

EPHEMERIDES

4 17.9

4 18.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
506563	2005 <i>TY</i> ₁₄₆		4 17.9 216°11	2.4/14.5	18		462582	2009 <i>FX</i> ₁₅		4 17.9 110°18	1.7/19.2	18	
3 12	14 4.69	- 7 51.1	2.669	3.486	10.6	21.6	3 12	14 16.32	-16 2.3	1.711	2.509	16.4	22.0
3 22	14 0.88	- 6 14.5	2.578	3.481	8.0	21.4	3 22	14 10.57	-16 10.4	1.642	2.527	12.9	21.8
4 1	13 55.56	- 4 28.3	2.514	3.476	5.2	21.2	4 1	14 2.23	-16 4.3	1.594	2.545	8.8	21.6
4 11	13 49.24	- 2 38.0	2.479	3.472	2.7	21.1	4 11	13 52.11	-15 45.4	1.572	2.563	4.3	21.4
4 21	13 42.48	- 0 49.8	2.476	3.467	3.3	21.1	4 21	13 41.31	-15 16.6	1.577	2.580	1.9	21.3
5 1	13 35.93	+ 0 50.0	2.503	3.461	6.1	21.3	5 1	13 31.06	-14 43.2	1.610	2.596	5.8	21.6
5 11	13 30.22	+ 2 15.9	2.559	3.456	9.0	21.4	5 11	13 22.45	-14 11.2	1.669	2.612	10.0	21.8
5 21	13 25.78	+ 3 25.0	2.639	3.450	11.5	21.6	5 21	13 16.16	-13 45.8	1.752	2.627	13.6	22.1
49912	2011 <i>GP</i> ₆₉		4 17.9 354°96	0.4/17.7	17		483585	2004 <i>FK</i> ₁₀₆		4 17.9 342°33	4.4/18.8	18	
3 12	14 4.43	-12 14.9	1.411	2.253	17.0	20.7	3 12	14 29.31	-11 32.9	1.019	1.845	23.3	20.3
3 22	14 2.05	-11 51.4	1.334	2.248	13.2	20.5	3 22	14 23.13	-13 38.6	0.943	1.842	18.7	20.0
4 1	13 56.99	-11 12.9	1.278	2.244	8.6	20.2	4 1	14 12.04	-15 44.3	0.884	1.840	13.2	19.6
4 11	13 50.00	-10 23.2	1.244	2.241	3.6	19.9	4 11	13 56.79	-17 43.5	0.848	1.837	7.2	19.3
4 21	13 42.13	- 9 28.6	1.236	2.239	1.8	19.7	4 21	13 39.14	-19 28.1	0.836	1.836	4.7	19.1
5 1	13 34.62	- 8 36.6	1.252	2.238	7.0	20.1	5 1	13 21.68	-20 52.9	0.850	1.835	9.8	19.4
5 11	13 28.64	- 7 54.9	1.292	2.239	11.9	20.3	5 11	13 6.99	-21 59.6	0.887	1.834	15.8	19.7
5 21	13 24.97	- 7 28.3	1.352	2.240	16.1	20.6	5 21	12 56.67	-22 54.5	0.943	1.833	21.1	20.0
274573	2008 <i>SR</i> ₃₀₂		4 17.9 199°13	0.4/17.7	17		106830	2000 <i>YC</i> ₄		4 17.9 113°51	0.1/17.9	18	
3 12	14 7.46	-13 5.9	2.003	2.816	13.8	21.0	3 12	14 12.43	-13 13.6	1.710	2.523	15.8	20.2
3 22	14 3.55	-12 26.3	1.917	2.815	10.7	20.8	3 22	14 7.55	-12 46.2	1.641	2.538	12.2	20.0
4 1	13 57.57	-11 33.7	1.854	2.814	7.0	20.6	4 1	14 0.23	-12 5.4	1.594	2.553	8.0	19.8
4 11	13 50.14	-10 31.7	1.817	2.813	2.9	20.3	4 11	13 51.26	-11 14.7	1.571	2.567	3.3	19.6
4 21	13 42.09	- 9 25.5	1.808	2.811	1.5	20.2	4 21	13 41.68	-10 19.4	1.577	2.580	1.5	19.4
5 1	13 34.33	- 8 21.1	1.827	2.810	5.7	20.5	5 1	13 32.61	- 9 25.9	1.610	2.594	6.1	19.8
5 11	13 27.73	- 7 24.8	1.873	2.808	9.6	20.7	5 11	13 25.06	- 8 40.5	1.669	2.606	10.3	20.1
5 21	13 22.91	- 6 40.9	1.942	2.806	13.0	20.9	5 21	13 19.68	- 8 7.8	1.751	2.619	14.0	20.3
338894	2004 <i>CP</i> ₂₇		4 17.9 141°71	0.1/17.9	17		151706	2003 <i>BT</i> ₃₃		4 17.9 307°27	9.6/24.9	18	
3 12	14 8.45	-12 21.0	2.330	3.135	12.4	22.0	3 12	14 10.41	-33 8.2	1.663	2.399	19.2	19.6
3 22	14 3.96	-12 1.6	2.247	3.140	9.5	21.8	3 22	14 7.11	-34 13.6	1.565	2.384	16.9	19.4
4 1	13 57.67	-11 32.7	2.188	3.146	6.2	21.6	4 1	14 0.68	-34 55.7	1.483	2.369	14.1	19.1
4 11	13 50.14	-10 57.0	2.156	3.151	2.6	21.3	4 11	13 51.74	-35 8.8	1.422	2.355	11.5	18.9
4 21	13 42.10	-10 17.9	2.152	3.156	1.2	21.2	4 21	13 41.38	-34 49.9	1.383	2.341	9.7	18.8
5 1	13 34.34	- 9 39.6	2.178	3.160	4.9	21.5	5 1	13 31.08	-34 0.5	1.368	2.327	10.0	18.8
5 11	13 27.62	- 9 6.5	2.231	3.165	8.3	21.7	5 11	13 22.37	-32 47.8	1.377	2.313	12.1	18.8
5 21	13 22.46	- 8 41.9	2.308	3.169	11.3	21.9	5 21	13 16.35	-31 22.5	1.407	2.300	15.2	19.0
336948	2011 <i>HB</i> ₈₀		4 17.9 314°31	2.9/15.5	17		171245	2005 <i>LF</i> ₉		4 17.9 25°24	1.1/19.1	17	
3 12	14 6.90	- 5 53.0	1.825	2.660	14.0	20.8	3 12	14 5.81	-17 15.4	2.124	2.924	13.6	20.4
3 22	14 3.30	- 5 7.0	1.742	2.654	10.7	20.6	3 22	14 2.20	-16 42.9	2.037	2.924	10.7	20.2
4 1	13 57.51	- 4 13.1	1.683	2.648	7.0	20.4	4 1	13 56.66	-15 55.4	1.972	2.925	7.2	20.0
4 11	13 50.15	- 3 16.4	1.649	2.642	3.5	20.1	4 11	13 49.77	-14 55.5	1.934	2.926	3.4	19.8
4 21	13 42.10	- 2 23.2	1.641	2.637	3.8	20.1	4 21	13 42.31	-13 47.5	1.923	2.927	1.3	19.6
5 1	13 34.33	- 1 39.6	1.661	2.631	7.5	20.3	5 1	13 35.14	-12 37.2	1.941	2.927	4.9	19.9
5 11	13 27.78	- 1 10.5	1.706	2.626	11.3	20.6	5 11	13 29.06	-11 31.0	1.985	2.928	8.6	20.1
5 21	13 23.11	- 0 58.4	1.772	2.621	14.7	20.8	5 21	13 24.65	-10 34.0	2.054	2.929	11.9	20.3
264021	2009 <i>QB</i> ₂		4 17.9 193°27	0.9/19.1	16		57622	2001 <i>TY</i> ₁₅₁		4 17.9 37°09	4.4/15.9	18	
3 12	14 4.81	-16 16.1	2.957	3.744	10.5	21.3	3 12	14 20.06	+ 1 41.3	1.633	2.457	15.9	19.1
3 22	14 0.89	-15 57.1	2.863	3.743	8.2	21.1	3 22	14 13.57	+ 1 28.3	1.558	2.460	12.4	18.9
4 1	13 55.55	-15 28.3	2.793	3.742	5.5	20.9	4 1	14 4.28	+ 1 12.1	1.506	2.464	8.5	18.6
4 11	13 49.24	-14 51.3	2.750	3.741	2.6	20.7	4 11	13 53.01	+ 0 48.5	1.480	2.468	5.0	18.4
4 21	13 42.50	-14 8.8	2.737	3.740	1.1	20.6	4 21	13 40.93	+ 0 14.4	1.481	2.472	5.1	18.4
5 1	13 35.96	-13 24.2	2.753	3.738	3.8	20.8	5 1	13 29.35	+ 0 32.0	1.511	2.476	8.6	18.7
5 11	13 30.17	-12 41.3	2.797	3.737	6.6	21.0	5 11	13 19.47	+ 1 30.8	1.566	2.480	12.5	18.9
5 21	13 25.59	-12 3.6	2.868	3.735	9.2	21.2	5 21	13 12.07	+ 2 40.7	1.645	2.485	16.0	19.1
36029	1999 <i>NF</i> ₅₇		4 17.9 326°58	4.5/21.8	18		205072	1999 <i>RE</i> ₁₂₉		4 17.9 239°27	0.9/17.2	17	
3 12	14 3.03	-24 44.9	1.512	2.310	18.3	18.0	3 12	14 10.76	-11 22.1	1.870	2.685	14.6	20.6
3 22	14 1.17	-24 33.8	1.414	2.291	15.1	17.7	3 22	14 6.38	-10 46.1	1.772	2.672	11.3	20.4
4 1	13 56.59	-23 55.9	1.335	2.274	11.3	17.4	4 1	13 59.63	- 9 57.2	1.697	2.658	7.4	20.1
4 11	13 49.92	-22 50.5	1.277	2.256	7.2	17.1	4 11	13 51.11	- 8 59.2	1.647	2.643	3.0	19.8
4 21	13 42.17	-21 20.8	1.244	2.240	4.5	16.9	4 21	13 41.71	- 7 57.2	1.626	2.628	2.0	19.7
5 1	13 34.63	-19 34.4	1.235	2.225	6.6	17.0	5 1	13 32.51	- 6 57.7	1.633	2.613	6.5	19.9
5 11	13 28.57	-17 42.9	1.252	2.210	11.0	17.2	5 11	13 24.53	- 6 7.3	1.665	2.597	10.8	20.2
5 21	13 24.87	-15 57.8	1.290	2.196	15.4	17.4	5 21	13 18.54	- 5 30.8	1.721	2.580	14.6	20.4
354777	2005 <i>US</i> ₁₄₂		4 17.9 171°40	0.7/18.5	18		240314	2003 <i>GP</i> ₃₈		4 18.0 259°72	4.6/14.4	16	
3 12	14 12.69	-15 38.6	1.670	2.477	16.4	22.0	3 12	14 11.24	- 2 48.5	1.616	2.454	15.4	21.2
3 22	14 8.00	-15 10.1	1.588	2.481	12.8	21.7	3 22	14 7.09	- 1 49.4	1.525	2.437	11.9	21.0
4 1	14 0.69	-14 24.8	1.528	2.484	8.6	21.5	4 1	14 0.28	- 0 42.6	1.456	2.419	8.1	20.7
4 11	13 51.51	-13 25.4	1.492	2.486	3.8	21.2	4 11	13 51.44	+ 0 25.1	1.411	2.401	5.0	20.5
4 21	13 41.53	-12 17.4	1.483	2.487	1.4	21.0	4 21	13 41.57	+ 1 25.5	1.394	2.382	5.7	20.5
5 1	13 31.95	-11 8.1	1.503	2.488	6.2	21.3	5 1	13 31.89	+ 2 11.0	1.402	2.363	9.6	20.6
5 11	13 23.90	-10 5.3	1.548	2.488	10.8	21.6	5 11	13 23.59	+ 2 36.0	1.435	2.343	13.8	20.8
5 21	13 18.13	- 9 15.1	1.616	2.488	14.7	21.8	5 21	13 17.54	+ 2 38.3	1.487	2.323	17.7	21.0
480362	2015 <i>KR</i> ₂₄		4 17.9 243°15	5.3/12.8	17		513030	2017 <i>VZ</i> ₃					

EPHEMERIDES

4 18.0

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
402822	2007 <i>EL</i> ₁₃₃		4 18.0 310°99	0°7/18.4	14 C		122331	2000 <i>QY</i> ₂₄		4 18.0 149°15	4°0/21.6	18	
3 12	14 8.43	-13 12.1	1.173	2.018	19.6	21.4	3 12	14 13.39	-23 43.0	2.312	3.064	14.0	20.1
3 22	14 6.12	-13 17.5	1.079	1.993	15.5	21.0	3 22	14 7.97	-24 5.1	2.224	3.073	11.5	20.0
4 1	14 0.36	-13 6.6	1.004	1.969	10.5	20.6	4 1	14 0.43	-24 12.1	2.158	3.081	8.5	19.8
4 11	13 51.72	-12 40.8	0.950	1.946	4.7	20.2	4 11	13 51.39	-24 3.2	2.118	3.089	5.6	19.6
4 21	13 41.39	-12 4.2	0.919	1.923	1.8	20.0	4 21	13 41.69	-23 39.5	2.106	3.096	4.0	19.5
5 1	13 31.04	-11 24.2	0.910	1.900	8.2	20.3	5 1	13 32.28	-23 4.3	2.123	3.102	5.3	19.6
5 11	13 22.45	-10 50.0	0.924	1.879	14.4	20.5	5 11	13 24.05	-22 22.7	2.167	3.108	8.1	19.8
5 21	13 16.88	-10 29.1	0.956	1.858	19.8	20.7	5 21	13 17.63	-21 40.3	2.237	3.113	11.0	20.0
347098	2010 <i>HO</i> ₁₇		4 18.0 307°75	1°9/20.9	18		456147	2006 <i>ES</i> ₄₄		4 18.0 339°10	1°5/16.9	17	
3 12	14 2.88	-20 42.6	4.122	4.879	8.2	20.2	3 12	14 2.57	-12 6.5	1.119	1.979	19.3	21.2
3 22	13 59.12	-20 52.8	4.014	4.870	6.6	20.1	3 22	14 1.31	-11 18.4	1.042	1.966	15.0	20.9
4 1	13 54.29	-20 55.2	3.930	4.860	4.8	19.9	4 1	13 56.92	-10 8.7	0.984	1.955	9.8	20.6
4 11	13 48.71	-20 50.3	3.874	4.851	3.0	19.8	4 11	13 50.15	-8 43.6	0.947	1.945	4.0	20.2
4 21	13 42.79	-20 38.9	3.847	4.842	1.9	19.7	4 21	13 42.19	-7 12.8	0.934	1.936	3.0	20.1
5 1	13 36.94	-20 22.8	3.850	4.833	3.0	19.8	5 1	13 34.60	-5 48.3	0.943	1.928	8.9	20.4
5 11	13 31.61	-20 4.1	3.883	4.824	4.9	19.9	5 11	13 28.81	-4 41.5	0.973	1.922	14.5	20.7
5 21	13 27.12	-19 45.0	3.941	4.815	6.7	20.0	5 21	13 25.77	-3 59.3	1.021	1.916	19.4	20.9
420874	2013 <i>KV</i> ₁₂		4 18.0 281°74	4°9/14.7	18		227443	2005 <i>WW</i> ₃₇		4 18.0 232°56	5°1/13.2	18	
3 12	14 12.46	-1 6.4	1.576	2.415	15.7	20.6	3 12	14 11.58	+ 2 47.5	2.204	3.029	12.3	21.0
3 22	14 8.18	-0 28.2	1.481	2.393	12.2	20.3	3 22	14 6.55	+ 3 36.7	2.115	3.016	9.6	20.8
4 1	14 1.09	+ 0 14.3	1.409	2.371	8.4	20.0	4 1	13 59.50	+ 4 26.4	2.050	3.003	6.9	20.6
4 11	13 51.83	+ 0 54.9	1.360	2.349	5.2	19.8	4 11	13 51.01	+ 5 10.8	2.012	2.989	5.2	20.4
4 21	13 41.41	+ 1 26.3	1.338	2.327	5.9	19.7	4 21	13 41.85	+ 5 44.6	2.003	2.975	6.0	20.4
5 1	13 31.12	+ 1 42.3	1.342	2.304	9.8	19.9	5 1	13 32.89	+ 6 3.3	2.021	2.960	8.6	20.6
5 11	13 22.23	+ 1 38.4	1.369	2.281	14.1	20.1	5 11	13 25.00	+ 6 4.3	2.065	2.945	11.5	20.7
5 21	13 15.68	+ 1 13.5	1.416	2.258	18.1	20.3	5 21	13 18.79	+ 5 47.3	2.131	2.929	14.3	20.9
9737	Dudarova		4 18.0 298°76	3°1/20.7	18		401770	2013 <i>UX</i> ₁₁		4 18.0 232°38	0°7/17.3	18	
3 12	14 5.88	-22 16.6	1.574	2.374	17.5	17.5	3 12	14 11.14	-10 24.3	2.393	3.196	12.1	21.7
3 22	14 3.27	-21 50.5	1.472	2.354	14.3	17.2	3 22	14 6.16	-10 2.5	2.288	3.181	9.4	21.5
4 1	13 57.93	-20 59.0	1.389	2.335	10.3	16.9	4 1	13 59.25	-9 32.2	2.207	3.165	6.1	21.3
4 11	13 50.51	-19 42.5	1.329	2.315	5.9	16.6	4 11	13 50.92	-8 55.8	2.154	3.149	2.5	21.0
4 21	13 41.99	-18 5.1	1.295	2.296	3.1	16.4	4 21	13 41.88	-8 16.9	2.130	3.132	1.6	20.9
5 1	13 33.64	-16 15.3	1.287	2.277	6.3	16.5	5 1	13 32.97	-7 39.7	2.135	3.114	5.3	21.2
5 11	13 26.72	-14 24.6	1.304	2.258	11.1	16.7	5 11	13 25.02	-7 8.5	2.169	3.096	8.9	21.3
5 21	13 22.13	-12 43.6	1.343	2.239	15.6	16.9	5 21	13 18.63	-6 46.7	2.227	3.077	12.1	21.5
261981	2006 <i>QD</i> ₂₀		4 18.0 231°76	4°2/13.8	17		503739	2016 <i>LU</i> ₂₅		4 18.0 233°76	1°8/16.3	17	
3 12	14 10.42	-2 9.5	2.102	2.928	12.8	22.0	3 12	14 8.08	-8 33.2	2.014	2.837	13.4	22.2
3 22	14 5.80	-0 59.9	2.008	2.914	9.9	21.8	3 22	14 4.04	-7 50.7	1.926	2.831	10.2	21.9
4 1	13 59.08	+ 0 16.0	1.939	2.899	6.7	21.4	4 1	13 57.94	-6 58.7	1.862	2.825	6.6	21.7
4 11	13 50.85	+ 1 31.9	1.896	2.882	4.4	21.4	4 11	13 50.37	-6 1.6	1.824	2.819	2.9	21.5
4 21	13 41.88	+ 2 41.3	1.883	2.865	5.2	21.4	4 21	13 42.14	-5 4.7	1.814	2.813	2.7	21.4
5 1	13 33.10	+ 3 37.7	1.897	2.847	8.3	21.5	5 1	13 34.16	-4 13.8	1.832	2.807	6.4	21.6
5 11	13 25.40	+ 4 16.5	1.937	2.829	11.6	21.7	5 11	13 27.31	-3 34.0	1.876	2.800	10.2	21.9
5 21	13 19.42	+ 4 35.6	2.000	2.809	14.7	21.9	5 21	13 22.23	-3 8.7	1.943	2.793	13.5	22.1
346821	2009 <i>CD</i> ₆₀		4 18.0 85°39	5°1/23.1	17		87073	2000 <i>KF</i> ₆₆		4 18.0 213°14	2°4/15.0	18	
3 12	14 9.35	-27 32.7	2.217	2.961	14.8	20.7	3 12	14 8.16	-9 16.5	2.282	3.096	12.3	19.8
3 22	14 5.02	-27 52.9	2.131	2.969	12.3	20.5	3 22	14 3.84	-7 39.2	2.187	3.089	9.4	19.6
4 1	13 58.56	-27 54.8	2.067	2.977	9.6	20.4	4 1	13 57.68	-5 49.2	2.118	3.081	6.0	19.3
4 11	13 50.61	-27 37.5	2.026	2.984	6.8	20.2	4 11	13 50.23	-3 52.4	2.078	3.072	2.9	19.1
4 21	13 42.00	-27 2.1	2.012	2.992	5.2	20.1	4 21	13 42.21	-1 56.1	2.068	3.062	3.4	19.1
5 1	13 33.70	-26 12.3	2.025	3.000	5.9	20.2	5 1	13 34.42	-0 8.3	2.089	3.052	6.8	19.3
5 11	13 26.60	-25 13.9	2.065	3.007	8.3	20.3	5 11	13 27.64	+ 1 24.3	2.138	3.041	10.2	19.5
5 21	13 21.34	-24 13.6	2.129	3.015	11.1	20.5	5 21	13 22.42	+ 2 37.6	2.211	3.030	13.2	19.7
145614	2006 <i>QF</i> ₄₈		4 18.0 261°65	1°3/16.9	17		385005	2012 <i>TH</i> ₂₃₄		4 18.0 83°78	1°9/16.3	17	
3 12	14 10.30	-10 12.0	1.746	2.569	15.1	21.0	3 12	14 8.63	-6 55.3	2.074	2.898	13.0	20.9
3 22	14 6.24	-9 37.9	1.648	2.552	11.7	20.7	3 22	14 4.30	-6 28.3	1.997	2.902	9.9	20.7
4 1	13 59.67	-8 51.5	1.572	2.535	7.6	20.4	4 1	13 58.00	-5 54.8	1.944	2.907	6.4	20.5
4 11	13 51.19	-7 56.5	1.521	2.517	3.2	20.1	4 11	13 50.36	-5 18.7	1.916	2.911	2.9	20.2
4 21	13 41.72	-6 58.5	1.497	2.499	2.4	20.0	4 21	13 42.17	-4 44.4	1.917	2.916	2.7	20.2
5 1	13 32.42	-6 4.2	1.500	2.480	7.0	20.3	5 1	13 34.29	-4 16.4	1.946	2.921	6.2	20.5
5 11	13 24.39	-5 20.5	1.529	2.461	11.5	20.5	5 11	13 27.56	-3 58.4	2.001	2.925	9.7	20.7
5 21	13 18.46	-4 51.8	1.580	2.442	15.5	20.7	5 21	13 22.54	-3 52.7	2.080	2.930	12.8	20.9
519313	2011 <i>EK</i> ₈₉		4 18.0 49°55	1°8/19.3	17		437678	2014 <i>CC</i> ₂₁		4 18.0 98°78	5°5/11.9	17	
3 12	14 11.37	-15 43.6	1.763	2.569	15.7	21.2	3 12	14 6.32	+ 3 41.9	2.254	3.089	11.7	20.7
3 22	14 6.87	-15 58.0	1.685	2.575	12.4	21.0	3 22	14 2.32	+ 4 52.8	2.190	3.096	9.2	20.6
4 1	13 59.92	-15 59.5	1.629	2.582	8.4	20.8	4 1	13 56.59	+ 6 3.1	2.151	3.103	6.7	20.4
4 11	13 51.22	-15 49.1	1.598	2.589	4.2	20.6	4 11	13 49.74	+ 7 6.6	2.138	3.110	5.5	20.4
4 21	13 41.76	-15 29.4	1.594	2.596	1.9	20.4	4 21	13 42.44	+ 7 57.6	2.153	3.116	6.4	20.4
5 1	13 32.68	-15 4.7	1.616	2.604	5.6	20.7	5 1	13 35.48	+ 8 31.9	2.196	3.123	8.6	20.6
5 11	13 25.02	-14 40.5	1.665	2.611	9.7	20.9	5 11	13 29.55	+ 8 47.2	2.262	3.130	11.1	20.7
5 21	13 19.50	-14 21.6	1.737	2.619	13.4	21.2	5 21	13 25.13	+ 8 43.5	2.350	3.137	13.5	20.9
509201	2006 <i>RA</i> ₉₉		4 18.0 165°88	1°3/19.4	18		216082	2006 <i>QS</i> ₇₈		4 18.0 227°79	0°3/17.7	17	
3 12	1												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
125381	2001 <i>VW</i> ₇₉	4 18.0 184°22		1°7/16.5 17			500150	2012 <i>DA</i> ₅₅	4 18.0 114°44		2°7/20.0 17		
3 12	14 11.81	- 9 53.0	1.866	2.683	14.5	21.5	3 12	14 12.14	-19 0.8	1.639	2.438	17.0	21.5
3 22	14 7.02	- 8 59.3	1.782	2.684	11.1	21.3	3 22	14 7.70	-19 4.5	1.561	2.444	13.6	21.3
4 1	13 59.93	- 7 53.7	1.721	2.684	7.2	21.0	4 1	14 0.59	-18 50.6	1.503	2.451	9.5	21.1
4 11	13 51.22	- 6 41.0	1.687	2.683	3.1	20.8	4 11	13 51.56	-18 19.8	1.470	2.457	5.2	20.8
4 21	13 41.80	- 5 27.6	1.682	2.682	2.7	20.8	4 21	13 41.70	-17 35.3	1.462	2.463	2.7	20.7
5 1	13 32.73	- 4 20.6	1.704	2.679	6.8	21.0	5 1	13 32.26	-16 43.0	1.481	2.469	6.0	20.9
5 11	13 24.98	- 3 26.2	1.753	2.676	10.9	21.2	5 11	13 24.39	-15 50.6	1.526	2.475	10.3	21.1
5 21	13 19.23	- 2 48.3	1.825	2.672	14.4	21.5	5 21	13 18.86	-15 4.7	1.594	2.480	14.1	21.4
457008	2008 <i>CA</i> ₈₃	4 18.0 49°13		4°9/14.2 17			467966	2012 <i>JJ</i> ₆₀	4 18.0 279°90		3°7/14.8 17		
3 12	14 8.74	- 2 22.2	1.488	2.337	16.0	20.9	3 12	14 8.41	- 4 9.7	1.795	2.631	14.2	21.3
3 22	14 5.02	- 1 16.9	1.425	2.343	12.2	20.7	3 22	14 4.66	- 3 16.7	1.701	2.613	10.9	21.0
4 1	13 58.75	- 0 6.0	1.384	2.350	8.2	20.4	4 1	13 58.57	- 2 15.9	1.630	2.595	7.3	20.8
4 11	13 50.73	+ 1 2.4	1.368	2.356	5.2	20.3	4 11	13 50.74	- 1 13.1	1.585	2.577	4.1	20.5
4 21	13 42.03	+ 2 0.3	1.377	2.364	6.0	20.3	4 21	13 42.03	- 0 15.0	1.567	2.558	4.7	20.5
5 1	13 33.84	+ 2 40.5	1.411	2.371	9.6	20.6	5 1	13 33.49	+ 0 31.4	1.575	2.539	8.4	20.7
5 11	13 27.21	+ 2 58.9	1.468	2.378	13.5	20.8	5 11	13 26.15	+ 1 0.9	1.608	2.520	12.3	20.9
5 21	13 22.82	+ 2 54.8	1.546	2.386	16.9	21.0	5 21	13 20.77	+ 1 10.8	1.662	2.502	15.9	21.1
344546	2002 <i>VK</i> ₇₈	4 18.0 230°79		7°3/10.7 18			426333	2012 <i>VG</i> ₃₉	4 18.0 179°05		1°1/17.1 18		
3 12	14 13.19	+13 12.3	2.523	3.331	11.4	20.8	3 12	14 11.39	- 7 38.0	2.455	3.262	11.7	20.9
3 22	14 7.47	+13 55.7	2.444	3.321	9.5	20.7	3 22	14 6.16	- 7 34.3	2.367	3.263	9.0	20.7
4 1	13 59.94	+14 31.9	2.390	3.311	7.9	20.6	4 1	13 59.13	- 7 25.5	2.304	3.263	5.8	20.5
4 11	13 51.16	+14 55.0	2.362	3.300	7.3	20.5	4 11	13 50.85	- 7 14.0	2.268	3.264	2.5	20.3
4 21	13 41.84	+15 0.9	2.362	3.289	8.0	20.5	4 21	13 42.01	- 7 2.4	2.262	3.264	1.8	20.3
5 1	13 32.80	+14 46.9	2.389	3.277	9.7	20.6	5 1	13 33.42	- 6 54.0	2.286	3.263	5.1	20.5
5 11	13 24.79	+14 12.7	2.440	3.265	11.9	20.7	5 11	13 25.81	- 6 51.4	2.338	3.263	8.4	20.7
5 21	13 18.34	+13 20.0	2.513	3.253	13.9	20.9	5 21	13 19.74	- 6 56.6	2.414	3.262	11.3	20.9
407902	2012 <i>BR</i> ₁₄₂	4 18.0 146°24		1°6/16.6 16			5045	Hoyin	4 18.0 171°01		0°9/16.9 18		
3 12	14 11.93	- 9 3.8	1.949	2.765	14.0	22.2	3 12	14 6.64	- 9 30.3	2.917	3.722	10.1	18.7
3 22	14 6.91	- 8 22.2	1.874	2.775	10.7	22.0	3 22	14 2.25	- 8 59.0	2.830	3.725	7.7	18.6
4 1	13 59.73	- 7 31.2	1.823	2.784	6.9	21.7	4 1	13 56.44	- 8 21.2	2.768	3.728	5.0	18.4
4 11	13 51.09	- 6 35.1	1.798	2.793	2.9	21.5	4 11	13 49.68	- 7 39.6	2.735	3.730	2.1	18.2
4 21	13 41.88	- 5 39.3	1.801	2.802	2.5	21.5	4 21	13 42.53	- 6 57.4	2.731	3.732	1.6	18.1
5 1	13 33.08	- 4 49.8	1.834	2.809	6.4	21.7	5 1	13 35.58	- 6 18.2	2.757	3.734	4.5	18.4
5 11	13 25.57	- 4 11.4	1.892	2.816	10.2	22.0	5 11	13 29.42	- 5 45.3	2.812	3.735	7.3	18.5
5 21	13 19.98	- 3 47.3	1.974	2.822	13.4	22.2	5 21	13 24.48	- 5 21.1	2.892	3.735	9.8	18.7
389749	2011 <i>SV</i> ₁₅₄	4 18.0 224°82		2°8/14.7 17			167838	2005 <i>CY</i> ₅₁	4 18.0 127°97		1°3/16.9 18		
3 12	14 4.90	- 5 30.4	2.416	3.242	11.3	21.0	3 12	14 11.88	-10 33.2	1.758	2.577	15.2	20.6
3 22	14 1.23	- 4 25.0	2.331	3.238	8.6	20.8	3 22	14 7.09	- 9 51.3	1.687	2.589	11.6	20.4
4 1	13 55.91	- 3 12.7	2.271	3.234	5.6	20.6	4 1	13 59.95	- 8 57.8	1.639	2.601	7.5	20.2
4 11	13 49.48	- 1 58.6	2.239	3.231	3.1	20.4	4 11	13 51.22	- 7 57.3	1.616	2.612	3.1	19.9
4 21	13 42.56	- 0 47.9	2.236	3.227	3.6	20.4	4 21	13 41.89	- 6 55.8	1.621	2.623	2.3	19.9
5 1	13 35.87	+ 0 13.8	2.261	3.223	6.4	20.6	5 1	13 33.03	- 6 0.0	1.654	2.633	6.6	20.2
5 11	13 30.08	+ 1 2.3	2.313	3.218	9.4	20.8	5 11	13 25.61	- 5 15.7	1.713	2.643	10.7	20.5
5 21	13 25.70	+ 1 35.3	2.389	3.214	12.1	21.0	5 21	13 20.27	- 4 46.5	1.795	2.652	14.2	20.7
379972	2012 <i>SA</i> ₁	4 18.0 257°36		1°7/14.4 18			403282	2009 <i>BF</i> ₂₇	4 18.0 242°66		5°4/21.7 16		
3 12	13 58.81	- 2 53.5	4.772	5.589	6.3	20.5	3 12	14 14.46	-24 23.3	1.727	2.496	17.4	21.8
3 22	13 55.84	- 2 13.1	4.677	5.579	4.7	20.4	3 22	14 9.84	-24 56.7	1.626	2.484	14.5	21.5
4 1	13 52.08	- 1 30.6	4.609	5.570	3.1	20.3	4 1	14 2.29	-25 11.3	1.545	2.471	11.0	21.3
4 11	13 47.79	- 0 48.4	4.571	5.560	1.9	20.2	4 11	13 52.43	-25 4.3	1.487	2.458	7.5	21.1
4 21	13 43.28	- 0 8.6	4.563	5.550	2.2	20.2	4 21	13 41.30	-24 35.7	1.455	2.444	5.4	20.9
5 1	13 38.86	+ 0 26.6	4.585	5.540	3.7	20.3	5 1	13 30.29	-23 48.9	1.449	2.430	7.1	21.0
5 11	13 34.84	+ 0 55.6	4.635	5.530	5.3	20.4	5 11	13 20.74	-22 51.5	1.469	2.415	10.8	21.1
5 21	13 31.47	+ 1 17.0	4.711	5.519	6.8	20.5	5 21	13 13.65	-21 52.1	1.512	2.400	14.7	21.3
56714	2000 <i>MK</i> ₃	4 18.0 222°19		3°2/21.6 18			326422	2001 <i>TN</i> ₉₉	4 18.0 248°08		1°4/19.3 17		
3 12	14 7.04	-23 45.2	2.507	3.267	12.9	19.5	3 12	14 9.74	-17 10.2	1.983	2.779	14.5	21.4
3 22	14 3.01	-23 36.1	2.407	3.262	10.5	19.3	3 22	14 5.57	-16 53.7	1.881	2.766	11.5	21.2
4 1	13 57.16	-23 11.2	2.329	3.257	7.7	19.2	4 1	13 59.12	-16 21.7	1.801	2.752	7.9	20.9
4 11	13 50.03	-22 30.9	2.277	3.252	4.9	19.0	4 11	13 50.97	-15 35.9	1.747	2.738	3.9	20.7
4 21	13 42.32	-21 37.4	2.252	3.246	3.2	18.8	4 21	13 41.96	-14 39.7	1.721	2.724	1.6	20.5
5 1	13 34.81	-20 34.8	2.257	3.240	4.6	18.9	5 1	13 33.13	-13 38.7	1.722	2.709	5.4	20.7
5 11	13 28.27	-19 28.6	2.289	3.235	7.5	19.1	5 11	13 25.46	-12 39.5	1.751	2.694	9.5	20.9
5 21	13 23.26	-18 24.4	2.347	3.228	10.4	19.3	5 21	13 19.69	-11 48.2	1.803	2.678	13.3	21.1
235925	2005 <i>EA</i> ₉₆	4 18.0 52°27		1°5/16.5 17			462156	2007 <i>TM</i> ₁₂₄	4 18.0 201°38		1°0/17.2 16		
3 12	14 5.46	-11 20.0	1.820	2.647	14.4	20.0	3 12	14 12.81	-10 27.3	2.000	2.810	14.0	22.3
3 22	14 2.10	-10 12.2	1.749	2.657	11.0	19.8	3 22	14 7.74	- 9 57.5	1.909	2.806	10.8	22.1
4 1	13 56.65	- 8 51.2	1.702	2.667	7.0	19.6	4 1	14 0.41	- 9 17.2	1.841	2.801	7.0	21.9
4 11	13 49.81	- 7 22.8	1.681	2.677	2.9	19.4	4 11	13 51.47	- 8 29.8	1.800	2.795	2.9	21.6
4 21	13 42.44	- 5 54.0	1.687	2.687	2.5	19.4	4 21	13 41.78	- 7 40.1	1.787	2.789	1.9	21.5
5 1	13 35.48	- 4 32.7	1.721	2.698	6.5	19.6	5 1	13 32.35	- 6 53.4	1.803	2.781	6.1	21.8
5 11	13 29.78	- 3 25.4	1.781	2.709	10.4	19.9	5 11	13 24.14	- 6 15.3	1.845	2.773	10.1	22.0
5 21	13 25.90	- 2 36.0	1.863	2.720	13.7	20.1	5 21	13 17.84	- 5 49.5	1.912	2.765	13.6	22.2
193846	2001 <i>QZ</i> ₁₀₃	4 18.0 176°65		2°4/20.3 18			58548	1997 <i>GK</i> ₁₂	4 18.0 336°95		1°1/16.9 17		
3 12	14 14.16	-20 58.											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
7763	Crabeels		4 18.0 278°98	2°8/15.6	18		41456	2000 NT		4 18.0 107°27	8°5/28.1	18	
3 12	14 8.09	- 5 36.8	1.914	2.745	13.6	17.4	3 12	14 16.62	-40 1.5	2.345	2.994	16.3	19.4
3 22	14 4.18	- 4 55.6	1.829	2.738	10.4	17.2	3 22	14 10.70	-40 37.4	2.270	3.019	14.4	19.3
4 1	13 58.11	- 4 7.2	1.766	2.731	6.8	16.9	4 1	14 2.32	-40 49.2	2.214	3.044	12.3	19.2
4 11	13 50.51	- 3 16.6	1.730	2.724	3.4	16.7	4 11	13 52.26	-40 33.8	2.179	3.068	10.3	19.1
4 21	13 42.21	- 2 29.2	1.721	2.716	3.7	16.7	4 21	13 41.56	-39 51.0	2.169	3.091	8.8	19.0
5 1	13 34.17	- 1 50.8	1.739	2.709	7.2	16.9	5 1	13 31.39	-38 43.8	2.184	3.114	8.5	19.0
5 11	13 27.30	- 1 25.9	1.783	2.702	11.0	17.1	5 11	13 22.78	-37 19.2	2.226	3.136	9.5	19.1
5 21	13 22.26	- 1 16.8	1.849	2.695	14.3	17.3	5 21	13 16.39	-35 45.5	2.292	3.157	11.2	19.3
38973	2000 TQ ₆₁		4 18.0 229°89	4°8/13.4	18		132322	2002 GX ₁₉		4 18.0 340°56	1°0/18.8	18	
3 12	14 11.11	+ 1 59.5	2.283	3.107	12.0	19.9	3 12	14 2.76	-16 0.5	1.142	1.990	19.8	19.4
3 22	14 6.15	+ 2 48.0	2.193	3.095	9.3	19.7	3 22	14 1.54	-15 40.5	1.062	1.977	15.6	19.1
4 1	13 59.24	+ 3 37.4	2.128	3.082	6.6	19.5	4 1	13 57.16	-14 57.3	1.000	1.966	10.6	18.7
4 11	13 50.96	+ 4 22.5	2.090	3.069	4.9	19.3	4 11	13 50.35	-13 53.6	0.960	1.955	4.9	18.4
4 21	13 42.03	+ 4 58.1	2.080	3.055	5.6	19.4	4 21	13 42.30	-12 36.3	0.942	1.946	1.7	18.1
5 1	13 33.30	+ 5 19.7	2.099	3.040	8.1	19.5	5 1	13 34.58	-11 15.7	0.947	1.938	7.7	18.5
5 11	13 25.59	+ 5 24.7	2.143	3.025	11.1	19.6	5 11	13 28.66	-10 3.7	0.973	1.931	13.4	18.7
5 21	13 19.49	+ 5 12.6	2.210	3.010	13.8	19.8	5 21	13 25.52	- 9 9.1	1.019	1.926	18.4	19.0
494270	2016 QU ₆₉		4 18.0 245°18	1°8/19.9	17		493541	2015 GE ₃₆		4 18.0 56°47	1°8/16.3	17	
3 12	14 7.17	-18 34.2	2.384	3.169	12.7	21.9	3 12	14 6.73	- 8 59.4	1.888	2.716	13.9	21.3
3 22	14 3.17	-18 22.5	2.285	3.162	10.1	21.7	3 22	14 2.99	- 8 10.3	1.820	2.728	10.6	21.1
4 1	13 57.32	-17 57.5	2.210	3.155	7.0	21.5	4 1	13 57.23	- 7 11.6	1.776	2.740	6.8	20.9
4 11	13 50.15	-17 20.5	2.160	3.148	3.7	21.3	4 11	13 50.11	- 6 8.4	1.757	2.753	2.9	20.7
4 21	13 42.37	-16 34.1	2.139	3.141	1.8	21.2	4 21	13 42.48	- 5 6.5	1.766	2.766	2.7	20.7
5 1	13 34.78	-15 42.6	2.147	3.134	4.5	21.3	5 1	13 35.26	- 4 12.1	1.803	2.778	6.4	21.0
5 11	13 28.16	-14 51.2	2.182	3.126	7.9	21.5	5 11	13 29.27	- 3 30.2	1.865	2.791	10.1	21.2
5 21	13 23.08	-14 4.7	2.242	3.119	11.0	21.7	5 21	13 25.08	- 3 3.5	1.950	2.804	13.3	21.5
222260	2000 QT ₁₆₇		4 18.0 91°22	4°3/22.2	18		87247	2000 OB ₄₇		4 18.0 281°01	1°8/19.4	18	
3 12	14 14.35	-25 20.1	2.104	2.854	15.3	20.1	3 12	14 12.07	-16 43.5	1.980	2.774	14.7	20.2
3 22	14 8.70	-25 33.1	2.038	2.883	12.5	20.0	3 22	14 7.65	-16 47.9	1.860	2.742	11.8	20.0
4 1	14 0.87	-25 27.8	1.992	2.912	9.3	19.8	4 1	14 0.73	-16 38.9	1.761	2.710	8.2	19.7
4 11	13 51.59	-25 4.1	1.972	2.940	6.2	19.7	4 11	13 51.79	-16 16.8	1.688	2.678	4.2	19.4
4 21	13 41.82	-24 23.9	1.979	2.967	4.4	19.6	4 21	13 41.68	-15 43.5	1.642	2.645	2.0	19.1
5 1	13 32.57	-23 32.0	2.015	2.994	5.5	19.8	5 1	13 31.47	-15 3.1	1.625	2.611	5.7	19.3
5 11	13 24.74	-22 34.7	2.077	3.020	8.3	20.0	5 11	13 22.30	-14 21.6	1.634	2.577	10.1	19.5
5 21	13 18.91	-21 38.4	2.165	3.046	11.2	20.2	5 21	13 15.10	-13 45.0	1.666	2.542	14.2	19.6
16428	1988 RD ₁₂		4 18.0 251°86	0°7/19.3	18 R		384002	2008 UB ₃₄		4 18.0 290°50	3°4/15.4	17	
3 12	14 0.53	-15 52.3	4.591	5.370	7.1	19.1	3 12	14 10.57	- 2 45.6	1.876	2.707	13.9	20.7
3 22	13 57.21	-15 42.1	4.489	5.365	5.5	19.0	3 22	14 6.19	- 2 21.4	1.787	2.696	10.7	20.5
4 1	13 53.02	-15 26.1	4.413	5.361	3.8	18.8	4 1	13 59.51	- 1 53.4	1.721	2.684	7.1	20.2
4 11	13 48.25	-15 5.1	4.366	5.356	1.8	18.7	4 11	13 51.16	- 1 26.3	1.681	2.673	4.0	20.0
4 21	13 43.21	-14 40.8	4.348	5.351	0.8	18.6	4 21	13 42.00	- 1 5.1	1.668	2.661	4.2	20.0
5 1	13 38.27	-14 14.9	4.361	5.346	2.5	18.7	5 1	13 33.07	- 0 54.3	1.682	2.650	7.7	20.2
5 11	13 33.77	-13 49.5	4.403	5.341	4.4	18.8	5 11	13 25.36	- 0 57.3	1.722	2.638	11.4	20.4
5 21	13 29.99	-13 26.4	4.472	5.337	6.2	19.0	5 21	13 19.57	- 1 15.4	1.784	2.627	14.9	20.6
42278	2001 SH ₂₆₅		4 18.0 89°84	0°1/17.9	18		52837	1998 RL ₅₅		4 18.0 320°80	4°4/20.6	18	
3 12	14 5.75	-14 9.0	2.249	3.056	12.7	19.0	3 12	14 9.33	-19 53.7	1.210	2.032	20.5	18.7
3 22	14 2.01	-13 25.9	2.168	3.062	9.8	18.8	3 22	14 6.75	-20 25.6	1.125	2.020	16.7	18.4
4 1	13 56.49	-12 30.6	2.110	3.068	6.4	18.6	4 1	14 0.72	-20 36.6	1.057	2.008	12.1	18.1
4 11	13 49.77	-11 26.5	2.079	3.074	2.7	18.4	4 11	13 51.93	-20 25.1	1.011	1.997	7.2	17.8
4 21	13 42.57	-10 18.2	2.077	3.080	1.2	18.3	4 21	13 41.63	-19 52.3	0.987	1.986	4.4	17.5
5 1	13 35.66	- 9 11.3	2.103	3.086	4.9	18.6	5 1	13 31.52	-19 4.1	0.986	1.976	7.8	17.7
5 11	13 29.79	- 8 11.3	2.157	3.092	8.4	18.8	5 11	13 23.31	-18 10.2	1.007	1.966	13.0	17.9
5 21	13 25.47	- 7 22.4	2.235	3.098	11.5	19.0	5 21	13 18.13	-17 20.9	1.048	1.957	17.9	18.2
233833	2008 UY ₂₆₆		4 18.0 97°27	0°9/18.9	17		233582	2007 QH ₁₃		4 18.0 316°71	2°7/19.9	18	
3 12	14 8.76	-15 18.3	1.996	2.800	14.2	21.0	3 12	14 10.30	-17 39.6	1.804	2.604	15.6	20.3
3 22	14 4.63	-15 6.2	1.912	2.802	11.1	20.8	3 22	14 6.31	-18 5.3	1.708	2.593	12.5	20.1
4 1	13 58.37	-14 41.3	1.850	2.805	7.4	20.6	4 1	13 59.79	-18 17.7	1.634	2.582	8.9	19.8
4 11	13 50.62	-14 5.6	1.814	2.807	3.5	20.4	4 11	13 51.35	-18 16.7	1.584	2.571	4.9	19.6
4 21	13 42.20	-13 22.7	1.805	2.809	1.3	20.2	4 21	13 41.92	-18 3.7	1.560	2.561	2.8	19.4
5 1	13 34.09	-12 37.6	1.824	2.811	5.2	20.5	5 1	13 32.64	-17 42.3	1.564	2.551	5.8	19.6
5 11	13 27.18	-11 55.8	1.870	2.813	9.1	20.7	5 11	13 24.64	-17 17.9	1.593	2.541	9.9	19.8
5 21	13 22.10	-11 22.1	1.940	2.815	12.5	20.9	5 21	13 18.76	-16 56.0	1.644	2.532	13.7	20.0
213347	2001 SD ₃₀₄		4 18.0 281°11	0°0/18.0	18		357577	2004 TP ₂₃₁		4 18.0 284°94	1°7/19.0	17	
3 12	13 59.63	-12 53.6	4.341	5.135	7.3	20.1	3 12	14 13.91	-14 26.3	1.443	2.261	17.9	20.1
3 22	13 56.57	-12 25.6	4.243	5.131	5.6	19.9	3 22	14 9.73	-14 49.8	1.351	2.248	14.3	19.8
4 1	13 52.62	-11 51.8	4.172	5.128	3.6	19.8	4 1	14 2.40	-15 0.4	1.279	2.236	9.8	19.5
4 11	13 48.08	-11 13.9	4.130	5.124	1.5	19.6	4 11	13 52.57	-14 58.4	1.230	2.223	4.8	19.2
4 21	13 43.29	-10 34.1	4.117	5.121	0.7	19.5	4 21	13 41.39	-14 45.7	1.207	2.210	2.1	19.0
5 1	13 38.61	- 9 54.6	4.135	5.117	2.8	19.7	5 1	13 30.36	-14 26.9	1.209	2.197	6.9	19.2
5 11	13 34.39	- 9 17.7	4.182	5.114	4.8	19.9	5 11	13 20.95	-14 8.4	1.236	2.184	12.1	19.5
5 21	13 30.92	- 8 45.5	4.255	5.110	6.7	20.0	5 21	13 14.22	-13 56.4	1.283	2.172	16.7	19.7
93403	2000 SM ₂₉₃		4 18.0 277°17	5°3/22.3	18		468377	2016 FV ₅₄		4 18.0 295°05	6°7/12.7	18	
3 12	14 10.46	-26 0.6	1.959	2.718									

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4 18.0

4 18.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
112176	2002 <i>JT</i> ₉₅		4 18.0	35° ⁰³	2° ⁵ /16.7	18	485423	2011 <i>QO</i> ₅		4 18.1	290° ⁶⁸	3° ⁶ /24.5	18
3 12	14 12.30	- 6 25.4	1.251	2.098	18.4	19.2	3 12	14 2.00	-30 53.4	4.309	5.006	8.7	21.0
3 22	14 8.27	- 6 14.1	1.190	2.108	14.1	19.0	3 22	13 58.55	-30 59.8	4.197	4.997	7.4	20.8
4 1	14 1.15	- 5 54.8	1.150	2.117	9.2	18.7	4 1	13 54.01	-30 55.1	4.108	4.988	6.0	20.7
4 11	13 51.89	- 5 32.8	1.132	2.128	4.1	18.5	4 11	13 48.73	-30 39.0	4.044	4.980	4.6	20.6
4 21	13 41.77	- 5 13.7	1.139	2.139	3.5	18.5	4 21	13 43.11	-30 12.2	4.008	4.971	3.7	20.5
5 1	13 32.29	- 5 3.6	1.170	2.151	8.4	18.8	5 1	13 37.59	-29 36.5	4.000	4.962	3.9	20.5
5 11	13 24.75	- 5 6.8	1.225	2.163	13.2	19.1	5 11	13 32.59	-28 54.2	4.021	4.953	5.0	20.6
5 21	13 19.91	- 5 25.2	1.299	2.176	17.3	19.4	5 21	13 28.48	-28 8.5	4.069	4.944	6.5	20.7
468471	2004 <i>RU</i> ₇₉		4 18.1	278° ¹²	3° ⁵ /15.9	16	522793	2016 <i>NW</i> ₇₈		4 18.1	206° ⁵⁷	3° ⁹ /13.6	17
3 12	14 20.14	- 0 35.5	2.040	2.849	13.7	21.3	3 12	14 6.89	+ 0 59.3	2.639	3.464	10.5	21.7
3 22	14 13.70	- 0 36.9	1.923	2.818	10.8	21.0	3 22	14 2.62	+ 1 45.5	2.558	3.461	8.1	21.5
4 1	14 4.61	- 0 38.4	1.830	2.786	7.4	20.8	4 1	13 56.81	+ 2 32.8	2.502	3.458	5.7	21.3
4 11	13 53.43	- 0 43.9	1.764	2.753	4.2	20.5	4 11	13 49.94	+ 3 16.6	2.474	3.455	4.0	21.2
4 21	13 41.03	- 0 56.8	1.728	2.720	4.2	20.4	4 21	13 42.63	+ 3 52.8	2.474	3.451	4.6	21.3
5 1	13 28.56	- 1 20.3	1.722	2.686	7.8	20.6	5 1	13 35.53	+ 4 17.7	2.503	3.447	6.9	21.4
5 11	13 17.17	- 1 56.4	1.744	2.652	11.8	20.7	5 11	13 29.29	+ 4 29.1	2.558	3.443	9.4	21.5
5 21	13 7.81	- 2 45.4	1.790	2.617	15.5	20.9	5 21	13 24.37	+ 4 26.0	2.636	3.439	11.7	21.7
39159	2000 <i>WT</i> ₁₁₅		4 18.1	200° ²⁵	0° ⁷ /18.9	18	502791	2015 <i>DX</i> ₉₉		4 18.1	68° ²³	1° ¹ /19.1	17
3 12	14 7.63	-15 3.9	2.970	3.756	10.5	20.3	3 12	14 7.74	-17 23.0	1.779	2.585	15.6	21.4
3 22	14 3.10	-14 53.7	2.872	3.752	8.2	20.1	3 22	14 4.01	-16 46.9	1.706	2.597	12.2	21.2
4 1	13 57.09	-14 34.7	2.798	3.748	5.5	19.9	4 1	13 58.02	-15 53.6	1.655	2.609	8.2	20.9
4 11	13 50.05	-14 8.3	2.752	3.744	2.6	19.7	4 11	13 50.51	-14 46.2	1.629	2.621	3.9	20.7
4 21	13 42.53	-13 36.9	2.736	3.739	1.0	19.6	4 21	13 42.41	-13 30.4	1.630	2.633	1.4	20.6
5 1	13 35.18	-13 3.5	2.749	3.734	3.8	19.8	5 1	13 34.75	-12 13.2	1.658	2.645	5.5	20.9
5 11	13 28.59	-12 31.6	2.792	3.728	6.7	20.0	5 11	13 28.46	-11 2.4	1.713	2.658	9.6	21.1
5 21	13 23.25	-12 4.3	2.860	3.723	9.3	20.2	5 21	13 24.15	-10 3.6	1.791	2.670	13.2	21.4
341779	2007 <i>WS</i> ₂₃		4 18.1	142° ⁷⁰	1° ⁰ /16.9	17	303949	2005 <i>X7</i> ₁₁₄		4 18.1	50° ⁷⁶	1° ³ /18.9	18
3 12	14 7.49	- 9 50.3	2.420	3.231	11.8	21.6	3 12	14 12.81	-14 41.3	1.246	2.076	19.5	20.3
3 22	14 3.20	- 9 15.6	2.339	3.238	9.0	21.4	3 22	14 8.78	-14 48.4	1.185	2.090	15.3	20.1
4 1	13 57.22	- 8 32.8	2.283	3.243	5.8	21.2	4 1	14 1.56	-14 38.8	1.143	2.103	10.3	19.9
4 11	13 50.10	- 7 45.3	2.253	3.249	2.4	21.0	4 11	13 52.10	-14 14.6	1.124	2.118	4.8	19.6
4 21	13 42.52	- 6 57.1	2.253	3.254	1.8	20.9	4 21	13 41.75	-13 40.5	1.129	2.132	1.8	19.4
5 1	13 35.21	- 6 12.7	2.282	3.259	5.1	21.2	5 1	13 32.08	-13 3.4	1.158	2.147	7.0	19.8
5 11	13 28.87	- 5 36.2	2.338	3.264	8.4	21.4	5 11	13 24.42	-12 31.0	1.211	2.163	12.0	20.1
5 21	13 24.00	- 5 10.4	2.419	3.269	11.2	21.6	5 21	13 19.57	-12 9.3	1.285	2.178	16.4	20.4
170288	2003 <i>RD</i> ₁₃		4 18.1	165° ¹⁶	0° ² /17.9	18	319553	2006 <i>SU</i> ₁₁		4 18.1	288° ⁶²	5° ⁵ /21.3	17
3 12	14 12.29	-13 0.4	1.973	2.778	14.3	21.5	3 12	14 13.04	-22 50.8	1.617	2.401	17.8	20.9
3 22	14 7.31	-12 30.6	1.890	2.783	11.1	21.3	3 22	14 9.14	-23 35.4	1.508	2.376	14.9	20.6
4 1	14 0.11	-11 48.6	1.830	2.788	7.2	21.1	4 1	14 2.14	-24 3.1	1.418	2.351	11.3	20.3
4 11	13 51.37	-10 57.4	1.797	2.792	3.0	20.8	4 11	13 52.58	-24 10.8	1.351	2.325	7.6	20.0
4 21	13 41.99	-10 1.6	1.792	2.796	1.4	20.7	4 21	13 41.45	-23 57.3	1.308	2.300	5.5	19.8
5 1	13 32.95	- 9 7.1	1.816	2.798	5.7	21.0	5 1	13 30.19	-23 25.1	1.292	2.274	7.5	19.9
5 11	13 25.20	- 8 19.7	1.867	2.800	9.7	21.2	5 11	13 20.31	-22 40.9	1.299	2.248	11.6	20.0
5 21	13 19.37	- 7 43.7	1.941	2.802	13.1	21.4	5 21	13 12.98	-21 53.3	1.329	2.223	15.9	20.2
329365	2001 <i>UA</i> ₁₀₇		4 18.1	237° ⁸⁸	0° ⁷ /17.5	17	32481	2000 <i>SF</i> ₃₅₂		4 18.1	249° ¹²	2° ⁹ /15.3	18
3 12	14 11.14	-10 51.6	2.151	2.959	13.2	22.0	3 12	14 8.87	- 2 48.3	2.388	3.210	11.6	18.9
3 22	14 6.43	-10 28.3	2.049	2.944	10.2	21.8	3 22	14 4.36	- 2 21.0	2.299	3.202	8.9	18.7
4 1	13 59.60	- 9 55.0	1.970	2.930	6.7	21.5	4 1	13 58.07	- 1 50.5	2.234	3.194	5.9	18.5
4 11	13 51.21	- 9 14.7	1.919	2.914	2.8	21.2	4 11	13 50.53	- 1 20.7	2.196	3.186	3.3	18.3
4 21	13 42.03	- 8 31.1	1.895	2.898	1.6	21.1	4 21	13 42.41	- 0 55.6	2.187	3.178	3.6	18.4
5 1	13 33.00	- 7 49.2	1.901	2.882	5.7	21.3	5 1	13 34.49	- 0 38.9	2.206	3.170	6.4	18.5
5 11	13 25.02	- 7 14.1	1.934	2.864	9.6	21.5	5 11	13 27.52	- 0 33.4	2.252	3.161	9.5	18.7
5 21	13 18.79	- 6 49.5	1.991	2.847	13.0	21.7	5 21	13 22.05	- 0 40.4	2.322	3.152	12.3	18.9
430850	2005 <i>LF</i> ₄₆		4 18.1	294° ⁸³	11° ⁰ /4.3	18	354729	2005 <i>SE</i> ₁₉₃		4 18.1	136° ³⁸	2° ² /16.6	18
3 12	14 8.44	+22 38.9	2.207	3.010	13.0	20.5	3 12	14 17.29	- 6 32.8	1.675	2.495	15.8	21.2
3 22	14 4.19	+24 11.0	2.156	3.005	11.8	20.4	3 22	14 11.38	- 6 12.5	1.605	2.508	12.1	21.0
4 1	13 57.98	+25 29.0	2.127	3.000	11.1	20.3	4 1	14 2.87	- 5 45.3	1.558	2.520	7.8	20.7
4 11	13 50.45	+26 24.9	2.122	2.994	11.2	20.3	4 11	13 52.57	- 5 15.4	1.537	2.531	3.5	20.5
4 21	13 42.40	+26 53.4	2.139	2.989	12.2	20.4	4 21	13 41.58	- 4 47.8	1.543	2.542	3.1	20.5
5 1	13 34.72	+26 51.7	2.179	2.984	13.6	20.5	5 1	13 31.13	- 4 27.6	1.577	2.552	7.3	20.8
5 11	13 28.20	+26 20.6	2.237	2.979	15.3	20.6	5 11	13 22.29	- 4 18.8	1.637	2.561	11.4	21.0
5 21	13 23.39	+25 23.6	2.312	2.974	16.8	20.7	5 21	13 15.76	- 4 23.6	1.720	2.570	15.0	21.3
337519	2001 <i>SD</i> ₁₅₈		4 18.1	118° ¹⁰	3° ³ /21.9	17	391376	2006 <i>WV</i> ₂₁		4 18.1	186° ²²	4° ¹ /13.6	17
3 12	14 11.61	-24 24.5	2.983	3.720	11.5	22.2	3 12	14 7.60	+ 1 35.5	2.583	3.408	10.7	21.4
3 22	14 6.09	-24 38.9	2.903	3.741	9.4	22.1	3 22	14 3.18	+ 2 19.0	2.505	3.408	8.3	21.2
4 1	13 58.99	-24 40.7	2.846	3.761	7.0	22.0	4 1	13 57.18	+ 3 2.9	2.452	3.408	5.8	21.1
4 11	13 50.83	-24 29.6	2.815	3.781	4.7	21.8	4 11	13 50.11	+ 3 42.7	2.427	3.407	4.2	21.0
4 21	13 42.25	-24 7.0	2.814	3.801	3.3	21.8	4 21	13 42.60	+ 4 14.3	2.430	3.406	4.8	21.0
5 1	13 33.96	-23 35.5	2.842	3.819	4.3	21.9	5 1	13 35.33	+ 4 34.1	2.462	3.405	7.0	21.1
5 11	13 26.60	-22 59.0	2.900	3.838	6.4	22.0	5 11	13 28.95	+ 4 40.1	2.519	3.404	9.6	21.3
5 21	13 20.64	-22 21.5	2.984	3.855	8.7	22.2	5 21	13 23.93	+ 4 31.7	2.600	3.402		

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4 18.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
213840	2003 <i>SU</i> ₅		4 18.1 223°32	0°3/17.8	16		505891	2015 <i>DE</i> ₁₅₂		4 18.1 185°19	4°0/13.9	17	
3 12	14 11.50	-13 9.3	2.027	2.831	14.0	21.5	3 12	14 8.15	-1 23.6	2.201	3.030	12.2	21.4
3 22	14 6.84	-12 32.6	1.927	2.820	10.9	21.3	3 22	14 3.89	-0 24.5	2.123	3.030	9.3	21.2
4 1	13 59.94	-11 42.4	1.851	2.809	7.2	21.0	4 1	13 57.79	+0 38.2	2.070	3.030	6.3	21.0
4 11	13 51.39	-10 41.9	1.801	2.796	3.0	20.7	4 11	13 50.42	+1 39.0	2.044	3.030	4.2	20.8
4 21	13 42.04	-9 35.8	1.779	2.783	1.5	20.6	4 21	13 42.52	+2 32.1	2.046	3.029	4.8	20.9
5 1	13 32.88	-8 30.3	1.786	2.768	5.8	20.8	5 1	13 34.91	+3 12.8	2.076	3.028	7.6	21.0
5 11	13 24.88	-7 32.0	1.821	2.753	9.9	21.0	5 11	13 28.34	+3 37.4	2.132	3.026	10.6	21.2
5 21	13 18.75	-6 45.7	1.879	2.737	13.6	21.2	5 21	13 23.36	+3 44.9	2.210	3.024	13.3	21.4
301523	2009 <i>FZ</i> ₂₃		4 18.1 10°58	3°3/14.5	17		267388	2001 <i>YO</i> ₁₃		4 18.1 278°60	4°3/13.9	18	
3 12	14 4.95	-4 46.0	2.111	2.944	12.5	20.7	3 12	14 8.12	+0 47.0	2.253	3.082	11.9	20.5
3 22	14 1.53	-3 37.7	2.033	2.944	9.5	20.5	3 22	14 3.92	+1 28.5	2.165	3.071	9.2	20.3
4 1	13 56.27	-2 22.6	1.981	2.945	6.2	20.3	4 1	13 57.86	+2 11.3	2.101	3.059	6.4	20.1
4 11	13 49.77	-1 6.3	1.955	2.945	3.6	20.1	4 11	13 50.48	+2 50.6	2.065	3.048	4.5	20.0
4 21	13 42.75	+0 4.7	1.957	2.946	4.2	20.2	4 21	13 42.49	+3 21.5	2.056	3.036	5.1	20.0
5 1	13 36.01	+1 4.6	1.987	2.947	7.2	20.4	5 1	13 34.71	+3 39.8	2.074	3.024	7.7	20.1
5 11	13 30.31	+1 48.8	2.042	2.948	10.4	20.6	5 11	13 27.91	+3 42.7	2.119	3.012	10.7	20.3
5 21	13 26.19	+2 15.2	2.120	2.949	13.3	20.8	5 21	13 22.66	+3 29.6	2.185	3.001	13.4	20.5
452379	2002 <i>CW</i> ₃₉		4 18.1 31°03	20°1/10.8	17		444754	2007 <i>RD</i> ₁₀₅		4 18.1 196°45	0°8/16.8	18	
3 12	14 15.79	-52 44.9	1.292	1.923	28.2	20.0	3 12	14 2.72	-8 46.6	4.105	4.906	7.5	22.6
3 22	14 13.75	-55 18.0	1.241	1.936	26.6	19.9	3 22	13 58.96	-8 18.9	4.009	4.903	5.7	22.4
4 1	14 6.46	-57 11.1	1.199	1.950	24.9	19.8	4 1	13 54.23	-7 46.8	3.940	4.899	3.7	22.3
4 11	13 54.71	-58 12.7	1.169	1.966	23.1	19.7	4 11	13 48.85	-7 12.4	3.901	4.896	1.5	22.1
4 21	13 40.60	-58 14.5	1.151	1.982	21.6	19.6	4 21	13 43.19	-6 37.8	3.891	4.892	1.2	22.1
5 1	13 27.20	-57 15.4	1.148	1.999	20.5	19.6	5 1	13 37.65	-6 5.3	3.913	4.887	3.3	22.2
5 11	13 17.35	-55 25.1	1.161	2.018	20.1	19.7	5 11	13 32.62	-5 37.3	3.963	4.883	5.4	22.4
5 21	13 12.48	-52 59.3	1.190	2.037	20.5	19.7	5 21	13 28.39	-5 15.4	4.039	4.878	7.3	22.5
264661	2001 <i>XX</i> ₁₁₀		4 18.1 206°11	3°5/14.9	17		211816	2004 <i>EM</i> ₅		4 18.1 287°57	3°4/14.6	18	
3 12	14 10.47	-2 57.0	2.074	2.899	12.9	21.6	3 12	14 6.01	-3 43.5	2.151	2.983	12.3	20.5
3 22	14 5.83	-2 11.2	1.990	2.896	9.9	21.3	3 22	14 2.35	-2 46.9	2.068	2.978	9.4	20.3
4 1	13 59.14	-1 20.7	1.930	2.891	6.6	21.1	4 1	13 56.84	-1 44.5	2.010	2.973	6.2	20.1
4 11	13 51.01	-0 30.7	1.897	2.887	3.9	21.0	4 11	13 50.05	-0 41.8	1.978	2.969	3.7	19.9
4 21	13 42.24	+0 13.5	1.892	2.881	4.3	21.0	4 21	13 42.69	+0 15.5	1.975	2.964	4.2	19.9
5 1	13 33.75	+0 46.8	1.915	2.876	7.4	21.1	5 1	13 35.58	+1 2.2	1.999	2.959	7.2	20.1
5 11	13 26.38	+1 5.5	1.964	2.870	10.8	21.3	5 11	13 29.48	+1 34.1	2.049	2.955	10.4	20.3
5 21	13 20.76	+1 7.9	2.036	2.863	13.9	21.5	5 21	13 24.97	+1 49.3	2.121	2.950	13.3	20.5
10412	<i>Tsukuyomi</i>		4 18.1 64°77	3°7/14.9	18		295907	2008 <i>WK</i> ₉₄		4 18.1 142°51	4°2/14.7	18	
3 12	14 10.08	-0 55.6	2.072	2.901	12.8	17.5	3 12	14 11.07	-4 51.1	1.519	2.359	16.1	20.9
3 22	14 5.42	-0 27.5	2.000	2.906	9.8	17.3	3 22	14 6.88	-3 38.3	1.451	2.364	12.3	20.7
4 1	13 58.80	+0 2.2	1.951	2.912	6.6	17.1	4 1	14 0.08	-2 16.4	1.404	2.370	8.1	20.5
4 11	13 50.83	+0 28.9	1.929	2.917	4.1	16.9	4 11	13 51.47	-0 53.3	1.383	2.375	4.6	20.3
4 21	13 42.34	+0 48.3	1.935	2.923	4.5	17.0	4 21	13 42.13	+0 22.2	1.388	2.379	5.3	20.3
5 1	13 34.19	+0 56.4	1.969	2.928	7.3	17.1	5 1	13 33.27	+1 21.9	1.420	2.383	9.2	20.6
5 11	13 27.21	+0 51.1	2.028	2.934	10.5	17.3	5 11	13 25.99	+2 0.3	1.475	2.387	13.3	20.8
5 21	13 21.95	+0 31.7	2.110	2.940	13.3	17.5	5 21	13 20.99	+2 15.5	1.551	2.391	16.9	21.0
464816	2004 <i>ST</i> ₂₃		4 18.1 280°59	1°1/17.1	17		184124	2004 <i>HW</i> ₇₁		4 18.1 265°12	1°6/16.8	17	
3 12	14 7.29	-11 38.1	1.881	2.702	14.3	21.2	3 12	14 11.31	-8 25.4	1.929	2.748	14.0	21.2
3 22	14 3.83	-10 50.3	1.778	2.681	11.1	21.0	3 22	14 6.88	-8 2.2	1.826	2.729	10.9	21.0
4 1	13 58.10	-9 48.2	1.697	2.660	7.2	20.7	4 1	14 0.10	-7 30.1	1.747	2.709	7.1	20.7
4 11	13 50.67	-8 35.8	1.643	2.639	3.0	20.4	4 11	13 51.55	-6 52.5	1.693	2.688	3.1	20.4
4 21	13 42.36	-7 18.8	1.616	2.618	2.1	20.3	4 21	13 42.05	-6 13.8	1.667	2.667	2.5	20.3
5 1	13 34.19	-6 4.7	1.616	2.596	6.6	20.5	5 1	13 32.66	-5 39.6	1.668	2.646	6.6	20.5
5 11	13 27.14	-5 0.5	1.643	2.575	10.9	20.7	5 11	13 24.40	-5 14.7	1.696	2.625	10.8	20.7
5 21	13 21.97	-4 11.7	1.692	2.553	14.7	20.9	5 21	13 18.06	-5 2.9	1.747	2.603	14.6	20.9
477212	2009 <i>JJ</i> ₁₆		4 18.1 345°89	3°6/22.0	17		436711	2011 <i>UH</i> ₄₆		4 18.1 224°27	2°4/20.9	16	
3 12	14 3.62	-25 22.3	1.953	2.727	15.5	20.4	3 12	14 6.98	-21 41.6	2.785	3.548	11.6	21.8
3 22	14 0.95	-24 53.3	1.858	2.722	12.7	20.2	3 22	14 2.83	-21 28.2	2.680	3.540	9.4	21.6
4 1	13 56.13	-24 1.5	1.785	2.716	9.4	20.0	4 1	13 57.06	-21 1.2	2.598	3.531	6.8	21.4
4 11	13 49.79	-22 47.9	1.735	2.712	6.0	19.7	4 11	13 50.13	-20 21.6	2.542	3.522	4.0	21.2
4 21	13 42.76	-21 16.2	1.712	2.707	3.7	19.6	4 21	13 42.67	-19 31.4	2.515	3.513	2.4	21.1
5 1	13 36.02	-19 33.3	1.716	2.704	5.3	19.7	5 1	13 35.37	-18 34.5	2.518	3.503	4.1	21.2
5 11	13 30.49	-17 48.2	1.747	2.701	8.8	19.9	5 11	13 28.90	-17 35.4	2.550	3.493	6.9	21.4
5 21	13 26.79	-16 9.2	1.803	2.698	12.3	20.1	5 21	13 23.79	-16 39.0	2.607	3.483	9.6	21.5
502134	2015 <i>BZ</i> ₂₂		4 18.1 208°96	5°5/12.1	17		240034	2001 <i>UZ</i> ₁₀₈		4 18.1 143°16	0°5/18.5	18	
3 12	14 7.78	+1 40.7	2.116	2.950	12.4	21.5	3 12	14 12.39	-15 53.0	1.740	2.544	15.9	20.9
3 22	14 3.71	+3 6.2	2.039	2.946	9.7	21.3	3 22	14 7.67	-15 15.6	1.663	2.554	12.4	20.7
4 1	13 57.72	+4 34.3	1.986	2.941	7.0	21.2	4 1	14 0.49	-14 21.4	1.608	2.563	8.3	20.5
4 11	13 50.41	+5 58.0	1.961	2.937	5.5	21.0	4 11	13 51.62	-13 13.9	1.578	2.572	3.7	20.2
4 21	13 42.51	+7 10.1	1.964	2.931	6.5	21.1	4 21	13 42.07	-11 58.8	1.576	2.580	1.3	20.0
5 1	13 34.89	+8 4.9	1.994	2.926	9.1	21.2	5 1	13 32.99	-10 43.4	1.603	2.588	5.9	20.4
5 11	13 28.34	+8 38.6	2.048	2.920	12.0	21.4	5 11	13 25.38	-9 35.6	1.655	2.595	10.2	20.6
5 21	13 23.43	+8 50.7	2.124	2.913	14.6	21.6	5 21	13 19.93	-8 40.9	1.731	2.601	14.0	20.9
361598	2007 <i>RH</i> ₂₉₅		4 18.1 298°02	1°0/17.2	17		330023	2005 <i>UW</i> ₁₁₆		4 18.1 230°32	2°6/20.7	18	
3 12	14 6.61	-13 18.8	1.406										

EPHEMERIDES

4 18.1

4 18.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
504026	2005 <i>SU</i> ₂₂₃		4 18.1 143°43	1°3/16.5 17			296870	2009 <i>XP</i> ₁₄		4 18.1 141°77	2°5/19.9 18		
3 12	14 5.16	- 9 38.1	2.600	3.413	11.0	22.3	3 12	14 13.02	-19 10.0	1.436	2.242	18.6	21.0
3 22	14 1.35	- 8 47.2	2.517	3.417	8.4	22.2	3 22	14 8.82	-19 0.7	1.359	2.247	14.9	20.8
4 1	13 56.02	- 7 48.1	2.460	3.421	5.4	22.0	4 1	14 1.61	-18 30.3	1.302	2.252	10.4	20.5
4 11	13 49.66	- 6 44.6	2.430	3.425	2.3	21.8	4 11	13 52.22	-17 40.0	1.268	2.257	5.5	20.2
4 21	13 42.88	- 5 41.0	2.429	3.429	2.0	21.7	4 21	13 41.87	-16 34.4	1.259	2.261	2.6	20.0
5 1	13 36.35	- 4 42.2	2.458	3.433	5.1	22.0	5 1	13 31.99	-15 21.5	1.276	2.265	6.5	20.3
5 11	13 30.68	- 3 52.3	2.515	3.436	8.1	22.1	5 11	13 23.90	-14 11.0	1.318	2.268	11.4	20.6
5 21	13 26.33	- 3 14.1	2.595	3.439	10.7	22.3	5 21	13 18.44	-13 10.9	1.382	2.272	15.7	20.8
251947	1999 <i>XG</i> ₆₂		4 18.1 221°50	1°9/19.7 17			519354	2011 <i>KR</i> ₁₂		4 18.1 187°21	3°0/18.6 18		
3 12	14 10.75	-18 50.2	1.929	2.720	15.1	21.0	3 12	15 6.62	-14 25.8	0.552	1.376	37.1	22.2
3 22	14 6.44	-18 30.2	1.832	2.712	12.0	20.8	3 22	14 57.32	-15 10.2	0.488	1.386	30.4	21.8
4 1	13 59.77	-17 52.8	1.757	2.704	8.4	20.6	4 1	14 38.42	-15 35.7	0.434	1.391	21.5	21.3
4 11	13 51.38	-16 59.6	1.707	2.695	4.4	20.3	4 11	14 9.68	-15 31.1	0.396	1.389	10.3	20.7
4 21	13 42.15	-15 54.1	1.684	2.686	2.0	20.1	4 21	13 34.25	-14 47.4	0.379	1.382	4.4	20.3
5 1	13 33.15	-14 42.6	1.689	2.676	5.4	20.3	5 1	12 58.99	-13 33.5	0.384	1.369	16.7	20.8
5 11	13 25.41	-13 32.3	1.722	2.666	9.6	20.5	5 11	12 30.56	-12 17.2	0.408	1.350	28.3	21.3
5 21	13 19.65	-12 30.1	1.778	2.656	13.3	20.7	5 21	12 11.64	-11 22.6	0.444	1.326	37.8	21.7
370151	2001 <i>XU</i> ₂₁₄		4 18.1 213°01	5°8/24.4 17			435413	2008 <i>AA</i> ₉₃		4 18.1 323°39	5°5/12.7 17		
3 12	14 13.31	-32 12.2	2.649	3.346	13.7	22.1	3 12	14 7.15	+ 3 33.1	2.097	2.933	12.4	20.5
3 22	14 8.03	-32 30.9	2.537	3.336	11.7	22.0	3 22	14 3.27	+ 4 26.9	2.021	2.927	9.7	20.3
4 1	14 0.65	-32 31.4	2.447	3.326	9.5	21.8	4 1	13 57.48	+ 5 20.3	1.968	2.922	7.1	20.1
4 11	13 51.72	-32 11.6	2.380	3.315	7.4	21.6	4 11	13 50.36	+ 6 7.1	1.941	2.916	5.6	20.0
4 21	13 42.01	-31 31.6	2.341	3.303	6.0	21.5	4 21	13 42.66	+ 6 41.8	1.942	2.911	6.4	20.1
5 1	13 32.46	-30 33.8	2.329	3.290	6.3	21.5	5 1	13 35.24	+ 7 0.1	1.969	2.906	8.9	20.2
5 11	13 23.94	-29 23.6	2.346	3.277	8.1	21.6	5 11	13 28.88	+ 6 59.6	2.020	2.901	11.7	20.4
5 21	13 17.15	-28 7.4	2.389	3.262	10.5	21.7	5 21	13 24.17	+ 6 40.4	2.093	2.897	14.3	20.5
46421	2002 <i>JC</i> ₃₃		4 18.1 327°11	3°8/15.8 18			411207	2010 <i>LN</i> ₁₁₀		4 18.1 274°36	3°0/20.3 17		
3 12	14 11.67	- 3 41.9	1.396	2.241	17.0	18.8	3 12	14 9.75	-20 31.6	1.536	2.338	17.8	21.1
3 22	14 7.76	- 3 16.7	1.319	2.235	13.1	18.5	3 22	14 6.43	-20 22.4	1.437	2.322	14.4	20.8
4 1	14 0.92	- 2 45.8	1.263	2.230	8.7	18.2	4 1	14 0.20	-19 51.3	1.358	2.306	10.3	20.5
4 11	13 51.94	- 2 15.1	1.231	2.224	4.6	18.0	4 11	13 51.73	-18 58.2	1.303	2.289	5.8	20.2
4 21	13 41.94	- 1 51.1	1.224	2.219	4.8	18.0	4 21	13 42.05	-17 46.6	1.272	2.273	3.0	20.0
5 1	13 32.31	- 1 39.7	1.242	2.215	9.0	18.2	5 1	13 32.53	-16 23.7	1.267	2.256	6.5	20.2
5 11	13 24.35	- 1 45.3	1.283	2.211	13.6	18.4	5 11	13 24.52	-14 59.5	1.287	2.239	11.4	20.4
5 21	13 18.89	- 2 9.0	1.344	2.207	17.7	18.7	5 21	13 18.97	-13 43.7	1.329	2.222	15.9	20.6
116711	2004 <i>DY</i> ₃		4 18.1 158°41	4°6/13.1 18			465376	2008 <i>DS</i> ₆₃		4 18.1 61°76	2°9/15.9 16		
3 12	14 7.46	+ 1 35.1	2.369	3.198	11.4	20.2	3 12	14 10.13	- 6 56.6	1.479	2.319	16.5	22.0
3 22	14 3.21	+ 2 34.7	2.296	3.201	8.8	20.0	3 22	14 6.14	- 6 8.6	1.419	2.333	12.5	21.7
4 1	13 57.28	+ 3 35.2	2.249	3.204	6.3	19.9	4 1	13 59.57	- 5 11.3	1.380	2.347	8.1	21.5
4 11	13 50.21	+ 4 31.2	2.229	3.207	4.7	19.8	4 11	13 51.26	- 4 11.1	1.366	2.361	3.8	21.3
4 21	13 42.68	+ 5 17.6	2.237	3.210	5.4	19.8	4 21	13 42.32	- 3 15.3	1.378	2.376	3.9	21.3
5 1	13 35.44	+ 5 50.2	2.272	3.212	7.7	20.0	5 1	13 33.96	- 2 31.0	1.416	2.390	8.0	21.6
5 11	13 29.18	+ 6 6.4	2.334	3.214	10.4	20.1	5 11	13 27.21	- 2 3.3	1.478	2.405	12.2	21.9
5 21	13 24.38	+ 6 5.7	2.417	3.216	12.8	20.3	5 21	13 22.74	- 1 54.3	1.561	2.420	15.8	22.1
251978	2000 <i>AR</i> ₂₄₀		4 18.1 38°34	2°5/20.1 18			349465	2008 <i>CT</i> ₁₄₉		4 18.1 94°68	6°1/24.8 17		
3 12	14 6.87	-20 53.1	1.169	1.995	20.9	19.1	3 12	14 12.25	-32 11.1	2.597	3.297	13.8	21.6
3 22	14 4.25	-20 16.1	1.119	2.018	16.5	18.9	3 22	14 7.08	-32 48.3	2.517	3.316	11.8	21.4
4 1	13 58.55	-19 11.7	1.087	2.042	11.4	18.6	4 1	13 59.92	-33 7.8	2.457	3.334	9.6	21.3
4 11	13 50.83	-17 44.4	1.077	2.067	5.9	18.4	4 11	13 51.38	-33 8.0	2.422	3.351	7.5	21.2
4 21	13 42.48	-16 2.8	1.090	2.093	2.5	18.3	4 21	13 42.26	-32 48.9	2.412	3.369	6.2	21.1
5 1	13 34.94	-14 19.0	1.129	2.120	6.7	18.6	5 1	13 33.44	-32 13.0	2.431	3.386	6.4	21.2
5 11	13 29.41	-12 45.0	1.190	2.147	11.6	18.9	5 11	13 25.75	-31 25.3	2.476	3.403	7.9	21.3
5 21	13 26.51	-11 29.0	1.273	2.175	15.8	19.3	5 21	13 19.80	-30 31.4	2.547	3.420	9.9	21.4
249229	2008 <i>GC</i> ₁₂		4 18.1 274°43	1°5/16.4 17			471895	2013 <i>AP</i> ₁₇₃		4 18.1 165°96	3°6/13.3 17		
3 12	14 5.03	- 9 6.1	2.388	3.207	11.7	21.3	3 12	14 5.27	- 0 48.2	2.792	3.617	10.0	22.1
3 22	14 1.44	- 8 17.5	2.301	3.204	8.9	21.1	3 22	14 1.32	+ 0 18.6	2.715	3.620	7.6	21.9
4 1	13 56.19	- 7 20.3	2.239	3.202	5.7	20.9	4 1	13 55.96	+ 1 27.9	2.665	3.623	5.3	21.8
4 11	13 49.78	- 6 18.3	2.203	3.199	2.5	20.7	4 11	13 49.66	+ 2 35.2	2.643	3.625	3.7	21.7
4 21	13 42.87	- 5 16.5	2.197	3.196	2.3	20.7	4 21	13 42.98	+ 3 35.7	2.650	3.628	4.3	21.7
5 1	13 36.19	- 4 19.8	2.219	3.193	5.5	20.9	5 1	13 36.53	+ 4 25.3	2.687	3.630	6.5	21.8
5 11	13 30.42	- 3 32.8	2.268	3.191	8.8	21.1	5 11	13 30.87	+ 5 1.1	2.749	3.632	8.9	22.0
5 21	13 26.08	- 2 58.5	2.341	3.188	11.6	21.3	5 21	13 26.42	+ 5 21.9	2.835	3.633	11.1	22.2
435423	2008 <i>CR</i> ₅		4 18.1 116°29	4°4/12.9 17			213784	2003 <i>FY</i> ₄		4 18.1 33°00	3°8/13.5 17		
3 12	14 8.24	+ 3 16.5	2.672	3.495	10.5	21.2	3 12	14 4.07	- 4 4.6	2.163	2.998	12.1	20.2
3 22	14 3.52	+ 4 6.9	2.611	3.511	8.1	21.1	3 22	14 0.82	- 2 33.3	2.089	3.000	9.2	20.0
4 1	13 57.33	+ 4 56.3	2.575	3.526	5.8	21.0	4 1	13 55.82	- 0 55.0	2.040	3.004	6.1	19.8
4 11	13 50.19	+ 5 39.9	2.568	3.542	4.5	20.9	4 11	13 49.65	+ 0 43.5	2.019	3.007	3.9	19.7
4 21	13 42.73	+ 6 13.9	2.589	3.556	5.1	20.9	4 21	13 42.99	+ 2 15.2	2.026	3.010	4.8	19.7
5 1	13 35.58	+ 6 35.1	2.638	3.571	7.1	21.1	5 1	13 36.63	+ 3 33.5	2.062	3.014	7.6	19.9
5 11	13 29.35	+ 6 41.8	2.713	3.585	9.4	21.3	5 11	13 31.28	+ 4 33.6	2.123	3.017	10.6	20.1
5 21	13 24.46	+ 6 33.8	2.811	3.599	11.5	21.4	5 21	13 27.43	+ 5 13.5	2.206	3.021	13.4	20.3
430572	2002 <i>QV</i> ₅₂		4 18.1 234°48	0°3/18.3 17			265268	2004 <i>FL</i> ₂₇					

EPHEMERIDES

4 18.1

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
416008	2002 CY ₂₉		4 18.1 106°68	5°4/13.4	18		165388	2000 WV ₁₈₇		4 18.1 204°44	4°0/21.3	18	
3 12	14 11.85	+ 2 40.0	2.004	2.833	13.2	21.2	3 12	14 13.12	-22 47.3	1.813	2.588	16.5	20.8
3 22	14 6.72	+ 3 35.6	1.946	2.850	10.2	21.1	3 22	14 8.53	-22 56.5	1.720	2.585	13.5	20.6
4 1	13 59.61	+ 4 30.4	1.913	2.867	7.3	20.9	4 1	14 1.30	-22 46.5	1.647	2.581	9.9	20.4
4 11	13 51.21	+ 5 18.1	1.907	2.884	5.4	20.8	4 11	13 52.13	-22 16.8	1.599	2.576	6.2	20.2
4 21	13 42.38	+ 5 53.4	1.928	2.900	6.2	20.9	4 21	13 41.99	-21 29.3	1.576	2.572	4.0	20.0
5 1	13 34.03	+ 6 12.1	1.976	2.916	8.7	21.1	5 1	13 32.11	-20 28.9	1.581	2.566	6.1	20.1
5 11	13 26.95	+ 6 12.4	2.049	2.931	11.5	21.3	5 11	13 23.66	-19 23.4	1.613	2.561	9.9	20.3
5 21	13 21.68	+ 5 54.9	2.144	2.946	14.1	21.5	5 21	13 17.44	-18 20.7	1.668	2.554	13.6	20.5
218752	Tentlingen		4 18.1 153°00	6°0/24.5	18		6445	Bellmore		4 18.1 81°74	8°1/10.7	18	
3 12	14 14.02	-31 47.4	2.451	3.155	14.5	21.0	3 12	14 9.51	+ 7 41.0	1.740	2.581	14.4	16.8
3 22	14 8.59	-32 11.2	2.361	3.165	12.4	20.8	3 22	14 5.28	+ 9 11.2	1.690	2.593	11.5	16.6
4 1	14 0.99	-32 15.9	2.291	3.174	10.0	20.7	4 1	13 58.83	+10 36.8	1.662	2.605	9.1	16.5
4 11	13 51.87	-31 59.7	2.245	3.182	7.6	20.5	4 11	13 50.93	+11 48.6	1.660	2.618	8.1	16.5
4 21	13 42.08	-31 22.9	2.226	3.190	6.1	20.4	4 21	13 42.53	+12 39.5	1.683	2.630	9.2	16.5
5 1	13 32.59	-30 28.7	2.235	3.197	6.4	20.5	5 1	13 34.65	+13 4.6	1.731	2.642	11.6	16.7
5 11	13 24.31	-29 22.7	2.271	3.203	8.3	20.6	5 11	13 28.16	+13 2.9	1.801	2.654	14.2	16.9
5 21	13 17.90	-28 11.9	2.333	3.208	10.6	20.7	5 21	13 23.63	+12 36.6	1.890	2.666	16.7	17.1
36804	2000 SX ₆₁		4 18.1 296°28	0°5/18.5	18 R		114748	2003 HC ₂₈		4 18.1 167°27	0°3/17.7	18	
3 12	14 10.23	-13 31.0	1.771	2.585	15.3	19.1	3 12	14 5.37	-13 39.0	2.741	3.540	10.9	20.1
3 22	14 6.18	-13 26.6	1.682	2.579	12.0	18.9	3 22	14 1.48	-12 46.0	2.652	3.542	8.4	19.9
4 1	13 59.69	-13 10.0	1.616	2.574	8.0	18.7	4 1	13 56.12	-11 42.4	2.588	3.545	5.4	19.8
4 11	13 51.40	-12 43.1	1.574	2.568	3.6	18.4	4 11	13 49.77	-10 31.4	2.552	3.547	2.2	19.5
4 21	13 42.26	-12 9.6	1.559	2.563	1.3	18.2	4 21	13 43.00	- 9 17.3	2.546	3.549	1.1	19.4
5 1	13 33.37	-11 34.5	1.571	2.558	5.9	18.5	5 1	13 36.47	- 8 4.9	2.570	3.551	4.4	19.7
5 11	13 25.79	-11 3.7	1.609	2.553	10.2	18.7	5 11	13 30.76	- 6 59.1	2.622	3.552	7.4	19.9
5 21	13 20.29	-10 41.8	1.670	2.548	14.0	18.9	5 21	13 26.33	- 6 3.4	2.700	3.553	10.1	20.1
389260	2009 FL ₆₁		4 18.1 354°91	0°4/17.7	17 R		497351	2005 UA ₁₇₈		4 18.1 213°80	0°1/17.9	17	
3 12	14 6.66	-11 25.3	1.935	2.756	13.9	20.9	3 12	14 12.08	-12 2.1	2.320	3.119	12.6	23.1
3 22	14 3.14	-11 8.1	1.852	2.754	10.7	20.7	3 22	14 7.02	-11 47.2	2.221	3.111	9.8	22.9
4 1	13 57.53	-10 40.5	1.791	2.752	7.0	20.5	4 1	13 59.96	-11 22.8	2.146	3.102	6.5	22.7
4 11	13 50.44	-10 5.6	1.755	2.751	2.9	20.2	4 11	13 51.47	-10 51.3	2.098	3.093	2.7	22.4
4 21	13 42.69	- 9 27.5	1.746	2.750	1.5	20.1	4 21	13 42.29	-10 15.7	2.079	3.083	1.2	22.3
5 1	13 35.20	- 8 51.3	1.765	2.749	5.6	20.4	5 1	13 33.28	- 9 40.3	2.090	3.072	5.1	22.6
5 11	13 28.87	- 8 21.9	1.810	2.749	9.6	20.6	5 11	13 25.28	- 9 9.6	2.129	3.061	8.7	22.8
5 21	13 24.32	- 8 2.9	1.877	2.749	13.0	20.8	5 21	13 18.93	- 8 47.0	2.192	3.049	12.0	22.9
297752	2001 XJ ₇₁		4 18.1 182°89	0°9/19.2	18		138854	2000 WK ₁₇		4 18.1 46°02	0°1/18.2	17	
3 12	14 6.18	-17 22.3	2.570	3.357	11.8	20.5	3 12	14 8.22	-12 50.1	1.964	2.777	14.0	19.7
3 22	14 2.26	-16 46.9	2.477	3.358	9.3	20.3	3 22	14 4.08	-12 32.9	1.903	2.801	10.8	19.5
4 1	13 56.70	-15 58.6	2.408	3.358	6.3	20.1	4 1	13 57.96	-12 5.0	1.865	2.824	7.0	19.3
4 11	13 50.03	-14 59.7	2.366	3.357	3.0	19.9	4 11	13 50.55	-11 29.4	1.853	2.848	3.0	19.1
4 21	13 42.87	-13 53.9	2.353	3.357	1.1	19.8	4 21	13 42.71	-10 50.4	1.869	2.873	1.2	19.0
5 1	13 35.94	-12 45.9	2.370	3.356	4.2	20.0	5 1	13 35.32	-10 12.8	1.912	2.897	5.2	19.3
5 11	13 29.91	-11 41.0	2.415	3.355	7.4	20.2	5 11	13 29.18	- 9 41.2	1.982	2.922	8.8	19.6
5 21	13 25.29	-10 43.7	2.485	3.354	10.3	20.4	5 21	13 24.82	- 9 19.0	2.075	2.947	11.9	19.9
509634	2008 FY ₁₂₉		4 18.1 290°34	0°3/18.6	18		134880	2000 QF ₂₂₃		4 18.1 130°39	3°6/13.7	18	
3 12	14 3.01	-12 48.3	4.131	4.920	7.7	21.3	3 12	14 7.72	+ 0 41.7	2.810	3.630	10.1	20.2
3 22	13 59.27	-12 47.7	4.025	4.909	5.9	21.1	3 22	14 3.11	+ 1 29.5	2.743	3.644	7.7	20.0
4 1	13 54.51	-12 42.0	3.945	4.898	3.9	21.0	4 1	13 57.09	+ 2 18.0	2.701	3.657	5.3	19.9
4 11	13 49.05	-12 32.5	3.894	4.887	1.8	20.8	4 11	13 50.16	+ 3 3.0	2.688	3.669	3.7	19.8
4 21	13 43.26	-12 20.4	3.873	4.877	0.6	20.7	4 21	13 42.89	+ 3 40.7	2.704	3.681	4.3	19.9
5 1	13 37.56	-12 7.6	3.882	4.866	2.9	20.9	5 1	13 35.90	+ 4 7.7	2.749	3.693	6.4	20.0
5 11	13 32.34	-11 56.0	3.920	4.855	5.0	21.0	5 11	13 29.76	+ 4 22.0	2.821	3.704	8.7	20.2
5 21	13 27.93	-11 47.4	3.985	4.845	7.0	21.1	5 21	13 24.89	+ 4 23.0	2.916	3.715	10.8	20.4
342120	2008 SU ₁₀₃		4 18.1 181°72	0°1/18.1	17		213743	2002 XL ₃		4 18.1 130°67	0°5/18.7	17	
3 12	14 8.31	-13 31.8	2.202	3.006	13.0	21.5	3 12	14 6.92	-15 45.7	2.350	3.146	12.5	20.8
3 22	14 4.13	-12 59.1	2.114	3.007	10.1	21.3	3 22	14 2.94	-15 9.8	2.265	3.152	9.7	20.6
4 1	13 58.04	-12 14.6	2.050	3.007	6.6	21.0	4 1	13 57.20	-14 21.4	2.205	3.158	6.5	20.4
4 11	13 50.62	-11 21.3	2.012	3.007	2.8	20.8	4 11	13 50.26	-13 23.1	2.171	3.164	2.9	20.2
4 21	13 42.62	-10 23.4	2.003	3.006	1.2	20.7	4 21	13 42.84	-12 19.1	2.166	3.170	1.0	20.0
5 1	13 34.88	- 9 26.4	2.022	3.006	5.1	20.9	5 1	13 35.71	-11 14.5	2.190	3.175	4.6	20.3
5 11	13 28.21	- 8 35.5	2.069	3.005	8.8	21.2	5 11	13 29.58	-10 14.8	2.242	3.180	8.0	20.5
5 21	13 23.18	- 7 54.8	2.140	3.004	12.0	21.4	5 21	13 24.97	- 9 24.2	2.318	3.185	11.0	20.7
290906	2005 WA ₁₀₁		4 18.1 191°42	0°2/18.3	17		418372	2008 GB ₁₃₈		4 18.1 309°36	0°0/18.1	18	
3 12	14 10.25	-14 3.4	2.313	3.110	12.7	22.0	3 12	14 0.01	-13 15.2	3.998	4.793	7.8	20.8
3 22	14 5.56	-13 35.9	2.221	3.108	9.9	21.8	3 22	13 57.04	-12 42.6	3.895	4.783	6.0	20.6
4 1	13 58.95	-12 57.0	2.152	3.106	6.5	21.6	4 1	13 53.08	-12 3.4	3.817	4.772	3.9	20.5
4 11	13 51.01	-12 9.0	2.110	3.104	2.8	21.4	4 11	13 48.47	-11 19.4	3.768	4.762	1.7	20.3
4 21	13 42.46	-11 15.8	2.097	3.100	1.1	21.2	4 21	13 43.57	-10 32.9	3.749	4.752	0.7	20.2
5 1	13 34.16	-10 22.2	2.113	3.097	4.9	21.5	5 1	13 38.77	- 9 46.6	3.760	4.742	3.0	20.4
5 11	13 26.88	- 9 33.5	2.157	3.092	8.5	21.7	5 11	13 34.46	- 9 3.3	3.800	4.732	5.2	20.5
5 21	13 21.23	- 8 53.6	2.226	3.087	11.7	21.9	5 21	13 30.96	- 8 25.3	3.866	4.723	7.2	20.6
228497	2001 SR ₂₈₅		4 18.1 220°28	0°8/18.8	17		89803	2002 AD ₁₅₅		4 18.1 346°61	1°0/18.9	18	
3 12	14 11.80	-14 19.1	1.908	2.712	1								

