

EPHEMERIDES

7 3.9

7 4.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
265746	2005 VA ₆		7 3.9 332 ^o 14	8 ^o 4/ 4.7 17			56295	1999 NB ₅₄		7 4.0 84 ^o :24	6 ^o 0/ 4.7 18		
5 31	19 13.02	- 5 8.0	1.661	2.505	15.8	20.6	5 31	19 20.21	-11 1.1	1.438	2.298	17.0	18.4
6 10	19 9.36	- 3 59.7	1.577	2.486	13.1	20.3	6 10	19 14.73	-10 9.6	1.378	2.305	13.4	18.2
6 20	19 3.55	- 3 4.7	1.514	2.467	10.5	20.1	6 20	19 6.74	- 9 30.1	1.338	2.311	9.5	18.0
6 30	18 56.21	- 2 27.6	1.474	2.449	8.7	20.0	6 30	18 57.13	- 9 5.0	1.321	2.318	6.5	17.8
7 10	18 48.28	- 2 10.9	1.457	2.432	8.7	19.9	7 10	18 47.11	- 8 55.2	1.329	2.325	6.6	17.8
7 20	18 40.76	- 2 15.2	1.463	2.416	10.8	20.0	7 20	18 37.92	- 9 0.1	1.361	2.332	9.6	18.0
7 30	18 34.68	- 2 38.8	1.491	2.401	13.7	20.2	7 30	18 30.67	- 9 17.5	1.416	2.339	13.3	18.3
8 9	18 30.82	- 3 17.7	1.539	2.386	16.7	20.3	8 9	18 26.10	- 9 44.2	1.491	2.346	16.8	18.5
105826	2000 SD ₁₄₅		7 3.9 341 ^o 32	1 ^o 5/ 3.7 18			358421	2007 CO ₅₃		7 4.0 135 ^o :26	3 ^o 7/ 3.1 18		
5 31	19 15.31	-25 58.0	1.563	2.448	14.5	18.5	5 31	19 19.87	-34 59.8	2.715	3.563	10.3	21.2
6 10	19 11.35	-26 8.7	1.487	2.436	10.9	18.3	6 10	19 13.69	-35 26.3	2.649	3.572	7.9	21.0
6 20	19 4.86	-26 19.6	1.431	2.424	6.7	18.0	6 20	19 5.79	-35 47.0	2.608	3.581	5.5	20.9
6 30	18 56.60	-26 27.6	1.399	2.413	2.4	17.7	6 30	18 56.82	-35 58.8	2.594	3.590	3.8	20.8
7 10	18 47.73	-26 30.2	1.392	2.403	3.4	17.8	7 10	18 47.58	-36 0.1	2.608	3.599	4.3	20.8
7 20	18 39.49	-26 26.3	1.410	2.394	7.9	18.0	7 20	18 38.91	-35 50.3	2.650	3.607	6.3	21.0
7 30	18 33.07	-26 16.4	1.451	2.387	12.2	18.2	7 30	18 31.56	-35 30.9	2.718	3.615	8.7	21.2
8 9	18 29.30	-26 2.0	1.513	2.380	15.9	18.4	8 9	18 26.08	-35 4.1	2.810	3.623	10.9	21.3
347837	2002 PO ₁₀₇		7 3.9 272 ^o 97	4 ^o 4/ 4.8 18			93710	2000 VR ₃₃		7 4.0 230 ^o :57	0 ^o 5/ 4.1 18		
5 31	19 16.75	-11 17.4	2.021	2.868	13.3	21.0	5 31	19 19.25	-20 34.9	2.087	2.946	12.5	20.1
6 10	19 11.81	-10 53.3	1.930	2.851	10.5	20.8	6 10	19 13.66	-20 48.1	2.001	2.937	9.3	19.9
6 20	19 4.90	-10 38.3	1.862	2.834	7.4	20.5	6 20	19 6.02	-21 5.2	1.938	2.927	5.7	19.6
6 30	18 56.60	-10 33.6	1.818	2.817	4.8	20.4	6 30	18 56.94	-21 24.5	1.902	2.916	1.8	19.3
7 10	18 47.75	-10 39.2	1.801	2.799	4.9	20.3	7 10	18 47.34	-21 43.8	1.894	2.906	2.5	19.4
7 20	18 39.26	-10 54.4	1.810	2.782	7.6	20.5	7 20	18 38.16	-22 1.7	1.913	2.894	6.4	19.6
7 30	18 32.05	-11 17.6	1.845	2.764	11.0	20.6	7 30	18 30.37	-22 17.2	1.959	2.883	10.1	19.8
8 9	18 26.83	-11 46.7	1.902	2.746	14.1	20.8	8 9	18 24.67	-22 30.3	2.027	2.871	13.4	20.0
79331	1996 TY		7 3.9 264 ^o :74	0 ^o 2/ 4.0 18			238645	2005 EL ₂₅		7 4.0 136 ^o :78	0 ^o 1/ 3.9 17		
5 31	19 17.35	-21 51.1	2.091	2.956	12.2	19.8	5 31	19 19.35	-22 7.1	2.377	3.232	11.3	21.6
6 10	19 12.18	-21 56.4	2.012	2.951	9.1	19.6	6 10	19 13.33	-22 24.9	2.311	3.245	8.3	21.5
6 20	19 5.05	-22 4.2	1.956	2.946	5.5	19.4	6 20	19 5.60	-22 44.7	2.268	3.256	5.0	21.3
6 30	18 56.62	-22 13.0	1.927	2.941	1.6	19.1	6 30	18 56.77	-23 4.7	2.253	3.268	1.4	21.0
7 10	18 47.76	-22 21.0	1.924	2.936	2.4	19.1	7 10	18 47.66	-23 22.9	2.267	3.279	2.2	21.1
7 20	18 39.39	-22 27.3	1.949	2.931	6.3	19.4	7 20	18 39.08	-23 38.1	2.310	3.289	5.6	21.4
7 30	18 32.41	-22 31.5	2.000	2.926	9.9	19.6	7 30	18 31.81	-23 50.0	2.379	3.299	8.8	21.6
8 9	18 27.47	-22 33.9	2.073	2.921	13.0	19.8	8 9	18 26.40	-23 58.7	2.472	3.308	11.5	21.8
291448	2006 DU ₄₀		7 4.0 107 ^o :25	3 ^o 4/ 4.8 17			507852	2014 GD ₄₄		7 4.0 61 ^o :08	6 ^o 3/ 5.1 17		
5 31	19 21.37	-14 21.1	1.427	2.293	16.8	20.6	5 31	19 17.14	- 6 49.8	2.001	2.833	14.0	21.3
6 10	19 15.65	-14 21.5	1.368	2.303	12.8	20.3	6 10	19 11.74	- 5 52.7	1.949	2.853	11.2	21.1
6 20	19 7.32	-14 33.4	1.330	2.314	8.3	20.1	6 20	19 4.62	- 5 7.8	1.919	2.873	8.5	21.0
6 30	18 57.29	-14 55.8	1.316	2.324	4.2	19.9	6 30	18 56.48	- 4 37.3	1.913	2.893	6.6	20.9
7 10	18 46.81	-15 26.3	1.327	2.334	4.3	19.9	7 10	18 48.16	- 4 22.3	1.934	2.913	6.6	21.0
7 20	18 37.20	-16 2.0	1.363	2.344	8.4	20.2	7 20	18 40.50	- 4 22.0	1.981	2.934	8.4	21.1
7 30	18 29.61	-16 40.2	1.422	2.354	12.7	20.5	7 30	18 34.23	- 4 34.6	2.052	2.954	10.8	21.3
8 9	18 24.81	-17 18.6	1.502	2.363	16.3	20.7	8 9	18 29.87	- 4 57.1	2.144	2.974	13.2	21.5
478409	2012 CK ₃₃		7 4.0 193 ^o :35	3 ^o 4/ 5.2 18			10848	1995 BD ₁		7 4.0 261 ^o :56	0 ^o 2/ 3.9 18		
5 31	19 14.00	- 9 3.2	3.166	3.989	9.6	22.8	5 31	19 21.30	-21 35.4	1.529	2.403	15.4	18.3
6 10	19 9.05	- 8 57.2	3.082	3.986	7.5	22.7	6 10	19 15.99	-22 2.2	1.445	2.388	11.6	18.0
6 20	19 2.90	- 8 58.9	3.022	3.984	5.4	22.5	6 20	19 7.84	-22 35.0	1.381	2.372	7.1	17.7
6 30	18 55.96	- 9 8.5	2.989	3.980	3.7	22.4	6 30	18 57.57	-23 10.5	1.342	2.356	2.1	17.3
7 10	18 48.77	- 9 25.6	2.985	3.977	3.7	22.4	7 10	18 46.40	-23 44.8	1.328	2.340	3.2	17.4
7 20	18 41.85	- 9 49.2	3.009	3.973	5.3	22.5	7 20	18 35.72	-24 14.6	1.340	2.323	8.3	17.6
7 30	18 35.75	-10 18.0	3.061	3.968	7.5	22.7	7 30	18 26.94	-24 38.7	1.376	2.306	13.1	17.9
8 9	18 30.89	-10 50.4	3.137	3.963	9.6	22.8	8 9	18 21.04	-24 57.1	1.432	2.289	17.2	18.1
106294	2000 UH ₈₂		7 4.0 239 ^o :44	2 ^o 5/ 3.3 18			127567	2003 AS ₈		7 4.0 105 ^o :27	12 ^o :2/ 10.5 18		
5 31	19 18.44	-29 52.0	2.563	3.419	10.5	20.5	5 31	19 23.14	+10 52.2	1.654	2.403	19.7	19.5
6 10	19 12.83	-30 19.8	2.476	3.408	7.9	20.3	6 10	19 16.47	+10 58.2	1.604	2.427	17.3	19.4
6 20	19 5.40	-30 45.5	2.413	3.397	5.1	20.1	6 20	19 7.60	+10 32.8	1.571	2.450	14.9	19.3
6 30	18 56.73	-31 6.0	2.377	3.385	2.7	19.9	6 30	18 57.37	+ 9 33.2	1.559	2.473	13.0	19.2
7 10	18 47.60	-31 19.2	2.369	3.372	3.4	19.9	7 10	18 46.89	+ 8 1.1	1.569	2.495	12.2	19.2
7 20	18 38.86	-31 23.8	2.390	3.360	6.1	20.1	7 20	18 37.26	+ 6 2.0	1.604	2.517	12.8	19.3
7 30	18 31.34	-31 20.1	2.437	3.347	9.0	20.3	7 30	18 29.44	+ 3 44.5	1.663	2.537	14.5	19.4
8 9	18 25.67	-31 9.7	2.507	3.334	11.7	20.4	8 9	18 24.07	+ 1 18.5	1.745	2.557	16.5	19.6
416284	2003 OP ₂₁		7 4.0 11 ^o :43	3 ^o 5/ 5.0 17			239450	2007 TR ₂₁₅		7 4.0 336 ^o :19	0 ^o 5/ 4.1 18		
5 31	19 15.19	-13 13.5	1.042	1.935	19.5	20.1	5 31	19 16.66	-22 6.2	1.557	2.438	14.8	19.9
6 10	19 11.88	-13 40.4	0.987	1.936	15.0	19.8	6 10	19 12.28	-21 55.3	1.481	2.428	11.1	19.7
6 20	19 5.44	-14 26.2	0.950	1.939	9.8	19.6	6 20	19 5.40	-21 46.6	1.426	2.418	6.8	19.4
6 30	18 56.82	-15 29.0	0.933	1.943	4.7	19.3	6 30	18 56.81	-21 39.0	1.395	2.410	2.1	19.1
7 10	18 47.51	-16 43.3	0.938	1.948	4.7	19.3	7 10	18 47.64	-21 31.1	1.389	2.401	3.0	19.1
7 20	18 39.11	-18 2.3	0.965	1.955	9.7	19.6	7 20	18 39.12	-21 22.6	1.408	2.394	7.7	19.4
7 30	18 33.09	-19 19.6	1.013	1.962	14.7	19.9	7 30	18 32.40	-21 13.7	1.451	2.387	12.1	19.6
8 9	18 30.39	-20 30.8	1.080	1.970	19.1	20.2	8 9	18 28.28	-21 4.9				

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
517232	2014 <i>BG</i> ₆₆		7 4.0 230°38	2°8/ 3.5	18		226773	2004 <i>RP</i> ₁₂₂		7 4.0 110°70	4°6/ 3.2	18	
5 31	19 22.08	-30 32.8	2.216	3.073	11.9	22.4	5 31	19 24.09	-34 0.5	1.849	2.709	13.8	20.3
6 10	19 15.77	-30 49.5	2.129	3.062	9.0	22.2	6 10	19 17.48	-34 35.6	1.791	2.722	10.5	20.1
6 20	19 7.30	-31 2.5	2.066	3.050	5.8	22.0	6 20	19 8.38	-35 3.9	1.755	2.733	7.2	19.9
6 30	18 57.34	-31 8.6	2.030	3.038	3.1	21.8	6 30	18 57.67	-35 20.5	1.745	2.745	4.8	19.8
7 10	18 46.87	-31 5.3	2.022	3.026	3.7	21.8	7 10	18 46.61	-35 22.3	1.761	2.756	5.4	19.9
7 20	18 36.92	-30 52.1	2.041	3.012	6.9	22.0	7 20	18 36.45	-35 9.2	1.803	2.767	8.3	20.1
7 30	18 28.48	-30 30.2	2.087	2.999	10.2	22.1	7 30	18 28.29	-34 43.5	1.870	2.778	11.5	20.3
8 9	18 22.28	-30 2.1	2.155	2.985	13.2	22.3	8 9	18 22.83	-34 9.1	1.959	2.788	14.3	20.5
134550	1999 <i>RF</i> ₁₅₇		7 4.0 260°32	2°8/ 4.7	18		407738	2011 <i>UN</i> ₃₉₈		7 4.0 340°36	2°1/ 4.2	17	
5 31	19 19.81	-15 4.0	1.652	2.513	15.1	20.1	5 31	19 16.68	-20 28.4	0.986	1.890	19.4	20.4
6 10	19 14.61	-15 9.6	1.564	2.497	11.6	19.9	6 10	19 13.38	-19 55.9	0.922	1.879	14.7	20.1
6 20	19 6.88	-15 25.4	1.497	2.481	7.6	19.6	6 20	19 6.58	-19 27.7	0.875	1.870	9.2	19.8
6 30	18 57.29	-15 50.7	1.454	2.464	3.6	19.3	6 30	18 57.28	-19 3.9	0.848	1.862	3.5	19.4
7 10	18 46.92	-16 23.3	1.437	2.446	3.9	19.3	7 10	18 47.12	-18 44.3	0.842	1.855	4.4	19.5
7 20	18 36.96	-17 0.9	1.447	2.428	8.0	19.5	7 20	18 37.92	-18 29.2	0.858	1.849	10.3	19.8
7 30	18 28.62	-17 40.8	1.481	2.410	12.4	19.7	7 30	18 31.34	-18 18.8	0.893	1.844	15.9	20.0
8 9	18 22.83	-18 21.0	1.535	2.392	16.3	19.9	8 9	18 28.41	-18 13.1	0.945	1.840	20.8	20.3
288107	2003 <i>WS</i> ₄₉		7 4.0 200°67	4°2/ 3.2	17		397730	2008 <i>ES</i> ₇₆		7 4.0 123°24	0°7/ 4.2	18	
5 31	19 25.15	-32 30.3	1.858	2.717	13.8	21.5	5 31	19 16.72	-19 41.9	2.426	3.281	11.1	21.9
6 10	19 18.46	-33 7.6	1.783	2.714	10.5	21.3	6 10	19 11.41	-19 53.8	2.356	3.290	8.2	21.7
6 20	19 9.09	-33 40.1	1.730	2.710	7.1	21.1	6 20	19 4.49	-20 9.3	2.311	3.298	5.0	21.5
6 30	18 57.90	-34 2.5	1.703	2.706	4.4	20.9	6 30	18 56.53	-20 27.1	2.293	3.306	1.6	21.3
7 10	18 46.09	-34 11.1	1.703	2.701	5.2	20.9	7 10	18 48.28	-20 45.5	2.303	3.314	2.1	21.4
7 20	18 35.00	-34 4.8	1.729	2.695	8.4	21.1	7 20	18 40.51	-21 3.3	2.341	3.322	5.5	21.6
7 30	18 25.84	-33 45.3	1.780	2.689	11.9	21.3	7 30	18 33.93	-21 19.8	2.406	3.329	8.5	21.8
8 9	18 19.45	-33 16.3	1.853	2.682	15.1	21.5	8 9	18 29.08	-21 34.5	2.494	3.337	11.2	22.0
7698	Schweitzer		7 4.0 138°51	0°7/ 4.2	18		141999	2002 <i>PJ</i> ₁₅₇		7 4.0 305°11	3°0/ 4.8	18	
5 31	19 21.68	-19 52.4	1.817	2.678	13.9	19.4	5 31	19 17.36	-14 28.0	1.387	2.261	16.7	20.3
6 10	19 15.52	-20 8.7	1.752	2.688	10.4	19.2	6 10	19 13.15	-14 43.0	1.307	2.247	12.8	20.0
6 20	19 7.13	-20 29.9	1.710	2.698	6.3	19.0	6 20	19 6.17	-15 11.6	1.246	2.233	8.4	19.7
6 30	18 57.29	-20 53.7	1.693	2.707	2.0	18.7	6 30	18 57.15	-15 52.9	1.209	2.219	4.0	19.4
7 10	18 47.05	-21 17.6	1.704	2.716	2.7	18.8	7 10	18 47.26	-16 43.8	1.196	2.206	4.2	19.4
7 20	18 37.51	-21 39.7	1.742	2.724	6.9	19.1	7 20	18 37.87	-17 40.3	1.207	2.193	8.8	19.6
7 30	18 29.66	-21 59.2	1.806	2.731	10.8	19.3	7 30	18 30.35	-18 38.4	1.242	2.180	13.5	19.8
8 9	18 24.19	-22 15.8	1.891	2.738	14.1	19.6	8 9	18 25.69	-19 34.7	1.295	2.168	17.7	20.1
40554	1999 <i>RG</i> ₁₁₅		7 4.0 329°75	3°9/ 4.8	18		427986	2006 <i>AQ</i> ₅₁		7 4.0 90°72	1°6/ 4.6	17	
5 31	19 12.18	-14 23.3	1.234	2.122	17.3	18.2	5 31	19 18.76	-15 56.1	1.750	2.611	14.4	21.1
6 10	19 9.65	-14 19.1	1.145	2.093	13.5	17.9	6 10	19 13.48	-16 31.6	1.684	2.619	10.8	20.9
6 20	19 4.24	-14 28.6	1.076	2.065	9.0	17.5	6 20	19 5.99	-17 17.0	1.640	2.626	6.8	20.7
6 30	18 56.60	-14 52.5	1.028	2.037	4.7	17.2	6 30	18 57.01	-18 9.7	1.622	2.634	2.7	20.4
7 10	18 47.90	-15 29.4	1.002	2.011	4.9	17.1	7 10	18 47.57	-19 6.1	1.630	2.641	3.0	20.5
7 20	18 39.57	-16 16.4	0.998	1.986	9.6	17.3	7 20	18 38.73	-20 2.5	1.666	2.649	7.0	20.7
7 30	18 33.14	-17 9.6	1.015	1.963	14.8	17.5	7 30	18 31.52	-20 56.1	1.726	2.656	10.9	21.0
8 9	18 29.75	-18 4.7	1.051	1.941	19.5	17.7	8 9	18 26.64	-21 45.0	1.809	2.663	14.3	21.2
346813	2009 <i>CN</i> ₄₀		7 4.0 206°96	1°6/ 3.7	16		113975	2002 <i>UO</i> ₁₈		7 4.0 199°30	1°2/ 4.3	18	
5 31	19 19.45	-26 50.7	2.042	2.907	12.5	21.5	5 31	19 20.72	-18 55.6	1.918	2.777	13.4	21.0
6 10	19 13.84	-27 5.7	1.967	2.905	9.3	21.3	6 10	19 14.86	-19 3.4	1.840	2.774	10.1	20.8
6 20	19 6.13	-27 19.8	1.915	2.904	5.7	21.1	6 20	19 6.80	-19 16.6	1.784	2.771	6.2	20.6
6 30	18 57.01	-27 30.1	1.890	2.902	2.2	20.8	6 30	18 57.26	-19 33.4	1.754	2.767	2.2	20.3
7 10	18 47.47	-27 34.5	1.892	2.901	3.0	20.9	7 10	18 47.20	-19 52.0	1.752	2.763	2.8	20.3
7 20	18 38.51	-27 32.2	1.920	2.899	6.7	21.1	7 20	18 37.68	-20 10.6	1.777	2.758	6.8	20.6
7 30	18 31.09	-27 23.8	1.975	2.897	10.2	21.3	7 30	18 29.69	-20 28.3	1.827	2.753	10.7	20.8
8 9	18 25.89	-27 10.8	2.052	2.895	13.3	21.5	8 9	18 23.97	-20 44.7	1.900	2.747	14.0	21.0
440632	2005 <i>WN</i> ₆₉		7 4.0 252°45	0°7/ 3.8	18		45043	1999 <i>XG</i> ₁₁		7 4.0 267°43	0°6/ 3.9	18	
5 31	19 16.55	-23 54.9	2.425	3.286	10.9	21.7	5 31	19 22.02	-24 47.9	1.572	2.445	15.1	19.1
6 10	19 11.45	-24 16.1	2.341	3.278	8.1	21.5	6 10	19 16.39	-24 42.6	1.490	2.433	11.3	18.8
6 20	19 4.61	-24 38.9	2.281	3.270	4.9	21.3	6 20	19 8.00	-24 37.0	1.429	2.420	6.9	18.5
6 30	18 56.58	-25 1.1	2.248	3.262	1.5	21.0	6 30	18 57.65	-24 28.6	1.392	2.407	2.1	18.2
7 10	18 48.12	-25 20.6	2.244	3.254	2.3	21.1	7 10	18 46.60	-24 15.8	1.382	2.394	3.1	18.2
7 20	18 40.06	-25 36.1	2.267	3.246	5.7	21.3	7 20	18 36.20	-23 58.0	1.397	2.380	8.1	18.5
7 30	18 33.18	-25 47.2	2.317	3.238	8.9	21.5	7 30	18 27.76	-23 36.7	1.436	2.367	12.6	18.7
8 9	18 28.09	-25 54.0	2.390	3.230	11.7	21.7	8 9	18 22.17	-23 13.9	1.496	2.353	16.6	18.9
468622	2008 <i>FN</i> ₉₇		7 4.0 47°98	1°0/ 4.2	17		219705	2001 <i>XJ</i> ₃₇		7 4.0 106°44	7°0/ 2.3	18	
5 31	19 19.56	-19 41.4	1.316	2.198	16.9	21.3	5 31	19 27.11	-39 47.3	1.910	2.756	14.0	20.2
6 10	19 14.52	-19 49.8	1.264	2.211	12.6	21.1	6 10	19 19.90	-40 57.7	1.861	2.775	11.2	20.1
6 20	19 6.74	-20 4.9	1.232	2.224	7.7	20.8	6 20	19 9.92	-41 57.4	1.834	2.793	8.6	19.9
6 30	18 57.20	-20 24.3	1.223	2.237	2.5	20.6	6 30	18 58.16	-42 39.5	1.833	2.810	7.1	19.9
7 10	18 47.28	-20 45.0	1.239	2.251	3.3	20.7	7 10	18 45.97	-42 59.8	1.858	2.827	7.7	20.0
7 20	18 38.34	-21 5.0	1.280	2.266	8.2	21.0	7 20	18 34.76	-42 57.8	1.908	2.844	9.8	20.1
7 30	18 31.58	-21 23.0	1.343	2.280	12.7	21.3	7 30	18 25.75	-42 36.6	1.983	2.861	12.3	20.3
8 9	18 27.74	-21 38.6	1.426	2.295	16.6	21.6	8 9	18 19.70	-42 1.6	2.077	2.876	14.7	20.5
440565	2005 <i>UX</i> ₃₃₁		7 4.0 302°29	3°2/ 2.9	18		519810	2013 <i>HG</i> ₁₀₇		7 4.0			

EPHEMERIDES

7 4.0

7 4.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
8653	1990 KE		7 4.0 287°00	9.4/ 5.8 18			145265	2005 JZ ₁₃₃		7 4.0 333°95	7.4/ 5.1 18		
5 31	19 16.00	- 0 6.4	1.780	2.594	16.2	17.0	5 31	19 15.31	- 5 45.6	1.788	2.626	15.1	20.0
6 10	19 11.46	+ 0 46.8	1.700	2.582	13.8	16.8	6 10	19 10.88	- 4 48.7	1.714	2.620	12.4	19.8
6 20	19 4.82	+ 1 22.0	1.640	2.571	11.4	16.6	6 20	19 4.42	- 4 5.1	1.660	2.614	9.7	19.6
6 30	18 56.71	+ 1 35.0	1.603	2.559	9.8	16.5	6 30	18 56.60	- 3 38.0	1.630	2.608	7.7	19.5
7 10	18 48.04	+ 1 24.1	1.589	2.548	9.6	16.5	7 10	18 48.32	- 3 29.1	1.624	2.603	7.7	19.5
7 20	18 39.79	+ 0 50.0	1.599	2.537	11.1	16.5	7 20	18 40.54	- 3 38.1	1.643	2.598	9.7	19.6
7 30	18 32.94	- 0 4.0	1.631	2.526	13.6	16.7	7 30	18 34.18	- 4 2.9	1.685	2.593	12.5	19.7
8 9	18 28.24	- 1 12.5	1.684	2.514	16.2	16.8	8 9	18 29.92	- 4 39.7	1.747	2.589	15.3	19.9
469183	2016 FP ₇		7 4.0 30°87	0°5/ 4.2 17			334002	2000 UO ₁₄		7 4.0 271°42	1°8/ 4.3 18		
5 31	19 16.95	-18 39.8	0.973	1.875	19.7	19.4	5 31	19 19.78	-18 33.7	1.927	2.787	13.3	21.2
6 10	19 13.16	-19 25.9	0.937	1.894	14.6	19.2	6 10	19 14.35	-18 20.9	1.829	2.764	10.1	21.0
6 20	19 6.14	-20 23.4	0.919	1.915	8.8	18.9	6 20	19 6.65	-18 12.3	1.754	2.740	6.4	20.7
6 30	18 57.08	-21 26.6	0.922	1.937	2.6	18.6	6 30	18 57.30	-18 7.3	1.704	2.716	2.6	20.4
7 10	18 47.65	-22 28.9	0.947	1.960	3.6	18.8	7 10	18 47.24	-18 5.3	1.681	2.691	3.1	20.4
7 20	18 39.51	-23 24.8	0.994	1.985	9.3	19.2	7 20	18 37.54	-18 5.4	1.685	2.666	7.2	20.6
7 30	18 34.01	-24 11.5	1.062	2.010	14.3	19.6	7 30	18 29.26	-18 7.4	1.715	2.641	11.2	20.8
8 9	18 31.88	-24 48.3	1.148	2.036	18.4	19.9	8 9	18 23.22	-18 11.0	1.766	2.615	14.8	21.0
520154	2014 CD ₂₅		7 4.0 200°99	1°4/ 3.8 16			508336	2015 PK ₄₁		7 4.0 9°02	6°9/ 2.7 18		
5 31	19 19.63	-26 7.2	1.949	2.816	12.9	21.7	5 31	19 22.43	-42 10.6	2.132	2.975	12.9	21.1
6 10	19 14.06	-26 19.5	1.875	2.815	9.6	21.4	6 10	19 16.34	-42 52.1	2.067	2.975	10.5	20.9
6 20	19 6.31	-26 31.4	1.825	2.814	5.9	21.2	6 20	19 7.77	-43 22.3	2.023	2.976	8.3	20.8
6 30	18 57.12	-26 40.0	1.800	2.814	2.1	21.0	6 30	18 57.57	-43 35.9	2.004	2.976	7.0	20.7
7 10	18 47.49	-26 43.4	1.803	2.813	3.0	21.0	7 10	18 46.95	-43 29.7	2.011	2.977	7.4	20.7
7 20	18 38.48	-26 40.6	1.832	2.812	6.8	21.3	7 20	18 37.13	-43 3.9	2.043	2.978	9.2	20.8
7 30	18 31.07	-26 32.2	1.887	2.811	10.5	21.5	7 30	18 29.21	-42 21.2	2.099	2.980	11.6	21.0
8 9	18 25.96	-26 19.7	1.964	2.810	13.7	21.7	8 9	18 23.92	-41 26.4	2.176	2.981	13.9	21.2
262305	2006 TO ₆		7 4.0 91°70	5°3/ 2.7 17			94747	2001 XB ₈₅		7 4.0 215°74	0°3/ 3.9 18		
5 31	19 24.62	-32 35.9	1.570	2.439	15.3	20.7	5 31	19 22.39	-17 18.0	1.744	2.602	14.6	19.2
6 10	19 18.33	-33 47.4	1.518	2.454	11.7	20.5	6 10	19 16.51	-18 59.0	1.666	2.601	10.9	19.0
6 20	19 9.12	-34 54.0	1.488	2.468	8.0	20.3	6 20	19 8.08	-20 53.7	1.611	2.600	6.6	18.7
6 30	18 57.97	-35 48.4	1.483	2.483	5.5	20.2	6 30	18 57.75	-22 55.9	1.584	2.599	1.9	18.4
7 10	18 46.30	-36 25.0	1.503	2.497	6.3	20.3	7 10	18 46.60	-24 57.5	1.587	2.598	3.0	18.5
7 20	18 35.61	-36 42.1	1.548	2.511	9.5	20.5	7 20	18 35.84	-26 51.2	1.617	2.597	7.6	18.8
7 30	18 27.20	-36 41.5	1.617	2.524	13.0	20.7	7 30	18 26.70	-28 31.8	1.675	2.595	11.8	19.0
8 9	18 21.89	-36 27.5	1.706	2.538	16.0	21.0	8 9	18 20.13	-29 57.6	1.756	2.594	15.3	19.2
518175	2016 LC ₅₈		7 4.0 229°28	6°4/ 5.7 18			42727	1998 QX ₈₅		7 4.0 249°89	6°0/ 5.6 18		
5 31	19 16.88	- 4 57.7	2.033	2.858	14.1	21.5	5 31	19 14.22	- 2 47.2	2.717	3.520	11.5	19.6
6 10	19 11.85	- 4 35.7	1.953	2.851	11.5	21.3	6 10	19 9.50	- 2 15.8	2.626	3.507	9.5	19.5
6 20	19 4.94	- 4 28.0	1.893	2.845	8.8	21.2	6 20	19 3.37	- 1 55.8	2.559	3.494	7.6	19.3
6 30	18 56.73	- 4 36.3	1.858	2.838	6.8	21.0	6 30	18 56.28	- 1 48.8	2.516	3.481	6.3	19.2
7 10	18 48.07	- 5 0.5	1.849	2.831	6.6	21.0	7 10	18 48.84	- 1 55.6	2.501	3.467	6.2	19.2
7 20	18 39.82	- 5 39.0	1.866	2.824	8.5	21.1	7 20	18 41.67	- 2 15.4	2.512	3.453	7.5	19.2
7 30	18 32.83	- 6 29.1	1.908	2.817	11.2	21.2	7 30	18 35.40	- 2 46.8	2.548	3.439	9.5	19.3
8 9	18 27.78	- 7 26.8	1.972	2.809	14.0	21.4	8 9	18 30.54	- 3 27.1	2.608	3.424	11.6	19.5
264945	2002 VR ₁₂₇		7 4.0 254°96	1°8/ 3.4 18			107444	2001 DF ₁₈		7 4.0 150°75	2°0/ 3.5 17		
5 31	19 21.91	-24 9.8	1.838	2.703	13.6	20.7	5 31	19 23.88	-26 3.2	1.876	2.738	13.5	20.9
6 10	19 16.22	-25 6.3	1.746	2.685	10.2	20.4	6 10	19 17.28	-26 43.9	1.810	2.747	10.1	20.7
6 20	19 7.94	-26 7.8	1.677	2.666	6.3	20.1	6 20	19 8.31	-27 25.1	1.767	2.755	6.2	20.5
6 30	18 57.70	-27 9.8	1.634	2.646	2.4	19.8	6 30	18 57.75	-28 2.5	1.751	2.763	2.5	20.3
7 10	18 46.55	-28 7.0	1.618	2.627	3.5	19.9	7 10	18 46.73	-28 32.4	1.762	2.770	3.4	20.4
7 20	18 35.71	-28 55.5	1.629	2.606	7.8	20.1	7 20	18 36.41	-28 53.0	1.801	2.777	7.3	20.6
7 30	18 26.45	-29 33.4	1.666	2.585	11.9	20.3	7 30	18 27.86	-29 4.2	1.865	2.783	11.0	20.9
8 9	18 19.73	-30 1.2	1.725	2.564	15.6	20.5	8 9	18 21.82	-29 7.8	1.952	2.788	14.1	21.1
338588	2003 SA ₁₄₄		7 4.0 270°73	1°5/ 3.7 18			266985	2010 XZ ₄		7 4.0 221°79	2°2/ 4.7 18		
5 31	19 20.44	-26 35.0	2.027	2.891	12.6	21.4	5 31	19 14.85	-14 44.0	2.750	3.594	10.3	21.0
6 10	19 14.82	-26 47.7	1.932	2.870	9.5	21.1	6 10	19 9.94	-14 41.1	2.664	3.588	7.8	20.9
6 20	19 6.92	-26 59.7	1.859	2.848	5.9	20.9	6 20	19 3.62	-14 43.9	2.603	3.582	5.1	20.7
6 30	18 57.36	-27 8.3	1.813	2.826	2.2	20.6	6 30	18 56.36	-14 52.1	2.569	3.576	2.7	20.5
7 10	18 47.13	-27 11.1	1.794	2.803	3.1	20.6	7 10	18 48.77	-15 5.0	2.563	3.569	2.8	20.5
7 20	18 37.30	-27 6.9	1.802	2.781	7.0	20.8	7 20	18 41.51	-15 21.6	2.586	3.562	5.3	20.7
7 30	18 28.95	-26 56.2	1.836	2.757	10.9	21.0	7 30	18 35.20	-15 40.9	2.636	3.555	8.0	20.8
8 9	18 22.91	-26 40.7	1.892	2.734	14.2	21.2	8 9	18 30.36	-16 1.8	2.710	3.548	10.5	21.0
371907	2008 CC ₂₁₃		7 4.0 101°51	1°4/ 4.4 17			518605	2007 YO ₇₅		7 4.1 229°98	0°5/ 3.9 18		
5 31	19 20.74	-17 21.2	1.580	2.446	15.4	21.3	5 31	19 17.70	-22 38.8	2.204	3.066	11.8	21.9
6 10	19 15.11	-17 48.2	1.519	2.457	11.5	21.1	6 10	19 12.48	-23 8.4	2.124	3.062	8.8	21.7
6 20	19 7.04	-18 24.1	1.480	2.468	7.1	20.8	6 20	19 5.34	-23 41.1	2.068	3.058	5.3	21.4
6 30	18 57.36	-19 6.1	1.466	2.479	2.6	20.6	6 30	18 56.89	-24 14.4	2.039	3.053	1.6	21.2
7 10	18 47.23	-19 50.7	1.478	2.489	3.1	20.6	7 10	18 47.98	-24 45.4	2.037	3.048	2.4	21.2
7 20	18 37.86	-20 34.4	1.516	2.500	7.5	20.9	7 20	18 39.49	-25 12.4	2.063	3.043	6.1	21.5
7 30	18 30.34	-21 15.2	1.579	2.510	11.7	21.2	7 30	18 32.31	-25 34.3	2.115	3.038	9.6	21.7
8 9	18 25.42	-21 51.7	1.663	2.520	15.2	21.5	8 9	18 27.09	-25 51.3	2.190	3.033	12.6	21.9
466660	2014 WX ₁₀₈		7 4.0 342°59	7°3/ 4.9 17			24807	1994 SS ₈		7 4.1 137°59	0°3/ 4.1 18		
5 31	19 14.25	-10 51.3	1.029</										

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
102274	1999 <i>TV</i> ₄₆		7 4.1 290°49	2°5/ 3.6	18		391928	2008 <i>UV</i> ₃₀₂		7 4.1 199°49	3°0/ 3.3	18	
5 31	19 20.95	-26 48.6	1.442	2.323	15.8	20.2	5 31	19 20.98	-29 52.1	2.177	3.036	12.0	22.1
6 10	19 16.09	-27 17.8	1.356	2.302	12.0	19.9	6 10	19 15.04	-30 29.9	2.100	3.034	9.1	21.9
6 20	19 8.13	-27 48.1	1.291	2.282	7.5	19.6	6 20	19 6.96	-31 5.6	2.047	3.031	5.8	21.7
6 30	18 57.83	-28 14.8	1.249	2.261	3.1	19.3	6 30	18 57.41	-31 35.3	2.021	3.028	3.2	21.6
7 10	18 46.52	-28 33.2	1.232	2.241	4.3	19.3	7 10	18 47.37	-31 55.7	2.022	3.024	3.9	21.6
7 20	18 35.74	-28 40.7	1.239	2.220	9.1	19.5	7 20	18 37.85	-32 5.5	2.051	3.020	7.0	21.8
7 30	18 27.03	-28 37.7	1.269	2.200	13.9	19.7	7 30	18 29.83	-32 5.1	2.105	3.016	10.2	22.0
8 9	18 21.48	-28 26.5	1.319	2.180	18.2	19.9	8 9	18 24.03	-31 56.5	2.182	3.011	13.1	22.2
40219	1998 <i>SX</i> ₁₁₁		7 4.1 315°02	3°9/ 5.1	18		171335	2006 <i>JE</i> ₄₈		7 4.1 338°85	4°5/ 4.3	18	
5 31	19 14.12	-11 24.4	2.080	2.930	12.9	18.7	5 31	19 17.05	-16 37.9	1.116	2.008	18.6	19.3
6 10	19 9.87	-11 15.0	1.992	2.916	10.1	18.5	6 10	19 13.30	-15 44.2	1.049	1.998	14.3	19.0
6 20	19 3.80	-11 15.5	1.928	2.902	7.0	18.3	6 20	19 6.42	-14 57.4	1.000	1.989	9.5	18.7
6 30	18 56.45	-11 26.4	1.888	2.888	4.4	18.1	6 30	18 57.33	-14 19.7	0.972	1.980	5.2	18.5
7 10	18 48.63	-11 47.1	1.874	2.875	4.4	18.0	7 10	18 47.49	-13 52.9	0.966	1.973	5.6	18.5
7 20	18 41.16	-12 16.1	1.887	2.862	7.1	18.2	7 20	18 38.48	-13 37.6	0.982	1.967	10.3	18.7
7 30	18 34.90	-12 51.5	1.925	2.850	10.3	18.4	7 30	18 31.78	-13 33.6	1.019	1.962	15.3	18.9
8 9	18 30.49	-13 30.7	1.986	2.838	13.3	18.5	8 9	18 28.34	-13 38.9	1.073	1.957	19.7	19.2
242704	2005 <i>TN</i> ₁₁₉		7 4.1 183°57	6°6/ 5.9	18		275585	1999 <i>UM</i> ₂₉		7 4.1 243°32	1°2/ 3.7	18	
5 31	19 14.72	-0 38.1	2.699	3.491	11.8	21.1	5 31	19 17.15	-25 28.3	2.538	3.397	10.5	21.5
6 10	19 9.80	-0 2.0	2.622	3.491	9.9	21.0	6 10	19 11.91	-25 51.0	2.452	3.388	7.8	21.4
6 20	19 3.51	+0 21.4	2.568	3.491	8.1	20.8	6 20	19 4.95	-26 14.2	2.390	3.378	4.8	21.1
6 30	18 56.33	+0 30.2	2.538	3.491	6.8	20.7	6 30	18 56.81	-26 35.6	2.355	3.368	1.7	20.9
7 10	18 48.86	+0 24.0	2.535	3.490	6.7	20.7	7 10	18 48.25	-26 53.2	2.348	3.358	2.5	21.0
7 20	18 41.74	+0 3.5	2.558	3.489	7.8	20.8	7 20	18 40.06	-27 5.7	2.370	3.347	5.7	21.2
7 30	18 35.56	-0 29.6	2.607	3.488	9.6	20.9	7 30	18 33.00	-27 12.9	2.418	3.337	8.7	21.3
8 9	18 30.82	-1 12.3	2.678	3.486	11.5	21.1	8 9	18 27.70	-27 15.3	2.490	3.326	11.4	21.5
264305	1999 <i>KF</i> ₁₂		7 4.1	2°24	2°1/ 4.6	17	496225	2011 <i>WX</i> ₁₀₉		7 4.1 215°98	0°6/ 4.2	18	
5 31	19 10.66	-16 38.5	1.030	1.935	18.7	19.2	5 31	19 16.84	-20 13.3	2.634	3.487	10.4	22.7
6 10	19 8.64	-16 59.8	0.974	1.932	14.1	18.9	6 10	19 11.54	-20 19.5	2.549	3.481	7.7	22.5
6 20	19 3.60	-17 35.4	0.936	1.931	8.9	18.6	6 20	19 4.65	-20 28.7	2.487	3.474	4.7	22.3
6 30	18 56.46	-18 23.0	0.918	1.932	3.5	18.3	6 30	18 56.72	-20 39.6	2.454	3.467	1.6	22.1
7 10	18 48.66	-19 17.8	0.922	1.935	3.9	18.3	7 10	18 48.43	-20 51.0	2.448	3.460	2.0	22.1
7 20	18 41.71	-20 14.6	0.947	1.939	9.3	18.6	7 20	18 40.49	-21 1.9	2.472	3.452	5.3	22.3
7 30	18 37.05	-21 8.8	0.993	1.946	14.4	18.9	7 30	18 33.62	-21 11.9	2.522	3.444	8.3	22.5
8 9	18 35.58	-21 57.2	1.056	1.955	18.8	19.2	8 9	18 28.36	-21 20.6	2.597	3.436	10.9	22.6
393473	2002 <i>CF</i> ₂₆₅		7 4.1 245°92	0°5/ 3.9	18		400896	2010 <i>RR</i> ₁₁₃		7 4.1 264°58	3°4/ 4.7	18	
5 31	19 17.21	-23 51.0	2.245	3.108	11.6	21.2	5 31	19 15.62	-12 56.4	2.359	3.204	11.7	21.2
6 10	19 12.03	-24 2.1	2.169	3.107	8.6	21.0	6 10	19 10.73	-12 33.1	2.275	3.196	9.1	21.0
6 20	19 5.02	-24 14.4	2.116	3.106	5.2	20.8	6 20	19 4.21	-12 16.8	2.214	3.188	6.2	20.8
6 30	18 56.79	-24 25.8	2.090	3.104	1.6	20.6	6 30	18 56.60	-12 7.8	2.179	3.180	3.8	20.7
7 10	18 48.19	-24 34.6	2.092	3.103	2.3	20.6	7 10	18 48.62	-12 6.3	2.172	3.172	3.9	20.7
7 20	18 40.08	-24 40.0	2.121	3.101	5.9	20.9	7 20	18 41.01	-12 11.6	2.192	3.164	6.4	20.8
7 30	18 33.28	-24 41.7	2.176	3.100	9.3	21.1	7 30	18 34.53	-12 22.9	2.238	3.156	9.3	21.0
8 9	18 28.40	-24 40.3	2.254	3.098	12.2	21.3	8 9	18 29.73	-12 38.7	2.307	3.148	12.0	21.1
468831	2012 <i>TR</i> ₂₁₀		7 4.1 278°42	2°5/ 4.7	18		478663	2012 <i>TO</i> ₂₅₆		7 4.1 328°07	6°1/ 2.6	18	
5 31	19 17.61	-15 9.0	1.850	2.710	13.8	20.9	5 31	19 21.06	-35 49.5	1.696	2.564	14.5	20.5
6 10	19 12.77	-15 16.6	1.760	2.693	10.6	20.6	6 10	19 15.84	-36 47.1	1.626	2.558	11.3	20.3
6 20	19 5.71	-15 33.4	1.692	2.676	6.9	20.4	6 20	19 7.78	-37 38.1	1.578	2.553	8.2	20.1
6 30	18 57.06	-15 58.7	1.649	2.658	3.3	20.1	6 30	18 57.72	-38 15.8	1.554	2.547	6.2	20.0
7 10	18 47.74	-16 30.7	1.632	2.641	3.5	20.1	7 10	18 46.97	-38 35.4	1.555	2.542	7.0	20.0
7 20	18 38.78	-17 7.0	1.642	2.624	7.3	20.3	7 20	18 36.95	-38 35.2	1.580	2.538	9.8	20.2
7 30	18 31.24	-17 45.4	1.677	2.606	11.2	20.5	7 30	18 28.99	-38 17.1	1.629	2.534	13.0	20.3
8 9	18 25.92	-18 24.1	1.734	2.589	14.8	20.7	8 9	18 23.98	-37 45.5	1.698	2.530	16.1	20.5
440307	2004 <i>RB</i> ₃₂₈		7 4.1 293°19	3°2/ 3.4	17		382526	2001 <i>SY</i> ₂₆₄		7 4.1 283°95	0°9/ 3.9	18	
5 31	19 19.56	-32 7.0	2.251	3.110	11.7	21.4	5 31	19 20.49	-23 41.3	1.692	2.563	14.3	21.5
6 10	19 14.08	-32 22.0	2.153	3.085	8.9	21.2	6 10	19 15.38	-24 5.4	1.595	2.537	10.8	21.2
6 20	19 6.43	-32 32.7	2.078	3.060	5.9	21.0	6 20	19 7.57	-24 33.2	1.520	2.510	6.6	20.9
6 30	18 57.26	-32 35.5	2.030	3.035	3.5	20.8	6 30	18 57.71	-25 1.3	1.469	2.483	2.1	20.6
7 10	18 47.48	-32 28.0	2.009	3.010	4.1	20.8	7 10	18 46.89	-25 26.1	1.445	2.456	3.2	20.6
7 20	18 38.11	-32 9.7	2.015	2.985	7.1	20.9	7 20	18 36.40	-25 45.1	1.447	2.429	8.0	20.8
7 30	18 30.15	-31 41.7	2.046	2.959	10.3	21.1	7 30	18 27.57	-25 57.4	1.473	2.402	12.5	21.0
8 9	18 24.37	-31 6.6	2.100	2.934	13.3	21.2	8 9	18 21.41	-26 3.9	1.520	2.374	16.6	21.2
47299	1999 <i>WJ</i> ₃		7 4.1 195°71	0°0/ 3.8	18		392389	2010 <i>JL</i> ₈₆		7 4.1 73°51	0°0/ 4.1	17	
5 31	19 22.35	-23 45.6	1.570	2.443	15.2	18.9	5 31	19 21.43	-23 42.0	1.768	2.636	14.0	20.8
6 10	19 16.46	-23 32.4	1.500	2.442	11.3	18.6	6 10	19 15.30	-23 33.1	1.715	2.655	10.3	20.7
6 20	19 7.95	-23 19.4	1.451	2.442	6.9	18.4	6 20	19 7.00	-23 24.8	1.684	2.674	6.2	20.4
6 30	18 57.69	-23 4.9	1.427	2.441	2.0	18.0	6 30	18 57.39	-23 15.3	1.679	2.693	1.8	20.2
7 10	18 46.94	-22 47.7	1.428	2.440	3.0	18.1	7 10	18 47.58	-23 3.8	1.700	2.712	2.6	20.3
7 20	18 37.00	-22 28.0	1.456	2.440	7.8	18.4	7 20	18 38.65	-22 50.0	1.749	2.731	6.8	20.6
7 30	18 29.04	-22 7.0	1.508	2.439	12.1	18.7	7 30	18 31.53	-22 34.9	1.822	2.750	10.6	20.9
8 9	18 23.85	-21 46.2	1.581	2.438	15.9	18.9	8 9	18 26.81	-22 19.5	1.918	2.769	13.7	21.1
41438	2000 <i>GG</i> ₁₂₄		7 4.1 157°89	5°4/ 2.3	18		352805	2008 <i>UV</i> ₂₄₂					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
330829	2009 <i>FY</i>		7 4.1 315°00	22°9/12.4	18		394081	2006 <i>AS</i> ₃₀		7 4.1 309°80	2°2/ 4.9	18	
5 31	19 16.74	+19 19.6	1.092	1.846	27.6	20.2	5 31	19 15.37	-13 58.9	2.040	2.895	12.9	20.4
6 10	19 13.15	+21 6.3	1.039	1.839	26.1	20.0	6 10	19 11.03	-14 33.7	1.942	2.872	9.9	20.2
6 20	19 6.41	+22 9.4	0.996	1.833	24.6	19.9	6 20	19 4.68	-15 20.1	1.867	2.850	6.4	19.9
6 30	18 57.37	+22 16.5	0.966	1.827	23.5	19.7	6 30	18 56.85	-16 16.7	1.817	2.827	3.0	19.7
7 10	18 47.46	+21 21.1	0.949	1.821	22.9	19.7	7 10	18 48.33	-17 20.6	1.795	2.805	3.1	19.6
7 20	18 38.24	+19 23.8	0.946	1.816	23.1	19.7	7 20	18 40.05	-18 28.4	1.800	2.783	6.7	19.8
7 30	18 31.26	+16 33.1	0.959	1.811	24.1	19.7	7 30	18 32.96	-19 36.6	1.831	2.761	10.4	20.0
8 9	18 27.58	+13 4.9	0.986	1.807	25.8	19.8	8 9	18 27.84	-20 42.2	1.885	2.739	13.8	20.2
280117	2002 <i>HN</i> ₁		7 4.1 89°61	6°5/ 2.1	18		206512	2003 <i>UL</i> ₁₂₇		7 4.1 158°56	0°2/ 4.0	17	
5 31	19 24.00	-36 41.2	1.785	2.645	14.2	20.1	5 31	19 19.38	-22 41.3	2.220	3.078	11.8	21.7
6 10	19 17.84	-38 0.5	1.730	2.656	11.2	19.9	6 10	19 13.64	-22 56.8	2.147	3.083	8.8	21.5
6 20	19 8.89	-39 12.4	1.698	2.666	8.3	19.8	6 20	19 6.02	-23 14.4	2.099	3.087	5.3	21.3
6 30	18 58.04	-40 9.4	1.690	2.677	6.6	19.7	6 30	18 57.17	-23 31.8	2.077	3.091	1.6	21.0
7 10	18 46.62	-40 46.4	1.709	2.688	7.3	19.7	7 10	18 47.96	-23 47.3	2.083	3.095	2.3	21.1
7 20	18 36.02	-41 1.6	1.752	2.698	9.8	19.9	7 20	18 39.28	-23 59.4	2.118	3.098	6.0	21.4
7 30	18 27.53	-40 57.2	1.819	2.709	12.6	20.1	7 30	18 31.96	-24 7.9	2.178	3.101	9.3	21.6
8 9	18 21.98	-40 37.7	1.906	2.719	15.3	20.3	8 9	18 26.62	-24 13.2	2.262	3.103	12.3	21.8
398812	2013 <i>BD</i> ₄₀		7 4.1 32°14	2°0/ 3.8	17		321918	2010 <i>TW</i> ₅₅		7 4.1 81°49	3°1/ 4.5	17	
5 31	19 19.31	-28 58.4	2.002	2.868	12.6	20.8	5 31	19 21.04	-16 39.1	1.449	2.319	16.3	19.9
6 10	19 13.77	-28 58.6	1.934	2.872	9.4	20.6	6 10	19 15.50	-16 11.5	1.388	2.326	12.4	19.7
6 20	19 6.13	-28 55.4	1.889	2.877	5.9	20.4	6 20	19 7.38	-15 51.3	1.347	2.333	8.0	19.5
6 30	18 57.18	-28 46.3	1.870	2.881	2.6	20.2	6 30	18 57.59	-15 38.6	1.331	2.340	3.9	19.2
7 10	18 47.91	-28 30.1	1.878	2.886	3.2	20.3	7 10	18 47.39	-15 32.9	1.339	2.347	4.2	19.3
7 20	18 39.33	-28 6.9	1.913	2.891	6.7	20.5	7 20	18 38.04	-15 33.7	1.373	2.354	8.4	19.5
7 30	18 32.37	-27 38.2	1.973	2.896	10.1	20.7	7 30	18 30.68	-15 39.8	1.430	2.362	12.6	19.8
8 9	18 27.65	-27 6.4	2.055	2.901	13.1	20.9	8 9	18 26.06	-15 50.1	1.507	2.369	16.3	20.0
218254	2003 <i>AN</i> ₂₆		7 4.1 275°86	0°0/ 3.8	18		505937	2015 <i>FT</i> ₅₆		7 4.1 20°67	10°4/ 5.4	17	
5 31	19 21.16	-22 56.0	1.676	2.546	14.5	20.8	5 31	19 16.60	- 2 21.1	1.423	2.262	18.3	19.6
6 10	19 15.77	-22 53.6	1.584	2.525	10.9	20.5	6 10	19 12.17	- 0 57.4	1.366	2.266	15.4	19.4
6 20	19 7.72	-22 53.0	1.513	2.504	6.7	20.2	6 20	19 5.37	+ 0 7.0	1.328	2.270	12.6	19.2
6 30	18 57.75	-22 52.1	1.468	2.483	2.0	19.8	6 30	18 57.01	+ 0 46.8	1.311	2.276	10.7	19.1
7 10	18 46.96	-22 49.0	1.449	2.461	2.9	19.9	7 10	18 48.22	+ 0 59.3	1.316	2.281	10.6	19.2
7 20	18 36.64	-22 42.8	1.456	2.439	7.8	20.1	7 20	18 40.16	+ 0 45.1	1.344	2.288	12.3	19.3
7 30	18 28.05	-22 33.9	1.487	2.417	12.3	20.3	7 30	18 33.89	+ 0 8.2	1.392	2.295	14.9	19.5
8 9	18 22.12	-22 23.4	1.539	2.395	16.3	20.5	8 9	18 30.12	- 0 45.4	1.460	2.302	17.7	19.7
372408	2009 <i>RD</i> ₃₆		7 4.1 285°75	1°4/ 3.9	18		509126	2005 <i>YH</i> ₁₆₀		7 4.1 167°80	1°3/ 4.4	18	
5 31	19 21.43	-26 13.5	1.544	2.420	15.2	21.1	5 31	19 15.94	-18 23.6	2.679	3.530	10.3	22.4
6 10	19 16.10	-26 14.6	1.462	2.406	11.4	20.8	6 10	19 10.78	-18 19.2	2.602	3.532	7.7	22.3
6 20	19 7.96	-26 14.6	1.401	2.392	7.0	20.5	6 20	19 4.17	-18 18.3	2.549	3.533	4.8	22.1
6 30	18 57.81	-26 10.4	1.365	2.379	2.4	20.2	6 30	18 56.61	-18 20.3	2.523	3.535	1.9	21.9
7 10	18 46.92	-25 59.7	1.354	2.365	3.4	20.3	7 10	18 48.79	-18 24.3	2.527	3.537	2.2	21.9
7 20	18 36.68	-25 42.1	1.368	2.351	8.2	20.5	7 20	18 41.36	-18 29.8	2.558	3.538	5.1	22.1
7 30	18 28.43	-25 19.0	1.406	2.337	12.8	20.7	7 30	18 34.97	-18 36.2	2.617	3.539	8.0	22.3
8 9	18 23.09	-24 52.8	1.464	2.323	16.8	21.0	8 9	18 30.13	-18 43.1	2.700	3.540	10.5	22.5
153217	2000 <i>YX</i> ₁₉		7 4.1 200°70	2°8/ 5.1	18		251874	1999 <i>VV</i> ₄₂		7 4.1 194°06	1°6/ 3.8	17	
5 31	19 15.32	-11 52.4	2.929	3.761	10.0	21.4	5 31	19 23.18	-26 4.1	1.831	2.695	13.7	22.3
6 10	19 10.23	-11 52.9	2.843	3.757	7.7	21.2	6 10	19 16.93	-26 25.0	1.755	2.693	10.3	22.0
6 20	19 3.81	-12 0.4	2.782	3.753	5.3	21.0	6 20	19 8.24	-26 45.9	1.703	2.691	6.3	21.8
6 30	18 56.50	-12 14.9	2.747	3.748	3.2	20.9	6 30	18 57.87	-27 3.3	1.676	2.689	2.3	21.5
7 10	18 48.88	-12 35.4	2.742	3.743	3.2	20.9	7 10	18 46.96	-27 14.3	1.676	2.686	3.2	21.6
7 20	18 41.56	-13 0.9	2.765	3.737	5.3	21.0	7 20	18 36.69	-27 17.6	1.703	2.682	7.3	21.8
7 30	18 35.13	-13 30.1	2.816	3.731	7.8	21.2	7 30	18 28.19	-27 13.8	1.756	2.678	11.3	22.1
8 9	18 30.06	-14 1.4	2.891	3.724	10.1	21.3	8 9	18 22.23	-27 4.5	1.830	2.673	14.6	22.3
81074	2000 <i>EZ</i> ₈₄		7 4.1 264°71	4°3/ 4.4	18		429978	2013 <i>LC</i> ₁₁		7 4.1 323°67	0°8/ 3.8	17	
5 31	19 20.12	-14 21.0	1.627	2.487	15.3	19.3	5 31	19 16.57	-20 14.4	1.140	2.035	18.0	20.2
6 10	19 14.75	-13 35.8	1.547	2.478	11.9	19.0	6 10	19 13.32	-21 14.6	1.064	2.018	13.6	19.8
6 20	19 6.96	-12 57.5	1.489	2.469	8.1	18.8	6 20	19 6.74	-22 28.6	0.972	2.002	8.3	19.5
6 30	18 57.49	-12 27.7	1.455	2.459	4.9	18.6	6 30	18 57.58	-23 51.0	1.007	1.987	2.5	19.1
7 10	18 47.43	-12 7.6	1.447	2.449	5.1	18.6	7 10	18 47.24	-25 14.3	0.960	1.972	3.9	19.1
7 20	18 37.95	-11 57.2	1.464	2.439	8.6	18.8	7 20	18 37.43	-26 30.7	0.971	1.959	9.9	19.4
7 30	18 30.17	-11 56.3	1.505	2.430	12.6	19.0	7 30	18 29.89	-27 35.6	1.003	1.946	15.4	19.7
8 9	18 24.89	-12 3.2	1.566	2.420	16.2	19.2	8 9	18 25.89	-28 27.1	1.052	1.934	20.2	19.9
35636	1998 <i>KO</i> ₃₄		7 4.1 95°11	1°6/ 3.5	18		240797	2005 <i>XE</i> ₃₂		7 4.1 55°10	1°0/ 4.2	17	
5 31	19 21.57	-24 6.8	1.856	2.721	13.5	18.9	5 31	19 22.10	-21 3.9	1.166	2.053	18.3	20.7
6 10	19 15.55	-25 2.9	1.799	2.738	10.0	18.7	6 10	19 16.81	-20 54.6	1.113	2.062	13.6	20.5
6 20	19 7.28	-26 1.4	1.766	2.755	6.0	18.5	6 20	19 8.39	-20 50.1	1.078	2.071	8.3	20.2
6 30	18 57.54	-26 57.8	1.760	2.773	2.2	18.3	6 30	18 57.92	-20 48.5	1.066	2.081	2.7	19.9
7 10	18 47.41	-27 47.8	1.780	2.789	3.2	18.4	7 10	18 46.98	-20 47.8	1.078	2.090	3.5	20.0
7 20	18 37.99	-28 28.6	1.829	2.806	7.0	18.7	7 20	18 37.18	-20 47.0	1.113	2.101	9.0	20.4
7 30	18 30.28	-28 59.4	1.902	2.822	10.6	18.9	7 30	18 29.87	-20 46.1	1.170	2.111	14.0	20.7
8 9	18 24.97	-29 21.2	1.998	2.838	13.7	19.2	8 9	18 25.87	-20 45.5	1.246	2.121	18.1	20.9
61006	2000 <i>KR</i> ₃₅		7 4.1 33°71	3°4/ 4.5	17		365964	2012 <i>BK</i> ₃₃					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
193453	2000 <i>WV</i> ₁₆₉	7 4.1 197°85	2°0/ 4.2 18				381855	2009 <i>WD</i> ₂₆₄	7 4.1 84°66	0°9/ 4.4 17			
5 31	19 21.42	-19 27.7	1.925	2.783	13.4	19.7	5 31	19 19.58	-17 30.6	1.799	2.660	14.0	20.7
6 10	19 15.32	-18 48.8	1.848	2.782	10.1	19.5	6 10	19 14.11	-18 15.3	1.737	2.674	10.5	20.5
6 20	19 7.11	-18 11.9	1.795	2.780	6.4	19.3	6 20	19 6.47	-19 8.5	1.699	2.687	6.4	20.3
6 30	18 57.52	-17 37.3	1.767	2.778	2.7	19.0	6 30	18 57.39	-20 6.7	1.687	2.700	2.2	20.0
7 10	18 47.55	-17 5.6	1.767	2.777	3.2	19.1	7 10	18 47.91	-21 6.0	1.701	2.713	2.6	20.1
7 20	18 38.21	-16 37.4	1.795	2.774	7.0	19.3	7 20	18 39.06	-22 2.8	1.743	2.726	6.8	20.4
7 30	18 30.45	-16 13.5	1.848	2.772	10.7	19.5	7 30	18 31.82	-22 54.6	1.811	2.739	10.6	20.6
8 9	18 24.93	-15 54.4	1.924	2.769	13.9	19.7	8 9	18 26.88	-23 40.1	1.901	2.752	13.8	20.9
468637	2008 <i>SD</i> ₉₅	7 4.1 328°91	5°7/ 4.5 16				195498	2002 <i>GX</i> ₁₆₈	7 4.1 11°91	7°5/ 2.9 17			
5 31	19 13.09	-13 42.9	1.206	2.094	17.8	21.2	5 31	19 22.77	-39 4.4	1.534	2.400	15.8	19.8
6 10	19 10.43	-12 53.0	1.118	2.063	14.0	20.9	6 10	19 17.36	-39 55.7	1.474	2.402	12.6	19.6
6 20	19 4.86	-12 11.9	1.049	2.034	9.9	20.6	6 20	19 8.80	-40 35.7	1.436	2.404	9.6	19.4
6 30	18 57.03	-11 42.9	1.001	2.005	6.3	20.3	6 30	18 58.13	-40 57.3	1.420	2.406	7.6	19.3
7 10	18 48.15	-11 28.2	0.974	1.978	6.6	20.2	7 10	18 46.87	-40 55.8	1.428	2.409	8.2	19.4
7 20	18 39.68	-11 28.6	0.969	1.952	10.7	20.4	7 20	18 36.66	-40 31.1	1.460	2.413	10.8	19.5
7 30	18 33.13	-11 42.8	0.985	1.928	15.6	20.5	7 30	18 28.89	-39 47.0	1.513	2.417	13.9	19.7
8 9	18 29.66	-12 8.1	1.017	1.906	20.2	20.7	8 9	18 24.41	-38 49.9	1.587	2.421	16.9	19.9
397436	2007 <i>DV</i> ₄₉	7 4.1 253°14	2°1/ 4.8 18				466061	2011 <i>UQ</i> ₉₇	7 4.1 292°42	0°6/ 4.2 17			
5 31	19 15.55	-14 58.3	2.378	3.228	11.5	20.7	5 31	19 21.36	-21 34.8	1.254	2.138	17.4	21.7
6 10	19 10.75	-15 10.2	2.295	3.222	8.7	20.5	6 10	19 16.46	-21 31.0	1.182	2.130	13.1	21.4
6 20	19 4.29	-15 29.5	2.235	3.216	5.6	20.3	6 20	19 8.40	-21 31.5	1.130	2.122	8.1	21.1
6 30	18 56.71	-15 55.2	2.202	3.210	2.7	20.1	6 30	18 58.07	-21 34.0	1.100	2.114	2.5	20.7
7 10	18 48.73	-16 25.8	2.196	3.204	2.8	20.1	7 10	18 46.92	-21 36.4	1.094	2.106	3.4	20.7
7 20	18 41.11	-16 59.5	2.219	3.198	5.8	20.3	7 20	18 36.57	-21 37.2	1.112	2.099	9.1	21.0
7 30	18 34.59	-17 34.5	2.268	3.192	8.9	20.5	7 30	18 28.52	-21 36.5	1.152	2.091	14.2	21.3
8 9	18 29.76	-18 9.5	2.340	3.186	11.7	20.7	8 9	18 23.75	-21 35.0	1.211	2.084	18.7	21.6
441347	2008 <i>CL</i> ₂₀₆	7 4.1 126°12	4°1/ 5.4 15				21547	Kottapalli	7 4.1 354°04	0°1/ 4.1 18			
5 31	19 15.83	- 9 31.4	2.367	3.201	12.0	22.0	5 31	19 15.85	-22 39.6	1.864	2.738	13.1	17.7
6 10	19 10.82	- 9 22.3	2.296	3.208	9.4	21.9	6 10	19 11.41	-22 47.4	1.791	2.734	9.7	17.5
6 20	19 4.26	- 9 23.2	2.248	3.214	6.7	21.7	6 20	19 4.88	-22 57.7	1.741	2.732	5.9	17.3
6 30	18 56.69	- 9 34.3	2.226	3.220	4.5	21.6	6 30	18 56.95	-23 8.6	1.715	2.730	1.7	17.0
7 10	18 48.83	- 9 54.9	2.231	3.226	4.4	21.6	7 10	18 48.58	-23 18.1	1.716	2.728	2.5	17.0
7 20	18 41.40	-10 23.5	2.264	3.232	6.5	21.7	7 20	18 40.77	-23 25.1	1.743	2.727	6.7	17.3
7 30	18 35.11	-10 58.1	2.322	3.238	9.2	21.9	7 30	18 34.46	-23 29.2	1.794	2.726	10.4	17.5
8 9	18 30.46	-11 36.6	2.404	3.244	11.7	22.1	8 9	18 30.34	-23 30.8	1.868	2.727	13.7	17.7
281999	2011 <i>HH</i> ₃₆	7 4.1 232°65	2°6/ 3.1 18				241266	2007 <i>TO</i> ₃₈₉	7 4.1 221°99	2°1/ 4.7 18			
5 31	19 21.25	-26 21.4	1.944	2.808	13.0	20.5	5 31	19 17.59	-16 12.1	2.062	2.918	12.7	21.0
6 10	19 15.61	-27 29.2	1.864	2.801	9.8	20.3	6 10	19 12.47	-16 15.0	1.983	2.915	9.7	20.8
6 20	19 7.56	-28 39.9	1.807	2.794	6.1	20.1	6 20	19 5.44	-16 24.8	1.928	2.912	6.2	20.6
6 30	18 57.76	-29 48.2	1.776	2.786	3.0	19.9	6 30	18 57.12	-16 40.7	1.898	2.908	2.8	20.4
7 10	18 47.23	-30 48.9	1.773	2.778	4.0	19.9	7 10	18 48.35	-17 1.1	1.896	2.905	3.0	20.4
7 20	18 37.11	-31 38.2	1.798	2.770	7.6	20.1	7 20	18 40.05	-17 24.5	1.921	2.902	6.5	20.6
7 30	18 28.55	-32 14.9	1.848	2.761	11.3	20.3	7 30	18 33.08	-17 49.5	1.971	2.898	10.0	20.8
8 9	18 22.40	-32 39.9	1.920	2.753	14.5	20.5	8 9	18 28.09	-18 14.7	2.045	2.894	13.1	21.0
293151	2006 <i>YQ</i> ₈	7 4.1 146°78	0°3/ 3.9 18				181314	2006 <i>QY</i> ₄₆	7 4.1 319°81	21°4/ 14.4 17			
5 31	19 17.23	-23 8.3	2.602	3.458	10.4	22.0	5 31	19 17.61	+21 6.9	1.220	1.947	26.5	20.1
6 10	19 11.83	-23 24.1	2.529	3.464	7.7	21.9	6 10	19 13.61	+22 22.3	1.162	1.941	25.0	19.9
6 20	19 4.86	-23 41.2	2.481	3.469	4.6	21.7	6 20	19 6.65	+22 54.0	1.115	1.936	23.5	19.8
6 30	18 56.88	-23 58.0	2.460	3.475	1.4	21.4	6 30	18 57.56	+22 31.4	1.081	1.931	22.2	19.7
7 10	18 48.60	-24 12.8	2.468	3.480	2.0	21.5	7 10	18 47.68	+21 9.1	1.061	1.927	21.5	19.6
7 20	18 40.77	-24 24.5	2.505	3.485	5.2	21.7	7 20	18 38.47	+18 48.8	1.057	1.922	21.6	19.6
7 30	18 34.07	-24 32.8	2.568	3.489	8.2	21.9	7 30	18 31.36	+15 39.8	1.070	1.918	22.5	19.6
8 9	18 29.03	-24 38.1	2.656	3.494	10.8	22.1	8 9	18 27.34	+11 57.8	1.100	1.915	24.0	19.7
100099	1993 <i>FG</i> ₂₁	7 4.1 126°43	0°1/ 4.1 18				504303	2007 <i>GC</i> ₄₄	7 4.1 92°36	7°4/ 5.7 17			
5 31	19 17.79	-22 51.3	2.178	3.041	11.9	20.0	5 31	19 18.65	- 4 56.8	1.756	2.586	15.7	21.9
6 10	19 12.53	-22 59.8	2.105	3.043	8.8	19.8	6 10	19 13.29	- 4 11.0	1.697	2.598	12.8	21.8
6 20	19 5.40	-23 10.0	2.055	3.045	5.3	19.6	6 20	19 5.91	- 3 40.7	1.659	2.610	9.9	21.6
6 30	18 57.06	-23 20.1	2.032	3.046	1.6	19.4	6 30	18 57.24	- 3 28.4	1.644	2.621	7.7	21.5
7 10	18 48.35	-23 28.5	2.037	3.048	2.3	19.4	7 10	18 48.25	- 3 34.5	1.654	2.633	7.6	21.5
7 20	18 40.17	-23 34.3	2.068	3.050	6.0	19.7	7 20	18 39.92	- 3 57.7	1.689	2.644	9.5	21.7
7 30	18 33.33	-23 37.1	2.126	3.052	9.4	19.9	7 30	18 33.14	- 4 35.0	1.748	2.655	12.2	21.9
8 9	18 28.46	-23 37.5	2.207	3.053	12.3	20.1	8 9	18 28.54	- 5 21.9	1.829	2.666	14.9	22.1
248149	2004 <i>TM</i> ₁₈₂	7 4.1 321°16	2°8/ 4.9 18				336152	2008 <i>QQ</i> ₄₅	7 4.1 309°30	5°5/ 5.5 16			
5 31	19 15.15	-13 46.6	2.177	3.029	12.3	20.7	5 31	19 15.98	- 9 20.9	1.540	2.398	16.2	20.5
6 10	19 10.56	-13 47.1	2.098	3.025	9.4	20.5	6 10	19 11.97	- 9 11.8	1.454	2.379	12.9	20.3
6 20	19 4.23	-13 55.9	2.042	3.021	6.3	20.3	6 20	19 5.50	- 9 18.3	1.388	2.361	9.3	20.0
6 30	18 56.72	-14 12.5	2.012	3.018	3.4	20.1	6 30	18 57.23	- 9 41.6	1.345	2.343	6.2	19.8
7 10	18 48.82	-14 35.9	2.008	3.014	3.4	20.1	7 10	18 48.17	-10 21.1	1.325	2.325	6.0	19.7
7 20	18 41.32	-15 4.4	2.032	3.010	6.3	20.3	7 20	18 39.50	-11 14.1	1.331	2.308	9.1	19.8
7 30	18 35.03	-15 36.1	2.081	3.007	9.5	20.5	7 30	18 32.41	-12 16.6	1.359	2.291	13.1	20.0
8 9	18 30.54	-16 9.4	2.154	3.004	12.5	20.7	8 9	18 27.83	-13 23.9	1.408	2.275	16.9	20.2
70561	1999 <i>TU</i> ₁₄₃	7 4.1 185°62	0°4/ 4.2 18				283686	2002 <i>QD</i> ₁₂					

EPHEMERIDES

7 4.1

7 4.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
105530	2000 <i>RM</i> ₂₇		7 4.1 301°66	3°6/ 4.6	18		446145	2013 <i>EB</i> ₉₃		7 4.1 120°41	4°2/ 3.6	18	
5 31	19 16.46	-14 4.3	2.033	2.887	13.0	19.8	5 31	19 22.84	-37 6.8	2.535	3.378	11.1	20.9
6 10	19 11.67	-13 33.9	1.949	2.877	10.0	19.6	6 10	19 16.10	-37 17.9	2.470	3.388	8.6	20.7
6 20	19 4.99	-13 10.2	1.888	2.867	6.8	19.4	6 20	19 7.48	-37 21.0	2.429	3.398	6.1	20.6
6 30	18 57.01	-12 54.0	1.853	2.857	4.0	19.2	6 30	18 57.72	-37 12.9	2.415	3.408	4.4	20.5
7 10	18 48.58	-12 45.5	1.844	2.847	4.2	19.2	7 10	18 47.76	-36 52.4	2.429	3.418	4.7	20.5
7 20	18 40.58	-12 44.5	1.862	2.837	7.1	19.3	7 20	18 38.50	-36 19.9	2.471	3.427	6.8	20.6
7 30	18 33.89	-12 50.1	1.905	2.828	10.4	19.5	7 30	18 30.78	-35 37.5	2.539	3.436	9.2	20.8
8 9	18 29.16	-13 1.2	1.969	2.819	13.5	19.7	8 9	18 25.15	-34 48.7	2.630	3.445	11.5	21.0
335801	2007 <i>HK</i> ₄₁		7 4.1 25°90	5°7/ 2.1	18		510411	2011 <i>UL</i> ₂₀₀		7 4.1 213°24	0°5/ 4.2	18	
5 31	19 20.96	-31 17.7	1.475	2.354	15.6	19.2	5 31	19 17.77	-21 29.6	2.624	3.477	10.4	22.1
6 10	19 16.05	-32 56.1	1.417	2.359	11.9	18.9	6 10	19 12.28	-21 24.3	2.539	3.471	7.8	21.9
6 20	19 8.11	-34 33.2	1.382	2.364	8.2	18.7	6 20	19 5.20	-21 20.7	2.478	3.465	4.7	21.7
6 30	18 58.00	-36 0.0	1.370	2.370	5.8	18.6	6 30	18 57.08	-21 17.6	2.445	3.459	1.5	21.4
7 10	18 47.13	-37 9.0	1.384	2.376	6.9	18.7	7 10	18 48.62	-21 14.3	2.441	3.453	2.0	21.5
7 20	18 37.02	-37 56.0	1.422	2.383	10.2	18.9	7 20	18 40.55	-21 10.3	2.465	3.446	5.3	21.7
7 30	18 29.13	-38 21.3	1.482	2.391	13.8	19.1	7 30	18 33.58	-21 5.5	2.517	3.439	8.3	21.9
8 9	18 24.40	-38 28.6	1.562	2.398	17.0	19.4	8 9	18 28.26	-21 0.4	2.592	3.431	11.0	22.0
19100	1981 <i>EH</i> ₅		7 4.1 294°29	3°2/ 4.6	18		11016	BorISOV		7 4.1 231°24	4°3/ 4.9	18	
5 31	19 16.43	-14 31.1	2.170	3.022	12.3	19.1	5 31	19 20.48	-12 18.2	1.664	2.518	15.4	18.2
6 10	19 11.51	-14 2.9	2.089	3.016	9.5	18.9	6 10	19 15.07	-12 1.5	1.584	2.510	12.0	17.9
6 20	19 4.82	-13 40.7	2.031	3.010	6.4	18.7	6 20	19 7.26	-11 55.7	1.525	2.502	8.2	17.7
6 30	18 56.94	-13 25.3	1.999	3.004	3.7	18.5	6 30	18 57.76	-12 1.4	1.490	2.493	5.0	17.5
7 10	18 48.68	-13 16.6	1.994	2.998	3.8	18.5	7 10	18 47.62	-12 18.0	1.481	2.484	5.0	17.4
7 20	18 40.86	-13 14.4	2.016	2.992	6.6	18.7	7 20	18 37.99	-12 43.7	1.498	2.475	8.4	17.6
7 30	18 34.28	-13 18.0	2.064	2.986	9.8	18.9	7 30	18 30.00	-13 16.4	1.539	2.465	12.3	17.8
8 9	18 29.54	-13 26.4	2.134	2.980	12.7	19.1	8 9	18 24.47	-13 53.4	1.601	2.455	15.9	18.0
301525	2009 <i>FP</i> ₂₇		7 4.1 347°92	1°1/ 4.4	16		443462	2014 <i>HH</i> ₁₈₉		7 4.1 351°33	4°2/ 5.4	18	
5 31	19 17.26	-19 9.8	1.891	2.757	13.3	21.2	5 31	19 14.72	-10 17.8	1.994	2.842	13.4	20.5
6 10	19 12.40	-19 14.6	1.818	2.756	9.9	20.9	6 10	19 10.39	-10 14.3	1.919	2.840	10.5	20.3
6 20	19 5.47	-19 24.5	1.766	2.755	6.1	20.7	6 20	19 4.22	-10 22.3	1.865	2.837	7.4	20.2
6 30	18 57.15	-19 38.2	1.740	2.754	2.2	20.5	6 30	18 56.81	-10 42.1	1.837	2.836	4.8	20.0
7 10	18 48.39	-19 54.0	1.741	2.753	2.7	20.5	7 10	18 48.99	-11 12.7	1.834	2.834	4.6	20.0
7 20	18 40.17	-20 10.2	1.768	2.752	6.6	20.7	7 20	18 41.61	-11 51.8	1.858	2.833	7.2	20.1
7 30	18 33.43	-20 26.0	1.821	2.751	10.4	21.0	7 30	18 35.51	-12 36.9	1.907	2.832	10.3	20.3
8 9	18 28.84	-20 40.8	1.895	2.751	13.7	21.2	8 9	18 31.32	-13 25.2	1.978	2.832	13.3	20.5
129973	Michaeldaly		7 4.1 242°81	6°1/ 5.1	18		498381	2007 <i>WX</i> ₄₅		7 4.1 298°50	6°6/ 2.5	17	
5 31	19 17.95	- 6 30.0	2.174	2.999	13.3	20.3	5 31	19 22.54	-33 12.2	1.305	2.188	17.0	21.7
6 10	19 12.67	- 5 48.6	2.086	2.986	10.8	20.2	6 10	19 18.07	-34 19.9	1.220	2.162	13.3	21.4
6 20	19 5.57	- 5 18.1	2.019	2.972	8.3	20.0	6 20	19 9.89	-35 26.0	1.154	2.136	9.4	21.1
6 30	18 57.20	- 5 0.7	1.978	2.958	6.4	19.8	6 30	18 58.73	-36 21.2	1.110	2.111	6.7	20.9
7 10	18 48.33	- 4 57.3	1.963	2.944	6.4	19.8	7 10	18 46.11	-36 57.2	1.089	2.085	7.8	20.8
7 20	18 39.82	- 5 7.6	1.975	2.929	8.3	19.9	7 20	18 33.96	-37 9.1	1.092	2.059	11.9	21.0
7 30	18 32.49	- 5 30.2	2.011	2.914	11.0	20.0	7 30	18 24.28	-36 57.8	1.115	2.034	16.4	21.2
8 9	18 27.00	- 6 2.3	2.070	2.899	13.7	20.2	8 9	18 18.46	-36 28.7	1.156	2.010	20.7	21.4
520313	2014 <i>FD</i> ₇₆		7 4.1 114°86	1°1/ 3.7	18		37540	1981 <i>ES</i> ₇		7 4.1 30°76	4°0/ 4.6	18	
5 31	19 18.06	-23 40.8	2.200	3.062	11.8	20.9	5 31	19 18.61	-16 5.9	1.080	1.970	19.2	18.2
6 10	19 12.81	-24 23.1	2.129	3.066	8.7	20.7	6 10	19 14.30	-15 31.6	1.032	1.980	14.6	18.0
6 20	19 5.65	-25 8.0	2.081	3.070	5.3	20.5	6 20	19 6.95	-15 8.0	1.002	1.991	9.5	17.7
6 30	18 57.21	-25 52.3	2.061	3.074	1.8	20.2	6 30	18 57.65	-14 55.7	0.994	2.003	4.9	17.5
7 10	18 48.34	-26 32.8	2.068	3.078	2.6	20.3	7 10	18 47.94	-14 54.2	1.008	2.016	5.1	17.6
7 20	18 39.94	-27 7.4	2.103	3.082	6.2	20.5	7 20	18 39.35	-15 2.0	1.044	2.030	9.6	17.9
7 30	18 32.88	-27 35.0	2.164	3.085	9.5	20.7	7 30	18 33.19	-15 17.2	1.101	2.045	14.3	18.2
8 9	18 27.80	-27 55.9	2.248	3.089	12.3	20.9	8 9	18 30.20	-15 37.0	1.177	2.060	18.4	18.5
199504	2006 <i>DT</i> ₁₁₂		7 4.1 219°93	0°2/ 4.1	17		100341	1995 <i>ST</i> ₄₄		7 4.1 306°97	3°8/ 4.6	17	
5 31	19 20.45	-22 55.0	2.085	2.945	12.4	22.2	5 31	19 18.17	-15 40.1	1.333	2.211	17.0	19.3
6 10	19 14.69	-23 3.8	2.002	2.938	9.3	22.0	6 10	19 14.29	-15 18.5	1.233	2.175	13.3	19.0
6 20	19 6.84	-23 14.4	1.942	2.931	5.6	21.7	6 20	19 7.35	-15 5.8	1.152	2.139	8.9	18.7
6 30	18 57.58	-23 24.8	1.909	2.923	1.7	21.4	6 30	18 57.95	-15 3.0	1.093	2.102	4.6	18.3
7 10	18 47.81	-23 33.0	1.903	2.915	2.4	21.5	7 10	18 47.23	-15 9.8	1.058	2.066	4.9	18.2
7 20	18 38.52	-23 38.1	1.926	2.907	6.4	21.7	7 20	18 36.69	-15 25.4	1.045	2.030	9.9	18.4
7 30	18 30.67	-23 39.9	1.974	2.898	10.1	21.9	7 30	18 27.93	-15 48.2	1.055	1.995	15.2	18.6
8 9	18 24.96	-23 38.9	2.045	2.888	13.3	22.1	8 9	18 22.24	-16 16.1	1.083	1.959	20.1	18.7
233337	2006 <i>CL</i> ₅₉		7 4.1 88°16	4°1/ 3.5	18		434748	2006 <i>HU</i> ₁₁		7 4.1 279°27	2°9/ 4.9	18	
5 31	19 23.62	-33 2.2	1.811	2.674	13.9	20.0	5 31	19 17.46	-14 16.9	1.847	2.704	13.9	20.4
6 10	19 17.23	-33 26.7	1.754	2.687	10.6	19.8	6 10	19 12.63	-14 20.7	1.768	2.699	10.7	20.2
6 20	19 8.39	-33 44.9	1.719	2.700	7.1	19.7	6 20	19 5.69	-14 34.1	1.711	2.693	7.0	19.9
6 30	18 58.00	-33 52.3	1.710	2.713	4.4	19.5	6 30	18 57.29	-14 56.3	1.679	2.687	3.6	19.7
7 10	18 47.30	-33 46.5	1.726	2.726	4.9	19.6	7 10	18 48.36	-15 25.8	1.674	2.681	3.7	19.7
7 20	18 37.51	-33 27.4	1.770	2.738	8.0	19.8	7 20	18 39.90	-16 0.4	1.694	2.675	7.1	19.9
7 30	18 29.70	-32 57.6	1.837	2.751	11.3	20.0	7 30	18 32.88	-16 37.8	1.740	2.670	10.9	20.1
8 9	18 24.56	-32 20.7	1.927	2.763	14.3	20.2	8 9	18 28.04	-17 15.8	1.808	2.664	14.2	20.3
96153	4651 <i>T-3</i>		7 4.1 356°10	6°9/ 5.9	1								

