

EPHEMERIDES

7 6.9

7 7.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
111945	2002 GY ₅₅		7 6.9 109°77	0°5/ 6.8 17			358954	2008 KE ₉		7 7.0 9°96	0°5/ 6.8 18		
5 31	19 36.56	-21 45.6	1.580	2.425	16.4	20.6	5 31	19 28.83	-22 34.2	2.050	2.895	13.2	20.5
6 10	19 31.21	-22 16.8	1.518	2.440	12.6	20.4	6 10	19 24.84	-22 57.1	1.973	2.896	10.1	20.3
6 20	19 23.09	-22 53.7	1.476	2.455	8.2	20.2	6 20	19 18.77	-23 23.7	1.919	2.898	6.6	20.1
6 30	19 13.00	-23 32.3	1.459	2.469	3.4	19.9	6 30	19 11.18	-23 51.7	1.889	2.899	2.8	19.9
7 10	19 2.12	-24 8.4	1.468	2.483	1.7	19.8	7 10	19 2.92	-24 18.2	1.887	2.902	1.4	19.8
7 20	18 51.72	-24 38.7	1.504	2.497	6.4	20.2	7 20	18 54.91	-24 41.0	1.911	2.904	5.2	20.1
7 30	18 43.06	-25 1.8	1.564	2.510	10.7	20.4	7 30	18 48.06	-24 59.0	1.961	2.907	8.9	20.3
8 9	18 36.99	-25 18.0	1.647	2.522	14.4	20.7	8 9	18 43.10	-25 11.9	2.035	2.910	12.1	20.5
80344	1999 XM ₁₁₂		7 6.9 217°92	3°8/ 5.9 18			253660	2003 UF ₁₆₄		7 7.0 219°84	0°5/ 6.9 17		
5 31	19 36.30	-29 44.7	1.765	2.610	15.0	19.9	5 31	19 35.04	-21 52.4	1.765	2.607	15.2	21.3
6 10	19 31.23	-30 32.5	1.685	2.605	11.8	19.6	6 10	19 30.09	-22 19.0	1.679	2.600	11.8	21.0
6 20	19 23.30	-31 20.3	1.626	2.600	8.1	19.4	6 20	19 22.49	-22 51.3	1.615	2.593	7.7	20.8
6 30	19 13.18	-32 2.5	1.591	2.594	4.7	19.2	6 30	19 12.85	-23 26.1	1.575	2.585	3.3	20.5
7 10	19 1.99	-32 33.8	1.582	2.588	4.3	19.1	7 10	19 2.19	-23 59.5	1.562	2.577	1.6	20.3
7 20	18 51.05	-32 51.1	1.600	2.582	7.5	19.3	7 20	18 51.71	-24 28.5	1.576	2.569	6.2	20.6
7 30	18 41.67	-32 54.0	1.643	2.575	11.3	19.5	7 30	18 42.62	-24 51.2	1.615	2.560	10.5	20.8
8 9	18 34.89	-32 44.9	1.708	2.568	14.7	19.7	8 9	18 35.91	-25 7.8	1.677	2.550	14.3	21.1
491707	2012 UH ₁₁₆		7 6.9 196°13	0°6/ 7.2 16			453693	2010 WT ₁₂		7 7.0 336°30	5°8/ 4.2 18		
5 31	19 31.94	-20 19.5	2.068	2.904	13.4	22.0	5 31	19 31.54	-34 20.0	2.015	2.858	13.5	20.1
6 10	19 27.15	-20 21.5	1.986	2.903	10.4	21.8	6 10	19 27.49	-35 48.5	1.937	2.851	10.8	19.9
6 20	19 20.24	-20 27.8	1.926	2.902	6.9	21.5	6 20	19 20.86	-37 15.8	1.881	2.844	8.0	19.7
6 30	19 11.78	-20 36.7	1.891	2.900	3.0	21.3	6 30	19 12.20	-38 35.0	1.851	2.838	6.1	19.6
7 10	19 2.63	-20 46.6	1.883	2.899	1.3	21.2	7 10	19 2.46	-39 39.8	1.847	2.832	6.3	19.6
7 20	18 53.72	-20 55.9	1.903	2.897	5.2	21.4	7 20	18 52.82	-40 26.1	1.869	2.826	8.5	19.7
7 30	18 45.99	-21 3.9	1.950	2.895	9.0	21.7	7 30	18 44.49	-40 52.7	1.915	2.821	11.3	19.9
8 9	18 40.19	-21 10.1	2.020	2.893	12.3	21.9	8 9	18 38.46	-41 1.7	1.983	2.817	14.0	20.0
241533	2010 DA ₃₄		7 6.9 4°58	2°0/ 7.6 18			164417	2006 BM ₅₇		7 7.0 9°45	3°9/ 6.4 17		
5 31	19 30.42	-15 54.5	1.795	2.634	15.0	20.2	5 31	19 31.66	-28 26.0	1.034	1.919	20.2	19.6
6 10	19 26.27	-16 5.8	1.717	2.634	11.8	20.0	6 10	19 28.95	-28 57.1	0.977	1.920	15.8	19.3
6 20	19 19.81	-16 26.5	1.661	2.634	8.0	19.8	6 20	19 22.39	-29 28.3	0.936	1.922	10.6	19.0
6 30	19 11.64	-16 55.3	1.628	2.634	4.0	19.5	6 30	19 12.93	-29 52.9	0.916	1.924	5.5	18.8
7 10	19 2.68	-17 29.9	1.621	2.635	2.3	19.4	7 10	19 2.20	-30 5.0	0.917	1.928	4.5	18.7
7 20	18 53.97	-18 7.3	1.641	2.635	5.9	19.6	7 20	18 52.15	-30 1.7	0.940	1.933	9.1	19.0
7 30	18 46.53	-18 45.2	1.687	2.635	9.8	19.9	7 30	18 44.55	-29 44.2	0.983	1.939	14.2	19.3
8 9	18 41.18	-19 21.5	1.755	2.636	13.4	20.1	8 9	18 40.56	-29 16.4	1.045	1.946	18.8	19.6
513785	2013 AS ₇₈		7 6.9 197°94	2°4/ 7.8 18			328111	2008 AW ₅₇		7 7.0 170°62	1°0/ 7.3 17		
5 31	19 30.00	-14 7.5	2.665	3.478	11.4	22.7	5 31	19 35.06	-18 57.8	1.809	2.645	15.1	21.8
6 10	19 25.17	-14 1.2	2.575	3.475	9.0	22.6	6 10	19 29.83	-19 7.6	1.732	2.648	11.7	21.6
6 20	19 18.72	-14 1.3	2.508	3.471	6.3	22.4	6 20	19 22.14	-19 23.9	1.676	2.651	7.8	21.4
6 30	19 11.09	-14 7.6	2.467	3.467	3.5	22.2	6 30	19 12.64	-19 44.7	1.644	2.653	3.5	21.1
7 10	19 2.94	-14 19.3	2.454	3.463	2.5	22.1	7 10	19 2.33	-20 7.5	1.640	2.655	1.6	21.0
7 20	18 54.93	-14 35.3	2.471	3.458	4.7	22.3	7 20	18 52.31	-20 29.9	1.662	2.656	5.8	21.3
7 30	18 47.76	-14 54.4	2.514	3.453	7.5	22.4	7 30	18 43.69	-20 50.5	1.711	2.656	10.0	21.5
8 9	18 42.01	-15 15.3	2.583	3.447	10.2	22.6	8 9	18 37.32	-21 8.5	1.782	2.656	13.6	21.8
389842	2012 QO ₃₀		7 6.9 104°41	0°8/ 6.9 18			423025	2003 TB ₂₁		7 7.0 304°37	2°6/ 6.2 18		
5 31	19 34.73	-25 14.7	1.847	2.690	14.5	20.8	5 31	19 31.32	-24 15.2	1.311	2.179	17.8	20.7
6 10	19 29.48	-25 7.7	1.774	2.695	11.2	20.6	6 10	19 28.40	-25 8.8	1.221	2.156	13.9	20.4
6 20	19 21.81	-25 0.7	1.722	2.700	7.3	20.4	6 20	19 22.11	-26 11.6	1.150	2.133	9.3	20.1
6 30	19 12.43	-24 51.5	1.696	2.706	3.1	20.1	6 30	19 12.95	-27 18.0	1.101	2.111	4.4	19.7
7 10	19 2.38	-24 38.5	1.696	2.711	1.6	20.0	7 10	19 2.09	-28 20.8	1.076	2.088	3.4	19.6
7 20	18 52.75	-24 21.0	1.724	2.716	5.7	20.3	7 20	18 51.14	-29 13.3	1.074	2.066	8.5	19.8
7 30	18 44.62	-23 59.9	1.777	2.721	9.7	20.6	7 30	18 41.86	-29 51.8	1.095	2.045	13.8	20.0
8 9	18 38.76	-23 36.6	1.853	2.727	13.1	20.8	8 9	18 35.70	-30 16.1	1.135	2.024	18.5	20.3
329766	2004 FJ ₁₅₇		7 7.0 117°92	0°6/ 7.1 17			501594	2014 QA ₂₂₄		7 7.0 127°03	1°9/ 6.7 17		
5 31	19 35.00	-20 12.4	1.745	2.585	15.4	22.0	5 31	19 37.81	-26 31.9	1.337	2.195	18.1	21.7
6 10	19 29.74	-20 20.8	1.678	2.597	11.9	21.8	6 10	19 32.84	-26 38.3	1.269	2.198	14.1	21.4
6 20	19 22.02	-20 34.6	1.631	2.608	7.8	21.6	6 20	19 24.52	-26 44.9	1.220	2.201	9.3	21.2
6 30	19 12.53	-20 51.5	1.610	2.619	3.3	21.4	6 30	19 13.72	-26 47.4	1.194	2.204	4.2	20.9
7 10	19 2.34	-21 8.9	1.615	2.630	1.4	21.2	7 10	19 1.88	-26 42.2	1.193	2.207	2.6	20.8
7 20	18 52.58	-21 25.0	1.647	2.641	5.8	21.6	7 20	18 50.60	-26 28.0	1.216	2.209	7.5	21.1
7 30	18 44.34	-21 38.5	1.705	2.651	9.9	21.8	7 30	18 41.43	-26 6.1	1.262	2.211	12.4	21.4
8 9	18 38.40	-21 49.1	1.785	2.661	13.5	22.1	8 9	18 35.39	-25 39.4	1.330	2.214	16.6	21.6
251844	1999 TV ₂₆₇		7 7.0 252°13	0°9/ 7.2 18			18365	Shimomoto		7 7.0 46°38	4°3/ 5.4 18		
5 31	19 31.08	-20 36.7	2.534	3.361	11.5	20.7	5 31	19 32.39	-31 52.7	2.079	2.921	13.2	16.6
6 10	19 26.14	-20 17.6	2.438	3.350	9.0	20.5	6 10	19 27.78	-32 51.1	2.007	2.924	10.3	16.4
6 20	19 19.43	-20 0.4	2.364	3.338	5.9	20.3	6 20	19 20.81	-33 47.9	1.957	2.927	7.3	16.2
6 30	19 11.42	-19 44.4	2.317	3.326	2.7	20.0	6 30	19 12.09	-34 37.9	1.933	2.930	4.8	16.1
7 10	19 2.81	-19 29.2	2.299	3.313	1.4	19.9	7 10	19 2.56	-35 16.5	1.935	2.933	4.6	16.1
7 20	18 54.36	-19 14.4	2.309	3.301	4.6	20.1	7 20	18 53.29	-35 41.1	1.964	2.937	7.0	16.2
7 30	18 46.85	-19 0.1	2.347	3.288	7.8	20.3	7 30	18 45.34	-35 51.3	2.018	2.940	10.0	16.4
8 9	18 40.91	-18 46.6	2.409	3.275	10.8	20.5	8 9	18 39.54	-35 48.9	2.095	2.944	12.8	16.6
225823	2001 XR ₄		7 7.0 125°39	3°5/ 5.1 18			324353	2006 QR ₅₅		7 7.0 324°42	0°9/ 6.9 17		
5 31	19 39.56	-27 27.2	2.236	3.060	13.0	19.4	5 31	19 28.07	-23 50.2	1.137	2.020	19.0	20.4
6 10	19 33.09	-29 10.8	2.168	3.077	10.0	19.3	6 10	19 26.13	-23 55.1	1.052	1.995	14.9	20.0
6 20	19 24.21	-30 57.1	2.125	3.094	6.8	19.1	6 20	19 20.70	-24 4.2	0.985	1.972	10.0	19.7
6 30	19 13.50	-32 39.1	2.110	3.111	4.1	19.0	6 30	19 12.35	-24 14.6	0.938	1.950	4.3	19.3
7 10	19 1.89	-34 10.2	2.126	3.126	4.0	19.0	7 10	19 2.39	-24 22.3	0.913	1.928	2.2	19.1
7 20	18 50.45	-35 25.9	2.171	3.142	6.6	19.2	7 20	18 52.49	-24 24.4	0.910	1.908	8.2	19.4
7 30	18 40.27	-36 24.2	2.245	3.156	9.6	19.4	7 30	18 44.49	-24 20.0	0.927	1.889	14.1	19.6
8 9	18 32.22	-37 6.2	2.342	3.170	12.3	19.6	8 9	18 39.80	-24 10.2	0.963	1.872	19.3	19.9

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EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
118867	2000 <i>SB</i> ₃₅₅	7 7.0 168°30	3.4/ 5.7 18				502159	2015 <i>BP</i> ₄₅	7 7.0 209°35	2.7/ 7.8 17			
5 31	19 36.05	-30 20.8	2.375	3.203	12.2	20.2	5 31	19 34.45	-14 12.5	1.916	2.739	14.9	22.4
6 10	19 30.27	-31 16.6	2.298	3.208	9.5	20.1	6 10	19 29.33	-14 18.3	1.826	2.733	11.8	22.2
6 20	19 22.29	-32 11.8	2.244	3.212	6.6	19.9	6 20	19 21.85	-14 33.9	1.758	2.726	8.1	22.0
6 30	19 12.69	-33 1.5	2.216	3.216	4.0	19.7	6 30	19 12.58	-14 58.8	1.715	2.719	4.4	21.7
7 10	19 2.33	-33 41.8	2.218	3.219	3.7	19.7	7 10	19 2.41	-15 30.8	1.699	2.710	2.9	21.6
7 20	18 52.17	-34 10.0	2.247	3.221	6.2	19.9	7 20	18 52.39	-16 7.7	1.711	2.701	6.0	21.8
7 30	18 43.20	-34 25.7	2.304	3.223	9.1	20.1	7 30	18 43.56	-16 46.7	1.749	2.692	9.9	22.0
8 9	18 36.18	-34 30.2	2.384	3.224	11.7	20.2	8 9	18 36.81	-17 25.8	1.810	2.682	13.5	22.2
2544	Gubarev	7 7.0 47°78	7.9/ 8.4 18 R				416450	2003 <i>VZ</i> ₁₀	7 7.0 255°67	0.4/ 6.9 17			
5 31	19 55.56	-43 46.7	1.176	2.009	21.7	14.9	5 31	19 34.91	-21 36.0	1.742	2.584	15.3	21.9
6 10	19 46.37	-43 7.3	1.132	2.034	17.6	14.7	6 10	19 30.20	-22 0.6	1.645	2.566	11.9	21.7
6 20	19 32.85	-42 4.7	1.104	2.060	13.2	14.6	6 20	19 22.74	-22 31.6	1.569	2.547	7.9	21.4
6 30	19 16.84	-40 32.1	1.099	2.086	9.3	14.4	6 30	19 13.07	-23 6.0	1.518	2.528	3.4	21.0
7 10	19 0.80	-38 29.9	1.118	2.112	7.9	14.4	7 10	19 2.18	-23 39.9	1.493	2.508	1.6	20.9
7 20	18 46.95	-36 6.6	1.163	2.139	10.2	14.6	7 20	18 51.30	-24 9.9	1.495	2.488	6.4	21.1
7 30	18 36.77	-33 35.0	1.232	2.167	13.9	14.9	7 30	18 41.74	-24 34.2	1.522	2.467	11.0	21.4
8 9	18 30.83	-31 7.3	1.323	2.194	17.5	15.2	8 9	18 34.57	-24 52.2	1.571	2.446	15.1	21.6
503493	2016 <i>EP</i> ₁₉₁	7 7.0 55°46	16.3/ 9.2 17				193644	2001 <i>DL</i> ₂₂	7 7.0 146°41	0.0/ 6.9 18			
5 31	19 30.49	-58 53.9	1.309	2.087	22.7	20.6	5 31	19 32.82	-19 55.1	2.279	3.107	12.6	20.4
6 10	19 54.59	-59 51.5	1.272	2.105	20.4	20.5	6 10	19 27.64	-20 29.3	2.203	3.116	9.7	20.2
6 20	19 39.26	-60 18.7	1.250	2.124	18.3	20.4	6 20	19 20.50	-21 9.0	2.149	3.124	6.4	20.0
6 30	19 19.71	-60 1.0	1.245	2.142	16.8	20.3	6 30	19 11.93	-21 51.7	2.122	3.132	2.7	19.8
7 10	18 59.61	-58 51.5	1.259	2.161	16.4	20.4	7 10	19 2.73	-22 34.3	2.124	3.139	1.1	19.7
7 20	18 42.50	-56 54.4	1.294	2.180	17.0	20.5	7 20	18 53.76	-23 14.1	2.154	3.146	4.8	20.0
7 30	18 30.59	-54 22.6	1.348	2.200	18.5	20.6	7 30	18 45.88	-23 49.4	2.211	3.152	8.3	20.2
8 9	18 24.43	-51 32.7	1.421	2.219	20.3	20.8	8 9	18 39.77	-24 19.4	2.293	3.158	11.3	20.4
384508	2010 <i>CU</i> ₁₂₃	7 7.0 219°21	0°0/ 6.8 18				65078	2002 <i>BR</i> ₃	7 7.0 171°11	5°2/ 4.6 18			
5 31	19 34.16	-22 17.4	2.329	3.157	12.4	22.3	5 31	19 34.18	-35 54.6	2.444	3.271	11.9	19.4
6 10	19 28.74	-22 21.0	2.234	3.147	9.6	22.1	6 10	19 29.01	-37 7.2	2.369	3.272	9.5	19.3
6 20	19 21.26	-22 27.0	2.162	3.137	6.3	21.8	6 20	19 21.58	-38 16.3	2.317	3.274	7.2	19.1
6 30	19 12.26	-22 33.6	2.116	3.126	2.7	21.6	6 30	19 12.45	-39 16.4	2.292	3.275	5.5	19.0
7 10	19 2.52	-22 38.9	2.099	3.114	1.2	21.4	7 10	19 2.49	-40 3.0	2.294	3.276	5.5	19.0
7 20	18 52.93	-22 41.9	2.110	3.102	5.0	21.7	7 20	18 52.68	-40 33.4	2.323	3.276	7.3	19.1
7 30	18 44.40	-22 41.9	2.149	3.089	8.5	21.9	7 30	18 44.05	-40 47.3	2.378	3.277	9.7	19.3
8 9	18 37.67	-22 39.3	2.212	3.076	11.7	22.1	8 9	18 37.42	-40 46.8	2.456	3.277	12.0	19.5
18369	1991 <i>LM</i>	7 7.0 348°63	0°3/ 6.8 18				470906	2009 <i>CQ</i> ₅₈	7 7.0 302°01	2°6/ 6.4 18			
5 31	19 30.90	-17 50.0	1.506	2.358	16.7	16.5	5 31	19 32.62	-28 44.4	1.903	2.750	14.0	20.9
6 10	19 27.30	-19 5.5	1.428	2.355	13.0	16.3	6 10	19 28.11	-29 2.9	1.820	2.742	10.9	20.7
6 20	19 20.89	-20 35.7	1.372	2.352	8.5	16.0	6 20	19 21.12	-29 20.4	1.757	2.734	7.4	20.4
6 30	19 12.27	-22 15.5	1.339	2.350	3.6	15.7	6 30	19 12.28	-29 33.2	1.720	2.727	3.8	20.2
7 10	19 2.49	-23 57.6	1.332	2.348	1.7	15.6	7 10	19 2.58	-29 38.2	1.709	2.719	3.0	20.1
7 20	18 52.84	-25 34.6	1.352	2.346	6.8	15.9	7 20	18 53.14	-29 33.7	1.724	2.712	6.3	20.3
7 30	18 44.67	-27 0.6	1.396	2.345	11.5	16.2	7 30	18 45.09	-29 20.0	1.765	2.705	10.1	20.5
8 9	18 39.05	-28 12.8	1.463	2.344	15.5	16.4	8 9	18 39.29	-28 59.0	1.828	2.698	13.5	20.7
294178	2007 <i>TG</i> ₃₉₁	7 7.0 171°32	2°2/ 6.3 16				432681	2011 <i>BF</i> ₃₆	7 7.0 243°11	1°3/ 7.4 18			
5 31	19 32.93	-27 22.2	2.137	2.976	13.0	21.8	5 31	19 33.92	-18 19.4	1.883	2.717	14.6	22.5
6 10	19 27.99	-27 52.5	2.059	2.977	10.0	21.6	6 10	19 29.08	-18 24.0	1.788	2.703	11.5	22.2
6 20	19 20.85	-28 23.2	2.003	2.978	6.7	21.4	6 20	19 21.79	-18 35.4	1.714	2.689	7.7	22.0
6 30	19 12.09	-28 50.7	1.972	2.979	3.3	21.2	6 30	19 12.60	-18 52.0	1.665	2.674	3.6	21.7
7 10	19 2.61	-29 12.0	1.969	2.980	2.6	21.1	7 10	19 2.42	-19 11.9	1.643	2.658	1.8	21.5
7 20	18 53.39	-29 24.8	1.994	2.981	5.7	21.3	7 20	18 52.33	-19 32.9	1.649	2.642	5.9	21.8
7 30	18 45.42	-29 29.0	2.045	2.981	9.1	21.5	7 30	18 43.45	-19 53.4	1.680	2.625	10.1	22.0
8 9	18 39.44	-29 25.5	2.119	2.981	12.2	21.7	8 9	18 36.71	-20 12.4	1.734	2.608	13.9	22.2
264226	2010 <i>RT</i> ₁₅₃	7 7.0 306°06	4°5/ 7.9 17				505974	2015 <i>FM</i> ₃₂₈	7 7.0 102°58	8°5/ 4.5 17			
5 31	19 28.37	-11 3.8	2.111	2.931	13.8	20.8	5 31	19 40.70	-42 35.2	1.895	2.716	15.1	21.4
6 10	19 24.39	-10 28.8	2.020	2.920	11.1	20.6	6 10	19 34.76	-43 55.1	1.839	2.729	12.5	21.2
6 20	19 18.47	-10 2.3	1.950	2.908	8.2	20.4	6 20	19 25.65	-45 4.7	1.805	2.741	10.2	21.1
6 30	19 11.10	-9 45.8	1.905	2.897	5.5	20.3	6 30	19 14.20	-45 55.9	1.794	2.754	8.6	21.1
7 10	19 3.04	-9 39.6	1.886	2.885	4.6	20.2	7 10	19 1.78	-46 22.8	1.808	2.767	8.7	21.1
7 20	18 55.11	-9 43.5	1.893	2.874	6.5	20.3	7 20	18 49.92	-46 23.7	1.847	2.779	10.3	21.2
7 30	18 48.19	-9 56.3	1.926	2.863	9.5	20.4	7 30	18 40.05	-46 0.8	1.910	2.791	12.5	21.4
8 9	18 42.98	-10 16.1	1.982	2.853	12.5	20.6	8 9	18 33.17	-45 19.8	1.993	2.802	14.8	21.6
53593	2000 <i>CJ</i> ₅₈	7 7.0 51°12	4°7/ 5.8 18				151835	Christinarichey	7 7.0 51°26	9°0/ 10.8 18			
5 31	19 35.79	-28 49.4	1.233	2.101	18.7	17.6	5 31	19 29.78	+ 0 10.1	1.525	2.324	19.1	19.3
6 10	19 31.73	-29 55.2	1.173	2.106	14.6	17.4	6 10	19 25.88	+ 0 30.7	1.467	2.339	16.2	19.2
6 20	19 24.06	-31 2.8	1.132	2.112	10.0	17.1	6 20	19 19.58	+ 0 27.6	1.427	2.354	13.0	19.0
6 30	19 13.63	-32 4.0	1.112	2.117	5.8	16.9	6 30	19 11.58	+ 0 1.8	1.408	2.370	10.3	18.9
7 10	19 1.96	-32 50.8	1.117	2.123	5.3	16.9	7 10	19 2.91	+ 0 56.6	1.411	2.386	9.0	18.8
7 20	18 50.81	-33 18.5	1.144	2.129	9.2	17.1	7 20	18 54.66	+ 2 13.0	1.438	2.402	9.9	18.9
7 30	18 41.91	-33 27.0	1.194	2.135	13.7	17.4	7 30	18 47.87	+ 3 44.8	1.489	2.418	12.4	19.1
8 9	18 36.42	-33 19.8	1.263	2.142	17.7	17.7	8 9	18 43.31	+ 5 24.5	1.561	2.435	15.2	19.3
87859	2000 <i>SX</i> ₂₂₅	7 7.0 116°11	4°0/ 5.2 18				95571	2002 <i>EC</i> ₁₂₅	7 7.0 339°33	5°0/ 8.8 18			
5 31	19 33.69	-33 4.2	2.589	3.416	11.3	18.7	5 31	19 27.28	- 7 36.9	2.112	2.924	14.1	19.9
6 10	19 28.30	-34 7.2	2.522	3.430	8.9	18.6	6 10	19 23.51	- 7 24.5	2.029	2.920	11.5	19.7
6 20	19 20.91	-35 7.7	2.480	3.443	6.3	18.4	6 20	19 17.87	- 7 24.8	1.967	2.917	8.6	19.5
6 30	19 12.10	-36 1.0	2.464	3.457	4.4	18.3	6 30	19 10.85	- 7 38.5	1.929	2.914	6.0	19.3
7 10	19 2.64	-36 43.4	2.477	3.470	4.3	18.4	7 10	19 3.20	- 8 5.4	1.916	2.912	5.0	19.3
7 20	18 53.43	-37 12.8	2.518	3.482	6.2	18.5	7 20	18 55.72	- 8 43.6	1.930	2.909	6.6	19.3
7 30	18 45.33	-37 28.9	2.585	3.495	8.6	18.7	7 30	18 49.22	- 9 30.5	1.970	2.907	9.4	19.5
8 9	18 39.03	-37 33.2	2.676	3.507	10.9	18.8	8 9	18 44					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
494390	2016 <i>UM</i> ₅₀	7 7.0 353°71 0°3/ 7.1 17						383950	2008 <i>SG</i> ₂₈₆	7 7.0 186°36 1°6/ 6.5 18			
5 31	19 29.98	-21 14.7	2.034	2.875	13.4	21.2	5 31	19 33.98	-25 46.0	2.338	3.169	12.2	22.2
6 10	19 25.73	-21 18.2	1.954	2.874	10.4	21.0	6 10	19 28.63	-26 14.2	2.254	3.169	9.4	22.0
6 20	19 19.38	-21 25.4	1.896	2.873	6.8	20.8	6 20	19 21.23	-26 43.7	2.193	3.168	6.2	21.8
6 30	19 11.50	-21 34.8	1.863	2.873	2.9	20.5	6 30	19 12.31	-27 11.4	2.159	3.167	2.9	21.6
7 10	19 2.94	-21 44.3	1.857	2.872	1.2	20.4	7 10	19 2.69	-27 34.4	2.153	3.165	2.0	21.5
7 20	18 54.64	-21 52.7	1.878	2.872	5.2	20.7	7 20	18 53.28	-27 50.9	2.175	3.163	5.2	21.7
7 30	18 47.52	-21 59.1	1.925	2.872	8.9	20.9	7 30	18 44.98	-28 0.1	2.225	3.160	8.5	21.9
8 9	18 42.30	-22 3.3	1.995	2.872	12.2	21.1	8 9	18 38.52	-28 2.7	2.298	3.157	11.5	22.1
13747	1998 <i>SS</i> ₄₃	7 7.0 301°10 6°1/ 8.6 18						200239	1999 <i>VM</i> ₇₆	7 7.0 195°66 0°5/ 6.9 18			
5 31	19 28.57	-7 30.8	1.803	2.622	15.8	18.8	5 31	19 32.28	-22 22.5	1.975	2.816	13.8	21.2
6 10	19 24.94	-7 0.7	1.711	2.606	13.0	18.6	6 10	19 27.64	-22 43.5	1.895	2.815	10.7	21.0
6 20	19 19.06	-6 43.9	1.640	2.590	10.0	18.4	6 20	19 20.72	-23 8.6	1.836	2.814	7.0	20.8
6 30	19 11.44	-6 42.6	1.591	2.575	7.2	18.2	6 30	19 12.14	-23 35.1	1.803	2.813	2.9	20.5
7 10	19 2.93	-6 57.5	1.566	2.560	6.2	18.1	7 10	19 2.78	-24 0.0	1.797	2.812	1.4	20.4
7 20	18 54.51	-7 27.5	1.567	2.545	8.0	18.2	7 20	18 53.66	-24 21.1	1.818	2.811	5.5	20.7
7 30	18 47.19	-8 10.0	1.592	2.530	11.1	18.3	7 30	18 45.79	-24 37.2	1.865	2.810	9.3	20.9
8 9	18 41.85	-9 1.2	1.640	2.516	14.4	18.5	8 9	18 39.96	-24 48.3	1.936	2.808	12.7	21.1
198163	2004 <i>TS</i> ₇₃	7 7.0 233°78 3°8/ 7.9 18						193649	2001 <i>DA</i> ₃₈	7 7.0 227°87 0°8/ 7.2 18			
5 31	19 32.21	-12 5.1	2.273	3.085	13.2	21.1	5 31	19 33.21	-20 5.8	2.240	3.068	12.8	20.3
6 10	19 27.24	-11 41.1	2.175	3.071	10.6	20.9	6 10	19 28.11	-20 4.8	2.145	3.058	10.0	20.1
6 20	19 20.31	-11 24.9	2.099	3.058	7.6	20.7	6 20	19 20.95	-20 7.7	2.073	3.047	6.6	19.9
6 30	19 11.91	-11 17.2	2.049	3.043	4.8	20.5	6 30	19 12.24	-20 13.1	2.027	3.036	2.9	19.6
7 10	19 2.77	-11 17.9	2.026	3.029	3.8	20.4	7 10	19 2.77	-20 19.5	2.009	3.024	1.3	19.5
7 20	18 53.72	-11 26.4	2.030	3.013	6.0	20.5	7 20	18 53.45	-20 25.6	2.019	3.012	5.1	19.7
7 30	18 45.63	-11 41.5	2.062	2.997	9.1	20.7	7 30	18 45.18	-20 30.7	2.056	2.999	8.7	19.9
8 9	18 39.22	-12 1.7	2.117	2.980	12.1	20.8	8 9	18 38.72	-20 34.7	2.117	2.985	12.0	20.1
195328	2002 <i>EG</i> ₁₂₈	7 7.0 312°72 7°5/ 5.3 18						5332	Davidaguilar	7 7.0 213°59 7°4/ 10.1 17 A			
5 31	19 34.68	-37 23.2	1.501	2.354	16.8	19.4	5 31	19 36.58	+1 44.9	2.368	3.110	14.6	19.9
6 10	19 30.96	-38 13.5	1.413	2.331	13.7	19.2	6 10	19 30.55	+1 52.6	2.265	3.098	12.6	19.7
6 20	19 23.72	-38 57.6	1.345	2.309	10.5	18.9	6 20	19 22.51	+1 42.8	2.183	3.085	10.3	19.5
6 30	19 13.62	-39 27.5	1.298	2.287	7.9	18.7	6 30	19 12.91	+1 13.3	2.125	3.071	8.3	19.4
7 10	19 1.99	-39 35.9	1.275	2.265	7.8	18.7	7 10	19 2.48	+0 23.8	2.094	3.056	7.4	19.3
7 20	18 50.55	-39 19.4	1.276	2.244	10.5	18.7	7 20	18 52.06	-0 44.0	2.091	3.039	8.3	19.3
7 30	18 41.05	-38 39.4	1.299	2.224	14.1	18.9	7 30	18 42.54	-2 6.3	2.115	3.020	10.4	19.4
8 9	18 34.83	-37 41.5	1.341	2.204	17.8	19.1	8 9	18 34.67	-3 38.1	2.166	3.001	12.9	19.5
118423	1999 <i>TJ</i> ₈₄	7 7.0 126°51 9°6/ 10.8 18 R						257700	1999 <i>WW</i> ₂₅	7 7.0 346°61 3°5/ 7.8 18			
5 31	19 28.15	+9 51.6	2.718	3.419	13.8	19.8	5 31	19 28.70	-13 34.6	2.128	2.954	13.4	20.7
6 10	19 23.68	+10 55.8	2.650	3.428	12.4	19.7	6 10	19 24.59	-13 5.4	2.046	2.952	10.7	20.5
6 20	19 17.72	+11 43.0	2.601	3.437	11.1	19.6	6 20	19 18.59	-12 43.5	1.985	2.950	7.6	20.3
6 30	19 10.74	+12 10.1	2.573	3.445	10.1	19.6	6 30	19 11.21	-12 29.5	1.949	2.948	4.6	20.1
7 10	19 3.32	+12 15.3	2.569	3.454	9.6	19.6	7 10	19 3.23	-12 23.4	1.940	2.946	3.6	20.0
7 20	18 56.08	+11 58.9	2.588	3.462	9.9	19.6	7 20	18 55.46	-12 24.7	1.958	2.944	5.8	20.2
7 30	18 49.66	+11 22.8	2.630	3.469	10.9	19.7	7 30	18 48.75	-12 32.5	2.001	2.943	9.0	20.4
8 9	18 44.56	+10 30.7	2.694	3.477	12.1	19.8	8 9	18 43.74	-12 45.1	2.068	2.942	12.0	20.5
387912	2004 <i>XX</i> ₁₀₅	7 7.0 238°94 1°8/ 6.5 18						440231	2004 <i>QG</i> ₁₅	7 7.0 269°10 1°9/ 6.6 18			
5 31	19 34.71	-26 41.0	2.309	3.140	12.4	22.1	5 31	19 32.35	-28 38.5	2.340	3.176	12.1	21.4
6 10	19 29.38	-27 4.5	2.209	3.124	9.6	21.9	6 10	19 27.37	-28 41.4	2.256	3.173	9.4	21.2
6 20	19 21.84	-27 28.8	2.133	3.107	6.4	21.7	6 20	19 20.38	-28 42.4	2.195	3.170	6.2	21.0
6 30	19 12.61	-27 50.7	2.083	3.090	3.1	21.5	6 30	19 11.96	-28 38.9	2.160	3.167	3.1	20.8
7 10	19 2.51	-28 7.3	2.061	3.073	2.2	21.4	7 10	19 2.93	-28 29.4	2.153	3.164	2.3	20.7
7 20	18 52.50	-28 16.7	2.067	3.054	5.5	21.5	7 20	18 54.17	-28 13.0	2.173	3.161	5.2	20.9
7 30	18 43.57	-28 18.3	2.101	3.035	9.0	21.7	7 30	18 46.57	-27 50.4	2.221	3.159	8.4	21.1
8 9	18 36.53	-28 13.0	2.158	3.016	12.2	21.9	8 9	18 40.81	-27 23.1	2.292	3.156	11.3	21.3
79786	1998 <i>UY</i> ₄₄	7 7.0 271°16 3°6/ 5.9 18						3054	Strugatskia	7 7.0 326°88 0°9/ 7.3 18			
5 31	19 34.55	-28 24.0	1.642	2.493	15.6	19.7	5 31	19 27.69	-19 32.3	1.805	2.655	14.5	16.0
6 10	19 30.21	-29 15.4	1.556	2.481	12.2	19.5	6 10	19 24.42	-19 37.8	1.713	2.638	11.3	15.8
6 20	19 22.88	-30 9.0	1.491	2.468	8.4	19.2	6 20	19 18.82	-19 49.6	1.642	2.621	7.5	15.5
6 30	19 13.19	-30 59.1	1.450	2.455	4.6	19.0	6 30	19 11.42	-20 6.2	1.595	2.605	3.4	15.2
7 10	19 2.25	-31 39.7	1.435	2.442	4.2	18.9	7 10	19 3.11	-20 25.5	1.573	2.589	1.5	15.0
7 20	18 51.43	-32 6.8	1.445	2.429	7.7	19.1	7 20	18 54.91	-20 45.5	1.578	2.574	5.8	15.3
7 30	18 42.16	-32 19.2	1.480	2.416	11.9	19.3	7 30	18 47.89	-21 4.4	1.607	2.559	10.0	15.5
8 9	18 35.58	-32 18.6	1.535	2.403	15.7	19.5	8 9	18 42.93	-21 21.3	1.659	2.545	13.7	15.7
109258	2001 <i>QY</i> ₁₀₅	7 7.0 240°07 6°7/ 7.9 18						215213	2000 <i>TV</i> ₁₈	7 7.0 321°88 5°7/ 8.4 18			
5 31	19 32.82	-8 55.1	1.678	2.498	16.7	19.5	5 31	19 28.03	-8 5.7	1.995	2.810	14.6	20.0
6 10	19 28.19	-7 48.8	1.601	2.496	13.7	19.3	6 10	19 24.24	-7 29.2	1.909	2.802	12.0	19.8
6 20	19 21.14	-6 53.2	1.543	2.495	10.5	19.1	6 20	19 18.46	-7 4.0	1.844	2.794	9.1	19.6
6 30	19 12.31	-6 11.6	1.509	2.493	7.6	18.9	6 30	19 11.20	-6 52.0	1.803	2.787	6.6	19.4
7 10	19 2.67	-5 46.1	1.500	2.491	6.8	18.9	7 10	19 3.24	-6 53.9	1.787	2.780	5.7	19.3
7 20	18 53.32	-5 37.1	1.516	2.489	8.7	19.0	7 20	18 55.43	-7 9.1	1.797	2.773	7.3	19.4
7 30	18 45.35	-5 43.6	1.556	2.487	11.9	19.2	7 30	18 48.68	-7 35.7	1.832	2.766	10.1	19.6
8 9	18 39.57	-6 2.5	1.618	2.485	15.1	19.4	8 9	18 43.70	-8 10.7	1.889	2.760	13.1	19.8
470707	2008 <i>TU</i> ₁₃₈	7 7.0 350°59 11°4/ 4.3 16						145278	2005 <i>JZ</i> ₁₄₆	7 7.1 355°08 5°7/ 7.9 17			
5 31	19 33.00	-43 9.2	1.281	2.138	18.8	20.3	5 31	19 29.16	-12 30.9	1			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
252773	2002 <i>EE</i> ₁₀₇		7 7.1 71°41	5°9/ 4.9 18			94351	2001 <i>QA</i> ₁₀₇		7 7.1 210°38	0°1/ 7.1 18		
5 31	19 34.39	−37 54.6	2.225	3.054	12.9	19.9	5 31	19 47.25	−27 23.7	1.321	2.165	19.1	18.4
6 10	19 29.32	−38 56.5	2.161	3.064	10.4	19.8	6 10	19 40.25	−26 23.7	1.240	2.161	15.0	18.1
6 20	19 21.85	−39 52.3	2.120	3.073	7.9	19.6	6 20	19 29.51	−25 15.8	1.179	2.157	10.0	17.8
6 30	19 12.63	−40 36.3	2.104	3.083	6.2	19.5	6 30	19 15.99	−23 58.3	1.142	2.152	4.3	17.4
7 10	19 2.67	−41 4.5	2.114	3.093	6.2	19.6	7 10	19 1.32	−22 31.9	1.130	2.146	1.8	17.2
7 20	18 53.05	−41 14.8	2.151	3.103	7.9	19.7	7 20	18 47.36	−21 0.7	1.146	2.140	7.8	17.6
7 30	18 44.84	−41 8.1	2.212	3.112	10.2	19.8	7 30	18 35.81	−19 31.0	1.186	2.133	13.2	17.9
8 9	18 38.85	−40 47.3	2.295	3.122	12.6	20.0	8 9	18 27.79	−18 8.6	1.248	2.125	17.9	18.2
478503	2012 <i>SY</i> ₁₇		7 7.1 307°33	2°2/ 6.6 16			200532	2001 <i>DH</i> ₃₂		7 7.1 260°72	3°1/ 8.2 18		
5 31	19 33.15	−27 33.1	1.747	2.597	14.9	21.3	5 31	19 31.64	−11 59.2	2.146	2.962	13.7	20.6
6 10	19 28.74	−27 47.6	1.665	2.590	11.6	21.1	6 10	19 27.11	−12 9.5	2.040	2.940	11.0	20.4
6 20	19 21.68	−28 1.8	1.604	2.583	7.7	20.8	6 20	19 20.46	−12 31.0	1.956	2.919	7.8	20.1
6 30	19 12.63	−28 12.2	1.568	2.576	3.8	20.6	6 30	19 12.14	−13 3.4	1.897	2.896	4.6	19.9
7 10	19 2.66	−28 15.4	1.557	2.569	2.7	20.5	7 10	19 2.88	−13 45.2	1.865	2.873	3.2	19.8
7 20	18 52.97	−28 10.0	1.573	2.563	6.5	20.7	7 20	18 53.58	−14 33.9	1.861	2.850	5.8	19.9
7 30	18 44.79	−27 56.1	1.613	2.557	10.6	20.9	7 30	18 45.21	−15 26.7	1.884	2.826	9.4	20.1
8 9	18 39.02	−27 35.7	1.675	2.551	14.2	21.2	8 9	18 38.58	−16 20.7	1.931	2.802	12.8	20.2
386438	2008 <i>WD</i> ₃₉		7 7.1 256°12	2°1/ 6.4 18			323401	2004 <i>BM</i> ₂₂		7 7.1 94°16	1°0/ 7.4 17		
5 31	19 32.80	−25 50.7	1.907	2.751	14.1	21.2	5 31	19 35.72	−17 59.8	1.651	2.490	16.2	21.6
6 10	19 28.30	−26 30.2	1.823	2.745	10.9	21.0	6 10	19 30.39	−18 25.4	1.593	2.511	12.5	21.5
6 20	19 21.33	−27 12.5	1.761	2.739	7.2	20.7	6 20	19 22.54	−18 59.3	1.556	2.531	8.2	21.2
6 30	19 12.49	−27 53.5	1.725	2.733	3.5	20.5	6 30	19 12.92	−19 38.8	1.543	2.551	3.6	21.0
7 10	19 2.71	−28 29.1	1.715	2.726	2.6	20.4	7 10	19 2.62	−20 20.0	1.556	2.571	1.6	20.9
7 20	18 53.12	−28 56.2	1.731	2.720	6.2	20.6	7 20	18 52.83	−20 59.6	1.596	2.590	5.9	21.2
7 30	18 44.83	−29 13.6	1.774	2.713	10.1	20.9	7 30	18 44.63	−21 35.4	1.662	2.609	10.1	21.5
8 9	18 38.75	−29 21.9	1.839	2.707	13.5	21.1	8 9	18 38.82	−22 6.4	1.751	2.628	13.6	21.8
146846	2002 <i>AM</i> ₈₃		7 7.1 235°23	2°1/ 7.9 18			23514	Schneider		7 7.1 294°86	2°4/ 7.6 18		
5 31	19 29.35	−14 19.5	2.388	3.208	12.4	20.3	5 31	19 31.85	−16 31.8	1.453	2.304	17.3	18.8
6 10	19 25.00	−14 32.3	2.296	3.202	9.7	20.1	6 10	19 28.43	−16 31.4	1.351	2.275	13.8	18.5
6 20	19 18.84	−14 53.5	2.228	3.195	6.7	19.9	6 20	19 21.98	−16 41.4	1.269	2.245	9.5	18.2
6 30	19 11.35	−15 22.1	2.185	3.188	3.6	19.7	6 30	19 12.99	−17 1.6	1.208	2.216	4.8	17.8
7 10	19 3.20	−15 56.5	2.169	3.181	2.3	19.6	7 10	19 2.47	−17 29.9	1.172	2.186	2.8	17.6
7 20	18 55.17	−16 34.6	2.182	3.173	4.9	19.7	7 20	18 51.75	−18 3.6	1.160	2.156	7.4	17.8
7 30	18 48.04	−17 14.3	2.222	3.166	8.1	19.9	7 30	18 42.38	−18 39.7	1.172	2.126	12.6	18.0
8 9	18 42.46	−17 53.6	2.287	3.158	11.1	20.1	8 9	18 35.66	−19 15.7	1.204	2.096	17.5	18.2
60601	2000 <i>EQ</i> ₁₅₇		7 7.1 119°63	0°7/ 7.2 18 R			185947	2001 <i>BU</i> ₁₇		7 7.1 189°90	0°6/ 6.8 18		
5 31	19 36.20	−21 33.2	1.731	2.571	15.5	19.3	5 31	19 30.07	−22 49.3	2.623	3.454	11.1	21.0
6 10	19 30.73	−21 16.9	1.661	2.580	12.0	19.1	6 10	19 25.42	−23 15.0	2.538	3.453	8.5	20.8
6 20	19 22.75	−21 3.4	1.612	2.589	7.9	18.9	6 20	19 19.05	−23 43.6	2.476	3.452	5.6	20.6
6 30	19 12.99	−20 51.3	1.588	2.598	3.4	18.6	6 30	19 11.43	−24 12.9	2.441	3.451	2.4	20.4
7 10	19 2.55	−20 39.4	1.591	2.606	1.5	18.5	7 10	19 3.22	−24 40.6	2.434	3.449	1.2	20.3
7 20	18 52.57	−20 27.1	1.621	2.615	5.9	18.8	7 20	18 55.18	−25 4.8	2.456	3.448	4.4	20.5
7 30	18 44.17	−20 14.6	1.676	2.622	10.0	19.1	7 30	18 48.03	−25 24.6	2.506	3.446	7.5	20.7
8 9	18 38.13	−20 2.5	1.754	2.630	13.6	19.3	8 9	18 42.40	−25 39.6	2.580	3.444	10.2	20.9
175336	2005 <i>NU</i> ₄₀		7 7.1 286°19	0°5/ 7.2 18			174277	2002 <i>SH</i> ₁₇		7 7.1 11°46	1°8/ 7.4 17		
5 31	19 30.90	−21 7.6	2.082	2.920	13.3	20.8	5 31	19 27.26	−19 14.1	1.020	1.906	20.4	19.5
6 10	19 26.47	−21 3.0	1.994	2.913	10.3	20.6	6 10	19 25.25	−19 2.5	0.965	1.909	15.9	19.2
6 20	19 19.93	−21 1.6	1.929	2.905	6.8	20.4	6 20	19 19.85	−18 59.9	0.927	1.914	10.6	18.9
6 30	19 11.83	−21 2.1	1.888	2.898	3.0	20.1	6 30	19 11.96	−19 5.3	0.909	1.920	4.9	18.6
7 10	19 3.01	−21 3.1	1.875	2.890	1.3	19.9	7 10	19 3.03	−19 16.1	0.912	1.927	2.4	18.5
7 20	18 54.39	−21 3.5	1.889	2.883	5.2	20.2	7 20	18 54.69	−19 29.7	0.937	1.937	7.8	18.8
7 30	18 46.91	−21 2.8	1.929	2.876	8.9	20.4	7 30	18 48.48	−19 44.1	0.982	1.947	13.1	19.2
8 9	18 41.32	−21 0.9	1.993	2.869	12.3	20.6	8 9	18 45.42	−19 57.7	1.046	1.959	17.7	19.5
358441	2007 <i>DB</i> ₉₄		7 7.1 121°61	7°1/ 4.9 18			7222	Alekperov		7 7.1 273°06	0°1/ 7.1 18		
5 31	19 38.24	−45 26.0	2.610	3.408	12.0	21.1	5 31	19 29.41	−20 58.3	2.551	3.381	11.4	18.1
6 10	19 32.08	−46 13.6	2.545	3.417	10.1	20.9	6 10	19 25.07	−21 11.7	2.448	3.363	8.8	17.9
6 20	19 23.53	−46 50.8	2.503	3.425	8.4	20.8	6 20	19 18.93	−21 29.0	2.369	3.344	5.8	17.7
6 30	19 13.31	−47 12.5	2.486	3.433	7.2	20.8	6 30	19 11.42	−21 48.5	2.316	3.325	2.5	17.4
7 10	19 2.42	−47 15.4	2.494	3.441	7.2	20.8	7 10	19 3.23	−22 8.4	2.291	3.307	1.0	17.3
7 20	18 51.99	−46 58.6	2.528	3.449	8.4	20.9	7 20	18 55.08	−22 27.0	2.295	3.287	4.5	17.5
7 30	18 43.05	−46 23.9	2.587	3.456	10.1	21.0	7 30	18 47.77	−22 43.2	2.325	3.268	7.8	17.7
8 9	18 36.35	−45 35.4	2.668	3.464	11.9	21.1	8 9	18 41.99	−22 56.6	2.381	3.249	10.8	17.8
457710	2009 <i>FC</i> ₂₉		7 7.1 50°65	6°3/ 9.4 16			75391	1999 <i>XF</i> ₉₆		7 7.1 277°86	0°6/ 7.2 18		
5 31	19 32.12	− 6 40.2	1.182	2.023	21.1	20.4	5 31	19 35.06	−21 30.5	1.639	2.485	15.9	19.5
6 10	19 28.25	− 6 48.9	1.135	2.044	17.1	20.2	6 10	19 30.56	−21 22.5	1.538	2.460	12.5	19.2
6 20	19 21.41	− 7 21.1	1.104	2.065	12.6	20.0	6 20	19 23.16	−21 18.0	1.456	2.434	8.4	18.9
6 30	19 12.49	− 8 16.7	1.094	2.087	8.3	19.9	6 30	19 13.41	−21 15.5	1.399	2.409	3.7	18.6
7 10	19 2.79	− 9 31.5	1.107	2.109	6.3	19.8	7 10	19 2.35	−21 12.8	1.367	2.382	1.6	18.4
7 20	18 53.73	−10 59.1	1.143	2.132	8.6	20.0	7 20	18 51.27	−21 8.5	1.361	2.355	6.7	18.6
7 30	18 46.59	−12 31.7	1.202	2.155	12.5	20.3	7 30	18 41.57	−21 2.3	1.380	2.328	11.6	18.8
8 9	18 42.26	−14 2.5	1.282	2.178	16.3	20.6	8 9	18 34.39	−20 54.7	1.420	2.301	16.0	19.0
262315	2006 <i>TU</i> ₁₈		7 7.1 24°71	0°4/ 6.9 18			316922	2000 <i>WB</i> ₁₆₅		7 7.1 96°15	0°4/ 6.9 18		
5 31	19 32.94	−23 15.1	1.291	2.157	18.2	20.0	5 31	19 37.21	−21 3.9	2.392	3.210	12.4	20.0
6 10	19 29.10	−23 14.9	1.228	2.162	14.0	19.7	6 10	19 30.72	−21 49.0	2.338	3.246	9.5	19.8
6 20	19 22.12	−23 18.3	1.184	2.167	9.2	19.5	6 20	19 22.37	−22 37.7	2.308	3.281	6.1	19.7
6 30	19 12.85	−23 22.3	1.162	2.172	3.9	19.2	6 30	19 12.77	−23 26.9	2.306	3.315	2.5	19.5
7 10	19 2.63	−23 24.2	1.163	2.179	1.7	19.0	7 10	19 2.73	−24 13.2	2.334	3.349	1.2	19.4
7 20	18 52.96	−23 22.3	1.189	2.185	7.1	19.4	7 20	18 53.12	−24 54.1	2.391	3.381	4.6	19.7
7 30	18 45.24	−23 16.4	1.238	2.193	12.0	19.7	7 30	18 44.72					

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7 7.1

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
505623	2014 <i>GB</i> ₃₉		7 7.1 196°44	2.2°/ 6.3	17		284782	2008 <i>YA</i> ₂₁		7 7.1 317°57	0.3°/ 7.0	18	
5 31	19 32.01	−26 37.3	2.106	2.947	13.1	21.0	5 31	19 31.79	−23 17.5	1.803	2.651	14.6	20.5
6 10	19 27.42	−27 15.5	2.027	2.947	10.1	20.8	6 10	19 27.53	−23 17.6	1.720	2.644	11.3	20.3
6 20	19 20.61	−27 55.2	1.970	2.946	6.7	20.6	6 20	19 20.83	−23 20.1	1.659	2.638	7.5	20.0
6 30	19 12.17	−28 32.7	1.939	2.946	3.3	20.4	6 30	19 12.32	−23 22.8	1.622	2.632	3.2	19.8
7 10	19 2.97	−29 4.5	1.935	2.945	2.6	20.4	7 10	19 2.96	−23 23.7	1.611	2.627	1.4	19.6
7 20	18 53.98	−29 27.9	1.958	2.945	5.8	20.6	7 20	18 53.87	−23 21.5	1.627	2.621	5.8	19.9
7 30	18 46.20	−29 42.3	2.008	2.944	9.2	20.8	7 30	18 46.14	−23 15.8	1.667	2.616	9.9	20.1
8 9	18 40.40	−29 48.1	2.080	2.944	12.3	21.0	8 9	18 40.62	−23 7.4	1.731	2.611	13.6	20.4
519569	2012 <i>SB</i> ₇₀		7 7.1 192°41	5.1°/ 8.5	18		444321	2005 <i>WX</i> ₁₉		7 7.1 265°99	0.1°/ 7.1	18	
5 31	19 30.68	−7 53.6	2.245	3.046	13.6	21.8	5 31	19 30.61	−22 3.8	2.410	3.243	11.9	21.9
6 10	19 26.02	−7 24.8	2.160	3.045	11.1	21.6	6 10	19 26.05	−22 3.8	2.314	3.230	9.2	21.7
6 20	19 19.51	−7 6.7	2.098	3.044	8.4	21.4	6 20	19 19.59	−22 6.1	2.241	3.216	6.1	21.5
6 30	19 11.66	−7 0.5	2.059	3.042	6.0	21.3	6 30	19 11.74	−22 9.3	2.193	3.203	2.6	21.2
7 10	19 3.19	−7 6.6	2.048	3.040	5.1	21.2	7 10	19 3.21	−22 12.1	2.174	3.190	1.1	21.1
7 20	18 54.91	−7 24.1	2.063	3.037	6.6	21.3	7 20	18 54.81	−22 13.3	2.183	3.176	4.7	21.3
7 30	18 47.61	−7 51.1	2.105	3.034	9.3	21.4	7 30	18 47.36	−22 12.4	2.219	3.162	8.1	21.5
8 9	18 41.95	−8 25.1	2.170	3.031	12.0	21.6	8 9	18 41.56	−22 9.6	2.279	3.148	11.2	21.7
181148	2005 <i>RL</i> ₃		7 7.1 308°64	5.4°/ 8.6	18		34499	2000 <i>SL</i> ₁₅₀		7 7.1 223°11	3.8°/ 5.8	18	
5 31	19 28.45	−7 54.7	2.053	2.865	14.4	20.2	5 31	19 33.49	−33 35.8	2.540	3.368	11.5	19.4
6 10	19 24.53	−7 27.6	1.968	2.859	11.8	20.0	6 10	19 28.34	−34 11.6	2.453	3.361	9.1	19.2
6 20	19 18.65	−7 12.2	1.904	2.853	8.9	19.8	6 20	19 21.13	−34 44.1	2.390	3.355	6.5	19.0
6 30	19 11.33	−7 10.1	1.863	2.847	6.4	19.6	6 30	19 12.40	−35 9.5	2.353	3.348	4.3	18.9
7 10	19 3.32	−7 21.5	1.848	2.842	5.4	19.5	7 10	19 2.96	−35 24.7	2.344	3.341	4.1	18.8
7 20	18 55.48	−7 45.3	1.860	2.836	7.0	19.6	7 20	18 53.70	−35 27.9	2.363	3.334	6.1	19.0
7 30	18 48.66	−8 19.3	1.896	2.831	9.8	19.8	7 30	18 45.55	−35 19.4	2.408	3.326	8.8	19.1
8 9	18 43.58	−9 0.6	1.956	2.826	12.7	20.0	8 9	18 39.22	−35 1.1	2.476	3.318	11.3	19.3
385322	2002 <i>AE</i> ₁₇₇		7 7.1 202°49	1.2°/ 6.7	18		255079	2005 <i>UF</i> ₃₀		7 7.1 272°84	4.6°/ 8.1	18	
5 31	19 35.64	−25 42.0	2.437	3.263	12.0	22.6	5 31	19 29.22	−9 32.5	2.418	3.224	12.7	20.9
6 10	19 29.87	−25 56.6	2.345	3.257	9.3	22.4	6 10	19 24.91	−8 58.2	2.317	3.206	10.3	20.7
6 20	19 22.06	−26 11.8	2.277	3.251	6.1	22.2	6 20	19 18.84	−8 32.2	2.238	3.188	7.7	20.5
6 30	19 12.75	−26 25.0	2.236	3.245	2.8	22.0	6 30	19 11.43	−8 15.8	2.184	3.170	5.4	20.3
7 10	19 2.73	−26 33.8	2.224	3.237	1.7	21.9	7 10	19 3.35	−8 9.6	2.157	3.152	4.6	20.3
7 20	18 52.90	−26 36.8	2.240	3.229	5.0	22.1	7 20	18 55.34	−8 13.4	2.157	3.133	6.3	20.3
7 30	18 44.14	−26 33.9	2.284	3.220	8.3	22.3	7 30	18 48.16	−8 26.3	2.184	3.115	8.9	20.5
8 9	18 37.19	−26 26.0	2.353	3.210	11.3	22.5	8 9	18 42.48	−8 46.4	2.234	3.096	11.7	20.6
519905	2013 <i>PZ</i> ₈₁		7 7.1 253°53	5.1°/ 5.9	17		182951	2002 <i>GU</i> ₁₇₇		7 7.1 154°79	0.0°/ 7.0	18	
5 31	19 37.58	−33 25.2	1.678	2.523	15.7	22.0	5 31	19 29.88	−21 9.9	2.456	3.288	11.7	21.1
6 10	19 32.63	−34 2.4	1.596	2.514	12.5	21.8	6 10	19 25.36	−21 25.5	2.375	3.290	9.0	20.9
6 20	19 24.45	−34 35.7	1.535	2.505	8.9	21.5	6 20	19 19.07	−21 44.8	2.316	3.292	5.9	20.7
6 30	19 13.92	−34 58.9	1.498	2.495	5.8	21.3	6 30	19 11.49	−22 5.8	2.284	3.294	2.5	20.5
7 10	19 2.25	−35 6.9	1.486	2.486	5.4	21.3	7 10	19 3.35	−22 26.7	2.280	3.296	1.0	20.3
7 20	18 50.88	−34 57.3	1.499	2.476	8.3	21.4	7 20	18 55.40	−22 45.9	2.304	3.297	4.5	20.6
7 30	18 41.27	−34 31.3	1.537	2.466	12.0	21.6	7 30	18 48.42	−23 2.2	2.355	3.298	7.7	20.8
8 9	18 34.50	−33 52.9	1.596	2.456	15.5	21.8	8 9	18 43.02	−23 15.3	2.431	3.300	10.6	21.0
105601	2000 <i>RZ</i> ₉₁		7 7.1 233°86	1.5°/ 7.5	18		225689	2001 <i>QR</i> ₁₁₆		7 7.1 319°02	9.5°/ 6.2	17	
5 31	19 30.19	−17 38.1	2.503	3.327	11.7	20.2	5 31	19 39.11	−42 24.8	1.353	2.200	18.6	19.5
6 10	19 25.57	−17 32.3	2.410	3.319	9.2	20.0	6 10	19 34.99	−42 56.8	1.270	2.178	15.6	19.3
6 20	19 19.20	−17 31.2	2.339	3.310	6.2	19.8	6 20	19 26.69	−43 15.0	1.204	2.157	12.5	19.0
6 30	19 11.54	−17 34.2	2.295	3.301	3.0	19.6	6 30	19 15.07	−43 9.4	1.158	2.137	10.0	18.8
7 10	19 3.27	−17 40.3	2.279	3.292	1.8	19.5	7 10	19 1.83	−42 32.5	1.135	2.117	9.7	18.7
7 20	18 55.14	−17 48.4	2.291	3.283	4.6	19.7	7 20	18 49.10	−41 22.8	1.134	2.098	12.0	18.8
7 30	18 47.90	−17 57.7	2.331	3.273	7.8	19.9	7 30	18 38.93	−39 45.2	1.155	2.080	15.5	19.0
8 9	18 42.20	−18 7.5	2.395	3.264	10.7	20.0	8 9	18 32.67	−37 50.0	1.195	2.062	19.2	19.1
251895	1999 <i>VL</i> ₁₀₈		7 7.1 289°59	3.2°/ 7.8	18		96908	1999 <i>TP</i> ₉₉		7 7.1 288°44	5.8°/ 4.9	18	
5 31	19 29.19	−13 53.4	2.294	3.116	12.7	20.9	5 31	19 34.46	−33 27.7	1.796	2.642	14.8	19.2
6 10	19 25.04	−13 30.4	2.190	3.095	10.2	20.7	6 10	19 30.23	−34 40.9	1.706	2.624	11.8	19.0
6 20	19 18.99	−13 14.0	2.109	3.073	7.2	20.5	6 20	19 23.03	−35 53.7	1.638	2.605	8.7	18.7
6 30	19 11.51	−13 4.7	2.053	3.052	4.3	20.3	6 30	19 13.43	−36 59.0	1.595	2.587	6.2	18.6
7 10	19 3.27	−13 2.3	2.023	3.030	3.3	20.2	7 10	19 2.48	−37 50.0	1.576	2.569	6.2	18.5
7 20	18 55.09	−13 6.4	2.021	3.008	5.6	20.3	7 20	18 51.54	−38 22.0	1.584	2.551	8.9	18.6
7 30	18 47.79	−13 16.0	2.046	2.987	8.8	20.4	7 30	18 42.05	−38 33.9	1.615	2.533	12.3	18.8
8 9	18 42.10	−13 30.0	2.094	2.965	12.0	20.6	8 9	18 35.20	−38 28.2	1.667	2.515	15.6	19.0
54747	2001 <i>KB</i> ₄₂		7 7.1 330°32	1.1°/ 7.4	18		459591	2013 <i>GS</i> ₁₃₄		7 7.1 70°57	5.7°/ 8.4	17	
5 31	19 28.58	−17 11.4	1.286	2.152	18.2	18.8	5 31	19 33.76	−10 48.5	1.290	2.133	19.5	21.6
6 10	19 26.01	−17 42.8	1.207	2.140	14.3	18.5	6 10	19 29.48	−10 17.9	1.231	2.144	15.7	21.4
6 20	19 20.38	−18 28.2	1.146	2.128	9.6	18.2	6 20	19 22.27	−10 2.7	1.190	2.155	11.4	21.1
6 30	19 12.30	−19 25.1	1.107	2.117	4.4	17.8	6 30	19 12.94	−10 4.1	1.171	2.167	7.3	21.0
7 10	19 2.91	−20 28.9	1.091	2.106	1.9	17.6	7 10	19 2.77	−10 21.7	1.174	2.178	5.8	20.9
7 20	18 53.65	−21 33.7	1.099	2.097	7.2	17.9	7 20	18 53.12	−10 52.7	1.202	2.190	8.4	21.1
7 30	18 46.02	−22 34.5	1.130	2.088	12.5	18.2	7 30	18 45.30	−11 33.5	1.253	2.202	12.5	21.3
8 9	18 41.21	−23 28.2	1.180	2.080	17.1	18.5	8 9	18 40.21	−12 19.6	1.324	2.213	16.4	21.6
1177	Gonnessia		7 7.1 142°84	3.6°/ 7.9	18		262274	2006 <i>SL</i> ₃₅₆		7 7.1 259°01	2.3°/ 6.4	18	
5 31	19 29.26	−12 11.4	2.627	3.437	11.7	14.8	5 31	19 35.62	−25 57.3	1.757	2.602	15.1	21.0
6 10	19 24.64	−11 33.7	2.544	3.439	9.3	14.6	6 10	19 30.90	−26 34.4	1.662	2.584	11.8	20.8
6 20	19 18.46	−11 2.1	2.484	3.441	6.7	14.5	6 20	19 23.35	−27 15.1	1.588	2.566	7.9	20.5
6 30	19 11.18	−10 37.7	2.450	3.442	4.4	14.3	6 30	19 13.53	−27 54.7	1.539	2.547	3.8	20.2
7 10	19 3.45	−10 20.7	2.444	3.444	3.6	14.3	7 10	19 2.45	−28 28.5	1.516	2.527	2.9	20.1
7 20	18 55.92	−10 11.2	2.466	3.446	5.3	14.4	7 20	18 51.40	−28 52.9	1.519	2.508	6.9	20.3
7 30	18 49.26	−10 8.5	2.515	3.447	7.8	14.5	7 30	18 41					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
309096	2006 <i>VT</i> ₁₆₉	7 7.1 334° 34' 7.5 18					388238	2006 <i>KH</i> ₂₆	7 7.1 105° 53' 3.3/ 8.4 17				
5 31	19 30.77	-16 1.5	1.879	2.715	14.6	20.2	5 31	19 32.10	-11 35.3	2.031	2.848	14.3	21.1
6 10	19 26.51	-15 12.6	1.795	2.708	11.6	19.9	6 10	19 27.24	-11 46.0	1.962	2.863	11.4	20.9
6 20	19 20.04	-14 28.6	1.732	2.702	8.1	19.7	6 20	19 20.38	-12 8.0	1.915	2.877	8.0	20.8
6 30	19 11.97	-13 50.5	1.694	2.696	4.7	19.5	6 30	19 12.11	-12 40.4	1.893	2.892	4.7	20.6
7 10	19 3.18	-13 19.2	1.682	2.690	3.6	19.4	7 10	19 3.25	-13 21.1	1.899	2.906	3.3	20.5
7 20	18 54.64	-12 55.4	1.697	2.685	6.4	19.6	7 20	18 54.70	-14 7.5	1.931	2.920	5.7	20.7
7 30	18 47.33	-12 39.1	1.736	2.680	10.0	19.8	7 30	18 47.32	-14 56.6	1.991	2.934	8.9	20.9
8 9	18 42.00	-12 29.7	1.799	2.675	13.3	20.0	8 9	18 41.79	-15 45.8	2.074	2.947	12.0	21.2
71249	2000 <i>AK</i> ₁₄	7 7.1 282° 16' 3.4/ 5.7 18					315165	2007 <i>FZ</i> ₃₆	7 7.1 194° 31' 3.6/ 8.6 18				
5 31	19 33.20	-27 25.3	1.883	2.728	14.2	19.2	5 31	19 28.09	-8 55.9	2.937	3.732	10.9	21.6
6 10	19 28.95	-28 33.7	1.789	2.711	11.1	18.9	6 10	19 23.68	-8 50.1	2.847	3.730	8.8	21.4
6 20	19 22.05	-29 46.7	1.717	2.693	7.6	18.7	6 20	19 17.85	-8 52.9	2.780	3.728	6.5	21.3
6 30	19 12.99	-30 58.6	1.670	2.675	4.3	18.4	6 30	19 11.01	-9 4.7	2.739	3.725	4.4	21.1
7 10	19 2.71	-32 3.3	1.650	2.656	3.9	18.4	7 10	19 3.71	-9 24.8	2.725	3.722	3.6	21.1
7 20	18 52.38	-32 56.0	1.657	2.638	7.2	18.5	7 20	18 56.52	-9 52.1	2.740	3.719	4.9	21.2
7 30	18 43.29	-33 34.1	1.689	2.620	11.0	18.7	7 30	18 50.04	-10 25.1	2.783	3.715	7.2	21.3
8 9	18 36.49	-33 58.0	1.743	2.602	14.5	18.9	8 9	18 44.79	-11 1.7	2.851	3.711	9.5	21.4
340495	2006 <i>HS</i> ₉₉	7 7.1 76° 72' 2.4/ 6.4 17					248156	2004 <i>TW</i> ₂₉₈	7 7.1 199° 05' 5.3/ 8.5 18				
5 31	19 33.32	-26 47.8	1.842	2.688	14.4	21.5	5 31	19 31.79	-7 19.8	2.253	3.050	13.7	21.2
6 10	19 28.68	-27 24.1	1.771	2.694	11.1	21.3	6 10	19 26.92	-6 48.1	2.166	3.047	11.3	21.0
6 20	19 21.56	-28 1.6	1.722	2.700	7.4	21.1	6 20	19 20.17	-6 27.2	2.100	3.043	8.6	20.8
6 30	19 12.64	-28 36.1	1.698	2.705	3.7	20.9	6 30	19 12.05	-6 18.6	2.059	3.039	6.2	20.7
7 10	19 2.92	-29 3.9	1.700	2.711	2.8	20.8	7 10	19 3.28	-6 22.7	2.045	3.035	5.4	20.6
7 20	18 53.54	-29 22.3	1.729	2.717	6.3	21.0	7 20	18 54.67	-6 38.7	2.058	3.030	6.8	20.7
7 30	18 45.60	-29 30.8	1.783	2.723	10.0	21.3	7 30	18 47.04	-7 5.1	2.098	3.024	9.4	20.8
8 9	18 39.94	-29 30.6	1.860	2.729	13.3	21.5	8 9	18 41.06	-7 39.1	2.161	3.018	12.1	21.0
501962	2014 <i>YZ</i> ₁₅	7 7.1 192° 32' 0.4/ 7.2 17 R					253060	2002 <i>TF</i> ₆₈	7 7.1 161° 44' 11.9/ 7.2 18				
5 31	19 35.94	-20 42.8	1.973	2.804	14.2	23.2	5 31	19 40.87	-4 38.5	1.249	2.063	21.7	19.7
6 10	19 30.48	-20 48.8	1.888	2.803	11.0	23.0	6 10	19 35.12	-4 21.1	1.184	2.067	18.4	19.5
6 20	19 22.66	-20 59.1	1.826	2.801	7.3	22.8	6 20	19 26.12	-4 0 17.5	1.138	2.071	15.1	19.3
6 30	19 13.11	-21 11.8	1.789	2.798	3.1	22.5	6 30	19 14.70	+1 23.3	1.113	2.075	12.5	19.2
7 10	19 2.73	-21 24.6	1.779	2.795	1.3	22.4	7 10	19 2.21	+2 33.9	1.111	2.077	12.0	19.1
7 20	18 52.59	-21 35.8	1.798	2.791	5.5	22.6	7 20	18 50.21	+3 10.9	1.132	2.079	13.7	19.2
7 30	18 43.74	-21 44.6	1.842	2.786	9.5	22.9	7 30	18 40.20	+3 15.6	1.173	2.081	16.7	19.4
8 9	18 37.01	-21 50.8	1.911	2.780	13.0	23.1	8 9	18 33.21	+2 54.1	1.233	2.082	19.9	19.6
369262	2009 <i>KO</i> ₅	7 7.1 31° 02' 2.3/ 6.4 17					383872	2008 <i>RO</i> ₄₉	7 7.1 148° 12' 1.0/ 7.3 17				
5 31	19 32.52	-23 52.2	1.212	2.083	18.8	20.6	5 31	19 34.60	-20 1.4	2.110	2.939	13.5	21.4
6 10	19 29.11	-24 46.4	1.154	2.090	14.5	20.3	6 10	19 29.17	-19 52.5	2.034	2.946	10.4	21.3
6 20	19 22.37	-25 47.4	1.114	2.098	9.5	20.1	6 20	19 21.65	-19 47.1	1.980	2.953	6.9	21.0
6 30	19 13.11	-26 48.9	1.096	2.106	4.4	19.8	6 30	19 12.66	-19 44.2	1.952	2.960	3.1	20.8
7 10	19 2.74	-27 43.9	1.102	2.115	3.1	19.7	7 10	19 3.06	-19 42.5	1.951	2.966	1.5	20.7
7 20	18 52.88	-28 27.2	1.131	2.125	7.9	20.1	7 20	18 53.79	-19 41.2	1.979	2.972	5.1	21.0
7 30	18 45.07	-28 56.7	1.183	2.135	12.8	20.4	7 30	18 45.75	-19 39.7	2.034	2.977	8.7	21.2
8 9	18 40.39	-29 13.4	1.255	2.145	17.0	20.7	8 9	18 39.63	-19 38.1	2.112	2.982	11.9	21.4
169492	2002 <i>CV</i> ₁₉₂	7 7.1 23° 95' 4.0/ 6.4 17					435855	2008 <i>WK</i> ₁₃₈	7 7.1 242° 46' 3.3/ 5.7 18				
5 31	19 33.38	-28 44.5	1.114	1.992	19.6	19.4	5 31	19 34.62	-28 31.8	2.177	3.012	12.9	21.2
6 10	19 30.10	-29 20.2	1.059	1.998	15.3	19.2	6 10	19 29.67	-29 35.1	2.084	3.000	10.1	21.0
6 20	19 23.14	-29 55.7	1.021	2.004	10.3	18.9	6 20	19 22.32	-30 40.7	2.014	2.987	6.9	20.8
6 30	19 13.44	-30 24.2	1.005	2.012	5.5	18.7	6 30	19 13.09	-31 43.6	1.971	2.973	4.0	20.6
7 10	19 2.63	-30 39.9	1.010	2.020	4.6	18.6	7 10	19 2.83	-32 38.7	1.955	2.959	3.7	20.6
7 20	18 52.50	-30 39.9	1.038	2.030	8.8	18.9	7 20	18 52.57	-33 22.1	1.966	2.945	6.6	20.7
7 30	18 44.75	-30 25.5	1.088	2.040	13.6	19.2	7 30	18 43.43	-33 52.4	2.005	2.930	9.9	20.9
8 9	18 40.42	-30 0.4	1.156	2.051	17.9	19.5	8 9	18 36.33	-34 10.0	2.066	2.915	13.0	21.1
253694	2003 <i>UD</i> ₂₆₄	7 7.1 211° 23' 1.2/ 6.7 17					106413	2000 <i>VD</i> ₃₂	7 7.1 213° 53' 0.9/ 7.4 18				
5 31	19 35.03	-22 34.5	1.649	2.496	15.8	21.0	5 31	19 30.03	-19 1.3	2.589	3.414	11.4	20.1
6 10	19 30.38	-23 17.9	1.569	2.493	12.3	20.8	6 10	19 25.43	-19 6.9	2.499	3.410	8.8	20.0
6 20	19 22.93	-24 7.9	1.510	2.489	8.1	20.5	6 20	19 19.13	-19 16.7	2.432	3.405	5.9	19.8
6 30	19 13.33	-25 0.1	1.476	2.486	3.5	20.3	6 30	19 11.60	-19 29.7	2.392	3.400	2.7	19.5
7 10	19 2.65	-25 49.6	1.468	2.482	2.0	20.1	7 10	19 3.49	-19 44.4	2.380	3.395	1.2	19.4
7 20	18 52.16	-26 32.0	1.486	2.478	6.6	20.4	7 20	18 55.52	-19 59.5	2.396	3.389	4.4	19.6
7 30	18 43.18	-27 5.3	1.529	2.473	11.0	20.7	7 30	18 48.43	-20 13.9	2.441	3.384	7.5	19.8
8 9	18 36.71	-27 29.2	1.594	2.468	14.9	20.9	8 9	18 42.83	-20 27.2	2.509	3.378	10.3	20.0
469979	2006 <i>FF</i> ₄₉	7 7.1 68° 29' 0.5/ 7.3 17					253624	2003 <i>UA</i> ₈₆	7 7.1 314° 37' 20.6/ 22.1 18				
5 31	19 34.83	-18 16.5	1.713	2.552	15.7	20.8	5 31	19 47.10	-59 58.4	1.306	2.098	22.1	19.8
6 10	19 29.60	-18 57.9	1.663	2.581	12.0	20.6	6 10	19 45.62	-63 1.9	1.247	2.074	21.1	19.6
6 20	19 21.99	-19 47.3	1.634	2.611	7.8	20.4	6 20	19 36.99	-65 46.3	1.204	2.050	20.7	19.5
6 30	19 12.75	-20 41.1	1.630	2.640	3.4	20.2	6 30	19 20.83	-67 52.8	1.178	2.027	20.9	19.4
7 10	19 2.96	-21 34.9	1.653	2.669	1.3	20.1	7 10	18 59.29	-69 4.4	1.167	2.004	21.7	19.4
7 20	18 53.69	-22 25.1	1.703	2.698	5.6	20.5	7 20	18 37.25	-69 13.0	1.170	1.982	23.2	19.4
7 30	18 45.96	-23 9.3	1.780	2.726	9.6	20.8	7 30	18 20.46	-68 23.0	1.187	1.961	24.9	19.5
8 9	18 40.51	-23 46.5	1.879	2.754	12.9	21.0	8 9	18 12.23	-66 48.4	1.214	1.941	26.6	19.6
318376	2004 <i>VC</i> ₇₄	7 7.1 292° 86' 0.6/ 6.9 18					65728	1993 <i>FD</i> ₈₄	7 7.1 311° 58' 10.1/ 9.5 17				
5 31	19 29.48	-22 30.4	2.296	3.133	12.2	20.8	5 31	19 28.10	+0 25.4	1.689	2.482	17.8	19.5
6 10	19 25.42	-22 57.8	2.196	3.115	9.5	20.6	6 10	19 24.79	+1 25.4	1.603	2.467	15.4	19.3
6 20	19 19.35	-23 29.4	2.120	3.097	6.2	20.4	6 20	19 19.16	+2 6.9	1.536	2.453	12.9	19.1
6 30	19 11.75	-24 2.9	2.069	3.079	2.7	20.1	6 30	19 11.75	+2 25.2	1.490	2.440	10.9	19.0
7 10	19 3.35	-24 35.5	2.046	3.061	1.3	20.0	7 10	19 3.40	+2 17.3	1.465	2.426	10.1	18.9
7 20	18 54.98	-25 4.8	2.051	3.043	5.0	20.2	7 20	18 55.14	+1 43.4	1.464	2.413	11.1	18.9
7 30	18 47.55	-25 29.2	2.082	3.025	8.6	20.4	7 30	18 48.04	+0 46.5	1.485	2.400	13.4	19.0
8 9	18 41.83	-25 48.2</											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
290755	2005 <i>US</i> ₄₉₄		7 7.1 275°56	4.9/ 8.7 18			241531	2010 <i>CL</i> ₁₇₇		7 7.1 320°30	3.7/ 8.3 16		
5 31	19 28.31	— 7 29.4	2.347	3.149	13.1	20.6	5 31	19 30.17	—12 15.1	1.771	2.602	15.5	20.4
6 10	19 24.30	— 7 12.3	2.249	3.134	10.8	20.4	6 10	19 26.26	—12 12.9	1.690	2.599	12.4	20.2
6 20	19 18.51	— 7 6.4	2.173	3.119	8.2	20.2	6 20	19 20.04	—12 22.6	1.629	2.595	8.8	19.9
6 30	19 11.38	— 7 12.7	2.122	3.104	5.8	20.1	6 30	19 12.11	—12 44.0	1.593	2.592	5.2	19.7
7 10	19 3.57	— 7 31.2	2.096	3.089	4.9	20.0	7 10	19 3.35	—13 15.8	1.581	2.589	3.8	19.6
7 20	18 55.82	— 8 0.9	2.098	3.074	6.4	20.0	7 20	18 54.79	—13 55.5	1.596	2.586	6.4	19.8
7 30	18 48.92	— 8 39.7	2.126	3.059	9.0	20.2	7 30	18 47.46	—14 40.0	1.636	2.584	10.2	20.0
8 9	18 43.53	— 9 24.8	2.178	3.044	11.8	20.3	8 9	18 42.18	—15 26.4	1.699	2.581	13.7	20.2
103144	1999 <i>XY</i> ₂₀₉		7 7.1 183°28	5.9/ 5.0 18			85893	1999 <i>CE</i> ₄₈		7 7.1 84°45	0°1/ 7.1 18		
5 31	19 36.41	—36 21.8	2.064	2.896	13.6	19.0	5 31	19 34.29	—21 56.3	1.651	2.498	15.8	19.3
6 10	19 31.22	—37 27.3	1.990	2.896	11.0	18.8	6 10	19 29.54	—22 9.3	1.584	2.507	12.2	19.1
6 20	19 23.37	—38 28.3	1.938	2.896	8.2	18.6	6 20	19 22.20	—22 26.9	1.538	2.517	8.0	18.9
6 30	19 13.52	—39 18.5	1.912	2.896	6.2	18.5	6 30	19 13.00	—22 46.1	1.517	2.527	3.4	18.6
7 10	19 2.71	—39 52.7	1.911	2.895	6.2	18.5	7 10	19 3.03	—23 4.1	1.521	2.537	1.4	18.5
7 20	18 52.15	—40 8.2	1.937	2.895	8.2	18.6	7 20	18 53.49	—23 18.6	1.552	2.547	6.0	18.9
7 30	18 43.07	—40 5.3	1.988	2.894	10.9	18.8	7 30	18 45.52	—23 28.8	1.608	2.556	10.2	19.1
8 9	18 36.39	—39 47.3	2.060	2.893	13.6	19.0	8 9	18 39.95	—23 34.8	1.686	2.566	13.9	19.4
273493	2007 <i>AP</i> ₁₃		7 7.1 162°65	0°7/ 7.3 17			306245	2011 <i>QF</i> ₇₆		7 7.1 227°57	5°2/ 5.6 18		
5 31	19 34.62	—19 13.6	1.959	2.791	14.2	21.7	5 31	19 36.08	—36 48.1	2.280	3.106	12.7	21.0
6 10	19 29.44	—19 27.8	1.881	2.796	11.0	21.5	6 10	19 30.68	—37 26.8	2.198	3.101	10.2	20.8
6 20	19 21.98	—19 48.1	1.825	2.800	7.3	21.3	6 20	19 22.88	—37 59.8	2.137	3.095	7.6	20.6
6 30	19 12.86	—20 12.4	1.795	2.804	3.2	21.0	6 30	19 13.29	—38 22.3	2.103	3.089	5.6	20.5
7 10	19 3.00	—20 38.1	1.792	2.807	1.4	20.9	7 10	19 2.89	—38 30.5	2.094	3.082	5.4	20.5
7 20	18 53.40	—21 2.9	1.816	2.810	5.4	21.2	7 20	18 52.76	—38 22.9	2.113	3.076	7.3	20.6
7 30	18 45.08	—21 25.3	1.867	2.812	9.3	21.4	7 30	18 43.97	—38 0.3	2.157	3.069	10.0	20.7
8 9	18 38.82	—21 44.7	1.942	2.814	12.7	21.6	8 9	18 37.35	—37 25.7	2.225	3.062	12.6	20.9
239510	2007 <i>VY</i> ₂₃₂		7 7.1 337°19	2°0/ 7.5 18			370303	2002 <i>RM</i> ₂₃		7 7.1 328°16	1°2/ 6.9 17		
5 31	19 27.97	—18 29.5	1.474	2.334	16.6	20.2	5 31	19 28.79	—24 3.3	1.170	2.050	18.7	20.7
6 10	19 25.13	—18 13.2	1.390	2.320	13.1	19.9	6 10	19 26.69	—24 13.3	1.089	2.030	14.7	20.3
6 20	19 19.59	—18 3.5	1.327	2.306	8.9	19.6	6 20	19 21.16	—24 27.8	1.025	2.011	9.8	20.0
6 30	19 11.98	—18 0.1	1.286	2.294	4.3	19.3	6 30	19 12.84	—24 43.3	0.982	1.994	4.3	19.6
7 10	19 3.33	—18 1.8	1.268	2.283	2.4	19.2	7 10	19 3.02	—24 55.8	0.962	1.977	2.2	19.4
7 20	18 54.88	—18 7.3	1.276	2.272	6.7	19.4	7 20	18 53.34	—25 2.0	0.963	1.961	8.0	19.7
7 30	18 47.89	—18 15.3	1.306	2.263	11.4	19.7	7 30	18 45.55	—25 1.0	0.986	1.947	13.6	20.0
8 9	18 43.35	—18 24.6	1.357	2.254	15.5	19.9	8 9	18 40.96	—24 53.6	1.028	1.934	18.5	20.2
103024	1999 <i>XG</i> ₁₁₀		7 7.1 300°17	3°1/ 6.1 18			100950	1998 <i>PA</i>		7 7.1 314°84	2°5/ 7.7 18		
5 31	19 32.77	—25 36.4	1.409	2.272	17.1	19.3	5 31	19 29.23	—16 42.4	1.312	2.175	18.2	19.2
6 10	19 29.37	—26 33.3	1.324	2.256	13.4	19.1	6 10	19 26.60	—16 38.9	1.223	2.153	14.4	18.9
6 20	19 22.74	—27 36.8	1.258	2.240	9.0	18.8	6 20	19 20.90	—16 46.3	1.152	2.132	9.9	18.6
6 30	19 13.46	—28 41.1	1.216	2.224	4.5	18.5	6 30	19 12.69	—17 4.3	1.103	2.111	5.0	18.3
7 10	19 2.70	—29 39.1	1.197	2.209	3.7	18.4	7 10	19 3.08	—17 30.9	1.077	2.091	2.8	18.1
7 20	18 51.96	—30 25.1	1.204	2.193	8.1	18.6	7 20	18 53.48	—18 3.2	1.075	2.072	7.5	18.3
7 30	18 42.89	—30 56.1	1.233	2.178	13.0	18.8	7 30	18 45.42	—18 38.0	1.094	2.053	12.8	18.5
8 9	18 36.76	—31 12.9	1.282	2.164	17.3	19.0	8 9	18 40.15	—19 12.6	1.134	2.035	17.6	18.7
276196	2002 <i>QJ</i> ₂₄		7 7.1 304°43	8°0/ 9.8 18			280051	2002 <i>BA</i> ₁₂		7 7.1 52°89	2°6/ 6.7 18		
5 31	19 28.08	— 1 40.5	1.819	2.615	16.5	19.9	5 31	19 34.26	—30 4.4	1.977	2.818	13.8	19.7
6 10	19 24.68	— 1 15.4	1.726	2.598	14.1	19.7	6 10	19 29.09	—30 11.7	1.918	2.836	10.6	19.5
6 20	19 19.06	— 1 8.7	1.651	2.580	11.4	19.5	6 20	19 21.64	—30 15.9	1.880	2.854	7.1	19.4
6 30	19 11.72	— 1 23.4	1.598	2.563	9.1	19.3	6 30	19 12.68	—30 14.0	1.867	2.873	3.8	19.2
7 10	19 3.46	— 2 0.5	1.569	2.546	8.0	19.2	7 10	19 3.20	—30 3.7	1.882	2.891	3.0	19.2
7 20	18 55.22	— 2 58.5	1.565	2.530	9.2	19.2	7 20	18 54.25	—29 44.8	1.923	2.910	5.9	19.4
7 30	18 48.03	— 4 13.6	1.584	2.513	11.8	19.3	7 30	18 46.79	—29 18.4	1.990	2.929	9.2	19.6
8 9	18 42.76	— 5 40.0	1.626	2.497	14.8	19.5	8 9	18 41.48	—28 46.8	2.081	2.948	12.2	19.9
491673	2012 <i>UX</i> ₁₂		7 7.1 187°28	1°7/ 6.6 18			285748	2000 <i>TN</i> ₄₁		7 7.1 259°63	0°3/ 7.0 18		
5 31	19 33.34	—25 29.8	2.097	2.935	13.2	21.8	5 31	19 31.45	—22 34.4	2.539	3.367	11.5	21.8
6 10	19 28.48	—26 2.2	2.016	2.935	10.2	21.6	6 10	19 26.75	—22 48.5	2.434	3.348	8.9	21.6
6 20	19 21.39	—26 36.7	1.958	2.935	6.7	21.4	6 20	19 20.16	—23 5.5	2.353	3.328	5.9	21.3
6 30	19 12.64	—27 9.8	1.926	2.934	3.1	21.2	6 30	19 12.14	—23 23.5	2.298	3.307	2.5	21.1
7 10	19 3.12	—27 38.2	1.920	2.933	2.2	21.1	7 10	19 3.37	—23 40.5	2.271	3.287	1.1	20.9
7 20	18 53.82	—27 59.4	1.943	2.932	5.6	21.3	7 20	18 54.64	—23 54.7	2.273	3.265	4.6	21.2
7 30	18 45.73	—28 12.6	1.991	2.930	9.2	21.5	7 30	18 46.78	—24 5.4	2.303	3.244	8.0	21.3
8 9	18 39.65	—28 18.4	2.064	2.929	12.3	21.7	8 9	18 40.49	—24 12.3	2.357	3.222	11.0	21.5
96892	1999 <i>TY</i> ₃₈		7 7.1 14°32	4°0/ 7.7 18			515234	2012 <i>BA</i> ₁₁₅		7 7.1 394°85	3°4/ 8.6 18		
5 31	19 32.11	—14 42.6	1.687	2.524	15.9	19.4	5 31	19 27.95	—10 16.1	2.295	3.109	13.0	21.3
6 10	19 27.74	—13 58.4	1.613	2.525	12.6	19.2	6 10	19 24.07	—10 29.1	2.204	3.102	10.4	21.1
6 20	19 20.97	—13 21.4	1.558	2.527	8.9	19.0	6 20	19 18.39	—10 53.5	2.136	3.095	7.5	20.9
6 30	19 12.46	—12 53.0	1.528	2.528	5.3	18.8	6 30	19 11.37	—11 29.1	2.093	3.088	4.7	20.8
7 10	19 3.21	—12 33.7	1.523	2.530	4.1	18.7	7 10	19 3.70	—12 14.3	2.076	3.081	3.5	20.7
7 20	18 54.30	—12 23.4	1.544	2.532	6.9	18.9	7 20	18 56.12	—13 6.8	2.087	3.074	5.4	20.8
7 30	18 46.78	—12 21.5	1.589	2.534	10.6	19.1	7 30	18 49.43	—14 3.5	2.125	3.068	8.4	21.0
8 9	18 41.46	—12 26.4	1.656	2.536	14.1	19.3	8 9	18 44.30	—15 1.6	2.187	3.062	11.4	21.1
6502	1993 <i>XR</i> ₁		7 7.1 257°13	2°9/ 7.9 18			11851	1988 <i>PD</i> ₁		7 7.1 313°95	20°0/ 13.1 18		
5 31	19 33.46	—14 50.8	1.609	2.447	16.5	17.7	5 31	19 26.69	+18 7.8	1.413	2.127	24.0	17.6
6 10	19 29.21	—14 50.8	1.519	2.434	13.1	17.4	6 10	19 24.41	+19 45.3	1.332	2.102	22.8	17.4
6 20	19 22.24	—15 1.7	1.449	2.420	9.1	17.1	6 20	19 19.37	+20 50.7	1.263	2.078	21.6	17.2
6 30	19 13.14	—15 23.0	1.402	2.406	4.9	16.9	6 30	19 12.04	+21 13.1	1.208	2.055	20.6	17.1
7 10	19 2.89	—15 52.9	1.380	2.392	3.1	16.7	7 10	19 3.38	+20 44.6	1.167	2.032	20.0	17.0
7 20	18 52.72	—16 28.7	1.385	2.378	6.8	16.9	7 20	18 54.63	+19 21.7	1.143	2.010	20.1	16.9
7 30	18 43.91	—17 7.3	1.414	2.363	11.3	17.1							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
335058	2004 <i>RK</i> ₁₆₈		7 7.1 297°04	2°5/ 7.4 17			64877	2001 <i>YH</i> ₆₄		7 7.1 300°07	2°9/ 6.4 18		
5 31	19 32.98	−18 39.3	1.630	2.476	16.0	20.4	5 31	19 32.98	−27 8.1	1.561	2.418	16.0	18.6
6 10	19 28.81	−18 2.8	1.538	2.458	12.6	20.1	6 10	19 29.30	−27 41.9	1.468	2.397	12.6	18.3
6 20	19 21.96	−17 30.0	1.466	2.441	8.7	19.9	6 20	19 22.59	−28 18.3	1.396	2.376	8.5	18.0
6 30	19 13.03	−17 1.2	1.417	2.424	4.4	19.6	6 30	19 13.44	−28 52.6	1.347	2.355	4.3	17.7
7 10	19 3.04	−16 36.3	1.394	2.407	2.8	19.4	7 10	19 2.93	−29 19.6	1.323	2.335	3.4	17.6
7 20	18 53.20	−16 15.7	1.396	2.389	6.7	19.6	7 20	18 52.46	−29 35.6	1.324	2.314	7.5	17.8
7 30	18 44.74	−15 59.7	1.423	2.373	11.2	19.8	7 30	18 43.52	−29 39.6	1.349	2.294	12.1	18.0
8 9	18 38.67	−15 48.2	1.472	2.356	15.3	20.0	8 9	18 37.28	−29 33.0	1.394	2.274	16.3	18.2
185712	1998 <i>RH</i> ₇₀		7 7.1 256°18	0°6/ 6.9 18			114959	2003 <i>QQ</i> ₆₀		7 7.1 199°84	1°1/ 7.5 17		
5 31	19 34.68	−22 13.4	1.813	2.654	14.8	20.4	5 31	19 34.95	−17 34.7	1.722	2.559	15.7	20.2
6 10	19 30.04	−22 38.3	1.717	2.637	11.6	20.2	6 10	19 30.15	−17 58.1	1.640	2.557	12.3	19.9
6 20	19 22.77	−23 8.9	1.642	2.620	7.7	19.9	6 20	19 22.75	−18 30.8	1.579	2.554	8.2	19.7
6 30	19 13.40	−23 41.8	1.592	2.602	3.3	19.6	6 30	19 13.37	−19 10.5	1.542	2.551	3.8	19.4
7 10	19 2.89	−24 13.7	1.569	2.584	1.5	19.4	7 10	19 3.02	−19 53.9	1.532	2.547	1.7	19.3
7 20	18 52.41	−24 41.2	1.572	2.566	6.1	19.7	7 20	18 52.84	−20 37.3	1.549	2.543	6.0	19.5
7 30	18 43.20	−25 2.7	1.602	2.547	10.5	19.9	7 30	18 44.05	−21 18.0	1.591	2.539	10.4	19.8
8 9	18 36.27	−25 17.9	1.653	2.527	14.4	20.1	8 9	18 37.56	−21 54.5	1.656	2.534	14.2	20.0
5702	Morando		7 7.1 52°06	4°5/ 6.4 18 R			468873	2013 <i>QH</i> ₈₄		7 7.1 315°80	6°7/ 8.5 17		
5 31	19 37.70	−30 43.3	1.208	2.074	19.2	16.7	5 31	19 27.88	−9 44.6	1.273	2.124	19.3	20.8
6 10	19 33.20	−31 15.1	1.155	2.086	15.0	16.4	6 10	19 25.59	−9 10.1	1.182	2.099	15.9	20.5
6 20	19 25.07	−31 43.7	1.120	2.099	10.2	16.2	6 20	19 20.30	−8 50.9	1.109	2.075	12.0	20.2
6 30	19 14.33	−32 2.4	1.107	2.112	5.8	16.0	6 30	19 12.53	−8 50.5	1.057	2.051	8.2	20.0
7 10	19 2.61	−32 5.9	1.117	2.125	5.0	16.0	7 10	19 3.32	−9 10.2	1.026	2.028	6.7	19.8
7 20	18 51.71	−31 52.6	1.151	2.139	8.7	16.2	7 20	18 54.04	−9 48.9	1.017	2.006	9.4	19.9
7 30	18 43.21	−31 25.0	1.207	2.153	13.2	16.5	7 30	18 46.21	−10 42.8	1.030	1.985	13.9	20.0
8 9	18 38.11	−30 47.7	1.283	2.167	17.1	16.8	8 9	18 41.11	−11 46.4	1.062	1.964	18.4	20.2
375750	2009 <i>SJ</i> ₄₂		7 7.1 135°77	0°1/ 7.1 17			418194	2008 <i>CX</i> ₄₁		7 7.2 205°54	2°7/ 6.7 17		
5 31	19 35.57	−22 38.5	1.887	2.724	14.5	21.4	5 31	19 38.01	−28 52.5	1.711	2.554	15.5	21.5
6 10	19 30.24	−22 40.2	1.814	2.732	11.2	21.2	6 10	19 32.65	−29 6.4	1.631	2.551	12.1	21.2
6 20	19 22.54	−22 44.6	1.763	2.740	7.3	21.0	6 20	19 24.43	−29 18.7	1.573	2.549	8.2	21.0
6 30	19 13.15	−22 49.4	1.737	2.747	3.1	20.7	6 30	19 14.08	−29 25.1	1.539	2.545	4.2	20.7
7 10	19 3.07	−22 52.6	1.738	2.754	1.3	20.6	7 10	19 2.78	−29 22.2	1.531	2.542	3.1	20.7
7 20	18 53.36	−22 52.9	1.767	2.760	5.5	20.9	7 20	18 51.84	−29 8.6	1.550	2.538	6.8	20.9
7 30	18 45.08	−22 50.1	1.821	2.767	9.5	21.1	7 30	18 42.56	−28 45.2	1.594	2.534	10.9	21.1
8 9	18 38.98	−22 44.8	1.899	2.772	12.9	21.4	8 9	18 35.91	−28 15.0	1.660	2.530	14.6	21.3
490193	2008 <i>UP</i> ₃₁₇		7 7.1 315°48	5°0/ 7.1 16			440363	2004 <i>XU</i> ₅₁		7 7.2 332°66	11°0/ 5.6 16		
5 31	19 31.53	−16 2.1	1.424	2.276	17.6	21.5	5 31	19 30.39	−3 14.9	1.698	2.502	17.2	19.6
6 10	19 28.24	−14 50.3	1.320	2.242	14.2	21.2	6 10	19 26.66	−0 54.9	1.605	2.477	15.0	19.3
6 20	19 21.96	−13 40.4	1.236	2.208	10.3	20.8	6 20	19 20.51	+ 1 17.7	1.533	2.453	12.8	19.1
6 30	19 13.18	−12 34.8	1.174	2.175	6.4	20.5	6 30	19 12.46	+ 3 15.3	1.483	2.429	11.3	19.0
7 10	19 2.96	−11 36.5	1.135	2.142	5.3	20.4	7 10	19 3.39	+ 4 50.9	1.458	2.407	11.2	18.9
7 20	18 52.62	−10 48.6	1.121	2.109	8.8	20.5	7 20	18 54.34	+ 5 59.6	1.456	2.386	12.6	19.0
7 30	18 43.67	−10 13.1	1.130	2.078	13.6	20.6	7 30	18 46.43	+ 6 39.4	1.476	2.365	15.1	19.0
8 9	18 37.33	−9 50.4	1.158	2.047	18.2	20.8	8 9	18 40.60	+ 6 52.8	1.515	2.346	17.7	19.2
506578	2005 <i>UX</i> ₄₁₁		7 7.1 349°59	5°0/ 5.3 17			445481	2010 <i>VH</i> ₁₄₉		7 7.2 318°76	5°2/ 8.3 15		
5 31	19 32.77	−29 12.0	1.441	2.304	16.8	20.7	5 31	19 27.84	−9 25.2	2.010	2.830	14.4	21.8
6 10	19 29.29	−30 34.6	1.371	2.300	13.2	20.5	6 10	19 24.28	−8 48.4	1.917	2.814	11.8	21.6
6 20	19 22.61	−32 0.5	1.320	2.298	9.2	20.2	6 20	19 18.71	−8 21.7	1.845	2.799	8.9	21.4
6 30	19 13.41	−33 21.7	1.293	2.295	5.7	20.0	6 30	19 11.61	−8 6.8	1.797	2.784	6.2	21.2
7 10	19 2.91	−34 30.0	1.290	2.293	5.6	20.0	7 10	19 3.76	−8 4.5	1.774	2.770	5.3	21.1
7 20	18 52.64	−35 19.5	1.312	2.292	8.9	20.2	7 20	18 56.00	−8 14.5	1.777	2.756	7.1	21.2
7 30	18 44.15	−35 48.7	1.357	2.291	13.0	20.4	7 30	18 49.24	−8 35.3	1.805	2.742	10.0	21.3
8 9	18 38.61	−35 59.5	1.422	2.290	16.7	20.7	8 9	18 44.23	−9 4.2	1.855	2.729	13.1	21.5
204483	2005 <i>AZ</i> ₆₇		7 7.1 27°05	1°6/ 6.6 17			290204	2005 <i>SN</i> ₃₇		7 7.2 14°28	5°1/ 8.8 18		
5 31	19 30.11	−21 56.3	1.375	2.241	17.3	18.9	5 31	19 28.60	−7 46.4	2.123	2.932	14.1	20.8
6 10	19 26.84	−22 59.0	1.320	2.254	13.3	18.6	6 10	19 24.62	−7 24.5	2.044	2.933	11.5	20.6
6 20	19 20.71	−24 9.7	1.284	2.268	8.6	18.4	6 20	19 18.78	−7 14.4	1.985	2.933	8.7	20.4
6 30	19 12.48	−25 22.7	1.272	2.283	3.8	18.2	6 30	19 11.59	−7 17.4	1.951	2.934	6.1	20.3
7 10	19 3.37	−26 31.4	1.284	2.299	2.4	18.1	7 10	19 3.79	−7 33.3	1.942	2.936	5.2	20.2
7 20	18 54.70	−27 30.5	1.321	2.315	6.9	18.4	7 20	18 56.19	−8 0.8	1.960	2.937	6.7	20.3
7 30	18 47.79	−28 17.1	1.382	2.333	11.4	18.7	7 30	18 49.59	−8 37.5	2.003	2.938	9.3	20.5
8 9	18 43.53	−28 51.0	1.464	2.351	15.2	19.0	8 9	18 44.65	−9 20.5	2.070	2.940	12.1	20.7
507658	2013 <i>QX</i> ₁₆		7 7.1 242°71	4°6/ 5.8 18			152466	2005 <i>VJ</i> ₁₀₆		7 7.2 281°45	0°7/ 6.9 18		
5 31	19 37.90	−31 50.4	1.860	2.699	14.6	21.9	5 31	19 30.87	−23 44.5	2.296	3.133	12.3	20.5
6 10	19 32.71	−32 41.2	1.770	2.685	11.6	21.7	6 10	19 26.53	−23 59.6	2.197	3.115	9.5	20.3
6 20	19 24.62	−33 31.1	1.701	2.671	8.2	21.5	6 20	19 20.16	−24 17.3	2.121	3.098	6.3	20.1
6 30	19 14.23	−34 14.0	1.658	2.656	5.2	21.3	6 30	19 12.23	−24 35.2	2.070	3.080	2.7	19.8
7 10	19 2.62	−34 44.2	1.640	2.641	4.9	21.2	7 10	19 3.51	−24 51.1	2.047	3.062	1.4	19.7
7 20	18 51.11	−34 58.5	1.649	2.625	7.8	21.3	7 20	18 54.87	−25 3.1	2.051	3.044	5.0	19.9
7 30	18 41.08	−34 56.5	1.683	2.608	11.4	21.5	7 30	18 47.20	−25 10.5	2.083	3.026	8.6	20.1
8 9	18 33.61	−34 40.8	1.739	2.592	14.8	21.7	8 9	18 41.28	−25 13.4	2.138	3.008	11.8	20.3
251514	2008 <i>FH</i> ₆₈		7 7.1 7°87	6°4/ 9.0 18			259634	2003 <i>WF</i> ₃₆		7 7.2 178°18	1°9/ 6.7 17		
5 31	19 28.17	−4 15.3	2.248	3.040	13.9	20.4	5 31	19 37.35	−25 56.8	1.829	2.668	14.8	21.6
6 10	19 24.16	−3 34.9	2.168	3.040	11.6	20.2	6 10	19 31.91	−26 22.5	1.751	2.670	11.5	21.4
6 20	19 18.41	−3 7.1	2.109	3.041	9.2	20.1	6 20	19 23.84	−26 49.7	1.695	2.671	7.6	21.1
6 30	19 11.39	−2 53.8	2.074	3.041	7.2	19.9	6 30	19 13.82	−27 14.5	1.664	2.672	3.5	20.9
7 10	19 3.82	−2 56.0	2.065	3.042	6.4	19.9	7 10	19 2.90	−27 33.3	1.659	2.672	2.4	20.8
7 20	18 56.42	−3 13.0	2.081	3.042	7.5	19.9	7 20	18 52.30	−27 43.7	1.682	2.672	6.2	21.0
7 30	18 49.97	−3 42.9	2.123	3.043	9.7	20.1	7 30	18 43.18					

