

EPHEMERIDES

8 12.9

8 13.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
109014	2001 QV ₄	8 12.9	22°22	0°9/13.5	17		115006	2003 QX ₇₇	8 13.0	327°10	4°7/15.6	18	
7 10	21 54.69	-11 46.9	1.155	2.048	18.1	19.4	7 10	21 50.81	- 4 15.2	1.130	2.010	19.5	18.9
7 20	21 50.55	-11 48.1	1.104	2.055	13.6	19.2	7 20	21 48.07	- 4 2.8	1.054	1.992	15.4	18.6
7 30	21 43.64	-12 3.4	1.072	2.064	8.3	18.9	7 30	21 42.48	- 4 13.9	0.995	1.975	10.8	18.2
8 9	21 34.96	-12 28.2	1.061	2.073	2.8	18.6	8 9	21 34.76	- 4 48.0	0.956	1.959	6.2	17.9
8 19	21 25.82	-12 56.8	1.074	2.083	3.3	18.7	8 19	21 26.08	- 5 41.1	0.940	1.945	5.1	17.8
8 29	21 17.70	-13 22.9	1.111	2.094	8.7	19.0	8 29	21 17.97	- 6 45.7	0.945	1.931	9.4	18.0
9 8	21 11.83	-13 41.8	1.169	2.106	13.6	19.3	9 8	21 11.93	- 7 52.2	0.971	1.918	14.5	18.3
9 18	21 8.91	-13 50.5	1.247	2.119	17.7	19.6	9 18	21 8.97	- 8 52.1	1.016	1.906	19.3	18.5
402410	2005 YP ₁₅₀	8 12.9	198°25	0°2/13.2	18		43161	1999 XW ₁₂₃	8 13.0	145°47	4°7/16.7	18	
7 10	21 54.09	-13 8.9	2.515	3.373	10.7	21.5	7 10	21 56.03	- 0 24.9	2.109	2.924	14.0	18.7
7 20	21 48.88	-13 16.9	2.437	3.372	8.0	21.3	7 20	21 50.52	- 0 3.1	2.035	2.930	11.3	18.6
7 30	21 42.17	-13 31.1	2.384	3.371	4.8	21.1	7 30	21 43.26	+ 0 3.2	1.983	2.936	8.3	18.4
8 9	21 34.50	-13 48.8	2.358	3.369	1.5	20.9	8 9	21 34.85	- 0 5.6	1.955	2.942	5.6	18.3
8 19	21 26.50	-14 7.3	2.360	3.367	2.0	20.9	8 19	21 26.07	- 0 27.6	1.955	2.947	4.8	18.2
8 29	21 18.92	-14 23.7	2.391	3.365	5.4	21.2	8 29	21 17.78	- 0 59.6	1.983	2.952	6.7	18.3
9 8	21 12.43	-14 35.7	2.449	3.363	8.5	21.4	9 8	21 10.79	- 1 37.1	2.036	2.957	9.6	18.5
9 18	21 7.54	-14 41.8	2.531	3.361	11.2	21.5	9 18	21 5.68	- 2 15.6	2.113	2.961	12.4	18.7
318910	2005 US ₄₀	8 12.9	277°15	1°8/14.6	18		286815	2002 LH ₃₀	8 13.0	5°09	10°0/21.3	18	
7 10	21 52.25	- 7 24.7	2.254	3.102	12.2	21.3	7 10	21 43.22	+ 8 2.6	1.080	1.925	22.6	19.1
7 20	21 47.78	- 7 36.9	2.163	3.088	9.3	21.0	7 20	21 42.22	+ 8 24.6	1.024	1.924	19.3	18.8
7 30	21 41.66	- 8 0.6	2.094	3.073	6.1	20.8	7 30	21 38.76	+ 8 8.2	0.982	1.926	15.6	18.6
8 9	21 34.38	- 8 33.9	2.052	3.058	2.8	20.6	8 9	21 33.62	+ 7 11.8	0.957	1.930	12.1	18.5
8 19	21 26.63	- 9 13.5	2.037	3.044	2.5	20.5	8 19	21 27.90	+ 5 38.7	0.953	1.936	10.1	18.4
8 29	21 19.20	- 9 55.5	2.051	3.029	5.8	20.7	8 29	21 22.92	+ 3 38.7	0.969	1.945	10.9	18.5
9 8	21 12.88	-10 35.8	2.090	3.014	9.2	20.9	9 8	21 19.87	+ 1 26.2	1.006	1.955	13.8	18.7
9 18	21 8.27	-11 11.0	2.154	2.999	12.3	21.1	9 18	21 19.50	- 0 44.5	1.063	1.968	17.4	18.9
395043	2009 DY ₁₀₅	8 12.9	96°05	0°7/13.6	18		282720	2006 CD ₃₄	8 13.0	223°34	0°9/13.7	16	
7 10	21 53.62	-10 41.5	1.997	2.860	12.9	21.2	7 10	21 53.74	- 8 53.1	1.858	2.719	13.8	21.1
7 20	21 48.85	-11 5.1	1.928	2.864	9.7	21.0	7 20	21 49.17	- 9 37.1	1.780	2.715	10.4	20.9
7 30	21 42.29	-11 39.2	1.882	2.868	6.0	20.8	7 30	21 42.61	-10 35.6	1.725	2.710	6.5	20.6
8 9	21 34.55	-12 20.1	1.861	2.871	2.0	20.6	8 9	21 34.70	-11 44.3	1.695	2.705	2.3	20.4
8 19	21 26.45	-13 3.7	1.868	2.875	2.3	20.6	8 19	21 26.26	-12 57.5	1.692	2.700	2.5	20.4
8 29	21 18.87	-13 45.3	1.902	2.879	6.2	20.9	8 29	21 18.30	-14 8.7	1.717	2.695	6.8	20.6
9 8	21 12.63	-14 21.0	1.962	2.883	9.9	21.1	9 8	21 11.73	-15 12.1	1.768	2.689	10.7	20.9
9 18	21 8.33	-14 48.1	2.045	2.886	13.0	21.3	9 18	21 7.24	-16 4.1	1.841	2.683	14.2	21.1
444132	2004 TV ₃₄₃	8 12.9	308°89	5°0/17.6	18		113526	2002 TK ₁₉	8 13.0	43°29	2°4/14.9	18	
7 10	21 50.85	+ 2 1.1	2.245	3.054	13.5	21.0	7 10	21 52.91	- 5 50.4	1.860	2.712	14.2	19.5
7 20	21 46.72	+ 2 10.4	2.159	3.047	11.0	20.8	7 20	21 48.46	- 6 6.6	1.788	2.714	10.9	19.3
7 30	21 40.99	+ 2 2.9	2.095	3.041	8.4	20.6	7 30	21 42.13	- 6 37.8	1.738	2.716	7.2	19.1
8 9	21 34.19	+ 1 38.8	2.055	3.035	5.9	20.4	8 9	21 34.55	- 7 21.5	1.713	2.718	3.6	18.9
8 19	21 26.97	+ 1 0.0	2.041	3.029	5.1	20.4	8 19	21 26.54	- 8 13.4	1.714	2.720	3.0	18.8
8 29	21 20.10	+ 0 10.0	2.054	3.023	6.5	20.5	8 29	21 19.06	- 9 8.2	1.742	2.722	6.5	19.1
9 8	21 14.33	+ 0 46.3	2.093	3.017	9.2	20.6	9 8	21 12.96	-10 0.5	1.796	2.724	10.2	19.3
9 18	21 10.21	- 1 43.8	2.156	3.011	11.9	20.8	9 18	21 8.88	-10 46.3	1.873	2.727	13.5	19.5
281686	2008 WG ₃₁	8 12.9	351°83	7°3/ 8.1	18		376362	2011 JH ₃₁	8 13.0	139°33	6°1/ 8.1	18	
7 10	21 52.91	-27 13.8	1.272	2.181	15.7	19.4	7 10	22 1.31	-30 59.4	2.100	2.972	12.0	20.6
7 20	21 49.46	-28 32.7	1.217	2.174	12.0	19.1	7 20	21 54.55	-32 0.9	2.050	2.984	9.3	20.5
7 30	21 43.15	-29 50.5	1.183	2.169	8.6	18.9	7 30	21 45.70	-32 56.6	2.025	2.995	7.0	20.3
8 9	21 34.88	-30 56.3	1.171	2.164	7.3	18.8	8 9	21 35.55	-33 39.6	2.027	3.006	6.1	20.3
8 19	21 25.97	-31 40.8	1.182	2.161	9.2	18.9	8 19	21 25.11	-34 4.8	2.055	3.016	7.3	20.4
8 29	21 17.97	-31 58.1	1.215	2.158	12.8	19.1	8 29	21 15.46	-34 9.8	2.110	3.025	9.7	20.6
9 8	21 12.21	-31 47.6	1.268	2.157	16.5	19.4	9 8	21 7.54	-33 55.0	2.188	3.034	12.2	20.7
9 18	21 9.51	-31 12.4	1.339	2.157	19.8	19.6	9 18	21 1.95	-33 23.3	2.288	3.043	14.4	20.9
434369	2004 TE ₁₄₁	8 12.9	304°03	8°6/20.4	18		261971	2006 PV ₃₆	8 13.0	316°97	2°9/11.4	17	
7 10	21 50.50	+ 9 16.2	1.649	2.440	18.3	21.0	7 10	21 54.29	-18 14.2	1.167	2.072	17.1	20.0
7 20	21 47.08	+ 9 22.7	1.560	2.427	15.7	20.7	7 20	21 50.85	-18 48.3	1.087	2.047	12.8	19.7
7 30	21 41.51	+ 8 59.9	1.490	2.413	12.8	20.5	7 30	21 44.28	-19 32.3	1.028	2.023	7.8	19.3
8 9	21 34.41	+ 8 6.0	1.440	2.400	10.0	20.3	8 9	21 35.33	-20 18.9	0.989	2.000	3.2	19.0
8 19	21 26.61	+ 6 42.4	1.413	2.387	8.6	20.2	8 19	21 25.27	-20 59.4	0.974	1.977	5.4	19.1
8 29	21 19.21	+ 4 55.0	1.411	2.374	9.5	20.3	8 29	21 15.81	-21 25.9	0.981	1.955	11.0	19.3
9 8	21 13.25	+ 2 53.3	1.433	2.362	12.2	20.4	9 8	21 8.59	-21 33.7	1.008	1.934	16.3	19.5
9 18	21 9.54	+ 0 48.1	1.477	2.350	15.4	20.5	9 18	21 4.70	-21 22.0	1.053	1.914	21.0	19.8
70758	1999 VB ₃₀	8 13.0	162°98	1°4/14.2	18		352571	2008 DJ ₂₂	8 13.0	114°79	2°9/10.6	18	
7 10	21 54.89	- 8 24.7	2.223	3.071	12.3	19.7	7 10	21 58.53	-23 44.2	2.529	3.397	10.4	20.8
7 20	21 49.62	- 8 44.1	2.149	3.075	9.3	19.5	7 20	21 52.04	-24 6.6	2.474	3.413	7.6	20.7
7 30	21 42.69	- 9 14.3	2.099	3.080	5.9	19.3	7 30	21 44.00	-24 27.9	2.444	3.430	4.8	20.5
8 9	21 34.68	- 9 52.7	2.075	3.083	2.5	19.1	8 9	21 35.04	-24 44.1	2.442	3.445	2.9	20.4
8 19	21 26.30	-10 35.5	2.080	3.086	2.3	19.1	8 19	21 25.91	-24 52.3	2.469	3.461	4.0	20.5
8 29	21 18.40	-11 18.6	2.112	3.089	5.7	19.3	8 29	21 17.41	-24 50.4	2.525	3.476	6.6	20.7
9 8	21 11.73	-11 58.0	2.172	3.092	9.1	19.5	9 8	21 10.22	-24 37.9	2.608	3.491	9.2	20.9
9 18	21 6.84	-12 31.0	2.256	3.093	12.1	19.7	9 18	21 4.83	-24 15.6	2.714	3.505	11.5	21.1
41194	1999 VH ₂₁₃	8 13.0	268°76	0°9/12.1	18		509762	2008 UK ₁₃	8 13.0	260°25	2°2/11.4	18	
7 10	21 51.77												

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
130201	2000 AE ₁₇₀		8 13.0 298°19	8°7/19.6	18		253549	2003 SO ₂₄₅		8 13.0 290°73	3°6/11.1	17	
7 10	21 52.63	+ 8 14.0	1.806	2.592	17.1	19.8	7 10	21 59.93	-21 16.2	1.367	2.259	15.9	20.7
7 20	21 48.48	+ 8 54.3	1.720	2.581	14.7	19.6	7 20	21 54.62	-21 43.3	1.292	2.244	11.9	20.4
7 30	21 42.29	+ 9 11.3	1.652	2.570	12.1	19.4	7 30	21 46.34	-22 14.0	1.237	2.230	7.4	20.1
8 9	21 34.65	+ 9 2.6	1.605	2.559	9.8	19.2	8 9	21 35.94	-22 41.1	1.207	2.215	3.8	19.9
8 19	21 26.37	+ 8 28.3	1.583	2.548	8.7	19.1	8 19	21 24.69	-22 57.5	1.200	2.200	5.6	20.0
8 29	21 18.47	+ 7 31.6	1.584	2.537	9.6	19.1	8 29	21 14.20	-22 58.3	1.219	2.185	10.3	20.2
9 8	21 11.94	+ 6 19.1	1.610	2.527	11.9	19.3	9 8	21 5.89	-22 41.7	1.260	2.171	14.9	20.4
9 18	21 7.52	+ 4 58.4	1.657	2.516	14.7	19.4	9 18	21 0.70	-22 9.0	1.319	2.157	19.0	20.6
376786	2000 QO ₁₉₄		8 13.0 312°07	0°9/12.3	17		287053	2002 QT ₁₃₁		8 13.0 8°12	2°1/11.6	18	
7 10	21 54.41	-12 52.3	1.857	2.728	13.4	20.9	7 10	21 55.74	-18 19.8	1.666	2.551	13.9	21.1
7 20	21 50.23	-13 50.6	1.732	2.674	10.1	20.6	7 20	21 50.81	-18 48.1	1.601	2.551	10.3	20.9
7 30	21 43.67	-15 4.9	1.629	2.620	6.2	20.2	7 30	21 43.67	-19 21.7	1.559	2.552	6.2	20.7
8 9	21 35.16	-16 31.0	1.552	2.564	1.8	19.8	8 9	21 35.08	-19 55.0	1.542	2.553	2.4	20.4
8 19	21 25.43	-18 2.1	1.503	2.508	3.5	19.8	8 19	21 26.04	-20 22.8	1.551	2.554	4.0	20.6
8 29	21 15.60	-19 30.2	1.481	2.452	8.4	20.0	8 29	21 17.70	-20 40.7	1.587	2.556	8.1	20.8
9 8	21 6.89	-20 47.6	1.484	2.395	13.1	20.1	9 8	21 11.07	-20 46.1	1.646	2.558	12.0	21.0
9 18	21 0.38	-21 49.4	1.509	2.337	17.4	20.3	9 18	21 6.83	-20 38.8	1.726	2.560	15.3	21.3
329155	2012 BX ₂₂		8 13.0 183°39	2°3/10.6	18		13667	Samthurman		8 13.0 308°53	1°7/14.0	18	
7 10	21 52.36	-19 12.4	2.524	3.398	10.2	20.9	7 10	21 53.50	- 9 6.0	1.341	2.221	17.0	18.2
7 20	21 47.72	-20 13.2	2.453	3.398	7.4	20.7	7 20	21 49.81	- 9 19.1	1.258	2.201	13.0	17.9
7 30	21 41.55	-21 18.2	2.408	3.398	4.5	20.6	7 30	21 43.45	- 9 49.6	1.194	2.182	8.3	17.6
8 9	21 34.38	-22 22.3	2.390	3.397	2.3	20.4	8 9	21 35.12	-10 34.2	1.153	2.163	3.3	17.2
8 19	21 26.86	-23 21.0	2.401	3.397	3.7	20.5	8 19	21 25.87	-11 27.4	1.136	2.144	3.3	17.2
8 29	21 19.72	-24 10.0	2.441	3.396	6.5	20.7	8 29	21 17.11	-12 21.9	1.144	2.126	8.6	17.4
9 8	21 13.67	-24 46.8	2.506	3.395	9.3	20.9	9 8	21 10.20	-13 10.7	1.173	2.109	13.7	17.7
9 18	21 9.22	-25 10.3	2.595	3.394	11.8	21.0	9 18	21 6.10	-13 48.5	1.223	2.092	18.2	17.9
129192	1978 VD ₅		8 13.0 214°95	0°4/13.4	18		311502	2005 WV ₆₈		8 13.0 49°44	7°7/5.6	18	
7 10	21 52.64	-11 34.7	2.565	3.421	10.6	19.6	7 10	21 56.03	-35 12.6	2.076	2.954	11.9	20.4
7 20	21 47.86	-11 59.2	2.483	3.416	7.9	19.4	7 20	21 50.91	-36 37.8	2.031	2.960	9.7	20.2
7 30	21 41.63	-12 31.5	2.425	3.411	4.9	19.2	7 30	21 43.67	-37 54.7	2.010	2.966	8.1	20.1
8 9	21 34.43	-13 8.8	2.394	3.405	1.5	19.0	8 9	21 35.06	-38 55.8	2.014	2.972	7.8	20.1
8 19	21 26.87	-13 47.8	2.392	3.400	2.0	19.0	8 19	21 26.07	-39 35.4	2.044	2.978	9.0	20.2
8 29	21 19.67	-14 24.9	2.419	3.394	5.3	19.2	8 29	21 17.78	-39 50.7	2.097	2.985	11.1	20.4
9 8	21 13.48	-14 57.2	2.473	3.387	8.4	19.4	9 8	21 11.16	-39 42.4	2.172	2.991	13.2	20.5
9 18	21 8.82	-15 22.3	2.551	3.381	11.1	19.6	9 18	21 6.83	-39 13.5	2.267	2.998	15.2	20.7
447685	2007 BD ₁₁		8 13.0 115°73	1°6/11.7	18		324395	2006 SB ₄₃		8 13.0 97°83	2°7/14.9	17	
7 10	21 55.59	-18 50.5	2.300	3.172	11.1	21.5	7 10	21 58.52	- 6 18.3	1.583	2.436	16.2	21.0
7 20	21 50.11	-19 11.0	2.234	3.177	8.2	21.3	7 20	21 52.72	- 6 25.9	1.528	2.454	12.4	20.8
7 30	21 42.98	-19 34.3	2.192	3.182	4.9	21.1	7 30	21 44.73	- 6 49.4	1.494	2.472	8.1	20.6
8 9	21 34.81	-19 56.8	2.178	3.188	1.9	20.9	8 9	21 35.36	- 7 25.7	1.485	2.490	3.9	20.4
8 19	21 26.36	-20 14.8	2.191	3.193	3.1	21.0	8 19	21 25.67	- 8 10.1	1.502	2.507	3.3	20.4
8 29	21 18.44	-20 25.4	2.233	3.198	6.4	21.3	8 29	21 16.81	- 8 56.9	1.545	2.524	7.2	20.7
9 8	21 11.81	-20 27.1	2.301	3.203	9.5	21.5	9 8	21 9.75	- 9 40.7	1.614	2.541	11.2	21.0
9 18	21 6.99	-20 19.4	2.392	3.208	12.1	21.7	9 18	21 5.13	-10 17.4	1.704	2.557	14.6	21.2
338641	2003 SV ₃₀₁		8 13.0 301°15	4°6/16.6	18		37545	1981 EA ₁₈		8 13.0 183°48	2°5/15.6	18	
7 10	21 52.36	- 0 56.4	1.742	2.578	15.7	20.4	7 10	21 51.25	- 3 45.8	2.377	3.210	12.1	19.6
7 20	21 48.29	- 0 57.8	1.659	2.570	12.6	20.2	7 20	21 46.93	- 4 14.5	2.297	3.210	9.4	19.5
7 30	21 42.19	- 1 19.0	1.597	2.561	9.0	20.0	7 30	21 41.13	- 4 57.1	2.239	3.210	6.4	19.3
8 9	21 34.66	- 1 59.0	1.558	2.552	5.7	19.8	8 9	21 34.33	- 5 51.5	2.208	3.210	3.4	19.1
8 19	21 26.54	- 2 54.6	1.545	2.544	4.7	19.7	8 19	21 27.17	- 6 53.9	2.205	3.209	2.8	19.0
8 29	21 18.88	- 4 0.3	1.558	2.535	7.3	19.8	8 29	21 20.38	- 7 59.8	2.231	3.209	5.4	19.2
9 8	21 12.62	- 5 9.2	1.595	2.527	10.9	20.0	9 8	21 14.65	- 9 4.3	2.283	3.208	8.5	19.4
9 18	21 8.51	- 6 15.2	1.655	2.519	14.4	20.2	9 18	21 10.48	-10 3.5	2.360	3.207	11.3	19.6
235720	2004 TS ₁₆₀		8 13.0 217°22	3°1/10.7	18		369502	2010 VX ₃₆		8 13.0 257°04	3°3/15.4	18	
7 10	21 57.59	-21 16.3	1.971	2.849	12.4	20.8	7 10	21 55.80	- 4 17.0	1.662	2.510	15.8	21.5
7 20	21 51.99	-21 58.7	1.898	2.844	9.2	20.6	7 20	21 51.07	- 4 28.0	1.572	2.494	12.4	21.2
7 30	21 44.32	-22 43.8	1.850	2.839	5.7	20.4	7 30	21 44.01	- 4 57.5	1.503	2.477	8.5	20.9
8 9	21 35.26	-23 26.0	1.827	2.833	3.1	20.2	8 9	21 35.26	- 5 43.8	1.457	2.460	4.6	20.7
8 19	21 25.71	-23 59.9	1.832	2.827	4.6	20.3	8 19	21 25.73	- 6 43.0	1.438	2.442	3.8	20.6
8 29	21 16.73	-24 21.2	1.864	2.821	8.1	20.5	8 29	21 16.58	- 7 48.8	1.445	2.425	7.5	20.8
9 8	21 9.27	-24 28.2	1.921	2.814	11.5	20.7	9 8	21 8.96	- 8 54.3	1.477	2.406	11.8	21.0
9 18	21 4.01	-24 21.0	2.000	2.807	14.5	20.9	9 18	21 3.72	- 9 53.6	1.531	2.388	15.8	21.2
264864	2002 RZ ₁₅₅		8 13.0 271°42	1°9/14.4	18		143691	2003 UQ ₁₅		8 13.0 229°73	3°0/15.2	18	
7 10	21 56.01	- 7 39.8	1.705	2.562	15.0	21.1	7 10	21 56.04	- 4 55.4	1.655	2.505	15.8	20.5
7 20	21 51.25	- 7 58.4	1.608	2.539	11.6	20.9	7 20	21 51.14	- 5 7.6	1.575	2.498	12.3	20.3
7 30	21 44.15	- 8 32.9	1.532	2.514	7.5	20.6	7 30	21 43.98	- 5 37.7	1.515	2.491	8.3	20.1
8 9	21 35.29	- 9 20.8	1.481	2.489	3.3	20.3	8 9	21 35.22	- 6 23.2	1.480	2.483	4.3	19.8
8 19	21 25.56	-10 17.4	1.457	2.464	3.0	20.2	8 19	21 25.82	- 7 19.9	1.470	2.475	3.6	19.7
8 29	21 16.15	-11 16.8	1.459	2.438	7.5	20.4	8 29	21 16.93	- 8 21.5	1.487	2.467	7.3	20.0
9 8	21 8.20	-12 12.5	1.486	2.412	12.0	20.6	9 8	21 9.62	- 9 21.7	1.529	2.458	11.5	20.2
9 18	21 2.61	-12 59.7	1.535	2.385	16.1	20.8	9 18	21 4.67	-10 14.9	1.594	2.449	15.3	20.4
506460	2002 CR ₁₆₁		8 13.0 173°99	1°4/11.9	18		519230						

EPHEMERIDES

8 13.0

8 13.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
293120	2006 <i>XF</i> ₃₆		8 13.0 297°52	3°5/10.5	18		171054	2005 <i>EA</i> ₁₁₇		8 13.0 305°22	3°0/10.9	18	
7 10	21 54.65	-18 54.1	1.424	2.320	15.2	20.2	7 10	21 56.74	-21 7.0	1.796	2.680	13.2	20.7
7 20	21 50.63	-20 2.6	1.348	2.303	11.3	20.0	7 20	21 51.52	-21 39.9	1.726	2.675	9.7	20.5
7 30	21 43.93	-21 20.8	1.293	2.286	7.0	19.7	7 30	21 44.11	-22 15.4	1.680	2.671	6.0	20.2
8 9	21 35.26	-22 40.4	1.262	2.270	3.6	19.4	8 9	21 35.25	-22 48.0	1.659	2.666	3.1	20.0
8 19	21 25.75	-23 52.1	1.256	2.254	5.8	19.5	8 19	21 25.91	-23 12.3	1.664	2.662	4.7	20.1
8 29	21 16.79	-24 47.6	1.274	2.238	10.3	19.7	8 29	21 17.21	-23 24.3	1.696	2.658	8.3	20.3
9 8	21 9.73	-25 22.2	1.315	2.222	14.8	20.0	9 8	21 10.16	-23 22.2	1.752	2.654	12.0	20.6
9 18	21 5.49	-25 34.9	1.375	2.206	18.6	20.2	9 18	21 5.44	-23 6.5	1.830	2.650	15.2	20.8
14159	1998 <i>SV</i> ₁₄₁		8 13.0 51°34	2°9/11.2	18		134953	2001 <i>CV</i> ₂₀		8 13.0 171°45	8°5/4.3	18	
7 10	21 56.72	-16 55.8	1.150	2.051	17.7	18.2	7 10	22 1.97	-35 1.2	2.007	2.878	12.5	20.0
7 20	21 52.27	-18 0.4	1.100	2.058	13.0	17.9	7 20	21 55.60	-37 10.2	1.959	2.882	10.3	19.8
7 30	21 44.85	-19 15.7	1.070	2.065	7.7	17.7	7 30	21 46.71	-39 11.7	1.937	2.886	8.7	19.7
8 9	21 35.48	-20 32.1	1.063	2.073	3.2	17.4	8 9	21 36.05	-40 55.4	1.941	2.889	8.7	19.7
8 19	21 25.55	-21 39.5	1.079	2.081	5.4	17.6	8 19	21 24.71	-42 13.2	1.971	2.891	10.1	19.8
8 29	21 16.68	-22 29.7	1.119	2.089	10.4	17.9	8 29	21 14.02	-43 1.1	2.026	2.893	12.3	20.0
9 8	21 10.20	-22 58.6	1.180	2.098	15.1	18.2	9 8	21 5.17	-43 19.5	2.103	2.893	14.5	20.1
9 18	21 6.87	-23 6.4	1.259	2.107	19.1	18.5	9 18	20 58.98	-43 12.2	2.197	2.893	16.5	20.3
316808	1999 <i>VX</i> ₉₉		8 13.0 324°87	1°9/14.3	18		132980	2002 <i>TM</i> ₁₈₈		8 13.0 334°80	6°1/17.2	18	
7 10	21 52.38	- 8 32.4	1.505	2.379	15.8	20.7	7 10	21 50.91	+ 0 26.7	1.544	2.385	17.1	18.5
7 20	21 48.64	- 8 42.9	1.426	2.365	12.1	20.5	7 20	21 47.49	+ 0 51.6	1.463	2.372	14.0	18.3
7 30	21 42.56	- 9 9.0	1.367	2.353	7.8	20.2	7 30	21 41.85	+ 0 55.3	1.401	2.360	10.5	18.1
8 9	21 34.83	- 9 47.9	1.331	2.340	3.3	19.9	8 9	21 34.64	+ 0 37.2	1.361	2.349	7.3	17.9
8 19	21 26.42	-10 34.7	1.321	2.329	3.1	19.8	8 19	21 26.77	- 0 0.9	1.344	2.338	6.2	17.8
8 29	21 18.53	-11 23.3	1.335	2.318	7.7	20.1	8 29	21 19.36	- 0 54.2	1.352	2.328	8.4	17.9
9 8	21 12.29	-12 7.6	1.373	2.307	12.2	20.3	9 8	21 13.50	- 1 55.5	1.383	2.319	12.0	18.1
9 18	21 8.51	-12 43.2	1.432	2.297	16.2	20.6	9 18	21 9.97	- 2 57.8	1.436	2.311	15.6	18.3
136224	2003 <i>WH</i> ₈₆		8 13.0 87°86	4°1/15.8	18		476498	2008 <i>FA</i> ₁₃₃		8 13.0 113°43	2°5/15.5	18	
7 10	21 57.16	- 3 8.3	1.464	2.313	17.5	19.7	7 10	21 52.93	- 4 37.6	2.448	3.280	11.8	21.8
7 20	21 51.92	- 3 9.4	1.407	2.328	13.7	19.5	7 20	21 48.04	- 4 49.8	2.380	3.292	9.2	21.7
7 30	21 44.35	- 3 30.7	1.371	2.342	9.4	19.3	7 30	21 41.73	- 5 14.0	2.335	3.305	6.2	21.5
8 9	21 35.30	- 4 9.9	1.357	2.357	5.4	19.1	8 9	21 34.52	- 5 48.1	2.317	3.317	3.3	21.4
8 19	21 25.84	- 5 2.2	1.369	2.371	4.4	19.0	8 19	21 27.04	- 6 29.3	2.326	3.329	2.8	21.3
8 29	21 17.21	- 6 1.1	1.406	2.385	7.7	19.3	8 29	21 20.01	- 7 13.7	2.365	3.341	5.2	21.5
9 8	21 10.45	- 6 59.5	1.468	2.399	11.7	19.5	9 8	21 14.06	- 7 57.6	2.430	3.353	8.1	21.7
9 18	21 6.22	- 7 51.9	1.551	2.413	15.3	19.8	9 18	21 9.68	- 8 37.7	2.520	3.364	10.7	21.9
336946	2011 <i>HK</i> ₇₇		8 13.0 33°83	2°5/11.4	17		30121	2000 <i>FF</i> ₃₉		8 13.0 24°01	0°7/12.6	18	
7 10	21 55.24	-17 52.8	1.390	2.285	15.6	20.4	7 10	21 54.43	-12 29.5	1.109	2.006	18.4	18.3
7 20	21 50.73	-18 38.4	1.338	2.292	11.4	20.1	7 20	21 50.65	-13 19.5	1.054	2.010	13.7	18.0
7 30	21 43.73	-19 31.2	1.307	2.301	6.8	19.9	7 30	21 43.94	-14 26.4	1.019	2.014	8.2	17.7
8 9	21 35.13	-20 23.9	1.299	2.310	2.8	19.7	8 9	21 35.26	-15 42.4	1.006	2.018	2.3	17.4
8 19	21 26.10	-21 9.2	1.317	2.319	4.6	19.8	8 19	21 25.95	-16 57.6	1.016	2.023	3.9	17.5
8 29	21 17.96	-21 41.3	1.359	2.329	9.1	20.1	8 29	21 17.60	-18 2.5	1.049	2.029	9.7	17.9
9 8	21 11.82	-21 57.4	1.424	2.339	13.3	20.4	9 8	21 11.56	-18 50.5	1.104	2.035	14.8	18.2
9 18	21 8.36	-21 57.1	1.509	2.350	16.8	20.6	9 18	21 8.65	-19 18.9	1.177	2.041	19.0	18.5
397362	2006 <i>UA</i> ₁₄₁		8 13.0 63°39	5°7/17.9	18		396290	2014 <i>DA</i> ₁₉		8 13.0 247°26	2°1/14.7	18	
7 10	21 53.03	+ 2 48.5	2.109	2.914	14.4	21.0	7 10	21 55.38	- 6 57.4	2.038	2.884	13.4	21.4
7 20	21 48.42	+ 3 9.4	2.031	2.915	11.8	20.8	7 20	21 50.36	- 7 11.0	1.945	2.869	10.3	21.2
7 30	21 42.10	+ 3 12.6	1.973	2.915	9.1	20.6	7 30	21 43.40	- 7 38.0	1.875	2.853	6.8	20.9
8 9	21 34.64	+ 2 58.0	1.940	2.915	6.6	20.5	8 9	21 35.08	- 8 16.1	1.831	2.837	3.2	20.7
8 19	21 26.77	+ 2 27.0	1.932	2.916	5.7	20.4	8 19	21 26.15	- 9 1.6	1.814	2.820	2.8	20.6
8 29	21 19.32	+ 1 43.3	1.950	2.916	7.1	20.5	8 29	21 17.58	- 9 50.0	1.825	2.803	6.4	20.8
9 8	21 13.08	+ 0 51.7	1.995	2.917	9.7	20.7	9 8	21 10.26	-10 36.4	1.862	2.785	10.2	21.0
9 18	21 8.64	- 0 2.3	2.063	2.917	12.4	20.8	9 18	21 4.90	-11 16.9	1.923	2.767	13.6	21.2
173854	2001 <i>TM</i> ₁₅₇		8 13.0 332°98	0°5/13.4	18		198243	2004 <i>TN</i> ₂₀₆		8 13.0 342°19	2°4/14.6	18	
7 10	21 52.59	-11 10.8	1.880	2.749	13.3	20.5	7 10	21 52.46	- 7 20.8	1.439	2.312	16.5	19.6
7 20	21 48.31	-11 37.8	1.805	2.745	10.0	20.3	7 20	21 48.71	- 7 30.4	1.367	2.305	12.7	19.3
7 30	21 42.13	-12 15.8	1.753	2.741	6.1	20.1	7 30	21 42.61	- 7 57.3	1.315	2.299	8.3	19.1
8 9	21 34.66	-13 1.3	1.726	2.738	2.0	19.8	8 9	21 34.86	- 8 38.5	1.286	2.294	3.8	18.8
8 19	21 26.74	-13 49.4	1.726	2.734	2.5	19.8	8 19	21 26.50	- 9 29.0	1.282	2.289	3.3	18.8
8 29	21 19.31	-14 34.9	1.753	2.731	6.6	20.1	8 29	21 18.74	-10 22.4	1.303	2.285	7.7	19.0
9 8	21 13.26	-15 13.6	1.805	2.728	10.5	20.3	9 8	21 12.72	-11 12.0	1.346	2.282	12.2	19.3
9 18	21 9.22	-15 42.5	1.880	2.726	13.8	20.5	9 18	21 9.22	-11 52.8	1.411	2.279	16.2	19.5
481572	2007 <i>TR</i> ₄₀		8 13.0 355°15	11°1/5.9	18		184732	2005 <i>SG</i> ₁₈₅		8 13.0 135°64	1°1/12.1	18	
7 10	21 56.11	-36 43.1	1.260	2.160	16.5	19.5	7 10	21 54.40	-16 13.5	2.301	3.169	11.2	21.3
7 20	21 52.13	-38 1.6	1.213	2.153	13.7	19.3	7 20	21 49.28	-16 43.1	2.233	3.175	8.2	21.1
7 30	21 44.90	-39 6.9	1.186	2.148	11.6	19.1	7 30	21 42.55	-17 17.9	2.190	3.180	4.9	20.9
8 9	21 35.52	-39 47.4	1.180	2.145	11.2	19.1	8 9	21 34.77	-17 54.1	2.173	3.184	1.6	20.7
8 19	21 25.56	-39 54.9	1.194	2.142	12.7	19.2	8 19	21 26.69	-18 27.7	2.185	3.189	2.7	20.8
8 29	21 16.80	-39 26.6	1.230	2.141	15.4	19.3	8 29	21 19.09	-18 55.1	2.225	3.194	6.1	21.0
9 8	21 10.68	-38 26.1	1.284	2.142	18.3	19.5	9 8	21 12.72	-19 13.9	2.291	3.198	9.3	21.2
9 18	21 7.95	-36 59.9	1.354	2.143	21.0	19.7	9 18	21 8.10	-19 23.1	2.381	3.202	12.0	21.4
204977	1994 <i>S</i>												