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
280093	2002 <i>EO</i> ₆₁	7 4.1 204°01	1°5/ 4.5 18				390247	2012 <i>XK</i> ₈₅	7 4.1 152°58	4°1/ 5.7 18			
5 31	19 19.86	-17 50.5	2.204	3.055	12.2	21.7	5 31	19 16.76	- 8 16.0	2.499	3.324	11.7	21.1
6 10	19 14.10	-17 53.0	2.121	3.051	9.2	21.5	6 10	19 11.51	- 8 17.5	2.425	3.331	9.3	21.0
6 20	19 6.45	-18 0.6	2.061	3.046	5.8	21.2	6 20	19 4.75	- 8 29.7	2.375	3.337	6.7	20.8
6 30	18 57.50	-18 12.3	2.028	3.040	2.3	21.0	6 30	18 57.00	- 8 52.5	2.351	3.343	4.5	20.7
7 10	18 48.10	-18 26.6	2.024	3.034	2.6	21.0	7 10	18 48.95	- 9 25.0	2.354	3.348	4.4	20.7
7 20	18 39.14	-18 42.3	2.047	3.027	6.2	21.2	7 20	18 41.30	-10 5.2	2.386	3.353	6.3	20.8
7 30	18 31.47	-18 58.5	2.097	3.020	9.6	21.4	7 30	18 34.71	-10 50.9	2.444	3.358	8.9	21.0
8 9	18 25.75	-19 14.5	2.170	3.012	12.7	21.6	8 9	18 29.72	-11 39.7	2.526	3.362	11.3	21.1
472084	2013 <i>YK</i> ₁₁₇	7 4.1 192°76	0°2/ 4.1 17				298337	2003 <i>FZ</i> ₁₃₀	7 4.1 131°96	5°8/ 5.6 18			
5 31	19 19.87	-22 9.1	2.315	3.170	11.5	22.1	5 31	19 16.38	- 4 6.7	2.607	3.414	11.8	21.0
6 10	19 14.07	-22 31.3	2.235	3.169	8.6	21.9	6 10	19 11.11	- 3 28.0	2.540	3.425	9.7	20.8
6 20	19 6.41	-22 56.4	2.178	3.166	5.2	21.7	6 20	19 4.44	- 3 0.5	2.495	3.435	7.6	20.7
6 30	18 57.49	-23 21.9	2.149	3.164	1.5	21.5	6 30	18 56.90	- 2 45.7	2.477	3.445	6.1	20.6
7 10	18 48.13	-23 45.7	2.149	3.160	2.2	21.5	7 10	18 49.13	- 2 44.1	2.485	3.455	6.0	20.6
7 20	18 39.20	-24 6.2	2.177	3.157	5.9	21.7	7 20	18 41.78	- 2 55.1	2.520	3.464	7.3	20.7
7 30	18 31.55	-24 22.7	2.231	3.152	9.2	22.0	7 30	18 35.46	- 3 16.9	2.581	3.473	9.3	20.9
8 9	18 25.82	-24 35.3	2.309	3.147	12.1	22.1	8 9	18 30.64	- 3 47.1	2.665	3.482	11.3	21.0
198369	2004 <i>VR</i> ₁₉	7 4.1 334°75	9°0/ 4.3 18				480907	2002 <i>SB</i> ₆₅	7 4.1 309°73	4°9/ 2.6 17			
5 31	19 16.45	- 6 38.8	1.438	2.291	17.4	19.0	5 31	19 19.47	-31 40.6	1.649	2.525	14.4	21.2
6 10	19 12.30	- 5 6.8	1.365	2.280	14.3	18.8	6 10	19 15.02	-32 41.6	1.558	2.498	11.2	20.9
6 20	19 5.67	- 3 47.4	1.312	2.269	11.3	18.6	6 20	19 7.66	-33 42.0	1.488	2.471	7.7	20.7
6 30	18 57.32	- 2 46.2	1.281	2.260	9.3	18.4	6 30	18 58.05	-34 35.3	1.442	2.444	5.1	20.5
7 10	18 48.36	- 2 7.4	1.273	2.250	9.5	18.4	7 10	18 47.36	-35 15.3	1.421	2.418	6.1	20.5
7 20	18 39.98	- 1 52.4	1.288	2.242	11.8	18.5	7 20	18 37.03	-35 38.2	1.425	2.392	9.6	20.6
7 30	18 33.33	- 1 59.8	1.324	2.235	15.0	18.7	7 30	18 28.54	-35 43.9	1.452	2.367	13.6	20.8
8 9	18 29.25	- 2 25.2	1.378	2.228	18.2	18.9	8 9	18 22.99	-35 35.0	1.498	2.342	17.3	20.9
500795	2013 <i>FN</i> ₁₁	7 4.1 3°55	4°2/ 3.6 17				469358	2001 <i>FO</i> ₁₉₁	7 4.1 252°76	6°9/ 2.4 18			
5 31	19 18.97	-29 24.9	1.000	1.904	19.2	20.9	5 31	19 25.69	-41 8.3	2.121	2.961	13.0	21.5
6 10	19 15.36	-29 57.0	0.946	1.903	14.5	20.6	6 10	19 19.14	-41 58.7	2.037	2.946	10.6	21.3
6 20	19 8.01	-30 26.1	0.909	1.902	9.3	20.3	6 20	19 9.86	-42 39.5	1.976	2.930	8.3	21.1
6 30	18 58.07	-30 45.5	0.892	1.903	4.8	20.1	6 30	18 58.62	-43 4.3	1.940	2.914	7.0	21.0
7 10	18 47.36	-30 50.0	0.897	1.905	5.8	20.1	7 10	18 46.65	-43 8.8	1.930	2.898	7.5	21.0
7 20	18 37.85	-30 38.4	0.923	1.908	10.8	20.4	7 20	18 35.29	-42 52.0	1.946	2.882	9.6	21.1
7 30	18 31.24	-30 13.3	0.969	1.912	15.8	20.7	7 30	18 25.82	-42 16.1	1.985	2.865	12.2	21.2
8 9	18 28.50	-29 39.6	1.032	1.917	20.2	21.0	8 9	18 19.14	-41 26.1	2.046	2.847	14.8	21.4
361023	2005 <i>WV</i> ₅₆	7 4.1 203°08	3°2/ 5.2 18				357799	2005 <i>TW</i> ₈₅	7 4.1 229°83	4°5/ 5.2 18			
5 31	19 15.44	-11 6.5	2.737	3.570	10.6	22.1	5 31	19 15.80	- 9 6.5	2.451	3.282	11.8	21.3
6 10	19 10.47	-11 3.1	2.653	3.566	8.3	22.0	6 10	19 10.90	- 8 40.2	2.368	3.276	9.3	21.2
6 20	19 4.10	-11 7.7	2.593	3.563	5.7	21.8	6 20	19 4.43	- 8 23.0	2.308	3.271	6.8	21.0
6 30	18 56.79	-11 20.1	2.560	3.558	3.6	21.6	6 30	18 56.94	- 8 15.8	2.275	3.265	4.8	20.9
7 10	18 49.15	-11 39.8	2.555	3.554	3.6	21.6	7 10	18 49.09	- 8 18.7	2.268	3.259	4.8	20.9
7 20	18 41.84	-12 5.4	2.578	3.549	5.7	21.8	7 20	18 41.59	- 8 31.1	2.289	3.253	6.8	21.0
7 30	18 35.47	-12 35.6	2.628	3.544	8.2	21.9	7 30	18 35.16	- 8 51.6	2.336	3.247	9.3	21.1
8 9	18 30.55	-13 8.6	2.703	3.539	10.6	22.1	8 9	18 30.32	- 9 18.2	2.406	3.241	11.8	21.3
303865	2005 <i>SZ</i> ₂₆₈	7 4.1 76°06	7°9/ 2.4 18				85692	1998 <i>RQ</i> ₅₇	7 4.1 338°77	11°0/ 7.5 18			
5 31	19 24.96	-45 30.6	2.213	3.041	12.9	19.7	5 31	19 14.30	+ 3 36.6	1.615	2.422	17.9	18.8
6 10	19 18.36	-46 23.7	2.156	3.049	10.8	19.6	6 10	19 10.50	+ 4 17.8	1.543	2.414	15.5	18.6
6 20	19 9.18	-47 3.7	2.121	3.057	9.0	19.5	6 20	19 4.51	+ 4 34.9	1.488	2.407	13.2	18.4
6 30	18 58.33	-47 24.6	2.111	3.065	7.9	19.4	6 30	18 57.01	+ 4 23.6	1.454	2.400	11.5	18.3
7 10	18 47.07	-47 23.5	2.126	3.072	8.3	19.5	7 10	18 48.96	+ 3 42.6	1.442	2.394	11.1	18.3
7 20	18 36.68	-47 0.3	2.165	3.080	9.8	19.6	7 20	18 41.37	+ 2 34.0	1.453	2.388	12.2	18.3
7 30	18 28.31	-46 18.2	2.228	3.088	11.8	19.7	7 30	18 35.28	+ 1 3.3	1.485	2.383	14.5	18.5
8 9	18 22.69	-45 22.4	2.311	3.096	13.8	19.9	8 9	18 31.44	- 0 42.1	1.538	2.379	17.0	18.6
157580	2005 <i>UG</i> ₂₉₆	7 4.1 153°14	0°5/ 4.3 17				39195	2000 <i>WV</i> ₁₈₉	7 4.1 16°21	3°5/ 3.7 18			
5 31	19 21.18	-20 48.3	2.055	2.912	12.7	21.3	5 31	19 20.44	-28 35.7	1.127	2.023	18.1	18.5
6 10	19 15.12	-20 54.0	1.985	2.919	9.5	21.1	6 10	19 16.07	-29 4.2	1.073	2.025	13.7	18.3
6 20	19 7.06	-21 2.8	1.938	2.925	5.8	20.9	6 20	19 8.28	-29 30.6	1.037	2.029	8.6	18.0
6 30	18 57.69	-21 13.1	1.918	2.932	1.8	20.7	6 30	18 58.16	-29 49.0	1.022	2.033	4.1	17.8
7 10	18 47.96	-21 23.2	1.925	2.937	2.4	20.7	7 10	18 47.42	-29 54.8	1.030	2.039	5.1	17.8
7 20	18 38.82	-21 31.9	1.961	2.942	6.3	21.0	7 20	18 37.81	-29 47.1	1.061	2.045	9.9	18.1
7 30	18 31.17	-21 39.0	2.022	2.947	9.9	21.2	7 30	18 30.86	-29 28.0	1.113	2.052	14.7	18.4
8 9	18 25.65	-21 44.4	2.107	2.951	12.9	21.4	8 9	18 27.47	-29 1.3	1.183	2.059	18.8	18.7
383299	2006 <i>FK</i> ₂₈	7 4.1 98°84	2°4/ 3.6 17				314552	2005 <i>YS</i> ₁₂₅	7 4.1 260°78	0°7/ 3.9 18			
5 31	19 20.68	-27 39.4	1.856	2.724	13.4	21.2	5 31	19 17.01	-22 42.8	2.452	3.310	10.9	21.0
6 10	19 15.09	-28 12.8	1.790	2.729	10.0	21.0	6 10	19 12.00	-23 25.2	2.365	3.301	8.1	20.8
6 20	19 7.19	-28 45.4	1.747	2.735	6.2	20.8	6 20	19 5.22	-24 11.2	2.303	3.292	4.9	20.6
6 30	18 57.75	-29 13.1	1.730	2.740	2.8	20.6	6 30	18 57.20	-24 57.9	2.268	3.282	1.6	20.4
7 10	18 47.87	-29 32.8	1.739	2.746	3.7	20.6	7 10	18 48.69	-25 42.5	2.262	3.273	2.3	20.4
7 20	18 38.66	-29 43.0	1.775	2.751	7.3	20.9	7 20	18 40.50	-26 22.7	2.284	3.263	5.7	20.6
7 30	18 31.16	-29 44.1	1.835	2.757	10.9	21.1	7 30	18 33.42	-26 57.0	2.333	3.253	8.9	20.8
8 9	18 26.10	-29 38.0	1.918	2.762	14.0	21.3	8 9	18 28.10	-27 25.2	2.405	3.243	11.7	21.0
335559	2006 <i>BL</i> ₂₂₀	7 4.1 98°54	2°1/ 3.8 17				86398	2000 <i>AV</i> ₁₃₉					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
356887	2011 <i>WF</i> ₁₄₈		7 4.1 241°21	2°6/ 4.9 18			313972	2004 <i>TL</i> ₆		7 4.2 314°26	2°1/ 4.9 18		
5 31	19 16.19	-13 54.3	2.380	3.226	11.6	21.4	5 31	19 15.30	-14 59.2	1.946	2.806	13.2	20.0
6 10	19 11.29	-13 59.4	2.295	3.219	8.9	21.2	6 10	19 11.15	-15 24.0	1.852	2.785	10.1	19.7
6 20	19 4.74	-14 12.3	2.233	3.212	5.9	21.0	6 20	19 4.94	-15 59.3	1.780	2.764	6.5	19.5
6 30	18 57.05	-14 32.3	2.198	3.204	3.1	20.9	6 30	18 57.21	-16 43.8	1.733	2.744	3.0	19.2
7 10	18 48.95	-14 58.3	2.190	3.196	3.2	20.8	7 10	18 48.81	-17 34.9	1.713	2.723	3.1	19.2
7 20	18 41.19	-15 28.6	2.210	3.188	6.0	21.0	7 20	18 40.70	-18 29.7	1.720	2.703	6.8	19.3
7 30	18 34.53	-16 1.6	2.257	3.180	9.0	21.2	7 30	18 33.85	-19 25.1	1.752	2.684	10.7	19.5
8 9	18 29.55	-16 35.6	2.327	3.172	11.8	21.4	8 9	18 29.04	-20 18.6	1.806	2.665	14.1	19.7
249215	2008 <i>EO</i> ₁₉		7 4.2 247°91	1°4/ 4.5 18			325112	2008 <i>EM</i> ₄₄		7 4.2 8°81	2°3/ 3.8 17		
5 31	19 16.88	-18 16.6	2.344	3.199	11.4	21.5	5 31	19 17.55	-26 20.4	1.138	2.036	17.8	20.2
6 10	19 11.84	-18 17.0	2.259	3.191	8.6	21.3	6 10	19 13.85	-26 43.3	1.082	2.037	13.3	19.9
6 20	19 5.08	-18 22.0	2.198	3.183	5.4	21.1	6 20	19 6.93	-27 6.6	1.045	2.040	8.2	19.6
6 30	18 57.15	-18 30.6	2.163	3.175	2.1	20.8	6 30	18 57.82	-27 25.6	1.030	2.043	3.2	19.3
7 10	18 48.81	-18 41.6	2.156	3.167	2.4	20.8	7 10	18 48.08	-27 36.5	1.037	2.048	4.3	19.4
7 20	18 40.85	-18 54.1	2.177	3.158	5.8	21.0	7 20	18 39.38	-27 37.4	1.067	2.054	9.4	19.7
7 30	18 34.05	-19 7.2	2.224	3.150	9.1	21.2	7 30	18 33.15	-27 29.4	1.118	2.061	14.2	20.0
8 9	18 29.02	-19 20.3	2.295	3.141	11.9	21.4	8 9	18 30.26	-27 14.8	1.187	2.069	18.4	20.3
235901	2005 <i>CV</i> ₈₀		7 4.2 90°48	0°0/ 3.9 18 R			146884	2002 <i>CL</i> ₂₄		7 4.2 42°96	2°2/ 4.3 18		
5 31	19 19.49	-19 33.0	1.911	2.773	13.3	19.7	5 31	19 19.89	-19 17.9	1.778	2.642	14.0	18.6
6 10	19 14.07	-20 23.0	1.846	2.783	9.9	19.5	6 10	19 14.16	-18 31.3	1.727	2.663	10.5	18.4
6 20	19 6.55	-21 19.7	1.804	2.793	6.0	19.3	6 20	19 6.44	-17 48.0	1.698	2.685	6.6	18.2
6 30	18 57.61	-22 19.4	1.789	2.803	1.8	19.0	6 30	18 57.55	-17 8.7	1.696	2.706	2.9	18.0
7 10	18 48.22	-23 18.1	1.801	2.813	2.5	19.1	7 10	18 48.53	-16 34.2	1.720	2.729	3.3	18.1
7 20	18 39.40	-24 12.4	1.841	2.823	6.6	19.4	7 20	18 40.36	-16 5.1	1.770	2.751	6.9	18.4
7 30	18 32.10	-25 0.3	1.906	2.833	10.3	19.6	7 30	18 33.87	-15 41.9	1.846	2.774	10.4	18.6
8 9	18 27.01	-25 40.9	1.994	2.842	13.4	19.8	8 9	18 29.62	-15 24.4	1.944	2.797	13.5	18.9
503896	2001 <i>UL</i> ₂₂₀		7 4.2 211°36	4°6/ 4.9 17			311509	2005 <i>WS</i> ₁₄₀		7 4.2 188°22	0°2/ 4.1 18		
5 31	19 19.91	-9 44.4	2.302	3.130	12.5	23.0	5 31	19 17.77	-24 0.2	2.486	3.344	10.8	21.2
6 10	19 14.06	-9 13.6	2.215	3.122	9.9	22.8	6 10	19 12.39	-23 53.8	2.408	3.343	8.0	21.0
6 20	19 6.42	-8 51.6	2.151	3.114	7.2	22.7	6 20	19 5.36	-23 47.5	2.355	3.343	4.8	20.8
6 30	18 57.57	-8 39.4	2.113	3.105	5.0	22.5	6 30	18 57.27	-23 40.0	2.329	3.343	1.5	20.6
7 10	18 48.29	-8 37.5	2.103	3.095	5.0	22.5	7 10	18 48.87	-23 30.5	2.331	3.342	2.1	20.6
7 20	18 39.38	-8 45.3	2.121	3.085	7.2	22.6	7 20	18 40.94	-23 18.8	2.361	3.342	5.4	20.8
7 30	18 31.65	-9 1.7	2.165	3.073	10.1	22.8	7 30	18 34.22	-23 5.2	2.418	3.341	8.5	21.0
8 9	18 25.72	-9 24.7	2.232	3.061	12.8	22.9	8 9	18 29.24	-22 50.6	2.498	3.340	11.2	21.2
146034	2000 <i>DT</i> ₈₇		7 4.2 188°46	0°3/ 4.2 18			440968	2007 <i>BG</i> ₇₉		7 4.2 311°53	2°5/ 3.8 18		
5 31	19 21.85	-20 23.8	1.988	2.845	13.1	20.9	5 31	19 19.19	-30 3.7	2.109	2.973	12.2	20.7
6 10	19 15.83	-20 48.0	1.910	2.844	9.8	20.7	6 10	19 13.87	-30 9.6	2.029	2.965	9.2	20.5
6 20	19 7.64	-21 17.0	1.855	2.843	6.0	20.5	6 20	19 6.45	-30 11.8	1.971	2.957	5.9	20.3
6 30	18 57.95	-21 48.4	1.827	2.841	1.8	20.2	6 30	18 57.63	-30 7.6	1.939	2.948	2.9	20.1
7 10	18 47.75	-22 19.2	1.827	2.839	2.5	20.2	7 10	18 48.36	-29 55.0	1.934	2.940	3.5	20.1
7 20	18 38.05	-22 47.4	1.855	2.836	6.6	20.5	7 20	18 39.66	-29 34.1	1.956	2.933	6.8	20.3
7 30	18 29.85	-23 11.8	1.908	2.832	10.4	20.7	7 30	18 32.45	-29 6.1	2.004	2.925	10.1	20.5
8 9	18 23.88	-23 32.3	1.985	2.828	13.6	20.9	8 9	18 27.43	-28 33.4	2.074	2.918	13.1	20.7
206114	2002 <i>RJ</i> ₂₃₇		7 4.2 326°13	2°4/ 3.6 18			510688	2012 <i>UL</i> ₁₁₀		7 4.2 239°64	1°6/ 3.7 17		
5 31	19 18.99	-27 43.4	1.709	2.584	14.0	20.8	5 31	19 19.54	-25 39.0	2.026	2.891	12.6	21.2
6 10	19 14.15	-28 9.6	1.634	2.577	10.5	20.6	6 10	19 14.20	-26 11.0	1.948	2.886	9.4	21.0
6 20	19 6.81	-28 35.1	1.581	2.570	6.6	20.3	6 20	19 6.71	-26 44.1	1.892	2.881	5.8	20.7
6 30	18 57.74	-28 55.9	1.552	2.563	3.0	20.1	6 30	18 57.72	-27 15.1	1.863	2.876	2.2	20.5
7 10	18 48.06	-29 8.8	1.549	2.557	3.8	20.1	7 10	18 48.21	-27 40.7	1.861	2.871	3.0	20.5
7 20	18 39.00	-29 12.3	1.572	2.551	7.8	20.4	7 20	18 39.18	-27 59.2	1.887	2.865	6.8	20.8
7 30	18 31.71	-29 6.8	1.618	2.545	11.7	20.6	7 30	18 31.63	-28 10.2	1.937	2.860	10.3	21.0
8 9	18 27.01	-28 54.5	1.686	2.540	15.2	20.8	8 9	18 26.29	-28 14.6	2.010	2.854	13.5	21.2
508972	2004 <i>WA</i> ₇		7 4.2 213°48	1°8/ 4.4 18			180363	2003 <i>YZ</i> ₉₄		7 4.2 322°84	2°8/ 3.2 18		
5 31	19 20.51	-18 24.7	2.229	3.079	12.1	22.0	5 31	19 15.64	-22 50.2	1.098	1.999	18.0	19.3
6 10	19 14.58	-18 4.7	2.143	3.073	9.1	21.8	6 10	19 13.10	-24 13.0	1.014	1.972	13.7	19.0
6 20	19 6.76	-17 48.0	2.082	3.066	5.8	21.6	6 20	19 7.04	-25 50.8	0.949	1.945	8.6	18.6
6 30	18 57.68	-17 34.4	2.047	3.058	2.5	21.4	6 30	18 58.06	-27 36.7	0.906	1.919	3.5	18.2
7 10	18 48.17	-17 23.4	2.041	3.050	2.8	21.4	7 10	18 47.51	-29 20.5	0.885	1.894	5.3	18.3
7 20	18 39.13	-17 14.9	2.063	3.041	6.2	21.6	7 20	18 37.24	-30 52.3	0.886	1.871	11.1	18.5
7 30	18 31.38	-17 8.7	2.111	3.032	9.7	21.8	7 30	18 29.25	-32 6.0	0.907	1.849	16.9	18.7
8 9	18 25.58	-17 4.9	2.182	3.023	12.7	21.9	8 9	18 25.08	-33 0.3	0.945	1.828	21.9	18.9
242880	2006 <i>HC</i> ₁₁₄		7 4.2 12°34	2°7/ 3.5 17			446150	2013 <i>EO</i> ₁₀₂		7 4.2 205°70	3°3/ 5.3 18		
5 31	19 20.14	-27 47.4	1.788	2.658	13.7	20.8	5 31	19 15.38	-11 20.8	2.504	3.342	11.3	21.4
6 10	19 14.87	-28 28.2	1.718	2.659	10.3	20.6	6 10	19 10.60	-11 22.1	2.424	3.340	8.8	21.2
6 20	19 7.19	-29 8.8	1.671	2.659	6.5	20.3	6 20	19 4.29	-11 32.2	2.367	3.339	6.1	21.1
6 30	18 57.84	-29 44.6	1.649	2.659	3.1	20.1	6 30	18 56.96	-11 50.8	2.336	3.337	3.7	20.9
7 10	18 47.95	-30 11.8	1.654	2.660	3.9	20.2	7 10	18 49.30	-12 16.9	2.334	3.335	3.6	20.9
7 20	18 38.68	-30 28.5	1.684	2.660	7.6	20.4	7 20	18 41.98	-12 49.2	2.359	3.332	5.9	21.0
7 30	18 31.16	-30 34.8	1.739	2.661	11.3	20.6	7 30	18 35.70	-13 25.6	2.410	3.330	8.7	21.2
8 9	18 26.16	-30 32.5	1.816	2.662	14.6	20.8	8 9	18 30.99	-14 4.3	2.485	3.328	11.3	21.4
228629	2002 <i>CH</i> ₂₁₅		7 4.2 139°71	1°5/ 3.8 17			128602	Careyparish		7 4.2 335°88			

EPHEMERIDES

7 4.2

7 4.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
519945	2013 <i>RA</i> ₁₀₇		7 4.2 296°27	1.9°/ 3.6	17		185842	2000 <i>CH</i> ₉₈		7 4.2 117°52	0°1/ 4.2	17	
5 31	19 19.96	-24 17.0	1.482	2.362	15.5	21.3	5 31	19 22.56	-21 43.9	1.721	2.586	14.4	21.5
6 10	19 15.36	-25 6.8	1.400	2.347	11.7	21.0	6 10	19 16.48	-21 52.7	1.659	2.598	10.7	21.2
6 20	19 7.86	-26 2.0	1.340	2.332	7.2	20.7	6 20	19 8.06	-22 4.7	1.620	2.609	6.5	21.0
6 30	18 58.17	-26 57.5	1.304	2.317	2.7	20.4	6 30	18 58.13	-22 17.5	1.606	2.620	2.0	20.8
7 10	18 47.54	-27 47.9	1.292	2.302	3.9	20.4	7 10	18 47.84	-22 28.9	1.619	2.631	2.7	20.8
7 20	18 37.39	-28 28.8	1.306	2.288	8.7	20.7	7 20	18 38.31	-22 37.6	1.659	2.642	7.1	21.1
7 30	18 29.16	-28 58.7	1.343	2.274	13.3	20.9	7 30	18 30.59	-22 43.4	1.723	2.652	11.0	21.4
8 9	18 23.91	-29 18.2	1.400	2.260	17.4	21.1	8 9	18 25.37	-22 46.9	1.810	2.661	14.4	21.6
140666	2001 <i>UO</i> ₄₆		7 4.2 225°28	0°2/ 4.2	18		347438	2012 <i>TA</i> ₁₅₆		7 4.2 6°74	0°6/ 4.3	17	
5 31	19 17.88	-21 17.8	2.406	3.262	11.1	20.1	5 31	19 16.36	-20 52.3	1.313	2.201	16.5	20.5
6 10	19 12.61	-21 32.2	2.321	3.255	8.3	19.9	6 10	19 12.54	-20 57.6	1.251	2.202	12.3	20.2
6 20	19 5.59	-21 49.6	2.260	3.248	5.1	19.7	6 20	19 5.97	-21 8.5	1.210	2.203	7.6	20.0
6 30	18 57.38	-22 8.3	2.227	3.241	1.5	19.4	6 30	18 57.56	-21 22.9	1.192	2.206	2.4	19.7
7 10	18 48.74	-22 26.5	2.221	3.233	2.1	19.4	7 10	18 48.60	-21 38.1	1.197	2.210	3.1	19.7
7 20	18 40.48	-22 42.9	2.244	3.226	5.6	19.7	7 20	18 40.46	-21 52.3	1.226	2.214	8.2	20.0
7 30	18 33.39	-22 56.8	2.294	3.217	8.9	19.8	7 30	18 34.36	-22 4.4	1.277	2.220	12.8	20.3
8 9	18 28.08	-23 8.1	2.367	3.209	11.8	20.0	8 9	18 31.12	-22 14.0	1.348	2.226	16.8	20.6
115139	2003 <i>SB</i> ₅₉		7 4.2 259°51	1°8/ 3.9	18		128653	2004 <i>RT</i> ₄₅		7 4.2 325°99	1°2/ 3.9	18	
5 31	19 22.21	-28 20.0	1.900	2.764	13.3	19.6	5 31	19 16.65	-25 3.1	1.896	2.768	12.9	19.8
6 10	19 16.27	-28 14.6	1.819	2.756	10.0	19.3	6 10	19 12.22	-25 21.1	1.813	2.756	9.7	19.5
6 20	19 7.98	-28 5.6	1.760	2.748	6.2	19.1	6 20	19 5.60	-25 40.4	1.753	2.743	5.9	19.3
6 30	18 58.11	-27 50.7	1.728	2.740	2.5	18.8	6 30	18 57.45	-25 58.1	1.717	2.731	2.0	19.0
7 10	18 47.75	-27 28.3	1.723	2.732	3.2	18.9	7 10	18 48.72	-26 11.9	1.709	2.720	2.9	19.0
7 20	18 38.03	-26 58.8	1.744	2.724	7.1	19.1	7 20	18 40.47	-26 20.2	1.726	2.708	6.9	19.3
7 30	18 30.01	-26 24.0	1.791	2.715	10.9	19.3	7 30	18 33.71	-26 22.7	1.768	2.698	10.7	19.5
8 9	18 24.45	-25 46.4	1.860	2.707	14.3	19.5	8 9	18 29.20	-26 20.5	1.832	2.688	14.1	19.7
243890	2001 <i>AD</i> ₃₆		7 4.2 231°86	3°8/ 3.5	18		404633	2014 <i>HP</i> ₁₂		7 4.2 104°98	0°9/ 4.4	18	
5 31	19 24.18	-33 42.7	2.242	3.093	12.0	21.0	5 31	19 17.49	-19 46.1	2.160	3.020	12.1	21.5
6 10	19 17.61	-34 4.2	2.155	3.080	9.3	20.8	6 10	19 12.40	-19 49.1	2.086	3.021	9.0	21.3
6 20	19 8.77	-34 20.1	2.091	3.068	6.3	20.6	6 20	19 5.49	-19 56.0	2.035	3.023	5.6	21.1
6 30	18 58.36	-34 26.4	2.053	3.054	4.0	20.5	6 30	18 57.37	-20 5.5	2.011	3.024	1.9	20.9
7 10	18 47.39	-34 20.3	2.043	3.040	4.6	20.5	7 10	18 48.88	-20 16.2	2.014	3.026	2.3	20.9
7 20	18 36.96	-34 1.4	2.061	3.026	7.3	20.6	7 20	18 40.88	-20 27.0	2.045	3.027	6.0	21.1
7 30	18 28.11	-33 31.2	2.105	3.011	10.5	20.8	7 30	18 34.20	-20 37.2	2.102	3.029	9.4	21.3
8 9	18 21.58	-32 53.2	2.172	2.995	13.3	20.9	8 9	18 29.43	-20 46.5	2.181	3.030	12.4	21.5
125156	2001 <i>UV</i> ₈₈		7 4.2 120°06	3°0/ 4.8	17		107307	2001 <i>CE</i> ₈		7 4.2 96°12	2°6/ 3.7	17	
5 31	19 22.25	-15 10.2	1.421	2.288	16.8	19.9	5 31	19 24.96	-27 54.1	1.539	2.410	15.5	20.1
6 10	19 16.63	-15 13.2	1.360	2.296	12.8	19.6	6 10	19 18.55	-28 20.7	1.485	2.426	11.6	19.9
6 20	19 8.32	-15 27.2	1.319	2.303	8.3	19.4	6 20	19 9.42	-28 45.2	1.453	2.441	7.2	19.7
6 30	18 58.23	-15 50.9	1.301	2.311	3.9	19.2	6 30	18 58.55	-29 3.2	1.445	2.457	3.2	19.5
7 10	18 47.62	-16 21.7	1.309	2.318	4.0	19.2	7 10	18 47.32	-29 11.4	1.464	2.472	4.0	19.6
7 20	18 37.82	-16 56.7	1.342	2.325	8.3	19.4	7 20	18 37.09	-29 9.1	1.508	2.486	8.1	19.8
7 30	18 30.04	-17 33.4	1.398	2.332	12.7	19.7	7 30	18 29.05	-28 57.7	1.576	2.501	12.1	20.1
8 9	18 25.08	-18 9.6	1.475	2.338	16.5	20.0	8 9	18 23.94	-28 40.1	1.665	2.515	15.5	20.4
56820	2000 <i>QK</i> ₈		7 4.2 29°67	3°5/ 3.7	18		498457	2008 <i>BB</i> ₄₈		7 4.2 218°00	1°1/ 4.4	17	
5 31	19 21.02	-32 38.2	1.966	2.830	13.0	16.9	5 31	19 22.13	-19 18.9	1.788	2.648	14.2	22.6
6 10	19 15.30	-32 49.9	1.899	2.832	9.9	16.7	6 10	19 16.31	-19 26.0	1.706	2.641	10.7	22.3
6 20	19 7.32	-32 55.8	1.853	2.835	6.5	16.5	6 20	19 8.10	-19 38.7	1.647	2.634	6.6	22.1
6 30	18 57.89	-32 52.4	1.834	2.839	3.8	16.3	6 30	18 58.21	-19 55.0	1.613	2.626	2.3	21.8
7 10	18 48.10	-32 37.8	1.840	2.842	4.4	16.4	7 10	18 47.69	-20 12.9	1.606	2.618	2.8	21.8
7 20	18 39.05	-32 12.0	1.874	2.846	7.4	16.6	7 20	18 37.69	-20 30.5	1.626	2.609	7.2	22.1
7 30	18 31.74	-31 37.2	1.932	2.849	10.6	16.8	7 30	18 29.32	-20 47.0	1.671	2.599	11.4	22.3
8 9	18 26.82	-30 56.6	2.013	2.853	13.6	17.0	8 9	18 23.39	-21 1.9	1.738	2.589	14.9	22.5
416445	2003 <i>UY</i> ₄₀₀		7 4.2 272°66	0°5/ 4.1	17		45836	2000 <i>RT</i> ₂₁		7 4.2 292°41	2°6/ 3.9	17	
5 31	19 23.06	-24 19.8	1.530	2.403	15.5	21.9	5 31	19 23.29	-28 18.8	1.357	2.238	16.6	19.0
6 10	19 17.55	-24 14.7	1.441	2.384	11.7	21.6	6 10	19 17.94	-28 27.3	1.285	2.230	12.5	18.7
6 20	19 9.12	-24 9.9	1.374	2.365	7.2	21.3	6 20	19 9.41	-28 32.9	1.232	2.223	7.9	18.4
6 30	18 58.54	-24 2.8	1.331	2.345	2.2	20.9	6 30	18 58.64	-28 31.3	1.203	2.215	3.3	18.2
7 10	18 47.09	-23 51.5	1.314	2.326	3.2	20.9	7 10	18 47.11	-28 19.5	1.198	2.207	4.2	18.2
7 20	18 36.19	-23 35.3	1.322	2.306	8.3	21.2	7 20	18 36.43	-27 57.0	1.217	2.200	9.1	18.4
7 30	18 27.24	-23 15.5	1.354	2.286	13.1	21.4	7 30	18 28.10	-27 26.2	1.259	2.193	13.8	18.7
8 9	18 21.25	-22 54.0	1.406	2.266	17.3	21.6	8 9	18 23.05	-26 50.8	1.321	2.186	17.9	18.9
27781	1992 <i>EE</i> ₁₉		7 4.2 252°67	0°7/ 4.4	18		338646	2003 <i>SZ</i> ₃₁₆		7 4.2 297°93	1°7/ 3.9	16	
5 31	19 22.17	-19 19.7	1.592	2.459	15.3	18.5	5 31	19 20.61	-27 15.8	1.741	2.612	14.0	20.5
6 10	19 16.75	-19 42.5	1.505	2.444	11.6	18.2	6 10	19 15.32	-27 20.6	1.661	2.603	10.5	20.2
6 20	19 8.59	-20 13.1	1.439	2.428	7.2	17.9	6 20	19 7.54	-27 23.7	1.604	2.593	6.5	20.0
6 30	18 58.39	-20 48.8	1.398	2.412	2.3	17.6	6 30	18 58.04	-27 22.0	1.572	2.584	2.5	19.7
7 10	18 47.29	-21 26.4	1.383	2.395	3.0	17.6	7 10	18 47.96	-27 13.6	1.565	2.575	3.3	19.8
7 20	18 36.62	-22 2.4	1.394	2.378	8.0	17.9	7 20	18 38.51	-26 57.8	1.585	2.567	7.5	20.0
7 30	18 27.71	-22 35.1	1.429	2.360	12.7	18.1	7 30	18 30.84	-26 35.9	1.630	2.558	11.5	20.2
8 9	18 21.55	-23 3.5	1.485	2.342	16.7	18.3	8 9	18 25.73	-26 10.2	1.696	2.550	15.1	20.4
156338	2001 <i>XW</i> ₁₃₈		7 4.2 125°32	0°7/ 3.9	17		504952	2011 <i>FA</i> _{5</}					

EPHEMERIDES

7 4.2

7 4.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
41534	2000 <i>RX</i> ₉		7 4.2 138°18	4.4/ 4.9	18		128993	2004 <i>TN</i> ₂₂₂		7 4.2 280°85	2.5/ 5.0	18	
5 31	19 21.15	-13 5.3	1.546	2.404	16.1	18.3	5 31	19 16.17	-13 34.4	2.511	3.354	11.2	20.5
6 10	19 15.63	-12 40.2	1.479	2.408	12.5	18.1	6 10	19 11.40	-13 43.5	2.406	3.328	8.6	20.3
6 20	19 7.67	-12 25.7	1.434	2.412	8.5	17.9	6 20	19 4.95	-14 0.7	2.325	3.302	5.8	20.1
6 30	18 58.07	-12 22.3	1.412	2.416	5.0	17.7	6 30	18 57.29	-14 25.5	2.270	3.276	3.1	19.9
7 10	18 47.99	-12 29.6	1.416	2.420	5.0	17.7	7 10	18 49.09	-14 56.6	2.243	3.249	3.1	19.8
7 20	18 38.62	-12 46.1	1.446	2.423	8.5	17.9	7 20	18 41.08	-15 32.5	2.245	3.223	5.9	20.0
7 30	18 31.08	-13 10.0	1.499	2.427	12.4	18.1	7 30	18 34.04	-16 11.2	2.273	3.196	9.0	20.1
8 9	18 26.11	-13 38.5	1.572	2.430	15.9	18.4	8 9	18 28.58	-16 51.2	2.325	3.169	11.9	20.3
253655	2003 <i>UG</i> ₁₅₅		7 4.2 229°84	2.0/ 4.6	18		440751	2006 <i>DW</i> ₃₂		7 4.2 227°67	17.7/ 9.8	17	
5 31	19 21.73	-16 46.2	1.807	2.663	14.2	21.6	5 31	19 21.29	+14 13.8	1.326	2.081	23.5	21.3
6 10	19 16.03	-16 52.4	1.721	2.653	10.8	21.4	6 10	19 16.29	+15 25.5	1.259	2.074	21.6	21.1
6 20	19 7.96	-17 6.2	1.657	2.641	6.9	21.1	6 20	19 8.40	+16 1.5	1.207	2.067	19.7	21.0
6 30	18 58.20	-17 26.6	1.618	2.630	3.0	20.8	6 30	18 58.40	+15 52.5	1.171	2.060	18.3	20.9
7 10	18 47.75	-17 51.4	1.607	2.617	3.2	20.8	7 10	18 47.55	+14 54.1	1.152	2.052	17.7	20.8
7 20	18 37.75	-18 18.7	1.622	2.604	7.3	21.1	7 20	18 37.26	+13 7.9	1.152	2.043	18.3	20.8
7 30	18 29.30	-18 46.7	1.663	2.590	11.4	21.3	7 30	18 28.94	+10 42.2	1.172	2.035	20.0	20.9
8 9	18 23.22	-19 14.2	1.726	2.576	15.0	21.5	8 9	18 23.57	+7 49.9	1.209	2.025	22.1	21.0
398063	2009 <i>HQ</i> ₅₂		7 4.2 154°94	1.3/ 3.8	17		377914	2006 <i>EP</i> ₇		7 4.2 150°76	1.0/ 3.9	17	
5 31	19 19.23	-25 43.3	2.295	3.154	11.5	21.6	5 31	19 22.17	-25 22.8	2.376	3.228	11.4	21.8
6 10	19 13.68	-26 8.2	2.222	3.158	8.5	21.4	6 10	19 15.71	-25 35.6	2.306	3.239	8.4	21.6
6 20	19 6.27	-26 33.4	2.174	3.161	5.2	21.2	6 20	19 7.42	-25 47.9	2.261	3.248	5.1	21.5
6 30	18 57.63	-26 56.1	2.152	3.165	1.9	21.0	6 30	18 57.98	-25 57.7	2.244	3.257	1.7	21.2
7 10	18 48.61	-27 14.1	2.158	3.168	2.6	21.1	7 10	18 48.24	-26 3.1	2.255	3.265	2.4	21.3
7 20	18 40.09	-27 26.1	2.192	3.170	6.0	21.3	7 20	18 39.06	-26 3.5	2.295	3.273	5.8	21.5
7 30	18 32.90	-27 32.0	2.253	3.173	9.2	21.5	7 30	18 31.25	-25 59.2	2.362	3.280	8.9	21.7
8 9	18 27.66	-27 32.8	2.336	3.175	12.0	21.7	8 9	18 25.40	-25 51.4	2.453	3.286	11.7	21.9
50170	2000 <i>AT</i> ₁₅₈		7 4.2 19°87	1.3/ 3.9	18		324400	2006 <i>SQ</i> ₁₀₈		7 4.2 72°04	2.2/ 4.6	17	
5 31	19 18.53	-23 30.6	1.196	2.089	17.5	18.2	5 31	19 20.89	-17 38.1	1.457	2.329	16.2	21.0
6 10	19 14.43	-24 5.8	1.141	2.094	13.0	18.0	6 10	19 15.57	-17 31.1	1.397	2.337	12.2	20.8
6 20	19 7.26	-24 45.5	1.106	2.100	7.9	17.7	6 20	19 7.68	-17 31.6	1.357	2.345	7.7	20.6
6 30	18 58.00	-25 24.9	1.092	2.107	2.6	17.4	6 30	18 58.10	-17 38.5	1.341	2.353	3.2	20.3
7 10	18 48.13	-25 59.1	1.102	2.114	3.7	17.5	7 10	18 48.08	-17 50.1	1.351	2.362	3.5	20.4
7 20	18 39.22	-26 25.1	1.136	2.123	8.9	17.8	7 20	18 38.88	-18 4.8	1.386	2.370	8.0	20.6
7 30	18 32.67	-26 42.0	1.191	2.132	13.7	18.1	7 30	18 31.65	-18 21.2	1.444	2.379	12.3	20.9
8 9	18 29.32	-26 51.0	1.265	2.142	17.8	18.4	8 9	18 27.14	-18 38.2	1.522	2.387	16.0	21.2
42743	1998 <i>RP</i> ₇₃		7 4.2 26°45	1.2/ 4.4	18		304533	2006 <i>UJ</i> ₂₇₀		7 4.2 276°67	2.0/ 4.5	18	
5 31	19 18.71	-19 58.2	1.715	2.585	14.2	18.9	5 31	19 17.94	-17 58.1	2.128	2.985	12.3	20.9
6 10	19 13.69	-19 49.5	1.648	2.588	10.7	18.7	6 10	19 12.85	-17 38.1	2.041	2.973	9.4	20.6
6 20	19 6.43	-19 45.0	1.602	2.591	6.6	18.5	6 20	19 5.86	-17 22.0	1.977	2.962	6.0	20.4
6 30	18 57.70	-19 43.6	1.581	2.594	2.4	18.2	6 30	18 57.56	-17 9.8	1.939	2.950	2.7	20.2
7 10	18 48.55	-19 44.0	1.586	2.598	2.8	18.3	7 10	18 48.80	-17 1.1	1.929	2.938	3.0	20.2
7 20	18 40.06	-19 45.4	1.617	2.601	7.1	18.5	7 20	18 40.45	-16 55.5	1.945	2.926	6.4	20.4
7 30	18 33.25	-19 47.5	1.673	2.606	11.0	18.8	7 30	18 33.39	-16 52.9	1.988	2.914	9.9	20.6
8 9	18 28.79	-19 50.0	1.750	2.610	14.4	19.0	8 9	18 28.28	-16 52.9	2.053	2.902	13.0	20.7
173142	1995 <i>SJ</i> ₅₇		7 4.2 147°63	0.6/ 4.3	17		315087	2007 <i>DL</i> ₈₃		7 4.2 329°39	3.9/ 5.5	18	
5 31	19 23.09	-20 36.4	1.845	2.704	13.9	21.7	5 31	19 14.94	-10 22.3	2.111	2.955	12.9	20.3
6 10	19 16.78	-20 41.9	1.778	2.713	10.3	21.5	6 10	19 10.60	-10 24.9	2.030	2.949	10.1	20.1
6 20	19 8.23	-20 51.1	1.734	2.722	6.3	21.3	6 20	19 4.48	-10 38.7	1.972	2.944	7.1	19.9
6 30	18 58.23	-21 2.1	1.716	2.729	2.0	21.0	6 30	18 57.14	-11 3.9	1.939	2.939	4.5	19.8
7 10	18 47.83	-21 13.0	1.725	2.736	2.6	21.0	7 10	18 49.38	-11 39.0	1.933	2.934	4.3	19.8
7 20	18 38.12	-21 22.5	1.761	2.743	6.8	21.3	7 20	18 41.99	-12 22.1	1.953	2.929	6.8	19.9
7 30	18 30.49	-21 30.2	1.823	2.749	10.7	21.6	7 30	18 35.80	-13 10.5	1.999	2.924	9.9	20.1
8 9	18 24.04	-21 36.3	1.907	2.754	14.0	21.8	8 9	18 31.43	-14 1.4	2.068	2.920	12.8	20.3
248426	2005 <i>SP</i> ₂₅₇		7 4.2 299°21	2.3/ 4.5	18		200311	2000 <i>EH</i> ₁₀		7 4.2 106°33	1.5/ 3.9	17	
5 31	19 17.19	-17 12.9	2.134	2.990	12.3	20.0	5 31	19 25.42	-25 20.9	1.359	2.236	16.8	20.9
6 10	19 12.23	-16 47.9	2.051	2.982	9.4	19.8	6 10	19 19.21	-25 36.5	1.303	2.247	12.5	20.7
6 20	19 5.44	-16 27.2	1.991	2.974	6.0	19.5	6 20	19 9.99	-25 52.7	1.267	2.258	7.6	20.4
6 30	18 57.40	-16 11.1	1.957	2.967	2.9	19.3	6 30	18 58.82	-26 5.2	1.255	2.268	2.6	20.2
7 10	18 48.96	-15 59.3	1.951	2.959	3.2	19.3	7 10	18 47.17	-26 10.9	1.267	2.279	3.6	20.2
7 20	18 40.96	-15 51.7	1.971	2.951	6.4	19.5	7 20	18 36.57	-26 8.7	1.305	2.289	8.5	20.6
7 30	18 34.23	-15 48.1	2.018	2.944	9.8	19.7	7 30	18 28.36	-25 59.9	1.367	2.298	13.1	20.8
8 9	18 29.42	-15 47.8	2.087	2.936	12.8	19.9	8 9	18 23.32	-25 46.8	1.448	2.308	16.9	21.1
391570	2007 <i>TS</i> ₂₂₀		7 4.2 274°79	0.2/ 4.2	18		184590	2005 <i>QM</i> ₁₂₂		7 4.2 184°96	2.5/ 3.7	18	
5 31	19 19.19	-23 18.4	1.981	2.846	12.8	21.2	5 31	19 19.90	-30 1.7	2.267	3.127	11.6	20.6
6 10	19 13.99	-23 21.4	1.896	2.835	9.6	21.0	6 10	19 14.26	-30 18.1	2.193	3.127	8.7	20.4
6 20	19 6.63	-23 25.9	1.834	2.823	5.8	20.7	6 20	19 6.66	-30 31.4	2.142	3.127	5.6	20.2
6 30	18 57.79	-23 29.9	1.797	2.812	1.8	20.4	6 30	18 57.79	-30 38.6	2.118	3.126	2.9	20.0
7 10	18 48.41	-23 31.9	1.788	2.800	2.5	20.5	7 10	18 48.53	-30 37.8	2.121	3.126	3.4	20.0
7 20	18 39.50	-23 30.8	1.806	2.789	6.6	20.7	7 20	18 39.83	-30 28.5	2.152	3.126	6.4	20.2
7 30	18 32.05	-23 26.7	1.849	2.777	10.4	20.9	7 30	18 32.55	-30 11.5	2.209	3.125	9.5	20.4
8 9	18 26.79	-23 20.4	1.914	2.765	13.8	21.1	8 9	18 27.33	-29 49.0	2.289	3.125	12.3	20.6
59995	1999 <i>SP</i> ₂₄		7 4.2 309°30	4.2/									

EPHEMERIDES

7 4.2

7 4.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
293262	2007 <i>CJ</i> ₂₁		7 4.2 176°78	0°3/ 4.3 18			128849	2004 <i>SM</i> ₁₄		7 4.2 211°13	0°9/ 4.5 18		
5 31	19 18.06	-22 12.2	2.592	3.446	10.5	21.2	5 31	19 19.88	-18 13.1	2.062	2.917	12.7	20.3
6 10	19 12.57	-22 5.8	2.514	3.447	7.8	21.0	6 10	19 14.40	-18 40.0	1.980	2.913	9.6	20.1
6 20	19 5.50	-22 0.5	2.461	3.448	4.7	20.9	6 20	19 6.86	-19 13.6	1.921	2.907	5.9	19.9
6 30	18 57.43	-21 55.4	2.434	3.448	1.5	20.6	6 30	18 57.91	-19 51.8	1.889	2.902	2.1	19.6
7 10	18 49.05	-21 49.5	2.437	3.449	2.0	20.7	7 10	18 48.41	-20 31.8	1.884	2.896	2.5	19.7
7 20	18 41.12	-21 42.7	2.468	3.449	5.2	20.9	7 20	18 39.32	-21 11.3	1.908	2.890	6.4	19.9
7 30	18 34.32	-21 34.9	2.526	3.449	8.2	21.1	7 30	18 31.60	-21 48.2	1.957	2.883	10.1	20.1
8 9	18 29.19	-21 26.6	2.608	3.448	10.9	21.3	8 9	18 25.94	-22 21.7	2.030	2.876	13.3	20.3
437440	2013 <i>YD</i> ₆		7 4.2 186°08	0°8/ 4.5 17			214435	2005 <i>QM</i> ₇₈		7 4.2 328°06	5°9/ 5.6 18		
5 31	19 19.87	-17 12.8	2.023	2.877	13.0	20.9	5 31	19 15.11	-7 18.9	1.931	2.771	14.1	20.0
6 10	19 14.41	-18 2.8	1.945	2.877	9.8	20.7	6 10	19 10.86	-6 52.8	1.853	2.763	11.4	19.8
6 20	19 6.88	-19 1.7	1.891	2.877	6.0	20.5	6 20	19 4.71	-6 39.7	1.795	2.756	8.5	19.7
6 30	18 57.90	-20 6.4	1.863	2.876	2.1	20.2	6 30	18 57.25	-6 41.2	1.761	2.749	6.3	19.5
7 10	18 48.36	-21 13.0	1.864	2.875	2.4	20.2	7 10	18 49.33	-6 57.4	1.753	2.742	6.1	19.5
7 20	18 39.24	-22 17.7	1.892	2.874	6.4	20.5	7 20	18 41.83	-7 26.9	1.770	2.736	8.2	19.6
7 30	18 31.49	-23 17.6	1.947	2.873	10.1	20.7	7 30	18 35.62	-8 7.2	1.811	2.730	11.2	19.8
8 9	18 25.85	-24 11.2	2.026	2.872	13.3	20.9	8 9	18 31.36	-8 54.9	1.875	2.724	14.1	19.9
294451	2007 <i>VT</i> ₂₉₆		7 4.2 226°39	3°6/ 3.4 18			388751	2007 <i>WO</i> ₅		7 4.2 222°99	0°1/ 4.2 18		
5 31	19 21.27	-32 11.0	2.079	2.939	12.5	20.6	5 31	19 18.87	-22 23.1	2.257	3.116	11.7	21.3
6 10	19 15.53	-32 39.8	2.004	2.936	9.5	20.4	6 10	19 13.50	-22 38.9	2.175	3.110	8.7	21.1
6 20	19 7.56	-33 4.3	1.953	2.934	6.3	20.2	6 20	19 6.25	-22 57.2	2.116	3.104	5.3	20.9
6 30	18 58.09	-33 20.5	1.927	2.931	3.9	20.0	6 30	18 57.71	-23 15.9	2.084	3.098	1.6	20.7
7 10	18 48.13	-33 25.5	1.928	2.928	4.5	20.1	7 10	18 48.72	-23 33.2	2.079	3.091	2.2	20.7
7 20	18 38.78	-33 18.5	1.957	2.925	7.4	20.2	7 20	18 40.15	-23 47.5	2.103	3.084	5.9	20.9
7 30	18 31.03	-33 0.8	2.010	2.922	10.6	20.4	7 30	18 32.85	-23 58.4	2.153	3.077	9.4	21.1
8 9	18 25.61	-32 35.0	2.085	2.919	13.4	20.6	8 9	18 27.47	-24 6.0	2.226	3.070	12.3	21.3
282034	1995 <i>UO</i>		7 4.2 263°40	7°0/ 5.1 18			468835	2012 <i>UD</i> ₁		7 4.2 288°95	11°4/ 8.0 18		
5 31	19 18.23	-5 27.5	1.994	2.819	14.3	20.4	5 31	19 19.16	+ 9 3.6	2.009	2.759	16.7	20.9
6 10	19 13.18	-4 36.4	1.904	2.802	11.8	20.2	6 10	19 14.12	+ 9 22.4	1.899	2.724	15.0	20.7
6 20	19 6.14	-3 57.4	1.837	2.786	9.2	20.0	6 20	19 6.90	+ 9 16.2	1.808	2.689	13.2	20.5
6 30	18 57.69	-3 33.2	1.793	2.769	7.3	19.8	6 30	18 58.00	+ 8 40.2	1.737	2.653	11.8	20.3
7 10	18 48.66	-3 25.6	1.775	2.752	7.3	19.8	7 10	18 48.22	+ 7 32.0	1.690	2.617	11.4	20.2
7 20	18 39.98	-3 34.4	1.783	2.735	9.2	19.9	7 20	18 38.52	+ 5 52.6	1.668	2.580	12.4	20.2
7 30	18 32.57	-3 58.1	1.815	2.717	12.0	20.0	7 30	18 29.95	+ 3 46.9	1.669	2.543	14.4	20.3
8 9	18 27.13	-4 33.6	1.868	2.700	14.8	20.1	8 9	18 23.37	+ 1 22.8	1.693	2.506	16.9	20.3
172460	2003 <i>RT</i> ₁₁		7 4.2 205°74	2°5/ 3.7 17			523081	2016 <i>QW</i> ₉₃		7 4.2 307°43	4°2/ 3.0 18		
5 31	19 24.85	-28 4.0	1.804	2.666	14.0	21.3	5 31	19 19.86	-30 40.9	1.705	2.578	14.1	20.7
6 10	19 18.46	-28 29.8	1.726	2.662	10.5	21.1	6 10	19 15.11	-31 33.4	1.623	2.563	10.8	20.5
6 20	19 9.49	-28 54.1	1.671	2.657	6.6	20.8	6 20	19 7.66	-32 24.7	1.564	2.548	7.2	20.2
6 30	18 58.70	-29 12.9	1.641	2.652	3.0	20.6	6 30	18 58.23	-33 9.0	1.528	2.534	4.4	20.0
7 10	18 47.29	-29 22.6	1.638	2.645	3.8	20.6	7 10	18 47.98	-33 41.4	1.519	2.519	5.3	20.0
7 20	18 36.51	-29 22.2	1.662	2.639	7.7	20.9	7 20	18 38.22	-33 58.9	1.535	2.505	8.8	20.2
7 30	18 27.57	-29 12.4	1.711	2.631	11.6	21.1	7 30	18 30.28	-34 1.9	1.574	2.492	12.6	20.4
8 9	18 21.29	-28 55.9	1.782	2.623	15.1	21.3	8 9	18 25.09	-33 52.9	1.634	2.478	16.0	20.6
279195	2009 <i>TV</i> ₃		7 4.2 276°93	14°4/ 28.1 17			350236	2012 <i>TR</i> ₅₇		7 4.2 209°88	2°8/ 4.8 18		
5 31	19 35.60	-55 19.6	1.721	2.519	17.3	20.6	5 31	19 18.57	-15 23.6	1.998	2.852	13.2	20.9
6 10	19 28.91	-57 19.6	1.654	2.501	15.8	20.4	6 10	19 13.35	-15 6.8	1.922	2.851	10.1	20.7
6 20	19 17.18	-59 0.8	1.606	2.483	14.7	20.3	6 20	19 6.18	-14 56.6	1.868	2.849	6.6	20.5
6 30	19 1.30	-60 10.2	1.578	2.465	14.5	20.3	6 30	18 57.70	-14 53.0	1.840	2.847	3.4	20.3
7 10	18 43.50	-60 38.3	1.571	2.447	15.1	20.3	7 10	18 48.79	-14 55.6	1.839	2.845	3.6	20.3
7 20	18 26.69	-60 22.7	1.583	2.429	16.5	20.3	7 20	18 40.40	-15 3.3	1.864	2.843	6.8	20.5
7 30	18 13.60	-59 28.6	1.614	2.410	18.4	20.4	7 30	18 33.38	-15 15.3	1.915	2.841	10.3	20.7
8 9	18 5.81	-58 6.6	1.660	2.391	20.3	20.5	8 9	18 28.39	-15 30.3	1.989	2.839	13.4	20.9
443534	2014 <i>KY</i>		7 4.2 21°48	7°4/ 6.2 16			341033	2007 <i>GQ</i> ₂₁		7 4.2 343°21	2°9/ 4.6 16		
5 31	19 14.08	-4 59.2	1.615	2.459	16.2	20.5	5 31	19 14.49	-17 22.4	1.242	2.133	17.2	20.2
6 10	19 10.20	-4 24.4	1.561	2.470	13.2	20.3	6 10	19 11.41	-17 2.4	1.170	2.119	13.1	19.9
6 20	19 4.29	-4 7.1	1.526	2.482	10.2	20.1	6 20	19 5.51	-16 50.5	1.117	2.107	8.5	19.6
6 30	18 57.09	-4 9.2	1.514	2.495	7.9	20.0	6 30	18 57.59	-16 47.1	1.085	2.097	3.9	19.3
7 10	18 49.57	-4 30.7	1.526	2.509	7.6	20.1	7 10	18 48.92	-16 51.3	1.077	2.087	4.2	19.3
7 20	18 42.70	-5 9.1	1.561	2.524	9.4	20.2	7 20	18 40.90	-17 1.8	1.091	2.079	9.0	19.6
7 30	18 37.37	-6 0.5	1.620	2.539	12.2	20.4	7 30	18 34.90	-17 17.2	1.126	2.072	13.8	19.8
8 9	18 34.19	-7 0.1	1.699	2.556	15.0	20.6	8 9	18 31.83	-17 35.4	1.180	2.067	18.1	20.1
176625	2002 <i>JW</i> ₇₀		7 4.2 35°09	2°7/ 3.7 17			39105	2000 <i>WY</i> ₁₈		7 4.2 7°44	4°5/ 2.2 18		
5 31	19 21.08	-26 20.1	1.177	2.068	17.8	19.9	5 31	19 18.60	-29 9.8	1.711	2.586	14.0	17.6
6 10	19 16.42	-27 0.6	1.125	2.077	13.3	19.6	6 10	19 14.09	-30 50.4	1.646	2.588	10.6	17.4
6 20	19 8.51	-27 42.3	1.093	2.086	8.2	19.4	6 20	19 6.99	-32 32.4	1.605	2.590	7.1	17.2
6 30	18 58.42	-28 19.1	1.083	2.096	3.4	19.1	6 30	18 58.02	-34 8.3	1.589	2.592	4.7	17.1
7 10	18 47.76	-28 45.8	1.097	2.106	4.5	19.2	7 10	18 48.32	-35 31.0	1.600	2.596	5.7	17.1
7 20	18 38.20	-29 0.2	1.133	2.117	9.4	19.5	7 20	18 39.14	-36 36.0	1.636	2.600	8.9	17.3
7 30	18 31.16	-29 2.9	1.192	2.129	14.1	19.8	7 30	18 31.73	-37 21.9	1.696	2.605	12.4	17.6
8 9	18 27.52	-28 56.7	1.269	2.141	18.1	20.1	8 9	18 26.98	-37 50.6	1.777	2.610	15.4	17.8
440004	2002 <i>EQ</i> ₅₃		7 4.2 36°73	7°8/ 3.6 17			11987	Yonematsu		7 4.2 109°76	4°0/ 2.8 18		

EPHEMERIDES

7 4.2

7 4.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
479295	2013 <i>GT</i> ₁₀₃		7 4.2 192°03	7.6/ 1.4	18		361457	2007 <i>CG</i> ₂₇		7 4.2 221°15	2.5/ 5.0	18	
5 31	19 25.59	-48 3.0	2.783	3.590	11.2	21.5	5 31	19 16.54	-13 14.4	2.959	3.792	9.9	22.4
6 10	19 18.76	-49 6.1	2.716	3.589	9.5	21.4	6 10	19 11.37	-13 12.7	2.866	3.782	7.6	22.2
6 20	19 9.58	-49 57.6	2.672	3.587	8.2	21.3	6 20	19 4.82	-13 17.2	2.797	3.771	5.1	22.0
6 30	18 58.77	-50 32.1	2.653	3.585	7.6	21.2	6 30	18 57.34	-13 27.6	2.756	3.759	2.9	21.9
7 10	18 47.40	-50 46.4	2.660	3.582	7.9	21.3	7 10	18 49.50	-13 43.3	2.743	3.747	2.9	21.9
7 20	18 36.61	-50 39.8	2.692	3.580	9.1	21.3	7 20	18 41.93	-14 3.3	2.760	3.734	5.2	22.0
7 30	18 27.48	-50 14.2	2.747	3.577	10.7	21.4	7 30	18 35.22	-14 26.5	2.804	3.721	7.7	22.1
8 9	18 20.76	-49 33.9	2.824	3.573	12.3	21.6	8 9	18 29.87	-14 51.7	2.873	3.707	10.1	22.3
75842	Jackmonahan		7 4.2 161°58	0°8/ 4.4	18		190664	2000 <i>YX</i> ₉₀		7 4.2 308°96	0°3/ 4.1	18	
5 31	19 19.55	-19 50.7	2.291	3.144	11.7	20.4	5 31	19 18.92	-21 27.9	1.509	2.386	15.4	19.8
6 10	19 13.86	-19 54.5	2.217	3.149	8.7	20.2	6 10	19 14.86	-21 58.7	1.403	2.348	11.7	19.5
6 20	19 6.41	-20 1.9	2.167	3.153	5.4	20.0	6 20	19 7.86	-22 37.6	1.318	2.310	7.3	19.1
6 30	18 57.79	-20 11.4	2.144	3.157	1.9	19.8	6 30	18 58.47	-23 21.6	1.257	2.271	2.3	18.7
7 10	18 48.82	-20 21.7	2.149	3.160	2.2	19.8	7 10	18 47.76	-24 6.6	1.221	2.233	3.2	18.7
7 20	18 40.35	-20 31.7	2.182	3.163	5.8	20.1	7 20	18 37.13	-24 48.3	1.209	2.195	8.7	18.9
7 30	18 33.15	-20 40.9	2.242	3.166	9.0	20.3	7 30	18 28.14	-25 24.1	1.221	2.157	13.9	19.1
8 9	18 27.82	-20 49.2	2.325	3.168	11.9	20.5	8 9	18 22.03	-25 53.2	1.252	2.119	18.6	19.3
293889	2007 <i>RR</i> ₂₉₂		7 4.2 348°15	0°3/ 4.2	16		313922	2004 <i>RG</i> ₇		7 4.2 311°49	6°8/ 6.7	18	
5 31	19 18.86	-22 51.9	1.774	2.645	13.8	21.6	5 31	19 14.83	- 2 27.9	2.032	2.850	14.3	19.7
6 10	19 13.92	-23 5.5	1.701	2.643	10.3	21.4	6 10	19 10.72	- 2 26.5	1.938	2.830	11.9	19.5
6 20	19 6.69	-23 21.7	1.651	2.642	6.2	21.2	6 20	19 4.73	- 2 42.9	1.865	2.810	9.4	19.3
6 30	18 57.92	-23 38.3	1.626	2.640	1.9	20.9	6 30	18 57.37	- 3 18.6	1.815	2.790	7.3	19.2
7 10	18 48.65	-23 52.7	1.627	2.639	2.6	20.9	7 10	18 49.42	- 4 13.3	1.791	2.771	7.0	19.1
7 20	18 39.97	-24 3.5	1.655	2.639	7.0	21.2	7 20	18 41.73	- 5 24.4	1.793	2.752	8.6	19.2
7 30	18 32.92	-24 10.3	1.707	2.638	10.9	21.5	7 30	18 35.19	- 6 48.0	1.819	2.734	11.4	19.3
8 9	18 28.24	-24 13.6	1.780	2.638	14.4	21.7	8 9	18 30.51	- 8 18.8	1.869	2.715	14.2	19.4
515212	2011 <i>YR</i> ₂₇		7 4.2 294°67	0°1/ 4.2	18		283868	2003 <i>WU</i> ₁₅₀		7 4.2 240°95	2°3/ 4.8	17	
5 31	19 17.87	-23 44.1	2.282	3.143	11.5	21.7	5 31	19 18.38	-15 34.0	2.093	2.945	12.7	20.9
6 10	19 12.72	-23 38.3	2.201	3.138	8.5	21.5	6 10	19 13.25	-15 34.5	2.008	2.937	9.7	20.7
6 20	19 5.76	-23 33.0	2.144	3.133	5.2	21.3	6 20	19 6.19	-15 42.2	1.946	2.928	6.3	20.5
6 30	18 57.61	-23 26.7	2.113	3.127	1.6	21.0	6 30	18 57.79	-15 56.4	1.910	2.919	3.1	20.2
7 10	18 49.08	-23 18.5	2.110	3.122	2.2	21.0	7 10	18 48.89	-16 16.0	1.902	2.910	3.1	20.2
7 20	18 41.02	-23 8.0	2.135	3.117	5.8	21.3	7 20	18 40.39	-16 39.3	1.920	2.901	6.5	20.4
7 30	18 34.23	-22 55.7	2.185	3.112	9.1	21.5	7 30	18 33.17	-17 4.9	1.965	2.891	10.0	20.6
8 9	18 29.32	-22 42.1	2.259	3.107	12.1	21.7	8 9	18 27.91	-17 31.4	2.032	2.882	13.1	20.8
346052	2007 <i>UZ</i> ₂₉		7 4.2 192°02	0°2/ 4.2	18		9984	Gregbryant		7 4.2 56°40	0°2/ 4.2	18	
5 31	19 19.06	-22 27.0	2.866	3.713	9.8	22.5	5 31	19 21.66	-23 38.4	1.548	2.422	15.3	17.1
6 10	19 13.29	-22 47.3	2.781	3.711	7.3	22.3	6 10	19 16.19	-23 35.7	1.482	2.425	11.4	16.9
6 20	19 5.99	-23 9.5	2.722	3.708	4.4	22.1	6 20	19 8.14	-23 34.4	1.439	2.430	6.9	16.6
6 30	18 57.67	-23 31.7	2.691	3.705	1.3	21.9	6 30	18 58.39	-23 32.1	1.419	2.434	2.1	16.3
7 10	18 49.00	-23 52.3	2.689	3.701	1.9	21.9	7 10	18 48.16	-23 27.0	1.426	2.438	2.9	16.4
7 20	18 40.66	-24 10.0	2.717	3.696	4.9	22.1	7 20	18 38.75	-23 18.7	1.457	2.442	7.6	16.7
7 30	18 33.32	-24 24.3	2.773	3.691	7.8	22.3	7 30	18 31.29	-23 7.7	1.513	2.447	11.9	17.0
8 9	18 27.54	-24 35.4	2.853	3.685	10.3	22.5	8 9	18 26.55	-22 55.3	1.590	2.451	15.6	17.2
217220	2002 <i>VM</i> ₅₈		7 4.2 274°98	0°4/ 4.3	18		186940	2004 <i>QZ</i> ₈		7 4.2 337°59	9°5/ 1.3	18	
5 31	19 21.12	-20 38.2	1.680	2.548	14.6	20.7	5 31	19 23.43	-46 32.9	1.967	2.801	14.1	19.3
6 10	19 16.00	-20 55.0	1.586	2.525	11.0	20.4	6 10	19 17.99	-47 49.6	1.901	2.794	12.0	19.2
6 20	19 8.24	-21 17.7	1.513	2.503	6.8	20.1	6 20	19 9.51	-48 52.9	1.856	2.787	10.3	19.0
6 30	18 58.49	-21 43.9	1.465	2.479	2.2	19.8	6 30	18 58.87	-49 35.5	1.834	2.780	9.5	19.0
7 10	18 47.82	-22 10.7	1.444	2.456	2.9	19.7	7 10	18 47.44	-49 52.0	1.836	2.774	10.0	19.0
7 20	18 37.49	-22 35.5	1.448	2.432	7.7	20.0	7 20	18 36.77	-49 41.5	1.861	2.768	11.6	19.1
7 30	18 28.79	-22 56.9	1.477	2.408	12.3	20.2	7 30	18 28.28	-49 6.7	1.908	2.763	13.7	19.2
8 9	18 22.70	-23 14.7	1.527	2.384	16.3	20.4	8 9	18 22.93	-48 13.6	1.974	2.758	15.8	19.3
290466	2005 <i>TH</i> ₁₇₀		7 4.2 213°88	0°9/ 3.9	18		117401	2005 <i>AL</i> ₈		7 4.2 128°64	0°7/ 4.5	18	
5 31	19 20.94	-21 36.0	1.870	2.734	13.5	20.3	5 31	19 19.68	-18 41.4	2.103	2.958	12.5	20.1
6 10	19 15.50	-22 35.1	1.793	2.731	10.1	20.1	6 10	19 14.13	-19 11.5	2.034	2.967	9.4	19.9
6 20	19 7.72	-23 40.6	1.739	2.728	6.1	19.9	6 20	19 6.67	-19 47.4	1.989	2.976	5.7	19.7
6 30	18 58.28	-24 48.3	1.710	2.724	1.9	19.6	6 30	18 57.93	-20 27.0	1.971	2.984	1.9	19.5
7 10	18 48.17	-25 53.1	1.710	2.721	2.9	19.6	7 10	18 48.81	-21 7.3	1.981	2.992	2.3	19.5
7 20	18 38.50	-26 51.3	1.737	2.717	7.1	19.9	7 20	18 40.19	-21 46.0	2.018	3.000	6.1	19.8
7 30	18 30.38	-27 40.5	1.790	2.714	11.0	20.1	7 30	18 32.95	-22 21.4	2.082	3.008	9.5	20.0
8 9	18 24.61	-28 20.4	1.865	2.710	14.3	20.3	8 9	18 27.72	-22 52.9	2.169	3.015	12.5	20.2
227944	2007 <i>GW</i> ₃₈		7 4.2 94°74	0°9/ 4.0	17		312605	2009 <i>OG</i> ₆		7 4.2 350°09	8°2/ 6.9	18	
5 31	19 20.89	-23 45.7	1.707	2.577	14.3	20.9	5 31	19 11.51	- 3 5.1	1.521	2.366	17.0	19.2
6 10	19 15.47	-24 9.0	1.640	2.581	10.6	20.7	6 10	19 8.68	- 2 46.9	1.446	2.355	14.1	19.0
6 20	19 7.66	-24 34.6	1.595	2.585	6.5	20.5	6 20	19 3.66	- 2 49.8	1.391	2.344	11.1	18.8
6 30	18 58.23	-24 59.3	1.576	2.590	2.1	20.2	6 30	18 57.08	- 3 16.5	1.356	2.336	8.8	18.6
7 10	18 48.30	-25 20.0	1.583	2.594	2.9	20.3	7 10	18 49.92	- 4 6.6	1.345	2.328	8.3	18.6
7 20	18 39.07	-25 35.1	1.616	2.599	7.2	20.5	7 20	18 43.22	- 5 17.2	1.356	2.322	10.2	18.6
7 30	18 31.60	-25 44.2	1.674	2.603	11.2	20.8	7 30	18 38.02	- 6 42.8	1.390	2.318	13.2	18.8
8 9	18 26.65	-25 48.2	1.753	2.607	14.7	21.0	8 9	18 35.11	- 8 16.7	1.445	2.315	16.4	19.0
103843	2000 <i>DZ</i> ₃₃		7 4.2 282°21	1°2/ 4.5	18		494337	2016 <i>TL</i> ₃₅		7 4.2 10°20			

EPHEMERIDES

7 4.2

7 4.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
263152	2007 VZ ₂₅₃	7 4.2 114°56	0°0/ 4.0 18				232188	2002 EG ₁₃₉	7 4.3 240°09	2°2/ 3.7 18			
5 31	19 30.78	-25 11.3	1.944	2.790	13.7	19.9	5 31	19 21.52	-27 17.1	1.906	2.771	13.2	21.1
6 10	19 22.10	-24 31.2	1.886	2.815	10.2	19.7	6 10	19 15.96	-27 46.1	1.826	2.763	9.9	20.9
6 20	19 11.28	-23 48.4	1.853	2.839	6.2	19.5	6 20	19 8.02	-28 14.8	1.768	2.756	6.2	20.6
6 30	18 59.26	-23 2.2	1.848	2.862	1.9	19.2	6 30	18 58.43	-28 39.5	1.737	2.748	2.7	20.4
7 10	18 47.18	-22 13.3	1.873	2.884	2.5	19.3	7 10	18 48.23	-28 57.0	1.732	2.740	3.5	20.4
7 20	18 36.14	-21 23.6	1.926	2.905	6.6	19.6	7 20	18 38.56	-29 5.5	1.755	2.732	7.3	20.6
7 30	18 27.06	-20 35.4	2.007	2.926	10.2	19.9	7 30	18 30.51	-29 5.4	1.802	2.724	11.0	20.8
8 9	18 20.49	-19 50.9	2.112	2.945	13.3	20.1	8 9	18 24.88	-28 58.3	1.871	2.715	14.3	21.0
184174	2004 NS ₂₅	7 4.2 330°69	2°7/ 4.9 18				230638	2003 QO ₄₃	7 4.3 233°64	4°9/ 3.2 18			
5 31	19 15.18	-15 5.4	1.808	2.672	13.8	20.2	5 31	19 24.52	-36 24.5	2.211	3.058	12.3	20.5
6 10	19 11.18	-15 6.3	1.725	2.660	10.6	20.0	6 10	19 18.08	-36 58.1	2.127	3.048	9.6	20.3
6 20	19 5.09	-15 16.2	1.664	2.648	7.0	19.7	6 20	19 9.27	-37 24.7	2.067	3.037	6.9	20.1
6 30	18 57.51	-15 34.7	1.627	2.636	3.5	19.5	6 30	18 58.81	-37 39.7	2.032	3.025	5.1	20.0
7 10	18 49.37	-16 0.3	1.616	2.625	3.5	19.5	7 10	18 47.76	-37 39.7	2.025	3.013	5.6	20.0
7 20	18 41.65	-16 30.9	1.631	2.615	7.1	19.7	7 20	18 37.27	-37 24.0	2.044	3.000	8.0	20.1
7 30	18 35.32	-17 4.6	1.671	2.605	10.9	19.9	7 30	18 28.43	-36 54.4	2.089	2.987	10.9	20.3
8 9	18 31.14	-17 39.1	1.732	2.596	14.4	20.1	8 9	18 22.03	-36 14.5	2.157	2.974	13.6	20.4
377798	2006 AP ₄₂	7 4.2 111°95	1°2/ 4.5 17				482932	2014 JG ₂₄	7 4.3 5°10	0°4/ 4.1 18			
5 31	19 20.90	-19 4.7	1.922	2.780	13.4	21.7	5 31	19 16.44	-20 20.4	1.771	2.643	13.7	20.2
6 10	19 15.10	-19 8.5	1.859	2.793	10.0	21.5	6 10	19 12.20	-21 18.0	1.701	2.643	10.2	20.0
6 20	19 7.26	-19 17.1	1.819	2.806	6.2	21.3	6 20	19 5.75	-22 23.1	1.653	2.644	6.2	19.8
6 30	18 58.11	-19 29.0	1.805	2.818	2.2	21.1	6 30	18 57.75	-23 31.8	1.631	2.646	1.9	19.5
7 10	18 48.64	-19 42.6	1.819	2.830	2.6	21.1	7 10	18 49.19	-24 39.3	1.636	2.648	2.7	19.6
7 20	18 39.83	-19 56.3	1.859	2.842	6.5	21.4	7 20	18 41.13	-25 41.4	1.667	2.651	6.9	19.8
7 30	18 32.57	-20 9.5	1.926	2.853	10.1	21.7	7 30	18 34.59	-26 35.6	1.723	2.654	10.8	20.1
8 9	18 27.49	-20 21.8	2.014	2.864	13.2	21.9	8 9	18 30.34	-27 20.8	1.801	2.659	14.2	20.3
380855	2006 BZ ₁₂₀	7 4.2 186°44	0°2/ 4.2 17				225994	2002 CF ₃₁₀	7 4.3 147°34	0°9/ 4.4 18			
5 31	19 21.57	-23 18.9	2.088	2.946	12.5	22.2	5 31	19 21.16	-20 17.1	1.962	2.820	13.2	20.9
6 10	19 15.61	-23 21.7	2.011	2.946	9.3	22.0	6 10	19 15.33	-20 13.0	1.891	2.826	9.8	20.7
6 20	19 7.61	-23 25.6	1.958	2.946	5.7	21.8	6 20	19 7.45	-20 12.3	1.844	2.831	6.1	20.5
6 30	18 58.25	-23 28.7	1.931	2.945	1.7	21.5	6 30	18 58.22	-20 13.8	1.823	2.836	2.1	20.2
7 10	18 48.45	-23 29.5	1.931	2.943	2.4	21.5	7 10	18 48.61	-20 16.0	1.829	2.841	2.5	20.3
7 20	18 39.21	-23 27.2	1.960	2.941	6.3	21.8	7 20	18 39.61	-20 18.2	1.863	2.845	6.5	20.5
7 30	18 31.44	-23 22.1	2.015	2.939	9.9	22.0	7 30	18 32.13	-20 20.2	1.922	2.849	10.1	20.7
8 9	18 25.80	-23 14.9	2.092	2.937	13.0	22.2	8 9	18 26.84	-20 21.9	2.004	2.853	13.3	21.0
365459	2010 NS ₈₈	7 4.2 208°54	3°3/ 5.2 18				475781	2006 XU ₁	7 4.3 188°02	2°9/ 5.1 18			
5 31	19 15.86	-10 58.4	2.927	3.755	10.1	22.1	5 31	19 16.58	-11 44.8	3.239	4.064	9.3	23.0
6 10	19 10.85	-10 41.9	2.840	3.750	7.9	21.9	6 10	19 11.24	-11 29.7	3.154	4.063	7.2	22.9
6 20	19 4.50	-10 32.1	2.777	3.744	5.6	21.7	6 20	19 4.69	-11 20.5	3.094	4.061	5.0	22.7
6 30	18 57.28	-10 29.7	2.742	3.738	3.7	21.6	6 30	18 57.36	-11 17.3	3.062	4.059	3.2	22.6
7 10	18 49.76	-10 34.2	2.735	3.731	3.6	21.6	7 10	18 49.77	-11 19.9	3.058	4.056	3.2	22.6
7 20	18 42.52	-10 45.2	2.756	3.724	5.5	21.7	7 20	18 42.46	-11 27.8	3.085	4.053	5.0	22.7
7 30	18 36.17	-11 1.7	2.805	3.717	7.9	21.8	7 30	18 35.97	-11 40.1	3.138	4.049	7.2	22.8
8 9	18 31.17	-11 22.3	2.877	3.709	10.2	22.0	8 9	18 30.73	-11 55.8	3.217	4.044	9.3	23.0
244866	2003 UT ₂₁₉	7 4.2 276°55	1°5/ 3.8 18				472636	2015 DK ₃₀₈	7 4.3 333°81	1°1/ 3.9 17			
5 31	19 19.71	-24 46.0	1.892	2.760	13.2	20.7	5 31	19 19.33	-22 31.4	1.693	2.565	14.3	20.8
6 10	19 14.66	-25 21.6	1.807	2.747	9.9	20.4	6 10	19 14.51	-23 20.1	1.620	2.562	10.6	20.6
6 20	19 7.27	-25 59.9	1.745	2.734	6.1	20.2	6 20	19 7.23	-24 14.3	1.569	2.560	6.5	20.3
6 30	18 58.20	-26 37.2	1.708	2.721	2.2	19.9	6 30	18 58.22	-25 9.8	1.543	2.557	2.1	20.0
7 10	18 48.45	-27 10.0	1.698	2.708	3.1	19.9	7 10	18 48.56	-26 2.0	1.544	2.555	3.0	20.1
7 20	18 39.11	-27 35.8	1.714	2.694	7.2	20.1	7 20	18 39.43	-26 47.4	1.570	2.553	7.4	20.4
7 30	18 31.29	-27 53.8	1.756	2.681	11.1	20.4	7 30	18 31.99	-27 24.1	1.621	2.551	11.5	20.6
8 9	18 25.83	-28 4.5	1.819	2.668	14.5	20.5	8 9	18 27.06	-27 52.2	1.694	2.549	15.1	20.8
347975	2003 SU ₆₃	7 4.2 305°23	6°6/ 6.1 18				349221	2007 SO ₁₆	7 4.3 335°13	0°1/ 4.3 16			
5 31	19 16.71	-5 43.2	1.666	2.506	16.0	20.4	5 31	19 17.71	-21 35.4	1.570	2.448	14.9	21.3
6 10	19 12.67	-5 39.6	1.566	2.476	13.1	20.1	6 10	19 13.41	-21 45.5	1.495	2.440	11.2	21.0
6 20	19 6.23	-5 54.5	1.485	2.446	9.9	19.8	6 20	19 6.60	-22 0.1	1.440	2.432	6.8	20.7
6 30	18 57.95	-6 30.1	1.427	2.417	7.2	19.6	6 30	18 58.04	-22 16.9	1.410	2.425	2.1	20.4
7 10	18 48.74	-7 26.1	1.394	2.387	6.9	19.5	7 10	18 48.84	-22 33.4	1.405	2.418	2.8	20.4
7 20	18 39.71	-8 39.8	1.386	2.357	9.5	19.6	7 20	18 40.23	-22 47.7	1.426	2.412	7.6	20.7
7 30	18 32.03	-10 6.4	1.401	2.328	13.2	19.7	7 30	18 33.37	-22 58.9	1.469	2.406	11.9	21.0
8 9	18 26.69	-11 40.1	1.438	2.299	16.9	19.9	8 9	18 29.10	-23 7.2	1.534	2.401	15.7	21.2
217526	2006 VB ₁₆₉	7 4.2 212°90	1°4/ 4.5 18				6667	Sannaimura	7 4.3 104°56	3°8/ 5.1 18			
5 31	19 21.59	-18 35.1	1.977	2.832	13.2	21.6	5 31	19 21.07	-13 27.0	1.530	2.390	16.1	17.0
6 10	19 15.77	-18 37.1	1.894	2.826	10.0	21.4	6 10	19 15.68	-13 19.6	1.468	2.398	12.4	16.8
6 20	19 7.80	-18 44.3	1.833	2.819	6.3	21.2	6 20	19 7.84	-13 23.5	1.426	2.406	8.3	16.6
6 30	18 58.34	-18 55.3	1.799	2.811	2.4	20.9	6 30	18 58.37	-13 38.5	1.408	2.414	4.5	16.4
7 10	18 48.33	-19 8.5	1.792	2.804	2.7	20.9	7 10	18 48.44	-14 2.8	1.415	2.422	4.5	16.4
7 20	18 38.80	-19 22.6	1.813	2.795	6.7	21.1	7 20	18 39.25	-14 34.1	1.448	2.429	8.1	16.6
7 30	18 30.71	-19 36.8	1.860	2.786	10.5	21.3	7 30	18 31.88	-15 9.8	1.505	2.437	12.1	16.9
8 9	18 24.82	-19 50.4	1.929	2.776	13.8	21.5	8 9	18 27.09	-15 47.2	1.583	2.444	15.7	17.1
257155	2008 HD ₃₇	7 4.2 64°02	0°5/ 4.4 16				192322	1994 SN ₁₁	7 4.3 143°13	2°7/ 3.6 17			
5 31	19 17.51	-20 25.2	2										