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
233692	2008 SX ₁₁	4 18.1 102°81		0°2/17.9 17			256757	2008 BN ₃₇	4 18.1 186°55		0°4/18.4 16		
3 12	14 8.70	-12 50.3	1.987	2.799	14.0	20.5	3 12	14 13.49	-12 56.4	1.815	2.623	15.2	21.1
3 22	14 4.59	-12 21.9	1.908	2.805	10.8	20.3	3 22	14 8.61	-12 52.9	1.729	2.623	11.9	20.9
4 1	13 58.42	-11 41.7	1.852	2.811	7.0	20.1	4 1	14 1.25	-12 38.0	1.665	2.622	7.9	20.7
4 11	13 50.82	-10 53.0	1.822	2.817	3.0	19.9	4 11	13 52.10	-12 13.6	1.627	2.621	3.5	20.4
4 21	13 42.62	-10 0.3	1.819	2.823	1.3	19.7	4 21	13 42.13	-11 43.4	1.616	2.620	1.3	20.2
5 1	13 34.76	-9 9.3	1.845	2.829	5.5	20.0	5 1	13 32.46	-11 12.1	1.634	2.619	5.9	20.5
5 11	13 28.10	-8 25.3	1.897	2.834	9.3	20.3	5 11	13 24.15	-10 45.2	1.677	2.617	10.1	20.8
5 21	13 23.24	-7 52.4	1.973	2.840	12.7	20.5	5 21	13 17.95	-10 27.0	1.744	2.615	13.9	21.0
102523	1999 UG	4 18.1 189°07		0°1/18.1 18			406983	2009 RE ₅	4 18.1 133°31		2°4/15.6 18		
3 12	14 12.73	-13 0.4	2.061	2.862	13.9	20.6	3 12	14 10.71	-6 0.3	2.291	3.106	12.2	22.6
3 22	14 7.71	-12 39.0	1.971	2.862	10.8	20.4	3 22	14 5.71	-5 9.6	2.221	3.122	9.3	22.4
4 1	14 0.49	-12 6.0	1.904	2.860	7.1	20.2	4 1	13 58.94	-4 12.9	2.176	3.137	6.0	22.2
4 11	13 51.72	-11 24.0	1.864	2.858	3.0	19.9	4 11	13 50.99	-3 14.7	2.158	3.151	3.0	22.1
4 21	13 42.24	-10 37.0	1.852	2.855	1.2	19.8	4 21	13 42.62	-2 20.1	2.170	3.164	3.2	22.1
5 1	13 33.04	-9 50.2	1.869	2.852	5.5	20.1	5 1	13 34.61	-1 33.9	2.211	3.177	6.2	22.3
5 11	13 25.02	-9 9.0	1.913	2.848	9.4	20.3	5 11	13 27.70	-0 59.8	2.279	3.189	9.3	22.5
5 21	13 18.87	-8 37.7	1.982	2.843	12.9	20.5	5 21	13 22.39	-0 39.8	2.371	3.201	12.1	22.7
127034	2002 GP ₃₄	4 18.1 279°24		1°9/19.1 18			505236	2012 UQ ₅₇	4 18.1 204°89		0°3/18.4 17		
3 12	14 16.55	-14 31.0	1.636	2.441	16.8	19.2	3 12	14 8.29	-13 54.0	2.429	3.227	12.1	22.5
3 22	14 11.76	-15 1.4	1.526	2.415	13.4	18.9	3 22	14 3.93	-13 32.2	2.336	3.224	9.4	22.3
4 1	14 3.88	-15 21.2	1.436	2.389	9.3	18.6	4 1	13 57.89	-13 0.0	2.266	3.221	6.2	22.1
4 11	13 53.44	-15 30.1	1.371	2.362	4.7	18.3	4 11	13 50.60	-12 19.5	2.223	3.217	2.7	21.9
4 21	13 41.45	-15 28.9	1.332	2.335	2.2	18.0	4 21	13 42.75	-11 34.1	2.209	3.213	1.0	21.7
5 1	13 29.31	-15 20.6	1.321	2.307	6.7	18.2	5 1	13 35.11	-10 48.2	2.225	3.209	4.6	22.0
5 11	13 18.49	-15 10.6	1.335	2.280	11.7	18.4	5 11	13 28.41	-10 6.4	2.268	3.205	8.0	22.2
5 21	13 10.13	-15 4.5	1.371	2.252	16.3	18.6	5 21	13 23.21	-9 32.3	2.336	3.200	11.1	22.4
308561	2005 UV ₃₄₂	4 18.1 259°00		5°1/21.4 17			338382	2002 YO ₃₄	4 18.1 61°29		5°7/12.8 17		
3 12	14 16.12	-23 8.7	1.941	2.703	16.0	20.8	3 12	14 8.54	+ 4 13.7	2.080	2.914	12.6	20.5
3 22	14 10.97	-24 1.6	1.836	2.690	13.3	20.5	3 22	14 4.24	+ 5 7.1	2.018	2.923	9.9	20.3
4 1	14 3.07	-24 40.4	1.752	2.675	10.1	20.3	4 1	13 58.06	+ 5 58.8	1.980	2.932	7.2	20.1
4 11	13 52.99	-25 2.2	1.692	2.661	6.9	20.1	4 11	13 50.64	+ 6 42.5	1.969	2.942	5.7	20.1
4 21	13 41.68	-25 6.1	1.659	2.646	5.1	19.9	4 21	13 42.76	+ 7 13.2	1.985	2.952	6.5	20.1
5 1	13 30.37	-24 53.5	1.654	2.631	6.7	20.0	5 1	13 35.26	+ 7 27.0	2.027	2.962	8.8	20.3
5 11	13 20.32	-24 29.5	1.675	2.616	10.0	20.2	5 11	13 28.92	+ 7 22.2	2.094	2.972	11.5	20.5
5 21	13 12.48	-24 0.7	1.719	2.600	13.5	20.3	5 21	13 24.23	+ 6 59.5	2.182	2.982	14.0	20.7
182877	2002 CL ₂₄₀	4 18.1 118°36		5°5/23.9 18			304072	2006 GQ ₁₅	4 18.1 46°94		2°2/16.8 18		
3 12	14 11.32	-30 5.8	2.678	3.391	13.2	20.2	3 12	14 11.34	-8 29.4	1.224	2.071	18.8	21.0
3 22	14 6.37	-30 42.2	2.589	3.400	11.2	20.0	3 22	14 7.62	-7 59.8	1.167	2.084	14.4	20.7
4 1	13 59.51	-31 2.6	2.520	3.408	9.0	19.9	4 1	14 0.83	-7 18.6	1.129	2.097	9.3	20.5
4 11	13 51.29	-31 5.6	2.476	3.416	6.9	19.7	4 11	13 51.94	-6 31.7	1.114	2.111	4.0	20.2
4 21	13 42.44	-30 51.3	2.459	3.424	5.6	19.7	4 21	13 42.24	-5 46.5	1.124	2.125	3.3	20.2
5 1	13 33.81	-30 21.8	2.470	3.432	5.9	19.7	5 1	13 33.23	-5 10.6	1.158	2.139	8.3	20.5
5 11	13 26.19	-29 41.4	2.508	3.439	7.6	19.8	5 11	13 26.16	-4 49.9	1.215	2.154	13.1	20.9
5 21	13 20.19	-28 55.4	2.571	3.447	9.8	20.0	5 21	13 21.77	-4 47.3	1.291	2.170	17.3	21.1
66249	1999 FG ₄₈	4 18.1 134°67		1°9/19.5 18			316643	2011 YV ₂₅	4 18.1 33°55		4°9/14.6 17		
3 12	14 15.56	-16 51.6	1.701	2.497	16.6	18.9	3 12	14 9.94	-2 30.4	1.414	2.262	16.6	19.9
3 22	14 10.29	-16 55.3	1.624	2.508	13.1	18.7	3 22	14 6.24	-1 35.1	1.349	2.266	12.8	19.7
4 1	14 2.36	-16 43.9	1.569	2.518	9.0	18.5	4 1	13 59.82	-0 34.2	1.305	2.270	8.6	19.4
4 11	13 52.55	-16 18.4	1.538	2.528	4.5	18.2	4 11	13 51.51	+ 0 24.6	1.285	2.275	5.2	19.3
4 21	13 41.95	-15 42.1	1.535	2.537	2.0	18.1	4 21	13 42.41	+ 1 13.3	1.290	2.280	5.9	19.3
5 1	13 31.79	-15 0.4	1.559	2.546	5.8	18.4	5 1	13 33.81	+ 1 44.9	1.321	2.285	9.7	19.5
5 11	13 23.22	-14 19.8	1.609	2.554	10.1	18.6	5 11	13 26.85	+ 1 55.2	1.374	2.290	13.8	19.8
5 21	13 16.96	-13 46.2	1.683	2.561	13.9	18.9	5 21	13 22.26	+ 1 43.5	1.447	2.296	17.4	20.0
223424	2003 SY ₂₅₀	4 18.1 290°49		1°9/19.7 18			300108	2006 UO ₂₈₆	4 18.1 305°17		0°5/18.6 17		
3 12	14 12.18	-16 12.9	2.560	3.340	12.1	19.9	3 12	14 6.16	-14 48.0	2.131	2.938	13.3	20.9
3 22	14 7.08	-16 43.9	2.451	3.324	9.6	19.7	3 22	14 2.68	-14 23.9	2.035	2.928	10.4	20.6
4 1	14 0.05	-17 6.8	2.365	3.309	6.7	19.5	4 1	13 57.23	-13 47.0	1.963	2.919	6.9	20.4
4 11	13 51.57	-17 21.3	2.306	3.293	3.7	19.2	4 11	13 50.37	-12 59.7	1.916	2.910	3.1	20.1
4 21	13 42.32	-17 28.3	2.277	3.278	2.0	19.1	4 21	13 42.85	-12 6.0	1.897	2.901	1.1	20.0
5 1	13 33.10	-17 29.5	2.277	3.262	4.5	19.2	5 1	13 35.51	-11 11.0	1.907	2.893	5.1	20.2
5 11	13 24.75	-17 27.9	2.306	3.247	7.7	19.4	5 11	13 29.21	-10 20.4	1.942	2.884	8.8	20.4
5 21	13 17.92	-17 26.9	2.361	3.231	10.7	19.6	5 21	13 24.56	-9 38.8	2.002	2.876	12.2	20.6
154503	2003 FQ ₃₅	4 18.1 186°72		0°7/18.8 18 R			508966	2004 UZ ₁	4 18.1 236°47		4°8/22.9 18		
3 12	14 11.35	-14 46.9	2.200	2.995	13.3	20.6	3 12	14 12.85	-27 48.0	2.605	3.330	13.3	22.7
3 22	14 6.53	-14 33.6	2.109	2.994	10.4	20.4	3 22	14 7.75	-28 5.4	2.487	3.312	11.2	22.5
4 1	13 59.68	-14 8.7	2.041	2.994	7.0	20.1	4 1	14 0.57	-28 6.6	2.391	3.294	8.7	22.3
4 11	13 51.38	-13 34.1	2.000	2.992	3.2	19.9	4 11	13 51.83	-27 50.3	2.319	3.275	6.3	22.1
4 21	13 42.43	-12 52.9	1.987	2.991	1.1	19.7	4 21	13 42.24	-27 16.6	2.276	3.255	4.8	22.0
5 1	13 33.72	-12 9.9	2.003	2.989	4.9	20.0	5 1	13 32.71	-26 28.1	2.261	3.234	5.6	22.0
5 11	13 26.12	-11 30.0	2.047	2.986	8.7	20.2	5 11	13 24.13	-25 29.7	2.275	3.212	8.0	22.1
5 21	13 20.25	-10 57.5	2.116	2.983	11.9	20.4	5 21	13 17.19	-24 27.4	2.314	3.190	10.7	22.2
333128	2011 WD ₇₆	4 18.1 145°77		1°2/17.0 18			123713	2000 YU ₁₂₂	4 18.1 144°91		1°1/19.3 18		
3 12	14 13.06	-10 38.0	1.958</										

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
268389	2005 <i>US</i> ₁₂₃	4 18.1 133°14		0°4/18.5 17			368251	2001 <i>XD</i> ₆₅	4 18.1 191°38		4°2/22.7 17		
3 12	14 10.53	-14 12.3	1.951	2.757	14.4	21.7	3 12	14 12.03	-27 8.1	2.600	3.330	13.2	21.4
3 22	14 6.07	-13 51.8	1.871	2.763	11.2	21.5	3 22	14 6.94	-27 9.7	2.497	3.328	10.9	21.2
4 1	13 59.43	-13 18.5	1.814	2.770	7.4	21.2	4 1	13 59.91	-26 54.5	2.417	3.326	8.4	21.0
4 11	13 51.29	-12 35.2	1.782	2.776	3.3	21.0	4 11	13 51.51	-26 21.9	2.362	3.322	5.8	20.8
4 21	13 42.50	-11 46.1	1.778	2.782	1.2	20.8	4 21	13 42.46	-25 33.4	2.334	3.318	4.2	20.7
5 1	13 34.07	-10 56.6	1.802	2.788	5.4	21.1	5 1	13 33.63	-24 32.3	2.337	3.313	5.1	20.8
5 11	13 26.89	-10 12.5	1.853	2.793	9.3	21.4	5 11	13 25.82	-23 24.2	2.367	3.308	7.5	20.9
5 21	13 21.61	-9 38.2	1.928	2.798	12.8	21.6	5 21	13 19.63	-22 15.2	2.424	3.301	10.2	21.1
186257	2001 <i>YR</i> ₄	4 18.1 217°59		0°5/17.6 18			208965	2002 <i>XF</i> ₆₁	4 18.1 69°27		0°7/17.5 18		
3 12	14 8.26	-15 20.8	2.158	2.958	13.4	20.3	3 12	14 10.59	-10 29.9	2.093	2.904	13.4	20.4
3 22	14 4.20	-14 1.8	2.060	2.951	10.4	20.1	3 22	14 5.74	-10 8.6	2.034	2.931	10.2	20.2
4 1	13 58.17	-12 25.6	1.986	2.944	6.8	19.8	4 1	13 58.99	-9 38.8	1.998	2.958	6.6	20.1
4 11	13 50.76	-10 36.5	1.940	2.936	2.8	19.6	4 11	13 51.04	-9 3.9	1.989	2.985	2.7	19.9
4 21	13 42.72	-8 41.2	1.924	2.927	1.5	19.5	4 21	13 42.70	-8 27.9	2.009	3.012	1.6	19.8
5 1	13 34.93	-6 47.8	1.938	2.918	5.7	19.7	5 1	13 34.83	-7 55.2	2.057	3.038	5.3	20.1
5 11	13 28.22	-5 4.5	1.980	2.908	9.5	19.9	5 11	13 28.18	-7 29.8	2.132	3.064	8.7	20.4
5 21	13 23.19	-3 37.2	2.047	2.898	12.9	20.1	5 21	13 23.25	-7 14.4	2.231	3.090	11.7	20.6
506760	2006 <i>WN</i> ₆₅	4 18.1 250°65		3°0/15.5 17			156982	2003 <i>KD</i> ₂	4 18.1 181°16		7°2/10.9 18		
3 12	14 11.80	-1 25.2	2.406	3.223	11.7	21.7	3 12	14 10.35	+ 8 29.1	2.103	2.931	12.7	20.1
3 22	14 6.65	-1 14.1	2.317	3.217	9.0	21.5	3 22	14 5.70	+ 9 41.8	2.036	2.932	10.3	19.9
4 1	13 59.65	-1 1.7	2.252	3.211	6.0	21.3	4 1	13 59.09	+10 50.5	1.994	2.932	8.1	19.8
4 11	13 51.36	-0 51.6	2.215	3.204	3.4	21.1	4 11	13 51.14	+11 47.8	1.977	2.932	7.2	19.7
4 21	13 42.48	-0 46.9	2.207	3.198	3.6	21.1	4 21	13 42.64	+12 27.9	1.988	2.932	8.2	19.8
5 1	13 33.81	-0 50.5	2.228	3.192	6.3	21.2	5 1	13 34.49	+12 46.5	2.024	2.931	10.3	19.9
5 11	13 26.12	-1 4.4	2.277	3.185	9.4	21.4	5 11	13 27.49	+12 42.2	2.084	2.930	12.8	20.1
5 21	13 19.98	-1 29.5	2.349	3.178	12.2	21.6	5 21	13 22.21	+12 16.3	2.164	2.929	15.1	20.2
308411	2005 <i>SM</i> ₉₈	4 18.1 207°55		2°2/20.7 16			383936	2008 <i>SW</i> ₂₁₉	4 18.1 198°95		0°4/17.7 18		
3 12	14 8.41	-20 18.5	2.916	3.680	11.1	22.1	3 12	14 8.74	-12 24.9	2.262	3.067	12.7	21.6
3 22	14 3.89	-20 20.5	2.814	3.675	8.9	22.0	3 22	14 4.47	-11 50.0	2.171	3.065	9.8	21.4
4 1	13 57.78	-20 11.4	2.735	3.670	6.4	21.8	4 1	13 58.31	-11 4.3	2.104	3.062	6.4	21.1
4 11	13 50.56	-19 51.5	2.684	3.665	3.8	21.6	4 11	13 50.83	-10 10.7	2.064	3.059	2.7	20.9
4 21	13 42.80	-19 22.5	2.661	3.659	2.2	21.5	4 21	13 42.75	-9 13.6	2.052	3.055	1.4	20.8
5 1	13 35.19	-18 47.3	2.668	3.653	3.9	21.6	5 1	13 34.91	-8 18.1	2.070	3.051	5.2	21.0
5 11	13 28.38	-18 9.7	2.704	3.646	6.6	21.8	5 11	13 28.10	-7 29.4	2.114	3.047	8.8	21.2
5 21	13 22.87	-17 33.5	2.766	3.640	9.2	21.9	5 21	13 22.88	-6 51.3	2.184	3.042	11.9	21.4
416273	2003 <i>GS</i> ₂₈	4 18.1 33°69		1°1/18.7 18			134663	1999 <i>VM</i> ₁₃₅	4 18.1 105°64		2°2/16.3 18		
3 12	14 16.87	-11 14.1	1.358	2.184	18.5	20.3	3 12	14 13.44	- 7 40.7	1.814	2.634	14.7	20.0
3 22	14 11.78	-12 2.4	1.295	2.197	14.4	20.1	3 22	14 8.20	- 6 57.4	1.752	2.655	11.2	19.8
4 1	14 3.57	-12 41.6	1.252	2.211	9.6	19.8	4 1	14 0.73	- 6 6.0	1.714	2.677	7.2	19.6
4 11	13 53.14	-13 12.1	1.232	2.226	4.4	19.6	4 11	13 51.82	- 5 11.4	1.702	2.697	3.3	19.4
4 21	13 41.79	-13 34.9	1.238	2.242	1.7	19.4	4 21	13 42.41	- 4 19.5	1.719	2.717	3.0	19.5
5 1	13 31.05	-13 53.1	1.271	2.259	6.7	19.8	5 1	13 33.54	- 3 36.1	1.763	2.736	6.8	19.7
5 11	13 22.24	-14 10.7	1.327	2.276	11.5	20.1	5 11	13 26.12	- 3 5.5	1.833	2.755	10.5	20.0
5 21	13 16.20	-14 31.6	1.406	2.293	15.6	20.4	5 21	13 20.72	- 2 50.2	1.926	2.773	13.8	20.2
192669	1999 <i>RD</i> ₂₀₃	4 18.1 164°48		3°4/21.8 17			438378	2006 <i>TK</i> ₉₀	4 18.1 197°36		0°4/18.6 17		
3 12	14 9.15	-24 30.3	2.236	2.996	14.2	20.3	3 12	14 8.12	-13 48.0	2.628	3.423	11.4	21.9
3 22	14 4.91	-24 15.1	2.145	2.999	11.6	20.2	3 22	14 3.75	-13 33.8	2.535	3.421	8.9	21.7
4 1	13 58.64	-23 41.4	2.075	3.002	8.6	20.0	4 1	13 57.73	-13 10.4	2.465	3.419	5.9	21.5
4 11	13 50.96	-22 50.0	2.030	3.004	5.4	19.8	4 11	13 50.57	-12 39.6	2.423	3.416	2.6	21.3
4 21	13 42.67	-21 43.4	2.013	3.007	3.4	19.6	4 21	13 42.88	-12 4.3	2.410	3.414	0.9	21.1
5 1	13 34.67	-20 27.0	2.024	3.009	5.0	19.7	5 1	13 35.38	-11 28.1	2.426	3.411	4.3	21.4
5 11	13 27.82	-19 7.4	2.063	3.010	8.1	19.9	5 11	13 28.76	-10 55.0	2.471	3.407	7.5	21.6
5 21	13 22.71	-17 51.4	2.128	3.011	11.2	20.1	5 21	13 23.52	-10 28.1	2.540	3.404	10.3	21.7
43064	1999 <i>VK</i> ₁₁₄	4 18.1 323°31		6°2/22.3 18 R			148089	1999 <i>CB</i> ₁₁₄	4 18.1 278°05		7°4/23.9 18		
3 12	14 10.59	-24 54.9	1.462	2.249	19.3	17.7	3 12	14 11.78	-30 4.4	1.830	2.572	17.5	19.7
3 22	14 7.35	-25 35.8	1.374	2.241	16.1	17.4	3 22	14 7.84	-30 49.0	1.732	2.562	15.0	19.5
4 1	14 0.98	-25 54.8	1.304	2.234	12.3	17.2	4 1	14 1.11	-31 12.2	1.652	2.552	12.1	19.3
4 11	13 52.19	-25 49.1	1.256	2.227	8.5	16.9	4 11	13 52.22	-31 10.5	1.595	2.542	9.3	19.1
4 21	13 42.12	-25 18.7	1.231	2.220	6.2	16.8	4 21	13 42.17	-30 42.8	1.561	2.532	7.5	18.9
5 1	13 32.28	-24 27.8	1.231	2.214	7.7	16.8	5 1	13 32.25	-29 51.8	1.554	2.522	8.0	18.9
5 11	13 24.11	-23 25.2	1.255	2.208	11.5	17.0	5 11	13 23.75	-28 44.6	1.571	2.512	10.5	19.0
5 21	13 18.64	-22 20.9	1.300	2.203	15.5	17.2	5 21	13 17.61	-27 30.3	1.611	2.503	13.7	19.2
299840	2006 <i>SO</i> ₂₀₃	4 18.1 189°07		0°4/17.7 17			381453	2008 <i>RO</i> ₂₆	4 18.1 208°44		1°5/16.4 18		
3 12	14 7.44	-11 47.1	2.507	3.312	11.6	21.9	3 12	14 8.66	- 9 3.2	2.514	3.323	11.5	21.8
3 22	14 3.27	-11 18.8	2.418	3.311	8.9	21.7	3 22	14 4.21	- 8 12.9	2.419	3.317	8.8	21.6
4 1	13 57.42	-10 41.4	2.352	3.310	5.8	21.5	4 1	13 58.06	- 7 13.9	2.349	3.309	5.7	21.4
4 11	13 50.42	- 9 57.8	2.314	3.309	2.4	21.3	4 11	13 50.71	- 6 10.0	2.307	3.302	2.5	21.2
4 21	13 42.90	- 9 11.5	2.305	3.308	1.3	21.2	4 21	13 42.82	- 5 5.8	2.294	3.293	2.3	21.1
5 1	13 35.60	- 8 26.8	2.325	3.306	4.7	21.4	5 1	13 35.12	- 4 6.3	2.311	3.284	5.5	21.3
5 11	13 29.22	- 7 47.9	2.373	3.304	8.0	21.6	5 11	13 28.32	- 3 16.1	2.356	3.274	8.7	21.5
5 21	13 24.25	- 7 18.0	2.445	3.302	10.9	21.8	5 21	13 22.95	- 2 38.3	2.425	3.264	11.6	21.7
30961	1994 <i>VD</i> ₁	4 18.1 93°11		4°0/15.6 18			119963	2002 <i>TE</i> ₆₈	4 18				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
178063	2006 <i>SN</i> ₄₂	4 18.1 175°06		0°5/17.5 18			422783	2001 <i>VP</i> ₁₀₄	4 18.1 139°40		0°0/18.1 17		
3 12	14 6.52	-12 6.3	2.576	3.381	11.4	20.8	3 12	14 12.71	-12 34.7	2.337	3.132	12.6	22.6
3 22	14 2.50	-11 26.7	2.488	3.382	8.7	20.6	3 22	14 7.32	-12 17.0	2.259	3.146	9.8	22.4
4 1	13 56.90	-10 37.6	2.425	3.383	5.7	20.4	4 1	14 0.07	-11 49.8	2.204	3.159	6.4	22.2
4 11	13 50.20	-9 42.0	2.388	3.384	2.3	20.2	4 11	13 51.56	-11 15.7	2.178	3.172	2.7	22.0
4 21	13 43.04	-8 43.9	2.382	3.384	1.3	20.1	4 21	13 42.56	-10 37.9	2.180	3.184	1.1	21.9
5 1	13 36.11	-7 47.9	2.404	3.385	4.7	20.4	5 1	13 33.90	-10 0.8	2.212	3.195	4.8	22.2
5 11	13 30.05	-6 58.5	2.455	3.385	7.8	20.6	5 11	13 26.34	-9 28.4	2.273	3.206	8.2	22.4
5 21	13 25.37	-6 18.9	2.530	3.385	10.6	20.7	5 21	13 20.44	-9 4.2	2.358	3.215	11.2	22.6
37131	2000 <i>VW</i> ₂₉	4 18.1 283°39		4°5/14.9 18			367105	2006 <i>RK</i> ₂₂	4 18.2 216°06		3°6/21.8 17		
3 12	14 10.83	-3 5.0	1.495	2.339	16.2	18.3	3 12	14 12.08	-25 5.8	2.282	3.031	14.3	21.9
3 22	14 7.01	-2 16.1	1.416	2.331	12.5	18.0	3 22	14 7.29	-24 50.7	2.174	3.021	11.7	21.7
4 1	14 0.45	-1 20.5	1.358	2.323	8.4	17.8	4 1	14 0.32	-24 16.5	2.088	3.011	8.7	21.5
4 11	13 51.88	-0 25.1	1.325	2.315	4.9	17.5	4 11	13 51.77	-23 23.1	2.027	2.999	5.6	21.3
4 21	13 42.37	+0 22.5	1.317	2.308	5.5	17.6	4 21	13 42.45	-22 12.8	1.994	2.987	3.6	21.1
5 1	13 33.17	+0 55.1	1.334	2.300	9.4	17.8	5 1	13 33.32	-20 50.5	1.991	2.974	5.2	21.2
5 11	13 25.50	+1 7.9	1.375	2.292	13.7	18.0	5 11	13 25.32	-19 23.3	2.016	2.960	8.4	21.4
5 21	13 20.16	+0 59.3	1.436	2.285	17.5	18.2	5 21	13 19.12	-17 58.5	2.066	2.945	11.7	21.5
362344	2010 <i>MB</i> ₁₀	4 18.1 272°12		4°4/14.5 17			130754	2000 <i>SV</i> ₂₇₅	4 18.2 165°06		1°1/17.1 18		
3 12	14 11.04	-3 29.1	1.706	2.541	14.9	21.4	3 12	14 12.40	-10 59.7	2.022	2.831	13.9	21.0
3 22	14 7.08	-2 26.2	1.605	2.515	11.6	21.1	3 22	14 7.42	-10 13.5	1.941	2.837	10.6	20.8
4 1	14 0.53	-1 14.0	1.526	2.489	7.8	20.9	4 1	14 0.31	-9 15.9	1.883	2.843	6.9	20.6
4 11	13 51.97	+0 0.9	1.473	2.462	4.8	20.6	4 11	13 51.73	-8 11.2	1.852	2.848	2.9	20.3
4 21	13 42.30	+1 10.5	1.446	2.435	5.5	20.6	4 21	13 42.53	-7 4.7	1.850	2.852	2.0	20.3
5 1	13 32.70	+2 6.8	1.446	2.407	9.4	20.7	5 1	13 33.70	-6 2.7	1.877	2.855	6.0	20.5
5 11	13 24.32	+2 43.3	1.470	2.378	13.6	20.9	5 11	13 26.09	-5 10.9	1.931	2.857	9.8	20.7
5 21	13 18.05	+2 57.0	1.515	2.349	17.5	21.1	5 21	13 20.34	-4 32.9	2.008	2.859	13.2	21.0
312645	2010 <i>EP</i> ₆₅	4 18.1 5°17		0°0/17.8 18			504270	2006 <i>VH</i> ₁₇₃	4 18.2 128°27		3°6/14.2 18		
3 12	13 48.19	-10 9.2	32.389	33.186	1.0	20.6	3 12	14 9.00	+0 44.8	2.725	3.544	10.4	22.1
3 22	13 47.47	-10 3.7	32.297	33.187	0.8	20.6	3 22	14 4.19	+1 19.3	2.655	3.555	8.0	21.9
4 1	13 46.65	-9 57.7	32.231	33.189	0.5	20.5	4 1	13 57.90	+1 54.2	2.610	3.566	5.5	21.8
4 11	13 45.77	-9 51.4	32.195	33.190	0.2	20.5	4 11	13 50.63	+2 25.5	2.593	3.576	3.7	21.7
4 21	13 44.86	-9 45.0	32.188	33.192	0.1	20.5	4 21	13 42.99	+2 49.7	2.606	3.586	4.2	21.7
5 1	13 43.96	-9 38.8	32.212	33.193	0.4	20.5	5 1	13 35.64	+3 3.9	2.647	3.595	6.3	21.9
5 11	13 43.11	-9 32.8	32.264	33.195	0.7	20.6	5 11	13 29.16	+3 6.1	2.715	3.605	8.8	22.0
5 21	13 42.34	-9 27.3	32.343	33.196	1.0	20.6	5 21	13 24.01	+2 56.0	2.807	3.614	11.0	22.2
3369	Freuchen	4 18.1 154°36		2°7/21.3 18			98333	2000 <i>SC</i> ₂₉₅	4 18.2 176°03		2°2/20.3 18		
3 12	14 8.27	-22 37.1	2.658	3.417	12.2	17.8	3 12	14 14.61	-19 49.2	2.280	3.048	13.7	20.8
3 22	14 3.90	-22 28.4	2.567	3.422	9.9	17.7	3 22	14 9.04	-19 41.9	2.187	3.052	11.0	20.6
4 1	13 57.84	-22 5.7	2.498	3.428	7.2	17.5	4 1	14 1.36	-19 20.0	2.117	3.055	7.7	20.4
4 11	13 50.62	-21 29.5	2.456	3.432	4.4	17.3	4 11	13 52.20	-18 44.3	2.073	3.057	4.3	20.2
4 21	13 42.90	-20 42.2	2.442	3.437	2.7	17.2	4 21	13 42.35	-17 57.4	2.058	3.058	2.3	20.1
5 1	13 35.43	-19 47.5	2.457	3.441	4.2	17.3	5 1	13 32.79	-17 3.6	2.072	3.058	4.8	20.2
5 11	13 28.89	-18 50.3	2.500	3.445	7.0	17.5	5 11	13 24.38	-16 8.8	2.116	3.057	8.3	20.4
5 21	13 23.79	-17 55.4	2.570	3.449	9.7	17.7	5 21	13 17.78	-15 18.3	2.184	3.055	11.5	20.6
57477	2001 <i>SU</i> ₁₅₁	4 18.1 145°71		0°0/18.2 18			106831	2000 <i>YQ</i> ₄	4 18.2 173°50		0°2/17.9 17		
3 12	14 7.58	-13 29.8	2.697	3.493	11.1	20.9	3 12	14 7.18	-12 15.9	2.918	3.714	10.4	21.8
3 22	14 3.21	-12 59.8	2.613	3.501	8.6	20.7	3 22	14 2.84	-11 51.8	2.828	3.716	8.0	21.7
4 1	13 57.31	-12 20.3	2.554	3.509	5.6	20.5	4 1	13 57.06	-11 19.7	2.762	3.718	5.2	21.5
4 11	13 50.37	-11 34.0	2.522	3.516	2.4	20.3	4 11	13 50.30	-10 42.0	2.725	3.720	2.2	21.3
4 21	13 43.02	-10 44.2	2.520	3.524	0.9	20.2	4 21	13 43.12	-10 1.7	2.717	3.721	1.0	21.2
5 1	13 35.91	-9 55.0	2.547	3.530	4.2	20.4	5 1	13 36.13	-9 22.1	2.740	3.722	4.1	21.4
5 11	13 29.68	-9 10.5	2.603	3.537	7.3	20.7	5 11	13 29.93	-8 46.8	2.791	3.722	6.9	21.6
5 21	13 24.79	-8 33.9	2.684	3.543	10.0	20.8	5 21	13 24.95	-8 18.6	2.867	3.722	9.5	21.8
495869	2004 <i>PW</i> ₈₉	4 18.1 234°02		1°4/19.5 18			296411	2009 <i>GX</i> ₅	4 18.2 215°29		1°4/17.0 17		
3 12	14 11.45	-17 4.0	2.507	3.286	12.3	22.3	3 12	14 12.08	-9 25.9	1.872	2.689	14.5	21.7
3 22	14 6.56	-16 54.2	2.395	3.270	9.8	22.1	3 22	14 7.49	-8 54.9	1.782	2.683	11.2	21.5
4 1	13 59.74	-16 32.3	2.307	3.253	6.8	21.9	4 1	14 0.55	-8 13.6	1.715	2.677	7.3	21.2
4 11	13 51.50	-15 59.6	2.246	3.235	3.4	21.6	4 11	13 51.91	-7 26.0	1.675	2.670	3.1	21.0
4 21	13 42.54	-15 18.4	2.214	3.217	1.5	21.5	4 21	13 42.47	-6 37.1	1.662	2.663	2.3	20.9
5 1	13 33.66	-14 32.6	2.212	3.198	4.5	21.6	5 1	13 33.27	-5 52.7	1.677	2.655	6.5	21.1
5 11	13 25.70	-13 46.9	2.239	3.178	8.0	21.8	5 11	13 25.34	-5 18.3	1.718	2.647	10.7	21.4
5 21	13 19.27	-13 6.0	2.291	3.157	11.2	22.0	5 21	13 19.38	-4 57.5	1.782	2.638	14.3	21.6
471869	2013 <i>AD</i> ₃₈	4 18.1 168°80		1°8/16.0 17			176994	2003 <i>AK</i> ₁₅	4 18.2 188°42		1°2/17.4 18		
3 12	14 6.77	-6 32.3	2.745	3.559	10.5	21.8	3 12	14 19.82	-6 53.8	2.096	2.896	13.7	19.9
3 22	14 2.57	-5 56.1	2.661	3.561	8.0	21.6	3 22	14 13.16	-7 5.7	2.005	2.895	10.6	19.7
4 1	13 56.88	-5 14.6	2.602	3.564	5.1	21.5	4 1	14 4.14	-7 13.1	1.937	2.894	7.0	19.5
4 11	13 50.20	-4 31.2	2.572	3.565	2.4	21.3	4 11	13 53.41	-7 18.3	1.898	2.892	3.0	19.2
4 21	13 43.09	-3 49.5	2.570	3.567	2.4	21.3	4 21	13 41.88	-7 23.4	1.888	2.890	2.0	19.1
5 1	13 36.20	-3 13.3	2.598	3.568	5.1	21.5	5 1	13 30.61	-7 31.4	1.909	2.887	5.9	19.4
5 11	13 30.13	-2 45.8	2.654	3.569	7.9	21.6	5 11	13 20.60	-7 44.8	1.958	2.883	9.8	19.6
5 21	13 25.33	-2 28.9	2.734	3.570	10.5	21.8	5 21	13 12.57	-8 5.6	2.032	2.879	13.2	19.8
64790	2001 <i>XQ</i> ₂₀₂	4 18.1 104°49		2°3/15.7 18			300004	2006 <i>UC</i> ₄₀	4 18.2 286°40		0°5/18.6 16		
3 12	14 7.24	-5 52.4	2.388	3.209	11.6	20.2	3 12	14 7.55	-14 30.3				

EPHEMERIDES

4 18.2

4 18.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
251573	2009 <i>FA</i> ₈		4 18.2 235°39	4.2/14.6	17		90640	4500 <i>T</i> ₋₂		4 18.2 255°10	0.6/17.7	18	
3 12	14 10.70	- 3 42.3	1.735	2.570	14.7	21.2	3 12	14 9.00	-11 1.9	2.120	2.932	13.2	20.0
3 22	14 6.57	- 2 39.0	1.650	2.561	11.3	20.9	3 22	14 4.86	-10 42.4	2.029	2.927	10.2	19.8
4 1	14 0.02	- 1 28.0	1.588	2.551	7.6	20.7	4 1	13 58.71	-10 13.5	1.962	2.922	6.7	19.6
4 11	13 51.70	- 0 15.8	1.552	2.541	4.5	20.5	4 11	13 51.12	- 9 37.8	1.921	2.916	2.8	19.3
4 21	13 42.55	+ 0 50.1	1.542	2.531	5.2	20.5	4 21	13 42.86	- 8 59.3	1.908	2.911	1.5	19.2
5 1	13 33.67	+ 1 42.2	1.560	2.521	8.8	20.7	5 1	13 34.82	- 8 22.7	1.923	2.905	5.4	19.5
5 11	13 26.10	+ 2 15.5	1.602	2.510	12.7	20.9	5 11	13 27.84	- 7 52.6	1.965	2.899	9.2	19.7
5 21	13 20.57	+ 2 27.6	1.665	2.498	16.2	21.1	5 21	13 22.56	- 7 32.4	2.030	2.894	12.5	19.9
136398	2004 <i>XC</i> ₁₅₈		4 18.2 129°15	0.4/18.5	17		97560	2000 <i>DS</i> ₇₆		4 18.2 103°15	1.6/20.0	17	
3 12	14 9.26	-14 10.1	2.058	2.863	13.8	20.4	3 12	14 7.04	-18 9.8	2.726	3.505	11.4	20.1
3 22	14 5.06	-13 50.4	1.975	2.867	10.7	20.2	3 22	14 2.91	-18 5.6	2.638	3.511	9.1	19.9
4 1	13 58.80	-13 18.5	1.915	2.871	7.1	20.0	4 1	13 57.20	-17 50.5	2.573	3.517	6.3	19.8
4 11	13 51.12	-12 37.2	1.881	2.875	3.1	19.8	4 11	13 50.41	-17 25.6	2.536	3.522	3.4	19.6
4 21	13 42.82	-11 50.3	1.875	2.879	1.1	19.6	4 21	13 43.16	-16 53.3	2.526	3.527	1.7	19.5
5 1	13 34.82	-11 2.8	1.897	2.882	5.1	19.9	5 1	13 36.12	-16 16.8	2.546	3.533	3.9	19.6
5 11	13 27.97	-10 20.3	1.946	2.886	8.9	20.1	5 11	13 29.94	-15 40.0	2.595	3.538	6.8	19.8
5 21	13 22.89	- 9 46.8	2.018	2.889	12.3	20.4	5 21	13 25.10	-15 6.7	2.668	3.543	9.5	20.0
284967	2010 <i>FY</i> ₂₂		4 18.2 284°20	1.6/16.8	17		89290	2001 <i>VX</i> ₂₄		4 18.2 242°38	1.9/19.6	16	
3 12	14 8.38	- 8 35.6	2.073	2.894	13.1	21.0	3 12	14 12.69	-17 57.0	1.692	2.491	16.5	20.1
3 22	14 4.54	- 8 5.3	1.970	2.874	10.1	20.7	3 22	14 8.47	-17 46.8	1.593	2.478	13.2	19.9
4 1	13 58.61	- 7 26.0	1.891	2.853	6.6	20.5	4 1	14 1.51	-17 18.7	1.515	2.465	9.2	19.6
4 11	13 51.11	- 6 41.2	1.837	2.833	2.9	20.2	4 11	13 52.46	-16 33.7	1.461	2.451	4.7	19.3
4 21	13 42.81	- 5 55.5	1.812	2.812	2.4	20.1	4 21	13 42.31	-15 35.2	1.433	2.436	2.0	19.1
5 1	13 34.61	- 5 14.1	1.814	2.792	6.2	20.3	5 1	13 32.32	-14 29.5	1.433	2.421	6.1	19.3
5 11	13 27.43	- 4 42.2	1.843	2.771	10.1	20.5	5 11	13 23.72	-13 24.8	1.459	2.406	10.8	19.5
5 21	13 21.96	- 4 23.2	1.895	2.750	13.6	20.7	5 21	13 17.41	-12 28.7	1.507	2.389	15.0	19.7
297123	2010 <i>RM</i> ₁₃₆		4 18.2 155°59	0.2/18.0	17		483856	2005 <i>YV</i> ₅₅		4 18.2 87°41	4.8/15.2	17	C
3 12	14 14.10	-11 41.3	1.915	2.721	14.6	21.0	3 12	14 24.33	- 4 31.7	1.247	2.076	19.6	23.3
3 22	14 8.90	-11 31.8	1.834	2.727	11.3	20.8	3 22	14 16.91	- 3 12.5	1.214	2.121	14.8	23.1
4 1	14 1.39	-11 12.1	1.775	2.733	7.4	20.6	4 1	14 6.45	- 1 47.2	1.201	2.163	9.6	22.9
4 11	13 52.25	-10 44.7	1.743	2.738	3.1	20.3	4 11	13 54.23	- 0 25.6	1.214	2.205	5.4	22.8
4 21	13 42.39	-10 13.3	1.739	2.742	1.3	20.2	4 21	13 41.78	+ 0 42.8	1.254	2.245	5.8	22.9
5 1	13 32.89	- 9 42.8	1.763	2.746	5.7	20.5	5 1	13 30.59	+ 1 30.5	1.320	2.283	9.8	23.2
5 11	13 24.70	- 9 17.9	1.814	2.750	9.7	20.7	5 11	13 21.78	+ 1 54.3	1.410	2.320	13.9	23.6
5 21	13 18.52	- 9 2.4	1.889	2.753	13.3	21.0	5 21	13 15.88	+ 1 54.8	1.521	2.355	17.4	23.9
428001	2006 <i>BM</i> ₃₈		4 18.2 54°53	4.2/21.3	17		504327	2007 <i>RW</i> ₃₁₈		4 18.2 187°55	0.4/17.8	17	
3 12	14 13.12	-21 40.7	1.706	2.490	17.0	20.9	3 12	14 8.22	-11 59.7	2.354	3.160	12.2	22.4
3 22	14 8.52	-22 14.2	1.636	2.506	13.8	20.8	3 22	14 4.02	-11 30.5	2.265	3.159	9.4	22.2
4 1	14 1.29	-22 30.3	1.587	2.522	10.1	20.6	4 1	13 58.03	-10 51.6	2.201	3.159	6.2	22.0
4 11	13 52.23	-22 28.2	1.561	2.538	6.4	20.4	4 11	13 50.80	-10 5.8	2.163	3.158	2.6	21.7
4 21	13 42.41	-22 9.4	1.561	2.555	4.2	20.3	4 21	13 43.02	- 9 17.0	2.154	3.157	1.3	21.6
5 1	13 33.04	-21 38.1	1.587	2.572	6.1	20.4	5 1	13 35.47	- 8 29.8	2.174	3.156	4.9	21.9
5 11	13 25.23	-21 0.9	1.640	2.589	9.6	20.7	5 11	13 28.90	- 7 48.8	2.221	3.154	8.4	22.1
5 21	13 19.72	-20 24.5	1.715	2.606	13.1	20.9	5 21	13 23.84	- 7 17.4	2.293	3.152	11.4	22.3
200760	2001 <i>WE</i> ₇₂		4 18.2 66°73	0.9/18.8	18		376790	2000 <i>SK</i> ₂₀		4 18.2 206°26	3.0/21.5	18	
3 12	14 12.41	-16 17.1	1.302	2.125	19.3	20.9	3 12	14 9.62	-23 53.3	2.324	3.083	13.8	20.9
3 22	14 8.30	-15 46.0	1.247	2.148	15.0	20.7	3 22	14 5.30	-23 30.6	2.223	3.078	11.2	20.7
4 1	14 1.23	-14 55.0	1.211	2.170	10.0	20.4	4 1	13 58.97	-22 49.6	2.143	3.073	8.2	20.5
4 11	13 52.18	-13 48.3	1.199	2.193	4.5	20.2	4 11	13 51.24	-21 51.2	2.090	3.067	5.1	20.3
4 21	13 42.47	-12 33.2	1.212	2.216	1.5	20.0	4 21	13 42.84	-20 38.2	2.064	3.060	3.0	20.1
5 1	13 33.52	-11 19.1	1.250	2.238	6.7	20.4	5 1	13 34.68	-19 15.7	2.068	3.053	4.8	20.2
5 11	13 26.52	-10 14.9	1.312	2.261	11.6	20.8	5 11	13 27.60	-17 50.6	2.100	3.046	8.0	20.4
5 21	13 22.13	- 9 26.8	1.396	2.283	15.7	21.1	5 21	13 22.19	-16 29.6	2.158	3.038	11.2	20.6
131700	2001 <i>YV</i>		4 18.2 106°39	14.7/ 5.6	18		93174	2000 <i>SY</i> ₁₀₁		4 18.2 48°74	5.2/21.6	18	
3 12	14 20.15	+28 17.6	1.734	2.513	17.0	19.7	3 12	14 15.74	-22 54.4	1.806	2.576	16.8	19.0
3 22	14 13.44	+30 3.3	1.716	2.536	15.6	19.6	3 22	14 10.70	-23 51.3	1.720	2.578	13.8	18.8
4 1	14 4.13	+31 23.9	1.719	2.559	14.8	19.6	4 1	14 2.90	-24 32.6	1.655	2.581	10.4	18.6
4 11	13 53.27	+32 9.8	1.743	2.582	14.8	19.7	4 11	13 53.03	-24 55.9	1.614	2.584	7.1	18.4
4 21	13 42.08	+32 16.3	1.787	2.603	15.6	19.8	4 21	13 42.12	-25 0.6	1.599	2.587	5.2	18.3
5 1	13 31.83	+31 43.5	1.851	2.624	16.9	19.9	5 1	13 31.44	-24 48.9	1.611	2.590	6.7	18.4
5 11	13 23.50	+30 36.1	1.933	2.644	18.3	20.1	5 11	13 22.23	-24 26.5	1.649	2.593	10.0	18.6
5 21	13 17.63	+29 1.0	2.029	2.663	19.5	20.2	5 21	13 15.35	-23 59.8	1.710	2.596	13.4	18.8
121359	1999 <i>TG</i> ₅₅		4 18.2 201°65	0.5/18.6	18		169236	2001 <i>SW</i> ₅₈		4 18.2 156°43	1.1/16.9	18	
3 12	14 11.23	-13 25.8	2.054	2.857	13.9	20.2	3 12	14 8.06	- 9 10.5	2.716	3.522	10.8	21.1
3 22	14 6.65	-13 23.3	1.965	2.856	10.8	20.0	3 22	14 3.59	- 8 39.9	2.633	3.528	8.2	20.9
4 1	13 59.91	-13 10.3	1.899	2.854	7.2	19.8	4 1	13 57.60	- 8 2.6	2.574	3.534	5.3	20.7
4 11	13 51.64	-12 48.6	1.859	2.853	3.2	19.5	4 11	13 50.58	- 7 21.6	2.544	3.539	2.2	20.5
4 21	13 42.64	-12 21.1	1.847	2.851	1.1	19.4	4 21	13 43.13	- 6 40.3	2.543	3.544	1.7	20.5
5 1	13 33.89	-11 52.2	1.864	2.850	5.2	19.7	5 1	13 35.92	- 6 2.4	2.571	3.548	4.7	20.7
5 11	13 26.30	-11 26.6	1.907	2.848	9.1	19.9	5 11	13 29.56	- 5 31.4	2.628	3.552	7.7	20.9
5 21	13 20.53	-11 8.0	1.975	2.846	12.5	20.1	5 21	13 24.52	- 5 9.8	2.710	3.556	10.3	21.1
281865	2010 <i>DL</i> ₁₁		4 18.2 259°29	1.9/16.6	17		474588	2004 <i>LX</i> ₂₀		4			

EPHEMERIDES

4 18.2

4 18.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
287556	2003 <i>FP</i> ₃		4 18.2 10°18'	9°9'/12.3	17		375743	2009 <i>SG</i> ₁₂		4 18.2 157°41'	0°5'/18.7	17	
3 12	14 18.74	+17 20.0	1.825	2.633	15.2	19.5	3 12	14 11.64	-14 48.1	2.354	3.144	12.7	22.9
3 22	14 12.38	+17 40.1	1.764	2.635	12.9	19.4	3 22	14 6.62	-14 27.8	2.269	3.152	9.9	22.7
4 1	14 3.57	+17 45.2	1.726	2.639	10.9	19.3	4 1	13 59.72	-13 56.2	2.208	3.160	6.6	22.5
4 11	13 53.14	+17 28.4	1.711	2.643	10.0	19.2	4 11	13 51.54	-13 15.7	2.174	3.166	3.0	22.3
4 21	13 42.16	+16 45.6	1.722	2.647	10.5	19.3	4 21	13 42.81	-12 29.5	2.169	3.172	1.0	22.1
5 1	13 31.80	+15 36.0	1.758	2.652	12.3	19.4	5 1	13 34.38	-11 42.3	2.193	3.178	4.6	22.4
5 11	13 23.04	+14 2.5	1.818	2.658	14.7	19.5	5 11	13 27.02	-10 58.7	2.246	3.182	8.1	22.6
5 21	13 16.52	+12 10.3	1.900	2.665	16.9	19.7	5 21	13 21.27	-10 22.7	2.323	3.187	11.2	22.8
92982	2000 <i>RE</i> ₇₁		4 18.2 353°09'	1°5'/16.9	18		53451	1999 <i>XU</i> ₁₃₄		4 18.2 205°19'	17°8'/4.1	18	
3 12	14 10.15	- 8 48.2	1.793	2.618	14.7	18.9	3 12	14 22.71	+28 12.9	1.378	2.170	20.0	19.0
3 22	14 6.04	- 8 23.4	1.712	2.618	11.3	18.7	3 22	14 16.55	+30 10.4	1.335	2.167	18.6	18.9
4 1	13 59.62	- 7 49.3	1.654	2.617	7.3	18.4	4 1	14 6.84	+31 41.5	1.311	2.164	17.8	18.8
4 11	13 51.55	- 7 10.0	1.621	2.617	3.1	18.2	4 11	13 54.68	+32 32.0	1.306	2.159	18.0	18.8
4 21	13 42.75	- 6 30.4	1.616	2.617	2.4	18.1	4 21	13 41.62	+32 33.1	1.319	2.154	19.1	18.8
5 1	13 34.27	- 5 56.0	1.637	2.617	6.5	18.4	5 1	13 29.42	+31 42.6	1.351	2.149	20.8	18.9
5 11	13 27.08	- 5 31.7	1.685	2.617	10.6	18.6	5 11	13 19.54	+30 6.1	1.398	2.143	22.7	19.1
5 21	13 21.88	- 5 20.7	1.754	2.617	14.2	18.8	5 21	13 12.79	+27 53.0	1.459	2.136	24.6	19.2
32063	Pusapaty		4 18.2 326°45'	3°9'/21.2	18		443765	2015 <i>MU</i> ₅₂		4 18.2 297°96'	9°8'/29.6	16	
3 12	14 9.13	-21 56.6	1.612	2.406	17.4	18.4	3 12	14 10.63	-43 22.6	2.481	3.110	15.9	21.2
3 22	14 5.81	-22 5.8	1.524	2.401	14.2	18.1	3 22	14 6.67	-44 13.4	2.378	3.101	14.5	21.1
4 1	13 59.78	-21 54.7	1.455	2.396	10.4	17.9	4 1	14 0.23	-44 41.7	2.290	3.091	12.9	20.9
4 11	13 51.72	-21 23.1	1.409	2.391	6.4	17.6	4 11	13 51.92	-44 43.4	2.223	3.082	11.3	20.8
4 21	13 42.66	-20 33.4	1.389	2.386	3.9	17.5	4 21	13 42.63	-44 16.3	2.177	3.073	10.1	20.7
5 1	13 33.87	-19 31.1	1.394	2.382	6.3	17.6	5 1	13 33.50	-43 21.4	2.156	3.063	9.8	20.6
5 11	13 26.56	-18 24.9	1.424	2.378	10.4	17.8	5 11	13 25.63	-42 3.6	2.158	3.054	10.4	20.7
5 21	13 21.56	-17 23.0	1.477	2.374	14.4	18.0	5 21	13 19.84	-40 30.2	2.184	3.045	11.8	20.7
67910	2000 <i>WC</i> ₁₀₀		4 18.2 262°12'	1°7'/19.5	18		211444	2003 <i>AK</i> ₅₃		4 18.2 98°43'	6°8'/10.6	17	
3 12	14 11.55	-17 18.4	1.688	2.491	16.4	19.3	3 12	14 9.80	+10 37.2	2.443	3.263	11.4	20.2
3 22	14 7.63	-17 10.0	1.587	2.475	13.1	19.0	3 22	14 4.92	+11 43.7	2.396	3.284	9.3	20.1
4 1	14 0.99	-16 44.3	1.507	2.458	9.1	18.8	4 1	13 58.43	+12 43.8	2.374	3.304	7.5	20.0
4 11	13 52.27	-16 2.5	1.451	2.441	4.6	18.4	4 11	13 50.92	+13 31.9	2.379	3.323	6.8	20.0
4 21	13 42.43	-15 7.9	1.421	2.424	1.9	18.2	4 21	13 43.09	+14 3.3	2.411	3.343	7.6	20.1
5 1	13 32.71	-14 6.7	1.419	2.407	6.1	18.4	5 1	13 35.67	+14 15.4	2.469	3.362	9.3	20.2
5 11	13 24.34	-13 6.7	1.442	2.389	10.8	18.7	5 11	13 29.30	+14 7.8	2.551	3.381	11.3	20.4
5 21	13 18.22	-12 15.3	1.487	2.371	15.1	18.9	5 21	13 24.41	+13 41.7	2.655	3.399	13.1	20.5
519616	2012 <i>UD</i> ₁₈₁		4 18.2 100°13'	1°3'/16.8	17		462552	2009 <i>CK</i> ₁₈		4 18.2 264°35'	4°5'/21.5	17	
3 12	14 7.06	- 9 50.8	2.369	3.183	11.9	21.7	3 12	14 11.57	-23 19.2	1.617	2.401	17.8	21.4
3 22	14 3.00	- 9 4.7	2.296	3.195	9.1	21.5	3 22	14 7.89	-23 29.8	1.518	2.387	14.7	21.1
4 1	13 57.28	- 8 10.3	2.247	3.208	5.8	21.4	4 1	14 1.31	-23 19.0	1.438	2.373	10.9	20.9
4 11	13 50.46	- 7 11.3	2.225	3.221	2.5	21.1	4 11	13 52.46	-22 45.4	1.381	2.359	7.0	20.6
4 21	13 43.21	- 6 12.4	2.232	3.233	2.0	21.1	4 21	13 42.40	-21 50.4	1.349	2.344	4.5	20.4
5 1	13 36.28	- 5 18.5	2.269	3.245	5.2	21.4	5 1	13 32.48	-20 39.5	1.343	2.329	6.7	20.5
5 11	13 30.33	- 4 33.8	2.332	3.257	8.4	21.6	5 11	13 24.04	-19 21.9	1.362	2.314	10.9	20.7
5 21	13 25.85	- 4 1.2	2.420	3.269	11.2	21.8	5 21	13 18.04	-18 7.0	1.404	2.299	15.1	20.9
436892	2012 <i>TQ</i> ₄₁		4 18.2 180°08'	2°4'/20.6	17		502994	2015 <i>FM</i> ₉₃		4 18.2 129°55'	5°4'/23.6	17	
3 12	14 9.08	-20 28.6	2.326	3.101	13.3	21.5	3 12	14 14.44	-29 5.3	2.444	3.163	14.2	21.7
3 22	14 4.82	-20 22.2	2.233	3.101	10.7	21.3	3 22	14 8.95	-29 36.8	2.359	3.177	11.9	21.6
4 1	13 58.64	-20 1.3	2.163	3.102	7.6	21.1	4 1	14 1.35	-29 51.0	2.295	3.191	9.4	21.4
4 11	13 51.10	-19 26.8	2.119	3.102	4.4	20.9	4 11	13 52.27	-29 46.6	2.257	3.204	7.0	21.3
4 21	13 42.94	-18 41.2	2.103	3.102	2.4	20.7	4 21	13 42.54	-29 23.8	2.245	3.216	5.5	21.2
5 1	13 35.02	-17 48.7	2.115	3.101	4.6	20.9	5 1	13 33.11	-28 45.4	2.262	3.229	6.0	21.3
5 11	13 28.13	-16 54.8	2.155	3.101	7.9	21.1	5 11	13 24.85	-27 56.8	2.306	3.240	8.0	21.4
5 21	13 22.88	-16 4.6	2.220	3.100	10.9	21.3	5 21	13 18.42	-27 3.8	2.375	3.251	10.5	21.6
368387	2002 <i>RS</i> ₂₆₅		4 18.2 270°15'	0°2'/18.1	17		304456	2006 <i>UR</i> ₂₂		4 18.2 191°91'	0°2'/18.4	17	
3 12	14 11.45	-12 26.4	1.740	2.556	15.5	22.4	3 12	14 8.02	-13 41.9	2.454	3.253	12.0	21.4
3 22	14 7.43	-12 9.2	1.638	2.537	12.1	22.1	3 22	14 3.84	-13 20.7	2.363	3.252	9.3	21.2
4 1	14 0.81	-11 39.0	1.558	2.518	8.1	21.8	4 1	13 57.92	-12 49.2	2.296	3.251	6.2	21.0
4 11	13 52.18	-10 58.2	1.502	2.498	3.5	21.5	4 11	13 50.79	-12 10.0	2.256	3.250	2.7	20.8
4 21	13 42.48	-10 11.1	1.474	2.478	1.5	21.3	4 21	13 43.12	-11 26.2	2.245	3.249	1.0	20.7
5 1	13 32.87	- 9 23.9	1.473	2.457	6.4	21.6	5 1	13 35.66	-10 42.1	2.262	3.247	4.5	20.9
5 11	13 24.51	- 8 43.1	1.497	2.437	11.1	21.8	5 11	13 29.14	-10 2.1	2.308	3.245	7.9	21.1
5 21	13 18.29	- 8 14.0	1.543	2.416	15.3	22.0	5 21	13 24.08	- 9 29.9	2.378	3.243	10.9	21.3
499247	2009 <i>UR</i> ₁₄₈		4 18.2 207°85'	1°7'/16.5	17		329398	2002 <i>AB</i> ₁₄₇		4 18.2 209°20'	0°8'/17.4	18	
3 12	14 11.58	- 7 19.1	2.468	3.276	11.7	23.8	3 12	14 10.50	-10 59.3	2.322	3.126	12.4	21.7
3 22	14 6.54	- 6 46.5	2.372	3.269	9.0	23.6	3 22	14 5.86	-10 25.9	2.226	3.120	9.6	21.5
4 1	13 59.68	- 6 7.3	2.301	3.261	5.8	23.3	4 1	13 59.31	- 9 42.8	2.154	3.113	6.3	21.3
4 11	13 51.53	- 5 24.8	2.258	3.252	2.7	23.1	4 11	13 51.42	- 8 52.9	2.110	3.105	2.6	21.1
4 21	13 42.78	- 4 42.9	2.245	3.243	2.4	23.1	4 21	13 42.88	- 8 0.6	2.095	3.097	1.6	21.0
5 1	13 34.21	- 4 6.1	2.261	3.233	5.6	23.3	5 1	13 34.54	- 7 10.6	2.109	3.088	5.3	21.2
5 11	13 26.58	- 3 38.1	2.305	3.222	8.9	23.5	5 11	13 27.20	- 6 27.8	2.151	3.079	8.9	21.4
5 21	13 20.46	- 3 21.4	2.373	3.211	11.8	23.6	5 21	13 21.44	- 5 55.8	2.217	3.069	12.0	21.6
275269	2010 <i>AR</i> ₂₇		4 18.2 117°27'	1°3'/17.0	17		112792	2002 <i>PF</i> ₁₆₄		4			

EPHEMERIDES

4 18.2

4 18.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
107711	2001 <i>FC</i> ₂₀		4 18.2 91°87	5°0/22.4	18		64958	2001 <i>YT</i> ₁₃₁		4 18.2 51°85	0°1/18.3	18	
3 12	14 13.82	-25 11.4	2.054	2.807	15.5	20.0	3 12	14 5.73	-16 9.6	2.000	2.807	14.1	19.0
3 22	14 8.81	-25 49.6	1.973	2.818	12.8	19.8	3 22	14 2.30	-15 6.2	1.932	2.825	10.8	18.9
4 1	14 1.44	-26 10.9	1.913	2.830	9.8	19.6	4 1	13 56.97	-13 47.5	1.887	2.844	7.1	18.7
4 11	13 52.36	-26 13.8	1.877	2.841	6.8	19.4	4 11	13 50.39	-12 17.8	1.869	2.863	3.1	18.5
4 21	13 42.53	-25 58.7	1.867	2.852	5.1	19.4	4 21	13 43.38	-10 43.6	1.878	2.882	1.1	18.3
5 1	13 33.00	-25 28.8	1.886	2.862	6.1	19.4	5 1	13 36.79	-9 12.2	1.917	2.902	5.2	18.7
5 11	13 24.81	-24 49.7	1.930	2.873	8.8	19.6	5 11	13 31.37	-7 50.4	1.982	2.921	8.9	18.9
5 21	13 18.65	-24 7.9	2.000	2.884	11.8	19.8	5 21	13 27.63	-6 43.1	2.072	2.941	12.1	19.2
71393	2000 <i>AA</i> ₁₆₃		4 18.2 165°03	6°9/12.2	18		200000	2007 <i>JT</i> ₄₀		4 18.2 260°02	4°2/14.3	18	
3 12	14 12.03	+ 4 49.5	1.802	2.636	14.2	19.1	3 12	14 9.13	- 1 38.3	2.051	2.882	12.9	20.4
3 22	14 7.36	+ 6 2.4	1.735	2.639	11.2	18.9	3 22	14 5.07	- 0 43.9	1.960	2.868	10.0	20.2
4 1	14 0.40	+ 7 14.0	1.692	2.642	8.4	18.7	4 1	13 58.94	+ 0 15.1	1.893	2.854	6.8	20.0
4 11	13 51.88	+ 8 16.3	1.675	2.645	6.9	18.6	4 11	13 51.32	+ 1 13.1	1.853	2.840	4.4	19.8
4 21	13 42.73	+ 9 2.2	1.684	2.647	7.9	18.7	4 21	13 42.98	+ 2 4.1	1.840	2.825	5.0	19.8
5 1	13 33.99	+ 9 26.5	1.719	2.648	10.5	18.9	5 1	13 34.82	+ 2 42.4	1.855	2.810	8.0	20.0
5 11	13 26.60	+ 9 26.9	1.778	2.649	13.5	19.0	5 11	13 27.72	+ 3 4.1	1.895	2.795	11.4	20.1
5 21	13 21.19	+ 9 4.6	1.856	2.650	16.3	19.2	5 21	13 22.33	+ 3 7.5	1.957	2.780	14.5	20.3
438395	2006 <i>UX</i> ₈₂		4 18.2 261°67	1°8/19.9	16		215300	2001 <i>SM</i> ₁₁₅		4 18.2 204°13	0°2/18.4	17	
3 12	14 8.26	-18 21.4	2.413	3.196	12.6	21.8	3 12	14 15.21	-13 15.5	1.879	2.681	15.0	21.4
3 22	14 4.23	-18 13.4	2.307	3.182	10.1	21.6	3 22	14 10.01	-13 2.9	1.786	2.676	11.8	21.2
4 1	13 58.31	-17 52.5	2.223	3.168	7.1	21.4	4 1	14 2.33	-12 38.0	1.715	2.670	7.8	21.0
4 11	13 51.02	-17 19.7	2.166	3.153	3.8	21.1	4 11	13 52.81	-12 3.0	1.670	2.664	3.4	20.7
4 21	13 43.04	-16 37.4	2.137	3.139	1.8	21.0	4 21	13 42.40	-11 21.7	1.653	2.657	1.3	20.5
5 1	13 35.18	-15 49.6	2.137	3.124	4.5	21.1	5 1	13 32.22	-10 39.4	1.665	2.649	5.9	20.8
5 11	13 28.24	-15 1.2	2.164	3.109	7.9	21.3	5 11	13 23.35	-10 1.9	1.703	2.640	10.2	21.0
5 21	13 22.83	-14 17.2	2.217	3.093	11.1	21.5	5 21	13 16.57	-9 34.0	1.765	2.631	14.0	21.2
334889	2003 <i>UQ</i> ₃₄₈		4 18.2 145°29	1°9/16.3	17		333129	2011 <i>WE</i> ₈₁		4 18.2 71°45	0°2/18.4	18	
3 12	14 8.36	- 8 4.7	2.105	2.926	13.0	21.6	3 12	14 12.48	-14 16.3	1.420	2.243	18.0	21.4
3 22	14 4.29	- 7 19.5	2.026	2.929	9.9	21.4	3 22	14 8.21	-13 48.7	1.361	2.262	13.9	21.2
4 1	13 58.30	- 6 26.0	1.970	2.933	6.4	21.2	4 1	14 1.16	-13 4.6	1.322	2.282	9.2	21.0
4 11	13 50.98	- 5 28.5	1.941	2.936	2.9	21.0	4 11	13 52.25	-12 8.2	1.306	2.301	3.9	20.8
4 21	13 43.10	- 4 32.2	1.940	2.939	2.7	21.0	4 21	13 42.67	-11 5.8	1.317	2.321	1.4	20.6
5 1	13 35.51	- 3 42.6	1.967	2.941	6.2	21.2	5 1	13 33.75	-10 5.5	1.354	2.341	6.6	21.0
5 11	13 29.03	- 3 4.3	2.021	2.944	9.7	21.4	5 11	13 26.60	- 9 14.7	1.415	2.360	11.2	21.3
5 21	13 24.20	- 2 40.0	2.098	2.946	12.8	21.6	5 21	13 21.90	- 8 38.6	1.499	2.379	15.2	21.6
29400	1996 <i>RO</i> ₆		4 18.2 214°83	0°4/18.6	18		488552	2001 <i>TW</i> ₂₃₇		4 18.2 191°09	2°0/16.2	17	
3 12	14 8.49	-14 12.4	2.383	3.181	12.3	19.8	3 12	14 11.47	- 6 50.1	2.437	3.246	11.8	23.0
3 22	14 4.29	-13 55.2	2.290	3.178	9.6	19.6	3 22	14 6.45	- 6 11.7	2.347	3.244	9.0	22.8
4 1	13 58.28	-13 27.3	2.220	3.174	6.4	19.4	4 1	13 59.63	- 5 26.8	2.282	3.242	5.9	22.6
4 11	13 50.98	-12 50.9	2.176	3.170	2.9	19.2	4 11	13 51.56	- 4 39.1	2.245	3.239	2.8	22.4
4 21	13 43.09	-12 9.1	2.162	3.166	1.0	19.0	4 21	13 42.92	- 3 52.9	2.238	3.235	2.7	22.4
5 1	13 35.40	-11 26.3	2.176	3.161	4.6	19.3	5 1	13 34.51	- 3 12.7	2.260	3.230	5.8	22.6
5 11	13 28.67	-10 47.0	2.218	3.157	8.1	19.5	5 11	13 27.07	- 2 42.2	2.310	3.225	9.0	22.8
5 21	13 23.46	-10 15.1	2.285	3.152	11.2	19.7	5 21	13 21.15	- 2 23.8	2.384	3.219	11.9	22.9
302505	2002 <i>GO</i> ₁₆₃		4 18.2 60°13	3°2/15.5	18		498520	2008 <i>EV</i> ₅₇		4 18.2 131°45	4°0/22.5	18	
3 12	14 8.72	- 9 8.6	1.313	2.158	17.8	20.1	3 12	14 14.84	-25 52.0	3.063	3.784	11.5	21.7
3 22	14 5.42	- 7 41.7	1.257	2.175	13.5	19.9	3 22	14 8.81	-26 29.1	2.974	3.798	9.6	21.6
4 1	13 59.36	- 6 0.2	1.223	2.191	8.7	19.6	4 1	14 1.09	-26 54.0	2.908	3.811	7.4	21.5
4 11	13 51.47	- 4 13.2	1.213	2.208	4.1	19.4	4 11	13 52.16	-27 5.6	2.869	3.825	5.2	21.3
4 21	13 42.94	- 2 31.7	1.228	2.225	4.4	19.5	4 21	13 42.69	-27 4.2	2.860	3.837	4.0	21.3
5 1	13 35.06	- 1 6.1	1.269	2.243	8.9	19.8	5 1	13 33.42	-26 51.4	2.880	3.850	4.7	21.3
5 11	13 28.93	- 0 3.7	1.334	2.260	13.3	20.1	5 11	13 25.05	-26 30.6	2.929	3.861	6.6	21.5
5 21	13 25.20	+ 0 32.7	1.418	2.277	17.1	20.4	5 21	13 18.10	-26 5.7	3.006	3.873	8.8	21.6
351624	2005 <i>WL</i> ₁₉₅		4 18.2 59°42	7°9/13.6	18		129264	2005 <i>QS</i> ₁₀₅		4 18.2 169°23	0°4/18.6	17	
3 12	14 14.91	+ 3 45.2	1.199	2.053	18.7	20.1	3 12	14 9.69	-12 58.3	2.573	3.368	11.6	20.7
3 22	14 10.23	+ 4 49.9	1.157	2.073	14.6	19.9	3 22	14 5.04	-12 55.6	2.483	3.369	9.0	20.5
4 1	14 2.49	+ 5 51.5	1.136	2.094	10.6	19.8	4 1	13 58.70	-12 44.6	2.417	3.371	6.0	20.3
4 11	13 52.76	+ 6 39.7	1.137	2.115	8.1	19.7	4 11	13 51.16	-12 27.0	2.378	3.372	2.7	20.1
4 21	13 42.46	+ 7 6.2	1.162	2.136	8.9	19.8	4 21	13 43.09	-12 5.4	2.369	3.373	0.9	20.0
5 1	13 33.05	+ 7 6.2	1.210	2.158	12.1	20.0	5 1	13 35.22	-11 42.7	2.389	3.374	4.3	20.2
5 11	13 25.71	+ 6 39.4	1.279	2.179	15.8	20.3	5 11	13 28.27	-11 22.6	2.437	3.374	7.5	20.4
5 21	13 21.10	+ 5 49.1	1.368	2.201	19.1	20.6	5 21	13 22.74	-11 8.1	2.510	3.375	10.4	20.6
331935	2004 <i>TJ</i> ₃₄		4 18.2 302°77	0°7/18.8	17		24767	1993 <i>FE</i> ₁₂		4 18.2 103°32	2°2/16.5	18	
3 12	14 9.54	-14 30.4	1.826	2.637	15.0	21.3	3 12	14 12.83	- 7 38.5	1.716	2.540	15.3	18.7
3 22	14 5.67	-14 18.7	1.739	2.633	11.8	21.1	3 22	14 8.02	- 6 59.5	1.651	2.556	11.6	18.5
4 1	13 59.47	-13 53.6	1.673	2.630	7.9	20.9	4 1	14 0.85	- 6 11.8	1.608	2.571	7.5	18.3
4 11	13 51.57	-13 17.4	1.632	2.626	3.6	20.6	4 11	13 52.10	- 5 20.6	1.591	2.586	3.4	18.1
4 21	13 42.87	-12 33.9	1.619	2.623	1.2	20.4	4 21	13 42.75	- 4 31.8	1.602	2.601	3.1	18.1
5 1	13 34.44	-11 48.7	1.632	2.619	5.6	20.7	5 1	13 33.92	- 3 51.4	1.640	2.615	7.0	18.4
5 11	13 27.27	-11 7.7	1.672	2.616	9.8	20.9	5 11	13 26.55	- 3 24.0	1.703	2.629	11.0	18.6
5 21	13 22.08	-10 36.0	1.734	2.613	13.6	21.2	5 21	13 21.27	- 3 12.1	1.789	2.643	14.4	18.9
177397	2004 <i>BA</i> ₉₄		4 18.2 6°61	2°7/20.4	18		497615	2006 <i>QT</i> ₈		4 18.2 221°58	0°		

EPHEMERIDES

4 18.2

4 18.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
80427	1999 XZ ₂₂₂		4 18.2 27°76	3°9/20.9	18		387874	2004 RR ₃₂₅		4 18.2 207°09	2°7/21.4	17	
3 12	14 12.14	-20 37.1	1.533	2.330	18.0	19.0	3 12	14 10.20	-23 18.0	2.627	3.379	12.5	22.4
3 22	14 8.23	-21 3.1	1.453	2.333	14.6	18.8	3 22	14 5.56	-22 58.5	2.521	3.372	10.2	22.2
4 1	14 1.43	-21 10.7	1.393	2.336	10.6	18.5	4 1	13 59.11	-22 23.3	2.437	3.365	7.4	22.0
4 11	13 52.50	-20 59.1	1.357	2.339	6.4	18.3	4 11	13 51.38	-21 33.0	2.380	3.357	4.5	21.8
4 21	13 42.57	-20 30.2	1.345	2.342	3.9	18.2	4 21	13 43.05	-20 30.0	2.352	3.348	2.7	21.7
5 1	13 32.98	-19 49.0	1.359	2.346	6.5	18.3	5 1	13 34.91	-19 18.5	2.354	3.339	4.4	21.8
5 11	13 25.03	-19 3.2	1.397	2.350	10.6	18.6	5 11	13 27.70	-18 4.3	2.385	3.329	7.3	21.9
5 21	13 19.57	-18 20.4	1.458	2.354	14.6	18.8	5 21	13 21.99	-16 53.0	2.442	3.318	10.2	22.1
87601	2000 RP ₃₇		4 18.2 236°58	4°4/21.9	18		434447	2005 NA ₁₂₃		4 18.2 242°07	2°4/15.4	16	
3 12	14 14.03	-24 42.0	2.387	3.131	13.8	19.7	3 12	14 7.27	-4 38.5	2.707	3.524	10.5	22.0
3 22	14 8.90	-25 8.7	2.275	3.117	11.5	19.5	3 22	14 3.14	-3 57.5	2.610	3.511	8.0	21.8
4 1	14 1.55	-25 20.6	2.184	3.101	8.8	19.3	4 1	13 57.45	-3 11.6	2.538	3.498	5.3	21.6
4 11	13 52.51	-25 16.4	2.120	3.085	6.0	19.0	4 11	13 50.66	-2 24.6	2.493	3.485	2.8	21.4
4 21	13 42.55	-24 56.2	2.082	3.069	4.4	18.9	4 21	13 43.34	-1 40.4	2.479	3.471	3.1	21.4
5 1	13 32.63	-24 22.4	2.074	3.052	5.6	19.0	5 1	13 36.16	-1 2.9	2.493	3.457	5.7	21.5
5 11	13 23.72	-23 39.8	2.093	3.034	8.4	19.1	5 11	13 29.76	-0 35.7	2.534	3.443	8.6	21.7
5 21	13 16.57	-22 54.4	2.138	3.015	11.4	19.2	5 21	13 24.65	-0 20.6	2.600	3.428	11.2	21.8
375930	2009 WD ₆₅		4 18.2 158°36	0°6/18.7	17		189487	1999 XM ₇₉		4 18.2 117°38	0°4/18.5	18	
3 12	14 15.96	-12 33.9	2.134	2.928	13.7	21.6	3 12	14 14.32	-14 31.5	1.461	2.277	17.9	21.1
3 22	14 10.20	-12 46.2	2.048	2.934	10.7	21.4	3 22	14 9.74	-14 8.9	1.391	2.289	13.9	20.9
4 1	14 2.24	-12 49.8	1.986	2.939	7.1	21.2	4 1	14 2.29	-13 29.6	1.341	2.300	9.2	20.7
4 11	13 52.73	-12 46.0	1.950	2.943	3.2	20.9	4 11	13 52.83	-12 37.1	1.316	2.310	4.1	20.4
4 21	13 42.50	-12 36.9	1.944	2.947	1.1	20.8	4 21	13 42.54	-11 37.0	1.316	2.320	1.4	20.2
5 1	13 32.56	-12 25.7	1.966	2.951	5.1	21.0	5 1	13 32.79	-10 37.2	1.344	2.330	6.6	20.6
5 11	13 23.83	-12 16.4	2.017	2.954	8.8	21.3	5 11	13 24.80	-9 45.4	1.396	2.340	11.4	20.9
5 21	13 16.98	-12 12.3	2.092	2.957	12.1	21.5	5 21	13 19.32	-9 7.4	1.470	2.349	15.5	21.1
139768	2001 QW ₂₉₁		4 18.2 291°15	1°4/19.4	17		502704	2015 DG ₁₉		4 18.2 200°40	2°7/15.8	17	
3 12	14 9.03	-16 7.2	2.087	2.885	13.9	20.4	3 12	14 10.48	-5 8.5	2.128	2.949	12.8	21.8
3 22	14 5.13	-16 7.0	1.986	2.872	11.0	20.2	3 22	14 5.96	-4 31.7	2.044	2.947	9.8	21.6
4 1	13 59.08	-15 54.4	1.908	2.858	7.5	19.9	4 1	13 59.46	-3 49.2	1.983	2.945	6.4	21.4
4 11	13 51.44	-15 30.6	1.854	2.845	3.8	19.7	4 11	13 51.56	-3 5.2	1.949	2.942	3.3	21.2
4 21	13 42.98	-14 58.2	1.829	2.832	1.6	19.5	4 21	13 43.03	-2 24.7	1.944	2.939	3.4	21.2
5 1	13 34.66	-14 21.3	1.831	2.819	5.1	19.7	5 1	13 34.76	-1 52.3	1.967	2.935	6.6	21.4
5 11	13 27.40	-13 45.2	1.860	2.806	8.9	19.9	5 11	13 27.57	-1 31.9	2.016	2.932	10.1	21.6
5 21	13 21.89	-13 14.7	1.913	2.793	12.4	20.1	5 21	13 22.07	-1 25.6	2.088	2.927	13.1	21.8
121442	1999 TE ₁₈₆		4 18.2 114°60	10°8/22.5	18		466908	2015 EW ₃₁		4 18.2 197°09	3°3/14.9	17	
3 12	14 29.34	-27 31.5	1.255	2.014	23.3	19.4	3 12	14 9.45	-3 31.0	2.160	2.985	12.5	21.4
3 22	14 22.99	-29 48.3	1.183	2.024	19.9	19.2	3 22	14 5.13	-2 40.3	2.078	2.984	9.6	21.2
4 1	14 12.08	-31 46.0	1.129	2.033	16.1	19.0	4 1	13 58.88	-1 44.4	2.020	2.982	6.4	21.0
4 11	13 57.39	-33 13.9	1.096	2.042	12.6	18.8	4 11	13 51.30	-0 48.5	1.989	2.979	3.7	20.8
4 21	13 40.62	-34 3.9	1.086	2.051	10.8	18.7	4 21	13 43.13	+0 2.0	1.987	2.976	4.1	20.8
5 1	13 24.13	-34 14.6	1.101	2.060	11.8	18.8	5 1	13 35.22	+0 42.1	2.012	2.973	7.1	21.0
5 11	13 10.26	-33 54.6	1.139	2.068	14.8	19.0	5 11	13 28.37	+1 8.0	2.064	2.970	10.3	21.2
5 21	13 0.44	-33 17.0	1.197	2.076	18.3	19.2	5 21	13 23.16	+1 18.0	2.138	2.966	13.3	21.4
187919	2000 WR ₁₂₄		4 18.2 244°68	9°5/7.7	18		286451	2002 AP ₈₈		4 18.2 108°42	2°8/20.4	18	
3 12	14 17.52	+20 35.3	2.516	3.299	12.2	20.3	3 12	14 11.70	-20 34.1	1.533	2.331	18.0	20.4
3 22	14 11.17	+21 38.1	2.434	3.278	10.7	20.2	3 22	14 7.76	-20 19.5	1.456	2.339	14.4	20.2
4 1	14 2.78	+22 29.9	2.376	3.257	9.7	20.1	4 1	14 1.03	-19 43.3	1.400	2.346	10.2	19.9
4 11	13 52.94	+23 3.4	2.344	3.234	9.6	20.0	4 11	13 52.31	-18 46.8	1.367	2.353	5.6	19.7
4 21	13 42.43	+23 13.4	2.337	3.211	10.4	20.0	4 21	13 42.75	-17 34.7	1.359	2.360	2.8	19.5
5 1	13 32.15	+22 57.1	2.356	3.187	11.9	20.1	5 1	13 33.65	-16 14.9	1.378	2.367	6.1	19.7
5 11	13 22.95	+22 14.7	2.398	3.162	13.8	20.2	5 11	13 26.20	-14 56.7	1.422	2.374	10.6	20.0
5 21	13 15.47	+21 8.9	2.460	3.137	15.6	20.3	5 21	13 21.17	-13 48.4	1.489	2.380	14.7	20.3
491200	2011 UL ₁₁₁		4 18.2 199°02	3°2/22.2	17		310474	2000 SL ₁₃₃		4 18.2 145°78	3°1/21.2	18	
3 12	14 8.14	-25 3.1	3.018	3.758	11.3	22.0	3 12	14 15.20	-22 30.9	2.115	2.875	14.9	21.7
3 22	14 3.76	-24 58.2	2.914	3.754	9.3	21.8	3 22	14 9.67	-22 25.0	2.032	2.889	12.0	21.6
4 1	13 57.82	-24 39.4	2.833	3.750	7.0	21.6	4 1	14 1.90	-22 1.7	1.971	2.902	8.7	21.4
4 11	13 50.80	-24 7.2	2.778	3.746	4.6	21.5	4 11	13 52.59	-21 21.6	1.936	2.914	5.2	21.2
4 21	13 43.27	-23 23.0	2.752	3.741	3.2	21.4	4 21	13 42.65	-20 27.4	1.928	2.925	3.1	21.1
5 1	13 35.90	-22 30.0	2.755	3.736	4.1	21.4	5 1	13 33.10	-19 24.1	1.950	2.935	5.1	21.2
5 11	13 29.33	-21 32.4	2.787	3.730	6.4	21.6	5 11	13 24.87	-18 18.4	2.000	2.944	8.5	21.4
5 21	13 24.06	-20 34.9	2.846	3.724	8.9	21.7	5 21	13 18.60	-17 16.9	2.075	2.952	11.7	21.7
222733	2002 AT ₁₈₃		4 18.2 55°13	2°0/19.7	18		248923	2006 VB ₁₄₈		4 18.2 72°60	3°2/15.3	18	
3 12	14 11.44	-17 10.3	1.647	2.453	16.6	20.3	3 12	14 10.15	-7 58.6	1.615	2.448	15.7	19.7
3 22	14 7.27	-17 15.7	1.576	2.464	13.1	20.1	3 22	14 5.94	-6 30.7	1.564	2.474	11.8	19.6
4 1	14 0.55	-17 5.6	1.525	2.476	9.1	19.9	4 1	13 59.44	-4 52.5	1.536	2.501	7.6	19.4
4 11	13 52.04	-16 41.2	1.499	2.488	4.7	19.7	4 11	13 51.50	-3 12.1	1.534	2.527	3.8	19.2
4 21	13 42.79	-16 5.9	1.498	2.501	2.1	19.5	4 21	13 43.11	-1 38.3	1.559	2.553	4.2	19.3
5 1	13 33.99	-15 25.1	1.525	2.513	5.7	19.8	5 1	13 35.35	-0 19.4	1.612	2.579	7.9	19.6
5 11	13 26.71	-14 45.6	1.577	2.526	9.9	20.0	5 11	13 29.11	+0 39.3	1.689	2.605	11.7	19.8
5 21	13 21.64	-14 13.0	1.652	2.539	13.6	20.3	5 21	13 24.91	+1 15.7	1.789	2.630	14.9	20.1
284580	2007 TX ₁₀₄		4 18.2 228°72	1°2/17.1	17		496114	2009 WF ₁₈₅		4 18.2 193°45	8°5/30.1	18	
3 12	14 8.82	-9 14.7	2.334	3.146									

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
191734	2004 <i>RU</i> ₃₂₃		4 18.2 111°23	4.6/22.5	17		502738	2015 <i>DF</i> ₃₈		4 18.2 108°09	0.3/17.9	17	
3 12	14 12.49	-25 32.1	2.097	2.849	15.3	20.3	3 12	14 11.44	-11 2.6	1.963	2.775	14.1	21.4
3 22	14 7.73	-25 50.2	2.015	2.861	12.6	20.2	3 22	14 6.92	-10 55.4	1.881	2.777	10.9	21.2
4 1	14 0.72	-25 50.3	1.955	2.873	9.5	20.0	4 1	14 0.20	-10 39.0	1.821	2.780	7.2	20.9
4 11	13 52.12	-25 31.7	1.918	2.884	6.5	19.8	4 11	13 51.94	-10 15.9	1.787	2.782	3.0	20.7
4 21	13 42.85	-24 55.8	1.909	2.896	4.6	19.7	4 21	13 42.99	-9 49.6	1.781	2.785	1.3	20.6
5 1	13 33.91	-24 6.6	1.927	2.906	5.7	19.8	5 1	13 34.33	-9 24.6	1.803	2.787	5.6	20.9
5 11	13 26.27	-23 10.5	1.972	2.917	8.5	20.0	5 11	13 26.88	-9 5.2	1.851	2.789	9.5	21.1
5 21	13 20.57	-22 13.9	2.042	2.927	11.5	20.2	5 21	13 21.30	-8 54.9	1.923	2.791	12.9	21.3
463723	2014 <i>QW</i> ₂₈₄		4 18.2 115°83	8.2/11.6	18		6113	Tsap		4 18.2 280°39	1.3/19.3	18	
3 12	14 14.38	+ 8 8.4	1.711	2.543	15.0	21.4	3 12	14 10.07	-16 4.0	1.923	2.725	14.7	17.6
3 22	14 9.15	+ 9 25.5	1.659	2.557	12.0	21.3	3 22	14 6.23	-15 56.5	1.816	2.704	11.7	17.4
4 1	14 1.56	+10 37.2	1.630	2.571	9.4	21.1	4 1	14 0.01	-15 34.7	1.731	2.684	8.1	17.1
4 11	13 52.43	+11 34.5	1.627	2.585	8.2	21.1	4 11	13 51.97	-15 0.1	1.671	2.663	3.9	16.8
4 21	13 42.76	+12 10.8	1.649	2.598	9.1	21.2	4 21	13 42.94	-14 15.7	1.638	2.642	1.5	16.6
5 1	13 33.67	+12 21.6	1.696	2.611	11.5	21.3	5 1	13 33.98	-13 26.4	1.633	2.620	5.5	16.8
5 11	13 26.11	+12 6.6	1.766	2.623	14.3	21.5	5 11	13 26.14	-12 38.6	1.654	2.599	9.8	17.0
5 21	13 20.67	+11 28.2	1.856	2.635	16.8	21.7	5 21	13 20.23	-11 58.2	1.698	2.578	13.7	17.2
89884	2002 <i>CS</i> ₂₂₆		4 18.2 229°50	3.4/13.8	16		357964	2006 <i>BK</i> ₃₄		4 18.2 341°21	5.9/13.9	17	
3 12	14 6.40	- 1 4.7	2.900	3.720	9.8	20.3	3 12	14 5.96	- 3 21.8	1.167	2.033	18.2	19.9
3 22	14 2.37	- 0 7.0	2.807	3.709	7.5	20.1	3 22	14 3.95	- 2 2.9	1.098	2.025	14.1	19.6
4 1	13 56.90	+ 0 53.7	2.740	3.697	5.2	20.0	4 1	13 58.88	- 0 33.2	1.049	2.018	9.5	19.4
4 11	13 50.43	+ 1 53.3	2.701	3.685	3.5	19.8	4 11	13 51.54	+ 0 57.0	1.021	2.012	6.1	19.1
4 21	13 43.51	+ 2 47.4	2.692	3.672	4.0	19.8	4 21	13 43.13	+ 2 16.1	1.017	2.006	7.2	19.2
5 1	13 36.72	+ 3 32.0	2.712	3.659	6.3	20.0	5 1	13 35.13	+ 3 13.1	1.036	2.002	11.5	19.4
5 11	13 30.66	+ 4 4.1	2.759	3.646	8.7	20.1	5 11	13 28.89	+ 3 41.6	1.076	1.998	16.1	19.6
5 21	13 25.78	+ 4 22.1	2.830	3.632	11.1	20.2	5 21	13 25.28	+ 3 40.0	1.133	1.995	20.3	19.9
385177	2013 <i>WB</i> ₁₂		4 18.2 221°03	1°0/17.2	18		57322	2001 <i>QX</i> ₂₃₉		4 18.2 106°61	0°5/17.8	18	
3 12	14 9.71	-11 32.2	2.522	3.322	11.7	22.1	3 12	14 10.39	-13 19.0	1.904	2.713	14.6	19.7
3 22	14 5.18	-10 39.7	2.418	3.310	9.0	21.9	3 22	14 6.02	-12 32.2	1.833	2.729	11.2	19.5
4 1	13 58.88	- 9 36.2	2.339	3.297	5.9	21.7	4 1	13 59.52	-11 32.2	1.785	2.744	7.3	19.3
4 11	13 51.32	- 8 25.3	2.289	3.284	2.5	21.4	4 11	13 51.60	-10 23.1	1.764	2.759	3.0	19.0
4 21	13 43.16	- 7 11.4	2.268	3.270	1.7	21.4	4 21	13 43.15	- 9 10.8	1.770	2.773	1.5	19.0
5 1	13 35.16	- 6 0.2	2.277	3.254	5.2	21.6	5 1	13 35.13	- 8 1.8	1.805	2.787	5.7	19.3
5 11	13 28.04	- 4 56.8	2.315	3.239	8.6	21.8	5 11	13 28.41	- 7 2.5	1.866	2.801	9.6	19.5
5 21	13 22.37	- 4 5.2	2.378	3.222	11.6	21.9	5 21	13 23.57	- 6 17.0	1.951	2.814	12.9	19.8
173478	2000 <i>SE</i> ₃₈		4 18.2 146°44	0°9/19.1	18		366238	2012 <i>UX</i> ₁₅₅		4 18.2 45°24	0°6/18.7	17	
3 12	14 10.18	-14 42.2	2.516	3.305	12.0	20.2	3 12	14 9.26	-13 44.3	1.965	2.774	14.2	20.9
3 22	14 5.49	-14 43.9	2.427	3.309	9.4	20.0	3 22	14 5.15	-13 38.8	1.894	2.787	11.0	20.7
4 1	13 59.05	-14 36.2	2.363	3.313	6.3	19.9	4 1	13 58.97	-13 22.2	1.845	2.802	7.3	20.5
4 11	13 51.38	-14 20.5	2.325	3.317	3.0	19.6	4 11	13 51.38	-12 56.8	1.822	2.816	3.3	20.3
4 21	13 43.17	-13 59.2	2.316	3.320	1.1	19.5	4 21	13 43.23	-12 26.1	1.827	2.831	1.1	20.1
5 1	13 35.17	-13 35.4	2.337	3.323	4.3	19.7	5 1	13 35.46	-11 54.5	1.859	2.846	5.1	20.4
5 11	13 28.12	-13 12.9	2.386	3.326	7.5	19.9	5 11	13 28.91	-11 26.9	1.918	2.861	8.8	20.7
5 21	13 22.56	-12 54.9	2.460	3.329	10.4	20.1	5 21	13 24.17	-11 7.1	2.000	2.877	12.1	20.9
224486	2005 <i>VW</i> ₁₁₆		4 18.2 272°32	2°1/16.8	18		497321	2005 <i>TA</i> ₁₂₀		4 18.2 258°69	1°7/19.3	17	
3 12	14 15.47	- 5 32.3	1.881	2.698	14.4	20.5	3 12	14 15.67	-14 33.2	1.819	2.618	15.6	21.8
3 22	14 10.39	- 5 28.4	1.776	2.677	11.2	20.3	3 22	14 10.61	-15 1.7	1.725	2.611	12.3	21.6
4 1	14 2.76	- 5 19.7	1.695	2.656	7.4	20.0	4 1	14 2.92	-15 19.8	1.652	2.603	8.5	21.4
4 11	13 53.15	- 5 9.4	1.640	2.634	3.5	19.7	4 11	13 53.22	-15 27.9	1.606	2.596	4.3	21.1
4 21	13 42.46	- 5 1.3	1.612	2.612	2.9	19.6	4 21	13 42.49	-15 27.2	1.586	2.589	1.9	20.9
5 1	13 31.81	- 4 59.3	1.613	2.589	7.0	19.8	5 1	13 31.92	-15 20.7	1.595	2.581	5.7	21.1
5 11	13 22.34	- 5 7.0	1.640	2.566	11.3	20.0	5 11	13 22.67	-15 13.2	1.630	2.574	10.0	21.4
5 21	13 14.91	- 5 26.6	1.690	2.543	15.1	20.2	5 21	13 15.61	-15 9.0	1.688	2.566	13.9	21.6
325392	2008 <i>VZ</i> ₂₆		4 18.2 59°94	6°2/17.3	17		139896	2001 <i>RA</i> ₉₅		4 18.2 291°58	3°5/21.3	17	
3 12	14 36.59	+ 5 34.9	0.937	1.773	24.1	19.8	3 12	14 10.12	-21 50.9	2.167	2.938	14.3	19.3
3 22	14 28.32	+ 4 34.9	0.880	1.785	19.2	19.6	3 22	14 5.97	-22 10.5	2.069	2.932	11.6	19.1
4 1	14 15.19	+ 3 19.8	0.840	1.798	13.3	19.3	4 1	13 59.66	-22 15.4	1.994	2.926	8.6	18.9
4 11	13 58.52	+ 1 45.0	0.823	1.811	7.8	19.0	4 11	13 51.76	-22 5.3	1.943	2.919	5.4	18.7
4 21	13 40.51	+ 0 9.1	0.830	1.825	6.7	19.0	4 21	13 43.06	-21 41.4	1.919	2.913	3.5	18.6
5 1	13 23.75	- 2 17.4	0.864	1.839	11.6	19.3	5 1	13 34.52	-21 6.9	1.923	2.907	5.2	18.7
5 11	13 10.36	- 4 32.9	0.920	1.853	17.1	19.7	5 11	13 27.07	-20 27.1	1.953	2.901	8.4	18.8
5 21	13 1.39	- 6 49.7	0.997	1.867	21.9	20.0	5 21	13 21.41	-19 47.5	2.009	2.895	11.6	19.0
250395	2003 <i>UX</i> ₁₆₈		4 18.2 175°65	0°3/18.5	16		473721	2016 <i>AY</i> ₁₁₆		4 18.2 81°71	0°1/18.2	18	
3 12	14 13.19	-13 59.5	2.037	2.835	14.1	21.3	3 12	14 12.83	-13 21.8	1.479	2.301	17.4	22.0
3 22	14 8.21	-13 36.7	1.950	2.838	11.0	21.1	3 22	14 8.48	-12 56.0	1.415	2.317	13.5	21.8
4 1	14 1.02	-13 1.5	1.886	2.840	7.3	20.9	4 1	14 1.41	-12 15.2	1.372	2.332	8.9	21.5
4 11	13 52.28	-12 16.4	1.848	2.842	3.2	20.6	4 11	13 52.48	-11 23.2	1.353	2.348	3.8	21.3
4 21	13 42.85	-11 25.4	1.839	2.842	1.1	20.5	4 21	13 42.84	-10 26.1	1.360	2.364	1.5	21.1
5 1	13 33.72	-10 34.0	1.858	2.843	5.4	20.8	5 1	13 33.78	- 9 31.2	1.393	2.379	6.5	21.5
5 11	13 25.80	- 9 47.9	1.905	2.842	9.3	21.0	5 11	13 26.41	- 8 45.7	1.451	2.394	11.1	21.8
5 21	13 19.77	- 9 11.5	1.976	2.841	12.7	21.2	5 21	13 21.44	- 8 14.2	1.532	2.409	15.1	22.1
206971	2004 <i>TP</i> ₄₇		4 18.2 266°81	0°2/18.1	17		498695	2008 <i>SM</i> ₃₀₀		4 18.2 130°04			

EPHEMERIDES

4 18.2

4 18.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
276565	2003 <i>SS</i> ₂₀₂		4 18.2 234°07	1°7/16.5	17		26604	2000 <i>FO</i> ₂₅		4 18.3 147°94	2°9/14.4	18	
3 12	14 8.46	- 8 44.5	2.159	2.977	12.8	21.0	3 12	14 8.17	- 3 4.3	2.969	3.783	9.8	18.8
3 22	14 4.48	- 7 59.7	2.068	2.970	9.8	20.8	3 22	14 3.55	- 2 0.6	2.896	3.795	7.4	18.6
4 1	13 58.55	- 7 5.6	2.000	2.962	6.4	20.6	4 1	13 57.58	- 0 53.5	2.849	3.807	4.9	18.5
4 11	13 51.24	- 6 6.4	1.959	2.954	2.8	20.3	4 11	13 50.73	+ 0 12.9	2.832	3.818	3.0	18.4
4 21	13 43.28	- 5 7.0	1.947	2.946	2.5	20.3	4 21	13 43.54	+ 1 14.2	2.844	3.829	3.5	18.4
5 1	13 35.53	- 4 13.2	1.963	2.938	6.1	20.5	5 1	13 36.60	+ 2 6.6	2.887	3.839	5.7	18.6
5 11	13 28.81	- 3 29.8	2.005	2.929	9.7	20.7	5 11	13 30.45	+ 2 47.0	2.958	3.848	8.1	18.7
5 21	13 23.71	- 3 0.2	2.071	2.920	12.9	20.9	5 21	13 25.50	+ 3 14.1	3.053	3.857	10.3	18.9
445919	2012 <i>XE</i> ₉₄		4 18.2 107°92	1°4/17.2	18		161551	2004 <i>XO</i> ₇₂		4 18.3 235°81	0°4/17.9	16	
3 12	14 14.70	-10 39.9	1.412	2.239	17.8	21.6	3 12	14 15.04	-11 42.6	1.979	2.781	14.3	21.0
3 22	14 10.02	-10 1.4	1.348	2.254	13.7	21.4	3 22	14 9.94	-11 25.4	1.873	2.765	11.2	20.8
4 1	14 2.47	- 9 9.2	1.305	2.268	8.9	21.2	4 1	14 2.40	-10 57.1	1.791	2.748	7.4	20.5
4 11	13 52.95	- 8 8.7	1.286	2.282	3.7	20.9	4 11	13 53.01	-10 20.0	1.735	2.730	3.2	20.2
4 21	13 42.67	- 7 7.0	1.293	2.295	2.5	20.8	4 21	13 42.63	- 9 38.1	1.707	2.711	1.4	20.0
5 1	13 33.00	- 6 12.1	1.326	2.308	7.5	21.2	5 1	13 32.34	- 8 56.6	1.709	2.691	6.0	20.3
5 11	13 25.13	- 5 30.8	1.384	2.320	12.2	21.5	5 11	13 23.20	- 8 20.9	1.737	2.670	10.3	20.5
5 21	13 19.79	- 5 7.0	1.463	2.332	16.2	21.7	5 21	13 16.03	- 7 55.7	1.789	2.649	14.1	20.7
8113	Matsue		4 18.2 294°34	4°8/15.2	18		12314	1992 <i>EE</i> ₁₄		4 18.3 11°27	0°3/17.9	18	
3 12	14 11.83	- 2 43.1	1.396	2.242	16.9	17.6	3 12	14 8.00	-12 58.5	1.843	2.661	14.7	18.8
3 22	14 8.35	- 2 2.0	1.304	2.220	13.2	17.3	3 22	14 4.43	-12 26.2	1.761	2.661	11.4	18.6
4 1	14 1.82	- 1 13.9	1.232	2.197	9.0	17.0	4 1	13 58.66	-11 40.6	1.702	2.662	7.5	18.3
4 11	13 52.89	- 0 25.5	1.183	2.174	5.3	16.7	4 11	13 51.33	-10 45.4	1.667	2.662	3.2	18.1
4 21	13 42.61	+ 0 15.4	1.159	2.152	5.8	16.6	4 21	13 43.31	- 9 45.8	1.660	2.663	1.4	17.9
5 1	13 32.42	+ 0 40.7	1.160	2.129	10.1	16.8	5 1	13 35.59	- 8 47.9	1.680	2.664	5.8	18.2
5 11	13 23.74	+ 0 44.8	1.184	2.107	14.9	17.0	5 11	13 29.10	- 7 58.1	1.726	2.666	9.9	18.5
5 21	13 17.60	+ 0 25.9	1.227	2.085	19.3	17.2	5 21	13 24.50	- 7 20.8	1.795	2.667	13.5	18.7
372908	2011 <i>AZ</i> ₆₇		4 18.3 23°24	0°1/18.3	17		105289	2000 <i>QH</i> ₄₆		4 18.3 49°49	2°0/19.6	18	
3 12	14 9.30	-13 26.9	1.639	2.459	16.0	21.6	3 12	14 12.20	-16 57.8	1.429	2.244	18.3	19.5
3 22	14 5.71	-13 3.1	1.560	2.461	12.5	21.4	3 22	14 8.41	-16 58.6	1.352	2.246	14.5	19.2
4 1	13 59.63	-12 24.8	1.503	2.463	8.2	21.1	4 1	14 1.65	-16 41.5	1.295	2.249	10.0	19.0
4 11	13 51.77	-11 35.6	1.470	2.465	3.6	20.8	4 11	13 52.71	-16 7.8	1.260	2.251	5.1	18.7
4 21	13 43.12	-10 40.5	1.463	2.467	1.3	20.7	4 21	13 42.78	-15 21.5	1.251	2.254	2.1	18.5
5 1	13 34.82	- 9 46.3	1.484	2.470	6.2	21.0	5 1	13 33.25	-14 29.5	1.268	2.257	6.5	18.8
5 11	13 27.94	- 8 59.9	1.529	2.473	10.6	21.3	5 11	13 25.42	-13 39.9	1.309	2.260	11.3	19.1
5 21	13 23.20	- 8 26.2	1.596	2.476	14.5	21.5	5 21	13 20.14	-12 59.8	1.371	2.263	15.6	19.3
164774	1999 <i>CA</i> ₉₅		4 18.3 131°29	3°9/14.0	18		28014	1997 <i>YS</i> ₅		4 18.3 94°96	4°1/22.7	18	
3 12	14 9.26	+ 0 5.0	2.471	3.294	11.2	20.1	3 12	14 11.70	-26 9.5	2.452	3.192	13.6	18.5
3 22	14 4.65	+ 0 56.1	2.403	3.305	8.6	20.0	3 22	14 6.74	-26 19.9	2.377	3.214	11.2	18.3
4 1	13 58.41	+ 1 48.4	2.360	3.316	5.9	19.8	4 1	13 59.89	-26 13.9	2.323	3.236	8.5	18.2
4 11	13 51.11	+ 2 37.4	2.344	3.327	4.1	19.7	4 11	13 51.77	-25 51.5	2.295	3.258	5.8	18.0
4 21	13 43.39	+ 3 18.4	2.357	3.337	4.6	19.8	4 21	13 43.17	-25 14.2	2.294	3.279	4.2	18.0
5 1	13 35.98	+ 3 47.6	2.399	3.347	6.9	19.9	5 1	13 34.93	-24 25.9	2.322	3.300	5.0	18.0
5 11	13 29.54	+ 4 2.6	2.467	3.356	9.6	20.1	5 11	13 27.82	-23 31.7	2.377	3.320	7.4	18.2
5 21	13 24.53	+ 4 2.7	2.558	3.365	12.0	20.3	5 21	13 22.37	-22 37.3	2.459	3.340	10.0	18.4
455983	2005 <i>WC</i> ₁₀₈		4 18.3 140°80	5°1/14.9	18		171007	2005 <i>EX</i> ₂₆		4 18.3 40°03	2°1/19.6	18	
3 12	14 15.78	- 0 53.8	1.518	2.353	16.4	20.9	3 12	14 12.21	-16 24.2	1.305	2.128	19.2	19.4
3 22	14 10.71	- 0 8.0	1.451	2.360	12.7	20.7	3 22	14 8.53	-16 37.4	1.240	2.139	15.2	19.2
4 1	14 2.88	+ 0 41.0	1.406	2.366	8.6	20.5	4 1	14 1.74	-16 33.0	1.194	2.150	10.4	18.9
4 11	13 53.14	+ 1 26.1	1.385	2.372	5.4	20.3	4 11	13 52.75	-16 12.3	1.170	2.161	5.3	18.7
4 21	13 42.62	+ 2 0.2	1.391	2.378	6.0	20.4	4 21	13 42.82	-15 39.2	1.171	2.174	2.3	18.5
5 1	13 32.61	+ 2 17.5	1.423	2.383	9.5	20.6	5 1	13 33.45	-15 0.1	1.197	2.187	6.6	18.8
5 11	13 24.26	+ 2 15.0	1.479	2.388	13.4	20.8	5 11	13 25.96	-14 23.1	1.246	2.200	11.5	19.1
5 21	13 18.32	+ 1 52.5	1.555	2.392	17.0	21.1	5 21	13 21.16	-13 54.6	1.316	2.214	15.8	19.4
196431	2003 <i>HB</i> ₂₂		4 18.3 301°60	3°9/15.8	17		21252	1995 <i>YP</i> ₈		4 18.3 269°21	6°1/25.0	18	
3 12	14 13.62	- 2 1.1	1.687	2.520	15.1	20.0	3 12	14 8.57	-32 45.5	2.016	2.740	16.6	18.5
3 22	14 9.33	- 1 45.0	1.581	2.489	11.9	19.7	3 22	14 5.08	-32 29.1	1.916	2.735	14.2	18.3
4 1	14 2.29	- 1 25.8	1.497	2.459	8.1	19.4	4 1	13 59.20	-31 46.0	1.835	2.729	11.4	18.1
4 11	13 53.06	- 1 8.2	1.438	2.428	4.6	19.1	4 11	13 51.61	-30 34.9	1.776	2.724	8.5	17.9
4 21	13 42.56	- 0 57.7	1.405	2.398	4.7	19.0	4 21	13 43.24	-28 57.6	1.742	2.718	6.3	17.8
5 1	13 32.01	- 0 59.3	1.398	2.368	8.7	19.2	5 1	13 35.19	-26 59.9	1.737	2.713	6.6	17.8
5 11	13 22.67	- 1 16.7	1.417	2.337	13.1	19.4	5 11	13 28.47	-24 51.6	1.758	2.707	9.1	17.9
5 21	13 15.52	- 1 51.3	1.456	2.307	17.2	19.5	5 21	13 23.79	-22 43.0	1.805	2.701	12.2	18.1
94099	2000 <i>YS</i> ₇₂		4 18.3 262°67	1°8/16.8	18		215530	2002 <i>VE</i> ₁₀₃		4 18.3 185°19	1°8/22.1	18	R
3 12	14 10.73	- 7 37.2	1.945	2.766	13.8	19.4	3 12	14 0.79	-23 50.8	4.957	5.694	7.2	20.3
3 22	14 6.49	- 7 13.3	1.853	2.757	10.7	19.2	3 22	13 57.61	-23 34.3	4.853	5.693	5.8	20.2
4 1	14 0.02	- 6 41.5	1.785	2.747	7.0	19.0	4 1	13 53.60	-23 9.6	4.774	5.693	4.3	20.1
4 11	13 51.93	- 6 5.7	1.742	2.737	3.1	18.7	4 11	13 49.04	-22 37.3	4.723	5.693	2.8	19.9
4 21	13 43.05	- 5 30.3	1.727	2.727	2.6	18.6	4 21	13 44.24	-21 58.8	4.701	5.692	1.8	19.9
5 1	13 34.36	- 5 0.4	1.740	2.717	6.5	18.9	5 1	13 39.55	-21 15.9	4.709	5.691	2.5	19.9
5 11	13 26.83	- 4 40.6	1.778	2.707	10.4	19.1	5 11	13 35.28	-20 31.0	4.747	5.691	4.0	20.0
5 21	13 21.15	- 4 33.6	1.840	2.696	13.9	19.3	5 21	13 31.72	-19 46.3	4.813	5.690	5.5	20.1
270249	2001 <i>UC</i> ₂₉		4 18.3 133°92	1°2/17.0	18		8087	Kazutaka		4 18.3 171°59	6°3/12.9	18	