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7 7.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
244895	2003 <i>WZ</i> ₅₆	7 7.2 330°81	3°0/ 7.7 18				469629	2004 <i>RB</i> ₃₀₁	7 7.2 311°34	3°3/ 7.9 16			
5 31	19 30.27	-16 26.1	1.608	2.455	16.1	20.2	5 31	19 29.53	-14 32.7	1.518	2.366	16.9	21.7
6 10	19 26.65	-15 59.2	1.526	2.446	12.7	19.9	6 10	19 26.41	-14 26.7	1.426	2.347	13.5	21.4
6 20	19 20.49	-15 39.5	1.464	2.438	8.8	19.7	6 20	19 20.58	-14 31.9	1.355	2.328	9.4	21.1
6 30	19 12.43	-15 27.3	1.425	2.430	4.8	19.4	6 30	19 12.60	-14 48.7	1.305	2.309	5.2	20.8
7 10	19 3.45	-15 22.2	1.411	2.422	3.2	19.3	7 10	19 3.45	-15 15.7	1.280	2.291	3.4	20.7
7 20	18 54.70	-15 23.5	1.422	2.415	6.6	19.5	7 20	18 54.32	-15 50.3	1.279	2.273	7.0	20.8
7 30	18 47.33	-15 30.0	1.457	2.409	10.8	19.7	7 30	18 46.53	-16 29.6	1.302	2.256	11.6	21.0
8 9	18 42.25	-15 40.3	1.514	2.403	14.7	19.9	8 9	18 41.13	-17 10.5	1.346	2.239	15.9	21.3
248937	2006 <i>WY</i> ₆₈	7 7.2 338°36	1°8/ 6.4 18				176001	2000 <i>QR</i> ₂₃₀	7 7.2 238°73	5°0/ 5.5 18			
5 31	19 30.27	-23 37.9	1.874	2.722	14.1	19.8	5 31	19 34.95	-36 24.6	2.360	3.186	12.3	20.1
6 10	19 26.51	-24 33.9	1.792	2.717	10.9	19.6	6 10	19 29.82	-37 8.9	2.276	3.180	9.9	19.9
6 20	19 20.36	-25 35.6	1.732	2.711	7.2	19.4	6 20	19 22.38	-37 48.4	2.216	3.173	7.4	19.8
6 30	19 12.38	-26 38.9	1.698	2.707	3.3	19.1	6 30	19 13.22	-38 18.3	2.180	3.166	5.4	19.6
7 10	19 3.47	-27 38.9	1.689	2.702	2.4	19.1	7 10	19 3.25	-38 34.8	2.172	3.159	5.3	19.6
7 20	18 54.69	-28 31.3	1.708	2.698	6.1	19.3	7 20	18 53.48	-38 36.0	2.190	3.152	7.1	19.7
7 30	18 47.13	-29 13.6	1.752	2.694	10.0	19.5	7 30	18 44.96	-38 22.3	2.235	3.145	9.7	19.9
8 9	18 41.69	-29 45.4	1.819	2.691	13.4	19.7	8 9	18 38.50	-37 56.4	2.302	3.138	12.3	20.0
475850	2007 <i>BR</i> ₅₅	7 7.2 87°28	3°9/ 6.5 16				475666	2006 <i>VQ</i> ₁₆	7 7.2 317°20	5°0/ 5.4 18			
5 31	19 36.48	-35 10.9	2.381	3.206	12.3	21.3	5 31	19 33.18	-33 32.1	1.987	2.829	13.7	21.0
6 10	19 30.56	-35 21.9	2.316	3.221	9.7	21.2	6 10	19 28.85	-34 31.6	1.908	2.823	10.9	20.8
6 20	19 22.54	-35 26.9	2.273	3.236	6.9	21.0	6 20	19 21.96	-35 28.9	1.851	2.817	7.9	20.6
6 30	19 13.13	-35 22.3	2.256	3.250	4.5	20.9	6 30	19 13.10	-36 18.2	1.818	2.812	5.5	20.5
7 10	19 3.25	-35 6.3	2.267	3.265	4.1	20.9	7 10	19 3.28	-36 54.4	1.812	2.806	5.4	20.5
7 20	18 53.85	-34 38.6	2.306	3.280	6.1	21.1	7 20	18 53.65	-37 14.6	1.831	2.801	7.7	20.6
7 30	18 45.82	-34 1.0	2.371	3.294	8.7	21.3	7 30	18 45.38	-37 18.4	1.876	2.796	10.7	20.8
8 9	18 39.80	-33 16.3	2.461	3.308	11.2	21.4	8 9	18 39.41	-37 8.1	1.942	2.791	13.7	21.0
368348	2002 <i>QB</i> ₁₀₄	7 7.2 140°66	0°6/ 7.1 17				19197	Akasaki	7 7.2 9°08	11°3/ 5.2 18			
5 31	19 36.86	-24 26.6	1.592	2.440	16.2	20.9	5 31	19 32.65	-45 14.3	1.359	2.209	18.4	15.6
6 10	19 31.74	-24 19.0	1.519	2.442	12.6	20.7	6 10	19 29.85	-46 28.6	1.310	2.213	15.7	15.5
6 20	19 23.80	-24 12.5	1.466	2.445	8.3	20.4	6 20	19 23.20	-47 27.1	1.279	2.219	13.1	15.3
6 30	19 13.81	-24 4.4	1.437	2.447	3.6	20.2	6 30	19 13.71	-48 0.2	1.267	2.226	11.5	15.3
7 10	19 2.95	-23 52.8	1.434	2.449	1.6	20.0	7 10	19 3.09	-48 1.4	1.277	2.236	11.5	15.3
7 20	18 52.54	-23 36.9	1.457	2.451	6.3	20.4	7 20	18 53.27	-47 29.9	1.308	2.247	13.0	15.4
7 30	18 43.83	-23 17.3	1.505	2.453	10.8	20.6	7 30	18 45.98	-46 29.9	1.359	2.259	15.4	15.6
8 9	18 37.72	-22 55.8	1.575	2.455	14.7	20.9	8 9	18 42.22	-45 9.6	1.428	2.273	17.9	15.8
398283	2010 <i>UP</i> ₆₁	7 7.2 283°14	0°3/ 7.1 17				247557	2002 <i>RY</i> ₂₇₃	7 7.2 225°81	1°4/ 7.6 18			
5 31	19 30.31	-22 16.3	2.307	3.143	12.2	21.7	5 31	19 31.38	-17 17.7	2.069	2.900	13.6	21.0
6 10	19 26.08	-22 32.4	2.208	3.126	9.5	21.5	6 10	19 26.97	-17 29.8	1.984	2.897	10.6	20.8
6 20	19 19.86	-22 52.1	2.132	3.109	6.3	21.3	6 20	19 20.46	-17 49.3	1.920	2.893	7.1	20.5
6 30	19 12.12	-23 13.3	2.082	3.092	2.7	21.0	6 30	19 12.40	-18 14.6	1.882	2.890	3.4	20.3
7 10	19 3.61	-23 33.9	2.059	3.075	1.2	20.9	7 10	19 3.58	-18 43.7	1.871	2.886	1.7	20.2
7 20	18 55.16	-23 51.8	2.064	3.057	4.9	21.1	7 20	18 54.93	-19 14.2	1.888	2.882	5.2	20.4
7 30	18 47.66	-24 6.0	2.096	3.040	8.5	21.3	7 30	18 47.38	-19 44.3	1.931	2.878	8.9	20.6
8 9	18 41.86	-24 16.3	2.152	3.023	11.7	21.5	8 9	18 41.67	-20 12.5	1.998	2.873	12.2	20.8
501763	2014 <i>UP</i> ₁₇₂	7 7.2 287°50	4°6/ 8.2 17				434371	2004 <i>TY</i> ₂₃₇	7 7.2 201°95	2°0/ 7.7 17			
5 31	19 32.05	-12 11.1	1.359	2.205	18.6	21.5	5 31	19 32.84	-16 31.1	2.038	2.866	13.9	21.6
6 10	19 28.71	-11 59.3	1.267	2.184	15.1	21.2	6 10	19 28.08	-16 26.9	1.954	2.864	10.9	21.4
6 20	19 22.32	-12 2.1	1.194	2.163	10.9	20.9	6 20	19 21.17	-16 29.7	1.891	2.861	7.4	21.2
6 30	19 13.41	-12 20.7	1.142	2.143	6.6	20.6	6 30	19 12.69	-16 38.6	1.853	2.858	3.8	21.0
7 10	19 3.05	-12 54.2	1.113	2.122	4.8	20.5	7 10	19 3.47	-16 52.2	1.842	2.855	2.2	20.9
7 20	18 52.62	-13 40.1	1.108	2.101	8.2	20.6	7 20	18 54.44	-17 9.0	1.859	2.851	5.5	21.1
7 30	18 43.65	-14 34.1	1.127	2.080	13.1	20.8	7 30	18 46.56	-17 27.5	1.902	2.847	9.1	21.3
8 9	18 37.40	-15 31.9	1.165	2.060	17.7	21.0	8 9	18 40.58	-17 46.6	1.968	2.843	12.5	21.5
122350	2000 <i>QB</i> ₄₂	7 7.2 242°15	3°6/ 6.2 18				392016	2009 <i>AK</i> ₂₁	7 7.2 209°53	1°2/ 6.7 18			
5 31	19 38.64	-32 33.8	2.415	3.237	12.2	20.6	5 31	19 33.33	-24 11.1	2.245	3.079	12.6	21.8
6 10	19 32.62	-33 1.2	2.311	3.217	9.7	20.4	6 10	19 28.42	-24 42.5	2.158	3.074	9.7	21.6
6 20	19 24.23	-33 25.7	2.230	3.196	6.8	20.2	6 20	19 21.40	-25 16.8	2.094	3.069	6.4	21.4
6 30	19 14.02	-33 43.1	2.176	3.174	4.2	20.0	6 30	19 12.80	-25 51.1	2.055	3.064	2.9	21.2
7 10	19 2.86	-33 49.8	2.150	3.151	3.9	19.9	7 10	19 3.43	-26 22.1	2.045	3.059	1.7	21.1
7 20	18 51.78	-33 44.0	2.152	3.128	6.3	20.0	7 20	18 54.20	-26 47.6	2.063	3.053	5.2	21.3
7 30	18 41.83	-33 26.1	2.181	3.103	9.4	20.2	7 30	18 46.05	-27 6.2	2.107	3.046	8.7	21.5
8 9	18 33.90	-32 58.3	2.235	3.078	12.3	20.3	8 9	18 39.75	-27 18.2	2.176	3.040	11.8	21.7
23224	2000 <i>WD</i> ₁₀	7 7.2 344°68	1°4/ 7.4 18				137670	1999 <i>XE</i> ₃₃	7 7.2 148°94	0°3/ 7.1 18			
5 31	19 32.22	-19 40.8	1.674	2.521	15.6	18.9	5 31	19 35.91	-21 54.5	1.839	2.676	14.8	20.1
6 10	19 28.03	-19 27.1	1.596	2.519	12.2	18.7	6 10	19 30.67	-22 14.4	1.765	2.683	11.4	19.9
6 20	19 21.34	-19 18.2	1.539	2.517	8.1	18.4	6 20	19 22.96	-22 38.8	1.713	2.690	7.5	19.7
6 30	19 12.78	-19 13.4	1.506	2.515	3.8	18.1	6 30	19 13.47	-23 4.7	1.686	2.696	3.2	19.4
7 10	19 3.39	-19 11.2	1.498	2.513	1.8	18.0	7 10	19 3.18	-23 29.1	1.686	2.701	1.3	19.3
7 20	18 54.30	-19 10.5	1.517	2.512	6.0	18.3	7 20	18 53.22	-23 49.6	1.713	2.706	5.7	19.6
7 30	18 46.64	-19 10.7	1.560	2.511	10.3	18.5	7 30	18 44.68	-24 4.9	1.766	2.711	9.7	19.8
8 9	18 41.27	-19 11.3	1.625	2.510	14.1	18.8	8 9	18 38.38	-24 15.3	1.842	2.715	13.2	20.1
384191	2009 <i>BG</i> ₁₀₇	7 7.2 204°54	13°4/ 7.0 18				280207	2002 <i>TK</i> ₂₀₈	7 7.2 330°24	12°4/ 7.2 18			
5 31	19 58.82	-49 23.7	1.221	2.037	22.0	20.6	5 31	19 25.87	- 1 28.8	1.409	2.229	19.4	19.6
6 10	19 51.29	-50 16.3	1.156	2.034	19.1	20.4	6 10	19 23.70	+ 0 24.4	1.319	2.200	17.0	19.3
6 20	19 37.93	-50 47.5	1.107	2.032	16.2	20.2	6 20	19 18.88	+ 2 4.2	1.246	2.172	14.6	19.1
6 30	19 20.08	-50 41.6	1.077	2.028	14.0	20.1	6 30	19 11.92	+ 3 22.7	1.194	2.145	12.8	18.9
7 10	19 0.56	-49 47.9	1.068	2.024	13.5	20.1	7 10	19 3.73	+ 4 12.9	1.162	2.120	12.4	18.8
7 20	18 42.64	-48 6.6	1.081	2.020	15.2	20.1	7 20	18 55.50	+ 4 31.0	1.150	2.095	13.8	18.8
7 30	18 28.98	-45 48.9	1.116	2.015	18.1	20.3	7 30	18 48.52	+ 4 16.9	1.159	2.072	16.4	18.9
8 9	18 20.83	-43 11.7	1.169</										

EPHEMERIDES

7 7.2

7 7.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
232878	2004 <i>VW</i> ₄₀		7 7.2 302°58	10°8/	1.8	17	58729	1998 <i>DJ</i> ₂₄		7 7.2 232°05	5°2/	9.1	18
5 31	19 39.82	−44 8.8	1.735	2.560	16.1	19.6	5 31	19 31.82	−6 46.2	2.089	2.889	14.6	19.3
6 10	19 35.31	−46 20.0	1.668	2.554	13.8	19.4	6 10	19 27.31	−6 42.6	1.995	2.879	12.0	19.1
6 20	19 27.03	−48 23.4	1.621	2.547	11.8	19.3	6 20	19 20.72	−6 53.1	1.922	2.868	9.1	18.9
6 30	19 15.57	−50 7.8	1.598	2.541	10.8	19.2	6 30	19 12.56	−7 18.5	1.874	2.858	6.3	18.7
7 10	19 2.28	−51 23.1	1.599	2.535	11.3	19.2	7 10	19 3.59	−7 58.1	1.851	2.846	5.2	18.6
7 20	18 48.98	−52 4.2	1.623	2.529	13.0	19.3	7 20	18 54.68	−8 49.9	1.855	2.834	6.8	18.7
7 30	18 37.67	−52 11.9	1.668	2.523	15.3	19.5	7 30	18 46.76	−9 50.5	1.886	2.822	9.8	18.9
8 9	18 29.85	−51 52.2	1.731	2.517	17.6	19.6	8 9	18 40.59	−10 56.1	1.941	2.809	12.9	19.0
39843	1998 <i>BB</i> ₂₆		7 7.2 309°44	4°9/	5.6	18	508362	2016 <i>EP</i> ₁₅₀		7 7.2 343°58	1°4/	7.5	17
5 31	19 33.06	−28 19.7	1.299	2.168	17.9	17.6	5 31	19 28.45	−18 33.9	1.132	2.009	19.5	20.4
6 10	19 30.03	−29 32.8	1.219	2.153	14.1	17.3	6 10	19 26.31	−18 40.0	1.061	2.000	15.3	20.1
6 20	19 23.49	−30 51.4	1.158	2.138	9.8	17.0	6 20	19 20.87	−18 57.0	1.007	1.991	10.3	19.8
6 30	19 14.03	−32 7.7	1.119	2.123	5.8	16.7	6 30	19 12.83	−19 23.2	0.974	1.984	4.7	19.4
7 10	19 2.91	−33 12.7	1.103	2.109	5.5	16.7	7 10	19 3.47	−19 55.2	0.962	1.978	2.1	19.2
7 20	18 51.83	−33 59.6	1.111	2.096	9.5	16.9	7 20	18 54.39	−20 29.0	0.973	1.973	7.6	19.6
7 30	18 42.62	−34 25.9	1.141	2.083	14.2	17.1	7 30	18 47.18	−21 1.3	1.006	1.969	13.1	19.8
8 9	18 36.68	−34 33.5	1.190	2.070	18.5	17.3	8 9	18 43.05	−21 29.9	1.057	1.966	17.9	20.1
22020	1999 <i>XG</i> ₁₀₈		7 7.2 65°03	0°1/	7.1	18	416558	2004 <i>CD</i> ₅₂		7 7.2 195°61	9°6/	2.8	18
5 31	19 30.65	−21 45.9	2.205	3.042	12.7	18.5	5 31	19 47.53	−47 44.1	2.257	3.045	14.0	21.9
6 10	19 26.19	−22 2.4	2.135	3.053	9.7	18.3	6 10	19 40.55	−49 25.6	2.185	3.042	12.1	21.7
6 20	19 19.81	−22 22.4	2.088	3.065	6.4	18.1	6 20	19 30.07	−50 56.8	2.135	3.038	10.5	21.6
6 30	19 12.07	−22 43.8	2.066	3.076	2.7	17.9	6 30	19 16.76	−52 8.6	2.110	3.033	9.6	21.6
7 10	19 3.78	−23 4.4	2.072	3.087	1.1	17.8	7 10	19 1.90	−52 53.7	2.109	3.028	9.9	21.6
7 20	18 55.78	−23 22.4	2.105	3.099	4.8	18.1	7 20	18 47.17	−53 8.9	2.134	3.021	11.2	21.6
7 30	18 48.89	−23 37.0	2.165	3.111	8.2	18.3	7 30	18 34.29	−52 55.9	2.181	3.014	13.0	21.8
8 9	18 43.77	−23 47.7	2.249	3.122	11.2	18.5	8 9	18 24.53	−52 20.3	2.249	3.006	14.9	21.9
211804	2004 <i>DF</i> ₈		7 7.2 322°86	0°8/	6.9	18	89001	2001 <i>TH</i> ₇₈		7 7.2 322°39	4°2/	8.2	18
5 31	19 31.59	−23 50.7	1.886	2.732	14.1	20.8	5 31	19 29.43	−11 50.2	1.953	2.778	14.5	19.4
6 10	19 27.42	−24 3.0	1.804	2.727	10.9	20.5	6 10	19 25.54	−11 23.8	1.868	2.772	11.7	19.2
6 20	19 20.90	−24 17.9	1.743	2.722	7.2	20.3	6 20	19 19.57	−11 6.8	1.805	2.766	8.5	19.0
6 30	19 12.64	−24 32.8	1.707	2.717	3.1	20.0	6 30	19 12.06	−11 0.2	1.765	2.760	5.4	18.8
7 10	19 3.55	−24 45.2	1.697	2.712	1.5	19.9	7 10	19 3.82	−11 4.0	1.751	2.755	4.3	18.7
7 20	18 54.69	−24 53.2	1.714	2.708	5.7	20.2	7 20	18 55.76	−11 17.2	1.764	2.749	6.4	18.8
7 30	18 47.12	−24 56.2	1.756	2.704	9.6	20.4	7 30	18 48.80	−11 38.1	1.801	2.744	9.7	19.0
8 9	18 41.65	−24 54.5	1.822	2.700	13.1	20.6	8 9	18 43.68	−12 4.6	1.862	2.739	12.9	19.2
439866	1999 <i>TN</i> ₂₉₆		7 7.2 221°79	3°1/	6.2	18	327174	2005 <i>JJ</i> ₁₂₀		7 7.2 134°31	0°4/	7.3	17
5 31	19 33.33	−32 6.4	2.659	3.486	11.1	21.7	5 31	19 36.64	−19 37.8	1.822	2.655	15.1	21.7
6 10	19 28.19	−32 31.8	2.570	3.479	8.7	21.5	6 10	19 31.18	−20 0.0	1.752	2.668	11.7	21.5
6 20	19 21.12	−32 54.4	2.505	3.473	6.1	21.4	6 20	19 23.28	−20 28.7	1.705	2.680	7.7	21.2
6 30	19 12.66	−33 11.0	2.467	3.465	3.7	21.2	6 30	19 13.63	−21 1.0	1.682	2.691	3.3	21.0
7 10	19 3.55	−33 19.2	2.456	3.458	3.4	21.2	7 10	19 3.23	−21 33.7	1.686	2.701	1.3	20.9
7 20	18 54.62	−33 17.4	2.473	3.450	5.5	21.3	7 20	18 53.18	−22 4.2	1.718	2.712	5.6	21.2
7 30	18 46.71	−33 6.0	2.518	3.443	8.2	21.5	7 30	18 44.58	−22 30.6	1.776	2.721	9.7	21.5
8 9	18 40.49	−32 46.5	2.587	3.434	10.7	21.6	8 9	18 38.22	−22 52.4	1.857	2.730	13.2	21.7
479994	2014 <i>KW</i> ₃₀		7 7.2 29°48	5°4/	8.5	16	253009	2002 <i>RV</i> ₉₉		7 7.2 238°89	19°5/	12.5	17
5 31	19 29.23	−8 19.6	2.110	2.920	14.1	21.4	5 31	19 34.10	+16 17.5	1.365	2.081	24.6	20.6
6 10	19 25.11	−7 39.5	2.033	2.923	11.5	21.2	6 10	19 30.20	+18 5.9	1.295	2.071	23.0	20.4
6 20	19 19.12	−7 10.0	1.978	2.926	8.7	21.0	6 20	19 23.26	+19 22.4	1.236	2.061	21.5	20.3
6 30	19 11.80	−6 52.8	1.947	2.929	6.3	20.9	6 30	19 13.85	+19 56.2	1.193	2.049	20.2	20.1
7 10	19 3.90	−6 48.5	1.941	2.933	5.4	20.8	7 10	19 3.08	+19 39.6	1.165	2.037	19.5	20.1
7 20	18 56.23	−6 56.4	1.962	2.937	6.9	20.9	7 20	18 52.35	+18 30.5	1.154	2.025	19.8	20.0
7 30	18 49.60	−7 15.1	2.009	2.940	9.5	21.1	7 30	18 43.13	+16 33.1	1.161	2.012	20.9	20.1
8 9	18 44.65	−7 41.9	2.078	2.945	12.2	21.3	8 9	18 36.63	+13 58.5	1.184	1.998	22.7	20.2
510365	2011 <i>ST</i> ₂₆₆		7 7.2 334°12	9°8/	10.3	16	471101	2010 <i>AE</i> ₁₀₆		7 7.2 232°88	1°4/	7.4	18
5 31	19 27.14	+1 7.0	1.704	2.495	17.7	21.1	5 31	19 33.73	−19 32.1	2.064	2.896	13.6	21.5
6 10	19 24.07	+1 53.1	1.623	2.485	15.3	20.9	6 10	19 28.77	−19 10.8	1.976	2.889	10.6	21.3
6 20	19 18.76	+2 19.0	1.560	2.476	12.9	20.7	6 20	19 21.65	−18 52.7	1.910	2.883	7.2	21.0
6 30	19 11.75	+2 20.4	1.518	2.468	10.7	20.5	6 30	19 12.94	−18 37.4	1.869	2.877	3.4	20.8
7 10	19 3.90	+1 55.6	1.498	2.460	9.8	20.5	7 10	19 3.50	−18 24.2	1.856	2.870	1.8	20.7
7 20	18 56.17	+1 5.5	1.501	2.453	10.7	20.5	7 20	18 54.27	−18 12.6	1.870	2.863	5.4	20.9
7 30	18 49.60	−0 5.9	1.527	2.446	12.8	20.6	7 30	18 46.22	−18 2.6	1.911	2.856	9.1	21.1
8 9	18 45.00	−1 32.3	1.574	2.440	15.5	20.8	8 9	18 40.09	−17 54.2	1.975	2.848	12.5	21.3
509855	2008 <i>YB</i> ₁₂₃		7 7.2 227°04	1°3/	7.7	17	362941	2012 <i>XO</i> ₁₀₁		7 7.2 130°48	1°5/	7.5	17
5 31	19 31.82	−16 41.4	2.181	3.007	13.2	22.1	5 31	19 33.71	−19 2.9	2.252	3.175	12.4	21.0
6 10	19 27.27	−17 3.6	2.090	3.000	10.3	21.8	6 10	19 28.32	−18 38.6	2.275	3.184	9.7	20.8
6 20	19 20.67	−17 33.8	2.021	2.993	6.9	21.6	6 20	19 21.11	−18 17.5	2.222	3.193	6.5	20.6
6 30	19 12.52	−18 10.5	1.978	2.985	3.3	21.4	6 30	19 12.62	−17 59.1	2.196	3.202	3.1	20.4
7 10	19 3.60	−18 31.2	1.963	2.977	1.6	21.2	7 10	19 3.65	−17 43.0	2.197	3.210	1.8	20.4
7 20	18 54.77	−19 53.2	1.976	2.969	5.1	21.5	7 20	18 54.98	−17 29.1	2.227	3.219	4.8	20.6
7 30	18 46.95	−20 14.2	2.015	2.961	8.7	21.7	7 30	18 47.41	−17 17.4	2.285	3.227	8.0	20.8
8 9	18 40.90	−20 52.5	2.079	2.952	12.0	21.9	8 9	18 41.55	−17 7.6	2.367	3.234	10.9	21.0
93887	2000 <i>WY</i> ₁₃₅		7 7.2 178°84	0°9/	7.5	18	206382	2003 <i>RU</i> ₁₃		7 7.2 236°87	3°2/	7.9	18
5 31	19 33.31	−18 25.9	2.136	2.964	13.4	20.3	5 31	19 32.99	−13 29.8	2.473	3.282	12.3	21.2
6 10	19 28.38	−18 44.0	2.053	2.965	10.4	20.1	6 10	19 27.90	−13 5.0	2.370	3.266	9.8	21.0
6 20	19 21.35	−19 8.6	1.993	2.966	6.9	19.9	6 20	19 20.96	−12 46.2	2.290	3.250	7.0	20.8
6 30	19 12.79	−19 37.7	1.958	2.967	3.1	19.6	6 30	19 12.64	−12 34.1	2.236	3.233	4.3	20.6
7 10	19 3.51	−20 9.0	1.952	2.967	1.3	19.5	7 10	19 3.61	−12 28.4	2.210	3.216	3.2	20.5
7 20	18 54.42	−20 40.0	1.973	2.966	5.1	19.8	7 20	18 54.65	−12 28.9	2.213	3.197	5.4	20.6
7 30	18 46.44	−21 9.0	2.021	2.965	8.7	20.0	7 30	18 46					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
167479	2003 <i>YT</i> ₅₃		7 7.2 292°81	1.2°/ 7.4 18			467491	2006 <i>UW</i> ₆₃		7 7.2 333°92	3.0°/ 7.7 17		
5 31	19 31.85	−19 37.3	1.839	2.681	14.6	20.2	5 31	19 26.15	−17 9.3	1.092	1.972	19.8	20.9
6 10	19 27.70	−19 27.5	1.748	2.668	11.4	19.9	6 10	19 24.72	−16 51.7	1.013	1.953	15.7	20.5
6 20	19 21.17	−19 22.3	1.678	2.654	7.7	19.7	6 20	19 19.98	−16 44.5	0.951	1.934	10.9	20.2
6 30	19 12.81	−19 20.8	1.633	2.641	3.6	19.4	6 30	19 12.55	−16 48.2	0.909	1.917	5.6	19.9
7 10	19 3.55	−19 21.6	1.613	2.628	1.7	19.3	7 10	19 3.66	−17 1.7	0.888	1.902	3.3	19.7
7 20	18 54.42	−19 23.6	1.620	2.615	5.8	19.5	7 20	18 54.88	−17 22.6	0.888	1.887	8.2	19.9
7 30	18 46.53	−19 26.0	1.652	2.602	9.9	19.7	7 30	18 47.90	−17 48.1	0.909	1.875	13.8	20.1
8 9	18 40.75	−19 28.5	1.707	2.589	13.7	19.9	8 9	18 44.03	−18 15.3	0.948	1.863	18.8	20.4
377645	2005 <i>UM</i> ₁₀₇		7 7.2 126°46	1.6°/ 6.7 17			432895	2011 <i>OY</i> ₂		7 7.2 339°41	4.7°/ 8.7 17		
5 31	19 34.78	−24 32.1	1.781	2.625	14.9	21.2	5 31	19 25.89	−10 37.1	1.412	2.261	17.8	20.1
6 10	19 30.00	−25 7.9	1.708	2.630	11.5	21.0	6 10	19 23.70	−10 38.4	1.328	2.247	14.4	19.9
6 20	19 22.65	−25 47.0	1.657	2.635	7.6	20.7	6 20	19 18.86	−10 56.6	1.264	2.233	10.5	19.6
6 30	19 13.42	−26 25.5	1.631	2.640	3.4	20.5	6 30	19 11.95	−11 32.7	1.220	2.220	6.5	19.4
7 10	19 3.34	−26 59.1	1.631	2.645	2.2	20.4	7 10	19 3.93	−12 25.0	1.200	2.208	4.7	19.2
7 20	18 53.56	−27 25.1	1.658	2.649	6.1	20.7	7 20	18 56.00	−13 29.8	1.204	2.197	7.5	19.4
7 30	18 45.24	−27 42.3	1.711	2.654	10.1	20.9	7 30	18 49.44	−14 41.7	1.230	2.188	11.8	19.6
8 9	18 39.25	−27 51.3	1.786	2.658	13.6	21.2	8 9	18 45.28	−15 55.5	1.278	2.180	16.0	19.8
382953	2004 <i>VH</i> ₁₆		7 7.2 202°39	1.3°/ 7.6 17			469937	2006 <i>BF</i> ₁₆		7 7.2 208°29	2.4°/ 8.2 18		
5 31	19 33.12	−17 18.6	2.290	3.112	12.8	22.3	5 31	19 32.52	−12 59.1	1.891	2.716	15.0	22.0
6 10	19 28.13	−17 29.6	2.200	3.108	10.0	22.1	6 10	19 28.09	−13 33.8	1.807	2.714	11.8	21.8
6 20	19 21.17	−17 46.9	2.133	3.104	6.7	21.9	6 20	19 21.37	−14 21.6	1.744	2.712	8.2	21.5
6 30	19 12.74	−18 9.4	2.092	3.099	3.2	21.7	6 30	19 12.92	−15 20.8	1.706	2.709	4.3	21.3
7 10	19 3.60	−18 35.1	2.079	3.093	1.6	21.5	7 10	19 3.58	−16 28.1	1.694	2.707	2.5	21.2
7 20	18 54.60	−19 2.0	2.094	3.087	4.9	21.8	7 20	18 54.37	−17 39.1	1.711	2.704	5.7	21.4
7 30	18 46.59	−19 28.6	2.137	3.080	8.4	22.0	7 30	18 46.32	−18 49.7	1.754	2.701	9.6	21.6
8 9	18 40.30	−19 53.6	2.204	3.073	11.5	22.2	8 9	18 40.27	−19 56.6	1.820	2.698	13.1	21.8
510761	2012 <i>YU</i> ₂		7 7.2 233°84	0.3°/ 7.3 18			520597	2014 <i>OZ</i> ₄₀₄		7 7.2 212°89	1.6°/ 6.7 18		
5 31	19 33.92	−21 49.3	2.573	3.395	11.5	22.4	5 31	19 30.47	−28 22.9	3.010	3.837	9.9	21.7
6 10	19 28.61	−21 45.3	2.471	3.381	8.9	22.2	6 10	19 25.69	−28 31.5	2.922	3.834	7.7	21.5
6 20	19 21.42	−21 43.1	2.392	3.365	5.9	22.0	6 20	19 19.36	−28 38.7	2.858	3.830	5.1	21.3
6 30	19 12.84	−21 41.7	2.341	3.349	2.6	21.7	6 30	19 11.92	−28 42.8	2.821	3.827	2.6	21.1
7 10	19 3.57	−21 39.6	2.318	3.333	1.0	21.6	7 10	19 4.01	−28 42.1	2.813	3.824	1.9	21.1
7 20	18 54.40	−21 35.9	2.323	3.316	4.5	21.8	7 20	18 56.27	−28 36.0	2.833	3.820	4.2	21.3
7 30	18 46.14	−21 30.6	2.357	3.298	7.8	22.0	7 30	18 49.37	−28 24.5	2.882	3.816	6.9	21.4
8 9	18 39.48	−21 23.7	2.416	3.280	10.8	22.2	8 9	18 43.86	−28 8.4	2.955	3.812	9.3	21.6
246660	2008 <i>YT</i> ₅₈		7 7.2 311°69	0.9°/ 6.9 17			111818	Deforest		7 7.2 319°12	1.6°/ 7.6 18		
5 31	19 31.89	−22 32.6	1.858	2.703	14.4	20.3	5 31	19 28.43	−17 55.3	1.756	2.604	14.9	19.1
6 10	19 27.74	−23 7.6	1.777	2.700	11.1	20.1	6 10	19 25.35	−17 57.4	1.654	2.577	11.8	18.9
6 20	19 21.19	−23 47.8	1.718	2.696	7.3	19.9	6 20	19 19.82	−18 7.2	1.572	2.549	8.0	18.6
6 30	19 12.82	−24 29.9	1.684	2.693	3.2	19.6	6 30	19 12.35	−18 23.8	1.514	2.522	3.9	18.3
7 10	19 3.58	−25 10.2	1.676	2.690	1.6	19.5	7 10	19 3.78	−18 45.6	1.481	2.496	1.9	18.1
7 20	18 54.52	−25 45.3	1.694	2.688	5.8	19.8	7 20	18 55.17	−19 10.2	1.474	2.470	6.1	18.3
7 30	18 46.73	−26 13.4	1.739	2.685	9.8	20.0	7 30	18 47.67	−19 35.7	1.491	2.445	10.5	18.5
8 9	18 41.08	−26 34.2	1.806	2.682	13.3	20.2	8 9	18 42.28	−20 0.4	1.531	2.420	14.5	18.7
85676	1998 <i>RT</i> ₂		7 7.2 105°68	0.4°/ 7.3 17			432870	2011 <i>JB</i> ₁₄		7 7.2 272°81	2.6°/ 6.1 18		
5 31	19 36.15	−20 37.1	1.677	2.518	15.8	20.4	5 31	19 33.68	−24 41.1	1.818	2.663	14.6	20.7
6 10	19 30.95	−20 45.6	1.612	2.532	12.2	20.2	6 10	19 29.41	−25 51.1	1.731	2.653	11.4	20.5
6 20	19 23.19	−20 59.2	1.569	2.545	8.1	20.0	6 20	19 22.50	−27 7.6	1.666	2.644	7.6	20.3
6 30	19 13.61	−21 15.7	1.549	2.559	3.5	19.7	6 30	19 13.50	−28 25.4	1.626	2.634	3.8	20.0
7 10	19 3.31	−21 32.4	1.556	2.572	1.3	19.6	7 10	19 3.34	−29 38.1	1.614	2.624	3.1	19.9
7 20	18 53.46	−21 47.1	1.590	2.584	5.9	19.9	7 20	18 53.20	−30 40.7	1.628	2.614	6.8	20.2
7 30	18 45.19	−21 58.9	1.649	2.597	10.1	20.2	7 30	18 44.34	−31 30.1	1.668	2.604	10.8	20.4
8 9	18 39.30	−22 7.7	1.730	2.608	13.7	20.5	8 9	18 37.78	−32 6.0	1.730	2.594	14.4	20.6
248083	2004 <i>QU</i> ₂₄		7 7.2 202°40	5.2°/10.2 18			449620	2014 <i>JJ</i> ₇₉		7 7.2 14°60	6.2°/ 5.2 17		
5 31	19 26.75	+ 5 10.8	4.628	5.330	8.4	23.5	5 31	19 31.84	−35 19.6	1.714	2.565	15.1	20.2
6 10	19 22.24	+ 5 33.7	4.530	5.323	7.4	23.4	6 10	19 28.15	−36 25.9	1.652	2.570	12.1	20.0
6 20	19 16.82	+ 5 47.1	4.454	5.315	6.4	23.4	6 20	19 21.66	−37 27.5	1.611	2.576	9.0	19.8
6 30	19 10.77	+ 5 49.9	4.403	5.306	5.5	23.3	6 30	19 13.07	−38 17.8	1.593	2.583	6.6	19.7
7 10	19 4.42	+ 5 41.8	4.379	5.297	5.2	23.3	7 10	19 3.56	−38 51.1	1.600	2.590	6.5	19.7
7 20	18 58.12	+ 5 23.0	4.383	5.288	5.5	23.3	7 20	18 54.44	−39 4.9	1.632	2.598	8.8	19.8
7 30	18 52.23	+ 4 54.4	4.413	5.277	6.3	23.3	7 30	18 46.98	−38 59.6	1.687	2.607	11.7	20.0
8 9	18 47.09	+ 4 17.7	4.469	5.266	7.4	23.4	8 9	18 42.11	−38 38.8	1.763	2.617	14.6	20.2
274569	2008 <i>SE</i> ₂₉₇		7 7.2 334°54	3.0°/ 8.6 17			358155	2006 <i>RF</i> ₇₂		7 7.2 187°08	5.0°/ 9.0 18		
5 31	19 27.94	−10 51.5	1.363	2.212	18.4	19.2	5 31	19 29.83	− 6 5.2	2.505	3.294	12.7	21.5
6 10	19 25.49	−11 43.8	1.277	2.198	14.7	19.0	6 10	19 25.34	− 5 46.2	2.419	3.294	10.5	21.4
6 20	19 20.19	−12 58.9	1.211	2.184	10.4	18.7	6 20	19 19.21	− 5 38.3	2.355	3.293	8.0	21.2
6 30	19 12.57	−14 35.4	1.166	2.171	5.6	18.4	6 30	19 11.90	− 5 42.7	2.316	3.292	5.9	21.1
7 10	19 3.64	−16 27.9	1.146	2.159	3.1	18.2	7 10	19 4.03	− 5 59.2	2.304	3.291	5.1	21.0
7 20	18 54.69	−18 28.3	1.151	2.148	7.1	18.4	7 20	18 56.31	− 6 26.8	2.319	3.289	6.3	21.1
7 30	18 47.14	−20 27.6	1.179	2.138	12.1	18.6	7 30	18 49.43	− 7 3.5	2.360	3.287	8.5	21.2
8 9	18 42.19	−22 18.6	1.230	2.130	16.6	18.9	8 9	18 43.99	− 7 46.6	2.426	3.285	11.0	21.4
79559	1998 <i>QQ</i> ₅₁		7 7.2 238°27	1.4°/ 6.9 18 R			357974	2006 <i>BU</i> ₁₄₉		7 7.2 116°83	4.1°/ 6.3 16		
5 31	19 36.79	−25 59.2	1.785	2.627	15.0	18.9	5 31	19 39.05	−29 17.7	1.409	2.263	17.6	21.0
6 10	19 31.68	−26 5.8	1.698	2.618	11.7	18.7	6 10	19 34.05	−30 5.0	1.345	2.270	13.7	20.8
6 20	19 23.87	−26 12.9	1.631	2.608	7.8	18.4	6 20	19 25.70	−30 52.2	1.301	2.278	9.4	20.6
6 30	19 14.00	−26 17.3	1.589	2.598	3.5	18.1	6 30	19 14.85	−31 32.5	1.280	2.285	5.3	20.4
7 10	19 3.13	−26 16.0	1.574	2.588	2.0	18.0	7 10	19 2.89	−31 59.9	1.284	2.291	4.5	20.3
7 20	18 52.49	−26 7.8	1.585	2.577	6.2	18.2	7 20	18 51.46	−32 11.1	1.313	2.298	8.2	20.6
7 30	18 43.32	−25 52.8	1.622	2.566	10.5								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
30078	2000 <i>EB</i> ₁₀₄		7 7.2 67°11' 8.2"/ 9.4 18				301861	1995 <i>SG</i> ₅₀		7 7.2 276°92' 1.2"/ 7.5 18			
5 31	19 31.80	— 2 5.3	1.910	2.697	16.2	18.4	5 31	19 30.77	—18 52.0	2.177	3.010	13.0	21.3
6 10	19 27.11	— 1 2.3	1.853	2.717	13.7	18.3	6 10	19 26.45	—18 49.9	2.090	3.005	10.1	21.1
6 20	19 20.43	— 0 15.2	1.816	2.737	11.1	18.2	6 20	19 20.15	—18 52.7	2.026	3.000	6.8	20.9
6 30	19 12.41	+ 0 12.7	1.802	2.757	8.9	18.1	6 30	19 12.39	—18 59.4	1.987	2.995	3.2	20.7
7 10	19 3.89	+ 0 20.2	1.812	2.777	8.2	18.1	7 10	19 3.95	—19 8.6	1.976	2.990	1.5	20.6
7 20	18 55.76	+ 0 8.2	1.847	2.797	9.1	18.2	7 20	18 55.69	—19 18.9	1.991	2.985	5.0	20.8
7 30	18 48.85	— 0 20.7	1.906	2.817	11.1	18.3	7 30	18 48.47	—19 29.3	2.034	2.981	8.5	21.0
8 9	18 43.81	— 1 2.3	1.988	2.837	13.4	18.5	8 9	18 43.01	—19 39.2	2.100	2.976	11.7	21.2
381708	2009 <i>PM</i> ₁₁		7 7.2 305°15' 1.1"/ 7.4 18				247090	2000 <i>SH</i> ₁₆₅		7 7.2 286°58' 3.7"/ 6.8 17			
5 31	19 31.36	—19 27.8	1.421	2.279	17.2	21.5	5 31	19 39.11	—31 8.1	1.406	2.260	17.6	19.9
6 10	19 28.25	—19 29.9	1.325	2.254	13.6	21.2	6 10	19 34.23	—31 13.4	1.330	2.255	13.9	19.7
6 20	19 22.10	—19 39.9	1.249	2.229	9.2	20.8	6 20	19 25.92	—31 13.9	1.274	2.250	9.6	19.4
6 30	19 13.46	—19 56.4	1.195	2.205	4.2	20.5	6 30	19 15.01	—31 4.6	1.240	2.245	5.2	19.2
7 10	19 3.39	—20 16.7	1.165	2.180	1.8	20.2	7 10	19 2.94	—30 41.6	1.230	2.240	4.1	19.1
7 20	18 53.24	—20 38.1	1.159	2.156	7.1	20.5	7 20	18 51.36	—30 4.2	1.245	2.235	8.0	19.3
7 30	18 44.55	—20 58.3	1.176	2.133	12.3	20.7	7 30	18 41.86	—29 15.3	1.284	2.230	12.5	19.5
8 9	18 38.56	—21 16.4	1.214	2.109	17.1	20.9	8 9	18 35.52	—28 19.8	1.344	2.225	16.7	19.8
471087	2009 <i>YJ</i> ₂₄		7 7.2 83°34' 2.1"/ 6.9 17				35103	1991 <i>RZ</i> ₁₄		7 7.2 239°91' 0.8"/ 7.4 18			
5 31	19 37.75	—28 41.5	1.803	2.643	14.9	21.2	5 31	19 31.48	—19 42.3	2.195	3.027	12.9	18.1
6 10	19 32.07	—28 37.4	1.738	2.657	11.5	21.0	6 10	19 27.01	—19 46.6	2.108	3.022	10.0	17.9
6 20	19 23.86	—28 30.6	1.695	2.670	7.7	20.8	6 20	19 20.52	—19 55.5	2.043	3.017	6.7	17.7
6 30	19 13.91	—28 18.0	1.676	2.683	3.7	20.6	6 30	19 12.56	—20 7.7	2.004	3.012	3.0	17.4
7 10	19 3.34	—27 57.9	1.684	2.696	2.5	20.6	7 10	19 3.89	—20 21.4	1.992	3.007	1.3	17.3
7 20	18 53.33	—27 30.1	1.719	2.710	6.0	20.8	7 20	18 55.40	—20 35.1	2.008	3.002	4.9	17.5
7 30	18 44.98	—26 56.3	1.780	2.723	9.8	21.1	7 30	18 47.95	—20 47.7	2.050	2.996	8.5	17.7
8 9	18 39.03	—26 19.0	1.864	2.735	13.2	21.3	8 9	18 42.27	—20 58.6	2.116	2.991	11.7	17.9
416614	2004 <i>RJ</i> ₇₀		7 7.2 302°21' 4.5"/ 6.3 17				368662	2005 <i>GX</i> ₈₁		7 7.2 66°49' 2.0"/ 6.8 17			
5 31	19 34.40	—29 18.5	1.234	2.104	18.6	21.0	5 31	19 36.82	—25 32.0	1.357	2.215	17.9	21.4
6 10	19 31.41	—29 57.1	1.146	2.080	14.8	20.7	6 10	19 32.13	—25 57.5	1.300	2.230	13.8	21.2
6 20	19 24.67	—30 37.5	1.075	2.056	10.3	20.4	6 20	19 24.31	—26 25.1	1.263	2.244	9.1	21.0
6 30	19 14.72	—31 12.8	1.026	2.032	5.8	20.1	6 30	19 14.23	—26 50.2	1.249	2.258	4.2	20.7
7 10	19 2.90	—31 35.7	0.999	2.008	5.0	19.9	7 10	19 3.28	—27 8.4	1.259	2.273	2.6	20.7
7 20	18 51.04	—31 41.4	0.995	1.985	9.4	20.1	7 20	18 52.95	—27 17.1	1.295	2.288	7.2	21.0
7 30	18 41.14	—31 29.1	1.013	1.962	14.7	20.3	7 30	18 44.64	—27 16.4	1.353	2.303	11.7	21.3
8 9	18 34.72	—31 2.5	1.049	1.940	19.5	20.5	8 9	18 39.27	—27 8.3	1.433	2.317	15.6	21.6
314476	2005 <i>WC</i> ₉₄		7 7.2 267°49' 0.6"/ 7.4 18				40699	1999 <i>RB</i> ₂₃₅		7 7.2 124°27' 5.4"/ 9.4 18			
5 31	19 30.83	—20 29.5	2.451	3.280	11.8	21.2	5 31	19 31.59	— 5 55.7	2.005	2.805	15.1	18.7
6 10	19 26.37	—20 30.3	2.351	3.264	9.2	21.0	6 10	19 27.08	— 5 55.3	1.930	2.812	12.4	18.5
6 20	19 20.05	—20 34.5	2.274	3.248	6.1	20.8	6 20	19 20.54	— 6 10.1	1.876	2.820	9.4	18.3
6 30	19 12.34	—20 40.9	2.223	3.232	2.7	20.6	6 30	19 12.55	— 6 40.6	1.845	2.827	6.6	18.2
7 10	19 3.92	—20 48.2	2.200	3.215	1.1	20.4	7 10	19 3.91	— 7 25.7	1.841	2.834	5.4	18.1
7 20	18 55.58	—20 55.1	2.205	3.198	4.6	20.6	7 20	18 55.49	— 8 22.6	1.863	2.841	6.9	18.2
7 30	18 48.13	—21 0.9	2.237	3.181	8.0	20.8	7 30	18 48.18	— 9 27.5	1.911	2.848	9.6	18.4
8 9	18 42.27	—21 5.3	2.294	3.164	11.1	21.0	8 9	18 42.69	—10 36.3	1.984	2.854	12.5	18.6
333294	2000 <i>QW</i> ₂₁₅		7 7.2 304°05' 4.3"/ 6.1 18				203041	2000 <i>DE</i> ₃₆		7 7.2 65°70' 2.9"/ 7.9 17			
5 31	19 34.00	—30 11.0	1.555	2.411	16.1	20.5	5 31	19 34.71	—15 30.4	1.233	2.088	19.5	20.5
6 10	19 30.42	—30 50.9	1.455	2.382	12.8	20.3	6 10	19 30.64	—15 29.8	1.173	2.098	15.3	20.3
6 20	19 23.64	—31 31.6	1.375	2.352	9.0	20.0	6 20	19 23.43	—15 41.8	1.132	2.108	10.5	20.1
6 30	19 14.18	—32 7.3	1.318	2.322	5.3	19.7	6 30	19 13.90	—16 5.4	1.112	2.118	5.4	19.8
7 10	19 3.13	—32 31.8	1.286	2.292	4.8	19.6	7 10	19 3.40	—16 37.4	1.115	2.128	3.1	19.7
7 20	18 51.97	—32 40.9	1.278	2.263	8.4	19.7	7 20	18 53.41	—17 14.2	1.143	2.139	7.4	20.0
7 30	18 42.33	—32 33.8	1.293	2.234	12.9	19.9	7 30	18 45.36	—17 52.3	1.193	2.149	12.2	20.3
8 9	18 35.54	—32 12.9	1.329	2.205	17.1	20.0	8 9	18 40.23	—18 29.2	1.264	2.160	16.5	20.6
129375	6350 <i>P-L</i>		7 7.2 209°96' 1.7"/ 7.7 18				354792	2005 <i>UZ</i> ₃₂₁		7 7.2 49°08' 1.0"/ 7.4 17			
5 31	19 34.34	—17 15.2	2.264	3.084	13.0	21.3	5 31	19 36.01	—20 58.6	1.204	2.068	19.4	20.7
6 10	19 29.12	—17 11.7	2.171	3.077	10.2	21.1	6 10	19 31.84	—20 44.3	1.142	2.073	15.1	20.4
6 20	19 21.88	—17 13.9	2.101	3.070	6.9	20.9	6 20	19 24.32	—20 35.5	1.097	2.078	10.0	20.1
6 30	19 13.13	—17 20.8	2.056	3.062	3.4	20.6	6 30	19 14.31	—20 30.4	1.074	2.084	4.5	19.8
7 10	19 3.64	—17 31.2	2.040	3.053	1.9	20.5	7 10	19 3.25	—20 26.9	1.074	2.089	1.9	19.7
7 20	18 54.28	—17 43.8	2.052	3.044	5.1	20.7	7 20	18 52.76	—20 23.5	1.098	2.095	7.4	20.0
7 30	18 45.95	—17 57.4	2.091	3.034	8.6	20.9	7 30	18 44.35	—20 19.9	1.144	2.101	12.6	20.4
8 9	18 39.37	—18 11.3	2.155	3.023	11.8	21.1	8 9	18 39.05	—20 16.1	1.211	2.108	17.0	20.6
328440	2008 <i>TT</i> ₃₄		7 7.2 208°69' 3.4"/ 5.9 18				128481	2004 <i>PE</i> ₆		7 7.2 256°74' 3.9"/ 8.1 18			
5 31	19 31.47	—34 5.4	3.029	3.852	9.9	21.5	5 31	19 32.93	—12 28.7	2.002	2.821	14.5	20.7
6 10	19 26.59	—34 34.1	2.945	3.849	7.9	21.3	6 10	19 28.38	—12 7.2	1.903	2.804	11.6	20.4
6 20	19 20.04	—34 59.4	2.884	3.847	5.6	21.2	6 20	19 21.61	—11 54.4	1.824	2.786	8.4	20.2
6 30	19 12.28	—35 18.3	2.850	3.844	3.8	21.1	6 30	19 13.11	—11 51.2	1.771	2.767	5.2	20.0
7 10	19 3.98	—35 28.6	2.845	3.840	3.6	21.0	7 10	19 3.69	—11 57.4	1.743	2.749	4.0	19.9
7 20	18 55.85	—35 29.0	2.867	3.837	5.2	21.1	7 20	18 54.30	—12 12.1	1.743	2.729	6.4	20.0
7 30	18 48.62	—35 19.9	2.916	3.834	7.5	21.3	7 30	18 45.96	—12 33.7	1.769	2.710	10.0	20.1
8 9	18 42.88	—35 2.4	2.990	3.830	9.6	21.4	8 9	18 39.50	—13 0.2	1.818	2.690	13.4	20.3
509794	2008 <i>UX</i> ₂₅₄		7 7.2 301°60' 3.2"/ 6.3 18				185941	2000 <i>WD</i> ₁₄₈		7 7.2 231°80' 0.8"/ 6.9 18			
5 31	19 32.95	—27 52.2	1.642	2.497	15.5	21.5	5 31	19 31.01	—23 11.5	2.579	3.408	11.3	21.0
6 10	19 29.26	—28 32.8	1.549	2.475	12.2	21.2	6 10	19 26.45	—23 41.7	2.486	3.401	8.7	20.8
6 20	19 22.65	—29 15.8	1.476	2.454	8.3	21.0	6 20	19 20.09	—24 15.2	2.418	3.393	5.7	20.6
6 30	19 13.68	—29 56.3	1.426	2.432	4.5	20.7	6 30	19 12.38	—24 49.4	2.376	3.385	2.5	20.4
7 10	19 3.39	—30 28.9	1.402	2.411	3.7	20.6	7 10	19 4.00	—25 21.8	2.362	3.376	1.3	20.3
7 20	18 53.11	—30 49.9	1.403	2.390	7.5	20.8	7 20	18 55.71	—25 50.2	2.377	3.368	4.5	20.5
7 30	18 44.26	—30 57.8	1.427										

EPHEMERIDES

7 7.2

7 7.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
295028	2008 <i>ED</i> ₇₇		7 7.2 159°11	4°3/ 8.9 18			398296	2010 <i>VD</i> ₁₆₈		7 7.2 337°73	3°6/ 7.9 18		
5 31	19 29.45	— 7 26.7	2.595	3.388	12.2	21.5	5 31	19 29.16	—13 40.9	2.055	2.883	13.8	20.7
6 10	19 25.00	— 7 17.3	2.512	3.392	10.0	21.3	6 10	19 25.28	—13 9.8	1.970	2.877	11.0	20.5
6 20	19 18.99	— 7 18.3	2.452	3.396	7.5	21.1	6 20	19 19.43	—12 45.9	1.907	2.871	7.8	20.2
6 30	19 11.85	— 7 30.4	2.417	3.399	5.2	21.0	6 30	19 12.13	—12 30.2	1.868	2.866	4.8	20.1
7 10	19 4.22	— 7 53.0	2.409	3.402	4.4	21.0	7 10	19 4.15	—12 22.7	1.855	2.861	3.7	20.0
7 20	18 56.74	— 8 24.6	2.429	3.405	5.6	21.0	7 20	18 56.37	—12 22.9	1.869	2.857	6.0	20.1
7 30	18 50.08	— 9 3.4	2.476	3.408	8.0	21.2	7 30	18 49.64	—12 29.9	1.909	2.853	9.2	20.3
8 9	18 44.82	— 9 46.8	2.548	3.410	10.4	21.4	8 9	18 44.66	—12 42.1	1.972	2.849	12.3	20.5
314161	2005 <i>FY</i> ₇		7 7.2 55°21	2°9/ 6.2 17			206574	2003 <i>VC</i>		7 7.2 190°28	4°3/ 5.9 17		
5 31	19 35.96	—23 29.3	1.263	2.126	18.7	19.7	5 31	19 35.84	—33 5.3	2.152	2.985	13.1	21.1
6 10	19 31.73	—24 53.5	1.213	2.145	14.3	19.5	6 10	19 30.67	—33 48.7	2.074	2.985	10.3	20.9
6 20	19 24.21	—26 25.0	1.183	2.165	9.4	19.3	6 20	19 23.09	—34 29.0	2.018	2.984	7.4	20.7
6 30	19 14.26	—27 55.8	1.176	2.185	4.5	19.0	6 30	19 13.73	—35 1.5	1.987	2.983	4.8	20.6
7 10	19 3.30	—29 17.2	1.193	2.205	3.6	19.0	7 10	19 3.54	—35 22.2	1.983	2.981	4.6	20.6
7 20	18 52.92	—30 22.8	1.235	2.225	7.9	19.4	7 20	18 53.60	—35 28.9	2.007	2.980	6.9	20.7
7 30	18 44.62	—31 10.3	1.301	2.246	12.4	19.7	7 30	18 44.98	—35 22.0	2.056	2.978	9.8	20.9
8 9	18 39.40	—31 41.1	1.387	2.267	16.3	20.0	8 9	18 38.53	—35 3.8	2.128	2.976	12.7	21.1
126878	2002 <i>ES</i> ₉₁		7 7.2 73°90	1°8/ 7.6 17			183218	2002 <i>TK</i> ₃₇		7 7.2 263°80	4°3/ 8.2 18		
5 31	19 34.33	—18 16.4	1.720	2.559	15.6	19.6	5 31	19 32.91	—12 30.1	1.672	2.503	16.3	20.7
6 10	19 29.43	—18 3.8	1.658	2.575	12.1	19.4	6 10	19 28.74	—12 7.8	1.584	2.491	13.1	20.4
6 20	19 22.16	—17 57.3	1.617	2.591	8.1	19.2	6 20	19 22.03	—11 56.1	1.515	2.480	9.5	20.2
6 30	19 13.24	—17 56.0	1.600	2.607	3.9	19.0	6 30	19 13.35	—11 56.0	1.470	2.468	5.8	20.0
7 10	19 3.71	—17 58.5	1.610	2.624	2.1	18.9	7 10	19 3.66	—12 7.2	1.449	2.456	4.4	19.8
7 20	18 54.65	—18 3.5	1.646	2.640	5.8	19.2	7 20	18 54.08	—12 28.3	1.455	2.444	7.1	20.0
7 30	18 47.07	—18 10.0	1.707	2.656	9.7	19.4	7 30	18 45.78	—12 57.0	1.485	2.431	11.1	20.2
8 9	18 41.71	—18 17.3	1.791	2.672	13.2	19.7	8 9	18 39.72	—13 30.7	1.537	2.419	14.9	20.4
440423	2005 <i>RB</i> ₁₅		7 7.2 232°27	1°4/ 6.8 18			503355	2016 <i>BH</i> ₇₅		7 7.2 68°27	2°7/ 6.6 17		
5 31	19 32.45	—26 12.8	2.513	3.344	11.5	21.9	5 31	19 37.84	—25 20.6	1.246	2.108	18.9	21.2
6 10	19 27.60	—26 28.5	2.421	3.336	8.9	21.7	6 10	19 33.18	—26 8.7	1.195	2.126	14.6	20.9
6 20	19 20.85	—26 44.5	2.353	3.327	5.9	21.5	6 20	19 25.14	—27 0.5	1.163	2.144	9.6	20.7
6 30	19 12.70	—26 58.7	2.311	3.319	2.8	21.3	6 30	19 14.66	—27 49.5	1.154	2.163	4.6	20.5
7 10	19 3.89	—27 8.7	2.297	3.310	1.8	21.2	7 10	19 3.23	—28 29.3	1.168	2.181	3.3	20.5
7 20	18 55.22	—27 13.2	2.311	3.300	4.8	21.4	7 20	18 52.49	—28 56.2	1.207	2.199	7.8	20.8
7 30	18 47.52	—27 11.8	2.352	3.291	8.0	21.6	7 30	18 43.97	—29 9.8	1.269	2.217	12.4	21.1
8 9	18 41.48	—27 5.2	2.418	3.281	10.8	21.8	8 9	18 38.61	—29 12.0	1.352	2.236	16.4	21.4
125812	2001 <i>XD</i> ₁₆₃		7 7.2 141°60	0°4/ 7.1 18			354755	2005 <i>TV</i> ₁₆₃		7 7.2 92°63	4°8/ 5.8 18		
5 31	19 33.87	—21 37.5	1.775	2.618	15.0	20.5	5 31	19 34.61	—35 37.7	2.281	3.111	12.6	20.6
6 10	19 29.32	—22 4.5	1.699	2.620	11.6	20.3	6 10	19 29.59	—36 19.3	2.208	3.115	10.0	20.4
6 20	19 22.28	—22 37.0	1.644	2.622	7.6	20.0	6 20	19 22.29	—36 55.9	2.158	3.118	7.3	20.3
6 30	19 13.38	—23 12.0	1.615	2.624	3.3	19.8	6 30	19 13.36	—37 23.1	2.133	3.122	5.2	20.1
7 10	19 3.62	—23 45.9	1.611	2.626	1.4	19.6	7 10	19 3.70	—37 37.2	2.135	3.126	5.0	20.1
7 20	18 54.12	—24 15.7	1.634	2.628	5.8	19.9	7 20	18 54.35	—37 36.7	2.163	3.129	6.9	20.3
7 30	18 46.01	—24 39.7	1.683	2.630	10.0	20.2	7 30	18 46.30	—37 22.3	2.217	3.133	9.5	20.4
8 9	18 40.15	—24 57.6	1.754	2.632	13.6	20.4	8 9	18 40.33	—36 56.6	2.294	3.137	12.1	20.6
308438	2005 <i>SG</i> ₁₇₆		7 7.2 146°30	4°4/ 8.6 18			17502	Manabeseiji		7 7.2 67°58	3°5/ 6.5 18		
5 31	19 29.78	— 8 36.4	2.559	3.357	12.3	21.3	5 31	19 37.81	—28 5.6	1.304	2.165	18.4	18.1
6 10	19 25.26	— 8 10.6	2.479	3.362	9.9	21.1	6 10	19 33.16	—28 44.5	1.248	2.178	14.2	17.9
6 20	19 19.15	— 7 53.8	2.421	3.367	7.5	21.0	6 20	19 25.13	—29 23.7	1.212	2.191	9.6	17.6
6 30	19 11.92	— 7 47.2	2.388	3.372	5.2	20.9	6 30	19 14.66	—29 57.0	1.198	2.204	5.0	17.4
7 10	19 4.21	— 7 50.6	2.383	3.376	4.4	20.8	7 10	19 3.22	—30 18.7	1.208	2.218	4.0	17.4
7 20	18 56.68	— 8 3.4	2.405	3.380	5.8	20.9	7 20	18 52.44	—30 26.3	1.242	2.232	8.0	17.7
7 30	18 50.02	— 8 24.0	2.454	3.384	8.1	21.1	7 30	18 43.82	—30 20.4	1.300	2.245	12.4	18.0
8 9	18 44.77	— 8 50.6	2.528	3.388	10.5	21.2	8 9	18 38.35	—30 4.2	1.378	2.259	16.3	18.2
111095	2001 <i>VC</i> ₆₇		7 7.2 238°94	2°2/ 7.7 18			200197	1999 <i>RA</i> ₂₀₃		7 7.2 296°23	0°3/ 7.2 18		
5 31	19 31.99	—16 40.3	2.407	3.228	12.3	20.2	5 31	19 35.43	—25 5.4	1.720	2.566	15.3	19.9
6 10	19 27.18	—16 15.2	2.313	3.219	9.7	20.0	6 10	19 30.83	—24 41.2	1.623	2.546	12.0	19.6
6 20	19 20.54	—15 54.4	2.242	3.210	6.7	19.8	6 20	19 23.47	—24 15.5	1.548	2.526	8.0	19.3
6 30	19 12.56	—15 38.1	2.197	3.200	3.6	19.6	6 30	19 13.99	—23 46.8	1.496	2.506	3.5	19.0
7 10	19 3.95	—15 25.9	2.180	3.191	2.4	19.5	7 10	19 3.43	—23 13.6	1.470	2.486	1.4	18.8
7 20	18 55.49	—15 17.7	2.191	3.181	5.0	19.6	7 20	18 53.03	—22 36.2	1.471	2.466	6.2	19.1
7 30	18 47.97	—15 12.9	2.229	3.171	8.2	19.8	7 30	18 44.07	—21 56.2	1.497	2.447	10.8	19.3
8 9	18 42.04	—15 11.2	2.292	3.160	11.2	20.0	8 9	18 37.54	—21 15.7	1.546	2.427	14.9	19.5
309712	2008 <i>GL</i> ₆₁		7 7.2 181°64	8°9/ 2.4 18			225836	2001 <i>XE</i> ₈₇		7 7.2 246°59	0°9/ 6.8 18		
5 31	19 43.19	—51 39.1	2.827	3.594	11.9	21.8	5 31	19 34.44	—21 13.8	1.927	2.763	14.3	20.1
6 10	19 36.69	—53 8.2	2.762	3.595	10.6	21.7	6 10	19 29.84	—22 8.7	1.834	2.751	11.1	19.9
6 20	19 27.29	—54 26.1	2.719	3.595	9.4	21.6	6 20	19 22.76	—23 11.7	1.762	2.739	7.3	19.7
6 30	19 15.61	—55 25.9	2.700	3.595	8.9	21.5	6 30	19 13.69	—24 19.1	1.717	2.726	3.2	19.4
7 10	19 2.74	—56 2.9	2.706	3.594	9.1	21.5	7 10	19 3.53	—25 25.9	1.699	2.713	1.7	19.2
7 20	18 50.02	—56 15.0	2.736	3.593	10.0	21.6	7 20	18 53.36	—26 27.4	1.708	2.700	5.9	19.5
7 30	18 38.80	—56 3.5	2.789	3.592	11.3	21.7	7 30	18 44.33	—27 20.4	1.744	2.686	10.0	19.7
8 9	18 30.14	—55 32.6	2.862	3.590	12.6	21.8	8 9	18 37.43	—28 3.7	1.804	2.672	13.7	19.9
154900	2004 <i>RM</i> ₂₄₁		7 7.2 147°35	0°2/ 7.3 18			208412	2001 <i>SF</i> ₂₅₁		7 7.2 344°49	3°5/ 8.2 18		
5 31	19 30.70	—21 10.0	2.686	3.512	11.0	21.3	5 31	19 29.01	—13 16.4	1.782	2.618	15.3	19.2
6 10	19 25.98	—21 18.8	2.606	3.517	8.5	21.1	6 10	19 25.50	—13 4.6	1.701	2.613	12.2	19.0
6 20	19 19.63	—21 30.5	2.549	3.523	5.6	20.9	6 20	19 19.74	—13 3.1	1.640	2.608	8.6	18.7
6 30	19 12.14	—21 43.6	2.519	3.528	2.4	20.7	6 30	19 12.32	—13 12.2	1.604	2.604	5.1	18.5
7 10	19 4.14	—21 56.7	2.517	3.532	0.9	20.6	7 10	19 4.10	—13 30.7	1.592	2.600	3.6	18.4
7 20	18 56.35	—22 8.5	2.544	3.537	4.1	20.8	7 20	18 56.07	—13 57.0	1.606	2.597	6.3	18.6
7 30	18 49.44	—22 18.2	2.598	3.541	7.1	21.0	7 30	18					

EPHEMERIDES

7 7.2

7 7.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
298083	2002 QY ₁₃₉	7 7.2 330°30	2°7/ 7.9 16				344053	5478 T-2	7 7.2 292°99	5°1/ 7.9 18			
5 31	19 30.13	-15 35.9	1.703	2.545	15.6	20.6	5 31	19 31.76	-11 54.7	1.777	2.604	15.7	20.4
6 10	19 26.51	-15 28.0	1.621	2.538	12.3	20.4	6 10	19 27.76	-11 7.3	1.682	2.586	12.7	20.1
6 20	19 20.50	-15 29.0	1.559	2.532	8.5	20.2	6 20	19 21.35	-10 28.2	1.606	2.567	9.4	19.9
6 30	19 12.67	-15 38.7	1.520	2.525	4.5	19.9	6 30	19 13.09	-9 59.1	1.555	2.548	6.2	19.7
7 10	19 3.96	-15 55.6	1.507	2.519	2.9	19.8	7 10	19 3.84	-9 41.6	1.528	2.529	5.2	19.6
7 20	18 55.44	-16 18.0	1.520	2.514	6.2	20.0	7 20	18 54.65	-9 35.9	1.527	2.511	7.5	19.7
7 30	18 48.19	-16 43.6	1.557	2.508	10.3	20.2	7 30	18 46.63	-9 41.2	1.551	2.492	11.1	19.8
8 9	18 43.09	-17 10.5	1.616	2.504	14.0	20.4	8 9	18 40.67	-9 55.6	1.597	2.474	14.7	20.0
87572	2000 RF ₁₄	7 7.2 107°47	2°3/ 6.9 18				395639	2011 WG ₂₆	7 7.2 180°40	0°9/ 7.5 18			
5 31	19 39.44	-29 34.5	1.815	2.652	15.0	19.2	5 31	19 30.91	-19 0.1	2.242	3.074	12.7	21.6
6 10	19 33.44	-29 27.6	1.746	2.663	11.6	19.0	6 10	19 26.50	-19 5.1	2.160	3.074	9.9	21.5
6 20	19 24.83	-29 17.1	1.699	2.673	7.8	18.8	6 20	19 20.18	-19 15.2	2.100	3.074	6.6	21.2
6 30	19 14.42	-28 59.8	1.677	2.683	3.9	18.6	6 30	19 12.46	-19 29.0	2.066	3.074	3.0	21.0
7 10	19 3.35	-28 33.7	1.681	2.693	2.7	18.6	7 10	19 4.11	-19 44.8	2.059	3.074	1.3	20.9
7 20	18 52.84	-27 59.2	1.713	2.703	6.2	18.8	7 20	18 55.95	-20 1.1	2.079	3.074	4.8	21.1
7 30	18 44.02	-27 18.1	1.771	2.712	10.0	19.1	7 30	18 48.83	-20 16.8	2.127	3.073	8.2	21.4
8 9	18 37.68	-26 33.6	1.852	2.722	13.3	19.3	8 9	18 43.41	-20 30.9	2.199	3.073	11.3	21.5
352148	Tarcisiozani	7 7.2 326°40	0°3/ 7.3 18				177281	2003 WE ₁₄₉	7 7.2 278°50	0°1/ 7.2 17			
5 31	19 29.17	-22 37.5	1.373	2.241	17.2	20.0	5 31	19 35.16	-22 30.4	1.540	2.391	16.5	20.9
6 10	19 26.67	-22 23.7	1.279	2.214	13.5	19.7	6 10	19 30.99	-22 33.0	1.447	2.372	13.0	20.6
6 20	19 21.13	-22 12.4	1.205	2.188	9.1	19.4	6 20	19 23.82	-22 39.7	1.374	2.353	8.7	20.3
6 30	19 13.12	-22 2.4	1.152	2.162	4.0	19.0	6 30	19 14.25	-22 48.0	1.324	2.334	3.8	20.0
7 10	19 3.75	-21 51.7	1.122	2.138	1.5	18.8	7 10	19 3.38	-22 55.0	1.299	2.315	1.5	19.8
7 20	18 54.40	-21 39.2	1.116	2.115	7.1	19.1	7 20	18 52.56	-22 58.6	1.300	2.296	6.7	20.1
7 30	18 46.60	-21 24.9	1.133	2.093	12.4	19.3	7 30	18 43.24	-22 58.0	1.325	2.276	11.7	20.3
8 9	18 41.54	-21 9.5	1.170	2.072	17.1	19.5	8 9	18 36.58	-22 53.9	1.371	2.257	16.1	20.5
470908	2009 DB ₄₄	7 7.2 195°67	0°5/ 7.4 16				43320	2000 JG ₄₄	7 7.2 235°65	0°9/ 6.9 18			
5 31	19 32.25	-20 37.0	2.068	2.904	13.5	22.0	5 31	19 35.09	-23 31.2	1.830	2.672	14.7	19.9
6 10	19 27.70	-20 41.6	1.987	2.904	10.4	21.8	6 10	19 30.36	-23 52.7	1.744	2.664	11.4	19.6
6 20	19 21.05	-20 50.4	1.928	2.903	6.9	21.6	6 20	19 23.07	-24 18.1	1.678	2.655	7.6	19.4
6 30	19 12.84	-21 1.8	1.894	2.903	3.0	21.3	6 30	19 13.82	-24 44.0	1.637	2.647	3.3	19.1
7 10	19 3.93	-21 13.9	1.887	2.902	1.2	21.2	7 10	19 3.57	-25 7.1	1.623	2.638	1.7	19.0
7 20	18 55.25	-21 25.1	1.907	2.901	5.1	21.4	7 20	18 53.49	-25 24.8	1.636	2.629	6.0	19.2
7 30	18 47.72	-21 34.5	1.954	2.901	8.8	21.7	7 30	18 44.74	-25 36.1	1.674	2.619	10.2	19.5
8 9	18 42.08	-21 41.7	2.024	2.900	12.1	21.9	8 9	18 38.26	-25 41.3	1.735	2.610	13.9	19.7
439681	2014 JH ₂₆	7 7.2 326°28	5°2/ 8.9 18				64983	2002 AX ₄₀	7 7.3 306°79	2°8/ 7.8 18			
5 31	19 28.02	-7 50.0	2.050	2.863	14.4	21.1	5 31	19 31.08	-16 14.4	1.239	2.102	19.0	18.8
6 10	19 24.44	-7 33.7	1.964	2.855	11.8	20.9	6 10	19 28.34	-16 8.9	1.153	2.083	15.2	18.5
6 20	19 18.92	-7 30.0	1.897	2.848	8.9	20.7	6 20	19 22.36	-16 15.2	1.086	2.064	10.5	18.2
6 30	19 11.95	-7 40.0	1.855	2.840	6.2	20.5	6 30	19 13.71	-16 33.2	1.039	2.046	5.4	17.9
7 10	19 4.26	-8 3.6	1.838	2.833	5.2	20.4	7 10	19 3.57	-17 0.9	1.015	2.028	3.1	17.7
7 20	18 56.70	-8 39.2	1.847	2.827	6.7	20.5	7 20	18 53.44	-17 35.1	1.014	2.011	7.8	17.9
7 30	18 50.13	-9 24.2	1.881	2.821	9.6	20.7	7 30	18 44.95	-18 12.4	1.035	1.994	13.2	18.1
8 9	18 45.25	-10 15.1	1.939	2.815	12.6	20.8	8 9	18 39.41	-18 49.8	1.075	1.978	18.2	18.4
519435	2011 UL ₄₁₇	7 7.2 195°17	0°2/ 7.3 18				498428	2008 AY ₆₆	7 7.3 232°44	0°6/ 7.4 17			
5 31	19 31.29	-21 14.3	2.619	3.445	11.2	22.8	5 31	19 36.05	-19 11.0	1.877	2.708	14.8	22.8
6 10	19 26.54	-21 22.9	2.531	3.443	8.7	22.6	6 10	19 31.07	-19 32.2	1.782	2.696	11.6	22.5
6 20	19 20.08	-21 34.6	2.467	3.441	5.7	22.4	6 20	19 23.56	-20 0.9	1.708	2.683	7.7	22.3
6 30	19 12.38	-21 47.8	2.429	3.438	2.5	22.2	6 30	19 14.06	-20 34.8	1.660	2.669	3.4	22.0
7 10	19 4.11	-22 0.9	2.420	3.436	0.9	22.0	7 10	19 3.48	-21 10.7	1.638	2.654	1.3	21.8
7 20	18 56.00	-22 12.6	2.439	3.433	4.3	22.3	7 20	18 52.94	-21 45.6	1.645	2.639	5.8	22.0
7 30	18 48.78	-22 22.1	2.487	3.429	7.4	22.5	7 30	18 43.61	-22 17.2	1.677	2.623	10.1	22.3
8 9	18 43.07	-22 29.2	2.559	3.426	10.2	22.7	8 9	18 36.45	-22 44.4	1.733	2.606	13.9	22.5
73650	1981 DN	7 7.2 101°40	1°6/ 6.9 17				478626	2012 TJ ₁₇₅	7 7.3 286°25	8°8/ 9.1 18			
5 31	19 40.10	-26 38.8	1.753	2.590	15.4	19.8	5 31	19 30.27	-1 28.9	1.855	2.645	16.5	22.1
6 10	19 33.88	-26 43.6	1.694	2.611	11.9	19.6	6 10	19 26.51	-0 34.5	1.759	2.625	14.2	21.9
6 20	19 25.08	-26 47.7	1.656	2.632	7.8	19.5	6 20	19 20.50	+0 4.4	1.682	2.604	11.7	21.7
6 30	19 14.51	-26 47.9	1.644	2.652	3.6	19.2	6 30	19 12.73	+0 23.7	1.627	2.584	9.6	21.6
7 10	19 3.35	-26 41.7	1.658	2.672	2.1	19.2	7 10	19 4.00	+0 21.0	1.596	2.563	8.9	21.5
7 20	18 52.81	-26 28.5	1.700	2.691	6.0	19.5	7 20	18 55.25	-0 4.1	1.589	2.543	10.0	21.5
7 30	18 44.00	-26 9.3	1.768	2.710	9.9	19.7	7 30	18 47.52	-0 49.2	1.605	2.522	12.4	21.6
8 9	18 37.67	-25 46.2	1.858	2.728	13.3	20.0	8 9	18 41.70	-1 49.9	1.643	2.502	15.3	21.7
2682	Soromundi	7 7.2 340°33	2°3/ 7.9 18				251467	2008 CF ₂₁₃	7 7.3 195°62	4°3/ 8.5 18			
5 31	19 27.06	-15 55.3	1.071	1.949	20.2	15.9	5 31	19 29.95	-9 34.0	2.371	3.176	12.9	20.5
6 10	19 25.49	-16 11.0	0.999	1.937	16.0	15.6	6 10	19 25.60	-9 10.7	2.286	3.175	10.4	20.4
6 20	19 20.56	-16 42.9	0.943	1.926	11.0	15.3	6 20	19 19.51	-8 56.8	2.223	3.174	7.7	20.2
6 30	19 12.93	-17 29.7	0.907	1.916	5.4	14.9	6 30	19 12.17	-8 53.1	2.186	3.173	5.3	20.0
7 10	19 3.85	-18 27.4	0.893	1.908	2.7	14.7	7 10	19 4.26	-8 59.6	2.175	3.172	4.3	20.0
7 20	18 54.95	-19 30.1	0.900	1.900	7.9	15.0	7 20	18 56.51	-9 15.4	2.191	3.171	5.9	20.1
7 30	18 47.90	-20 32.0	0.929	1.894	13.5	15.3	7 30	18 49.67	-9 38.9	2.234	3.169	8.5	20.2
8 9	18 44.00	-21 28.6	0.975	1.890	18.6	15.6	8 9	18 44.36	-10 7.9	2.301	3.167	11.2	20.4
386379	2008 UJ ₄₁	7 7.2 229°44	0°1/ 7.3 16				377733	2005 XQ ₁₅	7 7.3 224°52	1°0/ 7.5 17			
5 31	19 33.70	-21 37.2	2.094	2.928	13.4	22.6	5 31	19 33.83	-19 36.8	1.779	2.619	15.1	21.8
6 10	19 28.89	-21 44.0	2.005	2.920	10.4	22.4	6 10	19 29.29	-19 36.6	1.698	2.617	11.8	21.6
6 20	19 21.89	-21 54.5	1.937	2.913	6.9	22.2	6 20	19 22.29	-19 42.1	1.638	2.614	7.9	21.3
6 30	19 13.23	-22 6.6	1.895	2.905	3.0	21.9	6 30	19 13.46	-19 51.5	1.603	2.611	3.6	21.0
7 10	19 3.78	-22 18.4	1.881	2.896	1.1	21.7	7 10	19 3.77	-20 3.0	1.593	2.609	1.5	20.9
7 20	18 54.49	-22 28.1	1.894	2.888	5.2	22.0	7 20	18 54.32	-20 14.8	1.611	2.606	5.8	21.2
7 30	18 46.33	-22 34.9	1.933	2.879	9.0	22.2	7 30	18 46.21	-20 25.6	1.653	2.603	10.0	21.4
8 9	18 40.11	-22 38.9	1.997	2.869	12.4	22.4	8 9	18 40.32	-20 34.9	1.719	2.600	13.6	21.6