EPHEMERIDES

7 4.3

7 4.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
206733	2004 <i>BG</i> ₁₀₁		7 4.3 292°33	0°7/ 4.1 18			167212	2003 <i>UQ</i> ₁₈		7 4.3 246°81	4°5/ 5.2 18		
5 31	19 19.34	-24 18.4	1.889	2.757	13.2	20.6	5 31	19 18.42	-10 7.7	2.243	3.077	12.6	20.5
6 10	19 14.30	-24 24.2	1.805	2.745	9.9	20.3	6 10	19 13.22	-9 43.3	2.151	3.062	10.0	20.3
6 20	19 7.01	-24 31.0	1.744	2.734	6.1	20.1	6 20	19 6.21	-9 27.8	2.081	3.047	7.2	20.1
6 30	18 58.15	-24 36.4	1.708	2.722	1.9	19.8	6 30	18 57.92	-9 22.5	2.037	3.032	4.9	20.0
7 10	18 48.71	-24 38.7	1.698	2.710	2.6	19.8	7 10	18 49.13	-9 27.5	2.021	3.016	4.8	19.9
7 20	18 39.76	-24 36.7	1.716	2.699	6.9	20.0	7 20	18 40.66	-9 41.9	2.031	2.999	7.2	20.1
7 30	18 32.35	-24 30.7	1.758	2.687	10.8	20.2	7 30	18 33.33	-10 4.5	2.068	2.983	10.2	20.2
8 9	18 27.24	-24 21.6	1.822	2.676	14.2	20.4	8 9	18 27.80	-10 33.2	2.127	2.965	13.0	20.4
264377	2000 <i>DQ</i> ₃₂		7 4.3 237°73	1°6/ 3.9 17			122635	2000 <i>RK</i> ₈₁		7 4.3 262°90	6°8/ 4.9 18		
5 31	19 24.42	-26 34.9	2.040	2.896	12.8	21.4	5 31	19 19.46	-7 17.1	1.880	2.712	14.7	19.6
6 10	19 18.07	-26 51.7	1.946	2.880	9.7	21.2	6 10	19 14.28	-6 18.8	1.792	2.698	12.0	19.3
6 20	19 9.34	-27 8.1	1.876	2.862	6.0	20.9	6 20	19 6.98	-5 31.1	1.727	2.683	9.2	19.1
6 30	18 58.89	-27 20.8	1.832	2.844	2.3	20.6	6 30	18 58.18	-4 57.4	1.686	2.668	7.1	19.0
7 10	18 47.73	-27 27.0	1.816	2.825	3.1	20.7	7 10	18 48.79	-4 39.3	1.670	2.652	7.1	19.0
7 20	18 37.00	-27 25.6	1.828	2.806	7.0	20.9	7 20	18 39.79	-4 37.4	1.680	2.637	9.3	19.1
7 30	18 27.79	-27 17.1	1.866	2.785	10.8	21.1	7 30	18 32.15	-4 50.5	1.714	2.621	12.4	19.2
8 9	18 20.94	-27 3.1	1.927	2.764	14.2	21.2	8 9	18 26.63	-5 15.6	1.769	2.605	15.4	19.4
72833	2001 <i>HL</i> ₁₅		7 4.3 187°82	2°7/ 3.9 18			68522	2001 <i>VO</i> ₂₈		7 4.3 159°01	2°0/ 3.8 18		
5 31	19 23.54	-30 49.7	2.056	2.914	12.7	19.0	5 31	19 22.83	-26 51.3	2.025	2.885	12.8	19.9
6 10	19 17.19	-30 52.4	1.981	2.914	9.6	18.8	6 10	19 16.71	-27 24.5	1.955	2.890	9.5	19.7
6 20	19 8.63	-30 50.2	1.929	2.913	6.2	18.6	6 20	19 8.39	-27 57.5	1.908	2.895	5.9	19.5
6 30	18 58.62	-30 40.1	1.904	2.912	3.1	18.4	6 30	18 58.59	-28 26.6	1.888	2.899	2.5	19.3
7 10	18 48.21	-30 20.6	1.906	2.911	3.6	18.5	7 10	18 48.33	-28 48.6	1.896	2.903	3.3	19.3
7 20	18 38.49	-29 51.9	1.935	2.910	6.9	18.7	7 20	18 38.66	-29 2.0	1.931	2.907	6.8	19.6
7 30	18 30.44	-29 16.0	1.990	2.909	10.3	18.9	7 30	18 30.59	-29 7.1	1.991	2.910	10.3	19.8
8 9	18 24.73	-28 35.7	2.068	2.907	13.3	19.1	8 9	18 24.81	-29 5.2	2.075	2.913	13.3	20.0
377664	2005 <i>UM</i> ₂₅₂		7 4.3 249°08	2°6/ 4.6 18			511245	2014 <i>BC</i> ₃₄		7 4.3 262°07	4°7/ 3.5 18		
5 31	19 20.91	-17 7.5	1.813	2.672	14.1	21.2	5 31	19 24.83	-35 3.9	1.975	2.830	13.3	21.9
6 10	19 15.44	-16 42.0	1.730	2.662	10.8	21.0	6 10	19 18.61	-35 29.4	1.886	2.813	10.3	21.7
6 20	19 7.70	-16 21.7	1.668	2.652	7.0	20.7	6 20	19 9.77	-35 48.1	1.820	2.795	7.3	21.5
6 30	18 58.38	-16 6.5	1.632	2.641	3.3	20.5	6 30	18 59.06	-35 55.0	1.779	2.778	5.0	21.3
7 10	18 48.49	-15 56.4	1.622	2.630	3.6	20.5	7 10	18 47.65	-35 46.8	1.765	2.760	5.5	21.3
7 20	18 39.10	-15 51.0	1.639	2.620	7.4	20.7	7 20	18 36.81	-35 22.7	1.778	2.741	8.4	21.4
7 30	18 31.25	-15 50.0	1.681	2.608	11.3	20.9	7 30	18 27.76	-34 44.8	1.815	2.723	11.7	21.6
8 9	18 25.72	-15 52.8	1.744	2.597	14.8	21.1	8 9	18 21.37	-33 57.4	1.874	2.704	14.9	21.8
508805	2000 <i>TT</i> ₂₈		7 4.3 236°80	1°0/ 4.0 18			448096	2008 <i>KB</i> ₅		7 4.3 305°54	1°8/ 3.5 18		
5 31	19 23.26	-25 47.4	2.731	3.576	10.3	23.4	5 31	19 18.12	-23 58.9	2.161	3.025	11.9	20.4
6 10	19 16.66	-25 57.3	2.627	3.555	7.7	23.2	6 10	19 13.35	-25 7.5	2.071	3.009	8.9	20.2
6 20	19 8.23	-26 6.5	2.548	3.533	4.8	23.0	6 20	19 6.48	-26 21.3	2.005	2.994	5.5	19.9
6 30	18 58.52	-26 13.1	2.497	3.510	1.7	22.7	6 30	18 58.07	-27 35.9	1.967	2.979	2.2	19.7
7 10	18 48.28	-26 15.2	2.476	3.486	2.3	22.7	7 10	18 48.95	-28 46.7	1.956	2.964	3.1	19.7
7 20	18 38.31	-26 12.2	2.485	3.461	5.5	22.9	7 20	18 40.07	-29 49.7	1.973	2.949	6.7	19.9
7 30	18 29.45	-26 4.1	2.522	3.435	8.6	23.1	7 30	18 32.44	-30 42.7	2.016	2.935	10.2	20.1
8 9	18 22.34	-25 52.3	2.583	3.408	11.4	23.2	8 9	18 26.83	-31 25.4	2.083	2.920	13.3	20.3
385466	2003 <i>UO</i> ₄₀		7 4.3 208°11	1°9/ 4.7 17			433756	2015 <i>BL</i> ₁		7 4.3 178°40	3°4/ 3.7 17		
5 31	19 19.33	-17 22.2	2.122	2.976	12.5	21.5	5 31	19 24.73	-30 37.3	1.755	2.619	14.2	20.9
6 10	19 13.92	-17 14.0	2.042	2.973	9.5	21.3	6 10	19 18.49	-31 1.8	1.684	2.620	10.8	20.7
6 20	19 6.61	-17 11.0	1.985	2.969	6.0	21.1	6 20	19 9.63	-31 22.4	1.636	2.620	7.0	20.5
6 30	18 58.02	-17 12.6	1.955	2.965	2.7	20.9	6 30	18 58.99	-31 34.5	1.613	2.621	3.8	20.3
7 10	18 49.00	-17 17.8	1.952	2.961	2.9	20.9	7 10	18 47.82	-31 35.1	1.617	2.621	4.4	20.3
7 20	18 40.43	-17 25.7	1.976	2.957	6.3	21.1	7 20	18 37.41	-31 23.4	1.646	2.621	8.0	20.5
7 30	18 33.19	-17 35.6	2.027	2.952	9.8	21.3	7 30	18 28.94	-31 1.3	1.701	2.620	11.7	20.8
8 9	18 27.91	-17 46.7	2.100	2.947	12.8	21.5	8 9	18 23.22	-30 31.9	1.777	2.619	15.0	21.0
122980	2000 <i>SS</i> ₂₃₈		7 4.3 246°73	3°2/ 5.1 18			155399	1995 <i>SB</i> ₄₇		7 4.3 310°99	6°2/ 3.0 18		
5 31	19 19.04	-13 17.6	1.921	2.771	13.8	20.2	5 31	19 22.15	-33 37.8	1.332	2.214	16.8	19.6
6 10	19 13.97	-13 21.9	1.836	2.762	10.6	20.0	6 10	19 17.67	-34 31.5	1.256	2.198	13.1	19.4
6 20	19 6.79	-13 36.3	1.773	2.752	7.1	19.8	6 20	19 9.72	-35 20.6	1.200	2.182	9.2	19.1
6 30	18 58.11	-14 0.4	1.735	2.741	3.9	19.5	6 30	18 59.15	-35 57.2	1.166	2.167	6.4	18.9
7 10	18 48.85	-14 32.6	1.724	2.731	3.8	19.5	7 10	18 47.50	-36 14.6	1.155	2.152	7.2	18.9
7 20	18 39.98	-15 10.6	1.740	2.720	7.1	19.7	7 20	18 36.57	-36 10.1	1.167	2.138	11.0	19.1
7 30	18 32.48	-15 52.0	1.781	2.709	10.8	19.9	7 30	18 28.08	-35 45.9	1.201	2.124	15.2	19.3
8 9	18 27.10	-16 34.6	1.845	2.697	14.1	20.1	8 9	18 23.20	-35 7.3	1.253	2.110	19.2	19.5
289090	2004 <i>TA</i> ₂₆₉		7 4.3 284°08	0°6/ 4.1 18			438735	2008 <i>TL</i> ₃₅		7 4.3 184°61	5°9/ 2.8 18		
5 31	19 17.18	-23 41.4	2.344	3.205	11.2	21.3	5 31	19 26.14	-39 37.1	2.300	3.138	12.2	21.8
6 10	19 12.30	-23 58.1	2.260	3.197	8.4	21.1	6 10	19 19.26	-40 24.5	2.229	3.138	9.8	21.7
6 20	19 5.62	-24 16.5	2.200	3.189	5.1	20.9	6 20	19 9.99	-41 3.2	2.180	3.138	7.4	21.5
6 30	18 57.73	-24 34.4	2.166	3.180	1.6	20.6	6 30	18 59.09	-41 27.8	2.158	3.137	6.0	21.4
7 10	18 49.39	-24 50.0	2.161	3.172	2.2	20.6	7 10	18 47.68	-41 35.0	2.163	3.136	6.5	21.5
7 20	18 41.44	-25 2.0	2.183	3.164	5.8	20.9	7 20	18 36.93	-41 23.9	2.194	3.134	8.4	21.6
7 30	18 34.69	-25 10.0	2.231	3.156	9.0	21.0	7 30	18 27.90	-40 56.8	2.250	3.132	10.9	21.7
8 9	18 29.77	-25 14.2	2.303	3.148	11.9	21.2	8 9	18 21.36	-40 17.8	2.329	3.129	13.2	21.9
75679	2000 <i>AU</i> ₉₇		7 4.3 147°74	4°6/ 3.4 18			353965	1999 <i>WU</i> ₅		7			

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
56538	2000 <i>HF</i> ₅₄		7 4.3 31°72'	5°1'	4.8	17	505471	2013 <i>TP</i> ₁₂₉		7 4.3 193°95'	10°6'	7.0	18
5 31	19 20.61	-14 26.9	1.148	2.029	19.0	17.9	5 31	19 19.05	+13 26.4	2.757	3.452	13.8	22.3
6 10	19 15.94	-13 38.9	1.093	2.034	14.7	17.7	6 10	19 13.35	+14 32.2	2.682	3.449	12.6	22.2
6 20	19 8.27	-13 1.8	1.056	2.040	9.9	17.4	6 20	19 6.14	+15 19.5	2.627	3.445	11.5	22.1
6 30	18 58.60	-12 37.6	1.041	2.046	5.8	17.2	6 30	18 57.93	+15 44.7	2.593	3.441	10.8	22.0
7 10	18 48.41	-12 26.9	1.048	2.053	5.9	17.2	7 10	18 49.34	+15 45.9	2.582	3.435	10.6	22.0
7 20	18 39.20	-12 29.0	1.078	2.061	10.0	17.5	7 20	18 41.06	+15 23.3	2.594	3.429	11.1	22.0
7 30	18 32.31	-12 42.0	1.129	2.068	14.5	17.8	7 30	18 33.74	+14 39.0	2.629	3.422	12.1	22.1
8 9	18 28.55	-13 2.7	1.199	2.077	18.5	18.0	8 9	18 27.93	+13 37.3	2.684	3.415	13.3	22.2
111386	2001 <i>XM</i> ₁₅₈		7 4.3 330°51'	0°5'	4.1	18	397715	2008 <i>DW</i> ₂₅		7 4.3 134°74'	3°0'	5.2	17
5 31	19 17.50	-21 23.4	1.914	2.782	13.0	19.3	5 31	19 17.44	-11 42.5	2.867	3.695	10.3	22.7
6 10	19 12.94	-22 9.3	1.836	2.776	9.7	19.1	6 10	19 11.97	-11 32.2	2.798	3.710	8.0	22.5
6 20	19 6.22	-23 1.0	1.780	2.770	5.9	18.8	6 20	19 5.19	-11 28.8	2.755	3.723	5.5	22.4
6 30	18 57.98	-23 55.2	1.751	2.765	1.8	18.5	6 30	18 57.60	-11 32.2	2.738	3.737	3.4	22.3
7 10	18 49.15	-24 48.0	1.748	2.760	2.6	18.6	7 10	18 49.81	-11 42.0	2.751	3.750	3.4	22.3
7 20	18 40.74	-25 36.2	1.772	2.755	6.7	18.8	7 20	18 42.40	-11 57.2	2.792	3.762	5.3	22.4
7 30	18 33.76	-26 17.6	1.821	2.750	10.5	19.1	7 30	18 35.96	-12 16.7	2.860	3.774	7.7	22.6
8 9	18 28.96	-26 51.8	1.893	2.746	13.8	19.3	8 9	18 30.94	-12 39.1	2.953	3.785	9.9	22.8
189070	2001 <i>BD</i> ₃₉		7 4.3 195°47'	0°9'	4.6	18	20012	Ranke		7 4.3 282°18'	1°3'	4.5	18 R
5 31	19 16.81	-18 32.7	2.728	3.577	10.2	21.3	5 31	19 19.60	-19 34.5	1.761	2.627	14.1	18.8
6 10	19 11.73	-18 45.9	2.646	3.575	7.6	21.1	6 10	19 14.62	-19 29.5	1.677	2.615	10.6	18.6
6 20	19 5.17	-19 3.3	2.588	3.573	4.7	20.9	6 20	19 7.31	-19 29.1	1.614	2.602	6.7	18.3
6 30	18 57.61	-19 23.7	2.558	3.570	1.8	20.7	6 30	18 58.35	-19 32.3	1.577	2.590	2.4	18.0
7 10	18 49.71	-19 45.6	2.556	3.567	2.0	20.7	7 10	18 48.75	-19 37.5	1.566	2.578	2.8	18.0
7 20	18 42.14	-20 7.8	2.583	3.564	5.0	20.9	7 20	18 39.63	-19 43.7	1.582	2.566	7.2	18.3
7 30	18 35.56	-20 29.2	2.638	3.561	7.9	21.1	7 30	18 32.09	-19 50.2	1.622	2.554	11.3	18.5
8 9	18 30.50	-20 49.2	2.716	3.557	10.4	21.3	8 9	18 26.92	-19 56.9	1.683	2.542	15.0	18.7
370310	2002 <i>RD</i> ₇₀		7 4.3 313°61'	6°0'	5.3	17	521121	2015 <i>DE</i> ₂₄₇		7 4.3 176°75'	1°2'	4.2	18
5 31	19 17.45	-10 33.4	1.352	2.219	17.5	20.7	5 31	19 23.65	-26 33.6	1.897	2.759	13.4	21.2
6 10	19 13.53	-10 3.8	1.273	2.204	13.9	20.4	6 10	19 17.39	-26 28.2	1.824	2.760	10.0	21.0
6 20	19 6.88	-9 48.3	1.214	2.190	10.0	20.2	6 20	19 8.83	-26 20.9	1.773	2.761	6.2	20.7
6 30	18 58.25	-9 49.3	1.176	2.176	6.6	19.9	6 30	18 58.76	-26 9.4	1.748	2.761	2.2	20.5
7 10	18 48.79	-10 6.9	1.162	2.163	6.5	19.9	7 10	18 48.28	-25 52.3	1.751	2.762	2.8	20.5
7 20	18 39.84	-10 39.5	1.171	2.150	9.9	20.0	7 20	18 38.48	-25 29.8	1.781	2.762	6.9	20.8
7 30	18 32.72	-11 23.7	1.202	2.138	14.1	20.3	7 30	18 30.41	-25 3.2	1.836	2.761	10.7	21.0
8 9	18 28.39	-12 15.2	1.252	2.126	18.2	20.5	8 9	18 24.75	-24 34.7	1.914	2.761	13.9	21.2
21148	Billramsey		7 4.3 64°99'	6°8'	6.6	18	46831	1998 <i>QH</i>		7 4.3 3°83'	5°3'	3.8	18 R
5 31	19 18.71	-4 25.9	1.675	2.506	16.3	17.7	5 31	19 23.09	-33 37.7	1.277	2.159	17.3	18.0
6 10	19 13.61	-4 16.4	1.622	2.525	13.2	17.5	6 10	19 18.11	-34 0.8	1.216	2.159	13.3	17.8
6 20	19 6.45	-4 25.4	1.590	2.545	10.0	17.4	6 20	19 9.76	-34 15.8	1.174	2.159	9.1	17.5
6 30	18 58.00	-4 53.4	1.582	2.565	7.4	17.3	6 30	18 59.12	-34 16.3	1.155	2.159	5.7	17.3
7 10	18 49.25	-5 39.0	1.598	2.584	7.0	17.3	7 10	18 47.84	-33 58.8	1.159	2.161	6.3	17.4
7 20	18 41.21	-6 38.6	1.640	2.604	8.9	17.5	7 20	18 37.67	-33 23.6	1.186	2.163	10.1	17.6
7 30	18 34.77	-7 47.6	1.705	2.624	11.7	17.7	7 30	18 30.10	-32 34.7	1.235	2.165	14.3	17.8
8 9	18 30.55	-9 1.0	1.793	2.644	14.6	17.9	8 9	18 26.02	-31 38.0	1.304	2.168	18.1	18.1
512617	2016 <i>TA</i> ₃₄		7 4.3 110°08'	0°8'	4.2	18	334426	2002 <i>GM</i> ₃₄		7 4.3 86°39'	1°3'	3.9	17
5 31	19 19.43	-25 47.5	2.327	3.185	11.4	21.3	5 31	19 21.74	-24 45.3	1.759	2.627	14.0	20.8
6 10	19 13.85	-25 42.7	2.254	3.189	8.4	21.1	6 10	19 16.05	-25 13.7	1.700	2.640	10.4	20.6
6 20	19 6.50	-25 36.7	2.205	3.193	5.2	20.9	6 20	19 8.04	-25 43.4	1.663	2.653	6.3	20.4
6 30	18 58.01	-25 28.1	2.183	3.197	1.7	20.6	6 30	18 58.53	-26 10.9	1.652	2.666	2.2	20.2
7 10	18 49.23	-25 15.9	2.190	3.201	2.3	20.7	7 10	18 48.62	-26 33.0	1.668	2.678	3.0	20.3
7 20	18 40.98	-24 59.9	2.224	3.204	5.7	20.9	7 20	18 39.46	-26 48.1	1.710	2.691	7.1	20.5
7 30	18 34.07	-24 41.0	2.284	3.208	8.9	21.1	7 30	18 32.07	-26 56.2	1.777	2.704	10.8	20.8
8 9	18 29.05	-24 20.3	2.368	3.212	11.7	21.3	8 9	18 27.15	-26 58.5	1.866	2.716	14.1	21.0
338034	2002 <i>JK</i> ₃₀		7 4.3 24°58'	5°2'	2.8	17	357920	2005 <i>WQ</i> ₄₄		7 4.3 18°68'	2°5'	4.7	18
5 31	19 20.72	-31 35.6	1.489	2.368	15.5	19.7	5 31	19 17.34	-16 15.9	2.241	3.093	12.0	20.3
6 10	19 15.98	-32 48.2	1.432	2.373	11.8	19.5	6 10	19 12.33	-15 52.2	2.165	3.094	9.1	20.1
6 20	19 8.33	-33 57.9	1.396	2.380	8.1	19.3	6 20	19 5.61	-15 33.5	2.113	3.094	5.9	19.9
6 30	18 58.66	-34 57.3	1.384	2.386	5.4	19.1	6 30	18 57.77	-15 20.0	2.087	3.095	3.0	19.8
7 10	18 48.34	-35 40.6	1.397	2.394	6.3	19.2	7 10	18 49.61	-15 11.5	2.088	3.095	3.2	19.8
7 20	18 38.85	-36 5.0	1.434	2.402	9.6	19.4	7 20	18 41.90	-15 7.6	2.117	3.096	6.1	20.0
7 30	18 31.51	-36 11.4	1.494	2.411	13.2	19.7	7 30	18 35.43	-15 7.9	2.172	3.097	9.3	20.2
8 9	18 27.20	-36 3.4	1.574	2.420	16.5	19.9	8 9	18 30.74	-15 11.6	2.250	3.098	12.1	20.3
321185	2008 <i>WC</i> ₁₃₀		7 4.3 344°81'	1°8'	3.7	18	43617	2002 <i>CL</i> ₄₃		7 4.3 74°84'	2°5'	5.5	18
5 31	19 19.56	-24 37.3	1.781	2.652	13.7	20.1	5 31	19 17.70	-11 31.9	2.281	3.120	12.3	18.5
6 10	19 14.63	-25 26.5	1.709	2.650	10.2	19.8	6 10	19 12.65	-12 17.5	2.202	3.122	9.4	18.3
6 20	19 7.31	-26 19.0	1.659	2.649	6.3	19.6	6 20	19 5.86	-13 14.6	2.148	3.124	6.3	18.1
6 30	18 58.33	-27 10.3	1.635	2.647	2.4	19.3	6 30	18 57.88	-14 21.7	2.120	3.125	3.3	17.9
7 10	18 48.75	-27 56.2	1.637	2.646	3.3	19.4	7 10	18 49.45	-15 35.4	2.120	3.127	3.0	17.9
7 20	18 39.69	-28 33.5	1.666	2.646	7.4	19.7	7 20	18 41.38	-16 52.1	2.149	3.129	5.9	18.1
7 30	18 32.28	-29 1.3	1.719	2.645	11.2	19.9	7 30	18 34.45	-18 8.3	2.206	3.132	9.1	18.3
8 9	18 27.31	-29 20.0	1.794	2.644	14.6	20.1	8 9	18 29.27	-19 21.3	2.287	3.134	12.0	18.5
2896	Preiss		7 4.3 352°04'	7°1'	5.6	18	305540	2008 <i>HB</i> ₇		7 4.3 135°95'	5°1'	2.9	18
5 31	19 12.												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
248107	2004 RA ₁₀₉		7 4.3 334°43	7°9/ 3.3 18			509879	2009 BV ₄₄		7 4.3 220°36	1°9/ 3.9 18		
5 31	19 14.16	-34 40.1	0.877	1.791	20.2	19.4	5 31	19 21.87	-28 33.4	2.431	3.284	11.1	22.5
6 10	19 12.96	-35 23.5	0.805	1.765	16.0	19.0	6 10	19 15.80	-28 46.3	2.344	3.275	8.4	22.3
6 20	19 7.51	-35 58.6	0.750	1.740	11.6	18.7	6 20	19 7.80	-28 57.1	2.281	3.266	5.3	22.1
6 30	18 58.66	-36 15.3	0.713	1.717	8.2	18.4	6 30	18 58.50	-29 3.0	2.245	3.256	2.4	21.9
7 10	18 48.30	-36 5.4	0.695	1.697	9.1	18.4	7 10	18 48.74	-29 2.2	2.238	3.245	2.9	21.9
7 20	18 38.81	-35 26.1	0.694	1.678	13.6	18.5	7 20	18 39.41	-28 54.1	2.259	3.234	6.1	22.1
7 30	18 32.50	-34 21.6	0.711	1.662	18.9	18.7	7 30	18 31.40	-28 39.3	2.307	3.223	9.2	22.3
8 9	18 30.80	-33 0.8	0.742	1.648	23.8	19.0	8 9	18 25.34	-28 19.5	2.378	3.211	12.0	22.4
446884	2002 EA ₈		7 4.3 7°97 12°8/ 3.6 16				508190	2015 FV ₃₂₉		7 4.3 281°87	3°7/ 3.0 17		
5 31	19 28.79	-54 10.3	1.646	2.460	17.3	19.7	5 31	19 21.71	-28 28.9	1.740	2.610	14.1	21.0
6 10	19 22.66	-55 4.8	1.596	2.462	15.4	19.6	6 10	19 16.47	-29 40.4	1.667	2.606	10.6	20.8
6 20	19 12.58	-55 35.8	1.565	2.466	13.7	19.5	6 20	19 8.60	-30 53.0	1.617	2.603	6.9	20.5
6 30	18 59.95	-55 34.8	1.553	2.470	12.8	19.5	6 30	18 58.82	-32 0.5	1.593	2.600	3.9	20.3
7 10	18 46.89	-54 57.6	1.562	2.476	13.0	19.5	7 10	18 48.28	-32 57.2	1.595	2.596	4.9	20.4
7 20	18 35.49	-53 46.1	1.592	2.483	14.1	19.6	7 20	18 38.28	-33 39.4	1.623	2.593	8.4	20.6
7 30	18 27.36	-52 7.4	1.643	2.490	15.9	19.7	7 30	18 30.04	-34 6.4	1.675	2.590	12.1	20.8
8 9	18 23.24	-50 11.1	1.712	2.499	17.8	19.9	8 9	18 24.49	-34 20.1	1.748	2.587	15.4	21.0
242996	2006 TE ₉		7 4.3 321°46	4°0/ 2.8 18			93337	2000 SK ₂₃₆		7 4.3 73°57	0°9/ 4.5 18		
5 31	19 16.80	-35 3.1	2.717	3.570	10.1	20.4	5 31	19 20.35	-19 42.7	1.668	2.536	14.6	19.5
6 10	19 12.04	-35 45.8	2.635	3.560	7.9	20.2	6 10	19 15.11	-19 52.4	1.604	2.543	11.0	19.2
6 20	19 5.52	-36 24.1	2.577	3.549	5.6	20.1	6 20	19 7.55	-20 7.7	1.562	2.550	6.7	19.0
6 30	18 57.79	-36 54.7	2.545	3.539	4.1	19.9	6 30	18 58.44	-20 26.4	1.544	2.558	2.3	18.7
7 10	18 49.60	-37 14.9	2.541	3.529	4.6	20.0	7 10	18 48.89	-20 46.3	1.553	2.565	2.7	18.8
7 20	18 41.77	-37 23.4	2.564	3.519	6.6	20.1	7 20	18 40.03	-21 5.4	1.588	2.573	7.1	19.1
7 30	18 35.10	-37 20.5	2.612	3.510	9.0	20.2	7 30	18 32.90	-21 22.7	1.647	2.580	11.1	19.3
8 9	18 30.19	-37 8.0	2.684	3.500	11.2	20.4	8 9	18 28.22	-21 37.9	1.729	2.588	14.6	19.6
224205	2005 RL ₄₈		7 4.3 307°91	0°9/ 4.2 18			161870	2007 CC ₇		7 4.3 206°08	2°7/ 5.3 18		
5 31	19 19.90	-24 24.6	1.403	2.285	16.0	20.6	5 31	19 16.65	-12 36.0	2.592	3.430	11.0	21.0
6 10	19 15.60	-24 32.9	1.317	2.265	12.1	20.3	6 10	19 11.69	-12 45.0	2.508	3.426	8.5	20.9
6 20	19 8.30	-24 43.1	1.252	2.245	7.5	20.0	6 20	19 5.21	-13 1.9	2.448	3.422	5.7	20.7
6 30	18 58.76	-24 52.1	1.210	2.225	2.4	19.6	6 30	18 57.71	-13 26.4	2.415	3.418	3.2	20.5
7 10	18 48.26	-24 56.9	1.193	2.205	3.3	19.6	7 10	18 49.83	-13 57.1	2.410	3.414	3.1	20.5
7 20	18 38.29	-24 55.9	1.199	2.186	8.6	19.9	7 20	18 42.27	-14 32.4	2.433	3.410	5.6	20.6
7 30	18 30.31	-24 49.3	1.228	2.167	13.6	20.1	7 30	18 35.70	-15 10.5	2.483	3.405	8.4	20.8
8 9	18 25.38	-24 38.5	1.277	2.149	18.0	20.3	8 9	18 30.68	-15 49.7	2.558	3.400	11.0	21.0
283698	2002 RT ₁₈₆		7 4.3 312°51	1°2/ 4.2 18			389103	2008 YZ ₁₃		7 4.3 228°76	0°5/ 4.2 18		
5 31	19 20.23	-26 31.4	1.682	2.555	14.3	20.3	5 31	19 20.69	-23 7.1	2.260	3.116	11.8	22.4
6 10	19 15.32	-26 21.0	1.595	2.537	10.8	20.0	6 10	19 15.05	-23 27.8	2.172	3.106	8.8	22.1
6 20	19 7.85	-26 8.4	1.530	2.520	6.7	19.7	6 20	19 7.43	-23 50.9	2.107	3.095	5.4	21.9
6 30	18 58.56	-25 51.3	1.489	2.503	2.3	19.4	6 30	18 58.43	-24 13.9	2.069	3.083	1.7	21.6
7 10	18 48.59	-25 28.3	1.475	2.486	3.0	19.4	7 10	18 48.88	-24 34.6	2.060	3.071	2.3	21.7
7 20	18 39.19	-24 59.7	1.486	2.470	7.6	19.7	7 20	18 39.70	-24 51.3	2.078	3.059	6.1	21.9
7 30	18 31.54	-24 26.9	1.521	2.454	11.9	19.9	7 30	18 31.80	-25 3.4	2.123	3.046	9.6	22.1
8 9	18 26.51	-23 52.5	1.578	2.439	15.7	20.1	8 9	18 25.87	-25 11.3	2.192	3.032	12.6	22.3
312190	2007 VC ₀₁		7 4.3 86°82	0°9/ 4.2 17			252848	2002 GL ₁₃₄		7 4.3 344°29	3°3/ 4.7 17		
5 31	19 24.88	-25 25.3	1.397	2.273	16.5	20.2	5 31	19 17.49	-17 14.9	1.136	2.026	18.4	20.3
6 10	19 18.86	-25 19.7	1.338	2.281	12.3	20.0	6 10	19 13.94	-16 47.1	1.069	2.018	14.1	20.0
6 20	19 9.94	-25 13.4	1.299	2.290	7.5	19.7	6 20	19 7.30	-16 27.7	1.021	2.011	9.1	19.7
6 30	18 59.16	-25 3.5	1.285	2.299	2.4	19.4	6 30	18 58.46	-16 17.4	0.994	2.005	4.3	19.4
7 10	18 47.93	-24 48.4	1.295	2.307	3.2	19.5	7 10	18 48.85	-16 15.6	0.990	2.000	4.6	19.4
7 20	18 37.73	-24 28.2	1.331	2.316	8.2	19.8	7 20	18 40.02	-16 21.3	1.007	1.996	9.5	19.6
7 30	18 29.80	-24 4.6	1.390	2.324	12.7	20.1	7 30	18 33.44	-16 33.1	1.046	1.993	14.6	19.9
8 9	18 24.92	-23 40.0	1.470	2.333	16.5	20.4	8 9	18 30.07	-16 49.0	1.103	1.990	19.0	20.2
428067	2006 GM ₃		7 4.3 42°08	1°5/ 4.7 17			203966	2003 SN ₁₄₆		7 4.3 272°80	3°1/ 4.7 17		
5 31	19 18.75	-17 54.0	1.552	2.424	15.3	21.0	5 31	19 19.37	-15 51.4	1.889	2.745	13.7	20.1
6 10	19 13.99	-18 5.9	1.495	2.435	11.5	20.8	6 10	19 14.24	-15 21.7	1.807	2.737	10.5	19.8
6 20	19 6.87	-18 25.6	1.459	2.447	7.2	20.6	6 20	19 6.99	-14 57.8	1.747	2.728	7.0	19.6
6 30	18 58.21	-18 51.1	1.447	2.459	2.7	20.3	6 30	18 58.30	-14 40.2	1.712	2.719	3.7	19.4
7 10	18 49.15	-19 19.8	1.460	2.472	3.0	20.4	7 10	18 49.09	-14 28.9	1.704	2.710	3.8	19.4
7 20	18 40.84	-19 49.2	1.499	2.485	7.3	20.7	7 20	18 40.36	-14 23.8	1.722	2.701	7.2	19.6
7 30	18 34.31	-20 17.5	1.562	2.498	11.4	21.0	7 30	18 33.08	-14 24.4	1.766	2.692	10.9	19.8
8 9	18 30.28	-20 43.6	1.646	2.512	14.9	21.2	8 9	18 27.95	-14 29.7	1.831	2.683	14.2	20.0
328176	2008 DU ₃		7 4.3 62°49	2°4/ 3.9 17			21001	Troglic		7 4.3 165°18	9°6/ 7.6 18		
5 31	19 23.20	-26 52.6	1.396	2.275	16.3	20.8	5 31	19 21.42	+ 6 46.2	2.291	3.040	14.9	20.1
6 10	19 17.67	-27 22.0	1.342	2.287	12.2	20.6	6 10	19 15.27	+ 7 26.1	2.222	3.048	13.0	20.0
6 20	19 9.25	-27 50.9	1.309	2.300	7.5	20.3	6 20	19 7.39	+ 7 46.4	2.172	3.054	11.2	19.9
6 30	18 58.95	-28 14.5	1.300	2.312	3.1	20.1	6 30	18 58.38	+ 7 44.2	2.146	3.060	10.0	19.8
7 10	18 48.20	-28 29.0	1.316	2.325	4.0	20.2	7 10	18 49.01	+ 7 18.6	2.145	3.065	9.7	19.8
7 20	18 38.45	-28 33.2	1.357	2.338	8.4	20.5	7 20	18 40.09	+ 6 31.1	2.168	3.069	10.5	19.9
7 30	18 30.96	-28 28.0	1.420	2.352	12.7	20.8	7 30	18 32.40	+ 5 25.3	2.216	3.072	12.0	20.0
8 9	18 26.50	-28 16.1	1.504	2.365	16.3	21.0	8 9	18 26.50	+ 4 6.4	2.286	3.074	13.8	20.1
361468	2007 DO ₂₈		7 4.3 215°77	3°1/ 5.4 18			120791	1998 FP ₂₈					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
248085	2004 RO	7 4.3 261°24	3°7/ 3.9 18				233776	2008 TH ₁₆₀	7 4.3 96°01	0°5/ 4.2 17			
5 31	19 24.97	-36 19.5	2.671	3.509	10.7	20.3	5 31	19 20.42	-22 58.8	1.798	2.666	13.8	21.1
6 10	19 18.03	-36 15.8	2.573	3.490	8.4	20.1	6 10	19 15.15	-23 19.0	1.728	2.668	10.3	20.9
6 20	19 9.13	-36 4.0	2.499	3.470	5.9	20.0	6 20	19 7.60	-23 41.9	1.681	2.671	6.3	20.6
6 30	18 58.92	-35 41.3	2.453	3.450	3.9	19.8	6 30	18 58.51	-24 4.9	1.659	2.673	1.9	20.4
7 10	18 48.30	-35 6.1	2.436	3.430	4.2	19.8	7 10	18 48.92	-24 25.2	1.663	2.675	2.6	20.4
7 20	18 38.19	-34 19.0	2.447	3.410	6.5	19.9	7 20	18 39.94	-24 41.1	1.694	2.678	6.9	20.7
7 30	18 29.47	-33 22.3	2.486	3.389	9.2	20.0	7 30	18 32.61	-24 52.0	1.750	2.680	10.8	20.9
8 9	18 22.79	-32 19.5	2.550	3.368	11.7	20.2	8 9	18 27.65	-24 58.5	1.828	2.682	14.2	21.2
253553	2003 SZ ₂₅₂	7 4.3 271°82	0°3/ 4.4 17				425678	2011 AG ₁₉	7 4.3 233°30	3°2/ 3.8 17			
5 31	19 22.98	-21 47.4	1.591	2.460	15.2	21.9	5 31	19 24.70	-30 12.6	1.710	2.576	14.5	21.7
6 10	19 17.64	-21 49.7	1.497	2.437	11.5	21.6	6 10	19 18.67	-30 32.9	1.633	2.569	11.0	21.5
6 20	19 9.46	-21 55.6	1.425	2.414	7.2	21.3	6 20	19 9.91	-30 49.6	1.577	2.562	7.1	21.3
6 30	18 59.16	-22 2.8	1.377	2.391	2.3	20.9	6 30	18 59.25	-30 58.1	1.547	2.555	3.7	21.0
7 10	18 47.88	-22 9.2	1.354	2.367	3.0	20.9	7 10	18 47.94	-30 55.4	1.542	2.548	4.3	21.1
7 20	18 37.00	-22 13.1	1.358	2.343	8.1	21.2	7 20	18 37.31	-30 40.6	1.564	2.540	8.1	21.3
7 30	18 27.88	-22 14.3	1.386	2.318	12.9	21.4	7 30	18 28.63	-30 15.5	1.610	2.532	12.1	21.5
8 9	18 21.56	-22 13.5	1.434	2.293	17.1	21.6	8 9	18 22.76	-29 43.6	1.677	2.523	15.6	21.7
380287	2002 BF ₃₀	7 4.3 223°27	0°7/ 4.2 18				275729	2001 CE ₁₄	7 4.3 127°30	0°1/ 4.4 17			
5 31	19 22.65	-24 35.5	2.212	3.066	12.0	22.4	5 31	19 23.54	-20 18.8	1.680	2.543	14.8	20.8
6 10	19 16.54	-24 44.2	2.123	3.056	9.0	22.2	6 10	19 17.51	-20 49.9	1.617	2.554	11.0	20.6
6 20	19 8.35	-24 53.3	2.057	3.044	5.5	21.9	6 20	19 9.04	-21 26.9	1.577	2.565	6.7	20.3
6 30	18 58.72	-25 0.5	2.019	3.033	1.8	21.7	6 30	18 58.95	-22 6.3	1.561	2.576	2.1	20.1
7 10	18 48.55	-25 4.0	2.009	3.020	2.4	21.7	7 10	18 48.38	-22 44.5	1.573	2.586	2.7	20.1
7 20	18 38.81	-25 2.8	2.027	3.007	6.2	21.9	7 20	18 38.53	-23 18.8	1.612	2.595	7.2	20.4
7 30	18 30.44	-24 57.3	2.071	2.993	9.8	22.1	7 30	18 30.49	-23 47.9	1.675	2.604	11.3	20.7
8 9	18 24.15	-24 48.4	2.139	2.979	12.9	22.3	8 9	18 25.01	-24 11.5	1.761	2.613	14.7	20.9
248578	2006 BT ₈₉	7 4.3 241°35	0°1/ 4.3 18				334407	2002 CM ₃₁₁	7 4.3 272°04	0°3/ 4.3 18			
5 31	19 17.55	-22 35.1	2.982	3.831	9.4	22.1	5 31	19 22.17	-22 58.9	1.929	2.790	13.3	21.1
6 10	19 12.30	-22 47.9	2.885	3.815	7.0	21.9	6 10	19 16.64	-23 9.1	1.828	2.764	10.0	20.9
6 20	19 5.59	-23 2.3	2.812	3.799	4.3	21.7	6 20	19 8.69	-23 21.8	1.749	2.737	6.2	20.6
6 30	18 57.85	-23 16.8	2.768	3.782	1.3	21.5	6 30	18 58.92	-23 34.7	1.696	2.710	1.9	20.2
7 10	18 49.71	-23 30.2	2.753	3.765	1.8	21.5	7 10	18 48.31	-23 45.3	1.670	2.682	2.6	20.2
7 20	18 41.83	-23 41.4	2.767	3.747	4.8	21.7	7 20	18 37.98	-23 52.1	1.671	2.653	7.1	20.5
7 30	18 34.85	-23 49.9	2.809	3.729	7.6	21.8	7 30	18 29.09	-23 54.7	1.698	2.624	11.3	20.6
8 9	18 29.31	-23 55.9	2.875	3.710	10.1	22.0	8 9	18 22.55	-23 54.0	1.746	2.595	15.0	20.8
428300	2007 EB ₂₁₄	7 4.3 130°24	1°2/ 4.6 17				328966	2010 VF ₁₆₅	7 4.3 259°73	2°0/ 3.9 17			
5 31	19 21.52	-19 23.9	1.829	2.690	13.9	22.1	5 31	19 23.37	-26 11.8	1.653	2.522	14.7	21.6
6 10	19 15.80	-19 23.2	1.762	2.697	10.4	21.8	6 10	19 17.86	-26 39.6	1.567	2.507	11.1	21.4
6 20	19 7.89	-19 27.2	1.717	2.704	6.5	21.6	6 20	19 9.56	-27 8.6	1.502	2.491	6.9	21.1
6 30	18 58.56	-19 34.4	1.698	2.711	2.3	21.4	6 30	18 59.20	-27 34.6	1.462	2.475	2.8	20.8
7 10	18 48.83	-19 43.3	1.706	2.717	2.7	21.4	7 10	18 47.97	-27 53.6	1.448	2.458	3.6	20.8
7 20	18 39.74	-19 52.6	1.740	2.724	6.8	21.7	7 20	18 37.22	-28 3.5	1.461	2.441	8.1	21.0
7 30	18 32.28	-20 1.7	1.801	2.730	10.6	21.9	7 30	18 28.31	-28 4.2	1.497	2.424	12.5	21.2
8 9	18 27.11	-20 10.3	1.883	2.735	13.9	22.2	8 9	18 22.19	-27 57.7	1.554	2.406	16.3	21.4
339322	2004 XG ₁₂₂	7 4.3 284°45	0°9/ 4.1 18				332426	2007 SQ ₂₃	7 4.3 249°18	2°6/ 4.9 16			
5 31	19 19.89	-23 7.3	1.792	2.661	13.7	21.3	5 31	19 18.63	-15 44.8	1.998	2.853	13.1	21.5
6 10	19 15.02	-23 38.6	1.703	2.644	10.3	21.0	6 10	19 13.58	-15 32.8	1.919	2.848	10.0	21.3
6 20	19 7.70	-24 14.1	1.637	2.627	6.4	20.8	6 20	19 6.56	-15 27.4	1.862	2.844	6.6	21.1
6 30	18 58.59	-24 50.7	1.595	2.609	2.1	20.4	6 30	18 58.19	-15 28.4	1.831	2.839	3.3	20.9
7 10	18 48.70	-25 24.6	1.581	2.592	2.9	20.5	7 10	18 49.37	-15 35.2	1.827	2.834	3.4	20.9
7 20	18 39.20	-25 53.2	1.592	2.575	7.3	20.7	7 20	18 41.00	-15 46.6	1.849	2.830	6.7	21.1
7 30	18 31.24	-26 15.1	1.629	2.558	11.5	20.9	7 30	18 33.99	-16 1.5	1.897	2.825	10.2	21.3
8 9	18 25.72	-26 30.8	1.687	2.541	15.2	21.1	8 9	18 29.02	-16 18.7	1.968	2.820	13.4	21.5
184197	2004 PA ₄₉	7 4.3 314°41	4°5/ 5.8 18				314397	2005 UJ ₁₉₉	7 4.3 291°42	0°5/ 4.2 18			
5 31	19 15.73	- 8 48.5	2.126	2.964	13.1	20.4	5 31	19 18.10	-23 22.7	2.149	3.012	12.0	21.8
6 10	19 11.32	- 8 48.2	2.044	2.958	10.4	20.2	6 10	19 13.30	-23 39.2	2.056	2.993	9.0	21.6
6 20	19 5.14	- 9 0.1	1.985	2.951	7.5	20.0	6 20	19 6.47	-23 58.0	1.985	2.974	5.5	21.3
6 30	18 57.74	- 9 24.5	1.951	2.946	5.0	19.8	6 30	18 58.20	-24 16.9	1.941	2.955	1.7	21.0
7 10	18 49.89	-10 0.3	1.943	2.940	4.8	19.8	7 10	18 49.33	-24 33.7	1.924	2.936	2.4	21.0
7 20	18 42.40	-10 45.5	1.962	2.934	7.0	19.9	7 20	18 40.79	-24 46.8	1.935	2.917	6.3	21.2
7 30	18 36.09	-11 37.3	2.006	2.929	10.0	20.1	7 30	18 33.52	-24 55.7	1.971	2.898	9.9	21.4
8 9	18 31.58	-12 32.5	2.073	2.924	12.9	20.3	8 9	18 28.26	-25 0.7	2.030	2.879	13.1	21.6
498983	2009 BJ ₁₅₇	7 4.3 68°31	1°2/ 4.6 17				136522	2006 DA ₅₉	7 4.3 59°48	6°6/ 5.9 17			
5 31	19 22.81	-19 10.8	1.292	2.170	17.4	21.5	5 31	19 18.47	- 6 34.6	1.682	2.521	15.9	19.4
6 10	19 17.37	-19 19.9	1.241	2.185	13.0	21.2	6 10	19 13.50	- 6 0.5	1.627	2.536	12.8	19.2
6 20	19 9.08	-19 36.5	1.210	2.200	8.0	21.0	6 20	19 6.48	- 5 41.7	1.592	2.551	9.6	19.1
6 30	18 58.94	-19 57.9	1.202	2.215	2.8	20.7	6 30	18 58.15	- 5 40.2	1.581	2.566	7.1	19.0
7 10	18 48.39	-20 21.1	1.218	2.230	3.2	20.8	7 10	18 49.51	- 5 55.5	1.595	2.582	6.9	19.0
7 20	18 38.85	-20 43.7	1.259	2.246	8.3	21.1	7 20	18 41.55	- 6 25.7	1.634	2.598	8.9	19.1
7 30	18 31.55	-21 4.2	1.323	2.261	12.9	21.4	7 30	18 35.17	- 7 7.6	1.696	2.614	11.8	19.4
8 9	18 27.27	-21 22.2	1.407	2.277	16.7	21.7	8 9	18 31.00	- 7 56.9	1.780	2.629	14.7	19.6
169469	2002 CM ₈₄	7 4.3 348°58	3°8/ 3.9 17				131028	2000 XQ ₄₂	7 4.3 174°40	6°5/ 2.8 18			
5 31	19 21.54	-29 5											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
340349	2006 <i>DT</i> ₇₃		7 4.3 210°99	10.4/ 8.2	18		65330	2002 <i>LR</i> ₃₃		7 4.3 298°28	2.7/ 3.7	18	
5 31	19 17.75	+ 6 57.0	2.032	2.796	16.1	21.1	5 31	19 19.05	-30 12.0	2.341	3.200	11.3	19.6
6 10	19 12.86	+ 7 29.4	1.957	2.793	14.1	21.0	6 10	19 13.81	-30 36.2	2.265	3.198	8.5	19.4
6 20	19 6.10	+ 7 39.6	1.901	2.791	12.2	20.9	6 20	19 6.68	-30 57.7	2.212	3.196	5.5	19.2
6 30	18 58.06	+ 7 24.2	1.867	2.788	10.8	20.8	6 30	18 58.27	-31 13.4	2.186	3.193	3.0	19.0
7 10	18 49.57	+ 6 42.2	1.856	2.784	10.4	20.7	7 10	18 49.45	-31 21.2	2.188	3.191	3.5	19.1
7 20	18 41.49	+ 5 35.6	1.868	2.781	11.3	20.8	7 20	18 41.12	-31 20.1	2.216	3.189	6.3	19.2
7 30	18 34.66	+ 4 8.9	1.905	2.777	13.0	20.9	7 30	18 34.11	-31 10.8	2.271	3.187	9.3	19.4
8 9	18 29.73	+ 2 28.2	1.963	2.773	15.0	21.0	8 9	18 29.07	-30 54.8	2.349	3.185	12.0	19.6
470695	2008 <i>TR</i> ₅₅		7 4.3 295°12	5.7/ 5.3	16		443673	2015 <i>HD</i> ₁₅₅		7 4.3 356°21	7.9/ 4.4	16	
5 31	19 18.06	- 9 45.7	1.715	2.564	15.2	21.7	5 31	19 14.24	-11 27.9	1.173	2.056	18.5	19.2
6 10	19 13.47	- 9 10.7	1.634	2.553	12.1	21.4	6 10	19 11.28	- 9 52.5	1.110	2.048	14.8	18.9
6 20	19 6.65	- 8 47.3	1.573	2.542	8.8	21.2	6 20	19 5.58	- 8 27.4	1.066	2.042	11.0	18.7
6 30	18 58.27	- 8 37.5	1.537	2.531	6.1	21.0	6 30	18 57.99	- 7 18.3	1.044	2.039	8.2	18.5
7 10	18 49.29	- 8 41.7	1.526	2.521	6.1	21.0	7 10	18 49.82	- 6 29.8	1.043	2.036	8.4	18.5
7 20	18 40.76	- 8 59.2	1.539	2.511	8.7	21.1	7 20	18 42.41	- 6 3.6	1.063	2.036	11.5	18.7
7 30	18 33.71	- 9 27.8	1.577	2.500	12.2	21.3	7 30	18 37.00	- 5 58.8	1.104	2.037	15.3	18.9
8 9	18 28.93	-10 4.5	1.635	2.490	15.5	21.5	8 9	18 34.44	- 6 11.3	1.162	2.041	18.9	19.1
46889	1998 <i>RD</i> ₄₃		7 4.3 294°44	1.1/ 4.1	18		346770	2009 <i>BE</i> ₈₅		7 4.3 195°98	0.4/ 4.3	18	
5 31	19 20.40	-25 27.4	1.814	2.683	13.6	19.4	5 31	19 20.62	-24 9.4	2.038	2.900	12.6	21.3
6 10	19 15.24	-25 33.2	1.734	2.675	10.2	19.2	6 10	19 15.08	-24 8.4	1.962	2.899	9.4	21.1
6 20	19 7.73	-25 39.0	1.677	2.666	6.3	18.9	6 20	19 7.48	-24 7.8	1.910	2.898	5.7	20.9
6 30	18 58.60	-25 42.3	1.644	2.658	2.1	18.7	6 30	18 58.52	-24 5.8	1.883	2.897	1.8	20.6
7 10	18 48.89	-25 40.9	1.638	2.649	2.8	18.7	7 10	18 49.14	-24 0.9	1.885	2.897	2.4	20.7
7 20	18 39.74	-25 34.1	1.658	2.641	7.1	18.9	7 20	18 40.33	-23 52.8	1.913	2.896	6.3	20.9
7 30	18 32.23	-25 22.4	1.704	2.633	11.0	19.1	7 30	18 32.99	-23 41.8	1.967	2.894	9.9	21.1
8 9	18 27.14	-25 7.4	1.770	2.625	14.5	19.4	8 9	18 27.80	-23 28.9	2.044	2.893	13.1	21.3
334406	2002 <i>CR</i> ₃₀₄		7 4.3 176°44	11.8/ 9.8	18		508125	2015 <i>DY</i> ₂₂₉		7 4.3 203°17	5.7/ 6.1	18	
5 31	19 18.93	+14 10.5	2.266	2.971	16.1	21.2	5 31	19 18.54	- 6 23.3	1.970	2.798	14.3	21.6
6 10	19 13.55	+14 47.3	2.195	2.973	14.7	21.1	6 10	19 13.52	- 6 16.3	1.892	2.796	11.5	21.4
6 20	19 6.43	+14 59.9	2.143	2.975	13.3	21.0	6 20	19 6.55	- 6 23.8	1.836	2.794	8.6	21.2
6 30	18 58.15	+14 44.7	2.110	2.976	12.2	20.9	6 30	18 58.25	- 6 46.8	1.804	2.792	6.2	21.1
7 10	18 49.49	+14 0.5	2.100	2.976	11.8	20.9	7 10	18 49.47	- 7 24.3	1.799	2.789	5.9	21.1
7 20	18 41.24	+12 48.9	2.113	2.976	12.3	20.9	7 20	18 41.12	- 8 14.1	1.820	2.786	8.0	21.2
7 30	18 34.19	+11 14.3	2.148	2.976	13.3	21.0	7 30	18 34.08	- 9 12.8	1.866	2.784	10.9	21.4
8 9	18 28.93	+ 9 23.1	2.205	2.975	14.8	21.1	8 9	18 29.02	-10 16.4	1.935	2.780	13.8	21.5
474122	1994 <i>RP</i> ₂₄		7 4.3 327°53	3.2/ 3.9	16		476241	2007 <i>VH</i> ₆₄		7 4.3 315°94	2.9/ 3.7	18	R
5 31	19 17.78	-29 22.5	1.303	2.194	16.5	20.5	5 31	19 18.93	-28 3.5	1.638	2.515	14.4	20.7
6 10	19 14.42	-29 29.8	1.214	2.164	12.6	20.1	6 10	19 14.64	-28 37.9	1.551	2.495	10.9	20.4
6 20	19 7.83	-29 33.4	1.144	2.135	8.2	19.8	6 20	19 7.66	-29 12.5	1.486	2.475	7.0	20.1
6 30	18 58.76	-29 28.8	1.096	2.107	3.9	19.5	6 30	18 58.68	-29 42.7	1.445	2.456	3.4	19.9
7 10	18 48.58	-29 12.4	1.071	2.080	4.7	19.4	7 10	18 48.86	-30 4.6	1.430	2.437	4.2	19.9
7 20	18 38.92	-28 43.3	1.069	2.054	9.6	19.6	7 20	18 39.49	-30 15.4	1.439	2.419	8.3	20.1
7 30	18 31.42	-28 3.6	1.088	2.030	14.7	19.8	7 30	18 31.88	-30 15.4	1.472	2.401	12.5	20.3
8 9	18 27.26	-27 17.3	1.126	2.007	19.2	20.0	8 9	18 26.99	-30 6.2	1.525	2.383	16.3	20.5
218234	2002 <i>VY</i> ₁₁₃		7 4.3 287°04	0.7/ 4.5	18		331569	2001 <i>QO</i> ₅₂		7 4.3 288°06	1.8/ 4.7	18	
5 31	19 20.73	-20 22.1	1.553	2.425	15.3	20.7	5 31	19 20.13	-18 14.2	1.609	2.477	15.1	20.7
6 10	19 15.99	-20 31.9	1.462	2.403	11.6	20.4	6 10	19 15.43	-18 13.2	1.517	2.455	11.5	20.5
6 20	19 8.50	-20 47.6	1.392	2.382	7.3	20.1	6 20	19 8.11	-18 19.2	1.445	2.433	7.3	20.2
6 30	18 58.93	-21 7.3	1.346	2.360	2.4	19.8	6 30	18 58.83	-18 31.0	1.398	2.411	2.9	19.8
7 10	18 48.41	-21 28.3	1.325	2.338	3.0	19.8	7 10	18 48.66	-18 46.9	1.377	2.388	3.2	19.8
7 20	18 38.27	-21 48.2	1.330	2.315	8.1	20.0	7 20	18 38.85	-19 5.1	1.381	2.366	7.9	20.0
7 30	18 29.87	-22 5.8	1.358	2.293	12.8	20.2	7 30	18 30.67	-19 24.3	1.408	2.343	12.5	20.2
8 9	18 24.21	-22 20.7	1.407	2.271	17.0	20.4	8 9	18 25.10	-19 43.4	1.457	2.321	16.6	20.4
169017	2001 <i>DU</i> ₆₇		7 4.3 183°29	0.6/ 4.2	18		458128	2010 <i>EX</i> ₁₃₉		7 4.3 72°71	3.2/ 3.8	17	
5 31	19 24.33	-23 39.3	1.869	2.728	13.7	20.6	5 31	19 25.37	-27 52.9	1.215	2.099	17.9	21.7
6 10	19 18.03	-23 51.4	1.794	2.729	10.2	20.4	6 10	19 19.77	-28 27.8	1.162	2.108	13.4	21.4
6 20	19 9.36	-24 5.0	1.741	2.729	6.3	20.2	6 20	19 10.81	-29 1.5	1.128	2.118	8.5	21.2
6 30	18 59.10	-24 17.4	1.715	2.729	2.0	19.9	6 30	18 59.60	-29 27.9	1.117	2.128	3.9	20.9
7 10	18 48.31	-24 26.3	1.716	2.728	2.6	19.9	7 10	18 47.82	-29 42.2	1.130	2.138	4.8	21.0
7 20	18 38.14	-24 30.5	1.744	2.726	6.9	20.2	7 20	18 37.17	-29 43.0	1.166	2.148	9.5	21.3
7 30	18 29.65	-24 30.1	1.798	2.723	10.8	20.4	7 30	18 29.16	-29 32.1	1.225	2.158	14.1	21.6
8 9	18 23.59	-24 26.3	1.875	2.720	14.2	20.6	8 9	18 24.65	-29 13.2	1.303	2.169	18.1	21.9
249403	2009 <i>CM</i> ₁₅		7 4.3 6°90	4.8/ 3.9	17		434377	2004 <i>TD</i> ₃₄₂		7 4.3 212°01	12.2/ 28.6	17	
5 31	19 20.31	-31 29.7	1.009	1.910	19.3	19.4	5 31	19 36.45	-55 18.2	2.149	2.930	14.8	21.0
6 10	19 16.62	-31 50.2	0.956	1.910	14.7	19.1	6 10	19 28.79	-57 15.0	2.091	2.925	13.4	20.9
6 20	19 9.16	-32 4.0	0.920	1.911	9.7	18.9	6 20	19 16.90	-58 54.5	2.054	2.920	12.5	20.8
6 30	18 59.12	-32 4.6	0.904	1.913	5.4	18.6	6 30	19 1.67	-60 6.6	2.039	2.915	12.2	20.8
7 10	18 48.38	-31 48.1	0.910	1.917	6.1	18.7	7 10	18 44.92	-60 44.2	2.047	2.909	12.7	20.8
7 20	18 38.90	-31 14.8	0.937	1.922	10.8	19.0	7 20	18 28.92	-60 45.9	2.076	2.903	13.8	20.9
7 30	18 32.36	-30 28.9	0.984	1.928	15.6	19.2	7 30	18 15.85	-60 15.8	2.125	2.896	15.3	21.0
8 9	18 29.66	-29 36.4	1.049	1.935	19.9	19.5	8 9	18 7.10	-59 21.9	2.190	2.889	16.8	21.1
87615	2000 <i>RB</i> ₄₇		7 4.3 239°57	7.4/ 2.9	18		278552						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
189557	2000 <i>SU</i> ₇₆		7 4.3 251°20	3°0/ 4.9 18			327689	2006 <i>RU</i> ₉₀		7 4.4 196°51	2°4/ 4.9 17		
5 31	19 19.84	-15 10.6	1.850	2.706	14.0	20.7	5 31	19 21.88	-16 7.3	1.803	2.658	14.3	21.6
6 10	19 14.70	-14 58.1	1.767	2.697	10.8	20.5	6 10	19 16.25	-16 4.5	1.726	2.656	10.9	21.4
6 20	19 7.39	-14 53.2	1.707	2.688	7.1	20.2	6 20	19 8.34	-16 9.3	1.671	2.654	7.1	21.2
6 30	18 58.55	-14 55.9	1.671	2.678	3.7	20.0	6 30	18 58.88	-16 21.0	1.642	2.651	3.3	20.9
7 10	18 49.14	-15 5.4	1.661	2.669	3.7	20.0	7 10	18 48.87	-16 37.9	1.639	2.648	3.4	20.9
7 20	18 40.18	-15 20.4	1.679	2.659	7.2	20.2	7 20	18 39.40	-16 58.5	1.663	2.645	7.2	21.1
7 30	18 32.67	-15 39.6	1.721	2.649	11.0	20.4	7 30	18 31.49	-17 21.2	1.712	2.641	11.1	21.4
8 9	18 27.37	-16 1.5	1.785	2.639	14.4	20.6	8 9	18 25.90	-17 44.8	1.783	2.636	14.5	21.6
175179	2005 <i>EC</i> ₁₆₀		7 4.3 257°35	5°1/ 5.4 18			501827	2014 <i>WY</i> ₁₀₄		7 4.4 323°11	5°6/ 3.0 17		
5 31	19 20.44	-10 57.8	1.569	2.423	16.1	20.4	5 31	19 16.78	-29 8.6	0.966	1.874	19.3	20.8
6 10	19 15.49	-10 38.5	1.489	2.413	12.7	20.1	6 10	19 14.70	-30 13.0	0.889	1.848	14.9	20.4
6 20	19 8.04	-10 32.0	1.429	2.403	9.0	19.9	6 20	19 8.62	-31 21.4	0.830	1.823	10.0	20.0
6 30	18 58.79	-10 39.3	1.392	2.392	5.7	19.7	6 30	18 59.24	-32 24.7	0.790	1.799	5.9	19.7
7 10	18 48.83	-11 0.0	1.381	2.382	5.6	19.6	7 10	18 48.20	-33 13.1	0.770	1.776	7.3	19.7
7 20	18 39.34	-11 32.2	1.394	2.371	8.8	19.8	7 20	18 37.68	-33 40.0	0.770	1.754	12.6	19.9
7 30	18 31.52	-12 13.2	1.432	2.360	12.8	20.0	7 30	18 29.94	-33 44.2	0.789	1.734	18.2	20.1
8 9	18 26.24	-12 59.3	1.490	2.349	16.5	20.2	8 9	18 26.56	-33 29.8	0.822	1.716	23.3	20.3
489618	2007 <i>TB</i> ₂₇₇		7 4.3 233°39	2°0/ 4.7 17			470231	2006 <i>WB</i> ₁₂₉		7 4.4 217°07	3°7/ 5.8 18		
5 31	19 23.32	-18 13.5	1.662	2.523	15.0	22.2	5 31	19 17.00	- 8 33.9	2.865	3.684	10.6	22.2
6 10	19 17.59	-18 1.6	1.579	2.513	11.4	22.0	6 10	19 11.90	- 8 37.1	2.773	3.675	8.4	22.0
6 20	19 9.29	-17 55.2	1.517	2.503	7.3	21.7	6 20	19 5.40	- 8 49.6	2.705	3.666	6.0	21.9
6 30	18 59.18	-17 53.6	1.480	2.492	3.0	21.4	6 30	18 57.94	- 9 11.6	2.664	3.656	4.1	21.7
7 10	18 48.35	-17 55.6	1.470	2.480	3.3	21.4	7 10	18 50.12	- 9 42.1	2.651	3.646	3.9	21.7
7 20	18 38.05	-18 0.3	1.485	2.468	7.7	21.7	7 20	18 42.53	-10 19.8	2.667	3.635	5.7	21.8
7 30	18 29.48	-18 6.9	1.526	2.456	12.1	21.9	7 30	18 35.82	-11 2.9	2.711	3.623	8.1	21.9
8 9	18 23.48	-18 15.1	1.587	2.443	15.9	22.1	8 9	18 30.48	-11 49.1	2.779	3.611	10.5	22.1
77503	2001 <i>HP</i> ₄₅		7 4.3 52°16	1°0/ 4.0 18 R			335757	2007 <i>EW</i> ₈₆		7 4.4 95°61	1°2/ 4.6 17		
5 31	19 19.89	-22 23.4	1.744	2.614	14.0	19.1	5 31	19 23.34	-19 49.7	1.795	2.654	14.2	20.9
6 10	19 14.87	-23 13.4	1.680	2.621	10.4	18.9	6 10	19 17.07	-19 43.7	1.740	2.675	10.6	20.7
6 20	19 7.52	-24 8.3	1.638	2.628	6.3	18.7	6 20	19 8.66	-19 41.7	1.708	2.695	6.5	20.5
6 30	18 58.60	-25 3.9	1.622	2.636	2.1	18.4	6 30	18 58.92	-19 42.3	1.702	2.715	2.3	20.3
7 10	18 49.15	-25 55.8	1.632	2.643	2.9	18.5	7 10	18 48.94	-19 44.3	1.722	2.734	2.7	20.3
7 20	18 40.30	-26 40.7	1.669	2.651	7.1	18.8	7 20	18 39.76	-19 46.7	1.770	2.753	6.7	20.6
7 30	18 33.12	-27 17.1	1.731	2.659	11.0	19.0	7 30	18 32.30	-19 49.3	1.843	2.772	10.4	20.9
8 9	18 28.35	-27 45.0	1.814	2.667	14.3	19.2	8 9	18 27.19	-19 52.1	1.939	2.790	13.6	21.1
252813	2002 <i>GS</i> ₃₉		7 4.3 25°04	5°9/ 3.3 18			227818	2007 <i>BE</i> ₇₁		7 4.4 248°87	0°7/ 4.5 18		
5 31	19 22.59	-39 4.4	2.079	2.929	12.9	19.8	5 31	19 22.27	-20 36.3	1.890	2.749	13.6	21.8
6 10	19 16.78	-39 36.2	2.014	2.932	10.2	19.6	6 10	19 16.65	-20 38.7	1.799	2.734	10.3	21.5
6 20	19 8.61	-39 58.6	1.972	2.936	7.7	19.5	6 20	19 8.68	-20 44.9	1.730	2.717	6.4	21.3
6 30	18 58.90	-40 6.6	1.954	2.940	6.0	19.4	6 30	18 59.03	-20 53.3	1.687	2.701	2.1	20.9
7 10	18 48.80	-39 57.7	1.963	2.944	6.4	19.4	7 10	18 48.67	-21 2.1	1.671	2.684	2.6	20.9
7 20	18 39.45	-39 31.8	1.997	2.948	8.5	19.5	7 20	18 38.72	-21 9.9	1.683	2.666	7.0	21.2
7 30	18 31.90	-38 51.6	2.056	2.952	11.1	19.7	7 30	18 30.26	-21 16.3	1.719	2.648	11.1	21.4
8 9	18 26.86	-38 1.3	2.136	2.957	13.6	19.9	8 9	18 24.12	-21 21.4	1.778	2.629	14.7	21.6
279774	1999 <i>TL</i> ₆₁		7 4.3 218°17	7°6/ 6.2 18			424834	2008 <i>UJ</i> ₂₄₁		7 4.4 356°16	4°6/ 3.8 16		
5 31	19 18.13	- 1 38.6	2.098	2.904	14.3	21.1	5 31	19 17.96	-31 49.5	1.214	2.108	17.2	19.8
6 10	19 13.12	- 1 1.6	2.019	2.899	12.0	21.0	6 10	19 14.48	-32 10.2	1.152	2.102	13.2	19.5
6 20	19 6.28	- 0 39.9	1.961	2.894	9.7	20.8	6 20	19 7.76	-32 24.8	1.108	2.097	8.8	19.2
6 30	18 58.20	- 0 36.2	1.926	2.889	8.0	20.7	6 30	18 58.77	-32 27.8	1.086	2.094	5.1	19.0
7 10	18 49.66	- 0 51.2	1.917	2.883	7.7	20.7	7 10	18 49.10	-32 15.5	1.087	2.093	5.7	19.0
7 20	18 41.51	- 1 23.6	1.933	2.877	9.2	20.7	7 20	18 40.38	-31 47.6	1.110	2.092	9.9	19.3
7 30	18 34.56	- 2 11.0	1.974	2.870	11.5	20.9	7 30	18 34.11	-31 7.4	1.155	2.093	14.3	19.5
8 9	18 29.47	- 3 8.9	2.037	2.864	13.9	21.0	8 9	18 31.19	-30 19.4	1.218	2.096	18.2	19.8
118414	1999 <i>SU</i> ₁₀		7 4.3 235°60	2°0/ 3.6 18			504083	2006 <i>BQ</i> ₁₃₆		7 4.4 185°76	1°8/ 3.9 17		
5 31	19 18.96	-28 0.7	2.811	3.663	9.8	20.3	5 31	19 23.20	-27 27.1	2.228	3.082	12.0	22.5
6 10	19 13.56	-28 38.1	2.720	3.651	7.4	20.1	6 10	19 16.95	-27 45.2	2.150	3.082	9.0	22.3
6 20	19 6.50	-29 15.2	2.655	3.639	4.7	19.9	6 20	19 8.65	-28 1.9	2.096	3.082	5.6	22.1
6 30	18 58.27	-29 49.2	2.616	3.626	2.3	19.7	6 30	18 58.97	-28 14.4	2.069	3.080	2.4	21.9
7 10	18 49.56	-30 17.6	2.607	3.612	2.9	19.8	7 10	18 48.85	-28 20.3	2.070	3.079	2.9	21.9
7 20	18 41.13	-30 38.8	2.627	3.599	5.5	19.9	7 20	18 39.25	-28 18.9	2.100	3.077	6.3	22.1
7 30	18 33.72	-30 52.4	2.673	3.585	8.3	20.1	7 30	18 31.10	-28 10.8	2.156	3.074	9.7	22.3
8 9	18 27.94	-30 59.1	2.744	3.570	10.8	20.2	8 9	18 25.07	-27 57.5	2.234	3.070	12.6	22.5
289792	2005 <i>JS</i> ₁₁₇		7 4.3 317°82	8°7/ 5.3 18			88208	2000 <i>YG</i> ₁₂₀		7 4.4 286°86	2°3/ 5.2 18 R		
5 31	19 16.20	- 3 9.9	1.777	2.604	15.7	20.5	5 31	19 19.45	-14 11.0	1.725	2.583	14.7	19.1
6 10	19 12.05	- 2 1.9	1.695	2.589	13.2	20.3	6 10	19 14.81	-14 46.1	1.631	2.563	11.4	18.8
6 20	19 5.81	- 1 8.2	1.633	2.574	10.7	20.1	6 20	19 7.72	-15 34.6	1.559	2.542	7.4	18.5
6 30	18 58.10	- 0 33.1	1.593	2.559	9.0	20.0	6 30	18 58.79	-16 35.0	1.512	2.522	3.4	18.2
7 10	18 49.80	- 0 19.2	1.578	2.545	9.0	19.9	7 10	18 48.98	-17 43.7	1.491	2.502	3.3	18.2
7 20	18 41.89	- 0 26.8	1.586	2.532	10.7	20.0	7 20	18 39.42	-18 56.2	1.497	2.481	7.5	18.4
7 30	18 35.32	- 0 54.0	1.617	2.518	13.3	20.1	7 30	18 31.30	-20 8.3	1.528	2.461	11.8	18.6
8 9	18 30.87	- 1 36.5	1.668	2.506	16.1	20.3	8 9	18 25.56	-21 16.8	1.580	2.440	15.7	18.8
398293	2010 <i>VZ</i> ₁₂₅		7 4.3 333°04	4°9/ 2.1 18			214692	2006 <i>SU</</i>					