EPHEMERIDES

4 18.3

4 18.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
491147	2011 <i>SV</i> ₁₈₃		4 18.3 264°59	1°3/16.9 16			519983	2013 <i>TU</i> ₁₆₇		4 18.3 127°34	1°7/16.6 17		
3 12	14 8.95	- 8 20.7	2.482	3.293	11.5	22.2	3 12	14 8.52	- 9 56.7	2.023	2.842	13.5	21.7
3 22	14 4.72	- 7 55.4	2.376	3.274	8.9	22.0	3 22	14 4.55	- 8 58.3	1.946	2.849	10.3	21.5
4 1	13 58.69	- 7 23.0	2.294	3.254	5.8	21.7	4 1	13 58.60	- 7 49.1	1.893	2.855	6.6	21.3
4 11	13 51.35	- 6 46.4	2.240	3.235	2.5	21.5	4 11	13 51.30	- 6 34.1	1.867	2.862	2.9	21.0
4 21	13 43.35	- 6 9.3	2.214	3.214	2.0	21.4	4 21	13 43.44	- 5 19.2	1.869	2.869	2.5	21.0
5 1	13 35.43	- 5 35.7	2.217	3.194	5.3	21.6	5 1	13 35.93	- 4 11.0	1.899	2.875	6.2	21.3
5 11	13 28.36	- 5 9.5	2.248	3.173	8.7	21.8	5 11	13 29.56	- 3 15.0	1.956	2.881	9.8	21.5
5 21	13 22.71	- 4 53.5	2.304	3.152	11.7	21.9	5 21	13 24.91	- 2 34.7	2.036	2.886	13.0	21.7
68117	2001 <i>AF</i> ₅		4 18.3 114°91	1°9/16.5 18			118374	1999 <i>GU</i> ₅₅		4 18.3 123°86	0°1/18.3 17		
3 12	14 9.17	- 8 27.6	2.001	2.822	13.5	19.1	3 12	14 12.46	-12 49.9	1.942	2.748	14.5	21.1
3 22	14 5.06	- 7 43.0	1.926	2.829	10.3	18.9	3 22	14 7.70	-12 35.4	1.864	2.757	11.2	20.9
4 1	13 58.93	- 6 49.4	1.874	2.836	6.7	18.7	4 1	14 0.73	-12 9.8	1.810	2.766	7.4	20.7
4 11	13 51.42	- 5 51.6	1.848	2.843	3.0	18.5	4 11	13 52.23	-11 35.5	1.781	2.775	3.2	20.5
4 21	13 43.35	- 4 54.9	1.850	2.849	2.7	18.5	4 21	13 43.09	-10 56.7	1.780	2.784	1.2	20.3
5 1	13 35.61	- 4 4.9	1.880	2.856	6.3	18.7	5 1	13 34.31	-10 18.3	1.808	2.792	5.4	20.7
5 11	13 29.04	- 3 26.6	1.937	2.862	9.9	19.0	5 11	13 26.82	- 9 45.5	1.862	2.800	9.4	20.9
5 21	13 24.22	- 3 2.6	2.016	2.868	13.1	19.2	5 21	13 21.24	- 9 22.1	1.939	2.808	12.8	21.1
76819	2000 <i>RQ</i> ₉₁		4 18.3 259°84	2°5/22.7 18			426269	2012 <i>RF</i> ₂₇		4 18.3 132°27	3°8/13.7 17		
3 12	14 3.29	-25 12.4	4.743	5.469	7.6	19.6	3 12	14 7.35	- 2 50.1	2.346	3.172	11.6	21.0
3 22	13 59.60	-25 23.6	4.633	5.462	6.3	19.5	3 22	14 3.33	- 1 25.1	2.276	3.182	8.8	20.8
4 1	13 54.95	-25 26.5	4.547	5.454	4.8	19.4	4 1	13 57.64	+ 0 4.8	2.231	3.191	6.0	20.6
4 11	13 49.65	-25 21.4	4.488	5.447	3.4	19.3	4 11	13 50.85	+ 1 33.5	2.215	3.200	3.9	20.5
4 21	13 44.02	-25 8.9	4.458	5.440	2.5	19.2	4 21	13 43.62	+ 2 54.8	2.228	3.209	4.7	20.6
5 1	13 38.46	-24 50.4	4.457	5.432	3.0	19.2	5 1	13 36.70	+ 4 3.1	2.269	3.217	7.2	20.7
5 11	13 33.35	-24 27.8	4.486	5.425	4.3	19.3	5 11	13 30.75	+ 4 54.5	2.337	3.225	10.0	20.9
5 21	13 28.99	-24 3.3	4.542	5.417	5.9	19.4	5 21	13 26.25	+ 5 27.4	2.428	3.233	12.6	21.1
134595	1999 <i>TS</i> ₁₂₃		4 18.3 258°20	0°3/18.5 18			297132	2010 <i>TJ</i> ₂		4 18.3 287°04	2°8/16.1 17		
3 12	14 13.43	-13 29.0	1.864	2.668	15.0	20.9	3 12	14 10.12	- 8 4.4	1.563	2.397	16.0	20.7
3 22	14 8.94	-13 16.8	1.756	2.648	11.8	20.7	3 22	14 6.84	- 7 12.3	1.458	2.369	12.5	20.4
4 1	14 1.90	-12 51.8	1.670	2.626	8.0	20.4	4 1	14 0.77	- 6 6.2	1.374	2.339	8.3	20.1
4 11	13 52.88	-12 15.7	1.610	2.604	3.6	20.1	4 11	13 52.49	- 4 51.0	1.315	2.310	3.9	19.8
4 21	13 42.76	-11 32.2	1.577	2.581	1.2	19.8	4 21	13 42.93	- 3 34.4	1.282	2.280	3.9	19.7
5 1	13 32.67	-10 46.6	1.572	2.557	6.0	20.1	5 1	13 33.36	- 2 25.3	1.275	2.250	8.6	19.9
5 11	13 23.76	- 9 5.2	1.594	2.533	10.6	20.3	5 11	13 25.07	- 1 32.2	1.292	2.220	13.5	20.1
5 21	13 16.90	- 9 33.5	1.638	2.509	14.6	20.5	5 21	13 19.05	- 1 0.3	1.330	2.189	18.0	20.3
313642	2003 <i>SG</i> ₆₃		4 18.3 135°66	0°6/17.8 18			245723	2006 <i>DR</i> ₁₃		4 18.3 80°99	4°3/22.2 17		
3 12	14 15.89	-10 57.0	2.026	2.827	14.1	21.7	3 12	14 9.82	-24 50.7	1.932	2.699	15.9	20.1
3 22	14 10.15	-10 39.8	1.952	2.843	10.9	21.5	3 22	14 5.95	-24 54.6	1.846	2.703	13.1	19.9
4 1	14 2.22	-10 13.2	1.901	2.858	7.1	21.3	4 1	13 59.75	-24 38.8	1.780	2.706	9.8	19.7
4 11	13 52.83	- 9 40.1	1.877	2.872	3.0	21.1	4 11	13 51.87	-24 2.9	1.738	2.710	6.4	19.5
4 21	13 42.85	- 9 4.5	1.882	2.885	1.5	21.0	4 21	13 43.23	-23 9.3	1.722	2.713	4.3	19.3
5 1	13 33.29	- 8 31.1	1.916	2.897	5.5	21.3	5 1	13 34.90	-22 2.9	1.733	2.717	5.7	19.4
5 11	13 25.04	- 8 4.4	1.977	2.909	9.3	21.5	5 11	13 27.88	-20 51.3	1.770	2.720	8.9	19.6
5 21	13 18.72	- 7 47.6	2.063	2.920	12.6	21.7	5 21	13 22.85	-19 41.8	1.832	2.724	12.3	19.8
389541	2010 <i>KH</i> ₁₁₀		4 18.3 262°76	6°2/10.0 17			188841	2006 <i>DZ</i> ₃₉		4 18.3 271°96	1°8/14.9 18		
3 12	14 5.66	+ 6 59.2	2.512	3.342	10.8	21.3	3 12	14 0.57	- 2 53.8	4.518	5.333	6.6	20.9
3 22	14 2.07	+ 8 26.3	2.432	3.330	8.7	21.1	3 22	13 57.48	- 2 21.9	4.425	5.325	5.0	20.8
4 1	13 56.87	+ 9 52.2	2.378	3.318	6.9	21.0	4 1	13 53.55	- 1 48.1	4.357	5.317	3.3	20.7
4 11	13 50.54	+11 10.6	2.351	3.306	6.2	20.9	4 11	13 49.05	- 0 14.7	4.319	5.308	1.9	20.5
4 21	13 43.69	+12 15.5	2.352	3.294	7.2	21.0	4 21	13 44.30	- 0 43.7	4.311	5.300	2.2	20.5
5 1	13 37.02	+13 2.3	2.380	3.282	9.2	21.1	5 1	13 39.64	- 0 17.3	4.333	5.292	3.7	20.7
5 11	13 31.18	+13 28.4	2.431	3.270	11.5	21.2	5 11	13 35.40	+ 0 3.0	4.383	5.283	5.5	20.8
5 21	13 26.69	+13 33.6	2.503	3.257	13.6	21.3	5 21	13 31.85	+ 0 15.8	4.458	5.275	7.1	20.9
139008	2001 <i>DZ</i> ₄₁		4 18.3 317°06	4°1/20.9 17			343420	2010 <i>DY</i> ₆		4 18.3 102°22	2°0/20.0 17		
3 12	14 10.39	-20 34.9	1.442	2.247	18.6	19.7	3 12	14 10.70	-17 46.8	2.053	2.843	14.3	21.1
3 22	14 7.29	-20 59.0	1.352	2.237	15.2	19.4	3 22	14 6.42	-17 52.8	1.964	2.843	11.4	20.9
4 1	14 1.15	-21 3.8	1.281	2.226	11.1	19.2	4 1	13 59.96	-17 45.5	1.898	2.844	8.0	20.7
4 11	13 52.63	-20 48.1	1.233	2.216	6.7	18.9	4 11	13 51.95	-17 25.8	1.857	2.844	4.3	20.5
4 21	13 42.85	-20 13.5	1.208	2.206	4.1	18.7	4 21	13 43.21	-16 56.0	1.843	2.845	2.1	20.3
5 1	13 33.25	-19 25.1	1.208	2.197	6.8	18.8	5 1	13 34.71	-16 20.2	1.858	2.845	5.0	20.5
5 11	13 25.25	-18 31.5	1.233	2.188	11.4	19.1	5 11	13 27.37	-15 43.8	1.899	2.846	8.7	20.8
5 21	13 19.84	-17 41.3	1.278	2.180	15.8	19.3	5 21	13 21.87	-15 11.7	1.965	2.846	12.1	21.0
25541	Greathouse		4 18.3 60°07	0°4/17.9 18			484073	2006 <i>KM</i> ₂₀		4 18.3 328°40	18°1/ 6.5 18		
3 12	14 9.27	-12 58.1	1.786	2.603	15.1	18.4	3 12	14 16.10	+21 58.3	1.047	1.888	21.7	19.8
3 22	14 5.28	-12 22.6	1.723	2.622	11.6	18.2	3 22	14 12.30	+23 54.1	1.001	1.881	19.6	19.7
4 1	13 59.11	-11 34.5	1.682	2.642	7.5	18.0	4 1	14 4.60	+25 26.3	0.972	1.875	18.3	19.5
4 11	13 51.49	-10 37.7	1.667	2.663	3.2	17.8	4 11	13 54.09	+26 17.6	0.960	1.868	18.2	19.5
4 21	13 43.36	- 9 37.8	1.679	2.683	1.4	17.7	4 21	13 42.43	+26 16.5	0.967	1.863	19.5	19.6
5 1	13 35.71	- 8 41.2	1.719	2.703	5.7	18.0	5 1	13 31.57	+25 19.4	0.990	1.858	21.8	19.7
5 11	13 29.42	- 7 53.7	1.784	2.724	9.7	18.3	5 11	13 23.13	+23 31.6	1.028	1.853	24.4	19.8
5 21	13 25.06	- 7 19.2	1.873	2.744	13.1	18.5	5 21	13 18.03	+21 4.1	1.080	1.849	26.9	20.0
289967	2005 <i>NL</i> ₉₂		4 18.3 162°87	3°3/21.7 17			157507	2005 <i>SZ</i> ₅₆		4 18.3 120°05	0		

EPHEMERIDES

4 18.3

4 18.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
382799	2003 UC ₅₀		4 18.3 228°03	5°0/23.4	18		470175	2006 UT ₂₄₁		4 18.3 203°14	0°3/17.9	17	
3 12	14 12.89	-28 43.0	2.683	3.400	13.1	22.2	3 12	14 7.33	-12 53.7	2.599	3.399	11.4	22.3
3 22	14 7.89	-29 5.4	2.569	3.387	11.1	22.0	3 22	14 3.33	-12 13.1	2.505	3.395	8.8	22.1
4 1	14 0.87	-29 12.1	2.477	3.374	8.8	21.8	4 1	13 57.70	-11 22.1	2.435	3.392	5.8	21.9
4 11	13 52.36	-29 1.6	2.410	3.359	6.5	21.6	4 11	13 50.95	-10 23.9	2.393	3.388	2.4	21.7
4 21	13 43.05	-28 33.9	2.370	3.345	5.0	21.5	4 21	13 43.69	-9 22.3	2.380	3.383	1.1	21.6
5 1	13 33.81	-27 51.2	2.359	3.329	5.6	21.5	5 1	13 36.63	-8 21.9	2.397	3.379	4.6	21.8
5 11	13 25.51	-26 58.2	2.376	3.313	7.7	21.6	5 11	13 30.42	-7 27.6	2.442	3.373	7.8	22.0
5 21	13 18.79	-26 0.5	2.419	3.296	10.3	21.8	5 21	13 25.57	-6 42.9	2.512	3.368	10.6	22.2
111406	2001 XB ₁₈₀		4 18.3 240°98	0°3/18.7	18		477589	2010 JA ₈₉		4 18.3 322°85	8°4/24.7	16	
3 12	14 7.44	-14 35.0	2.641	3.434	11.4	20.2	3 12	14 9.05	-31 47.0	1.879	2.614	17.4	20.2
3 22	14 3.45	-14 8.2	2.538	3.423	8.9	20.0	3 22	14 6.03	-32 46.8	1.771	2.592	15.2	19.9
4 1	13 57.81	-13 30.7	2.458	3.411	5.9	19.8	4 1	14 0.29	-33 26.6	1.681	2.570	12.6	19.7
4 11	13 50.99	-12 44.8	2.406	3.399	2.7	19.5	4 11	13 52.34	-33 42.0	1.613	2.549	10.1	19.5
4 21	13 43.60	-11 53.5	2.383	3.387	0.9	19.4	4 21	13 43.11	-33 30.7	1.568	2.528	8.5	19.4
5 1	13 36.35	-11 1.1	2.389	3.374	4.3	19.6	5 1	13 33.82	-32 53.6	1.547	2.508	8.8	19.3
5 11	13 29.92	-10 12.1	2.424	3.361	7.6	19.8	5 11	13 25.78	-31 56.7	1.551	2.489	10.9	19.4
5 21	13 24.84	-9 30.4	2.484	3.348	10.5	20.0	5 21	13 20.01	-30 48.1	1.576	2.470	13.8	19.5
504326	2007 RW ₂₈₈		4 18.3 195°00	1°0/19.5	17		399688	2004 TM ₇₆		4 18.3 162°79	1°1/17.4	17	
3 12	14 8.68	-17 3.6	2.874	3.651	11.0	22.8	3 12	14 13.81	-10 54.2	1.803	2.616	15.1	22.3
3 22	14 4.22	-16 41.0	2.775	3.649	8.6	22.6	3 22	14 8.94	-10 17.4	1.723	2.621	11.7	22.1
4 1	13 58.21	-16 7.6	2.699	3.645	5.9	22.4	4 1	14 1.67	-9 28.8	1.666	2.627	7.6	21.9
4 11	13 51.13	-15 24.9	2.652	3.641	2.9	22.2	4 11	13 52.72	-8 32.4	1.635	2.631	3.2	21.6
4 21	13 43.56	-14 35.7	2.634	3.637	1.1	22.1	4 21	13 43.04	-7 33.9	1.632	2.635	2.0	21.5
5 1	13 36.16	-13 43.7	2.646	3.632	3.8	22.3	5 1	13 33.74	-6 39.6	1.657	2.638	6.4	21.8
5 11	13 29.56	-12 53.1	2.687	3.626	6.8	22.5	5 11	13 25.82	-5 55.5	1.708	2.640	10.5	22.0
5 21	13 24.25	-12 7.8	2.754	3.620	9.5	22.6	5 21	13 19.96	-5 25.6	1.783	2.642	14.2	22.3
518174	2016 LX ₅₇		4 18.3 209°89	4°8/13.0	17		374524	2006 AM ₁₅		4 18.3 63°29	6°1/12.9	18	
3 12	14 7.58	-1 5.5	2.053	2.887	12.7	21.6	3 12	14 9.31	+2 8.4	1.751	2.592	14.3	20.7
3 22	14 3.85	+0 21.8	1.975	2.884	9.8	21.4	3 22	14 5.38	+3 20.3	1.690	2.601	11.1	20.5
4 1	13 58.18	+1 54.3	1.922	2.881	6.8	21.2	4 1	13 59.25	+4 32.9	1.653	2.610	8.0	20.3
4 11	13 51.16	+3 24.8	1.897	2.878	4.9	21.1	4 11	13 51.64	+5 38.3	1.641	2.619	6.1	20.2
4 21	13 43.55	+4 45.9	1.899	2.875	5.8	21.1	4 21	13 43.46	+6 29.5	1.656	2.628	7.0	20.3
5 1	13 36.21	+5 51.2	1.928	2.872	8.6	21.3	5 1	13 35.72	+7 1.0	1.696	2.637	9.8	20.5
5 11	13 29.94	+6 36.3	1.983	2.868	11.7	21.5	5 11	13 29.31	+7 10.2	1.760	2.647	12.9	20.7
5 21	13 25.32	+6 59.7	2.059	2.864	14.5	21.7	5 21	13 24.81	+6 57.6	1.844	2.656	15.7	20.9
369078	2008 FX ₉₆		4 18.3 81°97	2°4/15.9	18		361556	2007 RJ		4 18.3 277°62	0°3/18.0	17	
3 12	14 7.70	-10 38.1	1.677	2.506	15.3	20.4	3 12	14 9.85	-13 53.7	1.503	2.327	17.1	21.4
3 22	14 4.31	-9 10.9	1.605	2.514	11.7	20.1	3 22	14 6.68	-13 15.3	1.406	2.310	13.4	21.1
4 1	13 58.62	-7 28.7	1.556	2.521	7.5	19.9	4 1	14 0.68	-12 18.3	1.330	2.291	9.0	20.8
4 11	13 51.37	-5 38.6	1.533	2.529	3.4	19.7	4 11	13 52.48	-11 5.9	1.278	2.273	3.9	20.5
4 21	13 43.49	-3 49.8	1.538	2.536	3.4	19.7	4 21	13 43.10	-9 44.4	1.251	2.255	1.7	20.3
5 1	13 36.04	-2 11.6	1.570	2.543	7.5	19.9	5 1	13 33.85	-8 22.9	1.250	2.236	7.2	20.6
5 11	13 29.94	-0 51.7	1.628	2.551	11.5	20.2	5 11	13 26.04	-7 10.8	1.274	2.217	12.3	20.8
5 21	13 25.82	+0 5.9	1.707	2.558	15.1	20.4	5 21	13 20.60	-6 15.7	1.319	2.198	16.9	21.0
174675	2003 SB ₂₇₀		4 18.3 263°57	4°9/15.0	17		156197	2001 UV ₂₃		4 18.3 77°41	3°7/22.6	18	
3 12	14 15.87	-0 7.1	1.692	2.521	15.2	20.3	3 12	14 12.10	-29 15.2	1.811	2.558	17.5	19.8
3 22	14 10.93	+0 23.9	1.598	2.503	11.9	20.0	3 22	14 7.51	-27 57.3	1.739	2.584	14.3	19.7
4 1	14 3.27	+0 57.4	1.526	2.484	8.3	19.8	4 1	14 0.57	-26 10.2	1.688	2.609	10.6	19.5
4 11	13 53.52	+1 27.2	1.479	2.465	5.3	19.5	4 11	13 52.15	-23 56.7	1.662	2.635	6.6	19.3
4 21	13 42.66	+1 47.4	1.459	2.446	5.7	19.5	4 21	13 43.32	-21 24.3	1.665	2.660	3.8	19.2
5 1	13 31.94	+1 52.5	1.465	2.426	9.3	19.7	5 1	13 35.18	-18 44.2	1.698	2.685	5.4	19.3
5 11	13 22.56	+1 39.2	1.497	2.405	13.3	19.9	5 11	13 28.63	-16 8.8	1.760	2.710	9.0	19.6
5 21	13 15.41	+1 7.0	1.549	2.385	17.1	20.0	5 21	13 24.22	-13 48.5	1.848	2.734	12.5	19.9
499735	2011 BA ₃₆		4 18.3 280°68	12°9/29.9	17		235295	2003 UU ₇₁		4 18.3 144°49	1°1/19.3	17	
3 12	14 17.54	-44 24.2	1.934	2.570	19.7	21.5	3 12	14 10.50	-15 52.3	2.144	2.939	13.7	21.2
3 22	14 13.12	-46 0.4	1.846	2.569	18.1	21.3	3 22	14 6.12	-15 43.4	2.059	2.943	10.7	21.0
4 1	14 5.24	-47 11.1	1.773	2.568	16.3	21.2	4 1	13 59.70	-15 22.3	1.996	2.946	7.3	20.8
4 11	13 54.53	-47 49.0	1.719	2.567	14.6	21.0	4 11	13 51.86	-14 50.6	1.959	2.950	3.5	20.5
4 21	13 42.25	-47 49.3	1.684	2.565	13.3	21.0	4 21	13 43.37	-14 11.5	1.949	2.953	1.3	20.4
5 1	13 30.08	-47 11.2	1.671	2.564	12.9	20.9	5 1	13 35.16	-13 29.6	1.969	2.956	4.8	20.6
5 11	13 19.71	-46 0.8	1.680	2.563	13.6	21.0	5 11	13 28.07	-12 49.8	2.016	2.959	8.5	20.9
5 21	13 12.34	-44 28.0	1.710	2.562	15.0	21.0	5 21	13 22.70	-12 16.7	2.087	2.962	11.7	21.1
473008	2015 HE ₄₀		4 18.3 264°17	4°1/13.9	17		169505	2002 CS ₂₄₃		4 18.3 306°48	4°3/20.9	17	
3 12	14 6.95	-1 33.0	2.221	3.052	12.0	21.0	3 12	14 11.95	-20 41.8	1.434	2.237	18.8	19.6
3 22	14 3.26	-0 30.7	2.139	3.046	9.2	20.8	3 22	14 8.59	-21 12.6	1.344	2.226	15.4	19.3
4 1	13 57.76	+0 35.7	2.080	3.040	6.3	20.6	4 1	14 2.11	-21 24.6	1.272	2.215	11.3	19.0
4 11	13 51.00	+1 40.7	2.049	3.034	4.2	20.4	4 11	13 53.15	-21 16.1	1.223	2.205	6.9	18.8
4 21	13 43.66	+2 38.5	2.045	3.028	4.9	20.5	4 21	13 42.86	-20 48.1	1.198	2.195	4.3	18.6
5 1	13 36.55	+3 23.9	2.069	3.021	7.6	20.6	5 1	13 32.71	-20 5.4	1.197	2.185	7.0	18.7
5 11	13 30.40	+3 53.2	2.119	3.015	10.6	20.8	5 11	13 24.19	-19 16.2	1.221	2.176	11.6	18.9
5 21	13 25.78	+4 4.9	2.191	3.009	13.3	21.0	5 21	13 18.35	-18 29.2	1.266	2.167	16.0	19.2
332727	2009 SX ₂₈₂		4 18.3 327°70	1°7/17.3	17		430361	2014 AV ₂₀		4 18.3 132°52	3°1/15.4	17	
3 12	14 12.80	-7 0.8	1.513	2.347	16.5	20.5	3 12	14					

EPHEMERIDES

4 18.3

4 18.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
32872	1993 <i>FM</i> ₃₆		4 18.3 283°45	1°6/16.7	18		79165	1993 <i>FR</i> ₂₇		4 18.3 295°29	1°2/17.2	18	
3 12	14 7.33	- 8 24.6	2.230	3.049	12.4	19.7	3 12	14 7.64	-12 59.8	1.605	2.431	16.1	18.9
3 22	14 3.62	- 7 48.6	2.138	3.041	9.5	19.5	3 22	14 4.90	-11 59.7	1.494	2.400	12.6	18.6
4 1	13 58.05	- 7 4.5	2.070	3.033	6.2	19.3	4 1	13 59.51	-10 39.3	1.405	2.368	8.3	18.3
4 11	13 51.16	- 6 15.9	2.029	3.024	2.7	19.0	4 11	13 52.01	- 9 2.5	1.341	2.337	3.5	17.9
4 21	13 43.65	- 5 27.4	2.016	3.016	2.3	19.0	4 21	13 43.30	- 7 16.6	1.303	2.305	2.4	17.8
5 1	13 36.33	- 4 43.8	2.032	3.008	5.8	19.2	5 1	13 34.57	- 5 31.6	1.291	2.273	7.6	18.0
5 11	13 29.97	- 4 9.8	2.074	3.000	9.3	19.4	5 11	13 27.07	- 3 58.2	1.305	2.241	12.7	18.2
5 21	13 25.16	- 3 48.1	2.139	2.992	12.4	19.6	5 21	13 21.74	- 2 44.6	1.340	2.209	17.3	18.4
471401	2011 <i>SV</i> ₁₇₁		4 18.3 208°95	0°6/18.9	17		499125	2009 <i>KC</i> ₁₉		4 18.3 305°09	1°2/17.5	17	
3 12	14 10.15	-13 42.6	2.690	3.480	11.3	21.6	3 12	14 8.73	-11 0.3	1.444	2.280	17.0	21.6
3 22	14 5.48	-13 42.6	2.593	3.476	8.8	21.4	3 22	14 5.89	-10 31.6	1.350	2.261	13.3	21.3
4 1	13 59.13	-13 34.2	2.521	3.472	5.9	21.2	4 1	14 0.21	- 9 48.0	1.277	2.242	8.8	21.0
4 11	13 51.59	-13 19.1	2.476	3.468	2.7	21.0	4 11	13 52.31	- 8 53.5	1.227	2.224	3.7	20.6
4 21	13 43.49	-12 59.2	2.460	3.464	0.9	20.8	4 21	13 43.20	- 7 54.1	1.203	2.206	2.3	20.5
5 1	13 35.55	-12 37.5	2.474	3.459	4.1	21.0	5 1	13 34.23	- 6 58.0	1.203	2.188	7.6	20.7
5 11	13 28.45	-12 17.5	2.516	3.454	7.3	21.2	5 11	13 26.70	- 6 13.2	1.228	2.171	12.7	21.0
5 21	13 22.73	-12 2.2	2.584	3.449	10.1	21.4	5 21	13 21.57	- 5 45.4	1.272	2.154	17.3	21.2
456878	2007 <i>VL</i> ₉₂		4 18.3 101°52	0°7/18.8	18		78873	2003 <i>QX</i> ₁₀₃		4 18.3 192°35	1°8/16.6	18	
3 12	14 18.41	-13 8.5	1.740	2.541	16.1	21.8	3 12	14 11.05	- 7 2.4	2.353	3.165	12.1	19.9
3 22	14 12.43	-13 16.5	1.674	2.562	12.5	21.6	3 22	14 6.31	- 6 36.2	2.265	3.163	9.2	19.7
4 1	14 3.91	-13 13.2	1.629	2.583	8.3	21.4	4 1	13 59.73	- 6 3.9	2.201	3.162	6.0	19.5
4 11	13 53.66	-13 0.3	1.611	2.604	3.8	21.2	4 11	13 51.87	- 5 28.9	2.165	3.159	2.8	19.3
4 21	13 42.76	-12 41.1	1.620	2.624	1.3	21.0	4 21	13 43.42	- 4 55.0	2.158	3.157	2.4	19.2
5 1	13 32.40	-12 20.0	1.658	2.644	5.7	21.4	5 1	13 35.19	- 4 26.3	2.179	3.154	5.6	19.4
5 11	13 23.65	-12 2.1	1.722	2.663	9.9	21.6	5 11	13 27.95	- 4 6.3	2.229	3.150	8.9	19.6
5 21	13 17.18	-11 51.2	1.810	2.681	13.4	21.9	5 21	13 22.26	- 3 57.5	2.302	3.146	11.9	19.8
435953	2009 <i>DM</i> ₂₀		4 18.3 126°12	0°4/17.9	17		507481	2012 <i>TN</i> ₂₉₃		4 18.3 159°19	1°1/19.4	18	
3 12	14 9.02	-12 0.5	2.308	3.113	12.5	22.2	3 12	14 11.44	-15 15.5	2.397	3.185	12.6	21.3
3 22	14 4.76	-11 33.7	2.227	3.121	9.6	22.0	3 22	14 6.65	-15 20.0	2.308	3.188	9.9	21.1
4 1	13 58.69	-10 57.4	2.170	3.128	6.3	21.8	4 1	13 59.98	-15 14.5	2.242	3.191	6.7	20.9
4 11	13 51.39	-10 14.5	2.140	3.135	2.6	21.6	4 11	13 51.99	-15 0.2	2.203	3.194	3.3	20.7
4 21	13 43.58	- 9 28.7	2.138	3.141	1.2	21.5	4 21	13 43.39	-14 39.4	2.193	3.196	1.3	20.5
5 1	13 36.05	- 8 44.7	2.165	3.148	4.9	21.8	5 1	13 35.01	-14 15.3	2.211	3.198	4.4	20.7
5 11	13 29.53	- 8 6.9	2.220	3.154	8.3	22.0	5 11	13 27.63	-13 51.9	2.258	3.200	7.8	20.9
5 21	13 24.56	- 7 38.6	2.299	3.160	11.3	22.2	5 21	13 21.82	-13 32.9	2.330	3.201	10.8	21.1
202788	2008 <i>OK</i> ₁₈		4 18.3 232°05	1°1/17.5	17		52393	1993 <i>RH</i> ₅		4 18.3 165°67	1°7/19.8	18	
3 12	14 13.09	-11 19.9	1.640	2.459	16.1	21.0	3 12	14 13.18	-17 35.9	2.175	2.957	13.9	20.1
3 22	14 8.84	-10 43.0	1.548	2.449	12.5	20.7	3 22	14 8.18	-17 31.5	2.087	2.962	11.0	19.9
4 1	14 1.91	- 9 51.8	1.477	2.439	8.2	20.5	4 1	14 1.08	-17 14.0	2.021	2.966	7.6	19.7
4 11	13 52.95	- 8 50.4	1.432	2.427	3.5	20.1	4 11	13 52.48	-16 44.4	1.982	2.970	4.0	19.5
4 21	13 42.97	- 7 44.7	1.413	2.416	2.1	20.0	4 21	13 43.21	-16 5.5	1.971	2.973	1.8	19.4
5 1	13 33.20	- 6 42.4	1.422	2.403	7.0	20.3	5 1	13 34.21	-15 21.6	1.989	2.975	4.8	19.6
5 11	13 24.84	- 5 50.8	1.455	2.390	11.8	20.5	5 11	13 26.37	-14 38.2	2.034	2.977	8.4	19.8
5 21	13 18.73	- 5 15.2	1.511	2.377	15.9	20.7	5 21	13 20.32	-14 0.1	2.105	2.979	11.7	20.0
205950	2002 <i>JS</i> ₉₅		4 18.3 290°66	1°6/17.3	17		474140	1995 <i>UQ</i> ₅₂		4 18.3 212°85	1°2/19.4	17	
3 12	14 10.77	- 9 10.6	1.445	2.281	17.0	20.3	3 12	14 12.54	-14 51.8	2.545	3.329	12.0	21.8
3 22	14 7.49	- 8 51.0	1.352	2.262	13.3	20.0	3 22	14 7.45	-15 6.7	2.447	3.325	9.5	21.6
4 1	14 1.28	- 8 19.6	1.279	2.244	8.8	19.7	4 1	14 0.51	-15 13.0	2.374	3.321	6.5	21.4
4 11	13 52.78	- 7 40.3	1.229	2.225	3.8	19.3	4 11	13 52.23	-15 11.4	2.327	3.317	3.2	21.2
4 21	13 43.01	- 6 58.7	1.205	2.207	2.6	19.2	4 21	13 43.30	-15 3.6	2.310	3.313	1.3	21.0
5 1	13 33.36	- 6 22.0	1.205	2.189	7.8	19.5	5 1	13 34.52	-14 52.0	2.322	3.308	4.3	21.2
5 11	13 25.17	- 5 56.8	1.230	2.171	12.9	19.7	5 11	13 26.65	-14 40.2	2.363	3.304	7.6	21.4
5 21	13 19.43	- 5 47.9	1.275	2.153	17.5	19.9	5 21	13 20.30	-14 31.3	2.430	3.299	10.5	21.6
43189	1999 <i>XR</i> ₂₄₀		4 18.3 229°68	0°1/18.2	18		320047	2007 <i>DH</i> ₁₁₇		4 18.3 284°97	1°9/21.5	18	
3 12	14 9.03	-13 20.0	2.158	2.963	13.2	19.5	3 12	14 3.13	-21 35.0	4.412	5.161	7.8	20.5
3 22	14 5.02	-12 49.5	2.064	2.957	10.3	19.3	3 22	13 59.58	-21 40.1	4.302	5.151	6.3	20.4
4 1	13 59.02	-12 7.1	1.993	2.950	6.8	19.1	4 1	13 55.03	-21 37.5	4.216	5.142	4.6	20.3
4 11	13 51.60	-11 15.5	1.949	2.944	2.9	18.8	4 11	13 49.79	-21 27.5	4.159	5.133	2.9	20.1
4 21	13 43.50	-10 19.1	1.933	2.937	1.2	18.6	4 21	13 44.23	-21 11.3	4.130	5.123	1.9	20.1
5 1	13 35.60	- 9 23.1	1.946	2.930	5.2	18.9	5 1	13 38.73	-20 50.3	4.131	5.114	2.8	20.1
5 11	13 28.75	- 8 33.1	1.985	2.922	9.0	19.1	5 11	13 33.70	-20 26.8	4.162	5.104	4.5	20.2
5 21	13 23.56	- 7 53.4	2.049	2.915	12.3	19.3	5 21	13 29.45	-20 2.9	4.219	5.095	6.3	20.3
279376	2010 <i>BW</i> ₁₀₁		4 18.3 88°01	0°0/18.3	17		362536	2010 <i>UW</i> ₂₃		4 18.3 72°12	1°2/17.1	17	
3 12	14 5.72	-12 32.9	3.327	4.120	9.3	22.3	3 12	14 8.63	- 7 31.1	2.642	3.452	10.9	20.8
3 22	14 1.63	-12 11.6	3.255	4.141	7.1	22.2	3 22	14 4.25	- 7 19.6	2.558	3.455	8.4	20.6
4 1	13 56.35	-11 43.6	3.207	4.162	4.6	22.0	4 1	13 58.28	- 7 3.2	2.499	3.459	5.4	20.4
4 11	13 50.32	-11 11.1	3.188	4.182	2.0	21.9	4 11	13 51.23	- 6 44.3	2.467	3.462	2.4	20.2
4 21	13 44.00	-10 36.5	3.199	4.203	0.8	21.8	4 21	13 43.71	- 6 25.9	2.464	3.465	1.8	20.2
5 1	13 37.91	-10 2.7	3.240	4.223	3.4	22.0	5 1	13 36.40	- 6 11.0	2.491	3.468	4.8	20.4
5 11	13 32.51	- 9 32.4	3.310	4.243	5.9	22.2	5 11	13 29.95	- 6 2.3	2.545	3.471	7.8	20.6
5 21	13 28.17	- 9 7.9	3.406	4.263	8.1	22.4	5 21	13 24.84	- 6 1.7	2.624	3.475	10.4	20.8
255744	2006 <i>RQ</i> ₂		4 18.3 189°69	1°6/19.8	16		4805	Asteropaios		4 18.3 207°89	2°4/23.0	1	

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
174051	2002 CW ₁₉		4 18.3 131°95	2.7/21.1	18		320416	2007 VU ₁₂		4 18.3 251°24	2.9/20.6	17	
3 12	14 10.15	-21 3.0	2.581	3.345	12.4	20.7	3 12	14 13.12	-20 41.9	1.833	2.616	16.1	21.3
3 22	14 5.59	-21 13.5	2.491	3.350	10.0	20.6	3 22	14 8.89	-20 37.1	1.725	2.597	13.1	21.0
4 1	13 59.26	-21 11.4	2.424	3.356	7.2	20.4	4 1	14 2.02	-20 13.7	1.638	2.578	9.4	20.8
4 11	13 51.69	-20 57.0	2.383	3.362	4.4	20.2	4 11	13 53.09	-19 31.5	1.575	2.559	5.4	20.5
4 21	13 43.55	-20 32.1	2.371	3.367	2.7	20.1	4 21	13 43.03	-18 32.9	1.539	2.538	2.9	20.3
5 1	13 35.63	-19 59.6	2.387	3.372	4.3	20.2	5 1	13 33.04	-17 23.4	1.530	2.518	5.8	20.4
5 11	13 28.66	-19 23.8	2.432	3.377	7.1	20.4	5 11	13 24.30	-16 10.8	1.548	2.496	10.2	20.6
5 21	13 23.17	-18 49.0	2.502	3.382	9.9	20.6	5 21	13 17.71	-15 3.3	1.589	2.474	14.3	20.8
242403	2004 FU ₁₁₂		4 18.3 74°91	6°0/12.4	17		19691	Iwate		4 18.3 152°94	2°0/16.3	18	
3 12	14 9.03	+ 4 56.7	2.109	2.941	12.5	20.3	3 12	14 9.07	- 8 4.4	2.061	2.882	13.2	17.9
3 22	14 4.82	+ 5 58.2	2.048	2.951	9.9	20.1	3 22	14 5.02	- 7 16.6	1.982	2.885	10.1	17.7
4 1	13 58.75	+ 6 57.7	2.011	2.960	7.4	20.0	4 1	13 59.00	- 6 20.0	1.925	2.888	6.5	17.5
4 11	13 51.44	+ 7 48.7	2.000	2.969	6.0	19.9	4 11	13 51.61	- 5 19.4	1.896	2.891	3.0	17.3
4 21	13 43.67	+ 8 25.9	2.016	2.978	6.8	20.0	4 21	13 43.63	- 4 20.1	1.895	2.893	2.8	17.3
5 1	13 36.25	+ 8 45.2	2.058	2.987	9.0	20.2	5 1	13 35.95	- 3 27.7	1.921	2.895	6.3	17.5
5 11	13 29.95	+ 8 45.0	2.125	2.997	11.6	20.3	5 11	13 29.38	- 2 47.3	1.974	2.897	9.8	17.7
5 21	13 25.28	+ 8 25.8	2.213	3.006	14.0	20.5	5 21	13 24.49	- 2 21.5	2.051	2.899	13.0	17.9
151771	2003 EV ₂₅		4 18.3 352°73	0°1/18.4	17		215886	Barryarnold		4 18.3 22°20	1°2/17.5	17	
3 12	14 7.77	-14 14.1	1.567	2.392	16.5	20.0	3 12	14 8.82	-11 36.7	1.347	2.186	17.9	20.7
3 22	14 4.75	-13 43.2	1.487	2.389	12.9	19.7	3 22	14 5.85	-10 58.9	1.277	2.189	13.8	20.4
4 1	13 59.19	-12 55.9	1.427	2.387	8.5	19.4	4 1	14 0.04	-10 5.5	1.227	2.193	9.0	20.2
4 11	13 51.78	-11 55.7	1.391	2.386	3.7	19.2	4 11	13 52.18	- 9 1.5	1.201	2.197	3.8	19.9
4 21	13 43.52	-10 48.6	1.381	2.385	1.3	19.0	4 21	13 43.44	- 7 54.5	1.199	2.202	2.3	19.8
5 1	13 35.58	- 9 42.1	1.397	2.384	6.3	19.3	5 1	13 35.16	- 6 53.1	1.223	2.207	7.4	20.1
5 11	13 29.07	- 8 44.1	1.438	2.384	11.0	19.6	5 11	13 28.55	- 6 5.1	1.270	2.213	12.3	20.4
5 21	13 24.73	- 8 0.4	1.501	2.384	15.0	19.8	5 21	13 24.38	- 5 35.5	1.337	2.219	16.5	20.6
423443	2005 SS ₁₂		4 18.3 126°08	1°0/19.3	15		141439	2002 CQ ₂₉		4 18.3 26°84	0°2/18.2	18	
3 12	14 13.96	-15 54.3	2.322	3.104	13.1	22.7	3 12	14 9.23	-11 25.4	2.078	2.890	13.4	19.4
3 22	14 8.48	-15 43.5	2.246	3.123	10.2	22.5	3 22	14 5.18	-11 20.3	1.998	2.895	10.4	19.2
4 1	14 1.11	-15 21.3	2.193	3.141	6.9	22.3	4 1	13 59.13	-11 6.5	1.941	2.900	6.8	19.0
4 11	13 52.45	-14 49.4	2.168	3.159	3.3	22.1	4 11	13 51.68	-10 46.1	1.911	2.906	2.9	18.7
4 21	13 43.30	-14 10.9	2.172	3.175	1.2	22.0	4 21	13 43.63	-10 22.6	1.908	2.912	1.1	18.6
5 1	13 34.51	-13 30.0	2.205	3.191	4.5	22.2	5 1	13 35.86	- 9 59.9	1.933	2.918	5.1	18.9
5 11	13 26.87	-12 51.3	2.267	3.207	7.9	22.5	5 11	13 29.20	- 9 42.1	1.984	2.924	8.8	19.1
5 21	13 20.92	-12 18.9	2.354	3.221	10.9	22.7	5 21	13 24.24	- 9 32.2	2.060	2.931	12.0	19.3
281517	2008 TN ₅₄		4 18.3 199°71	0°2/18.5	17		139793	2001 RX ₇		4 18.3 242°03	0°3/18.7	18	
3 12	14 8.64	-14 39.8	2.034	2.839	13.9	21.2	3 12	14 8.01	-14 40.2	2.353	3.151	12.5	20.6
3 22	14 4.82	-14 6.3	1.946	2.838	10.8	21.0	3 22	14 4.13	-14 11.9	2.255	3.143	9.7	20.4
4 1	13 58.94	-13 19.2	1.881	2.837	7.2	20.8	4 1	13 58.41	-13 31.8	2.181	3.135	6.5	20.2
4 11	13 51.60	-12 21.4	1.842	2.836	3.2	20.5	4 11	13 51.39	-12 42.1	2.133	3.126	2.9	19.9
4 21	13 43.60	-11 17.6	1.831	2.835	1.1	20.3	4 21	13 43.74	-11 46.6	2.113	3.117	0.9	19.7
5 1	13 35.86	-10 13.7	1.848	2.834	5.2	20.6	5 1	13 36.26	-10 50.2	2.123	3.109	4.7	20.0
5 11	13 29.25	- 9 15.8	1.892	2.833	9.1	20.9	5 11	13 29.72	- 9 58.0	2.160	3.099	8.2	20.2
5 21	13 24.39	- 8 28.9	1.960	2.831	12.6	21.1	5 21	13 24.70	- 9 14.3	2.222	3.090	11.4	20.4
140693	2001 UN ₆₅		4 18.3 184°89	0°1/18.2	18		299408	2005 YC ₄₇		4 18.3 181°53	4°7/21.8	18	
3 12	14 9.34	-12 8.5	3.056	3.846	10.1	21.3	3 12	14 15.10	-23 36.5	1.639	2.414	18.0	21.4
3 22	14 4.62	-11 52.1	2.961	3.846	7.8	21.1	3 22	14 10.60	-23 55.9	1.552	2.415	14.8	21.2
4 1	13 58.46	-11 28.4	2.892	3.845	5.1	21.0	4 1	14 3.18	-23 54.8	1.485	2.415	11.0	21.0
4 11	13 51.31	-10 59.4	2.850	3.844	2.2	20.8	4 11	13 53.58	-23 31.6	1.440	2.415	7.1	20.7
4 21	13 43.72	-10 27.5	2.839	3.843	0.9	20.6	4 21	13 42.92	-22 48.0	1.422	2.415	4.7	20.6
5 1	13 36.29	- 9 56.0	2.858	3.840	3.9	20.9	5 1	13 32.56	-21 48.9	1.429	2.414	6.6	20.7
5 11	13 29.60	- 9 27.8	2.906	3.838	6.7	21.0	5 11	13 23.79	-20 42.9	1.463	2.413	10.5	20.9
5 21	13 24.11	- 9 5.7	2.980	3.834	9.2	21.2	5 21	13 17.51	-19 38.7	1.519	2.411	14.4	21.1
391345	2006 US ₁₁₈		4 18.3 86°07	0°5/17.8	17		128612	2004 QW ₂₁		4 18.3 301°43	1°4/19.7	18	
3 12	14 8.73	-11 14.4	2.320	3.128	12.3	21.8	3 12	14 6.85	-17 21.2	2.255	3.048	13.1	20.4
3 22	14 4.51	-10 51.9	2.244	3.139	9.5	21.7	3 22	14 3.41	-17 7.2	2.151	3.034	10.4	20.1
4 1	13 58.53	-10 20.8	2.192	3.150	6.2	21.5	4 1	13 58.04	-16 39.9	2.071	3.019	7.2	19.9
4 11	13 51.36	- 9 43.9	2.166	3.161	2.6	21.3	4 11	13 51.27	-16 0.6	2.015	3.005	3.7	19.7
4 21	13 43.71	- 9 5.0	2.169	3.172	1.3	21.2	4 21	13 43.78	-15 12.3	1.988	2.991	1.5	19.5
5 1	13 36.36	- 8 28.2	2.201	3.183	4.8	21.4	5 1	13 36.41	-14 19.6	1.989	2.977	4.6	19.7
5 11	13 30.02	- 7 57.7	2.260	3.194	8.2	21.7	5 11	13 30.00	-13 27.9	2.017	2.963	8.3	19.9
5 21	13 25.20	- 7 36.3	2.343	3.205	11.1	21.9	5 21	13 25.16	-12 42.3	2.069	2.949	11.6	20.0
88123	2000 WV ₁₄₁		4 18.3 232°11	4°0/13.4	18		402943	2007 TZ ₃₂₂		4 18.3 134°40	2°5/16.4	18	
3 12	14 9.90	+ 3 24.9	3.088	3.901	9.4	20.3	3 12	14 15.19	- 6 16.6	1.864	2.682	14.5	21.7
3 22	14 5.04	+ 4 4.1	2.992	3.886	7.4	20.2	3 22	14 9.82	- 5 41.2	1.794	2.695	11.1	21.5
4 1	13 58.75	+ 4 43.0	2.922	3.870	5.4	20.0	4 1	14 2.18	- 4 59.0	1.747	2.708	7.2	21.3
4 11	13 51.45	+ 5 17.6	2.880	3.854	4.1	19.9	4 11	13 52.99	- 4 14.6	1.727	2.720	3.5	21.1
4 21	13 43.67	+ 5 44.5	2.868	3.837	4.6	19.9	4 21	13 43.19	- 3 33.3	1.734	2.732	3.2	21.1
5 1	13 36.01	+ 6 0.7	2.885	3.820	6.5	20.0	5 1	13 33.84	- 3 0.5	1.770	2.742	6.9	21.3
5 11	13 29.05	+ 6 4.2	2.930	3.802	8.8	20.1	5 11	13 25.86	- 2 40.2	1.832	2.753	10.6	21.6
5 21	13 23.25	+ 5 54.4	2.998	3.783	10.9	20.3	5 21	13 19.90	- 2 34.3	1.917	2.762	13.9	21.8
338493	2003 LL ₉		4 18.3 266°77	3°3/14.9	17		166476	2002 PM ₁₂₁		4 18.3 297°72	0°8/17.6	17	
3 12	14 9.63	- 4 30.6	2.198	3.020	12								

EPHEMERIDES

4 18.3

4 18.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
28175	1998 <i>VM</i> ₃₃		4 18.3 107°18		0°4/17.9 18		338574	2003 <i>SZ</i> ₁₀₄		4 18.3 162°57		3°5/22.1 17	
3 12	14 11.95	-12 32.3	1.816	2.628	15.1	19.5	3 12	14 10.68	-24 32.1	2.411	3.163	13.5	21.1
3 22	14 7.45	-12 0.2	1.745	2.642	11.6	19.3	3 22	14 6.19	-24 28.8	2.319	3.167	11.1	20.9
4 1	14 0.68	-11 15.6	1.696	2.655	7.6	19.1	4 1	13 59.77	-24 9.1	2.249	3.171	8.3	20.7
4 11	13 52.36	-10 22.4	1.672	2.668	3.2	18.9	4 11	13 51.99	-23 33.2	2.203	3.175	5.4	20.6
4 21	13 43.42	-9 25.7	1.677	2.680	1.5	18.8	4 21	13 43.60	-22 43.1	2.186	3.178	3.5	20.4
5 1	13 34.92	-8 31.8	1.709	2.693	5.8	19.1	5 1	13 35.46	-21 42.8	2.197	3.180	4.8	20.5
5 11	13 27.78	-7 46.4	1.767	2.705	9.9	19.3	5 11	13 28.38	-20 38.2	2.237	3.183	7.6	20.7
5 21	13 22.63	-7 13.7	1.849	2.716	13.4	19.6	5 21	13 22.94	-19 35.0	2.302	3.185	10.5	20.9
105518	2000 <i>RP</i> ₁₆		4 18.3 250°06		5°4/23.7 18		361687	2007 <i>UX</i> ₁₂₈		4 18.3 165°89		2°3/16.3 16	
3 12	14 11.16	-29 5.9	2.561	3.283	13.5	20.2	3 12	14 11.56	-8 36.6	1.782	2.605	14.8	21.7
3 22	14 6.72	-29 35.4	2.452	3.271	11.5	20.0	3 22	14 7.27	-7 39.3	1.704	2.608	11.4	21.4
4 1	14 0.24	-29 48.9	2.365	3.260	9.2	19.8	4 1	14 0.65	-6 31.0	1.649	2.612	7.4	21.2
4 11	13 52.24	-29 44.6	2.302	3.249	6.9	19.7	4 11	13 52.40	-5 17.1	1.620	2.614	3.4	21.0
4 21	13 43.44	-29 22.5	2.265	3.237	5.4	19.6	4 21	13 43.45	-4 4.5	1.618	2.616	3.2	21.0
5 1	13 34.72	-28 44.8	2.257	3.225	5.9	19.6	5 1	13 34.86	-3 0.3	1.644	2.618	7.1	21.2
5 11	13 26.96	-27 56.0	2.275	3.213	8.0	19.7	5 11	13 27.60	-2 10.7	1.696	2.619	11.1	21.4
5 21	13 20.83	-27 1.8	2.319	3.200	10.5	19.8	5 21	13 22.33	-1 39.0	1.770	2.620	14.7	21.7
278777	2008 <i>SQ</i> ₁₆₁		4 18.3 202°59		1°4/16.9 17		496055	2009 <i>BU</i> ₁₃₁		4 18.3 90°41		5°3/13.5 17	
3 12	14 9.39	-9 29.9	2.253	3.065	12.5	21.7	3 12	14 11.29	+ 3 56.2	2.182	3.008	12.4	21.0
3 22	14 5.18	-8 46.9	2.164	3.062	9.6	21.5	3 22	14 6.48	+ 4 40.4	2.120	3.021	9.7	20.9
4 1	13 59.09	-7 54.6	2.098	3.059	6.2	21.3	4 1	13 59.82	+ 5 22.6	2.083	3.034	7.0	20.7
4 11	13 51.68	-6 57.0	2.060	3.055	2.7	21.1	4 11	13 51.95	+ 5 57.6	2.072	3.046	5.4	20.6
4 21	13 43.67	-5 58.6	2.050	3.050	2.2	21.0	4 21	13 43.64	+ 6 20.6	2.089	3.059	6.0	20.7
5 1	13 35.88	-5 4.8	2.069	3.046	5.7	21.3	5 1	13 35.71	+ 6 28.3	2.133	3.071	8.2	20.9
5 11	13 29.09	-4 20.5	2.115	3.041	9.2	21.5	5 11	13 28.91	+ 6 19.3	2.202	3.084	10.9	21.0
5 21	13 23.88	-3 48.9	2.186	3.035	12.3	21.6	5 21	13 23.74	+ 5 54.0	2.294	3.096	13.3	21.2
243635	1999 <i>SD</i> ₁₆		4 18.3 256°05		5°8/25.1 18		287736	2003 <i>SZ</i> ₄		4 18.3 218°14		2°0/20.0 16	
3 12	14 10.13	-33 1.4	2.822	3.515	13.0	20.7	3 12	14 15.17	-18 11.2	2.172	2.948	14.1	21.8
3 22	14 5.82	-33 21.1	2.704	3.498	11.2	20.6	3 22	14 9.95	-18 9.8	2.067	2.938	11.3	21.6
4 1	13 59.60	-33 23.7	2.606	3.480	9.3	20.4	4 1	14 2.45	-17 54.7	1.984	2.926	7.9	21.4
4 11	13 51.96	-33 7.3	2.532	3.461	7.3	20.2	4 11	13 53.23	-17 26.3	1.927	2.914	4.2	21.1
4 21	13 43.56	-32 31.7	2.485	3.442	6.0	20.1	4 21	13 43.13	-16 46.9	1.899	2.901	2.0	20.9
5 1	13 35.23	-31 38.9	2.465	3.423	6.1	20.1	5 1	13 33.15	-16 0.8	1.901	2.887	5.0	21.1
5 11	13 27.78	-30 33.4	2.472	3.404	7.7	20.2	5 11	13 24.27	-15 13.5	1.930	2.872	8.9	21.3
5 21	13 21.85	-29 21.2	2.505	3.384	9.9	20.3	5 21	13 17.25	-14 30.7	1.984	2.856	12.4	21.5
326345	2000 <i>SM</i> ₃₄		4 18.3 233°59		3°6/14.5 17		522546	2016 <i>EN</i> ₂₃₉		4 18.3 297°54		1°2/17.4 17	
3 12	14 8.63	-4 51.8	2.104	2.930	12.8	21.0	3 12	14 8.70	-10 50.0	1.671	2.498	15.5	21.3
3 22	14 4.75	-3 34.1	2.013	2.920	9.8	20.8	3 22	14 5.53	-10 17.0	1.572	2.478	12.1	21.0
4 1	13 58.90	-2 7.8	1.947	2.909	6.5	20.6	4 1	13 59.82	-9 30.4	1.495	2.458	8.0	20.7
4 11	13 51.63	-0 38.9	1.909	2.898	3.9	20.4	4 11	13 52.18	-8 34.2	1.442	2.438	3.4	20.4
4 21	13 43.70	+ 0 45.5	1.899	2.887	4.5	20.4	4 21	13 43.50	-7 34.0	1.416	2.418	2.2	20.2
5 1	13 35.96	+ 1 58.5	1.917	2.875	7.6	20.6	5 1	13 34.92	-6 36.8	1.416	2.399	6.9	20.5
5 11	13 29.24	+ 2 54.8	1.961	2.863	11.0	20.7	5 11	13 27.59	-5 50.0	1.441	2.379	11.6	20.7
5 21	13 24.18	+ 3 31.6	2.028	2.850	14.1	20.9	5 21	13 22.35	-5 18.5	1.487	2.360	15.7	20.9
427011	2014 <i>SN</i> ₂₀₇		4 18.3 188°47		3°0/15.9 16		229561	2005 <i>YA</i> ₂₈₇		4 18.3 186°39		5°3/13.1 18	
3 12	14 13.97	-4 36.6	1.958	2.778	13.8	22.1	3 12	14 10.90	+ 2 34.4	2.164	2.991	12.4	21.0
3 22	14 8.95	-3 59.9	1.875	2.777	10.6	21.9	3 22	14 6.33	+ 3 35.6	2.089	2.991	9.7	20.8
4 1	14 1.68	-3 17.5	1.816	2.776	7.0	21.6	4 1	13 59.83	+ 4 37.4	2.038	2.990	7.0	20.6
4 11	13 52.84	-2 34.0	1.783	2.775	3.7	21.4	4 11	13 52.01	+ 5 33.7	2.014	2.989	5.4	20.5
4 21	13 43.27	-1 54.8	1.778	2.772	3.8	21.4	4 21	13 43.61	+ 6 18.6	2.018	2.988	6.1	20.6
5 1	13 34.00	-1 24.9	1.802	2.770	7.2	21.6	5 1	13 35.50	+ 6 47.6	2.049	2.986	8.6	20.7
5 11	13 25.96	-1 8.3	1.851	2.766	10.8	21.8	5 11	13 28.46	+ 6 58.1	2.105	2.984	11.4	20.9
5 21	13 19.82	-1 6.9	1.924	2.762	14.1	22.0	5 21	13 23.08	+ 6 49.9	2.183	2.981	14.0	21.1
199981	2007 <i>JQ</i> ₁₂		4 18.3 335°74		2°9/15.7 17		156911	2003 <i>FD</i> ₁₁		4 18.3 222°25		1°0/17.4 17	
3 12	14 4.47	-9 6.9	1.525	2.369	15.9	19.7	3 12	14 11.13	-10 14.4	2.112	2.922	13.3	21.1
3 22	14 2.27	-7 51.8	1.443	2.359	12.2	19.4	3 22	14 6.72	-9 45.1	2.018	2.915	10.3	20.9
4 1	13 57.62	-6 21.3	1.382	2.350	7.9	19.1	4 1	14 0.23	-9 6.0	1.947	2.907	6.7	20.7
4 11	13 51.17	-4 42.3	1.346	2.341	3.8	18.8	4 11	13 52.24	-8 20.4	1.904	2.899	2.9	20.4
4 21	13 43.87	-3 4.0	1.336	2.333	4.0	18.8	4 21	13 43.52	-7 32.8	1.888	2.890	1.8	20.3
5 1	13 36.85	-1 36.4	1.352	2.326	8.3	19.1	5 1	13 34.99	-6 48.2	1.901	2.881	5.7	20.6
5 11	13 31.17	-0 27.7	1.391	2.320	12.7	19.3	5 11	13 27.54	-6 11.8	1.941	2.872	9.5	20.8
5 21	13 27.57	+ 0 17.6	1.451	2.314	16.6	19.5	5 21	13 21.82	-5 46.9	2.005	2.862	12.9	21.0
321971	2010 <i>UR</i> ₃₁		4 18.3 152°88		0°7/17.7 16		105147	2000 <i>NH</i> ₁₅		4 18.3 248°72		2°4/20.1 17	
3 12	14 12.74	-11 43.6	2.038	2.844	13.9	22.6	3 12	14 13.78	-18 41.3	1.743	2.536	16.4	20.4
3 22	14 7.88	-11 10.4	1.958	2.852	10.7	22.4	3 22	14 9.50	-18 41.7	1.641	2.521	13.2	20.2
4 1	14 0.90	-10 26.3	1.902	2.860	7.0	22.2	4 1	14 2.49	-18 25.1	1.559	2.505	9.4	19.9
4 11	13 52.47	-9 34.6	1.871	2.867	2.9	21.9	4 11	13 53.36	-17 51.7	1.502	2.489	5.1	19.6
4 21	13 43.42	-8 40.2	1.870	2.873	1.5	21.9	4 21	13 43.08	-17 4.0	1.470	2.472	2.5	19.4
5 1	13 34.72	-7 48.5	1.897	2.879	5.6	22.1	5 1	13 32.88	-16 7.4	1.467	2.455	6.0	19.6
5 11	13 27.23	-7 4.9	1.951	2.884	9.4	22.4	5 11	13 24.01	-15 9.3	1.489	2.437	10.5	19.8
5 21	13 21.56	-6 33.1	2.030	2.888	12.7	22.6	5 21	13 17.38	-14 17.3	1.534	2.419	14.7	20.0
357041	2000 <i>QH</i> ₁₇₅		4 18.3 259°38		1°0/19.1 16		500270	2012 <i>LW</i> ₁₇		4 18.3 302°90		2°8/20.9 17	
3													

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4 18.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
388925	2008 <i>SN</i> ₁₅₅		4 18.3 187°60	1.7/16.4	18		148325	2000 <i>QB</i> ₈₃		4 18.4 189°74	0.4/18.8	17	
3 12	14 9.76	- 7 48.3	2.569	3.378	11.3	21.9	3 12	14 8.34	-14 23.4	3.119	3.903	10.0	22.0
3 22	14 5.21	- 7 4.8	2.480	3.377	8.6	21.7	3 22	14 3.88	-14 3.3	3.021	3.901	7.8	21.8
4 1	13 58.99	- 6 14.4	2.416	3.376	5.6	21.5	4 1	13 58.03	-13 34.8	2.949	3.899	5.2	21.6
4 11	13 51.63	- 5 20.6	2.380	3.374	2.6	21.3	4 11	13 51.21	-12 59.6	2.904	3.897	2.4	21.4
4 21	13 43.76	- 4 27.6	2.374	3.372	2.4	21.3	4 21	13 43.95	-12 20.2	2.890	3.894	0.8	21.3
5 1	13 36.10	- 3 39.9	2.397	3.369	5.4	21.5	5 1	13 36.85	-11 39.8	2.906	3.890	3.6	21.5
5 11	13 29.32	- 3 1.4	2.448	3.365	8.4	21.7	5 11	13 30.46	-11 1.9	2.951	3.886	6.4	21.7
5 21	13 23.95	- 2 34.7	2.523	3.361	11.2	21.8	5 21	13 25.24	-10 29.4	3.022	3.882	8.9	21.8
470499	2008 <i>CV</i> ₅₈		4 18.3 70°69	3.8/14.2	17		299307	2005 <i>QL</i> ₅₀		4 18.4 190°53	1.1/19.5	17	
3 12	14 6.52	- 2 1.8	2.292	3.122	11.7	21.1	3 12	14 10.01	-15 50.3	2.715	3.497	11.4	21.6
3 22	14 2.87	- 0 59.7	2.217	3.125	9.0	20.9	3 22	14 5.41	-15 51.2	2.620	3.496	9.0	21.4
4 1	13 57.51	+ 0 6.3	2.168	3.128	6.1	20.7	4 1	13 59.16	-15 42.6	2.549	3.495	6.1	21.2
4 11	13 51.00	+ 1 10.8	2.145	3.131	4.0	20.6	4 11	13 51.73	-15 25.9	2.504	3.494	3.1	21.0
4 21	13 44.00	+ 2 8.2	2.150	3.134	4.5	20.6	4 21	13 43.76	-15 2.9	2.489	3.492	1.2	20.9
5 1	13 37.26	+ 2 53.8	2.184	3.137	7.1	20.8	5 1	13 35.96	-14 36.6	2.504	3.490	4.0	21.1
5 11	13 31.48	+ 3 24.2	2.243	3.141	10.0	21.0	5 11	13 29.00	-14 10.8	2.547	3.488	7.0	21.3
5 21	13 27.15	+ 3 37.8	2.324	3.144	12.6	21.2	5 21	13 23.41	-13 48.6	2.616	3.486	9.8	21.4
361738	2007 <i>XR</i> ₁₇		4 18.3 254°84	4.5/14.9	17		504264	2006 <i>VZ</i> ₁₀₁		4 18.4 129°12	3.9/23.4	18	
3 12	14 15.99	- 0 57.6	1.854	2.677	14.4	20.9	3 12	14 7.64	-28 52.5	2.436	3.169	13.9	21.1
3 22	14 10.91	- 0 18.6	1.753	2.655	11.2	20.6	3 22	14 3.87	-28 14.6	2.339	3.172	11.5	21.0
4 1	14 3.27	+ 0 24.3	1.675	2.633	7.8	20.4	4 1	13 58.23	-27 15.4	2.263	3.174	8.8	20.8
4 11	13 53.66	+ 1 5.4	1.623	2.610	4.9	20.1	4 11	13 51.34	-25 55.7	2.213	3.176	6.0	20.6
4 21	13 42.99	+ 1 38.8	1.599	2.586	5.3	20.1	4 21	13 43.93	-24 18.7	2.191	3.179	4.0	20.5
5 1	13 32.38	+ 1 58.6	1.602	2.561	8.8	20.3	5 1	13 36.82	-22 30.2	2.198	3.181	4.8	20.5
5 11	13 22.96	+ 2 0.9	1.631	2.535	12.7	20.4	5 11	13 30.77	-20 37.7	2.234	3.183	7.4	20.7
5 21	13 15.59	+ 1 44.4	1.681	2.509	16.3	20.6	5 21	13 26.32	-18 48.7	2.297	3.185	10.3	20.9
260917	2005 <i>RH</i> ₂₀		4 18.3 231°75	3.2/22.1	18		462148	2007 <i>TQ</i> ₅₆		4 18.4 144°23	0.4/18.7	16	
3 12	14 7.57	-24 29.1	2.562	3.315	12.8	20.5	3 12	14 14.15	-14 29.8	1.868	2.669	15.2	22.6
3 22	14 3.75	-24 17.7	2.461	3.311	10.5	20.3	3 22	14 9.19	-14 8.3	1.790	2.679	11.8	22.4
4 1	13 58.16	-23 50.3	2.382	3.306	7.8	20.1	4 1	14 1.90	-13 33.2	1.734	2.688	7.9	22.2
4 11	13 51.31	-23 7.3	2.329	3.301	5.0	20.0	4 11	13 52.97	-12 47.4	1.703	2.696	3.5	21.9
4 21	13 43.88	-22 10.9	2.303	3.296	3.3	19.8	4 21	13 43.35	-11 55.1	1.700	2.704	1.1	21.8
5 1	13 36.63	-21 5.0	2.307	3.291	4.5	19.9	5 1	13 34.11	-11 2.2	1.726	2.712	5.5	22.1
5 11	13 30.31	-19 55.3	2.338	3.286	7.2	20.1	5 11	13 26.24	-10 15.0	1.779	2.719	9.6	22.4
5 21	13 25.46	-18 47.3	2.395	3.280	10.1	20.2	5 21	13 20.40	- 9 38.1	1.855	2.725	13.2	22.6
290981	2005 <i>XZ</i> ₄₂		4 18.3 151°72	0.1/18.3	17		364252	2006 <i>SE</i> ₃₁₆		4 18.4 86°66	0.5/17.9	17	
3 12	14 10.38	-14 15.3	2.181	2.980	13.3	21.4	3 12	14 11.15	-10 22.4	2.372	3.176	12.2	21.9
3 22	14 5.96	-13 34.9	2.098	2.987	10.3	21.2	3 22	14 6.31	-10 13.0	2.301	3.193	9.4	21.8
4 1	13 59.61	-12 42.0	2.039	2.994	6.8	21.0	4 1	13 59.72	- 9 56.4	2.253	3.210	6.1	21.6
4 11	13 51.92	-11 39.6	2.006	3.000	2.9	20.8	4 11	13 51.95	- 9 35.0	2.233	3.227	2.6	21.4
4 21	13 43.67	-10 32.5	2.002	3.006	1.1	20.7	4 21	13 43.74	- 9 11.9	2.241	3.244	1.2	21.3
5 1	13 35.74	- 9 26.3	2.027	3.011	5.0	21.0	5 1	13 35.85	- 8 50.6	2.279	3.261	4.7	21.6
5 11	13 28.90	- 8 27.0	2.080	3.016	8.7	21.2	5 11	13 29.00	- 8 34.4	2.344	3.278	8.0	21.8
5 21	13 23.74	- 7 38.7	2.157	3.020	11.9	21.4	5 21	13 23.70	- 8 25.8	2.434	3.294	10.8	22.0
36749	2000 <i>RW</i> ₆₅		4 18.4 247°41	3.2/15.8	18		500259	2012 <i>KE</i> ₄₉		4 18.4 307°03	9.7/11.6	17	
3 12	14 12.25	- 6 10.5	1.714	2.543	15.1	18.8	3 12	14 14.93	+11 50.4	1.621	2.452	15.7	20.4
3 22	14 8.12	- 5 19.2	1.621	2.529	11.7	18.6	3 22	14 10.25	+12 43.6	1.546	2.439	13.1	20.1
4 1	14 1.44	- 4 18.1	1.551	2.514	7.7	18.3	4 1	14 2.85	+13 28.2	1.492	2.425	10.8	20.0
4 11	13 52.86	- 3 12.5	1.506	2.500	4.0	18.0	4 11	13 53.47	+13 55.1	1.462	2.412	9.7	19.9
4 21	13 43.31	- 2 9.6	1.489	2.484	4.1	18.0	4 21	13 43.17	+13 57.1	1.456	2.400	10.6	19.9
5 1	13 33.93	- 1 16.5	1.498	2.468	8.1	18.2	5 1	13 33.19	+13 30.1	1.474	2.387	13.0	20.0
5 11	13 25.84	- 0 39.5	1.532	2.452	12.4	18.4	5 11	13 24.72	+12 34.0	1.514	2.375	16.0	20.1
5 21	13 19.85	- 0 21.8	1.588	2.435	16.2	18.6	5 21	13 18.54	+11 12.6	1.573	2.363	18.9	20.3
243720	2000 <i>HZ</i> ₅		4 18.4 25°11	0.2/18.2	17		378765	2008 <i>RM</i> ₁₂₅		4 18.4 147°04	0.4/18.8	17	
3 12	14 11.67	-10 22.0	1.657	2.481	15.8	19.9	3 12	14 11.18	-13 57.7	2.074	2.875	13.8	21.6
3 22	14 7.53	-10 31.2	1.586	2.489	12.2	19.7	3 22	14 6.75	-13 44.6	1.989	2.879	10.8	21.4
4 1	14 0.92	-10 31.5	1.537	2.498	8.0	19.5	4 1	14 0.24	-13 20.0	1.928	2.882	7.2	21.2
4 11	13 52.56	-10 25.3	1.512	2.507	3.4	19.2	4 11	13 52.25	-12 46.3	1.892	2.886	3.2	20.9
4 21	13 43.45	-10 15.8	1.513	2.517	1.4	19.1	4 21	13 43.62	-12 6.9	1.885	2.889	1.0	20.7
5 1	13 34.74	-10 7.3	1.542	2.528	6.0	19.4	5 1	13 35.26	-11 26.6	1.906	2.892	5.1	21.0
5 11	13 27.47	-10 4.1	1.595	2.539	10.2	19.7	5 11	13 28.05	-10 50.4	1.954	2.895	8.8	21.3
5 21	13 22.33	-10 9.0	1.671	2.551	13.9	19.9	5 21	13 22.61	-10 22.4	2.026	2.898	12.2	21.5
234403	2001 <i>RF</i> ₁₂		4 18.4 292°71	1.2/18.9	16		201576	2003 <i>SX</i> ₆₉		4 18.4 215°60	0.5/17.8	18	
3 12	14 14.85	-13 13.9	1.353	2.177	18.6	20.5	3 12	14 9.63	-11 49.7	2.389	3.191	12.2	21.2
3 22	14 11.21	-13 36.0	1.252	2.154	14.9	20.2	3 22	14 5.34	-11 17.0	2.292	3.184	9.4	21.0
4 1	14 4.18	-13 46.1	1.171	2.130	10.2	19.8	4 1	13 59.22	-10 34.2	2.220	3.177	6.2	20.8
4 11	13 54.31	-13 44.4	1.113	2.106	4.9	19.5	4 11	13 51.80	- 9 44.4	2.175	3.170	2.6	20.6
4 21	13 42.72	-13 33.0	1.078	2.082	1.7	19.2	4 21	13 43.77	- 8 51.3	2.159	3.162	1.3	20.5
5 1	13 30.99	-13 16.6	1.070	2.059	7.4	19.5	5 1	13 35.92	- 7 59.9	2.172	3.153	5.0	20.7
5 11	13 20.82	-13 1.9	1.084	2.035	13.1	19.7	5 11	13 29.01	- 7 14.9	2.213	3.144	8.5	20.9
5 21	13 13.46	-12 55.1	1.119	2.012	18.3	19.9	5 21	13 23.60	- 6 39.9	2.278	3.135	11.6	21.1
62842	2000 <i>UF</i> ₆₃		4 18.4 256°60	1.7/19.8	18 R		522761	2016 <i>NT</i> ₇₅		4			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
67379	2000 <i>OB</i> ₆		4 18.4 186°50		5°1/24.4 18		98409	2000 <i>UQ</i> ₁₂		4 18.4 72°15		0°1/18.3 18	
3 12	14 10.57	-30 42.1	2.809	3.516	12.8	19.9	3 12	14 14.66	-12 25.0	1.423	2.246	17.9	20.2
3 22	14 6.02	-30 58.5	2.708	3.516	10.9	19.8	3 22	14 10.11	-12 13.0	1.361	2.263	13.9	19.9
4 1	13 59.66	-30 58.4	2.628	3.515	8.7	19.6	4 1	14 2.73	-11 47.3	1.320	2.281	9.1	19.7
4 11	13 52.00	-30 40.9	2.573	3.514	6.6	19.5	4 11	13 53.38	-11 11.5	1.303	2.298	3.9	19.4
4 21	13 43.72	-30 6.4	2.545	3.513	5.2	19.4	4 21	13 43.30	-10 30.9	1.312	2.316	1.4	19.3
5 1	13 35.62	-29 17.5	2.545	3.511	5.5	19.4	5 1	13 33.82	-9 52.0	1.347	2.333	6.6	19.7
5 11	13 28.45	-28 18.7	2.573	3.509	7.2	19.5	5 11	13 26.12	-9 21.3	1.406	2.351	11.3	20.0
5 21	13 22.78	-27 15.7	2.627	3.506	9.5	19.6	5 21	13 20.93	-9 3.2	1.487	2.368	15.3	20.3
95856	2003 <i>GG</i> ₆		4 18.4 312°61		3°5/15.1 18		504647	2008 <i>XW</i> ₃₈		4 18.4 232°04		2°1/20.3 17	
3 12	14 5.24	-7 41.6	1.586	2.429	15.4	19.0	3 12	14 9.62	-19 2.6	2.135	2.920	14.0	21.8
3 22	14 2.89	-6 20.4	1.494	2.411	11.8	18.7	3 22	14 5.65	-18 54.0	2.041	2.917	11.2	21.6
4 1	13 58.09	-4 44.2	1.425	2.393	7.8	18.4	4 1	13 59.58	-18 30.7	1.969	2.913	7.9	21.4
4 11	13 51.46	-3 0.0	1.381	2.375	4.1	18.2	4 11	13 52.02	-17 53.7	1.923	2.909	4.3	21.1
4 21	13 43.90	-1 17.2	1.364	2.358	4.6	18.1	4 21	13 43.75	-17 5.9	1.904	2.906	2.1	21.0
5 1	13 36.52	+0 14.0	1.372	2.341	8.8	18.3	5 1	13 35.69	-16 11.9	1.914	2.902	4.8	21.1
5 11	13 30.40	+1 25.2	1.404	2.325	13.2	18.5	5 11	13 28.71	-15 17.8	1.950	2.897	8.4	21.3
5 21	13 26.33	+2 11.8	1.456	2.309	17.1	18.7	5 21	13 23.47	-14 28.9	2.011	2.893	11.8	21.5
372555	2009 <i>UJ</i> ₂		4 18.4 183°22		1°8/16.4 17		277663	2006 <i>BR</i> ₁₉₄		4 18.4 56°67		1°8/19.9 17	
3 12	14 9.55	-9 49.3	2.213	3.025	12.7	21.8	3 12	14 10.02	-17 52.7	1.847	2.645	15.4	20.8
3 22	14 5.32	-8 43.2	2.127	3.026	9.7	21.6	3 22	14 6.18	-17 43.8	1.764	2.648	12.2	20.6
4 1	13 59.21	-7 26.3	2.065	3.026	6.3	21.4	4 1	14 0.03	-17 19.3	1.703	2.652	8.5	20.4
4 11	13 51.80	-6 3.3	2.031	3.025	2.8	21.1	4 11	13 52.23	-16 40.6	1.666	2.656	4.4	20.1
4 21	13 43.82	-4 40.2	2.026	3.024	2.6	21.1	4 21	13 43.69	-15 51.3	1.657	2.659	1.9	19.9
5 1	13 36.09	-3 23.4	2.050	3.023	6.0	21.3	5 1	13 35.45	-14 57.1	1.675	2.663	5.3	20.2
5 11	13 29.41	-2 18.5	2.101	3.021	9.5	21.5	5 11	13 28.51	-14 4.6	1.719	2.667	9.3	20.4
5 21	13 24.32	-1 29.3	2.177	3.018	12.6	21.7	5 21	13 23.54	-13 19.4	1.786	2.671	12.9	20.7
41716	2000 <i>UP</i> ₇₆		4 18.4 247°33		0°6/17.9 18		510739	2012 <i>WS</i> ₅		4 18.4 209°09		1°9/20.6 17	
3 12	14 14.19	-10 51.4	1.664	2.482	16.0	19.5	3 12	14 9.21	-20 14.9	2.786	3.551	11.6	22.8
3 22	14 9.76	-10 40.9	1.572	2.472	12.5	19.3	3 22	14 4.84	-19 56.4	2.682	3.545	9.3	22.6
4 1	14 2.63	-10 19.4	1.502	2.462	8.3	19.0	4 1	13 58.81	-19 24.8	2.601	3.538	6.6	22.4
4 11	13 53.44	-9 49.5	1.456	2.451	3.6	18.7	4 11	13 51.63	-18 41.4	2.547	3.530	3.7	22.2
4 21	13 43.20	-9 15.6	1.437	2.440	1.7	18.5	4 21	13 43.90	-17 48.6	2.522	3.522	1.9	22.1
5 1	13 33.14	-8 43.2	1.445	2.429	6.6	18.8	5 1	13 36.32	-16 50.2	2.527	3.514	3.9	22.2
5 11	13 24.47	-8 18.2	1.478	2.417	11.3	19.1	5 11	13 29.57	-15 50.9	2.561	3.504	6.9	22.4
5 21	13 18.04	-8 5.0	1.534	2.406	15.4	19.3	5 21	13 24.17	-14 55.4	2.621	3.495	9.7	22.5
439364	2012 <i>YP</i> ₈		4 18.4 140°71		8°7/7.8 18		36155	1999 <i>RO</i> ₂₀₆		4 18.4 15°86		4°5/23.4 18	
3 12	14 11.23	+19 43.9	2.650	3.446	11.3	20.9	3 12	14 6.07	-27 58.5	2.109	2.860	15.2	17.9
3 22	14 6.22	+20 48.7	2.600	3.453	9.9	20.8	3 22	14 3.00	-27 43.5	2.019	2.863	12.7	17.8
4 1	13 59.58	+21 42.4	2.573	3.459	8.9	20.7	4 1	13 57.86	-27 6.9	1.951	2.866	9.7	17.6
4 11	13 51.88	+22 19.3	2.572	3.465	8.7	20.7	4 11	13 51.27	-26 8.7	1.906	2.870	6.7	17.4
4 21	13 43.81	+22 35.3	2.596	3.471	9.5	20.8	4 21	13 44.05	-24 51.9	1.887	2.874	4.6	17.3
5 1	13 36.09	+22 28.4	2.645	3.476	10.8	20.9	5 1	13 37.13	-23 21.9	1.895	2.878	5.4	17.3
5 11	13 29.36	+21 59.2	2.715	3.482	12.3	21.0	5 11	13 31.37	-21 46.6	1.931	2.883	8.2	17.5
5 21	13 24.09	+21 9.9	2.805	3.487	13.7	21.1	5 21	13 27.38	-20 13.6	1.992	2.888	11.2	17.7
348920	2006 <i>TW</i> ₂₅		4 18.4 143°98		0°2/18.2 18		213381	2001 <i>UB</i> ₄₅		4 18.4 71°83		2°3/16.3 18	
3 12	14 10.13	-11 32.5	3.118	3.907	9.9	22.3	3 12	14 13.18	-4 33.2	2.226	3.041	12.6	20.4
3 22	14 5.17	-11 19.6	3.035	3.919	7.6	22.1	3 22	14 7.81	-4 14.4	2.170	3.069	9.5	20.2
4 1	13 58.82	-11 0.3	2.977	3.931	5.0	22.0	4 1	14 0.65	-3 52.1	2.138	3.098	6.2	20.1
4 11	13 51.56	-10 36.4	2.947	3.941	2.1	21.8	4 11	13 52.35	-3 30.0	2.133	3.126	3.1	19.9
4 21	13 43.92	-10 10.2	2.948	3.952	0.9	21.7	4 21	13 43.69	-3 11.6	2.158	3.154	2.9	20.0
5 1	13 36.50	-9 44.7	2.979	3.961	3.8	21.9	5 1	13 35.49	-3 0.2	2.211	3.182	5.8	20.2
5 11	13 29.84	-9 22.6	3.040	3.971	6.5	22.1	5 11	13 28.46	-2 58.1	2.291	3.209	8.9	20.4
5 21	13 24.36	-9 6.2	3.126	3.980	8.9	22.3	5 21	13 23.07	-3 6.6	2.395	3.236	11.6	20.7
384603	2010 <i>TM</i> ₂₀		4 18.4 198°59		13°0/24.0 18		73546	2003 <i>OM</i> ₃₁		4 18.4 214°12		3°9/21.3 17	
3 12	14 28.21	-33 26.0	1.380	2.104	23.0	21.0	3 12	14 14.37	-21 56.3	1.788	2.565	16.6	20.0
3 22	14 22.60	-35 44.4	1.296	2.102	20.4	20.8	3 22	14 9.87	-22 12.8	1.694	2.560	13.6	19.8
4 1	14 12.40	-37 42.4	1.228	2.100	17.4	20.6	4 1	14 2.68	-22 11.4	1.621	2.556	10.0	19.5
4 11	13 58.17	-39 8.7	1.180	2.097	14.7	20.4	4 11	13 53.47	-21 51.3	1.572	2.551	6.2	19.3
4 21	13 41.39	-39 53.2	1.154	2.094	13.1	20.3	4 21	13 43.23	-21 13.9	1.549	2.545	3.9	19.1
5 1	13 24.42	-39 53.0	1.151	2.090	13.5	20.3	5 1	13 33.20	-20 23.9	1.553	2.539	6.0	19.3
5 11	13 9.74	-39 15.1	1.171	2.085	15.7	20.4	5 11	13 24.56	-19 28.4	1.584	2.533	9.9	19.5
5 21	12 59.07	-38 13.5	1.210	2.080	18.7	20.6	5 21	13 18.16	-18 34.9	1.638	2.526	13.7	19.7
557	<i>Violetta</i>		4 18.4 68°77		1°8/19.7 18		470217	2006 <i>WS</i> ₃₁		4 18.4 157°53		1°6/16.5 17	
3 12	14 12.13	-17 19.4	1.536	2.344	17.5	15.8	3 12	14 7.92	-7 32.7	2.611	3.423	11.0	22.0
3 22	14 8.16	-17 12.5	1.464	2.355	13.8	15.6	3 22	14 3.78	-6 55.7	2.528	3.426	8.4	21.9
4 1	14 1.48	-16 48.1	1.413	2.366	9.5	15.3	4 1	13 58.07	-6 12.6	2.469	3.430	5.4	21.7
4 11	13 52.87	-16 7.9	1.386	2.376	4.8	15.1	4 11	13 51.29	-5 26.8	2.439	3.433	2.5	21.5
4 21	13 43.46	-15 16.5	1.384	2.387	1.9	14.9	4 21	13 44.05	-4 42.0	2.438	3.436	2.2	21.5
5 1	13 34.51	-14 20.6	1.409	2.398	6.0	15.2	5 1	13 37.04	-4 2.4	2.465	3.439	5.1	21.7
5 11	13 27.17	-13 27.9	1.459	2.409	10.5	15.5	5 11	13 30.89	-3 31.4	2.521	3.441	8.1	21.9
5 21	13 22.17	-12 44.7	1.531	2.420	14.4	15.8	5 21	13 26.07	-3 11.4	2.601	3.444	10.7	22.0
93712	2000 <i>VU</i> ₃₄		4 18.4 178°25		5°0/13.6 18		205654	2001 <i>XT</i> ₁₂₂		4 18.4 44°84		1°1/19.1 18	
3 12	14 13.												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
503033	2015 <i>FE</i> ₁₄₄		4 18.4 60°64	2°2/16.3	17		508292	2015 <i>KA</i> ₁₇		4 18.4 124°49	7°1/10.1	17	
3 12	14 8.28	- 7 57.9	1.889	2.716	14.0	21.2	3 12	14 8.61	+11 5.4	2.453	3.275	11.3	21.0
3 22	14 4.57	- 7 6.7	1.820	2.727	10.6	21.1	3 22	14 4.35	+12 16.0	2.393	3.280	9.3	20.9
4 1	13 58.80	- 6 6.7	1.774	2.738	6.9	20.8	4 1	13 58.45	+13 20.9	2.359	3.286	7.7	20.8
4 11	13 51.64	- 5 3.0	1.754	2.749	3.2	20.6	4 11	13 51.46	+14 13.9	2.350	3.291	7.1	20.8
4 21	13 43.94	- 4 1.6	1.762	2.760	3.0	20.6	4 21	13 44.05	+14 50.2	2.369	3.297	7.9	20.8
5 1	13 36.61	- 3 8.7	1.797	2.771	6.6	20.9	5 1	13 36.93	+15 6.5	2.413	3.302	9.6	20.9
5 11	13 30.49	- 2 29.0	1.858	2.783	10.2	21.1	5 11	13 30.78	+15 1.9	2.480	3.307	11.6	21.1
5 21	13 26.15	- 2 5.3	1.941	2.794	13.4	21.3	5 21	13 26.06	+14 37.7	2.569	3.312	13.5	21.2
74667	1999 <i>RR</i> ₉₅		4 18.4 217°35	1°2/17.3	17		329377	2001 <i>WP</i> ₇₂		4 18.4 234°75	1°6/16.9	17	
3 12	14 13.72	- 9 45.9	2.055	2.863	13.7	20.3	3 12	14 12.48	- 8 26.5	2.225	3.034	12.8	22.0
3 22	14 8.84	- 9 16.6	1.958	2.854	10.6	20.1	3 22	14 7.75	- 7 55.9	2.123	3.019	9.9	21.8
4 1	14 1.73	- 8 37.6	1.885	2.844	7.0	19.9	4 1	14 0.96	- 7 17.0	2.045	3.004	6.5	21.5
4 11	13 52.99	- 7 52.1	1.839	2.834	3.0	19.6	4 11	13 52.66	- 6 33.2	1.994	2.989	2.9	21.3
4 21	13 43.44	- 7 4.7	1.821	2.823	2.0	19.5	4 21	13 43.59	- 5 48.8	1.972	2.972	2.3	21.2
5 1	13 34.07	- 6 20.8	1.832	2.811	6.0	19.7	5 1	13 34.64	- 5 8.5	1.979	2.955	5.9	21.4
5 11	13 25.82	- 5 45.4	1.870	2.798	10.0	19.9	5 11	13 26.68	- 4 37.1	2.013	2.937	9.6	21.6
5 21	13 19.40	- 5 22.2	1.932	2.785	13.5	20.1	5 21	13 20.37	- 4 17.7	2.071	2.919	12.9	21.8
135153	2001 <i>QF</i> ₂₂₃		4 18.4 159°16	3°9/13.9	18		514547	2017 <i>TS</i> ₈		4 18.4 190°52	1°8/16.4	18	
3 12	14 8.09	- 0 56.7	2.419	3.244	11.3	20.4	3 12	14 9.83	- 7 37.8	2.554	3.362	11.3	22.5
3 22	14 4.00	+ 0 4.2	2.344	3.248	8.7	20.2	3 22	14 5.32	- 6 56.1	2.464	3.361	8.7	22.3
4 1	13 58.25	+ 1 8.0	2.294	3.251	6.0	20.0	4 1	13 59.14	- 6 7.5	2.400	3.359	5.6	22.1
4 11	13 51.38	+ 2 9.4	2.271	3.254	4.0	19.9	4 11	13 51.80	- 5 15.6	2.363	3.357	2.6	21.9
4 21	13 44.04	+ 3 3.4	2.277	3.257	4.6	20.0	4 21	13 43.93	- 4 24.7	2.356	3.354	2.4	21.9
5 1	13 36.95	+ 3 45.5	2.311	3.260	7.1	20.1	5 1	13 36.28	- 3 39.0	2.378	3.350	5.4	22.0
5 11	13 30.79	+ 4 12.5	2.371	3.262	9.8	20.3	5 11	13 29.50	- 3 2.6	2.428	3.346	8.5	22.2
5 21	13 26.04	+ 4 23.4	2.454	3.264	12.3	20.5	5 21	13 24.13	- 2 37.9	2.502	3.341	11.2	22.4
410354	2007 <i>VK</i> ₁₂		4 18.4 192°86	1°6/19.6	16		245460	2005 <i>LU</i> ₄₆		4 18.4 311°92	3°5/15.2	16	
3 12	14 16.03	-16 43.2	2.013	2.797	14.8	22.3	3 12	14 6.65	- 4 46.0	1.856	2.693	13.8	20.4
3 22	14 10.71	-16 41.8	1.919	2.796	11.7	22.1	3 22	14 3.70	- 3 53.5	1.755	2.667	10.7	20.1
4 1	14 3.01	-16 27.0	1.847	2.793	8.1	21.8	4 1	13 58.54	- 2 52.4	1.677	2.641	7.1	19.9
4 11	13 53.55	-15 59.7	1.801	2.790	4.1	21.6	4 11	13 51.69	- 1 48.2	1.624	2.616	4.0	19.6
4 21	13 43.25	-15 22.6	1.783	2.786	1.7	21.4	4 21	13 43.95	- 0 47.5	1.598	2.591	4.4	19.6
5 1	13 33.16	-14 40.3	1.794	2.781	5.2	21.6	5 1	13 36.27	+ 0 2.9	1.599	2.566	8.0	19.7
5 11	13 24.32	-13 58.7	1.833	2.775	9.2	21.8	5 11	13 29.65	+ 0 37.4	1.624	2.542	11.9	19.9
5 21	13 17.46	-13 22.9	1.896	2.769	12.9	22.1	5 21	13 24.84	+ 0 52.8	1.670	2.518	15.5	20.1
120602	1995 <i>VZ</i> ₁		4 18.4 154°95	1°9/16.7	18		214972	2008 <i>AY</i> ₁₁		4 18.4 108°59	5°4/12.2	17	
3 12	14 11.72	- 7 8.9	2.177	2.991	12.8	20.4	3 12	14 7.84	+ 4 16.0	2.373	3.202	11.4	20.7
3 22	14 7.00	- 6 41.1	2.097	2.996	9.8	20.2	3 22	14 3.81	+ 5 23.7	2.309	3.210	9.0	20.6
4 1	14 0.33	- 6 6.7	2.040	3.001	6.4	20.0	4 1	13 58.13	+ 6 30.2	2.269	3.217	6.7	20.4
4 11	13 52.31	- 5 29.5	2.011	3.005	2.9	19.8	4 11	13 51.34	+ 7 29.9	2.256	3.225	5.4	20.4
4 21	13 43.71	- 4 53.7	2.010	3.009	2.5	19.8	4 21	13 44.12	+ 8 17.5	2.271	3.232	6.2	20.4
5 1	13 35.40	- 4 23.6	2.037	3.012	5.9	20.0	5 1	13 37.20	+ 8 49.0	2.313	3.239	8.3	20.5
5 11	13 28.18	- 4 3.2	2.092	3.016	9.3	20.2	5 11	13 31.23	+ 9 2.2	2.380	3.246	10.7	20.7
5 21	13 22.62	- 3 54.6	2.170	3.018	12.4	20.4	5 21	13 26.69	+ 8 57.3	2.468	3.253	12.9	20.9
299382	2005 <i>VF</i> ₃		4 18.4 287°36	2°5/16.7	17		332117	2005 <i>UR</i> ₄₈₅		4 18.4 124°89	0°9/17.5	18	
3 12	14 10.42	- 9 21.8	1.332	2.174	17.9	20.7	3 12	14 9.60	-12 42.0	1.956	2.767	14.2	21.1
3 22	14 7.57	- 8 35.0	1.239	2.153	13.9	20.4	3 22	14 5.59	-11 44.8	1.879	2.776	10.9	20.9
4 1	14 1.61	- 7 31.9	1.165	2.131	9.2	20.1	4 1	13 59.49	-10 34.1	1.825	2.785	7.1	20.7
4 11	13 53.17	- 6 17.7	1.114	2.110	4.2	19.7	4 11	13 51.98	- 9 14.7	1.798	2.793	3.0	20.4
4 21	13 43.34	- 5 0.6	1.088	2.088	3.6	19.6	4 21	13 43.90	- 7 52.6	1.799	2.802	1.8	20.3
5 1	13 33.59	- 3 50.7	1.086	2.067	8.9	19.9	5 1	13 36.18	- 6 34.9	1.828	2.809	5.8	20.6
5 11	13 25.38	- 2 57.5	1.108	2.045	14.4	20.1	5 11	13 29.66	- 5 28.1	1.885	2.817	9.7	20.9
5 21	13 19.78	- 2 26.9	1.149	2.024	19.2	20.3	5 21	13 24.94	- 4 36.5	1.964	2.824	13.0	21.1
173679	2001 <i>OH</i> ₃₉		4 18.4 191°01	3°3/13.9	18		260096	2004 <i>LH</i> ₂₁		4 18.4 306°48	10°6/ 9.1	17	
3 12	14 8.52	+ 0 12.6	3.150	3.964	9.3	21.4	3 12	14 10.66	+12 26.6	1.596	2.435	15.5	19.9
3 22	14 3.97	+ 1 1.4	3.065	3.962	7.1	21.2	3 22	14 7.01	+13 57.2	1.528	2.423	13.1	19.7
4 1	13 58.08	+ 1 51.6	3.005	3.959	5.0	21.1	4 1	14 0.76	+15 20.6	1.481	2.410	11.2	19.6
4 11	13 51.28	+ 2 39.5	2.975	3.956	3.4	21.0	4 11	13 52.64	+16 26.0	1.457	2.398	10.6	19.5
4 21	13 44.09	+ 3 21.5	2.974	3.952	3.9	21.0	4 21	13 43.65	+17 4.5	1.457	2.386	11.8	19.5
5 1	13 37.07	+ 3 54.3	3.004	3.948	5.9	21.1	5 1	13 34.98	+17 10.7	1.479	2.374	14.2	19.6
5 11	13 30.75	+ 4 15.5	3.060	3.943	8.1	21.3	5 11	13 27.74	+16 43.6	1.522	2.363	17.0	19.8
5 21	13 25.54	+ 4 24.2	3.141	3.937	10.2	21.4	5 21	13 22.68	+15 46.4	1.582	2.351	19.6	19.9
63712	2001 <i>QH</i> ₂₀₀		4 18.4 229°51	4°8/23.2	18		111701	2002 <i>CE</i> ₂₀		4 18.4 113°42	2°2/15.8	18	
3 12	14 11.35	-27 58.2	2.117	2.859	15.4	19.8	3 12	14 8.24	- 5 19.6	2.613	3.429	10.9	20.4
3 22	14 7.22	-27 53.4	2.012	2.849	13.0	19.6	3 22	14 3.96	- 4 39.3	2.541	3.441	8.3	20.3
4 1	14 0.78	-27 27.1	1.927	2.839	10.0	19.3	4 1	13 58.15	- 3 54.4	2.494	3.454	5.4	20.1
4 11	13 52.61	-26 38.5	1.867	2.829	7.0	19.1	4 11	13 51.34	- 3 8.8	2.474	3.466	2.8	20.0
4 21	13 43.60	-25 29.0	1.833	2.819	4.9	19.0	4 21	13 44.13	- 2 26.4	2.484	3.478	2.8	20.0
5 1	13 34.78	-24 3.6	1.827	2.807	5.8	19.0	5 1	13 37.20	- 1 51.0	2.522	3.490	5.4	20.2
5 11	13 27.15	-22 29.9	1.848	2.796	8.8	19.2	5 11	13 31.14	- 1 25.7	2.588	3.501	8.2	20.4
5 21	13 21.45	-20 56.3	1.894	2.784	12.1	19.3	5 21	13 26.42	- 1 12.1	2.678	3.512	10.7	20.5
137762	1999 <i>XM</i> ₁₇₉		4 18.4 70°91	4°2/15.6	18		191858	2004 <i>WV</i> ₄		4 18.4 167°			

