

EPHEMERIDES

8 18.9

8 19.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
185833	2000 <i>AL</i> ₂₂₁		8 18.9 342°73	0°7/18.6	18		24052	Nguyen		8 18.9 99°59	1°8/20.3	18	
7 10	22 12.18	-13 16.1	1.020	1.899	21.1	19.6	7 10	22 20.03	-6 8.1	1.521	2.338	18.5	19.0
7 20	22 11.93	-13 10.8	0.946	1.882	17.0	19.3	7 20	22 16.77	-6 15.3	1.446	2.342	15.0	18.8
7 30	22 8.33	-13 20.1	0.888	1.867	11.9	18.9	7 30	22 10.86	-6 40.5	1.389	2.346	10.8	18.5
8 9	22 1.90	-13 40.4	0.849	1.854	6.1	18.6	8 9	22 2.88	-7 21.2	1.355	2.351	6.1	18.3
8 19	21 53.68	-14 5.5	0.830	1.842	0.7	18.1	8 19	21 53.70	-8 12.8	1.345	2.355	2.0	18.0
8 29	21 45.26	-14 27.9	0.833	1.832	6.7	18.5	8 29	21 44.52	-9 8.9	1.361	2.359	4.8	18.2
9 8	21 38.39	-14 40.4	0.856	1.824	12.7	18.8	9 8	21 36.55	-10 2.2	1.402	2.363	9.5	18.5
9 18	21 34.37	-14 39.0	0.897	1.818	18.1	19.1	9 18	21 30.74	-10 47.4	1.466	2.367	13.7	18.8
279536	2011 <i>CV</i>		8 18.9 265°54	3°6/16.6	18 R		316447	2010 <i>UM</i> ₅₈		8 18.9 214°56	7°0/10.9	18	
7 10	22 22.98	-19 27.8	1.629	2.470	16.4	20.4	7 10	22 20.14	-33 13.3	2.445	3.276	11.9	20.6
7 20	22 19.21	-20 1.4	1.546	2.461	13.0	20.2	7 20	22 16.16	-34 32.0	2.377	3.274	9.8	20.5
7 30	22 12.65	-20 42.1	1.483	2.452	9.1	19.9	7 30	22 10.07	-35 47.7	2.332	3.271	8.0	20.4
8 9	22 3.84	-21 23.7	1.443	2.442	5.2	19.7	8 9	22 2.35	-36 53.5	2.313	3.268	7.1	20.3
8 19	21 53.68	-21 59.2	1.428	2.432	3.8	19.6	8 19	21 53.71	-37 43.3	2.320	3.265	7.5	20.3
8 29	21 43.43	-22 22.1	1.439	2.423	7.1	19.7	8 29	21 45.06	-38 12.6	2.352	3.262	9.1	20.4
9 8	21 34.40	-22 28.6	1.476	2.413	11.3	20.0	9 8	21 37.34	-38 19.9	2.409	3.259	11.1	20.6
9 18	21 27.61	-22 17.7	1.534	2.403	15.1	20.2	9 18	21 31.28	-38 6.1	2.487	3.256	13.1	20.7
73147	2002 <i>GS</i> ₉₈		8 18.9 41°87	6°0/24.2	18		313268	2001 <i>XR</i> ₂₃₆		8 18.9 303°73	5°3/15.5	17	
7 10	22 15.12	+ 4 38.5	1.554	2.331	19.8	19.7	7 10	22 18.36	-19 28.4	1.224	2.093	19.0	20.5
7 20	22 12.73	+ 4 47.4	1.485	2.343	16.8	19.5	7 20	22 16.64	-20 29.1	1.141	2.072	15.2	20.2
7 30	22 7.95	+ 4 30.6	1.432	2.356	13.2	19.3	7 30	22 11.57	-21 42.9	1.076	2.052	10.8	19.9
8 9	22 1.32	+ 3 47.7	1.400	2.368	9.5	19.1	8 9	22 3.60	-23 1.0	1.032	2.033	6.6	19.6
8 19	21 53.68	+ 2 41.4	1.391	2.382	6.5	19.0	8 19	21 53.70	-24 12.4	1.011	2.013	5.7	19.5
8 29	21 46.09	+ 1 17.8	1.406	2.395	6.4	19.0	8 29	21 43.45	-25 5.7	1.013	1.994	9.6	19.7
9 8	21 39.63	- 0 14.3	1.447	2.409	9.2	19.2	9 8	21 34.59	-25 33.5	1.036	1.976	14.6	19.9
9 18	21 35.10	- 1 45.9	1.511	2.424	12.6	19.5	9 18	21 28.53	-25 33.8	1.078	1.958	19.3	20.1
80553	2000 <i>AN</i> ₉₀		8 18.9 130°63	0°3/19.2	18		49836	1999 <i>XD</i> ₈₅		8 18.9 211°97	0°9/18.3	18	
7 10	22 20.90	- 9 0.6	1.763	2.576	16.4	20.3	7 10	22 20.59	-11 50.3	1.802	2.624	15.8	19.6
7 20	22 17.04	- 9 29.2	1.688	2.586	13.1	20.1	7 20	22 16.94	-12 27.3	1.716	2.619	12.6	19.4
7 30	22 10.80	-10 12.3	1.634	2.595	9.2	19.8	7 30	22 10.87	-13 17.5	1.650	2.614	8.7	19.2
8 9	22 2.75	-11 6.2	1.603	2.603	4.8	19.6	8 9	22 2.87	-14 16.5	1.608	2.609	4.4	18.9
8 19	21 53.68	-12 5.4	1.599	2.611	0.3	19.3	8 19	21 53.71	-15 18.5	1.592	2.604	1.0	18.6
8 29	21 44.66	-13 3.5	1.622	2.619	4.5	19.6	8 29	21 44.44	-16 16.6	1.604	2.597	5.1	18.9
9 8	21 36.74	-13 54.7	1.672	2.626	8.8	19.9	9 8	21 36.17	-17 5.0	1.642	2.591	9.4	19.2
9 18	21 30.73	-14 34.9	1.746	2.633	12.6	20.2	9 18	21 29.79	-17 40.0	1.704	2.584	13.3	19.4
94201	2001 <i>BE</i> ₁₈		8 18.9 257°51	1°8/20.9	18		447364	2006 <i>AG</i> ₂₀		8 18.9 307°14	7°2/10.3	18	
7 10	22 14.32	- 3 34.7	2.403	3.188	13.4	19.8	7 10	22 16.39	-29 23.2	2.166	3.011	12.7	20.0
7 20	22 11.32	- 4 3.9	2.304	3.180	10.9	19.6	7 20	22 13.55	-31 16.0	2.093	3.003	10.4	19.9
7 30	22 6.61	- 4 47.9	2.227	3.172	8.0	19.4	7 30	22 8.49	-33 10.2	2.044	2.995	8.3	19.7
8 9	22 0.55	- 5 45.1	2.174	3.164	4.7	19.2	8 9	22 1.65	-34 57.5	2.021	2.987	7.2	19.6
8 19	21 53.69	- 6 52.0	2.148	3.157	1.9	19.0	8 19	21 53.71	-36 29.3	2.025	2.979	7.8	19.7
8 29	21 46.72	- 8 3.8	2.151	3.149	3.5	19.1	8 29	21 45.62	-37 38.9	2.054	2.972	9.8	19.8
9 8	21 40.39	- 9 15.2	2.182	3.141	6.8	19.3	9 8	21 38.40	-38 23.1	2.108	2.965	12.2	19.9
9 18	21 35.33	-10 21.3	2.240	3.132	10.0	19.5	9 18	21 32.90	-38 41.6	2.181	2.957	14.4	20.1
280102	2002 <i>FG</i> ₁₇		8 18.9 213°10	2°4/16.5	18		117808	2005 <i>GM</i> ₁₇₈		8 18.9 139°20	0°1/18.9	18	
7 10	22 18.96	-15 0.8	2.167	2.989	13.5	20.8	7 10	22 17.44	- 9 28.6	2.163	2.971	14.0	20.2
7 20	22 15.28	-16 11.0	2.077	2.982	10.6	20.6	7 20	22 13.90	-10 6.4	2.082	2.977	11.1	20.1
7 30	22 9.53	-17 32.3	2.009	2.975	7.3	20.4	7 30	22 8.43	-10 56.6	2.022	2.983	7.7	19.9
8 9	22 2.12	-18 59.0	1.967	2.967	3.9	20.2	8 9	22 1.49	-11 55.5	1.988	2.988	3.9	19.6
8 19	21 53.69	-20 24.7	1.953	2.959	2.6	20.1	8 19	21 53.72	-12 58.4	1.981	2.993	0.1	19.3
8 29	21 45.12	-21 42.3	1.968	2.950	5.6	20.3	8 29	21 45.95	-13 59.9	2.002	2.998	4.0	19.7
9 8	21 37.33	-22 46.4	2.010	2.941	9.1	20.5	9 8	21 39.00	-14 54.8	2.051	3.002	7.7	19.9
9 18	21 31.11	-23 33.8	2.077	2.931	12.3	20.7	9 18	21 33.56	-15 39.6	2.125	3.007	11.0	20.1
219256	2000 <i>AM</i> ₄		8 18.9 207°72	1°1/17.8	18		144211	2004 <i>CM</i> ₁₂		8 18.9 196°11	0°5/19.4	18	
7 10	22 15.36	-13 8.2	2.487	3.303	12.1	20.2	7 10	22 21.30	- 8 50.2	1.876	2.683	15.8	21.0
7 20	22 12.05	-13 48.9	2.400	3.302	9.6	20.0	7 20	22 17.35	- 9 10.4	1.788	2.682	12.7	20.8
7 30	22 7.04	-14 38.5	2.336	3.301	6.5	19.8	7 30	22 11.06	- 9 44.4	1.721	2.679	9.0	20.5
8 9	22 0.74	-15 33.2	2.298	3.300	3.3	19.6	8 9	22 2.94	-10 29.2	1.678	2.676	4.7	20.3
8 19	21 53.69	-16 28.8	2.288	3.298	1.1	19.5	8 19	21 53.72	-11 20.2	1.661	2.673	0.5	19.9
8 29	21 46.61	-17 20.6	2.306	3.297	4.0	19.7	8 29	21 44.42	-12 11.7	1.672	2.669	4.4	20.2
9 8	21 40.21	-18 4.7	2.352	3.296	7.3	19.9	9 8	21 36.08	-12 58.1	1.710	2.664	8.7	20.5
9 18	21 35.10	-18 38.3	2.424	3.294	10.2	20.1	9 18	21 29.56	-13 35.4	1.772	2.659	12.5	20.7
65427	2002 <i>TU</i> ₁₆₈		8 18.9 45°53	1°6/20.2	17		273872	2007 <i>GK</i> ₇₅		8 18.9 355°88	13°3/ 9.8	18	
7 10	22 17.59	- 5 53.6	1.282	2.116	20.3	19.5	7 10	22 19.44	-37 38.2	1.202	2.074	19.1	19.3
7 20	22 15.14	- 6 12.4	1.222	2.129	16.4	19.3	7 20	22 17.86	-39 17.6	1.153	2.068	16.5	19.1
7 30	22 9.85	- 6 52.6	1.180	2.142	11.7	19.0	7 30	22 12.43	-40 47.2	1.121	2.063	14.3	18.9
8 9	22 2.36	- 7 50.7	1.158	2.156	6.5	18.8	8 9	22 3.92	-41 53.1	1.109	2.060	13.3	18.9
8 19	21 53.69	- 9 0.0	1.160	2.170	1.8	18.5	8 19	21 53.74	-42 23.4	1.117	2.058	14.1	18.9
8 29	21 45.18	-10 12.0	1.186	2.185	5.1	18.8	8 29	21 43.82	-42 11.6	1.144	2.058	16.1	19.0
9 8	21 38.10	-11 17.9	1.236	2.200	10.1	19.1	9 8	21 35.99	-41 19.2	1.189	2.059	18.7	19.2
9 18	21 33.39	-12 11.6	1.308	2.216	14.5	19.4	9 18	21 31.41	-39 52.5	1.251	2.061	21.3	19.4
348144	2004 <i>CG</i> ₈₄		8 18.9 234°70	1°3/17.6	18		430984	2005 <i>WY</i> ₁₅₂		8 19.0 310°89			

EPHEMERIDES

8 19.0

8 19.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
519272	2011 <i>AF</i> ₈₃		8 19.0 217°39	0°5/18.6	17		319138	2005 <i>YR</i> ₁₄		8 19.0 231°54	0°8/19.8	18	
7 20	22 16.99	-11 33.1	1.771	2.672	12.4	22.6	7 20	22 13.42	-8 37.5	2.509	3.394	9.8	21.6
7 30	22 10.88	-12 17.4	1.703	2.666	8.7	22.4	7 30	22 7.97	-8 55.3	2.434	3.387	7.0	21.4
8 9	22 2.89	-13 10.9	1.659	2.660	4.4	22.1	8 9	22 1.26	-9 20.9	2.384	3.380	3.8	21.2
8 19	21 53.77	-14 8.3	1.641	2.653	0.5	21.8	8 19	21 53.79	-9 51.4	2.362	3.373	0.9	20.9
8 29	21 44.52	-15 3.4	1.651	2.645	4.8	22.1	8 29	21 46.25	-10 23.6	2.369	3.366	3.3	21.1
9 8	21 36.23	-15 50.4	1.687	2.638	9.1	22.4	9 8	21 39.35	-10 54.0	2.404	3.359	6.5	21.3
9 18	21 29.77	-16 25.6	1.748	2.630	12.9	22.6	9 18	21 33.68	-11 19.7	2.466	3.351	9.5	21.5
9 28	21 25.76	-16 46.9	1.829	2.621	16.1	22.8	9 28	21 29.71	-11 38.5	2.550	3.343	12.0	21.7
428544	2008 <i>CM</i> ₂₄		8 19.0 211°69	0°9/18.4	17		62541	2000 <i>SY</i> ₂₅₉		8 19.0 105°96	6°8/25.4	18	
7 20	22 20.99	-14 11.8	1.870	2.768	12.0	22.0	7 20	22 14.54	+8 14.0	1.816	2.641	15.6	18.7
7 30	22 13.59	-14 32.0	1.799	2.761	8.4	21.8	7 30	22 9.04	+8 12.5	1.754	2.651	12.7	18.5
8 9	22 4.26	-14 57.0	1.753	2.753	4.3	21.5	8 9	22 1.88	+7 46.7	1.713	2.661	9.7	18.3
8 19	21 53.77	-15 22.6	1.734	2.745	1.0	21.2	8 19	21 53.79	+6 57.7	1.696	2.671	7.4	18.2
8 29	21 43.19	-15 44.0	1.743	2.736	4.8	21.5	8 29	21 45.69	+5 49.3	1.705	2.680	7.0	18.2
9 8	21 33.61	-15 57.5	1.780	2.726	9.0	21.7	9 8	21 38.53	+4 28.1	1.739	2.690	8.8	18.3
9 18	21 25.92	-16 1.1	1.841	2.716	12.7	21.9	9 18	21 33.07	+3 2.0	1.798	2.699	11.6	18.5
9 28	21 20.75	-15 53.9	1.924	2.705	15.8	22.1	9 28	21 29.85	+1 38.3	1.880	2.708	14.4	18.7
452233	2015 <i>SH</i> ₅		8 19.0 266°60	3°0/16.6	17		31905	Likinpong		8 19.0 35°27	3°6/21.7	18	
7 20	22 19.22	-22 39.7	2.484	3.383	9.4	21.1	7 20	22 13.96	-1 52.5	1.344	2.234	16.3	18.7
7 30	22 12.04	-22 50.6	2.407	3.367	6.6	20.9	7 30	22 9.01	-2 16.7	1.291	2.241	12.1	18.4
8 9	22 3.35	-22 58.6	2.356	3.351	4.0	20.8	8 9	22 1.99	-3 2.3	1.259	2.248	7.6	18.2
8 19	21 53.77	-23 0.2	2.334	3.334	3.1	20.7	8 19	21 53.79	-4 5.3	1.250	2.255	3.9	18.0
8 29	21 44.15	-22 52.3	2.341	3.318	5.2	20.8	8 29	21 45.62	-5 18.5	1.266	2.263	5.3	18.1
9 8	21 35.32	-22 33.4	2.376	3.301	8.2	20.9	9 8	21 38.67	-6 33.1	1.306	2.272	9.5	18.4
9 18	21 27.98	-22 3.4	2.437	3.284	11.0	21.1	9 18	21 33.87	-7 41.5	1.369	2.281	13.7	18.7
9 28	21 22.67	-21 23.2	2.520	3.267	13.4	21.3	9 28	21 31.82	-8 37.8	1.452	2.290	17.3	18.9
448680	2010 <i>WV</i>		8 19.0 238°89	4°4/23.4	18		392880	2012 <i>UO</i> ₁₆₅		8 19.0 178°22	3°8/15.9	18	
7 20	22 12.66	+2 44.8	2.331	3.174	12.0	21.3	7 20	22 19.59	-23 27.6	2.103	3.008	10.5	21.3
7 30	22 7.51	+2 47.1	2.256	3.172	9.4	21.1	7 30	22 12.41	-24 0.3	2.047	3.009	7.5	21.1
8 9	22 1.04	+2 34.0	2.204	3.169	6.7	20.9	8 9	22 3.55	-24 29.8	2.017	3.010	4.7	20.9
8 19	21 53.77	+2 6.4	2.178	3.167	4.7	20.8	8 19	21 53.80	-24 51.1	2.014	3.011	4.0	20.9
8 29	21 46.43	+1 27.0	2.179	3.164	4.9	20.8	8 29	21 44.11	-24 59.9	2.039	3.011	6.3	21.0
9 8	21 39.75	+0 40.0	2.208	3.162	7.0	20.9	9 8	21 35.45	-24 54.4	2.090	3.011	9.4	21.2
9 18	21 34.36	-0 10.1	2.263	3.159	9.7	21.1	9 18	21 28.58	-24 34.6	2.166	3.010	12.3	21.4
9 28	21 30.75	-0 58.6	2.340	3.157	12.3	21.3	9 28	21 24.00	-24 2.0	2.263	3.009	14.7	21.6
314497	2005 <i>WF</i> ₁₉₁		8 19.0 329°46	2°1/20.5	18		480016	2014 <i>OR</i> ₃₆₇		8 19.0 131°86	2°8/15.4	18	
7 20	22 13.25	-6 26.2	1.751	2.644	13.0	20.1	7 20	22 12.81	-19 51.3	2.668	3.574	8.6	21.4
7 30	22 8.31	-6 29.2	1.676	2.631	9.4	19.8	7 30	22 7.49	-21 7.5	2.620	3.585	5.9	21.2
8 9	22 1.58	-6 44.4	1.624	2.618	5.5	19.6	8 9	22 0.98	-22 24.3	2.598	3.595	3.5	21.1
8 19	21 53.77	-7 9.5	1.597	2.606	2.2	19.3	8 19	21 53.80	-23 36.5	2.606	3.605	3.0	21.1
8 29	21 45.81	-7 40.1	1.597	2.595	4.3	19.5	8 29	21 46.62	-24 39.3	2.642	3.614	5.1	21.2
9 8	21 38.71	-8 11.6	1.622	2.584	8.4	19.7	9 8	21 40.11	-25 29.4	2.707	3.624	7.7	21.4
9 18	21 33.31	-8 39.6	1.672	2.574	12.2	19.9	9 18	21 34.83	-26 5.1	2.797	3.632	10.0	21.6
9 28	21 30.23	-9 0.3	1.742	2.565	15.6	20.1	9 28	21 31.21	-26 26.2	2.908	3.641	12.1	21.8
121907	2000 <i>DX</i> ₆₄		8 19.0 270°25	0°3/19.3	18		198234	2004 <i>TN</i> ₁₉₈		8 19.0 236°99	1°4/20.3	18	
7 20	22 12.57	-10 3.9	2.427	3.318	9.9	20.1	7 20	22 15.27	-6 24.9	2.005	2.888	12.0	21.0
7 30	22 7.46	-10 32.3	2.347	3.305	6.9	19.9	7 30	22 9.57	-6 55.1	1.926	2.877	8.6	20.8
8 9	22 1.02	-11 8.2	2.294	3.292	3.6	19.6	8 9	22 2.20	-7 37.7	1.871	2.866	4.9	20.6
8 19	21 53.78	-11 48.4	2.267	3.279	0.3	19.3	8 19	21 53.81	-8 29.1	1.844	2.854	1.5	20.3
8 29	21 46.42	-12 29.1	2.270	3.266	3.5	19.6	8 29	21 45.25	-9 24.4	1.844	2.842	3.9	20.5
9 8	21 39.69	-13 6.4	2.300	3.253	6.9	19.8	9 8	21 37.45	-10 18.3	1.872	2.829	7.9	20.7
9 18	21 34.20	-13 37.1	2.356	3.240	9.9	20.0	9 18	21 31.20	-11 6.1	1.925	2.816	11.5	20.9
9 28	21 30.46	-13 59.2	2.435	3.226	12.6	20.1	9 28	21 27.10	-11 44.2	2.000	2.802	14.6	21.1
483221	2015 <i>RP</i> ₃₇		8 19.0 261°92	7°7/11.8	18		20297	1998 <i>FQ</i> ₇₆		8 19.0 300°89	4°6/15.5	18	
7 20	22 21.44	-38 1.6	2.377	3.258	10.4	20.8	7 20	22 16.50	-21 53.9	1.571	2.491	12.6	17.8
7 30	22 13.70	-38 43.3	2.325	3.251	8.7	20.7	7 30	22 10.83	-22 55.5	1.509	2.479	8.9	17.6
8 9	22 4.21	-39 11.7	2.299	3.243	7.8	20.6	8 9	22 2.98	-23 57.2	1.470	2.467	5.6	17.3
8 19	21 53.78	-39 21.4	2.298	3.235	8.0	20.6	8 19	21 53.81	-24 51.1	1.457	2.456	4.9	17.3
8 29	21 43.47	-39 8.9	2.323	3.227	9.4	20.7	8 29	21 44.52	-25 29.7	1.469	2.444	7.9	17.4
9 8	21 34.30	-38 34.2	2.373	3.219	11.3	20.8	9 8	21 36.37	-25 48.6	1.505	2.433	11.8	17.6
9 18	21 27.06	-37 39.7	2.445	3.211	13.3	20.9	9 18	21 30.35	-25 46.7	1.563	2.422	15.4	17.8
9 28	21 22.25	-36 28.9	2.536	3.203	15.1	21.1	9 28	21 27.15	-25 25.3	1.639	2.412	18.5	18.0
145975	2000 <i>AF</i> ₅₇		8 19.0 316°83	0°3/19.1	18		234918	2002 <i>TG</i> ₃₃₁		8 19.0 193°04	1°2/20.1	18	
7 20	22 17.69	-11 41.7	1.289	2.202	15.2	19.0	7 20	22 13.53	-6 45.9	1.900	2.790	12.2	20.4
7 30	22 11.91	-11 44.1	1.221	2.189	10.7	18.7	7 30	22 8.34	-7 24.4	1.835	2.790	8.7	20.1
8 9	22 3.63	-11 56.1	1.175	2.176	5.6	18.4	8 9	22 1.54	-8 15.3	1.794	2.790	4.8	19.9
8 19	21 53.78	-12 13.3	1.152	2.164	0.3	17.9	8 19	21 53.82	-9 14.4	1.779	2.790	1.3	19.7
8 29	21 43.73	-12 30.3	1.154	2.152	5.6	18.3	8 29	21 46.03	-10 16.4	1.792	2.790	4.0	19.9
9 8	21 34.94	-12 41.8	1.179	2.141	10.9	18.6	9 8	21 39.10	-11 15.2	1.831	2.790	7.9	20.1
9 18	21 28.59	-12 44.3	1.226	2.130	15.7	18.8	9 18	21 33.77	-12 6.2	1.896	2.789	11.5	20.3
9 28	21 25.43	-12 35.6	1.292	2.119	19.7	19.1	9 28	21 30.59	-12 46.1	1.982	2.789	14.5	20.5
300693	2007 <i>VN</i> ₅₄		8 19.0 174°80	1°2/20.1	18		174577	2003 <i>OH</i> ₃₁		8 19.0 341°01	5°5/22.3	18	
7 20	22 1												

EPHEMERIDES

8 19.0

8 19.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
48293	2002 <i>JD</i> ₅₂		8 19.0 336°13	22°9/ 5.1	18		420578	2012 <i>HH</i> ₂₅		8 19.0 171°32	9°8/ 8.0	15	
7 20	22 10.50	+28 49.3	1.160	1.896	27.3	17.6	7 20	22 23.99	-40 46.7	2.123	2.999	11.7	21.9
7 30	22 7.50	+31 23.8	1.093	1.876	26.1	17.4	7 30	22 15.91	-42 43.2	2.094	3.004	10.3	21.9
8 9	22 1.70	+33 17.7	1.038	1.857	24.9	17.3	8 9	22 5.56	-44 22.7	2.090	3.009	9.8	21.8
8 19	21 53.82	+34 19.6	0.995	1.840	23.8	17.1	8 19	21 53.88	-45 36.8	2.111	3.012	10.5	21.9
8 29	21 45.23	+34 21.0	0.965	1.824	23.1	17.0	8 29	21 42.17	-46 20.1	2.157	3.014	12.0	22.0
9 8	21 37.69	+33 21.3	0.947	1.810	22.9	17.0	9 8	21 31.74	-46 32.1	2.225	3.016	13.8	22.1
9 18	21 32.77	+31 27.4	0.944	1.798	23.4	17.0	9 18	21 23.62	-46 15.9	2.311	3.017	15.6	22.3
9 28	21 31.69	+28 53.0	0.954	1.787	24.6	17.0	9 28	21 18.45	-45 36.5	2.413	3.016	17.1	22.4
162362	2000 <i>AU</i> ₂₃		8 19.0 309°30	7°4/12.1	18		179657	2002 <i>QP</i> ₁₄		8 19.0 78°81	6°6/23.4	17	
7 20	22 14.88	-27 49.9	1.581	2.502	12.4	19.1	7 20	22 18.03	+ 3 9.1	1.449	2.308	17.0	19.8
7 30	22 9.85	-29 34.5	1.522	2.486	9.5	18.9	7 30	22 11.78	+ 3 37.8	1.392	2.316	13.5	19.6
8 9	22 2.56	-31 15.0	1.488	2.470	7.6	18.8	8 9	22 3.43	+ 3 43.7	1.356	2.324	9.7	19.4
8 19	21 53.83	-32 40.8	1.478	2.454	8.1	18.8	8 19	21 53.88	+ 3 26.9	1.343	2.332	7.0	19.3
8 29	21 44.88	-33 43.0	1.492	2.438	10.7	18.9	8 29	21 44.33	+ 2 50.9	1.355	2.340	7.2	19.3
9 8	21 37.04	-34 16.6	1.530	2.423	13.9	19.0	9 8	21 36.01	+ 2 2.1	1.391	2.348	10.0	19.5
9 18	21 31.39	-34 21.5	1.587	2.408	17.0	19.2	9 18	21 29.85	+ 1 8.0	1.451	2.356	13.5	19.8
9 28	21 28.66	-34 0.2	1.660	2.394	19.7	19.4	9 28	21 26.47	+ 0 15.8	1.531	2.364	16.8	20.0
504691	2009 <i>HV</i> ₆₀		8 19.0 90°73	3°3/16.8	17		325063	2008 <i>CM</i> ₂₀₈		8 19.0 260°58	3°9/16.6	18	
7 20	22 19.12	-17 40.8	1.340	2.259	14.3	21.6	7 20	22 20.43	-20 24.5	1.474	2.390	13.5	20.3
7 30	22 12.64	-18 39.2	1.297	2.268	9.9	21.4	7 30	22 13.64	-21 4.9	1.412	2.382	9.5	20.1
8 9	22 3.86	-19 41.0	1.276	2.277	5.3	21.2	8 9	22 4.48	-21 45.6	1.374	2.373	5.5	19.8
8 19	21 53.84	-20 37.6	1.279	2.286	3.5	21.1	8 19	21 53.89	-22 19.5	1.360	2.364	4.1	19.7
8 29	21 43.96	-21 21.2	1.308	2.295	7.1	21.3	8 29	21 43.23	-22 39.7	1.372	2.355	7.4	19.9
9 8	21 35.57	-21 47.0	1.361	2.303	11.6	21.6	9 8	21 33.87	-22 42.4	1.409	2.346	11.7	20.1
9 18	21 29.65	-21 53.6	1.436	2.312	15.5	21.9	9 18	21 26.89	-22 27.1	1.468	2.337	15.6	20.3
9 28	21 26.77	-21 42.0	1.529	2.320	18.8	22.1	9 28	21 22.98	-21 55.3	1.545	2.328	19.0	20.5
349767	2009 <i>BD</i> ₁		8 19.0 152°94	0°8/18.3	18		423031	2003 <i>UO</i> ₁₁		8 19.0 257°99	7°0/15.2	18	
7 20	22 14.07	-12 1.2	1.831	2.735	11.9	21.1	7 20	22 30.57	-30 38.0	1.733	2.627	13.0	20.6
7 30	22 8.78	-12 55.6	1.770	2.735	8.2	20.9	7 30	22 20.70	-31 4.5	1.657	2.605	10.0	20.3
8 9	22 1.80	-13 58.7	1.734	2.736	4.1	20.7	8 9	22 8.13	-31 19.5	1.605	2.583	7.5	20.1
8 19	21 53.84	-15 4.6	1.724	2.736	0.8	20.4	8 19	21 53.91	-31 15.0	1.579	2.559	7.2	20.1
8 29	21 45.84	-16 7.0	1.742	2.736	4.7	20.7	8 29	21 39.56	-30 45.9	1.581	2.535	9.5	20.1
9 8	21 38.76	-17 0.2	1.786	2.736	8.7	20.9	9 8	21 26.66	-29 51.6	1.610	2.511	12.9	20.3
9 18	21 33.37	-17 40.7	1.855	2.736	12.3	21.2	9 18	21 16.43	-28 35.8	1.661	2.485	16.3	20.5
9 28	21 30.25	-18 6.4	1.944	2.737	15.3	21.4	9 28	21 9.60	-27 4.1	1.732	2.459	19.2	20.6
175410	Tsayweanshun		8 19.0 347°15	0°3/19.1	18		485293	2011 <i>AE</i> ₂₂		8 19.0 248°16	1°7/16.9	17	
7 20	22 19.83	-13 15.1	1.081	2.003	16.8	19.1	7 20	22 12.22	-16 14.3	2.688	3.590	8.6	22.0
7 30	22 13.62	-12 46.8	1.024	1.995	11.8	18.8	7 30	22 7.20	-17 14.7	2.611	3.576	5.9	21.8
8 9	22 4.58	-12 25.0	0.986	1.989	6.2	18.4	8 9	22 0.92	-18 19.1	2.561	3.562	3.1	21.6
8 19	21 53.85	-12 6.5	0.971	1.983	0.3	18.0	8 19	21 53.88	-19 23.1	2.540	3.547	1.9	21.5
8 29	21 43.06	-11 47.3	0.980	1.979	6.0	18.4	8 29	21 46.72	-20 21.9	2.548	3.533	4.3	21.7
9 8	21 33.93	-11 24.3	1.011	1.976	11.8	18.7	9 8	21 40.10	-21 11.8	2.585	3.518	7.2	21.8
9 18	21 27.68	-10 55.6	1.063	1.974	16.8	19.0	9 18	21 34.63	-21 50.2	2.647	3.502	9.9	22.0
9 28	21 25.03	-10 20.0	1.131	1.972	21.0	19.3	9 28	21 30.80	-22 15.7	2.731	3.487	12.2	22.1
461834	2006 <i>BT</i> ₂₈₁		8 19.0 90°07	2°3/17.6	17		342577	2008 <i>UV</i> ₂₆₆		8 19.0 242°94	0°2/18.8	18	
7 20	22 20.43	-15 43.4	1.279	2.196	15.0	21.3	7 20	22 16.43	-11 42.0	1.894	2.793	11.8	21.1
7 30	22 13.55	-16 27.5	1.238	2.208	10.3	21.0	7 30	22 10.44	-12 10.0	1.822	2.784	8.3	20.9
8 9	22 4.32	-17 16.8	1.218	2.220	5.3	20.8	8 9	22 2.70	-12 45.7	1.775	2.775	4.2	20.6
8 19	21 53.85	-18 3.6	1.222	2.232	2.4	20.6	8 19	21 53.89	-13 25.0	1.754	2.766	0.2	20.3
8 29	21 43.59	-18 40.4	1.252	2.244	6.6	20.9	8 29	21 44.97	-14 2.9	1.761	2.757	4.4	20.6
9 8	21 34.92	-19 2.4	1.306	2.255	11.3	21.2	9 8	21 36.92	-14 34.7	1.795	2.747	8.5	20.9
9 18	21 28.84	-19 7.9	1.382	2.266	15.5	21.5	9 18	21 30.57	-14 57.3	1.854	2.738	12.2	21.1
9 28	21 25.88	-18 57.1	1.476	2.278	18.9	21.8	9 28	21 26.53	-15 8.6	1.933	2.728	15.3	21.3
245625	2005 <i>WM</i> ₁₉₃		8 19.0 252°91	3°3/16.1	18		67108	2000 <i>AB</i> ₁₀₀		8 19.0 252°54	6°4/12.4	18	
7 20	22 16.26	-22 6.7	2.234	3.141	9.9	20.0	7 20	22 17.58	-29 6.4	2.073	2.980	10.6	18.3
7 30	22 10.10	-22 40.9	2.172	3.136	7.0	19.8	7 30	22 11.37	-30 32.6	2.009	2.964	8.1	18.1
8 9	22 2.41	-23 13.5	2.135	3.131	4.2	19.6	8 9	22 3.24	-31 53.7	1.970	2.946	6.5	18.0
8 19	21 53.85	-23 39.9	2.126	3.126	3.5	19.5	8 19	21 53.89	-33 1.8	1.958	2.928	6.9	18.0
8 29	21 45.29	-23 56.0	2.145	3.120	5.8	19.7	8 29	21 44.35	-33 50.5	1.972	2.910	9.0	18.1
9 8	21 37.59	-23 59.3	2.190	3.115	8.8	19.9	9 8	21 35.70	-34 16.3	2.011	2.892	11.7	18.2
9 18	21 31.45	-23 49.2	2.260	3.110	11.6	20.0	9 18	21 28.84	-34 19.0	2.072	2.872	14.3	18.4
9 28	21 27.39	-23 26.3	2.351	3.104	14.1	20.2	9 28	21 24.43	-34 0.7	2.152	2.853	16.6	18.5
512193	2015 <i>RX</i> ₂₅₂		8 19.0 71°05	1°9/20.7	18		418154	2008 <i>AZ</i> ₉₀		8 19.0 216°48	0°5/19.4	17	
7 20	22 13.67	- 5 32.0	2.117	2.998	11.5	21.1	7 20	22 17.73	- 9 2.4	1.713	2.607	13.1	22.4
7 30	22 8.22	- 5 48.7	2.063	3.011	8.3	20.9	7 30	22 11.49	- 9 40.1	1.642	2.601	9.3	22.2
8 9	22 1.40	- 6 16.3	2.032	3.024	4.9	20.8	8 9	22 3.29	-10 29.6	1.595	2.594	4.9	21.9
8 19	21 53.85	- 6 51.9	2.028	3.037	2.0	20.6	8 19	21 53.90	-11 26.1	1.574	2.586	0.5	21.6
8 29	21 46.36	- 7 31.5	2.052	3.050	3.6	20.7	8 29	21 44.35	-12 23.4	1.581	2.578	4.6	21.8
9 8	21 39.70	- 8 10.9	2.104	3.063	7.0	21.0	9 8	21 35.78	-13 15.2	1.615	2.570	9.0	22.1
9 18	21 34.51	- 8 46.1	2.181	3.076	10.1	21.2	9 18	21 29.08	-13 57.1	1.672	2.560	13.0	22.3
9 28	21 31.23	- 9 14.4	2.281	3.089	12.8	21.4	9 28	21 24.93	-14 26.1	1.751	2.551	16.4	22.5
248461	2005 <i>UU</i> ₅₃		8 19.0 242°32	0°3/18.7	18		429645	2011 <i>FH</i> ₁₄₈					

EPHEMERIDES

8 19.0

8 19.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
510280	2011 <i>KU</i> ₁₇		8 19.0 70°86	8°7/11.8	17		294300	2007 <i>VC</i> ₉		8 19.0 293°34	3°9/22.5	18	
7 20	22 18.97	-32 34.2	1.599	2.510	12.9	21.1	7 20	22 12.71	+ 0 13.8	1.817	2.684	13.8	20.4
7 30	22 12.44	-34 9.5	1.572	2.523	10.3	20.9	7 30	22 8.03	- 0 8.4	1.730	2.665	10.6	20.2
8 9	22 3.73	-35 31.5	1.569	2.536	8.7	20.9	8 9	22 1.57	- 0 50.2	1.666	2.646	7.1	19.9
8 19	21 53.90	-36 31.2	1.590	2.549	9.2	21.0	8 19	21 53.96	- 1 49.5	1.626	2.627	4.2	19.7
8 29	21 44.28	-37 2.6	1.635	2.562	11.2	21.1	8 29	21 46.09	- 3 1.6	1.613	2.608	4.9	19.7
9 8	21 36.14	-37 4.7	1.703	2.575	13.8	21.3	9 8	21 38.95	- 4 19.8	1.627	2.589	8.3	19.9
9 18	21 30.41	-36 40.2	1.790	2.589	16.3	21.5	9 18	21 33.40	- 5 37.2	1.665	2.570	12.1	20.1
9 28	21 27.58	-35 53.9	1.894	2.602	18.4	21.7	9 28	21 30.12	- 6 47.3	1.725	2.551	15.5	20.3
485311	2011 <i>AM</i> ₇₇		8 19.0 291°76	6°8/10.5	18		477913	2011 <i>LG</i> ₂₅		8 19.0 124°18	3°4/22.2	17	
7 20	22 14.06	-30 29.2	2.197	3.105	10.0	20.7	7 20	22 15.41	- 0 36.3	1.902	2.766	13.4	21.6
7 30	22 8.94	-32 20.9	2.132	3.083	7.9	20.5	7 30	22 9.60	- 1 0.3	1.843	2.777	10.1	21.4
8 9	22 2.01	-34 7.9	2.093	3.061	6.8	20.4	8 9	22 2.22	- 1 41.0	1.807	2.788	6.5	21.2
8 19	21 53.90	-35 41.9	2.081	3.039	7.5	20.4	8 19	21 53.96	- 2 35.5	1.796	2.798	3.7	21.1
8 29	21 45.52	-36 55.9	2.096	3.017	9.5	20.5	8 29	21 45.72	- 3 38.9	1.814	2.808	4.5	21.1
9 8	21 37.86	-37 45.8	2.135	2.995	11.9	20.7	9 8	21 38.40	- 4 44.9	1.858	2.818	7.7	21.3
9 18	21 31.81	-38 10.8	2.196	2.973	14.3	20.8	9 18	21 32.72	- 5 48.0	1.928	2.827	11.0	21.6
9 28	21 28.05	-38 12.4	2.273	2.951	16.4	20.9	9 28	21 29.20	- 6 43.4	2.021	2.836	14.0	21.8
93576	2000 <i>UL</i> ₄₄		8 19.0 292°51	2°5/17.2	18		99394	2002 <i>AL</i> ₁₆		8 19.0 71°72	5°1/14.4	18	
7 20	22 16.65	-16 56.1	1.608	2.522	12.7	19.7	7 20	22 15.85	-21 8.2	1.557	2.477	12.6	18.5
7 30	22 10.95	-17 38.3	1.534	2.504	8.8	19.4	7 30	22 10.20	-23 4.3	1.525	2.495	8.8	18.3
8 9	22 3.11	-18 25.5	1.484	2.486	4.7	19.1	8 9	22 2.60	-24 59.1	1.518	2.514	5.7	18.2
8 19	21 53.91	-19 11.2	1.460	2.468	2.6	19.0	8 19	21 53.96	-26 42.4	1.538	2.532	5.5	18.2
8 29	21 44.49	-19 48.8	1.461	2.450	6.2	19.2	8 29	21 45.45	-28 5.3	1.584	2.550	8.4	18.4
9 8	21 36.07	-20 13.2	1.488	2.432	10.6	19.4	9 8	21 38.20	-29 3.2	1.654	2.569	11.8	18.7
9 18	21 29.67	-20 21.7	1.537	2.415	14.6	19.6	9 18	21 33.07	-29 35.4	1.746	2.587	14.9	18.9
9 28	21 26.01	-20 13.9	1.606	2.397	18.0	19.8	9 28	21 30.56	-29 43.7	1.856	2.605	17.4	19.1
423988	2006 <i>VM</i> ₆₇		8 19.0 281°68	3°5/16.5	17		203720	2002 <i>PM</i> ₁₈₁		8 19.0 40°21	1°7/17.7	18	
7 20	22 17.50	-18 27.5	1.473	2.391	13.3	21.2	7 20	22 16.01	-15 30.5	1.734	2.644	12.1	20.3
7 30	22 11.69	-19 25.5	1.406	2.377	9.3	20.9	7 30	22 10.20	-16 9.1	1.678	2.646	8.3	20.1
8 9	22 3.54	-20 27.7	1.361	2.362	5.2	20.7	8 9	22 2.59	-16 52.3	1.646	2.648	4.3	19.9
8 19	21 53.93	-21 26.2	1.342	2.348	3.7	20.5	8 19	21 53.97	-17 34.7	1.641	2.651	1.8	19.7
8 29	21 44.11	-22 13.0	1.349	2.333	7.3	20.7	8 29	21 45.37	-18 10.7	1.662	2.653	5.3	20.0
9 8	21 35.42	-22 42.3	1.379	2.319	11.7	20.9	9 8	21 37.82	-18 35.7	1.709	2.656	9.3	20.2
9 18	21 28.98	-22 51.8	1.432	2.304	15.8	21.2	9 18	21 32.14	-18 47.8	1.780	2.658	12.9	20.4
9 28	21 25.52	-22 41.9	1.502	2.290	19.2	21.4	9 28	21 28.88	-18 46.2	1.871	2.661	15.9	20.6
507927	2014 <i>YC</i> ₅₄		8 19.0 104°29	5°1/15.7	17		368870	2006 <i>QC</i> ₁₀₅		8 19.0 315°31	1°2/19.6	18	
7 20	22 20.89	-23 16.3	1.474	2.390	13.4	21.5	7 20	22 19.78	-10 55.9	1.229	2.140	15.9	20.9
7 30	22 13.80	-24 7.2	1.429	2.397	9.5	21.3	7 30	22 13.57	-10 34.1	1.158	2.124	11.4	20.6
8 9	22 4.47	-24 54.6	1.408	2.403	6.1	21.1	8 9	22 4.65	-10 21.3	1.109	2.109	6.2	20.2
8 19	21 53.93	-25 30.6	1.411	2.409	5.3	21.1	8 19	21 53.99	-10 14.7	1.082	2.094	1.2	19.9
8 29	21 43.56	-25 48.9	1.441	2.415	8.2	21.3	8 29	21 43.05	-10 10.1	1.081	2.080	5.7	20.1
9 8	21 34.67	-25 47.0	1.494	2.421	11.9	21.5	9 8	21 33.44	-10 3.5	1.103	2.066	11.2	20.4
9 18	21 28.21	-25 25.5	1.569	2.426	15.4	21.8	9 18	21 26.41	- 9 51.8	1.146	2.053	16.2	20.6
9 28	21 24.75	-24 47.2	1.663	2.432	18.4	22.0	9 28	21 22.80	- 9 32.8	1.207	2.040	20.4	20.9
520570	2014 <i>NV</i> ₆₉		8 19.0 151°58	2°5/21.2	18		307980	2004 <i>PS</i> ₆₄		8 19.0 23°34	1°7/20.3	16	
7 20	22 18.53	- 4 24.3	2.645	3.503	10.2	21.2	7 20	22 11.60	- 5 48.9	1.112	2.027	17.0	20.0
7 30	22 11.41	- 3 59.9	2.575	3.510	7.6	21.0	7 30	22 7.62	- 6 35.6	1.071	2.037	12.1	19.7
8 9	22 3.02	- 3 43.9	2.532	3.515	4.8	20.9	8 9	22 1.40	- 7 42.4	1.050	2.049	6.7	19.5
8 19	21 53.95	- 3 35.3	2.518	3.521	2.6	20.7	8 19	21 53.97	- 9 2.0	1.051	2.062	1.8	19.2
8 29	21 44.88	- 3 32.5	2.534	3.526	3.6	20.8	8 29	21 46.65	-10 24.5	1.076	2.077	5.3	19.5
9 8	21 36.52	- 3 33.3	2.579	3.531	6.3	21.0	9 8	21 40.77	-11 39.9	1.124	2.092	10.4	19.8
9 18	21 29.47	- 3 35.5	2.652	3.535	9.0	21.2	9 18	21 37.25	-12 41.0	1.193	2.109	15.0	20.1
9 28	21 24.16	- 3 36.6	2.749	3.539	11.3	21.3	9 28	21 36.65	-13 23.7	1.280	2.126	18.7	20.4
74184	1998 <i>RM</i> ₃₉		8 19.0 151°29	3°6/16.6	18		310289	2011 <i>US</i> ₇₈		8 19.0 276°32	2°2/20.9	18	
7 20	22 20.15	-20 12.5	1.588	2.501	12.9	18.8	7 20	22 14.23	- 5 3.1	2.009	2.890	12.1	21.0
7 30	22 13.20	-20 55.6	1.536	2.504	9.0	18.5	7 30	22 8.87	- 5 15.1	1.933	2.880	8.9	20.8
8 9	22 4.16	-21 38.7	1.508	2.507	5.1	18.3	8 9	22 1.91	- 5 39.6	1.879	2.870	5.3	20.6
8 19	21 53.95	-22 14.9	1.506	2.509	3.8	18.2	8 19	21 53.97	- 6 13.9	1.852	2.860	2.3	20.4
8 29	21 43.82	-22 38.2	1.530	2.512	6.9	18.4	8 29	21 45.91	- 6 54.1	1.853	2.850	4.0	20.5
9 8	21 34.99	-22 45.4	1.579	2.514	10.8	18.7	9 8	21 38.60	- 7 35.4	1.881	2.840	7.6	20.7
9 18	21 28.38	-22 35.8	1.652	2.516	14.4	18.9	9 18	21 32.80	- 8 13.6	1.934	2.830	11.1	20.9
9 28	21 24.57	-22 10.8	1.743	2.518	17.4	19.1	9 28	21 29.09	- 8 44.9	2.008	2.820	14.2	21.1
167503	2003 <i>YF</i> ₉₃		8 19.0 55°41	0°3/18.8	18		423063	2003 <i>WM</i> ₇₉		8 19.0 239°94	2°4/17.3	18	
7 20	22 15.56	-11 55.1	1.781	2.684	12.2	19.8	7 20	22 19.28	-16 40.6	1.625	2.535	12.8	21.2
7 30	22 9.83	-12 24.6	1.723	2.687	8.5	19.6	7 30	22 12.74	-17 24.8	1.557	2.525	8.9	21.0
8 9	22 2.38	-13 1.8	1.689	2.690	4.3	19.4	8 9	22 4.03	-18 13.7	1.513	2.514	4.7	20.7
8 19	21 53.95	-13 42.0	1.681	2.693	0.3	19.1	8 19	21 53.98	-19 0.8	1.494	2.503	2.5	20.5
8 29	21 45.53	-14 20.0	1.700	2.696	4.5	19.4	8 29	21 43.78	-19 39.5	1.502	2.491	6.1	20.7
9 8	21 38.12	-14 51.2	1.746	2.699	8.6	19.7	9 8	21 34.67	-20 4.8	1.537	2.479	10.5	21.0
9 18	21 32.48	-15 12.4	1.815	2.703	12.2	19.9	9 18	21 27.65	-20 14.4	1.594	2.466	14.4	21.2
9 28	21 29.17	-15 22.0	1.906	2.706	15.3	20.1	9 28	21 23.41	-20 8.1	1.670	2.454	17.7	21.4
117769	2005 <i>GP</i> ₈₆		8 19.0 90°51	0°9/19.7	17		212476	2006 <i>QR</i> ₆₅ </					

EPHEMERIDES

8 19.1

8 19.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
91227	1999 <i>BG</i> ₉		8 19.1 138°75	0°3/19.3	18		514625	2004 <i>RA</i> ₃₀₃		8 19.1 294°83	3°3/22.1	18	
7 20	22 20.21	- 9 15.0	1.835	2.723	12.7	20.4	7 20	22 13.35	- 1 28.0	2.172	3.037	11.9	21.2
7 30	22 12.94	- 9 57.6	1.784	2.740	8.9	20.2	7 30	22 8.15	- 1 29.3	2.097	3.032	9.0	21.0
8 9	22 3.93	-10 50.0	1.757	2.755	4.6	20.0	8 9	22 1.52	- 1 44.1	2.046	3.027	5.9	20.8
8 19	21 54.01	-11 46.9	1.758	2.770	0.4	19.7	8 19	21 54.03	- 2 11.0	2.021	3.021	3.5	20.7
8 29	21 44.18	-12 42.6	1.787	2.783	4.3	20.1	8 29	21 46.45	- 2 46.7	2.023	3.016	4.2	20.7
9 8	21 35.46	-13 31.7	1.844	2.796	8.4	20.3	9 8	21 39.58	- 3 27.1	2.053	3.011	7.1	20.9
9 18	21 28.62	-14 10.5	1.927	2.808	11.9	20.6	9 18	21 34.08	- 4 7.7	2.108	3.006	10.2	21.1
9 28	21 24.18	-14 37.1	2.031	2.818	14.9	20.8	9 28	21 30.50	- 4 44.5	2.185	3.001	13.0	21.2
254520	2005 <i>EE</i> ₉₂		8 19.1 84°90	0°0/19.1	17		216942	1999 <i>TF</i> ₅₈		8 19.1 331°04	4°0/22.7	18	
7 20	22 17.19	- 9 41.0	1.389	2.295	14.8	20.4	7 20	22 11.34	+ 0 16.8	1.865	2.733	13.4	19.7
7 30	22 11.23	-10 31.6	1.342	2.307	10.3	20.2	7 30	22 6.98	+ 0 5.0	1.788	2.723	10.3	19.5
8 9	22 3.18	-11 34.6	1.318	2.319	5.3	20.0	8 9	22 1.00	- 0 24.7	1.734	2.712	7.0	19.3
8 19	21 54.00	-12 43.2	1.319	2.331	0.0	19.6	8 19	21 54.03	- 1 10.6	1.704	2.703	4.3	19.1
8 29	21 44.92	-13 49.3	1.346	2.344	5.1	20.0	8 29	21 46.92	- 2 8.5	1.700	2.694	4.8	19.1
9 8	21 37.17	-14 45.8	1.398	2.355	9.9	20.3	9 8	21 40.56	- 3 12.5	1.723	2.685	7.9	19.3
9 18	21 31.66	-15 28.2	1.473	2.367	14.1	20.6	9 18	21 35.74	- 4 16.5	1.770	2.677	11.4	19.5
9 28	21 28.95	-15 54.2	1.567	2.379	17.5	20.9	9 28	21 33.04	- 5 14.7	1.839	2.669	14.5	19.7
114351	2002 <i>XR</i> ₇₈		8 19.1 314°15	0°6/19.4	18		389082	2008 <i>WC</i> ₁₃₃		8 19.1 277°54	1°1/18.1	18	
7 20	22 17.77	-10 56.1	1.339	2.249	15.0	18.8	7 20	22 14.57	-12 27.9	1.737	2.644	12.3	20.5
7 30	22 11.98	-10 56.1	1.270	2.236	10.6	18.5	7 30	22 9.38	-13 24.9	1.665	2.631	8.5	20.3
8 9	22 3.76	-11 6.1	1.221	2.222	5.7	18.2	8 9	22 2.30	-14 31.6	1.617	2.619	4.3	20.0
8 19	21 54.01	-11 22.2	1.197	2.209	0.6	17.8	8 19	21 54.04	-15 42.0	1.595	2.606	1.1	19.8
8 29	21 44.04	-11 39.3	1.197	2.196	5.3	18.1	8 29	21 45.60	-16 49.0	1.600	2.593	5.1	20.0
9 8	21 35.27	-11 52.2	1.222	2.184	10.6	18.4	9 8	21 38.04	-17 46.1	1.631	2.580	9.4	20.2
9 18	21 28.84	-11 57.2	1.269	2.172	15.2	18.6	9 18	21 32.25	-18 29.2	1.686	2.567	13.3	20.5
9 28	21 25.50	-11 51.8	1.334	2.161	19.2	18.9	9 28	21 28.91	-18 56.0	1.760	2.555	16.6	20.7
299236	2005 <i>LM</i> ₂₉		8 19.1 359°32	3°0/21.6	18		135887	2002 <i>TM</i> ₅₂		8 19.1 301°54	5°5/14.6	18	
7 20	22 14.11	- 3 0.3	1.825	2.703	13.2	20.1	7 20	22 17.08	-25 10.9	1.738	2.654	11.8	19.3
7 30	22 8.84	- 3 9.2	1.759	2.703	9.8	19.9	7 30	22 11.28	-26 9.3	1.666	2.631	8.6	19.1
8 9	22 1.91	- 3 33.0	1.715	2.702	6.2	19.7	8 9	22 3.35	-27 5.1	1.617	2.607	6.0	18.9
8 19	21 54.00	- 4 9.4	1.697	2.702	3.2	19.5	8 19	21 54.05	-27 50.7	1.594	2.584	5.8	18.8
8 29	21 46.04	- 4 53.9	1.706	2.702	4.4	19.6	8 29	21 44.53	-28 19.2	1.596	2.561	8.4	18.9
9 8	21 38.95	- 5 41.3	1.741	2.702	8.0	19.8	9 8	21 35.99	-28 26.9	1.623	2.538	11.9	19.1
9 18	21 33.53	- 6 26.4	1.801	2.703	11.5	20.0	9 18	21 29.46	-28 13.1	1.672	2.516	15.3	19.3
9 28	21 30.32	- 7 4.7	1.882	2.703	14.6	20.3	9 28	21 25.65	-27 39.6	1.739	2.493	18.2	19.4
443471	2014 <i>JE</i> ₃		8 19.1 339°21	6°2/13.8	18		442069	2010 <i>RP</i> ₁₄₉		8 19.1 128°96	1°0/18.3	18	
7 20	22 16.26	-27 46.2	1.807	2.722	11.5	20.6	7 20	22 16.47	-14 52.1	2.111	3.012	10.7	21.2
7 30	22 10.48	-28 49.8	1.756	2.717	8.6	20.4	7 30	22 10.30	-15 7.5	2.049	3.013	7.4	21.0
8 9	22 2.78	-29 47.1	1.730	2.714	6.5	20.3	8 9	22 2.60	-15 26.6	2.012	3.013	3.7	20.8
8 19	21 54.01	-30 31.1	1.728	2.710	6.5	20.2	8 19	21 54.05	-15 45.6	2.003	3.014	1.0	20.6
8 29	21 45.24	-30 55.8	1.753	2.707	8.7	20.4	8 29	21 45.52	-16 0.8	2.021	3.014	4.3	20.8
9 8	21 37.58	-30 59.0	1.801	2.704	11.6	20.5	9 8	21 37.86	-16 9.2	2.067	3.015	7.9	21.0
9 18	21 31.90	-30 41.0	1.871	2.701	14.5	20.7	9 18	21 31.79	-16 9.2	2.139	3.016	11.1	21.2
9 28	21 28.76	-30 4.3	1.960	2.699	16.9	20.9	9 28	21 27.79	-16 0.0	2.231	3.016	13.8	21.4
349613	2008 <i>UA</i> ₆₆		8 19.1 341°75	10°6/26.5	17		262940	2007 <i>DT</i> ₃₀		8 19.1 10°50	2°7/17.1	18	
7 20	22 12.60	+10 45.4	1.375	2.209	19.2	20.3	7 20	22 16.70	-19 47.7	1.908	2.819	11.2	19.9
7 30	22 8.33	+11 39.6	1.305	2.199	16.3	20.1	7 30	22 10.57	-20 6.8	1.853	2.820	7.7	19.7
8 9	22 1.87	+12 4.2	1.253	2.190	13.4	19.9	8 9	22 2.76	-20 25.6	1.822	2.822	4.3	19.5
8 19	21 54.00	+11 56.0	1.220	2.181	11.2	19.7	8 19	21 54.05	-20 39.6	1.818	2.824	2.8	19.4
8 29	21 45.87	+11 15.7	1.210	2.174	10.6	19.7	8 29	21 45.41	-20 44.7	1.841	2.826	5.6	19.6
9 8	21 38.75	+10 9.2	1.221	2.167	12.2	19.7	9 8	21 37.80	-20 38.7	1.890	2.829	9.1	19.8
9 18	21 33.72	+ 8 45.9	1.254	2.162	15.0	19.9	9 18	21 31.97	-20 20.8	1.963	2.832	12.3	20.1
9 28	21 31.55	+ 7 16.6	1.305	2.157	18.1	20.1	9 28	21 28.43	-19 51.7	2.057	2.836	15.0	20.3
99432	2002 <i>BS</i> ₁₅		8 19.1 319°03	3°7/21.2	18		97930	2000 <i>QR</i> ₁₀₅		8 19.1 329°88	5°4/15.1	18	
7 20	22 15.38	- 3 57.0	1.160	2.062	17.4	19.1	7 20	22 13.00	-19 4.4	1.063	2.000	15.5	18.4
7 30	22 10.55	- 3 54.6	1.092	2.049	13.0	18.8	7 30	22 9.13	-20 45.9	1.007	1.987	10.9	18.1
8 9	22 3.13	- 4 12.9	1.044	2.036	8.1	18.5	8 9	22 2.48	-22 35.0	0.972	1.973	6.5	17.8
8 19	21 54.02	- 4 49.5	1.017	2.024	4.0	18.2	8 19	21 54.05	-24 18.5	0.959	1.961	5.9	17.7
8 29	21 44.62	- 5 38.7	1.014	2.013	6.0	18.3	8 29	21 45.36	-25 43.0	0.969	1.950	10.0	17.9
9 8	21 36.46	- 6 32.1	1.033	2.002	11.1	18.6	9 8	21 38.12	-26 38.9	0.999	1.940	14.9	18.2
9 18	21 30.80	- 7 21.8	1.074	1.992	16.1	18.8	9 18	21 33.63	-27 3.2	1.048	1.930	19.5	18.4
9 28	21 28.46	- 8 1.2	1.132	1.982	20.4	19.1	9 28	21 32.69	-26 57.2	1.112	1.922	23.3	18.7
106964	2000 <i>YJ</i> ₈₂		8 19.1 258°22	1°0/19.7	18		1992	Galvarino		8 19.1 45°68	3°1/22.2	18	R
7 20	22 17.70	- 8 27.4	1.507	2.405	14.3	20.4	7 20	22 11.98	- 0 37.5	2.018	2.885	12.6	17.2
7 30	22 11.76	- 8 53.2	1.434	2.394	10.2	20.1	7 30	22 7.25	- 1 10.3	1.952	2.888	9.5	17.0
8 9	22 3.60	- 9 32.5	1.383	2.381	5.6	19.8	8 9	22 1.06	- 1 59.7	1.909	2.892	6.1	16.8
8 19	21 54.04	-10 20.7	1.357	2.369	1.0	19.5	8 19	21 54.05	- 3 2.5	1.893	2.895	3.4	16.6
8 29	21 44.24	-11 11.7	1.358	2.356	4.9	19.7	8 29	21 46.99	- 4 13.8	1.903	2.899	4.1	16.7
9 8	21 35.48	-11 58.7	1.384	2.343	9.8	20.0	9 8	21 40.70	- 5 27.5	1.941	2.903	7.3	16.9
9 18	21 28.81	-12 36.6	1.433	2.330	14.3	20.2	9 18	21 35.87	- 6 37.8	2.005	2.907	10.5	17.1
9 28	21 24.97	-13 1.8	1.502	2.316	18.0	20.4	9 28	21 33.01	- 7 40.0	2.091	2.911	13.4	17.3
72957	2002 <i>CZ</i> ₁₀₀		8 19.1 32°83	0°2/18.9	18		476305	2007 <i>WO</i> ₂₆		8 19			

EPHEMERIDES

8 19.1

8 19.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
277364	2005 TZ ₁₆₇		8 19.1 239°38	3°0/15.9	18		277573	2005 YG ₁₉₁		8 19.1 34°65	5°8/14.3	17	
7 20	22 15.58	-21 31.1	2.513	3.418	9.1	21.6	7 20	22 12.98	-19 56.7	1.154	2.089	14.8	19.2
7 30	22 9.63	-22 13.5	2.443	3.406	6.4	21.4	7 30	22 8.59	-22 9.5	1.132	2.110	10.2	19.0
8 9	22 2.26	-22 55.3	2.398	3.394	3.8	21.2	8 9	22 1.93	-24 21.4	1.132	2.131	6.5	18.9
8 19	21 54.06	-23 32.1	2.382	3.381	3.2	21.1	8 19	21 54.09	-26 18.6	1.156	2.154	6.3	19.0
8 29	21 45.78	-23 59.8	2.394	3.369	5.3	21.3	8 29	21 46.49	-27 50.0	1.204	2.177	9.6	19.2
9 8	21 38.19	-24 15.7	2.434	3.356	8.2	21.4	9 8	21 40.46	-28 50.1	1.275	2.201	13.6	19.5
9 18	21 31.96	-24 18.6	2.498	3.342	10.8	21.6	9 18	21 36.89	-29 18.7	1.364	2.226	17.1	19.8
9 28	21 27.59	-24 8.6	2.584	3.328	13.1	21.7	9 28	21 36.27	-29 19.2	1.471	2.251	19.9	20.1
299234	2005 KP		8 19.1 29°12	6°6/25.2	18		136131	2003 SE ₉₆		8 19.1 293°77	2°8/20.6	18	
7 20	22 12.35	+ 6 52.1	1.723	2.562	15.7	20.6	7 20	22 19.42	- 6 37.2	1.347	2.244	15.8	18.9
7 30	22 7.69	+ 6 49.8	1.660	2.567	12.7	20.4	7 30	22 13.18	- 6 17.7	1.274	2.230	11.6	18.6
8 9	22 1.36	+ 6 23.3	1.618	2.573	9.6	20.2	8 9	22 4.45	- 6 11.7	1.223	2.217	6.9	18.3
8 19	21 54.05	+ 5 33.6	1.599	2.579	7.1	20.1	8 19	21 54.11	- 6 17.4	1.195	2.203	3.0	18.0
8 29	21 46.71	+ 4 24.7	1.605	2.586	6.8	20.1	8 29	21 43.50	- 6 31.0	1.192	2.190	5.5	18.1
9 8	21 40.29	+ 3 3.8	1.636	2.592	8.8	20.2	9 8	21 34.05	- 6 47.5	1.213	2.177	10.4	18.4
9 18	21 35.56	+ 1 38.6	1.692	2.600	11.8	20.4	9 18	21 26.95	- 7 1.9	1.257	2.164	15.1	18.6
9 28	21 33.07	+ 0 16.8	1.770	2.607	14.7	20.6	9 28	21 23.00	- 7 10.2	1.320	2.151	19.1	18.8
370008	1999 VH ₁₆₁		8 19.1 334°70	5°6/22.0	18		255324	2005 WT ₃₂		8 19.1 307°66	5°3/14.0	18	
7 20	22 10.90	- 2 9.3	0.992	1.903	18.9	19.8	7 20	22 14.89	-25 52.2	1.958	2.872	10.7	19.5
7 30	22 7.75	- 1 41.6	0.920	1.879	14.6	19.5	7 30	22 9.52	-26 58.6	1.895	2.859	7.9	19.3
8 9	22 1.85	- 1 37.6	0.867	1.857	9.8	19.2	8 9	22 2.35	-28 1.7	1.858	2.845	5.7	19.2
8 19	21 54.06	- 1 57.5	0.833	1.837	5.9	18.9	8 19	21 54.10	-28 54.7	1.846	2.832	5.7	19.1
8 29	21 45.80	- 2 37.5	0.820	1.818	7.2	18.9	8 29	21 45.74	-29 31.5	1.861	2.820	8.0	19.3
9 8	21 38.77	- 3 29.2	0.827	1.801	12.1	19.1	9 8	21 38.29	-29 48.7	1.900	2.807	10.9	19.4
9 18	21 34.38	- 4 23.0	0.853	1.786	17.4	19.3	9 18	21 32.60	-29 45.9	1.962	2.795	13.8	19.6
9 28	21 33.61	- 5 9.7	0.896	1.773	22.1	19.6	9 28	21 29.26	-29 24.3	2.043	2.783	16.3	19.8
187768	1998 QM ₇₂		8 19.1 343°62	6°7/25.3	18		40376	1999 NF ₃₇		8 19.1 4°59	2°5/17.5	18	
7 20	22 10.76	+ 7 9.4	1.829	2.665	15.0	19.2	7 20	22 12.57	-14 28.2	0.975	1.911	16.6	17.9
7 30	22 6.60	+ 7 16.9	1.753	2.657	12.3	19.0	7 30	22 8.72	-15 28.2	0.930	1.910	11.5	17.7
8 9	22 0.83	+ 7 1.6	1.698	2.650	9.5	18.8	8 9	22 2.19	-16 39.0	0.905	1.910	5.9	17.4
8 19	21 54.05	+ 6 23.5	1.666	2.643	7.2	18.6	8 19	21 54.10	-17 50.4	0.901	1.912	2.7	17.2
8 29	21 47.13	+ 5 25.6	1.659	2.637	6.9	18.6	8 29	21 46.03	-18 51.4	0.920	1.914	7.5	17.5
9 8	21 40.99	+ 4 13.7	1.677	2.632	8.8	18.7	9 8	21 39.58	-19 33.5	0.959	1.919	13.0	17.8
9 18	21 36.40	+ 2 54.9	1.720	2.627	11.7	18.9	9 18	21 35.88	-19 53.0	1.017	1.924	17.8	18.1
9 28	21 33.96	+ 1 36.7	1.784	2.623	14.6	19.1	9 28	21 35.59	-19 49.5	1.092	1.931	21.7	18.4
184861	2005 UY ₈₆		8 19.1 38°78	3°7/22.7	18		213948	2003 WL ₁₂₆		8 19.1 286°77	0°9/18.3	18	
7 20	22 12.39	+ 0 20.0	2.024	2.885	12.8	20.2	7 20	22 18.05	-13 35.4	1.998	2.896	11.3	20.9
7 30	22 7.53	+ 0 2.9	1.958	2.889	9.8	20.0	7 30	22 11.85	-14 7.3	1.897	2.859	8.0	20.6
8 9	22 1.21	- 0 30.7	1.915	2.892	6.5	19.8	8 9	22 3.67	-14 46.3	1.820	2.821	4.1	20.3
8 19	21 54.05	- 1 18.5	1.897	2.896	4.0	19.7	8 19	21 54.12	-15 28.2	1.770	2.782	1.0	20.0
8 29	21 46.86	- 2 16.5	1.907	2.900	4.5	19.7	8 29	21 44.11	-16 7.6	1.749	2.742	4.8	20.2
9 8	21 40.45	- 3 18.9	1.944	2.904	7.3	19.9	9 8	21 34.70	-16 39.5	1.755	2.702	9.1	20.4
9 18	21 35.50	- 4 20.4	2.006	2.908	10.5	20.1	9 18	21 26.88	-17 0.7	1.786	2.661	13.0	20.5
9 28	21 32.52	- 5 16.0	2.090	2.912	13.3	20.3	9 28	21 21.41	-17 9.2	1.838	2.620	16.4	20.7
317213	2002 CW ₅₀		8 19.1 165°54	0°3/19.3	14	18	39536	Lenhof		8 19.1 33°25	6°0/22.8	18	
7 20	22 20.07	- 9 58.1	1.758	2.650	12.9	21.9	7 20	22 15.35	+ 0 26.3	1.018	1.914	19.8	18.1
7 30	22 13.02	-10 28.1	1.698	2.656	9.1	21.7	7 30	22 10.40	+ 0 37.9	0.977	1.926	15.2	17.9
8 9	22 4.09	-11 7.8	1.662	2.661	4.8	21.4	8 9	22 2.94	+ 0 21.5	0.954	1.938	10.3	17.7
8 19	21 54.09	-11 52.2	1.653	2.665	0.3	21.1	8 19	21 54.11	- 0 20.1	0.952	1.952	6.4	17.5
8 29	21 44.09	-12 36.1	1.672	2.669	4.5	21.4	8 29	21 45.43	- 1 20.0	0.971	1.967	7.0	17.6
9 8	21 35.17	-13 14.1	1.718	2.671	8.7	21.7	9 8	21 38.37	- 2 28.0	1.013	1.982	11.1	17.9
9 18	21 28.19	-13 42.8	1.789	2.673	12.5	21.9	9 18	21 33.99	- 3 34.2	1.075	1.998	15.5	18.2
9 28	21 23.73	-14 0.2	1.881	2.674	15.7	22.2	9 28	21 32.85	- 4 30.7	1.155	2.015	19.4	18.5
279478	2010 VE ₁₁₂		8 19.1 39°84	5°4/22.8	17		98777	2000 YV ₈₅		8 19.1 264°05	4°9/14.2	18	
7 20	22 15.34	+ 0 47.5	1.226	2.109	18.0	20.2	7 20	22 15.08	-21 46.6	1.757	2.674	11.6	19.2
7 30	22 10.17	+ 0 45.7	1.176	2.118	13.8	20.0	7 30	22 9.80	-23 29.7	1.697	2.666	8.2	19.0
8 9	22 2.76	+ 0 18.7	1.145	2.127	9.3	19.8	8 9	22 2.57	-25 14.4	1.663	2.657	5.4	18.8
8 19	21 54.07	- 0 30.8	1.137	2.137	5.8	19.6	8 19	21 54.12	-26 51.6	1.655	2.648	5.3	18.7
8 29	21 45.43	- 1 36.4	1.152	2.147	6.4	19.7	8 29	21 45.49	-28 12.6	1.674	2.639	8.1	18.9
9 8	21 38.15	- 2 49.0	1.191	2.157	10.2	19.9	9 8	21 37.81	-29 11.6	1.718	2.630	11.5	19.1
9 18	21 33.21	- 3 59.6	1.252	2.168	14.4	20.2	9 18	21 32.02	-29 46.7	1.784	2.621	14.8	19.3
9 28	21 31.23	- 5 0.9	1.332	2.180	18.0	20.5	9 28	21 28.76	-29 58.5	1.868	2.612	17.5	19.5
163329	2002 JO ₁₄₆		8 19.1 15°89	5°1/23.3	16		501214	2013 TC ₁₄₆		8 19.1 105°80	0°0/19.2	18	
7 20	22 9.99	+ 1 53.8	1.241	2.127	17.6	19.1	7 20	21 57.34	-12 6.0	26.183	27.069	1.1	20.9
7 30	22 6.43	+ 1 25.0	1.191	2.133	13.6	18.9	7 30	21 56.32	-12 12.5	26.118	27.074	0.7	20.9
8 9	22 0.83	+ 0 28.6	1.159	2.141	9.2	18.7	8 9	21 55.22	-12 19.4	26.080	27.079	0.4	20.8
8 19	21 54.06	- 0 51.5	1.149	2.150	5.6	18.5	8 19	21 54.07	-12 26.5	26.072	27.084	0.0	20.8
8 29	21 47.31	- 2 27.1	1.163	2.160	5.9	18.6	8 29	21 52.92	-12 33.7	26.093	27.088	0.4	20.8
9 8	21 41.77	- 4 7.4	1.201	2.171	9.7	18.8	9 8	21 51.82	-12 40.6	26.143	27.093	0.7	20.9
9 18	21 38.34	- 5 42.2	1.261	2.183	13.8	19.1	9 18	21 50.80	-12 47.0	26.221	27.098	1.1	20.9
9 28	21 37.60	- 7 3.5	1.341	2.197	17.5	19.4	9 28	21 49.91	-12 52.8	26.325	27.103	1.4	21.0
52743	1998 HW ₁₃₅		8 19.1 93°89	4°9/14.8	18		50425	2000 DV ₁₃		8 19.1 261°71	0°7/19.6	18	
7 20	22 17.28	-2											