EPHEMERIDES

7 4.4

7 4.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
11141	Jindrawalter		7 4.4 338°14	2°9/ 5.6	18	R	250904	2005 VB ₁₁₁		7 4.4 277°02	1°8/ 4.8	18	
5 31	19 10.40	-12 7.6	1.061	1.957	19.0	16.7	5 31	19 17.40	-17 16.2	2.264	3.118	11.8	21.0
6 10	19 9.17	-13 5.2	0.975	1.927	14.9	16.3	6 10	19 12.60	-17 11.1	2.178	3.108	9.0	20.8
6 20	19 4.87	-14 30.8	0.907	1.898	9.9	15.9	6 20	19 6.03	-17 11.1	2.115	3.098	5.7	20.5
6 30	18 58.05	-16 23.4	0.860	1.872	4.6	15.5	6 30	18 58.25	-17 15.7	2.078	3.089	2.6	20.3
7 10	18 49.90	-18 36.7	0.834	1.847	4.1	15.4	7 10	18 50.01	-17 24.0	2.069	3.079	2.7	20.3
7 20	18 41.98	-20 59.9	0.830	1.825	9.8	15.6	7 20	18 42.14	-17 34.9	2.087	3.069	5.9	20.5
7 30	18 36.07	-23 21.0	0.847	1.805	15.7	15.9	7 30	18 35.44	-17 47.7	2.132	3.059	9.3	20.7
8 9	18 33.58	-25 30.4	0.882	1.787	20.9	16.1	8 9	18 30.53	-18 1.4	2.199	3.050	12.2	20.9
177022	2003 BQ ₇₃		7 4.4 201°68	2°0/ 3.8	18		119009	2000 YY ₇₉		7 4.4 259°19	0°0/ 4.2	18	
5 31	19 20.94	-28 58.6	2.633	3.484	10.4	21.8	5 31	19 18.37	-21 38.0	2.526	3.379	10.7	20.3
6 10	19 15.05	-29 17.3	2.550	3.480	7.9	21.6	6 10	19 13.29	-21 58.8	2.429	3.362	8.1	20.1
6 20	19 7.42	-29 33.9	2.492	3.475	5.0	21.4	6 20	19 6.46	-22 22.9	2.357	3.344	4.9	19.9
6 30	18 58.61	-29 45.9	2.461	3.470	2.4	21.2	6 30	18 58.40	-22 48.4	2.312	3.326	1.5	19.6
7 10	18 49.40	-29 51.3	2.459	3.465	2.9	21.3	7 10	18 49.82	-23 13.3	2.296	3.308	2.0	19.6
7 20	18 40.61	-29 49.4	2.486	3.459	5.7	21.4	7 20	18 41.50	-23 35.8	2.308	3.290	5.5	19.8
7 30	18 33.01	-29 40.7	2.539	3.453	8.6	21.6	7 30	18 34.23	-23 55.2	2.347	3.271	8.7	20.0
8 9	18 27.21	-29 26.6	2.616	3.446	11.1	21.8	8 9	18 28.65	-24 11.3	2.410	3.252	11.6	20.2
130599	2000 RF ₉₅		7 4.4 267°90	2°6/ 4.9	18		438875	2009 HT ₉₂		7 4.4 185°25	3°5/ 5.2	18	
5 31	19 20.37	-15 10.1	1.974	2.825	13.4	20.9	5 31	19 17.61	-12 41.2	2.207	3.051	12.4	21.6
6 10	19 15.20	-15 11.1	1.875	2.802	10.4	20.7	6 10	19 12.69	-12 24.4	2.130	3.051	9.6	21.4
6 20	19 7.83	-15 20.4	1.797	2.778	6.8	20.4	6 20	19 6.05	-12 15.6	2.077	3.051	6.6	21.2
6 30	18 58.82	-15 37.4	1.746	2.754	3.4	20.1	6 30	18 58.25	-12 15.2	2.049	3.051	4.0	21.0
7 10	18 49.06	-16 0.8	1.721	2.729	3.4	20.1	7 10	18 50.08	-12 22.7	2.048	3.050	3.9	21.0
7 20	18 39.56	-16 28.9	1.723	2.704	7.1	20.3	7 20	18 42.34	-12 37.0	2.075	3.050	6.5	21.2
7 30	18 31.34	-16 59.8	1.751	2.679	11.0	20.4	7 30	18 35.79	-12 56.9	2.127	3.050	9.5	21.4
8 9	18 25.24	-17 31.8	1.802	2.653	14.5	20.6	8 9	18 31.03	-13 20.7	2.202	3.049	12.3	21.6
281721	2008 WC ₁₂₂		7 4.4 314°69	1°0/ 4.6	18		118998	2000 YC ₄₀		7 4.4 265°67	0°7/ 4.6	18	
5 31	19 19.28	-19 57.6	1.691	2.561	14.4	20.9	5 31	19 18.06	-20 3.0	2.441	3.295	11.1	20.3
6 10	19 14.53	-19 59.1	1.614	2.554	10.9	20.7	6 10	19 13.07	-20 8.7	2.346	3.278	8.3	20.1
6 20	19 7.43	-20 5.6	1.559	2.548	6.7	20.4	6 20	19 6.33	-20 17.8	2.275	3.261	5.2	19.9
6 30	18 58.68	-20 15.6	1.528	2.542	2.4	20.1	6 30	18 58.37	-20 29.2	2.231	3.244	1.8	19.6
7 10	18 49.34	-20 27.2	1.524	2.536	2.7	20.1	7 10	18 49.91	-20 41.6	2.215	3.227	2.1	19.6
7 20	18 40.55	-20 39.0	1.545	2.530	7.2	20.4	7 20	18 41.74	-20 53.7	2.227	3.209	5.6	19.8
7 30	18 33.39	-20 49.9	1.590	2.525	11.3	20.6	7 30	18 34.66	-21 4.9	2.265	3.191	8.9	20.0
8 9	18 28.65	-20 59.9	1.657	2.520	15.0	20.8	8 9	18 29.30	-21 14.9	2.328	3.173	11.8	20.2
268313	2005 QX ₁₄₆		7 4.4 312°78	2°0/ 3.9	18		343556	2010 FQ ₃₀		7 4.4 257°77	3°5/ 5.2	18	
5 31	19 19.51	-25 16.9	1.354	2.240	16.3	20.7	5 31	19 18.67	-13 18.5	1.914	2.765	13.8	21.1
6 10	19 15.57	-25 48.2	1.270	2.219	12.4	20.4	6 10	19 13.77	-13 6.3	1.837	2.762	10.6	20.9
6 20	19 8.54	-26 23.1	1.207	2.199	7.7	20.1	6 20	19 6.83	-13 3.1	1.781	2.759	7.2	20.7
6 30	18 59.14	-26 56.8	1.166	2.179	3.0	19.7	6 30	18 58.52	-13 9.0	1.751	2.755	4.1	20.5
7 10	18 48.68	-27 24.7	1.149	2.160	3.9	19.7	7 10	18 49.73	-13 23.3	1.747	2.752	4.1	20.5
7 20	18 38.70	-27 43.4	1.156	2.141	9.1	20.0	7 20	18 41.40	-13 44.6	1.770	2.748	7.1	20.7
7 30	18 30.77	-27 52.2	1.185	2.123	14.1	20.2	7 30	18 34.46	-14 11.1	1.817	2.745	10.6	20.9
8 9	18 26.02	-27 52.5	1.233	2.106	18.4	20.4	8 9	18 29.59	-14 40.6	1.887	2.741	13.8	21.1
105653	2000 SA ₂₆		7 4.4 309°94	5°6/ 5.6	18		507771	2013 YK ₁₀₉		7 4.4 153°86	1°9/ 5.1	17	
5 31	19 16.40	- 8 5.2	1.987	2.825	13.8	19.5	5 31	19 19.51	-15 12.9	1.885	2.740	13.8	21.3
6 10	19 12.01	- 7 37.2	1.905	2.816	11.1	19.3	6 10	19 14.46	-15 44.1	1.811	2.741	10.5	21.0
6 20	19 5.74	- 7 21.1	1.845	2.807	8.3	19.1	6 20	19 7.30	-16 25.3	1.759	2.742	6.7	20.8
6 30	18 58.15	- 7 18.3	1.809	2.798	6.0	19.0	6 30	18 58.68	-17 14.5	1.733	2.743	2.9	20.6
7 10	18 50.08	- 7 29.3	1.798	2.789	5.8	19.0	7 10	18 49.53	-18 8.6	1.733	2.744	2.9	20.6
7 20	18 42.39	- 7 52.8	1.813	2.780	8.0	19.1	7 20	18 40.85	-19 4.1	1.761	2.745	6.7	20.8
7 30	18 35.95	- 8 26.7	1.853	2.772	10.9	19.2	7 30	18 33.60	-19 58.3	1.815	2.746	10.4	21.1
8 9	18 31.43	- 9 8.0	1.915	2.764	13.8	19.4	8 9	18 28.50	-20 49.0	1.891	2.746	13.7	21.3
507706	2013 TH ₁₀₈		7 4.4 266°30	0°5/ 4.5	17		146765	2001 XE ₁₉₉		7 4.4 120°35	1°9/ 5.1	18	
5 31	19 21.63	-20 27.7	1.752	2.616	14.2	22.2	5 31	19 17.78	-15 0.8	2.370	3.216	11.6	20.0
6 10	19 16.43	-20 40.5	1.660	2.598	10.8	22.0	6 10	19 12.72	-15 22.6	2.298	3.223	8.8	19.8
6 20	19 8.71	-20 58.7	1.591	2.579	6.7	21.7	6 20	19 6.03	-15 52.1	2.250	3.230	5.7	19.7
6 30	18 59.14	-21 20.1	1.546	2.560	2.2	21.3	6 30	18 58.25	-16 27.7	2.228	3.237	2.6	19.5
7 10	18 48.75	-21 42.2	1.528	2.541	2.7	21.3	7 10	18 50.11	-17 7.4	2.234	3.244	2.6	19.5
7 20	18 38.74	-22 2.7	1.537	2.521	7.4	21.6	7 20	18 42.39	-17 49.1	2.269	3.250	5.6	19.7
7 30	18 30.29	-22 20.6	1.570	2.501	11.7	21.8	7 30	18 35.80	-18 30.8	2.331	3.257	8.7	19.9
8 9	18 24.32	-22 35.7	1.625	2.481	15.5	22.0	8 9	18 30.90	-19 10.9	2.416	3.263	11.4	20.1
252861	2002 GE ₁₈₃		7 4.4 14°26	6°0/ 3.1	18		225839	2001 XQ ₉₇		7 4.4 270°17	1°4/ 4.1	18	
5 31	19 21.23	-37 44.0	1.894	2.753	13.5	20.4	5 31	19 22.46	-25 42.1	1.777	2.644	13.9	19.7
6 10	19 16.03	-38 27.3	1.831	2.756	10.7	20.2	6 10	19 17.07	-25 55.9	1.687	2.626	10.5	19.4
6 20	19 8.33	-39 2.0	1.790	2.759	7.9	20.0	6 20	19 9.12	-26 10.2	1.620	2.609	6.5	19.1
6 30	18 58.96	-39 22.8	1.774	2.763	6.1	19.9	6 30	18 59.30	-26 21.7	1.578	2.591	2.4	18.8
7 10	18 49.10	-39 26.3	1.783	2.767	6.6	20.0	7 10	18 48.71	-26 27.8	1.562	2.573	3.1	18.8
7 20	18 40.01	-39 11.8	1.818	2.772	8.9	20.1	7 20	18 38.56	-26 26.9	1.573	2.554	7.5	19.1
7 30	18 32.79	-38 41.8	1.876	2.778	11.7	20.3	7 30	18 30.09	-26 19.5	1.608	2.536	11.7	19.3
8 9	18 28.18	-38 0.4	1.955	2.784	14.4	20.5	8 9	18 24.17	-26 7.2	1.665	2.517	15.4	19.5
367679	2010 MB ₁₀₄		7 4.4 280°63	4°2/ 4.2	17		260213	2004 RV ₂₀₅		7 4.4 12°21	9°2/ 6.2	16	
5 31	19 27.51	-33 11.5	1.449	2.318	16.4	20.4	5 31	19 15.47	+ 0 1.7	1.889	2.699	15.5	19.9
6 10	19 21.20	-33 10.0	1.378	2.315	12.6	20.2	6 10	19 11.29	+ 1 7.6	1.825	2.702	13.2	19.7
6 20	19 11.70	-32 59.5	1.327	2.311	8.4	19.9	6 20	19 5.27	+ 1 56.3	1.780	2.705	11.0	19.6
6 30	19 0.03	-32 35.3	1.301	2.307	4.7	19.7	6 30	18 58.03	+ 2 24.0	1.759	2.709	9.5	19.5
7 10	18 47.76	-31 55.1	1.299	2.304	5.2	19.7	7 10	18 50.42	+ 2 29.2	1.760	2.713	9.3	19.5
7 20	18 36.51	-31 0.5	1.322	2.300	9.1	19.9	7 20	18 43.30	+ 2 12.3	1.786	2.718	10.5	19.6
7 30	18 27.71	-29 56.0	1.369	2.296	13.4	20.2	7 30	18 37.48	+ 1 36.3	1.834	2.723	12.6	19.7
8 9	18 22.23	-28 47.5	1.437	2.293	17.2	20.4	8 9	18 33.59	+ 0 45				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
149759	2004 PR ₆₉		7 4.4 49°37'	5°8/	3.9	18	214465	2005 SO ₁₆₆		7 4.4 322°05'	2°9/	3.4	18
5 31	19 25.20	-40 18.8	2.144	2.986	12.8	19.2	5 31	19 18.72	-27 39.0	1.893	2.764	13.1	19.5
6 10	19 18.63	-40 32.9	2.080	2.993	10.2	19.0	6 10	19 14.19	-28 35.3	1.813	2.753	9.9	19.2
6 20	19 9.73	-40 35.8	2.038	2.999	7.7	18.9	6 20	19 7.33	-29 33.1	1.755	2.742	6.3	19.0
6 30	18 59.39	-40 23.4	2.022	3.006	6.0	18.8	6 30	18 58.77	-30 27.6	1.722	2.732	3.3	18.8
7 10	18 48.77	-39 53.8	2.032	3.013	6.2	18.8	7 10	18 49.50	-31 14.3	1.717	2.722	4.1	18.8
7 20	18 39.02	-39 7.9	2.068	3.020	8.2	18.9	7 20	18 40.65	-31 50.0	1.737	2.712	7.6	19.0
7 30	18 31.14	-38 9.1	2.130	3.027	10.8	19.1	7 30	18 33.31	-32 13.9	1.782	2.703	11.2	19.2
8 9	18 25.78	-37 2.2	2.214	3.034	13.2	19.3	8 9	18 28.33	-32 26.9	1.849	2.694	14.4	19.4
509943	2009 QH ₅₅		7 4.4 258°28'	1°6/	4.7	17	141886	2002 PK ₅₃		7 4.4 272°10'	0°9/	4.6	18
5 31	19 21.57	-18 12.2	1.837	2.695	13.9	22.8	5 31	19 21.81	-19 44.5	1.629	2.496	15.0	20.8
6 10	19 16.24	-18 15.4	1.745	2.678	10.6	22.5	6 10	19 16.75	-19 52.5	1.539	2.477	11.4	20.5
6 20	19 8.55	-18 24.9	1.674	2.660	6.7	22.2	6 20	19 9.04	-20 6.6	1.470	2.458	7.1	20.2
6 30	18 59.13	-18 39.3	1.629	2.641	2.7	22.0	6 30	18 59.34	-20 24.9	1.425	2.438	2.5	19.9
7 10	18 48.96	-18 57.0	1.611	2.623	2.9	21.9	7 10	18 48.76	-20 45.0	1.406	2.419	2.9	19.9
7 20	18 39.14	-19 16.2	1.620	2.603	7.2	22.2	7 20	18 38.56	-21 4.8	1.413	2.399	7.8	20.1
7 30	18 30.79	-19 35.6	1.654	2.583	11.3	22.4	7 30	18 30.03	-21 22.9	1.445	2.378	12.4	20.3
8 9	18 24.77	-19 54.5	1.709	2.563	15.0	22.5	8 9	18 24.14	-21 39.0	1.497	2.358	16.4	20.5
344792	2003 YA ₈₇		7 4.4 244°86'	1°0/	4.7	18	449687	2014 LK ₁₆		7 4.4 342°71'	10°9/	5.5	17
5 31	19 19.95	-18 20.6	2.372	3.221	11.5	21.2	5 31	19 14.75	+ 2 9.7	1.810	2.615	16.3	20.1
6 10	19 14.56	-18 37.7	2.275	3.204	8.7	21.0	6 10	19 10.95	+ 3 37.1	1.737	2.605	14.2	19.9
6 20	19 7.30	-19 0.3	2.202	3.187	5.5	20.8	6 20	19 5.19	+ 4 46.9	1.683	2.595	12.3	19.7
6 30	18 58.71	-19 27.0	2.156	3.169	2.0	20.5	6 30	18 58.07	+ 5 33.6	1.651	2.586	11.1	19.6
7 10	18 49.54	-19 55.7	2.139	3.150	2.2	20.5	7 10	18 50.44	+ 5 54.3	1.641	2.578	11.0	19.6
7 20	18 40.64	-20 24.7	2.149	3.131	5.8	20.7	7 20	18 43.22	+ 5 48.3	1.654	2.571	12.2	19.7
7 30	18 32.85	-20 52.6	2.187	3.112	9.2	20.9	7 30	18 37.31	+ 5 18.1	1.688	2.565	14.1	19.8
8 9	18 26.85	-21 18.5	2.249	3.092	12.3	21.0	8 9	18 33.41	+ 4 28.5	1.741	2.559	16.3	19.9
282728	2006 DK ₇₆		7 4.4 54°37'	0°9/	4.6	17	144144	2004 BK ₉₃		7 4.4 145°35'	1°9/	3.8	17
5 31	19 19.94	-19 9.3	1.639	2.507	14.8	21.0	5 31	19 24.24	-25 8.6	1.822	2.684	13.9	20.0
6 10	19 14.95	-19 26.4	1.577	2.517	11.1	20.8	6 10	19 18.15	-25 58.0	1.756	2.692	10.4	19.8
6 20	19 7.65	-19 50.0	1.538	2.526	6.8	20.6	6 20	19 9.64	-26 49.6	1.712	2.700	6.4	19.6
6 30	18 58.80	-20 17.8	1.523	2.536	2.4	20.3	6 30	18 59.46	-27 38.6	1.694	2.706	2.6	19.4
7 10	18 49.51	-20 47.0	1.534	2.546	2.7	20.3	7 10	18 48.73	-28 20.7	1.704	2.713	3.3	19.5
7 20	18 40.91	-21 15.2	1.571	2.557	7.1	20.6	7 20	18 38.62	-28 53.3	1.741	2.719	7.3	19.7
7 30	18 34.04	-21 41.0	1.632	2.567	11.1	20.9	7 30	18 30.25	-29 15.8	1.803	2.725	11.0	19.9
8 9	18 29.60	-22 3.5	1.715	2.578	14.6	21.1	8 9	18 24.39	-29 29.4	1.887	2.730	14.3	20.2
59638	1999 JH ₈₂		7 4.4 357°08'	11°5/	7.3	18	201501	2003 LV ₄		7 4.4 324°62'	5°6/	6.4	18
5 31	19 13.90	+ 0 20.8	1.268	2.108	20.0	17.5	5 31	19 15.70	- 7 52.3	1.413	2.272	17.3	18.9
6 10	19 10.95	+ 1 19.3	1.206	2.104	17.1	17.3	6 10	19 12.41	- 8 11.9	1.325	2.251	13.9	18.7
6 20	19 5.45	+ 1 52.4	1.161	2.100	14.2	17.1	6 20	19 6.51	- 8 53.2	1.256	2.229	10.0	18.4
6 30	18 58.17	+ 1 54.6	1.135	2.098	12.1	17.0	6 30	18 58.59	- 9 57.0	1.209	2.209	6.5	18.1
7 10	18 50.27	+ 1 24.2	1.130	2.097	11.6	17.0	7 10	18 49.71	-11 20.8	1.186	2.189	5.9	18.0
7 20	18 42.99	+ 0 23.5	1.145	2.098	13.1	17.1	7 20	18 41.13	-12 59.3	1.188	2.171	9.2	18.2
7 30	18 37.52	- 1 1.1	1.181	2.099	15.8	17.2	7 30	18 34.17	-14 45.5	1.212	2.153	13.5	18.4
8 9	18 34.68	- 2 40.8	1.235	2.102	18.8	17.4	8 9	18 29.87	-16 32.3	1.257	2.136	17.7	18.6
25012	1998 QC		7 4.4 171°63'	1°4/	4.2	18	92610	2000 PP ₂₄		7 4.4 55°72'	2°6/	3.9	18
5 31	19 26.45	-25 59.0	1.449	2.321	16.2	18.1	5 31	19 22.94	-28 15.1	1.557	2.430	15.2	19.3
6 10	19 20.26	-26 4.7	1.381	2.323	12.2	17.9	6 10	19 17.45	-28 34.9	1.496	2.437	11.4	19.1
6 20	19 11.10	-26 9.8	1.335	2.324	7.5	17.6	6 20	19 9.28	-28 52.6	1.457	2.445	7.2	18.9
6 30	18 59.91	-26 10.6	1.312	2.325	2.7	17.3	6 30	18 59.34	-29 4.1	1.441	2.453	3.2	18.7
7 10	18 48.11	-26 4.5	1.315	2.326	3.4	17.4	7 10	18 48.93	-29 6.4	1.452	2.460	3.9	18.7
7 20	18 37.18	-25 50.9	1.343	2.327	8.3	17.6	7 20	18 39.38	-28 58.8	1.488	2.468	8.0	19.0
7 30	18 28.48	-25 31.6	1.395	2.327	12.9	17.9	7 30	18 31.87	-28 42.7	1.547	2.477	12.0	19.2
8 9	18 22.88	-25 9.0	1.468	2.326	16.8	18.2	8 9	18 27.17	-28 20.7	1.628	2.485	15.5	19.5
519105	2010 LX ₁₂₉		7 4.4 40°49'	3°6/	5.6	17	428320	2007 GV ₆₈		7 4.4 141°30'	8°8/	6.6	17
5 31	19 16.75	-11 22.3	2.084	2.929	13.0	20.7	5 31	19 19.14	- 0 30.5	1.835	2.643	16.0	21.5
6 10	19 12.15	-11 24.0	2.012	2.933	10.1	20.5	6 10	19 14.09	+ 0 17.0	1.767	2.646	13.5	21.3
6 20	19 5.77	-11 36.2	1.963	2.937	7.0	20.3	6 20	19 7.04	+ 0 46.3	1.720	2.650	11.0	21.2
6 30	18 58.21	-11 58.7	1.940	2.941	4.2	20.2	6 30	18 58.64	+ 0 54.5	1.695	2.653	9.2	21.1
7 10	18 50.27	-12 30.0	1.943	2.946	4.0	20.2	7 10	18 49.81	+ 0 40.3	1.695	2.657	8.9	21.1
7 20	18 42.77	-13 8.0	1.973	2.950	6.6	20.3	7 20	18 41.49	+ 0 5.4	1.719	2.660	10.3	21.2
7 30	18 36.53	-13 50.5	2.028	2.955	9.7	20.5	7 30	18 34.59	- 0 46.8	1.766	2.662	12.6	21.3
8 9	18 32.12	-14 34.9	2.107	2.960	12.6	20.7	8 9	18 29.77	- 1 51.2	1.835	2.665	15.1	21.5
1336	Zealandia		7 4.4 329°52'	0°1/	4.4	18	159243	2005 YO ₄₃		7 4.4 213°05'	1°6/	4.9	18
5 31	19 18.78	-21 59.0	1.839	2.707	13.5	14.9	5 31	19 20.46	-16 49.6	1.985	2.839	13.2	20.5
6 10	19 14.06	-22 18.8	1.763	2.703	10.1	14.7	6 10	19 15.14	-17 6.1	1.905	2.835	10.0	20.3
6 20	19 7.13	-22 42.5	1.709	2.699	6.2	14.5	6 20	19 7.74	-17 30.2	1.846	2.830	6.4	20.1
6 30	18 58.67	-23 7.7	1.681	2.695	1.9	14.2	6 30	18 58.88	-18 0.3	1.814	2.825	2.6	19.8
7 10	18 49.66	-23 31.6	1.679	2.691	2.5	14.2	7 10	18 49.48	-18 34.2	1.809	2.820	2.7	19.8
7 20	18 41.16	-23 52.2	1.703	2.688	6.7	14.5	7 20	18 40.50	-19 9.4	1.832	2.815	6.5	20.1
7 30	18 34.18	-24 8.8	1.753	2.685	10.6	14.7	7 30	18 32.90	-19 44.1	1.880	2.809	10.2	20.3
8 9	18 29.46	-24 21.2	1.824	2.682	14.0	14.9	8 9	18 27.40	-20 16.9	1.951	2.803	13.5	20.5
137432	1999 TD ₂₁₆		7 4.4 275°28'	1°4/	4.7	18	119929	2002 FE ₇		7 4.4 122°06'	5°0/	2.5	18
5 31	19 21.61	-18 53.8</											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
371652	2007 <i>BV</i> ₇₅		7 4.4 228°25	1°1/ 4.2 18			469058	2015 <i>AA</i> ₂₇₉		7 4.4 8°74	0°7/ 4.2 17		
5 31	19 23.56	-24 49.0	1.985	2.844	13.0	22.0	5 31	19 14.66	-21 17.8	1.083	1.985	18.2	19.4
6 10	19 17.61	-25 7.4	1.898	2.833	9.8	21.8	6 10	19 12.08	-22 2.3	1.030	1.987	13.6	19.1
6 20	19 9.33	-25 26.9	1.834	2.822	6.1	21.5	6 20	19 6.40	-22 55.5	0.995	1.991	8.3	18.9
6 30	18 59.40	-25 44.6	1.796	2.810	2.1	21.3	6 30	18 58.58	-23 52.5	0.982	1.997	2.6	18.5
7 10	18 48.82	-25 57.9	1.786	2.797	2.7	21.3	7 10	18 50.07	-24 47.2	0.991	2.004	3.5	18.6
7 20	18 38.69	-26 5.1	1.804	2.784	6.8	21.5	7 20	18 42.46	-25 34.7	1.022	2.013	9.0	19.0
7 30	18 30.08	-26 6.2	1.847	2.771	10.7	21.7	7 30	18 37.15	-26 12.3	1.074	2.024	14.0	19.3
8 9	18 23.79	-26 2.6	1.912	2.756	14.1	21.9	8 9	18 35.05	-26 39.8	1.145	2.036	18.2	19.6
41847	2000 <i>WK</i> ₈₆		7 4.4 323°14	1°4/ 4.3 18			230823	2004 <i>MR</i> ₄		7 4.4 315°36	4°6/ 2.9 18		
5 31	19 20.55	-26 6.5	1.188	2.080	17.7	17.6	5 31	19 19.99	-28 51.3	1.406	2.289	15.9	19.7
6 10	19 16.60	-26 2.5	1.112	2.064	13.4	17.3	6 10	19 16.10	-30 4.1	1.323	2.269	12.2	19.4
6 20	19 9.28	-25 57.5	1.056	2.049	8.4	17.0	6 20	19 9.04	-31 20.3	1.261	2.249	8.1	19.1
6 30	18 59.49	-25 48.0	1.021	2.035	2.9	16.6	6 30	18 59.50	-32 32.4	1.222	2.229	4.8	18.9
7 10	18 48.72	-25 31.6	1.009	2.022	3.7	16.6	7 10	18 48.76	-33 32.9	1.207	2.210	5.9	18.9
7 20	18 38.71	-25 7.9	1.021	2.009	9.4	16.9	7 20	18 38.43	-34 16.2	1.216	2.191	10.1	19.1
7 30	18 31.08	-24 38.9	1.053	1.998	14.7	17.1	7 30	18 30.14	-34 41.0	1.247	2.173	14.6	19.3
8 9	18 26.91	-24 7.4	1.103	1.987	19.3	17.4	8 9	18 25.09	-34 49.5	1.297	2.156	18.6	19.5
88203	2000 <i>YJ</i> ₁₀₇		7 4.4 289°93	1°3/ 4.2 18			7680	<i>Cari</i>		7 4.4 282°77	5°0/ 5.2 18		
5 31	19 21.87	-25 18.5	1.754	2.622	14.0	19.1	5 31	19 18.95	-10 38.9	1.916	2.759	14.1	17.6
6 10	19 16.82	-25 32.4	1.654	2.594	10.6	18.8	6 10	19 14.17	-10 5.8	1.821	2.738	11.2	17.4
6 20	19 9.13	-25 47.4	1.577	2.566	6.6	18.5	6 20	19 7.27	-9 42.2	1.747	2.716	8.1	17.1
6 30	18 59.42	-26 0.4	1.524	2.538	2.4	18.2	6 30	18 58.83	-9 29.6	1.698	2.694	5.5	16.9
7 10	18 48.77	-26 8.4	1.498	2.509	3.1	18.2	7 10	18 49.71	-9 28.8	1.676	2.672	5.4	16.9
7 20	18 38.43	-26 9.8	1.497	2.480	7.7	18.4	7 20	18 40.88	-9 39.4	1.679	2.650	8.1	17.0
7 30	18 29.69	-26 4.4	1.522	2.451	12.1	18.6	7 30	18 33.35	-10 0.0	1.706	2.628	11.6	17.2
8 9	18 23.54	-25 54.0	1.567	2.422	16.1	18.8	8 9	18 27.89	-10 28.3	1.756	2.605	14.9	17.3
9939	1988 <i>VK</i>		7 4.4 280°72	0°6/ 4.6 18			100321	1995 <i>MG</i> ₈		7 4.4 8°21	5°0/ 5.7 17		
5 31	19 21.89	-19 11.1	1.362	2.238	16.8	17.6	5 31	19 18.07	-11 11.8	1.201	2.076	18.7	20.1
6 10	19 17.31	-19 39.4	1.277	2.221	12.8	17.3	6 10	19 14.28	-11 10.6	1.140	2.076	14.6	19.9
6 20	19 9.66	-20 17.8	1.212	2.203	8.0	17.0	6 20	19 7.62	-11 27.0	1.097	2.077	10.1	19.6
6 30	18 59.63	-21 3.4	1.171	2.185	2.7	16.6	6 30	18 58.96	-12 1.2	1.075	2.079	6.0	19.4
7 10	18 48.49	-21 51.8	1.154	2.167	3.2	16.6	7 10	18 49.60	-12 50.6	1.076	2.082	5.6	19.4
7 20	18 37.76	-22 38.5	1.161	2.148	8.8	16.9	7 20	18 40.99	-13 50.8	1.100	2.085	9.4	19.6
7 30	18 28.99	-23 20.7	1.191	2.130	13.9	17.1	7 30	18 34.45	-14 56.4	1.145	2.089	13.9	19.9
8 9	18 23.32	-23 57.0	1.241	2.112	18.5	17.3	8 9	18 30.88	-16 2.5	1.211	2.093	18.0	20.2
317964	2003 <i>YZ</i> ₄₇		7 4.4 179°78	0°1/ 4.4 18			443034	2013 <i>EJ</i> ₄₃		7 4.4 81°04	4°5/ 3.5 18		
5 31	19 20.72	-22 42.6	2.450	3.302	11.1	21.7	5 31	19 22.00	-36 4.6	2.303	3.153	11.8	21.3
6 10	19 14.96	-22 52.2	2.372	3.303	8.3	21.5	6 10	19 16.23	-36 32.1	2.231	3.154	9.2	21.2
6 20	19 7.45	-23 3.4	2.317	3.304	5.1	21.3	6 20	19 8.36	-36 52.8	2.183	3.154	6.5	21.0
6 30	18 58.79	-23 14.4	2.290	3.304	1.6	21.1	6 30	18 59.11	-37 2.9	2.160	3.154	4.7	20.9
7 10	18 49.75	-23 23.7	2.292	3.304	2.0	21.1	7 10	18 49.45	-36 59.8	2.164	3.154	5.1	20.9
7 20	18 41.15	-23 30.3	2.322	3.303	5.5	21.4	7 20	18 40.38	-36 43.2	2.195	3.154	7.3	21.0
7 30	18 33.75	-23 34.0	2.379	3.302	8.7	21.6	7 30	18 32.84	-36 14.7	2.252	3.154	10.0	21.2
8 9	18 28.15	-23 35.2	2.460	3.301	11.4	21.8	8 9	18 27.49	-35 37.5	2.331	3.154	12.5	21.4
169032	2001 <i>FR</i> ₁₀		7 4.4 117°48	0°6/ 4.3 17			15957	<i>Gemoore</i>		7 4.4 312°01	0°3/ 4.4 18		
5 31	19 24.70	-23 29.9	1.646	2.512	14.9	20.8	5 31	19 18.83	-23 9.6	1.901	2.768	13.1	18.1
6 10	19 18.53	-23 43.4	1.585	2.524	11.1	20.6	6 10	19 14.12	-23 17.3	1.819	2.758	9.8	17.8
6 20	19 9.86	-23 58.8	1.546	2.535	6.8	20.4	6 20	19 7.22	-23 27.1	1.759	2.749	6.0	17.6
6 30	18 59.56	-24 13.0	1.533	2.547	2.1	20.1	6 30	18 58.80	-23 37.0	1.725	2.739	1.9	17.3
7 10	18 48.83	-24 23.7	1.546	2.558	2.8	20.2	7 10	18 49.81	-23 45.0	1.717	2.730	2.4	17.3
7 20	18 38.92	-24 29.3	1.585	2.568	7.3	20.5	7 20	18 41.30	-23 49.8	1.736	2.721	6.6	17.6
7 30	18 30.92	-24 30.3	1.649	2.579	11.4	20.7	7 30	18 34.26	-23 51.2	1.780	2.712	10.5	17.8
8 9	18 25.57	-24 27.6	1.735	2.588	14.8	21.0	8 9	18 29.44	-23 49.7	1.846	2.703	13.9	18.0
267353	2001 <i>WE</i> ₉₀		7 4.4 130°18	1°7/ 4.1 17			182734	2001 <i>XW</i> ₄₅		7 4.4 167°67	2°7/ 3.5 18		
5 31	19 24.41	-26 59.2	1.997	2.855	13.0	20.6	5 31	19 20.90	-31 53.1	3.001	3.846	9.5	21.7
6 10	19 17.99	-27 16.4	1.934	2.868	9.7	20.5	6 10	19 14.93	-32 24.9	2.927	3.850	7.2	21.6
6 20	19 9.39	-27 32.2	1.893	2.880	6.0	20.3	6 20	19 7.37	-32 53.4	2.877	3.855	4.8	21.4
6 30	18 59.40	-27 43.6	1.879	2.891	2.4	20.0	6 30	18 58.79	-33 15.8	2.856	3.858	2.9	21.3
7 10	18 49.05	-27 48.5	1.893	2.902	3.0	20.1	7 10	18 49.87	-33 30.3	2.864	3.862	3.4	21.3
7 20	18 39.40	-27 46.0	1.934	2.913	6.6	20.4	7 20	18 41.35	-33 35.9	2.900	3.864	5.5	21.5
7 30	18 31.41	-27 36.9	2.002	2.923	10.1	20.6	7 30	18 33.92	-33 33.0	2.964	3.867	7.9	21.7
8 9	18 25.74	-27 23.1	2.091	2.933	13.1	20.8	8 9	18 28.11	-33 23.2	3.052	3.868	10.0	21.8
64346	2001 <i>US</i> ₇₈		7 4.4 215°22	2°8/ 3.8 17			504720	2009 <i>UM</i> ₃₁		7 4.4 143°84	13°6/ 6.2 17		
5 31	19 25.67	-27 3.7	1.565	2.434	15.4	20.5	5 31	19 21.35	+12 32.3	2.034	2.756	17.3	21.3
6 10	19 19.79	-27 47.7	1.490	2.429	11.6	20.2	6 10	19 15.63	+14 26.6	1.977	2.762	15.8	21.1
6 20	19 10.96	-28 32.7	1.436	2.424	7.4	19.9	6 20	19 7.97	+15 58.0	1.939	2.769	14.6	21.1
6 30	19 0.00	-29 13.4	1.407	2.418	3.4	19.7	6 30	18 59.01	+17 0.5	1.922	2.774	13.8	21.0
7 10	18 48.20	-29 44.8	1.404	2.411	4.2	19.7	7 10	18 49.62	+17 30.7	1.926	2.780	13.7	21.0
7 20	18 37.03	-30 3.9	1.426	2.404	8.5	20.0	7 20	18 40.71	+17 28.4	1.951	2.785	14.3	21.1
7 30	18 27.89	-30 10.9	1.473	2.397	12.8	20.2	7 30	18 33.16	+16 56.7	1.995	2.790	15.4	21.2
8 9	18 21.75	-30 8.3	1.540	2.389	16.6	20.4	8 9	18 27.61	+16 1.3	2.058	2.794	16.7	21.3
152014	2004 <i>JR</i> ₄₂		7 4.4 325°80	0°0/ 4.2 18</									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
160006	2007 <i>HK</i> ₅₆		7 4.4 318°81	4.7/ 5.1	17		462542	2009 <i>BW</i> ₁₁₄		7 4.4 88°44	1.6/ 4.9	17	
5 31	19 20.64	-13 59.0	1.194	2.071	18.6	19.9	5 31	19 23.98	-16 54.8	1.393	2.260	17.0	21.2
6 10	19 16.34	-13 30.5	1.126	2.065	14.5	19.6	6 10	19 18.28	-17 21.9	1.339	2.277	12.8	21.0
6 20	19 8.99	-13 14.0	1.076	2.059	9.8	19.4	6 20	19 9.85	-17 59.3	1.306	2.293	8.0	20.7
6 30	18 59.43	-13 10.7	1.047	2.054	5.6	19.1	6 30	18 59.64	-18 43.8	1.297	2.310	3.1	20.5
7 10	18 49.06	-13 20.3	1.041	2.048	5.5	19.1	7 10	18 48.97	-19 31.3	1.314	2.326	3.2	20.5
7 20	18 39.40	-13 41.1	1.059	2.043	9.8	19.3	7 20	18 39.18	-20 18.0	1.356	2.342	7.9	20.9
7 30	18 31.91	-14 10.3	1.097	2.039	14.6	19.6	7 30	18 31.49	-21 1.2	1.421	2.357	12.3	21.2
8 9	18 27.58	-14 44.7	1.155	2.034	18.9	19.8	8 9	18 26.66	-21 39.5	1.508	2.372	16.1	21.4
80544	2000 <i>AZ</i> ₈₄		7 4.4 150°41	0.4/ 4.5	18		471629	2012 <i>TX</i> ₃₂		7 4.4 305°13	8°3/ 5.8	17	
5 31	19 23.64	-21 1.7	1.833	2.692	13.9	19.8	5 31	19 17.62	-3 53.6	1.704	2.534	16.1	20.8
6 10	19 17.58	-21 9.9	1.765	2.699	10.4	19.6	6 10	19 13.29	-2 59.2	1.624	2.523	13.4	20.6
6 20	19 9.26	-21 21.7	1.719	2.706	6.4	19.3	6 20	19 6.78	-2 20.3	1.565	2.511	10.7	20.4
6 30	18 59.43	-21 35.0	1.698	2.712	2.1	19.1	6 30	18 58.71	-2 0.6	1.527	2.500	8.7	20.3
7 10	18 49.15	-21 47.7	1.705	2.718	2.5	19.1	7 10	18 50.04	-2 1.9	1.514	2.489	8.5	20.3
7 20	18 39.51	-21 58.5	1.739	2.723	6.7	19.4	7 20	18 41.78	-2 23.7	1.525	2.478	10.4	20.3
7 30	18 31.54	-22 6.9	1.799	2.727	10.6	19.6	7 30	18 34.95	-3 3.3	1.558	2.467	13.2	20.5
8 9	18 25.93	-22 13.1	1.881	2.731	14.0	19.9	8 9	18 30.33	-3 56.2	1.612	2.457	16.2	20.7
155593	2000 <i>CK</i> ₁₅		7 4.4 241°28	0°2/ 4.4	18		106755	2000 <i>XF</i> ₅		7 4.4 275°29	5°6/ 2.8	18	
5 31	19 17.71	-22 21.0	2.768	3.620	10.0	20.6	5 31	19 22.78	-38 4.9	2.291	3.138	12.0	20.3
6 10	19 12.68	-22 42.4	2.677	3.609	7.4	20.4	6 10	19 17.11	-38 50.9	2.206	3.122	9.5	20.1
6 20	19 6.10	-23 6.2	2.610	3.597	4.6	20.2	6 20	19 9.11	-39 30.1	2.143	3.106	7.2	19.9
6 30	18 58.44	-23 30.6	2.571	3.585	1.4	19.9	6 30	18 59.45	-39 57.4	2.106	3.091	5.7	19.8
7 10	18 50.35	-23 53.8	2.561	3.573	1.8	19.9	7 10	18 49.12	-40 9.1	2.095	3.075	6.2	19.8
7 20	18 42.54	-24 14.4	2.580	3.561	5.0	20.1	7 20	18 39.24	-40 4.0	2.111	3.058	8.3	19.9
7 30	18 35.69	-24 31.7	2.625	3.548	8.0	20.3	7 30	18 30.89	-39 43.2	2.151	3.042	10.9	20.1
8 9	18 30.38	-24 45.6	2.695	3.535	10.6	20.5	8 9	18 24.87	-39 10.1	2.213	3.026	13.5	20.2
360688	2004 <i>RU</i> ₃₅₆		7 4.4 321°02	4°6/ 5.4	18		347068	2010 <i>FL</i> ₄₇		7 4.4 51°59	1°3/ 4.8	17	
5 31	19 16.22	-10 32.7	2.038	2.883	13.3	20.7	5 31	19 19.48	-18 38.1	1.764	2.629	14.1	21.0
6 10	19 11.92	-10 6.1	1.955	2.873	10.5	20.5	6 10	19 14.54	-18 45.9	1.699	2.636	10.6	20.8
6 20	19 5.78	-9 49.3	1.894	2.863	7.5	20.3	6 20	19 7.43	-18 59.8	1.655	2.643	6.6	20.6
6 30	18 58.36	-9 43.4	1.858	2.854	5.1	20.1	6 30	18 58.88	-19 18.2	1.637	2.650	2.5	20.4
7 10	18 50.46	-9 48.5	1.848	2.845	5.0	20.1	7 10	18 49.90	-19 38.9	1.645	2.657	2.7	20.4
7 20	18 42.95	-10 3.9	1.864	2.836	7.4	20.3	7 20	18 41.54	-20 0.3	1.679	2.665	6.8	20.7
7 30	18 36.66	-10 27.7	1.905	2.828	10.4	20.4	7 30	18 34.76	-20 20.9	1.739	2.672	10.6	20.9
8 9	18 32.23	-10 57.8	1.968	2.820	13.4	20.6	8 9	18 30.25	-20 39.9	1.820	2.680	13.9	21.1
371957	2008 <i>FQ</i> ₄₃		7 4.4 100°42	0°9/ 4.3	17		177215	2003 <i>UO</i> ₁₅₉		7 4.4 153°86	1°0/ 4.7	17	
5 31	19 24.19	-24 16.8	1.598	2.466	15.1	21.7	5 31	19 23.88	-19 19.5	1.822	2.679	14.1	21.4
6 10	19 18.25	-24 30.9	1.538	2.478	11.3	21.5	6 10	19 17.77	-19 28.0	1.753	2.686	10.6	21.2
6 20	19 9.76	-24 46.3	1.500	2.490	6.9	21.3	6 20	19 9.39	-19 41.6	1.707	2.693	6.6	21.0
6 30	18 59.59	-24 59.8	1.487	2.501	2.3	21.0	6 30	18 59.50	-19 58.6	1.686	2.699	2.3	20.8
7 10	18 49.00	-25 8.9	1.500	2.512	2.9	21.1	7 10	18 49.14	-20 16.7	1.692	2.704	2.6	20.8
7 20	18 39.24	-25 12.2	1.539	2.523	7.4	21.4	7 20	18 39.41	-20 34.2	1.726	2.709	6.8	21.1
7 30	18 31.45	-25 10.2	1.603	2.534	11.5	21.7	7 30	18 31.33	-20 50.2	1.785	2.714	10.7	21.3
8 9	18 26.35	-25 4.3	1.688	2.544	15.0	21.9	8 9	18 25.62	-21 4.5	1.867	2.717	14.1	21.5
371425	2006 <i>SM</i> ₁₁₅		7 4.4 232°50	2°3/ 3.9	17		508637	2017 <i>TE</i> ₉		7 4.4 232°34	1°6/ 4.9	17	
5 31	19 24.48	-27 25.5	1.691	2.557	14.5	21.8	5 31	19 22.07	-17 16.0	1.669	2.530	15.0	21.7
6 10	19 18.70	-27 50.0	1.612	2.550	11.0	21.6	6 10	19 16.80	-17 33.5	1.589	2.523	11.4	21.4
6 20	19 10.21	-28 13.8	1.555	2.542	6.9	21.3	6 20	19 9.02	-17 59.8	1.530	2.516	7.2	21.2
6 30	18 59.80	-28 32.8	1.523	2.534	3.0	21.0	6 30	18 59.45	-18 33.0	1.496	2.508	2.9	20.9
7 10	18 48.66	-28 43.6	1.517	2.526	3.7	21.1	7 10	18 49.16	-19 10.1	1.489	2.500	3.0	20.9
7 20	18 38.13	-28 44.5	1.538	2.517	7.9	21.3	7 20	18 39.35	-19 48.4	1.507	2.492	7.4	21.1
7 30	18 29.47	-28 36.2	1.583	2.508	12.0	21.5	7 30	18 31.19	-20 25.4	1.551	2.483	11.7	21.3
8 9	18 23.55	-28 21.2	1.649	2.499	15.6	21.7	8 9	18 25.55	-20 59.8	1.616	2.474	15.5	21.6
472171	2014 <i>DV</i> ₄₂		7 4.4 13°47	1°0/ 4.7	18		168436	1998 <i>VH</i> ₂₂		7 4.4 278°23	2°0/ 4.7	18	
5 31	19 18.45	-19 2.4	1.888	2.752	13.4	20.8	5 31	19 20.44	-18 10.7	2.019	2.874	13.0	20.4
6 10	19 13.72	-19 12.7	1.816	2.752	10.1	20.5	6 10	19 15.27	-17 51.9	1.920	2.852	9.9	20.1
6 20	19 6.92	-19 28.6	1.766	2.754	6.3	20.3	6 20	19 7.96	-17 37.1	1.845	2.829	6.4	19.9
6 30	18 58.72	-19 48.5	1.742	2.755	2.3	20.1	6 30	18 59.10	-17 26.0	1.795	2.806	2.8	19.6
7 10	18 50.05	-20 10.4	1.744	2.756	2.5	20.1	7 10	18 49.58	-17 18.1	1.772	2.782	3.0	19.6
7 20	18 41.91	-20 32.5	1.773	2.758	6.5	20.3	7 20	18 40.38	-17 13.2	1.777	2.759	6.8	19.8
7 30	18 35.21	-20 53.4	1.827	2.760	10.2	20.6	7 30	18 32.49	-17 11.0	1.807	2.735	10.6	19.9
8 9	18 30.65	-21 12.4	1.904	2.762	13.5	20.8	8 9	18 26.68	-17 11.2	1.859	2.711	14.1	20.1
405729	2005 <i>XN</i> ₄₀		7 4.4 304°08	1°9/ 4.1	17		384461	2010 <i>BS</i> ₇		7 4.4 76°77	2°2/ 3.8	17	
5 31	19 21.05	-24 34.1	1.157	2.049	18.0	21.2	5 31	19 22.07	-26 10.8	1.857	2.723	13.5	20.6
6 10	19 17.31	-25 5.0	1.075	2.027	13.7	20.9	6 10	19 16.45	-26 59.2	1.801	2.739	10.0	20.4
6 20	19 10.01	-25 41.2	1.013	2.006	8.6	20.5	6 20	19 8.58	-27 48.2	1.768	2.756	6.2	20.2
6 30	18 59.89	-26 17.5	0.971	1.985	3.1	20.1	6 30	18 59.25	-28 33.4	1.761	2.772	2.7	20.0
7 10	18 48.43	-26 48.4	0.952	1.964	4.2	20.1	7 10	18 49.51	-29 11.0	1.781	2.789	3.4	20.1
7 20	18 37.46	-27 9.7	0.956	1.944	10.1	20.4	7 20	18 40.45	-29 38.8	1.827	2.805	7.0	20.4
7 30	18 28.84	-27 20.3	0.981	1.924	15.7	20.6	7 30	18 33.08	-29 56.6	1.899	2.821	10.5	20.6
8 9	18 23.91	-27 21.9	1.023	1.905	20.6	20.9	8 9	18 28.08	-30 5.8	1.993	2.838	13.5	20.8
428243	2006 <i>YE</i> ₁₉		7 4.4 220°63	1°6/ 4.1	17		359474	2010 <i>OQ</i> ₄					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
515233	2012 <i>BU</i> ₁₀₆		7 4.4 191°57	2.4/ 5.5	18		329218	2012 <i>DS</i> ₇₇		7 4.5 141°87	1.6/ 4.2	17	
5 31	19 16.59	-12 4.5	3.144	3.971	9.5	22.9	5 31	19 26.59	-26 41.7	1.738	2.600	14.5	21.3
6 10	19 11.59	-12 17.2	3.058	3.969	7.4	22.8	6 10	19 19.95	-26 51.1	1.674	2.609	10.8	21.1
6 20	19 5.32	-12 36.9	2.996	3.967	5.0	22.6	6 20	19 10.79	-26 59.0	1.631	2.618	6.7	20.9
6 30	18 58.21	-13 3.0	2.962	3.964	2.9	22.4	6 30	18 59.99	-27 2.3	1.614	2.626	2.5	20.6
7 10	18 50.79	-13 34.5	2.958	3.961	2.7	22.4	7 10	18 48.76	-26 58.6	1.624	2.634	3.1	20.7
7 20	18 43.62	-14 9.9	2.982	3.957	4.8	22.6	7 20	18 38.34	-26 47.6	1.661	2.642	7.3	20.9
7 30	18 37.26	-14 47.8	3.035	3.953	7.2	22.7	7 30	18 29.85	-26 30.5	1.723	2.648	11.2	21.2
8 9	18 32.16	-15 26.5	3.113	3.949	9.4	22.9	8 9	18 24.02	-26 9.7	1.807	2.654	14.6	21.4
432025	2008 <i>WA</i> ₅		7 4.4 27°76	7.4/ 2.3	17		218889	2007 <i>CU</i> ₄₁		7 4.5 350°27	8.2/ 4.0	18	
5 31	19 22.92	-36 4.8	1.467	2.340	16.0	20.2	5 31	19 26.83	-45 18.7	1.892	2.727	14.5	19.2
6 10	19 18.07	-37 33.7	1.414	2.347	12.6	20.1	6 10	19 20.50	-45 38.2	1.822	2.722	12.1	19.0
6 20	19 10.05	-38 55.5	1.382	2.355	9.4	19.9	6 20	19 11.27	-45 41.9	1.774	2.718	9.8	18.9
6 30	18 59.80	-40 1.3	1.374	2.363	7.5	19.8	6 30	19 0.15	-45 23.9	1.748	2.714	8.3	18.8
7 10	18 48.82	-40 44.5	1.390	2.372	8.2	19.9	7 10	18 48.61	-44 41.5	1.747	2.711	8.5	18.8
7 20	18 38.73	-41 2.7	1.429	2.382	10.9	20.0	7 20	18 38.11	-43 35.9	1.771	2.708	10.3	18.9
7 30	18 31.00	-40 58.2	1.490	2.392	14.1	20.3	7 30	18 29.92	-42 12.0	1.818	2.706	12.7	19.0
8 9	18 26.56	-40 36.2	1.570	2.403	17.1	20.5	8 9	18 24.77	-40 36.8	1.887	2.705	15.2	19.2
508965	2004 <i>TJ</i> ₃₃₃		7 4.5 288°23	2.4/ 3.9	18		100594	1997 <i>OH</i> ₂		7 4.5 290°89	1.6/ 4.8	18	
5 31	19 21.78	-27 14.5	1.728	2.598	14.1	21.9	5 31	19 20.59	-18 43.7	1.580	2.449	15.3	20.2
6 10	19 16.83	-27 45.4	1.637	2.576	10.7	21.6	6 10	19 15.98	-18 41.8	1.488	2.427	11.7	19.9
6 20	19 9.20	-28 17.1	1.567	2.555	6.8	21.3	6 20	19 8.72	-18 46.4	1.418	2.406	7.4	19.6
6 30	18 59.57	-28 45.3	1.523	2.534	3.0	21.0	6 30	18 59.46	-18 56.3	1.372	2.384	2.9	19.3
7 10	18 49.05	-29 6.0	1.504	2.513	3.8	21.0	7 10	18 49.30	-19 9.8	1.351	2.363	3.1	19.2
7 20	18 38.91	-29 16.9	1.511	2.491	8.0	21.2	7 20	18 39.51	-19 25.2	1.355	2.341	7.9	19.5
7 30	18 30.46	-29 17.7	1.543	2.470	12.2	21.4	7 30	18 31.37	-19 41.2	1.383	2.320	12.6	19.7
8 9	18 24.66	-29 10.4	1.595	2.448	15.9	21.6	8 9	18 25.88	-19 57.1	1.432	2.298	16.7	19.9
51644	2001 <i>HD</i> ₆₀		7 4.5 109°54	4.0/ 5.4	17		316198	2010 <i>MP</i> ₃₃		7 4.5 248°57	5.4/ 6.0	18	
5 31	19 21.43	-12 27.6	1.603	2.458	15.8	19.1	5 31	19 16.56	-5 3.2	2.612	3.423	11.7	21.5
6 10	19 16.14	-12 22.7	1.539	2.465	12.2	18.9	6 10	19 11.85	-4 42.9	2.520	3.410	9.6	21.3
6 20	19 8.49	-12 29.8	1.495	2.473	8.3	18.7	6 20	19 5.63	-4 33.6	2.450	3.396	7.4	21.1
6 30	18 59.27	-12 48.6	1.476	2.480	4.8	18.5	6 30	18 58.38	-4 36.7	2.406	3.383	5.7	21.0
7 10	18 49.56	-13 17.5	1.482	2.487	4.5	18.5	7 10	18 50.72	-4 52.4	2.389	3.369	5.5	21.0
7 20	18 40.52	-13 53.8	1.514	2.494	7.9	18.7	7 20	18 43.31	-5 19.6	2.400	3.355	7.0	21.0
7 30	18 33.19	-14 34.8	1.570	2.501	11.7	19.0	7 30	18 36.81	-5 56.6	2.436	3.340	9.3	21.2
8 9	18 28.31	-15 17.5	1.648	2.508	15.2	19.2	8 9	18 31.79	-6 40.9	2.496	3.326	11.6	21.3
191705	2004 <i>RR</i> ₁₈₈		7 4.5 237°42	0.2/ 4.4	18		308529	2005 <i>UO</i> ₁₀₇		7 4.5 266°18	3.7/ 3.2	18	
5 31	19 22.86	-24 7.3	1.846	2.709	13.7	20.1	5 31	19 20.78	-31 54.1	2.332	3.188	11.4	20.9
6 10	19 17.13	-23 56.0	1.767	2.704	10.3	19.9	6 10	19 15.49	-32 43.2	2.246	3.175	8.8	20.7
6 20	19 9.08	-23 44.6	1.711	2.699	6.3	19.6	6 20	19 8.09	-33 30.1	2.184	3.162	6.0	20.5
6 30	18 59.46	-23 31.4	1.680	2.694	2.0	19.3	6 30	18 59.20	-34 10.4	2.148	3.149	3.9	20.3
7 10	18 49.33	-23 15.3	1.676	2.688	2.5	19.3	7 10	18 49.68	-34 40.6	2.139	3.136	4.5	20.3
7 20	18 39.79	-22 56.3	1.699	2.683	6.8	19.6	7 20	18 40.51	-34 58.7	2.158	3.123	7.1	20.5
7 30	18 31.90	-22 35.4	1.748	2.677	10.8	19.8	7 30	18 32.65	-35 4.7	2.203	3.109	10.0	20.6
8 9	18 26.39	-22 13.9	1.818	2.671	14.3	20.0	8 9	18 26.86	-35 0.4	2.270	3.095	12.7	20.8
222553	2001 <i>VQ</i> ₂₄		7 4.5 210°62	0.9/ 4.7	18		246903	1998 <i>DA</i> ₂₂		7 4.5 334°65	8.5/ 7.0	16	
5 31	19 22.31	-19 49.5	2.196	3.046	12.3	21.7	5 31	19 14.28	-3 49.7	1.308	2.162	18.7	19.3
6 10	19 16.42	-19 52.3	2.110	3.039	9.2	21.5	6 10	19 11.47	-3 36.3	1.229	2.145	15.6	19.1
6 20	19 8.54	-19 58.9	2.047	3.032	5.8	21.2	6 20	19 6.03	-3 46.8	1.168	2.128	12.1	18.8
6 30	18 59.29	-20 7.8	2.011	3.024	2.0	21.0	6 30	18 58.63	-4 24.4	1.127	2.113	9.2	18.6
7 10	18 49.53	-20 17.5	2.004	3.016	2.3	21.0	7 10	18 50.35	-5 29.1	1.108	2.098	8.6	18.5
7 20	18 40.17	-20 26.9	2.024	3.006	6.1	21.2	7 20	18 42.49	-6 56.9	1.111	2.085	10.9	18.6
7 30	18 32.13	-20 35.4	2.071	2.996	9.6	21.4	7 30	18 36.34	-8 40.9	1.136	2.073	14.6	18.8
8 9	18 26.07	-20 43.0	2.142	2.986	12.8	21.6	8 9	18 32.89	-10 32.4	1.180	2.062	18.4	19.0
216782	2006 <i>QG</i> ₁₁₆		7 4.5 319°28	6.4/ 5.5	18		471778	2012 <i>UH</i> ₁₆₉		7 4.5 252°25	5.9/ 5.9	18	
5 31	19 17.75	-10 17.9	1.281	2.150	18.1	20.0	5 31	19 19.05	-5 8.6	2.305	3.118	13.0	22.2
6 10	19 14.12	-9 43.9	1.204	2.136	14.5	19.8	6 10	19 13.95	-4 48.2	2.207	3.099	10.6	22.0
6 20	19 7.66	-9 24.6	1.146	2.121	10.5	19.5	6 20	19 7.05	-4 40.3	2.131	3.079	8.2	21.9
6 30	18 59.12	-9 22.9	1.109	2.108	7.1	19.3	6 30	18 58.87	-4 46.5	2.080	3.059	6.3	21.7
7 10	18 49.70	-9 39.2	1.094	2.095	6.9	19.2	7 10	18 50.11	-5 7.0	2.056	3.038	6.1	21.7
7 20	18 40.79	-10 11.9	1.103	2.082	10.2	19.4	7 20	18 41.59	-5 40.8	2.059	3.016	7.8	21.7
7 30	18 33.77	-10 57.5	1.133	2.071	14.6	19.6	7 30	18 34.10	-6 25.7	2.087	2.994	10.5	21.8
8 9	18 29.63	-11 51.2	1.181	2.060	18.7	19.8	8 9	18 28.33	-7 18.5	2.139	2.971	13.2	22.0
315197	2007 <i>PF</i> ₄₅		7 4.5 242°86	0.4/ 4.6	17		126528	2002 <i>CN</i> ₈₃		7 4.5 21°75	1.1/ 4.8	18	
5 31	19 23.90	-20 36.2	1.615	2.480	15.2	22.0	5 31	19 19.54	-18 27.5	1.570	2.441	15.2	19.3
6 10	19 18.37	-20 51.6	1.530	2.468	11.5	21.7	6 10	19 14.93	-18 49.2	1.503	2.443	11.5	19.0
6 20	19 10.13	-21 12.7	1.467	2.455	7.1	21.4	6 20	19 7.87	-19 18.9	1.458	2.446	7.2	18.8
6 30	18 59.87	-21 36.9	1.428	2.442	2.3	21.1	6 30	18 59.14	-19 54.3	1.436	2.449	2.6	18.5
7 10	18 48.78	-22 1.3	1.415	2.428	2.8	21.1	7 10	18 49.83	-20 32.1	1.440	2.453	2.8	18.5
7 20	18 38.14	-22 23.4	1.429	2.414	7.7	21.3	7 20	18 41.15	-21 9.3	1.470	2.456	7.3	18.8
7 30	18 29.27	-22 42.0	1.467	2.399	12.3	21.6	7 30	18 34.21	-21 43.8	1.523	2.460	11.6	19.1
8 9	18 23.11	-22 57.2	1.526	2.383	16.3	21.8	8 9	18 29.79	-22 14.4	1.598	2.465	15.2	19.3
147679	2004 <i>NF</i> ₁₄		7 4.5 328°72	0.5/ 4.5	18		513341	2007 <i>QJ</i> ₄					