EPHEMERIDES

4 18.4

4 18.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
185513	2007 <i>UY</i> ₄₆		4 18.4 245°96	1.8/16.7	17		34776	2001 <i>QC</i> ₂₆₉		4 18.4 242°75	2.6/15.9	18	
3 12	14 9.07	— 7 45.5	2.277	3.093	12.3	20.7	3 12	14 12.38	— 5 39.8	2.208	3.023	12.6	20.1
3 22	14 5.01	— 7 11.7	2.184	3.085	9.4	20.5	3 22	14 7.71	— 4 59.1	2.105	3.005	9.8	19.8
4 1	13 59.09	— 6 30.5	2.116	3.077	6.1	20.2	4 1	14 0.98	— 4 11.3	2.026	2.986	6.5	19.6
4 11	13 51.84	— 5 45.5	2.074	3.068	2.8	20.0	4 11	13 52.72	— 3 20.7	1.975	2.967	3.3	19.4
4 21	13 43.95	— 5 1.1	2.060	3.059	2.4	20.0	4 21	13 43.66	— 2 32.1	1.952	2.947	3.3	19.3
5 1	13 36.24	— 4 21.8	2.075	3.050	5.8	20.2	5 1	13 34.70	— 1 50.9	1.958	2.927	6.6	19.5
5 11	13 29.49	— 3 52.0	2.117	3.041	9.2	20.4	5 11	13 26.72	— 1 21.4	1.991	2.906	10.2	19.7
5 21	13 24.27	— 3 34.3	2.182	3.032	12.3	20.5	5 21	13 20.40	— 1 6.4	2.048	2.884	13.5	19.8
173658	2001 <i>HX</i> ₂₆		4 18.4 351°58	2.5/16.9	18		29669	1998 <i>XZ</i> ₃		4 18.4 30°58	0.1/18.3	18	
3 12	14 9.27	— 7 14.4	1.260	2.111	18.1	19.3	3 12	14 14.36	— 10 56.1	1.195	2.034	19.6	17.2
3 22	14 6.55	— 6 54.8	1.187	2.106	14.0	19.0	3 22	14 10.59	— 11 7.2	1.130	2.040	15.3	17.0
4 1	14 0.78	— 6 25.2	1.133	2.101	9.2	18.7	4 1	14 3.48	— 11 6.0	1.083	2.047	10.2	16.7
4 11	13 52.75	— 5 50.9	1.101	2.097	4.2	18.4	4 11	13 53.92	— 10 55.3	1.058	2.054	4.4	16.4
4 21	13 43.62	— 5 18.3	1.094	2.095	3.4	18.3	4 21	13 43.26	— 10 39.3	1.058	2.062	1.6	16.2
5 1	13 34.86	— 4 54.8	1.110	2.093	8.4	18.6	5 1	13 33.14	— 10 24.1	1.082	2.070	7.4	16.6
5 11	13 27.81	— 4 45.9	1.149	2.092	13.4	18.9	5 11	13 25.01	— 10 15.8	1.128	2.079	12.8	16.9
5 21	13 23.36	— 4 54.6	1.208	2.093	17.8	19.1	5 21	13 19.79	— 10 18.9	1.195	2.088	17.3	17.2
243636	1999 <i>SD</i> ₁₇		4 18.4 175°09	2.9/21.2	18		109537	2001 <i>QU</i> ₂₅₀		4 18.4 176°69	1.6/19.9	17	
3 12	14 14.04	— 22 26.1	2.257	3.016	14.1	21.1	3 12	14 15.63	— 17 2.4	2.463	3.235	12.7	21.3
3 22	14 8.93	— 22 14.4	2.163	3.020	11.4	20.9	3 22	14 9.95	— 17 9.2	2.369	3.238	10.1	21.1
4 1	14 1.70	— 21 45.9	2.092	3.023	8.3	20.7	4 1	14 2.30	— 17 5.1	2.298	3.240	7.0	20.9
4 11	13 52.97	— 21 1.2	2.046	3.025	5.0	20.5	4 11	13 53.23	— 16 50.8	2.255	3.242	3.7	20.7
4 21	13 43.56	— 20 2.9	2.028	3.026	2.9	20.3	4 21	13 43.51	— 16 28.1	2.241	3.242	1.7	20.5
5 1	13 34.42	— 18 55.9	2.040	3.026	4.8	20.5	5 1	13 33.99	— 16 0.2	2.256	3.242	4.4	20.7
5 11	13 26.44	— 17 46.5	2.081	3.025	8.2	20.7	5 11	13 25.49	— 15 31.5	2.301	3.241	7.7	20.9
5 21	13 20.25	— 16 40.9	2.146	3.024	11.4	20.9	5 21	13 18.64	— 15 5.9	2.372	3.240	10.8	21.1
179504	2002 <i>CL</i> ₁₁₈		4 18.4 320°71	1.6/16.8	17		136941	1998 <i>QT</i> ₅₇		4 18.4 174°53	0.0/18.4	16	
3 12	14 6.27	— 8 50.2	2.203	3.024	12.5	20.0	3 12	14 12.87	— 13 28.7	2.135	2.933	13.6	21.9
3 22	14 2.93	— 8 10.5	2.113	3.017	9.6	19.8	3 22	14 8.03	— 13 2.3	2.048	2.936	10.6	21.7
4 1	13 57.74	— 7 22.0	2.047	3.009	6.2	19.5	4 1	14 1.11	— 12 24.3	1.984	2.938	7.0	21.4
4 11	13 51.26	— 6 28.7	2.007	3.002	2.8	19.3	4 11	13 52.73	— 11 37.2	1.946	2.940	3.1	21.2
4 21	13 44.17	— 5 35.2	1.995	2.996	2.3	19.2	4 21	13 43.70	— 10 45.2	1.937	2.941	1.1	21.0
5 1	13 37.27	— 4 46.7	2.012	2.989	5.7	19.5	5 1	13 34.93	— 9 53.5	1.957	2.942	5.2	21.3
5 11	13 31.32	— 4 7.9	2.054	2.983	9.2	19.7	5 11	13 27.31	— 9 7.4	2.005	2.941	8.9	21.6
5 21	13 26.90	— 3 42.0	2.120	2.976	12.3	19.8	5 21	13 21.44	— 8 31.2	2.077	2.941	12.3	21.8
169659	2002 <i>JE</i> ₆₆		4 18.4 322°54	4.0/15.9	17		44967	1999 <i>VG</i> ₉₃		4 18.4 353°27	0.4/18.7	18	
3 12	14 11.58	— 3 53.0	1.357	2.204	17.3	19.5	3 12	14 10.49	— 12 46.5	1.287	2.123	18.7	18.5
3 22	14 8.19	— 3 22.7	1.278	2.194	13.4	19.2	3 22	14 7.55	— 12 50.3	1.210	2.119	14.7	18.3
4 1	14 1.82	— 2 45.7	1.219	2.185	9.0	18.9	4 1	14 1.49	— 12 39.7	1.153	2.116	9.8	18.0
4 11	13 53.20	— 2 8.4	1.183	2.176	4.8	18.7	4 11	13 53.10	— 12 17.1	1.119	2.114	4.4	17.7
4 21	13 43.47	— 1 37.6	1.172	2.168	4.9	18.6	4 21	13 43.56	— 11 46.9	1.108	2.112	1.4	17.4
5 1	13 34.02	— 1 20.2	1.186	2.160	9.2	18.9	5 1	13 34.35	— 11 15.7	1.122	2.111	7.0	17.8
5 11	13 26.19	— 1 21.0	1.222	2.153	13.9	19.1	5 11	13 26.88	— 10 50.8	1.159	2.111	12.3	18.1
5 21	13 20.88	— 1 41.6	1.278	2.146	18.1	19.3	5 21	13 22.07	— 10 37.4	1.216	2.112	16.9	18.3
285762	2000 <i>UE</i> ₂₈		4 18.4 194°67	0.2/18.7	18		141726	2002 <i>LA</i> ₂₂		4 18.4 290°68	0.1/18.3	17	
3 12	14 7.05	— 15 31.4	2.966	3.751	10.5	21.6	3 12	14 11.44	— 12 34.9	1.529	2.353	16.8	20.5
3 22	14 3.01	— 14 45.7	2.868	3.748	8.2	21.4	3 22	14 8.06	— 12 22.5	1.430	2.332	13.3	20.2
4 1	13 57.55	— 13 49.2	2.794	3.745	5.4	21.2	4 1	14 1.81	— 11 55.9	1.350	2.311	8.9	19.9
4 11	13 51.12	— 12 44.4	2.749	3.742	2.4	21.0	4 11	13 53.28	— 11 17.4	1.295	2.290	3.9	19.5
4 21	13 44.24	— 11 34.8	2.734	3.738	0.8	20.9	4 21	13 43.47	— 10 31.5	1.264	2.269	1.5	19.3
5 1	13 37.55	— 10 24.7	2.750	3.734	3.9	21.1	5 1	13 33.69	— 9 44.9	1.260	2.247	6.9	19.6
5 11	13 31.61	— 9 18.8	2.795	3.730	6.8	21.3	5 11	13 25.29	— 9 5.0	1.281	2.226	12.0	19.8
5 21	13 26.86	— 8 20.8	2.866	3.725	9.4	21.5	5 21	13 19.26	— 8 37.9	1.322	2.205	16.6	20.0
140242	2001 <i>SO</i> ₂₅₀		4 18.4 108°17	2.2/16.7	18		505427	2013 <i>RY</i> ₄₇		4 18.4 230°42	3.9/14.1	17	
3 12	14 15.10	— 8 44.3	1.608	2.430	16.2	20.8	3 12	14 9.07	— 4 43.1	2.071	2.897	12.9	22.5
3 22	14 10.08	— 7 54.7	1.547	2.450	12.4	20.6	3 22	14 5.20	— 3 12.6	1.981	2.887	9.9	22.2
4 1	14 2.54	— 6 54.5	1.507	2.469	8.0	20.4	4 1	13 59.32	— 1 32.6	1.915	2.877	6.7	22.0
4 11	13 53.32	— 5 49.5	1.493	2.488	3.6	20.2	4 11	13 51.99	+ 0 10.1	1.877	2.865	4.1	21.8
4 21	13 43.50	— 4 46.7	1.507	2.506	3.1	20.2	4 21	13 43.98	+ 1 47.9	1.868	2.854	4.9	21.8
5 1	13 34.25	— 3 53.0	1.547	2.524	7.2	20.5	5 1	13 36.16	+ 3 12.9	1.887	2.842	8.0	22.0
5 11	13 26.61	— 3 14.0	1.614	2.541	11.4	20.8	5 11	13 29.38	+ 4 19.5	1.933	2.829	11.4	22.2
5 21	13 21.20	— 2 52.5	1.702	2.557	14.9	21.0	5 21	13 24.28	+ 5 4.6	2.000	2.816	14.5	22.4
235586	2004 <i>PG</i> ₃		4 18.4 284°03	2.8/16.5	16		70510	1999 <i>TK</i> ₁₀₃		4 18.4 106°94	3.5/21.0	18	
3 12	14 12.19	— 7 36.0	1.419	2.257	17.2	21.1	3 12	14 14.84	— 20 48.9	1.682	2.467	17.2	19.5
3 22	14 8.81	— 6 59.2	1.322	2.234	13.4	20.8	3 22	14 10.21	— 21 5.3	1.604	2.476	13.9	19.3
4 1	14 2.39	— 6 10.1	1.246	2.212	8.9	20.5	4 1	14 2.87	— 21 3.7	1.547	2.486	10.0	19.1
4 11	13 53.54	— 5 13.6	1.194	2.189	4.2	20.2	4 11	13 53.58	— 20 44.1	1.514	2.495	6.0	18.9
4 21	13 43.32	— 4 16.8	1.166	2.166	3.8	20.1	4 21	13 43.43	— 20 8.6	1.507	2.505	3.5	18.7
5 1	13 33.14	— 3 28.3	1.164	2.142	8.7	20.3	5 1	13 33.67	— 19 22.4	1.527	2.514	5.9	18.9
5 11	13 24.41	— 2 55.7	1.185	2.119	13.9	20.5	5 11	13 25.46	— 18 32.8	1.572	2.522	9.9	19.1
5 21	13 18.21	— 2 43.5	1.226	2.096	18.6	20.7	5 21	13 19.59	— 17 46.7	1.641			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
87479	2000 <i>QB</i> ₁₄₃		4 18.4 237°36	1°1/17.2	18		231649	Korotkiy		4 18.4 170°33	0°1/18.3	18	
3 12	14 8.18	— 9 36.8	2.502	3.310	11.5	19.9	3 12	14 8.64	—14 45.2	1.881	2.690	14.7	20.3
3 22	14 4.18	— 9 5.5	2.407	3.303	8.9	19.7	3 22	14 5.07	—13 56.9	1.796	2.691	11.4	20.1
4 1	13 58.49	— 8 26.3	2.336	3.295	5.8	19.5	4 1	13 59.31	—12 52.9	1.734	2.691	7.6	19.9
4 11	13 51.60	— 7 42.2	2.292	3.287	2.5	19.3	4 11	13 52.01	—11 37.1	1.697	2.692	3.3	19.6
4 21	13 44.13	— 6 57.0	2.278	3.279	1.7	19.2	4 21	13 44.02	—10 15.2	1.688	2.692	1.2	19.5
5 1	13 36.83	— 6 15.0	2.292	3.271	5.0	19.4	5 1	13 36.33	— 8 54.7	1.707	2.692	5.7	19.8
5 11	13 30.40	— 5 40.2	2.334	3.262	8.3	19.6	5 11	13 29.85	— 7 42.7	1.753	2.692	9.8	20.0
5 21	13 25.35	— 5 15.6	2.400	3.253	11.2	19.8	5 21	13 25.23	— 6 44.7	1.822	2.692	13.4	20.2
172446	2003 <i>QN</i> ₅₈		4 18.4 145°19	0°9/17.7	18		241629	1999 <i>VC</i> ₁₇₃		4 18.4 108°34	3°6/15.9	18	
3 12	14 14.62	—10 51.7	1.895	2.703	14.7	21.2	3 12	14 17.81	— 2 25.8	1.822	2.641	14.7	20.5
3 22	14 9.54	—10 24.0	1.818	2.713	11.3	21.0	3 22	14 11.85	— 1 59.7	1.761	2.662	11.3	20.4
4 1	14 2.17	— 9 45.7	1.764	2.723	7.4	20.7	4 1	14 3.58	— 1 30.8	1.723	2.681	7.5	20.2
4 11	13 53.21	— 9 0.4	1.737	2.732	3.1	20.5	4 11	13 53.78	— 1 4.0	1.711	2.701	4.2	20.0
4 21	13 43.59	— 8 12.9	1.737	2.740	1.7	20.4	4 21	13 43.43	— 0 44.1	1.727	2.719	4.2	20.0
5 1	13 34.35	— 7 28.7	1.766	2.747	5.9	20.7	5 1	13 33.63	— 0 35.2	1.771	2.737	7.5	20.3
5 11	13 26.44	— 6 53.2	1.821	2.754	9.9	20.9	5 11	13 25.31	— 0 39.8	1.842	2.755	11.0	20.5
5 21	13 20.51	— 6 29.8	1.901	2.761	13.4	21.2	5 21	13 19.07	— 0 58.4	1.935	2.771	14.1	20.8
438626	2007 <i>YD</i> ₆₅		4 18.4 31°06	7°7/9.6	18		301302	2009 <i>BX</i> ₁₃₀		4 18.4 125°10	0°1/18.4	18	
3 12	14 7.95	+11 19.5	2.264	3.091	12.0	20.7	3 12	14 16.21	—12 32.8	1.724	2.531	16.0	21.2
3 22	14 4.06	+12 38.2	2.203	3.092	9.9	20.6	3 22	14 10.97	—12 20.0	1.651	2.544	12.4	21.0
4 1	13 58.39	+13 51.0	2.166	3.093	8.3	20.5	4 1	14 3.21	—11 55.3	1.601	2.557	8.2	20.7
4 11	13 51.53	+14 51.1	2.154	3.094	7.7	20.5	4 11	13 53.69	—11 21.3	1.576	2.570	3.6	20.5
4 21	13 44.18	+15 32.7	2.169	3.095	8.6	20.5	4 21	13 43.45	—10 42.5	1.578	2.582	1.3	20.3
5 1	13 37.12	+15 52.2	2.208	3.096	10.5	20.6	5 1	13 33.66	—10 4.5	1.608	2.593	5.9	20.7
5 11	13 31.07	+15 48.5	2.271	3.097	12.6	20.8	5 11	13 25.38	— 9 32.8	1.664	2.604	10.2	20.9
5 21	13 26.55	+15 23.1	2.353	3.098	14.6	20.9	5 21	13 19.30	— 9 11.7	1.744	2.614	13.9	21.2
321898	2010 <i>TW</i> ₆		4 18.4 284°22	1°1/19.2	17		101474	1998 <i>WQ</i> ₂₁		4 18.4 178°70	1°1/17.4	18	
3 12	14 11.76	—15 37.5	1.594	2.406	16.8	21.1	3 12	14 11.39	— 8 54.8	2.270	3.079	12.5	20.2
3 22	14 8.32	—15 27.0	1.487	2.381	13.4	20.8	3 22	14 6.77	— 8 37.6	2.184	3.080	9.6	20.0
4 1	14 2.02	—14 59.6	1.400	2.355	9.3	20.5	4 1	14 0.24	— 8 13.4	2.121	3.080	6.3	19.8
4 11	13 53.41	—14 16.5	1.336	2.329	4.5	20.2	4 11	13 52.37	— 7 44.9	2.086	3.081	2.7	19.5
4 21	13 43.45	—13 21.5	1.298	2.302	1.5	19.9	4 21	13 43.90	— 7 15.7	2.079	3.081	1.8	19.5
5 1	13 33.45	—12 20.9	1.287	2.276	6.5	20.1	5 1	13 35.65	— 6 49.9	2.101	3.081	5.3	19.7
5 11	13 24.75	—11 23.1	1.301	2.249	11.7	20.3	5 11	13 28.43	— 6 31.1	2.150	3.080	8.8	19.9
5 21	13 18.38	—10 35.7	1.336	2.222	16.3	20.5	5 21	13 22.81	— 6 21.9	2.223	3.079	11.9	20.1
306670	2000 <i>SO</i> ₃₆₀		4 18.4 213°51	4°9/14.0	17		106670	2000 <i>WX</i> ₁₄₉		4 18.4 50°91	0°1/18.4	18	
3 12	14 13.85	— 0 13.6	1.949	2.774	13.7	20.8	3 12	14 11.32	—13 48.1	1.311	2.142	18.7	20.2
3 22	14 9.00	+ 0 48.7	1.864	2.767	10.6	20.5	3 22	14 7.85	—13 22.2	1.249	2.155	14.5	20.0
4 1	14 1.88	+ 1 54.9	1.802	2.759	7.4	20.3	4 1	14 1.44	—12 39.1	1.207	2.169	9.6	19.7
4 11	13 53.13	+ 2 58.5	1.767	2.749	5.1	20.2	4 11	13 52.98	—11 43.1	1.188	2.183	4.2	19.4
4 21	13 43.61	+ 3 52.8	1.760	2.740	5.8	20.2	4 21	13 43.71	—10 41.1	1.194	2.198	1.5	19.3
5 1	13 34.32	+ 4 31.7	1.780	2.729	8.8	20.3	5 1	13 35.02	— 9 41.5	1.225	2.213	6.9	19.7
5 11	13 26.22	+ 4 51.5	1.825	2.718	12.2	20.5	5 11	13 28.15	— 8 52.3	1.279	2.228	11.8	20.0
5 21	13 20.01	+ 4 51.1	1.892	2.705	15.3	20.7	5 21	13 23.82	— 8 18.8	1.355	2.243	16.0	20.3
219852	2002 <i>CL</i> ₂₁₂		4 18.4 106°90	0°3/18.7	17		405507	2005 <i>AT</i> ₆₈		4 18.4 82°90	5°1/14.7	18	
3 12	14 12.83	—13 49.8	2.043	2.842	14.1	21.7	3 12	14 12.88	— 1 43.4	1.490	2.331	16.3	20.6
3 22	14 7.96	—13 30.4	1.971	2.859	10.9	21.5	3 22	14 8.64	+ 0 46.0	1.428	2.340	12.6	20.4
4 1	14 1.01	—12 59.5	1.922	2.877	7.2	21.3	4 1	14 1.77	+ 0 15.9	1.387	2.350	8.6	20.2
4 11	13 52.68	—12 19.7	1.900	2.893	3.2	21.1	4 11	13 53.08	+ 1 14.5	1.371	2.359	5.4	20.0
4 21	13 43.80	—11 35.2	1.906	2.910	1.0	21.0	4 21	13 43.67	+ 2 2.1	1.381	2.368	6.0	20.0
5 1	13 35.32	—10 50.8	1.940	2.926	5.0	21.3	5 1	13 34.78	+ 2 32.3	1.417	2.378	9.5	20.3
5 11	13 28.09	—10 11.6	2.002	2.941	8.8	21.5	5 11	13 27.49	+ 2 41.4	1.476	2.387	13.3	20.5
5 21	13 22.67	— 9 41.7	2.088	2.957	12.0	21.8	5 21	13 22.49	+ 2 29.3	1.555	2.396	16.8	20.8
363869	2005 <i>SK</i> ₁₇		4 18.4 250°29	1°3/16.9	17		325834	2010 <i>SV</i> ₂₉		4 18.4 157°01	0°6/18.9	16	
3 12	14 6.54	—10 5.6	2.476	3.287	11.5	21.1	3 12	14 13.36	—15 20.7	2.032	2.826	14.3	22.3
3 22	14 2.94	— 9 18.0	2.382	3.280	8.9	20.9	3 22	14 8.51	—14 57.0	1.949	2.833	11.2	22.1
4 1	13 57.68	— 8 21.3	2.313	3.273	5.7	20.7	4 1	14 1.48	—14 19.7	1.888	2.840	7.5	21.9
4 11	13 51.25	— 7 18.9	2.271	3.266	2.5	20.4	4 11	13 52.93	—13 31.5	1.853	2.846	3.5	21.6
4 21	13 44.28	— 6 15.4	2.258	3.259	1.9	20.4	4 21	13 43.72	—12 36.4	1.847	2.851	1.1	21.5
5 1	13 37.49	— 5 15.9	2.274	3.252	5.2	20.6	5 1	13 34.83	—11 40.0	1.870	2.856	5.1	21.8
5 11	13 31.56	— 4 24.9	2.318	3.244	8.4	20.8	5 11	13 27.17	—10 48.1	1.920	2.860	9.0	22.0
5 21	13 27.00	— 3 45.8	2.386	3.237	11.3	20.9	5 21	13 21.38	—10 5.6	1.994	2.863	12.4	22.2
60038	1999 <i>TR</i> ₉₄		4 18.4 234°29	1°2/17.1	18		169446	2002 <i>AA</i> ₁₉₃		4 18.4 345°95	0°7/17.8	17	
3 12	14 9.51	— 7 42.0	2.823	3.627	10.5	19.8	3 12	14 6.46	—11 24.0	1.951	2.772	13.8	19.8
3 22	14 5.02	— 7 23.8	2.722	3.617	8.0	19.6	3 22	14 3.35	—10 58.0	1.864	2.766	10.7	19.5
4 1	13 58.96	— 7 0.3	2.647	3.606	5.2	19.4	4 1	13 58.18	—10 21.2	1.799	2.760	7.0	19.3
4 11	13 51.79	— 6 34.0	2.600	3.594	2.3	19.2	4 11	13 51.54	— 9 36.8	1.760	2.756	3.0	19.0
4 21	13 44.09	— 6 7.7	2.582	3.583	1.8	19.2	4 21	13 44.19	— 8 49.3	1.748	2.751	1.5	18.9
5 1	13 36.50	— 5 44.8	2.594	3.571	4.7	19.3	5 1	13 37.07	— 8 4.3	1.764	2.748	5.6	19.2
5 11	13 29.67	— 5 28.1	2.634	3.558	7.6	19.5	5 11	13 31.04	— 7 27.0	1.805	2.745	9.5	19.4
5 21	13 24.10	— 5 19.9	2.700	3.546	10.3	19.7	5 21	13 26.74	— 7 1.3	1.869	2.742	13.0	19.6
267184	2000 <i>QN</i> _{101</}												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
225924	2002 AE ₁₁₆		4 18.4	23°02'	2°6'/16.4	18	155999	2001 RV ₂₆		4 18.4	239°95'	0°2'/18.6	17
3 12	14 10.80	- 6 18.3	1.764	2.593	14.7	20.1	3 12	14 14.75	-13 45.7	1.733	2.539	15.9	21.7
3 22	14 6.81	- 5 44.4	1.686	2.594	11.3	19.9	3 22	14 10.26	-13 27.4	1.632	2.524	12.5	21.4
4 1	14 0.50	- 5 3.0	1.631	2.595	7.4	19.7	4 1	14 3.07	-12 54.8	1.553	2.509	8.5	21.1
4 11	13 52.55	- 4 18.9	1.602	2.596	3.6	19.4	4 11	13 53.80	-12 9.9	1.499	2.493	3.8	20.8
4 21	13 43.86	- 3 37.8	1.599	2.597	3.4	19.4	4 21	13 43.41	-11 17.0	1.473	2.477	1.2	20.6
5 1	13 35.49	- 3 5.2	1.623	2.598	7.1	19.6	5 1	13 33.13	-10 22.4	1.474	2.459	6.3	20.9
5 11	13 28.41	- 2 45.7	1.673	2.599	11.1	19.9	5 11	13 24.16	- 9 33.3	1.500	2.441	11.0	21.1
5 21	13 23.31	- 2 41.6	1.744	2.600	14.6	20.1	5 21	13 17.40	- 8 55.5	1.550	2.423	15.2	21.3
432329	2009 UD ₁₀₃		4 18.4	124°84'	0°5'/17.9	18	419896	2011 AQ ₆₁		4 18.4	41°93'	3°7'/15.7	17
3 12	14 11.55	-12 26.4	2.418	3.214	12.2	22.4	3 12	14 10.26	- 4 55.8	1.445	2.289	16.6	20.4
3 22	14 6.62	-11 44.5	2.345	3.233	9.4	22.2	3 22	14 6.66	- 4 8.2	1.387	2.303	12.7	20.2
4 1	13 59.97	-10 52.8	2.296	3.252	6.1	22.0	4 1	14 0.47	- 3 13.5	1.351	2.317	8.3	20.0
4 11	13 52.20	- 9 54.6	2.275	3.270	2.6	21.8	4 11	13 52.52	- 2 18.5	1.339	2.332	4.4	19.8
4 21	13 44.00	- 8 54.2	2.284	3.287	1.3	21.8	4 21	13 43.92	- 1 30.6	1.353	2.348	4.6	19.8
5 1	13 36.16	- 7 56.6	2.322	3.303	4.7	22.0	5 1	13 35.87	- 0 56.2	1.392	2.364	8.4	20.1
5 11	13 29.35	- 7 6.3	2.389	3.319	8.0	22.3	5 11	13 29.41	- 0 39.9	1.454	2.380	12.5	20.3
5 21	13 24.07	- 6 26.6	2.481	3.334	10.9	22.5	5 21	13 25.20	- 0 42.6	1.537	2.397	16.0	20.6
251778	1999 RM ₆₉		4 18.4	279°07'	2°4'/16.6	17	435010	2006 VO ₁₉		4 18.4	206°90'	2°0'/16.5	17
3 12	14 11.54	- 8 10.9	1.612	2.442	15.8	20.7	3 12	14 11.14	- 5 5.4	2.610	3.420	11.1	21.7
3 22	14 7.94	- 7 30.7	1.512	2.420	12.3	20.5	3 22	14 6.33	- 4 49.3	2.520	3.417	8.5	21.6
4 1	14 1.63	- 6 38.4	1.433	2.397	8.2	20.2	4 1	13 59.86	- 4 29.5	2.454	3.413	5.6	21.4
4 11	13 53.20	- 5 38.7	1.379	2.374	3.8	19.8	4 11	13 52.21	- 4 8.9	2.416	3.409	2.7	21.2
4 21	13 43.59	- 4 38.1	1.352	2.351	3.3	19.7	4 21	13 44.02	- 3 50.5	2.408	3.405	2.5	21.1
5 1	13 34.03	- 3 44.3	1.350	2.328	7.9	19.9	5 1	13 36.01	- 3 37.5	2.429	3.401	5.3	21.3
5 11	13 25.77	- 3 4.3	1.373	2.304	12.7	20.2	5 11	13 28.86	- 3 32.6	2.478	3.396	8.3	21.5
5 21	13 19.72	- 2 42.8	1.418	2.280	16.9	20.3	5 21	13 23.10	- 3 37.3	2.551	3.391	11.0	21.7
149405	2003 AD ₅₇		4 18.4	65°91'	4°1'/22.2	17	493560	2015 KL ₁₉		4 18.4	200°45'	2°8'/21.5	17
3 12	14 11.83	-23 52.9	2.142	2.902	14.7	19.9	3 12	14 8.36	-22 32.5	2.461	3.225	13.0	21.9
3 22	14 7.33	-24 14.4	2.066	2.918	12.1	19.7	3 22	14 4.47	-22 23.7	2.366	3.224	10.5	21.7
4 1	14 0.70	-24 19.6	2.011	2.934	9.0	19.6	4 1	13 58.76	-21 59.8	2.292	3.223	7.7	21.5
4 11	13 52.60	-24 8.2	1.981	2.951	6.0	19.4	4 11	13 51.77	-21 21.4	2.244	3.222	4.7	21.3
4 21	13 43.87	-23 41.7	1.977	2.967	4.1	19.3	4 21	13 44.18	-20 30.8	2.224	3.221	2.8	21.2
5 1	13 35.47	-23 3.8	2.002	2.984	5.3	19.4	5 1	13 36.79	-19 32.2	2.233	3.219	4.4	21.3
5 11	13 28.29	-22 19.9	2.053	3.000	8.1	19.6	5 11	13 30.36	-18 30.8	2.269	3.218	7.4	21.5
5 21	13 22.95	-21 36.0	2.129	3.016	11.0	19.8	5 21	13 25.44	-17 32.2	2.331	3.216	10.3	21.6
208868	2002 TL ₄		4 18.4	258°74'	1°6'/16.8	18	270434	2002 CG ₉₁		4 18.4	96°94'	2°3'/16.5	17
3 12	14 9.41	- 8 30.5	2.306	3.119	12.2	20.7	3 12	14 11.51	- 7 14.6	1.904	2.726	14.1	21.0
3 22	14 5.36	- 7 54.7	2.203	3.102	9.4	20.5	3 22	14 7.06	- 6 33.8	1.836	2.740	10.7	20.8
4 1	13 59.41	- 7 10.5	2.124	3.085	6.2	20.3	4 1	14 0.49	- 5 45.4	1.792	2.754	7.0	20.6
4 11	13 52.07	- 6 21.4	2.073	3.068	2.8	20.0	4 11	13 52.50	- 4 54.2	1.773	2.767	3.3	20.4
4 21	13 44.03	- 5 31.7	2.050	3.050	2.3	19.9	4 21	13 43.95	- 4 5.5	1.782	2.781	3.0	20.4
5 1	13 36.09	- 4 46.3	2.056	3.032	5.7	20.1	5 1	13 35.81	- 3 24.8	1.819	2.794	6.5	20.6
5 11	13 29.06	- 4 9.9	2.089	3.014	9.3	20.3	5 11	13 28.94	- 2 56.4	1.882	2.807	10.2	20.9
5 21	13 23.56	- 3 45.6	2.145	2.995	12.5	20.5	5 21	13 23.91	- 2 42.6	1.968	2.819	13.4	21.1
299716	2006 RN ₆		4 18.4	146°39'	1°0'/17.2	18	308420	2005 SO ₁₂₅		4 18.4	312°41'	3°3'/20.8	16
3 12	14 7.07	-11 19.0	2.489	3.296	11.6	21.2	3 12	14 14.22	-19 11.7	2.200	2.974	14.0	20.7
3 22	14 3.26	-10 24.3	2.405	3.300	8.9	21.0	3 22	14 9.35	-19 55.3	2.100	2.966	11.4	20.5
4 1	13 57.84	- 9 19.7	2.345	3.305	5.8	20.8	4 1	14 2.21	-20 28.1	2.022	2.957	8.3	20.3
4 11	13 51.31	- 8 9.0	2.314	3.309	2.4	20.6	4 11	13 53.37	-20 49.1	1.970	2.950	5.1	20.0
4 21	13 44.32	- 6 56.9	2.311	3.313	1.7	20.5	4 21	13 43.60	-20 58.4	1.946	2.942	3.3	19.9
5 1	13 37.57	- 5 48.9	2.338	3.317	5.0	20.8	5 1	13 33.91	-20 57.8	1.950	2.934	5.2	20.0
5 11	13 31.72	- 4 49.6	2.393	3.320	8.2	21.0	5 11	13 25.27	-20 51.1	1.982	2.927	8.5	20.2
5 21	13 27.26	- 4 2.4	2.473	3.324	11.0	21.2	5 21	13 18.43	-20 42.6	2.038	2.919	11.7	20.4
170392	2003 SZ ₃₀₄		4 18.4	215°06'	1°6'/19.9	17	345661	2006 TH ₁₀₃		4 18.4	107°13'	0°9'/19.4	18
3 12	14 10.98	-17 27.0	2.219	3.005	13.5	20.5	3 12	14 7.52	-17 8.9	2.418	3.207	12.5	20.8
3 22	14 6.66	-17 22.6	2.124	3.001	10.7	20.3	3 22	14 3.70	-16 35.0	2.334	3.215	9.8	20.6
4 1	14 0.29	-17 5.2	2.052	2.997	7.5	20.1	4 1	13 58.17	-15 48.1	2.273	3.222	6.6	20.4
4 11	13 52.45	-16 36.1	2.005	2.993	3.9	19.9	4 11	13 51.48	-14 50.6	2.239	3.230	3.2	20.2
4 21	13 43.90	-15 57.9	1.986	2.988	1.7	19.7	4 21	13 44.30	-13 46.4	2.233	3.237	1.1	20.1
5 1	13 35.54	-15 14.7	1.996	2.984	4.7	19.9	5 1	13 37.39	-12 40.5	2.257	3.245	4.3	20.3
5 11	13 28.22	-14 31.9	2.033	2.978	8.3	20.1	5 11	13 31.43	-11 38.2	2.309	3.252	7.6	20.5
5 21	13 22.59	-13 54.1	2.095	2.973	11.6	20.3	5 21	13 26.94	-10 44.1	2.386	3.259	10.5	20.7
236160	2005 UM ₃₇₁		4 18.4	201°73'	0°9'/19.0	18	155440	1998 FN ₈		4 18.4	50°23'	0°1'/18.4	18
3 12	14 12.87	-15 28.6	1.430	2.248	18.1	20.7	3 12	14 14.02	-11 42.2	1.516	2.338	17.1	20.2
3 22	14 9.12	-15 11.2	1.349	2.247	14.3	20.4	3 22	14 9.49	-11 43.9	1.457	2.358	13.2	19.9
4 1	14 2.41	-14 35.7	1.289	2.246	9.7	20.1	4 1	14 2.31	-11 34.3	1.419	2.379	8.7	19.7
4 11	13 53.50	-13 44.6	1.252	2.245	4.5	19.8	4 11	13 53.33	-11 16.1	1.405	2.400	3.8	19.5
4 21	13 43.54	-12 43.4	1.240	2.244	1.4	19.6	4 21	13 43.68	-10 53.5	1.417	2.421	1.3	19.4
5 1	13 33.93	-11 39.7	1.254	2.243	6.6	19.9	5 1	13 34.60	-10 31.7	1.455	2.443	6.2	19.7
5 11	13 25.98	-10 42.4	1.293	2.242	11.7	20.2	5 11	13 27.19	-10 15.9	1.519	2.464	10.6	20.0
5 21	13 20.56	- 9 58.2	1.353	2.240	16.1	20.5	5 21	13 22.11	-10 9.6	1.605	2.486	14.3	20.3
45610	2000 DJ ₄₈		4 18.4	206°58'	0°4'/18.8	18 R	513114	2017 WZ ₂₆		4			

EPHEMERIDES

4 18.4

4 18.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
455870	2005 UX ₈₃		4 18.4 209°14	0°5/18.1	17		423553	2005 UK ₃₂₃		4 18.4 162°99	0°6/17.8	17	
3 12	14 14.73	-12 33.6	1.683	2.494	16.1	22.4	3 12	14 10.07	-13 32.8	2.160	2.963	13.3	21.7
3 22	14 10.16	-12 3.9	1.593	2.489	12.6	22.1	3 22	14 5.84	-12 33.6	2.076	2.968	10.3	21.5
4 1	14 2.92	-11 19.9	1.525	2.484	8.3	21.9	4 1	13 59.67	-11 20.9	2.015	2.972	6.7	21.3
4 11	13 53.70	-10 25.0	1.482	2.477	3.6	21.6	4 11	13 52.17	-9 58.8	1.981	2.976	2.8	21.0
4 21	13 43.51	-9 24.5	1.466	2.470	1.6	21.4	4 21	13 44.11	-8 33.2	1.976	2.979	1.5	20.9
5 1	13 33.56	-8 25.5	1.478	2.462	6.5	21.7	5 1	13 36.34	-7 10.5	2.001	2.982	5.4	21.2
5 11	13 25.03	-7 35.1	1.516	2.453	11.2	21.9	5 11	13 29.66	-5 57.2	2.053	2.985	9.1	21.4
5 21	13 18.74	-6 58.5	1.576	2.444	15.2	22.2	5 21	13 24.64	-4 57.7	2.130	2.986	12.3	21.7
410390	2007 VU ₃₂₄		4 18.4 197°32	2°9/20.7	16		372614	2009 VA ₂₉		4 18.4 182°86	0°0/18.5	17	
3 12	14 15.41	-19 51.1	1.882	2.661	15.8	22.3	3 12	14 11.32	-13 51.4	2.262	3.058	13.0	22.4
3 22	14 10.54	-20 0.9	1.789	2.659	12.8	22.0	3 22	14 6.78	-13 19.9	2.172	3.059	10.1	22.2
4 1	14 3.10	-19 54.7	1.717	2.656	9.2	21.8	4 1	14 0.30	-12 36.7	2.105	3.059	6.7	21.9
4 11	13 53.77	-19 32.5	1.669	2.653	5.3	21.6	4 11	13 52.46	-11 44.4	2.065	3.059	2.9	21.7
4 21	13 43.48	-18 56.4	1.649	2.649	2.9	21.4	4 21	13 44.00	-10 47.2	2.054	3.058	1.0	21.5
5 1	13 33.42	-18 10.7	1.657	2.644	5.6	21.6	5 1	13 35.78	-9 50.2	2.072	3.056	4.9	21.8
5 11	13 24.68	-17 22.2	1.692	2.639	9.5	21.8	5 11	13 28.60	-8 58.7	2.118	3.054	8.5	22.0
5 21	13 18.07	-16 37.2	1.751	2.634	13.2	22.0	5 21	13 23.05	-8 16.9	2.188	3.051	11.7	22.2
142164	2002 RG ₃₂		4 18.4 306°41	4°1/21.2	17		436004	2009 FA ₅₉		4 18.4 337°19	0°7/17.7	17	
3 12	14 11.93	-20 58.7	1.531	2.327	18.1	19.8	3 12	14 7.04	-11 53.5	2.148	2.961	13.0	21.5
3 22	14 8.53	-21 25.2	1.439	2.317	14.8	19.5	3 22	14 3.59	-11 13.8	2.061	2.959	10.0	21.3
4 1	14 2.16	-21 33.2	1.366	2.307	10.9	19.3	4 1	13 58.25	-10 22.9	1.998	2.957	6.6	21.1
4 11	13 53.48	-21 21.6	1.315	2.297	6.7	19.0	4 11	13 51.58	-9 24.5	1.960	2.956	2.8	20.8
4 21	13 43.56	-20 51.3	1.289	2.287	4.1	18.8	4 21	13 44.31	-8 23.3	1.951	2.954	1.5	20.7
5 1	13 33.77	-20 7.0	1.289	2.277	6.6	18.9	5 1	13 37.27	-7 24.8	1.970	2.953	5.3	21.0
5 11	13 25.50	-19 16.6	1.313	2.268	11.0	19.2	5 11	13 31.24	-6 34.5	2.016	2.951	9.0	21.2
5 21	13 19.72	-18 28.4	1.360	2.259	15.2	19.4	5 21	13 26.80	-5 56.1	2.086	2.950	12.2	21.4
6672	Corot		4 18.4 197°72	0°1/18.5	18 R		338330	2002 VT ₁₃₁		4 18.4 120°33	1°4/17.1	17	
3 12	14 12.52	-14 11.8	2.130	2.926	13.7	19.3	3 12	14 11.76	-7 41.1	2.431	3.238	11.9	21.7
3 22	14 7.86	-13 36.7	2.036	2.923	10.7	19.0	3 22	14 6.84	-7 23.1	2.355	3.250	9.1	21.5
4 1	14 1.10	-12 48.4	1.965	2.919	7.1	18.8	4 1	14 0.18	-6 59.5	2.303	3.262	5.9	21.3
4 11	13 52.82	-11 49.9	1.920	2.914	3.1	18.6	4 11	13 52.35	-6 33.1	2.279	3.274	2.6	21.1
4 21	13 43.83	-10 45.5	1.905	2.909	1.1	18.4	4 21	13 44.06	-6 7.4	2.285	3.285	2.0	21.1
5 1	13 35.07	-9 40.9	1.919	2.903	5.2	18.7	5 1	13 36.05	-5 45.8	2.319	3.296	5.1	21.3
5 11	13 27.42	-8 42.4	1.960	2.896	9.1	18.9	5 11	13 29.04	-5 31.6	2.382	3.307	8.3	21.6
5 21	13 21.53	-7 54.7	2.026	2.888	12.6	19.1	5 21	13 23.54	-5 26.6	2.469	3.318	11.0	21.8
292194	2006 SY ₃₂		4 18.4 151°50	0°8/19.1	16		231502	2008 RD ₂		4 18.4 198°08	1°0/17.5	18	
3 12	14 13.78	-15 29.3	2.086	2.877	14.1	22.4	3 12	14 10.27	-10 30.2	2.165	2.975	13.0	21.0
3 22	14 8.78	-15 10.7	2.003	2.886	11.0	22.2	3 22	14 6.06	-9 56.4	2.076	2.973	10.0	20.8
4 1	14 1.65	-14 39.3	1.943	2.894	7.4	22.0	4 1	13 59.87	-9 12.8	2.012	2.971	6.6	20.6
4 11	13 53.03	-13 57.1	1.910	2.902	3.5	21.8	4 11	13 52.29	-8 22.9	1.973	2.968	2.8	20.3
4 21	13 43.78	-13 8.0	1.905	2.909	1.1	21.6	4 21	13 44.07	-7 31.2	1.963	2.966	1.8	20.2
5 1	13 34.84	-12 17.0	1.929	2.915	5.0	21.9	5 1	13 36.08	-6 42.7	1.982	2.963	5.5	20.5
5 11	13 27.12	-11 29.8	1.980	2.921	8.8	22.1	5 11	13 29.13	-6 2.6	2.028	2.959	9.2	20.7
5 21	13 21.23	-10 50.9	2.056	2.926	12.1	22.3	5 21	13 23.84	-5 34.1	2.098	2.956	12.4	20.9
287074	2002 RC ₃₄		4 18.4 222°01	0°4/18.7	17		11714	Mikebrown		4 18.4 281°98	0°9/17.7	18	
3 12	14 16.18	-13 40.8	1.637	2.445	16.6	22.1	3 12	14 9.95	-11 27.0	1.968	2.782	14.0	18.6
3 22	14 11.46	-13 29.7	1.544	2.436	13.1	21.8	3 22	14 6.27	-10 53.3	1.858	2.756	10.9	18.3
4 1	14 3.91	-13 4.3	1.471	2.427	8.8	21.6	4 1	14 0.32	-10 7.1	1.770	2.730	7.3	18.1
4 11	13 54.19	-12 26.9	1.424	2.418	4.0	21.2	4 11	13 52.61	-9 11.4	1.708	2.703	3.1	17.7
4 21	13 43.34	-11 41.5	1.403	2.407	1.3	21.0	4 21	13 43.93	-8 10.9	1.674	2.676	1.8	17.6
5 1	13 32.67	-10 54.2	1.410	2.396	6.4	21.3	5 1	13 35.27	-7 11.9	1.667	2.649	6.1	17.8
5 11	13 23.47	-10 12.2	1.442	2.384	11.3	21.6	5 11	13 27.64	-6 20.8	1.687	2.622	10.4	18.0
5 21	13 16.62	-9 41.2	1.497	2.372	15.5	21.8	5 21	13 21.82	-5 42.6	1.730	2.595	14.3	18.2
22853	1999 RH ₁₃₀		4 18.4 186°38	1°0/17.5	18		439566	2014 DX ₈₀		4 18.4 27°62	0°1/18.3	17	
3 12	14 13.24	-10 55.4	2.091	2.896	13.6	20.0	3 12	14 6.63	-14 4.2	2.016	2.828	13.8	21.5
3 22	14 8.39	-10 17.1	2.002	2.896	10.5	19.8	3 22	14 3.37	-13 24.1	1.936	2.832	10.7	21.3
4 1	14 1.43	-9 28.0	1.937	2.895	6.9	19.6	4 1	13 58.14	-12 30.7	1.878	2.836	7.1	21.1
4 11	13 52.96	-8 31.6	1.899	2.894	2.9	19.3	4 11	13 51.54	-11 27.6	1.847	2.841	3.1	20.8
4 21	13 43.81	-7 33.0	1.889	2.891	1.8	19.2	4 21	13 44.36	-10 19.9	1.843	2.847	1.1	20.7
5 1	13 34.92	-6 37.8	1.909	2.888	5.7	19.5	5 1	13 37.46	-9 13.6	1.867	2.852	5.2	21.0
5 11	13 27.17	-5 51.3	1.956	2.885	9.6	19.7	5 11	13 31.67	-8 14.9	1.917	2.858	9.0	21.2
5 21	13 21.20	-5 17.4	2.026	2.880	12.9	19.9	5 21	13 27.56	-7 28.2	1.991	2.864	12.3	21.4
493575	2015 KY ₁₄₂		4 18.4 249°29	3°9/22.9	17		235294	2003 UC ₆₉		4 18.4 173°21	1°0/17.4	17	
3 12	14 8.39	-26 49.4	2.547	3.287	13.2	21.3	3 12	14 9.49	-10 47.7	2.202	3.012	12.8	21.7
3 22	14 4.57	-26 40.0	2.439	3.277	11.0	21.1	3 22	14 5.39	-10 9.0	2.116	3.013	9.9	21.5
4 1	13 58.89	-26 13.1	2.352	3.266	8.4	20.9	4 1	13 59.40	-9 20.2	2.055	3.014	6.4	21.3
4 11	13 51.86	-25 28.5	2.291	3.255	5.7	20.7	4 11	13 52.08	-8 25.1	2.020	3.015	2.7	21.0
4 21	13 44.19	-24 27.9	2.257	3.244	4.0	20.6	4 21	13 44.17	-7 28.3	2.014	3.016	1.7	20.9
5 1	13 36.66	-23 15.4	2.251	3.233	4.8	20.6	5 1	13 36.52	-6 35.0	2.036	3.016	5.4	21.2
5 11	13 30.07	-21 56.7	2.274	3.221	7.4	20.8	5 11	13 29.89	-5 50.2	2.086	3.017	9.0	21.4
5 21	13 25.01	-20 38.2	2.323	3.210	10.2	20.9	5 21	13 24.87	-5 17.4	2.159	3.016	12.1	21.6
217774	2000 RV ₇₆		4 18.4 135°76	5°1/12.7	17		102197	1999 SR ₁₁		4 18.4 141°54	2°9/15.6	18	
3 12	14 11.26	+ 2 46.7	2.374	3.196	11.6	20.1	3 12	14 11.71	-				

EPHEMERIDES

4 18.4

4 18.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
56078	1999 AT		4 18.4	95°54	2.6/16.4	18	429147	2009 UA ₉₁		4 18.4	129°56	4.3/22.3	17
3 12	14 13.91	- 5 56.2	1.776	2.600	14.9	19.5	3 12	14 15.60	-24 35.8	2.202	2.950	14.8	22.2
3 22	14 9.03	- 5 22.6	1.712	2.616	11.4	19.3	3 22	14 10.27	-25 0.2	2.119	2.963	12.1	22.0
4 1	14 1.85	- 4 42.5	1.671	2.633	7.4	19.1	4 1	14 2.70	-25 8.2	2.057	2.975	9.2	21.8
4 11	13 53.13	- 4 0.8	1.655	2.649	3.6	18.9	4 11	13 53.56	-24 59.1	2.020	2.987	6.2	21.7
4 21	13 43.83	- 3 23.0	1.667	2.664	3.4	18.9	4 21	13 43.71	-24 33.9	2.011	2.999	4.3	21.6
5 1	13 35.01	- 2 54.2	1.706	2.680	7.0	19.1	5 1	13 34.16	-23 55.9	2.030	3.010	5.5	21.7
5 11	13 27.59	- 2 38.3	1.772	2.695	10.7	19.4	5 11	13 25.86	-23 10.8	2.077	3.020	8.3	21.9
5 21	13 22.20	- 2 37.0	1.859	2.710	14.0	19.6	5 21	13 19.46	-22 24.5	2.148	3.030	11.2	22.1
148108	1999 RJ ₁₆₄		4 18.4	197°24	1.5/16.6	18	501198	2013 TO ₁₂₆		4 18.4	204°01	1.3/19.7	17
3 12	14 7.12	- 8 12.8	2.910	3.718	10.1	20.4	3 12	14 12.42	-16 54.7	2.335	3.117	13.1	22.4
3 22	14 3.12	- 7 30.3	2.819	3.715	7.7	20.3	3 22	14 7.69	-16 41.7	2.236	3.112	10.3	22.2
4 1	13 57.69	- 6 41.4	2.752	3.712	5.0	20.1	4 1	14 0.97	-16 16.1	2.160	3.106	7.1	22.0
4 11	13 51.29	- 5 49.2	2.714	3.709	2.3	19.9	4 11	13 52.81	-15 39.3	2.111	3.100	3.6	21.7
4 21	13 44.45	- 4 57.4	2.706	3.705	2.0	19.8	4 21	13 43.96	-14 54.2	2.090	3.094	1.4	21.5
5 1	13 37.77	- 4 10.0	2.728	3.701	4.7	20.0	5 1	13 35.29	-14 5.1	2.099	3.086	4.6	21.8
5 11	13 31.83	- 3 30.3	2.777	3.696	7.5	20.2	5 11	13 27.62	-13 17.2	2.136	3.078	8.1	22.0
5 21	13 27.07	- 3 0.9	2.852	3.692	10.0	20.4	5 21	13 21.58	-12 35.2	2.198	3.070	11.4	22.1
267751	2003 HL ₂₆		4 18.4	258°37	1.2/17.4	17	420975	2013 PP ₂₄		4 18.5	323°05	4.1/21.4	17
3 12	14 10.14	-10 33.0	1.859	2.678	14.5	21.0	3 12	14 9.52	-21 52.3	1.486	2.286	18.4	20.7
3 22	14 6.35	- 9 58.0	1.769	2.670	11.2	20.8	3 22	14 6.71	-22 4.5	1.396	2.276	15.1	20.4
4 1	14 0.28	- 9 11.4	1.702	2.663	7.4	20.5	4 1	14 0.98	-21 55.3	1.326	2.267	11.1	20.2
4 11	13 52.55	- 8 17.1	1.660	2.655	3.2	20.2	4 11	13 53.01	-21 24.1	1.277	2.259	6.8	19.9
4 21	13 44.01	- 7 20.5	1.645	2.648	2.0	20.1	4 21	13 43.87	-20 33.0	1.253	2.251	4.1	19.7
5 1	13 35.69	- 6 27.6	1.658	2.640	6.3	20.4	5 1	13 34.94	-19 28.0	1.254	2.243	6.5	19.8
5 11	13 28.56	- 5 44.6	1.697	2.632	10.4	20.6	5 11	13 27.53	-18 18.4	1.279	2.236	10.9	20.1
5 21	13 23.33	- 5 15.4	1.759	2.624	14.1	20.8	5 21	13 22.60	-17 13.3	1.326	2.229	15.2	20.3
123273	2000 UO ₉₀		4 18.4	269°16	3.1/16.3	18	328883	2010 HG		4 18.5	293°79	0.7/19.8	18
3 12	14 15.37	- 2 46.5	1.914	2.735	14.1	19.8	3 12	14 1.49	-16 53.1	4.299	5.075	7.6	20.1
3 22	14 10.34	- 2 36.9	1.822	2.723	10.9	19.6	3 22	13 58.47	-16 31.5	4.191	5.064	6.0	20.0
4 1	14 2.91	- 2 24.5	1.752	2.711	7.3	19.3	4 1	13 54.50	-16 2.7	4.109	5.053	4.1	19.9
4 11	13 53.71	- 2 13.5	1.708	2.699	3.9	19.1	4 11	13 49.89	-15 28.0	4.054	5.043	2.1	19.7
4 21	13 43.61	- 2 7.8	1.692	2.687	3.8	19.0	4 21	13 44.99	-14 49.2	4.029	5.032	0.8	19.6
5 1	13 33.67	- 2 11.3	1.704	2.675	7.3	19.2	5 1	13 40.17	-14 8.5	4.035	5.022	2.6	19.7
5 11	13 24.93	- 2 26.7	1.742	2.662	11.1	19.4	5 11	13 35.80	-13 28.5	4.069	5.011	4.6	19.8
5 21	13 18.15	- 2 55.1	1.803	2.650	14.6	19.6	5 21	13 32.19	-12 51.4	4.131	5.001	6.5	20.0
184317	2005 EV ₃₂₃		4 18.4	14°24	0.2/18.3	18	203570	2002 CM ₁₅₂		4 18.5	8°45	6.1/14.2	18
3 12	14 8.27	-14 13.5	1.328	2.162	18.3	19.9	3 12	14 11.24	- 0 39.8	1.328	2.180	17.3	20.3
3 22	14 5.65	-13 37.0	1.256	2.164	14.3	19.7	3 22	14 7.84	+ 0 24.1	1.262	2.180	13.4	20.1
4 1	14 0.15	-12 41.5	1.203	2.166	9.5	19.4	4 1	14 1.54	+ 1 32.6	1.217	2.181	9.3	19.8
4 11	13 52.56	-11 31.5	1.174	2.169	4.1	19.1	4 11	13 53.16	+ 2 36.7	1.195	2.182	6.3	19.7
4 21	13 44.03	-10 14.3	1.169	2.173	1.5	18.9	4 21	13 43.87	+ 3 27.4	1.198	2.183	7.1	19.7
5 1	13 35.92	- 8 59.4	1.189	2.177	7.0	19.3	5 1	13 35.03	+ 3 57.0	1.225	2.184	10.8	19.9
5 11	13 29.49	- 7 56.1	1.232	2.181	12.1	19.6	5 11	13 27.88	+ 4 1.5	1.273	2.186	14.9	20.2
5 21	13 25.51	- 7 10.5	1.297	2.187	16.5	19.8	5 21	13 23.20	+ 3 41.2	1.341	2.189	18.6	20.4
507133	2009 VY ₁₀		4 18.4	70°46	0.3/18.0	17	59511	1999 JP ₁₄		4 18.5	217°11	1.6/20.4	18
3 12	14 5.97	-11 50.5	2.984	3.783	10.1	21.8	3 12	14 11.24	-22 32.3	2.384	3.144	13.4	18.6
3 22	14 2.12	-11 23.4	2.912	3.802	7.7	21.7	3 22	14 6.74	-21 21.5	2.275	3.136	10.8	18.3
4 1	13 56.96	-10 49.1	2.865	3.821	5.0	21.5	4 1	14 0.30	-19 49.8	2.189	3.127	7.6	18.1
4 11	13 50.94	-10 10.1	2.846	3.840	2.1	21.3	4 11	13 52.51	-17 59.6	2.131	3.117	4.1	17.9
4 21	13 44.61	- 9 29.6	2.856	3.859	0.9	21.3	4 21	13 44.09	-15 55.9	2.104	3.106	1.6	17.7
5 1	13 38.51	- 8 50.7	2.896	3.878	3.8	21.5	5 1	13 35.92	-13 46.4	2.108	3.095	4.5	17.9
5 11	13 33.17	- 8 16.6	2.964	3.897	6.5	21.7	5 11	13 28.78	-11 39.7	2.142	3.083	8.2	18.1
5 21	13 28.98	- 7 49.9	3.058	3.916	8.9	21.9	5 21	13 23.27	- 9 43.5	2.204	3.071	11.5	18.3
477141	2009 DK ₃₃		4 18.4	327°75	3.3/20.8	17	48428	1989 SV ₅		4 18.5	64°20	3.1/16.3	18
3 12	14 14.11	-19 13.0	2.122	2.899	14.4	21.3	3 12	14 14.10	- 5 6.4	1.549	2.382	16.2	18.2
3 22	14 9.32	-19 54.4	2.027	2.894	11.6	21.1	3 22	14 9.43	- 4 36.3	1.493	2.401	12.4	18.0
4 1	14 2.23	-20 24.4	1.953	2.890	8.4	20.8	4 1	14 2.22	- 4 0.2	1.458	2.421	8.1	17.8
4 11	13 53.43	-20 42.0	1.906	2.885	5.1	20.6	4 11	13 53.33	- 3 23.7	1.448	2.441	4.1	17.6
4 21	13 43.72	-20 47.6	1.885	2.881	3.3	20.5	4 21	13 43.84	- 2 52.4	1.464	2.461	3.8	17.6
5 1	13 34.13	-20 43.2	1.893	2.877	5.3	20.6	5 1	13 34.93	- 2 31.8	1.507	2.481	7.6	17.9
5 11	13 25.65	-20 32.9	1.928	2.874	8.6	20.8	5 11	13 27.63	- 2 25.5	1.574	2.501	11.6	18.2
5 21	13 19.04	-20 21.3	1.987	2.870	11.9	21.0	5 21	13 22.57	- 2 34.7	1.663	2.521	15.1	18.4
433540	2013 WN ₉₈		4 18.4	114°77	5.1/13.5	17	105995	2000 SN ₂₈₀		4 18.5	157°24	1.2/19.9	18
3 12	14 9.08	+ 0 30.0	1.996	2.830	13.1	20.5	3 12	14 9.50	-17 8.0	2.880	3.656	11.0	19.9
3 22	14 5.19	+ 1 36.9	1.925	2.832	10.1	20.3	3 22	14 4.99	-16 59.5	2.790	3.661	8.7	19.7
4 1	13 59.31	+ 2 46.2	1.877	2.835	7.1	20.2	4 1	13 58.96	-16 40.9	2.723	3.667	6.0	19.6
4 11	13 52.06	+ 3 51.3	1.856	2.837	5.2	20.0	4 11	13 51.88	-16 13.6	2.684	3.672	3.1	19.4
4 21	13 44.23	+ 4 45.9	1.862	2.839	5.9	20.1	4 21	13 44.33	-15 39.9	2.674	3.676	1.3	19.2
5 1	13 36.70	+ 5 24.6	1.895	2.841	8.6	20.2	5 1	13 36.97	-15 2.9	2.694	3.680	3.7	19.4
5 11	13 30.30	+ 5 44.2	1.953	2.844	11.6	20.4	5 11	13 30.42	-14 26.3	2.742	3.684	6.6	19.6
5 21	13 25.60	+ 5 44.0	2.032	2.846	14.4	20.6	5 21	13 25.16	-13 53.7	2.817	3.688	9.2	19.8
333269	2012 KR ₂₄		4 18.4	290°76	4.6/22.6	18	457569	2008 YZ ₁₂₄		4 18.5	142		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
141382	2002 <i>AW</i> ₇₁		4 18.5 110°37'	3°7'/22.2	18		207442	2006 <i>EF</i> ₁₆		4 18.5 304°75'	0°2'/18.4	17	
3 12	14 9.93	-24 8.5	2.416	3.171	13.4	20.3	3 12	14 11.69	-11 58.5	1.356	2.189	18.1	20.5
3 22	14 5.77	-24 18.4	2.326	3.175	11.0	20.1	3 22	14 8.58	-11 52.8	1.267	2.174	14.3	20.2
4 1	13 59.69	-24 13.0	2.257	3.179	8.2	20.0	4 1	14 2.35	-11 33.0	1.197	2.160	9.6	19.9
4 11	13 52.25	-23 52.3	2.213	3.183	5.4	19.8	4 11	13 53.68	-11 1.8	1.150	2.146	4.2	19.5
4 21	13 44.20	-23 17.7	2.196	3.187	3.7	19.7	4 21	13 43.68	-10 23.9	1.128	2.132	1.6	19.3
5 1	13 36.36	-22 32.8	2.208	3.191	4.8	19.8	5 1	13 33.82	-9 46.2	1.130	2.118	7.3	19.6
5 11	13 29.53	-21 42.7	2.248	3.195	7.5	19.9	5 11	13 25.54	-9 16.1	1.156	2.105	12.7	19.9
5 21	13 24.30	-20 52.6	2.312	3.198	10.3	20.1	5 21	13 19.89	-8 59.5	1.202	2.093	17.4	20.1
322314	2011 <i>FX</i> ₁₄₉		4 18.5 317°23'	2°1'/16.6	17		25953	Lanairlett		4 18.5 111°41'	0°2'/18.7	18	
3 12	14 7.96	-8 59.3	1.761	2.591	14.7	20.2	3 12	14 10.92	-13 16.4	2.019	2.825	14.0	19.1
3 22	14 4.76	-8 10.3	1.676	2.584	11.3	20.0	3 22	14 6.72	-13 3.2	1.936	2.828	10.9	18.9
4 1	13 59.28	-7 9.9	1.614	2.578	7.4	19.7	4 1	14 0.41	-12 38.8	1.875	2.831	7.3	18.7
4 11	13 52.14	-6 3.0	1.576	2.571	3.3	19.5	4 11	13 52.60	-12 5.7	1.840	2.833	3.2	18.4
4 21	13 44.23	-4 56.0	1.566	2.565	2.9	19.4	4 21	13 44.12	-11 27.5	1.832	2.836	1.0	18.2
5 1	13 36.56	-3 56.2	1.582	2.560	7.0	19.7	5 1	13 35.90	-10 49.1	1.853	2.839	5.2	18.5
5 11	13 30.11	-3 9.6	1.623	2.554	11.1	19.9	5 11	13 28.84	-10 15.4	1.900	2.842	9.0	18.8
5 21	13 25.57	-2 40.0	1.687	2.549	14.7	20.1	5 21	13 23.57	-9 50.4	1.971	2.844	12.4	19.0
397846	2008 <i>TS</i>		4 18.5 213°86'	4°4'/14.7	17		3159	Prokof'ev		4 18.5 297°26'	2°2'/20.6	18	R
3 12	14 15.03	-2 33.0	1.833	2.657	14.5	22.4	3 12	14 7.40	-21 42.9	1.709	2.503	16.6	16.1
3 22	14 10.13	-1 30.7	1.746	2.649	11.2	22.1	3 22	14 4.62	-20 59.6	1.612	2.491	13.4	15.9
4 1	14 2.80	-0 22.0	1.681	2.640	7.6	21.9	4 1	13 59.35	-19 52.2	1.535	2.480	9.5	15.6
4 11	13 53.69	+ 0 46.7	1.643	2.630	4.8	21.7	4 11	13 52.24	-18 22.3	1.482	2.469	5.2	15.3
4 21	13 43.70	+ 1 48.2	1.633	2.620	5.3	21.7	4 21	13 44.23	-16 35.3	1.456	2.458	2.2	15.1
5 1	13 33.94	+ 2 35.7	1.650	2.608	8.7	21.9	5 1	13 36.44	-14 39.9	1.457	2.447	5.6	15.3
5 11	13 25.45	+ 3 4.4	1.693	2.595	12.4	22.1	5 11	13 29.97	-12 46.9	1.484	2.436	10.1	15.5
5 21	13 18.99	+ 3 12.4	1.757	2.582	15.9	22.2	5 21	13 25.58	-11 5.8	1.535	2.426	14.3	15.8
477618	2010 <i>LF</i> ₁₃		4 18.5 259°95'	9°2'/26.9	18		122807	2000 <i>SS</i> ₉₉		4 18.5 247°33'	2°1'/20.3	18	
3 12	14 18.17	-40 12.5	2.680	3.312	14.8	21.0	3 12	14 13.12	-18 28.0	2.212	2.990	13.8	21.4
3 22	14 12.75	-41 35.0	2.571	3.302	13.4	20.8	3 22	14 8.53	-18 30.2	2.102	2.973	11.1	21.2
4 1	14 4.74	-42 40.3	2.482	3.291	11.8	20.7	4 1	14 1.73	-18 18.9	2.014	2.956	7.9	20.9
4 11	13 54.65	-43 23.5	2.415	3.280	10.3	20.6	4 11	13 53.26	-17 54.6	1.953	2.938	4.3	20.7
4 21	13 43.32	-43 41.4	2.372	3.269	9.4	20.5	4 21	13 43.88	-17 19.3	1.919	2.920	2.1	20.5
5 1	13 31.87	-43 33.6	2.355	3.257	9.3	20.4	5 1	13 34.55	-16 36.8	1.914	2.901	4.9	20.6
5 11	13 21.45	-43 3.3	2.362	3.246	10.1	20.5	5 11	13 26.23	-15 52.5	1.936	2.881	8.7	20.8
5 21	13 13.01	-42 16.4	2.393	3.234	11.6	20.6	5 21	13 19.66	-15 11.7	1.984	2.861	12.1	21.0
302221	2001 <i>VO</i> ₁₀		4 18.5 187°87'	1°0'/19.5	18		17666	1996 <i>XR</i>		4 18.5 254°41'	0°4'/18.1	18	
3 12	14 12.93	-15 6.8	2.875	3.651	11.0	21.3	3 12	14 11.22	-11 55.8	1.964	2.774	14.2	18.9
3 22	14 7.67	-15 15.2	2.777	3.650	8.7	21.1	3 22	14 7.14	-11 35.6	1.869	2.764	11.0	18.7
4 1	14 0.76	-15 15.4	2.703	3.649	5.9	20.9	4 1	14 0.82	-11 4.4	1.796	2.754	7.3	18.4
4 11	13 52.69	-15 8.3	2.658	3.647	2.9	20.7	4 11	13 52.84	-10 24.6	1.749	2.743	3.2	18.1
4 21	13 44.06	-14 55.5	2.642	3.645	1.2	20.6	4 21	13 44.04	-9 40.6	1.729	2.733	1.3	18.0
5 1	13 35.57	-14 39.5	2.657	3.642	3.8	20.8	5 1	13 35.39	-8 57.5	1.737	2.722	5.7	18.2
5 11	13 27.90	-14 23.5	2.700	3.639	6.8	21.0	5 11	13 27.87	-8 20.8	1.772	2.711	9.8	18.4
5 21	13 21.56	-14 10.2	2.771	3.636	9.5	21.1	5 21	13 22.20	-7 54.7	1.830	2.699	13.4	18.6
410434	2008 <i>BZ</i> ₃₁		4 18.5 138°83'	0°7'/17.8	16		500729	2012 <i>XZ</i> ₆₉		4 18.5 129°56'	2°7'/15.2	17	
3 12	14 13.60	-11 39.0	1.963	2.769	14.3	22.3	3 12	14 8.38	-3 49.4	2.686	3.503	10.6	22.4
3 22	14 8.72	-11 5.5	1.887	2.780	11.0	22.1	3 22	14 4.11	-2 59.0	2.614	3.515	8.1	22.3
4 1	14 1.66	-10 20.8	1.833	2.791	7.2	21.9	4 1	13 58.35	-2 4.8	2.567	3.526	5.3	22.1
4 11	13 53.10	-9 28.7	1.807	2.802	3.1	21.6	4 11	13 51.61	-1 10.9	2.548	3.537	3.1	22.0
4 21	13 43.94	-8 34.0	1.808	2.811	1.6	21.5	4 21	13 44.49	-0 21.6	2.558	3.548	3.3	22.0
5 1	13 35.14	-7 42.4	1.838	2.820	5.7	21.8	5 1	13 37.62	+ 0 19.4	2.598	3.558	5.7	22.2
5 11	13 27.62	-6 59.4	1.896	2.829	9.6	22.1	5 11	13 31.60	+ 0 48.9	2.665	3.569	8.4	22.4
5 21	13 21.98	-6 28.6	1.976	2.837	12.9	22.3	5 21	13 26.87	+ 1 5.5	2.756	3.578	10.8	22.5
208923	2002 <i>UZ</i> ₁₁		4 18.5 125°38'	14°9'/27.6	18	R	228382	2000 <i>WC</i> ₁₄₉		4 18.5 139°19'	3°6'/14.5	17	
3 12	14 27.36	-39 17.1	1.343	2.040	24.7	20.0	3 12	14 10.13	-3 12.4	2.263	3.085	12.1	20.9
3 22	14 22.16	-41 32.9	1.273	2.050	22.3	19.9	3 22	14 5.72	-2 1.9	2.193	3.096	9.3	20.7
4 1	14 12.21	-43 20.1	1.218	2.060	19.5	19.7	4 1	13 59.53	-0 46.5	2.147	3.107	6.2	20.5
4 11	13 58.27	-44 27.0	1.181	2.070	17.0	19.5	4 11	13 52.16	+ 0 28.1	2.130	3.117	3.9	20.4
4 21	13 42.06	-44 44.9	1.163	2.079	15.3	19.5	4 21	13 44.31	+ 1 36.0	2.141	3.126	4.4	20.4
5 1	13 26.13	-44 12.8	1.166	2.088	15.0	19.5	5 1	13 36.78	+ 2 31.8	2.180	3.135	7.1	20.6
5 11	13 12.94	-43 0.6	1.190	2.096	16.3	19.6	5 11	13 30.29	+ 3 11.9	2.246	3.144	10.0	20.8
5 21	13 4.01	-41 24.0	1.233	2.103	18.5	19.7	5 21	13 25.34	+ 3 34.6	2.335	3.151	12.7	21.0
143131	2002 <i>XE</i> ₃₅		4 18.5 251°75'	5°0'/13.1	18		182302	2001 <i>NC</i> ₂₂		4 18.5 258°01'	5°7'/13.2	17	
3 12	14 8.33	+ 2 22.6	2.282	3.111	11.8	20.2	3 12	14 10.34	+ 0 37.2	1.834	2.670	13.9	20.2
3 22	14 4.44	+ 3 23.2	2.203	3.106	9.2	20.0	3 22	14 6.53	+ 1 53.3	1.749	2.657	10.9	20.0
4 1	13 58.76	+ 4 24.6	2.148	3.101	6.7	19.8	4 1	14 0.44	+ 3 13.8	1.687	2.644	7.8	19.8
4 11	13 51.84	+ 5 21.2	2.121	3.096	5.1	19.7	4 11	13 52.68	+ 4 31.1	1.650	2.630	5.8	19.6
4 21	13 44.36	+ 6 7.4	2.121	3.091	5.8	19.7	4 21	13 44.10	+ 5 37.5	1.641	2.616	6.7	19.7
5 1	13 37.11	+ 6 38.7	2.148	3.086	8.2	19.9	5 1	13 35.72	+ 6 25.9	1.658	2.602	9.7	19.8
5 11	13 30.81	+ 6 52.5	2.200	3.081	10.9	20.0	5 11	13 28.52	+ 6 52.1	1.699	2.588	13.1	20.0
5 21	13 26.00	+ 6 48.1	2.275	3.076	13.4	20.2	5 21	13 23.20	+ 6 54.9	1.761	2.573	16.3	20.2
109277	2001 <i>QO</i> ₁₁₆		4 18.5 137°18'	6°5'/24.1	18		431076	2006 <i>CW</i> ₆₁		4 18.5 63°66'	7°7'/11.8	18	
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
471319	2011 <i>KS</i> ₁		4 18.5 331°20	8°8/10.1	17		335793	2007 <i>GF</i> ₅₉		4 18.5 250°67	1°1/19.4	17	
3 12	14 5.99	+ 6 33.6	1.571	2.424	15.0	20.3	3 12	14 10.53	-16 21.1	2.041	2.837	14.2	21.6
3 22	14 3.49	+ 8 15.2	1.500	2.411	12.2	20.1	3 22	14 6.58	-16 4.1	1.942	2.826	11.2	21.4
4 1	13 58.57	+ 9 56.3	1.451	2.398	9.7	19.9	4 1	14 0.45	-15 33.0	1.865	2.816	7.7	21.2
4 11	13 51.89	+11 26.3	1.425	2.387	8.8	19.9	4 11	13 52.69	-14 49.4	1.814	2.805	3.8	20.9
4 21	13 44.38	+12 35.3	1.425	2.375	10.1	19.9	4 21	13 44.13	-13 57.0	1.790	2.794	1.3	20.7
5 1	13 37.13	+13 15.9	1.447	2.365	12.9	20.0	5 1	13 35.72	-13 0.8	1.795	2.783	5.1	20.9
5 11	13 31.19	+13 25.2	1.490	2.355	16.0	20.2	5 11	13 28.40	-12 7.3	1.827	2.772	9.1	21.1
5 21	13 27.28	+13 4.1	1.551	2.346	18.9	20.4	5 21	13 22.88	-11 21.6	1.882	2.760	12.7	21.3
235397	2003 <i>WD</i> ₁₆₁		4 18.5 228°40	1°3/17.2	17		218628	2005 <i>QD</i> ₁₈₂		4 18.5 160°70	4°5/13.5	17	
3 12	14 10.25	- 9 3.1	2.196	3.008	12.8	21.1	3 12	14 10.57	- 0 51.0	2.195	3.020	12.4	21.3
3 22	14 6.07	- 8 35.3	2.105	3.003	9.8	20.8	3 22	14 6.16	+ 0 28.3	2.122	3.026	9.5	21.2
4 1	13 59.93	- 7 59.3	2.038	2.998	6.4	20.6	4 1	13 59.88	+ 1 51.3	2.075	3.031	6.6	21.0
4 11	13 52.40	- 7 18.5	1.998	2.993	2.8	20.4	4 11	13 52.34	+ 3 11.6	2.055	3.036	4.7	20.9
4 21	13 44.22	- 6 36.9	1.986	2.987	2.0	20.3	4 21	13 44.28	+ 4 22.9	2.064	3.041	5.4	20.9
5 1	13 36.23	- 5 59.3	2.002	2.981	5.6	20.5	5 1	13 36.52	+ 5 19.4	2.100	3.044	8.0	21.1
5 11	13 29.25	- 5 30.0	2.046	2.975	9.2	20.7	5 11	13 29.81	+ 5 57.5	2.163	3.048	10.9	21.3
5 21	13 23.88	- 5 12.1	2.113	2.969	12.4	20.9	5 21	13 24.71	+ 6 16.2	2.248	3.050	13.5	21.5
119519	2001 <i>UJ</i> ₁₅₇		4 18.5 80°85	1°2/17.5	18		94604	2001 <i>VN</i> ₁₀₀		4 18.5 213°66	4°5/14.9	18	
3 12	14 11.09	-10 25.5	1.748	2.569	15.2	20.1	3 12	14 13.41	- 3 3.8	1.656	2.488	15.4	20.4
3 22	14 7.11	- 9 55.2	1.672	2.574	11.7	19.9	3 22	14 9.10	- 2 1.6	1.575	2.484	11.9	20.2
4 1	14 0.78	- 9 13.8	1.618	2.579	7.6	19.6	4 1	14 2.22	- 0 52.3	1.517	2.478	8.1	19.9
4 11	13 52.80	- 8 25.4	1.589	2.584	3.3	19.4	4 11	13 53.49	+ 0 17.1	1.484	2.472	4.9	19.7
4 21	13 44.10	- 7 35.3	1.587	2.589	2.0	19.3	4 21	13 43.88	+ 1 18.9	1.478	2.466	5.5	19.8
5 1	13 35.75	- 6 49.7	1.612	2.594	6.3	19.6	5 1	13 34.55	+ 2 5.7	1.498	2.459	9.0	19.9
5 11	13 28.73	- 6 14.1	1.663	2.600	10.4	19.8	5 11	13 26.62	+ 2 32.5	1.543	2.452	13.0	20.2
5 21	13 23.71	- 5 52.1	1.736	2.605	14.1	20.1	5 21	13 20.84	+ 2 37.7	1.609	2.444	16.6	20.4
298335	2003 <i>FL</i> ₁₂₁		4 18.5 10°75	1°6/17.3	16		85889	1999 <i>CH</i> ₄₀		4 18.5 40°52	9°8/10.7	18	
3 12	14 8.93	-11 24.0	1.211	2.057	19.0	20.5	3 12	14 11.08	+ 9 54.0	1.485	2.330	16.2	17.9
3 22	14 6.42	-10 38.9	1.141	2.057	14.7	20.3	3 22	14 7.29	+11 23.2	1.436	2.339	13.2	17.7
4 1	14 0.81	- 9 36.1	1.092	2.059	9.6	20.0	4 1	14 0.93	+12 44.8	1.409	2.348	10.8	17.6
4 11	13 52.94	- 8 21.7	1.064	2.061	4.1	19.7	4 11	13 52.85	+13 48.4	1.405	2.358	9.8	17.5
4 21	13 44.04	- 7 4.4	1.060	2.063	2.7	19.6	4 21	13 44.13	+14 25.9	1.425	2.368	10.9	17.6
5 1	13 35.60	- 5 54.5	1.081	2.066	8.2	19.9	5 1	13 35.96	+14 32.7	1.468	2.378	13.3	17.8
5 11	13 28.96	- 5 1.1	1.124	2.070	13.4	20.2	5 11	13 29.38	+14 8.8	1.532	2.389	16.0	18.0
5 21	13 24.96	- 4 29.3	1.187	2.074	17.9	20.5	5 21	13 25.03	+13 17.8	1.613	2.400	18.6	18.2
438369	2006 <i>SR</i> ₃₇₈		4 18.5 183°80	4°7/13.1	17		49707	1999 <i>VZ</i> ₂₃		4 18.5 144°02	1°3/17.6	18	
3 12	14 8.81	+ 2 55.6	2.522	3.346	11.0	22.2	3 12	14 17.40	- 9 35.4	1.548	2.367	16.9	18.2
3 22	14 4.60	+ 3 50.2	2.446	3.346	8.6	22.1	3 22	14 12.28	- 9 16.2	1.474	2.375	13.1	18.0
4 1	13 58.78	+ 4 44.7	2.395	3.346	6.2	21.9	4 1	14 4.35	- 8 46.3	1.422	2.382	8.6	17.7
4 11	13 51.84	+ 5 34.1	2.371	3.345	4.8	21.8	4 11	13 54.41	- 8 9.6	1.394	2.390	3.7	17.5
4 21	13 44.44	+ 6 13.8	2.376	3.345	5.4	21.8	4 21	13 43.59	- 7 31.4	1.394	2.396	2.2	17.4
5 1	13 37.26	+ 6 39.9	2.408	3.344	7.5	22.0	5 1	13 33.23	- 6 57.8	1.420	2.402	7.0	17.7
5 11	13 30.96	+ 6 50.2	2.466	3.343	10.0	22.1	5 11	13 24.51	- 6 34.6	1.472	2.408	11.6	18.0
5 21	13 26.04	+ 6 44.3	2.547	3.342	12.3	22.3	5 21	13 18.21	- 6 25.1	1.545	2.412	15.5	18.2
232929	2005 <i>AB</i> ₄₉		4 18.5 155°19	1°6/16.9	17		501108	2013 <i>TF</i> ₃		4 18.5 185°65	6°6/24.9	17	
3 12	14 10.54	- 8 32.6	2.163	2.977	12.9	21.3	3 12	14 14.70	-32 11.3	2.292	2.998	15.3	21.9
3 22	14 6.23	- 7 59.2	2.081	2.980	9.9	21.1	3 22	14 9.85	-32 45.1	2.195	2.998	13.2	21.8
4 1	14 0.00	- 7 17.8	2.023	2.984	6.4	20.9	4 1	14 2.63	-32 59.3	2.117	2.997	10.8	21.6
4 11	13 52.41	- 6 32.1	1.992	2.987	2.9	20.7	4 11	13 53.67	-32 51.4	2.063	2.996	8.4	21.4
4 21	13 44.24	- 5 46.8	1.989	2.989	2.2	20.6	4 21	13 43.83	-32 21.0	2.034	2.995	6.8	21.3
5 1	13 36.34	- 5 6.6	2.015	2.992	5.7	20.9	5 1	13 34.17	-31 30.5	2.032	2.993	7.0	21.3
5 11	13 29.50	- 4 35.8	2.067	2.994	9.2	21.1	5 11	13 25.72	-30 25.9	2.057	2.991	8.9	21.4
5 21	13 24.30	- 4 17.3	2.143	2.996	12.3	21.3	5 21	13 19.23	-29 14.4	2.107	2.988	11.4	21.6
17258	Whalen		4 18.5 163°69	1°9/16.9	18		396263	2014 <i>CG</i> ₁₅		4 18.5 68°93	5°4/12.7	17	
3 12	14 16.11	- 8 5.5	1.823	2.637	14.9	19.7	3 12	14 7.91	+ 2 48.2	2.186	3.018	12.1	20.3
3 22	14 10.86	- 7 32.6	1.744	2.643	11.5	19.5	3 22	14 4.14	+ 3 56.8	2.118	3.022	9.5	20.2
4 1	14 3.21	- 6 50.9	1.689	2.649	7.5	19.3	4 1	13 58.58	+ 5 5.7	2.074	3.026	6.9	20.0
4 11	13 53.85	- 6 4.5	1.659	2.653	3.4	19.0	4 11	13 51.79	+ 6 8.6	2.057	3.030	5.4	19.9
4 21	13 43.75	- 5 18.9	1.657	2.657	2.7	19.0	4 21	13 44.50	+ 6 59.8	2.067	3.034	6.2	20.0
5 1	13 34.01	- 4 39.7	1.683	2.660	6.7	19.3	5 1	13 37.50	+ 7 34.6	2.104	3.039	8.5	20.1
5 11	13 25.65	- 4 12.0	1.736	2.663	10.7	19.5	5 11	13 31.51	+ 7 50.4	2.165	3.043	11.2	20.3
5 21	13 19.35	- 3 58.6	1.812	2.664	14.3	19.7	5 21	13 27.06	+ 7 47.0	2.248	3.047	13.6	20.5
341972	2008 <i>QO</i> ₂₀		4 18.5 315°16	8°5/23.2	18		81529	2000 <i>HV</i> ₁₂		4 18.5 145°21	0°6/18.0	18	
3 12	14 12.99	-27 59.2	1.597	2.359	18.9	19.8	3 12	14 12.99	-11 15.9	1.831	2.643	14.9	19.5
3 22	14 9.84	-29 18.7	1.490	2.334	16.3	19.6	3 22	14 8.52	-10 58.1	1.750	2.647	11.6	19.2
4 1	14 3.47	-30 21.0	1.401	2.309	13.3	19.3	4 1	14 1.71	-10 29.7	1.692	2.651	7.6	19.0
4 11	13 54.35	-31 0.6	1.333	2.284	10.4	19.1	4 11	13 53.23	- 9 53.6	1.659	2.654	3.3	18.7
4 21	13 43.47	-31 13.4	1.288	2.260	8.6	18.9	4 21	13 44.00	- 9 14.4	1.653	2.657	1.5	18.6
5 1	13 32.32	-30 59.1	1.267	2.236	9.4	18.9	5 1	13 35.08	- 8 37.2	1.676	2.660	5.9	18.9
5 11	13 22.53	-30 23.2	1.270	2.213	12.3	19.0	5 11	13 27.47	- 8 7.3	1.724	2.663	10.0	19.2
5 21	13 15.40	-29 34.5	1.293	2.191	16.0	19.1	5 21	13 21.85	- 7 48.6	1.796	2.665	13.6	19.4
192650	1999 <i>RF</i> ₈₀		4 18.5 196°12	4°4/22.4	18		465047	2006 <i>RW</i> ₃₃		4 18.5			

