

EPHEMERIDES

8 10.9

8 11.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
504483	2008 <i>FE</i> ₇₂		8 10.9 214°66	1.4/ 9.9	17		12023	1996 <i>YJ</i>		8 10.9 320°14	3.7/12.7	18	
7 10	21 49.18	-16 21.2	1.729	2.619	13.2	22.1	7 10	21 47.62	-7 52.0	1.253	2.142	17.3	17.8
7 20	21 43.25	-17 6.6	1.658	2.614	9.5	21.9	7 20	21 42.73	-7 24.1	1.180	2.129	13.2	17.5
7 30	21 35.15	-17 59.6	1.610	2.608	5.3	21.7	7 30	21 35.13	-7 11.7	1.127	2.116	8.5	17.2
8 9	21 25.66	-18 54.3	1.589	2.602	1.5	21.4	8 9	21 25.71	-7 13.5	1.096	2.103	4.3	16.9
8 19	21 15.80	-19 44.7	1.595	2.595	4.4	21.6	8 19	21 15.72	-7 26.8	1.089	2.092	5.2	16.9
8 29	21 6.74	-20 25.3	1.628	2.587	8.8	21.8	8 29	21 6.67	-7 46.8	1.105	2.081	9.9	17.2
9 8	20 59.51	-20 53.0	1.684	2.579	12.7	22.0	9 8	20 59.88	-8 8.0	1.143	2.070	14.8	17.4
9 18	20 54.78	-21 6.7	1.762	2.571	16.1	22.3	9 18	20 56.19	-8 25.7	1.200	2.060	19.0	17.6
23164	Badger		8 10.9 351°34	0°3/11.2	18 R		268928	2007 <i>DE</i> ₄		8 10.9 223°94	2°3/12.6	18	
7 10	21 45.02	-13 7.8	1.648	2.541	13.7	18.5	7 10	21 47.45	-7 33.8	1.807	2.676	13.8	21.2
7 20	21 40.23	-13 25.9	1.582	2.537	9.9	18.3	7 20	21 41.89	-7 47.5	1.730	2.670	10.4	21.0
7 30	21 33.42	-13 53.7	1.538	2.535	5.6	18.0	7 30	21 34.36	-8 15.0	1.676	2.663	6.5	20.7
8 9	21 25.36	-14 26.9	1.519	2.532	1.1	17.7	8 9	21 25.55	-8 53.4	1.648	2.657	2.8	20.5
8 19	21 17.02	-15 0.9	1.526	2.530	3.7	17.9	8 19	21 16.39	-9 38.7	1.646	2.649	3.7	20.5
8 29	21 9.50	-15 30.9	1.559	2.529	8.1	18.1	8 29	21 7.92	-10 25.7	1.672	2.642	7.6	20.8
9 8	21 3.74	-15 53.2	1.616	2.528	12.1	18.4	9 8	21 1.09	-11 9.5	1.722	2.634	11.5	21.0
9 18	21 0.36	-16 5.8	1.693	2.528	15.5	18.6	9 18	20 56.53	-11 46.4	1.795	2.626	14.9	21.2
432640	2010 <i>VH</i> ₁₈₆		8 10.9 292°10	3°5/ 9.2	17		412008	2012 <i>PU</i> ₁₆		8 10.9 327°36	6°9/10.1	15	
7 10	21 51.13	-21 49.4	1.373	2.279	15.0	21.7	7 10	22 11.07	-31 25.6	0.962	1.862	20.3	19.8
7 20	21 45.17	-22 18.2	1.305	2.267	10.9	21.4	7 20	22 0.36	-30 46.8	0.904	1.858	15.5	19.5
7 30	21 36.44	-22 49.0	1.258	2.255	6.4	21.2	7 30	21 45.16	-29 48.1	0.865	1.854	10.3	19.2
8 9	21 25.89	-23 14.8	1.235	2.243	3.5	20.9	8 9	21 27.36	-28 20.5	0.849	1.851	6.9	19.0
8 19	21 14.89	-23 28.9	1.236	2.232	6.4	21.1	8 19	21 9.59	-26 22.7	0.856	1.848	9.3	19.1
8 29	21 4.96	-23 27.3	1.263	2.220	11.0	21.3	8 29	20 54.51	-24 2.0	0.888	1.845	14.5	19.4
9 8	20 57.43	-23 9.1	1.311	2.209	15.4	21.6	9 8	20 43.85	-21 30.8	0.941	1.843	19.7	19.7
9 18	20 53.08	-22 36.0	1.377	2.197	19.2	21.8	9 18	20 38.19	-18 59.8	1.012	1.841	24.0	20.0
478701	2012 <i>UG</i> ₃₆		8 10.9 318°74	1°5/11.9	18		440439	2005 <i>SA</i> ₄₀		8 10.9 276°82	3°4/ 8.3	18	
7 10	21 44.55	-10 2.5	1.510	2.400	14.8	21.0	7 10	21 47.25	-24 5.3	2.148	3.042	10.9	21.0
7 20	21 40.16	-10 17.6	1.433	2.385	11.0	20.8	7 20	21 41.59	-24 42.0	2.075	3.030	7.9	20.8
7 30	21 33.53	-10 46.7	1.377	2.370	6.6	20.5	7 30	21 34.11	-25 18.3	2.026	3.019	4.9	20.5
8 9	21 25.40	-11 26.5	1.344	2.356	2.1	20.2	8 9	21 25.51	-25 49.2	2.004	3.008	3.4	20.4
8 19	21 16.80	-12 11.8	1.337	2.342	3.9	20.2	8 19	21 16.63	-26 10.2	2.010	2.996	5.3	20.5
8 29	21 8.95	-12 56.7	1.356	2.329	8.7	20.5	8 29	21 8.43	-26 18.4	2.043	2.985	8.5	20.7
9 8	21 2.94	-13 35.8	1.397	2.316	13.1	20.7	9 8	21 1.75	-26 12.8	2.100	2.973	11.5	20.9
9 18	20 59.52	-14 5.3	1.458	2.304	17.0	20.9	9 18	20 57.18	-25 54.2	2.178	2.962	14.2	21.1
440976	2007 <i>CV</i> ₂₂		8 10.9 120°62	0°1/11.1	18		505512	2013 <i>WL</i> ₁₀₉		8 10.9 182°72	2°4/ 8.8	18	
7 10	21 43.34	-11 17.6	2.495	3.367	10.3	21.2	7 10	21 47.79	-20 20.3	2.361	3.248	10.3	22.1
7 20	21 38.43	-12 17.2	2.432	3.378	7.4	21.0	7 20	21 41.78	-21 16.9	2.295	3.248	7.4	21.9
7 30	21 32.18	-13 25.5	2.395	3.389	4.2	20.8	7 30	21 34.15	-22 16.1	2.254	3.249	4.3	21.7
8 9	21 25.14	-14 38.3	2.386	3.399	0.7	20.6	8 9	21 25.53	-23 12.8	2.241	3.248	2.4	21.6
8 19	21 17.95	-15 50.7	2.407	3.410	2.7	20.8	8 19	21 16.67	-24 2.2	2.257	3.247	4.4	21.7
8 29	21 11.30	-16 58.3	2.456	3.420	6.0	21.0	8 29	21 8.43	-24 40.7	2.301	3.245	7.5	21.9
9 8	21 5.81	-17 57.5	2.533	3.429	8.9	21.2	9 8	21 1.56	-25 6.2	2.371	3.243	10.4	22.1
9 18	21 1.93	-18 46.0	2.633	3.439	11.5	21.4	9 18	20 56.60	-25 18.5	2.463	3.240	13.0	22.3
92182	1999 <i>XG</i> ₂₀₃		8 10.9 209°42	5°5/ 4.6	18		298032	2002 <i>PG</i> ₁₄₂		8 10.9 333°74	2°2/ 9.9	18	
7 10	21 46.66	-33 40.6	2.778	3.660	9.1	19.5	7 10	21 48.64	-20 28.9	1.402	2.309	14.7	19.6
7 20	21 40.93	-34 48.3	2.719	3.655	7.2	19.4	7 20	21 43.30	-20 26.2	1.330	2.293	10.6	19.3
7 30	21 33.65	-35 50.0	2.686	3.650	5.8	19.3	7 30	21 35.37	-20 24.9	1.279	2.278	6.1	19.0
8 9	21 25.40	-36 40.6	2.680	3.645	5.7	19.3	8 9	21 25.76	-20 20.1	1.252	2.263	2.2	18.7
8 19	21 16.93	-37 16.1	2.701	3.639	7.0	19.4	8 19	21 15.73	-20 7.5	1.249	2.250	5.2	18.9
8 29	21 9.03	-37 34.2	2.749	3.633	8.9	19.5	8 29	21 6.70	-19 44.6	1.272	2.237	10.1	19.1
9 8	21 2.44	-37 35.0	2.820	3.626	10.8	19.6	9 8	20 59.90	-19 10.6	1.316	2.226	14.5	19.4
9 18	20 57.68	-37 19.8	2.912	3.620	12.6	19.8	9 18	20 56.08	-18 26.6	1.380	2.215	18.4	19.6
70433	1999 <i>TS</i> ₃		8 10.9 14°20	0°1/10.9	18		203996	2003 <i>TX</i> ₁₆		8 10.9 340°21	0°1/10.9	18 R	
7 10	21 46.12	-13 45.3	1.497	2.393	14.5	19.4	7 10	21 46.35	-14 8.9	1.537	2.433	14.3	19.6
7 20	21 41.14	-14 7.5	1.437	2.395	10.5	19.2	7 20	21 41.36	-14 22.9	1.470	2.427	10.3	19.3
7 30	21 33.97	-14 39.5	1.400	2.398	5.9	18.9	7 30	21 34.15	-14 45.9	1.425	2.422	5.8	19.1
8 9	21 25.47	-15 16.4	1.387	2.400	1.0	18.6	8 9	21 25.55	-15 13.6	1.404	2.417	1.0	18.7
8 19	21 16.72	-15 52.9	1.399	2.404	4.0	18.8	8 19	21 16.63	-15 41.0	1.409	2.413	3.9	18.9
8 29	21 8.94	-16 23.7	1.437	2.407	8.7	19.1	8 29	21 8.60	-16 3.6	1.439	2.409	8.7	19.2
9 8	21 3.11	-16 45.2	1.498	2.411	12.9	19.3	9 8	21 2.48	-16 17.9	1.493	2.406	12.9	19.4
9 18	20 59.87	-16 55.6	1.579	2.416	16.4	19.6	9 18	20 58.95	-16 22.2	1.567	2.403	16.5	19.7
392120	Heidiursula		8 10.9 303°96	15°0/24.1	17		485286	2010 <i>YB</i> ₄		8 11.0 251°56	1°3/12.1	17	
7 10	21 41.14	+19 27.3	1.045	1.833	26.8	21.0	7 10	21 46.25	-10 19.0	2.757	3.617	9.8	22.1
7 20	21 38.53	+19 28.5	0.968	1.819	24.1	20.8	7 20	21 40.51	-10 13.5	2.664	3.601	7.3	21.9
7 30	21 33.01	+18 33.9	0.902	1.805	21.0	20.5	7 30	21 33.40	-10 14.4	2.597	3.585	4.4	21.7
8 9	21 25.37	+16 34.7	0.852	1.792	17.7	20.2	8 9	21 25.43	-10 20.3	2.558	3.568	1.7	21.5
8 19	21 16.89	+13 29.4	0.820	1.779	15.4	20.1	8 19	21 17.19	-10 29.2	2.549	3.551	2.6	21.6
8 29	21 9.26	+9 28.7	0.808	1.766	15.4	20.0	8 29	21 9.37	-10 38.9	2.568	3.534	5.6	21.7
9 8	21 4.08	+4 56.4	0.818	1.754	17.9	20.1	9 8	21 2.61	-10 47.3	2.615	3.516	8.5	21.9
9 18	21 2.42	+0 20.5	0.849	1.742	21.8	20.3	9 18	20 57.40	-10 52.7	2.686	3.499	11.1	22.1
173638	2001 <i>FQ</i> ₁₂₅		8 10.9 99°42	0°9/10.4	17		522852	2016 <i>NL</i> ₈₆		8 11.0 39°60	3°3/12.9	17	

EPHEMERIDES

8 11.0

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
193595	2001 <i>BK</i> ₅₅		8 11.0 274°57	1°8/12.4 18			289061	2004 <i>TA</i> ₂₀₀		8 11.0 151°23	3°3/14.2 18		
7 10	21 45.05	- 7 39.2	1.836	2.708	13.5	20.1	7 10	21 42.80	- 2 39.3	2.353	3.197	11.9	21.0
7 20	21 40.29	- 8 14.5	1.747	2.689	10.1	19.8	7 20	21 38.17	- 2 52.9	2.278	3.198	9.2	20.8
7 30	21 33.56	- 9 5.2	1.682	2.671	6.2	19.5	7 30	21 32.14	- 3 20.5	2.226	3.199	6.3	20.6
8 9	21 25.49	-10 8.2	1.642	2.652	2.4	19.3	8 9	21 25.26	- 4 0.2	2.201	3.199	3.8	20.5
8 19	21 16.93	-11 18.1	1.629	2.633	3.5	19.3	8 19	21 18.17	- 4 49.1	2.202	3.200	3.7	20.5
8 29	21 8.92	-12 28.8	1.643	2.614	7.7	19.5	8 29	21 11.60	- 5 43.1	2.232	3.200	6.2	20.6
9 8	21 2.42	-13 34.2	1.682	2.594	11.7	19.7	9 8	21 6.20	- 6 37.7	2.288	3.200	9.0	20.8
9 18	20 58.13	-14 29.8	1.743	2.575	15.3	19.9	9 18	21 2.46	- 7 29.0	2.368	3.201	11.7	21.0
451187	2009 <i>SV</i> ₃₃₁		8 11.0 325°95	1°8/11.9 17			91767	1999 <i>TH</i> ₁₉₆		8 11.0 268°37	2°8/13.3 18		
7 10	21 48.00	-11 58.5	1.801	2.682	13.3	20.3	7 10	21 44.94	- 5 49.4	2.324	3.178	11.7	19.9
7 20	21 42.39	-11 24.9	1.715	2.662	9.9	20.0	7 20	21 39.77	- 5 42.6	2.240	3.168	8.9	19.7
7 30	21 34.71	-10 57.8	1.651	2.643	6.0	19.8	7 30	21 33.08	- 5 46.7	2.180	3.159	5.9	19.5
8 9	21 25.68	-10 36.0	1.613	2.624	2.2	19.5	8 9	21 25.43	- 6 0.6	2.147	3.150	3.2	19.3
8 19	21 16.22	-10 17.9	1.602	2.605	3.7	19.6	8 19	21 17.51	- 6 21.9	2.141	3.140	3.5	19.3
8 29	21 7.43	-10 1.5	1.617	2.588	7.8	19.8	8 29	21 10.09	- 6 47.7	2.163	3.131	6.4	19.4
9 8	21 0.29	- 9 44.8	1.658	2.571	11.8	20.0	9 8	21 3.90	- 7 14.5	2.212	3.122	9.4	19.6
9 18	20 55.50	- 9 26.4	1.719	2.554	15.3	20.2	9 18	20 59.45	- 7 39.3	2.283	3.112	12.2	19.8
423166	2004 <i>FR</i> ₃₄		8 11.0 164°23	0°5/10.6 17			510704	2012 <i>UN</i> ₁₆₉		8 11.0 305°83	5°6/13.9 18		
7 10	21 48.92	-14 6.3	1.866	2.749	12.8	21.6	7 10	21 48.01	- 2 51.9	1.625	2.481	15.7	20.3
7 20	21 42.86	-14 49.0	1.802	2.754	9.2	21.4	7 20	21 42.60	- 2 4.6	1.541	2.465	12.5	20.0
7 30	21 34.87	-15 40.1	1.762	2.759	5.1	21.2	7 30	21 34.95	- 1 32.5	1.478	2.449	8.9	19.8
8 9	21 25.70	-16 34.6	1.749	2.762	0.9	20.9	8 9	21 25.78	- 1 16.5	1.439	2.433	6.1	19.6
8 19	21 16.30	-17 26.8	1.764	2.766	3.7	21.1	8 19	21 16.08	- 1 15.9	1.425	2.417	6.1	19.6
8 29	21 7.70	-18 11.9	1.806	2.768	7.8	21.3	8 29	21 7.05	- 1 28.1	1.437	2.402	9.1	19.7
9 8	21 0.78	-18 46.4	1.873	2.770	11.5	21.6	9 8	20 59.78	- 1 48.4	1.472	2.387	12.9	19.9
9 18	20 56.15	-19 8.9	1.961	2.772	14.6	21.8	9 18	20 55.04	- 2 11.9	1.527	2.373	16.4	20.1
507760	2013 <i>YY</i> ₇₁		8 11.0 150°72	7°0/ 4.9 17			447360	2005 <i>YK</i> ₂₇₄		8 11.0 79°76	1°7/12.2 18		
7 10	21 50.95	-32 44.6	1.979	2.870	11.8	22.1	7 10	21 48.75	-10 30.2	2.329	3.192	11.3	20.4
7 20	21 44.44	-34 8.8	1.934	2.876	9.2	21.9	7 20	21 42.33	-10 6.0	2.262	3.200	8.3	20.2
7 30	21 35.79	-35 25.3	1.912	2.882	7.3	21.8	7 30	21 34.42	- 9 48.6	2.220	3.207	5.1	20.0
8 9	21 25.86	-36 26.3	1.917	2.888	7.1	21.8	8 9	21 25.64	- 9 36.7	2.205	3.214	2.1	19.8
8 19	21 15.73	-37 6.2	1.948	2.893	8.7	21.9	8 19	21 16.75	- 9 28.6	2.220	3.222	3.0	19.9
8 29	21 6.55	-37 22.3	2.004	2.898	11.2	22.1	8 29	21 8.54	- 9 22.5	2.263	3.229	6.2	20.1
9 8	20 59.31	-37 15.6	2.082	2.902	13.7	22.3	9 8	21 1.71	- 9 16.6	2.332	3.237	9.3	20.3
9 18	20 54.62	-36 49.3	2.179	2.906	15.8	22.5	9 18	20 56.72	- 9 9.1	2.426	3.244	11.9	20.5
494470	2016 <i>WK</i> ₁₁		8 11.0 168°76	6°2/15.8 18			273739	2007 <i>EB</i> ₁₁₃		8 11.0 204°44	1°0/11.7 18		
7 10	21 46.79	+ 3 27.3	2.232	3.042	13.6	20.8	7 10	21 48.24	-10 33.7	1.955	2.828	12.7	22.2
7 20	21 41.09	+ 4 5.0	2.157	3.043	11.1	20.7	7 20	21 42.37	-10 59.2	1.879	2.824	9.3	21.9
7 30	21 33.80	+ 4 26.2	2.104	3.044	8.6	20.5	7 30	21 34.63	-11 35.4	1.827	2.819	5.5	21.7
8 9	21 25.53	+ 4 30.3	2.075	3.045	6.7	20.4	8 9	21 25.70	-12 18.9	1.802	2.814	1.5	21.4
8 19	21 17.01	+ 4 18.0	2.073	3.046	6.3	20.4	8 19	21 16.45	-13 5.0	1.804	2.808	3.3	21.5
8 29	21 9.07	+ 3 52.2	2.098	3.047	7.8	20.5	8 29	21 7.87	-13 49.1	1.834	2.802	7.3	21.8
9 8	21 2.44	+ 3 17.2	2.148	3.048	10.2	20.6	9 8	21 0.84	-14 27.1	1.890	2.795	11.1	22.0
9 18	20 57.66	+ 2 37.5	2.221	3.048	12.6	20.8	9 18	20 55.98	-14 56.5	1.968	2.787	14.3	22.2
12567	Herreweghe		8 11.0 197°70	0°2/11.2 18			515326	2012 <i>XC</i> ₁₅₅		8 11.0 307°00	3°4/12.9 18		
7 10	21 43.72	-12 49.7	2.685	3.559	9.7	18.5	7 10	21 46.06	- 6 37.5	1.555	2.430	15.3	21.1
7 20	21 38.70	-13 18.1	2.610	3.557	7.0	18.4	7 20	21 41.47	- 6 29.5	1.455	2.397	11.8	20.8
7 30	21 32.39	-13 52.9	2.561	3.554	3.9	18.2	7 30	21 34.48	- 6 37.1	1.377	2.363	7.7	20.5
8 9	21 25.30	-14 31.3	2.539	3.552	0.7	17.9	8 9	21 25.73	- 6 59.3	1.322	2.329	4.0	20.2
8 19	21 18.01	-15 10.0	2.546	3.549	2.6	18.1	8 19	21 16.18	- 7 33.0	1.293	2.295	4.7	20.2
8 29	21 11.19	-15 45.8	2.582	3.546	5.7	18.3	8 29	21 7.11	- 8 13.5	1.288	2.262	9.1	20.3
9 8	21 5.46	-16 16.1	2.645	3.543	8.5	18.4	9 8	20 59.76	- 8 54.9	1.307	2.228	13.7	20.5
9 18	21 1.25	-16 39.1	2.731	3.539	11.0	18.6	9 18	20 55.07	- 9 32.0	1.346	2.195	18.0	20.7
80701	2000 <i>CP</i> ₄		8 11.0 216°13	0°1/10.9 17			7304	Namiki		8 11.0 44°88	3°8/ 8.6 18 A		
7 10	21 48.27	-12 56.9	1.761	2.645	13.4	20.3	7 10	21 52.13	-18 30.4	1.133	2.043	17.1	16.5
7 20	21 42.59	-13 36.2	1.687	2.639	9.7	20.1	7 20	21 45.35	-20 17.7	1.127	2.093	11.9	16.4
7 30	21 34.83	-14 26.0	1.638	2.633	5.5	19.8	7 30	21 36.15	-22 5.9	1.143	2.142	6.7	16.2
8 9	21 25.73	-15 21.4	1.614	2.627	0.9	19.5	8 9	21 25.90	-23 42.9	1.184	2.192	3.8	16.2
8 19	21 16.26	-16 16.7	1.617	2.620	3.7	19.7	8 19	21 16.07	-24 59.8	1.249	2.241	6.8	16.5
8 29	21 7.54	-17 6.1	1.647	2.613	8.2	19.9	8 29	21 8.03	-25 52.0	1.338	2.291	11.0	16.9
9 8	21 0.54	-17 45.5	1.702	2.605	12.2	20.2	9 8	21 2.65	-26 19.8	1.449	2.340	14.7	17.3
9 18	20 55.94	-18 12.7	1.778	2.597	15.6	20.4	9 18	21 0.28	-26 26.1	1.578	2.388	17.6	17.6
425988	2011 <i>HK</i> ₈₂		8 11.0 82°09	4°8/ 7.2 18			294458	2007 <i>VK</i> ₃₁₁		8 11.0 278°60	1°8/12.3 18		
7 10	21 47.53	-24 8.8	1.658	2.562	12.9	20.4	7 10	21 46.29	- 9 25.5	1.932	2.805	12.8	20.6
7 20	21 42.15	-25 32.8	1.608	2.569	9.4	20.2	7 20	21 41.01	- 9 29.1	1.853	2.796	9.6	20.4
7 30	21 34.57	-26 57.1	1.583	2.575	6.1	20.0	7 30	21 33.89	- 9 43.5	1.797	2.786	5.8	20.2
8 9	21 25.68	-28 13.1	1.582	2.582	4.9	20.0	8 9	21 25.60	-10 6.3	1.766	2.777	2.3	19.9
8 19	21 16.55	-29 13.4	1.608	2.588	7.2	20.1	8 19	21 16.97	-10 34.0	1.763	2.767	3.4	20.0
8 29	21 8.38	-29 53.3	1.660	2.594	10.6	20.3	8 29	21 8.97	-11 2.8	1.787	2.757	7.2	20.2
9 8	21 2.19	-30 11.7	1.733	2.601	13.8	20.6	9 8	21 2.48	-11 28.9	1.836	2.748	11.0	20.4
9 18	20 58.57	-30 10.1	1.826	2.607	16.7	20.8	9 18	20 58.12	-11 49.4	1.907	2.738	14.2	20.6
121701	1999 <i>XR</i> ₇₈		8 11.0 196°95	1°4/12.4 18			31331	1998 <i>HU</i> ₉₂		8 11.0 106°39	5°5/ 6.5 1		

EPHEMERIDES

8 11.0

8 11.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
122559	2000 <i>RB</i> ₂		8 11.0 287°56	2°1/ 9.7	18		509142	2006 <i>BH</i> ₇₁		8 11.0 225°63	2°0/ 9.5	18	
7 10	21 49.24	-18 53.0	1.693	2.589	13.2	19.8	7 10	21 49.22	-19 14.6	2.107	2.994	11.4	22.5
7 20	21 43.61	-19 22.6	1.605	2.563	9.6	19.5	7 20	21 43.09	-19 54.0	2.029	2.984	8.2	22.3
7 30	21 35.60	-19 57.4	1.539	2.537	5.5	19.2	7 30	21 35.08	-20 37.2	1.976	2.973	4.6	22.0
8 9	21 25.94	-20 31.9	1.499	2.510	2.1	18.9	8 9	21 25.87	-21 19.1	1.951	2.961	2.0	21.8
8 19	21 15.66	-21 0.6	1.485	2.484	5.0	19.1	8 19	21 16.32	-21 55.0	1.953	2.949	4.3	22.0
8 29	21 6.04	-21 18.5	1.498	2.457	9.5	19.3	8 29	21 7.40	-22 21.0	1.984	2.936	8.0	22.2
9 8	20 58.24	-21 23.2	1.534	2.430	13.7	19.4	9 8	21 0.02	-22 35.0	2.039	2.923	11.4	22.4
9 18	20 53.09	-21 14.2	1.590	2.403	17.4	19.6	9 18	20 54.78	-22 36.7	2.116	2.909	14.3	22.6
177051	2003 <i>EG</i> ₂₁		8 11.0 165°30	2°7/ 9.1	18		285429	1999 <i>VM</i> ₁₂₃		8 11.0 306°74	2°4/ 12.5	18	
7 10	21 48.36	-22 19.8	2.096	2.988	11.2	20.0	7 10	21 45.92	- 8 18.8	1.328	2.218	16.5	20.4
7 20	21 42.34	-22 43.8	2.032	2.988	8.0	19.8	7 20	21 41.51	- 8 29.5	1.251	2.202	12.4	20.1
7 30	21 34.55	-23 7.9	1.993	2.988	4.7	19.6	7 30	21 34.54	- 8 57.8	1.194	2.186	7.7	19.8
8 9	21 25.72	-23 27.7	1.981	2.988	2.7	19.4	8 9	21 25.82	- 9 40.7	1.160	2.170	3.1	19.5
8 19	21 16.72	-23 39.3	1.996	2.989	4.7	19.6	8 19	21 16.49	-10 32.7	1.150	2.155	4.4	19.6
8 29	21 8.49	-23 40.2	2.039	2.989	8.0	19.8	8 29	21 7.96	-11 26.7	1.164	2.140	9.5	19.8
9 8	21 1.86	-23 29.7	2.106	2.989	11.1	20.0	9 8	21 1.51	-12 15.9	1.200	2.125	14.4	20.0
9 18	20 57.35	-23 8.4	2.196	2.989	13.8	20.2	9 18	20 57.99	-12 55.3	1.256	2.111	18.6	20.3
281540	2008 <i>TS</i> ₁₈₈		8 11.0 62°14	3°0/ 13.1	17		79522	1998 <i>MS</i> ₃₃		8 11.0 350°68	5°4/ 7.3	18	
7 10	21 46.28	- 6 4.1	1.650	2.521	14.8	20.7	7 10	21 43.71	-21 35.1	1.132	2.056	16.0	18.4
7 20	21 41.11	- 6 12.4	1.589	2.527	11.2	20.5	7 20	21 40.21	-23 14.0	1.079	2.050	11.5	18.1
7 30	21 33.96	- 6 36.5	1.549	2.534	7.2	20.3	7 30	21 33.88	-24 59.5	1.047	2.045	7.2	17.9
8 9	21 25.63	- 7 13.5	1.534	2.540	3.6	20.1	8 9	21 25.70	-26 39.5	1.037	2.041	5.4	17.8
8 19	21 17.07	- 7 59.1	1.544	2.547	4.0	20.1	8 19	21 17.06	-28 2.0	1.050	2.039	8.6	17.9
8 29	21 9.36	- 8 47.7	1.581	2.554	7.8	20.4	8 29	21 9.58	-28 58.3	1.086	2.037	13.1	18.2
9 8	21 3.40	- 9 34.1	1.642	2.560	11.6	20.6	9 8	21 4.61	-29 25.8	1.140	2.036	17.5	18.4
9 18	20 59.79	-10 14.0	1.725	2.567	15.0	20.9	9 18	21 2.93	-29 25.8	1.212	2.036	21.1	18.7
260255	2004 <i>SU</i>		8 11.0 336°88	4°2/ 7.2	18		86701	2000 <i>FP</i> ₅₉		8 11.0 123°59	5°5/ 7.2	18	
7 10	21 43.72	-23 43.0	1.926	2.829	11.5	20.1	7 10	21 52.33	-27 34.2	1.732	2.628	12.9	20.5
7 20	21 39.29	-24 59.9	1.863	2.823	8.3	19.9	7 20	21 45.49	-28 37.8	1.687	2.640	9.6	20.3
7 30	21 32.98	-26 18.5	1.824	2.817	5.3	19.7	7 30	21 36.43	-29 37.2	1.665	2.651	6.6	20.1
8 9	21 25.47	-27 31.5	1.811	2.811	4.3	19.6	8 9	21 26.09	-30 24.6	1.669	2.662	5.6	20.1
8 19	21 17.65	-28 32.6	1.825	2.806	6.4	19.7	8 19	21 15.64	-30 54.3	1.700	2.673	7.5	20.2
8 29	21 10.53	-29 16.9	1.865	2.801	9.5	19.9	8 29	21 6.32	-31 3.5	1.756	2.683	10.6	20.4
9 8	21 4.99	-29 42.4	1.928	2.797	12.6	20.1	9 8	20 59.10	-30 52.8	1.835	2.693	13.6	20.7
9 18	21 1.65	-29 49.5	2.012	2.793	15.3	20.3	9 18	20 54.57	-30 25.1	1.933	2.702	16.3	20.9
482354	2011 <i>WE</i> ₈₇		8 11.0 323°86	6°4/ 15.9	16		207850	2007 <i>UA</i> ₁₁₉		8 11.0 315°78	2°8/ 13.2	18	
7 10	21 44.12	+ 2 57.8	1.933	2.759	14.8	21.7	7 10	21 44.71	- 5 48.9	1.776	2.644	14.0	20.7
7 20	21 39.44	+ 3 20.9	1.855	2.753	12.1	21.5	7 20	21 39.99	- 6 5.6	1.704	2.641	10.6	20.4
7 30	21 33.02	+ 3 24.8	1.798	2.748	9.3	21.3	7 30	21 33.39	- 6 38.1	1.653	2.637	6.8	20.2
8 9	21 25.48	+ 3 9.0	1.765	2.743	7.0	21.1	8 9	21 25.60	- 7 23.5	1.627	2.634	3.4	20.0
8 19	21 17.62	+ 2 35.2	1.757	2.738	6.5	21.1	8 19	21 17.49	- 8 17.6	1.628	2.630	3.8	20.0
8 29	21 10.35	+ 1 47.4	1.775	2.733	8.3	21.2	8 29	21 10.07	- 9 14.8	1.655	2.627	7.5	20.2
9 8	21 4.51	+ 0 51.1	1.817	2.729	11.0	21.4	9 8	21 4.22	-10 9.5	1.706	2.624	11.3	20.5
9 18	21 0.69	- 0 7.6	1.881	2.725	13.9	21.5	9 18	21 0.57	-10 57.3	1.780	2.621	14.6	20.7
205355	2000 <i>WZ</i> ₁₅₃		8 11.0 314°84	5°4/ 13.3	18		102308	1999 <i>TF</i> ₉₆		8 11.0 282°40	5°8/ 7.3	18	
7 10	21 49.29	- 4 58.8	1.477	2.345	16.4	19.3	7 10	21 50.87	-26 5.0	1.473	2.378	14.2	19.5
7 20	21 43.73	- 4 0.9	1.395	2.328	12.8	19.0	7 20	21 45.17	-27 10.0	1.398	2.358	10.6	19.3
7 30	21 35.70	- 3 16.5	1.334	2.311	9.0	18.7	7 30	21 36.65	-28 15.1	1.346	2.337	7.1	19.0
8 9	21 25.98	- 2 46.7	1.296	2.294	5.8	18.5	8 9	21 26.21	-29 10.9	1.319	2.316	5.9	18.9
8 19	21 15.68	- 2 31.3	1.283	2.279	6.1	18.5	8 19	21 15.11	-29 49.0	1.316	2.296	8.4	19.0
8 29	21 6.13	- 2 28.2	1.295	2.263	9.7	18.7	8 29	21 4.93	-30 4.0	1.337	2.275	12.3	19.2
9 8	20 58.54	- 2 33.2	1.330	2.248	13.8	18.9	9 8	20 57.05	-29 55.0	1.379	2.254	16.3	19.3
9 18	20 53.75	- 2 42.0	1.385	2.234	17.6	19.1	9 18	20 52.34	-29 24.5	1.440	2.233	19.8	19.5
342136	2008 <i>SO</i> ₁₂₇		8 11.0 295°15	3°5/ 8.6	18		204092	2003 <i>WZ</i> ₆₉		8 11.0 293°25	0°1/ 11.1	18	
7 10	21 47.27	-21 29.7	1.649	2.552	13.1	20.4	7 10	21 45.72	-13 2.2	1.765	2.654	13.1	20.7
7 20	21 42.15	-22 22.5	1.575	2.537	9.5	20.1	7 20	21 40.80	-13 33.0	1.690	2.644	9.5	20.5
7 30	21 34.74	-23 19.0	1.525	2.521	5.7	19.9	7 30	21 33.90	-14 14.0	1.638	2.634	5.4	20.2
8 9	21 25.81	-24 12.2	1.499	2.506	3.5	19.7	8 9	21 25.70	-15 0.7	1.612	2.625	0.9	19.9
8 19	21 16.42	-24 55.4	1.500	2.491	6.0	19.8	8 19	21 17.14	-15 47.9	1.612	2.615	3.6	20.1
8 29	21 7.82	-25 23.4	1.526	2.477	10.1	20.0	8 29	21 9.27	-16 30.4	1.638	2.606	8.0	20.3
9 8	21 1.11	-25 34.0	1.575	2.462	13.9	20.2	9 8	21 3.05	-17 4.1	1.689	2.597	12.0	20.5
9 18	20 57.02	-25 27.4	1.643	2.448	17.3	20.4	9 18	20 59.13	-17 26.7	1.761	2.588	15.4	20.7
342079	2008 <i>SG</i> ₃₇		8 11.0 3°60	3°4/ 9.3	16		340382	2006 <i>DV</i> ₁₉₇		8 11.0 88°86	5°4/ 7.7	17	
7 10	21 44.41	-20 36.4	1.078	2.003	16.5	20.1	7 10	21 54.53	-29 33.5	1.833	2.723	12.6	20.6
7 20	21 40.61	-21 7.3	1.030	2.001	11.9	19.8	7 20	21 46.81	-30 8.3	1.794	2.742	9.4	20.5
7 30	21 34.00	-21 42.3	1.000	2.001	6.8	19.5	7 30	21 37.04	-30 35.9	1.779	2.762	6.6	20.4
8 9	21 25.68	-22 13.2	0.993	2.003	3.4	19.3	8 9	21 26.20	-30 50.4	1.790	2.781	5.5	20.3
8 19	21 17.10	-22 33.0	1.007	2.006	6.6	19.5	8 19	21 15.45	-30 48.1	1.828	2.800	7.1	20.5
8 29	21 9.86	-22 36.7	1.044	2.011	11.5	19.8	8 29	21 5.95	-30 27.8	1.892	2.819	10.0	20.7
9 8	21 5.18	-22 23.0	1.100	2.017	16.1	20.1	9 8	20 58.59	-29 51.5	1.980	2.838	12.8	20.9
9 18	21 3.72	-21 53.1	1.174	2.025	20.0	20.4	9 18	20 53.84	-29 2.3	2.088	2.856	15.3	21.1
340965	2007 <i>EA</i> ₁₀₅		8 11.0 10°93	4°7/ 9.1	16		383516	2007 <i>CF</i> ₄₅ </					

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8 11.0

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
397245	2006 <i>QJ</i>		8 11.0	6°67	1°2/ 9.9	18	86167	1999 <i>RM</i> ₂₀₉		8 11.1	260°25	3°1/13.6	18
7 10	21 40.49	- 9 53.0	1.363	2.264	15.4	19.1	7 10	21 45.33	- 4 32.8	2.484	3.329	11.3	19.0
7 20	21 37.42	-12 11.3	1.303	2.264	11.0	18.8	7 20	21 40.07	- 4 24.6	2.392	3.313	8.7	18.8
7 30	21 32.14	-14 51.6	1.267	2.266	6.0	18.6	7 30	21 33.33	- 4 27.4	2.323	3.298	5.9	18.6
8 9	21 25.42	-17 42.3	1.256	2.269	1.3	18.3	8 9	21 25.64	- 4 40.3	2.282	3.281	3.5	18.4
8 19	21 18.30	-20 29.2	1.272	2.273	5.1	18.5	8 19	21 17.62	- 5 1.5	2.268	3.265	3.6	18.4
8 29	21 12.02	-22 58.6	1.315	2.278	10.1	18.8	8 29	21 10.04	- 5 28.0	2.282	3.248	6.2	18.5
9 8	21 7.66	-25 1.6	1.381	2.284	14.4	19.1	9 8	21 3.58	- 5 56.6	2.324	3.232	9.1	18.7
9 18	21 5.91	-26 34.4	1.468	2.292	18.0	19.4	9 18	20 58.77	- 6 24.2	2.388	3.214	11.9	18.8
333262	2012 <i>JY</i> ₂₀		8 11.1	36°65	4°7/13.9	17	400864	2010 <i>NJ</i> ₁₀₉		8 11.1	329°28	7°7/18.2	17
7 10	21 46.64	- 3 30.8	1.336	2.209	17.4	20.9	7 10	21 42.47	+ 8 42.7	2.054	2.846	15.2	21.3
7 20	21 41.71	- 3 21.5	1.280	2.216	13.5	20.6	7 20	21 38.23	+ 8 58.4	1.974	2.841	12.9	21.1
7 30	21 34.47	- 3 33.1	1.244	2.224	9.2	20.4	7 30	21 32.37	+ 8 51.2	1.914	2.836	10.5	20.9
8 9	21 25.81	- 4 3 7	1.230	2.231	5.4	20.2	8 9	21 25.47	+ 8 20.6	1.876	2.831	8.5	20.8
8 19	21 16.90	- 4 48.8	1.240	2.240	5.4	20.3	8 19	21 18.27	+ 7 27.9	1.863	2.827	7.7	20.8
8 29	21 9.02	- 5 41.8	1.274	2.248	9.1	20.5	8 29	21 11.61	+ 6 17.3	1.876	2.823	8.7	20.8
9 8	21 3.24	- 6 35.6	1.332	2.257	13.2	20.8	9 8	21 6.26	+ 4 55.3	1.913	2.819	10.9	20.9
9 18	21 0.20	- 7 24.1	1.409	2.267	16.8	21.0	9 18	21 2.80	+ 3 28.9	1.973	2.815	13.3	21.1
264933	2002 <i>VQ</i> ₃₅		8 11.1	282°04	2°5/ 9.5	18	351448	2005 <i>JS</i> ₁₁₈		8 11.1	285°05	2°3/ 9.1	18
7 10	21 48.88	-18 44.9	1.549	2.449	13.9	21.0	7 10	21 45.40	-18 38.6	1.903	2.799	11.9	21.1
7 20	21 43.51	-19 28.9	1.468	2.429	10.1	20.7	7 20	21 40.50	-19 37.6	1.834	2.793	8.5	20.8
7 30	21 35.64	-20 19.7	1.410	2.408	5.8	20.4	7 30	21 33.71	-20 42.2	1.789	2.787	4.8	20.6
8 9	21 26.04	-21 10.7	1.377	2.388	2.5	20.2	8 9	21 25.71	-21 46.3	1.771	2.781	2.3	20.4
8 19	21 15.84	-21 55.0	1.369	2.367	5.5	20.3	8 19	21 17.40	-22 43.9	1.780	2.775	4.8	20.6
8 29	21 6.39	-22 26.6	1.387	2.346	10.1	20.5	8 29	21 9.77	-23 29.8	1.816	2.769	8.5	20.8
9 8	20 58.93	-22 42.4	1.428	2.325	14.5	20.7	9 8	21 3.72	-24 1.3	1.875	2.763	12.0	21.0
9 18	20 54.30	-22 41.8	1.488	2.304	18.2	20.9	9 18	20 59.87	-24 17.3	1.956	2.757	15.0	21.2
448611	2010 <i>UG</i> ₄₅		8 11.1	316°57	0°2/10.9	17	132916	2002 <i>SE</i> ₂₈		8 11.1	8°84	0°1/11.0	18
7 10	21 45.85	-15 1.9	1.933	2.821	12.1	21.4	7 10	21 45.61	-13 20.2	1.698	2.589	13.4	19.8
7 20	21 40.76	-15 12.2	1.855	2.809	8.8	21.2	7 20	21 40.70	-13 49.1	1.634	2.589	9.7	19.6
7 30	21 33.81	-15 29.0	1.801	2.797	5.0	20.9	7 30	21 33.82	-14 27.5	1.593	2.590	5.5	19.3
8 9	21 25.70	-15 48.6	1.772	2.786	0.8	20.6	8 9	21 25.73	-15 10.9	1.578	2.591	0.9	19.0
8 19	21 17.26	-16 7.5	1.771	2.774	3.4	20.8	8 19	21 17.38	-15 54.1	1.588	2.592	3.6	19.2
8 29	21 9.48	-16 22.1	1.796	2.763	7.5	21.0	8 29	21 9.84	-16 32.0	1.625	2.594	8.0	19.5
9 8	21 3.23	-16 29.9	1.847	2.753	11.2	21.2	9 8	21 4.03	-17 0.9	1.686	2.596	11.9	19.7
9 18	20 59.12	-16 29.4	1.918	2.742	14.4	21.4	9 18	21 0.54	-17 18.9	1.768	2.598	15.2	20.0
394577	2007 <i>VU</i> ₆₀		8 11.1	249°71	2°9/ 8.8	18	203956	2003 <i>SX</i> ₆₃		8 11.1	282°62	1°2/11.7	18
7 10	21 47.57	-21 36.6	2.042	2.936	11.4	21.4	7 10	21 50.46	-12 15.0	1.869	2.745	13.1	20.5
7 20	21 41.96	-22 19.7	1.970	2.927	8.2	21.2	7 20	21 44.29	-12 2.5	1.774	2.720	9.7	20.3
7 30	21 34.48	-23 4.7	1.923	2.919	4.8	21.0	7 30	21 35.96	-11 57.5	1.702	2.694	5.8	20.0
8 9	21 25.82	-23 46.4	1.903	2.910	2.9	20.8	8 9	21 26.13	-11 57.7	1.656	2.668	1.7	19.6
8 19	21 16.85	-24 19.7	1.910	2.901	5.0	20.9	8 19	21 15.74	-12 0.5	1.638	2.642	3.6	19.7
8 29	21 8.58	-24 40.9	1.944	2.892	8.4	21.1	8 29	21 5.92	-12 2.8	1.647	2.615	7.9	19.9
9 8	21 1.87	-24 48.5	2.002	2.883	11.7	21.3	9 8	20 57.71	-12 2.1	1.681	2.588	12.1	20.1
9 18	20 57.33	-24 42.6	2.082	2.873	14.6	21.5	9 18	20 51.87	-11 56.6	1.737	2.561	15.7	20.3
354165	2002 <i>CU</i> ₂₁₉		8 11.1	85°23	2°3/13.5	16	496391	2013 <i>TA</i> ₅₀		8 11.1	288°57	0°1/11.1	18
7 10	21 43.40	- 3 58.6	2.285	3.135	12.0	20.2	7 10	21 46.80	-12 22.0	1.493	2.386	14.8	21.6
7 20	21 38.60	- 4 50.0	2.226	3.153	9.0	20.0	7 20	21 42.04	-12 59.0	1.410	2.366	10.8	21.3
7 30	21 32.42	- 5 55.6	2.191	3.171	5.8	19.9	7 30	21 34.84	-13 49.8	1.349	2.346	6.2	21.0
8 9	21 25.45	- 7 11.7	2.183	3.189	2.8	19.7	8 9	21 25.95	-14 49.5	1.312	2.325	1.1	20.6
8 19	21 18.35	- 8 33.6	2.204	3.206	3.0	19.8	8 19	21 16.43	-15 51.3	1.301	2.305	4.2	20.8
8 29	21 11.86	- 9 55.7	2.254	3.224	6.0	20.0	8 29	21 7.60	-16 48.0	1.315	2.285	9.3	21.0
9 8	21 6.61	-11 12.9	2.330	3.241	9.0	20.2	9 8	21 0.68	-17 34.0	1.352	2.265	14.0	21.2
9 18	21 3.05	-12 21.5	2.431	3.258	11.6	20.4	9 18	20 56.52	-18 5.9	1.409	2.244	18.1	21.4
175427	2006 <i>QN</i> ₃		8 11.1	341°17	0°6/11.4	18	229834	2009 <i>FM</i> ₅₉		8 11.1	28°22	0°2/11.2	18
7 10	21 41.73	-12 40.3	1.271	2.180	15.7	19.1	7 10	21 45.63	-13 18.1	1.811	2.699	12.9	20.2
7 20	21 38.54	-12 52.9	1.197	2.161	11.6	18.8	7 20	21 40.58	-13 39.2	1.749	2.702	9.3	20.0
7 30	21 32.89	-13 18.6	1.144	2.143	6.7	18.5	7 30	21 33.69	-14 8.9	1.711	2.707	5.3	19.8
8 9	21 25.58	-13 53.2	1.114	2.127	1.4	18.1	8 9	21 25.71	-14 43.0	1.698	2.711	1.0	19.5
8 19	21 17.75	-14 31.0	1.106	2.112	4.3	18.2	8 19	21 17.52	-15 17.2	1.712	2.716	3.4	19.7
8 29	21 10.76	-15 5.4	1.122	2.099	9.6	18.5	8 29	21 10.13	-15 47.2	1.753	2.721	7.5	19.9
9 8	21 5.85	-15 31.2	1.159	2.087	14.5	18.7	9 8	21 4.37	-16 9.7	1.818	2.727	11.2	20.2
9 18	21 3.81	-15 45.0	1.215	2.077	18.7	19.0	9 18	21 0.79	-16 23.0	1.905	2.732	14.3	20.4
285428	1999 <i>VX</i> ₁₁₂		8 11.1	258°89	5°8/ 5.8	18	259811	2004 <i>BO</i> ₁₀₆		8 11.1	252°58	2°6/12.6	18
7 10	21 49.07	-29 16.1	2.034	2.928	11.4	20.8	7 10	21 49.35	- 8 23.9	1.567	2.443	15.2	20.5
7 20	21 43.28	-30 32.8	1.961	2.911	8.7	20.6	7 20	21 43.61	- 8 19.0	1.493	2.436	11.4	20.2
7 30	21 35.35	-31 47.0	1.913	2.894	6.4	20.4	7 30	21 35.58	- 8 27.7	1.440	2.428	7.1	19.9
8 9	21 25.99	-32 51.1	1.891	2.876	6.0	20.3	8 9	21 26.06	- 8 47.7	1.412	2.421	3.1	19.7
8 19	21 16.18	-33 38.4	1.896	2.857	7.8	20.4	8 19	21 16.12	- 9 15.2	1.410	2.413	4.1	19.7
8 29	21 7.04	-34 5.1	1.926	2.838	10.6	20.6	8 29	21 7.00	- 9 45.4	1.433	2.405	8.5	20.0
9 8	20 59.60	-34 10.2	1.980	2.819	13.5	20.7	9 8	20 59.78	-10 13.7	1.481	2.397	12.8	20.2
9 18	20 54.58	-33 55.6	2.052	2.800	16.1	20.9	9 18	20 55.19	-10 36.4	1.549	2.389	16.5	20.4
255202	2005 <i>UU</i> ₃₂₇		8 11.1	288°04	4°0/14.2	18	213891	2003 <i>SZ</i> ₃₀₉					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
38142	1999 <i>JQ</i> ₅₉		8 11.1 25°68	2.7/ 9.3	18		496424	2014 <i>EV</i> ₄		8 11.1 139°40	3.2/ 8.8	18	
7 10	21 45.16	-16 38.2	1.047	1.967	17.3	17.7	7 10	21 49.70	-23 12.8	1.991	2.884	11.7	21.3
7 20	21 41.18	-17 52.7	1.004	1.975	12.3	17.4	7 20	21 43.42	-23 43.0	1.931	2.887	8.4	21.1
7 30	21 34.37	-19 18.4	0.981	1.983	6.8	17.2	7 30	21 35.27	-24 12.7	1.896	2.890	5.1	20.9
8 9	21 25.86	-20 44.5	0.980	1.992	2.7	16.9	8 9	21 26.02	-24 36.8	1.887	2.893	3.2	20.8
8 19	21 17.10	-22 0.0	1.002	2.002	6.4	17.2	8 19	21 16.60	-24 51.2	1.906	2.895	5.2	20.9
8 29	21 9.71	-22 56.4	1.046	2.012	11.6	17.5	8 29	21 8.04	-24 53.2	1.951	2.898	8.5	21.1
9 8	21 4.91	-23 29.9	1.110	2.024	16.3	17.8	9 8	21 1.19	-24 42.2	2.021	2.900	11.7	21.4
9 18	21 3.36	-23 40.7	1.192	2.036	20.1	18.1	9 18	20 56.60	-24 19.3	2.113	2.903	14.4	21.6
476235	2007 <i>VE</i> ₃₅		8 11.1 277°61	2.6/ 9.0	18		392936	2012 <i>VS</i> ₁₁₂		8 11.1 275°96	1.0/ 10.2	18	
7 10	21 46.30	-19 47.5	1.893	2.790	12.0	21.3	7 10	21 46.00	-14 21.8	1.940	2.827	12.2	21.2
7 20	21 41.16	-20 39.6	1.825	2.784	8.6	21.1	7 20	21 41.07	-15 21.7	1.849	2.803	8.8	21.0
7 30	21 34.09	-21 36.0	1.780	2.777	4.9	20.9	7 30	21 34.16	-16 32.4	1.781	2.778	4.9	20.7
8 9	21 25.81	-22 30.7	1.762	2.771	2.6	20.7	8 9	21 25.87	-17 48.8	1.741	2.753	1.1	20.4
8 19	21 17.20	-23 18.0	1.771	2.765	4.9	20.9	8 19	21 17.03	-19 4.3	1.728	2.728	4.0	20.5
8 29	21 9.32	-23 53.2	1.807	2.759	8.6	21.1	8 29	21 8.66	-20 12.5	1.742	2.703	8.2	20.7
9 8	21 3.06	-24 14.0	1.866	2.753	12.1	21.3	9 8	21 1.75	-21 8.6	1.781	2.677	12.1	20.9
9 18	20 59.04	-24 20.0	1.946	2.747	15.1	21.5	9 18	20 57.04	-21 50.0	1.842	2.650	15.5	21.1
260114	2004 <i>PL</i> ₂₁		8 11.1 309°03	8.4/ 6.2	18		47531	2000 <i>AY</i> ₉₆		8 11.1 156°00	2.5/ 8.8	18	
7 10	21 59.67	-40 18.8	2.046	2.911	12.6	20.0	7 10	21 46.47	-19 38.0	2.115	3.007	11.1	18.3
7 20	21 50.79	-40 39.1	1.980	2.898	10.5	19.9	7 20	21 41.07	-20 43.0	2.054	3.011	7.9	18.1
7 30	21 39.45	-40 43.9	1.937	2.885	8.8	19.7	7 30	21 33.96	-21 51.7	2.018	3.014	4.5	17.9
8 9	21 26.72	-40 26.7	1.920	2.873	8.5	19.7	8 9	21 25.80	-22 58.3	2.010	3.018	2.5	17.8
8 19	21 13.91	-39 43.8	1.929	2.860	9.7	19.7	8 19	21 17.41	-23 57.2	2.030	3.021	4.7	17.9
8 29	21 2.42	-38 35.7	1.963	2.848	11.8	19.9	8 29	21 9.70	-24 44.0	2.077	3.024	8.0	18.2
9 8	20 53.31	-37 6.6	2.021	2.836	14.2	20.0	9 8	21 3.47	-25 16.3	2.149	3.027	11.1	18.4
9 18	20 47.17	-35 22.2	2.100	2.825	16.4	20.1	9 18	20 59.27	-25 33.8	2.242	3.029	13.8	18.6
290635	2005 <i>UQ</i> ₂₅₀		8 11.1 320°03	1.7/ 10.0	18		207644	2006 <i>UW</i> ₃₂₂		8 11.1 146°37	0.1/ 11.0	18	
7 10	21 49.14	-19 55.3	1.906	2.798	12.1	20.5	7 10	21 41.79	-14 15.8	3.348	4.221	7.9	21.0
7 20	21 43.14	-19 57.8	1.833	2.789	8.7	20.2	7 20	21 37.18	-14 35.2	3.278	4.224	5.7	20.9
7 30	21 35.17	-20 1.7	1.784	2.781	4.9	20.0	7 30	21 31.57	-14 58.8	3.234	4.228	3.2	20.7
8 9	21 26.00	-20 3.3	1.761	2.772	1.8	19.8	8 9	21 25.38	-15 24.2	3.218	4.231	0.5	20.5
8 19	21 16.56	-19 59.3	1.765	2.764	4.2	19.9	8 19	21 19.08	-15 49.3	3.232	4.234	2.1	20.6
8 29	21 7.91	-19 47.3	1.796	2.756	8.1	20.1	8 29	21 13.16	-16 11.8	3.274	4.237	4.7	20.8
9 8	21 0.96	-19 26.4	1.851	2.748	11.7	20.3	9 8	21 8.10	-16 29.9	3.345	4.240	7.0	21.0
9 18	20 56.31	-18 57.0	1.929	2.741	14.8	20.5	9 18	21 4.24	-16 42.6	3.439	4.243	9.1	21.1
60352	2000 <i>AC</i> ₈₈		8 11.1 207°75	0.5/ 11.4	18		25418	<i>Deshmukh</i>		8 11.1 215°16	1.9/ 9.7	18	
7 10	21 48.26	-11 26.8	1.781	2.660	13.4	20.1	7 10	21 50.00	-17 47.9	1.801	2.691	12.8	19.9
7 20	21 42.62	-12 3.5	1.708	2.657	9.8	19.8	7 20	21 43.93	-18 34.4	1.729	2.685	9.2	19.6
7 30	21 34.94	-12 51.8	1.658	2.652	5.6	19.6	7 30	21 35.72	-19 26.9	1.681	2.678	5.2	19.4
8 9	21 25.97	-13 47.3	1.635	2.647	1.2	19.3	8 9	21 26.13	-20 19.5	1.659	2.671	1.9	19.2
8 19	21 16.64	-14 44.2	1.638	2.642	3.5	19.4	8 19	21 16.17	-21 6.4	1.665	2.662	4.6	19.3
8 29	21 8.03	-15 37.0	1.669	2.636	7.9	19.7	8 29	21 6.98	-21 42.4	1.697	2.654	8.7	19.6
9 8	21 1.12	-16 21.0	1.724	2.630	11.9	19.9	9 8	20 59.56	-22 4.9	1.754	2.645	12.6	19.8
9 18	20 56.55	-16 53.8	1.802	2.624	15.3	20.1	9 18	20 54.60	-22 13.2	1.832	2.635	15.8	20.0
399878	2005 <i>VV</i> ₁₀₆		8 11.1 14°10	4.8/ 14.8	18		471261	2011 <i>CV</i> ₈₆		8 11.1 180°86	2.0/ 12.7	18	
7 10	21 44.51	- 1 8.8	1.972	2.815	13.8	20.5	7 10	21 46.15	- 6 38.7	1.681	2.553	14.5	21.4
7 20	21 39.68	- 0 53.6	1.901	2.817	10.9	20.3	7 20	21 41.15	- 7 22.0	1.612	2.553	10.9	21.2
7 30	21 33.18	- 0 54.6	1.853	2.818	7.8	20.1	7 30	21 34.14	- 8 22.5	1.566	2.554	6.7	20.9
8 9	21 25.65	- 1 11.1	1.828	2.820	5.3	20.0	8 9	21 25.86	- 9 35.9	1.544	2.554	2.7	20.7
8 19	21 17.88	- 1 40.8	1.830	2.823	5.1	20.0	8 19	21 17.24	-10 55.8	1.549	2.553	3.6	20.7
8 29	21 10.75	- 2 19.7	1.859	2.825	7.4	20.1	8 29	21 9.38	-12 15.1	1.581	2.553	7.8	21.0
9 8	21 5.05	- 3 3.0	1.913	2.828	10.4	20.3	9 8	21 3.21	-13 27.2	1.638	2.552	11.9	21.2
9 18	21 1.31	- 3 46.0	1.989	2.831	13.3	20.5	9 18	20 59.39	-14 27.8	1.716	2.552	15.3	21.5
444452	2006 <i>DG</i> ₁₈₃		8 11.1 230°82	13.3/ 5.9	15		131027	2000 <i>XP</i> ₄₂		8 11.1 255°35	8.4/ 4.7	18	
7 10	22 10.95	-42 22.7	1.212	2.087	18.7	21.5	7 10	21 53.69	-36 42.0	1.854	2.738	12.8	19.5
7 20	22 0.51	-43 22.6	1.159	2.079	15.9	21.3	7 20	21 46.81	-37 48.8	1.795	2.728	10.4	19.3
7 30	21 45.54	-43 58.5	1.125	2.071	13.8	21.1	7 30	21 37.40	-38 44.7	1.760	2.718	8.7	19.2
8 9	21 27.81	-43 55.6	1.112	2.062	13.4	21.1	8 9	21 26.43	-39 21.2	1.748	2.708	8.6	19.2
8 19	21 9.94	-43 5.9	1.122	2.053	15.0	21.1	8 19	21 15.14	-39 32.7	1.762	2.698	10.2	19.2
8 29	20 54.61	-41 31.7	1.153	2.043	17.9	21.3	8 29	21 4.92	-39 17.0	1.800	2.687	12.6	19.4
9 8	20 43.64	-39 23.8	1.204	2.032	21.1	21.5	9 8	20 56.92	-38 36.5	1.859	2.676	15.2	19.5
9 18	20 37.64	-36 55.4	1.270	2.021	24.1	21.7	9 18	20 51.85	-37 35.7	1.936	2.665	17.5	19.7
63208	2001 <i>AJ</i> ₁₀		8 11.1 185°49	0.5/ 10.5	18		167923	2005 <i>EO</i> ₁₂₈		8 11.1 135°66	2.5/ 13.2	18	
7 10	21 43.59	-13 51.5	2.432	3.312	10.3	19.8	7 10	21 45.40	- 5 47.0	1.983	2.844	13.1	20.1
7 20	21 38.83	-14 46.2	2.361	3.312	7.4	19.6	7 20	21 40.31	- 6 9.3	1.915	2.848	9.9	19.9
7 30	21 32.63	-15 48.4	2.315	3.311	4.1	19.4	7 30	21 33.54	- 6 45.9	1.869	2.852	6.3	19.7
8 9	21 25.56	-16 53.7	2.298	3.311	0.8	19.1	8 9	21 25.75	- 7 33.7	1.850	2.856	3.1	19.5
8 19	21 18.26	-17 57.6	2.309	3.310	3.0	19.3	8 19	21 17.72	- 8 28.8	1.857	2.860	3.5	19.6
8 29	21 11.47	-18 55.5	2.349	3.309	6.4	19.5	8 29	21 10.35	- 9 25.9	1.893	2.863	6.9	19.8
9 8	21 5.87	-19 44.3	2.415	3.309	9.4	19.7	9 8	21 4.43	-10 20.1	1.953	2.867	10.3	20.0
9 18	21 1.93	-20 22.0	2.504	3.307	12.0	19.9	9 18	21 0.51	-11 7.6	2.037	2.870	13.3	20.2
441362	2008 <i>DC</i> ₇₉		8 11.1 51°62	1.2/ 10.2	18		93335	2000 <i>SK</i> ₂₃₅ </					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
9423	Abt		8 11.1 353°70	3°2/ 8.6	18		234328	2001 DP ₉₃		8 11.1 237°18	2°1/12.8	18	
7 10	21 44.60	-19 17.2	1.521	2.429	13.7	16.2	7 10	21 46.36	-7 5.7	2.088	2.950	12.5	21.2
7 20	21 40.29	-20 32.7	1.461	2.426	9.8	16.0	7 20	21 41.08	-7 26.6	2.003	2.939	9.4	21.0
7 30	21 33.75	-21 54.9	1.425	2.424	5.6	15.7	7 30	21 34.05	-8 0.5	1.942	2.927	5.9	20.7
8 9	21 25.80	-23 15.4	1.413	2.422	3.2	15.6	8 9	21 25.89	-8 44.8	1.907	2.915	2.6	20.5
8 19	21 17.51	-24 26.0	1.427	2.421	6.0	15.8	8 19	21 17.36	-9 35.6	1.899	2.902	3.3	20.5
8 29	21 10.10	-25 20.2	1.466	2.420	10.1	16.0	8 29	21 9.36	-10 28.1	1.920	2.890	6.9	20.7
9 8	21 4.62	-25 54.7	1.528	2.420	14.0	16.2	9 8	21 2.73	-11 17.8	1.966	2.876	10.4	20.9
9 18	21 1.74	-26 9.4	1.608	2.420	17.3	16.5	9 18	20 58.07	-12 1.1	2.036	2.863	13.6	21.1
102385	1999 TQ ₁₅₂		8 11.1 326°47	3°1/13.1	18		435152	2007 JP ₃₇		8 11.1 113°02	7°0/ 4.7	18	
7 10	21 41.94	-6 19.7	1.340	2.229	16.4	19.2	7 10	21 48.98	-29 34.2	1.731	2.632	12.7	20.8
7 20	21 38.70	-6 35.3	1.256	2.205	12.5	18.9	7 20	21 43.37	-31 30.7	1.687	2.639	9.7	20.7
7 30	21 33.05	-7 11.6	1.193	2.182	8.1	18.5	7 30	21 35.47	-33 22.6	1.668	2.646	7.4	20.6
8 9	21 25.72	-8 6.1	1.152	2.160	3.8	18.2	8 9	21 26.13	-34 59.6	1.675	2.654	7.2	20.6
8 19	21 17.75	-9 13.5	1.134	2.139	4.5	18.2	8 19	21 16.49	-36 13.9	1.708	2.661	9.2	20.7
8 29	21 10.45	-10 25.9	1.141	2.119	9.3	18.4	8 29	21 7.81	-37 1.0	1.766	2.668	12.0	20.9
9 8	21 5.06	-11 35.0	1.169	2.100	14.1	18.7	9 8	21 1.15	-37 21.2	1.845	2.674	14.8	21.1
9 18	21 2.48	-12 34.1	1.217	2.082	18.5	18.9	9 18	20 57.17	-37 17.4	1.942	2.681	17.2	21.3
235247	2003 SG ₃₁₉		8 11.1 290°37	3°5/13.9	18		202320	2005 EO ₄₉		8 11.1 195°29	1°0/11.9	18	
7 10	21 44.66	-3 38.3	1.785	2.644	14.4	20.7	7 10	21 46.84	-10 22.1	2.171	3.041	11.8	20.9
7 20	21 40.01	-3 57.2	1.710	2.640	11.1	20.5	7 20	21 41.29	-10 43.0	2.096	3.039	8.6	20.7
7 30	21 33.49	-4 33.9	1.657	2.636	7.4	20.2	7 30	21 34.09	-11 13.4	2.046	3.037	5.1	20.5
8 9	21 25.76	-5 26.0	1.628	2.631	4.1	20.0	8 9	21 25.88	-11 50.4	2.023	3.034	1.6	20.2
8 19	21 17.70	-6 29.1	1.626	2.627	4.2	20.0	8 19	21 17.42	-12 30.2	2.027	3.031	2.9	20.3
8 29	21 10.29	-7 37.2	1.650	2.623	7.5	20.2	8 29	21 9.56	-13 8.6	2.060	3.028	6.6	20.6
9 8	21 4.44	-8 44.0	1.700	2.618	11.2	20.4	9 8	21 3.06	-13 42.3	2.119	3.024	10.0	20.8
9 18	21 0.77	-9 44.5	1.771	2.614	14.6	20.6	9 18	20 58.49	-14 8.8	2.201	3.020	12.9	21.0
152464	2005 VD ₈₁		8 11.1 286°58	0°6/10.6	18		211937	2004 XP ₂₀		8 11.1 234°15	3°7/ 8.6	18	
7 10	21 45.16	-15 8.6	2.157	3.042	11.2	20.8	7 10	21 50.62	-21 0.7	1.522	2.423	14.1	20.3
7 20	21 40.22	-15 37.7	2.071	3.024	8.1	20.6	7 20	21 44.76	-22 5.4	1.455	2.415	10.2	20.1
7 30	21 33.56	-16 13.6	2.010	3.006	4.5	20.3	7 30	21 36.37	-23 14.7	1.411	2.407	6.1	19.8
8 9	21 25.78	-16 52.6	1.976	2.989	0.9	20.0	8 9	21 26.31	-24 20.6	1.391	2.398	3.7	19.7
8 19	21 17.64	-17 30.5	1.969	2.971	3.4	20.2	8 19	21 15.78	-25 14.8	1.398	2.389	6.4	19.8
8 29	21 10.02	-18 3.1	1.989	2.953	7.2	20.4	8 29	21 6.18	-25 51.5	1.430	2.380	10.7	20.0
9 8	21 3.74	-18 27.6	2.036	2.935	10.6	20.6	9 8	20 58.72	-26 8.5	1.485	2.370	14.7	20.3
9 18	20 59.40	-18 42.1	2.104	2.917	13.7	20.7	9 18	20 54.15	-26 6.5	1.558	2.360	18.2	20.5
224178	2005 QP ₁₅₁		8 11.1 308°35	1°0/10.5	18		124113	2001 HT ₅₄		8 11.1 12°06	5°4/ 8.2	18	
7 10	21 47.00	-15 37.7	1.373	2.277	15.2	20.7	7 10	21 41.44	-20 50.8	0.752	1.696	19.3	18.3
7 20	21 42.39	-16 5.3	1.294	2.255	11.0	20.4	7 20	21 39.21	-22 9.0	0.718	1.699	13.8	18.0
7 30	21 35.11	-16 43.1	1.235	2.234	6.2	20.1	7 30	21 33.54	-23 33.4	0.701	1.704	8.3	17.8
8 9	21 26.16	-17 25.4	1.201	2.214	1.3	19.7	8 9	21 25.81	-24 50.1	0.702	1.711	5.5	17.6
8 19	21 16.41	-18 5.7	1.190	2.193	4.8	19.9	8 19	21 17.83	-25 46.2	0.723	1.720	9.0	17.9
8 29	21 7.50	-18 37.6	1.204	2.174	10.1	20.1	8 29	21 11.56	-26 13.8	0.762	1.730	14.4	18.2
9 8	21 0.70	-18 56.9	1.240	2.154	14.9	20.4	9 8	21 8.44	-26 11.9	0.818	1.743	19.3	18.5
9 18	20 56.88	-19 1.7	1.295	2.135	19.1	20.6	9 18	21 9.04	-25 43.6	0.889	1.757	23.4	18.9
234262	2000 VR ₁₁		8 11.1 306°44	3°3/ 8.9	18		287350	2002 TA ₃₈₇		8 11.1 332°22	6°2/16.3	18	
7 10	21 47.30	-20 35.2	1.484	2.390	14.0	20.2	7 10	21 42.27	+3 14.7	1.690	2.526	16.1	20.2
7 20	21 42.56	-21 23.3	1.402	2.365	10.2	20.0	7 20	21 38.42	+3 6.5	1.612	2.518	13.1	20.0
7 30	21 35.25	-22 17.1	1.342	2.340	6.0	19.7	7 30	21 32.66	+2 33.8	1.554	2.511	9.9	19.8
8 9	21 26.13	-23 9.4	1.306	2.314	3.3	19.4	8 9	21 25.65	+1 37.4	1.518	2.503	7.0	19.6
8 19	21 16.34	-23 52.7	1.295	2.289	6.2	19.5	8 19	21 18.26	+0 20.7	1.507	2.497	6.3	19.6
8 29	21 7.28	-24 20.8	1.308	2.265	10.8	19.7	8 29	21 11.51	-1 9.6	1.522	2.490	8.5	19.7
9 8	21 0.26	-24 30.6	1.344	2.241	15.2	19.9	9 8	21 6.31	-2 45.2	1.561	2.484	11.8	19.9
9 18	20 56.16	-24 22.0	1.398	2.217	19.0	20.1	9 18	21 3.33	-4 18.3	1.622	2.479	15.0	20.1
445828	2012 CW ₁₇		8 11.1 278°36	0°7/11.8	18		173010	2006 PW ₁₁		8 11.1 4°90	1°5/10.2	17	
7 10	21 42.64	-9 15.9	2.272	3.144	11.2	20.6	7 10	21 42.30	-14 36.8	0.973	1.897	17.9	19.0
7 20	21 38.28	-10 13.0	2.193	3.137	8.2	20.4	7 20	21 39.34	-15 32.0	0.924	1.896	12.9	18.7
7 30	21 32.41	-11 22.1	2.139	3.131	4.8	20.1	7 30	21 33.48	-16 42.3	0.894	1.897	7.1	18.4
8 9	21 25.59	-12 39.1	2.112	3.124	1.3	19.9	8 9	21 25.81	-17 58.4	0.885	1.898	1.7	18.0
8 19	21 18.47	-13 59.0	2.113	3.118	2.8	20.0	8 19	21 17.76	-19 9.8	0.898	1.902	5.7	18.3
8 29	21 11.85	-15 16.2	2.143	3.111	6.4	20.2	8 29	21 11.01	-20 6.7	0.932	1.906	11.4	18.7
9 8	21 6.43	-16 25.9	2.200	3.105	9.7	20.4	9 8	21 6.87	-20 43.7	0.986	1.913	16.5	19.0
9 18	21 2.73	-17 24.8	2.279	3.098	12.6	20.6	9 18	21 6.04	-20 59.0	1.056	1.920	20.8	19.3
294818	2008 CF ₁₂₁		8 11.1 104°72	2°5/ 9.3	17		440063	2002 RQ ₁₁₆		8 11.1 332°17	5°5/14.6	17	
7 10	21 51.17	-18 43.6	1.592	2.487	13.9	21.0	7 10	21 40.44	-1 59.5	1.320	2.198	17.4	20.1
7 20	21 44.71	-19 43.4	1.547	2.505	9.9	20.8	7 20	21 37.65	-1 53.2	1.235	2.172	13.8	19.8
7 30	21 36.08	-20 47.5	1.526	2.524	5.6	20.6	7 30	21 32.49	-2 10.6	1.168	2.147	9.8	19.5
8 9	21 26.22	-21 48.6	1.531	2.541	2.6	20.4	8 9	21 25.66	-2 51.7	1.123	2.123	6.3	19.3
8 19	21 16.26	-22 40.0	1.563	2.558	5.2	20.6	8 19	21 18.17	-3 53.2	1.100	2.100	6.0	19.2
8 29	21 7.42	-23 17.0	1.621	2.575	9.3	20.9	8 29	21 11.31	-5 8.1	1.101	2.079	9.6	19.3
9 8	21 0.66	-23 37.8	1.702	2.591	13.0	21.2	9 8	21 6.34	-6 27.5	1.123	2.059	14.1	19.5
9 18	20 56.52	-23 42.8	1.804	2.607	16.0	21.4	9 18	21 4.14	-7 42.6	1.165	2.040	18.4	19.7
385570	2004 TH ₃₆₇		8 11.1 241°97	2°8/12.9	18		454157	2013 EL ₁₀₁		8 11.1 38°82	1°0/10.1	18	
7 10	21 50.15	-7 14.0	2.104	2.959	12.7	21.3							

EPHEMERIDES

8 11.1

8 11.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
119925	2002 <i>EY</i> ₁₂₉		8 11.1 91°33'	4.8/15.4	18		66142	1998 <i>SN</i> ₁₄₅		8 11.1 0°52'	1.8/12.1	18	
7 10	21 45.04	+ 0 45.0	2.252	3.078	12.9	19.9	7 10	21 40.05	-10 24.4	0.917	1.839	19.0	18.0
7 20	21 39.87	+ 0 58.0	2.185	3.088	10.3	19.7	7 20	21 37.79	-10 32.6	0.866	1.834	14.1	17.7
7 30	21 33.24	+ 0 55.3	2.141	3.097	7.6	19.6	7 30	21 32.67	-11 0.4	0.832	1.831	8.4	17.4
8 9	21 25.74	+ 0 37.7	2.122	3.107	5.4	19.4	8 9	21 25.72	-11 42.8	0.818	1.831	2.6	17.1
8 19	21 18.07	+ 0 7.2	2.129	3.116	5.0	19.4	8 19	21 18.38	-12 32.1	0.825	1.832	4.8	17.2
8 29	21 11.01	- 0 32.6	2.164	3.125	6.9	19.6	8 29	21 12.28	-13 19.5	0.853	1.836	10.6	17.5
9 8	21 5.22	- 1 17.3	2.225	3.135	9.4	19.7	9 8	21 8.77	-13 57.4	0.899	1.841	16.0	17.9
9 18	21 1.18	- 2 2.5	2.310	3.144	11.9	19.9	9 18	21 8.54	-14 21.3	0.963	1.849	20.5	18.2
400978	2010 <i>XH</i> ₄₅		8 11.1 276°57'	4.2/7.0	18		440982	2007 <i>CR</i> ₃₇		8 11.1 227°62'	0.8/10.3	18	
7 10	21 45.58	-25 57.5	2.295	3.190	10.2	20.7	7 10	21 44.04	-14 38.1	2.306	3.190	10.6	21.4
7 20	21 40.50	-26 59.8	2.224	3.178	7.5	20.5	7 20	21 39.27	-15 32.1	2.234	3.186	7.6	21.2
7 30	21 33.72	-28 1.6	2.178	3.167	5.1	20.3	7 30	21 32.99	-16 33.6	2.186	3.182	4.2	21.0
8 9	21 25.84	-28 57.0	2.159	3.155	4.2	20.2	8 9	21 25.74	-17 38.0	2.166	3.178	0.9	20.7
8 19	21 17.65	-29 40.9	2.168	3.143	6.0	20.2	8 19	21 18.24	-18 40.3	2.174	3.174	3.3	20.9
8 29	21 10.04	-30 9.8	2.203	3.131	8.7	20.5	8 29	21 11.27	-19 36.1	2.210	3.170	6.8	21.1
9 8	21 3.82	-30 22.4	2.262	3.119	11.5	20.6	9 8	21 5.54	-20 22.0	2.272	3.166	9.9	21.3
9 18	20 59.57	-30 19.1	2.342	3.107	13.9	20.8	9 18	21 1.59	-20 56.0	2.357	3.162	12.7	21.5
256467	2007 <i>DU</i> ₂₉		8 11.1 5°88'	0.5/10.7	18		125268	2001 <i>VJ</i> ₂		8 11.1 207°93'	3.6/8.9	18	
7 10	21 44.24	-14 31.4	2.071	2.958	11.5	20.0	7 10	21 52.17	-21 18.9	1.501	2.400	14.3	19.6
7 20	21 39.49	-15 5.3	2.004	2.958	8.3	19.8	7 20	21 45.86	-22 11.7	1.438	2.397	10.4	19.3
7 30	21 33.10	-15 46.4	1.962	2.959	4.6	19.6	7 30	21 36.98	-23 7.8	1.397	2.393	6.1	19.1
8 9	21 25.73	-16 30.5	1.946	2.959	0.8	19.3	8 9	21 26.47	-23 59.4	1.382	2.389	3.6	18.9
8 19	21 18.13	-17 13.3	1.957	2.960	3.3	19.5	8 19	21 15.58	-24 39.2	1.393	2.385	6.3	19.1
8 29	21 11.18	-17 50.5	1.996	2.961	7.0	19.8	8 29	21 5.72	-25 2.2	1.429	2.380	10.5	19.3
9 8	21 5.63	-18 19.0	2.060	2.962	10.4	20.0	9 8	20 58.10	-25 6.9	1.487	2.375	14.6	19.6
9 18	21 2.01	-18 37.3	2.146	2.963	13.3	20.2	9 18	20 53.42	-24 54.6	1.565	2.369	18.0	19.8
451215	2009 <i>WS</i> ₁₉₇		8 11.1 328°07'	3.7/14.7	18		246670	2008 <i>YY</i> ₁₃₁		8 11.1 245°21'	0.6/10.7	18	
7 10	21 42.00	- 1 32.1	2.318	3.159	12.1	21.4	7 10	21 47.56	-15 10.8	1.976	2.861	12.1	21.1
7 20	21 37.76	- 1 43.7	2.238	3.154	9.5	21.2	7 20	21 42.03	-15 37.9	1.900	2.853	8.7	20.9
7 30	21 32.10	- 2 10.3	2.181	3.150	6.7	21.0	7 30	21 34.64	-16 11.9	1.848	2.844	4.9	20.6
8 9	21 25.55	- 2 50.3	2.150	3.146	4.2	20.8	8 9	21 26.05	-16 48.6	1.822	2.835	0.9	20.3
8 19	21 18.76	- 3 40.9	2.146	3.141	4.0	20.8	8 19	21 17.14	-17 23.7	1.824	2.826	3.6	20.5
8 29	21 12.46	- 4 37.9	2.169	3.137	6.3	20.9	8 29	21 8.88	-17 52.8	1.853	2.817	7.6	20.7
9 8	21 7.31	- 5 36.6	2.218	3.134	9.2	21.1	9 8	21 2.15	-18 13.2	1.907	2.807	11.2	20.9
9 18	21 3.81	- 6 32.6	2.292	3.130	11.9	21.3	9 18	20 57.58	-18 23.4	1.983	2.797	14.4	21.1
97233	1999 <i>XJ</i> ₆₁		8 11.1 151°51'	3.4/14.3	18		93618	2000 <i>UL</i> ₆₉		8 11.1 354°98'	3.5/9.3	18	
7 10	21 46.72	- 2 23.3	2.476	3.309	11.7	20.6	7 10	21 47.65	-21 35.1	1.265	2.179	15.4	18.8
7 20	21 40.97	- 2 28.6	2.406	3.318	9.1	20.4	7 20	21 42.83	-22 2.8	1.208	2.175	11.1	18.6
7 30	21 33.82	- 2 46.8	2.359	3.327	6.2	20.3	7 30	21 35.33	-22 32.7	1.172	2.171	6.5	18.3
8 9	21 25.85	- 3 16.5	2.340	3.336	3.9	20.1	8 9	21 26.18	-22 57.6	1.159	2.169	3.5	18.1
8 19	21 17.71	- 3 55.1	2.348	3.344	3.8	20.1	8 19	21 16.73	-23 11.3	1.170	2.167	6.3	18.3
8 29	21 10.14	- 4 38.8	2.386	3.351	6.1	20.3	8 29	21 8.46	-23 9.6	1.204	2.166	10.9	18.6
9 8	21 3.76	- 5 23.9	2.451	3.357	8.8	20.5	9 8	21 2.58	-22 51.7	1.260	2.167	15.3	18.8
9 18	20 59.06	- 6 6.9	2.539	3.363	11.3	20.7	9 18	20 59.79	-22 18.9	1.334	2.168	19.0	19.1
397942	2008 <i>XG</i> ₅₁		8 11.1 281°99'	11.9/27.8	18		391341	2006 <i>UY</i> ₉₇		8 11.1 7°35'	3.5/8.4	18	
7 10	21 51.59	-43 53.2	1.817	2.689	13.6	20.4	7 10	21 46.52	-22 31.1	1.863	2.763	12.0	21.1
7 20	21 46.06	-46 31.7	1.769	2.673	12.2	20.3	7 20	21 41.36	-23 24.0	1.804	2.763	8.6	20.9
7 30	21 37.45	-48 55.6	1.746	2.657	11.9	20.3	7 30	21 34.26	-24 18.2	1.769	2.764	5.2	20.7
8 9	21 26.57	-50 52.6	1.746	2.641	12.7	20.3	8 9	21 26.00	-25 7.5	1.760	2.765	3.5	20.6
8 19	21 14.79	-52 13.9	1.769	2.625	14.4	20.3	8 19	21 17.49	-25 46.3	1.777	2.765	5.6	20.7
8 29	21 3.86	-52 55.8	1.812	2.608	16.4	20.5	8 29	21 9.80	-26 10.9	1.820	2.766	9.0	20.9
9 8	20 55.38	-53 0.8	1.872	2.592	18.4	20.6	9 8	21 3.79	-26 19.6	1.887	2.767	12.3	21.1
9 18	20 50.38	-52 34.7	1.946	2.576	20.1	20.7	9 18	21 0.06	-26 13.1	1.975	2.769	15.1	21.3
144863	2004 <i>LW</i> ₁₃		8 11.1 69°32'	5.3/15.7	18		448520	2010 <i>OA</i> ₄₃		8 11.1 308°60'	1.9/12.4	18	
7 10	21 44.54	+ 1 34.8	2.060	2.888	13.9	19.8	7 10	21 46.20	- 9 41.9	1.971	2.844	12.6	20.9
7 20	21 39.65	+ 1 43.4	1.993	2.895	11.2	19.6	7 20	21 41.07	- 9 33.5	1.887	2.830	9.4	20.7
7 30	21 33.18	+ 1 34.1	1.947	2.902	8.3	19.4	7 30	21 34.12	- 9 34.7	1.827	2.815	5.8	20.4
8 9	21 25.75	+ 1 7.6	1.925	2.909	5.9	19.3	8 9	21 25.99	- 9 43.8	1.792	2.801	2.4	20.2
8 19	21 18.12	+ 0 26.6	1.930	2.916	5.5	19.3	8 19	21 17.49	- 9 57.9	1.784	2.787	3.4	20.2
8 29	21 11.12	- 0 24.9	1.961	2.924	7.3	19.4	8 29	21 9.58	-10 13.9	1.803	2.774	7.1	20.4
9 8	21 5.49	- 1 21.4	2.018	2.931	10.1	19.6	9 8	21 3.13	-10 28.5	1.847	2.760	10.8	20.6
9 18	21 1.74	- 2 17.9	2.098	2.938	12.7	19.8	9 18	20 58.75	-10 39.1	1.913	2.747	14.1	20.8
51683	2001 <i>KT</i> ₁₀		8 11.1 5°01'	3.0/13.3	18		358362	2006 <i>WX</i> ₁₉₇		8 11.1 193°57'	2.3/12.9	18	
7 10	21 44.29	- 5 36.5	1.665	2.536	14.6	18.5	7 10	21 46.81	- 7 51.4	2.204	3.065	11.9	20.8
7 20	21 39.82	- 5 52.7	1.598	2.536	11.1	18.3	7 20	21 41.24	- 7 42.7	2.130	3.065	9.0	20.6
7 30	21 33.42	- 6 25.7	1.552	2.537	7.2	18.1	7 30	21 34.10	- 7 44.0	2.081	3.064	5.7	20.4
8 9	21 25.82	- 7 12.5	1.531	2.537	3.6	17.9	8 9	21 25.99	- 7 53.5	2.057	3.064	2.7	20.2
8 19	21 17.92	- 8 8.5	1.535	2.538	4.0	17.9	8 19	21 17.65	- 8 8.9	2.062	3.063	3.3	20.2
8 29	21 10.78	- 9 7.5	1.566	2.540	7.7	18.1	8 29	21 9.93	- 8 27.3	2.094	3.063	6.5	20.4
9 8	21 5.29	-10 3.8	1.621	2.542	11.6	18.4	9 8	21 3.55	- 8 45.5	2.152	3.062	9.7	20.6
9 18	21 2.08	-10 52.7	1.697	2.544	15.0	18.6	9 18	20 59.03	- 9 0.9	2.234	3.062	12.5	20.8
17541	1993 <i>OL</i> ₅		8 11.1 55°05'	0.3/10.9	18		41082	1999 <i>VQ</i> ₄₈		8 11.1 43°06'</			