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7 4.5

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
218233	2002 VR ₁₁₂		7 4.5 276°85	1.3°/ 4.7 18			444295	2005 UM ₅₁₅		7 4.5 229°66	3°6/ 5.8 18		
5 31	19 21.72	-19 48.5	1.598	2.466	15.2	20.7	5 31	19 16.89	-9 58.2	2.470	3.301	11.7	21.6
6 10	19 16.73	-19 42.6	1.512	2.451	11.5	20.5	6 10	19 12.17	-10 2.3	2.386	3.297	9.2	21.4
6 20	19 9.11	-19 41.7	1.448	2.436	7.3	20.2	6 20	19 5.87	-10 16.4	2.325	3.292	6.5	21.2
6 30	18 59.58	-19 44.3	1.409	2.422	2.7	19.8	6 30	18 58.50	-10 40.4	2.290	3.287	4.2	21.1
7 10	18 49.26	-19 49.0	1.394	2.407	3.0	19.8	7 10	18 50.73	-11 13.2	2.282	3.282	3.9	21.0
7 20	18 39.43	-19 54.4	1.406	2.391	7.7	20.1	7 20	18 43.26	-11 53.0	2.303	3.276	6.1	21.2
7 30	18 31.31	-19 59.9	1.441	2.376	12.3	20.3	7 30	18 36.81	-12 37.7	2.350	3.271	8.8	21.3
8 9	18 25.83	-20 5.6	1.498	2.361	16.2	20.5	8 9	18 31.94	-13 24.9	2.421	3.265	11.4	21.5
440587	2005 UU ₅₁₀		7 4.5 272°53	0°1/ 4.5 18			1562	Gondolatsch		7 4.5 60°26	1°9/ 4.9 18		
5 31	19 18.17	-21 25.3	2.321	3.179	11.4	21.6	5 31	19 22.28	-16 57.6	1.250	2.127	17.9	15.0
6 10	19 13.32	-21 39.3	2.234	3.168	8.6	21.4	6 10	19 17.40	-17 15.3	1.192	2.135	13.6	14.7
6 20	19 6.66	-21 56.5	2.170	3.158	5.3	21.2	6 20	19 9.58	-17 44.3	1.154	2.143	8.6	14.5
6 30	18 58.74	-22 15.2	2.133	3.147	1.7	20.9	6 30	18 59.73	-18 21.9	1.139	2.151	3.4	14.2
7 10	18 50.34	-22 33.6	2.124	3.136	2.0	21.0	7 10	18 49.26	-19 4.2	1.148	2.160	3.5	14.2
7 20	18 42.28	-22 50.1	2.142	3.125	5.7	21.2	7 20	18 39.67	-19 47.4	1.181	2.169	8.5	14.5
7 30	18 35.38	-23 4.1	2.187	3.114	9.1	21.4	7 30	18 32.28	-20 28.3	1.236	2.177	13.3	14.8
8 9	18 30.29	-23 15.5	2.254	3.103	12.0	21.6	8 9	18 27.96	-21 5.5	1.311	2.186	17.4	15.1
71113	1999 XV ₁₅₅		7 4.5 2°34	0°4/ 4.6 18			52546	1996 XW		7 4.5 209°91	3°1/ 3.4 18		
5 31	19 19.77	-19 53.5	1.810	2.674	13.8	19.3	5 31	19 21.09	-30 3.6	2.365	3.220	11.3	19.4
6 10	19 14.88	-20 19.8	1.737	2.674	10.4	19.1	6 10	19 15.60	-30 52.7	2.286	3.217	8.6	19.2
6 20	19 7.76	-20 52.2	1.686	2.674	6.4	18.9	6 20	19 8.12	-31 40.4	2.232	3.213	5.7	19.0
6 30	18 59.11	-21 28.2	1.661	2.674	2.1	18.6	6 30	18 59.24	-32 22.8	2.205	3.210	3.3	18.9
7 10	18 49.90	-22 4.6	1.662	2.674	2.4	18.6	7 10	18 49.83	-32 56.3	2.205	3.206	3.9	18.9
7 20	18 41.21	-22 38.9	1.690	2.675	6.7	18.9	7 20	18 40.82	-33 19.2	2.234	3.202	6.6	19.1
7 30	18 34.06	-23 9.4	1.743	2.675	10.7	19.1	7 30	18 33.11	-33 31.2	2.288	3.197	9.6	19.3
8 9	18 29.18	-23 35.5	1.817	2.675	14.1	19.3	8 9	18 27.39	-33 33.9	2.365	3.193	12.2	19.4
91628	1999 TC ₅₈		7 4.5 26°67	9°6/ 6.2 18			507876	2014 KK ₄₃		7 4.5 231°77	4°4/ 5.9 18		
5 31	19 16.71	+ 3 51.1	2.232	3.009	14.4	19.1	5 31	19 16.76	- 7 53.0	2.454	3.279	11.9	21.3
6 10	19 12.08	+ 5 6.3	2.165	3.012	12.6	18.9	6 10	19 12.07	- 7 47.2	2.370	3.274	9.5	21.1
6 20	19 5.81	+ 6 4.8	2.119	3.014	10.9	18.8	6 20	19 5.81	- 7 52.3	2.309	3.269	7.0	20.9
6 30	18 58.46	+ 6 42.9	2.095	3.017	9.8	18.7	6 30	18 58.49	- 8 8.7	2.274	3.263	4.9	20.8
7 10	18 50.76	+ 6 58.5	2.096	3.020	9.7	18.7	7 10	18 50.78	- 8 35.8	2.265	3.258	4.7	20.7
7 20	18 43.46	+ 6 51.9	2.120	3.022	10.6	18.8	7 20	18 43.38	- 9 12.1	2.285	3.252	6.5	20.9
7 30	18 37.29	+ 6 25.1	2.166	3.026	12.1	18.9	7 30	18 36.99	- 9 55.4	2.330	3.246	9.1	21.0
8 9	18 32.81	+ 5 42.2	2.234	3.029	13.9	19.0	8 9	18 32.16	-10 43.1	2.399	3.240	11.6	21.2
314157	2005 EE ₃₂₄		7 4.5 85°98	2°3/ 3.9 17			503436	2016 EX ₇₄		7 4.5 136°87	2°1/ 4.9 17		
5 31	19 25.83	-25 31.5	1.470	2.341	16.1	21.1	5 31	19 23.68	-17 2.0	1.397	2.265	16.9	21.8
6 10	19 19.73	-26 23.8	1.420	2.361	12.0	20.8	6 10	19 18.26	-17 11.4	1.332	2.270	12.8	21.6
6 20	19 10.81	-27 17.5	1.391	2.380	7.4	20.6	6 20	19 10.04	-17 30.4	1.287	2.274	8.2	21.3
6 30	19 0.06	-28 7.0	1.387	2.399	3.1	20.4	6 30	18 59.89	-17 57.1	1.266	2.278	3.4	21.0
7 10	18 48.85	-28 47.2	1.409	2.418	3.9	20.5	7 10	18 49.09	-18 28.5	1.270	2.282	3.4	21.0
7 20	18 38.60	-29 15.5	1.456	2.436	8.2	20.8	7 20	18 39.05	-19 1.7	1.299	2.285	8.2	21.3
7 30	18 30.54	-29 32.0	1.528	2.455	12.3	21.1	7 30	18 31.04	-19 34.4	1.352	2.289	12.8	21.6
8 9	18 25.44	-29 38.8	1.620	2.473	15.7	21.4	8 9	18 25.93	-20 5.2	1.425	2.292	16.7	21.9
53226	1999 CB ₉₈		7 4.5 22°44	8°4/ 4.1 18			28084	1998 QH ₉₂		7 4.5 288°67	0°2/ 4.5 18		
5 31	19 26.63	-40 52.9	1.302	2.170	17.9	18.2	5 31	19 21.93	-20 0.4	1.304	2.183	17.2	18.6
6 10	19 21.09	-41 23.9	1.250	2.177	14.5	18.0	6 10	19 17.63	-20 29.3	1.216	2.162	13.1	18.3
6 20	19 11.93	-41 38.9	1.217	2.184	11.0	17.8	6 20	19 10.11	-21 8.1	1.149	2.140	8.2	17.9
6 30	19 0.43	-41 30.5	1.206	2.192	8.7	17.7	6 30	19 0.05	-21 53.7	1.104	2.118	2.7	17.5
7 10	18 48.46	-40 55.0	1.217	2.201	8.9	17.7	7 10	18 48.73	-22 41.3	1.083	2.096	3.2	17.5
7 20	18 37.90	-39 54.4	1.251	2.210	11.5	17.9	7 20	18 37.75	-23 26.4	1.086	2.074	9.1	17.8
7 30	18 30.26	-38 35.4	1.306	2.221	14.9	18.1	7 30	18 28.78	-24 5.9	1.112	2.052	14.5	18.0
8 9	18 26.32	-37 6.4	1.381	2.232	18.1	18.4	8 9	18 23.06	-24 38.9	1.156	2.031	19.3	18.2
231290	2006 BK ₉₉		7 4.5 322°97	2°6/ 4.2 16			512129	2015 PR ₃₀		7 4.5 333°45	2°1/ 4.1 18		
5 31	19 22.22	-29 7.0	1.557	2.431	15.1	20.4	5 31	19 20.21	-28 56.5	2.098	2.961	12.3	20.8
6 10	19 17.21	-29 13.5	1.481	2.423	11.5	20.2	6 10	19 15.01	-29 3.1	2.021	2.957	9.2	20.6
6 20	19 9.41	-29 16.6	1.427	2.415	7.3	19.9	6 20	19 7.76	-29 7.0	1.968	2.954	5.9	20.4
6 30	18 59.67	-29 12.5	1.396	2.407	3.4	19.7	6 30	18 59.12	-29 5.5	1.940	2.950	2.7	20.2
7 10	18 49.27	-28 58.7	1.391	2.399	3.9	19.7	7 10	18 50.05	-28 56.8	1.939	2.947	3.1	20.2
7 20	18 39.58	-28 35.0	1.410	2.392	8.1	19.9	7 20	18 41.52	-28 40.7	1.965	2.944	6.5	20.4
7 30	18 31.87	-28 3.2	1.454	2.386	12.4	20.1	7 30	18 34.47	-28 18.2	2.016	2.941	9.9	20.6
8 9	18 27.03	-27 26.6	1.518	2.380	16.1	20.4	8 9	18 29.55	-27 51.3	2.091	2.938	12.9	20.8
77115	2001 DK ₇₅		7 4.5 70°33	0°7/ 4.6 17			257968	2001 CK ₁₇		7 4.5 198°21	1°4/ 5.0 18		
5 31	19 23.24	-20 36.7	1.386	2.261	16.6	19.8	5 31	19 17.42	-16 18.5	2.927	3.767	9.8	21.3
6 10	19 17.82	-20 43.4	1.331	2.273	12.5	19.5	6 10	19 12.36	-16 35.6	2.841	3.764	7.4	21.1
6 20	19 9.66	-20 55.5	1.296	2.286	7.7	19.3	6 20	19 5.91	-16 58.0	2.780	3.760	4.7	20.9
6 30	18 59.71	-21 10.5	1.285	2.298	2.5	19.0	6 30	18 58.52	-17 24.7	2.746	3.756	2.1	20.7
7 10	18 49.30	-21 25.7	1.298	2.311	2.9	19.1	7 10	18 50.78	-17 54.3	2.742	3.752	2.1	20.7
7 20	18 39.80	-21 39.3	1.337	2.324	7.9	19.4	7 20	18 43.31	-18 25.3	2.767	3.747	4.7	20.9
7 30	18 32.41	-21 50.5	1.399	2.336	12.4	19.7	7 30	18 36.73	-18 56.3	2.819	3.742	7.5	21.1
8 9	18 27.90	-21 59.4	1.481	2.349	16.2	20.0	8 9	18 31.54	-19 26.4	2.897	3.737	9.9	21.2
355244	2007 DD ₅₄		7 4.5 30°15	4°5/ 6.9 17			442980	2013 CX ₁₅₄		7 4.5 334°05	6°2/ 6.8 18		
5 31	19 18.45	- 5 40.9	2.000	2.825									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
105978	2000 <i>SJ</i> ₂₆₆		7 4.5 310°55	0°4/ 4.4	18		430529	2002 <i>CC</i> ₁₆		7 4.5 130°83	0°1/ 4.5	17	
5 31	19 18.38	-22 2.8	2.023	2.887	12.6	19.4	5 31	19 23.47	-22 29.1	2.212	3.063	12.2	22.6
6 10	19 13.77	-22 33.8	1.941	2.879	9.4	19.2	6 10	19 17.13	-22 42.6	2.148	3.079	9.0	22.4
6 20	19 7.09	-23 9.1	1.882	2.871	5.8	18.9	6 20	19 8.91	-22 58.0	2.108	3.094	5.5	22.2
6 30	18 58.96	-23 46.0	1.849	2.863	1.8	18.6	6 30	18 59.49	-23 13.1	2.095	3.109	1.7	22.0
7 10	18 50.26	-24 21.4	1.843	2.855	2.4	18.7	7 10	18 49.75	-23 26.0	2.110	3.122	2.1	22.0
7 20	18 41.95	-24 53.1	1.864	2.848	6.3	18.9	7 20	18 40.61	-23 35.7	2.154	3.136	5.8	22.3
7 30	18 34.98	-25 19.7	1.911	2.840	10.0	19.1	7 30	18 32.90	-23 42.0	2.225	3.148	9.1	22.5
8 9	18 30.08	-25 40.9	1.980	2.833	13.3	19.3	8 9	18 27.19	-23 45.3	2.319	3.160	12.0	22.7
123050	2000 <i>SL</i> ₂₉₅		7 4.5 298°50	9°9/ 1.2	18		294301	2007 <i>VA</i> ₁₀		7 4.5 273°77	2°6/ 5.0	17	
5 31	19 26.62	-43 30.4	1.669	2.516	15.6	18.9	5 31	19 19.16	-15 58.8	1.987	2.841	13.2	20.8
6 10	19 21.28	-45 3.3	1.596	2.502	13.1	18.7	6 10	19 14.25	-15 44.3	1.905	2.834	10.1	20.6
6 20	19 12.39	-46 25.6	1.543	2.488	11.0	18.5	6 20	19 7.34	-15 36.3	1.845	2.826	6.6	20.4
6 30	19 0.78	-47 27.4	1.514	2.474	9.9	18.4	6 30	18 59.05	-15 34.5	1.811	2.819	3.3	20.2
7 10	18 47.96	-48 0.9	1.508	2.460	10.6	18.4	7 10	18 50.25	-15 38.3	1.803	2.812	3.3	20.2
7 20	18 35.79	-48 3.5	1.525	2.447	12.7	18.5	7 20	18 41.88	-15 46.9	1.823	2.804	6.7	20.3
7 30	18 26.03	-47 37.8	1.563	2.433	15.4	18.6	7 30	18 34.86	-15 59.1	1.868	2.797	10.3	20.5
8 9	18 19.90	-46 50.5	1.619	2.420	18.1	18.8	8 9	18 29.86	-16 13.9	1.935	2.789	13.5	20.7
512547	2016 <i>SK</i> ₁₀		7 4.5 221°28	1°0/ 4.7	18		364674	2007 <i>TU</i> ₃₅₉		7 4.5 323°06	7°2/ 2.7	17	
5 31	19 19.48	-19 25.3	2.133	2.989	12.3	21.2	5 31	19 20.73	-32 57.8	1.119	2.013	18.4	20.4
6 10	19 14.37	-19 29.5	2.054	2.986	9.3	21.0	6 10	19 17.50	-34 13.3	1.047	1.995	14.4	20.1
6 20	19 7.34	-19 38.0	1.998	2.983	5.8	20.7	6 20	19 10.39	-35 27.0	0.993	1.978	10.3	19.8
6 30	18 59.01	-19 49.6	1.968	2.980	2.1	20.5	6 30	19 0.23	-36 29.1	0.960	1.962	7.3	19.6
7 10	18 50.24	-20 2.7	1.965	2.977	2.3	20.5	7 10	18 48.68	-37 10.0	0.949	1.946	8.4	19.6
7 20	18 41.90	-20 16.0	1.990	2.974	6.0	20.7	7 20	18 37.81	-37 24.8	0.959	1.931	12.4	19.8
7 30	18 34.86	-20 28.8	2.042	2.971	9.5	20.9	7 30	18 29.65	-37 14.5	0.988	1.918	17.1	20.0
8 9	18 29.76	-20 40.6	2.116	2.967	12.6	21.1	8 9	18 25.56	-36 44.9	1.034	1.905	21.3	20.2
508133	2015 <i>FH</i> ₂₀		7 4.5 173°88	3°0/ 5.6	18		244383	2002 <i>PY</i> ₂₇		7 4.5 355°75	2°1/ 4.2	18	
5 31	19 21.09	-11 52.9	2.065	2.903	13.4	21.6	5 31	19 21.91	-28 3.5	1.744	2.613	14.0	20.3
6 10	19 15.57	-12 16.2	1.988	2.906	10.3	21.4	6 10	19 16.63	-28 9.3	1.673	2.612	10.6	20.1
6 20	19 8.09	-12 50.8	1.933	2.908	7.0	21.2	6 20	19 8.91	-28 12.7	1.623	2.611	6.6	19.8
6 30	18 59.26	-13 35.6	1.904	2.909	3.8	21.0	6 30	18 59.54	-28 10.6	1.599	2.611	2.8	19.6
7 10	18 49.94	-14 28.1	1.904	2.910	3.5	21.0	7 10	18 49.68	-28 1.1	1.601	2.610	3.3	19.6
7 20	18 41.03	-15 25.2	1.931	2.910	6.5	21.1	7 20	18 40.51	-27 43.8	1.628	2.610	7.3	19.9
7 30	18 33.43	-16 23.9	1.985	2.910	9.9	21.4	7 30	18 33.11	-27 20.1	1.681	2.610	11.2	20.1
8 9	18 27.81	-17 21.5	2.062	2.910	13.0	21.6	8 9	18 28.25	-26 52.3	1.755	2.611	14.6	20.3
59816	1999 <i>RO</i> ₂₀		7 4.5 326°97	5°4/ 5.3	18		276447	2003 <i>FZ</i> ₂		7 4.5 3°14	19°7/ 25.4	18	
5 31	19 18.17	-12 38.3	1.241	2.117	18.1	18.8	5 31	19 35.01	-51 32.8	1.001	1.855	23.1	19.1
6 10	19 14.52	-12 4.3	1.167	2.105	14.3	18.6	6 10	19 31.21	-55 13.2	0.964	1.854	21.1	19.0
6 20	19 7.98	-11 42.8	1.113	2.093	10.0	18.3	6 20	19 20.63	-58 29.9	0.945	1.854	19.8	18.9
6 30	18 59.33	-11 36.0	1.079	2.083	6.2	18.0	6 30	19 3.88	-60 59.6	0.945	1.854	19.8	18.9
7 10	18 49.83	-11 44.1	1.068	2.073	6.1	18.0	7 10	18 43.98	-62 25.8	0.961	1.854	20.9	19.0
7 20	18 40.92	-12 5.9	1.080	2.063	9.9	18.2	7 20	18 25.49	-62 45.5	0.992	1.856	22.8	19.1
7 30	18 33.99	-12 38.4	1.113	2.055	14.4	18.4	7 30	18 12.71	-62 9.2	1.037	1.857	24.9	19.3
8 9	18 30.03	-13 17.9	1.165	2.047	18.7	18.6	8 9	18 7.60	-60 54.4	1.093	1.859	26.9	19.5
423478	2005 <i>SU</i> ₂₇₃		7 4.5 341°61	3°5/ 3.9	17		507470	2012 <i>TL</i> ₂₃₉		7 4.5 170°61	2°6/ 3.9	17	
5 31	19 19.10	-28 43.2	1.210	2.103	17.3	20.8	5 31	19 23.47	-30 42.5	2.437	3.287	11.2	22.3
6 10	19 15.59	-29 9.2	1.140	2.092	13.2	20.6	6 10	19 17.18	-31 1.9	2.363	3.290	8.5	22.1
6 20	19 8.79	-29 33.6	1.090	2.082	8.5	20.3	6 20	19 8.99	-31 17.7	2.312	3.293	5.5	22.0
6 30	18 59.60	-29 51.1	1.062	2.073	4.1	20.0	6 30	18 59.53	-31 27.1	2.289	3.296	3.0	21.8
7 10	18 49.51	-29 57.1	1.056	2.065	4.9	20.0	7 10	18 49.70	-31 27.9	2.294	3.298	3.4	21.8
7 20	18 40.22	-29 49.9	1.073	2.058	9.6	20.3	7 20	18 40.40	-31 19.6	2.328	3.299	6.2	22.0
7 30	18 33.29	-29 30.9	1.111	2.052	14.5	20.5	7 30	18 32.47	-31 3.3	2.388	3.300	9.1	22.2
8 9	18 29.75	-29 3.4	1.168	2.048	18.7	20.8	8 9	18 26.53	-30 40.9	2.471	3.300	11.7	22.4
152218	2005 <i>RQ</i> ₂₃		7 4.5 269°74	3°2/ 3.9	18		392686	2011 <i>VY</i> ₁₁		7 4.5 344°24	2°6/ 4.9	18	
5 31	19 22.18	-32 38.3	2.308	3.161	11.6	20.2	5 31	19 18.55	-16 24.2	2.081	2.935	12.7	20.4
6 10	19 16.45	-32 48.6	2.221	3.150	8.9	20.0	6 10	19 13.64	-15 58.5	2.004	2.933	9.7	20.2
6 20	19 8.64	-32 53.8	2.159	3.138	6.0	19.8	6 20	19 6.88	-15 38.0	1.951	2.932	6.4	20.0
6 30	18 59.44	-32 50.8	2.122	3.126	3.5	19.6	6 30	18 58.88	-15 23.0	1.923	2.930	3.2	19.8
7 10	18 49.75	-32 37.6	2.113	3.115	3.9	19.7	7 10	18 50.49	-15 13.2	1.922	2.929	3.3	19.8
7 20	18 40.55	-32 13.9	2.132	3.103	6.7	19.8	7 20	18 42.57	-15 8.5	1.948	2.928	6.4	20.0
7 30	18 32.78	-31 41.4	2.176	3.091	9.8	20.0	7 30	18 35.95	-15 8.3	1.999	2.927	9.8	20.2
8 9	18 27.12	-31 2.5	2.244	3.079	12.6	20.1	8 9	18 31.25	-15 11.8	2.074	2.927	12.8	20.4
522817	2016 <i>NG</i> ₈₁		7 4.5 354°53	0°4/ 4.6	17		483605	2004 <i>RY</i> ₁₀₀		7 4.5 269°31	5°4/ 5.9	17	
5 31	19 15.61	-19 31.1	1.220	2.112	17.2	20.3	5 31	19 16.84	-4 54.2	2.688	3.496	11.5	22.2
6 10	19 12.70	-20 3.5	1.154	2.106	13.0	20.0	6 10	19 12.13	-4 31.9	2.585	3.473	9.4	22.0
6 20	19 6.89	-20 46.1	1.107	2.101	8.1	19.7	6 20	19 5.90	-4 20.4	2.504	3.449	7.3	21.8
6 30	18 58.98	-21 35.5	1.083	2.097	2.6	19.4	6 30	18 58.59	-4 20.9	2.449	3.424	5.7	21.7
7 10	18 50.28	-22 26.8	1.081	2.094	3.1	19.4	7 10	18 50.81	-4 33.9	2.421	3.399	5.5	21.6
7 20	18 42.25	-23 15.5	1.103	2.093	8.5	19.7	7 20	18 43.20	-4 58.8	2.420	3.374	7.0	21.7
7 30	18 36.28	-23 58.4	1.146	2.094	13.5	20.0	7 30	18 36.45	-5 33.9	2.446	3.348	9.3	21.8
8 9	18 33.32	-24 34.0	1.208	2.095	17.7	20.2	8 9	18 31.13	-6 16.7	2.495	3.322	11.7	21.9
504106	2006 <i>GT</i> ₂₃		7 4.5 150°31	4°4/ 3.3	17		35647	1998 <i>KA</i> ₆₇					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
318547	Fidrich		7 4.5 163°57	1.7°/ 4.1 17			491601	2012 TH ₆		7 4.5 240°23	2°5/ 3.8 18		
5 31	19 25.37	-25 34.1	1.716	2.580	14.5	22.0	5 31	19 22.43	-28 27.1	2.180	3.037	12.1	22.3
6 10	19 19.25	-26 1.6	1.647	2.584	10.9	21.8	6 10	19 16.81	-29 2.7	2.093	3.025	9.1	22.1
6 20	19 10.55	-26 30.0	1.600	2.587	6.7	21.6	6 20	19 9.01	-29 37.6	2.029	3.013	5.9	21.9
6 30	19 0.10	-26 55.3	1.578	2.591	2.6	21.3	6 30	18 59.65	-30 8.2	1.992	3.001	2.9	21.7
7 10	18 49.07	-27 14.1	1.583	2.593	3.2	21.4	7 10	18 49.66	-30 31.2	1.983	2.988	3.5	21.7
7 20	18 38.72	-27 24.8	1.615	2.596	7.4	21.7	7 20	18 40.05	-30 44.6	2.001	2.975	6.8	21.9
7 30	18 30.23	-27 27.4	1.671	2.597	11.5	21.9	7 30	18 31.83	-30 48.6	2.045	2.961	10.2	22.1
8 9	18 24.39	-27 23.8	1.750	2.599	14.9	22.1	8 9	18 25.77	-30 44.6	2.111	2.948	13.2	22.2
185268	2006 UP ₁₃₈		7 4.5 113°86	3°8/ 3.8 17			242510	2004 XQ ₁₆₄		7 4.5 213°48	0°1/ 4.5 18		
5 31	19 25.02	-30 37.3	1.560	2.430	15.4	20.8	5 31	19 24.17	-24 22.1	2.368	3.216	11.5	21.0
6 10	19 19.31	-31 8.8	1.494	2.432	11.7	20.6	6 10	19 17.72	-24 6.4	2.279	3.209	8.7	20.8
6 20	19 10.73	-31 36.7	1.449	2.434	7.7	20.4	6 20	19 9.37	-23 49.8	2.215	3.200	5.3	20.6
6 30	19 0.17	-31 55.6	1.428	2.435	4.2	20.2	6 30	18 59.73	-23 30.9	2.178	3.192	1.7	20.3
7 10	18 49.00	-32 1.7	1.433	2.437	4.8	20.2	7 10	18 49.65	-23 9.1	2.170	3.182	2.1	20.3
7 20	18 38.64	-31 54.0	1.463	2.439	8.6	20.5	7 20	18 40.04	-22 44.5	2.191	3.172	5.8	20.6
7 30	18 30.41	-31 34.2	1.517	2.441	12.5	20.7	7 30	18 31.75	-22 18.3	2.239	3.161	9.2	20.8
8 9	18 25.15	-31 6.1	1.591	2.442	16.0	20.9	8 9	18 25.41	-21 51.6	2.312	3.150	12.1	20.9
509471	2007 RC ₂₆₄		7 4.5 228°34	0°6/ 4.4 18			390795	2004 CJ ₁₃₀		7 4.5 149°26	2°5/ 3.5 18		
5 31	19 21.56	-24 6.8	2.342	3.195	11.5	23.1	5 31	19 22.56	-29 17.8	2.689	3.536	10.4	22.3
6 10	19 15.88	-24 15.4	2.253	3.185	8.6	22.9	6 10	19 16.40	-30 5.2	2.620	3.547	7.8	22.1
6 20	19 8.29	-24 24.9	2.188	3.174	5.3	22.6	6 20	19 8.51	-30 51.0	2.576	3.557	5.0	21.9
6 30	18 59.37	-24 33.2	2.150	3.163	1.7	22.4	6 30	18 59.45	-31 31.8	2.560	3.566	2.8	21.8
7 10	18 49.95	-24 38.5	2.140	3.152	2.2	22.4	7 10	18 50.00	-32 4.9	2.573	3.574	3.3	21.8
7 20	18 40.91	-24 40.1	2.158	3.140	5.8	22.6	7 20	18 40.97	-32 28.6	2.615	3.583	5.8	22.0
7 30	18 33.11	-24 37.8	2.204	3.127	9.2	22.8	7 30	18 33.13	-32 43.0	2.684	3.590	8.4	22.2
8 9	18 27.23	-24 32.3	2.272	3.114	12.2	23.0	8 9	18 27.08	-32 49.2	2.777	3.597	10.8	22.4
247092	2000 SD ₁₈₇		7 4.5 307°42	3°1/ 3.7 18			81001	2000 EF ₃₁		7 4.5 219°51	2°7/ 3.8 18		
5 31	19 20.62	-25 29.3	1.221	2.111	17.4	20.1	5 31	19 24.21	-27 15.9	1.786	2.650	14.0	20.1
6 10	19 17.11	-26 25.1	1.132	2.083	13.3	19.7	6 10	19 18.53	-28 2.3	1.709	2.645	10.6	19.8
6 20	19 10.10	-27 28.3	1.063	2.055	8.5	19.4	6 20	19 10.25	-28 49.6	1.653	2.639	6.7	19.6
6 30	19 0.19	-28 32.7	1.015	2.027	3.8	19.0	6 30	19 0.10	-29 33.0	1.623	2.633	3.2	19.4
7 10	18 48.75	-29 30.7	0.990	2.000	4.9	19.0	7 10	18 49.21	-30 7.9	1.620	2.627	3.9	19.4
7 20	18 37.56	-30 15.9	0.989	1.973	10.4	19.2	7 20	18 38.83	-30 31.6	1.644	2.620	7.8	19.6
7 30	18 28.54	-30 45.8	1.008	1.947	15.9	19.4	7 30	18 30.19	-30 44.0	1.692	2.613	11.6	19.8
8 9	18 23.13	-31 1.5	1.045	1.921	20.8	19.6	8 9	18 24.16	-30 46.7	1.762	2.606	15.1	20.0
227396	2005 UC ₃₇₄		7 4.5 70°70	2°6/ 3.9 17			77198	2001 FK ₁₇		7 4.5 214°57	1°4/ 4.8 18		
5 31	19 23.32	-27 33.6	1.599	2.470	15.0	20.8	5 31	19 20.32	-18 31.7	1.982	2.839	13.1	19.7
6 10	19 17.83	-28 8.7	1.540	2.480	11.2	20.6	6 10	19 15.15	-18 31.3	1.904	2.837	9.9	19.5
6 20	19 9.70	-28 43.0	1.503	2.490	7.1	20.4	6 20	19 7.93	-18 36.0	1.849	2.834	6.2	19.3
6 30	18 59.83	-29 11.9	1.490	2.500	3.2	20.2	6 30	18 59.32	-18 44.8	1.820	2.832	2.5	19.0
7 10	18 49.46	-29 31.7	1.503	2.511	3.9	20.2	7 10	18 50.22	-18 56.2	1.818	2.830	2.6	19.0
7 20	18 39.90	-29 40.8	1.541	2.521	7.9	20.5	7 20	18 41.61	-19 9.0	1.843	2.827	6.4	19.3
7 30	18 32.31	-29 39.8	1.604	2.531	11.8	20.8	7 30	18 34.39	-19 22.1	1.894	2.824	10.1	19.5
8 9	18 27.46	-29 31.0	1.688	2.542	15.2	21.0	8 9	18 29.26	-19 35.0	1.967	2.821	13.3	19.7
58359	1995 KP ₄		7 4.5 147°81	3°5/ 5.2 18			85773	Gutbezahl		7 4.5 246°47	0°4/ 4.5 18		
5 31	19 21.81	-13 21.1	1.991	2.834	13.6	20.1	5 31	19 24.00	-24 13.0	1.760	2.624	14.2	19.1
6 10	19 16.07	-13 1.2	1.921	2.842	10.5	20.0	6 10	19 18.28	-24 10.3	1.676	2.614	10.7	18.9
6 20	19 8.37	-12 49.5	1.874	2.849	7.1	19.8	6 20	19 10.05	-24 8.0	1.614	2.603	6.6	18.6
6 30	18 59.38	-12 46.3	1.852	2.855	4.2	19.6	6 30	19 0.03	-24 3.9	1.578	2.592	2.1	18.3
7 10	18 50.02	-12 51.0	1.857	2.861	4.1	19.6	7 10	18 49.35	-23 56.2	1.568	2.580	2.6	18.3
7 20	18 41.19	-13 2.6	1.890	2.867	6.9	19.8	7 20	18 39.21	-23 44.4	1.585	2.568	7.2	18.6
7 30	18 33.79	-13 19.7	1.948	2.872	10.2	20.0	7 30	18 30.77	-23 29.2	1.626	2.556	11.4	18.8
8 9	18 28.44	-13 40.7	2.029	2.876	13.2	20.2	8 9	18 24.87	-23 12.0	1.690	2.544	15.1	19.0
500744	2013 AK ₁₇		7 4.5 114°13	5°5/ 5.1 17			278387	2007 OM		7 4.5 341°15	9°9/ 7.7 16		
5 31	19 43.16	-39 6.5	1.515	2.353	17.4	21.2	5 31	19 12.84	- 1 15.1	1.281	2.129	19.4	19.6
6 10	19 32.42	-38 38.9	1.458	2.373	13.6	21.0	6 10	19 10.48	- 0 54.4	1.203	2.111	16.4	19.3
6 20	19 18.34	-37 53.7	1.423	2.392	9.5	20.8	6 20	19 5.54	- 1 0.0	1.143	2.095	13.3	19.1
6 30	19 2.41	-36 46.1	1.413	2.410	6.1	20.6	6 30	18 58.67	- 1 36.3	1.103	2.080	10.7	18.9
7 10	18 46.59	-35 16.2	1.431	2.428	6.1	20.7	7 10	18 50.96	- 2 44.0	1.083	2.066	9.9	18.8
7 20	18 32.65	-33 30.0	1.477	2.445	9.3	20.9	7 20	18 43.66	- 4 19.2	1.086	2.054	11.8	18.9
7 30	18 21.88	-31 36.3	1.548	2.461	13.1	21.2	7 30	18 38.06	- 6 14.2	1.109	2.044	15.1	19.0
8 9	18 14.86	-29 44.1	1.643	2.477	16.4	21.4	8 9	18 35.14	- 8 19.5	1.152	2.035	18.7	19.2
369742	2012 FZ ₂₆		7 4.5 151°59	2°8/ 3.9 17			135635	2002 JA ₈₆		7 4.5 348°58	3°9/ 4.8 17		
5 31	19 25.87	-28 18.1	1.696	2.560	14.6	21.5	5 31	19 19.87	-16 53.0	1.190	2.074	18.2	19.8
6 10	19 19.69	-28 50.0	1.630	2.566	11.0	21.3	6 10	19 15.85	-16 7.8	1.124	2.068	14.0	19.5
6 20	19 10.85	-29 20.5	1.585	2.571	7.0	21.1	6 20	19 8.82	-15 29.8	1.077	2.064	9.3	19.3
6 30	19 0.21	-29 44.9	1.566	2.576	3.3	20.9	6 30	18 59.68	-15 0.4	1.051	2.060	4.8	19.0
7 10	18 49.01	-29 59.6	1.573	2.580	4.0	20.9	7 10	18 49.83	-14 40.5	1.049	2.057	4.9	19.0
7 20	18 38.56	-30 3.0	1.606	2.584	7.8	21.1	7 20	18 40.76	-14 30.3	1.069	2.055	9.5	19.2
7 30	18 30.05	-29 56.3	1.665	2.587	11.7	21.4	7 30	18 33.88	-14 29.1	1.111	2.054	14.3	19.5
8 9	18 24.29	-29 41.9	1.744	2.590	15.1	21.6	8 9	18 30.09	-14 35.2	1.171	2.054	18.5	19.8
483203	2015 PG ₃₀₃		7 4.5 319°60	0°0/ 4.3 18			134605	1999 TF ₁₇₇		7 4.5 262°90	2°0/ 4.9 18		
5 31	19 17.66	-20 17.1	2.100										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
274622	2008 <i>TJ</i> ₇₂		7 4.5 335°22	0°7/ 4.3 18			12112	Sprague		7 4.5 16°84	10°5/ 9.5 18		
5 31	19 17.54	-22 9.5	1.331	2.218	16.4	19.7	5 31	19 15.81	+ 7 7.9	1.903	2.675	16.7	16.6
6 10	19 14.16	-22 42.6	1.255	2.204	12.4	19.4	6 10	19 11.74	+ 7 26.8	1.837	2.679	14.7	16.5
6 20	19 7.87	-23 22.6	1.199	2.192	7.7	19.1	6 20	19 5.83	+ 7 21.2	1.790	2.684	12.6	16.4
6 30	18 59.42	-24 5.8	1.165	2.180	2.5	18.8	6 30	18 58.68	+ 6 48.2	1.763	2.689	11.0	16.3
7 10	18 50.07	-24 47.5	1.156	2.169	3.2	18.8	7 10	18 51.13	+ 5 47.9	1.759	2.695	10.5	16.2
7 20	18 41.26	-25 23.9	1.170	2.158	8.5	19.1	7 20	18 44.03	+ 4 23.3	1.779	2.701	11.2	16.3
7 30	18 34.41	-25 52.8	1.206	2.149	13.4	19.3	7 30	18 38.23	+ 2 39.9	1.822	2.708	12.8	16.4
8 9	18 30.55	-26 14.0	1.262	2.141	17.7	19.6	8 9	18 34.34	+ 0 44.8	1.887	2.715	14.8	16.6
485304	2011 <i>AD</i> ₅₇		7 4.5 229°56	7°8/ 8.2 17			2381	Landi		7 4.5 225°77	5°2/ 6.2 18 R		
5 31	19 26.51	+ 0 3.8	1.223	2.047	21.5	20.6	5 31	19 19.88	- 6 51.6	2.154	2.976	13.5	16.5
6 10	19 21.03	- 1 1.0	1.144	2.042	17.8	20.4	6 10	19 14.70	- 6 48.1	2.067	2.968	10.8	16.3
6 20	19 12.24	- 2 44.0	1.083	2.037	13.5	20.1	6 20	19 7.65	- 6 58.0	2.001	2.958	8.0	16.1
6 30	19 0.87	- 5 6.2	1.043	2.032	9.4	19.9	6 30	18 59.28	- 7 21.8	1.960	2.949	5.7	16.0
7 10	18 48.28	- 8 0.8	1.029	2.026	7.9	19.8	7 10	18 50.37	- 7 58.8	1.947	2.938	5.4	15.9
7 20	18 36.10	-11 14.7	1.041	2.020	10.8	19.9	7 20	18 41.78	- 8 47.0	1.960	2.927	7.4	16.0
7 30	18 26.02	-14 32.3	1.078	2.013	15.4	20.1	7 30	18 34.35	- 9 43.5	2.000	2.916	10.4	16.2
8 9	18 19.26	-17 40.1	1.137	2.007	19.9	20.4	8 9	18 28.76	-10 44.6	2.062	2.905	13.2	16.4
257676	1999 <i>VQ</i> ₁₂₅		7 4.5 312°93	0°1/ 4.6 18			342807	2008 <i>XO</i> ₁		7 4.5 224°70	4°4/ 2.8 18		
5 31	19 17.97	-21 50.7	1.981	2.847	12.8	20.7	5 31	19 23.74	-31 22.6	2.059	2.916	12.7	20.4
6 10	19 13.59	-21 57.5	1.891	2.829	9.6	20.5	6 10	19 18.07	-32 38.8	1.981	2.910	9.8	20.2
6 20	19 7.10	-22 7.4	1.823	2.812	5.9	20.2	6 20	19 9.96	-33 54.1	1.927	2.905	6.7	20.0
6 30	18 59.11	-22 18.8	1.781	2.795	1.9	19.9	6 30	19 0.06	-35 2.4	1.899	2.899	4.5	19.9
7 10	18 50.50	-22 29.8	1.765	2.778	2.3	19.9	7 10	18 49.40	-35 58.4	1.900	2.893	5.2	19.9
7 20	18 42.26	-22 39.1	1.776	2.762	6.4	20.1	7 20	18 39.11	-36 38.9	1.927	2.887	8.1	20.1
7 30	18 35.35	-22 46.1	1.813	2.746	10.3	20.3	7 30	18 30.37	-37 3.4	1.979	2.881	11.2	20.3
8 9	18 30.53	-22 50.8	1.871	2.730	13.7	20.5	8 9	18 24.02	-37 14.0	2.053	2.874	14.1	20.5
335518	2005 <i>YC</i> ₂₁₁		7 4.5 141°62	1°9/ 4.4 17			72652	2001 <i>FZ</i> ₄₄		7 4.5 152°58	0°7/ 4.7 18		
5 31	19 26.03	-28 58.3	1.964	2.820	13.3	20.5	5 31	19 21.02	-19 53.5	2.088	2.944	12.6	20.0
6 10	19 19.37	-28 48.4	1.894	2.826	10.0	20.3	6 10	19 15.55	-20 2.0	2.016	2.948	9.5	19.8
6 20	19 10.45	-28 34.2	1.847	2.832	6.3	20.1	6 20	19 8.13	-20 14.8	1.966	2.952	5.9	19.6
6 30	19 0.10	-28 13.6	1.827	2.838	2.6	19.9	6 30	18 59.41	-20 30.1	1.943	2.956	2.0	19.3
7 10	18 49.41	-27 45.3	1.834	2.843	3.0	19.9	7 10	18 50.27	-20 46.2	1.947	2.959	2.2	19.4
7 20	18 39.47	-27 10.3	1.869	2.848	6.7	20.1	7 20	18 41.63	-21 1.6	1.979	2.963	6.0	19.6
7 30	18 31.28	-26 30.5	1.930	2.853	10.3	20.4	7 30	18 34.37	-21 15.6	2.037	2.965	9.6	19.8
8 9	18 25.49	-25 48.8	2.013	2.858	13.4	20.6	8 9	18 29.12	-21 27.8	2.118	2.968	12.6	20.0
2102	Tantalus		7 4.5 102°16	23°6/25.9 17			61976	2000 <i>RS</i> ₂₇		7 4.5 0°80	17°3/ 9.4 18		
5 31	21 11.19	-10 17.0	0.584	1.350	43.9	17.2	5 31	19 10.68	+ 8 5.5	1.087	1.911	23.6	17.8
6 10	20 58.97	-24 41.6	0.509	1.392	34.7	16.7	6 10	19 9.00	+ 9 49.4	1.037	1.907	21.4	17.6
6 20	20 30.67	-42 19.2	0.483	1.431	25.5	16.4	6 20	19 4.63	+10 58.7	1.000	1.904	19.4	17.5
6 30	19 33.54	-58 13.7	0.520	1.468	24.3	16.5	6 30	18 58.39	+11 24.1	0.980	1.904	17.8	17.4
7 10	18 0.90	-67 20.4	0.609	1.502	29.5	17.1	7 10	18 51.50	+11 1.2	0.976	1.906	17.3	17.4
7 20	16 26.45	-69 38.6	0.731	1.533	34.3	17.7	7 20	18 45.28	+ 9 52.1	0.988	1.910	18.0	17.4
7 30	15 28.03	-68 52.4	0.868	1.561	37.2	18.2	7 30	18 41.00	+ 8 4.3	1.018	1.915	19.6	17.5
8 9	15 1.15	-67 39.3	1.010	1.586	38.5	18.6	8 9	18 39.51	+ 5 50.2	1.064	1.923	21.7	17.7
203704	2002 <i>PX</i> ₃₄		7 4.5 239°31	0°9/ 4.7 17			388403	2006 <i>VO</i> ₁₂₀		7 4.5 67°38	7°3/ 5.7 17		
5 31	19 20.54	-20 16.3	2.037	2.895	12.8	21.1	5 31	19 20.47	- 3 53.2	2.111	2.922	14.1	20.3
6 10	19 15.31	-20 13.4	1.956	2.890	9.6	20.9	6 10	19 14.80	- 2 42.2	2.061	2.946	11.6	20.1
6 20	19 8.04	-20 14.1	1.898	2.884	6.0	20.7	6 20	19 7.47	- 1 44.8	2.034	2.970	9.2	20.0
6 30	18 59.38	-20 17.0	1.865	2.879	2.1	20.4	6 30	18 59.16	- 1 3.7	2.031	2.994	7.6	20.0
7 10	18 50.22	-20 20.8	1.861	2.873	2.4	20.4	7 10	18 50.66	- 0 40.3	2.054	3.018	7.4	20.0
7 20	18 41.53	-20 24.7	1.883	2.867	6.3	20.6	7 20	18 42.77	- 0 34.0	2.103	3.042	8.8	20.1
7 30	18 34.21	-20 28.2	1.931	2.861	9.9	20.9	7 30	18 36.21	- 0 43.1	2.177	3.066	10.9	20.3
8 9	18 28.95	-20 31.3	2.002	2.855	13.2	21.1	8 9	18 31.47	- 1 4.3	2.272	3.090	13.0	20.5
146127	2000 <i>RD</i> ₈₂		7 4.5 329°52	3°4/ 4.8 18			71308	2000 <i>AU</i> ₇₀		7 4.5 275°18	2°7/ 5.1 18		
5 31	19 18.12	-16 16.6	1.735	2.599	14.4	19.1	5 31	19 19.62	-15 34.6	1.882	2.738	13.8	19.4
6 10	19 13.80	-15 35.7	1.652	2.586	11.1	18.8	6 10	19 14.79	-15 24.9	1.799	2.728	10.6	19.1
6 20	19 7.25	-14 59.9	1.591	2.573	7.4	18.6	6 20	19 7.82	-15 22.7	1.737	2.718	7.0	18.9
6 30	18 59.16	-14 30.5	1.554	2.561	4.0	18.4	6 30	18 59.36	-15 27.7	1.701	2.709	3.5	18.7
7 10	18 50.49	-14 8.0	1.543	2.549	4.1	18.3	7 10	18 50.32	-15 39.0	1.691	2.699	3.5	18.6
7 20	18 42.30	-13 52.8	1.557	2.538	7.6	18.5	7 20	18 41.70	-15 55.2	1.707	2.689	7.0	18.8
7 30	18 35.60	-13 44.9	1.596	2.528	11.5	18.7	7 30	18 34.47	-16 15.0	1.749	2.680	10.7	19.0
8 9	18 31.14	-13 43.3	1.655	2.519	15.0	18.9	8 9	18 29.39	-16 36.9	1.812	2.670	14.1	19.2
153273	2001 <i>CQ</i> ₄₆		7 4.5 186°83	6°3/ 2.8 18			22970	1999 <i>VT</i> ₈		7 4.5 277°60	2°9/ 5.6 18		
5 31	19 26.99	-46 21.0	3.090	3.894	10.2	21.5	5 31	19 17.73	-11 56.2	2.462	3.298	11.6	19.2
6 10	19 19.81	-46 57.4	3.017	3.894	8.6	21.3	6 10	19 13.03	-12 12.3	2.359	3.275	9.0	18.9
6 20	19 10.64	-47 23.2	2.968	3.893	7.1	21.2	6 20	19 6.62	-12 38.1	2.280	3.253	6.2	18.7
6 30	19 0.17	-47 34.2	2.945	3.891	6.3	21.2	6 30	18 58.98	-13 13.2	2.227	3.230	3.5	18.5
7 10	18 49.32	-47 28.2	2.949	3.889	6.5	21.2	7 10	18 50.76	-13 56.1	2.202	3.207	3.3	18.5
7 20	18 39.05	-47 5.0	2.980	3.887	7.7	21.3	7 20	18 42.73	-14 44.7	2.206	3.184	5.9	18.6
7 30	18 30.23	-46 26.6	3.036	3.884	9.3	21.4	7 30	18 35.64	-15 36.5	2.236	3.161	9.0	18.8
8 9	18 23.52	-45 36.6	3.114	3.881	11.0	21.5	8 9	18 30.16	-16 29.4	2.291	3.137	11.9	18.9
189371	2008 <i>EU</i> ₁₅₂		7 4.5 271°89	1°5									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
142102	2002 <i>QP</i> ₆₉		7 4.5 251°03	3°3/ 3.9	18		440592	2005 <i>UE</i> ₅₂₆		7 4.5 322°15	10°2/28.9	15	
5 31	19 25.35	-29 47.1	1.667	2.532	14.7	20.8	5 31	19 24.29	-43 18.8	1.785	2.632	14.8	21.1
6 10	19 19.62	-30 13.3	1.585	2.522	11.3	20.5	6 10	19 19.72	-45 30.4	1.707	2.611	12.6	20.9
6 20	19 11.05	-30 37.1	1.525	2.510	7.3	20.2	6 20	19 11.70	-47 35.3	1.652	2.590	10.8	20.7
6 30	19 0.44	-30 53.4	1.490	2.499	3.8	20.0	6 30	19 0.85	-49 22.6	1.620	2.570	10.2	20.7
7 10	18 49.02	-30 58.6	1.481	2.487	4.4	20.0	7 10	18 48.44	-50 43.0	1.613	2.550	11.2	20.7
7 20	18 38.20	-30 51.1	1.498	2.475	8.3	20.2	7 20	18 36.23	-51 31.5	1.629	2.531	13.2	20.7
7 30	18 29.31	-30 32.3	1.539	2.463	12.4	20.4	7 30	18 26.06	-51 48.7	1.666	2.513	15.7	20.9
8 9	18 23.29	-30 5.5	1.600	2.450	16.1	20.6	8 9	18 19.38	-51 39.8	1.720	2.495	18.1	21.0
404723	2014 <i>JG</i> ₁₇		7 4.5 9°82	1°0/ 4.2	18		377632	2005 <i>TN</i> ₂₅		7 4.5 327°25	0°4/ 4.4	18	
5 31	19 18.81	-23 15.7	2.154	3.015	12.0	20.2	5 31	19 18.21	-23 11.6	1.859	2.728	13.3	20.9
6 10	19 14.00	-23 58.2	2.079	3.016	9.0	20.0	6 10	19 13.88	-23 24.4	1.776	2.717	10.0	20.7
6 20	19 7.26	-24 44.1	2.028	3.016	5.5	19.8	6 20	19 7.34	-23 39.8	1.716	2.706	6.1	20.4
6 30	18 59.17	-25 30.2	2.004	3.017	1.9	19.5	6 30	18 59.25	-23 55.5	1.682	2.696	2.0	20.1
7 10	18 50.59	-26 13.1	2.007	3.018	2.5	19.6	7 10	18 50.57	-24 9.2	1.673	2.685	2.5	20.1
7 20	18 42.42	-26 50.4	2.037	3.019	6.1	19.8	7 20	18 42.32	-24 19.4	1.690	2.676	6.7	20.4
7 30	18 35.55	-27 20.9	2.094	3.020	9.5	20.0	7 30	18 35.55	-24 25.6	1.733	2.667	10.6	20.6
8 9	18 30.65	-27 44.5	2.173	3.021	12.5	20.2	8 9	18 31.00	-24 28.2	1.797	2.658	14.1	20.8
37916	1998 <i>FN</i> ₁₀₁		7 4.5 125°78	6°5/ 5.9	18		260258	2004 <i>SS</i> ₈		7 4.5 303°19	0°2/ 4.6	17	
5 31	19 20.59	-5 47.1	1.963	2.785	14.6	19.2	5 31	19 18.32	-21 19.9	2.087	2.950	12.3	21.1
6 10	19 15.18	-5 7.3	1.897	2.795	11.8	19.0	6 10	19 13.84	-21 29.9	1.989	2.926	9.3	20.8
6 20	19 7.87	-4 41.0	1.853	2.804	9.0	18.9	6 20	19 7.29	-21 43.7	1.914	2.902	5.8	20.6
6 30	18 59.34	-4 30.1	1.833	2.813	6.9	18.8	6 30	18 59.25	-21 59.4	1.864	2.878	1.9	20.3
7 10	18 50.44	-4 35.0	1.840	2.821	6.7	18.8	7 10	18 50.54	-22 15.4	1.841	2.854	2.2	20.3
7 20	18 42.08	-4 54.5	1.872	2.829	8.5	18.9	7 20	18 42.10	-22 29.8	1.846	2.831	6.3	20.5
7 30	18 35.09	-5 26.4	1.929	2.837	11.1	19.1	7 30	18 34.89	-22 42.0	1.876	2.807	10.1	20.7
8 9	18 30.09	-6 6.9	2.008	2.845	13.7	19.3	8 9	18 29.68	-22 51.7	1.928	2.784	13.5	20.8
32173	2000 <i>NF</i> ₁₂		7 4.5 266°44	4°5/ 5.1	18		508460	2016 <i>NK</i> ₂₃		7 4.5 333°49	6°8/ 4.7	18	
5 31	19 19.20	-11 3.9	2.325	3.158	12.2	18.4	5 31	19 26.49	-39 27.5	1.382	2.249	17.2	20.0
6 10	19 14.09	-10 20.2	2.231	3.142	9.7	18.2	6 10	19 21.14	-39 21.3	1.303	2.232	13.8	19.7
6 20	19 7.24	-9 43.2	2.161	3.126	7.0	18.0	6 20	19 12.23	-38 58.8	1.244	2.217	10.1	19.5
6 30	18 59.16	-9 14.7	2.116	3.109	4.8	17.8	6 30	19 0.85	-38 13.7	1.207	2.202	7.3	19.3
7 10	18 50.61	-8 55.5	2.099	3.093	4.8	17.8	7 10	18 48.72	-37 3.2	1.194	2.189	7.4	19.2
7 20	18 42.35	-8 45.9	2.109	3.076	7.1	17.9	7 20	18 37.68	-35 29.9	1.204	2.176	10.5	19.4
7 30	18 35.19	-8 45.4	2.145	3.059	9.9	18.0	7 30	18 29.31	-33 41.0	1.238	2.165	14.5	19.6
8 9	18 29.75	-8 52.6	2.204	3.041	12.7	18.2	8 9	18 24.55	-31 45.9	1.291	2.154	18.4	19.8
443118	2014 <i>AA</i> ₂₇		7 4.5 173°26	3°9/ 5.9	18		118267	1998 <i>HR</i> ₅₆		7 4.5 18°55	8°4/ 2.4	17 R	
5 31	19 19.78	-9 21.6	2.321	3.148	12.5	22.0	5 31	19 20.92	-38 57.8	1.438	2.311	16.3	18.0
6 10	19 14.43	-9 27.4	2.243	3.150	9.8	21.8	6 10	19 16.76	-40 22.3	1.393	2.321	13.1	17.8
6 20	19 7.39	-9 44.2	2.187	3.152	7.0	21.6	6 20	19 9.43	-41 36.0	1.368	2.333	10.2	17.7
6 30	18 59.19	-10 11.8	2.158	3.154	4.5	21.5	6 30	18 59.94	-42 30.2	1.365	2.347	8.5	17.6
7 10	18 50.59	-10 48.9	2.157	3.155	4.2	21.4	7 10	18 49.83	-42 59.3	1.386	2.361	9.1	17.7
7 20	18 42.37	-11 33.4	2.183	3.156	6.4	21.6	7 20	18 40.72	-43 2.1	1.429	2.376	11.4	17.9
7 30	18 35.28	-12 22.7	2.237	3.156	9.3	21.8	7 30	18 34.02	-42 41.7	1.493	2.393	14.3	18.1
8 9	18 29.91	-13 14.3	2.314	3.156	12.0	21.9	8 9	18 30.57	-42 4.1	1.576	2.410	17.0	18.3
398446	2011 <i>UF</i> ₅₁		7 4.5 209°16	3°8/ 5.4	18		8931	Hirokimatsuo		7 4.5 340°69	2°3/ 4.2	18	
5 31	19 18.09	-11 11.6	2.401	3.235	11.9	21.5	5 31	19 15.71	-26 22.2	1.015	1.921	18.7	16.1
6 10	19 13.14	-10 50.7	2.320	3.233	9.3	21.3	6 10	19 13.58	-26 35.5	0.945	1.904	14.2	15.8
6 20	19 6.57	-10 37.8	2.262	3.230	6.6	21.1	6 20	19 7.91	-26 49.5	0.893	1.888	9.0	15.4
6 30	18 58.93	-10 33.7	2.230	3.227	4.3	21.0	6 30	18 59.58	-26 59.8	0.860	1.874	3.5	15.1
7 10	18 50.91	-10 38.2	2.225	3.223	4.1	21.0	7 10	18 50.17	-27 2.2	0.849	1.861	4.3	15.1
7 20	18 43.25	-10 50.4	2.248	3.220	6.3	21.1	7 20	18 41.51	-26 54.7	0.859	1.851	10.1	15.4
7 30	18 36.67	-11 9.2	2.297	3.216	9.1	21.3	7 30	18 35.38	-26 38.2	0.888	1.841	15.6	15.6
8 9	18 31.72	-11 32.7	2.370	3.212	11.7	21.4	8 9	18 32.93	-26 15.3	0.934	1.834	20.5	15.9
385564	2004 <i>TG</i> ₁₉₅		7 4.5 271°92	1°0/ 4.7	18		496218	2011 <i>WV</i> ₈		7 4.5 178°88	0°1/ 4.5	18	
5 31	19 21.61	-19 56.0	1.890	2.749	13.6	22.1	5 31	19 19.35	-22 42.4	2.762	3.611	10.1	22.9
6 10	19 16.45	-19 55.3	1.795	2.729	10.3	21.8	6 10	19 13.95	-22 51.6	2.682	3.612	7.5	22.8
6 20	19 8.97	-19 58.9	1.722	2.708	6.5	21.5	6 20	19 7.02	-23 2.3	2.627	3.612	4.6	22.6
6 30	18 59.78	-20 5.6	1.674	2.687	2.3	21.2	6 30	18 59.09	-23 12.8	2.599	3.613	1.5	22.4
7 10	18 49.84	-20 13.6	1.653	2.666	2.6	21.2	7 10	18 50.84	-23 21.9	2.601	3.613	1.8	22.4
7 20	18 40.23	-20 21.8	1.660	2.644	6.9	21.4	7 20	18 42.94	-23 28.8	2.631	3.613	4.9	22.6
7 30	18 32.04	-20 29.4	1.691	2.622	11.0	21.6	7 30	18 36.08	-23 33.1	2.689	3.612	7.8	22.8
8 9	18 26.12	-20 36.4	1.744	2.600	14.7	21.8	8 9	18 30.78	-23 35.0	2.771	3.611	10.3	23.0
107337	2001 <i>CE</i> ₂₂		7 4.5 170°22	3°0/ 4.0	17		390731	2003 <i>MR</i> ₁		7 4.5 3°05	13°3/11.9	16	
5 31	19 26.73	-29 28.0	1.706	2.568	14.6	20.2	5 31	19 11.19	+ 8 59.2	1.348	2.148	21.1	19.2
6 10	19 20.41	-29 52.8	1.636	2.571	11.1	20.0	6 10	19 8.99	+ 9 14.9	1.288	2.147	18.8	19.1
6 20	19 11.38	-30 14.7	1.589	2.573	7.1	19.8	6 20	19 4.47	+ 8 55.4	1.244	2.147	16.4	18.9
6 30	19 0.51	-30 29.2	1.566	2.575	3.6	19.6	6 30	18 58.36	+ 7 56.1	1.217	2.150	14.3	18.8
7 10	18 49.06	-30 33.0	1.570	2.577	4.1	19.6	7 10	18 51.71	+ 6 17.4	1.209	2.154	13.3	18.8
7 20	18 38.37	-30 25.2	1.601	2.578	7.9	19.8	7 20	18 45.63	+ 4 4.7	1.223	2.161	13.8	18.8
7 30	18 29.65	-30 7.2	1.656	2.578	11.8	20.1	7 30	18 41.18	+ 1 27.7	1.258	2.170	15.5	18.9
8 9	18 23.71	-29 42.2	1.732	2.578	15.2	20.3	8 9	18 39.12	- 1 21.1	1.314	2.180	17.9	19.1
207796	2007 <i>TB</i> ₁₇₁		7 4.5 332°28	1°4/ 4.2	17		26888	1994 <i>XH</i>		7 4.6 282°59			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
479997	2014 <i>KT</i> ₆₂		7 4.6 142°60	1°9/ 5.0 18			407691	2011 <i>UJ</i> ₈₇		7 4.6 259°90	3°6/ 3.9 17		
5 31	19 18.45	-16 43.9	2.366	3.214	11.6	21.7	5 31	19 25.93	-28 43.3	1.394	2.269	16.6	22.0
6 10	19 13.44	-16 38.9	2.291	3.217	8.8	21.5	6 10	19 20.61	-29 22.4	1.316	2.258	12.6	21.7
6 20	19 6.78	-16 39.1	2.239	3.220	5.6	21.3	6 20	19 11.97	-30 1.2	1.259	2.247	8.2	21.4
6 30	18 59.03	-16 44.1	2.213	3.223	2.6	21.1	6 30	19 0.87	-30 33.4	1.226	2.235	4.2	21.2
7 10	18 50.94	-16 52.8	2.216	3.225	2.6	21.2	7 10	18 48.75	-30 53.7	1.217	2.223	4.9	21.2
7 20	18 43.26	-17 4.3	2.246	3.228	5.6	21.4	7 20	18 37.27	-30 59.2	1.232	2.212	9.4	21.4
7 30	18 36.72	-17 17.7	2.303	3.230	8.7	21.6	7 30	18 28.05	-30 51.0	1.270	2.200	14.1	21.6
8 9	18 31.89	-17 32.1	2.384	3.232	11.5	21.7	8 9	18 22.17	-30 32.5	1.328	2.187	18.2	21.9
422886	2002 <i>QR</i> ₈₃		7 4.6 262°55	1°0/ 4.4 17			182326	2001 <i>PH</i> ₅		7 4.6 337°99	5°7/ 5.3 17		
5 31	19 24.34	-25 19.4	1.610	2.478	15.0	21.5	5 31	19 16.90	-12 34.1	1.231	2.109	18.1	19.5
6 10	19 18.83	-25 20.0	1.527	2.467	11.4	21.3	6 10	19 13.66	-11 54.2	1.158	2.097	14.3	19.2
6 20	19 10.57	-25 20.4	1.466	2.455	7.1	21.0	6 20	19 7.58	-11 26.6	1.105	2.085	10.1	19.0
6 30	19 0.33	-25 17.9	1.430	2.443	2.4	20.7	6 30	18 59.44	-11 13.7	1.072	2.075	6.4	18.7
7 10	18 49.34	-25 10.1	1.419	2.431	3.0	20.7	7 10	18 50.49	-11 16.3	1.062	2.066	6.2	18.7
7 20	18 38.93	-24 56.4	1.434	2.419	7.8	21.0	7 20	18 42.13	-11 33.4	1.074	2.058	9.9	18.9
7 30	18 30.40	-24 37.8	1.474	2.406	12.2	21.2	7 30	18 35.71	-12 2.2	1.108	2.050	14.4	19.1
8 9	18 24.64	-24 16.4	1.534	2.394	16.1	21.4	8 9	18 32.21	-12 39.0	1.160	2.044	18.5	19.3
255240	2005 <i>UM</i> ₄₄₇		7 4.6 205°32	1°4/ 4.8 18			388312	2006 <i>SC</i> ₃₁₃		7 4.6 87°67	4°8/ 3.3 17		
5 31	19 19.31	-19 16.9	2.411	3.262	11.3	20.4	5 31	19 24.12	-35 27.0	2.162	3.012	12.4	21.0
6 10	19 14.07	-18 58.2	2.332	3.261	8.5	20.2	6 10	19 18.02	-36 15.1	2.107	3.029	9.6	20.9
6 20	19 7.16	-18 42.2	2.276	3.259	5.4	20.0	6 20	19 9.72	-36 56.7	2.075	3.045	6.9	20.7
6 30	18 59.15	-18 28.7	2.246	3.258	2.2	19.8	6 30	19 0.01	-37 27.1	2.069	3.062	5.0	20.6
7 10	18 50.80	-18 17.2	2.245	3.256	2.3	19.8	7 10	18 49.91	-37 43.1	2.090	3.078	5.4	20.7
7 20	18 42.88	-18 7.4	2.272	3.254	5.5	20.0	7 20	18 40.52	-37 44.1	2.138	3.094	7.7	20.9
7 30	18 36.11	-17 59.5	2.326	3.253	8.7	20.2	7 30	18 32.78	-37 31.5	2.210	3.110	10.3	21.0
8 9	18 31.06	-17 53.3	2.404	3.251	11.4	20.4	8 9	18 27.37	-37 8.5	2.305	3.125	12.7	21.2
109151	2001 <i>QH</i> ₅₉		7 4.6 1°30	7°0/ 4.4 18			352484	2008 <i>BD</i> ₄₈		7 4.6 126°80	0°8/ 4.9 17		
5 31	19 24.95	-37 51.3	1.208	2.088	18.3	18.8	5 31	19 19.25	-18 9.9	2.266	3.118	11.9	22.0
6 10	19 20.13	-38 1.6	1.148	2.086	14.5	18.5	6 10	19 14.18	-18 41.2	2.192	3.122	8.9	21.8
6 20	19 11.63	-37 57.5	1.107	2.085	10.5	18.3	6 20	19 7.32	-19 18.6	2.142	3.127	5.6	21.6
6 30	19 0.66	-37 32.4	1.087	2.085	7.4	18.1	6 30	18 59.26	-20 0.0	2.119	3.132	2.0	21.3
7 10	18 49.08	-36 43.4	1.089	2.086	7.6	18.1	7 10	18 50.78	-20 43.0	2.124	3.136	2.1	21.4
7 20	18 38.79	-35 32.7	1.114	2.088	10.9	18.3	7 20	18 42.70	-21 24.9	2.157	3.141	5.6	21.6
7 30	18 31.36	-34 7.1	1.160	2.091	15.0	18.6	7 30	18 35.82	-22 4.1	2.217	3.145	8.9	21.8
8 9	18 27.65	-32 34.9	1.226	2.095	18.7	18.8	8 9	18 30.75	-22 39.5	2.300	3.149	11.8	22.0
383862	2008 <i>QR</i> ₂₄		7 4.6 285°68	1°7/ 4.9 18			516272	2016 <i>WW</i> ₅		7 4.6 244°19	2°9/ 3.5 18		
5 31	19 20.53	-18 18.4	1.738	2.601	14.4	21.4	5 31	19 20.82	-30 18.5	2.548	3.400	10.7	21.6
6 10	19 15.78	-18 14.5	1.648	2.584	11.0	21.1	6 10	19 15.45	-31 2.4	2.460	3.389	8.1	21.4
6 20	19 8.63	-18 16.7	1.580	2.566	7.0	20.9	6 20	19 8.17	-31 45.0	2.397	3.377	5.4	21.2
6 30	18 59.72	-18 24.0	1.537	2.549	2.9	20.6	6 30	18 59.56	-32 22.5	2.360	3.365	3.2	21.0
7 10	18 50.07	-18 35.0	1.520	2.531	3.0	20.5	7 10	18 50.39	-32 52.0	2.352	3.353	3.7	21.0
7 20	18 40.79	-18 48.3	1.528	2.514	7.3	20.8	7 20	18 41.52	-33 11.6	2.372	3.341	6.3	21.2
7 30	18 33.03	-19 2.7	1.562	2.496	11.5	21.0	7 30	18 33.82	-33 21.2	2.419	3.328	9.1	21.3
8 9	18 27.65	-19 17.4	1.617	2.479	15.3	21.2	8 9	18 27.97	-33 22.1	2.488	3.315	11.7	21.5
42485	Stendhal		7 4.6 122°60	0°2/ 4.6 18			180475	2004 <i>CX</i> ₅₂		7 4.6 77°95	2°7/ 4.1 17		
5 31	19 26.48	-21 10.6	1.749	2.605	14.6	20.5	5 31	19 25.39	-27 49.0	1.484	2.357	15.9	20.2
6 10	19 19.85	-21 27.6	1.690	2.623	10.9	20.3	6 10	19 19.55	-28 19.5	1.430	2.371	11.9	20.0
6 20	19 10.85	-21 48.4	1.654	2.641	6.7	20.1	6 20	19 10.90	-28 48.6	1.397	2.385	7.5	19.8
6 30	19 0.34	-22 10.2	1.643	2.657	2.1	19.8	6 30	19 0.42	-29 11.5	1.388	2.399	3.4	19.5
7 10	18 49.45	-22 30.4	1.660	2.673	2.5	19.9	7 10	18 49.48	-29 24.4	1.405	2.413	4.0	19.6
7 20	18 39.34	-22 47.3	1.705	2.688	6.9	20.2	7 20	18 39.48	-29 26.1	1.447	2.428	8.2	19.9
7 30	18 31.05	-23 0.3	1.775	2.703	10.8	20.5	7 30	18 31.67	-29 18.0	1.513	2.442	12.2	20.2
8 9	18 25.26	-23 10.0	1.867	2.716	14.1	20.7	8 9	18 26.79	-29 2.8	1.599	2.456	15.7	20.4
38159	1999 <i>JB</i> ₇₃		7 4.6 35°20	6°0/ 5.7 17			295040	2008 <i>EV</i> ₉₅		7 4.6 16°97	3°8/ 3.7 17		
5 31	19 20.85	-10 34.4	1.287	2.151	18.3	18.8	5 31	19 21.08	-28 6.1	1.211	2.101	17.5	19.8
6 10	19 16.31	-10 1.2	1.226	2.155	14.5	18.5	6 10	19 17.02	-28 58.1	1.155	2.105	13.2	19.6
6 20	19 9.01	-9 43.2	1.184	2.159	10.3	18.3	6 20	19 9.70	-29 50.1	1.119	2.109	8.5	19.3
6 30	18 59.83	-9 42.0	1.165	2.164	6.8	18.1	6 30	19 0.11	-30 35.6	1.105	2.115	4.4	19.1
7 10	18 50.07	-9 57.4	1.168	2.169	6.5	18.1	7 10	18 49.79	-31 8.5	1.114	2.121	5.2	19.2
7 20	18 41.07	-10 27.2	1.195	2.174	9.7	18.3	7 20	18 40.41	-31 25.9	1.146	2.128	9.6	19.5
7 30	18 34.08	-11 7.7	1.244	2.179	13.8	18.6	7 30	18 33.45	-31 28.5	1.200	2.136	14.1	19.7
8 9	18 29.93	-11 54.6	1.312	2.185	17.5	18.8	8 9	18 29.84	-31 19.5	1.272	2.145	18.0	20.0
416395	2003 <i>UE</i> ₉₀		7 4.6 164°02	4°0/ 5.5 17			258632	2002 <i>ES</i> ₈		7 4.6 239°81	1°8/ 5.3 18		
5 31	19 22.28	-12 19.4	1.606	2.458	15.9	22.0	5 31	19 18.28	-15 12.2	2.442	3.286	11.4	20.5
6 10	19 16.99	-12 15.1	1.535	2.460	12.4	21.8	6 10	19 13.40	-15 34.8	2.354	3.278	8.7	20.3
6 20	19 9.29	-12 23.0	1.486	2.462	8.4	21.6	6 20	19 6.85	-16 5.1	2.290	3.270	5.6	20.1
6 30	18 59.91	-12 42.9	1.460	2.464	4.9	21.4	6 30	18 59.13	-16 41.7	2.253	3.262	2.6	19.9
7 10	18 49.96	-13 13.3	1.460	2.466	4.6	21.4	7 10	18 50.93	-17 22.8	2.244	3.254	2.5	19.9
7 20	18 40.59	-13 51.5	1.486	2.467	8.0	21.6	7 20	18 43.02	-18 6.2	2.263	3.245	5.5	20.1
7 30	18 32.91	-14 34.6	1.536	2.468	11.9	21.8	7 30	18 36.14	-18 49.7	2.310	3.237	8.7	20.3
8 9	18 27.71	-15 19.6	1.608	2.468	15.5	22.0	8 9	18 30.92	-19 31.9	2.380	3.228	11.5	20.4
499694	2010 <i>XK</i> ₃₃		7 4.6 245°90	1°2/ 4.9 17			521486	2015 <i>OF</i> ₉₄		7 4.6 20°20			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
235175	2003 SG ₆₂		7 4.6 266°09	8°4/ 2.3 18			5513	Yukio		7 4.6 165°96	0°1/ 4.6 18		
5 31	19 27.75	-43 12.3	1.941	2.778	14.1	20.2	5 31	19 25.55	-22 44.3	1.453	2.323	16.3	17.2
6 10	19 21.63	-44 18.5	1.864	2.767	11.8	20.0	6 10	19 19.80	-22 50.1	1.385	2.326	12.2	17.0
6 20	19 12.43	-45 13.8	1.810	2.755	9.6	19.8	6 20	19 11.18	-22 59.0	1.338	2.327	7.5	16.7
6 30	19 1.00	-45 50.5	1.779	2.743	8.4	19.7	6 30	19 0.59	-23 7.9	1.315	2.329	2.4	16.4
7 10	18 48.69	-46 3.2	1.773	2.731	8.9	19.7	7 10	18 49.35	-23 14.3	1.317	2.330	2.9	16.4
7 20	18 37.03	-45 50.5	1.792	2.719	10.8	19.8	7 20	18 38.89	-23 16.8	1.345	2.331	8.0	16.7
7 30	18 27.47	-45 15.0	1.834	2.707	13.3	20.0	7 30	18 30.51	-23 15.6	1.397	2.332	12.6	17.0
8 9	18 21.02	-44 22.5	1.895	2.695	15.9	20.1	8 9	18 25.09	-23 11.8	1.469	2.332	16.5	17.3
235959	2005 EO ₂₀₃		7 4.6 264°85	0°0/ 4.5 18			183414	2002 YY ₂₉		7 4.6 52°90	1°9/ 4.4 18		
5 31	19 20.74	-21 39.1	1.910	2.773	13.3	20.7	5 31	19 23.35	-28 49.8	1.848	2.712	13.6	18.9
6 10	19 15.74	-22 0.8	1.827	2.764	10.0	20.5	6 10	19 17.45	-28 42.8	1.792	2.728	10.2	18.7
6 20	19 8.51	-22 26.8	1.767	2.755	6.2	20.2	6 20	19 9.36	-28 32.0	1.758	2.745	6.4	18.5
6 30	18 59.70	-22 54.6	1.732	2.746	2.0	19.9	6 30	18 59.91	-28 15.4	1.750	2.762	2.7	18.3
7 10	18 50.27	-23 21.4	1.725	2.737	2.4	19.9	7 10	18 50.23	-27 51.8	1.769	2.779	3.1	18.4
7 20	18 41.25	-23 45.2	1.744	2.728	6.6	20.2	7 20	18 41.39	-27 21.8	1.815	2.797	6.7	18.6
7 30	18 33.69	-24 4.7	1.788	2.719	10.5	20.4	7 30	18 34.32	-26 47.5	1.886	2.814	10.2	18.9
8 9	18 28.35	-24 20.0	1.855	2.710	14.0	20.6	8 9	18 29.62	-26 11.2	1.980	2.832	13.3	19.1
233825	2008 UE ₂₄₀		7 4.6 55°07	2°7/ 4.1 17			26134	1993 FY ₃₄		7 4.6 20°10	4°9/ 5.7 18		
5 31	19 23.29	-29 20.3	1.741	2.608	14.2	20.4	5 31	19 19.36	-11 51.2	1.324	2.192	17.7	18.4
6 10	19 17.74	-29 35.5	1.676	2.613	10.7	20.2	6 10	19 15.19	-11 35.5	1.262	2.195	13.8	18.2
6 20	19 9.72	-29 47.5	1.632	2.618	6.8	20.0	6 20	19 8.35	-11 34.3	1.220	2.199	9.6	18.0
6 30	19 0.05	-29 52.7	1.613	2.623	3.3	19.8	6 30	18 59.68	-11 48.2	1.200	2.203	5.8	17.8
7 10	18 49.92	-29 48.6	1.621	2.628	3.8	19.8	7 10	18 50.43	-12 15.7	1.203	2.208	5.4	17.8
7 20	18 40.54	-29 34.9	1.654	2.634	7.5	20.0	7 20	18 41.90	-12 54.0	1.230	2.213	9.0	18.0
7 30	18 33.00	-29 12.9	1.712	2.639	11.2	20.3	7 30	18 35.29	-13 39.5	1.280	2.219	13.1	18.2
8 9	18 28.04	-28 45.3	1.792	2.644	14.5	20.5	8 9	18 31.43	-14 28.1	1.350	2.226	16.9	18.5
21555	Levary		7 4.6 187°72	6°0/ 6.1 18			281984	2011 HQ ₁₈		7 4.6 58°74	5°9/ 6.2 17		
5 31	19 16.91	-3 9.3	2.669	3.470	11.7	18.1	5 31	19 19.25	-7 24.7	1.723	2.562	15.6	20.9
6 10	19 12.12	-2 30.6	2.591	3.469	9.7	18.0	6 10	19 14.55	-7 10.1	1.655	2.566	12.5	20.7
6 20	19 5.93	-2 3.1	2.535	3.469	7.8	17.9	6 20	19 7.72	-7 10.7	1.608	2.571	9.2	20.5
6 30	18 58.81	-1 48.7	2.504	3.468	6.3	17.8	6 30	18 59.45	-7 27.5	1.585	2.575	6.5	20.3
7 10	18 51.38	-1 47.9	2.501	3.467	6.1	17.8	7 10	18 50.71	-7 59.7	1.586	2.580	6.1	20.3
7 20	18 44.26	-2 0.2	2.523	3.466	7.4	17.8	7 20	18 42.50	-8 44.8	1.613	2.584	8.4	20.5
7 30	18 38.07	-2 24.1	2.572	3.464	9.3	18.0	7 30	18 35.78	-9 39.1	1.664	2.589	11.6	20.7
8 9	18 33.31	-2 57.1	2.643	3.463	11.3	18.1	8 9	18 31.26	-10 38.6	1.737	2.594	14.7	20.9
235721	2004 TH ₁₆₁		7 4.6 149°83	2°7/ 5.2 17			247727	2003 GC ₂₁		7 4.6 310°95	4°3/ 6.2 18		
5 31	19 21.48	-14 15.1	2.432	3.267	11.7	22.0	5 31	19 17.49	-8 26.5	2.188	3.020	13.0	20.0
6 10	19 15.58	-14 4.0	2.360	3.278	9.0	21.8	6 10	19 12.92	-8 33.8	2.109	3.018	10.3	19.8
6 20	19 8.06	-13 59.3	2.313	3.288	6.0	21.7	6 20	19 6.60	-8 53.7	2.052	3.017	7.4	19.6
6 30	18 59.48	-14 0.7	2.292	3.297	3.3	21.5	6 30	18 59.10	-9 26.0	2.021	3.015	4.9	19.4
7 10	18 50.60	-14 7.6	2.300	3.305	3.2	21.5	7 10	18 51.15	-10 9.5	2.016	3.014	4.6	19.4
7 20	18 42.17	-14 19.0	2.336	3.313	5.8	21.7	7 20	18 43.57	-11 1.6	2.038	3.012	6.7	19.5
7 30	18 34.92	-14 33.9	2.400	3.320	8.7	21.9	7 30	18 37.12	-11 59.3	2.087	3.011	9.6	19.7
8 9	18 29.38	-14 51.2	2.487	3.327	11.3	22.1	8 9	18 32.42	-12 59.6	2.159	3.009	12.4	19.9
346297	2008 PK ₁₂		7 4.6 55°83	9°3/ 4.8 18			196497	2003 LZ ₃		7 4.6 3°68	6°0/ 2.4 17		
5 31	19 35.77	-46 58.2	1.679	2.505	16.5	19.9	5 31	19 20.07	-30 23.6	1.285	2.173	16.8	19.0
6 10	19 27.57	-47 14.8	1.616	2.509	13.8	19.7	6 10	19 16.43	-32 7.0	1.226	2.172	12.9	18.8
6 20	19 15.87	-47 11.9	1.574	2.513	11.2	19.6	6 20	19 9.51	-33 51.3	1.187	2.172	8.9	18.6
6 30	19 1.98	-46 41.8	1.554	2.517	9.5	19.5	6 30	19 0.17	-35 26.8	1.171	2.173	6.2	18.4
7 10	18 47.79	-45 41.8	1.559	2.521	9.5	19.5	7 10	18 49.86	-36 44.3	1.179	2.176	7.3	18.5
7 20	18 35.14	-44 14.5	1.588	2.525	11.3	19.6	7 20	18 40.26	-37 38.2	1.211	2.179	10.9	18.7
7 30	18 25.44	-42 27.6	1.642	2.529	13.9	19.8	7 30	18 32.99	-38 8.2	1.263	2.183	14.9	18.9
8 9	18 19.43	-40 30.5	1.716	2.533	16.6	20.0	8 9	18 29.11	-38 17.8	1.334	2.188	18.4	19.2
519134	2010 MR ₈₆		7 4.6 71°96	3°7/ 3.3 17			162138	1998 UY ₁₃		7 4.6 317°68	1°1/ 4.8 17 R		
5 31	19 22.65	-29 22.8	1.846	2.711	13.6	21.4	5 31	19 19.42	-19 28.3	1.734	2.601	14.2	19.9
6 10	19 17.32	-30 29.6	1.781	2.716	10.3	21.2	6 10	19 14.90	-19 31.2	1.654	2.592	10.8	19.6
6 20	19 9.54	-31 35.9	1.739	2.722	6.8	21.0	6 20	19 8.08	-19 39.6	1.597	2.584	6.7	19.4
6 30	19 0.04	-32 35.9	1.722	2.727	4.0	20.8	6 30	18 59.63	-19 52.0	1.563	2.576	2.5	19.1
7 10	18 49.92	-33 24.6	1.732	2.733	4.7	20.9	7 10	18 50.56	-20 6.6	1.556	2.569	2.6	19.1
7 20	18 40.38	-33 59.2	1.769	2.739	7.9	21.1	7 20	18 41.97	-20 21.8	1.575	2.561	7.0	19.3
7 30	18 32.53	-34 19.3	1.830	2.744	11.3	21.3	7 30	18 34.93	-20 36.5	1.618	2.554	11.1	19.6
8 9	18 27.19	-34 27.2	1.913	2.750	14.3	21.5	8 9	18 30.22	-20 50.0	1.683	2.548	14.7	19.8
25580	Xuelai		7 4.6 130°31	1°7/ 4.9 18			125525	2001 WH ₅₁		7 4.6 112°84	4°6/ 5.2 17		
5 31	19 20.95	-17 25.7	2.102	2.953	12.7	19.5	5 31	19 24.52	-13 42.4	1.421	2.280	17.2	20.2
6 10	19 15.48	-17 24.5	2.033	2.961	9.6	19.3	6 10	19 18.82	-13 5.3	1.360	2.289	13.3	19.9
6 20	19 8.12	-17 28.8	1.986	2.969	6.1	19.1	6 20	19 10.47	-12 38.3	1.319	2.297	9.1	19.7
6 30	18 59.54	-17 37.7	1.966	2.977	2.6	18.9	6 30	19 0.36	-12 22.5	1.301	2.305	5.3	19.5
7 10	18 50.59	-17 49.8	1.974	2.984	2.6	18.9	7 10	18 49.76	-12 18.1	1.309	2.313	5.2	19.5
7 20	18 42.16	-18 4.0	2.009	2.991	6.1	19.2	7 20	18 39.98	-12 24.0	1.341	2.321	8.8	19.8
7 30	18 35.07	-18 19.2	2.070	2.998	9.5	19.4	7 30	18 32.19	-12 38.6	1.397	2.328	12.9	20.0
8 9	18 29.95	-18 34.7	2.154	3.005	12.4	19.6	8 9	18 27.15	-12 59.4	1.473	2.336	16.5	20.3
242516	Lindseystirling		7 4.6 48°42	0°3/ 4.6 17			475954	2007 GV ₁₃		7 4.6 195°43	5°4/ 2.7 18		
5 31	19 21.42	-22 1.5	1.753	2.619	14.1	20.4	5 31						

EPHEMERIDES

7 4.6

7 4.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
405756	2005 YK ₁₃₃		7 4.6 46°32	2.6/ 4.1	17		100818	1998 FW ₁₃₃		7 4.6 101°05	0.8/ 4.4	17	
5 31	19 24.33	-26 1.0	1.173	2.060	18.2	20.7	5 31	19 26.06	-23 39.4	1.533	2.401	15.7	20.6
6 10	19 19.47	-26 39.4	1.118	2.067	13.7	20.4	6 10	19 19.92	-23 57.7	1.477	2.416	11.7	20.4
6 20	19 11.24	-27 19.7	1.082	2.074	8.5	20.1	6 20	19 11.13	-24 18.2	1.443	2.431	7.2	20.2
6 30	19 0.67	-27 55.8	1.068	2.081	3.5	19.9	6 30	19 0.61	-24 37.3	1.433	2.446	2.4	19.9
7 10	18 49.40	-28 22.3	1.078	2.089	4.3	19.9	7 10	18 49.65	-24 52.0	1.449	2.461	2.9	20.0
7 20	18 39.15	-28 36.5	1.111	2.096	9.4	20.3	7 20	18 39.59	-25 0.8	1.491	2.475	7.5	20.3
7 30	18 31.45	-28 39.2	1.166	2.105	14.2	20.6	7 30	18 31.58	-25 3.9	1.557	2.489	11.7	20.6
8 9	18 27.22	-28 33.0	1.239	2.113	18.3	20.8	8 9	18 26.36	-25 2.6	1.645	2.503	15.3	20.8
465568	2008 WY ₁₀₉		7 4.6 240°58	2.1/ 4.1	17		121761	1999 YZ ₆		7 4.6 193°62	4.1/ 3.7	18	
5 31	19 25.60	-25 20.9	1.440	2.313	16.3	22.2	5 31	19 23.53	-38 4.1	3.017	3.849	9.8	20.5
6 10	19 20.20	-25 59.7	1.363	2.305	12.3	21.9	6 10	19 17.16	-38 22.2	2.937	3.847	7.7	20.3
6 20	19 11.68	-26 41.7	1.307	2.296	7.7	21.6	6 20	19 9.09	-38 33.4	2.882	3.844	5.6	20.2
6 30	19 0.86	-27 21.6	1.275	2.287	3.1	21.3	6 30	18 59.92	-38 34.7	2.855	3.841	4.2	20.1
7 10	18 49.09	-27 54.4	1.268	2.278	3.8	21.4	7 10	18 50.42	-38 24.3	2.855	3.838	4.5	20.1
7 20	18 37.90	-28 16.6	1.286	2.269	8.7	21.6	7 20	18 41.40	-38 2.1	2.884	3.835	6.2	20.2
7 30	18 28.81	-28 27.9	1.327	2.259	13.4	21.9	7 30	18 33.59	-37 29.5	2.940	3.831	8.3	20.3
8 9	18 22.87	-28 30.3	1.389	2.249	17.5	22.1	8 9	18 27.56	-36 49.2	3.019	3.826	10.4	20.5
237577	2001 DF ₅₉		7 4.6 101°79	5.9/ 3.9	18		508684	2017 UU ₁₆		7 4.6 243°70	2.6/ 5.1	17	
5 31	19 28.33	-38 47.3	1.945	2.790	13.8	20.7	5 31	19 23.52	-15 50.2	1.821	2.672	14.4	22.7
6 10	19 21.41	-39 14.3	1.886	2.802	10.9	20.5	6 10	19 17.97	-15 44.1	1.729	2.656	11.1	22.5
6 20	19 11.91	-39 30.8	1.850	2.814	8.1	20.3	6 20	19 10.03	-15 45.6	1.659	2.640	7.3	22.2
6 30	19 0.79	-39 31.8	1.838	2.826	6.1	20.3	6 30	19 0.33	-15 54.3	1.615	2.623	3.5	22.0
7 10	18 49.32	-39 14.6	1.853	2.837	6.4	20.3	7 10	18 49.86	-16 8.9	1.597	2.606	3.5	21.9
7 20	18 38.80	-38 39.8	1.894	2.848	8.6	20.4	7 20	18 39.74	-16 27.9	1.605	2.587	7.4	22.1
7 30	18 30.33	-37 51.0	1.960	2.860	11.4	20.6	7 30	18 31.08	-16 49.9	1.640	2.569	11.5	22.3
8 9	18 24.60	-36 53.1	2.047	2.870	14.0	20.8	8 9	18 24.76	-17 13.6	1.696	2.549	15.1	22.5
503015	2015 FW ₁₁₁		7 4.6 161°33	1.3/ 4.9	17		208407	2001 SF ₂₃₁		7 4.6 3°36	0.3/ 4.5	18	
5 31	19 23.38	-18 36.3	2.263	3.108	12.1	22.5	5 31	19 19.58	-22 18.7	1.892	2.758	13.3	19.9
6 10	19 17.19	-18 33.8	2.190	3.115	9.1	22.3	6 10	19 14.84	-22 38.9	1.820	2.758	9.9	19.6
6 20	19 9.15	-18 35.4	2.140	3.122	5.8	22.1	6 20	19 7.96	-23 2.4	1.769	2.758	6.1	19.4
6 30	18 59.91	-18 40.1	2.116	3.128	2.3	21.9	6 30	18 59.61	-23 27.0	1.744	2.758	2.0	19.1
7 10	18 50.30	-18 46.6	2.122	3.133	2.4	21.9	7 10	18 50.76	-23 49.9	1.746	2.759	2.4	19.2
7 20	18 41.19	-18 54.0	2.156	3.138	5.8	22.1	7 20	18 42.42	-24 9.3	1.775	2.760	6.5	19.4
7 30	18 33.39	-19 1.7	2.217	3.141	9.1	22.3	7 30	18 35.55	-24 24.4	1.828	2.760	10.3	19.7
8 9	18 27.50	-19 9.5	2.302	3.144	12.0	22.5	8 9	18 30.87	-24 35.3	1.904	2.762	13.5	19.9
311529	2005 YL ₄₆		7 4.6 33°38	2.0/ 5.5	18		513245	2006 BW ₄₀		7 4.6 244°19	4.8/ 6.3	18	
5 31	19 17.86	-13 42.3	2.340	3.183	11.8	20.2	5 31	19 20.82	-7 27.3	2.093	2.917	13.7	21.8
6 10	19 13.14	-14 17.6	2.262	3.185	9.1	20.0	6 10	19 15.63	-7 35.1	1.999	2.902	11.0	21.6
6 20	19 6.73	-15 2.3	2.207	3.186	5.9	19.8	6 20	19 8.44	-7 57.0	1.926	2.887	8.0	21.4
6 30	18 59.17	-15 54.7	2.179	3.187	2.9	19.6	6 30	18 59.80	-8 33.5	1.879	2.871	5.5	21.2
7 10	18 51.17	-16 52.4	2.180	3.189	2.6	19.6	7 10	18 50.50	-9 23.2	1.859	2.855	5.1	21.1
7 20	18 43.52	-17 52.3	2.208	3.191	5.6	19.8	7 20	18 41.45	-10 23.6	1.866	2.838	7.4	21.3
7 30	18 36.95	-18 51.7	2.264	3.192	8.7	20.0	7 30	18 33.57	-11 31.2	1.900	2.821	10.6	21.4
8 9	18 32.07	-19 48.5	2.343	3.194	11.6	20.2	8 9	18 27.60	-12 42.2	1.957	2.803	13.7	21.6
242002	2002 PX ₁		7 4.6 307°19	2.4/ 5.3	18		346299	2008 PS ₂₁		7 4.6 314°46	1.8/ 4.2	18	
5 31	19 18.47	-14 45.7	1.697	2.558	14.7	19.7	5 31	19 19.96	-25 23.7	1.493	2.373	15.4	20.6
6 10	19 14.41	-15 8.5	1.603	2.536	11.4	19.4	6 10	19 15.98	-25 48.3	1.405	2.350	11.7	20.3
6 20	19 7.94	-15 43.4	1.530	2.514	7.5	19.2	6 20	19 9.14	-26 15.5	1.337	2.328	7.3	20.0
6 30	18 59.66	-16 29.3	1.482	2.492	3.5	18.9	6 30	19 0.12	-26 41.3	1.293	2.306	2.8	19.7
7 10	18 50.51	-17 23.4	1.459	2.470	3.3	18.8	7 10	18 50.10	-27 1.8	1.273	2.284	3.5	19.7
7 20	18 41.61	-18 22.1	1.462	2.448	7.4	19.0	7 20	18 40.49	-27 14.4	1.278	2.264	8.4	19.9
7 30	18 34.12	-19 21.8	1.490	2.427	11.8	19.2	7 30	18 32.69	-27 18.4	1.306	2.243	13.1	20.1
8 9	18 28.99	-20 19.4	1.539	2.406	15.7	19.4	8 9	18 27.78	-27 15.2	1.354	2.224	17.2	20.3
25398	1999 VM ₁₂		7 4.6 229°13	0.9/ 4.3	18		295306	2008 GL ₁₁₉		7 4.6 349°94	1.1/ 4.9	18	
5 31	19 22.18	-24 16.5	2.255	3.109	11.8	19.8	5 31	19 16.83	-18 43.6	1.863	2.730	13.4	19.9
6 10	19 16.58	-24 39.5	2.166	3.099	8.9	19.6	6 10	19 12.82	-18 56.5	1.787	2.725	10.1	19.7
6 20	19 8.96	-25 4.2	2.101	3.088	5.5	19.4	6 20	19 6.75	-19 15.9	1.733	2.720	6.3	19.5
6 30	18 59.91	-25 28.0	2.063	3.076	1.9	19.1	6 30	18 59.25	-19 40.0	1.704	2.716	2.4	19.2
7 10	18 50.29	-25 48.4	2.053	3.065	2.4	19.2	7 10	18 51.22	-20 6.8	1.700	2.713	2.4	19.2
7 20	18 41.02	-26 3.6	2.071	3.052	6.1	19.4	7 20	18 43.64	-20 34.1	1.723	2.710	6.4	19.4
7 30	18 33.03	-26 13.4	2.116	3.040	9.5	19.6	7 30	18 37.45	-21 0.2	1.771	2.708	10.3	19.7
8 9	18 27.02	-26 18.1	2.184	3.026	12.6	19.7	8 9	18 33.35	-21 24.3	1.841	2.706	13.6	19.9
509731	2008 SJ ₂₅₁		7 4.6 297°55	5.8/ 3.0	18		506243	2016 NQ ₄₀		7 4.6 17°32	0.0/ 4.3	17	
5 31	19 23.71	-34 17.0	1.655	2.522	14.8	21.2	5 31	19 20.36	-23 6.8	1.321	2.205	16.7	20.1
6 10	19 18.84	-35 13.4	1.567	2.500	11.7	21.0	6 10	19 16.07	-23 1.8	1.262	2.209	12.5	19.9
6 20	19 10.92	-36 6.1	1.501	2.478	8.3	20.7	6 20	19 8.95	-22 59.3	1.223	2.215	7.7	19.6
6 30	19 0.66	-36 48.1	1.459	2.456	6.0	20.5	6 30	18 59.96	-22 57.0	1.207	2.221	2.5	19.3
7 10	18 49.33	-37 13.3	1.441	2.434	6.7	20.5	7 10	18 50.44	-22 53.0	1.215	2.228	2.9	19.4
7 20	18 38.42	-37 18.9	1.448	2.412	9.9	20.7	7 20	18 41.79	-22 46.7	1.247	2.236	8.0	19.7
7 30	18 29.46	-37 5.6	1.478	2.391	13.6	20.8	7 30	18 35.24	-22 38.3	1.302	2.245	12.6	20.0
8 9	18 23.54	-36 37.5	1.528	2.369	17.1	21.0	8 9	18 31.60	-22 28.8	1.376	2.254	16.6	20.2
43027	1999 VA ₂₃		7 4.6 60°47	7.2/ 5.5	18		276079	2002 CV ₂₆₃		7 4.6 78°00	2.3/ 5.2	17	
5 31	19 20.35	-6 27.6											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
83418	2001 SG ₄₂		7 4.6 243°46	0°8/ 4.4 18			319345	2006 CY ₈		7 4.6 237°07	3°7/ 5.9 18		
5 31	19 20.45	-23 58.8	2.209	3.067	11.9	20.3	5 31	19 16.91	-8 42.5	2.935	3.754	10.3	21.6
6 10	19 15.30	-24 20.0	2.125	3.060	8.9	20.1	6 10	19 12.16	-8 36.1	2.840	3.741	8.2	21.4
6 20	19 8.19	-24 43.0	2.066	3.053	5.5	19.8	6 20	19 6.06	-8 38.2	2.769	3.728	6.0	21.2
6 30	18 59.71	-25 5.4	2.033	3.046	1.9	19.6	6 30	18 59.02	-8 49.4	2.724	3.715	4.1	21.1
7 10	18 50.71	-25 24.8	2.027	3.039	2.3	19.6	7 10	18 51.61	-9 9.0	2.708	3.701	3.9	21.1
7 20	18 42.11	-25 39.7	2.049	3.031	6.0	19.8	7 20	18 44.41	-9 36.2	2.720	3.687	5.6	21.2
7 30	18 34.79	-25 49.5	2.098	3.024	9.5	20.0	7 30	18 38.02	-10 9.4	2.759	3.672	8.0	21.3
8 9	18 29.43	-25 54.8	2.169	3.016	12.5	20.2	8 9	18 32.94	-10 46.8	2.822	3.657	10.3	21.4
323728	2005 JE ₁₆₈		7 4.6 336°70	2°0/ 4.2 17			289855	2005 MT ₈		7 4.6 317°00	3°0/ 4.9 17		
5 31	19 19.88	-24 49.1	1.235	2.125	17.3	20.4	5 31	19 20.64	-17 47.9	1.378	2.254	16.7	20.2
6 10	19 16.24	-25 23.4	1.164	2.115	13.0	20.1	6 10	19 16.36	-17 13.0	1.299	2.240	12.8	19.9
6 20	19 9.40	-26 1.8	1.114	2.106	8.1	19.8	6 20	19 9.28	-16 43.5	1.241	2.227	8.4	19.6
6 30	19 0.22	-26 39.3	1.085	2.098	3.1	19.5	6 30	19 0.17	-16 20.2	1.205	2.215	4.0	19.3
7 10	18 50.09	-27 10.8	1.079	2.091	3.9	19.5	7 10	18 50.25	-16 3.2	1.193	2.203	4.1	19.3
7 20	18 40.64	-27 32.8	1.097	2.084	9.1	19.8	7 20	18 40.91	-15 52.7	1.205	2.191	8.7	19.5
7 30	18 33.41	-27 44.6	1.136	2.078	14.1	20.1	7 30	18 33.47	-15 48.4	1.240	2.180	13.4	19.7
8 9	18 29.46	-27 47.5	1.194	2.074	18.4	20.3	8 9	18 28.87	-15 49.4	1.294	2.170	17.5	20.0
96350	1997 UA ₁₅		7 4.6 269°78	1°8/ 4.2 18			297546	2001 QB ₁₄₄		7 4.6 235°52	0°9/ 4.8 18		
5 31	19 24.79	-25 4.3	1.511	2.382	15.7	19.2	5 31	19 19.91	-19 37.1	2.193	3.048	12.1	21.4
6 10	19 19.63	-25 34.1	1.422	2.363	11.9	19.0	6 10	19 14.84	-19 41.8	2.111	3.043	9.1	21.2
6 20	19 11.43	-26 7.0	1.354	2.343	7.5	18.6	6 20	19 7.88	-19 50.6	2.052	3.037	5.7	20.9
6 30	19 0.89	-26 38.7	1.310	2.323	2.8	18.3	6 30	18 59.64	-20 2.3	2.019	3.032	2.1	20.7
7 10	18 49.26	-27 4.5	1.292	2.303	3.6	18.3	7 10	18 50.91	-20 15.3	2.014	3.026	2.2	20.7
7 20	18 38.03	-27 21.5	1.299	2.282	8.5	18.5	7 20	18 42.59	-20 28.3	2.036	3.020	5.9	20.9
7 30	18 28.70	-27 29.1	1.330	2.262	13.3	18.8	7 30	18 35.51	-20 40.6	2.085	3.014	9.3	21.1
8 9	18 22.40	-27 28.9	1.380	2.240	17.5	19.0	8 9	18 30.32	-20 51.8	2.157	3.008	12.4	21.3
358361	2006 WF ₁₉₃		7 4.6 163°92	2°4/ 5.2 18			509501	2007 UB ₅₀		7 4.6 285°57	5°3/ 5.5 18		
5 31	19 19.18	-14 51.8	2.786	3.621	10.4	21.3	5 31	19 18.90	-9 31.5	1.956	2.794	14.0	21.5
6 10	19 13.79	-14 33.1	2.708	3.625	8.0	21.1	6 10	19 14.27	-8 56.0	1.868	2.780	11.2	21.3
6 20	19 6.99	-14 19.2	2.655	3.630	5.3	21.0	6 20	19 7.64	-8 30.7	1.802	2.766	8.2	21.1
6 30	18 59.28	-14 10.4	2.629	3.633	2.9	20.8	6 30	18 59.59	-8 17.4	1.760	2.752	5.8	20.9
7 10	18 51.29	-14 6.2	2.632	3.637	2.9	20.8	7 10	18 50.96	-8 16.8	1.744	2.738	5.6	20.8
7 20	18 43.66	-14 6.3	2.664	3.640	5.2	21.0	7 20	18 42.66	-8 28.3	1.754	2.724	8.0	21.0
7 30	18 37.02	-14 10.1	2.723	3.643	7.8	21.1	7 30	18 35.64	-8 50.5	1.789	2.710	11.2	21.1
8 9	18 31.84	-14 16.9	2.806	3.645	10.2	21.3	8 9	18 30.59	-9 20.6	1.846	2.695	14.2	21.3
397086	2005 UX ₂₉₂		7 4.6 328°13	2°0/ 4.9 18			444649	2007 BV ₉		7 4.6 208°37	3°1/ 3.9 18		
5 31	19 18.84	-17 34.4	2.165	3.019	12.3	20.6	5 31	19 21.93	-32 11.9	2.376	3.228	11.4	21.6
6 10	19 13.97	-17 15.9	2.087	3.016	9.3	20.4	6 10	19 16.32	-32 30.8	2.299	3.227	8.7	21.4
6 20	19 7.30	-17 1.9	2.031	3.014	6.0	20.2	6 20	19 8.76	-32 45.4	2.247	3.226	5.8	21.3
6 30	18 59.41	-16 52.3	2.002	3.012	2.8	20.0	6 30	18 59.90	-32 52.6	2.220	3.224	3.4	21.1
7 10	18 51.13	-16 46.5	2.000	3.009	2.8	20.0	7 10	18 50.64	-32 50.3	2.222	3.223	3.8	21.1
7 20	18 43.28	-16 44.2	2.025	3.007	6.0	20.2	7 20	18 41.88	-32 38.0	2.251	3.221	6.4	21.3
7 30	18 36.67	-16 44.8	2.076	3.005	9.4	20.4	7 30	18 34.48	-32 16.7	2.305	3.219	9.3	21.5
8 9	18 31.92	-16 47.7	2.150	3.004	12.4	20.6	8 9	18 29.10	-31 48.9	2.383	3.217	12.0	21.6
177893	2005 QP ₁₇₀		7 4.6 24°33	3°4/ 5.1 17			469923	2005 YZ ₁₉₁		7 4.6 91°47	0°8/ 4.4 17		
5 31	19 19.09	-14 45.6	1.961	2.814	13.4	19.6	5 31	19 22.45	-23 51.4	1.749	2.615	14.1	21.6
6 10	19 14.25	-14 13.9	1.890	2.816	10.3	19.4	6 10	19 17.13	-24 9.5	1.681	2.620	10.6	21.4
6 20	19 7.49	-13 48.9	1.842	2.819	7.0	19.2	6 20	19 9.44	-24 29.6	1.635	2.624	6.5	21.2
6 30	18 59.48	-13 31.2	1.818	2.823	4.0	19.0	6 30	19 0.15	-24 48.8	1.615	2.629	2.2	20.9
7 10	18 51.08	-13 21.0	1.821	2.826	3.9	19.0	7 10	18 50.35	-25 4.3	1.621	2.633	2.6	20.9
7 20	18 43.19	-13 17.9	1.851	2.830	6.8	19.2	7 20	18 41.19	-25 14.7	1.653	2.637	6.9	21.2
7 30	18 36.67	-13 21.1	1.906	2.834	10.2	19.4	7 30	18 33.72	-25 19.7	1.710	2.642	10.9	21.5
8 9	18 32.14	-13 29.3	1.983	2.838	13.2	19.6	8 9	18 28.69	-25 20.2	1.789	2.646	14.3	21.7
33856	2000 HD ₇₃		7 4.6 324°58	0°5/ 4.5 18			511156	2013 YU ₃₉		7 4.6 236°79	3°5/ 6.2 18		
5 31	19 19.74	-21 58.0	1.371	2.253	16.3	19.2	5 31	19 21.22	-9 19.7	1.952	2.786	14.2	21.4
6 10	19 15.85	-22 25.4	1.294	2.241	12.4	18.9	6 10	19 16.05	-10 3.9	1.867	2.781	11.2	21.2
6 20	19 9.05	-22 59.3	1.237	2.229	7.7	18.7	6 20	19 8.77	-11 4.1	1.805	2.776	7.7	20.9
6 30	19 0.11	-23 36.2	1.204	2.218	2.5	18.3	6 30	18 59.97	-12 18.6	1.769	2.771	4.4	20.7
7 10	18 50.26	-24 11.8	1.195	2.207	3.0	18.3	7 10	18 50.52	-13 44.0	1.760	2.765	3.9	20.7
7 20	18 40.95	-24 42.7	1.209	2.198	8.3	18.6	7 20	18 41.39	-15 15.3	1.779	2.760	6.9	20.9
7 30	18 33.59	-25 7.1	1.247	2.188	13.2	18.8	7 30	18 33.56	-16 47.8	1.825	2.754	10.5	21.1
8 9	18 29.18	-25 25.0	1.304	2.180	17.4	19.1	8 9	18 27.80	-18 17.2	1.895	2.748	13.8	21.3
202279	2005 BT ₂₃		7 4.6 149°41	1°6/ 4.2 17			232284	2002 RE ₁₂₈		7 4.6 56°42	8°3/ 5.8 18		
5 31	19 22.22	-25 20.1	1.996	2.857	12.9	20.8	5 31	19 40.66	-46 55.4	1.691	2.510	16.7	18.7
6 10	19 16.77	-25 53.7	1.925	2.860	9.6	20.6	6 10	19 30.62	-46 41.5	1.642	2.532	13.7	18.6
6 20	19 9.14	-26 28.7	1.876	2.863	6.0	20.4	6 20	19 17.39	-46 6.0	1.613	2.555	10.8	18.5
6 30	19 0.04	-27 1.5	1.854	2.866	2.3	20.2	6 30	19 2.52	-45 3.6	1.608	2.577	8.7	18.4
7 10	18 50.42	-27 29.0	1.859	2.869	2.9	20.2	7 10	18 47.91	-43 33.8	1.630	2.600	8.5	18.4
7 20	18 41.32	-27 49.2	1.891	2.871	6.6	20.5	7 20	18 35.25	-41 42.2	1.678	2.622	10.3	18.6
7 30	18 33.73	-28 1.9	1.949	2.874	10.1	20.7	7 30	18 25.68	-39 37.5	1.752	2.645	12.8	18.8
8 9	18 28.35	-28 7.8	2.029	2.876	13.3	20.9	8 9	18 19.70	-37 29.2	1.848	2.668	15.4	19.0
446692	2015 OH ₁₉		7 4.6 259°97	1°7/ 4.8 18			385222	2000 DR ₉₀		7 4.6 109°45	2°7/ 4.2 17		
5 31	19 20.35	-19 9.7	2.336	3.									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
54528	2000 <i>QF</i> ₁₈		7 4.6 24 ^o 16	8 ^o 7/ 7.9	18		387094	2012 <i>TF</i> ₁₂₆		7 4.6 256 ^o 68	0 ^o 6/ 4.7	18	
5 31	19 17.77	- 1 43.1	1.363	2.200	19.0	18.7	5 31	19 21.69	-21 10.3	1.961	2.820	13.2	21.3
6 10	19 13.93	- 1 34.7	1.305	2.207	15.8	18.5	6 10	19 16.45	-21 8.5	1.875	2.810	9.9	21.1
6 20	19 7.61	- 1 51.4	1.264	2.214	12.4	18.3	6 20	19 9.03	-21 9.8	1.812	2.799	6.2	20.8
6 30	18 59.60	- 2 35.2	1.244	2.222	9.6	18.1	6 30	19 0.08	-21 12.6	1.774	2.788	2.1	20.5
7 10	18 51.06	- 3 44.4	1.247	2.231	8.8	18.1	7 10	18 50.54	-21 15.5	1.764	2.776	2.3	20.5
7 20	18 43.16	- 5 14.0	1.273	2.241	10.6	18.2	7 20	18 41.42	-21 17.5	1.780	2.765	6.5	20.8
7 30	18 37.05	- 6 56.4	1.322	2.251	13.6	18.5	7 30	18 33.73	-21 18.3	1.823	2.753	10.4	21.0
8 9	18 33.48	- 8 43.9	1.391	2.262	16.9	18.7	8 9	18 28.21	-21 18.1	1.887	2.742	13.8	21.2
59654	1999 <i>JB</i> ₉₄		7 4.6 316 ^o 21	4 ^o 4/ 5.8	18		306135	2010 <i>JA</i> ₁₂₉		7 4.6 354 ^o 15	4 ^o 2/ 4.9	16	
5 31	19 17.66	-11 42.4	1.447	2.312	16.6	18.1	5 31	19 16.14	-16 10.4	1.380	2.259	16.4	19.2
6 10	19 14.14	-11 45.3	1.358	2.290	13.1	17.8	6 10	19 12.85	-15 16.2	1.310	2.251	12.7	18.9
6 20	19 7.99	-12 3.6	1.289	2.268	9.1	17.5	6 20	19 7.02	-14 28.3	1.260	2.245	8.6	18.6
6 30	18 59.82	-12 37.8	1.243	2.247	5.4	17.3	6 30	18 59.46	-13 48.7	1.233	2.240	4.9	18.4
7 10	18 50.70	-13 26.2	1.220	2.227	4.9	17.2	7 10	18 51.31	-13 19.0	1.229	2.236	4.9	18.4
7 20	18 41.87	-14 25.5	1.222	2.207	8.7	17.3	7 20	18 43.79	-13 0.0	1.249	2.233	8.7	18.6
7 30	18 34.66	-15 31.2	1.246	2.188	13.2	17.5	7 30	18 38.06	-12 51.2	1.291	2.233	12.9	18.9
8 9	18 30.08	-16 38.8	1.291	2.169	17.4	17.8	8 9	18 34.92	-12 51.2	1.353	2.233	16.6	19.1
140332	2001 <i>SK</i> ₃₅₀		7 4.6 359 ^o 16	6 ^o 3/ 2.9	18		345517	2006 <i>KS</i> ₅₁		7 4.6 99 ^o 63	6 ^o 0/ 5.7	17	
5 31	19 21.69	-35 49.6	1.667	2.535	14.7	19.4	5 31	19 20.24	- 8 2.4	1.918	2.751	14.5	21.0
6 10	19 17.10	-36 52.1	1.602	2.533	11.5	19.1	6 10	19 15.12	- 7 16.4	1.850	2.756	11.6	20.8
6 20	19 9.70	-37 48.3	1.559	2.532	8.5	19.0	6 20	19 8.07	- 6 42.0	1.803	2.761	8.7	20.7
6 30	19 0.31	-38 31.4	1.539	2.531	6.4	18.8	6 30	18 59.74	- 6 21.3	1.781	2.766	6.4	20.6
7 10	18 50.22	-38 56.3	1.544	2.531	7.0	18.9	7 10	18 51.02	- 6 14.9	1.784	2.771	6.2	20.6
7 20	18 40.82	-39 1.1	1.573	2.532	9.7	19.0	7 20	18 42.81	- 6 22.4	1.813	2.777	8.3	20.7
7 30	18 33.41	-38 47.5	1.625	2.533	12.8	19.2	7 30	18 35.99	- 6 41.8	1.867	2.782	11.1	20.9
8 9	18 28.87	-38 19.6	1.697	2.535	15.8	19.4	8 9	18 31.17	- 7 10.3	1.943	2.787	13.9	21.1
342241	2008 <i>SR</i> ₂₇₆		7 4.6 249 ^o 53	1 ^o 2/ 4.9	18		343662	2010 <i>MO</i> ₅₆		7 4.6 131 ^o 45	4 ^o 2/ 5.6	17	
5 31	19 21.65	-19 5.2	2.006	2.861	13.1	22.1	5 31	19 20.67	-11 18.2	2.078	2.915	13.3	20.8
6 10	19 16.38	-19 6.5	1.917	2.849	9.9	21.8	6 10	19 15.32	-10 52.7	2.008	2.922	10.4	20.6
6 20	19 8.98	-19 12.6	1.851	2.836	6.3	21.6	6 20	19 8.14	-10 36.4	1.961	2.930	7.3	20.4
6 30	19 0.06	-19 22.4	1.810	2.822	2.4	21.3	6 30	18 59.76	-10 30.0	1.939	2.936	4.7	20.3
7 10	18 50.51	-19 34.2	1.797	2.809	2.5	21.3	7 10	18 51.01	-10 33.4	1.944	2.943	4.6	20.3
7 20	18 41.33	-19 46.8	1.810	2.794	6.5	21.5	7 20	18 42.77	-10 45.5	1.977	2.949	7.0	20.4
7 30	18 33.50	-19 59.1	1.850	2.780	10.3	21.7	7 30	18 35.82	-11 4.9	2.035	2.956	10.0	20.6
8 9	18 27.78	-20 10.9	1.912	2.765	13.7	21.9	8 9	18 30.79	-11 29.4	2.115	2.961	12.8	20.8
238932	2006 <i>AF</i> ₉₀		7 4.6 329 ^o 78	0 ^o 0/ 4.4	18		315273	2007 <i>TO</i> ₈₇		7 4.6 138 ^o 34	4 ^o 1/ 5.5	17	
5 31	19 20.55	-20 50.8	1.098	1.991	18.7	19.7	5 31	19 23.59	-12 41.7	1.602	2.453	16.0	21.2
6 10	19 17.00	-21 13.0	1.030	1.982	14.2	19.4	6 10	19 18.01	-12 28.1	1.536	2.460	12.4	21.0
6 20	19 10.03	-21 44.0	0.980	1.973	8.9	19.0	6 20	19 10.02	-12 25.8	1.491	2.467	8.5	20.8
6 30	19 0.52	-22 20.2	0.951	1.965	2.9	18.7	6 30	19 0.40	-12 34.8	1.470	2.473	4.9	20.6
7 10	18 49.96	-22 56.9	0.944	1.958	3.3	18.7	7 10	18 50.27	-12 54.1	1.474	2.479	4.6	20.6
7 20	18 40.11	-23 30.0	0.960	1.951	9.4	19.0	7 20	18 40.79	-13 21.4	1.505	2.485	8.0	20.8
7 30	18 32.65	-23 57.2	0.997	1.946	14.9	19.3	7 30	18 33.05	-13 54.4	1.560	2.490	11.8	21.1
8 9	18 28.69	-24 18.0	1.052	1.940	19.7	19.5	8 9	18 27.79	-14 30.5	1.636	2.494	15.3	21.3
307126	2002 <i>CT</i> ₁₄₆		7 4.6 103 ^o 29	3 ^o 1/ 4.3	17		275677	2000 <i>RS</i> ₁₁		7 4.6 157 ^o 88	2 ^o 4/ 10.6	17	A
5 31	19 27.83	-29 42.3	1.449	2.319	16.3	20.1	5 31	19 44.61	+13 11.4	0.850	1.626	32.2	21.1
6 10	19 21.59	-29 55.5	1.389	2.328	12.4	19.9	6 10	19 35.32	+14 48.7	0.807	1.645	25.8	20.9
6 20	19 12.35	-30 4.6	1.350	2.337	7.9	19.7	6 20	19 21.42	+15 37.9	0.775	1.661	28.4	20.7
6 30	19 1.12	-30 4.8	1.335	2.345	3.8	19.4	6 30	19 4.20	+15 24.5	0.757	1.673	22.6	20.6
7 10	18 49.39	-29 53.5	1.345	2.353	4.3	19.5	7 10	18 45.93	+14 2.9	0.756	1.682	21.4	20.6
7 20	18 38.66	-29 30.5	1.381	2.361	8.5	19.7	7 20	18 29.16	+11 40.0	0.773	1.688	22.3	20.6
7 30	18 30.25	-28 58.6	1.440	2.369	12.7	20.0	7 30	18 16.04	+ 8 33.7	0.807	1.691	24.7	20.8
8 9	18 24.97	-28 21.6	1.519	2.377	16.4	20.3	8 9	18 7.75	+ 5 6.3	0.858	1.690	27.8	21.0
477634	2010 <i>LU</i> ₁₂₂		7 4.6 272 ^o 44	0 ^o 3/ 4.6	18		345852	2007 <i>PT</i> ₆		7 4.6 300 ^o 94	3 ^o 1/ 3.9	18	
5 31	19 20.88	-24 30.6	2.257	3.114	11.7	20.7	5 31	19 21.87	-28 58.6	1.722	2.592	14.2	20.7
6 10	19 15.55	-24 20.2	2.172	3.106	8.8	20.5	6 10	19 17.19	-29 31.1	1.632	2.571	10.8	20.4
6 20	19 8.32	-24 9.3	2.111	3.098	5.4	20.3	6 20	19 9.82	-30 2.9	1.563	2.549	7.1	20.1
6 30	18 59.81	-23 56.7	2.076	3.090	1.8	20.1	6 30	19 0.44	-30 29.4	1.519	2.528	3.6	19.9
7 10	18 50.86	-23 41.4	2.069	3.081	2.1	20.1	7 10	18 50.15	-30 46.6	1.501	2.507	4.2	19.9
7 20	18 42.35	-23 23.3	2.090	3.073	5.8	20.3	7 20	18 40.26	-30 52.1	1.508	2.487	8.1	20.0
7 30	18 35.13	-23 3.1	2.137	3.065	9.2	20.5	7 30	18 32.06	-30 46.3	1.539	2.466	12.2	20.2
8 9	18 29.85	-22 42.0	2.207	3.057	12.2	20.7	8 9	18 26.53	-30 31.2	1.592	2.446	15.9	20.4
501493	2014 <i>DP</i> ₁		7 4.6 183 ^o 90	1 ^o 4/ 5.0	17		359525	2010 <i>RF</i> ₈₈		7 4.6 165 ^o 68	4 ^o 1/ 3.6	18	
5 31	19 21.40	-17 33.8	2.588	3.428	10.9	22.9	5 31	19 22.62	-34 49.6	2.423	3.271	11.3	21.1
6 10	19 15.64	-17 40.2	2.506	3.429	8.3	22.7	6 10	19 16.89	-35 22.4	2.351	3.273	8.8	20.9
6 20	19 8.26	-17 51.2	2.448	3.429	5.3	22.6	6 20	19 9.17	-35 49.8	2.302	3.274	6.2	20.8
6 30	18 59.78	-18 5.8	2.417	3.428	2.2	22.3	6 30	19 0.11	-36 7.9	2.280	3.275	4.3	20.6
7 10	18 50.91	-18 22.8	2.416	3.426	2.2	22.3	7 10	18 50.63	-36 14.3	2.285	3.277	4.7	20.7
7 20	18 42.40	-18 40.8	2.443	3.424	5.2	22.5	7 20	18 41.66	-36 8.1	2.317	3.277	6.9	20.8
7 30	18 34.96	-18 58.9	2.498	3.421	8.3	22.7	7 30	18 34.08	-35 50.6	2.375	3.278	9.5	21.0
8 9	18 29.16	-19 16.5	2.577	3.418	11.0	22.9	8 9						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
217374	2004 TZ ₂₂₁		7 4.6 338°30	5°3/ 6.4 18									
5 31	19 15.23	- 8 15.2	1.738	2.586	15.0	19.3							
6 10	19 11.81	- 8 16.3	1.654	2.572	12.1	19.1							
6 20	19 6.29	- 8 33.0	1.591	2.559	8.8	18.8							
6 30	18 59.25	- 9 6.2	1.551	2.546	6.0	18.7							
7 10	18 51.57	- 9 54.5	1.536	2.535	5.5	18.6							
7 20	18 44.24	-10 55.1	1.546	2.524	8.0	18.7							
7 30	18 38.25	-12 3.9	1.580	2.514	11.5	18.9							
8 9	18 34.36	-13 16.4	1.636	2.505	14.8	19.1							
180093	2003 EJ ₄₁		7 4.6 309°27	3°8/ 5.9 18									
5 31	19 17.79	-10 59.6	2.047	2.890	13.3	20.3							
6 10	19 13.38	-11 2.4	1.965	2.884	10.4	20.1							
6 20	19 7.08	-11 16.4	1.906	2.877	7.3	19.9							
6 30	18 59.47	-11 41.5	1.871	2.871	4.5	19.7							
7 10	18 51.36	-12 16.5	1.863	2.865	4.2	19.7							
7 20	18 43.60	-12 59.1	1.881	2.860	6.8	19.9							
7 30	18 37.05	-13 46.7	1.925	2.854	10.0	20.0							
8 9	18 32.38	-14 36.5	1.992	2.848	13.1	20.2							
253773	2003 WL ₁₃₇		7 4.6 252°22	1°2/ 4.4 18									
5 31	19 24.67	-24 4.7	1.702	2.566	14.6	21.2							
6 10	19 19.20	-24 31.3	1.614	2.551	11.0	21.0							
6 20	19 11.02	-25 1.0	1.547	2.535	6.9	20.7							
6 30	19 0.83	-25 30.3	1.506	2.519	2.4	20.4							
7 10	18 49.75	-25 55.4	1.491	2.503	3.0	20.4							
7 20	18 39.07	-26 13.7	1.503	2.486	7.6	20.6							
7 30	18 30.09	-26 24.7	1.539	2.468	12.0	20.8							
8 9	18 23.77	-26 29.3	1.596	2.451	15.9	21.0							
384503	2010 CN ₁₀₉		7 4.6 145°18	2°5/ 4.1 18									
5 31	19 25.08	-29 47.9	2.171	3.024	12.3	21.5							
6 10	19 18.74	-30 5.6	2.103	3.032	9.3	21.3							
6 20	19 10.29	-30 20.2	2.058	3.040	6.0	21.2							
6 30	19 0.49	-30 28.3	2.040	3.048	3.0	21.0							
7 10	18 50.30	-30 27.8	2.049	3.055	3.4	21.0							
7 20	18 40.73	-30 18.3	2.087	3.062	6.5	21.2							
7 30	18 32.71	-30 0.9	2.150	3.068	9.7	21.4							
8 9	18 26.89	-29 37.7	2.237	3.074	12.5	21.6							
359934	2011 YX ₁₆		7 4.6 192°33	0°5/ 4.5 18									
5 31	19 19.17	-22 5.0	2.446	3.300	11.0	20.8							
6 10	19 14.20	-22 41.7	2.367	3.300	8.2	20.6							
6 20	19 7.50	-23 21.9	2.312	3.299	5.1	20.4							
6 30	18 59.61	-24 3.1	2.285	3.298	1.6	20.2							
7 10	18 51.27	-24 42.6	2.285	3.298	2.0	20.2							
7 20	18 43.27	-25 18.3	2.315	3.297	5.4	20.5							
7 30	18 36.38	-25 48.9	2.370	3.296	8.6	20.7							
8 9	18 31.22	-26 14.1	2.450	3.295	11.3	20.8							
478345	2011 WT ₁₃₆		7 4.6 222°99	3°2/ 3.8 18									
5 31	19 21.99	-31 51.1	2.419	3.271	11.2	22.2							
6 10	19 16.44	-32 21.6	2.339	3.266	8.6	22.0							
6 20	19 8.93	-32 48.8	2.282	3.261	5.8	21.8							
6 30	19 0.08	-33 9.1	2.252	3.256	3.5	21.7							
7 10	18 50.75	-33 20.0	2.250	3.250	3.9	21.7							
7 20	18 41.84	-33 20.4	2.276	3.245	6.5	21.8							
7 30	18 34.25	-33 10.9	2.328	3.239	9.4	22.0							
8 9	18 28.63	-32 53.6	2.402	3.233	12.0	22.2							
347160	2011 FB ₈		7 4.6 138°53	4°6/ 5.7 17									
5 31	19 20.91	-11 1.7	1.800	2.644	14.8	20.8							
6 10	19 15.83	-10 42.2	1.729	2.647	11.6	20.6							
6 20	19 8.62	-10 33.8	1.679	2.650	8.2	20.4							
6 30	18 59.99	-10 37.2	1.654	2.653	5.2	20.2							
7 10	18 50.87	-10 52.0	1.655	2.655	5.0	20.2							
7 20	18 42.28	-11 16.5	1.682	2.658	7.7	20.4							
7 30	18 35.17	-11 48.5	1.734	2.660	11.1	20.6							
8 9	18 30.22	-12 25.1	1.807	2.662	14.3	20.8							
304516	2006 UU ₂₁₂		7 4.6 323°84	5°3/ 3.1 18									
5 31	19 22.23	-34 49.3	1.939	2.799	13.2	20.3							
6 10	19 17.22	-35 46.2	1.864	2.792	10.4	20.1							
6 20	19 9.69	-36 38.3	1.813	2.786	7.4	20.0							
6 30	19 0.38	-37 19.8	1.786	2.781	5.5	19.8							
7 10	18 50.38	-37 46.5	1.786	2.775	6.0	19.8							
7 20	18 40.90	-37 56.1	1.811	2.770	8.6	20.0							
7 30	18 33.10	-37 49.7	1.860	2.765	11.6	20.2							
8 9	18 27.84	-37 30.5	1.930	2.760	14.5	20.3							
261259	2005 UK ₈₈		7 4.7 197°00	0°8/ 4.4 18									
5 31	19 19.83	-24 38.4	2.603	3.456	10.5	21.7							
6 10	19 14.59	-24 57.4	2.522	3.454	7.8	21.6							
6 20	19 7.69	-25 17.2	2.466	3.452	4.8	21.4							
6 30	18 59.67	-25 35.8	2.436	3.449	1.7	21.1							
7 10	18 51.25	-25 51.3	2.435	3.447	2.1	21.2							
7 20	18 43.20	-26 2.5	2.463	3.444	5.2	21.4							
7 30	18 36.23	-26 9.2	2.517	3.441	8.2	21.6							
8 9	18 30.94	-26 11.8	2.596	3.437	10.9	21.7							
16361	1979 MS ₁		7 4.7 312°03	1°2/ 4.9 18									
5 31	19 18.76	-19 2.8	1.938	2.799	13.2	18.5							
6 10	19 14.30	-19 5.8	1.853	2.789	10.0	18.3							
6 20	19 7.76	-19 14.0	1.792	2.778	6.3	18.1							
6 30	18 59.74	-19 26.3	1.755	2.768	2.4	17.8							
7 10	18 51.16	-19 41.0	1.745	2.757	2.5	17.8							
7 20	18 42.96	-19 56.7	1.762	2.747	6.4	18.0							
7 30	18 36.12	-20 12.2	1.803	2.738	10.3	18.2							
8 9	18 31.36	-20 27.0	1.867	2.728	13.6	18.4							
191826	2004 UZ ₇		7 4.7 307°34	1°7/ 4.9 18									
5 31	19 20.74	-19 42.2	1.566	2.437	15.3	19.4							
6 10	19 16.29	-19 21.5	1.479	2.419	11.7	19.1							
6 20	19 9.24	-19 4.8	1.413	2.401	7.4	18.8							
6 30	19 0.28	-18 51.5	1.371	2.384	3.0	18.5							
7 10	18 50.53	-18 40.9	1.354	2.366	3.1	18.4							
7 20	18 41.23	-18 32.7	1.363	2.350	7.8	18.7							
7 30	18 33.61	-18 26.8	1.395	2.333	12.3	18.9							
8 9	18 28.61	-18 23.2	1.447	2.317	16.3	19.1							
237264	2008 WP ₉₆		7 4.7 331°26	1°2/ 4.									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
69658	1998 <i>FC</i> ₁₁₄		7 4.7 124°16'	3°1'	5.2	18	437823	2015 <i>DV</i> ₁₆₆		7 4.7 107°98'	0°2'	4.7	17
5 31	19 25.42	-15 47.1	1.683	2.535	15.3	19.2	5 31	19 22.48	-20 37.1	1.795	2.657	14.1	21.5
6 10	19 19.22	-15 24.8	1.621	2.548	11.7	19.0	6 10	19 17.12	-21 0.3	1.728	2.664	10.5	21.3
6 20	19 10.70	-15 9.9	1.581	2.561	7.7	18.8	6 20	19 9.51	-21 28.7	1.684	2.672	6.5	21.1
6 30	19 0.68	-15 2.3	1.566	2.574	3.9	18.6	6 30	19 0.36	-21 59.3	1.665	2.679	2.1	20.8
7 10	18 50.26	-15 1.3	1.578	2.585	3.8	18.6	7 10	18 50.73	-22 29.5	1.673	2.686	2.4	20.8
7 20	18 40.59	-15 5.9	1.616	2.597	7.4	18.9	7 20	18 41.69	-22 56.7	1.708	2.693	6.7	21.1
7 30	18 32.67	-15 15.1	1.679	2.607	11.2	19.1	7 30	18 34.25	-23 19.9	1.768	2.700	10.6	21.4
8 9	18 27.21	-15 27.7	1.763	2.618	14.6	19.3	8 9	18 29.14	-23 38.9	1.850	2.707	13.9	21.6
438799	2008 <i>YF</i> ₃₈		7 4.7 228°51'	0°0'	4.4	18	171920	2001 <i>SN</i> ₁₁₇		7 4.7 262°35'	0°3'	4.6	18
5 31	19 21.81	-20 55.9	2.348	3.197	11.6	22.4	5 31	19 21.64	-24 4.8	2.144	3.001	12.2	20.7
6 10	19 16.33	-21 26.2	2.256	3.186	8.7	22.2	6 10	19 16.30	-24 0.1	2.057	2.991	9.2	20.5
6 20	19 8.93	-22 1.0	2.189	3.174	5.4	22.0	6 20	19 8.95	-23 55.8	1.994	2.981	5.7	20.2
6 30	19 0.15	-22 37.8	2.148	3.162	1.8	21.7	6 30	19 0.19	-23 50.1	1.957	2.971	1.9	20.0
7 10	18 50.79	-23 14.2	2.137	3.149	2.0	21.7	7 10	18 50.93	-23 41.8	1.948	2.961	2.2	20.0
7 20	18 41.71	-23 47.7	2.154	3.136	5.7	21.9	7 20	18 42.10	-23 30.5	1.966	2.950	6.1	20.2
7 30	18 33.77	-24 17.1	2.197	3.122	9.2	22.1	7 30	18 34.61	-23 16.6	2.011	2.940	9.7	20.4
8 9	18 27.69	-24 42.1	2.265	3.108	12.2	22.3	8 9	18 29.15	-23 1.1	2.078	2.929	12.8	20.6
215800	2004 <i>PS</i> ₂₇		7 4.7 353°14'	1°5'	4.2	18	160784	2000 <i>SF</i> ₃₂₆		7 4.7 64°39'	11°1'	2.7	18
5 31	19 18.52	-23 53.2	1.801	2.672	13.6	19.4	5 31	19 32.61	-48 4.6	1.621	2.451	16.8	19.2
6 10	19 14.35	-24 39.0	1.727	2.669	10.2	19.2	6 10	19 25.88	-49 28.8	1.578	2.466	14.4	19.1
6 20	19 7.90	-25 28.8	1.676	2.666	6.3	18.9	6 20	19 15.37	-50 34.6	1.555	2.480	12.3	19.0
6 30	18 59.85	-26 18.6	1.650	2.663	2.3	18.7	6 30	19 2.32	-51 12.4	1.554	2.495	11.2	18.9
7 10	18 51.18	-27 4.4	1.650	2.661	2.9	18.7	7 10	18 48.61	-51 17.0	1.575	2.510	11.5	19.0
7 20	18 42.98	-27 43.1	1.677	2.660	7.0	19.0	7 20	18 36.25	-50 48.9	1.619	2.525	13.1	19.1
7 30	18 36.29	-28 13.3	1.727	2.659	10.8	19.2	7 30	18 26.87	-49 54.0	1.683	2.540	15.1	19.3
8 9	18 31.89	-28 35.0	1.800	2.659	14.1	19.4	8 9	18 21.36	-48 40.7	1.766	2.555	17.3	19.5
498547	2008 <i>GX</i> ₉₀		7 4.7 118°89'	2°1'	5.1	17	156235	2001 <i>UJ</i> ₁₄₅		7 4.7 139°54'	5°1'	3.1	17
5 31	19 23.64	-16 55.2	1.701	2.558	14.9	22.2	5 31	19 27.51	-34 22.8	2.039	2.888	13.1	20.9
6 10	19 17.97	-16 55.4	1.637	2.568	11.3	22.0	6 10	19 20.97	-35 29.1	1.977	2.899	10.2	20.7
6 20	19 9.99	-17 3.1	1.595	2.578	7.3	21.8	6 20	19 11.94	-36 30.2	1.938	2.909	7.2	20.6
6 30	19 0.49	-17 17.0	1.578	2.588	3.2	21.6	6 30	19 1.20	-37 20.3	1.925	2.919	5.2	20.5
7 10	18 50.53	-17 35.3	1.587	2.598	3.1	21.6	7 10	18 49.88	-37 54.8	1.940	2.928	5.8	20.5
7 20	18 41.24	-17 56.0	1.622	2.607	7.0	21.9	7 20	18 39.18	-38 11.9	1.981	2.936	8.2	20.7
7 30	18 33.63	-18 17.7	1.683	2.616	11.0	22.1	7 30	18 30.25	-38 12.8	2.047	2.944	11.1	20.9
8 9	18 28.43	-18 39.3	1.766	2.624	14.4	22.3	8 9	18 23.86	-38 0.8	2.135	2.952	13.8	21.1
289054	2004 <i>TO</i> ₁₈₀		7 4.7 296°40'	0°7'	4.8	18	372869	2010 <i>WG</i> ₂₂		7 4.7 217°98'	1°2'	4.4	18
5 31	19 18.57	-20 12.6	2.200	3.058	12.0	21.1	5 31	19 25.01	-24 19.8	1.825	2.685	13.9	22.3
6 10	19 13.99	-20 18.9	2.110	3.044	9.0	20.8	6 10	19 19.24	-24 47.0	1.743	2.679	10.5	22.1
6 20	19 7.52	-20 29.3	2.044	3.030	5.6	20.6	6 20	19 10.97	-25 16.5	1.684	2.671	6.5	21.9
6 30	18 59.71	-20 42.3	2.003	3.016	2.0	20.3	6 30	19 0.92	-25 45.0	1.651	2.664	2.3	21.6
7 10	18 51.37	-20 56.3	1.989	3.002	2.1	20.3	7 10	18 50.16	-26 8.8	1.644	2.656	2.8	21.6
7 20	18 43.35	-21 10.0	2.003	2.988	5.9	20.5	7 20	18 39.87	-26 26.1	1.665	2.647	7.1	21.8
7 30	18 36.52	-21 22.6	2.043	2.974	9.4	20.7	7 30	18 31.21	-26 36.1	1.711	2.638	11.2	22.1
8 9	18 31.54	-21 33.6	2.106	2.961	12.5	20.9	8 9	18 25.03	-26 40.1	1.778	2.628	14.7	22.3
300616	2007 <i>UU</i> ₁₁		7 4.7 272°80'	7°8'	6.0	18	498281	2007 <i>VF</i> ₄₉		7 4.7 208°02'	3°5'	3.9	17
5 31	19 19.05	-1 59.3	2.127	2.932	14.2	21.3	5 31	19 27.51	-29 59.0	1.723	2.584	14.6	22.1
6 10	19 14.35	-1 12.2	2.033	2.912	12.0	21.1	6 10	19 21.33	-30 35.0	1.647	2.580	11.1	21.8
6 20	19 7.77	-0 38.9	1.959	2.891	9.8	20.9	6 20	19 12.35	-31 8.6	1.592	2.575	7.3	21.6
6 30	18 59.81	-0 22.7	1.909	2.871	8.1	20.8	6 30	19 1.38	-31 34.8	1.562	2.569	4.0	21.4
7 10	18 51.24	-0 25.0	1.885	2.850	7.9	20.7	7 10	18 49.65	-31 49.2	1.559	2.564	4.5	21.4
7 20	18 42.91	-0 45.7	1.886	2.828	9.4	20.8	7 20	18 38.54	-31 50.1	1.582	2.557	8.2	21.6
7 30	18 35.68	-1 22.9	1.910	2.807	11.8	20.9	7 30	18 29.35	-31 38.8	1.630	2.550	12.1	21.8
8 9	18 30.25	-2 13.0	1.957	2.785	14.4	21.0	8 9	18 22.98	-31 18.3	1.699	2.543	15.6	22.0
241764	2001 <i>FR</i> ₆₇		7 4.7 49°26'	6°3'	6.7	17	212915	2007 <i>XH</i> ₄₇		7 4.7 201°43'	0°1'	4.7	18
5 31	19 19.37	-6 27.1	1.615	2.454	16.4	20.6	5 31	19 20.48	-21 59.1	2.122	2.980	12.3	20.5
6 10	19 14.74	-6 11.7	1.561	2.471	13.2	20.4	6 10	19 15.43	-22 17.6	2.045	2.979	9.2	20.3
6 20	19 7.97	-6 13.3	1.527	2.488	9.8	20.2	6 20	19 8.40	-22 39.4	1.992	2.979	5.7	20.1
6 30	18 59.83	-6 32.8	1.517	2.505	7.0	20.1	6 30	19 0.04	-23 2.1	1.964	2.978	1.8	19.9
7 10	18 51.33	-7 8.8	1.531	2.522	6.5	20.1	7 10	18 51.20	-23 23.6	1.964	2.977	2.1	19.9
7 20	18 43.50	-7 58.3	1.569	2.540	8.6	20.3	7 20	18 42.79	-23 42.2	1.992	2.976	6.0	20.1
7 30	18 37.26	-8 57.2	1.632	2.558	11.7	20.5	7 30	18 35.70	-23 57.1	2.045	2.975	9.5	20.3
8 9	18 33.27	-10 0.7	1.717	2.576	14.7	20.8	8 9	18 30.60	-24 8.4	2.122	2.974	12.6	20.5
328120	2008 <i>AU</i> ₇₄		7 4.7 177°71'	0°5'	4.8	17	158947	2004 <i>RT</i> ₁₀₇		7 4.7 12°12'	4°8'	5.9	18
5 31	19 25.69	-21 28.0	1.857	2.712	13.9	22.2	5 31	19 17.31	-8 54.4	2.147	2.982	13.1	19.6
6 10	19 19.47	-21 25.7	1.782	2.714	10.5	22.0	6 10	19 12.90	-8 34.8	2.073	2.982	10.4	19.4
6 20	19 10.93	-21 26.0	1.729	2.715	6.5	21.8	6 20	19 6.77	-8 26.2	2.021	2.984	7.6	19.2
6 30	19 0.82	-21 27.4	1.703	2.716	2.2	21.5	6 30	18 59.50	-8 29.4	1.993	2.985	5.3	19.1
7 10	18 50.19	-21 28.0	1.704	2.716	2.4	21.5	7 10	18 51.83	-8 44.1	1.992	2.986	5.0	19.1
7 20	18 40.15	-21 27.1	1.732	2.716	6.7	21.8	7 20	18 44.56	-9 9.0	2.018	2.988	7.0	19.2
7 30	18 31.74	-21 24.8	1.786	2.715	10.7	22.0	7 30	18 38.46	-9 42.1	2.069	2.990	9.8	19.4
8 9	18 25.72	-21 21.4	1.863	2.713	14.1	22.2	8 9	18 34.10	-10 20.6	2.142	2.992	12.5	19.6
4442	Garcia		7 4.7 62°33'	0°5'	4.6	18	401091	2011 <i>UW</i> ₁₅₂		7 4.7 71°82'	9°3'	5.7	16</