EPHEMERIDES

4 18.5

4 18.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
11343	1996 <i>XP</i> ₁₉		4 18.5 153°82	1°0/17.6	18		172570	2003 <i>UX</i> ₁₇₈		4 18.5 101°49	0°6/18.1	18	
3 12	14 14.13	-10 57.9	2.072	2.876	13.7	19.7	3 12	14 15.25	-11 33.9	1.686	2.499	16.0	21.2
3 22	14 9.05	-10 19.7	1.993	2.885	10.6	19.5	3 22	14 10.30	-11 13.0	1.620	2.516	12.4	21.0
4 1	14 1.87	-9 31.0	1.937	2.894	6.9	19.3	4 1	14 2.87	-10 40.5	1.575	2.533	8.1	20.8
4 11	13 53.25	-8 35.5	1.908	2.903	2.9	19.0	4 11	13 53.73	-10 0.0	1.555	2.550	3.5	20.5
4 21	13 44.03	-7 38.2	1.908	2.910	1.8	18.9	4 21	13 43.94	-9 16.5	1.562	2.566	1.5	20.4
5 1	13 35.14	-6 44.8	1.937	2.917	5.7	19.2	5 1	13 34.65	-8 35.8	1.598	2.582	6.1	20.8
5 11	13 27.46	-6 0.3	1.993	2.922	9.4	19.4	5 11	13 26.87	-8 3.6	1.659	2.597	10.3	21.0
5 21	13 21.59	-5 28.2	2.073	2.927	12.7	19.7	5 21	13 21.27	-7 43.4	1.743	2.612	14.0	21.3
204939	2008 <i>UV</i> ₁₇₂		4 18.5 10°40	1°1/19.4	17		210907	2001 <i>SG</i> ₂₂₀		4 18.5 157°20	0°9/17.5	18	
3 12	14 9.50	-16 7.4	1.916	2.719	14.7	20.4	3 12	14 9.30	-9 57.7	2.664	3.466	11.1	21.5
3 22	14 5.83	-15 51.7	1.831	2.719	11.6	20.2	3 22	14 4.94	-9 26.8	2.579	3.471	8.5	21.3
4 1	13 59.94	-15 21.6	1.767	2.720	7.9	20.0	4 1	13 59.00	-8 48.5	2.519	3.477	5.5	21.2
4 11	13 52.47	-14 39.4	1.728	2.720	3.8	19.7	4 11	13 51.99	-8 5.8	2.487	3.481	2.4	21.0
4 21	13 44.28	-13 48.9	1.717	2.721	1.3	19.5	4 21	13 44.52	-7 22.2	2.484	3.486	1.5	20.9
5 1	13 36.34	-12 55.6	1.733	2.722	5.2	19.8	5 1	13 37.27	-6 41.6	2.511	3.490	4.6	21.1
5 11	13 29.61	-12 5.8	1.775	2.722	9.2	20.0	5 11	13 30.87	-6 7.6	2.566	3.494	7.6	21.3
5 21	13 24.73	-11 24.5	1.842	2.723	12.7	20.3	5 21	13 25.81	-5 43.0	2.646	3.497	10.3	21.5
217911	2001 <i>SK</i> ₁₇₅		4 18.5 132°27	0°6/18.1	18		381432	2008 <i>PJ</i> ₁₄		4 18.5 297°87	2°6/16.4	17	
3 12	14 17.08	-11 9.9	1.645	2.457	16.4	21.0	3 12	14 8.79	-7 56.0	1.698	2.530	15.0	21.4
3 22	14 11.86	-10 55.7	1.572	2.468	12.7	20.8	3 22	14 5.70	-7 8.8	1.599	2.508	11.7	21.1
4 1	14 3.99	-10 30.3	1.520	2.479	8.4	20.6	4 1	14 0.15	-6 9.8	1.522	2.487	7.7	20.8
4 11	13 54.24	-9 56.7	1.494	2.489	3.6	20.3	4 11	13 52.70	-5 4.0	1.470	2.465	3.7	20.5
4 21	13 43.71	-9 19.7	1.495	2.499	1.6	20.2	4 21	13 44.24	-3 58.0	1.445	2.444	3.4	20.5
5 1	13 33.62	-8 45.0	1.524	2.508	6.3	20.5	5 1	13 35.87	-2 59.4	1.446	2.422	7.6	20.7
5 11	13 25.10	-8 18.2	1.578	2.516	10.8	20.8	5 11	13 28.68	-2 15.0	1.472	2.401	12.1	20.9
5 21	13 18.88	-8 3.1	1.655	2.524	14.6	21.0	5 21	13 23.51	-1 49.1	1.519	2.380	16.1	21.1
510346	2011 <i>SE</i> ₁₃₆		4 18.5 242°76	0°7/17.7	17		283448	2000 <i>YK</i> ₁₁		4 18.5 164°26	7°1/6.8	18	
3 12	14 7.44	-12 21.2	2.514	3.316	11.6	21.9	3 12	14 8.56	+18 14.4	3.349	4.143	9.2	21.3
3 22	14 3.72	-11 33.7	2.414	3.306	9.0	21.7	3 22	14 4.04	+19 32.6	3.296	4.149	8.0	21.2
4 1	13 58.32	-10 35.2	2.338	3.295	5.9	21.5	4 1	13 58.25	+20 43.0	3.270	4.155	7.2	21.2
4 11	13 51.73	-9 29.1	2.290	3.284	2.5	21.3	4 11	13 51.62	+21 40.5	3.270	4.160	7.1	21.2
4 21	13 44.56	-8 19.6	2.270	3.273	1.4	21.1	4 21	13 44.66	+22 21.6	3.296	4.165	7.8	21.2
5 1	13 37.54	-7 12.1	2.281	3.262	4.8	21.4	5 1	13 37.91	+22 44.0	3.348	4.169	9.0	21.3
5 11	13 31.37	-6 11.5	2.319	3.250	8.2	21.6	5 11	13 31.88	+22 47.3	3.423	4.173	10.3	21.4
5 21	13 26.57	-5 21.8	2.382	3.238	11.2	21.7	5 21	13 26.95	+22 32.6	3.518	4.176	11.5	21.5
435000	2006 <i>UP</i> ₂₅₆		4 18.5 164°27	0°8/17.5	17		92954	2000 <i>RG</i> ₄₄		4 18.5 181°74	5°1/22.8	17	
3 12	14 7.72	-11 33.7	2.726	3.527	10.9	22.7	3 12	14 15.97	-26 18.1	2.248	2.985	14.8	20.5
3 22	14 3.70	-10 47.5	2.639	3.531	8.4	22.5	3 22	14 10.77	-26 55.8	2.153	2.986	12.4	20.3
4 1	13 58.17	-9 52.4	2.577	3.534	5.4	22.3	4 1	14 3.25	-27 17.4	2.078	2.986	9.6	20.1
4 11	13 51.61	-8 51.5	2.543	3.538	2.3	22.1	4 11	13 53.99	-27 21.2	2.028	2.986	6.8	19.9
4 21	13 44.62	-7 48.9	2.538	3.540	1.4	22.1	4 21	13 43.85	-27 7.0	2.005	2.986	5.2	19.8
5 1	13 37.83	-6 49.1	2.563	3.543	4.5	22.3	5 1	13 33.86	-26 37.3	2.011	2.985	6.0	19.9
5 11	13 31.86	-5 56.3	2.617	3.545	7.5	22.5	5 11	13 25.04	-25 57.2	2.043	2.983	8.6	20.0
5 21	13 27.17	-5 13.6	2.696	3.547	10.2	22.7	5 21	13 18.12	-25 12.8	2.100	2.982	11.4	20.2
163024	2001 <i>XF</i> ₁₀		4 18.5 7°79	3°6/16.4	18		499216	2009 <i>UQ</i> ₅₁		4 18.5 174°51	0°4/18.9	17	
3 12	14 14.97	-4 11.3	1.347	2.188	17.7	19.1	3 12	14 11.86	-14 47.1	2.253	3.046	13.1	23.1
3 22	14 10.83	-3 52.0	1.276	2.189	13.7	18.8	3 22	14 7.27	-14 22.1	2.164	3.048	10.3	23.0
4 1	14 3.63	-3 27.0	1.224	2.189	9.1	18.6	4 1	14 0.73	-13 45.2	2.098	3.050	6.9	22.7
4 11	13 54.20	-3 2.0	1.196	2.189	4.7	18.3	4 11	13 52.81	-12 58.6	2.059	3.052	3.1	22.5
4 21	13 43.73	-2 42.9	1.193	2.190	4.4	18.3	4 21	13 44.27	-12 6.2	2.049	3.053	0.9	22.3
5 1	13 33.69	-2 35.6	1.215	2.191	8.7	18.5	5 1	13 35.98	-11 12.7	2.067	3.053	4.8	22.6
5 11	13 25.39	-2 44.1	1.261	2.193	13.4	18.8	5 11	13 28.73	-10 23.6	2.114	3.053	8.4	22.8
5 21	13 19.69	-3 9.7	1.326	2.195	17.5	19.0	5 21	13 23.14	-9 43.1	2.185	3.053	11.6	23.0
429186	2009 <i>WR</i> ₂₈		4 18.5 187°42	0°8/17.8	17		199689	2006 <i>HA</i> ₂₂		4 18.5 86°91	1°9/16.8	17	
3 12	14 12.12	-10 28.2	2.078	2.887	13.5	21.9	3 12	14 10.10	-8 7.8	1.966	2.787	13.7	20.7
3 22	14 7.62	-10 5.6	1.991	2.887	10.5	21.7	3 22	14 6.10	-7 31.8	1.889	2.792	10.5	20.5
4 1	14 1.02	-9 33.6	1.928	2.886	6.9	21.4	4 1	14 0.03	-6 47.4	1.835	2.797	6.9	20.3
4 11	13 52.94	-8 55.4	1.890	2.885	2.9	21.2	4 11	13 52.52	-5 58.9	1.807	2.801	3.1	20.0
4 21	13 44.17	-8 14.9	1.881	2.884	1.6	21.1	4 21	13 44.38	-5 11.4	1.806	2.806	2.6	20.0
5 1	13 35.63	-7 37.2	1.900	2.882	5.5	21.3	5 1	13 36.55	-4 30.2	1.833	2.810	6.2	20.2
5 11	13 28.22	-7 6.8	1.947	2.880	9.3	21.6	5 11	13 29.87	-4 0.1	1.887	2.815	9.9	20.5
5 21	13 22.56	-6 47.2	2.017	2.878	12.7	21.8	5 21	13 24.96	-3 43.5	1.963	2.820	13.2	20.7
384968	2012 <i>TH</i> ₁₅₅		4 18.5 109°33	0°4/18.1	17		463150	2011 <i>YE</i> ₇₀		4 18.5 115°18	2°1/16.9	16	
3 12	14 10.62	-11 32.7	2.365	3.167	12.3	22.3	3 12	14 13.32	-8 26.8	1.645	2.470	15.8	21.9
3 22	14 6.10	-11 11.3	2.289	3.180	9.5	22.1	3 22	14 8.94	-7 47.7	1.574	2.479	12.1	21.7
4 1	13 59.82	-10 41.2	2.237	3.193	6.2	21.9	4 1	14 2.06	-6 58.5	1.525	2.488	7.9	21.5
4 11	13 52.35	-10 5.2	2.211	3.206	2.6	21.7	4 11	13 53.44	-6 4.3	1.501	2.496	3.6	21.2
4 21	13 44.40	-9 26.9	2.215	3.218	1.1	21.6	4 21	13 44.09	-5 11.3	1.504	2.504	2.9	21.2
5 1	13 36.74	-8 50.3	2.247	3.230	4.7	21.9	5 1	13 35.16	-4 26.0	1.534	2.512	7.1	21.5
5 11	13 30.09	-8 19.5	2.308	3.242	8.0	22.1	5 11	13 27.70	-3 53.9	1.590	2.520	11.3	21.7
5 21	13 24.96	-7 57.5	2.392	3.254	10.9	22.3	5 21	13 22.39	-3 37.9	1.667	2.528	14.9	22.0
129698	1998 <i>SH</i> ₇₇		4 18.5 254°95	1°7/20.0	17		201487	2003 <i>HA</i> ₃₆		4 18.5 286°36	3°8/15.6	18	
3 12	14 10.13	-17 5											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
501077	2013 <i>SY</i> ₅₀		4 18.5 151°58	1°3/17.2	17		505805	2015 <i>BT</i> ₃₉₇		4 18.5 324°30	0°7/19.0	17	
3 12	14 12.03	- 9 0.1	2.297	3.104	12.5	21.9	3 12	14 10.07	-14 7.0	1.634	2.452	16.2	21.1
3 22	14 7.26	- 8 28.5	2.217	3.112	9.6	21.7	3 22	14 6.78	-14 2.6	1.545	2.442	12.8	20.8
4 1	14 0.64	- 7 49.2	2.160	3.119	6.2	21.5	4 1	14 0.90	-13 44.5	1.476	2.433	8.7	20.6
4 11	13 52.75	- 7 5.7	2.131	3.126	2.7	21.3	4 11	13 53.07	-13 14.5	1.431	2.425	4.0	20.3
4 21	13 44.32	- 6 22.0	2.131	3.132	2.0	21.3	4 21	13 44.24	-12 36.6	1.412	2.416	1.2	20.0
5 1	13 36.17	- 5 42.7	2.160	3.138	5.4	21.5	5 1	13 35.60	-11 56.4	1.420	2.409	6.0	20.3
5 11	13 29.06	- 5 11.8	2.217	3.143	8.7	21.7	5 11	13 28.30	-11 20.5	1.452	2.401	10.6	20.6
5 21	13 23.53	- 4 52.0	2.298	3.148	11.7	21.9	5 21	13 23.16	-10 54.2	1.507	2.394	14.7	20.8
173952	2001 <i>XJ</i> ₇		4 18.5 125°29	2°6/21.5	18		357070	2001 <i>QH</i> ₁₇₂		4 18.5 221°60	2°8/20.7	17	
3 12	14 8.73	-22 16.7	2.489	3.253	12.8	20.4	3 12	14 14.83	-20 30.2	1.783	2.565	16.5	22.2
3 22	14 4.75	-22 2.1	2.400	3.259	10.4	20.2	3 22	14 10.39	-20 22.8	1.684	2.556	13.3	21.9
4 1	13 59.01	-21 32.5	2.333	3.265	7.5	20.1	4 1	14 3.27	-19 56.5	1.606	2.547	9.6	21.7
4 11	13 52.05	-20 48.8	2.292	3.271	4.5	19.9	4 11	13 54.11	-19 11.6	1.552	2.536	5.4	21.4
4 21	13 44.56	-19 53.8	2.280	3.277	2.6	19.7	4 21	13 43.89	-18 10.7	1.525	2.525	2.8	21.2
5 1	13 37.31	-18 51.8	2.296	3.283	4.2	19.9	5 1	13 33.84	-17 0.0	1.525	2.514	5.7	21.4
5 11	13 31.02	-17 48.1	2.340	3.288	7.2	20.1	5 11	13 25.14	-15 47.5	1.553	2.501	10.1	21.6
5 21	13 26.23	-16 48.1	2.410	3.293	10.1	20.2	5 21	13 18.66	-14 41.2	1.603	2.488	14.1	21.8
430143	2013 <i>TK</i> ₄₆		4 18.5 156°72	0°9/19.2	17		88163	2000 <i>XS</i> ₂₂		4 18.5 138°55	5°4/24.9	18	
3 12	14 13.40	-14 31.6	1.986	2.783	14.5	21.8	3 12	14 10.06	-31 28.4	2.654	3.362	13.4	19.8
3 22	14 8.77	-14 32.0	1.900	2.786	11.4	21.6	3 22	14 5.88	-31 43.1	2.560	3.366	11.4	19.7
4 1	14 1.88	-14 20.9	1.837	2.788	7.7	21.4	4 1	13 59.83	-31 39.9	2.485	3.370	9.2	19.5
4 11	13 53.37	-13 59.9	1.799	2.791	3.7	21.1	4 11	13 52.46	-31 18.0	2.435	3.374	7.0	19.4
4 21	13 44.11	-13 31.9	1.789	2.793	1.2	21.0	4 21	13 44.47	-30 37.9	2.411	3.378	5.5	19.3
5 1	13 35.11	-13 1.2	1.807	2.794	5.1	21.2	5 1	13 36.70	-29 42.7	2.415	3.381	5.7	19.3
5 11	13 27.31	-12 32.8	1.852	2.796	9.1	21.5	5 11	13 29.91	-28 37.3	2.447	3.385	7.5	19.4
5 21	13 21.40	-12 11.0	1.921	2.797	12.5	21.7	5 21	13 24.69	-27 27.7	2.504	3.388	9.7	19.6
94576	2001 <i>VZ</i> ₄₄		4 18.5 190°78	0°7/19.1	18		56565	2000 <i>JY</i> ₁₂		4 18.5 246°50	4°6/22.9	18	R
3 12	14 13.48	-16 23.8	1.816	2.614	15.6	20.0	3 12	14 12.49	-26 48.5	2.196	2.939	14.9	19.1
3 22	14 9.06	-15 47.8	1.727	2.613	12.3	19.8	3 22	14 8.25	-26 49.2	2.083	2.922	12.5	18.9
4 1	14 2.19	-14 54.7	1.659	2.612	8.3	19.6	4 1	14 1.69	-26 30.5	1.990	2.905	9.6	18.6
4 11	13 53.54	-13 47.3	1.617	2.609	3.9	19.3	4 11	13 53.39	-25 51.1	1.922	2.887	6.6	18.4
4 21	13 44.06	-12 30.8	1.602	2.607	1.1	19.1	4 21	13 44.14	-24 52.1	1.880	2.868	4.6	18.3
5 1	13 34.86	-11 12.2	1.616	2.603	5.7	19.4	5 1	13 34.97	-23 37.5	1.867	2.848	5.7	18.3
5 11	13 26.99	- 9 59.6	1.657	2.599	10.1	19.6	5 11	13 26.89	-22 14.4	1.881	2.828	8.7	18.4
5 21	13 21.19	- 8 59.1	1.721	2.594	13.9	19.8	5 21	13 20.67	-20 50.4	1.920	2.808	12.0	18.6
132070	2002 <i>CC</i> ₁₅₄		4 18.5 278°66	0°2/18.7	18		244160	2001 <i>XC</i> ₈		4 18.5 146°45	13°4/5.9	18	
3 12	14 12.59	-13 26.9	1.508	2.328	17.2	20.1	3 12	14 20.61	+25 56.7	1.896	2.676	15.7	21.0
3 22	14 8.89	-13 13.7	1.423	2.323	13.5	19.9	3 22	14 14.20	+27 35.7	1.861	2.687	14.3	20.9
4 1	14 2.36	-12 45.8	1.359	2.318	9.1	19.6	4 1	14 5.30	+28 54.6	1.847	2.698	13.5	20.9
4 11	13 53.70	-12 5.6	1.319	2.313	4.1	19.3	4 11	13 54.78	+29 44.0	1.855	2.708	13.5	20.9
4 21	13 43.99	-11 18.0	1.304	2.308	1.3	19.1	4 21	13 43.76	+29 58.3	1.886	2.718	14.3	21.0
5 1	13 34.54	-10 29.8	1.315	2.303	6.5	19.4	5 1	13 33.41	+29 35.9	1.937	2.726	15.7	21.1
5 11	13 26.61	- 9 48.3	1.351	2.298	11.4	19.7	5 11	13 24.72	+28 39.9	2.007	2.734	17.2	21.2
5 21	13 21.07	- 9 19.1	1.409	2.293	15.7	19.9	5 21	13 18.30	+27 16.1	2.094	2.741	18.7	21.4
161985	1253 <i>T</i> ₋₂		4 18.5 269°51	0°1/18.4	16		504233	2006 <i>UQ</i> ₂₀₁		4 18.5 157°32	0°5/17.9	18	
3 12	14 12.07	-13 55.9	1.594	2.410	16.6	20.5	3 12	14 9.30	-10 54.1	3.177	3.969	9.7	22.8
3 22	14 8.54	-13 25.6	1.493	2.391	13.1	20.2	3 22	14 4.69	-10 30.8	3.090	3.977	7.5	22.7
4 1	14 2.22	-12 38.3	1.412	2.370	8.8	19.9	4 1	13 58.75	-10 1.1	3.029	3.984	4.9	22.5
4 11	13 53.70	-11 36.5	1.355	2.350	3.9	19.6	4 11	13 51.91	- 9 27.1	2.997	3.991	2.1	22.3
4 21	13 43.97	-10 25.7	1.325	2.329	1.4	19.3	4 21	13 44.69	- 8 51.6	2.994	3.997	1.0	22.2
5 1	13 34.30	- 9 13.6	1.321	2.307	6.7	19.6	5 1	13 37.65	- 8 17.6	3.022	4.003	3.8	22.5
5 11	13 25.96	- 8 8.9	1.342	2.285	11.8	19.9	5 11	13 31.33	- 7 48.0	3.079	4.009	6.5	22.7
5 21	13 19.91	- 7 18.8	1.385	2.263	16.3	20.1	5 21	13 26.15	- 7 25.2	3.163	4.013	8.8	22.8
201646	2003 <i>SJ</i> ₃₇₆		4 18.5 313°82	0°4/18.1	17		173165	1997 <i>AM</i> ₁₈		4 18.5 159°80	6°0/10.3	18	
3 12	14 9.96	-12 4.3	1.928	2.741	14.3	20.8	3 12	14 8.54	+ 9 34.8	2.873	3.689	10.0	20.8
3 22	14 6.16	-11 40.2	1.842	2.740	11.1	20.6	3 22	14 4.22	+10 47.6	2.809	3.695	8.1	20.6
4 1	14 0.18	-11 4.7	1.779	2.738	7.3	20.4	4 1	13 58.48	+11 56.4	2.771	3.700	6.6	20.6
4 11	13 52.64	-10 21.0	1.742	2.737	3.1	20.1	4 11	13 51.79	+12 56.1	2.761	3.705	6.0	20.5
4 21	13 44.38	- 9 33.4	1.731	2.735	1.3	20.0	4 21	13 44.73	+13 42.2	2.779	3.710	6.7	20.6
5 1	13 36.36	- 8 47.4	1.749	2.734	5.6	20.2	5 1	13 37.89	+14 11.4	2.824	3.714	8.3	20.7
5 11	13 29.51	- 8 8.6	1.793	2.732	9.6	20.5	5 11	13 31.85	+14 22.6	2.893	3.718	10.2	20.8
5 21	13 24.48	- 7 40.9	1.859	2.731	13.1	20.7	5 21	13 27.04	+14 16.0	2.984	3.721	11.9	21.0
360754	2004 <i>XQ</i> ₈₉		4 18.5 171°32	2°4/20.5	18		505163	2012 <i>SP</i> ₁₂		4 18.5 203°55	0°2/18.4	17	
3 12	14 15.62	-19 29.3	1.882	2.663	15.8	21.9	3 12	14 10.72	-12 17.8	2.293	3.094	12.7	22.3
3 22	14 10.68	-19 26.5	1.795	2.667	12.7	21.6	3 22	14 6.41	-11 59.6	2.202	3.092	9.8	22.1
4 1	14 3.25	-19 7.1	1.728	2.670	9.0	21.4	4 1	14 0.20	-11 31.9	2.134	3.089	6.5	21.9
4 11	13 54.02	-18 31.8	1.687	2.672	5.0	21.2	4 11	13 52.64	-10 56.9	2.092	3.086	2.8	21.6
4 21	13 43.93	-17 43.5	1.673	2.674	2.5	21.0	4 21	13 44.44	-10 18.1	2.079	3.083	1.0	21.5
5 1	13 34.14	-16 47.6	1.687	2.675	5.4	21.2	5 1	13 36.43	- 9 39.9	2.096	3.080	4.8	21.8
5 11	13 25.70	-15 50.9	1.728	2.675	9.4	21.4	5 11	13 29.41	- 9 6.7	2.139	3.076	8.4	22.0
5 21	13 19.37	-14 59.9	1.794	2.675	13.0	21.7	5 21	13 23.97	- 8 41.9	2.207	3.073	11.6	22.2
368703	2005 <i>SC</i> ₂₂₃		4 18.5 222°95	7°4/25.2	17		500034	2011 <i>SS</i> ₈₂	</				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
465335	2007 VL ₁₂₈		4 18.5 149°78	0°7/19.1	16		520038	2013 VT ₂₈		4 18.5 301°34	0°8/17.9	17	
3 12	14 13.83	-15 44.5	1.835	2.633	15.5	22.4	3 12	14 10.52	-10 50.0	1.658	2.482	15.7	21.4
3 22	14 9.21	-15 16.9	1.754	2.641	12.1	22.2	3 22	14 7.16	-10 32.7	1.561	2.464	12.3	21.2
4 1	14 2.22	-14 34.0	1.695	2.648	8.2	21.9	4 1	14 1.21	-10 3.5	1.485	2.446	8.2	20.9
4 11	13 53.55	-13 38.6	1.662	2.655	3.8	21.7	4 11	13 53.26	-9 25.5	1.433	2.429	3.5	20.5
4 21	13 44.15	-12 35.4	1.657	2.661	1.1	21.5	4 21	13 44.23	-8 43.5	1.408	2.411	1.8	20.4
5 1	13 35.12	-11 30.9	1.679	2.666	5.5	21.8	5 1	13 35.29	-8 3.5	1.409	2.394	6.6	20.6
5 11	13 27.43	-10 32.0	1.729	2.671	9.7	22.1	5 11	13 27.61	-7 31.9	1.435	2.377	11.3	20.9
5 21	13 21.79	-9 44.2	1.802	2.676	13.3	22.3	5 21	13 22.06	-7 13.3	1.483	2.360	15.5	21.1
30789	1988 RB ₆		4 18.5 267°76	4°9/13.5	18		137155	1999 EA ₄		4 18.5 105°50	1°1/19.3	18	
3 12	14 9.91	-1 53.3	1.983	2.814	13.3	18.9	3 12	14 15.68	-15 30.6	1.531	2.339	17.6	21.4
3 22	14 6.19	-0 30.0	1.883	2.790	10.3	18.7	3 22	14 11.05	-15 22.7	1.460	2.352	13.8	21.2
4 1	14 0.31	+1 1.2	1.808	2.767	7.2	18.4	4 1	14 3.62	-14 58.8	1.410	2.364	9.4	20.9
4 11	13 52.78	+2 33.6	1.759	2.742	5.0	18.2	4 11	13 54.21	-14 21.3	1.384	2.376	4.4	20.7
4 21	13 44.38	+3 59.1	1.737	2.717	5.9	18.2	4 21	13 43.97	-13 34.7	1.384	2.388	1.4	20.5
5 1	13 36.06	+5 10.1	1.744	2.692	9.0	18.4	5 1	13 34.21	-12 45.4	1.411	2.399	6.1	20.8
5 11	13 28.75	+6 0.9	1.775	2.666	12.5	18.5	5 11	13 26.11	-12 0.7	1.463	2.411	10.7	21.1
5 21	13 23.19	+6 28.9	1.828	2.640	15.8	18.7	5 21	13 20.44	-11 26.4	1.538	2.421	14.7	21.4
473241	2015 LL ₂₃		4 18.5 316°22	3°1/15.7	17		315478	2007 YH ₃₄		4 18.5 133°47	3°3/21.2	16	
3 12	14 8.47	-4 11.7	2.079	2.907	12.8	21.0	3 12	14 14.53	-21 25.0	1.755	2.535	16.8	21.7
3 22	14 4.84	-3 33.1	1.992	2.899	9.9	20.7	3 22	14 10.02	-21 30.0	1.674	2.543	13.6	21.5
4 1	13 59.25	-2 49.3	1.929	2.891	6.6	20.5	4 1	14 2.90	-21 16.4	1.613	2.550	9.8	21.3
4 11	13 52.25	-2 4.8	1.892	2.884	3.6	20.3	4 11	13 53.91	-20 44.4	1.576	2.557	5.8	21.1
4 21	13 44.58	-1 24.5	1.883	2.876	3.8	20.3	4 21	13 44.06	-19 56.7	1.566	2.564	3.3	20.9
5 1	13 37.10	-0 53.5	1.901	2.869	6.9	20.5	5 1	13 34.57	-18 58.8	1.583	2.570	5.7	21.1
5 11	13 30.65	-0 35.6	1.945	2.862	10.3	20.7	5 11	13 26.54	-17 58.2	1.626	2.576	9.6	21.3
5 21	13 25.83	-0 32.7	2.011	2.855	13.4	20.9	5 21	13 20.74	-17 2.2	1.692	2.582	13.3	21.6
171312	2006 HS ₄₆		4 18.5 288°89	2°5/16.5	17		105583	2000 RU ₈₂		4 18.5 111°53	5°3/24.7	18	
3 12	14 9.25	-9 41.6	1.460	2.297	16.8	20.2	3 12	14 11.17	-30 39.3	2.568	3.281	13.7	19.1
3 22	14 6.43	-8 41.6	1.369	2.281	13.1	19.9	3 22	14 6.76	-30 57.5	2.480	3.291	11.6	19.0
4 1	14 0.84	-7 25.3	1.299	2.265	8.6	19.6	4 1	14 0.42	-30 58.0	2.412	3.301	9.3	18.8
4 11	13 53.11	-5 58.5	1.253	2.249	3.9	19.3	4 11	13 52.74	-30 39.8	2.369	3.311	7.0	18.7
4 21	13 44.27	-4 29.6	1.233	2.233	3.5	19.2	4 21	13 44.45	-30 3.6	2.352	3.320	5.5	18.6
5 1	13 35.59	-3 8.7	1.239	2.217	8.3	19.5	5 1	13 36.41	-29 12.4	2.362	3.330	5.7	18.6
5 11	13 28.33	-2 4.7	1.268	2.202	13.3	19.7	5 11	13 29.41	-28 11.5	2.400	3.339	7.5	18.8
5 21	13 23.40	-1 23.2	1.318	2.186	17.6	19.9	5 21	13 24.04	-27 6.8	2.464	3.348	9.8	18.9
65810	1996 RL ₂₆		4 18.5 294°38	1°2/19.4	17		341467	2007 TG ₃₁₇		4 18.5 75°19	3°0/15.9	18	
3 12	14 9.44	-17 7.9	1.453	2.271	17.9	20.0	3 12	14 11.57	-3 12.2	2.116	2.938	12.8	20.5
3 22	14 6.74	-16 43.3	1.359	2.255	14.3	19.7	3 22	14 7.05	-2 46.3	2.043	2.946	9.9	20.3
4 1	14 1.13	-15 57.7	1.283	2.239	9.8	19.4	4 1	14 0.58	-2 17.0	1.994	2.954	6.5	20.1
4 11	13 53.28	-14 52.9	1.231	2.224	4.8	19.1	4 11	13 52.79	-1 48.7	1.972	2.962	3.6	20.0
4 21	13 44.20	-13 34.1	1.204	2.208	1.5	18.8	4 21	13 44.44	-1 25.5	1.977	2.970	3.6	20.0
5 1	13 35.27	-12 9.8	1.202	2.193	6.6	19.1	5 1	13 36.42	-1 11.4	2.011	2.978	6.6	20.2
5 11	13 27.80	-10 50.4	1.225	2.177	11.8	19.3	5 11	13 29.50	-1 9.0	2.070	2.986	9.8	20.4
5 21	13 22.77	-9 44.5	1.269	2.162	16.5	19.6	5 21	13 24.25	-1 19.5	2.153	2.994	12.7	20.6
295170	2008 FO ₇₂		4 18.5 290°15	1°1/16.8	18		503457	2016 EF ₁₂₂		4 18.5 4°23	0°6/18.9	17	
3 12	14 3.15	-6 30.8	4.257	5.062	7.2	20.7	3 12	14 7.99	-14 21.6	1.242	2.081	19.1	21.1
3 22	13 59.75	-6 14.1	4.159	5.054	5.5	20.6	3 22	14 5.77	-14 10.9	1.171	2.080	15.0	20.9
4 1	13 55.42	-5 54.4	4.087	5.046	3.6	20.4	4 1	14 0.50	-13 42.2	1.118	2.080	10.1	20.6
4 11	13 50.45	-5 33.5	4.044	5.038	1.7	20.3	4 11	13 52.96	-12 58.6	1.087	2.082	4.6	20.3
4 21	13 45.19	-5 13.4	4.031	5.030	1.4	20.2	4 21	13 44.37	-12 6.0	1.080	2.084	1.3	20.0
5 1	13 40.01	-4 56.0	4.049	5.022	3.3	20.4	5 1	13 36.16	-11 12.4	1.096	2.087	6.9	20.4
5 11	13 35.28	-4 43.0	4.094	5.015	5.3	20.5	5 11	13 29.69	-10 26.7	1.136	2.091	12.2	20.7
5 21	13 31.30	-4 35.9	4.166	5.007	7.1	20.6	5 21	13 25.82	-9 55.1	1.195	2.097	16.7	21.0
2237	Melnikov		4 18.5 183°35	0°9/17.5	18		507674	2013 RZ ₁₀₀		4 18.5 227°39	0°2/18.7	17	
3 12	14 8.60	-9 46.9	3.026	3.824	10.0	18.0	3 12	14 11.99	-14 13.4	2.175	2.971	13.4	23.1
3 22	14 4.27	-9 17.4	2.934	3.825	7.7	17.8	3 22	14 7.60	-13 48.6	2.074	2.961	10.5	22.9
4 1	13 58.54	-8 41.5	2.868	3.824	5.0	17.6	4 1	14 1.12	-13 11.5	1.996	2.950	7.1	22.7
4 11	13 51.85	-8 1.6	2.829	3.824	2.1	17.4	4 11	13 53.11	-12 24.3	1.945	2.938	3.2	22.4
4 21	13 44.73	-7 20.8	2.821	3.823	1.4	17.4	4 21	13 44.32	-11 30.7	1.922	2.926	1.0	22.2
5 1	13 37.78	-6 42.5	2.843	3.821	4.2	17.6	5 1	13 35.68	-10 36.0	1.928	2.914	5.1	22.5
5 11	13 31.55	-6 10.0	2.893	3.819	6.9	17.7	5 11	13 28.06	-9 45.8	1.962	2.901	8.9	22.7
5 21	13 26.48	-5 45.5	2.969	3.817	9.4	17.9	5 21	13 22.14	-9 4.7	2.020	2.887	12.4	22.9
439108	2011 SL ₆₉		4 18.5 180°76	3°4/13.5	18		464492	2016 BJ ₆₈		4 18.5 221°25	2°9/16.3	16	
3 12	14 6.76	-2 54.2	2.826	3.645	10.1	21.7	3 12	14 15.13	-6 32.8	1.733	2.555	15.3	22.1
3 22	14 2.93	-1 24.1	2.744	3.645	7.7	21.6	3 22	14 10.48	-5 49.1	1.643	2.546	11.8	21.8
4 1	13 57.68	+0 11.1	2.688	3.646	5.2	21.4	4 1	14 3.25	-4 56.0	1.576	2.537	7.8	21.6
4 11	13 51.48	+1 46.0	2.662	3.646	3.5	21.3	4 11	13 54.10	-3 58.8	1.534	2.527	3.9	21.3
4 21	13 44.86	+3 15.2	2.667	3.646	4.2	21.3	4 21	13 43.99	-3 3.7	1.519	2.516	3.7	21.3
5 1	13 38.43	+4 33.5	2.701	3.645	6.4	21.5	5 1	13 34.09	-2 17.6	1.532	2.504	7.7	21.5
5 11	13 32.75	+5 37.0	2.762	3.644	8.9	21.6	5 11	13 25.51	-1 46.0	1.570	2.492	12.0	21.7
5 21	13 28.27	+6 23.8	2.848	3.643	11.2	21.8	5 21	13 19.07	-1 32.1	1.630	2.479	15.8	21.9
272838	2006 BY ₁₃		4 18.5 130°59	5°5/14.4	18		391163	2005 YQ ₂₂₈		4 18.5 237°98	3°2/14.8	16	
3 12	14 15.28	+3 33.9	1.952	2.775	13.7	20.6	3 12	14 7.90	-1 13.2	2.719	3.53		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
498264	2007 <i>UF</i> ₁₂₉		4 18.5 134°58	0°9/17.5 17			101797	1999 <i>HR</i> ₃		4 18.5 92°56	10°2/ 9.2 18		
3 12	14 10.04	- 9 41.7	2.867	3.665	10.5	22.4	3 12	14 10.44	- 1 48.6	1.020	1.888	20.0	19.1
3 22	14 5.36	- 9 13.3	2.788	3.678	8.0	22.2	3 22	14 7.80	+ 1 57.9	0.974	1.900	15.5	18.9
4 1	13 59.24	- 8 38.6	2.735	3.692	5.2	22.1	4 1	14 1.80	+ 5 57.4	0.950	1.912	11.5	18.7
4 11	13 52.16	- 8 0.1	2.710	3.705	2.2	21.9	4 11	13 53.49	+ 9 46.0	0.951	1.923	10.3	18.7
4 21	13 44.68	- 7 21.1	2.715	3.717	1.4	21.8	4 21	13 44.31	+13 0.2	0.977	1.935	12.7	18.8
5 1	13 37.45	- 6 45.0	2.750	3.729	4.3	22.0	5 1	13 35.88	+15 23.8	1.025	1.946	16.7	19.1
5 11	13 31.04	- 6 15.0	2.814	3.740	7.1	22.2	5 11	13 29.55	+16 51.9	1.092	1.957	20.6	19.4
5 21	13 25.89	- 5 53.4	2.903	3.751	9.6	22.4	5 21	13 26.06	+17 28.8	1.175	1.967	23.9	19.6
59989	1999 <i>SL</i> ₁₆		4 18.5 320°31	4°0/21.2 17			368213	2001 <i>RG</i> ₄₀		4 18.5 211°15	2°7/21.1 17		
3 12	14 6.92	-20 57.6	1.271	2.090	19.9	18.7	3 12	14 11.59	-21 50.4	2.068	2.840	14.8	21.6
3 22	14 5.37	-21 10.2	1.175	2.068	16.3	18.4	3 22	14 7.47	-21 32.9	1.971	2.836	12.0	21.4
4 1	14 0.60	-20 59.2	1.097	2.046	12.0	18.1	4 1	14 1.11	-20 57.2	1.894	2.830	8.7	21.1
4 11	13 53.20	-20 23.4	1.040	2.025	7.2	17.7	4 11	13 53.14	-20 4.1	1.843	2.825	5.1	20.9
4 21	13 44.27	-19 24.7	1.005	2.005	4.0	17.5	4 21	13 44.38	-18 56.7	1.820	2.819	2.7	20.7
5 1	13 35.34	-18 9.9	0.994	1.986	7.2	17.6	5 1	13 35.83	-17 40.5	1.824	2.812	5.0	20.9
5 11	13 28.02	-16 50.0	1.005	1.968	12.5	17.8	5 11	13 28.44	-16 22.9	1.856	2.805	8.7	21.1
5 21	13 23.48	-15 36.5	1.036	1.950	17.5	18.0	5 21	13 22.90	-15 10.7	1.913	2.798	12.2	21.3
272722	2005 <i>YC</i> ₆₀		4 18.5 56°01	0°1/18.6 17			12646	Avercamp		4 18.5 266°12	4°7/22.4 18		
3 12	14 11.92	-13 3.6	1.675	2.491	16.0	21.0	3 12	14 13.46	-24 56.2	2.152	2.903	14.9	18.9
3 22	14 7.87	-12 50.6	1.607	2.504	12.4	20.8	3 22	14 9.14	-25 20.2	2.037	2.883	12.5	18.7
4 1	14 1.38	-11 25.0	1.560	2.518	8.2	20.5	4 1	14 2.42	-25 27.9	1.943	2.862	9.6	18.5
4 11	13 53.21	-11 49.8	1.538	2.532	3.6	20.3	4 11	13 53.81	-25 17.5	1.873	2.840	6.6	18.2
4 21	13 44.36	-11 9.7	1.542	2.546	1.1	20.1	4 21	13 44.13	-24 49.2	1.830	2.818	4.7	18.1
5 1	13 35.94	-10 30.1	1.574	2.561	5.8	20.5	5 1	13 34.42	-24 5.6	1.815	2.796	5.9	18.1
5 11	13 28.96	- 9 57.1	1.631	2.575	10.0	20.8	5 11	13 25.76	-23 12.5	1.827	2.773	9.0	18.2
5 21	13 24.07	- 9 34.6	1.710	2.590	13.6	21.0	5 21	13 18.98	-22 16.6	1.863	2.750	12.4	18.4
68672	2002 <i>CS</i> ₁₁₄		4 18.5 341°46	7°8/ 9.0 18			36086	1999 <i>RW</i> ₈₆		4 18.5 234°19	0°3/18.9 18		
3 12	14 6.49	+10 26.9	2.216	3.048	12.0	18.9	3 12	14 9.87	-13 20.9	2.786	3.576	11.0	19.2
3 22	14 3.16	+11 59.7	2.152	3.045	9.9	18.7	3 22	14 5.50	-13 11.4	2.683	3.566	8.6	19.0
4 1	13 58.04	+13 28.0	2.113	3.042	8.3	18.6	4 1	13 59.51	-12 53.5	2.604	3.555	5.7	18.8
4 11	13 51.71	+14 44.0	2.099	3.040	7.8	18.6	4 11	13 52.37	-12 29.0	2.552	3.545	2.6	18.6
4 21	13 44.84	+15 41.6	2.111	3.038	8.8	18.6	4 21	13 44.65	-12 0.2	2.529	3.534	0.8	18.4
5 1	13 38.23	+16 16.1	2.149	3.035	10.7	18.7	5 1	13 37.03	-11 30.3	2.537	3.522	4.0	18.6
5 11	13 32.59	+16 26.2	2.208	3.034	12.9	18.9	5 11	13 30.18	-11 2.9	2.573	3.511	7.1	18.8
5 21	13 28.45	+16 12.8	2.287	3.032	15.0	19.0	5 21	13 24.62	-10 41.1	2.634	3.499	9.9	19.0
502757	2015 <i>DQ</i> ₆₃		4 18.5 68°96	4°6/14.3 17			309985	2009 <i>HF</i> ₈₃		4 18.5 62°35	1°5/17.3 18		
3 12	14 9.50	- 2 3.3	1.808	2.644	14.1	21.5	3 12	14 11.84	-12 21.9	1.325	2.158	18.4	20.6
3 22	14 5.75	- 0 54.3	1.743	2.654	10.8	21.3	3 22	14 8.16	-11 16.9	1.272	2.181	14.1	20.4
4 1	13 59.86	+ 0 19.2	1.702	2.663	7.4	21.1	4 1	14 1.67	- 9 55.2	1.240	2.204	9.1	20.2
4 11	13 52.52	+ 1 30.4	1.686	2.672	4.8	21.0	4 11	13 53.34	- 8 24.0	1.231	2.227	3.8	19.9
4 21	13 44.59	+ 2 32.1	1.697	2.682	5.4	21.0	4 21	13 44.37	- 6 52.7	1.248	2.251	2.5	19.9
5 1	13 37.06	+ 3 18.3	1.735	2.691	8.4	21.2	5 1	13 36.11	- 5 31.2	1.291	2.274	7.5	20.3
5 11	13 30.77	+ 3 45.1	1.798	2.701	11.8	21.4	5 11	13 29.63	- 4 27.4	1.359	2.297	12.1	20.6
5 21	13 26.32	+ 3 51.7	1.881	2.710	14.8	21.7	5 21	13 25.59	- 3 45.2	1.447	2.321	16.0	20.9
352043	2006 <i>VT</i> ₁₀₇		4 18.5 112°44	0°6/17.9 18			144367	2004 <i>DG</i> ₄₈		4 18.5 12°89	0°5/18.9 17		
3 12	14 10.63	-10 18.2	2.593	3.393	11.4	21.7	3 12	14 8.23	-13 46.9	1.652	2.474	15.9	19.4
3 22	14 6.01	-10 4.0	2.514	3.405	8.8	21.6	3 22	14 5.18	-13 39.8	1.578	2.478	12.4	19.2
4 1	13 59.76	- 9 42.9	2.460	3.417	5.7	21.4	4 1	13 59.71	-13 19.5	1.524	2.482	8.3	19.0
4 11	13 52.42	- 9 17.3	2.434	3.428	2.4	21.2	4 11	13 52.54	-12 48.6	1.494	2.488	3.8	18.7
4 21	13 44.63	- 8 50.3	2.436	3.440	1.2	21.1	4 21	13 44.60	-12 11.3	1.490	2.494	1.1	18.5
5 1	13 37.09	- 8 25.1	2.469	3.451	4.4	21.3	5 1	13 36.99	-11 33.3	1.512	2.502	5.7	18.8
5 11	13 30.46	- 8 5.0	2.529	3.462	7.5	21.6	5 11	13 30.72	-11 0.5	1.560	2.510	10.0	19.1
5 21	13 25.22	- 7 52.5	2.614	3.472	10.2	21.7	5 21	13 26.49	-10 37.5	1.630	2.518	13.7	19.4
277494	2005 <i>WK</i> ₁₀₅		4 18.5 256°84	6°6/11.7 18			35827	1999 <i>JY</i> ₅₃		4 18.5 294°46	0°3/18.3 18		
3 12	14 11.71	+ 4 46.6	2.095	2.922	12.8	20.8	3 12	14 9.22	-13 9.1	1.746	2.564	15.3	18.9
3 22	14 7.46	+ 6 7.3	2.001	2.900	10.2	20.6	3 22	14 6.09	-12 38.2	1.643	2.542	12.0	18.6
4 1	14 1.09	+ 7 29.4	1.932	2.878	7.8	20.4	4 1	14 0.49	-11 52.2	1.561	2.520	8.1	18.3
4 11	13 53.13	+ 8 45.4	1.890	2.856	6.6	20.3	4 11	13 52.98	-10 54.0	1.503	2.498	3.5	18.0
4 21	13 44.36	+ 9 48.1	1.875	2.832	7.6	20.3	4 21	13 44.43	- 9 48.7	1.472	2.476	1.4	17.8
5 1	13 35.70	+10 31.3	1.886	2.808	10.1	20.4	5 1	13 35.94	- 8 43.4	1.469	2.455	6.3	18.1
5 11	13 28.04	+10 51.5	1.922	2.784	13.1	20.5	5 11	13 28.62	- 7 45.4	1.490	2.433	10.9	18.3
5 21	13 22.07	+10 48.1	1.978	2.759	15.9	20.6	5 21	13 23.30	- 7 0.8	1.534	2.411	15.1	18.5
27855	Giorgilli		4 18.5 77°03	2°2/16.9 18			3814	Hoshi-no-mura		4 18.5 347°22	0°8/17.8 18		
3 12	14 13.08	- 7 18.1	1.664	2.490	15.6	19.2	3 12	14 7.70	-10 56.5	2.025	2.843	13.5	16.9
3 22	14 8.76	- 6 50.9	1.593	2.499	12.0	19.0	3 22	14 4.36	-10 30.9	1.939	2.839	10.4	16.7
4 1	14 1.99	- 6 15.5	1.545	2.507	7.8	18.8	4 1	13 58.99	- 9 55.2	1.875	2.836	6.9	16.4
4 11	13 53.49	- 5 36.6	1.521	2.516	3.6	18.6	4 11	13 52.20	- 9 12.7	1.837	2.833	2.9	16.2
4 21	13 44.28	- 4 59.7	1.525	2.525	2.9	18.5	4 21	13 44.73	- 8 27.8	1.827	2.830	1.5	16.1
5 1	13 35.47	- 4 30.3	1.555	2.533	7.0	18.8	5 1	13 37.48	- 7 45.5	1.844	2.828	5.5	16.3
5 11	13 28.09	- 4 13.0	1.610	2.542	11.1	19.0	5 11	13 31.29	- 7 10.9	1.888	2.826	9.3	16.6
5 21	13 22.83	- 4 10.2	1.688	2.550	14.7	19.3	5 21	13 26.77	- 6 47.6	1.954	2.825	12.6	16.8
72594	2001 <i>FG</i> ₆		4 18.5 276°06	0°5/19.0 18			376689	2013 <i>QX</i> ₆₅		4 18.5 266°13	1°3/19.6 17		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
180399	2004 <i>BN</i> ₁₁		4 18.5 138°68	0°7/17.9	18		377447	2004 <i>TE</i> ₃₅₉		4 18.6 213°96	0°0/18.5	18	
3 12	14 13.62	-12 1.4	1.932	2.738	14.5	21.5	3 12	14 11.15	-13 30.4	2.237	3.035	13.0	21.5
3 22	14 8.88	-11 27.1	1.856	2.749	11.2	21.3	3 22	14 6.87	-13 3.2	2.141	3.029	10.2	21.3
4 1	14 1.93	-10 41.3	1.802	2.759	7.4	21.1	4 1	14 0.61	-12 24.5	2.069	3.023	6.8	21.1
4 11	13 53.46	-9 47.4	1.774	2.769	3.1	20.9	4 11	13 52.93	-11 36.8	2.023	3.017	3.0	20.8
4 21	13 44.35	-8 50.5	1.775	2.778	1.5	20.8	4 21	13 44.56	-10 44.1	2.005	3.010	1.0	20.7
5 1	13 35.61	-7 56.4	1.804	2.786	5.7	21.1	5 1	13 36.37	-9 51.3	2.017	3.002	4.9	20.9
5 11	13 28.14	-7 11.0	1.859	2.794	9.6	21.3	5 11	13 29.18	-9 3.7	2.056	2.994	8.7	21.1
5 21	13 22.57	-6 37.9	1.939	2.802	13.0	21.5	5 21	13 23.62	-8 25.5	2.120	2.986	12.0	21.3
514083	2014 <i>UL</i> ₁₆₀		4 18.5 258°70	1°3/20.9	18		415985	2001 <i>YH</i> ₁₃₄		4 18.6 146°91	5°1/23.5	17	
3 12	14 2.37	-19 31.7	4.444	5.205	7.6	21.3	3 12	14 14.21	-28 3.8	2.216	2.949	15.1	21.5
3 22	13 59.19	-19 19.7	4.344	5.204	6.1	21.1	3 22	14 9.40	-28 17.9	2.128	2.957	12.6	21.3
4 1	13 55.09	-19 0.1	4.268	5.203	4.3	21.0	4 1	14 2.34	-28 12.9	2.060	2.965	9.8	21.2
4 11	13 50.37	-18 34.1	4.220	5.202	2.5	20.9	4 11	13 53.69	-27 47.9	2.016	2.973	7.0	21.0
4 21	13 45.36	-18 2.9	4.202	5.202	1.3	20.8	4 21	13 44.32	-27 3.9	1.999	2.980	5.2	20.9
5 1	13 40.46	-17 28.7	4.214	5.201	2.5	20.9	5 1	13 35.23	-26 4.9	2.010	2.986	5.8	21.0
5 11	13 36.01	-16 53.7	4.255	5.200	4.3	21.0	5 11	13 27.36	-24 57.2	2.048	2.992	8.3	21.1
5 21	13 32.30	-16 20.2	4.323	5.199	6.1	21.1	5 21	13 21.39	-23 47.8	2.112	2.998	11.2	21.3
239249	2006 <i>UA</i> ₆₇		4 18.5 258°16	3°4/14.9	17		214511	2006 <i>BA</i> ₂₁₃		4 18.6 278°22	2°8/13.1	18	
3 12	14 9.01	-2 38.5	2.428	3.249	11.4	21.0	3 12	14 1.28	+ 2 3.2	4.413	5.232	6.7	19.9
3 22	14 5.05	-1 48.7	2.331	3.233	8.8	20.8	3 22	13 58.32	+ 2 49.3	4.328	5.227	5.2	19.8
4 1	13 59.33	-0 54.4	2.259	3.218	6.0	20.6	4 1	13 54.51	+ 3 35.7	4.270	5.221	3.7	19.7
4 11	13 52.34	-0 0.1	2.214	3.201	3.7	20.4	4 11	13 50.13	+ 4 19.7	4.241	5.216	2.8	19.6
4 21	13 44.72	+ 0 49.4	2.198	3.185	4.1	20.4	4 21	13 45.49	+ 4 58.7	4.241	5.210	3.2	19.6
5 1	13 37.22	+ 1 29.2	2.210	3.168	6.7	20.5	5 1	13 40.94	+ 5 30.6	4.270	5.205	4.6	19.7
5 11	13 30.57	+ 1 55.8	2.249	3.152	9.8	20.7	5 11	13 36.82	+ 5 53.7	4.327	5.199	6.1	19.8
5 21	13 25.33	+ 2 7.2	2.311	3.134	12.5	20.8	5 21	13 33.39	+ 6 7.2	4.407	5.194	7.6	19.9
39612	1993 <i>XE</i> ₁		4 18.5 103°46	13°2/ 9.9	18		315299	2007 <i>TF</i> ₁₆₃		4 18.6 218°45	0°6/18.0	16	
3 12	14 24.54	+23 38.0	1.698	2.485	17.0	18.2	3 12	14 13.10	-12 57.3	1.885	2.692	14.8	22.0
3 22	14 17.26	+24 47.8	1.664	2.505	15.0	18.1	3 22	14 8.78	-12 15.9	1.790	2.684	11.6	21.7
4 1	14 7.30	+25 36.7	1.650	2.524	13.6	18.1	4 1	14 2.08	-11 20.2	1.718	2.675	7.7	21.5
4 11	13 55.70	+25 55.6	1.659	2.543	13.2	18.1	4 11	13 53.64	-10 13.6	1.671	2.665	3.3	21.2
4 21	13 43.70	+25 39.3	1.691	2.562	13.9	18.2	4 21	13 44.33	-9 1.7	1.652	2.655	1.5	21.0
5 1	13 32.61	+24 47.6	1.746	2.580	15.3	18.3	5 1	13 35.22	-7 51.2	1.661	2.645	6.0	21.3
5 11	13 23.45	+23 24.7	1.821	2.598	17.1	18.5	5 11	13 27.31	-6 49.3	1.698	2.633	10.3	21.5
5 21	13 16.81	+21 37.5	1.915	2.614	18.8	18.7	5 21	13 21.36	-6 1.2	1.757	2.621	14.1	21.7
83621	2001 <i>SL</i> ₃₀₇		4 18.5 50°12	2°0/16.9	18		340293	2006 <i>CX</i> ₃		4 18.6 305°45	6°8/12.1	17	
3 12	14 10.39	-7 6.8	1.952	2.775	13.7	19.1	3 12	14 7.64	+ 1 48.6	1.671	2.518	14.6	20.6
3 22	14 6.32	-6 41.0	1.883	2.787	10.5	18.9	3 22	14 4.87	+ 3 17.6	1.580	2.493	11.5	20.4
4 1	14 0.20	-6 8.5	1.838	2.800	6.8	18.7	4 1	13 59.68	+ 4 52.1	1.512	2.469	8.5	20.1
4 11	13 52.69	-5 33.5	1.818	2.813	3.1	18.5	4 11	13 52.65	+ 6 23.1	1.469	2.446	6.9	20.0
4 21	13 44.63	-5 0.3	1.826	2.826	2.6	18.4	4 21	13 44.64	+ 7 41.3	1.452	2.422	8.1	20.0
5 1	13 36.92	-4 33.7	1.861	2.839	6.1	18.7	5 1	13 36.74	+ 8 38.1	1.460	2.399	11.2	20.1
5 11	13 30.41	-4 17.5	1.923	2.852	9.7	18.9	5 11	13 30.01	+ 9 8.1	1.490	2.376	14.8	20.3
5 21	13 25.66	-4 13.6	2.007	2.866	12.8	19.2	5 21	13 25.26	+ 9 10.2	1.539	2.353	18.2	20.4
197554	2004 <i>FB</i> ₉₈		4 18.5 21°38	3°2/14.9	18		114600	2003 <i>CG</i> ₁₀		4 18.6 230°33	7°6/24.9	18	
3 12	14 7.35	-0 22.8	2.734	3.555	10.3	19.7	3 12	14 15.89	-32 29.8	2.106	2.815	16.4	19.1
3 22	14 3.44	+ 0 5.5	2.657	3.559	7.9	19.5	3 22	14 11.24	-33 18.9	2.003	2.806	14.3	19.0
4 1	13 58.07	+ 0 34.7	2.605	3.562	5.4	19.4	4 1	14 3.93	-33 48.1	1.919	2.798	11.8	18.8
4 11	13 51.72	+ 1 1.3	2.581	3.566	3.5	19.3	4 11	13 54.54	-33 53.7	1.858	2.789	9.4	18.6
4 21	13 44.94	+ 1 21.9	2.586	3.571	3.8	19.3	4 21	13 44.02	-33 34.1	1.822	2.780	7.7	18.5
5 1	13 38.38	+ 1 33.5	2.619	3.575	5.9	19.4	5 1	13 33.56	-32 51.0	1.811	2.770	8.0	18.5
5 11	13 32.61	+ 1 34.3	2.678	3.580	8.4	19.6	5 11	13 24.36	-31 50.2	1.827	2.760	9.9	18.6
5 21	13 28.07	+ 1 23.3	2.761	3.585	10.7	19.8	5 21	13 17.33	-30 39.8	1.867	2.749	12.6	18.7
357943	2005 <i>YJ</i> ₅₃		4 18.5 128°67	1°3/19.5	18		522335	2016 <i>CO</i> ₂₉₀		4 18.6 313°99	1°0/19.1	17	
3 12	14 16.01	-16 29.3	1.612	2.413	17.1	21.9	3 12	14 12.22	-13 50.3	1.390	2.216	18.1	21.3
3 22	14 11.24	-16 19.6	1.538	2.424	13.5	21.6	3 22	14 9.05	-13 58.7	1.302	2.203	14.4	21.0
4 1	14 3.76	-15 47.3	1.484	2.435	9.2	21.4	4 1	14 2.79	-13 52.9	1.232	2.191	9.8	20.7
4 11	13 54.34	-15 3.5	1.455	2.446	4.5	21.1	4 11	13 54.13	-13 34.3	1.186	2.179	4.7	20.4
4 21	13 44.09	-14 9.8	1.452	2.456	1.5	21.0	4 21	13 44.16	-13 6.2	1.164	2.168	1.4	20.1
5 1	13 34.29	-13 12.7	1.476	2.465	5.9	21.3	5 1	13 34.32	-12 34.5	1.167	2.157	6.8	20.4
5 11	13 26.08	-12 19.7	1.527	2.474	10.4	21.5	5 11	13 26.04	-12 6.3	1.193	2.146	12.0	20.7
5 21	13 20.22	-11 37.0	1.600	2.482	14.3	21.8	5 21	13 20.35	-11 47.8	1.241	2.136	16.7	20.9
138635	2000 <i>RP</i> ₁₇		4 18.6 243°20	1°2/17.1	18		200769	2001 <i>XY</i> ₁₅		4 18.6 221°72	2°0/16.9	17	
3 12	14 7.25	-11 4.0	2.509	3.315	11.5	20.3	3 12	14 15.00	-8 31.7	1.816	2.631	14.9	20.4
3 22	14 3.63	-10 7.2	2.410	3.306	8.9	20.1	3 22	14 10.33	-7 54.4	1.723	2.622	11.6	20.2
4 1	13 58.35	-8 59.8	2.337	3.296	5.8	19.9	4 1	14 3.17	-7 6.8	1.652	2.612	7.6	19.9
4 11	13 51.90	-7 45.6	2.291	3.286	2.5	19.7	4 11	13 54.15	-6 13.0	1.607	2.601	3.5	19.6
4 21	13 44.89	-6 29.4	2.274	3.276	1.8	19.6	4 21	13 44.19	-5 18.6	1.590	2.590	2.8	19.6
5 1	13 38.03	-5 16.7	2.287	3.265	5.1	19.8	5 1	13 34.41	-4 30.2	1.600	2.578	6.9	19.8
5 11	13 32.01	-4 12.6	2.328	3.254	8.4	20.0	5 11	13 25.89	-3 53.5	1.637	2.565	11.2	20.0
5 21	13 27.34	-3 21.0	2.394	3.243	11.3	20.1	5 21	13 19.42	-3 32.2	1.697	2.551	15.0	20.2
20821	Balasridhar		4 18.6 207°22	1°1/17.6	18		192884	1999 <i>XJ</i> ₇₅		4 18.6 175°17	3°3/14.9	17	
3 1													

EPHEMERIDES

4 18.6

4 18.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
180116	2003 <i>FG</i> ₄₄		4 18.6 346°64	0°1/18.5 18			34414	2000 <i>RQ</i> ₁₀₃		4 18.6 237°64	6°2/25.5 18		
3 12	14 6.23	-13 18.9	1.815	2.635	14.7	19.8	3 12	14 11.33	-33 13.3	2.614	3.309	13.9	18.4
3 22	14 3.53	-12 54.2	1.727	2.628	11.5	19.6	3 22	14 7.12	-33 39.2	2.507	3.301	12.0	18.2
4 1	13 58.63	-12 16.2	1.661	2.621	7.6	19.3	4 1	14 0.86	-33 47.0	2.421	3.294	9.9	18.1
4 11	13 52.13	-11 28.1	1.620	2.615	3.4	19.1	4 11	13 53.10	-33 34.7	2.358	3.286	7.8	17.9
4 21	13 44.86	-10 34.4	1.605	2.610	1.1	18.9	4 21	13 44.57	-33 2.0	2.321	3.278	6.4	17.8
5 1	13 37.80	-9 41.4	1.618	2.605	5.6	19.2	5 1	13 36.15	-32 11.2	2.311	3.269	6.5	17.8
5 11	13 31.89	-8 55.1	1.655	2.601	9.8	19.4	5 11	13 28.72	-31 7.1	2.328	3.261	8.1	17.9
5 21	13 27.81	-8 20.5	1.715	2.598	13.5	19.6	5 21	13 22.94	-29 56.0	2.370	3.252	10.3	18.0
247936	2003 <i>XJ</i> ₁		4 18.6 148°07	3°4/15.4 18			473275	2015 <i>MW</i> ₉₃		4 18.6 233°38	4°6/13.8 18		
3 12	14 13.73	-4 24.6	2.013	2.832	13.5	21.5	3 12	14 10.02	+2 30.0	2.421	3.244	11.4	20.5
3 22	14 8.82	-3 26.1	1.941	2.842	10.4	21.3	3 22	14 5.74	+3 15.0	2.340	3.240	8.9	20.3
4 1	14 1.84	-2 21.7	1.893	2.852	6.9	21.1	4 1	13 59.73	+4 0.1	2.283	3.235	6.4	20.1
4 11	13 53.44	-1 16.9	1.871	2.861	3.9	20.9	4 11	13 52.53	+4 40.3	2.253	3.230	4.7	20.0
4 21	13 44.47	-0 17.7	1.879	2.870	4.1	20.9	4 21	13 44.78	+5 11.1	2.252	3.225	5.3	20.0
5 1	13 35.85	+0 30.1	1.914	2.877	7.2	21.1	5 1	13 37.23	+5 28.7	2.278	3.220	7.6	20.2
5 11	13 28.45	+1 2.5	1.976	2.884	10.6	21.4	5 11	13 30.60	+5 30.9	2.330	3.215	10.2	20.3
5 21	13 22.84	+1 17.8	2.061	2.890	13.6	21.6	5 21	13 25.41	+5 17.2	2.404	3.210	12.7	20.5
426743	2013 <i>TW</i> ₈₃		4 18.6 356°56	2°1/20.2 17			502929	2015 <i>EJ</i> ₃₃		4 18.6 178°24	0°6/18.1 17		
3 12	14 9.23	-18 28.2	1.623	2.429	16.8	20.9	3 12	14 12.56	-10 43.4	2.060	2.868	13.7	21.6
3 22	14 6.16	-18 18.6	1.539	2.427	13.4	20.6	3 22	14 8.07	-10 30.0	1.974	2.868	10.6	21.4
4 1	14 0.53	-17 50.7	1.476	2.426	9.4	20.4	4 1	14 1.46	-10 7.6	1.911	2.869	7.0	21.2
4 11	13 53.01	-17 6.0	1.436	2.425	5.0	20.1	4 11	13 53.34	-9 38.9	1.874	2.869	3.0	21.0
4 21	13 44.58	-16 8.5	1.422	2.425	2.1	19.9	4 21	13 44.52	-9 7.6	1.866	2.869	1.4	20.8
5 1	13 36.45	-15 4.8	1.434	2.425	5.7	20.2	5 1	13 35.93	-8 38.0	1.885	2.869	5.4	21.1
5 11	13 29.70	-14 2.9	1.472	2.425	10.1	20.4	5 11	13 28.47	-8 14.7	1.932	2.869	9.2	21.3
5 21	13 25.12	-13 9.8	1.532	2.426	14.1	20.7	5 21	13 22.78	-8 0.9	2.002	2.868	12.6	21.5
499757	2011 <i>BR</i> ₁₁₁		4 18.6 256°00	7°7/24.5 18			15185	4104 <i>T</i> ₋₁		4 18.6 234°12	3°8/14.9 18		
3 12	14 16.47	-31 43.4	2.080	2.794	16.5	21.3	3 12	14 9.84	-4 57.0	1.897	2.726	13.8	18.0
3 22	14 11.84	-32 40.6	1.971	2.778	14.3	21.1	3 22	14 6.14	-3 43.3	1.812	2.719	10.6	17.7
4 1	14 4.44	-33 19.1	1.881	2.763	11.9	20.9	4 1	14 0.27	-2 20.8	1.750	2.712	7.1	17.5
4 11	13 54.84	-33 35.0	1.814	2.746	9.4	20.7	4 11	13 52.85	-0 55.8	1.715	2.705	4.1	17.3
4 21	13 43.94	-33 25.7	1.771	2.730	7.8	20.6	4 21	13 44.68	+0 24.2	1.708	2.697	4.6	17.3
5 1	13 32.99	-32 52.4	1.755	2.713	8.2	20.6	5 1	13 36.75	+1 31.8	1.728	2.689	8.0	17.5
5 11	13 23.23	-32 0.4	1.764	2.696	10.2	20.6	5 11	13 29.95	+2 21.7	1.773	2.681	11.6	17.7
5 21	13 15.67	-30 57.5	1.797	2.678	13.0	20.8	5 21	13 24.96	+2 50.9	1.840	2.673	14.9	17.9
176520	2001 <i>YF</i> ₈₃		4 18.6 103°98	5°0/13.0 17			236401	2006 <i>DW</i> ₆₁		4 18.6 354°96	7°5/13.2 18		
3 12	14 9.95	+4 20.9	2.514	3.336	11.1	20.8	3 12	14 11.59	+2 1.1	1.310	2.164	17.4	20.1
3 22	14 5.47	+5 14.4	2.453	3.350	8.7	20.7	3 22	14 8.30	+3 18.1	1.246	2.162	13.7	19.8
4 1	13 59.41	+6 6.1	2.417	3.364	6.4	20.5	4 1	14 2.06	+4 37.4	1.202	2.161	10.0	19.6
4 11	13 52.32	+6 51.1	2.408	3.378	5.1	20.5	4 11	13 53.71	+5 48.7	1.181	2.161	7.6	19.5
4 21	13 44.84	+7 25.0	2.428	3.392	5.7	20.5	4 21	13 44.41	+6 42.0	1.184	2.160	8.6	19.5
5 1	13 37.67	+7 44.4	2.475	3.405	7.6	20.7	5 1	13 35.56	+7 9.7	1.211	2.160	12.0	19.7
5 11	13 31.44	+7 47.9	2.548	3.419	9.9	20.8	5 11	13 28.39	+7 8.4	1.259	2.160	15.9	19.9
5 21	13 26.60	+7 35.5	2.643	3.432	12.1	21.0	5 21	13 23.72	+6 39.4	1.325	2.161	19.4	20.2
297591	2001 <i>SL</i> ₉₀		4 18.6 270°85	2°8/21.1 16			260023	2004 <i>GB</i> ₁₈		4 18.6 30°22	6°9/13.2 17		
3 12	14 12.54	-20 32.1	2.430	3.195	13.1	22.7	3 12	14 10.02	+1 32.3	1.437	2.288	16.3	20.1
3 22	14 8.09	-20 44.6	2.311	3.171	10.7	22.5	3 22	14 6.74	+2 50.3	1.378	2.293	12.7	19.8
4 1	14 1.58	-20 44.5	2.213	3.146	7.8	22.3	4 1	14 0.83	+4 10.3	1.340	2.299	9.2	19.7
4 11	13 53.46	-20 31.3	2.142	3.121	4.7	22.0	4 11	13 53.10	+5 22.7	1.326	2.305	6.9	19.5
4 21	13 44.43	-20 6.1	2.098	3.095	2.8	21.9	4 21	13 44.63	+6 18.6	1.336	2.312	7.9	19.6
5 1	13 35.36	-19 31.7	2.084	3.069	4.7	21.9	5 1	13 36.63	+6 51.3	1.371	2.319	11.0	19.8
5 11	13 27.15	-18 52.7	2.097	3.043	8.0	22.1	5 11	13 30.17	+6 57.6	1.428	2.327	14.6	20.0
5 21	13 20.52	-18 14.2	2.136	3.016	11.3	22.2	5 21	13 25.94	+6 38.4	1.504	2.334	17.8	20.3
58655	1997 <i>WU</i> ₄₉		4 18.6 113°06	1°1/17.5 18			338253	2002 <i>TZ</i> ₁₉₈		4 18.6 140°47	0°2/18.4 18		
3 12	14 13.07	-10 22.7	2.001	2.810	14.0	19.5	3 12	14 10.03	-12 58.8	2.557	3.351	11.7	21.5
3 22	14 8.32	-9 47.0	1.931	2.827	10.7	19.4	3 22	14 5.64	-12 27.9	2.474	3.361	9.0	21.3
4 1	14 1.50	-9 1.6	1.884	2.843	7.0	19.2	4 1	13 59.61	-11 47.6	2.416	3.370	6.0	21.1
4 11	13 53.29	-8 10.4	1.864	2.858	3.0	18.9	4 11	13 52.46	-11 0.4	2.385	3.379	2.6	20.9
4 21	13 44.53	-7 18.3	1.871	2.874	1.9	18.9	4 21	13 44.84	-10 10.0	2.383	3.387	0.9	20.8
5 1	13 36.17	-6 30.8	1.908	2.888	5.7	19.2	5 1	13 37.47	-9 20.7	2.412	3.395	4.4	21.1
5 11	13 29.04	-5 52.8	1.971	2.902	9.4	19.4	5 11	13 31.01	-8 36.7	2.468	3.403	7.5	21.3
5 21	13 23.72	-5 27.3	2.058	2.916	12.6	19.6	5 21	13 25.96	-8 1.4	2.549	3.410	10.4	21.5
500753	2013 <i>AM</i> ₇₄		4 18.6 157°46	4°3/23.7 18			251521	2008 <i>GO</i> ₃		4 18.6 84°53	2°1/20.5 17		
3 12	14 12.94	-28 18.2	3.084	3.795	11.7	22.3	3 12	14 11.82	-18 10.1	2.428	3.204	12.8	20.6
3 22	14 7.82	-28 41.1	2.988	3.802	9.8	22.1	3 22	14 7.25	-18 25.5	2.341	3.210	10.2	20.4
4 1	14 1.04	-28 50.5	2.915	3.809	7.7	22.0	4 1	14 0.80	-18 29.7	2.276	3.216	7.2	20.2
4 11	13 53.09	-28 45.3	2.867	3.815	5.6	21.8	4 11	13 53.03	-18 23.4	2.237	3.221	4.0	20.1
4 21	13 44.58	-28 26.2	2.847	3.820	4.4	21.8	4 21	13 44.64	-18 8.1	2.227	3.227	2.1	19.9
5 1	13 36.24	-27 55.1	2.857	3.826	4.8	21.8	5 1	13 36.46	-17 46.7	2.246	3.233	4.3	20.1
5 11	13 28.73	-27 15.9	2.895	3.830	6.5	21.9	5 11	13 29.25	-17 23.2	2.292	3.238	7.4	20.3
5 21	13 22.58	-26 32.8	2.959	3.835	8.6	22.1	5 21	13 23.60	-17 1.6	2.364	3.244	10.4	20.5
150255	1999 <i>NH</i> ₂		4 18.6 303°37	4°7/13.9 18			146171	2000 <i>SS</i> ₂₈₂		4 18.6 235°16	3°3/22.5 18		
3 12	14 6.60												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
305453	2008 <i>DC</i> ₁		4 18.6 256°33	4.7/23.2	18		501478	2014 <i>BT</i> ₅₈		4 18.6 138°19	4.7/23.5	18	
3 12	14 11.80	-27 5.1	2.533	3.265	13.4	21.1	3 12	14 12.22	-27 25.2	2.462	3.194	13.8	21.3
3 22	14 7.47	-27 29.9	2.423	3.252	11.3	20.9	3 22	14 7.69	-27 44.5	2.371	3.200	11.5	21.1
4 1	14 1.12	-27 39.4	2.334	3.239	8.8	20.7	4 1	14 1.17	-27 47.3	2.301	3.206	8.9	20.9
4 11	13 53.24	-27 32.2	2.269	3.225	6.4	20.5	4 11	13 53.22	-27 32.8	2.256	3.212	6.4	20.8
4 21	13 44.55	-27 8.6	2.232	3.212	4.8	20.4	4 21	13 44.62	-27 1.9	2.238	3.218	4.8	20.7
5 1	13 35.91	-26 30.9	2.223	3.198	5.5	20.4	5 1	13 36.23	-26 17.5	2.248	3.223	5.4	20.7
5 11	13 28.19	-25 43.7	2.241	3.183	7.8	20.5	5 11	13 28.89	-25 24.8	2.285	3.228	7.6	20.9
5 21	13 22.06	-24 52.5	2.285	3.169	10.5	20.7	5 21	13 23.20	-24 29.6	2.348	3.233	10.2	21.1
222485	2001 <i>SH</i> ₁₄₇		4 18.6 157°48	4.8/21.4	17		146122	2000 <i>RA</i> ₂₃		4 18.6 256°96	0°1/18.6	18	
3 12	14 21.92	-21 32.3	1.940	2.698	16.1	20.8	3 12	14 9.14	-13 39.3	2.634	3.427	11.4	21.0
3 22	14 15.82	-22 38.4	1.849	2.701	13.3	20.6	3 22	14 5.14	-13 12.6	2.523	3.408	8.9	20.8
4 1	14 6.92	-23 31.8	1.779	2.703	10.0	20.4	4 1	13 59.43	-12 35.6	2.436	3.389	6.0	20.6
4 11	13 55.88	-24 9.7	1.735	2.706	6.6	20.2	4 11	13 52.46	-11 50.4	2.376	3.369	2.7	20.3
4 21	13 43.71	-24 30.6	1.719	2.708	4.8	20.0	4 21	13 44.86	-11 0.3	2.345	3.349	0.8	20.1
5 1	13 31.66	-24 35.8	1.731	2.710	6.4	20.1	5 1	13 37.32	-10 9.4	2.344	3.329	4.4	20.3
5 11	13 20.99	-24 29.8	1.771	2.711	9.6	20.3	5 11	13 30.56	-9 22.2	2.371	3.308	7.7	20.5
5 21	13 12.61	-24 18.2	1.835	2.713	13.0	20.5	5 21	13 25.14	-8 42.7	2.424	3.287	10.7	20.7
474735	2005 <i>NU</i> ₂₅		4 18.6 332°92	6°3/24.4	17		363275	2002 <i>GG</i> ₈₆		4 18.6 345°36	3°4/16.6	17	
3 12	14 9.45	-29 42.8	2.025	2.764	16.1	20.8	3 12	14 14.57	-4 25.1	1.378	2.218	17.5	20.2
3 22	14 6.16	-30 11.9	1.928	2.757	13.8	20.6	3 22	14 10.61	-4 7.8	1.303	2.216	13.5	20.0
4 1	14 0.49	-30 20.7	1.850	2.750	11.0	20.4	4 1	14 3.65	-3 44.7	1.249	2.213	9.0	19.7
4 11	13 53.02	-30 7.0	1.794	2.744	8.3	20.2	4 11	13 54.47	-3 21.2	1.218	2.211	4.6	19.4
4 21	13 44.63	-29 30.9	1.764	2.738	6.5	20.1	4 21	13 44.22	-3 3.1	1.212	2.209	4.2	19.4
5 1	13 36.39	-28 35.5	1.759	2.732	6.9	20.1	5 1	13 34.32	-2 56.0	1.231	2.208	8.5	19.7
5 11	13 29.35	-27 27.4	1.780	2.727	9.2	20.2	5 11	13 26.08	-3 4.2	1.273	2.207	13.2	19.9
5 21	13 24.29	-26 14.4	1.825	2.722	12.1	20.4	5 21	13 20.39	-3 29.1	1.336	2.206	17.3	20.2
249086	2007 <i>VR</i> ₃₈		4 18.6 145°50	5°3/13.4	18		305757	2009 <i>DR</i> ₁₅		4 18.6 86°81	2°2/16.9	18	
3 12	14 10.43	+ 3 20.3	2.210	3.037	12.2	20.6	3 12	14 15.13	- 8 43.7	1.485	2.312	17.1	21.6
3 22	14 6.18	+ 4 11.4	2.137	3.038	9.6	20.4	3 22	14 10.52	- 8 1.8	1.426	2.331	13.1	21.4
4 1	14 0.08	+ 5 1.9	2.088	3.039	7.0	20.2	4 1	14 3.23	- 7 9.1	1.388	2.351	8.5	21.2
4 11	13 52.70	+ 5 46.1	2.065	3.040	5.3	20.1	4 11	13 54.13	- 6 11.5	1.375	2.370	3.8	20.9
4 21	13 44.78	+ 6 19.0	2.071	3.041	6.0	20.2	4 21	13 44.37	- 5 15.7	1.388	2.388	3.0	20.9
5 1	13 37.12	+ 6 36.5	2.103	3.042	8.3	20.3	5 1	13 35.21	- 4 28.9	1.428	2.407	7.4	21.2
5 11	13 30.50	+ 6 36.5	2.160	3.043	11.0	20.5	5 11	13 27.72	- 3 56.7	1.492	2.425	11.7	21.5
5 21	13 25.44	+ 6 19.1	2.239	3.044	13.5	20.6	5 21	13 22.58	- 3 41.8	1.578	2.443	15.4	21.8
197045	2003 <i>UC</i> ₁₃₉		4 18.6 181°77	4°2/13.9	17		205903	2002 <i>GV</i> ₇₄		4 18.6 7°39	0°1/18.5	18	
3 12	14 9.82	- 0 37.2	2.366	3.188	11.6	20.7	3 12	14 7.98	-13 33.1	1.161	2.007	19.7	19.8
3 22	14 5.61	+ 0 27.7	2.287	3.189	9.0	20.5	3 22	14 5.97	-13 12.0	1.093	2.007	15.4	19.6
4 1	13 59.66	+ 1 35.7	2.233	3.189	6.2	20.3	4 1	14 0.79	-12 32.0	1.043	2.008	10.3	19.3
4 11	13 52.51	+ 2 41.2	2.207	3.189	4.3	20.2	4 11	13 53.25	-11 37.3	1.015	2.010	4.5	18.9
4 21	13 44.84	+ 3 39.0	2.210	3.189	4.9	20.3	4 21	13 44.62	-10 35.0	1.009	2.014	1.5	18.7
5 1	13 37.40	+ 4 24.1	2.240	3.188	7.4	20.4	5 1	13 36.42	- 9 34.5	1.028	2.018	7.4	19.1
5 11	13 30.91	+ 4 53.2	2.297	3.186	10.2	20.6	5 11	13 30.05	- 8 45.1	1.068	2.023	12.8	19.4
5 21	13 25.87	+ 5 5.1	2.377	3.185	12.7	20.7	5 21	13 26.39	- 8 13.2	1.128	2.030	17.5	19.7
240060	2001 <i>XW</i> ₄₉		4 18.6 160°18	4°0/15.7	18		501930	2014 <i>WT</i> ₄₉₄		4 18.6 107°86	5°5/12.9	18	
3 12	14 16.80	- 2 48.9	1.711	2.536	15.3	20.9	3 12	14 10.88	+ 1 15.6	2.004	2.835	13.1	21.2
3 22	14 11.63	- 2 8.2	1.638	2.541	11.8	20.7	3 22	14 6.59	+ 2 39.7	1.946	2.850	10.2	21.1
4 1	14 3.94	- 1 23.0	1.587	2.546	8.0	20.5	4 1	14 0.34	+ 4 5.3	1.912	2.866	7.3	20.9
4 11	13 54.46	- 0 38.9	1.561	2.551	4.6	20.3	4 11	13 52.81	+ 5 25.0	1.904	2.881	5.6	20.8
4 21	13 44.22	- 0 2.1	1.563	2.554	4.8	20.3	4 21	13 44.79	+ 6 31.9	1.925	2.895	6.4	20.9
5 1	13 34.37	+ 0 21.9	1.592	2.557	8.2	20.5	5 1	13 37.17	+ 7 20.8	1.972	2.909	8.9	21.1
5 11	13 25.97	+ 0 29.4	1.647	2.560	12.0	20.8	5 11	13 30.73	+ 7 48.6	2.044	2.923	11.7	21.3
5 21	13 19.72	+ 0 19.4	1.723	2.562	15.5	21.0	5 21	13 25.99	+ 7 55.3	2.138	2.937	14.2	21.5
425083	2009 <i>RJ</i> ₇₅		4 18.6 215°78	5°0/22.4	17		83242	2001 <i>RU</i> ₅₄		4 18.6 114°96	0°3/18.9	18	
3 12	14 15.85	-24 44.4	2.032	2.784	15.7	21.5	3 12	14 10.44	-13 45.3	2.306	3.103	12.7	20.2
3 22	14 11.05	-25 20.6	1.934	2.780	13.1	21.3	3 22	14 6.19	-13 29.2	2.223	3.110	9.9	20.0
4 1	14 3.71	-25 40.5	1.857	2.775	10.0	21.1	4 1	14 0.10	-13 2.8	2.164	3.117	6.6	19.8
4 11	13 54.46	-25 42.2	1.804	2.770	6.9	20.9	4 11	13 52.73	-12 28.4	2.131	3.124	3.0	19.6
4 21	13 44.19	-25 25.5	1.778	2.764	5.0	20.8	4 21	13 44.80	-11 49.4	2.127	3.131	0.9	19.5
5 1	13 34.04	-24 53.2	1.779	2.758	6.2	20.8	5 1	13 37.13	-11 9.9	2.151	3.138	4.5	19.7
5 11	13 25.12	-24 11.0	1.807	2.752	9.2	21.0	5 11	13 30.46	-10 34.4	2.203	3.144	8.0	20.0
5 21	13 18.25	-23 25.7	1.859	2.746	12.4	21.2	5 21	13 25.35	-10 6.6	2.280	3.151	11.1	20.2
138823	2000 <i>UR</i> ₂₄		4 18.6 47°59	2°3/16.8	18		74071	1998 <i>MH</i> ₉		4 18.6 319°04	3°2/16.2	17	
3 12	14 12.94	- 4 22.4	2.187	3.003	12.7	18.9	3 12	14 7.06	- 8 19.0	1.319	2.169	17.5	18.8
3 22	14 8.14	- 4 16.0	2.109	3.009	9.8	18.7	3 22	14 5.07	- 7 22.4	1.232	2.151	13.6	18.5
4 1	14 1.39	- 4 6.5	2.055	3.015	6.4	18.6	4 1	14 0.17	- 6 10.2	1.166	2.134	9.0	18.2
4 11	13 53.29	- 3 56.9	2.028	3.021	3.2	18.4	4 11	13 53.02	- 4 48.9	1.122	2.117	4.3	17.9
4 21	13 44.61	- 3 50.5	2.030	3.027	2.8	18.3	4 21	13 44.67	- 3 27.5	1.102	2.101	4.2	17.8
5 1	13 36.21	- 3 50.5	2.060	3.034	5.9	18.5	5 1	13 36.48	- 2 16.5	1.107	2.085	9.1	18.0
5 11	13 28.89	- 3 59.1	2.117	3.040	9.2	18.8	5 11	13 29.78	- 1 24.9	1.134	2.071	14.1	18.3
5 21	13 23.22	- 4 17.8	2.197	3.047	12.2	19.0	5 21	13 25.54	- 0 57.6	1.180	2.057	18.7	18.5
114040	2002 <i>VY</i> ₁₀		4 18.6 255°47	0°9/19.3	18		424019	2006 <i>XM</i> ₉		4 18.6 92°09			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
285123	1995 SG ₄₂		4 18.6 70°03	1.5°/17.5	18		138875	2000 XF ₃₇		4 18.6 179°74	5°9°/25.5	18	
3 12	14 13.13	-10 10.8	1.488	2.316	17.0	20.8	3 12	14 12.12	-33 1.2	2.813	3.503	13.1	20.5
3 22	14 9.05	-9 36.0	1.425	2.331	13.1	20.6	3 22	14 7.55	-33 30.7	2.714	3.504	11.3	20.4
4 1	14 2.32	-8 49.1	1.384	2.347	8.5	20.3	4 1	14 1.07	-33 43.6	2.635	3.504	9.3	20.2
4 11	13 53.76	-7 55.1	1.366	2.362	3.7	20.1	4 11	13 53.22	-33 37.9	2.579	3.504	7.3	20.1
4 21	13 44.50	-7 0.6	1.375	2.377	2.4	20.0	4 21	13 44.70	-33 13.8	2.550	3.504	6.0	20.0
5 1	13 35.75	-6 12.7	1.410	2.393	7.0	20.4	5 1	13 36.31	-32 33.1	2.548	3.504	6.1	20.0
5 11	13 28.63	-5 37.5	1.470	2.408	11.4	20.6	5 11	13 28.87	-31 40.2	2.574	3.503	7.5	20.1
5 21	13 23.80	-5 18.3	1.551	2.424	15.2	20.9	5 21	13 22.96	-30 40.5	2.625	3.502	9.5	20.2
7393	Luginbuhl		4 18.6 225°66	0°4°/18.9	18		34382	2000 RG ₅₆		4 18.6 310°00	4°6°/22.4	18	
3 12	14 17.27	-13 17.0	1.825	2.624	15.5	17.5	3 12	14 10.77	-24 21.9	1.766	2.540	16.9	18.2
3 22	14 12.24	-13 13.6	1.726	2.614	12.2	17.2	3 22	14 7.40	-24 35.2	1.673	2.534	14.0	17.9
4 1	14 4.57	-12 58.3	1.649	2.603	8.3	16.9	4 1	14 1.44	-24 28.3	1.599	2.527	10.6	17.7
4 11	13 54.87	-12 32.8	1.598	2.591	3.8	16.6	4 11	13 53.52	-24 0.1	1.548	2.521	7.0	17.5
4 21	13 44.09	-12 0.2	1.574	2.578	1.1	16.4	4 21	13 44.59	-23 12.2	1.523	2.515	4.6	17.3
5 1	13 33.43	-11 25.5	1.578	2.565	5.9	16.7	5 1	13 35.86	-22 9.5	1.524	2.510	6.1	17.4
5 11	13 24.04	-10 54.5	1.609	2.550	10.4	16.9	5 11	13 28.46	-20 59.7	1.550	2.504	9.7	17.6
5 21	13 16.80	-10 32.0	1.664	2.535	14.4	17.1	5 21	13 23.22	-19 51.2	1.600	2.499	13.4	17.8
134846	2000 KN ₁₃		4 18.6 212°40	1°1°/17.4	17		106982	2000 YJ ₉₇		4 18.6 139°81	0°7°/19.2	18	
3 12	14 10.48	-9 4.4	2.677	3.479	11.0	20.5	3 12	14 15.38	-15 28.8	1.923	2.716	15.1	20.8
3 22	14 6.02	-8 39.3	2.580	3.472	8.5	20.3	3 22	14 10.35	-15 9.5	1.844	2.728	11.8	20.6
4 1	13 59.91	-8 7.3	2.508	3.465	5.6	20.1	4 1	14 3.02	-14 36.4	1.788	2.739	8.0	20.4
4 11	13 52.65	-7 31.3	2.464	3.458	2.4	19.9	4 11	13 54.08	-13 51.9	1.758	2.750	3.7	20.2
4 21	13 44.84	-6 54.5	2.449	3.450	1.6	19.8	4 21	13 44.45	-13 0.0	1.756	2.760	1.1	20.0
5 1	13 37.16	-6 20.6	2.464	3.442	4.7	20.0	5 1	13 35.20	-12 6.5	1.782	2.769	5.2	20.3
5 11	13 30.30	-5 53.2	2.507	3.434	7.8	20.2	5 11	13 27.27	-11 17.4	1.836	2.778	9.2	20.6
5 21	13 24.76	-5 34.9	2.575	3.425	10.6	20.4	5 21	13 21.33	-10 37.7	1.913	2.786	12.8	20.8
291807	2006 KG ₈₉		4 18.6 264°76	4°0°/25.6	18		175844	1999 TC ₂₁₆		4 18.6 145°12	1°4°/17.4	18	
3 12	14 6.96	-33 16.1	4.655	5.322	8.5	20.4	3 12	14 14.85	-9 30.5	2.008	2.815	14.0	21.4
3 22	14 2.87	-33 44.2	4.543	5.315	7.3	20.2	3 22	14 9.78	-8 56.4	1.931	2.826	10.8	21.2
4 1	13 57.64	-34 2.0	4.453	5.309	6.1	20.1	4 1	14 2.55	-8 13.2	1.878	2.837	7.0	21.0
4 11	13 51.61	-34 8.9	4.389	5.302	4.9	20.0	4 11	13 53.85	-7 24.7	1.852	2.846	3.1	20.7
4 21	13 45.17	-34 4.8	4.352	5.295	4.1	20.0	4 21	13 44.53	-6 35.6	1.854	2.855	2.1	20.7
5 1	13 38.77	-33 50.7	4.343	5.288	4.2	20.0	5 1	13 35.56	-5 51.5	1.885	2.864	5.9	20.9
5 11	13 32.85	-33 28.5	4.362	5.281	5.0	20.0	5 11	13 27.82	-5 17.0	1.942	2.871	9.6	21.2
5 21	13 27.78	-33 0.8	4.409	5.274	6.2	20.1	5 21	13 21.94	-4 55.2	2.024	2.878	12.9	21.4
429671	2011 GN ₇₅		4 18.6 320°34	4°3°/14.6	17		239582	2008 TX ₁₆₉		4 18.6 320°04	2°2°/20.5	17	
3 12	14 6.93	-4 34.8	1.669	2.511	14.8	21.0	3 12	14 9.75	-19 15.1	1.889	2.681	15.3	20.4
3 22	14 4.23	-3 19.7	1.586	2.500	11.4	20.8	3 22	14 6.26	-19 4.0	1.799	2.678	12.3	20.1
4 1	13 59.20	-1 54.8	1.525	2.489	7.7	20.5	4 1	14 0.48	-18 36.1	1.730	2.675	8.7	19.9
4 11	13 52.47	-0 27.5	1.489	2.479	4.6	20.3	4 11	13 53.03	-17 52.6	1.686	2.672	4.7	19.7
4 21	13 44.90	+0 53.9	1.479	2.469	5.3	20.3	4 21	13 44.77	-16 56.9	1.668	2.669	2.2	19.5
5 1	13 37.55	+2 1.0	1.496	2.459	8.8	20.5	5 1	13 36.73	-15 54.7	1.677	2.667	5.1	19.7
5 11	13 31.42	+2 47.7	1.536	2.450	12.7	20.7	5 11	13 29.90	-14 52.9	1.713	2.664	9.1	19.9
5 21	13 27.23	+3 11.3	1.597	2.441	16.3	20.9	5 21	13 24.99	-13 57.8	1.773	2.662	12.8	20.1
73194	2002 JY ₇		4 18.6 318°51	5°8°/14.6	17		244573	2002 WW ₁₀		4 18.6 59°80	6°1°/13.3	18	
3 12	14 11.12	-1 2.8	1.348	2.199	17.1	19.1	3 12	14 11.97	+4 38.1	1.937	2.768	13.5	19.9
3 22	14 8.04	-0 7.8	1.271	2.188	13.4	18.8	3 22	14 7.39	+5 34.9	1.890	2.792	10.6	19.8
4 1	14 2.03	+0 52.6	1.214	2.178	9.3	18.5	4 1	14 0.84	+6 28.8	1.867	2.816	7.8	19.7
4 11	13 53.80	+1 50.3	1.181	2.168	6.1	18.3	4 11	13 53.03	+7 13.2	1.869	2.840	6.2	19.6
4 21	13 44.47	+2 36.3	1.171	2.158	6.8	18.3	4 21	13 44.81	+7 42.9	1.898	2.864	6.8	19.7
5 1	13 35.41	+3 2.9	1.186	2.150	10.6	18.5	5 1	13 37.09	+7 54.3	1.953	2.888	9.1	19.9
5 11	13 27.93	+3 5.3	1.223	2.141	15.0	18.7	5 11	13 30.64	+7 46.3	2.032	2.912	11.7	20.1
5 21	13 22.93	+2 43.1	1.279	2.133	18.9	18.9	5 21	13 25.95	+7 20.0	2.133	2.936	14.2	20.3
237851	2002 GQ ₇₁		4 18.6 257°80	1°1°/17.7	18		501823	2014 WY ₈₄		4 18.6 286°08	0°8°/17.9	17	
3 12	14 12.40	-9 14.0	1.935	2.750	14.1	20.2	3 12	14 9.79	-13 16.2	1.510	2.336	16.9	21.5
3 22	14 8.15	-8 58.7	1.847	2.746	11.0	20.0	3 22	14 6.91	-12 31.1	1.416	2.320	13.3	21.3
4 1	14 1.65	-8 34.9	1.782	2.742	7.2	19.8	4 1	14 1.27	-11 27.5	1.342	2.304	8.8	21.0
4 11	13 53.51	-8 5.7	1.742	2.737	3.1	19.5	4 11	13 53.50	-10 9.5	1.292	2.288	3.8	20.6
4 21	13 44.59	-7 35.3	1.730	2.733	1.9	19.4	4 21	13 44.60	-8 43.9	1.268	2.272	1.8	20.4
5 1	13 35.88	-7 8.3	1.746	2.728	5.9	19.7	5 1	13 35.84	-7 19.9	1.270	2.256	7.1	20.7
5 11	13 28.33	-6 49.3	1.788	2.723	9.9	19.9	5 11	13 28.48	-6 7.1	1.297	2.240	12.2	20.9
5 21	13 22.64	-6 41.2	1.853	2.719	13.4	20.1	5 21	13 23.40	-5 12.3	1.344	2.224	16.7	21.2
377466	2004 XC ₁₀₅		4 18.6 90°31	4°2°/22.4	17		370476	2003 FM ₁₁₆		4 18.6 3°69	2°3°/16.8	17	
3 12	14 13.07	-24 17.5	2.042	2.802	15.4	20.6	3 12	14 9.27	-8 17.7	1.500	2.338	16.4	20.5
3 22	14 8.63	-24 34.5	1.962	2.813	12.6	20.5	3 22	14 6.25	-7 38.5	1.425	2.337	12.6	20.3
4 1	14 1.93	-24 33.9	1.902	2.825	9.5	20.3	4 1	14 0.62	-6 48.1	1.372	2.337	8.3	20.0
4 11	13 53.61	-24 15.4	1.866	2.836	6.3	20.1	4 11	13 53.12	-5 52.2	1.343	2.338	3.8	19.7
4 21	13 44.58	-23 40.5	1.857	2.848	4.3	20.0	4 21	13 44.76	-4 57.4	1.339	2.339	3.2	19.7
5 1	13 35.86	-22 53.4	1.876	2.859	5.5	20.1	5 1	13 36.74	-4 11.1	1.361	2.341	7.5	20.0
5 11	13 28.41	-22 0.2	1.921	2.870	8.5	20.3	5 11	13 30.17	-3 39.4	1.407	2.343	12.0	20.2
5 21	13 22.88	-21 7.4	1.991	2.881	11.6	20.5	5 21	13 25.79	-3 25.4	1.473	2.346	15.9	20.5
36505	2000 QQ ₆₄		4 18.6 248°29	4°0°/15.7	17		140644	2001 UL ₂₆		4 18.6 224°05	3°4°/22.3	18	
3 12	14 14.50												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
522922	2016 <i>PT</i> ₁₀₉		4 18.6 296°72	0°8/17.9	17		2952	Lilliputia		4 18.6 161°04	1°8/20.1	18	
3 12	14 10.13	-10 0.1	2.240	3.049	12.7	21.6	3 12	14 16.10	-17 54.2	1.892	2.677	15.6	18.6
3 22	14 6.10	-9 45.4	2.149	3.045	9.8	21.4	3 22	14 11.10	-17 47.3	1.807	2.683	12.4	18.4
4 1	14 0.16	-9 22.8	2.082	3.040	6.4	21.2	4 1	14 3.66	-17 25.0	1.744	2.689	8.6	18.1
4 11	13 52.85	-8 54.9	2.041	3.036	2.8	21.0	4 11	13 54.46	-16 48.6	1.706	2.694	4.5	17.9
4 21	13 44.88	-8 25.3	2.028	3.031	1.4	20.8	4 21	13 44.45	-16 1.3	1.695	2.698	1.9	17.7
5 1	13 37.09	-7 57.9	2.044	3.027	5.1	21.1	5 1	13 34.75	-15 8.4	1.713	2.702	5.2	18.0
5 11	13 30.27	-7 36.8	2.087	3.022	8.7	21.3	5 11	13 26.40	-14 16.5	1.758	2.704	9.3	18.2
5 21	13 25.02	-7 24.8	2.154	3.018	11.8	21.5	5 21	13 20.11	-13 31.6	1.828	2.707	13.0	18.4
20805	2000 <i>SC</i> ₂₂₀		4 18.6 149°46	4°0/15.2	18		81886	2000 <i>LE</i> ₂₁		4 18.6 228°14	0°1/18.8	18	
3 12	14 15.22	+0 8.4	2.208	3.024	12.6	18.1	3 12	14 8.41	-14 37.0	2.555	3.348	11.8	19.7
3 22	14 9.84	+0 38.9	2.134	3.031	9.8	17.9	3 22	14 4.58	-14 0.9	2.456	3.341	9.2	19.5
4 1	14 2.50	+1 10.3	2.084	3.038	6.7	17.7	4 1	13 59.08	-13 13.4	2.380	3.333	6.1	19.3
4 11	13 53.82	+1 38.0	2.061	3.045	4.3	17.6	4 11	13 52.37	-12 17.0	2.332	3.325	2.8	19.0
4 21	13 44.59	+1 57.7	2.066	3.051	4.6	17.6	4 21	13 45.10	-11 15.4	2.313	3.317	0.8	18.9
5 1	13 35.67	+2 5.8	2.101	3.057	7.2	17.8	5 1	13 37.98	-10 13.3	2.323	3.309	4.3	19.1
5 11	13 27.87	+2 0.3	2.162	3.062	10.2	18.0	5 11	13 31.71	-9 15.7	2.362	3.300	7.7	19.3
5 21	13 21.76	+1 40.7	2.246	3.067	13.0	18.2	5 21	13 26.80	-8 26.7	2.425	3.291	10.6	19.5
313132	2001 <i>BF</i> ₅₆		4 18.6 153°21	2°2/16.7	18		134894	2000 <i>SM</i> ₂₅₉		4 18.6 74°59	2°5/20.1	18	
3 12	14 15.28	-7 19.5	2.066	2.875	13.6	21.3	3 12	14 24.85	-15 40.5	1.863	2.638	16.1	20.1
3 22	14 10.05	-6 38.7	1.989	2.886	10.4	21.1	3 22	14 17.65	-16 34.2	1.798	2.668	12.7	20.0
4 1	14 2.72	-5 50.4	1.936	2.895	6.8	20.9	4 1	14 7.84	-17 17.1	1.755	2.696	8.9	19.8
4 11	13 53.94	-4 58.8	1.910	2.903	3.2	20.6	4 11	13 56.23	-17 48.3	1.740	2.725	4.8	19.6
4 21	13 44.56	-4 9.1	1.913	2.911	2.8	20.6	4 21	13 43.92	-18 7.9	1.753	2.753	2.5	19.5
5 1	13 35.52	-3 26.4	1.945	2.918	6.3	20.9	5 1	13 32.15	-18 18.2	1.796	2.781	5.4	19.7
5 11	13 27.68	-2 55.3	2.003	2.924	9.8	21.1	5 11	13 22.00	-18 23.4	1.867	2.809	9.1	20.0
5 21	13 21.65	-2 38.0	2.086	2.929	13.0	21.3	5 21	13 14.19	-18 27.8	1.962	2.836	12.4	20.3
435901	2009 <i>BU</i>		4 18.6 79°70	1°7/16.9	18		84831	2003 <i>AB</i> ₅		4 18.6 144°21	4°7/13.4	18	
3 12	14 12.66	-8 2.5	2.237	3.046	12.7	21.5	3 12	14 9.77	+2 11.0	2.430	3.254	11.4	20.2
3 22	14 7.68	-7 23.8	2.182	3.078	9.6	21.4	3 22	14 5.52	+3 9.5	2.359	3.259	8.8	20.0
4 1	14 0.93	-6 38.7	2.151	3.110	6.2	21.2	4 1	13 59.61	+4 8.4	2.313	3.265	6.4	19.9
4 11	13 53.08	-5 51.0	2.147	3.141	2.8	21.0	4 11	13 52.57	+5 2.4	2.295	3.270	4.8	19.8
4 21	13 44.87	-5 5.4	2.172	3.171	2.3	21.0	4 21	13 45.07	+5 46.6	2.304	3.276	5.4	19.8
5 1	13 37.11	-4 26.1	2.226	3.201	5.4	21.3	5 1	13 37.83	+6 16.9	2.342	3.280	7.6	20.0
5 11	13 30.48	-3 56.8	2.307	3.231	8.6	21.6	5 11	13 31.51	+6 31.0	2.405	3.285	10.1	20.1
5 21	13 25.45	-3 39.4	2.413	3.260	11.3	21.8	5 21	13 26.62	+6 28.4	2.490	3.289	12.5	20.3
431136	2006 <i>KO</i> ₉₃		4 18.6 270°67	0°6/18.1	17		367991	2012 <i>FL</i> ₂₅		4 18.6 248°78	4°4/14.4	17	
3 12	14 9.85	-11 57.0	2.019	2.830	13.8	21.8	3 12	14 12.11	-2 19.7	1.994	2.820	13.4	20.9
3 22	14 6.08	-11 27.8	1.933	2.829	10.7	21.6	3 22	14 7.95	-1 12.6	1.898	2.802	10.4	20.7
4 1	14 0.23	-10 47.5	1.870	2.828	7.1	21.3	4 1	14 1.59	+0 1.3	1.825	2.784	7.2	20.5
4 11	13 52.91	-9 59.2	1.832	2.827	3.0	21.1	4 11	13 53.58	+1 15.7	1.779	2.765	4.7	20.3
4 21	13 44.90	-9 7.6	1.822	2.826	1.4	20.9	4 21	13 44.72	+2 23.7	1.761	2.746	5.3	20.3
5 1	13 37.12	-8 18.0	1.840	2.824	5.4	21.2	5 1	13 35.97	+3 18.5	1.771	2.726	8.4	20.4
5 11	13 30.44	-7 35.8	1.885	2.823	9.3	21.4	5 11	13 28.28	+3 55.2	1.806	2.705	11.9	20.6
5 21	13 25.49	-7 4.9	1.953	2.822	12.7	21.7	5 21	13 22.36	+4 11.5	1.862	2.684	15.2	20.7
320502	2007 <i>XE</i> ₁₄		4 18.6 246°18	3°5/15.4	17		175846	1999 <i>TO</i> ₂₈₅		4 18.6 234°91	1°7/17.1	17	
3 12	14 11.33	-1 36.1	2.271	3.092	12.1	20.3	3 12	14 13.78	-9 7.5	1.991	2.802	14.0	21.4
3 22	14 6.94	-1 4.6	2.185	3.086	9.4	20.1	3 22	14 9.28	-8 29.2	1.891	2.788	10.8	21.2
4 1	14 0.67	-0 30.4	2.123	3.081	6.4	19.9	4 1	14 2.49	-7 40.5	1.814	2.774	7.2	20.9
4 11	13 53.07	+0 1.9	2.088	3.075	3.9	19.7	4 11	13 53.99	-6 45.3	1.764	2.758	3.2	20.7
4 21	13 44.85	+0 28.2	2.081	3.070	4.1	19.7	4 21	13 44.59	-5 48.8	1.742	2.742	2.4	20.6
5 1	13 36.82	+0 44.4	2.103	3.064	6.8	19.9	5 1	13 35.32	-4 56.8	1.748	2.726	6.4	20.8
5 11	13 29.77	+0 47.7	2.150	3.058	9.9	20.0	5 11	13 27.14	-4 15.1	1.781	2.708	10.4	21.0
5 21	13 24.27	+0 37.2	2.221	3.052	12.7	20.2	5 21	13 20.80	-3 47.6	1.837	2.690	14.1	21.2
470435	2007 <i>VV</i> ₃₃₂		4 18.6 186°38	7°9/ 8.6	18		315467	2007 <i>XW</i> ₅₄		4 18.6 28°86	1°8/17.5	18	
3 12	14 10.19	+15 18.2	2.611	3.421	11.1	21.3	3 12	14 11.38	-9 20.0	1.278	2.121	18.4	20.4
3 22	14 5.78	+16 32.5	2.550	3.420	9.4	21.2	3 22	14 8.24	-8 54.7	1.214	2.128	14.2	20.2
4 1	13 59.74	+17 39.1	2.513	3.420	8.2	21.1	4 1	14 2.11	-8 17.0	1.170	2.136	9.3	19.9
4 11	13 52.61	+18 31.8	2.502	3.419	7.9	21.1	4 11	13 53.85	-7 32.3	1.148	2.144	4.1	19.6
4 21	13 45.02	+19 5.9	2.517	3.418	8.7	21.2	4 21	13 44.67	-6 47.3	1.151	2.153	2.7	19.6
5 1	13 37.67	+19 18.4	2.558	3.416	10.2	21.3	5 1	13 35.99	-6 9.6	1.178	2.163	7.7	19.9
5 11	13 31.24	+19 8.9	2.621	3.415	12.0	21.4	5 11	13 29.07	-5 45.5	1.229	2.173	12.6	20.2
5 21	13 26.19	+18 38.7	2.703	3.413	13.7	21.5	5 21	13 24.69	-5 38.4	1.300	2.184	16.8	20.5
415870	2001 <i>SA</i> ₂₇₆		4 18.6 126°53	10°7/ 2.4	18		513101	2017 <i>WY</i> ₂₃		4 18.6 185°23	2°0/16.5	17	
3 12	14 27.36	-49 19.0	2.719	3.263	16.0	22.3	3 12	14 10.21	-5 28.2	2.687	3.497	10.8	20.9
3 22	14 20.15	-50 37.9	2.640	3.285	14.8	22.2	3 22	14 5.77	-5 2.1	2.600	3.497	8.3	20.8
4 1	14 9.87	-51 33.9	2.578	3.305	13.5	22.1	4 1	13 59.76	-4 31.7	2.538	3.496	5.4	20.6
4 11	13 57.27	-52 1.6	2.535	3.325	12.2	22.1	4 11	13 52.65	-4 0.1	2.503	3.496	2.7	20.4
4 21	13 43.52	-51 57.9	2.513	3.345	11.2	22.0	4 21	13 45.05	-3 30.7	2.498	3.495	2.5	20.4
5 1	13 30.07	-51 23.2	2.515	3.363	10.7	22.0	5 1	13 37.63	-3 6.9	2.522	3.493	5.2	20.6
5 11	13 18.29	-50 22.2	2.541	3.380	11.0	22.1	5 11	13 31.02	-2 51.7	2.574	3.492	8.1	20.7
5 21	13 9.11	-49 2.7	2.589	3.397	11.8	22.1	5 21	13 25.73	-2 46.6	2.651	3.490	10.7	20.9
385064	2012 <i>UP</i> ₆₀		4 18.6 75°41	1°4/20.1	18		109436	2001 <i>QO</i> ₁₉₈		4 18.6 123°64	2°0/20		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
162658	2000 <i>SK</i> ₂₄₄		4 18.6 203°87	2°9/16.1	18		469284	1995 <i>UL</i> ₂₃		4 18.6 214°77	1°2/20.1	17	
3 12	14 12.80	- 7 25.9	1.774	2.597	14.9	20.9	3 12	14 8.82	-18 1.5	2.696	3.472	11.6	22.2
3 22	14 8.64	- 6 23.1	1.689	2.593	11.5	20.7	3 22	14 4.85	-17 37.2	2.595	3.467	9.2	22.0
4 1	14 2.08	- 5 9.4	1.628	2.589	7.6	20.5	4 1	13 59.24	-17 0.5	2.517	3.461	6.4	21.8
4 11	13 53.79	- 3 50.5	1.592	2.585	3.8	20.2	4 11	13 52.47	-16 13.3	2.467	3.455	3.3	21.6
4 21	13 44.69	- 2 33.8	1.584	2.580	3.8	20.2	4 21	13 45.15	-15 18.4	2.445	3.448	1.3	21.4
5 1	13 35.84	- 1 27.0	1.603	2.574	7.6	20.4	5 1	13 37.98	-14 19.8	2.453	3.441	3.9	21.6
5 11	13 28.28	- 0 36.1	1.648	2.568	11.6	20.6	5 11	13 31.63	-13 22.5	2.490	3.434	7.0	21.8
5 21	13 22.72	- 0 4.7	1.715	2.561	15.2	20.9	5 21	13 26.61	-12 30.6	2.553	3.427	9.9	22.0
95204	2002 <i>BY</i> ₂₂		4 18.6 82°09	2°7/16.8	18		209455	2004 <i>GK</i> ₁₅		4 18.6 277°79	21°3/3.6	18	
3 12	14 15.92	- 4 14.2	1.795	2.617	14.8	19.3	3 12	14 26.78	+31 46.7	1.165	1.954	23.1	19.7
3 22	14 10.93	- 4 5.4	1.719	2.621	11.4	19.1	3 22	14 21.06	+33 39.7	1.121	1.944	21.9	19.6
4 1	14 3.52	- 3 52.8	1.664	2.625	7.6	18.8	4 1	14 11.03	+35 0.2	1.092	1.934	21.3	19.5
4 11	13 54.40	- 3 40.2	1.636	2.629	3.8	18.6	4 11	13 57.89	+35 31.2	1.078	1.924	21.5	19.4
4 21	13 44.51	- 3 31.7	1.635	2.633	3.3	18.6	4 21	13 43.50	+35 2.0	1.081	1.914	22.6	19.5
5 1	13 34.95	- 3 31.2	1.662	2.637	7.0	18.8	5 1	13 30.04	+33 30.2	1.100	1.904	24.2	19.5
5 11	13 26.74	- 3 41.6	1.714	2.641	10.8	19.1	5 11	13 19.34	+31 3.5	1.133	1.894	26.2	19.6
5 21	13 20.59	- 4 4.1	1.790	2.645	14.3	19.3	5 21	13 12.32	+27 54.7	1.179	1.884	28.2	19.8
98458	2000 <i>UP</i> ₇₀		4 18.6 247°72	1°7/19.9	17		414925	2011 <i>AG</i> ₄₅		4 18.6 132°17	6°3/12.2	18	
3 12	14 13.39	-17 29.5	1.661	2.461	16.7	20.1	3 12	14 13.24	+ 5 34.8	2.194	3.016	12.5	21.9
3 22	14 9.53	-17 20.8	1.566	2.452	13.4	19.8	3 22	14 8.28	+ 6 52.5	2.137	3.031	9.9	21.8
4 1	14 2.94	-16 54.7	1.492	2.442	9.3	19.5	4 1	14 1.45	+ 8 7.9	2.104	3.046	7.5	21.7
4 11	13 54.27	-16 12.5	1.442	2.432	4.8	19.2	4 11	13 53.40	+ 9 14.3	2.097	3.060	6.3	21.6
4 21	13 44.51	-15 17.7	1.418	2.421	1.8	19.0	4 21	13 44.89	+10 5.8	2.119	3.074	7.1	21.7
5 1	13 34.91	-14 16.4	1.421	2.410	5.9	19.2	5 1	13 36.77	+10 38.1	2.168	3.086	9.2	21.8
5 11	13 26.69	-13 16.7	1.449	2.399	10.6	19.5	5 11	13 29.77	+10 49.5	2.242	3.099	11.6	22.0
5 21	13 20.71	-12 25.7	1.500	2.388	14.8	19.7	5 21	13 24.41	+10 40.7	2.336	3.110	13.9	22.2
432332	2009 <i>UU</i> ₁₂₆		4 18.6 184°05	0°7/17.9	17		284559	2007 <i>TD</i> ₃		4 18.6 346°67	0°7/19.3	17	
3 12	14 12.13	-11 29.4	2.529	3.324	11.8	22.4	3 12	14 9.43	-15 3.1	1.935	2.741	14.5	21.1
3 22	14 7.38	-10 52.4	2.437	3.325	9.1	22.3	3 22	14 5.93	-14 48.8	1.848	2.738	11.4	20.9
4 1	14 0.89	-10 6.1	2.369	3.324	6.0	22.1	4 1	14 0.26	-14 21.2	1.782	2.736	7.7	20.7
4 11	13 53.18	- 9 13.4	2.329	3.324	2.6	21.8	4 11	13 53.01	-13 42.7	1.742	2.734	3.7	20.4
4 21	13 44.91	- 8 18.3	2.319	3.322	1.3	21.7	4 21	13 45.00	-12 57.0	1.728	2.733	1.0	20.2
5 1	13 36.84	- 7 25.3	2.339	3.320	4.8	22.0	5 1	13 37.22	-12 9.3	1.743	2.731	5.1	20.5
5 11	13 29.69	- 6 39.0	2.387	3.316	8.1	22.2	5 11	13 30.59	-11 25.5	1.783	2.730	9.1	20.7
5 21	13 23.98	- 6 2.7	2.460	3.313	11.0	22.3	5 21	13 25.76	-10 50.4	1.847	2.729	12.7	21.0
489748	2007 <i>YR</i> ₃₃		4 18.6 112°96	0°7/17.9	17		136137	2003 <i>SU</i> ₁₈₈		4 18.6 157°21	2°2/16.5	17	
3 12	14 10.24	-11 2.5	2.460	3.262	11.9	22.5	3 12	14 11.74	- 6 13.4	2.289	3.102	12.3	20.4
3 22	14 5.89	-10 33.6	2.384	3.275	9.1	22.4	3 22	14 7.21	- 5 39.4	2.208	3.107	9.4	20.2
4 1	13 59.86	- 9 56.4	2.331	3.288	6.0	22.2	4 1	14 0.83	- 4 59.5	2.152	3.111	6.2	20.0
4 11	13 52.70	- 9 13.9	2.306	3.301	2.6	22.0	4 11	13 53.18	- 4 17.7	2.122	3.115	3.0	19.8
4 21	13 45.08	- 8 29.8	2.310	3.313	1.3	21.9	4 21	13 44.97	- 3 38.2	2.122	3.119	2.8	19.8
5 1	13 37.74	- 7 48.3	2.343	3.325	4.6	22.2	5 1	13 37.01	- 3 5.4	2.150	3.122	5.8	20.0
5 11	13 31.34	- 7 13.3	2.404	3.337	7.8	22.4	5 11	13 30.06	- 2 42.8	2.205	3.125	9.1	20.2
5 21	13 26.38	- 6 47.7	2.490	3.348	10.6	22.6	5 21	13 24.66	- 2 32.6	2.284	3.128	12.0	20.4
505254	2012 <i>UW</i> ₁₄₂		4 18.6 230°19	1°8/16.5	17		253048	2002 <i>SG</i> ₅₉		4 18.6 213°41	1°3/17.6	17	
3 12	14 8.26	-10 2.1	2.363	3.173	12.1	22.0	3 12	14 15.41	- 9 1.1	2.013	2.820	14.0	21.5
3 22	14 4.57	- 8 51.6	2.267	3.165	9.3	21.8	3 22	14 10.47	- 8 42.6	1.919	2.814	10.8	21.2
4 1	13 59.13	- 7 30.0	2.197	3.157	6.0	21.6	4 1	14 3.24	- 8 15.6	1.849	2.807	7.2	21.0
4 11	13 52.43	- 6 1.7	2.154	3.148	2.8	21.3	4 11	13 54.33	- 7 43.4	1.805	2.799	3.2	20.7
4 21	13 45.15	- 4 32.6	2.140	3.139	2.5	21.3	4 21	13 44.59	- 7 9.9	1.789	2.791	2.0	20.6
5 1	13 38.04	- 3 9.1	2.157	3.130	5.8	21.5	5 1	13 35.02	- 6 39.9	1.802	2.782	5.9	20.9
5 11	13 31.83	- 1 56.8	2.200	3.120	9.1	21.7	5 11	13 26.60	- 6 18.0	1.842	2.773	9.9	21.1
5 21	13 27.07	- 0 59.8	2.268	3.110	12.1	21.9	5 21	13 20.04	- 6 7.3	1.905	2.763	13.4	21.3
519909	2013 <i>QM</i> ₆₄		4 18.6 226°82	8°2/25.4	17		174651	2003 <i>SJ</i> ₁₈₉		4 18.6 219°67	0°8/19.3	16	
3 12	14 17.61	-33 52.9	2.106	2.803	16.7	21.9	3 12	14 15.13	-15 15.1	2.037	2.827	14.4	21.3
3 22	14 12.76	-34 49.6	2.002	2.795	14.7	21.8	3 22	14 10.34	-15 0.7	1.936	2.818	11.4	21.1
4 1	14 5.12	-35 26.3	1.917	2.785	12.3	21.6	4 1	14 3.22	-14 33.2	1.857	2.807	7.8	20.8
4 11	13 55.29	-35 38.6	1.854	2.776	9.9	21.4	4 11	13 54.36	-13 54.1	1.805	2.796	3.7	20.6
4 21	13 44.22	-35 24.1	1.815	2.765	8.4	21.3	4 21	13 44.59	-13 6.8	1.780	2.784	1.1	20.3
5 1	13 33.17	-34 44.2	1.803	2.755	8.5	21.3	5 1	13 34.96	-12 16.4	1.785	2.772	5.2	20.6
5 11	13 23.41	-33 44.4	1.816	2.744	10.3	21.3	5 11	13 26.45	-11 28.9	1.817	2.759	9.3	20.8
5 21	13 15.90	-32 32.9	1.853	2.732	12.8	21.5	5 21	13 19.83	-10 49.5	1.873	2.745	13.0	21.0
205482	2001 <i>QJ</i> ₂₁₄		4 18.6 247°36	1°8/19.9	17		511564	2014 <i>WR</i> ₂₁₅		4 18.6 16°27	2°9/13.8	18	
3 12	14 15.57	-17 2.5	1.656	2.454	16.9	21.1	3 12	14 4.71	+ 3 36.2	4.310	5.123	7.0	20.8
3 22	14 11.35	-17 1.1	1.555	2.439	13.6	20.9	3 22	14 0.99	+ 3 57.9	4.230	5.123	5.4	20.7
4 1	14 4.26	-16 43.3	1.475	2.424	9.5	20.6	4 1	13 56.36	+ 4 18.5	4.176	5.123	3.9	20.6
4 11	13 54.92	-16 9.7	1.419	2.408	4.9	20.3	4 11	13 51.13	+ 4 35.7	4.150	5.124	2.9	20.5
4 21	13 44.34	-15 23.3	1.389	2.392	1.9	20.0	4 21	13 45.63	+ 4 47.5	4.154	5.124	3.3	20.6
5 1	13 33.81	-14 29.7	1.386	2.375	6.1	20.3	5 1	13 40.25	+ 4 52.2	4.188	5.125	4.6	20.7
5 11	13 24.64	-13 36.6	1.409	2.358	10.9	20.5	5 11	13 35.35	+ 4 48.7	4.248	5.125	6.2	20.8
5 21	13 17.81	-12 51.2	1.455	2.340	15.3	20.7	5 21	13 31.20	+ 4 36.6	4.334	5.126	7.7	20.9
269652	1994 <i>PE</i> ₃₁		4 18.6 281°64	2°9/15.8	17		125481	2001 <i>WL</i> ₁₉		4			