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
250873	2005 <i>UK</i> ₄₄₁		8 11.1 354°84	3°8/ 8.6 18			329753	2004 <i>CO</i> ₉₁		8 11.1 125°05	3°0/14.1 17		
7 10	21 48.49	-24 51.8	1.857	2.755	12.1	19.7	7 10	21 47.70	-1 1.1	1.841	2.683	14.7	21.0
7 20	21 42.77	-25 19.1	1.796	2.753	8.8	19.5	7 20	21 42.10	-2 19.6	1.778	2.698	11.3	20.8
7 30	21 35.06	-25 44.6	1.759	2.752	5.5	19.3	7 30	21 34.68	-3 59.9	1.737	2.713	7.4	20.6
8 9	21 26.17	-26 3.0	1.747	2.750	3.8	19.2	8 9	21 26.15	-5 56.7	1.724	2.727	3.8	20.4
8 19	21 17.08	-26 9.9	1.762	2.750	5.8	19.3	8 19	21 17.41	-8 2.1	1.739	2.741	3.7	20.4
8 29	21 8.88	-26 2.8	1.803	2.749	9.1	19.5	8 29	21 9.43	-10 7.3	1.783	2.754	7.2	20.7
9 8	21 2.48	-25 41.7	1.868	2.749	12.4	19.7	9 8	21 3.04	-12 3.8	1.855	2.766	10.9	20.9
9 18	20 58.44	-25 7.8	1.953	2.749	15.2	19.9	9 18	20 58.83	-13 46.1	1.950	2.778	14.1	21.2
520476	2014 <i>KJ</i> ₁₁₀		8 11.1 316°09	1°1/12.1 18			86048	1999 <i>PP</i> ₁		8 11.1 277°99	3°9/ 7.9 18 R		
7 10	21 43.11	-8 44.5	2.017	2.891	12.3	21.2	7 10	21 48.35	-26 2.2	2.191	3.083	10.8	18.9
7 20	21 38.79	-9 31.8	1.942	2.886	9.1	21.0	7 20	21 42.54	-26 38.0	2.120	3.073	7.9	18.7
7 30	21 32.82	-10 32.4	1.890	2.881	5.4	20.7	7 30	21 34.93	-27 11.9	2.074	3.064	5.2	18.5
8 9	21 25.78	-11 42.2	1.865	2.876	1.7	20.5	8 9	21 26.21	-27 38.7	2.055	3.054	4.0	18.5
8 19	21 18.45	-12 55.8	1.867	2.871	3.0	20.6	8 19	21 17.22	-27 54.1	2.063	3.044	5.7	18.5
8 29	21 11.69	-14 7.6	1.896	2.867	6.9	20.8	8 29	21 8.94	-27 55.6	2.098	3.034	8.6	18.7
9 8	21 6.28	-15 12.3	1.952	2.862	10.5	21.0	9 8	21 2.18	-27 42.6	2.158	3.025	11.5	18.9
9 18	21 2.80	-16 6.3	2.029	2.858	13.6	21.2	9 18	20 57.54	-27 16.4	2.238	3.015	14.1	19.0
92185	1999 <i>XM</i> ₂₀₄		8 11.1 307°36	6°1/ 5.8 18			252734	2002 <i>CM</i> ₂₈₆		8 11.1 133°62	0°6/10.8 17		
7 10	21 47.14	-30 38.3	2.019	2.915	11.3	18.8	7 10	21 51.74	-15 7.3	1.458	2.350	15.1	20.6
7 20	21 41.97	-31 42.2	1.945	2.895	8.8	18.6	7 20	21 45.44	-15 30.0	1.400	2.356	10.9	20.4
7 30	21 34.74	-32 41.9	1.896	2.874	6.6	18.5	7 30	21 36.72	-16 1.1	1.364	2.361	6.1	20.1
8 9	21 26.14	-33 30.5	1.872	2.854	6.2	18.4	8 9	21 26.53	-16 35.1	1.353	2.366	1.1	19.8
8 19	21 17.12	-34 2.2	1.874	2.834	8.0	18.5	8 19	21 16.10	-17 6.3	1.367	2.370	4.3	20.0
8 29	21 8.79	-34 13.3	1.901	2.814	10.7	18.6	8 29	21 6.76	-17 29.9	1.408	2.375	9.1	20.3
9 8	21 2.14	-34 3.6	1.950	2.794	13.5	18.8	9 8	20 59.60	-17 42.9	1.472	2.379	13.4	20.6
9 18	20 57.86	-33 35.0	2.019	2.775	16.1	18.9	9 18	20 55.28	-17 44.5	1.556	2.383	17.0	20.8
188874	2006 <i>UA</i> ₂₈₇		8 11.1 199°76	1°3/12.1 18			505744	2015 <i>BX</i> ₆₂		8 11.1 70°28	2°8/ 9.6 17		
7 10	21 48.77	-9 33.3	1.848	2.720	13.4	21.6	7 10	21 51.74	-20 35.4	1.451	2.352	14.6	20.8
7 20	21 42.98	-9 59.3	1.774	2.717	9.9	21.4	7 20	21 45.45	-21 3.1	1.397	2.358	10.5	20.6
7 30	21 35.23	-10 37.5	1.724	2.714	5.9	21.1	7 30	21 36.72	-21 33.2	1.365	2.363	6.0	20.3
8 9	21 26.23	-11 24.4	1.699	2.710	1.9	20.8	8 9	21 26.53	-21 59.2	1.358	2.368	2.8	20.1
8 19	21 16.89	-12 15.1	1.702	2.706	3.4	20.9	8 19	21 16.15	-22 15.7	1.377	2.374	5.5	20.3
8 29	21 8.26	-13 4.5	1.732	2.701	7.5	21.2	8 29	21 6.95	-22 19.1	1.420	2.379	9.9	20.6
9 8	21 1.25	-13 47.9	1.787	2.695	11.4	21.4	9 8	21 0.01	-22 8.4	1.487	2.385	13.9	20.8
9 18	20 56.50	-14 22.3	1.865	2.690	14.7	21.6	9 18	20 55.95	-21 44.7	1.573	2.390	17.3	21.1
521242	2015 <i>HX</i> ₁₈₉		8 11.1 53°00	4°8/15.4 18			496291	2013 <i>AD</i> ₃		8 11.1 311°26	2°7/ 9.1 18		
7 10	21 44.02	+1 5.4	1.636	2.481	16.1	21.3	7 10	21 46.46	-19 53.0	1.741	2.641	12.7	21.1
7 20	21 39.66	+0 29.4	1.571	2.488	12.7	21.1	7 20	21 41.52	-20 41.6	1.672	2.632	9.1	20.8
7 30	21 33.38	-0 30.9	1.527	2.495	9.0	20.9	7 30	21 34.51	-21 34.7	1.626	2.623	5.3	20.6
8 9	21 25.90	-1 52.5	1.506	2.501	5.7	20.7	8 9	21 26.17	-22 26.1	1.606	2.615	2.7	20.4
8 19	21 18.16	-3 29.6	1.511	2.508	5.1	20.7	8 19	21 17.46	-23 9.8	1.612	2.607	5.2	20.5
8 29	21 11.19	-5 14.0	1.543	2.516	7.9	20.9	8 29	21 9.52	-23 40.8	1.644	2.599	9.1	20.8
9 8	21 5.89	-6 56.8	1.600	2.523	11.5	21.1	9 8	21 3.33	-23 56.7	1.699	2.591	12.8	21.0
9 18	21 2.84	-8 30.9	1.679	2.530	14.9	21.4	9 18	20 59.54	-23 57.4	1.775	2.584	16.0	21.2
44679	1999 <i>RQ</i> ₁₉₃		8 11.1 17°90	0°7/10.7 18			445422	2010 <i>TJ</i> ₁₇₈		8 11.1 287°32	0°5/11.5 18		
7 10	21 42.37	-12 20.2	0.974	1.895	18.3	17.1	7 10	21 44.76	-11 55.5	2.121	2.999	11.6	21.8
7 20	21 39.32	-13 23.6	0.932	1.901	13.2	16.8	7 20	21 39.95	-12 21.1	2.042	2.990	8.5	21.6
7 30	21 33.48	-14 45.0	0.907	1.909	7.3	16.5	7 30	21 33.49	-12 55.7	1.988	2.981	4.9	21.4
8 9	21 25.93	-16 14.7	0.904	1.918	1.3	16.2	8 9	21 25.98	-13 36.0	1.959	2.972	1.1	21.1
8 19	21 18.12	-17 41.3	0.924	1.928	5.2	16.5	8 19	21 18.16	-14 18.0	1.959	2.963	3.0	21.2
8 29	21 11.64	-18 54.3	0.965	1.940	10.9	16.8	8 29	21 10.91	-14 57.4	1.986	2.954	6.8	21.5
9 8	21 7.70	-19 47.3	1.025	1.953	15.9	17.2	9 8	21 4.99	-15 30.7	2.038	2.945	10.3	21.6
9 18	21 6.96	-20 17.9	1.104	1.968	20.1	17.5	9 18	21 0.98	-15 55.6	2.113	2.936	13.3	21.8
158982	2004 <i>RT</i> ₃₁₁		8 11.1 291°98	1°1/12.1 18			371490	2006 <i>TB</i> ₉₂		8 11.1 189°79	6°5/ 6.6 18		
7 10	21 43.68	-9 37.1	2.186	3.059	11.6	20.7	7 10	21 53.53	-30 11.1	1.748	2.641	13.0	21.0
7 20	21 39.16	-10 4.6	2.100	3.043	8.6	20.5	7 20	21 46.68	-31 16.3	1.692	2.641	9.9	20.8
7 30	21 33.04	-10 43.1	2.038	3.028	5.1	20.3	7 30	21 37.42	-32 15.6	1.660	2.640	7.3	20.6
8 9	21 25.87	-11 29.5	2.002	3.013	1.7	20.0	8 9	21 26.69	-33 0.9	1.653	2.638	6.6	20.6
8 19	21 18.36	-12 19.9	1.994	2.998	2.9	20.1	8 19	21 15.68	-33 26.0	1.672	2.637	8.4	20.7
8 29	21 11.33	-13 9.8	2.013	2.983	6.6	20.3	8 29	21 5.73	-33 28.0	1.717	2.634	11.4	20.9
9 8	21 5.55	-13 55.0	2.058	2.968	10.0	20.5	9 8	20 57.94	-33 8.1	1.783	2.632	14.4	21.1
9 18	21 1.59	-14 32.6	2.127	2.953	13.1	20.7	9 18	20 52.96	-32 29.6	1.869	2.628	17.1	21.3
414380	2008 <i>UH</i> ₃₄₆		8 11.1 265°53	3°4/ 8.9 17			262368	2006 <i>TX</i> ₉₀		8 11.1 230°09	1°0/11.8 18		
7 10	21 49.62	-19 10.6	1.347	2.253	15.2	21.4	7 10	21 49.19	-10 44.1	1.767	2.644	13.7	21.5
7 20	21 44.39	-20 20.6	1.278	2.241	11.0	21.1	7 20	21 43.44	-11 5.6	1.689	2.635	10.1	21.3
7 30	21 36.39	-21 39.0	1.231	2.229	6.4	20.8	7 30	21 35.60	-11 38.9	1.634	2.626	6.0	21.0
8 9	21 26.50	-22 57.0	1.207	2.216	3.4	20.6	8 9	21 26.37	-12 20.1	1.604	2.616	1.7	20.7
8 19	21 16.01	-24 4.8	1.209	2.204	6.6	20.7	8 19	21 16.74	-13 4.6	1.602	2.606	3.5	20.8
8 29	21 6.44	-24 54.9	1.235	2.191	11.4	21.0	8 29	21 7.79	-13 47.1	1.626	2.596	7.9	21.1
9 8	20 59.17	-25 23.5	1.283	2.178	15.9	21.2	9 8	21 0.54	-14 23.2	1.676	2.584	12.0	21.3
9 18	20 55.05	-25 30.7	1.348	2.165	19.7	21.4	9 18	20 55.68	-14 50.2	1.746	2.573	15.5	21.5
118840	2000 <i>SM</i> ₂₁₃		8 11.1 334°56										

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
472039	2013 YO ₃₄		8 11.1 141°49'	4.7°/14.6 18			316256	2010 OF ₈₉		8 11.2 317°50'	1.7°/12.3 18		
7 10	21 48.63	- 1 20.1	2.038	2.873	13.8	21.1	7 10	21 46.77	-10 21.6	1.983	2.857	12.5	20.5
7 20	21 42.65	- 0 59.5	1.969	2.880	10.8	20.9	7 20	21 41.48	-10 11.6	1.905	2.848	9.3	20.3
7 30	21 34.97	- 0 54.3	1.923	2.887	7.7	20.8	7 30	21 34.41	-10 10.5	1.849	2.839	5.7	20.1
8 9	21 26.26	- 1 3.7	1.902	2.893	5.2	20.6	8 9	21 26.20	-10 16.4	1.820	2.830	2.2	19.8
8 19	21 17.32	- 1 25.8	1.908	2.899	5.0	20.6	8 19	21 17.69	-10 26.7	1.818	2.822	3.3	19.9
8 29	21 9.07	- 1 57.0	1.942	2.905	7.3	20.8	8 29	21 9.80	-10 38.3	1.843	2.814	7.0	20.1
9 8	21 2.30	- 2 32.8	2.001	2.910	10.3	21.0	9 8	21 3.39	-10 48.2	1.893	2.806	10.6	20.3
9 18	20 57.55	- 3 8.9	2.083	2.915	13.1	21.2	9 18	20 59.03	-10 54.2	1.966	2.798	13.8	20.5
86262	1999 TE ₂₃₇		8 11.1 335°08'	0°5/10.8 18			102312	1999 TA ₉₈		8 11.2 180°20'	7.7°/ 5.8 18		
7 10	21 42.68	-13 31.7	1.748	2.642	12.9	18.7	7 10	21 53.54	-31 52.5	1.588	2.485	13.8	18.2
7 20	21 38.78	-14 16.9	1.673	2.631	9.3	18.4	7 20	21 46.94	-33 12.3	1.538	2.486	10.8	18.0
7 30	21 32.97	-15 12.8	1.622	2.619	5.2	18.2	7 30	21 37.68	-34 24.5	1.510	2.486	8.3	17.9
8 9	21 25.92	-16 14.4	1.595	2.608	0.9	17.8	8 9	21 26.79	-35 19.5	1.508	2.486	7.9	17.8
8 19	21 18.49	-17 15.9	1.595	2.598	3.7	18.0	8 19	21 15.62	-35 50.0	1.530	2.486	9.8	17.9
8 29	21 11.71	-18 11.1	1.621	2.589	8.1	18.3	8 29	21 5.63	-35 53.3	1.576	2.485	12.7	18.1
9 8	21 6.50	-18 55.5	1.671	2.580	12.0	18.5	9 8	20 58.04	-35 31.0	1.643	2.485	15.7	18.3
9 18	21 3.50	-19 26.6	1.741	2.572	15.4	18.7	9 18	20 53.51	-34 47.5	1.728	2.484	18.4	18.5
34403	2000 RP ₈₅		8 11.1 345°00'	0°2/11.3 18			389495	2010 FX ₁₆		8 11.2 117°59'	0°5/11.6 17		
7 10	21 44.37	-12 32.0	1.770	2.659	13.1	18.7	7 10	21 48.03	-11 40.9	2.093	2.966	12.0	21.9
7 20	21 39.91	-13 3.4	1.701	2.655	9.5	18.5	7 20	21 42.15	-12 7.4	2.036	2.981	8.7	21.7
7 30	21 33.56	-13 45.2	1.655	2.651	5.4	18.3	7 30	21 34.66	-12 42.5	2.002	2.995	5.0	21.5
8 9	21 26.03	-14 33.0	1.634	2.647	1.0	17.9	8 9	21 26.23	-13 22.4	1.996	3.009	1.2	21.3
8 19	21 18.19	-15 21.6	1.640	2.644	3.4	18.1	8 19	21 17.68	-14 3.0	2.018	3.022	3.0	21.4
8 29	21 11.06	-16 5.8	1.672	2.641	7.7	18.4	8 29	21 9.86	-14 40.4	2.069	3.036	6.7	21.7
9 8	21 5.53	-16 41.6	1.728	2.639	11.5	18.6	9 8	21 3.53	-15 11.2	2.145	3.048	10.0	21.9
9 18	21 2.20	-17 6.6	1.805	2.637	14.8	18.8	9 18	20 59.17	-15 33.8	2.243	3.060	12.8	22.1
349322	2007 UQ ₁₁₀		8 11.1 141°73'	2°9/ 8.8 17			336769	2011 BV ₂₂		8 11.2 207°85'	1°9/11.7 16		
7 10	21 48.48	-21 55.2	2.135	3.026	11.1	21.4	7 10	22 2.85	-14 7.6	1.212	2.095	18.1	20.3
7 20	21 42.56	-22 40.0	2.077	3.032	7.9	21.3	7 20	21 54.03	-13 11.2	1.143	2.093	13.5	20.0
7 30	21 34.92	-23 25.8	2.044	3.038	4.7	21.1	7 30	21 41.87	-12 19.6	1.096	2.089	8.0	19.7
8 9	21 26.25	-24 7.4	2.038	3.044	2.9	21.0	8 9	21 27.58	-11 31.6	1.074	2.085	2.5	19.3
8 19	21 17.42	-24 40.3	2.060	3.050	4.8	21.1	8 19	21 12.84	-10 46.2	1.077	2.081	4.9	19.5
8 29	21 9.34	-25 1.2	2.109	3.055	8.0	21.3	8 29	20 59.54	-10 2.8	1.106	2.076	10.7	19.8
9 8	21 2.80	-25 8.8	2.183	3.060	11.0	21.5	9 8	20 49.20	- 9 21.0	1.159	2.071	15.9	20.1
9 18	20 58.33	-25 3.7	2.279	3.065	13.6	21.7	9 18	20 42.65	- 8 40.2	1.230	2.065	20.2	20.3
330581	2008 CE ₁₀₈		8 11.2 172°20'	2°0/12.6 17			465836	2010 ME ₃₄		8 11.2 356°18'	3°2/ 9.4 17		
7 10	21 50.44	- 8 15.7	1.858	2.722	13.7	22.1	7 10	21 42.56	-18 3.0	0.916	1.847	18.0	20.1
7 20	21 44.14	- 8 27.0	1.788	2.726	10.2	21.9	7 20	21 39.85	-18 57.0	0.866	1.841	13.0	19.8
7 30	21 35.90	- 8 50.6	1.742	2.729	6.3	21.7	7 30	21 34.02	-20 1.8	0.834	1.836	7.4	19.5
8 9	21 26.45	- 9 23.6	1.722	2.731	2.6	21.4	8 9	21 26.18	-21 7.2	0.822	1.833	3.2	19.2
8 19	21 16.73	-10 2.0	1.729	2.732	3.5	21.5	8 19	21 17.88	-22 2.4	0.831	1.832	6.9	19.4
8 29	21 7.78	-10 41.3	1.764	2.733	7.4	21.8	8 29	21 10.93	-22 38.9	0.860	1.832	12.6	19.7
9 8	21 0.49	-11 17.1	1.824	2.733	11.2	22.0	9 8	21 6.77	-22 52.6	0.908	1.834	17.7	20.0
9 18	20 55.49	-11 46.3	1.907	2.733	14.4	22.2	9 18	21 6.15	-22 43.8	0.972	1.838	22.0	20.3
431323	2006 WR ₁₃₄		8 11.2 210°33'	1°6/12.2 18			384069	2008 UQ ₃₄₀		8 11.2 341°28'	4°4/13.2 18		
7 10	21 50.15	- 9 37.5	1.922	2.789	13.2	22.2	7 10	21 46.53	- 6 48.4	1.292	2.178	17.1	19.6
7 20	21 43.98	- 9 48.2	1.843	2.783	9.8	22.0	7 20	21 42.05	- 6 8.7	1.221	2.166	13.2	19.3
7 30	21 35.84	-10 9.9	1.788	2.777	5.9	21.7	7 30	21 35.04	- 5 44.4	1.170	2.156	8.8	19.0
8 9	21 26.45	-10 39.6	1.759	2.770	2.1	21.5	8 9	21 26.36	- 5 35.3	1.142	2.147	5.0	18.8
8 19	21 16.70	-11 13.7	1.758	2.762	3.4	21.6	8 19	21 17.18	- 5 39.2	1.137	2.138	5.4	18.8
8 29	21 7.61	-11 47.7	1.785	2.753	7.4	21.8	8 29	21 8.91	- 5 52.3	1.155	2.131	9.6	19.0
9 8	21 0.12	-12 17.9	1.837	2.744	11.2	22.0	9 8	21 2.76	- 6 9.3	1.196	2.125	14.1	19.2
9 18	20 54.86	-12 41.3	1.912	2.735	14.5	22.2	9 18	20 59.53	- 6 25.3	1.255	2.119	18.1	19.5
456121	2006 DZ ₂₇		8 11.2 106°79'	3°4/ 9.4 17			249220	2008 EV ₉₈		8 11.2 30°08'	9°9/ 2.3 18		
7 10	21 55.27	-21 48.3	1.386	2.285	15.3	21.5	7 10	21 49.31	-40 3.0	1.798	2.683	13.1	19.3
7 20	21 48.02	-22 19.7	1.339	2.298	11.0	21.3	7 20	21 43.78	-41 40.3	1.767	2.691	11.1	19.2
7 30	21 38.17	-22 51.8	1.314	2.310	6.4	21.1	7 30	21 35.83	-43 2.8	1.758	2.700	10.0	19.1
8 9	21 26.84	-23 17.5	1.313	2.322	3.4	21.0	8 9	21 26.46	-44 1.7	1.773	2.709	10.2	19.2
8 19	21 15.44	-23 31.0	1.338	2.333	6.0	21.1	8 19	21 16.91	-44 31.7	1.811	2.718	11.6	19.3
8 29	21 5.42	-23 29.2	1.389	2.344	10.4	21.4	8 29	21 8.53	-44 31.5	1.871	2.728	13.6	19.4
9 8	20 57.90	-23 12.2	1.462	2.355	14.4	21.7	9 8	21 2.36	-44 3.9	1.950	2.738	15.6	19.6
9 18	20 53.48	-22 42.0	1.555	2.366	17.8	22.0	9 18	20 59.02	-43 13.8	2.046	2.748	17.4	19.8
153735	2001 UH ₁₃₇		8 11.2 236°09'	2°9/13.3 18			255616	2006 PK ₁₉		8 11.2 41°73'	1°0/11.7 17		
7 10	21 46.66	- 5 24.1	1.730	2.594	14.5	20.5	7 10	21 47.74	-10 49.3	1.099	2.003	18.0	20.3
7 20	21 41.62	- 5 45.5	1.654	2.589	11.0	20.2	7 20	21 42.90	-11 17.1	1.058	2.018	13.1	20.1
7 30	21 34.57	- 6 23.9	1.601	2.584	7.1	20.0	7 30	21 35.41	-12 1.2	1.036	2.033	7.6	19.9
8 9	21 26.23	- 7 16.3	1.572	2.578	3.5	19.8	8 9	21 26.39	-12 55.1	1.037	2.049	1.9	19.6
8 19	21 17.50	- 8 18.0	1.570	2.572	3.9	19.8	8 19	21 17.26	-13 50.8	1.061	2.066	4.4	19.8
8 29	21 9.46	- 9 22.9	1.594	2.566	7.7	20.0	8 29	21 9.50	-14 40.7	1.108	2.084	9.8	20.2
9 8	21 3.06	-10 24.8	1.643	2.560	11.7	20.2	9 8	21 4.23	-15 19.2	1.176	2.102	14.5	20.5
9 18	20 58.96	-11 19.0	1.714	2.554	15.2	20.4	9 18	21 2.05	-15 43.6	1.263	2.120	18.4	20.8
375202	2008 EE ₉₀		8 11.2 355°22'	7°4/ 6.9 17			101523	1998 XD ₆₅		8 11.2 210°24'	2°6/ 9.4 18		
7 10	21 50.23												

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8 11.2

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
389021	2008 <i>UC</i> ₂₃₈		8 11.2 287°10	2°9/ 9.2 18			208899	2002 <i>TF</i> ₁₄₉		8 11.2 238°30	2°8/13.4 18		
7 10	21 49.32	-20 50.8	1.709	2.607	13.0	21.3	7 10	21 45.44	- 5 29.4	1.948	2.808	13.3	20.5
7 20	21 43.79	-21 27.2	1.628	2.587	9.4	21.0	7 20	21 40.54	- 5 45.2	1.874	2.807	10.1	20.3
7 30	21 35.94	-22 7.0	1.571	2.567	5.5	20.8	7 30	21 33.91	- 6 15.7	1.824	2.805	6.6	20.0
8 9	21 26.54	-22 44.2	1.538	2.547	2.9	20.6	8 9	21 26.19	- 6 58.2	1.798	2.804	3.3	19.8
8 19	21 16.62	-23 13.1	1.532	2.527	5.4	20.7	8 19	21 18.18	- 7 48.9	1.800	2.802	3.6	19.9
8 29	21 7.42	-23 29.0	1.552	2.507	9.6	20.9	8 29	21 10.80	- 8 42.8	1.829	2.801	7.0	20.1
9 8	21 0.05	-23 29.9	1.595	2.486	13.5	21.1	9 8	21 4.86	- 9 34.9	1.883	2.799	10.5	20.3
9 18	20 55.29	-23 16.0	1.658	2.466	17.0	21.3	9 18	21 0.95	-10 21.1	1.960	2.797	13.6	20.5
185638	Erwinschwab		8 11.2 139°03	1°7/ 9.9 17			430624	2003 <i>GA</i> ₂₈		8 11.2 74°14	3°8/14.0 17		
7 10	21 51.37	-17 33.5	1.770	2.658	13.1	21.5	7 10	21 46.84	- 3 25.9	1.594	2.456	15.7	21.4
7 20	21 44.87	-18 15.0	1.714	2.669	9.3	21.3	7 20	21 41.73	- 3 39.2	1.536	2.467	12.0	21.2
7 30	21 36.32	-19 1.5	1.682	2.679	5.2	21.1	7 30	21 34.62	- 4 11.4	1.499	2.478	8.0	21.0
8 9	21 26.57	-19 47.4	1.676	2.688	1.7	20.9	8 9	21 26.31	- 4 59.7	1.486	2.489	4.5	20.8
8 19	21 16.64	-20 27.2	1.698	2.697	4.4	21.1	8 19	21 17.79	- 5 59.2	1.499	2.500	4.5	20.9
8 29	21 7.65	-20 56.5	1.747	2.705	8.4	21.4	8 29	21 10.14	- 7 3.6	1.538	2.511	7.9	21.1
9 8	21 0.52	-21 13.2	1.820	2.713	12.1	21.6	9 8	21 4.27	- 8 6.1	1.601	2.521	11.7	21.3
9 18	20 55.84	-21 17.2	1.915	2.720	15.1	21.8	9 18	21 0.79	- 9 1.8	1.686	2.532	15.0	21.6
192462	1998 <i>EZ</i> ₇		8 11.2 153°93	3°7/14.6 18			450369	2005 <i>EA</i> ₁₁₆		8 11.2 85°21	8°2/18.2 16		
7 10	21 46.12	- 1 1.5	2.058	2.896	13.5	20.9	7 10	21 47.22	+ 9 1.7	1.166	1.994	22.3	20.8
7 20	21 40.91	- 1 35.5	1.987	2.902	10.5	20.7	7 20	21 42.53	+ 8 8.3	1.112	2.009	18.4	20.6
7 30	21 34.04	- 2 27.7	1.938	2.908	7.2	20.5	7 30	21 35.27	+ 6 32.5	1.075	2.025	14.0	20.4
8 9	21 26.17	- 3 35.2	1.916	2.914	4.3	20.3	8 9	21 26.44	+ 4 17.4	1.059	2.040	9.9	20.2
8 19	21 18.05	- 4 53.5	1.921	2.919	4.1	20.3	8 19	21 17.34	+ 1 32.7	1.066	2.056	8.2	20.2
8 29	21 10.55	- 6 16.8	1.954	2.923	6.8	20.5	8 29	21 9.41	- 1 26.0	1.098	2.071	10.4	20.3
9 8	21 4.45	- 7 38.7	2.014	2.927	10.0	20.7	9 8	21 3.83	- 4 21.4	1.154	2.085	14.2	20.6
9 18	21 0.27	- 8 54.1	2.097	2.931	13.0	20.9	9 18	21 1.25	- 7 0.2	1.232	2.100	18.1	20.9
293901	2007 <i>RX</i> ₃₀₂		8 11.2 272°41	5°8/16.3 18			341196	2007 <i>RH</i> ₆₇		8 11.2 331°59	0°9/11.8 18		
7 10	21 44.05	+ 3 39.5	1.986	2.807	14.6	21.0	7 10	21 45.67	-11 11.3	1.575	2.464	14.4	21.1
7 20	21 39.62	+ 3 27.4	1.897	2.793	11.9	20.7	7 20	21 41.10	-11 32.0	1.504	2.456	10.6	20.8
7 30	21 33.44	+ 2 53.5	1.829	2.780	9.0	20.5	7 30	21 34.38	-12 5.2	1.455	2.450	6.2	20.5
8 9	21 26.09	+ 1 58.2	1.784	2.766	6.5	20.4	8 9	21 26.29	-12 46.8	1.431	2.443	1.6	20.2
8 19	21 18.32	+ 0 44.6	1.766	2.753	5.9	20.3	8 19	21 17.82	-13 31.6	1.432	2.437	3.6	20.4
8 29	21 11.06	- 0 42.0	1.775	2.739	7.8	20.4	8 29	21 10.12	-14 13.9	1.459	2.432	8.3	20.6
9 8	21 5.13	- 2 14.3	1.809	2.725	10.8	20.5	9 8	21 4.22	-14 49.0	1.509	2.427	12.5	20.9
9 18	21 1.19	- 3 45.4	1.866	2.711	13.9	20.7	9 18	21 0.80	-15 13.9	1.580	2.422	16.1	21.1
251574	2009 <i>FN</i> ₁₈		8 11.2 53°85	0°1/11.2 17			445818	2012 <i>BR</i> ₁₂₈		8 11.2 204°51	2°0/ 9.3 18		
7 10	21 51.47	-14 3.5	1.177	2.079	17.2	20.6	7 10	21 47.33	-21 30.0	2.775	3.658	9.1	21.5
7 20	21 45.48	-14 12.7	1.134	2.094	12.4	20.3	7 20	21 41.49	-21 55.8	2.702	3.653	6.5	21.4
7 30	21 36.83	-14 32.4	1.111	2.109	7.0	20.1	7 30	21 34.29	-22 22.2	2.655	3.649	3.8	21.2
8 9	21 26.67	-14 57.1	1.112	2.125	1.3	19.7	8 9	21 26.25	-22 45.8	2.636	3.644	2.0	21.1
8 19	21 16.45	-15 20.9	1.136	2.141	4.4	20.0	8 19	21 18.03	-23 3.6	2.646	3.638	3.7	21.2
8 29	21 7.64	-15 38.7	1.184	2.157	9.7	20.4	8 29	21 10.33	-23 13.3	2.685	3.633	6.4	21.3
9 8	21 1.39	-15 47.2	1.254	2.174	14.4	20.7	9 8	21 3.78	-23 13.9	2.750	3.627	9.0	21.5
9 18	20 58.26	-15 45.3	1.344	2.190	18.2	21.0	9 18	20 58.86	-23 5.1	2.839	3.620	11.3	21.7
91635	1999 <i>TH</i> ₇₉		8 11.2 188°04	5°1/ 6.8 18			422854	2002 <i>JO</i> ₁₂₁		8 11.2 51°53	17°3/28.3 16		
7 10	21 52.03	-30 13.9	2.361	3.244	10.4	19.8	7 10	21 57.03	-49 27.1	1.186	2.061	19.1	20.3
7 20	21 45.13	-31 4.3	2.300	3.243	7.9	19.6	7 20	21 50.89	-52 15.3	1.184	2.078	17.7	20.3
7 30	21 36.41	-31 49.5	2.264	3.242	5.8	19.5	7 30	21 40.43	-54 27.5	1.200	2.096	17.3	20.3
8 9	21 26.61	-32 24.0	2.256	3.240	5.2	19.4	8 9	21 27.38	-55 50.5	1.236	2.115	18.0	20.4
8 19	21 16.60	-32 43.5	2.276	3.238	6.6	19.5	8 19	21 14.22	-56 19.1	1.288	2.134	19.3	20.6
8 29	21 7.35	-32 45.9	2.322	3.235	9.1	19.7	8 29	21 3.52	-55 56.6	1.356	2.153	20.9	20.8
9 8	20 59.70	-32 31.4	2.393	3.231	11.5	19.8	9 8	20 56.92	-54 53.0	1.438	2.172	22.5	21.0
9 18	20 54.21	-32 2.3	2.485	3.227	13.7	20.0	9 18	20 54.92	-53 19.0	1.532	2.192	23.9	21.1
99195	2001 <i>GH</i> ₅		8 11.2 186°97	11°3/ 2.0 18			363927	2005 <i>SW</i> ₂₈₇		8 11.2 196°61	4°0/ 6.6 18		
7 10	21 59.06	-47 8.2	1.972	2.821	13.6	18.7	7 10	21 46.48	-27 31.6	2.786	3.673	8.9	22.0
7 20	21 50.87	-48 21.8	1.933	2.821	12.1	18.6	7 20	21 40.99	-28 37.8	2.722	3.670	6.6	21.8
7 30	21 39.86	-49 15.8	1.916	2.821	11.4	18.6	7 30	21 34.05	-29 42.1	2.684	3.667	4.6	21.7
8 9	21 27.22	-49 41.8	1.922	2.821	11.6	18.6	8 9	21 26.22	-30 39.4	2.674	3.663	4.1	21.6
8 19	21 14.48	-49 35.4	1.950	2.820	12.7	18.7	8 19	21 18.14	-31 25.6	2.693	3.659	5.5	21.7
8 29	21 3.23	-48 56.7	2.000	2.819	14.3	18.8	8 29	21 10.56	-31 57.8	2.740	3.654	7.8	21.9
9 8	20 54.67	-47 50.5	2.070	2.818	16.1	18.9	9 8	21 4.17	-32 15.0	2.811	3.649	10.0	22.0
9 18	20 49.41	-46 23.1	2.156	2.817	17.7	19.0	9 18	20 59.45	-32 17.7	2.904	3.644	12.0	22.1
121816	2000 <i>AE</i> ₂₃₈		8 11.2 228°68	6°6/ 3.5 18			509798	2008 <i>UQ</i> ₂₉₈		8 11.2 187°43	3°6/ 8.3 18		
7 10	21 47.25	-34 47.0	2.467	3.351	10.0	19.9	7 10	21 50.20	-24 25.2	2.196	3.085	10.9	22.0
7 20	21 41.84	-36 17.3	2.412	3.347	8.1	19.8	7 20	21 43.87	-25 10.5	2.132	3.085	7.9	21.8
7 30	21 34.64	-37 40.9	2.383	3.342	6.8	19.7	7 30	21 35.75	-25 55.0	2.093	3.084	5.0	21.7
8 9	21 26.30	-38 51.2	2.381	3.337	6.8	19.7	8 9	21 26.53	-26 33.3	2.081	3.082	3.6	21.6
8 19	21 17.65	-39 43.0	2.405	3.332	8.2	19.8	8 19	21 17.08	-27 0.8	2.097	3.081	5.4	21.7
8 29	21 9.60	-40 13.6	2.454	3.327	10.2	19.9	8 29	21 8.36	-27 14.7	2.141	3.078	8.4	21.9
9 8	21 3.02	-40 22.9	2.526	3.321	12.2	20.1	9 8	21 1.21	-27 14.2	2.209	3.076	11.3	22.1
9 18	20 58.50	-40 12.8	2.616	3.316	14.1	20.2	9 18	20 56.17	-27 0.1	2.299	3.072	13.9	22.2
467122	2016 <i>EU</i> ₇												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
205834	2002 EZ ₁	8 11.2	25°67'	1.7°/10.4	17		256749	2008 BZ ₂₉	8 11.2	224°66'	1.1°/11.9	17	
7 10	21 49.47	-17 21.1	1.053	1.969	17.6	19.6	7 10	21 49.32	-10 16.3	1.662	2.540	14.3	21.4
7 20	21 44.41	-17 41.5	1.008	1.975	12.7	19.3	7 20	21 43.70	-10 44.4	1.587	2.533	10.6	21.2
7 30	21 36.41	-18 9.6	0.982	1.982	7.1	19.1	7 30	21 35.89	-11 25.7	1.534	2.526	6.3	20.9
8 9	21 26.67	-18 38.3	0.978	1.991	1.9	18.8	8 9	21 26.64	-12 16.1	1.506	2.518	1.8	20.6
8 19	21 16.74	-19 0.5	0.997	2.000	5.5	19.0	8 19	21 16.96	-13 10.2	1.506	2.510	3.6	20.7
8 29	21 8.28	-19 11.2	1.038	2.010	10.9	19.4	8 29	21 8.01	-14 1.8	1.531	2.502	8.2	21.0
9 8	21 2.55	-19 8.0	1.100	2.020	15.8	19.7	9 8	21 0.86	-14 46.1	1.582	2.493	12.4	21.2
9 18	21 0.19	-18 51.1	1.179	2.032	19.8	20.0	9 18	20 56.21	-15 19.9	1.653	2.483	16.1	21.4
423933	2006 TS ₄₄	8 11.2	249°03'	2.9°/ 9.1	18		214144	2005 AR ₆₅	8 11.2	164°56'	0.9°/11.8	17	
7 10	21 50.92	-20 27.0	1.745	2.639	13.0	21.8	7 10	21 50.38	-10 48.9	1.582	2.462	14.8	21.4
7 20	21 44.93	-21 15.5	1.667	2.624	9.4	21.5	7 20	21 44.44	-11 14.5	1.518	2.466	10.9	21.1
7 30	21 36.62	-22 8.2	1.613	2.609	5.5	21.3	7 30	21 36.27	-11 52.7	1.476	2.469	6.4	20.9
8 9	21 26.75	-22 58.7	1.584	2.592	2.9	21.1	8 9	21 26.71	-12 39.0	1.459	2.471	1.7	20.6
8 19	21 16.39	-23 40.6	1.582	2.576	5.5	21.2	8 19	21 16.85	-13 27.7	1.469	2.473	3.7	20.7
8 29	21 6.75	-24 8.8	1.607	2.559	9.5	21.4	8 29	21 7.88	-14 13.1	1.505	2.475	8.3	21.0
9 8	20 58.96	-24 21.0	1.656	2.541	13.4	21.6	9 8	21 0.85	-14 50.6	1.565	2.476	12.5	21.3
9 18	20 53.76	-24 17.4	1.724	2.524	16.8	21.8	9 18	20 56.41	-15 17.6	1.646	2.477	16.1	21.5
342376	2008 UX ₁₅	8 11.2	276°93'	3.9°/ 8.6	18		36441	2000 PM ₂₈	8 11.2	224°56'	3.4°/ 8.7	18	
7 10	21 50.28	-23 34.1	1.740	2.637	12.8	21.5	7 10	21 51.35	-20 35.4	1.691	2.585	13.3	19.2
7 20	21 44.45	-24 16.0	1.665	2.623	9.3	21.2	7 20	21 45.28	-21 41.6	1.619	2.576	9.6	18.9
7 30	21 36.33	-24 58.7	1.614	2.608	5.8	21.0	7 30	21 36.85	-22 52.8	1.571	2.566	5.7	18.7
8 9	21 26.70	-25 35.5	1.589	2.593	3.9	20.8	8 9	21 26.84	-24 1.2	1.549	2.556	3.4	18.5
8 19	21 16.63	-26 0.6	1.589	2.578	6.2	20.9	8 19	21 16.35	-24 59.5	1.554	2.545	5.9	18.7
8 29	21 7.36	-26 10.0	1.616	2.563	9.9	21.1	8 29	21 6.64	-25 41.8	1.585	2.533	10.0	18.9
9 8	20 59.99	-26 2.6	1.666	2.548	13.6	21.3	9 8	20 58.86	-26 5.6	1.640	2.520	13.8	19.1
9 18	20 55.22	-25 39.5	1.736	2.532	16.8	21.5	9 18	20 53.76	-26 11.2	1.714	2.507	17.1	19.3
154123	2002 EA ₈₂	8 11.2	5°06'	4.7°/ 8.2	18		1135	Colchis	8 11.2	330°77'	1.8°/10.1	18	R
7 10	21 51.60	-28 33.8	1.971	2.862	11.8	19.6	7 10	21 48.14	-18 21.4	1.532	2.433	14.0	14.2
7 20	21 44.99	-28 53.1	1.912	2.863	8.8	19.4	7 20	21 42.99	-18 42.9	1.464	2.424	10.1	13.9
7 30	21 36.41	-29 6.9	1.877	2.863	6.0	19.2	7 30	21 35.53	-19 9.5	1.418	2.417	5.7	13.6
8 9	21 26.69	-29 10.1	1.868	2.864	4.7	19.1	8 9	21 26.59	-19 35.8	1.397	2.409	1.9	13.4
8 19	21 16.84	-28 59.2	1.886	2.864	6.4	19.3	8 19	21 17.28	-19 56.5	1.401	2.402	4.7	13.5
8 29	21 7.96	-28 32.8	1.930	2.866	9.3	19.4	8 29	21 8.87	-20 7.4	1.431	2.396	9.3	13.8
9 8	21 0.92	-27 52.1	1.999	2.867	12.3	19.6	9 8	21 2.44	-20 6.2	1.483	2.389	13.4	14.0
9 18	20 56.28	-26 59.3	2.088	2.869	14.9	19.8	9 18	20 58.69	-19 52.8	1.556	2.384	17.0	14.2
221771	2007 GM ₆₂	8 11.2	170°23'	3.0°/14.4	18		325872	2010 TN ₁₅₃	8 11.2	246°17'	5.6°/ 5.2	18	
7 10	21 43.23	- 2 36.8	2.667	3.504	10.8	20.7	7 10	21 48.68	-33 23.0	2.710	3.590	9.3	21.5
7 20	21 38.58	- 2 54.3	2.590	3.505	8.4	20.6	7 20	21 42.75	-34 22.3	2.639	3.575	7.4	21.3
7 30	21 32.68	- 3 24.3	2.537	3.507	5.7	20.4	7 30	21 35.16	-35 16.0	2.594	3.560	5.9	21.2
8 9	21 26.01	- 4 5.2	2.510	3.508	3.5	20.3	8 9	21 26.51	-35 58.8	2.576	3.544	5.7	21.2
8 19	21 19.16	- 4 54.1	2.512	3.509	3.3	20.3	8 19	21 17.57	-36 26.5	2.585	3.528	7.0	21.2
8 29	21 12.75	- 5 47.4	2.542	3.510	5.5	20.4	8 29	21 9.17	-36 36.8	2.621	3.512	9.0	21.3
9 8	21 7.36	- 6 41.1	2.600	3.511	8.2	20.6	9 8	21 2.11	-36 29.7	2.680	3.495	11.1	21.4
9 18	21 3.44	- 7 31.9	2.682	3.511	10.6	20.7	9 18	20 56.94	-36 6.7	2.760	3.478	13.0	21.6
436786	2012 PX ₁₄	8 11.2	18°48'	2.2°/12.6	16		154198	2002 GT ₁₆₂	8 11.2	68°21'	2.7°/13.8	18	
7 10	21 46.74	- 8 39.2	1.442	2.327	15.7	21.0	7 10	21 43.60	- 4 23.0	2.205	3.058	12.2	19.9
7 20	21 41.91	- 8 47.4	1.382	2.330	11.7	20.8	7 20	21 39.05	- 4 47.8	2.136	3.063	9.3	19.7
7 30	21 34.86	- 9 10.8	1.342	2.333	7.2	20.5	7 30	21 33.03	- 5 26.6	2.090	3.068	6.1	19.5
8 9	21 26.43	- 9 45.8	1.326	2.336	2.9	20.3	8 9	21 26.12	- 6 16.9	2.070	3.074	3.2	19.3
8 19	21 17.71	-10 27.4	1.336	2.340	3.9	20.3	8 19	21 19.00	- 7 14.7	2.078	3.079	3.3	19.4
8 29	21 9.93	-11 9.8	1.370	2.345	8.4	20.6	8 29	21 12.45	- 8 15.4	2.114	3.085	6.2	19.6
9 8	21 4.10	-11 47.6	1.427	2.350	12.7	20.9	9 8	21 7.15	- 9 14.2	2.175	3.090	9.3	19.8
9 18	21 0.88	-12 17.0	1.505	2.355	16.4	21.1	9 18	21 3.60	-10 7.3	2.261	3.096	12.1	20.0
175381	2006 HA ₁₂₂	8 11.2	27°07'	3.5°/ 8.5	18		379216	2009 SW ₁₅₃	8 11.2	19°39'	3.4°/13.3	17	
7 10	21 45.14	-19 42.7	1.420	2.330	14.3	19.4	7 10	21 42.57	- 6 14.0	0.978	1.884	19.6	20.3
7 20	21 40.83	-21 1.0	1.373	2.339	10.2	19.2	7 20	21 39.45	- 6 27.4	0.936	1.893	14.8	20.1
7 30	21 34.25	-22 24.5	1.350	2.348	5.9	19.0	7 30	21 33.65	- 7 5.0	0.912	1.904	9.4	19.8
8 9	21 26.31	-23 44.3	1.350	2.358	3.5	18.9	8 9	21 26.25	- 8 1.9	0.908	1.917	4.3	19.6
8 19	21 18.15	-24 52.1	1.376	2.369	6.2	19.0	8 19	21 18.63	- 9 9.9	0.925	1.931	4.9	19.7
8 29	21 11.03	-25 41.7	1.426	2.380	10.3	19.3	8 29	21 12.31	-10 19.2	0.965	1.947	9.9	20.0
9 8	21 5.95	-26 10.7	1.498	2.392	14.1	19.6	9 8	21 8.45	-11 20.8	1.024	1.964	14.7	20.3
9 18	21 3.52	-26 19.4	1.589	2.404	17.3	19.8	9 18	21 7.66	-12 9.0	1.102	1.982	18.9	20.7
91085	1998 FK ₁₁₉	8 11.2	197°24'	6.3°/16.6	18		186740	2004 CR ₃₉	8 11.2	225°85'	2.6°/13.1	18	
7 10	21 46.37	+ 4 30.6	2.043	2.853	14.6	19.8	7 10	21 48.96	- 6 10.4	1.864	2.723	13.8	21.8
7 20	21 41.20	+ 4 37.0	1.964	2.851	12.0	19.7	7 20	21 43.29	- 6 27.2	1.780	2.713	10.5	21.6
7 30	21 34.31	+ 4 23.0	1.905	2.849	9.3	19.5	7 30	21 35.62	- 6 59.0	1.720	2.703	6.7	21.3
8 9	21 26.33	+ 3 48.6	1.871	2.846	6.9	19.3	8 9	21 26.62	- 7 43.2	1.685	2.692	3.2	21.1
8 19	21 18.03	+ 2 56.2	1.863	2.843	6.3	19.3	8 19	21 17.18	- 8 35.7	1.677	2.680	3.7	21.1
8 29	21 10.29	+ 1 50.1	1.882	2.840	8.0	19.4	8 29	21 8.35	- 9 31.2	1.697	2.668	7.5	21.3
9 8	21 3.94	+ 0 36.7	1.926	2.836	10.6	19.6	9 8	21 1.08	-10 24.3	1.743	2.655	11.4	21.5
9 18	20 59.56	- 0 37.8	1.994	2.832	13.4	19.7	9 18	20 56.05	-11 10.8	1.810	2.641	14.8	21.7
269613	2010 DE ₁₄	8 11.2	348°65'	6.5°/16.5	18		242523	Kreszgéza	8 11.2	210°82'	3.9°/ 7.8	18	
7 10	21 43.71	+ 3 31.5	1.734	2.565	16.0	20.5	7 10	21 48.97	-24 17.9	2.085	2.978	11.2	21.4
7 20	21 39.51	+ 3 35.7	1.661	2.562	13.1	20.3	7 20	21 43.17	-25 19.9	2.019	2.973	8.2	21.2
7 30	21 33.45	+ 3 16.8	1.607	2.560	9.9	20.1	7 30	21 35.48	-26 22.1	1.977	2.968	5.2	21.0
8 9	21 26.18	+ 2 35.0	1.576	2.557	7.3	20.0	8 9	21 26.58	-27 18.3	1.963	2.963	4.0	20.9
8 19	21 18.58	+ 1 33.5	1.570	2.556	6.6	19.9	8 19	21 17.37	-28 2.9	1.976	2.957	5.9	21.0
8 29	21 11.63	+ 0 17.9	1.589	2.554	8.5	20.0	8 29	21 8.86	-28 32.1	2.016	2.951	9.0	21.2
9 8	21 6.23	- 1 4.3	1.633	2.553	11.5	20.2	9 8	21 1.93	-28 44.4	2.080	2.945	12.0	21.4
9 18	21 3.00	- 2 25.9	1.699	2.553	14.6	20.4	9 18	20 57.20	-28 40.8	2.165	2.93		

EPHEMERIDES

8 11.2

8 11.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
373373	2012 <i>LB</i> ₁₈		8 11.2 98°21	1.6°/ 9.9	17		443065	2013 <i>FK</i> ₂₅		8 11.2 95°01	3.3°/ 8.0	18	
7 10	21 48.18	-15 28.3	1.529	2.425	14.3	20.8	7 10	21 45.83	-22 16.0	2.150	3.045	10.8	20.6
7 20	21 42.91	-16 34.0	1.474	2.432	10.2	20.5	7 20	21 40.79	-23 26.1	2.094	3.050	7.8	20.4
7 30	21 35.42	-17 49.1	1.441	2.439	5.7	20.3	7 30	21 34.07	-24 37.9	2.063	3.056	4.8	20.2
8 9	21 26.57	-19 6.4	1.434	2.446	1.7	20.0	8 9	21 26.34	-25 45.1	2.059	3.062	3.4	20.1
8 19	21 17.45	-20 17.9	1.453	2.453	4.7	20.3	8 19	21 18.39	-26 42.3	2.083	3.068	5.3	20.3
8 29	21 9.28	-21 17.0	1.498	2.460	9.2	20.5	8 29	21 11.12	-27 25.5	2.134	3.074	8.3	20.5
9 8	21 3.07	-21 59.7	1.567	2.467	13.2	20.8	9 8	21 5.29	-27 52.7	2.209	3.079	11.2	20.7
9 18	20 59.47	-22 25.1	1.655	2.474	16.6	21.0	9 18	21 1.45	-28 4.3	2.306	3.085	13.7	20.8
20409	1998 <i>QP</i> ₄₃		8 11.2 200°73	4.7°/ 7.2	18		436225	2010 <i>AV</i> ₃₁		8 11.2 176°64	0.9°/ 10.4	18	
7 10	21 50.74	-30 49.3	2.561	3.443	9.8	18.3	7 10	21 46.86	-13 56.6	2.021	2.904	12.0	21.5
7 20	21 44.10	-31 20.6	2.498	3.440	7.4	18.1	7 20	21 41.61	-15 3.6	1.953	2.905	8.6	21.3
7 30	21 35.84	-31 46.3	2.461	3.438	5.4	18.0	7 30	21 34.58	-16 19.9	1.910	2.906	4.8	21.0
8 9	21 26.63	-32 1.8	2.451	3.435	4.8	17.9	8 9	21 26.45	-17 39.7	1.894	2.907	1.1	20.8
8 19	21 17.28	-32 3.9	2.469	3.433	6.1	18.0	8 19	21 18.01	-18 57.0	1.907	2.908	3.7	21.0
8 29	21 8.65	-31 51.2	2.514	3.430	8.3	18.2	8 29	21 10.21	-20 5.7	1.947	2.907	7.5	21.2
9 8	21 1.48	-31 24.1	2.584	3.426	10.7	18.3	9 8	21 3.88	-21 1.9	2.013	2.907	11.0	21.4
9 18	20 56.28	-30 44.6	2.676	3.423	12.8	18.5	9 18	20 59.60	-21 43.7	2.101	2.906	14.0	21.6
119019	2001 <i>AJ</i> ₃₅		8 11.2 267°46	4.0°/ 7.5	18		424446	2008 <i>CK</i> ₄₄		8 11.2 276°30	2.2°/ 9.9	18	
7 10	21 47.84	-26 14.9	2.398	3.288	10.0	19.9	7 10	21 50.08	-17 54.8	1.491	2.390	14.5	21.2
7 20	21 42.25	-27 3.5	2.318	3.269	7.4	19.7	7 20	21 44.66	-18 36.1	1.412	2.372	10.5	20.9
7 30	21 34.93	-27 51.1	2.263	3.250	5.0	19.6	7 30	21 36.65	-19 25.0	1.356	2.354	6.0	20.6
8 9	21 26.49	-28 32.3	2.235	3.231	4.0	19.5	8 9	21 26.87	-20 15.1	1.324	2.336	2.2	20.3
8 19	21 17.69	-29 2.6	2.235	3.211	5.7	19.5	8 19	21 16.46	-20 59.2	1.318	2.317	5.3	20.5
8 29	21 9.43	-29 18.9	2.262	3.191	8.4	19.7	8 29	21 6.85	-21 31.3	1.337	2.299	10.1	20.7
9 8	21 2.52	-29 20.1	2.313	3.171	11.2	19.8	9 8	20 59.28	-21 48.1	1.379	2.280	14.6	20.9
9 18	20 57.57	-29 6.8	2.386	3.151	13.7	20.0	9 18	20 54.62	-21 48.7	1.440	2.261	18.5	21.1
248639	2006 <i>GE</i> ₂₇		8 11.2 359°31	2°8/12.9	18		266496	2008 <i>DU</i> ₆₇		8 11.2 8°66	0°8/11.6	17	
7 10	21 43.82	- 7 13.2	1.039	1.942	18.9	20.0	7 10	21 49.54	-13 15.8	1.243	2.144	16.6	19.9
7 20	21 40.48	- 7 33.7	0.982	1.939	14.2	19.7	7 20	21 44.25	-13 7.9	1.186	2.144	12.2	19.7
7 30	21 34.35	- 8 17.5	0.944	1.937	8.9	19.4	7 30	21 36.33	-13 10.6	1.149	2.145	7.1	19.4
8 9	21 26.41	- 9 19.9	0.926	1.936	3.7	19.1	8 9	21 26.78	-13 19.9	1.134	2.147	1.7	19.0
8 19	21 18.02	-10 32.9	0.931	1.937	4.7	19.2	8 19	21 16.93	-13 31.3	1.144	2.150	4.2	19.2
8 29	21 10.77	-11 46.4	0.957	1.938	10.1	19.5	8 29	21 8.24	-13 40.3	1.178	2.153	9.5	19.5
9 8	21 5.96	-12 51.5	1.004	1.941	15.3	19.8	9 8	21 1.91	-13 43.4	1.234	2.157	14.2	19.8
9 18	21 4.36	-13 42.0	1.069	1.944	19.8	20.1	9 18	20 58.62	-13 38.7	1.309	2.161	18.2	20.1
85667	1998 <i>QT</i> ₅₂		8 11.2 354°11	5°0/14.5	18		452640	2005 <i>UG</i> ₆₆		8 11.2 296°12	4°4/14.7	18	
7 10	21 43.08	- 2 46.3	1.603	2.467	15.4	18.1	7 10	21 44.61	- 1 26.4	2.084	2.925	13.3	20.9
7 20	21 39.18	- 2 22.8	1.532	2.461	12.2	17.9	7 20	21 39.97	- 1 19.6	1.999	2.914	10.5	20.7
7 30	21 33.32	- 2 16.9	1.482	2.456	8.6	17.7	7 30	21 33.67	- 1 28.4	1.936	2.903	7.5	20.5
8 9	21 26.20	- 2 28.2	1.455	2.452	5.6	17.5	8 9	21 26.29	- 1 52.2	1.899	2.892	4.9	20.3
8 19	21 18.75	- 2 54.2	1.452	2.449	5.4	17.5	8 19	21 18.56	- 2 28.5	1.888	2.882	4.7	20.3
8 29	21 12.01	- 3 30.5	1.474	2.446	8.3	17.7	8 29	21 11.33	- 3 13.6	1.903	2.871	7.1	20.4
9 8	21 6.92	- 4 11.3	1.520	2.446	11.8	17.9	9 8	21 5.41	- 4 2.6	1.944	2.860	10.2	20.6
9 18	21 4.12	- 4 51.4	1.587	2.446	15.2	18.1	9 18	21 1.38	- 4 50.7	2.008	2.850	13.2	20.8
359586	2010 <i>UA</i> ₅₃		8 11.2 343°10	3°5/ 8.7	18		151386	2002 <i>EL</i> ₆₃		8 11.2 269°56	2°9/13.9	18	
7 10	21 47.31	-23 33.5	1.842	2.742	12.1	20.2	7 10	21 43.67	- 3 43.3	2.242	3.092	12.2	20.3
7 20	21 42.10	-24 6.8	1.777	2.736	8.8	20.0	7 20	21 39.19	- 4 5.5	2.160	3.085	9.4	20.1
7 30	21 34.91	-24 40.0	1.737	2.731	5.4	19.8	7 30	21 33.18	- 4 42.3	2.101	3.077	6.3	19.9
8 9	21 26.49	-25 7.5	1.721	2.726	3.5	19.7	8 9	21 26.20	- 5 31.6	2.068	3.070	3.5	19.7
8 19	21 17.82	-25 24.7	1.732	2.722	5.6	19.8	8 19	21 18.93	- 6 29.8	2.062	3.063	3.5	19.7
8 29	21 9.96	-25 28.2	1.769	2.718	9.0	20.0	8 29	21 12.15	- 7 32.2	2.084	3.055	6.3	19.9
9 8	21 3.82	-25 17.4	1.829	2.715	12.4	20.2	9 8	21 6.56	- 8 34.0	2.133	3.048	9.5	20.1
9 18	21 0.01	-24 53.1	1.911	2.712	15.3	20.4	9 18	21 2.72	- 9 30.9	2.205	3.040	12.4	20.3
394039	2005 <i>WP</i> ₉₈		8 11.2 59°16	7°4/18.4	18		360914	2005 <i>SR</i> ₂₆₃		8 11.2 289°75	4°3/15.1	18	
7 10	21 44.05	+ 8 25.8	2.090	2.879	15.0	20.6	7 10	21 43.52	- 0 15.9	2.133	2.970	13.2	20.9
7 20	21 39.44	+ 8 41.9	2.023	2.889	12.6	20.5	7 20	21 39.16	- 0 27.2	2.048	2.960	10.5	20.7
7 30	21 33.29	+ 8 35.8	1.977	2.898	10.2	20.3	7 30	21 33.21	- 0 55.9	1.985	2.949	7.5	20.5
8 9	21 26.19	+ 8 7.3	1.953	2.908	8.2	20.2	8 9	21 26.22	- 1 40.6	1.946	2.939	4.9	20.3
8 19	21 18.88	+ 7 18.3	1.954	2.918	7.4	20.2	8 19	21 18.89	- 2 38.4	1.935	2.929	4.6	20.3
8 29	21 12.19	+ 6 13.2	1.981	2.928	8.4	20.3	8 29	21 12.06	- 3 44.5	1.951	2.919	6.9	20.4
9 8	21 6.83	+ 4 58.1	2.033	2.938	10.4	20.4	9 8	21 6.47	- 4 53.4	1.992	2.909	10.0	20.6
9 18	21 3.31	+ 3 39.4	2.108	2.948	12.7	20.6	9 18	21 2.69	- 5 59.9	2.057	2.899	12.9	20.7
310701	2002 <i>JB</i> ₃₇		8 11.2 146°81	2°9/ 7.8	18		242583	2005 <i>GA</i> ₁₃₃		8 11.2 37°13	3°3/ 8.7	18	
7 10	21 45.68	-22 54.9	2.788	3.674	8.9	20.9	7 10	21 47.84	-21 52.7	1.821	2.719	12.3	20.5
7 20	21 40.37	-24 5.5	2.731	3.683	6.4	20.7	7 20	21 42.47	-22 43.2	1.762	2.721	8.8	20.3
7 30	21 33.72	-25 16.6	2.701	3.692	4.0	20.6	7 30	21 35.12	-23 35.6	1.727	2.722	5.3	20.1
8 9	21 26.27	-26 23.5	2.699	3.700	2.9	20.5	8 9	21 26.56	-24 23.6	1.718	2.724	3.3	20.0
8 19	21 18.63	-27 21.8	2.727	3.708	4.5	20.6	8 19	21 17.77	-25 1.6	1.735	2.726	5.5	20.1
8 29	21 11.49	-28 8.4	2.783	3.715	6.9	20.8	8 29	21 9.80	-25 25.5	1.779	2.728	9.0	20.3
9 8	21 5.49	-28 41.5	2.865	3.722	9.3	21.0	9 8	21 3.57	-25 33.9	1.846	2.730	12.4	20.6
9 18	21 1.07	-29 1.0	2.970	3.728	11.4	21.1	9 18	20 59.68	-25 27.4	1.934	2.732	15.3	20.8
494701	2004 <i>TF</i> ₂₄₂		8 11.2 304°95	20°7/21.8	17		314574	2005 <i>YX</i> ₂₁₃		8 11.2 103°49	3°4/ 7.8	18	
7 10	21 48.95	+20 33.3	1.123	1.885	26.7	20.6	7 10	21 45.28	-23 28.7	2.378	3.271	10.0	20.1
7 20	21 44.55	+23 6.5	1.060	1.875	24.9	20.4	7 20	21 40.29	-24 32.9	2.321	3.276	7.2	19.9
7 30	21 36.95	+25 2.4	1.009	1.864	23.0	20.3	7 30	21 33.76	-25 37.4	2.289	3.281	4.5	19.8
8 9	21 26.97	+26 9.3	0.973	1.854	21.5	20.1	8 9	21 26.30	-26 37.0	2.285	3.286	3.4	19.7
8 19	21 15.95	+26 19.4	0.951	1.844	20.7	20.0	8 19	21 18.66	-27 26.8	2.309	3.291	5.1	19.8
8 29	21 5.72	+25 31.9	0.946	1.835	21.0	20.0	8 29	21 11.61	-28 3.6	2.360	3.296	7.8	20.0
9 8	20 58.00	+23 55.6	0.956	1.826	22.2	20.1	9 8	21 5.89	-28 25.7	2.436	3.301	10.5	20.2
9 18	20 53.97	+21 45.1	0.98										

EPHEMERIDES

8 11.2

8 11.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
167252	2003 <i>UP</i> ₁₀₉		8 11.2 187°13	2°2/12.9	18		323627	2004 <i>VS</i> ₇₄		8 11.2 282°01	1°8/ 9.5	18	
7 10	21 47.15	- 7 31.5	2.017	2.881	12.8	20.1	7 10	21 44.91	-18 22.9	2.306	3.195	10.4	20.7
7 20	21 41.77	- 7 41.9	1.944	2.880	9.6	19.9	7 20	21 40.16	-19 10.1	2.225	3.180	7.5	20.5
7 30	21 34.67	- 8 4.4	1.895	2.880	6.0	19.7	7 30	21 33.79	-20 2.2	2.168	3.165	4.2	20.3
8 9	21 26.49	- 8 36.5	1.871	2.879	2.7	19.4	8 9	21 26.37	-20 54.6	2.139	3.150	1.8	20.1
8 19	21 18.04	- 9 14.7	1.875	2.879	3.3	19.5	8 19	21 18.62	-21 42.5	2.138	3.135	3.9	20.2
8 29	21 10.23	- 9 54.7	1.907	2.878	6.8	19.7	8 29	21 11.36	-22 22.0	2.165	3.119	7.3	20.4
9 8	21 3.87	-10 32.3	1.964	2.876	10.3	19.9	9 8	21 5.35	-22 50.2	2.216	3.104	10.4	20.6
9 18	20 59.51	-11 4.3	2.044	2.875	13.4	20.1	9 18	21 1.17	-23 6.1	2.290	3.089	13.2	20.7
68289	2001 <i>FM</i> ₂₆		8 11.2 249°71	9°7/20.9	18		239864	2000 <i>BL</i> ₁₃		8 11.2 323°70	0°3/11.4	18	
7 10	21 44.30	+14 51.4	1.996	2.746	16.9	18.6	7 10	21 47.13	-13 53.9	1.521	2.416	14.5	19.7
7 20	21 39.85	+15 4.2	1.915	2.742	14.8	18.4	7 20	21 42.37	-13 58.7	1.444	2.401	10.6	19.5
7 30	21 33.65	+14 49.2	1.851	2.738	12.6	18.3	7 30	21 35.29	-14 12.6	1.390	2.386	6.1	19.2
8 9	21 26.31	+14 4.6	1.808	2.734	10.7	18.1	8 9	21 26.68	-14 31.9	1.359	2.372	1.2	18.8
8 19	21 18.62	+12 51.5	1.789	2.729	9.7	18.1	8 19	21 17.59	-14 52.0	1.353	2.358	3.9	19.0
8 29	21 11.49	+11 14.3	1.794	2.725	10.2	18.1	8 29	21 9.28	-15 8.5	1.373	2.345	8.7	19.2
9 8	21 5.75	+ 9 21.0	1.824	2.721	11.9	18.2	9 8	21 2.86	-15 17.8	1.416	2.333	13.2	19.5
9 18	21 2.02	+ 7 20.4	1.877	2.716	14.1	18.3	9 18	20 59.08	-15 18.1	1.479	2.321	17.0	19.7
434093	2002 <i>EP</i> ₃₇		8 11.2 155°38	0°7/10.7	17		469887	2005 <i>UV</i> ₄₈₉		8 11.2 284°60	1°8/12.2	18	
7 10	21 48.34	-14 35.2	2.007	2.888	12.1	22.0	7 10	21 49.85	-10 27.4	1.602	2.482	14.7	20.9
7 20	21 42.63	-15 17.3	1.943	2.894	8.7	21.8	7 20	21 44.30	-10 20.2	1.518	2.464	11.0	20.7
7 30	21 35.14	-16 6.9	1.903	2.899	4.8	21.6	7 30	21 36.40	-10 24.2	1.455	2.446	6.7	20.4
8 9	21 26.58	-16 59.1	1.891	2.904	1.0	21.3	8 9	21 26.90	-10 36.8	1.417	2.427	2.4	20.1
8 19	21 17.79	-17 49.0	1.906	2.908	3.5	21.6	8 19	21 16.82	-10 54.8	1.405	2.409	3.9	20.1
8 29	21 9.72	-18 31.9	1.949	2.912	7.3	21.8	8 29	21 7.42	-11 13.9	1.418	2.391	8.5	20.3
9 8	21 3.18	-19 4.8	2.018	2.916	10.8	22.0	9 8	20 59.86	-11 30.2	1.456	2.372	13.0	20.6
9 18	20 58.73	-19 26.2	2.109	2.919	13.8	22.2	9 18	20 54.92	-11 40.6	1.514	2.354	16.8	20.8
183210	2002 <i>TE</i> ₂₉		8 11.2 347°91	2°2/10.0	18		10789	Mikeread		8 11.2 332°65	0°6/11.7	18	
7 10	21 43.91	-17 34.1	1.014	1.939	17.3	19.3	7 10	21 45.15	-11 37.3	1.820	2.704	13.0	18.0
7 20	21 40.76	-18 5.9	0.956	1.928	12.5	19.0	7 20	21 40.56	-12 3.5	1.748	2.699	9.5	17.8
7 30	21 34.63	-18 47.4	0.916	1.918	7.1	18.6	7 30	21 34.09	-12 40.5	1.700	2.694	5.5	17.6
8 9	21 26.54	-19 30.8	0.898	1.910	2.3	18.3	8 9	21 26.45	-13 24.3	1.676	2.689	1.3	17.3
8 19	21 17.92	-20 7.8	0.901	1.904	6.0	18.5	8 19	21 18.49	-14 10.2	1.679	2.684	3.3	17.4
8 29	21 10.50	-20 31.0	0.925	1.899	11.6	18.8	8 29	21 11.20	-14 53.1	1.709	2.680	7.5	17.6
9 8	21 5.69	-20 36.6	0.969	1.895	16.8	19.1	9 8	21 5.47	-15 28.9	1.764	2.676	11.3	17.9
9 18	21 4.29	-20 24.3	1.029	1.894	21.1	19.4	9 18	21 1.89	-15 55.0	1.840	2.672	14.6	18.1
316207	2010 <i>MR</i> ₈₀		8 11.2 265°22	2°0/12.7	17		127322	2002 <i>JE</i> ₁₀₀		8 11.2 155°18	7°9/21.2	18	
7 10	21 47.45	- 8 43.1	2.373	3.232	11.3	21.4	7 10	21 45.42	+17 18.3	3.148	3.840	12.3	20.3
7 20	21 41.88	- 8 36.2	2.281	3.215	8.5	21.2	7 20	21 40.09	+17 53.4	3.071	3.848	10.9	20.2
7 30	21 34.72	- 8 38.0	2.213	3.198	5.3	21.0	7 30	21 33.58	+18 10.2	3.015	3.855	9.6	20.2
8 9	21 26.52	- 8 47.0	2.172	3.180	2.4	20.8	8 9	21 26.35	+18 7.5	2.981	3.862	8.5	20.1
8 19	21 17.96	- 9 1.0	2.160	3.162	3.0	20.8	8 19	21 18.92	+17 45.6	2.971	3.869	7.9	20.1
8 29	21 9.86	- 9 17.2	2.175	3.144	6.3	21.0	8 29	21 11.90	+17 6.2	2.987	3.875	8.1	20.1
9 8	21 2.97	- 9 32.9	2.218	3.126	9.5	21.1	9 8	21 5.81	+16 12.9	3.029	3.880	9.0	20.2
9 18	20 57.85	- 9 45.7	2.284	3.107	12.4	21.3	9 18	21 1.08	+15 10.4	3.094	3.885	10.2	20.3
326176	2012 <i>BX</i> ₁₂₁		8 11.2 108°19	0°3/10.9	18		65937	1998 <i>FZ</i> ₇₂		8 11.2 63°93	4°7/14.9	18	
7 10	21 49.29	-16 17.2	2.283	3.161	10.9	20.4	7 10	21 45.95	- 1 0.2	1.661	2.512	15.7	19.6
7 20	21 43.08	-16 14.4	2.215	3.164	7.9	20.2	7 20	21 41.15	- 1 10.2	1.599	2.521	12.3	19.4
7 30	21 35.31	-16 15.2	2.172	3.167	4.4	20.0	7 30	21 34.42	- 1 40.7	1.559	2.529	8.6	19.2
8 9	21 26.60	-16 16.8	2.157	3.170	0.8	19.7	8 9	21 26.52	- 2 29.6	1.541	2.538	5.4	19.0
8 19	21 17.75	-16 16.8	2.170	3.173	3.0	19.9	8 19	21 18.38	- 3 32.3	1.550	2.547	5.0	19.0
8 29	21 9.58	-16 13.1	2.212	3.176	6.5	20.1	8 29	21 11.03	- 4 42.6	1.584	2.556	7.9	19.2
9 8	21 2.82	-16 4.2	2.280	3.179	9.7	20.3	9 8	21 5.36	- 5 53.5	1.643	2.565	11.4	19.4
9 18	20 57.97	-15 49.6	2.371	3.182	12.4	20.5	9 18	21 1.95	- 6 59.1	1.724	2.574	14.6	19.7
429646	2011 <i>FB</i> ₁₅₀		8 11.2 61°24	6°0/ 6.9	17		71753	2000 <i>RB</i> ₃₉		8 11.2 179°73	3°4/ 8.7	18	
7 10	21 49.54	-26 39.3	1.522	2.427	13.8	20.6	7 10	21 51.67	-21 12.5	1.726	2.620	13.1	19.1
7 20	21 43.99	-28 1.8	1.481	2.439	10.2	20.4	7 20	21 45.40	-22 15.6	1.665	2.622	9.4	18.9
7 30	21 36.08	-29 21.2	1.462	2.451	7.0	20.3	7 30	21 36.90	-23 21.8	1.628	2.623	5.6	18.7
8 9	21 26.77	-30 28.3	1.469	2.463	6.0	20.3	8 9	21 26.99	-24 23.7	1.617	2.623	3.4	18.6
8 19	21 17.30	-31 15.9	1.501	2.475	8.2	20.4	8 19	21 16.76	-25 14.5	1.633	2.623	5.8	18.7
8 29	21 8.97	-31 40.1	1.557	2.487	11.4	20.6	8 29	21 7.42	-25 49.5	1.675	2.622	9.6	18.9
9 8	21 2.82	-31 41.1	1.634	2.500	14.7	20.9	9 8	21 0.01	-26 6.8	1.741	2.621	13.2	19.2
9 18	20 59.46	-31 21.7	1.730	2.512	17.4	21.1	9 18	20 55.19	-26 7.0	1.827	2.619	16.3	19.4
205117	1999 <i>VK</i> ₄₂		8 11.2 254°83	1°7/12.6	18		99357	2001 <i>XZ</i> ₁₇₈		8 11.2 121°71	2°0/ 9.9	17	
7 10	21 47.83	- 8 37.7	2.130	2.993	12.2	21.5	7 10	21 50.69	-16 28.6	1.428	2.326	15.1	19.6
7 20	21 42.36	- 8 51.3	2.038	2.975	9.2	21.2	7 20	21 44.90	-17 28.7	1.375	2.334	10.8	19.4
7 30	21 35.10	- 9 16.1	1.969	2.956	5.7	21.0	7 30	21 36.67	-18 37.4	1.343	2.341	6.0	19.2
8 9	21 26.62	- 9 49.7	1.927	2.936	2.3	20.7	8 9	21 26.95	-19 46.8	1.337	2.349	2.0	18.9
8 19	21 17.71	-10 28.7	1.912	2.916	3.2	20.7	8 19	21 16.97	-20 49.1	1.357	2.356	5.1	19.1
8 29	21 9.27	-11 8.9	1.926	2.895	6.9	20.9	8 29	21 8.06	-21 37.8	1.402	2.363	9.7	19.4
9 8	21 2.16	-11 46.4	1.966	2.874	10.5	21.1	9 8	21 1.33	-22 9.6	1.469	2.370	13.9	19.7
9 18	20 57.02	-12 17.9	2.028	2.853	13.7	21.3	9 18	20 57.43	-22 24.1	1.557	2.376	17.4	20.0
278747	2008 <i>SS</i> ₁₀₀		8 11.2 344°81	4°5/ 8.3	18		230330	2002 <i>CS</i> ₁₀₀		8 11.2 188°81	0°1/11.2	17	
7 10	21 47.06	-22 48.5	1.378	2.290	14.5	20.3	7 10	21 48.09	-12 53.0	2.153	3.028	11.6	21.7
7 20	21 42.50	-23 47.7	1.319	2.284	10.6	20.1	7 20	21 42.43	-13 34.1	2.080	3.027	8.4	21.5
7 30	21 35.40	-24 49.3	1.282	2.278	6.5	19.8	7 30	21 35.08	-14 23.8	2.032	3.026	4.8	21.3
8 9	21 26.68	-25 44.8	1.269	2.274	4.5	19.7	8 9	21 26.66	-15 17.8	2.011	3.024	0.9	21.0
8 19	21 17.58	-26 26.5	1.279	2.269	7.1	19.8	8 19	21 17.96	-16 11.6	2.019	3.022	3.1	21.1
8 29	21 9.51	-26 48.9	1.314	2.266	11.2	20.1	8 29	21 9.86	-17 0.3	2.054	3.019	6.9	21.4
9 8	21 3.64	-26 50.5	1.370	2.263	15.2	20.3	9 8	21 3.15	-17 40.6	2.116	3.015	10.3	21.6
9 18	21 0.69	-26 32.7	1.										