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
341180	2007 RY ₁₆		7 4.7 247°39	1.3/ 4.5	18		72367	2001 CL ₁		7 4.7 256°02	4.4/ 6.3	18	
5 31	19 22.84	-26 15.3	1.992	2.852	12.9	21.1	5 31	19 20.31	-8 41.1	1.986	2.818	14.1	19.5
6 10	19 17.37	-26 21.8	1.911	2.846	9.7	20.9	6 10	19 15.46	-8 57.5	1.896	2.807	11.2	19.3
6 20	19 9.69	-26 27.6	1.853	2.840	6.1	20.7	6 20	19 8.56	-9 28.3	1.829	2.796	8.0	19.1
6 30	19 0.48	-26 30.1	1.821	2.833	2.3	20.4	6 30	19 0.17	-10 13.6	1.787	2.784	5.1	18.9
7 10	18 50.72	-26 27.4	1.816	2.827	2.7	20.4	7 10	18 51.13	-11 11.2	1.771	2.772	4.6	18.9
7 20	18 41.47	-26 18.8	1.838	2.820	6.5	20.7	7 20	18 42.39	-12 18.1	1.783	2.760	7.2	19.0
7 30	18 33.74	-26 4.9	1.885	2.813	10.3	20.9	7 30	18 34.87	-13 30.3	1.821	2.748	10.6	19.2
8 9	18 28.24	-25 47.2	1.956	2.806	13.5	21.1	8 9	18 29.34	-14 43.9	1.882	2.736	13.8	19.4
49887	1999 XH ₁₅₆		7 4.7 132°60	1.4/ 5.0	17		207903	2008 UX ₁₆₃		7 4.7 146°75	3.2/ 5.3	18	
5 31	19 24.35	-18 21.6	1.760	2.616	14.6	19.7	5 31	19 21.86	-14 9.9	2.142	2.983	12.9	21.2
6 10	19 18.50	-18 29.2	1.694	2.626	11.0	19.5	6 10	19 16.26	-13 45.9	2.070	2.990	9.9	21.0
6 20	19 10.35	-18 43.1	1.651	2.635	6.9	19.3	6 20	19 8.82	-13 28.8	2.021	2.996	6.7	20.8
6 30	19 0.67	-19 1.4	1.632	2.644	2.7	19.1	6 30	19 0.19	-13 18.9	1.999	3.002	3.8	20.6
7 10	18 50.53	-19 22.1	1.641	2.653	2.7	19.1	7 10	18 51.19	-13 15.8	2.003	3.008	3.7	20.6
7 20	18 41.03	-19 43.1	1.677	2.661	6.8	19.4	7 20	18 42.69	-13 18.9	2.036	3.013	6.5	20.8
7 30	18 33.20	-20 3.2	1.738	2.669	10.8	19.6	7 30	18 35.49	-13 27.3	2.094	3.018	9.6	21.0
8 9	18 27.74	-20 21.9	1.821	2.677	14.1	19.8	8 9	18 30.19	-13 39.8	2.176	3.022	12.5	21.2
514496	2016 WS ₁₈		7 4.7 178°46	3.3/ 3.5	18		128411	2004 LO ₁₆		7 4.7 329°92	0.7/ 4.4	18	
5 31	19 21.25	-31 21.0	2.482	3.334	11.0	22.0	5 31	19 20.07	-19 28.5	1.403	2.280	16.3	18.9
6 10	19 15.90	-32 5.7	2.407	3.335	8.4	21.8	6 10	19 16.22	-20 41.5	1.325	2.269	12.3	18.6
6 20	19 8.67	-32 47.9	2.356	3.335	5.6	21.6	6 20	19 9.50	-22 7.7	1.268	2.259	7.6	18.3
6 30	19 0.14	-33 23.9	2.333	3.335	3.5	21.5	6 30	19 0.58	-23 41.7	1.235	2.249	2.5	18.0
7 10	18 51.13	-33 50.8	2.337	3.335	3.9	21.5	7 10	18 50.64	-25 16.1	1.228	2.240	3.1	18.0
7 20	18 42.53	-34 7.0	2.369	3.335	6.4	21.7	7 20	18 41.09	-26 43.8	1.245	2.232	8.4	18.3
7 30	18 35.17	-34 12.5	2.426	3.335	9.1	21.9	7 30	18 33.38	-27 59.9	1.286	2.224	13.2	18.6
8 9	18 29.71	-34 9.1	2.507	3.335	11.6	22.0	8 9	18 28.57	-29 2.4	1.347	2.217	17.3	18.8
210938	2001 TS ₁₈₈		7 4.7 282°61	3.3/ 3.8	18		152043	2004 PP ₂₀		7 4.7 284°83	2.9/ 4.3	18	
5 31	19 22.00	-30 44.7	2.077	2.937	12.5	20.5	5 31	19 23.09	-31 58.5	2.252	3.105	11.9	19.6
6 10	19 16.84	-31 17.9	1.994	2.927	9.5	20.3	6 10	19 17.37	-32 0.8	2.171	3.099	9.1	19.4
6 20	19 9.43	-31 48.7	1.935	2.916	6.3	20.0	6 20	19 9.60	-31 57.9	2.113	3.094	6.0	19.2
6 30	19 0.42	-32 13.0	1.901	2.906	3.6	19.9	6 30	19 0.46	-31 47.2	2.082	3.088	3.3	19.1
7 10	18 50.79	-32 27.5	1.893	2.896	4.1	19.9	7 10	18 50.89	-31 27.0	2.079	3.083	3.6	19.1
7 20	18 41.60	-32 30.8	1.913	2.886	7.2	20.0	7 20	18 41.87	-30 57.4	2.103	3.077	6.5	19.2
7 30	18 33.89	-32 23.3	1.958	2.875	10.5	20.2	7 30	18 34.30	-30 20.2	2.153	3.072	9.6	19.4
8 9	18 28.42	-32 7.2	2.024	2.865	13.5	20.4	8 9	18 28.84	-29 38.0	2.226	3.067	12.5	19.6
519019	2010 JV ₁₃₀		7 4.7 125°71	0.9/ 5.1	17		225957	2002 CT ₃₃		7 4.7 175°75	1.3/ 4.3	18	
5 31	19 22.92	-16 49.3	2.160	3.005	12.6	21.3	5 31	19 24.18	-24 59.5	2.352	3.201	11.6	21.7
6 10	19 17.11	-17 35.6	2.092	3.018	9.5	21.1	6 10	19 18.06	-25 31.4	2.275	3.204	8.7	21.5
6 20	19 9.38	-18 29.7	2.048	3.031	6.0	20.9	6 20	19 9.99	-26 4.5	2.222	3.207	5.4	21.3
6 30	19 0.36	-19 28.7	2.032	3.044	2.2	20.7	6 30	19 0.60	-26 35.6	2.196	3.208	2.0	21.1
7 10	18 50.91	-20 29.1	2.043	3.056	2.2	20.7	7 10	18 50.73	-27 2.2	2.199	3.209	2.5	21.1
7 20	18 41.91	-21 27.7	2.084	3.067	5.8	21.0	7 20	18 41.28	-27 22.4	2.230	3.209	5.8	21.3
7 30	18 34.23	-22 22.1	2.152	3.079	9.2	21.2	7 30	18 33.13	-27 35.9	2.289	3.209	9.1	21.5
8 9	18 28.51	-23 10.9	2.244	3.089	12.2	21.4	8 9	18 26.93	-27 43.5	2.371	3.208	11.9	21.7
306867	2001 SC ₂₆₉		7 4.7 292°47	1.6/ 4.4	13 C		6552	Higginson		7 4.7 46°42	4.8/ 6.4	18	
5 31	19 22.83	-25 26.9	1.574	2.446	15.1	21.8	5 31	19 19.88	-9 0.7	1.558	2.407	16.4	17.4
6 10	19 18.15	-25 47.9	1.483	2.424	11.5	21.5	6 10	19 15.34	-9 15.9	1.499	2.419	12.9	17.2
6 20	19 10.61	-26 10.9	1.413	2.403	7.2	21.2	6 20	19 8.50	-9 47.8	1.460	2.432	9.1	17.0
6 30	19 0.90	-26 32.0	1.368	2.381	2.8	20.9	6 30	19 0.13	-10 35.6	1.445	2.444	5.7	16.8
7 10	18 50.20	-26 47.7	1.348	2.359	3.3	20.8	7 10	18 51.29	-11 36.5	1.455	2.457	5.1	16.8
7 20	18 39.87	-26 55.4	1.353	2.337	8.1	21.1	7 20	18 43.08	-12 45.9	1.490	2.471	7.9	17.0
7 30	18 31.32	-26 55.1	1.381	2.315	12.8	21.3	7 30	18 36.52	-13 59.2	1.549	2.484	11.6	17.2
8 9	18 25.60	-26 48.3	1.430	2.294	16.9	21.5	8 9	18 32.34	-15 11.8	1.630	2.498	14.9	17.5
395520	2011 UJ ₁₃₄		7 4.7 359°58	5.1/ 3.2	18		139013	2001 DD ₄₆		7 4.7 109°31	1.9/ 4.3	17	
5 31	19 22.56	-34 39.8	1.999	2.857	13.0	20.8	5 31	19 26.65	-26 15.8	1.602	2.468	15.3	20.4
6 10	19 17.39	-35 35.8	1.930	2.857	10.1	20.7	6 10	19 20.52	-26 42.1	1.543	2.481	11.4	20.2
6 20	19 9.82	-36 26.8	1.883	2.857	7.2	20.5	6 20	19 11.73	-27 8.5	1.506	2.494	7.1	20.0
6 30	19 0.57	-37 7.5	1.862	2.856	5.2	20.4	6 30	19 1.18	-27 30.6	1.494	2.506	2.9	19.8
7 10	18 50.70	-37 33.7	1.867	2.857	5.8	20.4	7 10	18 50.15	-27 45.1	1.508	2.518	3.4	19.8
7 20	18 41.38	-37 43.6	1.897	2.857	8.3	20.5	7 20	18 39.95	-27 50.7	1.548	2.530	7.6	20.1
7 30	18 33.71	-37 38.3	1.953	2.857	11.2	20.7	7 30	18 31.77	-27 47.9	1.613	2.542	11.6	20.4
8 9	18 28.48	-37 20.7	2.029	2.858	13.9	20.9	8 9	18 26.36	-27 39.0	1.699	2.553	15.1	20.6
25269	1998 VY ₂₃		7 4.7 333°83	1.4/ 4.4	18		267738	2003 FS ₉₂		7 4.7 132°68	3.4/ 5.7	17	
5 31	19 17.00	-23 29.1	1.127	2.026	17.9	17.7	5 31	19 22.84	-12 9.6	2.067	2.903	13.5	21.3
6 10	19 14.50	-23 59.8	1.051	2.006	13.6	17.4	6 10	19 17.02	-12 8.6	2.001	2.916	10.4	21.1
6 20	19 8.70	-24 37.0	0.994	1.989	8.5	17.1	6 20	19 9.31	-12 17.2	1.957	2.929	7.1	20.9
6 30	19 0.35	-25 16.5	0.958	1.972	3.0	16.7	6 30	19 0.36	-12 35.0	1.940	2.942	4.1	20.8
7 10	18 50.86	-25 52.9	0.943	1.956	3.7	16.7	7 10	18 51.06	-13 0.7	1.950	2.953	3.8	20.8
7 20	18 41.89	-26 21.9	0.951	1.942	9.5	17.0	7 20	18 42.28	-13 32.2	1.987	2.965	6.6	20.9
7 30	18 35.17	-26 41.7	0.979	1.929	14.9	17.2	7 30	18 34.86	-14 7.6	2.051	2.975	9.7	21.2
8 9	18 31.87	-26 52.6	1.025	1.918	19.7	17.5	8 9	18 29.41	-14 44.5	2.138	2.986	12.7	21.4
342824	2008 XB ₃₀		7 4.7 107°59	6.1/ 5.9	18		446678	2015 OT ₉		7 4.7 281°01	1.3/ 4.8	18	
5 31	19 20.40	-7 1.5	1.986	2.813									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
475822	2007 AS ₂₀	7 4.7 200°15	1°0/ 4.4 18				437176	2012 VD ₇₁	7 4.7 255°92	1°2/ 4.4 18			
5 31	19 20.28	-25 15.7	2.887	3.735	9.7	22.4	5 31	19 21.75	-24 23.9	1.988	2.849	12.9	21.5
6 10	19 14.87	-25 37.0	2.802	3.731	7.3	22.2	6 10	19 16.66	-24 54.9	1.906	2.842	9.7	21.3
6 20	19 7.92	-25 58.7	2.742	3.727	4.5	22.0	6 20	19 9.36	-25 28.3	1.847	2.835	6.0	21.1
6 30	18 59.92	-26 18.8	2.709	3.722	1.7	21.8	6 30	19 0.50	-26 0.9	1.814	2.827	2.2	20.8
7 10	18 51.54	-26 35.5	2.706	3.717	2.0	21.9	7 10	18 51.01	-26 29.6	1.809	2.820	2.7	20.8
7 20	18 43.46	-26 47.7	2.732	3.711	4.9	22.0	7 20	18 41.93	-26 52.2	1.830	2.812	6.6	21.1
7 30	18 36.37	-26 55.2	2.785	3.705	7.7	22.2	7 30	18 34.27	-27 7.9	1.877	2.804	10.3	21.3
8 9	18 30.80	-26 58.3	2.863	3.699	10.1	22.4	8 9	18 28.81	-27 17.2	1.946	2.797	13.6	21.5
198164	2004 TZ ₇₃	7 4.7 298°52	1°5/ 4.4 18				436988	2012 TJ ₂₀₈	7 4.7 295°47	0°6/ 4.8 16			
5 31	19 22.45	-25 28.9	1.629	2.500	14.8	20.7	5 31	19 21.95	-21 41.5	1.834	2.697	13.8	21.5
6 10	19 17.84	-25 44.8	1.532	2.473	11.3	20.4	6 10	19 16.81	-21 31.2	1.757	2.693	10.4	21.2
6 20	19 10.45	-26 2.1	1.457	2.446	7.1	20.1	6 20	19 9.42	-21 23.1	1.702	2.689	6.5	21.0
6 30	19 0.91	-26 17.4	1.406	2.419	2.7	19.7	6 30	19 0.50	-21 16.2	1.672	2.685	2.2	20.7
7 10	18 50.33	-26 27.5	1.380	2.391	3.2	19.7	7 10	18 51.05	-21 9.1	1.669	2.682	2.4	20.7
7 20	18 40.06	-26 30.3	1.380	2.364	8.0	19.9	7 20	18 42.13	-21 1.5	1.692	2.678	6.6	21.0
7 30	18 31.48	-26 25.7	1.403	2.337	12.6	20.1	7 30	18 34.77	-20 53.3	1.741	2.675	10.6	21.2
8 9	18 25.62	-26 15.2	1.447	2.311	16.7	20.3	8 9	18 29.69	-20 45.2	1.812	2.671	14.0	21.4
175625	2007 OK ₇	7 4.7 271°68	3°6/ 4.2 18				33084	1997 WX ₄₉	7 4.7 359°45	4°0/ 3.8 18			
5 31	19 26.18	-32 56.0	2.059	2.911	12.9	19.9	5 31	19 20.34	-27 18.1	1.055	1.954	18.8	17.2
6 10	19 20.08	-33 3.6	1.964	2.891	10.0	19.7	6 10	19 17.15	-28 15.8	0.997	1.951	14.3	17.0
6 20	19 11.51	-33 5.2	1.891	2.870	6.7	19.5	6 20	19 10.36	-29 16.1	0.957	1.949	9.2	16.7
6 30	19 1.17	-32 57.0	1.845	2.849	4.0	19.3	6 30	19 0.94	-30 11.2	0.938	1.948	4.6	16.4
7 10	18 50.13	-32 36.5	1.825	2.827	4.3	19.2	7 10	18 50.55	-30 53.8	0.940	1.949	5.5	16.5
7 20	18 39.56	-32 3.3	1.833	2.806	7.4	19.4	7 20	18 41.05	-31 19.5	0.965	1.950	10.4	16.7
7 30	18 30.60	-31 19.6	1.866	2.784	10.9	19.6	7 30	18 34.17	-31 28.3	1.010	1.953	15.4	17.0
8 9	18 24.10	-30 29.1	1.923	2.762	14.2	19.7	8 9	18 30.99	-31 23.3	1.072	1.956	19.7	17.3
21736	Samaschneid	7 4.7 338°88	1°4/ 4.5 18				434635	2005 WJ ₅₄	7 4.7 122°65	7°9/ 5.8 17			
5 31	19 18.61	-25 22.1	1.068	1.968	18.5	17.0	5 31	19 25.44	- 0 49.6	2.356	3.135	13.7	21.5
6 10	19 15.79	-25 26.0	0.998	1.954	14.1	16.7	6 10	19 18.60	+ 0 30.5	2.298	3.157	11.5	21.4
6 20	19 9.50	-25 31.0	0.947	1.941	8.8	16.3	6 20	19 10.14	+ 1 37.3	2.263	3.177	9.5	21.3
6 30	19 0.62	-25 33.5	0.915	1.929	3.1	16.0	6 30	19 0.67	+ 2 27.3	2.254	3.197	8.1	21.3
7 10	18 50.72	-25 30.1	0.906	1.919	3.7	15.9	7 10	18 50.96	+ 2 58.8	2.271	3.216	8.0	21.3
7 20	18 41.57	-25 19.5	0.918	1.910	9.6	16.2	7 20	18 41.80	+ 3 11.7	2.316	3.234	9.1	21.4
7 30	18 34.87	-25 2.6	0.950	1.902	15.1	16.5	7 30	18 33.89	+ 3 7.6	2.386	3.252	10.9	21.5
8 9	18 31.73	-24 41.7	1.000	1.896	19.8	16.8	8 9	18 27.77	+ 2 49.7	2.478	3.268	12.8	21.7
91857	1999 UR ₁₃	7 4.7 156°98	5°4/ 6.4 18				305969	2009 HD ₇₀	7 4.7 12°26	5°9/ 5.8 16			
5 31	19 17.62	- 3 7.2	3.002	3.795	10.8	19.8	5 31	19 18.71	- 7 33.3	2.031	2.861	13.9	20.7
6 10	19 12.65	- 2 37.6	2.927	3.801	8.9	19.6	6 10	19 14.06	- 6 50.1	1.958	2.862	11.2	20.5
6 20	19 6.44	- 2 18.5	2.875	3.807	7.0	19.5	6 20	19 7.58	- 6 18.2	1.907	2.863	8.4	20.4
6 30	18 59.42	- 2 11.0	2.850	3.813	5.7	19.4	6 30	18 59.89	- 5 59.7	1.880	2.864	6.3	20.2
7 10	18 52.15	- 2 15.4	2.851	3.818	5.5	19.4	7 10	18 51.78	- 5 55.2	1.879	2.865	6.1	20.2
7 20	18 45.18	- 2 31.1	2.880	3.823	6.5	19.5	7 20	18 44.11	- 6 4.1	1.903	2.866	8.0	20.3
7 30	18 39.04	- 2 56.6	2.935	3.827	8.3	19.6	7 30	18 37.68	- 6 24.9	1.953	2.867	10.7	20.5
8 9	18 34.19	- 3 29.6	3.015	3.832	10.1	19.8	8 9	18 33.12	- 6 54.5	2.024	2.869	13.4	20.7
162695	2000 UL ₁₁	7 4.7 107°04	0°8/ 4.5 04 C				239609	2008 UU ₂₀₂	7 4.7 289°38	1°6/ 4.5 18			
5 31	19 36.36	-24 7.7	2.098	2.929	13.4	24.8	5 31	19 23.21	-26 38.3	1.740	2.607	14.2	20.3
6 10	19 26.79	-24 31.4	2.052	2.972	10.0	24.7	6 10	19 18.01	-26 45.4	1.661	2.599	10.7	20.1
6 20	19 15.10	-24 54.7	2.031	3.012	6.1	24.5	6 20	19 10.30	-26 51.7	1.604	2.592	6.7	19.8
6 30	19 2.19	-25 14.3	2.039	3.051	2.1	24.3	6 30	19 0.83	-26 54.0	1.571	2.584	2.6	19.5
7 10	18 49.18	-25 27.7	2.077	3.088	2.4	24.4	7 10	18 50.71	-26 50.1	1.565	2.576	3.0	19.5
7 20	18 37.15	-25 34.2	2.146	3.123	6.2	24.7	7 20	18 41.16	-26 39.3	1.585	2.569	7.2	19.8
7 30	18 27.02	-25 34.6	2.243	3.157	9.5	25.0	7 30	18 33.33	-26 22.3	1.630	2.561	11.3	20.0
8 9	18 19.36	-25 30.7	2.364	3.188	12.3	25.2	8 9	18 28.04	-26 1.2	1.696	2.554	14.9	20.2
437207	2012 WA ₁₁	7 4.7 321°21	0°5/ 4.6 16				193204	2000 QE ₁₇₂	7 4.7 297°62	8°1/ 3.1 18			
5 31	19 20.56	-22 36.5	1.739	2.608	14.1	21.6	5 31	19 28.95	-40 27.8	1.659	2.510	15.5	21.0
6 10	19 15.98	-22 58.4	1.662	2.601	10.6	21.3	6 10	19 23.36	-41 16.8	1.561	2.477	12.8	20.7
6 20	19 9.02	-23 24.2	1.606	2.595	6.6	21.1	6 20	19 14.22	-41 56.2	1.484	2.444	10.0	20.4
6 30	19 0.37	-23 51.0	1.575	2.589	2.2	20.8	6 30	19 2.27	-42 17.4	1.430	2.411	8.2	20.3
7 10	18 51.08	-24 16.0	1.571	2.583	2.5	20.8	7 10	18 48.97	-42 13.6	1.399	2.377	8.8	20.2
7 20	18 42.27	-24 36.7	1.592	2.578	7.0	21.1	7 20	18 36.10	-41 42.1	1.393	2.343	11.4	20.3
7 30	18 35.04	-24 52.4	1.638	2.573	11.1	21.3	7 30	18 25.46	-40 45.8	1.410	2.310	15.0	20.4
8 9	18 30.21	-25 3.1	1.705	2.568	14.6	21.5	8 9	18 18.34	-39 31.7	1.446	2.276	18.5	20.5
13338	1998 SK ₁₁₉	7 4.7 180°43	4°4/ 3.5 18				352622	2008 FA ₇	7 4.7 42°45	4°0/ 6.4 17			
5 31	19 25.06	-34 30.6	2.259	3.107	12.0	17.7	5 31	19 18.76	- 9 30.6	1.833	2.676	14.6	19.7
6 10	19 18.99	-35 13.5	2.186	3.108	9.4	17.5	6 10	19 14.17	- 9 53.9	1.779	2.696	11.4	19.5
6 20	19 10.70	-35 51.2	2.136	3.109	6.6	17.3	6 20	19 7.65	-10 31.1	1.746	2.717	7.9	19.3
6 30	19 0.89	-36 19.2	2.113	3.109	4.6	17.2	6 30	18 59.90	-11 21.1	1.738	2.738	4.8	19.2
7 10	18 50.54	-36 34.3	2.117	3.108	5.0	17.2	7 10	18 51.82	-12 20.9	1.756	2.760	4.3	19.2
7 20	18 40.73	-36 35.2	2.148	3.108	7.4	17.4	7 20	18 44.32	-13 26.7	1.801	2.782	6.8	19.4
7 30	18 32.43	-36 23.1	2.204	3.107	10.2	17.5	7 30	18 38.24	-14 34.7	1.872	2.804	10.1	19.7
8 9	18 26.38	-36 0.8	2.283	3.106	12.8	17.7	8 9	18 34.17	-15 41.3	1.965	2.827	13.0	19.9
338774	2003 UL ₂₅₈	7 4.7 207°08	1°3/ 5.1 17				92097	Aidai	7 4.7 133°38	0°4/ 4.9 18			
5 31	19 21.50	-18 20.5	2.34										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
280660	2005 <i>EO</i> ₂₄		7 4.7 105°88	1°9/ 5.2 17			26269	Marciaprihl		7 4.7 346°77	2°5/ 4.3 18	R	
5 31	19 25.19	-16 40.1	1.590	2.448	15.8	21.0	5 31	19 18.80	-26 36.4	1.114	2.012	18.1	18.2
6 10	19 19.30	-16 56.8	1.533	2.464	11.9	20.8	6 10	19 15.85	-26 59.0	1.048	2.002	13.7	17.9
6 20	19 10.96	-17 22.5	1.496	2.480	7.6	20.6	6 20	19 9.51	-27 22.6	1.000	1.994	8.7	17.6
6 30	19 1.00	-17 54.9	1.485	2.496	3.2	20.4	6 30	19 0.69	-27 42.3	0.974	1.987	3.6	17.3
7 10	18 50.60	-18 30.9	1.499	2.511	3.0	20.4	7 10	18 50.94	-27 53.6	0.969	1.980	4.2	17.3
7 20	18 40.94	-19 7.7	1.540	2.526	7.2	20.7	7 20	18 41.96	-27 54.2	0.986	1.976	9.5	17.6
7 30	18 33.12	-19 43.0	1.606	2.540	11.3	21.0	7 30	18 35.40	-27 44.6	1.024	1.972	14.7	17.8
8 9	18 27.87	-20 15.6	1.694	2.554	14.8	21.2	8 9	18 32.30	-27 27.4	1.080	1.970	19.1	18.1
201397	2002 <i>VR</i> ₆₈		7 4.7 327°21	2°6/ 4.5 18			490	Veritas		7 4.7 282°02	4°2/ 5.9 18	R	
5 31	19 22.41	-29 44.1	1.621	2.493	14.8	19.4	5 31	19 17.56	-9 40.9	2.338	3.170	12.2	13.4
6 10	19 17.65	-29 41.5	1.540	2.480	11.3	19.1	6 10	19 13.10	-9 26.9	2.252	3.161	9.7	13.2
6 20	19 10.18	-29 34.3	1.481	2.468	7.3	18.8	6 20	19 9.99	-9 22.6	2.188	3.152	7.0	13.0
6 30	19 0.82	-29 19.4	1.445	2.456	3.4	18.6	6 30	18 59.74	-9 28.7	2.150	3.144	4.7	12.9
7 10	18 50.76	-28 54.6	1.435	2.444	3.7	18.6	7 10	18 52.04	-9 44.8	2.138	3.135	4.5	12.8
7 20	18 41.33	-28 20.2	1.450	2.433	7.8	18.8	7 20	18 44.64	-10 9.9	2.154	3.126	6.6	13.0
7 30	18 33.78	-27 38.4	1.489	2.423	12.0	19.0	7 30	18 38.27	-10 42.1	2.195	3.117	9.3	13.1
8 9	18 28.96	-26 52.7	1.549	2.414	15.8	19.2	8 9	18 33.54	-11 19.1	2.260	3.108	12.0	13.3
462544	2009 <i>BP</i> ₁₄₂		7 4.7 46°72	2°8/ 4.3 17			143570	2003 <i>ER</i> ₅₃		7 4.7 50°67	7°2/ 7.6 17		
5 31	19 25.41	-27 44.1	1.195	2.080	18.1	21.1	5 31	19 21.18	-3 41.0	1.406	2.242	18.6	18.8
6 10	19 20.35	-28 7.0	1.143	2.090	13.6	20.9	6 10	19 16.36	-3 48.1	1.360	2.266	15.0	18.7
6 20	19 11.98	-28 28.4	1.110	2.100	8.6	20.6	6 20	19 9.15	-4 18.1	1.334	2.290	11.3	18.5
6 30	19 1.38	-28 43.1	1.100	2.111	3.8	20.4	6 30	19 0.43	-5 10.9	1.329	2.314	8.2	18.4
7 10	18 50.21	-28 47.1	1.112	2.123	4.3	20.4	7 10	18 51.36	-6 23.2	1.348	2.339	7.3	18.4
7 20	18 40.15	-28 39.5	1.149	2.134	9.1	20.8	7 20	18 43.11	-7 49.5	1.392	2.364	9.4	18.6
7 30	18 32.64	-28 22.1	1.207	2.146	13.8	21.1	7 30	18 36.69	-9 22.9	1.460	2.390	12.5	18.9
8 9	18 28.52	-27 58.5	1.285	2.159	17.8	21.3	8 9	18 32.79	-10 57.2	1.549	2.415	15.6	19.1
510674	2012 <i>UL</i> ₂₈		7 4.7 63°84	3°6/ 3.8 17			346562	2008 <i>UX</i> ₃₆₅		7 4.7 232°54	1°4/ 5.0 18		
5 31	19 23.48	-30 18.3	1.848	2.711	13.6	21.9	5 31	19 23.00	-18 33.9	2.551	3.390	11.1	22.4
6 10	19 18.16	-31 1.4	1.778	2.712	10.4	21.7	6 10	19 17.11	-18 24.2	2.451	3.374	8.4	22.2
6 20	19 10.36	-31 42.3	1.730	2.712	6.9	21.5	6 20	19 9.45	-18 17.8	2.376	3.357	5.4	22.0
6 30	19 0.85	-32 16.2	1.707	2.713	3.9	21.3	6 30	19 0.55	-18 14.0	2.329	3.339	2.3	21.7
7 10	18 50.73	-32 39.1	1.711	2.714	4.5	21.3	7 10	18 51.13	-18 12.0	2.310	3.321	2.3	21.7
7 20	18 41.20	-32 49.4	1.741	2.714	7.7	21.5	7 20	18 41.98	-18 11.3	2.321	3.302	5.5	21.9
7 30	18 33.37	-32 47.4	1.796	2.715	11.2	21.7	7 30	18 33.89	-18 11.6	2.359	3.282	8.7	22.0
8 9	18 28.05	-32 35.7	1.872	2.716	14.3	21.9	8 9	18 27.49	-18 12.7	2.421	3.261	11.6	22.2
74747	1999 <i>RB</i> ₁₉₃		7 4.7 342°88	4°2/ 3.9 18			280307	2003 <i>QK</i> ₄₉		7 4.7 269°36	6°1/ 6.3 18		
5 31	19 20.53	-28 33.3	1.136	2.031	18.1	18.6	5 31	19 19.83	-6 4.4	2.000	2.824	14.3	20.9
6 10	19 17.22	-29 21.8	1.070	2.022	13.8	18.3	6 10	19 15.15	-5 43.4	1.906	2.806	11.7	20.7
6 20	19 10.41	-30 11.0	1.023	2.014	9.0	18.0	6 20	19 8.45	-5 36.1	1.834	2.788	8.9	20.4
6 30	19 0.99	-30 53.8	0.997	2.007	4.8	17.7	6 30	19 0.27	-5 44.3	1.786	2.769	6.6	20.3
7 10	18 50.53	-31 23.7	0.993	2.001	5.6	17.7	7 10	18 51.43	-6 8.2	1.763	2.751	6.3	20.2
7 20	18 40.85	-31 37.1	1.012	1.996	10.3	18.0	7 20	18 42.85	-6 46.4	1.767	2.732	8.3	20.3
7 30	18 33.66	-31 34.4	1.051	1.992	15.1	18.2	7 30	18 35.45	-7 36.3	1.795	2.713	11.3	20.4
8 9	18 30.06	-31 19.3	1.108	1.989	19.4	18.5	8 9	18 29.99	-8 34.1	1.846	2.693	14.4	20.6
344706	2003 <i>TS</i> ₃₃		7 4.7 4°22	2°9/ 4.0 17			84028	2002 <i>PN</i> ₄₄		7 4.7 328°72	0°1/ 4.7 18		
5 31	19 21.24	-27 46.7	1.517	2.394	15.3	20.1	5 31	19 17.50	-20 52.6	1.447	2.328	15.7	18.8
6 10	19 16.85	-28 25.0	1.451	2.394	11.6	19.9	6 10	19 14.30	-21 24.4	1.360	2.306	11.9	18.5
6 20	19 9.72	-29 3.4	1.406	2.394	7.4	19.7	6 20	19 8.36	-22 4.6	1.294	2.285	7.4	18.2
6 30	19 0.67	-29 36.8	1.385	2.395	3.6	19.4	6 30	19 0.33	-22 50.1	1.251	2.265	2.5	17.8
7 10	18 50.95	-30 0.9	1.389	2.397	4.1	19.5	7 10	18 51.33	-23 36.7	1.233	2.246	2.8	17.8
7 20	18 41.92	-30 13.6	1.417	2.399	8.2	19.7	7 20	18 42.66	-24 20.3	1.238	2.228	8.0	18.1
7 30	18 34.82	-30 15.1	1.469	2.401	12.3	20.0	7 30	18 35.71	-24 58.2	1.267	2.210	12.9	18.3
8 9	18 30.51	-30 7.5	1.541	2.404	15.9	20.2	8 9	18 31.52	-25 29.3	1.315	2.194	17.1	18.5
503535	2016 <i>FL</i> ₂₄		7 4.7 324°02	2°3/ 4.3 17			114212	2002 <i>VU</i> ₁₀₉		7 4.7 307°74	0°5/ 4.7 18		
5 31	19 24.76	-26 14.7	1.341	2.220	16.9	21.4	5 31	19 23.17	-24 12.7	1.462	2.337	15.9	19.1
6 10	19 19.80	-26 42.4	1.273	2.217	12.8	21.1	6 10	19 18.38	-24 9.6	1.385	2.328	12.0	18.9
6 20	19 11.70	-27 11.3	1.226	2.215	8.0	20.8	6 20	19 10.74	-24 7.6	1.328	2.318	7.5	18.6
6 30	19 1.36	-27 36.5	1.201	2.213	3.3	20.5	6 30	19 1.06	-24 4.0	1.295	2.309	2.5	18.3
7 10	18 50.21	-27 53.5	1.201	2.212	3.9	20.6	7 10	18 50.60	-23 56.9	1.287	2.300	2.8	18.3
7 20	18 39.82	-28 0.2	1.225	2.210	8.7	20.9	7 20	18 40.77	-23 45.5	1.304	2.292	7.9	18.5
7 30	18 31.66	-27 57.0	1.272	2.209	13.4	21.1	7 30	18 32.90	-23 30.5	1.345	2.284	12.6	18.8
8 9	18 26.71	-27 46.4	1.338	2.207	17.5	21.4	8 9	18 27.92	-23 13.5	1.405	2.276	16.7	19.0
444419	2006 <i>BR</i> ₃₄		7 4.7 280°73	1°9/ 4.3 17			313984	2004 <i>TY</i> ₉₃		7 4.7 183°14	4°3/ 3.3 18		
5 31	19 21.93	-28 22.0	2.450	3.303	11.1	22.4	5 31	19 22.55	-36 43.0	2.844	3.683	10.1	21.6
6 10	19 16.57	-28 33.1	2.347	3.277	8.4	22.2	6 10	19 16.78	-37 22.5	2.769	3.683	7.9	21.4
6 20	19 9.25	-28 42.5	2.267	3.251	5.4	22.0	6 20	19 9.23	-37 56.5	2.718	3.683	5.8	21.3
6 30	19 0.50	-28 47.6	2.214	3.224	2.4	21.7	6 30	19 0.47	-38 21.3	2.695	3.682	4.4	21.2
7 10	18 51.14	-28 46.5	2.189	3.197	2.8	21.7	7 10	18 51.30	-38 34.5	2.699	3.682	4.7	21.2
7 20	18 42.03	-28 38.2	2.192	3.170	6.0	21.9	7 20	18 42.52	-38 35.2	2.730	3.681	6.5	21.3
7 30	18 34.09	-28 23.1	2.222	3.143	9.3	22.0	7 30	18 34.94	-38 24.2	2.788	3.680	8.7	21.4
8 9	18 28.03	-28 2.8	2.275	3.116	12.2	22.2	8 9	18 29.17	-38 3.7	2.869	3.678	10.8	21.6
106694	2000 <i>WV</i> ₁₆₁		7 4.7 297°58	1°6/ 5.3 18									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
250268	2003 <i>FJ</i> ₃₁		7 4.7 321°08	6°4/ 6.4	18		391324	2006 <i>TC</i> ₁₀₃		7 4.7 63°05	4°8/ 3.5	17	
5 31	19 17.41	- 5 26.0	2.015	2.840	14.1	20.2	5 31	19 23.57	-34 45.5	2.067	2.921	12.7	20.9
6 10	19 13.21	- 4 57.2	1.934	2.833	11.6	20.0	6 10	19 18.08	-35 30.6	1.999	2.924	9.9	20.7
6 20	19 7.17	- 4 42.2	1.875	2.826	8.9	19.8	6 20	19 10.26	-36 10.2	1.954	2.927	7.0	20.5
6 30	18 59.83	- 4 42.7	1.840	2.819	6.8	19.7	6 30	19 0.86	-36 39.3	1.935	2.931	5.0	20.4
7 10	18 52.01	- 4 59.2	1.829	2.813	6.5	19.7	7 10	18 50.94	-36 54.6	1.942	2.934	5.4	20.4
7 20	18 44.54	- 5 30.3	1.845	2.806	8.3	19.7	7 20	18 41.61	-36 54.7	1.976	2.937	7.9	20.6
7 30	18 38.26	- 6 13.5	1.885	2.800	10.9	19.9	7 30	18 33.90	-36 41.1	2.034	2.940	10.7	20.8
8 9	18 33.82	- 7 5.1	1.946	2.795	13.7	20.1	8 9	18 28.57	-36 16.8	2.114	2.944	13.4	20.9
38796	2000 <i>RK</i> ₅₁		7 4.7 286°81	3°8/ 5.5	18		324899	2007 <i>VU</i> ₁₂₆		7 4.8 175°35	5°8/ 3.2	15	
5 31	19 20.62	-13 28.9	1.732	2.586	14.9	19.0	5 31	19 30.01	-35 20.2	1.847	2.697	14.2	21.6
6 10	19 16.08	-13 12.2	1.641	2.567	11.6	18.7	6 10	19 23.29	-36 25.6	1.778	2.699	11.2	21.4
6 20	19 9.19	-13 4.9	1.571	2.549	8.0	18.5	6 20	19 13.70	-37 25.3	1.732	2.702	8.1	21.2
6 30	19 0.56	-13 7.8	1.526	2.530	4.6	18.2	6 30	19 2.05	-38 12.3	1.711	2.703	5.9	21.1
7 10	18 51.16	-13 20.2	1.506	2.512	4.4	18.2	7 10	18 49.64	-38 41.2	1.717	2.704	6.5	21.1
7 20	18 42.09	-13 41.0	1.512	2.493	7.8	18.3	7 20	18 37.89	-38 50.1	1.749	2.704	9.2	21.3
7 30	18 34.45	-14 8.2	1.542	2.475	11.8	18.5	7 30	18 28.14	-38 40.6	1.805	2.703	12.3	21.5
8 9	18 29.10	-14 39.6	1.593	2.456	15.5	18.7	8 9	18 21.30	-38 17.2	1.883	2.702	15.2	21.7
60384	2000 <i>AU</i> ₁₈₅		7 4.7 226°14	0°7/ 4.9	18		176170	2001 <i>KA</i> ₃₄		7 4.8 61°52	0°0/ 4.5	17	
5 31	19 19.03	-18 44.4	2.470	3.320	11.1	19.2	5 31	19 24.33	-21 0.4	1.352	2.227	17.0	19.9
6 10	19 14.19	-19 11.8	2.387	3.316	8.4	19.0	6 10	19 19.06	-21 24.3	1.303	2.245	12.7	19.7
6 20	19 7.67	-19 44.6	2.328	3.312	5.2	18.8	6 20	19 10.99	-21 53.9	1.273	2.263	7.8	19.5
6 30	18 59.98	-20 20.9	2.296	3.308	1.9	18.5	6 30	19 1.11	-22 25.8	1.267	2.281	2.5	19.2
7 10	18 51.85	-20 58.6	2.292	3.304	1.9	18.5	7 10	18 50.78	-22 56.1	1.286	2.299	2.8	19.2
7 20	18 44.02	-21 35.6	2.316	3.300	5.3	18.8	7 20	18 41.38	-23 22.0	1.329	2.317	7.8	19.6
7 30	18 37.24	-22 10.2	2.367	3.296	8.4	18.9	7 30	18 34.13	-23 42.6	1.396	2.336	12.2	19.9
8 9	18 32.12	-22 41.7	2.443	3.292	11.2	19.1	8 9	18 29.77	-23 58.0	1.484	2.354	16.0	20.2
204442	2004 <i>XW</i> ₁₀₆		7 4.7 306°51	4°6/ 3.1	18		93871	2000 <i>WZ</i> ₁₂₀		7 4.8 271°75	3°1/ 3.5	18	
5 31	19 22.35	-29 9.8	1.552	2.427	15.2	19.7	5 31	19 23.96	-26 58.5	1.902	2.763	13.4	18.7
6 10	19 18.22	-30 26.7	1.459	2.399	11.7	19.4	6 10	19 18.77	-28 9.9	1.810	2.744	10.2	18.4
6 20	19 11.01	-31 47.8	1.386	2.371	7.9	19.1	6 20	19 11.00	-29 25.2	1.741	2.725	6.6	18.2
6 30	19 1.29	-33 5.8	1.338	2.344	4.9	18.9	6 30	19 1.24	-30 38.9	1.698	2.706	3.5	17.9
7 10	18 50.25	-34 13.1	1.316	2.317	5.8	18.9	7 10	18 50.47	-31 45.0	1.682	2.686	4.2	18.0
7 20	18 39.36	-35 3.9	1.318	2.290	9.8	19.0	7 20	18 39.90	-32 39.1	1.693	2.666	7.9	18.1
7 30	18 30.24	-35 36.1	1.342	2.263	14.1	19.2	7 30	18 30.79	-33 19.3	1.730	2.646	11.7	18.3
8 9	18 24.16	-35 51.2	1.387	2.237	18.0	19.4	8 9	18 24.14	-33 46.2	1.788	2.626	15.1	18.5
472140	2014 <i>BJ</i> ₆₄		7 4.7 177°03	4°6/ 5.9	17		301401	2009 <i>DD</i> ₃₃		7 4.8 238°06	0°9/ 4.5	17	
5 31	19 21.15	- 8 23.1	2.497	3.314	12.0	22.3	5 31	19 21.19	-24 8.0	2.088	2.948	12.4	20.7
6 10	19 15.58	- 7 56.4	2.418	3.316	9.6	22.1	6 10	19 16.11	-24 28.8	2.011	2.946	9.3	20.5
6 20	19 8.43	- 7 39.0	2.362	3.318	7.1	22.0	6 20	19 8.99	-24 51.3	1.957	2.944	5.8	20.3
6 30	19 0.21	- 7 31.9	2.332	3.319	5.0	21.9	6 30	19 0.47	-25 12.9	1.929	2.942	2.0	20.0
7 10	18 51.64	- 7 35.1	2.330	3.319	4.8	21.9	7 10	18 51.44	-25 31.3	1.929	2.940	2.4	20.0
7 20	18 43.43	- 7 47.9	2.356	3.319	6.6	22.0	7 20	18 42.86	-25 44.8	1.955	2.938	6.1	20.3
7 30	18 36.27	- 8 8.9	2.408	3.318	9.1	22.1	7 30	18 35.64	-25 53.1	2.008	2.936	9.7	20.5
8 9	18 30.73	- 8 36.1	2.485	3.317	11.6	22.3	8 9	18 30.48	-25 56.7	2.083	2.934	12.8	20.7
355684	2008 <i>FE</i> ₁₀		7 4.7 250°40	4°3/ 6.1	18		55825	1995 <i>SD</i> ₄		7 4.8 304°67	3°9/ 5.1	18	
5 31	19 18.58	- 9 4.5	2.322	3.150	12.4	21.4	5 31	19 21.20	-16 35.2	1.164	2.047	18.6	18.8
6 10	19 13.90	- 8 57.1	2.234	3.141	9.9	21.2	6 10	19 17.70	-16 3.8	1.075	2.019	14.6	18.5
6 20	19 7.52	- 9 0.3	2.169	3.132	7.2	21.0	6 20	19 10.84	-15 40.3	1.005	1.992	9.8	18.1
6 30	18 59.95	- 9 14.6	2.129	3.122	4.8	20.8	6 30	19 1.29	-15 25.9	0.956	1.965	5.0	17.8
7 10	18 51.91	- 9 39.4	2.117	3.113	4.5	20.8	7 10	18 50.38	-15 20.8	0.929	1.939	4.9	17.7
7 20	18 44.16	-10 13.2	2.131	3.103	6.6	20.9	7 20	18 39.75	-15 24.7	0.924	1.912	10.1	17.9
7 30	18 37.46	-10 53.9	2.172	3.093	9.4	21.1	7 30	18 31.18	-15 36.4	0.939	1.887	15.8	18.1
8 9	18 32.42	-11 39.0	2.236	3.083	12.2	21.2	8 9	18 25.97	-15 54.3	0.973	1.862	20.9	18.3
324473	2006 <i>UC</i> ₈₈		7 4.7 359°37	4°2/ 4.2	17		185812	1999 <i>XJ</i> ₅		7 4.8 288°20	0°9/ 4.5	18	
5 31	19 18.16	-29 18.6	1.007	1.911	19.0	20.0	5 31	19 19.69	-23 50.9	2.260	3.118	11.7	20.2
6 10	19 15.62	-29 48.6	0.950	1.906	14.5	19.7	6 10	19 15.00	-24 20.1	2.167	3.101	8.8	19.9
6 20	19 9.46	-30 16.2	0.911	1.904	9.5	19.4	6 20	19 8.35	-24 52.0	2.098	3.085	5.5	19.7
6 30	19 0.71	-30 35.1	0.892	1.902	4.9	19.2	6 30	19 0.29	-25 24.0	2.055	3.068	1.9	19.4
7 10	18 51.09	-30 40.0	0.894	1.903	5.5	19.2	7 10	18 51.61	-25 53.4	2.039	3.051	2.3	19.4
7 20	18 42.48	-30 29.5	0.917	1.905	10.3	19.5	7 20	18 43.20	-26 18.1	2.052	3.034	6.0	19.6
7 30	18 36.54	-30 5.6	0.960	1.909	15.3	19.8	7 30	18 35.96	-26 37.2	2.090	3.017	9.4	19.8
8 9	18 34.27	-29 32.5	1.020	1.914	19.7	20.0	8 9	18 30.61	-26 50.8	2.151	3.001	12.5	20.0
66714	1999 <i>TT</i> ₁₀₀		7 4.7 138°84	11°9/10.9	18		392156	2009 <i>HJ</i> ₈₃		7 4.8 359°57	2°1/ 5.5	18	
5 31	19 20.87	+19 36.3	2.716	3.360	14.9	19.8	5 31	19 18.82	-14 48.3	1.935	2.789	13.5	20.7
6 10	19 15.26	+20 35.4	2.661	3.374	13.9	19.8	6 10	19 14.40	-15 13.9	1.860	2.788	10.3	20.5
6 20	19 8.16	+21 12.3	2.624	3.388	12.9	19.7	6 20	19 7.97	-15 49.6	1.806	2.788	6.7	20.3
6 30	19 0.12	+21 23.3	2.605	3.402	12.2	19.7	6 30	19 0.15	-16 33.6	1.778	2.788	3.1	20.1
7 10	18 51.78	+21 7.4	2.607	3.414	11.9	19.7	7 10	18 51.80	-17 23.4	1.777	2.788	2.8	20.1
7 20	18 43.85	+20 25.3	2.631	3.426	12.1	19.7	7 20	18 43.86	-18 15.6	1.803	2.788	6.3	20.3
7 30	18 36.95	+19 20.1	2.675	3.437	12.7	19.8	7 30	18 37.23	-19 7.6	1.854	2.789	10.0	20.5
8 9	18 31.61	+17 56.7	2.739	3.448	13.5	19.9	8 9	18 32.62	-19 57.1	1.928	2.789	13.2	20.7
103757	2000 <i>CJ</i> ₁₂₄		7 4.7 355°87	8°2/ 4.4	18		347935	2003 <i>FV</i> _{61</}					

EPHEMERIDES

7 4.8

7 4.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
284057	2005 <i>CT</i> ₄₂		7 4.8 135°41'	4.3/ 6.4	18		399811	2005 <i>SZ</i> ₈₆		7 4.8 166°92'	2.0/ 4.2	18	
5 31	19 20.43	- 8 51.5	2.000	2.833	14.0	20.5	5 31	19 21.49	-28 22.9	2.539	3.391	10.8	21.9
6 10	19 15.46	- 9 4.9	1.926	2.837	11.0	20.3	6 10	19 16.04	-28 47.9	2.464	3.393	8.1	21.7
6 20	19 8.56	- 9 31.8	1.874	2.840	7.8	20.1	6 20	19 8.83	-29 11.6	2.413	3.396	5.2	21.5
6 30	19 0.34	-10 11.9	1.847	2.844	5.0	19.9	6 30	19 0.45	-29 31.2	2.388	3.397	2.5	21.3
7 10	18 51.64	-11 3.1	1.847	2.848	4.5	19.9	7 10	18 51.67	-29 44.5	2.392	3.399	2.8	21.3
7 20	18 43.36	-12 2.5	1.874	2.851	7.0	20.1	7 20	18 43.30	-29 50.5	2.424	3.401	5.6	21.5
7 30	18 36.37	-13 6.5	1.927	2.854	10.1	20.3	7 30	18 36.12	-29 49.5	2.483	3.402	8.5	21.7
8 9	18 31.32	-14 11.7	2.003	2.857	13.1	20.5	8 9	18 30.73	-29 42.5	2.566	3.403	11.1	21.9
314137	2005 <i>EM</i> ₁₉₀		7 4.8 67°93'	1.3/ 4.6	17		365736	2010 <i>WK</i> ₈		7 4.8 131°57'	2.9/ 5.3	18	
5 31	19 26.01	-25 59.2	1.400	2.275	16.5	20.6	5 31	19 19.19	-13 50.1	2.786	3.618	10.5	20.4
6 10	19 20.49	-25 59.6	1.337	2.279	12.5	20.4	6 10	19 13.98	-13 18.8	2.711	3.625	8.1	20.2
6 20	19 12.00	-25 59.3	1.293	2.283	7.8	20.1	6 20	19 7.40	-12 52.6	2.662	3.633	5.5	20.1
6 30	19 1.50	-25 55.0	1.273	2.287	2.8	19.8	6 30	18 59.95	-12 32.1	2.639	3.640	3.3	19.9
7 10	18 50.42	-25 44.5	1.279	2.291	3.2	19.9	7 10	18 52.24	-12 17.4	2.645	3.646	3.2	19.9
7 20	18 40.21	-25 27.4	1.309	2.295	8.1	20.2	7 20	18 44.91	-12 8.3	2.679	3.653	5.3	20.1
7 30	18 32.20	-25 5.3	1.362	2.299	12.7	20.4	7 30	18 38.54	-12 4.6	2.741	3.659	7.8	20.3
8 9	18 27.22	-24 40.6	1.436	2.304	16.6	20.7	8 9	18 33.61	-12 5.3	2.827	3.666	10.1	20.4
293134	2006 <i>XP</i> ₆₁		7 4.8 140°71'	1.0/ 4.9	18		446421	2014 <i>JM</i> ₂₂		7 4.8 21°54'	9.7/ 8.4	15	
5 31	19 20.25	-19 49.4	2.394	3.244	11.4	20.9	5 31	19 16.15	+ 2 22.0	1.727	2.531	17.0	21.2
6 10	19 15.05	-19 43.4	2.319	3.248	8.6	20.7	6 10	19 12.42	+ 2 58.8	1.669	2.540	14.5	21.1
6 20	19 8.17	-19 40.4	2.268	3.252	5.4	20.5	6 20	19 6.74	+ 3 13.5	1.631	2.551	12.1	20.9
6 30	19 0.18	-19 39.7	2.244	3.256	2.0	20.3	6 30	18 59.78	+ 3 2.9	1.613	2.562	10.3	20.8
7 10	18 51.86	-19 40.2	2.247	3.259	2.0	20.3	7 10	18 52.43	+ 2 27.0	1.619	2.574	9.8	20.8
7 20	18 43.96	-19 41.3	2.279	3.263	5.4	20.5	7 20	18 45.61	+ 1 28.4	1.647	2.587	10.8	20.9
7 30	18 37.22	-19 42.6	2.337	3.266	8.5	20.7	7 30	18 40.17	+ 0 12.0	1.698	2.600	12.7	21.1
8 9	18 32.21	-19 44.0	2.420	3.269	11.3	20.9	8 9	18 36.75	- 1 15.8	1.771	2.614	15.0	21.3
393118	2013 <i>BO</i> ₃₀		7 4.8 354°86'	0°0/ 4.5	18		387518	1999 <i>TV</i> ₁₂₈		7 4.8 307°77'	10°5/ 2.3	18	
5 31	19 20.11	-19 53.2	2.003	2.863	12.9	20.4	5 31	19 28.82	-45 32.4	1.609	2.451	16.3	20.4
6 10	19 15.40	-20 40.1	1.927	2.862	9.7	20.1	6 10	19 23.57	-46 41.0	1.527	2.428	14.0	20.1
6 20	19 8.63	-21 33.8	1.874	2.861	6.0	19.9	6 20	19 14.52	-47 36.1	1.464	2.405	11.8	20.0
6 30	19 0.40	-22 31.0	1.847	2.861	2.0	19.6	6 30	19 2.54	-48 7.8	1.424	2.382	10.6	19.8
7 10	18 51.60	-23 28.1	1.847	2.860	2.2	19.7	7 10	18 49.29	-48 8.6	1.406	2.359	11.1	19.8
7 20	18 43.18	-24 21.6	1.875	2.860	6.2	19.9	7 20	18 36.74	-47 36.4	1.410	2.337	13.2	19.9
7 30	18 36.09	-25 9.2	1.929	2.860	9.9	20.2	7 30	18 26.80	-46 34.9	1.435	2.315	16.0	20.0
8 9	18 31.05	-25 50.0	2.006	2.860	13.1	20.4	8 9	18 20.71	-45 12.1	1.479	2.294	18.8	20.1
126956	2002 <i>FU</i> ₁₁		7 4.8 303°75'	1°4/ 5.1	17		336279	2008 <i>SR</i> ₂₄₅		7 4.8 287°91'	0°9/ 4.5	18	
5 31	19 20.58	-18 52.8	1.593	2.462	15.2	20.2	5 31	19 22.08	-23 17.7	1.734	2.601	14.2	20.9
6 10	19 16.33	-18 54.5	1.505	2.444	11.6	19.9	6 10	19 17.39	-23 45.5	1.644	2.583	10.8	20.6
6 20	19 9.50	-19 2.9	1.438	2.425	7.4	19.6	6 20	19 10.16	-24 17.5	1.576	2.564	6.7	20.3
6 30	19 0.76	-19 16.7	1.395	2.408	2.9	19.3	6 30	19 1.01	-24 50.5	1.532	2.545	2.3	20.0
7 10	18 51.16	-19 33.9	1.377	2.390	2.9	19.3	7 10	18 50.99	-25 20.8	1.514	2.527	2.8	20.0
7 20	18 41.94	-19 52.6	1.385	2.372	7.6	19.5	7 20	18 41.29	-25 45.7	1.523	2.508	7.3	20.2
7 30	18 34.33	-20 11.4	1.416	2.355	12.1	19.7	7 30	18 33.16	-26 4.1	1.556	2.489	11.7	20.5
8 9	18 29.26	-20 29.3	1.468	2.339	16.1	20.0	8 9	18 27.51	-26 16.1	1.610	2.471	15.5	20.6
169845	2002 <i>RG</i> ₁₀		7 4.8 241°86'	2°9/ 5.6	18		362403	2010 <i>OK</i> ₁₂₄		7 4.8 225°21'	8°8/ 29.9	18	
5 31	19 20.39	-13 25.3	2.263	3.102	12.3	20.5	5 31	19 31.19	-52 32.7	2.921	3.700	11.3	21.6
6 10	19 15.37	-13 26.4	2.172	3.090	9.6	20.3	6 10	19 24.16	-53 59.9	2.850	3.691	10.1	21.5
6 20	19 8.51	-13 35.9	2.103	3.078	6.5	20.0	6 20	19 14.33	-55 14.9	2.803	3.682	9.1	21.4
6 30	19 0.36	-13 53.4	2.061	3.065	3.6	19.8	6 30	19 2.39	-56 11.3	2.780	3.672	8.8	21.3
7 10	18 51.65	-14 17.8	2.046	3.052	3.3	19.8	7 10	18 49.47	-56 44.8	2.782	3.662	9.1	21.4
7 20	18 43.23	-14 47.4	2.059	3.039	6.2	20.0	7 20	18 36.88	-56 53.9	2.807	3.652	10.1	21.4
7 30	18 35.91	-15 20.6	2.098	3.025	9.4	20.1	7 30	18 25.99	-56 40.4	2.856	3.641	11.4	21.5
8 9	18 30.38	-15 55.4	2.161	3.011	12.4	20.3	8 9	18 17.77	-56 8.5	2.923	3.630	12.8	21.6
429548	2011 <i>CF</i> ₂₈		7 4.8 243°37'	0°3/ 4.7	18		335055	2004 <i>RD</i> ₁₄₃		7 4.8 284°97'	4°0/ 4.3	18	
5 31	19 25.34	-24 3.2	1.716	2.579	14.6	21.4	5 31	19 26.74	-32 59.7	1.730	2.590	14.6	21.0
6 10	19 19.66	-23 56.5	1.634	2.570	11.0	21.2	6 10	19 21.01	-33 8.3	1.640	2.572	11.3	20.7
6 20	19 11.41	-23 50.2	1.574	2.561	6.8	20.9	6 20	19 12.41	-33 10.2	1.573	2.553	7.7	20.5
6 30	19 1.34	-23 42.2	1.538	2.552	2.3	20.6	6 30	19 1.74	-33 0.9	1.530	2.535	4.5	20.2
7 10	18 50.59	-23 31.0	1.530	2.542	2.5	20.6	7 10	18 50.24	-32 37.3	1.513	2.516	4.8	20.2
7 20	18 40.40	-23 15.9	1.547	2.533	7.2	20.9	7 20	18 39.33	-31 59.1	1.522	2.497	8.4	20.4
7 30	18 31.94	-22 58.1	1.590	2.523	11.5	21.1	7 30	18 30.33	-31 9.2	1.555	2.479	12.3	20.6
8 9	18 26.07	-22 38.9	1.654	2.512	15.2	21.3	8 9	18 24.19	-30 12.1	1.610	2.460	15.9	20.8
153291	2001 <i>FW</i> ₁₉		7 4.8 31°42'	1°8/ 5.0	17		361027	2005 <i>WS</i> ₈₈		7 4.8 148°75'	3°6/ 5.4	18	
5 31	19 22.78	-19 32.7	0.999	1.893	20.1	20.1	5 31	19 19.55	-12 46.1	2.438	3.273	11.7	20.4
6 10	19 18.70	-19 21.0	0.949	1.900	15.2	19.8	6 10	19 14.47	-12 8.9	2.361	3.275	9.1	20.3
6 20	19 11.16	-19 17.4	0.916	1.908	9.6	19.5	6 20	19 7.81	-11 38.0	2.307	3.276	6.4	20.1
6 30	19 1.28	-19 20.2	0.903	1.917	3.7	19.2	6 30	19 0.11	-11 14.3	2.280	3.278	4.1	19.9
7 10	18 50.75	-19 27.2	0.913	1.926	3.6	19.3	7 10	18 52.09	-10 58.1	2.280	3.279	3.9	19.9
7 20	18 41.32	-19 36.3	0.945	1.936	9.4	19.6	7 20	18 44.45	-10 49.5	2.308	3.280	6.2	20.1
7 30	18 34.50	-19 46.4	0.997	1.947	14.7	20.0	7 30	18 37.90	-10 48.0	2.363	3.282	8.9	20.2
8 9	18 31.20	-19 56.7	1.067	1.959	19.2	20.3	8 9	18 32.97	-10 52.2	2.441	3.283	11.4	20.4
158327	2001 <												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
468618	2008 <i>EW</i> ₁₅₁		7 4.8 24 ^o 07	0 ^o 0/ 4.6 16			191684	2004 <i>RK</i> ₇₈		7 4.8 342 ^o 96	4 ^o 4/ 3.7 16		
5 31	19 21.43	-22 14.9	1.207	2.094	17.8	21.3	5 31	19 18.71	-28 52.1	1.226	2.119	17.1	19.6
6 10	19 17.30	-22 17.9	1.152	2.101	13.3	21.1	6 10	19 15.77	-29 47.2	1.156	2.106	13.1	19.3
6 20	19 10.14	-22 25.2	1.117	2.109	8.2	20.8	6 20	19 9.56	-30 43.4	1.105	2.095	8.7	19.0
6 30	19 0.96	-22 34.2	1.103	2.117	2.7	20.5	6 30	19 0.91	-31 33.8	1.076	2.085	4.8	18.8
7 10	18 51.21	-22 42.0	1.113	2.127	2.9	20.6	7 10	18 51.22	-32 11.7	1.070	2.076	5.6	18.8
7 20	18 42.38	-22 47.1	1.147	2.138	8.3	20.9	7 20	18 42.17	-32 33.2	1.086	2.068	10.0	19.0
7 30	18 35.80	-22 49.3	1.203	2.149	13.1	21.2	7 30	18 35.38	-32 38.0	1.123	2.061	14.6	19.2
8 9	18 32.31	-22 48.9	1.277	2.161	17.2	21.5	8 9	18 31.94	-32 28.9	1.178	2.056	18.7	19.5
284646	2007 <i>WL</i> ₉		7 4.8 337 ^o 40	1 ^o 9/ 4.6 18			121591	1999 <i>VN</i> ₁₁₁		7 4.8 252 ^o 92	0 ^o 4/ 4.9 18		
5 31	19 21.66	-27 50.5	1.545	2.421	15.2	20.3	5 31	19 19.46	-20 52.4	2.561	3.411	10.7	20.6
6 10	19 17.20	-27 46.5	1.468	2.411	11.5	20.1	6 10	19 14.54	-20 59.9	2.470	3.399	8.1	20.4
6 20	19 10.03	-27 39.6	1.412	2.401	7.3	19.8	6 20	19 7.96	-21 10.3	2.403	3.388	5.0	20.2
6 30	19 0.95	-27 27.1	1.380	2.392	3.0	19.5	6 30	19 0.22	-21 22.3	2.363	3.376	1.7	19.9
7 10	18 51.19	-27 7.1	1.373	2.384	3.3	19.5	7 10	18 52.03	-21 34.5	2.351	3.364	1.8	19.9
7 20	18 42.08	-26 39.5	1.391	2.377	7.8	19.7	7 20	18 44.12	-21 45.7	2.367	3.351	5.2	20.1
7 30	18 34.87	-26 6.1	1.433	2.371	12.1	20.0	7 30	18 37.24	-21 55.4	2.411	3.339	8.3	20.3
8 9	18 30.40	-25 29.8	1.495	2.365	15.9	20.2	8 9	18 31.98	-22 3.4	2.478	3.326	11.1	20.5
109478	2001 <i>QJ</i> ₂₂₁		7 4.8 330 ^o 57	2 ^o 4/ 5.2 18			489055	2005 <i>YT</i> ₁₁₇		7 4.8 269 ^o 25	1 ^o 1/ 4.6 18		
5 31	19 19.97	-17 6.3	1.817	2.677	14.0	19.6	5 31	19 23.37	-24 39.7	1.780	2.645	14.0	21.7
6 10	19 15.40	-16 49.1	1.740	2.672	10.7	19.4	6 10	19 18.24	-24 56.1	1.695	2.632	10.6	21.4
6 20	19 8.67	-16 37.8	1.684	2.667	7.0	19.2	6 20	19 10.61	-25 14.2	1.631	2.619	6.6	21.2
6 30	19 0.47	-16 32.4	1.652	2.662	3.3	18.9	6 30	19 1.17	-25 31.0	1.592	2.606	2.4	20.9
7 10	18 51.73	-16 32.1	1.647	2.657	3.2	18.9	7 10	18 50.97	-25 43.5	1.580	2.592	2.7	20.9
7 20	18 43.46	-16 36.1	1.668	2.653	6.8	19.1	7 20	18 41.21	-25 50.1	1.595	2.579	7.1	21.1
7 30	18 36.63	-16 43.6	1.714	2.649	10.7	19.4	7 30	18 33.06	-25 50.7	1.634	2.565	11.3	21.3
8 9	18 31.98	-16 53.5	1.782	2.645	14.1	19.6	8 9	18 27.37	-25 46.3	1.694	2.552	14.9	21.5
2970	<i>Pestalozzi</i>		7 4.8 233 ^o 58	5 ^o 6/ 3.7 18			125625	2001 <i>XO</i> ₅₈		7 4.8 72 ^o 07	0 ^o 0/ 4.5 18		
5 31	19 28.13	-37 48.3	2.101	2.944	13.0	17.3	5 31	19 25.65	-20 12.6	1.277	2.153	17.8	18.6
6 10	19 21.68	-38 22.5	2.019	2.934	10.4	17.1	6 10	19 20.27	-20 49.7	1.227	2.170	13.3	18.4
6 20	19 12.65	-38 48.6	1.960	2.924	7.7	16.9	6 20	19 11.90	-21 34.6	1.197	2.187	8.2	18.2
6 30	19 1.79	-39 1.3	1.925	2.914	5.8	16.8	6 30	19 1.55	-22 22.8	1.190	2.204	2.7	17.9
7 10	18 50.28	-38 57.0	1.918	2.903	6.1	16.8	7 10	18 50.66	-23 9.0	1.207	2.221	2.9	17.9
7 20	18 39.34	-38 34.9	1.937	2.891	8.4	16.9	7 20	18 40.73	-23 49.6	1.250	2.238	8.1	18.3
7 30	18 30.17	-37 57.4	1.981	2.880	11.3	17.1	7 30	18 33.07	-24 22.8	1.315	2.255	12.8	18.6
8 9	18 23.60	-37 8.7	2.047	2.868	14.1	17.2	8 9	18 28.49	-24 48.6	1.401	2.272	16.7	18.9
385384	2002 <i>SW</i> ₂		7 4.8 231 ^o 12	11 ^o 0/ 4.9 17			247195	2001 <i>OB</i> ₂		7 4.8 355 ^o 61	7 ^o 1/ 4.3 18		
5 31	19 44.66	-45 58.4	1.269	2.106	20.1	21.2	5 31	19 26.95	-40 27.9	1.623	2.478	15.6	19.6
6 10	19 36.08	-46 29.3	1.196	2.098	16.9	21.0	6 10	19 21.30	-40 46.2	1.556	2.475	12.6	19.4
6 20	19 22.42	-46 38.6	1.141	2.088	13.7	20.8	6 20	19 12.56	-40 51.2	1.509	2.473	9.6	19.2
6 30	19 5.12	-46 13.1	1.106	2.077	11.4	20.6	6 30	19 1.77	-40 36.8	1.485	2.471	7.4	19.1
7 10	18 46.76	-45 5.2	1.095	2.066	11.4	20.6	7 10	18 50.43	-40 0.0	1.486	2.470	7.6	19.1
7 20	18 30.19	-43 17.5	1.107	2.055	13.9	20.7	7 20	18 40.09	-39 1.8	1.511	2.470	10.0	19.2
7 30	18 17.66	-41 1.6	1.141	2.042	17.6	20.9	7 30	18 32.09	-37 47.2	1.559	2.470	13.1	19.4
8 9	18 10.22	-38 33.0	1.194	2.029	21.2	21.1	8 9	18 27.24	-36 22.9	1.628	2.471	16.1	19.6
492313	2014 <i>BP</i> ₁₆		7 4.8 126 ^o 67	1 ^o 5/ 4.4 17			470752	2008 <i>UK</i> ₁₄₁		7 4.8 269 ^o 66	1 ^o 4/ 4.4 18		
5 31	19 23.75	-26 5.5	2.120	2.976	12.4	22.3	5 31	19 23.43	-25 6.5	1.965	2.824	13.1	22.2
6 10	19 17.94	-26 28.3	2.053	2.986	9.3	22.2	6 10	19 18.19	-25 31.5	1.869	2.804	9.9	21.9
6 20	19 10.09	-26 51.1	2.010	2.996	5.8	22.0	6 20	19 10.57	-25 58.4	1.796	2.783	6.2	21.7
6 30	19 0.90	-27 10.7	1.993	3.005	2.3	21.7	6 30	19 1.18	-26 24.0	1.749	2.761	2.4	21.4
7 10	18 51.30	-27 24.9	2.004	3.014	2.7	21.8	7 10	18 50.97	-26 45.1	1.728	2.739	2.8	21.4
7 20	18 42.27	-27 32.4	2.043	3.023	6.2	22.0	7 20	18 41.04	-26 59.6	1.735	2.717	6.9	21.6
7 30	18 34.69	-27 33.4	2.107	3.032	9.5	22.3	7 30	18 32.53	-27 7.1	1.768	2.695	10.9	21.8
8 9	18 29.23	-27 29.1	2.195	3.040	12.5	22.5	8 9	18 26.31	-27 8.3	1.822	2.672	14.4	21.9
277654	2006 <i>BB</i> ₁₄₀		7 4.8 150 ^o 17	3 ^o 7/ 6.1 18			392618	2011 <i>UF</i> ₉		7 4.8 98 ^o 87	7 ^o 9/ 6.5 18		
5 31	19 21.60	-10 20.5	2.090	2.922	13.5	20.6	5 31	19 19.41	+ 0 18.1	2.385	3.171	13.4	20.8
6 10	19 16.27	-10 31.5	2.016	2.928	10.5	20.4	6 10	19 14.33	+ 1 21.4	2.322	3.182	11.4	20.6
6 20	19 9.06	-10 54.2	1.966	2.934	7.3	20.2	6 20	19 7.72	+ 2 10.6	2.280	3.193	9.5	20.5
6 30	19 0.57	-11 28.0	1.940	2.940	4.5	20.1	6 30	19 0.12	+ 2 42.7	2.262	3.204	8.1	20.5
7 10	18 51.64	-12 11.1	1.942	2.945	4.1	20.1	7 10	18 52.22	+ 2 56.6	2.270	3.215	8.0	20.5
7 20	18 43.13	-13 0.8	1.972	2.950	6.6	20.2	7 20	18 44.74	+ 2 52.5	2.303	3.225	9.0	20.6
7 30	18 35.89	-13 54.4	2.028	2.954	9.8	20.4	7 30	18 38.35	+ 2 32.3	2.360	3.236	10.7	20.7
8 9	18 30.55	-14 48.9	2.107	2.958	12.7	20.6	8 9	18 33.55	+ 1 59.3	2.439	3.246	12.5	20.8
195459	2002 <i>GE</i> ₉₉		7 4.8 167 ^o 03	4 ^o 8/ 5.7 17			302337	2002 <i>AV</i> ₁₁₇		7 4.8 103 ^o 89	3 ^o 7/ 6.5 18		
5 31	19 21.31	-10 53.5	1.869	2.710	14.5	20.1	5 31	19 19.42	- 8 33.1	2.436	3.258	12.1	20.2
6 10	19 16.24	-10 21.8	1.795	2.711	11.4	19.9	6 10	19 14.38	- 8 53.1	2.367	3.271	9.5	20.1
6 20	19 9.12	-10 0.3	1.744	2.712	8.1	19.7	6 20	19 7.78	- 9 24.5	2.321	3.284	6.8	19.9
6 30	19 0.60	- 9 50.2	1.716	2.712	5.4	19.6	6 30	19 0.16	-10 6.6	2.301	3.296	4.3	19.8
7 10	18 51.61	- 9 51.6	1.715	2.713	5.2	19.6	7 10	18 52.21	-10 57.6	2.309	3.308	3.9	19.8
7 20	18 43.10	-10 3.6	1.740	2.714	7.7	19.7	7 20	18 44.64	-11 54.9	2.346	3.321	5.9	19.9
7 30	18 36.00	-10 24.6	1.790	2.714	10.9	19.9	7 30	18 38.13	-12 55.6	2.410	3.333	8.6	20.1
8 9	18 30.												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
511461	2014 <i>KS</i> ₃₀		7 4.8 67°63	7.5/ 6.5	17		107073	2001 <i>AZ</i> ₁₈		7 4.8 142°84	0.8/ 4.9	17	
5 31	19 19.58	- 2 21.5	2.138	2.943	14.1	21.2	5 31	19 26.04	-20 4.1	1.755	2.611	14.6	20.8
6 10	19 14.57	- 1 24.7	2.082	2.960	11.8	21.1	6 10	19 19.94	-20 9.0	1.688	2.620	11.0	20.6
6 20	19 7.90	- 0 42.3	2.046	2.978	9.5	20.9	6 20	19 11.48	-20 18.4	1.643	2.629	6.9	20.4
6 30	19 0.19	- 0 16.9	2.035	2.995	7.8	20.9	6 30	19 1.44	-20 30.5	1.624	2.637	2.4	20.1
7 10	18 52.21	- 0 9.5	2.050	3.012	7.6	20.9	7 10	18 50.92	-20 43.2	1.632	2.645	2.5	20.1
7 20	18 44.74	- 0 19.2	2.089	3.029	8.8	21.0	7 20	18 41.05	-20 54.9	1.667	2.652	6.8	20.4
7 30	18 38.49	- 0 43.7	2.153	3.047	10.8	21.2	7 30	18 32.89	-21 5.0	1.727	2.658	10.8	20.7
8 9	18 34.00	- 1 19.5	2.239	3.064	12.9	21.3	8 9	18 27.17	-21 13.5	1.809	2.664	14.2	20.9
433885	2015 <i>BM</i> ₃₅₉		7 4.8 71°48	3.9/ 4.1	17		304443	2006 <i>TN</i> ₁₂₆		7 4.8 150°85	3.3/ 3.8	18	
5 31	19 26.06	-30 45.4	1.575	2.443	15.4	21.1	5 31	19 23.33	-31 50.5	2.445	3.294	11.2	21.6
6 10	19 20.36	-31 20.0	1.518	2.454	11.7	20.9	6 10	19 17.56	-32 25.9	2.374	3.299	8.6	21.5
6 20	19 11.88	-31 50.7	1.483	2.466	7.7	20.7	6 20	19 9.87	-32 57.9	2.327	3.304	5.7	21.3
6 30	19 1.56	-32 12.3	1.471	2.478	4.3	20.5	6 30	19 0.90	-33 22.9	2.307	3.309	3.5	21.2
7 10	18 50.74	-32 21.1	1.485	2.489	4.8	20.5	7 10	18 51.49	-33 38.3	2.315	3.314	3.9	21.2
7 20	18 40.78	-32 16.1	1.525	2.501	8.3	20.8	7 20	18 42.56	-33 43.1	2.350	3.318	6.4	21.3
7 30	18 32.92	-31 59.2	1.588	2.513	12.0	21.0	7 30	18 34.96	-33 37.8	2.412	3.322	9.1	21.5
8 9	18 27.94	-31 33.7	1.673	2.525	15.4	21.3	8 9	18 29.31	-33 24.3	2.497	3.325	11.6	21.7
280949	2006 <i>BP</i> ₁₅₄		7 4.8 239°90	1.2/ 5.1	17		186350	2002 <i>EL</i> ₁₆₁		7 4.8 356°48	5.1/ 6.0	18	
5 31	19 21.85	-18 12.6	1.859	2.716	13.8	20.5	5 31	19 18.11	- 8 49.6	2.075	2.910	13.5	19.8
6 10	19 16.86	-18 29.0	1.779	2.711	10.5	20.3	6 10	19 13.71	- 8 22.4	2.000	2.909	10.8	19.6
6 20	19 9.64	-18 52.3	1.722	2.707	6.7	20.0	6 20	19 7.53	- 8 6.2	1.946	2.908	7.9	19.4
6 30	19 0.85	-19 20.9	1.689	2.701	2.6	19.8	6 30	19 0.13	- 8 2.3	1.917	2.908	5.6	19.3
7 10	18 51.44	-19 52.1	1.684	2.696	2.5	19.8	7 10	18 52.31	- 8 10.5	1.914	2.907	5.3	19.3
7 20	18 42.46	-20 23.6	1.705	2.691	6.6	20.0	7 20	18 44.89	- 8 30.0	1.938	2.907	7.3	19.4
7 30	18 34.92	-20 53.7	1.752	2.685	10.5	20.2	7 30	18 38.66	- 8 58.6	1.986	2.907	10.2	19.6
8 9	18 29.59	-21 21.3	1.821	2.680	14.0	20.4	8 9	18 34.24	- 9 33.8	2.056	2.908	12.9	19.7
510448	2011 <i>WQ</i> ₉		7 4.8 72°75	5.0/ 2.9	17		44866	1999 <i>UP</i> ₂₇		7 4.8 86°86	0.8/ 4.7	17	
5 31	19 23.59	-34 47.3	2.175	3.027	12.3	21.2	5 31	19 26.75	-23 54.9	1.473	2.342	16.2	19.1
6 10	19 18.09	-35 55.9	2.114	3.037	9.6	21.1	6 10	19 20.79	-24 8.0	1.419	2.358	12.1	18.9
6 20	19 10.35	-36 59.6	2.077	3.047	6.9	20.9	6 20	19 12.10	-24 22.9	1.386	2.374	7.4	18.6
6 30	19 1.07	-37 53.1	2.066	3.058	5.1	20.8	6 30	19 1.64	-24 36.3	1.377	2.391	2.5	18.4
7 10	18 51.24	-38 32.2	2.082	3.068	5.6	20.9	7 10	18 50.75	-24 45.4	1.394	2.407	2.8	18.4
7 20	18 41.95	-38 55.0	2.125	3.078	7.9	21.0	7 20	18 40.78	-24 48.8	1.436	2.422	7.6	18.8
7 30	18 34.20	-39 2.2	2.192	3.089	10.5	21.2	7 30	18 32.92	-24 47.0	1.503	2.438	11.9	19.0
8 9	18 28.72	-38 56.5	2.281	3.099	12.9	21.4	8 9	18 27.90	-24 41.4	1.590	2.453	15.5	19.3
36851	2000 <i>SS</i> ₁₂₃		7 4.8 342°15	3.6/ 5.6	17		66953	1999 <i>XM</i> ₁₉		7 4.8 293°74	7.7/ 5.9	18	
5 31	19 10.94	-15 15.7	1.009	1.912	19.1	17.5	5 31	19 19.74	- 5 20.7	1.762	2.592	15.7	19.0
6 10	19 10.12	-15 13.8	0.932	1.887	14.9	17.2	6 10	19 15.42	- 4 29.1	1.671	2.571	13.0	18.7
6 20	19 6.21	-15 27.3	0.873	1.865	10.0	16.8	6 20	19 8.87	- 3 51.0	1.600	2.550	10.2	18.5
6 30	18 59.88	-15 56.8	0.833	1.844	5.0	16.5	6 30	19 0.66	- 3 29.8	1.552	2.529	8.1	18.3
7 10	18 52.42	-16 40.4	0.813	1.826	4.5	16.4	7 10	18 51.70	- 3 27.6	1.528	2.509	7.9	18.3
7 20	18 45.41	-17 33.8	0.814	1.809	9.7	16.6	7 20	18 43.00	- 3 44.4	1.529	2.488	9.9	18.3
7 30	18 40.49	-18 31.9	0.834	1.796	15.3	16.8	7 30	18 35.64	- 4 18.0	1.553	2.467	13.0	18.5
8 9	18 38.90	-19 29.5	0.871	1.785	20.3	17.1	8 9	18 30.43	- 5 4.5	1.598	2.447	16.1	18.6
282742	2006 <i>ET</i> ₃₉		7 4.8 32°90	3.4/ 5.7	17		264495	2001 <i>QB</i> ₁₀		7 4.8 292°07	4.0/ 4.3	18	
5 31	19 20.32	-13 29.3	1.661	2.517	15.2	20.5	5 31	19 25.74	-31 34.0	1.558	2.426	15.5	20.1
6 10	19 15.77	-13 28.6	1.593	2.521	11.8	20.3	6 10	19 20.56	-31 52.5	1.473	2.410	12.0	19.9
6 20	19 8.96	-13 38.9	1.546	2.525	7.9	20.1	6 20	19 12.33	-32 6.2	1.409	2.393	8.0	19.6
6 30	19 0.62	-13 59.8	1.524	2.530	4.3	19.9	6 30	19 1.85	-32 10.2	1.369	2.376	4.5	19.4
7 10	18 51.75	-14 29.4	1.527	2.534	4.0	19.9	7 10	18 50.45	-32 0.5	1.354	2.359	4.9	19.3
7 20	18 43.43	-15 5.3	1.555	2.539	7.3	20.1	7 20	18 39.62	-31 36.0	1.365	2.343	8.8	19.5
7 30	18 36.68	-15 44.8	1.608	2.544	11.2	20.4	7 30	18 30.84	-30 59.2	1.398	2.326	13.1	19.7
8 9	18 32.23	-16 25.3	1.683	2.549	14.6	20.6	8 9	18 25.10	-30 14.1	1.452	2.310	16.9	19.9
369492	2010 <i>UT</i> ₇₀		7 4.8 223°53	3.4/ 4.1	17		168635	Davidkaufmann		7 4.8 23°80	0.3/ 4.9	17	
5 31	19 28.23	-30 47.2	1.959	2.811	13.4	21.9	5 31	19 21.38	-21 13.6	1.841	2.704	13.7	21.1
6 10	19 21.82	-31 17.9	1.872	2.800	10.3	21.7	6 10	19 16.47	-21 20.8	1.769	2.705	10.3	20.9
6 20	19 12.81	-31 45.7	1.809	2.789	6.8	21.4	6 20	19 9.37	-21 31.8	1.719	2.706	6.4	20.6
6 30	19 1.93	-32 5.9	1.771	2.777	3.8	21.2	6 30	19 0.78	-21 44.7	1.694	2.708	2.2	20.4
7 10	18 50.29	-32 14.7	1.761	2.764	4.3	21.2	7 10	18 51.67	-21 57.4	1.696	2.709	2.3	20.4
7 20	18 39.13	-32 10.8	1.778	2.751	7.6	21.4	7 20	18 43.09	-22 8.6	1.725	2.711	6.5	20.6
7 30	18 29.65	-31 55.1	1.821	2.737	11.3	21.6	7 30	18 36.03	-22 17.5	1.778	2.713	10.4	20.9
8 9	18 22.73	-31 30.7	1.886	2.722	14.5	21.8	8 9	18 31.21	-22 24.1	1.854	2.715	13.7	21.1
273716	2007 <i>EJ</i> ₇₈		7 4.8 32°50	1.1/ 5.0	17		235836	2004 <i>XP</i> ₁₉₁		7 4.8 257°82	1.9/ 5.5	18	
5 31	19 21.16	-19 13.4	1.384	2.260	16.6	20.9	5 31	19 21.17	-15 4.9	1.921	2.771	13.7	20.1
6 10	19 16.77	-19 23.5	1.327	2.269	12.5	20.6	6 10	19 16.34	-15 34.6	1.837	2.764	10.5	19.9
6 20	19 9.72	-19 41.0	1.289	2.278	7.8	20.4	6 20	19 9.36	-16 14.8	1.775	2.756	6.9	19.7
6 30	19 0.88	-20 3.6	1.276	2.289	2.9	20.1	6 30	19 0.82	-17 3.7	1.739	2.748	3.1	19.4
7 10	18 51.51	-20 28.3	1.286	2.299	2.8	20.1	7 10	18 51.63	-17 58.1	1.729	2.741	2.8	19.4
7 20	18 42.91	-20 52.8	1.321	2.311	7.6	20.5	7 20	18 42.76	-18 54.8	1.748	2.733	6.5	19.6
7 30	18 36.27	-21 15.2	1.380	2.322	12.1	20.8	7 30	18 35.23	-19 50.7	1.791	2.725	10.4	19.8
8 9	18 32.36	-21 34.9	1.459	2.335	15.9	21.0	8 9	18 29.80	-20 43.4	1.858	2.717	13.8	20.0
19733	1999 <i>XA</i> ₁₆₆		7 4.										