EPHEMERIDES

8 19.1

8 19.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
402805	2007 <i>DS</i> ₇₃		8 19.1 112°33	0°2/18.9	18		513831	2013 <i>EB</i> ₉₉		8 19.1 178°60	0°5/19.6	18	
7 20	22 13.78	-11 28.9	2.424	3.318	9.8	22.3	7 20	22 13.29	-8 49.7	2.278	3.167	10.5	21.8
7 30	22 8.28	-12 0.5	2.368	3.328	6.8	22.1	7 30	22 8.08	-9 26.0	2.212	3.168	7.4	21.6
8 9	22 1.54	-12 38.0	2.338	3.338	3.5	21.9	8 9	22 1.52	-10 11.1	2.170	3.168	3.9	21.3
8 19	21 54.14	-13 17.7	2.336	3.348	0.2	21.6	8 19	21 54.18	-11 1.4	2.157	3.168	0.6	21.1
8 29	21 46.76	-13 56.0	2.362	3.357	3.5	21.9	8 29	21 46.79	-11 52.4	2.171	3.168	3.5	21.3
9 8	21 40.12	-14 29.1	2.416	3.367	6.7	22.2	9 8	21 40.12	-12 39.6	2.214	3.168	7.0	21.5
9 18	21 34.78	-14 54.7	2.497	3.376	9.6	22.4	9 18	21 34.79	-13 19.6	2.282	3.168	10.1	21.7
9 28	21 31.19	-15 11.1	2.600	3.385	12.0	22.5	9 28	21 31.29	-13 49.9	2.373	3.168	12.8	21.9
45108	1999 <i>XD</i> ₇₆		8 19.1 68°47	9°8/29.8	18		381781	2009 <i>TW</i> ₁		8 19.1 353°19	1°3/20.0	16	
7 20	22 14.33	+19 9.8	2.340	3.072	15.1	18.6	7 20	22 5.28	-6 43.8	0.868	1.803	18.3	19.6
7 30	22 8.84	+20 0.4	2.272	3.079	13.4	18.5	7 30	22 3.83	-7 29.3	0.814	1.791	13.2	19.3
8 9	22 1.92	+20 27.3	2.224	3.087	11.7	18.4	8 9	21 59.81	-8 40.5	0.778	1.781	7.3	18.9
8 19	21 54.14	+20 28.5	2.198	3.094	10.3	18.3	8 19	21 54.16	-10 9.9	0.762	1.773	1.5	18.6
8 29	21 46.27	+20 4.5	2.194	3.101	9.8	18.3	8 29	21 48.35	-11 45.3	0.766	1.768	6.0	18.8
9 8	21 39.11	+19 18.5	2.215	3.109	10.2	18.3	9 8	21 43.97	-13 12.8	0.790	1.765	12.2	19.2
9 18	21 33.34	+18 15.9	2.260	3.116	11.4	18.4	9 18	21 42.24	-14 22.0	0.832	1.765	17.7	19.5
9 28	21 29.47	+17 3.5	2.326	3.124	12.9	18.6	9 28	21 43.89	-15 6.5	0.890	1.768	22.2	19.8
293446	2007 <i>EJ</i> ₁₆₉		8 19.1 207°48	2°0/21.4	18		229569	2006 <i>AL</i> ₄₃		8 19.1 144°61	0°9/19.8	18	
7 20	22 12.03	-3 12.0	2.618	3.484	10.1	21.1	7 20	22 16.07	-8 7.7	1.759	2.652	12.9	20.8
7 30	22 7.08	-3 42.9	2.541	3.480	7.5	20.9	7 30	22 10.29	-8 37.6	1.698	2.655	9.1	20.6
8 9	22 0.96	-4 25.2	2.490	3.476	4.6	20.7	8 9	22 2.75	-9 19.1	1.660	2.657	5.0	20.3
8 19	21 54.13	-5 16.4	2.466	3.472	2.2	20.5	8 19	21 54.19	-10 7.7	1.649	2.660	1.0	20.1
8 29	21 47.23	-6 12.8	2.471	3.467	3.2	20.6	8 29	21 45.61	-10 58.0	1.664	2.662	4.2	20.3
9 8	21 40.91	-7 10.2	2.505	3.463	6.1	20.8	9 8	21 38.01	-11 44.5	1.707	2.665	8.4	20.6
9 18	21 35.71	-8 4.6	2.566	3.458	8.9	20.9	9 18	21 32.19	-12 22.7	1.773	2.667	12.2	20.8
9 28	21 32.10	-8 52.6	2.650	3.452	11.4	21.1	9 28	21 28.72	-12 49.9	1.861	2.669	15.3	21.0
517277	2014 <i>FH</i> ₇₄		8 19.1 198°80	4°9/24.1	17		38558	1999 <i>VM</i> ₁₁₄		8 19.1 341°97	4°0/16.4	18	
7 20	22 14.79	+5 7.2	2.398	3.223	12.3	22.4	7 20	22 18.96	-23 39.6	1.847	2.758	11.5	18.0
7 30	22 9.10	+5 1.4	2.317	3.219	9.8	22.2	7 30	22 12.29	-23 55.0	1.788	2.752	8.2	17.8
8 9	22 2.04	+4 38.6	2.260	3.215	7.2	22.0	8 9	22 3.76	-24 6.5	1.752	2.747	5.1	17.6
8 19	21 54.15	+3 59.5	2.228	3.211	5.2	21.9	8 19	21 54.21	-24 9.1	1.743	2.742	4.2	17.6
8 29	21 46.14	+3 7.1	2.225	3.205	5.2	21.9	8 29	21 44.70	-23 58.9	1.761	2.738	6.6	17.7
9 8	21 38.77	+2 5.7	2.249	3.199	7.2	22.0	9 8	21 36.32	-23 34.3	1.804	2.734	10.0	17.9
9 18	21 32.69	+1 0.7	2.300	3.193	9.8	22.2	9 18	21 29.89	-22 55.8	1.871	2.731	13.2	18.1
9 28	21 28.41	-0 2.9	2.375	3.186	12.3	22.3	9 28	21 25.95	-22 5.4	1.959	2.728	16.0	18.3
469526	2003 <i>SD</i> ₁₀₅		8 19.1 315°46	5°2/21.9	18		86047	1999 <i>OY</i> ₃		8 19.1 64°86	0°3/23.8	06 C	
7 20	22 16.73	-1 28.0	1.517	2.394	15.4	19.9	7 20	21 56.35	+0 45.9	41.284	42.110	0.8	23.1
7 30	22 11.17	-0 48.2	1.435	2.374	12.0	19.7	7 30	21 55.66	+0 44.4	41.209	42.115	0.6	23.1
8 9	22 3.40	-0 24.4	1.374	2.355	8.2	19.4	8 9	21 54.91	+0 42.1	41.160	42.119	0.5	23.1
8 19	21 54.16	-0 17.0	1.337	2.336	5.4	19.2	8 19	21 54.14	+0 39.2	41.139	42.124	0.3	23.1
8 29	21 44.57	-0 24.2	1.326	2.317	6.3	19.2	8 29	21 53.36	+0 35.7	41.146	42.129	0.3	23.1
9 8	21 35.89	-0 41.9	1.338	2.299	9.9	19.4	9 8	21 52.61	+0 31.8	41.182	42.133	0.5	23.1
9 18	21 29.21	-1 4.8	1.374	2.281	14.0	19.6	9 18	21 51.92	+0 27.6	41.246	42.138	0.6	23.1
9 28	21 25.33	-1 27.4	1.429	2.264	17.7	19.8	9 28	21 51.30	+0 23.3	41.336	42.142	0.8	23.1
181158	2005 <i>RN</i> ₄₁		8 19.1 243°47	4°1/15.4	18		342529	2008 <i>UH</i> ₂₀₉		8 19.1 298°53	1°2/19.8	18	
7 20	22 17.40	-24 23.6	2.183	3.090	10.1	20.4	7 20	22 15.42	-8 2.9	1.616	2.514	13.6	20.6
7 30	22 11.03	-25 2.5	2.123	3.085	7.3	20.2	7 30	22 10.09	-8 22.2	1.542	2.501	9.7	20.4
8 9	22 3.05	-25 38.2	2.089	3.080	4.8	20.1	8 9	22 2.77	-8 54.2	1.491	2.488	5.4	20.1
8 19	21 54.16	-26 5.4	2.081	3.075	4.3	20.0	8 19	21 54.20	-9 35.2	1.465	2.476	1.3	19.8
8 29	21 45.27	-26 19.9	2.101	3.069	6.5	20.1	8 29	21 45.44	-10 19.5	1.465	2.464	4.5	20.0
9 8	21 37.29	-26 19.5	2.148	3.064	9.4	20.3	9 8	21 37.61	-11 1.5	1.491	2.451	9.1	20.2
9 18	21 30.96	-26 3.9	2.218	3.058	12.1	20.5	9 18	21 31.67	-11 36.1	1.540	2.440	13.3	20.4
9 28	21 26.80	-25 34.5	2.309	3.053	14.5	20.7	9 28	21 28.30	-11 59.9	1.610	2.428	16.8	20.7
489689	2007 <i>VS</i> ₉₆		8 19.1 310°21	1°5/18.3	18		299664	2006 <i>PS</i> ₄		8 19.1 340°62	5°3/14.8	18	
7 20	22 18.24	-14 38.8	1.166	2.088	15.7	21.2	7 20	22 11.17	-20 53.9	1.307	2.240	13.5	19.1
7 30	22 12.72	-14 57.6	1.096	2.068	11.1	20.9	7 30	22 7.53	-22 20.5	1.247	2.224	9.6	18.8
8 9	22 4.38	-15 24.5	1.046	2.049	5.7	20.5	8 9	22 1.59	-23 50.4	1.210	2.209	6.1	18.6
8 19	21 54.17	-15 53.2	1.019	2.030	1.5	20.2	8 19	21 54.19	-25 13.4	1.196	2.195	5.7	18.6
8 29	21 43.61	-16 16.2	1.016	2.012	6.7	20.5	8 29	21 46.60	-26 19.3	1.206	2.182	9.1	18.7
9 8	21 34.36	-16 27.5	1.035	1.994	12.3	20.7	9 8	21 40.20	-27 1.1	1.238	2.171	13.3	18.9
9 18	21 27.80	-16 23.8	1.075	1.977	17.5	21.0	9 18	21 36.05	-27 16.5	1.289	2.161	17.2	19.1
9 28	21 24.79	-16 4.3	1.132	1.961	21.8	21.2	9 28	21 34.90	-27 6.1	1.358	2.153	20.6	19.3
228396	2001 <i>BO</i> ₂₉		8 19.1 159°41	1°5/17.4	18		384440	2010 <i>AD</i> ₂₁		8 19.1 235°10	0°7/19.7	18 R	
7 20	22 15.88	-15 4.2	2.389	3.287	9.7	21.7	7 20	22 16.80	-9 7.4	1.893	2.784	12.2	21.4
7 30	22 9.80	-16 4.1	2.332	3.294	6.7	21.5	7 30	22 10.81	-9 31.2	1.819	2.776	8.7	21.2
8 9	22 2.36	-17 8.1	2.301	3.301	3.4	21.3	8 9	22 3.05	-10 4.9	1.769	2.767	4.7	21.0
8 19	21 54.16	-18 11.1	2.299	3.308	1.7	21.2	8 19	21 54.22	-10 44.9	1.746	2.758	0.7	20.6
8 29	21 45.95	-19 8.3	2.326	3.314	4.4	21.4	8 29	21 45.24	-11 26.3	1.751	2.748	4.1	20.9
9 8	21 38.49	-19 55.6	2.382	3.319	7.6	21.6	9 8	21 37.12	-12 4.1	1.783	2.739	8.3	21.1
9 18	21 32.44	-20 30.6	2.464	3.323	10.4	21.8	9 18	21 30.68	-12 34.6	1.839	2.728	12.0	21.3
9 28	21 28.25	-20 52.5	2.567	3.327	12.8	22.0	9 28	21 26.54	-12 55.0	1.917	2.718	15.2	21.5
480633	2015 <i>NT</i> ₇		8 19.1 196°95	2°5/21.2	18		510059	2010 <i>GS</i> ₁₄₃		8 19.1 160°33	3°9/23.4	18	

EPHEMERIDES

8 19.1

8 19.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
362875	2012 <i>BO</i> ₉₁		8 19.1 268°50	1°3/17.7	18		323317	2003 <i>UY</i> ₁₁₄		8 19.1 338°19	0°2/19.2	18	
7 20	22 12.49	-13 40.0	2.246	3.149	10.1	20.8	7 20	22 12.47	-10 40.8	0.979	1.909	17.2	20.1
7 30	22 7.63	-14 40.7	2.176	3.141	6.9	20.6	7 30	22 8.88	-10 59.4	0.917	1.892	12.2	19.7
8 9	22 1.35	-15 47.9	2.132	3.134	3.5	20.4	8 9	22 2.48	-11 33.5	0.873	1.877	6.5	19.4
8 19	21 54.21	-16 56.5	2.116	3.126	1.3	20.2	8 19	21 54.25	-12 17.4	0.851	1.863	0.3	18.9
8 29	21 46.97	-18 1.1	2.128	3.118	4.4	20.4	8 29	21 45.73	-13 2.4	0.850	1.850	6.3	19.3
9 8	21 40.41	-18 56.8	2.167	3.111	7.8	20.6	9 8	21 38.63	-13 39.7	0.870	1.839	12.4	19.6
9 18	21 35.20	-19 40.3	2.232	3.103	10.9	20.8	9 18	21 34.28	-14 3.0	0.908	1.830	17.9	19.8
9 28	21 31.88	-20 9.8	2.318	3.095	13.6	21.0	9 28	21 33.55	-14 8.8	0.963	1.822	22.4	20.1
106358	2000 <i>VE</i> ₅		8 19.1 173°72	3°5/22.7	18		14062	Cremaschini		8 19.1 150°57	1°5/17.9	18	
7 20	22 12.95	+ 0 32.7	2.344	3.196	11.6	19.9	7 20	22 18.80	-14 38.9	1.798	2.701	12.1	18.8
7 30	22 7.83	+ 0 17.0	2.272	3.197	8.9	19.7	7 30	22 12.17	-15 21.7	1.744	2.708	8.4	18.5
8 9	22 1.40	- 0 13.3	2.223	3.198	6.0	19.5	8 9	22 3.73	-16 9.6	1.713	2.715	4.2	18.3
8 19	21 54.22	- 0 56.2	2.202	3.199	3.7	19.4	8 19	21 54.29	-16 57.2	1.710	2.721	1.6	18.1
8 29	21 46.97	- 1 48.4	2.208	3.199	4.1	19.4	8 29	21 44.89	-17 38.7	1.735	2.726	5.1	18.4
9 8	21 40.39	- 2 45.1	2.242	3.200	6.7	19.6	9 8	21 36.56	-18 9.6	1.786	2.731	9.1	18.6
9 18	21 35.09	- 3 41.7	2.302	3.200	9.5	19.8	9 18	21 30.11	-18 27.6	1.861	2.736	12.6	18.9
9 28	21 31.55	- 4 34.0	2.386	3.200	12.1	19.9	9 28	21 26.10	-18 32.1	1.957	2.740	15.5	19.1
251310	2006 <i>YQ</i> ₉		8 19.1 74°77	3°9/22.5	18		455160	1998 <i>QV</i> ₂₉		8 19.1 324°34	3°3/20.8	16	
7 20	22 14.75	- 0 11.4	2.073	2.932	12.6	20.2	7 20	22 18.07	- 5 58.1	1.727	2.612	13.5	20.9
7 30	22 9.17	- 0 4.4	2.008	2.938	9.7	20.0	7 30	22 11.99	- 5 11.9	1.637	2.585	10.1	20.6
8 9	22 2.12	- 0 12.1	1.967	2.943	6.5	19.8	8 9	22 3.83	- 4 34.7	1.570	2.559	6.4	20.3
8 19	21 54.23	- 0 33.1	1.951	2.948	4.2	19.7	8 19	21 54.30	- 4 6.4	1.528	2.534	3.5	20.1
8 29	21 46.32	- 1 4.5	1.962	2.953	4.7	19.7	8 29	21 44.41	- 3 45.8	1.514	2.509	5.1	20.1
9 8	21 39.21	- 1 41.9	2.001	2.958	7.4	19.9	9 8	21 35.32	- 3 30.8	1.525	2.484	9.1	20.3
9 18	21 33.58	- 2 20.7	2.065	2.963	10.4	20.1	9 18	21 28.04	- 3 18.6	1.561	2.461	13.1	20.5
9 28	21 29.96	- 2 56.6	2.151	2.969	13.2	20.3	9 28	21 23.32	- 3 6.1	1.617	2.438	16.6	20.7
189202	Calar Alto		8 19.1 39°88	5°9/25.9	18		314633	2006 <i>HT</i> ₄₆		8 19.1 278°54	2°3/17.5	17	
7 20	22 11.04	+ 8 35.3	2.230	3.046	13.4	20.2	7 20	22 17.13	-14 27.1	1.320	2.238	14.6	20.9
7 30	22 6.56	+ 8 19.9	2.159	3.050	10.9	20.1	7 30	22 11.70	-15 32.7	1.254	2.226	10.1	20.6
8 9	22 0.77	+ 7 43.6	2.110	3.054	8.4	19.9	8 9	22 3.80	-16 48.7	1.211	2.214	5.2	20.3
8 19	21 54.21	+ 6 47.5	2.086	3.058	6.4	19.8	8 19	21 54.30	-18 6.6	1.192	2.202	2.4	20.1
8 29	21 47.61	+ 5 35.0	2.088	3.063	6.0	19.8	8 29	21 44.56	-19 16.5	1.198	2.189	6.8	20.3
9 8	21 41.70	+ 4 11.9	2.117	3.067	7.5	19.9	9 8	21 36.02	-20 10.6	1.228	2.177	11.8	20.6
9 18	21 37.10	+ 2 44.4	2.172	3.072	9.9	20.1	9 18	21 29.85	-20 44.4	1.279	2.165	16.4	20.8
9 28	21 34.28	+ 1 18.8	2.250	3.077	12.3	20.2	9 28	21 26.84	-20 56.9	1.348	2.153	20.2	21.0
329736	2003 <i>YF</i> ₅₅		8 19.1 279°44	2°9/16.9	18		295869	2008 <i>WN</i> ₂₂		8 19.1 133°82	1°1/20.1	17	
7 20	22 17.44	-16 25.0	1.454	2.370	13.6	20.8	7 20	22 17.10	- 7 50.5	2.040	2.924	11.8	21.4
7 30	22 11.83	-17 27.8	1.381	2.352	9.5	20.5	7 30	22 10.79	- 8 10.9	1.982	2.935	8.4	21.2
8 9	22 3.82	-18 38.2	1.331	2.333	5.1	20.2	8 9	22 2.96	- 8 41.1	1.949	2.945	4.6	21.0
8 19	21 54.25	-19 48.3	1.306	2.313	3.1	20.0	8 19	21 54.30	- 9 17.4	1.943	2.954	1.2	20.8
8 29	21 44.36	-20 49.2	1.306	2.294	7.0	20.2	8 29	21 45.67	- 9 55.6	1.966	2.963	3.8	21.0
9 8	21 35.52	-21 33.9	1.331	2.275	11.7	20.4	9 8	21 37.95	-10 31.3	2.016	2.972	7.4	21.2
9 18	21 28.90	-21 58.8	1.378	2.255	16.0	20.6	9 18	21 31.83	-11 1.1	2.092	2.980	10.8	21.5
9 28	21 25.30	-22 3.3	1.443	2.236	19.7	20.8	9 28	21 27.80	-11 22.6	2.190	2.988	13.6	21.7
435220	2007 <i>RM</i> ₂₇₂		8 19.1 6°75	5°1/16.7	16		396117	2013 <i>CH</i> ₁₇₇		8 19.1 276°73	2°7/21.4	18	
7 20	22 20.28	-24 12.8	1.228	2.153	14.9	19.7	7 20	22 14.57	- 3 40.9	1.994	2.869	12.4	21.2
7 30	22 13.74	-24 18.1	1.182	2.153	10.6	19.5	7 30	22 9.18	- 3 48.5	1.921	2.864	9.2	21.0
8 9	22 4.66	-24 16.9	1.158	2.155	6.6	19.3	8 9	22 2.21	- 4 9.4	1.871	2.859	5.7	20.8
8 19	21 54.26	-24 3.0	1.157	2.158	5.3	19.2	8 19	21 54.30	- 4 41.3	1.848	2.853	2.9	20.6
8 29	21 44.11	-23 31.9	1.180	2.163	8.3	19.4	8 29	21 46.27	- 5 20.4	1.852	2.848	4.1	20.7
9 8	21 35.68	-22 43.4	1.226	2.169	12.5	19.7	9 8	21 39.03	- 6 2.0	1.883	2.843	7.6	20.9
9 18	21 30.00	-21 39.7	1.293	2.176	16.5	19.9	9 18	21 33.32	- 6 41.6	1.939	2.837	11.0	21.1
9 28	21 27.59	-20 24.3	1.378	2.184	19.8	20.2	9 28	21 29.69	- 7 15.2	2.017	2.832	14.0	21.3
340395	2006 <i>EJ</i> ₂₇		8 19.1 259°82	0°1/19.2	18		195303	2002 <i>EW</i> ₉₅		8 19.1 7°14	4°5/16.4	18	
7 20	22 15.16	- 9 47.4	1.721	2.621	12.8	21.3	7 20	22 20.22	-22 49.3	1.487	2.404	13.3	19.1
7 30	22 9.77	-10 29.6	1.656	2.618	9.0	21.1	7 30	22 13.48	-23 17.8	1.436	2.404	9.4	18.9
8 9	22 2.55	-11 22.9	1.615	2.615	4.7	20.8	8 9	22 4.51	-23 42.9	1.408	2.405	5.8	18.7
8 19	21 54.25	-12 22.0	1.599	2.611	0.2	20.5	8 19	21 54.33	-23 58.1	1.405	2.406	4.7	18.6
8 29	21 45.86	-13 20.8	1.611	2.608	4.5	20.8	8 29	21 44.25	-23 58.1	1.427	2.407	7.6	18.8
9 8	21 38.42	-14 13.1	1.649	2.605	8.8	21.1	9 8	21 35.58	-23 40.8	1.474	2.409	11.5	19.1
9 18	21 32.77	-14 54.7	1.711	2.602	12.7	21.3	9 18	21 29.28	-23 6.8	1.543	2.411	15.1	19.3
9 28	21 29.52	-15 22.7	1.794	2.599	15.9	21.5	9 28	21 25.91	-22 18.5	1.630	2.413	18.1	19.5
43356	2000 <i>TJ</i> ₂₉		8 19.1 210°41	9°2/29.6	18		361490	2007 <i>DT</i> ₁₁₆		8 19.1 197°41	1°4/20.6	18	
7 20	22 16.15	+20 22.9	2.636	3.346	14.1	19.7	7 20	22 13.40	- 6 3.4	2.644	3.518	9.7	21.7
7 30	22 10.11	+20 53.2	2.547	3.338	12.5	19.6	7 30	22 8.06	- 6 26.6	2.570	3.516	7.0	21.5
8 9	22 2.64	+21 1.0	2.476	3.329	11.0	19.5	8 9	22 1.53	- 6 58.8	2.521	3.513	4.1	21.3
8 19	21 54.25	+20 44.4	2.428	3.319	9.7	19.4	8 19	21 54.30	- 7 37.7	2.501	3.510	1.5	21.1
8 29	21 45.67	+20 3.5	2.405	3.309	9.2	19.3	8 29	21 47.00	- 8 19.7	2.509	3.506	3.1	21.2
9 8	21 37.65	+19 1.4	2.407	3.297	9.6	19.3	9 8	21 40.30	- 9 1.3	2.546	3.502	6.1	21.4
9 18	21 30.88	+17 43.2	2.434	3.285	10.8	19.4	9 18	21 34.75	- 9 39.2	2.610	3.498	8.9	21.6
9 28	21 25.92	+16 15.4	2.484	3.272	12.5	19.5	9 28	21 30.81	-10 10.7	2.698	3.494	11.4	21.8
294807	2008 <i>CW</i> ₈₉		8 19.1 317°71	2°0/17.6	18		139890	2001 <i>RU</i> ₉₁		8 19.1 344°51	0°4/19.		

EPHEMERIDES

8 19.1

8 19.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
174717	2003 <i>UU</i> ₁₄₄		8 19.1 293°99	2°5/20.6	18		167245	2003 <i>UR</i> ₉₆		8 19.1 272°40	0°3/19.4	18	
7 20	22 18.35	- 6 35.4	1.360	2.257	15.6	20.0	7 20	22 16.07	-10 14.9	1.789	2.688	12.4	20.5
7 30	22 12.47	- 6 29.5	1.288	2.245	11.4	19.7	7 30	22 10.39	-10 39.1	1.721	2.682	8.8	20.2
8 9	22 4.18	- 6 38.2	1.237	2.232	6.7	19.4	8 9	22 2.91	-11 12.6	1.677	2.676	4.6	20.0
8 19	21 54.34	- 6 59.0	1.210	2.219	2.6	19.1	8 19	21 54.36	-11 51.4	1.659	2.671	0.4	19.6
8 29	21 44.24	- 7 26.9	1.208	2.207	5.3	19.3	8 29	21 45.71	-12 30.4	1.667	2.665	4.3	19.9
9 8	21 35.27	- 7 56.2	1.231	2.195	10.2	19.5	9 8	21 37.99	-13 4.6	1.703	2.659	8.5	20.2
9 18	21 28.58	- 8 21.5	1.276	2.183	14.9	19.8	9 18	21 32.02	-13 30.3	1.762	2.653	12.3	20.4
9 28	21 24.96	- 8 38.5	1.340	2.171	18.9	20.0	9 28	21 28.40	-13 45.3	1.843	2.648	15.5	20.6
430232	2013 <i>VV</i> ₂₁		8 19.1 341°09	5°2/22.5	15		448731	2011 <i>DQ</i> ₂₄		8 19.1 236°99	7°7/16.5	15	
7 20	22 13.29	- 0 28.1	1.192	2.084	17.7	20.5	7 20	22 35.35	-29 6.8	1.166	2.073	16.9	20.6
7 30	22 9.07	- 0 22.3	1.127	2.075	13.7	20.2	7 30	22 24.79	-29 18.8	1.108	2.066	12.7	20.4
8 9	22 2.45	- 0 40.8	1.082	2.067	9.2	20.0	8 9	22 10.65	-29 16.1	1.071	2.058	8.9	20.1
8 19	21 54.33	- 1 22.1	1.058	2.060	5.6	19.7	8 19	21 54.47	-28 48.9	1.058	2.050	7.8	20.0
8 29	21 45.99	- 2 20.8	1.057	2.053	6.4	19.8	8 29	21 38.47	-27 51.8	1.070	2.041	10.8	20.2
9 8	21 38.85	- 3 28.0	1.078	2.047	10.6	20.0	9 8	21 24.82	-26 27.3	1.106	2.032	15.2	20.4
9 18	21 34.03	- 4 34.8	1.121	2.043	15.2	20.2	9 18	21 14.94	-24 42.5	1.162	2.022	19.5	20.6
9 28	21 32.31	- 5 32.9	1.182	2.039	19.3	20.5	9 28	21 9.48	-22 45.7	1.236	2.012	23.2	20.9
24669	1988 <i>VV</i>		8 19.1 300°14	3°4/21.4	18		471528	2012 <i>HH</i> ₉		8 19.1 110°49	4°8/15.2	17	
7 20	22 15.55	- 3 25.7	1.375	2.266	15.9	18.1	7 20	22 20.39	-22 21.3	1.681	2.593	12.3	21.4
7 30	22 10.53	- 3 34.0	1.298	2.250	11.9	17.8	7 30	22 13.33	-23 45.4	1.647	2.613	8.7	21.3
8 9	22 3.20	- 4 1.8	1.243	2.234	7.4	17.6	8 9	22 4.35	-25 6.6	1.639	2.632	5.6	21.1
8 19	21 54.34	- 4 46.7	1.211	2.218	3.6	17.3	8 19	21 54.38	-26 16.7	1.657	2.651	5.1	21.1
8 29	21 45.16	- 5 42.9	1.203	2.202	5.4	17.4	8 29	21 44.61	-27 8.8	1.702	2.670	7.7	21.3
9 8	21 36.99	- 6 43.0	1.220	2.186	10.1	17.6	9 8	21 36.15	-27 39.7	1.772	2.688	11.0	21.6
9 18	21 30.96	- 7 39.5	1.259	2.171	14.7	17.8	9 18	21 29.83	-27 49.3	1.865	2.705	14.1	21.8
9 28	21 27.89	- 8 26.2	1.318	2.156	18.8	18.0	9 28	21 26.17	-27 39.7	1.976	2.721	16.6	22.0
326236	2012 <i>DC</i> ₂₀		8 19.1 145°99	5°5/14.6	17		376122	2011 <i>AC</i> ₂₄		8 19.1 218°82	0°2/19.0	18	
7 20	22 19.28	-22 57.2	1.572	2.488	12.8	20.3	7 20	22 19.70	-12 6.2	1.630	2.531	13.3	20.7
7 30	22 12.82	-24 30.9	1.528	2.495	9.1	20.1	7 30	22 13.04	-12 22.8	1.565	2.528	9.3	20.4
8 9	22 4.20	-26 2.7	1.508	2.501	6.1	20.0	8 9	22 4.32	-12 47.2	1.523	2.524	4.8	20.1
8 19	21 54.35	-27 23.0	1.514	2.507	5.8	20.0	8 19	21 54.39	-13 14.9	1.507	2.519	0.2	19.8
8 29	21 44.54	-28 23.6	1.546	2.512	8.6	20.1	8 29	21 44.37	-13 40.8	1.518	2.515	4.8	20.1
9 8	21 36.01	-29 0.2	1.603	2.517	12.1	20.4	9 8	21 35.46	-14 0.2	1.555	2.510	9.4	20.4
9 18	21 29.72	-29 12.5	1.681	2.521	15.4	20.6	9 18	21 28.60	-14 10.3	1.616	2.505	13.4	20.6
9 28	21 26.26	-29 2.8	1.777	2.525	18.1	20.8	9 28	21 24.41	-14 9.6	1.698	2.499	16.8	20.8
186856	2004 <i>GE</i> ₄₄		8 19.1 45°17	1°7/20.3	17		344134	2000 <i>AS</i> ₁₆₉		8 19.1 260°61	14°5/3.6	17	
7 20	22 16.19	- 6 38.7	1.251	2.156	16.2	20.5	7 20	22 16.46	+30 51.9	2.178	2.811	18.5	20.7
7 30	22 10.72	- 7 5.0	1.209	2.171	11.6	20.3	7 30	22 10.84	+32 10.0	2.094	2.798	17.4	20.6
8 9	22 3.10	- 7 47.6	1.189	2.187	6.5	20.1	8 9	22 3.28	+32 58.8	2.024	2.785	16.2	20.4
8 19	21 54.34	- 8 40.9	1.192	2.203	1.9	19.8	8 19	21 54.39	+33 13.3	1.971	2.771	15.2	20.3
8 29	21 45.76	- 9 37.5	1.220	2.220	5.0	20.1	8 29	21 45.11	+32 50.7	1.936	2.757	14.6	20.3
9 8	21 38.60	-10 29.6	1.272	2.237	9.8	20.4	9 8	21 36.49	+31 52.7	1.922	2.743	14.6	20.2
9 18	21 33.77	-11 11.8	1.346	2.255	14.2	20.7	9 18	21 29.50	+30 24.4	1.927	2.729	15.2	20.2
9 28	21 31.81	-11 40.5	1.440	2.273	17.7	21.0	9 28	21 24.88	+28 34.4	1.951	2.715	16.2	20.3
33731	1999 <i>NM</i> ₂₄		8 19.1 250°57	0°6/19.6	18		325509	2009 <i>RA</i> ₅₃		8 19.1 301°54	2°9/16.5	18	
7 20	22 15.87	-10 10.9	2.172	3.062	10.9	18.4	7 20	22 14.51	-19 56.6	2.176	3.086	10.0	20.7
7 30	22 9.98	-10 19.9	2.101	3.057	7.7	18.2	7 30	22 9.15	-20 37.2	2.105	3.072	7.0	20.5
8 9	22 2.60	-10 36.0	2.055	3.053	4.1	18.0	8 9	22 2.24	-21 18.7	2.059	3.058	4.0	20.3
8 19	21 54.34	-10 56.4	2.036	3.048	0.6	17.7	8 19	21 54.38	-21 56.2	2.040	3.044	3.0	20.2
8 29	21 46.02	-11 17.6	2.045	3.043	3.7	17.9	8 29	21 46.42	-22 25.1	2.049	3.030	5.5	20.3
9 8	21 38.47	-11 36.1	2.083	3.038	7.3	18.1	9 8	21 39.21	-22 41.9	2.085	3.017	8.7	20.5
9 18	21 32.39	-11 49.2	2.145	3.032	10.6	18.3	9 18	21 33.51	-22 45.3	2.144	3.003	11.8	20.7
9 28	21 28.31	-11 55.0	2.230	3.027	13.4	18.5	9 28	21 29.84	-22 34.9	2.224	2.990	14.4	20.8
292313	2006 <i>SE</i> ₁₅₉		8 19.1 151°00	4°0/23.6	18		480485	2015 <i>LC</i> ₂₇		8 19.1 352°12	0°3/19.4	18	
7 20	22 13.20	+ 3 7.1	2.380	3.219	11.9	21.0	7 20	22 12.80	- 9 2.1	1.497	2.405	13.8	20.5
7 30	22 8.00	+ 2 44.1	2.310	3.225	9.3	20.9	7 30	22 8.35	- 9 50.5	1.436	2.401	9.7	20.2
8 9	22 1.53	+ 2 4.7	2.264	3.230	6.5	20.7	8 9	22 1.95	-10 52.5	1.398	2.398	5.1	20.0
8 19	21 54.33	+ 1 10.9	2.244	3.235	4.3	20.6	8 19	21 54.39	-12 2.3	1.384	2.396	0.3	19.6
8 29	21 47.09	+ 0 6.5	2.252	3.240	4.4	20.6	8 29	21 46.74	-13 12.3	1.395	2.394	4.8	19.9
9 8	21 40.52	- 1 3.6	2.289	3.245	6.7	20.8	9 8	21 40.13	-14 15.2	1.432	2.393	9.4	20.2
9 18	21 35.21	- 2 14.1	2.352	3.249	9.4	20.9	9 18	21 35.44	-15 5.3	1.492	2.392	13.6	20.4
9 28	21 31.65	- 3 20.2	2.439	3.253	11.9	21.1	9 28	21 33.32	-15 39.6	1.572	2.392	17.1	20.7
349430	2008 <i>AT</i> ₈₄		8 19.1 158°60	2°3/21.5	18		512108	2015 <i>OH</i> ₆₅		8 19.1 340°51	0°2/19.3	18	
7 20	22 15.70	- 3 36.7	2.590	3.451	10.3	21.2	7 20	22 17.82	-12 5.1	2.015	2.910	11.4	20.3
7 30	22 9.62	- 3 40.8	2.522	3.458	7.6	21.1	7 30	22 11.40	-12 1.7	1.949	2.908	8.0	20.1
8 9	22 2.32	- 3 55.0	2.480	3.464	4.8	20.9	8 9	22 3.37	-12 3.8	1.908	2.907	4.2	19.9
8 19	21 54.34	- 4 17.4	2.465	3.469	2.5	20.7	8 19	21 54.42	-12 8.5	1.894	2.906	0.2	19.6
8 29	21 46.35	- 4 45.3	2.480	3.474	3.4	20.8	8 29	21 45.45	-12 12.7	1.908	2.905	3.9	19.9
9 8	21 39.02	- 5 15.3	2.523	3.479	6.2	21.0	9 8	21 37.40	-12 13.5	1.950	2.904	7.8	20.1
9 18	21 32.93	- 5 44.3	2.594	3.483	8.9	21.2	9 18	21 30.99	-12 9.0	2.017	2.904	11.2	20.3
9 28	21 28.53	- 6 9.4	2.688	3.486	11.3	21.4	9 28	21 26.76	-11 57.8	2.106	2.903	14.1	20.5
261317	2005 <i>UB</i> ₂₀₅		8 19.1 76°77	3°4/22.7	18		262686	2006 <i>WD</i> ₁₇₀	</				

EPHEMERIDES

8 19.1

8 19.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
10284	1981 QY ₂		8 19.1 73°62	0°3/18.8	18		381732	2009 RJ ₂₆		8 19.2 349°20	2°5/17.4	16	
7 20	22 14.41	-11 24.7	1.961	2.861	11.4	17.6	7 20	22 9.61	-13 39.2	0.978	1.917	16.4	19.8
7 30	22 9.09	-12 5.1	1.900	2.863	7.9	17.4	7 30	22 6.85	-14 50.4	0.925	1.905	11.3	19.5
8 9	22 2.20	-12 53.5	1.864	2.864	4.1	17.2	8 9	22 1.47	-16 16.1	0.890	1.896	5.8	19.2
8 19	21 54.41	-13 45.3	1.854	2.866	0.3	16.9	8 19	21 54.42	-17 45.5	0.877	1.888	2.7	19.0
8 29	21 46.58	-14 35.0	1.872	2.868	4.2	17.2	8 29	21 47.21	-19 6.3	0.886	1.881	7.6	19.3
9 8	21 39.62	-15 17.9	1.917	2.869	8.0	17.5	9 8	21 41.43	-20 7.7	0.915	1.877	13.2	19.5
9 18	21 34.24	-15 50.7	1.986	2.871	11.5	17.7	9 18	21 38.30	-20 44.1	0.963	1.874	18.2	19.8
9 28	21 30.96	-16 11.3	2.077	2.873	14.3	17.9	9 28	21 38.56	-20 53.8	1.028	1.873	22.4	20.1
260626	2005 GM ₇₅		8 19.1 115°88	2°5/17.3	17		374939	2007 BL ₂₃		8 19.2 279°75	0°4/19.4	18	
7 20	22 20.16	-16 37.6	1.569	2.479	13.2	20.4	7 20	22 17.76	-10 5.4	1.555	2.456	13.8	21.7
7 30	22 13.27	-17 31.7	1.525	2.493	9.1	20.2	7 30	22 11.97	-10 28.5	1.475	2.437	9.8	21.4
8 9	22 4.38	-18 29.3	1.505	2.506	4.7	20.0	8 9	22 3.95	-11 3.2	1.417	2.417	5.2	21.1
8 19	21 54.44	-19 23.4	1.511	2.519	2.6	19.9	8 19	21 54.47	-11 44.9	1.385	2.397	0.4	20.7
8 29	21 44.64	-20 7.2	1.544	2.532	6.1	20.1	8 29	21 44.67	-12 27.8	1.379	2.377	4.9	21.0
9 8	21 36.14	-20 36.4	1.602	2.544	10.2	20.4	9 8	21 35.81	-13 5.8	1.399	2.357	9.8	21.2
9 18	21 29.83	-20 49.1	1.684	2.555	13.8	20.7	9 18	21 28.96	-13 34.1	1.442	2.337	14.3	21.4
9 28	21 26.23	-20 46.0	1.785	2.567	16.8	20.9	9 28	21 24.91	-13 50.0	1.504	2.316	18.1	21.6
476265	2007 VO ₁₄₂		8 19.1 264°62	2°0/20.9	18		312607	2009 RJ ₂₁		8 19.2 136°83	3°2/22.2	18	
7 20	22 14.38	-5 4.6	1.924	2.806	12.5	21.2	7 20	22 14.09	-1 20.8	2.357	3.216	11.3	20.4
7 30	22 9.14	-5 28.2	1.853	2.802	9.1	21.0	7 30	22 8.67	-1 21.2	2.288	3.219	8.6	20.2
8 9	22 2.26	-6 5.1	1.805	2.797	5.4	20.8	8 9	22 1.94	-1 34.1	2.243	3.221	5.6	20.0
8 19	21 54.42	-6 52.1	1.784	2.793	2.1	20.5	8 19	21 54.46	-1 57.9	2.224	3.224	3.4	19.9
8 29	21 46.47	-7 44.5	1.790	2.788	4.0	20.7	8 29	21 46.94	-2 29.9	2.234	3.227	4.0	20.0
9 8	21 39.33	-8 36.9	1.823	2.783	7.7	20.9	9 8	21 40.11	-3 6.0	2.272	3.229	6.6	20.1
9 18	21 33.76	-9 24.3	1.881	2.779	11.3	21.1	9 18	21 34.57	-3 42.6	2.335	3.231	9.5	20.3
9 28	21 30.33	-10 3.0	1.961	2.774	14.4	21.3	9 28	21 30.80	-4 15.9	2.422	3.234	12.1	20.5
179529	2002 CT ₁₉₅		8 19.1 42°49	0°8/18.3	18		475436	2006 QZ ₁₄₇		8 19.2 301°53	3°4/16.6	18	
7 20	22 11.91	-9 53.3	1.757	2.661	12.3	19.0	7 20	22 18.35	-21 8.9	1.835	2.745	11.5	20.8
7 30	22 7.42	-11 27.7	1.712	2.677	8.4	18.8	7 30	22 12.02	-21 37.1	1.770	2.736	8.1	20.6
8 9	22 1.34	-13 12.9	1.692	2.694	4.2	18.6	8 9	22 3.81	-22 4.4	1.729	2.727	4.7	20.4
8 19	21 54.41	-15 1.0	1.699	2.711	0.8	18.4	8 19	21 54.49	-22 25.3	1.715	2.718	3.6	20.3
8 29	21 47.52	-16 43.7	1.734	2.728	4.7	18.7	8 29	21 45.13	-22 35.1	1.728	2.710	6.3	20.4
9 8	21 41.58	-18 13.6	1.796	2.746	8.7	19.0	9 8	21 36.78	-22 31.0	1.767	2.701	9.9	20.6
9 18	21 37.31	-19 26.1	1.882	2.764	12.1	19.2	9 18	21 30.33	-22 12.4	1.829	2.693	13.3	20.8
9 28	21 35.18	-20 19.1	1.990	2.782	15.0	19.4	9 28	21 26.36	-21 40.3	1.911	2.684	16.2	21.0
154183	2002 GJ ₁₁₇		8 19.1 241°11	2°7/22.3	18		300544	2007 TL ₂₆₁		8 19.2 346°27	2°8/17.1	18	
7 20	22 11.80	-0 29.8	2.347	3.207	11.3	20.2	7 20	22 16.52	-18 18.5	1.639	2.554	12.4	19.9
7 30	22 7.14	-1 14.7	2.269	3.201	8.5	20.0	7 30	22 10.86	-18 58.0	1.582	2.551	8.6	19.7
8 9	22 1.17	-2 15.0	2.214	3.195	5.5	19.8	8 9	22 3.24	-19 39.9	1.548	2.548	4.7	19.5
8 19	21 54.41	-3 27.8	2.187	3.189	2.9	19.6	8 19	21 54.50	-20 18.0	1.539	2.546	3.0	19.4
8 29	21 47.54	-4 48.4	2.188	3.183	3.7	19.7	8 29	21 45.74	-20 46.5	1.557	2.544	6.2	19.6
9 8	21 41.29	-6 11.1	2.217	3.177	6.6	19.8	9 8	21 38.08	-21 1.3	1.600	2.542	10.1	19.8
9 18	21 36.26	-7 30.5	2.273	3.171	9.7	20.0	9 18	21 32.40	-21 0.8	1.666	2.541	13.8	20.0
9 28	21 32.97	-8 41.9	2.354	3.165	12.4	20.2	9 28	21 29.30	-20 45.2	1.751	2.540	16.8	20.2
21097	1992 ER ₂₅		8 19.2 331°30	1°7/17.8	18		128193	2003 SA ₁₃		8 19.2 317°84	1°4/17.9	18	
7 20	22 13.60	-15 12.7	1.672	2.586	12.2	17.9	7 20	22 14.84	-15 46.6	2.130	3.035	10.4	19.0
7 30	22 8.85	-15 52.1	1.603	2.573	8.5	17.7	7 30	22 9.37	-16 10.8	2.062	3.028	7.2	18.8
8 9	22 2.22	-16 37.8	1.558	2.560	4.4	17.4	8 9	22 2.38	-16 38.4	2.019	3.021	3.7	18.6
8 19	21 54.43	-17 24.0	1.538	2.548	1.8	17.2	8 19	21 54.50	-17 5.5	2.003	3.014	1.4	18.4
8 29	21 46.50	-18 4.6	1.544	2.537	5.4	17.4	8 29	21 46.57	-17 28.0	2.015	3.007	4.5	18.6
9 8	21 39.50	-18 34.5	1.576	2.526	9.6	17.6	9 8	21 39.42	-17 42.5	2.054	3.000	8.0	18.8
9 18	21 34.32	-18 50.7	1.630	2.516	13.5	17.8	9 18	21 33.77	-17 47.1	2.117	2.994	11.2	19.0
9 28	21 31.60	-18 51.9	1.704	2.506	16.7	18.0	9 28	21 30.15	-17 41.0	2.202	2.988	13.9	19.2
237250	2008 WG ₆₉		8 19.2 343°01	4°0/17.0	17		349786	2009 BP ₆₀		8 19.2 260°72	1°0/19.9	18	
7 20	22 19.08	-18 49.7	1.035	1.966	16.4	19.5	7 20	22 19.16	-9 44.8	1.942	2.831	12.1	20.5
7 30	22 13.42	-19 31.3	0.985	1.961	11.5	19.2	7 30	22 12.53	-9 39.1	1.863	2.818	8.6	20.3
8 9	22 4.83	-20 16.1	0.954	1.956	6.4	18.9	8 9	22 4.09	-9 40.9	1.809	2.806	4.7	20.0
8 19	21 54.47	-20 54.7	0.945	1.952	4.2	18.8	8 19	21 54.54	-9 47.8	1.781	2.792	1.1	19.7
8 29	21 44.07	-21 18.1	0.959	1.949	8.4	19.0	8 29	21 44.82	-9 56.5	1.782	2.779	4.1	19.9
9 8	21 35.41	-21 21.1	0.994	1.946	13.6	19.3	9 8	21 35.95	-10 3.8	1.810	2.766	8.1	20.2
9 18	21 29.74	-21 3.1	1.049	1.944	18.4	19.6	9 18	21 28.78	-10 6.8	1.863	2.752	11.9	20.4
9 28	21 27.77	-20 25.8	1.120	1.943	22.3	19.9	9 28	21 23.93	-10 3.7	1.938	2.738	15.0	20.6
217015	2001 BW ₃₁		8 19.2 196°88	1°1/20.1	18		477249	2009 SM ₁₁		8 19.2 244°13	2°4/21.8	17	
7 20	22 16.84	-8 47.4	2.483	3.363	10.1	19.9	7 20	22 12.56	-2 28.1	2.565	3.428	10.4	22.2
7 30	22 10.51	-8 42.0	2.412	3.362	7.2	19.7	7 30	22 7.61	-2 47.9	2.483	3.419	7.8	22.0
8 9	22 2.85	-8 43.2	2.366	3.360	4.0	19.5	8 9	22 1.43	-3 19.5	2.426	3.409	4.9	21.8
8 19	21 54.44	-8 49.0	2.348	3.358	1.2	19.3	8 19	21 54.50	-4 0.8	2.396	3.399	2.6	21.6
8 29	21 46.00	-8 56.9	2.359	3.356	3.3	19.4	8 29	21 47.45	-4 48.6	2.394	3.390	3.4	21.7
9 8	21 38.25	-9 4.4	2.399	3.354	6.5	19.6	9 8	21 40.97	-5 38.9	2.421	3.379	6.2	21.8
9 18	21 31.83	-9 9.3	2.466	3.352	9.5	19.8	9 18	21 35.62	-6 27.6	2.474	3.369	9.1	22.0
9 28	21 27.20	-9 9.6	2.556	3.349	12.0	20.0	9 28	21 31.90	-7 11.3	2.552	3.359	11.6	22.2
68045	2000 YN ₄₄		8 19.2 62°21	6°5/23.7	18		260418	2004 XU ₆₀		8 19.2 244°99	2°0/20.5	17	
7 20	22 18.23	+ 3 36.2	1.684	2.532	15.6	18.6	7 20						

EPHEMERIDES

8 19.2

8 19.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
137780	1999 <i>XO</i> ₂₂₃		8 19.2 156°21	2.7/21.2	18		324128	2005 <i>YY</i> ₄₆		8 19.2 258°91	0.6/19.8	18	
7 20	22 18.91	- 4 11.3	1.802	2.677	13.5	20.7	7 20	22 14.81	- 9 26.0	2.538	3.422	9.7	21.6
7 30	22 12.32	- 4 19.5	1.739	2.683	9.9	20.5	7 30	22 9.25	- 9 43.7	2.451	3.404	6.9	21.4
8 9	22 3.95	- 4 41.5	1.700	2.688	6.0	20.3	8 9	22 2.33	-10 8.6	2.389	3.386	3.7	21.2
8 19	21 54.55	- 5 14.6	1.687	2.693	2.8	20.1	8 19	21 54.57	-10 38.2	2.356	3.367	0.6	20.9
8 29	21 45.14	- 5 54.4	1.701	2.698	4.4	20.2	8 29	21 46.64	-11 9.0	2.351	3.348	3.3	21.1
9 8	21 36.71	- 6 35.7	1.743	2.702	8.2	20.4	9 8	21 39.29	-11 37.7	2.375	3.329	6.6	21.3
9 18	21 30.10	- 7 13.8	1.809	2.705	11.8	20.7	9 18	21 33.14	-12 1.4	2.425	3.309	9.7	21.5
9 28	21 25.87	- 7 45.0	1.898	2.708	14.9	20.9	9 28	21 28.71	-12 17.9	2.499	3.289	12.3	21.6
36700	2000 <i>RT</i> ₁₇		8 19.2 173°79	2.5/20.9	18		296727	2009 <i>SO</i> ₃₅₉		8 19.2 245°84	7.2/26.9	17	
7 20	22 20.30	- 5 12.4	1.616	2.498	14.4	19.2	7 20	22 13.67	+12 57.3	2.635	3.407	12.7	20.4
7 30	22 13.48	- 5 18.2	1.552	2.500	10.6	19.0	7 30	22 8.43	+13 26.8	2.549	3.399	10.8	20.3
8 9	22 4.62	- 5 38.2	1.511	2.502	6.3	18.8	8 9	22 1.90	+13 37.9	2.485	3.391	9.0	20.1
8 19	21 54.57	- 6 9.5	1.495	2.503	2.7	18.6	8 19	21 54.57	+13 29.5	2.445	3.382	7.6	20.0
8 29	21 44.46	- 6 47.2	1.507	2.504	4.7	18.7	8 29	21 47.08	+13 2.5	2.430	3.373	7.2	20.0
9 8	21 35.46	- 7 25.9	1.545	2.505	8.9	18.9	9 8	21 40.13	+12 19.9	2.442	3.364	8.1	20.0
9 18	21 28.49	- 8 0.5	1.607	2.504	12.9	19.2	9 18	21 34.33	+11 25.9	2.479	3.355	9.8	20.1
9 28	21 24.18	- 8 27.2	1.690	2.504	16.3	19.4	9 28	21 30.18	+10 25.9	2.539	3.346	11.7	20.3
204594	2005 <i>GJ</i> ₁₁₃		8 19.2 110°58	3.4/15.8	17		383235	2006 <i>BC</i> ₄₀		8 19.2 212°80	1.3/18.1	18	
7 20	22 15.61	-19 22.9	2.007	2.917	10.7	20.0	7 20	22 16.46	-13 32.0	1.925	2.827	11.5	20.9
7 30	22 9.93	-20 43.3	1.962	2.929	7.4	19.8	7 30	22 10.66	-14 25.0	1.859	2.823	8.0	20.7
8 9	22 2.67	-22 4.9	1.943	2.940	4.3	19.7	8 9	22 3.14	-15 25.2	1.817	2.818	4.0	20.4
8 19	21 54.54	-23 20.7	1.951	2.951	3.6	19.6	8 19	21 54.59	-16 26.8	1.802	2.813	1.3	20.2
8 29	21 46.43	-24 24.5	1.987	2.962	6.2	19.8	8 29	21 45.93	-17 23.9	1.815	2.807	4.8	20.4
9 8	21 39.26	-25 12.0	2.049	2.973	9.3	20.0	9 8	21 38.13	-18 11.1	1.855	2.801	8.7	20.7
9 18	21 33.75	-25 41.7	2.136	2.984	12.3	20.3	9 18	21 32.00	-18 45.4	1.920	2.795	12.2	20.9
9 28	21 30.39	-25 53.7	2.242	2.994	14.7	20.5	9 28	21 28.12	-19 5.1	2.005	2.788	15.2	21.1
469351	2000 <i>WE</i> ₇₄		8 19.2 316°54	3.8/21.4	16		176609	2002 <i>FM</i> ₆		8 19.2 101°52	11.5/ 4.9	18	
7 20	22 15.58	- 4 0.6	1.387	2.280	15.7	20.7	7 20	22 23.57	-50 37.4	2.322	3.157	12.3	19.8
7 30	22 10.68	- 3 43.9	1.304	2.256	11.8	20.4	7 30	22 15.84	-52 9.5	2.311	3.167	11.6	19.7
8 9	22 3.43	- 3 43.6	1.242	2.232	7.5	20.1	8 9	22 5.84	-53 19.2	2.322	3.177	11.5	19.7
8 19	21 54.56	- 3 58.8	1.202	2.208	4.0	19.8	8 19	21 54.63	-54 0.2	2.355	3.187	12.1	19.8
8 29	21 45.26	- 4 25.9	1.188	2.185	5.6	19.8	8 29	21 43.59	-54 9.6	2.409	3.197	13.1	19.9
9 8	21 36.90	- 4 59.2	1.197	2.163	10.2	20.0	9 8	21 34.06	-53 48.6	2.482	3.206	14.3	20.0
9 18	21 30.63	- 5 32.6	1.228	2.141	14.9	20.2	9 18	21 26.99	-53 1.3	2.572	3.216	15.4	20.1
9 28	21 27.35	- 6 0.3	1.278	2.120	19.0	20.4	9 28	21 22.92	-51 52.9	2.676	3.225	16.4	20.3
164347	2005 <i>CN</i> ₄₈		8 19.2 175°76	0.8/18.4	18		396569	2000 <i>DF</i> ₁₄		8 19.2 251°70	1.4/20.6	18	
7 20	22 15.24	-12 13.1	1.895	2.796	11.7	20.4	7 20	22 13.92	- 4 56.7	2.101	2.980	11.7	21.3
7 30	22 9.77	-13 4.6	1.833	2.797	8.1	20.2	7 30	22 8.85	- 5 48.0	2.018	2.966	8.5	21.1
8 9	22 2.64	-14 4.0	1.796	2.797	4.1	20.0	8 9	22 2.21	- 6 53.8	1.959	2.952	4.9	20.8
8 19	21 54.55	-15 6.0	1.786	2.798	0.8	19.7	8 19	21 54.58	- 8 10.1	1.927	2.937	1.6	20.6
8 29	21 46.39	-16 4.5	1.804	2.798	4.5	20.0	8 29	21 46.74	- 9 31.2	1.924	2.922	3.7	20.7
9 8	21 39.13	-16 54.3	1.848	2.798	8.5	20.3	9 8	21 39.56	-10 50.8	1.948	2.906	7.5	20.9
9 18	21 33.52	-17 31.9	1.917	2.798	12.0	20.5	9 18	21 33.79	-12 3.3	1.999	2.890	11.1	21.1
9 28	21 30.12	-17 55.4	2.007	2.798	14.9	20.7	9 28	21 30.02	-13 4.4	2.072	2.874	14.1	21.3
290113	2005 <i>QB</i> ₁₂₃		8 19.2 27°34	0.1/19.1	18		515868	2015 <i>OM</i> ₈₈		8 19.2 20°82	1.4/20.2	18	
7 20	22 14.98	-11 29.2	1.899	2.799	11.7	20.6	7 20	22 16.76	- 8 51.0	1.785	2.678	12.7	20.7
7 30	22 9.55	-11 55.8	1.839	2.802	8.2	20.4	7 30	22 10.83	- 8 43.1	1.726	2.682	9.1	20.5
8 9	22 2.50	-12 30.0	1.804	2.804	4.2	20.2	8 9	22 3.20	- 8 44.2	1.690	2.687	5.1	20.3
8 19	21 54.55	-13 7.6	1.795	2.807	0.1	19.9	8 19	21 54.61	- 8 51.8	1.681	2.692	1.5	20.1
8 29	21 46.59	-13 43.7	1.813	2.810	4.1	20.2	8 29	21 46.05	- 9 2.4	1.699	2.697	4.1	20.3
9 8	21 39.53	-14 14.1	1.858	2.813	8.1	20.5	9 8	21 38.48	- 9 12.4	1.743	2.703	8.1	20.5
9 18	21 34.11	-14 35.7	1.928	2.816	11.6	20.7	9 18	21 32.69	- 9 18.8	1.811	2.709	11.7	20.8
9 28	21 30.86	-14 46.6	2.019	2.820	14.5	20.9	9 28	21 29.21	- 9 19.2	1.901	2.715	14.8	21.0
468946	2015 <i>AD</i> ₁₈		8 19.2 268°13	1.0/18.4	18		100829	1998 <i>HW</i> ₈		8 19.2 193°51	0.8/19.8	18	
7 20	22 16.96	-11 59.2	1.400	2.311	14.4	20.7	7 20	22 16.83	- 7 40.3	1.514	2.412	14.3	20.2
7 30	22 11.44	-12 55.3	1.340	2.308	10.0	20.4	7 30	22 11.22	- 8 28.4	1.452	2.411	10.2	20.0
8 9	22 3.68	-14 2.9	1.303	2.305	5.1	20.1	8 9	22 3.54	- 9 31.5	1.412	2.411	5.5	19.7
8 19	21 54.57	-15 14.5	1.290	2.302	1.1	19.8	8 19	21 54.63	-10 43.7	1.398	2.410	0.9	19.4
8 29	21 45.35	-16 21.8	1.303	2.299	5.7	20.1	8 29	21 45.61	-11 57.4	1.410	2.409	4.7	19.7
9 8	21 37.32	-17 17.2	1.341	2.296	10.6	20.4	9 8	21 37.68	-13 5.0	1.448	2.407	9.5	19.9
9 18	21 31.50	-17 56.3	1.402	2.292	14.9	20.7	9 18	21 31.78	-14 0.6	1.509	2.406	13.7	20.2
9 28	21 28.57	-18 17.1	1.481	2.289	18.5	20.9	9 28	21 28.57	-14 40.8	1.591	2.404	17.2	20.4
424511	2008 <i>EU</i> ₁₃		8 19.2 171°37	3.4/16.7	17		38785	2000 <i>RR</i> ₄₃		8 19.2 235°30	3.2/21.6	18	
7 20	22 20.03	-19 13.2	1.612	2.524	12.8	21.7	7 20	22 18.02	- 2 57.2	2.004	2.871	12.7	18.8
7 30	22 13.33	-20 4.3	1.558	2.526	8.9	21.5	7 30	22 11.74	- 2 51.7	1.923	2.861	9.5	18.5
8 9	22 4.56	-20 57.0	1.528	2.528	5.0	21.3	8 9	22 3.73	- 2 59.3	1.866	2.849	6.1	18.3
8 19	21 54.59	-21 44.1	1.524	2.529	3.6	21.2	8 19	21 54.63	- 3 18.5	1.835	2.838	3.4	18.1
8 29	21 44.64	-22 19.0	1.547	2.530	6.7	21.4	8 29	21 45.36	- 3 46.3	1.832	2.826	4.4	18.2
9 8	21 35.90	-22 37.8	1.594	2.530	10.7	21.6	9 8	21 36.84	- 4 18.4	1.856	2.813	7.8	18.3
9 18	21 29.31	-22 39.2	1.665	2.530	14.3	21.8	9 18	21 29.91	- 4 50.6	1.906	2.801	11.3	18.5
9 28	21 25.47	-22 24.2	1.755	2.530	17.3	22.0	9 28	21 25.17	- 5 18.7	1.977	2.787	14.4	18.7
25955	Radway		8 19.2 272°18	1.6/17.9	18		264889	2002 <i>SH</i> ₆₃		8 19.2 305°			

EPHEMERIDES

8 19.2

8 19.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
514411	2016 <i>TB</i> ₆₃		8 19.2 323°37	2°8/17.2	18		36879	2000 <i>SM</i> ₁₅₄		8 19.2 229°61	2°3/21.5	18	
7 20	22 16.30	-17 34.7	1.513	2.430	13.1	21.4	7 20	22 13.38	-3 18.1	2.319	3.188	11.1	19.3
7 30	22 10.95	-18 14.3	1.448	2.419	9.1	21.1	7 30	22 8.30	-3 41.6	2.243	3.183	8.2	19.1
8 9	22 3.45	-18 57.9	1.406	2.408	4.9	20.9	8 9	22 1.87	-4 17.6	2.191	3.178	5.1	18.9
8 19	21 54.63	-19 39.0	1.389	2.397	2.9	20.7	8 19	21 54.63	-5 3.6	2.167	3.172	2.5	18.8
8 29	21 45.68	-20 10.7	1.398	2.387	6.4	20.9	8 29	21 47.29	-5 55.7	2.170	3.167	3.6	18.8
9 8	21 37.84	-20 28.4	1.431	2.377	10.8	21.1	9 8	21 40.59	-6 49.3	2.202	3.161	6.7	19.0
9 18	21 32.09	-20 29.9	1.486	2.368	14.7	21.4	9 18	21 35.18	-7 40.0	2.259	3.155	9.8	19.2
9 28	21 29.11	-20 15.1	1.560	2.360	18.1	21.6	9 28	21 31.55	-8 24.3	2.340	3.149	12.5	19.4
102606	1999 <i>VA</i> ₁₀		8 19.2 298°56	7°3/13.8	18		217631	1993 <i>TG</i> ₁₅		8 19.2 335°12	5°3/24.5	18	
7 20	22 21.73	-29 37.8	1.658	2.567	12.6	19.5	7 20	22 10.90	+ 5 4.3	1.931	2.775	14.0	19.9
7 30	22 14.96	-30 32.9	1.581	2.537	9.8	19.3	7 30	22 6.81	+ 4 44.5	1.853	2.767	11.2	19.7
8 9	22 5.65	-31 20.8	1.527	2.507	7.6	19.1	8 9	22 1.18	+ 4 2.9	1.797	2.760	8.2	19.5
8 19	21 54.68	-31 52.7	1.498	2.476	7.7	19.0	8 19	21 54.61	+ 3 1.0	1.765	2.752	5.7	19.4
8 29	21 43.36	-32 1.2	1.494	2.446	10.1	19.1	8 29	21 47.90	+ 1 43.0	1.759	2.746	5.6	19.4
9 8	21 33.17	-31 43.4	1.514	2.416	13.5	19.2	9 8	21 41.90	+ 0 15.4	1.779	2.739	7.9	19.5
9 18	21 25.29	-31 0.4	1.555	2.385	16.9	19.3	9 18	21 37.36	- 1 14.5	1.825	2.734	11.0	19.7
9 28	21 20.55	-29 55.9	1.613	2.355	19.9	19.5	9 28	21 34.85	- 2 39.6	1.893	2.728	14.0	19.9
440117	2003 <i>SP</i> ₇₈		8 19.2 75°83	1°9/20.6	16		87834	2000 <i>SD</i> ₁₇₉		8 19.2 16°82	1°7/18.1	18	
7 20	22 17.56	- 6 36.2	1.691	2.579	13.6	21.2	7 20	22 18.31	-15 43.2	1.414	2.330	14.0	17.5
7 30	22 11.41	- 6 44.1	1.638	2.591	9.8	21.0	7 30	22 12.28	-16 3.6	1.362	2.332	9.7	17.2
8 9	22 3.50	- 7 4.3	1.609	2.603	5.6	20.8	8 9	22 4.09	-16 28.7	1.333	2.335	5.0	17.0
8 19	21 54.64	- 7 33.3	1.605	2.615	2.0	20.6	8 19	21 54.67	-16 52.8	1.328	2.338	1.8	16.8
8 29	21 45.85	- 8 6.6	1.629	2.627	4.2	20.7	8 29	21 45.32	-17 10.2	1.348	2.342	5.8	17.1
9 8	21 38.15	- 8 39.1	1.679	2.639	8.3	21.0	9 8	21 37.28	-17 16.8	1.393	2.346	10.3	17.3
9 18	21 32.32	- 9 6.7	1.752	2.651	12.0	21.3	9 18	21 31.51	-17 10.9	1.460	2.351	14.4	17.6
9 28	21 28.90	- 9 26.4	1.848	2.663	15.1	21.5	9 28	21 28.60	-16 52.2	1.547	2.356	17.8	17.8
145443	2005 <i>QR</i> ₁₆₅		8 19.2 7°15	0°7/18.5	18 R		424801	2008 <i>UF</i> ₅₂		8 19.2 344°99	13°0/ 8.8	18	
7 20	22 10.35	-12 35.1	2.089	2.995	10.5	18.7	7 20	22 17.36	-38 39.6	1.216	2.130	15.8	18.8
7 30	22 6.26	-13 17.3	2.032	2.998	7.3	18.5	7 30	22 12.43	-40 24.0	1.177	2.118	13.8	18.7
8 9	22 0.81	-14 6.2	1.999	3.001	3.7	18.2	8 9	22 4.45	-41 47.8	1.158	2.108	13.0	18.6
8 19	21 54.59	-14 57.2	1.993	3.005	0.7	18.0	8 19	21 54.68	-42 38.3	1.159	2.099	13.9	18.6
8 29	21 48.36	-15 45.3	2.015	3.010	4.0	18.3	8 29	21 44.91	-42 47.6	1.181	2.091	16.0	18.7
9 8	21 42.88	-16 26.3	2.063	3.015	7.6	18.5	9 8	21 36.98	-42 15.0	1.220	2.084	18.7	18.9
9 18	21 38.79	-16 57.0	2.135	3.022	10.7	18.7	9 18	21 32.14	-41 5.7	1.276	2.078	21.4	19.1
9 28	21 36.56	-17 15.7	2.230	3.029	13.4	18.9	9 28	21 31.03	-39 27.4	1.345	2.074	23.7	19.2
354205	2002 <i>ES</i> ₁₂₉		8 19.2 21°92	4°4/23.5	17		115969	2003 <i>WA</i> ₄₅		8 19.2 193°10	0°8/19.9	18	
7 20	22 9.48	+ 2 29.5	1.450	2.325	16.2	19.7	7 20	22 14.41	- 7 20.2	2.031	2.919	11.7	20.0
7 30	22 5.98	+ 1 39.7	1.404	2.341	12.4	19.5	7 30	22 9.16	- 8 10.1	1.963	2.918	8.3	19.8
8 9	22 0.75	+ 0 24.8	1.378	2.358	8.3	19.3	8 9	22 2.36	- 9 11.8	1.920	2.917	4.5	19.5
8 19	21 54.58	- 1 10.1	1.376	2.376	4.9	19.2	8 19	21 54.65	-10 20.8	1.904	2.915	0.8	19.3
8 29	21 48.49	- 2 56.8	1.399	2.395	5.1	19.3	8 29	21 46.85	-11 31.4	1.916	2.914	3.8	19.5
9 8	21 43.45	- 4 45.3	1.447	2.416	8.5	19.5	9 8	21 39.82	-12 37.7	1.955	2.912	7.6	19.7
9 18	21 40.22	- 6 26.4	1.519	2.437	12.2	19.8	9 18	21 34.30	-13 35.1	2.021	2.910	11.1	19.9
9 28	21 39.30	- 7 53.4	1.613	2.460	15.5	20.0	9 28	21 30.81	-14 20.4	2.108	2.907	14.0	20.1
144277	2004 <i>CO</i> ₁₀₀		8 19.2 238°14	2°0/17.7	18		20826	2000 <i>UV</i> ₁₃		8 19.2 55°58	10°8/16.7	18	
7 20	22 18.83	-15 28.7	1.699	2.605	12.5	20.5	7 20	22 58.49	-40 11.1	1.406	2.259	17.8	17.3
7 30	22 12.57	-16 16.5	1.629	2.595	8.7	20.2	7 30	22 38.50	-40 48.4	1.421	2.332	14.1	17.3
8 9	22 4.25	-17 10.4	1.583	2.584	4.5	20.0	8 9	22 16.50	-40 51.8	1.462	2.404	11.5	17.3
8 19	21 54.66	-18 4.0	1.564	2.573	2.1	19.8	8 19	21 54.91	-40 16.3	1.531	2.473	10.9	17.5
8 29	21 44.89	-18 50.8	1.571	2.561	5.7	20.0	8 29	21 36.01	-39 5.7	1.628	2.541	12.2	17.7
9 8	21 36.10	-19 25.4	1.605	2.549	10.0	20.2	9 8	21 21.18	-37 29.9	1.752	2.607	14.3	18.0
9 18	21 29.27	-19 45.0	1.662	2.537	13.8	20.4	9 18	21 10.82	-35 40.2	1.898	2.670	16.4	18.3
9 28	21 25.07	-19 48.8	1.739	2.524	17.1	20.6	9 28	21 4.71	-33 45.0	2.064	2.732	18.1	18.6
293851	2007 <i>RX</i> ₂₃₄		8 19.2 153°67	1°3/18.4	17		293474	2007 <i>EN</i> ₂₂₀		8 19.2 189°95	6°1/12.4	18	
7 20	22 21.74	-14 16.8	1.422	2.330	14.4	20.5	7 20	22 17.82	-33 23.9	2.594	3.487	9.2	21.3
7 30	22 14.69	-14 42.6	1.367	2.334	10.0	20.3	7 30	22 11.35	-34 18.6	2.546	3.486	7.4	21.2
8 9	22 5.34	-15 14.7	1.335	2.337	5.1	20.0	8 9	22 3.42	-35 4.5	2.524	3.485	6.2	21.1
8 19	21 54.68	-15 47.3	1.329	2.340	1.3	19.7	8 19	21 54.68	-35 36.5	2.529	3.484	6.5	21.1
8 29	21 44.06	-16 14.0	1.348	2.342	5.7	20.1	8 29	21 45.97	-35 51.0	2.561	3.483	7.9	21.2
9 8	21 34.81	-16 30.4	1.393	2.345	10.4	20.3	9 8	21 38.13	-35 46.7	2.618	3.481	9.9	21.3
9 18	21 27.94	-16 34.0	1.460	2.347	14.7	20.6	9 18	21 31.82	-35 24.7	2.698	3.479	11.8	21.5
9 28	21 24.08	-16 24.3	1.546	2.349	18.1	20.8	9 28	21 27.54	-34 46.9	2.797	3.477	13.5	21.6
205207	2000 <i>GB</i> ₄₀		8 19.2 141°89	2°6/16.8	18		400939	2010 <i>VH</i> ₃₀		8 19.2 352°86	0°7/18.5	18	
7 20	22 17.69	-19 16.5	2.165	3.070	10.3	20.9	7 20	22 11.29	-11 8.8	1.614	2.526	12.8	20.1
7 30	22 11.29	-19 56.5	2.113	3.077	7.1	20.7	7 30	22 7.29	-12 11.0	1.553	2.521	8.9	19.9
8 9	22 3.38	-20 36.9	2.085	3.084	4.0	20.5	8 9	22 1.50	-13 24.5	1.515	2.517	4.5	19.6
8 19	21 54.65	-21 12.9	2.086	3.090	2.8	20.4	8 19	21 54.64	-14 42.9	1.501	2.513	0.8	19.3
8 29	21 45.97	-21 40.1	2.114	3.097	5.3	20.6	8 29	21 47.68	-15 58.4	1.515	2.511	4.9	19.6
9 8	21 38.19	-21 55.7	2.170	3.103	8.4	20.8	9 8	21 41.66	-17 4.0	1.553	2.509	9.3	19.9
9 18	21 32.02	-21 58.4	2.251	3.108	11.4	21.0	9 18	21 37.39	-17 54.9	1.615	2.508	13.2	20.1
9 28	21 27.94	-21 48.6	2.353	3.114	13.8	21.2	9 28	21 35.50	-18 28.4	1.697	2.507	16.4	20.3
44576	1999 <i>GJ</i> ₁₀		8 19.2 56°04	0°6/18.7	18		315310	2007 <i>TE</i> ₂₃₄					