EPHEMERIDES

7 7.3

7 7.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
254174	2004 <i>RG</i> ₃		7 7.3 356°76	8°7/ 7.3 18			142394	2002 <i>SK</i> ₁₈		7 7.3 261°64	0°3/ 7.2 18		
5 31	19 32.99	− 4 8.2	1.979	2.769	15.6	19.5	5 31	19 34.24	−20 38.0	1.669	2.514	15.7	19.7
6 10	19 28.20	− 2 15.4	1.901	2.768	13.3	19.4	6 10	19 30.03	−21 13.4	1.580	2.502	12.3	19.4
6 20	19 21.34	− 0 32.5	1.845	2.766	10.9	19.2	6 20	19 23.07	−21 57.1	1.511	2.489	8.2	19.1
6 30	19 12.98	+ 0 55.2	1.813	2.765	9.2	19.1	6 30	19 13.94	−22 45.9	1.467	2.477	3.5	18.8
7 10	19 3.96	+ 2 3.7	1.807	2.764	8.8	19.1	7 10	19 3.62	−23 35.3	1.448	2.464	1.4	18.7
7 20	18 55.17	+ 2 50.5	1.826	2.764	10.0	19.2	7 20	18 53.35	−24 21.0	1.456	2.451	6.3	18.9
7 30	18 47.52	+ 3 15.6	1.869	2.765	12.1	19.3	7 30	18 44.43	−25 0.3	1.489	2.437	10.9	19.2
8 9	18 41.71	+ 3 21.5	1.934	2.765	14.4	19.5	8 9	18 37.91	−25 32.0	1.544	2.424	15.0	19.4
186977	2004 <i>RT</i> ₂₂₆		7 7.3 277°20	5°1/ 8.9 18			218435	2004 <i>RM</i> ₁₈₃		7 7.3 348°98	11°8/ 4.9 18		
5 31	19 28.37	− 6 45.0	2.422	3.220	12.9	19.9	5 31	19 39.75	−50 55.8	1.725	2.533	16.8	19.0
6 10	19 24.42	− 6 23.3	2.329	3.210	10.6	19.7	6 10	19 35.26	−51 58.0	1.659	2.525	14.9	18.8
6 20	19 18.78	− 6 12.6	2.258	3.200	8.1	19.6	6 20	19 26.89	−52 43.3	1.611	2.518	13.1	18.7
6 30	19 11.88	− 6 14.2	2.211	3.190	5.9	19.4	6 30	19 15.59	−53 2.5	1.583	2.511	12.0	18.6
7 10	19 4.37	− 6 28.0	2.190	3.180	5.1	19.3	7 10	19 3.05	−52 49.3	1.578	2.506	12.0	18.6
7 20	18 56.95	− 6 53.3	2.197	3.170	6.4	19.4	7 20	18 51.22	−52 2.3	1.593	2.501	13.1	18.7
7 30	18 50.35	− 7 28.2	2.229	3.160	8.8	19.5	7 30	18 41.88	−50 45.6	1.630	2.498	15.0	18.8
8 9	18 45.19	− 8 9.9	2.285	3.150	11.3	19.7	8 9	18 36.15	−49 7.4	1.686	2.495	17.1	18.9
389811	2011 <i>UA</i> ₄₀₅		7 7.3 6°88	0°4/ 7.1 18			93477	2000 <i>TL</i> ₁₇		7 7.3 27°23	7°6/ 9.2 18		
5 31	19 31.46	−22 16.4	1.966	2.809	13.8	20.7	5 31	19 30.98	− 4 44.4	1.705	2.513	17.0	19.6
6 10	19 27.27	−22 36.5	1.888	2.809	10.7	20.5	6 10	19 27.01	− 3 57.6	1.631	2.514	14.2	19.4
6 20	19 20.86	−23 0.6	1.831	2.809	7.0	20.3	6 20	19 20.75	− 3 26.4	1.577	2.516	11.2	19.2
6 30	19 12.82	−23 26.4	1.800	2.809	3.0	20.0	6 30	19 12.81	− 3 13.9	1.545	2.518	8.6	19.0
7 10	19 4.03	−23 51.0	1.795	2.810	1.3	19.9	7 10	19 4.10	− 3 21.3	1.537	2.519	7.6	19.0
7 20	18 55.46	−24 12.1	1.817	2.811	5.3	20.2	7 20	18 55.64	− 3 47.3	1.553	2.521	9.0	19.1
7 30	18 48.11	−24 28.5	1.864	2.812	9.1	20.4	7 30	18 48.44	− 4 29.1	1.594	2.524	11.7	19.2
8 9	18 42.74	−24 40.0	1.936	2.813	12.5	20.6	8 9	18 43.30	− 5 22.1	1.656	2.526	14.6	19.4
234809	2002 <i>QV</i> ₉₇		7 7.3 60°38	3°5/ 8.3 17			122902	2000 <i>SN</i> ₁₆₂		7 7.3 276°23	2°8/ 6.4 18		
5 31	19 31.13	−12 51.6	1.879	2.706	14.9	20.7	5 31	19 34.64	−27 8.5	1.825	2.669	14.6	20.0
6 10	19 26.95	−12 42.7	1.803	2.710	11.9	20.5	6 10	19 30.31	−27 50.3	1.729	2.650	11.4	19.7
6 20	19 20.61	−12 44.0	1.749	2.714	8.4	20.3	6 20	19 23.26	−28 34.9	1.655	2.631	7.8	19.4
6 30	19 12.70	−12 55.5	1.718	2.718	5.0	20.1	6 30	19 14.03	−29 17.7	1.605	2.612	4.0	19.2
7 10	19 4.09	−13 16.0	1.714	2.721	3.5	20.0	7 10	19 3.60	−29 53.8	1.582	2.592	3.2	19.1
7 20	18 55.72	−13 43.6	1.736	2.725	6.1	20.1	7 20	18 53.16	−30 19.5	1.585	2.572	6.8	19.3
7 30	18 48.56	−14 16.0	1.783	2.729	9.5	20.4	7 30	18 44.02	−30 33.5	1.613	2.552	10.9	19.5
8 9	18 43.33	−14 50.8	1.854	2.734	12.8	20.6	8 9	18 37.23	−30 36.7	1.663	2.532	14.6	19.6
37668	1994 <i>SX</i> ₉		7 7.3 249°36	4°5/ 8.8 18			370414	2002 <i>TN</i> ₃₇₇		7 7.3 259°87	3°5/ 7.9 18		
5 31	19 29.17	− 8 27.0	2.393	3.195	12.9	19.4	5 31	19 33.74	−14 34.6	1.698	2.532	16.0	21.0
6 10	19 25.04	− 8 9.9	2.303	3.189	10.5	19.2	6 10	19 29.41	−14 12.8	1.609	2.520	12.8	20.8
6 20	19 19.19	− 8 3.1	2.235	3.183	7.9	19.0	6 20	19 22.52	−13 59.6	1.539	2.508	9.0	20.5
6 30	19 12.07	− 8 7.5	2.192	3.177	5.5	18.9	6 30	19 13.66	−13 55.4	1.494	2.495	5.2	20.3
7 10	19 4.34	− 8 22.9	2.175	3.171	4.5	18.8	7 10	19 3.79	−13 59.9	1.473	2.483	3.6	20.2
7 20	18 56.73	− 8 48.1	2.186	3.164	6.0	18.9	7 20	18 54.03	−14 11.8	1.479	2.470	6.7	20.3
7 30	18 49.98	− 9 21.4	2.223	3.158	8.6	19.0	7 30	18 45.56	−14 29.6	1.510	2.457	10.9	20.5
8 9	18 44.71	−10 0.2	2.284	3.151	11.2	19.2	8 9	18 39.34	−14 51.2	1.563	2.444	14.7	20.7
477061	2009 <i>BL</i> ₃₆		7 7.3 212°36	2°2/ 6.6 18			513087	2017 <i>WV</i> ₂₁		7 7.3 252°15	1°6/ 7.5 18		
5 31	19 34.74	−28 3.4	2.316	3.148	12.3	22.5	5 31	19 34.96	−19 9.5	1.778	2.615	15.2	21.9
6 10	19 29.59	−28 27.5	2.228	3.142	9.6	22.3	6 10	19 30.27	−18 53.5	1.688	2.604	12.0	21.6
6 20	19 22.30	−28 51.4	2.164	3.137	6.5	22.1	6 20	19 23.03	−18 42.2	1.619	2.593	8.1	21.4
6 30	19 13.44	−29 11.7	2.125	3.131	3.3	21.8	6 30	19 13.86	−18 34.8	1.574	2.581	3.9	21.1
7 10	19 3.82	−29 25.7	2.114	3.124	2.5	21.8	7 10	19 3.72	−18 30.2	1.555	2.569	2.0	20.9
7 20	18 54.38	−29 31.6	2.131	3.117	5.4	22.0	7 20	18 53.74	−18 27.5	1.563	2.557	6.0	21.2
7 30	18 46.06	−29 29.1	2.175	3.110	8.7	22.1	7 30	18 45.07	−18 26.0	1.597	2.545	10.3	21.4
8 9	18 39.62	−29 19.5	2.243	3.102	11.7	22.3	8 9	18 38.64	−18 25.5	1.653	2.532	14.2	21.6
11527	1991 <i>VU</i> ₄		7 7.3 288°53	1°0/ 7.5 18 R			507284	2011 <i>GO</i> ₄₆		7 7.3 45°35	6°4/ 5.6 17		
5 31	19 32.32	−18 44.9	1.798	2.639	14.9	18.4	5 31	19 36.88	−35 7.0	1.571	2.420	16.4	21.4
6 10	19 28.40	−18 56.3	1.696	2.615	11.8	18.2	6 10	19 32.36	−36 9.4	1.509	2.426	13.1	21.2
6 20	19 21.94	−19 15.4	1.615	2.590	8.0	17.9	6 20	19 24.66	−37 6.9	1.467	2.433	9.6	21.0
6 30	19 13.44	−19 40.6	1.557	2.566	3.7	17.6	6 30	19 14.59	−37 51.9	1.449	2.440	6.9	20.9
7 10	19 3.78	−20 9.4	1.526	2.541	1.5	17.3	7 10	19 3.47	−38 18.3	1.455	2.447	6.7	20.9
7 20	18 54.05	−20 39.2	1.521	2.516	6.0	17.6	7 20	18 52.84	−38 23.4	1.485	2.454	9.2	21.0
7 30	18 45.46	−21 7.6	1.541	2.491	10.5	17.8	7 30	18 44.14	−38 8.6	1.539	2.462	12.5	21.2
8 9	18 39.02	−21 33.3	1.584	2.466	14.5	18.0	8 9	18 38.38	−37 38.3	1.613	2.470	15.6	21.5
382551	2001 <i>VO</i> ₁		7 7.3 295°29	2°0/ 6.8 18			212355	2006 <i>DT</i> ₃₇		7 7.3 147°16	2°6/ 6.7 17		
5 31	19 34.45	−25 45.6	1.603	2.455	15.9	21.1	5 31	19 38.75	−27 1.7	1.494	2.344	17.0	20.7
6 10	19 30.61	−26 9.3	1.499	2.425	12.5	20.8	6 10	19 33.67	−27 29.0	1.425	2.349	13.2	20.5
6 20	19 23.74	−26 36.4	1.416	2.395	8.5	20.5	6 20	19 25.47	−27 57.4	1.375	2.353	8.8	20.2
6 30	19 14.33	−27 2.8	1.356	2.365	4.0	20.2	6 30	19 14.93	−28 21.8	1.349	2.356	4.3	20.0
7 10	19 3.42	−27 24.0	1.321	2.334	2.6	20.0	7 10	19 3.35	−28 37.7	1.348	2.360	3.1	19.9
7 20	18 52.36	−27 36.5	1.311	2.304	7.2	20.2	7 20	18 52.21	−28 42.5	1.373	2.363	7.2	20.2
7 30	18 42.68	−27 39.1	1.326	2.273	12.1	20.4	7 30	18 42.94	−28 36.5	1.422	2.366	11.6	20.4
8 9	18 35.62	−27 32.8	1.361	2.243	16.5	20.6	8 9	18 36.54	−28 22.1	1.492	2.369	15.6	20.7
96444	1998 <i>FR</i> ₁₀₆		7 7.3 140°75	4°9/ 6.3 18			387322	2012 <i>VH</i> ₇₃		7 7.3 21°52	1°2/ 6.9 18		
5 31	19 41.72	−33 39.5	1.721	2.557	15.7	19.4	5 31	19 31.56	−22 55.3	1.640	2.493	15.6	20.3
6 10	19 35.66	−34 14.0	1.654	2.566	12.4	19.2	6 10	19 27.80	−23 33.8	1.570	2.497	12.0	20.1
6 20	19 26.58	−34 43.5	1.607	2.574	8.8	19.0	6 20	19 21.45	−24 17.8	1.522	2.502	7.9	19.9
6 30	19 15.31	−35 2.0	1.585	2.582	5.7	18.8	6 30	19 13.17	−25 3.2	1.497	2.507	3.5	19.6
7 10	19 3.15	−35 5.0	1.589	2.589	5.2	18.8	7 10	19 4.01	−25 45.8	1.497	2.512	1.9	19.5
7 20	18 51.54	−34 51.0	1.620	2.596	7.8	19.0	7 20	18 55.15	−26 21.9	1.524	2.518	6.2	19.8
7 30	18 41.81	−34 21.9	1.675	2.603	11.3</								

EPHEMERIDES

7 7.3

7 7.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
358420	2007 <i>CP</i> ₄₃	7 7.3 218°73	3°2/ 8.6 18				350228	2012 <i>TS</i> ₁₇	7 7.3 354°26	1°9/ 7.7 18			
5 31	19 29.35	-11 0.3	2.519	3.327	12.1	21.1	5 31	19 31.37	-17 36.9	1.630	2.476	16.0	20.9
6 10	19 25.12	-11 1.7	2.429	3.323	9.7	21.0	6 10	19 27.59	-17 32.5	1.553	2.474	12.5	20.7
6 20	19 19.22	-11 12.4	2.362	3.319	7.0	20.8	6 20	19 21.29	-17 35.9	1.497	2.473	8.5	20.4
6 30	19 12.11	-11 32.2	2.321	3.315	4.4	20.6	6 30	19 13.12	-17 46.1	1.464	2.472	4.1	20.2
7 10	19 4.42	-12 0.3	2.307	3.311	3.3	20.5	7 10	19 4.07	-18 1.2	1.457	2.471	2.2	20.0
7 20	18 56.84	-12 34.9	2.321	3.307	5.1	20.6	7 20	18 55.29	-18 19.2	1.475	2.471	6.1	20.3
7 30	18 50.09	-13 14.0	2.362	3.302	7.8	20.8	7 30	18 47.90	-18 38.5	1.518	2.471	10.4	20.5
8 9	18 44.77	-13 55.3	2.428	3.298	10.6	21.0	8 9	18 42.79	-18 57.5	1.582	2.471	14.2	20.8
156289	2001 <i>WF</i> ₁₇	7 7.3 209°64	0°4/ 7.4 18				32439	2000 <i>RO</i> ₉₉	7 7.3 143°05	3°7/ 8.2 18			
5 31	19 35.02	-20 44.4	1.982	2.815	14.1	20.6	5 31	19 31.59	-11 47.8	2.491	3.297	12.3	19.1
6 10	19 30.03	-20 49.1	1.895	2.810	10.9	20.4	6 10	19 26.72	-11 13.8	2.411	3.303	9.9	18.9
6 20	19 22.73	-20 58.1	1.831	2.806	7.3	20.2	6 20	19 20.20	-10 47.0	2.354	3.309	7.1	18.8
6 30	19 13.69	-21 9.6	1.791	2.800	3.2	19.9	6 30	19 12.51	-10 28.0	2.323	3.315	4.7	18.6
7 10	19 3.83	-21 21.6	1.779	2.795	1.2	19.8	7 10	19 4.33	-10 17.1	2.320	3.320	3.8	18.6
7 20	18 54.15	-21 32.2	1.795	2.789	5.4	20.0	7 20	18 56.36	-10 14.0	2.345	3.325	5.5	18.7
7 30	18 45.70	-21 40.6	1.836	2.782	9.4	20.3	7 30	18 49.33	-10 17.8	2.396	3.330	8.1	18.9
8 9	18 39.30	-21 46.6	1.901	2.775	12.8	20.5	8 9	18 43.79	-10 27.2	2.472	3.335	10.7	19.1
450190	2001 <i>XJ</i> ₁₀₄	7 7.3 303°20	8°1/ 6.4 17				84159	2002 <i>RP</i> ₈₄	7 7.3 283°44	1°3/ 7.5 18			
5 31	19 40.49	-15 26.1	1.089	1.944	21.6	20.2	5 31	19 33.69	-19 7.3	1.572	2.419	16.4	20.1
6 10	19 35.72	-13 8.6	1.015	1.936	17.6	19.9	6 10	19 29.77	-19 6.6	1.478	2.400	12.9	19.8
6 20	19 27.20	-10 50.3	0.960	1.928	13.0	19.6	6 20	19 23.02	-19 12.9	1.404	2.381	8.8	19.5
6 30	19 15.80	-8 38.5	0.926	1.921	9.1	19.4	6 30	19 13.99	-19 24.9	1.353	2.362	4.1	19.2
7 10	19 3.03	-6 41.9	0.916	1.914	8.4	19.3	7 10	19 3.71	-19 40.3	1.327	2.342	1.8	19.0
7 20	18 50.72	-5 8.5	0.928	1.907	11.8	19.5	7 20	18 53.45	-19 56.9	1.327	2.323	6.6	19.2
7 30	18 40.63	-4 2.4	0.962	1.900	16.5	19.7	7 30	18 44.57	-20 13.0	1.351	2.303	11.4	19.5
8 9	18 33.98	-3 22.8	1.013	1.894	20.9	19.9	8 9	18 38.18	-20 27.7	1.396	2.284	15.8	19.7
501728	2014 <i>UB</i> ₆₈	7 7.3 228°11	2°9/ 7.9 17				508270	2015 <i>HY</i> ₁₇₁	7 7.3 35°09	7°6/ 8.4 17			
5 31	19 35.53	-15 7.2	1.624	2.459	16.6	22.0	5 31	19 32.54	-7 1.9	1.663	2.478	17.1	20.4
6 10	19 30.91	-15 1.8	1.538	2.451	13.2	21.8	6 10	19 28.22	-5 47.0	1.593	2.482	14.2	20.2
6 20	19 23.58	-15 6.5	1.472	2.443	9.1	21.5	6 20	19 21.55	-4 44.6	1.542	2.486	11.1	20.0
6 30	19 14.15	-15 20.7	1.430	2.434	4.9	21.2	6 30	19 13.18	-3 58.4	1.515	2.490	8.5	19.9
7 10	19 3.64	-15 42.8	1.413	2.425	3.1	21.1	7 10	19 4.08	-3 30.8	1.512	2.495	7.6	19.8
7 20	18 53.26	-16 10.4	1.422	2.415	6.7	21.3	7 20	18 55.30	-3 22.4	1.533	2.500	9.2	19.9
7 30	18 44.29	-16 41.2	1.456	2.405	11.1	21.5	7 30	18 47.88	-3 31.6	1.578	2.505	12.0	20.1
8 9	18 37.70	-17 12.9	1.512	2.394	15.1	21.7	8 9	18 42.59	-3 54.7	1.645	2.511	14.9	20.3
502287	2015 <i>BZ</i> ₁₄₀	7 7.3 263°81	4°5/ 6.1 18				399695	2004 <i>TP</i> ₁₄₄	7 7.3 311°43	6°3/ 8.2 16			
5 31	19 37.86	-30 59.4	1.642	2.489	15.9	21.8	5 31	19 29.09	-7 32.4	2.058	2.867	14.5	20.7
6 10	19 33.20	-31 43.1	1.553	2.473	12.6	21.6	6 10	19 25.41	-6 35.9	1.957	2.844	12.0	20.5
6 20	19 25.38	-32 26.4	1.484	2.456	8.9	21.3	6 20	19 19.70	-5 48.8	1.877	2.821	9.4	20.2
6 30	19 15.02	-33 3.0	1.438	2.439	5.4	21.1	6 30	19 12.44	-5 13.9	1.821	2.799	7.1	20.1
7 10	19 3.29	-33 27.0	1.418	2.422	4.9	21.0	7 10	19 4.34	-4 53.0	1.791	2.777	6.4	20.0
7 20	18 51.65	-33 34.7	1.423	2.405	8.1	21.1	7 20	18 56.27	-4 47.0	1.786	2.755	7.9	20.0
7 30	18 41.63	-33 26.1	1.453	2.387	12.2	21.3	7 30	18 49.12	-4 55.0	1.805	2.733	10.6	20.1
8 9	18 34.43	-33 4.2	1.504	2.370	16.1	21.5	8 9	18 43.68	-5 14.8	1.847	2.712	13.6	20.3
248676	2006 <i>JF</i> ₅₇	7 7.3 70°17	0°7/ 6.9 17				307150	2002 <i>CU</i> ₂₅₆	7 7.3 214°55	3°3/ 6.3 18			
5 31	19 35.31	-19 42.8	1.750	2.589	15.4	20.4	5 31	19 34.33	-32 22.2	2.548	3.375	11.5	21.1
6 10	19 30.35	-20 51.9	1.693	2.612	11.8	20.2	6 10	19 29.16	-32 48.7	2.462	3.370	9.0	20.9
6 20	19 22.93	-22 9.2	1.658	2.635	7.7	20.1	6 20	19 21.99	-33 12.3	2.399	3.365	6.3	20.7
6 30	19 13.76	-23 29.8	1.648	2.657	3.3	19.8	6 30	19 13.35	-33 29.5	2.362	3.360	3.9	20.6
7 10	19 3.84	-24 47.7	1.665	2.680	1.5	19.7	7 10	19 4.03	-33 37.5	2.353	3.355	3.5	20.5
7 20	18 54.31	-25 58.2	1.710	2.703	5.8	20.1	7 20	18 54.90	-33 35.1	2.372	3.349	5.7	20.7
7 30	18 46.25	-26 58.1	1.781	2.725	9.7	20.4	7 30	18 46.86	-33 22.4	2.418	3.343	8.4	20.8
8 9	18 40.45	-27 46.6	1.876	2.747	13.1	20.6	8 9	18 40.59	-33 1.3	2.488	3.337	11.0	21.0
35771	1999 <i>JE</i> ₆	7 7.3 50°81	1°9/ 6.7 18				107308	2001 <i>CR</i> ₈	7 7.3 157°02	3°1/ 6.5 17			
5 31	19 34.96	-22 25.2	1.211	2.078	19.1	17.3	5 31	19 38.59	-28 38.2	1.710	2.553	15.5	20.7
6 10	19 31.15	-23 25.2	1.157	2.091	14.7	17.0	6 10	19 33.24	-29 11.9	1.638	2.557	12.1	20.4
6 20	19 23.99	-24 33.6	1.121	2.104	9.7	16.8	6 20	19 25.05	-29 45.3	1.587	2.561	8.2	20.2
6 30	19 14.34	-25 44.0	1.108	2.118	4.3	16.5	6 30	19 14.75	-30 13.5	1.560	2.565	4.4	20.0
7 10	19 3.62	-26 48.8	1.118	2.132	2.7	16.5	7 10	19 3.51	-30 31.9	1.559	2.568	3.5	19.9
7 20	18 53.44	-27 42.3	1.152	2.147	7.6	16.8	7 20	18 52.64	-30 38.2	1.585	2.571	6.9	20.2
7 30	18 45.34	-28 21.9	1.210	2.162	12.5	17.1	7 30	18 43.43	-30 32.7	1.636	2.574	10.9	20.4
8 9	18 40.36	-28 48.1	1.287	2.177	16.7	17.4	8 9	18 36.82	-30 17.8	1.709	2.576	14.4	20.6
233875	2008 <i>WT</i> ₅₉	7 7.3 317°65	2°2/ 7.9 18				285300	1998 <i>TT</i> ₁₆	7 7.3 316°14	2°8/ 7.9 16			
5 31	19 29.08	-16 28.3	1.470	2.325	16.9	19.8	5 31	19 31.87	-15 36.4	1.877	2.710	14.7	20.9
6 10	19 26.37	-16 32.0	1.376	2.301	13.5	19.5	6 10	19 27.62	-15 15.8	1.796	2.707	11.6	20.6
6 20	19 20.87	-16 46.7	1.301	2.278	9.3	19.2	6 20	19 21.14	-15 2.3	1.736	2.705	8.1	20.4
6 30	19 13.10	-17 11.7	1.248	2.255	4.7	18.9	6 30	19 13.02	-14 56.2	1.700	2.703	4.5	20.2
7 10	19 4.02	-17 44.9	1.218	2.233	2.5	18.6	7 10	19 4.15	-14 56.6	1.690	2.700	3.0	20.1
7 20	18 54.90	-18 23.2	1.214	2.211	6.9	18.9	7 20	18 55.51	-15 2.8	1.706	2.698	5.9	20.3
7 30	18 47.10	-19 3.3	1.232	2.190	11.8	19.1	7 30	18 48.07	-15 13.5	1.749	2.696	9.6	20.5
8 9	18 41.79	-19 42.5	1.272	2.170	16.3	19.3	8 9	18 42.63	-15 27.1	1.814	2.694	13.1	20.7
83385	2001 <i>SH</i> ₁₇	7 7.3 163°22	1°0/ 6.9 18				99886	2002 <i>PV</i> ₁₅₈	7 7.3 98°20	0°5/ 7.1 17			
5 31	19 32.68	-24 28.0	2.117	2.955	13.1	19.1	5 31	19 33.80	-22 36.5	1.965	2.803	14.0	20.5
6 10	19 28.09	-24 45.5	2.037	2.955	10.1	18.9	6 10	19 29.01	-22 55.2	1.894	2.813	10.8	20.3
6 20	19 21.37	-25 5.1	1.979	2.956	6.7	18.7	6 20	19 21.98	-23 17.5	1.846	2.823	7.1	20.1
6 30	19 13.08	-25 24.0	1.947	2.956	3.0	18.5	6 30	19 13.35	-23 40.7	1.823	2.832	3.0	19.9
7 10	19 4.09	-25 39.7	1.942	2.956	1.6	18.4	7 10	19 4.05	-24 1.9	1.827	2.842	1.3	19.8
7 20	18 55.33	-25 50.5	1.964	2.957	5.2	18.7	7 20	18 55.06	-24 19.2	1.858	2.852	5.3	20.1
7 30	18 47.74	-25 55.6	2.013	2.957	8.8	18.9	7 30	18 47.38	-24 31.5	1.915	2.861	9.0	20.3
8 9	18 42.06	-25 55.6	2.086	2.957	12.0	19.1	8						

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
249223	2008 <i>EF</i> ₁₀₅		7 7.3 341°21	1°5/ 7.8 18			312524	2009 <i>DP</i> ₆₆		7 7.3 57°66	0°1/ 7.3 17		
5 31	19 29.03	−16 37.0	1.878	2.718	14.4	20.2	5 31	19 36.78	−22 26.2	1.233	2.095	19.1	20.6
6 10	19 25.55	−16 57.8	1.794	2.712	11.3	19.9	6 10	19 32.29	−22 30.2	1.180	2.112	14.7	20.4
6 20	19 19.86	−17 27.9	1.732	2.706	7.6	19.7	6 20	19 24.57	−22 38.9	1.147	2.128	9.7	20.2
6 30	19 12.51	−18 5.8	1.694	2.701	3.7	19.4	6 30	19 14.55	−22 49.3	1.135	2.146	4.1	19.9
7 10	19 4.34	−18 48.6	1.682	2.696	1.7	19.3	7 10	19 3.69	−22 57.9	1.147	2.163	1.6	19.8
7 20	18 56.30	−19 33.4	1.696	2.692	5.4	19.5	7 20	18 53.55	−23 2.7	1.184	2.181	7.0	20.2
7 30	18 49.40	−20 17.3	1.737	2.688	9.4	19.8	7 30	18 45.53	−23 3.4	1.243	2.199	11.9	20.5
8 9	18 44.44	−20 58.2	1.800	2.685	12.9	20.0	8 9	18 40.53	−23 0.6	1.323	2.216	16.1	20.8
345928	2007 <i>RK</i> ₂₃₃		7 7.3 256°77	5°0/ 8.9 18			114761	2003 <i>HN</i> ₄₇		7 7.3 44°60	1°1/ 6.9 18 R		
5 31	19 31.29	−7 4.6	2.306	3.101	13.5	21.5	5 31	19 31.66	−24 11.7	1.981	2.824	13.7	19.7
6 10	19 26.90	−6 52.7	2.201	3.082	11.1	21.2	6 10	19 27.39	−24 36.1	1.912	2.833	10.5	19.5
6 20	19 20.59	−6 52.8	2.118	3.062	8.5	21.0	6 20	19 20.95	−25 3.1	1.865	2.843	6.9	19.3
6 30	19 12.81	−7 5.9	2.060	3.042	6.0	20.9	6 30	19 12.94	−25 29.6	1.843	2.853	3.1	19.1
7 10	19 4.22	−7 32.1	2.028	3.021	5.0	20.8	7 10	19 4.28	−25 52.8	1.848	2.863	1.7	19.0
7 20	18 55.62	−8 9.9	2.023	3.000	6.5	20.8	7 20	18 55.92	−26 10.6	1.880	2.873	5.4	19.3
7 30	18 47.85	−8 57.1	2.045	2.978	9.3	20.9	7 30	18 48.83	−26 22.2	1.938	2.884	9.0	19.5
8 9	18 41.64	−9 50.4	2.091	2.956	12.2	21.1	8 9	18 43.72	−26 27.7	2.019	2.894	12.2	19.8
53342	1999 <i>JK</i> ₅₁		7 7.3 110°29	2°0/ 6.7 18 R			73993	1998 <i>FZ</i> ₄		7 7.3 63°40	0°0/ 7.2 17		
5 31	19 37.61	−25 48.4	1.973	2.807	14.1	19.1	5 31	19 35.00	−19 42.8	1.354	2.209	18.1	19.1
6 10	19 31.91	−26 28.5	1.911	2.826	10.8	18.9	6 10	19 30.80	−20 15.9	1.295	2.222	14.0	18.9
6 20	19 23.86	−27 10.2	1.871	2.846	7.2	18.8	6 20	19 23.58	−20 58.2	1.255	2.235	9.2	18.7
6 30	19 14.15	−27 49.2	1.857	2.864	3.4	18.6	6 30	19 14.17	−21 45.7	1.238	2.248	4.0	18.4
7 10	19 3.77	−28 21.6	1.871	2.883	2.4	18.5	7 10	19 3.83	−22 33.4	1.246	2.261	1.4	18.2
7 20	18 53.80	−28 45.2	1.912	2.900	5.8	18.8	7 20	18 53.96	−23 17.0	1.278	2.275	6.7	18.6
7 30	18 45.26	−28 59.3	1.980	2.917	9.3	19.0	7 30	18 45.93	−23 53.7	1.335	2.288	11.4	18.9
8 9	18 38.92	−29 5.0	2.071	2.934	12.4	19.3	8 9	18 40.69	−24 22.7	1.412	2.302	15.5	19.2
410747	2009 <i>DU</i> ₂₀		7 7.3 231°93	0°5/ 7.4 17			184754	2005 <i>SJ</i> ₂₅₃		7 7.3 251°93	4°2/ 5.7 18		
5 31	19 37.22	−20 47.5	1.590	2.432	16.5	22.3	5 31	19 33.81	−33 44.0	2.412	3.242	12.0	20.3
6 10	19 32.39	−20 50.1	1.503	2.424	12.9	22.1	6 10	19 29.03	−34 30.0	2.326	3.234	9.5	20.1
6 20	19 24.66	−20 58.2	1.437	2.414	8.6	21.8	6 20	19 22.07	−35 13.2	2.263	3.226	6.9	19.9
6 30	19 14.67	−21 9.6	1.395	2.404	3.8	21.5	6 30	19 13.47	−35 49.4	2.225	3.218	4.7	19.8
7 10	19 3.52	−21 21.5	1.378	2.394	1.4	21.3	7 10	19 4.07	−36 14.6	2.215	3.210	4.5	19.8
7 20	18 52.54	−21 31.9	1.388	2.383	6.5	21.6	7 20	18 54.80	−36 26.8	2.232	3.202	6.5	19.9
7 30	18 43.10	−21 39.5	1.422	2.372	11.2	21.8	7 30	18 46.64	−36 25.8	2.275	3.194	9.2	20.0
8 9	18 36.23	−21 44.5	1.479	2.360	15.4	22.1	8 9	18 40.38	−36 13.4	2.342	3.185	11.8	20.2
507868	2014 <i>JA</i> ₃₈		7 7.3 32°61	5°7/ 4.6 18			395524	2011 <i>UY</i> ₁₃₇		7 7.3 288°28	4°4/ 8.2 18		
5 31	19 34.46	−34 34.4	2.112	2.947	13.2	20.8	5 31	19 30.75	−11 22.4	2.158	2.973	13.7	20.9
6 10	19 29.90	−36 1.6	2.041	2.950	10.6	20.7	6 10	19 26.48	−10 42.4	2.069	2.966	11.0	20.7
6 20	19 22.83	−37 26.7	1.993	2.953	7.9	20.5	6 20	19 20.29	−10 10.2	2.003	2.959	8.1	20.5
6 30	19 13.83	−38 43.1	1.970	2.956	5.9	20.4	6 30	19 12.67	−9 47.3	1.960	2.951	5.4	20.4
7 10	19 3.84	−39 44.9	1.975	2.959	6.0	20.4	7 10	19 4.38	−9 34.3	1.945	2.944	4.5	20.3
7 20	18 54.00	−40 28.4	2.005	2.962	8.0	20.5	7 20	18 56.24	−9 31.1	1.956	2.937	6.3	20.4
7 30	18 45.46	−40 52.9	2.061	2.966	10.7	20.7	7 30	18 49.10	−9 36.9	1.993	2.930	9.3	20.5
8 9	18 39.13	−41 0.6	2.139	2.969	13.2	20.9	8 9	18 43.65	−9 49.8	2.053	2.923	12.2	20.7
439788	2015 <i>GL</i> ₄₄		7 7.3 71°19	0°4/ 7.2 17			498478	2008 <i>CU</i> ₇₇		7 7.3 141°79	1°5/ 6.9 17		
5 31	19 35.30	−21 15.0	1.724	2.566	15.4	20.9	5 31	19 38.02	−24 49.4	1.819	2.656	15.0	22.3
6 10	19 30.28	−21 47.1	1.670	2.590	11.8	20.7	6 10	19 32.51	−25 16.7	1.748	2.666	11.5	22.0
6 20	19 22.84	−22 24.6	1.636	2.614	7.7	20.5	6 20	19 24.43	−25 46.4	1.699	2.675	7.6	21.8
6 30	19 13.70	−23 4.0	1.628	2.637	3.3	20.3	6 30	19 14.48	−26 14.6	1.675	2.683	3.5	21.6
7 10	19 3.94	−23 41.3	1.646	2.661	1.3	20.2	7 10	19 3.72	−26 37.8	1.677	2.691	2.0	21.5
7 20	18 54.67	−24 13.8	1.690	2.685	5.7	20.5	7 20	18 53.33	−26 53.4	1.708	2.699	6.0	21.8
7 30	18 46.93	−24 40.0	1.761	2.708	9.6	20.8	7 30	18 44.44	−27 1.1	1.764	2.706	9.9	22.0
8 9	18 41.48	−24 59.6	1.854	2.731	13.0	21.1	8 9	18 37.90	−27 1.8	1.843	2.712	13.4	22.3
132588	2002 <i>JC</i> ₁₂₈		7 7.3 355°53	3°1/ 8.1 18			9990	Niiyaeki		7 7.3 321°10	1°2/ 7.6 18		
5 31	19 30.81	−14 43.8	1.246	2.106	19.1	19.4	5 31	19 30.98	−18 51.3	1.825	2.668	14.7	17.8
6 10	19 27.86	−14 47.0	1.176	2.103	15.1	19.1	6 10	19 27.14	−18 54.3	1.741	2.660	11.5	17.5
6 20	19 21.86	−15 4.3	1.125	2.101	10.5	18.8	6 20	19 20.96	−19 3.6	1.678	2.654	7.7	17.3
6 30	19 13.49	−15 34.9	1.094	2.100	5.6	18.6	6 30	19 13.03	−19 18.1	1.639	2.647	3.6	17.0
7 10	19 3.98	−16 16.1	1.086	2.099	3.3	18.4	7 10	19 4.25	−19 35.5	1.626	2.641	1.6	16.9
7 20	18 54.75	−17 3.7	1.102	2.099	7.4	18.7	7 20	18 55.64	−19 54.1	1.639	2.635	5.6	17.1
7 30	18 47.26	−17 53.4	1.140	2.100	12.3	18.9	7 30	18 48.25	−20 12.2	1.678	2.629	9.7	17.4
8 9	18 42.57	−18 41.5	1.199	2.101	16.8	19.2	8 9	18 42.93	−20 28.7	1.739	2.623	13.3	17.6
388590	2007 <i>RE</i> ₁₃₀		7 7.3 257°65	20°0/ 12.7 17			12001	Gasbarini		7 7.3 309°21	5°2/ 9.4 18		
5 31	19 32.73	+15 8.6	1.262	1.997	25.4	20.7	5 31	19 28.58	−5 41.4	2.282	3.079	13.6	18.2
6 10	19 29.41	+17 6.1	1.196	1.989	23.7	20.5	6 10	19 24.71	−5 34.3	2.196	3.075	11.2	18.0
6 20	19 22.97	+18 30.9	1.143	1.980	22.1	20.3	6 20	19 19.07	−5 40.5	2.131	3.072	8.6	17.9
6 30	19 14.03	+19 11.4	1.104	1.971	20.7	20.2	6 30	19 12.14	−6 1.0	2.090	3.069	6.2	17.7
7 10	19 3.75	+19 0.0	1.081	1.963	20.0	20.1	7 10	19 4.59	−6 35.1	2.075	3.066	5.2	17.7
7 20	18 53.54	+17 54.3	1.074	1.953	20.2	20.1	7 20	18 57.16	−7 21.0	2.087	3.062	6.5	17.7
7 30	18 44.93	+15 59.1	1.083	1.944	21.4	20.2	7 30	18 50.61	−8 16.0	2.125	3.059	8.9	17.9
8 9	18 39.13	+13 26.1	1.109	1.935	23.2	20.3	8 9	18 45.59	−9 16.4	2.188	3.057	11.6	18.0
389948	2012 <i>TQ</i> ₁₆₆		7 7.3 315°76	0°0/ 7.1 16			384903	2012 <i>TZ</i> ₃₂		7 7.3 337°21	2°2/ 6.9 16		
5 31	19 32.18	−22 3.7	1.720	2.569	15.2	21.3	5 31	19 30.57	−26 24.2	1.365	2.234	17.2	20.4
6 10	19 28.25	−22 9.1	1.636	2.560	11.8	21.0	6 10	19 27.79	−26 40.2	1.286	2.220	13.5	20.2
6 20	19 21.77	−22 18.7	1.574	2.552	7.8	20.8	6 20	19 21.90	−26 57.7	1.226	2.208	9.0	19.9
6 30	19 13.38	−22 30.3	1.535	2.544	3.4	20.5	6 30	19 13.58	−27 13.0	1.188	2.197	4.3	19.6
7 10	19 4.04	−22 41.3	1.521	2.537	1.3	20.3	7 10	19 4.04	−27 21.8	1.173	2.187	2.8	19.4
7 20	18 54.91	−22 50.0	1.534	2.530	5.9	20.6	7 20	18 54.73	−27 21.7	1.182	2.177	7.4	19.7
7 30	18 47.13	−22 55.3	1.572	2.523	10.2	20.8	7 30	18 47.15	−27 12.4	1.21			

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
468508	2005 <i>NZ</i> ₄₀		7 7.3 336°40	0°2/ 7.3 16			316271	2010 <i>PA</i> ₃₅		7 7.3 291°05	0°1/ 7.4 18		
5 31	19 26.36	-21 55.0	1.086	1.972	19.4	20.9	5 31	19 30.78	-21 35.9	2.294	3.128	12.3	21.0
6 10	19 25.15	-21 50.3	1.006	1.951	15.3	20.6	6 10	19 26.52	-21 40.1	2.205	3.121	9.6	20.8
6 20	19 20.53	-21 51.4	0.944	1.931	10.3	20.3	6 20	19 20.34	-21 47.5	2.139	3.115	6.3	20.6
6 30	19 13.11	-21 56.5	0.902	1.913	4.5	19.9	6 30	19 12.73	-21 56.5	2.099	3.108	2.8	20.4
7 10	19 4.19	-22 2.8	0.881	1.897	1.7	19.6	7 10	19 4.46	-22 5.4	2.085	3.101	1.0	20.2
7 20	18 55.38	-22 7.8	0.881	1.882	7.9	20.0	7 20	18 56.33	-22 13.0	2.100	3.094	4.7	20.5
7 30	18 48.46	-22 10.2	0.902	1.869	13.7	20.2	7 30	18 49.20	-22 18.4	2.141	3.088	8.2	20.7
8 9	18 44.73	-22 9.6	0.940	1.857	18.8	20.5	8 9	18 43.77	-22 21.5	2.207	3.081	11.3	20.9
12580	Antonini		7 7.3 317°93	1°5/ 6.9 18 R			402769	2007 <i>BA</i> ₅₂		7 7.3 234°79	2°2/ 8.4 18		
5 31	19 30.27	-24 54.6	1.834	2.685	14.3	18.5	5 31	19 30.49	-12 41.6	2.470	3.282	12.2	21.0
6 10	19 26.87	-25 15.8	1.735	2.661	11.1	18.2	6 10	19 26.15	-13 13.1	2.377	3.276	9.7	20.8
6 20	19 20.99	-25 40.2	1.658	2.637	7.4	17.9	6 20	19 20.04	-13 54.8	2.307	3.270	6.8	20.6
6 30	19 13.13	-26 4.5	1.605	2.614	3.4	17.6	6 30	19 12.61	-14 45.6	2.263	3.265	3.7	20.4
7 10	19 4.20	-26 25.6	1.578	2.592	2.0	17.5	7 10	19 4.51	-15 43.0	2.247	3.258	2.2	20.3
7 20	18 55.28	-26 40.8	1.576	2.570	6.1	17.7	7 20	18 56.46	-16 44.1	2.260	3.252	4.7	20.4
7 30	18 47.56	-26 48.7	1.600	2.548	10.3	17.9	7 30	18 49.24	-17 46.0	2.301	3.246	7.8	20.6
8 9	18 41.99	-26 49.8	1.645	2.527	14.1	18.1	8 9	18 43.51	-18 46.2	2.368	3.239	10.7	20.8
306712	2000 <i>WQ</i> ₂₉		7 7.3 156°70	5°2/ 9.0 18			397432	2007 <i>CF</i> ₃₉		7 7.3 206°70	3°1/ 8.6 18		
5 31	19 30.68	-2 6.2	3.448	4.199	10.3	21.9	5 31	19 29.50	-11 21.4	2.395	3.207	12.6	21.2
6 10	19 25.57	-1 20.9	3.367	4.208	8.7	21.7	6 10	19 25.36	-11 26.6	2.310	3.206	10.1	21.0
6 20	19 19.27	-0 44.5	3.309	4.216	7.0	21.6	6 20	19 19.49	-11 41.5	2.246	3.205	7.2	20.8
6 30	19 12.14	-0 18.6	3.278	4.224	5.7	21.6	6 30	19 12.35	-12 5.8	2.208	3.204	4.4	20.6
7 10	19 4.66	-0 3.8	3.274	4.231	5.3	21.5	7 10	19 4.61	-12 38.4	2.197	3.203	3.2	20.6
7 20	18 57.33	-0 0.2	3.298	4.238	5.9	21.6	7 20	18 57.01	-13 17.2	2.174	3.202	5.1	20.7
7 30	18 50.64	-0 7.0	3.350	4.244	7.3	21.7	7 30	18 50.29	-14 0.0	2.258	3.201	8.0	20.9
8 9	18 45.01	-0 22.4	3.426	4.250	8.9	21.8	8 9	18 45.06	-14 44.4	2.326	3.199	10.8	21.0
373214	2012 <i>FD</i> ₃₀		7 7.3 29°46	2°1/ 6.7 17			386323	2008 <i>SL</i> ₁₂₇		7 7.3 42°38	9°0/ 4.2 17		
5 31	19 33.05	-23 54.2	1.258	2.127	18.4	20.2	5 31	19 39.19	-42 4.3	1.779	2.607	15.6	20.8
6 10	19 29.68	-24 39.9	1.199	2.134	14.2	19.9	6 10	19 34.36	-43 34.5	1.716	2.610	13.1	20.6
6 20	19 23.07	-25 31.7	1.159	2.142	9.4	19.7	6 20	19 26.20	-44 55.9	1.674	2.613	10.7	20.5
6 30	19 14.04	-26 23.9	1.141	2.150	4.3	19.4	6 30	19 15.45	-45 59.7	1.654	2.615	9.1	20.4
7 10	19 3.94	-27 10.4	1.146	2.160	2.7	19.4	7 10	19 3.45	-46 38.6	1.659	2.618	9.3	20.4
7 20	18 54.31	-27 46.6	1.175	2.170	7.5	19.7	7 20	18 51.80	-46 49.7	1.688	2.621	11.0	20.5
7 30	18 46.64	-28 10.7	1.227	2.180	12.3	20.0	7 30	18 42.09	-46 34.6	1.740	2.624	13.4	20.7
8 9	18 41.95	-28 23.6	1.299	2.191	16.4	20.3	8 9	18 35.44	-45 58.7	1.811	2.628	15.8	20.8
311384	2005 <i>SK</i> ₂₈₅		7 7.3 202°49	0°9/ 7.7 18			184840	2005 <i>UL</i> ₃₇		7 7.3 293°12	3°8/ 5.8 18		
5 31	19 30.49	-17 35.5	2.899	3.715	10.5	21.7	5 31	19 32.77	-31 10.5	2.237	3.074	12.5	20.0
6 10	19 25.87	-17 56.9	2.806	3.711	8.2	21.6	6 10	19 28.37	-32 4.5	2.154	3.068	9.8	19.8
6 20	19 19.70	-18 23.7	2.737	3.707	5.5	21.4	6 20	19 21.73	-32 57.9	2.094	3.063	6.9	19.6
6 30	19 12.40	-18 54.6	2.695	3.702	2.6	21.2	6 30	19 13.40	-33 45.9	2.059	3.057	4.4	19.5
7 10	19 4.55	-19 27.7	2.682	3.696	1.1	21.0	7 10	19 4.21	-34 24.4	2.051	3.052	4.1	19.5
7 20	18 56.79	-20 1.3	2.698	3.691	3.9	21.3	7 20	18 55.16	-34 50.6	2.071	3.046	6.5	19.6
7 30	18 49.76	-20 33.8	2.742	3.685	6.8	21.4	7 30	18 47.23	-35 3.7	2.116	3.041	9.5	19.8
8 9	18 44.03	-21 4.1	2.813	3.678	9.4	21.6	8 9	18 41.26	-35 5.1	2.185	3.036	12.3	19.9
169782	2002 <i>PT</i> ₁₂₃		7 7.3 332°68	6°7/ 8.7 18			283220	2010 <i>PG</i> ₁₀		7 7.3 275°01	1°7/ 7.7 18		
5 31	19 26.57	-8 51.3	1.428	2.271	18.0	19.5	5 31	19 31.80	-18 20.5	2.252	3.080	12.8	20.5
6 10	19 24.34	-8 11.7	1.341	2.251	14.9	19.2	6 10	19 27.34	-18 1.9	2.156	3.066	10.0	20.2
6 20	19 19.48	-7 46.5	1.272	2.232	11.3	19.0	6 20	19 20.90	-17 47.3	2.082	3.053	6.8	20.0
6 30	19 12.53	-7 38.9	1.224	2.214	8.1	18.7	6 30	19 13.00	-17 36.3	2.034	3.040	3.4	19.8
7 10	19 4.47	-7 50.2	1.199	2.198	6.8	18.6	7 10	19 4.37	-17 28.2	2.013	3.026	1.9	19.7
7 20	18 56.45	-8 19.6	1.197	2.182	8.9	18.7	7 20	18 55.86	-17 22.7	2.020	3.012	5.0	19.8
7 30	18 49.75	-9 4.0	1.217	2.167	12.6	18.9	7 30	18 48.34	-17 19.2	2.053	2.999	8.5	20.0
8 9	18 45.40	-9 58.5	1.257	2.154	16.5	19.0	8 9	18 42.51	-17 17.4	2.111	2.985	11.7	20.2
264501	2001 <i>QG</i> ₉₁		7 7.3 251°78	8°3/ 11.4 17			342534	2008 <i>UE</i> ₂₁₈		7 7.3 331°62	3°2/ 6.6 16		
5 31	19 37.09	+0 57.6	1.290	2.087	22.0	20.2	5 31	19 33.21	-28 31.1	1.556	2.413	16.1	21.0
6 10	19 32.95	+0 15.2	1.202	2.077	18.7	19.9	6 10	19 29.50	-28 58.9	1.477	2.405	12.6	20.8
6 20	19 25.51	-1 3.5	1.129	2.066	14.8	19.7	6 20	19 22.87	-29 26.9	1.419	2.397	8.5	20.5
6 30	19 15.29	-3 2.0	1.078	2.055	10.8	19.4	6 30	19 13.99	-29 50.3	1.383	2.390	4.5	20.3
7 10	19 3.41	-5 37.4	1.050	2.044	8.3	19.2	7 10	19 4.00	-30 4.6	1.373	2.383	3.6	20.2
7 20	18 51.36	-8 39.9	1.047	2.032	9.9	19.3	7 20	18 54.28	-30 7.3	1.387	2.377	7.3	20.4
7 30	18 40.82	-11 54.9	1.070	2.020	14.1	19.5	7 30	18 46.19	-29 58.3	1.425	2.371	11.5	20.7
8 9	18 33.18	-15 7.3	1.117	2.007	18.6	19.7	8 9	18 40.76	-29 39.9	1.485	2.366	15.4	20.9
153207	2000 <i>XX</i>		7 7.3 252°82	7°3/ 9.7 18			258586	2002 <i>CO</i> ₁₇₃		7 7.3 183°37	4°0/ 9.3 18		
5 31	19 29.33	+1 32.8	2.727	3.476	12.7	20.9	5 31	19 29.93	-6 46.0	2.795	3.581	11.6	21.2
6 10	19 25.07	+2 12.3	2.626	3.459	11.1	20.8	6 10	19 25.41	-6 55.7	2.706	3.581	9.5	21.1
6 20	19 19.24	+2 38.8	2.545	3.441	9.3	20.6	6 20	19 19.39	-7 16.4	2.639	3.581	7.1	20.9
6 30	19 12.24	+2 49.7	2.488	3.423	7.9	20.5	6 30	19 12.28	-7 48.2	2.598	3.580	4.9	20.8
7 10	19 4.61	+2 43.8	2.456	3.404	7.3	20.4	7 10	19 4.66	-8 30.1	2.585	3.579	4.0	20.7
7 20	18 57.00	+2 21.3	2.451	3.385	8.0	20.5	7 20	18 57.13	-9 20.2	2.600	3.578	5.2	20.8
7 30	18 50.09	+1 43.5	2.471	3.365	9.5	20.5	7 30	18 50.34	-10 16.0	2.644	3.577	7.5	20.9
8 9	18 44.44	+0 53.6	2.514	3.346	11.5	20.6	8 9	18 44.83	-11 14.7	2.713	3.575	9.8	21.1
413407	2004 <i>TK</i> ₉₄		7 7.3 207°82	5°2/ 8.3 17			396988	2005 <i>SG</i> ₁₅₆		7 7.3 340°30	3°8/ 8.3 18		
5 31	19 34.91	-11 39.6	1.487	2.320	17.9	21.5	5 31	19 29.20	-12 41.8	1.908	2.738	14.6	20.8
6 10	19 30.53	-11 6.5	1.411	2.318	14.5	21.3	6 10	19 25.58	-12 20.3	1.825	2.732	11.7	20.6
6 20	19 23.39	-10 45.4	1.353	2.317	10.5	21.0	6 20	19 19.86	-12 8.3	1.762	2.726	8.4	20.4
6 30	19 14.15	-10 37.9	1.319	2.315	6.7	20.8	6 30	19 12.58	-12 6.2	1.724	2.721	5.2	20.2
7 10	19 3.92	-10 44.0	1.308	2.312	5.2	20.7	7 10	19 4.55	-12 13.9	1.711	2.717	3.9	20.1
7 20	18 53.94	-11 2.4	1.323	2.310	7.9	20.9	7 20	18 56.70	-12 30.1	1.724	2.713	6.2	20.2
7 30	18 45.49	-11 30.6	1.361	2.307	11.9	21.1	7 30	18 49.95	-12 53.0	1.762	2.709	9.6	20.4
8 9	18 39.53	-12 5.4	1.421	2.305	15.8	21.3	8 9	18 45.07	-13 20.4	1.82			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
448567	2010 <i>RB</i> ₁₇₄		7 7.3 280°62	1°1/ 6.9 18			150800	2001 <i>RU</i> ₇₄		7 7.3 299°25	4°1/ 6.4 18		
5 31	19 31.88	-24 47.2	2.244	3.080	12.5	22.0	5 31	19 35.48	-30 20.0	1.566	2.420	16.2	19.3
6 10	19 27.54	-25 2.9	2.150	3.067	9.7	21.8	6 10	19 31.39	-30 55.2	1.484	2.409	12.8	19.0
6 20	19 21.12	-25 20.4	2.078	3.054	6.4	21.6	6 20	19 24.21	-31 29.5	1.423	2.398	8.9	18.8
6 30	19 13.12	-25 37.2	2.033	3.041	2.9	21.4	6 30	19 14.63	-31 57.3	1.384	2.387	5.2	18.5
7 10	19 4.35	-25 51.0	2.014	3.028	1.6	21.2	7 10	19 3.82	-32 13.4	1.370	2.377	4.4	18.5
7 20	18 55.67	-26 0.0	2.023	3.015	5.1	21.5	7 20	18 53.22	-32 14.8	1.381	2.367	7.8	18.6
7 30	18 48.04	-26 3.5	2.059	3.002	8.6	21.6	7 30	18 44.31	-32 1.8	1.416	2.357	12.0	18.8
8 9	18 42.20	-26 1.9	2.118	2.989	11.8	21.8	8 9	18 38.19	-31 37.3	1.472	2.347	15.8	19.1
348513	2005 <i>UT</i> ₅		7 7.3 251°15	6°7/10.2 18			471581	2012 <i>RT</i> ₆		7 7.3 291°11	7°4/ 5.6 18		
5 31	19 29.39	+1 55.7	2.924	3.666	12.1	21.5	5 31	19 40.62	-39 43.5	1.810	2.639	15.4	20.9
6 10	19 25.04	+2 14.6	2.817	3.646	10.5	21.3	6 10	19 35.58	-40 27.2	1.709	2.610	12.7	20.7
6 20	19 19.20	+2 20.0	2.731	3.626	8.8	21.2	6 20	19 27.17	-41 3.5	1.628	2.580	10.0	20.5
6 30	19 12.24	+2 9.9	2.668	3.605	7.3	21.0	6 30	19 15.99	-41 24.7	1.571	2.550	7.8	20.3
7 10	19 4.68	+1 43.8	2.632	3.584	6.7	21.0	7 10	19 3.28	-41 24.2	1.538	2.520	7.7	20.2
7 20	18 57.11	+1 2.2	2.623	3.562	7.3	21.0	7 20	18 50.61	-40 58.9	1.530	2.489	9.9	20.2
7 30	18 50.17	+0 7.2	2.640	3.540	8.8	21.1	7 30	18 39.65	-40 10.0	1.546	2.459	13.1	20.4
8 9	18 44.42	-0 57.9	2.682	3.517	10.7	21.1	8 9	18 31.68	-39 3.2	1.584	2.428	16.4	20.5
313258	2001 <i>WK</i> ₁₈		7 7.3 248°20	1°3/ 7.0 17			479096	2013 <i>AC</i> ₁₂₁		7 7.3 62°98	1°7/ 7.6 18		
5 31	19 37.99	-24 22.1	1.584	2.429	16.4	21.8	5 31	19 33.94	-19 26.1	1.980	2.813	14.1	20.3
6 10	19 33.23	-24 40.9	1.493	2.415	12.8	21.5	6 10	19 29.04	-18 54.1	1.905	2.819	11.0	20.1
6 20	19 25.42	-25 3.3	1.423	2.401	8.6	21.3	6 20	19 22.01	-18 25.3	1.852	2.824	7.4	19.9
6 30	19 15.15	-25 25.5	1.376	2.386	3.9	20.9	6 30	19 13.46	-17 59.6	1.823	2.830	3.6	19.7
7 10	19 3.58	-25 43.5	1.355	2.370	2.0	20.8	7 10	19 4.30	-17 36.7	1.822	2.836	2.0	19.6
7 20	18 52.08	-25 54.3	1.360	2.354	6.8	21.0	7 20	18 55.48	-17 16.8	1.848	2.842	5.4	19.8
7 30	18 42.14	-25 57.1	1.390	2.337	11.6	21.3	7 30	18 47.92	-16 59.9	1.901	2.847	9.0	20.1
8 9	18 34.90	-25 52.9	1.441	2.320	15.9	21.5	8 9	18 42.33	-16 46.1	1.977	2.853	12.3	20.3
498919	2009 <i>BZ</i> ₉		7 7.3 19°92	0°0/ 7.1 17			302856	2003 <i>GF</i> ₃₁		7 7.3 120°89	9°6/ 3.9 18		
5 31	19 36.09	-24 38.5	1.126	1.997	19.9	20.3	5 31	19 42.60	-50 24.2	2.340	3.124	13.7	20.5
6 10	19 32.24	-24 6.2	1.065	2.001	15.5	20.0	6 10	19 36.58	-51 40.2	2.279	3.128	12.0	20.4
6 20	19 24.84	-23 33.8	1.021	2.005	10.3	19.7	6 20	19 27.43	-52 43.3	2.239	3.132	10.5	20.3
6 30	19 14.83	-22 59.5	0.999	2.010	4.4	19.4	6 30	19 15.93	-53 26.0	2.222	3.136	9.7	20.2
7 10	19 3.78	-22 22.6	1.000	2.016	1.6	19.2	7 10	19 3.37	-53 43.4	2.229	3.140	9.8	20.3
7 20	18 53.40	-21 43.7	1.023	2.022	7.5	19.6	7 20	18 51.24	-53 33.9	2.259	3.144	10.8	20.3
7 30	18 45.29	-21 5.1	1.069	2.029	12.9	19.9	7 30	18 40.98	-52 59.8	2.312	3.148	12.3	20.4
8 9	18 40.46	-20 29.0	1.135	2.037	17.5	20.2	8 9	18 33.59	-52 6.4	2.386	3.151	13.9	20.6
516234	2016 <i>UW</i> ₃₄		7 7.3 257°05	0°6/ 7.5 18			339399	2005 <i>CS</i> ₃		7 7.3 209°59	2°6/ 6.6 16		
5 31	19 31.56	-19 51.8	2.380	3.209	12.2	21.8	5 31	19 35.30	-28 37.2	2.137	2.972	13.1	21.5
6 10	19 27.11	-19 57.8	2.283	3.195	9.5	21.6	6 10	19 30.29	-29 6.7	2.053	2.969	10.2	21.3
6 20	19 20.75	-20 8.1	2.209	3.182	6.3	21.4	6 20	19 22.98	-29 35.8	1.992	2.965	6.9	21.1
6 30	19 12.96	-20 21.4	2.160	3.169	2.8	21.2	6 30	19 13.95	-30 0.8	1.956	2.961	3.7	20.9
7 10	19 4.43	-20 36.1	2.139	3.155	1.1	21.0	7 10	19 4.10	-30 18.4	1.947	2.957	3.0	20.8
7 20	18 55.99	-20 50.6	2.147	3.141	4.7	21.2	7 20	18 54.46	-30 26.5	1.966	2.952	5.9	21.0
7 30	18 48.47	-21 3.8	2.181	3.127	8.1	21.4	7 30	18 46.05	-30 24.9	2.012	2.947	9.3	21.2
8 9	18 42.56	-21 15.2	2.240	3.112	11.2	21.6	8 9	18 39.67	-30 15.1	2.080	2.942	12.4	21.4
498062	2007 <i>RU</i> ₁₀₄		7 7.3 302°73	5°2/ 6.3 18			287093	2002 <i>RG</i> ₈₇		7 7.3 316°36	7°3/ 5.4 18		
5 31	19 35.66	-30 57.5	1.260	2.126	18.5	21.2	5 31	19 34.78	-37 13.4	1.588	2.437	16.2	20.3
6 10	19 32.65	-31 35.6	1.165	2.097	14.8	20.9	6 10	19 31.34	-38 4.7	1.493	2.408	13.3	20.1
6 20	19 25.79	-32 13.8	1.089	2.067	10.5	20.5	6 20	19 24.52	-38 51.0	1.417	2.380	10.2	19.8
6 30	19 15.60	-32 44.9	1.033	2.037	6.4	20.2	6 30	19 14.90	-39 24.6	1.364	2.352	7.7	19.6
7 10	19 3.36	-33 1.2	1.001	2.008	5.7	20.1	7 10	19 3.69	-39 38.4	1.335	2.324	7.6	19.5
7 20	18 50.95	-32 57.5	0.991	1.978	9.8	20.2	7 20	18 52.49	-39 28.2	1.329	2.297	10.2	19.6
7 30	18 40.43	-32 33.5	1.002	1.949	15.0	20.4	7 30	18 43.01	-38 54.7	1.345	2.270	13.8	19.7
8 9	18 33.46	-31 53.8	1.032	1.921	19.9	20.6	8 9	18 36.58	-38 2.7	1.382	2.244	17.4	19.9
274235	2008 <i>MJ</i> ₂		7 7.3 203°56	1°6/ 7.8 18			193327	2000 <i>TO</i> ₁₁		7 7.3 225°75	1°2/ 6.9 18		
5 31	19 33.78	-16 42.7	1.988	2.816	14.2	20.6	5 31	19 35.29	-24 30.9	2.090	2.924	13.4	21.2
6 10	19 29.09	-16 54.0	1.902	2.813	11.1	20.4	6 10	19 30.32	-24 52.6	2.000	2.916	10.4	21.0
6 20	19 22.18	-17 13.2	1.839	2.810	7.6	20.2	6 20	19 23.04	-25 16.8	1.932	2.907	6.9	20.8
6 30	19 13.60	-17 39.0	1.800	2.806	3.7	20.0	6 30	19 14.00	-25 40.5	1.889	2.898	3.1	20.5
7 10	19 4.20	-18 9.3	1.788	2.802	1.9	19.8	7 10	19 4.09	-26 0.7	1.874	2.888	1.7	20.4
7 20	18 54.96	-18 41.5	1.804	2.798	5.4	20.1	7 20	18 54.30	-26 15.1	1.887	2.878	5.5	20.6
7 30	18 46.86	-19 13.5	1.846	2.793	9.2	20.3	7 30	18 45.69	-26 23.0	1.926	2.868	9.2	20.8
8 9	18 40.71	-19 43.9	1.912	2.788	12.7	20.5	8 9	18 39.08	-26 24.9	1.988	2.857	12.6	21.0
31799	1999 <i>LN</i> ₂₃		7 7.3 141°68	2°4/ 7.7 18			521609	2015 <i>PA</i> ₃₂₀		7 7.3 4°97	6°0/ 5.6 18		
5 31	19 36.40	-17 33.8	1.983	2.808	14.4	17.7	5 31	19 34.61	-36 34.9	1.875	2.715	14.5	20.5
6 10	19 30.90	-17 0.4	1.907	2.815	11.3	17.5	6 10	19 30.27	-37 25.9	1.804	2.715	11.6	20.4
6 20	19 23.20	-16 31.4	1.853	2.822	7.7	17.3	6 20	19 23.20	-38 11.3	1.755	2.715	8.7	20.2
6 30	19 13.97	-16 7.0	1.825	2.829	4.0	17.1	6 30	19 14.10	-38 44.9	1.729	2.716	6.5	20.1
7 10	19 4.10	-15 47.1	1.824	2.835	2.6	17.0	7 10	19 4.07	-39 2.1	1.729	2.717	6.3	20.0
7 20	18 54.58	-15 31.5	1.850	2.841	5.6	17.3	7 20	18 54.39	-39 0.7	1.754	2.719	8.4	20.2
7 30	18 46.35	-15 20.3	1.903	2.847	9.2	17.5	7 30	18 46.28	-38 41.7	1.803	2.721	11.2	20.3
8 9	18 40.13	-15 12.9	1.980	2.852	12.5	17.7	8 9	18 40.67	-38 8.7	1.874	2.724	14.1	20.5
463859	2014 <i>UV</i> ₁₉		7 7.3 25°29	1°3/ 7.7 17			509056	2005 <i>TA</i> ₁₅		7 7.3 291°79	0°3/ 7.4 18		
5 31	19 32.82	-17 51.4	1.221	2.084	19.2	20.3	5 31	19 35.29	-22 15.7	1.627	2.474	16.0	22.3
6 10	19 29.50	-18 9.9	1.157	2.088	15.0	20.0	6 10	19 31.15	-22 4.5	1.522	2.444	12.6	22.0
6 20	19 23.00	-18 40.2	1.112	2.092	10.0	19.8	6 20	19 24.10	-21 55.9	1.437	2.415	8.5	21.7
6 30	19 14.07	-19 19.5	1.087	2.097	4.6	19.5	6 30	19 14.65	-21 48.1	1.376	2.385	3.8	21.3
7 10	19 4.04	-20 3.5	1.087	2.102	1.9	19.3	7 10	19 3.81	-21 39.4	1.340	2.355	1.4	21.1
7 20	18 54.39	-20 47.7	1.109	2.108	7.1	19.7	7 20	18 52.88	-21 28.3	1.329	2.325	6.6	21.4
7 30	18 46.63	-21 28.5	1.155	2.114	12.2	20.0	7 30	18 43.27	-21 15.0	1.344	2.295	11.6	21.6
8 9	18 41.81	-22 3.8	1.221	2.120	16.7	2							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
94225	2001 <i>BO</i> ₅₉		7 7.3 220°11	7°3/11.3	18		293492	2007 <i>FP</i> ₄₄		7 7.3 301°88	6°9/5.4	18	
5 31	19 29.11	+ 5 5.4	2.862	3.587	12.7	20.1	5 31	19 36.23	-35 38.4	1.567	2.416	16.4	20.5
6 10	19 24.79	+ 5 17.4	2.768	3.581	11.1	20.0	6 10	19 32.39	-36 38.2	1.479	2.397	13.3	20.2
6 20	19 19.01	+ 5 13.6	2.695	3.573	9.4	19.8	6 20	19 25.18	-37 34.5	1.412	2.377	10.0	20.0
6 30	19 12.16	+ 4 52.0	2.645	3.566	8.0	19.7	6 30	19 15.20	-38 19.7	1.367	2.358	7.4	19.8
7 10	19 4.79	+ 4 12.4	2.620	3.558	7.4	19.7	7 10	19 3.70	-38 46.2	1.347	2.338	7.2	19.7
7 20	18 57.48	+ 3 15.9	2.622	3.550	7.8	19.7	7 20	18 52.27	-38 50.0	1.350	2.319	9.9	19.8
7 30	18 50.87	+ 2 5.2	2.649	3.541	9.1	19.8	7 30	18 42.61	-38 31.3	1.376	2.301	13.5	20.0
8 9	18 45.47	+ 0 44.2	2.702	3.533	10.8	19.9	8 9	18 36.01	-37 54.4	1.422	2.282	17.1	20.2
31096	1997 <i>GH</i> ₁₄		7 7.3 261°72	9°5/3.0	18		251970	2000 <i>AQ</i> ₉₂		7 7.3 255°49	1°0/7.3	18	
5 31	19 43.95	-51 57.9	2.601	3.371	12.8	19.1	5 31	19 43.03	-23 37.6	1.840	2.665	15.3	20.3
6 10	19 37.69	-53 9.7	2.516	3.352	11.4	18.9	6 10	19 36.61	-22 45.5	1.735	2.646	12.0	20.0
6 20	19 28.28	-54 9.9	2.452	3.333	10.2	18.8	6 20	19 27.38	-21 50.0	1.653	2.625	8.1	19.8
6 30	19 16.39	-54 51.1	2.412	3.314	9.5	18.7	6 30	19 15.98	-20 50.4	1.596	2.604	3.7	19.4
7 10	19 3.20	-55 7.9	2.395	3.295	9.7	18.7	7 10	19 3.48	-19 47.0	1.568	2.583	1.6	19.2
7 20	18 50.18	-54 58.1	2.402	3.275	10.7	18.8	7 20	18 51.15	-18 41.8	1.568	2.560	6.2	19.5
7 30	18 38.82	-54 22.9	2.433	3.255	12.2	18.8	7 30	18 40.28	-17 37.8	1.595	2.538	10.8	19.7
8 9	18 30.27	-53 27.3	2.483	3.234	13.8	18.9	8 9	18 31.87	-16 38.0	1.647	2.514	14.8	19.9
56913	2000 <i>QS</i> ₂₀₀		7 7.3 4°73	5°3/6.2	18		34377	2000 <i>RQ</i> ₅₄		7 7.3 3°29	6°1/6.9	18	
5 31	19 35.44	-35 44.8	1.900	2.739	14.3	19.1	5 31	19 38.03	-36 41.0	1.418	2.271	17.6	17.1
6 10	19 30.79	-36 18.0	1.827	2.739	11.5	18.9	6 10	19 33.59	-36 54.1	1.351	2.270	14.2	16.8
6 20	19 23.47	-36 45.3	1.776	2.739	8.4	18.7	6 20	19 25.68	-36 57.6	1.302	2.270	10.4	16.6
6 30	19 14.20	-37 1.4	1.748	2.740	5.9	18.6	6 30	19 15.25	-36 45.0	1.276	2.271	7.1	16.4
7 10	19 4.08	-37 2.4	1.746	2.741	5.5	18.5	7 10	19 3.80	-36 12.4	1.273	2.272	6.3	16.4
7 20	18 54.35	-36 46.9	1.770	2.742	7.7	18.7	7 20	18 53.02	-35 19.8	1.294	2.274	9.0	16.5
7 30	18 46.19	-36 16.4	1.819	2.744	10.7	18.9	7 30	18 44.43	-34 11.5	1.338	2.277	12.7	16.8
8 9	18 40.47	-35 34.5	1.889	2.746	13.7	19.1	8 9	18 39.04	-32 53.8	1.404	2.280	16.4	17.0
192651	1999 <i>RS</i> ₈₀		7 7.3 220°39	0°6/7.5	18 R		248518	2005 <i>WC</i> ₁₀		7 7.4 320°54	3°3/6.1	18	
5 31	19 34.24	-20 12.0	2.271	3.097	12.7	21.1	5 31	19 31.38	-28 23.6	1.993	2.839	13.5	19.8
6 10	19 29.24	-20 17.2	2.178	3.089	9.9	20.9	6 10	19 27.61	-29 17.1	1.906	2.827	10.5	19.6
6 20	19 22.20	-20 26.7	2.107	3.080	6.6	20.7	6 20	19 21.44	-30 12.5	1.841	2.816	7.2	19.4
6 30	19 13.62	-20 38.7	2.062	3.070	3.0	20.4	6 30	19 13.41	-31 5.2	1.801	2.805	4.1	19.2
7 10	19 4.28	-20 51.6	2.045	3.061	1.1	20.2	7 10	19 4.42	-31 50.4	1.788	2.794	3.6	19.1
7 20	18 55.06	-21 3.8	2.056	3.050	4.9	20.5	7 20	18 55.50	-32 24.7	1.801	2.784	6.6	19.3
7 30	18 46.86	-21 14.3	2.095	3.039	8.5	20.7	7 30	18 47.76	-32 46.6	1.839	2.774	10.0	19.5
8 9	18 40.42	-21 22.7	2.158	3.028	11.7	20.9	8 9	18 42.10	-32 56.7	1.900	2.765	13.3	19.7
19096	Leonfridman		7 7.3 230°35	5°3/5.8	18		250589	2005 <i>CM</i> ₂₀		7 7.4 205°79	3°5/6.7	17	
5 31	19 39.97	-32 54.3	1.730	2.569	15.5	18.0	5 31	19 38.94	-29 55.3	1.513	2.363	16.8	20.3
6 10	19 34.78	-33 52.3	1.646	2.560	12.4	17.8	6 10	19 34.00	-30 16.6	1.439	2.362	13.2	20.0
6 20	19 26.46	-34 48.7	1.583	2.550	8.9	17.5	6 20	19 25.88	-30 35.8	1.385	2.361	9.0	19.8
6 30	19 15.64	-35 36.6	1.544	2.539	6.0	17.3	6 30	19 15.36	-30 47.7	1.355	2.360	4.9	19.5
7 10	19 3.51	-36 9.5	1.531	2.528	5.7	17.3	7 10	19 3.75	-30 47.9	1.349	2.358	3.9	19.5
7 20	18 51.52	-36 23.7	1.543	2.517	8.5	17.4	7 20	18 52.55	-30 34.7	1.369	2.357	7.6	19.7
7 30	18 41.18	-36 19.1	1.581	2.505	12.1	17.6	7 30	18 43.23	-30 9.2	1.412	2.355	11.8	19.9
8 9	18 33.64	-35 59.2	1.639	2.492	15.6	17.8	8 9	18 36.84	-29 35.1	1.478	2.354	15.7	20.2
398281	2010 <i>UA</i> ₂₀		7 7.3 6°63	9°7/3.6	18		352493	2008 <i>CG</i> ₈		7 7.4 120°32	2°8/6.7	18	
5 31	19 37.43	-46 5.1	1.983	2.799	14.7	20.6	5 31	19 34.95	-30 40.0	2.229	3.063	12.7	21.2
6 10	19 32.92	-47 35.3	1.921	2.799	12.6	20.5	6 10	19 29.86	-30 52.4	2.151	3.065	9.9	21.0
6 20	19 25.24	-48 54.5	1.880	2.800	10.8	20.4	6 20	19 22.60	-31 1.8	2.096	3.067	6.8	20.8
6 30	19 15.08	-49 54.6	1.862	2.802	9.7	20.3	6 30	19 13.80	-31 5.3	2.066	3.069	3.8	20.7
7 10	19 3.74	-50 29.3	1.867	2.803	9.9	20.3	7 10	19 4.34	-31 0.3	2.063	3.071	3.1	20.6
7 20	18 52.70	-50 36.1	1.896	2.806	11.2	20.4	7 20	18 55.19	-30 46.0	2.088	3.073	5.7	20.8
7 30	18 43.50	-50 16.8	1.946	2.809	13.2	20.6	7 30	18 47.29	-30 23.2	2.139	3.075	8.8	21.0
8 9	18 37.20	-49 36.3	2.017	2.812	15.2	20.7	8 9	18 41.37	-29 53.9	2.214	3.076	11.7	21.2
98016	2000 <i>QA</i> ₂₂₃		7 7.3 287°60	5°1/5.7	18		103225	1999 <i>YQ</i> ₈		7 7.4 312°85	0°7/7.2	17	
5 31	19 36.06	-29 34.0	1.388	2.248	17.5	19.4	5 31	19 31.70	-22 32.4	1.326	2.192	17.8	19.5
6 10	19 32.48	-30 43.0	1.303	2.231	13.9	19.1	6 10	19 28.90	-22 49.6	1.238	2.172	14.0	19.2
6 20	19 25.38	-31 55.8	1.238	2.215	9.8	18.8	6 20	19 22.89	-23 13.3	1.169	2.152	9.4	18.9
6 30	19 15.35	-33 4.7	1.195	2.198	6.0	18.6	6 30	19 14.24	-23 40.5	1.121	2.132	4.1	18.6
7 10	19 3.62	-34 1.1	1.177	2.181	5.6	18.5	7 10	19 4.11	-24 7.0	1.097	2.113	1.8	18.3
7 20	18 51.87	-34 38.8	1.182	2.165	9.3	18.7	7 20	18 53.98	-24 29.0	1.097	2.094	7.3	18.6
7 30	18 41.90	-34 55.8	1.210	2.148	13.9	18.9	7 30	18 45.48	-24 44.4	1.119	2.076	12.7	18.9
8 9	18 35.13	-34 54.7	1.258	2.132	18.1	19.1	8 9	18 39.89	-24 53.1	1.161	2.059	17.5	19.1
193806	2001 <i>PO</i> ₂₁		7 7.3 3°29	2°5/6.8	18		442947	2013 <i>CM</i> ₉₅		7 7.4 180°50	2°5/6.7	18	
5 31	19 30.30	-25 4.0	0.958	1.849	21.0	19.4	5 31	19 34.76	-30 9.0	2.416	3.245	12.0	21.9
6 10	19 28.52	-25 35.6	0.900	1.847	16.3	19.1	6 10	19 29.56	-30 22.1	2.334	3.245	9.3	21.7
6 20	19 22.86	-26 12.5	0.858	1.846	10.9	18.8	6 20	19 22.35	-30 32.8	2.275	3.246	6.3	21.5
6 30	19 14.19	-26 48.9	0.836	1.847	5.1	18.5	6 30	19 13.68	-30 38.2	2.242	3.246	3.5	21.3
7 10	19 4.11	-27 18.4	0.835	1.849	3.3	18.4	7 10	19 4.40	-30 36.1	2.237	3.246	2.8	21.3
7 20	18 54.53	-27 36.2	0.854	1.852	8.7	18.7	7 20	18 55.37	-30 25.5	2.260	3.245	5.3	21.5
7 30	18 47.34	-27 41.5	0.894	1.857	14.3	19.0	7 30	18 47.47	-30 7.0	2.310	3.245	8.3	21.7
8 9	18 43.76	-27 36.0	0.951	1.862	19.2	19.3	8 9	18 41.40	-29 42.2	2.385	3.244	11.1	21.8
42860	1999 <i>RC</i> ₉₀		7 7.3 202°78	0°3/7.2	18		510718	2012 <i>VP</i> ₃₇		7 7.4 201°97	3°4/8.3	17	
5 31	19 34.40	-22 4.6	2.308	3.136	12.5	19.6	5 31	19 32.00	-13 21.9	1.954	2.779	14.5	21.7
6 10	19 29.35	-22 24.5	2.219	3.132	9.7	19.4	6 10	19 27.70	-13 8.4	1.873	2.778	11.6	21.5
6 20	19 22.26	-22 48.2	2.153	3.127	6.4	19.2	6 20	19 21.26	-13 4.0	1.813	2.778	8.2	21.3
6 30	19 13.66	-23 13.2	2.113	3.122	2.8	19.0	6 30	19 13.27	-13 8.9	1.778	2.777	4.8	21.1
7 10	19 4.31	-23 37.0	2.101	3.117	1.1	18.8	7 10	19 4.54	-13 22.2	1.768	2.776	3.4	21.0
7 20	18 55.10	-23 57.7	2.118	3.111	4.8	19.1	7 20	18 56.01	-13 42.3	1.786	2.776	5.9	21.1
7 30	18 46.92	-24 14.0	2.162	3.104	8.4	19.3	7 30	18 48.62	-14 7.6	1.829	2.775	9.4	21.4
8 9	18 40.50	-24 26.0	2.230	3.097	11.5	19.5	8 9	18 43.12					