EPHEMERIDES

4 18.6

4 18.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
460558	2014 <i>TD</i> ₆₈		4 18.6 230°51	1°0/17.9 17			158513	2002 <i>ET</i> ₁₀₈		4 18.6 188°53	1°4/17.4 17		
3 12	14 16.69	- 9 29.4	1.791	2.602	15.3	21.6	3 12	14 11.99	- 9 14.8	2.178	2.987	13.0	20.9
3 22	14 11.82	- 9 20.5	1.697	2.593	11.9	21.3	3 22	14 7.59	- 8 42.6	2.091	2.987	10.0	20.7
4 1	14 4.35	- 9 2.5	1.625	2.583	7.9	21.1	4 1	14 1.20	- 8 1.9	2.027	2.986	6.6	20.5
4 11	13 54.91	- 8 38.4	1.579	2.573	3.5	20.8	4 11	13 53.41	- 7 16.1	1.990	2.985	2.9	20.3
4 21	13 44.46	- 8 12.0	1.560	2.563	1.8	20.6	4 21	13 44.97	- 6 29.7	1.982	2.983	2.0	20.2
5 1	13 34.15	- 7 48.2	1.569	2.552	6.3	20.9	5 1	13 36.75	- 5 47.5	2.002	2.981	5.6	20.4
5 11	13 25.12	- 7 32.0	1.604	2.540	10.8	21.1	5 11	13 29.58	- 5 14.0	2.049	2.979	9.2	20.6
5 21	13 18.22	- 7 26.9	1.662	2.528	14.7	21.3	5 21	13 24.04	- 4 52.4	2.120	2.976	12.4	20.8
159165	2005 <i>QE</i> ₉₂		4 18.6 34°56	14°7/ 3.9 18			522692	2016 <i>KT</i> ₅		4 18.6 204°37	4°4/14.3 17		
3 12	14 6.24	+ 5 53.9	0.913	1.797	20.5	19.0	3 12	14 12.09	+ 0 36.0	2.314	3.134	12.0	22.1
3 22	14 5.11	+10 26.1	0.874	1.800	16.9	18.8	3 22	14 7.51	+ 1 24.8	2.231	3.130	9.3	21.9
4 1	14 0.44	+14 59.4	0.858	1.804	14.8	18.7	4 1	14 1.07	+ 2 15.4	2.172	3.126	6.5	21.8
4 11	13 53.25	+19 3.9	0.864	1.808	15.4	18.7	4 11	13 53.33	+ 3 2.5	2.140	3.121	4.5	21.6
4 21	13 45.01	+22 15.2	0.892	1.813	18.2	18.9	4 21	13 45.00	+ 3 41.3	2.137	3.116	5.0	21.6
5 1	13 37.43	+24 20.1	0.938	1.818	21.6	19.1	5 1	13 36.87	+ 4 7.5	2.162	3.110	7.5	21.8
5 11	13 31.95	+25 18.8	0.999	1.824	24.9	19.4	5 11	13 29.72	+ 4 18.1	2.213	3.104	10.4	21.9
5 21	13 29.39	+25 20.1	1.071	1.829	27.7	19.6	5 21	13 24.10	+ 4 12.5	2.286	3.098	13.0	22.1
21491	1998 <i>JL</i> ₁		4 18.6 5°67	0°6/19.0 18			519409	2011 <i>SK</i> ₂₈₀		4 18.6 186°35	3°9/23.1 18		
3 12	14 11.13	-13 21.1	1.238	2.075	19.3	18.6	3 12	14 10.67	-26 8.5	2.719	3.454	12.5	21.7
3 22	14 8.39	-13 25.6	1.167	2.075	15.1	18.4	3 22	14 6.39	-26 18.8	2.620	3.454	10.4	21.5
4 1	14 2.47	-13 14.7	1.113	2.075	10.2	18.1	4 1	14 0.34	-26 14.4	2.543	3.453	8.0	21.4
4 11	13 54.16	-12 50.8	1.082	2.077	4.7	17.8	4 11	13 53.02	-25 54.8	2.491	3.453	5.5	21.2
4 21	13 44.71	-12 18.4	1.075	2.079	1.3	17.5	4 21	13 45.09	-25 21.3	2.467	3.452	4.0	21.1
5 1	13 35.63	-11 44.4	1.091	2.082	6.9	17.9	5 1	13 37.31	-24 36.7	2.472	3.451	4.7	21.2
5 11	13 28.33	-11 16.4	1.131	2.086	12.2	18.2	5 11	13 30.42	-23 45.4	2.504	3.449	7.0	21.3
5 21	13 23.74	-11 0.2	1.190	2.091	16.8	18.5	5 21	13 24.97	-22 52.6	2.563	3.448	9.5	21.5
434069	2001 <i>WF</i> ₇₈		4 18.6 195°55	1°5/16.9 17			274397	2008 <i>RB</i> ₁₁₅		4 18.6 240°48	0°1/18.8 18		
3 12	14 10.01	- 7 36.9	2.710	3.516	10.8	22.0	3 12	14 12.60	-12 47.8	2.170	2.969	13.4	21.3
3 22	14 5.66	- 7 7.1	2.619	3.513	8.3	21.8	3 22	14 8.21	-12 37.8	2.071	2.960	10.5	21.1
4 1	13 59.74	- 6 31.4	2.553	3.511	5.4	21.6	4 1	14 1.73	-12 17.6	1.996	2.950	7.0	20.9
4 11	13 52.71	- 5 52.8	2.514	3.508	2.5	21.4	4 11	13 53.70	-11 49.3	1.946	2.939	3.2	20.6
4 21	13 45.18	- 5 14.8	2.505	3.505	2.0	21.4	4 21	13 44.88	-11 16.0	1.925	2.929	0.9	20.4
5 1	13 37.80	- 4 41.2	2.526	3.501	4.9	21.5	5 1	13 36.19	-10 41.9	1.932	2.918	5.0	20.7
5 11	13 31.24	- 4 15.1	2.574	3.497	7.8	21.7	5 11	13 28.51	-10 11.9	1.967	2.907	8.8	20.9
5 21	13 25.96	- 3 58.9	2.647	3.493	10.5	21.9	5 21	13 22.52	- 9 49.7	2.026	2.896	12.3	21.1
507332	2011 <i>SP</i> ₂₃₅		4 18.6 284°83	1°3/20.0 17			168512	1999 <i>TV</i> ₁₀₄		4 18.6 217°40	1°1/19.6 17		
3 12	14 7.75	-18 16.5	2.291	3.079	13.1	21.3	3 12	14 14.07	-16 22.6	1.924	2.717	15.1	20.9
3 22	14 4.37	-17 47.5	2.192	3.070	10.4	21.1	3 22	14 9.65	-16 7.8	1.828	2.710	11.9	20.7
4 1	13 59.11	-17 3.7	2.116	3.062	7.2	20.9	4 1	14 2.83	-15 38.2	1.754	2.703	8.2	20.5
4 11	13 52.50	-16 7.1	2.065	3.054	3.7	20.6	4 11	13 54.22	-14 55.4	1.704	2.695	4.0	20.2
4 21	13 45.24	-15 1.3	2.043	3.046	1.3	20.5	4 21	13 44.72	-14 3.1	1.683	2.687	1.3	20.0
5 1	13 38.14	-13 51.4	2.049	3.038	4.4	20.7	5 1	13 35.38	-13 6.8	1.689	2.678	5.3	20.2
5 11	13 31.98	-12 43.5	2.083	3.030	8.0	20.9	5 11	13 27.25	-12 13.0	1.723	2.668	9.5	20.4
5 21	13 27.36	-11 43.1	2.141	3.022	11.3	21.1	5 21	13 21.08	-11 27.5	1.780	2.658	13.3	20.6
38650	2000 <i>ON</i> ₁₇		4 18.6 155°91	5°1/13.2 17			360015	2013 <i>AX</i> ₇		4 18.6 123°57	3°8/15.9 18		
3 12	14 11.76	+ 1 47.6	2.279	3.101	12.0	19.9	3 12	14 14.87	- 5 28.4	1.441	2.276	17.1	21.2
3 22	14 7.17	+ 3 0.2	2.209	3.109	9.4	19.7	3 22	14 10.63	- 4 34.4	1.373	2.283	13.2	20.9
4 1	14 0.78	+ 4 13.9	2.164	3.116	6.8	19.6	4 1	14 3.58	- 3 31.4	1.327	2.290	8.7	20.7
4 11	13 53.17	+ 5 22.7	2.147	3.122	5.1	19.5	4 11	13 54.54	- 2 26.5	1.305	2.297	4.6	20.5
4 21	13 45.05	+ 6 20.8	2.158	3.128	5.8	19.5	4 21	13 44.65	- 1 27.6	1.309	2.304	4.7	20.5
5 1	13 37.23	+ 7 3.2	2.197	3.133	8.1	19.7	5 1	13 35.22	- 0 42.4	1.338	2.310	8.7	20.7
5 11	13 30.43	+ 7 27.3	2.262	3.138	10.8	19.8	5 11	13 27.45	- 0 16.4	1.392	2.316	13.1	21.0
5 21	13 25.17	+ 7 32.6	2.348	3.142	13.3	20.0	5 21	13 22.08	- 0 11.3	1.466	2.321	16.9	21.3
247803	2003 <i>SD</i> ₈₉		4 18.6 243°48	2°0/16.9 17			55338	2001 <i>SK</i> ₁₂₅		4 18.6 86°66	1°4/17.2 18		
3 12	14 12.76	- 9 24.6	1.803	2.622	14.9	21.8	3 12	14 8.10	-10 36.9	2.171	2.985	12.9	19.4
3 22	14 8.75	- 8 33.8	1.706	2.608	11.6	21.6	3 22	14 4.56	- 9 44.8	2.088	2.987	9.9	19.2
4 1	14 2.30	- 7 30.5	1.632	2.593	7.6	21.3	4 1	13 59.18	- 8 42.1	2.030	2.990	6.4	19.0
4 11	13 54.01	- 6 19.1	1.583	2.578	3.5	21.0	4 11	13 52.51	- 7 33.1	1.998	2.993	2.8	18.8
4 21	13 44.76	- 5 6.1	1.562	2.562	2.8	20.9	4 21	13 45.27	- 6 23.2	1.994	2.996	2.0	18.7
5 1	13 35.64	- 3 59.0	1.569	2.546	7.0	21.1	5 1	13 38.29	- 5 18.2	2.019	2.999	5.5	19.0
5 11	13 27.72	- 3 4.7	1.601	2.529	11.4	21.3	5 11	13 32.31	- 4 23.4	2.071	3.001	9.1	19.2
5 21	13 21.79	- 2 27.6	1.656	2.512	15.2	21.5	5 21	13 27.88	- 3 42.3	2.147	3.004	12.2	19.4
384198	2009 <i>BP</i> ₁₄₆		4 18.6 53°49	0°6/19.2 17			341200	2007 <i>RF</i> ₈₀		4 18.6 224°97	0°4/18.3 17		
3 12	14 9.61	-15 12.1	1.986	2.789	14.3	21.2	3 12	14 10.33	-12 18.3	2.228	3.031	12.9	21.8
3 22	14 5.88	-14 50.7	1.912	2.802	11.1	21.0	3 22	14 6.34	-11 50.4	2.135	3.026	10.0	21.6
4 1	14 0.10	-14 16.2	1.861	2.814	7.5	20.8	4 1	14 0.40	-11 12.0	2.065	3.021	6.6	21.4
4 11	13 52.91	-13 31.5	1.835	2.827	3.5	20.6	4 11	13 53.08	-10 25.9	2.022	3.016	2.9	21.1
4 21	13 45.14	-12 40.7	1.836	2.840	1.0	20.4	4 21	13 45.09	- 9 36.0	2.007	3.010	1.2	21.0
5 1	13 37.70	-11 49.1	1.865	2.853	4.9	20.7	5 1	13 37.28	- 8 47.2	2.021	3.005	5.0	21.2
5 11	13 31.43	-11 2.4	1.921	2.867	8.7	21.0	5 11	13 30.45	- 8 4.6	2.062	2.999	8.7	21.4
5 21	13 26.91	-10 24.9	2.001	2.880	12.0	21.2	5 21	13 25.21	- 7 32.0	2.127	2.993	11.9	21.6
506626	2006 <i>HG</i> ₇₄		4 18.6 316°40	1°7/17.1 17			253248	2003 <i>AB</i> ₃₅		4 1			

EPHEMERIDES

4 18.6

4 18.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
367150	2006 <i>UH</i> ₉₈		4 18.6 276°37	2°2/16.9	17		177816	2005 <i>MK</i> ₂₄		4 18.7 185°38	0°9/19.6	17	
3 12	14 12.60	- 8 29.4	1.713	2.537	15.3	21.3	3 12	14 9.85	-15 50.5	2.550	3.336	12.0	21.3
3 22	14 8.89	- 7 51.9	1.610	2.514	12.0	21.1	3 22	14 5.72	-15 36.1	2.457	3.336	9.4	21.1
4 1	14 2.57	- 7 2.8	1.528	2.490	8.0	20.8	4 1	13 59.88	-15 10.8	2.388	3.336	6.4	20.9
4 11	13 54.21	- 6 6.4	1.472	2.467	3.7	20.4	4 11	13 52.82	-14 36.6	2.345	3.335	3.1	20.7
4 21	13 44.71	- 5 8.6	1.442	2.442	3.0	20.3	4 21	13 45.21	-13 56.0	2.331	3.335	1.0	20.5
5 1	13 35.21	- 4 16.5	1.439	2.418	7.4	20.5	5 1	13 37.77	-13 13.1	2.346	3.334	4.1	20.7
5 11	13 26.91	- 3 36.8	1.462	2.393	12.0	20.7	5 11	13 31.21	-12 32.2	2.389	3.332	7.3	20.9
5 21	13 20.69	- 3 14.0	1.506	2.368	16.1	20.9	5 21	13 26.06	-11 57.0	2.458	3.331	10.3	21.1
522916	2016 <i>PP</i> ₁₀₈		4 18.7 228°90	3°8/14.5	17		215806	2004 <i>RW</i> ₁₃₈		4 18.7 68°83	16°8/4.4	18	
3 12	14 9.88	+ 0 4.8	2.563	3.382	11.0	21.9	3 12	14 29.85	-48 17.0	1.512	2.133	24.9	19.9
3 22	14 5.65	+ 0 47.0	2.476	3.376	8.5	21.7	3 22	14 24.49	-50 44.2	1.460	2.159	23.1	19.8
4 1	13 59.78	+ 1 30.9	2.414	3.369	5.9	21.5	4 1	14 14.15	-52 37.7	1.420	2.185	21.0	19.7
4 11	13 52.76	+ 2 12.2	2.380	3.363	4.0	21.4	4 11	13 59.69	-53 46.6	1.395	2.211	19.1	19.6
4 21	13 45.20	+ 2 46.5	2.374	3.356	4.4	21.4	4 21	13 43.06	-54 3.3	1.388	2.236	17.6	19.6
5 1	13 37.81	+ 3 10.1	2.397	3.348	6.7	21.5	5 1	13 26.98	-53 27.5	1.399	2.262	16.8	19.6
5 11	13 31.26	+ 3 20.4	2.446	3.341	9.4	21.7	5 11	13 14.00	-52 8.9	1.430	2.287	17.0	19.7
5 21	13 26.05	+ 3 16.5	2.518	3.333	11.9	21.8	5 21	13 5.52	-50 22.1	1.479	2.312	17.9	19.8
331032	2009 <i>VM</i> ₄₀		4 18.7 248°96	1°3/19.8	18		229219	2004 <i>VW</i> ₈₃		4 18.7 239°72	1°5/17.3	18	
3 12	14 13.54	-16 28.4	2.143	2.930	13.9	21.4	3 12	14 12.31	- 8 31.3	2.088	2.900	13.3	21.2
3 22	14 9.11	-16 20.8	2.034	2.912	11.1	21.2	3 22	14 8.02	- 8 6.2	1.994	2.892	10.3	21.0
4 1	14 2.44	-16 0.1	1.947	2.895	7.7	20.9	4 1	14 1.62	- 7 33.1	1.923	2.883	6.8	20.7
4 11	13 54.07	-15 27.4	1.886	2.876	3.9	20.6	4 11	13 53.67	- 6 55.1	1.879	2.874	3.0	20.5
4 21	13 44.77	-14 45.3	1.854	2.857	1.4	20.4	4 21	13 44.95	- 6 16.7	1.863	2.864	2.2	20.4
5 1	13 35.51	-13 58.3	1.849	2.837	5.0	20.6	5 1	13 36.40	- 5 42.6	1.875	2.854	5.9	20.6
5 11	13 27.27	-13 12.1	1.873	2.817	8.9	20.8	5 11	13 28.89	- 5 17.4	1.914	2.844	9.7	20.8
5 21	13 20.78	-12 31.8	1.921	2.797	12.6	21.0	5 21	13 23.10	- 5 4.0	1.976	2.834	13.0	21.0
41443	2000 <i>JD</i> ₇₃		4 18.7 254°02	5°0/13.9	18 R		156382	2001 <i>YU</i> ₇₃		4 18.7 64°44	8°5/12.1	18	
3 12	14 12.07	+ 0 3.0	2.032	2.859	13.1	19.3	3 12	14 14.25	+ 9 20.6	1.684	2.516	15.1	19.6
3 22	14 7.91	+ 1 8.1	1.937	2.841	10.3	19.1	3 22	14 9.63	+10 26.0	1.632	2.528	12.3	19.4
4 1	14 1.59	+ 2 17.6	1.866	2.822	7.3	18.8	4 1	14 2.63	+11 24.5	1.602	2.540	9.8	19.3
4 11	13 53.66	+ 3 24.9	1.822	2.803	5.2	18.7	4 11	13 54.04	+12 7.7	1.597	2.553	8.5	19.2
4 21	13 44.90	+ 4 23.6	1.805	2.784	5.9	18.7	4 21	13 44.89	+12 29.2	1.616	2.565	9.3	19.3
5 1	13 36.26	+ 5 7.3	1.816	2.764	8.8	18.8	5 1	13 36.25	+12 25.3	1.661	2.578	11.6	19.5
5 11	13 28.64	+ 5 31.9	1.852	2.743	12.1	19.0	5 11	13 29.08	+11 56.1	1.727	2.590	14.3	19.7
5 21	13 22.76	+ 5 35.9	1.909	2.722	15.2	19.1	5 21	13 23.98	+11 4.3	1.814	2.603	16.8	19.9
222339	2000 <i>VM</i> ₃		4 18.7 102°09	5°0/23.9	18		421295	2013 <i>TL</i> ₁₂		4 18.7 144°79	3°2/15.5	17	
3 12	14 17.85	-28 59.4	2.433	3.146	14.4	21.9	3 12	14 11.37	- 4 43.3	2.076	2.897	13.1	21.3
3 22	14 11.92	-29 18.2	2.362	3.177	12.0	21.8	3 22	14 7.11	- 3 47.1	2.001	2.904	10.0	21.1
4 1	14 3.93	-29 19.1	2.311	3.206	9.4	21.6	4 1	14 0.87	- 2 44.9	1.950	2.910	6.7	20.9
4 11	13 54.56	-29 1.1	2.286	3.235	6.8	21.6	4 11	13 53.27	- 1 41.8	1.925	2.916	3.7	20.7
4 21	13 44.67	-28 25.5	2.288	3.263	5.1	21.5	4 21	13 45.10	- 0 43.8	1.929	2.921	3.9	20.7
5 1	13 35.20	-27 35.7	2.319	3.291	5.6	21.6	5 1	13 37.23	+ 0 3.8	1.961	2.926	6.9	20.9
5 11	13 26.99	-26 37.6	2.378	3.317	7.6	21.7	5 11	13 30.47	+ 0 36.9	2.020	2.931	10.3	21.1
5 21	13 20.60	-25 37.3	2.464	3.343	10.0	21.9	5 21	13 25.38	+ 0 53.4	2.101	2.936	13.2	21.3
29050	3333 <i>T</i> ₋₂		4 18.7 240°74	1°4/17.3	18		417694	2007 <i>BA</i> ₅₅		4 18.7 141°09	1°0/19.6	16	
3 12	14 10.09	- 9 18.1	2.184	2.996	12.8	19.9	3 12	14 13.98	-16 36.8	2.187	2.970	13.8	22.6
3 22	14 6.17	- 8 44.2	2.093	2.991	9.9	19.7	3 22	14 9.08	-16 15.1	2.105	2.983	10.8	22.4
4 1	14 0.30	- 8 1.4	2.025	2.985	6.5	19.5	4 1	14 2.16	-15 40.2	2.047	2.994	7.4	22.2
4 11	13 53.04	- 7 13.2	1.984	2.979	2.9	19.3	4 11	13 53.84	-14 54.1	2.015	3.005	3.6	22.0
4 21	13 45.11	- 6 24.3	1.971	2.972	2.0	19.2	4 21	13 44.93	-14 0.6	2.011	3.015	1.1	21.8
5 1	13 37.36	- 5 39.6	1.987	2.966	5.6	19.4	5 1	13 36.34	-13 4.7	2.037	3.025	4.6	22.0
5 11	13 30.61	- 5 3.8	2.029	2.959	9.2	19.6	5 11	13 28.89	-12 11.9	2.091	3.034	8.3	22.3
5 21	13 25.44	- 4 40.0	2.095	2.953	12.4	19.8	5 21	13 23.18	-11 27.1	2.170	3.042	11.5	22.5
304687	2006 <i>WC</i> ₁₄₅		4 18.7 279°98	3°4/15.2	17		388785	2008 <i>AQ</i> ₄₀		4 18.7 347°75	5°5/12.9	17	
3 12	14 8.92	- 2 59.5	2.281	3.105	12.0	21.2	3 12	14 8.52	+ 3 26.9	2.230	3.060	12.0	20.8
3 22	14 5.21	- 2 13.0	2.187	3.091	9.3	21.0	3 22	14 4.82	+ 4 29.8	2.156	3.059	9.4	20.6
4 1	13 59.65	- 1 21.9	2.117	3.077	6.3	20.8	4 1	13 59.32	+ 5 32.5	2.108	3.058	7.0	20.5
4 11	13 52.76	- 0 30.6	2.074	3.063	3.7	20.6	4 11	13 52.59	+ 6 29.2	2.085	3.057	5.5	20.4
4 21	13 45.20	+ 0 15.8	2.059	3.049	4.1	20.6	4 21	13 45.32	+ 7 14.1	2.090	3.057	6.2	20.4
5 1	13 37.78	+ 0 52.4	2.072	3.034	6.9	20.7	5 1	13 38.29	+ 7 42.9	2.122	3.056	8.5	20.5
5 11	13 31.26	+ 1 15.5	2.111	3.020	10.0	20.9	5 11	13 32.22	+ 7 53.2	2.178	3.056	11.1	20.7
5 21	13 26.22	+ 1 23.2	2.173	3.006	12.9	21.0	5 21	13 27.66	+ 7 44.8	2.256	3.055	13.6	20.9
512604	2016 <i>TB</i> ₁₄		4 18.7 307°21	3°9/22.9	18		497015	2003 <i>FX</i> ₆₅		4 18.7 317°23	0°5/18.2	17	
3 12	14 8.28	-25 50.3	2.350	3.101	13.8	20.5	3 12	14 8.92	-14 10.3	1.737	2.553	15.5	20.8
3 22	14 4.85	-25 46.1	2.250	3.095	11.5	20.3	3 22	14 5.78	-13 18.9	1.652	2.550	12.1	20.5
4 1	13 59.47	-25 24.1	2.171	3.089	8.7	20.1	4 1	14 0.29	-12 10.9	1.588	2.547	8.0	20.3
4 11	13 52.69	-24 44.5	2.116	3.084	5.9	19.9	4 11	13 53.11	-10 50.5	1.550	2.545	3.5	20.0
4 21	13 45.23	-23 49.0	2.089	3.078	4.0	19.8	4 21	13 45.15	- 9 24.1	1.539	2.542	1.4	19.9
5 1	13 37.93	-22 41.8	2.089	3.073	4.9	19.9	5 1	13 37.45	- 7 59.9	1.555	2.540	6.1	20.2
5 11	13 31.62	-21 28.9	2.117	3.068	7.7	20.0	5 11	13 31.02	- 6 45.8	1.597	2.538	10.4	20.4
5 21	13 26.91	-20 16.8	2.170	3.063	10.6	20.2	5 21	13 26.54	- 5 47.7	1.661	2.536	14.2	20.6
368343	2002 <i>QX</i> ₆₆		4										

EPHEMERIDES

4 18.7

4 18.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
367793	2011 <i>AH</i> ₁₅		4 18.7 127°81	1°4/20.1	16		512337	2016 <i>LQ</i> ₅₄		4 18.7 234°72	1°8/16.6	17	
3 12	14 14.36	-18 5.0	2.241	3.018	13.7	22.0	3 12	14 8.42	-8 17.9	2.495	3.306	11.5	22.5
3 22	14 9.30	-17 46.1	2.163	3.035	10.8	21.9	3 22	14 4.66	-7 26.3	2.400	3.298	8.8	22.3
4 1	14 2.26	-17 13.5	2.108	3.052	7.5	21.7	4 1	13 59.21	-6 26.4	2.329	3.289	5.8	22.1
4 11	13 53.87	-16 28.9	2.080	3.067	3.8	21.5	4 11	13 52.58	-5 22.1	2.286	3.280	2.7	21.9
4 21	13 44.95	-15 35.9	2.080	3.083	1.5	21.3	4 21	13 45.37	-4 18.2	2.272	3.270	2.4	21.8
5 1	13 36.37	-14 39.3	2.110	3.097	4.5	21.6	5 1	13 38.32	-3 19.6	2.287	3.261	5.5	22.0
5 11	13 28.95	-13 44.7	2.167	3.111	7.9	21.8	5 11	13 32.10	-2 30.9	2.330	3.251	8.7	22.2
5 21	13 23.24	-12 56.9	2.250	3.125	11.0	22.0	5 21	13 27.24	-1 55.1	2.397	3.241	11.5	22.4
427877	2005 <i>SE</i> ₁₀₂		4 18.7 137°65	2°0/20.5	17		14823	1984 <i>ST</i> ₅		4 18.7 193°53	0°7/19.3	18	R
3 12	14 14.55	-18 44.0	2.148	2.924	14.2	22.5	3 12	14 14.92	-15 11.0	2.059	2.850	14.3	19.4
3 22	14 9.63	-18 41.5	2.065	2.935	11.3	22.3	3 22	14 10.10	-14 54.9	1.966	2.848	11.2	19.1
4 1	14 2.60	-18 25.1	2.005	2.945	8.0	22.1	4 1	14 3.03	-14 25.9	1.895	2.846	7.6	18.9
4 11	13 54.07	-17 55.7	1.970	2.955	4.3	21.9	4 11	13 54.33	-13 45.9	1.851	2.842	3.6	18.6
4 21	13 44.88	-17 16.1	1.963	2.964	2.0	21.8	4 21	13 44.84	-12 58.4	1.834	2.839	1.0	18.4
5 1	13 35.99	-16 30.7	1.985	2.973	4.7	22.0	5 1	13 35.54	-12 8.5	1.847	2.834	5.1	18.7
5 11	13 28.28	-15 45.0	2.035	2.982	8.2	22.2	5 11	13 27.41	-11 21.9	1.887	2.829	9.1	18.9
5 21	13 22.37	-15 4.0	2.110	2.989	11.5	22.4	5 21	13 21.12	-10 43.6	1.951	2.823	12.6	19.2
98257	2000 <i>SJ</i> ₁₈₁		4 18.7 133°70	1°5/17.6	18		349133	2007 <i>JB</i>		4 18.7 357°41	21°0/19.4	17	
3 12	14 16.16	-9 4.0	1.632	2.451	16.2	19.7	3 12	14 1.35	-59 16.8	1.344	1.932	28.8	18.7
3 22	14 11.40	-8 41.5	1.558	2.458	12.5	19.5	3 22	14 3.38	-61 11.7	1.273	1.924	27.9	18.6
4 1	14 4.01	-8 9.2	1.505	2.466	8.2	19.2	4 1	14 0.68	-62 24.0	1.209	1.918	26.7	18.4
4 11	13 54.75	-7 31.1	1.478	2.473	3.6	19.0	4 11	13 53.91	-62 42.8	1.153	1.915	25.3	18.3
4 21	13 44.67	-6 52.3	1.477	2.479	2.3	18.9	4 21	13 44.91	-61 59.0	1.107	1.913	23.8	18.1
5 1	13 34.98	-6 18.9	1.504	2.485	6.7	19.2	5 1	13 36.50	-60 8.2	1.074	1.914	22.3	18.0
5 11	13 26.80	-5 56.0	1.556	2.491	11.1	19.4	5 11	13 31.23	-57 15.4	1.055	1.917	21.3	18.0
5 21	13 20.85	-5 46.8	1.630	2.497	14.9	19.7	5 21	13 30.38	-53 33.9	1.054	1.922	21.0	18.0
455189	2000 <i>QM</i> ₇		4 18.7 135°95	6°1/11.7	18		101688	1999 <i>CX</i> ₁₁₇		4 18.7 57°53	3°7/21.9	18	
3 12	14 14.55	+2 54.8	2.170	2.990	12.7	21.8	3 12	14 11.29	-23 11.2	1.630	2.414	17.7	18.5
3 22	14 9.31	+4 47.4	2.113	3.009	9.9	21.7	3 22	14 7.82	-23 4.5	1.555	2.425	14.4	18.3
4 1	14 2.19	+6 40.8	2.082	3.028	7.4	21.5	4 1	14 1.73	-22 35.9	1.500	2.436	10.5	18.1
4 11	13 53.81	+8 26.7	2.079	3.045	6.1	21.5	4 11	13 53.78	-21 45.8	1.468	2.447	6.4	17.9
4 21	13 44.99	+9 57.5	2.106	3.061	7.1	21.6	4 21	13 45.03	-20 38.1	1.461	2.458	3.7	17.7
5 1	13 36.56	+11 7.3	2.161	3.076	9.4	21.7	5 1	13 36.69	-19 19.8	1.481	2.470	5.8	17.9
5 11	13 29.30	+11 53.5	2.240	3.090	11.9	21.9	5 11	13 29.86	-17 59.7	1.526	2.482	9.6	18.1
5 21	13 23.71	+12 16.0	2.342	3.104	14.2	22.1	5 21	13 25.27	-16 46.3	1.595	2.493	13.4	18.4
20593	Freilich		4 18.7 355°72	5°8/14.5	18		85201	1991 <i>VU</i> ₈		4 18.7 58°44	1°0/17.9	18	
3 12	14 10.82	-1 25.1	1.358	2.209	17.1	17.8	3 12	14 12.07	-11 46.3	1.458	2.286	17.3	19.7
3 22	14 7.74	-0 20.0	1.290	2.207	13.3	17.5	3 22	14 8.44	-11 10.3	1.394	2.299	13.4	19.5
4 1	14 1.83	+0 50.9	1.242	2.206	9.2	17.3	4 1	14 2.12	-10 20.1	1.350	2.312	8.8	19.3
4 11	13 53.86	+1 58.8	1.218	2.205	6.1	17.1	4 11	13 53.94	-9 20.5	1.330	2.325	3.8	19.0
4 21	13 44.96	+2 54.5	1.218	2.204	6.8	17.2	4 21	13 45.00	-8 18.5	1.336	2.339	1.9	18.9
5 1	13 36.44	+3 30.3	1.243	2.204	10.4	17.4	5 1	13 36.55	-7 21.5	1.368	2.353	6.8	19.2
5 11	13 29.51	+3 41.5	1.289	2.205	14.5	17.6	5 11	13 29.70	-6 36.7	1.424	2.367	11.3	19.5
5 21	13 24.98	+3 27.8	1.355	2.205	18.3	17.8	5 21	13 25.15	-6 8.1	1.502	2.381	15.3	19.8
227259	2005 <i>SR</i> ₉₁		4 18.7 114°76	0°5/18.2	18		55874	Brilka		4 18.7 70°08	1°5/17.8	18	
3 12	14 13.00	-12 48.9	2.156	2.955	13.5	21.8	3 12	14 20.13	-6 53.8	1.646	2.460	16.3	18.7
3 22	14 8.23	-12 6.3	2.086	2.975	10.4	21.6	3 22	14 14.21	-7 2.8	1.586	2.484	12.5	18.5
4 1	14 1.53	-11 12.4	2.039	2.994	6.8	21.4	4 1	14 5.70	-7 6.0	1.549	2.508	8.2	18.3
4 11	13 53.55	-10 11.1	2.019	3.013	2.9	21.2	4 11	13 55.44	-7 6.4	1.537	2.531	3.6	18.1
4 21	13 45.08	-9 7.1	2.028	3.031	1.3	21.1	4 21	13 44.56	-7 7.3	1.553	2.555	2.1	18.0
5 1	13 37.00	-8 6.1	2.066	3.049	5.1	21.4	5 1	13 34.26	-7 12.1	1.596	2.578	6.4	18.4
5 11	13 30.07	-7 13.3	2.132	3.066	8.6	21.7	5 11	13 25.61	-7 23.8	1.666	2.602	10.5	18.7
5 21	13 24.84	-6 32.4	2.222	3.082	11.7	21.9	5 21	13 19.26	-7 44.4	1.759	2.625	14.0	18.9
24162	Askaci		4 18.7 95°33	0°8/17.9	18		362021	2008 <i>YY</i> ₂₁		4 18.7 258°81	12°3/6.5	17	
3 12	14 11.16	-10 47.5	1.966	2.779	14.0	19.2	3 12	14 13.71	+15 50.9	1.614	2.442	15.9	20.7
3 22	14 7.18	-10 22.6	1.884	2.782	10.9	19.0	3 22	14 9.77	+17 53.6	1.547	2.427	13.9	20.6
4 1	14 1.06	-9 47.6	1.825	2.784	7.1	18.8	4 1	14 3.12	+19 47.6	1.502	2.412	12.5	20.4
4 11	13 53.42	-9 6.0	1.791	2.786	3.1	18.5	4 11	13 54.46	+21 20.4	1.480	2.396	12.4	20.4
4 21	13 45.10	-8 22.0	1.785	2.788	1.6	18.4	4 21	13 44.82	+22 21.7	1.482	2.380	13.8	20.4
5 1	13 37.04	-7 41.0	1.806	2.790	5.6	18.7	5 1	13 35.43	+22 45.3	1.505	2.364	16.0	20.5
5 11	13 30.12	-7 7.9	1.855	2.792	9.5	18.9	5 11	13 27.49	+22 30.2	1.546	2.347	18.6	20.7
5 21	13 25.00	-6 46.3	1.926	2.794	12.9	19.1	5 21	13 21.80	+21 40.3	1.604	2.330	21.0	20.8
87422	2000 <i>QE</i> ₉₉		4 18.7 260°15	2°5/16.4	18		255600	2006 <i>PC</i> ₄		4 18.7 221°04	2°5/16.5	17	
3 12	14 12.07	-6 36.3	2.020	2.838	13.5	20.8	3 12	14 14.94	-6 10.7	2.136	2.947	13.2	21.7
3 22	14 7.99	-5 55.9	1.919	2.820	10.5	20.5	3 22	14 10.03	-5 32.8	2.039	2.936	10.2	21.4
4 1	14 1.71	-5 7.1	1.842	2.802	6.9	20.3	4 1	14 2.96	-4 47.8	1.966	2.924	6.8	21.2
4 11	13 53.78	-4 14.3	1.791	2.784	3.4	20.0	4 11	13 54.31	-3 59.7	1.920	2.912	3.4	21.0
4 21	13 44.97	-3 22.9	1.767	2.765	3.2	20.0	4 21	13 44.87	-3 13.4	1.902	2.899	3.1	20.9
5 1	13 36.26	-2 38.5	1.772	2.745	6.8	20.1	5 1	13 35.55	-2 34.2	1.913	2.885	6.5	21.1
5 11	13 28.57	-2 6.2	1.803	2.725	10.6	20.3	5 11	13 27.29	-2 6.5	1.952	2.870	10.2	21.3
5 21	13 22.64	-1 49.3	1.857	2.705	14.1	20.5	5 21	13 20.75	-1 53.0	2.014	2.855	13.5	21.5
123384	2000 <i>WG</i> ₆₀		4 18.7 107°95	5°3/13.9	18		161942	2007 <i>GS</i> ₁		4 18.7 318°80	2°5/16.2	18	
3 12	14 13.19	+2 22.2	2.046	2.871	13.1								

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
242185	2003 <i>JV</i> ₁		4 18.7 336°12	0°3/18.9	17		79829	1998 <i>WT</i> ₅		4 18.7 181°59	2°2/20.4	18	
3 12	14 7.83	-16 44.5	1.677	2.489	16.1	20.4	3 12	14 16.03	-18 7.7	2.057	2.835	14.7	19.8
3 22	14 5.07	-15 51.9	1.590	2.485	12.7	20.1	3 22	14 11.02	-18 15.9	1.965	2.836	11.8	19.5
4 1	13 59.91	-14 39.5	1.525	2.481	8.5	19.9	4 1	14 3.70	-18 10.6	1.895	2.836	8.3	19.3
4 11	13 53.00	-13 11.1	1.485	2.478	3.9	19.6	4 11	13 54.67	-17 52.3	1.851	2.836	4.5	19.1
4 21	13 45.28	-11 33.2	1.471	2.475	1.0	19.4	4 21	13 44.81	-17 23.2	1.834	2.836	2.2	18.9
5 1	13 37.83	-9 54.9	1.484	2.472	5.9	19.7	5 1	13 35.16	-16 47.1	1.847	2.835	5.0	19.1
5 11	13 31.67	-8 25.3	1.523	2.470	10.4	19.9	5 11	13 26.69	-16 9.6	1.887	2.833	8.8	19.3
5 21	13 27.52	-7 11.5	1.585	2.468	14.4	20.2	5 21	13 20.14	-15 35.9	1.951	2.831	12.2	19.5
121583	1999 <i>VO</i> ₁₀₂		4 18.7 276°57	0°2/18.8	17		254234	2004 <i>RW</i> ₁₂₁		4 18.7 298°92	3°3/21.6	17	
3 12	14 10.62	-13 48.3	1.951	2.757	14.4	20.4	3 12	14 11.86	-21 18.1	2.349	3.114	13.5	20.9
3 22	14 6.90	-13 27.6	1.859	2.752	11.3	20.1	3 22	14 7.69	-21 44.1	2.245	3.104	11.0	20.7
4 1	14 0.98	-12 54.2	1.790	2.746	7.6	19.9	4 1	14 1.46	-21 57.4	2.164	3.093	8.1	20.5
4 11	13 53.46	-12 10.7	1.747	2.740	3.4	19.6	4 11	13 53.69	-21 57.5	2.108	3.083	5.2	20.3
4 21	13 45.14	-11 21.2	1.731	2.735	1.0	19.4	4 21	13 45.11	-21 45.3	2.079	3.073	3.3	20.2
5 1	13 37.02	-10 31.2	1.742	2.729	5.3	19.7	5 1	13 36.58	-21 23.1	2.079	3.063	4.9	20.2
5 11	13 30.03	-9 46.4	1.780	2.724	9.4	19.9	5 11	13 29.00	-20 55.3	2.105	3.053	7.9	20.4
5 21	13 24.84	-9 11.7	1.842	2.718	13.0	20.2	5 21	13 23.04	-20 26.6	2.157	3.044	10.9	20.6
206000	2002 <i>PH</i> ₃₁		4 18.7 170°89	5°9/25.1	18		505297	2012 <i>WP</i> ₂₂		4 18.7 178°93	0°3/19.1	18	
3 12	14 14.11	-31 55.1	2.603	3.302	13.8	21.1	3 12	14 10.59	-14 14.7	3.030	3.811	10.4	23.2
3 22	14 9.30	-32 22.8	2.506	3.305	11.9	20.9	3 22	14 6.00	-13 53.4	2.935	3.813	8.1	23.0
4 1	14 2.42	-32 32.9	2.429	3.307	9.7	20.8	4 1	13 59.95	-13 23.4	2.865	3.814	5.4	22.8
4 11	13 54.06	-32 23.6	2.376	3.309	7.5	20.6	4 11	13 52.89	-12 46.6	2.823	3.815	2.5	22.6
4 21	13 44.97	-31 55.0	2.350	3.311	6.0	20.5	4 21	13 45.38	-12 5.7	2.810	3.815	0.7	22.5
5 1	13 36.05	-31 9.3	2.351	3.312	6.2	20.5	5 1	13 38.02	-11 23.9	2.829	3.814	3.7	22.7
5 11	13 28.16	-30 11.6	2.380	3.313	7.9	20.6	5 11	13 31.41	-10 44.9	2.876	3.813	6.5	22.9
5 21	13 21.95	-29 7.8	2.434	3.314	10.1	20.8	5 21	13 25.99	-10 11.7	2.950	3.811	9.1	23.1
79026	1322 <i>T</i> ₋₂		4 18.7 198°03	1°1/17.7	16		221089	2005 <i>SE</i> ₆₈		4 18.7 148°98	3°5/21.5	17	
3 12	14 13.65	-10 57.1	1.904	2.714	14.6	20.4	3 12	14 17.76	-21 15.1	2.168	2.927	14.6	21.3
3 22	14 9.24	-10 21.0	1.816	2.711	11.3	20.2	3 22	14 12.26	-21 43.1	2.080	2.935	11.9	21.1
4 1	14 2.52	-9 33.4	1.750	2.708	7.4	19.9	4 1	14 4.46	-21 57.3	2.014	2.943	8.7	21.0
4 11	13 54.14	-8 37.9	1.710	2.705	3.2	19.6	4 11	13 55.00	-21 56.9	1.974	2.950	5.4	20.8
4 21	13 44.96	-7 39.8	1.699	2.701	1.8	19.5	4 21	13 44.73	-21 42.8	1.962	2.956	3.5	20.7
5 1	13 36.01	-6 45.1	1.715	2.697	6.0	19.8	5 1	13 34.70	-21 18.0	1.978	2.962	5.1	20.8
5 11	13 28.27	-5 59.7	1.758	2.692	10.1	20.0	5 11	13 25.86	-20 47.5	2.023	2.968	8.3	21.0
5 21	13 22.44	-5 27.9	1.824	2.686	13.8	20.2	5 21	13 18.94	-20 16.6	2.092	2.973	11.5	21.2
341182	2007 <i>RW</i> ₂₀		4 18.7 206°67	0°2/18.9	18		122640	2000 <i>RX</i> ₈₂		4 18.7 229°02	5°1/23.5	18	
3 12	14 11.53	-13 39.4	2.630	3.418	11.6	22.1	3 12	14 14.27	-27 49.3	2.312	3.043	14.6	21.1
3 22	14 7.01	-13 20.4	2.531	3.412	9.1	21.9	3 22	14 9.71	-28 7.5	2.204	3.032	12.3	20.9
4 1	14 0.76	-12 51.9	2.455	3.406	6.1	21.7	4 1	14 2.89	-28 7.9	2.116	3.020	9.6	20.7
4 11	13 53.29	-12 15.9	2.407	3.400	2.8	21.5	4 11	13 54.35	-27 48.9	2.052	3.008	6.9	20.5
4 21	13 45.23	-11 35.2	2.388	3.393	0.8	21.3	4 21	13 44.91	-27 11.0	2.015	2.996	5.2	20.3
5 1	13 37.30	-10 53.8	2.400	3.385	4.2	21.5	5 1	13 35.54	-26 17.0	2.006	2.982	5.9	20.3
5 11	13 30.22	-10 15.7	2.439	3.377	7.5	21.7	5 11	13 27.23	-25 12.7	2.025	2.969	8.4	20.5
5 21	13 24.51	-9 44.5	2.504	3.368	10.4	21.9	5 21	13 20.72	-24 4.9	2.068	2.954	11.4	20.6
396311	2014 <i>DZ</i> ₃₃		4 18.7 42°04	5°1/22.9	18		89212	2001 <i>UD</i> ₁₀₉		4 18.7 258°67	2°6/16.5	18	
3 12	14 15.33	-25 25.0	2.221	2.964	14.8	21.4	3 12	14 14.43	-5 46.8	2.097	2.910	13.3	20.3
3 22	14 10.51	-26 15.5	2.130	2.967	12.3	21.2	3 22	14 9.82	-5 14.6	1.989	2.887	10.3	20.1
4 1	14 3.39	-26 51.3	2.060	2.970	9.6	21.1	4 1	14 2.98	-4 35.3	1.905	2.864	6.9	19.8
4 11	13 54.55	-27 10.3	2.015	2.974	6.8	20.9	4 11	13 54.42	-3 53.0	1.847	2.840	3.5	19.5
4 21	13 44.84	-27 12.2	1.997	2.977	5.2	20.8	4 21	13 44.91	-3 12.4	1.818	2.815	3.2	19.5
5 1	13 35.26	-26 58.8	2.006	2.980	6.0	20.9	5 1	13 35.42	-2 38.7	1.818	2.790	6.7	19.6
5 11	13 26.81	-26 34.6	2.042	2.984	8.5	21.0	5 11	13 26.91	-2 16.5	1.844	2.764	10.6	19.8
5 21	13 20.22	-26 5.2	2.103	2.988	11.3	21.2	5 21	13 20.14	-2 8.5	1.893	2.737	14.1	20.0
434033	2001 <i>SD</i> ₂₂₂		4 18.7 199°58	1°4/17.1	18		197167	2003 <i>UM</i> ₂₇₇		4 18.7 227°94	1°9/17.0	18	
3 12	14 9.79	-8 33.4	2.523	3.331	11.5	21.5	3 12	14 12.21	-7 11.9	2.131	2.946	13.1	20.4
3 22	14 5.67	-7 58.7	2.433	3.329	8.8	21.3	3 22	14 7.89	-6 46.8	2.042	2.941	10.1	20.1
4 1	13 59.87	-7 16.8	2.367	3.326	5.8	21.1	4 1	14 1.52	-6 14.9	1.976	2.936	6.6	19.9
4 11	13 52.89	-6 31.0	2.329	3.323	2.6	20.9	4 11	13 53.69	-5 39.7	1.937	2.931	3.1	19.7
4 21	13 45.36	-5 45.2	2.320	3.320	2.0	20.9	4 21	13 45.16	-5 5.5	1.926	2.925	2.5	19.6
5 1	13 38.01	-5 3.6	2.339	3.316	5.1	21.1	5 1	13 36.81	-4 36.9	1.943	2.920	5.9	19.8
5 11	13 31.52	-4 30.2	2.387	3.313	8.2	21.3	5 11	13 29.50	-4 17.7	1.987	2.914	9.5	20.0
5 21	13 26.40	-4 7.5	2.459	3.308	11.1	21.4	5 21	13 23.86	-4 10.5	2.054	2.908	12.8	20.2
93775	2000 <i>WY</i> ₂₅		4 18.7 154°62	2°6/16.2	17		285223	1997 <i>MV</i> ₇		4 18.7 312°37	1°7/15.6	18	
3 12	14 12.15	-5 44.5	2.137	2.954	12.9	20.6	3 12	14 2.08	-4 36.6	4.069	4.881	7.4	20.2
3 22	14 7.71	-5 2.7	2.058	2.959	9.9	20.4	3 22	13 59.17	-3 56.6	3.974	4.873	5.6	20.1
4 1	14 1.30	-4 14.8	2.004	2.964	6.5	20.2	4 1	13 55.32	-3 13.5	3.907	4.866	3.7	19.9
4 11	13 53.53	-3 25.0	1.976	2.968	3.3	20.0	4 11	13 50.82	-2 29.9	3.868	4.858	2.0	19.8
4 21	13 45.17	-2 38.5	1.976	2.972	3.2	20.0	4 21	13 46.04	-1 48.3	3.858	4.850	2.1	19.8
5 1	13 37.08	-2 0.2	2.005	2.975	6.4	20.2	5 1	13 41.33	-1 11.3	3.879	4.843	3.9	19.9
5 11	13 30.07	-1 33.9	2.060	2.979	9.7	20.4	5 11	13 37.09	-0 40.9	3.928	4.836	5.8	20.1
5 21	13 24.72	-1 21.9	2.139	2.982	12.8	20.6	5 21	13 33.60	-0 18.8	4.002	4.829	7.6	20.2
437667	2014 <i>CS</i> ₁₀		4 18.7 188°14	3°3/15.6	17		201017	2002 <i>CU</i> ₂₅₂		4 18.7 6°23	6°6/14.4	18	
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
64609	2001 <i>XQ</i> ₂₄		4 18.7 49°21'	4.9/15.2	18		224030	2005 <i>LY</i> ₃₅		4 18.7 278°88'	5.5/14.1	18	
3 12	14 13.87	- 0 9.0	1.672	2.506	15.2	18.9	3 12	14 12.62	- 0 1.9	1.735	2.569	14.7	19.8
3 22	14 9.51	+ 0 27.0	1.605	2.512	11.8	18.6	3 22	14 8.83	+ 0 58.6	1.639	2.547	11.6	19.5
4 1	14 2.72	+ 1 4.6	1.560	2.519	8.1	18.4	4 1	14 2.53	+ 2 4.1	1.567	2.525	8.2	19.3
4 11	13 54.23	+ 1 37.6	1.540	2.526	5.2	18.3	4 11	13 54.29	+ 3 7.4	1.519	2.502	5.7	19.1
4 21	13 45.03	+ 2 0.3	1.546	2.533	5.5	18.3	4 21	13 45.01	+ 4 1.0	1.498	2.479	6.4	19.0
5 1	13 36.23	+ 2 8.0	1.579	2.540	8.7	18.5	5 1	13 35.79	+ 4 37.7	1.503	2.456	9.7	19.2
5 11	13 28.83	+ 1 58.2	1.635	2.547	12.2	18.7	5 11	13 27.76	+ 4 52.9	1.531	2.433	13.6	19.3
5 21	13 23.52	+ 1 30.8	1.714	2.555	15.5	19.0	5 21	13 21.75	+ 4 45.0	1.581	2.409	17.1	19.5
303235	2004 <i>PL</i> ₃₇		4 18.7 240°59'	1.1/19.6	17		189482	1999 <i>UT</i> ₄₇		4 18.7 173°07'	2.4/21.4	18	
3 12	14 14.86	-16 41.9	1.783	2.579	16.0	21.8	3 12	14 12.35	-21 38.4	2.552	3.310	12.7	21.0
3 22	14 10.63	-16 20.7	1.680	2.563	12.7	21.5	3 22	14 7.74	-21 27.4	2.457	3.313	10.3	20.8
4 1	14 3.75	-15 42.4	1.597	2.547	8.8	21.2	4 1	14 1.30	-21 2.1	2.385	3.316	7.4	20.6
4 11	13 54.83	-14 48.6	1.540	2.531	4.3	20.9	4 11	13 53.57	-20 23.3	2.339	3.318	4.4	20.4
4 21	13 44.80	-13 43.3	1.509	2.513	1.3	20.7	4 21	13 45.26	-19 33.4	2.321	3.319	2.4	20.3
5 1	13 34.84	-12 32.9	1.507	2.495	5.8	20.9	5 1	13 37.15	-18 36.3	2.333	3.320	4.2	20.4
5 11	13 26.14	-11 25.5	1.531	2.477	10.5	21.2	5 11	13 29.99	-17 37.2	2.374	3.321	7.2	20.6
5 21	13 19.57	-10 28.0	1.578	2.457	14.6	21.4	5 21	13 24.34	-16 41.3	2.441	3.320	10.1	20.8
426336	2012 <i>VE</i> ₇₈		4 18.7 270°06'	2.9/15.6	17		159852	2003 <i>YF</i> ₁₄₃		4 18.7 280°42'	4.7/22.3	18	
3 12	14 8.39	- 6 0.3	2.144	2.967	12.6	20.6	3 12	14 14.85	-24 23.1	2.200	2.951	14.7	19.7
3 22	14 4.94	- 4 58.8	2.053	2.958	9.7	20.4	3 22	14 10.46	-24 54.7	2.077	2.922	12.3	19.5
4 1	13 59.58	- 3 49.0	1.986	2.948	6.4	20.1	4 1	14 3.63	-25 11.7	1.975	2.893	9.5	19.2
4 11	13 52.84	- 2 36.1	1.946	2.938	3.5	19.9	4 11	13 54.83	-25 11.9	1.897	2.863	6.5	19.0
4 21	13 45.44	- 1 26.0	1.934	2.927	3.7	19.9	4 21	13 44.83	-24 54.8	1.846	2.833	4.7	18.8
5 1	13 38.20	- 0 25.0	1.950	2.917	6.8	20.1	5 1	13 34.66	-24 22.5	1.823	2.803	5.9	18.8
5 11	13 31.92	+ 0 22.1	1.992	2.907	10.2	20.3	5 11	13 25.43	-23 39.9	1.826	2.772	9.1	18.9
5 21	13 27.21	+ 0 52.3	2.057	2.897	13.3	20.4	5 21	13 18.04	-22 53.2	1.855	2.741	12.5	19.1
98215	2000 <i>SM</i> ₁₄₀		4 18.7 244°76'	0.5/19.1	17		451225	2010 <i>CF</i> ₈₀		4 18.7 33°26'	4.1/16.0	18	
3 12	14 14.86	-15 11.4	1.926	2.720	15.0	20.7	3 12	14 10.46	- 6 43.3	1.070	1.930	19.9	20.6
3 22	14 10.44	-14 46.2	1.817	2.702	11.9	20.5	3 22	14 8.00	- 5 42.7	1.016	1.940	15.3	20.3
4 1	14 3.54	-14 5.9	1.730	2.682	8.1	20.2	4 1	14 2.24	- 4 29.5	0.980	1.950	10.1	20.1
4 11	13 54.72	-13 12.4	1.669	2.662	3.8	19.9	4 11	13 54.15	- 3 12.9	0.966	1.961	5.2	19.8
4 21	13 44.85	-12 9.6	1.636	2.641	1.0	19.6	4 21	13 45.11	- 2 3.6	0.975	1.973	5.1	19.8
5 1	13 35.00	-11 3.7	1.632	2.618	5.6	19.9	5 1	13 36.71	- 1 11.7	1.007	1.985	9.9	20.1
5 11	13 26.28	-10 1.8	1.654	2.596	10.1	20.1	5 11	13 30.30	- 0 43.6	1.060	1.998	14.8	20.5
5 21	13 19.53	- 9 10.2	1.700	2.572	14.1	20.3	5 21	13 26.66	- 0 41.1	1.132	2.012	19.1	20.8
245894	2006 <i>QH</i> ₇₇		4 18.7 253°43'	3.7/14.6	17		372627	2009 <i>VB</i> ₅₉		4 18.7 131°70'	2.0/20.8	17	
3 12	14 8.33	- 3 22.9	2.250	3.075	12.1	20.9	3 12	14 12.07	-20 49.6	2.197	2.968	14.1	21.7
3 22	14 4.78	- 2 14.9	2.162	3.067	9.3	20.7	3 22	14 7.70	-20 19.4	2.114	2.980	11.3	21.5
4 1	13 59.41	- 1 0.8	2.099	3.058	6.3	20.5	4 1	14 1.33	-19 32.6	2.053	2.991	7.9	21.3
4 11	13 52.75	+ 0 13.8	2.063	3.050	3.9	20.4	4 11	13 53.60	-18 30.9	2.018	3.002	4.4	21.1
4 21	13 45.47	+ 1 23.1	2.055	3.041	4.4	20.4	4 21	13 45.29	-17 18.2	2.011	3.013	2.0	21.0
5 1	13 38.37	+ 2 21.1	2.075	3.033	7.2	20.5	5 1	13 37.30	-16 0.3	2.034	3.023	4.5	21.1
5 11	13 32.19	+ 3 3.7	2.122	3.024	10.3	20.7	5 11	13 30.45	-14 43.9	2.085	3.032	8.0	21.4
5 21	13 27.49	+ 3 28.5	2.191	3.015	13.1	20.9	5 21	13 25.31	-13 34.8	2.161	3.041	11.2	21.6
427754	2004 <i>SY</i> ₅₁		4 18.7 204°63'	1.9/16.7	18		390984	2005 <i>SK</i> ₂₅		4 18.7 208°21'	5.3/10.6	18	
3 12	14 12.86	- 6 37.9	2.670	3.472	11.1	21.9	3 12	14 7.71	+ 5 2.1	2.915	3.735	9.8	21.5
3 22	14 7.95	- 6 4.9	2.573	3.466	8.5	21.7	3 22	14 3.86	+ 6 40.1	2.836	3.730	7.8	21.4
4 1	14 1.37	- 5 26.3	2.502	3.459	5.6	21.5	4 1	13 58.60	+ 8 18.5	2.783	3.724	6.0	21.2
4 11	13 53.58	- 4 45.1	2.459	3.451	2.7	21.3	4 11	13 52.35	+ 9 51.5	2.760	3.718	5.3	21.2
4 21	13 45.23	- 4 5.1	2.445	3.443	2.4	21.3	4 21	13 45.66	+11 13.6	2.766	3.711	6.1	21.2
5 1	13 37.01	- 3 30.2	2.462	3.434	5.2	21.5	5 1	13 39.10	+12 20.2	2.800	3.704	7.9	21.3
5 11	13 29.62	- 3 3.8	2.506	3.424	8.3	21.6	5 11	13 33.26	+13 8.5	2.860	3.696	10.0	21.5
5 21	13 23.59	- 2 48.2	2.576	3.413	11.0	21.8	5 21	13 28.56	+13 37.7	2.942	3.688	11.9	21.6
380625	2004 <i>TQ</i> ₃₀₂		4 18.7 209°03'	1.6/17.3	18		267742	2003 <i>FG</i> ₁₁₅		4 18.7 330°83'	6.0/14.5	17	
3 12	14 15.06	- 7 2.8	2.372	3.175	12.2	21.3	3 12	14 10.85	+ 0 50.6	1.480	2.327	16.1	19.8
3 22	14 9.89	- 6 48.4	2.277	3.169	9.5	21.1	3 22	14 7.72	+ 1 36.3	1.401	2.315	12.7	19.5
4 1	14 2.77	- 6 28.4	2.206	3.163	6.3	20.9	4 1	14 1.89	+ 2 24.2	1.342	2.303	9.0	19.3
4 11	13 54.25	- 6 5.7	2.162	3.156	2.9	20.7	4 11	13 54.02	+ 3 6.9	1.308	2.292	6.3	19.1
4 21	13 45.03	- 5 43.7	2.148	3.148	2.1	20.6	4 21	13 45.14	+ 3 36.8	1.297	2.281	6.8	19.1
5 1	13 35.96	- 5 25.8	2.163	3.140	5.4	20.8	5 1	13 36.49	+ 3 47.6	1.312	2.271	10.2	19.2
5 11	13 27.85	- 5 15.5	2.206	3.132	8.8	21.0	5 11	13 29.26	+ 3 36.0	1.349	2.262	14.2	19.4
5 21	13 21.32	- 5 15.0	2.274	3.122	11.9	21.2	5 21	13 24.28	+ 3 1.9	1.406	2.254	17.8	19.6
88605	2001 <i>QK</i> ₂₉₄		4 18.7 131°15'	0.7/19.3	18		471396	2011 <i>SN</i> ₁₆₅		4 18.7 235°95'	4.6/23.6	17	
3 12	14 13.26	-15 15.5	1.843	2.644	15.3	20.0	3 12	14 12.54	-28 0.7	2.767	3.487	12.7	22.1
3 22	14 9.00	-14 58.5	1.762	2.650	12.0	19.8	3 22	14 8.02	-28 20.6	2.655	3.475	10.7	21.9
4 1	14 2.39	-14 27.4	1.703	2.656	8.1	19.5	4 1	14 1.60	-28 25.5	2.563	3.462	8.4	21.7
4 11	13 54.11	-13 44.6	1.669	2.661	3.8	19.3	4 11	13 53.78	-28 14.3	2.497	3.449	6.1	21.6
4 21	13 45.08	-12 54.4	1.662	2.667	1.1	19.1	4 21	13 45.21	-27 47.4	2.459	3.435	4.7	21.4
5 1	13 36.36	-12 2.4	1.684	2.672	5.3	19.4	5 1	13 36.69	-27 6.9	2.448	3.421	5.2	21.4
5 11	13 28.93	-11 14.9	1.731	2.677	9.5	19.7	5 11	13 29.02	-26 17.2	2.466	3.407	7.3	21.6
5 21	13 23.48	-10 37.0	1.802	2.681	13.1	19.9	5 21	13 22.81	-25 23.3	2.510	3.392	9.8	21.7
363435	2003 <i>SN</i> ₈₃		4 18.7 259°										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
83133	2001 QX ₂₅₉		4 18.7 209°90	1°0/19.9	18		221722	2007 EC ₄₃		4 18.7 83°05	2°5/16.5	18	
3 12	14 9.53	-17 19.4	2.592	3.372	11.9	19.9	3 12	14 11.73	-8 8.8	1.776	2.599	14.9	20.9
3 22	14 5.54	-16 52.5	2.493	3.368	9.4	19.7	3 22	14 7.67	-7 9.4	1.713	2.617	11.3	20.8
4 1	13 59.85	-16 13.1	2.417	3.363	6.5	19.5	4 1	14 1.40	-6 0.4	1.672	2.634	7.4	20.6
4 11	13 52.95	-15 23.2	2.368	3.357	3.3	19.3	4 11	13 53.66	-4 47.7	1.658	2.652	3.5	20.4
4 21	13 45.48	-14 25.9	2.348	3.352	1.1	19.1	4 21	13 45.35	-3 38.1	1.671	2.669	3.2	20.4
5 1	13 38.17	-13 25.5	2.358	3.346	4.0	19.4	5 1	13 37.48	-2 38.3	1.711	2.686	6.9	20.6
5 11	13 31.71	-12 27.2	2.396	3.340	7.3	19.5	5 11	13 30.94	-1 53.5	1.777	2.702	10.6	20.9
5 21	13 26.63	-11 35.2	2.459	3.333	10.3	19.7	5 21	13 26.30	-1 26.4	1.866	2.719	13.9	21.1
30705	Idaios		4 18.7 206°21	0°4/19.5	18 R		14488	1994 TF ₁₅		4 18.7 272°41	1°9/19.9	18	
3 12	14 5.15	-13 54.6	4.710	5.486	7.0	18.0	3 12	14 14.86	-17 9.6	1.587	2.389	17.3	17.6
3 22	14 1.39	-13 55.4	4.610	5.484	5.5	17.9	3 22	14 11.16	-17 9.3	1.480	2.366	14.0	17.3
4 1	13 56.74	-13 51.5	4.536	5.482	3.7	17.7	4 1	14 4.47	-16 52.0	1.392	2.342	9.9	17.0
4 11	13 51.49	-13 43.7	4.490	5.480	1.8	17.6	4 11	13 55.35	-16 17.7	1.329	2.318	5.2	16.7
4 21	13 45.94	-13 33.3	4.475	5.479	0.5	17.5	4 21	13 44.78	-15 29.2	1.291	2.294	2.0	16.4
5 1	13 40.47	-13 21.8	4.490	5.477	2.4	17.6	5 1	13 34.12	-14 32.3	1.279	2.269	6.3	16.6
5 11	13 35.42	-13 10.8	4.535	5.475	4.3	17.8	5 11	13 24.78	-13 35.2	1.292	2.243	11.5	16.8
5 21	13 31.07	-13 2.0	4.608	5.473	6.0	17.9	5 21	13 17.83	-12 45.8	1.328	2.218	16.2	17.0
480598	2015 MQ ₉₁		4 18.7 281°94	0°2/18.9	16		59114	1998 XQ ₂		4 18.7 112°19	0°2/18.8	18	
3 12	14 8.10	-14 54.1	2.453	3.247	12.1	22.1	3 12	14 15.81	-13 54.2	1.518	2.331	17.5	19.8
3 22	14 4.64	-14 18.0	2.340	3.225	9.5	21.9	3 22	14 11.39	-13 32.8	1.447	2.342	13.6	19.5
4 1	13 59.39	-13 29.4	2.250	3.203	6.4	21.7	4 1	14 4.18	-12 56.0	1.396	2.353	9.1	19.3
4 11	13 52.81	-12 30.5	2.188	3.181	2.9	21.4	4 11	13 55.00	-12 7.3	1.370	2.364	4.1	19.0
4 21	13 45.53	-11 25.0	2.154	3.158	0.8	21.2	4 21	13 44.96	-11 11.9	1.370	2.374	1.2	18.8
5 1	13 38.30	-10 17.9	2.149	3.135	4.5	21.4	5 1	13 35.38	-10 17.1	1.397	2.384	6.3	19.2
5 11	13 31.88	-9 14.9	2.172	3.112	8.1	21.6	5 11	13 27.43	-9 30.2	1.449	2.394	10.9	19.5
5 21	13 26.88	-8 20.5	2.220	3.089	11.4	21.8	5 21	13 21.86	-8 56.4	1.523	2.403	15.0	19.8
280648	2005 BR ₁₉		4 18.7 217°96	1°8/20.4	17		471388	2011 SQ ₁₂₆		4 18.7 191°77	0°9/17.6	18	
3 12	14 11.88	-18 13.0	2.220	3.002	13.7	21.5	3 12	14 9.51	-9 43.2	2.948	3.745	10.2	22.4
3 22	14 7.70	-18 7.5	2.124	2.997	10.9	21.3	3 22	14 5.25	-9 14.7	2.854	3.744	7.9	22.2
4 1	14 1.46	-17 48.6	2.050	2.993	7.7	21.1	4 1	13 59.53	-8 39.6	2.785	3.742	5.2	22.0
4 11	13 53.73	-17 17.3	2.002	2.988	4.1	20.9	4 11	13 52.80	-8 0.5	2.745	3.739	2.3	21.8
4 21	13 45.26	-16 36.2	1.981	2.983	1.8	20.7	4 21	13 45.61	-7 20.4	2.734	3.736	1.4	21.7
5 1	13 36.95	-15 49.5	1.990	2.978	4.6	20.9	5 1	13 38.56	-6 42.8	2.753	3.733	4.2	21.9
5 11	13 29.67	-15 2.6	2.025	2.973	8.2	21.1	5 11	13 32.24	-6 11.0	2.801	3.729	7.1	22.1
5 21	13 24.06	-14 20.5	2.086	2.967	11.5	21.3	5 21	13 27.11	-5 47.5	2.874	3.725	9.6	22.3
431937	2008 TN ₁₆₇		4 18.7 289°88	1°2/19.7	17		392103	2009 DF ₁₃₉		4 18.7 97°21	3°4/14.9	17	
3 12	14 12.30	-15 23.1	1.890	2.691	15.0	21.7	3 12	14 8.76	-3 59.9	2.268	3.091	12.1	21.3
3 22	14 8.42	-15 25.2	1.795	2.682	11.9	21.4	3 22	14 4.97	-2 53.8	2.197	3.101	9.2	21.1
4 1	14 2.16	-15 14.6	1.721	2.673	8.2	21.2	4 1	13 59.46	-1 42.5	2.152	3.112	6.2	20.9
4 11	13 54.11	-14 52.7	1.673	2.663	4.1	20.9	4 11	13 52.78	-0 31.4	2.134	3.122	3.7	20.8
4 21	13 45.14	-14 22.2	1.651	2.654	1.4	20.7	4 21	13 45.63	+0 33.9	2.144	3.132	4.0	20.8
5 1	13 36.29	-13 47.5	1.656	2.645	5.3	20.9	5 1	13 38.76	+1 28.1	2.183	3.143	6.7	21.0
5 11	13 28.61	-13 14.3	1.688	2.636	9.4	21.2	5 11	13 32.87	+2 7.5	2.248	3.153	9.7	21.2
5 21	13 22.87	-12 47.6	1.743	2.628	13.2	21.4	5 21	13 28.45	+2 30.4	2.335	3.162	12.3	21.4
372504	2009 ST ₂₇₇		4 18.7 132°50	2°1/16.7	17		439367	2013 AW ₄		4 18.7 196°62	4°5/13.2	17	
3 12	14 12.33	-8 3.4	2.132	2.944	13.1	22.1	3 12	14 9.72	+3 20.4	2.793	3.610	10.2	22.1
3 22	14 7.83	-7 13.6	2.058	2.956	10.0	21.9	3 22	14 5.44	+4 14.1	2.712	3.608	8.0	21.9
4 1	14 1.38	-6 15.6	2.008	2.967	6.6	21.7	4 1	13 59.67	+5 7.6	2.657	3.605	5.9	21.8
4 11	13 53.62	-5 14.0	1.985	2.978	3.1	21.5	4 11	13 52.86	+5 56.4	2.630	3.602	4.6	21.7
4 21	13 45.32	-4 14.1	1.990	2.989	2.7	21.5	4 21	13 45.60	+6 36.2	2.631	3.598	5.1	21.7
5 1	13 37.35	-3 21.4	2.025	2.999	6.0	21.7	5 1	13 38.51	+7 3.4	2.661	3.594	7.1	21.8
5 11	13 30.48	-2 40.4	2.086	3.008	9.4	21.9	5 11	13 32.20	+7 15.9	2.717	3.589	9.3	22.0
5 21	13 25.27	-2 13.7	2.171	3.017	12.5	22.1	5 21	13 27.12	+7 13.3	2.796	3.585	11.5	22.1
68058	2000 YY ₆₀		4 18.7 182°62	1°0/17.9	17		467418	2005 UY ₁₁₈		4 18.7 225°54	0°5/19.2	17	
3 12	14 14.85	-11 13.0	2.091	2.892	13.7	20.2	3 12	14 11.67	-15 30.4	1.997	2.794	14.4	22.4
3 22	14 9.96	-10 35.9	2.003	2.894	10.6	20.0	3 22	14 7.74	-15 0.9	1.902	2.788	11.3	22.2
4 1	14 2.93	-9 47.8	1.938	2.894	7.0	19.8	4 1	14 1.60	-14 16.8	1.829	2.782	7.7	22.0
4 11	13 54.37	-8 52.4	1.899	2.894	3.0	19.5	4 11	13 53.85	-13 20.6	1.782	2.775	3.6	21.7
4 21	13 45.10	-7 54.3	1.890	2.893	1.6	19.4	4 21	13 45.29	-12 16.6	1.763	2.767	0.9	21.5
5 1	13 36.07	-6 59.2	1.909	2.891	5.6	19.7	5 1	13 36.92	-11 10.8	1.772	2.760	5.2	21.8
5 11	13 28.18	-6 12.5	1.956	2.888	9.4	19.9	5 11	13 29.67	-10 9.9	1.808	2.752	9.3	22.0
5 21	13 22.07	-5 38.2	2.027	2.884	12.8	20.1	5 21	13 24.23	-9 19.2	1.868	2.744	12.9	22.2
488507	2000 TF ₅₀		4 18.7 171°09	2°6/15.5	18		93809	2000 WK ₅₆		4 18.7 251°47	3°4/22.1	18	
3 12	14 11.49	-1 24.3	3.213	4.018	9.3	22.0	3 12	14 11.09	-24 14.3	2.106	2.868	14.9	19.9
3 22	14 6.55	-0 58.0	3.129	4.021	7.2	21.8	3 22	14 7.37	-23 56.5	1.999	2.854	12.3	19.7
4 1	14 0.27	-0 30.2	3.071	4.025	4.9	21.7	4 1	14 1.41	-23 18.9	1.913	2.841	9.1	19.5
4 11	13 53.09	-0 4.0	3.042	4.028	2.9	21.5	4 11	13 53.79	-22 21.4	1.851	2.827	5.7	19.3
4 21	13 45.51	+0 17.7	3.043	4.030	3.1	21.6	4 21	13 45.31	-21 6.7	1.817	2.813	3.4	19.1
5 1	13 38.10	+0 32.5	3.074	4.032	5.1	21.7	5 1	13 36.95	-19 40.2	1.811	2.798	5.1	19.1
5 11	13 31.40	+0 38.3	3.133	4.033	7.4	21.8	5 11	13 29.68	-18 9.5	1.832	2.783	8.6	19.3
5 21	13 25.81	+0 34.3	3.218	4.034	9.5	22.0	5 21	13 24.23	-16 42.5	1.878	2.768	12.1	19.5
77936	2002 GR ₆₃		4 18.7 248°26	1°5/17.2	18		299395	2005 WN ₁₆₃		4 18.7 116°48	1°9/20.1	18	
3 12	14 13.04	-8 14.7	2.566	3.366	11.5	20.2	3 12	14 15.72	-17 47.4	1.483			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
499334	2009 <i>WA</i> ₂₀₁	4 18.7 215°66		0°3/18.4 17			38423	1999 <i>RS</i> ₂₂₆	4 18.7 151°02		3°3/14.3 18		
3 12	14 12.50	-12 51.9	2.421	3.213	12.3	22.9	3 12	14 7.23	-4 3.0	2.584	3.404	10.9	19.5
3 22	14 7.96	-12 17.7	2.319	3.204	9.6	22.7	3 22	14 3.64	-2 39.3	2.505	3.407	8.3	19.3
4 1	14 1.55	-11 32.6	2.241	3.194	6.4	22.5	4 1	13 58.53	-1 9.8	2.452	3.410	5.6	19.2
4 11	13 53.78	-10 39.3	2.190	3.184	2.8	22.2	4 11	13 52.38	+0 20.2	2.427	3.414	3.5	19.0
4 21	13 45.33	-9 41.6	2.169	3.173	1.1	22.0	4 21	13 45.78	+1 44.8	2.432	3.416	4.0	19.1
5 1	13 37.00	-8 44.5	2.177	3.161	4.8	22.3	5 1	13 39.39	+2 58.6	2.466	3.419	6.5	19.2
5 11	13 29.59	-7 53.0	2.214	3.148	8.3	22.5	5 11	13 33.82	+3 57.6	2.528	3.422	9.2	19.4
5 21	13 23.69	-7 11.2	2.276	3.135	11.5	22.7	5 21	13 29.52	+4 39.6	2.613	3.424	11.6	19.6
336859	2011 <i>FN</i> ₁₀₃	4 18.7 254°38		5°5/13.0 17			267379	2001 <i>XE</i> ₂₁₉	4 18.7 192°01		1°4/17.4 17		
3 12	14 9.64	+0 11.5	1.932	2.766	13.4	20.8	3 12	14 14.08	-8 37.4	2.339	3.141	12.4	21.8
3 22	14 6.12	+1 37.3	1.850	2.757	10.5	20.6	3 22	14 9.16	-8 9.2	2.247	3.139	9.6	21.6
4 1	14 0.49	+3 7.9	1.792	2.749	7.5	20.4	4 1	14 2.32	-7 33.6	2.180	3.137	6.3	21.4
4 11	13 53.34	+4 35.7	1.761	2.740	5.6	20.3	4 11	13 54.12	-6 53.6	2.140	3.134	2.8	21.1
4 21	13 45.46	+5 52.9	1.757	2.731	6.5	20.3	4 21	13 45.26	-6 13.2	2.129	3.130	2.0	21.1
5 1	13 37.79	+6 52.6	1.779	2.721	9.3	20.4	5 1	13 36.60	-5 36.9	2.148	3.126	5.4	21.3
5 11	13 31.20	+7 30.3	1.826	2.712	12.5	20.6	5 11	13 28.91	-5 8.7	2.195	3.121	8.8	21.5
5 21	13 26.36	+7 44.7	1.894	2.703	15.5	20.8	5 21	13 22.80	-4 51.3	2.266	3.115	11.9	21.7
462602	2009 <i>HW</i> ₄₇	4 18.7 322°06		4°8/15.6 17			461901	2006 <i>OR</i> ₅	4 18.7 240°60		2°0/16.9 18		
3 12	14 11.02	-3 11.0	1.321	2.171	17.5	20.5	3 12	14 13.62	-8 38.1	2.025	2.836	13.7	22.0
3 22	14 8.26	-2 29.0	1.240	2.157	13.6	20.2	3 22	14 9.26	-7 52.1	1.922	2.820	10.7	21.7
4 1	14 2.49	-1 39.6	1.178	2.144	9.3	19.9	4 1	14 2.66	-6 55.5	1.843	2.803	7.1	21.5
4 11	13 54.41	-0 50.0	1.140	2.131	5.4	19.7	4 11	13 54.36	-5 52.5	1.791	2.785	3.3	21.2
4 21	13 45.12	-0 8.4	1.126	2.119	5.7	19.6	4 21	13 45.17	-4 48.5	1.767	2.766	2.7	21.1
5 1	13 36.03	+0 17.3	1.135	2.107	9.8	19.8	5 1	13 36.07	-3 50.0	1.771	2.747	6.5	21.3
5 11	13 28.49	+0 21.8	1.167	2.097	14.5	20.1	5 11	13 28.01	-3 2.8	1.802	2.727	10.5	21.5
5 21	13 23.46	+0 3.5	1.218	2.086	18.8	20.3	5 21	13 21.75	-2 30.7	1.857	2.706	14.1	21.7
172035	2001 <i>WG</i> ₁₆	4 18.7 216°61		1°1/19.9 17			37693	1995 <i>VQ</i> ₁	4 18.7 144°46		5°3/14.1 18		
3 12	14 10.03	-17 1.5	2.543	3.324	12.1	20.9	3 12	14 14.77	+3 34.0	2.155	2.974	12.7	18.4
3 22	14 5.99	-16 45.4	2.444	3.319	9.6	20.7	3 22	14 9.69	+4 15.1	2.084	2.980	10.0	18.2
4 1	14 0.20	-16 17.5	2.369	3.314	6.6	20.5	4 1	14 2.63	+4 54.9	2.037	2.986	7.3	18.1
4 11	13 53.16	-15 39.4	2.320	3.309	3.4	20.3	4 11	13 54.22	+5 27.9	2.017	2.992	5.4	17.9
4 21	13 45.52	-14 53.9	2.300	3.303	1.2	20.1	4 21	13 45.25	+5 49.4	2.025	2.998	5.9	18.0
5 1	13 38.02	-14 5.0	2.309	3.298	4.1	20.3	5 1	13 36.60	+5 55.6	2.061	3.003	8.2	18.1
5 11	13 31.39	-13 17.3	2.347	3.292	7.4	20.5	5 11	13 29.07	+5 44.9	2.122	3.007	11.0	18.3
5 21	13 26.17	-12 35.1	2.410	3.285	10.3	20.7	5 21	13 23.24	+5 17.8	2.205	3.012	13.6	18.5
388351	2006 <i>TA</i> ₁₁₃	4 18.7 121°70		4°7/13.5 17			151098	2001 <i>VH</i> ₁₀₉	4 18.7 52°27		0°5/19.1 17		
3 12	14 9.35	+2 0.0	2.425	3.249	11.3	21.3	3 12	14 13.13	-13 57.0	1.573	2.389	16.9	20.2
3 22	14 5.33	+2 59.0	2.355	3.255	8.8	21.1	3 22	14 9.20	-13 49.0	1.506	2.402	13.2	20.0
4 1	13 59.66	+3 58.5	2.309	3.261	6.3	21.0	4 1	14 2.67	-13 27.2	1.459	2.416	8.8	19.7
4 11	13 52.88	+4 53.2	2.291	3.267	4.8	20.9	4 11	13 54.33	-12 54.3	1.437	2.430	4.1	19.5
4 21	13 45.62	+5 38.2	2.301	3.273	5.3	20.9	4 21	13 45.22	-12 14.8	1.440	2.445	1.1	19.3
5 1	13 38.62	+6 9.4	2.339	3.279	7.5	21.1	5 1	13 36.55	-11 34.7	1.471	2.460	5.8	19.7
5 11	13 32.53	+6 24.5	2.402	3.284	10.0	21.2	5 11	13 29.41	-11 0.2	1.526	2.475	10.2	19.9
5 21	13 27.84	+6 22.9	2.488	3.289	12.4	21.4	5 21	13 24.48	-10 36.0	1.603	2.490	14.1	20.2
510574	2012 <i>RT</i>	4 18.7 280°95		3°3/15.4 17			329266	1999 <i>RK</i> ₁₃₁	4 18.7 154°35		0°7/19.4 17		
3 12	14 9.54	-6 56.6	1.978	2.802	13.5	22.2	3 12	14 12.45	-15 9.9	2.100	2.895	13.9	21.8
3 22	14 6.20	-5 40.2	1.871	2.776	10.5	21.9	3 22	14 8.15	-14 56.0	2.014	2.898	10.9	21.6
4 1	14 0.69	-4 11.4	1.786	2.748	7.0	21.7	4 1	14 1.77	-14 29.7	1.951	2.901	7.4	21.4
4 11	13 53.51	-2 35.8	1.729	2.721	3.8	21.4	4 11	13 53.89	-13 53.3	1.913	2.904	3.5	21.2
4 21	13 45.40	-1 0.7	1.700	2.693	4.1	21.4	4 21	13 45.34	-13 10.1	1.903	2.907	1.0	21.0
5 1	13 37.33	+0 25.7	1.699	2.665	7.7	21.5	5 1	13 37.02	-12 24.8	1.922	2.910	4.8	21.2
5 11	13 30.22	+1 36.1	1.723	2.636	11.6	21.7	5 11	13 29.81	-11 42.9	1.968	2.912	8.6	21.5
5 21	13 24.84	+2 26.2	1.770	2.607	15.2	21.9	5 21	13 24.35	-11 8.7	2.038	2.914	11.9	21.7
97298	1999 <i>XA</i> ₁₈₁	4 18.7 89°70		2°3/20.6 18			101788	1999 <i>GN</i> ₃₃	4 18.7 138°39		0°5/18.4 18		
3 12	14 14.92	-18 6.0	2.020	2.801	14.8	19.6	3 12	14 17.52	-10 6.0	2.086	2.885	13.8	18.3
3 22	14 10.13	-18 21.3	1.941	2.814	11.8	19.4	3 22	14 11.98	-10 7.7	2.006	2.894	10.7	18.1
4 1	14 3.10	-18 23.4	1.885	2.826	8.3	19.2	4 1	14 4.25	-10 2.0	1.948	2.903	7.1	17.9
4 11	13 54.48	-18 12.9	1.854	2.838	4.6	19.0	4 11	13 54.98	-9 50.9	1.918	2.912	3.1	17.6
4 21	13 45.15	-17 51.9	1.850	2.851	2.3	18.9	4 21	13 45.03	-9 37.3	1.916	2.920	1.2	17.5
5 1	13 36.13	-17 24.0	1.875	2.863	4.9	19.1	5 1	13 35.37	-9 24.8	1.943	2.927	5.2	17.8
5 11	13 28.36	-16 54.5	1.926	2.875	8.5	19.3	5 11	13 26.91	-9 17.0	1.999	2.935	9.0	18.0
5 21	13 22.48	-16 28.1	2.002	2.886	11.8	19.5	5 21	13 20.30	-9 16.6	2.078	2.942	12.3	18.3
387477	2013 <i>YG</i> ₁₁	4 18.7 57°21		5°6/24.4 17			140367	2001 <i>TP</i> ₂₈	4 18.7 144°02		2°1/21.1 18		
3 12	14 11.80	-29 13.5	2.032	2.770	16.1	20.4	3 12	14 11.79	-20 3.8	2.786	3.547	11.7	20.9
3 22	14 7.85	-29 29.1	1.958	2.788	13.6	20.3	3 22	14 7.14	-20 2.9	2.697	3.556	9.4	20.7
4 1	14 1.62	-29 23.6	1.904	2.807	10.6	20.1	4 1	14 0.84	-19 50.3	2.631	3.565	6.7	20.6
4 11	13 53.82	-28 56.2	1.872	2.826	7.7	20.0	4 11	13 53.42	-19 26.9	2.592	3.573	3.9	20.4
4 21	13 45.35	-28 8.5	1.867	2.845	5.8	19.9	4 21	13 45.49	-18 54.6	2.582	3.581	2.1	20.3
5 1	13 37.27	-27 4.9	1.888	2.864	6.2	19.9	5 1	13 37.75	-18 16.5	2.602	3.589	3.8	20.4
5 11	13 30.49	-25 52.6	1.935	2.883	8.5	20.1	5 11	13 30.88	-17 36.7	2.650	3.596	6.6	20.6
5 21	13 25.66	-24 39.0	2.007	2.902	11.2	20.3	5 21	13 25.37	-16 59.0	2.725	3.602	9.2	20.8
463093	2011 <i>UW</i> ₈	4 18.7 134°80		0°9/19.5 18			501250	2013 <i>VT</i> ₂₀	4 18.7 209°61		1°0/17.6 18		
3 12	14 14.96	-17 13.6	1.827	2.619	15.8	22.0	3 12	14 12.03	-10 45.4				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
56275	1999 JK ₁₁₇		4 18.7 292°50	0°4/18.4	17		457516	2008 VX ₇₀		4 18.7 140°77	2°0/20.2	18	
3 12	14 9.13	-12 19.0	2.168	2.975	13.1	19.5	3 12	14 16.94	-17 52.5	1.647	2.440	17.2	22.8
3 22	14 5.65	-11 53.7	2.066	2.959	10.2	19.3	3 22	14 12.24	-17 49.5	1.568	2.449	13.7	22.6
4 1	14 0.19	-11 17.4	1.987	2.944	6.8	19.0	4 1	14 4.78	-17 29.5	1.510	2.457	9.5	22.4
4 11	13 53.24	-10 32.8	1.934	2.928	3.0	18.8	4 11	13 55.34	-16 53.8	1.476	2.464	5.0	22.1
4 21	13 45.54	-9 43.8	1.909	2.913	1.1	18.6	4 21	13 44.99	-16 5.9	1.468	2.471	2.0	21.9
5 1	13 37.92	-8 55.4	1.912	2.897	5.1	18.8	5 1	13 35.01	-15 11.9	1.488	2.478	5.7	22.2
5 11	13 31.25	-8 12.9	1.942	2.882	9.0	19.0	5 11	13 26.57	-14 19.3	1.534	2.483	10.1	22.5
5 21	13 26.17	-7 40.5	1.996	2.867	12.4	19.2	5 21	13 20.46	-13 34.5	1.603	2.489	14.1	22.7
142082	2002 QQ ₄₆		4 18.7 230°67	0°2/18.9	17		295323	2008 GV ₁₄₀		4 18.7 281°17	0°1/18.9	18	
3 12	14 14.51	-13 47.3	2.013	2.810	14.3	21.3	3 12	14 2.25	-13 59.8	4.400	5.184	7.3	20.5
3 22	14 10.00	-13 28.1	1.912	2.798	11.3	21.0	3 22	13 59.30	-13 27.8	4.299	5.180	5.7	20.4
4 1	14 3.18	-12 56.4	1.833	2.786	7.6	20.8	4 1	13 55.45	-12 49.6	4.225	5.175	3.8	20.3
4 11	13 54.61	-12 14.3	1.780	2.773	3.5	20.5	4 11	13 51.01	-12 6.8	4.179	5.171	1.7	20.1
4 21	13 45.13	-11 25.6	1.755	2.760	1.0	20.3	4 21	13 46.29	-11 21.6	4.163	5.167	0.5	20.0
5 1	13 35.76	-10 35.5	1.759	2.745	5.4	20.6	5 1	13 41.66	-10 36.3	4.177	5.163	2.6	20.1
5 11	13 27.49	-9 50.0	1.790	2.731	9.5	20.8	5 11	13 37.47	-9 53.3	4.221	5.159	4.6	20.3
5 21	13 21.08	-9 13.9	1.845	2.715	13.3	21.0	5 21	13 33.99	-9 14.8	4.292	5.154	6.5	20.4
296436	2009 HJ ₄₈		4 18.7 148°26	5°6/13.1	18		210145	2006 SG ₅₇		4 18.7 14°25	4°6/22.9	18	R
3 12	14 11.64	+ 6 2.0	2.419	3.239	11.5	20.6	3 12	14 13.30	-25 10.2	2.250	2.998	14.5	20.1
3 22	14 7.11	+ 6 46.3	2.347	3.241	9.2	20.4	3 22	14 8.96	-25 43.1	2.156	2.998	12.0	19.9
4 1	14 0.87	+ 7 28.0	2.299	3.242	6.9	20.3	4 1	14 2.43	-26 0.6	2.084	2.998	9.2	19.7
4 11	13 53.44	+ 8 1.7	2.278	3.244	5.6	20.2	4 11	13 54.28	-26 1.3	2.036	2.998	6.4	19.5
4 21	13 45.52	+ 8 23.2	2.285	3.245	6.2	20.2	4 21	13 45.32	-25 45.8	2.014	2.999	4.7	19.4
5 1	13 37.84	+ 8 29.2	2.319	3.247	8.2	20.4	5 1	13 36.49	-25 16.5	2.020	2.999	5.6	19.5
5 11	13 31.11	+ 8 18.3	2.378	3.248	10.6	20.5	5 11	13 28.75	-24 38.4	2.053	2.999	8.2	19.6
5 21	13 25.85	+ 7 51.0	2.459	3.250	12.8	20.7	5 21	13 22.77	-23 57.3	2.111	3.000	11.1	19.8
62432	2000 SH ₁₈₈		4 18.7 111°63	0°1/18.7	18		496973	2002 QD ₇₀		4 18.8 205°91	0°8/19.5	17	
3 12	14 10.41	-12 48.6	2.664	3.457	11.3	19.4	3 12	14 14.88	-15 31.3	2.155	2.942	13.8	22.8
3 22	14 6.02	-12 27.0	2.587	3.471	8.8	19.3	3 22	14 10.10	-15 15.3	2.057	2.937	10.9	22.6
4 1	14 0.07	-11 56.8	2.533	3.486	5.8	19.1	4 1	14 3.14	-14 46.5	1.982	2.930	7.5	22.4
4 11	13 53.07	-11 20.6	2.507	3.500	2.6	18.9	4 11	13 54.59	-14 6.7	1.932	2.923	3.6	22.1
4 21	13 45.63	-10 41.3	2.510	3.514	0.8	18.8	4 21	13 45.23	-13 19.2	1.912	2.916	1.0	21.9
5 1	13 38.44	-10 2.7	2.543	3.528	4.1	19.0	5 1	13 36.03	-12 28.8	1.920	2.907	4.9	22.1
5 11	13 32.12	-9 28.5	2.604	3.541	7.1	19.2	5 11	13 27.90	-11 41.1	1.956	2.898	8.8	22.4
5 21	13 27.14	-9 1.6	2.690	3.554	9.8	19.4	5 21	13 21.54	-11 1.0	2.017	2.889	12.2	22.6
89857	2002 CL ₉₅		4 18.7 161°67	1°7/16.9	18		329353	2001 SW ₁₇₃		4 18.8 213°39	0°3/18.9	18	
3 12	14 8.71	- 7 48.0	2.525	3.336	11.3	19.7	3 12	14 18.50	-11 39.6	2.130	2.921	13.8	21.3
3 22	14 4.87	- 7 9.6	2.440	3.338	8.7	19.5	3 22	14 12.94	-11 52.0	2.032	2.915	10.9	21.0
4 1	13 59.40	- 6 24.7	2.379	3.339	5.7	19.4	4 1	14 5.07	-11 56.6	1.957	2.909	7.3	20.8
4 11	13 52.81	- 5 36.5	2.346	3.340	2.7	19.2	4 11	13 55.47	-11 54.5	1.909	2.902	3.3	20.5
4 21	13 45.72	- 4 49.3	2.342	3.341	2.2	19.1	4 21	13 44.97	-11 48.0	1.890	2.894	0.9	20.3
5 1	13 38.81	- 4 7.3	2.367	3.342	5.2	19.3	5 1	13 34.59	-11 39.9	1.900	2.886	5.1	20.6
5 11	13 32.76	- 3 34.2	2.419	3.343	8.2	19.5	5 11	13 25.31	-11 34.1	1.938	2.877	9.0	20.8
5 21	13 28.06	- 3 12.4	2.495	3.344	11.0	19.7	5 21	13 17.88	-11 33.9	2.001	2.868	12.5	21.0
142242	2002 RP ₉₇		4 18.7 287°60	0°3/18.9	17		145688	2159 T ₋₃		4 18.8 238°19	1°3/19.8	17	
3 12	14 12.46	-14 8.5	1.644	2.457	16.3	20.9	3 12	14 15.37	-16 29.1	2.018	2.804	14.7	22.0
3 22	14 9.14	-13 51.0	1.535	2.430	13.0	20.6	3 22	14 10.78	-16 19.5	1.911	2.789	11.7	21.7
4 1	14 3.06	-13 17.7	1.446	2.402	8.9	20.3	4 1	14 3.79	-15 55.8	1.826	2.773	8.1	21.5
4 11	13 54.74	-12 30.6	1.381	2.375	4.1	20.0	4 11	13 54.95	-15 19.3	1.767	2.756	4.1	21.2
4 21	13 45.09	-11 33.8	1.342	2.347	1.1	19.7	4 21	13 45.11	-14 32.8	1.735	2.739	1.4	21.0
5 1	13 35.36	-10 33.8	1.330	2.319	6.4	19.9	5 1	13 35.32	-13 41.2	1.732	2.720	5.2	21.2
5 11	13 26.82	- 9 38.8	1.343	2.290	11.5	20.1	5 11	13 26.63	-12 50.7	1.757	2.702	9.4	21.4
5 21	13 20.49	- 8 55.5	1.378	2.262	16.1	20.3	5 21	13 19.83	-12 7.1	1.806	2.682	13.2	21.6
503990	2004 TG ₂₉₇		4 18.7 237°98	4°0/22.7	18		478881	2012 VZ ₁₁₀		4 18.8 280°73	1°8/17.5	17	
3 12	14 13.36	-25 38.2	2.430	3.169	13.7	22.0	3 12	14 15.62	- 5 58.8	2.065	2.876	13.5	21.0
3 22	14 8.92	-25 40.5	2.315	3.154	11.4	21.8	3 22	14 10.80	- 5 58.9	1.964	2.860	10.5	20.8
4 1	14 2.37	-25 26.0	2.223	3.138	8.7	21.6	4 1	14 3.71	- 5 54.7	1.886	2.844	7.0	20.6
4 11	13 54.25	-24 53.9	2.155	3.121	5.9	21.4	4 11	13 54.89	- 5 48.8	1.834	2.827	3.3	20.3
4 21	13 45.28	-24 5.3	2.115	3.104	4.0	21.3	4 21	13 45.15	- 5 44.4	1.810	2.811	2.4	20.2
5 1	13 36.36	-23 3.7	2.104	3.086	5.1	21.3	5 1	13 35.47	- 5 45.0	1.816	2.795	6.1	20.4
5 11	13 28.41	-21 54.9	2.120	3.067	7.9	21.4	5 11	13 26.83	- 5 53.6	1.848	2.778	9.9	20.6
5 21	13 22.10	-20 45.3	2.163	3.048	11.0	21.6	5 21	13 19.98	- 6 12.1	1.904	2.762	13.4	20.8
499573	2010 SP ₃₅		4 18.7 238°64	1°3/19.8	17		354036	2001 RW ₁₃₂		4 18.8 251°90	0°4/19.0	16	
3 12	14 14.29	-17 11.0	1.952	2.740	15.0	22.5	3 12	14 18.20	-12 52.6	1.661	2.466	16.6	21.4
3 22	14 9.99	-16 53.2	1.847	2.726	12.0	22.2	3 22	14 13.55	-12 56.3	1.559	2.449	13.1	21.2
4 1	14 3.27	-16 19.7	1.764	2.711	8.3	22.0	4 1	14 5.96	-12 48.2	1.477	2.431	9.0	20.9
4 11	13 54.71	-15 31.8	1.706	2.695	4.2	21.7	4 11	13 56.05	-12 29.6	1.420	2.413	4.2	20.6
4 21	13 45.15	-14 32.9	1.675	2.679	1.4	21.5	4 21	13 44.79	-12 3.6	1.390	2.394	1.1	20.3
5 1	13 35.67	-13 28.7	1.674	2.662	5.3	21.7	5 1	13 33.52	-11 34.8	1.387	2.375	6.3	20.6
5 11	13 27.33	-12 26.2	1.699	2.644	9.6	21.9	5 11	13 23.57	-11 9.6	1.410	2.355	11.3	20.8
5 21	13 20.93	-11 31.8	1.748	2.626	13.5	22.1	5 21	13 15.95	-10 53.2	1.456	2.334	15.7	21.0
77297	2001 FM ₇₃		4 18.7 48°01	2°8/16.9	18		421747	2014 PV ₅₁		4 18.8 322°62	5°5/21.9	17	
3 12	14 12.99	- 7 30.4	1.330										