EPHEMERIDES

8 19.2

8 19.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
304476	2006 <i>UM</i> ₈₆		8 19.2 230°27	0°3/19.4	18		285508	2000 <i>EF</i> ₃₃		8 19.2 112°22	1°6/18.1	17	
7 20	22 15.05	-10 12.9	2.075	2.968	11.2	21.4	7 20	22 18.76	-12 36.9	1.290	2.204	15.2	20.4
7 30	22 9.56	-10 39.4	2.008	2.967	7.9	21.2	7 30	22 12.78	-13 44.0	1.242	2.211	10.5	20.2
8 9	22 2.56	-11 14.1	1.966	2.965	4.1	21.0	8 9	22 4.44	-15 1.8	1.215	2.218	5.3	19.9
8 19	21 54.68	-11 53.3	1.951	2.963	0.3	20.7	8 19	21 54.76	-16 21.7	1.213	2.224	1.6	19.7
8 29	21 46.73	-12 32.4	1.965	2.962	3.8	21.0	8 29	21 45.10	-17 34.0	1.237	2.231	6.2	20.0
9 8	21 39.59	-13 7.2	2.005	2.960	7.5	21.2	9 8	21 36.84	-18 31.2	1.285	2.237	11.1	20.3
9 18	21 33.94	-13 34.4	2.070	2.958	10.9	21.4	9 18	21 31.01	-19 9.2	1.354	2.243	15.5	20.6
9 28	21 30.32	-13 52.0	2.158	2.956	13.8	21.6	9 28	21 28.24	-19 27.2	1.442	2.249	19.0	20.8
178763	2000 <i>WF</i> ₅		8 19.2 268°04	3°0/20.9	18		322436	2011 <i>SP</i> ₂₄₇		8 19.2 7°61	3°3/22.4	18	
7 20	22 19.52	-5 18.8	1.424	2.314	15.5	20.2	7 20	22 12.39	-0 19.9	1.877	2.746	13.3	20.1
7 30	22 13.29	-5 10.4	1.354	2.306	11.5	20.0	7 30	22 7.85	-0 55.3	1.810	2.746	10.1	19.9
8 9	22 4.74	-5 17.2	1.306	2.298	7.0	19.7	8 9	22 1.74	-1 49.0	1.765	2.747	6.5	19.7
8 19	21 54.72	-5 36.9	1.282	2.290	3.2	19.5	8 19	21 54.70	-2 57.6	1.745	2.747	3.6	19.5
8 29	21 44.50	-6 5.1	1.283	2.281	5.2	19.6	8 29	21 47.59	-4 15.8	1.752	2.748	4.3	19.6
9 8	21 35.41	-6 36.2	1.310	2.273	9.9	19.8	9 8	21 41.27	-5 36.7	1.786	2.750	7.6	19.8
9 18	21 28.53	-7 4.6	1.359	2.264	14.3	20.0	9 18	21 36.50	-6 53.7	1.846	2.751	11.1	20.0
9 28	21 24.61	-7 26.0	1.428	2.256	18.1	20.3	9 28	21 33.80	-8 1.5	1.928	2.753	14.2	20.2
355704	2008 <i>FW</i> ₇₅		8 19.2 90°75	2°7/16.5	18		20014	1991 <i>RM</i> ₂₉		8 19.2 284°27	7°0/24.0	18	
7 20	22 15.30	-18 53.7	2.171	3.078	10.1	20.7	7 20	22 17.19	+5 39.0	1.837	2.671	15.1	18.0
7 30	22 9.63	-19 48.3	2.125	3.091	7.0	20.5	7 30	22 11.49	+6 14.7	1.742	2.646	12.4	17.8
8 9	22 2.53	-20 43.9	2.106	3.104	3.9	20.3	8 9	22 3.81	+6 30.8	1.668	2.620	9.5	17.5
8 19	21 54.68	-21 35.0	2.113	3.117	2.8	20.3	8 19	21 54.75	+6 25.8	1.618	2.595	7.4	17.4
8 29	21 46.89	-22 16.9	2.149	3.130	5.3	20.5	8 29	21 45.27	+6 0.7	1.593	2.569	7.4	17.3
9 8	21 39.99	-22 46.4	2.212	3.143	8.4	20.7	9 8	21 36.44	+5 19.3	1.594	2.543	9.7	17.4
9 18	21 34.60	-23 1.8	2.299	3.156	11.2	20.9	9 18	21 29.24	+4 27.5	1.620	2.517	12.9	17.5
9 28	21 31.20	-23 3.4	2.407	3.168	13.6	21.1	9 28	21 24.45	+3 32.1	1.666	2.490	16.1	17.7
208026	1999 <i>JD</i> ₇₄		8 19.2 55°80	2°9/17.2	17		495987	2007 <i>TP</i> ₄₂₆		8 19.2 7°02	13°3/27.8	17	
7 20	22 17.74	-15 21.2	1.170	2.094	15.6	19.6	7 20	22 7.97	+9 15.8	0.773	1.663	25.0	19.8
7 30	22 12.10	-16 34.6	1.133	2.107	10.7	19.4	7 30	22 5.97	+10 43.4	0.733	1.662	21.3	19.6
8 9	22 4.05	-17 54.9	1.117	2.120	5.5	19.1	8 9	22 1.19	+11 28.1	0.706	1.665	17.5	19.4
8 19	21 54.72	-19 12.1	1.125	2.134	3.0	19.0	8 19	21 54.70	+11 24.8	0.694	1.670	14.4	19.2
8 29	21 45.55	-20 16.3	1.157	2.148	7.2	19.3	8 29	21 48.14	+10 35.5	0.699	1.677	13.4	19.2
9 8	21 37.98	-21 0.9	1.213	2.162	12.0	19.6	9 8	21 43.23	+9 11.6	0.722	1.687	14.9	19.4
9 18	21 32.99	-21 23.7	1.289	2.177	16.2	19.9	9 18	21 41.19	+7 28.7	0.761	1.700	18.1	19.6
9 28	21 31.12	-21 25.1	1.383	2.191	19.6	20.2	9 28	21 42.72	+5 43.5	0.816	1.715	21.6	19.9
364	<i>Isara</i>		8 19.2 283°64	3°2/16.9	18		32415	2000 <i>RH</i> ₃₀		8 19.2 38°57	3°1/21.6	18	
7 20	22 17.39	-16 12.0	1.323	2.243	14.4	13.0	7 20	22 16.27	-3 37.8	1.940	2.813	12.8	18.6
7 30	22 12.10	-17 26.5	1.254	2.226	10.0	12.7	7 30	22 10.46	-3 26.7	1.876	2.817	9.5	18.4
8 9	22 4.26	-18 50.4	1.207	2.209	5.4	12.4	8 9	22 3.06	-3 28.3	1.836	2.821	6.0	18.2
8 19	21 54.73	-20 14.3	1.184	2.191	3.4	12.3	8 19	21 54.74	-3 40.8	1.821	2.825	3.3	18.1
8 29	21 44.85	-21 27.8	1.186	2.174	7.5	12.5	8 29	21 46.41	-4 1.2	1.834	2.829	4.3	18.2
9 8	21 36.11	-22 22.7	1.212	2.157	12.5	12.7	9 8	21 38.94	-4 25.5	1.874	2.834	7.6	18.4
9 18	21 29.75	-22 54.9	1.259	2.139	17.0	12.9	9 18	21 33.09	-4 49.7	1.939	2.838	11.0	18.6
9 28	21 26.62	-23 3.6	1.324	2.122	20.8	13.1	9 28	21 29.38	-5 10.1	2.025	2.843	13.9	18.8
517700	2015 <i>FD</i> ₄₀₃		8 19.2 344°77	14°4/8.8	17		264937	2002 <i>VZ</i> ₆₀		8 19.2 260°17	3°5/21.6	18	
7 20	22 22.36	-43 7.9	1.251	2.148	16.7	20.2	7 20	22 17.78	-2 57.3	1.610	2.488	14.7	20.5
7 30	22 15.98	-44 33.9	1.214	2.137	15.1	20.1	7 30	22 11.93	-2 57.0	1.534	2.478	11.0	20.3
8 9	22 6.30	-45 33.6	1.197	2.128	14.4	20.0	8 9	22 4.01	-3 13.4	1.480	2.467	7.0	20.0
8 19	21 54.76	-45 55.3	1.199	2.120	15.1	20.1	8 19	21 54.78	-3 44.3	1.452	2.456	3.7	19.8
8 29	21 43.44	-45 32.6	1.221	2.113	16.9	20.2	8 29	21 45.32	-4 25.6	1.449	2.445	5.0	19.9
9 8	21 34.27	-44 27.2	1.261	2.107	19.3	20.3	9 8	21 36.80	-5 11.4	1.472	2.434	9.1	20.1
9 18	21 28.55	-42 46.3	1.317	2.103	21.7	20.5	9 18	21 30.20	-5 55.7	1.519	2.423	13.1	20.3
9 28	21 26.79	-40 38.9	1.387	2.099	23.8	20.6	9 28	21 26.22	-6 33.4	1.587	2.412	16.7	20.5
44494	1998 <i>WD</i> ₄₁		8 19.2 355°60	6°6/25.2	18		146944	2002 <i>EA</i> ₁₇		8 19.2 73°45	2°3/16.9	18	
7 20	22 14.18	+7 10.2	1.882	2.711	14.9	18.7	7 20	22 14.78	-16 46.6	2.119	3.025	10.4	18.8
7 30	22 9.11	+7 17.9	1.811	2.711	12.2	18.5	7 30	22 9.26	-17 53.7	2.082	3.048	7.1	18.6
8 9	22 2.40	+7 3.4	1.761	2.711	9.3	18.3	8 9	22 2.35	-19 3.2	2.070	3.071	3.8	18.5
8 19	21 54.70	+6 26.9	1.735	2.711	7.1	18.2	8 19	21 54.74	-20 9.2	2.087	3.093	2.4	18.4
8 29	21 46.88	+5 31.5	1.734	2.711	6.8	18.2	8 29	21 47.24	-21 6.4	2.131	3.116	5.0	18.6
9 8	21 39.88	+4 22.9	1.759	2.711	8.7	18.3	9 8	21 40.64	-21 50.9	2.203	3.138	8.2	18.9
9 18	21 34.47	+3 8.0	1.808	2.711	11.5	18.5	9 18	21 35.56	-22 20.8	2.299	3.160	11.0	19.1
9 28	21 31.22	+1 53.9	1.880	2.711	14.3	18.6	9 28	21 32.45	-22 35.8	2.417	3.182	13.4	19.3
499112	2009 <i>HP</i> ₄₂		8 19.2 190°26	2°9/16.9	17		216820	2006 <i>UP</i> ₂₆₆		8 19.2 85°39	1°5/17.9	18	
7 20	22 19.73	-17 7.0	1.624	2.534	12.8	22.3	7 20	22 15.42	-15 3.7	1.990	2.895	11.0	20.8
7 30	22 13.22	-18 12.9	1.566	2.533	8.9	22.1	7 30	22 9.89	-15 45.5	1.932	2.897	7.6	20.6
8 9	22 4.61	-19 23.2	1.531	2.532	4.8	21.9	8 9	22 2.77	-16 31.9	1.898	2.899	3.9	20.4
8 19	21 54.76	-20 30.6	1.524	2.530	3.1	21.7	8 19	21 54.75	-17 18.0	1.891	2.901	1.6	20.2
8 29	21 44.82	-21 27.2	1.543	2.528	6.5	21.9	8 29	21 46.72	-17 58.6	1.912	2.904	4.7	20.4
9 8	21 36.02	-22 7.8	1.587	2.525	10.6	22.2	9 8	21 39.57	-18 29.7	1.960	2.906	8.4	20.7
9 18	21 29.31	-22 29.9	1.655	2.521	14.3	22.4	9 18	21 34.02	-18 48.9	2.032	2.908	11.6	20.9
9 28	21 25.33	-22 33.8	1.742	2.518	17.4	22.6	9 28	21 30.60	-18 55.2	2.126	2.910	14.4	21.1
167487	2003 <i>YE</i> ₆₅		8 19.2 268°57	2°5/21.1	18		218801	2006 <i>BC</i> ₉₉		8 19.2 291°93	1°7/20.4	17	

EPHEMERIDES

8 19.2

8 19.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
146844	2002 AP ₇₉		8 19.2 38°14'	1.9°/17.6	18		323640	2004 XC ₇₉		8 19.2 275°91'	2.6°/16.4	18	
7 20	22 14.69	-15 38.6	1.837	2.747	11.5	19.6	7 20	22 13.80	-18 51.0	2.352	3.260	9.5	20.6
7 30	22 9.44	-16 25.9	1.786	2.754	7.9	19.4	7 30	22 8.72	-19 46.9	2.281	3.246	6.6	20.4
8 9	22 2.55	-17 17.6	1.759	2.761	4.1	19.2	8 9	22 2.21	-20 45.1	2.234	3.233	3.7	20.2
8 19	21 54.76	-18 8.0	1.759	2.768	2.0	19.1	8 19	21 54.81	-21 40.6	2.216	3.220	2.8	20.2
8 29	21 46.99	-18 51.7	1.786	2.776	5.1	19.3	8 29	21 47.29	-22 28.3	2.226	3.206	5.2	20.3
9 8	21 40.20	-19 24.1	1.839	2.784	8.8	19.5	9 8	21 40.42	-23 4.5	2.263	3.193	8.3	20.5
9 18	21 35.11	-19 43.1	1.915	2.792	12.2	19.8	9 18	21 34.90	-23 27.1	2.324	3.179	11.1	20.6
9 28	21 32.24	-19 48.0	2.013	2.801	15.0	20.0	9 28	21 31.25	-23 35.2	2.407	3.166	13.6	20.8
164038	2003 UP ₂₆₄		8 19.2 254°55'	0.2°/19.1	18		321533	2009 SS ₂₆₁		8 19.2 309°14'	0.1°/19.3	17	
7 20	22 15.07	-10 26.1	1.941	2.837	11.7	19.9	7 20	22 16.10	-11 50.2	2.219	3.113	10.6	21.6
7 30	22 9.77	-11 12.8	1.867	2.828	8.2	19.7	7 30	22 10.26	-11 56.3	2.150	3.109	7.4	21.4
8 9	22 2.80	-12 9.5	1.818	2.818	4.3	19.4	8 9	22 2.97	-12 8.0	2.107	3.106	3.9	21.1
8 19	21 54.78	-13 11.4	1.796	2.808	0.2	19.1	8 19	21 54.83	-12 22.4	2.090	3.102	0.2	20.8
8 29	21 46.61	-14 12.4	1.801	2.798	4.2	19.4	8 29	21 46.65	-12 36.3	2.102	3.099	3.6	21.1
9 8	21 39.21	-15 7.1	1.834	2.787	8.3	19.6	9 8	21 39.24	-12 46.6	2.141	3.095	7.2	21.3
9 18	21 33.40	-15 51.3	1.891	2.777	11.9	19.8	9 18	21 33.27	-12 51.2	2.206	3.092	10.4	21.5
9 28	21 29.77	-16 22.3	1.970	2.766	15.0	20.0	9 28	21 29.26	-12 48.4	2.294	3.089	13.2	21.7
424424	2008 AA ₁₂₈		8 19.2 161°50'	1.7°/20.5	17		482381	2012 AN ₃		8 19.2 137°97'	1.1°/20.4	18	
7 20	22 18.91	- 6 22.5	1.675	2.561	13.8	22.1	7 20	22 14.62	- 7 29.7	2.523	3.401	10.0	21.7
7 30	22 12.52	- 6 44.6	1.613	2.565	10.0	21.8	7 30	22 9.05	- 7 46.5	2.459	3.408	7.1	21.5
8 9	22 4.22	- 7 20.2	1.575	2.569	5.7	21.6	8 9	22 2.27	- 8 11.3	2.421	3.415	4.0	21.4
8 19	21 54.81	- 8 5.3	1.562	2.572	1.8	21.3	8 19	21 54.82	- 8 41.7	2.411	3.421	1.2	21.2
8 29	21 45.36	- 8 54.4	1.577	2.575	4.4	21.5	8 29	21 47.36	- 9 14.3	2.430	3.427	3.1	21.3
9 8	21 36.97	- 9 41.5	1.618	2.578	8.6	21.8	9 8	21 40.57	- 9 45.6	2.477	3.433	6.2	21.5
9 18	21 30.50	-10 22.0	1.684	2.580	12.5	22.0	9 18	21 35.02	-10 12.8	2.551	3.439	9.1	21.7
9 28	21 26.54	-10 52.3	1.771	2.581	15.8	22.3	9 28	21 31.15	-10 33.6	2.648	3.444	11.5	21.9
511457	2014 KP ₁₆		8 19.2 74°61'	5.1°/14.4	18		289083	2004 TP ₂₄₂		8 19.2 343°24'	14.8°/ 5.8	18	
7 20	22 16.32	-25 26.6	2.003	2.914	10.7	21.4	7 20	22 24.71	-50 13.8	1.592	2.449	15.9	19.3
7 30	22 10.52	-26 36.1	1.963	2.925	7.8	21.2	7 30	22 17.44	-51 28.8	1.556	2.435	15.0	19.2
8 9	22 3.10	-27 41.3	1.948	2.936	5.5	21.1	8 9	22 7.03	-52 15.4	1.540	2.423	14.8	19.2
8 19	21 54.79	-28 35.5	1.960	2.947	5.4	21.1	8 19	21 54.92	-52 24.4	1.544	2.411	15.5	19.2
8 29	21 46.57	-29 13.4	1.999	2.958	7.5	21.3	8 29	21 43.09	-51 51.2	1.566	2.401	16.9	19.3
9 8	21 39.36	-29 32.5	2.063	2.969	10.2	21.5	9 8	21 33.39	-50 37.9	1.606	2.391	18.5	19.4
9 18	21 33.88	-29 32.7	2.150	2.980	12.8	21.7	9 18	21 27.02	-48 51.0	1.662	2.383	20.3	19.5
9 28	21 30.65	-29 15.7	2.256	2.991	15.1	21.9	9 28	21 24.48	-46 38.8	1.733	2.376	21.8	19.6
312779	2010 VY ₃₃		8 19.2 274°79'	5.4°/30.0	16 R		382581	2002 CS ₁₅₀		8 19.2 234°92'	1.3°/18.2	18	
7 20	22 7.85	+18 51.9	4.659	5.360	8.4	20.6	7 20	22 18.75	-14 50.7	1.989	2.888	11.3	21.7
7 30	22 4.07	+19 4.0	4.561	5.347	7.5	20.5	7 30	22 12.35	-15 23.6	1.914	2.877	7.9	21.5
8 9	21 59.60	+19 3.5	4.484	5.333	6.5	20.4	8 9	22 4.16	-16 1.5	1.864	2.865	4.1	21.2
8 19	21 54.73	+18 50.0	4.431	5.320	5.7	20.3	8 19	21 54.87	-16 39.7	1.842	2.852	1.4	21.0
8 29	21 49.78	+18 23.9	4.404	5.306	5.4	20.3	8 29	21 45.43	-17 13.2	1.847	2.839	4.8	21.2
9 8	21 45.10	+17 47.0	4.403	5.292	5.6	20.3	9 8	21 36.82	-17 37.9	1.880	2.826	8.7	21.4
9 18	21 41.03	+17 1.4	4.428	5.279	6.3	20.3	9 18	21 29.88	-17 51.3	1.938	2.812	12.2	21.6
9 28	21 37.84	+16 9.9	4.477	5.265	7.3	20.4	9 28	21 25.24	-17 52.5	2.017	2.797	15.2	21.8
48699	1996 HN ₂₁		8 19.2 291°40'	7.6°/12.6	18		370004	1999 TM ₁₄₅		8 19.2 339°61'	6.4°/16.3	17	
7 20	22 19.01	-31 15.1	1.801	2.709	11.9	18.4	7 20	22 15.43	-23 21.8	0.900	1.843	16.9	19.6
7 30	22 12.84	-32 27.7	1.742	2.694	9.3	18.2	7 30	22 11.50	-23 50.7	0.842	1.822	12.3	19.3
8 9	22 4.51	-33 31.9	1.706	2.678	7.7	18.0	8 9	22 4.26	-24 16.0	0.801	1.801	7.9	19.0
8 19	21 54.86	-34 19.3	1.696	2.663	8.0	18.0	8 19	21 54.87	-24 27.4	0.780	1.783	6.6	18.8
8 29	21 45.07	-34 43.6	1.710	2.648	10.1	18.1	8 29	21 45.19	-24 15.8	0.780	1.767	10.4	19.0
9 8	21 36.40	-34 42.2	1.748	2.633	12.9	18.3	9 8	21 37.24	-23 37.2	0.798	1.753	15.7	19.2
9 18	21 29.83	-34 16.1	1.807	2.618	15.7	18.4	9 18	21 32.53	-22 33.3	0.834	1.741	20.7	19.4
9 28	21 26.04	-33 28.6	1.884	2.603	18.1	18.6	9 28	21 31.90	-21 8.4	0.884	1.731	25.0	19.7
211842	2004 FY ₆₁		8 19.2 128°05'	2.5°/16.9	18		291014	2005 YJ ₈		8 19.2 139°03'	5.1°/23.1	18	
7 20	22 16.47	-18 16.8	2.003	2.911	10.9	20.3	7 20	22 19.05	+ 1 45.8	1.923	2.770	14.0	20.2
7 30	22 10.63	-19 1.2	1.947	2.913	7.5	20.1	7 30	22 12.44	+ 2 9.3	1.859	2.778	10.9	20.0
8 9	22 3.19	-19 47.5	1.916	2.915	4.1	19.9	8 9	22 4.14	+ 2 16.0	1.817	2.785	7.7	19.9
8 19	21 54.83	-20 30.3	1.911	2.917	2.7	19.8	8 19	21 54.87	+ 2 6.6	1.801	2.791	5.3	19.7
8 29	21 46.47	-21 4.6	1.935	2.920	5.4	20.0	8 29	21 45.57	+ 1 43.4	1.812	2.797	5.6	19.8
9 8	21 39.03	-21 26.8	1.985	2.922	8.8	20.2	9 8	21 37.18	+ 1 11.0	1.850	2.803	8.2	19.9
9 18	21 33.25	-21 35.4	2.059	2.924	12.0	20.4	9 18	21 30.48	+ 0 34.3	1.913	2.809	11.3	20.1
9 28	21 29.63	-21 30.2	2.154	2.926	14.6	20.6	9 28	21 26.04	- 0 1.7	1.998	2.814	14.1	20.4
424169	2007 HO ₄₄		8 19.2 133°58'	1.4°/18.0	17		478830	2012 VE ₃₈		8 19.2 333°49'	5.5°/15.0	16	
7 20	22 18.79	-14 42.3	1.906	2.807	11.7	22.0	7 20	22 9.33	-19 9.8	1.046	1.988	15.2	20.1
7 30	22 12.23	-15 25.5	1.855	2.818	8.0	21.8	7 30	22 6.99	-20 41.5	0.972	1.954	10.8	19.8
8 9	22 3.99	-16 13.4	1.828	2.829	4.1	21.5	8 9	22 1.90	-22 24.5	0.918	1.920	6.6	19.4
8 19	21 54.85	-17 0.6	1.829	2.839	1.5	21.4	8 19	21 54.82	-24 6.7	0.885	1.888	6.0	19.3
8 29	21 45.77	-17 41.8	1.858	2.849	4.8	21.6	8 29	21 47.17	-25 33.8	0.874	1.857	10.3	19.4
9 8	21 37.70	-18 12.9	1.914	2.858	8.6	21.9	9 8	21 40.67	-26 34.1	0.882	1.829	15.6	19.6
9 18	21 31.41	-18 31.6	1.994	2.867	11.9	22.1	9 18	21 36.81	-27 1.7	0.908	1.802	20.7	19.8
9 28	21 27.41	-18 37.4	2.096	2.876	14.7	22.3	9 28	21 36.64	-26 55.8	0.949	1.778	25.0	20.0
176161	2001 HW ₄₃		8 19.2 135°06'	1.8°/17.9	17		98626	2000 WP ₉₈		8 19.2 295°64'	0.9°/19.9	18	
7 20													

EPHEMERIDES

8 19.2

8 19.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
273914	2007 <i>HT</i> ₇₁		8 19.2 85°54	1°9/20.8	17		120656	1996 <i>TV</i> ₄₅		8 19.3 287°94	1°3/18.3	18	
7 20	22 16.59	- 5 25.1	1.642	2.530	13.9	20.8	7 20	22 17.18	-14 1.3	1.628	2.537	12.9	20.8
7 30	22 10.87	- 5 55.5	1.590	2.542	10.1	20.6	7 30	22 11.52	-14 37.7	1.561	2.528	9.0	20.6
8 9	22 3.36	- 6 40.5	1.561	2.554	5.8	20.4	8 9	22 3.84	-15 21.3	1.518	2.519	4.6	20.3
8 19	21 54.86	- 7 35.6	1.557	2.566	2.0	20.1	8 19	21 54.92	-16 6.5	1.500	2.511	1.3	20.1
8 29	21 46.41	- 8 34.9	1.579	2.578	4.3	20.3	8 29	21 45.87	-16 46.9	1.508	2.502	5.3	20.3
9 8	21 39.04	- 9 31.7	1.628	2.590	8.4	20.6	9 8	21 37.83	-17 17.5	1.542	2.494	9.7	20.6
9 18	21 33.54	-10 21.1	1.702	2.602	12.2	20.9	9 18	21 31.73	-17 35.0	1.600	2.486	13.7	20.8
9 28	21 30.45	-10 59.4	1.796	2.614	15.4	21.1	9 28	21 28.24	-17 38.1	1.677	2.477	17.0	21.0
259682	2003 <i>XV</i> ₁₃		8 19.2 330°45	1°7/20.3	18		119977	2002 <i>WB</i> ₃		8 19.3 249°89	1°7/17.9	18	
7 20	22 13.14	- 7 3.4	1.088	2.004	17.1	19.6	7 20	22 16.65	-13 26.9	1.602	2.511	13.0	20.0
7 30	22 9.37	- 7 28.0	1.020	1.988	12.4	19.3	7 30	22 11.19	-14 33.9	1.537	2.504	9.0	19.7
8 9	22 2.98	- 8 12.8	0.973	1.972	7.0	18.9	8 9	22 3.69	-15 50.3	1.494	2.496	4.6	19.5
8 19	21 54.86	- 9 12.9	0.946	1.957	1.9	18.6	8 19	21 54.92	-17 9.1	1.478	2.488	1.8	19.2
8 29	21 46.39	-10 19.9	0.943	1.944	5.6	18.8	8 29	21 45.97	-18 22.0	1.488	2.480	5.7	19.5
9 8	21 39.16	-11 23.8	0.961	1.931	11.4	19.0	9 8	21 38.02	-19 22.0	1.525	2.472	10.1	19.7
9 18	21 34.44	-12 16.4	0.999	1.920	16.7	19.3	9 18	21 32.02	-20 5.1	1.584	2.464	14.1	20.0
9 28	21 33.10	-12 52.1	1.055	1.909	21.2	19.6	9 28	21 28.65	-20 29.5	1.663	2.455	17.5	20.2
399727	2004 <i>XA</i> ₁₀₉		8 19.2 237°12	9°5/30.5	16		424164	2007 <i>HG</i> ₂₃		8 19.3 81°04	2°3/17.4	16	
7 20	22 15.99	+23 30.9	2.979	3.652	13.3	21.5	7 20	22 17.65	-16 8.6	1.607	2.518	12.8	21.1
7 30	22 10.14	+24 27.3	2.887	3.640	12.1	21.3	7 30	22 11.70	-17 1.7	1.559	2.527	8.8	20.9
8 9	22 2.94	+25 3.7	2.815	3.628	10.9	21.2	8 9	22 3.84	-17 59.2	1.535	2.536	4.6	20.7
8 19	21 54.86	+25 17.7	2.765	3.616	9.9	21.1	8 19	21 54.93	-18 54.4	1.537	2.545	2.4	20.5
8 29	21 46.54	+25 8.4	2.738	3.603	9.5	21.1	8 29	21 46.08	-19 40.6	1.565	2.554	5.8	20.8
9 8	21 38.67	+24 37.6	2.735	3.590	9.8	21.1	9 8	21 38.40	-20 13.2	1.619	2.563	9.9	21.0
9 18	21 31.89	+23 48.7	2.755	3.576	10.6	21.1	9 18	21 32.74	-20 29.8	1.696	2.572	13.5	21.3
9 28	21 26.73	+22 47.1	2.798	3.563	11.8	21.2	9 28	21 29.64	-20 30.5	1.792	2.581	16.5	21.5
461161	2015 <i>TD</i> ₁₂₆		8 19.2 349°24	3°5/16.2	18		413014	2000 <i>NB</i> ₈		8 19.3 101°33	2°9/21.3	17	
7 20	22 10.46	-17 28.7	1.451	2.379	12.9	19.5	7 20	22 18.63	- 3 51.8	1.344	2.234	16.3	21.0
7 30	22 6.99	-18 44.4	1.392	2.367	8.9	19.3	7 30	22 12.64	- 4 11.1	1.290	2.241	12.0	20.7
8 9	22 1.53	-20 6.2	1.355	2.357	5.0	19.0	8 9	22 4.44	- 4 49.4	1.257	2.249	7.2	20.5
8 19	21 54.83	-21 25.7	1.343	2.348	3.7	18.9	8 19	21 54.95	- 5 42.5	1.248	2.256	3.2	20.3
8 29	21 48.00	-22 34.1	1.355	2.341	7.1	19.1	8 29	21 45.46	- 6 43.6	1.264	2.262	5.1	20.4
9 8	21 42.20	-23 24.5	1.391	2.335	11.3	19.4	9 8	21 37.26	- 7 44.7	1.305	2.269	9.7	20.7
9 18	21 38.37	-23 53.5	1.449	2.330	15.1	19.6	9 18	21 31.34	- 8 39.0	1.368	2.276	14.0	21.0
9 28	21 37.14	-24 0.6	1.525	2.326	18.4	19.8	9 28	21 28.32	- 9 21.7	1.452	2.282	17.7	21.2
86120	1999 <i>RM</i> ₁₄₀		8 19.2 351°74	0°7/18.7	18		478775	2012 <i>UT</i> ₁₃₁		8 19.3 344°64	15°6/29.4	18	
7 20	22 16.94	-14 10.6	1.967	2.869	11.3	18.9	7 20	22 10.47	+16 31.3	1.174	1.991	22.8	19.8
7 30	22 10.98	-14 22.2	1.904	2.868	7.9	18.6	7 30	22 7.49	+18 16.3	1.105	1.974	20.5	19.6
8 9	22 3.40	-14 38.2	1.866	2.866	4.0	18.4	8 9	22 2.05	+19 26.6	1.051	1.958	18.2	19.4
8 19	21 54.88	-14 55.0	1.854	2.865	0.8	18.2	8 19	21 54.90	+19 54.6	1.013	1.943	16.3	19.3
8 29	21 46.35	-15 8.7	1.870	2.865	4.3	18.4	8 29	21 47.30	+19 36.6	0.993	1.931	15.6	19.2
9 8	21 38.73	-15 16.0	1.912	2.864	8.1	18.7	9 8	21 40.73	+18 36.1	0.991	1.920	16.3	19.2
9 18	21 32.76	-15 15.2	1.980	2.864	11.5	18.9	9 18	21 36.49	+17 2.8	1.007	1.912	18.2	19.3
9 28	21 28.97	-15 5.2	2.069	2.864	14.4	19.1	9 28	21 35.52	+15 10.4	1.040	1.905	20.7	19.4
220158	2002 <i>TJ</i> ₂₄₃		8 19.2 18°85	3°6/17.2	17		137713	1999 <i>XX</i> ₉₆		8 19.3 254°93	6°3/14.1	18	
7 20	22 17.85	-18 30.6	1.097	2.027	15.8	19.5	7 20	22 19.78	-25 31.2	1.590	2.506	12.7	19.7
7 30	22 12.41	-19 8.7	1.056	2.032	11.0	19.2	7 30	22 13.56	-26 55.7	1.530	2.494	9.4	19.4
8 9	22 4.37	-19 49.4	1.036	2.038	6.0	19.0	8 9	22 5.00	-28 17.3	1.494	2.482	6.8	19.3
8 19	21 54.91	-20 24.1	1.037	2.045	3.8	18.9	8 19	21 54.98	-29 26.4	1.483	2.469	6.7	19.2
8 29	21 45.61	-20 45.1	1.062	2.053	7.7	19.1	8 29	21 44.75	-30 14.9	1.497	2.456	9.4	19.4
9 8	21 37.99	-20 48.2	1.109	2.062	12.5	19.4	9 8	21 35.69	-30 38.1	1.535	2.443	12.9	19.5
9 18	21 33.11	-20 32.6	1.177	2.071	16.8	19.7	9 18	21 28.87	-30 36.0	1.594	2.430	16.3	19.7
9 28	21 31.53	-19 59.9	1.261	2.082	20.4	20.0	9 28	21 25.03	-30 11.0	1.671	2.417	19.2	19.9
60468	2000 <i>DD</i> ₁₈		8 19.3 277°38	1°7/18.1	18		264001	2009 <i>OV</i> ₆		8 19.3 233°23	0°1/19.4	18	
7 20	22 20.25	-16 57.0	1.844	2.748	11.9	18.9	7 20	22 13.41	- 9 54.8	2.520	3.409	9.7	21.0
7 30	22 13.46	-17 5.3	1.774	2.738	8.3	18.7	7 30	22 8.35	-10 34.1	2.445	3.401	6.8	20.8
8 9	22 4.77	-17 15.7	1.728	2.728	4.3	18.5	8 9	22 2.01	-11 21.0	2.394	3.393	3.6	20.6
8 19	21 54.94	-17 23.8	1.708	2.718	1.7	18.3	8 19	21 54.90	-12 12.3	2.372	3.384	0.2	20.3
8 29	21 45.01	-17 25.8	1.716	2.708	5.1	18.5	8 29	21 47.69	-13 3.5	2.379	3.375	3.3	20.5
9 8	21 36.08	-17 18.8	1.751	2.698	9.1	18.7	9 8	21 41.07	-13 50.7	2.414	3.367	6.6	20.7
9 18	21 29.02	-17 1.7	1.811	2.688	12.7	18.9	9 18	21 35.63	-14 30.7	2.475	3.357	9.6	20.9
9 28	21 24.44	-16 34.5	1.891	2.678	15.8	19.1	9 28	21 31.88	-15 1.1	2.560	3.348	12.1	21.1
320299	2007 <i>RR</i> ₂₇₂		8 19.3 205°55	1°4/18.4	17		45052	1999 <i>XX</i> ₂₃		8 19.3 323°27	5°4/22.5	18	
7 20	22 21.53	-14 32.9	1.387	2.297	14.6	21.0	7 20	22 15.53	- 0 34.3	1.243	2.130	17.5	18.4
7 30	22 14.73	-14 56.2	1.329	2.296	10.2	20.8	7 30	22 10.83	- 0 18.1	1.172	2.117	13.5	18.2
8 9	22 5.54	-15 26.0	1.293	2.295	5.2	20.5	8 9	22 3.69	- 0 24.5	1.121	2.105	9.2	17.9
8 19	21 54.96	-15 56.1	1.282	2.294	1.4	20.2	8 19	21 54.95	- 0 52.8	1.092	2.093	5.7	17.7
8 29	21 44.34	-16 20.4	1.297	2.292	5.8	20.5	8 29	21 45.90	- 1 38.7	1.086	2.082	6.5	17.7
9 8	21 35.07	-16 34.1	1.337	2.290	10.7	20.8	9 8	21 37.96	- 2 34.6	1.104	2.071	10.7	17.9
9 18	21 28.21	-16 34.8	1.399	2.289	15.0	21.1	9 18	21 32.33	- 3 32.2	1.142	2.061	15.2	18.1
9 28	21 24.41	-16 22.1	1.480	2.287	18.6	21.3	9 28	21 29.82	- 4 23.7	1.200	2.052	19.3	18.3
482419	2012 <i>BB</i> ₁₂₆		8 19.3 174°35	0°4/19.7	18		394506	2007					

EPHEMERIDES

8 19.3

8 19.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
239843	1999 <i>TR</i> ₇₁		8 19.3 268°01	3°9/22.7	18		280994	2006 <i>DF</i> ₁₁₃		8 19.3 325°55	2°8/17.3	18	
7 20	22 15.11	+ 0 22.8	1.953	2.812	13.3	20.4	7 20	22 17.02	-17 37.1	1.504	2.422	13.2	20.5
7 30	22 9.91	+ 0 7.8	1.864	2.793	10.3	20.1	7 30	22 11.54	-18 19.6	1.443	2.414	9.2	20.2
8 9	22 2.99	- 0 25.0	1.798	2.775	6.9	19.9	8 9	22 3.91	-19 6.0	1.405	2.406	5.0	20.0
8 19	21 54.93	- 1 14.1	1.757	2.756	4.2	19.7	8 19	21 54.99	-19 49.6	1.391	2.399	3.0	19.8
8 29	21 46.60	- 2 15.4	1.743	2.736	4.8	19.7	8 29	21 45.95	-20 23.4	1.403	2.392	6.4	20.0
9 8	21 38.94	- 3 23.3	1.756	2.717	8.0	19.9	9 8	21 38.06	-20 42.8	1.440	2.385	10.8	20.3
9 18	21 32.79	- 4 31.4	1.795	2.697	11.5	20.0	9 18	21 32.28	-20 45.6	1.498	2.379	14.7	20.5
9 28	21 28.81	- 5 33.9	1.856	2.677	14.8	20.2	9 28	21 29.28	-20 32.0	1.576	2.374	18.0	20.7
390001	2012 <i>TD</i> ₃₀₃		8 19.3 284°39	2°3/17.4	18		151468	2002 <i>GT</i> ₁₅₄		8 19.3 120°03	2°1/17.1	18	
7 20	22 16.53	-16 19.2	1.722	2.633	12.1	20.6	7 20	22 15.49	-17 54.3	2.434	3.336	9.4	21.1
7 30	22 11.04	-17 9.0	1.653	2.621	8.4	20.4	7 30	22 9.73	-18 38.0	2.383	3.347	6.5	20.9
8 9	22 3.60	-18 4.3	1.608	2.609	4.5	20.1	8 9	22 2.69	-19 23.1	2.359	3.358	3.5	20.7
8 19	21 54.95	-18 58.6	1.589	2.597	2.4	19.9	8 19	21 54.95	-20 5.3	2.362	3.368	2.2	20.7
8 29	21 46.13	-19 45.5	1.597	2.585	5.8	20.1	8 29	21 47.26	-20 40.5	2.394	3.378	4.5	20.8
9 8	21 38.25	-20 19.7	1.630	2.574	9.9	20.4	9 8	21 40.32	-21 5.8	2.454	3.388	7.5	21.0
9 18	21 32.21	-20 38.5	1.686	2.562	13.6	20.6	9 18	21 34.76	-21 19.6	2.539	3.398	10.2	21.2
9 28	21 28.69	-20 41.1	1.762	2.550	16.8	20.8	9 28	21 30.99	-21 21.6	2.646	3.407	12.4	21.4
486947	2014 <i>MQ</i> ₅₀		8 19.3 313°78	4°7/23.6	17		500209	2012 <i>HK</i> ₂₈		8 19.3 152°04	1°6/17.9	17	
7 20	22 13.35	+ 2 35.6	2.168	3.014	12.6	20.9	7 20	22 19.11	-13 52.0	1.850	2.750	12.0	22.3
7 30	22 8.47	+ 2 42.6	2.089	3.006	10.0	20.7	7 30	22 12.59	-14 56.3	1.796	2.759	8.3	22.0
8 9	22 2.13	+ 2 33.2	2.033	2.999	7.2	20.6	8 9	22 4.29	-16 7.0	1.767	2.768	4.2	21.8
8 19	21 54.91	+ 2 8.4	2.002	2.991	5.0	20.4	8 19	21 55.00	-17 17.6	1.766	2.776	1.6	21.7
8 29	21 47.56	+ 1 30.6	1.998	2.984	5.1	20.4	8 29	21 45.71	-18 21.6	1.793	2.783	5.1	21.9
9 8	21 40.87	+ 0 44.3	2.021	2.977	7.4	20.5	9 8	21 37.43	-19 13.4	1.847	2.789	9.0	22.2
9 18	21 35.52	- 0 5.6	2.069	2.971	10.3	20.7	9 18	21 30.97	-19 50.4	1.925	2.795	12.4	22.4
9 28	21 32.07	- 0 54.2	2.140	2.964	13.0	20.9	9 28	21 26.87	-20 11.4	2.024	2.800	15.3	22.6
370229	2002 <i>PA</i> ₆₂		8 19.3 1°24	0°3/19.4	17		423863	2006 <i>RP</i> ₁₄		8 19.3 340°42	7°1/23.9	17	
7 20	22 18.38	-12 22.1	1.051	1.974	17.0	19.4	7 20	22 13.52	+ 2 59.1	1.149	2.031	19.1	20.4
7 30	22 12.93	-12 7.8	0.999	1.971	12.0	19.1	7 30	22 9.51	+ 3 16.6	1.084	2.021	15.2	20.1
8 9	22 4.76	-12 2.7	0.968	1.970	6.3	18.8	8 9	22 3.03	+ 3 5.6	1.037	2.013	11.0	19.9
8 19	21 54.98	-12 2.8	0.958	1.970	0.4	18.4	8 19	21 54.97	+ 2 26.1	1.011	2.005	7.6	19.7
8 29	21 45.21	-12 2.7	0.971	1.971	5.8	18.8	8 29	21 46.64	+ 1 22.5	1.006	1.998	7.7	19.7
9 8	21 37.06	-11 57.8	1.006	1.973	11.5	19.1	9 8	21 39.50	+ 0 4.1	1.024	1.993	11.2	19.8
9 18	21 31.70	-11 45.2	1.062	1.977	16.5	19.4	9 18	21 34.74	- 1 18.5	1.063	1.988	15.5	20.1
9 28	21 29.81	-11 23.1	1.135	1.982	20.6	19.7	9 28	21 33.15	- 2 35.0	1.120	1.984	19.6	20.3
12788	Shigeno		8 19.3 332°21	5°6/22.8	18 R		401727	2013 <i>JR</i> ₄		8 19.3 328°40	5°9/25.4	18	
7 20	22 10.50	- 0 4.8	1.053	1.955	18.8	16.8	7 20	22 12.78	+ 7 31.2	2.278	3.096	13.0	20.7
7 30	22 7.63	- 0 1.7	0.979	1.932	14.7	16.5	7 30	22 8.01	+ 7 35.8	2.202	3.094	10.7	20.5
8 9	22 2.18	- 0 27.0	0.923	1.910	10.0	16.2	8 9	22 1.88	+ 7 21.5	2.148	3.093	8.2	20.4
8 19	21 54.93	- 1 20.0	0.887	1.890	6.1	15.9	8 19	21 54.94	+ 6 48.6	2.119	3.091	6.3	20.3
8 29	21 47.22	- 2 35.3	0.873	1.871	6.8	15.9	8 29	21 47.89	+ 5 59.6	2.116	3.090	6.0	20.2
9 8	21 40.62	- 4 2.2	0.879	1.854	11.5	16.1	9 8	21 41.50	+ 4 59.1	2.140	3.088	7.6	20.3
9 18	21 36.48	- 5 29.2	0.905	1.838	16.7	16.3	9 18	21 36.39	+ 3 52.4	2.189	3.087	9.9	20.5
9 28	21 35.75	- 6 45.3	0.949	1.824	21.4	16.5	9 28	21 33.07	+ 2 45.4	2.262	3.086	12.4	20.7
181272	2005 <i>WR</i> ₁₈₄		8 19.3 165°26	3°5/15.5	18		349426	2008 <i>AJ</i> ₄₆		8 19.3 214°42	0°2/19.1	18	
7 20	22 15.10	-22 3.0	2.415	3.322	9.3	20.5	7 20	22 15.74	-11 24.2	2.011	2.908	11.3	21.5
7 30	22 9.56	-23 4.1	2.361	3.324	6.5	20.4	7 30	22 10.19	-11 57.1	1.946	2.906	7.9	21.3
8 9	22 2.65	-24 4.4	2.333	3.326	4.1	20.2	8 9	22 3.04	-12 37.7	1.905	2.904	4.1	21.1
8 19	21 54.94	-24 58.5	2.332	3.328	3.7	20.2	8 19	21 54.97	-13 21.8	1.904	2.903	0.2	20.8
8 29	21 47.22	-25 41.9	2.360	3.330	5.8	20.3	8 29	21 46.84	-14 4.3	1.890	2.901	4.0	21.1
9 8	21 40.23	-26 11.5	2.415	3.331	8.5	20.5	9 8	21 39.52	-14 41.0	1.945	2.898	7.9	21.3
9 18	21 34.64	-26 26.1	2.494	3.333	11.0	20.7	9 18	21 33.77	-15 8.4	2.011	2.896	11.3	21.5
9 28	21 30.91	-26 26.0	2.594	3.334	13.2	20.9	9 28	21 30.11	-15 24.8	2.098	2.894	14.2	21.7
454265	2014 <i>EY</i> ₃₂		8 19.3 58°50	17°0/14.2	15		469716	2005 <i>JP</i> ₁₅₀		8 19.3 90°89	5°2/24.7	16	
7 20	22 43.90	-46 27.0	1.004	1.884	21.3	20.6	7 20	22 14.26	+ 5 38.6	1.990	2.823	14.1	20.8
7 30	22 31.31	-47 14.2	0.976	1.889	18.8	20.5	7 30	22 9.08	+ 5 16.8	1.930	2.838	11.2	20.7
8 9	22 14.20	-47 21.5	0.966	1.894	17.3	20.4	8 9	22 2.42	+ 4 33.9	1.893	2.852	8.1	20.5
8 19	21 55.23	-46 35.3	0.974	1.900	17.2	20.4	8 19	21 54.96	+ 3 32.3	1.881	2.866	5.7	20.4
8 29	21 37.70	-44 53.2	1.002	1.906	18.7	20.6	8 29	21 47.50	+ 2 16.4	1.896	2.880	5.5	20.4
9 8	21 24.21	-42 25.3	1.049	1.912	21.1	20.7	9 8	21 40.89	+ 0 52.8	1.937	2.894	7.6	20.6
9 18	21 15.91	-39 27.7	1.113	1.918	23.7	21.0	9 18	21 35.79	- 0 31.7	2.005	2.908	10.5	20.8
9 28	21 12.80	-36 15.4	1.193	1.925	26.1	21.2	9 28	21 32.69	- 1 51.1	2.096	2.922	13.2	21.0
211712	2003 <i>YH</i> ₃		8 19.3 294°50	4°8/16.1	18		112368	2002 <i>NC</i> ₁₉		8 19.3 5°31	0°8/18.6	18	
7 20	22 21.79	-24 34.1	1.746	2.655	12.1	20.0	7 20	22 12.20	-10 42.3	1.373	2.289	14.3	18.8
7 30	22 14.84	-25 1.5	1.669	2.632	8.8	19.7	7 30	22 8.21	-11 51.8	1.319	2.289	9.9	18.5
8 9	22 5.64	-25 24.8	1.617	2.609	5.8	19.5	8 9	22 2.18	-13 14.6	1.287	2.290	5.0	18.3
8 19	21 55.03	-25 37.6	1.590	2.587	5.0	19.4	8 19	21 54.95	-14 42.8	1.280	2.291	0.9	18.0
8 29	21 44.21	-25 34.7	1.590	2.564	7.6	19.5	8 29	21 47.66	-16 7.2	1.297	2.294	5.4	18.3
9 8	21 34.45	-25 13.4	1.616	2.542	11.2	19.7	9 8	21 41.48	-17 19.3	1.339	2.297	10.2	18.6
9 18	21 26.79	-24 34.4	1.664	2.519	14.8	19.8	9 18	21 37.35	-18 13.7	1.404	2.302	14.4	18.9
9 28	21 21.96	-23 39.8	1.732	2.497	17.9	20.0	9 28	21 35.88	-18 47.9	1.487	2.307	17.9	19.1
516301	2016 <i>XL</i> ₆		8 19.3 223°39	5°3/13.2	18		312978	1999 <i>JG</i> ₂₉		8 19			

EPHEMERIDES

8 19.3

8 19.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
509205	2006 SY ₂₀		8 19.3 322°45	3°4/21.3	18		444030	2004 NT ₃₃		8 19.3 43°01	0°8/1.7	18	
7 20	22 15.50	- 4 29.3	1.203	2.104	16.9	20.7	7 20	21 57.24	+21 22.2	38.743	39.389	1.2	20.9
7 30	22 10.90	- 4 28.6	1.132	2.090	12.6	20.4	7 30	21 56.49	+21 22.6	38.659	39.392	1.0	20.9
8 9	22 3.78	- 4 47.6	1.082	2.075	7.8	20.1	8 9	21 55.68	+21 21.4	38.597	39.396	0.9	20.9
8 19	21 55.00	- 5 23.8	1.054	2.061	3.6	19.8	8 19	21 54.84	+21 18.6	38.557	39.399	0.8	20.8
8 29	21 45.90	- 6 11.3	1.049	2.048	5.6	19.9	8 29	21 53.99	+21 14.4	38.542	39.403	0.8	20.8
9 8	21 37.95	- 7 2.4	1.067	2.036	10.7	20.2	9 8	21 53.18	+21 8.9	38.551	39.406	0.8	20.8
9 18	21 32.37	- 7 49.4	1.106	2.025	15.7	20.4	9 18	21 52.42	+21 2.3	38.586	39.410	0.8	20.8
9 28	21 30.00	- 8 26.1	1.164	2.014	19.9	20.6	9 28	21 51.76	+20 54.7	38.645	39.413	0.9	20.9
382495	2001 QH ₁		8 19.3 316°92	1°8/20.9	18		476794	2008 UJ ₁₅₈		8 19.3 353°20	8°4/23.4	18	
7 20	22 10.51	- 0 45.1	1.256	2.150	16.9	19.5	7 20	22 14.40	+ 1 44.8	1.103	1.991	19.2	19.7
7 30	22 7.53	- 2 41.4	1.161	2.116	12.6	19.1	7 30	22 10.19	+ 3 2.3	1.042	1.981	15.5	19.4
8 9	22 2.15	- 5 17.8	1.088	2.083	7.5	18.7	8 9	22 3.44	+ 3 56.9	1.000	1.973	11.6	19.2
8 19	21 54.97	- 8 28.0	1.039	2.049	2.1	18.3	8 19	21 55.05	+ 4 25.4	0.977	1.967	8.8	19.0
8 29	21 47.12	-11 57.5	1.016	2.017	5.5	18.4	8 29	21 46.42	+ 4 28.2	0.976	1.962	9.0	19.0
9 8	21 40.02	-15 26.6	1.020	1.985	11.6	18.6	9 8	21 39.07	+ 4 10.2	0.996	1.960	12.1	19.2
9 18	21 35.03	-18 36.5	1.047	1.954	17.3	18.9	9 18	21 34.20	+ 3 39.2	1.036	1.959	16.0	19.4
9 28	21 33.23	-21 14.3	1.093	1.925	22.2	19.1	9 28	21 32.60	+ 3 3.9	1.094	1.960	19.8	19.6
513136	2001 FA ₆₅		8 19.3 201°81	1°8/21.4	18		65103	2002 CQ ₁₈		8 19.3 269°35	5°4/13.6	18	
7 20	22 15.09	- 3 17.2	2.490	3.353	10.7	22.6	7 20	22 15.96	-26 55.1	2.157	3.067	10.1	19.7
7 30	22 9.54	- 4 1.9	2.410	3.348	7.8	22.4	7 30	22 10.45	-28 10.1	2.098	3.057	7.6	19.5
8 9	22 2.66	- 4 59.4	2.356	3.343	4.7	22.2	8 9	22 3.26	-29 21.3	2.064	3.047	5.7	19.3
8 19	21 54.98	- 6 6.4	2.329	3.336	2.0	22.0	8 19	21 55.05	-30 21.9	2.056	3.037	5.8	19.3
8 29	21 47.17	- 7 18.5	2.332	3.329	3.3	22.1	8 29	21 46.73	-31 6.3	2.076	3.027	7.8	19.4
9 8	21 39.96	- 8 30.6	2.364	3.322	6.4	22.3	9 8	21 39.23	-31 31.3	2.121	3.016	10.5	19.6
9 18	21 33.96	- 9 38.0	2.424	3.313	9.5	22.4	9 18	21 33.34	-31 36.2	2.188	3.006	13.1	19.8
9 28	21 29.69	-10 37.0	2.508	3.304	12.1	22.6	9 28	21 29.64	-31 22.5	2.275	2.996	15.3	19.9
512106	2015 OV ₆₂		8 19.3 66°84	6°7/11.9	18		516731	2009 DZ ₁₄₄		8 19.3 44°61	0°7/18.5	18	
7 20	22 16.00	-30 21.8	2.072	2.980	10.5	20.9	7 20	22 11.27	-13 25.8	2.907	3.803	8.3	21.3
7 30	22 10.48	-31 54.7	2.032	2.984	8.2	20.8	7 30	22 6.72	-14 0.8	2.846	3.807	5.7	21.1
8 9	22 3.24	-33 20.0	2.016	2.987	6.8	20.7	8 9	22 1.14	-14 39.7	2.811	3.811	2.9	20.9
8 19	21 55.01	-34 30.2	2.026	2.990	7.2	20.7	8 19	21 54.99	-15 19.6	2.804	3.815	0.7	20.8
8 29	21 46.75	-35 19.6	2.063	2.994	9.1	20.9	8 29	21 48.83	-15 57.1	2.826	3.819	3.2	21.0
9 8	21 39.45	-35 45.6	2.124	2.997	11.4	21.0	9 8	21 43.21	-16 29.3	2.876	3.824	5.9	21.2
9 18	21 33.89	-35 48.8	2.206	3.000	13.7	21.2	9 18	21 38.62	-16 54.1	2.953	3.828	8.4	21.3
9 28	21 30.63	-35 31.3	2.306	3.004	15.7	21.4	9 28	21 35.45	-17 10.2	3.053	3.832	10.6	21.5
304472	2006 UC ₇₅		8 19.3 267°02	5°4/14.7	18		45638	2000 EK ₂₀		8 19.3 330°15	9°2/26.2	18	
7 20	22 19.62	-27 31.5	2.052	2.957	10.8	20.7	7 20	22 12.29	+ 9 26.3	1.485	2.321	17.9	17.6
7 30	22 13.02	-28 17.0	1.989	2.946	8.0	20.5	7 30	22 8.38	+ 9 59.0	1.405	2.303	15.1	17.4
8 9	22 4.58	-28 56.9	1.950	2.934	5.9	20.4	8 9	22 2.40	+10 3.8	1.343	2.287	12.1	17.2
8 19	21 55.06	-29 25.1	1.938	2.922	5.7	20.3	8 19	21 55.04	+ 9 38.5	1.303	2.271	9.8	17.0
8 29	21 45.48	-29 36.7	1.953	2.911	7.7	20.4	8 29	21 47.35	+ 8 44.4	1.284	2.256	9.3	16.9
9 8	21 36.87	-29 29.6	1.994	2.899	10.6	20.6	9 8	21 40.51	+ 7 27.8	1.289	2.242	11.0	17.0
9 18	21 30.08	-29 4.2	2.058	2.887	13.4	20.7	9 18	21 35.55	+ 5 57.5	1.316	2.229	14.1	17.1
9 28	21 25.69	-28 22.6	2.141	2.875	15.8	20.9	9 28	21 33.25	+ 4 23.9	1.364	2.217	17.4	17.3
449418	2013 HM ₄₁		8 19.3 140°72	0°4/18.9	18		245515	2005 SE ₇₂		8 19.3 20°25	2°8/22.0	18	
7 20	22 15.28	-12 31.6	2.482	3.374	9.6	22.3	7 20	22 12.04	- 1 36.0	1.749	2.626	13.7	19.4
7 30	22 9.59	-12 56.8	2.421	3.380	6.7	22.2	7 30	22 7.76	- 2 20.4	1.687	2.631	10.2	19.2
8 9	22 2.65	-13 27.0	2.386	3.386	3.4	22.0	8 9	22 1.86	- 3 23.2	1.648	2.635	6.4	19.0
8 19	21 55.01	-13 58.8	2.379	3.391	0.4	21.7	8 19	21 55.02	- 4 40.2	1.635	2.640	3.1	18.8
8 29	21 47.37	-14 28.7	2.402	3.397	3.5	22.0	8 29	21 48.13	- 6 5.1	1.648	2.646	4.2	18.9
9 8	21 40.44	-14 53.5	2.452	3.402	6.7	22.2	9 8	21 42.11	- 7 30.2	1.687	2.652	7.9	19.1
9 18	21 34.80	-15 11.1	2.528	3.407	9.5	22.4	9 18	21 37.70	- 8 48.9	1.751	2.658	11.5	19.3
9 28	21 30.89	-15 19.9	2.627	3.411	12.0	22.6	9 28	21 35.45	- 9 56.0	1.838	2.665	14.7	19.6
311430	2005 UJ ₁₆₇		8 19.3 256°07	4°7/14.9	18		330685	2008 HM ₅₆		8 19.3 38°44	1°1/18.5	17	
7 20	22 17.43	-25 57.0	2.211	3.117	10.0	20.9	7 20	22 16.60	-12 21.2	1.190	2.110	15.7	20.8
7 30	22 11.35	-26 45.2	2.152	3.111	7.4	20.8	7 30	22 11.36	-13 9.8	1.151	2.122	10.8	20.5
8 9	22 3.66	-27 29.4	2.118	3.105	5.2	20.6	8 9	22 3.83	-14 8.7	1.133	2.136	5.5	20.3
8 19	21 55.04	-28 4.0	2.111	3.099	4.9	20.6	8 19	21 55.08	-15 10.0	1.138	2.150	1.1	20.0
8 29	21 46.39	-28 24.6	2.132	3.093	6.9	20.7	8 29	21 46.48	-16 5.1	1.168	2.165	5.9	20.4
9 8	21 38.60	-28 28.6	2.179	3.087	9.6	20.9	9 8	21 39.37	-16 47.1	1.221	2.180	10.9	20.7
9 18	21 32.44	-28 16.0	2.249	3.080	12.3	21.0	9 18	21 34.71	-17 12.6	1.296	2.196	15.2	21.0
9 28	21 28.42	-27 48.2	2.339	3.074	14.6	21.2	9 28	21 33.02	-17 20.3	1.389	2.213	18.7	21.3
514626	2004 SO ₄		8 19.3 320°86	0°2/19.1	18		424633	2008 KK ₂₇		8 19.3 111°70	1°9/17.7	17	
7 20	22 16.86	-12 53.8	1.946	2.845	11.5	20.6	7 20	22 18.46	-14 17.1	1.636	2.543	12.9	21.4
7 30	22 11.05	-12 57.8	1.874	2.836	8.1	20.4	7 30	22 12.27	-15 22.7	1.590	2.556	8.9	21.1
8 9	22 3.55	-13 7.2	1.827	2.827	4.2	20.1	8 9	22 4.19	-16 34.6	1.568	2.569	4.5	20.9
8 19	21 55.04	-13 18.8	1.806	2.818	0.2	19.8	8 19	21 55.09	-17 45.7	1.572	2.582	2.0	20.8
8 29	21 46.43	-13 29.0	1.812	2.809	4.1	20.1	8 29	21 46.05	-18 48.7	1.604	2.595	5.5	21.0
9 8	21 38.67	-13 34.4	1.846	2.801	8.1	20.3	9 8	21 38.17	-19 37.9	1.662	2.607	9.6	21.3
9 18	21 32.55	-13 32.9	1.904	2.793	11.7	20.5	9 18	21 32.29	-20 10.6	1.743	2.618	13.3	21.6
9 28	21 28.64	-13 23.1	1.983	2.785	14.7	20.7	9 28	21 28.94	-20 26.2	1.844	2.629	16.2	21.8
484469	2008 CB ₈₈		8 19.3 243°47	1°1/18.1	18		252784	2002 EH ₁₃₃		8 19.3 42°96	1°7/17.9	18	
7 20													

EPHEMERIDES

8 19.3

8 19.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
449976	2015 <i>PG</i> ₃₉		8 19.3 29°17'	2°1/18.3	18		481576	2007 <i>TV</i> ₉₃		8 19.3 299°39'	4°5/15.6	18	
7 20	22 22.27	-18 39.6	1.423	2.336	14.1	19.7	7 20	22 17.48	-22 39.1	1.782	2.696	11.6	20.9
7 30	22 14.94	-18 23.9	1.383	2.351	9.7	19.5	7 30	22 11.69	-23 35.6	1.724	2.690	8.3	20.7
8 9	22 5.53	-18 8.1	1.366	2.368	5.1	19.3	8 9	22 3.98	-24 30.9	1.689	2.684	5.3	20.5
8 19	21 55.13	-17 48.1	1.375	2.385	2.1	19.1	8 19	21 55.15	-25 18.1	1.681	2.678	4.7	20.5
8 29	21 45.07	-17 21.0	1.409	2.403	5.7	19.4	8 29	21 46.24	-25 51.0	1.699	2.673	7.3	20.6
9 8	21 36.56	-16 45.8	1.469	2.421	10.0	19.7	9 8	21 38.36	-26 6.0	1.743	2.667	10.7	20.8
9 18	21 30.46	-16 2.8	1.552	2.441	13.8	20.0	9 18	21 32.39	-26 2.5	1.809	2.662	13.9	21.0
9 28	21 27.22	-15 12.8	1.655	2.461	16.9	20.2	9 28	21 28.91	-25 41.5	1.894	2.656	16.7	21.2
182303	2001 <i>NR</i> ₂₂		8 19.3 357°30'	2°1/17.9	15		107381	2001 <i>CP</i> ₃₉		8 19.3 284°14'	3°9/16.9	18	R
7 20	22 13.01	-14 22.0	1.044	1.977	16.1	19.5	7 20	22 20.90	-19 45.3	1.388	2.305	14.1	19.1
7 30	22 9.27	-15 8.0	0.994	1.972	11.2	19.3	7 30	22 14.61	-20 28.1	1.319	2.289	9.9	18.8
8 9	22 2.94	-16 4.3	0.964	1.968	5.8	18.9	8 9	22 5.73	-21 12.9	1.273	2.273	5.7	18.6
8 19	21 55.06	-17 2.2	0.955	1.966	2.2	18.7	8 19	21 55.20	-21 52.0	1.251	2.256	4.1	18.4
8 29	21 47.12	-17 52.1	0.969	1.965	6.9	19.0	8 29	21 44.40	-22 17.7	1.254	2.239	7.6	18.6
9 8	21 40.64	-18 26.3	1.004	1.966	12.3	19.3	9 8	21 34.84	-22 25.2	1.281	2.223	12.2	18.8
9 18	21 36.76	-18 41.0	1.059	1.968	17.1	19.6	9 18	21 27.71	-22 13.2	1.330	2.206	16.5	19.0
9 28	21 36.15	-18 35.2	1.131	1.971	21.0	19.9	9 28	21 23.81	-21 42.9	1.396	2.190	20.1	19.2
509889	2009 <i>BV</i> ₉₇		8 19.3 239°34'	5°4/13.5	18		396368	2014 <i>DL</i> ₉₅		8 19.3 202°49'	2°1/21.2	18	
7 20	22 18.37	-26 48.3	2.217	3.122	10.1	22.5	7 20	22 15.97	- 4 45.1	1.999	2.876	12.3	21.3
7 30	22 12.18	-28 10.7	2.150	3.107	7.5	22.3	7 30	22 10.40	- 5 4.0	1.928	2.874	9.0	21.1
8 9	22 4.21	-29 30.0	2.109	3.091	5.7	22.1	8 9	22 3.24	- 5 35.7	1.882	2.872	5.4	20.9
8 19	21 55.11	-30 39.1	2.095	3.074	5.8	22.1	8 19	21 55.13	- 6 17.2	1.862	2.870	2.3	20.7
8 29	21 45.80	-31 31.9	2.109	3.057	7.9	22.2	8 29	21 46.92	- 7 4.4	1.870	2.867	3.9	20.8
9 8	21 37.27	-32 4.6	2.149	3.039	10.6	22.3	9 8	21 39.51	- 7 52.1	1.905	2.865	7.5	21.0
9 18	21 30.35	-32 16.5	2.212	3.021	13.2	22.5	9 18	21 33.64	- 8 35.7	1.965	2.862	11.0	21.2
9 28	21 25.68	-32 8.9	2.293	3.002	15.5	22.6	9 28	21 29.85	- 9 11.7	2.048	2.859	14.0	21.4
470316	2007 <i>OC</i> ₁₀		8 19.3 12°96'	0°6/27.8	15		361962	2008 <i>JY</i> ₂₁		8 19.3 18°32'	4°8/24.1	18	
7 20	21 57.32	+10 33.1	35.458	36.210	1.1	20.7	7 20	22 11.32	+ 3 23.3	1.777	2.633	14.5	20.2
7 30	21 56.56	+10 32.5	35.376	36.213	0.9	20.7	7 30	22 7.25	+ 2 57.9	1.715	2.639	11.4	20.0
8 9	21 55.73	+10 30.5	35.319	36.216	0.8	20.7	8 9	22 1.62	+ 2 10.9	1.674	2.645	8.0	19.8
8 19	21 54.87	+10 27.2	35.287	36.219	0.6	20.6	8 19	21 55.08	+ 1 4.7	1.658	2.652	5.2	19.6
8 29	21 54.01	+10 22.9	35.282	36.222	0.6	20.6	8 29	21 48.49	- 0 15.3	1.668	2.659	5.2	19.7
9 8	21 53.18	+10 17.6	35.305	36.225	0.7	20.7	9 8	21 42.76	- 1 41.7	1.704	2.667	7.9	19.8
9 18	21 52.42	+10 11.5	35.354	36.228	0.8	20.7	9 18	21 38.59	- 3 7.4	1.764	2.676	11.1	20.1
9 28	21 51.74	+10 4.9	35.430	36.232	1.0	20.7	9 28	21 36.52	- 4 25.5	1.847	2.686	14.2	20.3
310658	2002 <i>EK</i> ₄₃		8 19.3 102°59'	0°4/19.6	17		332693	2009 <i>QO</i> ₄₅		8 19.3 314°91'	0°9/19.8	18	
7 20	22 21.60	- 9 40.0	1.493	2.390	14.6	20.9	7 20	22 15.89	- 9 19.1	1.251	2.163	15.7	20.4
7 30	22 14.47	-10 8.9	1.450	2.409	10.2	20.7	7 30	22 11.29	- 9 35.2	1.172	2.138	11.3	20.1
8 9	22 5.32	-10 48.4	1.430	2.428	5.4	20.4	8 9	22 4.11	-10 5.9	1.113	2.114	6.2	19.7
8 19	21 55.14	-11 33.1	1.435	2.447	0.5	20.1	8 19	21 55.16	-10 47.2	1.078	2.089	1.0	19.3
8 29	21 45.15	-12 16.7	1.467	2.465	4.7	20.5	8 29	21 45.73	-11 32.1	1.066	2.066	5.5	19.6
9 8	21 36.51	-12 53.7	1.525	2.483	9.3	20.8	9 8	21 37.33	-12 13.1	1.077	2.043	11.1	19.8
9 18	21 30.10	-13 20.5	1.607	2.500	13.2	21.1	9 18	21 31.25	-12 44.2	1.110	2.021	16.3	20.0
9 28	21 26.44	-13 35.1	1.710	2.516	16.5	21.4	9 28	21 28.43	-13 1.1	1.160	2.000	20.7	20.2
41154	1999 <i>VO</i> ₁₅₁		8 19.3 77°66'	1°5/20.7	18		25056	1998 <i>QP</i> ₅₇		8 19.3 241°85'	0°8/20.1	18	
7 20	22 14.70	- 6 32.6	2.197	3.079	11.2	18.8	7 20	22 13.71	- 8 4.5	2.633	3.513	9.6	19.2
7 30	22 9.30	- 6 50.8	2.141	3.090	8.0	18.7	7 30	22 8.59	- 8 33.5	2.551	3.502	6.8	19.0
8 9	22 2.55	- 7 18.8	2.109	3.101	4.6	18.5	8 9	22 2.22	- 9 10.9	2.495	3.490	3.8	18.8
8 19	21 55.07	- 7 53.8	2.103	3.113	1.6	18.3	8 19	21 55.10	- 9 53.7	2.466	3.477	0.8	18.5
8 29	21 47.61	- 8 31.9	2.126	3.124	3.4	18.4	8 29	21 47.85	-10 38.5	2.467	3.465	3.1	18.7
9 8	21 40.93	- 9 9.0	2.177	3.136	6.8	18.7	9 8	21 41.14	-11 21.3	2.496	3.452	6.2	18.9
9 18	21 35.66	- 9 41.5	2.253	3.147	9.9	18.9	9 18	21 35.57	-11 59.1	2.552	3.439	9.2	19.0
9 28	21 32.25	-10 6.8	2.352	3.158	12.5	19.1	9 28	21 31.60	-12 29.2	2.632	3.425	11.7	19.2
9192	1992 <i>AR</i> ₁		8 19.3 154°62'	1°9/21.1	18		362848	2012 <i>BQ</i> ₃₀		8 19.3 125°49'	1°8/17.3	18	
7 20	22 17.60	- 5 10.9	2.257	3.128	11.3	18.0	7 20	22 13.78	-15 35.0	2.351	3.254	9.7	20.8
7 30	22 11.31	- 5 22.5	2.193	3.135	8.3	17.9	7 30	22 8.69	-16 38.3	2.295	3.259	6.6	20.6
8 9	22 3.61	- 5 44.6	2.153	3.142	4.9	17.7	8 9	22 2.27	-17 45.7	2.264	3.265	3.5	20.4
8 19	21 55.10	- 6 14.8	2.141	3.148	2.1	17.5	8 19	21 55.10	-18 52.0	2.262	3.270	1.9	20.3
8 29	21 46.58	- 6 49.5	2.157	3.154	3.6	17.6	8 29	21 47.90	-19 52.1	2.288	3.275	4.5	20.5
9 8	21 38.84	- 7 24.6	2.202	3.160	6.8	17.8	9 8	21 41.40	-20 41.9	2.342	3.280	7.6	20.7
9 18	21 32.53	- 7 56.8	2.274	3.164	9.9	18.0	9 18	21 36.24	-21 18.9	2.422	3.285	10.5	20.9
9 28	21 28.15	- 8 23.0	2.368	3.169	12.6	18.2	9 28	21 32.87	-21 42.0	2.523	3.290	12.8	21.1
518836	2010 <i>CO</i> ₂₂₃		8 19.3 265°50'	0°5/19.7	17		38875	2000 <i>SA</i> ₁₂₀		8 19.3 85°32'	3°2/22.6	18	
7 20	22 15.22	-10 24.4	2.492	3.379	9.8	21.8	7 20	22 13.72	- 0 12.3	2.118	2.978	12.4	18.3
7 30	22 9.64	-10 31.9	2.419	3.373	6.9	21.6	7 30	22 8.69	- 0 38.3	2.057	2.988	9.4	18.2
8 9	22 2.75	-10 45.6	2.370	3.367	3.7	21.4	8 9	22 2.28	- 1 19.8	2.020	2.999	6.1	18.0
8 19	21 55.11	-11 2.8	2.350	3.361	0.5	21.1	8 19	21 55.10	- 2 14.3	2.009	3.009	3.5	17.8
8 29	21 47.39	-11 20.6	2.358	3.355	3.2	21.3	8 29	21 47.91	- 3 17.1	2.025	3.020	4.1	17.9
9 8	21 40.32	-11 36.0	2.395	3.349	6.5	21.5	9 8	21 41.49	- 4 22.7	2.069	3.030	6.9	18.1
9 18	21 34.51	-11 46.9	2.457	3.343	9.5	21.7	9 18	21 36.47	- 5 26.1	2.139	3.040	10.0	18.3
9 28	21 30.42	-11 51.4	2.543	3.337	12.0	21.9	9 28	21 33.33	- 6 22.6	2.232	3.051	12.7	18.5
353446	2011 <i>QZ</i> ₉₀		8 19.3 248°97'	2°0/20.7	18		215416	2002 <i>GM</i> ₁₀₀					