EPHEMERIDES

8 13.0

8 13.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
366029	2012 <i>BU</i> ₁₃₉		8 13.0 173°93	2.4/10.5	18		471109	Vladobahyl		8 13.1 238°84	2.6/11.0	18	
7 10	21 53.39	-21 3.0	2.634	3.507	9.8	21.6	7 10	21 57.43	-19 43.8	1.972	2.849	12.5	21.8
7 20	21 48.43	-21 48.9	2.565	3.508	7.2	21.4	7 20	21 51.97	-20 26.6	1.892	2.837	9.2	21.6
7 30	21 42.00	-22 36.7	2.521	3.510	4.5	21.2	7 30	21 44.41	-21 13.8	1.836	2.826	5.7	21.3
8 9	21 34.61	-23 22.4	2.505	3.511	2.5	21.1	8 9	21 35.40	-22 0.0	1.805	2.814	2.7	21.1
8 19	21 26.92	-24 1.9	2.518	3.511	3.7	21.2	8 19	21 25.82	-22 39.6	1.803	2.801	4.3	21.2
8 29	21 19.63	-24 31.8	2.558	3.512	6.4	21.4	8 29	21 16.72	-23 8.0	1.828	2.788	7.9	21.4
9 8	21 13.42	-24 50.5	2.626	3.512	9.0	21.5	9 8	21 9.09	-23 22.5	1.877	2.775	11.5	21.6
9 18	21 8.79	-24 57.4	2.716	3.512	11.4	21.7	9 18	21 3.64	-23 22.9	1.949	2.761	14.7	21.8
161796	2006 <i>VT</i> ₃₄		8 13.0 295°59	1.7/14.0	18		462536	2009 <i>BO</i> ₄₉		8 13.1 80°33	1.8/11.8	17	
7 10	21 55.21	-9 17.0	1.433	2.307	16.4	20.8	7 10	21 55.77	-14 10.0	1.313	2.203	16.6	20.9
7 20	21 51.05	-9 26.3	1.343	2.283	12.6	20.5	7 20	21 51.41	-15 19.2	1.251	2.204	12.3	20.6
7 30	21 44.23	-9 51.6	1.273	2.259	8.1	20.2	7 30	21 44.35	-16 42.7	1.210	2.204	7.3	20.4
8 9	21 35.42	-10 29.9	1.226	2.235	3.2	19.8	8 9	21 35.42	-18 12.3	1.193	2.204	2.4	20.1
8 19	21 25.62	-11 16.5	1.204	2.211	3.2	19.7	8 19	21 25.84	-19 38.0	1.200	2.205	4.4	20.2
8 29	21 16.23	-12 4.7	1.206	2.188	8.4	20.0	8 29	21 17.03	-20 50.7	1.233	2.205	9.5	20.5
9 8	21 8.57	-12 48.2	1.232	2.164	13.4	20.2	9 8	21 10.27	-21 44.5	1.288	2.206	14.2	20.8
9 18	21 3.65	-13 22.0	1.278	2.141	17.9	20.4	9 18	21 6.40	-22 17.3	1.363	2.206	18.1	21.0
223210	2003 <i>BW</i> ₅₁		8 13.0 285°66	0.5/12.8	18		112482	2002 <i>OJ</i> ₂₆		8 13.1 237°93	2.4/10.8	18	
7 10	21 58.50	-15 0.0	1.580	2.457	15.0	20.2	7 10	21 54.20	-18 4.9	2.081	2.958	11.9	19.8
7 20	21 53.26	-15 6.1	1.492	2.437	11.3	19.9	7 20	21 49.48	-19 9.3	2.003	2.950	8.7	19.6
7 30	21 45.44	-15 20.3	1.425	2.416	6.9	19.6	7 30	21 42.87	-20 20.3	1.950	2.941	5.3	19.3
8 9	21 35.74	-15 38.6	1.383	2.395	2.0	19.2	8 9	21 34.95	-21 32.1	1.924	2.932	2.5	19.1
8 19	21 25.20	-15 56.2	1.367	2.374	3.2	19.3	8 19	21 26.51	-22 38.6	1.925	2.923	4.1	19.2
8 29	21 15.15	-16 8.6	1.376	2.352	8.3	19.5	8 29	21 18.49	-23 34.3	1.954	2.914	7.6	19.4
9 8	21 6.84	-16 12.3	1.410	2.331	12.9	19.7	9 8	21 11.78	-24 15.7	2.008	2.904	11.0	19.6
9 18	21 1.19	-16 6.0	1.465	2.310	17.0	19.9	9 18	21 7.03	-24 41.4	2.085	2.894	13.9	19.8
101879	1999 <i>NP</i> ₂₆		8 13.0 7°90	1.9/14.0	18		467493	2006 <i>UV</i> ₈₂		8 13.1 349°28	4.7/11.0	16	
7 10	21 53.69	-10 15.3	1.038	1.936	19.4	18.2	7 10	21 52.34	-22 38.8	0.914	1.839	18.8	20.5
7 20	21 50.20	-10 6.6	0.983	1.936	14.7	17.9	7 20	21 49.81	-22 55.4	0.857	1.826	14.1	20.2
7 30	21 43.71	-10 14.8	0.947	1.938	9.3	17.6	7 30	21 43.79	-23 13.8	0.817	1.815	8.9	19.9
8 9	21 35.21	-10 36.4	0.930	1.941	3.7	17.3	8 9	21 35.32	-23 25.4	0.797	1.805	4.9	19.6
8 19	21 26.09	-11 5.7	0.936	1.945	3.6	17.3	8 19	21 26.00	-23 22.2	0.797	1.798	7.0	19.7
8 29	21 17.96	-11 35.8	0.964	1.950	9.2	17.7	8 29	21 17.80	-22 59.2	0.817	1.793	12.2	20.0
9 8	21 12.21	-12 0.5	1.013	1.956	14.4	18.0	9 8	21 12.35	-22 16.0	0.855	1.790	17.4	20.2
9 18	21 9.65	-12 15.6	1.080	1.964	18.9	18.3	9 18	21 10.57	-21 15.3	0.910	1.789	22.0	20.5
114146	2002 <i>VT</i> ₆₂		8 13.1 274°42	5.3/9.5	18 R		20211	Joycegates		8 13.1 91°62	0.4/12.7	18	
7 10	21 58.49	-24 44.8	1.554	2.445	14.4	19.4	7 10	21 53.96	-14 2.2	2.256	3.121	11.5	19.2
7 20	21 53.30	-25 44.7	1.484	2.434	10.9	19.2	7 20	21 48.95	-14 27.7	2.193	3.132	8.5	19.1
7 30	21 45.44	-26 45.9	1.436	2.423	7.3	18.9	7 30	21 42.35	-14 59.9	2.155	3.143	5.1	18.9
8 9	21 35.72	-27 40.0	1.412	2.412	5.3	18.8	8 9	21 34.76	-15 35.1	2.143	3.154	1.4	18.6
8 19	21 25.29	-28 19.1	1.414	2.400	7.0	18.9	8 19	21 26.89	-16 9.5	2.159	3.165	2.3	18.7
8 29	21 15.57	-28 37.8	1.441	2.389	10.7	19.1	8 29	21 19.54	-16 39.4	2.203	3.176	5.9	19.0
9 8	21 7.81	-28 34.6	1.490	2.378	14.5	19.3	9 8	21 13.43	-17 2.2	2.274	3.187	9.1	19.2
9 18	21 2.86	-28 11.4	1.558	2.367	17.9	19.5	9 18	21 9.06	-17 16.4	2.368	3.197	11.8	19.4
435680	2008 <i>TY</i> ₆₂		8 13.1 113°26	7.4/19.7	18		117474	2005 <i>BE</i> ₁₈		8 13.1 60°63	2.0/11.6	18	
7 10	21 53.14	+ 7 32.8	1.864	2.651	16.6	21.6	7 10	21 56.16	-17 36.3	1.647	2.531	14.1	19.6
7 20	21 48.70	+ 7 43.4	1.790	2.656	14.0	21.4	7 20	21 51.05	-18 16.8	1.596	2.545	10.3	19.4
7 30	21 42.37	+ 7 29.8	1.736	2.661	11.2	21.2	7 30	21 43.79	-19 3.1	1.567	2.559	6.1	19.2
8 9	21 34.77	+ 6 51.5	1.703	2.665	8.6	21.1	8 9	21 35.20	-19 49.2	1.563	2.573	2.4	19.0
8 19	21 26.72	+ 5 50.5	1.696	2.670	7.4	21.0	8 19	21 26.29	-20 29.3	1.585	2.588	3.9	19.1
8 29	21 19.18	+ 4 32.1	1.714	2.675	8.3	21.1	8 29	21 18.18	-20 58.6	1.634	2.602	8.0	19.4
9 8	21 13.02	+ 3 3.6	1.757	2.679	10.7	21.2	9 8	21 11.82	-21 14.6	1.707	2.617	11.7	19.7
9 18	21 8.87	+ 1 32.6	1.824	2.684	13.5	21.4	9 18	21 7.81	-21 16.9	1.801	2.632	14.9	19.9
66460	1999 <i>RX</i> ₈		8 13.1 283°35	0.5/12.7	18		208747	2002 <i>NK</i> ₆₂		8 13.1 289°53	1.4/11.9	18	
7 10	21 55.78	-14 17.4	1.768	2.643	13.8	19.9	7 10	21 52.77	-13 52.7	1.824	2.701	13.3	19.8
7 20	21 50.95	-14 38.6	1.682	2.626	10.3	19.7	7 20	21 48.77	-15 1.0	1.732	2.678	9.9	19.6
7 30	21 43.90	-15 8.9	1.618	2.609	6.2	19.4	7 30	21 42.65	-16 22.5	1.664	2.655	5.9	19.3
8 9	21 35.27	-15 44.1	1.580	2.592	1.8	19.1	8 9	21 34.95	-17 51.5	1.621	2.632	1.9	19.0
8 19	21 25.96	-16 19.3	1.568	2.574	3.0	19.1	8 19	21 26.50	-19 20.5	1.605	2.609	3.6	19.1
8 29	21 17.11	-16 49.4	1.582	2.557	7.5	19.4	8 29	21 18.36	-20 41.9	1.616	2.586	8.0	19.3
9 8	21 9.76	-17 10.7	1.621	2.540	11.7	19.6	9 8	21 11.58	-21 49.5	1.653	2.562	12.1	19.5
9 18	21 4.72	-17 21.1	1.682	2.522	15.4	19.8	9 18	21 6.97	-22 40.0	1.711	2.539	15.7	19.6
417534	2006 <i>TC</i> ₈₂		8 13.1 218°40	6.1/8.6	18		275308	2010 <i>SS</i> ₁₈		8 13.1 308°89	4.4/10.6	18	
7 10	22 2.71	-29 28.9	1.880	2.756	13.0	21.8	7 10	21 57.37	-21 36.6	1.260	2.161	16.4	21.0
7 20	21 56.06	-30 25.7	1.811	2.748	10.1	21.6	7 20	21 52.95	-22 23.1	1.190	2.147	12.3	20.7
7 30	21 46.94	-31 18.6	1.765	2.740	7.4	21.5	7 30	21 45.48	-23 14.6	1.140	2.133	7.8	20.4
8 9	21 36.14	-31 59.9	1.745	2.731	6.1	21.4	8 9	21 35.82	-24 2.6	1.113	2.119	4.5	20.2
8 19	21 24.76	-32 23.2	1.751	2.721	7.6	21.4	8 19	21 25.29	-24 38.4	1.109	2.106	6.5	20.2
8 29	21 14.09	-32 24.8	1.784	2.711	10.4	21.6	8 29	21 15.54	-24 55.2	1.129	2.094	11.2	20.5
9 8	21 5.29	-32 5.1	1.840	2.700	13.5	21.8	9 8	21 8.04	-24 50.7	1.170	2.081	15.8	20.7
9 18	20 59.11	-31 26.7	1.916	2.689	16.3	21.9	9 18	21 3.77	-24 26.1	1.229	2.070	19.9	20.9
391081	2005 <i>UH</i> ₂₀₈		8 13.1 27°50	2.1/14.6	15		427212	2014 <i>WX</i> ₃		8 13.1 52°57	1.7/14.2		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
488742	2004 <i>RF</i> ₂₄₉		8 13.1 288°65	3°2/10.9	17		237271	2008 <i>WM</i> ₁₁₅		8 13.1 152°05	2°9/10.6	17	
7 10	22 2.17	-24 41.6	2.381	3.246	11.0	21.4	7 10	21 56.24	-20 25.8	2.003	2.882	12.2	20.9
7 20	21 55.30	-24 47.9	2.277	3.214	8.3	21.2	7 20	21 50.96	-21 18.7	1.940	2.886	9.0	20.7
7 30	21 46.38	-24 52.2	2.198	3.182	5.4	21.0	7 30	21 43.74	-22 15.0	1.900	2.890	5.5	20.5
8 9	21 36.02	-24 50.2	2.147	3.150	3.2	20.8	8 9	21 35.25	-23 8.9	1.887	2.894	3.0	20.4
8 19	21 25.04	-24 38.3	2.125	3.117	4.4	20.8	8 19	21 26.36	-23 54.8	1.901	2.897	4.5	20.5
8 29	21 14.43	-24 14.3	2.131	3.084	7.5	20.9	8 29	21 18.06	-24 28.2	1.943	2.900	7.8	20.7
9 8	21 5.14	-23 38.0	2.165	3.051	10.7	21.1	9 8	21 11.23	-24 47.1	2.010	2.903	11.1	20.9
9 18	20 57.91	-22 50.5	2.223	3.017	13.6	21.2	9 18	21 6.48	-24 51.3	2.098	2.905	13.9	21.1
349359	2007 <i>VK</i> ₁₉₀		8 13.1 202°16	4°3/9.4	18		73582	2249 <i>T</i> ₋₁		8 13.1 58°52	0°9/13.7	17	
7 10	21 57.55	-26 2.4	2.234	3.111	11.2	21.0	7 10	21 56.26	-9 26.8	1.216	2.098	18.2	19.4
7 20	21 51.83	-26 50.1	2.166	3.108	8.4	20.8	7 20	21 51.65	-10 4.1	1.169	2.114	13.6	19.1
7 30	21 44.21	-27 36.5	2.123	3.105	5.7	20.7	7 30	21 44.39	-10 59.1	1.141	2.131	8.4	18.9
8 9	21 35.35	-28 16.0	2.106	3.102	4.3	20.6	8 9	21 35.46	-12 5.4	1.136	2.147	2.8	18.6
8 19	21 26.09	-28 43.9	2.117	3.098	5.5	20.6	8 19	21 26.12	-13 15.0	1.156	2.164	3.1	18.7
8 29	21 17.38	-28 56.9	2.155	3.094	8.2	20.8	8 29	21 17.80	-14 19.2	1.200	2.181	8.4	19.1
9 8	21 10.09	-28 54.0	2.218	3.090	11.1	21.0	9 8	21 11.66	-15 11.8	1.266	2.198	13.2	19.4
9 18	21 4.81	-28 36.3	2.302	3.085	13.6	21.1	9 18	21 8.38	-15 49.2	1.353	2.216	17.1	19.7
128992	2004 <i>TH</i> ₂₁₆		8 13.1 223°95	0°8/13.8	18		103955	2000 <i>DB</i> ₇₅		8 13.1 216°34	1°7/14.5	18	
7 10	21 52.93	-10 40.3	2.421	3.275	11.2	20.6	7 10	21 53.85	-7 39.3	2.088	2.938	12.9	20.1
7 20	21 48.19	-10 53.7	2.342	3.273	8.4	20.4	7 20	21 49.12	-7 59.5	2.008	2.935	9.9	19.9
7 30	21 41.94	-11 15.4	2.287	3.271	5.2	20.2	7 30	21 42.62	-8 32.2	1.952	2.931	6.4	19.7
8 9	21 34.69	-11 42.9	2.259	3.269	1.9	20.0	8 9	21 34.94	-9 14.7	1.920	2.928	2.8	19.4
8 19	21 27.09	-12 13.1	2.259	3.267	2.0	20.0	8 19	21 26.80	-10 3.0	1.917	2.924	2.5	19.4
8 29	21 19.88	-12 42.8	2.288	3.264	5.4	20.2	8 29	21 19.10	-10 52.5	1.941	2.920	6.0	19.6
9 8	21 13.76	-13 8.7	2.343	3.262	8.6	20.4	9 8	21 12.64	-11 38.7	1.991	2.915	9.6	19.8
9 18	21 9.24	-13 28.7	2.422	3.260	11.3	20.6	9 18	21 8.03	-12 18.1	2.065	2.911	12.7	20.0
514061	2014 <i>OM</i> ₃₈₂		8 13.1 62°61	1°4/14.1	18		509996	2009 <i>VB</i> ₃₇		8 13.1 331°91	0°8/13.5	18	
7 10	21 56.73	-10 49.7	2.218	3.070	12.2	21.2	7 10	21 51.38	-12 0.0	1.128	2.028	18.0	20.4
7 20	21 50.98	-10 32.1	2.150	3.079	9.2	21.0	7 20	21 48.67	-12 1.5	1.051	2.007	13.7	20.1
7 30	21 43.58	-10 21.8	2.106	3.088	5.8	20.8	7 30	21 43.03	-12 18.0	0.993	1.986	8.6	19.8
8 9	21 35.15	-10 17.3	2.088	3.097	2.4	20.6	8 9	21 35.19	-12 45.7	0.955	1.967	2.9	19.4
8 19	21 26.45	-10 16.3	2.099	3.106	2.3	20.6	8 19	21 26.36	-13 19.0	0.940	1.949	3.5	19.3
8 29	21 18.29	-10 16.6	2.138	3.115	5.7	20.9	8 29	21 18.14	-13 50.8	0.947	1.932	9.4	19.6
9 8	21 11.44	-10 15.9	2.204	3.124	9.0	21.1	9 8	21 12.03	-14 14.9	0.974	1.917	15.0	19.9
9 18	21 6.41	-10 12.4	2.294	3.133	11.8	21.3	9 18	21 9.08	-14 27.1	1.020	1.903	19.8	20.1
83694	2001 <i>TG</i> ₆₇		8 13.1 2°28	1°6/11.8	18		247162	2000 <i>YO</i> ₁₀₃		8 13.1 286°43	13°2/16.8	18	
7 10	21 53.97	-16 57.3	1.828	2.709	13.1	18.6	7 10	22 3.81	+9 27.8	1.554	2.326	20.0	20.2
7 20	21 49.41	-17 32.9	1.761	2.709	9.6	18.4	7 20	21 57.63	+11 45.0	1.456	2.300	17.8	20.0
7 30	21 42.86	-18 15.0	1.717	2.709	5.7	18.2	7 30	21 48.46	+13 45.6	1.377	2.274	15.5	19.7
8 9	21 34.98	-18 58.4	1.698	2.709	2.0	18.0	8 9	21 36.85	+15 21.3	1.320	2.247	13.7	19.5
8 19	21 26.68	-19 37.9	1.706	2.710	3.5	18.1	8 19	21 23.83	+16 25.1	1.286	2.220	13.2	19.4
8 29	21 18.96	-20 8.8	1.741	2.710	7.4	18.3	8 29	21 10.87	+16 53.9	1.275	2.194	14.5	19.4
9 8	21 12.74	-20 28.2	1.800	2.711	11.1	18.5	9 8	20 59.53	+16 50.4	1.286	2.166	16.9	19.5
9 18	21 8.66	-20 34.8	1.881	2.713	14.3	18.7	9 18	20 51.05	+16 21.9	1.316	2.139	19.8	19.6
238583	2004 <i>XF</i> ₁₇₁		8 13.1 240°61	3°1/9.9	18		471716	2012 <i>TW</i> ₃₁₄		8 13.1 346°58	8°7/15.9	18	
7 10	21 55.53	-20 25.1	2.236	3.111	11.3	20.5	7 10	21 56.41	-1 59.2	1.189	2.049	20.0	19.5
7 20	21 50.47	-21 41.0	2.151	3.096	8.3	20.3	7 20	21 52.18	-0 8.8	1.117	2.037	16.5	19.3
7 30	21 43.52	-23 2.4	2.091	3.080	5.2	20.1	7 30	21 45.03	+1 26.2	1.063	2.025	12.7	19.0
8 9	21 35.21	-24 23.0	2.059	3.063	3.2	19.9	8 9	21 35.76	+2 40.7	1.030	2.015	9.5	18.8
8 19	21 26.29	-25 36.4	2.055	3.046	4.7	20.0	8 19	21 25.60	+3 31.3	1.019	2.007	8.8	18.8
8 29	21 17.70	-26 37.2	2.079	3.028	7.9	20.2	8 29	21 16.10	+3 57.8	1.031	2.000	11.3	18.9
9 8	21 10.33	-27 21.7	2.129	3.010	11.1	20.3	9 8	21 8.71	+4 4.6	1.063	1.995	15.1	19.1
9 18	21 4.88	-27 49.2	2.201	2.991	13.9	20.5	9 18	21 4.42	+3 58.0	1.113	1.991	18.9	19.3
201055	2002 <i>ED</i> ₅₇		8 13.1 286°84	1°7/14.2	18		261709	2006 <i>AZ</i> ₃		8 13.1 243°12	1°2/11.8	18	
7 10	21 55.81	-8 54.3	1.710	2.572	14.8	20.3	7 10	21 51.79	-15 30.0	2.385	3.255	10.8	20.1
7 20	21 51.17	-9 1.4	1.613	2.546	11.4	20.1	7 20	21 47.46	-16 23.2	2.308	3.251	7.9	19.9
7 30	21 44.19	-9 22.2	1.536	2.519	7.4	19.8	7 30	21 41.57	-17 23.4	2.256	3.247	4.7	19.7
8 9	21 35.46	-9 54.3	1.484	2.493	3.1	19.5	8 9	21 34.63	-18 26.1	2.232	3.243	1.6	19.5
8 19	21 25.88	-10 33.7	1.458	2.466	2.9	19.4	8 19	21 27.30	-19 26.6	2.236	3.239	2.9	19.6
8 29	21 16.59	-11 15.4	1.459	2.438	7.5	19.6	8 29	21 20.34	-20 20.2	2.268	3.235	6.2	19.8
9 8	21 8.76	-11 53.9	1.484	2.411	12.0	19.8	9 8	21 14.47	-21 3.6	2.326	3.230	9.3	20.0
9 18	21 3.28	-12 25.1	1.531	2.384	16.0	20.0	9 18	21 10.24	-21 35.0	2.408	3.226	12.0	20.2
130859	2000 <i>UO</i> ₈₁		8 13.1 280°87	2°9/15.0	18		41198	1999 <i>WB</i>		8 13.1 326°98	9°9/20.2	18	
7 10	21 55.91	-6 8.8	1.850	2.698	14.4	18.9	7 10	21 52.02	+9 4.3	1.606	2.399	18.7	17.9
7 20	21 51.07	-6 5.6	1.749	2.672	11.3	18.6	7 20	21 48.34	+9 58.3	1.525	2.387	16.2	17.7
7 30	21 44.05	-6 16.5	1.670	2.646	7.6	18.4	7 30	21 42.45	+10 26.7	1.461	2.377	13.5	17.5
8 9	21 35.41	-6 40.2	1.615	2.619	4.0	18.1	8 9	21 34.96	+10 26.2	1.417	2.366	11.1	17.3
8 19	21 25.97	-7 13.9	1.587	2.592	3.4	18.0	8 19	21 26.78	+9 56.1	1.395	2.357	9.9	17.2
8 29	21 16.79	-7 53.4	1.586	2.564	7.1	18.2	8 29	21 19.01	+8 59.6	1.396	2.348	10.7	17.3
9 8	21 8.95	-8 33.4	1.610	2.537	11.2	18.4	9 8	21 12.75	+7 43.9	1.420	2.339	13.0	17.4
9 18	21 3.27	-9 9.6	1.656	2.509	15.0	18.5	9 18	21 8.81	+6 17.9	1.465	2.331	15.8	17.5
106745	2000 <i>WU</i> ₁₉₁		8 13.1 289°62	0°5/12.6	18		79587	1998 <i>RE</i> ₁₈		8 13.1 332°23	1°		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
400210	2007 <i>BN</i> ₅₈		8 13.1 71°07'	0.4/13.4	18		269766	1999 <i>TW</i> ₅₈		8 13.1 103°27'	5.7/19.6	18	
7 10	21 57.70	-13 37.7	2.183	3.042	12.1	20.3	7 10	21 52.08	+ 7 0.0	2.568	3.337	13.0	20.6
7 20	21 51.72	-13 26.7	2.120	3.054	9.0	20.2	7 20	21 47.44	+ 7 6.3	2.498	3.352	10.9	20.5
7 30	21 44.04	-13 21.5	2.080	3.066	5.5	20.0	7 30	21 41.45	+ 6 54.9	2.449	3.368	8.6	20.4
8 9	21 35.33	-13 19.5	2.066	3.077	1.7	19.7	8 9	21 34.60	+ 6 26.1	2.425	3.383	6.7	20.3
8 19	21 26.37	-13 18.5	2.082	3.089	2.2	19.8	8 19	21 27.50	+ 5 41.6	2.427	3.397	5.7	20.2
8 29	21 18.02	-13 16.1	2.125	3.101	5.8	20.1	8 29	21 20.80	+ 4 45.0	2.456	3.412	6.5	20.3
9 8	21 11.04	-13 10.5	2.196	3.113	9.2	20.3	9 8	21 15.12	+ 3 40.8	2.513	3.426	8.3	20.5
9 18	21 5.94	-13 0.6	2.290	3.124	12.0	20.5	9 18	21 10.91	+ 2 34.1	2.594	3.440	10.4	20.6
251316	2007 <i>AG</i> ₂₃		8 13.1 282°61'	2.4/15.0	18		470781	2008 <i>UT</i> ₂₇₆		8 13.1 299°69'	2.4/14.7	18	
7 10	21 53.74	- 6 38.8	2.162	3.007	12.7	20.5	7 10	21 54.42	- 7 14.4	1.632	2.494	15.4	21.7
7 20	21 48.98	- 6 36.0	2.081	3.003	9.8	20.3	7 20	21 50.31	- 7 20.9	1.530	2.462	12.0	21.4
7 30	21 42.53	- 6 44.7	2.023	2.998	6.6	20.1	7 30	21 43.80	- 7 43.5	1.449	2.431	8.0	21.1
8 9	21 34.93	- 7 3.3	1.990	2.994	3.3	19.9	8 9	21 35.45	- 8 20.4	1.392	2.399	3.7	20.8
8 19	21 26.92	- 7 29.1	1.985	2.990	2.9	19.9	8 19	21 26.14	- 9 7.7	1.360	2.367	3.3	20.7
8 29	21 19.33	- 7 58.6	2.007	2.986	5.9	20.1	8 29	21 17.06	- 9 59.9	1.354	2.335	7.7	20.9
9 8	21 12.93	- 8 28.1	2.056	2.981	9.2	20.3	9 8	21 9.43	-10 50.7	1.373	2.304	12.4	21.0
9 18	21 8.31	- 8 54.3	2.128	2.977	12.3	20.4	9 18	21 4.22	-11 34.6	1.412	2.272	16.7	21.2
507451	2012 <i>TS</i> ₆₆		8 13.1 189°36'	6.1/ 8.5	17		123644	2000 <i>YR</i> ₆₁		8 13.1 208°48'	2.4/15.2	18	
7 10	21 59.96	-30 7.5	1.936	2.815	12.6	21.0	7 10	21 53.92	- 6 10.9	2.463	3.299	11.7	20.0
7 20	21 53.91	-31 1.2	1.876	2.814	9.7	20.8	7 20	21 48.92	- 6 6.2	2.380	3.296	9.0	19.8
7 30	21 45.61	-31 50.2	1.840	2.814	7.2	20.7	7 30	21 42.42	- 6 11.9	2.321	3.294	6.1	19.6
8 9	21 35.85	-32 27.2	1.829	2.813	6.1	20.6	8 9	21 34.91	- 6 26.4	2.289	3.291	3.2	19.4
8 19	21 25.66	-32 46.7	1.844	2.813	7.4	20.7	8 19	21 27.05	- 6 47.7	2.284	3.288	2.7	19.4
8 29	21 16.23	-32 45.9	1.885	2.812	10.0	20.9	8 29	21 19.56	- 7 12.8	2.309	3.285	5.4	19.5
9 8	21 8.56	-32 25.0	1.950	2.810	12.9	21.1	9 8	21 13.13	- 7 38.4	2.360	3.282	8.4	19.7
9 18	21 3.32	-31 46.6	2.035	2.809	15.4	21.2	9 18	21 8.28	- 8 1.7	2.435	3.278	11.1	19.9
510916	2013 <i>EN</i> ₆		8 13.1 112°86'	1.3/14.3	18		188758	2005 <i>UP</i> ₂₉₉		8 13.1 123°56'	0.1/13.2	18	
7 10	21 52.68	- 8 16.3	2.304	3.153	11.9	22.3	7 10	21 53.51	-12 29.0	2.471	3.329	10.9	21.4
7 20	21 48.04	- 8 42.3	2.234	3.161	9.0	22.1	7 20	21 48.56	-12 55.2	2.404	3.339	8.1	21.2
7 30	21 41.88	- 9 19.2	2.188	3.168	5.7	22.0	7 30	21 42.15	-13 28.6	2.361	3.348	4.9	21.0
8 9	21 34.73	-10 3.9	2.168	3.176	2.3	21.8	8 9	21 34.82	-14 6.0	2.345	3.357	1.5	20.8
8 19	21 27.26	-10 52.8	2.176	3.183	2.1	21.8	8 19	21 27.21	-14 43.9	2.358	3.365	2.0	20.8
8 29	21 20.25	-11 41.5	2.212	3.190	5.4	22.0	8 29	21 20.04	-15 18.8	2.399	3.374	5.4	21.1
9 8	21 14.36	-12 26.3	2.276	3.197	8.7	22.2	9 8	21 13.98	-15 47.8	2.468	3.382	8.4	21.3
9 18	21 10.13	-13 4.0	2.363	3.204	11.5	22.4	9 18	21 9.50	-16 9.1	2.560	3.390	11.1	21.5
263435	2008 <i>DP</i> ₇₀		8 13.1 59°55'	0.8/12.3	18		184552	2005 <i>QM</i> ₄₈		8 13.1 340°54'	2.7/11.5	18	
7 10	21 51.98	-12 58.2	2.042	2.913	12.4	20.0	7 10	21 48.60	-16 41.3	1.030	1.947	17.8	18.7
7 20	21 47.79	-14 0.8	1.974	2.917	9.1	19.8	7 20	21 46.80	-17 26.7	0.962	1.928	13.3	18.4
7 30	21 41.84	-15 13.5	1.930	2.920	5.4	19.6	7 30	21 41.98	-18 25.7	0.913	1.911	8.0	18.1
8 9	21 34.74	-16 31.2	1.912	2.924	1.6	19.3	8 9	21 34.93	-19 30.3	0.884	1.896	3.1	17.7
8 19	21 27.24	-17 47.7	1.922	2.927	2.8	19.4	8 19	21 26.95	-20 30.6	0.877	1.882	5.4	17.8
8 29	21 20.21	-18 57.2	1.960	2.931	6.6	19.7	8 29	21 19.70	-21 16.6	0.891	1.870	11.0	18.1
9 8	21 14.45	-19 55.3	2.024	2.935	10.1	19.9	9 8	21 14.74	-21 42.3	0.925	1.860	16.4	18.4
9 18	21 10.55	-20 39.4	2.110	2.939	13.1	20.1	9 18	21 13.06	-21 45.5	0.975	1.852	21.0	18.6
133246	2003 <i>RB</i> ₃		8 13.1 127°27'	1.3/12.3	18		173669	2001 <i>KU</i> ₅₂		8 13.1 85°50'	2.0/14.4	17	
7 10	21 59.97	-17 44.0	1.855	2.727	13.4	19.6	7 10	22 0.40	- 8 22.1	1.530	2.389	16.4	20.0
7 20	21 53.76	-17 50.6	1.789	2.731	9.9	19.4	7 20	21 54.16	- 8 29.3	1.482	2.414	12.3	19.8
7 30	21 45.45	-18 1.0	1.746	2.736	5.9	19.2	7 30	21 45.68	- 8 50.6	1.456	2.438	7.8	19.6
8 9	21 35.80	-18 11.3	1.729	2.740	1.9	18.9	8 9	21 35.86	- 9 22.3	1.454	2.462	3.3	19.4
8 19	21 25.78	-18 17.7	1.740	2.745	3.2	19.0	8 19	21 25.79	- 9 59.6	1.479	2.486	3.0	19.4
8 29	21 16.47	-18 17.1	1.778	2.749	7.2	19.3	8 29	21 16.68	-10 37.1	1.530	2.509	7.2	19.8
9 8	21 8.83	-18 8.0	1.842	2.753	11.0	19.5	9 8	21 9.50	-11 10.1	1.606	2.532	11.3	20.0
9 18	21 3.47	-17 50.3	1.928	2.756	14.2	19.7	9 18	21 4.83	-11 35.4	1.704	2.555	14.7	20.3
114819	2003 <i>OU</i> ₁₁		8 13.1 45°07'	8.6/18.8	18		93248	2000 <i>SD</i> ₁₅₇		8 13.1 8°56'	8.5/17.0	18	
7 10	21 56.23	+ 5 36.0	1.615	2.419	18.1	18.8	7 10	21 56.76	+ 0 25.4	1.276	2.122	19.8	18.2
7 20	21 51.23	+ 6 37.2	1.551	2.427	15.3	18.6	7 20	21 52.12	+ 1 54.1	1.214	2.123	16.3	17.9
7 30	21 44.05	+ 7 15.4	1.506	2.436	12.2	18.5	7 30	21 44.81	+ 3 2.3	1.171	2.125	12.6	17.7
8 9	21 35.41	+ 7 28.6	1.483	2.445	9.6	18.3	8 9	21 35.69	+ 3 46.3	1.148	2.129	9.5	17.6
8 19	21 26.30	+ 7 16.7	1.484	2.455	8.6	18.3	8 19	21 25.94	+ 4 5.1	1.148	2.133	8.5	17.5
8 29	21 17.83	+ 6 43.5	1.508	2.464	9.7	18.4	8 29	21 16.98	+ 4 1.1	1.171	2.138	10.5	17.7
9 8	21 11.02	+ 5 55.3	1.557	2.474	12.1	18.6	9 8	21 10.06	+ 3 40.5	1.215	2.145	13.8	17.9
9 18	21 6.56	+ 4 59.6	1.626	2.485	14.9	18.8	9 18	21 5.98	+ 3 10.5	1.280	2.152	17.3	18.1
467478	2006 <i>SU</i> ₁₂₄		8 13.1 5°11'	5.0/15.7	16		148934	2001 <i>XO</i> ₁₀₁		8 13.1 296°54'	2.1/11.5	18	
7 10	21 44.86	- 5 57.3	0.777	1.693	22.2	20.2	7 10	21 54.45	-18 28.1	1.962	2.842	12.4	19.9
7 20	21 44.19	- 5 24.1	0.732	1.691	17.4	19.9	7 20	21 49.85	-19 3.4	1.878	2.825	9.2	19.6
7 30	21 40.36	- 5 17.4	0.702	1.692	12.0	19.6	7 30	21 43.24	-19 44.1	1.817	2.809	5.6	19.4
8 9	21 34.41	- 5 36.0	0.689	1.695	6.7	19.3	8 9	21 35.22	-20 25.4	1.782	2.792	2.3	19.1
8 19	21 27.78	- 6 14.4	0.695	1.702	5.4	19.3	8 19	21 26.62	-21 2.1	1.774	2.775	3.8	19.2
8 29	21 22.23	- 7 3.6	0.720	1.711	10.0	19.6	8 29	21 18.45	-21 29.5	1.793	2.759	7.6	19.4
9 8	21 19.19	- 7 52.8	0.762	1.723	15.3	19.9	9 8	21 11.65	-21 44.9	1.836	2.743	11.3	19.6
9 18	21 19.44	- 8 33.7	0.822	1.737	20.0	20.3	9 18	21 6.94	-21 47.2	1.902	2.726	14.5	19.8
139977	2001 <i>SP</i> ₁₉		8 13.1 283°79'	0.6/13.6	18		149986	2005 <i>UV</i> ₅₈					

EPHEMERIDES

8 13.1

8 13.1

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
303177	2004 <i>FW</i> ₃₁	8 13.1 211°41'		2°5'/11.1 18			511135	2013 <i>XR</i> ₁₉	8 13.1 160°44'		2°0'/15.2 18		
7 10	21 57.40	-21 5.7	2.210	3.084	11.4	20.9	7 10	21 53.83	-4 43.8	2.320	3.153	12.4	22.1
7 20	21 51.71	-21 32.9	2.137	3.080	8.5	20.7	7 20	21 48.94	-5 25.2	2.244	3.159	9.5	21.9
7 30	21 44.19	-22 1.9	2.088	3.077	5.2	20.5	7 30	21 42.48	-6 20.7	2.191	3.164	6.3	21.7
8 9	21 35.47	-22 28.1	2.066	3.073	2.6	20.3	8 9	21 34.98	-7 27.2	2.165	3.169	3.1	21.5
8 19	21 26.35	-22 47.5	2.071	3.069	3.9	20.4	8 19	21 27.12	-8 40.5	2.168	3.174	2.5	21.5
8 29	21 17.75	-22 57.0	2.105	3.064	7.1	20.6	8 29	21 19.66	-9 55.2	2.200	3.177	5.5	21.7
9 8	21 10.51	-22 55.0	2.164	3.060	10.3	20.8	9 8	21 13.34	-11 6.2	2.259	3.181	8.7	21.9
9 18	21 5.23	-22 41.7	2.246	3.055	13.1	20.9	9 18	21 8.67	-12 9.7	2.343	3.184	11.6	22.1
167126	2003 <i>SS</i> ₁₄₁	8 13.1 214°91'		6°8'/7.8 18			280958	2006 <i>BF</i> ₂₃₃	8 13.1 188°27'		1°2'/12.2 18		
7 10	22 1.89	-33 21.1	2.100	2.970	12.1	20.1	7 10	21 56.26	-15 23.7	1.869	2.742	13.2	21.5
7 20	21 55.29	-34 12.6	2.037	2.966	9.6	19.9	7 20	21 51.14	-16 3.9	1.798	2.742	9.7	21.3
7 30	21 46.45	-34 56.9	1.997	2.961	7.5	19.8	7 30	21 43.98	-16 52.1	1.751	2.742	5.8	21.1
8 9	21 36.16	-35 27.2	1.983	2.956	6.8	19.7	8 9	21 35.45	-17 43.1	1.729	2.741	1.8	20.8
8 19	21 25.42	-35 38.4	1.996	2.950	7.9	19.8	8 19	21 26.45	-18 31.6	1.735	2.740	3.2	20.9
8 29	21 15.42	-35 28.0	2.034	2.944	10.2	19.9	8 29	21 18.01	-19 12.2	1.768	2.738	7.3	21.2
9 8	21 7.16	-34 56.9	2.096	2.938	12.8	20.1	9 8	21 11.07	-19 41.7	1.826	2.737	11.1	21.4
9 18	21 1.32	-34 8.2	2.178	2.932	15.1	20.3	9 18	21 6.29	-19 58.3	1.906	2.735	14.3	21.6
147775	2005 <i>QS</i> ₈₉	8 13.1 317°08'		1°5'/14.4 18			444087	2004 <i>SY</i> ₄₆	8 13.1 299°36'		3°9'/16.1 17		
7 10	21 52.50	-8 19.0	1.939	2.798	13.4	20.0	7 10	21 53.23	-2 59.2	2.155	2.986	13.3	20.7
7 20	21 48.29	-8 38.7	1.860	2.792	10.2	19.8	7 20	21 48.77	-2 41.5	2.058	2.967	10.6	20.5
7 30	21 42.24	-9 11.3	1.804	2.786	6.5	19.6	7 30	21 42.54	-2 37.1	1.984	2.947	7.6	20.3
8 9	21 34.93	-9 53.9	1.772	2.780	2.7	19.4	8 9	21 35.05	-2 45.8	1.934	2.928	4.8	20.1
8 19	21 27.14	-10 42.4	1.767	2.775	2.5	19.3	8 19	21 27.00	-3 5.8	1.910	2.909	4.1	20.0
8 29	21 19.79	-11 31.6	1.790	2.770	6.3	19.6	8 29	21 19.24	-3 34.2	1.914	2.889	6.4	20.1
9 8	21 13.75	-12 16.9	1.838	2.765	10.1	19.8	9 8	21 12.60	-4 6.9	1.944	2.870	9.6	20.3
9 18	21 9.65	-12 54.6	1.909	2.760	13.4	20.0	9 18	21 7.74	-4 39.9	1.997	2.851	12.7	20.4
250029	2002 <i>CQ</i> ₄₉	8 13.1 115°00'		0°8'/12.5 18			259984	2004 <i>FZ</i> ₆₁	8 13.1 200°18'		0°3'/13.4 17		
7 10	21 56.42	-16 27.9	2.228	3.095	11.6	20.3	7 10	21 57.40	-11 11.5	1.960	2.818	13.3	22.0
7 20	21 50.87	-16 38.2	2.159	3.099	8.6	20.1	7 20	21 51.93	-11 45.2	1.881	2.815	10.0	21.8
7 30	21 43.62	-16 52.9	2.114	3.103	5.1	19.9	7 30	21 44.45	-12 30.1	1.825	2.811	6.1	21.5
8 9	21 35.30	-17 8.7	2.096	3.107	1.6	19.7	8 9	21 35.60	-13 22.0	1.795	2.806	1.9	21.2
8 19	21 26.66	-17 22.3	2.106	3.111	2.6	19.8	8 19	21 26.23	-14 16.0	1.793	2.801	2.5	21.3
8 29	21 18.55	-17 30.8	2.144	3.115	6.1	20.0	8 29	21 17.33	-15 6.7	1.819	2.795	6.7	21.5
9 8	21 11.76	-17 32.3	2.209	3.119	9.4	20.2	9 8	21 9.84	-15 49.8	1.872	2.788	10.5	21.8
9 18	21 6.81	-17 26.1	2.297	3.123	12.3	20.4	9 18	21 4.43	-16 22.4	1.947	2.780	13.9	22.0
220660	2004 <i>RL</i> ₁₆₃	8 13.1 238°93'		3°5'/10.4 18			339495	2005 <i>GW</i> ₃₄	8 13.1 219°48'		10°6'/9.2 18		
7 10	21 59.96	-26 12.7	2.515	3.382	10.4	20.3	7 10	22 16.98	-36 52.8	1.266	2.138	18.3	20.1
7 20	21 53.41	-26 25.8	2.438	3.375	7.8	20.1	7 20	22 7.84	-37 33.4	1.207	2.134	14.9	19.9
7 30	21 45.13	-26 36.2	2.386	3.368	5.2	20.0	7 30	21 54.58	-37 58.0	1.168	2.129	11.9	19.7
8 9	21 35.75	-26 39.9	2.362	3.361	3.5	19.8	8 9	21 38.63	-37 53.8	1.151	2.124	10.6	19.6
8 19	21 26.03	-26 33.7	2.366	3.354	4.5	19.9	8 19	21 22.10	-37 13.0	1.159	2.118	11.8	19.7
8 29	21 16.85	-26 15.8	2.399	3.346	7.1	20.0	8 29	21 7.32	-35 55.5	1.189	2.111	14.9	19.8
9 8	21 9.00	-25 46.2	2.459	3.338	9.9	20.2	9 8	20 56.09	-34 8.8	1.241	2.105	18.5	20.0
9 18	21 3.02	-25 6.0	2.542	3.330	12.3	20.4	9 18	20 49.20	-32 3.3	1.312	2.098	21.8	20.3
84401	2002 <i>TZ</i> ₁₇₉	8 13.1 272°02'		6°2'/8.8 18			257483	1995 <i>OD</i> ₁₁	8 13.1 303°07'		0°6'/12.8 18		
7 10	22 2.38	-31 43.6	2.040	2.912	12.3	18.9	7 10	21 58.13	-15 16.6	1.362	2.249	16.3	21.1
7 20	21 55.77	-32 19.3	1.963	2.896	9.7	18.7	7 20	21 53.31	-15 22.3	1.285	2.234	12.3	20.8
7 30	21 46.82	-32 48.8	1.910	2.881	7.3	18.5	7 30	21 45.69	-15 36.9	1.228	2.220	7.5	20.5
8 9	21 36.29	-33 5.4	1.883	2.865	6.2	18.4	8 9	21 36.05	-15 55.8	1.194	2.206	2.2	20.2
8 19	21 25.23	-33 4.1	1.882	2.849	7.4	18.5	8 19	21 25.57	-16 13.7	1.185	2.192	3.5	20.2
8 29	21 14.84	-32 42.3	1.908	2.833	10.0	18.6	8 29	21 15.75	-16 25.3	1.200	2.178	8.9	20.5
9 8	21 6.19	-32 0.8	1.957	2.816	12.9	18.8	9 8	21 7.95	-16 27.2	1.238	2.165	13.9	20.7
9 18	21 0.02	-31 2.8	2.028	2.800	15.5	18.9	9 18	21 3.08	-16 17.9	1.296	2.152	18.1	21.0
120788	1998 <i>FD</i> ₁₆	8 13.1 96°98'		0°5'/13.6 18			256535	2007 <i>FV</i> ₄₅	8 13.1 312°13'		0°4'/12.8 18		
7 10	21 54.36	-8 51.9	1.778	2.640	14.3	19.7	7 10	21 53.19	-14 9.5	2.135	3.004	11.9	20.8
7 20	21 49.69	-9 53.2	1.718	2.653	10.7	19.5	7 20	21 48.67	-14 32.8	2.057	2.998	8.9	20.6
7 30	21 43.05	-11 9.1	1.680	2.666	6.5	19.3	7 30	21 42.41	-15 3.5	2.003	2.992	5.3	20.3
8 9	21 35.16	-12 34.0	1.668	2.679	2.1	19.0	8 9	21 34.99	-15 38.0	1.975	2.986	1.5	20.1
8 19	21 26.87	-14 1.2	1.684	2.692	2.5	19.1	8 19	21 27.15	-16 12.3	1.974	2.981	2.5	20.1
8 29	21 19.20	-15 23.3	1.727	2.704	6.8	19.4	8 29	21 19.75	-16 42.3	2.001	2.975	6.3	20.4
9 8	21 13.00	-16 34.6	1.796	2.716	10.6	19.6	9 8	21 13.57	-17 5.0	2.053	2.969	9.7	20.6
9 18	21 8.98	-17 31.7	1.888	2.728	13.9	19.9	9 18	21 9.23	-17 18.6	2.129	2.964	12.8	20.8
523674	2013 <i>MA</i> ₁₂	8 13.1 258°97'		0°2'/9.8 17			305021	2007 <i>TR</i> ₃₈₁	8 13.1 351°93'		2°5'/11.5 18		
7 10	21 34.36	-24 27.2	41.582	42.453	0.7	22.0	7 10	21 51.22	-17 25.3	1.293	2.196	15.9	20.1
7 20	21 33.66	-24 32.3	41.510	42.451	0.5	21.9	7 20	21 48.16	-18 8.8	1.230	2.189	11.8	19.9
7 30	21 32.90	-24 37.4	41.465	42.450	0.3	21.9	7 30	21 42.52	-19 1.6	1.187	2.182	7.1	19.6
8 9	21 32.09	-24 42.2	41.448	42.448	0.2	21.9	8 9	21 35.09	-19 56.6	1.166	2.177	2.8	19.3
8 19	21 31.27	-24 46.6	41.460	42.447	0.3	21.9	8 19	21 27.03	-20 45.8	1.170	2.173	4.7	19.4
8 29	21 30.47	-24 50.5	41.501	42.445	0.5	21.9	8 29	21 19.71	-21 22.3	1.196	2.170	9.5	19.7
9 8	21 29.71	-24 53.8	41.569	42.443	0.7	22.0	9 8	21 14.34	-21 42.0	1.245	2.169	14.1	20.0
9 18	21 29.03	-24 56.4	41.663	42.442	0.9	22.0	9 18	21 11.73	-21 43.7	1.313	2.169	18.0	20.2
217263	2003 <i>YE</i> ₅₁	8 13.1 185°17'		2°8'/14.9 18			49237	1998 <i>SW</i> ₁₅₃	8 13.1 166°72'		0°3'/12.9 18		
7 10	21 58.47												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
77100	2001 <i>DT</i> ₆₃		8 13.1 138°22	1.3/14.0	17		120574	1995 <i>OB</i> ₁₀		8 13.1 5°51	1.9/12.1	18	
7 10	21 57.96	- 9 10.6	1.649	2.510	15.3	20.3	7 10	21 50.16	-15 12.4	0.819	1.744	20.4	19.3
7 20	21 52.51	- 9 33.0	1.584	2.518	11.5	20.1	7 20	21 48.26	-15 49.4	0.773	1.742	15.1	19.0
7 30	21 44.85	-10 9.2	1.541	2.525	7.2	19.9	7 30	21 42.94	-16 42.0	0.744	1.743	9.0	18.7
8 9	21 35.73	-10 55.2	1.522	2.532	2.7	19.6	8 9	21 35.29	-17 41.2	0.733	1.745	2.9	18.3
8 19	21 26.16	-11 45.8	1.530	2.538	2.7	19.6	8 19	21 26.92	-18 36.0	0.742	1.749	5.0	18.5
8 29	21 17.27	-12 35.0	1.566	2.544	7.1	19.9	8 29	21 19.73	-19 16.7	0.771	1.755	11.2	18.9
9 8	21 10.07	-13 17.7	1.626	2.550	11.3	20.2	9 8	21 15.28	-19 37.4	0.818	1.762	16.8	19.2
9 18	21 5.26	-13 50.8	1.708	2.555	14.8	20.4	9 18	21 14.38	-19 36.8	0.881	1.771	21.5	19.5
47158	1999 <i>RR</i> ₂₄₇		8 13.1 358°74	0°1/13.2	18		223551	2004 <i>ES</i> ₇₃		8 13.1 55°69	0°7/12.7	17	
7 10	21 49.26	- 9 23.7	1.072	1.972	18.7	18.3	7 10	21 57.70	-14 2.9	1.338	2.224	16.6	20.4
7 20	21 47.02	-10 29.9	1.013	1.969	14.1	18.0	7 20	21 52.60	-14 30.9	1.290	2.239	12.3	20.1
7 30	21 41.97	-11 59.9	0.973	1.967	8.6	17.7	7 30	21 44.98	-15 9.4	1.264	2.256	7.3	19.9
8 9	21 34.96	-13 45.6	0.954	1.966	2.6	17.3	8 9	21 35.80	-15 52.5	1.260	2.272	2.1	19.6
8 19	21 27.22	-15 35.7	0.957	1.966	3.6	17.4	8 19	21 26.27	-16 33.6	1.282	2.289	3.4	19.8
8 29	21 20.28	-17 17.3	0.984	1.967	9.5	17.8	8 29	21 17.73	-17 6.8	1.329	2.306	8.3	20.1
9 8	21 15.50	-18 40.6	1.031	1.969	14.8	18.1	9 8	21 11.28	-17 28.3	1.399	2.324	12.7	20.4
9 18	21 13.72	-19 40.3	1.097	1.973	19.3	18.4	9 18	21 7.57	-17 36.9	1.489	2.341	16.4	20.7
360997	2005 <i>UM</i> ₄₄₁		8 13.1 290°06	5°2/ 8.7	18		164114	2003 <i>XR</i> ₂₇		8 13.1 232°86	1°5/11.8	18	
7 10	21 56.75	-28 11.8	2.109	2.989	11.6	20.7	7 10	21 55.24	-16 36.6	2.206	3.075	11.6	20.4
7 20	21 51.55	-29 1.4	2.031	2.973	8.9	20.5	7 20	21 50.23	-17 21.3	2.123	3.066	8.6	20.2
7 30	21 44.28	-29 48.8	1.977	2.956	6.4	20.3	7 30	21 43.42	-18 12.6	2.065	3.055	5.1	19.9
8 9	21 35.59	-30 27.8	1.949	2.939	5.2	20.2	8 9	21 35.36	-19 5.8	2.034	3.045	1.9	19.7
8 19	21 26.35	-30 53.0	1.948	2.923	6.5	20.3	8 19	21 26.80	-19 56.0	2.031	3.034	3.2	19.8
8 29	21 17.61	-31 0.7	1.972	2.906	9.2	20.4	8 29	21 18.63	-20 38.4	2.056	3.022	6.8	20.0
9 8	21 10.33	-30 50.1	2.021	2.889	12.1	20.6	9 8	21 11.69	-21 10.0	2.107	3.010	10.2	20.2
9 18	21 5.20	-30 22.5	2.091	2.873	14.8	20.7	9 18	21 6.61	-21 29.2	2.181	2.998	13.1	20.3
175850	1999 <i>TG</i> ₃₂₁		8 13.1 235°02	5°2/16.7	18		476303	2007 <i>VW</i> ₃₃₄		8 13.1 273°89	2°3/11.3	18	
7 10	21 55.90	- 0 36.3	1.598	2.433	16.9	20.4	7 10	21 56.13	-19 25.6	2.011	2.889	12.2	21.8
7 20	21 51.19	- 0 26.7	1.520	2.429	13.6	20.2	7 20	21 51.09	-19 59.8	1.928	2.874	9.1	21.5
7 30	21 44.19	- 0 37.8	1.462	2.424	9.9	20.0	7 30	21 44.02	-20 38.3	1.869	2.859	5.5	21.3
8 9	21 35.59	- 1 9.2	1.427	2.419	6.4	19.8	8 9	21 35.55	-21 16.2	1.836	2.844	2.5	21.1
8 19	21 26.35	- 1 57.9	1.417	2.414	5.3	19.7	8 19	21 26.52	-21 48.4	1.830	2.829	4.0	21.1
8 29	21 17.63	- 2 58.3	1.432	2.409	7.9	19.8	8 29	21 17.94	-22 10.8	1.851	2.814	7.6	21.3
9 8	21 10.53	- 4 3.3	1.472	2.404	11.7	20.1	9 8	21 10.74	-22 20.7	1.897	2.799	11.2	21.5
9 18	21 5.82	- 5 6.1	1.534	2.398	15.4	20.3	9 18	21 5.64	-22 17.6	1.965	2.784	14.3	21.7
112270	2002 <i>LP</i> ₂₁		8 13.1 25°89	5°5/ 9.7	18		481138	2005 <i>UJ</i> ₆₃		8 13.1 340°24	6°8/ 7.1	18	
7 10	21 54.82	-22 3.9	1.078	1.991	17.6	18.7	7 10	21 56.04	-31 53.4	2.005	2.888	12.0	20.5
7 20	21 51.13	-23 22.0	1.036	1.999	13.0	18.4	7 20	21 51.09	-33 4.3	1.948	2.885	9.5	20.4
7 30	21 44.37	-24 44.2	1.014	2.008	8.3	18.2	7 30	21 44.02	-34 10.0	1.913	2.882	7.4	20.2
8 9	21 35.64	-25 58.8	1.013	2.018	5.5	18.1	8 9	21 35.53	-35 2.9	1.905	2.880	6.8	20.2
8 19	21 26.39	-26 55.4	1.035	2.029	7.7	18.3	8 19	21 26.59	-35 37.4	1.921	2.877	8.1	20.3
8 29	21 18.30	-27 27.2	1.079	2.040	12.0	18.5	8 29	21 18.30	-35 49.9	1.963	2.875	10.5	20.4
9 8	21 12.72	-27 32.8	1.143	2.053	16.3	18.8	9 8	21 11.61	-35 40.4	2.027	2.873	13.0	20.6
9 18	21 10.34	-27 14.5	1.225	2.066	19.9	19.1	9 18	21 7.21	-35 11.4	2.111	2.872	15.3	20.8
441919	2010 <i>GE</i> ₁₄₂		8 13.1 157°29	5°2/18.1	18		87431	2000 <i>QE</i> ₁₀₅		8 13.1 357°20	1°2/12.0	18	
7 10	21 53.54	+ 3 19.1	2.103	2.904	14.5	21.9	7 10	21 51.38	-13 47.1	1.829	2.708	13.2	18.2
7 20	21 48.90	+ 3 10.5	2.025	2.908	11.9	21.8	7 20	21 47.62	-14 52.8	1.760	2.706	9.7	18.0
7 30	21 42.55	+ 2 42.0	1.968	2.912	9.0	21.6	7 30	21 41.92	-16 9.5	1.713	2.705	5.8	17.8
8 9	21 35.06	+ 1 54.6	1.936	2.915	6.3	21.4	8 9	21 34.93	-17 31.3	1.693	2.705	1.8	17.5
8 19	21 27.16	+ 0 51.2	1.930	2.919	5.2	21.4	8 19	21 27.45	-18 51.3	1.700	2.704	3.3	17.6
8 29	21 19.70	- 0 23.3	1.951	2.922	6.7	21.5	8 29	21 20.47	-20 2.7	1.733	2.704	7.3	17.9
9 8	21 13.45	- 1 42.6	1.999	2.924	9.5	21.7	9 8	21 14.89	-21 0.7	1.792	2.705	11.1	18.1
9 18	21 9.01	- 3 0.6	2.071	2.926	12.3	21.8	9 18	21 11.34	-21 42.8	1.872	2.705	14.3	18.3
240672	2005 <i>EJ</i> ₉₃		8 13.1 162°68	6°3/ 7.6	17		140937	2001 <i>VS</i> ₈₆		8 13.1 289°64	4°1/15.8	18	
7 10	21 59.93	-31 56.2	2.189	3.061	11.6	20.8	7 10	21 55.99	- 3 52.9	2.004	2.838	14.0	19.1
7 20	21 53.73	-32 59.8	2.134	3.066	9.1	20.7	7 20	21 50.97	- 3 23.1	1.908	2.819	11.1	18.8
7 30	21 45.48	-33 57.6	2.103	3.069	7.0	20.6	7 30	21 43.97	- 3 5.9	1.834	2.800	7.9	18.6
8 9	21 35.92	-34 43.0	2.098	3.073	6.3	20.5	8 9	21 35.56	- 3 1.3	1.785	2.781	5.0	18.4
8 19	21 25.98	-35 10.7	2.120	3.076	7.5	20.6	8 19	21 26.51	- 3 8.1	1.763	2.761	4.3	18.3
8 29	21 16.73	-35 18.1	2.168	3.079	9.7	20.8	8 29	21 17.77	- 3 23.8	1.767	2.742	6.9	18.4
9 8	21 9.07	-35 5.4	2.240	3.081	12.1	20.9	9 8	21 10.29	- 3 44.4	1.797	2.722	10.4	18.6
9 18	21 3.64	-34 35.1	2.332	3.083	14.3	21.1	9 18	21 4.79	- 4 6.1	1.851	2.703	13.7	18.8
44683	1999 <i>RR</i> ₁₉₇		8 13.1 164°46	2°0/14.4	18	R	123832	2001 <i>CU</i> ₁₄		8 13.1 252°79	2°2/11.1	18	
7 10	21 59.71	- 8 38.3	1.696	2.551	15.2	18.9	7 10	21 54.70	-20 8.2	2.430	3.302	10.6	20.5
7 20	21 53.80	- 8 36.7	1.626	2.554	11.6	18.7	7 20	21 49.69	-20 43.4	2.348	3.291	7.8	20.3
7 30	21 45.65	- 8 47.7	1.577	2.558	7.5	18.5	7 30	21 43.02	-21 21.6	2.291	3.280	4.8	20.1
8 9	21 36.00	- 9 8.8	1.553	2.561	3.3	18.2	8 9	21 35.23	-21 58.4	2.261	3.269	2.3	19.9
8 19	21 25.86	- 9 36.2	1.556	2.563	3.0	18.2	8 19	21 27.02	-22 29.9	2.259	3.257	3.6	20.0
8 29	21 16.38	-10 5.3	1.586	2.565	7.1	18.5	8 29	21 19.20	-22 52.6	2.286	3.245	6.6	20.2
9 8	21 8.58	-10 31.9	1.642	2.566	11.2	18.7	9 8	21 12.51	-23 4.4	2.338	3.233	9.6	20.3
9 18	21 3.18	-10 52.6	1.719	2.567	14.7	18.9	9 18	21 7.55	-23 4.7	2.414	3.221	12.3	20.5
440358	2004 <i>VY</i> ₁₀		8 13.1 322°74	7°4/ 8.4	18		113777	2002 <i>TS</i> ₁					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
20910	4060 <i>P-L</i>		8 13.1 144°66	0°9/13.9	18		135598	2002 <i>GP172</i>		8 13.2 30°45	3°6/11.2	18	
7 10	21 55.60	-10 14.3	1.857	2.719	13.8	18.7	7 10	21 55.22	-18 40.0	0.964	1.879	19.0	18.8
7 20	21 50.63	-10 33.2	1.786	2.721	10.4	18.5	7 20	21 51.50	-19 32.8	0.929	1.893	13.9	18.5
7 30	21 43.70	-11 3.4	1.738	2.723	6.5	18.3	7 30	21 44.62	-20 33.3	0.912	1.908	8.4	18.3
8 9	21 35.46	-11 41.6	1.715	2.725	2.3	18.0	8 9	21 35.79	-21 31.2	0.915	1.925	3.8	18.1
8 19	21 26.78	-12 23.3	1.719	2.727	2.4	18.0	8 19	21 26.58	-22 16.9	0.941	1.943	6.0	18.3
8 29	21 18.66	-13 3.7	1.750	2.729	6.6	18.3	8 29	21 18.70	-22 43.6	0.988	1.962	11.0	18.6
9 8	21 11.99	-13 38.5	1.807	2.730	10.4	18.5	9 8	21 13.46	-22 49.1	1.056	1.982	15.7	19.0
9 18	21 7.42	-14 4.9	1.886	2.732	13.7	18.7	9 18	21 11.49	-22 34.7	1.141	2.003	19.7	19.3
20606	Widemann		8 13.1 354°38	5°1/ 9.4	18 R		8810	Johnmcfarland		8 13.2 22°76	2°0/11.6	18	
7 10	21 55.62	-26 32.0	1.804	2.693	12.8	17.7	7 10	21 53.14	-17 29.4	1.652	2.540	13.9	17.0
7 20	21 50.85	-27 17.7	1.742	2.690	9.7	17.5	7 20	21 49.00	-18 10.5	1.596	2.548	10.2	16.8
7 30	21 43.90	-28 1.5	1.703	2.687	6.7	17.3	7 30	21 42.78	-18 58.0	1.563	2.556	6.1	16.6
8 9	21 35.52	-28 37.0	1.689	2.686	5.1	17.2	8 9	21 35.22	-19 46.0	1.555	2.566	2.4	16.4
8 19	21 26.71	-28 58.5	1.701	2.684	6.5	17.3	8 19	21 27.29	-20 28.5	1.573	2.575	3.9	16.5
8 29	21 18.59	-29 2.5	1.738	2.683	9.5	17.5	8 29	21 20.07	-21 0.6	1.616	2.586	7.9	16.8
9 8	21 12.15	-28 48.4	1.799	2.683	12.6	17.7	9 8	21 14.48	-21 19.5	1.683	2.597	11.6	17.0
9 18	21 8.04	-28 17.9	1.880	2.683	15.4	17.9	9 18	21 11.13	-21 24.2	1.772	2.609	14.8	17.3
323223	2003 <i>SH86</i>		8 13.1 342°01	2°2/14.1	18		172086	2002 <i>CL99</i>		8 13.2 34°16	3°0/11.6	17	
7 10	21 57.01	-11 8.8	1.117	2.007	18.8	19.7	7 10	21 56.77	-18 9.4	0.945	1.858	19.4	18.3
7 20	21 52.82	-10 36.4	1.050	1.999	14.4	19.4	7 20	21 52.60	-18 49.1	0.912	1.875	14.2	18.1
7 30	21 45.56	-10 16.7	1.001	1.991	9.2	19.1	7 30	21 45.24	-19 36.7	0.898	1.894	8.5	17.8
8 9	21 36.12	-10 7.7	0.974	1.984	3.8	18.8	8 9	21 35.96	-20 22.5	0.904	1.915	3.4	17.6
8 19	21 25.87	-10 6.2	0.970	1.978	3.7	18.8	8 19	21 26.39	-20 58.0	0.932	1.936	5.5	17.8
8 29	21 16.46	-10 7.9	0.988	1.973	9.2	19.1	8 29	21 18.25	-21 16.8	0.982	1.958	10.7	18.2
9 8	21 9.37	-10 8.2	1.028	1.969	14.5	19.3	9 8	21 12.83	-21 17.1	1.052	1.982	15.5	18.5
9 18	21 5.53	-10 3.9	1.086	1.966	19.1	19.6	9 18	21 10.72	-20 59.9	1.140	2.006	19.4	18.9
296883	2010 <i>AD52</i>		8 13.1 304°67	3°2/15.9	17		398836	2013 <i>CV14</i>		8 13.2 73°32	1°0/12.2	18	
7 10	21 51.87	- 3 47.7	2.407	3.239	12.0	20.9	7 10	21 52.69	-14 8.7	2.070	2.942	12.2	21.0
7 20	21 47.59	- 3 39.2	2.315	3.225	9.5	20.7	7 20	21 48.34	-15 6.6	2.005	2.948	8.9	20.8
7 30	21 41.77	- 3 42.6	2.245	3.211	6.7	20.5	7 30	21 42.27	-16 13.1	1.964	2.954	5.3	20.6
8 9	21 34.90	- 3 57.2	2.201	3.198	4.0	20.3	8 9	21 35.07	-17 23.1	1.949	2.961	1.6	20.3
8 19	21 27.60	- 4 21.0	2.185	3.185	3.4	20.2	8 19	21 27.50	-18 30.9	1.963	2.968	2.9	20.4
8 29	21 20.59	- 4 51.0	2.196	3.172	5.6	20.4	8 29	21 20.42	-19 31.2	2.004	2.974	6.6	20.7
9 8	21 14.59	- 5 23.7	2.233	3.159	8.6	20.5	9 8	21 14.61	-20 20.1	2.071	2.981	10.0	20.9
9 18	21 10.15	- 5 55.6	2.295	3.146	11.4	20.7	9 18	21 10.65	-20 55.5	2.161	2.987	12.9	21.1
318153	2004 <i>PE102</i>		8 13.2 319°87	3°1/16.0	18		93697	2000 <i>VH26</i>		8 13.2 275°39	3°0/10.9	18	
7 10	21 49.80	- 2 40.1	1.904	2.747	14.3	20.3	7 10	21 56.67	-19 55.1	1.717	2.601	13.6	19.6
7 20	21 46.46	- 3 10.8	1.814	2.732	11.3	20.1	7 20	21 51.77	-20 42.1	1.644	2.593	10.1	19.4
7 30	21 41.27	- 4 0.5	1.745	2.717	7.8	19.8	7 30	21 44.58	-21 34.1	1.594	2.585	6.2	19.2
8 9	21 34.79	- 5 7.3	1.701	2.702	4.4	19.6	8 9	21 35.81	-22 24.8	1.570	2.577	3.1	19.0
8 19	21 27.74	- 6 26.6	1.683	2.688	3.4	19.5	8 19	21 26.44	-23 7.7	1.571	2.569	4.8	19.0
8 29	21 21.03	- 7 52.2	1.692	2.674	6.4	19.7	8 29	21 17.66	-23 37.6	1.599	2.561	8.7	19.3
9 8	21 15.54	- 9 17.0	1.727	2.660	10.2	19.9	9 8	21 10.54	-23 51.7	1.651	2.553	12.5	19.5
9 18	21 11.95	-10 34.8	1.785	2.648	13.6	20.1	9 18	21 5.83	-23 49.8	1.723	2.545	15.9	19.7
219941	2002 <i>GT145</i>		8 13.2 10°43	7°5/ 9.1	18		328516	2009 <i>QA20</i>		8 13.2 54°45	0°1/13.2	17	
7 10	22 2.04	-34 15.0	1.683	2.563	14.1	18.6	7 10	21 58.93	-13 30.8	1.349	2.231	16.7	20.3
7 20	21 55.67	-34 38.2	1.632	2.566	11.2	18.4	7 20	21 53.59	-13 38.5	1.295	2.241	12.5	20.1
7 30	21 46.78	-34 50.7	1.602	2.570	8.7	18.3	7 30	21 45.67	-13 56.7	1.261	2.252	7.5	19.8
8 9	21 36.37	-34 45.7	1.597	2.575	7.5	18.2	8 9	21 36.11	-14 20.6	1.251	2.263	2.3	19.5
8 19	21 25.70	-34 19.0	1.616	2.580	8.6	18.3	8 19	21 26.12	-14 45.0	1.266	2.274	3.1	19.6
8 29	21 16.13	-33 29.8	1.660	2.587	11.1	18.5	8 29	21 17.08	-15 4.6	1.306	2.285	8.2	19.9
9 8	21 8.74	-32 21.0	1.727	2.594	13.9	18.7	9 8	21 10.14	-15 16.0	1.369	2.297	12.7	20.2
9 18	21 4.12	-30 57.4	1.814	2.602	16.5	18.9	9 18	21 6.00	-15 17.4	1.453	2.308	16.5	20.5
75529	1999 <i>XF215</i>		8 13.2 346°21	4°5/11.1	18		284588	2007 <i>TD193</i>		8 13.2 329°97	2°3/11.6	18	
7 10	21 55.04	-22 12.6	1.022	1.938	18.1	18.4	7 10	21 52.86	-17 35.6	1.437	2.333	15.1	20.9
7 20	21 51.70	-22 35.1	0.962	1.926	13.6	18.1	7 20	21 49.34	-18 14.2	1.361	2.316	11.2	20.6
7 30	21 45.01	-23 0.4	0.921	1.916	8.6	17.8	7 30	21 43.31	-19 1.5	1.305	2.300	6.8	20.3
8 9	21 35.99	-23 20.1	0.899	1.908	4.7	17.6	8 9	21 35.48	-19 51.2	1.273	2.284	2.7	20.0
8 19	21 26.14	-23 26.1	0.900	1.900	6.6	17.7	8 19	21 26.90	-20 36.3	1.266	2.269	4.5	20.1
8 29	21 17.32	-23 13.3	0.921	1.895	11.7	17.9	8 29	21 18.88	-21 10.0	1.283	2.256	9.2	20.3
9 8	21 11.10	-22 40.7	0.963	1.891	16.7	18.2	9 8	21 12.67	-21 28.4	1.323	2.243	13.7	20.5
9 18	21 8.39	-21 50.5	1.021	1.888	21.1	18.5	9 18	21 9.10	-21 30.0	1.382	2.231	17.6	20.8
476155	2007 <i>TX343</i>		8 13.2 313°24	0°1/13.3	18		188879	2006 <i>VG101</i>		8 13.2 275°81	2°3/11.6	18	
7 10	21 53.47	-11 28.2	1.808	2.678	13.7	21.3	7 10	21 57.14	-17 20.3	1.565	2.449	14.7	20.9
7 20	21 49.19	-12 5.4	1.734	2.674	10.3	21.1	7 20	21 52.42	-18 7.1	1.483	2.432	10.9	20.7
7 30	21 42.91	-12 54.6	1.682	2.670	6.3	20.8	7 30	21 45.16	-19 2.9	1.423	2.415	6.6	20.4
8 9	21 35.28	-13 51.3	1.655	2.667	1.9	20.6	8 9	21 36.04	-20 1.4	1.388	2.398	2.7	20.1
8 19	21 27.13	-14 50.0	1.655	2.663	2.6	20.6	8 19	21 26.10	-20 55.2	1.378	2.380	4.4	20.2
8 29	21 19.48	-15 44.8	1.682	2.659	6.9	20.9	8 29	21 16.66	-21 37.5	1.394	2.363	9.0	20.4
9 8	21 13.27	-16 31.0	1.734	2.656	10.9	21.1	9 8	21 8.96	-22 4.1	1.434	2.345	13.5	20.6
9 18	21 9.15	-17 5.5	1.808	2.653	14.3	21.3	9 18	21 3.91	-22 13.7	1.494	2.327	17.3	20.8
266256	2006 <i>YO16</i>		8 13.2 135°53	1°2/12.2	17		65862	1997 <i>JN11</i>		8 13.2 47°38	2°0/14.6	18	
7 10	21 58.22	-15 26.8	1.797										