EPHEMERIDES

8 11.2

8 11.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
356371	2010 <i>MC</i> ₉₉	8 11.2 52°52'		5:7/16.9 18			367526	2009 <i>QB</i> ₁₃	8 11.3 337°47'		1:7/12.1 17		
7 10	21 43.37	+ 4 26.6	1.998	2.815	14.7	20.5	7 10	21 42.59	-10 42.6	1.045	1.958	18.0	20.3
7 20	21 39.05	+ 4 10.3	1.931	2.824	11.9	20.3	7 20	21 39.84	-10 46.5	0.975	1.939	13.5	20.0
7 30	21 33.16	+ 3 32.4	1.886	2.834	9.0	20.1	7 30	21 34.23	-11 7.9	0.923	1.921	8.1	19.6
8 9	21 26.31	+ 2 34.1	1.864	2.843	6.5	20.0	8 9	21 26.61	-11 43.3	0.892	1.904	2.6	19.2
8 19	21 19.25	+ 1 19.2	1.868	2.853	5.8	20.0	8 19	21 18.30	-12 26.4	0.883	1.889	4.6	19.3
8 29	21 12.82	- 0 6.6	1.899	2.863	7.4	20.1	8 29	21 10.93	-13 9.4	0.894	1.876	10.5	19.6
9 8	21 7.74	- 1 36.3	1.956	2.873	10.1	20.3	9 8	21 5.98	-13 45.0	0.926	1.864	16.1	19.9
9 18	21 4.54	- 3 3.5	2.036	2.883	12.8	20.5	9 18	21 4.36	-14 8.2	0.974	1.854	20.8	20.1
131218	2001 <i>DL</i> ₇₁	8 11.2 137°71'		1°0/12.1 18			116530	2004 <i>BQ</i> ₅₄	8 11.3 186°48'		1°8/ 9.6 18		
7 10	21 46.76	- 9 26.7	2.017	2.887	12.5	20.0	7 10	21 46.52	-17 27.9	2.095	2.984	11.3	20.1
7 20	21 41.49	-10 4.7	1.952	2.894	9.2	19.8	7 20	21 41.39	-18 26.6	2.029	2.984	8.1	19.9
7 30	21 34.54	-10 54.3	1.910	2.901	5.4	19.6	7 30	21 34.54	-19 31.0	1.987	2.983	4.5	19.7
8 9	21 26.57	-11 51.4	1.895	2.907	1.6	19.3	8 9	21 26.61	-20 35.7	1.972	2.983	1.8	19.5
8 19	21 18.37	-12 51.3	1.908	2.913	3.0	19.4	8 19	21 18.41	-21 35.2	1.985	2.982	4.1	19.6
8 29	21 10.84	-13 48.7	1.949	2.919	6.8	19.7	8 29	21 10.84	-22 24.7	2.026	2.981	7.6	19.9
9 8	21 4.76	-14 39.4	2.016	2.924	10.3	19.9	9 8	21 4.70	-23 1.3	2.092	2.980	10.9	20.1
9 18	21 0.67	-15 20.4	2.105	2.929	13.3	20.1	9 18	21 0.55	-23 24.0	2.180	2.979	13.7	20.3
234308	2001 <i>AD</i> ₃₉	8 11.2 293°23'		0°3/11.4 18			513978	2014 <i>GT</i> ₂₅	8 11.3 187°63'		3°4/ 8.6 18		
7 10	21 49.71	-13 58.4	1.724	2.609	13.5	20.1	7 10	21 51.26	-24 39.9	2.203	3.090	10.9	21.6
7 20	21 43.93	-14 0.8	1.652	2.604	9.9	19.9	7 20	21 44.71	-25 11.8	2.138	3.090	8.0	21.5
7 30	21 36.06	-14 10.6	1.604	2.599	5.7	19.7	7 30	21 36.37	-25 42.1	2.098	3.089	5.0	21.3
8 9	21 26.87	-14 24.6	1.581	2.594	1.2	19.3	8 9	21 26.95	-26 6.1	2.086	3.088	3.4	21.2
8 19	21 17.35	-14 38.9	1.585	2.589	3.5	19.5	8 19	21 17.34	-26 19.7	2.101	3.086	5.2	21.3
8 29	21 8.64	-14 49.9	1.615	2.585	8.0	19.8	8 29	21 8.47	-26 20.4	2.144	3.084	8.2	21.5
9 8	21 1.70	-14 54.8	1.670	2.580	12.0	20.0	9 8	21 1.19	-26 8.1	2.212	3.082	11.1	21.7
9 18	20 57.19	-14 52.3	1.746	2.576	15.4	20.2	9 18	20 56.04	-25 43.6	2.301	3.080	13.7	21.8
52861	1998 <i>SG</i> ₄	8 11.3 83°58'		1°2/11.9 18			455310	2002 <i>GL</i> ₃	8 11.3 46°34'		11°0/ 7.0 17		
7 10	21 52.31	-11 25.5	1.234	2.127	17.3	18.9	7 10	21 59.61	-37 3.7	1.087	1.990	18.3	20.2
7 20	21 46.22	-11 35.2	1.183	2.137	12.7	18.7	7 20	21 51.81	-37 58.1	1.064	2.010	14.7	20.1
7 30	21 37.46	-11 58.6	1.153	2.148	7.4	18.4	7 30	21 40.59	-38 32.3	1.061	2.030	11.9	20.0
8 9	21 27.13	-12 30.6	1.146	2.158	2.0	18.1	8 9	21 27.69	-38 35.8	1.079	2.051	11.1	20.0
8 19	21 16.59	-13 5.4	1.164	2.169	4.2	18.3	8 19	21 15.19	-38 4.3	1.118	2.073	12.7	20.2
8 29	21 7.33	-13 36.8	1.206	2.179	9.5	18.6	8 29	21 5.02	-37 0.3	1.179	2.095	15.5	20.4
9 8	21 0.52	-14 0.5	1.270	2.190	14.2	18.9	9 8	20 58.36	-35 31.7	1.258	2.117	18.5	20.7
9 18	20 56.81	-14 14.0	1.354	2.200	18.1	19.2	9 18	20 55.56	-33 46.9	1.354	2.140	21.2	20.9
357144	2002 <i>AF</i> ₂₀₉	8 11.3 199°61'		1°6/12.8 18			261581	2005 <i>XD</i> ₈	8 11.3 245°91'		0°9/10.4 18		
7 10	21 44.30	- 7 16.4	2.382	3.242	11.2	21.7	7 10	21 45.92	-16 28.8	2.564	3.444	9.8	22.1
7 20	21 39.58	- 7 52.0	2.306	3.240	8.4	21.5	7 20	21 40.75	-17 2.8	2.480	3.431	7.1	21.9
7 30	21 33.43	- 8 39.2	2.253	3.238	5.2	21.3	7 30	21 34.12	-17 41.7	2.421	3.417	4.0	21.7
8 9	21 26.38	- 9 35.2	2.227	3.236	2.1	21.1	8 9	21 26.54	-18 22.0	2.391	3.403	1.0	21.4
8 19	21 19.08	-10 35.8	2.230	3.234	2.7	21.2	8 19	21 18.67	-18 59.9	2.389	3.389	3.1	21.6
8 29	21 12.27	-11 36.7	2.262	3.232	5.9	21.4	8 29	21 11.25	-19 32.1	2.415	3.374	6.3	21.7
9 8	21 6.62	-12 33.6	2.320	3.229	9.1	21.6	9 8	21 4.97	-19 56.1	2.468	3.359	9.4	21.9
9 18	21 2.63	-13 23.2	2.402	3.226	11.8	21.8	9 18	21 0.33	-20 10.7	2.544	3.344	12.0	22.1
445021	2008 <i>KK</i> ₃₁	8 11.3 39°41'		3°9/14.9 18			185766	1999 <i>TK</i> ₁₁₄	8 11.3 313°37'		3°7/14.3 18		
7 10	21 43.65	- 1 9.6	2.202	3.041	12.7	21.1	7 10	21 43.25	- 2 59.6	1.948	2.802	13.5	19.7
7 20	21 39.18	- 1 22.8	2.129	3.043	10.0	20.9	7 20	21 39.20	- 3 12.3	1.860	2.785	10.6	19.4
7 30	21 33.22	- 1 52.0	2.077	3.045	7.0	20.7	7 30	21 33.39	- 3 41.9	1.794	2.769	7.2	19.2
8 9	21 26.34	- 2 35.4	2.052	3.047	4.5	20.6	8 9	21 26.42	- 4 26.9	1.753	2.753	4.3	19.0
8 19	21 19.23	- 3 29.9	2.053	3.049	4.2	20.6	8 19	21 19.05	- 5 23.7	1.738	2.737	4.2	19.0
8 29	21 12.66	- 4 30.8	2.082	3.051	6.5	20.7	8 29	21 12.17	- 6 27.4	1.749	2.722	7.2	19.1
9 8	21 7.32	- 5 33.1	2.137	3.053	9.4	20.9	9 8	21 6.63	- 7 32.0	1.786	2.707	10.7	19.3
9 18	21 3.73	- 6 32.2	2.215	3.055	12.2	21.1	9 18	21 3.06	- 8 32.4	1.846	2.692	14.0	19.5
445836	2012 <i>CG</i> ₅₃	8 11.3 174°53'		1°6/ 9.7 18			437059	2012 <i>US</i> ₄₀	8 11.3 11°94'		5°7/ 7.4 16		
7 10	21 48.02	-20 33.4	2.974	3.851	8.7	21.9	7 10	21 48.87	-26 31.3	1.487	2.395	13.9	20.7
7 20	21 41.96	-20 51.1	2.904	3.854	6.2	21.7	7 20	21 43.68	-27 35.2	1.436	2.396	10.3	20.4
7 30	21 34.65	-21 9.4	2.862	3.855	3.6	21.6	7 30	21 36.03	-28 36.6	1.408	2.398	7.0	20.3
8 9	21 26.60	-21 25.6	2.847	3.857	1.6	21.4	8 9	21 26.91	-29 27.0	1.404	2.400	5.8	20.2
8 19	21 18.42	-21 37.1	2.863	3.858	3.2	21.5	8 19	21 17.52	-29 59.6	1.424	2.403	7.9	20.3
8 29	21 10.76	-21 41.9	2.908	3.859	5.8	21.7	8 29	21 9.23	-30 10.3	1.468	2.406	11.4	20.5
9 8	21 4.19	-21 39.1	2.980	3.859	8.3	21.9	9 8	21 3.13	-29 59.4	1.534	2.410	14.9	20.8
9 18	20 59.14	-21 28.6	3.076	3.859	10.5	22.0	9 18	20 59.86	-29 29.4	1.619	2.414	17.9	21.0
148426	2000 <i>WB</i> ₁₂₆	8 11.3 303°81'		1°5/ 9.9 18			104759	2000 <i>HY</i> ₁₈	8 11.3 298°14'		3°6/ 8.5 18		
7 10	21 44.22	-15 56.0	1.977	2.869	11.8	19.8	7 10	21 47.46	-22 5.7	1.788	2.688	12.4	19.2
7 20	21 39.91	-16 59.2	1.899	2.856	8.4	19.6	7 20	21 42.51	-22 59.0	1.709	2.669	9.0	19.0
7 30	21 33.79	-18 11.0	1.845	2.843	4.7	19.3	7 30	21 35.39	-23 55.6	1.654	2.649	5.5	18.8
8 9	21 26.47	-19 25.9	1.818	2.830	1.6	19.1	8 9	21 26.81	-24 48.8	1.624	2.630	3.6	18.6
8 19	21 18.77	-20 37.5	1.818	2.817	4.1	19.2	8 19	21 17.74	-25 32.4	1.620	2.610	5.9	18.7
8 29	21 11.62	-21 40.1	1.845	2.805	8.0	19.4	8 29	21 9.32	-26 1.2	1.642	2.591	9.6	18.9
9 8	21 5.88	-22 29.5	1.897	2.792	11.5	19.6	9 8	21 2.62	-26 12.9	1.688	2.572	13.3	19.1
9 18	21 2.20	-23 3.9	1.970	2.780	14.6	19.8	9 18	20 58.36	-26 7.8	1.753	2.553	16.5	19.2
24795	1994 <i>AC</i> ₁₇	8 11.3 144°47'		0°9/10.5 18			345042	2005 <i>EC</i> ₂₇₀	8 11.3 156°23'		3°5/ 8.4 17		
7 10	21 49.47	-15 34.6	2.141	3.020	11.5	18.6	7 10	21 49.72	-23 49.3				

EPHEMERIDES

8 11.3

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
74162	1998 QR ₁₀₂		8 11.3 264°56	2°9/ 9.3	18		231260	2005 YB ₂₁₁		8 11.3 159°26	5°4/15.2	18	
7 10	21 49.80	-19 43.0	1.539	2.439	14.0	18.6	7 10	21 49.39	+ 0 27.5	2.013	2.839	14.2	20.3
7 20	21 44.33	-20 33.5	1.473	2.433	10.1	18.3	7 20	21 43.43	+ 0 53.9	1.941	2.843	11.4	20.1
7 30	21 36.45	-21 29.2	1.429	2.426	5.9	18.1	7 30	21 35.71	+ 1 3.8	1.891	2.847	8.4	19.9
8 9	21 27.01	-22 23.0	1.410	2.420	2.9	17.9	8 9	21 26.89	+ 0 57.1	1.866	2.851	6.0	19.8
8 19	21 17.15	-23 7.8	1.417	2.413	5.6	18.0	8 19	21 17.80	+ 0 35.7	1.868	2.854	5.6	19.8
8 29	21 8.19	-23 38.3	1.450	2.406	9.9	18.3	8 29	21 9.36	+ 0 3.0	1.896	2.857	7.7	19.9
9 8	21 1.26	-23 52.0	1.505	2.399	14.0	18.5	9 8	21 2.41	- 0 36.3	1.951	2.859	10.6	20.1
9 18	20 57.09	-23 49.0	1.580	2.393	17.5	18.7	9 18	20 57.51	- 1 17.3	2.028	2.861	13.4	20.3
253199	2002 XA ₆₅		8 11.3 194°43	16°9/ 1.7	18		101456	1998 WY ₄		8 11.3 272°82	2°4/13.9	18	
7 10	22 12.51	-50 14.0	1.258	2.111	19.6	19.9	7 10	21 43.60	- 3 49.3	2.626	3.468	10.8	19.8
7 20	22 2.42	-52 2.0	1.225	2.110	17.9	19.8	7 20	21 39.12	- 4 24.6	2.523	3.445	8.3	19.6
7 30	21 47.27	-53 19.0	1.209	2.109	17.0	19.7	7 30	21 33.25	- 5 13.6	2.445	3.421	5.5	19.4
8 9	21 29.04	-53 49.1	1.213	2.106	17.3	19.7	8 9	21 26.43	- 6 14.3	2.393	3.397	3.0	19.2
8 19	21 10.70	-53 24.8	1.236	2.103	18.6	19.8	8 19	21 19.25	- 7 23.3	2.371	3.372	3.0	19.1
8 29	20 55.32	-52 8.7	1.277	2.100	20.6	20.0	8 29	21 12.39	- 8 36.3	2.377	3.347	5.7	19.3
9 8	20 44.81	-50 12.5	1.333	2.096	22.7	20.1	9 8	21 6.50	- 9 48.5	2.411	3.322	8.7	19.4
9 18	20 39.69	-47 49.5	1.404	2.091	24.7	20.3	9 18	21 2.11	-10 55.8	2.470	3.297	11.5	19.6
383243	2006 BM ₁₅₄		8 11.3 95°74	0°3/11.0	18		266487	2008 CE ₁₇₆		8 11.3 193°82	3°6/ 8.7	17	
7 10	21 47.91	-11 51.4	1.883	2.762	12.9	21.0	7 10	21 51.41	-21 39.6	1.684	2.580	13.2	20.7
7 20	21 42.35	-12 59.5	1.834	2.783	9.2	20.9	7 20	21 45.32	-22 39.0	1.622	2.579	9.6	20.4
7 30	21 35.04	-14 17.9	1.809	2.804	5.2	20.7	7 30	21 36.95	-23 41.1	1.583	2.577	5.8	20.2
8 9	21 26.72	-15 40.3	1.811	2.825	0.9	20.4	8 9	21 27.13	-24 38.8	1.569	2.575	3.6	20.1
8 19	21 18.27	-17 0.4	1.842	2.845	3.4	20.6	8 19	21 16.97	-25 25.0	1.583	2.573	6.0	20.2
8 29	21 10.64	-18 12.0	1.900	2.865	7.4	20.9	8 29	21 7.70	-25 55.1	1.622	2.570	9.8	20.4
9 8	21 4.61	-19 11.1	1.984	2.884	10.9	21.2	9 8	21 0.39	-26 7.4	1.685	2.567	13.5	20.7
9 18	21 0.70	-19 55.9	2.090	2.903	13.8	21.4	9 18	20 55.71	-26 2.8	1.768	2.563	16.6	20.9
505136	2012 HJ ₅₈		8 11.3 87°56	2°4/ 9.7	17		147189	2002 VN ₈₁		8 11.3 164°66	4°0/ 7.9	18	
7 10	21 51.13	-18 20.7	1.464	2.363	14.7	21.0	7 10	21 50.78	-23 20.1	1.976	2.867	11.8	20.5
7 20	21 45.11	-19 11.7	1.418	2.377	10.5	20.8	7 20	21 44.59	-24 35.5	1.918	2.873	8.5	20.3
7 30	21 36.76	-20 7.9	1.394	2.391	5.9	20.6	7 30	21 36.42	-25 51.9	1.886	2.877	5.4	20.1
8 9	21 27.07	-21 2.2	1.395	2.406	2.4	20.4	8 9	21 27.03	-27 2.0	1.881	2.881	4.0	20.0
8 19	21 17.23	-21 47.6	1.421	2.419	5.2	20.6	8 19	21 17.36	-27 59.5	1.903	2.885	6.0	20.2
8 29	21 8.53	-22 19.2	1.474	2.433	9.5	20.9	8 29	21 8.48	-28 40.1	1.953	2.888	9.2	20.4
9 8	21 2.01	-22 34.9	1.549	2.447	13.5	21.2	9 8	21 1.30	-29 2.4	2.026	2.890	12.3	20.6
9 18	20 58.23	-22 35.2	1.644	2.460	16.8	21.4	9 18	20 56.44	-29 7.2	2.121	2.892	15.0	20.8
307807	2003 WD ₁₄₇		8 11.3 291°10	2°7/12.8	18		308437	2005 SH ₁₆₃		8 11.3 9°89	0°8/10.7	18	
7 10	21 48.68	- 8 3.4	1.400	2.282	16.3	21.1	7 10	21 45.29	-15 23.9	1.666	2.563	13.3	19.9
7 20	21 43.78	- 8 2.6	1.318	2.264	12.4	20.8	7 20	21 40.78	-15 55.7	1.606	2.565	9.6	19.7
7 30	21 36.31	- 8 18.1	1.256	2.245	7.8	20.5	7 30	21 34.31	-16 35.2	1.569	2.567	5.3	19.5
8 9	21 27.04	- 8 47.3	1.218	2.227	3.4	20.2	8 9	21 26.64	-17 17.5	1.557	2.570	1.1	19.2
8 19	21 17.10	- 9 26.1	1.204	2.209	4.4	20.2	8 19	21 18.72	-17 57.2	1.571	2.574	3.9	19.4
8 29	21 7.89	-10 8.4	1.216	2.191	9.2	20.4	8 29	21 11.62	-18 29.5	1.610	2.578	8.1	19.7
9 8	21 0.67	-10 48.3	1.249	2.173	14.1	20.7	9 8	21 6.24	-18 51.2	1.674	2.583	12.0	19.9
9 18	20 56.34	-11 20.9	1.303	2.155	18.3	20.9	9 18	21 3.17	-19 0.9	1.758	2.589	15.2	20.1
362277	2009 QY ₅₀		8 11.3 338°03	3°1/ 9.0	18		471608	2012 SP ₃₀		8 11.3 345°79	4°5/13.4	18	
7 10	21 48.42	-23 22.1	2.048	2.942	11.3	20.3	7 10	21 44.28	- 7 7.6	1.130	2.028	18.1	20.1
7 20	21 42.80	-23 45.6	1.982	2.937	8.2	20.1	7 20	21 40.85	- 6 27.4	1.062	2.014	14.0	19.8
7 30	21 35.35	-24 8.6	1.940	2.934	5.0	19.9	7 30	21 34.72	- 6 4.2	1.013	2.001	9.3	19.6
8 9	21 26.81	-24 26.5	1.924	2.930	3.1	19.8	8 9	21 26.77	- 5 57.7	0.984	1.990	5.2	19.3
8 19	21 18.04	-24 35.3	1.936	2.927	5.0	19.9	8 19	21 18.25	- 6 5.6	0.978	1.981	5.6	19.3
8 29	21 10.03	-24 32.5	1.974	2.923	8.2	20.1	8 29	21 10.68	- 6 23.2	0.993	1.973	10.1	19.5
9 8	21 3.60	-24 17.5	2.037	2.921	11.4	20.3	9 8	21 5.39	- 6 44.4	1.029	1.967	14.9	19.8
9 18	20 59.32	-23 51.1	2.121	2.918	14.1	20.5	9 18	21 3.21	- 7 3.6	1.084	1.962	19.2	20.0
363489	2003 SV ₄₂₈		8 11.3 326°56	3°4/14.4	18		431436	Gahberg		8 11.3 57°07	0°5/11.1	16	
7 10	21 43.69	- 3 4.5	2.256	3.102	12.2	20.8	7 10	21 54.53	-16 41.1	1.486	2.377	15.0	20.6
7 20	21 39.23	- 3 11.4	2.178	3.098	9.5	20.6	7 20	21 47.28	-16 30.9	1.446	2.401	10.8	20.4
7 30	21 33.29	- 3 32.5	2.123	3.095	6.5	20.4	7 30	21 37.85	-16 25.6	1.429	2.425	6.0	20.2
8 9	21 26.43	- 4 5.9	2.093	3.092	3.9	20.2	8 9	21 27.28	-16 21.2	1.437	2.450	1.1	19.9
8 19	21 19.31	- 4 49.0	2.091	3.089	3.8	20.2	8 19	21 16.82	-16 14.6	1.471	2.475	3.9	20.2
8 29	21 12.69	- 5 37.6	2.116	3.086	6.3	20.4	8 29	21 7.67	-16 3.3	1.531	2.499	8.4	20.5
9 8	21 7.27	- 6 27.4	2.167	3.083	9.3	20.5	9 8	21 0.77	-15 46.3	1.616	2.524	12.4	20.8
9 18	21 3.57	- 7 14.4	2.242	3.080	12.1	20.7	9 18	20 56.59	-15 23.3	1.721	2.549	15.6	21.1
136001	2002 VS ₄₃		8 11.3 355°16	0°9/10.6	18		333593	2007 DQ ₁₀₉		8 11.3 19°35	3°2/13.6	17	
7 10	21 43.90	-14 18.1	1.444	2.347	14.6	19.0	7 10	21 41.59	- 4 41.5	1.082	1.979	18.9	19.4
7 20	21 40.08	-15 4.6	1.382	2.343	10.5	18.7	7 20	21 38.70	- 5 21.4	1.036	1.988	14.3	19.2
7 30	21 34.04	-16 2.5	1.341	2.340	5.9	18.4	7 30	21 33.34	- 6 27.2	1.009	1.999	9.1	18.9
8 9	21 26.59	-17 5.5	1.324	2.337	1.2	18.1	8 9	21 26.49	- 7 52.8	1.003	2.011	4.2	18.7
8 19	21 18.78	-18 6.5	1.332	2.336	4.3	18.3	8 19	21 19.38	- 9 29.0	1.020	2.025	4.5	18.8
8 29	21 11.83	-18 58.6	1.365	2.335	9.0	18.6	8 29	21 13.41	-11 4.4	1.059	2.041	9.3	19.1
9 8	21 6.77	-19 37.2	1.421	2.335	13.3	18.9	9 8	21 9.67	-12 29.5	1.120	2.057	14.0	19.4
9 18	21 4.29	-20 0.1	1.496	2.336	17.0	19.1	9 18	21 8.77	-13 37.8	1.201	2.075	18.1	19.7
256164	2006 VP ₅₃		8 11.3 8°01	1°8/12.5	18		105617	2000 RJ ₁₀₂		8 11.3 318°73	6°5/15.9	18	
7 10	21 46.71	- 9 29.6	1.829	2.705	13.4	20.2	7 10	21 45.38	+ 2 33.4	1.923	2.749	14.8	19.2
7 20	21 41.65	- 9 30.4	1.762	2.705	9.9	20.0	7 20	21 40.74	+ 3 5.8	1.840	2.738	12.2	19.0
7 30	21 34.74	- 9 42.3	1.717	2.706	6.1	19.8	7 30	21 34.30	+ 3 19.7	1.779	2.728	9.4	18.9
8 9	21 26.70	-10 2.6	1.697	2.707	2.4	19.6	8 9	21 26.68	+ 3 14.3	1.741	2.719	7.1	18.7
8 19	21 18.41	-10 27.9	1.704	2.708	3.3	19.6	8 19	21 18.66	+ 2 50.9	1.728	2.709	6.6	18.7
8 29	21 10.84	-10 54.3	1.737	2.710	7.2	19.9	8 29	21 11.19	+ 2 12.7	1.741	2.700	8.4	18.7
9 8	21 4.85	-11 17.8	1.796	2.712	10.9	20.1	9 8	21 5.13	+ 1 25.1	1.779			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
398645	2012 <i>TT</i> ₁₃	8 11.3 285°20' 15°2'/26.0 18											
7 10	21 46.24	+29 2.2	2.093	2.717	19.4	21.4	7 10	21 45.29	-13 34.2	1.869	2.756	12.5	20.9
7 20	21 41.69	+29 55.2	1.987	2.686	18.4	21.2	7 20	21 40.66	-14 10.6	1.802	2.756	9.1	20.7
7 30	21 35.05	+30 17.1	1.894	2.656	17.2	21.0	7 30	21 34.24	-14 56.0	1.760	2.756	5.1	20.5
8 9	21 26.85	+30 1.7	1.816	2.624	16.1	20.9	8 9	21 26.69	-15 45.9	1.742	2.756	0.9	20.2
8 19	21 17.94	+29 5.0	1.757	2.593	15.4	20.7	8 19	21 18.87	-16 35.1	1.752	2.756	3.4	20.3
8 29	21 9.35	+27 26.8	1.717	2.561	15.2	20.7	8 29	21 11.74	-17 18.7	1.789	2.757	7.4	20.6
9 8	21 2.18	+25 12.3	1.698	2.528	15.8	20.6	9 8	21 6.14	-17 53.0	1.850	2.758	11.1	20.8
9 18	20 57.24	+22 30.4	1.700	2.496	17.2	20.6	9 18	21 2.65	-18 16.1	1.933	2.759	14.2	21.0
129148	Sheilahaggard	8 11.3 101°19' 2°3'/13.1 18											
7 10	21 46.53	- 6 49.3	1.875	2.740	13.5	20.3	505443	2013 <i>ST</i> ₆₈	8 11.3 195°32' 5°5'/ 7.4 18				
7 20	21 41.51	- 7 5.9	1.806	2.743	10.2	20.1	7 10	21 55.18	-29 10.9	1.975	2.861	12.1	21.5
7 30	21 34.68	- 7 36.3	1.761	2.746	6.4	19.9	7 20	21 47.86	-30 0.1	1.913	2.859	9.1	21.3
8 9	21 26.75	- 8 17.8	1.740	2.748	2.9	19.7	7 30	21 38.34	-30 44.4	1.874	2.856	6.4	21.1
8 19	21 18.55	- 9 6.0	1.747	2.751	3.4	19.7	8 9	21 27.47	-31 16.9	1.863	2.852	5.5	21.1
8 29	21 11.04	- 9 56.1	1.781	2.753	7.1	20.0	8 19	21 16.34	-31 32.6	1.878	2.848	7.2	21.2
9 8	21 5.04	-10 43.1	1.840	2.756	10.7	20.2	8 29	21 6.13	-31 29.0	1.921	2.843	10.1	21.3
9 18	21 1.15	-11 23.3	1.921	2.758	13.9	20.4	9 8	20 57.85	-31 6.8	1.987	2.838	13.0	21.5
							9 18	20 52.14	-30 28.7	2.073	2.831	15.6	21.7
112051	2002 <i>JL</i> ₉	8 11.3 350°30' 3°4'/ 8.6 18											
7 10	21 45.56	-22 24.3	1.864	2.765	11.9	19.0	418116	2007 <i>YU</i> ₁₆	8 11.3 122°64' 6°2'/ 6.8 17				
7 20	21 40.94	-23 11.1	1.801	2.761	8.6	18.8	7 10	21 51.31	-26 3.9	1.447	2.353	14.4	20.6
7 30	21 34.41	-23 59.5	1.762	2.757	5.2	18.6	7 20	21 45.59	-27 37.4	1.399	2.357	10.7	20.4
8 9	21 26.70	-24 43.6	1.748	2.753	3.4	18.4	7 30	21 37.25	-29 9.7	1.373	2.362	7.3	20.2
8 19	21 18.72	-25 18.0	1.760	2.751	5.5	18.6	8 9	21 27.28	-30 30.2	1.372	2.366	6.3	20.1
8 29	21 11.48	-25 38.8	1.799	2.748	8.9	18.8	8 19	21 16.99	-31 30.1	1.396	2.370	8.6	20.3
9 8	21 5.88	-25 44.6	1.861	2.747	12.2	19.0	8 29	21 7.82	-32 4.3	1.444	2.374	12.2	20.5
9 18	21 2.49	-25 35.5	1.943	2.745	15.1	19.2	9 8	21 0.97	-32 12.6	1.513	2.378	15.6	20.7
							9 18	20 57.14	-31 58.1	1.601	2.382	18.6	21.0
235777	2004 <i>VU</i> ₄₇	8 11.3 285°31' 0°7'/10.8 18											
7 10	21 47.06	-14 20.8	1.698	2.589	13.4	20.8	449048	2012 <i>DJ</i> ₅₃	8 11.3 225°25' 2°3'/13.9 18				
7 20	21 42.24	-15 3.3	1.620	2.575	9.7	20.5	7 10	21 43.44	- 4 1.2	2.791	3.632	10.3	21.7
7 30	21 35.28	-15 56.1	1.564	2.561	5.5	20.3	7 20	21 38.88	- 4 30.9	2.704	3.624	7.9	21.5
8 9	21 26.89	-16 53.9	1.534	2.547	1.1	19.9	7 30	21 33.07	- 5 12.6	2.641	3.616	5.2	21.3
8 19	21 18.02	-17 50.6	1.531	2.533	4.0	20.1	8 9	21 26.47	- 6 4.1	2.605	3.607	2.8	21.2
8 29	21 9.81	-18 40.1	1.553	2.520	8.5	20.3	8 19	21 19.63	- 7 2.6	2.598	3.599	2.8	21.2
9 8	21 3.31	-19 18.1	1.600	2.506	12.6	20.6	8 29	21 13.16	- 8 4.1	2.620	3.589	5.3	21.3
9 18	20 59.21	-19 42.5	1.667	2.492	16.2	20.8	9 8	21 7.63	- 9 4.7	2.670	3.580	8.0	21.5
							9 18	21 3.52	-10 1.0	2.745	3.570	10.5	21.6
8864	1991 <i>VU</i>	8 11.3 310°28' 5°0'/14.4 18											
7 10	21 46.36	- 2 46.3	1.582	2.442	15.8	17.2	148264	2000 <i>FS</i> ₃₄	8 11.3 224°75' 8°6'/ 5.7 18 R				
7 20	21 41.82	- 2 27.5	1.499	2.426	12.5	16.9	7 10	21 57.24	-36 2.4	1.715	2.599	13.7	20.0
7 30	21 35.09	- 2 26.9	1.437	2.411	8.8	16.7	7 20	21 49.77	-37 3.3	1.659	2.594	11.0	19.9
8 9	21 26.86	- 2 44.1	1.398	2.396	5.6	16.5	7 30	21 39.58	-37 52.6	1.626	2.588	9.0	19.7
8 19	21 18.10	- 3 16.8	1.384	2.381	5.5	16.4	8 9	21 27.73	-38 21.5	1.617	2.583	8.7	19.7
8 29	21 9.98	- 4 0.2	1.395	2.367	8.7	16.6	8 19	21 15.60	-38 24.1	1.633	2.577	10.3	19.8
9 8	21 3.57	- 4 48.1	1.430	2.353	12.6	16.8	8 29	21 4.70	-37 58.8	1.674	2.570	12.9	19.9
9 18	20 59.63	- 5 34.8	1.485	2.340	16.3	17.0	9 8	20 56.25	-37 8.5	1.735	2.564	15.6	20.1
							9 18	20 50.94	-35 58.7	1.815	2.557	18.1	20.3
327665	2006 <i>QQ</i> ₁₂₀	8 11.3 307°93' 5°2'/14.2 18											
7 10	21 45.95	- 3 6.8	1.290	2.165	17.8	20.3	442152	2010 <i>VV</i> ₁₈₃	8 11.3 322°66' 5°7'/ 6.2 18				
7 20	21 42.02	- 2 55.8	1.205	2.142	14.1	20.0	7 10	21 45.67	-27 25.1	1.810	2.714	12.0	20.1
7 30	21 35.45	- 3 7.1	1.139	2.119	9.8	19.7	7 20	21 41.30	-28 44.7	1.741	2.698	9.1	19.9
8 9	21 26.97	- 3 40.6	1.095	2.096	6.0	19.4	7 30	21 34.78	-30 3.5	1.696	2.683	6.5	19.7
8 19	21 17.69	- 4 33.1	1.074	2.074	5.9	19.3	8 9	21 26.85	-31 13.5	1.677	2.667	5.8	19.6
8 29	21 9.06	- 5 37.8	1.076	2.052	9.9	19.5	8 19	21 18.47	-32 7.5	1.683	2.653	7.8	19.7
9 8	21 2.45	- 6 46.3	1.100	2.031	14.8	19.7	8 29	21 10.78	-32 40.6	1.713	2.639	10.9	19.9
9 18	20 58.83	- 7 50.5	1.143	2.011	19.2	19.9	9 8	21 4.83	-32 51.5	1.766	2.625	14.1	20.0
							9 18	21 1.32	-32 41.4	1.838	2.612	16.8	20.2
39077	2000 <i>VJ</i> ₂₄	8 11.3 179°47' 0°3'/11.6 18											
7 10	21 45.77	-12 17.3	2.599	3.469	10.1	19.9	509836	2008 <i>YA</i> ₅	8 11.3 234°97' 1°5'/12.4 18				
7 20	21 40.56	-12 43.8	2.526	3.469	7.3	19.7	7 10	21 48.36	- 9 45.5	2.004	2.873	12.6	22.2
7 30	21 34.01	-13 17.2	2.478	3.470	4.2	19.5	7 20	21 42.82	- 9 52.5	1.926	2.867	9.4	22.0
8 9	21 26.63	-13 54.5	2.458	3.470	0.9	19.3	7 30	21 35.48	-10 9.7	1.871	2.860	5.7	21.8
8 19	21 19.04	-14 32.6	2.466	3.470	2.5	19.4	8 9	21 26.97	-10 34.7	1.842	2.853	2.1	21.5
8 29	21 11.96	-15 8.1	2.504	3.470	5.7	19.7	8 19	21 18.13	-11 3.9	1.841	2.845	3.1	21.6
9 8	21 5.99	-15 38.1	2.568	3.469	8.7	19.8	8 29	21 9.91	-11 33.4	1.867	2.838	7.0	21.8
9 18	21 1.60	-16 1.1	2.656	3.468	11.2	20.0	9 8	21 3.15	-11 59.8	1.919	2.830	10.6	22.0
							9 18	20 58.46	-12 20.2	1.994	2.822	13.8	22.2
103458	2000 <i>AA</i> ₁₉₉	8 11.3 136°17' 3°3'/14.3 18											
7 10	21 46.01	- 2 57.2	2.105	2.951	13.0	19.9	229046	2004 <i>FB</i> ₂₃	8 11.3 34°15' 3°7'/ 9.4 17				
7 20	21 40.96	- 3 18.9	2.036	2.958	10.0	19.7	7 10	21 51.72	-22 14.3	1.293	2.201	15.6	19.9
7 30	21 34.31	- 3 56.2	1.990	2.964	6.8	19.6	7 20	21 45.88	-22 44.8	1.245	2.208	11.2	19.7
8 9	21 26.69	- 4 46.7	1.970	2.970	3.9	19.4	7 30	21 37.38	-23 16.1	1.218	2.215	6.7	19.5
8 19	21 18.85	- 5 46.4	1.977	2.976	3.8	19.4	8 9	21 27.32	-23 40.9	1.215	2.223	3.8	19.3
8 29	21 11.62	- 6 50.4	2.012	2.982	6.6	19.6	8 19	21 17.10	-23 53.2	1.236	2.231	6.3	19.5
9 8	21 5.73	- 7 53.3	2.073	2.987	9.7	19.8	8 29	21 8.19	-23 49.5	1.281	2.240	10.7	19.8
9 18	21 1.71	- 8 51.0	2.157	2.993	12.6	20.0	9 8	21 1.76	-23 29.6	1.348	2.249	14.9	20.0
							9 18	20 58.40	-22 55.6	1.434	2.259	18.3	20.3
514278													

EPHEMERIDES

8 11.3

8 11.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
337295	2000 XR ₂₁		8 11.3 211 ^o 01	2 ^o 6/13.3	18		144454	2004 EC ₄₂		8 11.3 202 ^o 71	1 ^o 9/ 9.9	18	
7 10	21 50.16	- 6 32.2	2.344	3.191	11.8	21.4	7 10	21 52.53	-18 56.4	1.950	2.834	12.3	21.1
7 20	21 43.90	- 6 24.4	2.259	3.184	9.0	21.2	7 20	21 45.92	-19 29.0	1.878	2.830	8.8	20.9
7 30	21 36.01	- 6 26.9	2.197	3.176	5.9	21.0	7 30	21 37.27	-20 5.2	1.830	2.825	5.0	20.7
8 9	21 27.07	- 6 38.2	2.163	3.167	3.1	20.8	8 9	21 27.33	-20 40.1	1.809	2.820	2.0	20.5
8 19	21 17.81	- 6 56.3	2.158	3.158	3.4	20.8	8 19	21 17.06	-21 8.8	1.816	2.814	4.3	20.6
8 29	21 9.07	- 7 18.1	2.181	3.148	6.4	21.0	8 29	21 7.54	-21 27.5	1.851	2.807	8.2	20.8
9 8	21 1.61	- 7 40.5	2.232	3.138	9.5	21.2	9 8	20 59.71	-21 34.3	1.910	2.799	11.8	21.1
9 18	20 55.98	- 8 0.7	2.306	3.127	12.4	21.3	9 18	20 54.23	-21 29.3	1.992	2.791	14.9	21.3
120098	2003 EJ ₅₀		8 11.3 41 ^o 70	3 ^o 0/14.1	18		273660	2007 DE ₉₂		8 11.3 234 ^o 47	0 ^o 7/10.8	17	
7 10	21 44.12	- 3 44.3	2.017	2.871	13.2	19.5	7 10	21 49.77	-15 7.5	1.714	2.601	13.5	21.7
7 20	21 39.68	- 4 10.3	1.948	2.875	10.1	19.3	7 20	21 44.13	-15 37.9	1.642	2.595	9.8	21.5
7 30	21 33.65	- 4 52.1	1.902	2.879	6.7	19.1	7 30	21 36.34	-16 16.5	1.593	2.589	5.5	21.2
8 9	21 26.62	- 5 47.0	1.881	2.884	3.6	18.9	8 9	21 27.17	-16 58.2	1.570	2.583	1.1	20.9
8 19	21 19.35	- 6 50.9	1.887	2.888	3.6	18.9	8 19	21 17.61	-17 37.8	1.574	2.576	3.9	21.1
8 29	21 12.68	- 7 58.2	1.920	2.892	6.6	19.1	8 29	21 8.82	-18 10.3	1.604	2.570	8.3	21.4
9 8	21 7.37	- 9 3.6	1.979	2.897	9.9	19.3	9 8	21 1.81	-18 32.4	1.658	2.563	12.4	21.6
9 18	21 3.94	-10 2.6	2.061	2.902	12.9	19.5	9 18	20 57.26	-18 42.7	1.734	2.555	15.8	21.8
106560	2000 WH ₈₂		8 11.3 312 ^o 46	6 ^o 1/ 6.1	18		101197	1998 SH ₂₇		8 11.3 303 ^o 68	3 ^o 2/ 9.1	18	
7 10	21 47.97	-30 8.8	1.946	2.843	11.7	18.8	7 10	21 47.23	-18 48.9	1.377	2.285	14.8	19.3
7 20	21 42.81	-31 15.7	1.882	2.832	9.0	18.6	7 20	21 42.97	-19 55.1	1.298	2.262	10.8	19.0
7 30	21 35.57	-32 18.4	1.842	2.822	6.7	18.5	7 30	21 36.03	-21 11.4	1.240	2.238	6.3	18.7
8 9	21 27.00	-33 9.5	1.828	2.812	6.2	18.4	8 9	21 27.16	-22 29.3	1.205	2.215	3.3	18.5
8 19	21 18.07	-33 43.4	1.839	2.802	7.9	18.5	8 19	21 17.53	-23 39.6	1.196	2.192	6.3	18.6
8 29	21 9.91	-33 56.5	1.876	2.792	10.7	18.7	8 29	21 8.63	-24 33.9	1.210	2.169	11.2	18.8
9 8	21 3.49	-33 48.6	1.935	2.782	13.5	18.8	9 8	21 1.83	-25 7.5	1.246	2.147	15.9	19.0
9 18	20 59.46	-33 21.9	2.013	2.773	16.0	19.0	9 18	20 58.06	-25 19.4	1.300	2.125	19.9	19.2
211761	2004 BR ₂₁		8 11.3 168 ^o 22	2 ^o 1/ 9.8	18		217378	2004 UQ ₂		8 11.3 276 ^o 25	5 ^o 4/17.4	18	
7 10	21 51.25	-18 15.9	1.754	2.644	13.1	21.1	7 10	21 42.89	+ 5 45.4	2.348	3.147	13.3	19.8
7 20	21 45.10	-19 3.8	1.692	2.648	9.4	20.9	7 20	21 38.69	+ 5 18.1	2.263	3.144	10.9	19.6
7 30	21 36.82	-19 56.9	1.654	2.651	5.3	20.6	7 30	21 33.06	+ 4 30.3	2.201	3.141	8.4	19.5
8 9	21 27.23	-20 49.0	1.642	2.653	2.1	20.4	8 9	21 26.54	+ 3 22.9	2.163	3.137	6.2	19.3
8 19	21 17.36	-21 34.2	1.658	2.655	4.7	20.6	8 19	21 19.74	+ 1 59.3	2.152	3.134	5.4	19.3
8 29	21 8.35	-22 7.7	1.700	2.656	8.7	20.9	8 29	21 13.41	+ 0 24.5	2.169	3.131	6.8	19.4
9 8	21 1.18	-22 27.2	1.766	2.657	12.4	21.1	9 8	21 8.20	- 1 15.0	2.213	3.127	9.2	19.5
9 18	20 56.48	-22 32.4	1.853	2.658	15.6	21.3	9 18	21 4.62	- 2 53.0	2.282	3.124	11.8	19.7
461	Saskia		8 11.3 224 ^o 35	0 ^o 2/11.5	18		123067	2000 SZ ₃₀₄		8 11.3 296 ^o 64	6 ^o 6/ 7.6	18	
7 10	21 45.40	-12 43.6	2.621	3.492	9.9	15.9	7 10	21 54.76	-30 9.6	1.588	2.484	13.9	20.0
7 20	21 40.37	-13 10.8	2.540	3.485	7.2	15.7	7 20	21 48.23	-30 47.2	1.511	2.462	10.7	19.7
7 30	21 33.96	-13 44.8	2.485	3.477	4.1	15.5	7 30	21 38.90	-31 18.7	1.457	2.440	7.7	19.5
8 9	21 26.68	-14 22.7	2.457	3.470	0.9	15.3	8 9	21 27.69	-31 35.7	1.427	2.417	6.6	19.4
8 19	21 19.16	-15 1.3	2.458	3.461	2.5	15.4	8 19	21 15.92	-31 31.9	1.422	2.395	8.6	19.4
8 29	21 12.09	-15 37.1	2.487	3.453	5.8	15.6	8 29	21 5.14	-31 4.4	1.441	2.373	12.1	19.6
9 8	21 6.09	-16 7.4	2.544	3.444	8.7	15.8	9 8	20 56.67	-30 14.6	1.483	2.352	15.7	19.8
9 18	21 1.67	-16 30.3	2.624	3.435	11.3	16.0	9 18	20 51.33	-29 6.8	1.544	2.330	19.0	19.9
237892	2002 NG ₁₀		8 11.3 54 ^o 66	2 ^o 8/13.2	17		351140	2003 WB ₁₆₈		8 11.3 278 ^o 74	6 ^o 2/16.4	18	
7 10	21 51.51	- 6 55.9	1.463	2.334	16.3	20.1	7 10	21 45.86	+ 3 57.9	2.021	2.835	14.6	21.3
7 20	21 45.06	- 7 1.0	1.432	2.371	12.1	20.0	7 20	21 41.21	+ 4 0.0	1.919	2.810	12.1	21.1
7 30	21 36.60	- 7 21.6	1.422	2.408	7.6	19.8	7 30	21 34.70	+ 3 41.1	1.837	2.784	9.3	20.9
8 9	21 27.15	- 7 53.8	1.437	2.444	3.5	19.7	8 9	21 26.89	+ 3 0.8	1.779	2.757	6.9	20.7
8 19	21 17.82	- 8 32.8	1.478	2.481	4.0	19.8	8 19	21 18.51	+ 2 0.8	1.747	2.731	6.3	20.6
8 29	21 9.73	- 9 12.9	1.544	2.517	7.9	20.1	8 29	21 10.50	+ 0 45.6	1.742	2.704	8.2	20.6
9 8	21 3.71	- 9 49.2	1.635	2.554	11.6	20.4	9 8	21 3.78	- 0 38.3	1.762	2.676	11.2	20.8
9 18	21 0.22	-10 18.6	1.747	2.590	14.8	20.7	9 18	20 59.06	- 2 4.0	1.806	2.649	14.4	20.9
195492	2002 GO ₁₆₀		8 11.3 40 ^o 70	1 ^o 8/ 9.9	18		4605	Nikitin		8 11.3 310 ^o 06	1 ^o 2/11.9	18	
7 10	21 46.53	-15 58.8	1.422	2.325	14.8	19.7	7 10	21 48.56	-11 37.2	1.194	2.094	17.2	16.5
7 20	21 41.91	-17 2.9	1.375	2.337	10.5	19.5	7 20	21 44.07	-11 41.4	1.120	2.077	12.8	16.2
7 30	21 35.06	-18 15.8	1.351	2.350	5.8	19.3	7 30	21 36.69	-12 0.2	1.065	2.060	7.6	15.9
8 9	21 26.90	-19 29.7	1.351	2.363	1.9	19.1	8 9	21 27.30	-12 29.5	1.032	2.044	2.1	15.5
8 19	21 18.54	-20 36.7	1.377	2.377	4.9	19.3	8 19	21 17.18	-13 3.7	1.022	2.028	4.4	15.6
8 29	21 11.21	-21 30.3	1.427	2.391	9.3	19.6	8 29	21 7.96	-13 36.4	1.036	2.013	10.2	15.8
9 8	21 5.91	-22 7.1	1.501	2.406	13.3	19.9	9 8	21 1.07	-14 1.7	1.071	1.998	15.5	16.1
9 18	21 3.21	-22 26.2	1.594	2.421	16.7	20.1	9 18	20 57.45	-14 16.2	1.124	1.983	20.1	16.3
127011	2002 GT ₁₁		8 11.3 137 ^o 72	2 ^o 6/13.8	18		25775	Danielpeng		8 11.3 358 ^o 66	1 ^o 5/12.4	18	
7 10	21 47.06	- 3 47.1	2.188	3.033	12.6	20.3	7 10	21 43.67	- 9 1.7	1.426	2.317	15.5	17.6
7 20	21 41.65	- 4 27.8	2.122	3.045	9.6	20.1	7 20	21 39.95	- 9 33.5	1.362	2.314	11.5	17.4
7 30	21 34.70	- 5 23.5	2.079	3.057	6.2	19.9	7 30	21 34.04	-10 22.0	1.319	2.313	6.9	17.1
8 9	21 26.82	- 6 31.0	2.063	3.068	3.2	19.7	8 9	21 26.75	-11 22.3	1.300	2.312	2.3	16.8
8 19	21 18.74	- 7 45.6	2.076	3.078	3.3	19.8	8 19	21 19.10	-12 28.0	1.306	2.312	3.7	16.9
8 29	21 11.28	- 9 1.8	2.118	3.088	6.3	20.0	8 29	21 12.28	-13 31.8	1.336	2.312	8.4	17.2
9 8	21 5.15	-10 14.3	2.186	3.097	9.5	20.2	9 8	21 7.32	-14 27.3	1.389	2.314	12.8	17.5
9 18	21 0.84	-11 19.1	2.279	3.106	12.3	20.4	9 18	21 4.89	-15 10.4	1.463	2.316	16.6	17.7
376811	2000 WU ₁₂₄		8 11.3 186 ^o 80										

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8 11.3

8 11.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
157415	2004 <i>TD</i> ₂₈₆		8 11.3 350°77	1°5/10.5	18		210279	2007 <i>TS</i> ₂₉		8 11.3 224°16	2°0/12.9	18	
7 10	21 45.30	-16 56.0	1.162	2.078	16.3	19.0	7 10	21 46.70	-7 24.6	2.053	2.916	12.6	20.9
7 20	21 41.59	-17 15.7	1.101	2.069	11.8	18.7	7 20	21 41.61	-7 41.8	1.976	2.912	9.5	20.7
7 30	21 35.17	-17 44.0	1.061	2.061	6.7	18.4	7 30	21 34.81	-8 11.6	1.922	2.907	6.0	20.5
8 9	21 26.98	-18 14.6	1.042	2.055	1.7	18.1	8 9	21 26.93	-8 51.2	1.895	2.903	2.6	20.3
8 19	21 18.36	-18 40.9	1.047	2.050	5.1	18.3	8 19	21 18.74	-9 36.8	1.895	2.898	3.2	20.3
8 29	21 10.82	-18 57.1	1.074	2.047	10.4	18.6	8 29	21 11.13	-10 23.9	1.922	2.894	6.7	20.5
9 8	21 5.64	-18 59.9	1.122	2.045	15.3	18.8	9 8	21 4.89	-11 8.2	1.975	2.889	10.2	20.7
9 18	21 3.55	-18 48.4	1.187	2.045	19.4	19.1	9 18	21 0.62	-11 46.2	2.052	2.883	13.3	20.9
376891	2001 <i>XF</i> ₁₀₄		8 11.3 132°83	3°8/14.8	17		42007	2000 <i>YG</i> ₅₀		8 11.3 215°84	1°4/10.3	18	
7 10	21 50.06	-1 7 5	2.463	3.285	12.1	21.4	7 10	21 48.76	-16 54.8	1.884	2.772	12.4	19.5
7 20	21 43.59	-1 7 5	2.400	3.304	9.5	21.2	7 20	21 43.25	-17 33.5	1.815	2.769	8.9	19.3
7 30	21 35.72	-1 21.1	2.361	3.323	6.7	21.1	7 30	21 35.80	-18 18.3	1.769	2.766	5.0	19.1
8 9	21 27.04	-1 46.8	2.349	3.341	4.3	21.0	8 9	21 27.12	-19 4.1	1.750	2.763	1.5	18.8
8 19	21 18.24	-2 22.3	2.366	3.358	4.1	21.0	8 19	21 18.13	-19 45.6	1.759	2.759	4.0	19.0
8 29	21 10.06	-3 3 9	2.412	3.374	6.1	21.1	8 29	21 9.85	-20 18.5	1.794	2.755	8.0	19.2
9 8	21 3.15	-3 47.7	2.485	3.389	8.8	21.3	9 8	21 3.20	-20 39.8	1.854	2.751	11.6	19.5
9 18	20 57.97	-4 30.0	2.582	3.404	11.2	21.5	9 18	20 58.79	-20 48.7	1.936	2.747	14.8	19.7
21095	1992 <i>EG</i> ₁₁		8 11.3 40°61	2°9/13.8	18		79943	1999 <i>CO</i> ₈₅		8 11.3 270°74	5°1/6.8	18	
7 10	21 44.18	-3 28.9	1.520	2.389	15.9	17.5	7 10	21 49.80	-27 32.4	2.126	3.017	11.1	19.5
7 20	21 40.09	-4 24.1	1.465	2.401	12.1	17.3	7 20	21 44.13	-28 39.8	2.043	2.994	8.3	19.3
7 30	21 34.02	-5 40.9	1.431	2.414	7.8	17.0	7 30	21 36.40	-29 46.3	1.986	2.970	5.9	19.1
8 9	21 26.74	-7 14.2	1.421	2.427	3.7	16.8	8 9	21 27.27	-30 45.1	1.955	2.945	5.1	19.0
8 19	21 19.23	-8 56.2	1.437	2.441	3.8	16.9	8 19	21 17.61	-31 29.9	1.951	2.920	7.0	19.1
8 29	21 12.58	-10 38.0	1.479	2.455	7.8	17.2	8 29	21 8.51	-31 56.6	1.973	2.895	9.9	19.2
9 8	21 7.68	-12 11.6	1.545	2.469	11.8	17.4	9 8	21 0.95	-32 3 8	2.019	2.870	12.9	19.4
9 18	21 5.11	-13 31.2	1.634	2.484	15.3	17.7	9 18	20 55.66	-31 52.7	2.085	2.844	15.6	19.5
281296	2007 <i>RH</i> ₂₁₆		8 11.3 6°63	3°2/12.7	18		164354	2005 <i>CG</i> ₆₂		8 11.3 247°89	1°2/10.2	18	
7 10	21 41.23	-10 25.0	0.898	1.820	19.3	18.1	7 10	21 46.22	-14 31.8	1.860	2.748	12.5	20.2
7 20	21 38.84	-9 44.7	0.855	1.821	14.5	17.9	7 20	21 41.49	-15 41.9	1.790	2.744	9.0	20.0
7 30	21 33.62	-9 20.9	0.829	1.825	9.0	17.6	7 30	21 34.84	-17 2 2	1.743	2.740	5.0	19.7
8 9	21 26.68	-9 11.9	0.822	1.832	3.9	17.4	8 9	21 26.96	-18 26.4	1.723	2.736	1.3	19.5
8 19	21 19.49	-9 14.0	0.836	1.842	5.0	17.5	8 19	21 18.71	-19 47.5	1.731	2.731	4.0	19.6
8 29	21 13.63	-9 21.6	0.870	1.854	10.2	17.8	8 29	21 11.09	-20 59.1	1.766	2.727	8.1	19.9
9 8	21 10.33	-9 28.9	0.923	1.869	15.2	18.1	9 8	21 5.02	-21 56.6	1.825	2.722	11.8	20.1
9 18	21 10.19	-9 31.5	0.994	1.886	19.4	18.4	9 18	21 1.14	-22 38.0	1.906	2.718	15.0	20.3
73	<i>Klytia</i>		8 11.3 261°28	1°1/10.6	18		383300	2006 <i>FM</i> ₅₃		8 11.3 101°69	1°8/9.9	17	
7 10	21 48.65	-16 20.0	1.810	2.700	12.8	13.2	7 10	21 49.58	-17 57.3	1.873	2.763	12.4	21.3
7 20	21 43.22	-16 49.4	1.741	2.696	9.2	13.0	7 20	21 43.70	-18 40.2	1.822	2.776	8.9	21.1
7 30	21 35.79	-17 25.3	1.695	2.691	5.2	12.7	7 30	21 35.96	-19 27.5	1.794	2.790	5.0	20.9
8 9	21 27.09	-18 2 8	1.674	2.687	1.3	12.4	8 9	21 27.15	-20 13.8	1.792	2.803	1.8	20.7
8 19	21 18.08	-18 37.1	1.681	2.683	3.9	12.6	8 19	21 18.19	-20 53.9	1.818	2.816	4.2	20.9
8 29	21 9.81	-19 3 8	1.714	2.678	8.0	12.9	8 29	21 10.10	-21 23.8	1.871	2.829	7.9	21.2
9 8	21 3.22	-19 20.1	1.772	2.674	11.8	13.1	9 8	21 3.70	-21 41.5	1.949	2.842	11.4	21.4
9 18	20 58.93	-19 24.9	1.851	2.670	15.1	13.3	9 18	20 59.53	-21 46.7	2.048	2.854	14.2	21.6
362545	2010 <i>UK</i> ₅₄		8 11.3 324°80	8°4/4.2	18		271656	2004 <i>RO</i> ₁		8 11.3 13°99	0°3/11.0	18	
7 10	21 51.15	-38 10.6	1.998	2.880	12.1	20.5	7 10	21 39.81	-6 47.8	1.085	1.990	18.1	18.8
7 20	21 45.17	-39 15.8	1.944	2.872	10.0	20.4	7 20	21 37.61	-9 10.3	1.034	1.995	13.2	18.5
7 30	21 36.93	-40 9.6	1.913	2.865	8.7	20.3	7 30	21 32.91	-12 2 4	1.003	2.002	7.4	18.3
8 9	21 27.31	-40 44.6	1.907	2.858	8.6	20.3	8 9	21 26.61	-15 10.6	0.997	2.010	1.3	17.9
8 19	21 17.43	-40 55.8	1.925	2.851	10.0	20.3	8 19	21 19.91	-18 16.9	1.015	2.020	4.9	18.2
8 29	21 8.51	-40 41.4	1.967	2.845	12.1	20.5	8 29	21 14.23	-21 4 0	1.059	2.031	10.6	18.5
9 8	21 1.57	-40 3 4	2.030	2.839	14.4	20.6	9 8	21 10.76	-23 20.2	1.124	2.044	15.6	18.9
9 18	20 57.26	-39 5 6	2.111	2.833	16.4	20.8	9 18	21 10.19	-25 1 0	1.209	2.058	19.6	19.2
444465	2006 <i>FA</i> ₂₁		8 11.3 161°75	8°1/9.2	15		291209	2006 <i>AG</i> ₈₄		8 11.3 238°55	4°3/7.9	18	
7 10	22 10.81	-32 40.2	1.145	2.035	18.5	21.1	7 10	21 50.37	-28 19.1	2.350	3.236	10.4	20.3
7 20	22 0 23	-32 49.8	1.093	2.038	14.3	20.8	7 20	21 44.11	-28 47.6	2.287	3.235	7.7	20.1
7 30	21 45.72	-32 43.8	1.061	2.042	10.2	20.6	7 30	21 36.15	-29 12.1	2.249	3.233	5.3	19.9
8 9	21 28.99	-32 11.8	1.052	2.044	8.1	20.5	8 9	21 27.20	-29 27.7	2.238	3.231	4.3	19.9
8 19	21 12.30	-31 9 2	1.068	2.046	10.1	20.6	8 19	21 18.08	-29 31.1	2.254	3.230	5.8	20.0
8 29	20 57.95	-29 38.7	1.108	2.048	14.1	20.9	8 29	21 9.70	-29 20.4	2.298	3.228	8.3	20.1
9 8	20 47.47	-27 48.9	1.171	2.049	18.3	21.1	9 8	21 2.83	-28 56.0	2.367	3.226	10.9	20.3
9 18	20 41.46	-25 49.3	1.251	2.050	21.9	21.4	9 18	20 57.98	-28 19.4	2.457	3.224	13.2	20.5
334019	2000 <i>WV</i> ₂₀		8 11.3 302°80	5°8/15.2	18		239858	1999 <i>XV</i> ₁₄₅		8 11.3 164°78	4°7/7.2	18	
7 10	21 45.77	-0 6 2	1.600	2.450	16.2	20.6	7 10	21 50.23	-27 2 0	2.176	3.066	10.9	21.9
7 20	21 41.45	+0 6 0	1.515	2.433	13.0	20.4	7 20	21 44.15	-28 7 0	2.120	3.070	8.1	21.7
7 30	21 34.97	-0 3 0	1.449	2.416	9.5	20.1	7 30	21 36.25	-29 9 6	2.089	3.074	5.6	21.6
8 9	21 26.99	-0 33.1	1.407	2.399	6.5	19.9	8 9	21 27.23	-30 3 4	2.085	3.077	4.7	21.5
8 19	21 18.44	-1 21.9	1.388	2.382	6.1	19.9	8 19	21 17.98	-30 43.4	2.108	3.080	6.4	21.7
8 29	21 10.48	-2 24.0	1.395	2.366	8.8	20.0	8 29	21 9.47	-31 6 4	2.158	3.082	9.1	21.8
9 8	21 4 18	-3 32.2	1.426	2.350	12.6	20.2	9 8	21 2 55	-31 11.9	2.232	3.084	11.8	22.0
9 18	21 0 31	-4 39.5	1.478	2.334	16.3	20.4	9 18	20 57.78	-31 1 2	2.327	3.085	14.1	22.2
249780	2000 <i>WD</i> ₈₆		8 11.3 299°40	7°4/16.5	17		168825	2000 <i>SX</i> ₂₈₈		8 11.3 258°72	3°9/13.7	17	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
471600	2012 SY ₅		8 11.3 257°84	10°5/ 4.5	18		149783	2004 TH ₈₇		8 11.4 170°86	0°4/10.9	18	
7 10	22 1 59	-43 35.9	1.850	2.709	13.9	20.6	7 10	21 45.97	-15 3.0	2.673	3.548	9.6	21.2
7 20	21 52.95	-44 28.0	1.797	2.703	12.0	20.5	7 20	21 40.76	-15 31.3	2.603	3.550	6.9	21.0
7 30	21 41.42	-45 2.1	1.766	2.696	10.7	20.4	7 30	21 34.22	-16 4.6	2.558	3.552	3.9	20.9
8 9	21 28.22	-45 9.5	1.759	2.689	10.7	20.3	8 9	21 26.88	-16 39.7	2.541	3.554	0.8	20.6
8 19	21 14.89	-44 45.5	1.776	2.682	11.9	20.4	8 19	21 19.36	-17 13.4	2.553	3.555	2.7	20.8
8 29	21 3.06	-43 50.2	1.816	2.675	13.9	20.5	8 29	21 12.33	-17 42.7	2.594	3.556	5.8	21.0
9 8	20 53.96	-42 28.5	1.878	2.668	16.0	20.7	9 8	21 6.41	-18 5.3	2.662	3.557	8.6	21.2
9 18	20 48.22	-40 47.3	1.957	2.661	18.1	20.8	9 18	21 2.05	-18 20.0	2.753	3.558	11.0	21.3
30016	2000 CA ₉₅		8 11.3 29°79	2°9/ 9.6	18		394211	2006 SW ₂₂₄		8 11.4 332°85	4°1/ 8.6	18	
7 10	21 48.36	-19 2.4	1.216	2.128	16.0	16.7	7 10	21 49.62	-24 38.6	1.738	2.637	12.7	20.3
7 20	21 43.58	-19 50.7	1.172	2.137	11.5	16.5	7 20	21 44.09	-25 15.2	1.674	2.632	9.3	20.0
7 30	21 36.18	-20 44.7	1.148	2.147	6.5	16.3	7 30	21 36.38	-25 50.8	1.634	2.626	5.9	19.8
8 9	21 27.24	-21 36.1	1.147	2.158	3.0	16.1	8 9	21 27.32	-26 19.2	1.619	2.621	4.1	19.7
8 19	21 18.11	-22 17.3	1.170	2.169	5.9	16.3	8 19	21 17.97	-26 35.2	1.629	2.617	6.2	19.8
8 29	21 10.24	-22 42.7	1.217	2.181	10.6	16.6	8 29	21 9.50	-26 35.5	1.666	2.612	9.7	20.0
9 8	21 4.76	-22 50.4	1.285	2.193	14.9	16.9	9 8	21 2.91	-26 19.8	1.725	2.608	13.1	20.2
9 18	21 2.29	-22 41.0	1.371	2.207	18.5	17.2	9 18	20 58.83	-25 49.5	1.805	2.605	16.1	20.4
102933	1999 XV ₄₁		8 11.3 316°62	0°5/11.6	18		485212	2010 UB ₈₀		8 11.4 277°35	1°4/10.2	17	
7 10	21 46.72	-12 50.1	1.456	2.351	15.0	19.6	7 10	21 48.00	-18 15.6	2.348	3.231	10.5	22.4
7 20	21 42.43	-13 1.6	1.371	2.327	11.1	19.3	7 20	21 42.54	-18 38.9	2.257	3.209	7.6	22.1
7 30	21 35.68	-13 24.7	1.307	2.303	6.5	19.0	7 30	21 35.40	-19 6.0	2.191	3.187	4.3	21.9
8 9	21 27.20	-13 55.5	1.266	2.279	1.5	18.6	8 9	21 27.14	-19 33.1	2.152	3.164	1.4	21.7
8 19	21 18.05	-14 29.0	1.250	2.256	4.0	18.7	8 19	21 18.49	-19 56.5	2.142	3.141	3.5	21.8
8 29	21 9.57	-14 59.6	1.259	2.233	9.1	19.0	8 29	21 10.30	-20 13.0	2.159	3.118	7.0	22.0
9 8	21 2.98	-15 22.4	1.291	2.212	13.9	19.2	9 8	21 3.37	-20 20.5	2.202	3.094	10.3	22.1
9 18	20 59.15	-15 34.7	1.342	2.191	18.1	19.4	9 18	20 58.31	-20 18.2	2.268	3.070	13.2	22.3
284502	2007 PV ₂₄		8 11.3 288°42	1°3/10.6	18		219084	1998 QK ₅₉		8 11.4 1°54	1°5/10.6	18	
7 10	21 52.66	-18 48.0	1.782	2.670	13.0	20.0	7 10	21 45.23	-16 28.6	1.008	1.930	17.7	19.0
7 20	21 46.26	-18 45.0	1.702	2.655	9.5	19.7	7 20	21 41.78	-16 51.0	0.957	1.927	12.8	18.7
7 30	21 37.63	-18 44.3	1.644	2.640	5.4	19.4	7 30	21 35.39	-17 23.5	0.924	1.926	7.2	18.4
8 9	21 27.54	-18 42.1	1.613	2.625	1.5	19.1	8 9	21 27.16	-17 59.1	0.913	1.926	1.8	18.0
8 19	21 17.03	-18 34.9	1.608	2.610	4.1	19.3	8 19	21 18.54	-18 30.1	0.923	1.927	5.3	18.3
8 29	21 7.30	-18 20.3	1.631	2.595	8.4	19.5	8 29	21 11.20	-18 49.9	0.955	1.931	11.0	18.6
9 8	20 59.38	-17 57.1	1.678	2.580	12.4	19.7	9 8	21 6.46	-18 55.0	1.006	1.935	16.1	18.9
9 18	20 53.99	-17 25.8	1.747	2.565	15.9	19.9	9 18	21 5.04	-18 44.6	1.075	1.941	20.3	19.2
417965	2007 TH ₁₁₄		8 11.3 307°22	2°9/ 9.9	18		5728	1988 BJ ₄		8 11.4 306°25	1°0/11.9	18	
7 10	21 51.18	-19 55.4	1.179	2.090	16.5	20.9	7 10	21 47.25	-10 5.1	1.287	2.181	16.6	16.9
7 20	21 46.27	-20 17.5	1.100	2.065	12.1	20.6	7 20	21 42.92	-10 41.0	1.217	2.171	12.3	16.6
7 30	21 38.15	-20 45.1	1.042	2.041	7.1	20.3	7 30	21 35.99	-11 34.8	1.166	2.161	7.3	16.3
8 9	21 27.71	-21 10.9	1.005	2.016	3.0	19.9	8 9	21 27.29	-12 41.2	1.139	2.152	2.0	16.0
8 19	21 16.37	-21 27.3	0.992	1.992	6.3	20.1	8 19	21 18.01	-13 52.5	1.136	2.142	4.1	16.1
8 29	21 5.96	-21 28.6	1.002	1.969	11.9	20.3	8 29	21 9.59	-15 0.3	1.158	2.133	9.6	16.4
9 8	20 58.09	-21 12.5	1.032	1.946	17.2	20.5	9 8	21 3.32	-15 57.4	1.201	2.124	14.5	16.7
9 18	20 53.82	-20 39.9	1.079	1.924	21.8	20.7	9 18	21 0.02	-16 39.5	1.264	2.116	18.8	16.9
221919	2008 WZ ₉₂		8 11.3 259°14	1°6/10.2	18		209553	2004 VQ ₆₉		8 11.4 326°42	2°9/12.9	18	
7 10	21 48.97	-17 29.2	1.833	2.723	12.6	20.4	7 10	21 45.04	- 7 35.1	1.077	1.977	18.6	19.7
7 20	21 43.53	-18 4.2	1.759	2.714	9.1	20.2	7 20	21 41.70	- 7 44.1	1.006	1.962	14.2	19.4
7 30	21 36.04	-18 45.1	1.709	2.706	5.1	20.0	7 30	21 35.47	- 8 15.2	0.954	1.947	9.0	19.0
8 9	21 27.24	-19 26.7	1.685	2.697	1.7	19.7	8 9	21 27.22	- 9 5.1	0.923	1.933	3.8	18.7
8 19	21 18.06	-20 3.7	1.688	2.688	4.2	19.9	8 19	21 18.25	-10 7.5	0.914	1.920	4.8	18.7
8 29	21 9.59	-20 31.7	1.717	2.678	8.3	20.1	8 29	21 10.19	-11 13.2	0.927	1.908	10.3	19.0
9 8	21 2.78	-20 48.0	1.771	2.669	12.1	20.3	9 8	21 4.52	-12 13.3	0.960	1.897	15.8	19.3
9 18	20 58.29	-20 51.7	1.846	2.660	15.3	20.5	9 18	21 2.17	-13 1.1	1.011	1.887	20.5	19.5
166499	2002 QB ₁₃		8 11.3 274°15	3°1/13.6	18		395783	2012 VF ₉₈		8 11.4 253°16	3°5/14.5	18	
7 10	21 46.84	- 5 26.9	1.890	2.750	13.7	19.8	7 10	21 45.89	- 2 8.6	2.073	2.915	13.3	21.3
7 20	21 41.86	- 5 30.4	1.813	2.744	10.5	19.5	7 20	21 41.14	- 2 33.1	1.983	2.902	10.4	21.1
7 30	21 35.05	- 5 48.5	1.758	2.738	6.9	19.3	7 30	21 34.66	- 3 15.0	1.916	2.888	7.1	20.8
8 9	21 27.05	- 6 19.0	1.728	2.733	3.7	19.1	8 9	21 27.02	- 4 12.4	1.874	2.874	4.2	20.6
8 19	21 18.70	- 6 58.7	1.725	2.727	3.8	19.1	8 19	21 18.96	- 5 21.6	1.860	2.859	4.0	20.6
8 29	21 10.97	- 7 42.9	1.749	2.721	7.2	19.3	8 29	21 11.37	- 6 37.0	1.873	2.844	6.9	20.7
9 8	21 4.72	- 8 26.8	1.798	2.715	10.8	19.5	9 8	21 5.07	- 7 52.6	1.913	2.829	10.3	20.9
9 18	21 0.57	- 9 6.2	1.869	2.710	14.1	19.7	9 18	21 0.70	- 9 3.2	1.976	2.813	13.5	21.1
378260	2007 DN ₇₃		8 11.3 273°64	1°4/10.5	18		131172	2001 CV ₃₇		8 11.4 150°79	9°2/ 2.1	18	
7 10	21 51.35	-17 3.3	1.680	2.569	13.6	22.0	7 10	21 51.16	-37 3.7	1.871	2.757	12.6	19.3
7 20	21 45.56	-17 28.0	1.593	2.548	9.9	21.7	7 20	21 45.46	-39 9.0	1.829	2.759	10.5	19.2
7 30	21 37.38	-17 59.4	1.529	2.526	5.7	21.4	7 30	21 37.29	-41 3.5	1.813	2.762	9.2	19.1
8 9	21 27.54	-18 32.4	1.491	2.504	1.5	21.1	8 9	21 27.53	-42 37.3	1.821	2.764	9.5	19.1
8 19	21 17.08	-19 1.6	1.480	2.481	4.4	21.2	8 19	21 17.34	-43 43.1	1.854	2.765	11.2	19.2
8 29	21 7.28	-19 22.2	1.494	2.458	9.0	21.4	8 29	21 8.06	-44 17.7	1.910	2.767	13.3	19.4
9 8	20 59.30	-19 31.3	1.533	2.435	13.3	21.6	9 8	21 0.86	-44 22.7	1.986	2.769	15.6	19.6
9 18	20 53.96	-19 27.9	1.592	2.411	17.1	21.8	9 18	20 56.46	-44 2.3	2.079	2.770	17.5	19.7
370673	2004 DE ₃₈		8 11.3 190°28	0°1/11.3	18		447690	2007 CN ₂₃		8 11.4 75°78	1°8/ 9.6	18	
7 10	21 50.12	-12 56.7											