EPHEMERIDES

8 19.3

8 19.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
235765	2004 <i>VW</i> ₁₁		8 19.3 267°91	2°9/17.2	18		476073	2007 <i>TP</i> ₁₈		8 19.3 343°05	11°3/11.9	18	
7 20	22 20.46	-19 24.9	1.842	2.748	11.7	20.8	7 20	22 23.79	-38 54.4	1.440	2.338	14.8	20.3
7 30	22 13.82	-19 55.1	1.765	2.730	8.3	20.6	7 30	22 16.66	-39 51.7	1.395	2.330	12.6	20.1
8 9	22 5.15	-20 26.4	1.713	2.711	4.6	20.3	8 9	22 6.73	-40 29.1	1.372	2.322	11.4	20.0
8 19	21 55.20	-20 53.3	1.687	2.693	3.0	20.2	8 19	21 55.28	-40 37.0	1.371	2.315	11.8	20.0
8 29	21 45.04	-21 10.6	1.689	2.674	6.0	20.3	8 29	21 44.00	-40 10.1	1.392	2.308	13.6	20.1
9 8	21 35.81	-21 14.6	1.717	2.655	9.9	20.5	9 8	21 34.55	-39 9.3	1.434	2.303	16.1	20.3
9 18	21 28.45	-21 4.2	1.769	2.635	13.5	20.7	9 18	21 28.05	-37 39.9	1.494	2.298	18.7	20.4
9 28	21 23.66	-20 39.7	1.841	2.615	16.7	20.9	9 28	21 25.06	-35 49.3	1.571	2.294	21.1	20.6
365955	2012 <i>BS</i> ₁₁		8 19.3 123°87	0°9/18.2	18		149071	2002 <i>CP</i> ₇₂		8 19.3 336°12	1°0/18.3	18	
7 20	22 13.27	-12 52.2	2.351	3.249	9.9	20.8	7 20	22 13.06	-11 55.7	1.969	2.872	11.3	19.9
7 30	22 8.34	-13 49.1	2.291	3.253	6.8	20.6	7 30	22 8.45	-13 1.9	1.905	2.869	7.8	19.6
8 9	22 2.10	-14 52.2	2.256	3.257	3.4	20.4	8 9	22 2.27	-14 17.0	1.865	2.866	4.0	19.4
8 19	21 55.11	-15 56.6	2.249	3.260	1.0	20.2	8 19	21 55.15	-15 35.2	1.852	2.864	1.0	19.2
8 29	21 48.08	-16 57.5	2.271	3.264	3.9	20.4	8 29	21 47.94	-16 50.0	1.868	2.861	4.5	19.4
9 8	21 41.73	-17 50.3	2.321	3.267	7.2	20.6	9 8	21 41.50	-17 55.4	1.910	2.859	8.3	19.7
9 18	21 36.68	-18 32.2	2.396	3.270	10.2	20.8	9 18	21 36.57	-18 47.4	1.976	2.857	11.7	19.9
9 28	21 33.39	-19 1.3	2.494	3.273	12.7	21.0	9 28	21 33.70	-19 23.8	2.065	2.855	14.6	20.1
185266	2006 <i>UZ</i> ₁₂₈		8 19.3 354°99	1°8/20.3	18		42988	1999 <i>TK</i> ₂₄₂		8 19.3 258°63	1°4/18.1	18	
7 20	22 11.70	-7 57.4	0.926	1.854	18.2	19.1	7 20	22 15.54	-13 14.5	1.769	2.675	12.1	18.1
7 30	22 8.55	-8 4.3	0.873	1.846	13.1	18.8	7 30	22 10.30	-14 14.9	1.707	2.673	8.4	17.9
8 9	22 2.69	-8 30.5	0.839	1.840	7.4	18.5	8 9	22 3.28	-15 23.3	1.670	2.672	4.3	17.6
8 19	21 55.13	-9 10.8	0.824	1.835	2.0	18.1	8 19	21 55.18	-16 33.5	1.659	2.670	1.4	17.4
8 29	21 47.43	-9 57.2	0.831	1.833	5.8	18.4	8 29	21 47.00	-17 38.7	1.676	2.668	5.0	17.7
9 8	21 41.23	-10 40.4	0.858	1.832	11.7	18.7	9 8	21 39.74	-18 32.8	1.718	2.667	9.1	17.9
9 18	21 37.76	-11 13.1	0.904	1.833	17.0	19.0	9 18	21 34.23	-19 12.3	1.785	2.665	12.8	18.1
9 28	21 37.74	-11 30.4	0.966	1.837	21.5	19.3	9 28	21 31.05	-19 35.6	1.872	2.663	15.8	18.3
448089	2008 <i>JQ</i> ₂₂		8 19.3 359°21	0°4/19.7	18		258999	2002 <i>TZ</i> ₇₄		8 19.3 342°90	6°2/15.1	18	
7 20	22 12.71	-8 19.5	2.024	2.917	11.4	20.9	7 20	22 15.74	-22 12.8	1.139	2.072	15.1	19.4
7 30	22 8.12	-9 11.0	1.959	2.916	8.1	20.7	7 30	22 11.25	-23 34.6	1.088	2.063	10.8	19.1
8 9	22 2.06	-10 13.4	1.918	2.916	4.3	20.4	8 9	22 4.06	-24 57.0	1.058	2.055	7.1	18.9
8 19	21 55.12	-11 22.3	1.904	2.916	0.5	20.1	8 19	21 55.23	-26 8.4	1.051	2.049	6.6	18.9
8 29	21 48.10	-12 31.8	1.918	2.916	3.7	20.4	8 29	21 46.27	-26 58.3	1.066	2.043	10.0	19.0
9 8	21 41.84	-13 36.2	1.959	2.916	7.5	20.6	9 8	21 38.79	-27 20.7	1.103	2.038	14.3	19.3
9 18	21 37.02	-14 31.0	2.025	2.916	11.0	20.8	9 18	21 33.98	-27 15.0	1.158	2.034	18.5	19.5
9 28	21 34.17	-15 13.2	2.113	2.917	13.8	21.0	9 28	21 32.56	-26 43.7	1.230	2.031	21.9	19.7
339152	2004 <i>TQ</i> ₂₃		8 19.3 330°52	1°5/18.4	18		78623	2002 <i>TV</i> ₁₃		8 19.3 259°16	0°5/19.8	18	
7 20	22 16.61	-14 52.0	1.273	2.193	14.8	20.6	7 20	22 14.56	-8 21.3	1.917	2.810	12.0	19.8
7 30	22 11.65	-15 9.9	1.205	2.177	10.4	20.3	7 30	22 9.51	-9 7.3	1.850	2.807	8.5	19.6
8 9	22 4.21	-15 34.9	1.158	2.161	5.4	19.9	8 9	22 2.84	-10 4.9	1.807	2.804	4.6	19.3
8 19	21 55.18	-16 1.2	1.135	2.146	1.5	19.6	8 19	21 55.19	-11 9.2	1.790	2.802	0.6	19.0
8 29	21 45.91	-16 22.1	1.136	2.132	6.1	19.9	8 29	21 47.44	-12 14.6	1.801	2.799	3.9	19.3
9 8	21 37.84	-16 32.2	1.160	2.119	11.3	20.1	9 8	21 40.50	-13 15.1	1.839	2.796	7.9	19.5
9 18	21 32.14	-16 28.6	1.205	2.107	16.0	20.4	9 18	21 35.12	-14 6.0	1.901	2.793	11.5	19.7
9 28	21 29.60	-16 10.4	1.268	2.096	19.9	20.6	9 28	21 31.88	-14 44.5	1.986	2.790	14.6	19.9
251488	2008 <i>EZ</i> ₁₄		8 19.3 275°25	2°4/21.8	18		282023	2011 <i>JY</i> ₁₀		8 19.3 64°04	9°1/11.5	18	
7 20	22 13.17	-2 35.1	2.110	2.981	12.0	20.7	7 20	22 20.37	-33 44.2	1.615	2.522	13.0	20.0
7 30	22 8.43	-3 8.8	2.034	2.974	8.9	20.5	7 30	22 13.96	-35 18.1	1.580	2.526	10.6	19.9
8 9	22 2.23	-3 57.3	1.982	2.968	5.5	20.3	8 9	22 5.26	-36 38.8	1.568	2.530	9.2	19.8
8 19	21 55.12	-4 57.6	1.956	2.962	2.7	20.1	8 19	21 55.27	-37 36.8	1.580	2.534	9.7	19.8
8 29	21 47.89	-6 5.0	1.958	2.956	3.8	20.2	8 29	21 45.36	-38 5.7	1.616	2.539	11.6	20.0
9 8	21 41.35	-7 13.8	1.988	2.949	7.1	20.4	9 8	21 36.87	-38 4.4	1.674	2.543	14.2	20.2
9 18	21 36.18	-8 18.7	2.043	2.943	10.5	20.6	9 18	21 30.79	-37 35.4	1.752	2.547	16.7	20.3
9 28	21 32.93	-9 15.2	2.121	2.937	13.4	20.7	9 28	21 27.69	-36 43.5	1.846	2.552	18.9	20.5
354580	2004 <i>VX</i> ₁₀		8 19.3 320°01	9°6/24.2	18		90772	1993 <i>UH</i>		8 19.3 325°34	13°1/3.7	18	
7 20	22 17.25	+6 27.6	1.409	2.256	18.1	20.0	7 20	22 11.66	+26 49.8	2.035	2.720	18.4	18.8
7 30	22 12.09	+7 44.8	1.326	2.234	15.1	19.8	7 30	22 7.69	+27 33.7	1.947	2.704	17.0	18.6
8 9	22 4.50	+8 40.1	1.262	2.212	12.1	19.6	8 9	22 2.00	+27 46.6	1.875	2.689	15.5	18.5
8 19	21 55.21	+9 9.5	1.219	2.191	9.9	19.4	8 19	21 55.17	+27 24.3	1.820	2.674	14.1	18.3
8 29	21 45.40	+9 11.5	1.200	2.170	9.9	19.3	8 29	21 48.06	+26 25.6	1.785	2.660	13.3	18.3
9 8	21 36.44	+8 49.3	1.203	2.150	12.2	19.4	9 8	21 41.63	+24 53.4	1.771	2.646	13.2	18.2
9 18	21 29.56	+8 9.4	1.227	2.131	15.5	19.5	9 18	21 36.73	+22 54.6	1.778	2.633	14.0	18.3
9 28	21 25.70	+7 20.6	1.270	2.113	19.0	19.7	9 28	21 34.04	+20 38.7	1.807	2.620	15.5	18.3
208790	2002 <i>QV</i> ₄₆		8 19.3 313°78	4°3/16.2	18		493834	2015 <i>VS</i> ₁₃₁		8 19.3 292°08	4°4/14.7	17	
7 20	22 18.31	-22 12.5	1.649	2.565	12.3	19.9	7 20	22 15.31	-23 31.4	2.168	3.078	10.0	21.1
7 30	22 12.43	-22 54.7	1.586	2.553	8.8	19.6	7 30	22 10.11	-24 41.5	2.090	3.054	7.3	20.9
8 9	22 4.45	-23 35.7	1.546	2.542	5.4	19.4	8 9	22 3.21	-25 51.5	2.038	3.029	4.9	20.7
8 19	21 55.21	-24 8.9	1.532	2.532	4.5	19.3	8 19	21 55.21	-26 55.0	2.013	3.005	4.7	20.6
8 29	21 45.86	-24 28.1	1.543	2.521	7.3	19.5	8 29	21 46.96	-27 45.9	2.016	2.980	7.0	20.7
9 8	21 37.61	-24 29.9	1.579	2.511	11.0	19.7	9 8	21 39.40	-28 20.0	2.044	2.956	10.0	20.9
9 18	21 31.41	-24 13.8	1.638	2.501	14.6	19.9	9 18	21 33.35	-28 35.5	2.095	2.931	12.9	21.0
9 28	21 27.90	-23 41.1	1.715	2.492	17.6	20.1	9 28	21 29.44	-28 32.6	2.166	2.906	15.5	21.1
374868	2006 <i>VP</i> ₇₀		8 19.3 233°01	1°4/18.2	18		384359	2009 <i>UM</i> ₇₄		8 19.			

EPHEMERIDES

8 19.3

8 19.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
177199	2003 <i>UD</i> ₅₄		8 19.3 252°17	1.8°/18.2	18		255195	2005 <i>UB</i> ₃₁₃		8 19.3 250°09	0.4°/18.9	18	
7 20	22 21.81	-15 58.6	1.477	2.386	13.9	20.3	7 20	22 15.63	-12 28.6	2.451	3.343	9.8	21.3
7 30	22 15.01	-16 19.8	1.413	2.380	9.7	20.1	7 30	22 10.06	-12 55.0	2.371	3.329	6.8	21.1
8 9	22 5.87	-16 45.5	1.372	2.373	5.1	19.8	8 9	22 3.11	-13 27.0	2.316	3.316	3.5	20.9
8 19	21 55.32	-17 10.0	1.355	2.366	1.9	19.6	8 19	21 55.30	-14 1.3	2.290	3.302	0.4	20.6
8 29	21 44.65	-17 27.3	1.365	2.359	5.8	19.8	8 29	21 47.35	-14 34.1	2.292	3.288	3.6	20.8
9 8	21 35.21	-17 33.3	1.401	2.351	10.5	20.1	9 8	21 40.02	-15 1.9	2.323	3.273	7.0	21.0
9 18	21 28.07	-17 26.3	1.459	2.344	14.8	20.3	9 18	21 33.96	-15 22.1	2.380	3.258	10.0	21.2
9 28	21 23.91	-17 6.1	1.536	2.336	18.3	20.5	9 28	21 29.68	-15 33.1	2.459	3.243	12.7	21.4
247072	2000 <i>RH</i> ₈₇		8 19.3	2°24	2°9/18.2	18	261610	2005 <i>XF</i> ₁₁₃		8 19.3 231°69	8°6/5.4	18	
7 20	22 17.69	-18 11.5	0.854	1.794	17.9	18.9	7 20	22 21.10	-46 53.8	3.053	3.895	9.5	21.0
7 30	22 12.92	-18 7.7	0.811	1.791	12.6	18.6	7 30	22 14.09	-48 19.9	3.011	3.882	8.8	20.9
8 9	22 5.01	-18 5.9	0.785	1.790	6.7	18.2	8 9	22 5.28	-49 31.5	2.994	3.867	8.7	20.9
8 19	21 55.29	-17 59.2	0.780	1.790	2.9	18.0	8 19	21 55.37	-50 23.1	3.001	3.853	9.2	20.9
8 29	21 45.68	-17 41.6	0.795	1.793	7.7	18.3	8 29	21 45.28	-50 51.3	3.032	3.837	10.2	21.0
9 8	21 38.02	-17 9.9	0.831	1.797	13.5	18.6	9 8	21 36.01	-50 55.3	3.084	3.822	11.5	21.1
9 18	21 33.60	-16 24.3	0.884	1.803	18.6	19.0	9 18	21 28.40	-50 36.6	3.156	3.805	12.7	21.1
9 28	21 33.01	-15 26.4	0.954	1.811	22.8	19.3	9 28	21 23.05	-49 58.5	3.242	3.789	13.8	21.2
279419	2010 <i>GX</i> ₁₁₁		8 19.3 196°29	8°3/11.9	18		92252	2000 <i>AQ</i> ₁₈₇		8 19.3 195°42	5°0/13.3	18	
7 20	22 21.22	-34 47.8	1.924	2.822	11.8	20.5	7 20	22 14.56	-25 27.5	2.295	3.205	9.6	19.0
7 30	22 14.33	-36 0.2	1.881	2.821	9.6	20.4	7 30	22 9.45	-27 3.0	2.244	3.205	7.0	18.8
8 9	22 5.39	-37 0.2	1.863	2.820	8.3	20.3	8 9	22 2.82	-28 35.7	2.220	3.204	5.2	18.7
8 19	21 55.31	-37 40.4	1.869	2.819	8.7	20.3	8 19	21 55.29	-29 59.0	2.223	3.204	5.4	18.7
8 29	21 45.27	-37 55.6	1.900	2.818	10.4	20.4	8 29	21 47.66	-31 6.7	2.254	3.203	7.3	18.8
9 8	21 36.47	-37 44.7	1.954	2.817	12.7	20.6	9 8	21 40.78	-31 55.3	2.310	3.203	9.9	19.0
9 18	21 29.81	-37 10.0	2.030	2.816	15.0	20.7	9 18	21 35.35	-32 23.6	2.390	3.202	12.3	19.2
9 28	21 25.85	-36 15.4	2.123	2.815	17.1	20.9	9 28	21 31.92	-32 32.6	2.489	3.201	14.4	19.3
215782	2004 <i>JO</i> ₂₈		8 19.3 315°10	16°0/2.7	17		329122	2011 <i>CO</i> ₅₀		8 19.3 95°07	2°8/22.2	18	
7 20	22 16.65	-35 27.7	0.882	1.817	18.1	18.9	7 20	22 14.49	-2 14.5	2.561	3.419	10.5	20.5
7 30	22 13.17	-40 0.8	0.855	1.808	16.2	18.7	7 30	22 9.12	-2 9.3	2.491	3.423	7.9	20.3
8 9	22 5.70	-44 13.3	0.849	1.799	16.5	18.7	8 9	22 2.55	-2 14.9	2.446	3.426	5.2	20.1
8 19	21 55.35	-47 37.5	0.864	1.791	18.8	18.8	8 19	21 55.28	-2 29.9	2.429	3.429	3.0	20.0
8 29	21 44.38	-49 55.1	0.897	1.783	22.1	19.0	8 29	21 47.98	-2 51.8	2.439	3.432	3.6	20.1
9 8	21 35.46	-51 3.3	0.944	1.775	25.4	19.2	9 8	21 41.30	-3 17.6	2.478	3.436	6.1	20.2
9 18	21 30.58	-51 9.8	1.003	1.768	28.3	19.4	9 18	21 35.80	-3 44.0	2.543	3.439	8.8	20.4
9 28	21 30.71	-50 26.5	1.070	1.762	30.6	19.6	9 28	21 31.94	-4 7.9	2.632	3.442	11.2	20.6
360722	2004 <i>TS</i> ₁₃₉		8 19.3 335°84	14°5/6.8	18		390090	2012 <i>UF</i> ₁₅₅		8 19.3 170°79	1°9/21.1	18	
7 20	22 24.74	-47 47.8	1.525	2.394	15.8	19.1	7 20	22 16.64	-5 10.9	2.110	2.985	11.8	21.4
7 30	22 17.78	-48 58.4	1.474	2.369	14.8	18.9	7 30	22 10.83	-5 28.1	2.042	2.987	8.6	21.2
8 9	22 7.55	-49 42.8	1.443	2.344	14.5	18.9	8 9	22 3.52	-5 57.0	1.999	2.989	5.1	21.0
8 19	21 55.40	-49 50.4	1.431	2.320	15.2	18.8	8 19	21 55.32	-6 34.6	1.982	2.990	2.1	20.8
8 29	21 43.29	-49 15.1	1.439	2.298	16.8	18.9	8 29	21 47.06	-7 17.0	1.994	2.992	3.7	20.9
9 8	21 33.17	-47 57.7	1.465	2.277	18.8	19.0	9 8	21 39.58	-7 59.7	2.033	2.993	7.2	21.1
9 18	21 26.35	-46 4.6	1.508	2.257	20.9	19.1	9 18	21 33.58	-8 38.4	2.099	2.993	10.5	21.4
9 28	21 23.48	-43 44.1	1.565	2.239	22.8	19.2	9 28	21 29.59	-9 10.0	2.186	2.993	13.3	21.6
407817	2012 <i>AW</i> ₁₃		8 19.3 150°95	3°7/14.6	18		7593	1992 <i>WP</i> ₄		8 19.3 301°60	0°6/19.6	18	
7 20	22 14.24	-22 24.0	2.593	3.499	8.8	21.2	7 20	22 22.51	-12 17.3	1.548	2.447	14.0	16.0
7 30	22 9.03	-23 49.5	2.541	3.504	6.2	21.0	7 30	22 15.56	-11 53.4	1.468	2.429	10.0	15.7
8 9	22 2.52	-25 14.3	2.517	3.508	4.1	20.9	8 9	22 6.25	-11 34.7	1.412	2.411	5.4	15.4
8 19	21 55.25	-26 32.7	2.522	3.513	3.9	20.9	8 19	21 55.42	-11 18.8	1.381	2.393	0.6	15.0
8 29	21 47.92	-27 39.5	2.555	3.517	5.9	21.0	8 29	21 44.31	-11 2.7	1.377	2.375	4.9	15.3
9 8	21 41.24	-28 31.2	2.616	3.521	8.3	21.2	9 8	21 34.25	-10 43.7	1.399	2.358	9.8	15.5
9 18	21 35.83	-29 6.4	2.701	3.525	10.7	21.4	9 18	21 26.36	-10 20.1	1.445	2.341	14.2	15.8
9 28	21 32.16	-29 25.1	2.807	3.528	12.7	21.5	9 28	21 21.41	-9 50.6	1.510	2.324	18.0	16.0
301835	2011 <i>QY</i> ₄₉		8 19.3 358°70	10°3/15.9	18		338517	2003 <i>QP</i> ₅₃		8 19.3 359°90	4°1/17.6	18	
7 20	22 25.44	-35 7.8	1.088	2.005	17.1	17.9	7 20	22 22.54	-22 20.7	1.257	2.178	14.9	19.2
7 30	22 18.09	-35 5.6	1.043	1.998	13.7	17.7	7 30	22 15.69	-22 14.4	1.205	2.175	10.6	19.0
8 9	22 7.55	-34 40.8	1.018	1.994	11.0	17.5	8 9	22 6.27	-22 3.6	1.174	2.173	6.2	18.7
8 19	21 55.41	-33 45.4	1.013	1.992	10.5	17.5	8 19	21 55.42	-21 42.5	1.167	2.173	4.1	18.6
8 29	21 43.71	-32 16.4	1.031	1.991	12.5	17.6	8 29	21 44.70	-21 7.4	1.185	2.173	7.4	18.8
9 8	21 34.31	-30 18.3	1.070	1.993	15.9	17.8	9 8	21 35.62	-20 17.4	1.226	2.175	11.9	19.1
9 18	21 28.34	-27 59.9	1.129	1.997	19.4	18.0	9 18	21 29.26	-19 14.6	1.289	2.178	16.1	19.3
9 28	21 26.26	-25 30.1	1.205	2.003	22.5	18.3	9 28	21 26.21	-18 1.7	1.370	2.181	19.6	19.6
294325	2007 <i>VX</i> ₅₇		8 19.3	12°50	2°4/21.5	18	187326	2005 <i>UH</i> ₇₈		8 19.3 156°06	1°0/20.3	18	
7 20	22 14.51	-3 38.5	1.835	2.714	13.1	21.2	7 20	22 14.69	-7 49.2	2.174	3.059	11.1	20.8
7 30	22 9.52	-4 7.4	1.769	2.715	9.7	20.9	7 30	22 9.46	-8 14.6	2.107	3.060	7.9	20.6
8 9	22 2.89	-4 51.6	1.726	2.715	5.9	20.7	8 9	22 2.80	-8 49.7	2.065	3.060	4.4	20.4
8 19	21 55.27	-5 47.6	1.708	2.716	2.6	20.5	8 19	21 55.31	-9 31.1	2.050	3.061	1.1	20.2
8 29	21 47.57	-6 50.3	1.718	2.716	4.0	20.6	8 29	21 47.77	-10 14.5	2.063	3.061	3.5	20.3
9 8	21 40.71	-7 53.3	1.754	2.717	7.8	20.8	9 8	21 40.96	-10 55.7	2.104	3.062	7.0	20.6
9 18	21 35.47	-8 51.1	1.815	2.718	11.4	21.1	9 18	21 35.55	-11 31.0	2.170	3.062	10.3	20.8
9 28	21 32.39	-9 39.5	1.898	2.719	14.6	21.3	9 28	21 32.03	-11 57.7	2.258	3.063	13.1	21.0
399516	2002 <i>VL</i> ₉₈		8 19.3 245°44	17°6/30.7	17		311890	2006 <i>XS</i> ₄₂		8 19.4 1			

EPHEMERIDES

8 19.4

8 19.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
34177	Amandawilson	8 19.4 293°24	0°5/18.9	18			216919	1996 AK ₈	8 19.4 23°32	8°6/24.2	18		
7 20	22 14.78	-11 53.7	1.973	2.873	11.4	18.9	7 20	22 22.15	+ 6 20.6	1.709	2.536	16.3	18.6
7 30	22 9.71	-12 34.2	1.902	2.864	7.9	18.6	7 30	22 14.96	+ 7 57.1	1.651	2.545	13.5	18.4
8 9	22 3.02	-13 22.7	1.856	2.856	4.1	18.4	8 9	22 5.79	+ 9 13.9	1.614	2.555	10.7	18.3
8 19	21 55.33	-14 14.6	1.836	2.847	0.5	18.1	8 19	21 55.46	+10 7.7	1.602	2.565	8.8	18.2
8 29	21 47.52	-15 4.7	1.843	2.839	4.2	18.4	8 29	21 45.08	+10 37.8	1.616	2.576	8.8	18.2
9 8	21 40.47	-15 47.9	1.878	2.831	8.1	18.6	9 8	21 35.76	+10 46.9	1.655	2.588	10.5	18.3
9 18	21 34.97	-16 20.7	1.937	2.822	11.7	18.8	9 18	21 28.40	+10 39.7	1.717	2.600	13.0	18.5
9 28	21 31.58	-16 41.0	2.017	2.814	14.6	19.0	9 28	21 23.62	+10 22.9	1.800	2.613	15.5	18.7
84365	2002 TC ₁₁₂	8 19.4 249°08	4°9/14.4	18			359848	2011 UU ₃₅₃	8 19.4 252°70	0°2/19.2	18		
7 20	22 18.98	-29 36.8	2.653	3.549	9.0	19.7	7 20	22 16.24	-11 40.8	2.102	2.997	11.0	21.4
7 30	22 12.33	-30 9.3	2.591	3.540	6.8	19.5	7 30	22 10.65	-12 6.1	2.031	2.990	7.7	21.2
8 9	22 4.25	-30 35.3	2.554	3.531	5.2	19.4	8 9	22 3.49	-12 38.5	1.984	2.983	4.0	20.9
8 19	21 55.38	-30 50.5	2.546	3.522	5.1	19.4	8 19	21 55.40	-13 14.0	1.964	2.976	0.2	20.6
8 29	21 46.50	-30 51.7	2.565	3.513	6.7	19.5	8 29	21 47.20	-13 48.4	1.973	2.969	3.9	20.9
9 8	21 38.41	-30 37.5	2.611	3.504	8.9	19.6	9 8	21 39.76	-14 17.6	2.009	2.962	7.6	21.1
9 18	21 31.77	-30 8.4	2.682	3.494	11.1	19.7	9 18	21 33.81	-14 38.6	2.070	2.955	11.0	21.3
9 28	21 27.06	-29 26.2	2.773	3.485	13.0	19.9	9 28	21 29.91	-14 49.7	2.153	2.948	13.9	21.5
37542	1981 EJ ₈	8 19.4 210°27	1°2/20.6	18			239677	2008 YM ₃₇	8 19.4 26°46	3°1/16.6	18		
7 20	22 14.74	- 6 51.8	2.612	3.487	9.8	20.4	7 20	22 14.27	-16 26.6	1.526	2.445	12.9	19.4
7 30	22 9.34	- 7 13.9	2.535	3.482	7.1	20.3	7 30	22 9.64	-17 53.2	1.479	2.451	8.9	19.2
8 9	22 2.71	- 7 44.8	2.484	3.476	4.0	20.0	8 9	22 3.07	-19 25.4	1.456	2.457	4.8	19.0
8 19	21 55.33	- 8 21.7	2.460	3.470	1.3	19.8	8 19	21 55.38	-20 54.5	1.458	2.464	3.3	18.9
8 29	21 47.86	- 9 1.5	2.466	3.464	3.1	20.0	8 29	21 47.69	-22 11.8	1.486	2.471	6.6	19.1
9 8	21 40.97	- 9 40.4	2.500	3.457	6.2	20.2	9 8	21 41.09	-23 10.8	1.538	2.478	10.6	19.4
9 18	21 35.24	-10 15.3	2.561	3.450	9.1	20.3	9 18	21 36.46	-23 48.7	1.613	2.487	14.3	19.6
9 28	21 31.14	-10 43.5	2.646	3.442	11.6	20.5	9 28	21 34.36	-24 5.2	1.708	2.495	17.3	19.9
475977	2007 OO ₆	8 19.4 9°36	5°9/13.9	18			299676	2006 QE ₃₂	8 19.4 319°54	1°9/20.5	18		
7 20	22 8.38	-18 15.1	1.034	1.977	15.2	19.3	7 20	22 16.58	- 7 50.9	1.557	2.454	14.0	19.9
7 30	22 6.11	-20 47.2	0.998	1.980	10.6	19.0	7 30	22 11.44	- 7 42.5	1.474	2.431	10.2	19.6
8 9	22 1.41	-23 25.4	0.984	1.985	6.6	18.9	8 9	22 4.15	- 7 45.6	1.413	2.409	5.9	19.3
8 19	21 55.28	-25 53.2	0.993	1.992	6.6	18.9	8 19	21 55.43	- 7 57.9	1.377	2.387	2.0	19.0
8 29	21 49.13	-27 55.1	1.024	2.000	10.4	19.1	8 29	21 46.37	- 8 15.6	1.366	2.366	4.7	19.1
9 8	21 44.38	-29 21.7	1.077	2.011	14.8	19.4	9 8	21 38.19	- 8 33.9	1.381	2.345	9.3	19.4
9 18	21 42.09	-30 10.4	1.148	2.023	18.7	19.7	9 18	21 31.92	- 8 48.6	1.418	2.325	13.7	19.6
9 28	21 42.85	-30 23.8	1.235	2.036	21.9	20.0	9 28	21 28.33	- 8 56.0	1.476	2.306	17.5	19.8
330552	2008 BV ₉	8 19.4 201°59	2°0/17.7	17			313584	2003 FS ₃₃	8 19.4 201°18	4°3/15.6	18		
7 20	22 20.21	-15 34.0	1.824	2.726	12.1	21.8	7 20	22 18.43	-24 31.3	2.098	3.005	10.5	20.9
7 30	22 13.62	-16 25.3	1.758	2.722	8.4	21.6	7 30	22 12.17	-25 13.3	2.043	3.005	7.6	20.7
8 9	22 5.10	-17 21.9	1.718	2.718	4.4	21.3	8 9	22 4.26	-25 51.8	2.014	3.004	5.0	20.5
8 19	21 55.42	-18 17.7	1.704	2.713	2.1	21.2	8 19	21 55.44	-26 21.4	2.011	3.004	4.5	20.5
8 29	21 45.62	-19 6.4	1.718	2.707	5.4	21.4	8 29	21 46.63	-26 37.7	2.035	3.004	6.6	20.6
9 8	21 36.78	-19 43.0	1.759	2.701	9.4	21.6	9 8	21 38.77	-26 38.3	2.086	3.003	9.5	20.8
9 18	21 29.80	-20 5.1	1.823	2.693	13.0	21.8	9 18	21 32.60	-26 23.2	2.160	3.003	12.3	21.0
9 28	21 25.30	-20 11.8	1.909	2.686	16.1	22.0	9 28	21 28.64	-25 53.7	2.255	3.003	14.7	21.2
129242	2005 QB ₁₄	8 19.4 60°80	0°8/20.1	18			387636	2002 PR ₁₈₂	8 19.4 355°60	3°0/21.6	18		
7 20	22 15.05	- 8 25.1	1.992	2.883	11.7	19.8	7 20	22 15.76	- 3 51.4	1.622	2.506	14.3	21.4
7 30	22 9.79	- 8 53.5	1.931	2.886	8.3	19.6	7 30	22 10.61	- 3 56.1	1.557	2.504	10.6	21.1
8 9	22 3.01	- 9 31.8	1.893	2.890	4.5	19.4	8 9	22 3.58	- 4 16.5	1.514	2.503	6.6	20.9
8 19	21 55.35	-10 16.3	1.883	2.894	0.9	19.1	8 19	21 55.43	- 4 49.9	1.496	2.502	3.2	20.7
8 29	21 47.66	-11 2.2	1.900	2.898	3.7	19.4	8 29	21 47.18	- 5 31.8	1.504	2.502	4.6	20.8
9 8	21 40.79	-11 44.6	1.943	2.902	7.5	19.6	9 8	21 39.89	- 6 16.2	1.537	2.501	8.5	21.0
9 18	21 35.45	-12 19.9	2.012	2.906	10.9	19.8	9 18	21 34.44	- 6 57.8	1.594	2.502	12.4	21.2
9 28	21 32.16	-12 45.4	2.103	2.910	13.8	20.0	9 28	21 31.42	- 7 31.9	1.672	2.502	15.8	21.5
22172	2000 XQ ₁₁	8 19.4 205°24	1°0/20.3	18			232808	2004 RN ₂₄₉	8 19.4 256°52	3°4/22.2	18		
7 20	22 14.88	- 5 34.0	1.848	2.733	12.8	18.4	7 20	22 16.27	- 1 20.6	1.857	2.724	13.5	20.9
7 30	22 9.85	- 6 44.8	1.778	2.731	9.2	18.1	7 30	22 10.91	- 1 38.4	1.774	2.710	10.3	20.7
8 9	22 3.12	- 8 11.3	1.733	2.729	5.1	17.9	8 9	22 3.76	- 2 13.4	1.714	2.696	6.7	20.4
8 19	21 55.36	- 9 48.0	1.715	2.726	1.1	17.6	8 19	21 55.44	- 3 3.5	1.679	2.682	3.7	20.2
8 29	21 47.46	-11 27.3	1.725	2.724	4.0	17.8	8 29	21 46.88	- 4 4.1	1.672	2.668	4.5	20.2
9 8	21 40.37	-13 1.5	1.763	2.721	8.1	18.1	9 8	21 39.06	- 5 9.1	1.691	2.653	8.1	20.4
9 18	21 34.89	-14 24.1	1.826	2.718	11.9	18.3	9 18	21 32.84	- 6 12.4	1.735	2.638	11.9	20.6
9 28	21 31.61	-15 31.1	1.910	2.715	15.1	18.5	9 28	21 28.89	- 7 8.5	1.802	2.622	15.2	20.8
505399	2013 QR ₄₁	8 19.4 65°05	1°6/20.3	17			401569	2013 FD ₁₃	8 19.4 61°10	3°8/15.3	18		
7 20	22 20.86	- 8 4.7	1.278	2.179	16.2	21.1	7 20	22 14.65	-21 24.6	2.084	2.996	10.3	20.4
7 30	22 14.30	- 8 10.1	1.234	2.194	11.6	20.9	7 30	22 9.51	-22 41.2	2.042	3.008	7.2	20.3
8 9	22 5.47	- 8 29.2	1.212	2.209	6.4	20.6	8 9	22 2.87	-23 57.0	2.025	3.020	4.5	20.1
8 19	21 55.44	- 8 57.4	1.213	2.224	1.8	20.4	8 19	21 55.41	-25 5.7	2.036	3.032	4.1	20.1
8 29	21 45.58	- 9 28.9	1.240	2.239	5.0	20.6	8 29	21 47.97	-26 1.6	2.074	3.045	6.3	20.3
9 8	21 37.20	- 9 57.6	1.291	2.254	9.9	21.0	9 8	21 41.42	-26 41.0	2.138	3.058	9.3	20.5
9 18	21 31.27	-10 19.1	1.364	2.270	14.2	21.3	9 18	21 36.41	-27 2.8	2.226	3.070	12.0	20.7
9 28	21 28.34	-10 30.5	1.457	2.285	17.8	21.5	9 28	21 33.45	-27 7.3	2.334	3.083	14.3	20.9
118873	2000 TY ₁₄	8 19.4 241°80	0°6/18.9	18			262593	2006 VK ₁₀₂	8 19.4 127°41	0°1/19.5	17		
7 20	22 17.74	-12 10.6	1.792										

EPHEMERIDES

8 19.4

8 19.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
328959	2010 VG ₁₃₇		8 19.4 283°19	5°2/15.6	18		365682	2010 VL ₉₂		8 19.4 214°04	2°8/22.3	18	
7 20	22 19.47	-21 43.2	1.391	2.311	13.8	20.6	7 20	22 14.04	-1 39.6	2.332	3.193	11.4	21.8
7 30	22 13.61	-22 55.7	1.335	2.304	9.8	20.4	7 30	22 8.99	-1 55.0	2.258	3.191	8.6	21.6
8 9	22 5.31	-24 8.8	1.301	2.298	6.2	20.2	8 9	22 2.61	-2 23.6	2.208	3.189	5.5	21.4
8 19	21 55.51	-25 12.8	1.292	2.291	5.5	20.1	8 19	21 55.44	-3 3.3	2.185	3.187	3.1	21.2
8 29	21 45.57	-25 59.2	1.308	2.284	8.6	20.3	8 29	21 48.18	-3 50.6	2.189	3.185	3.7	21.3
9 8	21 36.93	-26 22.7	1.348	2.278	12.7	20.5	9 8	21 41.56	-4 41.0	2.222	3.182	6.6	21.4
9 18	21 30.69	-26 22.4	1.408	2.271	16.5	20.7	9 18	21 36.20	-5 30.3	2.281	3.180	9.6	21.6
9 28	21 27.56	-26 0.4	1.486	2.265	19.8	20.9	9 28	21 32.61	-6 14.4	2.363	3.177	12.2	21.8
301458	2009 DE ₁₁₅		8 19.4 40°94	0°9/18.6	18		37468	6782 P-L		8 19.4 54°79	0°6/18.9	18	
7 20	22 17.48	-13 50.1	1.803	2.707	12.1	20.9	7 20	22 18.42	-10 49.4	1.137	2.053	16.5	18.5
7 30	22 11.64	-14 15.6	1.745	2.709	8.4	20.7	7 30	22 12.85	-11 42.1	1.097	2.067	11.5	18.3
8 9	22 4.05	-14 46.7	1.711	2.712	4.3	20.4	8 9	22 4.85	-12 47.8	1.078	2.080	5.9	18.0
8 19	21 55.46	-15 18.9	1.703	2.715	1.0	20.2	8 19	21 55.52	-13 58.0	1.083	2.095	0.6	17.7
8 29	21 46.87	-15 47.2	1.723	2.718	4.6	20.5	8 29	21 46.35	-15 3.3	1.111	2.109	5.8	18.1
9 8	21 39.26	-16 7.6	1.768	2.721	8.6	20.7	9 8	21 38.74	-15 55.7	1.163	2.124	11.1	18.5
9 18	21 33.42	-16 17.7	1.838	2.724	12.2	20.9	9 18	21 33.70	-16 30.7	1.236	2.139	15.6	18.8
9 28	21 29.91	-16 16.4	1.929	2.727	15.2	21.1	9 28	21 31.81	-16 47.0	1.327	2.154	19.3	19.1
434689	2006 BC ₇₀		8 19.4 12°50	3°0/17.6	18		160638	1999 VB ₁₀₉		8 19.4 324°14	0°3/19.1	18	
7 20	22 19.88	-18 48.5	1.404	2.321	13.9	20.3	7 20	22 15.69	-11 35.4	1.483	2.393	13.8	19.7
7 30	22 13.67	-19 11.2	1.353	2.323	9.7	20.0	7 30	22 10.82	-12 4.3	1.413	2.380	9.7	19.5
8 9	22 5.22	-19 35.0	1.324	2.325	5.3	19.8	8 9	22 3.83	-12 43.6	1.366	2.367	5.1	19.2
8 19	21 55.51	-19 53.9	1.320	2.327	3.1	19.6	8 19	21 55.49	-13 28.3	1.343	2.355	0.3	18.8
8 29	21 45.86	-20 2.1	1.341	2.331	6.5	19.9	8 29	21 46.95	-14 11.7	1.345	2.343	5.0	19.1
9 8	21 37.58	-19 56.5	1.386	2.334	10.9	20.1	9 8	21 39.40	-14 47.8	1.373	2.332	9.8	19.4
9 18	21 31.63	-19 36.4	1.454	2.338	14.8	20.4	9 18	21 33.87	-15 12.3	1.422	2.322	14.2	19.6
9 28	21 28.61	-19 2.7	1.540	2.343	18.1	20.6	9 28	21 31.06	-15 22.7	1.491	2.312	17.8	19.8
285172	1996 ER ₆		8 19.4 235°39	0°8/20.2	18		25976	2001 FE ₄₄		8 19.4 302°40	0°1/19.4	18	
7 20	22 14.00	-7 49.4	2.402	3.285	10.3	21.3	7 20	22 17.31	-11 50.1	2.027	2.922	11.4	17.8
7 30	22 8.96	-8 21.4	2.328	3.279	7.3	21.1	7 30	22 11.63	-11 57.3	1.934	2.893	8.1	17.5
8 9	22 2.59	-9 2.7	2.278	3.273	4.1	20.9	8 9	22 4.16	-12 11.0	1.865	2.864	4.3	17.2
8 19	21 55.42	-9 49.9	2.255	3.267	0.9	20.7	8 19	21 55.51	-12 28.3	1.823	2.835	0.2	16.8
8 29	21 48.15	-10 39.2	2.262	3.260	3.2	20.9	8 29	21 46.55	-12 45.3	1.809	2.806	4.0	17.1
9 8	21 41.50	-11 26.1	2.296	3.253	6.6	21.1	9 8	21 38.24	-12 58.3	1.822	2.778	8.1	17.3
9 18	21 36.08	-12 7.1	2.357	3.247	9.7	21.3	9 18	21 31.45	-13 4.6	1.860	2.749	11.9	17.5
9 28	21 32.41	-12 39.6	2.441	3.240	12.4	21.4	9 28	21 26.86	-13 2.2	1.919	2.720	15.1	17.6
53103	1999 AB ₂		8 19.4 278°65	1°5/18.2	18		477892	2011 JE ₂₇		8 19.4 43°93	9°4/11.7	17	
7 20	22 16.67	-12 59.0	1.550	2.460	13.3	19.1	7 20	22 18.22	-30 46.7	1.301	2.223	14.4	20.1
7 30	22 11.45	-13 59.4	1.483	2.450	9.3	18.8	7 30	22 12.67	-32 50.2	1.285	2.244	11.3	20.0
8 9	22 4.12	-15 10.0	1.438	2.440	4.8	18.5	8 9	22 4.71	-34 39.0	1.292	2.265	9.5	20.0
8 19	21 55.48	-16 23.9	1.419	2.430	1.5	18.3	8 19	21 55.52	-36 1.6	1.322	2.287	10.1	20.1
8 29	21 46.62	-17 33.0	1.427	2.420	5.6	18.5	8 29	21 46.60	-36 50.7	1.374	2.309	12.3	20.2
9 8	21 38.75	-18 30.2	1.459	2.410	10.2	18.8	9 8	21 39.35	-37 5.1	1.448	2.332	15.1	20.5
9 18	21 32.87	-19 11.1	1.515	2.401	14.3	19.0	9 18	21 34.71	-36 48.5	1.540	2.355	17.8	20.7
9 28	21 29.67	-19 33.7	1.590	2.391	17.8	19.2	9 28	21 33.15	-36 6.4	1.648	2.378	20.0	21.0
366006	2012 BF ₁₀₇		8 19.4 34°10	0°5/18.9	18		376407	2012 FJ ₆₇		8 19.4 69°51	1°7/18.2	17	
7 20	22 13.40	-11 32.1	2.117	3.016	10.8	20.7	7 20	22 19.85	-14 21.2	1.361	2.273	14.6	21.0
7 30	22 8.62	-12 20.7	2.057	3.019	7.5	20.5	7 30	22 13.57	-15 5.7	1.320	2.288	10.1	20.7
8 9	22 2.42	-13 17.0	2.023	3.023	3.8	20.3	8 9	22 5.13	-15 56.8	1.302	2.303	5.2	20.5
8 19	21 55.41	-14 16.0	2.015	3.027	0.5	20.0	8 19	21 55.54	-16 47.3	1.308	2.319	1.8	20.3
8 29	21 48.37	-15 12.8	2.036	3.032	3.9	20.3	8 29	21 46.12	-17 30.0	1.340	2.334	5.8	20.6
9 8	21 42.08	-16 2.4	2.084	3.036	7.5	20.5	9 8	21 38.12	-17 59.7	1.397	2.349	10.4	20.9
9 18	21 37.20	-16 41.6	2.157	3.041	10.7	20.8	9 18	21 32.46	-18 14.0	1.475	2.364	14.4	21.2
9 28	21 34.23	-17 8.4	2.251	3.045	13.4	21.0	9 28	21 29.66	-18 12.6	1.574	2.380	17.7	21.5
5165	Videnom		8 19.4 253°02	1°6/18.1	18		449038	2012 CB ₄₆		8 19.4 265°67	0°1/19.5	18	
7 20	22 18.67	-14 9.7	1.707	2.611	12.6	17.4	7 20	22 13.44	-9 39.8	2.309	3.200	10.3	21.1
7 30	22 12.77	-15 1.2	1.632	2.597	8.8	17.1	7 30	22 8.64	-10 25.7	2.234	3.191	7.3	20.9
8 9	22 4.80	-16 0.7	1.581	2.582	4.6	16.9	8 9	22 2.47	-11 20.6	2.185	3.183	3.8	20.7
8 19	21 55.51	-17 2.0	1.556	2.566	1.7	16.6	8 19	21 55.45	-12 20.4	2.163	3.175	0.2	20.3
8 29	21 45.95	-17 58.2	1.558	2.550	5.4	16.8	8 29	21 48.32	-13 20.2	2.169	3.166	3.5	20.6
9 8	21 37.29	-18 43.2	1.586	2.534	9.8	17.1	9 8	21 41.81	-14 15.4	2.204	3.158	7.0	20.8
9 18	21 30.50	-19 13.3	1.638	2.517	13.8	17.3	9 18	21 36.57	-15 2.1	2.264	3.149	10.2	21.0
9 28	21 26.31	-19 27.2	1.710	2.500	17.2	17.5	9 28	21 33.13	-15 37.8	2.347	3.141	12.9	21.2
335602	2006 EO ₂₀		8 19.4 307°02	2°0/18.2	18		63010	2000 WQ ₃₃		8 19.4 305°52	5°7/13.2	18	
7 20	22 23.17	-17 55.8	1.657	2.562	12.9	20.5	7 20	22 15.56	-27 2.6	2.102	3.013	10.3	19.2
7 30	22 15.75	-17 57.5	1.596	2.561	9.0	20.3	7 30	22 10.32	-28 30.8	2.052	3.011	7.7	19.0
8 9	22 6.24	-17 59.9	1.560	2.560	4.8	20.0	8 9	22 3.40	-29 54.8	2.027	3.009	5.9	18.9
8 19	21 55.56	-17 58.6	1.549	2.559	2.1	19.8	8 19	21 55.49	-31 7.3	2.029	3.007	6.1	18.9
8 29	21 44.90	-17 49.8	1.566	2.558	5.5	20.1	8 29	21 47.50	-32 2.3	2.058	3.005	8.1	19.0
9 8	21 35.47	-17 31.2	1.609	2.557	9.7	20.3	9 8	21 40.37	-32 36.4	2.112	3.003	10.7	19.2
9 18	21 28.19	-17 2.4	1.676	2.556	13.5	20.5	9 18	21 34.87	-32 49.2	2.188	3.002	13.2	19.4
9 28	21 23.65	-16 24.1	1.764	2.555	16.6	20.8	9 28	21 31.56	-32 42.0	2.283	3.000	15.4	19.5
191306	2003 HV ₂₀		8 19.4 112°72	6°6/25.8	18		47369	1999 XA ₈₈		8 19.4 122°14	2°5/17.4		

EPHEMERIDES

8 19.4

8 19.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
512691	2016 <i>UD</i> ₂		8 19.4 326°08	1°5/18.0	18		444315	2005 <i>VU</i> ₁₂₄		8 19.4 260°53	2°1/21.4	17	
7 20	22 15.23	-13 29.4	1.737	2.645	12.2	21.1	7 20	22 16.66	-4 53.1	2.582	3.447	10.3	21.5
7 30	22 10.22	-14 30.8	1.676	2.642	8.5	20.9	7 30	22 10.83	-4 49.8	2.490	3.428	7.6	21.3
8 9	22 3.41	-15 40.2	1.638	2.640	4.3	20.7	8 9	22 3.63	-4 55.7	2.422	3.409	4.7	21.1
8 19	21 55.51	-16 51.4	1.627	2.637	1.6	20.5	8 19	21 55.57	-5 9.2	2.383	3.389	2.3	20.9
8 29	21 47.50	-17 57.2	1.643	2.635	5.1	20.7	8 29	21 47.30	-5 28.0	2.372	3.368	3.4	20.9
9 8	21 40.42	-18 51.5	1.684	2.633	9.2	20.9	9 8	21 39.56	-5 49.2	2.391	3.348	6.4	21.1
9 18	21 35.09	-19 30.9	1.749	2.631	12.9	21.2	9 18	21 32.99	-6 9.7	2.436	3.327	9.4	21.3
9 28	21 32.11	-19 53.5	1.835	2.629	16.0	21.4	9 28	21 28.13	-6 26.8	2.504	3.305	12.0	21.4
476152	2007 <i>TQ</i> ₃₂₈		8 19.4 15°57	5°1/16.5	18		137108	1999 <i>AN</i> ₁₀		8 19.4 46°53	34°0/28.0	13	C
7 20	22 19.21	-23 25.2	1.283	2.208	14.4	20.3	7 20	2 21.82	+12 32.9	0.289	1.008	83.4	18.1
7 30	22 13.31	-23 53.8	1.243	2.213	10.3	20.1	7 30	1 0.10	+29 5.4	0.283	1.104	64.6	17.7
8 9	22 5.06	-24 18.1	1.223	2.220	6.4	19.9	8 9	23 22.29	+39 40.7	0.326	1.198	48.8	17.7
8 19	21 55.57	-24 30.7	1.227	2.228	5.3	19.8	8 19	21 57.99	+42 4.1	0.405	1.289	40.0	18.1
8 29	21 46.27	-24 26.3	1.256	2.237	8.2	20.0	8 29	21 4.22	+40 9.6	0.509	1.375	36.1	18.6
9 8	21 38.54	-24 2.9	1.307	2.247	12.2	20.3	9 8	20 35.06	+37 4.3	0.627	1.458	34.7	19.1
9 18	21 33.33	-23 21.9	1.379	2.257	15.9	20.5	9 18	20 21.33	+33 59.1	0.756	1.535	34.2	19.6
9 28	21 31.16	-22 26.0	1.469	2.269	19.0	20.8	9 28	20 17.21	+31 15.5	0.892	1.609	34.0	20.1
402797	2007 <i>DN</i> ₅₄		8 19.4 40°82	0°2/19.6	18		24592	3039 <i>T</i> ₋₃		8 19.4 292°13	0°1/19.3	18	
7 20	22 15.89	-10 48.8	1.887	2.785	11.9	21.0	7 20	22 15.78	-10 19.5	1.717	2.618	12.8	18.9
7 30	22 10.40	-11 5.7	1.837	2.797	8.3	20.8	7 30	22 10.69	-11 0.6	1.645	2.607	9.0	18.7
8 9	22 3.38	-11 30.2	1.811	2.810	4.4	20.6	8 9	22 3.73	-11 52.7	1.597	2.597	4.7	18.4
8 19	21 55.52	-11 58.6	1.812	2.824	0.3	20.3	8 19	21 55.59	-12 50.8	1.574	2.586	0.2	18.0
8 29	21 47.73	-12 26.4	1.839	2.837	3.9	20.6	8 29	21 47.27	-13 48.6	1.578	2.576	4.5	18.3
9 8	21 40.89	-12 49.8	1.893	2.851	7.7	20.9	9 8	21 39.80	-14 39.9	1.609	2.566	8.9	18.6
9 18	21 35.69	-13 5.8	1.972	2.866	11.1	21.2	9 18	21 34.10	-15 20.1	1.663	2.556	12.8	18.8
9 28	21 32.61	-13 12.8	2.073	2.880	14.0	21.4	9 28	21 30.80	-15 46.6	1.737	2.546	16.2	19.0
38516	1999 <i>TQ</i> ₂₄₈		8 19.4 31°31	7°9/28.0	18		223437	2003 <i>SX</i> ₂₈₃		8 19.4 276°81	5°5/25.2	18	
7 20	22 11.99	+12 17.2	1.802	2.607	16.4	16.8	7 20	22 13.40	+6 52.9	2.443	3.259	12.3	20.3
7 30	22 7.82	+12 11.3	1.743	2.619	13.8	16.7	7 30	22 8.63	+6 58.4	2.353	3.245	10.1	20.2
8 9	22 2.09	+11 37.8	1.703	2.632	11.0	16.5	8 9	22 2.51	+6 46.5	2.286	3.231	7.7	20.0
8 19	21 55.47	+10 37.4	1.686	2.645	8.7	16.4	8 19	21 55.55	+6 17.3	2.243	3.217	5.9	19.9
8 29	21 48.84	+9 14.1	1.693	2.659	7.9	16.4	8 29	21 48.40	+5 32.9	2.228	3.203	5.7	19.8
9 8	21 43.07	+7 35.1	1.725	2.673	9.1	16.5	9 8	21 41.78	+4 37.1	2.239	3.188	7.3	19.9
9 18	21 38.89	+5 49.1	1.782	2.688	11.4	16.7	9 18	21 36.34	+3 35.0	2.277	3.174	9.7	20.0
9 28	21 36.81	+4 4.6	1.862	2.704	13.9	16.9	9 28	21 32.60	+2 31.8	2.338	3.160	12.1	20.2
456206	2006 <i>JH</i> ₃₁		8 19.4 40°97	5°0/16.1	17		52670	1998 <i>DC</i> ₃		8 19.4 114°25	0°6/18.8	18	
7 20	22 17.93	-19 7.6	1.052	1.984	16.1	19.9	7 20	22 14.39	-11 7.6	2.101	2.997	10.9	19.5
7 30	22 12.70	-20 33.6	1.020	1.997	11.2	19.6	7 30	22 9.37	-12 9.4	2.041	3.002	7.6	19.3
8 9	22 4.84	-22 1.4	1.009	2.010	6.5	19.4	8 9	22 2.89	-13 19.5	2.007	3.007	3.9	19.1
8 19	21 55.57	-23 19.3	1.021	2.024	5.2	19.4	8 19	21 55.56	-14 32.8	2.000	3.012	0.6	18.8
8 29	21 46.52	-24 16.7	1.056	2.039	8.9	19.7	8 29	21 48.19	-15 43.2	2.022	3.016	4.0	19.1
9 8	21 39.21	-24 48.2	1.112	2.055	13.5	20.0	9 8	21 41.58	-16 45.4	2.071	3.021	7.7	19.3
9 18	21 34.69	-24 53.3	1.188	2.071	17.6	20.3	9 18	21 36.41	-17 35.8	2.145	3.025	10.9	19.5
9 28	21 33.49	-24 34.7	1.280	2.088	20.9	20.6	9 28	21 33.19	-18 12.2	2.241	3.030	13.6	19.7
195434	2002 <i>GL</i> ₆₅		8 19.4 161°61	0°1/19.4	17		220422	2003 <i>SQ</i> ₂₅₇		8 19.4 266°81	0°4/19.0	18	
7 20	22 18.04	-10 24.6	2.169	3.056	11.0	21.6	7 20	22 13.96	-11 52.3	2.416	3.310	9.8	20.6
7 30	22 11.83	-10 58.8	2.106	3.062	7.7	21.4	7 30	22 8.98	-12 28.0	2.343	3.302	6.8	20.4
8 9	22 4.12	-11 40.7	2.070	3.068	4.1	21.2	8 9	22 2.67	-13 10.2	2.295	3.294	3.5	20.1
8 19	21 55.56	-12 26.2	2.060	3.072	0.2	20.9	8 19	21 55.56	-13 55.1	2.274	3.286	0.4	19.9
8 29	21 46.97	-13 10.8	2.080	3.077	3.7	21.2	8 29	21 48.35	-14 38.7	2.283	3.278	3.5	20.1
9 8	21 39.19	-13 50.1	2.128	3.080	7.3	21.4	9 8	21 41.76	-15 17.0	2.319	3.270	6.9	20.3
9 18	21 32.91	-14 21.2	2.201	3.083	10.6	21.6	9 18	21 36.41	-15 47.1	2.381	3.262	9.9	20.5
9 28	21 28.64	-14 42.0	2.297	3.086	13.3	21.8	9 28	21 32.80	-16 7.2	2.465	3.254	12.5	20.7
263864	2009 <i>DD</i> ₁₆		8 19.4 82°72	0°1/19.4	17		404987	2000 <i>CA</i> ₃		8 19.4 274°67	0°8/18.7	17	
7 20	22 22.65	-12 4.5	1.293	2.200	15.6	20.5	7 20	22 21.46	-15 28.5	2.663	3.549	9.3	20.9
7 30	22 15.72	-12 11.9	1.242	2.206	11.0	20.3	7 30	22 14.22	-15 28.3	2.563	3.518	6.5	20.7
8 9	22 6.37	-12 28.0	1.212	2.213	5.7	20.0	8 9	22 5.44	-15 29.8	2.489	3.487	3.4	20.4
8 19	21 55.66	-12 48.1	1.207	2.219	0.2	19.6	8 19	21 55.68	-15 30.5	2.444	3.456	0.8	20.2
8 29	21 45.01	-13 6.3	1.227	2.226	5.3	20.0	8 29	21 45.66	-15 27.5	2.431	3.424	3.7	20.3
9 8	21 35.85	-13 17.7	1.272	2.232	10.4	20.3	9 8	21 36.19	-15 19.0	2.447	3.391	7.0	20.5
9 18	21 29.21	-13 19.7	1.339	2.239	14.9	20.6	9 18	21 27.99	-15 3.6	2.491	3.358	10.1	20.7
9 28	21 25.72	-13 10.7	1.426	2.245	18.6	20.9	9 28	21 21.64	-14 41.0	2.558	3.324	12.7	20.8
261199	2005 <i>TV</i> ₁₆₄		8 19.4 78°59	1°3/20.6	18		166506	2002 <i>QD</i> ₃₃		8 19.4 268°13	0°2/19.6	18	
7 20	22 15.52	-7 7.0	2.095	2.979	11.5	20.5	7 20	22 15.25	-8 52.5	2.030	2.921	11.5	20.2
7 30	22 10.08	-7 24.1	2.037	2.988	8.3	20.3	7 30	22 10.17	-9 43.2	1.946	2.902	8.2	19.9
8 9	22 3.21	-7 53.3	2.003	2.997	4.7	20.1	8 9	22 3.42	-10 45.6	1.886	2.884	4.4	19.7
8 19	21 55.54	-8 29.3	1.995	3.006	1.5	19.9	8 19	21 55.60	-11 55.2	1.853	2.865	0.3	19.3
8 29	21 47.87	-9 8.2	2.016	3.014	3.5	20.1	8 29	21 47.51	-13 6.2	1.849	2.846	3.9	19.6
9 8	21 41.01	-9 45.4	2.064	3.023	7.0	20.3	9 8	21 40.08	-14 12.4	1.871	2.827	8.0	19.8
9 18	21 35.61	-10 17.6	2.137	3.032	10.3	20.5	9 18	21 34.12	-15 9.1	1.920	2.807	11.7	20.0
9 28	21 32.17	-10 41.9	2.233	3.041	13.1	20.7	9 28	21 30.24	-15 52.8	1.989	2.787	14.8	20.1
136549	6702 <i>P-L</i>		8 19.4 346°51	5°4/16.8	18		219822	2002 <i>CB</i> ₄		8 19.4 227°04	2°4/17.3	18	

EPHEMERIDES

8 19.4

8 19.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
107655	2001 <i>EF</i> ₂₄	8 19.4 108°52'		1°0'/20.2 18			226552	2003 <i>WN</i> ₆	8 19.4 225°71'		3°8'/23.0 18		
7 20	22 18.62	- 7 27.7	1.515	2.409	14.5	19.5	7 20	22 16.60	+ 0 51.2	2.315	3.160	12.0	21.2
7 30	22 12.67	- 8 7.3	1.462	2.419	10.3	19.3	7 30	22 10.91	+ 0 47.9	2.230	3.150	9.3	21.0
8 9	22 4.73	- 9 0.8	1.432	2.428	5.7	19.1	8 9	22 3.74	+ 0 29.9	2.169	3.140	6.4	20.9
8 19	21 55.65	-10 2.8	1.426	2.438	1.2	18.8	8 19	21 55.65	- 0 1.5	2.134	3.129	4.1	20.7
8 29	21 46.59	-11 6.3	1.448	2.447	4.5	19.0	8 29	21 47.39	- 0 43.5	2.127	3.118	4.4	20.7
9 8	21 38.68	-12 4.3	1.495	2.456	9.1	19.3	9 8	21 39.73	- 1 31.8	2.149	3.106	7.0	20.8
9 18	21 32.83	-12 51.6	1.566	2.464	13.2	19.6	9 18	21 33.39	- 2 21.8	2.197	3.093	10.0	21.0
9 28	21 29.60	-13 25.2	1.657	2.472	16.5	19.8	9 28	21 28.90	- 3 9.1	2.268	3.080	12.7	21.2
321964	2010 <i>UD</i> ₂₁	8 19.4 286°75'		5°6'/25.1 18			301984	2000 <i>KC</i> ₄₃	8 19.4 17°61'		10°3'/11.1 18		
7 20	22 13.81	+ 6 22.6	2.272	3.094	12.9	20.6	7 20	22 20.05	-37 1.2	1.552	2.456	13.7	19.2
7 30	22 8.96	+ 6 30.6	2.191	3.088	10.5	20.4	7 30	22 13.95	-38 23.8	1.521	2.460	11.5	19.1
8 9	22 2.70	+ 6 20.5	2.133	3.082	8.0	20.3	8 9	22 5.47	-39 29.2	1.513	2.465	10.4	19.0
8 19	21 55.58	+ 5 52.6	2.100	3.076	6.0	20.1	8 19	21 55.71	-40 8.6	1.527	2.470	10.9	19.1
8 29	21 48.32	+ 5 9.1	2.093	3.069	5.8	20.1	8 29	21 46.13	-40 16.5	1.564	2.476	12.6	19.2
9 8	21 41.67	+ 4 14.4	2.113	3.063	7.5	20.2	9 8	21 38.10	-39 52.8	1.622	2.483	15.0	19.4
9 18	21 36.31	+ 3 13.6	2.158	3.057	10.0	20.3	9 18	21 32.59	-39 1.3	1.699	2.491	17.3	19.5
9 28	21 32.76	+ 2 12.3	2.227	3.051	12.5	20.5	9 28	21 30.13	-37 47.6	1.792	2.499	19.3	19.7
445268	2009 <i>SX</i> ₂₉₁	8 19.4 3°11'		1°2'/18.4 18			94074	2000 <i>YB</i> ₄₀	8 19.4 246°10'		2°8'/16.3 18		
7 20	22 14.11	-13 53.9	1.723	2.634	12.2	20.1	7 20	22 14.74	-18 58.5	2.326	3.232	9.6	19.5
7 30	22 9.42	-14 28.7	1.666	2.633	8.4	19.9	7 30	22 9.63	-20 4.7	2.260	3.225	6.7	19.3
8 9	22 3.01	-15 10.0	1.632	2.633	4.3	19.7	8 9	22 3.07	-21 13.3	2.220	3.217	3.9	19.1
8 19	21 55.59	-15 52.6	1.623	2.634	1.2	19.4	8 19	21 55.63	-22 18.7	2.207	3.210	3.0	19.1
8 29	21 48.14	-16 30.9	1.641	2.636	4.8	19.7	8 29	21 48.07	-23 15.6	2.223	3.202	5.4	19.2
9 8	21 41.64	-17 0.3	1.684	2.638	8.8	19.9	9 8	21 41.18	-23 59.8	2.266	3.194	8.4	19.4
9 18	21 36.86	-17 17.8	1.751	2.641	12.4	20.2	9 18	21 35.65	-24 29.2	2.334	3.185	11.2	19.6
9 28	21 34.36	-17 22.1	1.839	2.645	15.5	20.4	9 28	21 32.01	-24 43.1	2.422	3.177	13.6	19.7
404897	2014 <i>KF</i> ₈₁	8 19.4 105°00'		4°6'/14.8 18			510516	2012 <i>BU</i> ₉₈	8 19.4 52°54'		1°5'/20.6 18		
7 20	22 17.89	-25 18.5	2.203	3.109	10.1	20.9	7 20	22 18.44	- 8 14.0	2.166	3.047	11.3	21.0
7 30	22 11.75	-26 20.8	2.163	3.122	7.3	20.8	7 30	22 12.12	- 8 0.3	2.102	3.051	8.2	20.8
8 9	22 4.09	-27 18.9	2.149	3.136	5.1	20.7	8 9	22 4.31	- 7 54.3	2.063	3.056	4.7	20.6
8 19	21 55.64	-28 7.1	2.162	3.149	4.9	20.7	8 19	21 55.68	- 7 54.2	2.050	3.060	1.6	20.4
8 29	21 47.26	-28 40.5	2.202	3.162	6.8	20.8	8 29	21 47.05	- 7 57.3	2.067	3.065	3.6	20.5
9 8	21 39.82	-28 57.1	2.269	3.175	9.4	21.0	9 8	21 39.23	- 8 0.9	2.111	3.069	7.0	20.8
9 18	21 33.99	-28 56.6	2.359	3.188	11.9	21.2	9 18	21 32.92	- 8 2.6	2.181	3.074	10.2	21.0
9 28	21 30.26	-28 40.5	2.469	3.200	14.0	21.4	9 28	21 28.60	- 8 0.2	2.274	3.079	13.0	21.2
241015	2006 <i>PH</i> ₃₆	8 19.4 3°09'		1°0'/18.5 18			517839	2015 <i>RW</i> ₁₁₆	8 19.4 297°60'		5°6'/13.0 18		
7 20	22 14.03	-11 47.2	1.591	2.500	13.0	20.1	7 20	22 14.75	-25 37.0	2.072	2.985	10.3	20.4
7 30	22 9.50	-12 49.5	1.533	2.500	9.1	19.8	7 30	22 9.96	-27 17.3	2.004	2.965	7.7	20.2
8 9	22 3.11	-14 2.2	1.498	2.500	4.6	19.6	8 9	22 3.39	-28 56.7	1.961	2.946	5.8	20.1
8 19	21 55.60	-15 18.7	1.489	2.500	1.0	19.3	8 19	21 55.65	-30 27.2	1.945	2.926	6.0	20.0
8 29	21 48.02	-16 31.1	1.506	2.501	5.0	19.6	8 29	21 47.65	-31 41.3	1.957	2.906	8.3	20.1
9 8	21 41.41	-17 32.6	1.548	2.503	9.4	19.9	9 8	21 40.37	-32 34.2	1.993	2.887	11.1	20.3
9 18	21 36.65	-18 18.8	1.614	2.505	13.3	20.1	9 18	21 34.67	-33 4.1	2.052	2.868	13.9	20.4
9 28	21 34.32	-18 47.5	1.700	2.507	16.5	20.3	9 28	21 31.20	-33 11.7	2.129	2.848	16.3	20.6
111849	2002 <i>EU</i> ₄₀	8 19.4 137°74'		3°9'/16.1 18			367887	2011 <i>WX</i> ₁₄₅	8 19.4 65°63'		6°2'/15.6 17		
7 20	22 22.29	-23 46.6	2.221	3.120	10.3	20.1	7 20	22 22.17	-23 27.9	1.203	2.126	15.3	20.0
7 30	22 14.74	-24 26.6	2.176	3.134	7.4	19.9	7 30	22 15.59	-24 37.5	1.166	2.136	10.9	19.8
8 9	22 5.62	-25 3.0	2.156	3.147	4.7	19.8	8 9	22 6.39	-25 43.2	1.150	2.145	7.2	19.6
8 19	21 55.70	-25 30.7	2.165	3.160	4.0	19.7	8 19	21 55.77	-26 34.5	1.158	2.155	6.4	19.6
8 29	21 45.91	-25 45.8	2.202	3.172	6.1	19.9	8 29	21 45.34	-27 3.5	1.190	2.165	9.5	19.8
9 8	21 37.14	-25 46.4	2.266	3.183	8.9	20.1	9 8	21 36.64	-27 6.8	1.244	2.175	13.5	20.0
9 18	21 30.10	-25 32.6	2.355	3.194	11.6	20.3	9 18	21 30.74	-26 46.0	1.319	2.185	17.3	20.3
9 28	21 25.26	-25 6.0	2.466	3.204	13.8	20.5	9 28	21 28.18	-26 4.7	1.410	2.195	20.4	20.6
39519	1988 <i>CQ</i> ₅	8 19.4 229°73'		4°1'/22.3 18			312400	2008 <i>FG</i> ₂₃	8 19.4 182°06'		2°5'/22.3 18		
7 20	22 18.73	- 1 12.2	1.523	2.396	15.6	19.3	7 20	22 13.63	- 1 9.8	2.410	3.268	11.1	20.7
7 30	22 12.92	- 1 18.0	1.452	2.391	11.9	19.0	7 30	22 8.74	- 1 48.1	2.337	3.269	8.4	20.5
8 9	22 4.98	- 1 43.5	1.403	2.386	7.8	18.8	8 9	22 2.56	- 2 40.5	2.288	3.269	5.3	20.3
8 19	21 55.69	- 2 26.5	1.378	2.380	4.4	18.6	8 19	21 55.63	- 3 44.0	2.265	3.269	2.8	20.1
8 29	21 46.19	- 3 21.9	1.378	2.374	5.3	18.6	8 29	21 48.61	- 4 54.5	2.272	3.268	3.5	20.2
9 8	21 37.70	- 4 22.8	1.405	2.368	9.2	18.8	9 8	21 42.20	- 6 6.7	2.307	3.268	6.3	20.4
9 18	21 31.21	- 5 22.1	1.454	2.362	13.4	19.1	9 18	21 37.01	- 7 15.7	2.369	3.267	9.3	20.6
9 28	21 27.44	- 6 13.8	1.525	2.355	17.0	19.3	9 28	21 33.51	- 8 17.5	2.455	3.266	11.9	20.7
138222	2000 <i>FU</i> ₃	8 19.4 202°97'		4°9'/15.1 18			137697	1999 <i>XM</i> ₆₉	8 19.4 296°82'		4°4'/22.1 18		
7 20	22 20.40	-23 29.3	1.885	2.793	11.4	20.0	7 20	22 17.76	- 2 3.5	1.399	2.281	16.2	20.1
7 30	22 13.86	-24 44.7	1.827	2.789	8.2	19.8	7 30	22 12.58	- 1 53.5	1.315	2.259	12.4	19.8
8 9	22 5.37	-25 58.6	1.794	2.785	5.5	19.6	8 9	22 4.99	- 2 2.8	1.252	2.237	8.2	19.5
8 19	21 55.71	-27 3.3	1.788	2.780	5.2	19.6	8 19	21 55.74	- 2 30.5	1.212	2.215	4.7	19.2
8 29	21 45.93	-27 52.1	1.809	2.774	7.6	19.7	8 29	21 46.01	- 3 12.6	1.196	2.193	5.8	19.3
9 8	21 37.14	-28 21.1	1.855	2.768	10.8	19.9	9 8	21 37.17	- 4 2.5	1.205	2.171	10.2	19.4
9 18	21 30.24	-28 29.4	1.925	2.761	13.9	20.1	9 18	21 30.43	- 4 53.1	1.237	2.150	14.8	19.6
9 28	21 25.86	-28 18.6	2.014	2.754	16.5	20.3	9 28	21 26.68	- 5 37.7	1.287	2.128	18.9	19.9
88404	2001 <i>QR</i> ₂₆	8 19.4 359°40'		2°7'/17.9 18			225738	2001 <i>SL</i>					