EPHEMERIDES

8 13.2

8 13.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
307131	2002 <i>CR</i> ₁₆₀		8 13.2 136°69	2°0/11.1	18		212250	2005 <i>JQ</i> ₇₆		8 13.2 82°58	3°1/15.6	18	
7 10	21 55.47	-20 8.1	2.717	3.584	9.8	21.5	7 10	21 54.27	-4 34.3	1.949	2.791	14.0	21.0
7 20	21 49.98	-20 45.3	2.655	3.596	7.1	21.3	7 20	21 49.60	-4 36.7	1.876	2.794	10.9	20.8
7 30	21 43.07	-21 24.4	2.619	3.607	4.3	21.2	7 30	21 43.10	-4 53.8	1.825	2.796	7.5	20.6
8 9	21 35.29	-22 1.5	2.611	3.618	2.1	21.0	8 9	21 35.39	-5 23.7	1.798	2.799	4.1	20.4
8 19	21 27.26	-22 33.2	2.632	3.629	3.2	21.1	8 19	21 27.26	-6 3.2	1.798	2.801	3.4	20.3
8 29	21 19.69	-22 56.6	2.682	3.639	5.9	21.3	8 29	21 19.62	-6 47.8	1.825	2.804	6.3	20.5
9 8	21 13.21	-23 10.1	2.759	3.649	8.5	21.5	9 8	21 13.31	-7 32.7	1.878	2.807	9.8	20.7
9 18	21 8.28	-23 13.5	2.859	3.659	10.8	21.7	9 18	21 8.95	-8 13.5	1.955	2.809	12.9	21.0
184487	2005 <i>OG</i> ₁₈		8 13.2 30°75	1°8/14.5	18		98659	2000 <i>WU</i> ₁₅₄		8 13.2 329°96	1°1/12.7	18	
7 10	21 54.21	-8 41.1	1.845	2.704	14.0	20.3	7 10	21 58.29	-17 0.8	1.124	2.023	18.0	18.5
7 20	21 49.59	-8 44.7	1.777	2.709	10.6	20.1	7 20	21 53.94	-16 53.4	1.054	2.010	13.6	18.2
7 30	21 43.08	-9 0 3	1.732	2.714	6.8	19.9	7 30	21 46.37	-16 52.9	1.004	1.998	8.3	17.9
8 9	21 35.33	-9 25.2	1.712	2.719	3.0	19.6	8 9	21 36.49	-16 54.4	0.975	1.986	2.5	17.5
8 19	21 27.19	-9 55.9	1.718	2.725	2.6	19.6	8 19	21 25.71	-16 52.6	0.968	1.976	4.0	17.6
8 29	21 19.62	-10 27.9	1.751	2.731	6.4	19.9	8 29	21 15.78	-16 42.8	0.985	1.966	9.9	17.9
9 8	21 13.48	-10 57.1	1.809	2.737	10.1	20.1	9 8	21 8.27	-16 22.7	1.023	1.957	15.3	18.2
9 18	21 9.38	-11 20.5	1.890	2.744	13.4	20.3	9 18	21 4.15	-15 51.8	1.079	1.949	19.9	18.4
448587	2010 <i>TA</i> ₆₈		8 13.2 290°22	5°3/18.2	18		224878	2007 <i>BM</i> ₆₀		8 13.2 160°95	2°0/11.6	18	
7 10	21 51.56	+3 9.4	2.188	2.992	14.0	21.5	7 10	21 57.67	-17 5.9	1.836	2.711	13.3	21.4
7 20	21 47.48	+3 10.8	2.103	2.987	11.5	21.3	7 20	21 52.28	-17 57.0	1.770	2.715	9.8	21.1
7 30	21 41.78	+2 53.6	2.039	2.982	8.8	21.1	7 30	21 44.79	-18 55.0	1.728	2.719	5.9	20.9
8 9	21 34.96	+2 18.4	1.999	2.977	6.3	21.0	8 9	21 35.91	-19 53.9	1.712	2.722	2.3	20.7
8 19	21 27.70	+1 27.1	1.985	2.972	5.3	20.9	8 19	21 26.57	-20 47.4	1.723	2.725	3.8	20.8
8 29	21 20.80	+0 24.0	1.998	2.967	6.7	21.0	8 29	21 17.84	-21 30.4	1.762	2.728	7.7	21.1
9 8	21 15.00	-0 45.5	2.037	2.963	9.3	21.1	9 8	21 10.69	-21 59.7	1.825	2.730	11.4	21.3
9 18	21 10.90	-1 55.6	2.100	2.958	12.0	21.3	9 18	21 5.77	-22 14.2	1.911	2.731	14.6	21.5
202280	2005 <i>BC</i> ₂₆		8 13.2 277°23	0°6/13.6	18		335733	2007 <i>DR</i> ₆₀		8 13.2 76°28	0°1/13.2	18	
7 10	21 54.80	-10 21.4	1.903	2.765	13.5	20.6	7 10	22 4.48	-14 58.5	1.627	2.493	15.2	19.5
7 20	21 50.30	-10 53.6	1.806	2.742	10.2	20.3	7 20	21 57.14	-14 41.7	1.578	2.516	11.3	19.3
7 30	21 43.71	-11 38.9	1.733	2.719	6.4	20.1	7 30	21 47.56	-14 30.9	1.552	2.540	6.8	19.1
8 9	21 35.60	-12 33.8	1.684	2.695	2.2	19.7	8 9	21 36.68	-14 22.9	1.552	2.563	2.0	18.8
8 19	21 26.76	-13 33.3	1.663	2.671	2.5	19.7	8 19	21 25.63	-14 14.9	1.578	2.586	2.7	18.9
8 29	21 18.21	-14 31.5	1.669	2.646	6.9	19.9	8 29	21 15.62	-14 4.2	1.633	2.609	7.2	19.3
9 8	21 10.96	-15 23.1	1.700	2.622	11.1	20.1	9 8	21 7.61	-13 49.3	1.713	2.631	11.2	19.6
9 18	21 5.79	-16 4.3	1.755	2.597	14.7	20.3	9 18	21 2.17	-13 29.5	1.815	2.654	14.5	19.8
449334	2013 <i>FW</i> ₂₄		8 13.2 68°91	1°7/14.8	18		128240	2003 <i>SK</i> ₁₆₅		8 13.2 59°79	6°2/18.9	18	
7 10	21 52.34	-7 13.2	2.218	3.067	12.3	21.2	7 10	21 52.30	+5 3.3	1.775	2.581	16.6	19.3
7 20	21 47.93	-7 35.4	2.151	3.076	9.4	21.0	7 20	21 48.30	+4 51.8	1.704	2.588	13.7	19.1
7 30	21 41.96	-8 9.4	2.107	3.086	6.1	20.8	7 30	21 42.38	+4 15.6	1.653	2.595	10.5	18.9
8 9	21 35.00	-8 52.4	2.089	3.095	2.7	20.6	8 9	21 35.20	+3 15.6	1.625	2.602	7.5	18.8
8 19	21 27.74	-9 40.7	2.098	3.105	2.3	20.6	8 19	21 27.58	+1 55.4	1.622	2.609	6.2	18.7
8 29	21 20.93	-10 29.8	2.136	3.115	5.5	20.9	8 29	21 20.48	+0 21.6	1.644	2.616	7.6	18.8
9 8	21 15.29	-11 15.7	2.200	3.125	8.7	21.1	9 8	21 14.79	+1 17.5	1.693	2.624	10.5	19.0
9 18	21 11.33	-11 55.1	2.288	3.135	11.6	21.3	9 18	21 11.13	+2 54.1	1.765	2.631	13.5	19.2
423854	2006 <i>QM</i> ₁₃₀		8 13.2 326°76	3°8/11.1	18		365684	2010 <i>VU</i> ₁₀₁		8 13.2 323°68	4°4/17.1	18	
7 10	21 54.80	-19 56.6	1.124	2.033	17.4	20.0	7 10	21 52.25	-0 10.9	2.202	3.020	13.4	21.1
7 20	21 51.44	-20 34.8	1.054	2.015	13.0	19.7	7 20	21 47.99	-0 2.3	2.119	3.017	10.8	20.9
7 30	21 44.91	-21 20.5	1.002	1.998	8.1	19.4	7 30	21 42.10	-0 9.4	2.059	3.013	7.9	20.7
8 9	21 36.05	-22 5.6	0.972	1.982	4.0	19.1	8 9	21 35.12	-0 31.4	2.023	3.010	5.3	20.6
8 19	21 26.20	-22 41.0	0.965	1.966	6.1	19.2	8 19	21 27.72	-1 6.4	2.013	3.007	4.5	20.5
8 29	21 17.10	-22 59.2	0.980	1.952	11.3	19.4	8 29	21 20.70	-1 50.8	2.031	3.004	6.3	20.6
9 8	21 10.35	-22 56.7	1.014	1.939	16.4	19.7	9 8	21 14.80	-2 39.8	2.075	3.001	9.1	20.8
9 18	21 6.96	-22 34.0	1.067	1.927	20.8	19.9	9 18	21 10.59	-3 28.9	2.142	2.999	11.9	21.0
79581	1998 <i>QC</i> ₁₀₆		8 13.2 11°05	3°7/10.9	18		512013	2015 <i>LM</i> ₂₆		8 13.2 304°66	1°7/14.5	18	
7 10	21 52.95	-18 59.5	1.052	1.965	17.9	18.3	7 10	21 53.17	-7 28.2	1.739	2.600	14.6	21.4
7 20	21 49.86	-19 53.9	1.003	1.967	13.2	18.0	7 20	21 49.10	-7 57.7	1.661	2.593	11.2	21.2
7 30	21 43.74	-20 56.5	0.974	1.971	8.0	17.8	7 30	21 42.97	-8 43.0	1.604	2.587	7.2	20.9
8 9	21 35.62	-21 57.8	0.966	1.976	3.9	17.6	8 9	21 35.42	-9 40.7	1.572	2.580	3.0	20.6
8 19	21 26.92	-22 48.0	0.980	1.982	6.0	17.7	8 19	21 27.31	-10 45.5	1.566	2.574	2.7	20.6
8 29	21 19.26	-23 19.7	1.017	1.989	11.0	18.0	8 29	21 19.66	-11 51.1	1.587	2.568	6.8	20.9
9 8	21 14.02	-23 29.7	1.073	1.998	15.7	18.3	9 8	21 13.46	-12 51.5	1.633	2.562	10.9	21.1
9 18	21 11.94	-23 18.7	1.147	2.008	19.7	18.6	9 18	21 9.40	-13 42.0	1.701	2.557	14.5	21.3
399707	2004 <i>TR</i> ₃₃₇		8 13.2 335°80	4°2/17.0	15		441226	2007 <i>VS</i> ₁₁₁		8 13.2 216°96	3°5/16.3	18	
7 10	21 50.60	-0 19.8	2.012	2.840	14.2	21.4	7 10	21 54.41	-2 7.7	2.384	3.203	12.5	21.8
7 20	21 46.91	-0 29.4	1.929	2.834	11.4	21.2	7 20	21 49.50	-2 8.8	2.295	3.196	9.9	21.6
7 30	21 41.50	-0 57.1	1.868	2.828	8.2	21.0	7 30	21 42.99	-2 23.7	2.228	3.189	7.1	21.4
8 9	21 34.91	-1 41.8	1.831	2.823	5.3	20.8	8 9	21 35.40	-2 51.2	2.188	3.182	4.4	21.2
8 19	21 27.86	-2 40.2	1.820	2.818	4.3	20.7	8 19	21 27.36	-3 29.2	2.175	3.174	3.6	21.1
8 29	21 21.20	-3 47.4	1.836	2.813	6.4	20.9	8 29	21 19.66	-4 13.9	2.191	3.165	5.8	21.3
9 8	21 15.72	-4 57.4	1.877	2.809	9.6	21.0	9 8	21 13.01	-5 1.3	2.233	3.156	8.7	21.4
9 18	21 12.05	-6 4.6	1.942	2.805	12.7	21.2	9 18	21 7.99	-5 47.1	2.300	3.147	11.5	21.6
507237	2011 <i>AB</i> ₅₈		8 13.2 176°05	0°3/13.4	17		154611	2003 <i>RL</i> ₄		8 13.2 23°74	7°6/19.2	18	

EPHEMERIDES

8 13.2

8 13.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
97283	1999 <i>XH</i> ₁₅₅		8 13.2 209°51	1°3/14.6	18		123373	2000 <i>WW</i> ₃₉		8 13.2 315°83	0°8/13.8	18	
7 10	21 52.64	- 8 9.4	2.764	3.605	10.4	20.4	7 10	21 52.26	-10 1.4	1.424	2.305	16.1	19.6
7 20	21 47.98	- 8 27.9	2.679	3.600	7.9	20.2	7 20	21 49.01	-10 30.5	1.337	2.282	12.3	19.3
7 30	21 41.98	- 8 55.5	2.617	3.595	5.1	20.0	7 30	21 43.26	-11 16.6	1.270	2.260	7.7	18.9
8 9	21 35.07	- 9 30.1	2.583	3.590	2.2	19.8	8 9	21 35.64	-12 16.0	1.227	2.238	2.7	18.6
8 19	21 27.83	-10 8.8	2.577	3.584	1.9	19.8	8 19	21 27.12	-13 22.4	1.208	2.216	3.0	18.5
8 29	21 20.89	-10 48.5	2.600	3.578	4.8	20.0	8 29	21 19.01	-14 27.8	1.213	2.195	8.3	18.8
9 8	21 14.86	-11 25.9	2.652	3.571	7.7	20.1	9 8	21 12.57	-15 25.0	1.241	2.175	13.2	19.0
9 18	21 10.21	-11 58.6	2.728	3.565	10.2	20.3	9 18	21 8.76	-16 8.8	1.290	2.156	17.6	19.2
208530	2001 <i>YV</i> ₈₅		8 13.2 297°25	0°6/12.9	17		108034	2001 <i>FR</i> ₁₅₃		8 13.2 193°54	3°1/16.7	18	
7 10	21 58.75	-14 53.8	1.269	2.158	17.2	20.1	7 10	21 51.05	- 1 10.0	2.511	3.330	12.0	20.0
7 20	21 54.07	-15 3.1	1.193	2.143	12.9	19.8	7 20	21 46.93	- 1 34.1	2.428	3.329	9.5	19.9
7 30	21 46.40	-15 22.9	1.136	2.129	7.9	19.5	7 30	21 41.41	- 2 13.0	2.368	3.328	6.7	19.7
8 9	21 36.54	-15 48.0	1.103	2.114	2.3	19.1	8 9	21 34.96	- 3 4.8	2.334	3.328	4.1	19.5
8 19	21 25.76	-16 12.5	1.093	2.100	3.6	19.1	8 19	21 28.16	- 4 6.6	2.327	3.327	3.2	19.5
8 29	21 15.64	-16 30.4	1.107	2.086	9.3	19.4	8 29	21 21.68	- 5 14.0	2.349	3.326	5.3	19.6
9 8	21 7.67	-16 37.6	1.144	2.073	14.5	19.7	9 8	21 16.17	- 6 22.2	2.398	3.325	8.0	19.8
9 18	21 2.83	-16 32.4	1.200	2.060	19.0	19.9	9 18	21 12.12	- 7 26.9	2.473	3.324	10.7	19.9
136196	2003 <i>UF</i> ₂₇₉		8 13.2 337°42	5°7/16.6	17		144039	2004 <i>BL</i> ₂₅		8 13.2 147°41	0°5/13.6	18	
7 10	21 51.00	- 1 57.3	1.127	1.999	20.1	19.4	7 10	21 58.93	-11 16.7	1.758	2.619	14.4	20.7
7 20	21 48.39	- 1 40.3	1.055	1.987	16.1	19.1	7 20	21 53.24	-11 39.1	1.691	2.627	10.8	20.5
7 30	21 42.98	- 1 49.1	1.001	1.975	11.6	18.8	7 30	21 45.41	-12 12.5	1.648	2.634	6.7	20.3
8 9	21 35.52	- 2 24.0	0.967	1.965	7.3	18.5	8 9	21 36.19	-12 52.9	1.629	2.640	2.2	20.0
8 19	21 27.18	- 3 21.2	0.954	1.956	5.9	18.4	8 19	21 26.52	-13 35.3	1.638	2.646	2.5	20.1
8 29	21 19.47	- 4 33.1	0.963	1.948	9.4	18.6	8 29	21 17.50	-14 14.6	1.674	2.651	6.9	20.4
9 8	21 13.79	- 5 49.3	0.993	1.941	14.1	18.8	9 8	21 10.11	-14 46.7	1.736	2.656	10.9	20.6
9 18	21 11.11	- 7 0.4	1.042	1.935	18.7	19.1	9 18	21 5.01	-15 9.1	1.820	2.661	14.4	20.8
254273	2004 <i>RW</i> ₁₉₃		8 13.2 342°44	5°0/17.6	18		347485	1994 <i>UT</i> ₅		8 13.2 281°42	3°8/10.5	18	
7 10	21 50.83	+ 1 19.7	1.977	2.797	14.7	20.0	7 10	21 57.90	-23 3.4	1.824	2.707	13.0	21.3
7 20	21 47.13	+ 1 21.4	1.896	2.792	11.9	19.8	7 20	21 52.67	-23 43.7	1.749	2.696	9.7	21.1
7 30	21 41.68	+ 1 4.1	1.835	2.788	8.9	19.6	7 30	21 45.19	-24 25.7	1.696	2.684	6.3	20.9
8 9	21 35.04	+ 0 28.4	1.798	2.783	6.1	19.5	8 9	21 36.15	-25 3.1	1.669	2.673	3.9	20.7
8 19	21 27.93	- 0 23.1	1.786	2.779	5.0	19.4	8 19	21 26.53	-25 30.0	1.669	2.662	5.4	20.8
8 29	21 21.22	- 1 25.7	1.801	2.776	6.8	19.5	8 29	21 17.47	-25 42.4	1.695	2.650	8.9	21.0
9 8	21 15.72	- 2 33.5	1.842	2.773	9.8	19.7	9 8	21 10.04	-25 38.5	1.745	2.639	12.4	21.2
9 18	21 12.04	- 3 40.6	1.905	2.770	12.8	19.9	9 18	21 4.98	-25 19.0	1.816	2.628	15.6	21.3
108326	2001 <i>KY</i>		8 13.2 49°45	9°0/6.1	17		295369	2008 <i>HY</i> ₅₂		8 13.2 55°77	2°1/11.8	17	
7 10	21 58.92	-34 55.0	1.620	2.506	14.2	18.9	7 10	21 56.99	-16 13.1	1.350	2.240	16.2	20.7
7 20	21 53.64	-36 28.0	1.586	2.519	11.5	18.8	7 20	21 52.23	-17 5.6	1.302	2.255	11.9	20.5
7 30	21 45.76	-37 50.5	1.573	2.533	9.5	18.7	7 30	21 44.94	-18 7.2	1.276	2.270	7.1	20.2
8 9	21 36.25	-38 52.8	1.585	2.547	9.1	18.7	8 9	21 36.06	-19 10.1	1.274	2.285	2.6	20.0
8 19	21 26.36	-39 28.2	1.620	2.561	10.5	18.9	8 19	21 26.78	-20 6.6	1.296	2.300	4.3	20.2
8 29	21 17.50	-39 34.2	1.678	2.576	12.8	19.0	8 29	21 18.44	-20 50.0	1.344	2.316	8.9	20.5
9 8	21 10.79	-39 12.8	1.757	2.591	15.2	19.2	9 8	21 12.16	-21 16.9	1.414	2.332	13.2	20.8
9 18	21 6.87	-38 28.5	1.854	2.606	17.4	19.4	9 18	21 8.60	-21 26.8	1.505	2.348	16.7	21.0
470596	2008 <i>NW</i> ₄		8 13.2 1°22	0°4/18.9	15		483628	2004 <i>TS</i> ₂₂₇		8 13.2 301°90	4°6/9.6	18	
7 10	21 34.87	+ 2 26.9	35.794	36.561	1.1	21.1	7 10	21 57.20	-26 44.1	2.084	2.964	11.7	21.3
7 20	21 34.12	+ 2 26.5	35.704	36.561	0.9	21.1	7 20	21 52.03	-27 21.9	2.000	2.943	9.0	21.1
7 30	21 33.31	+ 2 25.1	35.639	36.561	0.7	21.1	7 30	21 44.76	-27 58.4	1.939	2.921	6.2	20.8
8 9	21 32.44	+ 2 22.6	35.600	36.562	0.5	21.1	8 9	21 36.03	-28 27.7	1.904	2.899	4.7	20.7
8 19	21 31.57	+ 2 19.3	35.588	36.562	0.4	21.1	8 19	21 26.71	-28 44.7	1.895	2.878	6.0	20.8
8 29	21 30.71	+ 2 15.3	35.605	36.562	0.5	21.1	8 29	21 17.84	-28 45.8	1.913	2.856	8.9	20.9
9 8	21 29.91	+ 2 10.7	35.650	36.562	0.7	21.1	9 8	21 10.41	-28 30.0	1.955	2.835	12.0	21.0
9 18	21 29.18	+ 2 5.8	35.721	36.562	0.9	21.1	9 18	21 5.14	-27 58.5	2.019	2.814	14.8	21.2
417520	2006 <i>SL</i> ₃₆₉		8 13.2 215°12	1°3/12.3	17		188445	2004 <i>HB</i> ₅		8 13.2 199°11	1°8/11.9	18	
7 10	21 58.62	-15 29.3	1.801	2.672	13.7	21.9	7 10	21 58.55	-16 54.0	1.840	2.713	13.4	21.1
7 20	21 53.14	-16 8.3	1.724	2.666	10.2	21.7	7 20	21 53.04	-17 37.3	1.767	2.711	9.9	20.8
7 30	21 45.44	-16 55.8	1.669	2.659	6.1	21.4	7 30	21 45.35	-18 27.6	1.718	2.708	5.9	20.6
8 9	21 36.20	-17 46.5	1.641	2.652	2.0	21.1	8 9	21 36.20	-19 19.3	1.694	2.705	2.2	20.4
8 19	21 26.36	-18 34.6	1.640	2.645	3.3	21.2	8 19	21 26.51	-20 6.6	1.698	2.701	3.7	20.5
8 29	21 17.04	-19 14.7	1.666	2.637	7.6	21.5	8 29	21 17.37	-20 44.3	1.729	2.696	7.7	20.7
9 8	21 9.30	-19 42.9	1.718	2.628	11.6	21.7	9 8	21 9.80	-21 9.1	1.785	2.691	11.5	20.9
9 18	21 3.88	-19 57.9	1.791	2.619	15.1	21.9	9 18	21 4.50	-21 20.1	1.863	2.686	14.8	21.1
481453	2006 <i>WK</i> ₂₀₁		8 13.2 222°31	1°8/14.7	18		209100	2003 <i>SV</i> ₅₇		8 13.2 259°25	5°8/8.5	18	
7 10	21 55.30	- 8 24.2	2.337	3.181	11.9	21.9	7 10	22 1.14	-30 4.3	2.135	3.008	11.8	21.0
7 20	21 50.16	- 8 20.4	2.254	3.177	9.1	21.7	7 20	21 54.99	-30 56.6	2.053	2.987	9.2	20.8
7 30	21 43.39	- 8 26.1	2.196	3.173	5.9	21.5	7 30	21 46.58	-31 45.4	1.994	2.967	6.9	20.6
8 9	21 35.54	- 8 39.4	2.163	3.169	2.7	21.3	8 9	21 36.59	-32 23.9	1.962	2.946	5.8	20.5
8 19	21 27.30	- 8 57.8	2.159	3.165	2.4	21.2	8 19	21 25.96	-32 46.4	1.957	2.924	7.1	20.5
8 29	21 19.46	- 9 18.5	2.183	3.161	5.5	21.4	8 29	21 15.81	-32 49.1	1.978	2.902	9.7	20.6
9 8	21 12.75	- 9 38.2	2.234	3.156	8.8	21.6	9 8	21 7.21	-32 31.8	2.023	2.880	12.6	20.8
9 18	21 7.72	- 9 54.5	2.309	3.152	11.6	21.8	9 18	21 0.91	-31 56.5	2.089	2.857	15.3	20.9
72094	2000 <i>YM</i> ₄₇		8 13.2 71°54	5°6/16.9	18		242703	2005 <i>TA</i>					

EPHEMERIDES

8 13.2

8 13.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
96926	1999 <i>TD</i> ₁₂₆		8 13.2 295°51	1.8/12.0	18		192240	2008 <i>DL</i> ₅₄		8 13.2 212°66	4.9/9.3	18	
7 10	21 56.41	-17 8.5	1.686	2.567	14.0	20.2	7 10	21 58.17	-27 42.4	2.101	2.979	11.7	20.2
7 20	21 51.81	-17 38.7	1.598	2.545	10.4	19.9	7 20	21 52.56	-28 26.0	2.038	2.979	8.9	20.0
7 30	21 44.83	-18 16.5	1.532	2.523	6.3	19.6	7 30	21 44.96	-29 6.6	1.999	2.978	6.3	19.9
8 9	21 36.11	-18 56.8	1.490	2.501	2.3	19.3	8 9	21 36.09	-29 38.6	1.986	2.978	4.9	19.8
8 19	21 26.60	-19 33.8	1.475	2.479	3.8	19.4	8 19	21 26.83	-29 57.1	2.000	2.978	6.1	19.9
8 29	21 17.51	-20 1.8	1.486	2.457	8.3	19.6	8 29	21 18.19	-29 59.2	2.040	2.978	8.8	20.0
9 8	21 10.01	-20 17.2	1.521	2.436	12.6	19.8	9 8	21 11.09	-29 44.6	2.105	2.977	11.6	20.2
9 18	21 4.93	-20 18.8	1.577	2.414	16.4	20.0	9 18	21 6.12	-29 14.8	2.191	2.977	14.1	20.4
153215	2000 <i>YR</i> ₈		8 13.2 190°21	4.6/17.0	18		47752	2000 <i>DD</i> ₈₇		8 13.2 217°49	5.0/9.9	18	
7 10	21 55.22	+ 0 2.4	2.390	3.197	12.8	20.0	7 10	22 2.70	-28 16.8	1.997	2.870	12.5	18.8
7 20	21 50.06	+ 0 32.4	2.307	3.196	10.4	19.8	7 20	21 55.98	-28 42.2	1.930	2.868	9.5	18.6
7 30	21 43.34	+ 0 48.9	2.248	3.196	7.8	19.6	7 30	21 47.05	-29 3.2	1.886	2.865	6.6	18.5
8 9	21 35.57	+ 0 51.8	2.214	3.195	5.4	19.5	8 9	21 36.72	-29 14.1	1.869	2.863	5.0	18.4
8 19	21 27.41	+ 0 42.3	2.206	3.195	4.7	19.4	8 19	21 25.98	-29 10.5	1.879	2.860	6.1	18.4
8 29	21 19.62	+ 0 22.7	2.227	3.194	6.3	19.5	8 29	21 16.00	-28 50.1	1.916	2.857	9.0	18.6
9 8	21 12.93	- 0 3.4	2.274	3.193	8.8	19.7	9 8	21 7.75	-28 13.8	1.977	2.854	12.0	18.8
9 18	21 7.86	- 0 32.3	2.346	3.192	11.3	19.9	9 18	21 1.90	-27 23.7	2.061	2.851	14.7	19.0
390499	2014 <i>AQ</i> ₄₉		8 13.2 248°19	1.0/12.5	18		5611	1943 <i>DL</i>		8 13.2 218°64	4.0/10.4	18	
7 10	21 58.35	-15 42.0	2.003	2.870	12.7	22.6	7 10	22 1.57	-24 58.7	2.029	2.903	12.3	17.4
7 20	21 52.85	-16 7.3	1.914	2.854	9.5	22.4	7 20	21 55.16	-25 30.0	1.956	2.896	9.3	17.2
7 30	21 45.26	-16 39.7	1.849	2.838	5.7	22.2	7 30	21 46.60	-26 0.3	1.906	2.890	6.1	17.0
8 9	21 36.20	-17 14.9	1.810	2.821	1.8	21.9	8 9	21 36.60	-26 23.9	1.882	2.883	4.0	16.8
8 19	21 26.51	-17 48.3	1.798	2.803	3.0	21.9	8 19	21 26.12	-26 35.9	1.887	2.875	5.3	16.9
8 29	21 17.21	-18 15.4	1.815	2.786	7.1	22.1	8 29	21 16.25	-26 33.3	1.918	2.868	8.4	17.1
9 8	21 9.29	-18 33.1	1.857	2.767	10.9	22.3	9 8	21 7.99	-26 15.7	1.975	2.859	11.7	17.3
9 18	21 3.49	-18 40.0	1.922	2.748	14.3	22.5	9 18	21 2.01	-25 44.2	2.054	2.851	14.5	17.5
71420	2000 <i>AP</i> ₁₉₁		8 13.2 276°51	7.8/19.2	18		308435	2005 <i>SL</i> ₁₅₉		8 13.2 260°96	3.6/15.8	17	
7 10	21 54.29	+ 6 58.4	1.965	2.749	16.0	19.1	7 10	21 55.67	- 3 51.6	1.716	2.560	15.5	20.7
7 20	21 49.88	+ 7 34.0	1.870	2.732	13.6	18.9	7 20	21 51.06	- 3 52.7	1.631	2.550	12.3	20.4
7 30	21 43.49	+ 7 48.7	1.795	2.716	11.1	18.7	7 30	21 44.28	- 4 11.2	1.568	2.539	8.5	20.2
8 9	21 35.68	+ 7 40.6	1.742	2.699	8.8	18.6	8 9	21 35.95	- 4 45.7	1.529	2.529	4.8	19.9
8 19	21 27.20	+ 7 9.7	1.713	2.683	7.8	18.5	8 19	21 26.95	- 5 32.7	1.515	2.518	3.9	19.9
8 29	21 19.01	+ 6 19.0	1.710	2.666	8.8	18.5	8 29	21 18.40	- 6 27.0	1.528	2.507	7.2	20.0
9 8	21 12.04	+ 5 14.1	1.732	2.649	11.2	18.6	9 8	21 11.31	- 7 22.4	1.565	2.496	11.2	20.3
9 18	21 7.04	+ 4 1.9	1.776	2.632	14.0	18.7	9 18	21 6.48	- 8 13.5	1.625	2.485	14.9	20.5
179788	2002 <i>TM</i> ₈		8 13.2 3°87	2.3/11.8	17		284030	2004 <i>XV</i> ₂₅		8 13.2 161°35	2.7/15.5	18	
7 10	21 51.04	-15 40.5	1.022	1.935	18.3	19.4	7 10	21 57.84	- 5 12.2	2.467	3.291	12.0	21.2
7 20	21 48.56	-16 31.8	0.969	1.933	13.5	19.1	7 20	21 51.90	- 5 4.8	2.390	3.298	9.3	21.0
7 30	21 43.10	-17 36.7	0.936	1.933	8.1	18.9	7 30	21 44.41	- 5 8.2	2.336	3.304	6.3	20.8
8 9	21 35.59	-18 46.5	0.923	1.934	2.9	18.6	8 9	21 35.91	- 5 21.0	2.310	3.309	3.5	20.7
8 19	21 27.41	-19 50.9	0.932	1.937	4.9	18.7	8 19	21 27.08	- 5 41.0	2.312	3.314	2.9	20.6
8 29	21 20.18	-20 40.8	0.962	1.941	10.4	19.0	8 29	21 18.68	- 6 5.4	2.344	3.319	5.4	20.8
9 8	21 15.29	-21 10.6	1.013	1.947	15.5	19.3	9 8	21 11.41	- 6 31.0	2.403	3.323	8.4	21.0
9 18	21 13.55	-21 19.1	1.082	1.954	19.8	19.6	9 18	21 5.79	- 6 54.7	2.487	3.326	11.1	21.2
503810	2017 <i>KL</i> ₅		8 13.2 346°25	13.4/31.3	17		378630	2008 <i>FT</i> ₁₀₄		8 13.2 121°39	4.6/10.0	18	
7 10	21 52.94	-28 35.2	0.883	1.809	19.0	19.7	7 10	21 59.92	-23 34.3	1.621	2.507	14.2	20.9
7 20	21 51.18	-33 12.1	0.844	1.805	15.3	19.5	7 20	21 54.26	-24 33.9	1.566	2.514	10.6	20.7
7 30	21 45.42	-37 51.8	0.827	1.801	13.4	19.3	7 30	21 46.16	-25 34.6	1.533	2.520	6.9	20.5
8 9	21 36.48	-42 3.2	0.834	1.798	14.6	19.4	8 9	21 36.48	-26 28.5	1.525	2.527	4.6	20.4
8 19	21 26.04	-45 20.5	0.861	1.796	17.9	19.6	8 19	21 26.33	-27 8.6	1.544	2.533	6.2	20.5
8 29	21 16.54	-47 30.7	0.907	1.795	21.8	19.8	8 29	21 17.02	-27 30.3	1.588	2.539	9.7	20.8
9 8	21 10.25	-48 35.5	0.967	1.794	25.3	20.1	9 8	21 9.63	-27 32.5	1.656	2.545	13.2	21.0
9 18	21 8.46	-48 45.2	1.039	1.793	28.1	20.3	9 18	21 4.86	-27 16.7	1.743	2.551	16.3	21.2
362591	2010 <i>VT</i> ₁₉₄		8 13.2 63°54	2.1/11.6	18		33687	Julianbain		8 13.2 26°92	6.4/8.9	18	
7 10	21 56.42	-20 3.3	2.215	3.088	11.4	20.8	7 10	21 55.01	-24 58.1	1.214	2.122	16.4	17.7
7 20	21 51.04	-20 23.0	2.150	3.093	8.4	20.6	7 20	21 51.16	-26 21.2	1.174	2.133	12.3	17.5
7 30	21 43.93	-20 44.7	2.109	3.098	5.1	20.4	7 30	21 44.47	-27 43.9	1.156	2.145	8.4	17.4
8 9	21 35.74	-21 4.5	2.095	3.104	2.3	20.2	8 9	21 35.98	-28 55.2	1.160	2.158	6.4	17.3
8 19	21 27.25	-21 18.7	2.109	3.109	3.4	20.3	8 19	21 27.05	-29 46.0	1.187	2.172	8.3	17.4
8 29	21 19.31	-21 24.7	2.150	3.114	6.7	20.5	8 29	21 19.21	-30 10.8	1.237	2.187	12.0	17.7
9 8	21 12.70	-21 20.8	2.217	3.120	9.8	20.7	9 8	21 13.68	-30 9.4	1.307	2.202	15.6	18.0
9 18	21 7.97	-21 7.1	2.308	3.125	12.5	20.9	9 18	21 11.12	-29 44.8	1.395	2.219	18.8	18.2
337213	2000 <i>AE</i> ₂₂₆		8 13.2 190°81	2.0/14.8	18		402412	2005 <i>YH</i> ₁₅₈		8 13.2 206°99	3.8/17.0	17	
7 10	21 56.91	- 7 32.4	2.338	3.176	12.1	21.6	7 10	21 54.08	- 0 7.1	2.898	3.697	11.0	22.3
7 20	21 51.35	- 7 32.5	2.256	3.174	9.3	21.4	7 20	21 49.02	+ 0 7.9	2.807	3.692	8.9	22.2
7 30	21 44.14	- 7 42.7	2.197	3.173	6.1	21.2	7 30	21 42.64	+ 0 11.3	2.739	3.687	6.6	22.0
8 9	21 35.83	- 8 1.2	2.166	3.171	2.9	21.0	8 9	21 35.39	+ 0 3.4	2.698	3.681	4.5	21.9
8 19	21 27.12	- 8 25.5	2.162	3.168	2.5	21.0	8 19	21 27.78	- 0 14.6	2.685	3.675	3.8	21.8
8 29	21 18.81	- 8 52.2	2.188	3.165	5.6	21.2	8 29	21 20.45	- 0 40.4	2.700	3.668	5.3	21.9
9 8	21 11.66	- 9 18.0	2.240	3.161	8.8	21.3	9 8	21 13.98	- 1 10.9	2.744	3.661	7.5	22.1
9 18	21 6.24	- 9 40.2	2.317	3.157	11.7	21.5	9 18	21 8.85	- 1 43.1	2.812	3.654	9.8	22.2
43527	2001 <i>DS</i> ₅₁		8 13.2 152°33	4.8/8.6	18		207862	2007 <i>VM</i> ₁₂₁		8 13.2 331°53			