EPHEMERIDES

8 11.4

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
315971	2009 <i>BY</i> ₁₁₀		8 11.4 169°79	4.5/ 8.8	17		17966	1999 <i>JS</i> ₄₃		8 11.4 187°74	1.5/12.3	18	
7 10	21 55.03	-24 5.6	1.493	2.391	14.5	21.0	7 10	21 52.53	-10 14.2	1.632	2.505	14.8	17.6
7 20	21 48.23	-24 49.1	1.436	2.393	10.6	20.8	7 20	21 46.21	-10 21.0	1.562	2.505	11.0	17.3
7 30	21 38.82	-25 32.0	1.401	2.394	6.6	20.5	7 30	21 37.64	-10 39.6	1.515	2.505	6.6	17.1
8 9	21 27.82	-26 6.4	1.392	2.396	4.5	20.4	8 9	21 27.63	-11 6.8	1.493	2.504	2.2	16.8
8 19	21 16.53	-26 26.0	1.408	2.397	6.8	20.5	8 19	21 17.27	-11 38.2	1.497	2.502	3.6	16.9
8 29	21 6.41	-26 27.3	1.449	2.397	10.7	20.8	8 29	21 7.75	-12 8.9	1.529	2.500	8.1	17.2
9 8	20 58.62	-26 10.3	1.514	2.398	14.6	21.0	9 8	21 0.13	-12 34.9	1.585	2.497	12.3	17.4
9 18	20 53.85	-25 37.6	1.597	2.398	17.9	21.2	9 18	20 55.09	-12 53.3	1.662	2.494	15.9	17.7
520420	2014 <i>JX</i> ₈₉		8 11.4 60°65	2.5/ 8.9	18		282588	2005 <i>EX</i> ₁₇₄		8 11.4 195°06	2.0/12.9	18	
7 10	21 45.56	-18 57.8	2.081	2.974	11.2	21.1	7 10	21 46.93	- 7 21.7	2.007	2.870	12.8	20.9
7 20	21 40.85	-20 8.6	2.019	2.976	8.0	20.9	7 20	21 41.85	- 7 44.3	1.933	2.870	9.6	20.7
7 30	21 34.43	-21 24.2	1.982	2.979	4.6	20.7	7 30	21 35.03	- 8 20.0	1.883	2.868	6.0	20.4
8 9	21 26.96	-22 38.6	1.973	2.981	2.5	20.5	8 9	21 27.13	- 9 5.7	1.859	2.867	2.6	20.2
8 19	21 19.23	-23 45.7	1.991	2.984	4.6	20.7	8 19	21 18.92	- 9 57.2	1.862	2.866	3.2	20.3
8 29	21 12.12	-24 40.7	2.036	2.986	7.9	20.9	8 29	21 11.33	-10 49.8	1.892	2.864	6.8	20.5
9 8	21 6.43	-25 20.8	2.106	2.989	11.1	21.1	9 8	21 5.15	-11 38.7	1.948	2.862	10.3	20.7
9 18	21 2.72	-25 45.2	2.197	2.991	13.8	21.3	9 18	21 0.96	-12 20.4	2.027	2.860	13.4	20.9
263310	2008 <i>CL</i> ₃₀		8 11.4 82°23	1.2/10.5	17		313847	2004 <i>EF</i> ₃₂		8 11.4 167°28	3.0/13.5	18	R
7 10	21 51.11	-15 7.4	1.452	2.346	15.1	20.9	7 10	21 49.63	- 6 4.9	2.237	3.085	12.2	20.3
7 20	21 45.15	-15 58.8	1.409	2.365	10.8	20.7	7 20	21 43.59	- 5 46.2	2.163	3.088	9.4	20.1
7 30	21 36.94	-16 58.7	1.387	2.385	6.0	20.5	7 30	21 35.93	- 5 38.0	2.113	3.090	6.2	20.0
8 9	21 27.44	-18 0.3	1.391	2.404	1.5	20.2	8 9	21 27.29	- 5 39.3	2.089	3.092	3.4	19.8
8 19	21 17.83	-18 56.3	1.421	2.423	4.4	20.5	8 19	21 18.42	- 5 48.3	2.094	3.093	3.6	19.8
8 29	21 9.37	-19 41.1	1.477	2.442	9.0	20.8	8 29	21 10.16	- 6 2.1	2.127	3.094	6.5	20.0
9 8	21 3.03	-20 11.4	1.556	2.461	13.0	21.1	9 8	21 3.24	- 6 17.8	2.186	3.095	9.6	20.2
9 18	20 59.38	-20 26.6	1.655	2.479	16.3	21.3	9 18	20 58.19	- 6 32.5	2.269	3.096	12.4	20.4
287343	2002 <i>TK</i> ₃₅₃		8 11.4 6°62	5.9/15.6	18		398802	2013 <i>BK</i> ₂₀		8 11.4 206°21	2.4/13.7	18	
7 10	21 43.22	- 0 1.6	1.385	2.248	17.5	20.2	7 10	21 45.76	- 5 6.6	2.313	3.163	11.8	21.7
7 20	21 39.68	+ 0 4.5	1.323	2.248	14.0	20.0	7 20	21 40.84	- 5 30.5	2.233	3.160	9.0	21.5
7 30	21 33.97	- 0 13.7	1.280	2.250	10.1	19.7	7 30	21 34.40	- 6 7.5	2.177	3.156	5.9	21.4
8 9	21 26.90	- 0 55.0	1.259	2.253	6.8	19.6	8 9	21 27.00	- 6 55.2	2.148	3.152	3.0	21.2
8 19	21 19.48	- 1 55.2	1.261	2.256	6.1	19.5	8 19	21 19.33	- 7 50.2	2.146	3.148	3.1	21.2
8 29	21 12.90	- 3 7.4	1.287	2.261	8.9	19.7	8 29	21 12.15	- 8 47.9	2.173	3.143	6.1	21.3
9 8	21 8.17	- 4 22.9	1.335	2.267	12.7	20.0	9 8	21 6.16	- 9 43.9	2.226	3.138	9.3	21.5
9 18	21 5.95	- 5 34.1	1.405	2.274	16.2	20.2	9 18	21 1.89	-10 34.4	2.303	3.133	12.1	21.7
134610	1999 <i>TE</i> ₂₁₅		8 11.4 346°14	2.9/13.1	18		135881	2002 <i>TD</i> ₄₄		8 11.4 217°83	3.6/14.7	18	
7 10	21 42.69	- 7 15.0	1.039	1.944	18.8	19.1	7 10	21 45.92	- 1 54.5	2.234	3.071	12.6	20.0
7 20	21 39.95	- 7 27.8	0.976	1.933	14.3	18.8	7 20	21 41.01	- 2 6.9	2.152	3.066	9.9	19.8
7 30	21 34.43	- 8 3.6	0.931	1.924	9.0	18.5	7 30	21 34.52	- 2 34.6	2.092	3.061	6.9	19.6
8 9	21 27.03	- 8 58.9	0.906	1.916	3.9	18.2	8 9	21 27.03	- 3 16.1	2.059	3.056	4.2	19.5
8 19	21 19.05	-10 6.5	0.903	1.909	4.7	18.2	8 19	21 19.24	- 4 8.3	2.053	3.050	4.0	19.4
8 29	21 12.07	-11 16.9	0.922	1.904	10.1	18.5	8 29	21 11.94	- 5 6.8	2.075	3.044	6.5	19.6
9 8	21 7.47	-12 20.5	0.960	1.900	15.4	18.8	9 8	21 5.87	- 6 6.6	2.123	3.037	9.6	19.8
9 18	21 6.08	-13 10.8	1.017	1.898	20.0	19.0	9 18	21 1.58	- 7 3.4	2.195	3.031	12.4	20.0
157716	2006 <i>AK</i> ₈₁		8 11.4 85°12	1.1/12.2	18		510396	2011 <i>UX</i> ₁₂₄		8 11.4 333°20	1.6/10.3	18	
7 10	21 47.39	-11 17.4	2.327	3.195	11.1	19.8	7 10	21 46.86	-17 14.0	1.693	2.590	13.1	21.1
7 20	21 41.88	-11 17.4	2.260	3.202	8.2	19.7	7 20	21 42.13	-17 47.6	1.624	2.582	9.5	20.8
7 30	21 34.91	-11 24.8	2.218	3.208	4.9	19.5	7 30	21 35.33	-18 27.6	1.578	2.575	5.3	20.6
8 9	21 27.06	-11 37.1	2.203	3.214	1.6	19.3	8 9	21 27.20	-19 8.7	1.557	2.569	1.7	20.3
8 19	21 19.05	-11 51.9	2.216	3.221	2.7	19.4	8 19	21 18.72	-19 45.6	1.562	2.563	4.3	20.5
8 29	21 11.65	-12 6.4	2.257	3.227	6.0	19.6	8 29	21 11.00	-20 13.3	1.593	2.557	8.5	20.7
9 8	21 5.53	-12 18.1	2.325	3.233	9.1	19.8	9 8	21 5.00	-20 29.1	1.647	2.552	12.4	21.0
9 18	21 1.17	-12 25.2	2.416	3.239	11.8	20.0	9 18	21 1.39	-20 32.0	1.723	2.547	15.8	21.2
174036	2002 <i>AP</i> ₁₁₀		8 11.4 69°24	3.2/ 8.2	17		84197	2002 <i>RB</i> ₁₁₉		8 11.4 278°29	8.0/ 5.5	18	
7 10	21 47.14	-20 41.7	2.051	2.944	11.3	19.4	7 10	21 54.88	-36 19.5	1.909	2.791	12.6	19.2
7 20	21 41.87	-22 12.5	2.013	2.970	8.1	19.2	7 20	21 48.02	-37 13.2	1.846	2.779	10.2	19.0
7 30	21 34.94	-23 45.2	2.001	2.995	4.8	19.1	7 30	21 38.71	-37 56.3	1.805	2.766	8.4	18.9
8 9	21 27.07	-25 12.6	2.016	3.020	3.2	19.0	8 9	21 27.86	-38 21.2	1.790	2.753	8.1	18.8
8 19	21 19.07	-26 28.5	2.060	3.046	5.2	19.2	8 19	21 16.68	-38 22.5	1.799	2.740	9.6	18.9
8 29	21 11.85	-27 28.4	2.130	3.071	8.3	19.5	8 29	21 6.51	-37 58.2	1.833	2.727	12.0	19.0
9 8	21 6.16	-28 10.5	2.226	3.096	11.1	19.7	9 8	20 58.46	-37 10.7	1.889	2.715	14.6	19.2
9 18	21 2.49	-28 35.2	2.343	3.120	13.5	19.9	9 18	20 53.23	-36 4.1	1.964	2.702	17.0	19.3
57956	2002 <i>JL</i> ₁₀₅		8 11.4 67°77	1.8/13.0	18		443019	2013 <i>EG</i> ₁₀		8 11.4 85°97	1.7/10.2	18	
7 10	21 44.92	- 7 29.0	2.205	3.068	11.9	19.5	7 10	21 50.81	-20 20.8	2.197	3.081	11.1	20.6
7 20	21 40.19	- 7 51.6	2.142	3.078	8.9	19.3	7 20	21 44.45	-20 26.1	2.133	3.084	8.0	20.5
7 30	21 33.97	- 8 25.6	2.103	3.088	5.5	19.1	7 30	21 36.41	-20 32.3	2.093	3.088	4.6	20.2
8 9	21 26.89	- 9 8.1	2.090	3.098	2.4	18.9	8 9	21 27.39	-20 35.9	2.081	3.092	1.8	20.1
8 19	21 19.63	- 9 55.4	2.104	3.108	2.9	19.0	8 19	21 18.22	-20 34.0	2.097	3.095	3.7	20.2
8 29	21 12.98	-10 43.2	2.147	3.119	6.1	19.2	8 29	21 9.81	-20 24.7	2.141	3.099	7.1	20.4
9 8	21 7.60	-11 27.6	2.215	3.129	9.3	19.4	9 8	21 2.91	-20 7.2	2.211	3.103	10.3	20.6
9 18	21 3.97	-12 5.5	2.307	3.139	12.0	19.6	9 18	20 58.03	-19 41.8	2.304	3.106	13.0	20.8
5335	Damocles		8 11.4 262°48	1.2/18.9	92	C	225759	2001 <i>SB</i> ₁₇₄		8 11.4 306°37	1.8/1		

EPHEMERIDES

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8 11.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
95944	2003 <i>MN</i> ₂		8 11.4 73°84	6°1/16.1	18		62900	2000 <i>UG</i> ₁₀₅		8 11.4 334°63	6°0/ 6.4	18	
7 10	21 51.77	+ 3 9.3	2.281	3.081	13.6	18.6	7 10	21 47.42	-28 38.7	1.810	2.711	12.2	18.7
7 20	21 44.91	+ 4 0.2	2.230	3.110	11.1	18.5	7 20	21 42.60	-29 52.2	1.750	2.704	9.2	18.5
7 30	21 36.57	+ 4 35.0	2.201	3.138	8.5	18.4	7 30	21 35.63	-31 2.6	1.714	2.698	6.7	18.3
8 9	21 27.41	+ 4 53.1	2.199	3.166	6.6	18.3	8 9	21 27.31	-32 2.2	1.704	2.692	6.1	18.3
8 19	21 18.20	+ 4 55.3	2.224	3.194	6.2	18.3	8 19	21 18.63	-32 44.4	1.719	2.686	7.9	18.4
8 29	21 9.73	+ 4 44.1	2.276	3.222	7.5	18.5	8 29	21 10.76	-33 5.4	1.758	2.681	10.9	18.5
9 8	21 2.68	+ 4 23.6	2.354	3.249	9.6	18.6	9 8	21 4.70	-33 4.6	1.820	2.676	13.8	18.7
9 18	20 57.50	+ 3 57.9	2.457	3.276	11.8	18.8	9 18	21 1.09	-32 44.1	1.901	2.672	16.4	18.9
255235	2005 <i>UH</i> ₄₄₀		8 11.4 297°94	3°7/ 8.6	18		414391	2008 <i>YM</i> ₅₄		8 11.4 125°18	3°2/ 9.3	17	
7 10	21 49.58	-24 50.2	2.052	2.945	11.4	20.5	7 10	21 51.83	-19 16.8	1.381	2.282	15.2	20.5
7 20	21 43.83	-25 21.5	1.983	2.937	8.3	20.3	7 20	21 46.04	-20 21.4	1.327	2.288	10.9	20.3
7 30	21 36.19	-25 51.5	1.938	2.929	5.3	20.1	7 30	21 37.67	-21 31.9	1.296	2.294	6.3	20.1
8 9	21 27.37	-26 15.1	1.919	2.921	3.7	20.0	8 9	21 27.71	-22 39.7	1.290	2.299	3.2	19.9
8 19	21 18.27	-26 28.0	1.927	2.913	5.5	20.1	8 19	21 17.42	-23 36.3	1.309	2.304	6.0	20.1
8 29	21 9.90	-26 27.3	1.962	2.906	8.6	20.3	8 29	21 8.26	-24 15.9	1.352	2.309	10.5	20.3
9 8	21 3.14	-26 12.6	2.021	2.898	11.8	20.5	9 8	21 1.38	-24 36.0	1.418	2.314	14.6	20.6
9 18	20 58.58	-25 45.0	2.102	2.891	14.5	20.6	9 18	20 57.47	-24 37.3	1.503	2.318	18.1	20.8
445523	2010 <i>XJ</i> ₆₄		8 11.4 316°65	0°8/10.8	18		323657	2005 <i>CS</i> ₆₉		8 11.4 180°09	0°4/11.1	17	
7 10	21 46.22	-15 44.3	2.010	2.898	11.8	21.2	7 10	21 50.30	-12 56.4	1.635	2.519	14.2	21.9
7 20	21 41.40	-16 10.9	1.936	2.889	8.5	21.0	7 20	21 44.65	-13 47.7	1.569	2.520	10.3	21.6
7 30	21 34.82	-16 43.9	1.885	2.881	4.8	20.8	7 30	21 36.80	-14 50.7	1.525	2.521	5.8	21.4
8 9	21 27.11	-17 19.3	1.860	2.873	1.1	20.5	8 9	21 27.54	-15 59.3	1.508	2.521	1.1	21.1
8 19	21 19.10	-17 52.7	1.863	2.866	3.4	20.7	8 19	21 17.91	-17 6.7	1.517	2.521	3.9	21.3
8 29	21 11.69	-18 20.1	1.893	2.858	7.3	20.9	8 29	21 9.09	-18 6.2	1.553	2.520	8.5	21.5
9 8	21 5.72	-18 38.7	1.947	2.851	10.9	21.1	9 8	21 2.12	-18 53.3	1.614	2.519	12.6	21.8
9 18	21 1.78	-18 47.1	2.024	2.844	13.9	21.3	9 18	20 57.68	-19 25.9	1.695	2.517	16.1	22.0
69991	1998 <i>WP</i> ₃₂		8 11.4 336°60	2°7/ 9.2	18		19582	Blow		8 11.4 49°32	1°4/10.5	18	
7 10	21 45.69	-20 43.7	1.923	2.821	11.7	18.9	7 10	21 49.12	-16 37.0	1.614	2.509	13.8	18.6
7 20	21 41.13	-21 26.2	1.854	2.813	8.5	18.7	7 20	21 43.76	-17 11.7	1.555	2.512	9.9	18.4
7 30	21 34.71	-22 11.8	1.809	2.805	5.0	18.4	7 30	21 36.25	-17 53.3	1.519	2.516	5.6	18.2
8 9	21 27.11	-22 55.0	1.789	2.797	2.7	18.3	8 9	21 27.43	-18 36.1	1.507	2.520	1.5	17.9
8 19	21 19.20	-23 30.8	1.796	2.790	4.9	18.4	8 19	21 18.34	-19 14.4	1.522	2.524	4.3	18.1
8 29	21 11.96	-23 55.0	1.829	2.784	8.4	18.6	8 29	21 10.15	-19 43.3	1.563	2.528	8.6	18.4
9 8	21 6.26	-24 5.6	1.887	2.778	11.8	18.8	9 8	21 3.84	-20 0.2	1.627	2.532	12.5	18.6
9 18	21 2.70	-24 2.3	1.965	2.772	14.7	19.0	9 18	21 0.03	-20 4.2	1.712	2.536	15.9	18.9
389557	2010 <i>UB</i> ₁₂		8 11.4 256°00	7°6/ 4.3	18		18400	1992 <i>WY</i> ₃		8 11.4 359°94	5°5/ 7.2	18	
7 10	21 52.08	-38 24.1	2.337	3.211	10.9	21.3	7 10	21 47.03	-23 59.0	1.403	2.315	14.3	17.5
7 20	21 45.66	-39 23.8	2.281	3.204	9.0	21.1	7 20	21 42.68	-25 30.9	1.351	2.314	10.5	17.2
7 30	21 37.24	-40 13.2	2.249	3.196	7.8	21.0	7 30	21 35.83	-27 4.8	1.320	2.313	6.9	17.0
8 9	21 27.60	-40 45.9	2.242	3.189	7.7	21.0	8 9	21 27.37	-28 30.4	1.314	2.313	5.6	17.0
8 19	21 17.71	-40 57.6	2.260	3.182	8.9	21.1	8 19	21 18.52	-29 38.5	1.332	2.313	8.1	17.1
8 29	21 8.65	-40 46.7	2.303	3.174	10.8	21.2	8 29	21 10.66	-30 22.8	1.374	2.314	11.9	17.3
9 8	21 1.32	-40 14.7	2.369	3.167	12.9	21.3	9 8	21 4.97	-30 41.7	1.436	2.315	15.5	17.6
9 18	20 56.34	-39 24.8	2.453	3.159	14.8	21.5	9 18	21 2.16	-30 37.1	1.517	2.317	18.7	17.8
340239	2006 <i>BA</i> ₉₁		8 11.4 168°93	0°8/11.9	15		270258	2001 <i>UZ</i> ₁₀₁		8 11.4 280°00	1°6/12.4	16	
7 10	21 49.00	-11 40.0	1.751	2.630	13.6	21.6	7 10	21 48.07	- 9 20.8	1.605	2.484	14.7	21.1
7 20	21 43.55	-11 56.7	1.683	2.631	10.0	21.4	7 20	21 43.14	- 9 40.4	1.529	2.475	11.0	20.9
7 30	21 36.09	-12 23.7	1.638	2.631	5.9	21.1	7 30	21 36.00	-10 14.3	1.475	2.465	6.7	20.6
8 9	21 27.39	-12 57.3	1.619	2.632	1.5	20.8	8 9	21 27.41	-10 58.8	1.445	2.456	2.3	20.3
8 19	21 18.38	-13 32.9	1.627	2.632	3.3	21.0	8 19	21 18.35	-11 48.8	1.441	2.446	3.6	20.4
8 29	21 10.15	-14 6.0	1.661	2.632	7.6	21.3	8 29	21 10.00	-12 38.4	1.463	2.437	8.2	20.6
9 8	21 3.61	-14 32.7	1.720	2.632	11.5	21.5	9 8	21 3.41	-13 22.3	1.509	2.427	12.5	20.9
9 18	20 59.38	-14 50.7	1.801	2.632	14.9	21.7	9 18	20 59.31	-13 56.7	1.576	2.418	16.2	21.1
474720	2005 <i>JO</i> ₁₇₇		8 11.4 78°10	4°6/15.2	17		390069	2012 <i>UG</i> ₁₀₈		8 11.4 163°41	5°9/16.7	17	
7 10	21 46.90	- 0 41.8	1.905	2.745	14.4	21.0	7 10	21 46.90	+ 4 6.8	2.149	2.957	14.1	21.2
7 20	21 41.79	- 0 41.1	1.844	2.758	11.3	20.8	7 20	21 41.73	+ 4 15.2	2.074	2.960	11.5	21.0
7 30	21 34.98	- 0 58.1	1.805	2.770	8.1	20.7	7 30	21 34.96	+ 4 4.6	2.020	2.963	8.8	20.9
8 9	21 27.16	- 1 31.4	1.791	2.783	5.3	20.5	8 9	21 27.18	+ 3 35.2	1.991	2.966	6.6	20.8
8 19	21 19.14	- 2 17.5	1.802	2.796	4.9	20.5	8 19	21 19.13	+ 2 49.2	1.988	2.968	6.0	20.7
8 29	21 11.85	- 3 11.6	1.841	2.809	7.2	20.7	8 29	21 11.64	+ 1 50.7	2.012	2.970	7.5	20.8
9 8	21 6.04	- 4 8.0	1.905	2.822	10.3	20.9	9 8	21 5.46	+ 0 45.3	2.062	2.972	10.0	21.0
9 18	21 2.26	- 5 2.0	1.991	2.835	13.2	21.1	9 18	21 1.13	- 0 21.3	2.135	2.973	12.7	21.2
342096	2008 <i>SZ</i> ₅₇		8 11.4 298°28	3°2/ 9.3	18		274273	2008 <i>PQ</i> ₁₂		8 11.4 337°16	0°2/11.3	18	
7 10	21 49.35	-20 53.9	1.600	2.501	13.6	20.5	7 10	21 48.84	-14 17.0	1.458	2.353	14.9	20.1
7 20	21 44.20	-21 36.0	1.525	2.484	9.9	20.2	7 20	21 43.80	-14 33.9	1.391	2.348	10.9	19.9
7 30	21 36.67	-22 22.0	1.471	2.468	5.8	20.0	7 30	21 36.40	-15 0.3	1.347	2.344	6.2	19.6
8 9	21 27.53	-23 5.5	1.443	2.452	3.2	19.8	8 9	21 27.48	-15 31.5	1.326	2.340	1.2	19.2
8 19	21 17.87	-23 39.8	1.441	2.435	5.7	19.9	8 19	21 18.18	-16 2.2	1.331	2.336	4.0	19.4
8 29	21 8.97	-24 0.1	1.463	2.419	9.9	20.1	8 29	21 9.77	-16 27.2	1.361	2.333	8.9	19.7
9 8	21 2.00	-24 3.9	1.509	2.404	14.0	20.3	9 8	21 3.38	-16 42.8	1.414	2.330	13.3	20.0
9 18	20 57.72	-23 51.7	1.574	2.388	17.5	20.5	9 18	20 59.69	-16 47.4	1.487	2.327	17.0	20.2
72410	2001 <i>CD</i> ₂₈		8 11.4 255°54	4°2/ 7.7	18		449941	2015 <i>OX</i> ₄₄		8 11.4 305°06			

EPHEMERIDES

8 11.4

8 11.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
506918	2008 <i>EE</i> ₃₉		8 11.4 51°77'	1°9/10.2	17		31305	1998 <i>FL</i> ₁₀₄		8 11.4 64°94'	0°4/11.6	18	
7 10	21 48.95	-16 3.7	1.289	2.193	15.9	20.7	7 10	21 49.14	-13 43.5	2.040	2.917	12.1	18.4
7 20	21 43.92	-17 2.4	1.245	2.207	11.3	20.5	7 20	21 43.38	-13 44.6	1.974	2.922	8.8	18.2
7 30	21 36.43	-18 10.3	1.222	2.220	6.3	20.3	7 30	21 35.90	-13 52.0	1.933	2.926	5.1	18.0
8 9	21 27.48	-19 19.1	1.222	2.234	2.0	20.0	8 9	21 27.39	-14 2.9	1.918	2.930	1.1	17.7
8 19	21 18.34	-20 20.6	1.248	2.249	5.1	20.3	8 19	21 18.69	-14 14.3	1.930	2.935	3.0	17.9
8 29	21 10.38	-21 8.1	1.298	2.264	9.9	20.6	8 29	21 10.71	-14 23.3	1.971	2.939	6.8	18.1
9 8	21 4.69	-21 38.3	1.370	2.279	14.1	20.9	9 8	21 4.23	-14 27.5	2.037	2.944	10.3	18.3
9 18	21 1.86	-21 50.8	1.461	2.294	17.7	21.2	9 18	20 59.78	-14 25.7	2.125	2.949	13.2	18.6
478518	2012 <i>SA</i> ₅₅		8 11.4 328°81'	7°9/6.4	18		5561	Iguchi		8 11.4 317°16'	1°7/12.1	18	R
7 10	21 49.77	-30 47.5	1.364	2.274	14.8	20.3	7 10	21 50.72	-12 24.2	1.113	2.015	18.0	16.0
7 20	21 44.98	-31 52.9	1.301	2.257	11.5	20.0	7 20	21 45.91	-12 1.9	1.040	1.999	13.4	15.7
7 30	21 37.29	-32 52.5	1.259	2.242	8.7	19.8	7 30	21 37.98	-11 51.0	0.987	1.983	8.1	15.3
8 9	21 27.69	-33 36.0	1.240	2.227	8.1	19.8	8 9	21 27.88	-11 49.0	0.955	1.967	2.5	14.9
8 19	21 17.55	-33 55.3	1.244	2.213	10.2	19.9	8 19	21 17.02	-11 51.8	0.946	1.952	4.7	15.0
8 29	21 8.51	-33 46.4	1.271	2.200	13.6	20.0	8 29	21 7.17	-11 54.8	0.960	1.938	10.6	15.3
9 8	21 1.93	-33 10.3	1.317	2.187	17.2	20.2	9 8	20 59.85	-11 54.0	0.995	1.925	16.1	15.6
9 18	20 58.62	-32 11.4	1.380	2.176	20.4	20.4	9 18	20 56.04	-11 46.6	1.047	1.912	20.8	15.8
205713	2002 <i>AP</i> ₇₁		8 11.4 141°10'	0°7/11.8	17		28140	2008 <i>RB</i> ₁₀₃		8 11.4 210°95'	2°9/13.7	18	
7 10	21 52.43	-12 0.6	1.471	2.355	15.5	20.2	7 10	21 47.69	-5 9.2	1.852	2.710	14.0	21.2
7 20	21 46.29	-12 18.7	1.411	2.361	11.3	20.0	7 20	21 42.57	-5 25.2	1.777	2.708	10.7	21.0
7 30	21 37.76	-12 48.5	1.372	2.366	6.6	19.8	7 30	21 35.56	-5 56.9	1.724	2.705	7.0	20.8
8 9	21 27.75	-13 25.2	1.358	2.371	1.6	19.4	8 9	21 27.35	-6 41.7	1.697	2.702	3.6	20.5
8 19	21 17.45	-14 3.3	1.371	2.376	3.8	19.6	8 19	21 18.79	-7 35.5	1.696	2.699	3.8	20.6
8 29	21 8.15	-14 37.3	1.409	2.380	8.7	19.9	8 29	21 10.86	-8 33.0	1.723	2.695	7.3	20.8
9 8	21 0.96	-15 3.2	1.471	2.384	13.0	20.2	9 8	21 4.47	-9 28.6	1.774	2.691	11.0	21.0
9 18	20 56.53	-15 18.8	1.553	2.388	16.7	20.4	9 18	21 0.22	-10 18.0	1.848	2.687	14.3	21.2
257722	1999 <i>XD</i> ₂₁₉		8 11.4 200°45'	0°6/11.8	18		156999	2003 <i>OC</i> ₉		8 11.4 343°72'	7°2/17.3	18	
7 10	21 51.08	-11 50.6	1.860	2.734	13.2	21.6	7 10	21 39.14	+ 4 16.8	1.504	2.348	17.4	18.0
7 20	21 45.02	-12 11.5	1.786	2.731	9.7	21.4	7 20	21 36.81	+ 4 17.7	1.420	2.328	14.4	17.7
7 30	21 36.95	-12 42.2	1.736	2.728	5.7	21.1	7 30	21 32.47	+ 3 50.9	1.355	2.310	11.2	17.5
8 9	21 27.60	-13 19.0	1.711	2.724	1.4	20.8	8 9	21 26.76	+ 2 55.9	1.311	2.294	8.3	17.3
8 19	21 17.90	-13 57.5	1.714	2.719	3.3	21.0	8 19	21 20.56	+ 1 35.4	1.290	2.279	7.3	17.2
8 29	21 8.89	-14 32.9	1.745	2.714	7.5	21.2	8 29	21 14.94	- 0 3.7	1.293	2.265	9.2	17.2
9 8	21 1.53	-15 1.6	1.801	2.708	11.4	21.4	9 8	21 10.92	- 1 51.7	1.319	2.253	12.6	17.4
9 18	20 56.46	-15 21.5	1.879	2.701	14.7	21.7	9 18	21 9.23	- 3 38.7	1.366	2.243	16.1	17.6
195476	2002 <i>GT</i> ₁₂₇		8 11.4 23°98'	1°6/12.4	17		433785	2015 <i>BN</i> ₈₀		8 11.4 217°00'	5°0/6.3	17	
7 10	21 47.93	- 9 57.4	1.547	2.430	14.9	19.9	7 10	21 52.19	-23 24.6	1.929	2.819	12.1	21.2
7 20	21 42.94	-10 7.6	1.485	2.433	11.1	19.7	7 20	21 46.14	-25 33.6	1.856	2.809	8.9	21.0
7 30	21 35.82	-10 30.8	1.445	2.436	6.7	19.4	7 30	21 37.79	-27 47.5	1.811	2.799	6.0	20.8
8 9	21 27.38	-11 3.3	1.429	2.440	2.3	19.2	8 9	21 27.82	-29 56.1	1.794	2.787	5.2	20.7
8 19	21 18.65	-11 40.4	1.439	2.444	3.6	19.3	8 19	21 17.20	-31 49.5	1.806	2.775	7.4	20.8
8 29	21 10.79	-12 16.9	1.474	2.448	8.0	19.6	8 29	21 7.13	-33 20.2	1.845	2.762	10.8	21.0
9 8	21 4.78	-12 48.1	1.533	2.453	12.2	19.8	9 8	20 58.73	-34 25.1	1.909	2.748	14.0	21.2
9 18	21 1.25	-13 11.0	1.613	2.458	15.7	20.0	9 18	20 52.82	-35 4.8	1.992	2.733	16.7	21.4
489505	2007 <i>MK</i> ₁₄		8 11.4 199°00'	18°9/24.8	17		507993	2015 <i>BA</i> ₁₉₂		8 11.4 204°22'	0°6/11.0	17	
7 10	21 51.19	+22 39.2	1.218	1.953	26.3	21.2	7 10	21 52.27	-15 9.3	1.787	2.669	13.3	21.9
7 20	21 46.17	+24 26.7	1.156	1.952	24.3	21.0	7 20	21 45.98	-15 33.6	1.715	2.665	9.7	21.6
7 30	21 38.11	+25 32.7	1.107	1.951	22.2	20.8	7 30	21 37.54	-16 5.2	1.666	2.661	5.5	21.4
8 9	21 27.89	+25 48.1	1.072	1.949	20.3	20.7	8 9	21 27.74	-16 39.6	1.643	2.656	1.1	21.1
8 19	21 16.88	+25 7.8	1.053	1.947	19.1	20.6	8 19	21 17.57	-17 11.8	1.648	2.651	3.7	21.3
8 29	21 6.77	+23 34.3	1.051	1.944	19.0	20.6	8 29	21 8.18	-17 37.5	1.680	2.645	8.1	21.5
9 8	20 59.12	+21 18.9	1.067	1.941	20.0	20.7	9 8	21 0.55	-17 53.8	1.736	2.638	12.0	21.7
9 18	20 54.92	+18 37.4	1.100	1.938	21.9	20.8	9 18	20 55.36	-17 59.4	1.815	2.631	15.4	21.9
382144	2011 <i>KX</i> ₄₄		8 11.4 133°31'	1°8/9.9	17		30948	1994 <i>PU</i>		8 11.4 294°79'	0°7/11.1	18	
7 10	21 50.23	-17 49.7	1.955	2.842	12.1	21.9	7 10	21 51.39	-15 27.8	1.260	2.161	16.4	18.3
7 20	21 44.24	-18 37.0	1.899	2.852	8.7	21.7	7 20	21 46.16	-15 41.8	1.186	2.146	12.0	18.0
7 30	21 36.41	-19 28.9	1.867	2.862	4.9	21.5	7 30	21 38.03	-16 5.4	1.132	2.130	6.9	17.6
8 9	21 27.48	-20 20.0	1.861	2.872	1.8	21.3	8 9	21 27.88	-16 33.4	1.102	2.115	1.4	17.2
8 19	21 18.36	-21 5.2	1.884	2.882	4.1	21.4	8 19	21 17.06	-16 59.4	1.095	2.100	4.7	17.4
8 29	21 10.03	-21 40.1	1.933	2.890	7.8	21.7	8 29	21 7.16	-17 17.6	1.113	2.085	10.3	17.7
9 8	21 3.34	-22 2.5	2.008	2.899	11.2	21.9	9 8	20 59.62	-17 24.5	1.152	2.070	15.4	17.9
9 18	20 58.83	-22 12.0	2.105	2.907	14.1	22.1	9 18	20 55.34	-17 18.6	1.209	2.055	19.8	18.2
125763	2001 <i>XC</i> ₁₃₆		8 11.4 17°55'	1°2/10.7	18		122149	2000 <i>JN</i> ₄₅		8 11.4 149°46'	2°6/9.8	17	
7 10	21 45.65	-14 26.9	0.919	1.842	18.9	18.5	7 10	21 53.61	-18 52.5	1.453	2.349	14.9	20.6
7 20	21 42.22	-15 11.1	0.877	1.847	13.6	18.2	7 20	21 47.24	-19 40.1	1.397	2.355	10.7	20.4
7 30	21 35.74	-16 10.0	0.852	1.853	7.6	17.9	7 30	21 38.35	-20 33.0	1.364	2.360	6.2	20.1
8 9	21 27.39	-17 14.6	0.848	1.861	1.6	17.6	8 9	21 27.90	-21 23.9	1.355	2.365	2.7	19.9
8 19	21 18.73	-18 14.7	0.865	1.870	5.4	17.9	8 19	21 17.15	-22 5.7	1.372	2.369	5.4	20.1
8 29	21 11.49	-19 1.4	0.904	1.880	11.3	18.2	8 29	21 7.50	-22 33.2	1.414	2.373	9.9	20.4
9 8	21 7.01	-19 29.7	0.961	1.892	16.5	18.6	9 8	21 0.10	-22 44.4	1.480	2.377	14.1	20.6
9 18	21 5.94	-19 38.3	1.036	1.904	20.8	18.9	9 18	20 55.61	-22 39.8	1.565	2.380	17.5	20.9
71112	1999 <i>XP</i> ₁₅₅		8 11.4 257°95'	8°1/17.5	18		344723	2003 <i>UD</i> ₁₀₁		8 11.4 342°28'			

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
162014	1994 <i>RF</i> ₁₁		8 11.4 340°29	16°3/ 8.7	18		86068	1999 <i>RL</i> ₃₀		8 11.4 245°18	8°3/ 9.3	18	
7 10	22 15.92	-45 30.4	0.882	1.767	23.1	18.7	7 10	22 11.17	-32 55.8	1.144	2.033	18.6	18.9
7 20	22 5.50	-45 57.9	0.836	1.761	20.0	18.4	7 20	22 1.03	-33 2.3	1.079	2.024	14.5	18.6
7 30	21 49.36	-45 49.5	0.807	1.756	17.4	18.3	7 30	21 46.65	-32 52.9	1.035	2.015	10.5	18.4
8 9	21 30.03	-44 47.4	0.795	1.752	16.3	18.2	8 9	21 29.60	-32 16.2	1.013	2.006	8.3	18.2
8 19	21 11.03	-42 45.1	0.803	1.748	17.5	18.3	8 19	21 12.19	-31 6.1	1.016	1.995	10.3	18.3
8 29	20 55.73	-39 51.3	0.830	1.745	20.4	18.4	8 29	20 56.90	-29 25.2	1.044	1.985	14.6	18.5
9 8	20 45.95	-36 25.4	0.875	1.743	23.9	18.6	9 8	20 45.54	-27 22.5	1.093	1.974	19.1	18.7
9 18	20 41.93	-32 46.5	0.936	1.741	27.2	18.9	9 18	20 38.85	-25 8.7	1.160	1.963	23.1	19.0
384449	2010 <i>AL</i> ₆₆		8 11.4 186°61	0°6/10.9	18		214945	2007 <i>VP</i> ₂₇₅		8 11.4 319°19	1°8/10.1	18	
7 10	21 48.57	-14 17.4	2.060	2.939	11.9	21.4	7 10	21 47.23	-17 32.6	1.715	2.611	13.0	20.3
7 20	21 43.06	-15 1.9	1.990	2.939	8.6	21.2	7 20	21 42.46	-18 12.5	1.645	2.603	9.4	20.1
7 30	21 35.79	-15 54.4	1.944	2.939	4.8	21.0	7 30	21 35.61	-18 58.8	1.597	2.595	5.3	19.8
8 9	21 27.39	-16 50.1	1.925	2.938	1.0	20.7	8 9	21 27.41	-19 46.1	1.575	2.587	1.9	19.6
8 19	21 18.71	-17 44.0	1.934	2.936	3.4	20.9	8 19	21 18.83	-20 28.4	1.579	2.579	4.4	19.7
8 29	21 10.65	-18 31.3	1.971	2.934	7.2	21.1	8 29	21 10.98	-21 1.0	1.609	2.572	8.6	20.0
9 8	21 4.04	-19 8.7	2.033	2.932	10.7	21.4	9 8	21 4.84	-21 20.6	1.663	2.565	12.5	20.2
9 18	20 59.48	-19 34.4	2.118	2.929	13.7	21.6	9 18	21 1.08	-21 26.4	1.737	2.558	15.8	20.4
21364	Lingpan		8 11.4 114°46	0°6/11.9	18		9050	1991 <i>RF</i> ₂₉		8 11.4 32°56	5°6/14.4	18	
7 10	21 48.98	-11 27.3	1.985	2.858	12.6	19.2	7 10	21 51.21	-3 6.3	1.434	2.294	17.2	16.9
7 20	21 43.27	-11 52.4	1.926	2.870	9.1	19.0	7 20	21 45.48	-2 24.7	1.370	2.296	13.5	16.7
7 30	21 35.84	-12 26.7	1.890	2.882	5.3	18.8	7 30	21 37.38	-2 1.2	1.326	2.298	9.5	16.4
8 9	21 27.39	-13 6.6	1.882	2.894	1.4	18.6	8 9	21 27.76	-1 55.9	1.305	2.301	6.2	16.3
8 19	21 18.78	-13 47.7	1.901	2.906	3.0	18.7	8 19	21 17.78	-2 6.9	1.308	2.304	6.1	16.3
8 29	21 10.90	-14 25.6	1.948	2.917	6.8	19.0	8 29	21 8.74	-2 30.1	1.337	2.307	9.2	16.5
9 8	21 4.56	-14 57.0	2.020	2.928	10.3	19.2	9 8	21 1.73	-2 59.7	1.389	2.310	13.1	16.7
9 18	21 0.27	-15 19.8	2.115	2.938	13.3	19.4	9 18	20 57.45	-3 30.2	1.461	2.313	16.6	16.9
181735	1995 <i>UX</i> ₁₆		8 11.4 331°62	0°7/11.8	18		167741	2004 <i>XY</i> ₂₉		8 11.4 314°93	0°7/11.0	17	
7 10	21 44.12	-11 19.3	1.119	2.028	17.4	19.9	7 10	21 49.43	-14 37.8	1.210	2.114	16.7	19.9
7 20	21 41.04	-11 47.0	1.048	2.010	12.9	19.6	7 20	21 44.73	-15 5.2	1.143	2.105	12.2	19.6
7 30	21 35.17	-12 32.8	0.996	1.994	7.6	19.2	7 30	21 37.20	-15 44.6	1.097	2.095	7.0	19.3
8 9	21 27.35	-13 31.4	0.965	1.978	1.8	18.8	8 9	21 27.77	-16 29.8	1.073	2.087	1.4	18.9
8 19	21 18.83	-14 35.2	0.957	1.964	4.5	19.0	8 19	21 17.76	-17 13.5	1.073	2.078	4.7	19.1
8 29	21 11.20	-15 35.0	0.972	1.951	10.4	19.2	8 29	21 8.76	-17 48.7	1.097	2.070	10.3	19.4
9 8	21 5.87	-16 23.2	1.006	1.939	15.7	19.5	9 8	21 2.13	-18 10.7	1.142	2.062	15.4	19.7
9 18	21 3.76	-16 55.3	1.059	1.928	20.3	19.8	9 18	20 58.70	-18 17.8	1.205	2.055	19.6	20.0
218389	2004 <i>PH</i> ₂₁		8 11.4 25°30	1°0/12.3	18		444971	2008 <i>EF</i> ₅₀		8 11.4 37°03	0°8/10.8	15	
7 10	21 42.99	-8 27.5	1.560	2.447	14.7	18.8	7 10	21 46.42	-14 58.4	1.678	2.572	13.4	21.0
7 20	21 39.31	-9 28.8	1.509	2.459	10.7	18.6	7 20	21 41.66	-15 35.1	1.631	2.587	9.6	20.8
7 30	21 33.73	-10 46.2	1.480	2.472	6.3	18.4	7 30	21 35.01	-16 19.5	1.606	2.603	5.4	20.5
8 9	21 27.00	-12 13.6	1.475	2.487	1.8	18.1	8 9	21 27.27	-17 6.2	1.607	2.620	1.1	20.3
8 19	21 20.07	-13 43.3	1.496	2.502	3.3	18.3	8 19	21 19.42	-17 49.8	1.634	2.637	3.7	20.5
8 29	21 13.96	-15 7.6	1.543	2.518	7.7	18.6	8 29	21 12.45	-18 25.6	1.687	2.655	7.8	20.8
9 8	21 9.53	-16 20.2	1.615	2.534	11.7	18.9	9 8	21 7.20	-18 50.7	1.764	2.673	11.5	21.1
9 18	21 7.34	-17 17.5	1.708	2.552	15.0	19.1	9 18	21 4.19	-19 3.6	1.863	2.692	14.6	21.3
262378	2006 <i>TE</i> ₁₀₉		8 11.4 118°27	1°8/10.2	17		388173	2006 <i>BM</i> ₀₉		8 11.4 205°02	10°2/ 8.5	18	
7 10	21 51.31	-16 58.5	1.618	2.510	13.9	21.0	7 10	22 12.33	-36 27.5	1.181	2.064	18.5	20.3
7 20	21 45.32	-17 48.6	1.565	2.520	10.0	20.8	7 20	22 1.71	-36 54.0	1.125	2.062	14.9	20.1
7 30	21 37.15	-18 45.2	1.534	2.531	5.6	20.6	7 30	21 46.91	-37 1.4	1.090	2.059	11.5	19.9
8 9	21 27.68	-19 41.9	1.530	2.541	1.9	20.4	8 9	21 29.64	-36 37.3	1.077	2.056	10.2	19.8
8 19	21 17.99	-20 32.2	1.552	2.551	4.6	20.6	8 19	21 12.27	-35 35.6	1.088	2.052	11.9	19.9
8 29	21 9.27	-21 10.8	1.600	2.561	8.8	20.9	8 29	20 57.26	-33 59.0	1.123	2.048	15.4	20.1
9 8	21 2.51	-21 35.2	1.672	2.570	12.7	21.1	9 8	20 46.27	-31 57.3	1.179	2.043	19.3	20.3
9 18	20 58.30	-21 44.8	1.765	2.579	15.9	21.4	9 18	20 39.94	-29 41.9	1.253	2.037	22.7	20.5
176111	2001 <i>DY</i> ₉		8 11.4 199°85	5°0/ 8.1	18	R	448376	2009 <i>KL</i> ₁₄		8 11.4 60°04	18°5/27.7	17	
7 10	21 52.76	-24 44.1	1.570	2.469	13.8	20.1	7 10	21 47.25	+23 40.7	1.121	1.865	27.7	20.8
7 20	21 46.66	-25 47.2	1.511	2.468	10.2	19.9	7 20	21 43.31	+24 58.1	1.066	1.870	25.5	20.7
7 30	21 38.06	-26 50.1	1.475	2.466	6.6	19.7	7 30	21 36.45	+25 27.4	1.023	1.875	23.0	20.5
8 9	21 27.88	-27 44.5	1.464	2.464	5.0	19.6	8 9	21 27.64	+25 0.5	0.993	1.880	20.7	20.4
8 19	21 17.34	-28 23.1	1.479	2.462	7.2	19.7	8 19	21 18.23	+23 34.8	0.978	1.885	19.0	20.3
8 29	21 7.80	-28 41.6	1.519	2.460	10.9	19.9	8 29	21 9.90	+21 15.6	0.981	1.891	18.5	20.3
9 8	21 0.42	-28 39.5	1.581	2.457	14.5	20.2	9 8	21 4.07	+18 17.7	1.002	1.896	19.4	20.4
9 18	20 55.89	-28 18.6	1.663	2.454	17.6	20.4	9 18	21 1.61	+15 0.0	1.041	1.902	21.2	20.5
110893	2001 <i>UY</i> ₁₁₃		8 11.4 23°43	0°8/12.0	18		60369	2000 <i>AJ</i> ₁₂₀		8 11.4 197°85	0°9/12.1	18	
7 10	21 46.44	-11 2.9	1.914	2.792	12.7	19.8	7 10	21 50.14	-10 23.3	1.851	2.723	13.4	20.3
7 20	21 41.59	-11 27.1	1.847	2.793	9.3	19.6	7 20	21 44.39	-10 51.6	1.777	2.720	9.9	20.1
7 30	21 34.97	-12 1.8	1.803	2.795	5.5	19.4	7 30	21 36.65	-11 31.6	1.727	2.717	5.9	19.8
8 9	21 27.26	-12 43.1	1.785	2.797	1.5	19.1	8 9	21 27.64	-12 19.3	1.702	2.714	1.7	19.5
8 19	21 19.29	-13 26.7	1.793	2.799	3.0	19.2	8 19	21 18.26	-13 10.0	1.705	2.710	3.2	19.6
8 29	21 11.99	-14 8.0	1.829	2.801	7.0	19.5	8 29	21 9.57	-13 58.2	1.736	2.706	7.5	19.9
9 8	21 6.18	-14 42.9	1.890	2.803	10.7	19.7	9 8	21 2.49	-14 39.8	1.792	2.700	11.3	20.1
9 18	21 2.42	-15 9.1	1.974	2.805	13.8	19.9	9 18	20 57.67	-15 11.7	1.869	2.695	14.7	20.3
49024	1998 <i>QX</i> ₉₅		8 11.4 101°63	4°5/14.3	18		66469	1999 <i>RL</i> ₁₈		8 11.4			

EPHEMERIDES

8 11.4

8 11.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
396958	2005 <i>QA</i> ₂₄		8 11.4 338°10	0°1/11.5 18			451385	2011 <i>BY</i> ₅₇		8 11.4 189°81	0°3/11.2 18		
7 10	21 45.19	-12 30.1	1.815	2.702	12.9	21.2	7 10	21 46.87	-15 29.3	2.652	3.526	9.7	21.4
7 20	21 40.85	-13 4.8	1.744	2.696	9.4	21.0	7 20	21 41.51	-15 39.8	2.579	3.526	7.0	21.2
7 30	21 34.64	-13 50.0	1.696	2.691	5.4	20.7	7 30	21 34.82	-15 54.4	2.532	3.526	4.0	21.0
8 9	21 27.24	-14 41.3	1.673	2.686	1.1	20.4	8 9	21 27.32	-16 10.6	2.512	3.525	0.8	20.8
8 19	21 19.50	-15 33.4	1.676	2.681	3.3	20.6	8 19	21 19.63	-16 25.6	2.521	3.525	2.6	20.9
8 29	21 12.42	-16 21.1	1.706	2.677	7.5	20.8	8 29	21 12.46	-16 37.1	2.559	3.524	5.7	21.1
9 8	21 6.86	-17 0.1	1.761	2.673	11.3	21.1	9 8	21 6.40	-16 43.3	2.624	3.523	8.6	21.3
9 18	21 3.44	-17 28.0	1.837	2.669	14.6	21.3	9 18	21 1.93	-16 43.2	2.713	3.522	11.0	21.5
212409	2006 <i>KZ</i> ₃₆		8 11.4 70°92	1°3/12.2 17			320027	2007 <i>DB</i> ₉₁		8 11.4 89°17	1°3/12.7 18		
7 10	21 50.52	-9 48.3	1.273	2.162	17.1	21.1	7 10	21 44.42	-7 55.9	2.245	3.109	11.6	20.5
7 20	21 45.08	-10 15.9	1.224	2.175	12.6	20.9	7 20	21 39.98	-8 40.9	2.173	3.111	8.6	20.3
7 30	21 37.15	-10 59.5	1.195	2.189	7.4	20.6	7 30	21 34.04	-9 38.2	2.125	3.112	5.2	20.1
8 9	21 27.73	-11 53.4	1.190	2.202	2.2	20.3	8 9	21 27.18	-10 44.1	2.104	3.114	1.9	19.9
8 19	21 18.10	-12 50.7	1.210	2.216	4.0	20.5	8 19	21 20.06	-11 53.8	2.111	3.116	2.7	20.0
8 29	21 9.64	-13 44.1	1.254	2.229	9.0	20.8	8 29	21 13.47	-13 2.4	2.146	3.117	6.1	20.2
9 8	21 3.45	-14 27.9	1.321	2.243	13.6	21.1	9 8	21 8.09	-14 5.2	2.208	3.119	9.4	20.4
9 18	21 0.17	-14 59.1	1.408	2.256	17.4	21.4	9 18	21 4.44	-14 58.8	2.293	3.121	12.2	20.6
283045	2008 <i>EW</i> ₁₆		8 11.4 264°71	0°9/10.8 18			100757	1998 <i>FA</i> ₇		8 11.4 202°90	0°4/11.2 17		
7 10	21 51.38	-15 21.7	1.644	2.531	14.0	21.7	7 10	21 51.73	-13 52.0	1.742	2.623	13.6	21.4
7 20	21 45.72	-15 54.1	1.558	2.511	10.2	21.4	7 20	21 45.70	-14 27.7	1.669	2.619	9.9	21.1
7 30	21 37.65	-16 35.7	1.494	2.490	5.8	21.1	7 30	21 37.50	-15 12.9	1.620	2.615	5.6	20.9
8 9	21 27.88	-17 21.4	1.456	2.469	1.3	20.8	8 9	21 27.89	-16 2.6	1.597	2.610	1.1	20.6
8 19	21 17.46	-18 5.1	1.445	2.448	4.2	20.9	8 19	21 17.87	-16 51.1	1.601	2.605	3.7	20.8
8 29	21 7.68	-18 41.1	1.460	2.426	9.0	21.2	8 29	21 8.61	-17 33.0	1.633	2.599	8.2	21.0
9 8	20 59.72	-19 5.5	1.499	2.403	13.4	21.4	9 8	21 1.12	-18 4.5	1.689	2.592	12.2	21.2
9 18	20 54.42	-19 16.7	1.558	2.380	17.3	21.6	9 18	20 56.09	-18 24.0	1.766	2.585	15.7	21.5
508981	2005 <i>AV</i> ₅₈		8 11.4 203°95	0°9/10.5 18			513962	2014 <i>EM</i> ₂₂₆		8 11.4 237°37	1°3/10.5 18		
7 10	21 48.18	-15 21.6	2.485	3.359	10.3	22.8	7 10	21 52.62	-18 13.3	2.167	3.046	11.4	22.1
7 20	21 42.62	-16 13.9	2.406	3.354	7.4	22.6	7 20	21 46.05	-18 27.5	2.083	3.032	8.3	21.9
7 30	21 35.51	-17 12.6	2.353	3.348	4.2	22.4	7 30	21 37.60	-18 44.9	2.023	3.017	4.7	21.6
8 9	21 27.42	-18 13.5	2.328	3.341	1.1	22.1	8 9	21 27.90	-19 1.6	1.990	3.002	1.4	21.4
8 19	21 19.01	-19 11.9	2.333	3.333	3.2	22.3	8 19	21 17.83	-19 14.1	1.986	2.986	3.6	21.5
8 29	21 11.08	-20 3.6	2.366	3.325	6.5	22.5	8 29	21 8.35	-19 19.4	2.011	2.970	7.4	21.7
9 8	21 4.33	-20 45.6	2.427	3.316	9.6	22.7	9 8	21 0.36	-19 15.9	2.061	2.954	10.9	21.9
9 18	20 59.32	-21 16.3	2.511	3.306	12.2	22.8	9 18	20 54.49	-19 3.3	2.134	2.936	13.9	22.1
279743	1998 <i>HE</i> ₅₀		8 11.4 92°43	1°0/10.7 17			170358	2003 <i>SJ</i> ₁₉₁		8 11.4 259°92	4°2/ 8.8 18		
7 10	21 48.86	-15 18.1	1.715	2.605	13.4	21.1	7 10	21 52.49	-22 32.7	1.481	2.382	14.4	20.2
7 20	21 43.49	-16 1.7	1.658	2.612	9.6	20.9	7 20	21 46.70	-23 25.7	1.413	2.372	10.5	19.9
7 30	21 36.12	-16 53.2	1.623	2.620	5.4	20.7	7 30	21 38.27	-24 21.3	1.367	2.362	6.5	19.6
8 9	21 27.53	-17 47.0	1.615	2.628	1.3	20.4	8 9	21 28.07	-25 11.5	1.346	2.352	4.2	19.5
8 19	21 18.71	-18 37.2	1.633	2.635	3.9	20.6	8 19	21 17.36	-25 48.8	1.350	2.341	6.7	19.6
8 29	21 10.73	-19 18.7	1.678	2.643	8.1	20.9	8 29	21 7.59	-26 7.9	1.379	2.330	10.9	19.8
9 8	21 4.51	-19 48.2	1.747	2.650	11.9	21.1	9 8	21 0.01	-26 7.4	1.431	2.320	15.0	20.0
9 18	21 0.63	-20 4.5	1.837	2.657	15.1	21.4	9 18	20 55.41	-25 48.7	1.501	2.309	18.5	20.2
56844	2000 <i>QP</i> ₄₅		8 11.4 59°18	0°1/11.4 17			30857	Parsec		8 11.4 264°29	2°5/13.0 18		
7 10	21 51.60	-14 3.9	1.425	2.317	15.4	18.9	7 10	21 50.15	-7 22.6	1.482	2.356	16.0	18.6
7 20	21 45.59	-14 16.6	1.380	2.335	11.1	18.7	7 20	21 44.99	-7 36.4	1.398	2.340	12.1	18.3
7 30	21 37.32	-14 38.1	1.357	2.353	6.3	18.5	7 30	21 37.32	-8 7.6	1.336	2.323	7.7	18.0
8 9	21 27.77	-15 3.7	1.358	2.371	1.2	18.2	8 9	21 27.91	-8 53.2	1.297	2.306	3.3	17.7
8 19	21 18.15	-15 28.3	1.384	2.389	3.8	18.5	8 19	21 17.82	-9 48.3	1.284	2.289	4.1	17.7
8 29	21 9.68	-15 47.4	1.436	2.407	8.5	18.8	8 29	21 8.39	-10 46.2	1.297	2.271	8.9	17.9
9 8	21 3.37	-15 58.1	1.512	2.426	12.7	19.1	9 8	21 0.87	-11 40.2	1.333	2.253	13.6	18.2
9 18	20 59.75	-15 59.3	1.608	2.445	16.1	19.3	9 18	20 56.11	-12 25.3	1.389	2.235	17.7	18.4
220890	2004 <i>XL</i> ₁₂₉		8 11.4 262°59	0°4/11.8 18			68802	2002 <i>GK</i> ₂₁		8 11.4 14°75	0°7/10.9 18		
7 10	21 44.69	-11 13.9	2.552	3.421	10.2	20.8	7 10	21 45.63	-15 14.2	1.750	2.643	12.9	18.5
7 20	21 40.11	-11 54.1	2.462	3.405	7.5	20.6	7 20	21 41.16	-15 40.2	1.691	2.648	9.3	18.3
7 30	21 34.10	-12 43.3	2.398	3.390	4.4	20.3	7 30	21 34.82	-16 13.4	1.656	2.653	5.2	18.0
8 9	21 27.16	-13 38.4	2.361	3.374	1.0	20.1	8 9	21 27.36	-16 49.4	1.646	2.659	1.1	17.8
8 19	21 19.90	-14 35.4	2.353	3.358	2.5	20.2	8 19	21 19.68	-17 23.4	1.662	2.665	3.6	18.0
8 29	21 13.01	-15 30.1	2.374	3.341	5.9	20.4	8 29	21 12.79	-17 50.9	1.704	2.673	7.7	18.2
9 8	21 7.18	-16 18.8	2.421	3.325	9.0	20.5	9 8	21 7.52	-18 9.2	1.770	2.681	11.4	18.5
9 18	21 2.93	-16 59.2	2.492	3.308	11.7	20.7	9 18	21 4.43	-18 16.7	1.858	2.689	14.5	18.7
374883	2006 <i>WN</i> ₈		8 11.4 220°73	0°3/11.2 17			344660	2003 <i>SV</i> ₆₆		8 11.4 309°30	9°3/ 4.8 18		
7 10	21 50.16	-13 14.6	1.857	2.736	13.0	22.3	7 10	21 53.14	-36 5.8	1.601	2.494	14.0	19.7
7 20	21 44.49	-13 54.3	1.780	2.728	9.5	22.1	7 20	21 47.33	-37 17.7	1.538	2.477	11.4	19.5
7 30	21 36.77	-14 44.0	1.726	2.720	5.4	21.8	7 30	21 38.69	-38 19.1	1.497	2.460	9.6	19.4
8 9	21 27.71	-15 38.9	1.698	2.711	1.0	21.5	8 9	21 28.18	-39 0.3	1.479	2.443	9.4	19.3
8 19	21 18.23	-16 33.5	1.698	2.702	3.5	21.6	8 19	21 17.16	-39 14.0	1.485	2.427	11.2	19.4
8 29	21 9.38	-17 22.4	1.726	2.692	7.8	21.9	8 29	21 7.22	-38 57.2	1.513	2.411	13.9	19.5
9 8	21 2.15	-18 1.4	1.778	2.681	11.7	22.1	9 8	20 59.67	-38 12.0	1.562	2.396	16.8	19.7
9 18	20 57.21	-18 28.4	1.852	2.670	15.1	22.3	9 18	20 55.30	-37 3.7	1.628	2.381	19.5	19.8
471145	2010 <i>FD</i> ₁		8 11.4 211°80	3°5/15.3 16			276052	2002 <i>CB</i> ₃₂		8 11.5 111°86	3°0/ 9.3 17		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
444448	2006 <i>DY</i> ₁₂₇		8 11.5 281°84	1.3/10.4	17		207926	2008 <i>WS</i> ₆₀		8 11.5 315°77	0.8/10.9	18	
7 10	21 48.44	-18 23.5	2.292	3.175	10.7	21.2	7 10	21 47.05	-14 42.7	1.514	2.411	14.4	20.1
7 20	21 42.95	-18 38.8	2.209	3.161	7.7	21.0	7 20	21 42.66	-15 18.9	1.439	2.397	10.5	19.9
7 30	21 35.80	-18 57.3	2.152	3.147	4.4	20.7	7 30	21 35.96	-16 5.7	1.385	2.383	6.0	19.6
8 9	21 27.58	-19 15.3	2.121	3.133	1.4	20.5	8 9	21 27.69	-16 57.6	1.357	2.370	1.3	19.2
8 19	21 19.04	-19 29.6	2.119	3.119	3.5	20.6	8 19	21 18.90	-17 48.2	1.353	2.357	4.2	19.4
8 29	21 11.04	-19 37.3	2.145	3.105	6.9	20.8	8 29	21 10.85	-18 31.3	1.375	2.344	9.0	19.6
9 8	21 4.37	-19 36.6	2.196	3.091	10.2	21.0	9 8	21 4.66	-19 2.2	1.419	2.332	13.4	19.9
9 18	20 59.58	-19 27.2	2.270	3.077	13.0	21.2	9 18	21 1.09	-19 18.9	1.484	2.321	17.2	20.1
184263	2004 <i>TP</i> ₁₇₉		8 11.5 34°08	4.2/14.5	17		191698	2004 <i>RV</i> ₁₆₃		8 11.5 25°57	3.3/10.4	16	
7 10	21 45.43	-2 54.0	1.114	1.998	19.4	19.1	7 10	21 57.85	-24 1.1	1.216	2.120	16.7	19.2
7 20	21 41.50	-3 19.9	1.077	2.020	14.8	18.9	7 20	21 50.50	-23 35.6	1.170	2.130	12.1	19.0
7 30	21 35.15	-4 11.8	1.060	2.043	9.8	18.7	7 30	21 40.28	-23 6.0	1.144	2.140	7.2	18.8
8 9	21 27.43	-5 24.2	1.063	2.068	5.3	18.5	8 9	21 28.50	-22 27.6	1.142	2.151	3.4	18.6
8 19	21 19.63	-6 48.9	1.090	2.093	5.0	18.6	8 19	21 16.74	-21 38.1	1.164	2.164	5.8	18.8
8 29	21 13.06	-8 15.6	1.140	2.120	9.0	18.9	8 29	21 6.63	-20 37.9	1.212	2.177	10.5	19.1
9 8	21 8.75	-9 35.2	1.212	2.147	13.3	19.3	9 8	20 59.33	-19 29.5	1.281	2.191	14.9	19.4
9 18	21 7.22	-10 41.6	1.304	2.175	17.1	19.6	9 18	20 55.38	-18 16.0	1.370	2.206	18.5	19.7
313375	2002 <i>JM</i> ₁₄₅		8 11.5 42°68	3.7/7.8	18		389839	2012 <i>PU</i> ₃₇		8 11.5 67°45	6.9/10.4	15	
7 10	21 45.37	-21 10.9	1.924	2.823	11.7	19.4	7 10	22 12.85	-30 56.1	0.971	1.868	20.4	20.4
7 20	21 40.92	-22 46.3	1.875	2.834	8.4	19.2	7 20	22 2.04	-30 26.7	0.924	1.876	15.5	20.1
7 30	21 34.68	-24 24.6	1.852	2.846	5.1	19.0	7 30	21 47.06	-29 40.3	0.896	1.884	10.3	19.9
8 9	21 27.35	-25 58.2	1.856	2.859	3.7	19.0	8 9	21 29.84	-28 28.6	0.891	1.892	6.9	19.7
8 19	21 19.79	-27 20.0	1.887	2.871	5.8	19.1	8 19	21 12.91	-26 50.2	0.910	1.901	9.0	19.9
8 29	21 12.94	-28 24.6	1.944	2.884	8.9	19.3	8 29	20 58.71	-24 51.1	0.953	1.909	13.8	20.2
9 8	21 7.64	-29 9.7	2.025	2.897	12.0	19.6	9 8	20 48.76	-22 41.5	1.017	1.918	18.6	20.5
9 18	21 4.43	-29 35.5	2.128	2.911	14.5	19.8	9 18	20 43.50	-20 30.5	1.099	1.926	22.6	20.8
103346	2000 <i>AD</i> ₈₆		8 11.5 323°54	0.7/11.8	18		505381	2013 <i>JX</i> ₄₆		8 11.5 0°74	1.0/10.8	17	
7 10	21 43.87	-11 26.7	1.093	2.004	17.6	18.9	7 10	21 38.19	-11 57.7	0.822	1.754	19.4	19.8
7 20	21 41.16	-11 50.4	1.010	1.973	13.1	18.6	7 20	21 37.17	-13 11.5	0.774	1.749	14.1	19.5
7 30	21 35.51	-12 33.1	0.945	1.943	7.8	18.2	7 30	21 33.14	-14 48.9	0.744	1.747	8.0	19.1
8 9	21 27.64	-13 30.6	0.901	1.914	1.9	17.7	8 9	21 27.14	-16 38.9	0.733	1.746	1.6	18.7
8 19	21 18.76	-14 35.2	0.879	1.886	4.6	17.8	8 19	21 20.64	-18 27.2	0.742	1.748	5.6	19.0
8 29	21 10.56	-15 37.6	0.879	1.859	11.0	18.1	8 29	21 15.38	-19 59.5	0.771	1.751	11.9	19.4
9 8	21 4.66	-16 29.1	0.899	1.834	16.8	18.3	9 8	21 12.78	-21 6.5	0.818	1.757	17.5	19.7
9 18	21 2.18	-17 4.0	0.935	1.810	21.9	18.5	9 18	21 13.59	-21 44.6	0.881	1.765	22.1	20.0
153902	2001 <i>XV</i> ₂₂₁		8 11.5 296°68	0.5/11.8	18		123940	2001 <i>EL</i> ₁₈		8 11.5 105°10	2.9/8.8	18	
7 10	21 49.07	-12 20.0	1.563	2.450	14.6	20.3	7 10	21 48.16	-23 19.5	2.410	3.298	10.1	19.6
7 20	21 43.97	-12 39.2	1.492	2.444	10.7	20.1	7 20	21 42.59	-23 58.4	2.354	3.307	7.3	19.4
7 30	21 36.61	-13 9.6	1.443	2.437	6.2	19.8	7 30	21 35.51	-24 36.9	2.324	3.315	4.5	19.2
8 9	21 27.78	-13 47.1	1.418	2.430	1.5	19.5	8 9	21 27.55	-25 10.8	2.320	3.324	2.9	19.1
8 19	21 18.53	-14 26.4	1.419	2.424	3.6	19.6	8 19	21 19.45	-25 36.1	2.345	3.333	4.6	19.3
8 29	21 10.05	-15 2.0	1.445	2.417	8.4	19.9	8 29	21 12.00	-25 50.3	2.398	3.341	7.3	19.5
9 8	21 3.44	-15 29.8	1.496	2.411	12.7	20.1	9 8	21 5.89	-25 52.5	2.476	3.350	10.0	19.6
9 18	20 59.39	-15 47.1	1.567	2.405	16.4	20.4	9 18	21 1.60	-25 43.1	2.576	3.358	12.3	19.8
130068	1999 <i>VH</i> ₁₉₆		8 11.5 265°92	11.2/23.1	18		304464	2006 <i>UP</i> ₄₄		8 11.5 317°06	1.6/10.2	18	
7 10	21 45.46	+19 44.3	2.072	2.779	17.5	19.7	7 10	21 47.23	-17 33.6	1.857	2.749	12.4	21.3
7 20	21 41.07	+20 4.9	1.979	2.765	15.8	19.6	7 20	21 42.39	-18 10.8	1.786	2.742	8.9	21.1
7 30	21 34.87	+19 56.0	1.903	2.752	14.0	19.4	7 30	21 35.62	-18 53.8	1.738	2.735	5.1	20.8
8 9	21 27.44	+19 14.6	1.846	2.738	12.3	19.3	8 9	21 27.62	-19 37.5	1.716	2.728	1.7	20.6
8 19	21 19.53	+18 0.2	1.812	2.724	11.3	19.2	8 19	21 19.27	-20 16.8	1.721	2.721	4.1	20.7
8 29	21 12.09	+16 16.1	1.801	2.710	11.4	19.1	8 29	21 11.59	-20 47.1	1.752	2.714	8.1	21.0
9 8	21 5.99	+14 9.8	1.814	2.695	12.7	19.2	9 8	21 5.49	-21 5.6	1.808	2.708	11.7	21.2
9 18	21 1.90	+11 50.6	1.850	2.681	14.6	19.3	9 18	21 1.60	-21 11.4	1.885	2.702	14.9	21.4
316880	2000 <i>RM</i> ₁₀₇		8 11.5 294°08	1.5/10.3	18		112680	2002 <i>PS</i> ₉₆		8 11.5 20°53	1.8/10.4	17	
7 10	21 47.14	-17 24.6	2.000	2.890	11.8	20.6	7 10	21 45.42	-15 30.5	0.976	1.898	18.1	19.1
7 20	21 42.22	-18 1.0	1.924	2.879	8.5	20.4	7 20	21 42.00	-16 23.0	0.936	1.906	13.0	18.8
7 30	21 35.48	-18 43.0	1.872	2.869	4.8	20.2	7 30	21 35.69	-17 27.9	0.914	1.915	7.3	18.5
8 9	21 27.55	-19 25.9	1.847	2.859	1.6	19.9	8 9	21 27.64	-18 35.7	0.914	1.927	2.0	18.3
8 19	21 19.27	-20 4.9	1.849	2.849	3.9	20.1	8 19	21 19.36	-19 36.5	0.936	1.939	5.6	18.5
8 29	21 11.58	-20 35.7	1.877	2.839	7.7	20.3	8 29	21 12.44	-20 22.1	0.979	1.953	11.1	18.9
9 8	21 5.37	-20 55.6	1.931	2.829	11.2	20.5	9 8	21 8.13	-20 48.2	1.042	1.968	15.9	19.2
9 18	21 1.23	-21 3.5	2.006	2.819	14.3	20.7	9 18	21 7.05	-20 54.3	1.123	1.984	20.0	19.5
107355	2001 <i>CP</i> ₂₇		8 11.5 180°86	4.4/7.5	18	R	202085	2004 <i>SZ</i> ₆₀		8 11.5 18°51	12.2/21.4	18	
7 10	21 50.01	-25 18.5	2.118	3.009	11.1	20.0	7 10	21 43.79	+12 45.7	1.296	2.099	21.8	19.6
7 20	21 44.24	-26 31.4	2.058	3.010	8.2	19.8	7 20	21 40.37	+13 37.1	1.241	2.105	19.0	19.5
7 30	21 36.59	-27 43.8	2.023	3.010	5.5	19.7	7 30	21 34.64	+13 52.7	1.201	2.113	16.1	19.3
8 9	21 27.76	-28 49.1	2.014	3.010	4.4	19.6	8 9	21 27.44	+13 29.3	1.180	2.122	13.6	19.2
8 19	21 18.63	-29 41.3	2.034	3.010	6.2	19.7	8 19	21 19.89	+12 28.0	1.178	2.131	12.3	19.1
8 29	21 10.19	-30 16.7	2.080	3.009	9.1	19.9	8 29	21 13.24	+10 55.4	1.197	2.142	12.8	19.2
9 8	21 3.32	-30 33.9	2.151	3.008	11.9	20.1	9 8	21 8.58	+9 2.9	1.237	2.154	14.7	19.4
9 18	20 58.60	-30 34.1	2.242	3.006	14.4	20.3	9 18	21 6.59	+7 2.7	1.298	2.166	17.3	19.6
50488	2000 <i>DA</i> ₈₆		8 11.5 6°10	5.9/8.3	18		72083	2000 <i>YP</i> ₄₀ </					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
337336	2001 <i>FF</i> ₁₀		8 11.5 145°20	4.9/16.4	18		416686	2004 <i>XK</i> ₉₇		8 11.5 148°00	0.9/12.1	17	
7 10	21 47.18	+ 2 54.4	2.305	3.115	13.2	21.6	7 10	21 53.91	-11 34.4	1.687	2.561	14.4	21.6
7 20	21 41.92	+ 2 42.3	2.233	3.124	10.6	21.5	7 20	21 47.22	-11 44.7	1.625	2.569	10.6	21.4
7 30	21 35.18	+ 2 12.4	2.184	3.133	7.9	21.3	7 30	21 38.37	-12 5.2	1.586	2.577	6.2	21.1
8 9	21 27.54	+ 1 25.8	2.160	3.142	5.6	21.2	8 9	21 28.22	-12 32.0	1.573	2.585	1.7	20.9
8 19	21 19.68	+ 0 25.6	2.164	3.150	5.0	21.2	8 19	21 17.82	-13 0.8	1.587	2.592	3.4	21.0
8 29	21 12.37	- 0 43.7	2.195	3.157	6.7	21.3	8 29	21 8.34	-13 27.2	1.628	2.598	7.8	21.3
9 8	21 6.29	- 1 56.7	2.253	3.165	9.2	21.5	9 8	21 0.75	-13 47.7	1.694	2.603	11.8	21.5
9 18	21 1.94	- 3 8.1	2.336	3.171	11.8	21.7	9 18	20 55.68	-14 0.2	1.782	2.608	15.2	21.8
107846	2001 <i>FR</i> ₇₅		8 11.5 252°35	0°2/11.3	18		186949	2004 <i>RW</i> ₄₇		8 11.5 347°94	0°1/11.6	18	
7 10	21 49.07	-12 9.1	1.576	2.462	14.5	19.9	7 10	21 45.57	-12 52.6	1.889	2.774	12.6	20.3
7 20	21 44.07	-13 0.1	1.500	2.452	10.6	19.6	7 20	21 41.13	-13 19.9	1.819	2.770	9.1	20.1
7 30	21 36.77	-14 5.0	1.447	2.442	6.1	19.3	7 30	21 34.90	-13 56.5	1.772	2.767	5.3	19.9
8 9	21 27.90	-15 17.9	1.418	2.431	1.2	19.0	8 9	21 27.53	-14 38.4	1.751	2.764	1.1	19.6
8 19	21 18.51	-16 31.7	1.416	2.421	3.9	19.1	8 19	21 19.87	-15 20.9	1.756	2.761	3.1	19.7
8 29	21 9.81	-17 39.0	1.440	2.410	8.7	19.4	8 29	21 12.84	-15 59.5	1.789	2.759	7.2	20.0
9 8	21 2.94	-18 34.1	1.488	2.398	13.1	19.6	9 8	21 7.29	-16 30.3	1.845	2.757	10.9	20.2
9 18	20 58.65	-19 13.9	1.557	2.387	16.9	19.8	9 18	21 3.81	-16 51.3	1.924	2.756	14.1	20.4
214738	2006 <i>TB</i> ₄₁		8 11.5 88°53	1.7/10.1	18		144078	2004 <i>BM</i> ₄₉		8 11.5 318°78	1°0/12.1	18	
7 10	21 48.46	-18 20.8	2.025	2.914	11.7	20.6	7 10	21 49.07	-11 15.4	1.355	2.246	16.1	20.0
7 20	21 43.07	-18 53.8	1.963	2.917	8.4	20.4	7 20	21 44.28	-11 31.4	1.286	2.240	11.9	19.7
7 30	21 35.91	-19 30.8	1.924	2.920	4.8	20.2	7 30	21 36.96	-12 1.2	1.239	2.233	7.1	19.4
8 9	21 27.69	-20 7.1	1.912	2.924	1.8	20.0	8 9	21 27.98	-12 40.6	1.214	2.227	1.9	19.1
8 19	21 19.24	-20 38.3	1.928	2.927	3.9	20.1	8 19	21 18.51	-13 23.7	1.215	2.221	3.9	19.2
8 29	21 11.51	-21 0.8	1.971	2.930	7.5	20.3	8 29	21 9.92	-14 4.2	1.240	2.215	9.1	19.5
9 8	21 5.29	-21 12.5	2.039	2.934	10.8	20.6	9 8	21 3.43	-14 36.7	1.287	2.209	13.8	19.8
9 18	21 1.13	-21 13.0	2.128	2.937	13.7	20.8	9 18	20 59.79	-14 58.2	1.354	2.204	17.8	20.0
388998	2008 <i>UK</i> ₁₀₇		8 11.5 219°25	1°2/10.6	18		511316	2014 <i>DL</i> ₁₁₈		8 11.5 226°62	1°4/10.3	18	
7 10	21 49.88	-16 46.6	1.958	2.843	12.2	21.8	7 10	21 49.28	-16 55.7	2.177	3.059	11.3	22.5
7 20	21 44.21	-17 18.0	1.886	2.838	8.8	21.5	7 20	21 43.71	-17 41.1	2.097	3.048	8.1	22.3
7 30	21 36.64	-17 55.0	1.838	2.833	5.0	21.3	7 30	21 36.36	-18 32.5	2.043	3.038	4.6	22.1
8 9	21 27.86	-18 33.2	1.816	2.828	1.4	21.0	8 9	21 27.84	-19 25.1	2.015	3.027	1.5	21.8
8 19	21 18.74	-19 7.8	1.822	2.823	3.8	21.2	8 19	21 18.94	-20 14.0	2.016	3.015	3.7	22.0
8 29	21 10.30	-19 34.6	1.855	2.817	7.7	21.4	8 29	21 10.58	-20 54.8	2.045	3.003	7.4	22.2
9 8	21 3.43	-19 51.2	1.913	2.812	11.3	21.7	9 8	21 3.60	-21 24.4	2.099	2.990	10.8	22.4
9 18	20 58.74	-19 56.5	1.993	2.806	14.4	21.8	9 18	20 58.61	-21 41.9	2.176	2.977	13.7	22.5
239198	2006 <i>MP</i> ₅		8 11.5 334°25	3°3/ 8.9	18		292743	2006 <i>UO</i> ₁₇₃		8 11.5 278°60	4°4/ 8.5	18	
7 10	21 43.29	-18 27.7	1.373	2.286	14.5	19.0	7 10	21 50.97	-22 27.7	1.517	2.419	14.1	20.7
7 20	21 40.22	-19 45.3	1.300	2.267	10.5	18.7	7 20	21 45.71	-23 31.4	1.443	2.402	10.3	20.5
7 30	21 34.71	-21 13.5	1.250	2.249	6.1	18.4	7 30	21 37.84	-24 39.2	1.391	2.385	6.4	20.2
8 9	21 27.51	-22 43.6	1.223	2.232	3.3	18.2	8 9	21 28.17	-25 42.6	1.364	2.369	4.4	20.0
8 19	21 19.72	-24 5.9	1.220	2.216	6.3	18.3	8 19	21 17.88	-26 33.4	1.362	2.352	6.9	20.1
8 29	21 12.66	-25 11.7	1.241	2.201	10.9	18.6	8 29	21 8.38	-27 5.5	1.386	2.334	11.0	20.3
9 8	21 7.57	-25 55.9	1.284	2.188	15.3	18.8	9 8	21 0.95	-27 16.6	1.431	2.317	15.1	20.5
9 18	21 5.28	-26 17.0	1.345	2.175	19.0	19.0	9 18	20 56.43	-27 7.5	1.495	2.300	18.7	20.7
146807	2001 <i>YF</i> ₇₅		8 11.5 93°85	3°4/14.2	18		481074	2005 <i>SL</i> ₁₁		8 11.5 274°89	3°7/ 8.4	18	
7 10	21 47.87	- 4 22.8	2.150	2.997	12.7	19.8	7 10	21 49.44	-24 52.1	2.203	3.093	10.8	21.5
7 20	21 42.51	- 4 10.7	2.081	3.002	9.8	19.6	7 20	21 43.87	-25 32.9	2.125	3.077	7.9	21.3
7 30	21 35.56	- 4 11.4	2.034	3.008	6.7	19.4	7 30	21 36.46	-26 13.3	2.072	3.062	5.1	21.1
8 9	21 27.64	- 4 23.4	2.013	3.013	3.9	19.3	8 9	21 27.86	-26 47.9	2.045	3.046	3.7	21.0
8 19	21 19.49	- 4 44.6	2.020	3.018	3.9	19.3	8 19	21 18.89	-27 12.2	2.046	3.030	5.5	21.1
8 29	21 11.96	- 5 11.7	2.054	3.023	6.5	19.5	8 29	21 10.51	-27 22.9	2.074	3.014	8.5	21.3
9 8	21 5.76	- 5 40.7	2.114	3.029	9.6	19.7	9 8	21 3.59	-27 18.9	2.126	2.998	11.5	21.4
9 18	21 1.42	- 6 8.3	2.198	3.034	12.4	19.9	9 18	20 58.74	-27 1.0	2.200	2.981	14.2	21.6
16150	Clinch		8 11.5 353°98	12°0/ 2.0	18		342570	2008 <i>UY</i> ₂₅₇		8 11.5 200°01	5°5/16.4	18	
7 10	21 44.97	-35 58.4	1.140	2.059	16.3	17.1	7 10	21 48.10	+ 3 40.6	2.385	3.186	13.0	21.2
7 20	21 42.09	-38 7.6	1.100	2.051	13.6	17.0	7 20	21 42.66	+ 3 52.0	2.300	3.182	10.7	21.0
7 30	21 35.99	-40 4.1	1.079	2.045	12.1	16.8	7 30	21 35.67	+ 3 46.6	2.237	3.178	8.2	20.8
8 9	21 27.78	-41 33.2	1.079	2.040	12.5	16.9	8 9	21 27.70	+ 3 24.4	2.200	3.173	6.1	20.7
8 19	21 19.06	-42 24.4	1.099	2.036	14.6	17.0	8 19	21 19.41	+ 2 47.1	2.189	3.168	5.6	20.7
8 29	21 11.67	-42 33.6	1.138	2.034	17.6	17.1	8 29	21 11.58	+ 1 58.0	2.206	3.162	7.1	20.7
9 8	21 7.12	-42 3.7	1.193	2.034	20.5	17.3	9 8	21 4.92	+ 1 1.8	2.250	3.156	9.5	20.9
9 18	21 6.14	-41 1.5	1.263	2.036	23.1	17.5	9 18	20 59.98	+ 0 3.5	2.318	3.148	12.0	21.0
428611	2008 <i>EW</i> ₁₄₉		8 11.5 138°59	1°1/10.8	17		387906	2004 <i>XQ</i>		8 11.5 315°46	5°9/14.0	18	
7 10	21 52.26	-15 52.9	1.710	2.595	13.6	22.0	7 10	21 50.40	- 3 54.7	1.473	2.335	16.7	19.5
7 20	21 46.03	-16 26.7	1.652	2.604	9.8	21.8	7 20	21 45.24	- 2 55.3	1.387	2.315	13.3	19.2
7 30	21 37.69	-17 7.5	1.616	2.612	5.5	21.6	7 30	21 37.58	- 2 10.0	1.321	2.295	9.5	18.9
8 9	21 28.08	-17 49.7	1.607	2.619	1.3	21.3	8 9	21 28.14	- 1 40.6	1.279	2.275	6.4	18.7
8 19	21 18.23	-18 28.0	1.625	2.627	3.9	21.5	8 19	21 18.00	- 1 27.1	1.261	2.256	6.4	18.7
8 29	21 9.28	-18 57.9	1.669	2.633	8.2	21.8	8 29	21 8.50	- 1 27.4	1.268	2.237	9.7	18.8
9 8	21 2.19	-19 16.5	1.738	2.640	12.1	22.0	9 8	21 0.88	- 1 37.1	1.298	2.219	13.8	19.0
9 18	20 57.57	-19 23.3	1.829	2.645	15.3	22.3	9 18	20 56.02	- 1 51.3	1.347	2.202	17.6	19.2
353822	2012 <i>TJ</i> ₃₁₇		8 11.5 317°35	3°6/ 8.3	18		248150	2004 <i>TM</i> ₁₉₆		8 11.5 282°0			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V	
314451	2005 VQ ₁₁₃	8 11.5 204°50 0°6/12.1 18						397138	2005 WZ ₁₁₁	8 11.5 34°83 9°5/19.9 18				
7 10	21 46.84	-11 32.3	2.630	3.495	10.1	22.0	7 10	21 45.68	+11 20.4	1.852	2.629	17.1	19.8	
7 20	21 41.61	-11 48.7	2.552	3.492	7.4	21.8	7 20	21 41.18	+12 5.3	1.792	2.641	14.7	19.7	
7 30	21 35.01	-12 12.2	2.498	3.488	4.4	21.6	7 30	21 34.93	+12 24.6	1.751	2.654	12.3	19.6	
8 9	21 27.57	-12 40.1	2.472	3.484	1.2	21.4	8 9	21 27.60	+12 16.8	1.731	2.667	10.4	19.5	
8 19	21 19.89	-13 9.8	2.475	3.479	2.4	21.4	8 19	21 20.03	+11 42.8	1.734	2.681	9.5	19.5	
8 29	21 12.67	-13 38.1	2.506	3.475	5.6	21.6	8 29	21 13.15	+10 46.6	1.761	2.695	10.1	19.5	
9 8	21 6.54	-14 2.4	2.565	3.470	8.5	21.8	9 8	21 7.77	+9 35.1	1.811	2.710	11.8	19.7	
9 18	21 1.97	-14 20.8	2.648	3.464	11.1	22.0	9 18	21 4.43	+8 15.8	1.883	2.725	13.9	19.8	
18144	2000 OO ₄₈	8 11.5 335°74 2°2/13.3 18						21119	1992 UJ	8 11.5 295°84 0°4/11.7 18 R				
7 10	21 42.93	-4 18.7	1.364	2.244	16.7	17.4	7 10	21 49.29	-12 57.3	1.591	2.478	14.4	18.7	
7 20	21 39.84	-5 34.2	1.290	2.234	12.7	17.1	7 20	21 44.33	-13 11.4	1.506	2.458	10.6	18.4	
7 30	21 34.45	-7 17.0	1.236	2.224	8.0	16.9	7 30	21 37.02	-13 36.0	1.443	2.438	6.2	18.1	
8 9	21 27.50	-9 21.1	1.206	2.215	3.2	16.6	8 9	21 28.08	-14 7.4	1.405	2.417	1.4	17.7	
8 19	21 20.00	-11 36.8	1.201	2.207	3.8	16.6	8 19	21 18.52	-14 40.7	1.392	2.397	3.7	17.9	
8 29	21 13.21	-13 51.7	1.222	2.200	8.8	16.8	8 29	21 9.60	-15 10.6	1.405	2.377	8.6	18.1	
9 8	21 8.26	-15 54.5	1.266	2.194	13.6	17.1	9 8	21 2.47	-15 32.9	1.442	2.357	13.1	18.3	
9 18	21 5.95	-17 37.3	1.332	2.188	17.7	17.3	9 18	20 57.94	-15 45.1	1.499	2.337	17.0	18.5	
504865	2010 US ₅₆	8 11.5 246°01 4°9/14.5 18						510446	2011 WG ₄	8 11.5 166°08 7°1/19.4 17				
7 10	21 50.26	-2 40.8	1.571	2.425	16.2	21.6	7 10	21 46.39	+11 49.6	2.813	3.554	12.6	21.8	
7 20	21 44.88	-2 25.1	1.495	2.419	12.8	21.3	7 20	21 41.23	+12 14.8	2.733	3.558	10.9	21.7	
7 30	21 37.22	-2 28.0	1.439	2.412	8.9	21.1	7 30	21 34.80	+12 22.0	2.675	3.562	9.2	21.6	
8 9	21 28.05	-2 48.9	1.407	2.405	5.6	20.9	8 9	21 27.57	+12 10.3	2.640	3.566	7.7	21.5	
8 19	21 18.39	-3 24.7	1.401	2.398	5.4	20.9	8 19	21 20.11	+11 40.6	2.630	3.569	7.1	21.5	
8 29	21 9.45	-4 10.6	1.419	2.391	8.6	21.0	8 29	21 13.07	+10 55.0	2.648	3.571	7.6	21.5	
9 8	21 2.32	-5 0.0	1.462	2.383	12.6	21.3	9 8	21 7.02	+9 58.0	2.691	3.573	9.0	21.6	
9 18	20 57.74	-5 47.4	1.526	2.376	16.2	21.5	9 18	21 2.43	+8 54.1	2.758	3.575	10.7	21.7	
459867	2013 YE ₆₂	8 11.5 136°49 3°6/13.9 16						199993	2007 JP ₂₇	8 11.5 160°26 1°2/12.6 18				
7 10	21 51.31	-4 47.5	1.997	2.844	13.6	21.1	7 10	21 48.40	-7 51.9	2.120	2.980	12.4	20.7	
7 20	21 45.08	-4 26.0	1.929	2.851	10.5	20.9	7 20	21 42.99	-8 44.5	2.050	2.986	9.2	20.5	
7 30	21 37.08	-4 17.3	1.884	2.858	7.1	20.7	7 30	21 35.92	-9 50.2	2.005	2.992	5.5	20.3	
8 9	21 27.99	-4 20.4	1.865	2.865	4.2	20.5	8 9	21 27.81	-11 4.8	1.987	2.997	1.9	20.1	
8 19	21 18.67	-4 33.2	1.873	2.871	4.2	20.5	8 19	21 19.43	-12 22.9	1.997	3.002	2.8	20.2	
8 29	21 10.05	-4 52.4	1.909	2.877	7.0	20.7	8 29	21 11.64	-13 38.6	2.036	3.006	6.5	20.4	
9 8	21 2.96	-5 14.4	1.971	2.883	10.3	20.9	9 8	21 5.21	-14 46.9	2.102	3.009	10.0	20.7	
9 18	20 57.95	-5 35.6	2.056	2.888	13.3	21.1	9 18	21 0.70	-15 44.6	2.191	3.012	13.0	20.9	
510465	2011 WT ₆₀	8 11.5 221°81 4°2/ 7.6 18						161441	2003 XV ₉	8 11.5 310°13 8°9/ 5.8 18				
7 10	21 47.98	-25 18.0	2.184	3.077	10.8	21.4	7 10	21 54.91	-35 41.3	1.605	2.495	14.1	19.1	
7 20	21 42.78	-26 23.8	2.122	3.075	7.9	21.2	7 20	21 48.70	-36 36.8	1.535	2.474	11.4	18.9	
7 30	21 35.82	-27 29.2	2.084	3.072	5.3	21.1	7 30	21 39.60	-37 21.6	1.488	2.454	9.4	18.7	
8 9	21 27.75	-28 28.1	2.073	3.070	4.2	21.0	8 9	21 28.60	-37 46.4	1.464	2.433	9.0	18.7	
8 19	21 19.38	-29 15.0	2.090	3.068	5.9	21.1	8 19	21 17.07	-37 44.4	1.464	2.413	10.7	18.7	
8 29	21 11.65	-29 46.4	2.134	3.065	8.7	21.3	8 29	21 6.61	-37 12.9	1.487	2.394	13.5	18.8	
9 8	21 5.38	-30 0.9	2.201	3.062	11.6	21.5	9 8	20 58.57	-36 14.5	1.531	2.375	16.6	19.0	
9 18	21 1.14	-29 59.1	2.289	3.060	14.0	21.6	9 18	20 53.75	-34 54.4	1.593	2.356	19.4	19.2	
360917	2005 ST ₂₉₀	8 11.5 301°85 5°8/17.1 18						91344	1999 JQ ₃₀	8 11.5 100°41 0°6/11.9 18				
7 10	21 44.45	+4 28.0	2.151	2.961	14.0	21.1	7 10	21 51.75	-12 11.1	1.761	2.637	13.7	20.3	
7 20	21 40.16	+4 25.1	2.069	2.957	11.5	20.9	7 20	21 45.53	-12 28.1	1.708	2.654	10.0	20.1	
7 30	21 34.31	+4 2.3	2.009	2.952	8.8	20.8	7 30	21 37.37	-12 54.3	1.678	2.670	5.8	19.9	
8 9	21 27.45	+3 20.0	1.973	2.948	6.6	20.6	8 9	21 28.10	-13 25.7	1.674	2.686	1.4	19.7	
8 19	21 20.27	+2 20.6	1.963	2.944	5.9	20.6	8 19	21 18.69	-13 57.9	1.697	2.702	3.2	19.8	
8 29	21 13.59	+1 8.6	1.979	2.940	7.3	20.7	8 29	21 10.19	-14 26.5	1.747	2.717	7.4	20.1	
9 8	21 8.14	+0 9.7	2.021	2.937	9.9	20.8	9 8	21 3.46	-14 48.5	1.823	2.732	11.1	20.4	
9 18	21 4.46	-1 28.5	2.087	2.933	12.6	21.0	9 18	20 59.06	-15 2.0	1.920	2.747	14.3	20.6	
476636	2008 SA ₂₄₄	8 11.5 297°61 6°2/16.2 18						49356	1998 WT ₁₃	8 11.5 297°17 2°6/ 9.6 18				
7 10	21 45.59	+2 19.9	1.650	2.486	16.4	21.5	7 10	21 49.31	-20 18.4	1.782	2.677	12.7	18.9	
7 20	21 41.56	+2 19.5	1.558	2.465	13.4	21.3	7 20	21 44.08	-20 54.9	1.709	2.666	9.2	18.7	
7 30	21 35.39	+1 55.2	1.486	2.445	10.1	21.1	7 30	21 36.73	-21 35.0	1.659	2.655	5.4	18.5	
8 9	21 27.73	+1 6.6	1.437	2.424	7.1	20.8	8 9	21 28.00	-22 12.9	1.635	2.644	2.7	18.3	
8 19	21 19.44	+0 3.6	1.412	2.403	6.4	20.7	8 19	21 18.87	-22 43.3	1.638	2.634	4.9	18.4	
8 29	21 11.64	+1 29.3	1.413	2.383	8.8	20.8	8 29	21 10.46	-23 1.9	1.666	2.623	8.8	18.6	
9 8	21 5.41	+3 2.1	1.437	2.362	12.4	21.0	9 8	21 3.77	-23 6.7	1.719	2.613	12.6	18.8	
9 18	21 1.52	+4 33.9	1.484	2.342	16.1	21.2	9 18	20 59.47	-22 57.5	1.792	2.603	15.8	19.0	
161294	2003 JH ₁₄	8 11.5 347°78 14°2/23.4 18						230313	2002 CE ₂	8 11.5 115°08 3°9/ 8.1 18				
7 10	21 40.41	+16 20.6	1.281	2.068	22.8	18.6	7 10	21 49.55	-21 30.1	1.805	2.701	12.5	19.7	
7 20	21 38.17	+17 17.7	1.210	2.057	20.5	18.4	7 20	21 44.14	-23 1.9	1.754	2.711	9.0	19.5	
7 30	21 33.58	+17 36.6	1.153	2.047	18.0	18.2	7 30	21 36.69	-24 36.7	1.728	2.721	5.5	19.3	
8 9	21 27.37	+17 11.5	1.112	2.038	15.8	18.0	8 9	21 27.99	-26 6.2	1.728	2.731	3.9	19.2	
8 19	21 20.57	+16 1.0	1.090	2.031	14.4	17.9	8 19	21 19.01	-27 22.9	1.756	2.741	6.1	19.4	
8 29	21 14.50	+14 9.6	1.087	2.025	14.5	17.9	8 29	21 10.85	-28 21.3	1.810	2.750	9.5	19.6	
9 8	21 10.36	+11 49.1	1.105	2.021	16.1	18.0	9 8	21 4.44	-28 59.4	1.888	2.759	12.7	19.8	
9 18	21 8.98	+9 13.9	1.142	2.019	18.6	18.2	9 18	21 0.38	-29 17.6	1.986	2.768	15.5	20.1	
423091	2003 YX ₁₀₉	8 11.5 243°80 1°4/12.3 18						470777	2008 UA ₂₆₂	8 11.5 301°90 6°3/14.9 18				
7 10	21 52.35	-10 35.0	1.740	2.612	14.1	21.7	7 10	21 49.22	-0 42.5	1.643	2.488	16.1	20.7	
7 20	21 46.33	-10 41.7	1.655	2.598	10.5	21.4	7 20	21 44.19	+0 2.6	1.556	2.470	13.0	20.5	
7 30	21 38.06	-10 59.6	1.593											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
438293	2006 <i>BE</i> ₃₃		8 11.5 96°03	0°3/11.7	17		258625	2002 <i>DH</i> ₁₄		8 11.5 233°90	0°1/11.4	18	
7 10	21 48.30	-10 16.8	1.861	2.735	13.2	21.6	7 10	21 45.96	-12 48.0	2.330	3.205	10.9	21.1
7 20	21 43.02	-11 21.3	1.808	2.753	9.6	21.4	7 20	21 41.21	-13 30.5	2.253	3.200	7.9	20.9
7 30	21 35.95	-12 38.0	1.778	2.771	5.5	21.2	7 30	21 34.93	-14 21.5	2.200	3.194	4.5	20.7
8 9	21 27.83	-14 0.9	1.775	2.788	1.2	20.9	8 9	21 27.67	-15 17.0	2.175	3.188	0.9	20.4
8 19	21 19.53	-15 23.4	1.800	2.805	3.1	21.1	8 19	21 20.12	-16 12.6	2.178	3.182	2.8	20.6
8 29	21 11.99	-16 39.3	1.853	2.822	7.2	21.4	8 29	21 13.06	-17 4.0	2.210	3.176	6.3	20.8
9 8	21 6.03	-17 43.8	1.932	2.838	10.8	21.7	9 8	21 7.19	-17 47.5	2.267	3.170	9.6	21.0
9 18	21 2.17	-18 34.3	2.033	2.854	13.8	21.9	9 18	21 3.05	-18 21.1	2.348	3.163	12.4	21.2
515922	2015 <i>PM</i> ₃₁₅		8 11.5 97°07	0°0/11.5	18		505669	2014 <i>UA</i> ₄₇		8 11.5 339°39	0°7/11.2	17	
7 10	21 50.11	-14 52.0	2.130	3.006	11.7	21.6	7 10	21 45.10	-14 3.7	0.928	1.851	18.8	20.5
7 20	21 44.19	-14 53.0	2.062	3.010	8.5	21.4	7 20	21 42.27	-14 31.3	0.867	1.837	13.8	20.2
7 30	21 36.59	-14 59.3	2.019	3.013	4.9	21.2	7 30	21 36.25	-15 15.2	0.824	1.825	7.9	19.8
8 9	21 27.97	-15 7.8	2.003	3.016	1.0	21.0	8 9	21 28.02	-16 8.2	0.801	1.815	1.6	19.4
8 19	21 19.16	-15 15.8	2.015	3.019	2.9	21.1	8 19	21 19.07	-17 1.2	0.799	1.805	5.2	19.6
8 29	21 11.03	-15 20.6	2.055	3.023	6.7	21.4	8 29	21 11.26	-17 44.9	0.818	1.797	11.6	19.9
9 8	21 4.36	-15 20.2	2.121	3.026	10.0	21.6	9 8	21 6.17	-18 12.6	0.855	1.791	17.3	20.2
9 18	20 59.68	-15 13.6	2.210	3.029	12.9	21.8	9 18	21 4.72	-18 21.6	0.908	1.786	22.1	20.5
54853	2001 <i>OQ</i> ₁₉		8 11.5 332°50	0°6/11.2	18		190532	2000 <i>QX</i> ₂₁₅		8 11.5 334°40	6°3/8.4	18	
7 10	21 46.21	-14 43.7	1.157	2.068	16.8	18.1	7 10	21 48.72	-26 26.6	1.134	2.054	16.3	19.1
7 20	21 42.67	-15 2.7	1.086	2.051	12.3	17.8	7 20	21 44.78	-27 1.7	1.064	2.031	12.3	18.8
7 30	21 36.31	-15 33.8	1.034	2.034	7.1	17.4	7 30	21 37.65	-27 34.5	1.014	2.009	8.2	18.5
8 9	21 28.00	-16 11.4	1.005	2.018	1.4	17.0	8 9	21 28.31	-27 55.6	0.986	1.988	6.3	18.3
8 19	21 19.00	-16 48.7	0.998	2.003	4.7	17.2	8 19	21 18.23	-27 56.6	0.979	1.969	8.8	18.4
8 29	21 10.91	-17 18.7	1.014	1.990	10.4	17.5	8 29	21 9.25	-27 33.1	0.994	1.951	13.3	18.6
9 8	21 5.14	-17 36.2	1.050	1.978	15.7	17.7	9 8	21 2.94	-26 45.5	1.028	1.935	17.9	18.8
9 18	21 2.57	-17 39.2	1.104	1.967	20.1	18.0	9 18	21 0.21	-25 37.6	1.079	1.920	22.0	19.0
256606	2007 <i>VZ</i> ₄₉		8 11.5 50°42	9°2/7.3	17		234255	2000 <i>UF</i> ₂₇		8 11.5 299°30	4°7/14.9	18	
7 10	21 57.43	-32 27.1	1.106	2.015	17.5	19.1	7 10	21 46.08	-1 32.0	1.621	2.475	15.8	20.0
7 20	21 50.62	-33 31.4	1.079	2.033	13.6	18.9	7 20	21 41.93	-1 39.4	1.534	2.458	12.5	19.7
7 30	21 40.55	-34 22.5	1.072	2.052	10.3	18.8	7 30	21 35.64	-2 8.1	1.468	2.441	8.8	19.5
8 9	21 28.76	-34 49.3	1.086	2.071	9.2	18.8	8 9	21 27.87	-2 56.9	1.426	2.424	5.5	19.2
8 19	21 17.11	-34 45.7	1.123	2.091	11.1	18.9	8 19	21 19.51	-4 2.0	1.408	2.407	5.1	19.2
8 29	21 7.41	-34 11.7	1.181	2.111	14.4	19.2	8 29	21 11.71	-5 17.3	1.416	2.390	8.3	19.3
9 8	21 0.89	-33 12.4	1.259	2.131	17.7	19.5	9 8	21 5.52	-6 35.1	1.448	2.374	12.3	19.5
9 18	20 58.02	-31 54.9	1.354	2.151	20.6	19.7	9 18	21 1.72	-7 48.2	1.501	2.357	16.1	19.7
367492	2009 <i>HB</i> ₃₀		8 11.5 90°03	4°1/8.9	17		469267	2016 <i>JX</i> ₃₁		8 11.5 98°71	3°3/9.2	17	
7 10	21 52.76	-21 17.5	1.365	2.268	15.2	20.9	7 10	21 51.54	-18 48.9	1.413	2.313	15.0	21.3
7 20	21 46.86	-22 25.2	1.320	2.280	11.0	20.7	7 20	21 45.93	-20 7.4	1.365	2.325	10.7	21.1
7 30	21 38.38	-23 35.9	1.296	2.292	6.6	20.5	7 30	21 37.85	-21 32.2	1.340	2.337	6.2	20.9
8 9	21 28.36	-24 40.5	1.297	2.303	4.1	20.3	8 9	21 28.28	-22 53.9	1.339	2.348	3.3	20.7
8 19	21 18.12	-25 30.8	1.323	2.315	6.6	20.5	8 19	21 18.45	-24 3.9	1.365	2.360	6.0	20.9
8 29	21 9.09	-26 1.8	1.374	2.326	10.8	20.8	8 29	21 9.71	-24 55.8	1.415	2.371	10.3	21.2
9 8	21 2.40	-26 12.2	1.446	2.338	14.7	21.1	9 8	21 3.17	-25 27.0	1.488	2.381	14.2	21.5
9 18	20 58.69	-26 3.6	1.538	2.349	18.0	21.3	9 18	20 59.47	-25 38.1	1.581	2.392	17.5	21.7
129953	1999 <i>TE</i> ₂₂₅		8 11.5 208°25	2°3/9.8	18		401739	2013 <i>JN</i> ₃₅		8 11.5 240°12	6°5/17.8	18	
7 10	21 51.98	-20 39.4	2.092	2.976	11.5	20.0	7 10	21 45.46	+ 7 3.2	2.494	3.278	13.0	20.7
7 20	21 45.70	-21 8.1	2.020	2.972	8.3	19.8	7 20	21 40.75	+ 7 26.7	2.411	3.274	11.0	20.6
7 30	21 37.54	-21 38.6	1.973	2.967	4.9	19.6	7 30	21 34.64	+ 7 32.6	2.349	3.271	8.8	20.4
8 9	21 28.19	-22 6.3	1.953	2.962	2.3	19.4	8 9	21 27.62	+ 7 20.5	2.312	3.267	7.1	20.3
8 19	21 18.55	-22 26.9	1.961	2.956	4.3	19.5	8 19	21 20.33	+ 6 51.3	2.300	3.263	6.5	20.3
8 29	21 9.60	-22 37.3	1.996	2.950	7.8	19.7	8 29	21 13.45	+ 6 7.7	2.315	3.260	7.4	20.3
9 8	21 2.21	-22 36.2	2.057	2.944	11.2	19.9	9 8	21 7.66	+ 5 14.3	2.355	3.256	9.3	20.4
9 18	20 56.99	-22 23.6	2.140	2.937	14.0	20.1	9 18	21 3.45	+ 4 15.9	2.419	3.252	11.5	20.6
106847	2000 <i>YO</i> ₁₆		8 11.5 176°14	2°4/9.1	18		48007	2001 <i>BH</i> ₆₇		8 11.5 49°23	9°7/7.2	18	
7 10	21 49.09	-19 23.6	2.308	3.191	10.6	19.9	7 10	21 59.33	-35 29.5	1.244	2.142	16.8	17.0
7 20	21 43.49	-20 35.5	2.242	3.194	7.6	19.7	7 20	21 51.86	-36 20.9	1.212	2.156	13.3	16.9
7 30	21 36.23	-21 51.4	2.202	3.196	4.4	19.5	7 30	21 41.24	-36 56.4	1.200	2.171	10.6	16.7
8 9	21 27.93	-23 5.7	2.189	3.197	2.4	19.4	8 9	21 28.94	-37 6.4	1.211	2.186	9.8	16.8
8 19	21 19.32	-24 12.7	2.206	3.198	4.4	19.5	8 19	21 16.76	-36 45.6	1.244	2.201	11.4	16.9
8 29	21 11.28	-25 8.0	2.252	3.198	7.5	19.7	8 29	21 6.49	-35 54.8	1.299	2.217	14.2	17.1
9 8	21 4.58	-25 48.8	2.323	3.197	10.5	19.9	9 8	20 59.32	-34 39.9	1.375	2.233	17.3	17.3
9 18	20 59.77	-26 14.7	2.416	3.196	13.1	20.1	9 18	20 55.76	-33 8.1	1.468	2.250	20.0	17.6
339304	2004 <i>XE</i> ₇₈		8 11.5 269°10	1°5/12.6	18		443063	2013 <i>FQ</i> ₂₀		8 11.5 205°90	5°0/7.3	18	
7 10	21 48.62	- 9 20.8	1.841	2.713	13.5	20.9	7 10	21 50.57	-29 34.0	2.311	3.198	10.5	20.8
7 20	21 43.53	- 9 36.9	1.756	2.698	10.1	20.6	7 20	21 44.60	-30 19.4	2.251	3.196	8.0	20.6
7 30	21 36.45	-10 5.5	1.694	2.683	6.2	20.4	7 30	21 36.87	-31 0.3	2.215	3.195	5.7	20.5
8 9	21 28.00	-10 43.5	1.657	2.668	2.2	20.1	8 9	21 28.08	-31 31.3	2.206	3.193	5.0	20.5
8 19	21 19.08	-11 26.9	1.647	2.652	3.3	20.1	8 19	21 19.06	-31 48.3	2.224	3.191	6.4	20.5
8 29	21 10.71	-12 10.5	1.664	2.637	7.5	20.4	8 29	21 10.76	-31 49.2	2.269	3.189	8.9	20.7
9 8	21 3.87	-12 49.8	1.706	2.621	11.5	20.6	9 8	21 3.98	-31 33.9	2.338	3.187	11.4	20.9
9 18	20 59.24	-13 21.4	1.770	2.605	15.0	20.8	9 18	20 59.26	-31 4.2	2.428	3.185	13.6	21.0
253635	2003 <i>UO</i> ₁₀₇		8 11.5 237°84	0°2/11.4	17		282066	1999 <i>WE</i> ₁₇		8 11.5 2			