EPHEMERIDES

8 19.4

8 19.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
256792	2008 <i>CD</i> ₄₉		8 19.4 140°54	1.7°/18.2	17		424545	2008 <i>EN</i> ₁₄₈		8 19.4 209°38	2.9°/17.3	17	
7 20	22 22.17	-15 22.2	1.736	2.637	12.6	21.4	7 20	22 23.34	-19 27.7	1.889	2.790	11.8	22.3
7 30	22 14.98	-15 58.1	1.685	2.647	8.7	21.1	7 30	22 15.89	-20 2.2	1.822	2.784	8.3	22.1
8 9	22 5.90	-16 38.2	1.657	2.657	4.5	20.9	8 9	22 6.45	-20 37.3	1.779	2.777	4.7	21.9
8 19	21 55.77	-17 17.1	1.657	2.667	1.7	20.7	8 19	21 55.83	-21 7.5	1.764	2.769	3.0	21.8
8 29	21 45.71	-17 49.0	1.684	2.676	5.2	21.0	8 29	21 45.10	-21 27.4	1.777	2.761	5.9	21.9
9 8	21 36.81	-18 10.1	1.738	2.684	9.2	21.3	9 8	21 35.38	-21 33.9	1.817	2.752	9.6	22.1
9 18	21 29.92	-18 18.5	1.816	2.692	12.8	21.5	9 18	21 27.60	-21 26.1	1.881	2.742	13.1	22.3
9 28	21 25.58	-18 14.0	1.915	2.699	15.8	21.7	9 28	21 22.36	-21 4.6	1.966	2.731	16.0	22.5
476086	2007 <i>TK</i> ₅₂		8 19.4 47°48	6.5°/25.6	18		123604	2000 <i>YY</i> ₉		8 19.4 300°41	0.2°/19.3	18	
7 20	22 14.50	+ 7 26.9	1.822	2.651	15.4	21.2	7 20	22 17.45	-11 22.8	1.596	2.500	13.4	19.7
7 30	22 9.66	+ 7 24.2	1.754	2.654	12.5	21.0	7 30	22 12.02	-11 47.8	1.525	2.488	9.4	19.4
8 9	22 3.16	+ 6 57.9	1.707	2.658	9.5	20.8	8 9	22 4.53	-12 22.3	1.476	2.476	5.0	19.1
8 19	21 55.66	+ 6 8.7	1.684	2.661	7.1	20.7	8 19	21 55.75	-13 1.9	1.453	2.465	0.2	18.7
8 29	21 48.07	+ 5 0.5	1.686	2.665	6.7	20.7	8 29	21 46.76	-13 40.6	1.456	2.454	4.7	19.1
9 8	21 41.31	+ 3 39.6	1.714	2.669	8.6	20.8	9 8	21 38.73	-14 12.9	1.484	2.443	9.4	19.3
9 18	21 36.17	+ 2 13.8	1.766	2.673	11.4	21.0	9 18	21 32.63	-14 34.9	1.536	2.432	13.5	19.5
9 28	21 33.20	+ 0 50.5	1.841	2.677	14.3	21.2	9 28	21 29.15	-14 44.4	1.608	2.421	17.1	19.8
332487	2008 <i>ES</i> ₁₅₈		8 19.4 56°32	0.3°/19.7	17		69251	1981 <i>ER</i> ₃₃		8 19.4 115°46	3.0°/21.7	17	
7 20	22 17.09	- 8 18.2	1.301	2.207	15.6	20.7	7 20	22 18.97	- 2 42.3	1.499	2.379	15.5	20.2
7 30	22 11.74	- 9 15.7	1.261	2.224	11.0	20.5	7 30	22 12.96	- 3 7.9	1.444	2.389	11.5	20.0
8 9	22 4.29	-10 27.8	1.242	2.242	5.8	20.3	8 9	22 4.94	- 3 52.1	1.411	2.399	7.1	19.8
8 19	21 55.71	-11 47.0	1.248	2.260	0.5	20.0	8 19	21 55.77	- 4 51.1	1.402	2.408	3.3	19.6
8 29	21 47.25	-13 4.1	1.280	2.279	5.0	20.3	8 29	21 46.58	- 5 58.1	1.420	2.418	4.7	19.7
9 8	21 40.16	-14 11.2	1.335	2.297	9.8	20.7	9 8	21 38.55	- 7 5.6	1.463	2.427	8.9	20.0
9 18	21 35.30	-15 3.0	1.414	2.316	14.1	21.0	9 18	21 32.58	- 8 7.0	1.530	2.436	13.0	20.2
9 28	21 33.23	-15 37.0	1.512	2.335	17.5	21.3	9 28	21 29.26	- 8 57.3	1.618	2.444	16.4	20.5
56321	1999 <i>VB</i> ₅₃		8 19.4 189°63	19°2/ 2.5	18		476739	2008 <i>UP</i> ₄₇		8 19.4 324°47	8°9/13.1	18	
7 20	22 23.02	+26 46.3	1.312	2.032	25.4	17.7	7 20	22 19.64	-30 52.1	1.355	2.274	14.2	19.9
7 30	22 16.63	+28 54.4	1.253	2.032	23.6	17.5	7 30	22 14.09	-32 3.4	1.297	2.256	11.2	19.7
8 9	22 7.27	+30 22.3	1.207	2.031	21.7	17.4	8 9	22 5.81	-33 5.0	1.260	2.238	9.2	19.6
8 19	21 55.85	+31 0.7	1.176	2.031	20.2	17.3	8 19	21 55.80	-33 46.3	1.246	2.221	9.4	19.5
8 29	21 43.87	+30 44.6	1.161	2.030	19.3	17.2	8 29	21 45.61	-33 59.0	1.255	2.205	11.9	19.6
9 8	21 33.11	+29 37.2	1.163	2.028	19.4	17.2	9 8	21 36.82	-33 40.2	1.285	2.189	15.3	19.8
9 18	21 25.03	+27 48.7	1.183	2.026	20.3	17.3	9 18	21 30.69	-32 52.1	1.334	2.174	18.6	20.0
9 28	21 20.64	+25 33.9	1.219	2.024	21.9	17.4	9 28	21 27.96	-31 39.5	1.400	2.160	21.6	20.2
102396	1999 <i>TD</i> ₁₆₆		8 19.4 51°49	4°9/22.9	18		91610	1999 <i>TP</i> ₂₆		8 19.4 356°85	4°7/23.9	18	
7 20	22 17.46	+ 0 8.9	1.307	2.186	17.3	19.4	7 20	22 13.43	+ 2 50.0	2.003	2.852	13.4	18.8
7 30	22 12.11	+ 0 4.5	1.254	2.194	13.3	19.2	7 30	22 8.81	+ 2 44.1	1.932	2.851	10.5	18.6
8 9	22 4.56	+ 0 23.3	1.221	2.202	8.9	18.9	8 9	22 2.70	+ 2 19.9	1.883	2.850	7.5	18.4
8 19	21 55.73	- 1 11.7	1.210	2.211	5.3	18.8	8 19	21 55.67	+ 1 38.8	1.858	2.850	5.1	18.2
8 29	21 46.88	- 2 14.7	1.224	2.220	5.9	18.8	8 29	21 48.55	+ 0 44.3	1.860	2.849	5.1	18.2
9 8	21 39.28	- 3 23.7	1.262	2.229	9.7	19.1	9 8	21 42.15	- 0 18.0	1.889	2.849	7.5	18.4
9 18	21 33.92	- 4 30.6	1.323	2.238	13.9	19.3	9 18	21 37.19	- 1 22.4	1.943	2.849	10.6	18.6
9 28	21 31.42	- 5 28.4	1.403	2.247	17.5	19.6	9 28	21 34.21	- 2 23.2	2.019	2.850	13.4	18.8
263349	2008 <i>CN</i> ₁₁₇		8 19.4 149°65	0°3/19.2	17		522972	2016 <i>PH</i> ₁₁₆		8 19.4 298°41	2°9/21.7	17	
7 20	22 20.61	-11 32.5	1.702	2.598	13.1	21.0	7 20	22 15.72	- 3 12.0	1.587	2.470	14.6	21.5
7 30	22 13.96	-12 5.4	1.645	2.605	9.1	20.8	7 30	22 10.80	- 3 33.6	1.513	2.460	10.9	21.2
8 9	22 5.41	-12 46.6	1.612	2.611	4.7	20.5	8 9	22 3.90	- 4 13.2	1.462	2.451	6.8	21.0
8 19	21 55.76	-13 31.1	1.605	2.617	0.3	20.2	8 19	21 55.74	- 5 7.8	1.434	2.441	3.2	20.7
8 29	21 46.12	-14 13.1	1.626	2.623	4.6	20.5	8 29	21 47.35	- 6 11.7	1.433	2.432	4.6	20.8
9 8	21 37.56	-14 47.6	1.674	2.628	8.9	20.8	9 8	21 39.87	- 7 17.6	1.458	2.423	8.8	21.0
9 18	21 30.95	-15 11.4	1.746	2.632	12.7	21.1	9 18	21 34.22	- 8 19.0	1.506	2.414	13.0	21.3
9 28	21 26.86	-15 22.8	1.839	2.636	15.8	21.3	9 28	21 31.11	- 9 10.2	1.575	2.405	16.6	21.5
254390	2004 <i>TL</i> ₂₂₀		8 19.4 280°46	4°4/14.8	18		157338	2004 <i>TZ</i> ₄₃		8 19.4 315°39	0°3/19.7	18	
7 20	22 15.42	-23 55.0	2.218	3.127	9.9	19.7	7 20	22 14.86	-10 17.8	1.929	2.826	11.7	20.1
7 30	22 10.19	-25 3.0	2.159	3.121	7.1	19.6	7 30	22 9.97	-10 37.7	1.849	2.809	8.3	19.9
8 9	22 3.40	-26 9.4	2.125	3.115	4.9	19.4	8 9	22 3.38	-11 6.5	1.793	2.792	4.5	19.6
8 19	21 55.69	-27 8.0	2.119	3.110	4.6	19.4	8 19	21 55.71	-11 40.7	1.763	2.775	0.4	19.2
8 29	21 47.88	-27 53.5	2.140	3.104	6.7	19.5	8 29	21 47.85	-12 15.8	1.760	2.759	4.0	19.5
9 8	21 40.85	-28 22.5	2.187	3.098	9.5	19.7	9 8	21 40.71	-12 47.2	1.784	2.743	8.0	19.7
9 18	21 35.31	-28 33.9	2.257	3.092	12.2	19.9	9 18	21 35.11	-13 11.3	1.832	2.727	11.7	19.9
9 28	21 31.80	-28 28.3	2.348	3.086	14.5	20.0	9 28	21 31.67	-13 25.4	1.901	2.712	14.9	20.1
99913	1997 <i>CZ</i> ₅		8 19.4 283°76	12°8/24.4	18		121680	1999 <i>XJ</i> ₅₇		8 19.4 288°09	0°8/18.7	18	
7 20	22 26.10	+15 36.5	1.792	2.553	18.1	17.6	7 20	22 14.90	-12 52.1	2.192	3.090	10.5	20.7
7 30	22 18.61	+17 24.0	1.680	2.514	16.2	17.4	7 30	22 9.86	-13 29.7	2.109	3.071	7.3	20.5
8 9	22 8.37	+18 51.4	1.587	2.473	14.3	17.2	8 9	22 3.28	-14 14.2	2.052	3.052	3.8	20.2
8 19	21 55.92	+19 51.4	1.518	2.432	13.0	17.0	8 19	21 55.71	-15 1.4	2.022	3.033	0.8	20.0
8 29	21 42.34	+20 18.7	1.472	2.389	12.9	16.9	8 29	21 47.94	-15 46.6	2.019	3.014	4.1	20.2
9 8	21 29.02	+20 12.4	1.450	2.346	14.4	16.9	9 8	21 40.81	-16 25.2	2.044	2.995	7.7	20.4
9 18	21 17.41	+19 36.9	1.451	2.301	16.9	16.9	9 18	21 35.04	-16 54.2	2.095	2.976	11.1	20.6
9 28	21 8.69	+18 40.8	1.471	2.255	19.7	17.0	9 28	21 31.24	-17 11.4	2.166	2.957	14.0	20.7
312939	1994 <i>SW</i> ₁₂		8 19.4 278°86	3°8/16.0	18		5357	Sekiguchi					

EPHEMERIDES

8 19.4

8 19.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
258908	2002 <i>QQ</i> ₁₁₄	8 19.4 288°98		2°6/20.9 17			63953	2001 <i>SY</i> ₆₄	8 19.5 9°36		0°1/19.6 18		
7 20	22 19.43	- 6 1.4	1.440	2.332	15.3	20.8	7 20	22 15.15	-10 1.4	1.790	2.689	12.4	18.7
7 30	22 13.56	- 5 57.2	1.370	2.323	11.3	20.5	7 30	22 10.17	-10 37.8	1.729	2.689	8.7	18.4
8 9	22 5.41	- 6 7.7	1.321	2.313	6.7	20.2	8 9	22 3.48	-11 24.1	1.691	2.690	4.6	18.2
8 19	21 55.81	- 6 30.1	1.296	2.304	2.8	20.0	8 19	21 55.81	-12 15.7	1.679	2.691	0.3	17.8
8 29	21 45.97	- 7 0.0	1.296	2.295	4.9	20.1	8 29	21 48.06	-13 6.9	1.695	2.693	4.1	18.2
9 8	21 37.20	- 7 31.5	1.322	2.286	9.6	20.3	9 8	21 41.21	-13 52.3	1.736	2.695	8.2	18.4
9 18	21 30.57	- 7 59.4	1.370	2.277	14.1	20.6	9 18	21 36.04	-14 27.9	1.802	2.697	11.9	18.7
9 28	21 26.82	- 8 19.5	1.438	2.268	17.9	20.8	9 28	21 33.09	-14 51.2	1.889	2.699	15.0	18.9
18684	1998 <i>FW</i> ₁₁₆	8 19.4 357°82		6°1/24.7 18			384418	2009 <i>WQ</i> ₂₀₄	8 19.5 301°80		3°5/21.7 18		
7 20	22 13.97	+ 4 55.7	1.799	2.643	14.9	17.6	7 20	22 17.85	- 3 35.6	1.481	2.366	15.3	21.0
7 30	22 9.35	+ 5 8.9	1.729	2.641	12.0	17.4	7 30	22 12.47	- 3 28.4	1.406	2.353	11.5	20.7
8 9	22 3.04	+ 5 1.0	1.681	2.640	8.9	17.2	8 9	22 4.89	- 3 37.9	1.352	2.340	7.3	20.4
8 19	21 55.72	+ 4 32.6	1.655	2.639	6.6	17.1	8 19	21 55.88	- 4 2.4	1.322	2.327	3.8	20.2
8 29	21 48.27	+ 3 46.5	1.656	2.639	6.4	17.1	8 29	21 46.57	- 4 37.8	1.317	2.315	5.2	20.2
9 8	21 41.63	+ 2 48.5	1.681	2.639	8.5	17.2	9 8	21 38.23	- 5 17.9	1.337	2.302	9.4	20.5
9 18	21 36.59	+ 1 44.8	1.731	2.639	11.5	17.4	9 18	21 31.91	- 5 56.8	1.380	2.290	13.8	20.7
9 28	21 33.74	+ 0 42.4	1.803	2.641	14.5	17.6	9 28	21 28.36	- 6 29.3	1.444	2.279	17.6	20.9
334368	2002 <i>AB</i> ₄₇	8 19.4 227°96		1°3/20.5 18			453445	2009 <i>RK</i> ₅	8 19.5 357°13		5°4/17.1 18		
7 20	22 18.27	- 7 19.2	1.895	2.779	12.5	21.4	7 20	22 29.63	-28 50.0	1.758	2.654	12.7	19.3
7 30	22 12.33	- 7 38.8	1.821	2.772	9.1	21.1	7 30	22 20.25	-28 30.1	1.698	2.651	9.5	19.1
8 9	22 4.61	- 8 9.9	1.770	2.764	5.1	20.9	8 9	22 8.69	-27 58.8	1.663	2.649	6.5	18.9
8 19	21 55.79	- 8 49.1	1.746	2.756	1.5	20.6	8 19	21 56.04	-27 11.5	1.655	2.647	5.5	18.9
8 29	21 46.81	- 9 31.7	1.749	2.748	3.9	20.8	8 29	21 43.64	-26 6.4	1.675	2.647	7.5	19.0
9 8	21 38.64	-10 12.7	1.780	2.739	8.0	21.0	9 8	21 32.80	-24 45.3	1.723	2.646	10.8	19.2
9 18	21 32.12	-10 47.8	1.835	2.729	11.7	21.2	9 18	21 24.41	-23 12.0	1.795	2.647	14.0	19.4
9 28	21 27.87	-11 13.8	1.912	2.720	14.9	21.4	9 28	21 18.99	-21 30.9	1.888	2.648	16.8	19.6
153376	2001 <i>QU</i> ₂₁	8 19.4 345°93		3°5/17.8 18			513199	2005 <i>SJ</i> ₁₃	8 19.5 271°36		1°8/17.9 18		
7 20	22 15.49	-18 55.9	0.959	1.898	16.6	18.0	7 20	22 17.29	-16 51.8	2.114	3.017	10.6	21.0
7 30	22 11.56	-19 5.4	0.902	1.881	11.8	17.7	7 30	22 11.51	-17 20.8	2.047	3.011	7.4	20.8
8 9	22 4.65	-19 16.7	0.863	1.866	6.5	17.3	8 9	22 4.15	-17 52.5	2.005	3.005	3.9	20.6
8 19	21 55.82	-19 22.4	0.844	1.853	3.6	17.1	8 19	21 55.84	-18 22.7	1.990	2.999	1.9	20.4
8 29	21 46.78	-19 15.3	0.847	1.842	7.9	17.3	8 29	21 47.46	-18 46.8	2.003	2.993	4.7	20.6
9 8	21 39.32	-18 51.1	0.870	1.834	13.4	17.6	9 8	21 39.89	-19 1.7	2.043	2.987	8.2	20.8
9 18	21 34.78	-18 9.4	0.912	1.827	18.5	17.9	9 18	21 33.84	-19 5.5	2.108	2.981	11.4	21.0
9 28	21 33.96	-17 11.5	0.970	1.822	22.8	18.1	9 28	21 29.88	-18 57.6	2.194	2.975	14.1	21.2
440875	2006 <i>TX</i> ₄₀	8 19.5 306°58		0°9/18.7 18			218538	2004 <i>VV</i> ₂₆	8 19.5 244°69		2°7/16.6 18		
7 20	22 16.34	-13 29.5	1.883	2.786	11.7	21.5	7 20	22 16.60	-20 39.9	2.642	3.542	8.8	19.8
7 30	22 10.98	-14 1.3	1.815	2.779	8.1	21.3	7 30	22 10.84	-21 17.0	2.568	3.530	6.2	19.6
8 9	22 3.91	-14 39.6	1.772	2.772	4.2	21.0	8 9	22 3.74	-21 54.1	2.521	3.517	3.7	19.4
8 19	21 55.80	-15 19.8	1.754	2.766	0.9	20.8	8 19	21 55.83	-22 27.1	2.502	3.504	2.8	19.3
8 29	21 47.57	-15 56.6	1.764	2.759	4.5	21.0	8 29	21 47.81	-22 52.3	2.512	3.491	4.8	19.4
9 8	21 40.19	-16 25.6	1.800	2.752	8.5	21.3	9 8	21 40.42	-23 7.1	2.550	3.477	7.6	19.6
9 18	21 34.46	-16 43.9	1.861	2.746	12.1	21.5	9 18	21 34.27	-23 10.0	2.613	3.463	10.2	19.7
9 28	21 30.96	-16 50.1	1.942	2.740	15.1	21.7	9 28	21 29.87	-23 1.1	2.698	3.449	12.5	19.9
429663	2011 <i>GZ</i> ₆₀	8 19.5 49°50		4°3/23.4 18			403955	2012 <i>BP</i> ₄₈	8 19.5 91°19		0°9/18.5 18		
7 20	22 14.20	+ 2 19.7	1.473	2.341	16.4	20.5	7 20	22 14.65	-13 7.1	2.302	3.200	10.1	21.4
7 30	22 9.66	+ 1 29.8	1.420	2.353	12.5	20.3	7 30	22 9.48	-13 54.1	2.248	3.210	7.0	21.2
8 9	22 3.24	+ 0 14.7	1.388	2.366	8.4	20.1	8 9	22 3.00	-14 46.4	2.220	3.220	3.5	21.0
8 19	21 55.77	+ 1 21.0	1.379	2.380	4.8	19.9	8 19	21 55.79	-15 39.8	2.219	3.230	0.9	20.8
8 29	21 48.30	- 3 9.0	1.397	2.394	5.1	19.9	8 29	21 48.59	-16 29.5	2.246	3.240	3.9	21.1
9 8	21 41.90	- 4 59.1	1.440	2.408	8.7	20.2	9 8	21 42.12	-17 11.6	2.302	3.250	7.1	21.3
9 18	21 37.42	- 6 42.1	1.508	2.422	12.5	20.5	9 18	21 36.99	-17 43.4	2.383	3.260	10.1	21.5
9 28	21 35.40	- 8 11.0	1.597	2.437	15.9	20.7	9 28	21 33.66	-18 3.5	2.486	3.269	12.6	21.7
22673	1998 <i>QR</i> ₃₈	8 19.5 325°89		0°8/20.1 18			178131	2006 <i>TT</i> ₄₇	8 19.5 48°89		3°2/17.5 18		
7 20	22 16.95	- 9 57.7	2.041	2.932	11.5	17.6	7 20	22 20.28	-17 14.6	1.164	2.086	15.7	19.6
7 30	22 11.28	- 9 57.7	1.970	2.925	8.2	17.4	7 30	22 14.16	-18 4.7	1.132	2.104	10.8	19.4
8 9	22 4.02	-10 5.1	1.923	2.920	4.5	17.1	8 9	22 5.64	-18 58.1	1.121	2.123	5.8	19.1
8 19	21 55.81	-10 17.3	1.902	2.914	0.9	16.9	8 19	21 55.91	-19 46.2	1.134	2.142	3.3	19.1
8 29	21 47.51	-10 31.0	1.910	2.908	3.7	17.1	8 29	21 46.46	-20 21.2	1.171	2.161	7.1	19.3
9 8	21 39.99	-10 42.8	1.944	2.903	7.5	17.3	9 8	21 38.69	-20 38.4	1.231	2.181	11.7	19.7
9 18	21 34.01	-10 50.0	2.004	2.898	10.9	17.5	9 18	21 33.55	-20 37.1	1.312	2.202	15.8	20.0
9 28	21 30.10	-10 50.5	2.086	2.893	13.9	17.7	9 28	21 31.54	-20 18.3	1.411	2.222	19.1	20.3
315776	2008 <i>FT</i> ₁₀₃	8 19.5 15°82		2°7/17.0 18			80663	2000 <i>BX</i> ₁₀	8 19.5 247°14		0°8/18.8 18		
7 20	22 14.59	-17 33.5	1.808	2.722	11.5	20.2	7 20	22 17.34	-11 6.9	1.580	2.484	13.5	19.3
7 30	22 9.77	-18 30.2	1.756	2.725	8.0	20.0	7 30	22 11.99	-12 8.9	1.513	2.477	9.4	19.1
8 9	22 3.26	-19 30.1	1.728	2.729	4.4	19.8	8 9	22 4.58	-13 22.8	1.469	2.470	4.9	18.8
8 19	21 55.79	-20 27.0	1.727	2.733	2.8	19.7	8 19	21 55.88	-14 42.0	1.451	2.463	0.8	18.5
8 29	21 48.30	-21 14.8	1.752	2.738	5.7	19.9	8 29	21 46.98	-15 58.4	1.460	2.456	5.1	18.8
9 8	21 41.76	-21 49.0	1.802	2.743	9.3	20.1	9 8	21 39.06	-17 4.4	1.495	2.449	9.7	19.1
9 18	21 36.91	-22 7.4	1.876	2.748	12.6	20.3	9 18	21 33.07	-17 55.2	1.553	2.441	13.9	19.3
9 28	21 34.29	-22 9.9	1.970	2.755	15.4	20.5	9 28	21 29.71	-18 28.1	1.631	2.433	17.3	19.5
457662	2009 <i>DZ</i>	8 19.5 214°01		1°3/20.3 16 C			293702	2007 <i>PM</i> ₄₅	8 19.5 314°90		9°9/11.9 18		
7 20	22 28.77	- 2											

EPHEMERIDES

8 19.5

8 19.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
91082	1998 FA ₁₁₀		8 19.5 194°04	4°9/24.3	18		312198	2007 VB ₁₈₄		8 19.5 137°14	13°8/	9.4	17
7 20	22 17.06	+ 4 45.0	2.283	3.109	12.8	20.4	7 20	22 39.65	-51 9.1	1.824	2.652	15.4	20.3
7 30	22 11.27	+ 4 39.3	2.204	3.107	10.2	20.2	7 30	22 27.72	-52 23.5	1.808	2.665	14.2	20.2
8 9	22 4.01	+ 4 16.0	2.147	3.104	7.4	20.1	8 9	22 12.69	-53 8.3	1.812	2.678	13.8	20.2
8 19	21 55.85	+ 3 36.0	2.116	3.100	5.3	19.9	8 19	21 56.26	-53 15.1	1.839	2.690	14.1	20.3
8 29	21 47.56	+ 2 42.2	2.113	3.096	5.2	19.9	8 29	21 40.60	-52 41.3	1.886	2.701	15.2	20.4
9 8	21 39.92	+ 1 39.5	2.138	3.092	7.3	20.0	9 8	21 27.54	-51 30.9	1.954	2.712	16.6	20.5
9 18	21 33.62	+ 0 33.3	2.190	3.086	10.0	20.2	9 18	21 18.18	-49 52.0	2.040	2.721	18.0	20.7
9 28	21 29.22	- 0 30.9	2.265	3.080	12.7	20.4	9 28	21 12.87	-47 53.2	2.140	2.730	19.3	20.8
7645	Pons		8 19.5 238°69	0°2/19.6	18 R		394883	2008 UH ₁₄₂		8 19.5 240°81	4°4/23.4	18	
7 20	22 19.33	- 9 50.6	1.752	2.645	12.9	18.4	7 20	22 16.48	+ 2 5.4	2.089	2.934	13.1	22.0
7 30	22 13.27	-10 23.0	1.676	2.633	9.2	18.1	7 30	22 11.04	+ 1 57.0	2.003	2.922	10.2	21.8
8 9	22 5.22	-11 6.2	1.623	2.621	4.9	17.9	8 9	22 3.99	+ 1 31.0	1.940	2.909	7.2	21.6
8 19	21 55.91	-11 55.7	1.597	2.609	0.4	17.5	8 19	21 55.90	+ 0 48.7	1.902	2.896	4.7	21.4
8 29	21 46.36	-12 45.6	1.598	2.596	4.4	17.8	8 29	21 47.58	- 0 6.6	1.893	2.882	4.9	21.4
9 8	21 37.68	-13 30.3	1.626	2.582	8.9	18.0	9 8	21 39.91	- 1 9.5	1.910	2.868	7.6	21.5
9 18	21 30.81	-14 5.4	1.678	2.569	12.9	18.2	9 18	21 33.66	- 2 14.5	1.953	2.854	10.8	21.7
9 28	21 26.43	-14 28.1	1.751	2.554	16.3	18.4	9 28	21 29.44	- 3 15.9	2.019	2.839	13.8	21.9
177192	2003 UC ₁₅		8 19.5 258°39	2°0/18.1	18		467946	2012 DG ₆₃		8 19.5 93°04	0°3/19.7	17	
7 20	22 20.93	-15 21.9	1.572	2.479	13.4	21.1	7 20	22 17.59	- 8 1.3	1.365	2.267	15.3	21.7
7 30	22 14.63	-16 1.6	1.498	2.463	9.4	20.9	7 30	22 12.27	- 9 3.1	1.310	2.272	10.8	21.4
8 9	22 6.04	-16 47.9	1.446	2.447	4.9	20.6	8 9	22 4.75	-10 21.1	1.278	2.277	5.8	21.2
8 19	21 55.95	-17 34.6	1.421	2.431	2.0	20.3	8 19	21 55.93	-11 47.8	1.270	2.282	0.5	20.8
8 29	21 45.57	-18 14.6	1.422	2.414	5.8	20.5	8 29	21 47.05	-13 14.1	1.288	2.287	5.0	21.2
9 8	21 36.19	-18 42.5	1.448	2.397	10.5	20.8	9 8	21 39.37	-14 31.0	1.331	2.291	10.0	21.5
9 18	21 28.91	-18 55.3	1.498	2.379	14.7	21.0	9 18	21 33.87	-15 32.5	1.396	2.296	14.4	21.7
9 28	21 24.48	-18 52.2	1.567	2.361	18.3	21.2	9 28	21 31.20	-16 15.3	1.482	2.301	18.0	22.0
3030	Vehrenberg		8 19.5 310°13	2°0/20.5	18 R		359571	2010 TP ₁₂₈		8 19.5 59°39	4°6/15.5	18	
7 20	22 18.19	- 7 50.8	1.189	2.097	16.6	16.7	7 20	22 18.98	-25 45.7	2.111	3.017	10.5	20.0
7 30	22 13.33	- 7 46.8	1.106	2.069	12.2	16.3	7 30	22 12.66	-26 24.6	2.063	3.022	7.6	19.8
8 9	22 5.66	- 7 58.1	1.043	2.040	7.1	16.0	8 9	22 4.72	-26 58.8	2.039	3.027	5.2	19.7
8 19	21 55.95	- 8 22.1	1.002	2.012	2.2	15.6	8 19	21 55.93	-27 23.1	2.042	3.032	4.8	19.7
8 29	21 45.58	- 8 53.3	0.984	1.985	5.6	15.7	8 29	21 47.20	-27 33.2	2.072	3.037	6.8	19.8
9 8	21 36.21	- 9 24.8	0.989	1.958	11.5	15.9	9 8	21 39.45	-27 27.5	2.129	3.043	9.5	20.0
9 18	21 29.28	- 9 50.3	1.015	1.931	16.9	16.2	9 18	21 33.41	-27 6.2	2.208	3.048	12.2	20.2
9 28	21 25.83	-10 4.8	1.058	1.906	21.7	16.4	9 28	21 29.57	-26 30.9	2.309	3.054	14.5	20.4
162528	2000 QT ₁₃₄		8 19.5 299°74	3°4/17.6	18		171281	2006 FJ ₃₆		8 19.5 55°31	3°7/17.3	17	
7 20	22 22.08	-18 40.7	1.242	2.161	15.2	19.3	7 20	22 21.39	-17 56.2	1.117	2.041	16.1	19.3
7 30	22 15.89	-19 7.6	1.174	2.144	10.8	19.0	7 30	22 15.08	-18 49.8	1.083	2.056	11.1	19.0
8 9	22 6.87	-19 37.3	1.127	2.128	6.0	18.7	8 9	22 6.20	-19 46.1	1.071	2.072	6.1	18.8
8 19	21 56.00	-20 2.2	1.103	2.111	3.5	18.5	8 19	21 56.00	-20 35.8	1.081	2.088	3.8	18.7
8 29	21 44.82	-20 15.0	1.104	2.095	7.4	18.7	8 29	21 46.06	-21 10.7	1.115	2.105	7.6	19.0
9 8	21 34.98	-20 10.8	1.128	2.079	12.5	18.9	9 8	21 37.88	-21 26.1	1.172	2.121	12.3	19.3
9 18	21 27.80	-19 48.7	1.173	2.063	17.2	19.1	9 18	21 32.48	-21 21.6	1.250	2.138	16.5	19.6
9 28	21 24.11	-19 9.7	1.236	2.048	21.2	19.4	9 28	21 30.38	-20 58.7	1.345	2.156	19.9	19.9
446490	2014 KO ₄₃		8 19.5 354°09	4°5/23.9	18		350033	2010 JP ₁₅₃		8 19.5 150°39	6°6/12.9	17	
7 20	22 10.70	+ 3 1.2	1.659	2.522	15.1	20.2	7 20	22 19.87	-30 28.5	2.073	2.975	10.8	21.1
7 30	22 7.21	+ 2 19.1	1.589	2.518	11.7	20.0	7 30	22 13.43	-31 46.2	2.030	2.980	8.4	21.0
8 9	22 2.01	+ 1 12.6	1.539	2.514	8.1	19.8	8 9	22 5.20	-32 55.9	2.013	2.985	6.8	20.9
8 19	21 55.78	- 0 15.2	1.513	2.510	5.0	19.6	8 19	21 55.96	-33 50.3	2.023	2.989	7.0	20.9
8 29	21 49.40	- 1 57.8	1.513	2.508	5.0	19.6	8 29	21 46.73	-34 24.4	2.058	2.993	8.8	21.0
9 8	21 43.84	- 3 46.3	1.539	2.507	8.2	19.8	9 8	21 38.54	-34 35.9	2.118	2.997	11.2	21.2
9 18	21 39.90	- 5 31.7	1.590	2.506	11.9	20.0	9 18	21 32.18	-34 25.9	2.201	3.001	13.6	21.4
9 28	21 38.18	- 7 6.4	1.662	2.506	15.2	20.2	9 28	21 28.21	-33 56.9	2.301	3.004	15.6	21.6
128891	2004 SP ₅₉		8 19.5 318°47	0°1/19.4	18 R		289617	2005 GY ₃₀		8 19.5 9°48	2°1/17.9	18 R	
7 20	22 13.47	- 8 44.7	1.416	2.324	14.4	18.9	7 20	22 17.18	-16 7.5	1.685	2.596	12.4	20.1
7 30	22 9.51	- 9 50.4	1.341	2.307	10.3	18.6	7 30	22 11.71	-16 47.6	1.629	2.596	8.6	19.9
8 9	22 3.40	-11 13.6	1.289	2.289	5.4	18.3	8 9	22 4.36	-17 32.1	1.596	2.597	4.5	19.7
8 19	21 55.85	-12 47.7	1.261	2.273	0.2	17.8	8 19	21 55.93	-18 15.3	1.589	2.598	2.1	19.5
8 29	21 47.98	-14 23.2	1.258	2.257	5.1	18.2	8 29	21 47.47	-18 51.2	1.609	2.600	5.4	19.7
9 8	21 41.02	-15 50.4	1.280	2.241	10.3	18.4	9 8	21 40.03	-19 15.4	1.654	2.601	9.4	20.0
9 18	21 36.05	-17 1.9	1.325	2.226	14.8	18.7	9 18	21 34.47	-19 25.7	1.722	2.603	13.1	20.2
9 28	21 33.85	-17 53.2	1.388	2.212	18.7	18.9	9 28	21 31.36	-19 21.6	1.810	2.606	16.1	20.4
95386	2002 CR ₁₇₀		8 19.5 192°03	2°4/17.4	18		124088	2001 HP ₁₆		8 19.5 184°21	14°4/	6.1	17
7 20	22 18.51	-16 56.0	1.902	2.807	11.5	20.1	7 20	22 25.06	-37 32.2	1.135	2.047	16.9	19.4
7 30	22 12.51	-17 49.2	1.841	2.806	8.0	19.9	7 30	22 18.72	-40 58.3	1.110	2.047	14.9	19.3
8 9	22 4.73	-18 46.0	1.805	2.805	4.3	19.7	8 9	22 8.65	-44 2.0	1.107	2.047	14.5	19.3
8 19	21 55.91	-19 40.7	1.796	2.803	2.5	19.6	8 19	21 56.13	-46 24.0	1.126	2.047	15.9	19.4
8 29	21 47.01	-20 27.1	1.814	2.801	5.4	19.8	8 29	21 43.31	-47 52.2	1.165	2.046	18.4	19.5
9 8	21 39.03	-21 1.0	1.860	2.799	9.1	20.0	9 8	21 32.51	-48 25.6	1.222	2.045	21.2	19.7
9 18	21 32.78	-21 20.1	1.929	2.797	12.5	20.2	9 18	21 25.40	-48 11.3	1.293	2.043	23.7	19.9
9 28	21 28.84	-21 23.9	2.018	2.794	15.4	20.4	9 28	21 22.80	-47 19.4	1.374	2.041	25.8	20.1
338670	2003 ST ₃₉₁		8 19.5 15°20	2°2/17.7	18		156169	2001 TR ₁₄₉		8 19.5 226°50	4°3/16.0	18	
7 20	22 16.24												

EPHEMERIDES

8 19.5

8 19.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
60067	1999 <i>TH</i> ₁₂₆		8 19.5	14°43'	2°3'/17.8	18	332499	2008 <i>FG</i> ₁₁₃		8 19.5	60°01'	1°6'/18.4	17
7 20	22 16.28	-17 6.2	1.649	2.563	12.4	18.7	7 20	22 19.32	-13 40.0	1.328	2.241	14.8	20.9
7 30	22 11.06	-17 37.9	1.598	2.567	8.6	18.5	7 30	22 13.39	-14 29.8	1.289	2.258	10.2	20.7
8 9	22 4.00	-18 12.6	1.570	2.572	4.6	18.2	8 9	22 5.29	-15 27.2	1.273	2.274	5.2	20.4
8 19	21 55.93	-18 44.8	1.568	2.577	2.3	18.1	8 19	21 56.05	-16 24.7	1.280	2.291	1.6	20.2
8 29	21 47.88	-19 9.3	1.592	2.583	5.5	18.3	8 29	21 46.97	-17 14.6	1.313	2.308	5.7	20.6
9 8	21 40.91	-19 22.1	1.641	2.590	9.4	18.6	9 8	21 39.30	-17 51.1	1.371	2.325	10.4	20.9
9 18	21 35.82	-19 21.7	1.713	2.597	13.0	18.8	9 18	21 33.96	-18 11.5	1.451	2.343	14.4	21.2
9 28	21 33.15	-19 7.7	1.806	2.605	16.0	19.0	9 28	21 31.46	-18 15.3	1.550	2.360	17.7	21.4
254270	2004 <i>RZ</i> ₁₈₈		8 19.5	14°12'	3°6'/22.3	18	271004	2002 <i>XE</i> ₈₇		8 19.5	297°89'	6°4'/14.8	18
7 20	22 15.04	- 2 11.3	1.756	2.631	13.8	19.4	7 20	22 19.79	-24 19.7	1.412	2.332	13.7	20.4
7 30	22 10.11	- 2 4.5	1.695	2.635	10.4	19.2	7 30	22 14.27	-25 36.3	1.340	2.307	10.1	20.1
8 9	22 3.50	- 2 13.3	1.656	2.639	6.8	19.0	8 9	22 6.09	-26 52.6	1.290	2.282	7.0	19.9
8 19	21 55.91	- 2 35.7	1.642	2.644	3.9	18.8	8 19	21 56.10	-27 58.4	1.264	2.257	6.8	19.8
8 29	21 48.27	- 3 7.9	1.653	2.649	4.6	18.9	8 29	21 45.67	-28 44.0	1.263	2.232	9.8	19.9
9 8	21 41.53	- 3 45.1	1.691	2.655	7.9	19.1	9 8	21 36.34	-29 3.5	1.285	2.207	13.9	20.1
9 18	21 36.46	- 4 22.1	1.753	2.661	11.4	19.3	9 18	21 29.41	-28 55.9	1.326	2.182	17.8	20.2
9 28	21 33.60	- 4 54.5	1.836	2.669	14.5	19.6	9 28	21 25.76	-28 23.3	1.385	2.157	21.3	20.4
229646	2006 <i>FD</i> ₅₀		8 19.5	146°75'	8°6'/26.5	18	437373	2013 <i>VY</i> ₁₇		8 19.5	225°53'	4°3'/15.8	18
7 20	22 23.41	+13 12.7	2.286	3.048	14.6	20.1	7 20	22 20.26	-22 46.6	1.984	2.890	11.0	21.3
7 30	22 15.73	+14 19.1	2.217	3.058	12.5	20.0	7 30	22 13.82	-23 44.4	1.919	2.881	7.9	21.1
8 9	22 6.39	+15 5.2	2.170	3.068	10.5	19.9	8 9	22 5.51	-24 40.9	1.880	2.872	5.1	20.9
8 19	21 56.05	+15 28.7	2.147	3.076	9.0	19.8	8 19	21 56.08	-25 29.9	1.867	2.863	4.5	20.8
8 29	21 45.58	+15 29.4	2.152	3.085	8.6	19.8	8 29	21 46.50	-26 5.4	1.882	2.853	6.9	21.0
9 8	21 35.88	+15 10.3	2.183	3.092	9.6	19.9	9 8	21 37.84	-26 23.9	1.923	2.843	10.1	21.1
9 18	21 27.73	+14 36.0	2.239	3.099	11.3	20.0	9 18	21 30.95	-26 24.5	1.987	2.832	13.2	21.3
9 28	21 21.71	+13 52.8	2.318	3.106	13.2	20.2	9 28	21 26.45	-26 8.2	2.072	2.821	15.8	21.5
173345	1999 <i>XE</i> ₇₁		8 19.5	313°34'	6°2'/23.7	18	144132	2004 <i>BO</i> ₈₉		8 19.5	164°53'	1°4'/20.7	17
7 20	22 15.35	+ 2 40.9	1.551	2.412	16.0	19.4	7 20	22 18.72	- 5 58.3	1.836	2.717	13.0	20.9
7 30	22 10.77	+ 3 1.2	1.465	2.391	12.8	19.2	7 30	22 12.68	- 6 37.9	1.773	2.722	9.4	20.6
8 9	22 4.07	+ 3 0.0	1.400	2.369	9.3	18.9	8 9	22 4.88	- 7 31.0	1.733	2.726	5.4	20.4
8 19	21 55.95	+ 2 36.9	1.358	2.349	6.6	18.7	8 19	21 56.04	- 8 33.2	1.719	2.730	1.6	20.2
8 29	21 47.42	+ 1 54.4	1.340	2.328	6.7	18.7	8 29	21 47.13	- 9 38.6	1.734	2.733	3.9	20.3
9 8	21 39.68	+ 0 58.3	1.346	2.309	9.7	18.8	9 8	21 39.13	-10 41.0	1.776	2.735	8.0	20.6
9 18	21 33.77	- 0 4.1	1.376	2.289	13.5	19.0	9 18	21 32.85	-11 35.4	1.843	2.737	11.7	20.8
9 28	21 30.49	- 1 5.1	1.426	2.271	17.2	19.2	9 28	21 28.86	-12 18.2	1.932	2.738	14.9	21.0
40477	1999 <i>RS</i> ₅₄		8 19.5	341°72'	0°2'/19.6	18	97199	1999 <i>XD</i> ₇		8 19.5	186°69'	5°9'/13.3	18
7 20	22 17.13	-10 30.5	1.487	2.392	14.1	18.6	7 20	22 20.47	-30 13.0	2.365	3.262	9.9	20.6
7 30	22 11.89	-10 51.5	1.424	2.388	10.0	18.3	7 30	22 13.75	-31 21.9	2.315	3.262	7.6	20.4
8 9	22 4.56	-11 23.2	1.384	2.383	5.3	18.0	8 9	22 5.39	-32 23.8	2.290	3.261	6.1	20.3
8 19	21 55.97	-12 1.0	1.367	2.379	0.4	17.6	8 19	21 56.07	-33 12.6	2.292	3.260	6.2	20.3
8 29	21 47.25	-12 38.8	1.377	2.376	4.7	18.0	8 29	21 46.71	-33 43.7	2.322	3.258	7.9	20.5
9 8	21 39.61	-13 11.0	1.412	2.373	9.4	18.2	9 8	21 38.24	-33 55.0	2.377	3.255	10.2	20.6
9 18	21 33.99	-13 33.4	1.469	2.371	13.7	18.5	9 18	21 31.39	-33 46.9	2.455	3.252	12.4	20.8
9 28	21 31.06	-13 43.6	1.546	2.368	17.2	18.7	9 28	21 26.72	-33 21.5	2.553	3.248	14.4	20.9
324783	2007 <i>GH</i> ₆₆		8 19.5	217°62'	1°9'/17.4	18	432715	2011 <i>CC</i> ₄₀		8 19.5	115°09'	3°3'/16.8	17
7 20	22 15.57	-17 38.6	2.554	3.454	9.1	20.8	7 20	22 19.14	-17 52.1	1.642	2.553	12.6	21.3
7 30	22 10.15	-18 17.9	2.487	3.450	6.3	20.7	7 30	22 13.12	-19 4.0	1.595	2.562	8.8	21.1
8 9	22 3.42	-18 59.3	2.447	3.446	3.4	20.5	8 9	22 5.15	-20 18.9	1.572	2.571	4.9	20.8
8 19	21 55.93	-19 38.6	2.434	3.441	2.0	20.4	8 19	21 56.07	-21 29.1	1.575	2.580	3.4	20.8
8 29	21 48.37	-20 12.0	2.450	3.436	4.3	20.5	8 29	21 47.02	-22 27.3	1.605	2.589	6.4	21.0
9 8	21 41.45	-20 36.4	2.494	3.431	7.3	20.7	9 8	21 39.10	-23 8.5	1.661	2.597	10.3	21.2
9 18	21 35.79	-20 50.0	2.564	3.426	10.0	20.9	9 18	21 33.18	-23 30.7	1.739	2.605	13.8	21.5
9 28	21 31.85	-20 52.2	2.656	3.421	12.3	21.0	9 28	21 29.82	-23 34.5	1.837	2.613	16.6	21.7
80761	2000 <i>CA</i> ₅₄		8 19.5	267°44'	1°3'/20.4	18	174128	2002 <i>LQ</i> ₁₉		8 19.5	67°20'	2°2'/18.1	17
7 20	22 18.83	- 7 32.8	1.597	2.489	14.0	19.7	7 20	22 21.02	-14 38.4	1.246	2.162	15.4	19.7
7 30	22 13.13	- 7 52.8	1.519	2.474	10.2	19.4	7 30	22 14.62	-15 35.5	1.214	2.183	10.6	19.5
8 9	22 5.28	- 8 26.3	1.464	2.460	5.8	19.1	8 9	22 5.94	-16 39.1	1.203	2.205	5.5	19.3
8 19	21 56.04	- 9 9.6	1.434	2.445	1.5	18.8	8 19	21 56.11	-17 40.5	1.216	2.226	2.2	19.1
8 29	21 46.50	- 9 57.1	1.430	2.429	4.5	19.0	8 29	21 46.54	-18 31.5	1.254	2.248	6.3	19.4
9 8	21 37.87	-10 42.6	1.452	2.414	9.2	19.2	9 8	21 38.55	-19 6.6	1.317	2.269	10.9	19.8
9 18	21 31.15	-11 20.8	1.498	2.398	13.5	19.5	9 18	21 33.07	-19 23.6	1.401	2.290	15.0	20.1
9 28	21 27.10	-11 48.0	1.564	2.382	17.2	19.7	9 28	21 30.58	-19 22.9	1.504	2.312	18.3	20.4
39491	1981 <i>EW</i> ₈		8 19.5	256°43'	1°9'/21.1	18	471741	2012 <i>UR</i> ₄₇		8 19.5	266°14'	1°1'/20.5	18
7 20	22 17.49	- 5 13.8	1.967	2.844	12.5	19.7	7 20	22 16.45	- 7 1.5	1.869	2.756	12.6	21.8
7 30	22 11.90	- 5 36.5	1.881	2.827	9.2	19.4	7 30	22 11.22	- 7 36.0	1.789	2.742	9.1	21.6
8 9	22 4.54	- 6 12.7	1.818	2.809	5.5	19.2	8 9	22 4.21	- 8 23.5	1.733	2.728	5.1	21.3
8 19	21 56.02	- 6 59.5	1.782	2.791	2.1	18.9	8 19	21 56.05	- 9 20.3	1.702	2.713	1.3	21.0
8 29	21 47.23	- 7 52.2	1.774	2.772	3.9	19.0	8 29	21 47.64	-10 20.8	1.699	2.698	3.9	21.2
9 8	21 39.12	- 8 45.4	1.792	2.753	7.9	19.2	9 8	21 39.98	-11 19.0	1.723	2.683	8.1	21.4
9 18	21 32.54	- 9 34.1	1.837	2.733	11.6	19.4	9 18	21 33.92	-12 9.8	1.772	2.668	12.0	21.6
9 28	21 28.15	-10 14.3	1.903	2.713	14.9	19.6	9 28	21 30.10	-12 49.4	1.842	2.653	15.3	21.8
415273	2013 <i>EV</i> ₁₄		8 19.5	26°62'	2°2'/18.5	17	255465	2005 <i>YU</i> ₈₆					

EPHEMERIDES

8 19.5

8 19.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
140337	2001 <i>TS</i> ₄		8 19.5 308°60	0°2/19.6	18		249085	2007 <i>VH</i> ₃₂		8 19.5 324°00	0°9/20.1	18	
7 20	22 16.29	-10 28.0	1.867	2.763	12.1	20.7	7 20	22 17.32	-9 20.3	1.631	2.529	13.5	20.2
7 30	22 11.04	-10 53.0	1.797	2.756	8.5	20.5	7 30	22 11.97	-9 29.0	1.561	2.520	9.6	19.9
8 9	22 4.07	-11 27.0	1.751	2.749	4.6	20.2	8 9	22 4.65	-9 48.1	1.513	2.511	5.3	19.6
8 19	21 56.05	-12 6.0	1.731	2.743	0.3	19.9	8 19	21 56.12	-10 14.3	1.491	2.503	1.1	19.3
8 29	21 47.90	-12 45.1	1.738	2.736	4.0	20.2	8 29	21 47.41	-10 42.7	1.495	2.495	4.3	19.5
9 8	21 40.58	-13 19.4	1.772	2.730	8.1	20.4	9 8	21 39.65	-11 8.3	1.525	2.487	8.8	19.8
9 18	21 34.89	-13 45.4	1.830	2.724	11.8	20.6	9 18	21 33.75	-11 27.4	1.578	2.480	12.9	20.0
9 28	21 31.42	-14 0.7	1.910	2.718	14.9	20.8	9 28	21 30.36	-11 36.9	1.652	2.473	16.3	20.2
208842	2002 <i>RY</i> ₁₆₅		8 19.5 9°62	1°6/18.5	18		180330	2003 <i>YE</i> ₂₁		8 19.5 190°07	0°6/19.9	18	
7 20	22 16.57	-14 54.3	1.299	2.219	14.6	19.5	7 20	22 20.50	-9 24.6	1.664	2.557	13.5	20.5
7 30	22 11.64	-15 17.0	1.250	2.221	10.2	19.3	7 30	22 14.12	-9 46.2	1.599	2.556	9.6	20.3
8 9	22 4.50	-15 46.0	1.222	2.225	5.3	19.0	8 9	22 5.75	-10 18.3	1.558	2.555	5.2	20.0
8 19	21 56.08	-16 15.3	1.218	2.229	1.6	18.8	8 19	21 56.18	-10 56.7	1.542	2.554	0.8	19.7
8 29	21 47.70	-16 38.6	1.239	2.235	5.7	19.1	8 29	21 46.50	-11 36.1	1.554	2.552	4.3	20.0
9 8	21 40.62	-16 51.0	1.283	2.241	10.5	19.4	9 8	21 37.84	-12 11.0	1.592	2.550	8.8	20.2
9 18	21 35.81	-16 50.2	1.348	2.249	14.7	19.6	9 18	21 31.13	-12 37.6	1.654	2.548	12.8	20.5
9 28	21 33.86	-16 35.5	1.433	2.258	18.2	19.9	9 28	21 26.98	-12 53.3	1.737	2.545	16.2	20.7
255228	2005 <i>UH</i> ₄₂₂		8 19.5 145°05	1°3/18.3	18		212725	2007 <i>RC</i> ₁₄₅		8 19.5 352°09	4°8/22.5	17	
7 20	22 16.18	-14 57.7	2.199	3.099	10.4	21.0	7 20	22 13.65	-1 38.0	0.979	1.886	19.4	19.3
7 30	22 10.72	-15 33.6	2.137	3.100	7.2	20.8	7 30	22 10.16	-1 37.6	0.922	1.879	14.8	19.0
8 9	22 3.81	-16 13.7	2.101	3.101	3.7	20.6	8 9	22 3.99	-2 4.5	0.883	1.873	9.7	18.7
8 19	21 56.05	-16 53.8	2.092	3.102	1.4	20.4	8 19	21 56.09	-2 56.1	0.864	1.869	5.3	18.5
8 29	21 48.26	-17 29.3	2.111	3.103	4.2	20.7	8 29	21 47.97	-4 5.0	0.866	1.866	6.4	18.5
9 8	21 41.23	-17 56.6	2.157	3.104	7.6	20.9	9 8	21 41.22	-5 20.3	0.890	1.865	11.3	18.8
9 18	21 35.63	-18 13.5	2.229	3.105	10.7	21.1	9 18	21 37.10	-6 31.3	0.933	1.865	16.4	19.1
9 28	21 31.98	-18 18.9	2.322	3.105	13.4	21.3	9 28	21 36.40	-7 29.3	0.994	1.866	20.9	19.4
18590	1997 <i>YO</i> ₁₀		8 19.5 44°22	5°7/15.9	18		268907	2007 <i>CW</i> ₃		8 19.5 242°90	0°0/19.5	18	
7 20	22 20.58	-22 1.2	1.134	2.061	15.6	16.4	7 20	22 18.82	-10 10.7	1.745	2.640	12.9	21.0
7 30	22 14.66	-23 10.8	1.100	2.072	11.1	16.2	7 30	22 12.99	-10 47.6	1.670	2.629	9.1	20.7
8 9	22 6.11	-24 18.2	1.087	2.084	7.0	16.0	8 9	22 5.19	-11 35.2	1.619	2.617	4.9	20.4
8 19	21 56.16	-25 12.8	1.097	2.096	6.0	16.0	8 19	21 56.15	-12 28.9	1.594	2.606	0.3	20.1
8 29	21 46.42	-25 46.2	1.130	2.109	9.2	16.2	8 29	21 46.88	-13 22.5	1.596	2.594	4.4	20.4
9 8	21 38.42	-25 54.5	1.185	2.122	13.4	16.5	9 8	21 38.47	-14 10.0	1.625	2.581	8.9	20.6
9 18	21 33.19	-25 38.8	1.260	2.136	17.3	16.8	9 18	21 31.85	-14 47.2	1.678	2.569	12.9	20.8
9 28	21 31.28	-25 2.2	1.352	2.150	20.5	17.0	9 28	21 27.71	-15 11.3	1.752	2.556	16.3	21.0
352365	2007 <i>VB</i> ₂₁₆		8 19.5 295°10	3°1/17.1	18		398647	2012 <i>TD</i> ₂₆		8 19.5 290°94	14°9/9.0	18	
7 20	22 17.99	-18 59.2	1.783	2.694	11.8	20.7	7 20	22 45.60	-53 34.0	1.779	2.593	16.3	20.3
7 30	22 12.38	-19 43.2	1.715	2.682	8.3	20.5	7 30	22 32.52	-54 23.8	1.728	2.573	15.3	20.2
8 9	22 4.84	-20 29.6	1.671	2.670	4.7	20.3	8 9	22 15.56	-54 41.9	1.696	2.553	14.9	20.1
8 19	21 56.11	-21 12.2	1.653	2.658	3.2	20.1	8 19	21 56.65	-54 17.5	1.685	2.534	15.4	20.1
8 29	21 47.22	-21 45.0	1.662	2.647	6.1	20.3	8 29	21 38.38	-53 5.9	1.696	2.514	16.5	20.1
9 8	21 39.25	-22 3.9	1.696	2.635	9.9	20.5	9 8	21 23.08	-51 11.1	1.727	2.494	18.1	20.2
9 18	21 33.10	-22 7.0	1.754	2.624	13.5	20.7	9 18	21 12.08	-48 42.7	1.777	2.474	19.9	20.3
9 28	21 29.41	-21 54.4	1.831	2.613	16.5	20.9	9 28	21 5.80	-45 52.1	1.844	2.455	21.5	20.4
444273	2005 <i>UK</i> ₃₃₃		8 19.5 303°47	0°7/20.2	18		390921	2005 <i>EH</i> ₂₄₁		8 19.5 207°70	2°1/17.3	18	
7 20	22 14.74	-8 26.9	2.066	2.956	11.4	21.9	7 20	22 18.38	-17 39.2	2.520	3.416	9.4	22.1
7 30	22 9.83	-8 57.8	1.995	2.950	8.1	21.7	7 30	22 12.20	-18 27.6	2.448	3.409	6.5	21.9
8 9	22 3.40	-9 38.8	1.947	2.943	4.5	21.5	8 9	22 4.59	-19 18.4	2.403	3.401	3.6	21.7
8 19	21 56.04	-10 26.3	1.926	2.937	0.8	21.2	8 19	21 56.13	-20 7.1	2.386	3.393	2.2	21.6
8 29	21 48.56	-11 15.5	1.933	2.931	3.6	21.4	8 29	21 47.54	-20 49.2	2.399	3.383	4.6	21.7
9 8	21 41.79	-12 1.6	1.966	2.925	7.4	21.6	9 8	21 39.60	-21 21.2	2.441	3.374	7.6	21.9
9 18	21 36.45	-12 40.6	2.025	2.920	10.8	21.8	9 18	21 32.98	-21 41.2	2.508	3.363	10.4	22.1
9 28	21 33.10	-13 9.6	2.107	2.914	13.8	22.0	9 28	21 28.19	-21 48.7	2.597	3.352	12.8	22.3
70562	1999 <i>TB</i> ₁₄₅		8 19.5 315°14	2°0/21.0	18		225249	2009 <i>QT</i> ₃₃		8 19.5 0°63	0°1/19.5	17	
7 20	22 16.51	-5 52.4	1.603	2.493	14.1	19.3	7 20	22 15.76	-10 14.6	1.138	2.057	16.3	20.5
7 30	22 11.43	-6 6.9	1.532	2.484	10.3	19.1	7 30	22 11.36	-10 47.2	1.085	2.055	11.6	20.2
8 9	22 4.38	-6 36.0	1.483	2.476	6.1	18.8	8 9	22 4.49	-11 34.3	1.052	2.054	6.1	20.0
8 19	21 56.10	-7 16.4	1.459	2.468	2.3	18.5	8 19	21 56.12	-12 29.2	1.041	2.053	0.3	19.5
8 29	21 47.62	-8 3.0	1.461	2.460	4.4	18.7	8 29	21 47.65	-13 23.5	1.054	2.054	5.5	19.9
9 8	21 40.06	-8 49.6	1.488	2.453	8.7	18.9	9 8	21 40.54	-14 9.1	1.090	2.056	11.0	20.2
9 18	21 34.35	-9 30.7	1.540	2.446	12.8	19.1	9 18	21 35.87	-14 40.6	1.146	2.058	15.8	20.5
9 28	21 31.15	-10 2.3	1.611	2.439	16.4	19.4	9 28	21 34.34	-14 55.2	1.220	2.062	19.7	20.8
359019	2008 <i>UN</i> ₃₁₄		8 19.5 110°98	0°8/19.0	17		206942	2004 <i>RT</i> ₁₀₁		8 19.5 338°66	1°7/18.8	18	
7 20	22 22.99	-12 51.8	1.274	2.183	15.7	20.8	7 20	22 21.49	-16 14.7	0.991	1.918	17.3	19.8
7 30	22 16.19	-13 18.1	1.224	2.190	11.0	20.5	7 30	22 15.83	-16 6.0	0.933	1.907	12.3	19.5
8 9	22 6.91	-13 53.2	1.195	2.196	5.7	20.3	8 9	22 7.03	-16 1.4	0.894	1.897	6.5	19.1
8 19	21 56.22	-14 30.8	1.191	2.203	0.8	19.9	8 19	21 56.26	-15 55.2	0.877	1.888	1.7	18.8
8 29	21 45.57	-15 3.9	1.212	2.209	5.6	20.3	8 29	21 45.29	-15 41.6	0.882	1.880	6.8	19.1
9 8	21 36.41	-15 26.8	1.258	2.216	10.7	20.6	9 8	21 35.99	-15 17.1	0.909	1.874	12.8	19.4
9 18	21 29.80	-15 36.7	1.325	2.222	15.2	20.9	9 18	21 29.76	-14 40.5	0.955	1.868	18.1	19.7
9 28	21 26.37	-15 32.5	1.412	2.227	18.9	21.2	9 28	21 27.38	-13 52.5	1.017	1.864	22.5	20.0
49740	1999 <i>VV</i> ₁₂₃		8 19.5 73°75	1°6/20.7	17		513157	2003 <i>SU</i> ₄₀₁					