EPHEMERIDES

7 7.4

7 7.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
214877 2007 RY ₁₁₀ h m o / 5 31 19 35.93 -13 1.2 1.771 2.593 15.9 21.3 6 10 19 31.11 -12 47.7 1.679 2.583 12.8 21.0 6 20 19 23.76 -12 44.4 1.609 2.572 9.1 20.8 6 30 19 14.44 -12 51.7 1.562 2.561 5.4 20.6 7 10 19 4.09 -13 8.8 1.541 2.549 3.8 20.4 7 20 18 53.82 -13 33.9 1.546 2.536 6.7 20.6 7 30 18 44.79 -14 4.7 1.577 2.522 10.7 20.8 8 9 18 37.95 -14 38.9 1.631 2.508 14.5 21.0							61708 2000 QF ₁₃₈ h m o / 5 31 19 31.88 -22 45.5 2.253 3.087 12.5 19.6 6 10 19 27.58 -23 3.9 2.157 3.073 9.7 19.3 6 20 19 21.22 -23 25.8 2.083 3.059 6.4 19.1 6 30 19 13.29 -23 48.8 2.035 3.045 2.8 18.9 7 10 19 4.55 -24 10.7 2.015 3.030 1.2 18.7 7 20 18 55.89 -24 29.3 2.022 3.016 5.0 18.9 7 30 18 48.20 -24 43.4 2.056 3.001 8.6 19.1 8 9 18 42.28 -24 53.0 2.114 2.986 11.8 19.3						
154852 2004 RE ₆₁ h m o / 5 31 19 32.99 -28 56.0 2.714 3.541 10.9 20.4 6 10 19 28.06 -29 12.9 2.622 3.533 8.4 20.2 6 20 19 21.31 -29 28.7 2.553 3.524 5.7 20.0 6 30 19 13.25 -29 40.7 2.511 3.515 3.0 19.8 7 10 19 4.55 -29 46.9 2.497 3.506 2.3 19.8 7 20 18 56.00 -29 46.0 2.512 3.497 4.8 19.9 7 30 18 48.37 -29 38.0 2.554 3.488 7.7 20.1 8 9 18 42.31 -29 23.9 2.621 3.478 10.3 20.3							499372 2010 AN ₂₄ h m o / 5 31 19 35.22 -21 13.8 2.397 3.219 12.3 22.1 6 10 19 29.97 -21 35.9 2.301 3.211 9.5 21.9 6 20 19 22.71 -22 2.3 2.228 3.201 6.3 21.7 6 30 19 13.92 -22 30.8 2.182 3.191 2.7 21.4 7 10 19 4.34 -22 58.8 2.165 3.180 1.0 21.2 7 20 18 54.84 -23 24.2 2.176 3.169 4.7 21.5 7 30 18 46.29 -23 45.7 2.215 3.157 8.2 21.7 8 9 18 39.46 -24 2.8 2.279 3.144 11.3 21.9						
304504 2006 UZ ₁₇₆ h m o / 5 31 19 31.63 -22 5.8 2.000 2.841 13.7 21.1 6 10 19 27.68 -22 35.8 1.907 2.827 10.6 20.8 6 20 19 21.43 -23 11.3 1.835 2.813 7.0 20.6 6 30 19 13.42 -23 49.4 1.789 2.798 3.1 20.3 7 10 19 4.48 -24 26.9 1.769 2.784 1.4 20.2 7 20 18 55.57 -25 0.6 1.776 2.770 5.5 20.4 7 30 18 47.76 -25 28.7 1.810 2.757 9.4 20.6 8 9 18 41.91 -25 50.4 1.866 2.743 12.9 20.8							499642 2010 VR ₄₈ h m o / 5 31 19 36.64 -22 51.2 1.861 2.698 14.7 22.5 6 10 19 31.69 -23 19.2 1.772 2.690 11.4 22.3 6 20 19 24.17 -23 52.0 1.705 2.681 7.6 22.0 6 30 19 14.64 -24 26.2 1.662 2.671 3.3 21.8 7 10 19 4.07 -24 58.2 1.646 2.661 1.6 21.6 7 20 18 53.60 -25 24.8 1.658 2.651 5.9 21.9 7 30 18 44.43 -25 44.6 1.695 2.640 10.1 22.1 8 9 18 37.50 -25 57.6 1.756 2.628 13.8 22.3						
163938 2003 TV ₁₇ h m o / 5 31 19 34.45 -22 45.0 2.115 2.948 13.3 20.4 6 10 19 29.54 -22 47.2 2.030 2.945 10.3 20.2 6 20 19 22.46 -22 51.8 1.967 2.942 6.8 20.0 6 30 19 13.79 -22 56.9 1.929 2.939 3.0 19.8 7 10 19 4.38 -23 0.6 1.920 2.935 1.1 19.6 7 20 18 55.18 -23 1.6 1.937 2.931 5.1 19.9 7 30 18 47.14 -22 59.6 1.982 2.927 8.8 20.1 8 9 18 41.03 -22 54.9 2.050 2.923 12.1 20.3							462131 2007 RO ₂₅₀ h m o / 5 31 19 30.28 -13 18.3 1.143 2.006 20.2 20.3 6 10 19 27.85 -12 28.3 1.068 1.994 16.4 20.0 6 20 19 22.17 -11 49.7 1.010 1.983 11.9 19.7 6 30 19 13.92 -11 25.5 0.972 1.972 7.5 19.5 7 10 19 4.33 -11 17.1 0.955 1.962 5.9 19.3 7 20 18 54.94 -11 24.1 0.961 1.953 9.1 19.5 7 30 18 47.33 -11 44.5 0.987 1.945 13.9 19.7 8 9 18 42.69 -12 14.3 1.032 1.938 18.5 20.0						
36827 2000 SP ₈₉ h m o / 5 31 19 32.00 - 1 42.3 2.535 3.300 13.2 18.8 6 10 19 26.98 - 0 40.8 2.470 3.318 11.2 18.7 6 20 19 20.42 + 0 8.5 2.427 3.337 9.1 18.6 6 30 19 12.79 + 0 43.1 2.408 3.355 7.5 18.5 7 10 19 4.76 + 1 1.9 2.416 3.373 6.9 18.5 7 20 18 56.99 + 1 4.9 2.450 3.390 7.7 18.5 7 30 18 50.15 + 0 53.5 2.510 3.408 9.3 18.7 8 9 18 44.74 + 0 30.6 2.593 3.425 11.2 18.8							263082 2007 RT ₂₃₇ h m o / 5 31 19 34.45 -14 12.1 1.245 2.097 19.6 20.5 6 10 19 30.55 -13 49.5 1.185 2.106 15.5 20.2 6 20 19 23.59 -13 39.6 1.143 2.116 10.9 20.0 6 30 19 14.38 -13 42.6 1.122 2.125 6.2 19.8 7 10 19 4.22 -13 57.2 1.125 2.135 4.2 19.7 7 20 18 54.56 -14 20.9 1.151 2.145 7.7 19.9 7 30 18 46.77 -14 50.7 1.200 2.156 12.3 20.2 8 9 18 41.80 -15 23.4 1.270 2.166 16.4 20.5						
342222 2008 SH ₂₆₀ h m o / 5 31 19 33.98 -19 19.2 1.985 2.817 14.1 21.2 6 10 19 29.22 -19 41.6 1.911 2.825 10.9 21.0 6 20 19 22.26 -20 10.5 1.858 2.833 7.2 20.8 6 30 19 13.70 -20 43.3 1.831 2.840 3.2 20.6 7 10 19 4.42 -21 17.2 1.831 2.847 1.2 20.5 7 20 18 55.39 -21 49.7 1.859 2.854 5.2 20.8 7 30 18 47.59 -22 18.9 1.913 2.860 9.0 21.0 8 9 18 41.76 -22 43.9 1.991 2.867 12.3 21.2							444693 2007 EM ₃₃ h m o / 5 31 19 35.05 -34 5.7 2.353 3.182 12.3 21.2 6 10 19 29.90 -34 25.6 2.278 3.186 9.7 21.0 6 20 19 22.62 -34 40.8 2.226 3.190 6.9 20.9 6 30 19 13.83 -34 47.7 2.199 3.194 4.5 20.7 7 10 19 4.42 -34 43.7 2.199 3.198 4.0 20.7 7 20 18 55.34 -34 28.0 2.226 3.202 6.1 20.8 7 30 18 47.51 -34 1.5 2.280 3.206 8.8 21.0 8 9 18 41.63 -33 26.8 2.358 3.210 11.5 21.2						
356396 2010 RM ₄₈ h m o / 5 31 19 35.06 -36 7.2 2.191 3.022 13.0 20.7 6 10 19 30.19 -36 47.3 2.119 3.025 10.4 20.5 6 20 19 22.96 -37 22.1 2.068 3.028 7.7 20.3 6 30 19 14.01 -37 46.7 2.043 3.031 5.5 20.2 7 10 19 4.31 -37 57.5 2.043 3.034 5.3 20.2 7 20 18 54.92 -37 53.1 2.071 3.037 7.2 20.3 7 30 18 46.89 -37 34.1 2.123 3.040 9.8 20.5 8 9 18 41.01 -37 3.6 2.198 3.043 12.4 20.7							291797 2006 KG ₆₆ h m o / 5 31 19 33.87 -24 52.1 1.830 2.675 14.6 21.1 6 10 19 29.49 -25 29.1 1.756 2.678 11.3 20.9 6 20 19 22.63 -26 9.3 1.704 2.681 7.5 20.6 6 30 19 13.93 -26 48.9 1.676 2.685 3.5 20.4 7 10 19 4.38 -27 23.6 1.675 2.688 2.3 20.3 7 20 18 55.08 -27 50.6 1.700 2.691 6.0 20.6 7 30 18 47.15 -28 8.8 1.751 2.695 9.9 20.8 8 9 18 41.44 -28 18.5 1.824 2.698 13.3 21.0						
378218 2007 BD ₁₂ h m o / 5 31 19 36.43 -25 33.3 1.855 2.695 14.6 21.5 6 10 19 31.47 -26 5.5 1.777 2.695 11.3 21.3 6 20 19 23.94 -26 40.0 1.719 2.695 7.5 21.1 6 30 19 14.49 -27 13.1 1.687 2.695 3.6 20.8 7 10 19 4.13 -27 40.6 1.682 2.695 2.4 20.7 7 20 18 54.00 -28 0.0 1.703 2.694 6.1 21.0 7 30 18 45.27 -28 10.3 1.750 2.692 10.0 21.2 8 9 18 38.83 -28 12.5 1.821 2.691 13.5 21.4							379738 2011 GF ₆₃ h m o / 5 31 19 42.91 -37 41.4 1.862 2.688 15.1 20.3 6 10 19 36.54 -37 59.2 1.791 2.694 12.2 20.1 6 20 19 27.24 -38 8.2 1.742 2.699 9.0 20.0 6 30 19 15.87 -38 2.7 1.716 2.705 6.3 19.8 7 10 19 3.71 -37 39.2 1.717 2.710 5.8 19.8 7 20 18 52.16 -36 57.6 1.745 2.715 8.0 19.9 7 30 18 42.50 -36 1.1 1.797 2.720 11.0 20.1 8 9 18 35.59 -34 54.7 1.873 2.724 14.0 20.3						
344773 2003 WK ₁₄₉ h m o / 5 31 19 34.89 -27 1.0 2.430 3.259 11.9 21.7 6 10 19 29.70 -27 30.3 2.345 3.257 9.2 21.5 6 20 19 22.49 -28 0.2 2.283 3.256 6.2 21.3 6 30 19 13.79 -28 27.6 2.247 3.253 3.1 21.1 7 10 19 4.39 -28 49.6 2.240 3.251 2.3 21.1 7 20 18 55.15 -29 4.3 2.261 3.248 5.1 21.3 7 30 18 46.96 -29 11.1 2.309 3.244 8.3 21.4 8 9 18 40.54 -29 10.8 2.382 3.240 11.1 21.6							238249 2003 UD ₂₇₉ h m o / 5 31 19 33.98 -25 3.9 2.030 2.869 13.6 20.9 6 10 19 29.57 -25 39.1 1.933 2.852 10.6 20.7 6 20 19 22.75 -26 17.7 1.858 2.834 7.1 20.4 6 30 19 14.05 -26 56.4 1.809 2.817 3.3 20.2 7 10 19 4.31 -27 31.1 1.786 2.799 2.2 20.0 7 20 18 54.59 -27 58.9 1.790 2.781 5.9 20.2 7 30 18 45.98 -28 18.2 1.821 2.762 9.7 20.4 8 9 18 39.41 -28 29.3 1.875 2.744 13.2 20.6						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
446278	2014 DT_2		7 7.4	3°74	21.1°/ 3.7 17		498257	2007 UY_{115}		7 7.4	269°68	0°2/ 7.4 17	
5 31	19 52.51	-57 5.5	0.991	1.814	25.5	20.0	5 31	19 35.69	-20 46.9	1.537	2.384	16.7	22.1
6 10	19 49.68	-59 27.1	0.951	1.813	23.6	19.9	6 10	19 31.58	-21 0.4	1.444	2.367	13.1	21.8
6 20	19 39.14	-61 20.8	0.924	1.812	22.0	19.8	6 20	19 24.47	-21 21.0	1.371	2.349	8.8	21.5
6 30	19 21.88	-62 26.2	0.912	1.813	21.1	19.7	6 30	19 14.94	-21 46.0	1.321	2.331	3.9	21.2
7 10	19 1.54	-62 28.0	0.915	1.814	21.3	19.7	7 10	19 4.05	-22 12.0	1.296	2.312	1.4	21.0
7 20	18 43.06	-61 23.9	0.933	1.815	22.4	19.8	7 20	18 53.16	-22 35.9	1.297	2.293	6.7	21.3
7 30	18 30.49	-59 25.3	0.965	1.817	24.1	19.9	7 30	18 43.71	-22 55.6	1.322	2.274	11.7	21.5
8 9	18 25.25	-56 50.7	1.011	1.820	26.1	20.1	8 9	18 36.88	-23 10.7	1.369	2.255	16.1	21.7
501343	2013 YD_{10}		7 7.4	197°14	0°2/ 7.5 18		470656	2008 SV_{140}		7 7.4	305°28	2°9/ 7.0 18	
5 31	19 34.55	-18 59.6	2.418	3.238	12.2	22.0	5 31	19 36.37	-29 56.9	1.620	2.469	15.9	20.9
6 10	19 29.42	-19 37.7	2.327	3.235	9.5	21.8	6 10	19 31.97	-29 57.6	1.532	2.455	12.5	20.6
6 20	19 22.33	-20 22.4	2.259	3.231	6.3	21.6	6 20	19 24.59	-29 54.8	1.464	2.441	8.6	20.4
6 30	19 13.77	-21 11.2	2.218	3.226	2.8	21.4	6 30	19 14.91	-29 44.6	1.421	2.427	4.5	20.1
7 10	19 4.44	-22 1.1	2.206	3.221	1.0	21.2	7 10	19 4.11	-29 23.9	1.402	2.413	3.3	20.0
7 20	18 55.19	-22 49.1	2.223	3.216	4.6	21.5	7 20	18 53.56	-28 51.8	1.409	2.400	7.0	20.2
7 30	18 46.87	-23 33.0	2.268	3.210	8.1	21.7	7 30	18 44.66	-28 10.1	1.440	2.386	11.4	20.4
8 9	18 40.19	-24 11.6	2.338	3.203	11.1	21.9	8 9	18 38.44	-27 22.3	1.493	2.374	15.3	20.6
20099	1994 WB_3		7 7.4	246°51	0°1/ 7.4 18		13064	Haemhouts		7 7.4	252°81	1°7/ 7.9 18	
5 31	19 31.35	-21 12.5	2.640	3.466	11.2	19.6	5 31	19 34.36	-16 13.3	1.697	2.533	15.9	19.0
6 10	19 26.83	-21 25.8	2.542	3.453	8.7	19.4	6 10	19 30.13	-16 32.0	1.607	2.522	12.6	18.8
6 20	19 20.56	-21 42.6	2.466	3.440	5.7	19.2	6 20	19 23.27	-17 1.4	1.537	2.510	8.6	18.5
6 30	19 12.98	-22 1.2	2.418	3.426	2.5	19.0	6 30	19 14.34	-17 40.1	1.491	2.498	4.2	18.2
7 10	19 4.74	-22 19.9	2.397	3.413	0.9	18.8	7 10	19 4.29	-18 24.9	1.471	2.485	2.0	18.1
7 20	18 56.56	-22 37.1	2.405	3.399	4.3	19.0	7 20	18 54.28	-19 12.3	1.477	2.472	6.1	18.3
7 30	18 49.21	-22 51.8	2.441	3.385	7.5	19.2	7 30	18 45.54	-19 59.0	1.509	2.460	10.6	18.5
8 9	18 43.33	-23 3.5	2.502	3.370	10.3	19.4	8 9	18 39.07	-20 42.7	1.563	2.446	14.6	18.7
245355	2005 EL_{263}		7 7.4	335°99	0°7/ 7.2 17 R		379686	2011 FR_{37}		7 7.4	82°53	1°7/ 7.1 17	
5 31	19 32.78	-23 37.1	1.787	2.634	14.8	20.5	5 31	19 36.96	-26 30.4	1.682	2.528	15.6	20.9
6 10	19 28.69	-23 45.5	1.707	2.630	11.5	20.3	6 10	19 31.93	-26 38.8	1.616	2.537	12.1	20.7
6 20	19 22.13	-23 56.7	1.648	2.627	7.6	20.0	6 20	19 24.23	-26 47.3	1.570	2.547	8.0	20.5
6 30	19 13.74	-24 8.2	1.614	2.623	3.3	19.8	6 30	19 14.63	-26 52.5	1.548	2.557	3.7	20.2
7 10	19 4.49	-24 17.3	1.605	2.620	1.4	19.6	7 10	19 4.25	-26 51.6	1.553	2.566	2.2	20.2
7 20	18 55.47	-24 22.4	1.622	2.617	5.7	19.9	7 20	18 54.34	-26 43.4	1.583	2.576	6.2	20.4
7 30	18 47.81	-24 22.7	1.665	2.615	9.9	20.1	7 30	18 46.07	-26 28.5	1.639	2.586	10.2	20.7
8 9	18 42.36	-24 18.9	1.730	2.613	13.5	20.4	8 9	18 40.26	-26 8.6	1.718	2.595	13.8	20.9
313907	2004 PO_{26}		7 7.4	326°66	4°9/ 6.2 18		170720	2004 BF_{50}		7 7.4	180°58	0°4/ 7.3 18	
5 31	19 34.37	-35 8.7	2.015	2.853	13.7	20.3	5 31	19 33.39	-22 49.7	2.071	2.907	13.4	20.8
6 10	19 29.94	-35 36.9	1.933	2.844	10.9	20.1	6 10	19 28.78	-22 59.9	1.990	2.907	10.4	20.6
6 20	19 22.96	-36 0.0	1.871	2.836	8.0	19.9	6 20	19 22.01	-23 13.0	1.931	2.907	6.9	20.4
6 30	19 14.10	-36 13.1	1.834	2.827	5.5	19.7	6 30	19 13.66	-23 26.8	1.898	2.907	3.0	20.1
7 10	19 4.36	-36 12.6	1.823	2.819	5.1	19.7	7 10	19 4.58	-23 39.0	1.892	2.907	1.2	20.0
7 20	18 54.88	-35 57.0	1.838	2.812	7.3	19.8	7 20	18 55.72	-23 48.1	1.913	2.907	5.1	20.3
7 30	18 46.81	-35 27.4	1.878	2.805	10.4	20.0	7 30	18 48.05	-23 53.2	1.961	2.907	8.8	20.5
8 9	18 41.02	-34 46.8	1.940	2.798	13.3	20.1	8 9	18 42.30	-23 54.7	2.032	2.907	12.1	20.7
93245	2000 SH_{155}		7 7.4	277°50	8°5/ 9.2 18		182898	2002 EF_{12}		7 7.4	70°22	1°1/ 7.0 18	
5 31	19 31.32	-2 11.8	1.854	2.644	16.5	19.6	5 31	19 32.91	-24 18.3	2.185	3.021	12.8	20.5
6 10	19 27.44	-1 18.1	1.761	2.628	14.1	19.4	6 10	19 28.18	-24 43.4	2.122	3.039	9.8	20.3
6 20	19 21.30	-0 39.6	1.687	2.611	11.5	19.2	6 20	19 21.46	-25 10.4	2.081	3.057	6.5	20.1
6 30	19 13.42	-0 20.0	1.635	2.595	9.4	19.1	6 30	19 13.36	-25 36.6	2.066	3.075	2.9	19.9
7 10	19 4.60	-0 21.7	1.607	2.578	8.5	19.0	7 10	19 4.71	-25 59.4	2.079	3.093	1.6	19.8
7 20	18 55.79	-0 44.8	1.604	2.561	9.7	19.0	7 20	18 56.39	-26 16.8	2.119	3.111	4.9	20.1
7 30	18 48.03	-1 27.0	1.625	2.544	12.2	19.1	7 30	18 49.26	-26 28.3	2.186	3.129	8.2	20.3
8 9	18 42.18	-2 23.9	1.667	2.527	15.0	19.3	8 9	18 43.95	-26 34.1	2.277	3.147	11.2	20.6
350337	2012 UO_{100}		7 7.4	215°00	2°0/ 7.9 17		36596	2000 QH_{134}		7 7.4	173°67	2°2/ 6.9 17	
5 31	19 32.42	-16 15.3	2.064	2.892	13.8	21.6	5 31	19 39.42	-26 30.1	1.661	2.502	15.9	19.8
6 10	19 27.99	-16 14.1	1.980	2.889	10.8	21.4	6 10	19 34.06	-26 55.0	1.585	2.505	12.4	19.5
6 20	19 21.48	-16 20.2	1.917	2.887	7.4	21.2	6 20	19 25.82	-27 21.1	1.531	2.507	8.3	19.3
6 30	19 13.42	-16 32.8	1.879	2.884	3.8	20.9	6 30	19 15.40	-27 44.2	1.500	2.508	4.0	19.0
7 10	19 4.63	-16 50.4	1.869	2.881	2.2	20.8	7 10	19 3.97	-28 0.0	1.496	2.509	2.6	19.0
7 20	18 56.01	-17 11.2	1.885	2.878	5.3	21.0	7 20	18 52.88	-28 6.2	1.519	2.509	6.6	19.2
7 30	18 48.48	-17 33.7	1.928	2.875	8.9	21.2	7 30	18 43.45	-28 2.8	1.566	2.509	10.9	19.5
8 9	18 42.77	-17 56.4	1.994	2.872	12.2	21.4	8 9	18 36.65	-27 51.6	1.636	2.508	14.6	19.7
513239	2005 XO_{24}		7 7.4	255°14	0°7/ 7.5 18		369970	1996 AS_{18}		7 7.4	173°97	3°7/ 8.4 17	
5 31	19 31.98	-20 59.7	2.453	3.281	11.9	21.6	5 31	19 34.33	-12 29.0	1.791	2.615	15.7	21.8
6 10	19 27.34	-20 45.9	2.363	3.275	9.2	21.5	6 10	19 29.72	-12 18.9	1.713	2.616	12.6	21.6
6 20	19 20.88	-20 34.3	2.296	3.269	6.1	21.3	6 20	19 22.74	-12 19.8	1.654	2.618	8.9	21.4
6 30	19 13.12	-20 24.1	2.255	3.264	2.8	21.0	6 30	19 14.02	-12 31.7	1.620	2.618	5.3	21.2
7 10	19 4.76	-20 14.5	2.242	3.258	1.1	20.9	7 10	19 4.47	-12 53.5	1.612	2.619	3.8	21.1
7 20	18 56.57	-20 4.9	2.258	3.252	4.5	21.1	7 20	18 55.14	-13 23.0	1.630	2.619	6.4	21.2
7 30	18 49.34	-19 55.2	2.300	3.246	7.8	21.3	7 30	18 47.09	-13 57.9	1.673	2.619	10.1	21.5
8 9	18 43.69	-19 45.6	2.368	3.240	10.7	21.5	8 9	18 41.13	-14 35.5	1.740	2.619	13.6	21.7
180390	2004 AM_7		7 7.4	172°92	0°7/ 7.6 18		178893	2001 OD_{43}		7 7.4	306°53	0°8/ 7.3 18	
5 31	19 35.27	-18 25.7	1.697	2.536	15.8	20.4	5 31	19 33.69	-25 15.0	1.826	2.672	14.6	20.3
6 10	19 30.69	-18 53.9	1.620	2.537	12.3	20.2	6 10	19 29.61	-25 5.2	1.724	2.646	11.4	20.0
6 20	19 23.52	-19 31.1	1.563	2.538	8.2	20.0	6 20	19 22.92	-24 55.3	1.643	2.621	7.7	19.7
6 30	19 14.39	-20 14.5	1.530	2.539	3.7	19.7	6 30	19 14.20	-24 43.0	1.586	2.595	3.4	19.4
7 10	19 4.29	-21 0.3	1.524	2.540	1.3	19.5	7 10	19 4.38	-24 26.5	1.555	2.570	1.5	19.2
7 20	18 54.40	-21 44.9	1.545	2.540	5.9	19.8	7 20	18 54.60	-24 5.0	1.550	2.545	6.0	19.4
7 30	18 45.91	-22 25.4	1.591	2.540	10.2	20.1	7 30	18 46.08	-23 39.1	1.571	2.520	10.3	19.6
8 9	18 39.73	-23 0.4	1.659	2.540	14.0	20.3	8 9	18 39.80	-23 10.3	1.614	2.496	14.3	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
114443	2003 <i>AQ</i> ₁₇		7 7.4 218°10	0°3/ 7.5 18			170459	2003 <i>UQ</i> ₁₉₆		7 7.4 277°94	1°0/ 7.2 17		
5 31	19 36.19	-21 6.4	2.030	2.859	13.9	20.5	5 31	19 35.80	-23 52.9	1.484	2.338	16.9	20.8
6 10	19 31.07	-21 12.2	1.939	2.852	10.8	20.3	6 10	19 31.67	-24 5.0	1.402	2.328	13.2	20.5
6 20	19 23.62	-21 22.1	1.870	2.844	7.2	20.1	6 20	19 24.50	-24 20.9	1.340	2.319	8.8	20.3
6 30	19 14.41	-21 34.2	1.826	2.835	3.2	19.8	6 30	19 14.95	-24 37.1	1.300	2.310	3.9	19.9
7 10	19 4.33	-21 46.2	1.810	2.825	1.1	19.6	7 10	19 4.18	-24 49.9	1.285	2.300	1.8	19.8
7 20	18 54.38	-21 56.4	1.821	2.816	5.3	19.9	7 20	18 53.62	-24 56.9	1.296	2.291	6.8	20.1
7 30	18 45.61	-22 4.0	1.860	2.805	9.3	20.1	7 30	18 44.69	-24 57.3	1.330	2.282	11.6	20.3
8 9	18 38.86	-22 8.8	1.922	2.794	12.8	20.3	8 9	18 38.50	-24 52.0	1.386	2.273	15.9	20.6
127909	2003 <i>GU</i> ₂₆		7 7.4 195°52	3°2/ 6.7 17			91906	1999 <i>VE</i> ₂₄		7 7.4 283°46	4°7/ 5.4 18		
5 31	19 38.84	-27 52.0	1.452	2.304	17.3	21.3	5 31	19 34.06	-33 59.6	2.338	3.169	12.3	19.4
6 10	19 34.10	-28 25.8	1.379	2.303	13.5	21.1	6 10	19 29.58	-34 56.7	2.242	3.150	9.8	19.2
6 20	19 26.11	-29 0.8	1.325	2.302	9.2	20.8	6 20	19 22.76	-35 52.2	2.169	3.131	7.2	19.0
6 30	19 15.61	-29 31.2	1.295	2.301	4.7	20.6	6 30	19 14.12	-36 41.0	2.121	3.112	5.1	18.8
7 10	19 3.90	-29 51.6	1.289	2.300	3.6	20.5	7 10	19 4.47	-37 18.5	2.100	3.092	5.0	18.8
7 20	18 52.55	-29 59.1	1.309	2.298	7.6	20.7	7 20	18 54.81	-37 41.6	2.107	3.073	7.1	18.9
7 30	18 43.07	-29 53.8	1.352	2.297	12.1	21.0	7 30	18 46.22	-37 49.7	2.139	3.054	9.9	19.0
8 9	18 36.57	-29 38.2	1.417	2.294	16.2	21.2	8 9	18 39.59	-37 44.3	2.193	3.034	12.6	19.2
414158	2007 <i>XC</i> ₅₉		7 7.4 216°41	0°7/ 7.6 17			356908	2012 <i>AE</i> ₄		7 7.4 228°56	0°3/ 7.5 18		
5 31	19 36.82	-19 56.5	1.843	2.676	15.0	22.4	5 31	19 30.89	-19 24.5	2.506	3.332	11.7	20.8
6 10	19 31.78	-20 3.3	1.755	2.669	11.7	22.2	6 10	19 26.56	-19 52.5	2.416	3.327	9.1	20.6
6 20	19 24.21	-20 15.7	1.687	2.662	7.8	21.9	6 20	19 20.44	-20 26.1	2.350	3.323	6.0	20.4
6 30	19 14.71	-20 31.8	1.645	2.654	3.5	21.6	6 30	19 13.00	-21 3.3	2.309	3.318	2.7	20.2
7 10	19 4.22	-20 49.1	1.629	2.645	1.3	21.5	7 10	19 4.90	-21 41.8	2.297	3.313	0.9	20.1
7 20	18 53.88	-21 5.6	1.641	2.636	5.7	21.7	7 20	18 56.88	-22 19.1	2.314	3.308	4.4	20.3
7 30	18 44.84	-21 19.8	1.679	2.626	10.0	22.0	7 30	18 49.74	-22 53.5	2.358	3.303	7.6	20.5
8 9	18 38.00	-21 31.4	1.740	2.616	13.7	22.2	8 9	18 44.11	-23 23.9	2.427	3.297	10.5	20.7
431112	2006 <i>GM</i> ₄₃		7 7.4 312°53	2°2/ 6.7 18			83311	2001 <i>RD</i> ₁₁₄		7 7.4 251°56	0°0/ 7.2 18		
5 31	19 34.01	-25 48.8	1.818	2.663	14.6	21.1	5 31	19 32.31	-21 10.7	2.079	2.915	13.4	19.6
6 10	19 29.72	-26 29.0	1.739	2.661	11.3	20.9	6 10	19 27.98	-21 28.9	1.996	2.913	10.4	19.4
6 20	19 22.89	-27 12.1	1.683	2.660	7.6	20.7	6 20	19 21.53	-21 51.8	1.936	2.912	6.9	19.2
6 30	19 14.13	-27 53.9	1.651	2.658	3.7	20.5	6 30	19 13.50	-22 17.2	1.901	2.910	3.0	18.9
7 10	19 4.44	-28 30.0	1.645	2.657	2.7	20.4	7 10	19 4.72	-22 42.5	1.893	2.909	1.1	18.8
7 20	18 54.95	-28 57.2	1.665	2.655	6.3	20.6	7 20	18 56.12	-23 5.5	1.913	2.907	5.0	19.0
7 30	18 46.83	-29 14.3	1.711	2.654	10.1	20.8	7 30	18 48.64	-23 24.8	1.958	2.906	8.8	19.3
8 9	18 40.97	-29 22.1	1.780	2.653	13.6	21.1	8 9	18 43.03	-23 40.1	2.028	2.904	12.1	19.5
368929	2006 <i>VC</i> ₄₂		7 7.4 214°45	0°8/ 7.6 18			390944	2005 <i>JQ</i> ₄₈		7 7.4 319°00	3°5/ 8.4 17		
5 31	19 36.05	-19 8.8	1.994	2.822	14.2	22.0	5 31	19 30.45	-12 54.3	1.894	2.722	14.8	21.2
6 10	19 31.00	-19 19.5	1.904	2.815	11.1	21.7	6 10	19 26.69	-12 45.4	1.809	2.716	11.8	21.0
6 20	19 23.60	-19 36.3	1.835	2.808	7.4	21.5	6 20	19 20.76	-12 46.7	1.745	2.710	8.4	20.8
6 30	19 14.42	-19 57.3	1.792	2.800	3.4	21.2	6 30	19 13.19	-12 58.4	1.705	2.704	5.0	20.5
7 10	19 4.33	-20 20.2	1.775	2.791	1.3	21.1	7 10	19 4.83	-13 19.3	1.690	2.698	3.5	20.4
7 20	18 54.36	-20 42.9	1.787	2.781	5.4	21.3	7 20	18 56.61	-13 47.7	1.702	2.693	6.0	20.6
7 30	18 45.56	-21 3.6	1.825	2.771	9.4	21.5	7 30	18 49.50	-14 21.3	1.739	2.688	9.6	20.8
8 9	18 38.78	-21 21.7	1.887	2.760	12.9	21.7	8 9	18 44.29	-14 57.6	1.799	2.683	13.0	21.0
523062	2016 <i>QH</i> ₉₁		7 7.4 258°39	1°3/ 7.9 18			391762	2008 <i>EJ</i> ₁₂₈		7 7.4 5°81	2°7/ 8.3 16		
5 31	19 31.24	-16 2.8	2.248	3.072	12.9	21.1	5 31	19 28.17	-14 21.2	1.694	2.537	15.6	20.2
6 10	19 27.04	-16 32.7	2.156	3.064	10.1	20.9	6 10	19 25.12	-14 28.3	1.621	2.538	12.3	20.0
6 20	19 20.87	-17 11.4	2.086	3.056	6.9	20.6	6 20	19 19.80	-14 46.5	1.568	2.539	8.5	19.8
6 30	19 13.21	-17 57.3	2.041	3.048	3.3	20.4	6 30	19 12.78	-15 15.0	1.538	2.542	4.6	19.6
7 10	19 4.78	-18 47.8	2.025	3.039	1.5	20.2	7 10	19 4.99	-15 51.7	1.533	2.545	2.8	19.4
7 20	18 56.40	-19 39.8	2.036	3.031	4.8	20.5	7 20	18 57.42	-16 33.6	1.554	2.549	5.9	19.7
7 30	18 48.95	-20 30.5	2.075	3.022	8.4	20.7	7 30	18 51.10	-17 17.5	1.599	2.554	9.8	19.9
8 9	18 43.16	-21 18.0	2.138	3.014	11.6	20.9	8 9	18 46.82	-18 0.8	1.667	2.559	13.4	20.1
375710	2009 <i>PD</i> ₁₈		7 7.4 321°67	2°1/ 6.9 17			93701	2000 <i>VM</i> ₂₇		7 7.4 180°84	1°0/ 7.7 18		
5 31	19 35.21	-26 13.4	1.518	2.372	16.5	21.3	5 31	19 34.07	-18 50.5	1.979	2.811	14.1	19.8
6 10	19 31.11	-26 34.7	1.442	2.368	12.9	21.0	6 10	19 29.38	-18 57.7	1.898	2.811	11.0	19.6
6 20	19 24.04	-26 57.8	1.385	2.364	8.6	20.8	6 20	19 22.47	-19 10.9	1.838	2.812	7.4	19.4
6 30	19 14.70	-27 18.4	1.352	2.361	4.1	20.5	6 30	19 13.92	-19 28.5	1.804	2.812	3.4	19.2
7 10	19 4.26	-27 32.6	1.344	2.357	2.6	20.4	7 10	19 4.59	-19 48.4	1.796	2.811	1.4	19.0
7 20	18 54.12	-27 37.8	1.361	2.354	6.9	20.6	7 20	18 55.47	-20 8.6	1.816	2.811	5.3	19.3
7 30	18 45.66	-27 33.8	1.402	2.351	11.4	20.9	7 30	18 47.54	-20 27.7	1.862	2.810	9.1	19.5
8 9	18 39.88	-27 22.1	1.464	2.348	15.4	21.1	8 9	18 41.59	-20 44.7	1.932	2.809	12.5	19.7
284297	2006 <i>KC</i> ₁₁₇		7 7.4 299°88	3°6/ 8.4 17			344117	1999 <i>VF</i> ₁₁₆		7 7.4 193°96	4°0/ 8.4 17		
5 31	19 31.66	-12 59.9	1.878	2.705	15.0	21.0	5 31	19 32.92	-11 37.1	2.153	2.965	13.8	22.1
6 10	19 27.60	-12 45.5	1.796	2.702	11.9	20.8	6 10	19 28.25	-11 12.0	2.068	2.963	11.1	21.9
6 20	19 21.33	-12 40.8	1.734	2.699	8.5	20.5	6 20	19 21.60	-10 55.7	2.005	2.962	8.1	21.7
6 30	19 13.42	-12 46.1	1.697	2.696	5.1	20.3	6 30	19 13.51	-10 48.9	1.967	2.960	5.2	21.6
7 10	19 4.73	-13 0.7	1.685	2.693	3.7	20.2	7 10	19 4.74	-10 51.4	1.955	2.958	4.0	21.5
7 20	18 56.22	-13 23.0	1.700	2.690	6.2	20.4	7 20	18 56.15	-11 2.4	1.971	2.955	6.0	21.6
7 30	18 48.87	-13 50.8	1.740	2.687	9.7	20.6	7 30	18 48.59	-11 20.5	2.013	2.953	9.1	21.8
8 9	18 43.45	-14 22.0	1.803	2.684	13.1	20.8	8 9	18 42.76	-11 43.7	2.079	2.950	12.1	22.0
290892	2005 <i>WL</i> ₈₅		7 7.4 263°34	0°8/ 7.7 18			368659	2005 <i>EM</i> ₃₂₄		7 7.4 68°14	2°1/ 7.9 17		
5 31	19 31.42	-19 12.9	2.452	3.277	11.9	21.8	5 31	19 36.99	-17 30.0	1.371	2.219	18.3	21.1
6 10	19 27.05	-19 17.7	2.351	3.262	9.3	21.6	6 10	19 32.15	-17 22.5	1.319	2.240	14.3	20.9
6 20	19 20.81	-19 27.0	2.274	3.246	6.2	21.4	6 20	19 24.45	-17 23.8	1.285	2.261	9.6	20.6
6 30	19 13.18	-19 39.8	2.222	3.230	2.9	21.2	6 30	19 14.76	-17 32.6	1.275	2.282	4.7	20.4
7 10	19 4.82	-19 54.5	2.198	3.213	1.2	21.0	7 10	19 4.34	-17 46.5	1.289	2.303	2.4	20.3
7 20	18 56.51	-20 9.6	2.202	3.197	4.5	21.2	7 20	18 54.55	-18 3.3	1.328	2.324	6.6	20.6
7 30	18 49.07	-20 24.1	2.234	3.180	7.9	21.4	7 30	18 46.63	-18 21.0	1.391	2.344	11.1	21.0
8 9	18 43.17	-20 37.2	2.290	3.163									

EPHEMERIDES

7 7.4

7 7.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
345033	2005 <i>EX</i> ₁₆₃	7 7.4 144°02	1°3/ 7.8 17				168284	2007 <i>RT</i> ₃₆	7 7.4 289°00	5°8/ 5.7 18			
5 31	19 33.64	−17 37.4	2.334	3.155	12.6	22.2	5 31	19 37.38	−35 47.1	1.918	2.753	14.4	20.4
6 10	19 28.63	−17 42.1	2.257	3.163	9.8	22.0	6 10	19 32.78	−36 33.2	1.819	2.728	11.7	20.2
6 20	19 21.74	−17 52.5	2.202	3.172	6.6	21.8	6 20	19 25.24	−37 15.4	1.741	2.703	8.7	20.0
6 30	19 13.54	−18 7.3	2.174	3.180	3.2	21.6	6 30	19 15.35	−37 47.5	1.688	2.677	6.3	19.8
7 10	19 4.75	−18 24.9	2.173	3.187	1.6	21.5	7 10	19 4.13	−38 3.9	1.660	2.652	6.1	19.7
7 20	18 56.20	−18 43.7	2.201	3.194	4.6	21.7	7 20	18 52.92	−38 1.4	1.658	2.626	8.5	19.8
7 30	18 48.67	−19 2.5	2.256	3.201	7.9	22.0	7 30	18 43.12	−37 40.2	1.680	2.600	11.8	19.9
8 9	18 42.81	−19 20.3	2.336	3.207	10.9	22.2	8 9	18 35.87	−37 3.8	1.724	2.574	15.0	20.1
476044	2007 <i>RT</i> ₂₈₇	7 7.4 314°88	5°6/ 9.2 16				198009	2004 <i>RC</i> ₁₉₈	7 7.4 333°65	0°2/ 7.4 17			
5 31	19 30.48	−7 36.4	1.813	2.628	15.9	21.4	5 31	19 32.94	−23 47.1	1.441	2.301	17.0	20.1
6 10	19 26.77	−7 19.7	1.730	2.623	13.0	21.1	6 10	19 29.46	−23 36.2	1.361	2.291	13.3	19.8
6 20	19 20.85	−7 17.4	1.667	2.618	9.9	20.9	6 20	19 23.03	−23 27.0	1.301	2.282	8.8	19.6
6 30	19 13.25	−7 30.9	1.627	2.613	6.9	20.8	6 30	19 14.33	−23 17.6	1.263	2.273	3.9	19.2
7 10	19 4.83	−7 59.9	1.611	2.608	5.6	20.7	7 10	19 4.53	−23 5.9	1.249	2.265	1.4	19.1
7 20	18 56.54	−8 42.3	1.622	2.603	7.3	20.8	7 20	18 55.01	−22 50.9	1.260	2.258	6.6	19.4
7 30	18 49.39	−9 34.9	1.657	2.599	10.5	20.9	7 30	18 47.12	−22 33.1	1.295	2.251	11.5	19.6
8 9	18 44.18	−10 33.6	1.714	2.595	13.7	21.1	8 9	18 41.91	−22 13.5	1.351	2.245	15.7	19.9
323542	2004 <i>RG</i> ₂₇₈	7 7.4 302°11	8°9/ 5.7 18				478219	2011 <i>UY</i> ₃₁₁	7 7.4 261°07	5°6/ 5.3 18	R		
5 31	19 43.93	−48 20.4	2.194	2.987	14.2	20.7	5 31	19 35.78	−36 26.3	2.197	3.026	13.0	21.6
6 10	19 37.73	−48 54.3	2.104	2.967	12.3	20.5	6 10	19 31.01	−37 25.8	2.117	3.021	10.5	21.4
6 20	19 28.34	−49 14.8	2.033	2.947	10.4	20.4	6 20	19 23.74	−38 21.2	2.059	3.015	7.9	21.2
6 30	19 16.55	−49 14.7	1.986	2.927	9.1	20.2	6 30	19 14.58	−39 6.7	2.026	3.010	5.9	21.1
7 10	19 3.69	−48 48.9	1.963	2.907	9.0	20.2	7 10	19 4.46	−39 37.7	2.020	3.004	5.9	21.1
7 20	18 51.27	−47 56.4	1.965	2.887	10.3	20.2	7 20	18 54.51	−39 51.4	2.040	2.999	7.8	21.2
7 30	18 40.77	−46 40.0	1.991	2.868	12.3	20.3	7 30	18 45.85	−39 48.1	2.085	2.993	10.4	21.3
8 9	18 33.19	−45 6.1	2.039	2.848	14.6	20.4	8 9	18 39.39	−39 30.3	2.152	2.988	13.0	21.5
249441	2009 <i>FL</i> ₅₇	7 7.4 359°14	2°5/ 6.7 18				259725	2003 <i>YB</i> ₉₀	7 7.4 210°05	1°1/ 7.1 17			
5 31	19 30.34	−26 53.9	1.594	2.454	15.6	20.3	5 31	19 37.54	−23 43.2	1.929	2.763	14.4	21.6
6 10	19 27.21	−27 24.7	1.521	2.451	12.1	20.1	6 10	19 32.34	−24 10.1	1.841	2.757	11.2	21.4
6 20	19 21.38	−27 57.1	1.469	2.449	8.1	19.8	6 20	19 24.62	−24 40.7	1.776	2.751	7.4	21.2
6 30	19 13.54	−28 26.8	1.440	2.448	4.1	19.6	6 30	19 14.97	−25 11.6	1.735	2.744	3.3	20.9
7 10	19 4.75	−28 49.9	1.436	2.448	3.0	19.5	7 10	19 4.33	−25 39.3	1.721	2.736	1.7	20.8
7 20	18 56.25	−29 3.5	1.457	2.449	6.7	19.8	7 20	18 53.83	−26 0.9	1.736	2.728	5.8	21.0
7 30	18 49.26	−29 7.0	1.502	2.451	10.8	20.0	7 30	18 44.61	−26 15.3	1.776	2.719	9.8	21.3
8 9	18 44.70	−29 1.5	1.569	2.454	14.5	20.2	8 9	18 37.59	−26 22.9	1.840	2.709	13.4	21.5
478169	2011 <i>UR</i> ₁₈₀	7 7.4 267°43	3°4/ 8.2 18				90719	1991 <i>RZ</i> ₅	7 7.4 267°53	7°4/ 4.8 18			
5 31	19 31.56	−13 39.6	2.185	3.004	13.4	21.7	5 31	19 39.71	−39 22.8	1.968	2.794	14.4	19.0
6 10	19 27.18	−13 10.9	2.100	3.002	10.7	21.5	6 10	19 34.68	−40 30.9	1.878	2.775	11.9	18.8
6 20	19 20.89	−12 49.2	2.038	3.000	7.6	21.3	6 20	19 26.57	−41 33.8	1.808	2.756	9.4	18.6
6 30	19 13.20	−12 35.1	2.000	2.998	4.6	21.1	6 30	19 15.95	−42 23.7	1.763	2.737	7.6	18.5
7 10	19 4.88	−12 28.6	1.990	2.996	3.5	21.0	7 10	19 3.96	−42 54.2	1.743	2.717	7.7	18.4
7 20	18 56.75	−12 29.2	2.006	2.994	5.6	21.1	7 20	18 51.99	−43 1.5	1.748	2.697	9.6	18.5
7 30	18 49.63	−12 35.9	2.049	2.992	8.8	21.3	7 30	18 41.56	−42 46.0	1.778	2.677	12.4	18.6
8 9	18 44.19	−12 47.3	2.116	2.989	11.7	21.5	8 9	18 33.83	−42 11.8	1.828	2.656	15.2	18.8
259386	2003 <i>KJ</i> ₇	7 7.4 88°23	7°4/ 9.9 18				103320	2000 <i>AN</i> ₆₄	7 7.4 245°22	3°0/ 6.6 18			
5 31	19 30.62	−0 9.1	2.365	3.129	14.1	20.4	5 31	19 37.01	−30 31.4	2.277	3.105	12.6	19.9
6 10	19 26.15	+0 39.7	2.299	3.145	12.0	20.3	6 10	19 31.70	−30 52.4	2.180	3.090	9.9	19.7
6 20	19 20.03	+1 14.0	2.253	3.160	9.9	20.2	6 20	19 24.08	−31 11.4	2.106	3.075	6.9	19.5
6 30	19 12.77	+1 31.6	2.231	3.175	8.1	20.1	6 30	19 14.71	−31 24.7	2.057	3.059	3.9	19.3
7 10	19 5.05	+1 31.4	2.234	3.190	7.4	20.1	7 10	19 4.43	−31 29.3	2.036	3.043	3.2	19.2
7 20	18 57.57	+1 14.3	2.262	3.204	8.1	20.2	7 20	18 54.27	−31 23.5	2.043	3.026	5.9	19.3
7 30	18 51.04	+0 42.3	2.316	3.219	9.8	20.3	7 30	18 45.27	−31 7.5	2.076	3.009	9.2	19.5
8 9	18 46.00	−0 0.9	2.393	3.234	11.7	20.5	8 9	18 38.25	−30 43.3	2.134	2.991	12.3	19.7
313304	2002 <i>CJ</i> ₂₉₁	7 7.4 248°29	4°3/ 6.4 17				2460	Mitlincoln	7 7.4 160°14	2°4/ 8.0 18			
5 31	19 39.67	−30 47.8	1.595	2.440	16.3	20.5	5 31	19 37.03	−15 57.6	1.648	2.480	16.5	16.5
6 10	19 34.79	−31 25.7	1.509	2.428	12.9	20.3	6 10	19 32.05	−15 55.7	1.573	2.485	13.0	16.3
6 20	19 26.66	−32 2.5	1.443	2.415	9.1	20.0	6 20	19 24.43	−16 3.1	1.519	2.489	8.9	16.1
6 30	19 15.95	−32 32.3	1.400	2.402	5.4	19.8	6 30	19 14.87	−16 18.6	1.488	2.493	4.6	15.8
7 10	19 3.88	−32 49.2	1.383	2.389	4.7	19.7	7 10	19 4.40	−16 40.3	1.483	2.496	2.6	15.7
7 20	18 51.97	−32 50.0	1.392	2.375	8.0	19.9	7 20	18 54.22	−17 5.8	1.505	2.499	6.2	16.0
7 30	18 41.77	−32 35.0	1.424	2.361	12.2	20.1	7 30	18 45.51	−17 32.8	1.552	2.501	10.5	16.2
8 9	18 34.48	−32 7.7	1.478	2.347	16.1	20.3	8 9	18 39.17	−17 59.8	1.621	2.503	14.3	16.5
347497	1998 <i>QR</i> ₁₀₉	7 7.4 340°42	4°5/ 6.9 18				255353	2005 <i>WK</i> ₈₈	7 7.4 94°82	2°8/ 5.9 18			
5 31	19 26.79	−31 18.7	1.126	2.012	18.8	18.8	5 31	19 42.52	−15 44.2	1.061	1.916	22.1	19.7
6 10	19 25.82	−31 26.3	1.043	1.986	15.0	18.5	6 10	19 38.16	−18 35.4	0.995	1.923	17.2	19.4
6 20	19 21.26	−31 28.7	0.977	1.961	10.6	18.2	6 20	19 29.64	−21 57.6	0.949	1.930	11.3	19.1
6 30	19 13.75	−31 20.6	0.932	1.938	6.1	17.9	6 30	19 17.56	−25 37.0	0.928	1.937	5.0	18.8
7 10	19 4.66	−30 57.1	0.907	1.917	4.9	17.7	7 10	19 3.37	−29 12.8	0.932	1.944	4.0	18.8
7 20	18 55.74	−30 16.7	0.903	1.899	9.0	17.9	7 20	18 49.16	−32 24.5	0.963	1.951	9.9	19.1
7 30	18 48.84	−29 21.5	0.920	1.882	14.2	18.1	7 30	18 37.19	−35 0.0	1.019	1.958	15.6	19.5
8 9	18 45.31	−28 16.6	0.955	1.868	19.0	18.3	8 9	18 29.14	−36 57.6	1.094	1.965	20.4	19.8
39681	1996 <i>PE</i> ₃	7 7.4 284°04	11°4/ 11.7 18				149402	2003 <i>AE</i> ₅₃	7 7.4 224°76	0°6/ 7.2 18			
5 31	19 33.35	+5 18.4	1.624	2.386	19.6	18.8	5 31	19 35.99	−22 17.1	1.929	2.764	14.3	20.6
6 10	19 29.63	+5 39.6	1.518	2.357	17.4	18.6	6 10	19 31.14	−22 41.5	1.840	2.756	11.1	20.4
6 20	19 23.21	+5 34.3	1.429	2.329	14.9	18.3	6 20	19 23.84	−23 10.8	1.772	2.748	7.4	20.2
6 30	19 14.51	+4 56.1	1.360	2.299	12.6	18.1	6 30	19 14.65	−23 41.9	1.730	2.739	3.2	19.9
7 10	19 4.39	+3 41.9	1.312	2.270	11.4	18.0	7 10	19 4.48	−24 11.6	1.714	2.730	1.3	19.7
7 20	18 53.97	+1 52.9	1.288	2.240	12.1	17.9	7 20	18 54.41	−24 37.0	1.726	2.720	5.6	20.0
7 30	18 44.58	−0 25.0	1.288	2.209	14.5	18.0	7 30	18 45.57					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
40178	1998 <i>RU</i> ₃₆	7 7.4 334°58	2°1/ 7.9 18				172489	2003 <i>SV</i> ₁₃₈	7 7.4 225°82	1°9/ 7.8 18			
5 31	19 30.13	−17 15.7	2.010	2.845	13.8	18.7	5 31	19 36.93	−18 15.1	1.753	2.586	15.6	20.5
6 10	19 26.36	−16 58.0	1.923	2.837	10.8	18.5	6 10	19 31.99	−18 1.2	1.665	2.578	12.3	20.3
6 20	19 20.52	−16 45.9	1.858	2.830	7.4	18.2	6 20	19 24.47	−17 53.0	1.598	2.570	8.4	20.0
6 30	19 13.14	−16 39.2	1.818	2.823	3.9	18.0	6 30	19 14.95	−17 49.8	1.555	2.561	4.1	19.8
7 10	19 5.02	−16 37.3	1.804	2.817	2.3	17.9	7 10	19 4.45	−17 50.4	1.538	2.552	2.1	19.6
7 20	18 57.08	−16 39.2	1.817	2.811	5.4	18.1	7 20	18 54.10	−17 53.4	1.548	2.542	6.1	19.8
7 30	18 50.21	−16 44.2	1.855	2.805	9.0	18.3	7 30	18 45.10	−17 58.1	1.583	2.532	10.4	20.1
8 9	18 45.17	−16 51.2	1.917	2.800	12.3	18.5	8 9	18 38.37	−18 3.8	1.642	2.521	14.2	20.3
213497	2002 <i>GZ</i> ₄₆	7 7.4 103°40	1°7/ 7.8 17				292551	2006 <i>TR</i> ₆₁	7 7.4 123°24	3°1/ 8.1 18			
5 31	19 36.88	−17 46.6	1.502	2.344	17.3	20.9	5 31	19 32.95	−14 55.2	2.133	2.955	13.6	20.3
6 10	19 32.08	−17 48.9	1.437	2.355	13.5	20.7	6 10	19 28.28	−14 23.9	2.053	2.957	10.8	20.1
6 20	19 24.50	−17 59.7	1.392	2.366	9.1	20.5	6 20	19 21.64	−13 58.7	1.996	2.960	7.6	19.9
6 30	19 14.89	−18 17.3	1.370	2.377	4.3	20.2	6 30	19 13.60	−13 40.2	1.963	2.963	4.4	19.7
7 10	19 4.43	−18 38.9	1.373	2.388	2.0	20.1	7 10	19 4.94	−13 28.4	1.957	2.965	3.2	19.6
7 20	18 54.39	−19 2.1	1.402	2.398	6.3	20.4	7 20	18 56.52	−13 22.8	1.979	2.968	5.6	19.8
7 30	18 46.01	−19 24.8	1.456	2.408	10.8	20.7	7 30	18 49.19	−13 22.9	2.027	2.970	8.8	20.0
8 9	18 40.19	−19 45.9	1.531	2.418	14.7	21.0	8 9	18 43.62	−13 27.4	2.099	2.973	11.8	20.2
482193	2010 <i>UO</i> ₁₀₁	7 7.4 249°71	0°4/ 7.3 16				73203	2002 <i>JR</i> ₁₅	7 7.4 307°25	3°3/ 8.1 18			
5 31	19 31.80	−22 56.6	2.628	3.455	11.2	23.0	5 31	19 31.42	−15 22.3	1.313	2.169	18.5	18.7
6 10	19 27.26	−23 9.2	2.531	3.443	8.7	22.8	6 10	19 28.68	−15 10.0	1.223	2.147	14.8	18.4
6 20	19 20.94	−23 24.2	2.456	3.430	5.7	22.6	6 20	19 22.85	−15 9.1	1.150	2.126	10.4	18.1
6 30	19 13.29	−23 39.8	2.408	3.417	2.5	22.3	6 30	19 14.45	−15 20.2	1.099	2.104	5.7	17.8
7 10	19 4.98	−23 54.1	2.388	3.403	1.0	22.2	7 10	19 4.58	−15 42.0	1.071	2.084	3.5	17.6
7 20	18 56.74	−24 5.7	2.397	3.390	4.3	22.4	7 20	18 54.64	−16 12.0	1.066	2.063	7.7	17.8
7 30	18 49.35	−24 13.8	2.433	3.376	7.5	22.6	7 30	18 46.19	−16 47.2	1.084	2.043	12.8	18.0
8 9	18 43.45	−24 18.3	2.494	3.362	10.4	22.8	8 9	18 40.51	−17 24.6	1.122	2.024	17.7	18.2
9242	<i>Olea</i>	7 7.4 220°41	2°3/ 8.1 18				102349	1999 <i>TX</i> ₁₂₂	7 7.4 312°33	6°3/ 8.6 18			
5 31	19 36.31	−15 30.0	1.821	2.646	15.4	19.3	5 31	19 31.20	−10 28.1	1.349	2.193	18.8	19.2
6 10	19 31.44	−15 33.7	1.730	2.638	12.2	19.0	6 10	19 28.22	−9 46.6	1.266	2.178	15.4	19.0
6 20	19 24.08	−15 46.7	1.661	2.630	8.4	18.8	6 20	19 22.34	−9 18.4	1.201	2.164	11.5	18.7
6 30	19 14.77	−16 8.1	1.616	2.620	4.4	18.5	6 30	19 14.15	−9 6.5	1.156	2.150	7.8	18.4
7 10	19 4.46	−16 35.9	1.597	2.610	2.5	18.4	7 10	19 4.72	−9 12.1	1.134	2.136	6.3	18.3
7 20	18 54.23	−17 7.6	1.606	2.599	6.0	18.6	7 20	18 55.36	−9 34.1	1.136	2.124	8.9	18.4
7 30	18 45.23	−17 41.0	1.640	2.588	10.2	18.8	7 30	18 47.48	−10 10.0	1.160	2.111	13.0	18.6
8 9	18 38.38	−18 14.0	1.698	2.576	13.9	19.0	8 9	18 42.18	−10 55.2	1.204	2.099	17.2	18.8
203801	2002 <i>TN</i> ₁₁₆	7 7.4 340°67	0°9/ 7.5 18				278808	2008 <i>SY</i> ₂₄₄	7 7.4 111°07	5°7/ 9.0 17			
5 31	19 32.73	−22 5.1	1.591	2.443	16.0	19.3	5 31	19 32.04	−8 6.3	1.816	2.629	15.9	20.8
6 10	19 28.95	−21 36.0	1.510	2.435	12.5	19.1	6 10	19 27.94	−7 39.8	1.738	2.629	13.0	20.6
6 20	19 22.51	−21 8.5	1.449	2.428	8.4	18.8	6 20	19 21.63	−7 26.7	1.679	2.630	9.8	20.4
6 30	19 14.08	−20 42.0	1.411	2.421	3.8	18.5	6 30	19 13.66	−7 28.4	1.644	2.630	6.9	20.2
7 10	19 4.72	−20 15.8	1.399	2.414	1.5	18.3	7 10	19 4.92	−7 45.0	1.634	2.630	5.7	20.1
7 20	18 55.64	−19 50.2	1.412	2.409	6.1	18.6	7 20	18 56.38	−8 14.8	1.650	2.630	7.4	20.2
7 30	18 48.05	−19 25.6	1.450	2.404	10.6	18.9	7 30	18 49.03	−8 55.2	1.691	2.630	10.4	20.4
8 9	18 42.85	−19 2.9	1.509	2.400	14.6	19.1	8 9	18 43.63	−9 42.5	1.754	2.631	13.6	20.6
438775	2008 <i>UZ</i> ₃₅₆	7 7.4 218°96	5°1/ 5.5 16				182604	2001 <i>UK</i> ₄₇	7 7.4 202°47	0°0/ 7.2 18			
5 31	19 36.73	−33 19.0	1.993	2.828	13.9	22.1	5 31	19 32.64	−21 37.8	2.931	3.750	10.4	22.0
6 10	19 31.92	−34 25.6	1.914	2.825	11.1	22.0	6 10	19 27.66	−21 49.8	2.837	3.744	8.0	21.8
6 20	19 24.46	−35 30.6	1.858	2.822	8.0	21.8	6 20	19 21.08	−22 4.4	2.767	3.739	5.3	21.6
6 30	19 14.95	−36 27.7	1.827	2.819	5.6	21.6	6 30	19 13.35	−22 20.0	2.724	3.733	2.3	21.4
7 10	19 4.40	−37 11.3	1.822	2.816	5.4	21.6	7 10	19 5.05	−22 35.2	2.710	3.726	0.8	21.3
7 20	18 54.00	−37 38.0	1.844	2.812	7.8	21.7	7 20	18 56.86	−22 48.6	2.726	3.719	3.9	21.5
7 30	18 44.99	−37 47.5	1.891	2.809	10.8	21.9	7 30	18 49.44	−22 59.5	2.770	3.711	6.8	21.7
8 9	18 38.31	−37 41.9	1.960	2.805	13.7	22.1	8 9	18 43.37	−23 7.5	2.840	3.703	9.4	21.8
505794	2015 <i>BK</i> ₃₀₅	7 7.4 149°82	0°1/ 7.4 17				128061	2003 <i>NN</i> ₃	7 7.4 289°82	2°3/ 8.5 18			
5 31	19 35.20	−21 4.5	1.915	2.750	14.4	21.7	5 31	19 29.75	−13 6.9	2.377	3.194	12.5	19.7
6 10	19 30.39	−21 29.2	1.838	2.755	11.1	21.5	6 10	19 25.80	−13 30.5	2.285	3.187	9.9	19.6
6 20	19 23.23	−21 59.2	1.784	2.759	7.4	21.3	6 20	19 20.05	−14 4.0	2.215	3.180	6.9	19.4
6 30	19 14.34	−22 31.9	1.754	2.763	3.2	21.0	6 30	19 12.95	−14 46.4	2.171	3.172	3.8	19.1
7 10	19 4.64	−23 4.1	1.751	2.767	1.1	20.9	7 10	19 5.18	−15 35.6	2.154	3.165	2.3	19.0
7 20	18 55.19	−23 32.9	1.776	2.771	5.4	21.2	7 20	18 57.46	−16 29.0	2.166	3.158	4.8	19.2
7 30	18 47.01	−23 56.8	1.827	2.774	9.3	21.4	7 30	18 50.58	−17 23.9	2.204	3.151	8.0	19.4
8 9	18 40.93	−24 15.5	1.902	2.777	12.8	21.7	8 9	18 45.22	−18 17.6	2.268	3.145	10.9	19.6
16123	<i>Jessiecheng</i>	7 7.4 339°57	0°7/ 7.6 18				478040	2011 <i>SV</i> ₂₅₈	7 7.4 97°07	7°2/ 4.5 18			
5 31	19 26.00	−19 14.9	1.064	1.949	19.8	16.9	5 31	19 37.71	−41 12.2	2.249	3.067	13.1	21.4
6 10	19 25.01	−19 30.8	0.988	1.932	15.6	16.6	6 10	19 32.60	−42 27.9	2.182	3.072	10.9	21.2
6 20	19 20.66	−19 58.7	0.929	1.916	10.5	16.2	6 20	19 24.85	−43 36.3	2.138	3.076	8.7	21.1
6 30	19 13.53	−20 36.6	0.890	1.901	4.8	15.9	6 30	19 15.11	−44 30.9	2.118	3.081	7.3	21.0
7 10	19 4.89	−21 20.3	0.872	1.888	1.7	15.6	7 10	19 4.43	−45 6.6	2.124	3.085	7.4	21.0
7 20	18 56.35	−22 4.6	0.876	1.877	7.8	15.9	7 20	18 53.98	−45 21.1	2.155	3.090	8.9	21.1
7 30	18 49.64	−22 45.1	0.900	1.867	13.6	16.2	7 30	18 44.98	−45 15.1	2.211	3.094	11.0	21.3
8 9	18 46.10	−23 19.2	0.942	1.860	18.7	16.5	8 9	18 38.33	−44 52.1	2.288	3.099	13.1	21.4
266516	2008 <i>EU</i> ₁₃₇	7 7.4 311°43	0°4/ 7.3 17				165964	2001 <i>XT</i> ₁₇₃	7 7.4 125°12	0°6/ 7.6 17			
5 31	19 31.93	−21 33.6	1.369	2.232	17.5	20.2	5 31	19 38.78	−20 14.7	1.590	2.429	16.7	21.3
6 10	19 29.07	−21 55.9	1.281	2.213	13.8	20.0	6 10	19 33.46	−20 21.7	1.523	2.441	12.9	21.1
6 20	19 23.08	−22 26.3	1.212	2.193	9.2	19.6	6 20	19 25.38	−20 34.7	1.477	2.452	8.6	20.9
6 30	19 14.54	−23 1.6	1.164	2.175	4.1	19.3	6 30	19 15.30	−20 51.1	1.454	2.463	3.8	20.6
7 10	19 4.55	−23 37.7	1.141	2.157	1.6	19.1	7 10	19 4.39	−21 8.2	1.458	2.474	1.3	20.5
7 20	18 54.55	−24 10.2	1.141	2.139	7.1	19.4	7 20	18 53.90	−21 23.6	1.488	2.484	6.1	20.8
7 30	18 46.10	−24 36.5	1.165	2.122	12.4	19.6	7 30	18 45					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
309167	2007 <i>BD</i> ₁₈		7 7.4 156°58	0°8/ 7.2 18			495622	2015 <i>TG</i> ₁₈₉		7 7.4 254°99	20°9/ 9.7 17		
5 31	19 32.97	-24 44.6	2.542	3.370	11.5	21.0	5 31	19 34.67	+13 19.5	1.215	1.962	25.7	21.4
6 10	19 28.10	-24 51.7	2.460	3.373	8.9	20.8	6 10	19 31.16	+16 2.0	1.156	1.956	24.0	21.2
6 20	19 21.44	-24 59.7	2.402	3.376	5.8	20.6	6 20	19 24.44	+18 14.9	1.110	1.950	22.4	21.1
6 30	19 13.51	-25 6.6	2.370	3.379	2.6	20.4	6 30	19 15.14	+19 45.5	1.079	1.943	21.3	20.9
7 10	19 5.01	-25 10.7	2.367	3.381	1.2	20.3	7 10	19 4.45	+20 24.4	1.063	1.936	20.9	20.9
7 20	18 56.73	-25 11.1	2.392	3.384	4.4	20.5	7 20	18 53.86	+20 8.1	1.063	1.930	21.3	20.9
7 30	18 49.43	-25 7.3	2.444	3.386	7.5	20.7	7 30	18 44.94	+18 59.9	1.078	1.923	22.6	21.0
8 9	18 43.73	-25 0.0	2.521	3.388	10.3	20.9	8 9	18 38.91	+17 10.2	1.108	1.916	24.3	21.1
38506	1999 <i>TB</i> ₁₉₂		7 7.4 54°35	2°5/ 6.9 18			257947	2000 <i>YT</i> ₂₇		7 7.4 195°42	0°5/ 7.3 18		
5 31	19 34.75	-29 54.9	2.142	2.978	13.0	18.5	5 31	19 32.05	-23 26.4	2.778	3.603	10.7	22.2
6 10	19 29.79	-30 1.7	2.072	2.987	10.1	18.3	6 10	19 27.31	-23 40.0	2.690	3.601	8.3	22.0
6 20	19 22.68	-30 5.8	2.024	2.996	6.9	18.1	6 20	19 20.90	-23 55.6	2.625	3.598	5.5	21.8
6 30	19 14.06	-30 4.3	2.001	3.006	3.6	17.9	6 30	19 13.30	-24 11.1	2.587	3.596	2.4	21.6
7 10	19 4.84	-29 55.2	2.005	3.015	2.8	17.9	7 10	19 5.14	-24 25.0	2.578	3.593	1.0	21.5
7 20	18 56.00	-29 37.8	2.037	3.025	5.5	18.1	7 20	18 57.11	-24 35.7	2.597	3.589	4.1	21.7
7 30	18 48.47	-29 13.0	2.095	3.035	8.8	18.3	7 30	18 49.93	-24 42.8	2.644	3.586	7.1	21.9
8 9	18 42.93	-28 42.8	2.177	3.044	11.7	18.5	8 9	18 44.17	-24 46.3	2.717	3.582	9.7	22.1
87158	2000 <i>NP</i> ₂₂		7 7.4 211°21	0°4/ 7.4 18			269716	1998 <i>MM</i> ₁₆		7 7.4 315°16	0°2/ 7.5 18		
5 31	19 39.83	-25 21.9	2.238	3.060	13.0	18.8	5 31	19 30.16	-19 45.2	1.270	2.138	18.3	20.8
6 10	19 33.65	-25 1.3	2.144	3.053	10.1	18.6	6 10	19 28.05	-20 8.9	1.175	2.109	14.5	20.5
6 20	19 25.24	-24 39.2	2.073	3.046	6.7	18.4	6 20	19 22.69	-20 44.3	1.098	2.080	9.8	20.1
6 30	19 15.21	-24 14.1	2.029	3.038	3.0	18.2	6 30	19 14.53	-21 29.0	1.042	2.052	4.4	19.7
7 10	19 4.44	-23 45.0	2.014	3.029	1.1	18.0	7 10	19 4.63	-22 18.7	1.008	2.024	1.5	19.4
7 20	18 53.91	-23 11.9	2.028	3.020	5.0	18.3	7 20	18 54.49	-23 8.1	0.998	1.997	7.5	19.7
7 30	18 44.61	-22 36.0	2.069	3.011	8.7	18.5	7 30	18 45.84	-23 52.9	1.010	1.971	13.3	20.0
8 9	18 37.30	-21 59.1	2.135	3.000	12.0	18.7	8 9	18 40.13	-24 30.6	1.041	1.946	18.5	20.2
502472	2015 <i>BW</i> ₃₂₉		7 7.4 154°78	0°7/ 7.2 17			2442	Corbett		7 7.5 351°24	4°7/ 8.4 18		
5 31	19 37.11	-22 31.5	2.061	2.890	13.7	22.7	5 31	19 30.71	-13 12.8	1.266	2.122	19.1	15.7
6 10	19 31.71	-23 0.6	1.985	2.898	10.6	22.5	6 10	19 27.90	-12 46.3	1.195	2.117	15.3	15.5
6 20	19 24.04	-23 33.8	1.931	2.905	7.0	22.3	6 20	19 22.12	-12 32.7	1.142	2.114	11.0	15.2
6 30	19 14.71	-24 7.9	1.903	2.912	3.1	22.0	6 30	19 14.06	-12 33.5	1.110	2.111	6.6	14.9
7 10	19 4.62	-24 39.5	1.903	2.918	1.3	21.9	7 10	19 4.88	-12 48.0	1.100	2.109	4.8	14.8
7 20	18 54.77	-25 6.3	1.930	2.923	5.2	22.2	7 20	18 55.97	-13 14.2	1.113	2.107	7.9	15.0
7 30	18 46.17	-25 26.8	1.985	2.928	9.0	22.4	7 30	18 48.72	-13 48.8	1.149	2.107	12.4	15.3
8 9	18 39.60	-25 41.3	2.064	2.932	12.2	22.6	8 9	18 44.17	-14 27.9	1.205	2.107	16.7	15.5
73345	2002 <i>JM</i> ₁₂₁		7 7.4 355°35	7°8/ 10.5 18			73321	2002 <i>JX</i> ₉₇		7 7.5 349°61	5°8/ 9.8 16		
5 31	19 28.66	-3 1.4	1.518	2.333	18.5	19.3	5 31	19 27.32	-7 7.1	1.388	2.226	18.7	18.6
6 10	19 25.79	-2 47.2	1.443	2.329	15.5	19.1	6 10	19 25.07	-7 15.8	1.311	2.218	15.3	18.4
6 20	19 20.45	-2 54.5	1.386	2.327	12.3	18.9	6 20	19 20.17	-7 45.8	1.251	2.211	11.5	18.1
6 30	19 13.24	-3 25.9	1.349	2.325	9.3	18.7	6 30	19 13.20	-8 38.3	1.213	2.205	7.7	17.9
7 10	19 5.11	-4 20.9	1.336	2.324	7.8	18.6	7 10	19 5.17	-9 51.3	1.198	2.201	5.8	17.8
7 20	18 57.15	-5 36.3	1.346	2.323	9.1	18.7	7 20	18 57.26	-11 19.8	1.206	2.197	7.9	17.9
7 30	18 50.49	-7 6.1	1.380	2.324	12.0	18.9	7 30	18 50.72	-12 56.8	1.238	2.194	11.8	18.1
8 9	18 46.02	-8 43.3	1.436	2.325	15.3	19.1	8 9	18 46.57	-14 35.3	1.291	2.193	15.8	18.3
474715	2005 <i>JK</i> ₁₁		7 7.4 288°64	0°3/ 7.4 18			349508	2008 <i>QJ</i> ₅		7 7.5 223°02	2°6/ 8.4 18		
5 31	19 32.86	-22 23.1	1.944	2.784	14.0	21.9	5 31	19 33.93	-13 3.9	2.710	3.510	11.6	22.4
6 10	19 28.70	-22 35.5	1.856	2.775	10.9	21.6	6 10	19 28.79	-13 0.8	2.606	3.497	9.2	22.2
6 20	19 22.22	-22 51.7	1.790	2.766	7.2	21.4	6 20	19 21.94	-13 5.0	2.525	3.483	6.6	22.0
6 30	19 13.98	-23 9.5	1.748	2.758	3.2	21.1	6 30	19 13.80	-13 16.0	2.470	3.467	3.9	21.8
7 10	19 4.86	-23 26.4	1.733	2.749	1.2	21.0	7 10	19 4.99	-13 33.3	2.444	3.452	2.7	21.7
7 20	18 55.88	-23 40.2	1.745	2.740	5.4	21.2	7 20	18 56.20	-13 55.4	2.447	3.435	4.7	21.8
7 30	18 48.09	-23 50.0	1.783	2.732	9.4	21.5	7 30	18 48.16	-14 21.0	2.479	3.417	7.6	22.0
8 9	18 42.33	-23 55.6	1.844	2.723	12.9	21.7	8 9	18 41.53	-14 48.6	2.536	3.399	10.4	22.1
183545	2003 <i>HJ</i> ₃₅		7 7.4 329°25	4°8/ 5.9 17			293259	2007 <i>CL</i> ₁₈		7 7.5 10°26	3°8/ 6.5 18		
5 31	19 27.56	-26 41.0	1.006	1.898	20.1	18.8	5 31	19 34.36	-32 52.7	2.191	3.026	12.8	20.3
6 10	19 26.87	-27 47.5	0.927	1.875	15.9	18.5	6 10	19 29.67	-33 18.7	2.114	3.026	10.1	20.1
6 20	19 22.34	-29 3.3	0.866	1.853	11.0	18.1	6 20	19 22.74	-33 41.1	2.059	3.027	7.1	19.9
6 30	19 14.47	-30 20.8	0.824	1.832	6.1	17.8	6 30	19 14.17	-33 56.0	2.030	3.028	4.5	19.7
7 10	19 4.61	-31 30.0	0.803	1.813	5.4	17.7	7 10	19 4.88	-34 0.3	2.027	3.029	4.0	19.7
7 20	18 54.63	-32 22.1	0.802	1.795	10.3	17.8	7 20	18 55.88	-33 52.6	2.051	3.030	6.3	19.9
7 30	18 46.72	-32 52.7	0.820	1.779	15.9	18.1	7 30	18 48.14	-33 33.7	2.101	3.031	9.3	20.0
8 9	18 42.56	-33 2.6	0.855	1.764	21.0	18.3	8 9	18 42.43	-33 5.8	2.174	3.032	12.1	20.2
480679	2015 <i>PB</i> ₃₅		7 7.4 342°97	1°5/ 7.9 18			421037	2013 <i>PM</i> ₆₈		7 7.5 22°44	1°0/ 7.6 17		
5 31	19 30.00	-17 52.0	1.814	2.657	14.7	21.1	5 31	19 31.41	-20 29.3	1.035	1.916	20.6	20.2
6 10	19 26.55	-17 54.7	1.732	2.651	11.5	20.9	6 10	19 28.87	-20 21.5	0.984	1.925	16.0	20.0
6 20	19 20.81	-18 4.7	1.670	2.645	7.8	20.7	6 20	19 22.87	-20 21.4	0.950	1.935	10.6	19.7
6 30	19 13.36	-18 20.8	1.633	2.640	3.8	20.4	6 30	19 14.36	-20 27.1	0.936	1.946	4.8	19.4
7 10	19 5.08	-18 41.2	1.621	2.635	1.8	20.3	7 10	19 4.84	-20 35.6	0.944	1.959	1.8	19.3
7 20	18 56.97	-19 3.8	1.635	2.631	5.5	20.5	7 20	18 55.96	-20 44.6	0.973	1.973	7.4	19.7
7 30	18 50.06	-19 26.7	1.674	2.628	9.6	20.7	7 30	18 49.26	-20 52.4	1.024	1.989	12.7	20.0
8 9	18 45.15	-19 48.5	1.736	2.625	13.2	21.0	8 9	18 45.71	-20 58.5	1.094	2.005	17.3	20.3
383165	2005 <i>VJ</i> ₅		7 7.4 93°72	1°9/ 7.9 18			128797	2004 <i>RH</i> ₂₂₃		7 7.5 351°30	1°2/ 7.7 18		
5 31	19 45.83	-16 54.6	1.207	2.047	20.8	21.2	5 31	19 30.49	-19 33.4	1.355	2.218	17.7	19.4
6 10	19 39.19	-17 6.5	1.163	2.080	16.1	21.0	6 10	19 27.67	-19 31.2	1.281	2.212	13.8	19.2
6 20	19 29.20	-17 29.6	1.138	2.112	10.8	20.8	6 20	19 21.93	-19 36.5	1.227	2.207	9.3	18.9
6 30	19 16.92	-18 0.6	1.135	2.143	5.1	20.6	6 30	19 13.97	-19 47.7	1.194	2.204	4.3	18.6
7 10	19 3.94	-18 35.2	1.158	2.172	2.3	20.5	7 10	19 4.94	-20 2.5	1.185	2.201	1.7	18.4
7 20	18 51.90	-19 9.5	1.205	2.201	7.1	20.8	7 20	18 56.17	-20 18.5	1.200	2.199	6.6	18.7
7 30	18 42.23	-19 41.0	1.277	2.228	12.0	21.2	7 30	18 49.02	-20 33.7	1.238	2.198	11.5	19.0
8 9	18 35.79	-20 8.7	1.370	2.255	16.2	21.5	8 9	18					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
424665	2008 <i>RC</i> ₄₄	7 7.5 17°38' 0.7"/ 7.6 17					154162	2002 <i>GE</i> ₅₆	7 7.5 125°30' 3.7"/ 6.4 18				
5 31	19 29.46	-20 6.8	1.142	2.018	19.3	20.3	5 31	19 35.88	-34 12.6	2.620	3.441	11.4	20.7
6 10	19 27.12	-20 12.4	1.088	2.026	15.0	20.0	6 10	19 30.42	-34 39.3	2.548	3.451	9.0	20.5
6 20	19 21.62	-20 26.3	1.052	2.035	10.0	19.8	6 20	19 23.02	-35 1.7	2.500	3.461	6.4	20.4
6 30	19 13.80	-20 46.1	1.036	2.046	4.4	19.5	6 30	19 14.26	-35 16.4	2.478	3.471	4.2	20.3
7 10	19 5.03	-21 8.4	1.043	2.059	1.5	19.4	7 10	19 4.95	-35 20.9	2.483	3.480	3.9	20.2
7 20	18 56.79	-21 30.0	1.073	2.073	7.0	19.8	7 20	18 55.93	-35 14.1	2.517	3.489	5.7	20.4
7 30	18 50.49	-21 48.7	1.124	2.088	12.0	20.1	7 30	18 48.05	-34 56.8	2.578	3.498	8.2	20.5
8 9	18 47.07	-22 3.5	1.196	2.104	16.3	20.4	8 9	18 41.95	-34 30.9	2.662	3.507	10.5	20.7
199787	2006 <i>LG</i> ₃	7 7.5 237°76' 2.9"/ 8.6 17					513213	2005 <i>UJ</i> ₁₁₈	7 7.5 298°22' 3.1"/ 8.2 18				
5 31	19 32.26	-12 32.7	2.008	2.829	14.4	20.2	5 31	19 30.90	-14 7.7	2.196	3.017	13.3	21.7
6 10	19 28.06	-12 49.1	1.921	2.824	11.4	20.0	6 10	19 26.80	-13 46.3	2.108	3.011	10.5	21.5
6 20	19 21.73	-13 17.1	1.855	2.819	8.1	19.8	6 20	19 20.78	-13 31.9	2.041	3.005	7.5	21.3
6 30	19 13.79	-13 55.9	1.814	2.814	4.6	19.5	6 30	19 13.35	-13 25.0	2.000	2.999	4.4	21.1
7 10	19 5.02	-14 43.3	1.799	2.809	2.9	19.4	7 10	19 5.25	-13 25.0	1.985	2.993	3.1	21.0
7 20	18 56.35	-15 36.3	1.812	2.804	5.6	19.6	7 20	18 57.30	-13 31.4	1.998	2.987	5.4	21.1
7 30	18 48.73	-16 31.6	1.851	2.799	9.2	19.8	7 30	18 50.31	-13 43.0	2.037	2.981	8.6	21.3
8 9	18 42.94	-17 26.4	1.914	2.793	12.5	20.0	8 9	18 44.99	-13 58.3	2.099	2.976	11.7	21.5
252765	2002 <i>EB</i> ₇₃	7 7.5 27°87' 7.3"/ 6.1 17					504716	2009 <i>TP</i> ₂₃	7 7.5 207°76' 2.0"/ 6.9 17				
5 31	19 37.00	-40 41.3	1.810	2.643	15.2	19.3	5 31	19 37.42	-26 34.5	1.868	2.706	14.6	22.0
6 10	19 32.30	-41 24.4	1.753	2.654	12.4	19.2	6 10	19 32.38	-26 56.3	1.785	2.703	11.4	21.8
6 20	19 24.71	-41 57.3	1.717	2.666	9.7	19.0	6 20	19 24.75	-27 19.1	1.724	2.699	7.6	21.6
6 30	19 15.06	-42 13.9	1.703	2.679	7.7	18.9	6 30	19 15.16	-27 39.2	1.687	2.695	3.7	21.3
7 10	19 4.63	-42 10.0	1.714	2.692	7.5	19.0	7 10	19 4.63	-27 53.2	1.678	2.690	2.4	21.2
7 20	18 54.80	-41 44.9	1.750	2.705	9.1	19.1	7 20	18 54.32	-27 58.7	1.695	2.686	6.1	21.5
7 30	18 46.81	-41 1.2	1.809	2.720	11.6	19.3	7 30	18 45.41	-27 55.7	1.738	2.681	10.0	21.7
8 9	18 41.50	-40 4.0	1.890	2.734	14.2	19.5	8 9	18 38.80	-27 45.6	1.804	2.675	13.6	21.9
342410	2008 <i>UD</i> ₅₉	7 7.5 294°22' 1.7"/ 7.9 17					73869	1997 <i>AM</i> ₁₁	7 7.5 265°10' 0.5"/ 7.6 18				
5 31	19 32.33	-17 16.0	1.736	2.576	15.4	21.1	5 31	19 36.53	-20 43.7	1.692	2.532	15.8	20.5
6 10	19 28.56	-17 22.3	1.646	2.564	12.2	20.9	6 10	19 32.07	-20 46.7	1.594	2.512	12.4	20.3
6 20	19 22.30	-17 37.2	1.578	2.552	8.3	20.6	6 20	19 24.81	-20 55.0	1.516	2.492	8.4	20.0
6 30	19 14.11	-17 59.4	1.533	2.540	4.1	20.3	6 30	19 15.31	-21 6.7	1.463	2.472	3.8	19.6
7 10	19 4.91	-18 26.8	1.514	2.528	1.9	20.1	7 10	19 4.56	-21 19.4	1.435	2.451	1.3	19.4
7 20	18 55.79	-18 56.8	1.520	2.516	5.9	20.4	7 20	18 53.78	-21 30.8	1.433	2.429	6.2	19.7
7 30	18 47.89	-19 27.1	1.552	2.505	10.2	20.6	7 30	18 44.30	-21 39.7	1.457	2.407	10.9	19.9
8 9	18 42.16	-19 55.9	1.607	2.493	14.1	20.8	8 9	18 37.23	-21 45.9	1.503	2.385	15.2	20.1
91790	1999 <i>TF</i> ₂₂₂	7 7.5 209°83' 3.3"/ 8.4 18					335502	2005 <i>YT</i> ₅₃	7 7.5 340°15' 1.4"/ 8.0 16				
5 31	19 30.90	-12 34.4	2.489	3.299	12.2	19.4	5 31	19 28.66	-14 43.2	1.318	2.177	18.3	19.5
6 10	19 26.51	-12 13.4	2.402	3.297	9.8	19.2	6 10	19 26.50	-15 37.7	1.237	2.165	14.5	19.3
6 20	19 20.44	-11 59.6	2.337	3.295	7.0	19.1	6 20	19 21.39	-16 51.2	1.175	2.154	9.9	19.0
6 30	19 13.14	-11 53.3	2.297	3.292	4.4	18.9	6 30	19 13.88	-18 21.0	1.135	2.143	4.7	18.6
7 10	19 5.28	-11 54.4	2.285	3.289	3.3	18.8	7 10	19 5.05	-20 0.8	1.118	2.134	1.8	18.4
7 20	18 57.56	-12 2.2	2.301	3.287	5.2	18.9	7 20	18 56.22	-21 42.8	1.126	2.125	6.9	18.7
7 30	18 50.70	-12 15.4	2.344	3.284	7.9	19.1	7 30	18 48.87	-23 19.4	1.158	2.118	12.0	19.0
8 9	18 45.31	-12 32.7	2.411	3.280	10.6	19.3	8 9	18 44.19	-24 45.4	1.210	2.112	16.6	19.2
75348	1999 <i>XF</i> ₆₄	7 7.5 270°21' 2.4"/ 8.1 18 R					45195	1999 <i>XT</i> ₁₆₆	7 7.5 251°88' 4.8"/ 6.3 18				
5 31	19 32.55	-15 52.0	1.921	2.752	14.5	19.5	5 31	19 39.01	-31 56.9	1.676	2.519	15.8	18.4
6 10	19 28.40	-15 46.6	1.833	2.744	11.5	19.3	6 10	19 34.23	-32 41.1	1.591	2.508	12.5	18.1
6 20	19 22.01	-15 49.1	1.767	2.737	7.9	19.1	6 20	19 26.34	-33 23.7	1.527	2.497	8.9	17.9
6 30	19 13.93	-15 59.0	1.725	2.729	4.2	18.8	6 30	19 15.99	-33 58.5	1.486	2.485	5.6	17.7
7 10	19 5.00	-16 14.9	1.709	2.721	2.5	18.7	7 10	19 4.36	-34 19.6	1.471	2.473	5.1	17.6
7 20	18 56.20	-16 35.1	1.720	2.713	5.6	18.9	7 20	18 52.88	-34 23.9	1.481	2.461	8.1	17.8
7 30	18 48.53	-16 57.9	1.756	2.705	9.5	19.1	7 30	18 43.05	-34 11.6	1.516	2.449	11.9	18.0
8 9	18 42.81	-17 21.7	1.816	2.698	13.0	19.3	8 9	18 35.98	-33 45.9	1.572	2.436	15.6	18.2
207524	2006 <i>JV</i> ₇₉	7 7.5 239°34' 1.8"/ 6.8 18					266555	2008 <i>GX</i> ₃₇	7 7.5 356°04' 4.0"/ 8.4 17				
5 31	19 34.96	-25 19.7	2.198	3.031	12.9	21.1	5 31	19 32.69	-13 37.7	1.477	2.320	17.5	20.7
6 10	19 30.22	-26 0.7	2.104	3.019	10.0	20.9	6 10	19 29.04	-13 16.1	1.403	2.318	14.0	20.5
6 20	19 23.22	-26 44.9	2.033	3.007	6.7	20.6	6 20	19 22.69	-13 5.7	1.348	2.317	9.9	20.2
6 30	19 14.48	-27 28.8	1.988	2.995	3.2	20.4	6 30	19 14.31	-13 7.2	1.316	2.317	5.9	20.0
7 10	19 4.81	-28 8.4	1.970	2.982	2.2	20.3	7 10	19 4.96	-13 19.7	1.307	2.316	4.1	19.9
7 20	18 55.17	-28 40.7	1.980	2.969	5.5	20.5	7 20	18 55.87	-13 41.5	1.324	2.316	7.1	20.1
7 30	18 46.58	-29 4.3	2.017	2.956	9.1	20.7	7 30	18 48.27	-14 9.9	1.364	2.317	11.3	20.3
8 9	18 39.89	-29 19.2	2.078	2.942	12.3	20.9	8 9	18 43.09	-14 42.0	1.425	2.317	15.2	20.5
504210	2006 <i>UM</i> ₃₉	7 7.5 211°45' 1.3"/ 7.1 17					14037	1995 <i>EZ</i> ₇	7 7.5 95°50' 5.0"/ 8.9 18				
5 31	19 37.93	-24 43.2	2.000	2.832	14.0	23.2	5 31	19 32.07	- 9 3.8	2.054	2.862	14.5	17.8
6 10	19 32.62	-25 4.8	1.911	2.826	10.9	22.9	6 10	19 27.69	- 8 33.2	1.979	2.869	11.8	17.6
6 20	19 24.85	-25 28.7	1.844	2.819	7.3	22.7	6 20	19 21.34	- 8 13.7	1.926	2.876	8.8	17.4
6 30	19 15.19	-25 51.9	1.803	2.811	3.3	22.4	6 30	19 13.59	- 8 6.3	1.897	2.883	6.1	17.3
7 10	19 4.59	-26 10.9	1.788	2.803	1.8	22.3	7 10	19 5.23	- 8 11.1	1.893	2.889	5.0	17.2
7 20	18 54.12	-26 23.5	1.802	2.794	5.7	22.6	7 20	18 57.10	- 8 27.2	1.917	2.896	6.6	17.3
7 30	18 44.91	-26 29.0	1.842	2.784	9.6	22.8	7 30	18 50.06	- 8 52.5	1.966	2.903	9.4	17.5
8 9	18 37.85	-26 28.2	1.905	2.774	13.1	23.0	8 9	18 44.76	- 9 24.4	2.038	2.909	12.2	17.7
104550	2000 <i>GH</i> ₆₃	7 7.5 296°40' 1.0"/ 7.7 18					352628	2008 <i>FA</i> ₄₁	7 7.5 73°51' 5.6"/ 5.6 17				
5 31	19 32.34	-19 11.8	1.960	2.797	14.1	19.9	5 31	19 37.04	-37 7.8	2.209	3.035	13.0	20.9
6 10	19 28.21	-19 13.1	1.875	2.791	11.0	19.7	6 10	19 31.79	-38 5.2	2.152	3.053	10.5	20.8
6 20	19 21.86	-19 19.9	1.811	2.785	7.4	19.4	6 20	19 24.16	-38 56.6	2.117	3.071	7.9	20.6
6 30	19 13.86	-19 31.0	1.772	2.780	3.4	19.2	6 30	19 14.84	-39 36.6	2.107	3.089	5.9	20.5
7 10	19 5.05	-19 44.5	1.759	2.774	1.4	19.0	7 10	19 4.82	-40 1.2	2.124	3.107	5.8	20.6
7 20	18 56.41	-19 58.7	1.773	2.769	5.3	19.3	7 20	18 55.19	-40 8.8	2.167	3.125	7.5	20.7
7 30	18 48.91	-20 12.4	1.814	2.764	9.2	19.5	7 30	18 46.99	-40 0.3	2.235	3.142	9.9	20.9
8 9	18 43.35	-20 24.7	1.877										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
11765	Alfredfowler		7 7.5 48°10	1°3/ 7.3 18			437197	2012 WX ₁		7 7.5 313°89	0°0/ 7.3 16		
5 31	19 37.05	-25 3.7	1.288	2.149	18.5	17.5	5 31	19 32.55	-21 10.2	1.772	2.617	15.0	21.5
6 10	19 32.80	-25 8.5	1.228	2.159	14.3	17.2	6 10	19 28.72	-21 27.5	1.688	2.609	11.7	21.2
6 20	19 25.31	-25 15.3	1.188	2.169	9.5	17.0	6 20	19 22.42	-21 50.5	1.625	2.602	7.8	21.0
6 30	19 15.45	-25 20.3	1.169	2.179	4.2	16.7	6 30	19 14.22	-22 16.8	1.586	2.595	3.4	20.7
7 10	19 4.63	-25 20.2	1.175	2.190	2.0	16.6	7 10	19 5.09	-22 43.4	1.573	2.589	1.2	20.5
7 20	18 54.41	-25 13.5	1.204	2.201	7.0	16.9	7 20	18 56.09	-23 7.6	1.586	2.582	5.7	20.8
7 30	18 46.22	-25 0.6	1.257	2.212	11.9	17.2	7 30	18 48.37	-23 27.7	1.624	2.576	9.9	21.1
8 9	18 41.03	-24 43.3	1.331	2.224	16.0	17.5	8 9	18 42.82	-23 43.2	1.685	2.570	13.7	21.3
342477	2008 UR ₁₄₄		7 7.5 295°36	3°2/ 8.2 17			254372	2004 TB ₁₂₄		7 7.5 263°85	5°0/ 5.7 18		
5 31	19 32.89	-14 40.6	1.818	2.648	15.2	20.8	5 31	19 35.05	-36 7.3	2.377	3.203	12.2	20.0
6 10	19 28.73	-14 21.4	1.736	2.645	12.1	20.5	6 10	19 30.27	-36 54.6	2.297	3.201	9.8	19.9
6 20	19 22.26	-14 10.5	1.675	2.642	8.5	20.3	6 20	19 23.23	-37 37.5	2.241	3.198	7.3	19.7
6 30	19 14.08	-14 8.2	1.638	2.639	4.8	20.1	6 30	19 14.52	-38 11.2	2.209	3.195	5.4	19.6
7 10	19 5.08	-14 13.7	1.627	2.636	3.3	20.0	7 10	19 5.01	-38 32.0	2.205	3.192	5.2	19.6
7 20	18 56.28	-14 25.8	1.642	2.633	6.1	20.2	7 20	18 55.69	-38 38.0	2.227	3.190	7.0	19.7
7 30	18 48.69	-14 43.0	1.682	2.631	9.9	20.4	7 30	18 47.57	-38 29.3	2.274	3.187	9.5	19.8
8 9	18 43.14	-15 3.4	1.745	2.628	13.4	20.6	8 9	18 41.42	-38 8.3	2.345	3.184	12.0	20.0
490116	2008 UE ₆₇		7 7.5 316°65	4°1/ 6.5 18			388960	2008 TC ₈₄		7 7.5 240°00	0°1/ 7.5 18		
5 31	19 32.74	-29 23.8	1.431	2.294	16.9	21.1	5 31	19 35.30	-21 29.5	2.182	3.010	13.1	22.3
6 10	19 29.97	-29 58.7	1.335	2.265	13.4	20.8	6 10	19 30.41	-21 36.6	2.085	2.997	10.2	22.0
6 20	19 23.91	-30 34.7	1.258	2.236	9.4	20.5	6 20	19 23.34	-21 47.4	2.009	2.983	6.8	21.8
6 30	19 15.10	-31 6.3	1.203	2.208	5.3	20.2	6 30	19 14.59	-22 0.0	1.960	2.968	3.0	21.5
7 10	19 4.66	-31 27.5	1.171	2.180	4.5	20.0	7 10	19 4.97	-22 12.3	1.938	2.954	1.0	21.3
7 20	18 54.12	-31 34.2	1.164	2.153	8.4	20.2	7 20	18 55.42	-22 22.6	1.944	2.938	5.0	21.6
7 30	18 45.15	-31 25.2	1.179	2.127	13.1	20.4	7 30	18 46.91	-22 30.2	1.977	2.922	8.8	21.8
8 9	18 39.13	-31 3.0	1.213	2.102	17.6	20.6	8 9	18 40.25	-22 34.7	2.034	2.906	12.2	22.0
374956	2007 CQ ₃₉		7 7.5 251°01	0°8/ 7.7 18			417486	2006 RJ ₇₂		7 7.5 160°55	2°8/ 6.8 17		
5 31	19 35.72	-19 35.9	1.863	2.697	14.8	22.2	5 31	19 39.27	-28 11.5	1.776	2.614	15.2	22.4
6 10	19 31.12	-19 42.9	1.767	2.682	11.6	22.0	6 10	19 33.92	-28 39.8	1.701	2.618	11.9	22.2
6 20	19 24.00	-19 55.8	1.692	2.666	7.8	21.7	6 20	19 25.82	-29 8.0	1.648	2.622	8.0	21.9
6 30	19 14.92	-20 13.1	1.642	2.650	3.6	21.4	6 30	19 15.69	-29 31.5	1.620	2.626	4.2	21.7
7 10	19 4.78	-20 32.4	1.618	2.634	1.3	21.2	7 10	19 4.63	-29 46.3	1.618	2.629	3.1	21.7
7 20	18 54.66	-20 51.5	1.622	2.617	5.7	21.5	7 20	18 53.90	-29 50.3	1.643	2.631	6.5	21.9
7 30	18 45.74	-21 8.7	1.651	2.600	10.0	21.7	7 30	18 44.75	-29 43.6	1.693	2.633	10.4	22.1
8 9	18 38.96	-21 23.4	1.704	2.582	13.8	21.9	8 9	18 38.09	-29 28.3	1.766	2.635	13.9	22.3
136344	2004 CE ₃₃		7 7.5 335°36	0°9/ 7.7 18			141081	2001 XF ₃₄		7 7.5 215°59	4°3/ 6.2 18		
5 31	19 30.27	-18 26.0	1.244	2.112	18.7	19.6	5 31	19 36.42	-34 43.4	2.369	3.194	12.3	20.2
6 10	19 27.90	-18 47.9	1.167	2.101	14.7	19.3	6 10	19 31.24	-35 16.2	2.286	3.191	9.8	20.1
6 20	19 22.38	-19 21.9	1.109	2.090	9.9	19.0	6 20	19 23.83	-35 44.6	2.226	3.187	7.1	19.9
6 30	19 14.34	-20 5.4	1.071	2.081	4.5	18.6	6 30	19 14.76	-36 4.6	2.192	3.183	4.8	19.7
7 10	19 4.96	-20 54.3	1.057	2.072	1.6	18.4	7 10	19 4.94	-36 12.8	2.184	3.179	4.5	19.7
7 20	18 55.71	-21 43.4	1.065	2.065	7.1	18.7	7 20	18 55.33	-36 7.6	2.204	3.175	6.5	19.8
7 30	18 48.13	-22 28.7	1.097	2.058	12.5	19.0	7 30	18 46.94	-35 49.6	2.250	3.171	9.2	20.0
8 9	18 43.42	-23 7.7	1.147	2.052	17.1	19.3	8 9	18 40.52	-35 21.3	2.320	3.166	11.8	20.1
185478	2007 CD ₇		7 7.5 209°45	2°3/ 6.5 18			204502	2005 CE ₃₆		7 7.5 202°37	0°2/ 7.6 18		
5 31	19 33.43	-27 53.7	2.577	3.406	11.3	20.8	5 31	19 33.92	-20 6.8	2.104	2.935	13.4	20.9
6 10	19 28.69	-28 35.8	2.490	3.402	8.8	20.6	6 10	19 29.33	-20 29.4	2.019	2.933	10.4	20.7
6 20	19 22.03	-29 18.7	2.426	3.398	6.0	20.4	6 20	19 22.59	-20 57.6	1.957	2.931	6.9	20.5
6 30	19 13.94	-29 58.9	2.389	3.393	3.2	20.3	6 30	19 14.25	-21 29.4	1.919	2.928	3.1	20.3
7 10	19 5.14	-30 33.4	2.380	3.388	2.6	20.2	7 10	19 5.11	-22 1.8	1.909	2.925	1.0	20.1
7 20	18 56.43	-30 59.9	2.400	3.383	5.1	20.4	7 20	18 56.11	-22 32.5	1.927	2.922	5.0	20.4
7 30	18 48.66	-31 17.3	2.446	3.378	8.0	20.6	7 30	18 48.20	-22 59.6	1.971	2.918	8.8	20.6
8 9	18 42.45	-31 26.1	2.517	3.373	10.7	20.7	8 9	18 42.15	-23 22.4	2.040	2.915	12.1	20.8
297101	2010 NH ₅₈		7 7.5 357°67	2°5/ 8.0 17			83589	2001 SO ₂₄₆		7 7.5 305°63	1°3/ 7.1 18		
5 31	19 28.32	-17 6.4	1.033	1.914	20.6	19.6	5 31	19 32.74	-24 37.7	1.974	2.816	13.8	19.7
6 10	19 26.71	-17 2.1	0.970	1.909	16.3	19.3	6 10	19 28.67	-25 0.6	1.888	2.809	10.7	19.5
6 20	19 21.70	-17 10.6	0.923	1.906	11.1	19.0	6 20	19 22.28	-25 26.3	1.824	2.801	7.1	19.3
6 30	19 14.04	-17 30.9	0.895	1.904	5.6	18.7	6 30	19 14.15	-25 51.8	1.785	2.794	3.2	19.0
7 10	19 5.10	-18 0.2	0.889	1.904	2.8	18.5	7 10	19 5.14	-26 13.8	1.772	2.786	1.8	18.9
7 20	18 56.49	-18 34.6	0.904	1.904	7.8	18.8	7 20	18 56.27	-26 30.2	1.786	2.779	5.5	19.1
7 30	18 49.86	-19 10.2	0.940	1.907	13.2	19.1	7 30	18 48.59	-26 39.9	1.826	2.772	9.4	19.3
8 9	18 46.36	-19 43.9	0.994	1.911	18.1	19.4	8 9	18 42.93	-26 43.2	1.889	2.765	12.8	19.5
360677	2004 RV ₂₃₈		7 7.5 276°13	2°0/ 8.1 18			306106	2010 JF ₂₉		7 7.5 25°01	0°2/ 7.4 16		
5 31	19 30.68	-15 56.5	2.398	3.219	12.3	21.7	5 31	19 32.34	-22 11.3	1.610	2.463	15.8	20.9
6 10	19 26.58	-15 53.6	2.299	3.205	9.7	21.5	6 10	19 28.60	-22 22.5	1.544	2.469	12.3	20.6
6 20	19 20.66	-15 57.0	2.223	3.191	6.7	21.3	6 20	19 22.30	-22 38.3	1.497	2.477	8.1	20.4
6 30	19 13.36	-16 6.4	2.173	3.176	3.6	21.0	6 30	19 14.13	-22 55.9	1.475	2.484	3.5	20.2
7 10	19 5.36	-16 20.6	2.150	3.162	2.1	20.9	7 10	19 5.17	-23 12.6	1.477	2.493	1.2	20.0
7 20	18 57.41	-16 38.3	2.154	3.147	4.8	21.1	7 20	18 56.56	-23 26.1	1.505	2.502	5.8	20.3
7 30	18 50.31	-16 58.2	2.186	3.133	8.0	21.2	7 30	18 49.44	-23 35.5	1.558	2.511	10.1	20.6
8 9	18 44.74	-17 19.0	2.242	3.118	11.1	21.4	8 9	18 44.64	-23 40.6	1.632	2.521	13.8	20.9
500139	2012 DY ₄		7 7.5 138°68	0°7/ 7.3 17			439193	2012 AF ₅		7 7.5 244°21	1°3/ 6.9 18		
5 31	19 38.75	-23 8.4	1.693	2.532	15.8	22.3	5 31	19 32.30	-24 7.8	2.457	3.288	11.7	21.2
6 10	19 33.45	-23 24.1	1.622	2.541	12.3	22.1	6 10	19 27.89	-24 47.7	2.367	3.281	9.1	21.0
6 20	19 25.45	-23 43.4	1.573	2.549	8.1	21.9	6 20	19 21.57	-25 31.0	2.299	3.274	6.0	20.8
6 30	19 15.49	-24 3.0	1.548	2.557	3.6	21.6	6 30	19 13.79	-26 14.7	2.258	3.266	2.8	20.5
7 10	19 4.66	-24 19.6	1.549	2.564	1.4	21.5	7 10	19 5.27	-26 55.7	2.245	3.259	1.7	20.4
7 20	18 54.21	-24 31.1	1.577	2.571	6.0	21.8	7 20	18 56.80	-27 31.2	2.261	3.251	4.8	20.6
7 30	18 45.32	-24 36.8	1.630	2.577	10.2	22.1	7 30	18 49.25	-27 59.9	2.303	3.243	8.0	20.8
8 9	18 38.89	-24 37.4	1.706	2.583	13.9	22.3	8 9	18 43.32	-28 21.3	2.370	3.235	11.0	21.0