EPHEMERIDES

8 11.5

8 11.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
194925	2002 AS ₁₂₈		8 11.5 203°45	0°3/11.7	18		160658	1999 XT ₁₅₃		8 11.5 293°71	4°9/14.3	18	
7 10	22 0.24	-16 9.0	1.964	2.829	13.0	20.3	7 10	21 49.77	-3 13.2	1.786	2.636	14.8	18.8
7 20	21 51.68	-15 34.4	1.885	2.826	9.5	20.1	7 20	21 44.50	-2 38.6	1.695	2.615	11.7	18.5
7 30	21 40.97	-15 1.7	1.832	2.823	5.5	19.8	7 30	21 37.11	-2 18.3	1.624	2.595	8.4	18.3
8 9	21 28.93	-14 29.0	1.807	2.819	1.2	19.5	8 9	21 28.24	-2 12.7	1.578	2.574	5.5	18.1
8 19	21 16.62	-13 54.9	1.811	2.815	3.3	19.7	8 19	21 18.78	-2 20.8	1.559	2.553	5.3	18.0
8 29	21 5.19	-13 18.6	1.846	2.811	7.5	19.9	8 29	21 9.83	-2 39.5	1.565	2.533	8.3	18.2
9 8	20 55.62	-12 39.8	1.907	2.806	11.3	20.1	9 8	21 2.41	-3 4.5	1.595	2.513	11.9	18.3
9 18	20 48.54	-11 58.8	1.992	2.801	14.5	20.3	9 18	20 57.30	-3 31.2	1.648	2.492	15.4	18.5
315237	2007 RW ₂₇₂		8 11.5 266°49	3°8/9.6	17		520039	2013 VU ₂₈		8 11.5 38°60	1°0/10.8	17	
7 10	21 55.28	-22 22.5	1.396	2.295	15.2	20.6	7 10	21 48.34	-14 8.2	1.516	2.409	14.6	20.7
7 20	21 48.96	-22 51.4	1.327	2.285	11.2	20.3	7 20	21 43.56	-15 2.0	1.456	2.412	10.5	20.5
7 30	21 39.79	-23 21.7	1.280	2.275	6.8	20.0	7 30	21 36.53	-16 6.8	1.418	2.415	5.9	20.2
8 9	21 28.73	-23 46.1	1.257	2.264	3.8	19.8	8 9	21 28.10	-17 16.1	1.405	2.418	1.3	19.9
8 19	21 17.15	-23 58.0	1.259	2.254	6.3	20.0	8 19	21 19.32	-18 22.6	1.418	2.421	4.2	20.2
8 29	21 6.62	-23 53.5	1.286	2.243	10.9	20.2	8 29	21 11.40	-19 19.4	1.456	2.424	8.8	20.4
9 8	20 58.48	-23 31.9	1.335	2.233	15.2	20.4	9 8	21 5.38	-20 2.1	1.518	2.427	13.0	20.7
9 18	20 53.53	-22 55.3	1.403	2.222	19.0	20.6	9 18	21 1.93	-20 28.9	1.600	2.431	16.5	20.9
448444	2010 AP ₉₆		8 11.5 308°15	12°0/25.0	16		102926	1999 XH ₃₄		8 11.5 203°99	0°8/10.8	18	
7 10	21 43.96	+23 47.3	2.338	3.001	16.7	21.3	7 10	21 48.37	-15 7.7	2.419	3.294	10.5	20.2
7 20	21 39.97	+24 33.5	2.246	2.986	15.5	21.2	7 20	21 42.94	-15 53.7	2.342	3.289	7.6	20.0
7 30	21 34.34	+24 53.4	2.170	2.971	14.1	21.0	7 30	21 35.95	-16 46.3	2.290	3.284	4.3	19.8
8 9	21 27.60	+24 43.3	2.113	2.957	12.9	20.9	8 9	21 27.97	-17 41.1	2.265	3.278	1.0	19.5
8 19	21 20.42	+24 2.0	2.075	2.942	12.1	20.9	8 19	21 19.68	-18 33.9	2.270	3.271	3.1	19.7
8 29	21 13.64	+22 50.7	2.060	2.928	12.1	20.8	8 29	21 11.87	-19 20.5	2.304	3.264	6.5	19.9
9 8	21 8.05	+21 14.8	2.066	2.914	12.7	20.9	9 8	21 5.28	-19 57.8	2.364	3.257	9.6	20.1
9 18	21 4.26	+19 21.3	2.095	2.900	14.0	20.9	9 18	21 0.45	-20 24.4	2.447	3.249	12.3	20.2
326364	2000 VC ₂		8 11.5 197°27	9°5/2.1	17		482385	2012 AT ₈		8 11.6 246°12	0°7/10.8	18	
7 10	21 59.99	-42 17.2	2.207	3.063	12.1	20.9	7 10	21 47.13	-15 28.4	2.519	3.395	10.1	22.1
7 20	21 52.00	-43 58.0	2.157	3.059	10.5	20.8	7 20	21 42.04	-16 4.5	2.433	3.381	7.3	21.9
7 30	21 41.39	-45 25.4	2.132	3.054	9.6	20.7	7 30	21 35.45	-16 46.6	2.372	3.367	4.1	21.7
8 9	21 29.05	-46 30.4	2.133	3.048	9.8	20.7	8 9	21 27.88	-17 31.1	2.339	3.352	1.0	21.4
8 19	21 16.24	-47 7.1	2.158	3.041	11.1	20.8	8 19	21 19.97	-18 13.9	2.335	3.337	3.0	21.6
8 29	21 4.37	-47 13.6	2.207	3.033	12.9	20.9	8 29	21 12.48	-18 51.5	2.360	3.322	6.3	21.8
9 8	20 54.66	-46 52.4	2.277	3.024	14.8	21.0	9 8	21 6.12	-19 21.0	2.410	3.306	9.4	21.9
9 18	20 47.89	-46 8.3	2.363	3.014	16.5	21.1	9 18	21 1.43	-19 41.0	2.485	3.290	12.1	22.1
154248	2002 KE ₁₀		8 11.5 6°44	2°0/9.9	18		136459	2005 EA ₂₁₉		8 11.6 13°02	8°4/5.6	18	
7 10	21 44.96	-17 47.5	1.708	2.608	12.9	19.2	7 10	21 50.28	-33 1.8	1.505	2.408	14.1	18.9
7 20	21 40.90	-18 34.2	1.649	2.609	9.2	19.0	7 20	21 45.19	-34 20.4	1.462	2.411	11.1	18.7
7 30	21 34.89	-19 27.0	1.613	2.611	5.2	18.8	7 30	21 37.53	-35 30.0	1.441	2.414	8.9	18.6
8 9	21 27.70	-20 20.0	1.603	2.614	2.0	18.6	8 9	21 28.31	-36 20.8	1.443	2.418	8.5	18.6
8 19	21 20.24	-21 7.2	1.618	2.617	4.4	18.7	8 19	21 18.84	-36 46.4	1.469	2.423	10.3	18.7
8 29	21 13.54	-21 43.9	1.659	2.621	8.4	19.0	8 29	21 10.54	-36 44.0	1.517	2.428	13.0	18.9
9 8	21 8.49	-22 6.9	1.723	2.626	12.0	19.2	9 8	21 4.53	-36 15.5	1.586	2.434	15.9	19.1
9 18	21 5.67	-22 15.5	1.808	2.632	15.2	19.4	9 18	21 1.46	-35 25.3	1.672	2.441	18.4	19.3
263033	2007 FV ₄₃		8 11.5 168°44	3°4/15.4	18		418323	2008 FP ₁₁₈		8 11.6 105°73	0°5/11.2	17	
7 10	21 44.23	-0 14.3	2.605	3.429	11.4	20.5	7 10	21 51.38	-13 35.7	1.623	2.507	14.3	21.7
7 20	21 39.79	-0 44.3	2.526	3.431	9.0	20.3	7 20	21 45.50	-14 20.8	1.571	2.522	10.3	21.4
7 30	21 34.06	-1 19.2	2.470	3.433	6.3	20.1	7 30	21 37.53	-15 15.6	1.541	2.536	5.8	21.2
8 9	21 27.53	-2 27.1	2.441	3.434	4.0	20.0	8 9	21 28.30	-16 14.1	1.538	2.551	1.2	20.9
8 19	21 20.77	-3 34.8	2.439	3.435	3.6	20.0	8 19	21 18.88	-17 10.1	1.561	2.565	3.7	21.2
8 29	21 14.44	-4 47.9	2.467	3.436	5.6	20.1	8 29	21 10.40	-17 57.9	1.611	2.578	8.2	21.5
9 8	21 9.13	-6 1.6	2.522	3.437	8.2	20.3	9 8	21 3.82	-18 33.7	1.685	2.591	12.1	21.7
9 18	21 5.29	-7 11.6	2.602	3.437	10.7	20.4	9 18	20 59.71	-18 56.3	1.780	2.604	15.4	22.0
181816	1998 RD ₅₅		8 11.5 2°06	4°6/9.4	18		193551	2000 YX ₁₂₅		8 11.6 234°08	4°3/8.0	18	
7 10	21 52.24	-23 51.1	1.169	2.082	16.5	19.3	7 10	21 50.91	-24 43.3	1.974	2.866	11.8	20.4
7 20	21 46.93	-24 15.3	1.116	2.080	12.1	19.1	7 20	21 45.18	-25 44.1	1.904	2.857	8.7	20.2
7 30	21 38.64	-24 38.6	1.084	2.080	7.5	18.8	7 30	21 37.41	-26 45.1	1.859	2.849	5.7	20.0
8 9	21 28.52	-24 53.1	1.073	2.080	4.6	18.6	8 9	21 28.30	-27 39.6	1.840	2.840	4.3	19.9
8 19	21 18.07	-24 52.5	1.086	2.081	7.1	18.8	8 19	21 18.80	-28 21.8	1.849	2.830	6.2	20.0
8 29	21 8.98	-24 33.5	1.122	2.083	11.7	19.1	8 29	21 9.98	-28 47.5	1.884	2.821	9.4	20.1
9 8	21 2.56	-23 56.9	1.179	2.086	16.1	19.3	9 8	21 2.82	-28 55.4	1.943	2.811	12.6	20.3
9 18	20 59.48	-23 5.5	1.254	2.090	19.8	19.6	9 18	20 57.98	-28 46.4	2.022	2.800	15.3	20.5
34394	2000 RC ₇₀		8 11.5 355°47	4°9/8.2	18		522791	2016 NN ₇₈		8 11.6 20°93	4°7/8.7	16	
7 10	21 50.88	-27 21.8	1.815	2.711	12.4	18.7	7 10	21 47.77	-22 3.2	1.171	2.089	16.1	20.2
7 20	21 45.16	-27 58.0	1.756	2.709	9.3	18.5	7 20	21 43.58	-23 7.1	1.129	2.096	11.6	20.0
7 30	21 37.34	-28 30.7	1.720	2.708	6.3	18.3	7 30	21 36.67	-24 13.7	1.108	2.105	7.1	19.8
8 9	21 28.23	-28 53.5	1.710	2.707	5.0	18.2	8 9	21 28.15	-25 13.0	1.109	2.115	4.7	19.7
8 19	21 18.88	-29 1.7	1.726	2.706	6.7	18.4	8 19	21 19.38	-25 56.7	1.133	2.126	7.3	19.8
8 29	21 10.44	-28 52.9	1.767	2.706	9.8	18.5	8 29	21 11.89	-26 19.3	1.180	2.138	11.6	20.1
9 8	21 3.86	-28 27.4	1.832	2.706	12.9	18.7	9 8	21 6.84	-26 19.8	1.247	2.150	15.7	20.4
9 18	20 59.73	-27 47.3	1.917	2.706	15.7	18.9	9 18	21 4.84	-26 0.3	1.333	2.164	19.1	20.7
351148	2003 YG ₂₈		8 11.5 326°20	7°9/15.7	18		312351	2008 DH ₁₆		8 11.6 82°25	0°2/11.7	18	
7 10	21 47.30	+1 31.3	1.491	2									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
178235	2006 WA ₉₇		8 11.6 96°40	1°0/10.9	17		164185	2004 BD ₆₉		8 11.6 305°28	5°1/ 8.7	18	
7 10	21 52.05	-15 24.2	1.555	2.444	14.5	20.5	7 10	21 54.21	-27 22.1	1.670	2.564	13.4	19.2
7 20	21 46.08	-15 59.5	1.503	2.457	10.4	20.3	7 20	21 47.99	-27 46.4	1.592	2.545	10.1	19.0
7 30	21 37.91	-16 42.8	1.474	2.470	5.9	20.1	7 30	21 39.23	-28 6.8	1.537	2.525	6.8	18.8
8 9	21 28.42	-17 28.1	1.469	2.482	1.4	19.8	8 9	21 28.78	-28 16.5	1.507	2.506	5.1	18.6
8 19	21 18.74	-18 9.5	1.492	2.495	4.0	20.0	8 19	21 17.82	-28 10.2	1.503	2.487	7.0	18.7
8 29	21 10.07	-18 42.0	1.540	2.507	8.5	20.3	8 29	21 7.75	-27 45.1	1.524	2.468	10.6	18.8
9 8	21 3.39	-19 2.6	1.612	2.518	12.5	20.6	9 8	20 59.74	-27 2.1	1.568	2.449	14.3	19.0
9 18	20 59.31	-19 10.6	1.705	2.530	15.9	20.8	9 18	20 54.58	-26 3.9	1.632	2.431	17.6	19.2
292831	2006 UA ₂₇₆		8 11.6 261°08	0°5/12.0	18		165473	2001 AX ₃₇		8 11.6 186°35	4°6/10.5	18	
7 10	21 47.15	-11 29.5	2.055	2.930	12.1	21.1	7 10	22 10.35	-26 12.2	1.092	1.985	19.0	19.3
7 20	21 42.26	-11 57.0	1.980	2.926	8.9	20.9	7 20	22 0.41	-25 49.4	1.032	1.986	14.1	19.1
7 30	21 35.67	-12 34.2	1.930	2.922	5.2	20.7	7 30	21 46.54	-25 17.6	0.993	1.986	8.8	18.8
8 9	21 27.98	-13 17.5	1.905	2.918	1.3	20.4	8 9	21 30.28	-24 29.3	0.978	1.985	4.7	18.5
8 19	21 19.98	-14 2.7	1.908	2.913	2.9	20.5	8 19	21 13.79	-23 21.3	0.988	1.984	7.2	18.7
8 29	21 12.55	-14 45.2	1.939	2.909	6.8	20.8	8 29	20 59.34	-21 55.6	1.022	1.983	12.5	19.0
9 8	21 6.50	-15 21.3	1.995	2.905	10.3	21.0	9 8	20 48.59	-20 18.7	1.079	1.982	17.6	19.3
9 18	21 2.40	-15 48.6	2.074	2.901	13.4	21.2	9 18	20 42.24	-18 37.0	1.155	1.980	21.9	19.6
182687	2001 VQ ₃₉		8 11.6 324°34	4°0/ 8.6	18		261761	2006 BU ₅₃		8 11.6 247°11	0°2/11.8	18	
7 10	21 48.03	-23 19.0	1.709	2.610	12.8	19.7	7 10	21 45.57	-12 10.2	2.544	3.414	10.2	20.5
7 20	21 43.35	-24 8.9	1.639	2.598	9.3	19.5	7 20	21 40.90	-12 45.9	2.461	3.405	7.5	20.4
7 30	21 36.48	-25 0.4	1.591	2.585	5.9	19.2	7 30	21 34.83	-13 29.7	2.403	3.395	4.3	20.1
8 9	21 28.17	-25 46.8	1.569	2.573	4.0	19.1	8 9	21 27.84	-14 18.2	2.373	3.386	1.0	19.9
8 19	21 19.44	-26 21.9	1.573	2.561	6.2	19.2	8 19	21 20.57	-15 7.7	2.371	3.376	2.5	20.0
8 29	21 11.44	-26 41.0	1.601	2.550	9.8	19.4	8 29	21 13.71	-15 54.3	2.398	3.366	5.8	20.2
9 8	21 5.23	-26 42.5	1.653	2.540	13.4	19.6	9 8	21 7.93	-16 34.7	2.452	3.355	8.9	20.4
9 18	21 1.50	-26 27.2	1.724	2.530	16.5	19.8	9 18	21 3.72	-17 6.9	2.529	3.345	11.6	20.5
373460	2000 GX ₁₆₄		8 11.6 110°61	1°0/12.3	17		363699	2004 TS ₂₇₂		8 11.6 268°92	3°8/14.9	18	
7 10	21 51.50	-10 14.1	1.735	2.607	14.1	21.4	7 10	21 45.84	- 1 52.0	2.385	3.219	12.0	21.2
7 20	21 45.47	-10 42.0	1.681	2.624	10.3	21.2	7 20	21 41.14	- 1 47.6	2.302	3.213	9.5	21.0
7 30	21 37.49	-11 21.5	1.649	2.640	6.1	21.0	7 30	21 34.98	- 1 56.8	2.242	3.207	6.7	20.8
8 9	21 28.35	-12 8.4	1.643	2.655	1.8	20.7	8 9	21 27.88	- 2 18.6	2.207	3.200	4.4	20.6
8 19	21 19.04	-12 57.4	1.665	2.670	3.2	20.9	8 19	21 20.49	- 2 50.8	2.199	3.194	4.1	20.6
8 29	21 10.61	-13 43.2	1.713	2.684	7.4	21.2	8 29	21 13.55	- 3 30.3	2.220	3.187	6.2	20.7
9 8	21 3.94	-14 21.8	1.787	2.699	11.2	21.4	9 8	21 7.73	- 4 12.8	2.266	3.181	9.0	20.9
9 18	20 59.59	-14 50.6	1.883	2.712	14.4	21.7	9 18	21 3.55	- 4 54.7	2.337	3.174	11.7	21.1
354999	2006 PM ₄₂		8 11.6 328°65	1°2/12.5	18		258941	2002 RD ₁₆₀		8 11.6 72°91	1°6/10.7	17	
7 10	21 43.90	- 8 55.1	1.515	2.403	14.9	20.1	7 10	21 54.13	-17 59.3	1.404	2.299	15.4	20.3
7 20	21 40.51	- 9 37.3	1.435	2.386	11.2	19.9	7 20	21 47.82	-18 15.6	1.351	2.308	11.1	20.1
7 30	21 34.94	-10 37.2	1.377	2.370	6.8	19.6	7 30	21 39.01	-18 36.8	1.320	2.317	6.3	19.8
8 9	21 27.88	-11 50.3	1.342	2.354	2.1	19.2	8 9	21 28.72	-18 57.3	1.314	2.326	1.9	19.6
8 19	21 20.27	-13 9.9	1.333	2.339	3.5	19.3	8 19	21 18.22	-19 11.9	1.333	2.335	4.6	19.8
8 29	21 13.29	-14 28.1	1.349	2.325	8.4	19.6	8 29	21 8.90	-19 16.8	1.378	2.345	9.3	20.1
9 8	21 8.00	-15 37.6	1.388	2.312	12.9	19.8	9 8	21 1.85	-19 10.2	1.445	2.354	13.6	20.3
9 18	21 5.18	-16 33.5	1.448	2.300	16.8	20.0	9 18	20 57.70	-18 52.7	1.533	2.363	17.1	20.6
398650	2012 TR ₆₇		8 11.6 207°70	5°8/17.0	18		34161	Michaellee		8 11.6 119°50	1°7/12.7	18	
7 10	21 47.76	+ 5 6.6	2.406	3.200	13.2	21.7	7 10	21 52.15	- 8 40.9	1.476	2.352	15.9	19.4
7 20	21 42.53	+ 5 15.2	2.319	3.194	10.9	21.5	7 20	21 46.28	- 9 5.9	1.419	2.362	11.8	19.1
7 30	21 35.77	+ 5 6.0	2.253	3.188	8.5	21.4	7 30	21 38.12	- 9 46.4	1.384	2.373	7.2	18.9
8 9	21 28.02	+ 4 38.9	2.213	3.181	6.5	21.2	8 9	21 28.54	-10 37.6	1.372	2.383	2.6	18.7
8 19	21 19.94	+ 3 55.6	2.199	3.174	5.9	21.2	8 19	21 18.69	-11 33.7	1.387	2.393	3.6	18.8
8 29	21 12.30	+ 2 59.5	2.212	3.166	7.2	21.3	8 29	21 9.82	-12 28.0	1.428	2.402	8.3	19.1
9 8	21 5.79	+ 1 55.7	2.252	3.158	9.5	21.4	9 8	21 2.97	-13 15.0	1.493	2.411	12.6	19.3
9 18	21 0.97	+ 0 49.2	2.317	3.149	12.0	21.5	9 18	20 58.79	-13 51.3	1.579	2.420	16.2	19.6
141718	2002 LV ₁₇		8 11.6 7°48	3°2/13.1	17		486965	2014 NO ₁₃		8 11.6 325°86	5°0/ 6.4	17	
7 10	21 42.73	- 9 4.2	0.840	1.761	20.4	18.7	7 10	21 44.69	-24 15.2	1.862	2.766	11.8	20.5
7 20	21 40.46	- 8 45.1	0.796	1.761	15.4	18.4	7 20	21 40.93	-25 59.6	1.790	2.749	8.7	20.3
7 30	21 35.14	- 8 47.0	0.768	1.764	9.7	18.1	7 30	21 35.14	-27 47.8	1.742	2.732	5.9	20.1
8 9	21 27.93	- 9 6.6	0.759	1.769	4.2	17.8	8 9	21 27.95	-29 31.1	1.720	2.715	5.2	20.0
8 19	21 20.33	- 9 38.0	0.770	1.777	5.0	17.9	8 19	21 20.24	-31 1.1	1.726	2.700	7.3	20.1
8 29	21 14.08	-10 13.0	0.800	1.786	10.5	18.2	8 29	21 13.08	-32 11.2	1.756	2.685	10.5	20.2
9 8	21 10.52	-10 43.8	0.850	1.798	15.8	18.6	9 8	21 7.46	-32 58.2	1.810	2.670	13.7	20.4
9 18	21 10.33	-11 5.0	0.916	1.811	20.4	18.9	9 18	21 4.13	-33 22.1	1.882	2.656	16.5	20.6
297683	2001 UD ₁₇₁		8 11.6 269°93	6°1/ 6.6	18		15324	1993 QO ₄		8 11.6 333°06	0°2/11.7	18	
7 10	21 51.92	-31 30.9	2.081	2.969	11.4	20.5	7 10	21 44.92	-12 37.5	1.707	2.597	13.4	18.0
7 20	21 45.90	-32 24.1	2.016	2.959	8.9	20.3	7 20	21 41.04	-13 2.5	1.628	2.582	9.8	17.8
7 30	21 37.83	-33 11.4	1.975	2.950	6.7	20.1	7 30	21 35.16	-13 38.4	1.571	2.566	5.7	17.5
8 9	21 28.46	-33 46.4	1.960	2.941	6.2	20.1	8 9	21 27.95	-14 21.1	1.539	2.552	1.3	17.2
8 19	21 18.76	-34 4.0	1.972	2.931	7.7	20.2	8 19	21 20.29	-15 5.7	1.533	2.538	3.4	17.3
8 29	21 9.83	-34 1.6	2.009	2.922	10.2	20.3	8 29	21 13.23	-15 46.8	1.552	2.525	7.8	17.5
9 8	21 2.63	-33 39.8	2.069	2.912	12.9	20.5	9 8	21 7.74	-16 19.9	1.596	2.513	11.9	17.7
9 18	20 57.78	-33 0.9	2.149	2.903	15.3	20.6	9 18	21 4.51	-16 42.3	1.660	2.502	15.5	17.9
476815	2008 UD ₂₀₇		8 11.6 328°22	4°1/ 8.8	18		250739	2005 SN ₉₇		8 11.6 317°49	1°1/10.8	18	
7 10	21 50.44	-22 54.5	1.57										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
75395	1999 <i>XJ</i> ₉₈		8 11.6 253°39	2°9/13.4	18		7106	Kondakov		8 11.6 336°71	1°1/12.5	18	
7 10	21 51.11	- 6 39.7	1.711	2.574	14.7	19.5	7 10	21 43.49	- 8 33.1	1.502	2.390	15.0	16.1
7 20	21 45.57	- 6 39.7	1.625	2.559	11.3	19.3	7 20	21 40.21	- 9 25.5	1.427	2.378	11.2	15.8
7 30	21 37.81	- 6 54.3	1.561	2.544	7.3	19.0	7 30	21 34.78	-10 36.6	1.373	2.366	6.8	15.6
8 9	21 28.52	- 7 21.6	1.522	2.528	3.6	18.8	8 9	21 27.91	-12 1.2	1.344	2.355	2.1	15.2
8 19	21 18.66	- 7 58.3	1.509	2.512	4.0	18.8	8 19	21 20.55	-13 31.9	1.339	2.345	3.5	15.3
8 29	21 9.38	- 8 39.3	1.523	2.495	8.0	19.0	8 29	21 13.83	-15 0.1	1.360	2.336	8.3	15.6
9 8	21 1.77	- 9 19.5	1.561	2.479	12.1	19.2	9 8	21 8.82	-16 18.0	1.404	2.328	12.8	15.8
9 18	20 56.59	- 9 54.6	1.621	2.461	15.9	19.4	9 18	21 6.25	-17 20.7	1.470	2.321	16.6	16.1
59942	1999 <i>RZ</i> ₁₉₇		8 11.6 233°22	0°9/12.3	18 R		240650	2005 <i>CZ</i>		8 11.6 141°74	0°5/11.1	18	
7 10	21 48.72	-11 50.0	2.338	3.205	11.1	18.9	7 10	21 47.68	-11 50.2	2.046	2.921	12.1	20.7
7 20	21 43.22	-11 51.8	2.260	3.201	8.2	18.7	7 20	21 42.66	-13 7.1	1.981	2.928	8.8	20.5
7 30	21 36.16	-12 0.5	2.207	3.197	4.9	18.5	7 30	21 35.93	-14 35.0	1.941	2.935	5.0	20.3
8 9	21 28.13	-12 14.1	2.181	3.192	1.5	18.2	8 9	21 28.12	-16 8.2	1.928	2.941	1.0	20.0
8 19	21 19.84	-12 29.6	2.183	3.188	2.6	18.3	8 19	21 20.02	-17 40.1	1.943	2.946	3.2	20.2
8 29	21 12.09	-12 44.4	2.213	3.183	6.1	18.5	8 29	21 12.51	-19 4.0	1.988	2.952	7.1	20.5
9 8	21 5.58	-12 56.0	2.270	3.178	9.3	18.7	9 8	21 6.41	-20 15.4	2.058	2.957	10.6	20.7
9 18	21 0.85	-13 2.5	2.350	3.173	12.1	18.9	9 18	21 2.28	-21 11.7	2.151	2.962	13.5	20.9
300679	2007 <i>VJ</i> ₂₅		8 11.6 223°81	5°1/16.5	18		286975	2002 <i>QD</i> ₁₉		8 11.6 21°01	2°1/10.3	17	
7 10	21 46.72	+ 3 13.7	2.407	3.213	12.8	21.4	7 10	21 46.09	-15 54.9	0.991	1.912	18.0	19.5
7 20	21 41.80	+ 3 11.8	2.317	3.204	10.4	21.2	7 20	21 42.64	-16 51.0	0.951	1.920	12.9	19.3
7 30	21 35.39	+ 2 52.6	2.250	3.195	7.9	21.0	7 30	21 36.30	-17 59.0	0.929	1.930	7.3	19.0
8 9	21 27.99	+ 2 16.8	2.208	3.186	5.8	20.9	8 9	21 28.22	-19 9.2	0.928	1.941	2.3	18.7
8 19	21 20.25	+ 1 26.2	2.193	3.176	5.2	20.8	8 19	21 19.87	-20 11.4	0.950	1.953	5.7	19.0
8 29	21 12.92	+ 0 24.8	2.205	3.166	6.8	20.9	8 29	21 12.87	-20 57.6	0.994	1.967	11.1	19.3
9 8	21 6.71	- 0 42.4	2.245	3.155	9.3	21.1	9 8	21 8.45	-21 23.6	1.057	1.981	15.9	19.7
9 18	21 2.16	- 1 50.4	2.308	3.144	11.9	21.2	9 18	21 7.24	-21 29.2	1.138	1.997	19.9	20.0
509585	2008 <i>CE</i> ₂₀₈		8 11.6 143°72	0°1/11.6	18		191629	2004 <i>NJ</i> ₁₇		8 11.6 359°49	0°5/11.9	18	
7 10	21 47.17	-12 47.7	2.400	3.271	10.7	22.4	7 10	21 44.07	-10 50.4	1.165	2.071	17.1	19.1
7 20	21 42.04	-13 25.7	2.333	3.278	7.8	22.2	7 20	21 40.99	-11 31.4	1.107	2.068	12.6	18.8
7 30	21 35.46	-14 11.3	2.292	3.285	4.4	22.0	7 30	21 35.35	-12 30.3	1.069	2.066	7.4	18.6
8 9	21 28.00	-15 0.5	2.278	3.291	0.9	21.7	8 9	21 28.04	-13 40.7	1.052	2.065	1.8	18.2
8 19	21 20.32	-15 49.5	2.293	3.297	2.6	21.9	8 19	21 20.30	-14 54.2	1.059	2.065	4.1	18.4
8 29	21 13.19	-16 34.3	2.336	3.302	6.0	22.1	8 29	21 13.52	-16 1.6	1.088	2.067	9.6	18.7
9 8	21 7.27	-17 11.8	2.405	3.307	9.1	22.3	9 8	21 8.93	-16 55.8	1.139	2.070	14.5	19.0
9 18	21 3.04	-17 40.2	2.499	3.312	11.8	22.5	9 18	21 7.24	-17 33.0	1.209	2.074	18.6	19.3
5882	1992 <i>WW</i> ₅		8 11.6 330°54	0°7/12.1	18		398071	2009 <i>HT</i> ₉₉		8 11.6 70°45	2°1/13.3	18	
7 10	21 46.90	-11 15.8	1.772	2.653	13.4	17.9	7 10	21 47.49	- 7 27.7	1.970	2.833	13.0	21.2
7 20	21 42.35	-11 39.5	1.699	2.648	9.9	17.7	7 20	21 42.48	- 7 42.0	1.908	2.843	9.8	21.0
7 30	21 35.85	-12 14.4	1.649	2.642	5.8	17.5	7 30	21 35.79	- 8 8.7	1.869	2.854	6.1	20.8
8 9	21 28.11	-12 56.8	1.625	2.637	1.6	17.2	8 9	21 28.10	- 8 45.0	1.856	2.864	2.7	20.6
8 19	21 20.00	-13 41.8	1.626	2.632	3.2	17.3	8 19	21 20.20	- 9 27.0	1.870	2.874	3.1	20.7
8 29	21 12.54	-14 24.4	1.654	2.627	7.5	17.5	8 29	21 12.97	-10 10.1	1.911	2.884	6.6	20.9
9 8	21 6.66	-15 0.2	1.707	2.623	11.4	17.8	9 8	21 7.19	-10 50.2	1.978	2.894	10.0	21.1
9 18	21 2.98	-15 26.4	1.781	2.619	14.8	18.0	9 18	21 3.38	-11 24.0	2.067	2.905	13.0	21.4
504471	2008 <i>DW</i> ₈₃		8 11.6 120°69	1°1/10.9	17		16962	Elizawoolard		8 11.6 310°77	2°8/ 9.6	18	
7 10	21 52.64	-15 44.6	1.650	2.536	14.0	21.9	7 10	21 47.78	-17 25.7	1.378	2.283	15.0	17.4
7 20	21 46.48	-16 20.6	1.595	2.547	10.1	21.7	7 20	21 43.61	-18 35.1	1.308	2.270	10.9	17.1
7 30	21 38.17	-17 3.8	1.562	2.558	5.7	21.5	7 30	21 36.87	-19 55.2	1.260	2.258	6.3	16.9
8 9	21 28.57	-17 48.5	1.556	2.569	1.4	21.2	8 9	21 28.38	-21 17.7	1.235	2.246	2.8	16.6
8 19	21 18.76	-18 29.2	1.576	2.579	4.0	21.4	8 19	21 19.29	-22 33.2	1.236	2.235	5.7	16.8
8 29	21 9.89	-19 1.0	1.623	2.589	8.3	21.7	8 29	21 11.01	-23 33.7	1.261	2.223	10.5	17.0
9 8	21 2.93	-19 21.1	1.695	2.598	12.2	22.0	9 8	21 4.78	-24 14.2	1.308	2.213	15.0	17.2
9 18	20 58.48	-19 28.9	1.787	2.607	15.5	22.2	9 18	21 1.43	-24 33.7	1.374	2.202	18.8	17.5
196545	2003 <i>PQ</i> ₇		8 11.6 50°77	4°5/14.4	18		185596	2008 <i>CP</i> ₃		8 11.6 82°68	0°9/10.9	17	
7 10	21 50.11	- 3 45.9	1.655	2.511	15.5	19.2	7 10	21 51.23	-14 14.6	1.455	2.347	15.2	20.7
7 20	21 44.66	- 3 22.4	1.590	2.515	12.1	19.0	7 20	21 45.63	-15 2.9	1.406	2.361	10.9	20.5
7 30	21 37.16	- 3 15.1	1.546	2.520	8.3	18.8	7 30	21 37.75	-16 1.2	1.380	2.376	6.2	20.3
8 9	21 28.37	- 3 23.2	1.526	2.524	5.1	18.7	8 9	21 28.52	-17 2.8	1.378	2.391	1.4	20.0
8 19	21 19.28	- 3 44.1	1.532	2.529	4.9	18.7	8 19	21 19.08	-18 0.5	1.402	2.406	4.1	20.2
8 29	21 10.99	- 4 13.5	1.563	2.535	8.0	18.9	8 29	21 10.70	-18 48.3	1.452	2.420	8.8	20.5
9 8	21 4.43	- 4 46.5	1.619	2.540	11.6	19.1	9 8	21 4.38	-19 22.3	1.526	2.435	12.9	20.8
9 18	21 0.24	- 5 18.3	1.697	2.545	14.9	19.3	9 18	21 0.72	-19 41.5	1.619	2.449	16.4	21.1
261434	2005 <i>UJ</i> ₅₂₄		8 11.6 34°24	0°9/12.4	18		245558	2005 <i>UM</i> ₇₄		8 11.6 292°01	3°1/13.9	18	
7 10	21 45.36	- 9 13.9	1.972	2.845	12.6	20.4	7 10	21 47.64	- 5 42.4	2.126	2.979	12.6	20.2
7 20	21 41.01	- 9 58.1	1.906	2.849	9.3	20.2	7 20	21 42.64	- 5 31.7	2.041	2.968	9.7	19.9
7 30	21 34.98	-10 54.9	1.863	2.853	5.6	20.0	7 30	21 35.95	- 5 33.0	1.979	2.957	6.5	19.7
8 9	21 27.91	-11 59.9	1.846	2.858	1.7	19.7	8 9	21 28.16	- 5 44.9	1.944	2.946	3.6	19.5
8 19	21 20.58	-13 7.9	1.857	2.862	2.9	19.8	8 19	21 20.00	- 6 5.4	1.935	2.935	3.7	19.5
8 29	21 13.86	-14 13.3	1.895	2.867	6.7	20.1	8 29	21 12.34	- 6 31.0	1.953	2.925	6.6	19.7
9 8	21 8.52	-15 11.3	1.958	2.872	10.3	20.3	9 8	21 5.98	- 6 58.2	1.998	2.914	10.0	19.9
9 18	21 5.11	-15 58.6	2.044	2.877	13.3	20.5	9 18	21 1.50	- 7 23.4	2.065	2.903	13.0	20.1
424432	2008 <i>BH</i> ₄₇		8 11.6 153°76	2°9/10.2	17		99228	2001 <i>HJ</i> ₆₂		8 11.6 109°93	1°6/12.8	17	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
449514	2014 <i>GS</i> ₄₈		8 11.6	44°95'	0°9/12.4	15	512652	2016 <i>TB</i> ₆₂		8 11.6	292°19'	3°1/9.5	18
7 10	21 45.92	- 7 41.5	1.649	2.526	14.5	20.6	7 10	21 50.74	-21 42.2	1.802	2.695	12.6	21.4
7 20	21 41.50	- 8 59.2	1.607	2.552	10.6	20.4	7 20	21 45.18	-22 17.8	1.734	2.690	9.2	21.2
7 30	21 35.26	-10 32.2	1.588	2.579	6.2	20.2	7 30	21 37.52	-22 55.3	1.690	2.684	5.5	20.9
8 9	21 27.99	-12 13.7	1.595	2.607	1.8	20.0	8 9	21 28.53	-23 28.9	1.671	2.679	3.1	20.8
8 19	21 20.60	-13 55.6	1.628	2.634	3.1	20.2	8 19	21 19.19	-23 53.3	1.679	2.673	5.2	20.9
8 29	21 14.07	-15 30.1	1.689	2.662	7.3	20.5	8 29	21 10.63	-24 5.0	1.714	2.668	8.9	21.1
9 8	21 9.19	-16 51.4	1.775	2.690	11.1	20.8	9 8	21 3.82	-24 2.4	1.772	2.662	12.5	21.3
9 18	21 6.47	-17 56.2	1.884	2.719	14.2	21.1	9 18	20 59.41	-23 46.1	1.851	2.657	15.5	21.5
491040	2011 <i>QS</i> ₁₇		8 11.6	306°07'	1°2/10.8	18	92701	2000 <i>QC</i> ₈₂		8 11.6	312°59'	1°3/12.4	18
7 10	21 48.93	-16 38.6	1.712	2.604	13.3	20.9	7 10	21 47.44	-10 10.2	1.461	2.349	15.4	19.6
7 20	21 44.04	-17 1.3	1.629	2.585	9.7	20.7	7 20	21 43.22	-10 28.4	1.382	2.332	11.5	19.3
7 30	21 36.97	-17 30.8	1.569	2.566	5.5	20.4	7 30	21 36.62	-11 1.5	1.323	2.315	7.0	19.0
8 9	21 28.40	-18 2.5	1.535	2.547	1.5	20.1	8 9	21 28.38	-11 45.7	1.288	2.299	2.2	18.7
8 19	21 19.31	-18 31.4	1.526	2.529	4.0	20.2	8 19	21 19.53	-12 35.6	1.278	2.284	3.7	18.8
8 29	21 10.84	-18 52.7	1.543	2.510	8.5	20.4	8 29	21 11.35	-13 24.8	1.292	2.268	8.7	19.0
9 8	21 4.07	-19 3.5	1.585	2.493	12.6	20.6	9 8	21 5.02	-14 7.3	1.330	2.254	13.3	19.3
9 18	20 59.73	-19 2.6	1.647	2.475	16.2	20.8	9 18	21 1.36	-14 39.2	1.388	2.239	17.4	19.5
445262	2009 <i>RP</i> ₆₃		8 11.6	313°08'	8°0/19.1	18	157627	2005 <i>WD</i> ₁₄₉		8 11.6	225°72'	3°6/14.9	18
7 10	21 43.44	+ 9 43.6	2.061	2.844	15.4	20.6	7 10	21 47.57	- 2 6.1	2.710	3.535	11.0	20.4
7 20	21 39.77	+ 9 52.7	1.963	2.823	13.2	20.4	7 20	21 42.29	- 1 54.2	2.620	3.527	8.7	20.2
7 30	21 34.40	+ 9 37.9	1.884	2.801	10.9	20.2	7 30	21 35.64	- 1 53.6	2.555	3.517	6.2	20.0
8 9	21 27.86	+ 8 57.6	1.828	2.780	8.9	20.0	8 9	21 28.13	- 2 3.9	2.516	3.508	4.0	19.9
8 19	21 20.84	+ 7 53.0	1.795	2.759	8.0	19.9	8 19	21 20.32	- 2 23.4	2.506	3.498	3.8	19.9
8 29	21 14.21	+ 6 27.9	1.788	2.738	8.9	20.0	8 29	21 12.91	- 2 49.7	2.524	3.488	5.8	20.0
9 8	21 8.79	+ 4 49.1	1.806	2.718	11.1	20.0	9 8	21 6.50	- 3 19.5	2.569	3.478	8.3	20.1
9 18	21 5.23	+ 3 4.5	1.847	2.698	13.7	20.2	9 18	21 1.58	- 3 49.7	2.639	3.467	10.8	20.3
179460	2002 <i>AK</i> ₁₉₀		8 11.6	248°17'	1°9/10.1	18	250040	2002 <i>CA</i> ₁₆₇		8 11.6	94°49'	3°3/9.8	17
7 10	21 50.78	-20 21.5	2.293	3.175	10.7	20.9	7 10	21 55.33	-21 1.9	1.369	2.268	15.5	19.9
7 20	21 44.82	-20 39.0	2.215	3.166	7.8	20.7	7 20	21 48.83	-21 36.6	1.319	2.277	11.2	19.7
7 30	21 37.16	-20 58.0	2.162	3.156	4.5	20.5	7 30	21 39.69	-22 13.6	1.290	2.286	6.6	19.4
8 9	21 28.42	-21 14.8	2.136	3.146	2.0	20.3	8 9	21 28.99	-22 45.6	1.286	2.295	3.3	19.3
8 19	21 19.38	-21 25.9	2.139	3.136	3.8	20.4	8 19	21 18.07	-23 6.3	1.307	2.304	5.8	19.5
8 29	21 10.93	-21 28.7	2.170	3.126	7.1	20.6	8 29	21 8.40	-23 11.8	1.353	2.313	10.2	19.7
9 8	21 3.86	-21 21.9	2.226	3.116	10.3	20.8	9 8	21 1.14	-23 1.4	1.422	2.321	14.4	20.0
9 18	20 58.73	-21 5.5	2.306	3.105	13.1	20.9	9 18	20 56.92	-22 36.7	1.510	2.330	17.8	20.3
10708	Richardspalding		8 11.6	308°84'	1°1/10.7	18	438546	2007 <i>TK</i> ₂₂₄		8 11.6	343°65'	13°4/10.3	17
7 10	21 47.29	-15 50.0	1.920	2.808	12.2	17.3	7 10	22 18.57	-41 25.5	0.879	1.769	22.8	19.6
7 20	21 42.56	-16 28.9	1.847	2.801	8.8	17.1	7 20	22 7.52	-41 20.8	0.828	1.764	18.9	19.4
7 30	21 35.97	-17 15.1	1.799	2.795	5.0	16.8	7 30	21 50.97	-40 43.1	0.794	1.760	15.3	19.2
8 9	21 28.18	-18 3.8	1.776	2.788	1.3	16.6	8 9	21 31.33	-39 16.5	0.780	1.756	13.4	19.1
8 19	21 20.05	-18 49.8	1.780	2.782	3.7	16.7	8 19	21 11.95	-36 56.7	0.786	1.753	14.6	19.1
8 29	21 12.53	-19 28.4	1.811	2.776	7.6	17.0	8 29	20 56.05	-33 53.8	0.814	1.751	18.2	19.3
9 8	21 6.51	-19 56.2	1.867	2.770	11.3	17.2	9 8	20 45.48	-30 27.5	0.862	1.750	22.4	19.6
9 18	21 2.59	-20 11.9	1.944	2.764	14.4	17.4	9 18	20 40.57	-26 56.1	0.927	1.749	26.2	19.8
94027	2000 <i>XL</i> ₃₉		8 11.6	321°94'	0°8/11.3	18	508827	2001 <i>ST</i> ₁₉₇		8 11.6	336°64'	4°1/15.2	18
7 10	21 54.92	-18 13.0	1.487	2.379	14.9	18.2	7 10	21 44.01	- 1 6.1	1.698	2.551	15.3	21.0
7 20	21 48.56	-17 50.8	1.412	2.367	10.9	17.9	7 20	21 40.36	- 1 35.7	1.621	2.544	12.0	20.8
7 30	21 39.60	-17 30.9	1.360	2.356	6.3	17.6	7 30	21 34.81	- 2 27.2	1.564	2.536	8.4	20.6
8 9	21 28.96	-17 9.7	1.333	2.345	1.4	17.3	8 9	21 27.99	- 3 38.4	1.530	2.530	5.0	20.4
8 19	21 17.87	-16 44.4	1.331	2.335	4.1	17.4	8 19	21 20.75	- 5 4.1	1.523	2.523	4.5	20.3
8 29	21 7.72	-16 13.1	1.355	2.325	9.1	17.7	8 29	21 14.10	- 6 37.0	1.542	2.518	7.5	20.5
9 8	20 59.74	-15 35.3	1.403	2.316	13.6	17.9	9 8	21 8.96	- 8 9.2	1.585	2.512	11.3	20.7
9 18	20 54.67	-14 51.7	1.472	2.308	17.4	18.2	9 18	21 5.98	- 9 33.8	1.651	2.508	14.8	20.9
356892	2011 <i>XT</i>		8 11.6	344°96'	3°8/14.4	18	327776	2006 <i>UV</i> ₁₃₂		8 11.6	52°08'	4°8/14.8	17
7 10	21 47.82	- 3 52.4	2.014	2.862	13.4	20.9	7 10	21 49.08	- 2 26.0	1.339	2.205	17.9	20.8
7 20	21 42.78	- 3 39.2	1.939	2.861	10.4	20.7	7 20	21 44.26	- 2 25.5	1.284	2.214	13.9	20.6
7 30	21 36.03	- 3 39.9	1.887	2.860	7.2	20.5	7 30	21 37.09	- 2 47.5	1.248	2.224	9.6	20.3
8 9	21 28.19	- 3 53.4	1.860	2.859	4.3	20.3	8 9	21 28.47	- 3 29.8	1.235	2.235	5.7	20.2
8 19	21 20.05	- 4 17.4	1.860	2.858	4.2	20.3	8 19	21 19.56	- 4 27.3	1.245	2.246	5.3	20.2
8 29	21 12.50	- 4 48.2	1.887	2.857	6.9	20.5	8 29	21 11.63	- 5 32.7	1.281	2.256	8.8	20.4
9 8	21 6.34	- 5 21.6	1.939	2.857	10.1	20.7	9 8	21 5.75	- 6 38.0	1.339	2.268	12.9	20.7
9 18	21 2.13	- 5 53.6	2.014	2.856	13.1	20.9	9 18	21 2.57	- 7 36.9	1.418	2.279	16.6	20.9
181927	1999 <i>TM</i> ₁₃₃		8 11.6	316°30'	0°5/12.0	18	335026	2004 <i>PY</i> ₅₃		8 11.6	358°69'	3°5/10.4	17
7 10	21 46.84	-12 9.2	2.014	2.892	12.2	20.4	7 10	21 49.82	-22 44.9	0.991	1.914	17.8	19.6
7 20	21 42.14	-12 26.4	1.937	2.884	9.0	20.1	7 20	21 45.59	-22 31.5	0.939	1.908	13.0	19.3
7 30	21 35.70	-12 52.6	1.883	2.875	5.3	19.9	7 30	21 38.15	-22 16.6	0.905	1.904	7.8	19.0
8 9	21 28.13	-13 24.4	1.855	2.867	1.3	19.6	8 9	21 28.72	-21 54.1	0.892	1.902	3.6	18.8
8 19	21 20.22	-13 58.1	1.854	2.859	2.9	19.7	8 19	21 18.93	-21 19.8	0.901	1.902	6.3	19.0
8 29	21 12.88	-14 29.5	1.881	2.852	6.8	20.0	8 29	21 10.59	-20 32.0	0.931	1.904	11.6	19.3
9 8	21 6.93	-14 55.3	1.932	2.845	10.5	20.2	9 8	21 5.10	-19 32.1	0.981	1.908	16.5	19.5
9 18	21 2.95	-15 13.0	2.006	2.837	13.6	20.4	9 18	21 3.15	-18 23.0	1.048	1.914	20.7	19.8
34771	2001 <i>QO</i> ₂₅₂		8 11.6	225°66'	1°5/10.5	18	472853	2015 <i>FH</i> ₂₉₀		8 11.			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
92261	2000 <i>BY</i> ₅		8 11.6 243°27	5°9/ 5.5	18		298717	2004 <i>FV</i> ₅₇		8 11.6 122°54	0°5/12.0	18	
7 10	21 49.69	-33 15.1	2.518	3.399	9.9	18.9	7 10	21 48.13	-11 49.5	2.004	2.879	12.4	21.4
7 20	21 44.11	-34 19.4	2.455	3.392	7.8	18.8	7 20	21 43.04	-12 12.1	1.935	2.880	9.1	21.2
7 30	21 36.81	-35 17.9	2.418	3.384	6.3	18.6	7 30	21 36.22	-12 44.0	1.889	2.881	5.3	21.0
8 9	21 28.41	-36 4.8	2.407	3.376	6.0	18.6	8 9	21 28.31	-13 21.5	1.870	2.882	1.4	20.7
8 19	21 19.71	-36 35.8	2.423	3.368	7.3	18.7	8 19	21 20.13	-14 0.5	1.878	2.883	2.9	20.9
8 29	21 11.61	-36 48.2	2.465	3.359	9.4	18.8	8 29	21 12.57	-14 36.8	1.913	2.884	6.8	21.1
9 8	21 4.91	-36 42.1	2.531	3.351	11.5	18.9	9 8	21 6.45	-15 6.9	1.974	2.885	10.4	21.3
9 18	21 0.17	-36 19.3	2.616	3.342	13.5	19.1	9 18	21 2.34	-15 28.4	2.058	2.886	13.4	21.5
131012	2000 <i>XJ</i> ₁₀		8 11.6 132°99	7°5/ 5.1	18		321506	2009 <i>SZ</i> ₁₆₇		8 11.6 191°16	5°5/18.1	18	
7 10	21 53.39	-34 5.6	1.971	2.857	12.1	19.7	7 10	21 44.47	+ 6 55.7	2.756	3.536	12.0	21.3
7 20	21 47.09	-35 30.7	1.928	2.865	9.6	19.5	7 20	21 40.04	+ 6 49.6	2.672	3.535	10.0	21.1
7 30	21 38.61	-36 47.2	1.909	2.872	7.8	19.4	7 30	21 34.37	+ 6 26.3	2.609	3.534	7.9	21.0
8 9	21 28.79	-37 47.1	1.915	2.880	7.6	19.5	8 9	21 27.91	+ 5 46.2	2.571	3.532	6.1	20.9
8 19	21 18.72	-38 24.7	1.947	2.887	9.1	19.6	8 19	21 21.22	+ 4 51.2	2.560	3.531	5.5	20.8
8 29	21 9.58	-38 37.6	2.004	2.893	11.4	19.7	8 29	21 14.91	+ 3 44.7	2.577	3.529	6.4	20.9
9 8	21 2.38	-38 26.9	2.082	2.900	13.8	19.9	9 8	21 9.56	+ 2 31.4	2.621	3.527	8.3	21.0
9 18	20 57.71	-37 56.2	2.179	2.906	15.9	20.1	9 18	21 5.61	+ 1 16.0	2.690	3.525	10.4	21.1
417264	2006 <i>AT</i> ₂		8 11.6 68°28	0°8/12.4	15		6107	Osterbrock		8 11.6 111°43	11°0/ 1.9	18	
7 10	21 55.74	- 7 25.0	2.027	2.875	13.4	21.8	7 10	21 54.72	-26 8.0	0.985	1.904	18.2	16.6
7 20	21 48.02	- 8 47.4	2.002	2.933	9.7	21.7	7 20	21 49.80	-30 32.4	0.952	1.914	13.9	16.4
7 30	21 38.76	-10 20.7	2.003	2.989	5.7	21.5	7 30	21 41.00	-34 56.8	0.943	1.923	11.2	16.3
8 9	21 28.77	-11 58.3	2.033	3.044	1.6	21.4	8 9	21 29.43	-38 52.9	0.959	1.933	11.9	16.4
8 19	21 18.93	-13 33.5	2.094	3.098	2.8	21.6	8 19	21 16.94	-41 58.2	0.999	1.942	15.2	16.6
8 29	21 10.09	-15 0.4	2.185	3.151	6.4	21.9	8 29	21 5.87	-44 3.0	1.060	1.950	19.1	16.8
9 8	21 2.96	-16 14.9	2.303	3.202	9.6	22.2	9 8	20 58.18	-45 10.4	1.138	1.958	22.6	17.1
9 18	20 57.91	-17 15.1	2.446	3.252	12.2	22.4	9 18	20 54.89	-45 30.5	1.229	1.966	25.4	17.4
126419	2002 <i>BH</i> ₂₉		8 11.6 242°08	5°3/ 7.9	18		4151	Alan Hale		8 11.6 174°16	0°4/11.3	18	
7 10	21 54.93	-28 11.8	1.860	2.749	12.5	19.7	7 10	21 47.07	-14 39.8	2.727	3.598	9.6	17.9
7 20	21 48.31	-28 55.8	1.791	2.739	9.4	19.5	7 20	21 41.90	-15 8.9	2.655	3.600	6.9	17.7
7 30	21 39.39	-29 36.0	1.745	2.729	6.6	19.3	7 30	21 35.42	-15 43.2	2.609	3.602	3.9	17.5
8 9	21 28.98	-30 5.6	1.726	2.719	5.4	19.2	8 9	21 28.14	-16 19.6	2.590	3.603	0.8	17.3
8 19	21 18.18	-30 18.9	1.733	2.708	7.1	19.3	8 19	21 20.65	-16 55.0	2.601	3.604	2.5	17.4
8 29	21 8.24	-30 13.1	1.766	2.698	10.2	19.4	8 29	21 13.62	-17 26.1	2.641	3.605	5.6	17.6
9 8	21 0.23	-29 48.6	1.822	2.687	13.4	19.6	9 8	21 7.66	-17 50.8	2.707	3.605	8.4	17.8
9 18	20 54.83	-29 7.9	1.899	2.675	16.3	19.8	9 18	21 3.22	-18 7.7	2.798	3.605	10.8	18.0
387310	2012 <i>VO</i> ₅₇		8 11.6 266°87	1°7/10.3	18		311413	2005 <i>UX</i> ₆₃		8 11.6 172°20	1°4/10.2	18	
7 10	21 49.17	-17 19.3	1.835	2.724	12.6	21.2	7 10	21 47.48	-18 12.8	2.811	3.688	9.2	21.9
7 20	21 44.04	-18 1.6	1.763	2.718	9.1	21.0	7 20	21 42.18	-18 50.0	2.742	3.690	6.6	21.7
7 30	21 36.90	-18 50.3	1.715	2.711	5.2	20.8	7 30	21 35.57	-19 30.3	2.699	3.693	3.7	21.5
8 9	21 28.46	-19 40.0	1.693	2.704	1.8	20.5	8 9	21 28.17	-20 10.1	2.684	3.695	1.4	21.4
8 19	21 19.63	-20 25.0	1.698	2.698	4.2	20.7	8 19	21 20.57	-20 46.1	2.698	3.696	3.1	21.5
8 29	21 11.48	-21 0.6	1.729	2.691	8.2	20.9	8 29	21 13.43	-21 15.4	2.742	3.697	5.9	21.7
9 8	21 4.95	-21 23.6	1.785	2.684	11.9	21.1	9 8	21 7.36	-21 36.1	2.812	3.698	8.5	21.9
9 18	21 0.68	-21 33.2	1.862	2.677	15.1	21.3	9 18	21 2.81	-21 47.4	2.906	3.699	10.8	22.0
104822	2000 <i>HS</i> ₅₅		8 11.6 111°96	3°6/14.1	17		517977	2015 <i>UD</i> ₁		8 11.6 330°13	3°3/14.6	18	
7 10	21 50.39	- 4 32.8	1.659	2.517	15.4	20.0	7 10	21 44.52	- 3 3.6	2.106	2.954	12.9	21.0
7 20	21 44.90	- 4 34.6	1.595	2.524	11.8	19.8	7 20	21 40.42	- 3 22.4	2.027	2.949	10.0	20.8
7 30	21 37.35	- 4 53.2	1.554	2.532	7.9	19.6	7 30	21 34.72	- 3 57.0	1.970	2.944	6.8	20.6
8 9	21 28.54	- 5 26.4	1.536	2.539	4.3	19.4	8 9	21 28.01	- 4 45.4	1.938	2.939	3.9	20.4
8 19	21 19.45	- 6 10.1	1.545	2.546	4.2	19.5	8 19	21 20.98	- 5 43.8	1.933	2.934	3.7	20.4
8 29	21 11.15	- 6 59.0	1.580	2.554	7.7	19.7	8 29	21 14.44	- 6 47.4	1.956	2.929	6.4	20.6
9 8	21 4.60	- 7 47.3	1.640	2.560	11.5	19.9	9 8	21 9.15	- 7 50.9	2.004	2.925	9.7	20.8
9 18	21 0.42	- 8 30.5	1.722	2.567	14.8	20.2	9 18	21 5.65	- 8 49.7	2.076	2.921	12.7	21.0
445502	2010 <i>VA</i> ₂₀₉		8 11.6 328°22	5°4/ 7.4	18		2339	Anacreon		8 11.6 336°01	3°7/ 9.7	18	
7 10	21 50.28	-29 12.4	1.992	2.885	11.6	20.5	7 10	21 48.71	-21 25.3	1.221	2.135	15.8	16.4
7 20	21 44.79	-29 58.0	1.929	2.878	8.8	20.3	7 20	21 44.58	-21 55.7	1.154	2.120	11.6	16.1
7 30	21 37.28	-30 39.2	1.890	2.872	6.3	20.2	7 30	21 37.58	-22 29.6	1.107	2.106	7.0	15.8
8 9	21 28.53	-31 9.9	1.876	2.866	5.4	20.1	8 9	21 28.66	-22 59.5	1.083	2.092	3.7	15.6
8 19	21 19.48	-31 25.3	1.889	2.860	7.0	20.2	8 19	21 19.15	-23 18.2	1.082	2.080	6.4	15.7
8 29	21 11.22	-31 22.6	1.927	2.854	9.8	20.3	8 29	21 10.65	-23 20.5	1.104	2.069	11.3	16.0
9 8	21 4.66	-31 2.0	1.988	2.849	12.6	20.5	9 8	21 4.52	-23 4.6	1.146	2.059	15.9	16.2
9 18	21 0.40	-30 25.5	2.070	2.844	15.2	20.7	9 18	21 1.60	-22 31.7	1.207	2.051	20.0	16.5
115344	2003 <i>SV</i> ₂₂₈		8 11.6 306°55	4°9/ 8.9	18		119941	2002 <i>GS</i> ₁₀₅		8 11.6 150°90	0°9/10.7	18	
7 10	21 52.36	-23 35.2	1.257	2.166	15.8	19.5	7 10	21 46.27	-15 1.8	2.363	3.243	10.6	20.1
7 20	21 47.35	-24 19.2	1.184	2.146	11.7	19.2	7 20	21 41.52	-15 54.1	2.295	3.245	7.6	19.9
7 30	21 39.27	-25 5.3	1.132	2.127	7.4	18.9	7 30	21 35.28	-16 53.2	2.253	3.248	4.3	19.7
8 9	21 29.03	-25 44.5	1.103	2.108	4.9	18.7	8 9	21 28.12	-17 54.5	2.237	3.250	1.1	19.5
8 19	21 18.02	-26 8.5	1.097	2.089	7.6	18.8	8 19	21 20.71	-18 53.4	2.251	3.252	3.1	19.6
8 29	21 7.98	-26 11.5	1.114	2.071	12.2	19.0	8 29	21 13.82	-19 45.5	2.292	3.254	6.5	19.9
9 8	21 0.43	-25 52.4	1.152	2.053	16.9	19.3	9 8	21 8.13	-20 27.7	2.360	3.256	9.5	20.1
9 18	20 56.30	-25 13.5	1.208	2.036	20.9	19.5	9 18	21 4.14	-20 58.5	2.451	3.258	12.2	20.2
234295	2000 <i>YK</i> ₄₅		8 11.6 122°93	11°0/17.9	18		301466	2009 <i>DG</i> ₁₂₄		8 11.6 180°21	4°3/15.9	18	