EPHEMERIDES

8 19.5

8 19.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
506651	2006 <i>SR</i> ₅₀		8 19.5 329°80	3°3/18.3	18		323671	2005 <i>EW</i> ₁₃₇		8 19.5 195°34	3°9/16.7	17	
7 20	22 22.08	-19 53.3	1.027	1.956	16.8	20.4	7 20	22 23.19	-20 59.2	1.693	2.600	12.6	21.7
7 30	22 16.44	-19 39.3	0.957	1.932	12.0	20.1	7 30	22 16.06	-21 48.1	1.635	2.598	8.9	21.4
8 9	22 7.49	-19 23.1	0.906	1.908	6.7	19.7	8 9	22 6.80	-22 36.7	1.600	2.596	5.3	21.2
8 19	21 56.30	-18 58.1	0.877	1.886	3.3	19.4	8 19	21 56.28	-23 18.1	1.592	2.593	4.1	21.1
8 29	21 44.65	-18 19.1	0.870	1.866	7.7	19.6	8 29	21 45.69	-23 46.1	1.610	2.590	6.9	21.3
9 8	21 34.53	-17 23.9	0.885	1.847	13.5	19.8	9 8	21 36.26	-23 56.8	1.655	2.586	10.7	21.5
9 18	21 27.49	-16 14.1	0.919	1.829	18.9	20.1	9 18	21 28.95	-23 49.9	1.723	2.582	14.2	21.7
9 28	21 24.48	-14 52.5	0.970	1.813	23.5	20.3	9 28	21 24.39	-23 26.7	1.810	2.577	17.2	22.0
471300	2011 <i>HZ</i> ₁₂		8 19.5 101°49	6°9/13.0	17		134977	2001 <i>FX</i> ₃₀		8 19.5 247°81	2°0/18.0	18	
7 20	22 18.95	-27 17.1	1.701	2.615	12.1	20.5	7 20	22 20.63	-15 12.1	1.695	2.598	12.7	20.2
7 30	22 13.11	-29 5.0	1.664	2.623	9.1	20.3	7 30	22 14.41	-16 1.8	1.619	2.583	8.9	19.9
8 9	22 5.23	-30 46.7	1.651	2.631	7.1	20.2	8 9	22 6.03	-16 58.4	1.567	2.567	4.7	19.6
8 19	21 56.17	-32 12.7	1.664	2.640	7.3	20.2	8 19	21 56.26	-17 55.6	1.541	2.551	2.1	19.4
8 29	21 47.10	-33 15.3	1.702	2.648	9.6	20.4	8 29	21 46.18	-18 46.4	1.542	2.533	5.6	19.6
9 8	21 39.20	-33 51.1	1.765	2.656	12.5	20.6	9 8	21 37.01	-19 25.0	1.570	2.516	10.0	19.8
9 18	21 33.37	-34 0.7	1.848	2.664	15.2	20.8	9 18	21 29.77	-19 48.3	1.621	2.498	14.0	20.0
9 28	21 30.20	-33 47.0	1.950	2.672	17.5	21.0	9 28	21 25.20	-19 55.0	1.692	2.479	17.4	20.2
448087	2008 <i>HO</i> ₅₂		8 19.5 214°09	3°9/15.2	18		109551	2001 <i>QL</i> ₂₅₉		8 19.5 22°66	5°4/22.9	18	
7 20	22 15.99	-22 46.1	2.294	3.201	9.7	21.4	7 20	22 17.97	-0 21.9	1.291	2.172	17.4	18.6
7 30	22 10.65	-23 54.5	2.236	3.199	6.9	21.2	7 30	22 12.66	+0 1.6	1.236	2.177	13.4	18.3
8 9	22 3.82	-25 1.9	2.205	3.196	4.5	21.0	8 9	22 5.10	+0 3.5	1.202	2.182	9.1	18.1
8 19	21 56.11	-26 2.6	2.200	3.194	4.2	21.0	8 19	21 56.21	-0 15.0	1.189	2.188	5.8	17.9
8 29	21 48.31	-26 51.4	2.224	3.191	6.3	21.1	8 29	21 47.26	-0 49.8	1.201	2.195	6.3	18.0
9 8	21 41.26	-27 24.6	2.274	3.188	9.0	21.3	9 8	21 39.56	-1 33.8	1.236	2.202	9.9	18.2
9 18	21 35.64	-27 41.2	2.348	3.185	11.7	21.5	9 18	21 34.11	-2 19.9	1.293	2.210	14.0	18.5
9 28	21 31.98	-27 41.4	2.442	3.182	13.9	21.6	9 28	21 31.56	-3 1.2	1.370	2.218	17.6	18.7
38479	1999 <i>TK</i> ₉₅		8 19.5 323°49	0°4/19.9	18		255093	2005 <i>UW</i> ₄₈		8 19.5 333°95	5°0/24.0	18 R	
7 20	22 13.31	-7 50.8	2.020	2.911	11.6	18.5	7 20	22 13.70	+2 54.9	1.870	2.722	14.1	20.0
7 30	22 8.88	-8 47.9	1.949	2.906	8.2	18.2	7 30	22 9.27	+2 51.3	1.795	2.715	11.1	19.8
8 9	22 2.94	-9 57.0	1.903	2.900	4.5	18.0	8 9	22 3.21	+2 28.1	1.740	2.708	8.0	19.6
8 19	21 56.06	-11 13.6	1.884	2.896	0.6	17.7	8 19	21 56.12	+1 46.5	1.710	2.702	5.4	19.5
8 29	21 49.06	-12 31.3	1.892	2.891	3.7	17.9	8 29	21 48.87	+0 50.1	1.706	2.696	5.4	19.5
9 8	21 42.76	-13 44.0	1.928	2.886	7.6	18.2	9 8	21 42.35	-0 15.3	1.728	2.690	8.0	19.6
9 18	21 37.88	-14 46.8	1.989	2.882	11.1	18.4	9 18	21 37.35	-1 23.4	1.775	2.685	11.2	19.8
9 28	21 34.97	-15 36.3	2.072	2.878	14.0	18.6	9 28	21 34.45	-2 27.8	1.844	2.680	14.3	20.0
218452	2004 <i>RH</i> ₂₂₁		8 19.5 285°60	2°9/17.4	17		186812	2004 <i>EE</i> ₁₁₅		8 19.5 290°37	0°5/19.9	17	
7 20	22 22.17	-21 49.3	2.291	3.188	10.1	19.7	7 20	22 18.05	-8 56.4	1.437	2.338	14.7	20.8
7 30	22 15.00	-21 55.3	2.209	3.168	7.2	19.5	7 30	22 12.91	-9 29.2	1.355	2.316	10.6	20.5
8 9	22 6.13	-21 58.9	2.153	3.149	4.2	19.2	8 9	22 5.39	-10 16.9	1.295	2.294	5.8	20.1
8 19	21 56.23	-21 56.2	2.125	3.129	3.0	19.1	8 19	21 56.25	-11 14.8	1.259	2.271	0.7	19.7
8 29	21 46.19	-21 44.0	2.126	3.109	5.2	19.2	8 29	21 46.65	-12 15.6	1.249	2.248	5.0	20.0
9 8	21 36.94	-21 20.6	2.156	3.089	8.4	19.4	9 8	21 37.95	-13 11.7	1.263	2.225	10.2	20.2
9 18	21 29.27	-20 46.1	2.210	3.068	11.5	19.6	9 18	21 31.32	-13 56.8	1.301	2.203	15.0	20.4
9 28	21 23.77	-20 1.3	2.287	3.048	14.2	19.7	9 28	21 27.63	-14 26.9	1.357	2.180	19.1	20.6
139535	2001 <i>QC</i> ₂₁		8 19.5 296°16	1°8/21.4	18		357894	2005 <i>UO</i> ₅₂₀		8 19.5 23°14	2°3/21.9	18	
7 20	22 13.49	-3 25.2	1.889	2.768	12.8	19.2	7 20	22 13.85	-2 48.8	2.009	2.882	12.4	20.8
7 30	22 9.17	-4 24.5	1.807	2.753	9.4	19.0	7 30	22 9.23	-3 27.2	1.942	2.884	9.2	20.6
8 9	22 3.17	-5 41.7	1.748	2.739	5.6	18.8	8 9	22 3.12	-4 20.7	1.898	2.885	5.7	20.3
8 19	21 56.08	-7 12.6	1.715	2.724	2.1	18.5	8 19	21 56.12	-5 25.9	1.880	2.887	2.6	20.2
8 29	21 48.75	-8 50.4	1.710	2.710	3.8	18.6	8 29	21 49.04	-6 37.6	1.890	2.889	3.7	20.2
9 8	21 42.10	-10 27.3	1.732	2.695	7.9	18.8	9 8	21 42.69	-7 49.6	1.927	2.891	7.2	20.5
9 18	21 36.94	-11 56.3	1.780	2.681	11.7	19.0	9 18	21 37.78	-8 56.3	1.990	2.893	10.6	20.7
9 28	21 33.91	-13 12.0	1.850	2.667	15.0	19.2	9 28	21 34.83	-9 53.5	2.075	2.895	13.5	20.9
340365	2006 <i>DY</i> ₁₂₄		8 19.5 79°25	6°4/15.1	17		187690	2008 <i>DT</i> ₄₆		8 19.5 68°89	1°9/18.2	17	
7 20	22 24.99	-29 4.1	1.748	2.651	12.4	20.1	7 20	22 20.15	-14 26.3	1.374	2.286	14.5	20.3
7 30	22 16.97	-29 50.6	1.721	2.675	9.3	19.9	7 30	22 13.99	-15 17.0	1.335	2.303	10.0	20.1
8 9	22 7.06	-30 27.4	1.719	2.699	6.9	19.8	8 9	22 5.69	-16 14.1	1.318	2.320	5.2	19.9
8 19	21 56.27	-30 47.8	1.742	2.723	6.6	19.9	8 19	21 56.26	-17 10.2	1.326	2.337	1.9	19.7
8 29	21 45.84	-30 47.9	1.792	2.747	8.5	20.0	8 29	21 46.99	-17 57.9	1.360	2.354	5.8	20.0
9 8	21 36.91	-30 27.4	1.867	2.770	11.3	20.3	9 8	21 39.11	-18 31.7	1.419	2.371	10.3	20.3
9 18	21 30.24	-29 48.6	1.964	2.793	13.9	20.5	9 18	21 33.53	-18 49.4	1.500	2.388	14.3	20.6
9 28	21 26.27	-28 55.1	2.081	2.816	16.2	20.7	9 28	21 30.77	-18 50.6	1.600	2.405	17.5	20.8
515097	2010 <i>VY</i> ₈₇		8 19.5 356°24	4°9/15.1	18		511040	2013 <i>RB</i> ₄₂		8 19.5 282°34	0°6/19.1	18	
7 20	22 17.31	-25 26.9	2.027	2.937	10.6	20.6	7 20	22 17.46	-10 19.5	1.537	2.440	13.8	21.8
7 30	22 11.70	-26 20.1	1.975	2.936	7.8	20.5	7 30	22 12.42	-11 21.2	1.453	2.416	9.8	21.5
8 9	22 4.40	-27 9.4	1.947	2.935	5.4	20.3	8 9	22 5.12	-12 38.0	1.391	2.392	5.2	21.1
8 19	21 56.15	-27 48.8	1.945	2.935	5.1	20.3	8 19	21 56.25	-14 3.5	1.355	2.367	0.6	20.7
8 29	21 47.88	-28 13.4	1.970	2.934	7.2	20.4	8 29	21 46.91	-15 29.2	1.345	2.342	5.3	21.0
9 8	21 40.54	-28 20.5	2.021	2.934	10.0	20.6	9 8	21 38.38	-16 46.2	1.361	2.317	10.3	21.3
9 18	21 34.90	-28 10.0	2.094	2.934	12.8	20.8	9 18	21 31.79	-17 48.1	1.400	2.292	14.9	21.5
9 28	21 31.48	-27 43.3	2.188	2.934	15.1	21.0	9 28	21 27.98	-18 31.0	1.458	2.266	18.8	21.7
68239	2001 <i>DB</i> ₄₇		8 19.5 1										

EPHEMERIDES

8 19.5

8 19.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
317860	2003 <i>UT</i>		8 19.5 343°30	12°1/18.3	17		281851	2010 <i>CC70</i>		8 19.6 68°64	2°8/17.1	17	
7 20	22 45.72	-39 19.1	0.995	1.888	20.4	19.0	7 20	22 16.97	-15 55.2	1.603	2.516	12.8	20.3
7 30	22 33.26	-38 41.8	0.935	1.874	16.8	18.7	7 30	22 11.71	-17 14.6	1.556	2.524	8.8	20.1
8 9	22 16.22	-37 27.7	0.894	1.862	13.5	18.5	8 9	22 4.53	-18 39.7	1.532	2.533	4.7	19.9
8 19	21 56.82	-35 24.8	0.875	1.851	12.2	18.4	8 19	21 56.26	-20 2.3	1.534	2.542	2.9	19.8
8 29	21 38.17	-32 32.2	0.880	1.841	14.0	18.4	8 29	21 47.98	-21 14.3	1.563	2.550	6.1	20.0
9 8	21 23.01	-29 3.0	0.909	1.834	17.8	18.6	9 8	21 40.78	-22 9.8	1.618	2.559	10.1	20.2
9 18	21 12.81	-25 16.6	0.959	1.828	22.0	18.9	9 18	21 35.51	-22 45.9	1.695	2.568	13.7	20.5
9 28	21 7.91	-21 29.6	1.028	1.824	25.7	19.1	9 28	21 32.75	-23 2.3	1.792	2.577	16.7	20.7
423991	2006 <i>VN80</i>		8 19.5 188°82	2°6/17.5	18		378220	2007 <i>BD17</i>		8 19.6 88°04	2°3/20.9	17	
7 20	22 19.62	-16 20.6	1.692	2.599	12.5	21.9	7 20	22 22.53	-6 41.2	1.575	2.459	14.6	20.4
7 30	22 13.56	-17 22.5	1.633	2.598	8.7	21.6	7 30	22 15.49	-6 28.6	1.523	2.473	10.6	20.2
8 9	22 5.51	-18 29.6	1.598	2.598	4.7	21.4	8 9	22 6.47	-6 28.2	1.494	2.486	6.3	19.9
8 19	21 56.28	-19 34.8	1.589	2.597	2.7	21.3	8 19	21 56.36	-6 37.3	1.490	2.499	2.5	19.7
8 29	21 46.94	-20 31.0	1.608	2.595	5.9	21.5	8 29	21 46.34	-6 52.2	1.514	2.512	4.5	19.9
9 8	21 38.63	-21 12.7	1.652	2.593	9.9	21.7	9 8	21 37.55	-7 8.4	1.563	2.525	8.7	20.2
9 18	21 32.25	-21 37.4	1.720	2.591	13.6	21.9	9 18	21 30.84	-7 22.0	1.637	2.538	12.5	20.4
9 28	21 28.44	-21 44.7	1.807	2.589	16.7	22.1	9 28	21 26.78	-7 30.0	1.732	2.550	15.8	20.7
46955	1998 <i>SS121</i>		8 19.5 278°97	2°5/21.6	18		11820	Mikiyasato		8 19.6 336°65	3°9/23.4	18	R
7 20	22 16.66	-4 14.0	1.864	2.741	13.0	19.3	7 20	22 13.47	+1 19.9	2.008	2.864	13.1	18.7
7 30	22 11.39	-4 25.5	1.786	2.730	9.7	19.1	7 30	22 9.02	+0 57.7	1.934	2.861	10.1	18.5
8 9	22 4.36	-4 51.0	1.731	2.719	6.0	18.8	8 9	22 3.07	+0 17.6	1.883	2.857	6.9	18.3
8 19	21 56.22	-5 28.2	1.701	2.708	2.7	18.6	8 19	21 56.20	-0 38.4	1.857	2.854	4.3	18.1
8 29	21 47.87	-6 12.7	1.699	2.697	4.1	18.7	8 29	21 49.19	-1 45.9	1.857	2.851	4.5	18.1
9 8	21 40.29	-6 59.2	1.723	2.686	7.9	18.9	9 8	21 42.89	-2 59.0	1.885	2.848	7.3	18.3
9 18	21 34.30	-7 42.7	1.772	2.675	11.6	19.1	9 18	21 37.99	-4 11.4	1.938	2.846	10.5	18.5
9 28	21 30.54	-8 19.0	1.843	2.664	14.9	19.3	9 28	21 35.06	-5 17.7	2.014	2.843	13.5	18.7
517676	2015 <i>CO63</i>		8 19.5 232°15	0°9/18.8	17		90567	2004 <i>GC9</i>		8 19.6 19°61	6°7/14.3	18	
7 20	22 20.46	-12 53.1	1.691	2.590	13.0	22.5	7 20	22 19.43	-28 48.7	1.717	2.628	12.1	18.7
7 30	22 14.22	-13 31.0	1.619	2.581	9.1	22.2	7 30	22 13.41	-29 45.9	1.674	2.632	9.2	18.5
8 9	22 5.92	-14 17.1	1.572	2.572	4.7	21.9	8 9	22 5.41	-30 35.1	1.655	2.636	7.0	18.4
8 19	21 56.31	-15 6.1	1.550	2.562	0.9	21.6	8 19	21 56.32	-31 9.1	1.660	2.640	6.9	18.4
8 29	21 46.49	-15 51.6	1.556	2.551	4.9	21.9	8 29	21 47.30	-31 22.5	1.691	2.645	9.0	18.6
9 8	21 37.63	-16 28.0	1.588	2.541	9.4	22.2	9 8	21 39.50	-31 13.5	1.746	2.650	11.8	18.7
9 18	21 30.68	-16 52.1	1.644	2.529	13.4	22.4	9 18	21 33.79	-30 43.5	1.822	2.656	14.6	18.9
9 28	21 26.33	-17 2.1	1.721	2.517	16.8	22.6	9 28	21 30.70	-29 55.6	1.917	2.662	17.1	19.1
490775	2010 <i>UR45</i>		8 19.5 268°68	1°8/22.7	15		47921	2000 <i>GW106</i>		8 19.6 247°30	3°1/22.6	18	
7 20	22 9.12	-1 38.1	4.492	5.337	6.6	21.6	7 20	22 15.45	-0 39.8	2.138	2.996	12.3	18.8
7 30	22 5.33	-1 45.2	4.405	5.328	5.0	21.5	7 30	22 10.40	-1 4.0	2.055	2.985	9.4	18.6
8 9	22 0.88	-1 59.1	4.345	5.319	3.3	21.3	8 9	22 3.80	-1 44.2	1.995	2.974	6.2	18.3
8 19	21 56.05	-2 18.6	4.312	5.310	2.0	21.2	8 19	21 56.24	-2 38.0	1.961	2.963	3.5	18.2
8 29	21 51.16	-2 42.5	4.309	5.301	2.2	21.2	8 29	21 48.49	-3 41.3	1.956	2.951	4.0	18.2
9 8	21 46.56	-3 8.8	4.335	5.292	3.8	21.4	9 8	21 41.36	-4 48.7	1.977	2.939	7.1	18.3
9 18	21 42.55	-3 35.6	4.389	5.283	5.5	21.5	9 18	21 35.60	-5 54.5	2.025	2.927	10.5	18.5
9 28	21 39.40	-4 1.1	4.469	5.274	7.0	21.6	9 28	21 31.78	-6 54.0	2.096	2.915	13.4	18.7
81428	2000 <i>GV104</i>		8 19.5 29°14	1°9/18.3	18		149046	2002 <i>BU11</i>		8 19.6 198°85	1°3/20.7	18	
7 20	22 16.46	-13 33.7	1.172	2.095	15.6	18.5	7 20	22 17.62	-7 44.1	2.272	3.150	11.0	20.0
7 30	22 11.71	-14 31.0	1.132	2.105	10.8	18.3	7 30	22 11.74	-7 46.6	2.201	3.149	7.9	19.8
8 9	22 4.63	-15 37.7	1.112	2.115	5.6	18.0	8 9	22 4.43	-7 57.5	2.155	3.148	4.5	19.6
8 19	21 56.24	-16 45.2	1.116	2.127	1.9	17.8	8 19	21 56.28	-8 14.4	2.137	3.147	1.5	19.3
8 29	21 47.94	-17 44.2	1.144	2.140	6.2	18.1	8 29	21 48.05	-8 34.4	2.147	3.145	3.4	19.5
9 8	21 41.08	-18 27.7	1.195	2.153	11.2	18.4	9 8	21 40.54	-8 54.0	2.185	3.144	6.8	19.7
9 18	21 36.64	-18 52.4	1.267	2.167	15.5	18.7	9 18	21 34.41	-9 10.4	2.249	3.142	9.9	19.9
9 28	21 35.19	-18 57.5	1.357	2.182	19.0	19.0	9 28	21 30.16	-9 21.1	2.337	3.141	12.7	20.1
428233	2006 <i>WC168</i>		8 19.5 242°71	1°0/20.3	17		85066	4255 <i>T-1</i>		8 19.6 96°56	0°6/20.0	17	
7 20	22 19.20	-7 57.4	1.690	2.580	13.5	22.2	7 20	22 19.76	-8 12.1	1.552	2.446	14.3	19.8
7 30	22 13.34	-8 24.5	1.615	2.570	9.7	21.9	7 30	22 13.57	-8 55.9	1.506	2.463	10.1	19.6
8 9	22 5.46	-9 4.3	1.563	2.559	5.4	21.7	8 9	22 5.47	-9 52.3	1.482	2.480	5.4	19.4
8 19	21 56.30	-9 52.8	1.537	2.548	1.2	21.3	8 19	21 56.33	-10 55.3	1.484	2.496	0.8	19.1
8 29	21 46.89	-10 44.3	1.538	2.537	4.3	21.5	8 29	21 47.27	-11 58.1	1.514	2.512	4.4	19.4
9 8	21 38.38	-11 32.5	1.565	2.525	8.8	21.8	9 8	21 39.40	-12 54.0	1.569	2.528	8.8	19.7
9 18	21 31.69	-12 12.7	1.616	2.513	12.9	22.0	9 18	21 33.55	-13 38.6	1.648	2.544	12.8	20.0
9 28	21 27.54	-12 41.4	1.689	2.501	16.4	22.2	9 28	21 30.26	-14 9.2	1.748	2.559	16.0	20.2
354433	2003 <i>XO12</i>		8 19.5 308°13	0°1/19.6	16		317207	2002 <i>CH10</i>		8 19.6 287°79	6°2/15.6	18	
7 20	22 21.39	-12 48.1	1.580	2.481	13.6	20.7	7 20	22 23.78	-23 44.3	1.356	2.272	14.4	20.4
7 30	22 15.18	-12 36.5	1.490	2.452	9.8	20.4	7 30	22 17.40	-24 48.7	1.275	2.241	10.6	20.1
8 9	22 6.59	-12 30.6	1.424	2.423	5.3	20.0	8 9	22 8.02	-25 53.4	1.217	2.210	7.1	19.8
8 19	21 56.37	-12 27.3	1.383	2.395	0.3	19.6	8 19	21 56.50	-26 47.9	1.183	2.179	6.5	19.6
8 29	21 45.69	-12 22.7	1.368	2.366	4.8	19.9	8 29	21 44.33	-27 22.3	1.173	2.147	9.7	19.7
9 8	21 35.88	-12 13.3	1.379	2.338	9.8	20.1	9 8	21 33.25	-27 30.4	1.187	2.115	14.3	19.9
9 18	21 28.09	-11 56.9	1.413	2.311	14.4	20.3	9 18	21 24.76	-27 11.4	1.221	2.082	18.7	20.1
9 28	21 23.16	-11 32.2	1.468	2.284	18.3	20.5	9 28	21 19.88	-26 27.9	1.271	2.049	22.5	20.3
481574	2007 <i>TV53</i>		8 19.5 322°51	2°6/21.6	18		444038	2004 <i>PC77</i>		8 19.6 339°85	0°9/20.5	17	
7 20	22 15.06	-4 1.4	1.614	2.500	14.2	21.0	7 20	2					

EPHEMERIDES

8 19.6

8 19.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
69632	1998 <i>FN</i> ₆₄		8 19.6 172°50	3°6/17.1	17		337185	1999 <i>VJ</i> ₁₄₀		8 19.6 13°34	1°1/18.9	18	
7 20	22 23.24	-19 50.4	1.582	2.490	13.2	19.7	7 20	22 16.36	-13 28.0	1.191	2.113	15.5	19.9
7 30	22 16.19	-20 33.7	1.527	2.492	9.3	19.5	7 30	22 11.69	-13 51.3	1.146	2.118	10.8	19.6
8 9	22 6.94	-21 17.6	1.496	2.494	5.3	19.3	8 9	22 4.68	-14 23.2	1.121	2.123	5.6	19.3
8 19	21 56.43	-21 55.2	1.491	2.495	3.7	19.2	8 19	21 56.36	-14 57.5	1.119	2.130	1.1	19.0
8 29	21 45.90	-22 20.1	1.512	2.496	6.7	19.4	8 29	21 48.07	-15 27.1	1.140	2.138	5.6	19.4
9 8	21 36.62	-22 28.7	1.559	2.496	10.7	19.6	9 8	21 41.19	-15 46.5	1.185	2.148	10.7	19.7
9 18	21 29.57	-22 20.4	1.628	2.496	14.4	19.9	9 18	21 36.68	-15 52.4	1.251	2.158	15.1	20.0
9 28	21 25.36	-21 56.4	1.717	2.496	17.5	20.1	9 28	21 35.14	-15 43.9	1.335	2.170	18.7	20.3
448403	2009 <i>RQ</i> ₆₅		8 19.6 347°01	12°6/6.0	18		327713	2006 <i>SV</i> ₁₀₃		8 19.6 91°70	1°0/18.9	17	
7 20	22 20.09	-45 27.5	1.747	2.622	13.9	19.6	7 20	22 20.68	-13 4.0	1.427	2.334	14.4	21.3
7 30	22 14.41	-47 7.6	1.715	2.614	12.8	19.5	7 30	22 14.49	-13 38.1	1.374	2.339	10.1	21.1
8 9	22 6.15	-48 25.7	1.705	2.607	12.6	19.5	8 9	22 6.10	-14 20.5	1.344	2.345	5.2	20.8
8 19	21 56.38	-49 13.0	1.715	2.600	13.4	19.5	8 19	21 56.44	-15 4.9	1.338	2.350	1.0	20.5
8 29	21 46.60	-49 24.3	1.747	2.594	14.8	19.6	8 29	21 46.77	-15 44.6	1.359	2.355	5.3	20.9
9 8	21 38.31	-48 59.7	1.797	2.589	16.6	19.7	9 8	21 38.36	-16 14.1	1.405	2.361	10.0	21.2
9 18	21 32.62	-48 3.3	1.863	2.585	18.3	19.9	9 18	21 32.19	-16 30.3	1.473	2.366	14.2	21.4
9 28	21 30.14	-46 41.0	1.944	2.582	19.9	20.0	9 28	21 28.87	-16 32.1	1.561	2.371	17.6	21.7
8563	1995 <i>US</i>		8 19.6 3°93	0°3/19.4	18 R		132306	2002 <i>GQ</i> ₁₁		8 19.6 38°87	0°8/18.9	16	
7 20	22 24.97	-15 7.4	1.710	2.607	13.0	15.7	7 20	22 15.19	-10 24.1	1.513	2.420	13.8	18.7
7 30	22 17.19	-14 31.1	1.647	2.607	9.2	15.5	7 30	22 10.55	-11 38.3	1.462	2.428	9.6	18.5
8 9	22 7.39	-13 56.3	1.608	2.607	4.8	15.2	8 9	22 3.99	-13 4.7	1.435	2.436	4.9	18.2
8 19	21 56.46	-13 21.2	1.596	2.608	0.3	14.9	8 19	21 56.32	-14 35.5	1.432	2.444	0.8	18.0
8 29	21 45.58	-12 43.8	1.612	2.609	4.4	15.2	8 29	21 48.62	-16 2.0	1.457	2.453	5.0	18.3
9 8	21 35.88	-12 3.1	1.655	2.611	8.8	15.5	9 8	21 41.99	-17 16.6	1.506	2.462	9.5	18.6
9 18	21 28.28	-11 19.0	1.723	2.613	12.6	15.7	9 18	21 37.26	-18 14.1	1.579	2.472	13.4	18.8
9 28	21 23.35	-10 31.4	1.813	2.616	15.8	15.9	9 28	21 35.03	-18 52.5	1.672	2.482	16.7	19.1
264996	2003 <i>ET</i>		8 19.6 292°06	6°5/18.0	15		406813	2008 <i>VA</i> ₅₇		8 19.6 342°01	1°3/18.8	17	
7 20	22 37.67	-26 52.8	0.998	1.911	18.6	19.5	7 20	22 3.09	-11 54.7	0.648	1.606	19.1	21.0
7 30	22 27.64	-26 32.4	0.935	1.898	13.8	19.1	7 30	22 3.52	-12 29.0	0.589	1.578	13.7	20.5
8 9	22 13.49	-25 56.8	0.892	1.885	8.9	18.8	8 9	22 0.94	-13 25.3	0.546	1.553	7.2	20.1
8 19	21 56.80	-24 56.8	0.871	1.872	6.5	18.7	8 19	21 56.17	-14 35.6	0.519	1.531	1.3	19.6
8 29	21 40.04	-23 28.4	0.875	1.860	10.0	18.8	8 29	21 50.90	-15 46.3	0.508	1.511	7.7	19.9
9 8	21 25.70	-21 35.5	0.901	1.848	15.4	19.1	9 8	21 47.16	-16 42.5	0.514	1.495	14.8	20.2
9 18	21 15.47	-19 27.2	0.949	1.836	20.6	19.3	9 18	21 46.59	-17 13.5	0.534	1.483	21.3	20.4
9 28	21 10.09	-17 12.0	1.012	1.824	25.0	19.6	9 28	21 50.25	-17 13.7	0.566	1.475	26.6	20.7
237204	2008 <i>UT</i> ₂₇₇		8 19.6 154°73	2°9/16.9	18		259948	2004 <i>EC</i> ₆₇		8 19.6 229°86	1°1/18.8	18	
7 20	22 20.03	-19 57.3	2.199	3.100	10.3	21.6	7 20	22 20.73	-13 21.9	1.755	2.654	12.6	21.3
7 30	22 13.46	-20 44.5	2.146	3.107	7.2	21.4	7 30	22 14.40	-13 58.0	1.683	2.645	8.9	21.0
8 9	22 5.35	-21 31.8	2.118	3.114	4.2	21.3	8 9	22 6.05	-14 41.3	1.635	2.635	4.6	20.8
8 19	21 56.38	-22 14.1	2.118	3.121	3.1	21.2	8 19	21 56.44	-15 26.8	1.614	2.625	1.1	20.5
8 29	21 47.40	-22 46.7	2.146	3.126	5.4	21.4	8 29	21 46.63	-16 8.5	1.620	2.614	4.9	20.7
9 8	21 39.31	-23 6.5	2.202	3.132	8.5	21.6	9 8	21 37.74	-16 41.2	1.652	2.603	9.2	21.0
9 18	21 32.81	-23 12.4	2.283	3.136	11.4	21.8	9 18	21 30.71	-17 1.9	1.709	2.592	13.1	21.2
9 28	21 28.40	-23 4.9	2.385	3.141	13.8	22.0	9 28	21 26.22	-17 9.0	1.786	2.579	16.4	21.4
263119	2007 <i>UR</i> ₅₈		8 19.6 173°30	1°7/20.8	17		238224	2003 <i>UF</i> ₁₄₈		8 19.6 333°59	2°9/17.3	18	
7 20	22 20.31	- 6 11.1	1.546	2.433	14.7	21.2	7 20	22 17.34	-17 33.4	1.559	2.474	12.9	20.2
7 30	22 14.15	- 6 35.7	1.483	2.435	10.7	21.0	7 30	22 12.15	-18 23.9	1.499	2.468	9.0	19.9
8 9	22 5.91	- 7 15.1	1.443	2.436	6.1	20.7	8 9	22 4.89	-19 18.5	1.462	2.462	5.0	19.7
8 19	21 56.41	- 8 5.3	1.427	2.437	2.0	20.4	8 19	21 56.38	-20 10.5	1.450	2.457	3.0	19.6
8 29	21 46.80	- 9 0.1	1.439	2.438	4.4	20.6	8 29	21 47.75	-20 52.6	1.464	2.452	6.3	19.8
9 8	21 38.26	- 9 52.7	1.476	2.438	9.0	20.9	9 8	21 40.17	-21 20.0	1.502	2.447	10.4	20.0
9 18	21 31.75	-10 37.7	1.537	2.438	13.2	21.1	9 18	21 34.59	-21 30.2	1.563	2.443	14.3	20.2
9 28	21 27.92	-11 11.4	1.619	2.438	16.7	21.4	9 28	21 31.66	-21 23.1	1.643	2.439	17.5	20.4
210069	2006 <i>QF</i> ₉		8 19.6 302°62	0°4/19.9	18		424478	2008 <i>CP</i> ₂₀₇		8 19.6 178°66	0°4/19.9	17	
7 20	22 15.83	- 9 5.5	1.828	2.723	12.4	20.5	7 20	22 19.83	- 9 0.0	1.766	2.655	13.0	22.2
7 30	22 10.85	- 9 39.5	1.757	2.715	8.8	20.3	7 30	22 13.65	- 9 40.4	1.702	2.657	9.2	22.0
8 9	22 4.12	-10 24.6	1.709	2.707	4.8	20.0	8 9	22 5.60	-10 32.1	1.661	2.658	5.0	21.7
8 19	21 56.32	-11 16.4	1.687	2.699	0.6	19.7	8 19	21 56.42	-11 30.1	1.647	2.659	0.5	21.4
8 29	21 48.35	-12 9.4	1.693	2.692	4.0	20.0	8 29	21 47.14	-12 28.3	1.661	2.659	4.2	21.7
9 8	21 41.18	-12 57.9	1.725	2.684	8.2	20.2	9 8	21 38.80	-13 20.8	1.701	2.658	8.5	22.0
9 18	21 35.64	-13 37.7	1.781	2.677	12.0	20.4	9 18	21 32.27	-14 3.1	1.767	2.657	12.3	22.2
9 28	21 32.34	-14 5.6	1.858	2.669	15.2	20.6	9 28	21 28.16	-14 32.7	1.853	2.655	15.6	22.4
429915	2012 <i>TU</i> ₁₆₉		8 19.6 4°50	15°1/9.8	16		509093	2005 <i>UY</i> ₃₅₁		8 19.6 227°72	6°3/25.8	18	
7 20	22 14.75	-39 21.5	0.909	1.838	18.3	19.0	7 20	22 15.59	+ 8 15.8	2.294	3.102	13.3	20.6
7 30	22 11.47	-40 57.9	0.886	1.836	16.1	18.8	7 30	22 10.41	+ 8 34.7	2.217	3.100	11.0	20.5
8 9	22 4.82	-42 5.6	0.881	1.837	15.1	18.8	8 9	22 3.81	+ 8 35.0	2.161	3.098	8.6	20.3
8 19	21 56.34	-42 31.9	0.892	1.841	15.8	18.8	8 19	21 56.33	+ 8 16.4	2.130	3.096	6.7	20.2
8 29	21 48.15	-42 10.0	0.922	1.847	17.8	19.0	8 29	21 48.71	+ 7 40.7	2.125	3.093	6.4	20.2
9 8	21 42.16	-41 2.7	0.967	1.855	20.5	19.2	9 8	21 41.72	+ 6 52.0	2.146	3.091	7.8	20.3
9 18	21 39.52	-39 18.2	1.028	1.866	23.1	19.4	9 18	21 36.03	+ 5 55.1	2.194	3.088	10.1	20.4
9 28	21 40.64	-37 6.3	1.103	1.880	25.4	19.6	9 28	21 32.17	+ 4 55.9	2.264	3.086	12.5	20.6
507242	2011 <i>BA</i> ₃₅		8 19.6 182°90	0°6/20.1	17		21612	Chelsagloria		8			

EPHEMERIDES

8 19.6

8 19.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
276992	2004 <i>XF</i> ₃₈		8 19.6 256°34	2°0/17.0	18		128937	2004 <i>TH</i> ₁₀₉		8 19.6 333°11	1°6/18.2	18	
7 20	22 14.92	-16 47.5	2.759	3.656	8.6	20.8	7 20	22 15.31	-15 12.7	1.927	2.834	11.3	19.2
7 30	22 9.87	-17 53.6	2.674	3.636	6.0	20.6	7 30	22 10.43	-15 51.1	1.860	2.826	7.8	19.0
8 9	22 3.52	-19 3.8	2.616	3.615	3.3	20.4	8 9	22 3.90	-16 34.5	1.817	2.818	4.1	18.7
8 19	21 56.33	-20 13.6	2.588	3.594	2.1	20.3	8 19	21 56.37	-17 18.2	1.801	2.811	1.6	18.5
8 29	21 48.93	-21 18.2	2.589	3.572	4.4	20.4	8 29	21 48.72	-17 56.9	1.812	2.804	4.7	18.7
9 8	21 42.01	-22 13.4	2.618	3.550	7.2	20.6	9 8	21 41.87	-18 26.1	1.848	2.798	8.5	19.0
9 18	21 36.16	-22 56.5	2.674	3.527	9.9	20.7	9 18	21 36.60	-18 43.2	1.909	2.792	12.0	19.2
9 28	21 31.92	-23 26.1	2.752	3.504	12.2	20.9	9 28	21 33.48	-18 47.1	1.991	2.786	14.9	19.4
232860	2004 <i>TW</i> ₂₆₃		8 19.6 300°90	3°0/21.8	18		292337	2006 <i>SN</i> ₁₈₈		8 19.6 128°66	1°6/18.4	17	
7 20	22 17.07	-3 32.9	1.617	2.498	14.5	20.3	7 20	22 21.27	-14 9.7	1.625	2.527	13.2	21.5
7 30	22 11.92	-3 41.0	1.543	2.489	10.8	20.1	7 30	22 14.70	-14 56.6	1.574	2.538	9.2	21.3
8 9	22 4.80	-4 4 5.6	1.491	2.479	6.8	19.8	8 9	22 6.15	-15 49.9	1.547	2.548	4.8	21.1
8 19	21 56.41	-4 44.1	1.464	2.470	3.3	19.6	8 19	21 56.50	-16 43.2	1.547	2.557	1.6	20.9
8 29	21 47.80	-5 31.9	1.463	2.462	4.6	19.7	8 29	21 46.88	-17 29.8	1.573	2.567	5.2	21.2
9 8	21 40.07	-6 22.7	1.488	2.453	8.7	19.9	9 8	21 38.42	-18 4.8	1.626	2.575	9.5	21.4
9 18	21 34.17	-7 10.6	1.536	2.444	12.7	20.1	9 18	21 31.99	-18 25.6	1.702	2.584	13.2	21.7
9 28	21 30.78	-7 50.5	1.605	2.436	16.3	20.3	9 28	21 28.18	-18 31.5	1.799	2.592	16.3	21.9
163780	2003 <i>QZ</i> ₁₉		8 19.6 344°19	0°3/19.4	18		480936	2003 <i>QH</i> ₅		8 19.6 48°11	43°9/28.0	17	
7 20	22 13.67	-10 15.3	1.293	2.209	15.0	19.6	7 20	0 59.26	+18 48.1	0.092	1.031	78.5	17.7
7 30	22 9.86	-11 1.1	1.230	2.198	10.6	19.3	7 30	23 48.89	+40 7.6	0.121	1.056	67.3	18.0
8 9	22 3.82	-12 1.5	1.188	2.189	5.6	19.0	8 9	22 46.69	+49 23.4	0.163	1.085	60.2	18.5
8 19	21 56.36	-13 9.8	1.169	2.181	0.3	18.6	8 19	21 58.26	+52 14.0	0.209	1.116	55.3	18.9
8 29	21 48.69	-14 17.5	1.175	2.174	5.2	19.0	8 29	21 25.78	+51 50.2	0.256	1.150	51.4	19.3
9 8	21 42.11	-15 16.4	1.204	2.168	10.4	19.2	9 8	21 7.74	+49 49.2	0.304	1.184	48.2	19.7
9 18	21 37.66	-16 0.4	1.254	2.163	15.0	19.5	9 18	21 1.08	+46 58.2	0.353	1.219	45.7	20.0
9 28	21 36.07	-16 26.3	1.324	2.159	18.9	19.7	9 28	21 3.22	+43 45.2	0.403	1.253	43.9	20.3
389874	2012 <i>SL</i> ₁₈		8 19.6 300°03	1°9/18.3	18		265476	2005 <i>BE</i> ₁₉		8 19.6 270°63	4°0/22.7	17	
7 20	22 20.31	-16 21.1	1.587	2.495	13.1	20.6	7 20	22 20.54	-0 8.9	2.575	3.413	11.1	20.7
7 30	22 14.37	-16 40.8	1.509	2.475	9.3	20.3	7 30	22 13.83	+0 30.1	2.479	3.394	8.7	20.5
8 9	22 6.17	-17 4.8	1.454	2.455	4.9	20.0	8 9	22 5.64	+0 58.9	2.408	3.375	6.1	20.3
8 19	21 56.50	-17 27.9	1.425	2.435	2.0	19.7	8 19	21 56.48	+1 17.2	2.364	3.355	4.2	20.2
8 29	21 46.51	-17 44.3	1.422	2.415	5.6	19.9	8 29	21 47.07	+1 25.8	2.351	3.335	4.6	20.2
9 8	21 37.50	-17 49.8	1.444	2.395	10.2	20.1	9 8	21 38.18	+1 26.8	2.366	3.315	6.9	20.3
9 18	21 30.51	-17 42.3	1.489	2.376	14.4	20.4	9 18	21 30.50	+1 22.6	2.408	3.295	9.6	20.4
9 28	21 26.33	-17 21.3	1.553	2.357	18.0	20.6	9 28	21 24.60	+1 16.4	2.474	3.275	12.2	20.6
445794	2012 <i>BD</i> ₁		8 19.6 206°73	0°7/18.8	15		314405	2005 <i>UN</i> ₂₅₂		8 19.6 332°88	4°8/23.5	16	
7 20	22 17.52	-14 19.6	2.843	3.731	8.7	22.1	7 20	22 15.08	+1 18.7	1.863	2.720	13.9	21.0
7 30	22 11.51	-14 37.4	2.769	3.726	6.1	21.9	7 30	22 10.32	+1 29.0	1.787	2.712	10.9	20.8
8 9	22 4.30	-14 58.3	2.721	3.720	3.1	21.7	8 9	22 3.88	+1 21.7	1.733	2.705	7.7	20.6
8 19	21 56.39	-15 19.6	2.703	3.714	0.7	21.5	8 19	21 56.38	+0 57.8	1.704	2.697	5.1	20.4
8 29	21 48.40	-15 38.3	2.714	3.707	3.3	21.7	8 29	21 48.70	+0 20.2	1.700	2.691	5.3	20.4
9 8	21 40.98	-15 51.9	2.754	3.700	6.2	21.9	9 8	21 41.77	-0 26.1	1.723	2.684	8.0	20.6
9 18	21 34.71	-15 58.8	2.820	3.693	8.9	22.1	9 18	21 36.39	-1 15.6	1.770	2.679	11.3	20.8
9 28	21 30.01	-15 57.9	2.911	3.685	11.2	22.2	9 28	21 33.16	-2 2.7	1.839	2.673	14.4	21.0
339402	2005 <i>CO</i> ₁₃		8 19.6 273°92	2°4/17.4	18		79573	1998 <i>QW</i> ₉₂		8 19.6 301°29	2°7/17.7	18	
7 20	22 18.10	-16 17.2	1.900	2.805	11.5	20.9	7 20	22 18.53	-16 4.3	1.388	2.305	14.1	17.9
7 30	22 12.60	-17 17.0	1.817	2.782	8.1	20.7	7 30	22 13.41	-16 54.1	1.312	2.282	9.9	17.6
8 9	22 5.16	-18 23.2	1.758	2.758	4.4	20.4	8 9	22 5.80	-17 52.0	1.257	2.259	5.4	17.3
8 19	21 56.44	-19 29.6	1.726	2.734	2.5	20.2	8 19	21 56.50	-18 50.5	1.227	2.236	2.8	17.1
8 29	21 47.38	-20 29.3	1.722	2.709	5.6	20.4	8 29	21 46.76	-19 41.1	1.222	2.214	6.7	17.3
9 8	21 39.03	-21 16.6	1.744	2.684	9.6	20.6	9 8	21 38.02	-20 16.7	1.241	2.191	11.6	17.5
9 18	21 32.32	-21 48.2	1.790	2.659	13.3	20.8	9 18	21 31.51	-20 33.6	1.281	2.170	16.2	17.7
9 28	21 27.98	-22 2.6	1.856	2.634	16.4	20.9	9 28	21 28.08	-20 30.8	1.339	2.148	20.1	17.9
34609	2000 <i>UK</i> ₈		8 19.6 136°36	5°3/14.3	18		240420	2003 <i>WT</i> ₈		8 19.6 345°14	7°3/14.6	18	
7 20	22 18.81	-27 58.3	2.245	3.148	10.1	18.3	7 20	22 21.90	-29 22.3	1.545	2.457	13.2	19.5
7 30	22 12.69	-28 55.3	2.197	3.152	7.5	18.1	7 30	22 15.44	-30 11.9	1.495	2.452	10.1	19.3
8 9	22 5.00	-29 46.6	2.175	3.155	5.7	18.0	8 9	22 6.65	-30 52.5	1.467	2.449	7.7	19.1
8 19	21 56.42	-30 26.4	2.179	3.159	5.6	18.0	8 19	21 56.54	-31 15.9	1.464	2.445	7.5	19.1
8 29	21 47.86	-30 50.3	2.211	3.162	7.4	18.2	8 29	21 46.45	-31 16.3	1.486	2.442	9.8	19.2
9 8	21 40.20	-30 56.2	2.268	3.165	9.8	18.3	9 8	21 37.73	-30 52.3	1.530	2.440	12.9	19.4
9 18	21 34.15	-30 44.4	2.348	3.168	12.2	18.5	9 18	21 31.40	-30 5.8	1.596	2.438	16.0	19.6
9 28	21 30.23	-30 16.7	2.448	3.171	14.3	18.7	9 28	21 28.04	-29 0.9	1.680	2.436	18.7	19.8
518312	2017 <i>BP</i> ₆₁		8 19.6 310°43	4°9/14.7	18		16297	6346 <i>P-L</i>		8 19.6 157°11	3°5/16.9	18	
7 20	22 16.20	-24 22.4	1.981	2.893	10.7	20.8	7 20	22 21.94	-22 14.5	2.078	2.979	10.8	18.4
7 30	22 11.13	-25 32.7	1.919	2.882	7.8	20.6	7 30	22 14.90	-22 41.0	2.022	2.982	7.7	18.2
8 9	22 4.30	-26 41.2	1.881	2.871	5.4	20.4	8 9	22 6.17	-23 5.2	1.991	2.985	4.6	18.1
8 19	21 56.39	-27 41.1	1.870	2.860	5.2	20.4	8 19	21 56.52	-23 22.3	1.987	2.988	3.6	18.0
8 29	21 48.33	-28 26.2	1.886	2.850	7.5	20.5	8 29	21 46.90	-23 28.3	2.012	2.991	5.8	18.2
9 8	21 41.10	-28 52.7	1.927	2.839	10.5	20.7	9 8	21 38.28	-23 21.1	2.064	2.993	9.0	18.4
9 18	21 35.53	-28 59.4	1.990	2.829	13.4	20.8	9 18	21 31.41	-23 0.6	2.140	2.995	12.0	18.6
9 28	21 32.23	-28 47.3	2.072	2.820	15.9	21.0	9 28	21 26.81	-22 28.1	2.237	2.997	14.5	18.7
447339	2005 <i>YK</i> ₉₅		8 19.6 8°56	6°9/24.2	17		208122	2000 <i>DZ</i> ₁₃		8 19.6 227°93			

EPHEMERIDES

8 19.6

8 19.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
399013	2013 <i>GE</i> ₂₇		8 19.6 100°33	5°0/14.7 18			196531	2003 <i>OC</i> ₂₀		8 19.6 310°20	2°2/21.3 18		
7 20	22 18.49	-27 6.6	2.260	3.163	10.0	20.7	7 20	22 15.86	-4 57.5	1.563	2.453	14.4	19.5
7 30	22 12.45	-27 58.9	2.214	3.170	7.4	20.6	7 30	22 11.19	-5 21.4	1.488	2.440	10.6	19.3
8 9	22 4.87	-28 46.0	2.193	3.176	5.4	20.5	8 9	22 4.50	-6 2.1	1.435	2.427	6.4	19.0
8 19	21 56.45	-29 22.5	2.199	3.182	5.2	20.5	8 19	21 56.50	-6 56.1	1.405	2.414	2.5	18.7
8 29	21 48.07	-29 44.0	2.232	3.188	7.0	20.6	8 29	21 48.23	-7 57.6	1.402	2.402	4.4	18.8
9 8	21 40.59	-29 48.7	2.291	3.194	9.5	20.7	9 8	21 40.83	-8 59.3	1.424	2.390	8.9	19.1
9 18	21 34.69	-29 36.6	2.373	3.199	11.9	20.9	9 18	21 35.27	-9 54.9	1.470	2.379	13.2	19.3
9 28	21 30.87	-29 9.4	2.476	3.205	14.0	21.1	9 28	21 32.26	-10 39.4	1.536	2.368	16.9	19.5
443731	2015 <i>LX</i> ₂₁		8 19.6 31°96	5°7/15.1 16			148075	1998 <i>WB</i> ₃₇		8 19.6 271°37	2°1/18.1 18		
7 20	22 15.85	-21 32.2	1.233	2.162	14.4	19.7	7 20	22 19.81	-15 24.5	1.599	2.506	13.1	20.5
7 30	22 11.24	-23 12.8	1.210	2.183	10.2	19.6	7 30	22 14.01	-16 9.4	1.525	2.491	9.2	20.2
8 9	22 4.42	-24 50.7	1.209	2.206	6.6	19.4	8 9	22 6.02	-17 1.2	1.475	2.475	4.9	19.9
8 19	21 56.46	-26 14.8	1.232	2.229	6.1	19.5	8 19	21 56.59	-17 53.5	1.450	2.459	2.1	19.7
8 29	21 48.72	-27 16.5	1.279	2.253	9.0	19.7	8 29	21 46.87	-18 39.2	1.451	2.443	5.8	19.9
9 8	21 42.46	-27 51.3	1.349	2.278	12.7	20.0	9 8	21 38.10	-19 12.5	1.478	2.427	10.3	20.1
9 18	21 38.56	-27 59.8	1.438	2.304	16.1	20.3	9 18	21 31.32	-19 30.3	1.528	2.410	14.4	20.3
9 28	21 37.48	-27 44.7	1.546	2.331	18.9	20.5	9 28	21 27.29	-19 31.5	1.598	2.394	17.9	20.5
508293	2015 <i>KT</i> ₂₃		8 19.6 173°90	0°8/20.3 17			435607	2008 <i>SN</i> ₆₃		8 19.6 6°44	1°2/20.5 16		
7 20	22 19.14	-8 22.4	2.083	2.965	11.7	22.4	7 20	22 16.82	-7 46.0	1.385	2.287	15.1	21.3
7 30	22 12.96	-8 48.6	2.017	2.968	8.3	22.2	7 30	22 11.91	-8 9.5	1.327	2.287	10.9	21.1
8 9	22 5.20	-9 24.4	1.975	2.970	4.6	21.9	8 9	22 4.85	-8 47.5	1.290	2.288	6.1	20.8
8 19	21 56.51	-10 6.2	1.960	2.972	0.9	21.7	8 19	21 56.51	-9 35.3	1.278	2.289	1.4	20.5
8 29	21 47.74	-10 49.3	1.974	2.973	3.6	21.9	8 29	21 48.08	-10 26.3	1.290	2.291	4.6	20.8
9 8	21 39.78	-11 29.4	2.016	2.973	7.4	22.1	9 8	21 40.78	-11 13.6	1.327	2.293	9.4	21.0
9 18	21 33.35	-12 2.7	2.084	2.973	10.8	22.3	9 18	21 35.58	-11 51.7	1.387	2.296	13.8	21.3
9 28	21 28.99	-12 26.8	2.174	2.973	13.7	22.5	9 28	21 33.12	-12 17.0	1.466	2.299	17.5	21.6
397279	Bloomsburg		8 19.6 127°82	5°0/25.1 14 C			24522	2001 <i>CO</i> ₂		8 19.6 238°69	0°7/18.9 18		
7 20	22 14.83	+6 0.7	2.172	2.997	13.3	21.9	7 20	22 19.31	-13 1.7	2.214	3.105	10.7	20.2
7 30	22 9.91	+5 38.7	2.102	3.003	10.7	21.8	7 30	22 13.17	-13 34.4	2.132	3.090	7.5	19.9
8 9	22 3.58	+4 56.8	2.054	3.009	7.8	21.6	8 9	22 5.38	-14 13.2	2.075	3.074	3.9	19.7
8 19	21 56.42	+3 56.6	2.032	3.015	5.5	21.5	8 19	21 56.56	-14 54.2	2.045	3.057	0.7	19.4
8 29	21 49.19	+2 42.1	2.036	3.021	5.2	21.5	8 29	21 47.50	-15 32.8	2.045	3.040	4.0	19.6
9 8	21 42.65	+1 19.3	2.069	3.026	7.2	21.6	9 8	21 39.12	-16 4.8	2.073	3.022	7.7	19.8
9 18	21 37.47	+0 5.6	2.127	3.031	9.9	21.8	9 18	21 32.18	-16 27.3	2.126	3.003	11.1	20.0
9 28	21 34.14	-1 26.4	2.210	3.036	12.6	22.0	9 28	21 27.28	-16 38.8	2.202	2.984	14.0	20.2
179805	2002 <i>TS</i> ₆₂		8 19.6 288°31	1°6/18.4 18			329733	2003 <i>YF</i> ₇		8 19.6 261°76	1°2/20.4 18		
7 20	22 19.53	-16 2.0	1.837	2.740	11.9	20.1	7 20	22 20.01	-7 58.4	1.564	2.456	14.3	20.9
7 30	22 13.52	-16 22.7	1.765	2.728	8.3	19.9	7 30	22 14.15	-8 17.0	1.487	2.443	10.3	20.7
8 9	22 5.62	-16 47.2	1.716	2.716	4.4	19.6	8 9	22 6.09	-8 48.8	1.433	2.429	5.8	20.4
8 19	21 56.54	-17 10.9	1.694	2.704	1.7	19.4	8 19	21 56.60	-9 30.0	1.404	2.415	1.4	20.0
8 29	21 47.30	-17 29.1	1.699	2.692	4.9	19.6	8 29	21 46.80	-10 14.8	1.401	2.401	4.5	20.2
9 8	21 38.95	-17 37.9	1.731	2.680	9.0	19.8	9 8	21 37.93	-10 57.2	1.425	2.386	9.3	20.5
9 18	21 32.37	-17 35.6	1.787	2.669	12.7	20.0	9 18	21 31.04	-11 32.0	1.471	2.372	13.7	20.7
9 28	21 28.19	-17 21.5	1.863	2.657	15.8	20.2	9 28	21 26.87	-11 55.7	1.538	2.357	17.4	20.9
23837	Matthewwnanni		8 19.6 68°59	0°1/19.6 18			393755	2005 <i>EX</i> ₂₅₂		8 19.6 6°63	7°7/27.0 18		
7 20	22 21.34	-10 38.3	1.335	2.239	15.4	19.0	7 20	22 12.62	+9 47.1	1.557	2.386	17.5	20.3
7 30	22 14.90	-11 6.9	1.295	2.258	10.8	18.8	7 30	22 8.82	+9 37.3	1.490	2.387	14.5	20.1
8 9	22 6.30	-11 46.1	1.278	2.277	5.7	18.6	8 9	22 3.19	+8 57.5	1.442	2.388	11.3	19.9
8 19	21 56.58	-12 30.0	1.285	2.297	0.3	18.2	8 19	21 56.43	+7 48.5	1.416	2.390	8.6	19.7
8 29	21 47.04	-13 11.6	1.317	2.316	4.9	18.6	8 29	21 49.53	+6 14.8	1.414	2.393	7.8	19.7
9 8	21 38.94	-13 45.1	1.375	2.335	9.7	19.0	9 8	21 43.54	+4 25.1	1.436	2.396	9.5	19.8
9 18	21 33.17	-14 7.1	1.455	2.354	13.9	19.3	9 18	21 39.31	+2 29.6	1.483	2.400	12.5	20.0
9 28	21 30.27	-14 15.8	1.555	2.374	17.3	19.5	9 28	21 37.46	+0 38.5	1.551	2.405	15.6	20.2
45513	2000 <i>BR</i> ₂₃		8 19.6 301°17	9°7/6.3 18			384034	2008 <i>UM</i> ₁₅₅		8 19.6 122°15	2°6/17.4 17		
7 20	22 18.04	-39 55.7	2.129	3.015	11.3	18.3	7 20	22 19.72	-17 44.0	1.892	2.797	11.6	21.3
7 30	22 12.78	-42 4.4	2.082	2.998	10.1	18.2	7 30	22 13.46	-18 33.1	1.842	2.807	8.0	21.1
8 9	22 5.37	-44 0.2	2.060	2.981	9.8	18.2	8 9	22 5.49	-19 24.5	1.817	2.816	4.4	20.9
8 19	21 56.53	-45 34.1	2.063	2.965	10.7	18.2	8 19	21 56.57	-20 12.3	1.819	2.825	2.7	20.8
8 29	21 47.35	-46 39.2	2.089	2.948	12.3	18.3	8 29	21 47.67	-20 51.0	1.848	2.834	5.4	21.0
9 8	21 39.03	-47 13.1	2.137	2.932	14.2	18.4	9 8	21 39.77	-21 16.8	1.904	2.843	9.0	21.3
9 18	21 32.63	-47 17.0	2.203	2.915	16.1	18.5	9 18	21 33.65	-21 28.1	1.984	2.852	12.2	21.5
9 28	21 28.89	-46 54.4	2.283	2.899	17.7	18.6	9 28	21 29.82	-21 25.0	2.085	2.860	14.9	21.7
121005	1998 <i>YM</i> ₃₁		8 19.6 12°55	3°0/23.0 18 R			479493	2014 <i>AN</i> ₃₆		8 19.6 151°86	6°7/25.3 18		
7 20	22 11.90	-0 32.2	2.459	3.316	11.0	18.9	7 20	22 19.01	+7 12.2	1.951	2.769	14.9	21.8
7 30	22 7.73	-0 45.7	2.390	3.319	8.4	18.8	7 30	22 12.99	+7 34.1	1.882	2.775	12.1	21.6
8 9	22 2.39	-1 12.2	2.346	3.323	5.6	18.6	8 9	22 5.28	+7 35.2	1.835	2.780	9.3	21.5
8 19	21 56.36	-1 49.9	2.328	3.327	3.3	18.5	8 19	21 56.56	+7 15.3	1.812	2.784	7.2	21.3
8 29	21 50.28	-2 35.5	2.337	3.332	3.6	18.5	8 29	21 47.72	+6 36.6	1.815	2.788	6.8	21.3
9 8	21 44.79	-3 24.8	2.374	3.336	6.1	18.7	9 8	21 39.70	+5 44.1	1.844	2.792	8.6	21.4
9 18	21 40.43	-4 13.8	2.437	3.342	8.8	18.9	9 18	21 33.29	+4 44.0	1.899	2.796	11.3	21.6
9 28	21 37.64	-4 58.7	2.524	3.348	11.3	19.0	9 28	21 29.06	+3 42.7	1.976	2.799	14.0	21.8
373210	2012 <i>EH</i> ₈		8 19.6 177°91	1°2/20.5 17			286329	2001 <i>XW</i> ₈		8 19.6 264°57	2°4/18.1 17		
7 20	22 2												

EPHEMERIDES

8 19.6

8 19.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
128114	2003 <i>QW</i> ₁₉		8 19.6 285°17	3°2/16.9	18		20356	1998 <i>HG</i> ₁₄₇		8 19.6 292°99	6°2/13.9	18	
7 20	22 19.90	-22 22.4	2.298	3.199	9.9	19.4	7 20	22 17.90	-24 36.3	1.630	2.547	12.3	17.2
7 30	22 13.44	-22 41.5	2.235	3.195	7.1	19.2	7 30	22 12.80	-26 13.0	1.564	2.528	9.1	17.0
8 9	22 5.44	-22 58.5	2.196	3.191	4.3	19.0	8 9	22 5.46	-27 49.6	1.521	2.510	6.6	16.8
8 19	21 56.57	-23 9.1	2.186	3.186	3.3	18.9	8 19	21 56.62	-29 16.2	1.504	2.491	6.6	16.8
8 29	21 47.69	-23 10.0	2.203	3.182	5.4	19.1	8 29	21 47.46	-30 23.7	1.512	2.472	9.3	16.9
9 8	21 39.63	-22 59.2	2.248	3.178	8.3	19.2	9 8	21 39.23	-31 6.2	1.544	2.453	12.8	17.0
9 18	21 33.11	-22 36.6	2.318	3.173	11.1	19.4	9 18	21 33.04	-31 22.2	1.597	2.435	16.2	17.2
9 28	21 28.64	-22 2.8	2.409	3.169	13.6	19.6	9 28	21 29.65	-31 13.3	1.667	2.416	19.1	17.4
208325	2001 <i>PZ</i> ₃₇		8 19.6 44°51	4°4/15.2	18		91538	1999 <i>RA</i> ₂₀₄		8 19.6 239°56	6°3/15.1	18	
7 20	22 16.41	-21 30.7	1.866	2.780	11.2	19.7	7 20	22 30.12	-32 6.3	2.208	3.091	11.1	18.8
7 30	22 11.31	-23 0.2	1.815	2.781	8.0	19.5	7 30	22 20.80	-32 31.3	2.137	3.076	8.6	18.6
8 9	22 4.44	-24 30.2	1.789	2.783	5.1	19.3	8 9	22 9.43	-32 45.7	2.092	3.061	6.7	18.4
8 19	21 56.52	-25 52.7	1.790	2.785	4.7	19.3	8 19	21 56.86	-32 43.6	2.074	3.045	6.5	18.4
8 29	21 48.51	-27 0.5	1.817	2.787	7.2	19.5	8 29	21 44.27	-32 21.0	2.085	3.029	8.2	18.5
9 8	21 41.41	-27 48.9	1.870	2.789	10.4	19.6	9 8	21 32.82	-31 37.7	2.123	3.012	10.8	18.6
9 18	21 36.03	-28 16.2	1.946	2.791	13.4	19.9	9 18	21 23.44	-30 35.9	2.186	2.994	13.4	18.8
9 28	21 32.95	-28 23.2	2.041	2.793	15.9	20.0	9 28	21 16.75	-29 19.6	2.269	2.976	15.7	18.9
44616	1999 <i>RT</i> ₃₄		8 19.6 28°21	3°3/17.6	18		457846	2009 <i>SK</i> ₁₃₆		8 19.6 351°89	8°1/26.9	17	
7 20	22 17.14	-16 10.4	0.955	1.889	17.1	18.4	7 20	22 9.85	+ 9 2.7	1.507	2.347	17.5	20.4
7 30	22 12.55	-17 9.4	0.925	1.902	11.8	18.1	7 30	22 7.00	+ 9 10.8	1.433	2.336	14.6	20.1
8 9	22 5.27	-18 14.5	0.913	1.916	6.3	17.9	8 9	22 2.31	+ 8 49.8	1.379	2.327	11.5	19.9
8 19	21 56.56	-19 15.5	0.923	1.932	3.4	17.8	8 19	21 56.45	+ 7 59.3	1.345	2.319	8.9	19.8
8 29	21 48.07	-20 2.2	0.955	1.949	7.6	18.1	8 29	21 50.37	+ 6 42.5	1.334	2.313	8.1	19.7
9 8	21 41.36	-20 28.5	1.009	1.967	12.7	18.4	9 8	21 45.12	+ 5 7.1	1.347	2.308	9.8	19.8
9 18	21 37.45	-20 32.8	1.081	1.986	17.2	18.8	9 18	21 41.60	+ 3 22.7	1.382	2.304	12.9	20.0
9 28	21 36.86	-20 16.1	1.171	2.005	20.9	19.1	9 28	21 40.49	+ 1 39.6	1.439	2.303	16.1	20.2
483815	2005 <i>WW</i> ₁₀₀		8 19.6 319°50	7°4/12.7	17		336635	2009 <i>WJ</i> ₂₀		8 19.6 343°00	3°1/21.5	17	
7 20	22 16.76	-28 27.8	1.656	2.572	12.2	20.2	7 20	22 18.43	- 5 1.9	1.374	2.267	15.8	20.1
7 30	22 12.08	-29 55.7	1.582	2.542	9.5	19.9	7 30	22 13.14	- 4 52.9	1.310	2.262	11.8	19.9
8 9	22 5.11	-31 20.0	1.531	2.512	7.6	19.8	8 9	22 5.59	- 5 0.0	1.266	2.257	7.2	19.6
8 19	21 56.58	-32 31.2	1.506	2.482	7.9	19.7	8 19	21 56.65	- 5 20.8	1.246	2.253	3.3	19.4
8 29	21 47.64	-33 20.6	1.504	2.453	10.4	19.8	8 29	21 47.52	- 5 50.8	1.250	2.250	5.0	19.5
9 8	21 39.60	-33 43.1	1.526	2.424	13.6	19.9	9 8	21 39.51	- 6 23.9	1.279	2.247	9.5	19.7
9 18	21 33.60	-33 37.9	1.567	2.396	16.9	20.1	9 18	21 33.64	- 6 54.4	1.331	2.244	13.9	20.0
9 28	21 30.44	-33 6.9	1.625	2.368	19.7	20.2	9 28	21 30.63	- 7 17.5	1.402	2.242	17.7	20.2
108390	2001 <i>KJ</i> ₂₆		8 19.6 12°11	5°1/23.1	17		296572	2009 <i>QD</i> ₅₅		8 19.6 322°45	2°3/22.0	18	
7 20	22 15.59	- 0 14.2	1.164	2.054	18.3	19.1	7 20	22 13.47	- 2 48.3	2.118	2.989	11.9	20.2
7 30	22 11.29	- 0 11.4	1.110	2.056	14.0	18.9	7 30	22 9.08	- 3 21.8	2.043	2.983	8.9	20.0
8 9	22 4.63	- 0 33.5	1.075	2.059	9.4	18.6	8 9	22 3.24	- 4 9.9	1.991	2.977	5.5	19.8
8 19	21 56.55	- 1 18.3	1.061	2.063	5.6	18.5	8 19	21 56.51	- 5 9.6	1.966	2.972	2.6	19.6
8 29	21 48.36	- 2 19.5	1.071	2.068	6.1	18.5	8 29	21 49.65	- 6 16.2	1.968	2.966	3.6	19.7
9 8	21 41.45	- 3 27.9	1.103	2.074	10.2	18.8	9 8	21 43.43	- 7 24.0	1.998	2.961	6.9	19.9
9 18	21 36.86	- 4 34.5	1.156	2.081	14.6	19.0	9 18	21 38.55	- 8 27.8	2.053	2.956	10.2	20.1
9 28	21 35.28	- 5 31.6	1.229	2.088	18.5	19.3	9 28	21 35.54	- 9 23.2	2.131	2.952	13.2	20.3
241885	2001 <i>VK</i> ₄₅		8 19.6 275°59	4°4/23.5	18		283356	2000 <i>AZ</i> ₂₉		8 19.6 302°38	4°2/22.0	18	
7 20	22 17.07	+ 2 2.6	2.294	3.134	12.3	20.6	7 20	22 20.15	- 2 51.8	1.658	2.531	14.6	20.4
7 30	22 11.64	+ 2 10.4	2.193	3.108	9.7	20.4	7 30	22 14.36	- 2 19.9	1.562	2.501	11.2	20.2
8 9	22 4.63	+ 2 3.2	2.116	3.081	6.9	20.2	8 9	22 6.33	- 2 1.6	1.488	2.471	7.5	19.9
8 19	21 56.56	+ 1 41.2	2.064	3.055	4.8	20.0	8 19	21 56.72	- 1 56.9	1.439	2.441	4.5	19.6
8 29	21 48.15	+ 1 6.5	2.040	3.027	4.9	20.0	8 29	21 46.56	- 2 3.9	1.417	2.411	5.5	19.6
9 8	21 40.24	+ 0 22.9	2.044	3.000	7.4	20.1	9 8	21 37.09	- 2 19.1	1.419	2.381	9.4	19.8
9 18	21 33.58	- 0 24.9	2.074	2.972	10.4	20.2	9 18	21 29.41	- 2 37.7	1.446	2.352	13.6	19.9
9 28	21 28.80	- 1 12.1	2.127	2.944	13.3	20.4	9 28	21 24.39	- 2 55.0	1.493	2.322	17.4	20.1
259986	2004 <i>FO</i> ₆₄		8 19.6 130°65	1°8/18.2	18		343502	2010 <i>ED</i> ₁₀₆		8 19.6 94°77	5°3/15.3	17	
7 20	22 20.33	-14 35.7	1.698	2.601	12.7	21.0	7 20	22 21.16	-25 37.8	1.844	2.751	11.7	20.6
7 30	22 14.05	-15 28.3	1.647	2.611	8.8	20.8	7 30	22 14.55	-26 35.0	1.803	2.763	8.5	20.5
8 9	22 5.87	-16 26.9	1.619	2.620	4.6	20.5	8 9	22 6.10	-27 27.0	1.788	2.775	5.9	20.3
8 19	21 56.62	-17 24.9	1.618	2.628	1.8	20.4	8 19	21 56.68	-28 7.2	1.798	2.787	5.5	20.3
8 29	21 47.38	-18 15.9	1.644	2.636	5.2	20.6	8 29	21 47.37	-28 30.3	1.835	2.798	7.7	20.5
9 8	21 39.22	-18 54.8	1.697	2.644	9.3	20.9	9 8	21 39.21	-28 34.2	1.897	2.810	10.6	20.7
9 18	21 32.98	-19 19.0	1.773	2.651	12.9	21.1	9 18	21 33.02	-28 19.4	1.982	2.821	13.4	20.9
9 28	21 29.24	-19 27.8	1.870	2.658	15.9	21.3	9 28	21 29.29	-27 48.2	2.086	2.832	15.8	21.1
97205	1999 <i>XA</i> ₂₂		8 19.6 115°87	3°3/22.5	18		371878	2008 <i>CF</i> ₃₆		8 19.6 245°25	0°8/20.8	18	
7 20	22 18.60	- 1 32.7	2.082	2.941	12.6	19.2	7 20	22 11.92	- 7 12.9	3.480	4.351	7.7	21.4
7 30	22 12.54	- 1 31.8	2.022	2.953	9.5	19.0	7 30	22 7.55	- 7 37.3	3.396	4.340	5.5	21.2
8 9	22 4.98	- 1 44.8	1.985	2.964	6.2	18.8	8 9	22 2.28	- 8 8.3	3.338	4.330	3.2	21.0
8 19	21 56.58	- 2 9.7	1.975	2.976	3.6	18.7	8 19	21 56.46	- 8 43.9	3.309	4.319	1.0	20.8
8 29	21 48.16	- 2 43.1	1.993	2.987	4.2	18.7	8 29	21 50.56	- 9 21.6	3.309	4.307	2.3	20.9
9 8	21 40.57	- 3 20.8	2.038	2.997	7.1	19.0	9 8	21 45.03	- 9 58.7	3.339	4.296	4.7	21.1
9 18	21 34.49	- 3 58.3	2.108	3.008	10.2	19.2	9 18	21 40.30	-10 32.7	3.396	4.285	7.1	21.2
9 28	21 30.43	- 4 31.7	2.202	3.018	13.0	19.4	9 28	21 36.74	-11 1.5	3.478	4.273	9.1	21.4
251552	2009 <i>CO</i> ₄₄		8 19.6 71°77	3°8/17.5	17		398268	2010 <i>TV</i> ₉₈					