EPHEMERIDES

7 7.5

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
256632	2007 VG ₂₄₁		7 7.5 201°18	0°6/ 7.6 17			95022	2002 AG ₁₄		7 7.5 138°57	0°4/ 7.4 18		
5 31	19 37.21	-20 0.8	1.879	2.710	14.8	21.7	5 31	19 35.24	-21 53.5	1.929	2.764	14.3	20.0
6 10	19 32.12	-20 8.7	1.794	2.707	11.6	21.4	6 10	19 30.49	-22 16.0	1.853	2.770	11.1	19.8
6 20	19 24.57	-20 22.1	1.730	2.703	7.7	21.2	6 20	19 23.42	-22 43.1	1.799	2.775	7.3	19.6
6 30	19 15.15	-20 39.1	1.690	2.699	3.5	20.9	6 30	19 14.64	-23 12.1	1.770	2.779	3.2	19.4
7 10	19 4.81	-20 57.1	1.678	2.694	1.2	20.8	7 10	19 5.06	-23 39.7	1.768	2.784	1.2	19.2
7 20	18 54.64	-21 14.0	1.693	2.688	5.6	21.0	7 20	18 55.74	-24 3.6	1.794	2.788	5.3	19.5
7 30	18 45.75	-21 28.6	1.735	2.682	9.7	21.3	7 30	18 47.69	-24 22.4	1.845	2.792	9.2	19.8
8 9	18 39.03	-21 40.4	1.800	2.676	13.4	21.5	8 9	18 41.71	-24 36.0	1.920	2.796	12.6	20.0
319044	2005 VZ ₉₈		7 7.5 291°74	1°5/ 7.9 18			463890	2014 UY ₉₁		7 7.5 342°84	3°8/ 6.9 17		
5 31	19 30.93	-17 23.0	2.179	3.009	13.1	20.9	5 31	19 26.67	-27 47.2	0.876	1.778	21.4	20.5
6 10	19 26.98	-17 26.5	2.085	2.997	10.3	20.7	6 10	19 26.45	-28 9.6	0.810	1.762	16.9	20.2
6 20	19 21.04	-17 36.5	2.013	2.985	7.0	20.5	6 20	19 22.16	-28 33.3	0.759	1.748	11.6	19.8
6 30	19 13.58	-17 52.1	1.966	2.973	3.5	20.3	6 30	19 14.51	-28 52.3	0.726	1.736	6.0	19.5
7 10	19 5.35	-18 11.7	1.946	2.961	1.7	20.1	7 10	19 5.08	-29 0.2	0.713	1.726	4.3	19.3
7 20	18 57.19	-18 33.5	1.954	2.949	5.0	20.3	7 20	18 55.94	-28 53.1	0.718	1.717	9.6	19.6
7 30	18 49.99	-18 55.9	1.988	2.937	8.6	20.5	7 30	18 49.21	-28 31.2	0.742	1.711	15.5	19.9
8 9	18 44.49	-19 17.7	2.045	2.925	11.8	20.7	8 9	18 46.35	-27 58.1	0.782	1.707	20.8	20.2
336125	2008 OL ₁₉		7 7.5 3°32	1°2/ 7.6 17			512060	2015 MR ₁₁₁		7 7.5 355°59	0°6/ 7.8 18		
5 31	19 34.94	-21 47.5	1.454	2.308	17.2	20.4	5 31	19 30.91	-18 0.0	1.908	2.747	14.3	21.2
6 10	19 30.87	-21 14.3	1.381	2.307	13.4	20.2	6 10	19 27.23	-18 34.1	1.828	2.745	11.1	21.0
6 20	19 23.94	-20 43.3	1.328	2.307	9.0	19.9	6 20	19 21.34	-19 17.1	1.769	2.744	7.5	20.8
6 30	19 14.90	-20 13.8	1.298	2.307	4.1	19.7	6 30	19 13.77	-20 6.5	1.734	2.743	3.4	20.5
7 10	19 4.93	-19 45.4	1.293	2.308	1.7	19.5	7 10	19 5.37	-20 58.8	1.726	2.742	1.2	20.3
7 20	18 55.36	-19 18.3	1.313	2.310	6.5	19.8	7 20	18 57.11	-21 50.4	1.745	2.742	5.2	20.6
7 30	18 47.47	-18 53.4	1.357	2.312	11.1	20.1	7 30	18 49.98	-22 38.5	1.790	2.742	9.2	20.9
8 9	18 42.19	-18 31.2	1.422	2.315	15.2	20.3	8 9	18 44.79	-23 21.1	1.859	2.742	12.6	21.1
189562	2000 SX ₂₁₂		7 7.5 311°97	2°1/ 8.1 18			69349	1993 VU		7 7.5 176°34	10°9/ 10.3 18		
5 31	19 30.93	-16 8.2	1.458	2.310	17.2	19.7	5 31	19 36.53	+ 7 23.3	2.192	2.909	16.3	19.9
6 10	19 28.34	-16 19.5	1.349	2.273	13.8	19.4	6 10	19 31.09	+ 8 41.9	2.116	2.912	14.6	19.8
6 20	19 22.79	-16 43.7	1.260	2.236	9.7	19.1	6 20	19 23.64	+ 9 42.4	2.059	2.915	12.8	19.6
6 30	19 14.67	-17 20.3	1.192	2.199	4.9	18.7	6 30	19 14.72	+10 19.9	2.023	2.916	11.5	19.6
7 10	19 4.90	-18 7.0	1.148	2.163	2.4	18.4	7 10	19 5.08	+10 31.5	2.011	2.917	10.9	19.5
7 20	18 54.74	-18 59.9	1.129	2.127	7.1	18.6	7 20	18 55.60	+10 17.1	2.022	2.917	11.4	19.6
7 30	18 45.73	-19 55.0	1.132	2.091	12.5	18.8	7 30	18 47.14	+ 9 38.6	2.058	2.916	12.7	19.6
8 9	18 39.25	-20 48.4	1.157	2.056	17.5	19.0	8 9	18 40.42	+ 8 41.1	2.114	2.914	14.4	19.8
480670	2015 OL ₇₁		7 7.5 305°99	2°6/ 8.5 18			418946	2009 DV ₁₃₅		7 7.5 115°28	2°4/ 7.2 17		
5 31	19 30.21	-13 37.0	2.041	2.867	14.0	20.6	5 31	19 40.29	-28 8.4	1.480	2.329	17.2	20.9
6 10	19 26.56	-13 50.3	1.948	2.855	11.1	20.4	6 10	19 35.13	-28 14.1	1.411	2.334	13.4	20.7
6 20	19 20.84	-14 14.1	1.877	2.843	7.8	20.2	6 20	19 26.82	-28 18.3	1.362	2.339	9.0	20.4
6 30	19 13.52	-14 47.9	1.829	2.832	4.3	20.0	6 30	19 16.21	-28 16.8	1.336	2.343	4.4	20.2
7 10	19 5.37	-15 29.6	1.809	2.820	2.6	19.8	7 10	19 4.61	-28 6.2	1.335	2.348	2.8	20.1
7 20	18 57.26	-16 16.6	1.815	2.809	5.4	20.0	7 20	18 53.52	-27 45.6	1.360	2.353	7.0	20.3
7 30	18 50.13	-17 5.9	1.848	2.798	9.0	20.2	7 30	18 44.35	-27 16.6	1.409	2.357	11.5	20.6
8 9	18 44.76	-17 54.9	1.904	2.787	12.4	20.4	8 9	18 38.07	-26 42.2	1.480	2.362	15.4	20.9
509760	2008 TA ₁₈₄		7 7.5 282°15	5°4/ 5.6 18			497202	2004 TK ₂₇₄		7 7.5 161°45	2°8/ 6.6 17		
5 31	19 36.43	-32 53.6	1.791	2.634	14.9	21.2	5 31	19 37.67	-29 41.0	2.387	3.212	12.2	22.5
6 10	19 32.18	-33 59.4	1.705	2.620	11.9	21.0	6 10	19 32.04	-30 16.0	2.310	3.218	9.5	22.3
6 20	19 25.01	-35 4.6	1.640	2.607	8.7	20.7	6 20	19 24.29	-30 49.8	2.255	3.224	6.5	22.1
6 30	19 15.49	-36 2.5	1.600	2.594	6.0	20.6	6 30	19 15.00	-31 18.6	2.227	3.229	3.7	21.9
7 10	19 4.68	-36 46.6	1.585	2.581	5.8	20.5	7 10	19 5.00	-31 39.4	2.227	3.234	3.1	21.9
7 20	18 53.92	-37 12.7	1.596	2.568	8.4	20.6	7 20	18 55.24	-31 50.2	2.256	3.238	5.6	22.1
7 30	18 44.62	-37 20.1	1.631	2.554	11.8	20.8	7 30	18 46.64	-31 50.9	2.311	3.241	8.5	22.3
8 9	18 37.89	-37 11.1	1.687	2.541	15.1	21.0	8 9	18 39.92	-31 43.0	2.391	3.244	11.3	22.4
370014	2000 CW ₇₄		7 7.5 180°53	1°0/ 7.8 17			271716	2004 RY ₂₁₂		7 7.5 3°10	6°8/ 8.5 18 R		
5 31	19 36.52	-18 39.4	1.924	2.752	14.6	22.1	5 31	19 31.45	- 6 20.1	2.073	2.872	14.7	19.6
6 10	19 31.47	-18 50.8	1.842	2.753	11.4	21.9	6 10	19 27.26	- 5 7.9	1.994	2.872	12.2	19.4
6 20	19 24.07	-19 8.9	1.782	2.754	7.7	21.7	6 20	19 21.13	- 4 6.0	1.937	2.872	9.7	19.3
6 30	19 14.92	-19 31.8	1.747	2.754	3.5	21.5	6 30	19 13.61	- 3 17.6	1.904	2.872	7.6	19.1
7 10	19 4.92	-19 56.9	1.739	2.754	1.4	21.3	7 10	19 5.47	- 2 44.7	1.896	2.873	6.9	19.1
7 20	18 55.11	-20 21.9	1.758	2.753	5.4	21.6	7 20	18 57.52	- 2 28.1	1.913	2.874	8.1	19.2
7 30	18 46.55	-20 45.2	1.804	2.752	9.4	21.8	7 30	18 50.60	- 2 27.0	1.956	2.876	10.4	19.3
8 9	18 40.07	-21 5.8	1.874	2.750	12.9	22.0	8 9	18 45.39	- 2 39.0	2.021	2.877	12.9	19.5
320775	2008 EN ₁₂₀		7 7.5 36°85	0°3/ 7.4 15			374934	2007 AY ₂₇		7 7.5 280°46	1°5/ 7.9 17		
5 31	19 31.92	-22 16.5	1.991	2.832	13.7	21.3	5 31	19 34.79	-18 8.1	1.664	2.504	16.0	21.6
6 10	19 27.81	-22 30.6	1.920	2.839	10.6	21.2	6 10	19 30.83	-18 11.2	1.564	2.481	12.7	21.3
6 20	19 21.56	-22 48.4	1.870	2.847	7.0	20.9	6 20	19 24.12	-18 22.3	1.483	2.457	8.7	21.0
6 30	19 13.78	-23 7.5	1.845	2.855	3.0	20.7	6 30	19 15.16	-18 40.4	1.426	2.433	4.2	20.7
7 10	19 5.32	-23 25.6	1.847	2.863	1.1	20.6	7 10	19 4.90	-19 3.0	1.394	2.409	1.8	20.5
7 20	18 57.14	-23 40.7	1.876	2.871	5.1	20.9	7 20	18 54.53	-19 27.8	1.389	2.385	6.3	20.7
7 30	18 50.16	-23 51.9	1.930	2.880	8.8	21.1	7 30	18 45.39	-19 52.5	1.408	2.360	11.1	20.9
8 9	18 45.10	-23 59.1	2.009	2.889	12.0	21.3	8 9	18 38.58	-20 15.7	1.449	2.335	15.4	21.1
334033	2000 YT ₁₁₃		7 7.5 193°70	1°9/ 7.1 18 R			507460	2012 TO ₁₄₇		7 7.5 237°79	5°6/ 8.8 18		
5 31	19 38.80	-28 36.5	2.402	3.223	12.3	21.8	5 31	19 33.47	- 6 42.1	2.367	3.155	13.4	21.5
6 10	19 32.84	-28 39.2	2.313	3.221	9.5	21.6	6 10	19 28.73	- 6 1.5	2.267	3.140	11.1	21.4
6 20	19 24.76	-28 39.8	2.248	3.219	6.4	21.4	6 20	19 22.11	- 5 30.9	2.189	3.126	8.7	21.2
6 30	19 15.16	-28 35.7	2.210	3.215	3.2	21.2	6 30	19 14.08	- 5 12.0	2.136	3.110	6.5	21.0
7 10	19 4.88	-28 25.0	2.200	3.211	2.2	21.1	7 10	19 5.31	- 5 5.8	2.109	3.094	5.6	20.9
7 20	18 54.84	-28 6.9	2.218	3.207	5.1	21.3	7 20	18 56.57	- 5 12.4	2.110	3.078	7.0	21.0
7 30	18 45.97	-27 42.2	2.265	3.202	8.3	21.5	7 30	18 48.68	- 5 30.5	2.137	3.061	9.4	21.1
8 9	18 38.98	-27 12.6	2.336	3.196	11.3	21.7	8 9	18 42.33	- 5 57.7	2.187	3.043	12.1	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
213693	2002 <i>TS</i> ₂₄₈		7 7.5 301°71	0°4/ 7.4 18			504845	2010 <i>RO</i> ₁₇₆		7 7.5 250°81	1°7/ 7.1 17		
5 31	19 32.96	−22 24.0	1.868	2.711	14.4	20.4	5 31	19 39.36	−25 38.6	1.875	2.708	14.7	23.4
6 10	19 28.96	−22 40.6	1.782	2.703	11.2	20.2	6 10	19 34.20	−26 0.0	1.773	2.688	11.6	23.1
6 20	19 22.57	−23 1.6	1.717	2.694	7.4	20.0	6 20	19 26.27	−26 23.7	1.693	2.667	7.8	22.8
6 30	19 14.35	−23 24.4	1.677	2.686	3.3	19.7	6 30	19 16.11	−26 46.0	1.637	2.645	3.7	22.5
7 10	19 5.22	−23 46.1	1.663	2.678	1.2	19.5	7 10	19 4.69	−27 3.0	1.609	2.622	2.2	22.4
7 20	18 56.22	−24 4.4	1.675	2.671	5.5	19.8	7 20	18 53.23	−27 12.1	1.608	2.599	6.3	22.6
7 30	18 48.45	−24 18.1	1.713	2.663	9.6	20.0	7 30	18 43.03	−27 12.5	1.632	2.575	10.6	22.8
8 9	18 42.76	−24 26.9	1.774	2.656	13.2	20.2	8 9	18 35.17	−27 5.3	1.680	2.550	14.5	23.0
424654	2008 <i>QJ</i> ₂₃		7 7.5 349°02	7°2/ 7.2 18			314504	2005 <i>XL</i> ₂		7 7.5 276°00	0°3/ 7.4 18		
5 31	19 38.51	−38 38.4	1.331	2.185	18.5	19.7	5 31	19 32.37	−23 15.2	2.375	3.207	12.1	21.0
6 10	19 34.57	−38 50.8	1.260	2.178	15.1	19.4	6 10	19 27.97	−23 17.0	2.283	3.198	9.4	20.8
6 20	19 26.86	−38 51.1	1.207	2.171	11.3	19.2	6 20	19 21.64	−23 20.6	2.214	3.189	6.2	20.6
6 30	19 16.33	−38 32.0	1.175	2.166	8.1	19.0	6 30	19 13.90	−23 24.5	2.171	3.180	2.7	20.4
7 10	19 4.60	−37 48.8	1.166	2.162	7.4	18.9	7 10	19 5.47	−23 26.8	2.155	3.171	1.0	20.2
7 20	18 53.52	−36 41.9	1.180	2.159	9.9	19.1	7 20	18 57.17	−23 26.6	2.167	3.162	4.6	20.5
7 30	18 44.78	−35 16.2	1.217	2.157	13.6	19.3	7 30	18 49.85	−23 23.4	2.206	3.152	8.0	20.7
8 9	18 39.49	−33 39.9	1.274	2.155	17.4	19.5	8 9	18 44.17	−23 17.5	2.270	3.143	11.0	20.9
238564	2004 <i>XP</i> ₆₄		7 7.5 132°07	4°1/ 5.9 17			395544	2011 <i>UJ</i> ₁₇₀		7 7.5 326°14	2°9/ 6.9 18		
5 31	19 37.19	−30 20.0	2.030	2.865	13.7	20.7	5 31	19 34.89	−29 48.5	1.873	2.716	14.3	21.0
6 10	19 32.18	−31 28.9	1.958	2.871	10.7	20.5	6 10	19 30.53	−30 2.5	1.791	2.710	11.2	20.8
6 20	19 24.66	−32 38.0	1.910	2.878	7.5	20.3	6 20	19 23.64	−30 14.5	1.730	2.704	7.7	20.6
6 30	19 15.26	−33 41.5	1.886	2.885	4.7	20.2	6 30	19 14.84	−30 20.7	1.694	2.698	4.2	20.4
7 10	19 4.94	−34 33.9	1.890	2.891	4.4	20.2	7 10	19 5.16	−30 18.0	1.683	2.693	3.2	20.3
7 20	18 54.82	−35 11.7	1.921	2.897	6.9	20.3	7 20	18 55.74	−30 5.1	1.699	2.688	6.3	20.5
7 30	18 46.03	−35 34.3	1.978	2.903	10.1	20.5	7 30	18 47.71	−29 42.7	1.740	2.683	10.0	20.7
8 9	18 39.44	−35 43.0	2.058	2.908	13.0	20.7	8 9	18 41.95	−29 13.0	1.804	2.678	13.4	20.9
51668	2001 <i>KL</i> ₄		7 7.5 312°67	1°1/ 7.8 18			440470	2005 <i>SF</i> ₂₄₂		7 7.5 244°83	6°8/ 9.5 18		
5 31	19 32.53	−19 40.0	1.788	2.630	15.0	18.8	5 31	19 30.62	−0 40.5	2.731	3.489	12.5	21.9
6 10	19 28.68	−19 33.7	1.701	2.621	11.7	18.6	6 10	19 26.29	+0 3.6	2.632	3.475	10.7	21.8
6 20	19 22.40	−19 32.6	1.635	2.611	7.9	18.3	6 20	19 20.39	+0 36.0	2.554	3.460	8.9	21.6
6 30	19 14.29	−19 35.5	1.594	2.602	3.7	18.0	6 30	19 13.33	+0 54.5	2.500	3.445	7.3	21.5
7 10	19 5.26	−19 40.8	1.577	2.593	1.5	17.9	7 10	19 5.66	+0 57.8	2.472	3.429	6.8	21.4
7 20	18 56.38	−19 47.2	1.587	2.584	5.7	18.1	7 20	18 58.02	+0 45.8	2.471	3.413	7.5	21.5
7 30	18 48.75	−19 53.4	1.623	2.575	9.9	18.3	7 30	18 51.07	+0 19.8	2.495	3.397	9.2	21.6
8 9	18 43.23	−19 59.1	1.681	2.567	13.6	18.6	8 9	18 45.39	−0 17.5	2.543	3.381	11.2	21.7
180755	2004 <i>NC</i> ₂₉		7 7.5 332°99	2°3/ 8.0 18			2977	Chivilikhin		7 7.5 306°90	5°6/ 9.1 18	R	
5 31	19 31.10	−16 44.5	2.022	2.854	13.8	19.9	5 31	19 30.21	−8 13.6	1.794	2.612	15.9	16.7
6 10	19 27.19	−16 26.2	1.937	2.849	10.9	19.7	6 10	19 26.88	−7 52.7	1.700	2.595	13.1	16.5
6 20	19 21.22	−16 13.8	1.873	2.843	7.5	19.5	6 20	19 21.26	−7 45.5	1.625	2.578	9.9	16.3
6 30	19 13.71	−16 7.2	1.834	2.838	4.0	19.2	6 30	19 13.85	−7 53.8	1.573	2.561	6.9	16.0
7 10	19 5.47	−16 5.9	1.821	2.833	2.4	19.1	7 10	19 5.47	−8 17.6	1.546	2.544	5.6	15.9
7 20	18 57.41	−16 8.8	1.835	2.829	5.4	19.3	7 20	18 57.10	−8 55.6	1.544	2.527	7.5	16.0
7 30	18 50.42	−16 15.1	1.875	2.824	9.0	19.5	7 30	18 49.78	−9 44.7	1.567	2.511	10.8	16.2
8 9	18 45.24	−16 23.7	1.938	2.821	12.3	19.7	8 9	18 44.40	−10 41.0	1.612	2.496	14.2	16.3
356790	2011 <i>UT</i> ₃₁₃		7 7.5 123°97	1°7/ 6.9 18			244278	2002 <i>EG</i> ₂₅		7 7.5 196°82	4°9/ 8.8 18		
5 31	19 33.49	−25 57.8	2.388	3.219	12.0	21.3	5 31	19 34.63	−8 0.1	2.425	3.213	13.1	21.3
6 10	19 28.78	−26 30.7	2.311	3.226	9.3	21.1	6 10	19 29.50	−7 28.6	2.334	3.210	10.8	21.2
6 20	19 22.13	−27 4.9	2.258	3.232	6.2	20.9	6 20	19 22.56	−7 6.7	2.265	3.206	8.2	21.0
6 30	19 14.07	−27 37.5	2.232	3.238	3.0	20.7	6 30	19 14.28	−6 55.6	2.222	3.202	5.8	20.8
7 10	19 5.37	−28 5.5	2.233	3.245	2.0	20.6	7 10	19 5.36	−6 55.8	2.205	3.196	4.9	20.8
7 20	18 56.87	−28 26.8	2.262	3.251	4.9	20.8	7 20	18 56.55	−7 6.6	2.217	3.190	6.3	20.8
7 30	18 49.41	−28 40.8	2.318	3.257	8.1	21.1	7 30	18 48.64	−7 26.8	2.255	3.183	8.8	21.0
8 9	18 43.67	−28 47.7	2.398	3.262	10.9	21.2	8 9	18 42.26	−7 54.0	2.319	3.176	11.4	21.1
273785	2007 <i>EQ</i> ₂₂₃		7 7.5 22°53	0°2/ 7.5 17			254912	2005 <i>SO</i> ₉₆		7 7.5 275°07	7°7/ 10.3 18		
5 31	19 32.09	−22 55.9	1.199	2.071	18.9	20.1	5 31	19 29.66	+0 38.8	2.317	3.081	14.3	21.2
6 10	19 29.11	−22 55.2	1.146	2.082	14.6	19.9	6 10	19 25.83	+1 13.9	2.225	3.071	12.3	21.0
6 20	19 22.97	−22 58.7	1.110	2.093	9.6	19.7	6 20	19 20.23	+1 33.7	2.154	3.060	10.3	20.9
6 30	19 14.56	−23 3.8	1.096	2.106	4.2	19.4	6 30	19 13.30	+1 35.5	2.105	3.049	8.5	20.7
7 10	19 5.24	−23 7.7	1.105	2.121	1.4	19.2	7 10	19 5.69	+1 18.3	2.080	3.038	7.7	20.7
7 20	18 56.52	−23 8.3	1.137	2.136	6.8	19.6	7 20	18 58.14	+0 42.7	2.081	3.028	8.4	20.7
7 30	18 49.77	−23 5.3	1.191	2.152	11.8	20.0	7 30	18 51.41	−0 8.9	2.107	3.017	10.2	20.8
8 9	18 45.90	−22 59.2	1.266	2.170	16.0	20.3	8 9	18 46.17	−1 12.5	2.156	3.006	12.5	20.9
152115	2004 <i>RB</i> ₂₁₀		7 7.5 5°27	1°9/ 7.9 18			79798	1998 <i>VJ</i> ₁₀		7 7.5 345°68	0°8/ 7.3 18		
5 31	19 32.70	−18 17.9	2.239	3.065	12.9	19.7	5 31	19 29.19	−21 42.8	1.155	2.032	19.1	18.3
6 10	19 28.15	−17 50.6	2.156	3.065	10.1	19.6	6 10	19 27.38	−22 11.6	1.083	2.022	14.9	18.0
6 20	19 21.70	−17 27.0	2.096	3.065	6.9	19.4	6 20	19 22.25	−22 49.6	1.028	2.013	10.0	17.7
6 30	19 13.88	−17 7.1	2.061	3.066	3.5	19.1	6 30	19 14.46	−23 33.1	0.995	2.006	4.4	17.4
7 10	19 5.46	−16 50.5	2.053	3.066	2.0	19.0	7 10	19 5.29	−24 16.6	0.984	1.999	1.8	17.2
7 20	18 57.26	−16 37.0	2.073	3.066	4.9	19.2	7 20	18 56.31	−24 55.0	0.995	1.994	7.5	17.5
7 30	18 50.10	−16 26.6	2.120	3.067	8.3	19.4	7 30	18 49.17	−25 25.3	1.027	1.990	12.9	17.8
8 9	18 44.64	−16 18.8	2.191	3.067	11.3	19.6	8 9	18 45.09	−25 46.4	1.079	1.987	17.7	18.1
438891	2009 <i>TZ</i> ₃₄		7 7.5 214°88	3°6/ 9.1 18			69377	1994 <i>WJ</i> ₃		7 7.5 243°87	2°8/ 6.3 18		
5 31	19 28.84	−8 13.6	3.069	3.857	10.6	21.8	5 31	19 35.97	−27 14.1	2.266	3.096	12.6	19.1
6 10	19 24.72	−8 6.9	2.974	3.852	8.7	21.7	6 10	19 31.14	−28 12.7	2.170	3.082	9.9	18.9
6 20	19 19.24	−8 8.9	2.903	3.846	6.5	21.5	6 20	19 24.01	−29 14.2	2.096	3.068	6.7	18.6
6 30	19 12.78	−8 19.8	2.857	3.840	4.5	21.4	6 30	19 15.06	−30 14.4	2.049	3.053	3.7	18.4
7 10	19 5.84	−8 39.2	2.840	3.834	3.6	21.3	7 10	19 5.09	−31 8.6	2.030	3.037	3.1	18.4
7 20	18 58.97	−9 6.2	2.850	3.828	4.8	21.4	7 20	18 55.08	−31 53.0	2.039	3.021	6.0	18.5
7 30	18 52.74	−9 39.2	2.888	3.821	6.9	21.5	7 30	18 46.06	−32 25.7	2.075	3.005		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
186373	2002 <i>GF</i> ₁₄₈		7 7.5 196°61	1°9/ 8.2 18			512424	2016 <i>PK</i> ₈₉		7 7.5 252°63	0°8/ 7.2 18		
5 31	19 31.56	-15 51.6	2.741	3.554	11.2	21.3	5 31	19 34.65	-20 44.8	2.010	2.843	13.9	21.4
6 10	19 26.98	-15 46.7	2.651	3.551	8.8	21.2	6 10	19 30.26	-21 39.3	1.917	2.832	10.8	21.2
6 20	19 20.82	-15 47.1	2.584	3.549	6.0	21.0	6 20	19 23.51	-22 42.1	1.846	2.822	7.2	20.9
6 30	19 13.51	-15 52.5	2.543	3.546	3.2	20.8	6 30	19 14.88	-23 49.5	1.801	2.810	3.2	20.6
7 10	19 5.67	-16 1.9	2.531	3.543	2.0	20.7	7 10	19 5.23	-24 57.0	1.784	2.799	1.4	20.5
7 20	18 57.94	-16 14.4	2.547	3.539	4.2	20.9	7 20	18 55.54	-25 59.9	1.794	2.787	5.5	20.7
7 30	18 51.00	-16 28.8	2.592	3.535	7.1	21.0	7 30	18 46.91	-26 55.0	1.831	2.775	9.5	21.0
8 9	18 45.42	-16 44.2	2.661	3.531	9.7	21.2	8 9	18 40.26	-27 41.0	1.892	2.763	13.0	21.2
123651	2000 <i>YB</i> ₇₃		7 7.5 163°32	3°4/ 8.5 18			359612	2011 <i>BK</i> ₇₈		7 7.5 285°95	3°5/ 8.9 18		
5 31	19 32.20	-11 23.7	2.869	3.665	11.1	20.3	5 31	19 30.16	-10 35.8	2.283	3.094	13.2	20.7
6 10	19 27.30	-10 51.3	2.785	3.670	8.9	20.2	6 10	19 26.28	-10 39.4	2.192	3.087	10.6	20.5
6 20	19 20.93	-10 25.1	2.723	3.674	6.5	20.0	6 20	19 20.56	-10 53.7	2.124	3.080	7.7	20.3
6 30	19 13.53	-10 6.0	2.689	3.677	4.3	19.9	6 30	19 13.48	-11 18.7	2.079	3.073	4.8	20.1
7 10	19 5.68	-9 54.1	2.682	3.681	3.5	19.8	7 10	19 5.71	-11 53.3	2.062	3.067	3.5	20.0
7 20	18 57.99	-9 49.2	2.704	3.684	4.9	19.9	7 20	18 58.02	-12 35.4	2.072	3.060	5.4	20.2
7 30	18 51.07	-9 50.6	2.754	3.686	7.2	20.1	7 30	18 51.21	-13 22.5	2.109	3.054	8.4	20.3
8 9	18 45.45	-9 57.2	2.829	3.689	9.6	20.2	8 9	18 45.94	-14 11.9	2.170	3.047	11.3	20.5
10015	Valenlebedev		7 7.5 251°51	0°6/ 7.7 18			177884	2005 <i>QS</i> ₁₂₄		7 7.5 207°60	0°6/ 7.7 18		
5 31	19 38.16	-20 17.3	1.629	2.468	16.3	19.1	5 31	19 32.26	-19 45.6	2.280	3.109	12.6	21.0
6 10	19 33.52	-20 23.4	1.534	2.451	12.9	18.8	6 10	19 27.91	-19 55.6	2.196	3.108	9.8	20.8
6 20	19 25.96	-20 35.9	1.458	2.434	8.7	18.5	6 20	19 21.63	-20 10.4	2.134	3.107	6.5	20.6
6 30	19 16.04	-20 52.6	1.407	2.415	4.0	18.2	6 30	19 13.94	-20 28.4	2.098	3.106	3.0	20.4
7 10	19 4.80	-21 10.7	1.381	2.396	1.3	18.0	7 10	19 5.57	-20 47.8	2.089	3.104	1.0	20.2
7 20	18 53.53	-21 27.5	1.381	2.377	6.4	18.3	7 20	18 57.36	-21 6.7	2.108	3.103	4.6	20.5
7 30	18 43.64	-21 41.6	1.406	2.357	11.2	18.5	7 30	18 50.15	-21 23.9	2.154	3.102	8.1	20.7
8 9	18 36.25	-21 52.5	1.454	2.336	15.6	18.7	8 9	18 44.60	-21 38.8	2.224	3.100	11.2	20.9
441356	2008 <i>DF</i> ₃₉		7 7.5 14°86	9°2/ 5.9 15			257127	2008 <i>GZ</i> ₁₁₆		7 7.5 269°26	2°2/ 6.6 18		
5 31	19 38.00	-44 32.2	1.700	2.528	16.2	20.3	5 31	19 32.75	-26 32.6	2.350	3.184	12.1	20.7
6 10	19 33.65	-45 25.9	1.642	2.534	13.7	20.2	6 10	19 28.45	-27 17.7	2.261	3.176	9.4	20.5
6 20	19 26.00	-46 6.5	1.604	2.540	11.2	20.0	6 20	19 22.10	-28 5.1	2.194	3.168	6.3	20.3
6 30	19 15.93	-46 26.4	1.588	2.548	9.6	20.0	6 30	19 14.19	-28 51.1	2.154	3.160	3.3	20.1
7 10	19 4.90	-46 20.5	1.594	2.556	9.4	20.0	7 10	19 5.48	-29 32.2	2.142	3.152	2.5	20.0
7 20	18 54.51	-45 48.0	1.624	2.565	10.8	20.1	7 20	18 56.82	-30 5.6	2.157	3.144	5.3	20.2
7 30	18 46.22	-44 52.3	1.677	2.575	13.1	20.2	7 30	18 49.15	-30 29.9	2.200	3.136	8.5	20.4
8 9	18 40.97	-43 39.8	1.750	2.585	15.5	20.4	8 9	18 43.20	-30 45.2	2.266	3.128	11.5	20.6
392865	2012 <i>UW</i> ₈₉		7 7.5 208°36	2°5/ 8.2 16			310538	2001 <i>BG</i> ₈₃		7 7.5 99°07	1°3/ 7.1 17		
5 31	19 33.41	-15 30.3	2.164	2.985	13.4	21.6	5 31	19 41.31	-22 52.6	1.744	2.576	15.7	21.6
6 10	19 28.83	-15 14.5	2.078	2.983	10.6	21.4	6 10	19 35.23	-23 38.8	1.689	2.604	12.1	21.4
6 20	19 22.25	-15 5.2	2.014	2.980	7.4	21.2	6 20	19 26.57	-24 29.2	1.657	2.631	7.9	21.3
6 30	19 14.20	-15 2.4	1.975	2.977	4.1	21.0	6 30	19 16.09	-25 19.3	1.649	2.658	3.5	21.0
7 10	19 5.45	-15 5.2	1.963	2.974	2.6	20.9	7 10	19 4.92	-26 4.3	1.669	2.683	1.8	21.0
7 20	18 56.87	-15 12.7	1.979	2.970	5.3	21.1	7 20	18 54.25	-26 40.8	1.717	2.708	5.9	21.3
7 30	18 49.32	-15 23.7	2.021	2.967	8.7	21.3	7 30	18 45.22	-27 7.9	1.790	2.733	9.8	21.6
8 9	18 43.51	-15 37.2	2.087	2.963	11.8	21.5	8 9	18 38.63	-27 26.0	1.887	2.756	13.2	21.8
321709	2010 <i>GR</i> ₁₁₃		7 7.5 162°18	1°8/ 8.0 18			229138	2004 <i>RF</i> ₂₈₉		7 7.6 217°44	2°4/ 7.6 18		
5 31	19 33.40	-17 27.3	1.987	2.817	14.1	21.2	5 31	19 39.91	-19 44.5	1.940	2.763	14.7	20.1
6 10	19 29.00	-17 20.5	1.907	2.818	11.1	21.0	6 10	19 34.03	-18 45.5	1.852	2.759	11.6	19.9
6 20	19 22.44	-17 20.0	1.848	2.818	7.5	20.8	6 20	19 25.77	-17 47.1	1.786	2.755	7.9	19.6
6 30	19 14.30	-17 24.9	1.813	2.819	3.8	20.6	6 30	19 15.77	-16 50.0	1.747	2.751	4.1	19.4
7 10	19 5.43	-17 33.9	1.806	2.819	2.0	20.5	7 10	19 5.02	-15 55.4	1.735	2.747	2.6	19.3
7 20	18 56.77	-17 45.6	1.825	2.820	5.3	20.7	7 20	18 54.56	-15 4.8	1.752	2.742	5.9	19.5
7 30	18 49.26	-17 58.8	1.871	2.820	9.0	20.9	7 30	18 45.45	-14 19.9	1.795	2.738	9.8	19.7
8 9	18 43.65	-18 12.4	1.940	2.820	12.3	21.1	8 9	18 38.47	-13 41.8	1.862	2.733	13.2	19.9
314499	2005 <i>WL</i> ₁₉₄		7 7.5 154°94	7°7/ 10.7 18			11924	1992 <i>WS</i> ₃		7 7.6 183°55	0°6/ 7.4 18		
5 31	19 30.28	+ 6 49.2	3.220	3.924	11.8	21.9	5 31	19 38.95	-23 26.4	1.987	2.816	14.2	19.1
6 10	19 25.68	+ 7 41.2	3.144	3.932	10.4	21.8	6 10	19 33.41	-23 38.9	1.904	2.817	11.0	18.9
6 20	19 19.81	+ 8 19.8	3.088	3.939	9.1	21.7	6 20	19 25.44	-23 54.2	1.843	2.817	7.3	18.7
6 30	19 13.04	+ 8 42.7	3.055	3.946	8.1	21.7	6 30	19 15.67	-24 9.3	1.808	2.817	3.2	18.5
7 10	19 5.86	+ 8 48.8	3.047	3.952	7.7	21.7	7 10	19 5.05	-24 21.6	1.800	2.815	1.3	18.3
7 20	18 58.81	+ 8 38.2	3.065	3.958	8.0	21.7	7 20	18 54.65	-24 29.2	1.820	2.813	5.4	18.6
7 30	18 52.40	+ 8 12.2	3.108	3.964	8.9	21.8	7 30	18 45.55	-24 31.7	1.866	2.811	9.3	18.8
8 9	18 47.10	+ 7 33.5	3.174	3.969	10.2	21.9	8 9	18 38.59	-24 29.6	1.937	2.807	12.8	19.0
22125	2000 <i>SH</i> ₁₈₆		7 7.5 283°96	7°5/ 8.5 18			478337	2011 <i>WG</i> ₁₂₇		7 7.6 105°83	2°1/ 8.1 17		
5 31	19 33.07	- 6 15.0	1.810	2.615	16.3	18.3	5 31	19 32.69	-16 31.4	2.457	3.274	12.1	21.5
6 10	19 29.06	- 5 9.8	1.715	2.597	13.7	18.0	6 10	19 27.93	-16 11.6	2.381	3.285	9.5	21.3
6 20	19 22.70	- 4 15.8	1.640	2.579	10.9	17.8	6 20	19 21.46	-15 56.8	2.329	3.295	6.5	21.1
6 30	19 14.52	- 3 36.7	1.588	2.560	8.4	17.6	6 30	19 13.81	-15 46.8	2.302	3.305	3.5	20.9
7 10	19 5.34	- 3 15.0	1.560	2.542	7.6	17.5	7 10	19 5.67	-15 41.1	2.303	3.314	2.2	20.9
7 20	18 56.17	- 3 11.7	1.557	2.524	9.1	17.6	7 20	18 57.77	-15 39.0	2.332	3.324	4.6	21.0
7 30	18 48.07	- 3 25.8	1.578	2.505	12.0	17.7	7 30	18 50.84	-15 39.9	2.389	3.333	7.6	21.3
8 9	18 41.96	- 3 54.3	1.621	2.487	15.1	17.9	8 9	18 45.43	-15 43.1	2.471	3.343	10.3	21.4
507630	2013 <i>HY</i> ₈₄		7 7.5 222°90	0°0/ 7.4 18			87181	2000 <i>OC</i> ₈		7 7.6 345°18	1°2/ 7.6 18		
5 31	19 32.32	-22 17.6	2.628	3.453	11.2	22.0	5 31	19 34.88	-23 52.5	1.295	2.159	18.3	18.1
6 10	19 27.73	-22 22.2	2.537	3.448	8.7	21.8	6 10	19 31.34	-22 54.6	1.218	2.149	14.4	17.8
6 20	19 21.39	-22 29.1	2.469	3.443	5.8	21.6	6 20	19 24.59	-21 54.1	1.160	2.141	9.7	17.5
6 30	19 13.80	-22 36.8	2.428	3.437	2.5	21.4	6 30	19 15.43	-20 51.3	1.124	2.134	4.4	17.2
7 10	19 5.60	-22 43.8	2.415	3.431	0.8	21.2	7 10	19 5.15	-19 47.1	1.112	2.128	1.8	17.0
7 20	18 57.53	-22 48.8	2.430	3.425	4.2	21.5	7 20	18 55.27	-18 44.2	1.124	2.122	7.1	17.3
7 30	18 50.33	-22 51.5	2.473	3.418	7.3	21.7	7 30	18 47.26	-17 45.7	1.160	2.118	12.2	17.6
8 9	18 44.62	-22 51.7	2.541	3.412	10.1								

EPHEMERIDES

7 7.6

7 7.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
156978	2003 <i>JT</i> ₁₂		7 7.6 356°91	0°6/ 7.7 18			354703	2005 <i>RS</i> ₁₁		7 7.6 218°71	4°2/ 6.4 18		
5 31	19 29.41	-21 16.3	1.201	2.075	18.7	19.3	5 31	19 36.30	-34 22.3	2.365	3.191	12.3	20.8
6 10	19 27.28	-21 8.4	1.133	2.070	14.6	19.1	6 10	19 31.23	-34 52.9	2.283	3.188	9.8	20.6
6 20	19 22.01	-21 6.4	1.083	2.066	9.8	18.8	6 20	19 23.94	-35 19.4	2.223	3.185	7.1	20.5
6 30	19 14.33	-21 8.6	1.054	2.064	4.4	18.5	6 30	19 15.02	-35 37.7	2.189	3.182	4.7	20.3
7 10	19 5.51	-21 12.5	1.047	2.063	1.5	18.3	7 10	19 5.36	-35 44.5	2.182	3.179	4.4	20.3
7 20	18 57.03	-21 16.3	1.063	2.063	7.0	18.6	7 20	18 55.91	-35 38.5	2.203	3.176	6.4	20.4
7 30	18 50.35	-21 18.8	1.101	2.065	12.2	18.9	7 30	18 47.66	-35 20.2	2.249	3.172	9.1	20.6
8 9	18 46.53	-21 19.5	1.159	2.068	16.7	19.2	8 9	18 41.37	-34 51.8	2.319	3.168	11.7	20.7
517069	2013 <i>CH</i> ₅₇		7 7.6 159°12	0°6/ 7.4 18			510151	2010 <i>VR</i> ₂₁₄		7 7.6 12°15	2°6/ 7.0 18		
5 31	19 35.81	-25 16.2	2.703	3.523	11.1	21.8	5 31	19 34.95	-30 17.3	2.182	3.017	12.9	20.7
6 10	19 30.25	-25 6.7	2.620	3.528	8.6	21.6	6 10	19 30.17	-30 22.9	2.103	3.017	10.1	20.6
6 20	19 22.97	-24 56.8	2.561	3.533	5.7	21.4	6 20	19 23.20	-30 25.7	2.047	3.018	6.9	20.4
6 30	19 14.48	-24 45.0	2.530	3.538	2.5	21.2	6 30	19 14.68	-30 22.7	2.016	3.019	3.7	20.2
7 10	19 5.50	-24 30.3	2.527	3.542	1.0	21.1	7 10	19 5.49	-30 11.8	2.011	3.021	2.8	20.1
7 20	18 56.76	-24 12.3	2.553	3.546	4.1	21.4	7 20	18 56.60	-29 52.3	2.035	3.022	5.5	20.3
7 30	18 49.01	-23 51.5	2.608	3.549	7.2	21.6	7 30	18 48.95	-29 25.0	2.084	3.024	8.8	20.5
8 9	18 42.82	-23 28.7	2.688	3.552	9.8	21.7	8 9	18 43.27	-28 52.0	2.158	3.026	11.8	20.7
86420	2000 <i>BT</i> ₂		7 7.6 307°44	19°7/ 4.8 18			103025	1999 <i>XQ</i> ₁₁₀		7 7.6 194°13	1°2/ 7.9 18		
5 31	19 56.01	-56 45.5	1.079	1.892	24.5	18.1	5 31	19 35.40	-18 48.7	2.431	3.248	12.3	20.9
6 10	19 52.20	-58 38.0	1.025	1.883	22.6	17.9	6 10	19 30.18	-18 39.4	2.341	3.246	9.6	20.7
6 20	19 40.97	-60 5.7	0.985	1.874	20.9	17.8	6 20	19 23.09	-18 34.0	2.274	3.243	6.5	20.5
6 30	19 23.30	-60 48.7	0.959	1.865	19.8	17.7	6 30	19 14.62	-18 31.7	2.234	3.240	3.1	20.3
7 10	19 2.60	-60 31.3	0.950	1.857	19.9	17.6	7 10	19 5.50	-18 31.4	2.222	3.236	1.5	20.2
7 20	18 43.49	-59 9.6	0.957	1.850	21.0	17.7	7 20	18 56.55	-18 32.3	2.238	3.232	4.6	20.4
7 30	18 29.88	-56 54.0	0.980	1.842	23.0	17.8	7 30	18 48.56	-18 33.7	2.283	3.227	7.9	20.6
8 9	18 23.32	-54 3.0	1.017	1.835	25.3	17.9	8 9	18 42.20	-18 35.5	2.352	3.221	10.9	20.8
357747	2005 <i>SW</i> ₅₃		7 7.6 186°83	3°6/ 6.2 18			155098	2005 <i>SF</i> ₂₁₄		7 7.6 232°46	0°8/ 7.3 18		
5 31	19 35.31	-33 23.9	2.728	3.549	11.0	21.6	5 31	19 33.42	-24 42.1	2.868	3.689	10.5	21.0
6 10	19 30.14	-33 59.2	2.645	3.549	8.7	21.5	6 10	19 28.53	-24 53.3	2.768	3.676	8.1	20.8
6 20	19 23.06	-34 31.6	2.586	3.548	6.2	21.3	6 20	19 21.95	-25 5.5	2.691	3.663	5.4	20.6
6 30	19 14.59	-34 57.4	2.553	3.547	4.1	21.2	6 30	19 14.13	-25 16.8	2.642	3.650	2.4	20.4
7 10	19 5.45	-35 13.8	2.548	3.545	3.8	21.1	7 10	19 5.67	-25 25.7	2.621	3.636	1.2	20.3
7 20	18 56.48	-35 19.1	2.571	3.544	5.6	21.3	7 20	18 57.29	-25 30.7	2.630	3.622	4.1	20.5
7 30	18 48.51	-35 13.6	2.622	3.542	8.1	21.4	7 30	18 49.69	-25 31.6	2.667	3.607	7.1	20.6
8 9	18 42.21	-34 58.7	2.696	3.539	10.5	21.6	8 9	18 43.50	-25 28.4	2.729	3.592	9.7	20.8
442129	2010 <i>UA</i> ₂₇		7 7.6 310°87	5°6/ 5.2 18			338066	2002 <i>PV</i> ₁₂		7 7.6 349°45	2°6/ 8.2 16		
5 31	19 34.45	-35 40.5	2.187	3.020	12.9	20.6	5 31	19 31.83	-16 23.1	1.640	2.483	16.0	20.4
6 10	19 30.21	-36 46.4	2.104	3.011	10.4	20.4	6 10	19 28.28	-16 7.4	1.562	2.480	12.7	20.2
6 20	19 23.51	-37 49.4	2.044	3.002	7.8	20.2	6 20	19 22.26	-15 59.9	1.504	2.477	8.8	20.0
6 30	19 14.92	-38 43.8	2.008	2.993	5.9	20.1	6 30	19 14.37	-16 0.1	1.469	2.474	4.7	19.7
7 10	19 5.32	-39 24.4	1.999	2.985	5.8	20.0	7 10	19 5.60	-16 7.2	1.459	2.472	2.8	19.6
7 20	18 55.80	-39 48.1	2.016	2.976	7.8	20.1	7 20	18 57.05	-16 19.6	1.475	2.470	6.2	19.8
7 30	18 47.49	-39 54.6	2.058	2.968	10.4	20.3	7 30	18 49.82	-16 35.6	1.515	2.469	10.3	20.0
8 9	18 41.31	-39 45.9	2.122	2.960	13.1	20.5	8 9	18 44.80	-16 53.5	1.577	2.468	14.1	20.3
94561	2001 <i>VT</i> ₂₄		7 7.6 134°72	0°9/ 7.7 17			186636	2003 <i>HE</i> ₅₀		7 7.6 5°29	10°8/ 10.7 18		
5 31	19 40.04	-20 14.9	1.615	2.451	16.6	20.4	5 31	19 30.18	+ 7 32.2	2.236	2.964	15.8	19.8
6 10	19 34.54	-20 8.9	1.546	2.461	12.9	20.2	6 10	19 26.27	+ 8 50.9	2.162	2.964	14.1	19.6
6 20	19 26.30	-20 8.1	1.497	2.471	8.6	19.9	6 20	19 20.56	+ 9 51.7	2.107	2.964	12.5	19.5
6 30	19 16.07	-20 10.5	1.473	2.481	3.9	19.7	6 30	19 13.53	+10 30.0	2.073	2.964	11.3	19.4
7 10	19 4.99	-20 14.0	1.475	2.490	1.5	19.5	7 10	19 5.88	+10 43.3	2.061	2.965	10.8	19.4
7 20	18 54.35	-20 17.1	1.503	2.499	6.0	19.8	7 20	18 58.36	+10 31.3	2.071	2.965	11.2	19.4
7 30	18 45.33	-20 19.1	1.557	2.507	10.4	20.1	7 30	18 51.76	+ 9 55.9	2.104	2.966	12.3	19.5
8 9	18 38.83	-20 20.2	1.633	2.514	14.2	20.4	8 9	18 46.70	+ 9 1.4	2.158	2.967	13.9	19.6
507468	2012 <i>TM</i> ₂₀₈		7 7.6 289°60	9°2/ 4.6 17			59041	1998 <i>SS</i> ₁₆₁		7 7.6 240°67	0°9/ 7.8 18		
5 31	19 40.65	-43 28.9	1.837	2.658	15.5	21.4	5 31	19 36.44	-18 57.1	1.947	2.775	14.5	19.9
6 10	19 35.92	-44 44.1	1.758	2.646	13.1	21.2	6 10	19 31.68	-19 6.0	1.850	2.761	11.4	19.6
6 20	19 27.79	-45 50.2	1.700	2.634	10.9	21.0	6 20	19 24.49	-19 21.4	1.774	2.746	7.7	19.4
6 30	19 16.94	-46 38.8	1.664	2.622	9.4	20.9	6 30	19 15.39	-19 41.6	1.724	2.731	3.6	19.1
7 10	19 4.66	-47 2.5	1.653	2.610	9.5	20.9	7 10	19 5.28	-20 4.2	1.700	2.716	1.4	18.9
7 20	18 52.58	-46 58.2	1.665	2.598	11.1	21.0	7 20	18 55.17	-20 27.1	1.704	2.699	5.5	19.2
7 30	18 42.36	-46 27.3	1.700	2.586	13.5	21.1	7 30	18 46.20	-20 48.4	1.734	2.682	9.7	19.4
8 9	18 35.21	-45 35.4	1.754	2.575	16.1	21.2	8 9	18 39.27	-21 7.3	1.788	2.665	13.4	19.6
75252	1999 <i>XS</i> ₃		7 7.6 161°59	1°7/ 6.9 17			364610	2007 <i>RJ</i> ₂₈₉		7 7.6 314°88	5°6/ 5.8 17		
5 31	19 38.75	-24 31.1	1.942	2.773	14.4	19.7	5 31	19 33.52	-29 5.4	1.183	2.057	19.0	20.1
6 10	19 33.36	-25 14.4	1.865	2.779	11.1	19.5	6 10	19 31.31	-30 19.2	1.102	2.038	15.1	19.8
6 20	19 25.49	-26 1.2	1.811	2.785	7.4	19.2	6 20	19 25.33	-31 38.9	1.040	2.020	10.7	19.5
6 30	19 15.74	-26 47.5	1.782	2.789	3.5	19.0	6 30	19 16.12	-32 56.0	0.998	2.001	6.6	19.2
7 10	19 5.09	-27 28.8	1.780	2.794	2.2	18.9	7 10	19 4.99	-34 0.5	0.979	1.984	6.2	19.1
7 20	18 54.66	-28 1.8	1.807	2.797	5.8	19.2	7 20	18 53.76	-34 44.8	0.981	1.967	10.2	19.3
7 30	18 45.57	-28 25.3	1.860	2.800	9.6	19.4	7 30	18 44.48	-35 5.8	1.005	1.951	15.1	19.5
8 9	18 38.68	-28 39.8	1.936	2.802	13.0	19.6	8 9	18 38.71	-35 6.1	1.047	1.936	19.7	19.7
168204	2006 <i>JP</i> ₂₇		7 7.6 4°81	5°4/ 6.1 17			520858	2014 <i>US</i> ₂₄₀		7 7.6 156°00	2°8/ 6.9 17		
5 31	19 31.83	-28 43.5	1.048	1.932	20.1	19.0	5 31	19 39.89	-28 0.2	1.695	2.535	15.7	22.2
6 10	19 29.94	-29 55.2	0.989	1.931	15.8	18.8	6 10	19 34.63	-28 30.7	1.622	2.540	12.3	22.0
6 20	19 24.21	-31 10.2	0.948	1.931	11.0	18.5	6 20	19 26.52	-29 1.4	1.570	2.544	8.3	21.8
6 30	19 15.44	-32 19.7	0.927	1.932	6.6	18.3	6 30	19 16.26	-29 27.5	1.543	2.548	4.3	21.6
7 10	19 5.19	-33 14.2	0.928	1.935	5.9	18.2	7 10	19 5.03	-29 44.7	1.541	2.552	3.2	21.5
7 20	18 55.34	-33 47.6	0.950	1.939	9.9	18.5	7 20	18 54.15	-29 50.6	1.566	2.555	6.7	21.7
7 30	18 47.79	-33 59.0	0.993	1.944	14.6	18.7	7 30	18 44.90	-29 45.4	1.616	2.558	10.7	22.0
8 9	18 43.80	-33 51.6	1.053	1									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
513805	2013 <i>CU</i> ₁₇₄		7 7.6 160°17	4.2/ 9.4	18		272594	2005 <i>VE</i> ₉₁		7 7.6 231°81	0.9/ 7.8	18	
5 31	19 30.83	— 7 34.6	2.624	3.414	12.2	22.3	5 31	19 32.92	— 19 39.6	2.879	3.694	10.6	21.1
6 10	19 26.48	— 7 27.9	2.540	3.418	9.9	22.1	6 10	19 28.08	— 19 30.0	2.778	3.682	8.3	20.9
6 20	19 20.56	— 7 31.7	2.479	3.421	7.5	22.0	6 20	19 21.63	— 19 23.1	2.701	3.670	5.6	20.7
6 30	19 13.51	— 7 46.4	2.442	3.425	5.2	21.8	6 30	19 14.01	— 19 18.1	2.651	3.657	2.6	20.5
7 10	19 5.93	— 8 11.5	2.433	3.427	4.2	21.8	7 10	19 5.82	— 19 14.4	2.629	3.644	1.1	20.4
7 20	18 58.49	— 8 45.3	2.452	3.430	5.4	21.9	7 20	18 57.70	— 19 11.2	2.637	3.631	4.0	20.6
7 30	18 51.84	— 9 25.9	2.498	3.432	7.8	22.0	7 30	18 50.34	— 19 8.2	2.673	3.617	6.9	20.7
8 9	18 46.54	— 10 10.8	2.569	3.435	10.2	22.2	8 9	18 44.32	— 19 5.1	2.735	3.603	9.6	20.9
311974	2007 <i>EY</i> ₅₆		7 7.6 93°85	4.7/ 5.8	18		327705	2006 <i>SR</i> ₄₁		7 7.6 275°80	3.3/ 8.4	18	
5 31	19 35.56	— 35 30.5	2.444	3.269	12.0	20.1	5 31	19 34.59	— 14 28.2	1.602	2.437	16.7	20.9
6 10	19 30.60	— 36 21.1	2.376	3.278	9.6	20.0	6 10	19 30.74	— 14 19.2	1.507	2.419	13.4	20.6
6 20	19 23.50	— 37 7.6	2.330	3.287	7.1	19.8	6 20	19 24.16	— 14 20.9	1.432	2.401	9.5	20.3
6 30	19 14.85	— 37 45.2	2.310	3.297	5.1	19.7	6 30	19 15.37	— 14 33.2	1.380	2.382	5.3	20.0
7 10	19 5.52	— 38 10.5	2.317	3.306	4.9	19.7	7 10	19 5.34	— 14 55.0	1.352	2.364	3.4	19.9
7 20	18 56.43	— 38 21.5	2.351	3.315	6.6	19.9	7 20	18 55.27	— 15 24.2	1.351	2.345	6.8	20.0
7 30	18 48.51	— 38 18.6	2.411	3.324	9.0	20.0	7 30	18 46.46	— 15 58.2	1.373	2.326	11.3	20.2
8 9	18 42.51	— 38 3.9	2.495	3.332	11.4	20.2	8 9	18 39.99	— 16 34.2	1.418	2.306	15.5	20.4
443812	1999 <i>RG</i> ₃₁		7 7.6 296°33	12.2/ 2.3	17		356846	2011 <i>WD</i> ₆		7 7.6 230°38	4.6/ 5.9	18	
5 31	19 53.65	— 57 46.2	2.327	3.069	14.8	21.4	5 31	19 35.75	— 34 31.6	2.296	3.125	12.5	20.8
6 10	19 46.74	— 58 57.8	2.231	3.035	13.7	21.2	6 10	19 30.96	— 35 18.6	2.216	3.122	10.0	20.6
6 20	19 35.45	— 59 54.4	2.154	3.000	12.7	21.1	6 20	19 23.88	— 36 2.2	2.159	3.120	7.3	20.5
6 30	19 20.52	— 60 25.9	2.098	2.965	12.2	21.0	6 30	19 15.09	— 36 37.6	2.127	3.117	5.1	20.3
7 10	19 3.63	— 60 24.6	2.063	2.930	12.4	20.9	7 10	19 5.47	— 37 1.0	2.122	3.115	4.9	20.3
7 20	18 47.02	— 59 46.9	2.051	2.894	13.3	20.9	7 20	18 56.03	— 37 10.0	2.144	3.112	6.8	20.4
7 30	18 32.93	— 58 35.2	2.059	2.858	14.8	21.0	7 30	18 47.79	— 37 4.9	2.191	3.110	9.5	20.6
8 9	18 22.87	— 56 56.8	2.087	2.822	16.5	21.0	8 9	18 41.55	— 36 47.8	2.262	3.107	12.1	20.8
341266	2007 <i>RL</i> ₂₅₄		7 7.6 30°86	3.9/ 8.7	18		250761	2005 <i>SM</i> ₂₃₂		7 7.6 291°61	0.6/ 7.8	18	
5 31	19 32.35	— 11 59.4	1.819	2.643	15.5	20.8	5 31	19 32.04	— 20 15.5	2.178	3.011	13.0	21.1
6 10	19 28.38	— 11 46.6	1.742	2.645	12.4	20.6	6 10	19 27.96	— 20 17.7	2.085	3.000	10.1	20.9
6 20	19 22.18	— 11 44.9	1.685	2.647	8.9	20.3	6 20	19 21.85	— 20 24.2	2.015	2.988	6.8	20.7
6 30	19 14.32	— 11 54.5	1.652	2.649	5.5	20.2	6 30	19 14.19	— 20 33.6	1.969	2.977	3.1	20.5
7 10	19 5.69	— 12 14.6	1.645	2.651	4.0	20.1	7 10	19 5.75	— 20 44.4	1.950	2.966	1.1	20.3
7 20	18 57.27	— 12 43.2	1.663	2.653	6.3	20.2	7 20	18 57.41	— 20 54.9	1.959	2.955	4.8	20.5
7 30	18 50.04	— 13 17.9	1.707	2.656	9.8	20.4	7 30	18 50.07	— 21 4.3	1.994	2.944	8.5	20.7
8 9	18 44.78	— 13 55.9	1.774	2.658	13.1	20.6	8 9	18 44.47	— 21 11.9	2.053	2.933	11.8	20.9
425104	2009 <i>ST</i> ₁₁₅		7 7.6 67°43	2.8/ 8.2	17		505450	2013 <i>TC</i> ₂₁		7 7.6 232°44	5.4/ 9.1	17	
5 31	19 35.30	— 16 13.0	1.562	2.402	16.9	20.8	5 31	19 34.60	— 7 48.1	2.013	2.813	15.0	22.5
6 10	19 30.94	— 15 54.2	1.495	2.410	13.3	20.6	6 10	19 30.04	— 7 26.5	1.918	2.801	12.4	22.3
6 20	19 23.98	— 15 43.7	1.447	2.418	9.2	20.3	6 20	19 23.29	— 7 17.3	1.844	2.790	9.4	22.1
6 30	19 15.12	— 15 41.4	1.422	2.426	4.9	20.1	6 30	19 14.86	— 7 22.0	1.794	2.777	6.6	21.9
7 10	19 5.45	— 15 46.1	1.422	2.434	3.0	20.0	7 10	19 5.54	— 7 40.7	1.769	2.764	5.4	21.8
7 20	18 56.13	— 15 56.3	1.448	2.443	6.4	20.2	7 20	18 56.25	— 8 12.0	1.772	2.751	7.1	21.9
7 30	18 48.34	— 16 10.4	1.499	2.451	10.5	20.5	7 30	18 47.96	— 8 53.6	1.800	2.737	10.1	22.0
8 9	18 42.91	— 16 26.7	1.571	2.460	14.3	20.7	8 9	18 41.50	— 9 42.1	1.852	2.722	13.3	22.2
67495	2000 <i>RW</i> ₂₉		7 7.6 48°40	7.0/ 8.7	18		200254	1999 <i>VM</i> ₁₉₀		7 7.6 212°16	3.2/ 8.4	18	
5 31	19 35.41	— 10 23.5	1.231	2.074	20.3	18.5	5 31	19 34.08	— 13 40.4	2.210	3.024	13.4	20.7
6 10	19 31.47	— 9 19.4	1.174	2.085	16.5	18.3	6 10	19 29.37	— 13 19.0	2.121	3.019	10.7	20.5
6 20	19 24.52	— 8 29.7	1.135	2.096	12.3	18.1	6 20	19 22.68	— 13 4.9	2.053	3.014	7.6	20.3
6 30	19 15.39	— 7 57.7	1.117	2.108	8.5	17.9	6 30	19 14.53	— 12 58.3	2.011	3.009	4.6	20.1
7 10	19 5.38	— 7 45.0	1.121	2.120	7.0	17.9	7 10	19 5.66	— 12 59.0	1.996	3.003	3.3	20.0
7 20	18 55.88	— 7 50.9	1.149	2.133	9.3	18.1	7 20	18 56.93	— 13 6.2	2.008	2.997	5.5	20.1
7 30	18 48.23	— 8 12.4	1.198	2.146	13.0	18.3	7 30	18 49.19	— 13 18.7	2.048	2.990	8.7	20.3
8 9	18 43.33	— 8 44.9	1.268	2.159	16.8	18.6	8 9	18 43.15	— 13 35.0	2.111	2.984	11.8	20.5
361062	2005 <i>YR</i> ₁₅₂		7 7.6 305°02	3.9/ 6.0	18		264004	2009 <i>OO</i> ₁₀		7 7.6 333°16	5.5/ 4.8	18	
5 31	19 33.54	— 30 59.1	2.179	3.016	12.8	20.7	5 31	19 31.04	— 29 38.0	1.666	2.523	15.2	19.4
6 10	19 29.39	— 31 53.7	2.094	3.008	10.1	20.5	6 10	19 28.39	— 31 19.6	1.576	2.502	12.1	19.1
6 20	19 22.93	— 32 48.1	2.031	3.000	7.1	20.3	6 20	19 22.86	— 33 7.4	1.508	2.481	8.7	18.9
6 30	19 14.70	— 33 37.5	1.993	2.991	4.5	20.2	6 30	19 14.90	— 34 53.8	1.464	2.462	5.9	18.6
7 10	19 5.56	— 34 17.6	1.982	2.983	4.2	20.1	7 10	19 5.47	— 36 30.0	1.445	2.443	6.0	18.6
7 20	18 56.49	— 34 45.2	1.998	2.975	6.6	20.3	7 20	18 55.85	— 37 48.8	1.452	2.425	9.0	18.7
7 30	18 48.55	— 34 59.4	2.040	2.968	9.6	20.4	7 30	18 47.50	— 38 46.2	1.483	2.409	12.7	18.9
8 9	18 42.58	— 35 1.4	2.105	2.960	12.5	20.6	8 9	18 41.68	— 39 22.3	1.534	2.393	16.1	19.1
203950	2003 <i>SY</i> ₂		7 7.6 265°84	4.8/ 8.8	18		250849	2005 <i>UB</i> ₂₁₆		7 7.6 329°32	5.4/ 8.9	18	
5 31	19 33.09	— 9 31.4	2.114	2.920	14.2	20.5	5 31	19 29.85	— 8 54.7	1.943	2.759	14.9	20.0
6 10	19 28.84	— 9 8.6	2.011	2.900	11.7	20.2	6 10	19 26.38	— 8 20.5	1.857	2.750	12.2	19.8
6 20	19 22.49	— 8 56.1	1.928	2.879	8.7	20.0	6 20	19 20.85	— 7 57.6	1.790	2.741	9.3	19.6
6 30	19 14.51	— 8 55.3	1.870	2.858	5.9	19.8	6 30	19 13.76	— 7 47.6	1.747	2.733	6.5	19.4
7 10	19 5.62	— 9 6.4	1.839	2.837	4.8	19.7	7 10	19 5.91	— 7 51.1	1.729	2.725	5.4	19.3
7 20	18 56.69	— 9 28.5	1.834	2.816	6.6	19.8	7 20	18 58.16	— 8 7.4	1.737	2.717	7.1	19.4
7 30	18 48.68	— 9 59.7	1.855	2.794	9.7	19.9	7 30	18 51.43	— 8 34.5	1.769	2.710	10.0	19.6
8 9	18 42.37	— 10 37.5	1.899	2.771	12.9	20.1	8 9	18 46.48	— 9 9.6	1.824	2.703	13.1	19.7
422976	2003 <i>KQ</i> ₆		7 7.6 77°61	3.0/ 6.5	17		267650	2002 <i>TS</i> ₂₁		7 7.6 257°64	1.4/ 7.9	18	
5 31	19 36.78	— 26 22.7	1.665	2.511	15.7	21.2	5 31	19 36.51	— 18 18.1	1.844	2.674	15.1	21.7
6 10	19 32.25	— 27 24.5	1.601	2.522	12.2	21.0	6 10	19 31.93	— 18 18.1	1.743	2.655	11.9	21.4
6 20	19 24.96	— 28 29.5	1.557	2.533	8.2	20.8	6 20	19 24.79	— 18 24.7	1.663	2.635	8.1	21.2
6 30	19 15.61	— 29 32.0	1.538	2.544	4.3	20.5	6 30	19 15.61	— 18 36.9	1.608	2.615	3.9	20.9
7 10	19 5.30	— 30 26.0	1.545	2.555	3.4	20.5	7 10	19 5.29	— 18 52.6	1.579	2.594	1.7	20.7
7 20	18 55.30	— 31 7.4	1.579	2.566	6.9	20.7	7 20	18 54.92	— 19				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
423263	2004 <i>TF</i> ₃₂₆		7 7.6 80°17	0°5/ 7.5 17			161074	2002 <i>LR</i> ₃₇		7 7.6 342°06	11°2/10.4 18		
5 31	19 35.71	-22 59.8	1.744	2.587	15.3	21.3	5 31	19 26.72	+ 0 6.5	1.414	2.226	19.7	18.7
6 10	19 31.17	-23 9.3	1.672	2.592	11.8	21.1	6 10	19 24.71	+ 1 13.7	1.336	2.212	17.2	18.5
6 20	19 24.11	-23 22.2	1.620	2.597	7.8	20.9	6 20	19 20.15	+ 1 59.9	1.275	2.200	14.5	18.3
6 30	19 15.20	-23 35.8	1.593	2.602	3.5	20.6	6 30	19 13.59	+ 2 19.1	1.233	2.188	12.2	18.1
7 10	19 5.47	-23 47.4	1.592	2.608	1.3	20.5	7 10	19 6.00	+ 2 7.8	1.212	2.178	11.2	18.0
7 20	18 56.05	-23 55.1	1.617	2.613	5.7	20.8	7 20	18 58.48	+ 1 26.3	1.212	2.169	12.1	18.0
7 30	18 48.06	-23 58.2	1.668	2.618	9.8	21.0	7 30	18 52.25	+ 0 18.3	1.232	2.161	14.4	18.1
8 9	18 42.34	-23 57.3	1.741	2.623	13.4	21.3	8 9	18 48.27	- 1 8.6	1.272	2.155	17.3	18.3
254399	2004 <i>TZ</i> ₂₄₀		7 7.6 224°48	5°6/ 9.2 18			285518	2000 <i>EE</i> ₁₈₆		7 7.6 44°22	2°6/ 7.1 17		
5 31	19 30.50	- 3 21.6	2.944	3.711	11.5	20.8	5 31	19 36.30	-28 47.5	1.767	2.611	15.0	20.3
6 10	19 26.11	- 2 40.0	2.849	3.702	9.7	20.7	6 10	19 31.67	-28 59.2	1.698	2.618	11.7	20.1
6 20	19 20.28	- 2 8.1	2.776	3.694	7.8	20.5	6 20	19 24.44	-29 9.2	1.650	2.625	7.9	19.8
6 30	19 13.42	- 1 47.6	2.728	3.685	6.2	20.4	6 30	19 15.35	-29 13.9	1.626	2.632	4.1	19.6
7 10	19 6.03	- 1 39.4	2.707	3.675	5.6	20.3	7 10	19 5.48	-29 10.6	1.628	2.640	2.9	19.6
7 20	18 58.71	- 1 43.6	2.713	3.666	6.4	20.4	7 20	18 56.02	-28 58.0	1.657	2.648	6.2	19.8
7 30	18 52.06	- 1 59.0	2.746	3.656	8.2	20.5	7 30	18 48.10	-28 37.0	1.711	2.656	10.0	20.0
8 9	18 46.59	- 2 23.7	2.803	3.645	10.1	20.6	8 9	18 42.53	-28 9.9	1.787	2.664	13.4	20.3
88320	2001 <i>ON</i> ₄₂		7 7.6 319°18	1°3/ 7.4 17			248420	2005 <i>SG</i> ₂₀₆		7 7.6 303°11	3°9/ 6.1 18		
5 31	19 33.72	-24 45.8	1.126	2.001	19.6	19.3	5 31	19 33.74	-30 22.5	2.042	2.882	13.4	20.2
6 10	19 31.26	-24 49.2	1.047	1.985	15.5	18.9	6 10	19 29.75	-31 17.4	1.953	2.869	10.6	20.0
6 20	19 25.12	-24 55.7	0.986	1.970	10.4	18.6	6 20	19 23.32	-32 12.9	1.886	2.856	7.4	19.8
6 30	19 15.96	-25 1.7	0.945	1.955	4.8	18.2	6 30	19 14.96	-33 4.0	1.844	2.844	4.6	19.6
7 10	19 5.17	-25 3.0	0.925	1.941	2.1	18.0	7 10	19 5.57	-33 46.0	1.828	2.831	4.2	19.5
7 20	18 54.51	-24 57.1	0.928	1.927	8.0	18.3	7 20	18 56.21	-34 15.2	1.839	2.819	6.8	19.7
7 30	18 45.85	-24 43.7	0.953	1.915	13.8	18.6	7 30	18 48.02	-34 30.5	1.876	2.806	10.1	19.9
8 9	18 40.56	-24 24.8	0.995	1.903	18.9	18.9	8 9	18 41.93	-34 33.2	1.935	2.794	13.3	20.0
111842	2002 <i>EA</i> ₂₉		7 7.6 339°52	0°7/ 7.4 18			441970	2010 <i>MK</i> ₇₂		7 7.6 324°69	6°7/ 6.7 18		
5 31	19 27.40	-21 36.1	1.019	1.907	20.2	18.5	5 31	19 39.23	-40 9.4	1.862	2.691	15.0	20.4
6 10	19 26.50	-22 0.6	0.946	1.891	15.9	18.2	6 10	19 34.36	-40 26.9	1.776	2.676	12.4	20.2
6 20	19 22.03	-22 35.4	0.890	1.877	10.7	17.9	6 20	19 26.48	-40 34.2	1.709	2.662	9.5	20.0
6 30	19 14.62	-23 17.0	0.852	1.864	4.8	17.5	6 30	19 16.34	-40 25.5	1.666	2.648	7.2	19.9
7 10	19 5.59	-23 59.9	0.836	1.852	1.8	17.3	7 10	19 5.16	-39 56.5	1.648	2.634	6.8	19.8
7 20	18 56.67	-24 38.4	0.841	1.842	8.1	17.6	7 20	18 54.34	-39 6.5	1.656	2.622	8.7	19.9
7 30	18 49.70	-25 8.8	0.866	1.834	14.0	17.9	7 30	18 45.27	-37 58.3	1.688	2.609	11.6	20.0
8 9	18 46.08	-25 29.9	0.908	1.827	19.2	18.2	8 9	18 38.92	-36 37.6	1.742	2.597	14.7	20.2
443082	2013 <i>GO</i> ₆₂		7 7.6 146°61	3°4/ 6.3 18			285288	1998 <i>SO</i> ₉₆		7 7.6 339°92	1°1/ 7.3 17		
5 31	19 34.77	-32 43.9	2.678	3.501	11.1	21.2	5 31	19 29.18	-22 45.5	1.136	2.016	19.2	19.9
6 10	19 29.75	-33 20.1	2.601	3.507	8.7	21.0	6 10	19 27.57	-23 8.3	1.061	2.002	15.0	19.6
6 20	19 22.84	-33 53.6	2.548	3.512	6.2	20.8	6 20	19 22.57	-23 38.8	1.004	1.989	10.1	19.3
6 30	19 14.57	-34 20.9	2.521	3.516	4.0	20.7	6 30	19 14.82	-24 13.2	0.967	1.977	4.5	18.9
7 10	19 5.68	-34 39.1	2.522	3.521	3.6	20.7	7 10	19 5.60	-24 46.5	0.951	1.967	1.9	18.7
7 20	18 56.98	-34 46.7	2.551	3.525	5.5	20.8	7 20	18 56.51	-25 14.1	0.958	1.958	7.7	19.0
7 30	18 49.30	-34 43.7	2.607	3.529	8.0	21.0	7 30	18 49.28	-25 33.5	0.987	1.950	13.2	19.3
8 9	18 43.29	-34 31.6	2.687	3.533	10.4	21.1	8 9	18 45.17	-25 44.3	1.033	1.944	18.1	19.6
105729	2000 <i>SE</i> ₈₃		7 7.6 314°51	1°0/ 7.3 18			397691	2008 <i>CX</i> ₁₁₅		7 7.6 128°60	4°7/ 9.5 16		
5 31	19 31.62	-23 26.6	1.831	2.679	14.4	19.5	5 31	19 31.24	- 6 33.2	2.524	3.312	12.7	22.2
6 10	19 28.24	-23 48.8	1.734	2.657	11.3	19.2	6 10	19 26.83	- 6 19.6	2.447	3.321	10.4	22.0
6 20	19 22.38	-24 15.6	1.658	2.636	7.6	18.9	6 20	19 20.82	- 6 17.0	2.391	3.330	7.9	21.9
6 30	19 14.56	-24 43.9	1.605	2.615	3.4	18.6	6 30	19 13.67	- 6 26.4	2.360	3.338	5.7	21.7
7 10	19 5.65	-25 10.7	1.579	2.594	1.6	18.5	7 10	19 6.02	- 6 47.1	2.356	3.346	4.7	21.7
7 20	18 56.72	-25 32.8	1.579	2.574	5.8	18.7	7 20	18 58.53	- 7 18.0	2.380	3.354	5.9	21.8
7 30	18 48.94	-25 48.8	1.604	2.554	10.1	18.9	7 30	18 51.89	- 7 56.8	2.430	3.362	8.1	21.9
8 9	18 43.28	-25 58.4	1.651	2.535	13.9	19.1	8 9	18 46.66	- 8 40.8	2.505	3.369	10.5	22.1
9309	<i>Platanus</i>		7 7.6 261°74	0°1/ 7.6 18			180863	2005 <i>JE</i> ₂₇		7 7.6 237°33	5°0/ 8.8 18		
5 31	19 31.88	-20 57.5	2.589	3.413	11.4	18.9	5 31	19 34.93	-10 33.7	1.694	2.514	16.6	20.8
6 10	19 27.56	-21 10.6	2.488	3.399	8.9	18.7	6 10	19 30.67	-10 9.1	1.608	2.507	13.5	20.6
6 20	19 21.46	-21 27.5	2.411	3.384	5.9	18.5	6 20	19 23.90	- 9 56.5	1.542	2.500	9.9	20.4
6 30	19 14.01	-21 46.6	2.360	3.368	2.6	18.3	6 30	19 15.20	- 9 57.4	1.500	2.492	6.5	20.2
7 10	19 5.86	-22 6.2	2.337	3.353	0.8	18.1	7 10	19 5.51	-10 11.6	1.482	2.484	5.0	20.1
7 20	18 57.75	-22 24.4	2.343	3.337	4.3	18.3	7 20	18 55.92	-10 37.7	1.490	2.476	7.3	20.2
7 30	18 50.44	-22 40.3	2.376	3.321	7.5	18.5	7 30	18 47.59	-11 13.0	1.523	2.468	11.0	20.4
8 9	18 44.61	-22 53.3	2.434	3.305	10.5	18.7	8 9	18 41.43	-11 54.2	1.578	2.459	14.6	20.6
437140	2012 <i>VA</i> ₈		7 7.6 203°98	3°1/ 6.6 16			133347	2003 <i>SJ</i> ₁₁₀		7 7.6 323°34	1°6/ 7.9 17		
5 31	19 36.04	-29 0.6	2.025	2.861	13.7	21.5	5 31	19 33.10	-18 27.0	1.732	2.573	15.4	19.7
6 10	19 31.36	-29 42.7	1.944	2.860	10.7	21.3	6 10	19 29.24	-18 19.0	1.649	2.567	12.1	19.5
6 20	19 24.25	-30 25.0	1.886	2.858	7.3	21.1	6 20	19 22.92	-18 17.3	1.587	2.562	8.2	19.2
6 30	19 15.30	-31 3.1	1.854	2.857	4.1	20.9	6 30	19 14.74	-18 21.0	1.549	2.556	4.0	19.0
7 10	19 5.46	-31 32.8	1.848	2.855	3.4	20.8	7 10	19 5.66	-18 28.6	1.537	2.551	1.9	18.8
7 20	18 55.79	-31 51.4	1.869	2.853	6.3	21.0	7 20	18 56.76	-18 38.5	1.550	2.547	5.8	19.0
7 30	18 47.40	-31 58.4	1.916	2.851	9.7	21.2	7 30	18 49.15	-18 49.4	1.589	2.542	10.0	19.3
8 9	18 41.14	-31 55.1	1.985	2.849	12.8	21.4	8 9	18 43.70	-19 0.4	1.650	2.538	13.7	19.5
512915	2016 <i>XP</i> ₅		7 7.6 291°15	0°1/ 7.5 18			412994	1999 <i>GF</i> ₅₆		7 7.6 129°22	5°3/ 6.5 17		
5 31	19 32.44	-22 32.8	2.316	3.148	12.3	21.1	5 31	19 41.20	-32 30.8	1.458	2.306	17.4	21.6
6 10	19 28.10	-22 38.3	2.231	3.145	9.6	20.9	6 10	19 36.30	-33 15.5	1.391	2.310	13.8	21.3
6 20	19 21.84	-22 46.3	2.169	3.143	6.3	20.7	6 20	19 27.98	-33 57.1	1.343	2.314	9.8	21.1
6 30	19 14.17	-22 55.2	2.132	3.141	2.8	20.4	6 30	19 17.06	-34 28.4	1.318	2.317	6.2	20.9
7 10	19 5.84	-23 3.2	2.122	3.138	0.9	20.3	7 10	19 4.97	-34 43.4	1.318	2.320	5.6	20.9
7 20	18 57.68	-23 8.9	2.141	3.136	4.6	20.5	7 20	18 53.32	-34 39.5	1.343	2.324	8.6	21.1
7 30	18 50.51	-23 11.8	2.186	3.133	8.0	20.7	7 30	18 43.71	-34 18.0	1.391	2.327	12.5	21.3
8 9	18 45.03	-23 11.8	2.256	3.131									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
63425	2001 LV ₅		7 7.6 336°52	2°8/ 8.5 18			351883	2006 SJ ₁₄₇		7 7.6 246°99	0°1/ 7.6 18		
5 31	19 24.46	−14 51.9	1.050	1.932	20.3	18.0	5 31	19 33.54	−21 30.9	2.198	3.029	12.9	21.6
6 10	19 24.05	−15 5.6	0.969	1.908	16.3	17.7	6 10	19 29.11	−21 37.5	2.110	3.023	10.1	21.4
6 20	19 20.37	−15 37.7	0.904	1.887	11.4	17.4	6 20	19 22.61	−21 47.7	2.043	3.017	6.7	21.2
6 30	19 13.94	−16 28.2	0.858	1.866	6.0	17.0	6 30	19 14.58	−21 59.6	2.003	3.011	3.0	20.9
7 10	19 5.89	−17 33.8	0.833	1.848	3.0	16.7	7 10	19 5.81	−22 11.5	1.989	3.005	0.9	20.7
7 20	18 57.74	−18 48.6	0.829	1.831	7.9	17.0	7 20	18 57.16	−22 21.7	2.004	2.999	4.8	21.0
7 30	18 51.27	−20 5.4	0.845	1.816	13.7	17.2	7 30	18 49.56	−22 29.3	2.044	2.992	8.4	21.2
8 9	18 47.89	−21 17.9	0.879	1.804	19.0	17.5	8 9	18 43.73	−22 34.2	2.110	2.986	11.7	21.4
382280	2012 TW ₂₅₅		7 7.6 25°05	3°1/ 8.6 17			430064	2013 SQ ₃₁		7 7.6 252°75	1°4/ 7.2 18		
5 31	19 32.91	−13 38.7	1.771	2.601	15.6	20.8	5 31	19 37.52	−24 22.4	1.876	2.712	14.6	21.7
6 10	19 28.95	−13 37.9	1.694	2.602	12.4	20.6	6 10	19 32.81	−24 49.0	1.779	2.695	11.5	21.4
6 20	19 22.65	−13 47.8	1.637	2.603	8.7	20.3	6 20	19 25.45	−25 19.4	1.703	2.678	7.7	21.1
6 30	19 14.62	−14 8.1	1.603	2.604	4.9	20.1	6 30	19 15.98	−25 50.0	1.652	2.660	3.6	20.9
7 10	19 5.76	−14 37.0	1.595	2.606	3.2	20.0	7 10	19 5.33	−26 17.1	1.627	2.641	1.9	20.7
7 20	18 57.10	−15 12.2	1.613	2.607	6.0	20.2	7 20	18 54.67	−26 37.7	1.630	2.622	6.0	20.9
7 30	18 49.66	−15 50.8	1.657	2.608	9.8	20.4	7 30	18 45.23	−26 50.3	1.658	2.603	10.3	21.1
8 9	18 44.27	−16 30.2	1.724	2.610	13.3	20.6	8 9	18 38.03	−26 55.4	1.710	2.583	14.1	21.3
152620	1996 RX ₁₁		7 7.6 33°11	4°0/ 8.9 18			141839	2002 OT ₂₀		7 7.6 338°14	0°1/ 7.7 18		
5 31	19 32.67	−11 41.6	1.548	2.382	17.3	20.0	5 31	19 29.33	−20 3.2	1.139	2.015	19.4	19.2
6 10	19 29.02	−11 42.0	1.477	2.386	13.8	19.8	6 10	19 27.66	−20 25.1	1.063	2.002	15.2	18.9
6 20	19 22.83	−11 56.6	1.426	2.391	9.9	19.6	6 20	19 22.64	−20 57.9	1.005	1.989	10.3	18.6
6 30	19 14.73	−12 25.1	1.397	2.396	5.9	19.4	6 30	19 14.91	−21 39.0	0.967	1.978	4.6	18.2
7 10	19 5.74	−13 5.6	1.393	2.401	4.0	19.3	7 10	19 5.71	−22 23.4	0.952	1.968	1.4	18.0
7 20	18 57.00	−13 54.8	1.414	2.407	6.7	19.5	7 20	18 56.61	−23 6.1	0.958	1.959	7.4	18.3
7 30	18 49.66	−14 48.5	1.459	2.412	10.7	19.7	7 30	18 49.29	−23 43.3	0.986	1.951	13.1	18.6
8 9	18 44.59	−15 43.1	1.527	2.418	14.4	19.9	8 9	18 45.05	−24 12.9	1.033	1.945	18.0	18.9
446936	2002 XJ ₆₁		7 7.6 294°91	5°9/ 6.8 17			282292	2002 PK ₁₇₀		7 7.6 338°15	9°9/ 9.4 18		
5 31	19 43.67	−20 22.6	1.026	1.888	22.1	19.9	5 31	19 30.02	− 0 53.1	1.612	2.415	18.1	20.0
6 10	19 39.14	−18 13.6	0.945	1.874	17.8	19.6	6 10	19 26.93	− 0 36.5	1.533	2.406	15.5	19.8
6 20	19 30.44	−15 55.7	0.882	1.859	12.7	19.2	6 20	19 21.46	+ 0 23.8	1.473	2.398	12.9	19.6
6 30	19 18.37	−13 33.6	0.841	1.844	7.6	18.9	6 30	19 14.17	+ 1 2.6	1.434	2.390	10.7	19.5
7 10	19 4.56	−11 15.3	0.822	1.829	6.3	18.8	7 10	19 5.97	+ 1 16.6	1.417	2.383	9.9	19.4
7 20	18 51.05	− 9 11.0	0.826	1.815	10.9	19.0	7 20	18 57.90	+ 1 5.4	1.423	2.377	10.9	19.4
7 30	18 39.90	− 7 29.2	0.852	1.801	16.7	19.2	7 30	18 51.03	+ 0 31.1	1.451	2.372	13.3	19.6
8 9	18 32.53	− 6 13.3	0.896	1.788	21.9	19.5	8 9	18 46.24	− 0 21.0	1.499	2.367	16.0	19.7
193589	2001 BS ₄₂		7 7.6 224°74	4°6/ 9.3 18			404855	2014 KT ₁₆		7 7.6 3°27	5°9/ 8.9 18		
5 31	19 33.67	− 7 23.9	2.412	3.201	13.2	20.8	5 31	19 29.62	− 9 17.6	1.769	2.592	15.9	19.7
6 10	19 28.97	− 7 14.5	2.313	3.189	10.8	20.6	6 10	19 26.34	− 8 28.1	1.694	2.592	13.0	19.5
6 20	19 22.43	− 7 16.5	2.235	3.178	8.2	20.4	6 20	19 20.89	− 7 49.9	1.639	2.592	9.8	19.3
6 30	19 14.49	− 7 30.7	2.183	3.165	5.7	20.3	6 30	19 13.86	− 7 25.4	1.608	2.593	7.0	19.1
7 10	19 5.81	− 7 56.8	2.157	3.152	4.7	20.2	7 10	19 6.10	− 7 15.5	1.600	2.595	5.9	19.1
7 20	18 57.15	− 8 33.3	2.160	3.138	6.1	20.2	7 20	18 58.56	− 7 19.9	1.618	2.598	7.6	19.2
7 30	18 49.31	− 9 17.9	2.190	3.124	8.7	20.4	7 30	18 52.19	− 7 36.8	1.660	2.601	10.5	19.3
8 9	18 42.97	−10 7.9	2.244	3.108	11.5	20.5	8 9	18 47.73	− 8 3.3	1.724	2.605	13.6	19.5
25077	1998 QJ ₉₉		7 7.6 298°49	0°3/ 7.5 18			40863	1999 TL ₁₁₅		7 7.6 289°24	5°2/ 8.7 18		
5 31	19 33.97	−21 15.2	1.472	2.326	17.0	18.6	5 31	19 32.82	−10 24.2	1.807	2.627	15.7	19.8
6 10	19 30.76	−21 38.5	1.376	2.302	13.4	18.3	6 10	19 28.90	− 9 46.9	1.720	2.618	12.8	19.6
6 20	19 24.51	−22 10.0	1.299	2.278	9.0	18.0	6 20	19 22.67	− 9 20.1	1.653	2.608	9.6	19.4
6 30	19 15.70	−22 47.0	1.244	2.254	4.1	17.6	6 30	19 14.69	− 9 5.5	1.609	2.599	6.5	19.2
7 10	19 5.38	−23 25.2	1.214	2.230	1.4	17.4	7 10	19 5.82	− 9 3.9	1.590	2.590	5.2	19.1
7 20	18 54.90	−24 0.5	1.209	2.206	6.8	17.6	7 20	18 57.06	− 9 14.6	1.597	2.580	7.2	19.2
7 30	18 45.80	−24 29.8	1.227	2.182	12.0	17.9	7 30	18 49.44	− 9 35.9	1.629	2.571	10.6	19.4
8 9	18 39.36	−24 52.3	1.266	2.159	16.7	18.1	8 9	18 43.80	−10 5.1	1.683	2.562	13.9	19.6
200279	1999 XC ₂₃₇		7 7.6 251°50	0°8/ 7.8 18			392578	2011 SR ₁₄₁		7 7.6 129°09	7°1/ 5.2 18		
5 31	19 34.78	−20 26.1	1.916	2.751	14.4	20.6	5 31	19 39.47	−41 35.9	2.242	3.056	13.3	21.0
6 10	19 30.30	−20 19.6	1.832	2.747	11.2	20.4	6 10	19 34.15	−42 38.0	2.173	3.060	11.0	20.8
6 20	19 23.51	−20 17.2	1.770	2.744	7.5	20.2	6 20	19 26.17	−43 32.1	2.126	3.063	8.8	20.7
6 30	19 15.00	−20 17.6	1.733	2.741	3.5	19.9	6 30	19 16.22	−44 12.0	2.103	3.067	7.3	20.6
7 10	19 5.67	−20 19.2	1.722	2.737	1.3	19.7	7 10	19 5.36	−44 33.0	2.106	3.070	7.3	20.6
7 20	18 56.54	−20 20.9	1.738	2.734	5.3	20.0	7 20	18 54.78	−44 33.2	2.135	3.074	8.7	20.7
7 30	18 48.63	−20 21.9	1.780	2.730	9.3	20.3	7 30	18 45.68	−44 13.8	2.188	3.077	10.8	20.8
8 9	18 42.76	−20 22.0	1.845	2.726	12.8	20.5	8 9	18 38.97	−43 38.5	2.263	3.080	13.1	21.0
326529	2002 OE ₉		7 7.6 307°69	4°5/ 8.5 17			27556	Williamprem		7 7.6 189°69	0°5/ 7.5 18	R	
5 31	19 31.78	−13 33.0	1.356	2.206	18.4	20.4	5 31	19 36.25	−21 51.1	1.763	2.602	15.3	18.3
6 10	19 29.10	−13 8.9	1.262	2.181	14.9	20.1	6 10	19 31.73	−22 18.3	1.684	2.602	11.9	18.0
6 20	19 23.41	−12 56.4	1.186	2.157	10.8	19.8	6 20	19 24.63	−22 51.2	1.626	2.602	7.9	17.8
6 30	19 15.21	−12 57.1	1.131	2.133	6.5	19.5	6 30	19 15.58	−23 26.5	1.592	2.601	3.5	17.5
7 10	19 5.54	−13 11.1	1.100	2.109	4.6	19.3	7 10	19 5.56	−24 0.6	1.584	2.600	1.3	17.4
7 20	18 55.74	−13 36.7	1.091	2.086	7.9	19.4	7 20	18 55.72	−24 30.4	1.603	2.599	5.8	17.7
7 30	18 47.31	−14 11.3	1.105	2.063	12.8	19.6	7 30	18 47.24	−24 53.9	1.648	2.597	10.0	17.9
8 9	18 41.51	−14 51.4	1.139	2.041	17.5	19.9	8 9	18 41.03	−25 11.1	1.716	2.596	13.7	18.1
353794	2012 QO ₃₃		7 7.6 199°69	10°6/ 11.7 18			176082	2000 XX ₄₁		7 7.6 201°75	4°4/ 7.4 17		
5 31	19 32.16	+ 7 56.2	2.182	2.904	16.2	21.0	5 31	19 50.06	−36 1.1	1.932	2.744	15.1	20.0
6 10	19 27.91	+ 8 49.6	2.102	2.902	14.5	20.8	6 10	19 42.31	−35 51.9	1.843	2.740	12.1	19.7
6 20	19 21.76	+ 9 23.3	2.040	2.900	12.8	20.7	6 20	19 31.53	−35 33.2	1.777	2.736	8.7	19.5
6 30	19 14.19	+ 9 33.1	1.999	2.898	11.3	20.6	6 30	19 18.55	−35 0.0	1.736	2.730	5.5	19.3
7 10	19 5.93	+ 9 17.0	1.980	2.895	10.6	20.6	7 10	19 4.67	−34 9.4	1.722	2.724	4.5	19.3
7 20	18 57.77	+ 8 35.3	1.985	2.892	11.0	20.6	7 20	18 51.34	−33 2.3	1.738	2.718	7.1	19.4
7 30	18 50.55	+ 7 31.1	2.013	2.888	12.2	20.7	7 30	18 39.90	−31 42.8	1.781	2.710	10.7	19.6

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
25118	Kevlin		7 7.6 182°76	2°1/ 8.3 18			224154	2005 <i>QB</i> ₆₄		7 7.6 335°24	3°6/ 6.9 17		
5 31	19 33.79	−15 17.8	2.286	3.103	13.0	19.8	5 31	19 32.07	−28 20.6	1.221	2.095	18.5	19.9
6 10	19 29.13	−15 21.5	2.201	3.103	10.2	19.6	6 10	19 29.83	−28 48.9	1.144	2.080	14.6	19.6
6 20	19 22.55	−15 32.6	2.138	3.103	7.1	19.4	6 20	19 24.12	−29 18.2	1.085	2.067	10.0	19.3
6 30	19 14.56	−15 50.3	2.100	3.103	3.8	19.2	6 30	19 15.59	−29 43.0	1.047	2.054	5.4	19.0
7 10	19 5.90	−16 13.2	2.090	3.102	2.2	19.1	7 10	19 5.59	−29 57.7	1.031	2.042	4.1	18.9
7 20	18 57.37	−16 39.4	2.108	3.101	4.8	19.3	7 20	18 55.76	−29 58.6	1.038	2.032	8.3	19.1
7 30	18 49.81	−17 7.2	2.154	3.100	8.2	19.5	7 30	18 47.85	−29 45.5	1.067	2.023	13.3	19.3
8 9	18 43.90	−17 35.1	2.223	3.098	11.2	19.7	8 9	18 43.12	−29 21.3	1.114	2.015	17.9	19.6
88117	2000 <i>WV</i> ₁₃₂		7 7.6 197°43	7°3/ 8.2 18			235241	2003 <i>SA</i> ₃₀₁		7 7.6 304°65	1°4/ 7.4 18		
5 31	19 37.75	−4 55.4	2.239	3.013	14.5	18.9	5 31	19 36.03	−25 57.0	1.803	2.645	14.9	20.5
6 10	19 32.11	−3 30.2	2.151	3.011	12.2	18.7	6 10	19 31.54	−26 0.9	1.721	2.641	11.6	20.3
6 20	19 24.49	−2 14.2	2.086	3.008	9.8	18.5	6 20	19 24.49	−26 5.1	1.661	2.637	7.7	20.1
6 30	19 15.42	−1 11.0	2.047	3.004	7.9	18.4	6 30	19 15.52	−26 7.0	1.625	2.634	3.6	19.8
7 10	19 5.64	−0 23.5	2.034	3.000	7.3	18.4	7 10	19 5.67	−26 4.1	1.616	2.630	1.8	19.7
7 20	18 56.01	+0 7.0	2.048	2.996	8.5	18.4	7 20	18 56.06	−25 54.9	1.633	2.627	5.8	19.9
7 30	18 47.40	+0 20.6	2.088	2.991	10.7	18.6	7 30	18 47.85	−25 39.8	1.675	2.624	9.9	20.2
8 9	18 40.49	+0 19.3	2.151	2.986	13.1	18.7	8 9	18 41.91	−25 20.2	1.740	2.620	13.5	20.4
33428	1999 <i>DO</i> ₃		7 7.6 67°70	3°0/ 7.1 18			329756	2004 <i>EU</i> ₁₈		7 7.6 145°20	2°2/ 7.1 17		
5 31	19 40.62	−27 48.7	1.281	2.139	18.8	18.6	5 31	19 38.67	−26 28.0	1.736	2.577	15.4	20.9
6 10	19 35.77	−28 14.0	1.229	2.156	14.6	18.3	6 10	19 33.66	−26 58.0	1.664	2.582	12.0	20.7
6 20	19 27.52	−28 39.2	1.195	2.173	9.8	18.1	6 20	19 25.93	−27 29.6	1.612	2.587	8.1	20.5
6 30	19 16.84	−28 58.6	1.184	2.191	5.0	17.9	6 30	19 16.17	−27 58.5	1.584	2.591	4.0	20.2
7 10	19 5.23	−29 7.6	1.197	2.209	3.4	17.8	7 10	19 5.47	−28 20.4	1.583	2.596	2.6	20.2
7 20	18 54.35	−29 4.2	1.234	2.226	7.5	18.1	7 20	18 55.08	−28 33.0	1.609	2.600	6.3	20.4
7 30	18 45.66	−28 49.6	1.294	2.244	12.1	18.4	7 30	18 46.22	−28 35.8	1.660	2.603	10.3	20.6
8 9	18 40.12	−28 27.1	1.375	2.262	16.0	18.7	8 9	18 39.81	−28 30.3	1.733	2.607	13.9	20.9
178154	2006 <i>TP</i> ₁₀₉		7 7.6 1°96	2°0/ 7.1 18			357904	2005 <i>VC</i> ₆₇		7 7.6 144°07	3°2/ 6.9 17		
5 31	19 34.68	−27 22.3	2.074	2.911	13.4	20.3	5 31	19 40.23	−27 21.6	1.362	2.216	18.1	21.5
6 10	19 30.15	−27 37.8	1.994	2.911	10.4	20.1	6 10	19 35.65	−27 58.7	1.293	2.219	14.2	21.3
6 20	19 23.38	−27 53.1	1.937	2.911	7.0	19.9	6 20	19 27.66	−28 37.7	1.244	2.221	9.6	21.0
6 30	19 14.96	−28 5.3	1.904	2.911	3.5	19.7	6 30	19 17.05	−29 12.6	1.217	2.224	5.0	20.8
7 10	19 5.79	−28 11.6	1.899	2.911	2.3	19.6	7 10	19 5.19	−29 37.6	1.215	2.226	3.6	20.7
7 20	18 56.86	−28 10.6	1.920	2.911	5.5	19.8	7 20	18 53.71	−29 49.2	1.237	2.229	7.7	21.0
7 30	18 49.15	−28 2.3	1.968	2.912	9.0	20.0	7 30	18 44.22	−29 47.4	1.283	2.231	12.4	21.2
8 9	18 43.42	−27 47.8	2.039	2.912	12.2	20.2	8 9	18 37.84	−29 34.8	1.350	2.232	16.5	21.5
414454	2009 <i>HX</i> ₁₂		7 7.6 121°02	4°2/ 8.7 17			488920	2005 <i>UQ</i> ₉		7 7.6 308°35	9°4/ 3.5 18		
5 31	19 36.00	−12 28.8	1.502	2.334	17.8	21.2	5 31	19 38.49	−44 5.0	1.951	2.770	14.8	21.1
6 10	19 31.70	−12 13.2	1.431	2.339	14.3	20.9	6 10	19 34.42	−45 31.8	1.861	2.745	12.7	20.9
6 20	19 24.67	−12 10.1	1.378	2.343	10.2	20.7	6 20	19 27.06	−46 51.6	1.791	2.720	10.7	20.7
6 30	19 15.61	−12 20.1	1.349	2.348	6.1	20.5	6 30	19 16.93	−47 55.6	1.745	2.695	9.5	20.6
7 10	19 5.59	−12 41.9	1.344	2.352	4.3	20.4	7 10	19 5.17	−48 36.1	1.722	2.671	9.8	20.6
7 20	18 55.87	−13 13.0	1.364	2.356	7.1	20.6	7 20	18 53.32	−48 48.8	1.723	2.646	11.4	20.6
7 30	18 47.65	−13 50.4	1.409	2.360	11.2	20.8	7 30	18 43.05	−48 33.6	1.746	2.622	13.8	20.7
8 9	18 41.88	−14 30.8	1.475	2.364	15.0	21.0	8 9	18 35.68	−47 55.1	1.789	2.598	16.3	20.8
438817	2008 <i>YT</i> ₁₅₈		7 7.6 245°16	1°5/ 8.1 18			45480	2000 <i>AH</i> ₂₃₃		7 7.6 294°60	0°9/ 7.5 18		
5 31	19 33.29	−16 52.2	2.062	2.890	13.8	21.9	5 31	19 35.61	−25 14.8	1.858	2.699	14.5	18.5
6 10	19 29.05	−17 3.4	1.974	2.883	10.9	21.7	6 10	19 31.17	−25 12.1	1.772	2.691	11.3	18.3
6 20	19 22.68	−17 22.4	1.906	2.877	7.4	21.4	6 20	19 24.23	−25 10.0	1.707	2.683	7.6	18.0
6 30	19 14.69	−17 47.9	1.864	2.870	3.7	21.2	6 30	19 15.42	−25 6.0	1.666	2.675	3.4	17.8
7 10	19 5.88	−18 17.7	1.849	2.863	1.7	21.0	7 10	19 5.71	−24 58.1	1.651	2.667	1.5	17.6
7 20	18 57.16	−18 49.6	1.861	2.856	5.1	21.3	7 20	18 56.20	−24 45.2	1.664	2.659	5.6	17.9
7 30	18 49.48	−19 21.4	1.900	2.849	8.8	21.5	7 30	18 48.00	−24 27.7	1.702	2.651	9.7	18.1
8 9	18 43.62	−19 51.5	1.962	2.842	12.2	21.7	8 9	18 42.00	−24 6.9	1.762	2.643	13.4	18.3
311522	2005 <i>XK</i> ₃₃		7 7.6 246°88	1°4/ 7.0 18			432867	2011 <i>HB</i> ₉₇		7 7.6 279°11	5°5/ 6.2 18		
5 31	19 32.70	−24 38.1	2.450	3.281	11.8	20.8	5 31	19 38.51	−34 2.0	1.737	2.577	15.4	20.9
6 10	19 28.36	−25 15.8	2.361	3.275	9.1	20.7	6 10	19 34.07	−34 49.1	1.649	2.563	12.4	20.7
6 20	19 22.11	−25 56.4	2.295	3.269	6.1	20.5	6 20	19 26.55	−35 33.2	1.582	2.548	9.1	20.4
6 30	19 14.41	−26 37.0	2.256	3.263	2.9	20.2	6 30	19 16.59	−36 8.0	1.539	2.533	6.2	20.2
7 10	19 5.97	−27 14.4	2.244	3.257	1.8	20.1	7 10	19 5.33	−36 27.5	1.521	2.518	5.8	20.2
7 20	18 57.61	−27 46.2	2.261	3.251	4.8	20.3	7 20	18 54.17	−36 28.6	1.528	2.503	8.4	20.3
7 30	18 50.16	−28 11.0	2.305	3.245	8.0	20.5	7 30	18 44.57	−36 11.4	1.559	2.488	12.0	20.5
8 9	18 44.33	−28 28.7	2.373	3.239	10.9	20.7	8 9	18 37.69	−35 39.6	1.612	2.473	15.4	20.7
90658	2455 <i>T</i> ₋₃		7 7.6 257°95	6°5/ 9.2 18			229122	2004 <i>RM</i> ₁₃₈		7 7.6 160°46	7°2/ 9.1 18		
5 31	19 30.97	−1 14.1	2.802	3.560	12.2	20.6	5 31	19 34.68	−5 15.9	1.915	2.709	15.9	20.1
6 10	19 26.68	−0 30.9	2.696	3.540	10.5	20.5	6 10	19 30.06	−4 16.0	1.838	2.712	13.3	20.0
6 20	19 20.83	+0 1.5	2.612	3.520	8.6	20.3	6 20	19 23.30	−3 28.8	1.781	2.714	10.5	19.8
6 30	19 13.81	+0 20.7	2.552	3.499	7.1	20.2	6 30	19 14.95	−2 57.4	1.747	2.716	8.1	19.7
7 10	19 6.17	+0 25.4	2.519	3.478	6.5	20.1	7 10	19 5.88	−2 43.5	1.739	2.718	7.3	19.6
7 20	18 58.50	+0 15.4	2.512	3.457	7.3	20.1	7 20	18 57.01	−2 47.1	1.756	2.719	8.5	19.7
7 30	18 51.49	−0 8.0	2.531	3.435	9.0	20.2	7 30	18 49.28	−3 6.4	1.797	2.720	11.0	19.8
8 9	18 45.70	−0 42.6	2.574	3.413	11.0	20.3	8 9	18 43.44	−3 38.0	1.862	2.722	13.7	20.0
328571	2009 <i>SY</i> ₂₆		7 7.6 324°14	3°9/ 6.9 15			18960	2000 <i>QE</i> ₁₃₀		7 7.6 270°97	4°5/ 6.5 18		
5 31	19 32.78	−28 48.1	1.259	2.130	18.2	20.7	5 31	19 39.10	−30 28.1	1.547	2.395	16.6	17.6
6 10	19 30.42	−29 16.8	1.175	2.110	14.5	20.4	6 10	19 34.84	−31 12.8	1.458	2.378	13.2	17.4
6 20	19 24.57	−29 46.4	1.109	2.090	10.0	20.1	6 20	19 27.27	−31 57.9	1.389	2.361	9.3	17.1
6 30	19 15.83	−30 11.3	1.064	2.071	5.5	19.8	6 30	19 16.99	−32 37.0	1.343	2.344	5.6	16.8
7 10	19 5.49	−30 25.5	1.042	2.053	4.3	19.6	7 10	19 5.20	−33 3.7	1.321	2.327	4.9	16.8
7 20	18 55.21	−30 25.2	1.043	2.036	8.5	19.8	7 20	18 53.43	−33 13.9	1.325	2.309	8.3	16.9
7 30	18 46.75	−30 10.1	1.065	2.020	13.5	20.0	7 30	18 43.30	−3				