EPHEMERIDES

7 4.8

7 4.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
439221	2012 <i>TK</i> ₃₆		7 4.8 215°97	5°4/ 5.9 18			262126	2006 <i>SX</i> ₂₉		7 4.8 248°39	0°2/ 4.8 17		
5 31	19 20.89	- 6 51.9	2.352	3.167	12.7	21.9	5 31	19 26.42	-23 35.4	1.799	2.657	14.2	21.6
6 10	19 15.64	- 6 18.3	2.265	3.160	10.3	21.7	6 10	19 20.56	-23 33.4	1.707	2.640	10.8	21.3
6 20	19 8.68	- 5 55.2	2.201	3.152	7.8	21.6	6 20	19 12.12	-23 32.4	1.637	2.623	6.8	21.1
6 30	19 0.55	- 5 44.0	2.163	3.144	5.8	21.4	6 30	19 1.79	-23 30.2	1.592	2.606	2.3	20.7
7 10	18 51.95	- 5 45.4	2.151	3.135	5.6	21.4	7 10	18 50.65	-23 24.9	1.575	2.588	2.5	20.7
7 20	18 43.66	- 5 58.7	2.167	3.126	7.4	21.5	7 20	18 39.92	-23 15.7	1.584	2.569	7.1	21.0
7 30	18 36.44	- 6 22.4	2.208	3.117	9.9	21.6	7 30	18 30.81	-23 3.1	1.619	2.550	11.5	21.2
8 9	18 30.90	- 6 54.1	2.273	3.107	12.5	21.8	8 9	18 24.22	-22 48.4	1.676	2.530	15.2	21.4
370325	2002 <i>RG</i> ₁₄₈		7 4.8 279°06	1°7/ 4.5 17			247736	2003 <i>HP</i> ₅₁		7 4.8 6°86	7°8/ 5.7 17		
5 31	19 24.84	-25 45.1	1.603	2.471	15.1	21.5	5 31	19 18.27	- 5 48.6	1.755	2.590	15.5	19.4
6 10	19 19.81	-26 6.0	1.511	2.450	11.5	21.2	6 10	19 14.08	- 4 33.8	1.689	2.590	12.8	19.3
6 20	19 11.88	-26 28.4	1.440	2.428	7.3	20.9	6 20	19 7.87	- 3 32.0	1.643	2.592	10.1	19.1
6 30	19 1.75	-26 48.5	1.393	2.406	2.9	20.6	6 30	19 0.31	- 2 47.0	1.621	2.595	8.1	19.0
7 10	18 50.58	-27 2.5	1.372	2.384	3.3	20.6	7 10	18 52.31	- 2 21.1	1.622	2.598	8.0	19.0
7 20	18 39.77	-27 8.2	1.377	2.361	8.1	20.8	7 20	18 44.83	- 2 14.5	1.648	2.602	9.7	19.1
7 30	18 30.73	-27 5.4	1.406	2.339	12.7	21.0	7 30	18 38.74	- 2 25.4	1.697	2.606	12.3	19.3
8 9	18 24.52	-26 56.0	1.455	2.316	16.8	21.2	8 9	18 34.72	- 2 50.3	1.767	2.612	15.0	19.5
130836	2000 <i>UJ</i> ₄₇		7 4.8 314°99	3°4/ 4.1 18			507168	2010 <i>CQ</i> ₁₇₀		7 4.8 111°98	0°9/ 4.6 17		
5 31	19 21.83	-27 11.7	1.200	2.089	17.7	19.4	5 31	19 23.09	-24 26.1	1.857	2.720	13.6	21.8
6 10	19 18.34	-27 55.0	1.121	2.070	13.5	19.1	6 10	19 17.79	-24 41.7	1.787	2.723	10.2	21.6
6 20	19 11.37	-28 41.2	1.061	2.052	8.8	18.8	6 20	19 10.22	-24 58.6	1.738	2.726	6.3	21.4
6 30	19 1.66	-29 24.2	1.022	2.033	4.2	18.5	6 30	19 1.11	-25 14.0	1.715	2.728	2.2	21.1
7 10	18 50.66	-29 57.3	1.007	2.016	4.9	18.5	7 10	18 51.48	-25 25.6	1.719	2.731	2.5	21.1
7 20	18 40.16	-30 16.4	1.014	1.999	10.0	18.7	7 20	18 42.42	-25 32.0	1.749	2.734	6.6	21.4
7 30	18 31.96	-30 20.9	1.042	1.983	15.2	18.9	7 30	18 34.94	-25 33.0	1.805	2.736	10.4	21.6
8 9	18 27.32	-30 13.3	1.087	1.967	19.8	19.1	8 9	18 29.78	-25 29.8	1.883	2.739	13.7	21.9
510618	2012 <i>TX</i> ₁₃₀		7 4.8 242°00	2°0/ 5.2 18			193668	2001 <i>DJ</i> ₆₆		7 4.8 107°11	4°5/ 4.2 18 R		
5 31	19 22.88	-17 22.8	2.313	3.155	12.0	22.1	5 31	19 28.58	-35 33.2	2.018	2.865	13.3	20.2
6 10	19 17.29	-17 6.8	2.216	3.139	9.2	21.9	6 10	19 21.74	-35 51.4	1.959	2.880	10.3	20.0
6 20	19 9.79	-16 55.1	2.143	3.122	6.0	21.7	6 20	19 12.52	-36 1.7	1.922	2.894	7.2	19.9
6 30	19 0.94	-16 47.1	2.096	3.105	2.8	21.5	6 30	19 1.82	-35 59.8	1.911	2.908	4.8	19.7
7 10	18 51.53	-16 42.6	2.078	3.087	2.7	21.4	7 10	18 50.79	-35 43.5	1.927	2.921	5.1	19.8
7 20	18 42.41	-16 40.9	2.087	3.069	6.0	21.6	7 20	18 40.60	-35 13.4	1.969	2.935	7.6	20.0
7 30	18 34.43	-16 41.7	2.124	3.050	9.4	21.8	7 30	18 32.28	-34 32.1	2.038	2.948	10.5	20.2
8 9	18 28.28	-16 44.6	2.184	3.030	12.5	21.9	8 9	18 26.48	-33 43.7	2.129	2.960	13.3	20.4
489690	2007 <i>VP</i> ₉₈		7 4.8 268°38	2°4/ 5.1 17			259093	2002 <i>VC</i> ₁₀₄		7 4.8 217°01	2°5/ 4.3 17		
5 31	19 24.96	-18 8.0	1.544	2.406	15.9	21.7	5 31	19 26.50	-28 23.9	1.931	2.787	13.4	21.3
6 10	19 19.78	-17 45.1	1.453	2.387	12.3	21.4	6 10	19 20.48	-28 50.9	1.849	2.781	10.2	21.1
6 20	19 11.79	-17 27.3	1.383	2.368	8.0	21.1	6 20	19 11.99	-29 16.7	1.789	2.773	6.6	20.9
6 30	19 1.71	-17 14.6	1.338	2.348	3.6	20.8	6 30	19 1.73	-29 37.2	1.756	2.765	3.1	20.6
7 10	18 50.67	-17 6.2	1.317	2.328	3.6	20.8	7 10	18 50.78	-29 49.1	1.749	2.757	3.6	20.7
7 20	18 40.02	-17 1.8	1.322	2.307	8.2	21.0	7 20	18 40.33	-29 51.0	1.770	2.748	7.2	20.9
7 30	18 31.09	-17 1.0	1.351	2.287	12.9	21.2	7 30	18 31.50	-29 43.3	1.816	2.738	10.9	21.1
8 9	18 24.91	-17 3.5	1.401	2.266	17.1	21.4	8 9	18 25.13	-29 28.4	1.884	2.728	14.2	21.3
290736	2005 <i>UM</i> ₄₅₆		7 4.8 245°75	0°5/ 4.7 18			169555	2002 <i>ES</i> ₁₁₅		7 4.8 88°19	4°2/ 3.8 18		
5 31	19 20.18	-22 31.8	2.391	3.245	11.3	21.0	5 31	19 26.88	-29 13.1	1.406	2.279	16.6	20.0
6 10	19 15.25	-22 59.8	2.306	3.238	8.5	20.8	6 10	19 21.43	-30 14.3	1.347	2.286	12.6	19.8
6 20	19 8.52	-23 30.9	2.245	3.231	5.2	20.6	6 20	19 12.84	-31 14.7	1.309	2.294	8.3	19.6
6 30	19 0.52	-24 2.8	2.210	3.223	1.8	20.4	6 30	19 2.04	-32 7.2	1.294	2.301	4.7	19.4
7 10	18 52.01	-24 33.0	2.203	3.216	2.0	20.4	7 10	18 50.49	-32 45.7	1.305	2.309	5.3	19.4
7 20	18 43.82	-24 59.7	2.225	3.208	5.5	20.6	7 20	18 39.77	-33 7.2	1.340	2.316	9.2	19.7
7 30	18 36.74	-25 21.8	2.273	3.201	8.8	20.8	7 30	18 31.33	-33 12.6	1.398	2.323	13.3	19.9
8 9	18 31.44	-25 39.2	2.345	3.193	11.7	21.0	8 9	18 26.10	-33 5.4	1.476	2.330	16.9	20.2
40083	1998 <i>MS</i> ₁₈		7 4.8 16°72	5°6/ 6.4 18			10997	<i>Gahm</i>		7 4.8 23°69	3°3/ 4.5 18 R		
5 31	19 19.58	- 8 22.5	1.653	2.497	15.9	18.5	5 31	19 23.00	-29 57.9	1.231	2.117	17.5	16.5
6 10	19 15.24	- 8 10.6	1.584	2.499	12.7	18.3	6 10	19 18.56	-30 3.0	1.180	2.127	13.3	16.3
6 20	19 8.68	- 8 13.8	1.535	2.501	9.2	18.1	6 20	19 10.98	-30 3.1	1.150	2.139	8.5	16.0
6 30	19 0.59	- 8 33.0	1.509	2.503	6.3	18.0	6 30	19 1.37	-29 54.1	1.141	2.151	4.1	15.8
7 10	18 51.96	- 9 7.2	1.508	2.505	5.8	17.9	7 10	18 51.30	-29 33.7	1.156	2.165	4.4	15.9
7 20	18 43.83	- 9 53.9	1.532	2.508	8.3	18.1	7 20	18 42.34	-29 2.5	1.194	2.180	8.8	16.2
7 30	18 37.22	-10 49.2	1.580	2.511	11.7	18.3	7 30	18 35.80	-28 23.6	1.254	2.195	13.2	16.5
8 9	18 32.85	-11 48.9	1.650	2.514	15.0	18.5	8 9	18 32.45	-27 40.9	1.334	2.212	17.0	16.8
174749	2003 <i>UC</i> ₂₆₅		7 4.8 251°19	3°0/ 5.5 18			509851	2008 <i>YE</i> ₁₀₂		7 4.8 212°72	0°6/ 4.9 18		
5 31	19 23.06	-14 46.6	1.591	2.449	15.8	20.4	5 31	19 22.35	-20 16.0	2.427	3.273	11.4	23.1
6 10	19 18.14	-14 48.0	1.510	2.440	12.2	20.2	6 10	19 16.79	-20 21.2	2.339	3.266	8.6	22.9
6 20	19 10.65	-15 0.1	1.450	2.431	8.1	19.9	6 20	19 9.44	-20 29.7	2.275	3.259	5.4	22.7
6 30	19 1.30	-15 22.1	1.413	2.422	4.1	19.6	6 30	19 0.84	-20 40.1	2.238	3.251	1.9	22.4
7 10	18 51.16	-15 52.1	1.403	2.412	3.8	19.6	7 10	18 51.77	-20 50.9	2.230	3.242	1.9	22.4
7 20	18 41.45	-16 27.5	1.417	2.402	7.8	19.8	7 20	18 43.02	-21 1.0	2.250	3.233	5.4	22.7
7 30	18 33.39	-17 5.7	1.456	2.392	12.1	20.0	7 30	18 35.41	-21 9.9	2.297	3.224	8.7	22.8
8 9	18 27.87	-17 44.5	1.517	2.382	16.0	20.3	8 9	18 29.57	-21 17.5	2.368	3.213	11.6	23.0
192156	2006 <i>HP</i> ₄₂		7 4.8 112°37	9°7/ 5.9 18			163891	2003 <i>SJ</i> ₁₉₉					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
297782	2001 XZ ₂₄₁		7 4.8 220°73	0°7/ 5.0	18		267400	2002 AZ ₃₈		7 4.8 54°50	3°8/ 6.2	18	
5 31	19 20.84	-20 20.5	2.419	3.268	11.3	21.7	5 31	19 21.25	-11 0.6	1.580	2.432	16.1	19.6
6 10	19 15.64	-20 18.6	2.334	3.263	8.5	21.5	6 10	19 16.56	-11 24.6	1.518	2.442	12.5	19.4
6 20	19 8.71	-20 19.7	2.273	3.257	5.3	21.3	6 20	19 9.54	-12 3.8	1.477	2.453	8.6	19.2
6 30	19 0.59	-20 22.5	2.239	3.251	1.9	21.0	6 30	19 0.93	-12 56.8	1.459	2.463	4.8	19.0
7 10	18 52.05	-20 26.0	2.233	3.245	2.0	21.0	7 10	18 51.79	-14 0.1	1.467	2.474	4.2	19.0
7 20	18 43.86	-20 29.5	2.255	3.239	5.4	21.3	7 20	18 43.24	-15 9.2	1.501	2.485	7.5	19.2
7 30	18 36.79	-20 32.4	2.304	3.232	8.6	21.4	7 30	18 36.34	-16 19.7	1.560	2.496	11.4	19.5
8 9	18 31.46	-20 34.8	2.376	3.225	11.5	21.6	8 9	18 31.84	-17 27.9	1.640	2.508	14.8	19.7
27742	1990 UP ₄		7 4.8 276°31	3°5/ 5.6	18		355179	2006 WN ₇₃		7 4.8 166°10	0°0/ 4.7	18	
5 31	19 22.15	-13 58.0	1.691	2.545	15.2	18.9	5 31	19 21.02	-22 27.8	2.689	3.536	10.4	22.6
6 10	19 17.44	-13 49.1	1.598	2.525	11.9	18.6	6 10	19 15.59	-22 36.8	2.612	3.540	7.8	22.4
6 20	19 10.25	-13 50.1	1.527	2.505	8.1	18.4	6 20	19 8.59	-22 47.5	2.559	3.543	4.8	22.2
6 30	19 1.21	-14 1.3	1.479	2.485	4.4	18.1	6 30	19 0.56	-22 58.2	2.533	3.546	1.6	22.0
7 10	18 51.31	-14 21.6	1.457	2.464	4.1	18.0	7 10	18 52.19	-23 7.7	2.536	3.549	1.7	22.0
7 20	18 41.69	-14 49.4	1.461	2.444	7.8	18.2	7 20	18 44.19	-23 14.9	2.569	3.552	4.9	22.2
7 30	18 33.53	-15 22.3	1.489	2.423	12.0	18.4	7 30	18 37.24	-23 19.7	2.628	3.554	7.8	22.4
8 9	18 27.77	-15 58.1	1.539	2.402	15.9	18.6	8 9	18 31.88	-23 22.1	2.712	3.555	10.4	22.6
438290	2006 AP ₈₆		7 4.8 210°80	3°0/ 6.4	18		440923	2006 WF ₈₈		7 4.8 155°05	4°4/ 5.9	17	
5 31	19 19.61	-9 16.6	2.895	3.711	10.5	21.1	5 31	19 19.54	-9 3.8	2.551	3.372	11.6	22.0
6 10	19 14.46	-9 48.8	2.804	3.706	8.3	21.0	6 10	19 14.46	-8 35.7	2.476	3.377	9.3	21.8
6 20	19 7.89	-10 31.2	2.736	3.700	5.8	20.8	6 20	19 7.89	-8 16.4	2.423	3.382	6.8	21.7
6 30	19 0.32	-11 23.1	2.696	3.694	3.6	20.6	6 30	19 0.33	-8 6.6	2.397	3.386	4.8	21.6
7 10	18 52.33	-12 22.5	2.686	3.687	3.2	20.6	7 10	18 52.45	-8 6.6	2.399	3.390	4.6	21.5
7 20	18 44.54	-12 26.9	2.705	3.680	5.2	20.7	7 20	18 44.94	-8 15.7	2.428	3.393	6.3	21.7
7 30	18 37.59	-14 33.9	2.752	3.673	7.7	20.9	7 30	18 38.43	-8 32.6	2.483	3.396	8.7	21.8
8 9	18 32.00	-15 40.7	2.826	3.666	10.1	21.0	8 9	18 33.45	-8 55.5	2.562	3.399	11.1	22.0
320171	2007 GY ₁₀		7 4.8 299°18	6°7/ 7.1	18		46140	2001 FU ₅₇		7 4.8 50°47	3°7/ 5.4	18	
5 31	19 17.08	-1 48.6	2.317	3.120	13.2	20.5	5 31	19 21.68	-14 43.4	1.737	2.592	14.8	18.2
6 10	19 12.87	-1 29.1	2.232	3.111	11.1	20.3	6 10	19 16.66	-14 7.9	1.673	2.599	11.4	18.0
6 20	19 7.03	-1 24.5	2.168	3.102	8.9	20.1	6 20	19 9.48	-13 40.1	1.629	2.607	7.7	17.8
6 30	19 0.06	-1 36.4	2.128	3.093	7.2	20.0	6 30	19 0.89	-13 20.6	1.611	2.615	4.4	17.6
7 10	18 52.63	-2 4.9	2.113	3.084	6.8	20.0	7 10	18 51.88	-13 9.7	1.618	2.623	4.2	17.6
7 20	18 45.47	-2 48.7	2.125	3.075	8.1	20.0	7 20	18 43.50	-13 6.9	1.651	2.631	7.4	17.8
7 30	18 39.33	-3 45.0	2.161	3.066	10.2	20.2	7 30	18 36.68	-13 11.1	1.709	2.640	10.9	18.1
8 9	18 34.77	-4 50.0	2.220	3.058	12.6	20.3	8 9	18 32.08	-13 20.9	1.788	2.649	14.2	18.3
472036	2013 YB ₃₀		7 4.8 297°46	0°4/ 4.8	17		217244	2003 ML ₇		7 4.8 359°73	10°7/ 7.0	17	
5 31	19 25.57	-25 57.7	1.674	2.539	14.8	20.3	5 31	19 14.89	+0 34.7	1.569	2.391	17.6	19.1
6 10	19 19.99	-25 24.7	1.588	2.525	11.2	20.0	6 10	19 11.83	+1 48.1	1.505	2.388	15.2	18.9
6 20	19 11.76	-24 48.3	1.524	2.511	7.0	19.7	6 20	19 6.64	+2 41.1	1.459	2.386	12.8	18.8
6 30	19 1.67	-24 7.0	1.484	2.498	2.4	19.4	6 30	18 59.98	+3 8.8	1.434	2.385	11.1	18.7
7 10	18 50.91	-23 20.6	1.471	2.484	2.6	19.4	7 10	18 52.81	+3 8.8	1.430	2.385	10.8	18.6
7 20	18 40.75	-22 30.6	1.485	2.471	7.3	19.7	7 20	18 46.12	+2 42.0	1.448	2.387	12.0	18.7
7 30	18 32.39	-21 39.6	1.523	2.458	11.7	19.9	7 30	18 40.88	+1 51.9	1.488	2.390	14.2	18.9
8 9	18 26.68	-20 50.5	1.583	2.445	15.6	20.1	8 9	18 37.79	+0 44.9	1.547	2.394	16.6	19.0
57942	2002 JM ₄₀		7 4.8 333°60	5°3/ 4.1	18		46657	1995 WM ₁₇		7 4.8 284°34	1°8/ 4.5	18	
5 31	19 22.80	-32 7.2	1.151	2.041	18.2	17.7	5 31	19 24.78	-25 49.1	1.550	2.420	15.4	19.8
6 10	19 19.17	-32 39.1	1.082	2.029	14.2	17.4	6 10	19 19.91	-26 10.2	1.457	2.397	11.8	19.5
6 20	19 11.87	-33 6.0	1.031	2.018	9.7	17.1	6 20	19 12.05	-26 33.0	1.386	2.374	7.5	19.2
6 30	19 1.83	-33 20.6	1.001	2.007	5.8	16.9	6 30	19 1.90	-26 53.6	1.338	2.350	3.0	18.9
7 10	18 50.72	-33 17.4	0.993	1.997	6.4	16.9	7 10	18 50.66	-27 7.8	1.316	2.327	3.4	18.9
7 20	18 40.43	-32 54.9	1.007	1.989	10.6	17.1	7 20	18 39.75	-27 13.3	1.319	2.303	8.3	19.1
7 30	18 32.76	-32 16.0	1.042	1.981	15.4	17.3	7 30	18 30.66	-27 10.1	1.345	2.279	13.0	19.3
8 9	18 28.81	-31 26.5	1.094	1.974	19.7	17.6	8 9	18 24.49	-27 0.0	1.392	2.256	17.2	19.5
31301	1998 FE ₉₂		7 4.8 200°56	4°0/ 3.5	18		519336	2011 FJ ₁₅₉		7 4.8 221°30	8°6/ 2.5	18	
5 31	19 23.52	-33 18.2	2.391	3.240	11.4	18.3	5 31	19 31.11	-43 50.1	1.932	2.764	14.4	21.9
6 10	19 17.93	-34 7.5	2.314	3.238	8.8	18.2	6 10	19 24.55	-44 59.6	1.861	2.758	12.0	21.7
6 20	19 10.26	-34 53.2	2.261	3.235	6.2	18.0	6 20	19 14.82	-45 57.5	1.812	2.753	9.9	21.5
6 30	19 1.15	-35 31.0	2.235	3.233	4.2	17.9	6 30	19 2.78	-46 35.9	1.787	2.747	8.7	21.4
7 10	18 51.48	-35 57.5	2.237	3.230	4.6	17.9	7 10	18 49.86	-46 49.1	1.786	2.740	9.1	21.5
7 20	18 42.22	-36 11.1	2.266	3.227	7.0	18.0	7 20	18 37.65	-46 35.9	1.810	2.734	10.9	21.6
7 30	18 34.30	-36 12.2	2.320	3.224	9.7	18.2	7 30	18 27.64	-45 59.3	1.857	2.727	13.4	21.7
8 9	18 28.43	-36 2.8	2.398	3.220	12.2	18.4	8 9	18 20.82	-45 5.4	1.924	2.719	15.8	21.9
77535	2001 HT ₆₂		7 4.8 143°91	3°6/ 3.8	17		190027	2004 QB ₁₃		7 4.8 37°80	3°5/ 6.3	18	
5 31	19 26.62	-28 55.9	1.658	2.522	14.9	20.0	5 31	19 21.52	-10 40.2	1.589	2.439	16.1	19.3
6 10	19 20.88	-29 51.7	1.591	2.527	11.3	19.8	6 10	19 16.89	-11 20.5	1.520	2.443	12.6	19.1
6 20	19 12.37	-30 47.1	1.547	2.531	7.4	19.6	6 20	19 9.84	-12 17.8	1.471	2.447	8.5	18.9
6 30	19 1.90	-31 36.0	1.528	2.535	4.0	19.4	6 30	19 1.08	-13 29.9	1.446	2.451	4.7	18.6
7 10	18 50.72	-32 13.2	1.535	2.539	4.6	19.5	7 10	18 51.68	-14 52.7	1.447	2.455	4.0	18.6
7 20	18 40.19	-32 36.1	1.568	2.543	8.3	19.7	7 20	18 42.76	-16 20.5	1.474	2.459	7.5	18.8
7 30	18 31.60	-32 45.0	1.625	2.546	12.1	19.9	7 30	18 35.46	-17 48.0	1.526	2.464	11.5	19.1
8 9	18 25.82	-32 42.5	1.704	2.549	15.4	20.1	8 9	18 30.59	-19 10.9	1.601	2.469	15.2	19.3
374332	2005 TF ₁₂₅		7 4.8 254°54	0°7/ 4.9	17		6493	Cathybennett		7 4.8 266°66	15°2/ 11.8	18</	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
208334	2001 <i>QM</i> ₁₄₃		7 4.8 177°38	1°1/ 5.1 17			498489	2008 <i>CE</i> ₁₃₂		7 4.9 109°92	0°6/ 4.9 17		
5 31	19 21.00	-19 10.3	2.164	3.017	12.3	20.4	5 31	19 25.64	-20 43.2	1.631	2.493	15.2	22.1
6 10	19 15.93	-19 13.3	2.087	3.017	9.3	20.2	6 10	19 19.84	-20 49.8	1.570	2.505	11.5	21.9
6 20	19 8.98	-19 20.9	2.033	3.017	5.9	20.0	6 20	19 11.56	-21 1.0	1.530	2.516	7.1	21.7
6 30	19 0.75	-19 31.6	2.006	3.018	2.3	19.8	6 30	19 1.65	-21 14.3	1.514	2.528	2.5	21.4
7 10	18 52.08	-19 44.0	2.006	3.018	2.2	19.8	7 10	18 51.26	-21 27.6	1.526	2.539	2.5	21.4
7 20	18 43.83	-19 57.0	2.033	3.018	5.8	20.0	7 20	18 41.61	-21 39.1	1.563	2.550	7.0	21.7
7 30	18 36.84	-20 9.5	2.086	3.018	9.2	20.2	7 30	18 33.78	-21 48.4	1.626	2.560	11.2	22.0
8 9	18 31.75	-20 21.2	2.163	3.017	12.3	20.4	8 9	18 28.51	-21 55.6	1.710	2.570	14.7	22.2
333858	1995 <i>SW</i> ₆₉		7 4.8 270°58	1°4/ 4.7 18			344951	2004 <i>VU</i> ₆₃		7 4.9 251°73	4°3/ 3.3 18		
5 31	19 26.38	-27 33.1	1.938	2.794	13.4	20.9	5 31	19 25.49	-31 24.5	2.023	2.878	13.0	21.0
6 10	19 20.45	-27 21.9	1.841	2.773	10.2	20.7	6 10	19 19.94	-32 29.8	1.935	2.864	10.0	20.8
6 20	19 12.03	-27 7.6	1.767	2.752	6.5	20.4	6 20	19 11.85	-33 34.4	1.871	2.849	6.9	20.5
6 30	19 1.83	-26 47.5	1.719	2.731	2.5	20.1	6 30	19 1.84	-34 32.4	1.833	2.834	4.5	20.4
7 10	18 50.89	-26 20.3	1.698	2.709	2.8	20.1	7 10	18 50.94	-35 18.7	1.822	2.819	5.1	20.4
7 20	18 40.37	-25 46.1	1.704	2.687	6.9	20.3	7 20	18 40.33	-35 49.9	1.838	2.803	8.1	20.5
7 30	18 31.43	-25 6.8	1.737	2.665	11.0	20.5	7 30	18 31.23	-36 5.7	1.879	2.787	11.4	20.7
8 9	18 24.91	-24 25.0	1.791	2.642	14.6	20.7	8 9	18 24.57	-36 8.1	1.942	2.771	14.5	20.9
435741	2008 <i>UF</i> ₁₃₄		7 4.8 200°50	2°0/ 4.4 17			192059	2006 <i>BA</i> ₄₅		7 4.9 223°38	4°0/ 6.1 18		
5 31	19 23.77	-26 54.6	1.933	2.794	13.3	21.9	5 31	19 21.45	-10 36.3	2.015	2.851	13.8	20.5
6 10	19 18.36	-27 21.7	1.858	2.793	10.0	21.7	6 10	19 16.43	-10 36.5	1.931	2.845	10.9	20.3
6 20	19 10.65	-27 48.8	1.806	2.792	6.3	21.5	6 20	19 9.40	-10 48.2	1.869	2.838	7.6	20.1
6 30	19 1.34	-28 12.2	1.779	2.790	2.7	21.3	6 30	19 0.96	-11 11.4	1.833	2.832	4.7	19.9
7 10	18 51.45	-28 29.0	1.779	2.789	3.1	21.3	7 10	18 51.94	-11 45.0	1.823	2.825	4.3	19.8
7 20	18 42.08	-28 37.5	1.806	2.787	6.8	21.5	7 20	18 43.27	-12 26.8	1.840	2.817	7.0	20.0
7 30	18 34.26	-28 38.0	1.859	2.785	10.5	21.7	7 30	18 35.85	-13 14.0	1.883	2.810	10.3	20.2
8 9	18 28.76	-28 31.8	1.933	2.783	13.7	21.9	8 9	18 30.40	-14 3.8	1.949	2.802	13.5	20.4
520252	2014 <i>EF</i> ₁₃		7 4.8 231°76	1°6/ 4.4 18			154843	2004 <i>RK</i> ₄₃		7 4.9 253°45	5°4/ 3.7 18		
5 31	19 23.38	-26 14.4	2.193	3.048	12.1	21.8	5 31	19 25.90	-40 2.3	2.514	3.348	11.4	20.4
6 10	19 17.90	-26 41.0	2.107	3.039	9.1	21.5	6 10	19 19.74	-40 29.7	2.431	3.337	9.2	20.3
6 20	19 10.31	-27 8.2	2.044	3.029	5.8	21.3	6 20	19 11.42	-40 48.5	2.371	3.327	7.0	20.1
6 30	19 1.23	-27 32.8	2.008	3.019	2.4	21.1	6 30	19 1.61	-40 54.4	2.336	3.316	5.6	20.0
7 10	18 51.55	-27 52.2	1.999	3.009	2.8	21.1	7 10	18 51.29	-40 44.8	2.329	3.305	5.8	20.0
7 20	18 42.23	-28 4.5	2.019	2.999	6.3	21.3	7 20	18 41.47	-40 19.3	2.348	3.294	7.6	20.1
7 30	18 34.24	-28 9.6	2.064	2.988	9.7	21.5	7 30	18 33.14	-39 39.7	2.393	3.283	10.0	20.2
8 9	18 28.31	-28 8.5	2.133	2.977	12.8	21.7	8 9	18 27.00	-38 49.7	2.461	3.272	12.3	20.4
63005	2000 <i>WF</i> ₂₃		7 4.8 6°87	0°7/ 4.6 18			202960	1999 <i>RM</i> ₁₅₆		7 4.9 301°72	5°3/ 5.8 18		
5 31	19 20.44	-22 7.3	2.137	2.995	12.3	19.0	5 31	19 19.85	-10 34.5	1.659	2.509	15.6	20.2
6 10	19 15.66	-22 52.5	2.061	2.995	9.2	18.8	6 10	19 15.77	-10 8.2	1.565	2.486	12.5	19.9
6 20	19 8.90	-23 42.3	2.009	2.996	5.7	18.6	6 20	19 9.29	-9 53.6	1.492	2.463	9.0	19.6
6 30	19 0.76	-24 33.3	1.982	2.996	1.9	18.3	6 30	19 1.00	-9 52.6	1.443	2.440	6.0	19.4
7 10	18 52.09	-25 22.1	1.984	2.996	2.2	18.3	7 10	18 51.86	-10 5.4	1.417	2.417	5.7	19.3
7 20	18 43.78	-26 5.9	2.013	2.997	6.0	18.6	7 20	18 42.98	-10 31.1	1.417	2.395	8.6	19.4
7 30	18 36.74	-26 43.1	2.069	2.997	9.5	18.8	7 30	18 35.50	-11 7.4	1.441	2.373	12.5	19.6
8 9	18 31.67	-27 13.3	2.147	2.998	12.5	19.0	8 9	18 30.35	-11 50.8	1.485	2.351	16.2	19.8
119656	2001 <i>XJ</i> ₅₈		7 4.8 241°19	0°7/ 4.6 18			256692	2007 <i>YL</i> ₆₈		7 4.9 124°24	0°4/ 4.8 17		
5 31	19 23.84	-22 54.2	1.908	2.766	13.5	20.1	5 31	19 26.35	-22 19.7	1.700	2.560	14.8	21.7
6 10	19 18.52	-23 23.3	1.822	2.756	10.2	19.9	6 10	19 20.35	-22 42.9	1.637	2.572	11.1	21.5
6 20	19 10.84	-23 56.4	1.758	2.745	6.3	19.6	6 20	19 11.89	-23 9.8	1.596	2.583	6.8	21.3
6 30	19 1.45	-24 30.1	1.721	2.734	2.2	19.3	6 30	19 1.77	-23 36.9	1.581	2.594	2.3	21.0
7 10	18 51.33	-25 1.3	1.710	2.723	2.5	19.3	7 10	18 51.16	-24 1.2	1.592	2.605	2.5	21.1
7 20	18 41.57	-25 27.4	1.727	2.711	6.7	19.6	7 20	18 41.24	-24 20.6	1.630	2.615	6.9	21.4
7 30	18 33.28	-25 47.4	1.769	2.699	10.7	19.8	7 30	18 33.10	-24 34.6	1.694	2.625	11.0	21.6
8 9	18 27.29	-26 1.5	1.833	2.686	14.2	20.0	8 9	18 27.52	-24 43.7	1.779	2.635	14.4	21.9
358426	2007 <i>DC</i> ₈		7 4.9 112°19	2°2/ 4.1 18			348515	2005 <i>UU</i> ₁₆		7 4.9 260°84	3°3/ 5.6 18		
5 31	19 21.18	-28 28.7	2.453	3.307	11.0	20.5	5 31	19 19.16	-12 59.8	2.335	3.174	12.0	21.0
6 10	19 15.97	-29 0.4	2.382	3.312	8.3	20.4	6 10	19 14.46	-12 43.4	2.249	3.166	9.4	20.8
6 20	19 8.96	-29 30.9	2.335	3.318	5.3	20.2	6 20	19 8.06	-12 34.3	2.186	3.158	6.5	20.6
6 30	19 0.76	-29 57.2	2.315	3.323	2.6	20.0	6 30	19 0.49	-12 33.0	2.149	3.151	3.9	20.4
7 10	18 52.15	-30 16.8	2.322	3.329	3.0	20.0	7 10	18 52.48	-12 39.0	2.139	3.143	3.6	20.4
7 20	18 43.96	-30 28.6	2.358	3.334	5.8	20.2	7 20	18 44.78	-12 51.4	2.157	3.135	6.1	20.5
7 30	18 37.00	-30 32.5	2.420	3.339	8.7	20.4	7 30	18 38.16	-13 9.2	2.201	3.127	9.1	20.7
8 9	18 31.86	-30 29.7	2.505	3.344	11.3	20.6	8 9	18 33.21	-13 30.7	2.268	3.119	11.9	20.9
255880	2006 <i>SH</i> ₂₅₀		7 4.9 132°65	3°9/ 5.6 17			127503	2002 <i>TR</i> ₅₉		7 4.9 88°25	3°0/ 4.5 18		
5 31	19 23.81	-13 32.9	1.641	2.492	15.7	21.0	5 31	19 39.25	-24 22.1	1.021	1.895	21.3	18.4
6 10	19 18.44	-13 13.0	1.573	2.498	12.2	20.8	6 10	19 30.79	-22 22.2	0.969	1.909	16.2	18.1
6 20	19 10.71	-13 2.9	1.526	2.503	8.3	20.6	6 20	19 18.51	-20 15.0	0.935	1.923	10.2	17.8
6 30	19 1.37	-13 3.0	1.504	2.508	4.7	20.4	6 30	19 3.91	-18 5.0	0.926	1.937	4.3	17.6
7 10	18 51.51	-13 12.5	1.507	2.513	4.4	20.4	7 10	18 49.10	-15 59.6	0.941	1.951	4.8	17.6
7 20	18 42.27	-13 29.9	1.536	2.517	7.7	20.6	7 20	18 36.06	-14 7.5	0.981	1.965	10.5	18.0
7 30	18 34.69	-13 53.3	1.590	2.522	11.6	20.8	7 30	18 26.31	-12 35.0	1.044	1.978	15.8	18.3
8 9	18 29.52	-14 20.5	1.665	2.526	15.0	21.1	8 9	18 20.56	-11 23.8	1.125	1.992	20.2	18.7
344782	2003 <i>XM</i> ₅		7 4.9 273°02	0°8/ 4.7 18			242677	2005 <i>ST</i> ₁₈₃		7 4			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
491642	2012 TV ₁₉₇		7 4.9 274°71	2°4/ 4.4 16			417803	2007 EQ ₁₆₆		7 4.9 74°79	0°0/ 4.6 17		
5 31	19 25.94	-29 0.8	2.094	2.947	12.7	22.9	5 31	19 25.88	-20 5.6	1.637	2.497	15.3	20.9
6 10	19 20.16	-29 16.8	1.989	2.918	9.7	22.7	6 10	19 19.89	-20 47.0	1.590	2.525	11.4	20.7
6 20	19 11.94	-29 30.8	1.906	2.889	6.3	22.4	6 20	19 11.52	-21 34.3	1.565	2.552	7.0	20.5
6 30	19 1.89	-29 39.3	1.850	2.859	3.1	22.1	6 30	19 1.64	-22 23.4	1.566	2.579	2.3	20.3
7 10	18 50.96	-29 39.4	1.821	2.828	3.4	22.1	7 10	18 51.41	-23 10.2	1.593	2.606	2.4	20.4
7 20	18 40.27	-29 29.7	1.819	2.797	7.0	22.3	7 20	18 42.01	-23 51.8	1.647	2.633	6.8	20.7
7 30	18 30.98	-29 10.9	1.844	2.765	10.8	22.4	7 30	18 34.45	-24 26.6	1.727	2.659	10.7	21.0
8 9	18 24.00	-28 45.2	1.891	2.733	14.3	22.6	8 9	18 29.40	-24 54.5	1.828	2.685	14.0	21.3
311217	2005 AG ₂₁		7 4.9 112°40	1°6/ 4.5 17			438541	2007 TA ₁₉₈		7 4.9 288°73	1°2/ 5.1 18		
5 31	19 27.24	-24 37.5	1.557	2.422	15.6	21.4	5 31	19 21.50	-19 46.4	1.887	2.747	13.6	21.4
6 10	19 21.26	-25 13.9	1.498	2.435	11.7	21.2	6 10	19 16.66	-19 39.0	1.804	2.737	10.3	21.1
6 20	19 12.57	-25 52.6	1.460	2.448	7.3	21.0	6 20	19 9.64	-19 35.6	1.743	2.728	6.5	20.9
6 30	19 2.03	-26 28.9	1.447	2.460	2.7	20.7	6 30	19 1.08	-19 35.3	1.707	2.719	2.5	20.6
7 10	18 50.93	-26 58.7	1.460	2.472	3.2	20.8	7 10	18 51.92	-19 36.9	1.697	2.710	2.5	20.6
7 20	18 40.62	-27 19.6	1.500	2.483	7.6	21.1	7 20	18 43.19	-19 39.4	1.715	2.701	6.5	20.8
7 30	18 32.31	-27 31.5	1.563	2.494	11.8	21.4	7 30	18 35.88	-19 42.3	1.757	2.692	10.5	21.0
8 9	18 26.81	-27 35.9	1.648	2.505	15.3	21.6	8 9	18 30.75	-19 45.4	1.822	2.683	13.9	21.2
420479	2012 EX ₂		7 4.9 117°15	0°9/ 4.7 17			81159	2000 EF ₁₅₄		7 4.9 224°86	0°0/ 4.7 18		
5 31	19 26.27	-24 12.8	1.539	2.406	15.7	21.7	5 31	19 24.14	-20 39.9	1.770	2.629	14.3	19.9
6 10	19 20.57	-24 23.9	1.475	2.413	11.8	21.5	6 10	19 18.87	-21 15.3	1.689	2.624	10.8	19.7
6 20	19 12.16	-24 36.7	1.431	2.419	7.3	21.2	6 20	19 11.13	-21 57.2	1.631	2.618	6.7	19.5
6 30	19 1.90	-24 47.9	1.412	2.426	2.5	20.9	6 30	19 1.61	-22 42.4	1.598	2.611	2.2	19.2
7 10	18 51.06	-24 54.7	1.419	2.432	2.8	21.0	7 10	18 51.34	-23 27.0	1.592	2.605	2.4	19.2
7 20	18 41.00	-24 55.9	1.452	2.438	7.5	21.3	7 20	18 41.48	-24 7.6	1.612	2.598	7.0	19.4
7 30	18 32.91	-24 51.8	1.509	2.444	11.8	21.6	7 30	18 33.19	-24 42.5	1.658	2.590	11.1	19.7
8 9	18 27.61	-24 44.0	1.587	2.449	15.5	21.8	8 9	18 27.32	-25 11.1	1.726	2.583	14.8	19.9
387453	2013 WX ₈₁		7 4.9 215°11	1°4/ 5.2 18			345886	2007 RN ₆₀		7 4.9 295°56	0°0/ 4.7 18		
5 31	19 22.94	-18 26.1	1.922	2.776	13.6	21.5	5 31	19 22.16	-22 41.3	1.790	2.655	14.0	20.9
6 10	19 17.66	-18 28.3	1.842	2.772	10.3	21.3	6 10	19 17.37	-22 38.0	1.703	2.640	10.6	20.6
6 20	19 10.21	-18 36.2	1.784	2.768	6.6	21.1	6 20	19 10.20	-22 36.8	1.638	2.626	6.6	20.4
6 30	19 1.25	-18 48.5	1.752	2.763	2.7	20.8	6 30	19 1.30	-22 35.8	1.598	2.612	2.2	20.1
7 10	18 51.71	-19 3.4	1.746	2.758	2.5	20.8	7 10	18 51.71	-22 33.5	1.584	2.597	2.4	20.0
7 20	18 42.60	-19 19.5	1.768	2.753	6.5	21.0	7 20	18 42.53	-22 28.9	1.596	2.583	6.9	20.3
7 30	18 34.93	-19 35.6	1.816	2.748	10.3	21.2	7 30	18 34.89	-22 22.2	1.633	2.569	11.0	20.5
8 9	18 29.41	-19 51.1	1.886	2.742	13.7	21.5	8 9	18 29.60	-22 13.9	1.692	2.555	14.7	20.7
148040	1998 RH ₅₃		7 4.9 277°71	1°3/ 4.6 17			361461	2007 CK ₄₄		7 4.9 145°38	2°5/ 5.9 18		
5 31	19 24.82	-24 56.6	1.638	2.505	14.9	21.2	5 31	19 19.30	-12 26.2	2.595	3.427	11.2	20.9
6 10	19 19.77	-25 13.3	1.546	2.484	11.4	20.9	6 10	19 14.37	-12 44.5	2.518	3.432	8.6	20.8
6 20	19 11.91	-25 32.0	1.475	2.463	7.2	20.6	6 20	19 7.92	-13 11.3	2.465	3.437	5.8	20.6
6 30	19 1.92	-25 49.1	1.428	2.441	2.6	20.3	6 30	19 0.47	-13 45.6	2.439	3.442	3.2	20.4
7 10	18 50.93	-26 1.4	1.407	2.419	3.0	20.3	7 10	18 52.64	-14 25.8	2.441	3.447	2.9	20.4
7 20	18 40.29	-26 6.7	1.412	2.397	7.8	20.5	7 20	18 45.14	-15 9.9	2.472	3.452	5.3	20.6
7 30	18 31.36	-26 4.9	1.441	2.375	12.4	20.7	7 30	18 38.62	-15 55.7	2.530	3.456	8.1	20.8
8 9	18 25.16	-25 57.4	1.491	2.352	16.4	20.9	8 9	18 33.61	-16 41.5	2.613	3.460	10.6	21.0
482106	2010 MX ₇₉		7 4.9 249°60	3°0/ 3.9 18			107968	2001 FK ₁₂₅		7 4.9 175°69	1°6/ 5.3 18		
5 31	19 22.57	-31 38.4	2.582	3.431	10.7	22.1	5 31	19 22.47	-17 16.3	2.308	3.151	12.0	21.0
6 10	19 17.11	-32 5.4	2.492	3.417	8.2	21.9	6 10	19 16.92	-17 17.1	2.230	3.153	9.1	20.8
6 20	19 9.76	-32 29.4	2.426	3.404	5.5	21.7	6 20	19 9.58	-17 23.2	2.175	3.155	5.9	20.6
6 30	19 1.08	-32 47.3	2.387	3.390	3.3	21.6	6 30	19 1.03	-17 33.6	2.146	3.156	2.6	20.4
7 10	18 51.88	-32 56.5	2.376	3.376	3.6	21.6	7 10	18 52.05	-17 47.1	2.146	3.157	2.4	20.4
7 20	18 43.00	-32 56.0	2.392	3.362	6.1	21.7	7 20	18 43.48	-18 2.5	2.174	3.157	5.6	20.6
7 30	18 35.30	-32 46.1	2.436	3.348	9.0	21.9	7 30	18 36.09	-18 18.6	2.229	3.157	8.9	20.8
8 9	18 29.44	-32 28.7	2.502	3.333	11.5	22.0	8 9	18 30.51	-18 34.9	2.308	3.156	11.8	21.0
504965	2011 FW ₁₄₃		7 4.9 200°69	1°0/ 5.1 18			461363	2000 GQ ₁₄₈		7 4.9 155°53	2°9/ 3.2 17		
5 31	19 24.80	-19 45.4	2.229	3.073	12.3	22.4	5 31	19 14.75	-40 42.8	5.672	6.492	5.6	21.5
6 10	19 18.78	-19 43.9	2.143	3.069	9.3	22.2	6 10	19 10.41	-41 1.4	5.599	6.495	4.5	21.4
6 20	19 10.78	-19 45.9	2.081	3.064	5.9	22.0	6 20	19 5.24	-41 15.5	5.551	6.498	3.5	21.3
6 30	19 1.42	-19 50.1	2.046	3.058	2.2	21.7	6 30	18 59.53	-41 23.9	5.531	6.502	2.9	21.3
7 10	18 51.54	-19 55.2	2.040	3.052	2.2	21.7	7 10	18 53.65	-41 25.8	5.539	6.505	3.0	21.3
7 20	18 42.06	-20 0.2	2.062	3.045	5.9	22.0	7 20	18 47.98	-41 20.8	5.576	6.508	3.8	21.4
7 30	18 33.86	-20 4.8	2.110	3.037	9.4	22.2	7 30	18 42.86	-41 9.4	5.639	6.511	4.9	21.4
8 9	18 27.62	-20 8.9	2.183	3.028	12.5	22.3	8 9	18 38.60	-40 52.3	5.727	6.514	6.0	21.5
510352	2011 SL ₁₉₇		7 4.9 291°97	0°7/ 5.0 18			317274	2002 ED ₁₁₆		7 4.9 61°33	2°5/ 4.4 17		
5 31	19 20.98	-20 32.0	1.957	2.816	13.2	21.7	5 31	19 24.77	-28 14.5	1.644	2.512	14.8	20.9
6 10	19 16.21	-20 35.0	1.874	2.808	9.9	21.5	6 10	19 19.35	-28 35.4	1.583	2.521	11.2	20.7
6 20	19 9.33	-20 42.0	1.814	2.800	6.2	21.2	6 20	19 11.36	-28 54.5	1.544	2.530	7.1	20.5
6 30	19 0.96	-20 51.5	1.779	2.792	2.2	20.9	6 30	19 1.65	-29 7.8	1.529	2.539	3.3	20.3
7 10	18 52.02	-21 1.8	1.771	2.784	2.2	20.9	7 10	18 51.44	-29 12.3	1.540	2.548	3.6	20.3
7 20	18 43.49	-21 11.5	1.790	2.776	6.3	21.2	7 20	18 42.01	-29 7.2	1.576	2.558	7.5	20.6
7 30	18 36.33	-21 20.1	1.834	2.768	10.1	21.4	7 30	18 34.47	-28 53.4	1.637	2.568	11.4	20.8
8 9	18 31.27	-21 27.2	1.901	2.761	13.5	21.6	8 9	18 29.59	-28 33.6	1.720	2.577	14.8	21.1
390106	2012 VN ₂₆		7 4.9 252°13	0°8/ 5.1 18			445858	2012 OL		7 4.9 192°61	6°6/ 5.4 18		
5 31	19 22.27	-20 1.9											

EPHEMERIDES

7 4.9

7 4.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
12650	de Vries		7 4.9	9°36'	1°9/ 4.7	18	114258	2002 WQ ₁₆		7 4.9	285°00'	2°4/ 5.5	18
5 31	19 19.37	-27 10.0	0.952	1.858	19.7	17.2	5 31	19 22.08	-15 31.7	1.573	2.434	15.7	19.4
6 10	19 16.59	-27 0.9	0.902	1.860	14.9	17.0	6 10	19 17.66	-15 46.7	1.484	2.416	12.2	19.1
6 20	19 10.19	-26 49.3	0.868	1.863	9.4	16.7	6 20	19 10.60	-16 13.2	1.415	2.398	8.0	18.8
6 30	19 1.34	-26 31.9	0.855	1.869	3.6	16.4	6 30	19 1.54	-16 50.0	1.370	2.380	3.7	18.5
7 10	18 51.81	-26 6.7	0.863	1.876	3.8	16.4	7 10	18 51.52	-17 34.4	1.351	2.362	3.3	18.4
7 20	18 43.43	-25 34.6	0.891	1.884	9.5	16.8	7 20	18 41.79	-18 22.8	1.357	2.344	7.7	18.7
7 30	18 37.76	-24 58.2	0.940	1.895	14.8	17.1	7 30	18 33.64	-19 12.2	1.387	2.326	12.3	18.9
8 9	18 35.68	-24 20.6	1.006	1.907	19.3	17.4	8 9	18 28.06	-19 59.8	1.438	2.308	16.4	19.1
78304	2002 PG ₅₈		7 4.9	256°73'	4°6/ 5.9	18	430050	2013 RL ₉₂		7 4.9	217°84'	1°3/ 5.2	17
5 31	19 20.54	-9 54.7	2.157	2.988	13.1	19.4	5 31	19 24.13	-19 1.1	1.899	2.752	13.8	22.0
6 10	19 15.68	-9 30.7	2.066	2.975	10.5	19.2	6 10	19 18.63	-18 59.8	1.817	2.747	10.5	21.8
6 20	19 8.94	-9 16.5	1.997	2.961	7.6	19.0	6 20	19 10.88	-19 3.5	1.756	2.740	6.6	21.5
6 30	19 0.86	-9 13.0	1.953	2.946	5.2	18.8	6 30	19 1.54	-19 11.0	1.722	2.734	2.6	21.2
7 10	18 52.22	-9 20.5	1.936	2.932	4.9	18.8	7 10	18 51.59	-19 20.6	1.714	2.727	2.5	21.2
7 20	18 43.86	-9 38.0	1.945	2.917	7.2	18.9	7 20	18 42.07	-19 31.0	1.734	2.719	6.6	21.5
7 30	18 36.63	-10 4.1	1.981	2.902	10.2	19.1	7 30	18 34.02	-19 41.4	1.779	2.711	10.5	21.7
8 9	18 31.22	-10 36.3	2.039	2.887	13.2	19.2	8 9	18 28.20	-19 51.4	1.847	2.703	14.0	21.9
433725	2015 AG ₃₂		7 4.9	300°53'	1°6/ 5.3	17	446299	2014 EH ₄		7 4.9	37°55'	5°3/ 6.8	15
5 31	19 22.13	-17 45.1	1.409	2.280	16.6	20.8	5 31	19 18.99	-7 40.5	1.677	2.519	15.8	20.2
6 10	19 17.87	-18 1.1	1.330	2.270	12.7	20.6	6 10	19 14.68	-7 44.2	1.625	2.538	12.5	20.0
6 20	19 10.78	-18 27.0	1.272	2.259	8.1	20.3	6 20	19 8.31	-8 3.9	1.592	2.557	9.1	19.9
6 30	19 1.57	-19 1.0	1.237	2.249	3.2	19.9	6 30	19 0.63	-8 39.6	1.584	2.578	6.1	19.7
7 10	18 51.45	-19 39.7	1.226	2.239	3.0	19.9	7 10	18 52.60	-9 28.9	1.600	2.598	5.5	19.7
7 20	18 41.80	-20 19.6	1.240	2.229	8.0	20.2	7 20	18 45.19	-10 28.3	1.642	2.619	7.7	19.9
7 30	18 33.99	-20 58.0	1.277	2.219	12.9	20.4	7 30	18 39.28	-11 33.5	1.709	2.641	10.9	20.2
8 9	18 29.01	-21 33.2	1.334	2.210	17.1	20.7	8 9	18 35.51	-12 40.3	1.798	2.663	13.9	20.4
505968	2015 FA ₃₀₁		7 4.9	166°82'	1°5/ 4.3	18	499586	2010 TB ₄₃		7 4.9	243°63'	0°6/ 4.8	17
5 31	19 24.07	-23 54.7	2.054	2.910	12.8	20.9	5 31	19 26.42	-23 33.9	1.780	2.638	14.3	23.1
6 10	19 18.51	-24 49.3	1.980	2.912	9.6	20.7	6 10	19 20.70	-23 45.9	1.689	2.623	10.9	22.8
6 20	19 10.77	-25 47.5	1.929	2.915	6.0	20.5	6 20	19 12.36	-24 0.3	1.621	2.608	6.8	22.5
6 30	19 1.49	-26 45.2	1.905	2.917	2.3	20.3	6 30	19 2.09	-24 14.2	1.578	2.592	2.3	22.2
7 10	18 51.60	-27 38.1	1.908	2.919	2.8	20.3	7 10	18 50.98	-24 24.8	1.562	2.575	2.6	22.2
7 20	18 42.11	-28 23.1	1.940	2.920	6.5	20.6	7 20	18 40.25	-24 30.5	1.573	2.558	7.2	22.5
7 30	18 34.04	-28 58.8	1.998	2.921	10.0	20.8	7 30	18 31.14	-24 30.9	1.609	2.540	11.5	22.7
8 9	18 28.12	-29 25.5	2.079	2.922	13.1	21.0	8 9	18 24.57	-24 27.3	1.667	2.522	15.3	22.9
444279	2005 UO ₄₂₄		7 4.9	308°37'	1°9/ 5.3	18	385122	2012 XQ ₁₁₃		7 4.9	329°42'	1°7/ 4.5	16
5 31	19 19.42	-17 41.7	1.986	2.843	13.1	21.1	5 31	19 21.99	-25 21.7	1.685	2.555	14.4	20.7
6 10	19 15.07	-17 32.6	1.896	2.827	10.0	20.9	6 10	19 17.39	-25 49.2	1.610	2.550	10.9	20.4
6 20	19 8.66	-17 28.9	1.828	2.811	6.5	20.6	6 20	19 10.28	-26 18.6	1.556	2.544	6.8	20.2
6 30	19 0.80	-17 30.2	1.785	2.796	2.9	20.4	6 30	19 1.37	-26 46.1	1.527	2.539	2.7	19.9
7 10	18 52.32	-17 35.5	1.769	2.780	2.8	20.3	7 10	18 51.78	-27 8.3	1.524	2.535	3.1	19.9
7 20	18 44.17	-17 43.9	1.780	2.765	6.4	20.6	7 20	18 42.71	-27 23.0	1.546	2.531	7.3	20.2
7 30	18 37.28	-17 54.5	1.816	2.751	10.2	20.7	7 30	18 35.32	-27 29.8	1.593	2.527	11.4	20.4
8 9	18 32.40	-18 6.3	1.874	2.736	13.5	20.9	8 9	18 30.46	-27 29.9	1.661	2.523	15.0	20.6
416702	2005 AY ₄₇		7 4.9	230°98'	0°5/ 4.9	17	141233	2001 XC ₂₃₇		7 4.9	145°23'	2°7/ 3.9	18
5 31	19 26.22	-20 19.9	1.775	2.630	14.5	22.6	5 31	19 22.31	-28 43.1	2.223	3.079	11.9	19.9
6 10	19 20.49	-20 34.8	1.687	2.619	11.0	22.3	6 10	19 17.10	-29 28.1	2.150	3.081	9.0	19.7
6 20	19 12.20	-20 55.1	1.621	2.606	6.9	22.0	6 20	19 9.85	-30 12.5	2.100	3.082	5.8	19.5
6 30	19 2.02	-21 18.5	1.580	2.593	2.4	21.7	6 30	19 1.19	-30 52.2	2.077	3.084	3.1	19.3
7 10	18 51.02	-21 42.3	1.566	2.579	2.4	21.7	7 10	18 52.00	-31 24.1	2.081	3.085	3.5	19.4
7 20	18 40.39	-22 4.1	1.579	2.564	7.1	22.0	7 20	18 43.23	-31 46.0	2.113	3.087	6.5	19.6
7 30	18 31.33	-22 22.7	1.617	2.549	11.4	22.2	7 30	18 35.81	-31 57.9	2.170	3.088	9.6	19.8
8 9	18 24.75	-22 38.2	1.678	2.532	15.2	22.4	8 9	18 30.43	-32 1.0	2.250	3.089	12.4	20.0
27746	1990 WE ₃		7 4.9	285°19'	1°7/ 5.2	18	11447	1978 UL ₄		7 4.9	277°24'	7°2/ 5.7	18
5 31	19 22.52	-18 6.3	1.610	2.474	15.3	19.1	5 31	19 21.22	-5 49.1	1.903	2.726	14.9	18.2
6 10	19 17.96	-18 9.7	1.519	2.455	11.7	18.9	6 10	19 16.47	-4 53.8	1.809	2.706	12.4	18.0
6 20	19 10.76	-18 20.7	1.449	2.435	7.6	18.6	6 20	19 9.59	-4 10.3	1.737	2.686	9.7	17.8
6 30	19 1.57	-18 38.0	1.403	2.415	3.1	18.3	6 30	19 1.15	-3 41.8	1.689	2.666	7.6	17.6
7 10	18 51.46	-18 59.5	1.383	2.395	2.9	18.2	7 10	18 51.99	-3 30.2	1.666	2.645	7.5	17.6
7 20	18 41.66	-19 23.2	1.388	2.375	7.6	18.4	7 20	18 43.10	-3 36.1	1.668	2.625	9.4	17.6
7 30	18 33.45	-19 47.1	1.417	2.355	12.2	18.6	7 30	18 35.46	-3 57.8	1.694	2.604	12.3	17.8
8 9	18 27.79	-20 10.2	1.467	2.335	16.3	18.8	8 9	18 29.85	-4 32.2	1.742	2.583	15.3	17.9
50299	2000 CD ₃₄		7 4.9	198°16'	1°3/ 4.6	18	472046	2013 YY ₄₂		7 4.9	195°49'	1°4/ 4.3	18
5 31	19 26.60	-25 37.4	2.020	2.873	13.1	19.8	5 31	19 23.91	-23 14.3	2.034	2.889	12.9	21.1
6 10	19 20.42	-25 54.7	1.939	2.870	9.9	19.6	6 10	19 18.47	-24 13.8	1.955	2.888	9.7	20.9
6 20	19 11.96	-26 12.3	1.881	2.866	6.2	19.3	6 20	19 10.81	-25 18.1	1.900	2.886	6.0	20.7
6 30	19 1.89	-26 27.1	1.849	2.862	2.3	19.1	6 30	19 1.54	-26 22.8	1.872	2.885	2.3	20.4
7 10	18 51.21	-26 36.6	1.846	2.857	2.6	19.1	7 10	18 51.60	-27 23.4	1.872	2.882	2.8	20.5
7 20	18 41.03	-26 39.5	1.869	2.851	6.5	19.3	7 20	18 42.01	-28 16.3	1.900	2.880	6.6	20.7
7 30	18 32.36	-26 36.0	1.919	2.845	10.3	19.5	7 30	18 33.81	-28 59.7	1.954	2.877	10.2	20.9
8 9	18 25.99	-26 27.5	1.992	2.838	13.5	19.7	8 9	18 27.79	-29 33.4	2.030	2.874	13.4	21.1
2541	Edebono		7 4.9	246°11'	0°7/ 4.7	18	157000	2003 OL ₁₁		7 4.9	263°24'	7°4/ 6.8	18
5 31	19 21.44	-23 37.4	2.212	3.068	12.0								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
510719	2012 VZ ₃₈		7 4.9 229°56	4.2/ 3.4 18			46179	2001 FD ₉₈		7 4.9 311°98	0.6/ 5.1 18		
5 31	19 26.41	-34 41.5	2.561	3.400	11.1	22.8	5 31	19 20.10	-18 17.4	1.657	2.523	14.8	18.2
6 10	19 20.16	-35 27.6	2.469	3.386	8.7	22.6	6 10	19 16.10	-18 56.3	1.568	2.506	11.3	18.0
6 20	19 11.78	-36 9.7	2.402	3.371	6.2	22.4	6 20	19 9.61	-19 45.6	1.501	2.488	7.1	17.7
6 30	19 1.86	-36 43.2	2.362	3.356	4.4	22.3	6 30	19 1.22	-20 42.4	1.457	2.471	2.6	17.4
7 10	18 51.27	-37 4.8	2.350	3.340	4.8	22.3	7 10	18 51.94	-21 42.8	1.440	2.454	2.5	17.3
7 20	18 40.97	-37 12.7	2.366	3.323	7.0	22.4	7 20	18 42.93	-22 42.3	1.449	2.437	7.2	17.6
7 30	18 31.95	-37 7.5	2.409	3.306	9.7	22.5	7 30	18 35.40	-23 37.5	1.482	2.421	11.7	17.8
8 9	18 24.97	-36 51.4	2.475	3.287	12.2	22.7	8 9	18 30.31	-24 26.5	1.537	2.405	15.6	18.0
503651	2016 GJ ₂₀₀		7 4.9 17°75	4.9/ 3.7 17			504882	2010 VQ ₁₆₀		7 4.9 292°76	2.0/ 5.1 17		
5 31	19 20.63	-28 26.4	1.022	1.923	19.1	19.8	5 31	19 23.97	-19 42.8	1.412	2.283	16.6	21.7
6 10	19 17.57	-29 39.2	0.975	1.929	14.5	19.6	6 10	19 19.28	-19 15.3	1.329	2.268	12.7	21.4
6 20	19 10.88	-30 52.7	0.945	1.936	9.5	19.3	6 20	19 11.68	-18 51.7	1.266	2.253	8.2	21.1
6 30	19 1.64	-31 57.9	0.937	1.945	5.4	19.1	6 30	19 1.92	-18 31.5	1.226	2.238	3.4	20.8
7 10	18 51.57	-32 46.8	0.950	1.956	6.2	19.2	7 10	18 51.26	-18 14.4	1.211	2.224	3.4	20.8
7 20	18 42.55	-33 15.3	0.984	1.967	10.7	19.5	7 20	18 41.11	-18 0.3	1.221	2.209	8.3	21.0
7 30	18 36.22	-33 24.0	1.039	1.980	15.3	19.8	7 30	18 32.86	-17 49.5	1.254	2.194	13.2	21.3
8 9	18 33.56	-33 17.0	1.112	1.994	19.3	20.1	8 9	18 27.51	-17 42.1	1.306	2.180	17.5	21.5
333304	2000 UT ₆₂		7 4.9 272°12	0.1/ 4.9 18			28851	Londonbolsius		7 4.9 152°08	3.4/ 5.6 18		
5 31	19 24.52	-23 7.3	1.924	2.781	13.5	20.7	5 31	19 22.94	-14 3.2	1.723	2.574	15.0	18.3
6 10	19 19.14	-23 7.0	1.824	2.757	10.2	20.5	6 10	19 17.80	-13 53.3	1.651	2.576	11.6	18.1
6 20	19 11.35	-23 8.3	1.747	2.734	6.4	20.2	6 20	19 10.38	-13 52.9	1.601	2.579	7.8	17.8
6 30	19 1.77	-23 9.1	1.696	2.709	2.2	19.9	6 30	19 1.40	-14 1.9	1.575	2.581	4.3	17.6
7 10	18 51.35	-23 7.8	1.671	2.684	2.3	19.8	7 10	18 51.87	-14 19.1	1.575	2.583	3.9	17.6
7 20	18 41.22	-23 3.2	1.674	2.659	6.8	20.1	7 20	18 42.87	-14 42.7	1.602	2.584	7.3	17.8
7 30	18 32.52	-22 55.4	1.702	2.633	11.0	20.2	7 30	18 35.43	-15 10.6	1.653	2.586	11.1	18.0
8 9	18 26.11	-22 45.4	1.753	2.608	14.6	20.4	8 9	18 30.29	-15 40.9	1.726	2.587	14.5	18.3
182852	2002 CG ₁₀₁		7 4.9 84°81	2.7/ 4.2 18			37666	1994 SV ₇		7 4.9 284°42	2.6/ 4.2 18		
5 31	19 22.32	-29 45.4	2.257	3.112	11.8	20.4	5 31	19 21.87	-29 17.1	2.203	3.061	12.0	19.0
6 10	19 16.99	-30 13.6	2.189	3.120	8.9	20.3	6 10	19 16.83	-29 46.0	2.123	3.055	9.1	18.8
6 20	19 9.70	-30 39.4	2.145	3.127	5.8	20.1	6 20	19 9.72	-30 13.4	2.065	3.048	5.9	18.6
6 30	19 1.12	-30 59.5	2.127	3.134	3.1	19.9	6 30	19 1.18	-30 35.7	2.034	3.042	3.1	18.4
7 10	18 52.12	-31 11.6	2.137	3.142	3.4	20.0	7 10	18 52.08	-30 50.3	2.030	3.036	3.4	18.4
7 20	18 43.64	-31 14.6	2.174	3.149	6.3	20.2	7 20	18 43.40	-30 55.8	2.053	3.030	6.5	18.6
7 30	18 36.53	-31 9.0	2.237	3.156	9.3	20.4	7 30	18 36.07	-30 52.3	2.102	3.023	9.7	18.8
8 9	18 31.43	-30 56.5	2.323	3.164	12.0	20.6	8 9	18 30.78	-30 41.6	2.174	3.017	12.6	18.9
261574	2005 WA ₁₉₈		7 4.9 196°61	5.6/ 6.6 18			386334	2008 SV ₂₀₇		7 4.9 330°00	2.4/ 3.9 18		
5 31	19 18.23	- 2 15.8	3.022	3.809	10.8	21.7	5 31	19 19.43	-21 47.5	1.313	2.198	16.7	19.5
6 10	19 13.39	- 1 45.4	2.937	3.806	9.0	21.5	6 10	19 16.37	-23 21.2	1.230	2.178	12.7	19.2
6 20	19 7.26	- 1 25.6	2.876	3.802	7.2	21.4	6 20	19 10.20	-25 9.5	1.168	2.160	8.0	18.9
6 30	19 0.28	- 1 17.9	2.840	3.798	5.9	21.3	6 30	19 1.54	-27 5.3	1.129	2.142	3.3	18.5
7 10	18 52.99	- 1 22.7	2.831	3.794	5.7	21.3	7 10	18 51.56	-28 59.1	1.115	2.125	4.3	18.6
7 20	18 45.93	- 1 39.4	2.849	3.790	6.7	21.4	7 20	18 41.81	-30 41.7	1.125	2.109	9.4	18.8
7 30	18 39.67	- 2 6.6	2.894	3.785	8.5	21.5	7 30	18 33.94	-32 7.1	1.157	2.094	14.4	19.0
8 9	18 34.67	- 2 42.0	2.963	3.779	10.3	21.6	8 9	18 29.22	-33 13.6	1.209	2.081	18.8	19.3
366479	2002 JU ₅₇		7 4.9 69°56	0.7/ 4.8 17			384084	2008 VV ₅₄		7 4.9 239°98	1.3/ 5.1 18		
5 31	19 27.48	-23 3.9	1.310	2.184	17.5	20.8	5 31	19 22.92	-19 43.8	1.890	2.746	13.7	21.4
6 10	19 21.61	-23 24.3	1.264	2.206	13.1	20.6	6 10	19 17.71	-19 33.2	1.810	2.742	10.4	21.1
6 20	19 12.81	-23 47.9	1.239	2.229	8.0	20.4	6 20	19 10.30	-19 26.5	1.753	2.738	6.6	20.9
6 30	19 2.16	-24 10.8	1.238	2.251	2.7	20.1	6 30	19 1.38	-19 22.7	1.721	2.733	2.6	20.6
7 10	18 51.12	-24 29.4	1.261	2.274	2.9	20.2	7 10	18 51.91	-19 20.7	1.716	2.729	2.5	20.6
7 20	18 41.16	-24 41.7	1.309	2.296	7.9	20.6	7 20	18 42.91	-19 19.8	1.738	2.724	6.5	20.9
7 30	18 33.52	-24 48.1	1.380	2.319	12.4	20.9	7 30	18 35.38	-19 19.7	1.786	2.719	10.4	21.1
8 9	18 28.93	-24 49.5	1.472	2.341	16.2	21.2	8 9	18 30.05	-19 20.2	1.856	2.714	13.8	21.3
470649	2008 SS ₁₁₈		7 4.9 323°06	0.1/ 4.9 16			435245	2007 TM ₂₂		7 4.9 284°86	4.4/ 5.7 16		
5 31	19 21.79	-22 31.2	1.589	2.461	15.1	21.4	5 31	19 20.51	-11 53.3	1.898	2.743	14.1	21.3
6 10	19 17.32	-22 40.0	1.512	2.453	11.4	21.1	6 10	19 15.89	-11 27.3	1.814	2.733	11.1	21.1
6 20	19 10.28	-22 52.2	1.457	2.446	7.1	20.9	6 20	19 9.19	-11 10.6	1.752	2.723	7.9	20.8
6 30	19 1.40	-23 5.6	1.425	2.438	2.4	20.6	6 30	19 1.03	-11 4.3	1.714	2.713	5.0	20.7
7 10	18 51.80	-23 17.4	1.418	2.432	2.5	20.6	7 10	18 52.27	-11 8.4	1.702	2.703	4.7	20.6
7 20	18 42.73	-23 26.1	1.437	2.425	7.3	20.8	7 20	18 43.89	-11 22.0	1.716	2.693	7.4	20.8
7 30	18 35.37	-23 31.1	1.480	2.419	11.7	21.1	7 30	18 36.82	-11 43.7	1.755	2.683	10.9	20.9
8 9	18 30.60	-23 32.8	1.544	2.413	15.5	21.3	8 9	18 31.79	-12 11.0	1.816	2.674	14.1	21.1
373180	2012 DN ₄₆		7 4.9 16°14	1.6/ 4.6 17			102201	1999 SD ₁₅		7 4.9 218°74	2.0/ 4.5 18		
5 31	19 21.07	-24 21.3	1.145	2.037	18.1	20.6	5 31	19 25.86	-28 56.2	2.331	3.179	11.7	20.6
6 10	19 17.45	-24 48.5	1.090	2.041	13.7	20.3	6 10	19 19.67	-29 4.9	2.243	3.170	8.9	20.4
6 20	19 10.60	-25 19.2	1.053	2.046	8.5	20.1	6 20	19 11.42	-29 10.9	2.179	3.161	5.7	20.1
6 30	19 1.52	-25 48.8	1.039	2.052	3.1	19.8	6 30	19 1.75	-29 11.6	2.142	3.152	2.7	19.9
7 10	18 51.73	-26 12.7	1.047	2.060	3.5	19.8	7 10	18 51.55	-29 4.9	2.133	3.141	2.9	19.9
7 20	18 42.85	-26 28.1	1.078	2.068	8.8	20.1	7 20	18 41.78	-28 50.4	2.153	3.131	6.1	20.1
7 30	18 36.33	-26 34.8	1.131	2.077	13.7	20.4	7 30	18 33.36	-28 29.0	2.199	3.119	9.4	20.3
8 9	18 33.07	-26 34.3	1.202	2.088	17.9	20.7	8 9	18 26.98	-28 2.7	2.269	3.107	12.3	20.5
420371	2012 BU ₁₁₄		7 4.9 199°10	0.2/ 4.8 17			288989	2004 TC ₆₀		7 4.9 202°33	6.6/ 6.7 18		
5 31	19 27.01	-22 56.9	1.6										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
186992	2004 <i>TZ</i> ₈		7 4.9 276°38	5°2/ 5.6	18		252895	2002 <i>JT</i> ₁₀₂		7 4.9 101°19	8°1/ 6.7	18	
5 31	19 19.89	- 7 8.2	2.679	3.490	11.4	20.1	5 31	19 20.33	+ 2 53.1	2.641	3.405	12.8	20.3
6 10	19 14.95	- 6 25.8	2.571	3.462	9.3	19.9	6 10	19 15.00	+ 4 2.8	2.582	3.421	11.0	20.2
6 20	19 8.43	- 5 51.4	2.485	3.434	7.2	19.7	6 20	19 8.28	+ 4 58.1	2.545	3.438	9.4	20.1
6 30	19 0.77	- 5 26.8	2.426	3.405	5.5	19.5	6 30	19 0.67	+ 5 36.4	2.532	3.454	8.3	20.1
7 10	18 52.57	- 5 12.9	2.394	3.375	5.4	19.5	7 10	18 52.82	+ 5 56.2	2.545	3.470	8.1	20.1
7 20	18 44.51	- 5 10.2	2.390	3.346	7.0	19.5	7 20	18 45.36	+ 5 57.8	2.583	3.486	8.9	20.2
7 30	18 37.30	- 5 18.0	2.412	3.315	9.4	19.6	7 30	18 38.89	+ 5 42.9	2.645	3.501	10.3	20.3
8 9	18 31.53	- 5 34.6	2.457	3.285	11.8	19.8	8 9	18 33.90	+ 5 14.6	2.729	3.516	11.8	20.4
513828	2013 <i>EX</i> ₈₂		7 4.9 188°58	4°7/ 3.4	18		292212	2006 <i>SL</i> ₄₂		7 4.9 231°04	0°3/ 4.9	17	
5 31	19 24.82	-37 43.1	2.737	3.572	10.6	22.8	5 31	19 25.46	-21 16.7	1.842	2.697	14.0	22.3
6 10	19 18.79	-38 25.4	2.661	3.571	8.4	22.7	6 10	19 19.83	-21 24.0	1.755	2.687	10.6	22.0
6 20	19 10.83	-39 1.6	2.609	3.570	6.2	22.5	6 20	19 11.77	-21 35.0	1.691	2.677	6.7	21.8
6 30	19 1.55	-39 27.5	2.584	3.568	4.8	22.4	6 30	19 1.96	-21 47.8	1.652	2.665	2.3	21.5
7 10	18 51.80	-39 40.4	2.587	3.566	5.1	22.5	7 10	18 51.42	-22 0.0	1.640	2.653	2.3	21.5
7 20	18 42.46	-39 39.5	2.617	3.564	6.9	22.6	7 20	18 41.29	-22 10.2	1.656	2.641	6.8	21.7
7 30	18 34.39	-39 25.5	2.673	3.561	9.1	22.7	7 30	18 32.69	-22 17.6	1.696	2.628	11.0	21.9
8 9	18 28.26	-39 1.2	2.752	3.558	11.3	22.9	8 9	18 26.47	-22 22.7	1.759	2.615	14.6	22.1
202048	2004 <i>RW</i> ₁₅₇		7 4.9 119°07	2°1/ 5.1	17		375221	2008 <i>FD</i> ₅₀		7 4.9 0°59	5°9/ 3.8	17	
5 31	19 26.26	-19 11.9	1.371	2.239	17.2	19.9	5 31	19 24.05	-33 1.2	1.287	2.168	17.3	20.3
6 10	19 20.81	-18 46.7	1.305	2.242	13.1	19.7	6 10	19 19.82	-33 54.3	1.226	2.167	13.4	20.1
6 20	19 12.47	-18 26.5	1.259	2.245	8.4	19.4	6 20	19 12.21	-34 42.4	1.184	2.166	9.3	19.9
6 30	19 2.15	-18 11.0	1.237	2.248	3.5	19.2	6 30	19 2.17	-35 18.0	1.164	2.166	6.2	19.7
7 10	18 51.20	-17 59.4	1.239	2.251	3.4	19.2	7 10	18 51.26	-35 35.1	1.167	2.166	6.8	19.7
7 20	18 41.03	-17 51.2	1.266	2.254	8.2	19.4	7 20	18 41.21	-35 31.7	1.193	2.167	10.3	19.9
7 30	18 32.95	-17 46.4	1.317	2.256	12.8	19.7	7 30	18 33.61	-35 9.9	1.241	2.169	14.4	20.2
8 9	18 27.81	-17 44.8	1.388	2.259	16.9	20.0	8 9	18 29.44	-34 35.0	1.308	2.172	18.1	20.4
361099	2006 <i>DU</i> ₂₆		7 4.9 120°40	3°7/ 5.8	17		153209	2000 <i>XL</i> ₉		7 4.9 205°01	3°8/ 3.1	18	
5 31	19 25.10	-13 24.4	1.457	2.313	17.0	21.0	5 31	19 23.53	-34 40.6	3.050	3.887	9.5	20.9
6 10	19 19.73	-13 22.4	1.393	2.321	13.2	20.8	6 10	19 17.72	-35 36.1	2.967	3.881	7.4	20.7
6 20	19 11.71	-13 32.9	1.350	2.329	8.9	20.6	6 20	19 10.17	-36 28.2	2.908	3.875	5.3	20.6
6 30	19 1.89	-13 55.0	1.331	2.337	4.8	20.4	6 30	19 1.39	-37 13.3	2.878	3.869	3.9	20.5
7 10	18 51.47	-14 26.8	1.336	2.344	4.3	20.4	7 10	18 52.08	-37 48.1	2.876	3.862	4.3	20.5
7 20	18 41.74	-15 5.1	1.367	2.351	8.1	20.6	7 20	18 43.01	-38 11.3	2.903	3.855	6.1	20.6
7 30	18 33.89	-15 47.0	1.422	2.358	12.3	20.9	7 30	18 34.97	-38 22.6	2.957	3.847	8.3	20.8
8 9	18 28.73	-16 29.6	1.497	2.364	16.0	21.1	8 9	18 28.56	-38 23.6	3.035	3.839	10.4	20.9
301336	2009 <i>BL</i> ₁₈₃		7 4.9 320°55	1°1/ 5.2	18		18709	Laurawong		7 4.9 207°84	4°9/ 5.9	18	
5 31	19 20.51	-19 8.0	1.857	2.718	13.7	21.2	5 31	19 21.48	-10 18.0	1.864	2.703	14.6	18.3
6 10	19 15.99	-19 15.3	1.778	2.712	10.4	21.0	6 10	19 16.58	- 9 52.3	1.788	2.702	11.6	18.1
6 20	19 9.30	-19 28.4	1.721	2.706	6.6	20.7	6 20	19 9.61	- 9 37.5	1.734	2.701	8.3	17.9
6 30	19 1.09	-19 45.7	1.688	2.701	2.5	20.5	6 30	19 1.22	- 9 34.9	1.704	2.700	5.5	17.8
7 10	18 52.28	-20 5.2	1.683	2.696	2.4	20.4	7 10	18 52.30	- 9 44.3	1.700	2.698	5.2	17.7
7 20	18 43.91	-20 25.1	1.704	2.691	6.5	20.7	7 20	18 43.82	-10 4.5	1.723	2.697	7.7	17.9
7 30	18 36.95	-20 44.2	1.749	2.686	10.4	20.9	7 30	18 36.73	-10 33.4	1.770	2.695	10.9	18.1
8 9	18 32.15	-21 1.7	1.817	2.681	13.8	21.1	8 9	18 31.71	-11 8.2	1.839	2.694	14.1	18.3
137725	1999 <i>XY</i> ₁₁₁		7 4.9 250°24	0°1/ 4.9	17		210308	2007 <i>TX</i> ₁₅₄		7 4.9 337°11	2°9/ 5.3	17	
5 31	19 25.57	-22 31.0	1.763	2.623	14.4	21.0	5 31	19 21.58	-17 41.8	1.171	2.055	18.5	19.8
6 10	19 20.09	-22 41.3	1.673	2.607	10.9	20.8	6 10	19 17.83	-17 20.2	1.103	2.047	14.2	19.5
6 20	19 12.03	-22 54.8	1.605	2.592	6.8	20.5	6 20	19 10.94	-17 6.9	1.052	2.041	9.3	19.2
6 30	19 2.06	-23 9.0	1.562	2.576	2.3	20.2	6 30	19 1.77	-17 1.9	1.023	2.034	4.2	18.9
7 10	18 51.25	-23 21.3	1.546	2.559	2.5	20.2	7 10	18 51.71	-17 4.1	1.017	2.029	4.0	18.8
7 20	18 40.81	-23 29.9	1.556	2.542	7.1	20.4	7 20	18 42.33	-17 12.2	1.034	2.024	9.0	19.1
7 30	18 31.97	-23 34.5	1.592	2.524	11.5	20.6	7 30	18 35.13	-17 24.7	1.072	2.020	14.2	19.4
8 9	18 25.63	-23 35.6	1.649	2.506	15.3	20.8	8 9	18 31.09	-17 40.0	1.129	2.017	18.6	19.6
72449	2001 <i>DS</i> ₃		7 4.9 88°25	4°5/ 3.9	17		470947	2009 <i>KE</i> ₁₂		7 4.9 92°06	2°7/ 4.3	16	
5 31	19 27.36	-30 22.0	1.467	2.337	16.2	19.2	5 31	19 28.15	-26 27.5	1.480	2.348	16.2	21.7
6 10	19 21.80	-31 19.1	1.409	2.345	12.3	19.0	6 10	19 22.14	-27 18.1	1.427	2.365	12.1	21.5
6 20	19 13.17	-32 13.9	1.371	2.354	8.2	18.8	6 20	19 13.26	-28 9.5	1.396	2.383	7.7	21.3
6 30	19 2.42	-32 59.6	1.357	2.363	4.9	18.6	6 30	19 2.45	-28 56.0	1.389	2.400	3.5	21.0
7 10	18 50.97	-33 30.7	1.369	2.371	5.4	18.7	7 10	18 51.10	-29 32.3	1.408	2.417	4.0	21.1
7 20	18 40.34	-33 44.8	1.405	2.379	9.1	18.9	7 20	18 40.63	-29 56.0	1.452	2.433	8.1	21.4
7 30	18 31.95	-33 43.0	1.465	2.388	13.0	19.2	7 30	18 32.33	-30 7.5	1.521	2.449	12.2	21.7
8 9	18 26.67	-33 29.2	1.544	2.396	16.4	19.4	8 9	18 26.99	-30 9.1	1.610	2.465	15.7	22.0
509112	2005 <i>WN</i> ₄₄		7 4.9 155°80	0°5/ 4.7	18		216496	2000 <i>AQ</i> ₂₁₂		7 4.9 330°16	6°1/ 2.4	18	
5 31	19 20.66	-23 41.4	2.716	3.565	10.2	22.4	5 31	19 20.03	-27 42.8	1.126	2.022	18.1	19.2
6 10	19 15.42	-23 56.8	2.641	3.569	7.7	22.2	6 10	19 17.50	-29 40.7	1.051	2.003	14.0	18.9
6 20	19 8.63	-24 13.4	2.589	3.574	4.7	22.0	6 20	19 11.31	-31 49.1	0.995	1.985	9.5	18.6
6 30	19 0.81	-24 29.4	2.565	3.578	1.6	21.8	6 30	19 2.08	-33 56.9	0.962	1.968	6.2	18.4
7 10	18 52.64	-24 43.1	2.570	3.582	1.8	21.8	7 10	18 51.24	-35 51.2	0.951	1.952	7.6	18.4
7 20	18 44.83	-24 53.6	2.603	3.586	4.9	22.1	7 20	18 40.69	-37 21.5	0.963	1.937	12.2	18.6
7 30	18 38.07	-25 0.4	2.664	3.589	7.7	22.3	7 30	18 32.49	-38 23.5	0.995	1.924	17.0	18.8
8 9	18 32.87	-25 3.9	2.749	3.592	10.3	22.4	8 9	18 28.17	-38 59.0	1.043	1.912	21.3	19.0
78911	2003 <i>SY</i> ₉₇		7 4.9 237°60										