EPHEMERIDES

8 13.2

8 13.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
478486	2012 <i>RV</i> ₇		8 13.2 339°15	3°8/15.2	18		508718	2017 <i>UQ</i> ₂₆		8 13.2 16°69	6°9/9.7	17	
7 10	21 51.28	- 7 10.1	1.163	2.049	18.6	20.5	7 10	21 57.49	-25 8.1	0.994	1.909	18.5	20.3
7 20	21 48.63	- 6 41.6	1.087	2.031	14.6	20.2	7 20	21 53.56	-26 11.9	0.950	1.912	14.0	20.1
7 30	21 43.19	- 6 30.5	1.029	2.013	9.9	19.9	7 30	21 46.20	-27 15.4	0.926	1.917	9.4	19.9
8 9	21 35.70	- 6 36.3	0.992	1.997	5.3	19.6	8 9	21 36.57	-28 6.8	0.921	1.922	6.9	19.8
8 19	21 27.31	- 6 56.2	0.977	1.983	4.5	19.5	8 19	21 26.35	-28 36.1	0.938	1.929	8.9	19.9
8 29	21 19.49	- 7 24.7	0.984	1.970	9.0	19.7	8 29	21 17.44	-28 37.8	0.977	1.936	13.1	20.2
9 8	21 13.67	- 7 55.1	1.012	1.959	14.0	20.0	9 8	21 11.33	-28 12.5	1.034	1.945	17.5	20.4
9 18	21 10.82	- 8 21.5	1.059	1.950	18.6	20.2	9 18	21 8.78	-27 24.6	1.108	1.954	21.2	20.7
240646	2005 <i>BO</i> ₂₆		8 13.2 234°81	2°4/11.2	18		441389	2008 <i>FJ</i> ₂₄		8 13.2 214°32	3°8/17.2	18	
7 10	21 57.78	-19 43.0	2.112	2.984	11.9	21.4	7 10	21 51.61	+ 0 34.1	2.303	3.116	13.1	21.0
7 20	21 52.32	-20 23.0	2.030	2.974	8.8	21.2	7 20	21 47.52	+ 0 8.4	2.219	3.115	10.5	20.9
7 30	21 44.90	-21 7.0	1.973	2.962	5.4	21.0	7 30	21 41.88	- 0 34.6	2.157	3.113	7.6	20.7
8 9	21 36.12	-21 50.0	1.942	2.950	2.6	20.8	8 9	21 35.21	- 1 33.4	2.121	3.111	4.9	20.5
8 19	21 26.80	-22 26.9	1.940	2.938	4.0	20.8	8 19	21 28.14	- 2 44.6	2.112	3.109	3.8	20.4
8 29	21 17.92	-22 53.4	1.965	2.926	7.4	21.0	8 29	21 21.42	- 4 3.1	2.131	3.107	5.8	20.6
9 8	21 10.39	-23 7.2	2.015	2.913	10.9	21.2	9 8	21 15.74	- 5 23.3	2.177	3.105	8.6	20.7
9 18	21 4.89	-23 7.8	2.088	2.899	13.9	21.4	9 18	21 11.67	- 6 39.9	2.248	3.103	11.5	20.9
281610	2008 <i>UV</i> ₂₀₈		8 13.2 331°86	5°7/16.6	18		302210	2001 <i>UW</i> ₁₄₈		8 13.2 260°40	6°4/7.3	18	
7 10	21 51.50	- 1 55.3	1.325	2.185	18.3	20.1	7 10	21 57.67	-31 30.4	2.161	3.038	11.5	20.8
7 20	21 48.52	- 1 28.2	1.243	2.167	14.8	19.8	7 20	21 52.37	-32 38.8	2.093	3.028	9.1	20.6
7 30	21 43.01	- 1 22.7	1.181	2.150	10.8	19.5	7 30	21 44.99	-33 42.9	2.050	3.018	7.0	20.5
8 9	21 35.64	- 1 39.4	1.139	2.134	7.1	19.3	8 9	21 36.18	-34 35.8	2.032	3.008	6.4	20.4
8 19	21 27.41	- 2 16.2	1.120	2.120	5.9	19.1	8 19	21 26.85	-35 11.5	2.041	2.997	7.6	20.5
8 29	21 19.66	- 3 7.7	1.124	2.106	8.8	19.3	8 29	21 18.04	-35 26.6	2.075	2.987	10.0	20.6
9 8	21 13.66	- 4 6.2	1.150	2.093	13.1	19.5	9 8	21 10.73	-35 20.7	2.132	2.976	12.5	20.8
9 18	21 10.33	- 5 3.8	1.196	2.082	17.3	19.7	9 18	21 5.61	-34 55.6	2.210	2.966	14.9	20.9
144239	2004 <i>CS</i> ₇₃		8 13.2 259°34	2°2/11.7	18		122714	2000 <i>SG</i> ₃₃		8 13.2 320°40	2°7/11.5	18	
7 10	21 58.92	-17 30.7	1.688	2.566	14.1	21.4	7 10	21 55.67	-18 27.8	1.473	2.365	15.0	19.5
7 20	21 53.71	-18 15.3	1.602	2.548	10.5	21.1	7 20	21 51.44	-19 9.8	1.401	2.354	11.2	19.3
7 30	21 46.03	-19 8.0	1.538	2.529	6.4	20.8	7 30	21 44.68	-19 59.3	1.351	2.344	6.8	19.0
8 9	21 36.53	-20 2.9	1.499	2.510	2.6	20.6	8 9	21 36.13	-20 49.5	1.325	2.334	3.0	18.8
8 19	21 26.21	-20 53.2	1.488	2.490	4.2	20.6	8 19	21 26.89	-21 33.2	1.323	2.325	4.7	18.8
8 29	21 16.33	-21 32.7	1.502	2.469	8.7	20.8	8 29	21 18.28	-22 4.2	1.347	2.316	9.2	19.1
9 8	21 8.08	-21 57.3	1.541	2.449	12.9	21.0	9 8	21 11.52	-22 19.2	1.393	2.308	13.5	19.3
9 18	21 2.36	-22 6.0	1.601	2.427	16.7	21.2	9 18	21 7.42	-22 17.3	1.460	2.300	17.3	19.5
511466	2014 <i>KU</i> ₅₆		8 13.2 50°24	0°1/13.1	18		97801	2000 <i>NV</i> ₂₇		8 13.2 118°37	0°9/13.8	18	
7 10	21 52.46	-11 28.8	2.012	2.879	12.7	21.1	7 10	21 57.89	- 9 4.6	1.442	2.311	16.6	19.4
7 20	21 48.30	-12 18.6	1.945	2.884	9.4	20.9	7 20	21 52.88	- 9 47.6	1.382	2.320	12.5	19.2
7 30	21 42.39	-13 19.2	1.902	2.890	5.7	20.7	7 30	21 45.41	-10 47.4	1.343	2.329	7.8	18.9
8 9	21 35.35	-14 26.0	1.885	2.896	1.7	20.4	8 9	21 36.32	-11 58.3	1.327	2.338	2.7	18.6
8 19	21 27.92	-15 33.6	1.895	2.902	2.4	20.5	8 19	21 26.70	-13 13.1	1.338	2.346	2.8	18.7
8 29	21 20.97	-16 36.4	1.933	2.908	6.3	20.7	8 29	21 17.85	-14 23.7	1.374	2.354	7.8	19.0
9 8	21 15.30	-17 29.8	1.996	2.915	9.8	21.0	9 8	21 10.89	-15 23.7	1.435	2.362	12.3	19.3
9 18	21 11.49	-18 11.2	2.083	2.921	12.9	21.2	9 18	21 6.55	-16 9.3	1.517	2.369	16.1	19.6
351859	2006 <i>RT</i> ₁₀₄		8 13.2 230°98	1°8/14.5	18		67195	2000 <i>CT</i> ₆₆		8 13.2 301°30	6°5/18.4	18	
7 10	21 57.48	- 9 17.0	2.142	2.989	12.7	20.7	7 10	21 52.03	+ 3 59.4	1.741	2.555	16.6	18.5
7 20	21 51.94	- 9 5.1	2.060	2.985	9.7	20.5	7 20	21 48.52	+ 4 3.9	1.640	2.529	13.9	18.3
7 30	21 44.59	- 9 2.4	2.001	2.980	6.3	20.3	7 30	21 42.87	+ 3 44.5	1.557	2.502	10.8	18.0
8 9	21 36.02	- 9 7.0	1.968	2.975	2.8	20.0	8 9	21 35.62	+ 3 0.1	1.496	2.475	7.8	17.8
8 19	21 27.00	- 9 16.6	1.963	2.970	2.5	20.0	8 19	21 27.54	+ 1 52.1	1.460	2.449	6.6	17.7
8 29	21 18.42	- 9 28.3	1.987	2.964	6.0	20.2	8 29	21 19.68	+ 0 25.7	1.449	2.422	8.3	17.7
9 8	21 11.12	- 9 39.2	2.037	2.959	9.5	20.4	9 8	21 13.11	- 1 11.2	1.463	2.396	11.6	17.8
9 18	21 5.72	- 9 46.9	2.110	2.953	12.6	20.6	9 18	21 8.69	- 2 49.9	1.499	2.370	15.3	18.0
296697	2009 <i>SD</i> ₂₆₉		8 13.2 305°53	1°8/12.0	18		266682	2009 <i>OK</i> ₁₀		8 13.2 156°99	10°0/17.4	17	
7 10	21 54.79	-15 32.0	1.374	2.265	15.9	20.5	7 10	22 6.75	+ 3 21.4	1.287	2.103	21.3	20.3
7 20	21 51.09	-16 17.3	1.290	2.243	11.9	20.2	7 20	21 59.84	+ 4 58.4	1.221	2.108	17.8	20.1
7 30	21 44.65	-17 15.3	1.227	2.221	7.2	19.9	7 30	21 49.87	+ 6 12.9	1.174	2.113	14.1	19.9
8 9	21 36.16	-18 19.7	1.187	2.199	2.5	19.6	8 9	21 37.73	+ 6 59.8	1.148	2.117	11.0	19.7
8 19	21 26.70	-19 22.5	1.172	2.177	4.3	19.6	8 19	21 24.78	+ 7 16.9	1.145	2.120	10.0	19.7
8 29	21 17.69	-20 15.3	1.181	2.156	9.5	19.9	8 29	21 12.65	+ 7 6.4	1.166	2.123	11.8	19.8
9 8	21 10.53	-20 52.2	1.213	2.135	14.5	20.1	9 8	21 2.83	+ 6 35.4	1.210	2.125	15.1	20.0
9 18	21 6.23	-21 10.7	1.263	2.115	18.8	20.3	9 18	20 56.24	+ 5 52.6	1.273	2.127	18.5	20.2
104062	2000 <i>EU</i> ₁₈		8 13.2 215°92	0°6/12.6	18		219481	2001 <i>DF</i> ₁₅		8 13.2 56°16	8°3/11.5	17	
7 10	21 52.83	-14 36.4	2.739	3.599	9.9	20.6	7 10	22 23.44	-34 53.8	1.209	2.077	19.2	18.7
7 20	21 48.21	-15 10.5	2.657	3.594	7.3	20.4	7 20	22 11.35	-34 46.8	1.186	2.115	15.0	18.5
7 30	21 42.21	-15 50.5	2.600	3.588	4.4	20.2	7 30	21 55.99	-34 22.1	1.183	2.152	10.9	18.4
8 9	21 35.28	-16 33.2	2.571	3.583	1.3	20.0	8 9	21 39.25	-33 32.1	1.205	2.190	8.4	18.4
8 19	21 28.01	-17 15.1	2.571	3.577	2.2	20.1	8 19	21 23.25	-32 15.8	1.252	2.228	9.2	18.5
8 29	21 21.05	-17 52.8	2.600	3.571	5.3	20.3	8 29	21 9.86	-30 38.0	1.325	2.265	12.2	18.8
9 8	21 15.03	-18 23.5	2.656	3.564	8.1	20.4	9 8	21 0.14	-28 47.1	1.422	2.302	15.5	19.1
9 18	21 10.45	-18 45.7	2.736	3.557	10.7	20.6	9 18	20 54.38	-26 51.0	1.539	2.339	18.4	19.4
160888	2001 <i>QT</i> ₂₅₈		8 13.2 339°61	1°4/14.4	18		348885	2006 <					

EPHEMERIDES

8 13.2

8 13.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
55011	2001 <i>QV</i> ₂₉		8 13.2 330°41	1.3/12.2	18		100786	1998 <i>FZ</i> ₆₉		8 13.3 158°04	1.2/14.2	17	
7 10	21 53.95	-15 43.3	1.846	2.724	13.1	18.4	7 10	21 58.27	-8 15.4	1.840	2.692	14.4	20.8
7 20	21 49.65	-16 22.6	1.773	2.719	9.7	18.1	7 20	21 52.76	-8 53.3	1.771	2.699	10.9	20.6
7 30	21 43.36	-17 9.8	1.723	2.715	5.8	17.9	7 30	21 45.20	-9 45.3	1.724	2.706	6.9	20.4
8 9	21 35.71	-18 0.0	1.699	2.710	1.9	17.6	8 9	21 36.28	-10 47.3	1.703	2.712	2.6	20.1
8 19	21 27.57	-18 47.8	1.701	2.706	3.2	17.7	8 19	21 26.90	-11 53.7	1.709	2.717	2.5	20.1
8 29	21 19.93	-19 27.8	1.730	2.702	7.3	18.0	8 29	21 18.09	-12 58.5	1.744	2.722	6.6	20.4
9 8	21 13.73	-19 56.6	1.784	2.699	11.1	18.2	9 8	21 10.78	-13 56.1	1.804	2.725	10.5	20.6
9 18	21 9.62	-20 12.3	1.860	2.695	14.3	18.4	9 18	21 5.64	-14 43.1	1.888	2.729	13.9	20.9
244678	2003 <i>OY</i>		8 13.3 41°26	21°9/	2.7 18		507497	2012 <i>UJ</i> ₉₀		8 13.3 201°10	4°5/	9.1 18	
7 10	22 5.22	+25 32.8	1.120	1.825	29.7	18.9	7 10	21 57.99	-26 21.7	2.304	3.178	11.0	21.9
7 20	21 59.05	+29 2.2	1.096	1.851	27.6	18.9	7 20	21 52.39	-27 20.4	2.235	3.175	8.3	21.7
7 30	21 49.49	+31 43.3	1.085	1.879	25.6	18.8	7 30	21 44.91	-28 18.2	2.191	3.171	5.8	21.6
8 9	21 37.63	+33 25.8	1.086	1.907	23.9	18.8	8 9	21 36.19	-29 9.1	2.174	3.167	4.5	21.5
8 19	21 25.06	+34 4.7	1.102	1.936	22.6	18.8	8 19	21 27.03	-29 48.0	2.184	3.162	5.7	21.6
8 29	21 13.69	+33 43.1	1.131	1.966	22.0	18.9	8 29	21 18.35	-30 11.4	2.222	3.157	8.3	21.7
9 8	21 5.12	+32 32.5	1.176	1.996	22.0	19.0	9 8	21 11.02	-30 17.9	2.285	3.151	11.0	21.9
9 18	21 0.25	+30 47.8	1.234	2.027	22.5	19.2	9 18	21 5.64	-30 8.6	2.370	3.145	13.4	22.0
426569	2013 <i>SL</i> ₈		8 13.3 332°94	5°8/16.3	18		482973	2014 <i>KT</i> ₉₈		8 13.3 57°72	5°6/	8.4 18	
7 10	21 53.81	-3 4.4	1.185	2.054	19.5	20.1	7 10	21 56.57	-28 22.7	1.961	2.845	12.2	20.8
7 20	21 50.48	-2 28.0	1.112	2.041	15.7	19.8	7 20	21 51.48	-29 30.0	1.915	2.858	9.3	20.6
7 30	21 44.32	-2 13.0	1.056	2.030	11.3	19.6	7 30	21 44.38	-30 33.8	1.893	2.870	6.7	20.5
8 9	21 36.11	-2 20.3	1.021	2.019	7.2	19.3	8 9	21 36.02	-31 27.0	1.896	2.884	5.6	20.4
8 19	21 27.01	-2 47.7	1.008	2.009	6.0	19.2	8 19	21 27.34	-32 4.3	1.926	2.897	6.9	20.5
8 29	21 18.51	-3 29.9	1.017	2.000	9.4	19.4	8 29	21 19.37	-32 22.2	1.981	2.910	9.5	20.7
9 8	21 12.02	-4 18.8	1.048	1.992	14.0	19.6	9 8	21 13.02	-32 20.5	2.060	2.924	12.1	20.9
9 18	21 8.51	-5 6.7	1.098	1.985	18.4	19.8	9 18	21 8.85	-32 1.2	2.159	2.937	14.5	21.1
504911	2011 <i>AM</i> ₇₀		8 13.3 236°37	1°6/12.1	17		399974	2006 <i>BS</i> ₁₅₁		8 13.3 230°08	0°9/12.5	18	
7 10	21 58.26	-16 7.4	1.740	2.615	13.9	22.6	7 10	21 55.92	-16 55.6	2.437	3.302	10.8	20.2
7 20	21 53.06	-16 50.9	1.661	2.605	10.4	22.3	7 20	21 50.63	-17 7.0	2.361	3.300	8.0	20.0
7 30	21 45.56	-17 43.1	1.605	2.595	6.2	22.1	7 30	21 43.74	-17 22.3	2.309	3.297	4.8	19.8
8 9	21 36.42	-18 38.3	1.574	2.585	2.2	21.8	8 9	21 35.83	-17 38.4	2.283	3.295	1.5	19.6
8 19	21 26.62	-19 30.2	1.570	2.574	3.7	21.9	8 19	21 27.57	-17 52.1	2.287	3.292	2.5	19.7
8 29	21 17.32	-20 13.0	1.593	2.562	8.0	22.1	8 29	21 19.74	-18 0.8	2.319	3.289	5.8	19.9
9 8	21 9.62	-20 42.6	1.640	2.550	12.1	22.3	9 8	21 13.06	-18 2.7	2.377	3.286	8.9	20.1
9 18	21 4.30	-20 57.6	1.709	2.538	15.7	22.5	9 18	21 8.07	-17 56.8	2.460	3.283	11.6	20.2
125475	2001 <i>WA</i> ₁₅		8 13.3 345°37	2°6/14.9	17		510045	2010 <i>EP</i> ₂		8 13.3 138°04	2°5/15.6	17	
7 10	21 42.42	-6 34.8	0.803	1.721	21.4	18.5	7 10	21 55.79	-4 22.9	2.277	3.106	12.7	21.9
7 20	21 42.70	-6 58.4	0.741	1.703	16.7	18.2	7 20	21 50.54	-4 43.7	2.207	3.118	9.8	21.7
7 30	21 39.92	-7 53.7	0.694	1.687	11.0	17.8	7 30	21 43.68	-5 17.9	2.160	3.130	6.6	21.6
8 9	21 34.83	-9 16.9	0.664	1.674	4.8	17.4	8 9	21 35.81	-6 3.1	2.140	3.141	3.5	21.4
8 19	21 28.73	-10 58.6	0.653	1.663	3.9	17.3	8 19	21 27.61	-6 55.7	2.148	3.152	2.8	21.3
8 29	21 23.38	-12 44.1	0.661	1.654	10.2	17.6	8 29	21 19.88	-7 51.3	2.184	3.162	5.5	21.5
9 8	21 20.44	-14 18.5	0.687	1.648	16.4	18.0	9 8	21 13.33	-8 45.3	2.248	3.172	8.7	21.8
9 18	21 20.96	-15 31.1	0.729	1.644	21.8	18.3	9 18	21 8.49	-9 34.1	2.337	3.181	11.5	22.0
140283	2001 <i>ST</i> ₂₈₁		8 13.3 263°60	7°3/19.8	18		189242	2004 <i>RX</i> ₇₇		8 13.3 310°73	1°8/15.0	18	
7 10	21 53.73	+9 0.0	2.382	3.140	14.2	19.9	7 10	21 50.81	-5 51.4	2.061	2.911	13.1	19.9
7 20	21 49.21	+9 28.3	2.280	3.122	12.2	19.7	7 20	21 47.20	-6 30.6	1.972	2.897	10.1	19.6
7 30	21 43.02	+9 37.6	2.198	3.103	10.1	19.5	7 30	21 41.86	-7 25.7	1.906	2.884	6.6	19.4
8 9	21 35.64	+9 26.4	2.139	3.083	8.2	19.4	8 9	21 35.31	-8 33.5	1.865	2.871	3.1	19.2
8 19	21 27.68	+8 54.8	2.105	3.064	7.3	19.3	8 19	21 28.23	-9 49.3	1.851	2.859	2.4	19.1
8 29	21 19.95	+8 5.1	2.097	3.044	8.0	19.3	8 29	21 21.47	-11 7.3	1.865	2.846	6.0	19.3
9 8	21 13.20	+7 1.9	2.116	3.024	9.9	19.4	9 8	21 15.86	-12 21.5	1.906	2.834	9.6	19.5
9 18	21 8.08	+5 51.0	2.158	3.003	12.2	19.5	9 18	21 12.02	-13 27.0	1.970	2.822	12.9	19.7
197529	2004 <i>EU</i> ₂₆		8 13.3 239°77	0°7/12.5	17		103845	2000 <i>DF</i> ₃₄		8 13.3 311°04	0°2/13.4	18	
7 10	21 52.91	-16 1.1	2.856	3.718	9.5	21.3	7 10	21 55.24	-13 4.5	1.608	2.486	14.8	19.2
7 20	21 48.23	-16 21.8	2.774	3.712	7.0	21.1	7 20	21 51.04	-13 14.6	1.520	2.464	11.1	19.0
7 30	21 42.22	-16 46.8	2.718	3.706	4.2	20.9	7 30	21 44.47	-13 35.1	1.452	2.442	6.9	18.7
8 9	21 35.34	-17 13.2	2.689	3.701	1.3	20.7	8 9	21 36.16	-14 2.5	1.409	2.420	2.2	18.3
8 19	21 28.15	-17 38.2	2.689	3.695	2.1	20.7	8 19	21 27.05	-14 32.1	1.391	2.399	2.8	18.3
8 29	21 21.28	-17 59.0	2.718	3.689	5.1	20.9	8 29	21 18.36	-14 58.7	1.399	2.378	7.7	18.6
9 8	21 15.32	-18 13.7	2.775	3.682	7.8	21.1	9 8	21 11.24	-15 18.1	1.431	2.358	12.3	18.8
9 18	21 10.75	-18 20.9	2.855	3.676	10.3	21.3	9 18	21 6.56	-15 27.5	1.483	2.338	16.3	19.0
137309	1999 <i>TM</i> ₅		8 13.3 234°17	3°4/10.8	18		479507	2014 <i>BX</i> ₇		8 13.3 75°29	0°9/12.5	17	
7 10	22 0.75	-21 14.2	1.812	2.689	13.4	20.1	7 10	21 54.64	-13 33.4	1.778	2.653	13.7	21.0
7 20	21 54.92	-22 1.4	1.732	2.677	10.0	19.9	7 20	21 50.14	-14 28.5	1.717	2.661	10.1	20.8
7 30	21 46.69	-22 52.5	1.675	2.664	6.3	19.6	7 30	21 43.64	-15 33.9	1.678	2.669	6.0	20.5
8 9	21 36.78	-23 40.9	1.645	2.651	3.5	19.4	8 9	21 35.83	-16 43.9	1.665	2.676	1.8	20.3
8 19	21 26.18	-24 20.1	1.641	2.637	5.1	19.5	8 19	21 27.60	-17 51.9	1.679	2.684	3.0	20.4
8 29	21 16.10	-24 45.1	1.665	2.622	8.8	19.7	8 29	21 19.96	-18 51.8	1.719	2.692	7.2	20.7
9 8	21 7.67	-24 53.7	1.712	2.607	12.6	19.9	9 8	21 13.82	-19 39.3	1.785	2.700	11.0	20.9
9 18	21 1.70	-24 46.0	1.782	2.591	15.9	20.1	9 18	21 9.83	-20 12.3	1.873	2.708	14.2	21.1
467338	2002 <i>PF</i> ₁₉₃		8 13.3 29°48	1°5/12.4	17		293179	2007 <i>AP</i> ₁₀		8 13.3 240°51	2°7/11.5		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
364554	2007 <i>GT</i> ₅₈		8 13.3 214°94	1°5/14.8	18		123428	2000 <i>WJ</i> ₁₁₂		8 13.3 299°21	2°6/11.5	18	
7 10	21 52.98	- 7 28.6	2.586	3.427	11.0	21.7	7 10	21 57.55	-19 17.1	1.643	2.527	14.1	19.8
7 20	21 48.41	- 7 48.4	2.501	3.422	8.4	21.5	7 20	21 52.64	-19 51.2	1.570	2.519	10.5	19.6
7 30	21 42.40	- 8 18.5	2.440	3.417	5.5	21.3	7 30	21 45.36	-20 30.5	1.520	2.511	6.4	19.3
8 9	21 35.44	- 8 56.6	2.405	3.411	2.5	21.1	8 9	21 36.44	-21 9.1	1.495	2.504	2.9	19.1
8 19	21 28.11	- 9 39.7	2.399	3.406	2.1	21.1	8 19	21 26.92	-21 40.8	1.495	2.496	4.4	19.1
8 29	21 21.09	-10 24.2	2.422	3.400	5.0	21.3	8 29	21 18.01	-22 0.8	1.521	2.489	8.6	19.4
9 8	21 15.03	-11 6.5	2.472	3.394	8.0	21.5	9 8	21 10.82	-22 6.5	1.572	2.482	12.6	19.6
9 18	21 10.45	-11 43.6	2.547	3.388	10.8	21.7	9 18	21 6.12	-21 57.7	1.643	2.474	16.1	19.8
423489	2005 <i>TC</i> ₆₀		8 13.3 31°40	2°3/14.6	17		231385	2006 <i>JN</i> ₅₄		8 13.3 75°88	3°8/10.8	17	
7 10	21 57.05	- 8 48.4	1.311	2.186	17.6	20.5	7 10	21 59.05	-18 54.5	1.289	2.183	16.6	20.1
7 20	21 52.43	- 8 39.5	1.254	2.193	13.4	20.3	7 20	21 54.01	-20 11.3	1.244	2.198	12.2	19.9
7 30	21 45.23	- 8 46.1	1.216	2.201	8.7	20.0	7 30	21 46.22	-21 35.0	1.221	2.213	7.4	19.7
8 9	21 36.35	- 9 5.1	1.201	2.209	3.8	19.8	8 9	21 36.68	-22 55.7	1.221	2.229	3.9	19.5
8 19	21 26.98	- 9 32.2	1.210	2.218	3.3	19.8	8 19	21 26.69	-24 3.9	1.246	2.244	5.8	19.7
8 29	21 18.45	-10 1.7	1.244	2.227	8.0	20.1	8 29	21 17.73	-24 52.6	1.296	2.259	10.2	20.0
9 8	21 11.95	-10 28.2	1.301	2.237	12.5	20.4	9 8	21 11.01	-25 19.2	1.368	2.274	14.3	20.3
9 18	21 8.18	-10 47.9	1.378	2.247	16.5	20.6	9 18	21 7.21	-25 24.4	1.459	2.289	17.8	20.5
137655	1999 <i>XE</i> ₃		8 13.3 142°30	4°0/16.2	18		362560	2010 <i>VQ</i> ₄₆		8 13.3 338°61	7°1/7.6	18	
7 10	21 56.84	- 2 31.5	1.627	2.468	16.4	19.2	7 10	21 55.90	-31 15.1	1.774	2.663	13.0	20.2
7 20	21 51.94	- 2 36.2	1.557	2.472	13.0	19.0	7 20	21 51.45	-32 19.5	1.711	2.653	10.3	20.0
7 30	21 44.83	- 3 0.3	1.508	2.476	9.1	18.8	7 30	21 44.63	-33 19.0	1.671	2.644	7.9	19.9
8 9	21 36.23	- 3 42.1	1.482	2.480	5.3	18.6	8 9	21 36.22	-34 5.6	1.655	2.635	7.1	19.8
8 19	21 27.11	- 4 37.4	1.482	2.484	4.3	18.5	8 19	21 27.26	-34 32.8	1.663	2.627	8.5	19.9
8 29	21 18.58	- 5 40.1	1.508	2.487	7.3	18.7	8 29	21 18.96	-34 36.7	1.696	2.619	11.1	20.0
9 8	21 11.67	- 6 43.3	1.559	2.490	11.2	18.9	9 8	21 12.42	-34 17.5	1.751	2.612	14.0	20.2
9 18	21 7.09	- 7 41.4	1.632	2.493	14.7	19.2	9 18	21 8.37	-33 37.6	1.825	2.606	16.7	20.4
220897	2004 <i>YL</i> ₃		8 13.3 341°98	15°7/28.4	16		275710	2000 <i>WV</i> ₆₄		8 13.3 67°40	8°1/19.7	17	
7 10	21 50.26	+25 29.9	1.841	2.504	20.7	19.5	7 10	21 55.68	+ 6 48.4	1.672	2.467	17.9	19.8
7 20	21 47.26	+27 8.2	1.760	2.490	19.4	19.4	7 20	21 50.98	+ 7 22.5	1.610	2.480	15.1	19.6
7 30	21 42.14	+28 17.0	1.693	2.477	18.1	19.3	7 30	21 44.20	+ 7 31.8	1.567	2.494	12.0	19.5
8 9	21 35.47	+28 50.1	1.641	2.465	16.9	19.1	8 9	21 36.07	+ 7 15.3	1.545	2.507	9.3	19.4
8 19	21 28.04	+28 43.5	1.606	2.454	16.0	19.0	8 19	21 27.51	+ 6 34.7	1.547	2.520	8.1	19.3
8 29	21 20.92	+27 56.8	1.590	2.444	15.7	19.0	8 29	21 19.57	+ 5 34.7	1.574	2.534	9.0	19.4
9 8	21 15.16	+26 34.7	1.592	2.435	16.1	19.0	9 8	21 13.21	+ 4 22.9	1.625	2.547	11.4	19.6
9 18	21 11.59	+24 45.3	1.612	2.427	17.1	19.1	9 18	21 9.06	+ 3 7.0	1.698	2.561	14.2	19.8
506705	2006 <i>UD</i> ₈₆		8 13.3 299°41	4°5/10.9	17		156558	2002 <i>EV</i> ₅₀		8 13.3 6°99	3°4/10.9	18	
7 10	22 1.79	-23 29.3	1.366	2.258	16.0	21.4	7 10	21 57.56	-23 23.7	1.960	2.840	12.4	19.6
7 20	21 56.53	-23 54.4	1.283	2.234	12.1	21.1	7 20	21 52.22	-23 47.2	1.895	2.841	9.2	19.4
7 30	21 48.13	-24 20.8	1.219	2.209	7.9	20.8	7 30	21 44.88	-24 10.7	1.854	2.841	5.9	19.2
8 9	21 37.36	-24 40.8	1.179	2.185	4.7	20.6	8 9	21 36.26	-24 29.0	1.838	2.843	3.5	19.0
8 19	21 25.52	-24 47.0	1.164	2.160	6.4	20.6	8 19	21 27.26	-24 38.0	1.850	2.844	4.7	19.1
8 29	21 14.30	-24 34.3	1.172	2.136	10.9	20.8	8 29	21 18.91	-24 34.7	1.888	2.846	7.9	19.3
9 8	21 5.26	-24 1.8	1.203	2.112	15.6	21.0	9 8	21 12.10	-24 18.3	1.951	2.847	11.2	19.5
9 18	20 59.46	-23 11.7	1.253	2.089	19.8	21.2	9 18	21 7.45	-23 49.8	2.035	2.850	14.0	19.7
345865	2007 <i>QF</i>		8 13.3 5°60	3°4/14.7	18		246761	2009 <i>CT</i> ₉		8 13.3 14°30	1°6/14.4	18	
7 10	21 59.27	- 9 41.9	1.312	2.186	17.6	19.0	7 10	21 56.07	- 9 24.4	1.831	2.690	14.1	20.5
7 20	21 54.13	- 8 41.4	1.248	2.186	13.6	18.8	7 20	21 51.19	- 9 24.9	1.759	2.690	10.7	20.2
7 30	21 46.32	- 7 51.7	1.204	2.187	9.0	18.5	7 30	21 44.31	- 9 36.7	1.709	2.691	6.9	20.0
8 9	21 36.71	- 7 12.8	1.183	2.189	4.6	18.3	8 9	21 36.11	- 9 57.3	1.684	2.692	2.9	19.8
8 19	21 26.54	- 6 43.9	1.187	2.192	4.2	18.3	8 19	21 27.45	-10 23.1	1.685	2.693	2.6	19.8
8 29	21 17.23	- 6 22.9	1.215	2.197	8.3	18.5	8 29	21 19.33	-10 50.0	1.714	2.694	6.5	20.0
9 8	21 9.99	- 6 6.7	1.266	2.202	12.8	18.8	9 8	21 12.68	-11 14.1	1.768	2.695	10.3	20.3
9 18	21 5.61	- 5 52.2	1.338	2.209	16.8	19.0	9 18	21 8.13	-11 32.4	1.844	2.697	13.7	20.5
289681	2005 <i>GW</i> ₁₅₆		8 13.3 316°70	4°0/10.3	18		316055	2009 <i>HB</i> ₅₇		8 13.3 154°26	4°4/10.3	17	
7 10	21 55.01	-21 56.8	1.627	2.519	13.8	20.1	7 10	22 1.29	-22 29.2	1.568	2.452	14.7	21.4
7 20	21 50.90	-22 49.4	1.550	2.503	10.3	19.8	7 20	21 55.46	-23 31.0	1.509	2.457	10.9	21.2
7 30	21 44.39	-23 46.4	1.496	2.486	6.6	19.6	7 30	21 47.06	-24 35.5	1.473	2.462	7.0	21.0
8 9	21 36.16	-24 40.5	1.465	2.470	4.1	19.4	8 9	21 36.97	-25 34.3	1.463	2.466	4.4	20.9
8 19	21 27.21	-25 24.6	1.460	2.454	5.8	19.4	8 19	21 26.34	-26 19.8	1.478	2.469	6.1	21.0
8 29	21 18.80	-25 52.8	1.480	2.439	9.6	19.6	8 29	21 16.52	-26 46.9	1.519	2.473	9.8	21.2
9 8	21 12.07	-26 2.5	1.523	2.424	13.5	19.8	9 8	21 8.70	-26 54.0	1.583	2.476	13.6	21.4
9 18	21 7.84	-25 53.5	1.586	2.410	16.9	20.0	9 18	21 3.61	-26 42.5	1.668	2.478	16.8	21.7
12368	Mutsaers		8 13.3 52°89	1°8/12.3	18		404293	2013 <i>EM</i> ₁₀₈		8 13.3 227°28	2°5/10.8	18	
7 10	21 59.59	-15 59.4	1.176	2.070	17.9	17.4	7 10	21 53.72	-18 52.2	2.248	3.124	11.2	20.9
7 20	21 54.36	-16 36.4	1.138	2.091	13.1	17.1	7 20	21 49.26	-19 55.9	2.176	3.121	8.2	20.7
7 30	21 46.35	-17 22.6	1.120	2.114	7.8	16.9	7 30	21 43.08	-21 4.8	2.128	3.118	5.0	20.5
8 9	21 36.67	-18 10.4	1.125	2.136	2.6	16.7	8 9	21 35.74	-22 13.4	2.108	3.115	2.6	20.4
8 19	21 26.71	-18 51.9	1.154	2.159	4.2	16.9	8 19	21 27.96	-23 16.3	2.115	3.112	3.9	20.5
8 29	21 17.97	-19 21.3	1.207	2.183	9.2	17.2	8 29	21 20.59	-24 8.6	2.150	3.108	7.1	20.6
9 8	21 11.60	-19 35.6	1.282	2.206	13.7	17.5	9 8	21 14.40	-24 47.3	2.211	3.105	10.2	20.8
9 18	21 8.22	-19 34.7	1.377	2.230	17.4	17.9	9 18	21 10.00	-25 11.1	2.294	3.101	12.9	21.0
483253	2015 <i>SK</i> ₁₁		8 13.3 144°32	1°4/12.1	18		20422	1998 <i>UE</i> ₈					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
298107	2002 <i>RR</i> ₁₃₉		8 13.3	7°40	8°8/ 7.0	18	211014	2001 <i>YH</i> ₅₆		8 13.3	255°32	2°7/14.8	18
7 10	21 53.04	-30 2.8	1.231	2.141	16.0	19.2	7 10	21 59.88	-7 51.9	1.467	2.328	16.8	20.8
7 20	21 49.99	-31 38.8	1.188	2.143	12.6	19.0	7 20	21 54.67	-7 42.0	1.386	2.317	13.1	20.5
7 30	21 44.00	-33 9.5	1.166	2.145	9.7	18.8	7 30	21 46.80	-7 47.0	1.325	2.305	8.6	20.2
8 9	21 36.09	-34 22.9	1.165	2.149	8.9	18.8	8 9	21 37.01	-8 5.0	1.287	2.294	4.1	19.9
8 19	21 27.60	-35 9.6	1.187	2.155	10.6	18.9	8 19	21 26.39	-8 32.4	1.275	2.282	3.5	19.9
8 29	21 20.12	-35 24.5	1.230	2.162	13.8	19.1	8 29	21 16.31	-9 4.0	1.288	2.269	8.0	20.1
9 8	21 14.95	-35 8.6	1.293	2.170	17.0	19.3	9 8	21 8.04	-9 34.4	1.326	2.257	12.8	20.3
9 18	21 12.82	-34 26.1	1.373	2.179	19.9	19.6	9 18	21 2.51	-9 59.3	1.384	2.244	16.9	20.6
488765	2004 <i>TY</i> ₈₇		8 13.3	297°52	3°7/11.3	17	72620	2001 <i>FG</i> ₂₅		8 13.3	235°50	3°0/11.3	18
7 10	22 5.01	-26 17.6	2.143	3.008	12.1	20.8	7 10	22 1.29	-22 28.1	2.047	2.919	12.3	19.9
7 20	21 57.74	-26 12.3	2.054	2.990	9.2	20.6	7 20	21 55.03	-22 48.3	1.969	2.910	9.2	19.7
7 30	21 48.28	-26 2.6	1.990	2.973	6.0	20.3	7 30	21 46.67	-23 9.1	1.914	2.901	5.8	19.5
8 9	21 37.34	-25 44.3	1.954	2.955	3.8	20.2	8 9	21 36.90	-23 25.6	1.886	2.892	3.1	19.3
8 19	21 25.91	-25 14.1	1.945	2.937	4.8	20.2	8 19	21 26.61	-23 33.4	1.886	2.882	4.4	19.4
8 29	21 15.07	-24 30.6	1.966	2.920	7.9	20.4	8 29	21 16.89	-23 29.6	1.913	2.872	7.8	19.6
9 8	21 5.85	-23 34.8	2.013	2.902	11.2	20.5	9 8	21 8.69	-23 13.2	1.966	2.861	11.2	19.7
9 18	20 58.93	-22 29.0	2.083	2.885	14.2	20.7	9 18	21 2.69	-22 45.0	2.041	2.851	14.2	19.9
54157	2000 <i>HG</i> ₄₈		8 13.3	189°92	2°0/11.8	18	454824	2015 <i>RB</i> ₁₁₇		8 13.3	334°38	3°6/ 9.9	18
7 10	21 59.00	-17 40.4	1.880	2.752	13.2	19.4	7 10	21 53.19	-22 5.2	2.069	2.953	11.6	20.2
7 20	21 53.43	-18 23.7	1.809	2.752	9.7	19.2	7 20	21 49.04	-23 10.9	2.000	2.948	8.6	20.0
7 30	21 45.73	-19 13.0	1.761	2.751	5.9	19.0	7 30	21 43.04	-24 19.8	1.956	2.944	5.5	19.8
8 9	21 36.59	-20 2.9	1.739	2.749	2.4	18.8	8 9	21 35.79	-25 25.5	1.937	2.940	3.6	19.7
8 19	21 26.94	-20 47.5	1.745	2.747	3.8	18.9	8 19	21 28.06	-26 22.3	1.946	2.936	5.1	19.8
8 29	21 17.85	-21 22.0	1.778	2.744	7.6	19.1	8 29	21 20.80	-27 5.1	1.981	2.932	8.1	20.0
9 8	21 10.31	-21 43.5	1.837	2.741	11.4	19.3	9 8	21 14.85	-27 31.5	2.041	2.929	11.2	20.2
9 18	21 5.00	-21 51.2	1.917	2.737	14.6	19.5	9 18	21 10.84	-27 41.2	2.123	2.925	13.9	20.4
483276	2015 <i>TW</i> ₂₃₂		8 13.3	274°00	4°2/17.3	18	331112	2010 <i>RY</i> ₆₂		8 13.3	319°12	1°5/14.2	17
7 10	21 52.55	+ 0 24.8	2.486	3.295	12.4	21.8	7 10	21 54.16	- 8 50.9	1.211	2.095	18.1	21.0
7 20	21 48.27	+ 0 27.7	2.386	3.276	10.0	21.6	7 20	21 50.80	- 9 13.2	1.137	2.083	13.9	20.7
7 30	21 42.48	+ 0 15.8	2.307	3.258	7.5	21.4	7 30	21 44.62	- 9 55.2	1.083	2.072	8.9	20.4
8 9	21 35.59	- 0 10.3	2.254	3.239	5.1	21.2	8 9	21 36.38	-10 53.0	1.050	2.060	3.4	20.0
8 19	21 28.22	- 0 48.9	2.228	3.221	4.2	21.2	8 19	21 27.24	-11 59.6	1.041	2.050	3.2	20.0
8 29	21 21.08	- 1 36.9	2.230	3.202	5.9	21.2	8 29	21 18.72	-13 6.0	1.055	2.040	8.8	20.3
9 8	21 14.88	- 2 30.0	2.258	3.183	8.6	21.4	9 8	21 12.21	-14 4.2	1.091	2.030	14.1	20.5
9 18	21 10.18	- 3 23.7	2.311	3.163	11.3	21.5	9 18	21 8.66	-14 48.5	1.147	2.022	18.7	20.8
509019	2005 <i>NZ</i> ₇		8 13.3	36°98	5°7/16.4	18	389069	2008 <i>WG</i> ₆₃		8 13.3	265°24	1°3/12.3	18
7 10	22 0.49	- 2 22.2	1.691	2.522	16.3	20.7	7 10	21 57.41	-16 8.3	1.939	2.810	12.9	21.5
7 20	21 54.46	- 1 12.9	1.629	2.533	13.1	20.5	7 20	21 52.36	-16 41.0	1.850	2.792	9.6	21.3
7 30	21 46.29	- 0 18.6	1.588	2.546	9.6	20.4	7 30	21 45.19	-17 21.3	1.783	2.773	5.8	21.0
8 9	21 36.74	+ 0 19.5	1.572	2.559	6.6	20.2	8 9	21 36.49	-18 4.5	1.743	2.754	2.0	20.7
8 19	21 26.80	+ 0 41.3	1.581	2.572	5.9	20.2	8 19	21 27.11	-18 45.4	1.730	2.734	3.2	20.8
8 29	21 17.58	+ 0 49.1	1.617	2.586	8.0	20.4	8 29	21 18.11	-19 19.1	1.744	2.714	7.4	21.0
9 8	21 10.05	+ 0 46.5	1.678	2.600	11.1	20.6	9 8	21 10.48	-19 42.1	1.783	2.694	11.3	21.2
9 18	21 4.84	+ 0 38.2	1.760	2.615	14.2	20.8	9 18	21 5.00	-19 52.8	1.845	2.674	14.7	21.4
444342	2005 <i>WE</i> ₁₁₈		8 13.3	282°81	2°6/15.4	18	198238	2004 <i>TB</i> ₂₀₄		8 13.3	241°34	7°5/ 6.6	18
7 10	21 54.69	- 6 3.2	2.211	3.051	12.7	20.7	7 10	22 2.14	-34 32.0	2.111	2.979	12.1	20.9
7 20	21 49.93	- 5 55.1	2.127	3.044	9.9	20.5	7 20	21 55.95	-35 44.7	2.040	2.965	8.8	20.7
7 30	21 43.49	- 5 58.4	2.066	3.038	6.7	20.3	7 30	21 47.38	-36 50.8	1.993	2.951	9.0	20.6
8 9	21 35.90	- 6 11.9	2.030	3.032	3.6	20.1	8 9	21 37.15	-37 42.6	1.972	2.936	7.5	20.6
8 19	21 27.87	- 6 33.1	2.022	3.026	3.0	20.0	8 19	21 26.28	-38 13.5	1.977	2.920	8.8	20.6
8 29	21 20.21	- 6 58.9	2.041	3.019	5.8	20.2	8 29	21 15.97	-38 20.2	2.008	2.904	11.1	20.7
9 8	21 13.71	- 7 25.6	2.087	3.013	9.1	20.4	9 8	21 7.36	-38 3.0	2.061	2.888	13.5	20.9
9 18	21 8.95	- 7 50.0	2.156	3.007	12.1	20.6	9 18	21 1.20	-37 24.7	2.133	2.871	15.9	21.0
431311	2006 <i>VS</i> ₁₃₂		8 13.3	113°27	3°4/10.8	17	250579	2005 <i>AF</i> ₁₈		8 13.3	202°17	0°3/13.5	17
7 10	21 59.33	-19 56.9	1.640	2.522	14.3	21.5	7 10	22 0.32	-11 55.8	1.838	2.696	14.0	21.6
7 20	21 53.82	-20 59.2	1.586	2.534	10.5	21.3	7 20	21 54.47	-12 19.8	1.758	2.692	10.6	21.3
7 30	21 45.99	-22 6.0	1.555	2.545	6.5	21.1	7 30	21 46.42	-12 54.3	1.702	2.687	6.5	21.1
8 9	21 36.67	-23 9.8	1.549	2.556	3.5	20.9	8 9	21 36.85	-13 35.4	1.671	2.682	2.1	20.8
8 19	21 26.91	-24 3.6	1.570	2.567	5.1	21.1	8 19	21 26.68	-14 18.2	1.668	2.676	2.5	20.8
8 29	21 17.94	-24 41.9	1.618	2.577	8.8	21.3	8 29	21 17.03	-14 57.5	1.693	2.668	7.0	21.1
9 8	21 10.80	-25 2.4	1.689	2.587	12.5	21.5	9 8	21 8.90	-15 29.3	1.743	2.661	11.1	21.3
9 18	21 6.15	-25 5.5	1.781	2.597	15.7	21.8	9 18	21 3.06	-15 51.1	1.816	2.652	14.6	21.5
23448	1988 <i>BG</i>		8 13.3	279°84	4°0/15.6	18	121704	1999 <i>XW</i> ₈₈		8 13.3	216°30	1°2/14.5	18
7 10	21 58.68	- 4 58.1	1.830	2.669	14.9	17.4	7 10	21 53.75	- 8 56.1	2.716	3.558	10.5	20.3
7 20	21 53.34	- 4 23.6	1.738	2.652	11.8	17.1	7 20	21 48.97	- 9 7.6	2.630	3.553	8.0	20.1
7 30	21 45.79	- 4 1.6	1.667	2.635	8.3	16.9	7 30	21 42.79	- 9 27.6	2.568	3.547	5.1	19.9
8 9	21 36.66	- 3 52.2	1.621	2.619	5.0	16.7	8 9	21 35.69	- 9 54.1	2.533	3.541	2.2	19.7
8 19	21 26.81	- 3 54.0	1.601	2.602	4.3	16.6	8 19	21 28.24	-10 24.4	2.527	3.534	1.9	19.7
8 29	21 17.33	- 4 4.5	1.608	2.584	7.3	16.7	8 29	21 21.09	-10 55.5	2.550	3.527	4.8	19.9
9 8	21 9.26	- 4 19.8	1.641	2.567	11.1	16.9	9 8	21 14.87	-11 24.5	2.600	3.521	7.8	20.1
9 18	21 3.40	- 4 35.9	1.696	2.550	14.6	17.1	9 18	21 10.08	-11 48.9	2.676	3.513	10.4	20.2
263338	2008 <i>CG</i> ₈₆		8 13.3	190°94	1°8/11.9	17	316007	2009 <i>EU</i> ₂₅		8 13.3			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
131155	2001 CC ₁₀		8 13.3 76°33	4.9/17.1	18		62180	2000 SA ₃₈		8 13.3 231°12	4.6/ 9.3	18	
7 10	21 55.48	- 0 24.2	1.784	2.611	15.7	19.9	7 10	21 57.59	-27 7.7	2.239	3.115	11.2	19.8
7 20	21 50.78	- 0 13.2	1.716	2.619	12.6	19.7	7 20	21 52.20	-27 55.9	2.171	3.111	8.5	19.6
7 30	21 44.10	- 0 20.9	1.668	2.626	9.2	19.5	7 30	21 44.91	-28 42.1	2.128	3.107	5.9	19.5
8 9	21 36.13	- 0 46.4	1.644	2.634	6.0	19.4	8 9	21 36.39	-29 20.8	2.111	3.103	4.6	19.4
8 19	21 27.71	- 1 27.0	1.645	2.641	5.0	19.3	8 19	21 27.45	-29 47.2	2.121	3.099	5.8	19.5
8 29	21 19.85	- 2 17.8	1.673	2.649	7.1	19.5	8 29	21 19.03	-29 58.0	2.158	3.095	8.4	19.6
9 8	21 13.45	- 3 12.9	1.726	2.656	10.4	19.7	9 8	21 11.99	-29 52.4	2.220	3.090	11.1	19.8
9 18	21 9.13	- 4 6.5	1.802	2.664	13.5	19.9	9 18	21 6.95	-29 31.7	2.303	3.086	13.6	19.9
513708	2012 FC ₁₁		8 13.3 129°01	1°0/14.4	18		191014	2002 AY ₄₅		8 13.3 325°52	1°8/14.4	18	
7 10	21 52.90	- 9 9.7	2.957	3.797	9.8	22.1	7 10	21 55.49	- 9 22.4	1.454	2.327	16.3	20.1
7 20	21 48.15	- 9 26.5	2.886	3.808	7.4	21.9	7 20	21 51.35	- 9 23.2	1.379	2.318	12.5	19.9
7 30	21 42.20	- 9 50.9	2.840	3.819	4.7	21.8	7 30	21 44.75	- 9 38.4	1.323	2.309	8.0	19.6
8 9	21 35.50	-10 20.8	2.821	3.829	1.9	21.6	8 9	21 36.42	-10 5.1	1.291	2.300	3.3	19.3
8 19	21 28.55	-10 53.5	2.832	3.839	1.7	21.6	8 19	21 27.38	-10 38.9	1.284	2.292	3.0	19.2
8 29	21 21.96	-11 26.2	2.872	3.849	4.4	21.8	8 29	21 18.91	-11 14.3	1.301	2.284	7.7	19.5
9 8	21 16.24	-11 56.4	2.940	3.859	7.0	22.0	9 8	21 12.18	-11 45.7	1.342	2.277	12.4	19.8
9 18	21 11.82	-12 21.9	3.033	3.868	9.4	22.2	9 18	21 8.03	-12 9.3	1.404	2.270	16.4	20.0
282573	2005 AE ₄₀		8 13.3 320°27	3°1/10.8	18		97491	2000 CX ₇₉		8 13.3 254°17	0°3/13.5	18	
7 10	21 52.98	-17 16.9	1.531	2.423	14.5	19.7	7 10	21 57.61	-11 28.9	1.717	2.583	14.5	20.7
7 20	21 49.50	-18 37.1	1.458	2.411	10.8	19.4	7 20	21 52.71	-11 56.8	1.632	2.569	11.0	20.4
7 30	21 43.63	-20 8.5	1.406	2.400	6.5	19.1	7 30	21 45.51	-12 37.1	1.568	2.555	6.8	20.1
8 9	21 36.05	-21 43.0	1.380	2.389	3.2	18.9	8 9	21 36.65	-13 25.9	1.529	2.540	2.2	19.8
8 19	21 27.75	-23 11.3	1.379	2.378	5.1	19.0	8 19	21 27.06	-14 17.7	1.517	2.525	2.7	19.8
8 29	21 19.94	-24 25.0	1.404	2.368	9.4	19.2	8 29	21 17.90	-15 6.5	1.532	2.510	7.4	20.1
9 8	21 13.81	-25 18.7	1.451	2.359	13.6	19.5	9 8	21 10.26	-15 47.3	1.572	2.494	11.7	20.3
9 18	21 10.17	-25 50.4	1.519	2.349	17.2	19.7	9 18	21 4.96	-16 16.9	1.634	2.478	15.5	20.5
43557	2001 FA ₆₁		8 13.3 53°92	0°8/12.8	18		72190	2000 YG ₁₂₄		8 13.3 156°80	3°1/11.1	18	
7 10	21 57.36	-13 13.3	1.249	2.138	17.4	18.6	7 10	21 59.28	-18 48.4	1.521	2.406	15.0	19.5
7 20	21 52.72	-13 59.3	1.205	2.155	12.8	18.4	7 20	21 54.06	-19 50.2	1.460	2.409	11.1	19.2
7 30	21 45.46	-14 58.2	1.180	2.172	7.7	18.2	7 30	21 46.32	-20 59.0	1.421	2.412	6.8	19.0
8 9	21 36.55	-16 2.7	1.179	2.190	2.3	17.9	8 9	21 36.88	-22 6.8	1.406	2.415	3.3	18.8
8 19	21 27.26	-17 4.5	1.202	2.209	3.5	18.1	8 19	21 26.85	-23 5.8	1.418	2.417	5.0	18.9
8 29	21 18.96	-17 56.2	1.249	2.227	8.6	18.4	8 29	21 17.56	-23 49.4	1.455	2.419	9.2	19.1
9 8	21 12.82	-18 33.0	1.320	2.246	13.2	18.7	9 8	21 10.18	-24 14.6	1.516	2.420	13.3	19.4
9 18	21 9.48	-18 53.5	1.410	2.265	17.0	19.0	9 18	21 5.47	-24 21.3	1.597	2.422	16.8	19.6
363656	2004 RA ₃₄₅		8 13.3 350°49	6°1/10.3	17		481333	2006 BV ₈₈		8 13.3 257°24	0°8/12.5	18	
7 10	21 57.01	-23 52.7	0.992	1.907	18.5	19.8	7 10	21 53.22	-14 46.7	2.455	3.320	10.7	21.8
7 20	21 53.47	-24 43.6	0.938	1.901	14.0	19.6	7 20	21 48.80	-15 26.3	2.371	3.310	8.0	21.6
7 30	21 46.43	-25 36.7	0.903	1.896	9.2	19.3	7 30	21 42.82	-16 12.8	2.311	3.300	4.8	21.4
8 9	21 36.96	-26 21.0	0.888	1.892	6.2	19.1	8 9	21 35.77	-17 2.5	2.278	3.290	1.5	21.2
8 19	21 26.67	-26 46.4	0.894	1.889	8.2	19.2	8 19	21 28.29	-17 51.3	2.274	3.279	2.4	21.2
8 29	21 17.51	-26 46.7	0.921	1.887	12.8	19.5	8 29	21 21.13	-18 35.0	2.298	3.268	5.8	21.4
9 8	21 11.09	-26 21.3	0.968	1.887	17.6	19.7	9 8	21 15.01	-19 10.5	2.348	3.258	9.0	21.6
9 18	21 8.31	-25 33.6	1.030	1.887	21.7	20.0	9 18	21 10.48	-19 35.8	2.422	3.247	11.8	21.8
224053	2005 MV ₄₅		8 13.3 335°46	1°8/14.6	18		9611	Anouck		8 13.3 53°58	2°5/11.2	18	
7 10	21 52.42	- 7 17.3	1.297	2.175	17.5	19.6	7 10	21 55.16	-20 21.0	2.126	3.004	11.7	17.7
7 20	21 49.29	- 7 51.5	1.225	2.167	13.5	19.3	7 20	21 50.32	-20 59.7	2.066	3.011	8.6	17.6
7 30	21 43.60	- 8 47.0	1.173	2.159	8.7	19.0	7 30	21 43.73	-21 41.1	2.030	3.019	5.3	17.4
8 9	21 36.07	- 9 59.4	1.143	2.152	3.6	18.7	8 9	21 36.03	-22 20.2	2.020	3.027	2.7	17.2
8 19	21 27.79	-11 21.4	1.137	2.146	3.1	18.6	8 19	21 28.00	-22 52.7	2.038	3.035	3.9	17.3
8 29	21 20.09	-12 43.9	1.155	2.140	8.2	18.9	8 29	21 20.53	-23 14.8	2.082	3.044	7.1	17.5
9 8	21 14.24	-13 57.9	1.196	2.135	13.2	19.2	9 8	21 14.39	-23 24.8	2.153	3.052	10.2	17.7
9 18	21 11.10	-14 57.4	1.257	2.130	17.5	19.5	9 18	21 10.15	-23 22.4	2.245	3.060	12.9	17.9
198065	2004 RO ₃₂₅		8 13.3 300°91	9°2/18.5	18		133343	2003 SJ ₁₀₇		8 13.3 320°34	5°9/18.0	18	
7 10	21 55.50	+ 6 18.4	1.674	2.473	17.8	20.5	7 10	21 53.60	+ 2 21.9	1.763	2.582	16.3	19.6
7 20	21 51.40	+ 7 16.6	1.569	2.441	15.3	20.3	7 20	21 49.54	+ 2 31.7	1.684	2.578	13.3	19.4
7 30	21 44.90	+ 7 54.0	1.483	2.409	12.6	20.0	7 30	21 43.47	+ 2 20.0	1.625	2.574	10.1	19.2
8 9	21 36.52	+ 8 6.8	1.417	2.377	10.2	19.8	8 9	21 36.01	+ 1 47.0	1.588	2.570	7.1	19.0
8 19	21 27.09	+ 7 53.0	1.375	2.345	9.2	19.7	8 19	21 27.98	+ 0 55.0	1.576	2.567	5.9	18.9
8 29	21 17.76	+ 7 13.9	1.356	2.313	10.5	19.6	8 29	21 20.40	+ 0 10.9	1.590	2.563	7.6	19.0
9 8	21 9.77	+ 6 15.3	1.361	2.281	13.4	19.7	9 8	21 14.21	+ 1 23.8	1.629	2.560	10.8	19.2
9 18	21 4.12	+ 5 4.8	1.386	2.249	16.8	19.9	9 18	21 10.10	+ 2 36.6	1.690	2.557	14.0	19.4
374906	2006 WG ₂₀₄		8 13.3 285°27	1°4/14.2	18 R		80530	2000 AX ₇₀		8 13.3 262°69	1°5/14.4	18	
7 10	21 57.48	- 9 51.5	1.556	2.423	15.7	21.6	7 10	21 57.43	- 8 30.9	1.709	2.567	15.0	20.8
7 20	21 52.89	- 9 57.5	1.465	2.401	12.1	21.4	7 20	21 52.65	- 8 52.8	1.617	2.548	11.5	20.6
7 30	21 45.77	-10 17.3	1.395	2.380	7.7	21.1	7 30	21 45.54	- 9 29.9	1.545	2.528	7.4	20.3
8 9	21 36.76	-10 48.1	1.348	2.358	3.1	20.7	8 9	21 36.69	-10 19.2	1.499	2.507	3.0	20.0
8 19	21 26.85	-11 25.5	1.328	2.336	2.9	20.7	8 19	21 27.02	-11 15.8	1.479	2.487	2.7	19.9
8 29	21 17.31	-12 3.8	1.333	2.314	7.8	20.9	8 29	21 17.68	-12 13.5	1.485	2.465	7.3	20.2
9 8	21 9.39	-12 37.6	1.362	2.292	12.6	21.1	9 8	21 9.81	-13 6.3	1.517	2.443	11.8	20.4
9 18	21 4.04	-13 3.0	1.412	2.270	16.8	21.3	9 18	21 4.28	-13 49.7	1.571	2.421	15.8	20.6
518405	2018 CT ₄		8 13.3 265°37	0°5/13.8	18		186286	2002 AA ₁₇₇		8 13.3 118°07	0°5/13.8	18	
7 10	21 54.12												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
193427	2000 <i>WB</i> ₉₇		8 13.3 275°56	1.6°/14.5	18		438812	2008 <i>YD</i> ₁₃₅		8 13.3 84°77	8°2°/19.8	18	
7 10	21 56.14	- 8 47.7	1.800	2.658	14.3	20.0	7 10	21 56.12	+ 7 36.8	1.869	2.650	16.8	20.7
7 20	21 51.52	- 8 58.6	1.711	2.642	11.0	19.8	7 20	21 51.26	+ 8 22.1	1.797	2.656	14.3	20.5
7 30	21 44.74	- 9 22.8	1.644	2.626	7.1	19.5	7 30	21 44.44	+ 8 45.2	1.745	2.662	11.6	20.3
8 9	21 36.42	- 9 57.4	1.602	2.610	3.0	19.2	8 9	21 36.31	+ 8 44.4	1.714	2.667	9.3	20.2
8 19	21 27.42	-10 38.6	1.586	2.594	2.6	19.2	8 19	21 27.69	+ 8 20.2	1.708	2.673	8.2	20.2
8 29	21 18.79	-11 21.3	1.597	2.577	6.9	19.4	8 29	21 19.56	+ 7 35.9	1.727	2.679	9.0	20.2
9 8	21 11.56	-12 0.4	1.633	2.561	11.0	19.6	9 8	21 12.83	+ 6 37.7	1.771	2.685	11.1	20.4
9 18	21 6.52	-12 32.3	1.692	2.544	14.7	19.8	9 18	21 8.16	+ 5 32.3	1.837	2.691	13.7	20.6
207199	2005 <i>ER</i> ₄₉		8 13.3 115°01	0°7°/13.9	18		430556	2002 <i>JE</i> ₈₆		8 13.3 33°74	4°2°/11.0	16	
7 10	21 57.78	-11 42.9	1.908	2.768	13.5	20.3	7 10	21 58.36	-22 7.1	1.240	2.141	16.6	20.2
7 20	21 52.41	-11 46.4	1.838	2.772	10.2	20.1	7 20	21 53.48	-22 44.6	1.204	2.160	12.3	20.0
7 30	21 45.08	-11 58.9	1.790	2.775	6.3	19.9	7 30	21 45.90	-23 23.5	1.188	2.180	7.7	19.8
8 9	21 36.47	-12 17.4	1.769	2.779	2.2	19.6	8 9	21 36.72	-23 55.8	1.195	2.202	4.3	19.7
8 19	21 27.44	-12 38.4	1.774	2.782	2.3	19.6	8 19	21 27.29	-24 15.0	1.226	2.224	5.9	19.8
8 29	21 18.98	-12 58.2	1.807	2.785	6.4	19.9	8 29	21 19.05	-24 17.4	1.281	2.247	10.0	20.1
9 8	21 11.97	-13 13.4	1.866	2.788	10.2	20.1	9 8	21 13.11	-24 2.4	1.358	2.271	13.9	20.4
9 18	21 7.06	-13 22.0	1.947	2.792	13.4	20.4	9 18	21 10.04	-23 32.1	1.454	2.295	17.3	20.7
138065	2000 <i>DB</i> ₄₆		8 13.3 130°40	0°9°/14.0	17		75467	1999 <i>XS</i> ₁₆₀		8 13.3 238°40	5°6°/ 8.8	18	
7 10	21 59.06	-10 5.3	1.795	2.652	14.4	20.7	7 10	22 0.68	-29 29.6	2.110	2.984	11.9	19.3
7 20	21 53.40	-10 26.5	1.732	2.664	10.8	20.5	7 20	21 54.71	-30 20.4	2.038	2.974	9.2	19.1
7 30	21 45.69	-10 59.5	1.691	2.674	6.8	20.3	7 30	21 46.57	-31 7.6	1.990	2.964	6.7	19.0
8 9	21 36.65	-11 40.4	1.675	2.685	2.5	20.0	8 9	21 36.97	-31 44.8	1.968	2.954	5.6	18.9
8 19	21 27.21	-12 24.4	1.687	2.695	2.4	20.1	8 19	21 26.85	-32 6.3	1.973	2.943	6.8	18.9
8 29	21 18.41	-13 6.4	1.726	2.704	6.7	20.3	8 29	21 17.30	-32 9.1	2.004	2.932	9.4	19.1
9 8	21 11.20	-13 42.2	1.790	2.713	10.5	20.6	9 8	21 9.32	-31 52.9	2.060	2.921	12.2	19.2
9 18	21 6.19	-14 9.0	1.878	2.721	13.9	20.8	9 18	21 3.58	-31 19.5	2.137	2.910	14.8	19.4
117992	1039 <i>T</i> ₋₂		8 13.3 270°99	3°7°/10.8	18		437470	2013 <i>YF</i> ₄₂		8 13.3 93°35	7°7°/19.4	18	
7 10	22 0.32	-23 11.7	1.928	2.805	12.7	20.1	7 10	21 59.81	+ 6 47.0	1.943	2.719	16.4	20.5
7 20	21 54.61	-23 44.5	1.842	2.785	9.6	19.9	7 20	21 53.76	+ 7 36.2	1.884	2.741	13.8	20.4
7 30	21 46.62	-24 18.5	1.779	2.765	6.2	19.6	7 30	21 45.83	+ 8 4.3	1.846	2.763	11.1	20.2
8 9	21 37.00	-24 48.0	1.741	2.745	3.7	19.4	8 9	21 36.71	+ 8 10.1	1.830	2.784	8.7	20.1
8 19	21 26.69	-25 7.6	1.731	2.725	5.1	19.5	8 19	21 27.26	+ 7 54.3	1.840	2.805	7.7	20.1
8 29	21 16.84	-25 13.1	1.748	2.704	8.6	19.7	8 29	21 18.43	+ 7 20.4	1.876	2.826	8.5	20.2
9 8	21 8.54	-25 3.1	1.790	2.683	12.2	19.8	9 8	21 11.09	+ 6 33.9	1.937	2.846	10.6	20.4
9 18	21 2.57	-24 38.4	1.853	2.662	15.4	20.0	9 18	21 5.81	+ 5 41.1	2.021	2.866	13.0	20.6
509981	2009 <i>TH</i> ₂₃		8 13.3 344°91	9°7°/18.3	18		85496	1997 <i>TO</i> ₆		8 13.3 337°09	6°8°/ 8.8	18	
7 10	21 40.93	+ 0 13.3	0.843	1.740	22.8	19.5	7 10	21 55.91	-28 6.7	1.433	2.332	14.9	18.6
7 20	21 41.56	+ 1 25.6	0.771	1.713	19.2	19.2	7 20	21 51.97	-29 4.4	1.367	2.318	11.5	18.4
7 30	21 39.33	+ 2 10.0	0.715	1.688	15.1	18.8	7 30	21 45.27	-29 59.9	1.321	2.304	8.3	18.2
8 9	21 34.89	+ 2 20.6	0.675	1.667	11.3	18.6	8 9	21 36.64	-30 44.1	1.299	2.292	6.8	18.1
8 19	21 29.37	+ 1 55.6	0.651	1.648	9.7	18.4	8 19	21 27.29	-31 9.2	1.300	2.280	8.5	18.1
8 29	21 24.43	+ 0 59.2	0.645	1.633	11.9	18.4	8 29	21 18.67	-31 10.0	1.325	2.269	11.8	18.3
9 8	21 21.71	+ 0 17.2	0.656	1.621	16.2	18.6	9 8	21 12.11	-30 46.3	1.370	2.259	15.5	18.5
9 18	21 22.37	- 1 40.1	0.683	1.612	21.0	18.8	9 18	21 8.43	-30 0.7	1.434	2.251	18.8	18.7
99079	2001 <i>FH</i> ₁₆		8 13.3 260°95	3°6°/10.1	18		288979	2004 <i>TY</i> ₄₈		8 13.3 273°17	0°1°/13.4	18	
7 10	21 56.68	-25 3.3	2.401	3.276	10.6	19.6	7 10	21 53.51	-12 22.4	2.358	3.218	11.3	21.4
7 20	21 51.41	-25 39.2	2.327	3.268	8.0	19.4	7 20	21 49.08	-12 48.5	2.271	3.206	8.5	21.2
7 30	21 44.40	-26 14.5	2.277	3.261	5.3	19.2	7 30	21 43.04	-13 23.0	2.208	3.194	5.2	21.0
8 9	21 36.26	-26 44.4	2.254	3.253	3.7	19.1	8 9	21 35.89	-14 2.8	2.171	3.182	1.6	20.7
8 19	21 27.71	-27 4.8	2.259	3.245	4.8	19.1	8 19	21 28.29	-14 43.9	2.162	3.170	2.1	20.7
8 29	21 19.61	-27 12.9	2.291	3.237	7.4	19.3	8 29	21 21.01	-15 22.6	2.182	3.158	5.7	20.9
9 8	21 12.75	-27 7.4	2.349	3.230	10.2	19.5	9 8	21 14.79	-15 55.3	2.228	3.145	9.0	21.1
9 18	21 7.71	-26 49.0	2.429	3.222	12.7	19.6	9 18	21 10.22	-16 19.7	2.298	3.133	11.9	21.3
374017	2004 <i>DZ</i> ₄₈		8 13.3 174°93	1°7°/12.1	17		523015	2016 <i>PH</i> ₁₂₃		8 13.3 158°10	1°1°/14.3	18	
7 10	22 0.98	-17 25.9	1.944	2.811	13.0	21.6	7 10	21 55.96	- 9 43.5	2.049	2.903	13.0	21.5
7 20	21 54.81	-17 57.3	1.873	2.814	9.6	21.3	7 20	21 50.99	- 9 56.4	1.975	2.905	9.8	21.3
7 30	21 46.56	-18 33.9	1.827	2.816	5.8	21.1	7 30	21 44.22	-10 19.9	1.925	2.907	6.2	21.1
8 9	21 36.93	-19 10.8	1.807	2.817	2.1	20.9	8 9	21 36.25	-10 51.1	1.900	2.908	2.4	20.9
8 19	21 26.84	-19 43.1	1.815	2.818	3.4	21.0	8 19	21 27.87	-11 26.2	1.902	2.910	2.2	20.9
8 29	21 17.35	-20 6.7	1.851	2.819	7.3	21.2	8 29	21 19.96	-12 1.1	1.932	2.911	6.0	21.1
9 8	21 9.41	-20 19.0	1.913	2.818	10.9	21.4	9 8	21 13.36	-12 32.0	1.989	2.912	9.6	21.3
9 18	21 3.68	-20 19.5	1.997	2.817	14.1	21.7	9 18	21 8.65	-12 56.1	2.068	2.913	12.7	21.6
60826	2000 <i>HO</i> ₄₆		8 13.3 167°54	2°5°/14.9	17		318415	2005 <i>AO</i> ₄₂		8 13.3 247°22	3°3°/11.3	18	
7 10	21 59.49	- 6 51.2	1.464	2.323	17.0	20.6	7 10	22 2.58	-20 48.8	1.631	2.509	14.5	21.3
7 20	21 54.22	- 7 0.1	1.396	2.325	13.1	20.3	7 20	21 56.66	-21 27.2	1.549	2.494	10.9	21.0
7 30	21 46.45	- 7 26.2	1.347	2.327	8.6	20.1	7 30	21 48.06	-22 10.0	1.490	2.479	6.8	20.7
8 9	21 36.94	- 8 6.5	1.323	2.329	4.0	19.8	8 9	21 37.53	-22 50.2	1.455	2.462	3.5	20.5
8 19	21 26.82	- 8 56.0	1.323	2.330	3.3	19.8	8 19	21 26.16	-23 21.3	1.447	2.445	5.1	20.6
8 29	21 17.37	- 9 48.2	1.350	2.331	7.7	20.0	8 29	21 15.35	-23 37.9	1.466	2.428	9.3	20.8
9 8	21 9.79	-10 36.7	1.401	2.332	12.2	20.3	9 8	21 6.39	-23 37.6	1.508	2.410	13.5	21.0
9 18	21 4.85	-11 16.8	1.473	2.332	16.2	20.6	9 18	21 0.16	-23 21.1	1.571	2.391	17.2	21.2
330865	2009 <i>QE</i> ₄₆		8 13.3 345°63	2°8°/15.9	18		3274	Maillen					