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
352414	2007 <i>XF</i> ₅₃		7 7.6 147°09	0°1/ 7.6 18			190629	2000 <i>WT</i> ₁₁₄		7 7.6 268°39	2°4/ 6.9 18	R	
5 31	19 33.92	−22 26.0	2.328	3.156	12.4	21.4	5 31	19 37.71	−27 24.8	2.037	2.870	13.7	20.5
6 10	19 29.23	−22 31.9	2.247	3.160	9.6	21.2	6 10	19 32.92	−27 52.8	1.932	2.846	10.8	20.3
6 20	19 22.62	−22 40.5	2.189	3.163	6.4	21.0	6 20	19 25.57	−28 22.3	1.848	2.820	7.4	20.0
6 30	19 14.62	−22 49.8	2.157	3.166	2.8	20.8	6 30	19 16.14	−28 49.3	1.789	2.795	3.8	19.8
7 10	19 5.99	−22 58.2	2.153	3.169	0.9	20.6	7 10	19 5.52	−29 10.0	1.757	2.769	2.7	19.6
7 20	18 57.57	−23 4.2	2.177	3.172	4.5	20.9	7 20	18 54.81	−29 21.5	1.753	2.742	6.1	19.8
7 30	18 50.18	−23 7.3	2.228	3.174	7.9	21.1	7 30	18 45.22	−29 23.0	1.775	2.715	10.0	20.0
8 9	18 44.48	−23 7.6	2.303	3.177	10.9	21.3	8 9	18 37.75	−29 15.6	1.820	2.687	13.7	20.1
505500	2013 <i>WE</i> ₇₄		7 7.6 174°56	2°8/ 6.4 18			131820	2002 <i>AX</i> ₉₃		7 7.6 114°19	1°5/ 7.3 17		
5 31	19 38.31	−28 2.6	2.374	3.197	12.3	22.2	5 31	19 38.92	−23 34.2	1.472	2.320	17.3	20.7
6 10	19 32.82	−29 0.7	2.292	3.200	9.6	22.1	6 10	19 34.23	−24 8.7	1.405	2.328	13.4	20.5
6 20	19 25.14	−30 0.3	2.234	3.203	6.6	21.9	6 20	19 26.51	−24 48.5	1.359	2.336	8.9	20.2
6 30	19 15.80	−30 56.7	2.202	3.204	3.7	21.7	6 30	19 16.50	−25 28.7	1.335	2.344	4.1	19.9
7 10	19 5.62	−31 45.6	2.199	3.206	3.1	21.7	7 10	19 5.45	−26 4.3	1.337	2.352	2.0	19.8
7 20	18 55.54	−32 24.0	2.225	3.206	5.7	21.8	7 20	18 54.76	−26 31.9	1.364	2.359	6.7	20.1
7 30	18 46.54	−32 50.7	2.278	3.206	8.7	22.0	7 30	18 45.83	−26 49.9	1.416	2.366	11.2	20.4
8 9	18 39.39	−33 6.4	2.356	3.205	11.6	22.2	8 9	18 39.65	−26 59.1	1.490	2.373	15.2	20.7
235761	2004 <i>VL</i> ₇		7 7.6 230°17	0°5/ 7.8 18			257096	2008 <i>GJ</i> ₄₁		7 7.7 317°19	1°0/ 7.9 18		
5 31	19 35.11	−19 42.7	2.081	2.910	13.6	20.8	5 31	19 30.80	−18 20.4	2.055	2.890	13.6	20.6
6 10	19 30.52	−19 58.4	1.990	2.901	10.7	20.6	6 10	19 27.22	−18 35.3	1.964	2.879	10.6	20.3
6 20	19 23.70	−20 20.0	1.920	2.893	7.2	20.3	6 20	19 21.54	−18 57.2	1.893	2.867	7.2	20.1
6 30	19 15.19	−20 45.5	1.876	2.884	3.3	20.1	6 30	19 14.25	−19 24.7	1.848	2.856	3.4	19.8
7 10	19 5.81	−21 12.5	1.859	2.874	1.0	19.9	7 10	19 6.13	−19 55.4	1.829	2.845	1.3	19.7
7 20	18 56.49	−21 38.5	1.869	2.865	5.1	20.2	7 20	18 58.07	−20 27.0	1.837	2.834	5.0	19.9
7 30	18 48.24	−22 1.9	1.906	2.854	8.9	20.4	7 30	18 51.00	−20 57.5	1.872	2.824	8.8	20.1
8 9	18 41.88	−22 22.0	1.968	2.844	12.4	20.6	8 9	18 45.72	−21 25.3	1.929	2.813	12.2	20.3
149813	2005 <i>MJ</i> ₃₂		7 7.6 310°55	0°1/ 7.7 18			474103	2016 <i>LH</i> ₁₃		7 7.7 6°74	3°1/ 8.5 17		
5 31	19 33.77	−22 12.0	1.394	2.253	17.5	20.0	5 31	19 31.57	−14 33.3	1.296	2.151	18.8	20.9
6 10	19 30.68	−22 7.5	1.303	2.232	13.8	19.7	6 10	19 28.75	−14 36.9	1.228	2.151	14.9	20.6
6 20	19 24.48	−22 7.3	1.232	2.212	9.3	19.4	6 20	19 23.00	−14 54.4	1.178	2.152	10.4	20.4
6 30	19 15.75	−22 9.4	1.183	2.193	4.2	19.0	6 30	19 15.00	−15 24.9	1.149	2.154	5.6	20.1
7 10	19 5.60	−22 11.2	1.157	2.173	1.3	18.8	7 10	19 5.91	−16 5.8	1.143	2.156	3.2	20.0
7 20	18 55.48	−22 10.8	1.156	2.154	6.9	19.1	7 20	18 57.09	−16 52.9	1.162	2.159	7.0	20.2
7 30	18 46.89	−22 7.5	1.178	2.136	12.1	19.3	7 30	18 49.90	−17 42.1	1.203	2.163	11.7	20.5
8 9	18 41.06	−22 1.5	1.220	2.119	16.8	19.6	8 9	18 45.36	−18 29.8	1.265	2.168	16.0	20.8
302304	2001 <i>YS</i> ₁₁₁		7 7.6 119°98	2°8/ 6.8 17			149507	2003 <i>FC</i> ₅₇		7 7.7 152°38	3°4/ 9.1 18		
5 31	19 42.38	−26 59.3	1.696	2.531	15.9	21.1	5 31	19 32.12	−9 57.3	2.727	3.522	11.7	21.6
6 10	19 36.49	−27 46.2	1.634	2.549	12.4	20.9	6 10	19 27.48	−9 55.2	2.646	3.529	9.4	21.5
6 20	19 27.76	−28 34.5	1.594	2.567	8.3	20.7	6 20	19 21.30	−10 2.0	2.586	3.536	6.9	21.3
6 30	19 16.96	−29 18.6	1.578	2.584	4.3	20.5	6 30	19 14.02	−10 17.8	2.553	3.543	4.4	21.2
7 10	19 5.30	−29 53.5	1.590	2.600	3.2	20.5	7 10	19 6.25	−10 41.5	2.548	3.549	3.4	21.1
7 20	18 54.08	−30 16.1	1.628	2.615	6.6	20.7	7 20	18 58.61	−11 11.9	2.571	3.555	4.8	21.2
7 30	18 44.58	−30 26.3	1.692	2.630	10.5	21.0	7 30	18 51.77	−11 47.0	2.622	3.560	7.3	21.4
8 9	18 37.69	−30 26.0	1.778	2.644	14.0	21.3	8 9	18 46.25	−12 24.9	2.699	3.565	9.7	21.6
469831	2005 <i>SH</i> ₂₃₇		7 7.6 295°95	5°6/ 5.7 18			23848	1998 <i>RJ</i> ₁		7 7.7 230°08	0°4/ 7.8 18	R	
5 31	19 36.17	−36 40.1	2.171	3.000	13.1	20.6	5 31	19 31.99	−20 23.2	2.920	3.738	10.4	19.2
6 10	19 31.63	−37 30.5	2.088	2.991	10.6	20.4	6 10	19 27.45	−20 31.2	2.822	3.728	8.1	19.0
6 20	19 24.57	−38 16.4	2.027	2.983	8.0	20.3	6 20	19 21.35	−20 42.4	2.747	3.717	5.4	18.8
6 30	19 15.61	−38 52.2	1.990	2.975	6.0	20.1	6 30	19 14.08	−20 55.7	2.698	3.706	2.5	18.6
7 10	19 5.69	−39 13.5	1.980	2.967	5.8	20.1	7 10	19 6.23	−21 9.7	2.679	3.695	0.8	18.4
7 20	18 55.92	−39 17.9	1.996	2.959	7.7	20.2	7 20	18 58.44	−21 23.0	2.689	3.683	3.8	18.6
7 30	18 47.44	−39 5.7	2.037	2.951	10.4	20.4	7 30	18 51.37	−21 34.8	2.726	3.671	6.7	18.8
8 9	18 41.15	−38 39.7	2.100	2.943	13.0	20.5	8 9	18 45.61	−21 44.7	2.790	3.659	9.4	19.0
17154	1999 <i>JS</i> ₁₂₁		7 7.6 346°33	2°2/ 8.0 18			254045	2004 <i>GB</i> ₂₈		7 7.7 200°39	17°7/ 9.3 18		
5 31	19 33.16	−18 4.1	1.902	2.736	14.5	16.7	5 31	19 39.36	+8 39.6	1.311	2.066	23.7	20.8
6 10	19 29.03	−17 32.6	1.820	2.733	11.4	16.5	6 10	19 34.79	+11 9.7	1.247	2.064	21.7	20.6
6 20	19 22.69	−17 5.5	1.759	2.730	7.8	16.3	6 20	19 27.07	+13 15.2	1.199	2.061	19.7	20.5
6 30	19 14.71	−16 43.0	1.722	2.727	4.1	16.0	6 30	19 16.87	+14 44.9	1.167	2.058	18.2	20.3
7 10	19 5.99	−16 24.9	1.712	2.725	2.4	15.9	7 10	19 5.35	+15 30.5	1.155	2.054	17.7	20.3
7 20	18 57.49	−16 11.0	1.729	2.723	5.6	16.1	7 20	18 53.96	+15 28.6	1.161	2.050	18.4	20.3
7 30	18 50.19	−16 1.1	1.771	2.721	9.3	16.3	7 30	18 44.20	+14 42.6	1.184	2.045	20.0	20.4
8 9	18 44.84	−15 54.7	1.836	2.720	12.8	16.5	8 9	18 37.24	+13 21.3	1.224	2.039	22.0	20.5
315198	2007 <i>PB</i> ₄₉		7 7.6 296°34	1°2/ 7.4 17			310314	2011 <i>UG</i> ₁₂₇		7 7.7 259°59	4°6/ 8.9 18		
5 31	19 35.98	−24 11.0	1.306	2.168	18.3	21.2	5 31	19 31.62	−9 25.4	2.232	3.038	13.6	20.4
6 10	19 32.77	−24 21.0	1.215	2.146	14.5	20.9	6 10	19 27.51	−8 57.5	2.146	3.034	11.1	20.3
6 20	19 26.11	−24 35.1	1.143	2.124	9.8	20.6	6 20	19 21.54	−8 39.4	2.081	3.030	8.3	20.1
6 30	19 16.57	−24 49.9	1.092	2.102	4.5	20.2	6 30	19 14.20	−8 32.2	2.040	3.026	5.7	19.9
7 10	19 5.35	−25 1.1	1.065	2.080	1.9	20.0	7 10	19 6.20	−8 36.1	2.025	3.022	4.6	19.8
7 20	18 54.07	−25 5.4	1.062	2.059	7.5	20.2	7 20	18 58.32	−8 50.4	2.038	3.018	6.2	19.9
7 30	18 44.47	−25 2.1	1.081	2.038	13.1	20.5	7 30	18 51.37	−9 13.3	2.076	3.014	8.9	20.1
8 9	18 37.95	−24 52.2	1.119	2.017	18.0	20.7	8 9	18 46.01	−9 42.6	2.139	3.010	11.7	20.3
20701	1999 <i>VL</i> ₁₇₉		7 7.6 309°60	1°8/ 6.8 18			777	Gutemberga		7 7.7 84°15	0°3/ 7.7 18		
5 31	19 33.08	−24 38.9	2.322	3.154	12.3	18.3	5 31	19 34.93	−22 49.3	2.375	3.201	12.3	14.9
6 10	19 28.80	−25 35.4	2.239	3.153	9.5	18.1	6 10	19 29.85	−22 30.4	2.300	3.211	9.5	14.8
6 20	19 22.49	−26 35.7	2.178	3.152	6.3	17.9	6 20	19 22.94	−22 12.6	2.249	3.222	6.3	14.6
6 30	19 14.64	−27 36.3	2.145	3.152	3.1	17.7	6 30	19 14.75	−21 54.8	2.224	3.232	2.8	14.4
7 10	19 6.00	−28 32.9	2.139	3.151	2.2	17.6	7 10	19 6.06	−21 36.3	2.227	3.243	0.9	14.2
7 20	18 57.44	−29 22.3	2.161	3.150	5.2	17.8	7 20	18 57.67	−21 17.0	2.258	3.253	4.4	14.5
7 30	18 49.84	−30 2.4	2.211	3.149	8.4	18.0	7 30	18 50.37	−20				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
114715	2003 <i>GL</i> ₁₅	7 7.7 32°25' 1.7°/ 7.2 18						513767	2012 <i>XN</i> ₄₆	7 7.7 228°74' 2.0°/ 8.2 18			
5 31	19 34.01	−26 25.5	1.989	2.830	13.7	19.9	5 31	19 34.46	−16 1.1	2.545	3.356	12.0	22.7
6 10	19 29.71	−26 42.9	1.915	2.834	10.6	19.7	6 10	19 29.57	−15 51.0	2.445	3.344	9.5	22.5
6 20	19 23.15	−27 1.0	1.863	2.838	7.1	19.5	6 20	19 22.88	−15 46.3	2.367	3.331	6.6	22.3
6 30	19 14.94	−27 16.8	1.835	2.843	3.4	19.3	6 30	19 14.82	−15 46.6	2.315	3.317	3.5	22.1
7 10	19 5.99	−27 27.4	1.835	2.848	2.1	19.2	7 10	19 6.07	−15 51.2	2.292	3.303	2.1	21.9
7 20	18 57.32	−27 31.3	1.861	2.853	5.4	19.5	7 20	18 57.37	−15 59.2	2.297	3.289	4.6	22.1
7 30	18 49.90	−27 28.2	1.912	2.858	9.1	19.7	7 30	18 49.49	−16 9.6	2.331	3.274	7.8	22.3
8 9	18 44.50	−27 19.1	1.987	2.864	12.3	19.9	8 9	18 43.11	−16 21.4	2.389	3.258	10.7	22.4
381194	2007 <i>RQ</i> ₉	7 7.7 53°25' 18.1°/ 12.4 17						11683	1998 <i>FO</i> ₁₁	7 7.7 80°11' 7.6°/ 10.2 18			
5 31	19 35.76	+18 42.6	1.725	2.393	21.6	19.6	5 31	19 32.70	−2 50.6	1.798	2.591	16.8	17.5
6 10	19 31.20	+21 26.5	1.683	2.407	20.4	19.6	6 10	19 28.70	−2 17.4	1.725	2.596	14.2	17.4
6 20	19 24.21	+23 41.1	1.657	2.421	19.3	19.5	6 20	19 22.50	−2 1.4	1.672	2.601	11.3	17.2
6 30	19 15.43	+25 18.1	1.648	2.435	18.5	19.5	6 30	19 14.68	−2 5.3	1.640	2.606	8.8	17.1
7 10	19 5.84	+26 12.1	1.655	2.450	18.1	19.5	7 10	19 6.12	−2 29.4	1.633	2.612	7.6	17.0
7 20	18 56.52	+26 22.4	1.679	2.465	18.2	19.5	7 20	18 57.77	−3 12.1	1.650	2.617	8.7	17.1
7 30	18 48.55	+25 52.1	1.719	2.480	18.7	19.6	7 30	18 50.59	−4 9.7	1.692	2.622	11.1	17.2
8 9	18 42.77	+24 48.5	1.774	2.495	19.5	19.7	8 9	18 45.34	−5 17.0	1.757	2.627	13.9	17.4
93785	2000 <i>WZ</i> ₃₃	7 7.7 306°16' 4.2°/ 8.6 18						284993	2010 <i>JD</i> ₁₇₁	7 7.7 198°55' 2.4°/ 6.9 17			
5 31	19 31.94	−12 58.9	1.601	2.437	16.7	19.3	5 31	19 35.88	−27 28.3	2.027	2.863	13.7	21.3
6 10	19 28.72	−12 39.2	1.507	2.418	13.5	19.1	6 10	19 31.26	−28 1.2	1.946	2.862	10.6	21.1
6 20	19 22.90	−12 30.5	1.433	2.399	9.7	18.8	6 20	19 24.27	−28 35.1	1.888	2.861	7.2	20.9
6 30	19 15.00	−12 33.7	1.381	2.380	5.9	18.6	6 30	19 15.50	−29 5.9	1.855	2.860	3.7	20.7
7 10	19 5.94	−12 48.6	1.354	2.362	4.2	18.4	7 10	19 5.88	−29 30.1	1.849	2.859	2.7	20.6
7 20	18 56.85	−13 13.6	1.351	2.344	7.0	18.5	7 20	18 56.44	−29 45.3	1.869	2.858	5.8	20.8
7 30	18 48.98	−13 46.2	1.373	2.326	11.2	18.7	7 30	18 48.25	−29 50.9	1.916	2.857	9.4	21.0
8 9	18 43.34	−14 23.5	1.416	2.308	15.3	18.9	8 9	18 42.13	−29 47.9	1.986	2.855	12.6	21.2
111802	2002 <i>CA</i> ₂₄₈	7 7.7 175°57' 0°/ 7.7 18						259638	2003 <i>WA</i> ₄₂	7 7.7 318°68' 0°/ 7.8 18			
5 31	19 32.79	−21 12.3	2.779	3.599	10.8	20.4	5 31	19 32.95	−22 12.4	1.194	2.064	19.1	20.0
6 10	19 28.09	−21 26.5	2.693	3.601	8.4	20.2	6 10	19 30.56	−21 45.6	1.106	2.041	15.1	19.7
6 20	19 21.77	−21 43.9	2.631	3.602	5.6	20.0	6 20	19 24.72	−21 21.0	1.035	2.017	10.3	19.4
6 30	19 14.26	−22 2.8	2.595	3.603	2.5	19.8	6 30	19 16.01	−20 57.5	0.985	1.995	4.8	19.0
7 10	19 6.21	−22 21.5	2.588	3.604	0.7	19.7	7 10	19 5.67	−20 33.9	0.957	1.973	1.7	18.7
7 20	18 58.29	−22 38.6	2.610	3.604	3.9	19.9	7 20	18 55.32	−20 9.8	0.952	1.952	7.6	19.0
7 30	18 51.18	−22 53.2	2.660	3.604	6.9	20.1	7 30	18 46.70	−19 45.8	0.969	1.932	13.4	19.2
8 9	18 45.47	−23 4.8	2.735	3.604	9.6	20.3	8 9	18 41.21	−19 23.3	1.004	1.914	18.6	19.5
296420	2009 <i>HT</i> ₁₄	7 7.7 298°67' 3°/ 8.7 18						101034	1998 <i>QT</i> ₈₂	7 7.7 11°47' 5°/ 8.6 17			
5 31	19 33.03	−12 59.5	1.357	2.203	18.6	20.7	5 31	19 30.24	−13 8.3	1.083	1.950	20.8	18.4
6 10	19 30.06	−12 59.5	1.269	2.187	15.0	20.5	6 10	19 28.05	−12 15.1	1.025	1.952	16.8	18.2
6 20	19 24.07	−13 14.6	1.200	2.170	10.7	20.2	6 20	19 22.67	−11 35.1	0.984	1.956	12.2	18.0
6 30	19 15.61	−13 45.3	1.152	2.154	6.2	19.9	6 30	19 14.90	−11 11.2	0.962	1.962	7.7	17.7
7 10	19 5.74	−14 29.6	1.127	2.138	3.9	19.7	7 10	19 6.08	−11 4.3	0.962	1.969	5.9	17.7
7 20	18 55.82	−15 23.7	1.127	2.123	7.4	19.8	7 20	18 57.70	−11 13.3	0.983	1.977	8.8	17.8
7 30	18 47.32	−16 23.2	1.149	2.107	12.4	20.1	7 30	18 51.21	−11 35.3	1.026	1.986	13.2	18.1
8 9	18 41.48	−17 23.4	1.192	2.092	17.0	20.3	8 9	18 47.61	−12 5.8	1.087	1.997	17.4	18.4
509788	2008 <i>UM</i> ₂₃₀	7 7.7 268°54' 1°/ 7.2 18						295209	2008 <i>FE</i> ₁₂₄	7 7.7 327°00' 3°/ 6.2 18			
5 31	19 35.57	−23 57.6	1.961	2.797	14.1	22.0	5 31	19 33.20	−29 46.3	2.100	2.940	13.1	20.7
6 10	19 31.25	−24 30.5	1.862	2.779	11.0	21.8	6 10	19 29.27	−30 39.4	2.016	2.933	10.3	20.5
6 20	19 24.44	−25 8.0	1.785	2.761	7.4	21.5	6 20	19 23.02	−31 33.2	1.955	2.926	7.2	20.3
6 30	19 15.66	−25 46.6	1.734	2.742	3.4	21.2	6 30	19 14.99	−32 22.9	1.919	2.920	4.3	20.1
7 10	19 5.76	−26 22.5	1.709	2.723	1.8	21.1	7 10	19 6.04	−33 4.1	1.910	2.914	3.9	20.1
7 20	18 55.82	−26 52.5	1.711	2.704	5.8	21.3	7 20	18 57.19	−33 33.6	1.928	2.909	6.4	20.2
7 30	18 46.99	−27 14.6	1.739	2.684	9.8	21.5	7 30	18 49.47	−33 50.4	1.971	2.903	9.6	20.4
8 9	18 40.24	−27 28.8	1.790	2.664	13.5	21.7	8 9	18 43.75	−33 55.3	2.037	2.898	12.6	20.6
229706	2007 <i>EV</i> ₈₅	7 7.7 65°96' 5.4°/ 6.0 17						181209	2005 <i>SP</i> ₁₈₄	7 7.7 46°56' 1°/ 7.2 18			
5 31	19 38.42	−32 27.1	1.617	2.463	16.1	20.8	5 31	19 34.41	−26 53.3	2.002	2.842	13.7	20.2
6 10	19 33.88	−33 34.0	1.556	2.473	12.7	20.6	6 10	19 29.98	−27 9.8	1.932	2.850	10.6	20.0
6 20	19 26.30	−34 38.6	1.515	2.484	9.1	20.4	6 20	19 23.31	−27 26.4	1.884	2.859	7.1	19.8
6 30	19 16.45	−35 34.0	1.499	2.494	6.1	20.2	6 30	19 15.03	−27 40.2	1.861	2.868	3.5	19.6
7 10	19 5.56	−36 13.7	1.507	2.505	5.7	20.2	7 10	19 6.07	−27 48.4	1.865	2.877	2.2	19.5
7 20	18 55.06	−36 34.6	1.540	2.515	8.3	20.4	7 20	18 57.42	−27 49.7	1.895	2.887	5.4	19.7
7 30	18 46.32	−36 36.8	1.598	2.526	11.7	20.6	7 30	18 50.05	−27 43.9	1.951	2.897	8.9	20.0
8 9	18 40.34	−36 23.8	1.676	2.537	14.9	20.9	8 9	18 44.71	−27 32.2	2.031	2.906	12.1	20.2
100030	1990 <i>WN</i> ₁	7 7.7 233°22' 2.4°/ 8.6 18						195335	2002 <i>EZ</i> ₁₃₅	7 7.7 201°52' 1°/ 7.9 17			
5 31	19 32.27	−13 17.9	2.964	3.764	10.7	21.4	5 31	19 35.20	−18 38.3	1.945	2.775	14.4	21.2
6 10	19 27.63	−13 12.9	2.859	3.750	8.5	21.2	6 10	19 30.67	−18 44.4	1.861	2.773	11.3	21.0
6 20	19 21.46	−13 14.1	2.777	3.734	6.1	21.1	6 20	19 23.85	−18 56.9	1.799	2.771	7.6	20.7
6 30	19 14.16	−13 21.6	2.721	3.718	3.6	20.9	6 30	19 15.33	−19 14.1	1.762	2.769	3.6	20.5
7 10	19 6.26	−13 34.5	2.694	3.702	2.5	20.8	7 10	19 5.97	−19 34.1	1.752	2.767	1.4	20.3
7 20	18 58.38	−13 52.1	2.696	3.684	4.3	20.9	7 20	18 56.76	−19 54.7	1.768	2.764	5.2	20.6
7 30	18 51.15	−14 13.1	2.727	3.667	6.9	21.0	7 30	18 48.74	−20 14.3	1.812	2.761	9.2	20.8
8 9	18 45.15	−14 36.1	2.783	3.649	9.5	21.2	8 9	18 42.70	−20 32.1	1.878	2.758	12.7	21.0
263095	2007 <i>TR</i> ₁₃₆	7 7.7 187°37' 11°/ 6.0/ 3 17						256931	2008 <i>ER</i> ₂₈	7 7.7 17°67' 2°/ 6			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
161610	2005 <i>UN</i> ₈₈		7 7.7 81°19	0°6/ 7.5 18			78079	2002 <i>LK</i> ₁₈		7 7.7 16°76	3°0/ 6.7 18		
5 31	19 33.65	-23 4.8	2.273	3.104	12.6	20.9	5 31	19 34.34	-24 44.0	1.212	2.082	18.9	18.9
6 10	19 29.05	-23 23.2	2.203	3.117	9.7	20.7	6 10	19 31.42	-25 46.4	1.150	2.084	14.7	18.6
6 20	19 22.54	-23 44.3	2.156	3.130	6.4	20.5	6 20	19 25.08	-26 55.9	1.106	2.088	9.9	18.4
6 30	19 14.65	-24 5.7	2.134	3.143	2.8	20.3	6 30	19 16.07	-28 5.7	1.084	2.092	4.9	18.1
7 10	19 6.19	-24 25.1	2.140	3.156	1.1	20.2	7 10	19 5.75	-29 7.9	1.085	2.097	3.6	18.0
7 20	18 57.98	-24 40.9	2.175	3.169	4.6	20.5	7 20	18 55.76	-29 56.5	1.109	2.102	8.1	18.3
7 30	18 50.86	-24 52.1	2.235	3.182	7.9	20.7	7 30	18 47.73	-30 28.9	1.156	2.108	12.9	18.6
8 9	18 45.46	-24 58.9	2.321	3.194	10.8	20.9	8 9	18 42.82	-30 46.2	1.222	2.115	17.2	18.9
137969	2000 <i>CA</i> ₃₂		7 7.7 170°59	1°1/ 7.9 18			360007	2012 <i>XU</i> ₁₅₁		7 7.7 282°42	1°1/ 7.2 18		
5 31	19 37.82	-18 58.7	1.950	2.776	14.5	21.2	5 31	19 33.74	-22 4.7	2.022	2.858	13.7	20.6
6 10	19 32.63	-19 0.1	1.870	2.779	11.4	21.0	6 10	19 29.71	-22 56.4	1.930	2.847	10.7	20.4
6 20	19 25.10	-19 7.0	1.811	2.782	7.7	20.8	6 20	19 23.36	-23 55.2	1.860	2.836	7.1	20.1
6 30	19 15.86	-19 18.0	1.778	2.785	3.6	20.5	6 30	19 15.19	-24 57.3	1.816	2.824	3.2	19.9
7 10	19 5.81	-19 31.1	1.771	2.786	1.4	20.4	7 10	19 6.02	-25 58.3	1.798	2.813	1.7	19.7
7 20	18 55.99	-19 44.6	1.792	2.788	5.3	20.6	7 20	18 56.82	-26 54.0	1.808	2.801	5.5	20.0
7 30	18 47.41	-19 57.2	1.840	2.788	9.2	20.9	7 30	18 48.67	-27 41.6	1.845	2.790	9.4	20.2
8 9	18 40.89	-20 8.5	1.912	2.788	12.7	21.1	8 9	18 42.46	-28 20.0	1.905	2.779	12.8	20.4
510652	2012 <i>TG</i> ₂₄₄		7 7.7 267°94	3°2/ 8.6 18			332609	2008 <i>TR</i> ₆		7 7.7 231°55	0°5/ 7.9 18		
5 31	19 33.64	-13 26.3	2.038	2.857	14.2	22.1	5 31	19 34.79	-19 18.5	2.030	2.860	13.9	20.5
6 10	19 29.47	-13 18.8	1.937	2.838	11.4	21.9	6 10	19 30.36	-19 38.4	1.941	2.853	10.9	20.3
6 20	19 23.12	-13 20.4	1.857	2.820	8.2	21.7	6 20	19 23.68	-20 4.9	1.873	2.846	7.3	20.1
6 30	19 15.05	-13 31.4	1.802	2.801	4.8	21.4	6 30	19 15.29	-20 36.0	1.831	2.839	3.3	19.8
7 10	19 6.04	-13 50.7	1.773	2.782	3.2	21.3	7 10	19 6.02	-21 8.9	1.816	2.832	1.0	19.6
7 20	18 56.99	-14 16.8	1.771	2.763	5.8	21.4	7 20	18 56.83	-21 41.0	1.828	2.824	5.1	19.9
7 30	18 48.92	-14 47.6	1.796	2.743	9.4	21.6	7 30	18 48.72	-22 10.2	1.867	2.816	9.0	20.1
8 9	18 42.65	-15 21.1	1.844	2.723	12.9	21.8	8 9	18 42.52	-22 35.6	1.929	2.808	12.5	20.3
508319	2015 <i>KE</i> ₁₆₅		7 7.7 49°38	0°8/ 7.8 17			38975	2000 <i>TH</i> ₆₆		7 7.7 357°33	2°0/ 7.3 17		
5 31	19 34.50	-20 22.9	1.736	2.577	15.4	21.2	5 31	19 33.06	-24 51.9	1.108	1.985	19.7	19.3
6 10	19 30.23	-20 20.2	1.668	2.587	11.9	21.0	6 10	19 30.68	-25 15.8	1.043	1.982	15.4	19.0
6 20	19 23.56	-20 22.4	1.622	2.598	8.0	20.8	6 20	19 24.73	-25 44.4	0.995	1.979	10.4	18.7
6 30	19 15.16	-20 27.9	1.600	2.608	3.6	20.5	6 30	19 15.96	-26 12.9	0.968	1.978	4.8	18.4
7 10	19 6.04	-20 34.8	1.603	2.619	1.2	20.4	7 10	19 5.82	-26 35.8	0.963	1.977	2.6	18.3
7 20	18 57.28	-20 41.5	1.633	2.630	5.4	20.7	7 20	18 56.04	-26 49.3	0.980	1.978	7.9	18.6
7 30	18 49.90	-20 47.1	1.689	2.642	9.5	21.0	7 30	18 48.34	-26 52.5	1.019	1.980	13.2	18.9
8 9	18 44.70	-20 51.2	1.767	2.653	13.0	21.2	8 9	18 43.92	-26 46.6	1.076	1.982	17.9	19.2
299770	2006 <i>SW</i> ₃₁		7 7.7 212°35	3°2/ 8.7 18			24744	1992 <i>OD</i> ₅		7 7.7 319°64	0°1/ 7.7 18		
5 31	19 32.55	-11 52.2	2.609	3.411	11.9	22.3	5 31	19 33.31	-23 21.1	1.070	1.948	20.2	18.2
6 10	19 28.00	-11 41.0	2.515	3.405	9.6	22.1	6 10	19 31.19	-23 10.3	0.990	1.930	16.0	17.9
6 20	19 21.78	-11 37.5	2.444	3.398	6.9	21.9	6 20	19 25.33	-23 2.8	0.928	1.912	10.8	17.5
6 30	19 14.34	-11 41.9	2.398	3.392	4.3	21.7	6 30	19 16.36	-22 56.3	0.885	1.896	4.9	17.1
7 10	19 6.28	-11 53.7	2.380	3.384	3.2	21.6	7 10	19 5.66	-22 47.8	0.863	1.880	1.5	16.9
7 20	18 58.30	-12 11.9	2.391	3.377	4.9	21.8	7 20	18 55.03	-22 35.5	0.864	1.864	8.0	17.2
7 30	18 51.12	-12 35.0	2.428	3.369	7.7	21.9	7 30	18 46.41	-22 19.6	0.885	1.850	14.1	17.5
8 9	18 45.32	-13 1.4	2.491	3.360	10.4	22.1	8 9	18 41.23	-22 1.3	0.924	1.837	19.4	17.7
478645	2012 <i>TL</i> ₁₉₉		7 7.7 260°63	2°4/ 8.4 16			161877	2007 <i>CR</i> ₃₄		7 7.7 288°53	0°7/ 7.9 18		
5 31	19 33.78	-15 8.3	1.954	2.780	14.5	22.0	5 31	19 31.84	-18 3.9	2.240	3.068	12.8	20.4
6 10	19 29.64	-15 9.0	1.861	2.768	11.5	21.8	6 10	19 27.87	-18 33.8	2.150	3.061	10.0	20.2
6 20	19 23.24	-15 18.4	1.789	2.756	8.0	21.5	6 20	19 21.93	-19 11.2	2.082	3.054	6.7	20.0
6 30	19 15.09	-15 36.2	1.741	2.744	4.4	21.3	6 30	19 14.49	-19 54.1	2.040	3.047	3.1	19.8
7 10	19 6.03	-16 0.7	1.720	2.732	2.5	21.1	7 10	19 6.28	-20 39.8	2.025	3.040	1.0	19.6
7 20	18 57.02	-16 29.8	1.726	2.720	5.6	21.3	7 20	18 58.12	-21 25.4	2.038	3.034	4.7	19.9
7 30	18 49.06	-17 1.5	1.758	2.708	9.4	21.5	7 30	18 50.88	-22 8.4	2.078	3.027	8.2	20.1
8 9	18 43.01	-17 33.6	1.813	2.695	13.0	21.7	8 9	18 45.30	-22 47.3	2.142	3.020	11.4	20.3
89774	2002 <i>AZ</i> ₈₈		7 7.7 9°89	2°5/ 8.0 18			270112	2001 <i>RS</i> ₂₂		7 7.7 333°50	0°4/ 7.7 18		
5 31	19 32.93	-18 0.4	1.809	2.647	15.0	18.8	5 31	19 30.44	-21 47.7	1.207	2.080	18.7	20.4
6 10	19 28.93	-17 23.1	1.734	2.649	11.8	18.6	6 10	19 28.46	-21 41.3	1.126	2.062	14.8	20.1
6 20	19 22.66	-16 50.3	1.680	2.651	8.1	18.4	6 20	19 23.21	-21 40.1	1.063	2.046	10.0	19.7
6 30	19 14.77	-16 22.5	1.649	2.654	4.3	18.2	6 30	19 15.32	-21 42.6	1.020	2.031	4.5	19.4
7 10	19 6.17	-15 59.7	1.645	2.657	2.6	18.1	7 10	19 6.00	-21 46.0	1.000	2.016	1.4	19.1
7 20	18 57.85	-15 42.0	1.667	2.661	5.7	18.3	7 20	18 56.78	-21 48.3	1.003	2.003	7.2	19.4
7 30	18 50.80	-15 29.2	1.714	2.666	9.5	18.5	7 30	18 49.28	-21 48.4	1.027	1.991	12.7	19.7
8 9	18 45.77	-15 20.8	1.784	2.671	12.9	18.8	8 9	18 44.74	-21 46.1	1.070	1.981	17.6	20.0
512514	2016 <i>RX</i> ₂₆		7 7.7 326°86	8°0/ 10.7 18			186954	2004 <i>RG</i> ₇₄		7 7.7 249°84	4°0/ 9.0 18		
5 31	19 27.65	-3 11.2	1.404	2.227	19.3	20.4	5 31	19 30.80	-9 42.7	2.496	3.297	12.4	20.5
6 10	19 25.78	-3 5.4	1.308	2.201	16.4	20.1	6 10	19 26.74	-9 26.4	2.404	3.291	10.1	20.3
6 20	19 21.21	-3 23.8	1.230	2.176	13.0	19.8	6 20	19 21.00	-9 19.3	2.334	3.284	7.5	20.2
6 30	19 14.39	-4 10.5	1.171	2.151	9.8	19.5	6 30	19 14.02	-9 22.1	2.290	3.277	5.0	20.0
7 10	19 6.22	-5 26.0	1.135	2.128	8.0	19.4	7 10	19 6.43	-9 34.5	2.272	3.271	4.0	19.9
7 20	18 57.86	-7 7.0	1.121	2.105	9.5	19.4	7 20	18 58.92	-9 55.4	2.282	3.264	5.5	20.0
7 30	18 50.67	-9 6.4	1.131	2.084	13.0	19.5	7 30	18 52.22	-10 23.3	2.318	3.257	8.1	20.2
8 9	18 45.84	-11 14.7	1.161	2.064	17.1	19.7	8 9	18 46.91	-10 56.0	2.379	3.250	10.7	20.3
474028	2016 <i>GD</i> ₁₃₂		7 7.7 16°30	1°6/ 8.2 17			393531	2002 <i>TE</i> ₂₆₇		7 7.7 180°18	15°3/ 9.0 18		
5 31	19 33.11	-16 1.0	1.226	2.085	19.4	20.2	5 31	19 40.52	+4 14.5	1.328	2.101	22.6	20.6
6 10	19 30.19	-16 31.1	1.160	2.087	15.3	20.0	6 10	19 35.59	+6 34.1	1.263	2.103	20.2	20.4
6 20	19 24.12	-17 16.2	1.112	2.090	10.4	19.7	6 20	19 27.56	+8 32.3	1.215	2.104	17.8	20.3
6 30	19 15.61	-18 13.7	1.085	2.094	5.0	19.4	6 30	19 17.12	+9 59.0	1.186	2.104	15.9	20.2
7 10	19 5.89	-19 18.4	1.082	2.098	1.9	19.2	7 10	19 5.49	+10 46.9	1.178	2.104	15.3	20.1
7 20	18 56.45	-20 24.2	1.103	2.102	6.9	19.5	7 20	18 54.08	+10 53.3	1.189	2.103	16.2	20.2
7 30	18 48.78	-21 26.0	1.146	2.108	12.1	19.8	7 30	18 44.34	+10 21.1	1.221	2.101	18.2	20.3
8 9	18 43.96	-22 20.6	1.210	2.113	16.6	20							