EPHEMERIDES

8 19.6

8 19.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
359030	2008 <i>WC</i> ₃₁		8 19.6 69°79	6.4/24.7	17		361093	2006 <i>BN</i> ₂₇₉		8 19.6 108°40	0.3/20.0	18	
7 20	22 18.43	+ 4 52.5	1.746	2.585	15.5	19.9	7 20	22 13.97	- 8 32.1	2.401	3.286	10.2	20.5
7 30	22 12.70	+ 5 17.6	1.685	2.594	12.4	19.7	7 30	22 9.27	- 9 21.4	2.337	3.290	7.2	20.4
8 9	22 5.19	+ 5 21.8	1.645	2.602	9.3	19.6	8 9	22 3.29	-10 19.8	2.298	3.294	3.9	20.2
8 19	21 56.64	+ 5 5.2	1.629	2.610	6.8	19.5	8 19	21 56.58	-11 23.2	2.286	3.298	0.5	19.9
8 29	21 48.02	+ 4 30.5	1.638	2.619	6.6	19.5	8 29	21 49.80	-12 26.9	2.304	3.302	3.2	20.1
9 8	21 40.33	+ 3 43.1	1.673	2.628	8.8	19.6	9 8	21 43.64	-13 26.2	2.349	3.306	6.5	20.3
9 18	21 34.39	+ 2 49.4	1.732	2.636	11.8	19.8	9 18	21 38.71	-14 17.5	2.421	3.310	9.5	20.5
9 28	21 30.78	+ 1 55.9	1.813	2.645	14.7	20.0	9 28	21 35.46	-14 58.0	2.516	3.313	12.1	20.7
122672	2000 <i>RP</i> ₁₀₂		8 19.6 129°32	2.2/21.1	18		435219	2007 <i>RJ</i> ₂₅₇		8 19.6 352°19	5.9/15.4	18	
7 20	22 22.16	- 6 32.6	1.820	2.697	13.3	19.0	7 20	22 10.11	-20 36.6	1.006	1.950	15.5	18.9
7 30	22 15.23	- 6 21.1	1.759	2.705	9.7	18.8	7 30	22 7.91	-21 58.2	0.956	1.936	11.0	18.6
8 9	22 6.49	- 6 20.3	1.722	2.712	5.8	18.6	8 9	22 3.07	-23 23.5	0.924	1.925	7.0	18.4
8 19	21 56.72	- 6 28.1	1.711	2.719	2.4	18.4	8 19	21 56.57	-24 40.7	0.914	1.916	6.3	18.3
8 29	21 46.93	- 6 41.2	1.727	2.725	4.1	18.5	8 29	21 49.88	-25 37.8	0.926	1.909	9.9	18.5
9 8	21 38.15	- 6 55.8	1.772	2.732	8.0	18.8	9 8	21 44.58	-26 7.2	0.957	1.905	14.5	18.7
9 18	21 31.19	- 7 8.4	1.841	2.738	11.6	19.0	9 18	21 41.84	-26 6.8	1.006	1.902	18.9	19.0
9 28	21 26.62	- 7 16.1	1.932	2.744	14.7	19.2	9 28	21 42.40	-25 38.1	1.071	1.902	22.6	19.2
505109	2012 <i>DV</i> ₁₂		8 19.6 145°45	0.9/18.9	17		253397	2003 <i>OS</i> ₈		8 19.6 351°69	6.9/15.3	18	
7 20	22 22.67	-13 8.7	1.676	2.573	13.2	21.6	7 20	22 10.22	-21 3.7	0.800	1.752	17.3	18.7
7 30	22 15.72	-13 40.0	1.621	2.581	9.2	21.4	7 30	22 8.39	-22 28.0	0.755	1.739	12.4	18.4
8 9	22 6.79	-14 17.9	1.590	2.589	4.8	21.2	8 9	22 3.48	-23 55.7	0.727	1.729	8.0	18.2
8 19	21 56.74	-14 57.3	1.585	2.597	0.9	20.9	8 19	21 56.60	-25 12.7	0.719	1.721	7.3	18.1
8 29	21 46.70	-15 32.4	1.608	2.604	4.8	21.2	8 29	21 49.52	-26 4.8	0.729	1.715	11.2	18.3
9 8	21 37.80	-15 58.6	1.658	2.610	9.1	21.5	9 8	21 44.12	-26 23.9	0.758	1.712	16.3	18.5
9 18	21 30.91	-16 13.3	1.731	2.616	12.9	21.7	9 18	21 41.77	-26 8.8	0.803	1.711	21.1	18.8
9 28	21 26.62	-16 15.6	1.826	2.621	16.0	22.0	9 28	21 43.19	-25 22.5	0.861	1.713	25.1	19.1
133040	2003 <i>BB</i> ₃₄		8 19.6 246°66	3.6/22.9	15		268239	2005 <i>GT</i> ₁₀₇		8 19.6 66°43	2.8/17.4	18	
7 20	22 17.72	+ 3 47.5	1.183	2.054	19.4	19.7	7 20	22 19.21	-18 29.0	1.808	2.716	11.8	20.3
7 30	22 13.11	+ 1 53.8	1.106	2.043	14.9	19.4	7 30	22 13.25	-19 8.9	1.755	2.721	8.2	20.1
8 9	22 5.84	- 0 42.9	1.049	2.033	9.6	19.1	8 9	22 5.50	-19 50.4	1.726	2.725	4.6	19.9
8 19	21 56.71	- 3 55.8	1.016	2.022	4.4	18.8	8 19	21 56.73	-20 28.0	1.723	2.730	2.9	19.8
8 29	21 47.07	- 7 29.1	1.009	2.010	5.5	18.8	8 29	21 47.95	-20 56.2	1.747	2.734	5.6	19.9
9 8	21 38.48	-11 1.7	1.029	1.998	11.1	19.1	9 8	21 40.20	-21 11.6	1.798	2.739	9.3	20.2
9 18	21 32.30	-14 14.5	1.074	1.986	16.6	19.3	9 18	21 34.27	-21 12.7	1.872	2.743	12.7	20.4
9 28	21 29.45	-16 55.0	1.139	1.973	21.3	19.6	9 28	21 30.70	-20 59.8	1.966	2.748	15.5	20.6
357812	2005 <i>TM</i> ₁₆₆		8 19.6 69°88	2.6/22.1	18		114802	2003 <i>NN</i> ₈		8 19.6 101°85	2.5/21.9	18	R
7 20	22 15.79	- 2 53.9	2.054	2.923	12.3	20.7	7 20	22 17.54	- 2 40.0	1.757	2.630	13.9	19.2
7 30	22 10.62	- 3 11.1	1.995	2.934	9.2	20.5	7 30	22 12.05	- 3 16.8	1.701	2.642	10.3	19.0
8 9	22 4.01	- 3 41.8	1.960	2.944	5.8	20.4	8 9	22 4.85	- 4 10.2	1.668	2.655	6.3	18.8
8 19	21 56.58	- 4 23.4	1.950	2.955	2.9	20.2	8 19	21 56.69	- 5 16.2	1.660	2.667	2.9	18.6
8 29	21 49.14	- 5 11.6	1.969	2.966	3.8	20.3	8 29	21 48.51	- 6 28.6	1.680	2.678	4.0	18.7
9 8	21 42.48	- 6 1.4	2.014	2.977	6.9	20.5	9 8	21 41.28	- 7 40.6	1.726	2.690	7.8	19.0
9 18	21 37.27	- 6 48.3	2.086	2.988	10.2	20.7	9 18	21 35.76	- 8 46.2	1.798	2.701	11.5	19.2
9 28	21 34.01	- 7 28.4	2.180	2.999	12.9	20.9	9 28	21 32.50	- 9 41.0	1.892	2.712	14.6	19.5
513701	2012 <i>CA</i> ₄₂		8 19.6 158°73	0.3/19.4	18		384511	2010 <i>CU</i> ₁₄₃		8 19.6 163°18	5.3/24.1	18	
7 20	22 17.71	-12 45.5	2.599	3.487	9.4	22.0	7 20	22 20.04	+ 3 41.4	2.112	2.942	13.5	21.3
7 30	22 11.75	-12 57.9	2.534	3.490	6.6	21.8	7 30	22 13.66	+ 4 3.0	2.041	2.947	10.7	21.2
8 9	22 4.53	-13 14.5	2.495	3.493	3.5	21.6	8 9	22 5.68	+ 4 7.7	1.993	2.951	7.9	21.0
8 19	21 56.62	-13 32.7	2.484	3.496	0.3	21.4	8 19	21 56.75	+ 3 56.0	1.971	2.954	5.7	20.9
8 29	21 48.67	-13 49.3	2.503	3.499	3.2	21.6	8 29	21 47.71	+ 3 29.9	1.976	2.958	5.6	20.9
9 8	21 41.39	-14 1.8	2.550	3.502	6.3	21.8	9 8	21 39.44	+ 2 53.5	2.008	2.960	7.8	21.0
9 18	21 35.35	-14 8.3	2.624	3.504	9.2	22.0	9 18	21 32.68	+ 2 11.7	2.067	2.962	10.6	21.2
9 28	21 31.00	-14 7.7	2.721	3.506	11.6	22.2	9 28	21 27.98	+ 1 29.6	2.148	2.964	13.2	21.4
476775	2008 <i>UT</i> ₁₂₅		8 19.6 0°41	15.9/30.4	17		155952	2001 <i>QU</i> ₉₁		8 19.6 53°12	2.0/18.6	17	
7 20	22 13.21	+16 23.7	1.103	1.923	23.8	19.0	7 20	22 22.74	-14 45.0	1.029	1.951	17.3	18.9
7 30	22 9.93	+18 24.3	1.049	1.918	21.3	18.9	7 30	22 16.40	-15 19.0	0.994	1.966	12.0	18.7
8 9	22 4.11	+19 47.7	1.010	1.916	18.8	18.7	8 9	22 7.34	-16 0.3	0.979	1.981	6.3	18.4
8 19	21 56.61	+20 26.5	0.986	1.915	16.8	18.6	8 19	21 56.84	-16 40.8	0.986	1.997	2.0	18.2
8 29	21 48.80	+20 17.7	0.981	1.916	15.9	18.5	8 29	21 46.60	-17 12.0	1.016	2.013	6.6	18.6
9 8	21 42.18	+19 26.3	0.993	1.920	16.4	18.6	9 8	21 38.20	-17 28.6	1.070	2.029	11.9	18.9
9 18	21 38.01	+18 2.6	1.023	1.925	18.1	18.7	9 18	21 32.70	-17 28.6	1.143	2.046	16.6	19.2
9 28	21 37.11	+16 20.8	1.070	1.933	20.4	18.9	9 28	21 30.65	-17 12.3	1.234	2.063	20.3	19.5
281616	2008 <i>UW</i> ₂₂₃		8 19.6 340°78	7.5/13.9	18		400694	2009 <i>QX</i> ₅₈		8 19.6 358°58	6.6/26.6	16	
7 20	22 18.38	-27 14.1	1.376	2.299	13.8	19.1	7 20	22 9.94	+ 8 27.4	1.572	2.412	16.9	20.2
7 30	22 13.30	-28 34.4	1.326	2.291	10.4	18.9	7 30	22 6.99	+ 7 52.5	1.501	2.408	13.8	20.0
8 9	22 5.75	-29 49.0	1.298	2.284	7.9	18.7	8 9	22 2.31	+ 6 47.3	1.450	2.405	10.4	19.8
8 19	21 56.71	-30 47.5	1.293	2.277	7.9	18.7	8 19	21 56.54	+ 5 13.6	1.421	2.404	7.5	19.6
8 29	21 47.55	-31 21.7	1.312	2.271	10.5	18.8	8 29	21 50.63	+ 3 17.4	1.417	2.403	6.7	19.6
9 8	21 39.72	-31 27.8	1.353	2.266	13.9	19.0	9 8	21 45.55	+ 1 8.6	1.438	2.404	8.8	19.7
9 18	21 34.30	-31 6.5	1.413	2.262	17.3	19.2	9 18	21 42.12	- 1 1.9	1.484	2.406	12.1	19.9
9 28	21 31.97	-30 21.6	1.491	2.258	20.2	19.4	9 28	21 40.97	- 3 3.8	1.552	2.409	15.4	20.1
195267	2002 <i>ET</i> ₆₀		8 19.6 177°68	2.4/21.7	17		338037	2002					

EPHEMERIDES

8 19.6

8 19.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
110242	2001 SS ₂₃₃		8 19.6 208°33	0°1/19.5 18			49553	1999 CB ₈₇		8 19.7 220°18	1°5/18.3 18		
7 20	22 16.38	-10 37.8	2.051	2.944	11.3	20.3	7 20	22 19.29	-16 3.7	2.348	3.243	10.0	19.5
7 30	22 11.16	-11 16.1	1.985	2.943	8.0	20.1	7 30	22 13.09	-16 32.4	2.275	3.235	7.0	19.3
8 9	22 4.38	-12 2.8	1.944	2.943	4.2	19.9	8 9	22 5.38	-17 4.3	2.228	3.227	3.7	19.0
8 19	21 56.68	-12 53.7	1.930	2.942	0.2	19.5	8 19	21 56.77	-17 35.2	2.208	3.218	1.5	18.9
8 29	21 48.88	-13 43.6	1.943	2.941	3.8	19.8	8 29	21 48.03	-18 1.2	2.218	3.209	4.2	19.0
9 8	21 41.84	-14 27.9	1.984	2.940	7.6	20.1	9 8	21 39.99	-18 19.2	2.255	3.199	7.5	19.2
9 18	21 36.29	-15 2.9	2.050	2.939	11.0	20.3	9 18	21 33.35	-18 27.1	2.319	3.189	10.6	19.4
9 28	21 32.75	-15 26.5	2.138	2.937	13.8	20.5	9 28	21 28.65	-18 24.3	2.404	3.178	13.2	19.6
429816	2012 KR ₃₂		8 19.7 35°59	2°2/18.1 17			376845	2001 QO ₃₁₈		8 19.7 17°15	0°7/19.2 17		
7 20	22 18.55	-14 36.5	1.309	2.226	14.8	21.0	7 20	22 18.85	-12 45.1	1.191	2.109	15.9	20.3
7 30	22 13.26	-15 34.6	1.261	2.231	10.3	20.8	7 30	22 13.59	-13 5.2	1.143	2.112	11.1	20.0
8 9	22 5.67	-16 40.6	1.234	2.236	5.4	20.5	8 9	22 5.90	-13 34.7	1.115	2.117	5.8	19.7
8 19	21 56.76	-17 46.4	1.232	2.242	2.3	20.4	8 19	21 56.80	-14 7.7	1.110	2.122	0.7	19.4
8 29	21 47.82	-18 43.4	1.254	2.248	6.2	20.6	8 29	21 47.71	-14 37.1	1.130	2.129	5.5	19.8
9 8	21 40.19	-19 25.1	1.301	2.254	10.9	20.9	9 8	21 40.05	-14 57.2	1.172	2.136	10.7	20.1
9 18	21 34.87	-19 48.2	1.369	2.261	15.1	21.2	9 18	21 34.85	-15 4.7	1.236	2.143	15.3	20.4
9 28	21 32.47	-19 52.4	1.456	2.268	18.6	21.4	9 28	21 32.73	-14 58.1	1.319	2.152	19.0	20.6
428260	2007 CZ ₁₇		8 19.7 162°22	1°4/18.4 17			419567	2010 RX ₁₈		8 19.7 309°67	5°5/22.2 18		
7 20	22 19.32	-13 21.5	1.905	2.803	11.8	21.9	7 20	22 20.86	-2 33.7	1.208	2.097	17.8	20.2
7 30	22 13.29	-14 20.3	1.846	2.808	8.2	21.6	7 30	22 15.39	-1 45.6	1.130	2.076	13.8	19.9
8 9	22 5.53	-15 26.0	1.812	2.812	4.3	21.4	8 9	22 7.13	-1 14.8	1.072	2.056	9.4	19.6
8 19	21 56.75	-16 32.8	1.806	2.816	1.4	21.2	8 19	21 56.90	-1 2.2	1.035	2.036	5.8	19.4
8 29	21 47.91	-17 34.3	1.827	2.820	4.7	21.5	8 29	21 46.11	-1 6.4	1.022	2.017	6.9	19.4
9 8	21 39.96	-18 25.2	1.876	2.823	8.6	21.7	9 8	21 36.35	-1 22.4	1.031	1.998	11.3	19.6
9 18	21 33.71	-19 2.3	1.949	2.825	12.0	21.9	9 18	21 29.04	-1 44.1	1.062	1.980	16.2	19.8
9 28	21 29.71	-19 24.3	2.043	2.827	14.9	22.1	9 28	21 25.15	-2 4.8	1.111	1.963	20.6	20.0
188175	2002 JS ₅		8 19.7 31°95	7°6/12.4 18			391915	2008 UW ₂₀₃		8 19.7 191°19	6°0/24.9 17		
7 20	22 16.99	-30 44.8	1.747	2.659	11.9	19.2	7 20	22 17.49	+ 5 28.9	1.900	2.732	14.7	20.8
7 30	22 11.84	-32 17.3	1.718	2.672	9.3	19.0	7 30	22 12.07	+ 5 37.8	1.827	2.732	11.8	20.6
8 9	22 4.79	-33 39.7	1.713	2.685	7.7	19.0	8 9	22 4.94	+ 5 26.0	1.776	2.731	8.8	20.4
8 19	21 56.70	-34 43.8	1.734	2.699	8.1	19.0	8 19	21 56.76	+ 4 54.0	1.749	2.730	6.5	20.3
8 29	21 48.69	-35 23.9	1.778	2.713	10.0	19.2	8 29	21 48.42	+ 4 4.7	1.748	2.729	6.2	20.3
9 8	21 41.85	-35 38.0	1.846	2.728	12.4	19.4	9 8	21 40.86	+ 3 3.5	1.773	2.728	8.3	20.4
9 18	21 36.99	-35 27.4	1.935	2.744	14.9	19.6	9 18	21 34.88	+ 1 56.9	1.823	2.727	11.3	20.6
9 28	21 34.62	-34 55.3	2.041	2.760	16.9	19.8	9 28	21 31.09	+ 0 51.4	1.896	2.726	14.2	20.8
3210	Lupishko		8 19.7 170°24	1°8/17.6 18 R			306912	2001 TZ ₂₁₆		8 19.7 1°90	0°6/19.1 18		
7 20	22 14.94	-15 18.0	2.371	3.271	9.7	16.0	7 20	22 13.28	-10 6.7	1.523	2.432	13.6	19.4
7 30	22 10.02	-16 26.2	2.309	3.272	6.7	15.8	7 30	22 9.39	-11 15.8	1.465	2.431	9.5	19.2
8 9	22 3.74	-17 39.1	2.273	3.273	3.5	15.6	8 9	22 3.60	-12 38.0	1.430	2.431	4.9	18.9
8 19	21 56.65	-18 51.5	2.266	3.274	1.9	15.5	8 19	21 56.67	-14 6.3	1.419	2.431	0.6	18.6
8 29	21 49.47	-19 58.1	2.287	3.275	4.4	15.7	8 29	21 49.62	-15 32.1	1.435	2.432	4.8	18.9
9 8	21 42.95	-20 54.2	2.336	3.275	7.6	15.9	9 8	21 43.53	-16 47.3	1.475	2.434	9.4	19.2
9 18	21 37.70	-21 37.2	2.411	3.276	10.4	16.1	9 18	21 39.27	-17 46.6	1.539	2.437	13.4	19.4
9 28	21 34.24	-22 5.7	2.507	3.276	12.9	16.2	9 28	21 37.43	-18 26.9	1.623	2.440	16.8	19.7
185849	2000 DK ₆₆		8 19.7 81°08	1°3/18.8 18			392415	2010 MZ ₃₀		8 19.7 171°25	5°8/14.1 18		
7 20	22 22.58	-14 40.6	1.482	2.388	14.1	20.1	7 20	22 20.55	-27 29.7	2.065	2.969	10.8	21.0
7 30	22 15.82	-14 59.2	1.432	2.396	9.8	19.9	7 30	22 14.17	-28 44.3	2.016	2.971	8.1	20.9
8 9	22 6.93	-15 23.2	1.405	2.405	5.1	19.7	8 9	22 6.02	-29 53.5	1.993	2.973	6.1	20.7
8 19	21 56.85	-15 47.1	1.403	2.414	1.3	19.4	8 19	21 56.83	-30 50.4	1.996	2.975	6.1	20.7
8 29	21 46.83	-16 5.5	1.427	2.423	5.2	19.7	8 29	21 47.59	-31 29.3	2.027	2.977	8.0	20.9
9 8	21 38.12	-16 14.5	1.477	2.431	9.7	20.0	9 8	21 39.32	-31 47.5	2.083	2.978	10.7	21.0
9 18	21 31.64	-16 12.1	1.550	2.440	13.8	20.3	9 18	21 32.82	-31 45.2	2.161	2.978	13.2	21.2
9 28	21 27.97	-15 57.9	1.642	2.449	17.1	20.5	9 28	21 28.65	-31 24.4	2.258	2.978	15.4	21.4
453777	2011 HB ₃₅		8 19.7 181°96	13°5/ 1.3 16			250331	2003 SQ ₈₇		8 19.7 274°43	5°0/16.7 18		
7 20	22 18.96	+21 44.3	1.389	2.144	22.7	21.6	7 20	22 25.46	-23 3.9	1.486	2.396	13.8	20.5
7 30	22 13.71	+22 4.6	1.320	2.145	20.2	21.4	7 30	22 18.33	-23 40.4	1.413	2.376	10.0	20.3
8 9	22 6.05	+21 42.9	1.265	2.146	17.5	21.2	8 9	22 8.54	-24 14.8	1.362	2.356	6.3	20.0
8 19	21 56.81	+20 34.6	1.227	2.146	15.0	21.0	8 19	21 57.01	-24 39.2	1.336	2.336	5.1	19.9
8 29	21 47.27	+18 40.8	1.211	2.145	13.6	21.0	8 29	21 45.13	-24 46.5	1.336	2.315	8.1	20.0
9 8	21 38.85	+16 10.5	1.216	2.144	13.9	21.0	9 8	21 34.46	-24 33.3	1.361	2.295	12.3	20.2
9 18	21 32.70	+13 17.9	1.244	2.143	15.8	21.1	9 18	21 26.22	-23 59.8	1.408	2.274	16.4	20.4
9 28	21 29.60	+10 19.6	1.294	2.141	18.5	21.3	9 28	21 21.23	-23 8.5	1.473	2.253	19.9	20.6
347132	2010 LE ₃₃		8 19.7 140°44	4°9/24.9 18			426937	2013 XT ₂₄		8 19.7 172°13	9°2/11.4 18		
7 20	22 17.02	+ 5 44.3	2.270	3.091	13.0	21.8	7 20	22 23.01	-35 10.5	1.755	2.653	12.7	20.3
7 30	22 11.43	+ 5 25.3	2.204	3.103	10.3	21.6	7 30	22 16.28	-36 43.1	1.716	2.654	10.4	20.2
8 9	22 4.46	+ 4 47.6	2.160	3.114	7.6	21.5	8 9	22 7.26	-38 2.3	1.701	2.655	9.2	20.1
8 19	21 56.70	+ 3 52.9	2.141	3.124	5.3	21.4	8 19	21 56.92	-38 59.1	1.710	2.656	9.7	20.1
8 29	21 48.89	+ 2 44.8	2.151	3.134	5.1	21.4	8 29	21 46.56	-39 27.4	1.743	2.657	11.5	20.2
9 8	21 41.79	+ 1 29.0	2.188	3.143	7.0	21.5	9 8	21 37.51	-39 25.8	1.799	2.657	13.9	20.4
9 18	21 36.05	+ 0 11.1	2.253	3.152	9.6	21.7	9 18	21 30.78	-38 56.7	1.875	2.657	16.2	20.6
9 28	21 32.13	- 1 3.1	2.341	3.160	12.2	21.9	9 28	21 26.97	-38 4.9	1.967	2.657	18.3	20.7
498429	2008 AY ₇₀		8 19.7 215°35	1°6/18.4 17			374042	2004 KZ ₃		8 19.7 85°80	2°7/21.7 17		
7 20	22 20.63	-13 50.1											

EPHEMERIDES

8 19.7

8 19.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
437358	2013 <i>TT</i> ₁₄₂		8 19.7 262°74	2°3/21.4	18		517981	2015 <i>UL</i> ₇		8 19.7 307°76	3°2/16.1	18	
7 20	22 18.62	- 4 42.4	1.631	2.513	14.3	21.7	7 20	22 14.18	-17 36.2	1.987	2.897	10.8	20.3
7 30	22 13.17	- 5 1.2	1.554	2.501	10.6	21.4	7 30	22 9.91	-19 9.2	1.908	2.875	7.5	20.0
8 9	22 5.67	- 5 36.1	1.499	2.490	6.4	21.2	8 9	22 3.91	-20 48.8	1.855	2.854	4.4	19.8
8 19	21 56.83	- 6 23.8	1.469	2.478	2.6	20.9	8 19	21 56.77	-22 27.8	1.829	2.832	3.5	19.7
8 29	21 47.72	- 7 19.1	1.466	2.466	4.4	21.0	8 29	21 49.32	-23 58.2	1.831	2.810	6.2	19.8
9 8	21 39.47	- 8 15.3	1.489	2.453	8.8	21.2	9 8	21 42.50	-25 13.2	1.860	2.789	9.8	20.0
9 18	21 33.05	- 9 6.5	1.536	2.441	13.0	21.4	9 18	21 37.16	-26 9.0	1.912	2.768	13.1	20.2
9 28	21 29.19	- 9 47.8	1.604	2.428	16.6	21.6	9 28	21 33.98	-26 44.1	1.984	2.748	16.0	20.3
444395	2005 <i>YR</i> ₂₄₇		8 19.7 303°98	0°9/18.8	18		357090	2001 <i>SF</i> ₂₉₉		8 19.7 295°58	4°1/16.9	18	
7 20	22 15.64	-13 8.1	2.030	2.930	11.1	21.0	7 20	22 22.86	-23 29.4	1.871	2.775	11.7	20.8
7 30	22 10.79	-13 45.5	1.950	2.912	7.8	20.7	7 30	22 16.00	-23 48.6	1.799	2.760	8.4	20.6
8 9	22 4.29	-14 30.0	1.895	2.895	4.1	20.5	8 9	22 7.10	-24 4.5	1.751	2.744	5.3	20.3
8 19	21 56.75	-15 17.2	1.866	2.878	0.9	20.2	8 19	21 56.97	-24 11.6	1.729	2.729	4.2	20.2
8 29	21 48.98	-16 2.0	1.865	2.861	4.3	20.4	8 29	21 46.69	-24 5.4	1.735	2.713	6.6	20.4
9 8	21 41.89	-16 39.6	1.891	2.844	8.1	20.6	9 8	21 37.41	-23 43.9	1.767	2.698	10.1	20.5
9 18	21 36.27	-17 6.6	1.942	2.827	11.6	20.8	9 18	21 30.05	-23 7.2	1.823	2.683	13.5	20.7
9 28	21 32.72	-17 21.1	2.013	2.811	14.7	21.0	9 28	21 25.26	-22 17.3	1.899	2.668	16.4	20.9
250763	2005 <i>SU</i> ₂₅₂		8 19.7 283°55	2°8/22.5	18		228592	2002 <i>AY</i> ₅₁		8 19.7 179°65	0°8/20.4	18	
7 20	22 14.31	- 1 22.5	2.109	2.973	12.3	20.5	7 20	22 19.38	- 8 20.4	1.981	2.864	12.1	21.2
7 30	22 9.75	- 1 55.8	2.029	2.964	9.3	20.3	7 30	22 13.32	- 8 45.4	1.914	2.865	8.7	21.0
8 9	22 3.70	- 2 45.2	1.972	2.954	5.9	20.1	8 9	22 5.59	- 9 20.4	1.871	2.866	4.8	20.8
8 19	21 56.71	- 3 47.8	1.941	2.945	3.1	19.9	8 19	21 56.88	-10 1.9	1.855	2.866	1.0	20.5
8 29	21 49.54	- 4 58.9	1.938	2.936	3.8	19.9	8 29	21 48.06	-10 45.0	1.868	2.866	3.7	20.7
9 8	21 43.00	- 6 12.8	1.963	2.927	7.0	20.1	9 8	21 40.07	-11 25.0	1.907	2.866	7.6	20.9
9 18	21 37.80	- 7 23.5	2.013	2.917	10.4	20.3	9 18	21 33.67	-11 58.1	1.973	2.865	11.2	21.2
9 28	21 34.51	- 8 26.4	2.087	2.908	13.4	20.5	9 28	21 29.43	-12 21.7	2.060	2.863	14.2	21.4
142236	2002 <i>RE</i> ₈₉		8 19.7 191°53	0°1/19.6	18		289033	2004 <i>TD</i> ₁₃₁		8 19.7 344°49	6°9/14.6	18	
7 20	22 21.99	-11 16.4	1.934	2.822	12.1	20.2	7 20	22 18.26	-28 26.6	1.580	2.497	12.7	19.1
7 30	22 15.20	-11 41.2	1.866	2.821	8.6	20.0	7 30	22 13.03	-29 15.9	1.524	2.485	9.7	18.9
8 9	22 6.59	-12 13.7	1.821	2.819	4.6	19.7	8 9	22 5.61	-29 57.8	1.490	2.474	7.3	18.8
8 19	21 56.90	-12 49.7	1.804	2.816	0.3	19.4	8 19	21 56.88	-30 24.7	1.480	2.464	7.2	18.7
8 29	21 47.08	-13 24.4	1.816	2.813	4.1	19.7	8 29	21 48.06	-30 30.6	1.495	2.455	9.4	18.8
9 8	21 38.16	-13 53.4	1.855	2.809	8.1	20.0	9 8	21 40.43	-30 13.2	1.532	2.447	12.5	19.0
9 18	21 30.95	-14 13.8	1.920	2.804	11.8	20.2	9 18	21 34.94	-29 33.4	1.591	2.440	15.7	19.2
9 28	21 26.07	-14 23.7	2.006	2.799	14.9	20.4	9 28	21 32.25	-28 34.4	1.668	2.434	18.4	19.4
328980	2010 <i>VT</i> ₂₀₀		8 19.7 207°22	5°7/28.2	18		166937	2003 <i>HF</i> ₃₉		8 19.7 54°53	4°4/17.2	17	
7 20	22 13.77	+13 37.8	3.154	3.910	11.1	21.3	7 20	22 23.11	-19 29.0	1.080	2.005	16.5	19.4
7 30	22 8.99	+13 22.9	3.062	3.904	9.4	21.2	7 30	22 16.63	-20 23.2	1.049	2.022	11.5	19.1
8 9	22 3.16	+12 50.2	2.993	3.897	7.7	21.1	8 9	22 7.49	-21 17.9	1.040	2.040	6.6	18.9
8 19	21 56.69	+12 0.2	2.948	3.890	6.3	21.0	8 19	21 56.99	-22 3.3	1.052	2.058	4.6	18.9
8 29	21 50.11	+10 54.5	2.931	3.883	5.7	20.9	8 29	21 46.81	-22 31.3	1.089	2.076	8.1	19.1
9 8	21 43.96	+ 9 36.8	2.942	3.875	6.5	21.0	9 8	21 38.48	-22 38.1	1.148	2.095	12.7	19.5
9 18	21 38.74	+ 8 11.7	2.981	3.867	8.0	21.1	9 18	21 33.03	-22 24.1	1.227	2.114	16.8	19.8
9 28	21 34.85	+ 6 44.3	3.046	3.858	9.8	21.2	9 28	21 30.95	-21 51.8	1.323	2.133	20.2	20.1
289179	2004 <i>VT</i> ₇₃		8 19.7 305°47	3°0/22.8	18		16902	1998 <i>DT</i> ₁₄		8 19.7 214°68	1°8/21.3	18	
7 20	22 13.25	- 0 29.1	2.106	2.968	12.4	20.0	7 20	22 16.40	- 4 2.9	1.773	2.653	13.5	17.7
7 30	22 9.06	- 1 5.0	2.020	2.953	9.4	19.8	7 30	22 11.42	- 4 55.0	1.704	2.651	9.9	17.5
8 9	22 3.36	- 1 58.1	1.957	2.938	6.2	19.6	8 9	22 4.67	- 6 4.1	1.658	2.649	5.8	17.3
8 19	21 56.71	- 3 5.7	1.920	2.923	3.4	19.4	8 19	21 56.83	- 7 25.4	1.637	2.646	2.1	17.0
8 29	21 49.84	- 4 23.2	1.911	2.908	3.9	19.4	8 29	21 48.82	- 8 52.2	1.644	2.644	3.9	17.2
9 8	21 43.57	- 5 44.4	1.929	2.894	7.1	19.6	9 8	21 41.64	-10 16.9	1.678	2.641	8.0	17.4
9 18	21 38.60	- 7 3.1	1.973	2.879	10.5	19.7	9 18	21 36.10	-11 33.0	1.737	2.639	11.9	17.6
9 28	21 35.52	- 8 14.0	2.040	2.865	13.5	19.9	9 28	21 32.83	-12 35.7	1.818	2.636	15.2	17.8
474672	2005 <i>BQ</i> ₁₄		8 19.7 237°92	4°4/23.2	18		276046	2002 <i>BG</i> ₂₇		8 19.7 101°71	6°5/13.9	17	
7 20	22 19.32	+ 0 44.3	2.052	2.900	13.2	21.8	7 20	22 22.31	-28 10.7	1.857	2.762	11.7	20.1
7 30	22 13.33	+ 0 59.8	1.969	2.890	10.3	21.6	7 30	22 15.42	-29 38.0	1.829	2.783	8.8	19.9
8 9	22 5.64	+ 1 0.1	1.909	2.880	7.2	21.4	8 9	22 6.67	-30 57.2	1.826	2.804	6.8	19.9
8 19	21 56.86	+ 0 45.7	1.875	2.869	4.7	21.3	8 19	21 56.95	-32 0.5	1.849	2.824	6.8	19.9
8 29	21 47.85	+ 0 19.0	1.869	2.858	5.0	21.3	8 29	21 47.36	-32 42.3	1.899	2.844	8.8	20.1
9 8	21 39.53	- 0 15.9	1.890	2.847	7.8	21.4	9 8	21 39.00	-33 0.4	1.973	2.864	11.4	20.3
9 18	21 32.71	- 0 54.3	1.936	2.835	11.0	21.6	9 18	21 32.66	-32 56.2	2.069	2.883	13.9	20.5
9 28	21 27.99	- 1 31.4	2.005	2.824	13.9	21.8	9 28	21 28.84	-32 32.6	2.184	2.901	16.0	20.7
507992	2015 <i>BG</i> ₁₈₉		8 19.7 135°59	2°4/17.7	17		252208	2001 <i>FP</i> ₁₆₈		8 19.7 153°26	1°7/18.3	17	
7 20	22 19.40	-15 12.9	1.580	2.488	13.2	20.9	7 20	22 21.66	-14 45.7	1.767	2.667	12.5	21.7
7 30	22 13.65	-16 25.0	1.527	2.493	9.1	20.7	7 30	22 15.05	-15 35.7	1.712	2.674	8.7	21.5
8 9	22 5.86	-17 43.7	1.497	2.498	4.9	20.5	8 9	22 6.55	-16 31.2	1.682	2.681	4.5	21.3
8 19	21 56.88	-19 1.3	1.494	2.503	2.5	20.3	8 19	21 56.96	-17 26.2	1.678	2.688	1.8	21.1
8 29	21 47.82	-20 9.5	1.518	2.507	6.0	20.6	8 29	21 47.35	-18 14.4	1.702	2.693	5.1	21.3
9 8	21 39.87	-21 2.3	1.567	2.511	10.1	20.8	9 8	21 38.78	-18 50.9	1.752	2.699	9.1	21.6
9 18	21 33.92	-21 36.6	1.639	2.515	13.9	21.1	9 18	21 32.11	-19 13.2	1.827	2.703	12.7	21.8
9 28	21 30.59	-21 51.8	1.730	2.519	17.0	21.3	9 28	21 27.91	-19 20.7	1.923	2.707	15.7	22.0
67527	2000 <i>RR</i> ₈₄		8 19.7 64°87	0°7/20.3	18		179356	2001 <i>XH</i> ₁₄₇					

EPHEMERIDES

8 19.7

8 19.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
108331	2001 <i>KD</i> ₂		8 19.7 50°61	4.3/23.6	18		86848	2000 <i>GL</i> ₁₇₆		8 19.7 2°03	1.6/20.7	18	
7 20	22 16.04	+ 1 28.5	1.781	2.639	14.4	19.9	7 20	22 14.60	- 7 38.5	1.066	1.983	17.3	18.3
7 30	22 11.11	+ 1 13.7	1.716	2.642	11.2	19.7	7 30	22 10.88	- 7 53.3	1.013	1.981	12.5	18.1
8 9	22 4.48	+ 0 39.3	1.672	2.646	7.7	19.5	8 9	22 4.66	- 8 26.0	0.981	1.980	7.1	17.8
8 19	21 56.84	- 0 12.5	1.653	2.650	4.8	19.3	8 19	21 56.90	- 9 11.5	0.969	1.980	1.9	17.4
8 29	21 49.09	- 1 17.0	1.660	2.654	4.9	19.3	8 29	21 49.03	- 10 1.8	0.980	1.982	5.2	17.7
9 8	21 42.19	- 2 27.6	1.694	2.658	7.9	19.5	9 8	21 42.51	- 10 48.6	1.013	1.985	10.7	18.0
9 18	21 36.93	- 3 37.7	1.752	2.662	11.4	19.7	9 18	21 38.45	- 11 25.1	1.066	1.990	15.6	18.3
9 28	21 33.86	- 4 41.3	1.833	2.666	14.5	20.0	9 28	21 37.54	- 11 46.8	1.138	1.996	19.7	18.6
358782	2008 <i>DA</i> ₈₃		8 19.7 301°90	0°9/18.9	18		82187	2001 <i>HJ</i> ₂₇		8 19.7 54°71	3°6/22.3	17	
7 20	22 16.61	-13 3.8	2.033	2.932	11.2	21.3	7 20	22 18.52	- 2 8.9	1.324	2.209	16.8	19.1
7 30	22 11.39	-13 41.2	1.968	2.929	7.8	21.1	7 30	22 13.18	- 2 24.9	1.275	2.221	12.6	18.9
8 9	22 4.59	-14 25.0	1.927	2.926	4.1	20.8	8 9	22 5.69	- 3 1.8	1.246	2.233	7.9	18.7
8 19	21 56.85	-15 10.8	1.912	2.924	0.9	20.6	8 19	21 56.97	- 3 55.6	1.240	2.245	4.0	18.5
8 29	21 49.01	-15 53.5	1.926	2.921	4.1	20.8	8 29	21 48.26	- 4 59.5	1.259	2.258	5.1	18.6
9 8	21 41.94	-16 28.8	1.967	2.919	7.9	21.1	9 8	21 40.80	- 6 5.3	1.303	2.271	9.3	18.9
9 18	21 36.37	-16 53.7	2.032	2.916	11.2	21.3	9 18	21 35.52	- 7 5.6	1.370	2.284	13.5	19.2
9 28	21 32.86	-17 6.5	2.119	2.914	14.1	21.5	9 28	21 33.04	- 7 54.9	1.456	2.298	17.1	19.4
141995	Rossbeyer		8 19.7 330°91	4°2/16.7	18		219933	2002 <i>GF</i> ₁₀₀		8 19.7 111°58	2°5/22.5	18	
7 20	22 14.95	-17 7.5	1.106	2.038	15.5	19.5	7 20	22 15.42	- 1 47.6	2.452	3.309	11.0	21.0
7 30	22 11.34	-18 28.4	1.045	2.021	10.9	19.2	7 30	22 10.28	- 2 12.4	2.390	3.321	8.2	20.9
8 9	22 5.02	-19 59.2	1.004	2.006	6.2	18.9	8 9	22 3.91	- 2 49.6	2.353	3.334	5.3	20.7
8 19	21 56.90	-21 28.7	0.985	1.991	4.4	18.8	8 19	21 56.86	- 3 36.7	2.343	3.346	2.8	20.6
8 29	21 48.42	-22 44.8	0.989	1.978	8.5	18.9	8 29	21 49.79	- 4 29.9	2.361	3.358	3.4	20.6
9 8	21 41.19	-23 38.1	1.015	1.965	13.6	19.2	9 8	21 43.36	- 5 24.9	2.408	3.370	6.1	20.8
9 18	21 36.52	-24 4.2	1.060	1.954	18.3	19.4	9 18	21 38.16	- 6 17.5	2.482	3.381	8.9	21.0
9 28	21 35.25	-24 2.8	1.121	1.944	22.3	19.7	9 28	21 34.61	- 7 4.1	2.580	3.392	11.4	21.2
45945	2001 <i>AM</i> ₁₇		8 19.7 146°03	0°9/19.0	18		392867	2012 <i>UW</i> ₉₃		8 19.7 253°05	3°6/16.9	18	
7 20	22 22.41	-12 54.6	1.749	2.644	12.8	19.3	7 20	22 22.99	-22 0.5	1.978	2.879	11.3	20.9
7 30	22 15.56	-13 30.6	1.694	2.654	9.0	19.1	7 30	22 16.04	-22 29.6	1.905	2.866	8.1	20.7
8 9	22 6.82	-14 13.4	1.663	2.662	4.7	18.8	8 9	22 7.16	-22 57.2	1.857	2.852	4.9	20.4
8 19	21 57.01	-14 57.7	1.659	2.671	0.9	18.6	8 19	21 57.09	-23 17.8	1.836	2.837	3.7	20.3
8 29	21 47.20	-15 37.9	1.683	2.678	4.6	18.9	8 29	21 46.85	-23 26.7	1.843	2.823	6.2	20.5
9 8	21 38.46	-16 9.2	1.733	2.685	8.8	19.1	9 8	21 37.52	-23 21.2	1.877	2.808	9.6	20.6
9 18	21 31.64	-16 28.9	1.808	2.691	12.5	19.4	9 18	21 30.00	-23 0.9	1.934	2.792	12.9	20.8
9 28	21 27.31	-16 35.9	1.904	2.697	15.5	19.6	9 28	21 24.93	-22 26.9	2.013	2.777	15.8	21.0
485207	2010 <i>UL</i> ₇₃		8 19.7 301°30	7°5/26.5	17		481505	2007 <i>EN</i> ₆₄		8 19.7 179°75	0°0/19.7	18	
7 20	22 16.11	+10 20.6	2.189	2.986	14.2	21.0	7 20	22 18.67	-11 57.7	2.525	3.410	9.8	21.9
7 30	22 11.06	+10 56.0	2.105	2.976	12.0	20.8	7 30	22 12.56	-12 7.4	2.457	3.411	6.9	21.7
8 9	22 4.46	+11 11.5	2.043	2.967	9.7	20.6	8 9	22 5.13	-12 22.0	2.414	3.411	3.7	21.5
8 19	21 56.86	+11 5.8	2.003	2.957	8.0	20.5	8 19	21 56.95	-12 38.7	2.399	3.411	0.2	21.2
8 29	21 49.04	+10 39.8	1.989	2.948	7.5	20.5	8 29	21 48.72	-12 54.7	2.414	3.411	3.2	21.5
9 8	21 41.82	+ 9 57.0	2.001	2.938	8.7	20.5	9 8	21 41.15	-13 7.0	2.457	3.411	6.4	21.7
9 18	21 35.94	+ 9 2.5	2.038	2.929	10.9	20.7	9 18	21 34.86	-13 13.8	2.527	3.410	9.4	21.9
9 28	21 31.99	+ 8 2.6	2.097	2.920	13.2	20.8	9 28	21 30.32	-13 13.6	2.620	3.409	11.9	22.1
260318	2004 <i>TC</i> ₁₅₃		8 19.7 252°74	0°1/19.6	18		103714	2000 <i>CO</i> ₈₉		8 19.7 248°09	2°0/18.1	18	
7 20	22 16.03	-11 1.7	2.454	3.342	9.9	21.6	7 20	22 20.80	-15 22.5	1.743	2.646	12.5	20.2
7 30	22 10.82	-11 30.2	2.375	3.331	7.0	21.4	7 30	22 14.73	-16 10.9	1.668	2.632	8.8	19.9
8 9	22 4.25	-12 5.5	2.322	3.320	3.7	21.2	8 9	22 6.58	-17 5.8	1.617	2.617	4.7	19.6
8 19	21 56.85	-12 44.3	2.297	3.309	0.2	20.9	8 19	21 57.08	-18 1.0	1.592	2.602	2.1	19.4
8 29	21 49.30	-13 22.7	2.300	3.297	3.3	21.1	8 29	21 47.31	-18 49.9	1.595	2.586	5.5	19.6
9 8	21 42.33	-13 57.0	2.331	3.285	6.7	21.3	9 8	21 38.40	-19 26.9	1.624	2.570	9.7	19.8
9 18	21 36.58	-14 24.2	2.389	3.274	9.8	21.5	9 18	21 31.35	-19 48.9	1.676	2.553	13.6	20.0
9 28	21 32.57	-14 42.4	2.469	3.262	12.4	21.7	9 28	21 26.86	-19 54.9	1.749	2.536	16.9	20.2
284955	2010 <i>EN</i> ₁₂₉		8 19.7 86°37	1°4/18.6	18		417347	2006 <i>DR</i> ₁₈₂		8 19.7 286°61	1°3/19.0	17	
7 20	22 18.32	-14 4.3	1.793	2.696	12.2	20.7	7 20	22 23.13	-14 17.3	1.265	2.177	15.6	20.9
7 30	22 12.73	-14 45.7	1.735	2.699	8.5	20.4	7 30	22 16.89	-14 33.1	1.197	2.164	11.0	20.6
8 9	22 5.35	-15 33.2	1.701	2.701	4.4	20.2	8 9	22 7.92	-14 56.3	1.151	2.152	5.9	20.2
8 19	21 56.93	-16 21.6	1.692	2.703	1.4	20.0	8 19	21 57.18	-15 21.2	1.128	2.139	1.3	19.9
8 29	21 48.44	-17 5.0	1.711	2.705	4.7	20.2	8 29	21 46.13	-15 41.0	1.130	2.127	5.9	20.2
9 8	21 40.90	-17 38.7	1.756	2.707	8.7	20.5	9 8	21 36.34	-15 50.4	1.156	2.115	11.3	20.4
9 18	21 35.10	-17 59.8	1.826	2.710	12.3	20.7	9 18	21 29.09	-15 46.5	1.203	2.103	16.2	20.7
9 28	21 31.63	-18 7.2	1.916	2.712	15.3	20.9	9 28	21 25.20	-15 28.6	1.269	2.091	20.3	20.9
126214	2002 <i>AW</i> ₄₅		8 19.7 321°42	4°4/15.6	18		181132	2005 <i>QW</i> ₁₄₀		8 19.7 42°98	0°8/20.5	18	
7 20	22 16.19	-18 17.6	1.492	2.412	13.1	19.6	7 20	22 15.51	- 7 24.8	1.820	2.711	12.7	19.9
7 30	22 11.66	-20 9.8	1.435	2.406	9.2	19.4	7 30	22 10.71	- 8 7.1	1.763	2.718	9.0	19.7
8 9	22 4.97	-22 8.4	1.402	2.400	5.5	19.2	8 9	22 4.29	- 9 1.5	1.730	2.726	5.0	19.5
8 19	21 56.91	-24 2.6	1.394	2.395	4.7	19.1	8 19	21 56.93	-10 3.5	1.722	2.734	1.0	19.2
8 29	21 48.62	-25 41.7	1.412	2.389	8.0	19.3	8 29	21 49.52	-11 7.0	1.742	2.742	3.8	19.4
9 8	21 41.34	-26 57.8	1.455	2.384	12.0	19.5	9 8	21 42.98	-12 6.0	1.788	2.750	7.8	19.7
9 18	21 36.09	-27 47.3	1.519	2.380	15.7	19.7	9 18	21 38.05	-12 55.9	1.860	2.759	11.4	20.0
9 28	21 33.59	-28 10.5	1.602	2.375	18.8	20.0	9 28	21 35.24	-13 33.6	1.952	2.768	14.4	20.2
252700	2002 <i>CP</i> ₆₈		8 19.7 176°40	1°9/17.7	18		397723	2008 <i>EJ</i> ₁₃		8 19.7 26°99</			

EPHEMERIDES

8 19.9

8 19.9

Table with columns for date (2020), epoch (alpha_2000, delta_2000), and orbital elements (Delta, r, beta, V). It contains multiple entries for different celestial objects, such as 51489, 387646, 390397, 437086, 471793, 449739, 370339, 189355, 485247, 456019, 152474, 377017, 98728, 513771, 229754, 66704, 390428, and 367057.

EPHEMERIDES

8 19.9

8 19.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
192810	1999 VL ₆₃		8 19.9 285°41	6°1/24.8	18		445000	2008 GX ₁₀₂		8 19.9 333°75	9°3/10.9	18	
7 20	22 17.71	+ 5 1.8	1.852	2.688	14.9	19.6	7 20	22 20.83	-36 57.3	1.855	2.750	12.2	20.2
7 30	22 12.77	+ 5 11.0	1.757	2.664	12.1	19.4	7 30	22 15.07	-38 15.6	1.808	2.741	10.3	20.0
8 9	22 5.93	+ 4 59.2	1.683	2.640	9.1	19.1	8 9	22 7.13	-39 20.4	1.785	2.733	9.4	20.0
8 19	21 57.77	+ 4 25.9	1.632	2.616	6.6	19.0	8 19	21 57.91	-40 3.6	1.786	2.725	9.8	20.0
8 29	21 49.18	+ 3 33.5	1.608	2.592	6.4	18.9	8 29	21 48.59	-40 19.6	1.810	2.717	11.5	20.1
9 8	21 41.19	+ 2 27.1	1.609	2.567	8.8	19.0	9 8	21 40.44	-40 6.9	1.856	2.710	13.7	20.2
9 18	21 34.71	+ 1 13.7	1.635	2.543	12.1	19.1	9 18	21 34.39	-39 27.7	1.922	2.704	15.9	20.3
9 28	21 30.52	+ 0 0.6	1.683	2.518	15.5	19.3	9 28	21 31.09	-38 26.3	2.005	2.698	17.9	20.5
144925	2005 CO ₅₀		8 19.9 128°58	0°6/20.4	17		77656	2001 LT ₃		8 19.9 17°51	5°0/15.8	18	
7 20	22 20.51	- 7 32.9	1.533	2.424	14.5	20.3	7 20	22 15.29	-19 59.6	1.298	2.225	14.0	17.1
7 30	22 14.71	- 8 24.5	1.477	2.432	10.4	20.0	7 30	22 11.34	-21 32.1	1.259	2.232	9.9	16.9
8 9	22 6.88	- 9 30.6	1.444	2.441	5.7	19.8	8 9	22 5.17	-23 6.3	1.243	2.241	6.1	16.7
8 19	21 57.84	-10 45.1	1.437	2.448	0.9	19.5	8 19	21 57.74	-24 31.7	1.250	2.250	5.3	16.7
8 29	21 48.73	-12 0.3	1.456	2.456	4.3	19.8	8 29	21 50.30	-25 38.8	1.282	2.261	8.3	16.9
9 8	21 40.70	-13 8.6	1.501	2.463	9.0	20.0	9 8	21 44.12	-26 21.9	1.336	2.273	12.2	17.1
9 18	21 34.66	-14 4.5	1.571	2.469	13.1	20.3	9 18	21 40.13	-26 39.4	1.411	2.285	15.9	17.4
9 28	21 31.24	-14 44.8	1.661	2.476	16.5	20.6	9 28	21 38.92	-26 32.9	1.504	2.299	18.9	17.7
220675	2004 RR ₂₁₆		8 19.9 305°45	1°5/18.9	18		235374	2003 WE ₃₉		8 19.9 355°16	3°0/18.1	18	
7 20	22 23.98	-17 35.7	2.189	3.080	10.8	19.9	7 20	22 19.98	-18 21.9	1.329	2.248	14.4	19.1
7 30	22 16.70	-17 26.9	2.120	3.078	7.6	19.7	7 30	22 14.68	-18 42.4	1.273	2.243	10.2	18.8
8 9	22 7.78	-17 18.2	2.077	3.075	4.1	19.5	8 9	22 7.01	-19 5.2	1.239	2.240	5.6	18.6
8 19	21 57.92	-17 6.9	2.062	3.072	1.5	19.3	8 19	21 57.92	-19 23.9	1.229	2.237	3.0	18.4
8 29	21 48.03	-16 50.3	2.077	3.070	4.2	19.5	8 29	21 48.74	-19 32.4	1.243	2.235	6.4	18.6
9 8	21 39.02	-16 26.8	2.119	3.067	7.7	19.7	9 8	21 40.84	-19 27.0	1.281	2.235	11.0	18.9
9 18	21 31.63	-15 56.1	2.188	3.065	10.9	19.9	9 18	21 35.26	-19 6.7	1.340	2.235	15.2	19.1
9 28	21 26.40	-15 18.4	2.279	3.062	13.6	20.1	9 28	21 32.64	-18 31.9	1.418	2.236	18.7	19.4
364992	2008 JG ₃₉		8 19.9 1°75	8°2/28.1	15		435600	2008 SK ₄₅		8 19.9 317°71	3°9/23.2	17	
7 20	22 14.32	+11 58.7	1.889	2.689	16.0	20.7	7 20	22 16.83	+ 0 11.7	1.650	2.517	15.0	21.1
7 30	22 10.18	+12 18.8	1.817	2.688	13.6	20.5	7 30	22 12.13	+ 0 12.7	1.580	2.514	11.5	20.9
8 9	22 4.42	+12 13.9	1.765	2.688	11.0	20.4	8 9	22 5.56	+ 0 57.8	1.531	2.510	7.6	20.7
8 19	21 57.65	+11 43.1	1.734	2.688	9.0	20.2	8 19	21 57.80	+ 2 0.8	1.506	2.507	4.3	20.5
8 29	21 50.71	+10 48.4	1.728	2.689	8.3	20.2	8 29	21 49.85	+ 3 16.2	1.507	2.504	4.7	20.5
9 8	21 44.50	+ 9 35.2	1.746	2.690	9.3	20.3	9 8	21 42.74	+ 4 36.3	1.535	2.502	8.3	20.7
9 18	21 39.78	+ 8 10.7	1.789	2.693	11.5	20.4	9 18	21 37.35	+ 5 53.8	1.586	2.499	12.1	20.9
9 28	21 37.13	+ 6 43.0	1.853	2.695	14.0	20.6	9 28	21 34.33	+ 7 2.2	1.660	2.497	15.6	21.1
36011	1999 NM ₃₇		8 19.9 75°51	3°8/16.4	18		378043	2006 TX ₂₀		8 19.9 336°60	1°5/20.8	13	C
7 20	22 18.65	-17 33.1	1.594	2.506	12.9	18.3	7 20	22 15.51	- 7 46.9	1.055	1.972	17.5	21.2
7 30	22 13.36	-19 16.7	1.553	2.521	8.9	18.1	7 30	22 12.04	- 8 0.4	0.989	1.956	12.8	20.9
8 9	22 6.13	-21 4.1	1.538	2.536	5.1	17.9	8 9	22 5.86	- 8 32.5	0.942	1.941	7.3	20.5
8 19	21 57.79	-22 45.6	1.548	2.551	4.0	17.8	8 19	21 57.86	- 9 18.8	0.916	1.927	1.9	20.2
8 29	21 49.45	-24 12.2	1.586	2.566	6.9	18.1	8 29	21 49.45	-10 11.6	0.912	1.914	5.3	20.3
9 8	21 42.20	-25 18.0	1.649	2.581	10.6	18.3	9 8	21 42.23	-11 1.7	0.930	1.903	11.2	20.6
9 18	21 36.90	-26 0.5	1.734	2.596	14.0	18.6	9 18	21 37.52	-11 41.6	0.968	1.894	16.6	20.9
9 28	21 34.12	-26 20.5	1.839	2.611	16.8	18.8	9 28	21 36.19	-12 5.9	1.022	1.885	21.1	21.2
253489	2003 SC ₉₁		8 19.9 205°15	2°6/22.0	18		476909	2008 WU ₄₀		8 19.9 310°99	3°6/17.2	18	
7 20	22 20.39	- 2 55.2	1.726	2.596	14.2	21.1	7 20	22 18.74	-18 24.0	1.508	2.424	13.3	21.2
7 30	22 14.59	- 3 24.2	1.653	2.593	10.6	20.8	7 30	22 13.79	-19 21.0	1.439	2.408	9.4	20.9
8 9	22 6.84	- 4 10.6	1.602	2.588	6.6	20.6	8 9	22 6.59	-20 22.7	1.393	2.392	5.4	20.7
8 19	21 57.86	- 5 10.8	1.577	2.583	3.0	20.4	8 19	21 57.92	-21 21.5	1.371	2.376	3.7	20.5
8 29	21 48.65	- 6 19.3	1.579	2.578	4.2	20.4	8 29	21 48.94	-22 9.3	1.375	2.361	6.9	20.7
9 8	21 40.29	- 7 29.1	1.608	2.572	8.3	20.7	9 8	21 40.94	-22 40.4	1.403	2.346	11.1	20.9
9 18	21 33.68	- 8 33.7	1.662	2.565	12.2	20.9	9 18	21 34.98	-22 51.9	1.452	2.332	15.2	21.1
9 28	21 29.51	- 9 28.1	1.738	2.558	15.7	21.1	9 28	21 31.81	-22 43.8	1.521	2.318	18.6	21.3
331636	2002 JK ₇		8 19.9 76°58	0°4/20.2	17		80915	2000 DK ₆₃		8 19.9 291°76	1°0/20.6	18	R
7 20	22 18.54	- 8 20.0	1.678	2.570	13.5	20.9	7 20	22 20.03	- 8 19.7	1.463	2.359	14.8	19.0
7 30	22 13.12	- 9 11.3	1.630	2.586	9.5	20.7	7 30	22 14.82	- 8 38.9	1.380	2.337	10.8	18.7
8 9	22 5.94	-10 14.4	1.606	2.603	5.2	20.4	8 9	22 7.22	- 9 12.3	1.318	2.315	6.1	18.4
8 19	21 57.78	-11 23.7	1.607	2.619	0.7	20.1	8 19	21 57.99	- 9 56.0	1.281	2.292	1.3	18.0
8 29	21 49.63	-12 32.3	1.635	2.635	4.0	20.4	8 29	21 48.26	-10 44.0	1.269	2.270	4.6	18.2
9 8	21 42.51	-13 33.7	1.691	2.651	8.2	20.7	9 8	21 39.38	-11 29.3	1.283	2.247	9.8	18.4
9 18	21 37.17	-14 23.6	1.770	2.667	12.0	21.0	9 18	21 32.52	-12 6.3	1.319	2.225	14.6	18.7
9 28	21 34.15	-14 59.1	1.871	2.683	15.1	21.2	9 28	21 28.54	-12 30.7	1.374	2.203	18.6	18.9
505963	2015 FM ₂₈₇		8 19.9 205°75	2°4/21.9	17		279409	2010 EZ ₁₂₄		8 19.9 153°73	5°4/15.3	18	
7 20	22 19.42	- 3 17.5	1.798	2.669	13.7	21.7	7 20	22 22.84	-26 38.2	1.981	2.883	11.2	21.2
7 30	22 13.84	- 3 48.9	1.725	2.666	10.2	21.5	7 30	22 16.13	-27 34.1	1.932	2.888	8.3	21.0
8 9	22 6.41	- 4 36.8	1.675	2.662	6.3	21.2	8 9	22 7.59	-28 24.8	1.908	2.892	6.0	20.9
8 19	21 57.83	- 5 37.6	1.650	2.658	2.7	21.0	8 19	21 58.01	-29 3.6	1.910	2.896	5.6	20.9
8 29	21 49.04	- 6 45.9	1.654	2.653	4.0	21.1	8 29	21 48.42	-29 25.5	1.939	2.899	7.6	21.0
9 8	21 41.06	- 7 54.8	1.684	2.648	8.0	21.3	9 8	21 39.87	-29 28.3	1.994	2.902	10.4	21.2
9 18	21 34.75	- 8 58.4	1.739	2.642	11.8	21.5	9 18	21 33.18	-29 12.3	2.072	2.905	13.2	21.4
9 28	21 30.75	- 9 51.8	1.816	2.636	15.1	21.7	9 28	21 28.89	-28 39.7	2.170	2.908	15.5	21.6
290085	2005 QH ₉₄		8 19.9 4°20	0°4/20.2	18		9409	Kanpuz					

EPHEMERIDES

8 19.9

8 19.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
46877	1998 <i>RU</i>		8 19.9 281°38	1°1/19.3	18		236553	2006 <i>HU</i> ₅₈		8 19.9 87°41	5°9/25.5	17	
7 20	22 23.10	-14 5.7	1.488	2.392	14.2	19.2	7 20	22 18.23	+ 6 14.0	1.838	2.668	15.2	20.5
7 30	22 16.82	-14 19.6	1.419	2.382	10.0	18.9	7 30	22 12.87	+ 6 11.0	1.780	2.682	12.2	20.3
8 9	22 8.19	-14 40.0	1.372	2.372	5.4	18.6	8 9	22 5.86	+ 5 45.8	1.743	2.696	9.1	20.2
8 19	21 58.09	-15 1.8	1.351	2.362	1.1	18.3	8 19	21 57.90	+ 4 59.7	1.729	2.710	6.6	20.1
8 29	21 47.73	-15 19.6	1.355	2.352	5.1	18.5	8 29	21 49.90	+ 3 56.7	1.742	2.725	6.1	20.1
9 8	21 38.47	-15 28.7	1.385	2.342	10.0	18.8	9 8	21 42.78	+ 2 43.1	1.781	2.738	8.1	20.2
9 18	21 31.37	-15 26.6	1.438	2.333	14.3	19.0	9 18	21 37.28	+ 1 26.2	1.845	2.752	11.0	20.4
9 28	21 27.17	-15 12.4	1.510	2.323	18.0	19.3	9 28	21 33.94	+ 0 12.5	1.932	2.766	13.8	20.6
437390	2013 <i>WM</i> ₄₇		8 19.9 320°42	5°2/22.6	18		26366	1999 <i>AM</i> ₂₁		8 19.9 335°64	0°3/19.7	18	
7 20	22 21.01	- 2 20.0	1.306	2.189	17.1	20.7	7 20	22 14.67	-10 18.1	1.115	2.036	16.4	17.2
7 30	22 15.63	- 1 35.6	1.231	2.174	13.2	20.4	7 30	22 11.38	-10 57.1	1.048	2.018	11.7	16.8
8 9	22 7.71	- 1 8.2	1.176	2.159	9.0	20.1	8 9	22 5.51	-11 52.7	1.000	2.002	6.4	16.5
8 19	21 58.06	- 0 58.4	1.144	2.145	5.6	19.9	8 19	21 57.90	-12 58.5	0.974	1.986	0.5	16.0
8 29	21 47.98	- 1 4.1	1.136	2.131	6.3	19.9	8 29	21 49.88	-14 5.1	0.971	1.972	5.6	16.4
9 8	21 38.92	- 1 20.7	1.152	2.118	10.4	20.1	9 8	21 42.99	-15 2.8	0.990	1.959	11.4	16.6
9 18	21 32.10	- 1 42.4	1.189	2.106	14.9	20.3	9 18	21 38.48	-15 44.7	1.030	1.948	16.6	16.9
9 28	21 28.39	- 2 3.0	1.245	2.095	18.9	20.5	9 28	21 37.21	-16 6.6	1.086	1.938	21.0	17.1
66205	1999 <i>BJ</i> ₂₇		8 19.9 334°01	1°3/18.9	18		128140	2003 <i>QK</i> ₅₆		8 19.9 325°02	0°0/19.9	18	
7 20	22 14.96	-12 52.8	1.346	2.264	14.4	18.3	7 20	22 14.20	- 9 6.3	1.955	2.849	11.7	19.7
7 30	22 11.29	-13 36.7	1.274	2.244	10.2	18.0	7 30	22 10.15	-10 0.6	1.878	2.836	8.3	19.5
8 9	22 5.33	-14 32.1	1.223	2.225	5.4	17.7	8 9	22 4.49	-11 6.7	1.826	2.824	4.5	19.3
8 19	21 57.86	-15 32.6	1.195	2.207	1.3	17.4	8 19	21 57.81	-12 19.8	1.799	2.811	0.4	18.9
8 29	21 50.02	-16 30.1	1.192	2.190	5.6	17.6	8 29	21 50.91	-13 33.8	1.801	2.800	3.8	19.2
9 8	21 43.14	-17 16.9	1.212	2.174	10.6	17.9	9 8	21 44.67	-14 42.2	1.829	2.788	7.8	19.4
9 18	21 38.32	-17 47.8	1.254	2.159	15.2	18.1	9 18	21 39.85	-15 40.1	1.882	2.777	11.4	19.6
9 28	21 36.36	-18 0.2	1.314	2.146	19.2	18.3	9 28	21 37.05	-16 24.2	1.956	2.767	14.5	19.8
323704	2005 <i>GK</i> ₁₅₃		8 19.9 160°67	9°0/29.9	17		444143	2004 <i>VT</i> ₄₉		8 19.9 327°33	5°4/24.8	17	
7 20	22 19.86	+17 31.2	2.030	2.778	16.7	21.7	7 20	22 14.05	+ 3 55.1	1.836	2.683	14.5	20.8
7 30	22 14.03	+17 24.8	1.956	2.786	14.4	21.6	7 30	22 10.15	+ 3 53.4	1.750	2.666	11.6	20.6
8 9	22 6.50	+16 49.5	1.900	2.792	12.0	21.4	8 9	22 4.55	+ 3 30.8	1.685	2.649	8.5	20.3
8 19	21 57.95	+15 44.5	1.867	2.798	10.0	21.3	8 19	21 57.82	+ 2 47.8	1.644	2.633	5.9	20.1
8 29	21 49.25	+14 12.4	1.859	2.803	9.0	21.3	8 29	21 50.79	+ 1 47.7	1.628	2.617	5.7	20.1
9 8	21 41.35	+12 19.9	1.877	2.808	9.6	21.3	9 8	21 44.41	+ 0 36.3	1.638	2.602	8.2	20.2
9 18	21 35.02	+10 15.6	1.922	2.811	11.5	21.5	9 18	21 39.51	- 0 39.4	1.672	2.587	11.5	20.4
9 28	21 30.85	+ 8 9.1	1.990	2.814	13.8	21.6	9 28	21 36.73	- 1 52.5	1.729	2.573	14.7	20.6
454928	2015 <i>TV</i> ₁₅₇		8 19.9 353°19	0°2/20.1	18		391539	2007 <i>RT</i> ₃₂₃		8 19.9 23°32	2°0/18.4	18	
7 20	22 17.04	-10 13.1	2.032	2.923	11.5	21.1	7 20	22 19.49	-15 49.3	1.620	2.528	12.9	20.9
7 30	22 11.99	-10 36.8	1.966	2.922	8.2	20.9	7 30	22 14.00	-16 26.7	1.566	2.531	9.0	20.7
8 9	22 5.38	-11 8.8	1.924	2.921	4.4	20.6	8 9	22 6.56	-17 8.9	1.534	2.534	4.8	20.5
8 19	21 57.85	-11 45.4	1.908	2.920	0.5	20.3	8 19	21 57.98	-17 50.1	1.528	2.538	2.1	20.3
8 29	21 50.21	-12 22.3	1.920	2.919	3.6	20.6	8 29	21 49.35	-18 24.2	1.549	2.542	5.3	20.5
9 8	21 43.32	-12 55.0	1.959	2.919	7.4	20.8	9 8	21 41.77	-18 46.7	1.594	2.546	9.4	20.8
9 18	21 37.90	-13 20.3	2.023	2.919	10.8	21.0	9 18	21 36.11	-18 55.3	1.663	2.550	13.2	21.0
9 28	21 34.48	-13 36.0	2.109	2.918	13.7	21.2	9 28	21 32.95	-18 49.5	1.753	2.555	16.3	21.2
36078	1999 <i>RK</i> ₆₂		8 19.9 332°84	1°8/18.3	18		143861	2003 <i>YP</i> ₁₃		8 19.9 115°95	2°9/17.8	18	
7 20	22 16.08	-14 33.8	1.876	2.781	11.6	18.3	7 20	22 24.51	-18 9.3	1.675	2.577	12.9	19.7
7 30	22 11.48	-15 28.9	1.810	2.775	8.1	18.1	7 30	22 17.38	-18 54.4	1.631	2.593	9.0	19.5
8 9	22 5.18	-16 30.6	1.769	2.769	4.3	17.8	8 9	22 8.29	-19 41.2	1.611	2.609	5.0	19.3
8 19	21 57.84	-17 33.3	1.754	2.763	1.8	17.6	8 19	21 58.13	-20 23.1	1.617	2.623	3.0	19.2
8 29	21 50.33	-18 30.6	1.765	2.758	4.9	17.8	8 29	21 48.07	-20 54.3	1.651	2.638	5.8	19.5
9 8	21 43.61	-19 17.2	1.804	2.753	8.7	18.1	9 8	21 39.23	-21 11.3	1.710	2.652	9.7	19.7
9 18	21 38.45	-19 49.8	1.866	2.748	12.2	18.3	9 18	21 32.46	-21 12.9	1.794	2.665	13.2	20.0
9 28	21 35.46	-20 6.8	1.948	2.744	15.1	18.5	9 28	21 28.30	-21 0.0	1.898	2.678	16.0	20.2
411098	2009 <i>WJ</i> ₃₂		8 19.9 356°77	4°4/15.0	18		279481	2010 <i>WG</i> ₁₀		8 19.9 33°92	4°0/23.5	18	
7 20	22 16.79	-24 59.2	2.396	3.301	9.4	20.9	7 20	22 16.64	+ 0 12.2	1.957	2.815	13.4	19.8
7 30	22 11.71	-26 1.3	2.342	3.301	6.9	20.8	7 30	22 11.71	+ 0 14.0	1.895	2.821	10.3	19.6
8 9	22 5.20	-27 0.8	2.314	3.300	4.8	20.6	8 9	22 5.24	- 0 0.3	1.855	2.829	7.0	19.4
8 19	21 57.84	-27 52.1	2.313	3.300	4.6	20.6	8 19	21 57.88	- 0 29.1	1.839	2.836	4.4	19.3
8 29	21 50.41	-28 30.7	2.339	3.300	6.4	20.7	8 29	21 50.44	- 1 8.8	1.851	2.844	4.6	19.3
9 8	21 43.69	-28 53.7	2.391	3.300	8.9	20.9	9 8	21 43.77	- 1 54.5	1.889	2.853	7.3	19.5
9 18	21 38.34	-29 0.3	2.468	3.300	11.3	21.1	9 18	21 38.59	- 2 41.2	1.952	2.861	10.4	19.7
9 28	21 34.86	-28 51.1	2.564	3.300	13.4	21.2	9 28	21 35.41	- 3 24.0	2.038	2.870	13.3	19.9
256979	2008 <i>EN</i> ₁₂₁		8 19.9 98°43	0°6/19.3	18		444275	2005 <i>UM</i> ₃₃₆		8 19.9 209°91	0°3/19.6	18	
7 20	22 18.02	-12 34.7	2.201	3.093	10.7	20.8	7 20	22 16.99	-11 28.7	2.551	3.437	9.6	21.9
7 30	22 12.52	-13 8.9	2.145	3.103	7.5	20.7	7 30	22 11.75	-12 4.2	2.478	3.432	6.8	21.8
8 9	22 5.60	-13 48.9	2.115	3.113	3.9	20.5	8 9	22 5.21	-12 46.1	2.430	3.428	3.6	21.5
8 19	21 57.88	-14 30.6	2.112	3.124	0.6	20.2	8 19	21 57.88	-13 30.8	2.411	3.423	0.4	21.3
8 29	21 50.14	-15 9.5	2.137	3.134	3.7	20.5	8 29	21 50.43	-14 14.3	2.420	3.417	3.2	21.5
9 8	21 43.17	-15 41.9	2.190	3.144	7.1	20.7	9 8	21 43.55	-14 53.0	2.458	3.412	6.5	21.7
9 18	21 37.62	-16 5.2	2.269	3.153	10.2	20.9	9 18	21 37.86	-15 24.0	2.523	3.406	9.4	21.9
9 28	21 33.95	-16 17.8	2.370	3.163	12.8	21.1	9 28	21 33.82	-15 45.5	2.610	3.399	11.9	22.1
141625	2002 <i>JY</i> ₃₄		8 19.9 63°66	0°2/19.8	17		515241	2012 <i>CR</i> ₁₁					