EPHEMERIDES

8 13.3

8 13.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
263599	2008 <i>FE</i> ₁₂₅		8 13.3 320°80	5°2/ 8.8	18		486979	2014 <i>NW</i> ₃₀		8 13.4 176°26	3°4/16.4	18	
7 10	21 56.30	-27 50.9	2.114	2.995	11.6	20.3	7 10	21 54.41	-2 50.7	2.531	3.350	11.9	21.2
7 20	21 51.39	-28 48.5	2.050	2.992	8.8	20.1	7 20	21 49.55	-2 37.4	2.450	3.351	9.4	21.0
7 30	21 44.53	-29 44.0	2.010	2.988	6.3	20.0	7 30	21 43.24	-2 35.9	2.391	3.351	6.7	20.8
8 9	21 36.36	-30 31.1	1.995	2.985	5.2	19.9	8 9	21 35.96	-2 45.4	2.359	3.352	4.2	20.7
8 19	21 27.76	-31 4.3	2.008	2.982	6.4	20.0	8 19	21 28.34	-3 4.1	2.354	3.352	3.5	20.6
8 29	21 19.69	-31 20.3	2.046	2.979	9.0	20.1	8 29	21 21.06	-3 29.3	2.378	3.352	5.4	20.7
9 8	21 13.07	-31 18.1	2.109	2.976	11.7	20.3	9 8	21 14.79	-3 57.7	2.428	3.352	8.1	20.9
9 18	21 8.51	-30 59.0	2.192	2.973	14.2	20.5	9 18	21 10.03	-4 26.1	2.504	3.352	10.7	21.1
384821	2012 <i>RT</i> ₁₂		8 13.3 323°36	2°4/12.2	18		514300	2015 <i>TA</i> ₁₉₈		8 13.4 359°28	1°4/12.4	18	
7 10	22 1.49	-20 25.7	1.488	2.372	15.3	20.5	7 10	21 51.78	-15 44.2	1.528	2.419	14.6	20.3
7 20	21 55.86	-20 22.1	1.413	2.361	11.5	20.2	7 20	21 48.47	-16 17.7	1.463	2.416	10.8	20.0
7 30	21 47.54	-20 20.1	1.360	2.351	7.1	19.9	7 30	21 42.94	-17 0.1	1.420	2.414	6.5	19.8
8 9	21 37.34	-20 15.0	1.331	2.341	2.9	19.7	8 9	21 35.92	-17 46.0	1.401	2.413	2.1	19.5
8 19	21 26.48	-20 2.3	1.328	2.332	4.2	19.7	8 19	21 28.39	-18 29.4	1.407	2.413	3.5	19.6
8 29	21 16.37	-19 39.1	1.350	2.323	8.8	20.0	8 29	21 21.48	-19 4.3	1.438	2.414	8.0	19.9
9 8	21 8.26	-19 4.7	1.396	2.314	13.3	20.2	9 8	21 16.21	-19 27.0	1.492	2.416	12.1	20.1
9 18	21 2.99	-18 20.4	1.463	2.307	17.1	20.4	9 18	21 13.28	-19 35.7	1.567	2.420	15.7	20.4
516225	2016 <i>UZ</i> ₁₃		8 13.3 252°13	4°2/16.7	18		507878	2014 <i>MX</i> ₃₃		8 13.4 100°41	2°6/15.5	18	
7 10	21 55.32	-1 34.0	2.089	2.912	13.9	21.5	7 10	21 57.16	-5 56.5	2.518	3.346	11.7	20.7
7 20	21 50.59	-1 22.2	2.001	2.903	11.2	21.3	7 20	21 51.47	-5 37.8	2.450	3.360	9.0	20.6
7 30	21 44.04	-1 25.6	1.935	2.894	8.1	21.1	7 30	21 44.33	-5 28.6	2.406	3.374	6.1	20.4
8 9	21 36.23	-1 43.7	1.894	2.885	5.2	20.9	8 9	21 36.28	-5 28.0	2.388	3.388	3.4	20.3
8 19	21 27.90	-2 14.5	1.879	2.876	4.3	20.8	8 19	21 27.98	-5 34.3	2.399	3.401	2.8	20.3
8 29	21 19.91	-2 54.4	1.892	2.867	6.5	21.0	8 29	21 20.14	-5 45.0	2.439	3.415	5.2	20.4
9 8	21 13.13	-3 38.7	1.930	2.857	9.6	21.1	9 8	21 13.41	-5 57.5	2.507	3.428	8.0	20.6
9 18	21 8.18	-4 22.7	1.993	2.848	12.7	21.3	9 18	21 8.27	-6 9.3	2.599	3.441	10.5	20.8
343409	2010 <i>CY</i> ₁₇₆		8 13.3 338°29	1°2/12.9	18		195400	2002 <i>GO</i> ₂₀		8 13.4 138°77	2°2/11.6	17	
7 10	22 0.01	-18 31.2	1.280	2.172	16.8	19.2	7 10	21 59.42	-19 19.8	2.077	2.947	12.2	20.8
7 20	21 55.12	-18 5.5	1.206	2.158	12.6	18.9	7 20	21 53.52	-19 57.0	2.016	2.957	9.0	20.6
7 30	21 47.25	-17 42.4	1.152	2.145	7.7	18.6	7 30	21 45.73	-20 37.5	1.978	2.967	5.5	20.4
8 9	21 37.30	-17 18.1	1.121	2.133	2.5	18.3	8 9	21 36.74	-21 16.3	1.968	2.976	2.5	20.2
8 19	21 26.54	-16 49.0	1.115	2.122	3.7	18.3	8 19	21 27.41	-21 48.7	1.985	2.985	3.7	20.3
8 29	21 16.59	-16 13.0	1.132	2.112	9.1	18.6	8 29	21 18.68	-22 11.1	2.030	2.993	7.1	20.5
9 8	21 8.83	-15 29.4	1.172	2.103	14.1	18.9	9 8	21 11.41	-22 21.5	2.101	3.000	10.4	20.8
9 18	21 4.17	-14 38.9	1.232	2.096	18.4	19.1	9 18	21 6.18	-22 19.8	2.195	3.008	13.2	21.0
118412	1999 <i>RG</i> ₂₅₃		8 13.3 155°58	3°8/ 9.5	18		357542	2004 <i>RP</i> ₃₀₀		8 13.4 39°84	2°7/11.2	18	
7 10	21 58.45	-27 56.9	2.912	3.776	9.3	20.2	7 10	21 56.67	-21 19.7	2.101	2.978	11.8	20.6
7 20	21 52.38	-28 33.1	2.850	3.784	7.0	20.1	7 20	21 51.52	-21 48.6	2.036	2.981	8.7	20.4
7 30	21 44.85	-29 6.4	2.815	3.791	4.9	20.0	7 30	21 44.54	-22 19.3	1.996	2.985	5.4	20.2
8 9	21 36.42	-29 32.7	2.807	3.797	3.8	19.9	8 9	21 36.38	-22 46.9	1.982	2.988	2.8	20.1
8 19	21 27.75	-29 48.9	2.828	3.803	4.7	20.0	8 19	21 27.87	-23 7.4	1.995	2.992	4.0	20.1
8 29	21 19.54	-29 52.8	2.878	3.809	6.8	20.1	8 29	21 19.92	-23 17.4	2.035	2.996	7.2	20.4
9 8	21 12.46	-29 44.2	2.954	3.814	8.9	20.3	9 8	21 13.37	-23 15.5	2.100	3.000	10.4	20.6
9 18	21 6.98	-29 23.8	3.053	3.819	10.9	20.4	9 18	21 8.78	-23 1.9	2.188	3.004	13.1	20.8
60016	1999 <i>TJ</i> ₃₃		8 13.4 308°98	4°1/10.1	18		91884	1999 <i>UH</i> ₄₉		8 13.4 258°31	1°0/12.5	18	
7 10	21 57.54	-25 24.7	2.078	2.957	11.8	19.1	7 10	21 55.47	-16 26.5	2.421	3.286	10.9	20.3
7 20	21 52.30	-25 59.5	2.007	2.950	8.9	18.9	7 20	21 50.52	-16 49.3	2.335	3.274	8.1	20.1
7 30	21 45.09	-26 33.4	1.959	2.943	6.0	18.7	7 30	21 43.93	-17 17.1	2.273	3.261	4.9	19.9
8 9	21 36.55	-27 0.8	1.937	2.935	4.2	18.5	8 9	21 36.22	-17 46.5	2.238	3.249	1.6	19.6
8 19	21 27.56	-27 17.1	1.941	2.928	5.4	18.6	8 19	21 28.06	-18 13.9	2.231	3.236	2.6	19.7
8 29	21 19.12	-27 19.2	1.973	2.922	8.3	18.8	8 29	21 20.25	-18 35.9	2.253	3.224	6.0	19.9
9 8	21 12.12	-27 6.2	2.029	2.915	11.3	19.0	9 8	21 13.53	-18 50.1	2.302	3.211	9.2	20.1
9 18	21 7.22	-26 39.0	2.107	2.908	14.1	19.1	9 18	21 8.50	-18 55.2	2.374	3.198	12.0	20.2
66792	1999 <i>TM</i> ₂₃₃		8 13.4 81°26	8°3/20.5	18		262507	2006 <i>UU</i> ₂₆₃		8 13.4 165°72	0°8/13.9	17	
7 10	21 54.95	+ 8 54.6	1.822	2.599	17.3	19.1	7 10	21 59.13	-10 41.5	1.688	2.550	14.9	21.6
7 20	21 50.45	+ 9 25.5	1.752	2.607	14.8	18.9	7 20	21 53.71	-11 0.1	1.618	2.553	11.3	21.4
7 30	21 43.99	+ 9 31.9	1.700	2.614	12.0	18.8	7 30	21 46.05	-11 30.7	1.570	2.555	7.0	21.1
8 9	21 36.22	+ 9 12.4	1.670	2.622	9.6	18.6	8 9	21 36.90	-12 9.4	1.547	2.557	2.5	20.9
8 19	21 27.98	+ 8 28.2	1.664	2.629	8.4	18.6	8 19	21 27.21	-12 51.4	1.551	2.559	2.6	20.9
8 29	21 20.25	+ 7 23.5	1.683	2.636	9.0	18.6	8 29	21 18.15	-13 31.3	1.582	2.561	7.1	21.2
9 8	21 13.93	+ 6 5.5	1.726	2.644	11.2	18.8	9 8	21 10.72	-14 4.5	1.638	2.562	11.2	21.4
9 18	21 9.67	+ 4 41.8	1.792	2.651	13.7	19.0	9 18	21 5.66	-14 28.3	1.715	2.562	14.8	21.6
120416	6123 <i>P-L</i>		8 13.4 326°64	7°7/19.1	18		91055	1998 <i>FD</i> ₄₉		8 13.4 242°21	5°0/10.0	18	
7 10	21 48.14	+ 4 36.1	1.226	2.070	20.5	19.2	7 10	22 3.14	-27 13.4	1.906	2.780	12.9	18.4
7 20	21 46.38	+ 4 36.6	1.139	2.046	17.2	18.9	7 20	21 56.70	-27 48.0	1.831	2.770	9.9	18.2
7 30	21 42.05	+ 4 3.3	1.069	2.024	13.4	18.7	7 30	21 47.89	-28 20.0	1.780	2.760	6.8	18.0
8 9	21 35.76	+ 2 53.7	1.018	2.003	9.7	18.4	8 9	21 37.47	-28 42.7	1.754	2.750	5.0	17.8
8 19	21 28.47	+ 1 10.3	0.988	1.982	7.7	18.2	8 19	21 26.48	-28 50.8	1.756	2.739	6.3	17.9
8 29	21 21.54	+ 0 58.3	0.981	1.963	9.7	18.3	8 29	21 16.14	-28 41.2	1.784	2.728	9.4	18.1
9 8	21 16.36	+ 3 18.3	0.996	1.945	13.9	18.4	9 8	21 7.55	-28 13.9	1.837	2.716	12.6	18.2
9 18	21 13.96	+ 5 35.7	1.031	1.929	18.4	18.6	9 18	21 1.45	-27 31.0	1.911	2.705	15.6	18.4
308374	2005 <i>RQ</i> ₁₉		8 13.4 219°03	0°2/13.1	18		30880	1992 <i>PC</i> ₂		8 13.4 17°84	5°4/		