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
188434	2004 <i>FQ</i> ₁₀₈		7 4.9 140°03	1°0/ 4.7 17			122660	2000 <i>RE</i> ₉₈		7 4.9 315°63	1°4/ 4.9 18		
5 31	19 26.35	-24 12.2	1.834	2.692	14.0	21.2	5 31	19 25.23	-28 3.1	1.442	2.316	16.2	18.5
6 10	19 20.34	-24 33.4	1.767	2.700	10.5	21.0	6 10	19 20.38	-27 33.2	1.354	2.296	12.4	18.2
6 20	19 11.97	-24 56.2	1.722	2.709	6.5	20.7	6 20	19 12.47	-26 57.5	1.287	2.276	7.9	17.9
6 30	19 2.02	-25 17.6	1.703	2.716	2.3	20.5	6 30	19 2.32	-26 13.6	1.244	2.257	3.0	17.5
7 10	18 51.55	-25 34.5	1.712	2.724	2.5	20.5	7 10	18 51.26	-25 20.8	1.225	2.238	3.1	17.5
7 20	18 41.71	-25 45.5	1.747	2.731	6.7	20.8	7 20	18 40.80	-24 20.7	1.231	2.220	8.2	17.8
7 30	18 33.54	-25 50.4	1.808	2.737	10.5	21.0	7 30	18 32.41	-23 17.3	1.261	2.202	13.2	18.0
8 9	18 27.79	-25 50.3	1.891	2.743	13.9	21.3	8 9	18 27.06	-22 14.6	1.311	2.185	17.5	18.2
291590	2006 <i>GH</i> ₁₄		7 4.9 53°22	1°3/ 5.2 17			342046	2008 <i>RQ</i> ₁₂₅		7 4.9 310°67	8°8/ 7.7 18		
5 31	19 21.88	-18 30.3	1.757	2.618	14.4	21.1	5 31	19 19.37	-1 3.1	1.635	2.453	17.2	20.2
6 10	19 17.05	-18 40.6	1.688	2.622	10.9	20.9	6 10	19 15.37	-0 39.9	1.555	2.443	14.5	20.0
6 20	19 9.97	-18 57.4	1.641	2.626	6.9	20.7	6 20	19 9.08	-0 37.8	1.493	2.433	11.7	19.8
6 30	19 1.36	-19 19.1	1.619	2.631	2.7	20.4	6 30	19 1.13	-0 59.9	1.454	2.423	9.4	19.7
7 10	18 52.22	-19 43.3	1.623	2.635	2.5	20.4	7 10	18 52.47	-1 46.7	1.438	2.413	8.8	19.6
7 20	18 43.63	-20 7.9	1.653	2.640	6.6	20.7	7 20	18 44.17	-2 55.5	1.446	2.404	10.4	19.7
7 30	18 36.57	-20 31.5	1.708	2.644	10.6	20.9	7 30	18 37.28	-4 21.2	1.477	2.395	13.2	19.8
8 9	18 31.80	-20 53.2	1.785	2.649	14.0	21.2	8 9	18 32.66	-5 57.2	1.529	2.387	16.3	20.0
83126	2001 <i>QJ</i> ₂₅₃		7 4.9 201°81	0°4/ 5.0 18			304585	2006 <i>VV</i> ₄₉		7 4.9 186°02	1°0/ 4.6 18		
5 31	19 21.37	-20 24.7	2.112	2.967	12.5	19.5	5 31	19 21.75	-25 2.6	2.397	3.250	11.3	21.4
6 10	19 16.40	-20 40.2	2.034	2.966	9.4	19.3	6 10	19 16.51	-25 20.8	2.319	3.250	8.5	21.2
6 20	19 9.47	-21 0.0	1.980	2.965	5.9	19.1	6 20	19 9.46	-25 39.6	2.264	3.250	5.3	21.0
6 30	19 1.18	-21 22.3	1.951	2.964	2.0	18.9	6 30	19 1.19	-25 56.8	2.237	3.249	2.0	20.7
7 10	18 52.40	-21 44.9	1.950	2.963	2.0	18.8	7 10	18 52.47	-26 10.3	2.237	3.248	2.2	20.8
7 20	18 44.02	-22 6.1	1.976	2.962	5.9	19.1	7 20	18 44.14	-26 19.1	2.265	3.247	5.5	21.0
7 30	18 36.94	-22 24.7	2.029	2.961	9.4	19.3	7 30	18 37.01	-26 22.8	2.320	3.246	8.7	21.2
8 9	18 31.81	-22 40.6	2.104	2.960	12.5	19.5	8 9	18 31.69	-26 22.2	2.399	3.245	11.5	21.4
87464	2000 <i>QV</i> ₁₂₉		7 4.9 273°40	1°9/ 5.4 18			379415	2010 <i>AB</i> ₇₁		7 4.9 166°08	1°4/ 5.3 17		
5 31	19 22.67	-17 12.0	1.851	2.705	14.0	19.3	5 31	19 23.76	-18 14.9	2.332	3.174	11.9	22.4
6 10	19 17.81	-17 16.1	1.755	2.685	10.8	19.0	6 10	19 17.92	-18 14.7	2.256	3.179	9.0	22.2
6 20	19 10.60	-17 27.5	1.681	2.664	7.0	18.8	6 20	19 10.28	-18 19.0	2.203	3.184	5.8	22.0
6 30	19 1.64	-17 45.2	1.632	2.643	3.1	18.5	6 30	19 1.45	-18 26.7	2.177	3.188	2.4	21.8
7 10	18 51.86	-18 7.6	1.610	2.621	2.8	18.4	7 10	18 52.22	-18 36.4	2.180	3.191	2.2	21.8
7 20	18 42.33	-18 32.6	1.614	2.600	6.9	18.6	7 20	18 43.41	-18 47.3	2.211	3.194	5.5	22.0
7 30	18 34.16	-18 58.6	1.644	2.578	11.1	18.8	7 30	18 35.81	-18 58.4	2.269	3.196	8.8	22.2
8 9	18 28.22	-19 24.3	1.695	2.556	14.8	19.0	8 9	18 30.04	-19 9.4	2.351	3.198	11.7	22.4
102266	1999 <i>TD</i> ₄₀		7 4.9 246°13	1°7/ 4.5 18			241197	2007 <i>SJ</i> ₂₀		7 4.9 207°09	0°9/ 5.2 18		
5 31	19 26.22	-25 20.2	1.738	2.599	14.5	20.3	5 31	19 21.64	-18 51.7	2.053	2.907	12.9	20.4
6 10	19 20.72	-25 51.4	1.651	2.586	11.0	20.0	6 10	19 16.66	-19 8.7	1.975	2.905	9.7	20.2
6 20	19 12.52	-26 24.9	1.585	2.572	6.9	19.8	6 20	19 9.67	-19 31.5	1.919	2.904	6.1	20.0
6 30	19 2.31	-26 56.7	1.545	2.557	2.8	19.5	6 30	19 1.28	-19 58.3	1.890	2.902	2.3	19.8
7 10	18 51.21	-27 22.7	1.532	2.543	3.2	19.5	7 10	18 52.37	-20 26.8	1.887	2.900	2.2	19.7
7 20	18 40.48	-27 40.4	1.545	2.527	7.5	19.7	7 20	18 43.85	-20 55.0	1.912	2.898	6.0	20.0
7 30	18 31.43	-27 49.3	1.583	2.511	11.8	19.9	7 30	18 36.64	-21 21.3	1.963	2.896	9.6	20.2
8 9	18 25.01	-27 50.6	1.642	2.495	15.5	20.1	8 9	18 31.42	-21 45.1	2.038	2.894	12.8	20.4
319509	2006 <i>QA</i> ₁₄₃		7 4.9 2°45	5°5/ 4.3 17			312731	2010 <i>SS</i> ₉		7 4.9 192°75	3°7/ 3.8 18		
5 31	19 25.49	-33 20.8	1.222	2.104	17.9	20.1	5 31	19 23.44	-34 36.5	2.714	3.556	10.4	21.5
6 10	19 20.99	-33 48.6	1.161	2.103	13.9	19.8	6 10	19 17.73	-35 7.5	2.636	3.554	8.1	21.3
6 20	19 12.96	-34 9.1	1.119	2.103	9.6	19.6	6 20	19 10.19	-35 33.7	2.582	3.553	5.7	21.2
6 30	19 2.45	-34 15.5	1.099	2.103	6.0	19.4	6 30	19 1.43	-35 51.8	2.555	3.551	3.9	21.0
7 10	18 51.16	-34 3.5	1.101	2.104	6.3	19.4	7 10	18 52.23	-35 59.4	2.556	3.548	4.2	21.1
7 20	18 40.87	-33 32.8	1.127	2.106	10.1	19.6	7 20	18 43.44	-35 55.7	2.585	3.546	6.3	21.2
7 30	18 33.19	-32 47.1	1.174	2.108	14.5	19.9	7 30	18 35.86	-35 41.6	2.640	3.543	8.7	21.3
8 9	18 29.07	-31 52.3	1.240	2.111	18.4	20.1	8 9	18 30.10	-35 19.0	2.719	3.540	11.0	21.5
371590	2006 <i>WB</i> ₄₇		7 4.9 220°07	0°6/ 4.8 17			443588	2014 <i>KL</i> ₈₂		7 4.9 48°39	3°8/ 3.6 17		
5 31	19 25.95	-23 46.5	1.896	2.752	13.7	22.8	5 31	19 22.50	-30 54.3	2.087	2.946	12.5	20.9
6 10	19 20.16	-23 58.8	1.812	2.744	10.3	22.5	6 10	19 17.45	-31 54.5	2.023	2.953	9.5	20.7
6 20	19 11.97	-24 13.0	1.750	2.736	6.4	22.3	6 20	19 10.22	-32 52.6	1.981	2.960	6.4	20.5
6 30	19 2.07	-24 26.3	1.715	2.728	2.2	22.0	6 30	19 1.48	-33 43.9	1.966	2.968	4.0	20.4
7 10	18 51.50	-24 36.3	1.706	2.719	2.4	22.0	7 10	18 52.19	-34 24.3	1.977	2.976	4.5	20.4
7 20	18 41.37	-24 41.5	1.725	2.709	6.7	22.3	7 20	18 43.40	-34 51.4	2.016	2.984	7.2	20.6
7 30	18 32.79	-24 41.8	1.770	2.699	10.7	22.5	7 30	18 36.08	-35 5.4	2.079	2.992	10.2	20.8
8 9	18 26.57	-24 38.2	1.836	2.689	14.2	22.7	8 9	18 30.95	-35 8.1	2.165	3.000	13.0	21.0
39167	2000 <i>WT</i> ₁₃₀		7 4.9 139°02	0°4/ 5.0 18			388557	2007 <i>PS</i> ₇		7 4.9 315°32	17°5/ 12.5 17		
5 31	19 20.74	-20 47.4	2.528	3.376	10.9	20.2	5 31	19 18.96	+20 13.0	1.679	2.371	21.4	20.1
6 10	19 15.57	-20 55.6	2.454	3.382	8.2	20.1	6 10	19 15.25	+21 4.5	1.594	2.348	20.2	20.0
6 20	19 8.78	-21 6.5	2.404	3.388	5.1	19.9	6 20	19 9.14	+21 22.3	1.522	2.325	19.0	19.8
6 30	19 0.93	-21 19.0	2.381	3.394	1.8	19.7	6 30	19 1.21	+20 58.1	1.465	2.303	18.0	19.7
7 10	18 52.73	-21 31.4	2.387	3.400	1.7	19.7	7 10	18 52.40	+19 47.0	1.426	2.281	17.5	19.6
7 20	18 44.92	-21 42.9	2.421	3.405	5.0	19.9	7 20	18 43.84	+17 48.8	1.405	2.260	17.7	19.5
7 30	18 38.20	-21 52.6	2.482	3.411	8.1	20.1	7 30	18 36.66	+15 8.6	1.403	2.240	18.7	19.5
8 9	18 33.13	-22 0.6	2.567	3.416	10.7	20.3	8 9	18 31.82	+11 56.9	1.421	2.220	20.2	19.6
262102	2006 <i>RE</i> ₉₈												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
281829	2010 AR ₅		7 4.9 190°64	4°0/ 6.8 18			338455	2003 FS ₅		7 4.9 3°89 12°9/ 4.1 16			
5 31	19 22.98	- 8 7.7	1.951	2.778	14.5	20.5	5 31	19 18.69	-44 50.3	0.953	1.842	21.1	19.0
6 10	19 17.74	- 8 49.5	1.870	2.777	11.5	20.3	6 10	19 17.15	-45 57.9	0.908	1.840	17.9	18.7
6 20	19 10.41	- 9 47.8	1.811	2.777	8.1	20.1	6 20	19 11.13	-46 43.2	0.880	1.841	14.9	18.6
6 30	19 1.57	-11 1.3	1.777	2.776	4.9	19.9	6 30	19 1.95	-46 54.6	0.869	1.843	13.1	18.5
7 10	18 52.11	-12 26.5	1.771	2.775	4.2	19.8	7 10	18 51.91	-46 25.9	0.876	1.849	13.3	18.5
7 20	18 42.98	-13 58.7	1.793	2.773	6.9	20.0	7 20	18 43.37	-45 18.6	0.901	1.857	15.4	18.7
7 30	18 35.15	-15 32.8	1.842	2.772	10.4	20.2	7 30	18 38.24	-43 41.4	0.945	1.867	18.4	18.9
8 9	18 29.36	-17 4.4	1.915	2.770	13.6	20.4	8 9	18 37.39	-41 46.1	1.004	1.879	21.5	19.1
148422	2000 WE ₁₀₈		7 4.9 188°67	4°2/ 3.6 18			206036	2002 QT ₁₇		7 4.9 280°89	1°4/ 4.7 18		
5 31	19 23.74	-34 43.6	2.531	3.375	11.0	20.0	5 31	19 22.99	-25 48.2	1.925	2.787	13.3	20.8
6 10	19 18.11	-35 27.1	2.455	3.375	8.6	19.9	6 10	19 17.98	-26 2.4	1.841	2.776	10.0	20.6
6 20	19 10.53	-36 6.1	2.404	3.374	6.1	19.7	6 20	19 10.66	-26 17.0	1.778	2.765	6.3	20.3
6 30	19 1.58	-36 36.4	2.379	3.373	4.3	19.6	6 30	19 1.70	-26 29.1	1.742	2.754	2.4	20.1
7 10	18 52.13	-36 55.1	2.382	3.372	4.7	19.6	7 10	18 52.08	-26 36.4	1.732	2.743	2.7	20.1
7 20	18 43.09	-37 1.1	2.412	3.370	6.8	19.8	7 20	18 42.88	-26 37.3	1.748	2.732	6.7	20.3
7 30	18 35.35	-36 54.8	2.468	3.369	9.3	19.9	7 30	18 35.17	-26 32.2	1.790	2.721	10.5	20.5
8 9	18 29.56	-36 38.6	2.547	3.367	11.7	20.1	8 9	18 29.73	-26 22.1	1.854	2.710	13.9	20.7
256484	2007 DN ₁₁₀		7 4.9 209°27	0°5/ 5.1 18			444467	2006 HS ₅₇		7 4.9 280°50	17°5/25.7 17		
5 31	19 20.18	-20 32.6	2.712	3.557	10.3	21.9	5 31	19 37.13	-48 29.6	1.123	1.974	21.4	20.7
6 10	19 15.13	-20 37.6	2.626	3.553	7.8	21.7	6 10	19 32.97	-52 1.6	1.070	1.963	19.2	20.5
6 20	19 8.53	-20 45.4	2.565	3.548	4.9	21.5	6 20	19 22.65	-55 20.7	1.036	1.953	17.7	20.4
6 30	19 0.89	-20 54.8	2.531	3.544	1.7	21.3	6 30	19 6.47	-58 4.4	1.022	1.942	17.6	20.3
7 10	18 52.86	-21 4.5	2.526	3.539	1.7	21.3	7 10	18 46.71	-59 53.5	1.027	1.932	18.9	20.4
7 20	18 45.12	-21 13.6	2.549	3.533	4.8	21.5	7 20	18 27.25	-60 40.6	1.049	1.921	21.2	20.5
7 30	18 38.38	-21 21.6	2.600	3.528	7.8	21.7	7 30	18 12.30	-60 32.1	1.087	1.911	23.7	20.6
8 9	18 33.15	-21 28.3	2.675	3.522	10.4	21.8	8 9	18 4.40	-59 43.1	1.137	1.901	26.2	20.8
477957	2011 SF ₅		7 4.9 267°92	0°3/ 5.0 18			371418	2006 SJ ₈₀		7 4.9 215°59	4°5/ 4.1 17		
5 31	19 21.71	-21 27.7	2.063	2.920	12.7	21.8	5 31	19 29.37	-33 21.2	1.843	2.695	14.1	21.9
6 10	19 16.77	-21 32.7	1.980	2.912	9.6	21.5	6 10	19 23.02	-33 53.8	1.763	2.689	11.0	21.7
6 20	19 9.78	-21 40.8	1.919	2.905	6.0	21.3	6 20	19 13.90	-34 21.2	1.706	2.682	7.6	21.4
6 30	19 1.35	-21 50.3	1.884	2.897	2.1	21.0	6 30	19 2.81	-34 38.0	1.674	2.675	4.8	21.3
7 10	18 52.37	-21 59.6	1.876	2.889	2.1	21.0	7 10	18 50.97	-34 40.2	1.669	2.668	5.2	21.3
7 20	18 43.78	-22 7.4	1.895	2.881	6.0	21.3	7 20	18 39.73	-34 26.8	1.690	2.659	8.3	21.4
7 30	18 36.51	-22 13.2	1.940	2.873	9.7	21.5	7 30	18 30.37	-33 59.5	1.736	2.651	11.8	21.6
8 9	18 31.26	-22 17.1	2.008	2.865	13.0	21.7	8 9	18 23.78	-33 22.5	1.804	2.641	15.0	21.8
358350	2006 WE ₇₇		7 4.9 109°53	4°7/ 5.9 17			407822	2012 BT		7 4.9 75°75	0°0/ 4.7 17		
5 31	19 21.03	- 8 26.2	2.525	3.341	11.9	21.4	5 31	19 24.71	-20 15.2	1.399	2.271	16.7	20.9
6 10	19 15.62	- 7 46.4	2.460	3.357	9.5	21.2	6 10	19 19.79	-20 53.5	1.335	2.275	12.6	20.7
6 20	19 8.74	- 7 15.6	2.419	3.373	7.0	21.1	6 20	19 12.00	-21 40.0	1.291	2.280	7.9	20.4
6 30	19 0.93	- 6 55.0	2.404	3.388	5.1	21.0	6 30	19 2.18	-22 30.5	1.271	2.285	2.6	20.1
7 10	18 52.87	- 6 44.9	2.416	3.403	4.9	21.0	7 10	18 51.62	-23 20.2	1.276	2.290	2.7	20.1
7 20	18 45.24	- 6 45.0	2.456	3.418	6.5	21.1	7 20	18 41.74	-24 4.9	1.306	2.294	7.9	20.4
7 30	18 38.68	- 6 54.0	2.523	3.432	8.8	21.3	7 30	18 33.85	-24 42.4	1.360	2.299	12.5	20.7
8 9	18 33.68	- 7 10.2	2.613	3.446	11.1	21.5	8 9	18 28.86	-25 12.4	1.434	2.304	16.5	21.0
167756	2004 XM ₈₅		7 4.9 222°07	0°0/ 4.8 18			42162	2001 BA ₇₆		7 4.9 238°24	3°9/ 5.9 18		
5 31	19 25.88	-20 21.8	1.637	2.497	15.2	20.6	5 31	19 18.87	-10 45.1	2.437	3.268	11.8	19.3
6 10	19 20.49	-21 0.8	1.556	2.491	11.6	20.4	6 10	19 14.25	-10 26.1	2.356	3.265	9.3	19.1
6 20	19 12.41	-21 47.4	1.497	2.484	7.2	20.1	6 20	19 8.04	-10 15.5	2.297	3.262	6.7	19.0
6 30	19 2.32	-22 38.1	1.463	2.477	2.4	19.8	6 30	19 0.76	-10 14.0	2.264	3.259	4.4	18.8
7 10	18 51.37	-23 28.3	1.456	2.469	2.5	19.8	7 10	18 53.09	-10 21.2	2.259	3.257	4.1	18.8
7 20	18 40.84	-24 14.2	1.475	2.461	7.4	20.0	7 20	18 45.74	-10 36.4	2.281	3.254	6.2	18.9
7 30	18 32.01	-24 53.5	1.519	2.452	11.9	20.3	7 30	18 39.41	-10 58.1	2.329	3.251	8.9	19.1
8 9	18 25.83	-25 25.6	1.584	2.443	15.7	20.5	8 9	18 34.64	-11 24.5	2.400	3.248	11.4	19.3
334705	2003 FS ₁₇		7 4.9 48°37	3°6/ 5.6 17			311934	2007 CE ₂₉		7 4.9 51°96	2°3/ 5.8 18		
5 31	19 23.95	-15 25.7	1.196	2.071	18.7	20.4	5 31	19 19.42	-14 15.8	2.173	3.018	12.6	20.6
6 10	19 19.35	-15 9.2	1.140	2.078	14.4	20.2	6 10	19 14.84	-14 34.9	2.101	3.024	9.6	20.4
6 20	19 11.73	-15 4.3	1.102	2.086	9.6	19.9	6 20	19 8.48	-15 2.9	2.051	3.029	6.3	20.3
6 30	19 2.06	-15 10.5	1.086	2.095	4.8	19.7	6 30	19 0.92	-15 38.4	2.027	3.035	3.2	20.1
7 10	18 51.75	-15 26.3	1.093	2.103	4.4	19.7	7 10	18 52.93	-16 19.4	2.031	3.040	2.8	20.0
7 20	18 42.31	-15 49.3	1.124	2.112	8.8	20.0	7 20	18 45.33	-17 3.4	2.062	3.046	5.8	20.3
7 30	18 35.07	-16 16.7	1.177	2.121	13.5	20.3	7 30	18 38.91	-17 48.1	2.120	3.052	9.0	20.5
8 9	18 30.90	-16 46.2	1.249	2.131	17.7	20.5	8 9	18 34.27	-18 31.7	2.201	3.058	12.0	20.7
241430	2008 VV ₇₅		7 4.9 63°57	0°0/ 4.7 17			390722	2003 GG ₄₃		7 4.9 73°07	4°6/ 3.2 17		
5 31	19 25.63	-21 28.8	1.231	2.110	18.0	20.0	5 31	19 25.59	-32 30.9	2.108	2.960	12.6	20.8
6 10	19 20.74	-21 49.6	1.172	2.116	13.6	19.8	6 10	19 19.73	-33 50.2	2.056	2.981	9.7	20.7
6 20	19 12.68	-22 16.7	1.132	2.122	8.5	19.5	6 20	19 11.62	-35 5.9	2.029	3.002	6.7	20.5
6 30	19 2.40	-22 46.3	1.115	2.128	2.8	19.2	6 30	19 1.99	-36 12.1	2.028	3.024	4.7	20.4
7 10	18 51.39	-23 14.3	1.121	2.135	2.9	19.2	7 10	18 51.86	-37 4.2	2.054	3.045	5.2	20.5
7 20	18 41.23	-23 37.6	1.151	2.141	8.5	19.5	7 20	18 42.31	-37 40.1	2.108	3.066	7.6	20.7
7 30	18 33.36	-23 55.2	1.204	2.147	13.4	19.8	7 30	18 34.35	-38 0.0	2.187	3.087	10.4	20.9
8 9	18 28.72	-24 7.4	1.277	2.154	17.6	20.1	8 9	18 28.68	-38 6.5	2.288	3.108	12.8	21.1
469048	2015 AN ₂₆₁		7 4.9 229°90	2°5/ 5.4 17			350165	2011 TO ₁₁		7 4.9 289°98	3°3/ 4.2 18		
5 31	19 25.87	-16 16.9	1.95										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
93219	2000 SG ₁₃₃	7 4.9 126°02	3°9/ 5.5 17				513216	2005 UP ₂₄₆	7 4.9 166°44	0°5/ 5.1 18			
5 31	19 24.37	-14 5.2	1.878	2.721	14.3	19.6	5 31	19 20.30	-20 20.2	2.763	3.607	10.2	22.3
6 10	19 18.66	-13 24.5	1.809	2.729	11.1	19.4	6 10	19 15.17	-20 29.6	2.684	3.610	7.7	22.2
6 20	19 10.88	-12 50.9	1.763	2.736	7.6	19.2	6 20	19 8.56	-20 41.9	2.630	3.613	4.8	22.0
6 30	19 1.73	-12 25.4	1.742	2.743	4.5	19.0	6 30	19 0.95	-20 55.9	2.603	3.616	1.7	21.8
7 10	18 52.17	-12 8.5	1.747	2.750	4.3	19.0	7 10	18 52.99	-21 10.2	2.605	3.618	1.6	21.8
7 20	18 43.19	-12 0.0	1.780	2.757	7.2	19.2	7 20	18 45.36	-21 23.7	2.636	3.620	4.7	22.0
7 30	18 35.70	-11 59.3	1.838	2.763	10.6	19.4	7 30	18 38.71	-21 35.8	2.694	3.622	7.6	22.2
8 9	18 30.35	-12 4.9	1.918	2.770	13.7	19.6	8 9	18 33.57	-21 46.3	2.777	3.623	10.1	22.4
508124	2015 DS ₂₂₉	7 4.9 196°25	3°9/ 3.5 17				474919	2005 SG ₂₃₂	7 4.9 211°26	4°0/ 3.5 18			
5 31	19 26.17	-29 36.7	1.954	2.810	13.3	22.0	5 31	19 23.78	-35 16.6	2.764	3.604	10.3	21.7
6 10	19 20.51	-30 50.0	1.879	2.808	10.2	21.8	6 10	19 18.07	-35 58.1	2.682	3.598	8.1	21.5
6 20	19 12.33	-32 3.6	1.827	2.807	6.8	21.6	6 20	19 10.50	-36 35.1	2.625	3.593	5.8	21.3
6 30	19 2.31	-33 11.5	1.801	2.805	4.1	21.4	6 30	19 1.64	-37 3.9	2.594	3.586	4.2	21.2
7 10	18 51.50	-34 8.1	1.803	2.802	4.8	21.4	7 10	18 52.27	-37 21.6	2.592	3.580	4.5	21.2
7 20	18 41.09	-34 50.1	1.832	2.800	7.8	21.6	7 20	18 43.24	-37 27.0	2.617	3.573	6.5	21.3
7 30	18 32.25	-35 16.7	1.886	2.796	11.2	21.8	7 30	18 35.38	-37 20.8	2.669	3.566	8.8	21.5
8 9	18 25.87	-35 29.9	1.962	2.793	14.2	22.0	8 9	18 29.35	-37 4.8	2.744	3.558	11.1	21.6
266749	2009 SQ ₆₂	7 4.9 209°07	2°2/ 5.5 17				342666	2008 VC ₁₃	7 4.9 257°91	2°5/ 5.5 18			
5 31	19 23.90	-16 30.3	1.841	2.692	14.2	21.7	5 31	19 22.82	-15 37.4	2.141	2.984	12.8	21.5
6 10	19 18.57	-16 27.8	1.761	2.688	10.9	21.5	6 10	19 17.62	-15 28.4	2.042	2.964	9.9	21.3
6 20	19 10.99	-16 32.7	1.704	2.685	7.1	21.2	6 20	19 10.38	-15 25.9	1.966	2.944	6.6	21.0
6 30	19 1.82	-16 44.0	1.671	2.680	3.3	21.0	6 30	19 1.65	-15 29.7	1.916	2.923	3.4	20.8
7 10	18 52.04	-17 0.3	1.665	2.676	3.0	21.0	7 10	18 52.23	-15 38.9	1.893	2.901	3.1	20.7
7 20	18 42.70	-17 19.8	1.686	2.671	6.8	21.2	7 20	18 43.05	-15 52.4	1.898	2.880	6.4	20.9
7 30	18 34.83	-17 41.2	1.733	2.665	10.7	21.4	7 30	18 35.03	-16 9.2	1.928	2.857	10.0	21.1
8 9	18 29.20	-18 3.2	1.801	2.660	14.2	21.6	8 9	18 28.94	-16 28.1	1.983	2.834	13.3	21.2
435790	2008 UW ₃₅₂	7 4.9 313°92	1°8/ 4.4 18				383905	2008 SQ ₇₂	7 4.9 245°34	0°7/ 4.8 17			
5 31	19 22.69	-24 48.5	1.757	2.623	14.1	20.6	5 31	19 24.10	-24 8.2	2.015	2.872	13.0	22.1
6 10	19 17.95	-25 31.0	1.681	2.619	10.6	20.4	6 10	19 18.71	-24 18.7	1.928	2.861	9.8	21.8
6 20	19 10.74	-26 16.7	1.627	2.615	6.7	20.1	6 20	19 11.09	-24 30.5	1.864	2.850	6.1	21.6
6 30	19 1.77	-27 1.4	1.599	2.611	2.7	19.9	6 30	19 1.88	-24 41.3	1.825	2.838	2.1	21.3
7 10	18 52.08	-27 40.9	1.597	2.607	3.1	19.9	7 10	18 52.02	-24 48.8	1.814	2.826	2.3	21.3
7 20	18 42.85	-28 12.2	1.620	2.604	7.2	20.2	7 20	18 42.55	-24 51.8	1.830	2.814	6.4	21.5
7 30	18 35.23	-28 34.2	1.669	2.600	11.2	20.4	7 30	18 34.50	-24 50.2	1.872	2.802	10.2	21.8
8 9	18 30.05	-28 47.8	1.739	2.597	14.6	20.6	8 9	18 28.62	-24 44.9	1.936	2.789	13.5	21.9
470805	2008 VY ₂	7 4.9 305°95	0°0/ 4.8 18				284438	2007 DC ₁₀₅	7 4.9 21°51	4°4/ 5.9 17			
5 31	19 22.86	-23 1.8	1.566	2.437	15.3	20.8	5 31	19 20.89	-12 38.9	1.451	2.312	16.8	20.4
6 10	19 18.53	-22 52.4	1.468	2.408	11.7	20.5	6 10	19 16.66	-12 21.9	1.386	2.316	13.1	20.2
6 20	19 11.38	-22 44.6	1.391	2.379	7.4	20.1	6 20	19 9.93	-12 17.3	1.342	2.320	9.0	20.0
6 30	19 2.07	-22 36.4	1.337	2.350	2.6	19.8	6 30	19 1.49	-12 25.6	1.321	2.324	5.3	19.8
7 10	18 51.70	-22 26.3	1.308	2.322	2.6	19.7	7 10	18 52.47	-12 45.6	1.324	2.329	4.9	19.8
7 20	18 41.61	-22 13.4	1.304	2.293	7.8	19.9	7 20	18 44.07	-13 15.2	1.351	2.335	8.2	20.0
7 30	18 33.18	-21 58.1	1.325	2.265	12.7	20.1	7 30	18 37.41	-13 51.4	1.402	2.341	12.2	20.2
8 9	18 27.47	-21 41.8	1.365	2.237	17.0	20.3	8 9	18 33.29	-14 31.0	1.473	2.347	15.9	20.5
185761	1999 TN ₇₃	7 4.9 75°05	4°4/ 3.9 18				95477	2002 ED ₁₁	7 4.9 72°76	6°9/ 7.2 18			
5 31	19 24.38	-34 58.4	2.211	3.061	12.2	20.2	5 31	19 18.69	-1 51.6	2.274	3.075	13.5	19.3
6 10	19 18.75	-35 28.7	2.145	3.067	9.5	20.0	6 10	19 14.11	-1 19.0	2.209	3.085	11.3	19.2
6 20	19 10.97	-35 52.8	2.101	3.073	6.7	19.9	6 20	19 7.95	-1 1.0	2.164	3.095	9.0	19.0
6 30	19 1.77	-36 6.9	2.083	3.079	4.6	19.7	6 30	19 0.75	-0 59.3	2.144	3.105	7.3	18.9
7 10	18 52.14	-36 8.4	2.092	3.086	4.9	19.8	7 10	18 53.23	-1 14.2	2.149	3.116	7.0	18.9
7 20	18 43.10	-35 56.5	2.128	3.092	7.2	19.9	7 20	18 46.10	-1 44.3	2.180	3.126	8.1	19.0
7 30	18 35.59	-35 32.9	2.189	3.098	10.0	20.1	7 30	18 40.07	-2 27.1	2.235	3.136	10.1	19.2
8 9	18 30.29	-35 0.6	2.273	3.104	12.5	20.3	8 9	18 35.66	-3 18.9	2.314	3.146	12.3	19.3
16089	Lamb	7 4.9 32°28	0°6/ 5.1 18				80720	2000 CO ₂₄	7 4.9 57°18	0°3/ 5.0 17			
5 31	19 21.57	-19 53.4	1.468	2.341	16.0	17.6	5 31	19 24.91	-21 36.9	1.387	2.260	16.7	19.2
6 10	19 17.19	-20 10.3	1.409	2.350	12.0	17.4	6 10	19 19.74	-21 39.8	1.333	2.274	12.6	19.0
6 20	19 10.25	-20 33.8	1.371	2.359	7.5	17.2	6 20	19 11.82	-21 47.0	1.300	2.289	7.8	18.7
6 30	19 1.57	-21 1.4	1.356	2.369	2.6	16.9	6 30	19 2.10	-21 55.9	1.290	2.303	2.7	18.4
7 10	18 52.36	-21 29.9	1.366	2.380	2.5	16.9	7 10	18 51.91	-22 4.2	1.304	2.318	2.6	18.5
7 20	18 43.85	-21 56.8	1.402	2.391	7.3	17.3	7 20	18 42.59	-22 10.3	1.344	2.333	7.6	18.8
7 30	18 37.18	-22 20.4	1.461	2.402	11.6	17.5	7 30	18 35.35	-22 14.1	1.407	2.348	12.0	19.1
8 9	18 33.12	-22 40.1	1.541	2.415	15.3	17.8	8 9	18 30.95	-22 15.7	1.491	2.364	15.8	19.4
345078	2005 JX ₁₃₄	7 4.9 123°25	2°7/ 5.7 17				504159	2006 SQ ₂₉₅	7 4.9 251°47	0°3/ 4.9 17			
5 31	19 22.13	-14 0.1	2.349	3.185	12.1	22.1	5 31	19 25.87	-22 55.2	1.747	2.607	14.5	22.5
6 10	19 16.62	-13 52.1	2.283	3.199	9.3	21.9	6 10	19 20.43	-23 5.8	1.658	2.592	11.0	22.3
6 20	19 9.47	-13 51.1	2.239	3.213	6.2	21.8	6 20	19 12.37	-23 19.4	1.590	2.576	6.9	22.0
6 30	19 1.24	-13 56.8	2.222	3.226	3.4	21.6	6 30	19 2.38	-23 33.3	1.547	2.560	2.4	21.7
7 10	18 52.71	-14 8.3	2.233	3.239	3.1	21.6	7 10	18 51.53	-23 44.8	1.531	2.544	2.5	21.6
7 20	18 44.63	-14 24.5	2.272	3.252	5.7	21.8	7 20	18 41.06	-23 52.2	1.541	2.527	7.2	21.9
7 30	18 37.72	-14 44.0	2.338	3.264	8.7	22.0	7 30	18 32.21	-23 55.1	1.577	2.510	11.6	22.1
8 9	18 32.53	-15 5.5	2.428	3.276	11.3	22.2	8 9	18 25.88	-23 54.3	1.634	2.492	15.4	22.3
475319	2005 YS ₁₄₈	7 4.9 174°96	2°1/ 4.5 18				250046	2002 CD ₂₂₈	7 4.9 174°41	0°3/ 4.9 18			
5 31	19 23.17	-30 49.8	2.930	3.									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
263969	2009 <i>JD</i> ₁₃		7 4.9 25°44	0°5/ 5.1	16		112519	2002 <i>PL</i> ₂₈		7 4.9 2°73	1°5/ 5.3	18	
5 31	19 20.36	-20 17.1	1.802	2.667	13.9	20.7	5 31	19 21.54	-19 7.5	1.701	2.565	14.6	19.4
6 10	19 15.91	-20 30.1	1.736	2.672	10.4	20.5	6 10	19 16.95	-19 1.0	1.629	2.564	11.1	19.2
6 20	19 9.32	-20 48.2	1.691	2.678	6.5	20.3	6 20	19 10.04	-18 59.8	1.578	2.564	7.0	19.0
6 30	19 1.27	-21 9.3	1.672	2.685	2.3	20.0	6 30	19 1.56	-19 2.9	1.552	2.564	2.8	18.7
7 10	18 52.75	-21 31.1	1.678	2.692	2.2	20.0	7 10	18 52.52	-19 8.8	1.552	2.565	2.6	18.7
7 20	18 44.76	-21 51.7	1.711	2.699	6.4	20.3	7 20	18 44.02	-19 16.4	1.578	2.566	6.8	18.9
7 30	18 38.26	-22 9.9	1.769	2.707	10.2	20.6	7 30	18 37.10	-19 24.7	1.629	2.567	10.9	19.2
8 9	18 33.96	-22 25.2	1.849	2.715	13.5	20.8	8 9	18 32.50	-19 33.1	1.701	2.568	14.4	19.4
323196	2003 <i>QB</i> ₆₈		7 4.9 290°13	4°1/ 5.8	17		389995	2012 <i>TF</i> ₂₉₆		7 4.9 278°87	3°7/ 4.1	17	
5 31	19 22.43	-13 31.5	1.408	2.271	17.1	20.7	5 31	19 24.48	-30 54.2	1.875	2.736	13.6	20.9
6 10	19 18.28	-13 21.0	1.320	2.252	13.5	20.4	6 10	19 19.28	-31 31.7	1.798	2.730	10.4	20.7
6 20	19 11.27	-13 22.8	1.252	2.232	9.2	20.1	6 20	19 11.58	-32 6.7	1.743	2.725	7.0	20.5
6 30	19 2.07	-13 37.5	1.207	2.213	5.2	19.9	6 30	19 2.10	-32 34.3	1.714	2.719	4.1	20.3
7 10	18 51.82	-14 4.1	1.185	2.193	4.7	19.8	7 10	18 51.94	-32 50.9	1.710	2.713	4.5	20.3
7 20	18 41.88	-14 40.2	1.188	2.174	8.8	20.0	7 20	18 42.28	-32 54.6	1.733	2.707	7.7	20.5
7 30	18 33.65	-15 22.7	1.214	2.155	13.5	20.2	7 30	18 34.27	-32 46.2	1.781	2.701	11.2	20.7
8 9	18 28.22	-16 8.4	1.260	2.136	17.9	20.4	8 9	18 28.76	-32 28.3	1.850	2.696	14.4	20.9
90353	2003 <i>GC</i> ₅₀		7 4.9 13°09	0°6/ 5.0	18		83718	2001 <i>TB</i> ₉₄		7 4.9 279°08	2°4/ 4.4	18	
5 31	19 21.73	-22 7.3	1.931	2.792	13.3	19.2	5 31	19 23.11	-28 37.8	2.072	2.931	12.6	19.5
6 10	19 16.80	-21 48.6	1.859	2.793	10.0	19.0	6 10	19 17.93	-28 59.0	1.995	2.927	9.5	19.3
6 20	19 9.79	-21 31.3	1.809	2.795	6.2	18.8	6 20	19 10.58	-29 18.7	1.940	2.924	6.1	19.0
6 30	19 1.42	-21 14.6	1.785	2.798	2.2	18.5	6 30	19 1.74	-29 33.4	1.911	2.920	3.0	18.8
7 10	18 52.61	-20 57.9	1.787	2.800	2.2	18.5	7 10	18 52.35	-29 40.7	1.909	2.917	3.3	18.8
7 20	18 44.35	-20 41.2	1.816	2.803	6.2	18.8	7 20	18 43.43	-29 39.4	1.934	2.913	6.6	19.1
7 30	18 37.55	-20 24.9	1.871	2.806	9.9	19.0	7 30	18 35.97	-29 30.0	1.984	2.910	10.0	19.3
8 9	18 32.86	-20 9.5	1.948	2.810	13.1	19.3	8 9	18 30.67	-29 14.3	2.058	2.906	13.0	19.4
242482	2004 <i>TE</i> ₂₈₈		7 4.9 329°64	0°8/ 5.1	17		105907	2000 <i>SN</i> ₂₀₀		7 4.9 232°47	3°4/ 3.7	18	
5 31	19 16.62	-21 12.6	0.957	1.863	19.6	19.5	5 31	19 23.34	-31 51.4	2.541	3.389	10.9	20.5
6 10	19 15.02	-21 8.1	0.880	1.839	15.1	19.2	6 10	19 17.90	-32 36.6	2.456	3.380	8.4	20.3
6 20	19 9.81	-21 10.4	0.820	1.815	9.7	18.8	6 20	19 10.50	-33 19.4	2.395	3.371	5.7	20.1
6 30	19 1.71	-21 17.9	0.778	1.792	3.5	18.4	6 30	19 1.72	-33 56.2	2.360	3.361	3.6	19.9
7 10	18 52.19	-21 27.9	0.757	1.771	3.4	18.3	7 10	18 52.35	-34 23.5	2.354	3.351	4.0	20.0
7 20	18 43.11	-21 37.8	0.756	1.752	10.0	18.6	7 20	18 43.28	-34 39.8	2.375	3.341	6.4	20.1
7 30	18 36.42	-21 46.3	0.774	1.735	16.3	18.8	7 30	18 35.40	-34 45.0	2.423	3.331	9.2	20.2
8 9	18 33.52	-21 52.8	0.808	1.719	21.7	19.1	8 9	18 29.39	-34 40.6	2.494	3.320	11.7	20.4
213077	1999 <i>TY</i> ₁₁₆		7 4.9 328°47	6°5/ 5.8	18		506198	2016 <i>GP</i> ₁₉₀		7 4.9 357°02	9°7/ 6.6	17	
5 31	19 17.30	-11 48.9	1.116	1.998	19.3	19.4	5 31	19 19.53	-4 21.2	1.292	2.139	19.3	20.7
6 10	19 14.89	-11 5.9	1.037	1.976	15.5	19.1	6 10	19 15.91	-3 14.5	1.228	2.137	16.1	20.5
6 20	19 9.38	-10 36.6	0.976	1.956	11.2	18.8	6 20	19 9.63	-2 27.0	1.182	2.135	12.8	20.3
6 30	19 1.48	-10 24.4	0.935	1.937	7.3	18.5	6 30	19 1.47	-2 3.9	1.156	2.134	10.3	20.1
7 10	18 52.46	-10 30.9	0.914	1.918	6.9	18.4	7 10	18 52.62	-2 7.4	1.153	2.133	9.8	20.1
7 20	18 43.84	-10 55.2	0.915	1.901	10.7	18.6	7 20	18 44.36	-2 36.3	1.171	2.133	11.8	20.2
7 30	18 37.20	-11 34.1	0.936	1.886	15.5	18.8	7 30	18 37.93	-3 26.4	1.210	2.134	15.0	20.4
8 9	18 33.71	-12 22.8	0.975	1.872	20.1	19.0	8 9	18 34.17	-4 31.1	1.267	2.136	18.3	20.6
111523	2001 <i>YW</i> ₁₀₀		7 4.9 46°53	2°5/ 5.4	18		359551	2010 <i>SJ</i> ₂₃		7 4.9 204°61	0°6/ 5.1	18	
5 31	19 21.46	-17 1.3	1.997	2.849	13.2	18.8	5 31	19 21.46	-21 27.3	2.440	3.289	11.2	21.1
6 10	19 16.44	-16 31.5	1.928	2.856	10.1	18.7	6 10	19 16.24	-21 16.2	2.359	3.287	8.5	20.9
6 20	19 9.51	-16 6.8	1.882	2.863	6.6	18.5	6 20	19 9.33	-21 6.9	2.302	3.286	5.3	20.7
6 30	19 1.32	-15 47.2	1.862	2.870	3.3	18.3	6 30	19 1.28	-20 58.4	2.271	3.284	1.9	20.5
7 10	18 52.77	-15 32.9	1.868	2.877	3.1	18.3	7 10	18 52.84	-20 49.9	2.269	3.282	1.8	20.5
7 20	18 44.74	-15 23.5	1.902	2.885	6.3	18.5	7 20	18 44.80	-20 41.1	2.295	3.280	5.2	20.7
7 30	18 38.08	-15 18.6	1.961	2.892	9.7	18.7	7 30	18 37.90	-20 32.2	2.348	3.278	8.4	20.9
8 9	18 33.40	-15 17.7	2.042	2.900	12.7	18.9	8 9	18 32.71	-20 23.2	2.425	3.276	11.2	21.1
32909	1994 <i>TS</i>		7 4.9 330°95	1°2/ 4.8	18		473857	2016 <i>EE</i> ₁₃₂		7 4.9 197°17	2°4/ 4.6	17	
5 31	19 20.46	-24 25.7	1.050	1.948	18.9	17.8	5 31	19 29.30	-27 32.7	1.572	2.435	15.6	22.0
6 10	19 17.65	-24 35.2	0.978	1.932	14.5	17.5	6 10	19 23.19	-27 53.1	1.498	2.433	11.9	21.7
6 20	19 11.26	-24 47.8	0.924	1.918	9.1	17.2	6 20	19 14.14	-28 12.4	1.445	2.431	7.6	21.5
6 30	19 2.14	-24 59.9	0.890	1.904	3.3	16.8	6 30	19 3.00	-28 26.3	1.417	2.428	3.3	21.2
7 10	18 51.83	-25 7.3	0.878	1.892	3.5	16.7	7 10	18 51.09	-28 31.1	1.415	2.425	3.6	21.2
7 20	18 42.17	-25 7.8	0.888	1.880	9.6	17.0	7 20	18 39.85	-28 25.4	1.439	2.421	8.0	21.5
7 30	18 34.95	-25 1.4	0.917	1.870	15.3	17.3	7 30	18 30.65	-28 10.5	1.487	2.416	12.4	21.7
8 9	18 31.39	-24 49.8	0.964	1.861	20.3	17.6	8 9	18 24.41	-27 49.2	1.556	2.412	16.1	21.9
40191	1998 <i>RM</i> ₇₅		7 4.9 310°37	3°5/ 3.9	18		473178	2015 <i>KZ</i> ₆₀		7 4.9 298°49	4°1/ 3.8	17	
5 31	19 22.09	-31 47.8	2.252	3.107	11.8	18.3	5 31	19 24.27	-30 54.0	1.795	2.658	14.0	20.5
6 10	19 17.10	-32 22.1	2.173	3.102	9.1	18.2	6 10	19 19.28	-31 45.2	1.719	2.652	10.7	20.3
6 20	19 10.04	-32 53.3	2.118	3.097	6.1	18.0	6 20	19 11.67	-32 34.6	1.666	2.647	7.3	20.1
6 30	19 1.54	-33 17.6	2.089	3.091	3.8	17.8	6 30	19 2.18	-33 16.8	1.637	2.641	4.4	19.9
7 10	18 52.50	-33 32.1	2.086	3.086	4.1	17.8	7 10	18 51.92	-33 47.1	1.635	2.636	4.9	19.9
7 20	18 43.88	-33 35.5	2.111	3.081	6.8	18.0	7 20	18 42.16	-34 3.0	1.658	2.630	8.1	20.1
7 30	18 36.61	-33 28.2	2.161	3.077	9.7	18.2	7 30	18 34.10	-34 4.8	1.706	2.625	11.7	20.3
8 9	18 31.40	-33 12.3	2.234	3.072	12.5	18.3	8 9	18 28.64	-33 55.0	1.775	2.620	14.9	20.5
250952	2006 <i>BA</i> ₂₆₇		7 4.9 229°49	7°2/ 1.8	18		385740	2005 <i>WK</i> ₄₀		7 4.9 21			

EPHEMERIDES

7 4.9

7 4.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
297148	2010 <i>UD</i> ₁₁		7 4.9 226°47	1°3/ 4.5	18	R	247953	2003 <i>YF</i> ₆₃		7 4.9 117°51	1°4/ 5.3	17	
5 31	19 20.80	-25 59.4	2.699	3.549	10.3	20.6	5 31	19 26.81	-19 0.8	1.744	2.597	14.8	20.8
6 10	19 15.76	-26 25.8	2.614	3.543	7.7	20.4	6 10	19 20.69	-18 55.8	1.682	2.612	11.2	20.6
6 20	19 9.07	-26 52.5	2.552	3.536	4.8	20.2	6 20	19 12.26	-18 55.9	1.643	2.627	7.1	20.4
6 30	19 1.23	-27 17.4	2.518	3.530	2.0	20.0	6 30	19 2.33	-18 59.7	1.629	2.641	2.8	20.2
7 10	18 52.94	-27 38.3	2.513	3.523	2.2	20.0	7 10	18 51.98	-19 5.7	1.642	2.654	2.6	20.2
7 20	18 44.94	-27 53.8	2.536	3.516	5.2	20.2	7 20	18 42.34	-19 12.6	1.682	2.668	6.7	20.5
7 30	18 37.96	-28 3.6	2.586	3.508	8.1	20.4	7 30	18 34.41	-19 19.8	1.747	2.680	10.6	20.7
8 9	18 32.59	-28 8.0	2.660	3.501	10.6	20.5	8 9	18 28.89	-19 27.0	1.835	2.692	14.0	21.0
98927	2001 <i>CF</i> ₂		7 4.9 114°90	1°7/ 4.5	18		233874	2008 <i>WL</i> ₅₉		7 4.9 242°79	0°2/ 5.1	17	R
5 31	19 24.78	-26 3.7	1.987	2.844	13.1	19.2	5 31	19 22.90	-20 51.2	1.934	2.791	13.4	20.4
6 10	19 19.12	-26 32.3	1.921	2.854	9.8	19.0	6 10	19 17.87	-21 9.0	1.853	2.785	10.1	20.2
6 20	19 11.28	-27 1.3	1.879	2.864	6.2	18.8	6 20	19 10.64	-21 31.6	1.793	2.779	6.3	20.0
6 30	19 1.98	-27 27.2	1.863	2.874	2.5	18.6	6 30	19 1.84	-21 56.6	1.760	2.773	2.2	19.7
7 10	18 52.22	-27 47.1	1.874	2.884	2.8	18.7	7 10	18 52.41	-22 21.5	1.753	2.767	2.1	19.7
7 20	18 43.04	-27 59.5	1.912	2.893	6.4	18.9	7 20	18 43.38	-22 44.2	1.774	2.760	6.3	19.9
7 30	18 35.39	-28 4.4	1.976	2.902	9.9	19.1	7 30	18 35.76	-23 3.7	1.820	2.753	10.2	20.2
8 9	18 29.98	-28 3.1	2.063	2.911	13.0	19.4	8 9	18 30.30	-23 19.6	1.888	2.746	13.6	20.4
477667	2010 <i>OG</i> ₁₅		7 4.9 207°16	7°8/ 7.3	18		500189	2012 <i>GB</i> ₁₉		7 4.9 143°09	0°0/ 4.8	17	
5 31	19 18.39	+ 7 12.3	3.228	3.957	11.3	21.9	5 31	19 26.59	-21 42.8	1.771	2.627	14.5	22.4
6 10	19 13.58	+ 8 2.6	3.145	3.951	10.0	21.8	6 10	19 20.67	-22 2.3	1.703	2.635	10.9	22.1
6 20	19 7.56	+ 8 39.4	3.082	3.944	8.8	21.7	6 20	19 12.35	-22 25.7	1.658	2.643	6.8	21.9
6 30	19 0.70	+ 9 0.3	3.043	3.937	8.0	21.7	6 30	19 2.40	-22 50.2	1.638	2.651	2.3	21.6
7 10	18 53.51	+ 9 4.1	3.030	3.930	7.8	21.6	7 10	18 51.90	-23 12.9	1.645	2.658	2.3	21.7
7 20	18 46.52	+ 8 51.0	3.041	3.922	8.4	21.7	7 20	18 42.02	-23 31.7	1.679	2.665	6.7	22.0
7 30	18 40.27	+ 8 22.3	3.077	3.914	9.5	21.7	7 30	18 33.81	-23 46.1	1.739	2.671	10.7	22.2
8 9	18 35.18	+ 7 40.9	3.135	3.905	10.8	21.8	8 9	18 28.06	-23 56.3	1.820	2.676	14.2	22.4
231941	2001 <i>FD</i> ₁₄₂		7 4.9 57°84	5°9/ 6.6	17		318163	2004 <i>QD</i> ₁₃		7 4.9 272°99	3°7/ 6.4	18	
5 31	19 20.81	- 7 31.4	1.759	2.594	15.5	20.3	5 31	19 19.55	- 9 15.4	2.532	3.355	11.7	21.4
6 10	19 16.16	- 7 7.2	1.696	2.604	12.4	20.2	6 10	19 14.93	- 9 27.4	2.429	3.333	9.3	21.2
6 20	19 9.45	- 6 57.3	1.653	2.613	9.2	20.0	6 20	19 8.65	- 9 50.3	2.349	3.312	6.7	21.0
6 30	19 1.37	- 7 3.1	1.635	2.623	6.6	19.9	6 30	19 1.16	-10 24.1	2.295	3.290	4.3	20.8
7 10	18 52.86	- 7 24.0	1.641	2.633	6.1	19.9	7 10	18 53.10	-11 7.8	2.268	3.268	3.9	20.7
7 20	18 44.88	- 7 58.1	1.673	2.644	8.2	20.0	7 20	18 45.18	-11 59.2	2.270	3.246	6.0	20.8
7 30	18 38.35	- 8 42.2	1.729	2.654	11.2	20.2	7 30	18 38.15	-12 55.9	2.299	3.223	8.9	20.9
8 9	18 33.94	- 9 32.4	1.807	2.664	14.2	20.4	8 9	18 32.64	-13 55.2	2.353	3.201	11.6	21.1
177194	2003 <i>UZ</i> ₁₆		7 4.9 264°55	2°2/ 5.4	18		497091	2003 <i>YO</i> ₆		7 4.9 218°35	2°6/ 4.4	17	
5 31	19 24.39	-17 21.8	1.573	2.434	15.7	20.1	5 31	19 29.01	-29 0.1	2.197	3.042	12.4	23.4
6 10	19 19.47	-17 15.5	1.487	2.420	12.1	19.8	6 10	19 22.41	-29 28.3	2.106	3.031	9.5	23.2
6 20	19 11.88	-17 16.7	1.422	2.406	7.9	19.5	6 20	19 13.46	-29 55.1	2.038	3.018	6.2	22.9
6 30	19 2.30	-17 24.6	1.381	2.392	3.5	19.2	6 30	19 2.82	-30 16.3	1.997	3.005	3.1	22.7
7 10	18 51.84	-17 37.7	1.365	2.377	3.3	19.2	7 10	18 51.46	-30 28.9	1.985	2.991	3.4	22.7
7 20	18 41.77	-17 54.3	1.375	2.362	7.7	19.4	7 20	18 40.46	-30 31.3	2.001	2.976	6.7	22.9
7 30	18 33.37	-18 12.9	1.409	2.347	12.3	19.6	7 30	18 30.90	-30 23.9	2.043	2.960	10.2	23.1
8 9	18 27.58	-18 32.3	1.464	2.332	16.3	19.8	8 9	18 23.60	-30 8.9	2.109	2.943	13.3	23.2
98642	2000 <i>WX</i> ₁₂₃		7 4.9 131°06	0°7/ 4.8	17		368903	2006 <i>SW</i> ₃₅₆		7 4.9 209°93	0°5/ 4.9	17	
5 31	19 24.60	-23 23.3	2.068	2.922	12.8	20.6	5 31	19 26.14	-22 46.8	1.963	2.816	13.4	21.8
6 10	19 18.87	-23 45.6	2.001	2.932	9.6	20.4	6 10	19 20.33	-23 10.6	1.879	2.810	10.1	21.6
6 20	19 11.08	-24 10.0	1.956	2.942	5.9	20.2	6 20	19 12.19	-23 37.7	1.818	2.804	6.3	21.3
6 30	19 1.92	-24 33.8	1.938	2.951	2.1	19.9	6 30	19 2.39	-24 5.1	1.783	2.797	2.2	21.0
7 10	18 52.32	-24 54.4	1.948	2.960	2.2	20.0	7 10	18 51.90	-24 30.0	1.776	2.789	2.3	21.0
7 20	18 43.24	-25 10.2	1.985	2.969	6.0	20.2	7 20	18 41.81	-24 50.1	1.796	2.781	6.5	21.3
7 30	18 35.60	-25 20.9	2.049	2.977	9.5	20.5	7 30	18 33.18	-25 4.8	1.843	2.772	10.4	21.5
8 9	18 30.07	-25 27.1	2.135	2.985	12.6	20.7	8 9	18 26.83	-25 14.4	1.912	2.762	13.8	21.7
32784	1989 <i>AR</i>		7 4.9 196°60	0°4/ 4.8	18		505799	2015 <i>BO</i> ₃₄₂		7 4.9 150°69	1°8/ 4.5	17	
5 31	19 24.64	-22 19.2	2.407	3.252	11.5	19.6	5 31	19 26.88	-26 13.4	1.920	2.775	13.6	22.4
6 10	19 18.78	-22 48.1	2.322	3.249	8.7	19.4	6 10	19 20.82	-26 42.8	1.851	2.783	10.2	22.2
6 20	19 11.02	-23 20.0	2.261	3.245	5.4	19.2	6 20	19 12.43	-27 12.5	1.805	2.789	6.4	22.0
6 30	19 1.93	-23 52.5	2.227	3.240	1.8	18.9	6 30	19 2.44	-27 38.9	1.784	2.796	2.7	21.8
7 10	18 52.30	-24 23.0	2.222	3.235	1.9	18.9	7 10	18 51.91	-27 58.6	1.791	2.801	3.0	21.8
7 20	18 42.99	-24 49.5	2.246	3.229	5.5	19.1	7 20	18 41.97	-28 10.1	1.826	2.807	6.7	22.1
7 30	18 34.84	-25 11.2	2.297	3.222	8.8	19.3	7 30	18 33.65	-28 13.6	1.886	2.812	10.4	22.3
8 9	18 28.54	-25 28.0	2.373	3.215	11.7	19.5	8 9	18 27.70	-28 10.4	1.969	2.816	13.6	22.5
395681	2011 <i>WE</i> ₁₄₅		7 4.9 306°72	1°8/ 5.3	18		352064	2006 <i>WM</i> ₇₂		7 4.9 170°79	0°8/ 5.2	18	
5 31	19 20.87	-18 21.9	2.095	2.948	12.7	20.9	5 31	19 21.55	-19 55.7	2.536	3.381	11.0	22.2
6 10	19 16.10	-18 3.5	2.012	2.941	9.7	20.7	6 10	19 16.27	-19 54.3	2.457	3.383	8.3	22.0
6 20	19 9.40	-17 49.2	1.953	2.935	6.2	20.5	6 20	19 9.36	-19 56.0	2.402	3.385	5.2	21.8
6 30	19 1.38	-17 38.6	1.919	2.929	2.8	20.2	6 30	19 1.37	-19 59.6	2.375	3.387	2.0	21.6
7 10	18 52.87	-17 31.3	1.912	2.923	2.6	20.2	7 10	18 53.00	-20 4.2	2.376	3.388	1.8	21.6
7 20	18 44.76	-17 26.9	1.932	2.917	6.1	20.4	7 20	18 45.01	-20 8.8	2.405	3.389	5.1	21.8
7 30	18 37.91	-17 24.9	1.978	2.911	9.6	20.6	7 30	18 38.10	-20 13.2	2.461	3.390	8.1	22.0
8 9	18 32.98	-17 25.1	2.047	2.906	12.7	20.8	8 9	18 32.83	-20 17.0	2.542	3.390	10.8	22.2
171435	2007 <i>RW</i> ₆₇		7 4.9 274°44	3°7/ 4.2	18		288044	2003 <i>UB</i> ₂₇₁		7 4.9 24			

EPHEMERIDES

7 4.9

7 5.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
33966	2000 <i>NC</i> ₁₁		7 4.9 270°73	0°4/ 4.9 18			459480	2013 <i>CR</i> ₄₇		7 5.0 53°77	5°1/ 6.0 17		
5 31	19 27.14	-24 10.8	1.476	2.344	16.2	18.4	5 31	19 24.19	-12 25.3	1.140	2.011	19.7	21.3
6 10	19 21.87	-24 2.6	1.389	2.328	12.4	18.1	6 10	19 19.63	-12 4.5	1.088	2.023	15.4	21.1
6 20	19 13.55	-23 55.0	1.322	2.310	7.8	17.8	6 20	19 12.03	-11 59.3	1.055	2.034	10.6	20.8
6 30	19 2.95	-23 45.3	1.279	2.293	2.7	17.4	6 30	19 2.37	-12 10.1	1.042	2.046	6.2	20.6
7 10	18 51.35	-23 31.6	1.262	2.275	2.8	17.4	7 10	18 52.12	-12 35.2	1.052	2.059	5.6	20.6
7 20	18 40.22	-23 13.3	1.270	2.257	8.1	17.7	7 20	18 42.77	-13 11.5	1.086	2.071	9.4	20.9
7 30	18 31.05	-22 51.5	1.301	2.239	13.1	17.9	7 30	18 35.69	-13 54.8	1.140	2.084	13.9	21.2
8 9	18 24.86	-22 28.2	1.353	2.221	17.4	18.1	8 9	18 31.71	-14 41.1	1.214	2.098	18.0	21.5
387238	2012 <i>UY</i> ₄₇		7 4.9 275°20	2°1/ 4.4 17			334010	2000 <i>UV</i> ₈₁		7 5.0 282°73	3°5/ 4.1 18		
5 31	19 23.48	-26 25.4	1.886	2.748	13.5	20.9	5 31	19 25.79	-29 18.3	1.815	2.676	14.0	21.0
6 10	19 18.43	-27 4.0	1.812	2.747	10.2	20.6	6 10	19 20.68	-30 1.2	1.716	2.648	10.8	20.8
6 20	19 11.04	-27 43.7	1.761	2.746	6.4	20.4	6 20	19 12.79	-30 44.4	1.638	2.621	7.2	20.5
6 30	19 2.01	-28 20.6	1.735	2.746	2.9	20.2	6 30	19 2.74	-31 22.9	1.586	2.593	3.9	20.2
7 10	18 52.34	-28 50.9	1.735	2.745	3.2	20.2	7 10	18 51.59	-31 51.7	1.560	2.565	4.4	20.2
7 20	18 43.15	-29 12.3	1.763	2.744	6.9	20.4	7 20	18 40.63	-32 7.6	1.561	2.537	8.2	20.4
7 30	18 35.50	-29 24.4	1.815	2.743	10.6	20.7	7 30	18 31.24	-32 10.3	1.586	2.508	12.2	20.5
8 9	18 30.19	-29 28.4	1.890	2.742	13.9	20.9	8 9	18 24.48	-32 2.0	1.632	2.479	15.9	20.7
418190	2008 <i>CO</i> ₂₄		7 4.9 206°61	0°9/ 4.8 17			173894	2001 <i>UD</i> ₁₀₇		7 5.0 356°06	0°6/ 4.8 18		
5 31	19 26.80	-23 50.2	1.862	2.718	13.9	22.2	5 31	19 21.30	-23 1.7	1.900	2.763	13.3	20.1
6 10	19 20.93	-24 11.9	1.781	2.713	10.5	22.0	6 10	19 16.70	-23 24.1	1.826	2.762	10.0	19.9
6 20	19 12.62	-24 35.9	1.722	2.708	6.6	21.7	6 20	19 9.93	-23 49.6	1.774	2.761	6.2	19.6
6 30	19 2.56	-24 59.2	1.689	2.702	2.3	21.5	6 30	19 1.64	-24 15.5	1.747	2.761	2.1	19.4
7 10	18 51.79	-25 18.7	1.683	2.696	2.5	21.5	7 10	18 52.80	-24 39.1	1.747	2.760	2.3	19.4
7 20	18 41.48	-25 32.4	1.705	2.689	6.8	21.7	7 20	18 44.41	-24 58.5	1.774	2.760	6.4	19.6
7 30	18 32.76	-25 40.0	1.752	2.681	10.8	21.9	7 30	18 37.47	-25 12.7	1.826	2.760	10.1	19.9
8 9	18 26.46	-25 42.3	1.821	2.673	14.3	22.1	8 9	18 32.70	-25 22.1	1.900	2.761	13.4	20.1
329391	2001 <i>YD</i> ₄		7 5.0 137°12	14°9/ 2.2 18			123648	2000 <i>YN</i> ₆₆		7 5.0 164°29	5°6/ 2.6 18		
5 31	19 57.72	-62 31.2	1.938	2.671	17.7	21.0	5 31	19 33.95	-24 26.4	1.143	2.016	19.5	19.6
6 10	19 47.04	-64 17.4	1.901	2.686	16.4	20.9	6 10	19 28.15	-27 9.1	1.079	2.020	14.9	19.3
6 20	19 30.16	-65 38.0	1.883	2.700	15.4	20.9	6 20	19 18.16	-30 6.4	1.036	2.023	9.7	19.0
6 30	19 8.67	-66 20.4	1.883	2.713	14.9	20.9	6 30	19 4.73	-33 2.9	1.019	2.025	5.8	18.8
7 10	18 45.85	-66 17.3	1.904	2.725	15.1	20.9	7 10	18 49.55	-35 40.8	1.027	2.027	7.3	18.9
7 20	18 25.43	-65 30.3	1.944	2.737	15.8	21.0	7 20	18 34.83	-37 47.3	1.061	2.028	12.2	19.2
7 30	18 10.17	-64 8.1	2.003	2.748	16.9	21.1	7 30	18 22.84	-39 18.2	1.117	2.029	17.0	19.5
8 9	18 1.10	-62 23.0	2.078	2.757	18.1	21.2	8 9	18 15.11	-40 17.9	1.191	2.029	21.1	19.8
93412	2000 <i>ST</i> ₃₀₀		7 5.0 236°79	0°7/ 4.9 18 R			322317	2011 <i>GB</i> ₂		7 5.0 255°47	0°0/ 4.8 17		
5 31	19 25.14	-24 16.6	2.083	2.935	12.7	20.8	5 31	19 23.64	-21 23.9	1.775	2.636	14.2	21.0
6 10	19 19.50	-24 25.1	1.993	2.924	9.6	20.6	6 10	19 18.66	-21 44.4	1.694	2.629	10.8	20.7
6 20	19 11.65	-24 34.6	1.926	2.911	6.0	20.3	6 20	19 11.27	-22 9.8	1.635	2.621	6.7	20.5
6 30	19 2.22	-24 42.8	1.885	2.898	2.1	20.0	6 30	19 2.13	-22 37.5	1.600	2.614	2.3	20.2
7 10	18 52.14	-24 47.7	1.872	2.885	2.2	20.0	7 10	18 52.28	-23 4.5	1.592	2.606	2.3	20.1
7 20	18 42.43	-24 48.0	1.887	2.871	6.3	20.3	7 20	18 42.84	-23 28.4	1.611	2.598	6.8	20.4
7 30	18 34.10	-24 43.8	1.928	2.857	10.0	20.5	7 30	18 34.95	-23 48.0	1.655	2.590	11.0	20.6
8 9	18 27.91	-24 36.0	1.992	2.842	13.3	20.6	8 9	18 29.43	-24 3.2	1.721	2.582	14.6	20.9
339353	2005 <i>AJ</i> ₁₅		7 5.0 216°75	1°5/ 4.7 18			158328	2001 <i>VR</i> ₁₁₇		7 5.0 157°60	3°5/ 5.4 18		
5 31	19 25.65	-27 8.4	2.295	3.144	11.9	21.8	5 31	19 25.54	-14 44.1	2.065	2.903	13.4	19.9
6 10	19 19.66	-27 16.8	2.208	3.136	9.0	21.6	6 10	19 19.47	-14 2.9	1.992	2.909	10.4	19.7
6 20	19 11.64	-27 23.8	2.145	3.128	5.7	21.4	6 20	19 11.43	-13 27.4	1.941	2.914	7.1	19.5
6 30	19 2.19	-27 27.1	2.108	3.119	2.3	21.2	6 30	19 2.10	-12 58.5	1.916	2.919	4.1	19.3
7 10	18 52.20	-27 24.5	2.100	3.110	2.5	21.1	7 10	18 52.38	-12 36.7	1.920	2.923	3.9	19.3
7 20	18 42.62	-27 15.6	2.120	3.100	6.0	21.4	7 20	18 43.17	-12 22.1	1.951	2.927	6.7	19.5
7 30	18 34.36	-27 0.8	2.166	3.090	9.3	21.5	7 30	18 35.34	-12 14.5	2.008	2.930	10.0	19.7
8 9	18 28.13	-26 41.7	2.237	3.079	12.3	21.7	8 9	18 29.53	-12 13.0	2.088	2.933	13.0	19.9
501995	2015 <i>AP</i> ₂₈		7 5.0 225°85	1°0/ 4.8 17			216926	1998 <i>QR</i> ₈₈		7 5.0 299°41	5°5/ 5.4 18		
5 31	19 26.97	-24 39.9	1.730	2.590	14.6	22.0	5 31	19 22.50	-12 55.3	1.461	2.320	16.8	19.6
6 10	19 21.25	-24 51.0	1.648	2.583	11.1	21.7	6 10	19 18.32	-12 5.2	1.367	2.294	13.4	19.4
6 20	19 12.91	-25 3.4	1.588	2.575	6.9	21.5	6 20	19 11.36	-11 23.3	1.293	2.268	9.6	19.1
6 30	19 2.68	-25 14.0	1.553	2.566	2.5	21.2	6 30	19 2.25	-10 52.2	1.242	2.243	6.2	18.8
7 10	18 51.70	-25 20.0	1.545	2.558	2.7	21.2	7 10	18 52.10	-10 33.5	1.215	2.217	6.0	18.7
7 20	18 41.22	-25 20.0	1.564	2.548	7.2	21.4	7 20	18 42.20	-10 28.0	1.212	2.192	9.5	18.8
7 30	18 32.46	-25 14.3	1.607	2.539	11.4	21.7	7 30	18 33.92	-10 35.1	1.232	2.166	13.9	19.0
8 9	18 26.29	-25 4.4	1.672	2.529	15.1	21.9	8 9	18 28.33	-10 52.6	1.271	2.141	18.1	19.2
400449	2008 <i>EG</i> ₁₃₇		7 5.0 95°43	1°6/ 4.5 17			312684	2010 <i>NX</i> ₂₂		7 5.0 209°61	5°6/ 3.5 18		
5 31	19 22.63	-26 38.6	2.319	3.172	11.6	21.6	5 31	19 26.95	-41 59.0	2.803	3.625	10.7	20.9
6 10	19 17.25	-27 4.7	2.254	3.185	8.7	21.5	6 10	19 20.55	-42 32.5	2.725	3.621	8.7	20.8
6 20	19 10.04	-27 30.5	2.213	3.197	5.5	21.3	6 20	19 12.14	-42 57.2	2.670	3.615	6.9	20.6
6 30	19 1.61	-27 53.2	2.199	3.210	2.3	21.1	6 30	19 2.36	-43 9.0	2.641	3.610	5.7	20.6
7 10	18 52.82	-28 10.5	2.212	3.222	2.6	21.1	7 10	18 52.11	-43 5.4	2.639	3.604	5.9	20.6
7 20	18 44.52	-28 21.1	2.254	3.234	5.7	21.4	7 20	18 42.34	-42 45.8	2.665	3.598	7.4	20.6
7 30	18 37.52	-28 25.1	2.322	3.246	8.8	21.6	7 30	18 33.96	-42 12.0	2.716	3.592	9.4	20.8
8 9	18 32.40	-28 23.5	2.413	3.258	11.5	21.8	8 9	18 27.61	-41 27.3	2.789	3.585	11.4	20.9
432990	2012 <i>PC</i> ₂₉		7 5.0 333°36	1°8/ 5.0 17			214109	2004 <i>RF</i>					