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4 18.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
300050	2006 <i>UX</i> ₁₆₆		4 18.8 300°81	1°6/17.1	18		217073	2001 <i>SB</i> ₂₇₆		4 18.8 157°18	9°7/30.3	17	
3 12	14 7.35	-10 30.7	2.102	2.919	13.1	20.4	3 12	14 24.07	-45 40.3	2.764	3.342	15.3	20.8
3 22	14 4.28	-9 33.1	2.008	2.909	10.1	20.2	3 22	14 17.58	-46 48.3	2.672	3.352	14.0	20.7
4 1	13 59.28	-8 23.6	1.937	2.898	6.6	19.9	4 1	14 8.34	-47 35.2	2.598	3.361	12.5	20.6
4 11	13 52.87	-7 6.6	1.893	2.887	3.0	19.7	4 11	13 57.01	-47 56.4	2.543	3.369	11.1	20.5
4 21	13 45.77	-5 47.7	1.876	2.877	2.3	19.6	4 21	13 44.60	-47 49.1	2.512	3.377	10.1	20.4
5 1	13 38.84	-4 33.8	1.888	2.867	5.9	19.8	5 1	13 32.34	-47 13.7	2.505	3.383	9.7	20.4
5 11	13 32.87	-3 30.8	1.927	2.857	9.6	20.0	5 11	13 21.46	-46 14.6	2.523	3.389	10.2	20.4
5 21	13 28.49	-2 42.9	1.989	2.847	12.9	20.2	5 21	13 12.81	-44 58.7	2.565	3.394	11.3	20.5
23747	Rahaelgupta		4 18.8 227°38	2°0/17.0	17		229597	2006 <i>BV</i> ₂₂₀		4 18.8 186°27	2°1/20.7	17	
3 12	14 14.09	-8 17.2	1.961	2.774	14.1	19.6	3 12	14 11.92	-19 32.3	2.049	2.830	14.6	20.7
3 22	14 9.66	-7 36.9	1.865	2.763	10.9	19.3	3 22	14 7.93	-19 20.5	1.958	2.830	11.7	20.5
4 1	14 2.96	-6 46.8	1.793	2.752	7.2	19.1	4 1	14 1.76	-18 52.8	1.888	2.830	8.3	20.3
4 11	13 54.55	-5 51.2	1.747	2.741	3.4	18.8	4 11	13 54.00	-18 10.4	1.844	2.829	4.6	20.1
4 21	13 45.28	-4 55.4	1.729	2.729	2.7	18.8	4 21	13 45.49	-17 16.4	1.827	2.829	2.1	19.9
5 1	13 36.16	-4 4 5.4	1.739	2.716	6.5	19.0	5 1	13 37.20	-16 16.0	1.839	2.828	4.8	20.1
5 11	13 28.16	-3 26.8	1.776	2.702	10.5	19.2	5 11	13 30.04	-15 15.6	1.877	2.827	8.6	20.3
5 21	13 22.00	-3 3 0.0	1.836	2.688	14.1	19.4	5 21	13 24.70	-14 21.0	1.940	2.825	12.0	20.5
363414	2003 <i>QH</i> ₅₉		4 18.8 174°75	1°6/17.4	18		386971	2012 <i>JU</i> ₂₅		4 18.8 252°53	14°9/11.9	18	
3 12	14 15.62	-8 58.7	2.075	2.880	13.7	21.7	3 12	14 29.62	+19 37.8	1.247	2.058	20.7	20.9
3 22	14 10.58	-8 23.5	1.990	2.883	10.6	21.5	3 22	14 23.07	+20 39.7	1.181	2.048	18.1	20.7
4 1	14 3.39	-7 39.5	1.928	2.886	6.9	21.2	4 1	14 12.53	+21 22.1	1.133	2.039	15.9	20.5
4 11	13 54.68	-6 50.4	1.894	2.888	3.1	21.0	4 11	13 58.99	+21 30.8	1.105	2.028	14.9	20.4
4 21	13 45.27	-6 1 0.0	1.888	2.889	2.2	20.9	4 21	13 44.07	+20 55.5	1.099	2.018	15.7	20.4
5 1	13 36.12	-5 16.5	1.911	2.889	5.9	21.2	5 1	13 29.74	+19 33.2	1.115	2.007	18.0	20.5
5 11	13 28.13	-4 41.7	1.962	2.889	9.7	21.4	5 11	13 17.77	+17 28.9	1.151	1.996	21.0	20.6
5 21	13 21.93	-4 19.8	2.036	2.888	13.0	21.6	5 21	13 9.22	+14 53.0	1.205	1.985	24.1	20.8
170187	2003 <i>NF</i> ₁₀		4 18.8 261°61	0°8/19.4	17		234160	2000 <i>HS</i> ₇₂		4 18.8 236°41	0°4/19.0	18	
3 12	14 12.32	-16 13.5	1.603	2.412	16.9	21.0	3 12	14 18.15	-13 9.6	1.777	2.577	15.8	20.7
3 22	14 8.92	-15 47.1	1.509	2.401	13.4	20.8	3 22	14 13.27	-13 8.1	1.676	2.563	12.5	20.4
4 1	14 2.80	-15 2.3	1.435	2.389	9.2	20.5	4 1	14 5.64	-12 54.8	1.596	2.549	8.5	20.1
4 11	13 54.59	-14 1.4	1.385	2.378	4.4	20.2	4 11	13 55.88	-12 31.2	1.541	2.534	4.0	19.8
4 21	13 45.28	-12 49.3	1.361	2.366	1.2	19.9	4 21	13 44.93	-12 0.2	1.514	2.518	1.1	19.6
5 1	13 36.13	-11 33.7	1.364	2.354	6.1	20.2	5 1	13 34.03	-11 26.9	1.515	2.502	6.0	19.9
5 11	13 28.34	-10 23.5	1.393	2.342	11.0	20.5	5 11	13 24.39	-10 57.2	1.542	2.485	10.6	20.1
5 21	13 22.81	-9 25.8	1.443	2.329	15.3	20.7	5 21	13 16.95	-10 36.2	1.592	2.467	14.8	20.3
281892	2010 <i>XL</i> ₁₉		4 18.8 63°29	4°2/22.2	18		200096	1994 <i>TM</i> ₈		4 18.8 166°09	0°1/18.7	17	
3 12	14 17.79	-23 20.3	1.620	2.393	18.3	20.7	3 12	14 13.09	-12 23.0	2.172	2.971	13.3	21.0
3 22	14 12.69	-23 34.2	1.566	2.427	14.8	20.5	3 22	14 8.60	-12 10.8	2.085	2.973	10.4	20.8
4 1	14 4.89	-23 27.2	1.531	2.461	10.8	20.4	4 1	14 2.08	-11 48.8	2.021	2.975	6.9	20.6
4 11	13 55.31	-22 59.6	1.520	2.495	6.8	20.2	4 11	13 54.12	-11 19.4	1.983	2.977	3.1	20.4
4 21	13 45.13	-22 14.5	1.534	2.528	4.2	20.1	4 21	13 45.48	-10 46.0	1.974	2.979	0.9	20.2
5 1	13 35.62	-21 17.9	1.576	2.562	5.9	20.3	5 1	13 37.06	-10 12.7	1.994	2.980	4.9	20.5
5 11	13 27.85	-20 18.1	1.643	2.595	9.4	20.6	5 11	13 29.70	-9 44.1	2.041	2.981	8.6	20.7
5 21	13 22.46	-19 22.2	1.734	2.628	12.8	20.8	5 21	13 24.02	-9 23.7	2.112	2.982	11.8	20.9
190019	2004 <i>PW</i> ₃₅		4 18.8 283°92	5°2/13.5	18		49164	1998 <i>ST</i> ₅₆		4 18.8 293°22	0°5/19.1	18	
3 12	14 9.21	-2 34.9	1.837	2.672	14.0	20.2	3 12	14 12.94	-13 39.8	1.575	2.392	16.8	18.0
3 22	14 6.10	-1 2 0.0	1.739	2.649	10.9	19.9	3 22	14 9.58	-13 36.2	1.475	2.371	13.3	17.7
4 1	14 0.72	+0 40.9	1.664	2.624	7.6	19.6	4 1	14 3.39	-13 18.7	1.394	2.351	9.1	17.4
4 11	13 53.61	+2 26.1	1.616	2.600	5.3	19.5	4 11	13 54.94	-12 48.9	1.337	2.331	4.3	17.1
4 21	13 45.56	+4 4 8.8	1.595	2.575	6.2	19.4	4 21	13 45.20	-12 10.5	1.306	2.311	1.1	16.8
5 1	13 37.58	+5 27.9	1.600	2.550	9.5	19.6	5 1	13 35.44	-11 29.3	1.301	2.291	6.4	17.1
5 11	13 30.65	+6 28.7	1.630	2.526	13.2	19.7	5 11	13 26.99	-10 52.3	1.321	2.271	11.4	17.3
5 21	13 25.54	+7 4 2.0	1.681	2.500	16.7	19.9	5 21	13 20.84	-10 25.6	1.362	2.251	15.9	17.5
140374	2001 <i>TM</i> ₃₆		4 18.8 65°69	1°4/17.7	18		92798	2000 <i>QP</i> ₁₅₆		4 18.8 128°92	3°1/21.5	18	
3 12	14 15.91	-7 1 4.0	2.152	2.958	13.2	19.4	3 12	14 15.86	-22 38.2	1.813	2.584	16.7	19.6
3 22	14 10.49	-7 0 9.0	2.090	2.983	10.1	19.2	3 22	14 11.15	-22 22.6	1.735	2.598	13.5	19.4
4 1	14 3.13	-6 55.5	2.051	3.008	6.6	19.1	4 1	14 3.94	-21 46.7	1.678	2.611	9.8	19.2
4 11	13 54.48	-6 47.9	2.039	3.033	3.0	18.9	4 11	13 54.97	-20 51.3	1.644	2.624	5.8	19.0
4 21	13 45.37	-6 41.0	2.057	3.058	1.9	18.8	4 21	13 45.25	-19 40.3	1.638	2.637	3.1	18.9
5 1	13 36.67	-6 37.9	2.103	3.083	5.3	19.1	5 1	13 35.95	-18 20.2	1.660	2.648	5.3	19.1
5 11	13 29.17	-6 41.1	2.177	3.108	8.6	19.3	5 11	13 28.12	-16 59.5	1.709	2.659	9.2	19.3
5 21	13 23.39	-6 52.4	2.275	3.132	11.6	19.6	5 21	13 22.43	-15 45.7	1.782	2.670	12.8	19.5
353365	2011 <i>FJ</i> ₉		4 18.8 266°80	2°4/16.8	17		498582	2008 <i>QA</i> ₂		4 18.8 215°99	0°5/18.3	18	
3 12	14 12.63	-6 19.0	2.024	2.842	13.5	21.1	3 12	14 12.16	-12 12.3	2.663	3.453	11.4	22.8
3 22	14 8.50	-5 50.3	1.926	2.826	10.5	20.8	3 22	14 7.57	-11 39.3	2.559	3.443	8.9	22.6
4 1	14 2.18	-5 14.5	1.851	2.811	7.0	20.6	4 1	14 1.27	-10 56.8	2.479	3.433	5.9	22.4
4 11	13 54.22	-4 35.7	1.802	2.795	3.4	20.3	4 11	13 53.74	-10 7.4	2.428	3.421	2.6	22.2
4 21	13 45.41	-3 58.5	1.781	2.780	3.0	20.3	4 21	13 45.60	-9 14.5	2.405	3.409	1.1	22.0
5 1	13 36.69	-3 28.0	1.788	2.764	6.5	20.5	5 1	13 37.56	-8 22.4	2.414	3.396	4.5	22.3
5 11	13 29.01	-3 8.5	1.822	2.747	10.4	20.7	5 11	13 30.34	-7 35.6	2.450	3.382	7.7	22.4
5 21	13 23.08	-3 2 8.0	1.878	2.731	13.8	20.8	5 21	13 24.48	-6 57.5	2.513	3.368	10.7	22.6
312207	2007 <i>VS</i> ₂₆₉		4 18.8 102°60	0°4/19.0	18		347446	2012 <i>TF</i> ₂₃₁		4 18.8 261°15	4°2/26.9		

EPHEMERIDES

4 18.8

4 18.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
300175	2006 <i>WV</i> ₂₀		4 18.8 78°52'	0°1'/18.9	17		259745	2003 <i>YB</i> ₁₆₈		4 18.8 188°33'	1°1'/17.9	16	
3 12	14 8.72	-14 24.1	2.350	3.147	12.5	20.9	3 12	14 15.37	-10 22.8	2.061	2.864	13.8	21.9
3 22	14 5.02	-13 49.5	2.270	3.157	9.7	20.7	3 22	14 10.49	-9 53.9	1.972	2.864	10.7	21.7
4 1	13 59.58	-13 3.5	2.214	3.167	6.5	20.5	4 1	14 3.41	-9 15.2	1.906	2.862	7.1	21.5
4 11	13 52.97	-12 9.2	2.184	3.177	2.9	20.3	4 11	13 54.76	-8 29.9	1.866	2.861	3.1	21.3
4 21	13 45.85	-11 10.5	2.183	3.187	0.8	20.1	4 21	13 45.35	-7 42.5	1.855	2.858	1.7	21.1
5 1	13 38.98	-10 12.5	2.211	3.197	4.4	20.4	5 1	13 36.17	-6 58.2	1.873	2.855	5.7	21.4
5 11	13 33.08	-9 20.0	2.266	3.208	7.8	20.7	5 11	13 28.12	-6 22.0	1.918	2.851	9.5	21.6
5 21	13 28.64	-8 36.9	2.347	3.218	10.8	20.9	5 21	13 21.88	-5 57.5	1.988	2.846	12.9	21.8
48721	1996 <i>UJ</i> ₂		4 18.8 209°14'	3°5'/22.2	18 R		465891	2010 <i>UA</i> ₄		4 18.8 217°90'	1°1'/19.6	17	
3 12	14 12.80	-23 10.0	2.493	3.244	13.1	19.1	3 12	14 16.40	-14 54.1	1.924	2.717	15.1	22.3
3 22	14 8.34	-23 25.5	2.392	3.240	10.8	18.9	3 22	14 11.62	-14 56.3	1.828	2.710	11.9	22.1
4 1	14 1.92	-23 27.1	2.314	3.237	8.1	18.7	4 1	14 4.37	-14 46.3	1.754	2.704	8.2	21.9
4 11	13 54.08	-23 14.5	2.262	3.233	5.3	18.6	4 11	13 55.26	-14 25.5	1.705	2.696	4.0	21.6
4 21	13 45.51	-22 48.8	2.237	3.229	3.5	18.4	4 21	13 45.19	-13 56.4	1.684	2.688	1.2	21.4
5 1	13 37.06	-22 12.8	2.241	3.224	4.7	18.5	5 1	13 35.26	-13 23.5	1.692	2.680	5.3	21.6
5 11	13 29.55	-21 31.2	2.272	3.219	7.4	18.7	5 11	13 26.53	-12 52.1	1.726	2.671	9.5	21.8
5 21	13 23.60	-20 48.8	2.330	3.214	10.3	18.8	5 21	13 19.80	-12 27.3	1.784	2.662	13.3	22.1
453264	2008 <i>SP</i> ₂₃₁		4 18.8 150°54'	4°0'/21.4	18		177373	2004 <i>BB</i> ₃₇		4 18.8 306°03'	1°3'/19.7	17	
3 12	14 19.00	-21 1.6	1.593	2.374	18.2	21.3	3 12	14 11.83	-15 22.6	1.494	2.311	17.5	20.1
3 22	14 14.14	-21 28.1	1.512	2.380	14.8	21.1	3 22	14 8.87	-15 25.3	1.397	2.293	14.0	19.8
4 1	14 6.27	-21 36.6	1.449	2.385	10.8	20.9	4 1	14 3.00	-15 12.4	1.320	2.275	9.7	19.5
4 11	13 56.14	-21 25.9	1.411	2.390	6.6	20.6	4 11	13 54.81	-14 45.0	1.266	2.258	4.8	19.2
4 21	13 44.91	-20 57.4	1.398	2.395	4.0	20.5	4 21	13 45.31	-14 6.2	1.237	2.241	1.5	18.9
5 1	13 33.98	-20 15.6	1.411	2.398	6.3	20.6	5 1	13 35.82	-13 21.9	1.233	2.224	6.3	19.2
5 11	13 24.68	-19 28.3	1.451	2.402	10.4	20.9	5 11	13 27.72	-12 39.9	1.253	2.207	11.4	19.4
5 21	13 17.93	-18 43.2	1.513	2.405	14.4	21.1	5 21	13 22.02	-12 6.9	1.295	2.191	16.1	19.6
27067	1998 <i>SS</i> ₆₇		4 18.8 272°45'	3°3'/16.6	18		441779	2009 <i>DF</i> ₄₉		4 18.8 339°51'	1°0'/17.9	17	
3 12	14 15.65	-5 55.6	1.498	2.329	16.8	18.4	3 12	14 7.92	-11 1.8	1.865	2.687	14.3	20.9
3 22	14 11.79	-5 21.0	1.400	2.307	13.2	18.1	3 22	14 5.00	-10 31.5	1.777	2.679	11.1	20.7
4 1	14 4.93	-4 36.7	1.323	2.285	8.9	17.8	4 1	13 59.91	-9 49.9	1.711	2.672	7.4	20.4
4 11	13 55.66	-3 47.9	1.269	2.263	4.5	17.5	4 11	13 53.24	-9 0.4	1.670	2.665	3.2	20.2
4 21	13 45.02	-3 1.2	1.242	2.240	4.1	17.4	4 21	13 45.80	-8 8.2	1.656	2.659	1.7	20.0
5 1	13 34.36	-2 24.4	1.241	2.217	8.6	17.6	5 1	13 38.54	-7 19.1	1.669	2.653	5.8	20.3
5 11	13 25.08	-2 3.8	1.263	2.193	13.6	17.8	5 11	13 32.38	-6 38.8	1.707	2.648	9.9	20.5
5 21	13 18.21	-2 3.0	1.306	2.169	18.1	18.0	5 21	13 28.00	-6 11.4	1.768	2.643	13.5	20.7
384029	2008 <i>UO</i> ₁₂₂		4 18.8 164°00'	2°0'/20.6	17		166468	2002 <i>PP</i> ₁₀₁		4 18.8 329°31'	4°4'/14.6	17	
3 12	14 12.99	-18 14.8	2.167	2.947	14.0	21.8	3 12	14 5.36	-5 50.3	1.580	2.426	15.3	20.0
3 22	14 8.63	-18 17.3	2.077	2.949	11.2	21.6	3 22	14 3.39	-4 21.2	1.494	2.411	11.8	19.7
4 1	14 2.17	-18 6.6	2.009	2.951	7.9	21.4	4 1	13 59.04	-2 39.0	1.430	2.397	7.9	19.4
4 11	13 54.19	-17 43.6	1.967	2.952	4.3	21.2	4 11	13 52.91	-0 51.7	1.392	2.383	4.7	19.2
4 21	13 45.49	-17 10.6	1.952	2.954	2.0	21.0	4 21	13 45.89	+0 50.9	1.380	2.370	5.4	19.2
5 1	13 36.98	-16 31.7	1.966	2.955	4.6	21.2	5 1	13 39.05	+2 18.7	1.393	2.357	9.2	19.4
5 11	13 29.56	-15 51.9	2.007	2.956	8.2	21.4	5 11	13 33.43	+3 24.1	1.429	2.346	13.3	19.6
5 21	13 23.87	-15 16.2	2.073	2.956	11.5	21.6	5 21	13 29.77	+4 3.4	1.486	2.335	17.0	19.8
136684	1995 <i>SD</i> ₃₅		4 18.8 113°52'	1°8'/20.4	18		335574	2006 <i>CJ</i> ₅₁		4 18.8 242°76'	1°6'/15.8	18	
3 12	14 15.61	-16 49.0	2.524	3.295	12.5	19.9	3 12	14 2.73	-3 58.6	4.468	5.277	6.8	20.7
3 22	14 10.27	-17 10.9	2.439	3.306	9.9	19.8	3 22	13 59.65	-3 27.1	4.378	5.274	5.2	20.5
4 1	14 3.06	-17 23.2	2.377	3.317	6.9	19.6	4 1	13 55.71	-2 53.4	4.313	5.271	3.4	20.4
4 11	13 54.53	-17 26.3	2.343	3.328	3.8	19.4	4 11	13 51.19	-2 19.6	4.278	5.268	1.9	20.3
4 21	13 45.41	-17 21.5	2.338	3.339	1.8	19.3	4 21	13 46.41	-1 47.9	4.273	5.265	2.0	20.3
5 1	13 36.49	-17 11.1	2.362	3.349	4.1	19.5	5 1	13 41.72	-1 20.3	4.298	5.262	3.5	20.4
5 11	13 28.56	-16 58.8	2.415	3.359	7.2	19.7	5 11	13 37.44	-0 58.6	4.351	5.259	5.3	20.5
5 21	13 22.17	-16 47.8	2.494	3.369	10.1	19.9	5 21	13 33.86	-0 44.0	4.429	5.255	7.0	20.7
344522	2002 <i>SB</i> ₂₀		4 18.8 206°91'	2°5'/15.7	18		20555	Jennings		4 18.8 97°57'	5°1'/14.5	18	
3 12	14 9.41	-6 11.7	2.579	3.391	11.1	21.7	3 12	14 13.24	-2 15.1	1.586	2.422	15.7	18.5
3 22	14 5.44	-5 7.5	2.488	3.386	8.5	21.5	3 22	14 9.17	-0 58.1	1.525	2.435	12.1	18.3
4 1	13 59.83	-3 56.1	2.422	3.381	5.6	21.3	4 1	14 2.63	+0 24.3	1.487	2.447	8.3	18.1
4 11	13 53.09	-2 42.1	2.384	3.375	3.0	21.1	4 11	13 54.40	+1 44.0	1.474	2.459	5.4	17.9
4 21	13 45.82	-1 30.6	2.376	3.368	3.2	21.1	4 21	13 45.50	+2 52.6	1.487	2.471	6.0	18.0
5 1	13 38.71	-0 26.6	2.397	3.361	5.9	21.3	5 1	13 37.07	+3 43.1	1.526	2.483	9.3	18.2
5 11	13 32.41	+0 25.4	2.445	3.354	8.8	21.5	5 11	13 30.11	+4 11.1	1.589	2.495	12.9	18.4
5 21	13 27.44	+1 3.0	2.518	3.346	11.5	21.6	5 21	13 25.27	+4 16.2	1.673	2.506	16.1	18.7
467504	2007 <i>BK</i> ₄₃		4 18.8 69°57'	0°1'/18.7	18		402864	2007 <i>RM</i> ₁₃₆		4 18.8 115°07'	0°4'/19.2	18	
3 12	14 13.52	-13 15.3	1.642	2.455	16.3	21.6	3 12	14 18.52	-14 39.0	2.018	2.805	14.7	22.8
3 22	14 9.40	-12 54.5	1.575	2.471	12.7	21.4	3 22	14 12.71	-14 18.3	1.951	2.830	11.4	22.6
4 1	14 2.79	-12 20.3	1.530	2.487	8.4	21.2	4 1	14 4.71	-13 45.4	1.906	2.855	7.6	22.4
4 11	13 54.47	-11 36.2	1.509	2.503	3.8	20.9	4 11	13 55.26	-13 2.7	1.887	2.879	3.5	22.2
4 21	13 45.44	-10 47.1	1.514	2.519	1.1	20.8	4 21	13 45.27	-12 14.4	1.898	2.902	0.9	22.0
5 1	13 36.87	-9 59.5	1.547	2.535	5.8	21.1	5 1	13 35.75	-11 25.8	1.938	2.924	5.0	22.4
5 11	13 29.76	-9 19.4	1.605	2.551	10.1	21.4	5 11	13 27.59	-10 42.1	2.006	2.945	8.7	22.7
5 21	13 24.78	-8 51.2	1.687	2.566	13.8	21.7	5 21	13 21.36	-10 7.7	2.098	2.965	12.0	22.9
299523	2006 <i>DF</i> ₂		4 18.8 278°30'	4°8'/27.1	18		432344	2009 <i>VG</i> ₃₂		4 18.8 71°76'	0°5'/18.3	17	
3 12	14 8.03												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
519539	2012 <i>LS</i> ₁₄		4 18.8	10°44'	3°7/15.2	17	113328	2002 <i>RR</i> ₂₀₇		4 18.8	93°90'	0°3/19.1	18
3 12	14 5.48	- 9 56.6	1.391	2.237	17.0	20.8	3 12	14 11.48	-13 46.4	2.092	2.893	13.7	20.1
3 22	14 3.64	- 8 4.7	1.321	2.238	13.0	20.5	3 22	14 7.47	-13 32.6	2.006	2.895	10.7	19.9
4 1	13 59.22	- 5 54.0	1.273	2.241	8.5	20.3	4 1	14 1.42	-13 7.5	1.943	2.897	7.2	19.7
4 11	13 52.96	- 3 34.4	1.250	2.244	4.3	20.0	4 11	13 53.90	-12 33.6	1.906	2.899	3.3	19.4
4 21	13 45.91	- 1 18.3	1.252	2.248	4.8	20.1	4 21	13 45.70	-11 54.2	1.897	2.901	0.9	19.2
5 1	13 39.23	+ 0 41.3	1.281	2.252	9.1	20.3	5 1	13 37.72	-11 14.1	1.916	2.903	4.9	19.5
5 11	13 34.01	+ 2 15.1	1.333	2.257	13.5	20.6	5 11	13 30.82	-10 38.3	1.962	2.906	8.6	19.8
5 21	13 30.93	+ 3 18.7	1.406	2.263	17.3	20.8	5 21	13 25.62	-10 10.7	2.032	2.908	12.0	20.0
109593	2001 <i>QS</i> ₂₈₀		4 18.8	232°55'	0°1/18.8	18	508321	2015 <i>LT</i> ₇		4 18.8	295°28'	6°8/11.3	17
3 12	14 15.21	-12 6.7	1.933	2.736	14.6	20.8	3 12	14 8.93	+ 7 5.9	2.202	3.031	12.2	21.1
3 22	14 10.65	-12 1.1	1.838	2.728	11.5	20.6	3 22	14 5.40	+ 8 20.0	2.122	3.019	9.8	20.9
4 1	14 3.70	-11 45.1	1.765	2.720	7.7	20.4	4 1	14 0.00	+ 9 32.4	2.066	3.007	7.8	20.7
4 11	13 54.98	-11 21.0	1.718	2.711	3.5	20.1	4 11	13 53.26	+10 36.0	2.037	2.995	6.8	20.6
4 21	13 45.33	-10 51.8	1.698	2.702	1.0	19.9	4 21	13 45.88	+11 24.8	2.034	2.983	7.7	20.7
5 1	13 35.82	-10 22.3	1.707	2.693	5.5	20.2	5 1	13 38.67	+11 53.9	2.056	2.971	9.8	20.8
5 11	13 27.47	- 9 57.5	1.742	2.684	9.7	20.4	5 11	13 32.40	+12 0.9	2.103	2.959	12.3	20.9
5 21	13 21.05	- 9 41.4	1.801	2.674	13.4	20.6	5 21	13 27.66	+11 46.1	2.170	2.947	14.7	21.1
92315	2000 <i>GW</i> ₄		4 18.8	317°89'	1°8/19.6	17	498261	2007 <i>UL</i> ₁₂₄		4 18.8	120°80'	0°6/18.3	17
3 12	14 14.22	-13 45.5	1.206	2.038	19.9	19.4	3 12	14 13.82	-10 2.1	2.298	3.099	12.7	21.4
3 22	14 11.49	-14 19.6	1.116	2.021	16.0	19.1	3 22	14 9.01	- 9 57.2	2.216	3.106	9.8	21.2
4 1	14 5.21	-14 41.1	1.045	2.004	11.2	18.8	4 1	14 2.30	- 9 45.2	2.157	3.113	6.5	21.0
4 11	13 55.98	-14 50.0	0.995	1.988	5.6	18.4	4 11	13 54.25	- 9 28.3	2.126	3.120	2.8	20.8
4 21	13 44.99	-14 47.8	0.968	1.972	2.0	18.1	4 21	13 45.61	- 9 9.6	2.123	3.127	1.2	20.7
5 1	13 33.96	-14 38.8	0.965	1.957	7.4	18.4	5 1	13 37.20	- 8 52.4	2.150	3.133	4.8	21.0
5 11	13 24.64	-14 29.8	0.984	1.943	13.2	18.7	5 11	13 29.81	- 8 40.3	2.204	3.140	8.3	21.2
5 21	13 18.31	-14 27.3	1.023	1.930	18.4	18.9	5 21	13 24.02	- 8 35.7	2.282	3.146	11.3	21.4
188043	2001 <i>UO</i> ₁₉₀		4 18.8	53°07'	1°1/19.8	17	333643	2008 <i>QM</i> ₃₂		4 18.8	210°82'	3°4/22.4	18
3 12	14 10.79	-17 25.4	1.664	2.469	16.5	20.1	3 12	14 13.52	-24 12.1	2.582	3.324	12.9	21.5
3 22	14 7.46	-16 55.6	1.585	2.474	13.1	19.8	3 22	14 8.88	-24 16.0	2.475	3.317	10.7	21.3
4 1	14 1.64	-16 7.6	1.527	2.479	9.0	19.6	4 1	14 2.30	-24 5.1	2.391	3.310	8.0	21.2
4 11	13 54.04	-15 4.2	1.492	2.484	4.4	19.3	4 11	13 54.30	-23 39.1	2.332	3.301	5.3	21.0
4 21	13 45.63	-13 50.5	1.484	2.488	1.3	19.1	4 21	13 45.59	-22 59.3	2.301	3.293	3.5	20.8
5 1	13 37.55	-12 34.2	1.504	2.494	5.5	19.4	5 1	13 36.98	-22 8.9	2.300	3.283	4.6	20.9
5 11	13 30.85	-11 23.3	1.548	2.499	10.0	19.7	5 11	13 29.28	-21 12.9	2.327	3.273	7.3	21.0
5 21	13 26.24	-10 24.4	1.616	2.504	13.9	19.9	5 21	13 23.12	-20 16.8	2.380	3.263	10.2	21.2
226829	2004 <i>RW</i> ₃₂₃		4 18.8	95°61'	3°7/22.6	18	57204	2001 <i>QD</i> ₅₄		4 18.8	127°51'	0°7/17.9	18
3 12	14 15.09	-24 50.6	2.216	2.963	14.7	20.4	3 12	14 11.70	-10 21.7	2.894	3.686	10.5	20.6
3 22	14 10.07	-24 48.5	2.145	2.989	12.0	20.3	3 22	14 6.91	- 9 56.0	2.818	3.704	8.1	20.5
4 1	14 2.98	-24 28.7	2.095	3.015	8.9	20.1	4 1	14 0.66	- 9 23.8	2.766	3.720	5.3	20.3
4 11	13 54.51	-23 51.8	2.071	3.040	5.8	20.0	4 11	13 53.45	- 8 47.6	2.743	3.737	2.3	20.1
4 21	13 45.52	-23 0.3	2.073	3.065	3.7	19.9	4 21	13 45.86	- 8 10.3	2.749	3.752	1.2	20.0
5 1	13 36.94	-21 58.8	2.105	3.089	4.9	20.0	5 1	13 38.50	- 7 35.3	2.786	3.767	4.1	20.3
5 11	13 29.60	-20 53.7	2.164	3.113	7.7	20.2	5 11	13 31.96	- 7 5.8	2.852	3.782	6.9	20.5
5 21	13 24.07	-19 51.1	2.250	3.136	10.6	20.4	5 21	13 26.68	- 6 44.2	2.944	3.796	9.4	20.7
299363	2005 <i>TV</i> ₄₇		4 18.8	105°50'	1°4/17.0	17	430878	2005 <i>QL</i> ₈₄		4 18.8	162°19'	3°9/14.6	17
3 12	14 7.26	-11 29.8	2.453	3.260	11.8	20.9	3 12	14 11.53	- 3 51.9	2.140	2.961	12.8	22.1
3 22	14 3.85	-10 15.6	2.368	3.264	9.0	20.7	3 22	14 7.33	- 2 29.5	2.064	2.966	9.8	21.9
4 1	13 58.81	- 8 50.2	2.308	3.267	5.9	20.6	4 1	14 1.21	- 1 0.5	2.013	2.971	6.6	21.7
4 11	13 52.66	- 7 18.3	2.276	3.270	2.6	20.3	4 11	13 53.77	+ 0 28.9	1.989	2.975	4.1	21.5
4 21	13 46.03	- 5 45.3	2.273	3.274	2.0	20.3	4 21	13 45.76	+ 1 51.6	1.994	2.979	4.7	21.6
5 1	13 39.63	- 4 17.6	2.300	3.277	5.2	20.5	5 1	13 38.03	+ 3 1.4	2.028	2.982	7.5	21.7
5 11	13 34.09	- 3 0.5	2.356	3.280	8.4	20.7	5 11	13 31.35	+ 3 53.6	2.087	2.985	10.6	21.9
5 21	13 29.91	- 1 58.0	2.435	3.283	11.2	20.9	5 21	13 26.28	+ 4 26.2	2.170	2.987	13.5	22.1
153797	2001 <i>VH</i> ₉₅		4 18.8	154°72'	7°4/11.1	17	292950	2006 <i>VK</i> ₁₀₃		4 18.8	164°99'	0°5/18.1	18
3 12	14 12.74	+ 8 7.9	2.105	2.929	12.9	20.0	3 12	14 9.56	-11 26.9	2.821	3.616	10.7	21.7
3 22	14 8.25	+ 9 33.4	2.043	2.935	10.4	19.9	3 22	14 5.41	-10 56.4	2.732	3.619	8.3	21.6
4 1	14 1.80	+10 55.3	2.005	2.940	8.3	19.7	4 1	13 59.76	-10 18.0	2.668	3.623	5.4	21.4
4 11	13 54.00	+12 6.0	1.993	2.946	7.4	19.7	4 11	13 53.09	- 9 34.3	2.632	3.626	2.4	21.2
4 21	13 45.66	+12 59.0	2.009	2.950	8.3	19.7	4 21	13 45.96	- 8 48.6	2.625	3.629	1.1	21.1
5 1	13 37.63	+13 29.9	2.050	2.955	10.3	19.9	5 1	13 39.00	- 8 4.6	2.649	3.631	4.1	21.3
5 11	13 30.72	+13 37.0	2.115	2.959	12.7	20.0	5 11	13 32.82	- 7 26.1	2.700	3.633	7.1	21.5
5 21	13 25.49	+13 21.4	2.200	2.962	15.0	20.2	5 21	13 27.88	- 6 55.8	2.778	3.635	9.7	21.7
503776	2016 <i>QK</i> ₅₇		4 18.8	189°94'	2°4/15.8	17	227945	2007 <i>GX</i> ₄₀		4 18.8	51°89'	0°1/18.8	17
3 12	14 7.83	- 6 30.7	2.612	3.426	10.9	21.7	3 12	14 10.64	-14 13.7	1.801	2.611	15.2	20.7
3 22	14 4.19	- 5 28.6	2.526	3.425	8.4	21.6	3 22	14 7.14	-13 40.6	1.719	2.614	11.9	20.5
4 1	13 59.00	- 4 19.8	2.465	3.425	5.5	21.4	4 1	14 1.34	-12 53.0	1.660	2.616	8.0	20.3
4 11	13 52.75	- 3 8.5	2.432	3.424	2.9	21.2	4 11	13 53.91	-11 54.2	1.626	2.619	3.6	20.0
4 21	13 46.01	- 1 59.6	2.429	3.422	3.0	21.2	4 21	13 45.72	-10 49.5	1.618	2.622	1.0	19.8
5 1	13 39.45	- 0 58.1	2.454	3.421	5.6	21.4	5 1	13 37.82	- 9 45.5	1.638	2.625	5.6	20.1
5 11	13 33.70	- 0 8.0	2.507	3.419	8.5	21.6	5 11	13 31.16	- 8 49.0	1.684	2.629	9.8	20.4
5 21	13 29.21	+ 0 28.3	2.585	3.418	11.1	21.7	5 21	13 26.42	- 8 5.0	1.753	2.632	13.4	20.6
149129	2002 <i>EQ</i> ₄₉		4 18.8	326°62'	1°7/20.4	17	429123	2009 <i>SK</i> ₂₉₇		4 18.8			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
54578	2000 QK ₁₆₁		4 18.8 60°40'	2°0'/16.6	18		170926	2004 YM ₂₆		4 18.8 5°28'	2°1'/17.5	17	
3 12	14 8.03	- 9 7.9	2.126	2.945	12.9	18.9	3 12	14 9.99	- 9 22.9	1.204	2.053	18.9	20.2
3 22	14 4.67	- 8 3.8	2.050	2.952	9.9	18.8	3 22	14 7.65	- 8 52.6	1.135	2.052	14.7	20.0
4 1	13 59.46	- 6 49.8	1.998	2.959	6.4	18.6	4 1	14 2.21	- 8 8.5	1.086	2.053	9.7	19.7
4 11	13 53.00	- 5 31.1	1.972	2.966	3.0	18.3	4 11	13 54.46	- 7 16.2	1.058	2.054	4.3	19.4
4 21	13 46.00	- 4 13.6	1.975	2.974	2.7	18.3	4 21	13 45.62	- 6 23.3	1.054	2.056	2.9	19.3
5 1	13 39.27	- 3 3.6	2.006	2.981	6.0	18.6	5 1	13 37.17	- 5 38.5	1.074	2.059	8.1	19.6
5 11	13 33.55	- 2 6.2	2.064	2.989	9.4	18.8	5 11	13 30.47	- 5 9.2	1.116	2.063	13.3	19.9
5 21	13 29.39	- 1 24.7	2.145	2.996	12.4	19.0	5 21	13 26.39	- 4 59.1	1.177	2.068	17.7	20.2
344269	2001 SJ ₃₅₄		4 18.8 168°38'	0°8'/19.6	18		336291	2008 SL ₂₈₉		4 18.8 160°44'	1°7'/17.2	17	
3 12	14 13.84	-14 33.3	2.817	3.594	11.2	21.8	3 12	14 11.20	- 8 59.1	2.142	2.955	13.1	21.7
3 22	14 8.75	-14 36.2	2.724	3.597	8.8	21.7	3 22	14 7.15	- 8 16.2	2.060	2.958	10.1	21.5
4 1	14 2.01	-14 30.8	2.655	3.601	6.0	21.5	4 1	14 1.15	- 7 24.4	2.001	2.960	6.6	21.3
4 11	13 54.12	-14 18.3	2.614	3.604	2.9	21.3	4 11	13 53.79	- 6 27.8	1.969	2.963	3.0	21.0
4 21	13 45.68	-14 0.7	2.603	3.607	0.9	21.1	4 21	13 45.82	- 5 31.4	1.965	2.965	2.3	21.0
5 1	13 37.39	-13 40.5	2.622	3.609	3.8	21.3	5 1	13 38.08	- 4 40.4	1.989	2.967	5.7	21.2
5 11	13 29.94	-13 21.2	2.670	3.610	6.8	21.5	5 11	13 31.39	- 3 59.8	2.041	2.969	9.3	21.4
5 21	13 23.82	-13 5.6	2.744	3.611	9.5	21.7	5 21	13 26.32	- 3 32.4	2.116	2.970	12.4	21.6
298308	2003 DR ₁₂		4 18.8 55°93'	5°9'/24.0	17		61953	2000 RK ₁₇		4 18.8 62°88'	3°9'/22.8	18	
3 12	14 14.98	-28 15.8	2.172	2.904	15.4	20.4	3 12	14 10.54	-24 52.8	2.259	3.014	14.2	19.2
3 22	14 10.40	-29 4.4	2.090	2.915	13.0	20.3	3 22	14 6.76	-24 57.1	2.171	3.019	11.7	19.0
4 1	14 3.49	-29 35.7	2.027	2.926	10.3	20.1	4 1	14 0.96	-24 44.3	2.104	3.024	8.8	18.8
4 11	13 54.89	-29 47.6	1.989	2.937	7.7	20.0	4 11	13 53.73	-24 14.6	2.061	3.030	5.9	18.6
4 21	13 45.46	-29 39.9	1.976	2.949	6.0	19.9	4 21	13 45.83	-23 29.8	2.045	3.035	3.9	18.5
5 1	13 36.25	-29 14.8	1.991	2.960	6.5	19.9	5 1	13 38.16	-22 33.8	2.056	3.041	4.9	18.6
5 11	13 28.26	-28 37.5	2.032	2.972	8.6	20.1	5 11	13 31.55	-21 32.6	2.095	3.046	7.7	18.8
5 21	13 22.18	-27 54.4	2.097	2.984	11.2	20.3	5 21	13 26.61	-20 32.2	2.160	3.052	10.7	19.0
506431	2000 TV ₄₄		4 18.8 265°46'	0°4'/18.5	17		187090	2005 PK ₉		4 18.8 228°32'	0°4'/19.2	17	
3 12	14 17.42	-10 21.1	2.128	2.925	13.7	22.1	3 12	14 13.59	-14 13.8	1.855	2.658	15.2	21.4
3 22	14 12.36	-10 23.0	2.012	2.900	10.8	21.8	3 22	14 9.49	-14 0.0	1.764	2.653	11.9	21.2
4 1	14 4.93	-10 17.2	1.920	2.874	7.3	21.5	4 1	14 3.00	-13 33.0	1.694	2.648	8.1	20.9
4 11	13 55.62	-10 5.5	1.854	2.847	3.3	21.2	4 11	13 54.72	-12 55.1	1.650	2.642	3.8	20.6
4 21	13 45.22	- 9 50.4	1.817	2.820	1.2	21.0	4 21	13 45.55	-12 10.1	1.632	2.637	1.0	20.4
5 1	13 34.74	- 9 35.5	1.809	2.793	5.5	21.3	5 1	13 36.56	-11 23.5	1.643	2.631	5.4	20.7
5 11	13 25.20	- 9 25.0	1.828	2.765	9.6	21.5	5 11	13 28.79	-10 41.3	1.680	2.625	9.7	21.0
5 21	13 17.45	- 9 22.3	1.872	2.736	13.4	21.6	5 21	13 22.99	-10 8.5	1.740	2.619	13.5	21.2
83478	2001 ST ₈₃		4 18.8 117°22'	2°5'/16.1	18		163679	2002 XG ₈₄		4 18.8 198°73'	0°1'/18.8	18	
3 12	14 9.17	- 6 49.5	2.288	3.106	12.2	20.2	3 12	14 33.78	-13 45.1	1.414	2.199	19.9	22.6
3 22	14 5.41	- 5 50.6	2.212	3.113	9.3	20.0	3 22	14 26.33	-13 23.6	1.318	2.196	15.9	22.3
4 1	13 59.90	- 4 44.5	2.159	3.119	6.1	19.8	4 1	14 14.93	-12 44.1	1.241	2.191	10.8	22.0
4 11	13 53.19	- 3 35.9	2.134	3.126	3.1	19.6	4 11	14 0.33	-11 48.3	1.190	2.182	4.9	21.6
4 21	13 45.97	- 2 30.2	2.137	3.132	3.1	19.6	4 21	13 43.94	-10 41.1	1.166	2.171	1.4	21.3
5 1	13 39.01	- 1 32.6	2.169	3.139	6.0	19.8	5 1	13 27.69	- 9 31.2	1.172	2.156	7.9	21.7
5 11	13 33.00	- 0 47.5	2.228	3.145	9.2	20.0	5 11	13 13.46	- 8 29.0	1.205	2.139	13.8	21.9
5 21	13 28.46	- 0 17.4	2.310	3.151	12.0	20.2	5 21	13 2.52	- 7 42.4	1.261	2.119	18.9	22.2
465064	2006 SY ₉₅		4 18.8 176°84'	0°4'/18.5	16		59339	1999 CT ₁₁₃		4 18.8 59°87'	2°3'/20.6	18	
3 12	14 15.11	-12 4.8	2.112	2.909	13.7	22.7	3 12	14 13.15	-20 0.4	1.283	2.095	20.1	18.8
3 22	14 10.25	-11 41.4	2.024	2.912	10.7	22.5	3 22	14 9.85	-19 36.2	1.222	2.112	16.0	18.5
4 1	14 3.26	-11 7.4	1.959	2.914	7.1	22.3	4 1	14 3.47	-18 47.8	1.180	2.130	11.2	18.3
4 11	13 54.75	-10 25.7	1.921	2.915	3.1	22.1	4 11	13 54.93	-17 37.8	1.160	2.148	5.9	18.1
4 21	13 45.53	- 9 40.3	1.911	2.915	1.1	21.9	4 21	13 45.53	-16 13.0	1.164	2.167	2.3	17.9
5 1	13 36.54	- 8 56.0	1.931	2.915	5.2	22.2	5 1	13 36.76	-14 43.4	1.193	2.185	6.3	18.2
5 11	13 28.67	- 8 18.0	1.978	2.914	9.0	22.4	5 11	13 29.87	-13 19.8	1.247	2.204	11.2	18.5
5 21	13 22.56	- 7 50.0	2.049	2.913	12.4	22.6	5 21	13 25.61	-12 10.7	1.322	2.223	15.5	18.8
468648	2008 UL ₃₁		4 18.8 171°81'	0°3'/18.5	17		442302	2011 SB ₅₇		4 18.8 283°15'	2°5'/15.9	17	
3 12	14 10.86	-13 39.9	2.423	3.217	12.3	22.5	3 12	14 7.90	- 6 40.8	2.308	3.128	12.0	21.6
3 22	14 6.69	-12 57.7	2.334	3.220	9.5	22.3	3 22	14 4.50	- 5 41.8	2.223	3.125	9.2	21.4
4 1	14 0.75	-12 4.1	2.269	3.222	6.3	22.1	4 1	13 59.36	- 4 35.2	2.162	3.123	6.1	21.2
4 11	13 53.59	-11 2.3	2.231	3.224	2.8	21.9	4 11	13 52.99	- 3 25.6	2.128	3.120	3.1	21.0
4 21	13 45.87	- 9 56.5	2.222	3.226	1.0	21.7	4 21	13 46.07	- 2 18.5	2.122	3.117	3.2	21.0
5 1	13 38.36	- 8 51.8	2.243	3.227	4.6	22.0	5 1	13 39.33	- 1 19.3	2.145	3.114	6.1	21.2
5 11	13 31.79	- 7 53.3	2.291	3.228	8.0	22.2	5 11	13 33.49	- 0 32.5	2.195	3.112	9.3	21.4
5 21	13 26.68	- 7 5.1	2.365	3.228	11.0	22.4	5 21	13 29.09	- 0 0.8	2.268	3.109	12.2	21.6
142134	2002 RH ₁₄		4 18.8 218°92'	0°2'/18.9	17		38937	2000 SL ₂₅₈		4 18.8 253°27'	2°5'/16.6	18	
3 12	14 14.57	-13 49.0	2.043	2.839	14.2	21.2	3 12	14 11.61	- 7 1.5	1.923	2.744	14.0	19.4
3 22	14 10.05	-13 28.4	1.945	2.831	11.2	21.0	3 22	14 7.80	- 6 18.0	1.833	2.736	10.8	19.2
4 1	14 3.28	-12 55.5	1.870	2.822	7.5	20.8	4 1	14 1.79	- 5 25.8	1.767	2.728	7.1	18.9
4 11	13 54.82	-12 12.5	1.820	2.813	3.4	20.5	4 11	13 54.16	- 4 29.6	1.727	2.720	3.5	18.7
4 21	13 45.51	-11 23.1	1.799	2.803	0.9	20.3	4 21	13 45.74	- 3 35.0	1.714	2.712	3.2	18.7
5 1	13 36.33	-10 32.7	1.806	2.793	5.2	20.5	5 1	13 37.49	- 2 48.1	1.729	2.703	6.8	18.9
5 11	13 28.25	- 9 47.0	1.841	2.781	9.3	20.8	5 11	13 30.36	- 2 14.0	1.769	2.695	10.6	19.1
5 21	13 22.00	- 9 10.7	1.899	2.770	12.9	21.0	5 21	13 25.02	- 1 55.8	1.832	2.686	14.1	19.3
160341	2003 ST ₁₀₃		4 18.8 230°17'	1°3'/19.9	18		344308	2001 UO ₁₃₅		4 18.8 140°43'	2°7'/16.1	17	
3 12	14 12.59	-16 30.1	2.219</										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
213220	2000 VB ₂₅		4 18.8 211 ^o 24	5 ^o 7/13.0 18			322501	2011 VO ₉		4 18.8 335 ^o 97	6 ^o 2/12.2 18		
3 12	14 15.14	+ 9 3.4	2.748	3.553	10.7	20.1	3 12	14 9.44	+ 6 13.9	2.272	3.100	11.9	20.6
3 22	14 9.71	+ 9 34.4	2.667	3.548	8.7	20.0	3 22	14 5.68	+ 7 17.0	2.201	3.098	9.5	20.4
4 1	14 2.63	+10 0.6	2.611	3.543	6.8	19.8	4 1	14 0.13	+ 8 18.0	2.153	3.096	7.3	20.3
4 11	13 54.41	+10 17.8	2.582	3.538	5.7	19.8	4 11	13 53.34	+ 9 10.6	2.132	3.094	6.2	20.2
4 21	13 45.69	+10 22.2	2.582	3.533	6.2	19.8	4 21	13 46.02	+ 9 49.5	2.137	3.093	6.9	20.2
5 1	13 37.17	+10 11.6	2.611	3.527	7.9	19.9	5 1	13 38.92	+10 10.7	2.169	3.091	9.0	20.3
5 11	13 29.53	+ 9 45.0	2.665	3.521	10.1	20.0	5 11	13 32.77	+10 12.2	2.225	3.090	11.4	20.5
5 21	13 23.25	+ 9 3.4	2.743	3.514	12.1	20.1	5 21	13 28.10	+ 9 54.4	2.303	3.089	13.7	20.6
283180	2009 SC ₁₆₀		4 18.8 63 ^o 06	3 ^o 0/20.7 17			512353	2016 NC ₂₀		4 18.8 239 ^o 32	2 ^o 6/21.5 17		
3 12	14 19.05	-17 26.7	1.710	2.498	16.8	19.9	3 12	14 11.00	-22 37.6	2.136	2.903	14.6	21.7
3 22	14 13.87	-18 10.5	1.635	2.511	13.5	19.7	3 22	14 7.30	-22 10.4	2.033	2.894	11.8	21.5
4 1	14 5.96	-18 41.5	1.582	2.523	9.6	19.5	4 1	14 1.45	-21 24.2	1.951	2.885	8.6	21.2
4 11	13 56.05	-18 58.9	1.553	2.537	5.5	19.3	4 11	13 54.03	-20 19.8	1.894	2.875	5.1	21.0
4 21	13 45.22	-19 3.3	1.550	2.550	3.0	19.2	4 21	13 45.82	-19 0.5	1.865	2.865	2.6	20.8
5 1	13 34.73	-18 57.8	1.575	2.563	5.7	19.4	5 1	13 37.76	-17 32.1	1.865	2.854	4.8	20.9
5 11	13 25.76	-18 47.5	1.627	2.577	9.6	19.6	5 11	13 30.78	-16 2.3	1.892	2.843	8.4	21.1
5 21	13 19.11	-18 37.6	1.702	2.590	13.3	19.9	5 21	13 25.54	-14 38.2	1.945	2.832	11.9	21.3
133900	2004 RL ₆₆		4 18.8 100 ^o 85	1 ^o 6/17.2 18			396245	2014 BV ₄₄		4 18.8 91 ^o 94	0 ^o 8/18.0 17		
3 12	14 12.84	- 9 32.9	2.126	2.934	13.3	20.4	3 12	14 10.96	-10 55.1	2.266	3.071	12.7	21.7
3 22	14 8.25	- 8 42.8	2.061	2.956	10.2	20.3	3 22	14 6.81	-10 25.5	2.191	3.084	9.8	21.5
4 1	14 1.76	- 7 43.8	2.019	2.978	6.6	20.1	4 1	14 0.84	- 9 47.0	2.140	3.097	6.4	21.3
4 11	13 54.02	- 6 40.4	2.005	2.999	3.0	19.9	4 11	13 53.65	- 9 3.0	2.116	3.110	2.8	21.1
4 21	13 45.82	- 5 38.0	2.019	3.020	2.2	19.9	4 21	13 45.95	- 8 17.4	2.120	3.123	1.4	21.0
5 1	13 38.01	- 4 42.0	2.063	3.040	5.6	20.1	5 1	13 38.53	- 7 34.9	2.153	3.136	4.9	21.3
5 11	13 31.33	- 3 57.0	2.133	3.060	9.0	20.4	5 11	13 32.12	- 6 59.6	2.213	3.149	8.3	21.5
5 21	13 26.32	- 3 25.7	2.227	3.079	12.0	20.6	5 21	13 27.26	- 6 34.7	2.298	3.161	11.3	21.7
474306	2001 YT ₃₁		4 18.8 114 ^o 95	0 ^o 4/19.4 17			89277	2001 VZ ₁₅		4 18.8 160 ^o 31	4 ^o 1/16.5 18		
3 12	14 6.98	-14 31.0	3.553	4.333	9.0	22.1	3 12	14 22.45	+ 0 43.7	1.840	2.651	14.9	19.0
3 22	14 3.13	-14 12.0	3.469	4.346	7.0	22.0	3 22	14 16.17	+ 0 41.5	1.759	2.653	11.7	18.8
4 1	13 58.13	-13 45.9	3.410	4.358	4.7	21.9	4 1	14 7.33	+ 0 37.9	1.701	2.655	8.1	18.5
4 11	13 52.37	-13 14.4	3.379	4.371	2.2	21.7	4 11	13 56.64	+ 0 28.9	1.670	2.656	4.8	18.3
4 21	13 46.28	-12 39.5	3.378	4.383	0.6	21.6	4 21	13 45.10	+ 0 10.9	1.667	2.658	4.6	18.3
5 1	13 40.35	-12 4.0	3.408	4.394	3.0	21.8	5 1	13 33.88	- 0 18.6	1.693	2.659	7.8	18.5
5 11	13 35.02	-11 30.6	3.466	4.406	5.4	22.0	5 11	13 24.07	- 1 0.6	1.745	2.660	11.4	18.7
5 21	13 30.67	-11 1.8	3.551	4.417	7.6	22.1	5 21	13 16.43	- 1 54.5	1.821	2.661	14.8	19.0
427792	2005 EN ₂₇₁		4 18.8 3 ^o 22	4 ^o 1/14.5 17			249254	2008 SK ₂		4 18.8 153 ^o 10	0 ^o 8/17.9 17		
3 12	14 4.80	- 7 30.2	1.589	2.433	15.3	20.4	3 12	14 11.50	-11 33.5	2.513	3.310	11.8	21.8
3 22	14 2.84	- 5 38.9	1.516	2.432	11.7	20.1	3 22	14 7.07	-10 49.4	2.430	3.318	9.1	21.6
4 1	13 58.60	- 3 33.2	1.466	2.432	7.7	19.9	4 1	14 0.96	- 9 56.0	2.371	3.326	6.0	21.5
4 11	13 52.74	- 1 22.3	1.442	2.433	4.5	19.7	4 11	13 53.69	- 8 56.4	2.339	3.333	2.6	21.2
4 21	13 46.17	+ 0 42.7	1.445	2.435	5.2	19.8	4 21	13 45.93	- 7 55.1	2.338	3.340	1.4	21.2
5 1	13 39.90	+ 2 31.2	1.474	2.438	8.9	20.0	5 1	13 38.41	- 6 56.7	2.366	3.347	4.7	21.4
5 11	13 34.87	+ 3 55.3	1.527	2.441	12.8	20.2	5 11	13 31.81	- 6 5.8	2.422	3.352	7.9	21.6
5 21	13 31.74	+ 4 51.7	1.601	2.445	16.3	20.4	5 21	13 26.62	- 5 25.7	2.503	3.357	10.7	21.8
496894	2000 YF ₃₁		4 18.8 143 ^o 53	2 ^o 9/21.8 17			313073	2000 SZ ₂₃₅		4 18.8 263 ^o 99	3 ^o 9/15.8 17		
3 12	14 14.58	-22 18.2	2.476	3.228	13.2	23.0	3 12	14 13.83	- 5 5.1	1.631	2.461	15.7	20.8
3 22	14 9.61	-22 20.4	2.389	3.240	10.7	22.8	3 22	14 10.07	- 4 11.3	1.536	2.444	12.2	20.5
4 1	14 2.72	-22 8.4	2.324	3.250	7.8	22.6	4 1	14 3.63	- 3 7.8	1.464	2.425	8.2	20.2
4 11	13 54.50	-21 42.4	2.285	3.261	4.8	22.5	4 11	13 55.13	- 2 0.6	1.415	2.407	4.6	20.0
4 21	13 45.68	-21 4.5	2.275	3.270	2.9	22.4	4 21	13 45.50	- 0 57.2	1.394	2.388	4.7	19.9
5 1	13 37.10	-20 18.1	2.294	3.279	4.4	22.5	5 1	13 35.95	- 0 5.5	1.399	2.368	8.6	20.1
5 11	13 29.55	-19 28.4	2.341	3.288	7.3	22.7	5 11	13 27.68	+ 0 28.3	1.428	2.349	13.0	20.3
5 21	13 23.60	-18 40.3	2.414	3.295	10.1	22.9	5 21	13 21.57	+ 0 40.8	1.478	2.329	17.0	20.5
439161	2011 US ₂₈₈		4 18.8 194 ^o 83	3 ^o 2/15.3 17			386577	2009 DN ₁₄₂		4 18.8 257 ^o 47	2 ^o 8/15.7 17		
3 12	14 12.16	- 0 9.2	2.929	3.737	10.0	21.5	3 12	14 9.01	- 5 13.0	2.437	3.254	11.5	21.3
3 22	14 7.35	+ 0 17.7	2.841	3.735	7.8	21.4	3 22	14 5.34	- 4 17.9	2.340	3.241	8.9	21.1
4 1	14 1.04	+ 0 45.6	2.779	3.732	5.4	21.2	4 1	13 59.95	- 3 16.2	2.267	3.227	5.9	20.9
4 11	13 53.71	+ 1 11.0	2.745	3.729	3.4	21.1	4 11	13 53.30	- 2 12.2	2.222	3.213	3.3	20.7
4 21	13 45.90	+ 1 30.8	2.741	3.725	3.6	21.1	4 21	13 46.04	- 1 11.0	2.206	3.199	3.4	20.7
5 1	13 38.25	+ 1 42.2	2.766	3.722	5.7	21.2	5 1	13 38.88	- 0 17.8	2.219	3.184	6.2	20.8
5 11	13 31.36	+ 1 43.0	2.819	3.717	8.2	21.4	5 11	13 32.56	+ 0 23.3	2.258	3.169	9.3	21.0
5 21	13 25.68	+ 1 32.6	2.897	3.713	10.5	21.5	5 21	13 27.61	+ 0 49.6	2.321	3.155	12.2	21.2
271832	2004 TT ₁₇₁		4 18.8 135 ^o 32	2 ^o 6/16.4 17			518832	2010 CK ₁₉₉		4 18.8 310 ^o 67	0 ^o 5/18.4 17		
3 12	14 13.61	- 5 14.5	2.205	3.018	12.7	21.2	3 12	14 11.36	-10 59.0	2.035	2.845	13.7	21.3
3 22	14 8.87	- 4 38.5	2.130	3.028	9.8	21.0	3 22	14 7.54	-10 47.7	1.943	2.838	10.7	21.1
4 1	14 2.22	- 3 57.3	2.079	3.037	6.5	20.8	4 1	14 1.60	-10 27.3	1.874	2.831	7.1	20.8
4 11	13 54.27	- 3 15.1	2.055	3.047	3.3	20.6	4 11	13 54.10	-10 0.1	1.830	2.825	3.1	20.6
4 21	13 45.76	- 2 36.5	2.060	3.056	3.1	20.6	4 21	13 45.82	- 9 29.9	1.814	2.818	1.2	20.4
5 1	13 37.54	- 2 5.7	2.094	3.064	6.1	20.8	5 1	13 37.69	- 9 1.0	1.826	2.812	5.3	20.7
5 11	13 30.40	- 1 46.3	2.154	3.072	9.4	21.0	5 11	13 30.61	- 8 38.0	1.864	2.805	9.2	20.9
5 21	13 24.88	- 1 40.0	2.238	3.080	12.3	21.2	5 21	13 25.25	- 8 24.3	1.926	2.799	12.7	21.1
457399	2008 TA ₉₇												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
608	Adolfine		4 18.8 213°20	3°9/23.1	18		162677	2000 SA ₃₇₂		4 18.8 135°29	1°6/17.5	18	
3 12	14 11.79	-26 2.4	2.628	3.364	12.9	16.4	3 12	14 15.82	-9 50.6	1.820	2.630	15.1	20.9
3 22	14 7.55	-26 11.0	2.525	3.359	10.7	16.2	3 22	14 11.00	-9 8.9	1.747	2.643	11.6	20.7
4 1	14 1.45	-26 4.4	2.443	3.354	8.2	16.0	4 1	14 3.85	-8 16.5	1.696	2.655	7.6	20.5
4 11	13 53.99	-25 42.0	2.387	3.349	5.7	15.9	4 11	13 55.08	-7 18.0	1.672	2.666	3.4	20.3
4 21	13 45.85	-25 5.1	2.357	3.343	4.0	15.7	4 21	13 45.62	-6 19.1	1.675	2.676	2.3	20.2
5 1	13 37.83	-24 16.4	2.357	3.337	4.8	15.8	5 1	13 36.55	-5 26.2	1.707	2.686	6.3	20.5
5 11	13 30.71	-23 20.9	2.384	3.331	7.2	15.9	5 11	13 28.83	-4 44.7	1.765	2.696	10.3	20.7
5 21	13 25.08	-22 23.9	2.438	3.324	9.8	16.1	5 21	13 23.11	-4 18.1	1.846	2.704	13.8	21.0
62106	2000 RC ₉₇		4 18.8 314°57	2°9/15.9	18		498671	2008 ST ₁₇₁		4 18.8 148°28	1°4/20.2	17	
3 12	14 3.83	-16 11.9	1.220	2.062	19.2	17.6	3 12	14 12.13	-17 39.7	2.095	2.882	14.2	22.3
3 22	14 3.13	-13 51.9	1.121	2.036	15.0	17.2	3 22	14 8.06	-17 23.6	2.008	2.886	11.3	22.1
4 1	13 59.44	-10 50.8	1.044	2.012	9.9	16.9	4 1	14 1.88	-16 53.2	1.943	2.889	7.8	21.9
4 11	13 53.38	-7 16.7	0.991	1.987	4.4	16.5	4 11	13 54.21	-16 10.3	1.904	2.893	4.0	21.7
4 21	13 46.01	-3 26.3	0.965	1.964	4.5	16.4	4 21	13 45.86	-15 18.2	1.893	2.896	1.5	21.5
5 1	13 38.73	+0 17.4	0.965	1.941	10.5	16.6	5 1	13 37.73	-14 22.0	1.910	2.899	4.7	21.7
5 11	13 32.98	+3 32.4	0.989	1.919	16.4	16.9	5 11	13 30.72	-13 27.7	1.954	2.902	8.4	21.9
5 21	13 29.76	+6 5.0	1.033	1.898	21.6	17.1	5 21	13 25.45	-12 40.5	2.022	2.904	11.8	22.2
250446	2003 YJ ₆₇		4 18.8 253°05	1°4/17.8	17		168730	2000 OX ₅₁		4 18.8 284°11	0°9/19.5	17	
3 12	14 14.72	-9 58.7	1.815	2.628	15.0	21.4	3 12	14 12.99	-17 0.0	1.598	2.403	17.1	20.8
3 22	14 10.55	-9 29.3	1.714	2.611	11.8	21.2	3 22	14 9.87	-16 29.5	1.481	2.371	13.8	20.5
4 1	14 3.85	-8 48.5	1.635	2.593	7.8	20.9	4 1	14 3.83	-15 37.9	1.385	2.338	9.6	20.2
4 11	13 55.21	-7 59.9	1.581	2.575	3.5	20.6	4 11	13 55.40	-14 26.3	1.312	2.304	4.7	19.8
4 21	13 45.52	-7 8.3	1.555	2.557	2.1	20.4	4 21	13 45.47	-12 58.9	1.265	2.270	1.2	19.5
5 1	13 35.87	-6 20.2	1.556	2.538	6.5	20.7	5 1	13 35.35	-11 23.8	1.245	2.235	6.5	19.7
5 11	13 27.39	-5 41.5	1.583	2.518	11.0	20.9	5 11	13 26.43	-9 51.6	1.251	2.199	12.0	19.9
5 21	13 20.92	-5 16.9	1.633	2.498	15.0	21.1	5 21	13 19.81	-8 32.0	1.278	2.164	16.9	20.1
88726	2001 SS ₃₁		4 18.8 244°07	1°2/17.8	18		341521	2007 TG ₄₃₂		4 18.8 92°60	0°8/19.6	17	
3 12	14 12.98	-10 32.3	2.019	2.827	13.9	20.9	3 12	14 11.75	-15 31.2	2.200	2.991	13.4	21.4
3 22	14 8.87	-9 57.1	1.919	2.814	10.8	20.6	3 22	14 7.58	-15 18.5	2.119	3.001	10.6	21.2
4 1	14 2.55	-9 10.9	1.842	2.800	7.2	20.4	4 1	14 1.47	-14 54.0	2.062	3.012	7.2	21.0
4 11	13 54.56	-8 17.1	1.791	2.785	3.2	20.1	4 11	13 54.00	-14 19.8	2.031	3.022	3.5	20.8
4 21	13 45.71	-7 20.3	1.768	2.770	1.9	20.0	4 21	13 45.94	-13 39.1	2.027	3.032	1.0	20.6
5 1	13 36.96	-6 26.6	1.773	2.755	5.9	20.2	5 1	13 38.15	-12 56.4	2.053	3.041	4.5	20.9
5 11	13 29.26	-5 41.7	1.806	2.739	9.9	20.4	5 11	13 31.42	-12 16.6	2.105	3.051	8.0	21.1
5 21	13 23.33	-5 9.7	1.861	2.723	13.5	20.6	5 21	13 26.32	-11 43.7	2.183	3.061	11.2	21.3
471422	2011 UP ₉		4 18.8 208°26	0°1/18.8	16		64799	2001 XW ₂₀₉		4 18.8 296°65	5°8/14.7	17	
3 12	14 9.85	-12 54.2	2.967	3.754	10.4	23.0	3 12	14 11.67	-2 23.7	1.352	2.200	17.2	18.6
3 22	14 5.66	-12 31.2	2.867	3.749	8.1	22.8	3 22	14 8.94	-1 17.2	1.263	2.179	13.5	18.3
4 1	14 0.00	-11 59.9	2.791	3.743	5.4	22.6	4 1	14 3.19	-0 1.2	1.195	2.159	9.4	18.0
4 11	13 53.29	-11 22.4	2.744	3.737	2.4	22.4	4 11	13 55.06	+1 15.9	1.150	2.138	6.1	17.7
4 21	13 46.09	-10 41.5	2.726	3.730	0.7	22.3	4 21	13 45.60	+2 24.1	1.130	2.118	6.8	17.7
5 1	13 38.99	-10 0.6	2.738	3.723	3.8	22.5	5 1	13 36.21	+3 13.7	1.133	2.097	10.9	17.9
5 11	13 32.61	-9 23.3	2.779	3.715	6.7	22.7	5 11	13 28.29	+3 37.6	1.159	2.078	15.5	18.1
5 21	13 27.41	-8 52.6	2.845	3.707	9.4	22.8	5 21	13 22.84	+3 33.8	1.203	2.058	19.8	18.3
285751	2000 TG ₅₆		4 18.8 252°21	1°5/17.8	18		480642	2015 NT ₁₄		4 18.8 264°14	3°7/14.8	17	
3 12	14 17.63	-7 4.1	2.011	2.818	14.0	20.5	3 12	14 11.06	-0 3.1	2.640	3.456	10.8	22.2
3 22	14 12.49	-7 6.3	1.912	2.806	10.9	20.2	3 22	14 6.81	+0 35.1	2.540	3.437	8.4	22.0
4 1	14 4.98	-7 3.4	1.837	2.794	7.3	20.0	4 1	14 0.90	+1 15.3	2.464	3.418	5.9	21.8
4 11	13 55.67	-6 57.8	1.787	2.781	3.3	19.7	4 11	13 53.76	+1 53.3	2.415	3.398	3.9	21.6
4 21	13 45.41	-6 52.5	1.766	2.768	2.0	19.6	4 21	13 46.00	+2 25.1	2.396	3.378	4.3	21.6
5 1	13 35.22	-6 50.9	1.774	2.755	6.0	19.8	5 1	13 38.31	+2 46.8	2.405	3.358	6.6	21.7
5 11	13 26.15	-6 56.5	1.809	2.742	10.0	20.0	5 11	13 31.38	+2 55.8	2.441	3.338	9.3	21.9
5 21	13 18.96	-7 11.5	1.868	2.728	13.6	20.2	5 21	13 25.75	+2 50.8	2.500	3.317	11.9	22.0
381550	2008 TA ₅₈		4 18.8 85°85	1°0/17.9	17		31066	1996 TR ₂₅		4 18.8 299°41	1°1/18.1	18	
3 12	14 10.94	-11 17.9	1.948	2.761	14.2	21.7	3 12	14 14.57	-9 2.2	1.766	2.583	15.2	18.6
3 22	14 7.18	-10 41.9	1.868	2.765	11.0	21.5	3 22	14 10.37	-8 57.5	1.678	2.577	11.9	18.4
4 1	14 1.31	-9 54.7	1.811	2.770	7.2	21.2	4 1	14 3.67	-8 44.5	1.612	2.571	7.9	18.1
4 11	13 53.94	-9 0.2	1.780	2.775	3.1	21.0	4 11	13 55.11	-8 26.3	1.571	2.566	3.5	17.9
4 21	13 45.91	-8 3.4	1.777	2.780	1.6	20.9	4 21	13 45.62	-8 6.6	1.557	2.560	1.8	17.7
5 1	13 38.16	-7 10.2	1.801	2.784	5.6	21.2	5 1	13 36.31	-7 49.9	1.571	2.555	6.2	18.0
5 11	13 31.55	-6 26.1	1.852	2.789	9.5	21.4	5 11	13 28.26	-7 40.8	1.610	2.550	10.5	18.2
5 21	13 26.71	-5 54.8	1.926	2.794	12.9	21.6	5 21	13 22.25	-7 42.3	1.672	2.545	14.3	18.5
397807	2008 RH ₄₅		4 18.8 170°27	2°5/20.6	18		397072	2005 UC ₁₇₈		4 18.8 277°07	2°1/21.2	17	
3 12	14 20.21	-18 29.8	1.833	2.610	16.3	21.5	3 12	14 8.65	-20 49.4	2.466	3.236	12.7	21.1
3 22	14 14.72	-18 43.2	1.745	2.615	13.1	21.3	3 22	14 5.19	-20 31.2	2.362	3.227	10.3	20.9
4 1	14 6.54	-18 41.7	1.679	2.619	9.3	21.0	4 1	13 59.92	-19 58.3	2.281	3.218	7.4	20.7
4 11	13 56.37	-18 25.3	1.637	2.622	5.2	20.8	4 11	13 53.34	-19 11.7	2.226	3.208	4.3	20.4
4 21	13 45.22	-17 56.0	1.623	2.624	2.5	20.6	4 21	13 46.12	-18 14.1	2.199	3.199	2.1	20.3
5 1	13 34.33	-17 18.2	1.637	2.625	5.5	20.8	5 1	13 39.02	-17 9.8	2.200	3.189	4.2	20.4
5 11	13 24.84	-16 38.1	1.679	2.626	9.6	21.1	5 11	13 32.79	-16 4.5	2.230	3.180	7.4	20.6
5 21	13 17.59	-16 2.0	1.744	2.626	13.4	21.3	5 21	13 28.02	-15 3.4	2.285	3.171	10.4	20.8
300043	2006 UT ₁₃₇		4 18.8 244°88	0°2/19.0	16		153198	2000 WC ₄₅		4 18.8 182°70	1°1/17.8	17	
3 12	14 12.56	-12 34.4	2.524	3.315	11.9	21.0	3 12	14 10.91	-11 18.4	1.			