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
20670	1999 <i>UA</i> ₄₆	7 7.7 54°89	4.8/ 6.4 18				107448	2001 <i>DS</i> ₁₉	7 7.7 111°61	5°2/10.4 18	R		
5 31	19 36.85	−35 52.5	2.223	3.050	12.9	18.4	5 31	19 30.63	−3 23.6	2.552	3.327	12.9	19.8
6 10	19 31.88	−36 23.9	2.151	3.055	10.3	18.2	6 10	19 26.49	−3 26.7	2.471	3.333	10.7	19.7
6 20	19 24.60	−36 49.8	2.101	3.060	7.6	18.1	6 20	19 20.77	−3 43.6	2.411	3.339	8.4	19.5
6 30	19 15.64	−37 5.8	2.076	3.065	5.3	18.0	6 30	19 13.92	−4 14.7	2.376	3.345	6.2	19.4
7 10	19 5.97	−37 8.7	2.077	3.070	5.0	17.9	7 10	19 6.53	−4 59.2	2.367	3.351	5.2	19.3
7 20	18 56.61	−36 57.1	2.106	3.076	6.8	18.1	7 20	18 59.26	−5 55.1	2.386	3.357	6.1	19.4
7 30	18 48.59	−36 32.2	2.160	3.081	9.5	18.2	7 30	18 52.79	−6 59.4	2.432	3.363	8.1	19.5
8 9	18 42.66	−35 56.9	2.237	3.087	12.1	18.4	8 9	18 47.69	−8 8.4	2.503	3.368	10.5	19.7
130231	2000 <i>BS</i> ₃₈	7 7.7 315°56	1°8/ 8.2 18				492365	2014 <i>HF</i> ₅₆	7 7.7 351°37	1°3/ 8.1 18			
5 31	19 31.36	−16 26.4	1.642	2.486	16.0	19.8	5 31	19 31.50	−18 5.7	1.869	2.708	14.5	21.2
6 10	19 28.28	−16 38.6	1.550	2.469	12.7	19.6	6 10	19 27.91	−18 10.8	1.788	2.705	11.4	21.0
6 20	19 22.64	−17 1.3	1.478	2.452	8.7	19.3	6 20	19 22.09	−18 22.9	1.729	2.702	7.7	20.8
6 30	19 14.95	−17 33.5	1.429	2.435	4.4	19.0	6 30	19 14.61	−18 40.8	1.693	2.700	3.7	20.6
7 10	19 6.13	−18 12.7	1.405	2.419	2.0	18.8	7 10	19 6.31	−19 2.5	1.683	2.698	1.6	20.4
7 20	18 57.29	−18 55.5	1.406	2.404	6.0	19.0	7 20	18 58.18	−19 25.8	1.700	2.697	5.3	20.6
7 30	18 49.64	−19 38.7	1.432	2.388	10.6	19.2	7 30	18 51.20	−19 48.8	1.742	2.696	9.2	20.9
8 9	18 44.21	−20 19.9	1.480	2.374	14.6	19.4	8 9	18 46.17	−20 10.3	1.808	2.696	12.7	21.1
181262	2005 <i>VV</i> ₇₉	7 7.7 36°03	2°3/ 6.7 18				310420	1999 <i>VV</i> ₃	7 7.7 160°04	1°6/ 7.0 18			
5 31	19 33.46	−26 23.8	2.139	2.976	13.0	19.7	5 31	19 33.47	−26 23.3	2.809	3.632	10.6	21.3
6 10	19 29.28	−27 13.0	2.062	2.979	10.1	19.5	6 10	19 28.70	−26 52.4	2.727	3.636	8.2	21.2
6 20	19 22.92	−28 4.6	2.008	2.982	6.8	19.3	6 20	19 22.25	−27 22.3	2.669	3.640	5.5	21.0
6 30	19 14.94	−28 54.5	1.980	2.986	3.5	19.1	6 30	19 14.57	−27 50.5	2.638	3.644	2.7	20.8
7 10	19 6.17	−29 38.7	1.979	2.989	2.7	19.0	7 10	19 6.33	−28 14.5	2.636	3.647	1.8	20.7
7 20	18 57.56	−30 14.1	2.005	2.993	5.6	19.2	7 20	18 58.23	−28 32.7	2.662	3.651	4.3	20.9
7 30	18 50.06	−30 39.6	2.057	2.997	8.9	19.5	7 30	18 50.98	−28 44.4	2.716	3.653	7.1	21.1
8 9	18 44.45	−30 55.2	2.133	3.000	11.9	19.7	8 9	18 45.18	−28 50.0	2.795	3.656	9.6	21.3
432697	2011 <i>BN</i> ₉₈	7 7.7 233°00	0°9/ 7.4 17				294862	2008 <i>CH</i> ₁₉₆	7 7.7 10°15	0°9/ 7.5 17			
5 31	19 38.24	−22 55.5	1.989	2.819	14.1	22.9	5 31	19 32.22	−23 29.8	1.149	2.025	19.3	20.1
6 10	19 33.24	−23 22.7	1.893	2.806	11.1	22.7	6 10	19 29.75	−23 39.4	1.089	2.026	15.1	19.9
6 20	19 25.75	−23 54.6	1.818	2.792	7.4	22.5	6 20	19 23.93	−23 53.7	1.045	2.029	10.0	19.6
6 30	19 16.29	−24 28.0	1.769	2.778	3.3	22.2	6 30	19 15.56	−24 9.4	1.023	2.033	4.5	19.3
7 10	19 5.74	−24 59.3	1.747	2.762	1.4	22.0	7 10	19 6.04	−24 22.4	1.023	2.039	1.7	19.1
7 20	18 55.20	−25 25.5	1.753	2.747	5.6	22.3	7 20	18 56.97	−24 30.0	1.046	2.045	7.2	19.5
7 30	18 45.80	−25 45.2	1.786	2.730	9.7	22.5	7 30	18 49.88	−24 31.3	1.090	2.053	12.4	19.8
8 9	18 38.50	−25 58.2	1.842	2.713	13.3	22.7	8 9	18 45.83	−24 27.1	1.154	2.061	16.9	20.1
203676	2002 <i>LP</i> ₆	7 7.7 326°08	1°2/ 7.2 18				413449	2005 <i>CS</i> ₆₄	7 7.7 124°91	1°7/ 7.3 16			
5 31	19 33.88	−21 6.9	1.710	2.555	15.4	19.7	5 31	19 41.36	−25 24.9	1.727	2.562	15.7	22.2
6 10	19 30.18	−22 9.7	1.628	2.550	12.0	19.4	6 10	19 35.65	−25 48.4	1.662	2.577	12.2	22.0
6 20	19 23.87	−23 22.1	1.567	2.545	8.0	19.2	6 20	19 27.24	−26 13.5	1.617	2.591	8.1	21.8
6 30	19 15.49	−24 39.4	1.531	2.540	3.6	18.9	6 30	19 16.86	−26 36.4	1.597	2.605	3.8	21.6
7 10	19 5.99	−25 55.8	1.521	2.535	1.8	18.8	7 10	19 5.67	−26 53.3	1.604	2.618	2.1	21.5
7 20	18 56.53	−27 5.8	1.537	2.531	6.1	19.0	7 20	18 54.90	−27 2.1	1.638	2.630	6.0	21.7
7 30	18 48.34	−28 5.5	1.579	2.527	10.4	19.3	7 30	18 45.76	−27 2.7	1.698	2.642	10.1	22.0
8 9	18 42.42	−28 53.5	1.644	2.523	14.2	19.5	8 9	18 39.10	−26 56.5	1.780	2.653	13.6	22.3
415076	2012 <i>BR</i> ₈₀	7 7.7 184°26	0°5/ 7.5 17				209152	2003 <i>TY</i> ₅₄	7 7.7 199°49	2°2/ 8.4 18			
5 31	19 39.45	−22 16.8	1.767	2.601	15.5	22.4	5 31	19 33.76	−15 9.6	2.018	2.842	14.2	20.9
6 10	19 34.29	−22 39.2	1.687	2.602	12.1	22.1	6 10	19 29.46	−15 16.5	1.934	2.841	11.2	20.7
6 20	19 26.45	−23 6.4	1.627	2.602	8.0	21.9	6 20	19 23.04	−15 32.2	1.872	2.839	7.8	20.5
6 30	19 16.57	−23 35.4	1.592	2.601	3.6	21.6	6 30	19 15.01	−15 55.9	1.835	2.838	4.1	20.3
7 10	19 5.68	−24 2.4	1.584	2.600	1.3	21.5	7 10	19 6.20	−16 25.6	1.824	2.837	2.3	20.1
7 20	18 55.00	−24 24.7	1.603	2.598	5.8	21.8	7 20	18 57.53	−16 58.9	1.840	2.835	5.3	20.3
7 30	18 45.72	−24 40.8	1.648	2.596	10.1	22.0	7 30	18 49.93	−17 33.8	1.883	2.833	8.9	20.5
8 9	18 38.80	−24 50.9	1.716	2.592	13.9	22.2	8 9	18 44.18	−18 8.1	1.950	2.831	12.3	20.7
450220	2002 <i>TC</i> ₂	7 7.7 255°71	19°9/10.1 17				38537	1999 <i>UJ</i> ₄₃	7 7.7 52°30	2°6/ 7.0 18			
5 31	19 35.71	+13 9.8	1.288	2.027	24.8	21.4	5 31	19 35.20	−29 54.8	2.277	3.109	12.5	18.9
6 10	19 32.28	+15 30.6	1.217	2.014	23.2	21.2	6 10	19 30.44	−30 9.2	2.198	3.111	9.8	18.7
6 20	19 25.67	+17 23.8	1.160	2.001	21.6	21.1	6 20	19 23.59	−30 21.5	2.142	3.113	6.7	18.5
6 30	19 16.43	+18 37.3	1.118	1.987	20.4	20.9	6 30	19 15.21	−30 28.7	2.111	3.114	3.7	18.3
7 10	19 5.68	+19 1.9	1.092	1.973	19.9	20.9	7 10	19 6.16	−30 28.4	2.107	3.116	2.8	18.3
7 20	18 54.82	+18 33.3	1.082	1.958	20.4	20.8	7 20	18 57.36	−30 19.5	2.131	3.118	5.4	18.5
7 30	18 45.43	+17 14.2	1.089	1.943	21.7	20.9	7 30	18 49.73	−30 2.5	2.182	3.120	8.5	18.7
8 9	18 38.80	+15 14.2	1.111	1.928	23.7	21.0	8 9	18 43.96	−29 38.9	2.256	3.122	11.4	18.8
309727	2008 <i>HW</i> ₆₉	7 7.7 145°80	3°4/ 6.3 18				340510	2006 <i>JB</i> ₁₂	7 7.7 195°70	3°0/ 6.4 18			
5 31	19 35.66	−32 34.0	2.729	3.550	11.0	21.5	5 31	19 36.69	−27 26.9	2.101	2.934	13.4	20.7
6 10	19 30.53	−33 16.1	2.653	3.557	8.6	21.4	6 10	19 31.94	−28 27.9	2.019	2.933	10.4	20.5
6 20	19 23.51	−33 55.8	2.602	3.564	6.1	21.2	6 20	19 24.82	−29 31.4	1.960	2.931	7.1	20.3
6 30	19 15.14	−34 29.4	2.576	3.571	4.0	21.1	6 30	19 15.86	−30 32.6	1.926	2.929	3.9	20.1
7 10	19 6.14	−34 54.0	2.579	3.577	3.6	21.1	7 10	19 5.95	−31 26.6	1.920	2.927	3.3	20.1
7 20	18 57.32	−35 7.8	2.610	3.584	5.5	21.2	7 20	18 56.12	−32 9.5	1.942	2.925	6.2	20.3
7 30	18 49.48	−35 10.7	2.669	3.589	7.9	21.4	7 30	18 47.44	−32 39.9	1.990	2.922	9.5	20.5
8 9	18 43.29	−35 4.0	2.751	3.595	10.3	21.5	8 9	18 40.80	−32 58.3	2.061	2.919	12.6	20.6
250802	2005 <i>UD</i> ₁₄	7 7.7 305°84	5°2/ 8.9 18				399333	1999 <i>VT</i> ₈₃	7 7.7 294°04	3°8/ 8.6 18			
5 31	19 31.16	−8 38.2	2.152	2.957	14.0	20.8	5 31	19 31.63	−12 15.0	2.221	3.035	13.4	21.0
6 10	19 27.29	−8 1.7	2.063	2.950	11.5	20.6	6 10	19 27.74	−11 47.3	2.118	3.014	10.8	20.8
6 20	19 21.51	−7 35.3	1.996	2.942	8.7	20.4	6 20	19 21.89	−11 27.3	2.036	2.994	7.9	20.6
6 30	19 14.30	−7 20.7	1.952	2.935	6.2	20.3	6 30	19 14.53	−11 15.9	1.979	2.973	5.1	20.4
7 10	19 6.39	−7 18.4	1.935	2.928	5.2	20.2	7 10	19 6.36	−11 13.2	1.948	2.952	3.9	20.3
7 20	18 58.59	−7 28.1	1.944	2.921	6.7	20.3	7 20	18 58.18	−11 18.9	1.944	2.931	5.9	20.3
7 30	18 51.71	−7 48.2	1.978	2.914	9.4	20.4	7 30	18 50.8					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
152316	2005 <i>TF</i> ₁₇₂	7 7.7 346°89	2°6/ 7.7 18				342681	2008 <i>VT</i> ₄₆	7 7.7 277°23	1°6/ 8.1 18			
5 31	19 37.47	-21 31.5	1.335	2.190	18.3	19.1	5 31	19 35.07	-18 4.8	1.937	2.767	14.5	21.9
6 10	19 33.34	-20 19.5	1.259	2.184	14.5	18.8	6 10	19 30.85	-17 59.9	1.832	2.743	11.5	21.6
6 20	19 26.08	-19 6.4	1.202	2.179	9.9	18.5	6 20	19 24.22	-18 1.2	1.749	2.720	7.9	21.3
6 30	19 16.47	-17 53.6	1.168	2.175	5.0	18.2	6 30	19 15.67	-18 7.7	1.690	2.696	3.9	21.1
7 10	19 5.80	-16 43.3	1.158	2.171	2.9	18.1	7 10	19 6.04	-18 18.2	1.657	2.672	1.8	20.9
7 20	18 55.53	-15 38.5	1.173	2.168	7.3	18.4	7 20	18 56.33	-18 30.9	1.652	2.647	5.6	21.1
7 30	18 47.08	-14 42.3	1.211	2.166	12.2	18.6	7 30	18 47.66	-18 44.6	1.672	2.623	9.8	21.2
8 9	18 41.46	-13 56.0	1.270	2.165	16.5	18.9	8 9	18 40.97	-18 58.2	1.716	2.598	13.6	21.4
431823	2008 <i>RO</i> ₁₁₄	7 7.7 6°15	2°4/ 7.1 17				420395	2012 <i>CB</i> ₃₇	7 7.7 66°16	2°7/ 8.4 17			
5 31	19 35.24	-26 41.7	1.578	2.430	16.1	21.0	5 31	19 35.87	-15 12.4	1.402	2.246	18.2	21.0
6 10	19 31.37	-27 6.8	1.505	2.430	12.6	20.8	6 10	19 31.82	-15 16.4	1.339	2.256	14.4	20.8
6 20	19 24.67	-27 33.4	1.453	2.431	8.5	20.5	6 20	19 24.93	-15 32.3	1.295	2.267	9.9	20.6
6 30	19 15.83	-27 57.3	1.424	2.432	4.2	20.3	6 30	19 15.94	-15 59.0	1.273	2.277	5.2	20.3
7 10	19 5.99	-28 14.3	1.420	2.433	2.7	20.2	7 10	19 6.01	-16 33.5	1.275	2.288	2.8	20.2
7 20	18 56.44	-28 22.1	1.441	2.434	6.6	20.4	7 20	18 56.46	-17 12.4	1.302	2.299	6.6	20.5
7 30	18 48.47	-28 20.2	1.487	2.436	10.8	20.7	7 30	18 48.56	-17 52.4	1.354	2.310	11.1	20.8
8 9	18 43.04	-28 10.2	1.554	2.439	14.6	20.9	8 9	18 43.23	-18 30.7	1.427	2.321	15.1	21.0
360675	2004 <i>RL</i> ₂₂₅	7 7.7 281°15	4°1/ 9.2 18				444725	2007 <i>FA</i> ₂₀	7 7.7 270°76	6°7/ 5.3 18			
5 31	19 30.57	-9 20.2	2.353	3.157	13.0	21.0	5 31	19 39.94	-42 33.6	2.510	3.315	12.3	21.4
6 10	19 26.73	-9 13.3	2.259	3.147	10.6	20.8	6 10	19 34.53	-43 20.7	2.416	3.296	10.3	21.3
6 20	19 21.11	-9 17.1	2.185	3.136	7.9	20.6	6 20	19 26.59	-44 0.2	2.343	3.277	8.3	21.1
6 30	19 14.15	-9 32.0	2.137	3.126	5.2	20.5	6 30	19 16.68	-44 26.5	2.296	3.257	6.9	21.0
7 10	19 6.50	-9 57.5	2.115	3.115	4.1	20.4	7 10	19 5.76	-44 35.2	2.274	3.237	6.9	20.9
7 20	18 58.90	-10 32.0	2.120	3.105	5.6	20.4	7 20	18 54.94	-44 24.3	2.279	3.217	8.3	21.0
7 30	18 52.11	-11 13.4	2.152	3.094	8.4	20.6	7 30	18 45.38	-43 54.5	2.309	3.196	10.4	21.1
8 9	18 46.80	-11 58.9	2.209	3.084	11.3	20.8	8 9	18 37.99	-43 9.3	2.361	3.176	12.6	21.2
342585	2008 <i>UO</i> ₂₇₈	7 7.7 327°89	2°4/ 7.0 16				302672	2002 <i>SZ</i> ₆₁	7 7.7 322°05	1°1/ 7.5 18			
5 31	19 33.65	-25 55.9	1.526	2.382	16.4	20.9	5 31	19 35.55	-25 24.4	1.868	2.709	14.5	20.4
6 10	19 30.38	-26 29.0	1.444	2.372	12.8	20.6	6 10	19 31.15	-25 27.7	1.787	2.706	11.3	20.2
6 20	19 24.20	-27 5.7	1.383	2.362	8.7	20.4	6 20	19 24.30	-25 31.7	1.727	2.703	7.5	20.0
6 30	19 15.71	-27 41.3	1.345	2.353	4.3	20.1	6 30	19 15.63	-25 34.1	1.691	2.700	3.5	19.7
7 10	19 6.02	-28 11.2	1.331	2.344	2.8	20.0	7 10	19 6.11	-25 32.3	1.682	2.697	1.6	19.6
7 20	18 56.46	-28 31.7	1.342	2.336	6.9	20.2	7 20	18 56.82	-25 25.3	1.699	2.694	5.6	19.9
7 30	18 48.41	-28 41.4	1.377	2.328	11.4	20.4	7 30	18 48.86	-25 12.9	1.743	2.692	9.5	20.1
8 9	18 42.96	-28 41.4	1.433	2.321	15.4	20.7	8 9	18 43.05	-24 56.4	1.809	2.689	13.1	20.3
395697	2012 <i>BE</i> ₁₂₇	7 7.7 305°91	0°6/ 7.9 18				338040	2002 <i>JD</i> ₈₅	7 7.7 20°57	6°5/ 5.6 17			
5 31	19 31.46	-18 14.9	2.207	3.037	12.9	20.3	5 31	19 36.78	-34 30.7	1.572	2.421	16.3	20.2
6 10	19 27.64	-18 44.2	2.116	3.028	10.1	20.1	6 10	19 32.93	-35 45.0	1.507	2.424	13.1	20.0
6 20	19 21.83	-19 21.0	2.048	3.020	6.8	19.9	6 20	19 25.92	-36 56.2	1.463	2.428	9.7	19.8
6 30	19 14.51	-20 3.3	2.004	3.012	3.1	19.6	6 30	19 16.47	-37 56.3	1.442	2.433	7.0	19.6
7 10	19 6.40	-20 48.3	1.988	3.004	1.0	19.4	7 10	19 5.85	-38 38.4	1.446	2.437	6.8	19.6
7 20	18 58.33	-21 33.3	2.000	2.996	4.7	19.7	7 20	18 55.54	-38 58.8	1.473	2.442	9.2	19.8
7 30	18 51.19	-22 15.6	2.039	2.989	8.3	19.9	7 30	18 47.01	-38 57.8	1.524	2.448	12.5	20.0
8 9	18 45.72	-22 53.8	2.101	2.981	11.6	20.1	8 9	18 41.35	-38 39.2	1.596	2.454	15.7	20.2
66190	1998 <i>YX</i> ₅	7 7.7 233°37	1°5/ 7.4 18				361424	2006 <i>XJ</i> ₈	7 7.7 156°45	2°3/ 6.5 18			
5 31	19 38.71	-26 3.7	1.848	2.684	14.8	19.8	5 31	19 35.12	-27 39.6	2.781	3.602	10.8	21.3
6 10	19 33.73	-26 12.3	1.760	2.676	11.6	19.6	6 10	19 30.09	-28 33.6	2.701	3.608	8.4	21.1
6 20	19 26.11	-26 21.6	1.693	2.668	7.8	19.3	6 20	19 23.26	-29 28.6	2.645	3.614	5.7	21.0
6 30	19 16.47	-26 28.4	1.651	2.659	3.7	19.1	6 30	19 15.09	-30 21.1	2.616	3.619	3.1	20.8
7 10	19 5.81	-26 29.7	1.635	2.650	1.9	18.9	7 10	19 6.28	-31 7.8	2.617	3.624	2.6	20.8
7 20	18 55.33	-26 24.1	1.647	2.640	5.9	19.2	7 20	18 57.55	-31 46.1	2.647	3.629	4.8	20.9
7 30	18 46.21	-26 11.4	1.684	2.630	10.0	19.4	7 30	18 49.69	-32 14.9	2.704	3.633	7.5	21.1
8 9	18 39.40	-25 53.3	1.744	2.620	13.7	19.6	8 9	18 43.35	-32 34.5	2.787	3.637	10.0	21.3
174522	2003 <i>DD</i> ₁₇	7 7.7 156°89	1°0/ 7.4 18				398978	2013 <i>EE</i> ₆₆	7 7.7 53°57	1°3/ 7.9 18			
5 31	19 35.03	-25 1.8	2.526	3.351	11.6	21.1	5 31	19 34.34	-20 3.9	2.154	2.982	13.2	20.6
6 10	19 30.03	-25 16.7	2.446	3.356	9.0	21.0	6 10	19 29.67	-19 39.2	2.077	2.988	10.3	20.4
6 20	19 23.20	-25 32.7	2.388	3.360	6.0	20.8	6 20	19 23.03	-19 17.3	2.023	2.994	6.9	20.2
6 30	19 15.03	-25 47.5	2.357	3.365	2.7	20.6	6 30	19 14.98	-18 57.9	1.994	3.001	3.3	20.0
7 10	19 6.27	-25 59.0	2.354	3.369	1.4	20.5	7 10	19 6.33	-18 40.5	1.993	3.007	1.5	19.9
7 20	18 57.70	-26 5.9	2.380	3.373	4.4	20.7	7 20	18 57.97	-18 24.7	2.019	3.014	4.8	20.1
7 30	18 50.11	-26 7.7	2.434	3.376	7.6	20.9	7 30	18 50.72	-18 10.7	2.072	3.021	8.3	20.4
8 9	18 44.14	-26 5.0	2.512	3.379	10.4	21.1	8 9	18 45.26	-17 58.4	2.149	3.028	11.4	20.6
167719	2004 <i>TO</i> ₂₇₅	7 7.7 153°22	2°4/ 7.1 17				509829	2008 <i>WZ</i> ₁₃₈	7 7.7 270°91	2°6/ 6.6 18			
5 31	19 40.31	-26 22.6	1.560	2.404	16.7	21.3	5 31	19 36.13	-25 18.6	1.952	2.789	14.1	21.3
6 10	19 35.34	-26 54.7	1.489	2.409	13.0	21.0	6 10	19 31.87	-26 23.4	1.855	2.772	11.0	21.0
6 20	19 27.34	-27 29.0	1.437	2.413	8.8	20.8	6 20	19 25.04	-27 34.2	1.780	2.754	7.5	20.8
6 30	19 17.04	-28 0.6	1.410	2.417	4.3	20.5	6 30	19 16.11	-28 46.3	1.730	2.736	3.9	20.5
7 10	19 5.66	-28 24.5	1.407	2.420	2.8	20.5	7 10	19 5.94	-29 53.8	1.708	2.718	3.0	20.4
7 20	18 54.60	-28 37.9	1.431	2.423	6.8	20.7	7 20	18 55.63	-30 51.9	1.713	2.700	6.4	20.6
7 30	18 45.27	-28 40.3	1.480	2.426	11.2	21.0	7 30	18 46.41	-31 37.5	1.744	2.681	10.3	20.8
8 9	18 38.66	-28 33.7	1.550	2.428	15.0	21.2	8 9	18 39.32	-32 10.3	1.797	2.662	13.9	21.0
362531	2010 <i>UP</i> ₁₀	7 7.7 150°31	5°9/ 9.6 18				17093	1999 <i>JH</i> ₂₂	7 7.7 90°48	0°1/ 7.7 18			
5 31	19 30.61	-3 46.0	2.616	3.391	12.6	21.2	5 31	19 37.58	-22 51.5	1.715	2.555	15.6	17.8
6 10	19 26.97	-3 5.2	2.535	3.394	10.6	21.0	6 10	19 32.73	-22 49.9	1.646	2.564	12.1	17.6
6 20	19 20.88	-2 35.5	2.474	3.396	8.5	20.9	6 20	19 25.32	-22 51.0	1.597	2.573	8.0	17.3
6 30	19 13.99	-2 18.5	2.438	3.399	6.6	20.8	6 30	19 16.07	-22 52.7	1.573	2.582	3.6	17.1
7 10	19 6.58	-2 15.2	2.429	3.401	5.9	20.8	7 10	19 6.02	-22 52.9	1.575	2.591	1.1	16.9
7 20	18 59.31	-2 25.0	2.446	3.403	6.8	20.8	7 20	18 56.35	-22 50.1	1.604	2.600	5.6	17.3
7 30	18 52.82	-2 46.6	2.489	3.405	8.6	20.9	7 30	18 48.19	-22 44.4	1.658	2.609	9.8	17.5
8 9	18 47.66	-3 17.5	2.556	3.407	10.7								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
507360	2011 <i>WO</i> ₈₄		7 7.7 143°77	2°9/ 6.2 18			22824	von Neumann		7 7.7 302°97	3°0/ 8.2 18		
5 31	19 35.30	−30 3.6	2.853	3.673	10.6	22.1	5 31	19 34.44	−17 12.2	1.381	2.232	18.1	19.0
6 10	19 30.20	−30 58.8	2.777	3.682	8.2	21.9	6 10	19 31.19	−16 43.1	1.292	2.214	14.4	18.7
6 20	19 23.31	−31 53.5	2.725	3.690	5.7	21.8	6 20	19 24.90	−16 21.0	1.221	2.196	10.1	18.4
6 30	19 15.12	−32 44.0	2.700	3.699	3.5	21.6	6 30	19 16.13	−16 6.5	1.173	2.178	5.4	18.1
7 10	19 6.29	−33 27.1	2.705	3.707	3.1	21.6	7 10	19 6.00	−15 59.2	1.148	2.161	3.2	17.9
7 20	18 57.58	−34 0.5	2.738	3.714	5.1	21.8	7 20	18 55.88	−15 58.2	1.147	2.143	7.3	18.1
7 30	18 49.75	−34 23.4	2.799	3.721	7.5	21.9	7 30	18 47.26	−16 2.6	1.169	2.127	12.3	18.3
8 9	18 43.44	−34 36.4	2.885	3.728	9.8	22.1	8 9	18 41.31	−16 11.2	1.212	2.110	16.9	18.5
444121	2004 <i>TO</i> ₁₈₃		7 7.7 292°40	7°2/ 9.7 18			434671	2006 <i>AP</i> ₈		7 7.7 211°32	3°5/ 8.7 18		
5 31	19 30.38	−1 49.7	2.357	3.131	13.9	21.1	5 31	19 35.84	−11 59.4	2.312	3.114	13.3	22.3
6 10	19 26.54	−1 1.2	2.268	3.123	11.8	21.0	6 10	19 30.83	−11 42.2	2.217	3.107	10.7	22.1
6 20	19 20.96	−0 25.5	2.200	3.115	9.7	20.8	6 20	19 23.86	−11 33.2	2.144	3.099	7.7	21.9
6 30	19 14.10	−0 5.1	2.156	3.108	7.9	20.7	6 30	19 15.43	−11 32.9	2.097	3.090	4.8	21.7
7 10	19 6.60	−0 1.6	2.136	3.101	7.2	20.6	7 10	19 6.25	−11 40.9	2.076	3.081	3.6	21.6
7 20	18 59.18	−0 14.7	2.142	3.093	8.0	20.7	7 20	18 57.14	−11 56.2	2.085	3.071	5.6	21.7
7 30	18 52.58	−0 42.8	2.173	3.086	9.8	20.8	7 30	18 48.94	−12 17.3	2.120	3.060	8.6	21.9
8 9	18 47.43	−1 22.9	2.227	3.079	12.1	20.9	8 9	18 42.38	−12 42.4	2.180	3.048	11.6	22.0
368919	2006 <i>UU</i> ₁₁₀		7 7.7 357°71	2°0/ 7.9 17			504240	2006 <i>US</i> ₂₅₄		7 7.7 279°83	4°5/ 8.5 18		
5 31	19 31.96	−19 50.6	1.111	1.985	19.9	20.5	5 31	19 35.01	−13 7.7	1.574	2.406	17.1	21.6
6 10	19 29.63	−19 21.4	1.045	1.981	15.7	20.2	6 10	19 31.15	−12 34.1	1.485	2.393	13.8	21.3
6 20	19 23.93	−18 58.3	0.996	1.978	10.7	19.9	6 20	19 24.60	−12 10.2	1.415	2.380	10.0	21.1
6 30	19 15.64	−18 41.1	0.968	1.977	5.2	19.6	6 30	19 15.91	−11 57.5	1.369	2.366	6.2	20.8
7 10	19 6.14	−18 28.9	0.961	1.976	2.4	19.5	7 10	19 6.09	−11 56.1	1.346	2.353	4.6	20.7
7 20	18 57.00	−18 20.8	0.977	1.977	7.4	19.8	7 20	18 56.31	−12 5.4	1.349	2.339	7.3	20.8
7 30	18 49.81	−18 16.2	1.014	1.979	12.8	20.1	7 30	18 47.85	−12 23.7	1.376	2.326	11.5	21.0
8 9	18 45.66	−18 14.3	1.070	1.982	17.5	20.4	8 9	18 41.72	−12 48.4	1.424	2.312	15.5	21.2
409666	2005 <i>YY</i> ₁₅₁		7 7.7 252°78	1°8/ 7.2 17			358454	2007 <i>EX</i> ₁₀₀		7 7.7 269°89	4°4/ 6.4 18		
5 31	19 38.69	−23 45.6	1.462	2.311	17.3	22.1	5 31	19 36.56	−35 2.9	2.372	3.197	12.3	20.5
6 10	19 34.56	−24 26.6	1.375	2.299	13.6	21.8	6 10	19 31.69	−35 32.8	2.284	3.188	9.8	20.4
6 20	19 27.19	−25 14.6	1.309	2.287	9.2	21.5	6 20	19 24.57	−35 58.3	2.218	3.178	7.2	20.2
6 30	19 17.16	−26 4.7	1.265	2.274	4.3	21.2	6 30	19 15.77	−36 15.2	2.178	3.169	4.9	20.0
7 10	19 5.64	−26 51.0	1.247	2.261	2.4	21.0	7 10	19 6.16	−36 20.3	2.165	3.160	4.6	20.0
7 20	18 54.12	−27 28.6	1.253	2.247	7.2	21.3	7 20	18 56.71	−36 12.0	2.178	3.150	6.5	20.1
7 30	18 44.17	−27 54.9	1.284	2.234	12.2	21.5	7 30	18 48.42	−35 50.8	2.218	3.141	9.2	20.2
8 9	18 37.07	−28 10.3	1.336	2.220	16.6	21.7	8 9	18 42.08	−35 19.1	2.282	3.131	11.9	20.4
43955	Fixlmüller		7 7.7 295°29	0°2/ 7.8 17			49975	1999 <i>YZ</i> ₂		7 7.7 166°46	10°6/ 9.7 18		
5 31	19 36.16	−21 10.0	1.493	2.343	17.0	20.1	5 31	19 36.77	+ 3 12.4	1.956	2.705	17.1	19.6
6 10	19 32.21	−21 17.3	1.415	2.338	13.3	19.9	6 10	19 31.73	+ 4 42.9	1.883	2.709	15.0	19.5
6 20	19 25.34	−21 30.5	1.356	2.334	9.0	19.6	6 20	19 24.53	+ 5 56.5	1.828	2.713	12.9	19.3
6 30	19 16.22	−21 47.2	1.320	2.330	4.0	19.3	6 30	19 15.73	+ 6 48.1	1.796	2.715	11.3	19.2
7 10	19 5.96	−22 4.4	1.309	2.325	1.2	19.1	7 10	19 6.18	+ 7 14.4	1.787	2.718	10.7	19.2
7 20	18 55.91	−22 19.4	1.324	2.321	6.3	19.4	7 20	18 56.79	+ 7 14.4	1.802	2.720	11.3	19.3
7 30	18 47.42	−22 30.9	1.362	2.317	11.1	19.7	7 30	18 48.53	+ 6 50.3	1.841	2.721	13.0	19.4
8 9	18 41.52	−22 38.5	1.422	2.314	15.3	19.9	8 9	18 42.16	+ 6 6.6	1.900	2.722	15.0	19.5
510366	2011 <i>SC</i> ₇₅		7 7.7 278°17	4°2/ 8.6 18			359946	2012 <i>AX</i> ₁₅		7 7.7 224°19	1°9/ 6.8 18		
5 31	19 32.87	−11 45.8	2.084	2.898	14.1	21.7	5 31	19 33.72	−25 9.3	2.477	3.306	11.7	20.7
6 10	19 28.79	−11 14.9	1.988	2.884	11.4	21.5	6 10	19 29.28	−26 4.0	2.390	3.302	9.1	20.5
6 20	19 22.64	−10 52.4	1.914	2.870	8.4	21.3	6 20	19 22.89	−27 2.1	2.326	3.299	6.1	20.3
6 30	19 14.91	−10 39.4	1.864	2.856	5.5	21.1	6 30	19 15.02	−28 0.1	2.289	3.296	3.0	20.1
7 10	19 6.36	−10 36.3	1.840	2.842	4.2	21.0	7 10	19 6.37	−28 54.1	2.281	3.292	2.2	20.0
7 20	18 57.86	−10 42.5	1.843	2.828	6.2	21.1	7 20	18 57.76	−29 40.9	2.301	3.288	5.0	20.2
7 30	18 50.33	−10 56.8	1.871	2.814	9.4	21.2	7 30	18 50.05	−30 18.8	2.348	3.285	8.1	20.4
8 9	18 44.52	−11 17.3	1.923	2.800	12.6	21.4	8 9	18 43.96	−30 47.5	2.420	3.281	10.9	20.6
380278	2002 <i>AP</i> ₁₀₂		7 7.7 189°21	0°2/ 7.6 17			18708	Danielappel		7 7.7 108°53	3°5/ 6.6 18		
5 31	19 36.60	−20 6.1	2.118	2.943	13.6	21.6	5 31	19 35.98	−31 32.7	2.265	3.095	12.6	19.0
6 10	19 31.71	−20 47.3	2.032	2.942	10.6	21.4	6 10	19 31.16	−32 7.6	2.190	3.100	9.9	18.8
6 20	19 24.60	−21 35.5	1.968	2.941	7.0	21.1	6 20	19 24.15	−32 40.4	2.138	3.105	6.9	18.6
6 30	19 15.80	−22 27.6	1.931	2.939	3.1	20.9	6 30	19 15.55	−33 6.9	2.112	3.110	4.3	18.5
7 10	19 6.11	−23 19.8	1.921	2.937	1.0	20.7	7 10	19 6.24	−33 23.9	2.112	3.115	3.7	18.4
7 20	18 56.51	−24 8.6	1.940	2.934	5.0	21.0	7 20	18 57.15	−33 29.6	2.140	3.120	6.0	18.6
7 30	18 47.98	−24 51.7	1.986	2.931	8.8	21.2	7 30	18 49.27	−33 24.1	2.195	3.125	8.9	18.8
8 9	18 41.33	−25 27.9	2.056	2.928	12.1	21.4	8 9	18 43.31	−33 9.2	2.272	3.130	11.6	19.0
26276	Natrees		7 7.7 350°62	2°3/ 7.3 18			510787	2013 <i>AB</i> ₁₀₅		7 7.7 204°51	6°0/ 5.8 18		
5 31	19 31.58	−25 43.4	0.968	1.857	21.0	17.2	5 31	19 41.72	−41 37.9	2.683	3.483	17.1	22.0
6 10	19 30.06	−25 57.9	0.905	1.850	16.5	16.9	6 10	19 35.56	−42 18.9	2.599	3.478	9.7	21.8
6 20	19 24.64	−26 15.5	0.857	1.844	11.1	16.6	6 20	19 27.08	−42 52.3	2.538	3.473	7.7	21.7
6 30	19 16.10	−26 31.6	0.829	1.839	5.3	16.2	6 30	19 16.86	−43 13.3	2.502	3.467	6.2	21.6
7 10	19 6.01	−26 40.8	0.821	1.835	2.9	16.1	7 10	19 5.84	−43 18.0	2.493	3.460	6.1	21.6
7 20	18 56.29	−26 39.9	0.833	1.833	8.4	16.4	7 20	18 55.04	−43 5.3	2.511	3.453	7.4	21.6
7 30	18 48.85	−26 28.7	0.866	1.833	14.2	16.7	7 30	18 45.49	−42 36.0	2.555	3.446	9.4	21.7
8 9	18 45.01	−26 9.5	0.917	1.833	19.3	17.0	8 9	18 37.99	−41 53.5	2.623	3.437	11.5	21.9
325949	2010 <i>VP</i> ₇₉		7 7.7 41°26	1°6/ 8.1 17			80504	2000 <i>AS</i> ₅₄		7 7.7 150°87	0°7/ 7.5 17		
5 31	19 35.35	−18 27.9	1.284	2.141	18.8	21.3	5 31	19 39.05	−23 19.1	1.855	2.688	14.9	20.8
6 10	19 31.68	−18 24.7	1.224	2.151	14.7	21.0	6 10	19 33.79	−23 34.6	1.780	2.695	11.6	20.6
6 20	19 24.96	−18 30.3	1.183	2.161	9.9	20.8	6 20	19 26.03	−23 53.3	1.727	2.701	7.7	20.4
6 30	19 16.00	−18 43.1	1.164	2.172	4.8	20.5	6 30	19 16.42	−24 12.1	1.699	2.707	3.4	20.1
7 10	19 6.08	−19 0.5	1.168	2.183	2.0	20.4	7 10	19 5.98	−24 28.1	1.697	2.713	1.3	20.0
7 20	18 56.62	−19 19.7	1.197	2.195	6.7	20.7	7 20	18 55.82	−24 39.2	1.723	2.718	5.5	20.3
7 30	18 48.99	−19 38.7	1.248	2.207	11.5	21.0	7 30	18 47.06	−24 44.8	1.775	2.722	9.5</	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
429454	2010 <i>VW</i> ₁₇₂		7 7.7 200°86	0°8/ 7.5 17			142077	2002 <i>QB</i> ₄₃		7 7.7 345°64	2°0/ 7.1 18		
5 31	19 38.68	-23 16.4	1.922	2.753	14.5	22.7	5 31	19 33.21	-22 45.1	1.257	2.124	18.5	19.3
6 10	19 33.58	-23 38.3	1.836	2.750	11.3	22.5	6 10	19 30.58	-23 38.9	1.185	2.119	14.5	19.0
6 20	19 25.97	-24 3.9	1.772	2.746	7.6	22.3	6 20	19 24.65	-24 42.3	1.132	2.114	9.7	18.7
6 30	19 16.45	-24 30.2	1.733	2.742	3.4	22.0	6 30	19 16.09	-25 49.8	1.100	2.110	4.5	18.4
7 10	19 5.96	-24 53.8	1.722	2.737	1.4	21.9	7 10	19 6.13	-26 54.2	1.092	2.106	2.6	18.3
7 20	18 55.61	-25 12.2	1.737	2.731	5.6	22.1	7 20	18 56.31	-27 49.4	1.107	2.103	7.6	18.6
7 30	18 46.53	-25 24.2	1.779	2.725	9.6	22.4	7 30	18 48.25	-28 31.5	1.145	2.101	12.6	18.9
8 9	18 39.62	-25 30.3	1.845	2.718	13.2	22.6	8 9	18 43.18	-29 0.1	1.203	2.100	17.1	19.1
237318	2009 <i>AZ</i> ₄₂		7 7.7 94°84	2°1/ 8.5 18			398963	2013 <i>EF</i> ₁₃		7 7.7 257°76	1°0/ 7.4 18		
5 31	19 33.36	-15 13.3	2.022	2.846	14.1	20.9	5 31	19 33.96	-24 24.6	2.310	3.141	12.4	21.4
6 10	19 29.13	-15 22.6	1.945	2.852	11.1	20.7	6 10	19 29.56	-24 41.6	2.219	3.133	9.6	21.2
6 20	19 22.81	-15 40.7	1.889	2.857	7.7	20.5	6 20	19 23.13	-25 0.7	2.150	3.124	6.4	21.0
6 30	19 14.97	-16 6.5	1.858	2.862	4.1	20.3	6 30	19 15.17	-25 19.4	2.107	3.115	2.9	20.8
7 10	19 6.42	-16 38.0	1.854	2.867	2.2	20.2	7 10	19 6.44	-25 35.5	2.091	3.106	1.4	20.7
7 20	18 58.05	-17 12.8	1.877	2.872	5.1	20.4	7 20	18 57.80	-25 47.1	2.103	3.097	4.8	20.9
7 30	18 50.78	-17 48.5	1.927	2.877	8.7	20.6	7 30	18 50.15	-25 53.4	2.142	3.088	8.3	21.1
8 9	18 45.33	-18 23.4	2.000	2.882	12.0	20.8	8 9	18 44.23	-25 54.6	2.206	3.078	11.4	21.3
67081	2000 <i>AL</i> ₃₁		7 7.7 288°46	0°3/ 7.6 18			108004	2001 <i>FS</i> ₁₃₈		7 7.7 137°63	0°3/ 7.9 18 R		
5 31	19 32.16	-21 42.1	2.347	3.177	12.2	19.2	5 31	19 34.60	-19 27.4	1.946	2.779	14.3	19.8
6 10	19 28.20	-22 7.3	2.246	3.159	9.5	19.0	6 10	19 30.29	-19 53.3	1.867	2.781	11.1	19.6
6 20	19 22.25	-22 37.1	2.168	3.142	6.4	18.8	6 20	19 23.72	-20 26.0	1.809	2.783	7.4	19.3
6 30	19 14.78	-23 9.6	2.115	3.124	2.8	18.5	6 30	19 15.45	-21 3.2	1.777	2.785	3.4	19.1
7 10	19 6.47	-23 41.9	2.090	3.106	1.0	18.3	7 10	19 6.36	-21 41.7	1.771	2.787	1.0	18.9
7 20	18 58.15	-24 11.8	2.093	3.088	4.7	18.6	7 20	18 57.42	-22 18.6	1.792	2.789	5.1	19.2
7 30	18 50.69	-24 37.5	2.123	3.070	8.2	18.7	7 30	18 49.66	-22 51.7	1.840	2.790	9.0	19.5
8 9	18 44.85	-24 58.4	2.177	3.052	11.4	18.9	8 9	18 43.86	-23 20.0	1.911	2.792	12.5	19.7
420397	2012 <i>CU</i> ₃₉		7 7.7 133°60	3°2/ 8.6 17			314454	2005 <i>VR</i> ₁₁₇		7 7.7 250°04	1°0/ 7.4 16		
5 31	19 37.37	-13 42.4	1.646	2.472	16.7	22.0	5 31	19 33.65	-24 22.6	2.565	3.391	11.4	22.0
6 10	19 32.64	-13 41.4	1.574	2.480	13.3	21.8	6 10	19 29.15	-24 42.1	2.467	3.378	8.9	21.8
6 20	19 25.35	-13 51.7	1.522	2.488	9.3	21.6	6 20	19 22.78	-25 3.7	2.393	3.366	5.9	21.6
6 30	19 16.16	-14 12.8	1.494	2.496	5.2	21.4	6 30	19 15.01	-25 25.2	2.345	3.353	2.7	21.4
7 10	19 6.09	-14 42.7	1.492	2.503	3.2	21.3	7 10	19 6.50	-25 44.1	2.325	3.339	1.3	21.2
7 20	18 56.29	-15 18.4	1.516	2.509	6.3	21.5	7 20	18 58.04	-25 58.8	2.333	3.326	4.5	21.4
7 30	18 47.92	-15 57.2	1.565	2.516	10.3	21.7	7 30	18 50.44	-26 8.4	2.369	3.312	7.7	21.6
8 9	18 41.83	-16 36.3	1.637	2.521	14.0	22.0	8 9	18 44.38	-26 13.0	2.430	3.298	10.6	21.8
507845	2014 <i>FM</i> ₇₃		7 7.7 15°73	5°8/ 5.9 18			479271	2013 <i>FU</i> ₆		7 7.7 123°40	1°4/ 7.0 18		
5 31	19 36.44	-36 9.7	1.987	2.821	14.0	20.3	5 31	19 34.09	-24 25.1	2.693	3.515	11.1	21.3
6 10	19 32.05	-37 5.3	1.916	2.823	11.3	20.2	6 10	19 29.29	-25 13.8	2.617	3.526	8.5	21.1
6 20	19 25.03	-37 56.2	1.866	2.825	8.4	20.0	6 20	19 22.75	-26 5.1	2.565	3.537	5.7	20.9
6 30	19 16.05	-38 36.4	1.841	2.827	6.2	19.9	6 30	19 14.94	-26 55.9	2.541	3.548	2.7	20.8
7 10	19 6.13	-39 1.2	1.841	2.829	6.0	19.9	7 10	19 6.53	-27 43.1	2.545	3.558	1.7	20.7
7 20	18 56.46	-39 8.2	1.867	2.832	8.0	20.0	7 20	18 58.25	-28 24.2	2.579	3.568	4.4	20.9
7 30	18 48.24	-38 57.8	1.918	2.835	10.7	20.2	7 30	18 50.85	-28 57.8	2.640	3.577	7.3	21.1
8 9	18 42.35	-38 33.3	1.990	2.838	13.4	20.3	8 9	18 44.94	-29 23.8	2.727	3.587	9.8	21.3
433385	2013 <i>SZ</i> ₇₆		7 7.7 247°39	0°4/ 7.6 18			383977	2008 <i>TK</i> ₁₀₅		7 7.7 226°23	1°0/ 7.5 17 R		
5 31	19 37.32	-21 57.8	1.898	2.731	14.6	22.0	5 31	19 36.50	-24 19.2	2.019	2.852	13.8	21.9
6 10	19 32.69	-22 17.2	1.802	2.716	11.4	21.8	6 10	19 31.80	-24 35.0	1.932	2.847	10.8	21.7
6 20	19 25.51	-22 41.7	1.727	2.701	7.7	21.5	6 20	19 24.75	-24 53.1	1.866	2.841	7.2	21.4
6 30	19 16.32	-23 8.7	1.677	2.686	3.4	21.2	6 30	19 15.93	-25 10.9	1.826	2.835	3.3	21.2
7 10	19 6.03	-23 34.9	1.654	2.670	1.1	21.0	7 10	19 6.23	-25 25.5	1.813	2.828	1.5	21.0
7 20	18 55.73	-23 57.5	1.658	2.653	5.6	21.3	7 20	18 56.66	-25 34.9	1.828	2.822	5.3	21.3
7 30	18 46.61	-24 15.1	1.688	2.636	9.9	21.5	7 30	18 48.29	-25 38.4	1.868	2.815	9.2	21.5
8 9	18 39.62	-24 27.2	1.741	2.619	13.7	21.7	8 9	18 41.94	-25 36.6	1.933	2.808	12.6	21.7
337107	1999 <i>RD</i> ₆₁		7 7.7 319°29	1°1/ 7.5 18			218598	2005 <i>NQ</i> ₂		7 7.7 323°37	1°9/ 8.2 17		
5 31	19 32.53	-24 29.9	1.415	2.278	17.1	20.2	5 31	19 30.20	-17 49.0	1.246	2.112	18.7	20.2
6 10	19 29.95	-24 34.7	1.318	2.248	13.5	19.9	6 10	19 28.30	-17 49.8	1.157	2.089	14.9	19.8
6 20	19 24.25	-24 42.5	1.239	2.220	9.2	19.6	6 20	19 23.24	-18 1.4	1.087	2.067	10.3	19.5
6 30	19 15.95	-24 50.3	1.182	2.191	4.2	19.2	6 30	19 15.54	-18 23.1	1.037	2.046	5.1	19.2
7 10	19 6.12	-24 54.8	1.148	2.164	1.8	19.0	7 10	19 6.30	-18 52.5	1.010	2.025	2.2	18.9
7 20	18 56.16	-24 53.5	1.139	2.137	7.0	19.3	7 20	18 56.97	-19 26.1	1.005	2.006	7.2	19.2
7 30	18 47.64	-24 45.5	1.152	2.111	12.3	19.5	7 30	18 49.15	-20 0.4	1.023	1.987	12.8	19.4
8 9	18 41.87	-24 31.8	1.186	2.086	17.0	19.7	8 9	18 44.18	-20 33.0	1.059	1.970	17.7	19.6
15785	de Villegas		7 7.7 207°43	4°7/ 9.8 18 R			153296	2001 <i>FF</i> ₁₀₈		7 7.7 212°55	1°9/ 7.0 18		
5 31	19 30.83	-6 5.7	2.524	3.311	12.7	18.5	5 31	19 34.09	-28 11.5	2.867	3.689	10.5	20.8
6 10	19 26.78	-6 59.9	2.436	3.309	10.5	18.3	6 10	19 29.27	-28 33.7	2.775	3.683	8.2	20.6
6 20	19 21.08	-6 5.9	2.370	3.307	8.0	18.1	6 20	19 22.74	-28 55.4	2.708	3.677	5.5	20.4
6 30	19 14.19	-6 24.4	2.327	3.305	5.8	18.0	6 30	19 14.95	-29 14.3	2.667	3.671	2.9	20.3
7 10	19 6.70	-6 55.0	2.312	3.303	4.7	17.9	7 10	19 6.54	-29 28.2	2.654	3.664	2.1	20.2
7 20	18 59.31	-7 35.9	2.324	3.300	5.8	18.0	7 20	18 58.24	-29 35.5	2.671	3.658	4.4	20.3
7 30	18 52.69	-8 25.0	2.363	3.298	8.1	18.1	7 30	18 50.76	-29 36.0	2.715	3.650	7.2	20.5
8 9	18 47.45	-9 19.0	2.427	3.295	10.6	18.3	8 9	18 44.74	-29 30.3	2.784	3.643	9.7	20.7
116112	2003 <i>WH</i> ₁₃₅		7 7.7 267°06	3°5/ 8.4 18			478699	2012 <i>UZ</i> ₃₄		7 7.7 280°94	1°3/ 7.4 16		
5 31	19 34.54	-14 8.4	2.054	2.873	14.2	19.9	5 31	19 35.99	-24 36.2	1.926	2.763	14.2	22.2
6 10	19 30.16	-13 37.7	1.957	2.857	11.4	19.6	6 10	19 31.76	-24 55.3	1.823	2.740	11.2	22.0
6 20	19 23.62	-13 13.6	1.880	2.842	8.1	19.4	6 20	19 24.97	-25 17.5	1.742	2.717	7.5	21.7
6 30	19 15.41	-12 56.9	1.828	2.826	4.9	19.2	6 30	19 16.14	-25 39.8	1.686	2.694	3.5	21.4
7 10	19 6.33	-12 47.7	1.803	2.810	3.5	19.1	7 10	19 6.16	-25 58.8	1.655	2.670	1.7	21.2
7 20	18 57.29	-12 45.8	1.805	2.794	5.9	19.2	7 20	18 56.10	-26 11.9	1.652	2.646	5.8	21.5
7 30	18 49.26	-12 50.3	1.833	2.777	9.4	19.4	7 30	18 47.17	-26 18.1	1.675	2.622	10.0	21.7
8 9	18 43.03	-12 59.9	1.884	2.761	12.8	19.5							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
324965	2008 AQ ₄		7 7.7 130°68	4.7/ 6.5 17			260899	2005 QB ₁₈₂		7 7.8 278°08	4.8/ 9.4 18		
5 31	19 44.51	−33 47.1	1.971	2.794	14.5	21.8	5 31	19 31.34	−8 1.7	2.232	3.033	13.7	20.8
6 10	19 38.05	−34 33.2	1.908	2.811	11.5	21.7	6 10	19 27.42	−7 45.3	2.146	3.030	11.2	20.7
6 20	19 28.87	−35 15.0	1.866	2.827	8.3	21.5	6 20	19 21.65	−7 40.3	2.082	3.028	8.5	20.5
6 30	19 17.73	−35 46.6	1.850	2.843	5.5	21.3	6 30	19 14.52	−7 47.7	2.041	3.025	5.9	20.3
7 10	19 5.77	−36 3.6	1.861	2.857	5.0	21.3	7 10	19 6.73	−8 7.3	2.026	3.022	4.8	20.2
7 20	18 54.26	−36 4.1	1.899	2.871	7.2	21.5	7 20	18 59.04	−8 37.6	2.039	3.019	6.2	20.3
7 30	18 44.40	−35 49.5	1.963	2.885	10.3	21.7	7 30	18 52.25	−9 16.4	2.077	3.016	8.8	20.5
8 9	18 37.05	−35 23.1	2.050	2.897	13.1	21.9	8 9	18 47.02	−10 0.8	2.139	3.013	11.6	20.7
46869	1998 QC ₉₇		7 7.8 330°98	3.0/ 8.1 18			142295	2002 RV ₁₄₃		7 7.8 201°26	0°1/ 7.7 18		
5 31	19 34.16	−17 46.7	1.330	2.185	18.4	18.8	5 31	19 39.04	−22 24.5	2.011	2.837	14.1	21.2
6 10	19 30.94	−17 9.6	1.252	2.176	14.6	18.5	6 10	19 33.74	−22 30.8	1.923	2.834	11.0	21.0
6 20	19 24.68	−16 38.9	1.192	2.168	10.2	18.2	6 20	19 26.04	−22 40.2	1.857	2.829	7.4	20.7
6 30	19 16.06	−16 15.1	1.154	2.160	5.4	17.9	6 30	19 16.54	−22 50.5	1.816	2.824	3.3	20.5
7 10	19 6.24	−15 58.3	1.139	2.152	3.2	17.8	7 10	19 6.14	−22 59.3	1.803	2.819	1.0	20.3
7 20	18 56.63	−15 48.0	1.149	2.145	7.2	18.0	7 20	18 55.90	−23 5.0	1.817	2.812	5.2	20.6
7 30	18 48.65	−15 43.9	1.181	2.139	12.1	18.2	7 30	18 46.87	−23 6.9	1.859	2.805	9.2	20.8
8 9	18 43.38	−15 44.8	1.233	2.134	16.5	18.5	8 9	18 39.91	−23 5.4	1.924	2.798	12.7	21.0
430549	2002 GQ ₁₂₇		7 7.8 152°80	10°4/ 12.1 17			9645	Grünwald		7 7.8 294°87	0°4/ 7.7 18		
5 31	19 34.47	+10 5.3	2.454	3.147	15.3	22.0	5 31	19 34.95	−23 14.5	1.855	2.695	14.6	17.7
6 10	19 29.56	+11 5.7	2.382	3.157	13.8	21.9	6 10	19 30.82	−23 16.5	1.766	2.685	11.4	17.5
6 20	19 22.91	+11 47.2	2.329	3.165	12.2	21.8	6 20	19 24.24	−23 21.1	1.698	2.674	7.6	17.2
6 30	19 15.03	+12 6.2	2.298	3.173	11.0	21.7	6 30	19 15.78	−23 26.2	1.655	2.663	3.4	17.0
7 10	19 6.57	+12 0.8	2.289	3.180	10.4	21.7	7 10	19 6.36	−23 29.6	1.637	2.653	1.1	16.8
7 20	18 58.27	+11 31.4	2.304	3.187	10.6	21.7	7 20	18 57.07	−23 29.7	1.646	2.643	5.5	17.0
7 30	18 50.86	+10 40.3	2.342	3.193	11.6	21.8	7 30	18 49.01	−23 26.0	1.681	2.633	9.7	17.3
8 9	18 44.96	+9 32.3	2.402	3.198	13.0	21.9	8 9	18 43.08	−23 19.0	1.739	2.623	13.4	17.5
295584	2008 SE ₁₂₃		7 7.8 138°55	0°5/ 7.6 17			385061	2012 UQ ₅₀		7 7.8 188°50	0°0/ 7.6 17		
5 31	19 36.71	−22 57.7	2.056	2.886	13.7	21.4	5 31	19 34.93	−21 10.4	2.076	2.907	13.6	21.3
6 10	19 31.76	−23 10.3	1.980	2.893	10.6	21.2	6 10	19 30.45	−21 28.8	1.993	2.906	10.6	21.1
6 20	19 24.60	−23 25.9	1.926	2.900	7.1	21.0	6 20	19 23.80	−21 51.9	1.932	2.906	7.0	20.9
6 30	19 15.83	−23 41.9	1.897	2.906	3.1	20.7	6 30	19 15.52	−22 17.5	1.897	2.905	3.1	20.6
7 10	19 6.34	−23 56.0	1.896	2.912	1.1	20.6	7 10	19 6.45	−22 42.9	1.889	2.905	0.9	20.4
7 20	18 57.09	−24 6.4	1.922	2.917	5.0	20.9	7 20	18 57.53	−23 6.0	1.908	2.904	4.9	20.7
7 30	18 49.05	−24 12.3	1.975	2.923	8.7	21.1	7 30	18 49.72	−23 25.2	1.954	2.903	8.7	21.0
8 9	18 42.98	−24 14.1	2.052	2.928	12.0	21.3	8 9	18 43.80	−23 40.1	2.024	2.901	12.0	21.2
357891	2005 UG ₅₁₉		7 7.8 267°96	6°8/ 10.4 18			357912	2005 WY ₂		7 7.8 251°07	5°8/ 5.5 18		
5 31	19 30.54	−1 24.7	2.355	3.127	13.9	21.5	5 31	19 38.22	−39 32.2	2.566	3.378	11.8	20.9
6 10	19 26.70	−0 59.9	2.267	3.121	11.8	21.4	6 10	19 33.07	−40 21.5	2.477	3.366	9.7	20.7
6 20	19 21.13	−0 49.7	2.199	3.116	9.6	21.2	6 20	19 25.60	−41 5.0	2.410	3.354	7.6	20.6
6 30	19 14.28	−0 55.9	2.154	3.111	7.7	21.1	6 30	19 16.35	−41 37.8	2.368	3.341	6.0	20.5
7 10	19 6.78	−1 19.0	2.135	3.105	6.8	21.0	7 10	19 6.20	−41 55.8	2.354	3.328	6.0	20.4
7 20	18 59.36	−1 58.0	2.142	3.100	7.5	21.1	7 20	18 56.14	−41 57.0	2.366	3.315	7.4	20.5
7 30	18 52.75	−2 50.2	2.174	3.094	9.5	21.2	7 30	18 47.21	−41 41.7	2.403	3.301	9.6	20.6
8 9	18 47.60	−3 52.0	2.230	3.089	11.8	21.3	8 9	18 40.25	−41 12.4	2.464	3.287	11.9	20.8
153192	2000 VP ₁		7 7.8 5°00	21°6/ 24.3 17			344709	2003 TG ₅₄		7 7.8 287°12	2°3/ 8.4 18		
5 31	19 44.46	−60 57.3	1.203	2.001	23.2	18.5	5 31	19 33.36	−15 36.7	1.853	2.684	15.0	21.5
6 10	19 44.54	−64 23.3	1.175	2.000	22.2	18.4	6 10	19 29.61	−15 40.2	1.756	2.667	11.9	21.3
6 20	19 37.46	−67 20.2	1.163	2.001	21.7	18.4	6 20	19 23.49	−15 52.9	1.680	2.649	8.3	21.0
6 30	19 23.09	−69 30.6	1.167	2.004	21.7	18.4	6 30	19 15.48	−16 14.3	1.627	2.631	4.4	20.7
7 10	19 4.00	−70 41.6	1.185	2.008	22.3	18.5	7 10	19 6.44	−16 42.7	1.601	2.614	2.4	20.6
7 20	18 45.22	−70 50.0	1.216	2.014	23.2	18.5	7 20	18 57.36	−17 15.6	1.601	2.596	5.7	20.8
7 30	18 32.02	−70 3.3	1.260	2.022	24.3	18.7	7 30	18 49.35	−17 50.6	1.626	2.579	9.8	21.0
8 9	18 26.97	−68 35.6	1.314	2.031	25.4	18.8	8 9	18 43.33	−18 25.5	1.674	2.561	13.6	21.1
2851	Harbin		7 7.8 226°49	4°2/ 6.4 18 R			36158	1999 RL ₂₁₆		7 7.8 113°65	4°2/ 9.5 18		
5 31	19 39.24	−30 36.6	1.895	2.730	14.5	16.6	5 31	19 31.78	−8 15.6	2.527	3.320	12.5	19.2
6 10	19 34.37	−31 30.7	1.810	2.722	11.5	16.4	6 10	19 27.43	−8 5.3	2.451	3.331	10.2	19.0
6 20	19 26.74	−32 24.9	1.746	2.715	8.1	16.1	6 20	19 21.48	−8 5.4	2.397	3.341	7.6	18.9
6 30	19 16.94	−33 13.6	1.708	2.707	5.0	15.9	6 30	19 14.39	−8 16.1	2.368	3.351	5.2	18.7
7 10	19 5.99	−33 51.4	1.696	2.699	4.5	15.9	7 10	19 6.80	−8 36.9	2.366	3.362	4.2	18.7
7 20	18 55.11	−34 14.6	1.710	2.690	7.2	16.0	7 20	18 59.38	−9 6.4	2.391	3.371	5.4	18.8
7 30	18 45.61	−34 22.5	1.750	2.681	10.8	16.2	7 30	18 52.80	−9 42.5	2.444	3.381	7.8	18.9
8 9	18 38.49	−34 17.1	1.813	2.671	14.1	16.4	8 9	18 47.63	−10 22.7	2.522	3.391	10.3	19.1
255879	2006 SB ₂₄₁		7 7.8 72°65	0°6/ 7.9 17			392124	2009 FT ₄₀		7 7.8 159°56	7°9/ 5.5 18		
5 31	19 37.47	−19 44.8	1.448	2.295	17.6	20.9	5 31	19 43.35	−45 9.7	2.290	3.089	13.5	21.4
6 10	19 33.07	−19 58.7	1.387	2.308	13.7	20.7	6 10	19 37.37	−46 4.9	2.220	3.092	11.4	21.3
6 20	19 25.79	−20 20.2	1.345	2.322	9.1	20.5	6 20	19 28.57	−46 49.7	2.172	3.094	9.4	21.2
6 30	19 16.43	−20 46.6	1.327	2.336	4.1	20.2	6 30	19 17.68	−47 17.6	2.148	3.097	8.1	21.1
7 10	19 6.18	−21 14.2	1.334	2.349	1.2	20.1	7 10	19 5.85	−47 24.0	2.149	3.099	8.1	21.1
7 20	18 56.36	−21 40.0	1.365	2.363	6.2	20.4	7 20	18 54.40	−47 7.5	2.175	3.101	9.3	21.2
7 30	18 48.24	−22 2.2	1.422	2.377	10.7	20.7	7 30	18 44.60	−46 30.0	2.226	3.103	11.2	21.3
8 9	18 42.73	−22 20.0	1.500	2.391	14.7	21.0	8 9	18 37.36	−45 36.2	2.299	3.104	13.2	21.4
442018	2010 OZ ₈₇		7 7.8 310°96	8°2/ 9.9 17			465351	2007 XJ ₁		7 7.8 327°83	3°9/ 6.5 17		
5 31	19 30.88	+0 22.6	2.295	3.059	14.5	21.3	5 31	19 31.69	−25 47.4	1.125	2.004	19.4	20.6
6 10	19 26.99	+1 23.9	2.211	3.054	12.5	21.2	6 10	19 30.04	−26 51.0	1.047	1.987	15.3	20.3
6 20	19 21.33	+2 11.4	2.148	3.050	10.5	21.0	6 20	19 24.75	−28 3.5	0.988	1.971	10.5	20.0
6 30	19 14.37	+2 41.8	2.107	3.046	8.9	20.9	6 30	19 16.36	−29 17.9	0.948	1.956	5.6	19.7
7 10	19 6.77	+2 53.1	2.091	3.042	8.2	20.9	7 10	19 6.17	−30 25.2	0.931	1.942	4.5	19.6
7 20	18 59.27	+2 45.2	2.100	3.038	8.9	20.9	7 20	18 55.93	−31 17.8	0.936	1.929	9.1	19.8
7 30	18 52.62	+2 19.7	2.133	3.034	10.6	21.0	7 30	18 47.58	−31 51.5	0.961	1.917	14.5	20.0
8 9	18 47.47	+1 39.9	2.188	3.0									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
380879	2006 <i>DJ</i> ₁₀		7 7.8 197°40	0°6/ 7.9 18			44441	1998 <i>UO</i> ₁₆		7 7.8 255°57	1°3/ 8.2 18		
5 31	19 36.51	-19 15.1	2.363	3.181	12.6	22.0	5 31	19 34.07	-17 39.6	2.104	2.930	13.6	19.6
6 10	19 31.42	-19 32.3	2.272	3.177	9.8	21.8	6 10	19 29.83	-17 48.8	2.010	2.919	10.7	19.4
6 20	19 24.33	-19 54.8	2.204	3.173	6.6	21.6	6 20	19 23.45	-18 4.9	1.937	2.907	7.3	19.2
6 30	19 15.75	-20 21.0	2.162	3.169	3.0	21.4	6 30	19 15.42	-18 26.7	1.890	2.896	3.6	18.9
7 10	19 6.41	-20 48.4	2.148	3.164	1.0	21.2	7 10	19 6.53	-18 52.2	1.869	2.884	1.5	18.8
7 20	18 57.15	-21 15.1	2.163	3.158	4.5	21.5	7 20	18 57.68	-19 19.2	1.877	2.872	5.0	19.0
7 30	18 48.85	-21 39.5	2.206	3.151	8.0	21.7	7 30	18 49.83	-19 46.0	1.910	2.860	8.8	19.2
8 9	18 42.22	-22 0.7	2.273	3.144	11.1	21.9	8 9	18 43.76	-20 11.1	1.968	2.848	12.2	19.4
238498	2004 <i>SQ</i> ₂₈		7 7.8 356°82	0°1/ 7.8 17			375046	2007 <i>JJ</i> ₃₁		7 7.8 173°49	6°0/ 9.2 18		
5 31	19 28.05	-19 47.5	0.921	1.812	21.5	19.6	5 31	19 35.71	-6 54.5	2.075	2.867	14.9	21.5
6 10	19 27.31	-20 10.7	0.860	1.807	16.9	19.3	6 10	19 30.86	-6 9.6	1.994	2.870	12.3	21.3
6 20	19 22.86	-20 46.8	0.815	1.802	11.4	18.9	6 20	19 23.98	-5 35.9	1.934	2.872	9.5	21.2
6 30	19 15.43	-21 32.5	0.789	1.800	5.1	18.6	6 30	19 15.60	-5 15.8	1.897	2.873	7.0	21.0
7 10	19 6.49	-22 22.0	0.783	1.799	1.5	18.3	7 10	19 6.52	-5 10.0	1.887	2.874	6.0	20.9
7 20	18 57.85	-23 8.9	0.797	1.800	8.0	18.7	7 20	18 57.60	-5 18.2	1.904	2.875	7.4	21.0
7 30	18 51.34	-23 48.9	0.831	1.802	13.9	19.1	7 30	18 49.74	-5 38.7	1.946	2.875	9.9	21.2
8 9	18 48.28	-24 19.6	0.883	1.806	19.1	19.4	8 9	18 43.64	-6 8.7	2.012	2.874	12.7	21.4
370152	2001 <i>XP</i> ₂₃₁		7 7.8 147°20	0°7/ 7.6 17			387633	2002 <i>PV</i> ₆₄		7 7.8 277°11	15°2/ 14.8 17		
5 31	19 39.06	-24 1.2	2.302	3.123	12.8	21.6	5 31	19 35.58	+10 4.8	1.169	1.936	25.5	21.5
6 10	19 33.30	-24 12.4	2.227	3.134	9.9	21.5	6 10	19 32.66	+10 28.4	1.085	1.921	23.0	21.3
6 20	19 25.49	-24 25.0	2.174	3.145	6.6	21.3	6 20	19 26.33	+10 12.2	1.013	1.905	20.2	21.0
6 30	19 16.21	-24 36.9	2.147	3.155	2.9	21.1	6 30	19 17.08	+9 5.8	0.957	1.889	17.4	20.8
7 10	19 6.31	-24 45.7	2.149	3.165	1.2	20.9	7 10	19 6.00	+7 3.6	0.919	1.872	15.5	20.6
7 20	18 56.67	-24 50.1	2.180	3.173	4.7	21.2	7 20	18 54.64	+4 8.2	0.902	1.856	15.5	20.6
7 30	18 48.18	-24 49.9	2.239	3.181	8.1	21.4	7 30	18 44.75	+0 31.9	0.906	1.840	17.8	20.6
8 9	18 41.54	-24 45.5	2.322	3.189	11.1	21.6	8 9	18 37.84	-3 26.1	0.932	1.823	21.3	20.8
474464	2003 <i>SE</i> ₁₀₈		7 7.8 277°06	0°5/ 7.9 18			413303	2003 <i>UC</i> ₂₂₃		7 7.8 152°56	7°1/ 9.6 16		
5 31	19 35.66	-21 8.5	1.954	2.787	14.2	21.5	5 31	19 38.98	-1 14.4	2.488	3.236	13.9	21.8
6 10	19 31.33	-21 3.0	1.854	2.768	11.2	21.2	6 10	19 32.91	-0 16.6	2.412	3.249	11.8	21.7
6 20	19 24.59	-21 1.0	1.775	2.749	7.6	21.0	6 20	19 25.09	+0 28.8	2.358	3.262	9.6	21.6
6 30	19 15.97	-21 1.1	1.721	2.729	3.5	20.7	6 30	19 16.02	+0 59.1	2.329	3.273	7.8	21.5
7 10	19 6.34	-21 1.7	1.693	2.709	1.1	20.5	7 10	19 6.41	+1 13.0	2.327	3.283	7.1	21.4
7 20	18 56.71	-21 1.5	1.693	2.689	5.4	20.7	7 20	18 57.01	+1 10.5	2.352	3.293	7.9	21.5
7 30	18 48.18	-20 59.7	1.718	2.669	9.5	20.9	7 30	18 48.56	+0 53.2	2.403	3.301	9.7	21.6
8 9	18 41.67	-20 56.6	1.767	2.649	13.3	21.1	8 9	18 41.67	+0 24.1	2.479	3.308	11.7	21.8
1352	Wawel		7 7.8 254°22	2°1/ 8.3 18 R			365842	2011 <i>UY</i> ₇₀		7 7.8 194°46	3°0/ 7.2 17		
5 31	19 33.82	-16 20.6	2.033	2.859	14.0	15.7	5 31	19 41.06	-27 59.9	1.409	2.259	17.8	21.2
6 10	19 29.62	-16 17.0	1.945	2.853	11.1	15.5	6 10	19 36.39	-28 21.5	1.336	2.259	14.0	21.0
6 20	19 23.27	-16 20.7	1.878	2.847	7.6	15.3	6 20	19 28.37	-28 43.2	1.282	2.258	9.5	20.7
6 30	19 15.31	-16 30.9	1.836	2.840	4.0	15.1	6 30	19 17.76	-28 59.9	1.251	2.257	4.9	20.5
7 10	19 6.55	-16 46.4	1.821	2.834	2.2	14.9	7 10	19 5.90	-29 6.8	1.244	2.256	3.3	20.4
7 20	18 57.88	-17 5.3	1.833	2.828	5.2	15.1	7 20	18 54.39	-29 1.5	1.263	2.255	7.4	20.6
7 30	18 50.28	-17 26.2	1.871	2.822	8.9	15.3	7 30	18 44.80	-28 44.6	1.305	2.254	12.1	20.9
8 9	18 44.51	-17 47.5	1.933	2.815	12.3	15.5	8 9	18 38.24	-28 19.1	1.368	2.252	16.3	21.1
365091	2009 <i>BE</i> ₁₂₄		7 7.8 186°23	2°9/ 8.6 17			20381	1998 <i>KX</i> ₄₇		7 7.8 80°15	3°7/ 6.6 18		
5 31	19 38.14	-14 26.1	1.669	2.495	16.6	21.3	5 31	19 38.49	-27 8.5	1.479	2.330	17.1	17.6
6 10	19 33.39	-14 26.5	1.589	2.495	13.2	21.1	6 10	19 34.25	-28 12.9	1.412	2.336	13.3	17.4
6 20	19 26.00	-14 37.8	1.528	2.495	9.2	20.8	6 20	19 26.88	-29 20.9	1.366	2.342	9.1	17.1
6 30	19 16.59	-14 59.2	1.491	2.494	5.1	20.6	6 30	19 17.08	-30 25.8	1.343	2.348	5.0	16.9
7 10	19 6.18	-15 28.6	1.481	2.492	3.0	20.4	7 10	19 6.11	-31 20.5	1.346	2.354	4.1	16.9
7 20	18 55.92	-16 3.4	1.496	2.490	6.2	20.6	7 20	18 55.41	-32 0.4	1.373	2.361	7.7	17.1
7 30	18 47.03	-16 40.7	1.537	2.488	10.5	20.9	7 30	18 46.47	-32 23.8	1.425	2.367	11.8	17.4
8 9	18 40.44	-17 18.1	1.601	2.485	14.3	21.1	8 9	18 40.35	-32 32.8	1.497	2.373	15.6	17.6
415086	2012 <i>BT</i> ₁₁₂		7 7.8 111°91	0°5/ 7.9 16			77053	2001 <i>DR</i> ₆		7 7.8 125°37	0°0/ 7.6 18		
5 31	19 38.93	-20 1.5	1.605	2.443	16.6	22.3	5 31	19 40.23	-21 42.0	1.777	2.609	15.5	20.2
6 10	19 33.98	-20 14.1	1.539	2.455	12.9	22.0	6 10	19 34.74	-21 52.6	1.710	2.623	12.0	20.0
6 20	19 26.32	-20 33.2	1.493	2.467	8.6	21.8	6 20	19 26.71	-22 7.5	1.663	2.637	8.0	19.8
6 30	19 16.68	-20 56.2	1.471	2.479	3.9	21.6	6 30	19 16.85	-22 23.9	1.641	2.650	3.6	19.5
7 10	19 6.18	-21 20.0	1.474	2.490	1.2	21.4	7 10	19 6.21	-22 39.1	1.646	2.662	1.0	19.4
7 20	18 56.04	-21 41.9	1.504	2.501	5.8	21.7	7 20	18 55.95	-22 51.1	1.679	2.674	5.5	19.7
7 30	18 47.48	-22 0.4	1.560	2.512	10.2	22.0	7 30	18 47.17	-22 59.1	1.737	2.686	9.6	20.0
8 9	18 41.37	-22 15.0	1.637	2.522	14.0	22.3	8 9	18 40.70	-23 3.3	1.819	2.697	13.2	20.2
106639	2000 <i>WL</i> ₁₃₃		7 7.8 182°62	0°3/ 7.8 18			242656	2005 <i>QC</i> ₄₁		7 7.8 323°02	2°7/ 8.6 18		
5 31	19 34.04	-21 36.1	3.198	4.009	9.7	21.1	5 31	19 28.63	-13 47.7	2.613	3.429	11.5	19.9
6 10	19 28.92	-21 32.8	3.107	4.009	7.6	20.9	6 10	19 25.19	-13 33.1	2.513	3.412	9.2	19.7
6 20	19 22.36	-21 31.2	3.040	4.009	5.0	20.8	6 20	19 20.14	-13 24.9	2.435	3.396	6.6	19.5
6 30	19 14.78	-21 30.2	3.002	4.009	2.3	20.6	6 30	19 13.89	-13 23.3	2.382	3.380	3.9	19.3
7 10	19 6.73	-21 29.0	2.992	4.008	0.7	20.4	7 10	19 7.04	-13 28.1	2.356	3.364	2.7	19.2
7 20	18 58.82	-21 26.7	3.012	4.006	3.5	20.6	7 20	19 0.22	-13 38.4	2.358	3.349	4.7	19.3
7 30	18 51.63	-21 23.2	3.061	4.004	6.2	20.8	7 30	18 54.12	-13 53.1	2.387	3.334	7.5	19.4
8 9	18 45.67	-21 18.4	3.137	4.002	8.6	21.0	8 9	18 49.34	-14 10.9	2.441	3.319	10.2	19.6
361464	2007 <i>CC</i> ₆₃		7 7.8 133°21	0°8/ 7.5 18			42481	1988 <i>CX</i> ₄		7 7.8 273°42	5°2/ 9.2 18		
5 31	19 33.89	-24 3.5	2.592	3.417	11.4	21.5	5 31	19 33.38	-9 1.4	1.872	2.684	15.6	19.3
6 10	19 29.17	-24 19.1	2.513	3.424	8.8	21.4	6 10	19 29.35	-8 34.8	1.791	2.683	12.7	19.1
6 20	19 22.70	-24 36.4	2.458	3.431	5.8	21.2	6 20	19 23.13	-8 20.3	1.731	2.682	9.5	18.9
6 30	19 14.97	-24 53.3	2.430	3.437	2.6	21.0	6 30	19 15.28	-8 19.5	1.694	2.681	6.6	18.7
7 10	19 6.69	-25 7.8	2.429	3.444	1.1	20.9	7 10	19 6.64	-8 32.2	1.683	2.680	5.2	18.6
7 20	18 58.59	-25 18.5	2.457	3.450	4.2	21.1	7 20	18 58.16	-8 57.1	1.697	2.680	7.0	18.7
7 30	18 51.42	-25 24.8	2.513	3.457	7.3	21.3	7 30	18 50.79	-9 31.8	1.736	2.679	10.0	18.9
8 9	18 45.78	-25 26.9	2.593	3.462	10.0	21.5	8 9	18 45.31	-10 13.1				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
510948	2013 <i>EF</i> ₁₅₅		7 7.8 31°80	4.4/ 9.4	18		252112	2000 <i>WU</i> ₂₆		7 7.8 186°84	3.2/ 8.6	17	
5 31	19 31.25	— 8 47.5	2.264	3.067	13.5	21.6	5 31	19 37.91	—14 20.5	1.754	2.576	16.0	21.0
6 10	19 27.31	— 8 34.0	2.181	3.067	11.0	21.4	6 10	19 33.08	—14 6.8	1.672	2.576	12.8	20.8
6 20	19 21.58	— 8 31.4	2.120	3.068	8.2	21.2	6 20	19 25.74	—14 2.5	1.611	2.576	9.0	20.6
6 30	19 14.54	— 8 40.5	2.083	3.069	5.6	21.1	6 30	19 16.50	—14 7.5	1.574	2.575	5.1	20.4
7 10	19 6.87	— 9 0.8	2.072	3.070	4.4	21.0	7 10	19 6.34	—14 20.6	1.563	2.573	3.3	20.2
7 20	18 59.32	— 9 30.8	2.089	3.071	5.9	21.1	7 20	18 56.36	—14 40.0	1.579	2.571	6.2	20.4
7 30	18 52.68	—10 8.3	2.131	3.072	8.6	21.3	7 30	18 47.67	—15 3.9	1.620	2.569	10.2	20.6
8 9	18 47.57	—10 50.5	2.198	3.073	11.3	21.4	8 9	18 41.17	—15 30.1	1.684	2.566	13.8	20.9
36598	2000 <i>QX</i> ₁₃₇		7 7.8 332°52	0°0/ 7.6	18		504695	2009 <i>HR</i> ₉₂		7 7.8 351°47	6.4/ 8.9	17	
5 31	19 31.98	—21 26.0	1.804	2.649	14.7	18.6	5 31	19 29.98	—11 27.2	1.126	1.987	20.6	21.1
6 10	19 28.60	—21 40.8	1.718	2.640	11.5	18.4	6 10	19 28.05	—10 41.4	1.057	1.980	16.8	20.8
6 20	19 22.83	—22 0.9	1.653	2.630	7.7	18.1	6 20	19 22.97	—10 10.4	1.005	1.974	12.5	20.5
6 30	19 15.22	—22 24.1	1.612	2.622	3.5	17.9	6 30	19 15.43	— 9 57.3	0.973	1.970	8.3	20.3
7 10	19 6.66	—22 47.7	1.597	2.613	1.0	17.7	7 10	19 6.64	—10 3.2	0.962	1.967	6.4	20.2
7 20	18 58.21	—23 9.1	1.608	2.605	5.5	18.0	7 20	18 58.08	—10 26.5	0.972	1.965	9.0	20.3
7 30	18 50.95	—23 26.7	1.644	2.598	9.6	18.2	7 30	18 51.24	—11 3.8	1.004	1.964	13.5	20.6
8 9	18 45.77	—23 40.0	1.703	2.592	13.3	18.4	8 9	18 47.24	—11 49.8	1.054	1.965	17.8	20.8
11143	1997 <i>BF</i> ₇		7 7.8 192°93	0°2/ 7.7	18		429427	2010 <i>UO</i> ₇₀		7 7.8 266°38	0°2/ 7.8	18	
5 31	19 34.03	—22 29.1	2.398	3.225	12.1	18.9	5 31	19 38.34	—20 37.1	1.742	2.577	15.6	21.8
6 10	19 29.47	—22 39.8	2.313	3.224	9.4	18.7	6 10	19 33.90	—20 50.3	1.638	2.553	12.4	21.5
6 20	19 23.03	—22 53.3	2.250	3.223	6.3	18.5	6 20	19 26.66	—21 10.2	1.554	2.528	8.4	21.3
6 30	19 15.19	—23 7.7	2.214	3.222	2.8	18.3	6 30	19 17.09	—21 34.4	1.494	2.502	3.8	20.9
7 10	19 6.69	—23 21.0	2.205	3.221	0.9	18.1	7 10	19 6.13	—21 59.8	1.460	2.476	1.1	20.7
7 20	18 58.34	—23 31.7	2.224	3.219	4.4	18.4	7 20	18 55.00	—22 23.3	1.453	2.450	6.1	20.9
7 30	18 50.95	—23 39.1	2.271	3.218	7.8	18.6	7 30	18 45.05	—22 43.1	1.472	2.422	10.8	21.1
8 9	18 45.19	—23 43.2	2.342	3.216	10.7	18.8	8 9	18 37.41	—22 58.6	1.513	2.394	15.1	21.3
37736	Jandl		7 7.8 302°20	3°4/ 6.6	18		313425	2002 <i>QT</i> ₅₄		7 7.8 25°10	5°7/ 9.9	17	
5 31	19 35.76	—26 43.7	1.603	2.453	16.0	18.6	5 31	19 30.37	— 8 17.9	1.055	1.913	22.0	19.8
6 10	19 32.47	—27 38.2	1.495	2.419	12.7	18.3	6 10	19 28.29	— 8 30.2	1.004	1.924	17.8	19.6
6 20	19 26.07	—28 39.3	1.408	2.385	8.8	18.0	6 20	19 23.02	— 9 7.1	0.969	1.936	13.0	19.3
6 30	19 16.96	—29 41.6	1.345	2.350	4.8	17.7	6 30	19 15.37	—10 8.3	0.953	1.950	8.3	19.1
7 10	19 6.09	—30 38.5	1.306	2.316	3.8	17.6	7 10	19 6.68	—11 29.5	0.958	1.966	5.7	19.0
7 20	18 54.83	—31 24.0	1.293	2.281	7.8	17.7	7 20	18 58.44	—13 3.0	0.986	1.982	8.2	19.2
7 30	18 44.76	—31 54.8	1.303	2.247	12.5	17.9	7 30	18 52.08	—14 40.4	1.035	2.000	12.7	19.5
8 9	18 37.31	—32 10.7	1.334	2.213	16.9	18.1	8 9	18 48.60	—16 13.9	1.105	2.018	16.9	19.8
250984	2006 <i>KC</i> ₁₇		7 7.8 21°50	5°9/ 9.3	17		326855	2003 <i>UL</i> ₁₈₇		7 7.8 206°48	0°2/ 7.7	17	
5 31	19 33.77	— 9 51.5	1.276	2.117	19.8	20.5	5 31	19 40.07	—22 39.8	1.957	2.783	14.5	21.5
6 10	19 30.57	— 9 28.6	1.209	2.120	16.1	20.2	6 10	19 34.66	—22 43.4	1.867	2.778	11.3	21.3
6 20	19 24.41	— 9 22.7	1.160	2.123	11.9	20.0	6 20	19 26.76	—22 49.9	1.800	2.772	7.6	21.0
6 30	19 15.98	— 9 35.6	1.131	2.126	7.8	19.8	6 30	19 16.97	—22 57.0	1.757	2.765	3.4	20.8
7 10	19 6.47	—10 6.3	1.125	2.129	5.9	19.7	7 10	19 6.22	—23 2.4	1.742	2.758	1.0	20.6
7 20	18 57.23	—10 51.8	1.143	2.134	8.3	19.8	7 20	18 55.62	—23 4.3	1.755	2.750	5.4	20.9
7 30	18 49.64	—11 47.5	1.183	2.138	12.4	20.1	7 30	18 46.27	—23 2.3	1.794	2.741	9.5	21.1
8 9	18 44.70	—12 47.8	1.243	2.143	16.4	20.3	8 9	18 39.08	—22 57.1	1.857	2.731	13.1	21.3
106248	2000 <i>UO</i> ₅₁		7 7.8 219°80	1°8/ 7.2	18		414078	2007 <i>TH</i> ₁₀₃		7 7.8 14°64	0°8/ 7.6	17	
5 31	19 34.60	—26 53.5	2.472	3.299	11.8	20.1	5 31	19 33.56	—21 54.4	1.110	1.984	19.9	20.2
6 10	19 29.97	—27 17.5	2.384	3.295	9.2	19.9	6 10	19 31.03	—22 20.9	1.050	1.987	15.6	19.9
6 20	19 23.40	—27 42.2	2.319	3.291	6.2	19.7	6 20	19 25.03	—22 55.7	1.007	1.990	10.4	19.7
6 30	19 15.39	—28 4.7	2.280	3.286	3.1	19.5	6 30	19 16.35	—23 34.6	0.985	1.995	4.6	19.4
7 10	19 6.66	—28 22.5	2.269	3.281	2.0	19.4	7 10	19 6.40	—24 12.2	0.984	2.000	1.7	19.2
7 20	18 58.06	—28 33.7	2.287	3.276	4.8	19.6	7 20	18 56.85	—24 43.7	1.007	2.007	7.4	19.6
7 30	18 50.41	—28 37.8	2.331	3.271	8.0	19.8	7 30	18 49.33	—25 6.9	1.051	2.014	12.7	19.9
8 9	18 44.43	—28 35.5	2.400	3.266	10.8	20.0	8 9	18 44.96	—25 21.5	1.115	2.022	17.4	20.2
250771	2005 <i>TS</i> ₅		7 7.8 10°22	4°1/ 7.0	18		181194	2005 <i>SV</i> ₁₂₉		7 7.8 269°22	1°2/ 7.4	18	
5 31	19 35.75	—32 35.6	1.754	2.599	15.1	19.6	5 31	19 33.92	—24 50.7	2.300	3.132	12.4	20.7
6 10	19 31.64	—32 53.1	1.683	2.601	11.9	19.4	6 10	19 29.62	—25 10.3	2.208	3.122	9.7	20.5
6 20	19 24.84	—33 6.3	1.633	2.604	8.4	19.2	6 20	19 23.27	—25 32.0	2.139	3.113	6.5	20.3
6 30	19 16.08	—33 10.7	1.607	2.607	5.1	19.0	6 30	19 15.37	—25 53.1	2.095	3.103	3.0	20.1
7 10	19 6.47	—33 3.1	1.606	2.611	4.3	19.0	7 10	19 6.70	—26 11.2	2.079	3.093	1.5	19.9
7 20	18 57.24	—32 42.3	1.631	2.615	6.9	19.2	7 20	18 58.10	—26 24.2	2.091	3.084	4.9	20.2
7 30	18 49.57	—32 9.9	1.680	2.621	10.4	19.4	7 30	18 50.49	—26 31.5	2.129	3.074	8.3	20.4
8 9	18 44.32	—31 28.9	1.751	2.626	13.7	19.6	8 9	18 44.60	—26 33.1	2.191	3.064	11.4	20.5
363032	1999 <i>FU</i> ₆₄		7 7.8 50°35	5°2/ 8.9	17		22809	Kensiequade		7 7.8 205°17	1°1/ 7.5	18	
5 31	19 35.92	—12 2.5	1.340	2.180	19.1	20.9	5 31	19 40.08	—24 18.8	1.954	2.782	14.4	19.1
6 10	19 32.10	—11 28.5	1.272	2.184	15.4	20.7	6 10	19 34.73	—24 36.1	1.865	2.777	11.3	18.9
6 20	19 25.34	—11 7.6	1.223	2.188	11.2	20.4	6 20	19 26.85	—24 56.0	1.799	2.772	7.5	18.6
6 30	19 16.38	—11 1.5	1.195	2.192	7.1	20.2	6 30	19 17.03	—25 15.3	1.758	2.766	3.5	18.4
7 10	19 6.38	—11 9.8	1.190	2.196	5.2	20.1	7 10	19 6.23	—25 30.9	1.744	2.759	1.5	18.2
7 20	18 56.70	—11 30.9	1.210	2.201	7.9	20.3	7 20	18 55.55	—25 40.5	1.757	2.751	5.6	18.5
7 30	18 48.67	—12 1.7	1.252	2.205	12.1	20.5	7 30	18 46.16	—25 43.6	1.798	2.743	9.6	18.7
8 9	18 43.27	—12 38.5	1.315	2.210	16.1	20.8	8 9	18 38.94	—25 40.8	1.862	2.734	13.2	18.9
395994	2013 <i>BM</i> ₄₁		7 7.8 77°54	1°5/ 8.3	18		131136	2001 <i>BT</i> ₄₇		7 7.8 61°35	5°1/ 7.1	18	
5 31	19 32.68	—16 45.9	2.200	3.024	13.1	21.1	5 31	19 41.54	—35 49.3	1.789	2.621	15.4	19.5
6 10	19 28.51	—16 56.8	2.122	3.030	10.3	20.9	6 10	19 36.09	—36 4.4	1.720	2.628	12.3	19.3
6 20	19 22.43	—17 14.7	2.066	3.035	7.0	20.7	6 20	19 27.76	—36 12.2	1.672	2.635	8.9	19.1
6 30	19 14.94	—17 38.5	2.035	3.040	3.5	20.5	6 30	19 17.38	—36 7.4	1.648	2.641	6.0	19.0
7 10	19 6.80	—18 6.2	2.031	3.046	1.6	20.4	7 10	19 6.17	—35 46.9	1.650	2.648	5.2	18.9
7 20	18 58.83	—18 35.7	2.055	3.051	4.7	20.6	7 20	18 55.49	—35 10.1	1.678	2.655	7.5	19.1
7 30	18 51.86	—19 5.1	2.106	3.056	8.1	20.8	7 30	18 46.58	—				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
2 Pallas 7 7.8 151°37' 12°0'/15.9 18							375761 2009 SS ₁₁₂ 7 7.8 9°30' 8°8'/ 9.3 17						
5 31	19 34.11	+20 44.9	2.729	3.333	15.5	9.8	5 31	19 28.78	- 8 40.8	1.053	1.914	21.7	19.7
6 10	19 29.23	+21 33.6	2.661	3.343	14.5	9.7	6 10	19 27.09	- 7 22.4	0.997	1.915	18.0	19.4
6 20	19 22.71	+22 0.2	2.608	3.351	13.5	9.7	6 20	19 22.27	- 6 21.3	0.958	1.919	13.9	19.2
6 30	19 15.03	+22 1.0	2.574	3.359	12.6	9.6	6 30	19 15.09	- 5 43.0	0.937	1.924	10.3	19.0
7 10	19 6.83	+21 34.0	2.559	3.367	12.1	9.6	7 10	19 6.87	- 5 30.4	0.936	1.931	8.8	19.0
7 20	18 58.79	+20 39.8	2.566	3.374	12.0	9.6	7 20	18 59.05	- 5 42.8	0.956	1.940	10.7	19.1
7 30	18 51.59	+19 21.0	2.595	3.380	12.5	9.6	7 30	18 53.04	- 6 16.3	0.996	1.950	14.3	19.3
8 9	18 45.81	+17 42.8	2.644	3.386	13.3	9.7	8 9	18 49.85	- 7 4.3	1.054	1.962	18.1	19.6
281406 2008 RP ₅₇ 7 7.8 177°99' 1°9'/ 8.3 17							304003 2006 BM ₂₆₄ 7 7.8 209°45' 2°8'/ 8.6 17						
5 31	19 35.42	-17 1.6	1.882	2.711	14.9	21.4	5 31	19 38.15	-14 18.3	1.625	2.452	16.9	21.8
6 10	19 31.00	-16 56.5	1.802	2.711	11.7	21.2	6 10	19 33.60	-14 24.1	1.540	2.448	13.5	21.6
6 20	19 24.28	-16 58.5	1.742	2.712	8.0	20.9	6 20	19 26.31	-14 41.7	1.476	2.443	9.4	21.3
6 30	19 15.84	-17 6.8	1.707	2.712	4.1	20.7	6 30	19 16.89	-15 10.4	1.435	2.437	5.2	21.0
7 10	19 6.59	-17 19.8	1.698	2.712	2.1	20.6	7 10	19 6.35	-15 47.6	1.419	2.432	2.9	20.9
7 20	18 57.52	-17 35.9	1.716	2.712	5.4	20.8	7 20	18 55.89	-16 30.2	1.430	2.425	6.4	21.1
7 30	18 49.65	-17 53.4	1.761	2.712	9.3	21.0	7 30	18 46.78	-17 14.9	1.466	2.418	10.8	21.3
8 9	18 43.79	-18 11.1	1.828	2.711	12.8	21.2	8 9	18 40.03	-17 58.9	1.525	2.411	14.8	21.6
437549 2013 YP ₁₂₈ 7 7.8 215°00' 1°2'/ 7.4 18							396251 2014 BV ₆₀ 7 7.8 181°67' 4°8'/ 6.7 18						
5 31	19 37.10	-24 0.5	2.204	3.031	13.0	21.7	5 31	19 41.95	-36 26.6	2.282	3.098	13.0	21.3
6 10	19 32.18	-24 30.4	2.113	3.024	10.2	21.5	6 10	19 35.96	-36 53.5	2.202	3.099	10.4	21.1
6 20	19 25.05	-25 3.5	2.044	3.017	6.8	21.3	6 20	19 27.52	-37 14.4	2.144	3.099	7.7	21.0
6 30	19 16.21	-25 36.9	2.001	3.009	3.1	21.0	6 30	19 17.29	-37 24.7	2.111	3.099	5.4	20.8
7 10	19 6.48	-26 7.3	1.986	3.001	1.6	20.9	7 10	19 6.27	-37 20.9	2.106	3.098	5.0	20.8
7 20	18 56.82	-26 32.1	1.999	2.992	5.1	21.1	7 20	18 55.55	-37 1.8	2.128	3.097	6.8	20.9
7 30	18 48.22	-26 50.1	2.040	2.983	8.7	21.3	7 30	18 46.21	-36 28.9	2.177	3.096	9.5	21.1
8 9	18 41.48	-27 1.3	2.104	2.973	12.0	21.5	8 9	18 39.06	-35 45.3	2.250	3.094	12.2	21.2
390233 2012 XT ₅₁ 7 7.8 286°22' 0°4'/ 7.9 17							7050 1982 FE ₃ 7 7.8 10°51' 6°1'/ 6.4 18						
5 31	19 35.37	-21 43.4	1.920	2.756	14.3	21.0	5 31	19 34.52	-33 45.8	1.417	2.277	17.2	16.3
6 10	19 31.02	-21 35.4	1.834	2.749	11.2	20.8	6 10	19 31.45	-34 38.7	1.355	2.279	13.7	16.0
6 20	19 24.33	-21 30.4	1.769	2.743	7.5	20.6	6 20	19 25.15	-35 27.5	1.312	2.283	10.0	15.8
6 30	19 15.89	-21 27.1	1.729	2.737	3.4	20.3	6 30	19 16.39	-36 5.3	1.292	2.288	6.8	15.7
7 10	19 6.59	-21 23.7	1.715	2.731	1.0	20.1	7 10	19 6.52	-36 25.9	1.295	2.294	6.3	15.7
7 20	18 57.46	-21 19.2	1.729	2.725	5.2	20.4	7 20	18 57.06	-36 26.6	1.321	2.300	9.0	15.8
7 30	18 49.54	-21 13.3	1.768	2.719	9.3	20.6	7 30	18 49.48	-36 8.5	1.370	2.308	12.6	16.0
8 9	18 43.65	-21 6.2	1.830	2.713	12.8	20.8	8 9	18 44.84	-35 35.6	1.439	2.317	16.0	16.3
476465 2008 ED ₁₅₃ 7 7.8 0°83' 4°1'/ 6.3 18							140899 2001 VK ₃₈ 7 7.8 318°67' 6°7'/ 4.7 18						
5 31	19 34.92	-31 31.3	2.116	2.952	13.2	21.4	5 31	19 35.93	-35 12.2	1.849	2.689	14.6	19.7
6 10	19 30.70	-32 23.6	2.038	2.951	10.4	21.3	6 10	19 32.25	-36 42.9	1.766	2.676	11.9	19.5
6 20	19 24.14	-33 14.9	1.984	2.951	7.4	21.1	6 20	19 25.67	-38 12.7	1.705	2.664	9.0	19.3
6 30	19 15.82	-34 0.3	1.954	2.951	4.7	20.9	6 30	19 16.71	-39 34.0	1.669	2.653	7.0	19.1
7 10	19 6.61	-34 35.3	1.951	2.951	4.3	20.9	7 10	19 6.40	-40 39.2	1.658	2.641	7.0	19.1
7 20	18 57.56	-34 57.3	1.974	2.952	6.6	21.0	7 20	18 56.03	-41 23.5	1.672	2.630	9.2	19.2
7 30	18 49.72	-35 5.7	2.023	2.952	9.6	21.2	7 30	18 47.02	-41 45.4	1.710	2.620	12.2	19.4
8 9	18 43.90	-35 2.0	2.095	2.953	12.5	21.4	8 9	18 40.53	-41 47.3	1.769	2.610	15.1	19.6
491598 2012 SG ₆₂ 7 7.8 275°05' 1°0'/ 8.0 16							267648 2002 TG ₆ 7 7.8 288°96' 3°3'/ 8.6 18						
5 31	19 37.04	-19 54.6	2.093	2.918	13.7	22.8	5 31	19 34.91	-14 18.9	1.582	2.417	16.9	20.4
6 10	19 32.38	-19 48.0	1.980	2.889	10.9	22.6	6 10	19 31.43	-14 11.3	1.479	2.390	13.7	20.1
6 20	19 25.36	-19 45.5	1.888	2.859	7.4	22.3	6 20	19 25.14	-14 14.8	1.396	2.364	9.7	19.8
6 30	19 16.44	-19 45.8	1.822	2.829	3.5	22.0	6 30	19 16.50	-14 29.9	1.335	2.337	5.5	19.5
7 10	19 6.41	-19 47.7	1.783	2.798	1.3	21.8	7 10	19 6.45	-14 55.2	1.299	2.310	3.4	19.3
7 20	18 56.25	-19 49.7	1.772	2.767	5.3	22.0	7 20	18 56.19	-15 28.7	1.288	2.283	6.9	19.5
7 30	18 47.04	-19 51.1	1.787	2.735	9.4	22.2	7 30	18 47.08	-16 7.5	1.301	2.256	11.6	19.6
8 9	18 39.71	-19 51.7	1.826	2.703	13.2	22.3	8 9	18 40.31	-16 48.5	1.336	2.228	16.0	19.8
410706 2009 AD ₃₄ 7 7.8 111°66' 0°1'/ 7.8 17							173676 2001 OQ ₁₁ 7 7.8 274°01' 5°1'/ 6.3 18						
5 31	19 41.55	-22 1.2	1.578	2.415	16.9	21.9	5 31	19 38.21	-35 8.7	2.102	2.931	13.5	20.1
6 10	19 36.04	-22 9.9	1.515	2.432	13.1	21.7	6 10	19 33.50	-35 50.0	2.011	2.917	10.9	19.9
6 20	19 27.72	-22 23.1	1.473	2.448	8.7	21.5	6 20	19 26.17	-36 27.6	1.942	2.902	8.0	19.7
6 30	19 17.38	-22 37.7	1.455	2.464	3.9	21.2	6 30	19 16.82	-36 56.0	1.897	2.887	5.7	19.5
7 10	19 6.21	-22 50.6	1.463	2.479	1.1	21.1	7 10	19 6.41	-37 10.8	1.879	2.872	5.3	19.5
7 20	18 55.52	-22 59.7	1.497	2.494	5.9	21.4	7 20	18 56.08	-37 9.5	1.887	2.858	7.4	19.6
7 30	18 46.54	-23 4.6	1.557	2.508	10.3	21.7	7 30	18 47.04	-36 52.4	1.920	2.843	10.4	19.7
8 9	18 40.14	-23 5.5	1.639	2.521	14.1	22.0	8 9	18 40.24	-36 22.3	1.976	2.828	13.4	19.9
370010 1999 XQ ₂₅₂ 7 7.8 300°12' 0°8'/ 7.9 17							291110 2005 YW ₁₇₃ 7 7.8 113°34' 0°2'/ 7.8 17						
5 31	19 34.54	-19 42.5	1.408	2.262	17.6	21.8	5 31	19 39.52	-23 34.5	2.050	2.875	13.9	20.6
6 10	19 31.50	-19 48.8	1.313	2.238	14.0	21.5	6 10	19 33.85	-23 27.4	1.981	2.891	10.8	20.5
6 20	19 25.35	-20 3.3	1.237	2.215	9.6	21.2	6 20	19 25.98	-23 21.6	1.935	2.907	7.1	20.3
6 30	19 16.62	-20 24.5	1.184	2.193	4.5	20.9	6 30	19 16.57	-23 15.2	1.914	2.922	3.2	20.1
7 10	19 6.35	-20 49.3	1.154	2.170	1.4	20.6	7 10	19 6.55	-23 6.7	1.921	2.937	0.9	19.9
7 20	18 55.95	-21 14.3	1.148	2.147	6.8	20.9	7 20	18 56.92	-22 55.5	1.956	2.951	4.9	20.2
7 30	18 46.95	-21 37.3	1.166	2.125	12.2	21.1	7 30	18 48.62	-22 41.6	2.018	2.965	8.6	20.5
8 9	18 40.65	-21 56.8	1.204	2.103	16.9	21.3	8 9	18 42.35	-22 26.1	2.104	2.978	11.8	20.7
5866 Sachsen 7 7.8 263°75' 1°6'/ 8.3 18							395095 2009 KF ₂₇ 7 7.8 25°31' 6°2'/ 9.1 17						
5 31	19 33.70	-16 44.6	2.030	2.857	14.0	18.1	5 31	19 32.90	- 6 59.4	2.083	2.881	14.7	21.0
6 10	19 29.62	-16 52.8	1.940	2.849	11.0	17.9	6 10	19 28.73	- 6 2.1	2.005	2.883	12.2	20.8
6 20	19 23.38	-17 8.8	1.872	2.842	7.6	17.7	6 20	19 22.62	- 5 15.6	1.947	2.885	9.5	20.7
6 30	19 15.49	-17 31.5	1.828	2.834	3.8	17.4	6 30	19 15.11	- 4 42.3	1.914	2.888	7.1	20.5
7 10	19 6.74	-17 59.0	1.812	2.826	1.8								

EPHEMERIDES

7 7.8

7 7.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
35144	1992 YE ₁		7 7.8 251°15	1.3°/ 7.4 18			157377	2004 TG ₁₅₈		7 7.8 194°73	2.8°/ 6.8 18		
5 31	19 36.63	-23 53.4	1.958	2.792	14.1	18.5	5 31	19 34.80	-30 36.9	2.653	3.478	11.1	20.4
6 10	19 32.19	-24 25.0	1.865	2.780	11.1	18.3	6 10	19 30.08	-31 5.7	2.569	3.477	8.7	20.2
6 20	19 25.29	-25 0.8	1.793	2.768	7.4	18.0	6 20	19 23.50	-31 33.1	2.509	3.476	6.1	20.1
6 30	19 16.44	-25 37.6	1.747	2.755	3.5	17.7	6 30	19 15.54	-31 55.8	2.474	3.474	3.6	19.9
7 10	19 6.54	-26 11.4	1.728	2.742	1.7	17.6	7 10	19 6.92	-32 11.2	2.468	3.473	3.0	19.9
7 20	18 56.66	-26 39.3	1.735	2.729	5.6	17.8	7 20	18 58.45	-32 17.7	2.489	3.471	5.1	20.0
7 30	18 47.92	-26 59.6	1.769	2.715	9.6	18.0	7 30	18 50.93	-32 15.2	2.538	3.469	7.8	20.2
8 9	18 41.25	-27 12.2	1.826	2.701	13.2	18.2	8 9	18 45.01	-32 4.8	2.611	3.467	10.3	20.3
352462	2008 AN ₁₀₀		7 7.8 19°58	0.7°/ 7.7 18			412398	2014 BG ₂₃		7 7.8 198°76	4.4°/ 6.7 17		
5 31	19 36.23	-25 16.0	2.066	2.899	13.6	21.0	5 31	19 41.28	-35 25.8	2.371	3.187	12.6	21.8
6 10	19 31.47	-25 4.4	1.985	2.900	10.5	20.8	6 10	19 35.41	-35 50.8	2.286	3.184	10.1	21.7
6 20	19 24.52	-24 52.7	1.927	2.901	7.0	20.6	6 20	19 27.18	-36 10.6	2.223	3.180	7.4	21.5
6 30	19 15.97	-24 39.1	1.894	2.902	3.2	20.3	6 30	19 17.22	-36 21.0	2.186	3.176	5.0	21.3
7 10	19 6.72	-24 22.2	1.888	2.903	1.2	20.2	7 10	19 6.47	-36 18.6	2.177	3.172	4.5	21.3
7 20	18 57.73	-24 1.6	1.909	2.905	5.0	20.4	7 20	18 55.95	-36 2.2	2.195	3.167	6.5	21.4
7 30	18 49.98	-23 37.8	1.957	2.906	8.7	20.7	7 30	18 46.70	-35 32.9	2.240	3.162	9.2	21.6
8 9	18 44.18	-23 12.2	2.029	2.908	12.0	20.9	8 9	18 39.52	-34 53.5	2.309	3.156	11.9	21.7
505590	2014 CA ₅		7 7.8 207°91	9.3°/ 4.1 17			523008	2016 PY ₁₂₁		7 7.8 29°35	1.9°/ 6.9 18		
5 31	19 56.18	-55 4.6	2.922	3.655	12.3	23.6	5 31	19 35.69	-22 48.3	1.815	2.655	14.9	20.7
6 10	19 47.54	-56 8.9	2.843	3.647	11.0	23.5	6 10	19 31.60	-23 58.2	1.738	2.656	11.6	20.5
6 20	19 35.58	-57 0.1	2.784	3.637	9.9	23.4	6 20	19 24.96	-25 15.6	1.682	2.658	7.7	20.3
6 30	19 21.05	-57 30.7	2.749	3.627	9.3	23.3	6 30	19 16.35	-26 35.5	1.651	2.659	3.7	20.1
7 10	19 5.28	-57 35.8	2.739	3.615	9.4	23.3	7 10	19 6.69	-27 51.7	1.648	2.661	2.3	20.0
7 20	18 49.86	-57 13.4	2.753	3.603	10.1	23.3	7 20	18 57.11	-28 59.2	1.671	2.662	6.1	20.2
7 30	18 36.34	-56 25.9	2.791	3.590	11.4	23.4	7 30	18 48.78	-29 54.6	1.721	2.664	10.0	20.5
8 9	18 25.83	-55 18.6	2.851	3.576	12.8	23.5	8 9	18 42.65	-30 37.3	1.793	2.666	13.5	20.7
489104	2006 BQ ₂₁₃		7 7.8 230°10	1.2°/ 7.2 17			348085	2003 WF ₁₀₀		7 7.8 316°26	5.4°/ 7.8 18		
5 31	19 43.36	-14 42.6	1.213	2.053	20.7	20.8	5 31	19 34.72	-15 9.4	1.518	2.359	17.2	19.6
6 10	19 39.13	-16 52.9	1.129	2.047	16.4	20.5	6 10	19 31.39	-13 51.9	1.412	2.325	14.1	19.3
6 20	19 31.02	-19 33.6	1.064	2.040	11.1	20.2	6 20	19 25.19	-12 36.2	1.325	2.292	10.4	19.0
6 30	19 19.47	-22 36.7	1.023	2.032	4.9	19.8	6 30	19 16.61	-11 25.1	1.261	2.258	6.8	18.7
7 10	19 5.67	-25 47.3	1.009	2.024	2.3	19.6	7 10	19 6.59	-10 21.9	1.222	2.226	5.5	18.5
7 20	18 51.40	-28 47.9	1.022	2.016	8.6	20.0	7 20	18 56.39	-9 29.7	1.207	2.194	8.5	18.6
7 30	18 38.79	-31 24.8	1.061	2.007	14.5	20.3	7 30	18 47.41	-8 50.8	1.215	2.162	12.9	18.8
8 9	18 29.58	-33 32.5	1.121	1.997	19.6	20.5	8 9	18 40.83	-8 25.5	1.244	2.132	17.3	18.9
442454	2011 UZ ₂₃₅		7 7.8 205°06	4.3°/ 8.9 18			440959	2007 BN ₃₂		7 7.8 294°84	1.7°/ 8.5 18		
5 31	19 33.19	-10 19.3	2.371	3.172	13.0	22.2	5 31	19 32.10	-15 15.7	2.180	3.003	13.3	21.0
6 10	19 28.79	-9 46.0	2.284	3.170	10.6	22.1	6 10	19 28.29	-15 37.5	2.088	2.994	10.5	20.7
6 20	19 22.61	-9 21.0	2.219	3.168	7.9	21.9	6 20	19 22.48	-16 8.5	2.019	2.986	7.3	20.5
6 30	19 15.13	-9 5.5	2.179	3.166	5.3	21.7	6 30	19 15.16	-16 47.5	1.974	2.978	3.8	20.3
7 10	19 7.03	-8 59.7	2.166	3.164	4.3	21.7	7 10	19 7.04	-17 32.2	1.956	2.970	1.8	20.1
7 20	18 59.05	-9 3.2	2.180	3.161	5.8	21.8	7 20	18 58.95	-18 19.7	1.966	2.962	4.8	20.3
7 30	18 51.96	-9 14.9	2.221	3.158	8.5	21.9	7 30	18 51.78	-19 7.4	2.003	2.954	8.4	20.5
8 9	18 46.38	-9 32.9	2.287	3.156	11.2	22.1	8 9	18 46.27	-19 53.0	2.064	2.947	11.6	20.7
396041	2013 CK ₃₁		7 7.8 340°35	5.5°/ 6.1 18			380202	2001 AL ₁₂		7 7.8 137°88	1.5°/ 8.5 17		
5 31	19 36.15	-35 40.0	2.014	2.849	13.8	20.5	5 31	19 36.48	-14 46.1	2.263	3.073	13.3	21.7
6 10	19 31.94	-36 29.4	1.937	2.844	11.1	20.3	6 10	19 31.44	-15 22.7	2.185	3.084	10.4	21.5
6 20	19 25.14	-37 14.5	1.881	2.840	8.3	20.1	6 20	19 24.43	-16 8.8	2.130	3.095	7.1	21.3
6 30	19 16.38	-37 49.8	1.849	2.837	6.0	20.0	6 30	19 15.98	-17 2.2	2.102	3.105	3.6	21.1
7 10	19 6.66	-38 10.6	1.843	2.834	5.7	19.9	7 10	19 6.84	-18 0.0	2.101	3.115	1.6	21.0
7 20	18 57.13	-38 14.6	1.863	2.831	7.7	20.1	7 20	18 57.85	-18 58.7	2.130	3.125	4.6	21.2
7 30	18 48.97	-38 2.0	1.907	2.828	10.6	20.2	7 30	18 49.86	-19 55.4	2.186	3.133	8.0	21.4
8 9	18 43.07	-37 35.9	1.973	2.826	13.4	20.4	8 9	18 43.57	-20 48.1	2.268	3.142	11.1	21.7
256517	2007 ER ₁₇₂		7 7.8 212°62	2.0°/ 8.6 18			106241	2000 UC ₄₇		7 7.8 299°05	3.7°/ 8.8 18		
5 31	19 32.11	-14 53.3	2.832	3.639	11.0	21.5	5 31	19 32.44	-12 35.7	2.161	2.976	13.6	19.6
6 10	19 27.73	-14 50.5	2.738	3.634	8.7	21.3	6 10	19 28.47	-12 8.6	2.071	2.969	11.0	19.4
6 20	19 21.81	-14 53.6	2.667	3.628	6.1	21.1	6 20	19 22.54	-11 49.4	2.003	2.962	8.0	19.2
6 30	19 14.75	-15 2.3	2.622	3.622	3.4	20.9	6 30	19 15.16	-11 38.9	1.960	2.955	5.0	19.0
7 10	19 7.14	-15 15.5	2.605	3.616	2.1	20.8	7 10	19 7.07	-11 37.1	1.943	2.948	3.7	18.9
7 20	18 59.59	-15 32.3	2.617	3.609	4.1	20.9	7 20	18 59.07	-11 43.4	1.953	2.941	5.7	19.1
7 30	18 52.77	-15 51.5	2.657	3.602	6.9	21.1	7 30	18 52.02	-11 56.4	1.989	2.934	8.8	19.2
8 9	18 47.22	-16 11.8	2.723	3.595	9.5	21.3	8 9	18 46.62	-12 14.5	2.049	2.927	11.9	19.4
439522	2014 BP ₄₇		7 7.8 268°43	3.3°/ 8.9 16			45184	1999 XL ₁₅₅		7 7.8 339°90	8.8°/ 8.1 18		
5 31	19 33.48	-12 9.9	1.925	2.745	14.9	21.5	5 31	19 27.14	-11 50.1	1.015	1.888	21.4	17.6
6 10	19 29.57	-12 17.0	1.836	2.737	12.0	21.3	6 10	19 26.31	-10 11.3	0.939	1.868	17.8	17.2
6 20	19 23.44	-12 35.9	1.768	2.730	8.6	21.1	6 20	19 22.17	-8 40.6	0.880	1.850	13.7	16.9
6 30	19 15.61	-13 6.4	1.724	2.722	5.1	20.9	6 30	19 15.32	-7 24.7	0.840	1.833	10.0	16.7
7 10	19 6.88	-13 46.7	1.706	2.715	3.3	20.8	7 10	19 6.99	-6 29.8	0.819	1.818	8.8	16.6
7 20	18 58.20	-14 34.0	1.715	2.707	5.8	20.9	7 20	18 58.72	-5 59.7	0.818	1.805	11.4	16.6
7 30	18 50.57	-15 25.2	1.749	2.700	9.4	21.1	7 30	18 52.18	-5 54.8	0.836	1.794	15.7	16.8
8 9	18 44.80	-16 17.2	1.807	2.692	12.9	21.3	8 9	18 48.67	-6 11.0	0.870	1.785	20.2	17.1
186357	2002 GW ₁₂		7 7.8 357°58	4.6°/ 9.2 18			6235	Burney		7 7.8 244°38	0.0°/ 7.7 18 R		
5 31	19 31.12	-9 26.7	2.135	2.944	14.0	19.8	5 31	19 39.60	-22 1.0	1.611	2.450	16.5	17.8
6 10	19 27.40	-9 1.8	2.053	2.943	11.4	19.6	6 10	19 34.97	-22 1.4	1.521	2.438	13.0	17.5
6 20	19 21.79	-8 47.4	1.992	2.943	8.5	19.4	6 20	19 27.41	-22 6.1	1.451	2.426	8.8	17.2
6 30	19 14.79	-8 44.7	1.955	2.942	5.8	19.3	6 30	19 17.53	-22 12.6	1.405	2.414	4.0	16.9
7 10	19 7.13	-8 53.4	1.944	2.942	4.7	19.2	7 10	19 6.39	-22 18.2	1.385	2.401	1.1	16.7
7 20	18 59.60	-9 12.7	1.959	2.942	6.2	19.3	7 20	18 55.33	-22 21.1	1.390	2.387	6.2	17.0
7 30	18 53.03	-9 40.5	2.000	2.942	9.0	19.5	7 30	18 45.72	-22 20.4	1.421	2.373	11.0	17.2
8 9	18 48.08	-10 14.3	2.065	2.943	11.8	19.6	8 9	18 38.65	-22 16.7	1.474	2.359	15.2	17.4