EPHEMERIDES

8 13.4

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
150654	2001 <i>DR</i> ₁₀₅		8 13.4 142°43	1.2/14.6	18		507792	2014 <i>BX</i> ₉		8 13.4 173°82	5.3/8.1	18	
7 10	21 53.39	- 8 20.1	2.616	3.458	10.9	20.4	7 10	21 59.31	-28 33.8	2.313	3.186	11.0	21.8
7 20	21 48.75	- 8 44.7	2.542	3.465	8.2	20.2	7 20	21 53.52	-29 50.1	2.253	3.189	8.5	21.7
7 30	21 42.73	- 9 18.9	2.492	3.471	5.3	20.0	7 30	21 45.81	-31 3.9	2.218	3.191	6.2	21.5
8 9	21 35.83	-10 0.0	2.470	3.477	2.2	19.8	8 9	21 36.83	-32 8.7	2.210	3.193	5.3	21.5
8 19	21 28.62	-10 44.9	2.476	3.483	1.9	19.8	8 19	21 27.40	-32 58.7	2.229	3.194	6.5	21.6
8 29	21 21.77	-11 29.8	2.511	3.489	4.9	20.0	8 29	21 18.48	-33 30.3	2.276	3.195	8.9	21.7
9 8	21 15.91	-12 11.5	2.573	3.494	7.8	20.2	9 8	21 10.95	-33 42.7	2.347	3.195	11.4	21.9
9 18	21 11.50	-12 47.2	2.660	3.499	10.4	20.4	9 18	21 5.43	-33 37.1	2.439	3.195	13.6	22.0
307551	2003 <i>EO</i> ₂₉		8 13.4 65°00	6°8/9.9	17 R		308709	2006 <i>GZ</i> ₁₁		8 13.4 229°84	0°4/13.6	17	
7 10	22 4.53	-26 51.7	1.172	2.070	17.6	19.6	7 10	21 57.71	-10 28.6	1.412	2.287	16.6	20.8
7 20	21 58.42	-27 48.7	1.134	2.085	13.3	19.4	7 20	21 53.13	-11 6.4	1.342	2.283	12.5	20.6
7 30	21 49.11	-28 41.7	1.116	2.101	9.2	19.3	7 30	21 45.95	-12 0.5	1.292	2.280	7.8	20.3
8 9	21 37.82	-29 20.2	1.120	2.117	6.8	19.2	8 9	21 36.94	-13 5.5	1.266	2.277	2.6	20.0
8 19	21 26.20	-29 36.5	1.147	2.133	8.4	19.3	8 19	21 27.22	-14 14.2	1.265	2.273	2.9	20.0
8 29	21 16.00	-29 27.3	1.198	2.149	12.1	19.6	8 29	21 18.13	-15 18.6	1.289	2.269	8.2	20.3
9 8	21 8.54	-28 54.5	1.270	2.165	16.0	19.9	9 8	21 10.91	-16 12.2	1.337	2.265	12.9	20.6
9 18	21 4.48	-28 2.8	1.360	2.182	19.3	20.1	9 18	21 6.39	-16 51.3	1.406	2.261	17.0	20.8
60237	1999 <i>VS</i> ₁₆₇		8 13.4 2°01	3°4/15.1	18		262971	2007 <i>EH</i> ₉		8 13.4 200°84	3°6/10.2	18	
7 10	21 55.79	- 7 27.5	1.156	2.037	19.0	18.8	7 10	21 57.28	-25 4.4	2.427	3.300	10.6	21.3
7 20	21 51.99	- 7 4.6	1.095	2.036	14.8	18.6	7 20	21 51.84	-25 39.3	2.358	3.299	7.9	21.1
7 30	21 45.35	- 6 59.6	1.051	2.035	9.9	18.3	7 30	21 44.70	-26 13.2	2.314	3.298	5.2	20.9
8 9	21 36.75	- 7 10.9	1.029	2.035	5.0	18.0	8 9	21 36.47	-26 41.6	2.297	3.296	3.6	20.8
8 19	21 27.45	- 7 34.5	1.029	2.036	4.1	18.0	8 19	21 27.89	-27 0.5	2.308	3.295	4.7	20.9
8 29	21 18.97	- 8 4.5	1.053	2.038	8.7	18.3	8 29	21 19.79	-27 7.2	2.347	3.293	7.3	21.1
9 8	21 12.64	- 8 34.4	1.098	2.041	13.6	18.5	9 8	21 12.94	-27 0.8	2.411	3.291	10.0	21.2
9 18	21 9.30	- 8 58.8	1.163	2.045	17.9	18.8	9 18	21 7.90	-26 41.9	2.497	3.289	12.4	21.4
75030	1999 <i>UQ</i> ₂₃		8 13.4 268°04	1°1/12.8	18		478793	2012 <i>UU</i> ₁₅₀		8 13.4 268°92	4°1/10.3	18	
7 10	22 0.94	-16 11.2	1.497	2.375	15.6	18.9	7 10	21 58.06	-23 19.8	1.840	2.722	12.9	21.1
7 20	21 55.47	-16 21.5	1.422	2.367	11.7	18.6	7 20	21 52.96	-24 9.7	1.769	2.716	9.7	20.8
7 30	21 47.34	-16 39.2	1.368	2.358	7.1	18.4	7 30	21 45.65	-25 1.3	1.722	2.709	6.3	20.6
8 9	21 37.36	-16 59.4	1.338	2.350	2.2	18.0	8 9	21 36.82	-25 48.0	1.700	2.702	4.1	20.5
8 19	21 26.65	-17 17.0	1.334	2.341	3.4	18.1	8 19	21 27.43	-26 23.7	1.704	2.695	5.6	20.6
8 29	21 16.60	-17 27.2	1.356	2.332	8.4	18.4	8 29	21 18.61	-26 43.9	1.735	2.688	8.9	20.7
9 8	21 8.47	-17 27.2	1.402	2.323	13.0	18.6	9 8	21 11.39	-26 47.0	1.790	2.681	12.3	20.9
9 18	21 3.09	-17 16.0	1.468	2.314	16.9	18.9	9 18	21 6.49	-26 33.5	1.866	2.674	15.4	21.1
472805	2015 <i>FT</i> ₁₆₀		8 13.4 15°74	0°7/13.9	18		157462	2004 <i>XO</i> ₆₈		8 13.4 326°90	5°7/19.5	18	
7 10	21 54.88	- 9 38.4	1.592	2.461	15.3	20.8	7 10	21 51.17	+ 6 0.6	2.302	3.087	13.9	20.3
7 20	21 50.69	-10 17.1	1.523	2.462	11.5	20.6	7 20	21 47.37	+ 5 56.0	2.217	3.084	11.6	20.1
7 30	21 44.29	-11 10.8	1.476	2.463	7.2	20.3	7 30	21 42.05	+ 5 31.5	2.153	3.081	9.1	19.9
8 9	21 36.38	-12 15.0	1.453	2.464	2.5	20.0	8 9	21 35.69	+ 4 47.6	2.112	3.079	6.8	19.8
8 19	21 27.92	-13 23.2	1.456	2.465	2.6	20.1	8 19	21 28.91	+ 3 46.2	2.096	3.076	5.7	19.7
8 29	21 20.04	-14 28.3	1.486	2.466	7.3	20.3	8 29	21 22.47	+ 2 31.5	2.108	3.074	6.7	19.8
9 8	21 13.77	-15 24.5	1.539	2.468	11.5	20.6	9 8	21 17.05	+ 1 9.5	2.147	3.072	8.9	19.9
9 18	21 9.82	-16 7.9	1.615	2.469	15.2	20.8	9 18	21 13.21	- 0 14.0	2.210	3.069	11.5	20.1
121441	1999 <i>TA</i> ₁₈₅		8 13.4 299°05	4°9/16.9	18		458404	2010 <i>XV</i> ₆₅		8 13.4 298°75	2°1/15.1	17	
7 10	21 55.21	- 0 34.1	2.146	2.963	13.8	19.5	7 10	21 53.70	- 7 12.4	2.150	2.997	12.7	21.4
7 20	21 50.50	- 0 1.3	2.055	2.951	11.2	19.3	7 20	21 49.39	- 7 16.7	2.061	2.984	9.8	21.2
7 30	21 44.02	+ 0 17.4	1.986	2.938	8.4	19.1	7 30	21 43.36	- 7 32.7	1.994	2.971	6.5	21.0
8 9	21 36.29	+ 0 21.5	1.941	2.926	5.8	18.9	8 9	21 36.11	- 7 58.7	1.953	2.958	3.2	20.7
8 19	21 28.02	+ 0 12.0	1.923	2.914	5.0	18.9	8 19	21 28.36	- 8 31.6	1.939	2.946	2.6	20.7
8 29	21 20.07	- 0 8.7	1.931	2.902	6.8	19.0	8 29	21 20.94	- 9 7.7	1.953	2.933	5.8	20.9
9 8	21 13.26	- 0 36.6	1.966	2.890	9.7	19.1	9 8	21 14.66	- 9 42.8	1.993	2.921	9.3	21.0
9 18	21 8.25	- 1 7.6	2.024	2.878	12.6	19.3	9 18	21 10.14	-10 13.6	2.056	2.908	12.5	21.2
42191	Thurmann		8 13.4 330°31	3°4/10.8	18		291790	2006 <i>KK</i> ₅₄		8 13.4 251°16	0°8/13.9	17	
7 10	21 51.56	-17 28.7	1.339	2.240	15.6	18.4	7 10	21 57.58	- 9 59.3	1.426	2.298	16.6	21.2
7 20	21 48.82	-18 45.1	1.265	2.223	11.6	18.2	7 20	21 53.03	-10 29.1	1.353	2.293	12.6	20.9
7 30	21 43.48	-20 14.1	1.212	2.207	7.1	17.9	7 30	21 45.90	-11 15.0	1.301	2.288	7.9	20.6
8 9	21 36.21	-21 47.1	1.183	2.192	3.5	17.6	8 9	21 36.96	-12 12.4	1.273	2.283	2.8	20.3
8 19	21 28.10	-23 13.9	1.177	2.177	5.6	17.7	8 19	21 27.28	-13 14.7	1.269	2.278	2.9	20.3
8 29	21 20.51	-24 24.9	1.196	2.164	10.3	17.9	8 29	21 18.20	-14 14.4	1.291	2.272	8.0	20.6
9 8	21 14.77	-25 14.1	1.236	2.151	14.8	18.2	9 8	21 10.97	-15 5.1	1.337	2.267	12.8	20.9
9 18	21 11.78	-25 39.3	1.295	2.139	18.8	18.4	9 18	21 6.41	-15 42.7	1.403	2.261	16.9	21.1
224170	2005 <i>QS</i> ₁₀₈		8 13.4 235°26	1°6/12.4	18		141544	2002 <i>GY</i> ₂₂		8 13.4 52°87	1°7/14.8	18	
7 10	22 0.03	-17 5.8	1.653	2.529	14.5	20.5	7 10	21 54.61	- 8 12.6	2.081	2.931	12.9	19.6
7 20	21 54.53	-17 27.2	1.581	2.525	10.8	20.3	7 20	21 49.94	- 8 18.2	2.014	2.940	9.9	19.4
7 30	21 46.64	-17 54.9	1.531	2.521	6.5	20.0	7 30	21 43.59	- 8 34.8	1.969	2.948	6.4	19.2
8 9	21 37.12	-18 23.9	1.506	2.517	2.3	19.7	8 9	21 36.15	- 9 0.0	1.950	2.957	2.9	19.0
8 19	21 27.01	-18 48.9	1.507	2.512	3.5	19.8	8 19	21 28.37	- 9 30.7	1.959	2.966	2.4	19.0
8 29	21 17.54	-19 5.3	1.535	2.508	8.0	20.1	8 29	21 21.09	-10 2.8	1.995	2.975	5.7	19.2
9 8	21 9.82	-19 10.4	1.588	2.503	12.1	20.3	9 8	21 15.07	-10 32.7	2.057	2.984	9.1	19.5
9 18	21 4.61	-19 3.5	1.662	2.498	15.7	20.5	9 18	21 10.86	-10 57.5	2.143	2.993	12.1	19.7
256906	2008 <i>DR</i> ₆₈		8 13.4 16°34	4°5/10.2	18		382715	2002 <i>XJ</i> ₁₇		8 13.4 299°40			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
42186	2001 <i>CH</i> ₃₂		8 13.4	35°55'	3°1'/15.6	18	22430	1996 <i>DM</i> ₂		8 13.4	88°29'	1°9'/11.8	18
7 10	21 55.69	- 5 44.3	2.006	2.848	13.7	17.8	7 10	21 55.86	-16 37.6	1.850	2.727	13.2	18.0
7 20	21 50.79	- 5 24.6	1.938	2.855	10.7	17.6	7 20	21 51.17	-17 30.1	1.786	2.732	9.7	17.8
7 30	21 44.12	- 5 17.1	1.892	2.863	7.3	17.4	7 30	21 44.49	-18 29.9	1.747	2.737	5.8	17.6
8 9	21 36.32	- 5 20.7	1.871	2.872	4.1	17.2	8 9	21 36.50	-19 31.1	1.732	2.743	2.2	17.3
8 19	21 28.17	- 5 33.1	1.877	2.880	3.4	17.2	8 19	21 28.06	-20 27.7	1.745	2.748	3.6	17.4
8 29	21 20.53	- 5 51.2	1.911	2.889	6.1	17.4	8 29	21 20.20	-21 14.2	1.785	2.753	7.4	17.7
9 8	21 14.22	- 6 11.2	1.970	2.898	9.4	17.6	9 8	21 13.81	-21 47.3	1.850	2.759	11.1	17.9
9 18	21 9.79	- 6 29.9	2.052	2.908	12.4	17.8	9 18	21 9.54	-22 5.8	1.937	2.764	14.2	18.1
321642	2010 <i>AG</i> ₂₅		8 13.4	40°53'	1°7'/12.1	16	39814	1997 <i>XF</i> ₈		8 13.4	207°12'	1°5'/14.6	18
7 10	21 55.57	-15 28.0	1.557	2.441	14.8	20.6	7 10	21 58.89	- 8 58.4	2.180	3.023	12.7	19.4
7 20	21 51.24	-16 20.0	1.498	2.446	10.9	20.4	7 20	21 53.19	- 9 3.4	2.094	3.017	9.7	19.2
7 30	21 44.63	-17 21.5	1.461	2.453	6.5	20.2	7 30	21 45.66	- 9 18.5	2.033	3.011	6.3	19.0
8 9	21 36.52	-18 26.0	1.448	2.459	2.3	19.9	8 9	21 36.87	- 9 41.5	1.997	3.004	2.7	18.8
8 19	21 27.93	-19 26.5	1.461	2.466	3.7	20.0	8 19	21 27.57	-10 9.2	1.990	2.997	2.3	18.7
8 29	21 20.02	-20 16.5	1.500	2.473	8.1	20.3	8 29	21 18.68	-10 38.1	2.011	2.989	5.9	19.0
9 8	21 13.83	-20 51.8	1.563	2.480	12.2	20.6	9 8	21 11.03	-11 4.5	2.060	2.981	9.5	19.2
9 18	21 10.05	-21 11.2	1.647	2.487	15.6	20.8	9 18	21 5.25	-11 25.8	2.132	2.972	12.6	19.4
396829	2004 <i>RY</i> ₁₄₃		8 13.4	340°56'	1°9'/14.8	18	504382	2007 <i>VL</i> ₁₅₃		8 13.4	248°19'	3°9'/10.8	17
7 10	21 47.96	- 7 1.4	1.465	2.342	15.9	19.9	7 10	22 1.09	-21 3.9	1.569	2.452	14.7	21.8
7 20	21 45.86	- 7 32.0	1.380	2.321	12.3	19.7	7 20	21 55.70	-21 58.8	1.491	2.439	11.0	21.6
7 30	21 41.55	- 8 22.4	1.316	2.301	8.1	19.4	7 30	21 47.60	-22 59.0	1.436	2.425	7.0	21.3
8 9	21 35.63	- 9 29.4	1.274	2.283	3.5	19.1	8 9	21 37.55	-23 57.0	1.405	2.411	4.0	21.1
8 19	21 28.98	-10 47.3	1.257	2.266	2.8	19.0	8 19	21 26.67	-24 44.7	1.401	2.396	5.7	21.2
8 29	21 22.73	-12 7.8	1.264	2.250	7.5	19.2	8 29	21 16.35	-25 15.8	1.422	2.381	9.8	21.4
9 8	21 17.99	-13 22.8	1.295	2.236	12.2	19.4	9 8	21 7.89	-25 27.6	1.466	2.366	14.0	21.6
9 18	21 15.59	-14 25.8	1.346	2.223	16.3	19.7	9 18	21 2.21	-25 20.3	1.531	2.350	17.7	21.8
180505	2004 <i>CM</i> ₁₀₀		8 13.4	20°08'	2°0'/12.0	17	476742	2008 <i>UB</i> ₅₃		8 13.4	300°35'	3°0'/11.2	18
7 10	21 54.73	-14 57.3	1.273	2.168	16.7	19.0	7 10	21 56.98	-19 48.4	1.666	2.551	13.9	21.5
7 20	21 51.04	-15 58.7	1.217	2.171	12.3	18.7	7 20	21 52.37	-20 33.7	1.593	2.542	10.3	21.3
7 30	21 44.71	-17 12.9	1.181	2.175	7.4	18.5	7 30	21 45.42	-21 24.4	1.542	2.533	6.4	21.0
8 9	21 36.59	-18 31.7	1.169	2.180	2.6	18.2	8 9	21 36.83	-22 14.1	1.516	2.524	3.2	20.8
8 19	21 27.86	-19 45.8	1.180	2.185	4.3	18.3	8 19	21 27.61	-22 56.1	1.516	2.515	4.8	20.9
8 29	21 19.94	-20 46.9	1.216	2.191	9.3	18.6	8 29	21 18.96	-23 25.2	1.542	2.507	8.7	21.1
9 8	21 14.04	-21 29.6	1.274	2.197	13.9	18.9	9 8	21 11.97	-23 38.3	1.592	2.498	12.7	21.3
9 18	21 10.93	-21 52.3	1.352	2.204	17.7	19.2	9 18	21 7.41	-23 35.2	1.662	2.490	16.1	21.6
143531	2003 <i>EC</i> ₂₀		8 13.4	93°08'	3°0'/16.4	18	339383	2005 <i>AC</i> ₇₉		8 13.4	223°82'	1°1'/12.4	18
7 10	21 52.82	- 2 18.8	2.143	2.972	13.4	20.2	7 10	21 57.93	-16 8.5	2.332	3.193	11.4	22.4
7 20	21 48.64	- 2 46.6	2.069	2.977	10.5	20.0	7 20	21 52.46	-16 40.8	2.246	3.183	8.4	22.2
7 30	21 42.83	- 3 30.8	2.017	2.983	7.3	19.8	7 30	21 45.21	-17 19.1	2.184	3.172	5.1	21.9
8 9	21 35.94	- 4 28.9	1.990	2.988	4.2	19.6	8 9	21 36.74	-17 59.4	2.149	3.160	1.7	21.7
8 19	21 28.67	- 5 37.0	1.991	2.994	3.2	19.6	8 19	21 27.76	-18 37.3	2.143	3.147	2.7	21.7
8 29	21 21.82	- 6 49.7	2.019	2.999	5.7	19.8	8 29	21 19.14	-19 9.1	2.165	3.134	6.3	21.9
9 8	21 16.12	- 8 1.4	2.074	3.004	8.9	20.0	9 8	21 11.69	-19 31.7	2.215	3.121	9.6	22.1
9 18	21 12.13	- 9 7.4	2.154	3.009	11.9	20.2	9 18	21 6.03	-19 44.0	2.288	3.106	12.6	22.3
187194	2005 <i>SW</i> ₇₄		8 13.4	343°84'	2°7'/15.7	18	347587	2001 <i>FW</i> ₆₄		8 13.4	90°97'	2°1'/15.2	17
7 10	21 52.86	- 4 44.1	1.986	2.829	13.7	20.8	7 10	21 57.48	- 4 6.1	1.566	2.414	16.6	20.7
7 20	21 48.83	- 5 0.6	1.908	2.827	10.7	20.6	7 20	21 52.47	- 5 7.8	1.513	2.436	12.7	20.5
7 30	21 43.03	- 5 32.3	1.852	2.825	7.2	20.4	7 30	21 45.29	- 6 30.1	1.481	2.459	8.3	20.3
8 9	21 36.02	- 6 17.0	1.821	2.823	3.8	20.2	8 9	21 36.75	- 8 7.3	1.474	2.480	3.8	20.1
8 19	21 28.56	- 7 10.9	1.817	2.822	3.0	20.2	8 19	21 27.83	- 9 51.3	1.494	2.501	2.8	20.1
8 29	21 21.52	- 8 8.8	1.839	2.820	6.0	20.3	8 29	21 19.66	-11 33.2	1.541	2.522	6.9	20.4
9 8	21 15.70	- 9 5.6	1.888	2.819	9.6	20.6	9 8	21 13.21	-13 5.1	1.614	2.543	11.0	20.7
9 18	21 11.74	- 9 56.6	1.960	2.818	12.8	20.8	9 18	21 9.10	-14 22.0	1.709	2.563	14.6	20.9
440843	2006 <i>SD</i> ₁₀₃		8 13.4	353°05'	0°9'/14.1	18	299751	2006 <i>RX</i> ₉₆		8 13.4	310°43'	0°4'/13.1	18
7 10	21 54.66	-10 12.1	1.890	2.752	13.6	21.7	7 10	21 55.39	-13 48.4	1.882	2.753	13.2	21.0
7 20	21 50.24	-10 33.3	1.816	2.751	10.2	21.5	7 20	21 50.87	-14 10.5	1.805	2.746	9.9	20.8
7 30	21 43.91	-11 6.0	1.766	2.750	6.4	21.2	7 30	21 44.36	-14 41.3	1.750	2.739	6.0	20.6
8 9	21 36.30	-11 46.8	1.740	2.750	2.3	21.0	8 9	21 36.49	-15 16.9	1.720	2.732	1.8	20.3
8 19	21 28.23	-12 31.3	1.741	2.749	2.3	21.0	8 19	21 28.09	-15 52.7	1.718	2.725	2.6	20.3
8 29	21 20.64	-13 14.5	1.769	2.749	6.4	21.2	8 29	21 20.17	-16 24.0	1.742	2.719	6.8	20.6
9 8	21 14.41	-13 52.1	1.823	2.749	10.2	21.5	9 8	21 13.63	-16 47.4	1.792	2.712	10.6	20.8
9 18	21 10.18	-14 21.0	1.899	2.749	13.5	21.7	9 18	21 9.17	-17 0.6	1.863	2.706	14.0	21.0
72259	2001 <i>AY</i> ₃₂		8 13.4	301°34'	5°7'/9.6	18	476180	2007 <i>TM</i> ₄₄₁		8 13.4	322°92'	5°5'/10.4	18
7 10	21 57.88	-23 22.8	1.315	2.215	16.0	18.8	7 10	22 0.80	-26 58.6	1.542	2.431	14.7	20.5
7 20	21 53.71	-24 37.4	1.247	2.201	12.1	18.5	7 20	21 55.49	-27 23.8	1.468	2.415	11.2	20.2
7 30	21 46.55	-25 56.8	1.199	2.189	8.0	18.3	7 30	21 47.45	-27 46.0	1.415	2.400	7.7	20.0
8 9	21 37.23	-27 10.8	1.175	2.176	5.7	18.1	8 9	21 37.49	-27 58.0	1.386	2.385	5.5	19.8
8 19	21 26.99	-28 9.2	1.174	2.164	7.7	18.2	8 19	21 26.83	-27 53.7	1.383	2.371	6.9	19.9
8 29	21 17.45	-28 44.4	1.197	2.151	11.8	18.4	8 29	21 16.91	-27 29.8	1.404	2.357	10.5	20.1
9 8	21 10.06	-28 53.6	1.241	2.140	16.1	18.6	9 8	21 9.01	-26 46.7	1.447	2.345	14.3	20.3
9 18	21 5.79	-28 38.3	1.303	2.128	19.8	18.8	9 18	21 3.97	-25 47.1	1.511	2.332	17.7	20.5
356689	2011 <i>UF</i> ₁₂₃		8 13.4	146°03'	2°8'/11.1	18	489986	2008 <i>SN</i> _{142</}					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
221832	2008 <i>EC</i> ₁₄₂		8 13.4	8°83	1°2/12.9	17	69231	Alettajacobs		8 13.4	65°35	8°5/23.5	18
7 10	21 59.03	-17 5.6	1.156	2.053	17.8	19.3	7 10	21 55.78	+16 1.1	1.704	2.440	19.8	19.3
7 20	21 54.44	-16 59.6	1.100	2.054	13.3	19.0	7 20	21 51.06	+15 3.8	1.645	2.469	17.0	19.1
7 30	21 46.86	-17 0.5	1.063	2.056	8.1	18.8	7 30	21 44.37	+13 30.5	1.604	2.498	13.8	19.0
8 9	21 37.30	-17 3.1	1.047	2.059	2.6	18.4	8 9	21 36.47	+11 22.7	1.584	2.526	10.8	18.9
8 19	21 27.15	-17 2.4	1.056	2.063	3.8	18.5	8 19	21 28.28	+8 46.3	1.590	2.555	8.7	18.8
8 29	21 18.02	-16 54.2	1.087	2.068	9.2	18.9	8 29	21 20.83	+5 52.2	1.624	2.583	8.8	18.9
9 8	21 11.24	-16 36.4	1.141	2.074	14.2	19.2	9 8	21 14.97	+2 53.3	1.685	2.611	10.8	19.1
9 18	21 7.61	-16 8.9	1.213	2.081	18.4	19.5	9 18	21 11.28	+0 1.7	1.773	2.639	13.5	19.3
339318	2004 <i>XA</i> ₁₁₂		8 13.4	209°59	5°5/17.6	18	352350	2007 <i>VT</i> ₁₂₄		8 13.4	236°64	3°9/9.8	18
7 10	21 57.40	+1 41.9	2.124	2.926	14.4	21.3	7 10	21 57.81	-24 19.5	2.311	3.185	11.0	21.2
7 20	21 52.15	+2 8.7	2.039	2.922	11.8	21.1	7 20	21 52.48	-25 13.9	2.232	3.173	8.3	21.0
7 30	21 45.06	+2 19.0	1.974	2.917	9.0	20.9	7 30	21 45.29	-26 9.3	2.177	3.161	5.5	20.8
8 9	21 36.71	+2 12.5	1.934	2.912	6.4	20.7	8 9	21 36.80	-27 0.0	2.150	3.148	3.9	20.7
8 19	21 27.84	+1 50.4	1.921	2.907	5.5	20.7	8 19	21 27.79	-27 40.9	2.150	3.135	5.1	20.8
8 29	21 19.33	+1 15.7	1.934	2.901	7.1	20.8	8 29	21 19.17	-28 8.0	2.178	3.122	7.9	20.9
9 8	21 12.04	+0 33.1	1.974	2.895	9.8	20.9	9 8	21 11.81	-28 19.5	2.231	3.108	10.8	21.1
9 18	21 6.61	-0 12.5	2.038	2.888	12.7	21.1	9 18	21 6.35	-28 15.6	2.306	3.093	13.4	21.2
90600	4560 <i>P-L</i>		8 13.4	131°34	5°6/18.5	18	254309	2004 <i>RM</i> ₃₁₃		8 13.4	346°63	3°9/16.9	18
7 10	21 55.44	+4 3.3	1.755	2.562	16.8	19.9	7 10	21 51.46	-1 18.8	1.939	2.772	14.4	20.2
7 20	21 50.93	+3 42.6	1.683	2.570	13.7	19.7	7 20	21 47.88	-1 31.1	1.859	2.768	11.5	20.0
7 30	21 44.39	+2 57.2	1.631	2.577	10.3	19.5	7 30	21 42.52	-2 1.5	1.801	2.764	8.2	19.8
8 9	21 36.51	+1 48.4	1.602	2.584	7.1	19.3	8 9	21 35.96	-2 48.5	1.766	2.761	5.1	19.6
8 19	21 28.13	+0 20.4	1.598	2.590	5.6	19.2	8 19	21 28.91	-3 48.6	1.757	2.758	4.0	19.5
8 29	21 20.28	-1 19.6	1.622	2.597	7.4	19.4	8 29	21 22.25	-4 56.6	1.775	2.755	6.3	19.6
9 8	21 13.88	-3 3.1	1.671	2.603	10.6	19.6	9 8	21 16.82	-6 6.1	1.819	2.753	9.7	19.8
9 18	21 9.60	-4 42.0	1.744	2.608	13.8	19.8	9 18	21 13.23	-7 11.8	1.886	2.751	12.9	20.0
53911	2000 <i>GZ</i> ₄		8 13.4	178°79	3°0/11.6	17	448086	2008 <i>HW</i> ₅₀		8 13.4	0°52	4°4/17.4	15
7 10	22 2.15	-19 6.6	1.410	2.295	16.0	19.6	7 10	21 52.56	-0 1.5	2.085	2.906	14.0	21.4
7 20	21 56.49	-19 50.7	1.347	2.296	11.9	19.4	7 20	21 48.55	+0 0.3	2.007	2.906	11.3	21.2
7 30	21 48.03	-20 41.1	1.305	2.296	7.3	19.1	7 30	21 42.87	-0 14.8	1.950	2.905	8.3	21.0
8 9	21 37.68	-21 30.2	1.288	2.297	3.3	18.9	8 9	21 36.05	-0 46.1	1.917	2.905	5.5	20.9
8 19	21 26.67	-22 10.4	1.296	2.297	5.0	19.0	8 19	21 28.81	-1 30.9	1.910	2.905	4.4	20.8
8 29	21 16.49	-22 35.9	1.329	2.296	9.5	19.3	8 29	21 21.96	-2 24.9	1.930	2.906	6.3	20.9
9 8	21 8.43	-22 44.1	1.385	2.295	13.9	19.5	9 8	21 16.27	-3 22.9	1.976	2.907	9.2	21.1
9 18	21 3.31	-22 35.4	1.461	2.294	17.7	19.8	9 18	21 12.33	-4 19.7	2.046	2.907	12.2	21.3
389583	2011 <i>EP</i> ₂₂		8 13.4	359°34	2°3/11.8	18	144306	2004 <i>DC</i> ₁₁		8 13.4	216°46	1°7/12.1	18
7 10	21 53.08	-15 17.0	1.277	2.175	16.5	19.1	7 10	21 59.35	-16 29.1	1.817	2.689	13.6	20.5
7 20	21 49.90	-16 24.7	1.217	2.173	12.2	18.8	7 20	21 53.96	-17 13.5	1.740	2.683	10.1	20.3
7 30	21 44.10	-17 45.7	1.177	2.171	7.3	18.6	7 30	21 46.34	-18 5.7	1.686	2.676	6.1	20.0
8 9	21 36.47	-19 11.6	1.160	2.171	2.7	18.3	8 9	21 37.17	-19 0.2	1.658	2.669	2.2	19.8
8 19	21 28.18	-20 32.7	1.167	2.171	4.6	18.4	8 19	21 27.38	-19 50.9	1.657	2.661	3.6	19.9
8 29	21 20.60	-21 40.0	1.198	2.172	9.5	18.7	8 29	21 18.09	-20 32.2	1.683	2.652	7.7	20.1
9 8	21 14.98	-22 27.7	1.251	2.174	14.1	19.0	9 8	21 10.34	-21 0.5	1.735	2.643	11.7	20.3
9 18	21 12.13	-22 53.9	1.324	2.176	18.0	19.2	9 18	21 4.89	-21 14.5	1.808	2.634	15.1	20.5
428253	2007 <i>BV</i> ₄₉		8 13.4	173°20	0°3/13.7	18	181539	2006 <i>UX</i> ₁₇₇		8 13.4	307°94	0°9/12.7	18
7 10	21 57.10	-9 47.6	2.076	2.927	12.9	22.0	7 10	21 54.59	-14 23.1	1.935	2.807	12.9	20.5
7 20	21 51.93	-10 41.1	2.001	2.931	9.7	21.8	7 20	21 50.26	-15 2.1	1.860	2.803	9.5	20.3
7 30	21 44.92	-11 47.0	1.949	2.933	6.0	21.6	7 30	21 44.00	-15 50.0	1.808	2.798	5.8	20.1
8 9	21 36.67	-13 0.9	1.925	2.936	2.0	21.3	8 9	21 36.43	-16 42.0	1.782	2.793	1.8	19.8
8 19	21 27.94	-14 16.9	1.929	2.937	2.2	21.3	8 19	21 28.36	-17 33.1	1.783	2.789	2.8	19.9
8 29	21 19.65	-15 29.3	1.962	2.938	6.2	21.6	8 29	21 20.75	-18 17.9	1.811	2.784	6.8	20.1
9 8	21 12.65	-16 32.9	2.022	2.938	9.9	21.8	9 8	21 14.48	-18 52.7	1.864	2.780	10.5	20.3
9 18	21 7.56	-17 24.5	2.105	2.937	13.0	22.0	9 18	21 10.20	-19 15.3	1.939	2.776	13.8	20.5
483162	2015 <i>PN</i> ₃₁		8 13.4	338°44	2°3/15.5	18	141102	2001 <i>XE</i> ₅₄		8 13.4	297°43	0°7/13.9	18
7 10	21 51.60	-4 56.2	1.876	2.726	14.2	20.9	7 10	21 54.38	-10 45.1	1.990	2.852	13.0	19.9
7 20	21 48.05	-5 30.7	1.796	2.720	11.0	20.7	7 20	21 50.06	-11 6.5	1.908	2.843	9.8	19.7
7 30	21 42.66	-6 22.3	1.739	2.715	7.3	20.5	7 30	21 43.87	-11 38.7	1.848	2.834	6.1	19.5
8 9	21 35.99	-7 28.1	1.706	2.710	3.6	20.3	8 9	21 36.40	-12 18.5	1.814	2.825	2.2	19.2
8 19	21 28.80	-8 43.2	1.699	2.706	2.7	20.2	8 19	21 28.40	-13 1.7	1.807	2.816	2.2	19.2
8 29	21 22.03	-10 1.0	1.720	2.702	6.2	20.4	8 29	21 20.79	-13 43.6	1.827	2.807	6.3	19.4
9 8	21 16.52	-11 15.3	1.766	2.698	10.0	20.6	9 8	21 14.45	-14 19.9	1.873	2.798	10.0	19.6
9 18	21 12.92	-12 20.8	1.835	2.695	13.4	20.8	9 18	21 10.03	-14 47.7	1.942	2.789	13.3	19.8
431253	2006 <i>UK</i> ₂		8 13.4	279°90	2°5/11.8	17	507265	2011 <i>CL</i> ₁₁₂		8 13.4	220°53	1°3/14.3	17
7 10	21 58.85	-17 45.0	1.533	2.417	15.0	22.3	7 10	21 59.13	-9 37.3	1.828	2.682	14.3	22.6
7 20	21 54.13	-18 27.6	1.447	2.396	11.2	22.0	7 20	21 53.73	-9 46.5	1.746	2.676	10.9	22.3
7 30	21 46.73	-19 19.0	1.383	2.375	6.9	21.7	7 30	21 46.18	-10 7.5	1.687	2.669	7.0	22.1
8 9	21 37.34	-20 12.8	1.343	2.353	2.9	21.4	8 9	21 37.13	-10 37.4	1.653	2.661	2.8	21.8
8 19	21 27.02	-21 1.7	1.329	2.332	4.5	21.5	8 19	21 27.47	-11 12.2	1.646	2.654	2.5	21.8
8 29	21 17.12	-21 38.9	1.340	2.310	9.2	21.7	8 29	21 18.28	-11 47.4	1.666	2.645	6.7	22.0
9 8	21 8.99	-22 0.1	1.375	2.288	13.8	21.9	9 8	21 10.57	-12 18.4	1.712	2.637	10.8	22.3
9 18	21 3.58	-22 4.1	1.430	2.266	17.8	22.1	9 18	21 5.06	-12 42.1	1.781	2.628	14.4	22.5
72320	2001 <i>BW</i> ₄₇		8 13.4	340°46	0°9/12.9	18	311569	2006 <i>EN</i> ₃₃		8 13.4	110°58	5°0/10.2	17
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
417963	2007 <i>TQ</i> ₁₀₉	8 13.4 271°25		3°5/15.5 17			319195	2005 <i>YW</i> ₁₆₀	8 13.4 254°82		3°1/16.3 17		
7 10	21 57.96	- 5 6.1	1.480	2.334	17.1	21.0	7 10	21 54.39	- 3 9.9	2.576	3.395	11.7	22.0
7 20	21 53.45	- 5 4.9	1.391	2.316	13.5	20.7	7 20	21 49.71	- 3 6.1	2.478	3.380	9.3	21.8
7 30	21 46.34	- 5 22.4	1.323	2.299	9.2	20.4	7 30	21 43.53	- 3 14.2	2.403	3.365	6.5	21.6
8 9	21 37.27	- 5 57.2	1.277	2.280	4.9	20.1	8 9	21 36.29	- 3 33.4	2.355	3.350	4.0	21.4
8 19	21 27.25	- 6 45.6	1.256	2.262	4.0	20.0	8 19	21 28.60	- 4 1.7	2.334	3.334	3.2	21.4
8 29	21 17.62	- 7 41.6	1.261	2.243	8.0	20.2	8 29	21 21.15	- 4 36.1	2.342	3.318	5.4	21.5
9 8	21 9.66	- 8 37.8	1.289	2.224	12.8	20.4	9 8	21 14.63	- 5 13.2	2.377	3.301	8.2	21.6
9 18	21 4.33	- 9 28.3	1.339	2.205	17.1	20.7	9 18	21 9.59	- 5 49.5	2.437	3.284	10.9	21.8
287536	2003 <i>DX</i> ₂₃	8 13.4 210°47		1°9/12.2 17			172271	2002 <i>TW</i> ₇₉	8 13.4 261°43		7°1/ 6.5 18		
7 10	22 1.22	-16 28.1	1.470	2.349	15.8	21.4	7 10	21 59.68	-33 21.1	2.177	3.049	11.6	20.2
7 20	21 55.77	-17 8.9	1.400	2.346	11.7	21.1	7 20	21 54.24	-34 39.8	2.103	3.031	9.4	20.0
7 30	21 47.64	-17 59.0	1.351	2.342	7.1	20.8	7 30	21 46.56	-35 53.7	2.053	3.013	7.6	19.9
8 9	21 37.62	-18 51.6	1.327	2.338	2.6	20.5	8 9	21 37.29	-36 55.3	2.029	2.995	7.2	19.8
8 19	21 26.89	-19 39.5	1.329	2.333	4.1	20.6	8 19	21 27.34	-37 37.9	2.031	2.976	8.4	19.9
8 29	21 16.84	-20 16.3	1.356	2.328	8.9	20.9	8 29	21 17.84	-37 57.7	2.058	2.957	10.7	20.0
9 8	21 8.74	-20 38.2	1.407	2.322	13.4	21.1	9 8	21 9.84	-37 54.0	2.108	2.937	13.2	20.1
9 18	21 3.44	-20 44.1	1.478	2.316	17.3	21.4	9 18	21 4.12	-37 29.1	2.178	2.918	15.5	20.3
403100	2008 <i>CP</i> ₁₃₇	8 13.4 100°39		0°2/13.6 17			477094	2009 <i>BN</i> ₁₄₃	8 13.4 245°66		0°3/13.2 18		
7 10	21 54.00	-10 25.8	2.237	3.093	12.0	21.8	7 10	21 55.40	-12 33.5	2.012	2.876	12.8	22.0
7 20	21 49.46	-11 14.9	2.173	3.105	8.9	21.6	7 20	21 50.83	-13 13.0	1.931	2.869	9.5	21.7
7 30	21 43.34	-12 14.3	2.132	3.117	5.5	21.5	7 30	21 44.36	-14 2.6	1.873	2.861	5.8	21.5
8 9	21 36.20	-13 19.9	2.119	3.129	1.8	21.2	8 9	21 36.58	-14 58.3	1.842	2.853	1.8	21.2
8 19	21 28.73	-14 26.7	2.133	3.141	2.0	21.3	8 19	21 28.26	-15 54.9	1.837	2.845	2.5	21.3
8 29	21 21.71	-15 29.7	2.177	3.153	5.6	21.5	8 29	21 20.34	-16 47.1	1.861	2.836	6.5	21.5
9 8	21 15.86	-16 24.7	2.247	3.165	8.9	21.8	9 8	21 13.70	-17 30.6	1.910	2.828	10.3	21.7
9 18	21 11.70	-17 9.1	2.341	3.176	11.8	22.0	9 18	21 9.01	-18 2.7	1.982	2.819	13.5	21.9
439160	2011 <i>UV</i> ₂₈₅	8 13.4 353°09		1°2/12.5 18			437613	2014 <i>BC</i> ₁₄	8 13.4 291°53		2°5/11.8 18		
7 10	21 54.68	-15 15.5	1.764	2.642	13.6	20.9	7 10	21 57.84	-18 20.5	1.605	2.488	14.5	20.5
7 20	21 50.46	-15 54.9	1.695	2.641	10.1	20.7	7 20	21 53.24	-18 57.6	1.521	2.470	10.8	20.3
7 30	21 44.18	-16 42.9	1.648	2.639	6.1	20.5	7 30	21 46.13	-19 41.9	1.460	2.451	6.6	20.0
8 9	21 36.50	-17 34.5	1.627	2.638	2.0	20.2	8 9	21 37.19	-20 27.3	1.423	2.433	2.8	19.7
8 19	21 28.33	-18 23.7	1.631	2.637	3.2	20.3	8 19	21 27.45	-21 7.4	1.412	2.414	4.4	19.7
8 29	21 20.69	-19 5.3	1.663	2.636	7.3	20.5	8 29	21 18.17	-21 36.2	1.426	2.396	8.8	20.0
9 8	21 14.54	-19 35.4	1.718	2.636	11.2	20.8	9 8	21 10.58	-21 50.2	1.464	2.377	13.1	20.2
9 18	21 10.55	-19 52.2	1.796	2.636	14.6	21.0	9 18	21 5.54	-21 48.3	1.523	2.359	16.9	20.4
118698	2000 <i>OY</i> ₅₁	8 13.4 333°83		0°2/15.9 06 C			342129	2008 <i>SP</i> ₁₂₀	8 13.4 5°13		1°4/14.4 17		
7 10	21 35.76	- 6 47.6	34.531	35.352	1.0	23.8	7 10	21 55.08	- 8 50.9	1.545	2.413	15.7	20.6
7 20	21 35.01	- 6 49.8	34.441	35.347	0.8	23.8	7 20	21 50.96	- 9 10.8	1.476	2.413	12.0	20.4
7 30	21 34.18	- 6 52.8	34.376	35.343	0.5	23.7	7 30	21 44.58	- 9 45.9	1.429	2.414	7.6	20.1
8 9	21 33.30	- 6 56.3	34.339	35.339	0.3	23.7	8 9	21 36.66	-10 32.5	1.405	2.414	3.1	19.9
8 19	21 32.40	- 7 0.2	34.332	35.334	0.2	23.7	8 19	21 28.19	-11 25.0	1.407	2.415	2.7	19.8
8 29	21 31.53	- 7 4.5	34.353	35.330	0.4	23.7	8 29	21 20.31	-12 17.3	1.434	2.416	7.2	20.1
9 8	21 30.70	- 7 8.8	34.402	35.326	0.7	23.7	9 8	21 14.08	-13 3.6	1.486	2.418	11.5	20.4
9 18	21 29.96	- 7 13.1	34.479	35.322	0.9	23.8	9 18	21 10.21	-13 39.8	1.558	2.420	15.3	20.6
218434	2004 <i>RP</i> ₁₈₂	8 13.4 231°91		4°0/17.6 18			68257	2001 <i>DH</i> ₁₀₀	8 13.4 325°61		0°5/13.8 18		
7 10	21 52.54	+ 0 57.2	2.499	3.304	12.4	20.2	7 10	22 0.69	-14 10.4	2.152	3.008	12.4	18.5
7 20	21 48.34	+ 0 48.9	2.410	3.298	10.0	20.1	7 20	21 54.53	-13 44.1	2.071	3.003	9.3	18.3
7 30	21 42.67	+ 0 25.1	2.344	3.293	7.4	19.9	7 30	21 46.49	-13 22.3	2.014	2.998	5.8	18.1
8 9	21 36.01	- 0 13.3	2.302	3.287	5.0	19.7	8 9	21 37.22	-13 3.0	1.984	2.994	2.0	17.8
8 19	21 28.95	- 1 3.9	2.288	3.281	4.0	19.6	8 19	21 27.52	-12 44.6	1.982	2.990	2.2	17.8
8 29	21 22.18	- 2 2.9	2.302	3.275	5.6	19.7	8 29	21 18.34	-12 25.2	2.009	2.986	6.0	18.1
9 8	21 16.37	- 3 5.7	2.343	3.269	8.2	19.9	9 8	21 10.51	-12 3.6	2.063	2.982	9.5	18.3
9 18	21 12.03	- 4 7.8	2.409	3.263	10.8	20.1	9 18	21 4.65	-11 39.0	2.141	2.979	12.6	18.5
225628	2001 <i>CS</i> ₁₄	8 13.4 55°96		4°4/ 8.9 18			319155	2005 <i>YN</i> ₆₆	8 13.4 40°26		5°1/ 7.9 18		
7 10	21 56.06	-17 27.4	1.527	2.414	14.8	18.8	7 10	21 54.14	-26 15.3	2.166	3.049	11.2	20.0
7 20	21 51.70	-20 7.5	1.486	2.437	10.8	18.6	7 20	21 49.87	-27 50.1	2.109	3.053	8.5	19.8
7 30	21 45.01	-22 56.1	1.470	2.460	6.7	18.4	7 30	21 43.74	-29 24.8	2.077	3.057	6.1	19.7
8 9	21 36.77	-25 40.1	1.481	2.484	4.4	18.3	8 9	21 36.38	-30 52.0	2.073	3.061	5.1	19.6
8 19	21 28.04	-28 6.7	1.520	2.507	6.6	18.5	8 19	21 28.56	-32 5.2	2.095	3.065	6.5	19.7
8 29	21 20.06	-30 6.4	1.587	2.531	10.2	18.8	8 29	21 21.20	-32 59.7	2.144	3.069	9.0	19.9
9 8	21 13.87	-31 35.1	1.677	2.555	13.7	19.0	9 8	21 15.16	-33 33.6	2.217	3.074	11.6	20.1
9 18	21 10.17	-32 33.5	1.787	2.579	16.6	19.3	9 18	21 11.04	-33 47.5	2.310	3.078	14.0	20.3
423644	2005 <i>XH</i> ₆₀	8 13.4 92°98		3°4/10.8 17			476224	2007 <i>UW</i> ₁₃₆	8 13.4 291°42		2°2/11.5 16		
7 10	21 59.66	-20 39.3	1.756	2.635	13.6	21.3	7 10	21 54.47	-16 26.0	1.827	2.707	13.2	21.4
7 20	21 54.01	-21 41.1	1.709	2.655	10.0	21.1	7 20	21 50.47	-17 30.3	1.741	2.688	9.8	21.2
7 30	21 46.22	-22 45.9	1.685	2.674	6.2	21.0	7 30	21 44.32	-18 44.7	1.679	2.670	5.9	20.9
8 9	21 37.10	-23 46.6	1.688	2.693	3.5	20.8	8 9	21 36.63	-20 3.1	1.641	2.651	2.4	20.7
8 19	21 27.67	-24 36.8	1.717	2.712	4.9	21.0	8 19	21 28.21	-21 18.3	1.631	2.633	4.0	20.7
8 29	21 19.02	-25 11.8	1.773	2.730	8.4	21.2	8 29	21 20.14	-22 23.4	1.648	2.614	8.1	20.9
9 8	21 12.09	-25 29.8	1.853	2.748	11.8	21.5	9 8	21 13.45	-23 13.6	1.689	2.596	12.0	21.1
9 18	21 7.50	-25 31.5	1.955	2.766	14.7	21.7	9 18	21 8.92	-23 46.4	1.751	2.578	15.5	21.3
444228	2005 <i>UY</i> ₄₂	8 13.4 308°28		3°7/16.8 15			407260	2010 <i>BP</i> ₁	8 13.4 245°81		0°7/14.1 17		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
453432	2009 PQ_8		8 13.4 26°01'	3°0'/11.9 18			264909	2002 TH_{146}		8 13.4 246°48'	6°7'/ 7.1 18		
7 10	22 1.88	-23 10.0	1.702	2.582	13.9	19.6	7 10	22 1.46	-37 46.4	2.683	3.538	10.3	20.6
7 20	21 55.66	-23 2.9	1.648	2.593	10.4	19.4	7 20	21 55.02	-38 26.9	2.621	3.532	8.5	20.5
7 30	21 47.21	-22 54.5	1.617	2.605	6.5	19.2	7 30	21 46.75	-38 58.6	2.582	3.527	7.1	20.4
8 9	21 37.43	-22 40.4	1.610	2.617	3.3	19.0	8 9	21 37.32	-39 16.2	2.570	3.521	6.7	20.4
8 19	21 27.40	-22 17.5	1.631	2.631	4.4	19.1	8 19	21 27.57	-39 16.2	2.584	3.515	7.5	20.4
8 29	21 18.29	-21 44.4	1.678	2.645	8.0	19.4	8 29	21 18.42	-38 57.1	2.624	3.510	9.2	20.5
9 8	21 11.05	-21 1.6	1.750	2.659	11.6	19.6	9 8	21 10.68	-38 19.7	2.689	3.504	11.1	20.7
9 18	21 6.28	-20 10.6	1.844	2.674	14.6	19.9	9 18	21 4.93	-37 26.7	2.774	3.498	12.8	20.8
85278	1994 PU_8		8 13.4 246°55'	1°1'/12.9 18			182794	2002 AN_{46}		8 13.4 102°32'	0°6'/12.9 18		
7 10	22 3.31	-16 7.1	1.533	2.407	15.6	19.1	7 10	21 54.62	-13 21.2	2.320	3.181	11.4	20.6
7 20	21 57.37	-16 17.9	1.452	2.394	11.7	18.8	7 20	21 49.90	-14 9.8	2.259	3.196	8.4	20.5
7 30	21 48.68	-16 36.2	1.392	2.381	7.2	18.5	7 30	21 43.62	-15 6.1	2.222	3.210	5.0	20.3
8 9	21 38.02	-16 56.9	1.356	2.368	2.3	18.2	8 9	21 36.35	-16 5.8	2.213	3.224	1.5	20.1
8 19	21 26.52	-17 15.0	1.347	2.354	3.4	18.2	8 19	21 28.79	-17 4.1	2.231	3.238	2.3	20.2
8 29	21 15.61	-17 25.6	1.364	2.339	8.4	18.5	8 29	21 21.68	-17 56.7	2.279	3.251	5.7	20.4
9 8	21 6.58	-17 25.7	1.405	2.324	13.1	18.7	9 8	21 15.73	-18 40.2	2.353	3.264	8.9	20.6
9 18	21 0.37	-17 14.6	1.468	2.309	17.2	19.0	9 18	21 11.44	-19 12.8	2.451	3.278	11.6	20.8
75454	1999 XL_{144}		8 13.4 260°00'	3°8'/11.1 18			146842	2002 AA_{50}		8 13.4 341°67'	3°0'/15.5 18		
7 10	22 2.02	-22 20.9	1.604	2.486	14.5	18.5	7 10	21 56.20	- 6 26.2	1.919	2.765	14.1	19.8
7 20	21 56.33	-22 55.8	1.528	2.474	10.9	18.3	7 20	21 51.43	- 6 5.6	1.840	2.761	11.0	19.6
7 30	21 47.99	-23 33.0	1.474	2.463	7.0	18.0	7 30	21 44.75	- 5 57.0	1.784	2.757	7.5	19.4
8 9	21 37.79	-24 5.6	1.445	2.451	4.0	17.8	8 9	21 36.76	- 5 59.5	1.752	2.754	4.1	19.2
8 19	21 26.84	-24 27.3	1.442	2.438	5.5	17.9	8 19	21 28.28	- 6 10.8	1.747	2.751	3.3	19.1
8 29	21 16.54	-24 33.4	1.465	2.426	9.5	18.1	8 29	21 20.26	- 6 27.6	1.769	2.748	6.4	19.3
9 8	21 8.13	-24 22.4	1.511	2.413	13.5	18.3	9 8	21 13.58	- 6 46.3	1.816	2.746	10.0	19.5
9 18	21 2.45	-23 55.3	1.578	2.400	17.1	18.5	9 18	21 8.90	- 7 3.5	1.886	2.744	13.2	19.7
117196	2004 RW_{165}		8 13.4 1°63'	5°5'/15.9 18			34459	2000 SC_{91}		8 13.4 226°17'	3°3'/15.6 18		
7 10	21 58.49	- 4 29.8	1.561	2.409	16.6	18.3	7 10	21 59.71	- 5 24.4	1.994	2.827	14.1	17.8
7 20	21 53.45	- 3 13.9	1.491	2.407	13.3	18.0	7 20	21 54.03	- 5 2.0	1.908	2.820	11.1	17.5
7 30	21 46.09	- 2 10.9	1.441	2.406	9.6	17.8	7 30	21 46.35	- 4 51.9	1.844	2.813	7.6	17.3
8 9	21 37.16	- 1 22.4	1.414	2.407	6.4	17.7	8 9	21 37.27	- 4 53.2	1.806	2.805	4.4	17.1
8 19	21 27.67	- 0 49.1	1.413	2.408	5.7	17.6	8 19	21 27.62	- 5 4.0	1.795	2.797	3.6	17.0
8 29	21 18.81	- 0 29.5	1.437	2.411	8.2	17.8	8 29	21 18.39	- 5 21.4	1.812	2.789	6.5	17.2
9 8	21 11.64	- 0 20.3	1.485	2.415	11.7	18.0	9 8	21 10.49	- 5 41.5	1.855	2.780	10.1	17.4
9 18	21 6.91	- 0 17.5	1.554	2.420	15.1	18.2	9 18	21 4.64	- 6 0.8	1.921	2.771	13.4	17.6
126223	2002 AR_{49}		8 13.4 35°87'	4°4'/15.7 18			523093	2016 RO_{47}		8 13.4 331°76'	4°2'/16.5 16		
7 10	22 1.21	- 5 37.9	1.536	2.384	16.8	19.3	7 10	21 51.83	- 2 29.6	1.443	2.300	17.3	21.0
7 20	21 55.45	- 4 46.3	1.469	2.389	13.3	19.1	7 20	21 48.81	- 2 37.7	1.363	2.287	13.8	20.8
7 30	21 47.29	- 4 8.6	1.424	2.394	9.2	18.9	7 30	21 43.46	- 3 8.3	1.303	2.275	9.7	20.5
8 9	21 37.52	- 3 44.8	1.401	2.400	5.5	18.7	8 9	21 36.43	- 4 0.1	1.264	2.264	5.7	20.2
8 19	21 27.24	- 3 34.0	1.405	2.406	4.7	18.7	8 19	21 28.65	- 5 8.6	1.249	2.253	4.4	20.1
8 29	21 17.67	- 3 33.4	1.434	2.412	7.8	18.9	8 29	21 21.33	- 6 26.7	1.259	2.244	7.7	20.3
9 8	21 9.93	- 3 38.8	1.488	2.418	11.7	19.1	9 8	21 15.61	- 7 45.7	1.293	2.235	12.1	20.5
9 18	21 4.74	- 3 46.4	1.563	2.425	15.3	19.3	9 18	21 12.32	- 8 58.0	1.347	2.226	16.1	20.8
88252	2001 FM_{40}		8 13.4 278°65'	6°2'/ 8.4 18			76740	2000 JJ_{64}		8 13.4 166°83'	0°1'/13.6 18		
7 10	22 1.59	-33 21.6	2.334	3.199	11.2	19.3	7 10	21 58.06	-12 56.0	2.378	3.231	11.5	20.1
7 20	21 55.35	-33 58.7	2.259	3.186	8.9	19.1	7 20	21 52.44	-13 9.2	2.304	3.235	8.6	19.9
7 30	21 47.08	-34 29.3	2.209	3.172	6.9	18.9	7 30	21 45.18	-13 29.2	2.254	3.238	5.3	19.7
8 9	21 37.45	-34 47.5	2.184	3.158	6.2	18.9	8 9	21 36.86	-13 53.1	2.230	3.241	1.7	19.5
8 19	21 27.35	-34 48.8	2.187	3.144	7.2	18.9	8 19	21 28.19	-14 17.6	2.236	3.244	2.0	19.5
8 29	21 17.83	-34 31.1	2.216	3.130	9.3	19.0	8 29	21 19.96	-14 39.6	2.271	3.246	5.5	19.8
9 8	21 9.80	-33 54.8	2.269	3.116	11.8	19.2	9 8	21 12.90	-14 56.3	2.332	3.248	8.8	20.0
9 18	21 3.92	-33 2.6	2.343	3.102	14.0	19.3	9 18	21 7.56	-15 6.2	2.418	3.249	11.6	20.2
224907	2007 CB_{65}		8 13.4 271°69'	1°6'/12.5 17			7342	Uchinoura		8 13.4 170°86'	2°2'/15.7 18		
7 10	22 0.56	-17 14.3	1.641	2.517	14.6	20.9	7 10	21 54.59	- 4 5.2	2.131	2.965	13.3	17.9
7 20	21 55.19	-17 32.2	1.557	2.501	10.9	20.6	7 20	21 50.08	- 4 46.7	2.053	2.967	10.3	17.7
7 30	21 47.30	-17 56.5	1.495	2.485	6.7	20.4	7 30	21 43.86	- 5 44.3	1.997	2.969	6.9	17.5
8 9	21 37.60	-18 22.3	1.458	2.469	2.3	20.0	8 9	21 36.48	- 6 54.8	1.968	2.971	3.5	17.3
8 19	21 27.11	-18 44.3	1.448	2.453	3.6	20.1	8 19	21 28.65	- 8 13.5	1.966	2.972	2.6	17.2
8 29	21 17.13	-18 57.8	1.464	2.437	8.2	20.3	8 29	21 21.22	- 9 34.6	1.993	2.973	5.7	17.4
9 8	21 8.87	-18 59.8	1.504	2.420	12.6	20.6	9 8	21 14.97	-10 52.1	2.047	2.973	9.2	17.6
9 18	21 3.17	-18 49.6	1.565	2.403	16.4	20.8	9 18	21 10.48	-12 1.4	2.125	2.974	12.3	17.8
134576	1999 SX_{15}		8 13.4 232°40'	8°6'/ 7.5 18			425688	2011 AV_{56}		8 13.4 199°76'	0°2'/13.6 18		
7 10	22 13.13	-38 17.8	2.056	2.904	13.2	19.7	7 10	21 58.88	-11 45.3	1.883	2.742	13.7	22.3
7 20	22 4.41	-39 9.6	1.981	2.888	11.0	19.6	7 20	21 53.52	-12 12.5	1.806	2.740	10.3	22.0
7 30	21 52.83	-39 50.1	1.929	2.872	9.2	19.4	7 30	21 46.07	-12 50.3	1.751	2.737	6.4	21.8
8 9	21 39.29	-40 10.7	1.903	2.855	8.6	19.4	8 9	21 37.19	-13 34.9	1.722	2.733	2.1	21.5
8 19	21 25.09	-40 5.1	1.903	2.837	9.6	19.4	8 19	21 27.76	-14 21.1	1.721	2.729	2.4	21.5
8 29	21 11.74	-39 31.1	1.930	2.818	11.8	19.5	8 29	21 18.81	-15 4.1	1.747	2.724	6.7	21.8
9 8	21 0.55	-38 31.5	1.980	2.798	14.3	19.6	9 8	21 11.31	-15 39.4	1.799	2.719	10.7	22.0
9 18	20 52.38	-37 11.4	2.051	2.777	16.7	19.8	9 18	21 5.97	-16 4.7	1.874	2.713	14.1	22.2
258013	2001 FF_{85}		8 13.4 133°36'	2°0'/11.5 18			253617	2003 UC_{63}		8 13.4 302°17'	6°1'/ 9.4 18		
7 10	21 55.83	-19 51.0											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
296972	2010 <i>ER</i> ₇₈		8 13.5 188°82	0°8/12.8	17		106901	2000 <i>YB</i> ₄₅		8 13.5 303°52	4°6/10.2	18	
7 10	21 56.68	-14 10.8	1.918	2.786	13.1	21.1	7 10	21 56.33	-20 10.0	1.300	2.200	16.1	19.2
7 20	21 51.84	-14 51.3	1.846	2.786	9.7	20.9	7 20	21 52.65	-21 31.7	1.230	2.186	12.0	18.9
7 30	21 45.02	-15 40.7	1.797	2.785	5.9	20.7	7 30	21 46.06	-23 3.1	1.181	2.173	7.7	18.6
8 9	21 36.87	-16 34.4	1.773	2.785	1.8	20.4	8 9	21 37.33	-24 34.2	1.154	2.160	4.7	18.4
8 19	21 28.23	-17 26.7	1.778	2.784	2.8	20.5	8 19	21 27.67	-25 53.9	1.152	2.147	6.8	18.5
8 29	21 20.08	-18 12.6	1.809	2.783	6.9	20.7	8 29	21 18.60	-26 53.1	1.174	2.135	11.3	18.7
9 8	21 13.34	-18 48.1	1.866	2.782	10.6	20.9	9 8	21 11.59	-27 27.1	1.217	2.123	15.8	18.9
9 18	21 8.65	-19 11.3	1.946	2.780	13.8	21.2	9 18	21 7.61	-27 35.6	1.278	2.111	19.7	19.1
243256	2007 <i>XC</i> ₅		8 13.5 9°08	4°7/10.0	18		400439	2008 <i>DE</i> ₇₉		8 13.5 18°15	10°1/25.5	16	
7 10	21 56.31	-23 24.4	1.585	2.478	14.1	19.9	7 10	21 49.21	+17 30.8	1.724	2.459	19.6	20.1
7 20	21 51.97	-24 24.2	1.528	2.479	10.5	19.7	7 20	21 46.45	+17 20.5	1.654	2.467	17.3	20.0
7 30	21 45.26	-25 25.9	1.492	2.480	6.9	19.5	7 30	21 41.80	+16 35.4	1.600	2.476	14.8	19.8
8 9	21 36.96	-26 21.6	1.480	2.482	4.7	19.3	8 9	21 35.89	+15 14.4	1.565	2.487	12.3	19.7
8 19	21 28.15	-27 4.3	1.494	2.484	6.2	19.4	8 19	21 29.54	+13 19.6	1.552	2.498	10.5	19.6
8 29	21 20.04	-27 28.8	1.533	2.487	9.7	19.6	8 29	21 23.72	+10 58.1	1.564	2.509	10.3	19.6
9 8	21 13.74	-27 33.6	1.595	2.491	13.3	19.9	9 8	21 19.28	+8 20.9	1.600	2.522	11.6	19.7
9 18	21 9.93	-27 19.7	1.676	2.495	16.4	20.1	9 18	21 16.84	+5 40.0	1.661	2.536	13.8	19.9
200549	2001 <i>FR</i> ₁₅₆		8 13.5 136°27	4°3/9.5	17		123197	2000 <i>UV</i> ₁₉		8 13.5 103°80	4°0/10.5	18	
7 10	21 59.78	-25 42.1	2.268	3.140	11.3	20.2	7 10	22 0.10	-22 50.7	1.788	2.669	13.4	19.4
7 20	21 53.85	-26 42.4	2.214	3.152	8.4	20.0	7 20	21 54.44	-23 46.5	1.736	2.681	9.9	19.2
7 30	21 46.09	-27 41.4	2.184	3.164	5.7	19.9	7 30	21 46.60	-24 43.4	1.707	2.694	6.4	19.0
8 9	21 37.18	-28 33.3	2.182	3.176	4.3	19.8	8 9	21 37.38	-25 34.6	1.704	2.706	4.1	18.9
8 19	21 27.92	-29 12.9	2.207	3.187	5.5	19.9	8 19	21 27.77	-26 13.9	1.728	2.719	5.4	19.0
8 29	21 19.26	-29 37.1	2.260	3.198	8.0	20.1	8 29	21 18.93	-26 37.3	1.778	2.731	8.7	19.2
9 8	21 12.00	-29 44.9	2.339	3.208	10.7	20.2	9 8	21 11.80	-26 43.4	1.852	2.742	12.0	19.5
9 18	21 6.72	-29 37.3	2.439	3.217	13.0	20.4	9 18	21 7.02	-26 33.3	1.947	2.753	14.9	19.7
292970	2006 <i>VH</i> ₁₃₈		8 13.5 161°97	4°0/9.3	18		333997	2000 <i>SU</i> ₃₅₁		8 13.5 319°15	2°4/11.4	18	
7 10	21 56.91	-25 41.5	2.477	3.350	10.4	21.2	7 10	21 50.59	-13 19.5	1.310	2.206	16.2	19.8
7 20	21 51.67	-26 40.8	2.415	3.354	7.8	21.0	7 20	21 48.43	-14 55.4	1.219	2.174	12.2	19.4
7 30	21 44.77	-27 39.3	2.377	3.358	5.3	20.8	7 30	21 43.60	-16 54.5	1.148	2.143	7.4	19.1
8 9	21 36.77	-28 31.7	2.367	3.361	4.0	20.8	8 9	21 36.63	-19 8.7	1.101	2.112	2.8	18.7
8 19	21 28.41	-29 13.5	2.385	3.364	5.2	20.9	8 19	21 28.50	-21 25.8	1.079	2.082	5.1	18.8
8 29	21 20.50	-29 41.2	2.431	3.367	7.6	21.0	8 29	21 20.60	-23 31.9	1.081	2.053	10.6	19.0
9 8	21 13.80	-29 53.6	2.501	3.369	10.1	21.2	9 8	21 14.40	-25 15.7	1.106	2.025	15.8	19.2
9 18	21 8.86	-29 51.1	2.594	3.371	12.4	21.3	9 18	21 11.07	-26 31.3	1.148	1.998	20.4	19.4
476008	2007 <i>RO</i> ₉₃		8 13.5 322°27	3°0/11.6	16		482404	2012 <i>BO</i> ₃₇		8 13.5 158°47	0°6/12.9	18	
7 10	21 57.13	-20 13.9	1.527	2.417	14.7	20.6	7 10	21 55.21	-15 15.0	2.778	3.634	9.9	22.3
7 20	21 52.79	-20 42.1	1.451	2.402	11.0	20.3	7 20	21 50.16	-15 38.2	2.705	3.639	7.3	22.1
7 30	21 45.91	-21 14.9	1.395	2.387	6.8	20.0	7 30	21 43.75	-16 6.1	2.657	3.644	4.4	21.9
8 9	21 37.23	-21 46.1	1.364	2.372	3.3	19.8	8 9	21 36.47	-16 35.9	2.637	3.648	1.4	21.7
8 19	21 27.80	-22 9.7	1.358	2.358	4.8	19.8	8 19	21 28.90	-17 4.4	2.645	3.652	2.0	21.8
8 29	21 18.96	-22 20.4	1.376	2.345	9.1	20.1	8 29	21 21.69	-17 28.7	2.684	3.655	5.1	22.0
9 8	21 11.90	-22 15.9	1.418	2.332	13.3	20.3	9 8	21 15.45	-17 46.8	2.749	3.658	7.8	22.2
9 18	21 7.47	-21 56.1	1.480	2.320	17.1	20.5	9 18	21 10.65	-17 57.3	2.839	3.661	10.3	22.3
148372	2000 <i>ST</i> ₁₃₇		8 13.5 324°66	2°2/14.7	18		98761	2000 <i>YR</i> ₆₈		8 13.5 177°73	0°6/13.9	18	
7 10	21 57.44	-9 52.7	1.744	2.605	14.6	19.5	7 10	21 58.03	-11 7.9	2.332	3.180	11.8	20.6
7 20	21 52.67	-9 23.7	1.657	2.589	11.2	19.3	7 20	21 52.49	-11 25.6	2.255	3.182	8.9	20.4
7 30	21 45.69	-9 4.0	1.592	2.573	7.4	19.0	7 30	21 45.29	-11 51.8	2.201	3.184	5.5	20.2
8 9	21 37.14	-8 52.4	1.551	2.558	3.4	18.7	8 9	21 36.98	-12 23.5	2.175	3.184	1.9	19.9
8 19	21 27.92	-8 47.0	1.537	2.544	3.0	18.7	8 19	21 28.27	-12 57.3	2.177	3.185	2.0	19.9
8 29	21 19.13	-8 45.1	1.549	2.530	6.9	18.9	8 29	21 19.97	-13 29.5	2.208	3.184	5.6	20.2
9 8	21 11.82	-8 43.5	1.585	2.516	11.1	19.1	9 8	21 12.85	-13 56.9	2.266	3.184	8.9	20.4
9 18	21 6.77	-8 39.9	1.644	2.504	14.7	19.3	9 18	21 7.47	-14 17.4	2.348	3.182	11.8	20.6
137718	1999 <i>XA</i> ₁₀₂		8 13.5 284°61	0°9/13.9	18		467316	1999 <i>UX</i> ₂₁		8 13.5 356°96	3°9/11.5	17	
7 10	21 59.19	-11 20.5	1.542	2.411	15.7	19.9	7 10	21 51.12	-19 39.1	0.889	1.814	19.2	20.3
7 20	21 54.43	-11 26.6	1.449	2.387	12.1	19.6	7 20	21 49.36	-20 13.0	0.837	1.806	14.3	20.0
7 30	21 47.04	-11 45.1	1.375	2.362	7.7	19.3	7 30	21 44.25	-20 54.7	0.803	1.801	8.9	19.7
8 9	21 37.64	-12 12.9	1.326	2.337	2.8	18.9	8 9	21 36.79	-21 35.2	0.788	1.798	4.2	19.4
8 19	21 27.24	-12 45.4	1.303	2.311	2.8	18.9	8 19	21 28.52	-22 4.9	0.793	1.797	6.2	19.5
8 29	21 17.16	-13 17.1	1.305	2.285	8.0	19.1	8 29	21 21.29	-22 16.3	0.818	1.797	11.6	19.8
9 8	21 8.72	-13 43.0	1.331	2.260	12.9	19.4	9 8	21 16.66	-22 6.3	0.861	1.800	16.9	20.2
9 18	21 2.92	-13 59.6	1.378	2.234	17.3	19.6	9 18	21 15.49	-21 35.8	0.921	1.805	21.3	20.4
42206	2001 <i>DJ</i> ₄₁		8 13.5 44°95	0°3/13.2	18		312495	2009 <i>AP</i> ₄₉		8 13.5 122°46	3°7/10.9	17	
7 10	21 54.24	-13 12.9	2.073	2.940	12.4	18.9	7 10	22 0.69	-19 23.1	1.442	2.328	15.6	20.8
7 20	21 49.82	-13 41.7	2.009	2.947	9.2	18.7	7 20	21 55.36	-20 35.2	1.388	2.337	11.5	20.6
7 30	21 43.68	-14 18.7	1.968	2.955	5.6	18.5	7 30	21 47.41	-21 53.7	1.355	2.346	7.1	20.3
8 9	21 36.45	-15 0.0	1.952	2.964	1.7	18.2	8 9	21 37.69	-23 9.9	1.347	2.354	3.8	20.2
8 19	21 28.86	-15 41.3	1.965	2.972	2.3	18.3	8 19	21 27.43	-24 14.9	1.365	2.362	5.5	20.3
8 29	21 21.77	-16 18.2	2.004	2.981	6.0	18.6	8 29	21 18.00	-25 2.1	1.408	2.370	9.7	20.6
9 8	21 15.95	-16 47.6	2.070	2.990	9.5	18.8	9 8	21 10.61	-25 28.4	1.475	2.377	13.7	20.8
9 18	21 11.95	-17 7.3	2.159	2.999	12.4	19.0	9 18	21 6.01	-25 34.5	1.561	2.384	17.2	21.1
346676	2008 <i>YT</i> ₃₄		8 13.5 183°56	1°7/14.8	18		97424	2000 <i>AB</i>					