EPHEMERIDES

8 11.6

8 11.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
76940	2001 <i>BR</i> ₃		8 11.6 146°33	3°1/ 9.7 17			10718	Samus'		8 11.6 346°05	0°3/11.9 18		
7 10	21 55.40	-21 23.2	1.637	2.527	13.8	20.6	7 10	21 45.88	-12 9.7	1.657	2.546	13.8	17.6
7 20	21 48.64	-22 0.1	1.580	2.534	10.0	20.4	7 20	21 41.79	-12 38.6	1.587	2.540	10.1	17.4
7 30	21 39.55	-22 38.6	1.546	2.540	6.0	20.1	7 30	21 35.69	-13 18.8	1.540	2.534	5.9	17.1
8 9	21 29.04	-23 12.4	1.538	2.546	3.2	20.0	8 9	21 28.29	-14 6.2	1.516	2.529	1.4	16.8
8 19	21 18.29	-23 35.7	1.557	2.552	5.4	20.1	8 19	21 20.51	-14 55.2	1.519	2.525	3.3	16.9
8 29	21 8.57	-23 45.1	1.603	2.557	9.3	20.4	8 29	21 13.42	-15 40.3	1.548	2.521	7.8	17.2
9 8	21 0.91	-23 39.5	1.671	2.562	13.1	20.6	9 8	21 7.97	-16 16.9	1.600	2.518	11.9	17.4
9 18	20 55.97	-23 20.2	1.761	2.566	16.3	20.9	9 18	21 4.80	-16 42.2	1.673	2.515	15.4	17.7
72440	2001 <i>CH</i> ₄₅		8 11.6 106°52	5°0/ 6.3 18			455109	2015 <i>VD</i> ₄		8 11.6 355°64	6°0/ 6.3 18		
7 10	21 47.94	-28 30.0	2.387	3.277	10.1	18.7	7 10	21 48.29	-30 20.4	2.008	2.903	11.5	19.8
7 20	21 42.83	-29 51.8	2.337	3.284	7.6	18.6	7 20	21 43.39	-31 29.2	1.953	2.901	8.8	19.7
7 30	21 36.07	-31 10.7	2.312	3.292	5.6	18.5	7 30	21 36.53	-32 33.2	1.922	2.899	6.6	19.5
8 9	21 28.30	-32 20.3	2.315	3.299	5.1	18.4	8 9	21 28.45	-33 25.6	1.916	2.898	6.1	19.5
8 19	21 20.29	-33 15.6	2.345	3.306	6.5	18.5	8 19	21 20.09	-34 0.9	1.937	2.897	7.7	19.6
8 29	21 12.89	-33 53.3	2.402	3.313	8.8	18.7	8 29	21 12.49	-34 16.1	1.982	2.897	10.2	19.8
9 8	21 6.86	-34 12.7	2.483	3.320	11.2	18.9	9 8	21 6.53	-34 11.0	2.050	2.897	12.9	19.9
9 18	21 2.72	-34 14.8	2.584	3.327	13.2	19.0	9 18	21 2.81	-33 47.5	2.138	2.897	15.2	20.1
385528	2004 <i>OR</i> ₁₅		8 11.6 10°16	0°1/13.0 13 C			360938	2005 <i>TV</i> ₁₆₉		8 11.7 291°90	1°8/10.3 16		
7 10	21 28.75	-10 35.3	37.060	37.913	0.8	23.4	7 10	21 49.53	-19 16.7	2.054	2.942	11.6	21.3
7 20	21 28.03	-10 38.0	36.984	37.916	0.6	23.3	7 20	21 44.18	-19 39.4	1.976	2.929	8.4	21.1
7 30	21 27.25	-10 41.1	36.935	37.919	0.4	23.3	7 30	21 36.97	-20 5.2	1.921	2.916	4.9	20.9
8 9	21 26.42	-10 44.6	36.913	37.922	0.2	23.3	8 9	21 28.56	-20 30.0	1.893	2.904	1.9	20.6
8 19	21 25.59	-10 48.4	36.921	37.926	0.2	23.3	8 19	21 19.78	-20 49.6	1.892	2.891	4.0	20.8
8 29	21 24.78	-10 52.2	36.958	37.929	0.4	23.3	8 29	21 11.60	-21 0.7	1.918	2.878	7.6	21.0
9 8	21 24.03	-10 56.0	37.023	37.932	0.7	23.4	9 8	21 4.90	-21 1.3	1.970	2.866	11.1	21.1
9 18	21 23.35	-10 59.5	37.115	37.935	0.9	23.4	9 18	21 0.28	-20 51.2	2.043	2.854	14.1	21.3
267048	1998 <i>RX</i> ₄₆		8 11.6 312°41	3°6/13.6 18			314490	2005 <i>WO</i> ₁₇₁		8 11.7 312°85	0°8/12.3 18		
7 10	21 47.88	- 6 30.2	1.320	2.201	17.1	20.6	7 10	21 46.45	-11 6.0	2.055	2.929	12.1	21.1
7 20	21 43.83	- 6 22.3	1.237	2.180	13.2	20.3	7 20	21 41.89	-11 27.9	1.977	2.921	8.9	20.9
7 30	21 37.17	- 6 32.7	1.174	2.160	8.7	20.0	7 30	21 35.63	-11 59.8	1.922	2.914	5.3	20.7
8 9	21 28.63	- 6 59.9	1.133	2.140	4.4	19.7	8 9	21 28.28	-12 38.3	1.894	2.906	1.5	20.4
8 19	21 19.32	- 7 40.2	1.116	2.120	4.7	19.7	8 19	21 20.58	-13 19.5	1.893	2.898	2.8	20.5
8 29	21 10.68	- 8 27.3	1.122	2.101	9.3	19.9	8 29	21 13.43	-13 59.0	1.919	2.891	6.7	20.7
9 8	21 4.03	- 9 14.2	1.151	2.082	14.3	20.1	9 8	21 7.61	-14 33.0	1.971	2.884	10.2	20.9
9 18	21 0.29	- 9 55.0	1.199	2.064	18.7	20.3	9 18	21 3.71	-14 59.0	2.045	2.877	13.3	21.1
506616	2006 <i>DH</i> ₉₀		8 11.6 165°34	0°8/12.3 17			310277	2011 <i>UY</i> ₅₇		8 11.7 43°92	1°1/10.8 18		
7 10	21 49.36	-10 17.8	2.100	2.967	12.2	22.5	7 10	21 47.91	-15 42.7	1.913	2.800	12.3	21.3
7 20	21 43.88	-10 50.5	2.031	2.971	9.0	22.3	7 20	21 43.00	-16 22.9	1.850	2.803	8.9	21.1
7 30	21 36.70	-11 33.6	1.985	2.975	5.3	22.1	7 30	21 36.26	-17 10.1	1.810	2.806	5.0	20.9
8 9	21 28.46	-12 23.3	1.966	2.978	1.6	21.8	8 9	21 28.40	-17 59.3	1.796	2.809	1.3	20.6
8 19	21 19.94	-13 15.3	1.975	2.980	2.8	21.9	8 19	21 20.28	-18 45.4	1.810	2.812	3.6	20.8
8 29	21 12.03	-14 4.9	2.013	2.983	6.6	22.2	8 29	21 12.83	-19 23.8	1.850	2.815	7.5	21.0
9 8	21 5.52	-14 48.1	2.076	2.984	10.0	22.4	9 8	21 6.92	-19 51.4	1.916	2.819	11.0	21.2
9 18	21 0.95	-15 22.4	2.163	2.986	13.0	22.6	9 18	21 3.09	-20 7.0	2.003	2.822	14.0	21.5
476708	2008 <i>TE</i> ₁₆₅		8 11.6 308°05	2°3/10.3 16			282035	1995 <i>WG</i> ₁₈		8 11.7 340°76	5°6/15.2 18		
7 10	21 50.14	-18 50.3	1.510	2.409	14.3	21.9	7 10	21 46.58	- 1 42.7	1.440	2.301	17.0	20.3
7 20	21 45.27	-19 18.6	1.430	2.389	10.4	21.6	7 20	21 42.55	- 1 21.0	1.367	2.293	13.6	20.1
7 30	21 37.89	-19 52.7	1.371	2.368	6.1	21.3	7 30	21 36.26	- 1 19.9	1.314	2.285	9.7	19.8
8 9	21 28.77	-20 26.8	1.337	2.348	2.4	21.0	8 9	21 28.44	- 1 39.4	1.282	2.278	6.4	19.6
8 19	21 19.01	-20 54.6	1.328	2.329	5.0	21.2	8 19	21 20.13	- 2 16.7	1.275	2.272	5.9	19.6
8 29	21 9.98	-21 11.1	1.344	2.309	9.7	21.4	8 29	21 12.55	- 3 6.4	1.292	2.266	8.9	19.7
9 8	21 2.90	-21 13.4	1.383	2.290	14.1	21.6	9 8	21 6.78	- 4 1.4	1.332	2.262	12.8	20.0
9 18	20 58.61	-21 1.2	1.441	2.272	18.0	21.8	9 18	21 3.58	- 4 54.9	1.392	2.258	16.5	20.2
166944	Seton		8 11.6 8°52	6°5/ 7.4 18			200485	2000 <i>YE</i> ₃₈		8 11.7 146°92	6°4/16.2 18		
7 10	21 43.63	-21 32.0	0.881	1.816	18.1	18.2	7 10	21 50.50	+ 2 24.6	1.919	2.736	15.1	19.8
7 20	21 41.38	-23 27.0	0.841	1.817	13.2	17.9	7 20	21 44.85	+ 3 1.5	1.846	2.740	12.4	19.7
7 30	21 35.90	-25 29.1	0.820	1.819	8.4	17.6	7 30	21 37.34	+ 3 20.1	1.795	2.742	9.5	19.5
8 9	21 28.34	-27 22.5	0.819	1.823	6.6	17.6	8 9	21 28.65	+ 3 19.7	1.768	2.745	7.1	19.4
8 19	21 20.31	-28 52.5	0.838	1.828	9.8	17.8	8 19	21 19.62	+ 3 1.6	1.767	2.748	6.5	19.3
8 29	21 13.68	-29 49.4	0.878	1.835	14.6	18.1	8 29	21 11.24	+ 2 29.1	1.792	2.750	8.3	19.4
9 8	21 9.90	-30 11.0	0.935	1.844	19.1	18.4	9 8	21 4.36	+ 1 47.5	1.842	2.752	11.0	19.6
9 18	21 9.67	-30 0.7	1.008	1.854	22.9	18.6	9 18	20 59.58	+ 1 2.1	1.915	2.754	13.8	19.8
212372	2006 <i>HF</i> ₁₅		8 11.6 59°41	3°3/13.7 17			445381	2010 <i>RQ</i> ₇₀		8 11.7 300°76	4°0/ 8.7 18		
7 10	21 50.11	- 5 45.5	1.271	2.149	17.8	20.5	7 10	21 51.01	-25 39.1	2.038	2.929	11.5	21.0
7 20	21 45.19	- 5 58.6	1.214	2.156	13.6	20.3	7 20	21 45.29	-26 11.0	1.968	2.920	8.5	20.8
7 30	21 37.74	- 6 32.4	1.177	2.163	8.7	20.0	7 30	21 37.62	-26 41.0	1.921	2.910	5.5	20.6
8 9	21 28.72	- 7 23.0	1.163	2.170	4.2	19.8	8 9	21 28.71	-27 3.9	1.901	2.901	4.0	20.5
8 19	21 19.33	- 8 24.3	1.173	2.177	4.4	19.8	8 19	21 19.50	-27 15.2	1.908	2.892	5.7	20.6
8 29	21 10.97	- 9 28.4	1.207	2.185	8.9	20.1	8 29	21 10.99	-27 12.3	1.941	2.883	8.8	20.7
9 8	21 4.80	-10 27.9	1.264	2.192	13.5	20.4	9 8	21 4.11	-26 54.5	1.998	2.874	11.9	20.9
9 18	21 1.50	-11 17.3	1.341	2.200	17.5	20.7	9 18	20 59.44	-26 23.4	2.077	2.866	14.7	21.1
451165	2009 <i>SX</i> ₁₆₂		8 11.6 321°70	2°2/ 9.9 18			512227	2015 <i>UP</i> ₂₀		8 11.7 24°94			

EPHEMERIDES

8 11.7

8 11.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
326186	2012 CO		8 11.7 146°13	0°2/11.5	17		313252	2001 VS ₂₈		8 11.7 317°36	5°3/14.1	18	
7 10	21 52.02	-12 38.0	1.635	2.516	14.4	21.7	7 10	21 48.03	-5 10.7	1.092	1.981	19.3	19.9
7 20	21 46.20	-13 22.3	1.574	2.523	10.5	21.5	7 20	21 44.39	-4 37.9	1.014	1.959	15.2	19.5
7 30	21 38.20	-14 17.7	1.536	2.530	6.0	21.2	7 30	21 37.73	-4 25.6	0.954	1.938	10.5	19.2
8 9	21 28.84	-15 18.6	1.523	2.536	1.2	20.9	8 9	21 28.85	-4 34.1	0.914	1.917	6.2	18.9
8 19	21 19.17	-16 18.6	1.538	2.542	3.6	21.1	8 19	21 19.03	-5 1.1	0.895	1.897	6.1	18.8
8 29	21 10.36	-17 11.6	1.579	2.548	8.2	21.4	8 29	21 9.94	-5 40.9	0.898	1.878	10.7	19.0
9 8	21 3.40	-17 53.2	1.644	2.552	12.2	21.6	9 8	21 3.20	-6 25.5	0.922	1.860	16.1	19.2
9 18	20 58.95	-18 21.5	1.731	2.557	15.6	21.9	9 18	20 59.85	-7 7.2	0.962	1.844	20.9	19.5
262784	2006 YS ₁₉		8 11.7 124°10	3°7/14.6	18		109079	2001 QE ₂₆		8 11.7 266°09	6°8/ 7.8	18	
7 10	21 50.72	-3 11.9	2.463	3.292	11.9	20.7	7 10	21 57.55	-30 56.5	1.618	2.508	14.0	18.7
7 20	21 44.59	-2 42.4	2.392	3.302	9.3	20.5	7 20	21 50.55	-31 37.2	1.554	2.500	10.8	18.5
7 30	21 37.02	-2 24.1	2.346	3.311	6.5	20.3	7 30	21 40.85	-32 10.6	1.513	2.492	7.9	18.3
8 9	21 28.57	-2 16.6	2.326	3.319	4.2	20.2	8 9	21 29.44	-32 28.6	1.496	2.483	6.8	18.3
8 19	21 19.94	-2 18.4	2.335	3.328	4.0	20.2	8 19	21 17.66	-32 25.3	1.505	2.475	8.5	18.3
8 29	21 11.86	-2 27.5	2.372	3.336	6.2	20.4	8 29	21 6.99	-31 58.6	1.538	2.466	11.7	18.5
9 8	21 5.00	-2 40.9	2.437	3.344	8.8	20.6	9 8	20 58.67	-31 10.4	1.594	2.458	15.1	18.7
9 18	20 59.84	-2 55.6	2.525	3.352	11.3	20.7	9 18	20 53.39	-30 5.1	1.670	2.449	18.0	18.9
275304	2010 PN ₃₃		8 11.7 155°96	8°2/22.7	18		147205	2002 VY ₁₃₃		8 11.7 359°27	4°4/ 9.0	18	
7 10	21 46.13	+18 59.6	3.094	3.771	12.7	21.0	7 10	21 45.65	-20 26.5	1.022	1.947	17.2	18.8
7 20	21 41.18	+19 27.8	3.015	3.778	11.4	20.9	7 20	21 42.59	-21 31.0	0.972	1.943	12.5	18.5
7 30	21 35.04	+19 36.6	2.956	3.784	10.1	20.8	7 30	21 36.54	-22 42.3	0.941	1.941	7.5	18.2
8 9	21 28.15	+19 24.7	2.918	3.790	8.9	20.7	8 9	21 28.56	-23 49.9	0.931	1.939	4.4	18.1
8 19	21 21.05	+18 52.4	2.904	3.796	8.3	20.7	8 19	21 20.10	-24 43.5	0.943	1.940	7.4	18.2
8 29	21 14.33	+18 1.6	2.916	3.801	8.4	20.7	8 29	21 12.87	-25 15.3	0.976	1.942	12.4	18.5
9 8	21 8.53	+16 56.3	2.952	3.806	9.2	20.8	9 8	21 8.23	-25 22.9	1.029	1.945	17.1	18.8
9 18	21 4.09	+15 41.3	3.012	3.810	10.3	20.9	9 18	21 6.93	-25 7.4	1.098	1.949	21.0	19.1
439198	2012 BE ₉₈		8 11.7 223°36	4°5/ 7.5	18		61161	2000 NP ₁₈		8 11.7 342°39	2°1/10.3	18	
7 10	21 51.13	-29 23.6	2.566	3.447	9.8	20.9	7 10	21 46.23	-16 43.4	1.232	2.144	15.9	19.1
7 20	21 45.07	-30 4.4	2.498	3.441	7.4	20.7	7 20	21 42.69	-17 30.3	1.168	2.133	11.6	18.8
7 30	21 37.37	-30 41.2	2.455	3.434	5.3	20.6	7 30	21 36.51	-18 27.7	1.124	2.124	6.6	18.5
8 9	21 28.66	-31 9.3	2.439	3.427	4.6	20.5	8 9	21 28.56	-19 28.3	1.103	2.115	2.2	18.2
8 19	21 19.70	-31 24.9	2.452	3.419	5.9	20.6	8 19	21 20.06	-20 23.6	1.105	2.108	5.3	18.4
8 29	21 11.35	-31 25.8	2.491	3.412	8.2	20.7	8 29	21 12.48	-21 6.1	1.131	2.101	10.4	18.6
9 8	21 4.34	-31 11.9	2.556	3.404	10.6	20.9	9 8	21 7.10	-21 31.3	1.178	2.096	15.2	18.9
9 18	20 59.23	-30 44.5	2.642	3.396	12.7	21.0	9 18	21 4.71	-21 38.0	1.243	2.092	19.2	19.1
432820	2011 GX ₈₂		8 11.7 59°04	0°5/12.1	16		80945	2000 DN ₆₃		8 11.7 245°13	1°7/10.5	18	
7 10	21 48.97	-10 23.5	1.480	2.365	15.4	21.3	7 10	21 51.49	-16 59.5	1.641	2.532	13.8	19.7
7 20	21 43.99	-11 11.9	1.434	2.384	11.2	21.1	7 20	21 46.01	-17 41.8	1.569	2.524	10.0	19.4
7 30	21 36.89	-12 14.1	1.410	2.404	6.5	20.8	7 30	21 38.22	-18 31.7	1.519	2.515	5.7	19.2
8 9	21 28.55	-13 23.9	1.411	2.423	1.6	20.6	8 9	21 28.91	-19 23.0	1.495	2.507	1.9	18.9
8 19	21 20.05	-14 34.2	1.437	2.443	3.5	20.8	8 19	21 19.12	-20 9.6	1.497	2.498	4.5	19.1
8 29	21 12.54	-15 38.0	1.489	2.463	8.1	21.1	8 29	21 10.07	-20 45.8	1.525	2.489	8.9	19.3
9 8	21 6.94	-16 30.2	1.566	2.483	12.1	21.4	9 8	21 2.87	-21 8.4	1.577	2.479	13.0	19.5
9 18	21 3.81	-17 8.4	1.663	2.503	15.5	21.6	9 18	20 58.25	-21 16.3	1.650	2.470	16.6	19.7
302165	2001 ST ₃₅₁		8 11.7 324°16	7°2/ 5.4	18		39008	2000 UU ₄₁		8 11.7 249°75	0°5/11.3	18	
7 10	21 49.55	-31 30.5	1.812	2.709	12.4	19.9	7 10	21 49.95	-14 25.7	1.812	2.695	13.1	19.3
7 20	21 44.60	-32 55.7	1.755	2.702	9.7	19.7	7 20	21 44.68	-14 57.6	1.737	2.688	9.5	19.1
7 30	21 37.38	-34 15.7	1.722	2.696	7.6	19.6	7 30	21 37.37	-15 38.2	1.685	2.680	5.5	18.8
8 9	21 28.69	-35 21.9	1.713	2.689	7.3	19.5	8 9	21 28.72	-16 22.8	1.659	2.672	1.2	18.5
8 19	21 19.60	-36 7.4	1.730	2.683	9.0	19.6	8 19	21 19.66	-17 6.2	1.661	2.664	3.5	18.7
8 29	21 11.32	-36 28.4	1.770	2.677	11.7	19.8	8 29	21 11.26	-17 43.5	1.689	2.656	7.8	18.9
9 8	21 4.90	-36 25.0	1.832	2.672	14.5	20.0	9 8	21 4.47	-18 11.1	1.741	2.648	11.7	19.1
9 18	21 1.04	-35 59.7	1.913	2.667	16.9	20.1	9 18	20 59.97	-18 27.2	1.815	2.639	15.1	19.3
350793	2002 CJ ₁₅₂		8 11.7 103°61	0°7/12.4	17		343618	2010 GD ₁₃₈		8 11.7 245°08	2°2/13.4	18	
7 10	21 46.45	-9 30.9	2.413	3.276	11.0	21.0	7 10	21 49.57	-7 3.5	2.117	2.972	12.6	21.9
7 20	21 41.57	-10 19.5	2.353	3.292	8.0	20.8	7 20	21 44.21	-7 16.9	2.026	2.957	9.6	21.7
7 30	21 35.30	-11 17.8	2.318	3.307	4.8	20.6	7 30	21 37.04	-7 42.7	1.959	2.941	6.1	21.5
8 9	21 28.21	-12 22.0	2.310	3.322	1.4	20.4	8 9	21 28.66	-8 18.9	1.917	2.924	2.8	21.2
8 19	21 20.96	-13 27.8	2.331	3.337	2.4	20.5	8 19	21 19.81	-9 1.9	1.904	2.907	3.2	21.2
8 29	21 14.25	-14 30.4	2.381	3.351	5.7	20.8	8 29	21 11.42	-9 47.6	1.918	2.890	6.7	21.4
9 8	21 8.71	-15 26.3	2.458	3.365	8.7	21.0	9 8	21 4.34	-10 31.3	1.959	2.872	10.3	21.6
9 18	21 4.80	-16 12.7	2.559	3.379	11.3	21.2	9 18	20 59.21	-11 9.7	2.023	2.854	13.5	21.8
445242	2009 OY ₅		8 11.7 23°94	2°8/13.1	18		146139	2000 SL ₃₃		8 11.7 267°29	5°5/ 6.8	18	
7 10	21 52.60	-9 41.2	1.698	2.568	14.5	19.4	7 10	21 52.07	-30 54.1	2.312	3.196	10.6	20.5
7 20	21 46.41	-8 53.3	1.639	2.577	10.9	19.2	7 20	21 46.06	-31 45.4	2.235	3.177	8.2	20.3
7 30	21 38.21	-8 14.8	1.602	2.587	6.9	19.0	7 30	21 38.11	-32 32.1	2.183	3.158	6.2	20.2
8 9	21 28.84	-7 44.9	1.591	2.597	3.4	18.8	8 9	21 28.88	-33 8.4	2.157	3.139	5.6	20.1
8 19	21 19.29	-7 22.5	1.606	2.609	3.9	18.9	8 19	21 19.26	-33 29.3	2.159	3.120	7.0	20.2
8 29	21 10.65	-7 5.7	1.648	2.621	7.5	19.1	8 29	21 10.23	-33 32.1	2.187	3.100	9.5	20.3
9 8	21 3.82	-6 52.0	1.715	2.633	11.2	19.4	9 8	21 2.71	-33 16.7	2.238	3.080	12.1	20.4
9 18	20 59.35	-6 39.1	1.804	2.646	14.4	19.6	9 18	20 57.34	-32 44.7	2.310	3.060	14.5	20.6
494302	2016 SA ₈		8 11.7 31°49	8°6/17.3	16		443614	2014 LT ₂₂		8 11.7 45°85	4°5/15.3	18	
7 10	21 48.76	+4 41.9	1.476	2.304	18.4								

EPHEMERIDES

8 11.7

8 11.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
330288	2006 <i>SN</i> ₄₀₁		8 11.7 341°60	5°6/14.9	17		168397	1998 <i>BD</i> ₄₈		8 11.7 276°77	0°2/11.8	18	
7 10	21 46.99	- 2 21.5	1.242	2.115	18.5	20.3	7 10	21 51.82	-12 37.5	1.464	2.351	15.4	20.9
7 20	21 43.15	- 2 4.6	1.174	2.108	14.6	20.1	7 20	21 46.64	-13 0.7	1.379	2.330	11.4	20.6
7 30	21 36.76	- 2 11.1	1.124	2.101	10.3	19.8	7 30	21 38.84	-13 36.6	1.315	2.309	6.7	20.3
8 9	21 28.64	- 2 40.2	1.096	2.095	6.5	19.6	8 9	21 29.15	-14 20.8	1.275	2.288	1.5	19.9
8 19	21 19.96	- 3 28.4	1.090	2.090	6.0	19.6	8 19	21 18.70	-15 7.3	1.260	2.266	3.9	20.0
8 29	21 12.12	- 4 28.7	1.108	2.086	9.6	19.7	8 29	21 8.87	-15 49.4	1.271	2.244	9.2	20.3
9 8	21 6.37	- 5 32.7	1.147	2.082	14.0	20.0	9 8	21 1.00	-16 22.2	1.305	2.221	14.1	20.5
9 18	21 3.50	- 6 32.5	1.206	2.079	18.1	20.2	9 18	20 55.99	-16 42.5	1.359	2.199	18.4	20.7
322178	2010 <i>XW</i> ₃₁		8 11.7 311°71	0°3/11.9	17		185549	2007 <i>YX</i> ₅₂		8 11.7 327°90	2°9/ 9.6	18	
7 10	21 46.52	-12 30.2	1.936	2.817	12.5	21.4	7 10	21 49.49	-17 26.0	1.340	2.244	15.4	19.7
7 20	21 42.15	-12 53.4	1.849	2.798	9.2	21.2	7 20	21 44.93	-18 41.3	1.280	2.241	11.1	19.5
7 30	21 35.92	-13 26.3	1.786	2.780	5.4	20.9	7 30	21 37.77	-20 6.6	1.241	2.239	6.4	19.2
8 9	21 28.44	-14 5.5	1.749	2.761	1.3	20.6	8 9	21 28.89	-21 33.0	1.226	2.236	2.9	19.0
8 19	21 20.49	-14 46.5	1.738	2.743	3.1	20.7	8 19	21 19.51	-22 50.8	1.236	2.234	5.8	19.2
8 29	21 13.05	-15 24.8	1.754	2.726	7.2	20.9	8 29	21 11.07	-23 51.9	1.270	2.232	10.5	19.4
9 8	21 7.01	-15 56.2	1.795	2.708	11.1	21.1	9 8	21 4.78	-24 32.1	1.327	2.230	14.9	19.7
9 18	21 3.02	-16 18.4	1.858	2.691	14.4	21.3	9 18	21 1.42	-24 50.8	1.402	2.228	18.6	19.9
349225	2007 <i>TL</i> ₁₄		8 11.7 292°98	0°1/11.6	18		511125	2013 <i>WW</i> ₇₄		8 11.7 285°25	4°6/ 8.4	18	
7 10	21 47.89	-12 50.9	1.786	2.669	13.2	21.6	7 10	21 50.68	-22 48.6	1.540	2.442	13.9	20.7
7 20	21 43.22	-13 27.8	1.710	2.661	9.7	21.3	7 20	21 45.71	-23 58.9	1.470	2.429	10.2	20.4
7 30	21 36.55	-14 15.5	1.658	2.652	5.6	21.1	7 30	21 38.21	-25 13.1	1.422	2.415	6.5	20.2
8 9	21 28.57	-15 9.2	1.630	2.643	1.2	20.7	8 9	21 29.00	-26 22.4	1.399	2.402	4.6	20.0
8 19	21 20.17	-16 3.4	1.630	2.635	3.4	20.9	8 19	21 19.20	-27 18.6	1.401	2.389	7.0	20.1
8 29	21 12.39	-16 52.6	1.656	2.627	7.7	21.1	8 29	21 10.18	-27 55.5	1.428	2.375	10.9	20.3
9 8	21 6.18	-17 32.4	1.707	2.618	11.7	21.4	9 8	21 3.16	-28 10.7	1.477	2.362	14.8	20.5
9 18	21 2.21	-18 0.3	1.779	2.610	15.1	21.6	9 18	20 58.96	-28 5.1	1.546	2.349	18.2	20.7
507758	2013 <i>YG</i> ₆₆		8 11.7 281°28	11°3/15.9	18		185447	2006 <i>Y7</i> ₁₁		8 11.7 343°85	2°5/10.3	18	
7 10	21 57.42	+ 9 20.3	1.825	2.595	17.5	20.8	7 10	21 45.86	-17 34.1	1.069	1.989	17.1	19.3
7 20	21 50.38	+11 21.1	1.734	2.578	15.4	20.6	7 20	21 42.76	-18 14.0	1.008	1.977	12.4	19.0
7 30	21 40.87	+13 4.4	1.663	2.561	13.2	20.4	7 30	21 36.72	-19 4.2	0.965	1.966	7.2	18.7
8 9	21 29.55	+14 24.1	1.617	2.543	11.7	20.3	8 9	21 28.69	-19 56.7	0.944	1.956	2.6	18.4
8 19	21 17.40	+15 15.8	1.595	2.526	11.4	20.2	8 19	21 20.05	-20 42.6	0.945	1.948	5.8	18.6
8 29	21 5.65	+15 38.5	1.598	2.508	12.6	20.3	8 29	21 12.45	-21 14.1	0.968	1.941	11.3	18.9
9 8	20 55.52	+15 35.7	1.624	2.491	14.7	20.4	9 8	21 7.32	-21 27.0	1.010	1.935	16.4	19.1
9 18	20 47.93	+15 13.8	1.671	2.473	17.1	20.5	9 18	21 5.50	-21 20.5	1.070	1.931	20.7	19.4
95144	2002 <i>AG</i> ₁₆₅		8 11.7 286°29	1°6/12.8	18		488177	2015 <i>XZ</i> ₇₁		8 11.7 344°49	6°5/ 5.4	18	
7 10	21 48.70	- 8 35.7	1.654	2.529	14.5	20.3	7 10	21 45.49	-28 13.8	1.735	2.641	12.4	19.9
7 20	21 43.26	- 9 1.5	1.569	2.512	10.9	20.1	7 20	21 41.75	-29 58.2	1.676	2.632	9.4	19.7
7 30	21 36.95	- 9 42.9	1.506	2.495	6.8	19.8	7 30	21 35.83	-31 41.3	1.641	2.623	7.1	19.6
8 9	21 28.69	-10 36.3	1.468	2.478	2.5	19.5	8 9	21 28.47	-33 13.9	1.631	2.616	6.7	19.6
8 19	21 19.84	-11 36.5	1.455	2.461	3.4	19.5	8 19	21 20.65	-34 27.6	1.647	2.609	8.7	19.7
8 29	21 11.56	-12 37.2	1.469	2.444	8.0	19.7	8 29	21 13.54	-35 17.1	1.687	2.603	11.6	19.8
9 8	21 4.92	-13 32.3	1.507	2.427	12.3	20.0	9 8	21 8.18	-35 40.8	1.748	2.597	14.6	20.0
9 18	21 0.69	-14 17.3	1.566	2.410	16.2	20.2	9 18	21 5.27	-35 40.4	1.827	2.593	17.2	20.2
286929	2002 <i>PT</i> ₁₁₄		8 11.7 297°97	1°5/12.7	17		478812	2012 <i>VG</i> ₇		8 11.7 317°59	18°0/ 1.6	16	
7 10	21 48.42	- 9 9.2	1.400	2.286	16.0	21.1	7 10	21 43.93	+32 57.8	1.719	2.334	23.3	21.1
7 20	21 44.18	- 9 34.0	1.317	2.266	12.1	20.8	7 20	21 40.85	+33 47.7	1.626	2.312	22.3	20.9
7 30	21 37.40	-10 16.4	1.255	2.246	7.4	20.5	7 30	21 35.47	+33 58.0	1.543	2.290	21.1	20.8
8 9	21 28.82	-11 12.4	1.215	2.227	2.5	20.1	8 9	21 28.43	+33 20.9	1.473	2.268	19.8	20.6
8 19	21 19.50	-12 16.1	1.201	2.207	3.8	20.2	8 19	21 20.67	+31 50.9	1.417	2.247	18.7	20.5
8 29	21 10.81	-13 19.7	1.211	2.188	9.1	20.4	8 29	21 13.42	+29 27.2	1.379	2.226	18.0	20.4
9 8	21 4.04	-14 16.2	1.244	2.169	14.0	20.7	9 8	21 7.89	+26 16.8	1.360	2.207	18.2	20.3
9 18	21 0.08	-15 0.5	1.297	2.150	18.3	20.9	9 18	21 4.95	+22 32.2	1.363	2.188	19.1	20.3
170004	2002 <i>TF</i> ₂₉₆		8 11.7 4°47	3°0/ 9.5	18		447733	2007 <i>FR</i> ₇		8 11.7 319°04	2°8/ 9.7	18	
7 10	21 48.53	-20 11.0	1.613	2.514	13.5	20.0	7 10	21 50.56	-22 24.8	2.010	2.900	11.7	20.6
7 20	21 43.81	-21 1.6	1.554	2.514	9.7	19.8	7 20	21 44.98	-22 43.5	1.937	2.891	8.5	20.4
7 30	21 36.92	-21 56.4	1.518	2.514	5.7	19.6	7 30	21 37.50	-23 2.5	1.889	2.882	5.1	20.2
8 9	21 28.66	-22 48.7	1.506	2.515	3.0	19.4	8 9	21 28.81	-23 17.2	1.866	2.874	2.8	20.0
8 19	21 20.07	-23 31.9	1.520	2.516	5.3	19.6	8 19	21 19.82	-23 23.8	1.871	2.866	4.7	20.1
8 29	21 12.33	-24 1.2	1.560	2.517	9.3	19.8	8 29	21 11.51	-23 19.5	1.903	2.858	8.1	20.3
9 8	21 6.43	-24 14.4	1.622	2.519	13.0	20.0	9 8	21 4.78	-23 3.5	1.959	2.850	11.4	20.5
9 18	21 3.01	-24 11.5	1.705	2.522	16.2	20.2	9 18	21 0.23	-22 36.3	2.037	2.842	14.3	20.7
442557	2012 <i>AH</i> ₈		8 11.7 304°00	0°7/11.1	18		318974	2005 <i>UF</i> ₂₉₆		8 11.7 284°69	1°0/12.5	15	
7 10	21 46.91	-14 53.9	2.095	2.978	11.6	21.1	7 10	21 47.23	-10 35.3	2.160	3.030	11.8	21.6
7 20	21 42.25	-15 29.7	2.021	2.972	8.4	20.9	7 20	21 42.47	-10 52.5	2.076	3.018	8.8	21.4
7 30	21 35.89	-16 12.8	1.971	2.966	4.8	20.6	7 30	21 36.04	-11 19.4	2.016	3.006	5.3	21.1
8 9	21 28.44	-16 59.0	1.947	2.960	1.1	20.4	8 9	21 28.51	-11 53.1	1.982	2.994	1.7	20.9
8 19	21 20.66	-17 43.7	1.950	2.953	3.2	20.5	8 19	21 20.62	-12 30.1	1.976	2.981	2.7	20.9
8 29	21 13.44	-18 22.5	1.981	2.948	7.0	20.7	8 29	21 13.22	-13 6.3	1.997	2.969	6.5	21.2
9 8	21 7.57	-18 52.4	2.038	2.942	10.4	21.0	9 8	21 7.08	-13 38.2	2.045	2.957	10.0	21.4
9 18	21 3.61	-19 11.5	2.116	2.936	13.4	21.1	9 18	21 2.80	-14 3.1	2.115	2.945	13.0	21.5
445246	2009 <i>PF</i> ₂		8 11.7 13°01	5°2/15.3	18		416537	2004 <i>BW</i> <					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
205830	2002 <i>DM</i> ₁₀		8 11.7 57°89	0°1/11.6	17		429576	2011 <i>EF</i> ₇		8 11.7 162°73	0°9/12.4	17	
7 10	21 53.39	-13 58.2	1.215	2.112	17.2	20.0	7 10	21 51.09	-10 12.4	1.878	2.747	13.3	22.2
7 20	21 47.63	-14 13.2	1.169	2.125	12.5	19.7	7 20	21 45.38	-10 41.8	1.811	2.752	9.9	22.0
7 30	21 39.20	-14 38.9	1.143	2.139	7.2	19.5	7 30	21 37.76	-11 22.8	1.766	2.756	5.9	21.8
8 9	21 29.20	-15 9.7	1.140	2.153	1.5	19.1	8 9	21 28.94	-12 11.3	1.748	2.759	1.8	21.5
8 19	21 19.01	-15 39.3	1.161	2.167	4.1	19.4	8 19	21 19.81	-13 2.4	1.757	2.763	3.0	21.6
8 29	21 10.11	-16 2.3	1.207	2.181	9.4	19.7	8 29	21 11.38	-13 51.0	1.794	2.765	7.1	21.9
9 8	21 3.65	-16 15.1	1.275	2.196	14.0	20.0	9 8	21 4.53	-14 32.8	1.857	2.767	10.9	22.1
9 18	21 0.24	-16 16.7	1.363	2.211	17.9	20.3	9 18	20 59.87	-15 5.1	1.941	2.769	14.1	22.4
4411	Kochibunkyo		8 11.7 225°63	1°3/10.8	18		22174	Allisonmae		8 11.7 282°84	1°2/10.9	18	
7 10	21 53.06	-15 24.9	1.442	2.334	15.3	17.4	7 10	21 52.36	-17 21.0	1.715	2.603	13.5	18.6
7 20	21 47.43	-16 9.6	1.373	2.328	11.1	17.1	7 20	21 46.57	-17 32.8	1.641	2.594	9.8	18.4
7 30	21 39.21	-17 4.6	1.326	2.322	6.4	16.8	7 30	21 38.57	-17 49.6	1.591	2.586	5.6	18.1
8 9	21 29.25	-18 3.4	1.303	2.315	1.7	16.5	8 9	21 29.14	-18 7.0	1.565	2.578	1.5	17.8
8 19	21 18.76	-18 58.4	1.306	2.308	4.6	16.7	8 19	21 19.30	-18 20.5	1.566	2.569	3.9	18.0
8 29	21 9.12	-19 43.1	1.334	2.301	9.6	17.0	8 29	21 10.22	-18 26.7	1.594	2.561	8.3	18.2
9 8	21 1.58	-20 13.2	1.386	2.293	14.1	17.2	9 8	21 2.93	-18 23.3	1.646	2.553	12.3	18.5
9 18	20 56.94	-20 27.5	1.457	2.285	17.9	17.4	9 18	20 58.14	-18 10.0	1.719	2.544	15.8	18.7
522523	2016 <i>EV</i> ₂₃₅		8 11.7 121°41	2°6/ 9.9	17		271032	2003 <i>BW</i> ₃₄		8 11.7 229°60	0°1/11.8	18	
7 10	21 52.89	-18 7.3	1.500	2.395	14.6	21.7	7 10	21 50.38	-12 1.5	1.830	2.706	13.3	21.2
7 20	21 47.06	-19 8.4	1.447	2.404	10.5	21.5	7 20	21 45.05	-12 41.1	1.751	2.698	9.8	21.0
7 30	21 38.84	-20 16.0	1.417	2.413	6.1	21.2	7 30	21 37.69	-13 32.0	1.696	2.689	5.7	20.8
8 9	21 29.14	-21 22.3	1.411	2.421	2.6	21.1	8 9	21 28.96	-14 29.7	1.667	2.680	1.3	20.4
8 19	21 19.16	-22 19.7	1.432	2.430	5.2	21.2	8 19	21 19.77	-15 28.6	1.665	2.670	3.3	20.6
8 29	21 10.17	-23 2.4	1.478	2.438	9.5	21.5	8 29	21 11.18	-16 22.9	1.691	2.660	7.7	20.8
9 8	21 3.28	-23 27.8	1.548	2.445	13.5	21.8	9 8	21 4.17	-17 8.0	1.741	2.650	11.6	21.0
9 18	20 59.12	-23 35.8	1.638	2.453	16.9	22.0	9 18	20 59.42	-17 41.3	1.814	2.639	15.1	21.2
92190	1999 <i>XY</i> ₂₁₅		8 11.7 315°75	2°3/13.5	18		248269	2005 <i>HK</i> ₃		8 11.7 105°12	2°1/13.0	17	
7 10	21 47.59	- 7 39.4	2.141	3.001	12.3	19.4	7 10	21 54.20	- 8 35.3	1.591	2.458	15.4	20.4
7 20	21 42.70	- 7 33.1	2.060	2.993	9.3	19.2	7 20	21 47.72	- 8 41.8	1.538	2.476	11.5	20.2
7 30	21 36.17	- 7 37.3	2.003	2.986	6.0	19.0	7 30	21 39.10	- 9 1.6	1.508	2.494	7.1	20.0
8 9	21 28.58	- 7 50.5	1.972	2.978	2.9	18.7	8 9	21 29.23	- 9 31.4	1.502	2.511	2.9	19.8
8 19	21 20.66	- 8 10.1	1.968	2.971	3.2	18.8	8 19	21 19.19	-10 6.6	1.523	2.528	3.5	19.9
8 29	21 13.26	- 8 33.0	1.992	2.964	6.4	18.9	8 29	21 10.15	-10 42.1	1.571	2.544	7.7	20.2
9 8	21 7.15	- 8 55.6	2.041	2.958	9.7	19.1	9 8	21 3.05	-11 13.5	1.643	2.560	11.7	20.4
9 18	21 2.89	- 9 15.1	2.113	2.951	12.7	19.3	9 18	20 58.49	-11 37.8	1.737	2.575	15.1	20.7
414124	2007 <i>UQ</i> ₁₃₁		8 11.7 105°86	3°0/ 9.7	17		477497	2010 <i>CO</i> ₆₅		8 11.7 127°34	3°1/ 9.8	16	
7 10	21 54.90	-19 41.5	1.539	2.432	14.5	21.3	7 10	21 56.05	-23 34.3	1.976	2.859	12.2	21.2
7 20	21 48.36	-20 40.1	1.495	2.451	10.4	21.1	7 20	21 48.84	-23 50.1	1.919	2.868	8.9	21.0
7 30	21 39.49	-21 42.4	1.474	2.469	6.1	20.9	7 30	21 39.66	-24 4.4	1.886	2.877	5.4	20.8
8 9	21 29.28	-22 40.6	1.478	2.487	3.0	20.7	8 9	21 29.35	-24 12.4	1.880	2.886	3.1	20.7
8 19	21 18.92	-23 27.9	1.508	2.504	5.4	20.9	8 19	21 18.91	-24 10.6	1.902	2.894	4.9	20.8
8 29	21 9.68	-23 59.5	1.565	2.521	9.5	21.2	8 29	21 9.40	-23 57.1	1.951	2.902	8.2	21.0
9 8	21 2.58	-24 14.1	1.645	2.537	13.2	21.5	9 8	21 1.69	-23 32.0	2.026	2.909	11.4	21.3
9 18	20 58.20	-24 12.5	1.746	2.552	16.3	21.7	9 18	20 56.33	-22 56.7	2.122	2.916	14.2	21.5
242549	2005 <i>EB</i> ₃₆		8 11.7 145°06	3°5/15.1	18		355637	2008 <i>EX</i> ₂₆		8 11.7 237°01	1°4/13.1	18	
7 10	21 48.59	- 1 38.0	2.369	3.197	12.3	21.1	7 10	21 46.05	- 7 21.6	2.279	3.138	11.7	20.6
7 20	21 43.20	- 1 50.0	2.299	3.207	9.6	21.0	7 20	21 41.56	- 8 6.9	2.198	3.132	8.7	20.4
7 30	21 36.34	- 2 16.5	2.252	3.217	6.7	20.8	7 30	21 35.52	- 9 5.1	2.141	3.126	5.4	20.2
8 9	21 28.60	- 2 55.5	2.231	3.226	4.1	20.7	8 9	21 28.48	-10 12.8	2.111	3.120	2.1	19.9
8 19	21 20.65	- 3 44.2	2.238	3.234	3.8	20.7	8 19	21 21.12	-11 25.5	2.109	3.114	2.6	20.0
8 29	21 13.22	- 4 38.4	2.274	3.242	6.0	20.8	8 29	21 14.21	-12 37.8	2.135	3.108	6.1	20.2
9 8	21 7.00	- 5 33.6	2.336	3.250	8.9	21.0	9 8	21 8.46	-13 44.9	2.189	3.101	9.4	20.4
9 18	21 2.48	- 6 25.9	2.424	3.257	11.5	21.2	9 18	21 4.43	-14 43.2	2.266	3.095	12.3	20.6
424601	2008 <i>HY</i> ₁₃		8 11.7 140°06	0°1/11.6	17		183865	2004 <i>CN</i> ₁₆		8 11.7 209°45	0°3/11.5	18	
7 10	21 52.98	-13 26.9	1.760	2.637	13.7	21.8	7 10	21 51.68	-13 21.6	1.791	2.670	13.4	20.9
7 20	21 46.80	-13 53.8	1.699	2.646	10.0	21.6	7 20	21 46.01	-13 59.6	1.717	2.665	9.8	20.6
7 30	21 38.57	-14 29.4	1.661	2.655	5.7	21.4	7 30	21 38.24	-14 47.6	1.667	2.660	5.7	20.4
8 9	21 29.10	-15 9.2	1.650	2.663	1.2	21.1	8 9	21 29.09	-15 40.7	1.642	2.655	1.2	20.1
8 19	21 19.37	-15 48.1	1.666	2.670	3.3	21.3	8 19	21 19.51	-16 33.3	1.644	2.649	3.5	20.2
8 29	21 10.48	-16 21.5	1.709	2.678	7.7	21.6	8 29	21 10.61	-17 19.8	1.674	2.642	7.9	20.5
9 8	21 3.36	-16 46.1	1.777	2.684	11.5	21.8	9 8	21 3.37	-17 56.3	1.729	2.635	11.8	20.7
9 18	20 58.61	-17 0.4	1.867	2.690	14.8	22.0	9 18	20 58.48	-18 20.7	1.805	2.627	15.2	20.9
498541	2008 <i>GA</i> ₂₆		8 11.7 210°47	3°4/ 8.8	17		389146	2009 <i>BO</i> ₂₇		8 11.7 102°92	2°3/ 9.8	18	
7 10	21 54.92	-23 9.3	2.213	3.093	11.2	23.5	7 10	21 49.22	-18 47.6	1.871	2.762	12.4	20.9
7 20	21 48.13	-24 4.2	2.136	3.084	8.2	23.3	7 20	21 44.12	-19 39.7	1.808	2.764	8.9	20.7
7 30	21 39.36	-25 0.2	2.085	3.074	5.1	23.1	7 30	21 37.08	-20 36.6	1.769	2.765	5.1	20.5
8 9	21 29.29	-25 51.5	2.061	3.063	3.4	22.9	8 9	21 28.83	-21 32.5	1.757	2.766	2.3	20.3
8 19	21 18.80	-26 32.6	2.066	3.051	5.3	23.0	8 19	21 20.27	-22 21.6	1.771	2.768	4.5	20.4
8 29	21 8.90	-26 59.5	2.099	3.038	8.4	23.2	8 29	21 12.42	-22 59.2	1.812	2.769	8.2	20.7
9 8	21 0.52	-27 11.0	2.158	3.025	11.5	23.4	9 8	21 6.18	-23 22.8	1.877	2.771	11.7	20.9
9 18	20 54.33	-27 7.6	2.238	3.010	14.3	23.5	9 18	21 2.15	-23 31.8	1.964	2.772	14.7	21.1
483239	2015 <i>RM</i> ₁₂₃		8 11.7 9°52	2°4/ 9.9	18		24580	1414 <i>T</i> ₋₂		8 11.7 241°51	4°5/15.5	18</	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
445427	2010 <i>UU</i> ₁₆		8 11.7 320°78	7°3/ 4.8 18			127371	2002 <i>JT</i> ₁₄₄		8 11.7 148°84	3°4/15.7 18		
7 10	21 50.00	-34 27.4	2.057	2.945	11.5	20.0	7 10	21 45.43	+ 0 7.7	2.654	3.473	11.4	20.2
7 20	21 44.82	-35 43.8	1.999	2.937	9.3	19.9	7 20	21 40.86	- 0 21.9	2.577	3.479	9.0	20.1
7 30	21 37.55	-36 52.9	1.966	2.930	7.6	19.7	7 30	21 35.02	- 1 6.3	2.524	3.484	6.4	19.9
8 9	21 28.95	-37 47.1	1.958	2.923	7.5	19.7	8 9	21 28.40	- 2 3.5	2.498	3.490	4.1	19.8
8 19	21 19.98	-38 20.8	1.976	2.916	9.0	19.8	8 19	21 21.56	- 3 10.4	2.499	3.494	3.6	19.7
8 29	21 11.77	-38 31.1	2.017	2.909	11.2	19.9	8 29	21 15.15	- 4 22.7	2.530	3.499	5.5	19.9
9 8	21 5.27	-38 18.6	2.080	2.903	13.6	20.1	9 8	21 9.74	- 5 35.7	2.589	3.504	8.0	20.1
9 18	21 1.15	-37 45.9	2.162	2.897	15.8	20.2	9 18	21 5.79	- 6 45.2	2.672	3.508	10.5	20.2
223	<i>Rosa</i>		8 11.7 212°47	0°8/10.9 18			45251	1999 <i>YN</i>		8 11.7 298°73	5°1/ 6.9 18		
7 10	21 47.84	-16 2.0	2.554	3.430	10.0	15.0	7 10	21 49.05	-18 23.6	1.402	2.306	14.9	17.8
7 20	21 42.70	-16 33.1	2.478	3.426	7.2	14.9	7 20	21 45.20	-20 56.8	1.308	2.270	10.9	17.4
7 30	21 36.12	-17 9.1	2.427	3.421	4.1	14.6	7 30	21 38.43	-23 52.0	1.237	2.233	6.8	17.1
8 9	21 28.62	-17 46.5	2.403	3.416	1.0	14.4	8 9	21 29.30	-26 56.5	1.193	2.196	5.3	16.9
8 19	21 20.87	-18 21.9	2.409	3.411	2.9	14.6	8 19	21 18.83	-29 53.4	1.176	2.159	8.7	17.0
8 29	21 13.58	-18 51.8	2.443	3.405	6.1	14.8	8 29	21 8.57	-32 26.8	1.185	2.121	13.7	17.2
9 8	21 7.42	-19 14.0	2.503	3.399	9.0	14.9	9 8	21 0.18	-34 26.5	1.216	2.084	18.5	17.4
9 18	21 2.89	-19 27.3	2.587	3.393	11.6	15.1	9 18	20 54.99	-35 49.5	1.264	2.046	22.6	17.5
443795	1917 <i>T</i> ₋₃		8 11.7 294°86	3°0/13.7 17			224363	2005 <i>UW</i> ₁₃₄		8 11.7 251°76	1°2/10.9 18		
7 10	21 49.59	- 6 15.7	1.993	2.848	13.3	21.5	7 10	21 52.66	-16 26.9	1.847	2.729	12.9	22.1
7 20	21 44.53	- 6 7.2	1.887	2.815	10.3	21.3	7 20	21 46.81	-16 55.7	1.762	2.712	9.4	21.8
7 30	21 37.48	- 6 11.2	1.803	2.782	6.9	21.0	7 30	21 38.78	-17 31.2	1.701	2.696	5.4	21.5
8 9	21 28.97	- 6 26.6	1.745	2.749	3.6	20.8	8 9	21 29.27	-18 8.8	1.666	2.678	1.5	21.2
8 19	21 19.81	- 6 51.3	1.714	2.715	3.8	20.7	8 19	21 19.21	-18 43.3	1.658	2.660	3.9	21.4
8 29	21 10.96	- 7 21.6	1.709	2.682	7.3	20.8	8 29	21 9.74	-19 10.1	1.678	2.642	8.2	21.6
9 8	21 3.43	- 7 53.3	1.731	2.648	11.2	21.0	9 8	21 1.91	-19 26.2	1.722	2.623	12.2	21.8
9 18	20 57.96	- 8 22.5	1.774	2.613	14.8	21.2	9 18	20 56.46	-19 30.4	1.788	2.604	15.6	22.0
69593	1998 <i>EN</i> ₂₁		8 11.7 198°17	2°2/10.1 18			282675	2005 <i>WX</i> ₇₃		8 11.7 273°70	1°5/13.3 18		
7 10	21 51.33	-16 24.6	1.521	2.415	14.5	19.0	7 10	21 45.71	- 6 55.5	2.310	3.168	11.6	21.2
7 20	21 46.07	-17 34.3	1.457	2.413	10.5	18.8	7 20	21 41.37	- 7 39.1	2.218	3.151	8.7	21.0
7 30	21 38.41	-18 53.9	1.415	2.412	6.0	18.5	7 30	21 35.47	- 8 36.3	2.150	3.135	5.5	20.8
8 9	21 29.16	-20 15.6	1.399	2.410	2.3	18.3	8 9	21 28.53	- 9 43.9	2.109	3.118	2.2	20.5
8 19	21 19.45	-21 30.8	1.409	2.408	5.0	18.5	8 19	21 21.18	-10 57.7	2.096	3.101	2.7	20.5
8 29	21 10.56	-22 32.3	1.444	2.406	9.5	18.7	8 29	21 14.20	-12 12.2	2.111	3.084	6.1	20.7
9 8	21 3.64	-23 16.0	1.503	2.403	13.7	19.0	9 8	21 8.35	-13 22.5	2.154	3.067	9.5	20.9
9 18	20 59.43	-23 40.7	1.582	2.400	17.2	19.2	9 18	21 4.18	-14 24.6	2.220	3.050	12.5	21.1
469655	2004 <i>TK</i> ₁₅₆		8 11.7 340°15	6°0/ 8.4 18			70647	1999 <i>TN</i> ₂₄₄		8 11.7 159°26	4°7/ 8.9 17		
7 10	21 49.24	-25 47.7	1.194	2.111	15.9	20.8	7 10	21 55.87	-24 43.3	1.558	2.452	14.2	19.2
7 20	21 45.19	-26 33.1	1.131	2.096	11.9	20.5	7 20	21 49.30	-25 28.2	1.501	2.455	10.4	19.0
7 30	21 38.16	-27 17.4	1.089	2.083	7.9	20.2	7 30	21 40.20	-26 11.8	1.467	2.457	6.7	18.8
8 9	21 29.13	-27 51.2	1.069	2.071	6.0	20.1	8 9	21 29.55	-26 46.8	1.457	2.460	4.7	18.7
8 19	21 19.53	-28 6.5	1.071	2.060	8.4	20.2	8 19	21 18.59	-27 6.7	1.474	2.461	6.7	18.8
8 29	21 11.03	-27 58.5	1.096	2.050	12.6	20.4	8 29	21 8.71	-27 8.4	1.516	2.463	10.4	19.0
9 8	21 5.04	-27 27.1	1.140	2.042	16.9	20.6	9 8	21 1.04	-26 51.6	1.581	2.464	14.1	19.3
9 18	21 2.38	-26 35.5	1.201	2.035	20.7	20.9	9 18	20 56.25	-26 19.0	1.666	2.465	17.3	19.5
504407	2007 <i>XD</i> ₁₆		8 11.7 298°79	5°2/ 8.5 18			315894	2008 <i>LB</i> ₄		8 11.7 55°14	1°3/10.5 18		
7 10	21 51.50	-22 53.4	1.269	2.179	15.7	21.1	7 10	21 46.44	-15 46.1	2.178	3.062	11.2	20.3
7 20	21 46.90	-24 0.9	1.195	2.158	11.6	20.8	7 20	21 41.89	-16 42.4	2.113	3.065	8.0	20.1
7 30	21 39.25	-25 13.6	1.142	2.137	7.4	20.5	7 30	21 35.73	-17 45.4	2.072	3.067	4.5	19.9
8 9	21 29.40	-26 21.6	1.112	2.116	5.2	20.3	8 9	21 28.57	-18 50.3	2.058	3.070	1.4	19.7
8 19	21 18.71	-27 14.8	1.105	2.095	7.9	20.4	8 19	21 21.15	-19 51.7	2.072	3.073	3.5	19.9
8 29	21 8.86	-27 45.4	1.122	2.075	12.6	20.6	8 29	21 14.28	-20 45.1	2.114	3.075	6.9	20.1
9 8	21 1.40	-27 50.8	1.159	2.055	17.2	20.8	9 8	21 8.71	-21 27.0	2.181	3.078	10.2	20.3
9 18	20 57.32	-27 32.5	1.213	2.035	21.2	21.0	9 18	21 4.97	-21 56.1	2.271	3.081	12.9	20.5
179267	2001 <i>UZ</i> ₁₇₇		8 11.7 204°30	5°1/ 6.9 18			23329	<i>Josevega</i>		8 11.7 191°33	4°6/14.8 18		
7 10	21 50.78	-29 13.4	2.335	3.221	10.4	20.5	7 10	21 51.11	- 2 38.4	1.583	2.435	16.2	19.6
7 20	21 45.06	-30 14.2	2.273	3.218	7.9	20.4	7 20	21 45.75	- 2 32.9	1.512	2.435	12.7	19.4
7 30	21 37.56	-31 11.3	2.236	3.215	5.8	20.2	7 30	21 38.17	- 2 46.6	1.462	2.434	8.8	19.2
8 9	21 28.95	-31 59.1	2.226	3.212	5.1	20.2	8 9	21 29.14	- 3 18.1	1.435	2.434	5.4	19.0
8 19	21 20.05	-32 32.7	2.244	3.208	6.6	20.3	8 19	21 19.68	- 4 3.8	1.434	2.432	5.0	18.9
8 29	21 11.79	-32 49.2	2.288	3.205	9.0	20.4	8 29	21 10.96	- 4 58.0	1.458	2.431	8.3	19.1
9 8	21 4.98	-32 48.3	2.356	3.200	11.5	20.6	9 8	21 4.03	- 5 54.2	1.507	2.429	12.2	19.3
9 18	21 0.20	-32 31.4	2.444	3.196	13.7	20.8	9 18	20 59.60	- 6 46.7	1.577	2.428	15.7	19.6
500218	2012 <i>HQ</i> ₄₈		8 11.7 163°25	3°8/ 8.7 17			411751	2012 <i>BH</i> ₁₀₇		8 11.7 239°88	0°1/11.7 18		
7 10	21 52.15	-21 1.3	1.689	2.583	13.3	21.5	7 10	21 48.99	-14 24.4	2.340	3.213	10.9	21.4
7 20	21 46.48	-22 21.6	1.631	2.587	9.6	21.3	7 20	21 43.60	-14 33.3	2.266	3.211	7.9	21.2
7 30	21 38.55	-23 46.0	1.596	2.590	5.9	21.0	7 30	21 36.67	-14 47.8	2.217	3.209	4.6	21.0
8 9	21 29.19	-25 6.3	1.588	2.593	3.8	20.9	8 9	21 28.78	-15 4.9	2.194	3.207	1.0	20.7
8 19	21 19.44	-26 14.6	1.606	2.595	6.1	21.1	8 19	21 20.65	-15 21.8	2.200	3.205	2.7	20.8
8 29	21 10.53	-27 5.1	1.651	2.597	9.8	21.3	8 29	21 13.06	-15 35.5	2.235	3.203	6.2	21.1
9 8	21 3.49	-27 35.6	1.719	2.599	13.3	21.5	9 8	21 6.73	-15 43.9	2.295	3.201	9.4	21.3
9 18	20 59.01	-27 46.6	1.808	2.600	16.4	21.7	9 18	21 2.17	-15 45.7	2.379	3.198	12.1	21.4
92084	1999 <i>XD</i> ₂₁		8 11.7 267°78	2°0/ 9.7 18			346437	2008 <i>SZ</i> ₂₆₅		8 11.7 94°01	8°0/ 5.		