EPHEMERIDES

8 19.9

8 19.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
430219	2013 VZ ₅		8 19.9 313 ^o .77	4 ^o .2/17.4	17		334097	2001 QH ₂₀₂		8 19.9 74 ^o .35	7 ^o .1/26.7	17	
7 20	22 22.60	-20 28.6	1.354	2.270	14.4	20.5	7 20	22 17.12	+11 43.5	1.047	1.891	23.2	19.8
7 30	22 16.70	-21 5.6	1.291	2.259	10.3	20.3	7 30	22 13.05	+ 9 58.3	0.988	1.900	18.7	19.5
8 9	22 8.23	-21 43.4	1.250	2.248	6.1	20.0	8 9	22 6.35	+ 7 20.9	0.946	1.909	13.6	19.3
8 19	21 58.15	-22 14.4	1.234	2.238	4.3	19.9	8 19	21 58.02	+ 3 57.0	0.926	1.917	8.8	19.0
8 29	21 47.85	-22 31.2	1.242	2.228	7.5	20.0	8 29	21 49.51	+ 0 3.0	0.931	1.926	7.2	19.0
9 8	21 38.79	-22 29.7	1.274	2.219	11.9	20.3	9 8	21 42.37	- 3 56.7	0.961	1.935	10.8	19.2
9 18	21 32.16	-22 9.1	1.327	2.210	16.1	20.5	9 18	21 37.78	- 7 39.4	1.016	1.944	15.7	19.5
9 28	21 28.68	-21 31.0	1.398	2.201	19.7	20.7	9 28	21 36.49	-10 48.7	1.092	1.953	20.2	19.9
254361	2004 TM ₇₂		8 19.9 237 ^o .21	3 ^o .8/16.1	18		430595	2002 SG ₅₄		8 19.9 309 ^o .87	1 ^o .0/19.5	18	
7 20	22 19.24	-23 49.2	2.470	3.370	9.4	20.5	7 20	22 25.74	-15 33.0	1.284	2.193	15.6	20.4
7 30	22 13.41	-24 32.1	2.405	3.363	6.8	20.3	7 30	22 19.18	-15 15.6	1.207	2.172	11.2	20.1
8 9	22 6.12	-25 12.7	2.366	3.356	4.5	20.2	8 9	22 9.73	-15 1.1	1.151	2.151	6.1	19.7
8 19	21 57.96	-25 46.6	2.355	3.349	3.9	20.1	8 19	21 58.33	-14 45.5	1.119	2.130	1.1	19.3
8 29	21 49.70	-26 9.5	2.371	3.341	5.8	20.3	8 29	21 46.46	-14 24.3	1.112	2.110	5.7	19.6
9 8	21 42.14	-26 18.9	2.415	3.333	8.4	20.4	9 8	21 35.77	-13 54.7	1.129	2.090	11.2	19.9
9 18	21 35.94	-26 14.1	2.483	3.325	11.0	20.6	9 18	21 27.63	-13 15.9	1.168	2.071	16.3	20.1
9 28	21 31.63	-25 55.7	2.573	3.317	13.2	20.7	9 28	21 22.94	-12 27.9	1.225	2.053	20.5	20.3
152396	2005 UB ₂₇₀		8 19.9 336 ^o .85	0 ^o .3/19.6	18		404883	2014 KD ₆₂		8 19.9 0 ^o .42	6 ^o .3/27.1	18	
7 20	22 16.56	-11 18.1	1.831	2.730	12.2	20.3	7 20	22 8.16	+ 9 56.8	1.334	2.181	19.0	19.2
7 30	22 11.85	-11 52.3	1.763	2.724	8.6	20.1	7 30	22 6.33	+ 8 35.9	1.264	2.176	15.5	18.9
8 9	22 5.41	-12 35.3	1.719	2.718	4.6	19.8	8 9	22 2.62	+ 6 34.4	1.213	2.174	11.5	18.7
8 19	21 57.91	-13 22.7	1.700	2.712	0.4	19.5	8 19	21 57.70	+ 3 56.2	1.185	2.174	7.7	18.5
8 29	21 50.26	-14 9.0	1.709	2.707	4.1	19.8	8 29	21 52.60	+ 0 51.7	1.181	2.175	6.4	18.4
9 8	21 43.39	-14 49.0	1.743	2.702	8.2	20.0	9 8	21 48.40	- 2 23.0	1.203	2.178	9.0	18.6
9 18	21 38.13	-15 18.9	1.802	2.698	11.9	20.3	9 18	21 46.01	- 5 31.3	1.251	2.183	13.0	18.8
9 28	21 35.05	-15 36.4	1.882	2.694	15.0	20.5	9 28	21 46.08	- 8 19.2	1.321	2.190	16.9	19.1
510518	2012 BE ₁₃₃		8 19.9 169 ^o .93	2 ^o .8/23.1	18		326369	2000 WO ₇₄		8 19.9 283 ^o .71	5 ^o .7/16.1	18	
7 20	22 16.79	- 0 41.9	2.871	3.714	10.0	22.0	7 20	22 24.05	-23 11.8	1.383	2.298	14.3	21.0
7 30	22 11.45	- 0 47.4	2.797	3.717	7.6	21.8	7 30	22 17.91	-24 11.3	1.313	2.278	10.4	20.7
8 9	22 4.99	- 1 3.8	2.747	3.720	5.1	21.7	8 9	22 9.02	-25 10.5	1.265	2.259	6.9	20.5
8 19	21 57.88	- 1 29.7	2.724	3.722	3.1	21.5	8 19	21 58.27	-25 59.6	1.241	2.239	5.9	20.4
8 29	21 50.68	- 2 2.6	2.731	3.724	3.3	21.6	8 29	21 47.10	-26 30.0	1.242	2.219	8.9	20.5
9 8	21 43.99	- 2 39.4	2.767	3.726	5.5	21.7	9 8	21 37.09	-26 36.5	1.267	2.198	13.2	20.7
9 18	21 38.33	- 3 16.7	2.830	3.727	8.0	21.9	9 18	21 29.56	-26 18.4	1.312	2.178	17.3	20.9
9 28	21 34.13	- 3 51.5	2.918	3.728	10.3	22.0	9 28	21 25.36	-25 38.3	1.374	2.158	20.9	21.1
342395	2008 UU ₄₈		8 19.9 231 ^o .15	0 ^o .5/20.4	18		175536	2006 ST ₁₆₇		8 19.9 277 ^o .46	1 ^o .4/21.2	18	
7 20	22 19.61	- 9 16.9	1.821	2.711	12.7	21.2	7 20	22 17.81	- 6 32.4	2.012	2.892	12.1	20.5
7 30	22 13.99	- 9 40.2	1.753	2.708	9.1	21.0	7 30	22 12.69	- 6 52.8	1.929	2.877	8.9	20.2
8 9	22 6.56	-10 13.8	1.709	2.705	5.0	20.7	8 9	22 5.88	- 7 25.1	1.870	2.862	5.2	20.0
8 19	21 58.02	-10 53.5	1.690	2.702	0.8	20.4	8 19	21 57.99	- 8 6.2	1.837	2.847	1.7	19.7
8 29	21 49.33	-11 34.3	1.699	2.699	3.9	20.7	8 29	21 49.84	- 8 51.8	1.832	2.831	3.6	19.8
9 8	21 41.49	-12 11.3	1.735	2.696	8.0	20.9	9 8	21 42.34	- 9 37.0	1.853	2.816	7.5	20.0
9 18	21 35.33	-12 40.5	1.796	2.693	11.8	21.1	9 18	21 36.29	-10 17.2	1.900	2.801	11.1	20.2
9 28	21 31.46	-12 59.3	1.877	2.689	15.0	21.4	9 28	21 32.31	-10 48.8	1.970	2.785	14.3	20.4
396650	2002 EE ₅₁		8 19.9 265 ^o .30	0 ^o .1/20.0	17		388199	2006 DZ ₁₆₆		8 19.9 262 ^o .13	3 ^o .2/17.4	18	
7 20	22 10.39	-10 42.2	4.488	5.367	6.0	20.8	7 20	22 22.94	-19 31.2	1.948	2.848	11.5	21.5
7 30	22 6.72	-11 6.2	4.410	5.361	4.2	20.6	7 30	22 16.49	-20 13.7	1.865	2.826	8.2	21.3
8 9	22 2.38	-11 33.8	4.358	5.354	2.3	20.5	8 9	22 8.02	-20 58.2	1.806	2.803	4.8	21.0
8 19	21 57.66	-12 3.5	4.336	5.348	0.2	20.3	8 19	21 58.19	-21 38.9	1.775	2.779	3.2	20.9
8 29	21 52.87	-12 33.3	4.343	5.341	1.8	20.5	8 29	21 48.02	-22 9.9	1.771	2.755	5.9	21.0
9 8	21 48.37	-13 1.3	4.380	5.335	3.8	20.6	9 8	21 38.60	-22 27.0	1.794	2.730	9.7	21.2
9 18	21 44.46	-13 25.8	4.445	5.328	5.6	20.7	9 18	21 30.90	-22 28.4	1.842	2.705	13.2	21.4
9 28	21 41.43	-13 45.6	4.534	5.321	7.2	20.8	9 28	21 25.64	-22 14.3	1.910	2.679	16.3	21.5
81233	2000 FX ₂₆		8 19.9 280 ^o .09	4 ^o .8/16.6	18		403750	2011 AQ ₆₂		8 19.9 274 ^o .52	2 ^o .1/17.6	17	
7 20	22 23.08	-22 4.4	1.531	2.442	13.3	18.0	7 20	22 16.53	-16 37.0	2.448	3.347	9.5	22.0
7 30	22 16.92	-22 54.9	1.463	2.427	9.6	17.8	7 30	22 11.62	-17 36.4	2.364	3.326	6.7	21.8
8 9	22 8.33	-23 45.3	1.418	2.413	6.1	17.5	8 9	22 5.26	-18 40.4	2.306	3.304	3.7	21.6
8 19	21 58.19	-24 27.6	1.398	2.398	4.9	17.4	8 19	21 57.95	-19 44.2	2.276	3.283	2.2	21.4
8 29	21 47.75	-24 54.4	1.403	2.383	7.8	17.6	8 29	21 50.39	-20 42.6	2.275	3.261	4.6	21.5
9 8	21 38.41	-25 1.4	1.433	2.367	11.8	17.8	9 8	21 43.34	-21 31.2	2.301	3.239	7.7	21.7
9 18	21 31.28	-24 47.8	1.485	2.352	15.6	18.0	9 18	21 37.51	-22 7.0	2.353	3.216	10.7	21.9
9 28	21 27.12	-24 15.2	1.556	2.337	18.9	18.2	9 28	21 33.45	-22 28.7	2.426	3.194	13.3	22.0
394283	2006 UU ₂₈₀		8 19.9 336 ^o .30	4 ^o .4/24.0	18		33280	1998 HT ₁₂₀		8 19.9 208 ^o .83	0 ^o .3/20.2	18	
7 20	22 16.51	+ 2 4.7	2.005	2.853	13.5	21.1	7 20	22 16.01	- 8 18.4	2.249	3.133	10.9	18.7
7 30	22 11.67	+ 1 57.2	1.932	2.852	10.5	20.9	7 30	22 11.22	- 9 13.1	2.179	3.131	7.7	18.5
8 9	22 5.28	+ 1 31.7	1.882	2.851	7.4	20.7	8 9	22 5.01	-10 18.2	2.133	3.129	4.2	18.3
8 19	21 57.92	+ 0 50.0	1.856	2.850	4.8	20.5	8 19	21 57.93	-11 29.3	2.115	3.127	0.5	18.0
8 29	21 50.41	- 0 4.4	1.857	2.849	4.8	20.5	8 29	21 50.72	-12 41.1	2.125	3.124	3.3	18.2
9 8	21 43.60	- 1 5.9	1.886	2.848	7.4	20.7	9 8	21 44.13	-13 48.0	2.164	3.122	6.9	18.5
9 18	21 38.22	- 2 8.9	1.939	2.847	10.5	20.9	9 18	21 38.83	-14 46.0	2.229	3.119	10.1	18.7
9 28	21 34.83	- 3 7.9	2.016	2.847	13.4	21.1	9 28	21 35.34	-15 32.0	2.316			

EPHEMERIDES

8 19.9

8 19.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
39294	2001 <i>DB</i> ₃₃		8 19.9 140°70	1°2/18.3	18		155735	2000 <i>RZ</i> ₁₀₁		8 19.9 14°01	11°3/29.4	17	
7 20	22 13.37	-15 0.2	3.249	4.141	7.6	18.5	7 20	22 15.90	+14 0.6	1.345	2.157	20.6	18.5
7 30	22 9.01	-15 48.4	3.185	4.144	5.3	18.3	7 30	22 11.85	+14 46.3	1.286	2.160	17.8	18.3
8 9	22 3.69	-16 39.7	3.149	4.147	2.8	18.2	8 9	22 5.62	+14 57.9	1.243	2.164	14.8	18.2
8 19	21 57.82	-17 31.0	3.141	4.150	1.2	18.0	8 19	21 58.01	+14 32.6	1.220	2.169	12.4	18.1
8 29	21 51.88	-18 18.9	3.163	4.153	3.1	18.2	8 29	21 50.21	+13 32.1	1.218	2.175	11.3	18.0
9 8	21 46.39	-19 0.4	3.214	4.156	5.6	18.4	9 8	21 43.45	+12 3.8	1.237	2.182	12.2	18.1
9 18	21 41.78	-19 33.6	3.291	4.159	7.8	18.5	9 18	21 38.76	+10 18.7	1.278	2.190	14.5	18.3
9 28	21 38.45	-19 57.0	3.392	4.162	9.8	18.7	9 28	21 36.85	+8 28.9	1.339	2.198	17.3	18.5
68587	2002 <i>AD</i> ₁₀		8 19.9 117°00	1°5/18.6	18		128165	2003 <i>QR</i> ₁₀₄		8 19.9 338°12	0°7/19.4	18	
7 20	22 20.04	-13 50.7	1.841	2.740	12.1	19.2	7 20	22 17.48	-13 11.3	1.963	2.862	11.5	19.1
7 30	22 14.20	-14 46.7	1.790	2.751	8.4	19.0	7 30	22 12.42	-13 31.5	1.895	2.856	8.1	18.8
8 9	22 6.63	-15 48.9	1.763	2.762	4.4	18.8	8 9	22 5.72	-13 57.8	1.850	2.849	4.3	18.6
8 19	21 58.07	-16 51.4	1.762	2.773	1.5	18.6	8 19	21 58.02	-14 26.1	1.832	2.843	0.7	18.3
8 29	21 49.49	-17 47.9	1.790	2.783	4.7	18.9	8 29	21 50.18	-14 52.2	1.841	2.838	4.0	18.6
9 8	21 41.86	-18 33.3	1.844	2.793	8.6	19.1	9 8	21 43.12	-15 12.1	1.876	2.833	7.9	18.8
9 18	21 35.95	-19 4.8	1.923	2.802	12.0	19.4	9 18	21 37.58	-15 23.1	1.936	2.828	11.4	19.0
9 28	21 32.30	-19 21.4	2.022	2.812	14.9	19.6	9 28	21 34.15	-15 23.7	2.018	2.824	14.3	19.2
288174	2003 <i>WQ</i> ₁₆₈		8 19.9 334°36	0°3/19.7	17		15170	<i>Erikdeul</i>		8 19.9 280°68	1°3/19.0	18	
7 20	22 13.41	-8 56.1	1.025	1.948	17.2	19.6	7 20	22 20.78	-13 23.3	1.562	2.466	13.6	19.1
7 30	22 10.67	-9 57.9	0.959	1.931	12.4	19.3	7 30	22 15.25	-14 1.2	1.485	2.448	9.6	18.8
8 9	22 5.25	-11 21.8	0.913	1.915	6.7	18.9	8 9	22 7.47	-14 48.1	1.431	2.431	5.1	18.5
8 19	21 57.98	-12 59.8	0.888	1.900	0.6	18.4	8 19	21 58.18	-15 38.2	1.402	2.413	1.3	18.2
8 29	21 50.27	-14 39.8	0.885	1.886	6.0	18.8	8 29	21 48.53	-16 24.6	1.399	2.395	5.2	18.5
9 8	21 43.73	-16 8.8	0.904	1.874	12.1	19.1	9 8	21 39.76	-17 1.2	1.421	2.377	10.0	18.7
9 18	21 39.68	-17 17.3	0.943	1.863	17.5	19.3	9 18	21 32.97	-17 24.0	1.467	2.359	14.3	18.9
9 28	21 39.03	-18 0.2	0.998	1.854	22.1	19.6	9 28	21 28.92	-17 31.2	1.532	2.341	18.0	19.1
91051	1998 <i>FA</i> ₃₄		8 19.9 213°24	1°8/18.7	18		362286	2009 <i>SO</i> ₁₂		8 19.9 9°18	5°8/26.0	18	
7 20	22 22.17	-15 51.4	1.748	2.649	12.5	19.4	7 20	22 11.79	+6 45.4	1.600	2.445	16.4	19.8
7 30	22 15.86	-16 17.1	1.685	2.648	8.8	19.1	7 30	22 8.63	+6 6.4	1.535	2.448	13.2	19.6
8 9	22 7.60	-16 46.9	1.647	2.646	4.7	18.9	8 9	22 3.76	+4 59.5	1.491	2.452	9.7	19.4
8 19	21 58.17	-17 15.7	1.634	2.644	1.8	18.7	8 19	21 57.86	+3 27.3	1.470	2.458	6.6	19.3
8 29	21 48.64	-17 38.4	1.649	2.642	5.0	18.9	8 29	21 51.83	+1 36.2	1.474	2.464	5.9	19.3
9 8	21 40.10	-17 51.1	1.690	2.640	9.1	19.2	9 8	21 46.65	-0 24.0	1.503	2.471	8.3	19.4
9 18	21 33.43	-17 51.8	1.755	2.638	12.8	19.4	9 18	21 43.08	-2 23.4	1.557	2.480	11.6	19.6
9 28	21 29.26	-17 40.1	1.841	2.636	15.9	19.6	9 28	21 41.72	-4 12.9	1.634	2.489	14.9	19.9
390885	2004 <i>XE</i> ₄₁		8 19.9 341°18	0°8/20.5	18		128139	2003 <i>QU</i> ₅₅		8 19.9 13°07	2°5/17.5	18	
7 20	22 16.63	-9 14.2	1.245	2.157	15.8	20.4	7 20	22 16.77	-17 39.0	2.102	3.007	10.6	19.5
7 30	22 12.55	-9 27.9	1.179	2.144	11.4	20.1	7 30	22 11.83	-18 30.1	2.044	3.008	7.4	19.3
8 9	22 6.08	-9 55.7	1.134	2.132	6.4	19.8	8 9	22 5.37	-19 24.0	2.011	3.010	4.1	19.1
8 19	21 58.05	-10 33.3	1.110	2.122	1.2	19.4	8 19	21 58.00	-20 15.4	2.005	3.011	2.5	19.0
8 29	21 49.72	-11 13.9	1.111	2.113	4.9	19.7	8 29	21 50.56	-20 59.2	2.026	3.013	5.0	19.1
9 8	21 42.49	-11 50.5	1.135	2.105	10.2	19.9	9 8	21 43.88	-21 31.3	2.074	3.015	8.3	19.4
9 18	21 37.47	-12 17.5	1.181	2.098	15.0	20.2	9 18	21 38.66	-21 49.8	2.146	3.017	11.3	19.6
9 28	21 35.44	-12 31.1	1.244	2.092	19.1	20.4	9 28	21 35.42	-21 53.9	2.240	3.019	13.9	19.7
149154	2002 <i>FL</i> ₁₁		8 19.9 113°28	0°1/19.8	18		44032	1998 <i>CD</i> ₃		8 19.9 131°49	0°3/20.2	18	
7 20	22 17.59	-10 55.9	2.364	3.250	10.3	20.9	7 20	22 21.31	-8 38.1	1.546	2.438	14.4	19.7
7 30	22 12.19	-11 27.3	2.306	3.260	7.2	20.7	7 30	22 15.37	-9 25.1	1.490	2.446	10.2	19.5
8 9	22 5.46	-12 5.2	2.273	3.270	3.9	20.5	8 9	22 7.38	-10 25.1	1.457	2.454	5.6	19.2
8 19	21 57.98	-12 46.1	2.267	3.279	0.3	20.2	8 19	21 58.18	-11 32.2	1.450	2.462	0.7	18.9
8 29	21 50.47	-13 25.8	2.291	3.289	3.2	20.5	8 29	21 48.91	-12 39.0	1.469	2.469	4.4	19.2
9 8	21 43.66	-14 0.8	2.342	3.298	6.6	20.7	9 8	21 40.72	-13 38.6	1.515	2.475	9.0	19.5
9 18	21 38.15	-14 28.1	2.420	3.307	9.6	20.9	9 18	21 34.54	-14 25.9	1.584	2.482	13.1	19.7
9 28	21 34.40	-14 46.2	2.520	3.316	12.1	21.1	9 28	21 30.97	-14 58.3	1.674	2.488	16.5	20.0
518075	2015 <i>YD</i> ₁₁		8 19.9 254°26	6°4/27.4	18		505958	2015 <i>FH</i> ₂₃₅		8 19.9 74°49	3°1/17.7	17	
7 20	22 15.30	+11 10.0	2.515	3.299	12.9	21.5	7 20	22 22.59	-18 22.5	1.582	2.490	13.2	21.0
7 30	22 10.67	+11 13.9	2.426	3.290	10.8	21.3	7 30	22 16.11	-19 9.9	1.544	2.509	9.2	20.9
8 9	22 4.72	+10 58.2	2.359	3.281	8.7	21.1	8 9	22 7.67	-19 58.7	1.529	2.528	5.1	20.7
8 19	21 57.93	+10 22.8	2.317	3.271	7.0	21.0	8 19	21 58.20	-20 42.2	1.540	2.547	3.2	20.6
8 29	21 50.95	+9 29.4	2.300	3.262	6.5	21.0	8 29	21 48.87	-21 14.4	1.578	2.565	6.1	20.8
9 8	21 44.47	+8 22.1	2.310	3.252	7.5	21.0	9 8	21 40.81	-21 31.5	1.641	2.584	9.9	21.1
9 18	21 39.12	+7 6.0	2.347	3.242	9.5	21.1	9 18	21 34.83	-21 32.7	1.727	2.603	13.4	21.3
9 28	21 35.42	+5 47.2	2.407	3.232	11.7	21.3	9 28	21 31.45	-21 18.7	1.834	2.621	16.2	21.6
285211	1997 <i>BS</i> ₈		8 19.9 128°09	1°9/21.5	18		475583	2006 <i>UN</i> ₃₄		8 19.9 263°57	1°4/18.7	18	
7 20	22 18.94	-6 3.1	2.145	3.019	11.7	20.6	7 20	22 18.54	-14 36.7	2.022	2.920	11.2	21.7
7 30	22 13.28	-6 3.8	2.076	3.020	8.6	20.4	7 30	22 13.15	-15 14.7	1.955	2.916	7.8	21.4
8 9	22 6.11	-6 14.7	2.032	3.021	5.2	20.2	8 9	22 6.11	-15 58.1	1.913	2.912	4.2	21.2
8 19	21 58.05	-6 33.5	2.014	3.022	2.1	20.0	8 19	21 58.08	-16 42.0	1.897	2.908	1.4	21.0
8 29	21 49.88	-6 57.0	2.023	3.022	3.4	20.1	8 29	21 49.91	-17 21.5	1.910	2.904	4.4	21.2
9 8	21 42.44	-7 21.5	2.061	3.023	6.9	20.3	9 8	21 42.52	-17 52.1	1.949	2.899	8.1	21.4
9 18	21 36.42	-7 43.6	2.124	3.024	10.1	20.5	9 18	21 36.65	-18 11.4	2.013	2.895	11.5	21.6
9 28	21 32.35	-8 0.3	2.211	3.025	13.0	20.7	9 28	21 32.88	-18 18.0	2.099	2.891	14.3	21.8
472081	2013 <i>YT</i> ₁₁₀		8 19.9 167°00	3°7/16.9	17		470304	2007 <i>HW</i> ₈₇		8 19.9 41°81	7°0/14.5	18	
7 20	22 22.47	-20 59.0	1.931	2.834	11.5	21.5	7 20	22 20.85	-26 20.8	1.449	2.366	13.6	19.9
7 30	22 15.94	-21 50.7	1.876	2.837	8.1	21.3	7 30	22 15.25	-27 46.8	1.411	2.374	10.1	19.7
8 9	22 7.59	-22 42.1	1.845	2.840	4.9	21.1	8 9	22 7.37	-29 6.7	1.396	2.382	7.4	19.5
8 19	21 58.18	-23 27.0	1.842	2.842	3.8	21.0	8 19	21 58.19	-30 11.0	1.405	2.390	7.3	19.6
8 29	21 48.71	-23 59.9	1.866	2.845	6.2	21.2	8 29	21 49.03	-30 51.9	1.438	2.398	9.7	19.7
9 8	21 40.21	-24 17.4	1.916	2.846	9.5	21.4	9 8	21 41.20	-31 6.3	1.495	2.407	12.9	19.9
9 18	21 33.50	-24 18.5	1.991	2.847	12.7	21.6	9 18	21 35.68	-30 55.0	1.572	2.416	16.1	20.2
9 28	21 29.15	-24 4.1	2.086	2.848	15.3	21.8	9 28	21 33.06	-30 21.5	1.667	2.426	18.7	20.4

EPHEMERIDES

8 19.9

8 19.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
446045	2013 <i>CG</i> ₁₀₇		8 19.9 44°76'	0°8/19.5	18		86261	1999 <i>TS</i> ₂₃₃		8 19.9 144°35'	3°4/23.3	18	
7 20	22 24.11	-15 13.6	1.780	2.676	12.6	19.9	7 20	22 17.72	-0 20.1	2.364	3.213	11.7	19.2
7 30	22 16.96	-15 0.9	1.733	2.693	8.8	19.7	7 30	22 12.34	-0 18.4	2.294	3.216	8.9	19.0
8 9	22 8.06	-14 51.2	1.711	2.709	4.7	19.5	8 9	22 5.60	-0 29.8	2.246	3.220	6.1	18.9
8 19	21 58.25	-14 41.2	1.715	2.727	0.8	19.3	8 19	21 58.06	-0 52.9	2.226	3.223	3.7	18.7
8 29	21 48.59	-14 28.2	1.747	2.744	4.2	19.6	8 29	21 50.42	-1 25.1	2.233	3.226	4.0	18.8
9 8	21 40.10	-14 10.0	1.806	2.762	8.2	19.9	9 8	21 43.42	-2 2.3	2.268	3.229	6.4	18.9
9 18	21 33.53	-13 45.9	1.890	2.780	11.7	20.1	9 18	21 37.67	-2 40.8	2.330	3.232	9.3	19.1
9 28	21 29.37	-13 15.5	1.996	2.799	14.6	20.4	9 28	21 33.68	-3 16.5	2.415	3.234	11.9	19.3
41033	1999 <i>UW</i> ₄₈		8 19.9 42°91'	8°7/27.3	18		145407	2005 <i>NN</i> ₈₃		8 19.9 331°71'	2°6/22.1	18	
7 20	22 18.35	+10 37.6	1.644	2.456	17.5	18.4	7 20	22 17.01	-3 45.8	1.852	2.728	13.2	19.7
7 30	22 13.26	+11 11.2	1.581	2.463	14.7	18.3	7 30	22 12.18	-3 58.6	1.780	2.723	9.8	19.5
8 9	22 6.26	+11 18.2	1.538	2.469	11.8	18.1	8 9	22 5.65	-4 25.9	1.731	2.718	6.1	19.2
8 19	21 58.11	+10 57.3	1.516	2.476	9.5	18.0	8 19	21 58.07	-5 5.1	1.708	2.714	2.9	19.0
8 29	21 49.80	+10 10.8	1.518	2.484	8.8	18.0	8 29	21 50.32	-5 51.8	1.711	2.710	3.9	19.1
9 8	21 42.41	+9 4.6	1.545	2.491	10.1	18.1	9 8	21 43.32	-6 40.6	1.740	2.706	7.6	19.3
9 18	21 36.81	+7 46.7	1.594	2.499	12.6	18.2	9 18	21 37.88	-7 26.4	1.795	2.703	11.2	19.5
9 28	21 33.64	+6 26.0	1.666	2.507	15.3	18.4	9 28	21 34.58	-8 4.9	1.871	2.700	14.4	19.7
112324	2002 <i>MA</i> ₃		8 19.9 356°04'	1°9/18.9	18	R	149260	2002 <i>TW</i> ₃₁		8 19.9 322°82'	3°0/17.9	18	
7 20	22 13.85	-13 36.9	0.906	1.843	17.5	18.4	7 20	22 21.14	-17 12.8	1.345	2.260	14.5	19.2
7 30	22 11.07	-14 14.4	0.856	1.835	12.4	18.1	7 30	22 15.66	-17 56.3	1.285	2.253	10.2	19.0
8 9	22 5.46	-15 4.5	0.825	1.829	6.6	17.8	8 9	22 7.73	-18 44.7	1.247	2.247	5.7	18.7
8 19	21 58.04	-15 58.5	0.814	1.825	1.9	17.5	8 19	21 58.26	-19 30.6	1.233	2.241	3.1	18.5
8 29	21 50.44	-16 46.0	0.824	1.824	6.7	17.8	8 29	21 48.60	-20 6.3	1.244	2.235	6.6	18.7
9 8	21 44.31	-17 18.4	0.854	1.824	12.6	18.1	9 8	21 40.14	-20 26.2	1.278	2.230	11.3	19.0
9 18	21 40.93	-17 30.9	0.903	1.826	17.8	18.4	9 18	21 34.00	-20 28.1	1.335	2.224	15.6	19.2
9 28	21 41.01	-17 21.9	0.967	1.830	22.1	18.7	9 28	21 30.90	-20 12.1	1.409	2.220	19.2	19.4
517303	2014 <i>HS</i> ₁₂₅		8 19.9 186°62'	3°4/16.7	18		13088	<i>Filippoptera</i>		8 19.9 326°36'	0°1/20.1	18	
7 20	22 20.98	-21 38.2	2.334	3.232	9.9	22.3	7 20	22 15.11	-9 4.9	2.022	2.914	11.5	17.7
7 30	22 14.70	-22 25.1	2.273	3.232	7.1	22.2	7 30	22 10.76	-9 53.0	1.950	2.906	8.2	17.4
8 9	22 6.88	-23 11.2	2.238	3.231	4.4	22.0	8 9	22 4.87	-10 51.9	1.902	2.899	4.5	17.2
8 19	21 58.16	-23 51.5	2.231	3.230	3.5	21.9	8 19	21 58.01	-11 57.1	1.880	2.892	0.5	16.9
8 29	21 49.36	-24 21.5	2.253	3.228	5.5	22.1	8 29	21 50.97	-13 2.9	1.887	2.886	3.6	17.1
9 8	21 41.33	-24 38.2	2.301	3.226	8.4	22.2	9 8	21 44.61	-14 3.6	1.920	2.880	7.5	17.4
9 18	21 34.76	-24 40.8	2.375	3.224	11.2	22.4	9 18	21 39.65	-14 54.8	1.978	2.874	11.0	17.6
9 28	21 30.19	-24 29.6	2.470	3.221	13.5	22.6	9 28	21 36.65	-15 33.4	2.059	2.868	14.0	17.8
99560	2002 <i>FD</i> ₂		8 19.9 60°36'	0°3/20.2	18		360204	1998 <i>SE</i> ₃₁		8 19.9 315°31'	3°8/17.1	18	
7 20	22 19.01	-9 24.3	1.648	2.544	13.5	19.5	7 20	22 24.54	-24 32.1	2.204	3.100	10.5	20.1
7 30	22 13.67	-9 59.6	1.591	2.548	9.6	19.3	7 30	22 17.21	-24 42.3	2.143	3.098	7.6	20.0
8 9	22 6.45	-10 46.1	1.556	2.553	5.2	19.0	8 9	22 8.22	-24 47.9	2.107	3.097	4.9	19.8
8 19	21 58.13	-11 38.7	1.547	2.559	0.6	18.7	8 19	21 58.30	-24 44.8	2.098	3.095	3.9	19.7
8 29	21 49.72	-12 31.4	1.564	2.564	4.1	19.0	8 29	21 48.39	-24 30.0	2.118	3.094	5.8	19.8
9 8	21 42.28	-13 18.2	1.608	2.569	8.5	19.3	9 8	21 39.44	-24 2.2	2.166	3.092	8.8	20.0
9 18	21 36.66	-13 54.8	1.675	2.575	12.4	19.5	9 18	21 32.20	-23 22.0	2.238	3.091	11.6	20.2
9 28	21 33.46	-14 18.5	1.764	2.580	15.7	19.7	9 28	21 27.17	-22 31.2	2.333	3.090	14.0	20.4
383874	2008 <i>RX</i> ₆₂		8 19.9 233°69'	0°3/20.2	18		439528	2014 <i>BH</i> ₆₁		8 19.9 215°11'	2°3/22.1	18	
7 20	22 18.99	-8 52.4	1.936	2.823	12.2	21.9	7 20	22 18.93	-3 10.7	2.083	2.947	12.4	21.8
7 30	22 13.58	-9 36.9	1.860	2.814	8.7	21.7	7 30	22 13.42	-3 37.2	2.004	2.941	9.3	21.6
8 9	22 6.42	-10 32.7	1.808	2.805	4.8	21.4	8 9	22 6.29	-4 17.9	1.949	2.934	5.8	21.3
8 19	21 58.13	-11 35.4	1.783	2.795	0.6	21.1	8 19	21 58.14	-5 10.2	1.920	2.926	2.7	21.1
8 29	21 49.61	-12 39.1	1.786	2.785	3.8	21.3	8 29	21 49.78	-6 9.4	1.920	2.919	3.6	21.2
9 8	21 41.82	-13 37.9	1.816	2.774	7.9	21.6	9 8	21 42.09	-7 10.0	1.948	2.910	7.1	21.4
9 18	21 35.57	-14 27.1	1.871	2.763	11.7	21.8	9 18	21 35.83	-8 7.1	2.001	2.902	10.6	21.6
9 28	21 31.50	-15 3.7	1.948	2.752	14.8	22.0	9 28	21 31.59	-8 56.3	2.078	2.892	13.7	21.8
398986	2013 <i>EB</i> ₉₀		8 19.9 115°71'	5°2/25.8	18		187637	2007 <i>CC</i> ₂₅		8 19.9 208°43'	0°8/20.9	18	
7 20	22 18.50	+7 4.0	2.670	3.471	11.8	20.9	7 20	22 15.57	-6 8.6	2.410	3.285	10.6	20.6
7 30	22 12.71	+7 21.0	2.606	3.487	9.6	20.7	7 30	22 10.87	-7 5.9	2.336	3.282	7.6	20.4
8 9	22 5.73	+7 22.4	2.565	3.503	7.4	20.6	8 9	22 4.85	-8 14.7	2.286	3.279	4.3	20.2
8 19	21 58.07	+7 8.6	2.550	3.519	5.6	20.5	8 19	21 58.01	-9 31.0	2.265	3.276	1.1	19.9
8 29	21 50.37	+6 41.4	2.563	3.534	5.3	20.5	8 29	21 51.03	-10 49.7	2.273	3.272	3.0	20.1
9 8	21 43.28	+6 4.1	2.604	3.549	6.6	20.6	9 8	21 44.61	-12 5.3	2.309	3.268	6.4	20.3
9 18	21 37.35	+5 20.8	2.671	3.563	8.6	20.8	9 18	21 39.37	-13 13.4	2.372	3.265	9.5	20.5
9 28	21 33.02	+4 35.9	2.763	3.577	10.7	20.9	9 28	21 35.82	-14 10.4	2.459	3.261	12.2	20.7
49730	1999 <i>VQ</i> ₇₈		8 19.9 45°27'	2°0/18.9	17		295827	2008 <i>UX</i> ₃₅₁		8 19.9 257°34'	4°2/23.9	18	
7 20	22 24.39	-15 2.3	1.081	1.999	17.0	18.8	7 20	22 17.25	+2 32.2	1.970	2.815	13.8	20.7
7 30	22 18.15	-15 29.4	1.035	2.004	12.0	18.5	7 30	22 12.39	+2 2.7	1.881	2.800	10.8	20.5
8 9	22 9.09	-16 3.9	1.008	2.010	6.4	18.2	8 9	22 5.82	+1 12.7	1.815	2.785	7.5	20.3
8 19	21 58.37	-16 38.0	1.005	2.016	2.0	18.0	8 19	21 58.11	+0 4.0	1.774	2.769	4.7	20.1
8 29	21 47.65	-17 3.8	1.025	2.022	6.4	18.3	8 29	21 50.10	-1 18.7	1.760	2.753	4.7	20.0
9 8	21 38.59	-17 15.8	1.067	2.028	11.9	18.6	9 8	21 42.70	-2 48.9	1.773	2.737	7.6	20.2
9 18	21 32.38	-17 11.9	1.131	2.034	16.7	18.9	9 18	21 36.73	-4 19.1	1.813	2.721	11.1	20.4
9 28	21 29.66	-16 52.1	1.211	2.041	20.6	19.2	9 28	21 32.86	-5 42.6	1.876	2.704	14.4	20.5
261331	2005 <i>UL</i> ₂₄₂		8 19.9 57°46'	8°1/12.6	18		326175	2012 <i>BL</i> ₁₁₉		8 19.9 203°20'	0°0/19.9	18	
7 20	22 22.65	-35 36.7	2.031	2.923	11.5	19.9	7 20	22 17.08	-10 39.1	2.613	3.496	9.6	21.9
7 30	22 16.09	-36 40.7	1.998	2.932	9.4	19.8	7 30	22 11.83	-11 8.2	2.540	3.493	6.8	21.7
8 9	22 7.66	-37 31.9	1.990	2.942	8.2	19.7	8 9	22 5.33	-11 43.7	2.493	3.489	3.6	21.5
8 19	21 58.23	-38 3.7	2.006	2.953	8.4	19.7	8 19	21 58.07	-12 22.6	2.474	3.486	0.3	21.3
8 29	21 48.91	-38 12.0	2.047	2.963	9.9	19.9	8 29	21 50.69	-13 1.1	2.484	3.482	3.0	21.5
9 8	21 40.77	-37 56.1	2.111	2.973	12.0	20.0	9 8	21 43.88					

EPHEMERIDES

8 19.9

8 19.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
391889	2008 <i>UY</i> ₅₃		8 19.9 340°64	5°6/15.7	18		163159	2002 <i>CX</i> ₁₃₆		8 19.9 267°90	2°5/21.7	18	
7 20	22 20.20	-23 42.8	1.517	2.433	13.1	20.4	7 20	22 20.72	-4 36.3	1.390	2.278	16.0	20.0
7 30	22 14.82	-24 50.0	1.464	2.429	9.6	20.2	7 30	22 15.36	-4 53.9	1.318	2.267	11.9	19.7
8 9	22 7.21	-25 55.1	1.433	2.425	6.4	20.0	8 9	22 7.62	-5 30.0	1.266	2.257	7.3	19.4
8 19	21 58.24	-26 49.6	1.427	2.421	5.8	20.0	8 19	21 58.32	-6 21.2	1.238	2.247	2.9	19.1
8 29	21 49.14	-27 26.0	1.446	2.418	8.4	20.1	8 29	21 48.65	-7 21.2	1.236	2.236	4.7	19.2
9 8	21 41.19	-27 40.3	1.489	2.415	12.0	20.3	9 8	21 39.98	-8 22.1	1.258	2.226	9.6	19.5
9 18	21 35.39	-27 31.9	1.553	2.413	15.5	20.5	9 18	21 33.42	-9 16.9	1.303	2.215	14.3	19.7
9 28	21 32.41	-27 3.0	1.636	2.411	18.4	20.7	9 28	21 29.78	-10 0.1	1.368	2.204	18.3	19.9
299116	2005 <i>EH</i> ₁₅₇		8 19.9 50°36	0°3/20.2	18		517227	2014 <i>BR</i> ₃₅		8 19.9 266°43	1°9/18.3	18	
7 20	22 18.46	-9 23.4	1.774	2.667	12.8	21.2	7 20	22 19.90	-14 55.0	1.798	2.700	12.2	21.6
7 30	22 13.21	-9 56.1	1.714	2.670	9.1	21.0	7 30	22 14.44	-15 47.9	1.721	2.684	8.6	21.3
8 9	22 6.20	-10 39.2	1.676	2.673	5.0	20.8	8 9	22 7.00	-16 48.1	1.668	2.667	4.6	21.0
8 19	21 58.14	-11 28.3	1.665	2.677	0.6	20.5	8 19	21 58.26	-17 49.5	1.641	2.650	2.0	20.8
8 29	21 49.99	-12 17.7	1.681	2.680	3.9	20.7	8 29	21 49.20	-18 45.4	1.641	2.633	5.2	21.0
9 8	21 42.72	-13 2.0	1.723	2.684	8.1	21.0	9 8	21 40.92	-19 29.9	1.668	2.616	9.4	21.2
9 18	21 37.14	-13 37.2	1.789	2.687	11.8	21.2	9 18	21 34.35	-19 59.6	1.718	2.598	13.2	21.4
9 28	21 33.82	-14 0.5	1.877	2.691	14.9	21.4	9 28	21 30.20	-20 12.9	1.789	2.580	16.5	21.6
389107	2008 <i>YP</i> ₃₅		8 19.9 112°04	2°7/22.1	18		21004	1988 <i>BM</i> ₄		8 19.9 278°79	2°5/21.9	18	
7 20	22 21.56	-4 10.6	2.054	2.918	12.5	20.6	7 20	22 19.31	-4 14.1	1.835	2.709	13.4	18.4
7 30	22 15.12	-4 1.7	1.994	2.930	9.3	20.5	7 30	22 14.00	-4 24.4	1.746	2.688	10.0	18.1
8 9	22 7.12	-4 4.4	1.957	2.941	5.8	20.3	8 9	22 6.77	-4 49.2	1.680	2.667	6.2	17.8
8 19	21 58.23	-4 16.8	1.948	2.952	2.9	20.1	8 19	21 58.24	-5 26.3	1.639	2.646	2.8	17.6
8 29	21 49.31	-4 36.0	1.966	2.963	3.8	20.2	8 29	21 49.34	-6 11.6	1.625	2.624	4.1	17.6
9 8	21 41.24	-4 58.1	2.013	2.974	7.1	20.4	9 8	21 41.09	-6 59.7	1.638	2.603	8.1	17.8
9 18	21 34.73	-5 19.6	2.085	2.984	10.3	20.6	9 18	21 34.43	-7 45.0	1.676	2.581	12.1	18.0
9 28	21 30.29	-5 37.2	2.180	2.995	13.1	20.8	9 28	21 30.08	-8 23.1	1.735	2.559	15.6	18.2
370306	2002 <i>RV</i> ₃₅		8 19.9 319°11	2°1/21.1	15		183949	2004 <i>DH</i> ₄₀		8 19.9 156°64	1°2/20.9	18	
7 20	22 21.65	-7 53.7	1.291	2.190	16.2	20.2	7 20	22 20.88	-6 39.5	1.749	2.631	13.5	20.6
7 30	22 16.13	-7 39.5	1.222	2.179	11.9	19.9	7 30	22 14.95	-7 15.0	1.687	2.636	9.8	20.4
8 9	22 8.07	-7 38.4	1.172	2.167	7.0	19.6	8 9	22 7.17	-8 3.7	1.648	2.641	5.6	20.1
8 19	21 58.33	-7 47.9	1.146	2.156	2.4	19.3	8 19	21 58.27	-9 1.3	1.634	2.645	1.5	19.9
8 29	21 48.26	-8 3.6	1.145	2.146	4.9	19.5	8 29	21 49.26	-10 1.9	1.649	2.649	3.9	20.1
9 8	21 39.30	-8 20.0	1.168	2.136	10.1	19.7	9 8	21 41.18	-10 59.0	1.690	2.652	8.1	20.3
9 18	21 32.65	-8 32.3	1.212	2.127	14.9	20.0	9 18	21 34.86	-11 47.9	1.757	2.655	12.0	20.6
9 28	21 29.12	-8 36.8	1.276	2.118	19.0	20.2	9 28	21 30.91	-12 25.0	1.845	2.658	15.2	20.8
504850	2010 <i>SC</i> ₁₀		8 19.9 61°81	1°4/19.2	17		513055	2017 <i>VO</i> ₁₂		8 19.9 236°47	12°1/29.7	18	
7 20	22 23.86	-14 9.8	1.271	2.181	15.6	21.2	7 20	22 23.49	+21 5.5	2.038	2.752	17.6	22.1
7 30	22 17.43	-14 33.0	1.226	2.192	11.0	20.9	7 30	22 17.04	+22 13.9	1.945	2.736	15.9	21.9
8 9	22 8.57	-15 3.3	1.202	2.202	5.8	20.7	8 9	22 8.48	+22 56.3	1.870	2.719	14.1	21.7
8 19	21 58.37	-15 34.2	1.202	2.213	1.4	20.4	8 19	21 58.42	+23 7.8	1.816	2.701	12.7	21.6
8 29	21 48.23	-15 59.2	1.227	2.224	5.5	20.7	8 29	21 47.82	+22 46.2	1.784	2.683	12.1	21.5
9 8	21 39.55	-16 13.4	1.277	2.236	10.5	21.0	9 8	21 37.77	+21 54.0	1.775	2.663	12.6	21.5
9 18	21 33.36	-16 14.5	1.348	2.247	14.8	21.3	9 18	21 29.32	+20 36.8	1.790	2.643	14.0	21.6
9 28	21 30.23	-16 2.0	1.438	2.258	18.4	21.6	9 28	21 23.27	+19 3.7	1.825	2.621	16.0	21.7
196503	2003 <i>MX</i> ₆		8 19.9 68°44	1°6/18.5	18		61515	2000 <i>QY</i> ₅₇		8 19.9 301°68	3°2/17.6	18	
7 20	22 18.96	-11 39.5	1.515	2.420	13.9	18.9	7 20	22 19.37	-17 15.6	1.499	2.413	13.4	19.1
7 30	22 13.66	-13 11.3	1.477	2.441	9.6	18.7	7 30	22 14.39	-18 13.9	1.427	2.395	9.5	18.8
8 9	22 6.44	-14 52.8	1.462	2.463	5.0	18.5	8 9	22 7.10	-19 18.4	1.377	2.377	5.3	18.5
8 19	21 58.17	-16 34.9	1.474	2.484	1.6	18.3	8 19	21 58.29	-20 21.8	1.353	2.359	3.3	18.3
8 29	21 49.96	-18 8.5	1.512	2.506	5.3	18.6	8 29	21 49.11	-21 15.5	1.353	2.342	6.6	18.5
9 8	21 42.90	-19 26.1	1.576	2.528	9.5	18.9	9 8	21 40.87	-21 53.3	1.379	2.325	11.1	18.7
9 18	21 37.80	-20 23.8	1.664	2.549	13.3	19.2	9 18	21 34.67	-22 11.8	1.426	2.308	15.2	18.9
9 28	21 35.19	-21 0.6	1.772	2.570	16.3	19.5	9 28	21 31.30	-22 10.3	1.492	2.292	18.8	19.1
268226	2005 <i>EF</i> ₂₄		8 19.9 127°38	2°9/17.4	18		356632	2011 <i>UB</i> ₃₆		8 19.9 290°03	1°6/18.6	18	
7 20	22 22.58	-20 14.0	2.268	3.164	10.3	20.7	7 20	22 18.19	-14 50.2	1.960	2.861	11.4	21.2
7 30	22 15.73	-20 51.3	2.220	3.179	7.2	20.6	7 30	22 13.01	-15 32.4	1.891	2.853	8.0	21.0
8 9	22 7.39	-21 28.0	2.198	3.193	4.2	20.4	8 9	22 6.13	-16 20.3	1.846	2.846	4.2	20.8
8 19	21 58.26	-21 59.4	2.205	3.208	2.9	20.3	8 19	21 58.19	-17 8.8	1.828	2.839	1.6	20.6
8 29	21 49.18	-22 21.5	2.239	3.221	5.1	20.5	8 29	21 50.08	-17 52.5	1.838	2.831	4.6	20.8
9 8	21 40.99	-22 31.7	2.302	3.234	8.0	20.7	9 8	21 42.75	-18 26.6	1.874	2.824	8.4	21.0
9 18	21 34.37	-22 29.5	2.390	3.247	10.8	20.9	9 18	21 36.96	-18 48.4	1.935	2.817	11.8	21.2
9 28	21 29.78	-22 15.3	2.500	3.259	13.2	21.1	9 28	21 33.33	-18 56.5	2.016	2.810	14.8	21.4
309664	2008 <i>EE</i> ₂₃		8 19.9 246°74	4°7/15.7	18		481724	2008 <i>EU</i> ₁₆₇		8 19.9 229°55	2°9/23.1	18	
7 20	22 20.72	-25 13.1	2.111	3.015	10.6	20.4	7 20	22 16.36	-0 31.7	2.368	3.220	11.5	22.1
7 30	22 14.70	-26 2.6	2.053	3.011	7.8	20.2	7 30	22 11.49	-0 58.8	2.286	3.212	8.8	21.9
8 9	22 6.97	-26 48.6	2.019	3.007	5.4	20.1	8 9	22 5.23	-1 40.6	2.228	3.205	5.8	21.7
8 19	21 58.23	-27 25.3	2.012	3.002	4.9	20.0	8 19	21 58.11	-2 34.6	2.196	3.197	3.2	21.6
8 29	21 49.41	-27 47.9	2.033	2.998	6.9	20.1	8 29	21 50.82	-3 37.2	2.192	3.189	3.6	21.6
9 8	21 41.44	-27 53.6	2.079	2.994	9.7	20.3	9 8	21 44.07	-4 43.3	2.217	3.180	6.4	21.7
9 18	21 35.13	-27 42.3	2.149	2.990	12.5	20.5	9 18	21 38.53	-5 48.0	2.269	3.171	9.4	21.9
9 28	21 31.01	-27 15.2	2.239	2.985	14.9	20.7	9 28	21 34.71	-6 46.7	2.344	3.162	12.2	22.1
187633	2007 <i>BG</i> ₆₆		8 19.9 127°84	0°3/20.3	18		208497	2001 <i>VH</i> ₁₀₅		8 19.9 290°45	1°2/20.		

EPHEMERIDES

8 19.9

8 19.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
7354	Ishiguro		8 19.9 149°31	1.4/18.4	18		303964	2006 AJ ₁₆		8 19.9 237°56	1.2/20.9	17	
7 20	22 17.57	-15 29.5	2.611	3.504	9.2	18.3	7 20	22 23.38	-9 4.0	2.514	3.383	10.4	20.3
7 30	22 12.16	-16 9.1	2.551	3.510	6.4	18.2	7 30	22 16.31	-8 41.3	2.433	3.376	7.5	20.1
8 9	22 5.51	-16 51.9	2.517	3.515	3.4	18.0	8 9	22 7.78	-8 24.1	2.378	3.369	4.4	19.9
8 19	21 58.14	-17 34.0	2.511	3.521	1.4	17.8	8 19	21 58.38	-8 10.9	2.351	3.361	1.4	19.7
8 29	21 50.72	-18 11.7	2.535	3.526	3.7	18.0	8 29	21 48.83	-8 0.1	2.355	3.353	3.1	19.8
9 8	21 43.93	-18 41.7	2.586	3.531	6.7	18.2	9 8	21 39.94	-7 49.7	2.388	3.345	6.4	20.0
9 18	21 38.33	-19 2.0	2.664	3.535	9.4	18.4	9 18	21 32.37	-7 38.1	2.449	3.337	9.4	20.2
9 28	21 34.38	-19 11.8	2.764	3.539	11.7	18.6	9 28	21 26.64	-7 23.7	2.534	3.329	12.0	20.4
509892	2009 BK ₁₂₁		8 19.9 132°86	0°5/20.5	18		59853	1999 RP ₈₂		8 19.9 359°78	5°8/26.4	18	
7 20	22 19.00	-8 51.3	2.056	2.940	11.7	22.3	7 20	22 13.55	+7 53.6	1.835	2.662	15.3	18.8
7 30	22 13.41	-9 20.0	1.995	2.946	8.4	22.1	7 30	22 9.79	+7 17.3	1.761	2.661	12.4	18.6
8 9	22 6.26	-9 58.0	1.957	2.952	4.6	21.9	8 9	22 4.43	+6 14.9	1.707	2.660	9.3	18.4
8 19	21 58.22	-10 41.5	1.947	2.958	0.8	21.6	8 19	21 58.07	+4 48.5	1.678	2.660	6.6	18.2
8 29	21 50.09	-11 25.8	1.964	2.964	3.4	21.9	8 29	21 51.55	+3 3.1	1.674	2.660	5.9	18.2
9 8	21 42.76	-12 6.4	2.009	2.969	7.2	22.1	9 8	21 45.75	+1 7.0	1.697	2.661	7.9	18.3
9 18	21 36.91	-12 39.7	2.080	2.974	10.6	22.3	9 18	21 41.43	-0 50.8	1.746	2.662	11.0	18.5
9 28	21 33.08	-13 3.2	2.173	2.979	13.4	22.5	9 28	21 39.16	-2 41.8	1.818	2.664	14.0	18.7
63188	2000 YE ₉₆		8 19.9 197°54	0°1/19.9	18		97279	1999 XT ₁₄₄		8 19.9 244°10	5°0/13.9	18	
7 20	22 17.02	-10 38.7	2.759	3.640	9.2	21.0	7 20	22 17.22	-25 55.7	2.389	3.293	9.5	19.3
7 30	22 11.76	-11 11.7	2.685	3.637	6.5	20.8	7 30	22 12.20	-27 22.6	2.332	3.288	7.1	19.1
8 9	22 5.31	-11 50.9	2.637	3.633	3.5	20.6	8 9	22 5.66	-28 47.0	2.301	3.283	5.2	19.0
8 19	21 58.13	-12 33.3	2.618	3.630	0.3	20.4	8 19	21 58.19	-30 2.4	2.298	3.278	5.3	19.0
8 29	21 50.85	-13 15.2	2.628	3.626	2.9	20.6	8 29	21 50.55	-31 3.2	2.323	3.273	7.1	19.1
9 8	21 44.09	-13 53.3	2.667	3.621	6.0	20.8	9 8	21 43.57	-31 45.9	2.373	3.268	9.5	19.3
9 18	21 38.41	-14 24.9	2.733	3.616	8.7	21.0	9 18	21 37.97	-32 9.1	2.447	3.263	11.9	19.4
9 28	21 34.27	-14 48.0	2.823	3.611	11.1	21.1	9 28	21 34.27	-32 13.8	2.541	3.257	14.0	19.6
280090	2002 EH ₂₄		8 19.9 33°40	0°4/19.7	16		350387	2012 VP ₁₀		8 19.9 311°48	4°0/16.9	18	
7 20	22 19.88	-11 35.1	1.532	2.434	13.9	21.3	7 20	22 21.21	-21 14.9	1.718	2.627	12.3	20.5
7 30	22 14.42	-12 4.0	1.476	2.438	9.8	21.0	7 30	22 15.33	-22 2.4	1.660	2.624	8.7	20.3
8 9	22 6.95	-12 42.1	1.444	2.443	5.2	20.8	8 9	22 7.45	-22 49.7	1.626	2.621	5.3	20.1
8 19	21 58.28	-13 24.4	1.436	2.447	0.5	20.4	8 19	21 58.35	-23 30.1	1.617	2.618	4.1	20.0
8 29	21 49.54	-14 4.6	1.454	2.452	4.5	20.8	8 29	21 49.15	-23 57.7	1.634	2.615	6.7	20.2
9 8	21 41.88	-14 37.2	1.497	2.458	9.1	21.0	9 8	21 40.98	-24 8.8	1.677	2.612	10.3	20.4
9 18	21 36.19	-14 58.6	1.564	2.463	13.1	21.3	9 18	21 34.72	-24 2.4	1.743	2.609	13.7	20.6
9 28	21 33.08	-15 7.1	1.651	2.469	16.5	21.5	9 28	21 31.02	-23 39.5	1.829	2.607	16.6	20.8
517430	2014 NZ ₂₁		8 19.9 351°87	7°0/27.3	18		345044	2005 EP ₂₈₆		8 19.9 164°05	5°7/13.6	18	
7 20	22 15.66	+10 31.3	2.216	3.012	14.0	20.8	7 20	22 21.50	-29 12.6	2.415	3.311	9.7	21.9
7 30	22 11.08	+10 49.8	2.139	3.010	11.8	20.7	7 30	22 15.15	-30 31.8	2.369	3.316	7.5	21.7
8 9	22 5.04	+10 47.6	2.083	3.009	9.5	20.5	8 9	22 7.20	-31 44.9	2.349	3.322	5.9	21.6
8 19	21 58.11	+10 24.1	2.051	3.008	7.6	20.4	8 19	21 58.33	-32 45.7	2.357	3.326	6.0	21.6
8 29	21 51.02	+9 42.1	2.044	3.007	7.1	20.4	8 29	21 49.38	-33 29.3	2.392	3.330	7.6	21.8
9 8	21 44.53	+8 43.1	2.063	3.006	8.2	20.4	9 8	21 41.24	-33 53.3	2.454	3.334	9.8	21.9
9 18	21 39.34	+7 35.5	2.107	3.006	10.3	20.6	9 18	21 34.63	-33 57.7	2.538	3.336	12.0	22.1
9 28	21 35.98	+6 24.6	2.174	3.005	12.6	20.7	9 28	21 30.09	-33 44.2	2.642	3.339	13.9	22.2
218019	2001 YX ₁₄		8 19.9 301°17	17°0/27.1	17		133583	2003 UN ₆₀		8 19.9 347°92	5°0/22.7	18	
7 20	22 24.96	+15 42.3	1.111	1.919	24.4	19.9	7 20	22 19.46	-2 41.6	1.104	2.000	18.6	19.3
7 30	22 19.16	+18 9.1	1.044	1.907	21.8	19.7	7 30	22 14.80	-2 8.4	1.043	1.994	14.2	19.0
8 9	22 10.10	+20 4.5	0.993	1.895	19.4	19.5	8 9	22 7.46	-1 55.8	1.001	1.988	9.5	18.7
8 19	21 58.62	+21 17.4	0.959	1.884	17.5	19.3	8 19	21 58.38	-2 3.4	0.980	1.983	5.5	18.5
8 29	21 46.27	+21 41.0	0.943	1.873	17.0	19.2	8 29	21 48.99	-2 27.3	0.981	1.979	6.3	18.5
9 8	21 34.98	+21 16.9	0.946	1.863	18.1	19.3	9 8	21 40.86	-3 0.8	1.004	1.976	10.8	18.8
9 18	21 26.44	+20 14.0	0.966	1.852	20.4	19.4	9 18	21 35.24	-3 36.1	1.048	1.974	15.6	19.0
9 28	21 21.85	+18 46.9	1.002	1.843	23.2	19.5	9 28	21 32.94	-4 6.4	1.110	1.973	19.8	19.3
208931	2002 VB ₃		8 19.9 321°22	2°2/21.8	18		354775	2005 UB ₁₂₃		8 19.9 44°98	0°5/19.5	18	
7 20	22 16.58	-4 40.2	1.673	2.557	13.9	20.3	7 20	22 18.00	-12 2.0	1.896	2.793	11.9	20.8
7 30	22 12.11	-5 3.1	1.598	2.546	10.3	20.0	7 30	22 12.79	-12 33.7	1.842	2.802	8.4	20.6
8 9	22 5.75	-5 41.9	1.545	2.535	6.3	19.7	8 9	22 5.97	-13 12.6	1.812	2.811	4.4	20.4
8 19	21 58.19	-6 33.4	1.516	2.525	2.5	19.5	8 19	21 58.22	-13 54.1	1.808	2.820	0.6	20.1
8 29	21 50.36	-7 32.2	1.514	2.515	4.0	19.6	8 29	21 50.45	-14 33.3	1.831	2.829	3.9	20.4
9 8	21 43.32	-8 31.7	1.538	2.505	8.2	19.8	9 8	21 43.56	-15 5.7	1.881	2.839	7.8	20.7
9 18	21 37.97	-9 25.8	1.586	2.496	12.3	20.0	9 18	21 38.25	-15 28.4	1.956	2.848	11.2	20.9
9 28	21 34.96	-10 9.8	1.655	2.488	15.8	20.2	9 28	21 35.06	-15 39.6	2.052	2.858	14.1	21.1
283652	2002 KU ₁₅		8 19.9 38°93	2°4/21.8	16		188447	2004 HP ₁₂		8 19.9 209°80	0°7/19.4	18	
7 20	22 18.54	-4 45.7	1.389	2.280	15.8	20.8	7 20	22 21.30	-11 49.4	1.818	2.711	12.5	21.3
7 30	22 13.49	-5 2.2	1.343	2.295	11.6	20.6	7 30	22 15.32	-12 33.5	1.748	2.706	8.9	21.1
8 9	22 6.43	-5 35.7	1.319	2.310	7.0	20.3	8 9	22 7.44	-13 26.5	1.702	2.701	4.7	20.8
8 19	21 58.24	-6 21.8	1.318	2.327	2.8	20.1	8 19	21 58.37	-14 23.2	1.683	2.695	0.7	20.5
8 29	21 50.09	-7 14.3	1.343	2.344	4.4	20.3	8 29	21 49.09	-15 17.4	1.692	2.689	4.4	20.8
9 8	21 43.12	-8 5.9	1.392	2.361	8.7	20.6	9 8	21 40.67	-16 3.4	1.728	2.682	8.6	21.0
9 18	21 38.19	-8 51.0	1.465	2.379	12.8	20.9	9 18	21 33.97	-16 37.5	1.788	2.675	12.4	21.2
9 28	21 35.87	-9 25.2	1.558	2.398	16.3	21.1	9 28	21 29.65	-16 57.8	1.870	2.667	15.6	21.4
363964	2005 UJ ₉₈		8 19.9 221°88	3°3/16.3	18		363631	2004 RB ₁₄₈		8 19.9 299°94	5°4/15.2	18	
7 20	22 18.52	-21 56.2	2.564	3.463	9.1	21.4	7 20	22					

EPHEMERIDES

8 19.9

8 20.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
357808	2005 <i>TM</i> ₁₅₇		8 19.9	96°39	2°5/17.8	18	373246	2012 <i>GS</i> ₉		8 20.0	68°94	3°9/23.0	17
7 20	22 20.21	-18 56.7	2.124	3.024	10.7	21.2	7 20	22 19.86	-0 40.3	1.381	2.256	16.8	21.1
7 30	22 14.26	-19 28.0	2.067	3.028	7.5	21.0	7 30	22 14.53	-0 59.4	1.329	2.268	12.7	20.8
8 9	22 6.73	-20 0.1	2.035	3.032	4.2	20.8	8 9	22 7.07	-1 40.6	1.297	2.280	8.3	20.6
8 19	21 58.31	-20 28.5	2.030	3.036	2.6	20.7	8 19	21 58.38	-2 40.0	1.289	2.292	4.5	20.4
8 29	21 49.86	-20 48.9	2.054	3.040	5.0	20.9	8 29	21 49.63	-3 51.1	1.306	2.304	5.0	20.5
9 8	21 42.25	-20 58.5	2.104	3.044	8.2	21.1	9 8	21 42.05	-5 5.3	1.348	2.316	9.0	20.8
9 18	21 36.20	-20 55.9	2.179	3.048	11.2	21.3	9 18	21 36.57	-6 14.7	1.413	2.329	13.1	21.1
9 28	21 32.21	-20 41.2	2.275	3.052	13.8	21.5	9 28	21 33.80	-7 13.3	1.499	2.341	16.7	21.3
507954	2015 <i>BQ</i> ₁₉		8 19.9	316°19	2°0/20.9	17	282061	1999 <i>TL</i> ₂₇₀		8 20.0	325°71	11°6/27.6	18
7 20	22 23.29	-8 54.5	1.172	2.076	17.1	20.9	7 20	22 14.51	+11 58.5	1.352	2.178	19.9	19.3
7 30	22 17.57	-8 30.0	1.102	2.062	12.6	20.6	7 30	22 11.27	+12 57.2	1.261	2.147	17.3	19.1
8 9	22 9.01	-8 17.6	1.053	2.049	7.3	20.3	8 9	22 5.66	+13 26.3	1.187	2.117	14.6	18.8
8 19	21 58.55	-8 14.8	1.026	2.036	2.3	20.0	8 19	21 58.28	+13 20.6	1.131	2.088	12.3	18.6
8 29	21 47.66	-8 17.7	1.022	2.024	5.3	20.1	8 29	21 50.21	+12 38.1	1.096	2.060	11.6	18.5
9 8	21 37.99	-8 21.2	1.042	2.012	10.9	20.4	9 8	21 42.82	+11 22.9	1.083	2.033	13.0	18.5
9 18	21 30.88	-8 21.0	1.084	2.000	16.1	20.6	9 18	21 37.37	+9 44.0	1.090	2.007	15.9	18.6
9 28	21 27.23	-8 13.8	1.143	1.990	20.4	20.9	9 28	21 34.90	+7 53.8	1.115	1.983	19.4	18.7
339169	2004 <i>TG</i> ₈₇		8 19.9	309°24	0°6/19.5	18	442002	2010 <i>OX</i> ₁₇		8 20.0	308°51	1°6/21.1	18
7 20	22 19.24	-11 53.2	1.523	2.427	13.9	21.1	7 20	22 21.10	-8 13.4	1.972	2.853	12.3	20.5
7 30	22 14.18	-12 26.3	1.453	2.416	9.8	20.9	7 30	22 15.09	-7 55.8	1.893	2.841	9.0	20.3
8 9	22 6.96	-13 9.6	1.405	2.404	5.3	20.6	8 9	22 7.31	-7 46.4	1.837	2.829	5.3	20.0
8 19	21 58.35	-13 57.7	1.382	2.394	0.7	20.2	8 19	21 58.41	-7 43.4	1.808	2.817	1.9	19.8
8 29	21 49.47	-14 43.9	1.385	2.383	4.8	20.5	8 29	21 49.29	-7 44.3	1.807	2.806	3.7	19.9
9 8	21 41.53	-15 22.1	1.413	2.373	9.6	20.8	9 8	21 40.92	-7 46.0	1.832	2.795	7.6	20.1
9 18	21 35.54	-15 48.1	1.464	2.363	13.8	21.0	9 18	21 34.12	-7 45.9	1.884	2.784	11.2	20.3
9 28	21 32.23	-15 59.5	1.534	2.353	17.5	21.2	9 28	21 29.51	-7 41.5	1.957	2.773	14.3	20.5
446197	2013 <i>GN</i>		8 19.9	11°30	4°3/15.7	18	145409	2005 <i>NT</i> ₈₆		8 20.0	351°60	4°8/16.2	18
7 20	22 17.47	-22 44.2	2.071	2.979	10.5	20.8	7 20	22 21.04	-24 13.4	1.816	2.724	11.8	19.8
7 30	22 12.46	-23 52.5	2.018	2.980	7.6	20.6	7 30	22 15.14	-24 57.2	1.761	2.723	8.5	19.6
8 9	22 5.83	-24 59.9	1.989	2.981	5.0	20.5	8 9	22 7.33	-25 37.9	1.730	2.721	5.7	19.4
8 19	21 58.24	-25 59.9	1.988	2.982	4.5	20.5	8 19	21 58.40	-26 9.0	1.725	2.720	5.0	19.4
8 29	21 50.56	-26 46.8	2.013	2.983	6.6	20.6	8 29	21 49.42	-26 25.2	1.746	2.719	7.2	19.5
9 8	21 43.69	-27 17.1	2.065	2.985	9.5	20.8	9 8	21 41.46	-26 23.9	1.793	2.718	10.4	19.7
9 18	21 38.36	-27 29.5	2.139	2.986	12.3	21.0	9 18	21 35.37	-26 5.1	1.862	2.717	13.5	19.9
9 28	21 35.11	-27 24.5	2.234	2.988	14.7	21.1	9 28	21 31.73	-25 30.2	1.951	2.717	16.1	20.1
437710	2014 <i>DC</i> ₈₈		8 19.9	5°54	0°9/19.4	18	506909	2008 <i>DW</i> ₃		8 20.0	303°63	1°1/19.2	17
7 20	22 21.19	-14 11.9	1.426	2.335	14.3	19.9	7 20	22 18.62	-11 20.9	1.322	2.232	15.1	20.8
7 30	22 15.50	-14 17.4	1.370	2.335	10.1	19.7	7 30	22 14.02	-12 21.2	1.254	2.220	10.7	20.5
8 9	22 7.61	-14 28.8	1.335	2.335	5.4	19.4	8 9	22 7.01	-13 35.8	1.208	2.209	5.7	20.2
8 19	21 58.41	-14 41.6	1.325	2.337	1.0	19.1	8 19	21 58.39	-14 57.2	1.186	2.197	1.1	19.8
8 29	21 49.14	-14 50.8	1.341	2.339	4.9	19.4	8 29	21 49.42	-16 15.8	1.188	2.186	5.6	20.1
9 8	21 41.05	-14 52.2	1.381	2.342	9.7	19.7	9 8	21 41.48	-17 22.7	1.215	2.175	10.8	20.4
9 18	21 35.14	-14 43.8	1.444	2.345	13.9	19.9	9 18	21 35.73	-18 11.8	1.264	2.164	15.5	20.6
9 28	21 32.01	-14 24.7	1.526	2.349	17.4	20.2	9 28	21 32.97	-18 40.3	1.331	2.154	19.4	20.9
395451	2011 <i>SJ</i> ₂₆₁		8 20.0	283°19	1°6/18.6	18	520461	2014 <i>KE</i> ₁₀₈		8 20.0	97°96	1°3/18.7	15
7 20	22 18.69	-14 53.3	1.935	2.835	11.5	21.2	7 20	22 18.56	-14 9.3	2.218	3.112	10.5	21.8
7 30	22 13.40	-15 34.6	1.866	2.829	8.1	21.0	7 30	22 12.99	-14 57.5	2.169	3.129	7.3	21.6
8 9	22 6.39	-16 21.5	1.823	2.822	4.3	20.7	8 9	22 6.02	-15 50.2	2.146	3.145	3.8	21.4
8 19	21 58.30	-17 8.9	1.805	2.815	1.6	20.5	8 19	21 58.28	-16 42.8	2.151	3.161	1.3	21.2
8 29	21 50.05	-17 51.3	1.815	2.809	4.6	20.7	8 29	21 50.55	-17 30.4	2.184	3.177	4.0	21.5
9 8	21 42.58	-18 24.0	1.852	2.802	8.4	21.0	9 8	21 43.61	-18 9.1	2.244	3.192	7.3	21.7
9 18	21 36.70	-18 44.4	1.913	2.796	11.9	21.2	9 18	21 38.08	-18 36.6	2.331	3.208	10.3	21.9
9 28	21 33.01	-18 51.2	1.996	2.789	14.9	21.4	9 28	21 34.44	-18 51.7	2.439	3.223	12.8	22.1
100968	1998 <i>QL</i> ₂₀		8 20.0	350°21	3°1/21.8	17	76617	2000 <i>GM</i> ₁₇₃		8 20.0	143°66	5°1/24.6	18
7 20	22 13.59	-5 48.0	0.941	1.862	18.7	18.3	7 20	22 19.94	+3 50.8	2.180	3.009	13.2	19.5
7 30	22 10.91	-5 39.0	0.883	1.849	14.0	18.0	7 30	22 14.05	+4 7.2	2.111	3.015	10.5	19.3
8 9	22 5.48	-5 51.2	0.842	1.839	8.6	17.6	8 9	22 6.66	+4 6.9	2.064	3.021	7.7	19.1
8 19	21 58.23	-6 21.8	0.821	1.830	3.6	17.3	8 19	21 58.36	+3 50.5	2.043	3.027	5.5	19.0
8 29	21 50.65	-7 4.0	0.821	1.823	5.6	17.4	8 29	21 49.94	+3 20.4	2.049	3.032	5.3	19.0
9 8	21 44.38	-7 48.8	0.841	1.819	11.2	17.7	9 8	21 42.24	+2 40.5	2.083	3.037	7.4	19.1
9 18	21 40.70	-8 27.8	0.880	1.817	16.6	18.0	9 18	21 35.94	+1 55.8	2.142	3.042	10.0	19.3
9 28	21 40.46	-8 54.3	0.936	1.816	21.2	18.3	9 28	21 31.59	+1 11.2	2.225	3.047	12.6	19.5
440876	2006 <i>TD</i> ₄₆		8 20.0	307°65	1°7/18.5	18	40205	1998 <i>SU</i> ₃₀		8 20.0	12°77	2°7/22.5	18
7 20	22 18.18	-14 58.7	1.853	2.756	11.8	21.5	7 20	22 13.65	-2 18.9	1.595	2.478	14.6	18.0
7 30	22 13.13	-15 40.4	1.783	2.746	8.3	21.2	7 30	22 9.99	-2 55.7	1.537	2.483	10.9	17.8
8 9	22 6.27	-16 28.0	1.737	2.737	4.4	21.0	8 9	22 4.59	-3 51.3	1.501	2.489	6.8	17.6
8 19	21 58.30	-17 16.2	1.718	2.728	1.7	20.8	8 19	21 58.16	-5 1.6	1.489	2.496	3.2	17.4
8 29	21 50.12	-17 59.3	1.725	2.718	4.8	21.0	8 29	21 51.64	-6 19.8	1.503	2.504	4.1	17.4
9 8	21 42.75	-18 32.5	1.759	2.709	8.8	21.2	9 8	21 46.00	-7 38.4	1.542	2.512	7.9	17.7
9 18	21 37.00	-18 52.6	1.816	2.701	12.4	21.4	9 18	21 42.02	-8 50.2	1.606	2.522	11.8	18.0
9 28	21 33.51	-18 58.5	1.895	2.692	15.4	21.6	9 28	21 40.27	-9 50.0	1.691	2.533	15.1	18.2
108263	2001 <i>HT</i> ₅₃		8 20.0	5°49	6°1/24.6	18	187467	2005 <i>YS</i> ₂₅₀		8 20.0	355°15	0°1/19.9	