EPHEMERIDES

8 13.5

8 13.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
322057	2010 <i>VJ</i> ₇₇		8 13.5 244°94	2°6/16.2	18		264397	2000 <i>EB</i> ₁₀₀		8 13.5 221°23	2°7/11.8	18	
7 10	21 52.77	- 3 25.3	2.513	3.339	11.8	20.9	7 10	22 1.65	-19 48.1	1.685	2.562	14.2	20.8
7 20	21 48.58	- 3 46.1	2.423	3.330	9.2	20.7	7 20	21 55.87	-20 16.3	1.613	2.558	10.6	20.5
7 30	21 42.92	- 4 20.3	2.355	3.321	6.4	20.6	7 30	21 47.67	-20 48.4	1.564	2.553	6.5	20.3
8 9	21 36.25	- 5 6.0	2.314	3.312	3.6	20.4	8 9	21 37.81	-21 18.8	1.540	2.549	3.0	20.1
8 19	21 29.17	- 6 0.4	2.300	3.303	2.8	20.3	8 19	21 27.35	-21 41.7	1.543	2.544	4.3	20.2
8 29	21 22.36	- 6 59.4	2.315	3.294	5.2	20.4	8 29	21 17.54	-21 52.8	1.572	2.539	8.4	20.4
9 8	21 16.49	- 7 58.6	2.358	3.285	8.1	20.6	9 8	21 9.51	-21 50.2	1.626	2.534	12.4	20.6
9 18	21 12.09	- 8 53.8	2.425	3.275	10.9	20.8	9 18	21 4.01	-21 34.1	1.701	2.528	15.8	20.8
286570	2002 <i>CR</i> ₂₀₆		8 13.5 19°97	2°4/11.9	18		327149	2005 <i>GW</i> ₄₈		8 13.5 216°17	2°2/15.2	17	
7 10	21 59.73	-19 9.1	1.629	2.510	14.4	20.7	7 10	21 58.60	- 6 3.7	1.812	2.656	14.9	22.0
7 20	21 54.41	-19 33.7	1.564	2.511	10.7	20.4	7 20	21 53.47	- 6 25.7	1.728	2.649	11.5	21.8
7 30	21 46.73	-20 2.7	1.521	2.511	6.5	20.2	7 30	21 46.18	- 7 3.9	1.665	2.641	7.6	21.6
8 9	21 37.47	-20 30.6	1.503	2.512	2.8	20.0	8 9	21 37.35	- 7 55.4	1.627	2.633	3.6	21.3
8 19	21 27.71	-20 51.8	1.511	2.514	4.1	20.1	8 19	21 27.87	- 8 55.7	1.617	2.624	2.9	21.2
8 29	21 18.65	-21 2.3	1.545	2.515	8.2	20.3	8 29	21 18.79	- 9 58.8	1.634	2.614	6.7	21.5
9 8	21 11.39	-21 0.0	1.604	2.516	12.2	20.6	9 8	21 11.15	-10 58.8	1.676	2.604	10.8	21.7
9 18	21 6.61	-20 44.9	1.683	2.518	15.6	20.8	9 18	21 5.69	-11 50.8	1.742	2.593	14.5	21.9
140073	2001 <i>SC</i> ₁₁₅		8 13.5 269°72	0°9/14.2	18		28559	<i>Anniedai</i>		8 13.5 39°28	3°0/11.9	18	
7 10	21 54.75	- 9 44.8	2.132	2.987	12.5	20.3	7 10	22 0.83	-20 5.6	1.322	2.213	16.4	17.6
7 20	21 50.34	-10 9.5	2.043	2.973	9.5	20.0	7 20	21 55.54	-20 28.2	1.270	2.222	12.2	17.4
7 30	21 44.13	-10 45.5	1.977	2.960	6.0	19.8	7 30	21 47.51	-20 54.5	1.240	2.232	7.5	17.1
8 9	21 36.66	-11 29.8	1.937	2.946	2.3	19.5	8 9	21 37.74	-21 17.9	1.232	2.242	3.4	16.9
8 19	21 28.65	-12 18.4	1.924	2.932	2.1	19.5	8 19	21 27.52	-21 32.3	1.250	2.252	4.8	17.1
8 29	21 20.96	-13 6.5	1.939	2.918	6.0	19.7	8 29	21 18.31	-21 33.4	1.292	2.263	9.3	17.3
9 8	21 14.42	-13 49.9	1.980	2.904	9.6	19.9	9 8	21 11.31	-21 20.2	1.356	2.274	13.6	17.6
9 18	21 9.68	-14 25.3	2.045	2.890	12.9	20.1	9 18	21 7.22	-20 53.4	1.441	2.286	17.2	17.9
511263	2014 <i>CT</i> ₁₇		8 13.5 210°67	2°1/11.9	18		1157	<i>Arabia</i>		8 13.5 22°42	1°6/12.5	18	
7 10	22 1.31	-19 52.4	2.141	3.007	12.0	21.8	7 10	21 57.82	-18 31.1	1.874	2.751	13.0	14.3
7 20	21 55.14	-20 11.5	2.063	3.002	9.0	21.6	7 20	21 52.63	-18 37.1	1.812	2.757	9.6	14.1
7 30	21 47.01	-20 33.0	2.009	2.997	5.5	21.3	7 30	21 45.48	-18 46.5	1.773	2.763	5.8	13.9
8 9	21 37.55	-20 52.7	1.982	2.991	2.4	21.1	8 9	21 37.07	-18 55.3	1.759	2.770	2.1	13.7
8 19	21 27.61	-21 6.6	1.983	2.984	3.5	21.2	8 19	21 28.31	-18 59.9	1.772	2.777	3.2	13.8
8 29	21 18.18	-21 11.4	2.012	2.977	7.0	21.4	8 29	21 20.20	-18 57.5	1.812	2.785	7.0	14.0
9 8	21 10.16	-21 5.7	2.068	2.970	10.4	21.6	9 8	21 13.63	-18 46.4	1.878	2.793	10.5	14.3
9 18	21 4.20	-20 49.5	2.147	2.962	13.4	21.8	9 18	21 9.18	-18 26.5	1.965	2.802	13.6	14.5
371392	2006 <i>RO</i> ₁₉		8 13.5 289°13	4°4/10.9	18		54908	2001 <i>OY</i> ₈₀		8 13.5 51°68	5°3/17.3	18	
7 10	22 0.76	-22 29.7	1.433	2.323	15.5	20.7	7 10	21 56.88	- 0 3.3	1.931	2.748	15.1	17.6
7 20	21 55.75	-23 11.4	1.358	2.309	11.7	20.4	7 20	21 51.91	+ 0 30.4	1.859	2.754	12.2	17.4
7 30	21 47.86	-23 56.3	1.306	2.295	7.5	20.1	7 30	21 45.06	+ 0 47.7	1.808	2.759	9.1	17.2
8 9	21 37.92	-24 36.7	1.276	2.281	4.5	19.9	8 9	21 36.96	+ 0 48.4	1.781	2.765	6.3	17.0
8 19	21 27.12	-25 4.8	1.272	2.268	6.1	20.0	8 19	21 28.42	+ 0 33.9	1.779	2.770	5.3	17.0
8 29	21 16.99	-25 15.2	1.292	2.254	10.3	20.2	8 29	21 20.37	+ 0 7.4	1.805	2.776	7.1	17.1
9 8	21 8.90	-25 5.8	1.335	2.240	14.6	20.4	9 8	21 13.67	- 0 26.3	1.856	2.782	10.0	17.3
9 18	21 3.78	-24 38.1	1.397	2.227	18.5	20.6	9 18	21 8.94	- 1 2.4	1.930	2.788	12.9	17.5
70092	1999 <i>JH</i> ₁₀₅		8 13.5 5°24	3°2/11.4	18		62990	2000 <i>WM</i> ₂		8 13.5 143°92	5°4/ 7.7	18	
7 10	21 53.45	-16 13.2	1.073	1.981	18.1	18.8	7 10	21 57.24	-29 55.6	2.471	3.343	10.4	19.4
7 20	21 50.65	-17 29.2	1.019	1.980	13.4	18.5	7 20	21 52.02	-31 10.4	2.416	3.350	8.1	19.3
7 30	21 44.85	-18 59.3	0.984	1.980	8.1	18.2	7 30	21 45.05	-32 21.7	2.386	3.356	6.1	19.2
8 9	21 36.97	-20 33.3	0.971	1.982	3.5	18.0	8 9	21 36.94	-33 23.5	2.384	3.362	5.4	19.2
8 19	21 28.34	-21 59.1	0.981	1.984	5.6	18.1	8 19	21 28.45	-34 10.8	2.409	3.368	6.5	19.2
8 29	21 20.59	-23 6.5	1.013	1.987	10.8	18.4	8 29	21 20.45	-34 40.4	2.461	3.373	8.6	19.4
9 8	21 15.12	-23 49.7	1.066	1.991	15.7	18.7	9 8	21 13.71	-34 51.5	2.536	3.379	10.8	19.5
9 18	21 12.79	-24 7.6	1.136	1.996	19.9	19.0	9 18	21 8.81	-34 45.5	2.633	3.383	12.9	19.7
217314	2004 <i>PQ</i> ₃₅		8 13.5 36°41	4°7/11.2	18		42732	1998 <i>RD</i> ₁		8 13.5 330°44	2°2/11.9	18	
7 10	22 6.16	-28 13.9	1.798	2.671	13.7	19.2	7 10	21 57.07	-20 0.9	2.105	2.979	11.9	18.0
7 20	21 58.80	-28 11.4	1.744	2.682	10.4	19.0	7 20	21 52.02	-20 19.3	2.031	2.974	8.8	17.8
7 30	21 49.15	-28 2.8	1.714	2.694	7.0	18.8	7 30	21 45.12	-20 40.2	1.981	2.970	5.4	17.6
8 9	21 38.17	-27 43.3	1.709	2.706	4.8	18.7	8 9	21 36.98	-20 59.4	1.957	2.965	2.4	17.4
8 19	21 27.00	-27 9.7	1.731	2.719	5.8	18.8	8 19	21 28.41	-21 13.1	1.960	2.961	3.5	17.5
8 29	21 16.86	-26 21.5	1.781	2.733	8.8	19.0	8 29	21 20.35	-21 18.2	1.991	2.957	6.9	17.7
9 8	21 8.72	-25 20.7	1.855	2.746	12.0	19.3	9 8	21 13.62	-21 12.9	2.047	2.953	10.3	17.9
9 18	21 3.16	-24 10.5	1.952	2.760	14.8	19.5	9 18	21 8.85	-20 57.2	2.126	2.950	13.2	18.1
213019	1995 <i>UE</i> ₅₈		8 13.5 23°67	0°2/13.6	18		94219	2001 <i>BP</i> ₄₅		8 13.5 90°37	9°9/23.5	18	
7 10	21 54.87	-12 15.0	1.713	2.585	14.2	20.6	7 10	21 57.56	+17 36.3	2.469	3.154	15.5	19.1
7 20	21 50.62	-12 34.1	1.650	2.591	10.6	20.4	7 20	21 52.15	+18 48.9	2.399	3.167	13.9	19.0
7 30	21 44.33	-13 3.5	1.609	2.598	6.5	20.2	7 30	21 45.11	+19 40.2	2.349	3.180	12.2	18.9
8 9	21 36.72	-13 39.2	1.593	2.605	2.1	19.9	8 9	21 36.97	+20 7.2	2.319	3.193	10.8	18.8
8 19	21 28.69	-14 16.5	1.604	2.612	2.4	20.0	8 19	21 28.42	+20 9.0	2.312	3.205	10.0	18.8
8 29	21 21.27	-14 50.4	1.640	2.620	6.8	20.3	8 29	21 20.24	+19 46.9	2.330	3.218	10.1	18.8
9 8	21 15.36	-15 17.0	1.701	2.628	10.7	20.5	9 8	21 13.18	+19 5.0	2.371	3.230	10.9	18.9
9 18	21 11.61	-15 33.9	1.784	2.637	14.1	20.8	9 18	21 7.80	+18 9.0	2.435	3.242	12.2	19.0
361918	2008 <i>GV</i> ₁₀₂		8 13.5 138°98	3°5/16.9	18		353408	2011 <i>QR</i> ₁		8 13.5 327°53	0°8/13.9		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
473217	2015 <i>KP</i> ₁₃₃		8 13.5 39°56'	3°6'/16.7	16		309648	2008 <i>DR</i> ₇		8 13.5 281°61'	0°6'/12.9	18	
7 10	21 53.54	- 1 32.4	1.741	2.578	15.6	21.3	7 10	21 54.34	-13 6.9	2.004	2.872	12.7	20.9
7 20	21 49.65	- 2 0.9	1.669	2.582	12.4	21.1	7 20	21 50.13	-13 53.4	1.926	2.866	9.4	20.6
7 30	21 43.79	- 2 50.1	1.618	2.585	8.7	20.9	7 30	21 44.06	-14 50.1	1.871	2.859	5.7	20.4
8 9	21 36.60	- 3 57.2	1.591	2.589	5.0	20.7	8 9	21 36.71	-15 52.3	1.842	2.853	1.8	20.1
8 19	21 28.91	- 5 17.4	1.590	2.593	3.8	20.6	8 19	21 28.83	-16 54.7	1.840	2.846	2.6	20.2
8 29	21 21.71	- 6 43.7	1.616	2.597	6.6	20.8	8 29	21 21.35	-17 51.6	1.865	2.840	6.6	20.4
9 8	21 15.92	- 8 8.4	1.667	2.602	10.3	21.0	9 8	21 15.13	-18 38.7	1.917	2.834	10.3	20.6
9 18	21 12.19	- 9 25.5	1.741	2.606	13.8	21.3	9 18	21 10.83	-19 13.3	1.991	2.827	13.5	20.8
239176	2006 <i>KQ</i> ₆₆		8 13.5 330°21'	3°5'/16.1	18		234707	2002 <i>HB</i> ₁₀		8 13.5 181°13'	6°6'/19.8	18	
7 10	21 55.19	- 3 50.0	1.755	2.599	15.3	20.3	7 10	21 55.00	+ 7 6.0	2.049	2.828	15.6	20.7
7 20	21 50.91	- 3 51.2	1.679	2.596	12.0	20.1	7 20	21 50.53	+ 7 7.7	1.967	2.829	13.1	20.5
7 30	21 44.59	- 4 9.4	1.623	2.593	8.3	19.9	7 30	21 44.27	+ 6 46.9	1.905	2.829	10.4	20.3
8 9	21 36.86	- 4 42.8	1.591	2.591	4.8	19.7	8 9	21 36.77	+ 6 3.4	1.866	2.829	7.9	20.2
8 19	21 28.59	- 5 28.1	1.585	2.589	3.7	19.6	8 19	21 28.78	+ 4 59.2	1.852	2.829	6.6	20.1
8 29	21 20.78	- 6 20.0	1.606	2.587	6.8	19.8	8 29	21 21.17	+ 3 39.2	1.865	2.828	7.6	20.2
9 8	21 14.40	- 7 12.7	1.651	2.585	10.5	20.0	9 8	21 14.78	+ 2 10.2	1.904	2.827	10.0	20.3
9 18	21 10.13	- 8 1.1	1.719	2.583	14.0	20.2	9 18	21 10.24	+ 0 39.2	1.967	2.826	12.7	20.5
199517	2006 <i>DJ</i> ₁₃₉		8 13.5 347°01'	4°4'/10.6	18		332678	2009 <i>CW</i> ₂₁		8 13.5 42°43'	0°9'/13.9	17	
7 10	21 57.79	-22 40.1	1.495	2.388	14.8	19.7	7 10	22 0.61	-12 2.3	1.140	2.026	18.9	20.0
7 20	21 53.28	-23 27.7	1.432	2.384	11.1	19.5	7 20	21 55.66	-11 57.2	1.088	2.035	14.2	19.7
7 30	21 46.21	-24 17.9	1.391	2.380	7.1	19.2	7 30	21 47.74	-12 5.6	1.056	2.045	8.9	19.5
8 9	21 37.40	-25 3.1	1.373	2.378	4.4	19.1	8 9	21 37.90	-12 23.1	1.045	2.056	3.1	19.2
8 19	21 27.98	-25 36.2	1.381	2.375	6.0	19.1	8 19	21 27.52	-12 44.3	1.058	2.067	3.1	19.2
8 29	21 19.29	-25 52.0	1.413	2.373	9.8	19.4	8 29	21 18.20	-13 3.4	1.095	2.079	8.7	19.6
9 8	21 12.51	-25 48.9	1.468	2.372	13.7	19.6	9 8	21 11.25	-13 15.8	1.153	2.090	13.7	19.9
9 18	21 8.41	-25 28.0	1.542	2.371	17.1	19.8	9 18	21 7.42	-13 19.1	1.232	2.103	17.9	20.2
464995	2006 <i>DE</i> ₂₈		8 13.5 125°57'	2°6'/12.0	17		487656	2015 <i>PB</i> ₃₂		8 13.5 324°33'	1°0'/14.5	18	
7 10	22 3.89	-18 54.8	1.437	2.318	16.0	22.0	7 10	21 51.85	- 7 2.4	1.923	2.779	13.6	20.6
7 20	21 57.71	-19 25.2	1.380	2.326	11.9	21.8	7 20	21 48.36	- 8 4.7	1.841	2.771	10.4	20.4
7 30	21 48.84	-20 0.7	1.344	2.334	7.2	21.5	7 30	21 43.03	- 9 24.0	1.782	2.764	6.6	20.2
8 9	21 38.20	-20 34.6	1.332	2.342	3.0	21.3	8 9	21 36.41	-10 56.0	1.748	2.757	2.6	19.9
8 19	21 27.05	-21 0.6	1.347	2.349	4.5	21.4	8 19	21 29.25	-12 34.2	1.742	2.750	2.2	19.9
8 29	21 16.84	-21 13.7	1.387	2.357	9.0	21.7	8 29	21 22.44	-14 11.1	1.763	2.744	6.3	20.1
9 8	21 8.76	-21 12.3	1.451	2.363	13.2	21.9	9 8	21 16.85	-15 39.8	1.811	2.738	10.2	20.3
9 18	21 3.56	-20 56.9	1.535	2.370	16.9	22.2	9 18	21 13.15	-16 55.5	1.882	2.732	13.6	20.5
163873	2003 <i>SN</i> ₁₄₇		8 13.5 325°32'	10°5'/20.7	18		243885	2000 <i>YQ</i> ₉₄		8 13.5 231°64'	0°4'/13.2	17	
7 10	21 50.46	+ 9 1.5	1.444	2.248	19.9	19.0	7 10	21 58.70	-12 28.1	1.637	2.506	15.0	21.1
7 20	21 48.02	+ 9 51.2	1.351	2.222	17.4	18.7	7 20	21 53.80	-13 9.6	1.558	2.498	11.2	20.8
7 30	21 43.20	+10 13.1	1.273	2.196	14.6	18.5	7 30	21 46.53	-14 4.0	1.502	2.490	6.9	20.6
8 9	21 36.54	+10 2.5	1.215	2.171	12.0	18.2	8 9	21 37.55	-15 6.0	1.470	2.482	2.1	20.3
8 19	21 28.91	+ 9 17.7	1.178	2.147	10.6	18.1	8 19	21 27.86	-16 9.0	1.465	2.472	2.9	20.3
8 29	21 21.51	+ 8 1.5	1.162	2.123	11.4	18.1	8 29	21 18.65	-17 6.3	1.486	2.463	7.7	20.6
9 8	21 15.62	+ 6 22.1	1.169	2.101	14.0	18.1	9 8	21 11.07	-17 52.4	1.533	2.453	12.1	20.8
9 18	21 12.21	+ 4 30.7	1.195	2.080	17.3	18.3	9 18	21 5.92	-18 24.5	1.600	2.443	15.9	21.0
46074	2001 <i>EK</i> ₁		8 13.5 73°29'	3°9'/10.3	18		258598	2002 <i>CG</i> ₂₂₁		8 13.5 239°18'	2°4'/11.9	17	
7 10	21 58.51	-21 12.7	1.730	2.613	13.6	18.2	7 10	22 2.70	-18 32.9	1.643	2.518	14.6	20.8
7 20	21 53.26	-22 29.2	1.689	2.636	10.0	18.0	7 20	21 56.88	-19 6.0	1.562	2.506	10.9	20.5
7 30	21 45.90	-23 48.0	1.671	2.659	6.3	17.8	7 30	21 48.47	-19 45.2	1.503	2.493	6.7	20.3
8 9	21 37.23	-25 1.5	1.679	2.683	3.9	17.7	8 9	21 38.18	-20 24.6	1.469	2.479	2.8	20.0
8 19	21 28.26	-26 2.8	1.714	2.706	5.4	17.9	8 19	21 27.09	-20 57.7	1.462	2.465	4.2	20.1
8 29	21 20.07	-26 46.8	1.776	2.729	8.7	18.1	8 29	21 16.54	-21 19.3	1.482	2.450	8.7	20.3
9 8	21 13.61	-27 11.8	1.861	2.752	11.9	18.4	9 8	21 7.76	-21 26.4	1.526	2.434	13.0	20.5
9 18	21 9.44	-27 18.6	1.968	2.774	14.7	18.6	9 18	21 1.63	-21 18.9	1.590	2.418	16.7	20.7
118121	3211 <i>T</i> ₋₃		8 13.5 335°83'	2°3'/15.1	18		170680	2004 <i>AX</i> ₁		8 13.5 223°66'	2°7'/16.0	18	
7 10	21 54.03	- 7 4.2	1.533	2.398	16.0	19.8	7 10	21 54.94	- 3 46.1	2.284	3.112	12.7	20.8
7 20	21 50.35	- 7 14.8	1.457	2.390	12.4	19.5	7 20	21 50.36	- 4 6.3	2.195	3.105	10.0	20.6
7 30	21 44.40	- 7 42.3	1.402	2.383	8.2	19.3	7 30	21 44.13	- 4 40.9	2.129	3.097	6.8	20.4
8 9	21 36.84	- 8 23.7	1.370	2.376	3.8	19.0	8 9	21 36.75	- 5 28.0	2.089	3.089	3.8	20.2
8 19	21 28.64	- 9 14.6	1.362	2.370	3.0	19.0	8 19	21 28.88	- 6 24.3	2.076	3.080	2.9	20.1
8 29	21 20.93	-10 8.6	1.380	2.364	7.2	19.2	8 29	21 21.32	- 7 25.2	2.092	3.071	5.6	20.3
9 8	21 14.82	-10 59.3	1.422	2.359	11.6	19.4	9 8	21 14.83	- 8 25.7	2.134	3.061	8.9	20.5
9 18	21 11.07	-11 41.9	1.486	2.355	15.5	19.7	9 18	21 10.01	- 9 21.7	2.202	3.052	11.9	20.7
177278	2003 <i>WR</i> ₁₃₈		8 13.5 273°58'	2°2'/12.1	18		477069	2009 <i>BA</i> ₅₉		8 13.5 296°75'	1°1'/12.7	18	
7 10	21 59.41	-16 57.7	1.552	2.432	15.0	20.2	7 10	21 55.92	-14 46.5	1.728	2.605	13.9	21.6
7 20	21 54.63	-17 40.8	1.465	2.412	11.3	19.9	7 20	21 51.64	-15 23.6	1.648	2.593	10.4	21.3
7 30	21 47.20	-18 33.5	1.401	2.392	6.9	19.6	7 30	21 45.16	-16 10.4	1.591	2.581	6.3	21.1
8 9	21 37.78	-19 29.5	1.360	2.371	2.7	19.3	8 9	21 37.12	-17 2.1	1.558	2.569	2.0	20.8
8 19	21 27.43	-20 21.7	1.346	2.349	4.2	19.4	8 19	21 28.42	-17 52.7	1.551	2.557	3.1	20.8
8 29	21 17.48	-21 3.1	1.357	2.328	9.0	19.6	8 29	21 20.17	-18 36.3	1.571	2.546	7.6	21.1
9 8	21 9.25	-21 29.2	1.392	2.306	13.6	19.8	9 8	21 13.41	-19 8.7	1.616	2.535	11.7	21.3
9 18	21 3.71	-21 38.4	1.447	2.284	17.6	20.0	9 18	21 8.91	-19 27.5	1.681	2.524	15.3	21.5
108468	2001 <i>KR</i> ₅₆		8 13.5 27°99'	1°3'/12.3	18		445375	2010 <i>PG</i> ₄₈					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
220267	2003 <i>AG</i> ₃₇		8 13.5 253°61	3°0/15.6	18		60108	1999 <i>TF</i> ₂₀₅		8 13.5	8°19	5°6/ 9.1	18 R
7 10	21 58.11	- 5 32.8	1.764	2.609	15.2	20.6	7 10	21 58.23	-29 2.7	1.978	2.859	12.3	19.2
7 20	21 53.23	- 5 32.3	1.676	2.596	11.9	20.3	7 20	21 53.10	-29 51.5	1.919	2.860	9.4	19.0
7 30	21 46.14	- 5 47.3	1.609	2.583	8.1	20.1	7 30	21 45.88	-30 36.5	1.884	2.861	6.8	18.9
8 9	21 37.44	- 6 16.1	1.566	2.569	4.3	19.8	8 9	21 37.31	-31 11.3	1.874	2.862	5.6	18.8
8 19	21 28.03	- 6 55.5	1.550	2.555	3.4	19.7	8 19	21 28.32	-31 30.7	1.890	2.863	6.8	18.9
8 29	21 18.99	- 7 40.4	1.560	2.541	7.0	19.9	8 29	21 19.99	-31 31.8	1.931	2.865	9.4	19.0
9 8	21 11.38	- 8 25.5	1.596	2.526	11.1	20.1	9 8	21 13.25	-31 14.3	1.997	2.867	12.2	19.2
9 18	21 6.00	- 9 6.1	1.654	2.512	14.8	20.3	9 18	21 8.73	-30 40.3	2.083	2.870	14.7	19.4
507131	2009 <i>UH</i> ₁₅₃		8 13.5 166°24	4°2/17.0	17		514508	2016 <i>WR</i> ₃₁		8 13.5 285°60	1°2/12.6	18	
7 10	21 59.26	- 0 40.9	2.267	3.073	13.5	22.1	7 10	21 57.34	-16 16.3	1.909	2.781	13.0	21.6
7 20	21 53.47	- 0 26.7	2.188	3.078	10.8	21.9	7 20	21 52.46	-16 39.6	1.832	2.774	9.7	21.4
7 30	21 45.96	- 0 27.0	2.131	3.083	7.9	21.7	7 30	21 45.54	-17 9.4	1.777	2.767	5.9	21.1
8 9	21 37.31	- 0 41.3	2.100	3.088	5.2	21.6	8 9	21 37.24	-17 41.3	1.749	2.760	2.0	20.9
8 19	21 28.25	- 1 7.6	2.097	3.091	4.3	21.5	8 19	21 28.39	-18 10.8	1.747	2.753	3.0	20.9
8 29	21 19.60	- 1 42.7	2.122	3.094	6.2	21.7	8 29	21 20.03	-18 33.6	1.772	2.746	7.0	21.2
9 8	21 12.14	- 2 22.3	2.175	3.096	9.0	21.8	9 8	21 13.09	-18 46.7	1.823	2.739	10.8	21.4
9 18	21 6.46	- 3 2.3	2.251	3.098	11.8	22.0	9 18	21 8.24	-18 48.9	1.896	2.732	14.1	21.6
218440	2004 <i>RK</i> ₁₉₂		8 13.5 4°25	4°3/16.4	18		172546	2003 <i>UH</i> ₅₆		8 13.5 329°80	4°3/10.6	18	
7 10	21 54.96	- 3 49.0	1.725	2.569	15.4	19.1	7 10	21 53.40	-18 27.4	1.128	2.036	17.3	19.2
7 20	21 50.73	- 3 16.1	1.653	2.569	12.3	18.9	7 20	21 50.78	-19 47.2	1.061	2.022	12.9	18.9
7 30	21 44.49	- 2 58.3	1.603	2.570	8.7	18.7	7 30	21 45.13	-21 20.0	1.014	2.009	8.1	18.6
8 9	21 36.88	- 2 55.1	1.576	2.571	5.4	18.5	8 9	21 37.24	-22 55.4	0.989	1.997	4.4	18.4
8 19	21 28.78	- 3 4.9	1.574	2.574	4.5	18.4	8 19	21 28.35	-24 21.4	0.986	1.985	6.6	18.5
8 29	21 21.21	- 3 24.3	1.598	2.577	7.0	18.6	8 29	21 20.14	-25 27.1	1.006	1.975	11.6	18.7
9 8	21 15.08	- 3 48.6	1.647	2.580	10.5	18.8	9 8	21 14.12	-26 6.6	1.046	1.965	16.5	19.0
9 18	21 11.07	- 4 13.4	1.717	2.585	13.8	19.0	9 18	21 11.30	-26 18.8	1.104	1.957	20.8	19.2
14837	1988 <i>RN</i> ₂		8 13.5 238°92	2°5/15.6	18		65005	2002 <i>AE</i> ₇₇		8 13.5 180°42	2°2/11.4	18	
7 10	21 56.51	- 5 33.9	2.256	3.089	12.7	18.7	7 10	21 55.94	-19 9.2	2.342	3.213	11.0	20.4
7 20	21 51.56	- 5 35.2	2.165	3.078	9.9	18.5	7 20	21 51.07	-19 54.1	2.271	3.213	8.1	20.2
7 30	21 44.89	- 5 48.7	2.097	3.067	6.7	18.2	7 30	21 44.54	-20 43.0	2.225	3.214	5.0	20.0
8 9	21 37.01	- 6 12.8	2.054	3.055	3.6	18.0	8 9	21 36.90	-21 31.0	2.206	3.214	2.4	19.8
8 19	21 28.60	- 6 45.0	2.039	3.043	2.9	18.0	8 19	21 28.87	-22 13.8	2.214	3.213	3.5	19.9
8 29	21 20.51	- 7 21.7	2.052	3.031	5.7	18.1	8 29	21 21.26	-22 47.4	2.251	3.213	6.6	20.1
9 8	21 13.53	- 7 58.7	2.093	3.018	9.1	18.3	9 8	21 14.81	-23 9.5	2.314	3.213	9.6	20.3
9 18	21 8.27	- 8 32.7	2.157	3.005	12.1	18.5	9 18	21 10.11	-23 19.2	2.400	3.212	12.2	20.5
438810	2008 <i>YO</i> ₁₁₄		8 13.5 95°65	2°9/10.9	17		285234	1997 <i>SA</i> ₂₇		8 13.5 269°87	1°6/15.2	18	
7 10	21 57.37	-19 33.0	1.984	2.860	12.4	21.3	7 10	21 52.61	- 6 39.9	2.432	3.273	11.6	21.2
7 20	21 52.27	-20 37.1	1.932	2.876	9.1	21.1	7 20	21 48.55	- 7 6.5	2.347	3.267	8.9	21.0
7 30	21 45.28	-21 45.2	1.903	2.892	5.6	21.0	7 30	21 42.99	- 7 45.0	2.286	3.262	5.9	20.8
8 9	21 37.10	-22 50.9	1.901	2.907	3.0	20.8	8 9	21 36.42	- 8 32.9	2.250	3.256	2.7	20.6
8 19	21 28.56	-23 48.4	1.926	2.923	4.3	20.9	8 19	21 29.44	- 9 26.8	2.243	3.250	2.1	20.6
8 29	21 20.63	-24 33.0	1.979	2.938	7.6	21.2	8 29	21 22.77	-10 22.3	2.264	3.245	5.1	20.8
9 8	21 14.16	-25 2.1	2.057	2.952	10.8	21.4	9 8	21 17.08	-11 15.3	2.313	3.239	8.3	20.9
9 18	21 9.71	-25 15.7	2.157	2.967	13.5	21.6	9 18	21 12.91	-12 2.3	2.386	3.233	11.1	21.1
476680	2008 <i>TN</i> ₆₄		8 13.5 284°93	1°7/12.3	18		511065	2013 <i>TP</i> ₆		8 13.5 267°90	1°1/14.0	18	
7 10	21 57.58	-16 45.5	1.706	2.584	14.0	21.7	7 10	22 3.92	-12 54.2	1.547	2.412	15.9	20.9
7 20	21 52.91	-17 19.9	1.628	2.573	10.4	21.5	7 20	21 57.82	-12 28.9	1.466	2.402	12.1	20.7
7 30	21 45.95	-18 2.1	1.572	2.563	6.4	21.2	7 30	21 49.07	-12 11.3	1.406	2.392	7.7	20.4
8 9	21 37.38	-18 46.7	1.541	2.552	2.3	20.9	8 9	21 38.42	-11 59.0	1.371	2.381	2.8	20.1
8 19	21 28.15	-19 27.8	1.536	2.541	3.6	21.0	8 19	21 27.00	-11 49.3	1.362	2.371	2.8	20.0
8 29	21 19.41	-20 0.0	1.558	2.530	7.9	21.2	8 29	21 16.19	-11 39.3	1.380	2.360	7.8	20.3
9 8	21 12.24	-20 19.7	1.604	2.519	12.0	21.5	9 8	21 7.24	-11 26.5	1.422	2.349	12.4	20.6
9 18	21 7.43	-20 25.6	1.671	2.508	15.6	21.7	9 18	21 1.01	-11 9.3	1.486	2.338	16.4	20.8
104231	2000 <i>EE</i> ₁₂₉		8 13.5 126°85	2°6/11.4	17		252777	2002 <i>EZ</i> ₁₂₃		8 13.5 69°94	0°1/13.6	18	
7 10	21 59.46	-20 54.0	2.160	3.031	11.8	20.0	7 10	21 56.51	-13 9.2	2.134	2.995	12.3	20.5
7 20	21 53.68	-21 28.9	2.100	3.041	8.7	19.8	7 20	21 51.48	-13 22.4	2.071	3.006	9.1	20.3
7 30	21 46.09	-22 5.7	2.064	3.051	5.4	19.6	7 30	21 44.75	-13 43.0	2.031	3.017	5.6	20.1
8 9	21 37.34	-22 39.6	2.054	3.061	2.8	19.5	8 9	21 36.96	-14 7.5	2.018	3.029	1.8	19.9
8 19	21 28.27	-23 6.2	2.073	3.070	3.9	19.6	8 19	21 28.84	-14 32.6	2.032	3.040	2.1	19.9
8 29	21 19.78	-23 22.2	2.119	3.079	7.0	19.8	8 29	21 21.26	-14 54.7	2.074	3.051	5.8	20.2
9 8	21 12.69	-23 26.1	2.192	3.088	10.1	20.0	9 8	21 14.96	-15 11.1	2.142	3.062	9.2	20.4
9 18	21 7.57	-23 18.0	2.287	3.096	12.8	20.2	9 18	21 10.48	-15 20.0	2.234	3.074	12.1	20.6
52731	1998 <i>HU</i> ₁₂		8 13.5 75°00	11°6/ 2.6	18		504819	2010 <i>GL</i> ₆₇		8 13.5 197°44	9°1/25.2	18	
7 10	22 6.55	-48 39.7	2.080	2.911	13.7	19.0	7 10	21 56.55	+21 26.0	2.901	3.542	14.1	23.1
7 20	21 59.67	-50 10.3	2.058	2.926	12.3	18.9	7 20	21 51.34	+21 48.7	2.805	3.538	12.8	22.9
7 30	21 50.00	-51 21.5	2.058	2.942	11.7	18.9	7 30	21 44.65	+21 49.7	2.727	3.533	11.4	22.8
8 9	21 38.59	-52 5.3	2.080	2.957	11.8	19.0	8 9	21 36.94	+21 26.8	2.669	3.527	10.1	22.7
8 19	21 26.82	-52 17.5	2.124	2.972	12.6	19.0	8 19	21 28.80	+20 39.6	2.635	3.520	9.3	22.7
8 29	21 16.22	-51 57.7	2.188	2.987	13.9	19.2	8 29	21 20.90	+19 29.9	2.626	3.512	9.1	22.6
9 8	21 7.97	-51 9.6	2.272	3.002	15.3	19.3	9 8	21 13.92	+18 2.2	2.643	3.504	9.9	22.7
9 18	21 2.74	-49 59.1	2.372	3.017	16.6	19.5	9 18	21 8.39	+16 22.2	2.684	3.494	11.1	22.8
445485	2010 <i>VU</i> ₁₅₇		8 13.5 14°23	10°1/21.9	15		275435	2011 <i>CM</i> _{34</}					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
137783	1999 <i>XQ</i> ₂₂₆		8 13.5 275°90	0°1/13.5 18			145281	2005 <i>JH</i> ₁₅₆		8 13.5 21°18	0°6/13.9 17		
7 10	21 59.05	-12 54.6	1.572	2.444	15.3	20.6	7 10	21 54.89	-11 19.8	1.056	1.953	19.1	19.4
7 20	21 54.28	-13 13.7	1.485	2.426	11.6	20.3	7 20	21 51.59	-11 36.4	1.008	1.961	14.4	19.2
7 30	21 46.97	-13 44.4	1.419	2.408	7.2	20.0	7 30	21 45.38	-12 9.6	0.978	1.970	8.9	18.9
8 9	21 37.79	-14 22.5	1.378	2.389	2.3	19.6	8 9	21 37.25	-12 53.9	0.969	1.980	3.0	18.6
8 19	21 27.73	-15 2.6	1.362	2.370	2.9	19.6	8 19	21 28.57	-13 41.5	0.982	1.991	3.1	18.7
8 29	21 18.08	-15 38.7	1.373	2.351	7.9	19.9	8 29	21 20.88	-14 24.7	1.018	2.004	8.8	19.0
9 8	21 10.09	-16 6.1	1.407	2.332	12.6	20.1	9 8	21 15.47	-14 57.2	1.075	2.017	13.9	19.4
9 18	21 4.67	-16 21.9	1.463	2.313	16.7	20.3	9 18	21 13.09	-15 15.7	1.151	2.032	18.2	19.7
70604	1999 <i>TA</i> ₁₉₀		8 13.5 22°01	6°7/17.4 17			230402	2002 <i>JJ</i> ₁₁₀		8 13.5 126°57	5°3/18.2 17		
7 10	21 57.73	+ 0 24.6	1.434	2.273	18.3	18.3	7 10	21 58.29	+ 2 38.4	2.200	2.993	14.2	21.2
7 20	21 53.11	+ 0 33.2	1.372	2.279	14.9	18.1	7 20	21 52.75	+ 2 54.5	2.131	3.008	11.6	21.0
7 30	21 46.08	+ 1 11.2	1.329	2.285	11.2	17.9	7 30	21 45.53	+ 2 53.3	2.083	3.022	8.8	20.9
8 9	21 37.44	+ 1 27.9	1.307	2.293	7.9	17.7	8 9	21 37.23	+ 2 35.3	2.061	3.037	6.3	20.8
8 19	21 28.25	+ 1 24.2	1.310	2.301	6.8	17.7	8 19	21 28.58	+ 2 2.3	2.065	3.050	5.3	20.7
8 29	21 19.76	+ 1 3.8	1.337	2.310	8.8	17.8	8 29	21 20.41	+ 1 18.1	2.096	3.063	6.6	20.8
9 8	21 13.07	+ 0 32.7	1.387	2.320	12.2	18.1	9 8	21 13.48	+ 0 27.4	2.155	3.075	9.1	21.0
9 18	21 8.91	- 0 2.6	1.457	2.330	15.6	18.3	9 18	21 8.33	- 0 24.6	2.237	3.087	11.7	21.2
332339	2007 <i>CB</i> ₂₀		8 13.5 188°03	1°7/12.2 18			84597	2002 <i>VD</i> ₃₁		8 13.5 245°94	3°6/16.0 17		
7 10	21 59.43	-16 30.0	1.953	2.821	13.0	21.9	7 10	21 57.46	- 4 1.3	1.674	2.517	15.9	19.9
7 20	21 53.97	-17 16.0	1.880	2.820	9.6	21.7	7 20	21 52.80	- 4 1.9	1.593	2.510	12.6	19.7
7 30	21 46.46	-18 9.0	1.831	2.820	5.8	21.4	7 30	21 45.91	- 4 20.0	1.532	2.503	8.7	19.4
8 9	21 37.54	-19 3.8	1.808	2.818	2.2	21.2	8 9	21 37.43	- 4 54.2	1.496	2.496	4.9	19.2
8 19	21 28.11	-19 54.6	1.813	2.816	3.4	21.3	8 19	21 28.28	- 5 41.0	1.485	2.489	3.8	19.1
8 29	21 19.17	-20 36.4	1.845	2.813	7.2	21.5	8 29	21 19.58	- 6 34.7	1.501	2.482	7.1	19.3
9 8	21 11.68	-21 5.9	1.903	2.810	10.9	21.7	9 8	21 12.40	- 7 29.2	1.541	2.474	11.2	19.5
9 18	21 6.32	-21 21.8	1.984	2.806	14.1	21.9	9 18	21 7.50	- 8 19.0	1.604	2.466	14.9	19.7
58948	1998 <i>QT</i> ₅₄		8 13.5 257°44	3°4/15.9 18			22881	1999 <i>RJ</i> ₂₂₇		8 13.5 239°73	1°5/15.2 18		
7 10	21 56.70	- 3 59.9	1.617	2.463	16.2	18.1	7 10	21 53.90	- 6 26.5	2.908	3.736	10.2	20.2
7 20	21 52.29	- 4 7.9	1.537	2.457	12.8	17.8	7 20	21 49.34	- 6 53.3	2.807	3.720	7.9	20.1
7 30	21 45.61	- 4 34.8	1.478	2.450	8.8	17.6	7 30	21 43.43	- 7 30.6	2.730	3.703	5.2	19.9
8 9	21 37.32	- 5 18.5	1.442	2.444	4.9	17.3	8 9	21 36.59	- 8 16.2	2.681	3.686	2.5	19.6
8 19	21 28.35	- 6 14.9	1.432	2.437	3.7	17.3	8 19	21 29.32	- 9 7.5	2.661	3.667	1.9	19.6
8 29	21 19.84	- 7 17.8	1.448	2.430	7.2	17.5	8 29	21 22.24	-10 0.7	2.671	3.649	4.6	19.7
9 8	21 12.88	- 8 20.4	1.489	2.423	11.4	17.7	9 8	21 15.97	-10 52.4	2.708	3.630	7.5	19.9
9 18	21 8.25	- 9 16.9	1.551	2.416	15.2	17.9	9 18	21 10.99	-11 39.4	2.772	3.610	10.1	20.1
237574	2001 <i>DY</i> ₄₇		8 13.5 317°09	0°6/13.1 18			248547	2005 <i>XO</i> ₄₁		8 13.5 213°71	3°8/9.2 18		
7 10	21 54.19	-12 40.2	1.563	2.443	15.0	20.0	7 10	21 55.45	-24 44.0	2.579	3.453	10.0	20.5
7 20	21 50.57	-13 24.7	1.484	2.430	11.2	19.8	7 20	21 50.71	-25 52.2	2.508	3.448	7.5	20.3
7 30	21 44.63	-14 22.7	1.427	2.418	6.9	19.5	7 30	21 44.34	-27 1.1	2.462	3.443	5.1	20.2
8 9	21 37.02	-15 29.0	1.394	2.406	2.1	19.2	8 9	21 36.89	-28 5.5	2.443	3.438	3.8	20.1
8 19	21 28.70	-16 36.8	1.387	2.394	3.0	19.2	8 19	21 28.99	-29 0.2	2.453	3.433	5.0	20.1
8 29	21 20.83	-17 38.6	1.405	2.383	7.9	19.5	8 29	21 21.45	-29 41.6	2.490	3.427	7.4	20.3
9 8	21 14.54	-18 28.5	1.447	2.372	12.3	19.7	9 8	21 14.98	-30 7.6	2.553	3.421	9.9	20.5
9 18	21 10.65	-19 3.3	1.510	2.362	16.2	19.9	9 18	21 10.15	-30 18.1	2.638	3.414	12.2	20.6
103369	2000 <i>AN</i> ₁₀₉		8 13.5 233°22	0°7/14.1 18			312858	2011 <i>UK</i> ₈₉		8 13.5 132°55	2°0/12.3 17		
7 10	21 56.33	- 9 57.6	2.225	3.075	12.2	20.6	7 10	22 2.05	-16 48.1	1.382	2.265	16.4	21.4
7 20	21 51.50	-10 27.5	2.136	3.064	9.3	20.4	7 20	21 56.53	-17 24.7	1.323	2.270	12.2	21.1
7 30	21 44.89	-11 8.3	2.070	3.052	5.8	20.2	7 30	21 48.28	-18 9.7	1.284	2.275	7.4	20.9
8 9	21 37.05	-11 56.9	2.031	3.040	2.1	19.9	8 9	21 38.18	-18 56.3	1.269	2.279	2.7	20.6
8 19	21 28.68	-12 49.1	2.020	3.028	2.0	19.9	8 19	21 27.48	-19 37.3	1.279	2.284	4.1	20.7
8 29	21 20.62	-13 40.2	2.037	3.015	5.8	20.1	8 29	21 17.64	-20 6.6	1.315	2.288	8.9	21.0
9 8	21 13.68	-14 26.0	2.081	3.002	9.4	20.3	9 8	21 9.89	-20 21.1	1.374	2.292	13.4	21.3
9 18	21 8.52	-15 3.4	2.149	2.988	12.5	20.5	9 18	21 5.03	-20 20.2	1.453	2.296	17.2	21.5
172309	2002 <i>TU</i> ₂₆₈		8 13.5 278°98	1°8/12.3 18			52854	1998 <i>RR</i> ₇₆		8 13.5 349°33	3°8/11.4 18		
7 10	21 59.43	-18 21.9	2.005	2.875	12.6	20.2	7 10	21 52.30	-19 10.5	1.016	1.932	18.1	18.6
7 20	21 54.10	-18 41.0	1.912	2.853	9.4	19.9	7 20	21 50.09	-19 55.4	0.957	1.922	13.5	18.3
7 30	21 46.64	-19 4.7	1.842	2.831	5.8	19.6	7 30	21 44.75	-20 49.5	0.916	1.912	8.4	18.0
8 9	21 37.64	-19 28.5	1.799	2.809	2.3	19.4	8 9	21 37.15	-21 43.9	0.895	1.905	4.1	17.7
8 19	21 27.96	-19 48.1	1.783	2.786	3.4	19.4	8 19	21 28.69	-22 28.6	0.896	1.899	6.0	17.8
8 29	21 18.62	-19 59.6	1.794	2.763	7.3	19.6	8 29	21 21.07	-22 55.5	0.918	1.895	11.2	18.1
9 8	21 10.65	-20 0.5	1.831	2.740	11.1	19.8	9 8	21 15.83	-23 0.5	0.960	1.892	16.3	18.4
9 18	21 4.80	-19 50.1	1.890	2.717	14.5	20.0	9 18	21 13.87	-22 43.7	1.018	1.891	20.7	18.6
52667	1998 <i>CT</i> ₁		8 13.5 208°69	1°8/14.8 18			495909	2005 <i>SV</i> ₂₉₂		8 13.5 222°70	16°3/26.9 17		
7 10	22 0.06	- 9 29.5	2.259	3.099	12.4	19.4	7 10	21 57.89	+22 3.1	1.310	2.030	25.4	21.6
7 20	21 54.11	- 9 8.3	2.176	3.097	9.5	19.2	7 20	21 53.94	+23 4.1	1.234	2.024	23.3	21.4
7 30	21 46.40	- 8 55.0	2.117	3.094	6.2	19.0	7 30	21 47.05	+23 24.1	1.169	2.018	20.9	21.2
8 9	21 37.51	- 8 48.3	2.085	3.091	2.9	18.7	8 9	21 37.92	+22 54.7	1.120	2.011	18.6	21.0
8 19	21 28.19	- 8 46.4	2.082	3.088	2.4	18.7	8 19	21 27.69	+21 31.4	1.087	2.003	16.8	20.9
8 29	21 19.30	- 8 46.9	2.107	3.085	5.7	18.9	8 29	21 17.92	+19 17.0	1.075	1.995	16.3	20.8
9 8	21 11.64	- 8 47.4	2.159	3.081	9.0	19.1	9 8	21 10.13	+16 23.5	1.082	1.986	17.5	20.9
9 18	21 5.81	- 8 46.0	2.236	3.078	12.0	19.3	9 18	21 5.40	+13 8.1	1.110	1.976	19.8	21.0
304338	2006 <i>SK</i> ₂₅₁		8 13.5 272°60	0°7/14.1 18			264363	2000 <i>BE</i> ₄₂					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
390772	2003 <i>UR</i> ₁₄₀	8 13.5 308°59		10°1/ 5.3 18			313373	2002 <i>JN</i> ₁₂₀	8 13.5 45°30		0°2/13.4 18		
7 10	22 0.84	-36 47.4	1.602	2.483	14.6	20.4	7 10	21 52.96	-10 59.8	1.956	2.821	13.0	20.0
7 20	21 56.04	-38 16.9	1.537	2.465	12.2	20.2	7 20	21 49.04	-11 59.9	1.897	2.835	9.7	19.8
7 30	21 48.23	-39 37.6	1.493	2.446	10.5	20.1	7 30	21 43.38	-13 11.5	1.862	2.849	5.9	19.6
8 9	21 38.24	-40 38.6	1.472	2.428	10.3	20.0	8 9	21 36.61	-14 29.4	1.852	2.863	1.8	19.3
8 19	21 27.37	-41 11.0	1.474	2.410	11.7	20.1	8 19	21 29.47	-15 47.4	1.870	2.878	2.3	19.4
8 29	21 17.21	-41 10.3	1.498	2.392	14.3	20.2	8 29	21 22.85	-16 59.5	1.916	2.893	6.2	19.7
9 8	21 9.22	-40 37.6	1.543	2.375	17.0	20.3	9 8	21 17.51	-18 0.9	1.988	2.908	9.8	19.9
9 18	21 4.35	-39 37.6	1.604	2.358	19.6	20.5	9 18	21 14.02	-18 48.8	2.083	2.924	12.8	20.2
246436	2007 <i>VL</i> ₁₁₆	8 13.5 348°98		8°5/20.8 18			512594	2016 <i>SE</i> ₄₉	8 13.5 339°66		8°4/ 6.8 18		
7 10	21 51.62	+ 8 15.7	1.602	2.400	18.5	20.3	7 10	21 55.69	-30 21.7	1.458	2.357	14.7	20.1
7 20	21 48.52	+ 8 33.9	1.525	2.395	15.8	20.1	7 20	21 52.11	-32 0.6	1.400	2.347	11.7	19.9
7 30	21 43.32	+ 8 24.3	1.465	2.390	12.8	19.9	7 30	21 45.76	-33 36.5	1.364	2.338	9.1	19.7
8 9	21 36.63	+ 7 45.1	1.425	2.387	10.0	19.7	8 9	21 37.46	-34 58.3	1.350	2.330	8.4	19.7
8 19	21 29.32	+ 6 38.1	1.408	2.383	8.5	19.6	8 19	21 28.40	-35 56.4	1.361	2.323	10.1	19.8
8 29	21 22.45	+ 5 8.8	1.416	2.381	9.3	19.7	8 29	21 20.05	-36 24.9	1.394	2.316	13.1	19.9
9 8	21 17.02	+ 3 26.0	1.447	2.379	11.8	19.8	9 8	21 13.72	-36 23.1	1.447	2.310	16.3	20.1
9 18	21 13.79	+ 1 39.4	1.500	2.378	14.9	20.0	9 18	21 10.26	-35 54.1	1.518	2.305	19.2	20.3
163972	2003 <i>UF</i> ₁₀₆	8 13.5 274°86		1°8/14.9 18			234251	2000 <i>TV</i> ₅₉	8 13.5 296°16		6°7/ 7.5 18		
7 10	21 55.29	- 7 15.4	1.835	2.688	14.3	20.7	7 10	21 56.50	-26 13.2	1.597	2.491	14.0	19.7
7 20	21 50.98	- 7 39.6	1.757	2.685	11.0	20.5	7 20	21 52.57	-28 1.6	1.526	2.475	10.7	19.5
7 30	21 44.70	- 8 18.5	1.702	2.682	7.2	20.2	7 30	21 46.03	-29 53.5	1.478	2.459	7.8	19.3
8 9	21 37.04	- 9 9.2	1.671	2.678	3.2	20.0	8 9	21 37.57	-31 38.0	1.455	2.444	6.8	19.2
8 19	21 28.85	-10 6.8	1.667	2.675	2.5	19.9	8 19	21 28.22	-33 4.8	1.457	2.429	8.6	19.2
8 29	21 21.10	-11 5.7	1.690	2.672	6.4	20.2	8 29	21 19.34	-34 6.1	1.483	2.414	11.9	19.4
9 8	21 14.71	-12 0.4	1.739	2.669	10.3	20.4	9 8	21 12.22	-34 38.9	1.532	2.399	15.4	19.6
9 18	21 10.37	-12 46.6	1.810	2.666	13.8	20.6	9 18	21 7.78	-34 44.3	1.598	2.384	18.5	19.8
476641	2008 <i>SL</i> ₂₅₄	8 13.5 159°50		7°6/ 7.5 18			43488	2001 <i>BC</i> ₆₂	8 13.5 46°61		9°3/22.2 18		
7 10	22 5.32	-35 55.7	2.123	2.985	12.3	21.6	7 10	21 55.70	+12 46.2	2.107	2.846	16.4	18.1
7 20	21 58.36	-36 55.1	2.071	2.990	10.0	21.5	7 20	21 51.00	+13 47.7	2.042	2.859	14.4	17.9
7 30	21 49.11	-37 45.2	2.042	2.994	8.2	21.4	7 30	21 44.57	+14 26.7	1.995	2.873	12.2	17.8
8 9	21 38.40	-38 18.9	2.039	2.998	7.6	21.4	8 9	21 36.99	+14 40.9	1.970	2.887	10.4	17.7
8 19	21 27.31	-38 31.1	2.062	3.002	8.6	21.4	8 19	21 29.01	+14 29.9	1.968	2.901	9.4	17.7
8 29	21 17.02	-38 19.8	2.110	3.006	10.6	21.6	8 29	21 21.48	+13 56.3	1.990	2.915	9.6	17.8
9 8	21 8.56	-37 46.5	2.182	3.009	12.9	21.7	9 8	21 15.19	+13 5.1	2.036	2.930	10.9	17.9
9 18	21 2.57	-36 54.9	2.274	3.011	15.0	21.9	9 18	21 10.73	+12 2.8	2.105	2.945	12.7	18.0
175405	2006 <i>OL</i> ₁₂	8 13.5 358°84		2°4/14.6 17			262212	2006 <i>SX</i> ₂₂₀	8 13.5 256°44		1°1/14.3 18		
7 10	21 55.59	-10 41.7	0.988	1.887	20.0	19.5	7 10	21 58.72	- 9 33.2	1.678	2.538	15.1	22.0
7 20	21 52.44	-10 9.5	0.930	1.883	15.4	19.2	7 20	21 53.90	- 9 55.6	1.589	2.522	11.6	21.7
7 30	21 46.12	- 9 52.3	0.890	1.880	10.0	18.9	7 30	21 46.71	-10 32.4	1.522	2.505	7.4	21.4
8 9	21 37.58	- 9 48.2	0.869	1.879	4.3	18.5	8 9	21 37.77	-11 20.2	1.479	2.488	2.8	21.1
8 19	21 28.25	- 9 53.4	0.870	1.879	3.7	18.5	8 19	21 28.02	-12 13.9	1.463	2.471	2.6	21.1
8 29	21 19.84	-10 2.4	0.892	1.880	9.3	18.8	8 29	21 18.63	-13 7.2	1.473	2.453	7.3	21.3
9 8	21 13.85	-10 9.8	0.935	1.884	14.7	19.2	9 8	21 10.76	-13 54.5	1.508	2.435	11.8	21.5
9 18	21 11.17	-10 11.4	0.995	1.888	19.3	19.4	9 18	21 5.27	-14 31.6	1.566	2.417	15.8	21.7
345046	2005 <i>FJ</i> ₄	8 13.5 105°56		4°9/ 9.4 17			348738	2006 <i>FQ</i> ₅₁	8 13.5 63°05		6°6/19.5 16		
7 10	22 1.59	-27 44.3	2.157	3.028	11.8	21.0	7 10	21 54.37	+ 5 33.8	1.762	2.562	17.0	21.3
7 20	21 55.29	-28 39.0	2.112	3.049	8.9	20.8	7 20	21 50.28	+ 5 35.6	1.694	2.571	14.1	21.1
7 30	21 47.10	-29 30.2	2.091	3.068	6.3	20.7	7 30	21 44.25	+ 5 13.0	1.644	2.581	10.9	20.9
8 9	21 37.74	-30 11.9	2.098	3.087	4.9	20.7	8 9	21 36.92	+ 4 26.3	1.618	2.590	8.0	20.8
8 19	21 28.13	-30 39.4	2.131	3.106	6.0	20.8	8 19	21 29.13	+ 3 18.6	1.615	2.599	6.6	20.7
8 29	21 19.24	-30 50.0	2.192	3.125	8.5	21.0	8 29	21 21.86	+ 1 55.7	1.639	2.609	7.8	20.8
9 8	21 11.92	-30 43.6	2.277	3.143	11.1	21.2	9 8	21 16.00	+ 0 25.6	1.688	2.619	10.5	21.0
9 18	21 6.70	-30 22.1	2.384	3.160	13.4	21.4	9 18	21 12.18	- 1 4.1	1.760	2.628	13.5	21.2
452148	2015 <i>RA</i> ₃₁	8 13.5 359°43		4°2/16.4 18			177201	2003 <i>UZ</i> ₈₆	8 13.5 305°35		2°6/15.3 18		
7 10	21 54.05	- 3 43.6	1.711	2.558	15.5	20.3	7 10	21 54.50	- 5 43.6	1.321	2.191	17.8	20.1
7 20	21 50.13	- 3 19.8	1.638	2.555	12.3	20.0	7 20	21 51.22	- 6 7.5	1.240	2.175	13.9	19.8
7 30	21 44.20	- 3 11.7	1.586	2.554	8.7	19.8	7 30	21 45.28	- 6 54.0	1.178	2.159	9.3	19.5
8 9	21 36.89	- 3 18.8	1.557	2.553	5.3	19.6	8 9	21 37.37	- 8 0.2	1.137	2.144	4.4	19.2
8 19	21 29.07	- 3 38.8	1.553	2.553	4.3	19.6	8 19	21 28.51	- 9 20.0	1.121	2.129	3.4	19.1
8 29	21 21.75	- 4 7.7	1.574	2.554	7.0	19.7	8 29	21 20.10	-10 44.3	1.129	2.114	8.2	19.4
9 8	21 15.85	- 4 40.6	1.620	2.556	10.5	20.0	9 8	21 13.46	-12 4.0	1.160	2.100	13.3	19.6
9 18	21 12.06	- 5 12.8	1.689	2.559	13.9	20.2	9 18	21 9.56	-13 11.6	1.211	2.087	17.8	19.8
444392	2005 <i>YS</i> ₂₀₁	8 13.5 302°72		1°0/14.3 17			477796	2011 <i>CQ</i> ₄₆	8 13.6 83°34		1°4/14.3 16		
7 10	21 55.06	-10 29.4	2.039	2.898	12.9	21.8	7 10	22 13.36	-12 5.5	1.898	2.731	14.7	21.5
7 20	21 50.78	-10 38.1	1.944	2.876	9.8	21.6	7 20	22 3.70	-11 29.8	1.852	2.770	11.0	21.3
7 30	21 44.60	-10 57.0	1.871	2.854	6.3	21.3	7 30	21 52.03	-11 0.9	1.830	2.808	6.9	21.2
8 9	21 37.04	-11 23.7	1.823	2.833	2.4	21.0	8 9	21 39.27	-10 36.9	1.837	2.845	2.7	21.0
8 19	21 28.85	-11 54.8	1.803	2.811	2.2	21.0	8 19	21 26.51	-10 16.3	1.875	2.882	2.5	21.0
8 29	21 20.95	-12 26.1	1.810	2.790	6.2	21.2	8 29	21 14.85	- 9 57.4	1.943	2.918	6.4	21.4
9 8	21 14.23	-12 53.7	1.842	2.769	10.0	21.4	9 8	21 5.16	- 9 38.7	2.039	2.952	9.9	21.6
9 18	21 9.40	-13 14.6	1.897	2.748	13.5	21.6	9 18	20 57.97	- 9 19.1	2.159	2.986	12.9	21.9
127073	2002 <i>GO</i> ₆₁	8 13.5 198°90		2°0/11.5 18			358376	Gwyn	8 13.6 87°92		2°2/16.0 18		
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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
207471	2006 <i>HL</i> ₆		8 13.6 82°60	3:2/11.8	17		151267	2002 <i>AY</i> ₁₂₄		8 13.6 74°56	5:4/10.4	18	
7 10	22 3.74	-19 47.8	1.309	2.196	16.8	20.0	7 10	22 8.06	-31 37.5	2.165	3.024	12.2	18.9
7 20	21 57.79	-20 22.0	1.260	2.210	12.5	19.8	7 20	22 0.00	-31 46.2	2.112	3.038	9.4	18.8
7 30	21 49.02	-21 0.8	1.232	2.223	7.7	19.5	7 30	21 49.91	-31 47.2	2.083	3.052	6.8	18.6
8 9	21 38.44	-21 36.4	1.227	2.236	3.5	19.3	8 9	21 38.66	-31 35.4	2.081	3.067	5.4	18.6
8 19	21 27.43	-22 1.9	1.248	2.249	5.0	19.5	8 19	21 27.27	-31 8.0	2.107	3.081	6.2	18.6
8 29	21 17.49	-22 12.7	1.293	2.262	9.5	19.8	8 29	21 16.83	-30 24.4	2.162	3.095	8.6	18.8
9 8	21 9.87	-22 7.3	1.361	2.275	13.8	20.0	9 8	21 8.22	-29 26.6	2.242	3.109	11.2	19.0
9 18	21 5.27	-21 46.9	1.449	2.288	17.5	20.3	9 18	21 1.96	-28 17.9	2.345	3.123	13.5	19.2
432679	2011 <i>BR</i> ₁₆		8 13.6 135°60	1:3/12.6	17		97080	1999 <i>VZ</i> ₃₆		8 13.6 301°40	2:4/11.8	18	
7 10	21 59.96	-15 26.0	1.812	2.680	13.8	22.1	7 10	21 56.94	-18 4.8	1.725	2.607	13.7	19.4
7 20	21 54.41	-16 7.5	1.750	2.690	10.2	21.9	7 20	21 52.45	-18 48.5	1.652	2.599	10.2	19.1
7 30	21 46.75	-16 56.8	1.710	2.699	6.1	21.7	7 30	21 45.73	-19 39.0	1.601	2.592	6.2	18.9
8 9	21 37.72	-17 48.4	1.697	2.708	2.1	21.5	8 9	21 37.46	-20 30.3	1.575	2.584	2.7	18.6
8 19	21 28.24	-18 36.7	1.711	2.716	3.1	21.6	8 19	21 28.57	-21 16.2	1.575	2.577	4.1	18.7
8 29	21 19.41	-19 16.4	1.753	2.724	7.2	21.8	8 29	21 20.20	-21 51.3	1.602	2.570	8.1	18.9
9 8	21 12.15	-19 44.3	1.819	2.732	11.0	22.1	9 8	21 13.40	-22 12.2	1.652	2.563	12.0	19.2
9 18	21 7.13	-19 59.2	1.908	2.738	14.2	22.3	9 18	21 8.89	-22 17.8	1.724	2.556	15.4	19.4
379224	2009 <i>SQ</i> ₂₁₃		8 13.6 272°65	0:9/12.9	18		363399	2003 <i>JN</i> ₃		8 13.6 37°83	7:3/ 9.9	17	
7 10	21 58.89	-14 20.3	1.718	2.589	14.3	21.9	7 10	22 1.53	-26 26.5	1.033	1.942	18.5	20.1
7 20	21 54.07	-14 51.9	1.626	2.567	10.8	21.7	7 20	21 56.81	-27 31.8	0.997	1.954	14.1	19.8
7 30	21 46.85	-15 34.0	1.556	2.545	6.6	21.4	7 30	21 48.67	-28 34.2	0.970	1.966	9.7	19.7
8 9	21 37.85	-16 21.9	1.511	2.523	2.1	21.1	8 9	21 38.38	-29 21.8	0.982	1.980	7.3	19.6
8 19	21 27.98	-17 9.8	1.493	2.500	3.1	21.1	8 19	21 27.63	-29 45.4	1.007	1.994	9.0	19.7
8 29	21 18.44	-17 51.7	1.502	2.477	7.8	21.3	8 29	21 18.28	-29 41.0	1.053	2.009	12.9	20.0
9 8	21 10.40	-18 22.9	1.535	2.453	12.2	21.5	9 8	21 11.76	-29 10.3	1.120	2.024	17.0	20.3
9 18	21 4.75	-18 41.0	1.589	2.430	16.1	21.7	9 18	21 8.74	-28 18.2	1.203	2.040	20.5	20.6
241762	2001 <i>DJ</i> ₁₀₂		8 13.6 110°22	2:2/11.6	17		377650	2005 <i>UH</i> ₁₃₆		8 13.6 221°76	2:9/11.4	17	
7 10	21 58.82	-18 20.4	2.095	2.964	12.2	21.2	7 10	22 0.66	-20 17.5	1.916	2.789	12.9	22.3
7 20	21 53.27	-19 15.7	2.042	2.983	8.9	21.0	7 20	21 55.06	-20 59.5	1.839	2.782	9.6	22.1
7 30	21 45.91	-20 15.3	2.013	3.001	5.4	20.8	7 30	21 47.26	-21 45.6	1.786	2.774	6.0	21.8
8 9	21 37.42	-21 13.6	2.011	3.019	2.5	20.7	8 9	21 37.94	-22 29.8	1.759	2.766	3.1	21.6
8 19	21 28.62	-22 5.4	2.038	3.037	3.7	20.8	8 19	21 28.02	-23 6.5	1.759	2.757	4.4	21.7
8 29	21 20.42	-22 46.2	2.092	3.054	7.0	21.0	8 29	21 18.60	-23 31.1	1.787	2.748	8.0	21.9
9 8	21 13.62	-23 13.8	2.172	3.071	10.1	21.3	9 8	21 10.71	-23 41.3	1.839	2.738	11.6	22.1
9 18	21 8.78	-23 27.6	2.275	3.087	12.8	21.5	9 18	21 5.06	-23 36.9	1.913	2.728	14.8	22.3
515349	2013 <i>BV</i> ₇₀		8 13.6 269°70	1:5/12.2	18		190523	2000 <i>QK</i> ₉₃		8 13.6 315°84	4:5/17.3	18	
7 10	21 55.47	-15 10.7	2.016	2.887	12.5	21.8	7 10	21 50.57	+ 0 38.8	1.397	2.245	18.2	19.4
7 20	21 51.14	-16 6.8	1.929	2.871	9.3	21.5	7 20	21 48.34	- 0 1.6	1.293	2.211	14.9	19.1
7 30	21 44.85	-17 12.5	1.866	2.855	5.6	21.3	7 30	21 43.63	- 1 14.3	1.208	2.176	10.8	18.8
8 9	21 37.16	-18 22.6	1.829	2.840	2.0	21.0	8 9	21 36.93	- 2 59.4	1.144	2.142	6.5	18.4
8 19	21 28.84	-19 31.1	1.819	2.823	3.2	21.1	8 19	21 29.09	- 5 12.0	1.105	2.109	4.6	18.2
8 29	21 20.83	-20 31.9	1.838	2.807	7.1	21.3	8 29	21 21.37	- 7 41.6	1.090	2.076	8.3	18.3
9 8	21 14.07	-21 20.5	1.881	2.791	10.8	21.5	9 8	21 15.13	-10 14.3	1.099	2.044	13.4	18.5
9 18	21 9.26	-21 54.7	1.947	2.774	14.1	21.7	9 18	21 11.46	-12 36.8	1.130	2.013	18.3	18.7
126490	2002 <i>CB</i> ₅₆		8 13.6 80°66	1:8/12.6	18		26712	2001 <i>FV</i> ₁₈₀		8 13.6 44°12	1:3/12.7	18	
7 10	22 4.10	-19 19.3	1.695	2.567	14.4	19.4	7 10	21 57.85	-14 24.6	1.212	2.103	17.6	19.0
7 20	21 57.56	-19 16.7	1.632	2.573	10.7	19.2	7 20	21 53.52	-15 7.3	1.166	2.118	13.0	18.7
7 30	21 48.69	-19 16.6	1.592	2.580	6.5	19.0	7 30	21 46.48	-16 2.0	1.140	2.132	7.8	18.5
8 9	21 38.33	-19 14.5	1.577	2.587	2.5	18.7	8 9	21 37.69	-17 1.2	1.136	2.147	2.5	18.2
8 19	21 27.56	-19 6.9	1.589	2.594	3.5	18.8	8 19	21 28.44	-17 56.7	1.156	2.163	3.7	18.3
8 29	21 17.62	-18 51.1	1.629	2.601	7.6	19.1	8 29	21 20.18	-18 41.2	1.201	2.180	8.9	18.7
9 8	21 9.53	-18 26.5	1.693	2.608	11.6	19.3	9 8	21 14.08	-19 10.3	1.268	2.196	13.5	19.0
9 18	21 5.96	-17 53.6	1.780	2.614	14.9	19.6	9 18	21 10.86	-19 22.8	1.355	2.213	17.3	19.3
39564	Tarsia		8 13.6 23°51	6:8/10.8	18		235684	2004 <i>RO</i> ₃₃₇		8 13.6 268°80	2:6/15.6	18	
7 10	22 1.46	-26 44.8	0.954	1.867	19.3	18.1	7 10	21 56.71	- 5 19.9	1.918	2.759	14.3	21.2
7 20	21 56.85	-27 13.6	0.917	1.877	14.6	17.9	7 20	21 52.18	- 5 32.1	1.820	2.739	11.2	21.0
7 30	21 48.69	-27 37.7	0.898	1.888	9.9	17.7	7 30	21 45.58	- 6 0.0	1.744	2.718	7.6	20.7
8 9	21 38.35	-27 47.1	0.900	1.901	6.9	17.6	8 9	21 37.46	- 6 41.8	1.693	2.696	3.9	20.5
8 19	21 27.63	-27 34.9	0.923	1.916	8.4	17.7	8 19	21 28.59	- 7 33.8	1.669	2.674	3.1	20.4
8 29	21 18.45	-26 58.8	0.967	1.932	12.5	18.0	8 29	21 19.98	- 8 31.0	1.671	2.652	6.6	20.5
9 8	21 12.23	-26 1.7	1.030	1.948	16.8	18.3	9 8	21 12.61	- 9 27.8	1.700	2.630	10.5	20.7
9 18	21 9.62	-24 48.8	1.111	1.966	20.6	18.6	9 18	21 7.26	-10 19.0	1.752	2.607	14.2	20.9
71389	2000 <i>AQ</i> ₁₅₆		8 13.6 266°38	0:6/13.2	18		156674	2002 <i>JG</i> ₁₁₆		8 13.6 41°57	7:9/22.9	18	
7 10	21 58.38	-14 44.1	1.872	2.740	13.4	19.4	7 10	21 51.64	+13 12.9	2.198	2.938	15.8	19.5
7 20	21 53.33	-15 1.0	1.791	2.731	10.0	19.2	7 20	21 47.99	+13 11.3	2.123	2.946	13.7	19.4
7 30	21 46.18	-15 25.5	1.734	2.722	6.1	18.9	7 30	21 42.75	+12 45.0	2.066	2.955	11.4	19.2
8 9	21 37.58	-15 53.7	1.702	2.713	1.9	18.7	8 9	21 36.48	+11 53.3	2.031	2.963	9.3	19.1
8 19	21 28.39	-16 21.2	1.697	2.705	2.7	18.7	8 19	21 29.83	+10 38.0	2.020	2.972	8.0	19.1
8 29	21 19.67	-16 43.7	1.720	2.696	6.9	18.9	8 29	21 23.58	+ 9 3.8	2.035	2.982	8.2	19.1
9 8	21 12.39	-16 58.1	1.767	2.687	10.9	19.2	9 8	21 18.44	+ 7 17.6	2.076	2.991	9.7	19.2
9 18	21 7.26	-17 2.6	1.837	2.677	14.3	19.4	9 18	21 14.94	+ 5 27.0	2.141	3.001	11.8	19.4
346811	2009 <i>CF</i> ₄₀		8 13.6 219°61	2:6/11.0	18		283849	2003 <i>UR</i> ₁₅₁		8			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
136223	2003 <i>WL</i> ₈₄		8 13.6 23°49'	2.2/14.6	17		470665	2008 <i>SH</i> ₁₉₀		8 13.6 351°36'	0.9/13.0	16	
7 10	22 0.04	-10 18.1	1.179	2.060	18.7	19.3	7 10	21 56.26	-15 12.5	1.328	2.219	16.4	21.0
7 20	21 55.30	-9 55.2	1.122	2.065	14.3	19.0	7 20	21 52.40	-15 28.5	1.262	2.213	12.3	20.8
7 30	21 47.68	-9 46.4	1.084	2.070	9.2	18.8	7 30	21 45.91	-15 54.3	1.217	2.209	7.5	20.5
8 9	21 38.11	-9 49.1	1.067	2.076	3.9	18.5	8 9	21 37.59	-16 24.8	1.194	2.205	2.4	20.2
8 19	21 27.93	-9 59.5	1.074	2.083	3.4	18.5	8 19	21 28.59	-16 54.0	1.195	2.203	3.4	20.2
8 29	21 18.68	-10 12.5	1.105	2.090	8.5	18.8	8 29	21 20.30	-17 16.0	1.220	2.201	8.5	20.5
9 8	21 11.68	-10 23.2	1.158	2.098	13.4	19.1	9 8	21 13.96	-17 26.9	1.268	2.200	13.2	20.8
9 18	21 7.71	-10 28.3	1.231	2.106	17.6	19.4	9 18	21 10.36	-17 25.1	1.336	2.200	17.2	21.1
343284	2010 <i>AE</i> ₄₃		8 13.6 110°56'	3.7/10.7	17		66455	1999 <i>PV</i> ₂		8 13.6 60°16'	3.2/12.0	17	
7 10	21 58.92	-21 18.1	1.772	2.653	13.4	20.5	7 10	22 6.99	-22 4.2	1.475	2.353	15.8	18.9
7 20	21 53.78	-22 18.7	1.714	2.660	10.0	20.3	7 20	21 59.66	-22 13.1	1.439	2.383	11.7	18.7
7 30	21 46.45	-23 22.6	1.679	2.667	6.3	20.1	7 30	21 49.87	-22 21.9	1.424	2.412	7.2	18.5
8 9	21 37.68	-24 22.7	1.670	2.674	3.7	20.0	8 9	21 38.70	-22 25.1	1.434	2.442	3.5	18.4
8 19	21 28.45	-25 12.5	1.687	2.681	5.2	20.1	8 19	21 27.47	-22 18.3	1.471	2.471	4.6	18.5
8 29	21 19.88	-25 47.1	1.731	2.688	8.6	20.3	8 29	21 17.47	-21 59.7	1.534	2.501	8.6	18.8
9 8	21 12.95	-26 4.2	1.799	2.695	12.0	20.6	9 8	21 9.74	-21 29.6	1.621	2.530	12.3	19.1
9 18	21 8.34	-26 4.3	1.888	2.701	15.0	20.8	9 18	21 4.80	-20 49.9	1.730	2.559	15.5	19.4
346153	2007 <i>VC</i> ₂₆₀		8 13.6 303°10'	9.1/5.0	17		211382	2002 <i>TZ</i> ₃₇₉		8 13.6 246°73'	0.3/13.3	18	
7 10	21 58.32	-33 54.6	1.699	2.584	13.7	20.9	7 10	21 56.66	-13 23.5	1.974	2.839	12.9	21.1
7 20	21 54.10	-35 41.2	1.626	2.560	11.3	20.7	7 20	21 51.94	-13 51.5	1.898	2.836	9.7	20.9
7 30	21 47.10	-37 24.0	1.575	2.536	9.5	20.5	7 30	21 45.30	-14 28.4	1.844	2.832	5.9	20.7
8 9	21 38.01	-38 52.0	1.549	2.511	9.3	20.5	8 9	21 37.35	-15 10.2	1.817	2.828	1.8	20.4
8 19	21 27.94	-39 55.6	1.547	2.487	10.9	20.5	8 19	21 28.89	-15 52.2	1.816	2.824	2.4	20.4
8 29	21 18.31	-40 28.7	1.567	2.464	13.6	20.6	8 29	21 20.88	-16 29.8	1.843	2.820	6.5	20.7
9 8	21 10.53	-40 30.1	1.608	2.440	16.5	20.8	9 8	21 14.21	-16 59.2	1.896	2.816	10.2	20.9
9 18	21 5.59	-40 2.8	1.666	2.417	19.2	20.9	9 18	21 9.51	-17 18.4	1.972	2.811	13.5	21.1
247955	2003 <i>YW</i> ₇₀		8 13.6 209°44'	3.1/11.2	18		39577	1993 <i>FV</i> ₁₂		8 13.6 35°30'	4.3/17.4	18	
7 10	22 1.42	-20 7.4	1.870	2.743	13.2	21.4	7 10	21 52.37	+ 0 35.8	1.300	2.150	19.2	18.7
7 20	21 55.70	-21 0.8	1.795	2.737	9.8	21.2	7 20	21 49.23	- 0 10.9	1.252	2.170	15.2	18.5
7 30	21 47.70	-21 59.0	1.743	2.730	6.2	21.0	7 30	21 43.78	- 1 26.0	1.223	2.191	10.7	18.3
8 9	21 38.12	-22 55.7	1.717	2.723	3.2	20.8	8 9	21 36.87	- 3 4.7	1.215	2.213	6.3	18.1
8 19	21 27.90	-23 44.2	1.719	2.715	4.6	20.8	8 19	21 29.55	- 4 58.5	1.232	2.236	4.4	18.1
8 29	21 18.19	-24 19.4	1.748	2.707	8.3	21.1	8 29	21 23.01	- 6 56.5	1.274	2.260	7.5	18.3
9 8	21 10.04	-24 38.6	1.802	2.698	12.0	21.3	9 8	21 18.28	- 8 47.8	1.340	2.284	11.6	18.6
9 18	21 4.22	-24 41.5	1.877	2.688	15.2	21.5	9 18	21 15.97	-10 24.6	1.429	2.309	15.3	18.9
340371	2006 <i>DT</i> ₁₅₂		8 13.6 46°93'	1.0/14.3	16		193441	2000 <i>WO</i> ₁₂₇		8 13.6 284°82'	1.7/12.4	18	
7 10	21 56.48	- 9 47.9	1.513	2.383	15.9	20.7	7 10	21 57.33	-16 11.6	1.706	2.584	14.0	20.0
7 20	21 52.06	-10 12.1	1.459	2.397	12.0	20.5	7 20	21 52.86	-16 50.8	1.625	2.570	10.5	19.8
7 30	21 45.42	-10 50.3	1.426	2.411	7.5	20.3	7 30	21 46.08	-17 38.8	1.566	2.556	6.4	19.5
8 9	21 37.35	-11 38.0	1.417	2.426	2.8	20.1	8 9	21 37.66	-18 30.2	1.531	2.542	2.3	19.2
8 19	21 28.88	-12 29.4	1.433	2.442	2.5	20.1	8 19	21 28.52	-19 18.9	1.523	2.528	3.6	19.3
8 29	21 21.15	-13 18.2	1.475	2.457	7.1	20.4	8 29	21 19.81	-19 58.8	1.541	2.514	7.9	19.5
9 8	21 15.14	-13 59.4	1.541	2.473	11.3	20.7	9 8	21 12.65	-20 26.1	1.584	2.500	12.1	19.7
9 18	21 11.49	-14 29.8	1.630	2.489	14.8	21.0	9 18	21 7.82	-20 38.8	1.648	2.486	15.7	19.9
385566	2004 <i>TB</i> ₂₄₄		8 13.6 274°47'	2.4/11.9	18		311523	2005 <i>XZ</i> ₇₇		8 13.6 188°64'	1.9/15.6	18	
7 10	21 59.04	-18 44.2	1.730	2.608	13.8	21.5	7 10	21 54.83	- 6 11.2	2.861	3.688	10.5	21.8
7 20	21 54.08	-19 18.9	1.651	2.597	10.3	21.2	7 20	21 50.00	- 6 19.7	2.776	3.687	8.1	21.6
7 30	21 46.78	-19 59.3	1.595	2.585	6.4	21.0	7 30	21 43.87	- 6 37.7	2.715	3.686	5.4	21.4
8 9	21 37.85	-20 39.9	1.565	2.574	2.8	20.8	8 9	21 36.86	- 7 3.5	2.682	3.684	2.8	21.3
8 19	21 28.23	-21 14.6	1.560	2.562	4.1	20.7	8 19	21 29.52	- 7 34.8	2.677	3.682	2.2	21.2
8 29	21 19.12	-21 38.5	1.582	2.550	8.2	21.0	8 29	21 22.47	- 8 8.8	2.701	3.679	4.6	21.4
9 8	21 11.61	-21 48.7	1.628	2.539	12.2	21.2	9 8	21 16.29	- 8 42.4	2.753	3.676	7.3	21.6
9 18	21 6.49	-21 44.5	1.696	2.527	15.7	21.4	9 18	21 11.44	- 9 12.9	2.831	3.673	9.8	21.7
342020	2008 <i>RW</i> ₈₈		8 13.6 20°37'	0.8/13.9	16		1090	Sumida		8 13.6 202°02'	1.3/14.9	18	
7 10	21 58.67	-13 23.1	1.165	2.056	18.2	19.9	7 10	21 57.78	- 5 23.4	2.033	2.869	13.8	17.1
7 20	21 54.22	-13 1.6	1.115	2.064	13.7	19.7	7 20	21 52.80	- 6 33.2	1.946	2.865	10.6	16.9
7 30	21 46.94	-12 50.8	1.084	2.074	8.5	19.4	7 30	21 45.87	- 8 1.3	1.883	2.859	6.8	16.7
8 9	21 37.87	-12 47.3	1.074	2.085	3.0	19.2	8 9	21 37.57	- 9 43.1	1.846	2.853	2.9	16.4
8 19	21 28.32	-12 47.0	1.089	2.098	3.0	19.2	8 19	21 28.65	-11 32.0	1.839	2.847	2.2	16.3
8 29	21 19.79	-12 45.7	1.126	2.111	8.4	19.6	8 29	21 20.06	-13 20.4	1.861	2.839	6.2	16.6
9 8	21 13.51	-12 40.0	1.186	2.125	13.2	19.9	9 8	21 12.71	-15 0.7	1.910	2.831	10.1	16.8
9 18	21 10.18	-12 28.0	1.266	2.141	17.3	20.2	9 18	21 7.30	-16 27.9	1.985	2.822	13.5	17.0
113640	2002 <i>TM</i> ₇₆		8 13.6 68°28'	1.4/14.6	18		448727	2011 <i>BT</i> ₈₀		8 13.6 293°58'	1.7/11.8	18	
7 10	21 56.83	- 9 12.8	1.870	2.726	14.0	19.6	7 10	21 53.66	-16 17.1	2.231	3.103	11.4	20.8
7 20	21 52.05	- 9 22.6	1.801	2.731	10.6	19.4	7 20	21 49.70	-17 15.4	2.139	3.081	8.5	20.6
7 30	21 45.33	- 9 44.1	1.755	2.736	6.8	19.2	7 30	21 43.97	-18 22.0	2.071	3.060	5.2	20.3
8 9	21 37.34	-10 14.5	1.733	2.741	2.8	19.0	8 9	21 36.96	-19 32.0	2.029	3.039	2.1	20.1
8 19	21 28.90	-10 49.6	1.738	2.746	2.3	19.0	8 19	21 29.36	-20 39.8	2.016	3.018	3.3	20.1
8 29	21 21.00	-11 25.1	1.771	2.752	6.2	19.2	8 29	21 22.00	-21 40.1	2.030	2.997	6.8	20.3
9 8	21 14.51	-11 56.8	1.829	2.757	10.0	19.5	9 8	21 15.73	-22 28.7	2.070	2.975	10.2	20.5
9 18	21 10.04	-12 21.6	1.910	2.762	13.3	19.7	9 18	21 11.20	-23 3.2	2.133	2.954	13.2	20.7
86045	1999 <i>ON</i> ₂		8 13.6 168°52'	5.6/14.8	18		180391	2004 <i>AO</i> ₇					