EPHEMERIDES

8 11.7

8 11.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
1483	Hakoila		8 11.7 148°29'	1°9/10.0	18		261623	2005 YX ₂₂		8 11.7 322°35'	0°1/11.8	18	
7 10	21 50.76	-18 50.7	2.246	3.126	11.0	16.8	7 10	21 46.73	-13 5.5	1.864	2.748	12.7	20.6
7 20	21 44.93	-19 36.3	2.185	3.135	7.9	16.6	7 20	21 42.43	-13 26.7	1.782	2.732	9.4	20.4
7 30	21 37.44	-20 25.4	2.149	3.143	4.5	16.4	7 30	21 36.23	-13 57.3	1.723	2.717	5.5	20.1
8 9	21 28.95	-21 13.1	2.141	3.150	2.0	16.3	8 9	21 28.76	-14 33.6	1.690	2.703	1.2	19.8
8 19	21 20.25	-21 54.8	2.161	3.158	3.9	16.4	8 19	21 20.86	-15 11.1	1.683	2.689	3.1	19.9
8 29	21 12.18	-22 26.9	2.209	3.164	7.1	16.6	8 29	21 13.51	-15 45.2	1.703	2.675	7.4	20.1
9 8	21 5.52	-22 47.5	2.283	3.170	10.2	16.9	9 8	21 7.61	-16 12.1	1.747	2.662	11.2	20.3
9 18	21 0.78	-22 56.0	2.380	3.176	12.8	17.0	9 18	21 3.84	-16 29.4	1.813	2.649	14.6	20.5
265104	2003 SJ ₃₂₀		8 11.7 292°54'	1°3/12.8	18		23933	1998 TD ₃		8 11.7 21°55'	3°8/10.2	18	
7 10	21 47.01	-9 47.4	2.288	3.153	11.4	20.9	7 10	22 0.22	-27 8.5	1.797	2.679	13.2	17.3
7 20	21 42.30	-9 56.9	2.199	3.137	8.5	20.7	7 20	21 51.96	-26 45.0	1.739	2.686	9.8	17.1
7 30	21 36.01	-10 15.7	2.134	3.121	5.3	20.5	7 30	21 41.50	-26 14.8	1.705	2.694	6.2	16.9
8 9	21 28.66	-10 41.6	2.095	3.105	2.0	20.2	8 9	21 29.85	-25 34.1	1.698	2.702	3.8	16.8
8 19	21 20.95	-11 11.5	2.084	3.089	2.7	20.2	8 19	21 18.21	-24 41.2	1.719	2.711	5.4	16.9
8 29	21 13.66	-11 42.1	2.101	3.073	6.2	20.4	8 29	21 7.78	-23 36.7	1.768	2.720	8.8	17.1
9 8	21 7.55	-12 9.9	2.144	3.058	9.5	20.6	9 8	20 59.52	-22 23.1	1.842	2.730	12.2	17.3
9 18	21 3.18	-12 32.2	2.210	3.042	12.5	20.8	9 18	20 53.94	-21 3.8	1.939	2.740	15.1	17.6
449029	2012 CX ₂		8 11.7 294°22'	0°1/11.8	18		182130	2000 SY ₁₅		8 11.7 322°80'	1°3/10.8	18	
7 10	21 49.52	-14 24.6	2.291	3.164	11.1	21.0	7 10	21 50.73	-18 10.9	1.926	2.812	12.3	19.7
7 20	21 44.01	-14 27.3	2.217	3.162	8.1	20.8	7 20	21 45.20	-18 21.9	1.854	2.806	8.9	19.5
7 30	21 36.92	-14 35.3	2.168	3.160	4.7	20.6	7 30	21 37.74	-18 36.6	1.806	2.801	5.1	19.2
8 9	21 28.84	-14 46.0	2.145	3.158	1.0	20.3	8 9	21 29.07	-18 50.8	1.784	2.796	1.6	19.0
8 19	21 20.53	-14 56.5	2.151	3.156	2.7	20.4	8 19	21 20.09	-19 1.0	1.789	2.791	3.7	19.1
8 29	21 12.78	-15 4.4	2.186	3.154	6.2	20.7	8 29	21 11.81	-19 4.0	1.821	2.786	7.6	19.4
9 8	21 6.33	-15 7.4	2.246	3.152	9.5	20.9	9 8	21 5.11	-18 58.2	1.878	2.782	11.2	19.6
9 18	21 1.69	-15 4.4	2.329	3.150	12.3	21.1	9 18	21 0.60	-18 43.2	1.957	2.777	14.3	19.8
464729	2002 TS ₃₁₀		8 11.7 12°41'	2°7/10.0	17		465885	2010 TE ₁₅₅		8 11.7 5°08'	8°0/15.9	17	
7 10	21 42.76	-15 34.9	0.911	1.840	18.4	19.9	7 10	21 40.90	-1 50.3	0.788	1.696	22.8	19.8
7 20	21 40.62	-16 51.0	0.870	1.844	13.2	19.6	7 20	21 39.47	-0 56.2	0.743	1.694	18.3	19.5
7 30	21 35.52	-18 21.5	0.848	1.850	7.5	19.3	7 30	21 34.98	-0 33.2	0.713	1.695	13.4	19.3
8 9	21 28.59	-19 55.0	0.846	1.858	2.7	19.1	8 9	21 28.52	-0 42.7	0.699	1.698	9.2	19.1
8 19	21 21.28	-21 18.9	0.865	1.868	6.2	19.3	8 19	21 21.57	-1 21.1	0.704	1.704	8.2	19.1
8 29	21 15.26	-22 23.1	0.905	1.879	11.7	19.7	8 29	21 15.87	-2 19.5	0.727	1.712	11.5	19.3
9 8	21 11.81	-23 2.2	0.965	1.893	16.7	20.0	9 8	21 12.83	-3 25.6	0.769	1.723	16.2	19.6
9 18	21 11.61	-23 15.7	1.041	1.907	20.8	20.3	9 18	21 13.19	-4 28.4	0.826	1.735	20.6	19.9
152479	2005 WF ₃₃		8 11.7 107°22'	3°9/15.2	18		88247	2001 DF ₂₇		8 11.7 326°51'	1°4/10.7	18	
7 10	21 47.57	-1 47.0	2.317	3.149	12.4	20.0	7 10	21 46.82	-16 44.4	1.885	2.776	12.3	18.7
7 20	21 42.56	-1 38.3	2.245	3.154	9.8	19.8	7 20	21 42.48	-17 18.9	1.808	2.763	8.9	18.5
7 30	21 36.07	-1 43.3	2.195	3.159	6.9	19.6	7 30	21 36.24	-18 0.1	1.755	2.751	5.1	18.2
8 9	21 28.68	-2 1.0	2.171	3.164	4.5	19.5	8 9	21 28.76	-18 43.2	1.727	2.740	1.5	18.0
8 19	21 21.05	-2 29.3	2.175	3.169	4.1	19.5	8 19	21 20.89	-19 23.2	1.727	2.728	3.8	18.1
8 29	21 13.93	-3 4.9	2.206	3.174	6.3	19.6	8 29	21 13.59	-19 55.4	1.752	2.718	7.8	18.3
9 8	21 8.02	-3 43.6	2.264	3.179	9.0	19.8	9 8	21 7.79	-20 16.8	1.802	2.707	11.5	18.5
9 18	21 3.79	-4 21.7	2.345	3.183	11.6	20.0	9 18	21 4.10	-20 25.9	1.873	2.698	14.7	18.7
62018	2000 RV ₄₂		8 11.7 319°62'	5°4/16.0	18		509272	2006 UD ₂₃₉		8 11.7 290°70'	0°9/11.2	17	
7 10	21 46.43	+ 0 58.0	1.946	2.777	14.5	18.5	7 10	21 51.60	-15 21.4	1.436	2.330	15.2	21.9
7 20	21 42.08	+ 1 12.2	1.864	2.769	11.7	18.3	7 20	21 46.58	-15 45.1	1.355	2.311	11.2	21.6
7 30	21 35.97	+ 1 8.2	1.803	2.760	8.7	18.1	7 30	21 38.91	-16 18.6	1.296	2.292	6.5	21.3
8 9	21 28.68	+ 0 46.2	1.767	2.752	6.2	17.9	8 9	21 29.40	-16 56.5	1.261	2.274	1.5	20.9
8 19	21 21.00	+ 0 8.3	1.755	2.745	5.6	17.9	8 19	21 19.17	-17 32.8	1.251	2.255	4.3	21.0
8 29	21 13.83	-0 41.5	1.770	2.737	7.6	18.0	8 29	21 9.66	-18 1.5	1.265	2.236	9.5	21.3
9 8	21 8.01	-1 37.6	1.810	2.730	10.6	18.1	9 8	21 2.16	-18 18.4	1.303	2.217	14.3	21.5
9 18	21 4.16	-2 34.5	1.872	2.723	13.6	18.3	9 18	20 57.56	-18 22.0	1.360	2.199	18.4	21.7
300711	2007 VN ₁₁₃		8 11.7 255°93'	1°0/12.5	18		513237	2005 WG ₁₆₈		8 11.7 291°15'	1°0/11.1	18	
7 10	21 48.32	-10 19.0	1.986	2.857	12.6	21.0	7 10	21 50.32	-15 12.4	1.577	2.468	14.3	22.2
7 20	21 43.41	-10 42.8	1.910	2.852	9.4	20.8	7 20	21 45.52	-15 48.1	1.489	2.444	10.5	21.9
7 30	21 36.70	-11 17.6	1.857	2.846	5.6	20.6	7 30	21 38.26	-16 34.3	1.423	2.419	6.1	21.6
8 9	21 28.84	-12 0.0	1.830	2.841	1.8	20.3	8 9	21 29.26	-17 25.6	1.382	2.395	1.5	21.2
8 19	21 20.62	-12 45.6	1.830	2.835	2.9	20.4	8 19	21 19.52	-18 15.6	1.367	2.370	4.2	21.3
8 29	21 12.97	-13 29.8	1.857	2.830	6.8	20.6	8 29	21 10.34	-18 58.0	1.377	2.346	9.1	21.6
9 8	21 6.72	-14 8.4	1.910	2.824	10.5	20.8	9 8	21 2.95	-19 28.0	1.411	2.321	13.7	21.8
9 18	21 2.49	-14 38.7	1.986	2.818	13.7	21.0	9 18	20 58.22	-19 43.6	1.464	2.296	17.7	22.0
179781	2002 SP ₆₃		8 11.7 2°76'	0°7/12.1	17		510724	2012 VJ ₇₄		8 11.8 354°99'	6°2/7.5	18	
7 10	21 51.44	-13 49.6	1.131	2.035	17.7	19.7	7 10	21 49.23	-26 23.9	1.385	2.295	14.6	20.5
7 20	21 46.60	-13 34.1	1.074	2.033	13.0	19.5	7 20	21 44.82	-27 34.5	1.331	2.291	10.9	20.3
7 30	21 38.88	-13 28.8	1.036	2.033	7.7	19.2	7 30	21 37.81	-28 43.8	1.299	2.288	7.5	20.1
8 9	21 29.34	-13 30.1	1.020	2.033	2.0	18.8	8 9	21 29.12	-29 42.2	1.290	2.286	6.2	20.0
8 19	21 19.38	-13 33.6	1.028	2.035	4.2	19.0	8 19	21 20.03	-30 21.7	1.305	2.285	8.4	20.2
8 29	21 10.60	-13 34.7	1.059	2.037	9.8	19.3	8 29	21 11.98	-30 37.5	1.343	2.284	12.0	20.4
9 8	21 4.30	-13 30.2	1.110	2.040	14.8	19.6	9 8	21 6.14	-30 29.3	1.402	2.285	15.6	20.6
9 18	21 1.23	-13 18.2	1.181	2.045	19.0	19.9	9 18	21 3.24	-29 59.6	1.480	2.286	18.8	20.8
284253	2006 FW ₄₅		8 11.7 26°11'	10°1/4.0	17		220171	2002 TB ₂₈₅		8 11.8 264°15'	1°1/12.4	18	
7 10	21 48.30	-32 42.6	1.219	2.134	15.8								

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
241330	2007 <i>VB</i> ₁₆₆		8 11.8 329°03	6°9/ 6.4 18			188396	2004 <i>DJ</i> ₆₂		8 11.8 118°16	0°1/11.7 17		
7 10	21 49.01	-28 45.6	1.535	2.441	13.7	19.6	7 10	21 52.61	-12 42.8	1.740	2.617	13.8	21.2
7 20	21 44.63	-30 6.8	1.473	2.429	10.5	19.3	7 20	21 46.57	-13 21.0	1.685	2.632	10.1	21.0
7 30	21 37.73	-31 25.5	1.433	2.416	7.7	19.1	7 30	21 38.52	-14 9.0	1.654	2.647	5.8	20.8
8 9	21 29.12	-32 32.2	1.417	2.405	7.1	19.1	8 9	21 29.27	-15 1.5	1.648	2.661	1.2	20.5
8 19	21 19.99	-33 18.7	1.425	2.394	9.1	19.2	8 19	21 19.82	-15 53.0	1.670	2.674	3.3	20.7
8 29	21 11.72	-33 39.9	1.456	2.383	12.3	19.3	8 29	21 11.23	-16 38.2	1.719	2.688	7.6	21.0
9 8	21 5.52	-33 35.3	1.509	2.373	15.7	19.5	9 8	21 4.41	-17 13.4	1.793	2.700	11.4	21.2
9 18	21 2.16	-33 7.4	1.579	2.364	18.7	19.7	9 18	20 59.94	-17 37.0	1.889	2.712	14.6	21.5
377288	2004 <i>FL</i> ₂₃		8 11.8 152°83	1°8/10.5 17			50471	2000 <i>DT</i> ₆₉		8 11.8 254°93	0°7/11.3 18		
7 10	21 54.03	-18 1.4	1.821	2.704	13.0	21.4	7 10	21 52.07	-14 48.6	1.704	2.587	13.8	19.8
7 20	21 47.62	-18 36.1	1.760	2.711	9.4	21.2	7 20	21 46.54	-15 19.2	1.622	2.573	10.1	19.6
7 30	21 39.14	-19 15.4	1.723	2.717	5.4	21.0	7 30	21 38.74	-15 59.0	1.564	2.559	5.8	19.3
8 9	21 29.39	-19 54.0	1.712	2.723	1.9	20.8	8 9	21 29.37	-16 42.9	1.531	2.544	1.3	18.9
8 19	21 19.38	-20 26.6	1.729	2.729	4.1	20.9	8 19	21 19.44	-17 25.5	1.525	2.528	3.8	19.1
8 29	21 10.22	-20 49.3	1.773	2.734	8.1	21.2	8 29	21 10.15	-18 1.3	1.545	2.513	8.4	19.3
9 8	21 2.83	-21 0.1	1.842	2.738	11.8	21.4	9 8	21 2.59	-18 26.5	1.589	2.497	12.6	19.5
9 18	20 57.83	-20 58.7	1.932	2.742	14.9	21.6	9 18	20 57.54	-18 39.4	1.655	2.480	16.3	19.7
440577	2005 <i>UL</i> ₄₄₆		8 11.8 269°89	4°9/15.9 18			501540	2014 <i>JF</i> ₂₅		8 11.8 316°44	9°6/ 2.5 17		
7 10	21 47.22	+ 0 53.5	2.252	3.074	13.1	20.7	7 10	21 45.78	-20 46.5	0.905	1.836	18.2	19.3
7 20	21 42.46	+ 1 7.9	2.166	3.065	10.6	20.5	7 20	21 43.68	-25 12.5	0.848	1.821	13.5	19.0
7 30	21 36.12	+ 1 6.5	2.102	3.056	7.9	20.3	7 30	21 37.96	-30 3.6	0.815	1.808	9.9	18.8
8 9	21 28.75	+ 0 49.6	2.063	3.047	5.6	20.1	8 9	21 29.34	-34 49.7	0.806	1.795	10.7	18.8
8 19	21 21.01	+ 0 19.0	2.051	3.038	5.1	20.1	8 19	21 19.32	-38 58.9	0.822	1.782	15.1	19.0
8 29	21 13.72	- 0 22.2	2.065	3.029	6.9	20.2	8 29	21 10.15	-42 9.0	0.858	1.771	20.2	19.2
9 8	21 7.60	- 1 9.3	2.106	3.020	9.6	20.3	9 8	21 4.00	-44 13.9	0.911	1.760	24.7	19.5
9 18	21 3.23	- 1 57.8	2.170	3.011	12.3	20.5	9 18	21 2.27	-45 19.4	0.976	1.750	28.4	19.7
77334	2001 <i>FR</i> ₉₆		8 11.8 49°68	6°9/ 6.9 18			180466	2004 <i>CW</i> ₂₆		8 11.8 193°43	0°2/11.9 18		
7 10	21 53.01	-30 37.3	1.635	2.532	13.5	18.6	7 10	21 51.84	-12 11.5	1.786	2.662	13.6	20.9
7 20	21 47.17	-31 42.6	1.592	2.541	10.4	18.4	7 20	21 46.15	-12 44.4	1.715	2.660	10.0	20.6
7 30	21 38.96	-32 40.9	1.572	2.551	7.7	18.3	7 30	21 38.38	-13 27.9	1.666	2.659	5.8	20.4
8 9	21 29.35	-33 24.2	1.576	2.561	6.9	18.2	8 9	21 29.27	-14 17.6	1.644	2.656	1.3	20.1
8 19	21 19.56	-33 46.5	1.606	2.571	8.6	18.4	8 19	21 19.77	-15 8.0	1.649	2.654	3.3	20.2
8 29	21 10.88	-33 45.3	1.659	2.581	11.4	18.6	8 29	21 10.97	-15 53.9	1.681	2.650	7.7	20.5
9 8	21 4.33	-33 22.0	1.735	2.591	14.4	18.8	9 8	21 3.83	-16 31.0	1.738	2.647	11.6	20.7
9 18	21 0.52	-32 40.2	1.829	2.602	16.9	19.0	9 18	20 59.02	-16 57.1	1.817	2.643	15.0	20.9
219094	1998 <i>RN</i> ₇₉		8 11.8 348°29	5°4/ 7.4 18			293266	2007 <i>CJ</i> ₂₅		8 11.8 133°13	3°5/16.1 18		
7 10	21 49.78	-28 53.6	1.986	2.880	11.6	19.3	7 10	21 45.84	+ 1 39.9	2.592	3.404	11.8	20.8
7 20	21 44.59	-29 45.8	1.927	2.877	8.8	19.1	7 20	21 41.22	+ 0 46.9	2.515	3.412	9.4	20.7
7 30	21 37.42	-30 34.0	1.892	2.874	6.3	19.0	7 30	21 35.30	- 0 23.0	2.462	3.419	6.7	20.5
8 9	21 29.03	-31 12.0	1.882	2.871	5.5	18.9	8 9	21 28.58	- 1 47.5	2.436	3.427	4.2	20.4
8 19	21 20.36	-31 34.6	1.898	2.869	7.0	19.0	8 19	21 21.63	- 3 22.2	2.438	3.434	3.6	20.4
8 29	21 12.45	-31 39.1	1.940	2.867	9.7	19.2	8 29	21 15.12	- 5 1.9	2.471	3.441	5.5	20.5
9 8	21 6.21	-31 25.3	2.005	2.866	12.5	19.3	9 8	21 9.65	- 6 40.7	2.532	3.448	8.2	20.7
9 18	21 2.23	-30 55.2	2.090	2.865	15.0	19.5	9 18	21 5.66	- 8 13.7	2.620	3.454	10.7	20.9
474679	2005 <i>EX</i> ₃₇		8 11.8 177°46	1°1/10.9 18			106215	2000 <i>UD</i> ₃₅		8 11.8 226°49	1°8/10.6 17		
7 10	21 52.11	-17 19.4	2.207	3.084	11.3	21.2	7 10	21 54.09	-17 27.8	1.618	2.506	14.1	20.7
7 20	21 45.96	-17 38.8	2.138	3.085	8.2	21.0	7 20	21 48.07	-18 3.1	1.545	2.499	10.3	20.5
7 30	21 38.09	-18 2.0	2.093	3.087	4.7	20.8	7 30	21 39.62	-18 45.0	1.495	2.491	5.9	20.2
8 9	21 29.17	-18 25.4	2.075	3.087	1.3	20.5	8 9	21 29.58	-19 27.7	1.471	2.482	2.0	19.9
8 19	21 19.99	-18 45.3	2.086	3.087	3.3	20.7	8 19	21 19.02	-20 5.0	1.473	2.474	4.5	20.1
8 29	21 11.46	-18 58.6	2.125	3.087	6.9	20.9	8 29	21 9.27	-20 31.8	1.501	2.464	9.0	20.3
9 8	21 4.36	-19 3.6	2.190	3.087	10.1	21.1	9 8	21 1.44	-20 45.3	1.553	2.455	13.2	20.6
9 18	20 59.24	-18 59.7	2.278	3.086	12.9	21.3	9 18	20 56.30	-20 44.9	1.626	2.444	16.8	20.8
67193	2000 <i>CY</i> ₅₇		8 11.8 283°67	1°6/10.5 18			476084	2007 <i>TZ</i> ₄₇		8 11.8 224°59	4°2/15.6 18		
7 10	21 49.98	-19 12.1	2.388	3.268	10.4	18.2	7 10	21 48.23	- 0 7.1	2.366	3.188	12.5	21.7
7 20	21 44.51	-19 30.8	2.296	3.245	7.6	18.0	7 20	21 43.16	- 0 9.6	2.277	3.179	10.0	21.5
7 30	21 37.33	-19 52.2	2.228	3.222	4.4	17.8	7 30	21 36.53	- 0 27.4	2.210	3.169	7.2	21.4
8 9	21 29.03	-20 12.8	2.188	3.198	1.7	17.5	8 9	21 28.88	- 0 59.6	2.170	3.159	4.8	21.2
8 19	21 20.31	-20 29.0	2.176	3.175	3.5	17.6	8 19	21 20.86	- 1 44.0	2.156	3.149	4.4	21.1
8 29	21 12.03	-20 38.0	2.192	3.151	6.9	17.8	8 29	21 13.26	- 2 36.7	2.171	3.138	6.4	21.3
9 8	21 4.98	-20 37.9	2.234	3.127	10.1	18.0	9 8	21 6.80	- 3 33.1	2.213	3.126	9.3	21.4
9 18	20 59.77	-20 28.3	2.299	3.103	13.0	18.1	9 18	21 2.03	- 4 28.6	2.278	3.114	12.0	21.6
8102	Yoshikazu		8 11.8 238°98	0°9/11.0 18			7765	1991 <i>AD</i>		8 11.8 310°31	4°7/14.6 18		
7 10	21 48.58	-15 12.8	2.005	2.887	12.0	18.0	7 10	21 48.74	- 3 30.9	1.648	2.505	15.5	16.6
7 20	21 43.60	-15 52.1	1.934	2.885	8.7	17.8	7 20	21 44.14	- 3 6.1	1.562	2.488	12.2	16.4
7 30	21 36.83	-16 38.8	1.888	2.883	5.0	17.6	7 30	21 37.38	- 2 57.6	1.497	2.470	8.6	16.1
8 9	21 28.91	-17 28.2	1.868	2.880	1.2	17.3	8 9	21 29.10	- 3 5.2	1.455	2.453	5.4	15.9
8 19	21 20.68	-18 15.4	1.875	2.878	3.4	17.5	8 19	21 20.24	- 3 27.0	1.439	2.437	5.1	15.9
8 29	21 13.05	-18 55.7	1.910	2.875	7.2	17.7	8 29	21 11.93	- 3 59.0	1.447	2.420	8.3	16.0
9 8	21 6.86	-19 26.0	1.970	2.873	10.8	17.9	9 8	21 5.24	- 4 35.8	1.480	2.404	12.2	16.2
9 18	21 2.70	-19 44.6	2.052	2.870	13.8	18.1	9 18	21 0.93	- 5 12.3	1.534	2.389	15.8	16.4
212797	Lipei		8 11.8 277°25	0°4/12.1 18			244323	2002 <i>HU</i> ₁₀		8 11.8 139°13	9°6/31.3 18		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
311600	2006 <i>KH</i> ₆₇		8 11.8	88°71	3°8/ 9.2	17	75322	1999 <i>XF</i> ₄₇		8 11.8	209°43	2°3/10.2	18
7 10	21 52.88	-19 41.7	1.341	2.244	15.5	20.2	7 10	21 53.35	-18 41.0	1.798	2.684	13.0	20.1
7 20	21 47.33	-21 0.3	1.296	2.256	11.2	20.0	7 20	21 47.33	-19 26.1	1.727	2.679	9.4	19.9
7 30	21 39.19	-22 24.3	1.272	2.268	6.6	19.8	7 30	21 39.12	-20 16.5	1.679	2.674	5.5	19.6
8 9	21 29.47	-23 44.0	1.273	2.280	3.8	19.7	8 9	21 29.49	-21 6.1	1.658	2.668	2.3	19.4
8 19	21 19.46	-24 50.3	1.299	2.293	6.4	19.9	8 19	21 19.43	-21 49.0	1.664	2.662	4.6	19.5
8 29	21 10.61	-25 37.0	1.349	2.305	10.7	20.1	8 29	21 10.09	-22 20.3	1.697	2.655	8.6	19.8
9 8	21 4.06	-26 1.9	1.422	2.316	14.7	20.4	9 8	21 2.51	-22 37.6	1.754	2.647	12.4	20.0
9 18	21 0.46	-26 6.1	1.514	2.328	18.0	20.7	9 18	20 57.37	-22 40.5	1.832	2.639	15.7	20.2
185859	2000 <i>GH</i> ₂₆		8 11.8	343°89	4°1/14.5	18	28518	2000 <i>DE</i> ₇		8 11.8	21°90	5°1/ 8.4	18
7 10	21 46.13	- 3 59.2	1.279	2.157	17.7	19.5	7 10	21 49.38	-22 26.7	1.237	2.150	15.7	17.6
7 20	21 42.59	- 4 7.9	1.210	2.150	13.8	19.3	7 20	21 45.04	-23 45.1	1.191	2.155	11.5	17.4
7 30	21 36.59	- 4 39.6	1.161	2.144	9.3	19.0	7 30	21 37.99	-25 6.5	1.165	2.161	7.2	17.1
8 9	21 28.93	- 5 31.8	1.134	2.138	5.1	18.7	8 9	21 29.25	-26 20.5	1.163	2.167	5.1	17.0
8 19	21 20.74	- 6 39.1	1.129	2.133	4.8	18.7	8 19	21 20.17	-27 17.7	1.185	2.174	7.6	17.2
8 29	21 13.35	- 7 53.5	1.149	2.129	8.9	18.9	8 29	21 12.23	-27 52.1	1.229	2.182	11.8	17.5
9 8	21 7.95	- 9 6.0	1.191	2.126	13.5	19.2	9 8	21 6.67	-28 2.2	1.294	2.190	15.8	17.7
9 18	21 5.33	-10 9.7	1.253	2.123	17.7	19.4	9 18	21 4.14	-27 50.1	1.378	2.199	19.1	18.0
509411	2007 <i>DF</i> ₁₁₅		8 11.8	67°17	1°9/13.6	18	433584	2013 <i>YZ</i> ₃₅		8 11.8	269°82	5°3/ 8.1	17
7 10	21 46.27	- 6 44.6	2.198	3.056	12.1	21.5	7 10	21 53.01	-26 28.4	1.691	2.587	13.2	20.5
7 20	21 41.68	- 7 13.4	2.136	3.068	9.1	21.3	7 20	21 47.28	-27 24.7	1.627	2.581	9.9	20.3
7 30	21 35.62	- 7 54.4	2.098	3.081	5.7	21.1	7 30	21 39.16	-28 19.4	1.586	2.574	6.7	20.1
8 9	21 28.67	- 8 44.5	2.086	3.093	2.5	20.9	8 9	21 29.51	-29 4.7	1.571	2.567	5.3	20.0
8 19	21 21.52	- 9 39.7	2.102	3.106	2.8	21.0	8 19	21 19.44	-29 34.2	1.581	2.561	7.2	20.1
8 29	21 14.96	-10 35.4	2.145	3.119	5.9	21.2	8 29	21 10.24	-29 43.9	1.616	2.554	10.6	20.2
9 8	21 9.64	-11 27.3	2.215	3.132	9.1	21.4	9 8	21 3.01	-29 33.5	1.674	2.547	14.0	20.4
9 18	21 6.05	-12 12.1	2.309	3.145	11.9	21.6	9 18	20 58.45	-29 5.0	1.751	2.540	17.0	20.6
195038	2002 <i>CL</i> ₅₅		8 11.8	206°60	1°8/13.4	17	172747	2004 <i>CZ</i> ₈₈		8 11.8	302°44	2°9/ 9.6	18
7 10	21 50.00	- 7 17.0	2.216	3.069	12.2	21.5	7 10	21 49.70	-20 36.4	1.776	2.671	12.7	20.3
7 20	21 44.51	- 7 40.0	2.133	3.063	9.2	21.3	7 20	21 44.74	-21 20.8	1.703	2.660	9.2	20.1
7 30	21 37.34	- 8 15.2	2.075	3.057	5.8	21.1	7 30	21 37.66	-22 9.1	1.654	2.649	5.5	19.9
8 9	21 29.07	- 8 59.9	2.042	3.050	2.5	20.8	8 9	21 29.19	-22 55.1	1.630	2.638	2.9	19.7
8 19	21 20.43	- 9 50.2	2.039	3.043	2.9	20.9	8 19	21 20.27	-23 33.0	1.632	2.627	5.1	19.8
8 29	21 12.29	-10 41.7	2.064	3.035	6.3	21.1	8 29	21 12.03	-23 58.2	1.661	2.617	8.9	20.0
9 8	21 5.42	-11 30.0	2.115	3.026	9.7	21.3	9 8	21 5.48	-24 8.3	1.713	2.607	12.6	20.2
9 18	21 0.41	-12 12.0	2.190	3.017	12.7	21.5	9 18	21 1.31	-24 3.3	1.785	2.597	15.8	20.4
50934	1998 <i>SO</i> ₁₂₈		8 11.8	309°68	2°0/10.3	18	507492	2012 <i>UY</i> ₅₉		8 11.8	201°73	5°7/ 6.9	18
7 10	21 49.31	-18 4.3	1.719	2.613	13.1	19.6	7 10	21 54.39	-31 28.0	2.267	3.147	10.9	22.0
7 20	21 44.45	-18 45.3	1.648	2.604	9.5	19.4	7 20	21 47.81	-32 21.9	2.204	3.143	8.5	21.8
7 30	21 37.48	-19 32.4	1.600	2.596	5.5	19.1	7 30	21 39.27	-33 10.1	2.167	3.139	6.4	21.7
8 9	21 29.11	-20 19.9	1.578	2.589	2.1	18.9	8 9	21 29.53	-33 46.5	2.156	3.135	5.8	21.6
8 19	21 20.33	-21 1.8	1.581	2.581	4.5	19.0	8 19	21 19.49	-34 6.4	2.172	3.130	7.2	21.7
8 29	21 12.25	-21 33.3	1.611	2.574	8.6	19.3	8 29	21 10.19	-34 7.5	2.215	3.125	9.5	21.8
9 8	21 5.87	-21 51.3	1.665	2.567	12.5	19.5	9 8	21 2.51	-33 50.1	2.281	3.119	12.0	22.0
9 18	21 1.87	-21 55.1	1.739	2.560	15.8	19.7	9 18	20 57.07	-33 16.6	2.369	3.113	14.3	22.1
249720	2000 <i>RV</i> ₈₃		8 11.8	355°37	3°2/13.1	18	322664	1999 <i>RM</i> ₂₅₃		8 11.8	311°62	0°9/12.5	17
7 10	21 47.33	-10 9.7	0.912	1.825	20.0	19.4	7 10	21 46.60	-10 40.8	1.898	2.775	12.9	21.4
7 20	21 44.10	- 9 32.2	0.856	1.818	15.1	19.1	7 20	21 42.42	-11 2.6	1.807	2.752	9.6	21.1
7 30	21 37.71	- 9 10.9	0.818	1.813	9.6	18.8	7 30	21 36.33	-11 36.1	1.738	2.729	5.8	20.8
8 9	21 29.21	- 9 4.4	0.799	1.809	4.2	18.5	8 9	21 28.91	-12 18.2	1.695	2.707	1.8	20.5
8 19	21 20.12	- 9 9.0	0.800	1.807	5.0	18.5	8 19	21 20.98	-13 4.4	1.678	2.684	3.0	20.6
8 29	21 12.26	- 9 19.3	0.823	1.807	10.6	18.8	8 29	21 13.50	-13 49.8	1.688	2.662	7.2	20.8
9 8	21 7.10	- 9 29.2	0.864	1.808	16.1	19.1	9 8	21 7.40	-14 29.7	1.723	2.641	11.2	21.0
9 18	21 5.48	- 9 34.1	0.922	1.812	20.8	19.4	9 18	21 3.38	-15 0.9	1.780	2.619	14.7	21.2
142198	2002 <i>RN</i> ₅₆		8 11.8	73°79	1°1/11.2	18	471803	2012 <i>VU</i> ₉₇		8 11.8	314°62	7°8/17.4	18
7 10	21 54.86	-16 52.2	1.420	2.312	15.5	19.4	7 10	21 45.83	+ 4 42.4	1.562	2.391	17.5	20.9
7 20	21 48.58	-17 3.5	1.367	2.322	11.2	19.2	7 20	21 42.16	+ 5 1.8	1.475	2.372	14.7	20.6
7 30	21 39.84	-17 20.9	1.335	2.331	6.4	19.0	7 30	21 36.32	+ 4 55.8	1.407	2.354	11.5	20.4
8 9	21 29.62	-17 39.1	1.328	2.340	1.6	18.7	8 9	21 28.93	+ 4 22.7	1.360	2.337	8.7	20.2
8 19	21 19.16	-17 53.1	1.346	2.350	4.2	18.9	8 19	21 20.91	+ 3 24.1	1.336	2.320	7.8	20.1
8 29	21 9.84	-17 59.1	1.390	2.359	9.0	19.2	8 29	21 13.41	+ 2 5.3	1.337	2.303	9.6	20.2
9 8	21 2.74	-17 55.0	1.457	2.369	13.3	19.5	9 8	21 7.52	+ 0 34.7	1.361	2.287	12.9	20.3
9 18	20 58.48	-17 40.8	1.544	2.378	16.8	19.7	9 18	21 4.04	- 0 58.6	1.406	2.272	16.4	20.5
488132	2015 <i>VK</i> ₁₂₁		8 11.8	343°78	13°8/25.9	17	134013	2004 <i>VX</i> ₄₂		8 11.8	70°65	4°0/ 9.4	17
7 10	21 44.52	-42 49.4	1.412	2.308	15.3	19.7	7 10	21 53.62	-20 42.9	1.250	2.156	16.2	19.4
7 20	21 42.25	-45 52.3	1.368	2.288	14.0	19.6	7 20	21 48.03	-21 44.3	1.204	2.165	11.7	19.2
7 30	21 36.83	-48 39.8	1.346	2.269	13.9	19.5	7 30	21 39.68	-22 49.9	1.179	2.175	7.0	19.0
8 9	21 29.06	-50 56.6	1.345	2.251	15.0	19.5	8 9	21 29.63	-23 50.2	1.177	2.185	4.0	18.8
8 19	21 20.33	-52 31.8	1.365	2.235	17.0	19.6	8 19	21 19.30	-24 36.8	1.200	2.195	6.6	19.0
8 29	21 12.52	-53 20.2	1.403	2.220	19.3	19.7	8 29	21 10.22	-25 4.1	1.246	2.205	11.0	19.3
9 8	21 7.34	-53 24.3	1.455	2.208	21.5	19.9	9 8	21 3.62	-25 10.8	1.314	2.215	15.2	19.6
9 18	21 5.84	-52 49.9	1.519	2.197	23.4	20.0	9 18	21 0.15	-24 58.4	1.401	2.225	18.8	19.8
389357	2009 <i>UZ</i> ₁₀₁		8 11.8	306°49	2°2/13.2	18	337151	1999 <i>TE</i> ₃₁₂					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
437618	2014 <i>BG</i> ₂₀		8 11.8 200°56	3°4/ 9.0 17			57681	2001 <i>UJ</i> ₄₈		8 11.8 317°17	0°5/12.2 18		
7 10	21 51.50	-22 2.5	1.999	2.888	11.8	21.4	7 10	21 47.50	-11 22.9	1.920	2.797	12.7	19.3
7 20	21 45.83	-22 59.9	1.932	2.885	8.6	21.2	7 20	21 42.93	-11 51.7	1.846	2.792	9.4	19.1
7 30	21 38.19	-23 59.4	1.890	2.882	5.3	21.0	7 30	21 36.53	-12 31.2	1.795	2.787	5.5	18.8
8 9	21 29.30	-24 55.0	1.875	2.879	3.4	20.9	8 9	21 28.97	-13 17.4	1.770	2.782	1.5	18.6
8 19	21 20.06	-25 40.8	1.886	2.876	5.3	21.0	8 19	21 21.04	-14 5.9	1.772	2.778	2.9	18.7
8 29	21 11.49	-26 12.6	1.925	2.872	8.6	21.2	8 29	21 13.71	-14 51.5	1.801	2.773	7.0	18.9
9 8	21 4.50	-26 28.5	1.989	2.867	11.9	21.4	9 8	21 7.81	-15 30.2	1.855	2.769	10.7	19.1
9 18	20 59.72	-26 29.0	2.073	2.863	14.7	21.6	9 18	21 3.95	-15 59.3	1.931	2.765	13.9	19.3
239394	2007 <i>TE</i> ₂₂		8 11.8 335°23	9°8/ 3.4 18			272274	2005 <i>RP</i> ₈		8 11.8 359°62	1°5/12.6 15		
7 10	21 48.04	-33 41.5	1.401	2.309	14.6	18.7	7 10	21 46.96	-10 50.9	1.099	2.004	18.0	20.0
7 20	21 44.35	-35 38.2	1.345	2.294	11.9	18.5	7 20	21 43.46	-10 53.1	1.041	2.000	13.4	19.8
7 30	21 37.79	-37 28.1	1.312	2.281	10.0	18.3	7 30	21 37.20	-11 11.4	1.003	1.998	8.1	19.5
8 9	21 29.27	-38 58.8	1.301	2.268	10.2	18.3	8 9	21 29.14	-11 41.5	0.986	1.997	2.6	19.2
8 19	21 20.09	-40 0.2	1.312	2.256	12.2	18.4	8 19	21 20.62	-12 17.5	0.991	1.998	4.1	19.3
8 29	21 11.88	-40 26.8	1.345	2.244	15.2	18.5	8 29	21 13.15	-12 52.3	1.018	2.000	9.6	19.6
9 8	21 6.01	-40 19.3	1.397	2.234	18.2	18.7	9 8	21 8.02	-13 20.1	1.067	2.003	14.7	19.9
9 18	21 3.35	-39 42.0	1.464	2.225	20.9	18.9	9 18	21 5.98	-13 37.1	1.134	2.007	19.0	20.2
353802	2012 <i>TP</i> ₆₈		8 11.8 305°73	2°4/10.2 18			44162	1998 <i>HC</i> ₁₄₈		8 11.8 83°80	5°9/ 8.1 18		
7 10	21 49.92	-18 38.9	1.549	2.448	14.0	20.4	7 10	21 54.54	-26 8.6	1.412	2.314	14.9	18.7
7 20	21 45.30	-19 17.2	1.465	2.424	10.3	20.1	7 20	21 48.60	-27 16.5	1.364	2.321	11.1	18.5
7 30	21 38.21	-20 2.6	1.403	2.400	6.0	19.8	7 30	21 39.98	-28 22.1	1.339	2.328	7.5	18.3
8 9	21 29.36	-20 48.8	1.365	2.376	2.5	19.5	8 9	21 29.73	-29 16.0	1.337	2.335	5.9	18.2
8 19	21 19.82	-21 29.2	1.353	2.353	5.1	19.6	8 19	21 19.19	-29 50.8	1.361	2.342	8.0	18.4
8 29	21 10.89	-21 57.7	1.366	2.330	9.7	19.8	8 29	21 9.84	-30 2.4	1.408	2.348	11.6	18.6
9 8	21 3.83	-22 11.0	1.401	2.307	14.1	20.0	9 8	21 2.86	-29 51.3	1.477	2.355	15.2	18.8
9 18	20 59.48	-22 8.3	1.456	2.284	18.0	20.2	9 18	20 58.91	-29 20.5	1.565	2.362	18.3	19.1
505888	2015 <i>DH</i> ₁₄₇		8 11.8 89°40	3°9/14.6 17			84320	2002 <i>TU</i> ₄₆		8 11.8 277°31	1°9/10.5 18		
7 10	21 50.10	- 3 6.5	1.539	2.396	16.4	21.3	7 10	21 51.72	-17 12.0	1.572	2.465	14.2	19.7
7 20	21 45.01	- 3 19.0	1.478	2.406	12.7	21.1	7 20	21 46.56	-17 53.6	1.491	2.446	10.4	19.5
7 30	21 37.78	- 3 51.4	1.439	2.415	8.6	20.9	7 30	21 38.92	-18 43.6	1.431	2.428	6.0	19.2
8 9	21 29.21	- 4 41.1	1.423	2.424	4.8	20.7	8 9	21 29.55	-19 35.8	1.397	2.409	2.1	18.9
8 19	21 20.34	- 5 43.1	1.432	2.434	4.5	20.7	8 19	21 19.51	-20 23.5	1.389	2.390	4.7	19.0
8 29	21 12.30	- 6 50.5	1.468	2.443	7.9	20.9	8 29	21 10.12	-21 0.5	1.406	2.371	9.4	19.2
9 8	21 6.09	- 7 56.3	1.527	2.452	11.9	21.2	9 8	21 2.60	-21 22.9	1.447	2.351	13.8	19.4
9 18	21 2.32	- 8 55.0	1.609	2.461	15.4	21.4	9 18	20 57.80	-21 29.8	1.507	2.332	17.6	19.7
93582	2000 <i>UP</i> ₄₈		8 11.8 223°85	0°3/11.5 18			96861	1999 <i>SC</i> ₆		8 11.8 307°78	8°3/ 5.9 18		
7 10	21 51.17	-14 8.3	2.123	2.997	11.8	19.6	7 10	21 54.09	-33 32.5	1.591	2.486	14.0	18.7
7 20	21 45.48	-14 36.1	2.042	2.988	8.7	19.4	7 20	21 48.42	-34 40.7	1.529	2.472	11.1	18.5
7 30	21 37.97	-15 11.4	1.985	2.978	5.0	19.2	7 30	21 40.00	-35 40.8	1.488	2.459	8.9	18.3
8 9	21 29.26	-15 50.3	1.955	2.968	1.1	18.9	8 9	21 29.77	-36 23.2	1.472	2.446	8.4	18.3
8 19	21 20.16	-16 28.5	1.953	2.957	3.0	19.0	8 19	21 19.04	-36 40.9	1.479	2.434	10.2	18.3
8 29	21 11.60	-17 1.9	1.980	2.946	6.9	19.2	8 29	21 9.31	-36 30.6	1.510	2.422	13.1	18.5
9 8	21 4.43	-17 27.4	2.032	2.935	10.5	19.4	9 8	21 1.86	-35 53.7	1.562	2.410	16.1	18.6
9 18	20 59.26	-17 43.4	2.107	2.923	13.6	19.6	9 18	20 57.47	-34 54.8	1.631	2.398	18.9	18.8
363731	2004 <i>XF</i> ₃₉		8 11.8 268°49	6°1/18.2 17			174696	2003 <i>UW</i> ₅₃		8 11.8 347°36	2°6/12.9 18		
7 10	21 45.63	+ 7 43.7	2.655	3.429	12.5	21.7	7 10	21 50.50	-10 18.0	1.109	2.007	18.4	19.3
7 20	21 41.23	+ 7 48.2	2.552	3.409	10.6	21.6	7 20	21 46.10	- 9 51.9	1.046	2.000	13.9	19.0
7 30	21 35.44	+ 7 34.7	2.470	3.389	8.5	21.4	7 30	21 38.78	- 9 40.2	1.002	1.994	8.7	18.7
8 9	21 28.70	+ 7 2.9	2.412	3.368	6.8	21.3	8 9	21 29.52	- 9 40.8	0.979	1.989	3.6	18.4
8 19	21 21.59	+ 6 13.8	2.381	3.347	6.1	21.2	8 19	21 19.68	- 9 49.8	0.979	1.985	4.5	18.4
8 29	21 14.76	+ 5 10.4	2.377	3.326	7.0	21.2	8 29	21 10.90	-10 2.4	1.002	1.982	9.9	18.7
9 8	21 8.88	+ 3 57.4	2.400	3.305	9.0	21.3	9 8	21 4.56	-10 13.2	1.045	1.980	15.0	19.0
9 18	21 4.47	+ 2 40.0	2.447	3.283	11.3	21.4	9 18	21 1.48	-10 18.7	1.107	1.979	19.4	19.3
372852	2010 <i>VN</i> ₁₄₈		8 11.8 40°34	5°2/ 8.4 17			1393	<i>Sofala</i>		8 11.8 64°48	4°4/ 9.0 18 R		
7 10	21 50.70	-22 16.3	1.195	2.108	16.2	20.1	7 10	21 52.96	-22 33.3	1.407	2.310	14.9	15.5
7 20	21 46.04	-23 41.7	1.153	2.117	11.8	19.9	7 20	21 47.33	-23 33.3	1.362	2.321	10.8	15.3
7 30	21 38.58	-25 9.9	1.132	2.128	7.4	19.6	7 30	21 39.19	-24 34.6	1.339	2.333	6.7	15.1
8 9	21 29.41	-26 29.9	1.134	2.138	5.2	19.6	8 9	21 29.56	-25 28.7	1.340	2.344	4.4	15.0
8 19	21 19.94	-27 31.8	1.160	2.149	7.8	19.7	8 19	21 19.70	-26 8.4	1.366	2.356	6.6	15.1
8 29	21 11.73	-28 9.4	1.209	2.161	12.0	20.0	8 29	21 10.99	-26 29.1	1.416	2.368	10.6	15.4
9 8	21 5.99	-28 21.7	1.279	2.173	16.0	20.3	9 8	21 4.53	-26 30.2	1.489	2.381	14.3	15.7
9 18	21 3.39	-28 11.0	1.366	2.186	19.4	20.6	9 18	21 0.93	-26 13.3	1.581	2.393	17.5	15.9
307174	2002 <i>EK</i> ₄₇		8 11.8 37°06	3°4/14.9 18			89952	2002 <i>JB</i> ₂₀		8 11.8 353°09	7°0/19.4 18		
7 10	21 45.50	- 2 39.6	1.790	2.644	14.6	19.6	7 10	21 43.68	+ 9 11.2	1.972	2.761	15.8	18.8
7 20	21 41.39	- 3 6.4	1.734	2.659	11.2	19.4	7 20	21 40.12	+ 8 45.2	1.891	2.758	13.3	18.7
7 30	21 35.57	- 3 51.3	1.700	2.675	7.6	19.2	7 30	21 34.91	+ 7 52.5	1.829	2.756	10.6	18.5
8 9	21 28.72	- 4 51.1	1.690	2.691	4.3	19.1	8 9	21 28.62	+ 6 33.6	1.790	2.754	8.1	18.3
8 19	21 21.67	- 6 1.0	1.706	2.708	3.9	19.1	8 19	21 21.99	+ 4 52.0	1.777	2.752	7.0	18.3
8 29	21 15.33	- 7 14.6	1.749	2.725	6.8	19.3	8 29	21 15.87	+ 2 54.1	1.790	2.751	8.0	18.3
9 8	21 10.46	- 8 25.6	1.818	2.743	10.2	19.5	9 8	21 11.04	+ 0 48.7	1.829	2.751	10.4	18.5
9 18	21 7.58	- 9 29.2	1.909	2.761	13.3	19.8	9 18	21 8.07	- 1 15.6	1.893	2.750	13.2	18.7
151369	2002 <i>EB</i> ₄		8 11.8 49°98	0°3/11.9 18			387938	2005 <i>EG</i> ₄₇					

EPHEMERIDES

8 11.8

8 11.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
126901	Craigstevens		8 11.8 164°43	1°8/10.4 18			236556	2006 HV ₅₉		8 11.8 180°92	0°3/12.1 18		
7 10	21 50.56	-17 15.2	1.789	2.677	13.0	19.8	7 10	21 49.74	-11 27.1	2.280	3.145	11.4	21.2
7 20	21 45.26	-18 1.6	1.724	2.678	9.4	19.5	7 20	21 44.30	-12 8.0	2.206	3.147	8.4	21.0
7 30	21 37.92	-18 54.3	1.684	2.679	5.4	19.3	7 30	21 37.25	-12 58.2	2.157	3.147	4.9	20.8
8 9	21 29.29	-19 47.6	1.669	2.680	1.9	19.1	8 9	21 29.18	-13 53.8	2.135	3.147	1.2	20.5
8 19	21 20.33	-20 35.6	1.681	2.681	4.2	19.2	8 19	21 20.81	-14 50.3	2.142	3.147	2.6	20.6
8 29	21 12.11	-21 13.4	1.719	2.681	8.2	19.5	8 29	21 12.96	-15 43.2	2.178	3.146	6.3	20.9
9 8	21 5.57	-21 38.2	1.783	2.682	11.9	19.7	9 8	21 6.38	-16 28.8	2.240	3.144	9.6	21.1
9 18	21 1.33	-21 48.9	1.867	2.682	15.1	19.9	9 18	21 1.61	-17 4.8	2.326	3.142	12.4	21.3
52801	1998 QG ₆₃		8 11.8 354°92	5°6/ 9.2 17 R			339362	2005 AC ₄₂		8 11.8 263°36	14°1/29.1 16		
7 10	21 54.66	-24 29.3	1.071	1.986	17.5	18.2	7 10	21 55.09	-36 45.8	1.139	2.046	17.4	19.9
7 20	21 49.35	-25 9.7	1.019	1.983	13.0	17.9	7 20	21 50.70	-40 35.4	1.096	2.035	15.0	19.7
7 30	21 40.71	-25 49.5	0.986	1.981	8.3	17.6	7 30	21 42.20	-44 15.3	1.076	2.025	14.1	19.6
8 9	21 29.95	-26 18.7	0.975	1.980	5.6	17.5	8 9	21 30.47	-47 22.8	1.079	2.014	15.3	19.6
8 19	21 18.74	-26 29.3	0.986	1.979	8.1	17.6	8 19	21 17.29	-49 40.0	1.103	2.002	18.0	19.8
8 29	21 8.96	-26 16.9	1.020	1.979	12.8	17.9	8 29	21 5.19	-50 59.5	1.146	1.991	21.1	19.9
9 8	21 2.09	-25 42.7	1.073	1.980	17.3	18.1	9 8	20 56.45	-51 25.1	1.203	1.980	24.0	20.1
9 18	20 58.88	-24 50.2	1.143	1.981	21.3	18.4	9 18	20 52.41	-51 6.3	1.272	1.968	26.5	20.3
509979	2009 TC ₁₈		8 11.8 322°22	2°1/10.5 18			359556	2010 SW ₃₈		8 11.8 309°81	6°5/ 6.6 18		
7 10	21 46.79	-16 19.4	1.200	2.111	16.3	20.5	7 10	21 51.62	-31 44.4	1.961	2.852	11.9	20.1
7 20	21 43.55	-17 6.1	1.121	2.086	12.0	20.2	7 20	21 46.18	-32 39.4	1.892	2.836	9.3	19.9
7 30	21 37.46	-18 5.9	1.062	2.061	6.9	19.8	7 30	21 38.55	-33 28.7	1.847	2.821	7.1	19.7
8 9	21 29.29	-19 11.6	1.026	2.038	2.3	19.5	8 9	21 29.50	-34 5.3	1.826	2.806	6.6	19.6
8 19	21 20.25	-20 14.1	1.012	2.015	5.5	19.6	8 19	21 20.04	-34 23.6	1.831	2.792	8.1	19.7
8 29	21 11.93	-21 4.6	1.022	1.993	11.1	19.8	8 29	21 11.31	-34 20.6	1.862	2.777	10.8	19.8
9 8	21 5.82	-21 37.0	1.051	1.973	16.3	20.1	9 8	21 4.34	-33 56.7	1.914	2.763	13.6	20.0
9 18	21 2.92	-21 49.0	1.099	1.953	20.8	20.3	9 18	20 59.82	-33 14.3	1.987	2.749	16.1	20.2
92394	2000 JW ₁₇		8 11.8 1°43	2°2/10.4 18			161716	2006 OS ₁₅		8 11.8 74°15	12°5/ 8.8 18		
7 10	21 40.62	-14 5.1	0.808	1.742	19.5	17.7	7 10	22 14.84	-40 25.9	1.049	1.932	20.4	18.7
7 20	21 39.46	-15 19.8	0.761	1.738	14.1	17.4	7 20	22 4.24	-40 54.0	1.009	1.939	16.8	18.6
7 30	21 35.15	-16 54.5	0.732	1.735	8.0	17.1	7 30	21 49.19	-40 56.4	0.988	1.947	13.8	18.4
8 9	21 28.75	-18 37.6	0.723	1.735	2.4	16.8	8 9	21 31.79	-40 20.0	0.987	1.955	12.5	18.4
8 19	21 21.80	-20 14.8	0.733	1.737	6.2	17.0	8 19	21 14.73	-39 0.2	1.009	1.963	13.8	18.5
8 29	21 16.10	-21 32.8	0.762	1.741	12.3	17.4	8 29	21 0.58	-37 2.5	1.053	1.971	16.8	18.7
9 8	21 13.14	-22 23.9	0.810	1.748	17.8	17.7	9 8	20 50.87	-34 39.4	1.116	1.978	20.2	18.9
9 18	21 13.67	-22 46.1	0.873	1.756	22.4	18.0	9 18	20 45.98	-32 3.9	1.197	1.986	23.3	19.2
31000	Rockchic		8 11.8 323°92	5°9/ 6.9 18			481468	2007 AE ₁₄		8 11.8 258°96	1°9/ 9.9 18		
7 10	21 51.34	-30 26.2	2.005	2.896	11.7	17.9	7 10	21 47.28	-17 19.7	2.228	3.113	10.9	21.3
7 20	21 45.80	-31 23.2	1.947	2.893	9.0	17.8	7 20	21 42.68	-18 26.5	2.151	3.104	7.9	21.1
7 30	21 38.22	-32 15.1	1.912	2.889	6.7	17.6	7 30	21 36.41	-19 39.9	2.099	3.094	4.5	20.9
8 9	21 29.38	-32 55.4	1.902	2.886	6.0	17.6	8 9	21 29.02	-20 54.5	2.075	3.085	1.9	20.7
8 19	21 20.23	-33 18.7	1.919	2.883	7.5	17.7	8 19	21 21.26	-22 4.7	2.078	3.075	4.0	20.8
8 29	21 11.86	-33 22.3	1.961	2.880	10.1	17.8	8 29	21 13.96	-23 5.3	2.110	3.066	7.4	21.0
9 8	21 5.21	-33 6.4	2.026	2.877	12.8	18.0	9 8	21 7.92	-23 52.7	2.167	3.056	10.6	21.2
9 18	21 0.87	-32 33.3	2.111	2.874	15.2	18.2	9 18	21 3.73	-24 25.6	2.247	3.046	13.4	21.4
400966	2010 WT ₄		8 11.8 2°18	1°3/12.9 18			107007	2000 YL ₁₁₂		8 11.8 72°24	0°6/12.2 17		
7 10	21 47.23	- 9 31.9	2.226	3.091	11.7	21.1	7 10	21 54.46	-13 23.8	1.685	2.563	14.2	18.5
7 20	21 42.48	- 9 48.6	2.153	3.091	8.7	20.9	7 20	21 47.95	-13 15.2	1.632	2.578	10.4	18.3
7 30	21 36.19	-10 15.1	2.104	3.091	5.3	20.7	7 30	21 39.39	-13 14.2	1.602	2.594	6.1	18.1
8 9	21 28.93	-10 48.9	2.081	3.091	1.9	20.5	8 9	21 29.66	-13 17.7	1.598	2.610	1.6	17.8
8 19	21 21.40	-11 26.3	2.086	3.091	2.6	20.5	8 19	21 19.80	-13 22.4	1.620	2.626	3.2	18.0
8 29	21 14.39	-12 3.5	2.119	3.092	6.1	20.8	8 29	21 10.91	-13 25.2	1.669	2.641	7.5	18.3
9 8	21 8.63	-12 37.0	2.177	3.092	9.4	21.0	9 8	21 3.90	-13 23.7	1.744	2.657	11.3	18.5
9 18	21 4.62	-13 4.3	2.259	3.092	12.2	21.2	9 18	20 59.32	-13 16.7	1.840	2.673	14.6	18.8
28213	1998 XS ₉₂		8 11.8 253°20	0°9/11.1 18			61402	Franciseveritt		8 11.8 3°29	0°5/11.5 17		
7 10	21 49.29	-12 58.7	1.694	2.578	13.8	18.9	7 10	21 48.71	-14 56.5	1.207	2.113	16.6	19.2
7 20	21 44.57	-14 7.5	1.617	2.568	10.1	18.6	7 20	21 44.58	-15 10.3	1.150	2.111	12.1	19.0
7 30	21 37.68	-15 29.9	1.563	2.558	5.8	18.4	7 30	21 37.81	-15 34.3	1.113	2.111	7.0	18.7
8 9	21 29.30	-16 59.2	1.534	2.547	1.3	18.0	8 9	21 29.36	-16 3.0	1.099	2.112	1.5	18.3
8 19	21 20.38	-18 27.8	1.533	2.536	3.9	18.2	8 19	21 20.51	-16 30.5	1.108	2.114	4.2	18.5
8 29	21 12.06	-19 47.8	1.559	2.525	8.5	18.5	8 29	21 12.71	-16 50.9	1.141	2.117	9.5	18.8
9 8	21 5.38	-20 53.5	1.609	2.514	12.6	18.7	9 8	21 7.18	-17 0.5	1.195	2.122	14.3	19.1
9 18	21 1.10	-21 42.0	1.680	2.503	16.2	18.9	9 18	21 4.61	-16 57.9	1.268	2.127	18.3	19.4
274246	Reggiacaserta		8 11.8 162°84	0°6/12.2 18			12611	Ingres		8 11.8 316°46	1°1/12.7 18		
7 10	21 52.19	-12 1.6	1.894	2.766	13.1	20.7	7 10	21 46.43	-10 18.1	1.906	2.783	12.9	18.6
7 20	21 46.29	-12 17.1	1.826	2.769	9.7	20.5	7 20	21 42.30	-10 37.1	1.818	2.763	9.6	18.3
7 30	21 38.47	-12 41.6	1.782	2.773	5.7	20.2	7 30	21 36.30	-11 7.6	1.753	2.743	5.8	18.1
8 9	21 29.44	-13 11.8	1.763	2.775	1.5	19.9	8 9	21 29.03	-11 46.8	1.712	2.724	1.9	17.8
8 19	21 20.12	-13 43.4	1.772	2.778	3.0	20.1	8 19	21 21.27	-12 30.5	1.699	2.705	3.0	17.8
8 29	21 11.51	-14 12.3	1.809	2.780	7.1	20.3	8 29	21 13.99	-13 13.8	1.712	2.686	7.1	18.0
9 8	21 4.49	-14 35.1	1.871	2.782	10.8	20.6	9 8	21 8.08	-13 52.2	1.749	2.668	11.0	18.2
9 18	20 59.67	-14 49.9	1.956	2.783	14.0	20.8	9 18	21 4.22	-14 22.4	1.809	2.651	14.4	18.4
179616	2002 PL ₂₆		8 11.8 315°22	1°0/12.4 17			68806	2002 GR ₄₀		8 11.8 359°28	2°0/10.9 18		
7 10	21 48.89	-10 35.7	1.314	2.206	16.5	20.3	7 10	21 53.57	-18 56.5	1.113	2.023	17.4	1