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
497586	2006 <i>HS</i> ₆₁		7 7.8 209°42	10°1/ 2.2 18			71381	2000 <i>AD</i> ₁₄₉		7 7.8 150°75	4°0/ 8.9 18		
5 31	19 56.74	−56 59.6	2.893	3.619	12.6	22.5	5 31	19 36.85	−11 59.1	1.759	2.577	16.2	18.5
6 10	19 48.63	−58 29.6	2.819	3.610	11.5	22.4	6 10	19 32.25	−11 47.6	1.683	2.582	13.0	18.3
6 20	19 36.79	−59 46.7	2.766	3.600	10.6	22.4	6 20	19 25.24	−11 47.7	1.627	2.587	9.3	18.0
6 30	19 21.85	−60 42.7	2.736	3.589	10.1	22.3	6 30	19 16.44	−11 59.5	1.595	2.591	5.7	17.8
7 10	19 5.18	−61 11.4	2.729	3.577	10.3	22.3	7 10	19 6.79	−12 21.9	1.588	2.595	4.0	17.7
7 20	18 48.56	−61 10.5	2.746	3.564	11.1	22.3	7 20	18 57.35	−12 52.7	1.608	2.599	6.4	17.9
7 30	18 33.85	−60 41.7	2.785	3.551	12.2	22.4	7 30	18 49.19	−13 29.1	1.654	2.602	10.0	18.1
8 9	18 22.41	−59 50.4	2.844	3.536	13.4	22.5	8 9	18 43.13	−14 8.5	1.723	2.605	13.5	18.3
42698	1998 <i>MB</i> ₁		7 7.8 270°98	1°6/ 8.1 18			509818	2008 <i>WG</i> ₃₆		7 7.8 240°73	1°1/ 8.1 18		
5 31	19 36.95	−18 54.8	1.582	2.423	16.7	18.7	5 31	19 36.29	−18 54.0	2.243	3.063	13.1	22.5
6 10	19 32.90	−18 45.5	1.492	2.409	13.2	18.4	6 10	19 31.53	−18 52.5	2.143	3.049	10.3	22.3
6 20	19 26.03	−18 42.6	1.422	2.396	9.0	18.2	6 20	19 24.67	−18 55.9	2.066	3.035	7.0	22.1
6 30	19 16.91	−18 45.1	1.375	2.382	4.4	17.9	6 30	19 16.19	−19 3.0	2.014	3.020	3.4	21.8
7 10	19 6.58	−18 51.2	1.354	2.369	1.8	17.7	7 10	19 6.85	−19 12.4	1.989	3.004	1.3	21.7
7 20	18 56.30	−18 59.3	1.358	2.355	6.3	17.9	7 20	18 57.53	−19 22.7	1.993	2.988	4.8	21.9
7 30	18 47.39	−19 7.9	1.386	2.341	11.0	18.1	7 30	18 49.16	−19 32.7	2.024	2.971	8.5	22.1
8 9	18 40.92	−19 16.4	1.437	2.327	15.2	18.4	8 9	18 42.52	−19 41.9	2.079	2.954	11.8	22.3
51916	2001 <i>QQ</i> ₇₃		7 7.8 177°31	0°3/ 7.7 18			149930	2005 <i>SP</i> ₁₅₂		7 7.9 223°55	3°5/ 6.4 18		
5 31	19 36.27	−23 18.6	2.638	3.456	11.4	19.9	5 31	19 35.63	−31 25.0	2.489	3.315	11.7	20.0
6 10	19 31.06	−23 21.2	2.551	3.457	8.8	19.7	6 10	19 30.99	−32 12.7	2.404	3.311	9.3	19.8
6 20	19 24.07	−23 25.2	2.488	3.459	5.9	19.5	6 20	19 24.27	−32 59.4	2.341	3.307	6.6	19.6
6 30	19 15.79	−23 29.0	2.452	3.460	2.6	19.3	6 30	19 15.99	−33 41.1	2.305	3.302	4.2	19.5
7 10	19 6.93	−23 31.2	2.444	3.460	0.8	19.2	7 10	19 6.91	−34 14.0	2.296	3.297	3.7	19.4
7 20	18 58.23	−23 30.6	2.466	3.460	4.1	19.4	7 20	18 57.91	−34 35.7	2.315	3.292	5.8	19.6
7 30	18 50.45	−23 27.0	2.515	3.460	7.2	19.6	7 30	18 49.90	−34 45.7	2.361	3.287	8.6	19.7
8 9	18 44.21	−23 20.7	2.590	3.458	10.0	19.8	8 9	18 43.63	−34 44.9	2.431	3.281	11.2	19.9
493615	2015 <i>OD</i> ₁₅		7 7.8 266°22	3°6/ 6.9 18			272748	2005 <i>YV</i> ₁₃₁		7 7.9 354°28	0°6/ 8.0 17		
5 31	19 37.04	−32 43.2	2.297	3.124	12.6	21.4	5 31	19 32.38	−19 19.5	1.415	2.272	17.4	20.0
6 10	19 32.20	−33 4.5	2.209	3.116	10.0	21.2	6 10	19 29.54	−19 36.5	1.341	2.268	13.6	19.7
6 20	19 25.11	−33 22.4	2.143	3.108	7.1	21.0	6 20	19 23.85	−20 2.6	1.286	2.265	9.2	19.4
6 30	19 16.35	−33 33.2	2.102	3.100	4.4	20.9	6 30	19 15.95	−20 35.4	1.254	2.263	4.2	19.1
7 10	19 6.78	−33 33.9	2.089	3.092	3.8	20.8	7 10	19 6.94	−21 11.3	1.245	2.261	1.2	18.9
7 20	18 57.38	−33 23.1	2.103	3.084	6.0	20.9	7 20	18 58.11	−21 46.6	1.261	2.260	6.3	19.3
7 30	18 49.14	−33 1.2	2.143	3.075	9.0	21.1	7 30	18 50.80	−22 18.4	1.301	2.261	11.1	19.5
8 9	18 42.85	−32 30.6	2.208	3.067	11.9	21.3	8 9	18 46.02	−22 45.1	1.361	2.261	15.3	19.8
94276	2001 <i>DQ</i> ₃₄		7 7.8 118°44	2°6/ 8.9 18			91922	1999 <i>VP</i> ₃₇		7 7.9 320°79	2°4/ 8.4 18		
5 31	19 31.84	−12 46.0	2.404	3.215	12.6	19.5	5 31	19 31.69	−16 32.1	1.975	2.807	14.1	18.6
6 10	19 27.78	−12 54.7	2.320	3.217	10.0	19.3	6 10	19 28.20	−16 13.7	1.881	2.792	11.2	18.4
6 20	19 21.98	−13 12.4	2.259	3.219	7.1	19.1	6 20	19 22.57	−16 1.5	1.808	2.777	7.8	18.2
6 30	19 14.90	−13 38.5	2.223	3.221	4.1	18.9	6 30	19 15.28	−15 55.6	1.759	2.762	4.3	17.9
7 10	19 7.20	−14 11.6	2.214	3.223	2.6	18.9	7 10	19 7.13	−15 55.3	1.736	2.748	2.5	17.8
7 20	18 59.61	−14 49.5	2.233	3.225	4.7	19.0	7 20	18 59.03	−15 59.8	1.739	2.734	5.4	17.9
7 30	18 52.89	−15 30.2	2.280	3.228	7.7	19.2	7 30	18 51.95	−16 7.9	1.768	2.720	9.2	18.1
8 9	18 47.64	−16 11.4	2.351	3.230	10.5	19.4	8 9	18 46.68	−16 18.6	1.820	2.707	12.7	18.3
237121	2008 <i>TH</i> ₁₈₆		7 7.8 162°07	1°7/ 8.4 18			431381	2007 <i>ER</i> ₁₃₆		7 7.9 88°69	3°7/ 7.1 17		
5 31	19 35.38	−16 20.2	2.198	3.015	13.4	21.4	5 31	19 40.77	−30 51.0	1.723	2.561	15.6	21.0
6 10	19 30.68	−16 28.7	2.116	3.019	10.5	21.2	6 10	19 35.53	−31 18.7	1.660	2.575	12.2	20.8
6 20	19 23.99	−16 44.5	2.056	3.023	7.2	21.0	6 20	19 27.49	−31 43.7	1.618	2.588	8.5	20.6
6 30	19 15.82	−17 6.4	2.022	3.026	3.7	20.8	6 30	19 17.45	−32 1.0	1.600	2.602	4.9	20.4
7 10	19 6.95	−17 32.5	2.015	3.029	1.8	20.6	7 10	19 6.57	−32 6.9	1.608	2.615	3.9	20.4
7 20	18 58.23	−18 0.8	2.037	3.032	4.8	20.9	7 20	18 56.17	−31 59.7	1.642	2.628	6.8	20.6
7 30	18 50.53	−18 29.4	2.085	3.034	8.2	21.1	7 30	18 47.45	−31 40.5	1.702	2.641	10.4	20.8
8 9	18 44.55	−18 56.9	2.158	3.036	11.4	21.3	8 9	18 41.29	−31 12.4	1.784	2.654	13.7	21.1
125604	2001 <i>XJ</i> ₄₈		7 7.8 153°19	0°5/ 7.9 18			79615	1998 <i>RT</i> ₅₇		7 7.9 170°81	0°7/ 8.1 18		
5 31	19 40.20	−23 10.0	1.734	2.568	15.7	18.9	5 31	19 38.22	−19 15.0	1.940	2.765	14.6	19.9
6 10	19 34.94	−22 38.2	1.655	2.570	12.3	18.7	6 10	19 33.21	−19 29.1	1.859	2.769	11.4	19.7
6 20	19 27.04	−22 6.8	1.597	2.571	8.2	18.4	6 20	19 25.85	−19 49.5	1.800	2.771	7.7	19.4
6 30	19 17.23	−21 34.7	1.564	2.572	3.8	18.2	6 30	19 16.73	−20 14.2	1.766	2.774	3.6	19.2
7 10	19 6.57	−21 1.3	1.558	2.574	1.1	18.0	7 10	19 6.75	−20 40.5	1.759	2.775	1.1	19.0
7 20	18 56.26	−20 27.1	1.578	2.575	5.7	18.3	7 20	18 56.95	−21 5.9	1.780	2.776	5.2	19.3
7 30	18 47.45	−19 53.3	1.625	2.576	10.0	18.6	7 30	18 48.37	−21 28.7	1.828	2.777	9.2	19.5
8 9	18 41.01	−19 21.3	1.694	2.576	13.7	18.8	8 9	18 41.83	−21 48.2	1.899	2.777	12.7	19.8
241624	1999 <i>VU</i> ₅₂		7 7.8 249°52	3°2/ 8.6 18			510955	2013 <i>FB</i> ₂₉		7 7.9 166°92	1°1/ 7.4 18		
5 31	19 36.31	−13 1.5	2.519	3.319	12.4	21.1	5 31	19 33.56	−24 16.9	2.509	3.336	11.6	21.9
6 10	19 31.31	−12 38.3	2.407	3.296	10.0	20.8	6 10	19 29.17	−24 44.9	2.426	3.337	9.0	21.7
6 20	19 24.41	−12 21.5	2.318	3.273	7.2	20.6	6 20	19 22.95	−25 15.3	2.366	3.338	6.0	21.6
6 30	19 16.05	−12 11.5	2.254	3.249	4.5	20.4	6 30	19 15.37	−25 45.5	2.332	3.339	2.8	21.3
7 10	19 6.87	−12 8.3	2.219	3.224	3.3	20.3	7 10	19 7.13	−26 13.0	2.326	3.340	1.4	21.2
7 20	18 57.64	−12 11.3	2.212	3.199	5.3	20.4	7 20	18 59.01	−26 35.8	2.348	3.341	4.4	21.5
7 30	18 49.17	−12 20.0	2.233	3.173	8.3	20.5	7 30	18 51.81	−26 52.8	2.398	3.341	7.6	21.7
8 9	18 42.18	−12 32.9	2.279	3.146	11.3	20.7	8 9	18 46.17	−27 4.0	2.472	3.342	10.4	21.8
404132	2013 <i>BL</i> ₆₁		7 7.8 83°00	1°5/ 8.5 18			496853	1999 <i>VL</i> ₄₂		7 7.9 168°38	0°2/ 7.8 17		
5 31	19 32.83	−15 57.5	2.235	3.056	13.1	21.0	5 31	19 39.89	−22 24.3	1.874	2.704	14.9	22.4
6 10	19 28.70	−16 18.6	2.156	3.062	10.2	20.9	6 10	19 34.60	−22 32.9	1.795	2.708	11.6	22.1
6 20	19 22.65	−16 47.8	2.100	3.067	7.0	20.7	6 20	19 26.81	−22 45.0	1.738	2.711	7.8	21.9
6 30	19 15.22	−17 23.6	2.068	3.073	3.5	20.5	6 30	19 17.16	−22 58.1	1.705	2.714	3.5	21.7
7 10	19 7.12	−18 3.6	2.064	3.079	1.6	20.3	7 10	19 6.64	−23 9.6	1.700	2.716	1.0	21.5
7 20	18 59.17	−18 45.3	2.088	3.084	4.6	20.5	7 20	18 56.36	−23 17.5	1.722	2.717	5.4	21.8
7 30	18 52.17	−19 26.4	2.140	3.090	8								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
54606	2000 <i>RA</i> ₂₈		7 7.9 62°79	0°7/ 7.9 18			499633	2010 <i>UO</i> ₉₉		7 7.9 229°87	0°4/ 7.8 17		
5 31	19 35.55	-21 17.3	2.092	2.922	13.5	18.3	5 31	19 39.15	-23 45.7	1.561	2.405	16.7	21.2
6 10	19 30.88	-20 59.2	2.015	2.927	10.5	18.1	6 10	19 34.58	-23 40.7	1.484	2.404	13.0	20.9
6 20	19 24.13	-20 43.5	1.960	2.932	7.1	17.9	6 20	19 27.10	-23 37.9	1.426	2.402	8.8	20.7
6 30	19 15.89	-20 29.4	1.930	2.937	3.3	17.7	6 30	19 17.41	-23 34.8	1.391	2.400	4.0	20.4
7 10	19 7.00	-20 16.0	1.927	2.943	1.1	17.5	7 10	19 6.68	-23 28.9	1.382	2.398	1.2	20.2
7 20	18 58.38	-20 2.8	1.952	2.948	4.8	17.8	7 20	18 56.22	-23 19.0	1.399	2.396	6.1	20.5
7 30	18 50.91	-19 49.8	2.003	2.954	8.4	18.0	7 30	18 47.35	-23 5.2	1.441	2.394	10.8	20.8
8 9	18 45.30	-19 37.2	2.079	2.959	11.6	18.3	8 9	18 41.07	-22 48.9	1.504	2.392	14.8	21.0
111826	2002 <i>DB</i> ₁₉		7 7.9 51°34	4°3/ 6.6 18			160348	2003 <i>TY</i> ₂₀		7 7.9 323°35	5°5/ 9.6 18		
5 31	19 38.78	-28 13.0	1.349	2.206	18.1	19.4	5 31	19 30.17	-8 50.8	1.516	2.348	17.7	19.4
6 10	19 34.90	-29 15.7	1.284	2.210	14.2	19.2	6 10	19 27.73	-8 44.1	1.424	2.329	14.5	19.1
6 20	19 27.63	-30 21.2	1.238	2.215	9.8	18.9	6 20	19 22.69	-8 54.4	1.350	2.309	10.9	18.9
6 30	19 17.70	-31 22.1	1.215	2.219	5.6	18.7	6 30	19 15.53	-9 23.5	1.298	2.291	7.3	18.6
7 10	19 6.48	-32 10.9	1.217	2.224	4.7	18.7	7 10	19 7.17	-10 10.6	1.270	2.273	5.5	18.4
7 20	18 55.57	-32 42.9	1.242	2.230	8.3	18.9	7 20	18 58.73	-11 13.0	1.265	2.256	7.6	18.5
7 30	18 46.59	-32 56.9	1.291	2.235	12.6	19.1	7 30	18 51.46	-12 25.8	1.284	2.240	11.6	18.7
8 9	18 40.69	-32 55.8	1.360	2.240	16.5	19.4	8 9	18 46.42	-13 43.3	1.324	2.225	15.6	18.9
146283	2001 <i>FQ</i> ₁₁₀		7 7.9 301°07	3°5/ 7.2 18			184842	2005 <i>UY</i> ₃₈		7 7.9 9°12	2°2/ 7.1 18		
5 31	19 37.83	-29 4.3	1.424	2.279	17.4	19.5	5 31	19 33.50	-26 18.7	1.957	2.799	13.9	19.7
6 10	19 34.20	-29 28.4	1.339	2.264	13.8	19.2	6 10	19 29.73	-26 57.4	1.881	2.800	10.8	19.5
6 20	19 27.25	-29 52.3	1.274	2.250	9.5	18.9	6 20	19 23.64	-27 38.3	1.827	2.802	7.3	19.3
6 30	19 17.60	-30 10.9	1.231	2.236	5.2	18.6	6 30	19 15.81	-28 17.5	1.797	2.803	3.7	19.1
7 10	19 6.50	-30 18.8	1.211	2.222	3.9	18.5	7 10	19 7.15	-28 51.3	1.794	2.806	2.5	19.0
7 20	18 55.50	-30 13.1	1.216	2.208	7.7	18.7	7 20	18 58.66	-29 16.8	1.817	2.808	5.7	19.2
7 30	18 46.24	-29 54.0	1.245	2.195	12.4	18.9	7 30	18 51.36	-29 32.8	1.866	2.811	9.3	19.4
8 9	18 39.94	-29 24.7	1.294	2.182	16.7	19.1	8 9	18 46.09	-29 39.8	1.938	2.815	12.5	19.6
105175	2000 <i>OO</i> ₂₂		7 7.9 282°59	1°8/ 8.3 18			441373	2008 <i>EW</i> ₃₄		7 7.9 52°96	8°1/ 11.0 16		
5 31	19 37.29	-17 23.2	1.547	2.386	17.0	19.3	5 31	19 31.40	+0 42.4	2.124	2.891	15.4	20.8
6 10	19 33.56	-17 28.4	1.441	2.357	13.7	19.0	6 10	19 27.56	+1 25.4	2.056	2.901	13.2	20.6
6 20	19 26.81	-17 43.5	1.354	2.327	9.5	18.7	6 20	19 21.90	+1 51.6	2.007	2.912	10.9	20.5
6 30	19 17.48	-18 7.6	1.290	2.297	4.8	18.4	6 30	19 14.94	+1 58.4	1.980	2.924	9.0	20.4
7 10	19 6.52	-18 38.3	1.251	2.266	2.0	18.1	7 10	19 7.40	+1 45.1	1.978	2.935	8.1	20.4
7 20	18 55.23	-19 12.3	1.237	2.234	6.7	18.3	7 20	19 0.06	+1 12.7	2.000	2.946	8.7	20.4
7 30	18 45.11	-19 46.7	1.248	2.203	11.9	18.5	7 30	18 53.70	+0 24.1	2.046	2.958	10.4	20.6
8 9	18 37.49	-20 19.4	1.279	2.171	16.7	18.7	8 9	18 48.92	-0 36.2	2.116	2.970	12.5	20.7
280970	2006 <i>DN</i> ₇		7 7.9 204°84	0°8/ 7.6 18			434388	2005 <i>BH</i> ₄₉		7 7.9 91°91	2°1/ 8.6 17		
5 31	19 37.36	-22 57.6	2.185	3.010	13.2	21.6	5 31	19 34.75	-15 19.9	1.933	2.758	14.7	21.3
6 10	19 32.45	-23 26.8	2.096	3.006	10.3	21.4	6 10	19 30.45	-15 27.7	1.859	2.766	11.6	21.1
6 20	19 25.33	-24 0.0	2.029	3.001	6.9	21.1	6 20	19 23.99	-15 44.6	1.807	2.774	8.0	20.9
6 30	19 16.53	-24 34.4	1.988	2.996	3.1	20.9	6 30	19 15.93	-16 9.3	1.779	2.782	4.2	20.7
7 10	19 6.85	-25 6.6	1.975	2.990	1.3	20.7	7 10	19 7.13	-16 39.8	1.777	2.790	2.2	20.5
7 20	18 57.25	-25 34.1	1.990	2.984	5.0	21.0	7 20	18 58.55	-17 13.5	1.803	2.798	5.2	20.7
7 30	18 48.71	-25 55.4	2.032	2.977	8.7	21.2	7 30	18 51.13	-17 48.3	1.855	2.806	8.9	21.0
8 9	18 42.03	-26 10.5	2.099	2.970	11.9	21.4	8 9	18 45.61	-18 22.0	1.930	2.814	12.2	21.2
191791	2004 <i>TM</i> ₁₃₄		7 7.9 190°17	5°4/ 9.3 18			519428	2011 <i>UU</i> ₄₁₅		7 7.9 208°56	4°5/ 6.3 18		
5 31	19 35.29	-6 52.3	2.324	3.110	13.7	20.6	5 31	19 37.30	-33 43.4	2.236	3.064	12.8	21.7
6 10	19 30.48	-6 15.8	2.237	3.109	11.3	20.4	6 10	19 32.58	-34 32.5	2.156	3.062	10.2	21.6
6 20	19 23.81	-5 49.7	2.171	3.107	8.7	20.2	6 20	19 25.50	-35 18.9	2.099	3.061	7.4	21.4
6 30	19 15.78	-5 35.9	2.130	3.105	6.4	20.1	6 30	19 16.66	-35 57.7	2.068	3.060	5.1	21.2
7 10	19 7.09	-5 34.8	2.115	3.102	5.5	20.0	7 10	19 6.94	-36 24.7	2.063	3.058	4.7	21.2
7 20	18 58.50	-5 45.9	2.128	3.099	6.7	20.1	7 20	18 57.36	-36 37.5	2.085	3.056	6.8	21.3
7 30	18 50.81	-6 7.8	2.167	3.096	9.1	20.2	7 30	18 48.99	-36 36.0	2.132	3.054	9.5	21.5
8 9	18 44.70	-6 38.0	2.231	3.092	11.7	20.4	8 9	18 42.64	-36 22.3	2.203	3.053	12.3	21.7
69522	1997 <i>GY</i> ₆		7 7.9 339°87	8°2/ 4.9 18			384504	2010 <i>CR</i> ₁₁₄		7 7.9 226°29	1°8/ 7.3 18		
5 31	19 40.05	-40 7.3	1.790	2.620	15.5	19.7	5 31	19 38.78	-26 37.6	2.264	3.088	12.8	22.5
6 10	19 35.66	-41 29.0	1.720	2.617	12.8	19.5	6 10	19 33.59	-27 0.0	2.168	3.077	10.0	22.3
6 20	19 28.06	-42 44.1	1.670	2.616	10.2	19.4	6 20	19 26.15	-27 23.3	2.095	3.065	6.8	22.0
6 30	19 17.93	-43 44.2	1.644	2.614	8.5	19.3	6 30	19 16.96	-27 44.4	2.047	3.053	3.4	21.8
7 10	19 6.49	-44 22.3	1.643	2.612	8.5	19.2	7 10	19 6.86	-28 0.3	2.028	3.040	2.1	21.7
7 20	18 55.26	-44 34.9	1.666	2.611	10.3	19.3	7 20	18 56.81	-28 8.9	2.036	3.027	5.3	21.9
7 30	18 45.75	-44 22.8	1.711	2.610	12.8	19.5	7 30	18 47.82	-28 9.5	2.072	3.012	8.8	22.1
8 9	18 39.12	-43 50.7	1.777	2.609	15.5	19.7	8 9	18 40.72	-28 3.3	2.132	2.998	12.0	22.3
105681	2000 <i>SR</i> ₄₆		7 7.9 118°99	3°2/ 7.5 18			192028	2005 <i>YO</i> ₂₁₁		7 7.9 158°15	6°6/ 9.9 18		
5 31	19 42.16	-33 32.0	2.275	3.093	13.0	18.8	5 31	19 35.23	-4 15.8	2.078	2.861	15.2	20.5
6 10	19 35.92	-33 21.6	2.197	3.100	10.2	18.6	6 10	19 30.62	-3 41.9	1.999	2.866	12.7	20.3
6 20	19 27.42	-33 5.0	2.142	3.105	7.2	18.4	6 20	19 24.01	-3 21.8	1.941	2.870	10.0	20.2
6 30	19 17.36	-32 39.4	2.112	3.111	4.2	18.3	6 30	19 15.93	-3 17.7	1.907	2.874	7.6	20.0
7 10	19 6.71	-32 3.2	2.111	3.117	3.3	18.2	7 10	19 7.16	-3 30.1	1.897	2.878	6.6	20.0
7 20	18 56.49	-31 16.7	2.138	3.123	5.6	18.4	7 20	18 58.55	-3 57.9	1.914	2.881	7.6	20.1
7 30	18 47.66	-30 22.1	2.193	3.128	8.6	18.6	7 30	18 50.96	-4 38.5	1.957	2.884	10.0	20.2
8 9	18 40.91	-29 22.7	2.272	3.133	11.5	18.8	8 9	18 45.10	-5 28.2	2.023	2.887	12.6	20.4
177141	2003 <i>QC</i> ₃₆		7 7.9 289°91	1°1/ 8.1 18			468058	2013 <i>RP</i> ₉₃		7 7.9 352°26	4°8/ 7.1 17		
5 31	19 36.68	-19 33.8	1.463	2.310	17.4	20.7	5 31	19 31.45	-30 21.0	1.050	1.934	20.0	20.5
6 10	19 33.24	-19 33.8	1.361	2.283	13.9	20.4	6 10	19 30.07	-30 48.4	0.984	1.925	15.9	20.3
6 20	19 26.67	-19 41.3	1.279	2.255	9.6	20.0	6 20	19 24.88	-31 13.8	0.936	1.918	11.1	20.0
6 30	19 17.45	-19 54.8	1.219	2.227	4.6	19.7	6 30	19 16.66	-31 30.9	0.907	1.913	6.4	19.7
7 10	19 6.60	-20 11.9	1.183	2.199	1.5	19.4	7 10	19 6.94	-31 33.4	0.899	1.909	5.1	19.6
7 20	18 55.50	-20 29.8	1.172	2.171	6.8	19.6	7 20	18 57.58	-31 18.5	0.912	1.906	9.1	19.8
7 30	18 45.72	-20 46.4	1.185	2.142	12.2	19.9	7 30	18 50.43	-30 47.5	0.945	1.906	14.1	20.1
8 9	18 38.58	-21 0.9	1.219	2.114	17.0	20.1							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
503389	2016 <i>CQ</i> ₁₄₃	7 7.9 132°80 11°1/13.5 17					44743	1999 <i>TR</i> ₄₈	7 7.9 113°58 1°2/ 8.2 18				
5 31	19 38.22	+ 7 53.5	1.753	2.484	19.4	21.5	5 31	19 39.31	-18 24.1	1.673	2.505	16.3	18.7
6 10	19 33.25	+ 8 17.1	1.685	2.497	17.1	21.3	6 10	19 34.30	-18 33.6	1.607	2.519	12.7	18.5
6 20	19 25.90	+ 8 14.2	1.634	2.509	14.7	21.2	6 20	19 26.69	-18 50.7	1.560	2.532	8.6	18.3
6 30	19 16.82	+ 7 41.0	1.602	2.520	12.5	21.1	6 30	19 17.20	-19 13.3	1.538	2.545	4.1	18.0
7 10	19 6.93	+ 6 36.8	1.594	2.531	11.2	21.0	7 10	19 6.88	-19 38.5	1.543	2.558	1.4	17.9
7 20	18 57.29	+ 5 4.7	1.609	2.542	11.4	21.1	7 20	18 56.91	-20 3.7	1.574	2.570	5.6	18.2
7 30	18 48.94	+ 3 11.0	1.649	2.552	13.0	21.2	7 30	18 48.43	-20 27.0	1.630	2.582	9.8	18.5
8 9	18 42.68	+ 1 4.3	1.712	2.561	15.2	21.3	8 9	18 42.27	-20 47.6	1.710	2.594	13.5	18.7
156736	2002 <i>XW</i> ₄₅	7 7.9 54°67 1°9/ 7.3 17					381824	2009 <i>VS</i> ₈₃	7 7.9 229°04 0°3/ 7.9 18				
5 31	19 38.32	-22 53.0	1.245	2.104	19.1	19.3	5 31	19 37.69	-21 20.6	1.912	2.743	14.6	22.0
6 10	19 34.69	-23 42.4	1.178	2.107	14.9	19.0	6 10	19 32.99	-21 21.5	1.823	2.736	11.4	21.8
6 20	19 27.60	-24 40.3	1.131	2.111	10.0	18.7	6 20	19 25.87	-21 26.3	1.756	2.729	7.7	21.6
6 30	19 17.81	-25 41.0	1.105	2.114	4.7	18.4	6 30	19 16.88	-21 33.3	1.713	2.721	3.5	21.3
7 10	19 6.65	-26 37.4	1.103	2.117	2.4	18.3	7 10	19 6.95	-21 40.2	1.697	2.713	1.0	21.1
7 20	18 55.76	-27 23.7	1.125	2.121	7.5	18.6	7 20	18 57.14	-21 45.6	1.709	2.705	5.3	21.4
7 30	18 46.80	-27 57.2	1.170	2.125	12.6	18.9	7 30	18 48.54	-21 48.6	1.746	2.697	9.4	21.6
8 9	18 40.96	-28 18.3	1.235	2.128	17.0	19.2	8 9	18 42.02	-21 49.2	1.807	2.688	13.1	21.8
366716	2003 <i>XZ</i> ₃₀	7 7.9 319°41 3°3/ 8.2 17					367290	2007 <i>UP</i> ₈₀	7 7.9 84°13 1°3/ 7.6 17				
5 31	19 31.62	-18 15.3	1.149	2.019	19.7	20.9	5 31	19 40.63	-24 3.4	1.427	2.275	17.8	21.5
6 10	19 29.93	-17 35.2	1.056	1.989	15.9	20.6	6 10	19 35.80	-24 25.7	1.369	2.291	13.8	21.3
6 20	19 24.81	-17 0.4	0.980	1.959	11.2	20.2	6 20	19 27.91	-24 51.9	1.329	2.306	9.2	21.0
6 30	19 16.75	-16 31.9	0.923	1.930	6.1	19.8	6 30	19 17.79	-25 17.4	1.313	2.322	4.2	20.8
7 10	19 6.87	-16 10.1	0.888	1.902	3.5	19.6	7 10	19 6.74	-25 38.2	1.322	2.337	1.8	20.7
7 20	18 56.75	-15 55.5	0.875	1.875	8.2	19.7	7 20	18 56.20	-25 51.4	1.356	2.352	6.5	21.0
7 30	18 48.20	-15 47.9	0.883	1.849	14.1	20.0	7 30	18 47.51	-25 56.7	1.415	2.367	11.0	21.3
8 9	18 42.71	-15 46.5	0.909	1.824	19.5	20.2	8 9	18 41.61	-25 55.1	1.495	2.382	15.0	21.6
276096	2002 <i>EE</i> ₃₂	7 7.9 309°49 3°9/ 9.4 18					143667	2003 <i>SQ</i> ₁₂₅	7 7.9 236°97 4°2/ 9.2 17				
5 31	19 31.56	- 9 54.2	2.240	3.047	13.5	20.8	5 31	19 34.01	-10 32.8	2.023	2.833	14.6	20.1
6 10	19 27.76	- 9 48.7	2.153	3.044	10.9	20.6	6 10	19 29.89	-10 21.2	1.936	2.828	11.9	19.9
6 20	19 22.12	- 9 54.0	2.088	3.040	8.1	20.4	6 20	19 23.68	-10 20.7	1.868	2.823	8.7	19.7
6 30	19 15.10	-10 10.5	2.046	3.037	5.3	20.2	6 30	19 15.87	-10 31.8	1.826	2.818	5.6	19.5
7 10	19 7.39	-10 37.4	2.031	3.034	4.0	20.1	7 10	19 7.25	-10 54.0	1.809	2.812	4.2	19.4
7 20	18 59.77	-11 12.9	2.044	3.030	5.6	20.2	7 20	18 58.71	-11 25.5	1.819	2.806	6.1	19.5
7 30	18 53.04	-11 54.7	2.082	3.027	8.5	20.4	7 30	18 51.17	-12 3.8	1.855	2.800	9.3	19.7
8 9	18 47.86	-12 40.0	2.145	3.024	11.4	20.6	8 9	18 45.41	-12 46.1	1.914	2.794	12.5	19.9
503420	2016 <i>DE</i> ₂₆	7 7.9 170°49 1°2/ 8.2 17					177325	2003 <i>YJ</i> ₄₉	7 7.9 239°80 1°0/ 7.6 18 R				
5 31	19 38.72	-18 32.2	1.411	2.256	18.1	22.3	5 31	19 39.29	-23 20.4	1.816	2.649	15.1	21.1
6 10	19 34.49	-18 40.5	1.337	2.257	14.2	22.0	6 10	19 34.57	-23 45.9	1.722	2.636	11.9	20.9
6 20	19 27.20	-18 57.9	1.283	2.258	9.7	21.7	6 20	19 27.15	-24 16.2	1.649	2.623	8.0	20.6
6 30	19 17.55	-19 22.3	1.251	2.259	4.6	21.5	6 30	19 17.56	-24 47.8	1.601	2.609	3.7	20.4
7 10	19 6.73	-19 50.4	1.244	2.259	1.6	21.2	7 10	19 6.78	-25 16.9	1.579	2.594	1.5	20.2
7 20	18 56.14	-20 18.9	1.261	2.259	6.5	21.6	7 20	18 55.98	-25 40.3	1.584	2.579	5.9	20.4
7 30	18 47.20	-20 45.3	1.303	2.260	11.4	21.8	7 30	18 46.44	-25 56.3	1.616	2.563	10.3	20.6
8 9	18 40.98	-21 8.3	1.366	2.259	15.7	22.1	8 9	18 39.17	-26 5.3	1.670	2.547	14.1	20.8
397132	2005 <i>WM</i> ₈₀	7 7.9 354°03 3°4/ 6.4 18					94763	2001 <i>XM</i> ₉₉	7 7.9 145°66 0°5/ 7.8 18				
5 31	19 33.85	-28 6.4	2.000	2.841	13.6	20.1	5 31	19 38.86	-23 17.7	2.071	2.897	13.8	19.8
6 10	19 30.12	-29 12.8	1.921	2.839	10.7	19.9	6 10	19 33.57	-23 28.2	1.995	2.906	10.7	19.6
6 20	19 24.01	-30 21.8	1.865	2.837	7.4	19.7	6 20	19 26.05	-23 41.2	1.942	2.914	7.1	19.4
6 30	19 16.06	-31 28.2	1.833	2.836	4.3	19.5	6 30	19 16.90	-23 54.2	1.913	2.921	3.2	19.2
7 10	19 7.15	-32 26.8	1.829	2.835	3.7	19.4	7 10	19 7.01	-24 4.9	1.913	2.928	1.1	19.0
7 20	18 58.31	-33 13.5	1.851	2.834	6.5	19.6	7 20	18 57.38	-24 11.5	1.940	2.935	5.0	19.3
7 30	18 50.62	-33 46.7	1.899	2.833	9.8	19.8	7 30	18 48.98	-24 13.7	1.994	2.941	8.7	19.5
8 9	18 44.97	-34 6.6	1.969	2.833	12.9	20.0	8 9	18 42.57	-24 11.8	2.072	2.946	11.9	19.8
96728	1999 <i>NF</i> ₇	7 7.9 284°36 0°3/ 7.9 18					218862	2006 <i>WK</i> ₁₂₃	7 7.9 302°63 1°9/ 8.4 18				
5 31	19 36.47	-21 48.2	1.823	2.660	14.9	19.2	5 31	19 33.97	-17 11.9	1.452	2.301	17.5	20.2
6 10	19 32.33	-21 44.1	1.723	2.639	11.8	18.9	6 10	19 31.08	-17 17.2	1.354	2.275	14.0	19.9
6 20	19 25.62	-21 43.5	1.643	2.618	8.0	18.6	6 20	19 25.22	-17 33.3	1.274	2.249	9.7	19.6
6 30	19 16.85	-21 44.8	1.588	2.596	3.7	18.3	6 30	19 16.85	-17 59.2	1.217	2.224	4.9	19.3
7 10	19 6.93	-21 45.8	1.559	2.575	1.0	18.1	7 10	19 6.96	-18 32.6	1.184	2.199	2.1	19.0
7 20	18 56.98	-21 45.2	1.556	2.553	5.6	18.3	7 20	18 56.85	-19 10.0	1.175	2.173	6.7	19.2
7 30	18 48.19	-21 42.2	1.579	2.531	10.1	18.6	7 30	18 48.02	-19 48.2	1.189	2.149	11.9	19.5
8 9	18 41.57	-21 37.1	1.624	2.509	14.1	18.8	8 9	18 41.73	-20 24.6	1.224	2.124	16.6	19.7
510698	2012 <i>UE</i> ₁₃₈	7 7.9 283°14 3°2/ 6.9 18					338747	2003 <i>UR</i> ₁₆₆	7 7.9 267°25 2°8/ 7.0 18				
5 31	19 36.87	-28 52.9	1.859	2.699	14.6	21.5	5 31	19 36.64	-27 41.8	1.926	2.764	14.2	20.4
6 10	19 32.71	-29 28.8	1.769	2.686	11.5	21.3	6 10	19 32.35	-28 20.2	1.841	2.758	11.1	20.2
6 20	19 25.89	-30 5.5	1.701	2.673	7.9	21.0	6 20	19 25.54	-29 0.2	1.779	2.752	7.6	20.0
6 30	19 16.96	-30 38.3	1.656	2.660	4.4	20.8	6 30	19 16.79	-29 37.3	1.741	2.746	4.1	19.8
7 10	19 6.91	-31 2.7	1.638	2.646	3.5	20.7	7 10	19 7.03	-30 7.4	1.729	2.739	3.0	19.7
7 20	18 56.90	-31 15.9	1.646	2.633	6.6	20.9	7 20	18 57.38	-30 27.5	1.745	2.733	6.2	19.9
7 30	18 48.18	-31 16.9	1.679	2.620	10.4	21.1	7 30	18 48.98	-30 36.6	1.785	2.727	9.9	20.1
8 9	18 41.75	-31 7.4	1.734	2.607	13.9	21.3	8 9	18 42.75	-30 35.7	1.849	2.721	13.3	20.3
170802	2004 <i>DP</i> ₂₉	7 7.9 208°21 0°7/ 8.1 18					328182	2008 <i>DL</i> ₃₆	7 7.9 81°36 0°3/ 7.9 14 C				
5 31	19 34.52	-19 24.9	2.134	2.961	13.4	20.6	5 31	19 38.83	-20 57.5	1.536	2.379	17.0	21.7
6 10	19 30.22	-19 36.4	2.049	2.960	10.5	20.4	6 10	19 34.15	-21 4.6	1.474	2.393	13.2	21.5
6 20	19 23.84	-19 53.5	1.987	2.958	7.0	20.2	6 20	19 26.71	-21 17.5	1.432	2.407	8.8	21.3
6 30	19 15.91	-20 14.5	1.950	2.957	3.3	19.9	6 30	19 17.25	-21 33.3	1.413	2.421	4.0	21.0
7 10	19 7.22	-20 37.3	1.940	2.955	1.0	19.7	7 10	19 6.94	-21 49.2	1.419	2.435	1.1	20.9
7 20	18 58.65	-20 59.7	1.957	2.954	4.7	20.0	7 20	18 57.06	-22 2.9	1.451	2.449	5.9	21.2
7 30	18 51.11	-21 20.3	2.001	2.952	8.4	20.2	7 30	18 48.82	-22 13.3	1.509	2.463	10.3	21.5
8 9	18 45.36	-21 38.2											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
4359	Berlage		7 7.9 302°07	1°1/ 8.1 18	R		146862	2002 AV ₁₅₂		7 7.9 42°02	1°6/ 8.5 17		
5 31	19 35.15	-19 40.6	1.208	2.071	19.4	16.7	5 31	19 32.65	-16 5.9	2.032	2.860	14.0	19.3
6 10	19 32.54	-19 40.1	1.121	2.051	15.4	16.4	6 10	19 28.80	-16 24.9	1.958	2.867	11.0	19.1
6 20	19 26.47	-19 48.4	1.052	2.032	10.6	16.0	6 20	19 22.91	-16 52.4	1.906	2.875	7.5	18.9
6 30	19 17.49	-20 3.9	1.004	2.012	5.0	15.6	6 30	19 15.53	-17 27.0	1.879	2.884	3.8	18.7
7 10	19 6.80	-20 23.6	0.978	1.994	1.6	15.4	7 10	19 7.46	-18 6.2	1.878	2.892	1.7	18.6
7 20	18 56.00	-20 44.3	0.975	1.975	7.4	15.7	7 20	18 59.57	-18 47.2	1.904	2.901	4.8	18.8
7 30	18 46.86	-21 3.4	0.994	1.957	13.2	15.9	7 30	18 52.74	-19 27.5	1.957	2.910	8.4	19.1
8 9	18 40.80	-21 19.7	1.032	1.939	18.4	16.2	8 9	18 47.68	-20 5.3	2.034	2.919	11.6	19.3
99819	2002 LH ₅₂		7 7.9 63°19	3°5/ 8.6 17			397657	2007 YN ₆₃		7 7.9 243°17	0°3/ 8.1 18		
5 31	19 39.54	-14 58.2	1.669	2.493	16.6	19.1	5 31	19 34.20	-19 13.8	2.285	3.109	12.7	21.8
6 10	19 34.08	-14 22.5	1.620	2.525	13.1	18.9	6 10	19 29.95	-19 41.1	2.192	3.101	10.0	21.6
6 20	19 26.27	-13 55.4	1.592	2.556	9.1	18.8	6 20	19 23.71	-20 14.9	2.122	3.093	6.7	21.4
6 30	19 16.91	-13 37.3	1.589	2.588	5.3	18.6	6 30	19 15.93	-20 53.1	2.077	3.085	3.1	21.1
7 10	19 7.06	-13 27.7	1.611	2.620	3.5	18.6	7 10	19 7.34	-21 33.0	2.060	3.076	0.8	20.9
7 20	18 57.79	-13 25.6	1.660	2.651	6.1	18.8	7 20	18 58.78	-22 12.0	2.072	3.068	4.6	21.2
7 30	18 50.07	-13 29.9	1.734	2.682	9.7	19.1	7 30	18 51.12	-22 47.8	2.110	3.059	8.1	21.4
8 9	18 44.58	-13 38.8	1.831	2.713	12.9	19.3	8 9	18 45.12	-23 19.3	2.173	3.050	11.3	21.6
55582	2002 PM ₄₂		7 7.9 264°65	4°3/ 6.3 18			392088	2009 DL ₇₇		7 7.9 222°65	0°5/ 7.8 18		
5 31	19 38.54	-32 56.7	2.243	3.069	12.9	19.6	5 31	19 36.74	-23 40.8	2.308	3.132	12.6	21.9
6 10	19 33.75	-33 43.2	2.143	3.049	10.3	19.4	6 10	19 31.88	-23 47.4	2.215	3.125	9.8	21.7
6 20	19 26.48	-34 28.3	2.065	3.028	7.5	19.2	6 20	19 24.95	-23 55.9	2.146	3.118	6.6	21.5
6 30	19 17.25	-35 6.9	2.013	3.007	5.0	19.0	6 30	19 16.47	-24 4.3	2.102	3.110	3.0	21.3
7 10	19 6.90	-35 34.7	1.988	2.986	4.6	19.0	7 10	19 7.21	-24 10.5	2.086	3.102	1.0	21.1
7 20	18 56.51	-35 48.5	1.990	2.964	6.8	19.1	7 20	18 58.05	-24 13.2	2.098	3.093	4.7	21.4
7 30	18 47.20	-35 47.8	2.018	2.943	9.9	19.2	7 30	18 49.90	-24 11.8	2.138	3.084	8.2	21.6
8 9	18 39.92	-35 34.3	2.070	2.920	12.9	19.4	8 9	18 43.50	-24 6.7	2.201	3.075	11.4	21.8
157874	1999 JM ₁₅		7 7.9 343°70	18°8/10.1 16			49009	1998 QZ ₆₈		7 7.9 343°85	4°0/ 8.4 18		
5 31	19 23.12	+ 7 50.3	1.142	1.944	24.0	19.1	5 31	19 32.98	-16 21.6	1.228	2.088	19.3	17.6
6 10	19 22.85	+10 12.4	1.072	1.922	22.3	18.8	6 10	19 30.41	-15 38.2	1.154	2.080	15.4	17.3
6 20	19 19.75	+12 9.0	1.016	1.903	20.6	18.7	6 20	19 24.71	-15 2.9	1.097	2.072	10.9	17.1
6 30	19 14.36	+13 28.1	0.976	1.885	19.3	18.5	6 30	19 16.56	-14 37.1	1.062	2.066	6.2	16.8
7 10	19 7.67	+14 0.4	0.951	1.870	18.8	18.4	7 10	19 7.18	-14 21.4	1.049	2.060	4.1	16.6
7 20	19 0.96	+13 41.6	0.942	1.856	19.3	18.4	7 20	18 58.01	-14 15.4	1.059	2.056	7.7	16.8
7 30	18 55.64	+12 33.7	0.948	1.845	20.7	18.4	7 30	18 50.52	-14 18.2	1.091	2.052	12.5	17.1
8 9	18 52.88	+10 45.6	0.970	1.837	22.7	18.5	8 9	18 45.81	-14 27.6	1.142	2.049	17.0	17.3
131023	2000 XK ₃₈		7 7.9 188°63	7°0/ 5.1 18			102627	1999 VZ ₂₇		7 7.9 274°18	3°7/ 8.5 18		
5 31	19 43.55	-41 38.2	2.371	3.175	12.9	20.5	5 31	19 34.31	-13 18.6	2.342	3.151	12.9	19.3
6 10	19 37.67	-42 48.3	2.295	3.174	10.8	20.4	6 10	19 29.86	-12 35.6	2.245	3.138	10.4	19.1
6 20	19 29.07	-43 51.5	2.240	3.173	8.7	20.3	6 20	19 23.54	-11 58.1	2.170	3.126	7.6	18.9
6 30	19 18.39	-44 41.1	2.211	3.171	7.2	20.2	6 30	19 15.82	-11 27.4	2.121	3.114	4.8	18.7
7 10	19 6.63	-45 12.0	2.208	3.169	7.2	20.2	7 10	19 7.40	-11 4.1	2.098	3.101	3.7	18.6
7 20	18 55.01	-45 21.6	2.232	3.166	8.6	20.2	7 20	18 59.04	-10 48.4	2.104	3.089	5.6	18.7
7 30	18 44.77	-45 10.6	2.281	3.163	10.7	20.4	7 30	18 51.56	-10 40.1	2.136	3.076	8.6	18.9
8 9	18 36.87	-44 42.6	2.351	3.158	12.9	20.5	8 9	18 45.64	-10 38.3	2.192	3.064	11.5	19.0
520842	2014 UQ ₂₃₇		7 7.9 141°21	1°7/ 7.4 17			504443	2008 CU		7 7.9 108°83	6°4/ 5.3 17		
5 31	19 40.20	-23 38.7	1.611	2.451	16.4	22.0	5 31	19 42.94	-42 48.4	2.762	3.556	11.5	22.1
6 10	19 35.38	-24 21.5	1.540	2.458	12.8	21.7	6 10	19 36.62	-43 55.0	2.708	3.579	9.6	22.0
6 20	19 27.68	-25 9.7	1.489	2.464	8.6	21.5	6 20	19 28.03	-44 53.3	2.677	3.602	7.8	21.9
6 30	19 17.79	-25 58.5	1.462	2.470	4.0	21.3	6 30	19 17.81	-45 38.2	2.671	3.624	6.5	21.8
7 10	19 6.82	-26 42.7	1.462	2.476	2.1	21.1	7 10	19 6.89	-46 5.9	2.693	3.646	6.5	21.9
7 20	18 56.10	-27 18.4	1.488	2.481	6.3	21.4	7 20	18 56.27	-46 15.1	2.742	3.667	7.6	22.0
7 30	18 46.94	-27 43.7	1.539	2.486	10.7	21.7	7 30	18 46.93	-46 6.6	2.816	3.688	9.3	22.1
8 9	18 40.35	-27 59.2	1.612	2.491	14.5	21.9	8 9	18 39.62	-45 43.7	2.913	3.708	11.0	22.3
301866	1995 TR ₈		7 7.9 164°52	7°8/ 4.9 18			490214	2008 VF ₄		7 7.9 245°86	0°4/ 8.0 18		
5 31	19 42.73	-45 51.5	2.476	3.269	12.7	21.2	5 31	19 36.98	-21 12.7	2.106	2.932	13.6	22.3
6 10	19 37.00	-46 56.1	2.406	3.272	10.9	21.1	6 10	19 32.30	-21 12.5	2.010	2.920	10.7	22.1
6 20	19 28.59	-47 51.1	2.359	3.274	9.1	20.9	6 20	19 25.37	-21 16.0	1.935	2.907	7.2	21.9
6 30	19 18.14	-48 30.1	2.335	3.276	8.0	20.9	6 30	19 16.72	-21 21.5	1.886	2.893	3.3	21.6
7 10	19 6.73	-48 48.6	2.337	3.278	8.0	20.9	7 10	19 7.16	-21 27.1	1.863	2.879	0.9	21.4
7 20	18 55.58	-48 44.7	2.364	3.279	9.1	21.0	7 20	18 57.64	-21 31.5	1.869	2.865	5.0	21.7
7 30	18 45.89	-48 19.9	2.416	3.280	10.8	21.1	7 30	18 49.17	-21 33.9	1.902	2.851	8.9	21.9
8 9	18 38.58	-47 38.2	2.489	3.282	12.7	21.2	8 9	18 42.58	-21 34.2	1.958	2.836	12.3	22.1
506604	2006 BP ₂₀		7 7.9 176°20	1°1/ 7.8 17			296548	2009 PG ₁₅		7 7.9 331°88	2°9/ 8.6 18		
5 31	19 39.93	-26 18.8	1.818	2.653	15.1	21.6	5 31	19 30.87	-16 4.7	1.228	2.091	19.1	20.0
6 10	19 34.79	-26 6.0	1.738	2.653	11.8	21.3	6 10	19 28.92	-15 56.3	1.147	2.076	15.3	19.7
6 20	19 27.06	-25 52.1	1.680	2.654	7.9	21.1	6 20	19 23.86	-15 59.9	1.084	2.061	10.7	19.4
6 30	19 17.43	-25 34.9	1.646	2.654	3.7	20.8	6 30	19 16.26	-16 15.4	1.041	2.047	5.7	19.1
7 10	19 6.94	-25 12.5	1.639	2.654	1.5	20.7	7 10	19 7.25	-16 41.1	1.021	2.035	3.0	18.9
7 20	18 56.77	-24 44.8	1.659	2.654	5.6	21.0	7 20	18 58.27	-17 14.0	1.023	2.023	7.3	19.1
7 30	18 48.06	-24 12.9	1.704	2.654	9.7	21.2	7 30	18 50.84	-17 50.4	1.048	2.012	12.5	19.4
8 9	18 41.66	-23 38.7	1.773	2.654	13.3	21.4	8 9	18 46.21	-18 27.2	1.091	2.003	17.2	19.6
352076	2006 WN ₁₃₀		7 7.9 163°16	0°3/ 7.8 18			100094	1993 FJ ₁₃		7 7.9 277°77	5°2/ 5.9 18		
5 31	19 37.09	-24 10.9	2.537	3.356	11.7	21.5	5 31	19 37.45	-35 10.5	2.174	3.002	13.2	19.1
6 10	19 31.80	-23 59.9	2.453	3.360	9.1	21.3	6 10	19 32.97	-36 4.4	2.087	2.991	10.6	18.9
6 20	19 24.68	-23 49.3	2.392	3.363	6.1	21.1	6 20	19 25.99	-36 55.2	2.021	2.980	7.9	18.8
6 30	19 16.26	-23 37.5	2.358	3.366	2.7	20.9	6 30	19 17.04	-37 37.6	1.981	2.968	5.7	18.6
7 10	19 7.26	-23 23.7	2.353	3.369	0.8	20.7	7 10	19 7.06	-38 6.8	1.967	2.957	5.5	18.6
7 20	18 58.48	-23 7.2	2.376	3.371	4.2	21.0	7 20	18 57.14	-38 19.9	1.979	2.946	7.4	18.7
7 30	18 50.70	-22 48.5	2.427	3.373	7.4	21.2	7 30	18 48.42	-38 16.6	2.017	2.934	10.2	18.8
8 9	18 44.53	-22 28.2	2.504	3.375	10.2	21.4	8 9	18 41.84	-37 59.3	2.077	2.923	13.0	19.0

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
485435	2011 <i>QG</i> ₅₆	7 7.9 301°47	6°3/ 9.6 18				347155	2011 <i>ET</i> ₁₉	7 7.9 42°86	6°5/ 6.6 17			
5 31	19 32.18	— 6 43.5	1.852	2.659	15.9	21.1	5 31	19 40.27	—35 40.3	1.481	2.328	17.3	20.1
6 10	19 28.91	— 6 17.8	1.747	2.632	13.3	20.9	6 10	19 35.90	—36 29.5	1.424	2.339	13.9	19.9
6 20	19 23.34	— 6 6.0	1.661	2.605	10.3	20.6	6 20	19 28.20	—37 12.4	1.387	2.351	10.2	19.7
6 30	19 15.90	— 6 10.6	1.598	2.579	7.5	20.4	6 30	19 18.06	—37 41.6	1.372	2.363	7.2	19.6
7 10	19 7.36	— 6 32.2	1.559	2.552	6.3	20.3	7 10	19 6.89	—37 51.5	1.381	2.375	6.7	19.6
7 20	18 58.66	— 7 10.2	1.545	2.525	7.8	20.3	7 20	18 56.28	—37 40.3	1.414	2.388	9.0	19.8
7 30	18 50.88	— 8 1.7	1.556	2.499	11.0	20.4	7 30	18 47.70	—37 10.0	1.470	2.401	12.4	20.0
8 9	18 44.96	— 9 2.7	1.589	2.472	14.5	20.6	8 9	18 42.13	—36 25.9	1.548	2.415	15.6	20.2
283702	2002 <i>RV</i> ₂₄₃	7 7.9 291°91	4°4/ 9.3 18				40512	1999 <i>RP</i> ₈₈	7 7.9 286°79	0°1/ 7.9 18			
5 31	19 32.88	—10 7.2	1.903	2.718	15.2	21.3	5 31	19 35.82	—21 37.5	1.793	2.632	15.1	19.3
6 10	19 29.34	— 9 59.5	1.804	2.699	12.4	21.1	6 10	19 31.80	—21 40.3	1.704	2.621	11.8	19.1
6 20	19 23.54	—10 4.4	1.725	2.680	9.2	20.8	6 20	19 25.25	—21 47.4	1.636	2.610	8.0	18.8
6 30	19 15.97	—10 22.6	1.669	2.662	6.0	20.6	6 30	19 16.74	—21 56.9	1.591	2.600	3.6	18.5
7 10	19 7.38	—10 53.7	1.639	2.643	4.4	20.5	7 10	19 7.22	—22 6.4	1.573	2.589	1.0	18.3
7 20	18 58.73	—11 35.7	1.635	2.624	6.5	20.6	7 20	18 57.78	—22 14.1	1.581	2.579	5.5	18.6
7 30	18 51.04	—12 25.5	1.657	2.606	10.0	20.7	7 30	18 49.58	—22 19.0	1.615	2.568	9.8	18.8
8 9	18 45.20	—13 19.7	1.702	2.587	13.5	20.9	8 9	18 43.54	—22 20.9	1.671	2.558	13.6	19.0
73822	1995 <i>WM</i> ₃₁	7 7.9 328°87	1°7/ 8.3 18				477877	2011 <i>HE</i> ₆₄	7 7.9 32°66	7°7/ 9.6 17			
5 31	19 33.09	—18 1.4	1.608	2.453	16.2	19.5	5 31	19 33.76	— 6 26.4	1.534	2.351	18.2	21.1
6 10	19 29.87	—17 56.3	1.523	2.443	12.8	19.2	6 10	19 30.13	— 5 23.9	1.470	2.359	15.1	20.9
6 20	19 24.05	—17 58.8	1.459	2.433	8.8	18.9	6 20	19 24.03	— 4 36.5	1.424	2.367	11.8	20.8
6 30	19 16.22	—18 8.0	1.417	2.424	4.4	18.7	6 30	19 16.12	— 4 7.8	1.400	2.376	8.9	20.6
7 10	19 7.33	—18 22.2	1.400	2.415	1.9	18.5	7 10	19 7.41	— 3 59.4	1.400	2.386	7.7	20.6
7 20	18 58.53	—18 39.2	1.409	2.407	5.9	18.7	7 20	18 59.01	— 4 10.7	1.423	2.396	9.1	20.7
7 30	18 51.03	—18 57.4	1.442	2.399	10.4	19.0	7 30	18 51.99	— 4 39.0	1.469	2.407	11.9	20.9
8 9	18 45.79	—19 15.2	1.496	2.392	14.4	19.2	8 9	18 47.16	— 5 19.6	1.537	2.417	15.0	21.1
189535	2000 <i>QS</i> ₉₄	7 7.9 287°19	0°9/ 7.6 18				153248	2001 <i>BU</i> ₆	7 7.9 143°92	2°3/ 7.4 18			
5 31	19 36.81	—22 28.6	1.782	2.620	15.2	20.0	5 31	19 38.36	—30 58.5	2.792	3.607	10.9	20.7
6 10	19 32.93	—22 58.1	1.673	2.591	12.0	19.7	6 10	19 32.67	—30 59.7	2.713	3.615	8.5	20.5
6 20	19 26.30	—23 34.4	1.586	2.561	8.1	19.4	6 20	19 25.21	—30 57.7	2.657	3.623	5.9	20.4
6 30	19 17.36	—24 13.3	1.523	2.531	3.8	19.1	6 30	19 16.52	—30 50.3	2.628	3.630	3.3	20.2
7 10	19 6.99	—24 53.7	1.486	2.501	1.5	18.8	7 10	19 7.32	—30 35.8	2.628	3.637	2.4	20.2
7 20	18 56.36	—25 28.8	1.475	2.470	6.1	19.1	7 20	18 58.40	—30 13.9	2.657	3.643	4.5	20.3
7 30	18 46.80	—25 56.9	1.490	2.440	10.8	19.3	7 30	18 50.48	—29 45.4	2.715	3.650	7.2	20.5
8 9	18 39.48	—26 17.3	1.527	2.409	15.0	19.5	8 9	18 44.17	—29 11.9	2.797	3.655	9.7	20.7
167250	2003 <i>UQ</i> ₉₉	7 7.9 265°07	8°0/10.0 18				318569	2005 <i>GA</i> ₁₃₅	7 7.9 9°82	2°2/ 8.3 17			
5 31	19 33.25	— 1 35.2	2.071	2.847	15.5	20.1	5 31	19 32.11	—18 20.5	1.101	1.973	20.2	20.5
6 10	19 29.32	— 0 46.0	1.979	2.835	13.2	19.9	6 10	19 29.95	—18 4.5	1.041	1.975	15.9	20.2
6 20	19 23.35	— 0 11.2	1.906	2.822	10.9	19.7	6 20	19 24.48	—17 57.9	0.997	1.978	10.9	20.0
6 30	19 15.81	+ 0 6.0	1.855	2.809	8.8	19.6	6 30	19 16.48	—18 0.2	0.974	1.982	5.5	19.7
7 10	19 7.44	+ 0 3.6	1.829	2.796	8.0	19.5	7 10	19 7.32	—18 9.4	0.972	1.987	2.4	19.5
7 20	18 59.08	— 0 18.2	1.828	2.783	8.9	19.5	7 20	18 58.54	—18 22.9	0.993	1.994	7.2	19.8
7 30	18 51.62	— 0 57.3	1.852	2.770	11.0	19.6	7 30	18 51.68	—18 38.6	1.035	2.001	12.4	20.1
8 9	18 45.83	— 1 49.8	1.898	2.756	13.6	19.8	8 9	18 47.78	—18 54.5	1.097	2.010	17.0	20.4
120863	1998 <i>QF</i> ₉₄	7 7.9 280°61	8°9/12.3 18				419851	2011 <i>AY</i> ₉	7 7.9 159°17	0°5/ 7.8 17			
5 31	19 31.67	+ 7 26.4	2.555	3.269	14.3	19.7	5 31	19 40.07	—23 26.1	1.911	2.740	14.7	21.9
6 10	19 27.78	+ 7 45.2	2.449	3.248	12.8	19.6	6 10	19 34.77	—23 29.8	1.834	2.745	11.4	21.7
6 20	19 22.18	+ 7 45.5	2.363	3.227	11.1	19.4	6 20	19 27.02	—23 35.9	1.777	2.750	7.6	21.5
6 30	19 15.25	+ 7 24.2	2.297	3.205	9.7	19.3	6 30	19 17.46	—23 41.7	1.746	2.754	3.5	21.2
7 10	19 7.59	+ 6 40.2	2.256	3.184	8.9	19.2	7 10	19 7.08	—23 45.1	1.742	2.758	1.1	21.1
7 20	18 59.87	+ 5 34.2	2.240	3.162	9.2	19.2	7 20	18 56.96	—23 44.5	1.766	2.761	5.3	21.4
7 30	18 52.83	+ 4 9.0	2.249	3.140	10.5	19.2	7 30	18 48.18	—23 39.8	1.816	2.764	9.3	21.6
8 9	18 47.11	+ 2 29.4	2.282	3.118	12.4	19.3	8 9	18 41.57	—23 31.7	1.889	2.766	12.8	21.8
145736	1995 <i>SN</i> ₉	7 7.9 281°23	1°6/ 8.4 18				429619	2011 <i>FB</i> ₃₃	7 7.9 1°70	1°1/ 7.6 17			
5 31	19 33.99	—17 7.4	2.276	3.097	12.9	21.1	5 31	19 33.49	—22 16.5	1.448	2.305	17.0	20.6
6 10	19 29.89	—17 8.5	2.167	3.072	10.2	20.9	6 10	19 30.51	—22 54.9	1.376	2.304	13.3	20.4
6 20	19 23.77	—17 15.9	2.080	3.048	7.1	20.6	6 20	19 24.64	—23 40.8	1.324	2.303	8.9	20.1
6 30	19 16.03	—17 29.0	2.018	3.023	3.6	20.4	6 30	19 16.54	—24 29.9	1.294	2.304	4.1	19.8
7 10	19 7.38	—17 46.3	1.984	2.998	1.7	20.2	7 10	19 7.31	—25 17.3	1.289	2.305	1.7	19.7
7 20	18 58.65	—18 6.3	1.977	2.972	4.8	20.4	7 20	18 58.26	—25 58.4	1.309	2.306	6.4	20.0
7 30	18 50.75	—18 27.4	1.997	2.947	8.5	20.5	7 30	18 50.75	—26 30.7	1.352	2.308	11.1	20.3
8 9	18 44.46	—18 48.3	2.041	2.921	11.8	20.7	8 9	18 45.80	—26 53.5	1.417	2.311	15.1	20.5
445506	2010 <i>WY</i> ₃	7 7.9 247°79	0°1/ 7.9 18				510325	2011 <i>SS</i> ₂₂	7 7.9 290°33	2°5/ 7.3 18			
5 31	19 33.73	—22 7.6	2.713	3.533	11.0	22.3	5 31	19 36.33	—28 2.8	1.954	2.792	14.0	21.5
6 10	19 29.29	—22 18.3	2.613	3.520	8.6	22.1	6 10	19 32.13	—28 25.0	1.864	2.781	11.0	21.3
6 20	19 23.12	—22 31.7	2.536	3.507	5.8	21.9	6 20	19 25.44	—28 47.5	1.796	2.769	7.5	21.0
6 30	19 15.65	—22 46.4	2.486	3.493	2.6	21.7	6 30	19 16.84	—29 6.6	1.752	2.757	4.0	20.8
7 10	19 7.50	—23 0.4	2.464	3.480	0.7	21.5	7 10	19 7.23	—29 18.8	1.734	2.745	2.8	20.7
7 20	18 59.39	—23 12.5	2.470	3.466	4.0	21.7	7 20	18 57.72	—29 21.9	1.743	2.734	6.0	20.9
7 30	18 52.04	—23 21.8	2.505	3.451	7.2	21.9	7 30	18 49.42	—29 15.7	1.778	2.722	9.7	21.1
8 9	18 46.11	—23 28.0	2.565	3.437	10.0	22.1	8 9	18 43.25	—29 1.4	1.835	2.711	13.2	21.3
305971	2009 <i>HM</i> ₇₅	7 7.9 349°45	0°9/ 7.5 18				411182	2010 <i>GQ</i> ₁₃₇	7 7.9 351°18	3°2/ 7.3 17			
5 31	19 33.98	—21 58.8	2.029	2.865	13.7	20.2	5 31	19 30.71	—25 58.3	0.935	1.827	21.3	20.4
6 10	19 30.06	—22 42.1	1.948	2.864	10.6	20.0	6 10	19 29.82	—26 32.7	0.872	1.819	16.7	20.1
6 20	19 23.92	—23 31.4	1.888	2.862	7.1	19.8	6 20	19 24.98	—27 12.4	0.825	1.812	11.4	19.8
6 30	19 16.08	—24 23.2	1.853	2.862	3.2	19.5	6 30	19 16.92	—27 51.0	0.797	1.807	5.7	19.5
7 10	19 7.38	—25 13.7	1.846	2.861	1.4	19.4	7 10	19 7.20	—28 21.6	0.790	1.803	3.7	19.3
7 20	18 58.77	—25 59.4	1.865	2.860	5.1	19.7	7 20	18 57.75	—28 38.8	0.802	1.801	8.9	19.6
7 30	18 51.23	—26 38.0	1.911	2.860	8.9	19.							

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
29074	5160 T_{-3}		7 7.9 356°07	8°8/11.5 18	R		77006	2001 CT_5		7 7.9 268°51	0°9/ 8.2 18		
5 31	19 27.34	— 1 47.2	1.395	2.214	19.6	17.6	5 31	19 36.72	—18 3.9	1.565	2.405	16.8	19.6
6 10	19 25.57	— 1 27.0	1.321	2.208	16.7	17.4	6 10	19 32.95	—18 28.4	1.475	2.392	13.3	19.3
6 20	19 21.27	— 1 30.6	1.265	2.203	13.5	17.2	6 20	19 26.32	—19 3.7	1.405	2.379	9.1	19.0
6 30	19 15.00	— 2 1.7	1.228	2.199	10.5	17.0	6 30	19 17.37	—19 47.3	1.359	2.366	4.3	18.7
7 10	19 7.72	— 3 0.4	1.212	2.197	8.8	16.9	7 10	19 7.10	—20 35.6	1.337	2.353	1.3	18.5
7 20	19 0.56	— 4 23.1	1.219	2.197	9.7	17.0	7 20	18 56.79	—21 24.0	1.341	2.340	6.2	18.8
7 30	18 54.68	— 6 3.4	1.249	2.197	12.5	17.1	7 30	18 47.79	—22 9.3	1.371	2.326	11.0	19.0
8 9	18 51.04	— 7 52.6	1.299	2.200	15.8	17.3	8 9	18 41.24	—22 49.1	1.422	2.312	15.3	19.2
413402	2004 SM_3		7 7.9 261°63	0°6/ 8.1 18			245411	2005 JO_{15}		7 7.9 316°85	1°0/ 7.6 18		
5 31	19 38.05	—19 6.6	1.492	2.335	17.4	21.2	5 31	19 34.78	—23 28.0	1.903	2.743	14.3	20.5
6 10	19 34.17	—19 27.5	1.402	2.321	13.7	21.0	6 10	19 30.85	—23 51.4	1.820	2.738	11.2	20.3
6 20	19 27.25	—19 58.3	1.331	2.307	9.4	20.7	6 20	19 24.55	—24 18.6	1.758	2.733	7.5	20.0
6 30	19 17.82	—20 36.5	1.284	2.292	4.4	20.3	6 30	19 16.43	—24 46.9	1.720	2.728	3.4	19.8
7 10	19 6.96	—21 18.0	1.261	2.277	1.2	20.1	7 10	19 7.39	—25 12.8	1.708	2.724	1.4	19.6
7 20	18 56.02	—21 58.8	1.263	2.261	6.5	20.4	7 20	18 58.46	—25 33.9	1.724	2.719	5.4	19.9
7 30	18 46.49	—22 35.5	1.290	2.246	11.6	20.6	7 30	18 50.73	—25 48.8	1.765	2.715	9.4	20.1
8 9	18 39.58	—23 6.7	1.338	2.230	16.1	20.8	8 9	18 45.03	—25 57.5	1.829	2.711	12.9	20.3
1290	Albertine		7 7.9 275°04	1°5/ 7.7 18			344174	2001 BF_{30}		7 7.9 232°18	1°7/ 7.7 18		
5 31	19 39.49	—25 59.9	1.598	2.441	16.4	16.6	5 31	19 40.81	—28 18.8	1.967	2.796	14.3	20.2
6 10	19 35.16	—26 3.5	1.505	2.425	12.9	16.4	6 10	19 35.41	—28 7.0	1.880	2.791	11.2	20.0
6 20	19 27.81	—26 7.9	1.433	2.408	8.8	16.1	6 20	19 27.49	—27 52.5	1.815	2.786	7.6	19.8
6 30	19 18.03	—26 9.7	1.383	2.391	4.2	15.8	6 30	19 17.71	—27 32.6	1.775	2.781	3.7	19.5
7 10	19 6.92	—26 5.7	1.359	2.374	2.0	15.6	7 10	19 7.07	—27 5.7	1.762	2.776	2.0	19.4
7 20	18 55.86	—25 54.1	1.361	2.357	6.5	15.8	7 20	18 56.70	—26 31.4	1.777	2.771	5.5	19.6
7 30	18 46.28	—25 34.9	1.388	2.340	11.2	16.1	7 30	18 47.71	—25 51.3	1.819	2.765	9.4	19.8
8 9	18 39.33	—25 10.3	1.436	2.322	15.5	16.3	8 9	18 40.93	—25 7.9	1.884	2.759	12.9	20.0
130491	2000 QT_{117}		7 7.9 285°05	4°1/ 8.9 18			236555	2006 HK_{59}		7 7.9 349°72	7°3/ 6.5 17		
5 31	19 35.75	—11 52.8	1.872	2.688	15.4	21.0	5 31	19 40.19	—38 46.6	1.656	2.493	16.2	19.8
6 10	19 31.81	—11 38.6	1.759	2.656	12.6	20.7	6 10	19 35.85	—39 31.4	1.584	2.490	13.3	19.6
6 20	19 25.40	—11 35.1	1.665	2.624	9.3	20.4	6 20	19 28.25	—40 8.1	1.532	2.487	10.2	19.4
6 30	19 16.93	—11 43.2	1.596	2.591	5.8	20.1	6 30	19 18.18	—40 29.7	1.503	2.485	7.8	19.2
7 10	19 7.19	—12 2.7	1.551	2.558	4.2	20.0	7 10	19 6.94	—40 30.4	1.498	2.483	7.4	19.2
7 20	18 57.18	—12 32.4	1.534	2.524	6.6	20.0	7 20	18 56.08	—40 8.3	1.517	2.482	9.4	19.3
7 30	18 48.07	—13 9.8	1.542	2.490	10.6	20.2	7 30	18 47.09	—39 25.6	1.560	2.481	12.4	19.5
8 9	18 40.90	—13 52.2	1.572	2.455	14.6	20.4	8 9	18 41.01	—38 27.7	1.623	2.481	15.5	19.7
510667	2012 UB_1		7 7.9 274°73	11°5/ 4.9 18			24389	2000 AA_{177}		7 7.9 306°10	4°6/ 9.7 18		
5 31	19 39.49	—54 28.2	2.200	2.950	15.4	21.7	5 31	19 32.54	— 9 8.8	1.753	2.571	16.2	18.1
6 10	19 52.26	—55 25.1	2.098	2.918	13.9	21.5	6 10	19 29.25	— 9 14.9	1.661	2.558	13.2	17.9
6 20	19 39.71	—56 7.0	2.015	2.886	12.5	21.4	6 20	19 23.59	— 9 36.5	1.589	2.545	9.8	17.7
6 30	19 23.54	—56 23.1	1.955	2.853	11.6	21.2	6 30	19 16.05	—10 14.4	1.539	2.532	6.4	17.4
7 10	19 5.48	—56 4.8	1.917	2.819	11.6	21.2	7 10	19 7.48	—11 7.1	1.514	2.519	4.6	17.3
7 20	18 47.79	—55 9.0	1.904	2.784	12.7	21.2	7 20	18 58.87	—12 11.4	1.516	2.507	6.6	17.4
7 30	18 32.67	—53 38.7	1.914	2.749	14.5	21.2	7 30	18 51.32	—13 22.8	1.542	2.494	10.3	17.6
8 9	18 21.58	—51 42.7	1.945	2.713	16.6	21.3	8 9	18 45.75	—14 36.7	1.592	2.482	14.0	17.8
357934	2005 XR_{55}		7 7.9 49°23	0°9/ 7.7 18			187293	2005 TV_{121}		7 7.9 308°85	4°7/ 9.4 18		
5 31	19 34.20	—23 54.2	2.118	2.953	13.2	21.3	5 31	19 32.17	— 9 16.0	2.170	2.975	13.9	20.2
6 10	19 29.99	—24 11.1	2.047	2.963	10.2	21.1	6 10	19 28.36	— 8 52.2	2.083	2.970	11.4	20.1
6 20	19 23.71	—24 30.4	1.999	2.973	6.8	20.9	6 20	19 22.64	— 8 39.0	2.017	2.966	8.5	19.9
6 30	19 15.94	—24 49.6	1.975	2.983	3.1	20.7	6 30	19 15.50	— 8 37.3	1.975	2.961	5.9	19.7
7 10	19 7.51	—25 6.2	1.979	2.994	1.3	20.5	7 10	19 7.67	— 8 47.1	1.960	2.957	4.7	19.6
7 20	18 59.33	—25 18.5	2.009	3.005	4.8	20.8	7 20	18 59.92	— 9 7.5	1.970	2.953	6.2	19.7
7 30	18 52.28	—25 25.7	2.067	3.016	8.3	21.0	7 30	18 53.09	— 9 36.5	2.007	2.949	8.9	19.9
8 9	18 47.06	—25 28.1	2.148	3.027	11.4	21.3	8 9	18 47.86	—10 11.6	2.068	2.945	11.8	20.0
436942	2012 TO_{133}		7 7.9 250°65	3°3/ 9.0 18			47330	1999 XQ_{31}		7 7.9 2°97	2°1/ 8.8 18	R	
5 31	19 34.56	—12 30.6	2.008	2.823	14.5	21.6	5 31	19 32.62	—14 33.6	1.626	2.464	16.4	17.9
6 10	19 30.46	—12 27.0	1.916	2.814	11.7	21.4	6 10	19 29.41	—14 59.2	1.550	2.464	13.0	17.7
6 20	19 24.18	—12 33.7	1.844	2.804	8.4	21.1	6 20	19 23.71	—15 37.8	1.493	2.464	9.0	17.4
6 30	19 16.24	—12 50.7	1.797	2.795	5.0	20.9	6 30	19 16.09	—16 27.6	1.459	2.464	4.7	17.2
7 10	19 7.41	—13 17.0	1.776	2.785	3.4	20.8	7 10	19 7.51	—17 25.3	1.451	2.465	2.2	17.0
7 20	18 58.61	—13 50.4	1.783	2.774	5.7	20.9	7 20	18 59.05	—18 26.5	1.469	2.467	5.8	17.3
7 30	18 50.81	—14 28.7	1.815	2.764	9.2	21.1	7 30	18 51.85	—19 27.0	1.511	2.469	10.0	17.5
8 9	18 44.81	—15 9.2	1.871	2.754	12.6	21.3	8 9	18 46.83	—20 23.6	1.576	2.471	13.8	17.7
131846	2002 AU_{120}		7 7.9 173°05	1°1/ 7.7 17			146107	2000 QL_{88}		7 7.9 225°86	1°6/ 7.6 18		
5 31	19 41.31	—23 34.9	1.734	2.567	15.7	20.9	5 31	19 37.26	—27 33.0	2.293	3.120	12.6	19.9
6 10	19 36.09	—23 58.2	1.656	2.570	12.3	20.7	6 10	19 32.31	—27 33.6	2.206	3.117	9.8	19.7
6 20	19 28.11	—24 25.3	1.599	2.573	8.2	20.4	6 20	19 25.27	—27 33.1	2.142	3.113	6.6	19.5
6 30	19 18.05	—24 52.8	1.567	2.575	3.8	20.2	6 30	19 16.68	—27 29.0	2.104	3.110	3.3	19.3
7 10	19 6.95	—25 16.7	1.561	2.576	1.5	20.0	7 10	19 7.37	—27 19.6	2.093	3.106	1.8	19.2
7 20	18 56.07	—25 34.3	1.582	2.576	5.9	20.3	7 20	18 58.26	—27 3.9	2.110	3.103	4.9	19.4
7 30	18 46.66	—25 44.5	1.628	2.576	10.2	20.6	7 30	18 50.26	—26 42.6	2.155	3.099	8.3	19.6
8 9	18 39.66	—25 48.1	1.698	2.576	13.9	20.8	8 9	18 44.09	—26 16.9	2.223	3.095	11.3	19.8
465599	2009 BS_{141}		7 7.9 37°83	2°7/ 7.5 17			339432	2005 EQ_{86}		7 7.9 120°61	3°7/ 6.9 17		
5 31	19 38.87	—27 9.7	1.191	2.056	19.5	21.4	5 31	19 40.22	—32 16.8	2.198	3.022	13.2	21.6
6 10	19 35.18	—27 28.0	1.133	2.064	15.2	21.2	6 10	19 34.70	—32 48.7	2.129	3.035	10.4	21.4
6 20	19 27.94	—27 47.1	1.093	2.072	10.3	20.9	6 20	19 26.88	—33 17.4	2.083	3.047	7.3	21.2
6 30	19 18.03	—28 1.9	1.073	2.081	5.1	20.7	6 30	19 17.40	—33 38.8	2.062	3.059	4.5	21.1
7 10	19 6.97	—28 7.7	1.077	2.091	3.1	20.6	7 10	19 7.21	—33 49.4	2.069	3.071	3.9	21.1
7 20	18 56.46	—28 2.1	1.105	2.101	7.6	20.9	7 20	18 57.34	—33 47.7	2.103	3.082	6.1	21.2
7 30	18 48.10	—27 46.1	1.154	2.111	12.5	21.2	7 30	18 48.79	—33 34.5	2.163	3.093	9.0	21.4

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
42589	1997 <i>GP</i> ₃₃		7 7.9 207°63	1°6/ 8.4 18			250352	2003 <i>SA</i> ₂₁₇		7 7.9 242°01	1°6/ 7.6 17		
5 31	19 35.79	−17 31.0	2.041	2.865	14.0	19.5	5 31	19 40.44	−25 6.8	1.712	2.549	15.8	21.4
6 10	19 31.35	−17 31.3	1.956	2.863	11.1	19.3	6 10	19 35.71	−25 25.7	1.621	2.537	12.4	21.1
6 20	19 24.73	−17 38.2	1.891	2.860	7.6	19.1	6 20	19 28.10	−25 47.4	1.550	2.524	8.4	20.8
6 30	19 16.49	−17 50.6	1.852	2.857	3.8	18.9	6 30	19 18.19	−26 8.2	1.503	2.511	4.0	20.6
7 10	19 7.44	−18 6.8	1.840	2.854	1.7	18.7	7 10	19 7.03	−26 24.2	1.483	2.497	2.0	20.4
7 20	18 58.50	−18 25.1	1.855	2.851	5.0	18.9	7 20	18 55.90	−26 32.6	1.489	2.483	6.2	20.6
7 30	18 50.64	−18 44.0	1.896	2.847	8.8	19.2	7 30	18 46.16	−26 32.8	1.520	2.469	10.7	20.8
8 9	18 44.64	−19 2.2	1.962	2.844	12.2	19.4	8 9	18 38.89	−26 25.8	1.574	2.453	14.7	21.1
67663	2000 <i>SG</i> ₂₆₈		7 7.9 128°15	4°8/ 6.6 17			46524	1979 <i>QH</i> ₂		7 7.9 273°55	0°2/ 7.9 18		
5 31	19 41.58	−30 43.7	1.508	2.353	17.1	19.3	5 31	19 36.13	−22 25.0	2.058	2.889	13.7	20.0
6 10	19 36.95	−31 40.8	1.439	2.358	13.5	19.0	6 10	19 31.84	−22 32.5	1.958	2.871	10.7	19.7
6 20	19 29.04	−32 37.6	1.391	2.362	9.5	18.8	6 20	19 25.24	−22 43.5	1.879	2.852	7.2	19.5
6 30	19 18.59	−33 27.0	1.367	2.366	5.9	18.6	6 30	19 16.81	−22 56.0	1.825	2.833	3.3	19.2
7 10	19 6.92	−34 2.2	1.367	2.370	5.1	18.6	7 10	19 7.39	−23 7.7	1.798	2.814	0.9	19.0
7 20	18 55.54	−34 19.7	1.392	2.374	8.2	18.8	7 20	18 57.95	−23 16.6	1.799	2.795	5.1	19.2
7 30	18 46.00	−34 19.3	1.441	2.378	12.1	19.0	7 30	18 49.54	−23 21.8	1.826	2.776	9.1	19.4
8 9	18 39.40	−34 4.4	1.511	2.382	15.7	19.2	8 9	18 43.05	−23 23.3	1.876	2.756	12.7	19.6
251405	2007 <i>YT</i> ₃₁		7 7.9 196°61	1°0/ 8.2 17			104259	2000 <i>EK</i> ₁₄₂		7 7.9 234°20	0°7/ 7.8 18		
5 31	19 39.94	−19 13.9	1.951	2.773	14.7	22.2	5 31	19 37.17	−23 47.5	2.300	3.124	12.6	21.0
6 10	19 34.72	−19 17.5	1.864	2.771	11.5	22.0	6 10	19 32.33	−23 59.0	2.204	3.113	9.9	20.8
6 20	19 27.08	−19 26.7	1.798	2.767	7.8	21.7	6 20	19 25.38	−24 12.6	2.130	3.102	6.6	20.6
6 30	19 17.60	−19 40.0	1.757	2.763	3.7	21.5	6 30	19 16.81	−24 26.3	2.082	3.090	3.0	20.4
7 10	19 7.18	−19 55.2	1.743	2.759	1.2	21.3	7 10	19 7.40	−24 37.6	2.062	3.077	1.1	20.2
7 20	18 56.88	−20 10.3	1.757	2.753	5.3	21.6	7 20	18 58.05	−24 44.9	2.070	3.064	4.7	20.4
7 30	18 47.78	−20 24.0	1.798	2.747	9.3	21.8	7 30	18 49.67	−24 47.5	2.105	3.051	8.3	20.6
8 9	18 40.74	−20 35.7	1.862	2.740	12.9	22.0	8 9	18 43.05	−24 45.7	2.165	3.037	11.5	20.8
488290	2016 <i>UG</i> ₁₅		7 7.9 187°06	0°2/ 7.9 18			230378	2002 <i>GA</i> ₂₀		7 7.9 78°26	4°3/ 9.1 17		
5 31	19 33.83	−22 29.4	3.081	3.895	10.0	22.7	5 31	19 36.35	−11 49.5	1.784	2.602	16.0	20.0
6 10	19 29.11	−22 42.1	2.990	3.894	7.8	22.6	6 10	19 31.79	−11 21.5	1.719	2.617	12.8	19.8
6 20	19 22.88	−22 57.0	2.923	3.893	5.2	22.4	6 20	19 24.99	−11 4.3	1.675	2.632	9.3	19.6
6 30	19 15.56	−23 12.4	2.884	3.892	2.3	22.2	6 30	19 16.58	−10 58.4	1.654	2.648	5.9	19.5
7 10	19 7.72	−23 26.9	2.874	3.890	0.7	22.1	7 10	19 7.50	−11 3.4	1.659	2.663	4.3	19.4
7 20	18 59.96	−23 39.2	2.893	3.887	3.6	22.3	7 20	18 58.75	−11 18.0	1.690	2.679	6.4	19.6
7 30	18 52.93	−23 48.6	2.941	3.885	6.3	22.5	7 30	18 51.29	−11 40.1	1.747	2.694	9.7	19.8
8 9	18 47.15	−23 54.9	3.014	3.882	8.8	22.6	8 9	18 45.85	−12 7.1	1.827	2.709	12.9	20.0
316686	1996 <i>BX</i> ₉		7 7.9 313°93	3°6/ 8.9 16			277592	2006 <i>AT</i> ₁₂		7 7.9 244°33	0°6/ 8.1 18		
5 31	19 33.96	−13 9.9	1.823	2.648	15.4	21.1	5 31	19 34.72	−20 54.2	2.667	3.485	11.3	21.7
6 10	19 30.16	−12 53.4	1.740	2.644	12.4	20.9	6 10	19 30.07	−20 46.2	2.568	3.473	8.8	21.6
6 20	19 24.07	−12 46.8	1.677	2.639	8.9	20.6	6 20	19 23.68	−20 40.6	2.491	3.461	6.0	21.3
6 30	19 16.24	−12 50.3	1.637	2.635	5.3	20.4	6 30	19 15.98	−20 36.5	2.441	3.448	2.8	21.1
7 10	19 7.54	−13 3.4	1.623	2.631	3.7	20.3	7 10	19 7.64	−20 32.7	2.420	3.435	0.9	20.9
7 20	18 58.96	−13 24.5	1.635	2.628	6.1	20.4	7 20	18 59.36	−20 28.7	2.427	3.422	4.0	21.2
7 30	18 51.52	−13 51.4	1.673	2.624	9.7	20.6	7 30	18 51.88	−20 23.9	2.462	3.409	7.2	21.3
8 9	18 46.04	−14 21.8	1.733	2.620	13.2	20.9	8 9	18 45.85	−20 18.4	2.522	3.395	10.1	21.5
90310	2003 <i>FH</i> ₁₆		7 7.9 247°51	7°8/ 5.9 18			346656	2008 <i>YH</i> ₁		7 7.9 176°02	0°5/ 7.8 17		
5 31	19 44.33	−41 10.9	1.874	2.692	15.3	19.1	5 31	19 36.96	−22 48.3	2.500	3.318	11.9	22.4
6 10	19 38.99	−42 5.5	1.793	2.684	12.8	18.9	6 10	19 31.89	−23 9.0	2.414	3.321	9.3	22.2
6 20	19 30.39	−42 51.8	1.732	2.674	10.2	18.7	6 20	19 24.92	−23 32.5	2.352	3.323	6.2	22.0
6 30	19 19.22	−43 22.1	1.695	2.665	8.2	18.5	6 30	19 16.55	−23 56.7	2.316	3.324	2.8	21.8
7 10	19 6.76	−43 30.2	1.682	2.655	8.0	18.5	7 10	19 7.50	−24 19.1	2.309	3.325	1.0	21.7
7 20	18 54.53	−43 13.5	1.695	2.645	9.8	18.6	7 20	18 58.57	−24 37.9	2.331	3.325	4.3	21.9
7 30	18 44.08	−42 33.9	1.731	2.635	12.4	18.7	7 30	18 50.59	−24 52.2	2.380	3.325	7.6	22.1
8 9	18 36.53	−41 36.6	1.789	2.625	15.2	18.9	8 9	18 44.21	−25 1.8	2.455	3.324	10.5	22.3
228872	2003 <i>HS</i> ₃₈		7 7.9 46°35	4°3/ 8.3 17			329963	2005 <i>QH</i> ₁₅₈		7 7.9 317°15	1°9/ 8.5 17		
5 31	19 40.18	−16 39.2	1.346	2.188	18.9	19.2	5 31	19 33.04	−16 28.0	1.406	2.257	17.8	20.7
6 10	19 35.20	−15 26.4	1.296	2.211	15.0	19.0	6 10	19 30.36	−16 41.0	1.320	2.242	14.2	20.5
6 20	19 27.37	−14 20.6	1.266	2.234	10.5	18.8	6 20	19 24.74	−17 6.4	1.252	2.227	9.8	20.2
6 30	19 17.62	−13 24.0	1.258	2.258	6.2	18.6	6 30	19 16.75	−17 42.9	1.206	2.213	5.0	19.9
7 10	19 7.24	−12 38.4	1.274	2.282	4.4	18.6	7 10	19 7.41	−18 27.5	1.184	2.199	2.1	19.6
7 20	18 57.55	−12 4.8	1.315	2.307	7.3	18.8	7 20	18 58.03	−19 16.1	1.186	2.186	6.5	19.9
7 30	18 49.72	−11 43.0	1.381	2.332	11.4	19.1	7 30	18 50.04	−20 4.5	1.212	2.173	11.6	20.1
8 9	18 44.54	−11 31.5	1.467	2.357	15.0	19.4	8 9	18 44.59	−20 49.8	1.259	2.161	16.1	20.3
360288	2001 <i>BM</i> ₃		7 7.9 96°98	1°6/ 7.0 18			260972	2005 <i>SC</i> ₅₆		7 7.9 254°19	0°8/ 7.7 18		
5 31	19 36.79	−23 28.8	2.569	3.388	11.6	20.8	5 31	19 34.84	−23 59.3	2.508	3.332	11.7	21.7
6 10	19 31.72	−24 40.2	2.499	3.405	9.0	20.7	6 10	19 30.38	−24 16.2	2.409	3.319	9.1	21.5
6 20	19 24.79	−25 55.6	2.452	3.423	6.0	20.5	6 20	19 24.02	−24 35.4	2.333	3.305	6.1	21.3
6 30	19 16.48	−27 11.0	2.434	3.440	2.9	20.3	6 30	19 16.19	−24 54.7	2.283	3.291	2.8	21.1
7 10	19 7.49	−28 22.1	2.444	3.456	1.9	20.3	7 10	19 7.59	−25 11.9	2.261	3.276	1.2	20.9
7 20	18 58.62	−29 25.6	2.485	3.473	4.6	20.5	7 20	18 59.02	−25 25.2	2.268	3.262	4.4	21.1
7 30	18 50.66	−30 19.1	2.554	3.489	7.6	20.7	7 30	18 51.30	−25 33.6	2.301	3.247	7.8	21.3
8 9	18 44.29	−31 2.4	2.648	3.505	10.2	20.9	8 9	18 45.15	−25 37.4	2.360	3.232	10.8	21.5
415284	2013 <i>FS</i> ₂₀		7 7.9 13°94	1°5/ 8.3 17			342400	2008 <i>UO</i> ₅₃		7 7.9 331°23	2°7/ 7.2 17		
5 31	19 29.51	−18 15.8	0.886	1.777	22.3	19.8	5 31	19 35.15	−26 29.4	1.593	2.445	16.0	20.7
6 10	19 28.55	−18 21.9	0.836	1.781	17.5	19.5	6 10	19 31.76	−27 8.1	1.513	2.437	12.6	20.5
6 20	19 23.87	−18 41.4	0.802	1.787	11.9	19.2	6 20	19 25.52	−27 49.9	1.453	2.430	8.6	20.2
6 30	19 16.34	−19 12.1	0.785	1.795	5.7	18.9	6 30	19 17.03	−28 30.3	1.417	2.423	4.4	20.0
7 10	19 7.53	−19 49.4	0.789	1.805	1.9	18.7	7 10	19 7.37	−29 4.2	1.405	2.417	3.0	19.9
7 20	18 59.21	−20 28.1	0.813	1.816	7.7	19.1	7 20	18 57.82	−29 27.8	1.419	2.411	6.8	20.1
7 30	18 53.10	−21 4.0	0.857	1.829	13.4	19.5							

EPHEMERIDES

7 7.9

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
172975	2006 <i>DY</i> ₆	7 7.9 31°83	3°0/ 7.6 17				59387	1999 <i>FZ</i> ₁₇	7 7.9 57°24	1°2/ 7.7 18			
5 31	19 38.70	-28 10.8	1.094	1.965	20.4	19.3	5 31	19 39.32	-23 19.0	1.233	2.092	19.3	18.5
6 10	19 35.31	-28 21.4	1.040	1.974	15.9	19.0	6 10	19 35.29	-23 42.7	1.178	2.107	15.0	18.3
6 20	19 28.16	-28 31.1	1.003	1.984	10.8	18.8	6 20	19 27.91	-24 11.7	1.143	2.122	10.0	18.1
6 30	19 18.21	-28 34.6	0.986	1.994	5.5	18.5	6 30	19 18.07	-24 41.4	1.128	2.138	4.6	17.8
7 10	19 7.11	-28 27.7	0.992	2.006	3.4	18.4	7 10	19 7.20	-25 7.0	1.138	2.153	1.8	17.7
7 20	18 56.68	-28 8.8	1.021	2.018	7.9	18.7	7 20	18 56.89	-25 25.2	1.172	2.169	6.9	18.0
7 30	18 48.59	-27 39.9	1.071	2.031	12.9	19.0	7 30	18 48.62	-25 35.0	1.228	2.186	11.8	18.4
8 9	18 43.89	-27 4.6	1.141	2.044	17.4	19.4	8 9	18 43.37	-25 37.3	1.306	2.202	16.0	18.7
417562	2006 <i>UJ</i> ₁₄₂	7 7.9 157°13	0°6/ 8.1 17				442838	2013 <i>AN</i> ₉₇	7 7.9 267°17	0°0/ 7.9 18			
5 31	19 40.04	-20 32.8	1.974	2.797	14.5	21.8	5 31	19 36.06	-22 49.1	2.160	2.989	13.2	20.7
6 10	19 34.65	-20 30.3	1.896	2.804	11.3	21.6	6 10	19 31.46	-22 39.1	2.075	2.987	10.3	20.5
6 20	19 26.92	-20 31.8	1.840	2.810	7.6	21.4	6 20	19 24.77	-22 30.8	2.013	2.985	6.9	20.3
6 30	19 17.50	-20 35.8	1.809	2.816	3.5	21.2	6 30	19 16.54	-22 22.8	1.976	2.984	3.1	20.1
7 10	19 7.29	-20 40.4	1.805	2.821	1.0	21.0	7 10	19 7.59	-22 13.8	1.966	2.982	0.8	19.9
7 20	18 57.33	-20 44.1	1.829	2.826	5.1	21.3	7 20	18 58.83	-22 3.1	1.984	2.981	4.7	20.2
7 30	18 48.63	-20 46.3	1.880	2.829	9.0	21.5	7 30	18 51.16	-21 50.6	2.029	2.979	8.3	20.4
8 9	18 41.99	-20 47.1	1.955	2.833	12.4	21.8	8 9	18 45.32	-21 36.9	2.098	2.977	11.6	20.6
262057	2006 <i>RM</i> ₂₀	7 7.9 273°64	0°3/ 8.0 18				280343	2003 <i>SA</i> ₁₇₆	7 7.9 277°29	7°6/ 10.6 16	R		
5 31	19 39.27	-22 20.1	1.626	2.465	16.3	20.8	5 31	19 33.08	-2 11.5	1.923	2.708	16.2	20.8
6 10	19 34.94	-22 8.9	1.528	2.445	12.9	20.5	6 10	19 29.42	-1 42.8	1.832	2.696	13.8	20.6
6 20	19 27.69	-22 0.6	1.451	2.425	8.8	20.2	6 20	19 23.59	-1 30.9	1.760	2.685	11.1	20.4
6 30	19 18.06	-21 53.1	1.397	2.405	4.1	19.9	6 30	19 16.09	-1 38.4	1.710	2.673	8.7	20.2
7 10	19 7.10	-21 44.6	1.368	2.384	1.1	19.6	7 10	19 7.69	-2 6.4	1.685	2.662	7.6	20.1
7 20	18 56.11	-21 33.8	1.366	2.363	6.2	19.9	7 20	18 59.28	-2 53.5	1.684	2.650	8.6	20.1
7 30	18 46.47	-21 20.5	1.388	2.342	11.1	20.1	7 30	18 51.85	-3 56.6	1.708	2.639	11.0	20.3
8 9	18 39.33	-21 5.7	1.433	2.321	15.4	20.4	8 9	18 46.20	-5 10.5	1.755	2.627	13.8	20.4
245567	2005 <i>UM</i> ₁₂₇	7 7.9 270°48	0°5/ 7.8 18				167909	2005 <i>EP</i> ₉₈	7 7.9 345°45	0°4/ 8.1 18			
5 31	19 34.32	-23 10.2	2.325	3.154	12.4	20.9	5 31	19 34.90	-20 0.8	1.833	2.670	14.9	20.2
6 10	19 30.10	-23 23.3	2.232	3.144	9.7	20.7	6 10	19 30.97	-20 14.2	1.753	2.668	11.6	20.0
6 20	19 23.88	-23 39.1	2.161	3.134	6.5	20.4	6 20	19 24.68	-20 33.8	1.693	2.667	7.8	19.7
6 30	19 16.14	-23 55.7	2.116	3.124	3.0	20.2	6 30	19 16.58	-20 57.6	1.658	2.666	3.6	19.5
7 10	19 7.64	-24 10.8	2.099	3.114	1.0	20.0	7 10	19 7.59	-21 22.8	1.649	2.665	1.0	19.3
7 20	18 59.20	-24 22.7	2.109	3.104	4.6	20.3	7 20	18 58.74	-21 47.0	1.667	2.664	5.2	19.6
7 30	18 51.69	-24 30.4	2.146	3.094	8.1	20.5	7 30	18 51.11	-22 8.3	1.710	2.664	9.3	19.8
8 9	18 45.86	-24 34.0	2.207	3.084	11.2	20.7	8 9	18 45.53	-22 26.1	1.776	2.663	13.0	20.0
258766	2002 <i>JJ</i> ₁₈	7 7.9 357°97	6°1/ 5.7 18				468806	2012 <i>KA</i> ₁₈	7 7.9 153°08	3°9/ 9.2 17			
5 31	19 36.16	-36 46.6	2.035	2.867	13.8	19.8	5 31	19 38.27	-11 28.1	1.880	2.689	15.6	21.9
6 10	19 32.16	-37 49.2	1.961	2.866	11.2	19.6	6 10	19 33.34	-11 21.0	1.803	2.696	12.6	21.7
6 20	19 25.57	-38 47.4	1.909	2.865	8.5	19.5	6 20	19 26.11	-11 25.2	1.747	2.703	9.1	21.5
6 30	19 16.99	-39 35.2	1.882	2.864	6.5	19.4	6 30	19 17.18	-11 41.0	1.715	2.710	5.6	21.3
7 10	19 7.42	-40 7.3	1.879	2.864	6.3	19.3	7 10	19 7.44	-12 6.9	1.709	2.715	3.9	21.2
7 20	18 58.02	-40 21.1	1.903	2.864	8.1	19.5	7 20	18 57.90	-12 40.8	1.731	2.720	6.1	21.3
7 30	18 49.96	-40 16.7	1.951	2.864	10.8	19.6	7 30	18 49.56	-13 20.0	1.778	2.725	9.6	21.6
8 9	18 44.17	-39 56.9	2.020	2.865	13.4	19.8	8 9	18 43.22	-14 1.6	1.850	2.729	12.9	21.8
392604	2011 <i>SS</i> ₂₄₂	7 7.9 291°22	0°4/ 8.1 18				252181	2001 <i>DW</i> ₈₀	7 7.9 204°03	1°8/ 7.3 18			
5 31	19 34.29	-20 8.3	2.005	2.837	13.9	21.2	5 31	19 35.22	-27 37.5	2.723	3.545	11.0	21.5
6 10	19 30.36	-20 22.4	1.916	2.830	10.9	21.0	6 10	19 30.51	-28 0.1	2.634	3.541	8.5	21.3
6 20	19 24.20	-20 42.2	1.849	2.822	7.4	20.7	6 20	19 24.01	-28 22.7	2.569	3.538	5.8	21.2
6 30	19 16.33	-21 5.9	1.806	2.814	3.4	20.5	6 30	19 16.19	-28 42.8	2.530	3.534	3.0	21.0
7 10	19 7.59	-21 30.9	1.791	2.807	0.9	20.2	7 10	19 7.73	-28 57.9	2.519	3.531	2.0	20.9
7 20	18 58.92	-21 55.0	1.802	2.799	5.0	20.5	7 20	18 59.36	-29 6.7	2.538	3.526	4.5	21.1
7 30	18 51.31	-22 16.4	1.839	2.792	8.9	20.8	7 30	18 51.87	-29 8.6	2.583	3.522	7.3	21.2
8 9	18 45.58	-22 34.4	1.900	2.784	12.4	21.0	8 9	18 45.88	-29 4.2	2.654	3.517	10.0	21.4
191925	2005 <i>SS</i> ₆₆	7 7.9 316°74	0°2/ 8.0 17				216565	2001 <i>YO</i> ₂₈	7 7.9 159°40	2°8/ 6.9 18			
5 31	19 35.64	-21 14.4	1.123	1.992	20.1	21.0	5 31	19 36.32	-28 32.6	2.333	3.161	12.4	20.8
6 10	19 33.12	-21 18.0	1.047	1.981	15.9	20.6	6 10	19 31.71	-29 17.5	2.253	3.164	9.7	20.6
6 20	19 26.98	-21 29.3	0.988	1.970	10.8	20.3	6 20	19 24.99	-30 2.9	2.196	3.166	6.6	20.4
6 30	19 17.89	-21 45.9	0.950	1.959	5.0	20.0	6 30	19 16.69	-30 45.0	2.165	3.168	3.7	20.2
7 10	19 7.16	-22 3.8	0.933	1.949	1.3	19.7	7 10	19 7.60	-31 20.2	2.162	3.169	3.0	20.2
7 20	18 56.53	-22 19.6	0.939	1.940	7.5	20.0	7 20	18 58.64	-31 45.7	2.186	3.171	5.5	20.3
7 30	18 47.80	-22 31.3	0.967	1.931	13.3	20.3	7 30	18 50.72	-32 0.9	2.238	3.172	8.5	20.5
8 9	18 42.33	-22 38.6	1.013	1.923	18.4	20.6	8 9	18 44.59	-32 6.4	2.313	3.174	11.3	20.7
32476	2000 <i>SP</i> ₂₃₇	7 7.9 118°56	2°3/ 7.0 18				498394	2007 <i>XV</i> ₂₉	7 7.9 253°43	0°0/ 7.8 17			
5 31	19 35.28	-26 23.3	2.214	3.046	12.8	18.6	5 31	19 39.29	-20 34.7	1.704	2.538	15.9	21.7
6 10	19 30.99	-27 11.1	2.133	3.047	10.0	18.4	6 10	19 34.90	-20 59.3	1.606	2.521	12.6	21.5
6 20	19 24.54	-28 1.3	2.075	3.047	6.8	18.2	6 20	19 27.68	-21 31.8	1.529	2.503	8.5	21.2
6 30	19 16.47	-28 50.0	2.043	3.048	3.5	18.0	6 30	19 18.13	-22 9.2	1.476	2.484	3.9	20.9
7 10	19 7.57	-29 33.4	2.038	3.049	2.5	17.9	7 10	19 7.21	-22 47.7	1.449	2.465	1.0	20.6
7 20	18 58.77	-29 8.3	2.061	3.050	5.4	18.1	7 20	18 56.17	-23 23.5	1.448	2.445	6.0	20.9
7 30	18 51.02	-30 33.5	2.111	3.050	8.7	18.3	7 30	18 46.35	-23 54.1	1.473	2.424	10.8	21.1
8 9	18 45.10	-30 49.1	2.184	3.051	11.7	18.5	8 9	18 38.88	-24 18.4	1.520	2.403	15.0	21.3
184743	2005 <i>SE</i> ₂₃₀	7 7.9 246°15	0°8/ 8.2 18				174611	2003 <i>SV</i> ₃₆	7 7.9 314°92	1°4/ 8.3 18			
5 31	19 33.97	-19 18.4	2.356	3.179	12.4	21.2	5 31	19 32.74	-19 7.6	1.205	2.072	19.2	19.6
6 10	19 29.71	-19 21.4	2.266	3.173	9.7	21.0	6 10	19 30.80	-19 6.1	1.114	2.046	15.3	19.2
6 20	19 23.55	-19 29.1	2.197	3.167	6.6	20.8	6 20	19 25.50	-19 14.2	1.041	2.021	10.6	18.9
6 30	19 15.98	-19 40.2	2.155	3.161	3.1	20.6	6 30	19 17.32	-19 30.6	0.988	1.997	5.2	18.5
7 10	19 7.70	-19 53.2	2.140	3.155	1.1	20.4	7 10	19 7.39	-19 52.8	0.957	1.973	1.7	18.2
7 20	18 59.51	-20 6.6	2.153	3.149	4.4	20.6	7 20	18 57.24	-20 17.5	0.949	1.950	7.4	18.5
7 30	18 52.22	-20 19.3	2.193	3.143	7.8	20.8	7 30	18 48.64	-20 41.8	0.962	1.928	13.2	18.7
8 9	18 46.53	-20 30.7	2.257	3.136	10.9								

EPHEMERIDES

7 7.9

7 8.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
265054	2003 <i>RG</i> ₁₀		7 7.9 301°22	1.2°/ 7.8 18			1814	Bach		7 7.9 202°69	3°0' 7.2 18	R	
5 31	19 36.66	−24 10.4	1.349	2.207	18.0	21.2	5 31	19 42.47	−27 47.4	1.674	2.510	16.1	16.9
6 10	19 33.64	−24 20.1	1.256	2.184	14.3	20.9	6 10	19 37.38	−28 22.0	1.592	2.507	12.7	16.7
6 20	19 27.28	−24 33.9	1.181	2.161	9.7	20.6	6 20	19 29.27	−28 57.9	1.531	2.503	8.7	16.4
6 30	19 18.09	−24 48.6	1.128	2.138	4.6	20.2	6 30	19 18.80	−29 30.1	1.494	2.499	4.6	16.2
7 10	19 7.23	−24 59.9	1.099	2.115	1.8	20.0	7 10	19 7.11	−29 53.4	1.483	2.494	3.3	16.1
7 20	18 56.22	−25 4.8	1.094	2.092	7.2	20.2	7 20	18 55.58	−30 4.8	1.499	2.489	6.8	16.3
7 30	18 46.78	−25 2.0	1.111	2.070	12.6	20.5	7 30	18 45.60	−30 3.8	1.540	2.483	11.0	16.5
8 9	18 40.27	−24 52.7	1.148	2.048	17.5	20.7	8 9	18 38.27	−29 52.6	1.603	2.476	14.8	16.7
373304	2012 <i>HR</i> ₈₀		7 7.9 354°69	1.4°/ 8.2 18			357706	2005 <i>QX</i> ₁₅		7 7.9 288°28	4°9' 9.6 18		
5 31	19 34.72	−19 40.4	1.326	2.183	18.3	20.2	5 31	19 32.27	−8 13.9	2.166	2.968	14.1	21.5
6 10	19 31.66	−19 28.2	1.253	2.180	14.4	19.9	6 10	19 28.60	−7 58.1	2.068	2.953	11.6	21.3
6 20	19 25.56	−19 22.7	1.200	2.178	9.8	19.6	6 20	19 22.97	−7 54.0	1.991	2.937	8.8	21.1
6 30	19 17.11	−19 22.9	1.168	2.176	4.7	19.3	6 30	19 15.83	−8 2.8	1.937	2.922	6.1	20.9
7 10	19 7.52	−19 26.7	1.159	2.175	1.7	19.1	7 10	19 7.86	−8 24.4	1.909	2.906	4.9	20.8
7 20	18 58.18	−19 32.4	1.175	2.174	6.5	19.4	7 20	18 59.88	−8 57.4	1.908	2.891	6.3	20.9
7 30	18 50.49	−19 38.5	1.213	2.175	11.5	19.7	7 30	18 52.74	−9 39.6	1.933	2.875	9.2	21.0
8 9	18 45.49	−19 44.4	1.272	2.176	15.9	20.0	8 9	18 47.20	−10 27.9	1.981	2.860	12.2	21.2
104379	2000 <i>FB</i> ₃₄		7 7.9 265°71	3°0' 7.1 18			429519	2011 <i>BB</i> ₅₂		7 7.9 16°54	19°7' 17.8 16		
5 31	19 36.95	−28 45.1	2.012	2.847	13.8	19.2	5 31	20 22.45	−66 39.2	1.017	1.782	28.6	19.6
6 10	19 32.58	−29 20.6	1.929	2.843	10.8	19.0	6 10	20 12.15	−66 35.5	0.981	1.796	26.4	19.4
6 20	19 25.78	−29 56.4	1.868	2.839	7.5	18.8	6 20	19 52.62	−65 48.1	0.955	1.812	23.9	19.3
6 30	19 17.12	−30 28.4	1.831	2.835	4.1	18.6	6 30	19 28.29	−63 57.4	0.942	1.831	21.7	19.2
7 10	19 7.52	−30 52.6	1.822	2.830	3.2	18.5	7 10	19 5.21	−60 56.7	0.947	1.852	20.1	19.2
7 20	18 58.05	−31 6.5	1.839	2.826	6.1	18.7	7 20	18 47.67	−56 57.3	0.971	1.876	19.7	19.3
7 30	18 49.80	−31 9.5	1.881	2.821	9.5	18.9	7 30	18 37.21	−52 23.2	1.016	1.901	20.6	19.4
8 9	18 43.63	−31 2.9	1.947	2.817	12.8	19.0	8 9	18 33.25	−47 40.5	1.082	1.928	22.3	19.7
230366	2002 <i>EP</i> ₁₁₃		7 7.9 151°94	1°6' 7.7 17			143540	2003 <i>ED</i> ₂₇		7 7.9 253°41	4°2' 9.5 18		
5 31	19 41.93	−27 45.7	2.290	3.108	12.9	21.6	5 31	19 32.75	−9 20.4	2.222	3.025	13.7	20.2
6 10	19 35.84	−27 46.4	2.212	3.117	10.0	21.4	6 10	19 28.82	−9 10.8	2.136	3.023	11.2	20.0
6 20	19 27.59	−27 45.6	2.157	3.126	6.8	21.3	6 20	19 23.01	−9 12.2	2.071	3.020	8.3	19.9
6 30	19 17.81	−27 40.6	2.128	3.134	3.3	21.0	6 30	19 15.80	−9 25.3	2.030	3.018	5.5	19.7
7 10	19 7.38	−27 29.7	2.128	3.141	1.9	21.0	7 10	19 7.89	−9 49.3	2.015	3.015	4.2	19.6
7 20	18 57.25	−27 12.0	2.156	3.148	4.9	21.2	7 20	19 0.07	−10 22.7	2.027	3.013	5.8	19.7
7 30	18 48.37	−26 48.4	2.213	3.154	8.3	21.4	7 30	18 53.15	−11 3.0	2.066	3.010	8.6	19.9
8 9	18 41.43	−26 20.7	2.294	3.159	11.2	21.6	8 9	18 47.79	−11 47.6	2.129	3.008	11.5	20.0
389071	2008 <i>WC</i> ₇₂		7 7.9 267°01	4°0' 8.4 17			476960	2008 <i>XS</i> ₄₉		7 7.9 216°78	0°9' 8.4 18		
5 31	19 37.40	−14 18.8	1.956	2.772	14.8	21.4	5 31	19 35.61	−17 36.1	2.418	3.233	12.4	21.6
6 10	19 32.77	−13 27.4	1.860	2.759	12.0	21.2	6 10	19 31.00	−17 58.2	2.323	3.226	9.7	21.4
6 20	19 25.84	−12 41.2	1.785	2.745	8.7	20.9	6 20	19 24.48	−18 27.1	2.251	3.218	6.6	21.2
6 30	19 17.14	−12 1.7	1.735	2.730	5.4	20.7	6 30	19 16.49	−19 1.3	2.204	3.210	3.2	21.0
7 10	19 7.52	−11 30.0	1.711	2.716	4.1	20.6	7 10	19 7.72	−19 38.4	2.186	3.201	1.1	20.8
7 20	18 57.96	−11 6.9	1.714	2.701	6.4	20.7	7 20	18 58.97	−20 15.9	2.196	3.192	4.4	21.0
7 30	18 49.47	−10 52.4	1.743	2.686	10.0	20.9	7 30	18 51.07	−20 52.0	2.234	3.183	7.8	21.2
8 9	18 42.91	−10 45.7	1.795	2.671	13.4	21.1	8 9	18 44.73	−21 25.2	2.298	3.173	10.9	21.4
398797	2013 <i>AT</i> ₁₄₉		7 7.9 29°89	6°3' 10.1 15			8437	Bernicla		7 7.9 10°51	1°5' 8.3 18		
5 31	19 31.57	−6 45.8	1.676	2.492	17.0	20.9	5 31	19 36.20	−18 52.9	1.578	2.420	16.6	18.5
6 10	19 28.25	−6 16.2	1.618	2.508	13.9	20.7	6 10	19 32.31	−18 46.0	1.503	2.420	13.1	18.3
6 20	19 22.74	−6 2.3	1.578	2.524	10.7	20.6	6 20	19 25.74	−18 45.9	1.447	2.421	8.9	18.0
6 30	19 15.66	−6 5.8	1.561	2.542	7.7	20.4	6 30	19 17.14	−18 51.2	1.415	2.422	4.3	17.8
7 10	19 7.93	−6 26.1	1.567	2.560	6.3	20.4	7 10	19 7.57	−19 0.2	1.408	2.423	1.7	17.6
7 20	19 0.51	−7 1.2	1.599	2.579	7.6	20.5	7 20	18 58.22	−19 11.0	1.426	2.424	5.9	17.9
7 30	18 54.33	−7 47.5	1.655	2.599	10.3	20.7	7 30	18 50.31	−19 22.0	1.469	2.426	10.3	18.1
8 9	18 50.11	−8 40.6	1.732	2.619	13.3	21.0	8 9	18 44.75	−19 32.5	1.534	2.427	14.3	18.4
175099	2004 <i>JF</i> ₂₁		7 7.9 188°20	0°5' 7.8 18			25773	2000 <i>CX</i> ₂₇		7 8.0 342°52	0°7' 7.8 18	R	
5 31	19 35.46	−22 55.9	2.339	3.164	12.4	21.2	5 31	19 36.12	−24 2.6	1.814	2.655	14.9	18.1
6 10	19 30.92	−23 13.5	2.254	3.164	9.7	21.0	6 10	19 32.00	−24 7.0	1.734	2.652	11.6	17.9
6 20	19 24.40	−23 34.2	2.191	3.163	6.5	20.8	6 20	19 25.41	−24 13.6	1.675	2.650	7.8	17.7
6 30	19 16.42	−23 55.6	2.155	3.163	2.9	20.6	6 30	19 16.96	−24 20.0	1.640	2.648	3.6	17.4
7 10	19 7.72	−24 15.4	2.146	3.162	1.0	20.4	7 10	19 7.61	−24 23.8	1.631	2.647	1.2	17.2
7 20	18 59.15	−24 31.8	2.165	3.160	4.5	20.7	7 20	18 58.47	−24 23.4	1.648	2.645	5.4	17.5
7 30	18 51.55	−24 43.8	2.212	3.159	7.9	20.9	7 30	18 50.62	−24 18.4	1.691	2.644	9.5	17.8
8 9	18 45.63	−24 51.2	2.283	3.157	11.0	21.1	8 9	18 44.93	−24 9.5	1.757	2.643	13.1	18.0
37990	1998 <i>KN</i> ₄		7 7.9 16°62	3°4' 6.7 18			303946	2005 <i>XR</i> ₂₈		7 8.0 191°16	0°4' 7.8 17		
5 31	19 33.74	−24 48.1	1.341	2.205	17.8	17.9	5 31	19 43.81	−17 57.7	1.941	2.753	15.1	21.0
6 10	19 31.05	−26 7.3	1.279	2.210	13.8	17.6	6 10	19 38.02	−19 15.0	1.849	2.751	11.9	20.8
6 20	19 25.25	−27 33.8	1.236	2.216	9.3	17.4	6 20	19 29.57	−20 44.6	1.781	2.749	8.0	20.5
6 30	19 17.01	−29 0.4	1.216	2.223	4.9	17.2	6 30	19 18.95	−22 21.9	1.739	2.746	3.6	20.2
7 10	19 7.56	−30 19.1	1.221	2.231	3.8	17.1	7 10	19 7.09	−24 0.4	1.726	2.742	1.1	20.0
7 20	18 58.34	−31 23.3	1.249	2.240	7.7	17.4	7 20	18 55.12	−25 33.6	1.743	2.737	5.6	20.3
7 30	18 50.83	−32 9.9	1.301	2.250	12.1	17.7	7 30	18 44.27	−26 56.5	1.789	2.730	9.9	20.6
8 9	18 46.11	−32 39.4	1.373	2.261	16.0	17.9	8 9	18 35.59	−28 7.1	1.859	2.723	13.5	20.8
393017	2012 <i>XE</i> ₁₅₁		7 7.9 269°66	1°6' 7.6 18			217674	1998 <i>VU</i> ₄₀		7 8.0 311°89	4°3' 8.7 17		
5 31	19 37.89	−26 59.2	2.107	2.938	13.4	21.1	5 31	19 34.12	−14 16.9	1.421	2.265	18.0	19.8
6 10	19 33.20	−27 2.8	2.010	2.922	10.6	20.9	6 10	19 31.12	−13 44.3	1.334	2.250	14.6	19.5
6 20	19 26.15	−27 5.9	1.935	2.907	7.2	20.7	6 20	19 25.24	−13 21.4	1.266	2.234	10.5	19.2
6 30	19 17.29	−27 6.0	1.885	2.891	3.5	20.4	6 30	19 17.05	−13 9.6	1.219	2.219	6.3	18.9
7 10	19 7.49	−27 0.6	1.862	2.876	1.9	20.3	7 10	19 7.58	−13 9.0	1.195	2.205	4.3	18.8
7 20	18 57.77	−26 48.4	1.866	2.860	5.3	20.5	7 20	18 58.11	−13 18.7	1.196	2.190	7.4	18.9
7 30	18 49.17	−26 29.7	1.897	2.844	9.1	20.7	7 30	18 50.02	−13 37.1	1.22			