EPHEMERIDES

4 18.8

4 18.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
317803	2003 <i>SR</i> ₂₀₇		4 18.8 230°30	0°2/18.7	16		147874	2006 <i>QP</i> ₃₉		4 18.9 236°30	0°8/18.1	18	
3 12	14 16.28	-12 28.4	1.996	2.794	14.4	21.8	3 12	14 14.40	-12 5.5	2.220	3.016	13.2	21.3
3 22	14 11.53	-12 11.0	1.894	2.781	11.3	21.6	3 22	14 9.84	-11 24.2	2.111	2.998	10.3	21.1
4 1	14 4.39	-11 42.1	1.814	2.768	7.6	21.4	4 1	14 3.16	-10 30.7	2.025	2.980	6.9	20.8
4 11	13 55.45	-11 4.0	1.760	2.753	3.4	21.1	4 11	13 54.88	-9 28.0	1.966	2.960	3.0	20.5
4 21	13 45.54	-10 20.5	1.734	2.738	1.1	20.8	4 21	13 45.74	-8 20.7	1.937	2.940	1.5	20.4
5 1	13 35.70	-9 36.7	1.737	2.723	5.5	21.1	5 1	13 36.66	-7 14.6	1.937	2.919	5.5	20.6
5 11	13 26.97	-8 58.2	1.767	2.706	9.8	21.3	5 11	13 28.53	-6 15.7	1.965	2.896	9.4	20.8
5 21	13 20.13	-8 29.7	1.821	2.689	13.5	21.5	5 21	13 22.06	-5 28.7	2.017	2.873	12.9	21.0
501121	2013 <i>TN</i> ₂₂		4 18.8 259°54	0°7/18.3	17		434615	2005 <i>UC</i> ₄₆₂		4 18.9 280°30	2°1/16.9	17	
3 12	14 13.46	-11 14.8	1.879	2.689	14.7	22.4	3 12	14 12.92	-5 41.4	2.478	3.286	11.6	21.4
3 22	14 9.46	-10 53.7	1.780	2.675	11.5	22.2	3 22	14 8.50	-5 22.4	2.364	3.258	9.1	21.1
4 1	14 3.07	-10 21.3	1.704	2.662	7.7	21.9	4 1	14 2.18	-4 58.4	2.273	3.231	6.1	20.9
4 11	13 54.87	-9 40.7	1.653	2.647	3.4	21.6	4 11	13 54.43	-4 32.4	2.210	3.203	3.0	20.7
4 21	13 45.71	-8 56.0	1.629	2.633	1.5	21.5	4 21	13 45.87	-4 7.8	2.176	3.174	2.6	20.6
5 1	13 36.63	-8 12.8	1.634	2.618	5.9	21.7	5 1	13 37.29	-3 48.5	2.171	3.146	5.6	20.7
5 11	13 28.69	-7 37.0	1.664	2.603	10.2	21.9	5 11	13 29.48	-3 37.7	2.194	3.117	9.0	20.9
5 21	13 22.67	-7 12.8	1.717	2.588	14.0	22.1	5 21	13 23.09	-3 37.8	2.241	3.087	12.1	21.0
499767	2011 <i>CV</i> ₁₀		4 18.8 285°12	6°6/13.2	17		234813	2002 <i>QJ</i> ₁₁₂		4 18.9 260°22	2°6/16.2	17	
3 12	14 12.00	+3 6.9	1.750	2.586	14.5	21.1	3 12	14 9.76	-6 47.9	2.109	2.929	12.9	20.9
3 22	14 8.27	+4 16.2	1.674	2.580	11.5	20.9	3 22	14 6.21	-5 52.7	2.018	2.920	10.0	20.7
4 1	14 2.19	+5 26.5	1.621	2.574	8.5	20.7	4 1	14 0.68	-4 49.0	1.951	2.911	6.6	20.5
4 11	13 54.42	+6 29.8	1.594	2.568	6.7	20.6	4 11	13 53.73	-3 41.5	1.910	2.903	3.4	20.2
4 21	13 45.85	+7 18.8	1.592	2.562	7.5	20.6	4 21	13 46.09	-2 36.0	1.898	2.893	3.3	20.2
5 1	13 37.54	+7 47.3	1.616	2.556	10.2	20.7	5 1	13 38.60	-1 38.5	1.913	2.884	6.6	20.4
5 11	13 30.47	+7 52.4	1.663	2.550	13.4	20.9	5 11	13 32.09	-0 54.1	1.955	2.875	10.1	20.6
5 21	13 25.34	+7 34.1	1.730	2.544	16.5	21.1	5 21	13 27.19	-0 25.7	2.020	2.866	13.3	20.8
425928	2011 <i>GY</i> ₃₉		4 18.8 224°08	3°6/15.5	17		109106	2001 <i>QU</i> ₃₇		4 18.9 345°71	7°8/24.3	18	
3 12	14 11.72	-3 48.9	2.007	2.831	13.4	21.4	3 12	14 10.73	-28 27.0	1.605	2.368	18.8	18.6
3 22	14 7.77	-2 55.7	1.923	2.827	10.3	21.2	3 22	14 8.18	-29 30.7	1.514	2.358	16.1	18.3
4 1	14 1.72	-1 56.4	1.863	2.822	7.0	21.0	4 1	14 2.70	-30 13.9	1.440	2.348	13.0	18.1
4 11	13 54.18	-0 56.6	1.828	2.817	4.1	20.8	4 11	13 54.87	-30 32.6	1.388	2.340	9.9	17.9
4 21	13 45.93	-0 2.1	1.822	2.812	4.3	20.8	4 21	13 45.73	-30 24.7	1.359	2.333	7.9	17.8
5 1	13 37.88	+0 41.4	1.843	2.807	7.4	21.0	5 1	13 36.64	-29 52.4	1.354	2.327	8.4	17.8
5 11	13 30.92	+1 9.5	1.890	2.802	10.8	21.2	5 11	13 28.98	-29 2.4	1.372	2.322	11.0	17.9
5 21	13 25.67	+1 20.2	1.959	2.796	14.0	21.4	5 21	13 23.78	-28 3.7	1.412	2.318	14.3	18.1
61307	2000 <i>OJ</i> ₄₉		4 18.8 229°49	3°9/21.7	18		76862	2000 <i>XK</i> ₇		4 18.9 199°72	0°4/18.6	18	
3 12	14 18.19	-21 36.1	2.139	2.897	14.8	19.4	3 12	14 17.91	-11 23.3	2.029	2.825	14.3	19.6
3 22	14 13.04	-22 14.7	2.036	2.889	12.2	19.2	3 22	14 12.66	-11 12.1	1.935	2.822	11.2	19.4
4 1	14 5.45	-22 40.3	1.955	2.881	9.1	19.0	4 1	14 5.06	-10 51.1	1.863	2.817	7.5	19.1
4 11	13 55.96	-22 51.4	1.899	2.872	5.9	18.7	4 11	13 55.74	-10 22.7	1.818	2.812	3.3	18.9
4 21	13 45.43	-22 47.7	1.870	2.862	3.9	18.6	4 21	13 45.54	-9 50.4	1.802	2.806	1.2	18.7
5 1	13 34.91	-22 31.6	1.870	2.853	5.5	18.7	5 1	13 35.50	-9 18.7	1.815	2.799	5.5	19.0
5 11	13 25.50	-22 7.6	1.897	2.843	8.8	18.9	5 11	13 26.63	-8 52.5	1.855	2.792	9.5	19.2
5 21	13 18.01	-21 41.2	1.949	2.832	12.1	19.0	5 21	13 19.66	-8 35.5	1.919	2.783	13.1	19.4
119934	2002 <i>GW</i> ₄		4 18.9 78°01	9°4/11.5	18		212819	2007 <i>UJ</i> ₂		4 18.9 154°79	4°0/15.1	18	
3 12	14 17.30	+13 43.7	1.832	2.649	14.8	19.3	3 12	14 14.78	-3 39.5	1.948	2.767	13.9	21.4
3 22	14 11.89	+14 50.0	1.791	2.670	12.3	19.1	3 22	14 10.06	-2 29.7	1.875	2.776	10.7	21.2
4 1	14 4.26	+15 45.3	1.772	2.691	10.3	19.0	4 1	14 3.19	-1 13.6	1.826	2.784	7.2	21.0
4 11	13 55.20	+16 21.8	1.777	2.712	9.4	19.0	4 11	13 54.82	+0 2.3	1.804	2.791	4.4	20.8
4 21	13 45.71	+16 34.2	1.808	2.733	10.1	19.1	4 21	13 45.82	+1 11.3	1.810	2.798	4.7	20.8
5 1	13 36.80	+16 20.2	1.863	2.754	11.9	19.3	5 1	13 37.16	+2 6.8	1.844	2.804	7.8	21.0
5 11	13 29.35	+15 40.8	1.941	2.775	14.1	19.5	5 11	13 29.72	+2 44.7	1.904	2.809	11.2	21.2
5 21	13 23.91	+14 39.8	2.038	2.795	16.2	19.7	5 21	13 24.10	+3 3.3	1.987	2.813	14.2	21.4
295372	2008 <i>HR</i> ₅₆		4 18.9 264°26	0°4/18.1	18		390109	2012 <i>VW</i> ₃₀		4 18.9 222°38	1°1/17.7	17	
3 12	14 3.32	-10 15.2	4.510	5.303	7.0	21.1	3 12	14 11.04	-9 40.4	2.397	3.202	12.1	21.7
3 22	14 0.19	-9 54.3	4.408	5.295	5.4	21.0	3 22	14 6.96	-9 12.5	2.303	3.196	9.3	21.5
4 1	13 56.18	-9 29.2	4.333	5.288	3.5	20.8	4 1	14 1.06	-8 36.7	2.234	3.191	6.2	21.2
4 11	13 51.57	-9 1.3	4.286	5.280	1.5	20.7	4 11	13 53.88	-7 55.7	2.191	3.185	2.7	21.0
4 21	13 46.68	-8 32.5	4.270	5.273	0.8	20.6	4 21	13 46.08	-7 13.6	2.177	3.179	1.6	20.9
5 1	13 41.85	-8 4.8	4.283	5.265	2.7	20.8	5 1	13 38.42	-6 34.6	2.192	3.173	5.0	21.1
5 11	13 37.43	-7 40.1	4.326	5.257	4.7	20.9	5 11	13 31.65	-6 2.7	2.235	3.167	8.4	21.3
5 21	13 33.71	-7 20.2	4.395	5.250	6.5	21.0	5 21	13 26.34	-5 41.1	2.302	3.160	11.4	21.5
52547	1996 <i>XQ</i> ₁		4 18.9 205°23	9°2/7.7	18		431444	2007 <i>RL</i> ₈₂		4 18.9 317°36	4°1/21.9	17	
3 12	14 12.78	+19 21.3	2.496	3.293	11.9	18.7	3 12	14 14.92	-21 55.5	1.996	2.764	15.4	21.6
3 22	14 8.14	+20 33.4	2.437	3.290	10.4	18.6	3 22	14 10.60	-22 31.3	1.903	2.761	12.7	21.4
4 1	14 1.72	+21 34.8	2.402	3.288	9.4	18.5	4 1	14 3.84	-22 52.6	1.830	2.758	9.5	21.1
4 11	13 54.10	+22 18.9	2.391	3.286	9.3	18.5	4 11	13 55.25	-22 58.1	1.782	2.755	6.1	20.9
4 21	13 45.99	+22 41.0	2.406	3.283	10.0	18.5	4 21	13 45.68	-22 48.4	1.760	2.753	4.1	20.8
5 1	13 38.14	+22 38.5	2.444	3.280	11.4	18.6	5 1	13 36.23	-22 26.1	1.766	2.750	5.6	20.9
5 11	13 31.28	+22 11.5	2.504	3.277	13.0	18.7	5 11	13 27.96	-21 56.4	1.798	2.747	8.9	21.1
5 21	13 25.93	+21 22.5	2.583	3.273	14.6	18.9	5 21	13 21.66	-21 25.1	1.854	2.745	12.2	21.3
435127	2007 <i>EE</i> ₈₈		4 18.9 57°08	15°2/4.9	18		138803						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
53196	1999 <i>CF</i> ₅₅		4 18.9 338°05	5°4/22.2	18	R	297724	2001 <i>WD</i> ₂₈		4 18.9 223°24	0°1/18.9	17	
3 12	14 18.34	-22 52.1	1.721	2.490	17.5	18.2	3 12	14 14.14	-15 14.1	1.754	2.556	15.9	20.6
3 22	14 13.75	-23 52.6	1.631	2.488	14.5	18.0	3 22	14 10.16	-14 30.6	1.659	2.548	12.5	20.4
4 1	14 6.23	-24 37.8	1.562	2.486	11.1	17.7	4 1	14 3.62	-13 29.4	1.585	2.539	8.5	20.1
4 11	13 56.41	-25 4.7	1.516	2.485	7.6	17.5	4 11	13 55.18	-12 13.7	1.536	2.529	3.9	19.8
4 21	13 45.35	-25 12.2	1.495	2.483	5.5	17.4	4 21	13 45.75	-10 49.3	1.514	2.519	1.1	19.6
5 1	13 34.39	-25 2.2	1.501	2.482	6.8	17.5	5 1	13 36.49	-9 24.1	1.521	2.508	6.0	19.9
5 11	13 24.85	-24 40.2	1.533	2.481	10.2	17.7	5 11	13 28.52	-8 6.6	1.554	2.496	10.6	20.1
5 21	13 17.71	-24 13.2	1.587	2.480	13.8	17.9	5 21	13 22.63	-7 3.4	1.610	2.484	14.7	20.3
292092	2006 <i>RT</i> ₃₉		4 18.9 192°47	1°7/16.9	17		523006	2016 <i>PP</i> ₁₂₁		4 18.9 205°03	0°1/18.8	17	
3 12	14 10.54	-7 7.6	2.810	3.614	10.5	22.0	3 12	14 12.55	-11 44.0	2.526	3.319	11.9	22.3
3 22	14 6.25	-6 32.6	2.719	3.612	8.1	21.8	3 22	14 8.04	-11 39.7	2.432	3.317	9.2	22.1
4 1	14 0.43	-5 51.9	2.652	3.610	5.3	21.6	4 1	14 1.76	-11 27.8	2.362	3.315	6.2	21.9
4 11	13 53.55	-5 8.8	2.614	3.607	2.5	21.4	4 11	13 54.20	-11 10.1	2.319	3.312	2.8	21.7
4 21	13 46.18	-4 26.6	2.606	3.604	2.2	21.4	4 21	13 46.04	-10 49.1	2.305	3.309	0.8	21.5
5 1	13 38.96	-3 49.2	2.627	3.600	4.8	21.6	5 1	13 38.01	-10 28.1	2.321	3.307	4.3	21.8
5 11	13 32.50	-3 19.9	2.676	3.596	7.7	21.8	5 11	13 30.86	-10 10.5	2.364	3.304	7.6	22.0
5 21	13 27.27	-3 0.7	2.750	3.592	10.3	21.9	5 21	13 25.13	-9 59.1	2.433	3.300	10.6	22.2
24553	2590 <i>P-L</i>		4 18.9 309°72	1°3/19.6	18		110576	2001 <i>TX</i> ₁₁₆		4 18.9 140°76	1°3/17.9	18	
3 12	14 13.13	-14 20.8	1.451	2.271	17.8	18.6	3 12	14 16.08	-8 34.6	1.981	2.789	14.1	19.1
3 22	14 10.10	-14 34.1	1.354	2.252	14.2	18.3	3 22	14 11.14	-8 23.3	1.901	2.795	10.9	18.9
4 1	14 4.04	-14 33.7	1.277	2.233	9.9	18.0	4 1	14 3.98	-8 4.6	1.844	2.801	7.2	18.7
4 11	13 55.52	-14 20.4	1.222	2.214	4.9	17.7	4 11	13 55.23	-7 41.7	1.813	2.807	3.2	18.5
4 21	13 45.59	-13 56.9	1.192	2.196	1.5	17.4	4 21	13 45.77	-7 18.3	1.810	2.812	1.8	18.4
5 1	13 35.62	-13 28.4	1.188	2.179	6.5	17.7	5 1	13 36.58	-6 58.5	1.835	2.817	5.7	18.6
5 11	13 27.07	-13 1.7	1.207	2.162	11.7	17.9	5 11	13 28.60	-6 46.3	1.888	2.822	9.5	18.9
5 21	13 20.99	-12 43.0	1.248	2.145	16.4	18.1	5 21	13 22.48	-6 44.3	1.964	2.826	12.9	19.1
102769	1999 <i>VW</i> ₁₃₉		4 18.9 306°46	1°3/19.7	17		54628	2000 <i>SB</i> ₈₁		4 18.9 34°03	1°3/17.5	18	
3 12	14 10.92	-15 52.9	1.405	2.226	18.2	19.6	3 12	14 8.30	-7 49.1	2.696	3.505	10.8	18.5
3 22	14 8.51	-15 48.6	1.305	2.203	14.6	19.3	3 22	14 4.56	-7 30.5	2.617	3.513	8.3	18.3
4 1	14 3.05	-15 26.3	1.223	2.180	10.2	19.0	4 1	13 59.32	-7 6.8	2.563	3.521	5.4	18.1
4 11	13 55.11	-14 46.9	1.165	2.157	5.1	18.6	4 11	13 53.06	-6 40.6	2.536	3.530	2.5	17.9
4 21	13 45.70	-13 54.2	1.130	2.134	1.5	18.3	4 21	13 46.37	-6 14.9	2.537	3.538	1.7	17.9
5 1	13 36.22	-12 55.1	1.120	2.112	6.7	18.6	5 1	13 39.86	-5 53.0	2.568	3.547	4.5	18.1
5 11	13 28.14	-11 58.6	1.134	2.090	12.1	18.8	5 11	13 34.16	-5 37.6	2.626	3.556	7.4	18.3
5 21	13 22.57	-11 13.0	1.168	2.069	17.1	19.0	5 21	13 29.69	-5 30.8	2.709	3.566	9.9	18.5
365048	2008 <i>UV</i> ₃₇₀		4 18.9 23°17	3°3/21.3	18		366012	2012 <i>BR</i> ₁₂₆		4 18.9 103°77	3°3/16.1	18	
3 12	14 9.38	-21 6.6	1.193	2.013	20.9	20.0	3 12	14 13.72	-6 42.0	1.661	2.488	15.6	21.3
3 22	14 7.40	-20 59.6	1.126	2.019	16.9	19.8	3 22	14 9.56	-5 37.2	1.596	2.502	11.9	21.1
4 1	14 2.18	-20 26.3	1.077	2.026	12.1	19.5	4 1	14 3.00	-4 23.2	1.554	2.516	7.9	20.9
4 11	13 54.58	-19 28.1	1.048	2.034	6.9	19.3	4 11	13 54.79	-3 6.6	1.537	2.529	4.1	20.7
4 21	13 45.90	-18 10.4	1.042	2.043	3.3	19.1	4 21	13 45.92	-1 54.9	1.547	2.542	4.0	20.7
5 1	13 37.69	-16 42.9	1.060	2.053	6.6	19.3	5 1	13 37.48	-0 55.4	1.584	2.555	7.7	21.0
5 11	13 31.35	-15 17.6	1.101	2.063	11.6	19.6	5 11	13 30.46	-0 13.4	1.646	2.567	11.6	21.2
5 21	13 27.72	-14 4.5	1.162	2.075	16.2	19.9	5 21	13 25.50	+0 8.7	1.730	2.579	15.0	21.5
58162	1989 <i>TS</i> ₆		4 18.9 103°57	0°7/18.4	18		415991	2002 <i>AU</i> ₄₃		4 18.9 70°80	1°3/19.9	17	
3 12	14 19.61	-9 10.9	1.834	2.638	15.2	19.6	3 12	14 13.44	-17 2.0	1.728	2.527	16.3	21.5
3 22	14 13.99	-9 20.4	1.760	2.651	11.8	19.4	3 22	14 9.37	-16 45.3	1.660	2.544	12.8	21.3
4 1	14 5.91	-9 22.8	1.708	2.664	7.8	19.1	4 1	14 2.89	-16 12.7	1.613	2.562	8.8	21.1
4 11	13 56.09	-9 20.2	1.683	2.677	3.5	18.9	4 11	13 54.75	-15 26.7	1.590	2.580	4.4	20.9
4 21	13 45.51	-9 15.6	1.686	2.689	1.3	18.8	4 21	13 45.94	-14 31.6	1.594	2.598	1.4	20.7
5 1	13 35.31	-9 12.5	1.717	2.702	5.7	19.1	5 1	13 37.56	-13 33.9	1.626	2.616	5.2	21.0
5 11	13 26.51	-9 14.4	1.775	2.713	9.7	19.4	5 11	13 30.59	-12 40.3	1.684	2.634	9.3	21.3
5 21	13 19.81	-9 23.9	1.857	2.725	13.3	19.6	5 21	13 25.68	-11 56.2	1.765	2.652	13.0	21.5
69606	1998 <i>FX</i> ₄₀		4 18.9 328°88	3°0/16.7	17		466399	2013 <i>SQ</i> ₆₁		4 18.9 296°69	0°5/19.2	17	
3 12	14 8.76	-8 48.9	1.309	2.155	17.8	18.9	3 12	14 11.74	-14 25.5	1.582	2.398	16.7	22.0
3 22	14 6.64	-7 53.0	1.229	2.145	13.8	18.6	3 22	14 8.73	-14 11.7	1.481	2.378	13.3	21.7
4 1	14 1.61	-6 41.7	1.168	2.135	9.2	18.3	4 1	14 2.96	-13 42.0	1.401	2.358	9.1	21.4
4 11	13 54.35	-5 21.5	1.131	2.126	4.4	18.0	4 11	13 55.00	-12 58.6	1.345	2.338	4.3	21.1
4 21	13 45.96	-4 1.5	1.118	2.117	3.9	17.9	4 21	13 45.81	-12 5.7	1.314	2.318	1.1	20.8
5 1	13 37.80	-2 51.8	1.129	2.110	8.7	18.2	5 1	13 36.63	-11 9.7	1.309	2.299	6.3	21.1
5 11	13 31.17	-2 1.1	1.163	2.102	13.6	18.4	5 11	13 28.73	-10 18.7	1.329	2.279	11.3	21.3
5 21	13 26.98	-1 33.9	1.217	2.096	18.1	18.7	5 21	13 23.07	-9 39.2	1.371	2.260	15.8	21.5
338216	2002 <i>SE</i> ₇₀		4 18.9 231°96	1°5/20.2	17		480753	2016 <i>NS</i> ₄₀		4 18.9 183°15	4°5/13.1	18	
3 12	14 12.93	-16 47.5	2.244	3.028	13.5	21.5	3 12	14 9.38	+3 13.3	2.820	3.638	10.1	22.2
3 22	14 8.66	-16 49.7	2.148	3.023	10.7	21.3	3 22	14 5.32	+4 14.3	2.743	3.638	7.9	22.1
4 1	14 2.34	-16 40.1	2.074	3.018	7.5	21.1	4 1	13 59.81	+5 15.3	2.691	3.638	5.8	21.9
4 11	13 54.51	-16 19.7	2.025	3.013	3.9	20.9	4 11	13 53.29	+6 11.7	2.667	3.638	4.6	21.8
4 21	13 45.93	-15 50.7	2.005	3.008	1.6	20.7	4 21	13 46.34	+6 59.0	2.672	3.637	5.2	21.9
5 1	13 37.48	-15 17.0	2.013	3.002	4.5	20.9	5 1	13 39.55	+7 33.4	2.705	3.636	7.0	22.0
5 11	13 30.02	-14 43.2	2.049	2.997	8.1	21.1	5 11	13 33.53	+7 52.9	2.764	3.634	9.3	22.1
5 21	13 24.20	-14 13.7	2.110	2.991	11.4	21.3	5 21	13 28.70	+7 56.8	2.846	3.633	11.4	22.3
382633	2002 <i>QP</i> ₇₅		4 18.9 141°00	15°8/3.8	18		498065	2007 <i>RF</i> ₁₃₃		4 18.9 276°41	3°3/20.6	17	
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
101771	1999 <i>FB</i> ₅₈		4 18.9 150°38'	6°1/23.7	18	R	13314	1998 <i>RH</i> ₇₁		4 18.9 212°95'	0°4/18.5	18	
3 12	14 18.96	-27 44.0	2.046	2.777	16.2	19.5	3 12	14 13.08	-11 28.0	2.568	3.360	11.7	19.1
3 22	14 13.80	-28 34.3	1.956	2.782	13.7	19.4	3 22	14 8.46	-11 9.4	2.468	3.353	9.1	18.9
4 1	14 6.03	-29 7.0	1.887	2.787	10.8	19.2	4 1	14 2.07	-10 42.5	2.392	3.345	6.1	18.7
4 11	13 56.28	-29 19.4	1.841	2.792	8.0	19.0	4 11	13 54.39	-10 9.6	2.343	3.337	2.7	18.5
4 21	13 45.51	-29 10.7	1.821	2.796	6.2	18.9	4 21	13 46.07	-9 33.6	2.324	3.328	1.0	18.3
5 1	13 34.91	-28 43.0	1.829	2.800	6.8	19.0	5 1	13 37.87	-8 58.5	2.335	3.319	4.5	18.5
5 11	13 25.62	-28 2.0	1.863	2.803	9.2	19.1	5 11	13 30.51	-8 28.0	2.374	3.309	7.8	18.7
5 21	13 18.46	-27 14.8	1.922	2.807	12.1	19.3	5 21	13 24.55	-8 5.4	2.438	3.298	10.8	18.9
208447	2001 <i>TT</i> ₁₄₇		4 18.9 223°47'	2°9/15.6	18		212601	2006 <i>SO</i> ₂₇₃		4 18.9 144°29'	0°4/18.4	18	
3 12	14 9.47	-4 50.0	2.475	3.291	11.4	20.5	3 12	14 12.54	-10 33.6	2.656	3.450	11.3	21.1
3 22	14 5.67	-3 54.4	2.385	3.285	8.8	20.3	3 22	14 7.88	-10 24.1	2.570	3.456	8.8	20.9
4 1	14 0.19	-2 53.0	2.320	3.279	5.9	20.1	4 1	14 1.57	-10 8.0	2.509	3.462	5.8	20.8
4 11	13 53.52	-1 50.1	2.282	3.272	3.3	19.9	4 11	13 54.12	-9 47.1	2.475	3.468	2.6	20.5
4 21	13 46.28	-0 50.7	2.274	3.265	3.4	19.9	4 21	13 46.16	-9 24.4	2.470	3.474	1.0	20.4
5 1	13 39.20	+0 0.4	2.294	3.258	6.1	20.0	5 1	13 38.38	-9 2.8	2.495	3.479	4.2	20.7
5 11	13 32.96	+0 39.2	2.341	3.251	9.1	20.2	5 11	13 31.46	-8 45.6	2.549	3.484	7.3	20.9
5 21	13 28.07	+1 3.5	2.412	3.243	11.8	20.4	5 21	13 25.90	-8 35.1	2.628	3.489	10.1	21.1
33004	Dianesipiera		4 18.9 282°74'	4°8/23.4	18		403144	2008 <i>ED</i> ₁₆₂		4 18.9 239°79'	1°6/15.9	17	
3 12	14 12.83	-26 27.0	2.371	3.109	14.1	19.3	3 12	14 3.49	-3 46.1	4.580	5.387	6.7	21.6
3 22	14 8.71	-26 58.0	2.269	3.102	11.8	19.2	3 22	14 0.31	-3 19.6	4.487	5.382	5.1	21.4
4 1	14 2.47	-27 13.7	2.188	3.096	9.2	19.0	4 1	13 56.29	-2 51.0	4.421	5.377	3.4	21.3
4 11	13 54.64	-27 12.6	2.131	3.089	6.6	18.8	4 11	13 51.69	-2 22.5	4.383	5.372	1.9	21.2
4 21	13 45.96	-26 54.7	2.101	3.082	4.9	18.7	4 21	13 46.82	-1 56.0	4.375	5.367	1.9	21.2
5 1	13 37.36	-26 22.6	2.098	3.075	5.6	18.7	5 1	13 42.03	-1 33.5	4.398	5.363	3.4	21.3
5 11	13 29.73	-25 40.8	2.123	3.068	8.0	18.8	5 11	13 37.64	-1 16.5	4.448	5.358	5.2	21.4
5 21	13 23.78	-24 55.0	2.172	3.061	10.8	19.0	5 21	13 33.93	-1 6.2	4.525	5.352	6.8	21.5
96546	1998 <i>SO</i> ₅₅		4 18.9 197°86'	0°7/19.6	18		375282	2008 <i>KH</i> ₂		4 18.9 237°32'	4°3/14.2	17	
3 12	14 12.71	-15 2.5	2.271	3.060	13.1	20.1	3 12	14 11.56	-2 31.2	2.154	2.977	12.7	21.8
3 22	14 8.41	-14 51.4	2.177	3.058	10.4	19.9	3 22	14 7.61	-1 11.6	2.061	2.963	9.8	21.6
4 1	14 2.14	-14 29.0	2.107	3.056	7.1	19.7	4 1	14 1.67	+0 14.8	1.992	2.949	6.8	21.4
4 11	13 54.43	-13 57.1	2.063	3.054	3.4	19.4	4 11	13 54.26	+1 41.9	1.950	2.934	4.5	21.2
4 21	13 46.04	-13 18.7	2.047	3.051	0.9	19.2	4 21	13 46.11	+3 2.8	1.937	2.919	5.1	21.2
5 1	13 37.80	-12 38.0	2.060	3.048	4.5	19.5	5 1	13 38.08	+4 10.7	1.952	2.903	8.0	21.3
5 11	13 30.56	-11 59.9	2.101	3.045	8.1	19.7	5 11	13 31.02	+5 0.6	1.993	2.887	11.2	21.5
5 21	13 24.92	-11 28.4	2.167	3.042	11.4	19.9	5 21	13 25.55	+5 30.2	2.056	2.870	14.2	21.7
266124	2006 <i>SG</i> ₄₁₃		4 18.9 169°46'	5°1/14.3	18		298756	2004 <i>HD</i> ₄₅		4 18.9 311°63'	0°3/19.2	18	
3 12	14 15.92	+1 36.1	2.088	2.906	13.1	21.6	3 12	14 6.98	-16 58.8	2.019	2.820	14.2	20.4
3 22	14 10.84	+2 31.3	2.014	2.911	10.3	21.4	3 22	14 4.32	-16 3.9	1.916	2.805	11.2	20.1
4 1	14 3.69	+3 27.6	1.963	2.914	7.3	21.2	4 1	13 59.60	-14 50.9	1.836	2.789	7.6	19.9
4 11	13 55.10	+4 18.9	1.940	2.918	5.3	21.1	4 11	13 53.36	-13 23.1	1.782	2.775	3.6	19.6
4 21	13 45.87	+4 59.6	1.944	2.920	5.8	21.1	4 21	13 46.35	-11 45.7	1.755	2.760	0.8	19.4
5 1	13 36.93	+5 24.8	1.976	2.922	8.3	21.3	5 1	13 39.47	-10 6.4	1.757	2.746	5.1	19.6
5 11	13 29.14	+5 32.2	2.034	2.923	11.3	21.5	5 11	13 33.60	-8 33.3	1.786	2.732	9.2	19.9
5 21	13 23.10	+5 21.3	2.115	2.923	14.1	21.7	5 21	13 29.39	-7 13.0	1.839	2.718	12.9	20.1
252290	2001 <i>QZ</i> ₃₀₉		4 18.9 62°51'	1°7/17.6	18		287588	2003 <i>FX</i> ₁₀₅		4 18.9 19°05'	1°8/17.9	17	
3 12	14 14.47	-8 59.2	1.552	2.377	16.6	20.0	3 12	14 14.79	-6 46.8	1.283	2.124	18.4	20.0
3 22	14 10.30	-8 30.9	1.491	2.395	12.7	19.8	3 22	14 11.20	-6 58.5	1.219	2.131	14.3	19.8
4 1	14 3.56	-7 52.8	1.451	2.412	8.3	19.6	4 1	14 4.54	-7 3.6	1.175	2.139	9.5	19.5
4 11	13 55.07	-7 9.4	1.436	2.430	3.7	19.4	4 11	13 55.64	-7 5.7	1.153	2.149	4.3	19.3
4 21	13 45.89	-6 26.6	1.447	2.448	2.4	19.3	4 21	13 45.76	-7 8.9	1.156	2.159	2.5	19.2
5 1	13 37.21	-5 50.6	1.484	2.467	6.7	19.6	5 1	13 36.34	-7 17.4	1.184	2.171	7.4	19.5
5 11	13 30.06	-5 26.4	1.547	2.485	11.0	19.9	5 11	13 28.70	-7 35.1	1.236	2.183	12.2	19.8
5 21	13 25.11	-5 16.8	1.631	2.503	14.6	20.2	5 21	13 23.67	-8 3.7	1.308	2.197	16.4	20.1
463090	2011 <i>SF</i> ₂₂₃		4 18.9 159°47'	0°8/18.2	18		388409	2006 <i>WG</i> ₉₃		4 18.9 4°92'	4°6/14.8	18	
3 12	14 14.78	-13 6.5	1.720	2.528	15.9	21.8	3 12	14 12.22	+1 39.3	2.198	3.021	12.4	21.0
3 22	14 10.50	-12 17.5	1.640	2.534	12.4	21.5	3 22	14 7.94	+2 12.2	2.121	3.021	9.7	20.8
4 1	14 3.73	-11 13.3	1.582	2.539	8.2	21.3	4 1	14 1.75	+2 45.1	2.068	3.022	6.9	20.6
4 11	13 55.19	-9 58.2	1.549	2.544	3.6	21.0	4 11	13 54.24	+3 13.1	2.041	3.022	4.8	20.5
4 21	13 45.84	-8 38.6	1.544	2.547	1.6	20.9	4 21	13 46.13	+3 31.8	2.042	3.022	5.1	20.5
5 1	13 36.83	-7 22.4	1.567	2.551	6.2	21.2	5 1	13 38.26	+3 37.6	2.071	3.023	7.5	20.6
5 11	13 29.20	-6 17.1	1.616	2.553	10.6	21.4	5 11	13 31.41	+3 28.4	2.125	3.024	10.4	20.8
5 21	13 23.66	-5 27.8	1.687	2.556	14.4	21.7	5 21	13 26.13	+3 4.1	2.201	3.025	13.1	21.0
5832	Martaprincipe		4 18.9 183°63'	12°9/ 2.5	18		469397	2001 <i>TJ</i> ₂₁₅		4 18.9 262°94'	3°0/21.8	18	
3 12	14 16.10	+28 17.4	2.166	2.936	14.3	17.1	3 12	14 14.76	-21 57.4	2.697	3.445	12.3	22.1
3 22	14 11.11	+30 3.7	2.126	2.936	13.3	17.1	3 22	14 10.00	-22 13.1	2.572	3.419	10.1	21.9
4 1	14 3.90	+31 31.3	2.108	2.936	12.9	17.0	4 1	14 3.27	-22 16.7	2.469	3.393	7.5	21.7
4 11	13 55.18	+32 31.9	2.111	2.936	13.1	17.0	4 11	13 55.03	-22 7.7	2.392	3.365	4.8	21.4
4 21	13 45.86	+33 0.1	2.136	2.935	14.0	17.1	4 21	13 45.90	-21 46.6	2.344	3.338	3.1	21.3
5 1	13 36.95	+32 53.6	2.181	2.934	15.2	17.2	5 1	13 36.68	-21 15.6	2.325	3.309	4.5	21.3
5 11	13 29.34	+32 14.4	2.243	2.932	16.6	17.3	5 11	13 28.22	-20 38.8	2.335	3.280	7.4	21.5
5 21	13 23.64	+31 6.9	2.320	2.930	17.8	17.4	5 21	13 21.18	-20 0.8	2.371	3.251	10.4	21.6
8928	1996 <i>YH</i> ₂		4 18.9 155°13'	1°2/17.9	18		346171	2007 <i>VG</i> ₃₂₅		4 18.9 348°73'	3°6/16.1	17	
3 12	14 16.11	-9 42.1	1.807	2.61									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
237392	1997 <i>JH</i> ₄		4 18.9 312°54	2°2/17.7	18		179453	2002 <i>AV</i> ₁₇₁		4 18.9 177°53	2°2/16.4	18	
3 12	14 14.18	- 7 36.3	1.237	2.080	18.9	20.2	3 12	14 10.65	- 4 58.1	2.830	3.637	10.4	21.1
3 22	14 11.25	- 7 26.3	1.152	2.066	14.8	19.9	3 22	14 6.33	- 4 24.3	2.743	3.638	8.0	21.0
4 1	14 4.99	- 7 6.3	1.086	2.051	9.9	19.6	4 1	14 0.50	- 3 46.3	2.682	3.639	5.3	20.8
4 11	13 56.05	- 6 40.6	1.042	2.038	4.6	19.2	4 11	13 53.65	- 3 7.6	2.649	3.640	2.8	20.6
4 21	13 45.62	- 6 15.1	1.022	2.024	3.0	19.1	4 21	13 46.34	- 2 31.4	2.646	3.640	2.6	20.6
5 1	13 35.28	- 5 56.8	1.026	2.012	8.4	19.4	5 1	13 39.18	- 2 1.4	2.672	3.640	5.1	20.8
5 11	13 26.61	- 5 51.9	1.053	1.999	13.9	19.6	5 11	13 32.79	- 1 40.3	2.725	3.640	7.8	20.9
5 21	13 20.73	- 6 4.1	1.098	1.988	18.8	19.9	5 21	13 27.63	- 1 29.9	2.804	3.639	10.3	21.1
284378	2006 <i>SL</i> ₂₉₁		4 18.9 156°74	7°8/6.5	18		357716	2005 <i>QG</i> ₆₃		4 18.9 232°55	2°0/20.8	17	
3 12	14 10.76	+19 23.9	3.109	3.899	9.9	21.7	3 12	14 12.73	-18 15.0	2.559	3.330	12.3	21.4
3 22	14 6.26	+20 49.2	3.060	3.907	8.7	21.6	3 22	14 8.31	-18 24.9	2.458	3.324	9.9	21.2
4 1	14 0.36	+22 5.4	3.037	3.915	7.9	21.5	4 1	14 2.04	-18 24.1	2.380	3.318	7.0	21.0
4 11	13 53.55	+23 7.1	3.040	3.922	7.9	21.5	4 11	13 54.42	-18 12.9	2.328	3.312	4.0	20.8
4 21	13 46.35	+23 50.3	3.069	3.928	8.6	21.6	4 21	13 46.12	-17 52.9	2.305	3.305	2.0	20.6
5 1	13 39.38	+24 12.7	3.122	3.934	9.8	21.7	5 1	13 37.90	-17 26.9	2.311	3.299	4.1	20.8
5 11	13 33.18	+24 14.0	3.198	3.940	11.1	21.8	5 11	13 30.55	-16 59.0	2.345	3.292	7.2	21.0
5 21	13 28.17	+23 55.7	3.292	3.945	12.3	21.9	5 21	13 24.65	-16 33.0	2.404	3.285	10.2	21.1
58503	1996 <i>VJ</i> ₃		4 18.9 119°62	2°2/16.9	18		189861	2003 <i>HW</i> ₃₄		4 18.9 299°66	1°3/17.8	17	
3 12	14 13.55	- 5 1.0	2.282	3.094	12.4	19.9	3 12	14 11.12	-10 29.7	1.723	2.545	15.3	20.3
3 22	14 8.91	- 4 45.5	2.201	3.097	9.5	19.7	3 22	14 7.82	- 9 55.8	1.634	2.536	11.9	20.0
4 1	14 2.38	- 4 26.1	2.143	3.101	6.3	19.5	4 1	14 2.08	- 9 9.8	1.566	2.527	7.9	19.7
4 11	13 54.53	- 4 5.9	2.112	3.104	3.2	19.3	4 11	13 54.54	- 8 15.6	1.524	2.519	3.5	19.5
4 21	13 46.08	- 3 48.4	2.110	3.108	2.7	19.3	4 21	13 46.08	- 7 18.9	1.508	2.510	2.0	19.3
5 1	13 37.85	- 3 37.2	2.136	3.111	5.7	19.5	5 1	13 37.79	- 6 26.2	1.519	2.502	6.4	19.6
5 11	13 30.62	- 3 35.1	2.190	3.114	9.0	19.7	5 11	13 30.73	- 5 43.9	1.555	2.494	10.8	19.8
5 21	13 24.96	- 3 43.5	2.268	3.117	11.9	19.9	5 21	13 25.66	- 5 16.5	1.613	2.486	14.7	20.0
134299	2006 <i>DW</i> ₇₃		4 18.9 110°11	2°7/16.9	18		65479	2003 <i>AP</i> ₇₅		4 18.9 152°96	1°7/20.8	18	
3 12	14 14.01	- 8 7.4	1.465	2.297	17.1	20.3	3 12	14 14.08	-18 20.9	2.941	3.700	11.1	20.5
3 22	14 10.28	- 7 19.4	1.393	2.301	13.2	20.1	3 22	14 8.97	-18 25.7	2.849	3.709	8.9	20.3
4 1	14 3.78	- 6 19.8	1.341	2.304	8.7	19.8	4 1	14 2.27	-18 20.6	2.782	3.718	6.3	20.2
4 11	13 55.28	- 5 14.5	1.314	2.308	4.1	19.6	4 11	13 54.46	-18 6.3	2.742	3.725	3.5	20.0
4 21	13 45.87	- 4 11.0	1.312	2.312	3.5	19.5	4 21	13 46.13	-17 44.4	2.732	3.733	1.7	19.9
5 1	13 36.83	- 3 17.4	1.337	2.315	7.8	19.8	5 1	13 37.98	-17 17.6	2.753	3.740	3.6	20.0
5 11	13 29.34	- 2 40.1	1.385	2.318	12.4	20.1	5 11	13 30.64	-16 49.3	2.802	3.746	6.4	20.2
5 21	13 24.18	- 2 22.4	1.455	2.322	16.3	20.3	5 21	13 24.60	-16 23.0	2.878	3.752	8.9	20.4
497542	2006 <i>CY</i> ₂₂		4 18.9 185°82	10°4/28.8	17		301994	2000 <i>QJ</i> ₅₃		4 18.9 248°80	2°9/15.5	16	
3 12	14 24.91	-43 39.5	2.562	3.161	16.0	22.4	3 12	14 9.77	- 3 58.0	2.612	3.426	10.9	21.5
3 22	14 18.76	-45 9.0	2.463	3.161	14.6	22.3	3 22	14 5.89	- 3 5.9	2.512	3.411	8.4	21.3
4 1	14 9.63	-46 18.9	2.383	3.161	13.1	22.2	4 1	14 0.36	- 2 8.6	2.438	3.395	5.7	21.1
4 11	13 58.07	-47 3.3	2.323	3.160	11.7	22.0	4 11	13 53.65	- 1 10.1	2.391	3.380	3.3	21.0
4 21	13 45.07	-47 18.2	2.286	3.158	10.7	22.0	4 21	13 46.34	- 0 15.0	2.373	3.363	3.5	20.9
5 1	13 31.98	-47 3.0	2.273	3.156	10.4	21.9	5 1	13 39.12	+ 0 31.9	2.385	3.347	6.1	21.1
5 11	13 20.17	-46 21.4	2.285	3.153	11.0	22.0	5 11	13 32.66	+ 1 7.1	2.423	3.330	9.0	21.2
5 21	13 10.71	-45 20.5	2.320	3.150	12.3	22.1	5 21	13 27.49	+ 1 28.2	2.485	3.312	11.7	21.4
503959	2004 <i>PO</i> ₆₉		4 18.9 237°38	1°6/20.4	18		495840	2001 <i>WE</i> ₂₇		4 18.9 192°07	5°6/13.3	17	
3 12	14 14.97	-17 41.3	2.412	3.183	13.0	22.3	3 12	14 17.01	+ 6 26.0	2.545	3.351	11.4	22.2
3 22	14 10.23	-17 38.4	2.299	3.167	10.4	22.1	3 22	14 11.36	+ 7 12.8	2.464	3.349	9.1	22.0
4 1	14 3.44	-17 23.4	2.210	3.150	7.3	21.8	4 1	14 3.92	+ 7 57.0	2.408	3.346	7.0	21.8
4 11	13 55.10	-16 57.0	2.147	3.133	3.9	21.6	4 11	13 55.21	+ 8 33.5	2.380	3.342	5.6	21.8
4 21	13 45.91	-16 21.1	2.112	3.114	1.6	21.4	4 21	13 45.94	+ 8 57.9	2.380	3.338	6.2	21.8
5 1	13 36.74	-15 39.3	2.107	3.095	4.4	21.6	5 1	13 36.88	+ 9 6.7	2.409	3.333	8.1	21.9
5 11	13 28.46	-14 56.6	2.131	3.076	8.0	21.7	5 11	13 28.76	+ 8 58.4	2.464	3.327	10.5	22.0
5 21	13 21.77	-14 17.7	2.180	3.055	11.3	21.9	5 21	13 22.15	+ 8 33.5	2.543	3.320	12.8	22.2
285002	2010 <i>TU</i> ₁₃₁		4 18.9 122°89	6°4/12.9	18		222802	2002 <i>CC</i> ₂₃₃		4 18.9 112°72	3°2/15.9	18	
3 12	14 14.05	- 7 14.7	1.234	2.078	18.8	20.4	3 12	14 12.90	- 5 6.3	1.997	2.817	13.6	21.0
3 22	14 10.57	- 4 20.4	1.174	2.090	14.4	20.2	3 22	14 8.56	- 4 9.6	1.929	2.831	10.4	20.9
4 1	14 4.04	- 1 6.5	1.137	2.101	9.7	19.9	4 1	14 2.20	- 3 6.7	1.885	2.845	6.9	20.7
4 11	13 55.38	+ 2 10.7	1.126	2.112	6.5	19.8	4 11	13 54.45	- 2 3.0	1.867	2.858	3.8	20.5
4 21	13 45.88	+ 5 12.6	1.142	2.123	8.1	19.9	4 21	13 46.16	- 1 4.5	1.877	2.870	3.8	20.5
5 1	13 36.97	+ 7 42.8	1.184	2.132	12.3	20.1	5 1	13 38.21	+ 0 16.8	1.916	2.883	6.9	20.7
5 11	13 29.91	+ 9 32.1	1.249	2.141	16.6	20.4	5 11	13 31.43	+ 0 16.0	1.980	2.895	10.3	20.9
5 21	13 25.43	+10 39.3	1.332	2.150	20.3	20.7	5 21	13 26.38	+ 0 32.2	2.067	2.906	13.3	21.2
225897	2001 <i>YH</i> ₁₅₅		4 18.9 260°93	7°4/24.7	18		125737	2001 <i>XB</i> ₁₁₆		4 18.9 59°88	9°0/11.9	18	
3 12	14 18.77	-32 9.0	2.256	2.956	15.7	20.4	3 12	14 15.52	+10 49.1	1.728	2.555	15.1	19.3
3 22	14 13.92	-32 58.8	2.133	2.931	13.7	20.2	3 22	14 10.91	+11 52.6	1.671	2.561	12.4	19.1
4 1	14 6.37	-33 31.0	2.029	2.905	11.4	20.0	4 1	14 3.90	+12 48.3	1.636	2.568	10.1	19.0
4 11	13 56.61	-33 41.5	1.948	2.878	9.0	19.8	4 11	13 55.25	+13 27.9	1.625	2.574	9.0	18.9
4 21	13 45.48	-33 27.8	1.892	2.850	7.5	19.6	4 21	13 45.95	+13 44.9	1.639	2.581	9.7	19.0
5 1	13 34.12	-32 50.6	1.863	2.822	7.8	19.6	5 1	13 37.09	+13 35.9	1.677	2.588	11.9	19.1
5 11	13 23.79	-31 54.5	1.861	2.792	9.8	19.6	5 11	13 29.66	+13 0.7	1.738	2.595	14.5	19.3
5 21	13 15.48	-30 47.0	1.884	2.763	12.6	19.7	5 21	13 24.27	+12 2.5	1.818	2.602	16.9	19.5
203850	2002 <i>VW</i> ₉₆		4 18.9 135°15	4°3/14.9	18		423831	2006 <i>OY</i> ₂					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V	
362947	2013 AX ₂₇	4 18.9 160°24' 6°0/11.3 18						356877	2011 WN ₁₁₉	4 18.9 219°44' 4°2/14.3 18				
3 12	14 9.72	+ 8 19.9	2.689	3.507	10.5	20.5	3 12	14 11.21	+ 2 2.8	2.631	3.447	10.8	21.1	
3 22	14 5.66	+ 9 29.1	2.622	3.511	8.5	20.4	3 22	14 6.89	+ 2 42.1	2.547	3.443	8.4	20.9	
4 1	14 0.08	+10 35.1	2.581	3.514	6.8	20.3	4 1	14 0.96	+ 3 21.5	2.488	3.439	6.0	20.7	
4 11	13 53.47	+11 32.3	2.566	3.517	6.0	20.2	4 11	13 53.90	+ 3 56.7	2.457	3.434	4.4	20.6	
4 21	13 46.42	+12 16.2	2.579	3.520	6.7	20.3	4 21	13 46.33	+ 4 23.8	2.454	3.430	4.7	20.6	
5 1	13 39.58	+12 43.2	2.619	3.522	8.4	20.4	5 1	13 38.92	+ 4 39.3	2.479	3.425	6.9	20.8	
5 11	13 33.56	+12 51.8	2.684	3.524	10.4	20.5	5 11	13 32.33	+ 4 41.1	2.531	3.420	9.4	20.9	
5 21	13 28.82	+12 42.3	2.770	3.526	12.3	20.7	5 21	13 27.05	+ 4 28.8	2.606	3.415	11.7	21.1	
405001	2000 SY ₃₃₄	4 18.9 215°71' 1°9/17.4 14 C						192027	2005 YG ₂₀₁	4 18.9 288°65' 8°6/10.6 17				
3 12	14 17.66	- 7 45.3	1.943	2.750	14.4	22.3	3 12	14 11.62	+ 8 35.0	1.814	2.647	14.2	19.9	
3 22	14 12.62	- 7 20.7	1.848	2.742	11.2	22.0	3 22	14 8.09	+10 2.4	1.732	2.629	11.7	19.7	
4 1	14 5.17	- 6 47.9	1.776	2.733	7.5	21.8	4 1	14 2.23	+11 27.6	1.673	2.611	9.5	19.5	
4 11	13 55.92	- 6 10.7	1.730	2.724	3.5	21.5	4 11	13 54.62	+12 41.6	1.639	2.592	8.6	19.4	
4 21	13 45.75	- 5 33.5	1.713	2.713	2.5	21.4	4 21	13 46.12	+13 36.0	1.630	2.573	9.7	19.4	
5 1	13 35.71	- 5 1.6	1.724	2.702	6.4	21.6	5 1	13 37.76	+14 4.4	1.646	2.555	12.1	19.5	
5 11	13 26.84	- 4 39.7	1.762	2.690	10.5	21.8	5 11	13 30.55	+14 4.1	1.683	2.536	15.0	19.7	
5 21	13 19.90	- 4 30.8	1.823	2.677	14.1	22.0	5 21	13 25.23	+13 36.3	1.739	2.518	17.8	19.8	
135541	2002 CL ₂₅₁	4 18.9 22°58' 2°5/17.5 18						180495	2004 CL ₈₄	4 18.9 173°84' 3°2/15.6 16				
3 12	14 15.53	- 6 51.7	1.274	2.114	18.6	20.1	3 12	14 14.71	- 4 13.2	2.297	3.107	12.4	21.6	
3 22	14 11.89	- 6 39.8	1.205	2.117	14.5	19.8	3 22	14 9.79	- 3 15.8	2.215	3.111	9.5	21.4	
4 1	14 5.10	- 6 19.3	1.156	2.121	9.6	19.6	4 1	14 2.97	- 2 12.7	2.157	3.114	6.4	21.2	
4 11	13 55.97	- 5 55.2	1.130	2.125	4.5	19.3	4 11	13 54.83	- 1 8.9	2.128	3.116	3.7	21.1	
4 21	13 45.75	- 5 33.2	1.128	2.129	3.2	19.2	4 21	13 46.10	- 0 9.8	2.128	3.118	3.8	21.1	
5 1	13 35.95	- 5 19.5	1.151	2.134	8.0	19.5	5 1	13 37.61	+ 0 39.4	2.157	3.119	6.6	21.2	
5 11	13 27.93	- 5 19.1	1.197	2.140	13.0	19.8	5 11	13 30.13	+ 1 14.8	2.213	3.119	9.8	21.4	
5 21	13 22.58	- 5 34.2	1.263	2.146	17.3	20.1	5 21	13 24.24	+ 1 34.5	2.293	3.118	12.6	21.6	
246154	2007 PB ₃₁	4 18.9 312°40' 5°0/22.2 17						386991	2012 QA ₂₇	4 18.9 152°93' 1°8/16.8 17				
3 12	14 10.53	-23 3.4	1.288	2.093	20.4	19.8	3 12	14 10.56	- 8 27.0	2.492	3.299	11.6	21.9	
3 22	14 8.61	-23 23.9	1.195	2.076	17.0	19.5	3 22	14 6.45	- 7 34.4	2.410	3.305	8.9	21.7	
4 1	14 3.36	-23 20.0	1.120	2.060	12.8	19.2	4 1	14 0.68	- 6 34.0	2.353	3.311	5.8	21.5	
4 11	13 55.40	-22 49.3	1.064	2.044	8.2	18.9	4 11	13 53.78	- 5 29.9	2.324	3.317	2.8	21.3	
4 21	13 45.85	-21 53.0	1.032	2.028	5.1	18.6	4 21	13 46.39	- 4 26.8	2.324	3.322	2.3	21.3	
5 1	13 36.32	-20 37.1	1.023	2.014	7.3	18.7	5 1	13 39.22	- 3 29.5	2.353	3.327	5.3	21.5	
5 11	13 28.44	-19 12.8	1.036	1.999	12.1	18.9	5 11	13 32.93	- 2 42.4	2.410	3.332	8.4	21.7	
5 21	13 23.37	-17 52.0	1.071	1.986	17.0	19.1	5 21	13 28.03	- 2 8.0	2.492	3.336	11.1	21.9	
290052	2005 QG ₄₉	4 18.9 220°47' 4°8/12.4 18						340566	2006 KB ₁₀₀	4 18.9 336°04' 7°4/23.5 18				
3 12	14 8.43	+ 2 33.7	2.679	3.501	10.5	21.1	3 12	14 14.03	-26 43.7	1.642	2.405	18.4	19.8	
3 22	14 4.75	+ 3 53.2	2.597	3.495	8.2	21.0	3 22	14 10.80	-27 56.5	1.547	2.393	15.7	19.6	
4 1	13 59.54	+ 5 14.3	2.540	3.488	6.1	20.8	4 1	14 4.57	-28 51.8	1.471	2.382	12.6	19.4	
4 11	13 53.26	+ 6 31.5	2.511	3.482	4.9	20.7	4 11	13 55.89	-29 25.3	1.416	2.372	9.4	19.2	
4 21	13 46.49	+ 7 39.2	2.512	3.475	5.6	20.8	4 21	13 45.77	-29 34.4	1.385	2.362	7.5	19.0	
5 1	13 39.85	+ 8 32.9	2.540	3.467	7.6	20.9	5 1	13 35.61	-29 20.3	1.379	2.353	8.2	19.0	
5 11	13 33.98	+ 9 9.5	2.594	3.460	10.0	21.0	5 11	13 26.83	-28 48.7	1.397	2.345	11.1	19.2	
5 21	13 29.35	+ 9 28.2	2.670	3.452	12.2	21.2	5 21	13 20.52	-28 7.6	1.437	2.338	14.5	19.3	
8031	Williamdana	4 18.9 79°14' 2°5/20.4 18						136226	2003 WH ₁₀₀	4 18.9 261°47' 1°9/17.7 17				
3 12	14 18.46	-16 40.7	1.450	2.253	18.6	17.3	3 12	14 16.25	- 7 50.9	1.690	2.509	15.7	20.6	
3 22	14 14.01	-17 7.4	1.375	2.260	14.9	17.1	3 22	14 11.97	- 7 35.3	1.595	2.495	12.3	20.3	
4 1	14 6.45	-17 19.1	1.319	2.268	10.4	16.8	4 1	14 5.00	- 7 11.2	1.522	2.482	8.2	20.1	
4 11	13 56.58	-17 15.6	1.287	2.275	5.6	16.6	4 11	13 55.96	- 6 42.3	1.474	2.468	3.8	19.8	
4 21	13 45.59	-16 58.9	1.280	2.282	2.5	16.4	4 21	13 45.79	- 6 13.0	1.452	2.454	2.5	19.6	
5 1	13 34.95	-16 33.9	1.299	2.289	6.2	16.6	5 1	13 35.71	- 5 49.0	1.458	2.439	6.9	19.9	
5 11	13 26.02	-16 7.4	1.343	2.296	10.9	16.9	5 11	13 26.91	- 5 35.3	1.489	2.425	11.5	20.1	
5 21	13 19.71	-15 45.6	1.408	2.303	15.1	17.2	5 21	13 20.27	- 5 35.2	1.542	2.410	15.5	20.3	
188199	2002 RD ₉₀	4 18.9 269°08' 1°0/18.2 17						291869	2006 PO ₉	4 18.9 248°82' 1°4/17.7 17				
3 12	14 14.09	-11 59.8	1.382	2.209	18.1	21.0	3 12	14 14.62	-10 18.5	1.928	2.736	14.4	22.5	
3 22	14 10.89	-11 28.0	1.291	2.196	14.3	20.7	3 22	14 10.41	- 9 41.9	1.824	2.719	11.3	22.3	
4 1	14 4.59	-10 39.4	1.220	2.182	9.6	20.4	4 1	14 3.81	- 8 53.5	1.742	2.700	7.5	22.0	
4 11	13 55.85	- 9 37.9	1.172	2.167	4.3	20.0	4 11	13 55.38	- 7 56.9	1.686	2.681	3.4	21.7	
4 21	13 45.76	- 8 29.8	1.149	2.153	1.9	19.8	4 21	13 45.95	- 6 57.1	1.659	2.661	2.1	21.6	
5 1	13 35.77	- 7 24.1	1.152	2.138	7.5	20.1	5 1	13 36.56	- 6 0.5	1.659	2.640	6.3	21.8	
5 11	13 27.31	- 6 29.8	1.178	2.123	12.9	20.3	5 11	13 28.25	- 5 13.3	1.686	2.619	10.6	22.0	
5 21	13 21.40	- 5 53.4	1.224	2.108	17.7	20.6	5 21	13 21.82	- 4 40.1	1.736	2.597	14.4	22.2	
310377	1993 UK ₅	4 18.9 281°56' 3°2/16.7 17						467436	2005 YJ ₁₈₇	4 18.9 105°43' 6°9/12.8 16				
3 12	14 15.89	- 5 52.3	1.589	2.415	16.2	20.7	3 12	14 12.96	+ 5 17.2	1.873	2.704	13.9	21.6	
3 22	14 12.06	- 5 19.1	1.482	2.387	12.7	20.4	3 22	14 8.80	+ 6 26.8	1.809	2.709	11.1	21.4	
4 1	14 5.31	- 4 36.4	1.397	2.358	8.6	20.1	4 1	14 2.48	+ 7 34.6	1.767	2.713	8.4	21.3	
4 11	13 56.20	- 3 49.0	1.335	2.328	4.4	19.8	4 11	13 54.65	+ 8 32.9	1.751	2.718	6.9	21.2	
4 21	13 45.64	- 3 3.3	1.300	2.298	4.0	19.6	4 21	13 46.19	+ 9 15.2	1.761	2.722	7.7	21.3	
5 1	13 34.95	- 2 26.5	1.292	2.268	8.4	19.8	5 1	13 38.06	+ 9 36.6	1.797	2.727	10.1	21.4	
5 11	13 25.46	- 2 5.1	1.307	2.237	13.3	20.0	5 11	13 31.15	+ 9 35.1	1.857	2.731	12.9	21.6	
5 21	13 18.26	- 2 2.7	1.344	2.205	17.7	20.2	5 21	13 26.08	+ 9 11.7	1.937	2.735	15.5	21.8	
476625	2008 SA ₁₈₈	4 18.9 124°45' 0°6/19.8 18						179776	2002 SR ₄₄	4 18.9 252°91' 0°9/18.1 17				
3 12	14 7.26	-15 39.6	3.681	4.454	8.8	22.4	3 12	14 12.21	-12 28.4	1.791	2.603	15.2	21.0	
3 22	14 3.41	-15 24.7	3.593	4.465	6.9	22.2	3 22	14 8.65	-11 44.3	1.695	2.592	11.9	20.7	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
292805	2006 <i>US</i> ₂₄₄		4 18.9 199°87	0°3/18.6	17		234203	2000 <i>QN</i> ₂₂₉		4 18.9 160°44	3°2/15.2	17	
3 12	14 10.67	-12 19.4	2.504	3.301	11.9	21.8	3 12	14 12.28	-3 52.5	2.563	3.373	11.2	21.6
3 22	14 6.65	-11 55.0	2.412	3.299	9.2	21.6	3 22	14 7.70	-2 46.5	2.485	3.381	8.6	21.4
4 1	14 0.90	-11 21.5	2.343	3.297	6.1	21.4	4 1	14 1.49	-1 35.6	2.432	3.388	5.8	21.2
4 11	13 53.93	-10 41.2	2.301	3.294	2.7	21.2	4 11	13 54.17	-0 24.5	2.408	3.395	3.5	21.1
4 21	13 46.37	-9 57.6	2.288	3.292	0.9	21.0	4 21	13 46.37	+0 41.6	2.413	3.401	3.7	21.1
5 1	13 38.98	-9 14.8	2.304	3.289	4.4	21.3	5 1	13 38.80	+1 37.9	2.448	3.406	6.2	21.3
5 11	13 32.44	-8 37.1	2.348	3.286	7.7	21.5	5 11	13 32.12	+2 20.7	2.510	3.410	9.0	21.5
5 21	13 27.30	-8 7.7	2.417	3.283	10.7	21.7	5 21	13 26.81	+2 48.3	2.597	3.414	11.5	21.6
131195	2001 <i>DZ</i> ₁₁		4 18.9 33°04	3°4/21.3	17		158187	2001 <i>RY</i> ₈₅		4 18.9 286°61	0°9/19.5	16	
3 12	14 14.44	-19 25.1	1.631	2.424	17.3	19.5	3 12	14 14.65	-14 29.3	1.403	2.222	18.3	21.0
3 22	14 10.55	-19 56.6	1.557	2.434	14.0	19.3	3 22	14 11.51	-14 28.5	1.303	2.201	14.7	20.7
4 1	14 3.98	-20 12.3	1.503	2.444	10.1	19.1	4 1	14 5.19	-14 11.7	1.223	2.180	10.2	20.4
4 11	13 55.44	-20 11.7	1.473	2.455	6.0	18.9	4 11	13 56.25	-13 40.1	1.166	2.159	4.9	20.0
4 21	13 45.98	-19 56.4	1.468	2.467	3.4	18.7	4 21	13 45.75	-12 57.1	1.133	2.137	1.3	19.7
5 1	13 36.84	-19 30.6	1.490	2.479	5.7	18.9	5 1	13 35.16	-12 9.4	1.125	2.116	6.8	20.0
5 11	13 29.19	-19 0.5	1.536	2.491	9.7	19.1	5 11	13 26.02	-11 25.4	1.141	2.094	12.4	20.2
5 21	13 23.80	-18 32.3	1.606	2.504	13.4	19.4	5 21	13 19.48	-10 52.3	1.178	2.073	17.4	20.5
60903	2000 <i>JS</i> ₂₈		4 18.9 251°06	2°7/21.1	18		259972	2004 <i>FC</i> ₃₀		4 18.9 321°50	18°4/29.1	18	
3 12	14 14.27	-19 46.6	1.889	2.670	15.7	19.4	3 12	14 7.59	+16 45.8	0.984	1.852	20.7	19.2
3 22	14 10.28	-19 53.0	1.790	2.661	12.7	19.1	3 22	14 6.57	+21 13.7	0.949	1.846	18.8	19.1
4 1	14 3.79	-19 43.5	1.712	2.651	9.2	18.9	4 1	14 1.98	+25 25.9	0.934	1.841	18.5	19.0
4 11	13 55.40	-19 18.2	1.658	2.641	5.3	18.6	4 11	13 54.72	+28 56.2	0.941	1.836	19.7	19.1
4 21	13 45.99	-18 39.0	1.631	2.631	2.7	18.5	4 21	13 46.21	+31 25.7	0.965	1.831	22.1	19.2
5 1	13 36.68	-17 50.4	1.632	2.621	5.3	18.6	5 1	13 38.17	+32 46.3	1.005	1.827	24.9	19.4
5 11	13 28.56	-16 59.1	1.659	2.611	9.3	18.8	5 11	13 32.17	+33 1.4	1.056	1.823	27.4	19.5
5 21	13 22.44	-16 11.5	1.709	2.600	13.1	19.0	5 21	13 29.12	+32 20.8	1.117	1.819	29.6	19.7
459567	2013 <i>GU</i> ₁₀₁		4 18.9 341°08	3°2/17.2	16		438350	2006 <i>SF</i> ₉		4 18.9 157°14	0°4/19.4	17	
3 12	14 10.19	-5 58.5	1.103	1.962	19.5	20.8	3 12	14 12.11	-14 0.5	2.780	3.562	11.2	21.8
3 22	14 8.39	-5 44.7	1.026	1.949	15.3	20.4	3 22	14 7.55	-13 49.1	2.690	3.568	8.7	21.6
4 1	14 3.19	-5 21.7	0.968	1.937	10.3	20.1	4 1	14 1.40	-13 29.0	2.625	3.574	5.9	21.4
4 11	13 55.32	-4 55.5	0.931	1.926	5.0	19.8	4 11	13 54.15	-13 2.1	2.587	3.579	2.8	21.2
4 21	13 46.00	-4 32.9	0.916	1.917	4.0	19.7	4 21	13 46.39	-12 30.8	2.579	3.583	0.7	21.0
5 1	13 36.87	-4 21.6	0.924	1.909	9.2	19.9	5 1	13 38.80	-11 58.4	2.601	3.588	3.8	21.3
5 11	13 29.52	-4 27.2	0.953	1.902	14.7	20.2	5 11	13 32.03	-11 28.4	2.651	3.592	6.8	21.5
5 21	13 25.04	-4 52.4	1.000	1.897	19.5	20.5	5 21	13 26.56	-11 3.9	2.727	3.595	9.5	21.7
500666	2012 <i>VO</i> ₂₉		4 18.9 172°10	2°0/20.9	17		123470	2000 <i>WR</i> ₁₄₈		4 18.9 170°61	4°1/14.5	18	
3 12	14 11.89	-19 27.8	2.421	3.192	12.9	22.3	3 12	14 13.79	+0 24.4	2.557	3.368	11.2	21.2
3 22	14 7.72	-19 19.8	2.328	3.194	10.4	22.1	3 22	14 8.88	+1 16.3	2.479	3.373	8.7	21.0
4 1	14 1.68	-18 58.4	2.257	3.195	7.4	21.9	4 1	14 2.29	+2 9.7	2.425	3.377	6.1	20.8
4 11	13 54.31	-18 24.8	2.213	3.197	4.1	21.7	4 11	13 54.54	+3 0.0	2.400	3.380	4.2	20.7
4 21	13 46.31	-17 41.5	2.197	3.197	2.0	21.6	4 21	13 46.29	+3 42.6	2.404	3.383	4.6	20.8
5 1	13 38.48	-16 52.3	2.209	3.198	4.2	21.7	5 1	13 38.26	+4 13.5	2.437	3.384	6.9	20.9
5 11	13 31.60	-16 2.4	2.250	3.198	7.4	21.9	5 11	13 31.12	+4 30.1	2.497	3.386	9.5	21.1
5 21	13 26.24	-15 16.5	2.316	3.199	10.4	22.1	5 21	13 25.40	+4 31.6	2.581	3.386	11.9	21.2
511570	2014 <i>WP</i> ₄₆₃		4 18.9 291°95	2°6/14.3	18		503951	2003 <i>WY</i> ₁₅₄		4 18.9 151°75	0°3/19.3	17	
3 12	14 4.55	+1 35.8	4.279	5.091	7.0	20.1	3 12	14 11.11	-15 54.8	2.500	3.284	12.2	21.7
3 22	14 1.22	+2 3.4	4.188	5.082	5.5	20.0	3 22	14 6.94	-15 12.9	2.413	3.292	9.6	21.5
4 1	13 56.97	+2 31.1	4.123	5.073	3.9	19.9	4 1	14 1.06	-14 18.6	2.350	3.299	6.4	21.3
4 11	13 52.08	+2 56.3	4.086	5.065	2.7	19.8	4 11	13 54.00	-13 14.8	2.313	3.305	3.0	21.1
4 21	13 46.91	+3 17.0	4.079	5.056	3.0	19.8	4 21	13 46.43	-12 5.4	2.307	3.311	0.7	20.9
5 1	13 41.80	+3 31.1	4.102	5.047	4.4	19.9	5 1	13 39.09	-10 55.5	2.330	3.317	4.2	21.2
5 11	13 37.14	+3 37.3	4.152	5.038	6.1	20.0	5 11	13 32.67	-9 50.5	2.381	3.322	7.5	21.4
5 21	13 33.20	+3 34.9	4.227	5.030	7.7	20.1	5 21	13 27.68	-8 54.5	2.458	3.327	10.4	21.6
67944	2000 <i>WB</i> ₁₅₂		4 18.9 163°85	2°4/16.6	18		236076	2005 <i>JR</i> ₁₃₇		4 18.9 92°81	4°5/14.9	18	
3 12	14 13.86	-9 32.3	1.928	2.740	14.3	19.3	3 12	14 13.20	+1 2.1	2.145	2.967	12.7	20.3
3 22	14 9.51	-8 17.6	1.848	2.746	11.0	19.1	3 22	14 8.72	+1 40.5	2.074	2.973	9.9	20.1
4 1	14 2.97	-6 50.6	1.792	2.751	7.2	18.9	4 1	14 2.32	+2 19.3	2.026	2.980	7.0	19.9
4 11	13 54.90	-5 17.2	1.762	2.756	3.4	18.7	4 11	13 54.58	+2 53.6	2.005	2.986	4.8	19.8
4 21	13 46.16	-3 44.7	1.761	2.759	3.1	18.6	4 21	13 46.28	+3 18.6	2.012	2.993	5.1	19.8
5 1	13 37.72	-2 20.8	1.789	2.762	6.7	18.9	5 1	13 38.27	+3 30.5	2.046	2.999	7.6	20.0
5 11	13 30.49	-1 12.0	1.844	2.765	10.5	19.1	5 11	13 31.32	+3 27.2	2.106	3.005	10.5	20.2
5 21	13 25.09	-0 21.9	1.922	2.767	13.9	19.3	5 21	13 26.01	+3 8.3	2.188	3.011	13.2	20.4
407743	2011 <i>VQ</i> ₁₆		4 18.9 131°03	2°4/16.9	18		16897	1998 <i>DH</i> ₁₀		4 18.9 196°95	1°9/16.7	18	
3 12	14 17.45	-7 24.2	1.856	2.667	14.8	21.8	3 12	14 9.58	-7 45.5	2.683	3.490	10.9	18.8
3 22	14 12.25	-6 41.8	1.787	2.683	11.4	21.6	3 22	14 5.66	-6 55.5	2.593	3.488	8.4	18.7
4 1	14 4.75	-5 51.2	1.740	2.698	7.5	21.4	4 1	14 0.18	-5 58.6	2.527	3.485	5.5	18.5
4 11	13 55.68	-4 57.3	1.720	2.713	3.6	21.2	4 11	13 53.62	-4 58.3	2.489	3.482	2.7	18.3
4 21	13 45.97	-4 4 5.8	1.728	2.726	3.0	21.2	4 21	13 46.54	-3 58.9	2.481	3.478	2.4	18.2
5 1	13 36.67	-3 22.4	1.764	2.739	6.6	21.4	5 1	13 39.62	-3 5.0	2.502	3.475	5.1	18.4
5 11	13 28.72	-2 51.8	1.827	2.751	10.4	21.7	5 11	13 33.48	-2 20.4	2.551	3.470	8.1	18.6
5 21	13 22.75	-2 36.4	1.913	2.763	13.7	21.9	5 21	13 28.61	-1 47.8	2.625	3.466	10.7	18.8
388345	2006 <i>TA</i> ₉₁		4 18.9 188°69	1°1/17.8	17		289049	2004 <i>TH</i> ₁₇₀		4 18.9 199°20	3°3/16.5	16	
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
146887	2002 CT ₂₉		4 18.9 188°31'	3°5'/15.1	18		480769	2016 PS ₆		4 18.9 239°30'	3°9'/23.6	16	
3 12	14 11.16	- 0 27.4	2.659	3.474	10.7	20.3	3 12	14 11.51	-27 28.2	2.847	3.571	12.3	22.8
3 22	14 6.84	+ 0 10.9	2.576	3.473	8.3	20.1	3 22	14 7.37	-27 25.2	2.731	3.556	10.3	22.6
4 1	14 0.95	+ 0 50.9	2.518	3.472	5.8	20.0	4 1	14 1.47	-27 6.5	2.637	3.541	8.0	22.4
4 11	13 53.96	+ 1 28.4	2.488	3.471	3.8	19.8	4 11	13 54.28	-26 31.7	2.568	3.526	5.6	22.2
4 21	13 46.47	+ 1 59.7	2.487	3.470	4.0	19.8	4 21	13 46.42	-25 41.8	2.527	3.510	4.0	22.1
5 1	13 39.15	+ 2 21.3	2.514	3.469	6.3	20.0	5 1	13 38.62	-24 39.9	2.515	3.494	4.6	22.1
5 11	13 32.65	+ 2 30.6	2.568	3.467	8.9	20.1	5 11	13 31.63	-23 30.9	2.532	3.478	6.8	22.2
5 21	13 27.44	+ 2 26.8	2.646	3.465	11.3	20.3	5 21	13 26.00	-22 20.1	2.575	3.461	9.4	22.4
118271	1998 HO ₁₄₉		4 18.9 317°65'	2°5'/20.2	14 C		258819	2002 NH ₆₀		4 18.9 267°82'	0°2'/18.8	17	
3 12	14 10.89	-16 4.1	1.109	1.947	20.9	19.2	3 12	14 13.99	-13 13.0	1.750	2.559	15.7	22.1
3 22	14 9.38	-16 29.0	1.018	1.925	17.0	18.9	3 22	14 10.27	-12 51.0	1.647	2.540	12.4	21.8
4 1	14 4.24	-16 36.1	0.944	1.902	12.1	18.5	4 1	14 3.94	-12 14.7	1.565	2.520	8.4	21.6
4 11	13 56.01	-16 24.8	0.889	1.881	6.5	18.1	4 11	13 55.57	-11 26.8	1.507	2.501	3.8	21.2
4 21	13 45.84	-15 57.0	0.857	1.860	2.6	17.8	4 21	13 46.06	-10 31.6	1.476	2.481	1.1	21.0
5 1	13 35.50	-15 18.7	0.847	1.840	7.6	18.0	5 1	13 36.56	- 9 35.4	1.473	2.460	6.1	21.3
5 11	13 26.88	-14 39.4	0.857	1.822	13.8	18.3	5 11	13 28.24	- 8 45.5	1.495	2.439	10.8	21.5
5 21	13 21.36	-14 8.5	0.886	1.804	19.4	18.5	5 21	13 21.98	- 8 7.5	1.540	2.418	15.0	21.7
251596	2009 HV ₃₈		4 18.9 319°00'	4°7'/14.1	17		501354	2013 YQ ₂₆		4 18.9 98°39'	3°3'/15.9	17	
3 12	14 7.46	- 1 31.7	1.972	2.808	13.1	20.4	3 12	14 12.29	- 3 17.8	2.118	2.939	12.9	21.6
3 22	14 4.69	- 0 22.0	1.882	2.791	10.2	20.2	3 22	14 8.10	- 2 39.6	2.043	2.945	9.9	21.4
4 1	13 59.89	+ 0 53.5	1.816	2.775	7.1	19.9	4 1	14 1.96	- 1 57.4	1.992	2.951	6.7	21.2
4 11	13 53.60	+ 2 8.2	1.776	2.760	4.9	19.8	4 11	13 54.47	- 1 15.9	1.967	2.957	3.8	21.1
4 21	13 46.56	+ 3 15.4	1.762	2.745	5.5	19.8	4 21	13 46.39	- 0 39.8	1.971	2.962	3.9	21.1
5 1	13 39.63	+ 4 8.3	1.776	2.730	8.4	19.9	5 1	13 38.58	- 0 13.6	2.002	2.968	6.7	21.3
5 11	13 33.69	+ 4 42.4	1.813	2.716	11.7	20.1	5 11	13 31.82	- 0 0.6	2.059	2.974	9.9	21.5
5 21	13 29.38	+ 4 55.7	1.872	2.702	14.8	20.2	5 21	13 26.69	- 0 2.0	2.139	2.979	12.8	21.7
58886	1998 HN ₁₄₃		4 18.9 291°32'	3°2'/16.2	18		225531	2000 SF ₁		4 18.9 209°81'	10°3'/2.0	18	
3 12	14 15.90	- 1 39.6	2.385	3.193	12.0	19.0	3 12	14 22.19	-49 11.3	2.854	3.403	15.3	21.5
3 22	14 11.03	- 1 24.7	2.266	3.160	9.4	18.8	3 22	14 16.48	-50 5.3	2.744	3.395	14.2	21.4
4 1	14 4.08	- 1 7.8	2.172	3.126	6.5	18.6	4 1	14 8.00	-50 37.6	2.650	3.386	13.0	21.2
4 11	13 55.53	- 0 52.4	2.104	3.092	3.8	18.3	4 11	13 57.38	-50 43.4	2.575	3.376	11.7	21.1
4 21	13 46.03	- 0 42.2	2.066	3.058	3.7	18.3	4 21	13 45.59	-50 19.5	2.521	3.366	10.7	21.0
5 1	13 36.44	- 0 40.7	2.057	3.023	6.6	18.4	5 1	13 33.90	-49 25.7	2.490	3.355	10.3	21.0
5 11	13 27.64	- 0 50.8	2.075	2.988	10.0	18.5	5 11	13 23.54	-48 6.1	2.484	3.343	10.6	21.0
5 21	13 20.34	- 1 13.8	2.117	2.952	13.1	18.6	5 21	13 15.42	-46 27.5	2.501	3.330	11.6	21.0
243158	2007 TG ₆₈		4 18.9 283°37'	0°7'/19.4	17		504590	2008 UG ₅₀		4 18.9 227°70'	0°3'/18.7	17	
3 12	14 13.05	-15 20.0	1.524	2.337	17.4	21.0	3 12	14 14.21	-11 26.2	2.081	2.883	13.8	21.9
3 22	14 9.99	-15 2.0	1.421	2.316	13.9	20.7	3 22	14 9.82	-11 19.0	1.989	2.879	10.8	21.7
4 1	14 4.00	-14 26.2	1.339	2.295	9.6	20.4	4 1	14 3.27	-11 2.7	1.920	2.875	7.2	21.4
4 11	13 55.67	-13 34.3	1.280	2.273	4.6	20.0	4 11	13 55.13	-10 39.5	1.877	2.870	3.2	21.2
4 21	13 45.98	-12 30.8	1.247	2.251	1.1	19.7	4 21	13 46.20	-10 12.6	1.862	2.866	1.0	21.0
5 1	13 36.26	-11 22.8	1.239	2.229	6.5	20.0	5 1	13 37.43	- 9 46.3	1.875	2.861	5.1	21.3
5 11	13 27.87	-10 19.5	1.257	2.208	11.7	20.2	5 11	13 29.73	- 9 24.9	1.915	2.856	9.0	21.5
5 21	13 21.84	- 9 28.6	1.295	2.186	16.4	20.4	5 21	13 23.77	- 9 11.9	1.980	2.851	12.4	21.7
442684	2012 US ₃₉		4 18.9 155°41'	0°9'/19.8	17		8665	Daun-Eifel		4 18.9 71°46'	0°2'/18.8	18	
3 12	14 14.33	-14 44.2	2.472	3.254	12.4	21.6	3 12	14 12.67	-14 41.3	1.464	2.283	17.7	18.1
3 22	14 9.52	-14 48.4	2.382	3.258	9.8	21.4	3 22	14 9.31	-13 59.4	1.393	2.292	13.8	17.9
4 1	14 2.86	-14 43.2	2.316	3.262	6.7	21.2	4 1	14 3.20	-12 59.4	1.343	2.301	9.3	17.7
4 11	13 54.87	-14 29.9	2.276	3.266	3.3	21.0	4 11	13 55.14	-11 45.7	1.316	2.310	4.2	17.4
4 21	13 46.26	-14 10.7	2.266	3.270	1.0	20.8	4 21	13 46.22	-10 25.4	1.315	2.319	1.2	17.2
5 1	13 37.83	-13 48.6	2.285	3.273	4.1	21.0	5 1	13 37.72	- 9 7.4	1.340	2.328	6.4	17.6
5 11	13 30.33	-13 27.5	2.332	3.276	7.5	21.3	5 11	13 30.79	- 8 0.2	1.390	2.337	11.1	17.9
5 21	13 24.34	-13 10.7	2.405	3.278	10.4	21.4	5 21	13 26.16	- 7 9.8	1.462	2.346	15.3	18.1
499129	2009 PC ₉		4 18.9 206°72'	1°2'/20.2	17		365913	2011 WL ₁₀₆		4 18.9 76°19'	3°1'/20.8	18	
3 12	14 15.41	-17 4.3	2.523	3.294	12.5	24.2	3 12	14 18.30	-18 0.1	1.471	2.269	18.6	20.9
3 22	14 10.42	-16 53.9	2.419	3.287	9.9	24.0	3 22	14 13.97	-18 31.4	1.392	2.274	15.0	20.6
4 1	14 3.51	-16 31.8	2.337	3.279	6.9	23.8	4 1	14 6.53	-18 46.9	1.334	2.279	10.7	20.4
4 11	13 55.20	-15 59.2	2.283	3.271	3.6	23.6	4 11	13 56.74	-18 45.9	1.298	2.283	6.1	20.1
4 21	13 46.17	-15 18.4	2.258	3.261	1.3	23.4	4 21	13 45.79	-18 30.0	1.288	2.288	3.1	20.0
5 1	13 37.24	-14 33.2	2.263	3.251	4.2	23.6	5 1	13 35.12	-18 3.6	1.303	2.293	6.2	20.2
5 11	13 29.21	-13 48.5	2.297	3.240	7.6	23.8	5 11	13 26.13	-17 33.7	1.344	2.298	10.8	20.4
5 21	13 22.69	-13 8.4	2.356	3.228	10.7	24.0	5 21	13 19.75	-17 7.1	1.406	2.303	15.0	20.7
113789	2002 TZ ₁₉₄		4 18.9 162°01'	0°2'/19.2	17 R		23158	Boulogny		4 18.9 182°14'	3°5'/15.9	17	
3 12	14 12.21	-13 43.7	2.375	3.167	12.6	20.8	3 12	14 14.89	- 3 44.8	1.980	2.799	13.7	18.8
3 22	14 7.94	-13 27.2	2.286	3.170	9.8	20.6	3 22	14 10.31	- 2 57.7	1.899	2.800	10.6	18.6
4 1	14 1.83	-13 0.5	2.221	3.172	6.6	20.4	4 1	14 3.55	- 2 5.2	1.842	2.800	7.2	18.4
4 11	13 54.41	-12 25.9	2.183	3.175	3.0	20.2	4 11	13 55.24	- 1 12.4	1.811	2.800	4.1	18.2
4 21	13 46.39	-11 46.6	2.173	3.177	0.7	20.0	4 21	13 46.21	- 0 25.1	1.807	2.799	4.2	18.2
5 1	13 38.55	-11 6.7	2.192	3.179	4.4	20.3	5 1	13 37.43	+ 0 11.3	1.832	2.798	7.3	18.4
5 11	13 31.67	-10 30.5	2.239	3.181	7.8	20.5	5 11	13 29.80	+ 0 32.9	1.883	2.796	10.8	18.6
5 21	13 26.29	-10 1.8	2.311	3.182	10.9	20.7	5 21	13 23.97	+ 0 38.0	1.956	2.794	14.0	18.8
299398	2005 XV ₆₈		4 18.9 354°43'	2°7'/20.6	16		301838	6226 P-L		4 18.9 151°06'	4°9'/24.6	18	
3 12	14 11.73	-18 15.9	1.188	2.014	20								

EPHEMERIDES

4 18.9

4 18.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
296238	2009 <i>CW</i> ₅₇		4 18.9 76°48	4.5/14.7	18		31239	Michaeljames		4 18.9 197°61	5.7/24.4	18	
3 12	14 11.68	+ 0 41.8	2.180	3.004	12.5	20.4	3 12	14 16.77	-29 52.4	2.391	3.103	14.6	18.8
3 22	14 7.58	+ 1 27.1	2.107	3.008	9.7	20.2	3 22	14 11.88	-30 19.4	2.288	3.100	12.5	18.6
4 1	14 1.60	+ 2 13.6	2.057	3.012	6.8	20.1	4 1	14 4.72	-30 28.7	2.206	3.096	10.0	18.4
4 11	13 54.32	+ 2 56.0	2.034	3.015	4.7	19.9	4 11	13 55.86	-30 18.2	2.148	3.092	7.5	18.3
4 21	13 46.47	+ 3 29.4	2.039	3.019	5.1	20.0	4 21	13 46.12	-29 47.7	2.116	3.087	5.8	18.1
5 1	13 38.88	+ 3 49.5	2.071	3.023	7.6	20.1	5 1	13 36.48	-28 59.8	2.112	3.082	6.2	18.1
5 11	13 32.30	+ 3 54.1	2.128	3.027	10.4	20.3	5 11	13 27.91	-28 0.0	2.136	3.076	8.3	18.3
5 21	13 27.28	+ 3 42.4	2.208	3.031	13.1	20.5	5 21	13 21.15	-26 54.7	2.185	3.069	10.9	18.4
56569	2000 <i>JL</i> ₁₇		4 18.9 298°23	2.9/16.9	17		433212	2012 <i>UH</i> ₁₀₈		4 18.9 221°23	0.3/18.7	17	
3 12	14 11.63	- 8 38.7	1.340	2.181	17.8	18.7	3 12	14 13.16	-11 19.6	2.309	3.107	12.7	21.7
3 22	14 9.01	- 7 49.5	1.254	2.167	13.9	18.4	3 22	14 8.80	-11 9.4	2.215	3.103	9.9	21.5
4 1	14 3.37	- 6 45.4	1.188	2.153	9.3	18.1	4 1	14 2.50	-10 50.8	2.145	3.099	6.6	21.3
4 11	13 55.40	- 5 32.5	1.145	2.140	4.4	17.7	4 11	13 54.80	-10 26.0	2.101	3.095	3.0	21.1
4 21	13 46.16	- 4 18.9	1.127	2.127	3.7	17.6	4 21	13 46.40	- 9 58.1	2.086	3.090	1.0	20.9
5 1	13 37.06	- 3 14.6	1.133	2.114	8.6	17.9	5 1	13 38.15	- 9 30.9	2.100	3.085	4.7	21.2
5 11	13 29.48	- 2 27.8	1.162	2.101	13.7	18.1	5 11	13 30.83	- 9 8.4	2.141	3.080	8.3	21.4
5 21	13 24.39	- 2 3.6	1.211	2.088	18.3	18.4	5 21	13 25.07	- 8 53.7	2.207	3.075	11.5	21.6
172418	2003 <i>FV</i> ₁₀₆		4 18.9 43°69	1.2/18.3	18		357983	2006 <i>BU</i> ₂₆₇		4 18.9 100°79	2.2/17.6	18	
3 12	14 22.00	- 5 37.2	2.004	2.805	14.3	18.7	3 12	14 18.87	- 7 45.6	1.497	2.319	17.2	20.8
3 22	14 15.70	- 6 12.0	1.929	2.818	11.1	18.5	3 22	14 13.94	- 7 21.9	1.433	2.334	13.3	20.6
4 1	14 7.08	- 6 44.5	1.878	2.832	7.3	18.3	4 1	14 6.20	- 6 49.2	1.389	2.350	8.8	20.4
4 11	13 56.81	- 7 16.1	1.853	2.846	3.3	18.0	4 11	13 56.50	- 6 12.3	1.370	2.364	4.1	20.1
4 21	13 45.84	- 7 48.1	1.858	2.861	1.7	17.9	4 21	13 46.00	- 5 36.9	1.378	2.379	2.8	20.1
5 1	13 35.21	- 8 21.9	1.893	2.876	5.5	18.2	5 1	13 36.00	- 5 9.0	1.412	2.393	7.2	20.4
5 11	13 25.89	- 8 59.1	1.956	2.891	9.2	18.5	5 11	13 27.68	- 4 53.5	1.471	2.407	11.6	20.7
5 21	13 18.56	- 9 40.8	2.044	2.906	12.5	18.7	5 21	13 21.76	- 4 52.8	1.553	2.420	15.4	20.9
182675	2001 <i>UA</i> ₂₂₆		4 18.9 209°87	1.5/16.2	18		363451	2003 <i>SR</i> ₁₇₂		4 18.9 198°18	0.2/18.8	16	
3 12	14 4.17	- 3 46.8	4.653	5.457	6.6	20.4	3 12	14 16.87	-12 43.3	2.033	2.828	14.3	22.1
3 22	14 0.88	- 3 25.7	4.562	5.456	5.1	20.3	3 22	14 11.96	-12 25.0	1.940	2.825	11.2	21.9
4 1	13 56.74	- 3 2.9	4.498	5.454	3.4	20.2	4 1	14 4.76	-11 55.4	1.868	2.821	7.5	21.7
4 11	13 52.04	- 2 40.1	4.463	5.452	1.8	20.1	4 11	13 55.87	-11 17.0	1.823	2.816	3.4	21.4
4 21	13 47.08	- 2 19.3	4.458	5.451	1.8	20.0	4 21	13 46.14	-10 33.6	1.807	2.811	1.0	21.2
5 1	13 42.20	- 2 2.2	4.483	5.449	3.3	20.2	5 1	13 36.57	- 9 50.0	1.819	2.805	5.3	21.5
5 11	13 37.72	- 1 50.3	4.536	5.447	5.0	20.3	5 11	13 28.13	- 9 11.8	1.859	2.798	9.3	21.7
5 21	13 33.92	- 1 44.7	4.616	5.446	6.6	20.4	5 21	13 21.56	- 8 43.3	1.923	2.791	12.9	21.9
382184	2012 <i>KU</i> ₁₇		4 18.9 297°35	1.3/17.9	17		500443	2012 <i>TJ</i> ₁₇₂		4 18.9 94°95	0.4/19.4	17	
3 12	14 11.34	-11 31.8	1.696	2.516	15.6	21.0	3 12	14 9.63	-16 21.6	2.101	2.897	13.9	21.4
3 22	14 8.41	-10 53.0	1.583	2.483	12.3	20.7	3 22	14 6.24	-15 38.2	2.013	2.898	10.9	21.2
4 1	14 2.85	- 9 58.7	1.490	2.450	8.3	20.4	4 1	14 0.85	-14 39.6	1.947	2.899	7.4	21.0
4 11	13 55.18	- 8 52.2	1.422	2.417	3.7	20.0	4 11	13 54.06	-13 29.1	1.907	2.899	3.5	20.7
4 21	13 46.22	- 7 39.2	1.381	2.384	2.0	19.8	4 21	13 46.61	-12 11.3	1.895	2.900	0.8	20.5
5 1	13 37.12	- 6 27.3	1.366	2.350	6.9	20.0	5 1	13 39.39	-10 52.7	1.912	2.900	4.8	20.8
5 11	13 29.11	- 5 25.0	1.376	2.317	11.8	20.2	5 11	13 33.21	- 9 39.8	1.956	2.901	8.6	21.1
5 21	13 23.14	- 4 38.8	1.408	2.283	16.3	20.4	5 21	13 28.66	- 8 38.1	2.024	2.902	12.0	21.3
128422	2004 <i>MC</i> ₁		4 18.9 227°56	5.3/24.1	18		58115	1981 <i>EB</i> ₇		4 18.9 289°47	4.0/22.8	18	
3 12	14 13.79	-28 54.7	2.157	2.887	15.5	20.2	3 12	14 11.97	-24 26.0	2.338	3.090	13.9	19.9
3 22	14 9.76	-29 0.6	2.052	2.879	13.1	20.0	3 22	14 8.08	-24 43.8	2.239	3.085	11.5	19.7
4 1	14 3.39	-28 46.0	1.968	2.871	10.3	19.8	4 1	14 2.14	-24 46.4	2.161	3.080	8.7	19.5
4 11	13 55.27	-28 9.4	1.907	2.862	7.4	19.6	4 11	13 54.68	-24 33.1	2.107	3.075	5.9	19.3
4 21	13 46.23	-27 11.6	1.872	2.853	5.4	19.5	4 21	13 46.45	-24 4.8	2.081	3.070	4.0	19.2
5 1	13 37.33	-25 56.6	1.865	2.843	6.0	19.5	5 1	13 38.31	-23 24.6	2.082	3.065	5.0	19.2
5 11	13 29.56	-24 31.5	1.885	2.834	8.6	19.6	5 11	13 31.15	-22 37.6	2.110	3.060	7.8	19.4
5 21	13 23.68	-23 4.4	1.930	2.823	11.7	19.8	5 21	13 25.62	-21 49.2	2.164	3.055	10.7	19.6
374410	2005 <i>WM</i> ₃₉		4 18.9 114°03	1.0/19.8	17		48245	2001 <i>PD</i> ₉		4 18.9 162°01	2.8/21.7	18	
3 12	14 12.86	-16 19.0	1.880	2.677	15.2	21.1	3 12	14 14.32	-21 15.4	2.598	3.352	12.6	18.6
3 22	14 8.96	-16 0.0	1.798	2.682	12.0	20.8	3 22	14 9.55	-21 30.4	2.504	3.356	10.2	18.5
4 1	14 2.77	-15 26.3	1.737	2.687	8.2	20.6	4 1	14 2.93	-21 33.3	2.433	3.360	7.5	18.3
4 11	13 54.94	-14 40.0	1.701	2.691	4.0	20.4	4 11	13 54.98	-21 23.9	2.388	3.363	4.6	18.1
4 21	13 46.35	-13 45.3	1.692	2.696	1.1	20.2	4 21	13 46.38	-21 3.4	2.371	3.366	2.8	18.0
5 1	13 38.02	-12 48.0	1.711	2.700	5.1	20.4	5 1	13 37.92	-20 34.8	2.383	3.369	4.2	18.1
5 11	13 30.93	-11 54.4	1.756	2.705	9.1	20.7	5 11	13 30.38	-20 2.0	2.424	3.371	7.0	18.3
5 21	13 25.73	-11 10.1	1.825	2.709	12.8	20.9	5 21	13 24.32	-19 29.3	2.490	3.373	9.8	18.5
214783	2006 <i>UR</i> ₉₂		4 18.9 266°17	0.7/18.2	17		164670	1996 <i>XM</i> ₆		4 18.9 196°56	2.5/16.6	18	
3 12	14 8.96	-12 30.8	2.287	3.092	12.6	20.8	3 12	14 16.80	- 5 46.1	2.337	3.139	12.4	21.2
3 22	14 5.53	-11 46.0	2.198	3.090	9.8	20.6	3 22	14 11.52	- 5 4.9	2.244	3.135	9.6	21.0
4 1	14 0.29	-10 49.8	2.132	3.088	6.5	20.4	4 1	14 4.27	- 4 17.3	2.175	3.131	6.4	20.8
4 11	13 53.77	- 9 45.9	2.093	3.087	2.8	20.1	4 11	13 55.59	- 3 27.4	2.134	3.125	3.3	20.5
4 21	13 46.66	- 8 38.7	2.082	3.085	1.3	20.0	4 21	13 46.23	- 2 39.9	2.123	3.119	3.0	20.5
5 1	13 39.74	- 7 33.9	2.100	3.084	4.9	20.3	5 1	13 37.02	- 1 59.4	2.141	3.111	6.1	20.7
5 11	13 33.73	- 6 36.7	2.145	3.082	8.4	20.5	5 11	13 28.80	- 1 30.1	2.188	3.102	9.4	20.9
5 21	13 29.20	- 5 51.1	2.215	3.080	11.5	20.7	5 21	13 22.18	- 1 14.3	2.258	3.093	12.4	21.1
159434	1999 <i>VQ</i> ₉₄		4 18.9 229°81	0.4/19.4	18		491112	2011 <i>SW</i> ₇₆		4 18.9 202°47	0.		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
53400	1999 <i>JB</i> ₁₁₃		4 18.9 296°14	0°6/19.5	18		502077	2015 <i>AD</i> ₂₂₅		4 18.9 123°24	2°8/16.2	17	
3 12	14 13.57	-13 24.0	2.195	2.989	13.4	19.1	3 12	14 12.00	-7 1.4	1.979	2.798	13.7	21.8
3 22	14 9.29	-13 31.4	2.100	2.984	10.5	18.9	3 22	14 8.03	-5 57.4	1.905	2.807	10.5	21.6
4 1	14 2.94	-13 29.7	2.027	2.978	7.2	18.6	4 1	14 2.02	-4 44.9	1.856	2.816	6.9	21.4
4 11	13 55.05	-13 20.2	1.981	2.973	3.4	18.4	4 11	13 54.59	-3 29.3	1.832	2.824	3.6	21.2
4 21	13 46.38	-13 5.1	1.963	2.967	0.9	18.2	4 21	13 46.56	-2 17.2	1.837	2.833	3.5	21.2
5 1	13 37.83	-12 47.8	1.973	2.962	4.6	18.4	5 1	13 38.84	-1 14.8	1.870	2.841	6.7	21.4
5 11	13 30.27	-12 32.3	2.011	2.957	8.3	18.6	5 11	13 32.25	-0 27.3	1.929	2.849	10.2	21.7
5 21	13 24.36	-12 22.0	2.073	2.951	11.7	18.8	5 21	13 27.38	+0 2.8	2.011	2.856	13.4	21.9
460685	2014 <i>US</i> ₁₈₀		4 18.9 285°77	1°9/20.5	17		482822	2013 <i>XH</i> ₂₁		4 18.9 343°59	23°4/26.6	17	
3 12	14 11.78	-19 21.8	1.516	2.319	17.9	21.0	3 12	14 17.62	+33 17.5	1.035	1.843	24.2	20.6
3 22	14 8.86	-18 55.9	1.427	2.313	14.4	20.7	3 22	14 14.62	+36 8.1	1.013	1.840	23.5	20.6
4 1	14 3.13	-18 7.9	1.358	2.307	10.2	20.4	4 1	14 7.42	+38 19.5	1.005	1.837	23.5	20.5
4 11	13 55.27	-16 59.5	1.313	2.301	5.4	20.1	4 11	13 57.24	+39 34.6	1.011	1.834	24.2	20.6
4 21	13 46.32	-15 35.6	1.292	2.295	1.9	19.9	4 21	13 45.92	+39 44.4	1.030	1.832	25.5	20.6
5 1	13 37.59	-14 4.8	1.298	2.290	5.9	20.1	5 1	13 35.52	+38 47.9	1.061	1.831	27.0	20.8
5 11	13 30.33	-12 37.2	1.329	2.284	10.8	20.4	5 11	13 27.73	+36 52.9	1.102	1.829	28.6	20.9
5 21	13 25.39	-11 21.7	1.382	2.278	15.2	20.6	5 21	13 23.37	+34 11.6	1.152	1.829	30.1	21.0
96622	1999 <i>DY</i>		4 18.9 3°68	3°6/21.1	18		186209	2001 <i>WT</i> ₃₄		4 18.9 257°03	0°5/18.5	18	
3 12	14 16.29	-18 41.0	1.350	2.157	19.6	18.7	3 12	14 13.79	-12 36.6	2.130	2.929	13.6	21.7
3 22	14 12.78	-19 17.0	1.271	2.156	15.9	18.5	3 22	14 9.66	-12 2.3	2.018	2.906	10.7	21.4
4 1	14 5.98	-19 35.8	1.210	2.156	11.5	18.2	4 1	14 3.34	-11 15.5	1.929	2.883	7.2	21.2
4 11	13 56.64	-19 36.3	1.172	2.156	6.7	17.9	4 11	13 55.32	-10 18.8	1.866	2.859	3.2	20.9
4 21	13 45.97	-19 19.7	1.157	2.157	3.6	17.7	4 21	13 46.36	-9 16.4	1.831	2.835	1.2	20.7
5 1	13 35.54	-18 50.5	1.167	2.158	6.7	17.9	5 1	13 37.39	-8 14.1	1.825	2.810	5.4	20.9
5 11	13 26.84	-18 16.6	1.202	2.160	11.4	18.2	5 11	13 29.37	-7 18.1	1.847	2.784	9.5	21.1
5 21	13 20.89	-17 45.7	1.257	2.161	15.9	18.4	5 21	13 23.04	-6 33.4	1.893	2.757	13.2	21.3
226011	2002 <i>EX</i> ₅₂		4 18.9 91°44	2°4/16.8	17		442417	2011 <i>UX</i> ₁₁₂		4 18.9 231°37	1°7/21.1	16	
3 12	14 13.50	-7 17.5	1.898	2.716	14.3	20.9	3 12	14 9.65	-20 17.9	2.793	3.556	11.6	22.0
3 22	14 9.20	-6 31.5	1.832	2.732	10.9	20.7	3 22	14 5.86	-19 51.6	2.686	3.547	9.3	21.8
4 1	14 2.78	-5 37.7	1.789	2.749	7.2	20.5	4 1	14 0.45	-19 11.8	2.602	3.538	6.6	21.6
4 11	13 54.91	-4 41.1	1.772	2.765	3.5	20.3	4 11	13 53.89	-18 20.0	2.545	3.528	3.7	21.4
4 21	13 46.46	-3 47.4	1.783	2.781	3.0	20.3	4 21	13 46.75	-17 18.8	2.516	3.517	1.7	21.2
5 1	13 38.40	-3 2.2	1.821	2.797	6.4	20.5	5 1	13 39.73	-16 12.3	2.518	3.507	3.7	21.4
5 11	13 31.58	-2 30.0	1.886	2.812	10.0	20.8	5 11	13 33.47	-15 5.4	2.548	3.496	6.7	21.6
5 21	13 26.57	-2 13.0	1.974	2.827	13.2	21.0	5 21	13 28.50	-14 2.9	2.605	3.485	9.5	21.7
375040	2007 <i>HC</i> ₇₇		4 18.9 7°07	4°3/15.7	17		51302	2000 <i>KY</i> ₅₄		4 18.9 334°75	9°1/13.0	18	
3 12	14 11.37	-3 19.9	1.560	2.400	15.8	20.6	3 12	14 15.93	+8 50.2	1.495	2.331	16.5	17.6
3 22	14 8.15	-2 33.1	1.489	2.400	12.2	20.4	3 22	14 11.88	+9 43.3	1.425	2.325	13.5	17.4
4 1	14 2.41	-1 40.3	1.439	2.401	8.3	20.2	4 1	14 5.01	+10 30.1	1.376	2.318	10.7	17.2
4 11	13 54.85	-0 48.1	1.413	2.403	4.9	20.0	4 11	13 56.08	+11 1.5	1.350	2.312	9.1	17.1
4 21	13 46.46	-0 3.4	1.412	2.404	5.0	20.0	4 21	13 46.20	+11 9.9	1.349	2.307	9.9	17.1
5 1	13 38.38	+0 27.2	1.438	2.407	8.5	20.2	5 1	13 36.65	+10 50.8	1.371	2.302	12.4	17.2
5 11	13 31.68	+0 39.5	1.487	2.410	12.4	20.4	5 11	13 28.63	+10 3.7	1.415	2.298	15.7	17.4
5 21	13 27.07	+0 32.2	1.556	2.413	16.0	20.6	5 21	13 22.95	+8 51.8	1.479	2.294	18.7	17.6
103705	2000 <i>CW</i> ₈₂		4 18.9 125°09	2°7/17.0	18		435258	2007 <i>TL</i> ₁₄₆		4 18.9 166°57	0°6/18.3	18	
3 12	14 17.13	-7 49.6	1.514	2.338	17.0	18.9	3 12	14 10.81	-12 19.5	2.682	3.475	11.3	21.8
3 22	14 12.63	-7 4.3	1.445	2.349	13.1	18.7	3 22	14 6.65	-11 37.2	2.593	3.479	8.7	21.7
4 1	14 5.38	-6 8.6	1.398	2.359	8.6	18.5	4 1	14 0.90	-10 45.5	2.529	3.483	5.8	21.5
4 11	13 56.18	-5 8.3	1.375	2.369	4.1	18.2	4 11	13 54.06	-9 47.4	2.493	3.486	2.5	21.3
4 21	13 46.15	-4 10.3	1.379	2.379	3.4	18.2	4 21	13 46.72	-8 46.7	2.486	3.489	1.1	21.2
5 1	13 36.56	-3 22.1	1.410	2.388	7.6	18.5	5 1	13 39.58	-7 48.0	2.509	3.492	4.3	21.4
5 11	13 28.55	-2 49.3	1.465	2.396	12.0	18.8	5 11	13 33.25	-6 55.7	2.560	3.494	7.4	21.6
5 21	13 22.89	-2 35.0	1.542	2.404	15.8	19.0	5 21	13 28.23	-6 12.9	2.638	3.495	10.2	21.8
194676	2001 <i>XY</i> ₁₉₇		4 18.9 134°95	3°1/21.5	18		507824	2014 <i>DP</i> ₁₃₄		4 18.9 100°86	3°9/14.6	17	
3 12	14 18.44	-21 38.9	1.865	2.633	16.4	20.2	3 12	14 9.49	-1 31.7	2.367	3.190	11.6	21.6
3 22	14 13.35	-21 36.6	1.786	2.647	13.3	20.0	3 22	14 5.76	-0 29.6	2.295	3.197	9.0	21.4
4 1	14 5.72	-21 16.0	1.728	2.661	9.6	19.8	4 1	14 0.36	+0 35.7	2.248	3.204	6.2	21.3
4 11	13 56.31	-20 37.8	1.694	2.673	5.7	19.6	4 11	13 53.82	+1 39.0	2.227	3.211	4.1	21.1
4 21	13 46.11	-19 44.6	1.687	2.686	3.1	19.5	4 21	13 46.79	+2 35.0	2.235	3.218	4.5	21.2
5 1	13 36.28	-18 42.2	1.709	2.697	5.2	19.7	5 1	13 39.99	+3 19.2	2.271	3.224	6.9	21.3
5 11	13 27.87	-17 37.8	1.758	2.708	9.0	19.9	5 11	13 34.09	+3 48.2	2.333	3.231	9.7	21.5
5 21	13 21.60	-16 38.3	1.831	2.717	12.6	20.1	5 21	13 29.60	+4 0.9	2.418	3.237	12.2	21.7
229488	2005 <i>UX</i> ₄₃₈		4 18.9 204°11	1°7/17.3	18		162744	2000 <i>WA</i> ₁₈		4 18.9 252°84	0°3/18.8	17	
3 12	14 15.17	-7 27.2	2.471	3.271	11.9	21.8	3 12	14 16.37	-12 8.0	1.733	2.540	15.9	20.6
3 22	14 10.20	-6 58.0	2.375	3.265	9.2	21.6	3 22	14 12.17	-11 54.4	1.632	2.525	12.5	20.3
4 1	14 3.38	-6 22.3	2.303	3.259	6.1	21.4	4 1	14 5.28	-11 28.5	1.553	2.509	8.5	20.0
4 11	13 55.21	-5 43.2	2.259	3.251	2.9	21.1	4 11	13 56.28	-10 52.7	1.498	2.492	3.9	19.7
4 21	13 46.38	-5 4.7	2.244	3.243	2.2	21.1	4 21	13 46.12	-10 10.9	1.471	2.475	1.2	19.5
5 1	13 37.69	-4 30.8	2.259	3.235	5.3	21.3	5 1	13 35.98	-9 29.0	1.471	2.458	6.1	19.8
5 11	13 29.89	-4 5.2	2.302	3.225	8.6	21.4	5 11	13 27.07	-8 53.4	1.497	2.440	10.9	20.0
5 21	13 23.57	-3 50.6	2.370	3.215	11.6	21.6	5 21	13 20.31	-8 29.0	1.545	2.422	15.0	20.2
61549	2000 <i>QJ</i> ₆₈		4 18.9 28°16	6°0/22.7	18		481254	2005 <i>WO</i> ₁₈₀		4 18.9 234°49	13°9/13.4	18	
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
349326	2007 <i>UT</i> ₁₃₃		4 18.9 139°33	6°5/11.3	18		287697	2003 <i>QA</i> ₃₆		4 18.9 259°62	5°0/23.1	18	
3 12	14 13.05	+11 38.7	2.755	3.561	10.6	21.3	3 12	14 15.90	-25 45.1	2.188	2.930	15.0	20.9
3 22	14 8.20	+12 34.8	2.695	3.571	8.8	21.2	3 22	14 11.51	-26 19.5	2.077	2.914	12.6	20.7
4 1	14 1.82	+13 25.0	2.660	3.581	7.2	21.1	4 1	14 4.71	-26 38.3	1.988	2.899	9.8	20.4
4 11	13 54.43	+14 4.2	2.652	3.590	6.5	21.1	4 11	13 56.01	-26 39.3	1.922	2.883	7.0	20.2
4 21	13 46.65	+14 28.4	2.671	3.599	7.1	21.1	4 21	13 46.24	-26 22.3	1.883	2.866	5.1	20.1
5 1	13 39.12	+14 35.1	2.718	3.608	8.6	21.2	5 1	13 36.42	-25 49.2	1.871	2.850	6.0	20.1
5 11	13 32.48	+14 23.6	2.789	3.616	10.5	21.4	5 11	13 27.62	-25 5.4	1.887	2.833	8.8	20.2
5 21	13 27.15	+13 55.0	2.881	3.624	12.2	21.5	5 21	13 20.69	-24 17.0	1.927	2.816	11.9	20.4
123385	2000 <i>WO</i> ₆₂		4 18.9 205°55	12°2/29.2	18		28596	2000 <i>EK</i> ₁₃₇		4 18.9 297°44	6°9/12.3	17	
3 12	14 17.67	-40 20.8	1.321	2.029	24.6	19.8	3 12	14 10.54	+ 1 32.1	1.655	2.496	14.9	18.9
3 22	14 14.85	-41 2.2	1.235	2.026	22.1	19.6	3 22	14 7.39	+ 3 16.3	1.585	2.494	11.8	18.7
4 1	14 7.92	-41 5.7	1.163	2.024	19.0	19.3	4 1	14 1.86	+ 5 4.7	1.538	2.492	8.7	18.5
4 11	13 57.70	-40 22.8	1.107	2.021	15.8	19.1	4 11	13 54.63	+ 6 47.5	1.516	2.490	7.0	18.4
4 21	13 45.77	-38 48.7	1.070	2.017	13.1	18.9	4 21	13 46.62	+ 8 15.0	1.521	2.488	8.0	18.5
5 1	13 34.20	-36 27.6	1.055	2.014	12.3	18.9	5 1	13 38.90	+ 9 19.2	1.551	2.487	10.9	18.6
5 11	13 24.96	-33 33.9	1.064	2.009	14.0	18.9	5 11	13 32.45	+ 9 55.7	1.604	2.485	14.2	18.8
5 21	13 19.26	-30 27.6	1.094	2.004	17.2	19.1	5 21	13 27.96	+10 4.3	1.676	2.483	17.2	19.0
118927	2000 <i>WQ</i> ₂		4 18.9 206°24	1°8/16.9	18		117990	1014 <i>T</i> ₋₂		4 18.9 263°57	1°8/20.7	18	
3 12	14 10.84	- 6 14.8	2.854	3.658	10.4	20.8	3 12	14 12.97	-17 54.5	2.578	3.349	12.2	20.4
3 22	14 6.60	- 5 45.2	2.760	3.653	8.0	20.6	3 22	14 8.68	-17 58.3	2.463	3.330	9.8	20.2
4 1	14 0.86	- 5 10.7	2.692	3.649	5.3	20.4	4 1	14 2.51	-17 51.2	2.371	3.310	7.0	20.0
4 11	13 54.05	- 4 34.5	2.651	3.643	2.6	20.2	4 11	13 54.92	-17 33.6	2.305	3.290	3.9	19.8
4 21	13 46.74	- 3 59.7	2.641	3.638	2.2	20.2	4 21	13 46.53	-17 7.1	2.268	3.269	1.8	19.6
5 1	13 39.55	- 3 29.8	2.659	3.632	4.8	20.3	5 1	13 38.14	-16 34.8	2.260	3.248	4.1	19.7
5 11	13 33.09	- 3 7.9	2.706	3.626	7.6	20.5	5 11	13 30.53	-16 0.8	2.280	3.227	7.4	19.9
5 21	13 27.84	- 2 55.7	2.778	3.620	10.2	20.7	5 21	13 24.34	-15 29.3	2.326	3.206	10.5	20.0
521288	2015 <i>JH</i> ₁₅		4 18.9 189°21	5°0/12.8	17		97789	2000 <i>NY</i> ₈		4 18.9 259°79	3°5/21.3	18	
3 12	14 9.40	+ 2 45.3	2.540	3.362	11.0	21.7	3 12	14 17.30	-20 26.9	1.729	2.509	17.0	18.9
3 22	14 5.63	+ 3 58.7	2.464	3.362	8.6	21.6	3 22	14 13.17	-20 45.3	1.621	2.490	14.0	18.6
4 1	14 0.26	+ 5 12.9	2.413	3.361	6.3	21.4	4 1	14 6.15	-20 47.2	1.534	2.471	10.2	18.3
4 11	13 53.79	+ 6 22.4	2.389	3.360	5.0	21.3	4 11	13 56.78	-20 31.1	1.470	2.451	6.2	18.1
4 21	13 46.82	+ 7 21.8	2.394	3.359	5.7	21.4	4 21	13 46.03	-19 58.1	1.432	2.430	3.5	17.8
5 1	13 40.03	+ 8 6.7	2.426	3.357	7.8	21.5	5 1	13 35.18	-19 12.1	1.421	2.409	6.0	17.9
5 11	13 34.06	+ 8 34.2	2.484	3.355	10.2	21.7	5 11	13 25.59	-18 20.2	1.435	2.388	10.4	18.1
5 21	13 29.41	+ 8 43.7	2.565	3.354	12.4	21.8	5 21	13 18.28	-17 30.2	1.473	2.366	14.7	18.3
269058	2007 <i>GO</i> ₂₉		4 18.9 322°59	5°6/23.9	18		107403	2001 <i>DW</i> ₃		4 18.9 329°83	0°3/18.8	17	
3 12	14 8.66	-28 1.8	1.635	2.402	18.3	19.4	3 12	14 15.70	-10 52.4	1.434	2.258	17.7	19.5
3 22	14 6.52	-28 1.1	1.537	2.389	15.5	19.2	3 22	14 12.03	-10 59.3	1.351	2.252	14.0	19.2
4 1	14 1.65	-27 34.0	1.456	2.376	12.1	18.9	4 1	14 5.36	-10 55.4	1.288	2.247	9.4	18.9
4 11	13 54.67	-26 38.8	1.397	2.363	8.4	18.7	4 11	13 56.37	-10 43.2	1.248	2.242	4.3	18.6
4 21	13 46.57	-25 17.1	1.363	2.351	5.8	18.5	4 21	13 46.17	-10 26.4	1.233	2.238	1.2	18.4
5 1	13 38.60	-23 35.0	1.353	2.340	6.6	18.5	5 1	13 36.15	-10 10.0	1.244	2.233	6.6	18.7
5 11	13 32.00	-21 43.1	1.369	2.329	10.1	18.7	5 11	13 27.68	- 9 59.8	1.280	2.230	11.7	19.0
5 21	13 27.65	-19 52.5	1.408	2.319	14.1	18.9	5 21	13 21.70	-10 0.1	1.336	2.226	16.1	19.2
17026	1999 <i>EC</i> ₈		4 18.9 302°52	5°0/14.3	18		250432	2003 <i>WO</i> ₁₂₄		4 18.9 172°71	1°4/17.9	16	
3 12	14 8.78	- 3 52.6	1.657	2.497	15.0	17.7	3 12	14 17.43	- 9 0.8	1.998	2.801	14.2	21.6
3 22	14 6.18	- 2 23.8	1.569	2.482	11.6	17.5	3 22	14 12.35	- 8 39.5	1.913	2.805	11.0	21.4
4 1	14 1.18	- 0 44.2	1.505	2.467	8.0	17.2	4 1	14 5.00	- 8 9.8	1.851	2.807	7.3	21.2
4 11	13 54.38	+ 0 58.0	1.465	2.452	5.2	17.0	4 11	13 56.03	- 7 35.1	1.816	2.810	3.3	21.0
4 21	13 46.66	+ 2 33.6	1.452	2.437	6.0	17.0	4 21	13 46.28	- 6 59.6	1.809	2.811	1.9	20.9
5 1	13 39.07	+ 3 53.2	1.464	2.423	9.5	17.2	5 1	13 36.78	- 6 27.9	1.831	2.812	5.8	21.1
5 11	13 32.67	+ 4 49.9	1.501	2.409	13.4	17.4	5 11	13 28.46	- 6 4.8	1.879	2.812	9.7	21.3
5 21	13 28.21	+ 5 20.7	1.557	2.395	16.9	17.6	5 21	13 22.02	- 5 53.0	1.952	2.811	13.1	21.6
394504	2007 <i>TM</i> ₂₃₄		4 18.9 147°65	1°2/17.7	17		243039	2006 <i>WN</i> ₂₀		4 18.9 191°18	5°1/11.8	18	
3 12	14 12.27	- 8 54.5	2.516	3.317	11.7	21.6	3 12	14 9.60	+ 5 48.4	2.947	3.762	9.8	21.1
3 22	14 7.86	- 8 28.1	2.433	3.324	9.0	21.4	3 22	14 5.57	+ 7 1.6	2.870	3.761	7.8	20.9
4 1	14 1.75	- 7 55.0	2.374	3.330	5.9	21.3	4 1	14 0.13	+ 8 13.9	2.820	3.759	6.0	20.8
4 11	13 54.47	- 7 18.0	2.342	3.336	2.7	21.0	4 11	13 53.72	+ 9 20.0	2.797	3.756	5.2	20.7
4 21	13 46.66	- 6 40.9	2.340	3.342	1.7	21.0	4 21	13 46.87	+10 15.5	2.803	3.753	5.8	20.8
5 1	13 39.06	- 6 7.3	2.367	3.347	4.8	21.4	5 1	13 40.18	+10 56.6	2.838	3.750	7.5	20.9
5 11	13 32.35	- 5 41.0	2.422	3.352	7.9	21.4	5 11	13 34.19	+11 21.2	2.897	3.746	9.5	21.0
5 21	13 27.04	- 5 24.3	2.502	3.356	10.7	21.6	5 21	13 29.35	+11 28.9	2.980	3.741	11.5	21.1
35890	1999 <i>JR</i> ₈₁		4 18.9 325°04	6°3/14.3	18		377353	2004 <i>RL</i> ₆₂		4 18.9 221°16	4°5/22.7	17	
3 12	14 9.19	- 2 25.2	1.243	2.101	17.9	18.5	3 12	14 17.45	-24 43.8	2.303	3.043	14.4	21.5
3 22	14 7.23	- 1 4.1	1.167	2.088	14.0	18.2	3 22	14 12.50	-25 15.6	2.198	3.035	12.0	21.3
4 1	14 2.26	+ 0 27.1	1.111	2.076	9.8	18.0	4 1	14 5.24	-25 32.7	2.113	3.027	9.2	21.1
4 11	13 54.98	+ 1 58.5	1.077	2.065	6.6	17.7	4 11	13 56.22	-25 33.6	2.054	3.017	6.3	20.9
4 21	13 46.51	+ 3 18.6	1.068	2.054	7.4	17.7	4 21	13 46.22	-25 18.1	2.022	3.008	4.5	20.8
5 1	13 38.25	+ 4 16.8	1.081	2.044	11.4	17.9	5 1	13 36.25	-24 48.6	2.018	2.998	5.5	20.9
5 11	13 31.57	+ 4 46.2	1.115	2.035	15.9	18.1	5 11	13 27.31	-24 9.8	2.042	2.987	8.3	21.0
5 21	13 27.38	+ 4 45.1	1.167	2.026	20.1	18.4	5 21	13 20.15	-23 27.7	2.091	2.976	11.3	21.2
248501	2005 <i>UX</i> ₄₇₈		4 18.9 208°31	2°1/16.3	18		111138	2001 <i>VK</i> ₉₅					

EPHEMERIDES

4 18.9

4 19.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
474830	2005 <i>SP</i> ₅₆		4 18.9 267°26	0°4/19.3	16		140641	2001 <i>UP</i> ₂₅		4 18.9 210°83	2°3/21.7	18	
3 12	14 15.26	-12 7.6	2.467	3.255	12.3	21.1	3 12	14 11.35	-21 35.0	2.670	3.427	12.2	20.9
3 22	14 10.42	-12 22.0	2.364	3.244	9.6	20.9	3 22	14 7.28	-21 23.1	2.567	3.422	9.9	20.8
4 1	14 3.64	-12 29.5	2.284	3.234	6.5	20.6	4 1	14 1.47	-20 57.6	2.486	3.416	7.2	20.6
4 11	13 55.42	-12 31.2	2.232	3.224	3.1	20.4	4 11	13 54.41	-20 19.1	2.432	3.410	4.3	20.4
4 21	13 46.44	-12 28.7	2.209	3.213	0.7	20.2	4 21	13 46.73	-19 29.8	2.406	3.404	2.3	20.2
5 1	13 37.50	-12 24.6	2.215	3.202	4.3	20.4	5 1	13 39.18	-18 33.3	2.410	3.398	4.0	20.3
5 11	13 29.43	-12 21.9	2.250	3.192	7.8	20.6	5 11	13 32.46	-17 34.7	2.442	3.391	6.9	20.5
5 21	13 22.86	-12 23.3	2.310	3.181	10.9	20.8	5 21	13 27.12	-16 38.7	2.500	3.384	9.7	20.7
8175	Boerhaave		4 18.9 245°37	4°8/14.3	18		311591	2006 <i>JY</i> ₃₅		4 18.9 214°47	3°6/16.2	16	
3 12	14 12.09	+ 1 57.8	2.263	3.085	12.1	17.1	3 12	14 16.26	- 4 10.3	1.774	2.596	15.0	21.4
3 22	14 7.94	+ 2 43.9	2.182	3.081	9.5	17.0	3 22	14 11.78	- 3 27.6	1.689	2.590	11.6	21.2
4 1	14 1.93	+ 3 30.5	2.125	3.077	6.8	16.8	4 1	14 4.82	- 2 38.3	1.626	2.585	7.9	21.0
4 11	13 54.60	+ 4 12.4	2.095	3.072	5.0	16.7	4 11	13 56.03	- 1 47.9	1.588	2.579	4.4	20.7
4 21	13 46.66	+ 4 44.7	2.092	3.068	5.4	16.7	4 21	13 46.32	- 1 2.7	1.578	2.572	4.3	20.7
5 1	13 38.91	+ 5 3.3	2.117	3.064	7.8	16.8	5 1	13 36.82	- 0 28.7	1.596	2.565	7.8	20.9
5 11	13 32.11	+ 5 5.6	2.168	3.060	10.6	17.0	5 11	13 28.59	- 0 10.3	1.638	2.557	11.7	21.1
5 21	13 26.84	+ 4 51.4	2.241	3.055	13.2	17.1	5 21	13 22.38	- 0 9.7	1.703	2.549	15.3	21.3
503857	1996 <i>VM</i> ₁₆		4 18.9 133°84	0°8/18.2	17		266385	2007 <i>ET</i> ₁₂₄		4 19.0 37°08	6°7/22.9	17	
3 12	14 11.95	-10 18.9	2.457	3.257	12.0	22.7	3 12	14 19.47	-24 17.1	1.478	2.252	19.7	19.8
3 22	14 7.67	- 9 55.7	2.374	3.264	9.2	22.6	3 22	14 15.06	-25 36.3	1.409	2.266	16.4	19.6
4 1	14 1.66	- 9 24.7	2.315	3.270	6.1	22.4	4 1	14 7.41	-26 36.8	1.359	2.280	12.7	19.4
4 11	13 54.45	- 8 48.9	2.283	3.277	2.7	22.2	4 11	13 57.31	-27 14.7	1.331	2.295	9.0	19.2
4 21	13 46.71	- 8 11.6	2.280	3.283	1.3	22.1	4 21	13 46.00	-27 28.3	1.327	2.311	6.8	19.1
5 1	13 39.17	- 7 36.8	2.306	3.289	4.6	22.3	5 1	13 35.04	-27 19.8	1.349	2.327	7.8	19.2
5 11	13 32.54	- 7 8.3	2.360	3.295	7.9	22.5	5 11	13 25.88	-26 56.2	1.394	2.344	10.9	19.5
5 21	13 27.35	- 6 48.8	2.439	3.301	10.7	22.7	5 21	13 19.46	-26 25.7	1.462	2.361	14.4	19.7
266403	2007 <i>EK</i> ₂₁₁		4 18.9 101°62	5°9/13.5	18		500540	2012 <i>UR</i> ₂₄		4 19.0 123°92	2°7/22.3	17	
3 12	14 13.15	+ 1 27.0	1.858	2.688	14.0	20.7	3 12	14 13.83	-23 8.0	3.075	3.812	11.2	23.2
3 22	14 8.97	+ 2 48.7	1.799	2.702	10.9	20.5	3 22	14 8.80	-23 8.9	2.992	3.831	9.1	23.1
4 1	14 2.66	+ 4 11.7	1.764	2.717	7.9	20.4	4 1	14 2.26	-22 57.8	2.932	3.851	6.7	23.0
4 11	13 54.91	+ 5 28.4	1.755	2.731	6.0	20.3	4 11	13 54.69	-22 35.0	2.899	3.869	4.3	22.8
4 21	13 46.61	+ 6 31.6	1.773	2.744	6.7	20.3	4 21	13 46.69	-22 2.2	2.895	3.888	2.7	22.7
5 1	13 38.69	+ 7 15.5	1.817	2.758	9.3	20.5	5 1	13 38.91	-21 22.3	2.921	3.905	3.7	22.8
5 11	13 32.02	+ 7 37.3	1.886	2.771	12.2	20.7	5 11	13 31.96	-20 39.0	2.977	3.922	6.0	23.0
5 21	13 27.17	+ 7 37.2	1.976	2.784	14.9	20.9	5 21	13 26.29	-19 56.2	3.059	3.938	8.3	23.2
380117	1995 <i>SJ</i> ₄₀		4 18.9 182°59	2°8/21.7	17		369735	2012 <i>EX</i> ₁₂		4 19.0 272°38	2°9/21.0	18	
3 12	14 16.32	-21 18.8	2.534	3.285	12.9	22.4	3 12	14 15.91	-19 19.1	1.804	2.588	16.3	21.0
3 22	14 11.21	-21 30.7	2.436	3.286	10.5	22.2	3 22	14 11.97	-19 32.8	1.693	2.566	13.3	20.8
4 1	14 4.13	-21 29.8	2.360	3.286	7.7	22.0	4 1	14 5.29	-19 31.0	1.603	2.543	9.6	20.5
4 11	13 55.63	-21 16.0	2.310	3.286	4.7	21.8	4 11	13 56.40	-19 12.9	1.537	2.520	5.6	20.2
4 21	13 46.41	-20 50.5	2.289	3.285	2.8	21.7	4 21	13 46.20	-18 40.0	1.497	2.497	2.9	20.0
5 1	13 37.31	-20 16.5	2.298	3.283	4.4	21.8	5 1	13 35.89	-17 56.3	1.484	2.473	5.7	20.1
5 11	13 29.16	-19 38.2	2.335	3.281	7.3	22.0	5 11	13 26.73	-17 8.2	1.497	2.449	10.1	20.3
5 21	13 22.59	-19 0.4	2.398	3.278	10.2	22.1	5 21	13 19.70	-16 23.0	1.534	2.425	14.3	20.5
18844	1999 <i>RU</i> ₂₇		4 18.9 130°65	3°7/22.8	18		232129	2002 <i>AN</i> ₁₄₁		4 19.0 225°76	4°6/14.5	18	
3 12	14 14.77	-24 12.7	2.709	3.446	12.5	19.0	3 12	14 13.72	- 0 5.6	2.230	3.048	12.4	20.9
3 22	14 9.91	-24 41.2	2.616	3.453	10.3	18.8	3 22	14 9.31	+ 0 53.1	2.140	3.038	9.7	20.7
4 1	14 3.21	-24 57.0	2.546	3.459	7.8	18.7	4 1	14 2.92	+ 1 55.0	2.073	3.027	6.9	20.5
4 11	13 55.19	-24 59.3	2.502	3.466	5.4	18.5	4 11	13 55.11	+ 2 54.6	2.034	3.015	4.7	20.3
4 21	13 46.52	-24 48.8	2.486	3.473	3.8	18.4	4 21	13 46.57	+ 3 46.2	2.023	3.003	5.2	20.4
5 1	13 37.99	-24 27.6	2.499	3.479	4.6	18.5	5 1	13 38.17	+ 4 24.6	2.041	2.990	7.8	20.5
5 11	13 30.35	-23 59.4	2.541	3.485	6.9	18.6	5 11	13 30.72	+ 4 46.3	2.084	2.977	10.9	20.6
5 21	13 24.19	-23 28.7	2.608	3.491	9.4	18.8	5 21	13 24.85	+ 4 49.9	2.150	2.963	13.7	20.8
7191	1993 <i>MA</i> ₁		4 18.9 311°43	2°8/17.0	18		95165	2002 <i>AH</i> ₁₈₀		4 19.0 304°81	2°5/20.9	17	
3 12	14 14.20	- 4 46.1	1.760	2.586	14.9	16.6	3 12	14 12.09	-19 0.9	1.722	2.517	16.5	19.9
3 22	14 10.28	- 4 30.8	1.671	2.574	11.6	16.4	3 22	14 8.89	-19 3.0	1.626	2.506	13.3	19.6
4 1	14 3.88	- 4 10.3	1.603	2.563	7.8	16.1	4 1	14 3.11	-18 48.0	1.550	2.495	9.5	19.4
4 11	13 55.62	- 3 48.9	1.560	2.553	4.0	15.9	4 11	13 55.34	-18 16.4	1.498	2.484	5.4	19.1
4 21	13 46.40	- 3 31.1	1.544	2.542	3.4	15.8	4 21	13 46.50	-17 31.0	1.472	2.474	2.5	18.9
5 1	13 37.30	- 3 21.7	1.555	2.532	7.1	16.0	5 1	13 37.76	-16 36.9	1.473	2.464	5.5	19.0
5 11	13 29.41	- 3 24.4	1.591	2.522	11.2	16.2	5 11	13 30.27	-15 41.5	1.499	2.454	9.8	19.3
5 21	13 23.51	- 3 41.1	1.649	2.512	14.9	16.4	5 21	13 24.87	-14 51.8	1.547	2.444	13.9	19.5
205592	2001 <i>TR</i> ₁₉₁		4 18.9 138°13	1°9/20.5	18		124385	2001 <i>QC</i> ₁₇₄		4 19.0 149°75	0°4/19.3	17	
3 12	14 14.38	-19 7.7	1.524	2.324	18.0	20.5	3 12	14 13.63	-15 7.2	2.035	2.829	14.3	20.0
3 22	14 10.80	-18 46.0	1.444	2.327	14.4	20.2	3 22	14 9.40	-14 38.4	1.951	2.835	11.2	19.8
4 1	14 4.37	-18 3.5	1.383	2.331	10.1	20.0	4 1	14 3.04	-13 56.1	1.889	2.840	7.6	19.6
4 11	13 55.86	-17 2.0	1.345	2.334	5.4	19.7	4 11	13 55.16	-13 3.1	1.854	2.845	3.6	19.4
4 21	13 46.36	-15 46.3	1.334	2.337	2.0	19.5	4 21	13 46.59	-12 3.7	1.846	2.850	0.8	19.1
5 1	13 37.19	-14 24.5	1.348	2.340	5.8	19.8	5 1	13 38.27	-11 3.5	1.867	2.855	4.9	19.4
5 11	13 29.56	-13 6.2	1.388	2.342	10.6	20.0	5 11	13 31.10	-10 8.6	1.915	2.859	8.8	19.7
5 21	13 24.30	-11 59.3	1.451	2.345	14.8	20.3	5 21	13 25.70	- 9 23.7	1.987	2.863	12.2	19.9
153141	2000 <i>SP</i> ₂₀₃		4 18.9 267°36	1°9/22.1	18		272986	2006 <i>DK</i> ₂₈		4 19.0 95°32			