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
141907	2002 <i>PG</i> ₇₅		8 11.8 293°42	0°4/12.1	17		69970	1998 <i>WV</i>		8 11.8 258°80	4°7/ 6.9	18	
7 10	21 49.49	-11 23.2	1.437	2.326	15.5	19.8	7 10	21 48.93	-28 34.3	2.487	3.374	9.9	19.3
7 20	21 45.10	-11 57.0	1.355	2.307	11.6	19.5	7 20	21 43.81	-29 35.1	2.419	3.365	7.5	19.1
7 30	21 38.19	-12 46.2	1.294	2.288	6.9	19.2	7 30	21 37.04	-30 33.5	2.377	3.357	5.4	18.9
8 9	21 29.49	-13 45.8	1.257	2.269	1.7	18.8	8 9	21 29.22	-31 23.9	2.361	3.348	4.7	18.9
8 19	21 20.07	-14 49.3	1.245	2.251	3.8	18.9	8 19	21 21.07	-32 1.8	2.373	3.340	6.1	19.0
8 29	21 11.28	-15 49.0	1.258	2.232	9.1	19.1	8 29	21 13.45	-32 24.0	2.412	3.331	8.5	19.1
9 8	21 4.39	-16 38.7	1.293	2.214	13.9	19.4	9 8	21 7.12	-32 29.8	2.475	3.322	10.9	19.3
9 18	21 0.26	-17 14.5	1.349	2.196	18.1	19.6	9 18	21 2.63	-32 20.0	2.559	3.313	13.1	19.4
352339	2007 <i>VG</i> ₄₇		8 11.8 206°53	4°1/ 8.4	18		262275	2006 <i>SB</i> ₃₅₇		8 11.8 321°70	5°9/ 8.2	17	
7 10	21 52.38	-25 52.6	2.213	3.099	10.9	21.9	7 10	21 50.72	-24 30.0	1.229	2.143	15.8	20.1
7 20	21 46.37	-26 37.8	2.147	3.095	8.1	21.7	7 20	21 46.42	-25 37.0	1.165	2.129	11.8	19.8
7 30	21 38.51	-27 21.5	2.105	3.092	5.4	21.5	7 30	21 39.11	-26 46.1	1.121	2.115	7.8	19.5
8 9	21 29.51	-27 58.0	2.090	3.088	4.1	21.4	8 9	21 29.75	-27 47.2	1.100	2.102	5.9	19.4
8 19	21 20.21	-28 22.9	2.103	3.083	5.6	21.5	8 19	21 19.70	-28 30.5	1.102	2.089	8.4	19.5
8 29	21 11.56	-28 33.2	2.142	3.078	8.5	21.7	8 29	21 10.66	-28 49.5	1.127	2.078	12.8	19.7
9 8	21 4.43	-28 28.2	2.207	3.073	11.3	21.9	9 8	21 4.07	-28 42.8	1.171	2.067	17.1	19.9
9 18	20 59.39	-28 9.1	2.293	3.068	13.8	22.0	9 18	21 0.81	-28 12.8	1.233	2.057	20.8	20.1
187356	2005 <i>UW</i> ₂₃₇		8 11.8 199°23	4°6/ 7.4	18		505131	2012 <i>HZ</i> ₁₉		8 11.8 125°91	6°2/ 7.5	17	
7 10	21 49.25	-26 57.2	2.275	3.164	10.5	20.2	7 10	21 57.73	-29 30.5	1.764	2.651	13.2	22.0
7 20	21 44.09	-28 2.8	2.214	3.164	7.9	20.0	7 20	21 50.51	-30 37.0	1.721	2.666	10.0	21.9
7 30	21 37.20	-29 6.7	2.179	3.163	5.5	19.8	7 30	21 40.97	-31 37.6	1.702	2.681	7.2	21.7
8 9	21 29.21	-30 2.9	2.170	3.162	4.6	19.8	8 9	21 30.08	-32 24.1	1.708	2.695	6.3	21.7
8 19	21 20.94	-30 46.4	2.189	3.161	6.1	19.9	8 19	21 19.02	-32 50.8	1.741	2.708	7.9	21.8
8 29	21 13.28	-31 13.7	2.235	3.160	8.7	20.0	8 29	21 9.08	-32 55.4	1.799	2.721	10.7	22.0
9 8	21 7.02	-31 23.9	2.304	3.159	11.3	20.2	9 8	21 1.27	-32 39.0	1.881	2.733	13.6	22.2
9 18	21 2.73	-31 18.0	2.394	3.158	13.6	20.4	9 18	20 56.19	-32 4.9	1.982	2.744	16.1	22.5
202966	1999 <i>TE</i> ₃₂		8 11.8 289°65	7°8/18.3	18		39606	1993 <i>TL</i> ₂₄		8 11.8 258°95	7°2/ 5.0	18	
7 10	21 46.85	+ 7 15.1	1.805	2.608	16.6	20.2	7 10	21 53.61	-37 27.5	2.384	3.256	10.8	18.5
7 20	21 42.67	+ 7 27.0	1.719	2.596	14.0	19.9	7 20	21 47.36	-38 24.7	2.324	3.247	8.9	18.4
7 30	21 36.55	+ 7 14.0	1.652	2.584	11.2	19.7	7 30	21 39.13	-39 12.5	2.288	3.239	7.5	18.3
8 9	21 29.11	+ 6 35.0	1.607	2.573	8.7	19.6	8 9	21 29.68	-39 44.8	2.278	3.231	7.4	18.3
8 19	21 21.15	+ 5 31.7	1.587	2.561	7.8	19.5	8 19	21 19.94	-39 57.2	2.294	3.222	8.5	18.3
8 29	21 13.70	+ 4 8.9	1.592	2.550	9.1	19.6	8 29	21 10.94	-39 48.0	2.335	3.213	10.4	18.4
9 8	21 7.68	+ 2 34.6	1.621	2.539	11.7	19.7	9 8	21 3.58	-39 18.2	2.398	3.204	12.5	18.6
9 18	21 3.80	+ 0 56.9	1.672	2.528	14.7	19.9	9 18	20 58.47	-38 30.9	2.481	3.196	14.4	18.7
288830	2004 <i>RA</i> ₁₉₀		8 11.8 329°38	0°2/11.8	17		307135	2002 <i>CA</i> ₁₇₂		8 11.8 135°67	3°2/ 9.8	17	
7 10	21 53.33	-15 36.5	1.093	1.999	17.9	19.9	7 10	21 56.26	-20 53.1	1.551	2.442	14.4	20.5
7 20	21 48.38	-15 24.1	1.027	1.988	13.3	19.6	7 20	21 49.63	-21 37.5	1.497	2.451	10.5	20.3
7 30	21 40.26	-15 20.1	0.980	1.978	7.8	19.3	7 30	21 40.56	-22 24.6	1.466	2.460	6.2	20.1
8 9	21 29.99	-15 19.9	0.955	1.968	1.7	18.9	8 9	21 30.01	-23 7.2	1.460	2.468	3.3	19.9
8 19	21 19.04	-15 18.7	0.953	1.960	4.5	19.1	8 19	21 19.19	-23 38.9	1.481	2.476	5.5	20.1
8 29	21 9.21	-15 12.2	0.974	1.952	10.5	19.4	8 29	21 9.44	-23 55.6	1.527	2.483	9.6	20.3
9 8	21 2.00	-14 57.6	1.015	1.945	15.9	19.6	9 8	21 1.84	-23 56.1	1.597	2.490	13.5	20.6
9 18	20 58.31	-14 34.0	1.074	1.938	20.5	19.9	9 18	20 57.04	-23 41.6	1.687	2.496	16.7	20.8
479515	2014 <i>BV</i> ₂₀		8 11.8 73°61	0°6/12.3	16		22664	1998 <i>QY</i> ₂₂		8 11.8 326°29	2°7/ 9.8	18	
7 10	21 50.97	-12 13.3	1.773	2.650	13.6	20.9	7 10	21 48.73	-20 52.6	1.893	2.787	12.1	18.3
7 20	21 45.49	-12 24.6	1.711	2.657	10.0	20.7	7 20	21 43.99	-21 25.0	1.819	2.775	8.8	18.1
7 30	21 38.06	-12 45.3	1.671	2.663	5.9	20.5	7 30	21 37.28	-22 0.1	1.768	2.763	5.2	17.9
8 9	21 29.42	-13 11.7	1.657	2.669	1.6	20.2	8 9	21 29.29	-22 32.8	1.743	2.751	2.7	17.7
8 19	21 20.52	-13 39.7	1.670	2.675	3.1	20.4	8 19	21 20.92	-22 58.2	1.745	2.741	4.7	17.8
8 29	21 12.40	-14 5.0	1.709	2.682	7.3	20.6	8 29	21 13.18	-23 12.5	1.772	2.730	8.3	18.0
9 8	21 5.94	-14 24.4	1.773	2.688	11.1	20.9	9 8	21 7.00	-23 13.7	1.824	2.720	11.9	18.2
9 18	21 1.73	-14 35.8	1.860	2.694	14.4	21.1	9 18	21 3.02	-23 1.9	1.897	2.711	14.9	18.4
159685	2002 <i>LP</i> ₃		8 11.8 219°34	23°8/27.7	17		98673	2000 <i>WU</i> ₁₆₇		8 11.8 131°96	3°8/15.6	18	
7 10	21 55.86	+28 22.8	1.191	1.881	28.9	19.5	7 10	21 46.76	- 0 32.0	2.374	3.201	12.3	19.7
7 20	21 50.57	+31 24.3	1.139	1.880	27.5	19.4	7 20	21 42.08	- 0 43.6	2.301	3.206	9.7	19.6
7 30	21 41.80	+33 44.3	1.097	1.879	26.1	19.3	7 30	21 35.97	- 1 10.3	2.250	3.211	6.9	19.4
8 9	21 30.40	+35 10.8	1.067	1.877	24.9	19.2	8 9	21 28.98	- 1 50.6	2.225	3.217	4.5	19.3
8 19	21 17.82	+35 35.1	1.050	1.876	24.1	19.1	8 19	21 21.75	- 2 41.6	2.227	3.222	4.0	19.2
8 29	21 6.02	+34 55.9	1.047	1.874	23.8	19.1	8 29	21 15.00	- 3 39.3	2.257	3.226	6.0	19.4
9 8	20 56.87	+33 21.4	1.056	1.873	24.2	19.1	9 8	21 9.38	- 4 38.9	2.314	3.231	8.8	19.6
9 18	20 51.61	+31 5.3	1.079	1.871	25.1	19.2	9 18	21 5.39	- 5 36.1	2.395	3.235	11.4	19.7
507199	2010 <i>TO</i> ₂₃		8 11.8 320°62	4°1/ 9.7	17		111620	2002 <i>AQ</i> ₁₁₆		8 11.8 98°04	0°8/11.2	18	
7 10	21 51.11	-21 18.1	1.146	2.060	16.7	21.3	7 10	21 50.25	-13 29.2	1.769	2.651	13.4	19.3
7 20	21 46.83	-21 58.5	1.078	2.043	12.3	21.0	7 20	21 44.98	-14 28.7	1.715	2.665	9.7	19.1
7 30	21 39.42	-22 44.0	1.029	2.027	7.5	20.6	7 30	21 37.77	-15 37.8	1.685	2.679	5.5	18.9
8 9	21 29.82	-23 26.0	1.003	2.011	4.1	20.4	8 9	21 29.39	-16 50.6	1.681	2.693	1.2	18.7
8 19	21 19.45	-23 55.5	0.999	1.997	6.9	20.5	8 19	21 20.77	-18 0.4	1.704	2.707	3.5	18.9
8 29	21 10.08	-24 6.3	1.018	1.982	12.0	20.8	8 29	21 12.95	-19 1.3	1.754	2.720	7.7	19.1
9 8	21 3.26	-23 56.1	1.056	1.969	17.0	21.0	9 8	21 6.78	-19 49.3	1.829	2.733	11.4	19.4
9 18	20 59.92	-23 26.2	1.112	1.957	21.2	21.2	9 18	21 2.85	-20 22.7	1.925	2.746	14.5	19.6
470750	2008 <i>UX</i> ₁₃₁		8 11.8 339°69	5°1/14.8	18		317224	2002 <i>CF</i>					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
91702	1999 <i>TX</i> ₁₄₂		8 11.8 355°97	2°5/ 9.9	18		230608	2003 <i>FC</i> ₅₄		8 11.8 52°32	5°2/ 8.8	17	
7 10	21 51.03	-21 31.7	2.136	3.022	11.3	19.4	7 10	21 54.57	-25 25.3	1.385	2.288	15.1	19.7
7 20	21 45.36	-21 54.2	2.070	3.021	8.2	19.3	7 20	21 48.50	-26 14.0	1.347	2.305	11.1	19.6
7 30	21 37.93	-22 17.6	2.028	3.021	4.9	19.0	7 30	21 39.90	-26 59.8	1.332	2.323	7.2	19.4
8 9	21 29.43	-22 37.6	2.013	3.021	2.5	18.9	8 9	21 29.88	-27 34.6	1.340	2.341	5.2	19.3
8 19	21 20.68	-22 50.5	2.026	3.021	4.2	19.0	8 19	21 19.78	-27 52.4	1.373	2.359	7.2	19.5
8 29	21 12.61	-22 53.5	2.066	3.021	7.5	19.2	8 29	21 11.00	-27 50.5	1.430	2.378	10.8	19.7
9 8	21 6.02	-22 45.6	2.131	3.021	10.7	19.4	9 8	21 4.58	-27 29.5	1.510	2.397	14.4	20.0
9 18	21 1.46	-22 27.1	2.218	3.021	13.4	19.6	9 18	21 1.08	-26 52.6	1.608	2.416	17.4	20.3
223944	2004 <i>XE</i> ₂₇		8 11.8 308°10	5°1/ 6.9	18		100882	1998 <i>HK</i> ₁₀₁		8 11.8 63°64	1°1/ 11.2	17	
7 10	21 48.83	-28 29.8	2.207	3.098	10.7	19.6	7 10	21 51.90	-14 21.3	1.296	2.193	16.3	20.0
7 20	21 43.92	-29 33.2	2.142	3.090	8.1	19.4	7 20	21 46.67	-15 10.6	1.250	2.208	11.8	19.8
7 30	21 37.18	-30 34.0	2.101	3.082	5.9	19.2	7 30	21 38.93	-16 10.8	1.226	2.222	6.7	19.6
8 9	21 29.28	-31 26.0	2.086	3.074	5.2	19.2	8 9	21 29.69	-17 14.7	1.225	2.238	1.6	19.3
8 19	21 21.04	-32 4.1	2.099	3.066	6.7	19.2	8 19	21 20.23	-18 14.1	1.249	2.253	4.4	19.5
8 29	21 13.39	-32 24.8	2.137	3.059	9.2	19.4	8 29	21 11.90	-19 2.3	1.297	2.268	9.3	19.9
9 8	21 7.19	-32 27.5	2.199	3.051	11.9	19.6	9 8	21 5.81	-19 35.3	1.369	2.284	13.7	20.2
9 18	21 3.04	-32 13.2	2.281	3.044	14.2	19.7	9 18	21 2.57	-19 52.1	1.460	2.299	17.3	20.4
135656	2002 <i>LX</i> ₂₆		8 11.8 88°42	0°2/ 11.9	18		170140	2003 <i>AQ</i> ₇₁		8 11.8 14°68	15°1/ 15.2	18	
7 10	21 50.52	-10 46.6	1.412	2.299	15.9	19.7	7 10	22 2.38	+ 5 0.7	0.982	1.822	24.8	18.3
7 20	21 45.61	-11 42.2	1.355	2.306	11.6	19.5	7 20	21 55.26	+ 8 5.2	0.927	1.822	21.3	18.1
7 30	21 38.33	-12 53.2	1.320	2.314	6.8	19.2	7 30	21 44.44	+10 45.7	0.889	1.824	17.9	17.9
8 9	21 29.55	-14 13.0	1.308	2.321	1.6	18.9	8 9	21 31.03	+12 49.7	0.871	1.825	15.6	17.8
8 19	21 20.41	-15 33.4	1.323	2.329	3.7	19.1	8 19	21 16.76	+14 8.4	0.873	1.828	15.3	17.8
8 29	21 12.19	-16 46.3	1.363	2.336	8.7	19.4	8 29	21 3.77	+14 40.6	0.895	1.830	17.1	17.9
9 8	21 5.97	-17 45.7	1.426	2.343	13.1	19.7	9 8	20 53.85	+14 34.4	0.935	1.833	20.1	18.1
9 18	21 2.43	-18 28.8	1.510	2.351	16.8	19.9	9 18	20 48.06	+14 1.9	0.991	1.837	23.2	18.3
32227	2000 <i>OM</i> ₂₅		8 11.8 266°79	1°2/ 11.1	18		1508	Kemi		8 11.8 222°33	8°9/ 1.2	18	R
7 10	21 53.91	-17 22.1	1.708	2.593	13.6	17.7	7 10	22 3.85	-49 35.8	3.005	3.817	10.4	18.0
7 20	21 47.94	-17 33.5	1.630	2.581	10.0	17.5	7 20	21 54.81	-50 39.8	2.948	3.803	9.4	17.9
7 30	21 39.67	-17 49.9	1.575	2.570	5.8	17.2	7 30	21 43.49	-51 28.7	2.915	3.788	8.9	17.8
8 9	21 29.87	-18 6.9	1.546	2.558	1.6	16.9	8 9	21 30.72	-51 56.6	2.906	3.772	9.1	17.8
8 19	21 19.59	-18 20.0	1.543	2.546	3.9	17.0	8 19	21 17.61	-51 59.6	2.923	3.756	9.9	17.9
8 29	21 10.03	-18 25.5	1.567	2.534	8.4	17.3	8 29	21 5.39	-51 37.1	2.963	3.739	11.1	17.9
9 8	21 2.30	-18 21.3	1.616	2.522	12.5	17.5	9 8	20 55.10	-50 51.4	3.024	3.721	12.5	18.0
9 18	20 57.10	-18 7.0	1.685	2.510	16.1	17.7	9 18	20 47.41	-49 46.7	3.104	3.702	13.7	18.1
477170	2009 <i>FL</i> ₂		8 11.8 231°52	5°2/ 17.1	18		171476	1993 <i>RT</i> ₄		8 11.8 355°63	1°5/ 12.6	18	
7 10	21 48.55	+ 4 44.8	2.617	3.406	12.3	22.7	7 10	21 46.77	-10 57.2	0.976	1.888	19.1	19.7
7 20	21 43.41	+ 4 40.8	2.517	3.391	10.2	22.5	7 20	21 43.67	-11 1.2	0.920	1.883	14.2	19.4
7 30	21 36.81	+ 4 19.8	2.439	3.375	7.9	22.3	7 30	21 37.56	-11 22.9	0.882	1.878	8.6	19.1
8 9	21 29.21	+ 3 41.9	2.386	3.358	5.9	22.2	8 9	21 29.45	-11 57.8	0.863	1.875	2.7	18.7
8 19	21 21.22	+ 2 48.9	2.361	3.340	5.2	22.1	8 19	21 20.77	-12 39.0	0.866	1.874	4.3	18.8
8 29	21 13.54	+ 1 44.3	2.365	3.322	6.6	22.2	8 29	21 13.21	-13 18.4	0.891	1.874	10.3	19.2
9 8	21 6.87	+ 0 32.8	2.396	3.303	8.9	22.3	9 8	21 8.21	-13 49.3	0.935	1.875	15.7	19.5
9 18	21 1.74	- 0 40.5	2.451	3.283	11.4	22.4	9 18	21 6.56	-14 7.4	0.997	1.878	20.3	19.8
254016	2004 <i>FQ</i> ₅₂		8 11.8 173°30	2°0/ 10.4	17		233883	2008 <i>XO</i> ₅		8 11.8 162°11	3°6/ 14.7	18	
7 10	21 53.83	-18 24.1	1.830	2.714	12.9	21.3	7 10	21 51.91	- 3 29.4	2.348	3.179	12.3	20.6
7 20	21 47.65	-19 4.6	1.765	2.717	9.4	21.1	7 20	21 45.81	- 3 12.5	2.273	3.184	9.6	20.4
7 30	21 39.37	-19 49.8	1.724	2.719	5.4	20.9	7 30	21 38.15	- 3 7.5	2.222	3.189	6.7	20.3
8 9	21 29.78	-20 34.1	1.710	2.720	2.1	20.7	8 9	21 29.52	- 3 13.6	2.197	3.193	4.1	20.1
8 19	21 19.86	-21 12.0	1.722	2.721	4.3	20.8	8 19	21 20.64	- 3 29.1	2.201	3.197	3.9	20.1
8 29	21 10.72	-21 39.2	1.762	2.722	8.3	21.1	8 29	21 12.30	- 3 50.9	2.233	3.200	6.3	20.3
9 8	21 3.32	-21 53.4	1.827	2.722	11.9	21.3	9 8	21 5.22	- 4 15.9	2.293	3.203	9.1	20.4
9 18	20 58.30	-21 54.5	1.913	2.721	15.0	21.5	9 18	20 59.92	- 4 40.6	2.376	3.206	11.8	20.6
440390	2005 <i>GG</i> ₁₇₆		8 11.8 31°03	2°9/ 9.8	15		466538	2014 <i>SR</i> ₁₅₄		8 11.8 231°21	3°1/ 10.1	17	
7 10	21 47.77	-18 20.8	1.391	2.297	14.8	20.5	7 10	21 56.62	-20 33.7	1.404	2.299	15.4	21.6
7 20	21 43.55	-19 27.3	1.350	2.313	10.6	20.2	7 20	21 50.32	-21 6.8	1.338	2.294	11.3	21.3
7 30	21 37.07	-20 39.7	1.331	2.329	6.1	20.0	7 30	21 41.22	-21 43.6	1.293	2.288	6.7	21.1
8 9	21 29.25	-21 49.9	1.337	2.347	2.9	19.9	8 9	21 30.27	-22 16.9	1.272	2.282	3.2	20.8
8 19	21 21.25	-22 50.1	1.367	2.365	5.4	20.1	8 19	21 18.79	-22 40.0	1.277	2.275	5.7	21.0
8 29	21 14.27	-23 34.4	1.421	2.384	9.6	20.4	8 29	21 8.33	-22 48.1	1.307	2.268	10.4	21.2
9 8	21 9.31	-24 0.3	1.499	2.403	13.4	20.7	9 8	21 0.18	-22 39.8	1.360	2.261	14.8	21.5
9 18	21 6.92	-24 7.8	1.595	2.423	16.6	20.9	9 18	20 55.15	-22 16.3	1.432	2.254	18.5	21.7
106921	2000 <i>YN</i> ₅₄		8 11.8 181°42	0°3/ 12.0	17		422730	2001 <i>QL</i> ₅₃		8 11.9 10°85	6°3/ 10.7	15	
7 10	21 53.64	-12 19.6	1.804	2.676	13.6	20.9	7 10	22 2.30	-30 14.1	0.985	1.895	19.1	19.0
7 20	21 47.52	-12 46.1	1.734	2.678	10.0	20.7	7 20	21 54.90	-29 34.2	0.939	1.898	14.5	18.8
7 30	21 39.32	-13 22.6	1.687	2.678	5.9	20.4	7 30	21 43.85	-28 39.8	0.912	1.903	9.6	18.5
8 9	21 29.78	-14 4.7	1.666	2.678	1.4	20.1	8 9	21 30.79	-27 24.7	0.906	1.910	6.4	18.4
8 19	21 19.87	-14 47.6	1.672	2.677	3.2	20.3	8 19	21 17.79	-25 48.1	0.924	1.918	8.1	18.5
8 29	21 10.68	-15 26.2	1.706	2.676	7.6	20.5	8 29	21 6.91	-23 54.3	0.964	1.928	12.6	18.8
9 8	21 3.19	-15 56.7	1.766	2.674	11.5	20.8	9 8	20 59.51	-21 51.1	1.025	1.940	17.2	19.1
9 18	20 58.04	-16 17.2	1.847	2.672	14.9	21.0	9 18	20 56.11	-19 45.7	1.105	1.953	21.1	19.4
13973	1991 <i>UZ</i> ₃		8 11.8 275°84	0°2/ 11.7	18		244379	2002 <i>PK</i> ₁₁	</				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
65967	1998 <i>HM</i> ₁₀		8 11.9	66°61'	2°5'	9.8	18						
7 10	21 49.67	-20 22.5	2.058	2.946	11.5	19.7							
7 20	21 44.45	-21 3.3	1.995	2.949	8.3	19.5							
7 30	21 37.46	-21 46.7	1.957	2.951	4.9	19.3							
8 9	21 29.38	-22 27.7	1.945	2.954	2.5	19.2							
8 19	21 21.04	-23 1.5	1.961	2.956	4.4	19.3							
8 29	21 13.36	-23 24.6	2.004	2.959	7.7	19.5							
9 8	21 7.16	-23 35.2	2.071	2.962	10.9	19.7							
9 18	21 3.00	-23 33.1	2.161	2.964	13.7	19.9							
376492	2012 <i>KV</i> ₁₃		8 11.9	20°65'	1°5'	12.8	17						
7 10	21 50.24	- 9 10.0	1.474	2.354	15.7	21.2							
7 20	21 45.39	- 9 35.6	1.409	2.355	11.7	20.9							
7 30	21 38.24	-10 16.7	1.365	2.355	7.2	20.7							
8 9	21 29.59	-11 9.0	1.345	2.356	2.5	20.4							
8 19	21 20.51	-12 6.5	1.350	2.357	3.5	20.4							
8 29	21 12.26	-13 2.4	1.381	2.357	8.2	20.7							
9 8	21 5.90	-13 50.9	1.436	2.358	12.6	21.0							
9 18	21 2.14	-14 28.2	1.511	2.359	16.4	21.2							
496633	2015 <i>UF</i> ₅₅		8 11.9	0°72'	0°4'	12.1	18						
7 10	21 45.75	-11 51.9	1.689	2.576	13.7	20.8							
7 20	21 41.89	-12 21.0	1.623	2.574	10.0	20.6							
7 30	21 36.11	-13 1.4	1.580	2.573	5.9	20.3							
8 9	21 29.09	-13 48.9	1.561	2.573	1.5	20.0							
8 19	21 21.75	-14 38.1	1.568	2.574	3.1	20.1							
8 29	21 15.08	-15 23.6	1.601	2.576	7.5	20.4							
9 8	21 10.00	-16 0.8	1.658	2.578	11.4	20.7							
9 18	21 7.09	-16 27.1	1.736	2.581	14.8	20.9							
469039	2015 <i>AM</i> ₂₅₂		8 11.9	307°04'	3°7'	9.5	18						
7 10	21 49.99	-19 6.5	1.238	2.148	16.0	20.3							
7 20	21 45.88	-20 12.8	1.168	2.132	11.7	20.0							
7 30	21 38.86	-21 28.9	1.118	2.116	7.0	19.7							
8 9	21 29.78	-22 45.6	1.092	2.101	3.7	19.4							
8 19	21 19.94	-23 52.8	1.089	2.086	6.6	19.6							
8 29	21 10.95	-24 41.8	1.109	2.071	11.6	19.8							
9 8	21 4.26	-25 8.3	1.150	2.057	16.4	20.1							
9 18	21 0.79	-25 12.1	1.209	2.044	20.5	20.3							
269290	2008 <i>SV</i> ₂₀		8 11.9	76°35'	0°2'	11.7	17						
7 10	21 51.16	-12 56.7	1.582	2.467	14.6	20.8							
7 20	21 45.79	-13 35.0	1.530	2.481	10.6	20.6							
7 30	21 38.32	-14 23.7	1.501	2.495	6.1	20.3							
8 9	21 29.58	-15 17.3	1.496	2.509	1.3	20.1							
8 19	21 20.62	-16 9.6	1.518	2.523	3.5	20.3							
8 29	21 12.57	-16 55.1	1.566	2.537	8.0	20.6							
9 8	21 6.37	-17 29.8	1.639	2.552	12.0	20.8							
9 18	21 2.62	-17 51.8	1.732	2.565	15.3	21.1							
482221	2010 <i>XF</i> ₂₁		8 11.9	343°62'	11°6'	28.4	18						
7 10	21 56.57	-51 10.7	2.273	3.102	12.7	20.5							
7 20	21 50.25	-52 59.6	2.244	3.102	11.9	20.4							
7 30	21 41.16	-54 29.3	2.237	3.101	11.6	20.4							
8 9	21 30.26	-55 31.9	2.253	3.101	12.1	20.4							
8 19	21 18.88	-56 3.0	2.289	3.100	13.1	20.5							
8 29	21 8.53	-56 1.6	2.345	3.100	14.3	20.6							
9 8	21 0.49	-55 31.0	2.419	3.099	15.6	20.7							
9 18	20 55.53	-54 36.3	2.507	3.099	16.7	20.8							
70241	1999 <i>RE</i> ₇₃		8 11.9	209°74'	2°3'	13.5	18						
7 10	21 52.33	- 6 52.8	1.833	2.691	14.1	19.7							
7 20	21 46.63	- 7 8.3	1.754	2.685	10.7	19.4							
7 30	21 38.87	- 7 38.3	1.697	2.679	6.9	19.2							
8 9	21 29.75	- 8 19.9	1.665	2.672	3.1	19.0							
8 19	21 20.16	- 9 9.0	1.661	2.665	3.4	19.0							
8 29	21 11.18	-10 0.4	1.684	2.657	7.3	19.2							
9 8	21 3.76	-10 48.7	1.732	2.648	11.2	19.4							
9 18	20 58.61	-11 30.2	1.803	2.639	14.7	19.6							
75524	1999 <i>XA</i> ₂₀₇		8 11.9	115°10'	1°9'	10.3	18						
7 10	21 52.67	-19 10.7	2.156	3.036	11.4	19.0							
7 20	21 46.43	-19 44.3	2.103	3.053	8.2	18.8							
7 30	21 38.51	-20 20.4	2.075	3.069	4.7	18.6							
8 9	21 29.62	-20 54.6	2.074	3.084	2.0	18.5							
8 19	21 20.59	-21 22.7	2.102	3.100	3.8	18.6							
8 29	21 12.31	-21 41.6	2.157	3.115	7.1	18.9							
9 8	21 5.53	-21 49.8	2.238	3.129	10.2	19.1							
9 18	21 0.76	-21 47.3	2.342	3.143	12.9	19.3							
479238	2013 <i>DN</i> ₇		8 11.9	340°58'	4°8'	8.7	18						
7 10	21 53.52	-27 24.8	1.858	2.749	12.4	20.1							
7 20	21 47.49	-27 55.0	1.796	2.746	9.3	19.9							
7 30	21 39.32	-28 21.5	1.757	2.743	6.3	19.7							
8 9	21 29.83	-28 38.2	1.743	2.740	4.8	19.6							
8 19	21 20.07	-28 40.6	1.757	2.738	6.5	19.7							
8 29	21 11.18	-28 26.5	1.796	2.736	9.5	19.9							
9 8	21 4.13	-27 56.3	1.858	2.734	12.7	20.1							
9 18	20 59.53	-27 12.1	1.942	2.732	15.5	20.3							
432808	2011 <i>GB</i> ₄₈		8 11.9	322°27'	22°8'	11.8	18						
7 10	22 50.99	-72 59.8	1.525	2.232	22.8	20.1							
7 20	22 37.03	-74 32.5	1.496	2.211	22.9	20.1							
7 30	22 10.74	-75 24.7	1.479	2.191	23.2	20.1							
8 9	21 36.81	-75 16.5	1.473	2.171	23.7	20.0							
8 19	21 4.53	-73 58.9	1.478	2.152	24.4	20.0							
8 29	20 41.55	-71 37.9	1.495	2.134	25.3	20.1							
9 8	20 29.59	-68 29.4	1.522	2.117	26.2	20.1							
9 18	20 26.72	-64 48.5	1.560	2.101	27.1	20.2							
21946	1999 <i>VD</i> ₁₃₈		8 11.9	88°39'	0°6'	11.5	18						
7 10	21 57.60	-15 38.2	1.492	2.375	15.4	17.7							
7 20	21 50.42	-15 48.8	1.447	2.397	11.1	17.5							
7 30	21 40.94	-16 5.9	1.425	2.419	6.4	17.3							
8 9	21 30.17	-16 24.7	1.428	2.441	1.4	17.0							
8 19	21 19.35	-16 40.6	1.458	2.462	3.8	17.2							
8 29	21 9.74	-16 49.7	1.514	2.483	8.4	17.6							
9 8	21 2.33	-16 50.3	1.594	2.504	12.4	17.8							
9 18	20 57.68	-16 41.8	1.69										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
169527	2002 <i>EY</i> ₅₁		8 11.9 262°86	0°5/11.5	17		507089	2009 <i>DV</i> ₁₄₂		8 11.9 223°65	2°6/10.0	18	
7 10	21 51.56	-13 14.5	1.427	2.317	15.5	20.3	7 10	21 53.65	-21 47.7	2.141	3.022	11.4	21.4
7 20	21 46.62	-13 58.3	1.354	2.307	11.4	20.1	7 20	21 47.38	-22 9.5	2.067	3.017	8.3	21.2
7 30	21 39.13	-14 55.6	1.302	2.297	6.6	19.8	7 30	21 39.22	-22 32.0	2.018	3.010	5.0	20.9
8 9	21 29.88	-16 0.2	1.274	2.287	1.5	19.4	8 9	21 29.89	-22 50.8	1.996	3.004	2.6	20.8
8 19	21 20.02	-17 4.6	1.272	2.277	4.1	19.6	8 19	21 20.24	-23 1.8	2.002	2.997	4.3	20.9
8 29	21 10.91	-18 1.4	1.295	2.267	9.3	19.9	8 29	21 11.25	-23 2.5	2.036	2.990	7.7	21.1
9 8	21 3.80	-18 44.9	1.342	2.256	13.9	20.1	9 8	21 3.78	-22 51.9	2.095	2.983	11.0	21.3
9 18	20 59.52	-19 12.7	1.408	2.246	17.9	20.3	9 18	20 58.43	-22 30.3	2.177	2.975	13.8	21.4
47567	2000 <i>AL</i> ₁₅₄		8 11.9 297°13	3°8/9.1	18		391968	2008 <i>WK</i> ₁₃₀		8 11.9 334°81	5°7/7.4	18	
7 10	21 51.36	-22 55.9	1.787	2.681	12.7	19.1	7 10	21 51.17	-26 41.1	1.677	2.576	13.1	21.0
7 20	21 46.02	-23 44.1	1.722	2.677	9.3	18.8	7 20	21 46.09	-27 57.5	1.620	2.574	9.8	20.8
7 30	21 38.55	-24 33.7	1.680	2.673	5.8	18.6	7 30	21 38.68	-29 12.6	1.586	2.572	6.8	20.7
8 9	21 29.71	-25 18.2	1.664	2.669	3.8	18.5	8 9	21 29.79	-30 17.8	1.577	2.570	5.8	20.6
8 19	21 20.50	-25 51.7	1.675	2.665	5.7	18.6	8 19	21 20.49	-31 6.0	1.593	2.568	7.7	20.7
8 29	21 12.05	-26 10.2	1.711	2.661	9.2	18.8	8 29	21 12.04	-31 32.6	1.635	2.567	10.9	20.9
9 8	21 5.36	-26 12.2	1.771	2.657	12.7	19.0	9 8	21 5.51	-31 36.9	1.698	2.566	14.1	21.1
9 18	21 1.07	-25 58.4	1.851	2.653	15.7	19.2	9 18	21 1.58	-31 20.7	1.781	2.564	16.9	21.3
415038	2011 <i>YB</i> ₄₂		8 11.9 162°22	5°0/8.6	17		187429	2005 <i>WH</i> ₁₁		8 11.9 39°61	0°9/11.1	18	
7 10	21 54.33	-23 6.9	1.399	2.300	15.1	21.1	7 10	21 48.43	-15 35.0	1.873	2.759	12.6	20.0
7 20	21 48.64	-24 20.1	1.344	2.302	11.1	20.8	7 20	21 43.64	-16 8.8	1.816	2.769	9.1	19.8
7 30	21 40.25	-25 35.6	1.311	2.303	7.0	20.6	7 30	21 37.05	-16 49.2	1.784	2.779	5.2	19.6
8 9	21 30.11	-26 43.8	1.302	2.305	5.0	20.5	8 9	21 29.39	-17 31.6	1.777	2.789	1.3	19.4
8 19	21 19.54	-27 36.0	1.318	2.306	7.3	20.6	8 19	21 21.51	-18 11.1	1.796	2.800	3.4	19.5
8 29	21 10.01	-28 6.5	1.359	2.307	11.3	20.9	8 29	21 14.36	-18 43.5	1.843	2.811	7.3	19.8
9 8	21 2.79	-28 14.2	1.422	2.307	15.2	21.1	9 8	21 8.75	-19 5.8	1.914	2.822	10.8	20.0
9 18	20 58.61	-28 1.0	1.503	2.308	18.6	21.4	9 18	21 5.21	-19 16.9	2.008	2.833	13.8	20.3
262513	2006 <i>UJ</i> ₂₇₁		8 11.9 84°78	1°4/10.8	18		253750	2003 <i>WX</i> ₇₃		8 11.9 232°67	0°1/11.9	18	
7 10	21 50.96	-17 38.5	2.060	2.942	11.8	20.5	7 10	21 54.24	-13 14.4	1.798	2.672	13.6	21.4
7 20	21 45.29	-18 5.1	2.005	2.955	8.5	20.3	7 20	21 48.16	-13 31.6	1.715	2.660	10.1	21.1
7 30	21 37.91	-18 35.6	1.974	2.968	4.8	20.2	7 30	21 39.87	-13 57.8	1.656	2.648	5.9	20.9
8 9	21 29.54	-19 5.7	1.970	2.982	1.5	19.9	8 9	21 30.08	-14 29.2	1.623	2.635	1.4	20.5
8 19	21 21.00	-19 31.6	1.994	2.995	3.5	20.1	8 19	21 19.75	-15 1.2	1.617	2.622	3.3	20.7
8 29	21 13.21	-19 49.8	2.045	3.008	7.0	20.4	8 29	21 10.05	-15 29.2	1.638	2.608	7.8	20.9
9 8	21 6.91	-19 58.5	2.122	3.021	10.3	20.6	9 8	21 2.02	-15 49.7	1.684	2.593	11.9	21.1
9 18	21 2.62	-19 57.3	2.221	3.034	13.1	20.8	9 18	20 56.40	-16 0.8	1.753	2.578	15.5	21.3
178751	2000 <i>UE</i> ₁₁₃		8 11.9 323°70	0°1/11.9	18		485727	2012 <i>BX</i> ₅₂		8 11.9 297°37	0°1/11.9	18	
7 10	21 48.07	-13 23.9	1.874	2.757	12.8	20.4	7 10	21 46.36	-11 35.7	2.109	2.984	11.8	20.9
7 20	21 43.51	-13 46.5	1.799	2.748	9.3	20.2	7 20	21 42.16	-12 22.3	2.025	2.970	8.7	20.7
7 30	21 37.06	-14 17.9	1.746	2.740	5.4	19.9	7 30	21 36.27	-13 20.0	1.964	2.957	5.1	20.4
8 9	21 29.38	-14 54.3	1.719	2.732	1.2	19.6	8 9	21 29.25	-14 24.5	1.931	2.943	1.2	20.1
8 19	21 21.32	-15 31.3	1.718	2.724	3.1	19.8	8 19	21 21.81	-15 30.9	1.925	2.930	2.8	20.3
8 29	21 13.84	-16 4.2	1.745	2.716	7.3	20.0	8 29	21 14.82	-16 33.7	1.946	2.917	6.7	20.5
9 8	21 7.85	-16 29.6	1.796	2.709	11.1	20.2	9 8	21 9.08	-17 28.2	1.993	2.903	10.3	20.7
9 18	21 3.96	-16 45.3	1.869	2.703	14.3	20.4	9 18	21 5.19	-18 11.6	2.063	2.890	13.4	20.9
289021	Juzeliunas		8 11.9 326°13	5°0/15.9	18		309659	2008 <i>DV</i> ₈₀		8 11.9 111°30	0°1/12.0	18	
7 10	21 46.74	+ 0 20.5	2.103	2.932	13.6	20.3	7 10	21 49.50	-13 6.9	2.196	3.068	11.6	21.6
7 20	21 42.35	+ 0 35.2	2.021	2.925	11.0	20.1	7 20	21 44.21	-13 26.9	2.130	3.075	8.4	21.4
7 30	21 36.32	+ 0 33.6	1.961	2.918	8.1	20.0	7 30	21 37.33	-13 54.1	2.089	3.081	4.9	21.2
8 9	21 29.22	+ 0 15.8	1.925	2.912	5.7	19.8	8 9	21 29.47	-14 25.2	2.075	3.087	1.2	20.9
8 19	21 21.76	- 0 16.0	1.916	2.906	5.1	19.8	8 19	21 21.39	-14 56.4	2.089	3.094	2.7	21.0
8 29	21 14.78	- 0 58.4	1.933	2.900	7.0	19.9	8 29	21 13.91	-15 24.3	2.130	3.100	6.3	21.3
9 8	21 9.04	- 1 46.5	1.975	2.894	9.9	20.0	9 8	21 7.77	-15 46.1	2.198	3.106	9.6	21.5
9 18	21 5.12	- 2 35.5	2.041	2.889	12.7	20.2	9 18	21 3.46	-16 0.0	2.288	3.112	12.4	21.7
9246	Niemeyer		8 11.9 343°81	0°8/11.5	18		96510	1998 <i>QL</i> ₅₅		8 11.9 326°14	0°4/11.6	18	
7 10	21 44.48	-14 13.4	0.983	1.904	18.1	16.5	7 10	21 47.28	-14 35.9	1.896	2.782	12.5	19.2
7 20	21 42.16	-14 40.4	0.920	1.889	13.4	16.2	7 20	21 42.99	-14 59.2	1.816	2.767	9.1	18.9
7 30	21 36.83	-15 22.7	0.875	1.876	7.8	15.8	7 30	21 36.83	-15 30.4	1.759	2.753	5.3	18.7
8 9	21 29.41	-16 13.8	0.851	1.864	1.7	15.4	8 9	21 29.41	-16 5.6	1.727	2.740	1.2	18.3
8 19	21 21.28	-17 5.0	0.847	1.854	4.9	15.6	8 19	21 21.57	-16 40.4	1.722	2.726	3.2	18.5
8 29	21 14.15	-17 47.4	0.865	1.845	11.0	15.9	8 29	21 14.28	-17 10.4	1.743	2.714	7.3	18.7
9 8	21 9.50	-18 14.5	0.901	1.839	16.5	16.2	9 8	21 8.42	-17 32.1	1.789	2.702	11.1	18.9
9 18	21 8.25	-18 23.4	0.955	1.834	21.2	16.5	9 18	21 4.65	-17 43.5	1.857	2.690	14.4	19.1
57061	2001 <i>MZ</i> ₂₆		8 11.9 327°23	10°8/18.8	18		282411	2003 <i>UJ</i> ₁₇		8 11.9 319°99	3°2/14.0	18	
7 10	21 48.02	+10 14.9	1.687	2.475	18.1	18.1	7 10	21 49.30	- 5 59.8	1.689	2.553	14.8	20.3
7 20	21 43.77	+11 28.9	1.605	2.461	15.8	17.9	7 20	21 44.57	- 5 56.1	1.614	2.547	11.4	20.1
7 30	21 37.39	+12 19.1	1.540	2.448	13.5	17.8	7 30	21 37.78	- 6 7.7	1.560	2.541	7.5	19.8
8 9	21 29.51	+12 41.3	1.497	2.435	11.5	17.6	8 9	21 29.63	- 6 32.4	1.531	2.536	3.9	19.6
8 19	21 21.02	+12 33.9	1.475	2.423	10.8	17.5	8 19	21 21.05	- 7 7.1	1.527	2.530	3.9	19.6
8 29	21 13.03	+11 58.8	1.476	2.411	11.6	17.6	8 29	21 13.11	- 7 46.8	1.549	2.525	7.6	19.8
9 8	21 6.59	+11 2.1	1.499	2.400	13.7	17.7	9 8	21 6.79	- 8 26.3	1.596	2.520	11.5	20.0
9 18	21 2.49	+ 9 51.7	1.543	2.390	16.2	17.8	9 18	21 2.75	- 9 1.4	1.664	2.515	15.0	20.2
246320	2007 <i>TB</i> ₁₈₁		8 11.9 6°75	0°1/11.9	17		306387	1994 <i>GR</i> ₈		8 11.9 128°68	0°9/11.2		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
482122	2010 <i>OF</i> ₈₀		8 11.9 266°12	2°4/14.2	17		410656	2008 <i>SW</i> ₆₆		8 11.9 280°04	4°1/16.5	18	
7 10	21 47.10	- 5 6.4	2.457	3.302	11.4	21.8	7 10	21 45.10	+ 1 54.1	2.712	3.522	11.4	21.0
7 20	21 42.51	- 5 26.0	2.361	3.283	8.8	21.6	7 20	21 40.98	+ 1 37.3	2.609	3.501	9.2	20.8
7 30	21 36.43	- 5 58.2	2.288	3.265	5.8	21.4	7 30	21 35.53	+ 1 4.8	2.529	3.479	6.9	20.6
8 9	21 29.33	- 6 41.2	2.242	3.246	3.0	21.2	8 9	21 29.18	+ 0 17.6	2.474	3.458	4.8	20.5
8 19	21 21.83	- 7 32.0	2.224	3.226	3.0	21.2	8 19	21 22.46	- 0 42.2	2.447	3.437	4.2	20.4
8 29	21 14.67	- 8 26.4	2.234	3.207	5.8	21.3	8 29	21 16.03	- 1 50.8	2.448	3.415	5.8	20.5
9 8	21 8.56	- 9 20.3	2.271	3.187	9.0	21.5	9 8	21 10.49	- 3 3.7	2.477	3.393	8.3	20.6
9 18	21 4.04	-10 9.9	2.332	3.167	11.8	21.7	9 18	21 6.35	- 4 16.2	2.531	3.371	10.8	20.7
255517	2006 <i>BY</i> ₂₆₇		8 11.9 203°29	2°1/ 9.8	18		507121	2009 <i>SR</i> ₃₀₇		8 11.9 197°00	3°7/14.5	17	
7 10	21 48.86	-20 45.9	2.739	3.618	9.3	21.0	7 10	21 51.72	- 4 12.8	1.766	2.616	14.9	22.0
7 20	21 43.60	-21 21.1	2.666	3.615	6.7	20.8	7 20	21 46.26	- 4 7.4	1.692	2.615	11.6	21.7
7 30	21 36.95	-21 57.9	2.619	3.612	4.0	20.6	7 30	21 38.76	- 4 18.0	1.639	2.614	7.9	21.5
8 9	21 29.43	-22 32.7	2.600	3.608	2.1	20.5	8 9	21 29.94	- 4 43.0	1.611	2.612	4.5	21.3
8 19	21 21.67	-23 2.0	2.610	3.604	3.6	20.6	8 19	21 20.70	- 5 19.2	1.610	2.610	4.3	21.3
8 29	21 14.36	-23 23.1	2.648	3.599	6.3	20.8	8 29	21 12.11	- 6 1.9	1.635	2.608	7.5	21.5
9 8	21 8.15	-23 34.4	2.713	3.595	8.9	20.9	9 8	21 5.14	- 6 45.8	1.685	2.605	11.2	21.7
9 18	21 3.51	-23 35.4	2.800	3.590	11.2	21.1	9 18	21 0.43	- 7 26.2	1.757	2.602	14.6	21.9
16124	Timdong		8 11.9 179°45	0°7/12.4	18		392909	2012 <i>VX</i> ₆₁		8 11.9 194°71	2°1/10.1	18	
7 10	21 52.58	-10 47.5	1.895	2.762	13.3	19.3	7 10	21 51.10	-19 8.8	2.202	3.083	11.2	21.9
7 20	21 46.74	-11 16.1	1.823	2.764	9.8	19.1	7 20	21 45.53	-19 53.5	2.131	3.082	8.1	21.7
7 30	21 38.95	-11 55.6	1.775	2.765	5.9	18.8	7 30	21 38.22	-20 42.0	2.086	3.080	4.7	21.4
8 9	21 29.91	-12 42.2	1.754	2.765	1.7	18.5	8 9	21 29.80	-21 29.3	2.068	3.077	2.1	21.3
8 19	21 20.51	-13 31.0	1.760	2.765	3.0	18.6	8 19	21 21.07	-22 10.8	2.077	3.074	4.0	21.4
8 29	21 11.76	-14 17.0	1.793	2.764	7.1	18.9	8 29	21 12.91	-22 42.4	2.115	3.071	7.3	21.6
9 8	21 4.58	-14 56.0	1.853	2.763	10.9	19.1	9 8	21 6.13	-23 2.1	2.178	3.067	10.5	21.8
9 18	20 59.60	-15 25.5	1.934	2.761	14.2	19.3	9 18	21 1.31	-23 9.4	2.264	3.063	13.3	22.0
273892	2007 <i>HL</i> ₃₁		8 11.9 79°89	3°4/ 9.7	17		476276	2007 <i>VV</i> ₁₉₅		8 11.9 287°28	2°0/13.4	18	
7 10	21 53.85	-21 48.2	1.618	2.512	13.8	20.5	7 10	21 49.29	- 8 9.1	1.860	2.725	13.6	21.4
7 20	21 47.88	-22 27.1	1.566	2.521	10.0	20.3	7 20	21 44.45	- 8 19.1	1.782	2.719	10.3	21.2
7 30	21 39.65	-23 7.4	1.536	2.530	6.0	20.1	7 30	21 37.70	- 8 41.9	1.727	2.712	6.5	20.9
8 9	21 30.07	-23 42.7	1.531	2.538	3.4	20.0	8 9	21 29.70	- 9 14.9	1.697	2.705	2.8	20.7
8 19	21 20.25	-24 7.3	1.553	2.547	5.5	20.1	8 19	21 21.29	- 9 54.2	1.694	2.699	3.2	20.7
8 29	21 11.42	-24 17.6	1.600	2.556	9.3	20.4	8 29	21 13.46	-10 35.2	1.717	2.692	7.0	20.9
9 8	21 4.58	-24 12.6	1.671	2.565	12.9	20.6	9 8	21 7.11	-11 13.3	1.766	2.686	10.8	21.2
9 18	21 0.34	-23 53.5	1.762	2.573	16.0	20.9	9 18	21 2.87	-11 45.0	1.837	2.679	14.2	21.4
139578	2001 <i>QP</i> ₉₄		8 11.9 310°95	0°8/12.5	18		428290	2007 <i>EH</i> ₁₃₀		8 11.9 48°31	2°1/10.8	16	
7 10	21 48.44	-10 59.4	1.872	2.748	13.1	19.8	7 10	21 55.01	-18 31.0	1.273	2.174	16.3	21.0
7 20	21 43.81	-11 20.9	1.796	2.741	9.7	19.6	7 20	21 48.84	-18 55.7	1.241	2.200	11.7	20.8
7 30	21 37.30	-11 53.4	1.743	2.734	5.8	19.4	7 30	21 40.18	-19 24.7	1.230	2.227	6.7	20.6
8 9	21 29.55	-12 33.3	1.715	2.727	1.7	19.1	8 9	21 30.22	-19 51.6	1.243	2.255	2.3	20.4
8 19	21 21.41	-13 16.2	1.715	2.721	2.9	19.1	8 19	21 20.28	-20 10.6	1.281	2.283	4.8	20.6
8 29	21 13.86	-13 57.2	1.741	2.714	7.1	19.4	8 29	21 11.75	-20 18.0	1.343	2.311	9.4	21.0
9 8	21 7.77	-14 32.2	1.791	2.708	10.9	19.6	9 8	21 5.61	-20 12.7	1.428	2.339	13.5	21.3
9 18	21 3.79	-14 58.4	1.865	2.702	14.2	19.8	9 18	21 2.37	-19 55.4	1.532	2.368	16.8	21.6
287287	2002 <i>TK</i> ₁₉₂		8 11.9 327°76	6°7/ 8.6	18		102180	1999 <i>RV</i> ₂₃₈		8 11.9 28°28	6°9/ 7.9	18	
7 10	21 56.81	-30 48.4	1.512	2.407	14.5	19.8	7 10	21 51.49	-25 39.3	1.089	2.008	17.0	18.4
7 20	21 50.56	-31 8.2	1.441	2.391	11.2	19.6	7 20	21 47.03	-27 1.5	1.051	2.016	12.6	18.2
7 30	21 41.47	-31 19.8	1.392	2.375	8.1	19.4	7 30	21 39.51	-28 22.0	1.033	2.025	8.5	18.0
8 9	21 30.55	-31 15.4	1.367	2.359	6.7	19.2	8 9	21 30.12	-29 28.6	1.037	2.035	6.9	17.9
8 19	21 19.15	-30 49.9	1.367	2.345	8.4	19.3	8 19	21 20.44	-30 11.9	1.063	2.046	9.3	18.1
8 29	21 8.84	-30 1.4	1.391	2.331	11.8	19.5	8 29	21 12.18	-30 26.9	1.110	2.058	13.3	18.4
9 8	21 0.90	-28 52.5	1.437	2.318	15.4	19.7	9 8	21 6.63	-30 14.5	1.177	2.070	17.2	18.6
9 18	20 56.09	-27 27.9	1.503	2.305	18.7	19.9	9 18	21 4.45	-29 38.8	1.261	2.083	20.5	18.9
325174	2008 <i>FC</i> ₅₆		8 11.9 32°81	4°4/14.9	17		231304	2006 <i>BK</i> ₁₆₈		8 11.9 211°92	4°3/ 8.5	18	
7 10	21 48.44	- 2 47.4	1.302	2.172	18.0	20.0	7 10	21 53.62	-25 7.8	2.047	2.933	11.7	20.6
7 20	21 44.28	- 2 57.6	1.246	2.179	14.0	19.8	7 20	21 47.58	-26 3.4	1.978	2.928	8.6	20.4
7 30	21 37.73	- 3 31.2	1.208	2.186	9.6	19.5	7 30	21 39.50	-26 58.5	1.934	2.922	5.7	20.2
8 9	21 29.69	- 4 25.4	1.193	2.195	5.5	19.3	8 9	21 30.11	-27 46.9	1.917	2.915	4.3	20.1
8 19	21 21.28	- 5 34.3	1.201	2.204	4.9	19.3	8 19	21 20.34	-28 22.9	1.927	2.909	6.0	20.2
8 29	21 13.79	- 6 49.7	1.234	2.213	8.6	19.6	8 29	21 11.24	-28 42.8	1.964	2.901	9.0	20.4
9 8	21 8.32	- 8 3.1	1.290	2.223	12.9	19.8	9 8	21 3.76	-28 45.6	2.025	2.893	12.1	20.6
9 18	21 5.53	- 9 7.8	1.366	2.233	16.7	20.1	9 18	20 58.54	-28 32.4	2.107	2.885	14.8	20.7
264035	2009 <i>QB</i> ₄₁		8 11.9 304°94	1°1/12.6	18		348094	2003 <i>WT</i> ₁₇₆		8 11.9 299°32	2°7/13.9	18	
7 10	21 50.59	-10 47.4	1.433	2.318	15.8	20.9	7 10	21 48.95	- 6 24.4	1.774	2.637	14.3	21.2
7 20	21 45.90	-11 3.4	1.360	2.309	11.8	20.6	7 20	21 44.30	- 6 30.2	1.695	2.629	10.9	20.9
7 30	21 38.76	-11 33.4	1.307	2.300	7.1	20.3	7 30	21 37.67	- 6 50.7	1.638	2.620	7.1	20.7
8 9	21 29.95	-12 13.3	1.279	2.291	2.2	20.0	8 9	21 29.71	- 7 23.8	1.605	2.611	3.5	20.4
8 19	21 20.58	-12 57.7	1.276	2.282	3.6	20.1	8 19	21 21.30	- 8 5.7	1.599	2.603	3.6	20.4
8 29	21 11.96	-13 40.2	1.297	2.273	8.6	20.3	8 29	21 13.47	- 8 51.5	1.619	2.595	7.3	20.6
9 8	21 5.28	-14 15.6	1.342	2.265	13.3	20.6	9 8	21 7.16	- 9 36.0	1.664	2.587	11.2	20.9
9 18	21 1.32	-14 40.3	1.407	2.257	17.3	20.8	9 18	21 3.05	-10 14.8	1.731	2.579	14.7	21.1
358948	2008 <i>JA</i> ₂₉		8 11.9 114°98	3°6/15.9	17		165015	2000 <i>CS</i> ₉₈		8 11.9 284°4			

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
96284	1995 <i>YY</i> ₉		8 11.9	8°91	2°0/13.3	18	210030	Taoyuan		8 11.9	70°89	5°2/ 8.6	18
7 10	21 49.76	- 8 36.3	1.682	2.553	14.5	19.7	7 10	21 53.71	-22 55.2	1.284	2.190	15.8	20.0
7 20	21 44.90	- 8 43.6	1.614	2.554	10.9	19.5	7 20	21 48.35	-24 15.0	1.238	2.199	11.6	19.8
7 30	21 38.00	- 9 4.1	1.568	2.554	6.8	19.2	7 30	21 40.22	-25 36.8	1.214	2.207	7.3	19.6
8 9	21 29.80	- 9 35.0	1.546	2.555	2.8	19.0	8 9	21 30.36	-26 50.2	1.213	2.216	5.2	19.5
8 19	21 21.25	-10 12.0	1.551	2.556	3.3	19.0	8 19	21 20.16	-27 46.0	1.237	2.225	7.6	19.6
8 29	21 13.40	-10 50.2	1.582	2.558	7.4	19.3	8 29	21 11.16	-28 18.5	1.285	2.234	11.7	19.9
9 8	21 7.21	-11 24.9	1.637	2.559	11.4	19.5	9 8	21 4.58	-28 26.8	1.353	2.243	15.6	20.2
9 18	21 3.32	-11 52.6	1.714	2.561	14.8	19.7	9 18	21 1.12	-28 13.3	1.440	2.252	18.9	20.4
218505	2004 <i>TD</i> ₉₉		8 11.9	227°51	0°5/12.4	18	30378	2000 <i>JW</i> ₆₇		8 11.9	140°18	1°7/10.6	18
7 10	21 50.83	-12 59.3	2.613	3.475	10.3	20.4	7 10	21 52.48	-16 20.3	1.853	2.735	12.9	19.3
7 20	21 45.08	-12 57.2	2.530	3.468	7.6	20.3	7 20	21 46.74	-17 18.8	1.794	2.745	9.3	19.1
7 30	21 37.88	-13 0.4	2.472	3.461	4.5	20.1	7 30	21 39.02	-18 24.3	1.759	2.754	5.3	18.9
8 9	21 29.76	-13 6.9	2.442	3.453	1.3	19.8	8 9	21 30.07	-19 30.6	1.751	2.762	1.8	18.6
8 19	21 21.37	-13 14.4	2.441	3.446	2.3	19.9	8 19	21 20.83	-20 31.5	1.771	2.771	4.0	18.8
8 29	21 13.44	-13 20.7	2.469	3.438	5.6	20.1	8 29	21 12.35	-21 21.7	1.817	2.778	7.9	19.1
9 8	21 6.62	-13 23.7	2.524	3.430	8.6	20.3	9 8	21 5.51	-21 58.1	1.889	2.785	11.5	19.3
9 18	21 1.42	-13 22.3	2.603	3.422	11.2	20.4	9 18	21 0.93	-22 19.7	1.983	2.792	14.5	19.5
352536	2008 <i>CT</i> ₁₇₈		8 11.9	52°45	1°3/12.7	18	150141	1995 <i>YE</i> ₇		8 11.9	294°82	1°7/13.0	18
7 10	21 53.11	-11 51.6	1.833	2.704	13.5	19.6	7 10	21 49.99	- 8 56.4	1.439	2.320	16.0	20.5
7 20	21 47.01	-11 34.8	1.777	2.719	10.0	19.4	7 20	21 45.58	- 9 15.2	1.358	2.304	12.1	20.2
7 30	21 39.05	-11 26.1	1.745	2.734	6.0	19.2	7 30	21 38.70	- 9 50.7	1.298	2.288	7.5	19.9
8 9	21 30.02	-11 23.2	1.739	2.749	2.1	18.9	8 9	21 30.06	-10 39.3	1.262	2.272	2.8	19.6
8 19	21 20.85	-11 23.4	1.759	2.765	3.0	19.0	8 19	21 20.74	-11 35.3	1.250	2.257	3.6	19.6
8 29	21 12.52	-11 24.1	1.808	2.781	6.9	19.3	8 29	21 12.06	-12 31.9	1.264	2.241	8.7	19.9
9 8	21 5.86	-11 22.8	1.881	2.797	10.5	19.6	9 8	21 5.24	-13 22.4	1.300	2.226	13.4	20.1
9 18	21 1.41	-11 17.8	1.977	2.813	13.6	19.8	9 18	21 1.15	-14 2.3	1.357	2.211	17.6	20.3
440545	2005 <i>UQ</i> ₂₂₂		8 11.9	211°00	2°4/14.1	18	323298	2003 <i>UT</i> ₁₂		8 11.9	234°28	0°6/11.6	18
7 10	21 48.13	- 5 52.2	2.370	3.218	11.7	21.7	7 10	21 55.85	-15 33.4	1.574	2.457	14.7	21.0
7 20	21 43.25	- 5 59.7	2.291	3.216	8.9	21.5	7 20	21 49.61	-15 42.3	1.501	2.450	10.8	20.7
7 30	21 36.87	- 6 18.7	2.236	3.213	5.9	21.3	7 30	21 40.89	-15 58.3	1.449	2.443	6.3	20.4
8 9	21 29.55	- 6 47.4	2.206	3.210	3.0	21.2	8 9	21 30.54	-16 17.0	1.423	2.436	1.4	20.1
8 19	21 21.94	- 7 22.8	2.205	3.208	3.0	21.2	8 19	21 19.68	-16 33.7	1.423	2.428	3.8	20.2
8 29	21 14.79	- 8 1.5	2.232	3.205	5.8	21.3	8 29	21 9.64	-16 44.1	1.449	2.419	8.6	20.5
9 8	21 8.78	- 8 39.8	2.285	3.201	8.9	21.5	9 8	21 1.57	-16 45.6	1.500	2.411	13.0	20.8
9 18	21 4.44	- 9 14.4	2.363	3.198	11.7	21.7	9 18	20 56.24	-16 37.5	1.571	2.402	16.7	21.0
170711	2004 <i>BD</i> ₄₀		8 11.9	277°66	0°7/12.5	18 R	91773	1999 <i>TL</i> ₂₀₃		8 11.9	75°35	3°6/ 9.1	18
7 10	21 50.20	-11 38.5	1.918	2.791	12.9	20.1	7 10	21 51.58	-24 49.1	2.171	3.058	11.1	19.4
7 20	21 45.12	-11 51.3	1.838	2.781	9.6	19.9	7 20	21 45.86	-25 24.2	2.114	3.065	8.1	19.2
7 30	21 38.13	-12 13.8	1.781	2.771	5.7	19.6	7 30	21 38.41	-25 57.9	2.082	3.071	5.2	19.1
8 9	21 29.87	-12 42.8	1.750	2.761	1.7	19.3	8 9	21 29.92	-26 25.2	2.076	3.077	3.6	19.0
8 19	21 21.18	-13 14.3	1.746	2.752	2.9	19.4	8 19	21 21.23	-26 42.2	2.097	3.083	5.2	19.1
8 29	21 13.06	-13 44.2	1.769	2.742	7.0	19.6	8 29	21 13.26	-26 46.3	2.146	3.090	8.0	19.3
9 8	21 6.41	-14 8.8	1.817	2.732	10.9	19.9	9 8	21 6.80	-26 37.0	2.219	3.096	10.9	19.5
9 18	21 1.87	-14 25.7	1.887	2.722	14.2	20.1	9 18	21 2.36	-26 15.2	2.314	3.102	13.4	19.7
20080	Maeharatorakichi		8 11.9	141°27	6°1/ 7.8	18	472891	2015 <i>FB</i> ₃₂₆		8 11.9	13°33	8°5/ 6.4	16
7 10	21 58.09	-28 49.1	1.705	2.593	13.5	18.3	7 10	21 48.88	-29 45.6	1.184	2.101	16.0	19.7
7 20	21 51.05	-29 51.5	1.656	2.603	10.2	18.1	7 20	21 45.11	-31 15.9	1.145	2.106	12.3	19.5
7 30	21 41.57	-30 48.9	1.631	2.612	7.3	18.0	7 30	21 38.43	-32 39.5	1.128	2.112	9.3	19.4
8 9	21 30.64	-31 33.0	1.631	2.620	6.1	17.9	8 9	21 29.97	-33 44.8	1.132	2.119	8.6	19.4
8 19	21 19.46	-31 57.9	1.657	2.628	7.8	18.1	8 19	21 21.19	-34 23.0	1.158	2.128	10.6	19.5
8 29	21 9.37	-32 0.6	1.708	2.635	10.9	18.2	8 29	21 13.71	-34 30.2	1.206	2.138	13.9	19.8
9 8	21 1.43	-31 42.3	1.783	2.642	13.9	18.5	9 8	21 8.75	-34 8.2	1.273	2.149	17.3	20.0
9 18	20 56.30	-31 6.2	1.877	2.648	16.6	18.7	9 18	21 6.97	-33 21.5	1.357	2.161	20.2	20.2
142367	2002 <i>RC</i> ₂₃₃		8 11.9	10°70	1°5/11.0	17	94264	2001 <i>CG</i> ₄₄		8 11.9	96°31	6°7/ 6.4	18
7 10	21 50.30	-15 23.0	1.263	2.166	16.3	20.0	7 10	21 55.26	-36 5.7	2.338	3.210	10.9	19.3
7 20	21 45.86	-16 7.6	1.207	2.167	11.8	19.7	7 20	21 48.53	-36 49.7	2.290	3.217	8.8	19.1
7 30	21 38.80	-17 3.2	1.170	2.168	6.8	19.4	7 30	21 39.94	-37 24.2	2.267	3.224	7.2	19.0
8 9	21 30.03	-18 2.7	1.157	2.170	1.9	19.1	8 9	21 30.27	-37 43.6	2.269	3.231	6.8	19.0
8 19	21 20.83	-18 57.9	1.168	2.172	4.7	19.3	8 19	21 20.48	-37 44.3	2.298	3.238	7.9	19.1
8 29	21 12.63	-19 41.8	1.203	2.175	9.8	19.6	8 29	21 11.55	-37 25.2	2.352	3.245	9.8	19.3
9 8	21 6.65	-20 10.0	1.260	2.178	14.4	19.9	9 8	21 4.33	-36 48.0	2.430	3.251	11.9	19.4
9 18	21 3.61	-20 21.3	1.336	2.182	18.3	20.2	9 18	20 59.33	-35 55.5	2.529	3.258	13.8	19.6
278278	2007 <i>GT</i> ₁₇		8 11.9	96°08	4°1/14.9	17	107175	2001 <i>BZ</i> ₂₃		8 11.9	159°89	0°7/12.5	18
7 10	21 51.01	- 2 45.7	1.728	2.575	15.3	20.5	7 10	21 53.48	-10 42.5	1.762	2.632	14.1	20.9
7 20	21 45.68	- 2 46.0	1.666	2.587	11.9	20.3	7 20	21 47.54	-11 11.8	1.696	2.638	10.4	20.7
7 30	21 38.40	- 3 4.0	1.626	2.598	8.2	20.1	7 30	21 39.53	-11 52.9	1.653	2.643	6.2	20.5
8 9	21 29.92	- 3 37.8	1.610	2.609	4.9	19.9	8 9	21 30.22	-12 41.3	1.636	2.648	1.8	20.2
8 19	21 21.16	- 4 23.6	1.620	2.620	4.5	19.9	8 19	21 20.56	-13 31.9	1.646	2.652	3.1	20.3
8 29	21 13.16	- 5 16.0	1.657	2.630	7.4	20.1	8 29	21 11.65	-14 19.2	1.683	2.655	7.4	20.6
9 8	21 6.80	- 6 9.2	1.719	2.641	10.9	20.4	9 8	21 4.44	-14 58.9	1.746	2.658	11.4	20.8
9 18	21 2.68	- 6 58.3	1.803	2.651	14.1	20.6	9 18	20 59.57	-15 28.4	1.830	2.660	14.8	21.1
67661	2000 <i>SL</i> ₂₆₁		8 11.9	185°53	1°0/11.2	18	473109	2015 <i>HM</i> ₁₇₃		8 11.9	119°89		

EPHEMERIDES

8 11.9

8 11.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
134754	2000 <i>CP</i> ₇		8 11.9 93°67	2°1/10.2	18		184857	2005 <i>UF</i> ₆₆		8 11.9 349°09	0°9/12.7	18	
7 10	21 50.38	-17 52.9	1.898	2.785	12.4	19.6	7 10	21 45.69	-11 17.0	2.354	3.225	10.9	19.5
7 20	21 45.17	-18 47.7	1.842	2.795	8.9	19.4	7 20	21 41.53	-11 22.8	2.276	3.218	8.1	19.3
7 30	21 38.09	-19 47.7	1.810	2.805	5.1	19.2	7 30	21 35.92	-11 36.4	2.223	3.212	4.9	19.1
8 9	21 29.88	-20 47.1	1.805	2.815	2.1	19.0	8 9	21 29.41	-11 55.4	2.196	3.207	1.6	18.8
8 19	21 21.41	-21 40.1	1.827	2.825	4.2	19.1	8 19	21 22.62	-12 17.1	2.196	3.202	2.4	18.9
8 29	21 13.67	-22 22.0	1.876	2.835	7.8	19.4	8 29	21 16.29	-12 38.4	2.224	3.198	5.8	19.1
9 8	21 7.52	-22 50.2	1.950	2.845	11.3	19.6	9 8	21 11.09	-12 56.5	2.278	3.194	8.9	19.3
9 18	21 3.50	-23 4.2	2.045	2.855	14.1	19.8	9 18	21 7.51	-13 9.3	2.355	3.191	11.7	19.5
94800	2001 <i>XR</i> ₁₅₅		8 11.9 118°99	1°2/12.9	17		432079	2008 <i>YS</i> ₁₂₇		8 11.9 50°68	1°3/12.6	17	
7 10	21 51.07	- 9 34.3	1.742	2.613	14.1	20.0	7 10	21 54.86	-11 49.5	1.141	2.035	18.3	20.6
7 20	21 45.78	- 9 59.0	1.678	2.619	10.5	19.8	7 20	21 49.18	-11 44.4	1.094	2.047	13.5	20.3
7 30	21 38.51	-10 36.4	1.637	2.625	6.4	19.6	7 30	21 40.70	-11 52.7	1.067	2.060	8.1	20.1
8 9	21 29.98	-11 22.4	1.620	2.631	2.2	19.3	8 9	21 30.53	-12 10.0	1.061	2.073	2.5	19.8
8 19	21 21.15	-12 12.2	1.631	2.637	3.1	19.4	8 19	21 20.12	-12 30.9	1.080	2.087	4.0	19.9
8 29	21 13.04	-13 0.4	1.669	2.643	7.3	19.7	8 29	21 11.01	-12 50.0	1.123	2.101	9.4	20.3
9 8	21 6.59	-13 42.1	1.731	2.648	11.2	19.9	9 8	21 4.43	-13 2.9	1.187	2.115	14.2	20.6
9 18	21 2.39	-14 14.6	1.815	2.653	14.5	20.1	9 18	21 1.02	-13 7.3	1.270	2.129	18.2	20.9
128739	2004 <i>RD</i> ₁₅₉		8 11.9 151°91	0°7/12.4	17		102061	1999 <i>RC</i> ₁₃₂		8 11.9 332°06	3°7/13.9	18	
7 10	21 55.52	-11 54.5	1.450	2.330	15.9	20.5	7 10	21 44.86	- 7 4.3	1.182	2.076	17.8	18.5
7 20	21 49.38	-12 7.1	1.388	2.335	11.8	20.3	7 20	21 42.31	- 6 48.8	1.096	2.046	13.8	18.1
7 30	21 40.74	-12 31.5	1.347	2.339	7.0	20.0	7 30	21 37.05	- 6 52.0	1.029	2.018	9.2	17.8
8 9	21 30.52	-13 3.2	1.331	2.343	1.9	19.7	8 9	21 29.79	- 7 13.1	0.983	1.990	4.7	17.5
8 19	21 19.90	-13 36.9	1.340	2.346	3.6	19.8	8 19	21 21.60	- 7 48.7	0.959	1.964	4.8	17.4
8 29	21 10.24	-14 7.2	1.375	2.349	8.5	20.1	8 29	21 13.99	- 8 32.7	0.956	1.940	9.7	17.6
9 8	21 2.68	-14 29.9	1.435	2.352	13.0	20.4	9 8	21 8.41	- 9 17.4	0.975	1.917	15.0	17.8
9 18	20 57.93	-14 42.9	1.514	2.354	16.8	20.7	9 18	21 5.89	- 9 56.0	1.011	1.896	19.8	18.0
44898	1999 <i>VA</i> ₁₅		8 11.9 162°62	4°8/16.5	18		6504	Lehmbruck		8 11.9 291°46	3°7/ 9.7	18	
7 10	21 49.16	+ 1 54.9	2.132	2.948	13.9	20.3	7 10	21 53.88	-21 55.6	1.494	2.392	14.5	17.8
7 20	21 44.13	+ 1 44.3	2.057	2.953	11.2	20.1	7 20	21 48.51	-22 33.3	1.417	2.374	10.7	17.5
7 30	21 37.46	+ 1 14.9	2.003	2.956	8.2	19.9	7 30	21 40.45	-23 14.1	1.362	2.356	6.6	17.2
8 9	21 29.74	+ 0 28.2	1.974	2.960	5.6	19.8	8 9	21 30.54	-23 50.9	1.331	2.338	3.7	17.0
8 19	21 21.71	- 0 32.8	1.972	2.963	4.9	19.8	8 19	21 19.94	-24 16.7	1.325	2.320	6.1	17.1
8 29	21 14.21	- 1 43.2	1.998	2.965	6.8	19.9	8 29	21 10.12	-24 26.5	1.344	2.302	10.4	17.3
9 8	21 7.99	- 2 57.1	2.050	2.967	9.7	20.1	9 8	21 2.37	-24 18.5	1.386	2.284	14.7	17.5
9 18	21 3.62	- 4 8.9	2.126	2.969	12.5	20.2	9 18	20 57.55	-23 53.7	1.446	2.267	18.5	17.7
239825	1998 <i>SO</i> ₁₃₃		8 11.9 356°07	6°2/ 9.7	17		432757	2011 <i>EG</i> ₈₄		8 11.9 184°23	2°2/10.3	17	
7 10	21 42.02	-24 46.8	0.658	1.609	20.2	18.7	7 10	21 54.50	-19 28.4	1.947	2.829	12.4	22.4
7 20	21 41.31	-25 0.7	0.615	1.597	15.1	18.4	7 20	21 48.22	-20 4.8	1.880	2.829	9.0	22.2
7 30	21 36.75	-25 11.6	0.587	1.589	9.7	18.1	7 30	21 39.93	-20 44.6	1.836	2.829	5.3	22.0
8 9	21 29.66	-25 9.1	0.575	1.583	6.3	17.9	8 9	21 30.37	-21 22.6	1.819	2.829	2.3	21.8
8 19	21 21.96	-24 45.1	0.580	1.581	9.0	18.0	8 19	21 20.46	-21 53.7	1.830	2.827	4.3	22.0
8 29	21 15.88	-23 56.3	0.602	1.581	14.5	18.3	8 29	21 11.27	-22 14.1	1.868	2.826	8.0	22.2
9 8	21 13.10	-22 45.0	0.639	1.585	19.8	18.6	9 8	21 3.74	-22 22.0	1.932	2.823	11.5	22.4
9 18	21 14.33	-21 16.4	0.691	1.592	24.4	18.9	9 18	20 58.48	-22 17.4	2.017	2.821	14.5	22.6
288778	2004 <i>RO</i> ₁₀₁		8 11.9 321°18	0°5/11.6	17		353040	2009 <i>CO</i> ₄₇		8 11.9 311°49	0°9/11.3	17	
7 10	21 49.73	-15 45.3	1.806	2.692	13.0	20.3	7 10	21 47.05	-13 11.3	1.565	2.457	14.3	20.5
7 20	21 44.99	-15 50.5	1.720	2.672	9.5	20.0	7 20	21 43.43	-14 11.2	1.475	2.430	10.5	20.2
7 30	21 38.17	-16 1.9	1.657	2.651	5.6	19.8	7 30	21 37.50	-15 26.4	1.407	2.403	6.1	19.9
8 9	21 29.95	-16 16.0	1.619	2.632	1.3	19.4	8 9	21 29.88	-16 51.0	1.364	2.377	1.5	19.5
8 19	21 21.20	-16 28.8	1.607	2.612	3.4	19.5	8 19	21 21.51	-18 17.1	1.347	2.351	4.1	19.7
8 29	21 13.02	-16 36.8	1.622	2.594	7.7	19.8	8 29	21 13.60	-19 36.2	1.355	2.325	9.0	19.9
9 8	21 6.38	-16 37.3	1.662	2.575	11.8	20.0	9 8	21 7.34	-20 41.5	1.386	2.300	13.6	20.1
9 18	21 2.02	-16 29.0	1.722	2.558	15.3	20.2	9 18	21 3.61	-21 29.1	1.438	2.275	17.6	20.3
198520	2004 <i>XZ</i> ₉₆		8 11.9 296°74	2°9/ 9.9	18		404648	2014 <i>HB</i> ₃₅		8 11.9 55°52	3°0/ 9.5	15	
7 10	21 50.83	-19 55.3	1.660	2.555	13.4	20.1	7 10	21 49.93	-20 46.8	1.847	2.740	12.4	21.0
7 20	21 45.97	-20 42.8	1.585	2.542	9.8	19.9	7 20	21 44.88	-21 43.2	1.800	2.755	8.9	20.8
7 30	21 38.82	-21 35.6	1.533	2.528	5.8	19.6	7 30	21 37.95	-22 42.0	1.776	2.770	5.3	20.6
8 9	21 30.11	-22 27.0	1.506	2.515	3.0	19.4	8 9	21 29.90	-23 37.0	1.779	2.786	3.0	20.5
8 19	21 20.88	-23 10.6	1.505	2.502	5.2	19.5	8 19	21 21.67	-24 22.5	1.808	2.801	5.0	20.6
8 29	21 12.32	-23 41.0	1.530	2.489	9.3	19.7	8 29	21 14.24	-24 54.4	1.864	2.817	8.3	20.9
9 8	21 5.53	-23 55.4	1.578	2.476	13.3	19.9	9 8	21 8.45	-25 11.1	1.944	2.833	11.6	21.1
9 18	21 1.27	-23 53.4	1.646	2.464	16.7	20.1	9 18	21 4.84	-25 12.8	2.044	2.849	14.3	21.3
343425	2010 <i>DL</i> ₂₀		8 11.9 100°09	5°8/ 8.4	16		144249	2004 <i>CV</i> ₈₂		8 11.9 285°15	1°2/11.3	18	
7 10	21 57.52	-29 43.7	1.792	2.678	13.1	20.3	7 10	21 53.09	-16 8.9	1.467	2.359	15.1	20.0
7 20	21 50.53	-30 18.6	1.739	2.684	9.9	20.1	7 20	21 47.88	-16 32.4	1.390	2.345	11.1	19.8
7 30	21 41.25	-30 47.1	1.710	2.690	7.0	19.9	7 30	21 40.07	-17 4.5	1.334	2.330	6.4	19.5
8 9	21 30.62	-31 2.7	1.705	2.696	5.8	19.9	8 9	21 30.47	-17 39.7	1.302	2.315	1.7	19.1
8 19	21 19.82	-31 0.7	1.728	2.702	7.3	20.0	8 19	21 20.22	-18 11.9	1.296	2.300	4.3	19.3
8 29	21 10.08	-30 39.5	1.776	2.707	10.2	20.2	8 29	21 10.70	-18 35.6	1.315	2.285	9.3	19.5
9 8	21 2.40	-30 0.6	1.847	2.713	13.2	20.4	9 8	21 3.18	-18 47.3	1.357	2.270	13.9	19.7
9 18	20 57.39	-29 7.3	1.939	2.718	15.9	20.6	9 18	20 58.50	-18 45.8	1.419	2.256	17.9	20.0
297226	4219 <i>P-L</i>		8 11.9 334°45	3°9/14.8	18		444664	2007 <i>CN</i> ₅₈		8 11.9 92°84</			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
264007	2009 OY ₁₇		8 11.9 203°63	1°3/12.8	18		342680	2008 VN ₄₁		8 11.9 292°13	8°6/6.5	18	
7 10	21 54.19	-10 36.9	1.787	2.654	14.0	21.1	7 10	21 58.60	-35 40.3	1.672	2.555	14.0	20.3
7 20	21 48.14	-10 41.6	1.712	2.651	10.4	20.8	7 20	21 51.87	-36 33.6	1.608	2.543	11.3	20.1
7 30	21 39.97	-10 56.9	1.660	2.648	6.4	20.6	7 30	21 42.34	-37 16.2	1.567	2.531	9.2	19.9
8 9	21 30.42	-11 19.8	1.633	2.644	2.2	20.3	8 9	21 31.01	-37 39.1	1.550	2.519	8.7	19.9
8 19	21 20.45	-11 46.4	1.634	2.639	3.1	20.4	8 19	21 19.23	-37 36.0	1.557	2.506	10.2	19.9
8 29	21 11.16	-12 12.4	1.661	2.634	7.4	20.6	8 29	21 8.53	-37 4.9	1.588	2.494	12.9	20.0
9 8	21 3.54	-12 34.2	1.715	2.629	11.4	20.9	9 8	21 0.20	-36 8.4	1.641	2.483	15.8	20.2
9 18	20 58.28	-12 49.3	1.790	2.623	14.9	21.1	9 18	20 54.98	-34 51.7	1.712	2.471	18.4	20.4
293060	2006 WD ₁₄₉		8 11.9 282°30	0°1/11.9	18		237777	2002 AH ₁₁₄		8 11.9 283°02	0°2/12.1	18	R
7 10	21 52.14	-13 25.1	1.505	2.392	15.1	21.4	7 10	21 51.73	-12 56.1	1.662	2.544	14.2	20.7
7 20	21 47.10	-13 46.5	1.428	2.379	11.1	21.1	7 20	21 46.65	-13 12.5	1.578	2.526	10.5	20.5
7 30	21 39.58	-14 18.8	1.372	2.366	6.6	20.9	7 30	21 39.28	-13 39.2	1.516	2.509	6.2	20.2
8 9	21 30.37	-14 57.7	1.340	2.353	1.5	20.5	8 9	21 30.32	-14 12.3	1.479	2.492	1.5	19.8
8 19	21 20.54	-15 37.3	1.334	2.339	3.7	20.6	8 19	21 20.75	-14 47.1	1.469	2.474	3.4	19.9
8 29	21 11.41	-16 11.8	1.353	2.326	8.7	20.9	8 29	21 11.77	-15 18.3	1.484	2.457	8.1	20.2
9 8	21 4.17	-16 36.9	1.396	2.313	13.3	21.1	9 8	21 4.48	-15 41.9	1.524	2.440	12.5	20.4
9 18	20 59.64	-16 50.1	1.459	2.300	17.2	21.3	9 18	20 59.68	-15 55.5	1.584	2.422	16.3	20.6
66644	1999 RL ₂₃₁		8 11.9 314°61	4°3/8.6	18		361041	2005 XM ₄₅		8 11.9 82°38	3°9/15.2	18	
7 10	21 48.32	-20 59.6	1.470	2.376	14.2	18.4	7 10	21 49.67	-2 31.9	2.268	3.101	12.6	20.7
7 20	21 44.51	-22 19.9	1.394	2.356	10.4	18.1	7 20	21 44.38	-2 14.9	2.201	3.111	9.9	20.5
7 30	21 38.18	-23 47.9	1.340	2.336	6.5	17.9	7 30	21 37.58	-2 11.0	2.157	3.122	7.0	20.4
8 9	21 30.06	-25 14.7	1.311	2.316	4.3	17.7	8 9	21 29.86	-2 19.4	2.139	3.132	4.5	20.2
8 19	21 21.22	-26 30.8	1.306	2.297	6.9	17.8	8 19	21 21.93	-2 38.1	2.148	3.143	4.1	20.2
8 29	21 13.02	-27 28.1	1.326	2.278	11.1	18.0	8 29	21 14.56	-3 4.0	2.185	3.153	6.3	20.4
9 8	21 6.74	-28 2.5	1.367	2.260	15.2	18.2	9 8	21 8.44	-3 33.3	2.248	3.163	9.0	20.6
9 18	21 3.24	-28 13.7	1.427	2.243	18.9	18.4	9 18	21 4.05	-4 2.6	2.334	3.174	11.7	20.8
245245	2004 XG ₁₆₃		8 11.9 190°45	2°9/14.9	18		5312	Schott		8 11.9 325°93	1°3/11.0	18	
7 10	21 49.84	-2 50.9	2.663	3.488	11.2	21.6	7 10	21 46.68	-15 59.3	1.727	2.621	13.1	17.5
7 20	21 44.39	-3 4.6	2.578	3.486	8.7	21.5	7 20	21 42.96	-16 34.9	1.637	2.594	9.6	17.3
7 30	21 37.56	-3 30.6	2.517	3.484	6.0	21.3	7 30	21 37.13	-17 19.4	1.571	2.567	5.6	17.0
8 9	21 29.84	-4 7.5	2.484	3.481	3.5	21.1	8 9	21 29.83	-18 8.0	1.529	2.541	1.6	16.7
8 19	21 21.83	-4 52.5	2.479	3.477	3.2	21.1	8 19	21 21.91	-18 55.0	1.513	2.516	3.9	16.8
8 29	21 14.21	-5 42.3	2.504	3.473	5.5	21.2	8 29	21 14.48	-19 34.7	1.522	2.491	8.4	17.0
9 8	21 7.63	-6 32.8	2.556	3.468	8.3	21.4	9 8	21 8.57	-20 2.9	1.555	2.468	12.5	17.2
9 18	21 2.58	-7 20.6	2.633	3.462	10.8	21.6	9 18	21 4.96	-20 17.3	1.609	2.445	16.2	17.3
211425	2002 XW ₁₇		8 11.9 280°85	0°7/12.6	18		120013	2003 AU ₁₇		8 11.9 239°77	5°2/8.3	18	
7 10	21 49.42	-11 11.9	1.957	2.829	12.7	20.7	7 10	21 54.49	-25 55.6	1.697	2.591	13.3	19.9
7 20	21 44.54	-11 31.5	1.880	2.823	9.4	20.4	7 20	21 48.66	-26 56.8	1.632	2.584	9.9	19.7
7 30	21 37.83	-12 1.3	1.827	2.817	5.7	20.2	7 30	21 40.41	-27 57.1	1.590	2.577	6.7	19.5
8 9	21 29.92	-12 37.8	1.799	2.811	1.7	19.9	8 9	21 30.57	-28 48.8	1.573	2.570	5.2	19.4
8 19	21 21.64	-13 17.1	1.799	2.805	2.8	20.0	8 19	21 20.26	-29 24.8	1.582	2.563	7.1	19.5
8 29	21 13.91	-13 54.4	1.826	2.799	6.8	20.3	8 29	21 10.78	-29 41.0	1.617	2.555	10.5	19.6
9 8	21 7.61	-14 26.1	1.878	2.793	10.6	20.5	9 8	21 3.25	-29 36.6	1.674	2.547	14.0	19.8
9 18	21 3.34	-14 49.6	1.952	2.787	13.8	20.7	9 18	20 58.40	-29 13.4	1.751	2.539	17.0	20.0
91858	1999 US ₁₆		8 11.9 256°58	5°2/16.9	18		164090	2003 WF ₁₃₂		8 11.9 273°42	0°1/12.1	18	
7 10	21 47.31	+ 3 11.0	2.465	3.269	12.6	19.4	7 10	21 50.33	-12 54.4	1.872	2.750	13.0	20.3
7 20	21 42.72	+ 3 21.0	2.374	3.258	10.3	19.2	7 20	21 45.32	-13 17.8	1.794	2.740	9.6	20.1
7 30	21 36.67	+ 3 14.9	2.305	3.247	7.9	19.0	7 30	21 38.36	-13 50.5	1.739	2.731	5.6	19.8
8 9	21 29.65	+ 2 52.9	2.261	3.236	5.9	18.9	8 9	21 30.09	-14 28.7	1.710	2.722	1.4	19.5
8 19	21 22.27	+ 2 16.3	2.244	3.225	5.3	18.8	8 19	21 21.38	-15 7.9	1.707	2.713	3.0	19.6
8 29	21 15.26	+ 1 28.4	2.254	3.214	6.7	18.9	8 29	21 13.26	-15 43.4	1.732	2.704	7.3	19.9
9 8	21 9.30	+ 0 33.7	2.290	3.202	9.0	19.0	9 8	21 6.64	-16 11.3	1.782	2.695	11.2	20.1
9 18	21 4.91	+ 0 23.4	2.350	3.191	11.5	19.2	9 18	21 2.19	-16 29.5	1.854	2.685	14.5	20.3
388991	2008 UV ₈₇		8 11.9 252°51	2°3/10.2	18		477089	2009 BR ₁₁₉		8 11.9 234°97	1°2/11.2	18	
7 10	21 53.13	-19 40.1	2.062	2.943	11.8	22.0	7 10	21 54.06	-17 48.9	2.186	3.061	11.5	21.5
7 20	21 47.35	-20 19.6	1.975	2.925	8.6	21.8	7 20	21 47.81	-18 0.5	2.104	3.050	8.4	21.3
7 30	21 39.54	-21 3.2	1.913	2.906	5.1	21.6	7 30	21 39.70	-18 15.4	2.046	3.039	4.9	21.1
8 9	21 30.35	-21 45.8	1.878	2.887	2.4	21.3	8 9	21 30.39	-18 30.3	2.016	3.027	1.4	20.8
8 19	21 20.64	-22 22.1	1.870	2.867	4.4	21.4	8 19	21 20.69	-18 41.4	2.014	3.016	3.3	20.9
8 29	21 11.42	-22 48.1	1.890	2.846	8.0	21.6	8 29	21 11.56	-18 46.0	2.040	3.003	7.0	21.2
9 8	21 3.68	-23 1.1	1.935	2.825	11.6	21.8	9 8	21 3.86	-18 42.4	2.092	2.991	10.5	21.3
9 18	20 58.10	-23 0.9	2.002	2.804	14.7	22.0	9 18	20 58.19	-18 30.2	2.168	2.977	13.4	21.5
159510	2000 XJ ₄₀		8 11.9 116°78	8°9/18.4	18		264943	2002 VD ₁₂₃		8 11.9 296°76	1°3/12.7	17	
7 10	21 56.34	+ 9 44.6	2.116	2.873	15.8	19.4	7 10	21 53.33	-11 44.6	1.456	2.339	15.7	20.3
7 20	21 49.34	+ 10 57.4	2.052	2.890	13.6	19.2	7 20	21 48.01	-11 36.4	1.379	2.327	11.8	20.0
7 30	21 40.51	+ 11 49.7	2.009	2.906	11.3	19.1	7 30	21 40.15	-11 38.9	1.323	2.314	7.2	19.8
8 9	21 30.55	+ 12 18.9	1.989	2.921	9.5	19.0	8 9	21 30.54	-11 49.4	1.291	2.302	2.3	19.4
8 19	21 20.29	+ 12 24.6	1.996	2.936	8.9	19.0	8 19	21 20.32	-12 4.0	1.283	2.290	3.6	19.5
8 29	21 10.69	+ 12 8.9	2.028	2.951	9.6	19.1	8 29	21 10.85	-12 18.2	1.302	2.278	8.6	19.8
9 8	21 2.59	+ 11 36.7	2.086	2.965	11.3	19.3	9 8	21 3.35	-12 28.0	1.343	2.266	13.3	20.0
9 18	20 56.57	+ 10 53.9	2.165	2.978	13.4	19.4	9 18	20 58.63	-12 31.1	1.405	2.255	17.3	20.2
144055	2004 BR ₃₄		8 11.9 219°05	0°6/11.6	18		219413	2000 SB ₂₇₂					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
510922	2013 <i>EU</i> ₂₄		8 11.9 11°71'	4.9°/ 8.8 18			510087	2010 <i>MS</i> ₈		8 11.9 146°17'	2.5°/14.1 18		
7 10	21 55.40	-28 49.4	1.992	2.877	12.0	20.1	7 10	21 49.94	- 6 15.0	2.387	3.233	11.7	21.0
7 20	21 48.86	-29 10.0	1.932	2.878	9.0	19.9	7 20	21 44.56	- 6 12.3	2.315	3.238	8.9	20.9
7 30	21 40.29	-29 25.3	1.896	2.879	6.2	19.8	7 30	21 37.71	- 6 20.3	2.266	3.242	5.9	20.7
8 9	21 30.52	-29 30.0	1.886	2.880	4.9	19.7	8 9	21 29.94	- 6 37.1	2.243	3.247	3.1	20.5
8 19	21 20.56	-29 20.3	1.903	2.882	6.3	19.8	8 19	21 21.93	- 7 0.5	2.249	3.251	3.0	20.5
8 29	21 11.48	-28 54.8	1.947	2.884	9.1	20.0	8 29	21 14.43	- 7 27.3	2.283	3.255	5.8	20.7
9 8	21 4.20	-28 14.3	2.015	2.886	12.1	20.1	9 8	21 8.11	- 7 54.3	2.344	3.259	8.8	20.9
9 18	20 59.28	-27 21.5	2.104	2.888	14.6	20.3	9 18	21 3.48	- 8 18.6	2.429	3.263	11.4	21.1
70810	1999 <i>VM</i> ₆₈		8 11.9 342°16'	11°1'/ 3.6 18			309722	2008 <i>GT</i> ₁₄₅		8 11.9 105°80'	7°1'/ 4.7 18		
7 10	21 48.99	-35 23.0	1.230	2.141	16.0	17.7	7 10	21 53.32	-36 42.8	2.394	3.268	10.7	20.6
7 20	21 45.62	-37 9.4	1.178	2.126	13.2	17.5	7 20	21 47.24	-38 1.0	2.357	3.282	8.7	20.5
7 30	21 39.06	-38 45.7	1.146	2.113	11.4	17.3	7 30	21 39.33	-39 9.7	2.346	3.296	7.4	20.5
8 9	21 30.32	-39 58.5	1.135	2.101	11.5	17.3	8 9	21 30.31	-40 2.6	2.360	3.310	7.3	20.5
8 19	21 20.92	-40 37.6	1.145	2.090	13.5	17.4	8 19	21 21.09	-40 35.3	2.400	3.323	8.4	20.6
8 29	21 12.66	-40 38.4	1.175	2.080	16.5	17.5	8 29	21 12.65	-40 46.1	2.465	3.337	10.2	20.7
9 8	21 7.07	-40 2.9	1.222	2.072	19.6	17.7	9 8	21 5.82	-40 36.2	2.552	3.350	12.1	20.9
9 18	21 5.00	-38 56.9	1.285	2.065	22.4	17.9	9 18	21 1.13	-40 8.2	2.659	3.362	13.8	21.0
256847	2008 <i>CL</i> ₁₇₅		8 11.9 160°57'	3°4'/ 9.9 17			498493	2008 <i>CK</i> ₁₇₉		8 11.9 147°34'	1°4'/10.8 17		
7 10	21 56.13	-21 39.4	1.601	2.492	14.1	20.8	7 10	21 53.03	-14 57.7	1.956	2.832	12.6	21.5
7 20	21 49.78	-22 19.8	1.541	2.495	10.3	20.6	7 20	21 47.13	-16 8.8	1.896	2.843	9.1	21.3
7 30	21 41.00	-23 2.1	1.504	2.498	6.2	20.4	7 30	21 39.32	-17 28.2	1.860	2.854	5.2	21.1
8 9	21 30.72	-23 39.6	1.493	2.500	3.4	20.2	8 9	21 30.33	-18 49.4	1.852	2.864	1.6	20.8
8 19	21 20.08	-24 6.2	1.508	2.502	5.6	20.3	8 19	21 21.02	-20 6.0	1.872	2.873	3.8	21.0
8 29	21 10.41	-24 17.8	1.549	2.504	9.5	20.6	8 29	21 12.41	-21 12.0	1.921	2.881	7.6	21.3
9 8	21 2.79	-24 13.5	1.613	2.506	13.3	20.8	9 8	21 5.36	-22 3.9	1.995	2.889	11.1	21.5
9 18	20 57.91	-23 54.3	1.698	2.507	16.6	21.0	9 18	21 0.47	-22 40.1	2.091	2.895	14.1	21.7
38154	1999 <i>JU</i> ₆₈		8 11.9 283°55'	4°2'/ 9.3 18			349190	2007 <i>RC</i> ₁₆₇		8 11.9 331°34'	2°5'/10.4 18		
7 10	21 53.19	-21 17.1	1.347	2.250	15.4	18.7	7 10	21 50.74	-19 22.9	1.526	2.424	14.2	20.6
7 20	21 48.16	-22 21.0	1.282	2.242	11.3	18.4	7 20	21 46.03	-19 54.1	1.457	2.415	10.4	20.4
7 30	21 40.33	-23 30.2	1.239	2.234	6.9	18.1	7 30	21 38.93	-20 30.3	1.410	2.406	6.1	20.1
8 9	21 30.60	-24 35.6	1.220	2.226	4.2	17.9	8 9	21 30.27	-21 5.3	1.387	2.398	2.6	19.9
8 19	21 20.27	-25 28.4	1.225	2.219	6.8	18.1	8 19	21 21.13	-21 33.2	1.390	2.390	4.9	20.0
8 29	21 10.86	-26 1.8	1.255	2.211	11.2	18.3	8 29	21 12.78	-21 49.1	1.418	2.382	9.3	20.3
9 8	21 3.71	-26 13.4	1.306	2.203	15.5	18.5	9 8	21 6.35	-21 50.8	1.468	2.376	13.4	20.5
9 18	20 59.64	-26 4.2	1.375	2.196	19.2	18.8	9 18	21 2.56	-21 38.2	1.539	2.370	17.0	20.7
447205	2005 <i>TU</i> ₇		8 11.9 344°99'	5°0'/16.4 17			344957	2004 <i>VX</i> ₉₉		8 11.9 15°96'	1°9'/10.8 16		
7 10	21 45.75	+ 0 56.7	1.835	2.671	15.0	21.3	7 10	21 50.37	-17 17.7	1.372	2.274	15.3	21.0
7 20	21 41.97	+ 0 48.9	1.758	2.666	12.1	21.1	7 20	21 45.79	-17 54.4	1.317	2.277	11.1	20.8
7 30	21 36.40	+ 0 20.4	1.701	2.662	8.8	20.9	7 30	21 38.77	-18 38.5	1.283	2.280	6.4	20.5
8 9	21 29.65	- 0 27.6	1.667	2.657	5.9	20.7	8 9	21 30.22	-19 23.4	1.273	2.285	2.2	20.3
8 19	21 22.50	- 1 31.7	1.660	2.654	5.2	20.6	8 19	21 21.31	-20 2.4	1.287	2.290	4.7	20.5
8 29	21 15.89	- 2 46.2	1.678	2.651	7.4	20.8	8 29	21 13.37	-20 30.0	1.326	2.295	9.4	20.7
9 8	21 10.66	- 4 4.3	1.721	2.648	10.6	21.0	9 8	21 7.51	-20 43.1	1.387	2.301	13.6	21.0
9 18	21 7.43	- 5 19.6	1.787	2.646	13.8	21.2	9 18	21 4.39	-20 41.4	1.468	2.308	17.2	21.3
430683	2003 <i>WC</i> ₉₃		8 11.9 346°27'	9°3'/ 7.0 17			245520	2005 <i>SM</i> ₁₀₇		8 11.9 34°20'	0°9'/12.5 18		
7 10	21 44.91	-28 33.1	0.851	1.788	18.4	19.0	7 10	21 53.40	-13 11.4	1.747	2.623	13.8	19.4
7 20	21 43.22	-29 46.4	0.798	1.771	14.2	18.7	7 20	21 47.44	-12 51.3	1.687	2.632	10.2	19.2
7 30	21 37.91	-30 56.1	0.763	1.756	10.5	18.4	7 30	21 39.49	-12 38.3	1.651	2.642	6.1	19.0
8 9	21 30.09	-31 48.2	0.746	1.743	9.4	18.3	8 9	21 30.36	-12 30.0	1.640	2.651	1.8	18.7
8 19	21 21.49	-32 10.4	0.748	1.732	11.9	18.4	8 19	21 21.02	-12 24.0	1.655	2.661	3.0	18.8
8 29	21 14.23	-31 56.3	0.768	1.724	16.3	18.6	8 29	21 12.54	-12 17.6	1.698	2.672	7.2	19.1
9 8	21 10.07	-31 7.2	0.805	1.718	20.8	18.8	9 8	21 5.80	-12 8.7	1.766	2.683	11.0	19.4
9 18	21 9.85	-29 48.9	0.855	1.715	24.8	19.1	9 18	21 1.37	-11 55.9	1.855	2.694	14.2	19.6
94660	2001 <i>WY</i> ₉₁		8 11.9 325°59'	1°4'/11.3 17			441960	2010 <i>LV</i> ₁₁₇		8 11.9 347°61'	2°9'/14.5 18		
7 10	21 49.88	-15 54.3	1.056	1.969	17.8	19.2	7 10	21 45.73	- 4 7.1	1.771	2.631	14.4	21.2
7 20	21 46.25	-16 18.7	0.988	1.953	13.2	18.9	7 20	21 42.02	- 4 36.7	1.696	2.626	11.1	20.9
7 30	21 39.47	-16 55.2	0.939	1.938	7.7	18.5	7 30	21 36.46	- 5 24.6	1.643	2.622	7.4	20.7
8 9	21 30.45	-17 37.0	0.910	1.923	2.0	18.2	8 9	21 29.68	- 6 27.7	1.614	2.619	3.8	20.5
8 19	21 20.59	-18 15.9	0.904	1.909	5.1	18.3	8 19	21 22.51	- 7 41.3	1.611	2.615	3.6	20.5
8 29	21 11.69	-18 44.3	0.920	1.897	11.1	18.6	8 29	21 15.90	- 8 58.6	1.635	2.613	7.0	20.7
9 8	21 5.32	-18 57.1	0.955	1.885	16.6	18.9	9 8	21 10.73	-10 13.0	1.684	2.611	10.8	20.9
9 18	21 2.45	-18 53.0	1.008	1.874	21.3	19.1	9 18	21 7.63	-11 19.2	1.755	2.609	14.2	21.1
5212	<i>Celiacruz</i>		8 11.9 228°27'	5°2'/16.8 18			238626	2005 <i>CC</i> ₂₁		8 11.9 116°53'	0°9'/11.1 18		
7 10	21 47.79	+ 2 53.4	2.405	3.211	12.8	17.4	7 10	21 50.83	-14 24.2	2.299	3.170	11.1	20.8
7 20	21 43.08	+ 3 3.3	2.320	3.206	10.5	17.2	7 20	21 45.22	-15 24.5	2.245	3.190	8.0	20.6
7 30	21 36.90	+ 2 56.9	2.257	3.201	8.0	17.1	7 30	21 38.08	-16 31.3	2.217	3.210	4.6	20.5
8 9	21 29.75	+ 2 34.4	2.219	3.196	5.8	16.9	8 9	21 30.03	-17 39.9	2.216	3.228	1.2	20.2
8 19	21 22.28	+ 1 57.7	2.208	3.191	5.2	16.9	8 19	21 21.79	-18 45.1	2.245	3.247	3.0	20.4
8 29	21 15.21	+ 1 9.8	2.224	3.185	6.7	17.0	8 29	21 14.16	-19 42.4	2.302	3.264	6.4	20.7
9 8	21 9.24	+ 0 15.5	2.266	3.180	9.1	17.1	9 8	21 7.85	-20 28.8	2.386	3.281	9.5	20.9
9 18	21 4.90	- 0 40.6	2.333	3.174	11.6	17.3	9 18	21 3.33	-21 2.9	2.493	3.298	12.1	21.1
316974	2001 <i>FP</i> ₁₄₇		8 11.9 35°03'	15°8'/28.9 17			83318	2001 <i>RG</i> ₁₂₂		8 11.9 333°25'	1°5'/10.9 18		
7 10	21 45.82	+22 16.7	1.131	1.886	27.0	19.3	7 10	21 50.04	-17 15.3	1.828	2.716	12.7	18.8
7 20	21 42.69	+23 3.3	1.094	1.908	24.3	19.1	7 20	21 45.13	-17 47.9	1.759	2.712	9.2	18.6
7 30	21 37.01	+23 0.8	1.068	1.932	21.4	19.0	7 30	21 38.25	-18 26.4	1.714	2.709	5.3	18.4
8 9	21 29.79	+22 5.6	1.056	1.957	18.6	18.9	8 9	21 30.10	-19 5.8	1.694	2.706	1.7	18.1
8 19	21 22.32	+20 19.5	1.061	1.983	16.6	18.9	8 19	21 21.59	-19 41.1	1.701	2.703	3.9	18.3
8 29	21 15.99	+17 52.2	1.085	2.010	15.8	19.0	8 29	21 13.76	-20 7.8	1.734	2.700	7.9	18.5
9 8	21 11.91	+14 59.4	1.129	2.037	16.5	19.1	9 8	21 7.51	-20 23.3	1.792	2.697	11.6	18.7
9 18	21 10.67												