EPHEMERIDES

8 13.6

8 13.6

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
173856	2001 TZ ₁₇₀	8 13.6 284°49 1°0/14.3 18					208067	1999 VH ₁₉	8 13.6 290°70 7°3/18.1 18				
7 10	21 57.85	-11 6.2	2.020	2.876	13.1	20.2	7 10	21 57.32	+ 3 34.5	1.853	2.655	16.2	19.6
7 20	21 52.74	-11 5.3	1.943	2.874	9.9	20.0	7 20	21 52.77	+ 4 22.6	1.752	2.631	13.6	19.4
7 30	21 45.75	-11 13.2	1.889	2.872	6.3	19.8	7 30	21 46.06	+ 4 52.7	1.672	2.608	10.8	19.2
8 9	21 37.50	-11 27.5	1.861	2.870	2.4	19.5	8 9	21 37.70	+ 5 2.6	1.614	2.584	8.3	19.0
8 19	21 28.79	-11 45.1	1.860	2.868	2.2	19.5	8 19	21 28.50	+ 4 51.6	1.581	2.560	7.3	18.9
8 29	21 20.54	-12 2.5	1.887	2.866	6.0	19.7	8 29	21 19.49	+ 4 21.9	1.573	2.536	8.7	18.9
9 8	21 13.62	-12 16.5	1.939	2.865	9.7	20.0	9 8	21 11.74	+ 3 38.5	1.590	2.512	11.6	19.0
9 18	21 8.64	-12 25.0	2.015	2.863	12.9	20.2	9 18	21 6.09	+ 2 47.3	1.629	2.488	14.8	19.2
347810	2002 LM ₄₂	8 13.6 354°31 1°8/12.1 18					476302	2007 VD ₃₃₄	8 13.6 301°52 6°1/16.7 17				
7 10	21 50.29	-13 3.1	1.296	2.193	16.4	19.4	7 10	21 59.36	- 0 47.0	1.833	2.653	15.7	21.4
7 20	21 48.03	-14 26.0	1.232	2.187	12.1	19.2	7 20	21 54.45	+ 0 5.7	1.721	2.618	12.9	21.1
7 30	21 43.29	-16 6.3	1.188	2.182	7.3	18.9	7 30	21 47.20	+ 0 44.7	1.630	2.582	9.8	20.9
8 9	21 36.80	-17 55.6	1.167	2.178	2.5	18.6	8 9	21 38.11	+ 1 8.1	1.562	2.547	7.0	20.6
8 19	21 29.59	-19 43.0	1.171	2.176	4.2	18.7	8 19	21 27.98	+ 1 15.4	1.521	2.511	6.2	20.5
8 29	21 22.98	-21 17.7	1.199	2.175	9.2	19.0	8 29	21 17.91	+ 1 7.8	1.505	2.475	8.4	20.5
9 8	21 18.16	-22 32.0	1.249	2.175	13.9	19.3	9 8	21 9.07	+ 0 49.0	1.514	2.439	11.9	20.7
9 18	21 15.94	-23 22.4	1.319	2.176	17.8	19.5	9 18	21 2.40	+ 0 23.9	1.545	2.403	15.6	20.8
221748	2007 ES ₁₉₁	8 13.6 15°32 1°2/14.7 18					52917	1998 SH ₁₀₅	8 13.6 121°59 0°2/13.4 18				
7 10	21 53.53	- 8 52.3	2.049	2.905	12.9	20.5	7 10	21 59.69	-11 18.0	1.359	2.235	17.1	18.5
7 20	21 49.49	- 9 11.7	1.977	2.907	9.8	20.3	7 20	21 54.85	-12 7.6	1.299	2.242	12.8	18.3
7 30	21 43.74	- 9 42.6	1.928	2.909	6.3	20.1	7 30	21 47.36	-13 12.8	1.260	2.249	7.8	18.0
8 9	21 36.86	-10 22.1	1.904	2.912	2.6	19.9	8 9	21 38.08	-14 27.2	1.244	2.255	2.5	17.7
8 19	21 29.57	-11 6.3	1.907	2.916	2.1	19.9	8 19	21 28.18	-15 42.3	1.254	2.262	3.1	17.8
8 29	21 22.71	-11 50.6	1.938	2.919	5.8	20.1	8 29	21 19.04	-16 49.9	1.289	2.268	8.3	18.1
9 8	21 17.07	-12 30.7	1.995	2.923	9.3	20.3	9 8	21 11.89	-17 43.8	1.347	2.273	13.0	18.4
9 18	21 13.22	-13 3.6	2.074	2.928	12.4	20.6	9 18	21 7.50	-18 20.9	1.426	2.279	17.0	18.7
514372	2016 QS ₈₈	8 13.6 291°03 3°1/16.0 18					310613	2001 YC ₁₄₁	8 13.6 240°23 2°8/11.8 17				
7 10	21 55.46	- 4 26.5	1.884	2.725	14.5	21.8	7 10	22 0.27	-17 32.8	1.419	2.304	15.9	20.9
7 20	21 51.14	- 4 29.1	1.802	2.719	11.4	21.6	7 20	21 55.42	-18 27.8	1.349	2.298	11.9	20.7
7 30	21 44.88	- 4 47.3	1.742	2.712	7.8	21.3	7 30	21 47.83	-19 32.3	1.301	2.292	7.3	20.4
8 9	21 37.26	- 5 19.4	1.706	2.706	4.4	21.1	8 9	21 38.27	-20 38.6	1.276	2.286	3.1	20.1
8 19	21 29.07	- 6 2.0	1.696	2.700	3.4	21.0	8 19	21 27.92	-21 38.2	1.277	2.279	4.8	20.2
8 29	21 21.29	- 6 50.6	1.713	2.694	6.4	21.2	8 29	21 18.21	-22 23.9	1.303	2.272	9.5	20.5
9 8	21 14.81	- 7 39.7	1.755	2.688	10.1	21.4	9 8	21 10.46	-22 51.4	1.352	2.265	14.0	20.7
9 18	21 10.32	- 8 24.7	1.821	2.682	13.5	21.6	9 18	21 5.55	-22 59.9	1.421	2.258	17.8	21.0
163025	2001 XG ₁₀	8 13.6 296°40 3°3/11.8 17					126182	2002 AC ₁₈	8 13.6 199°40 0°1/13.7 18				
7 10	22 0.74	-19 33.6	1.262	2.156	16.9	19.9	7 10	21 56.90	-10 45.9	2.117	2.971	12.6	20.0
7 20	21 56.17	-20 7.1	1.188	2.141	12.7	19.6	7 20	21 52.04	-11 35.3	2.036	2.968	9.5	19.8
7 30	21 48.50	-20 47.5	1.134	2.126	7.9	19.3	7 30	21 45.36	-12 36.4	1.980	2.964	5.9	19.6
8 9	21 38.52	-21 27.3	1.102	2.111	3.7	19.0	8 9	21 37.42	-13 44.8	1.950	2.960	1.9	19.3
8 19	21 27.55	-21 58.5	1.095	2.097	5.3	19.0	8 19	21 28.95	-14 55.2	1.948	2.956	2.2	19.4
8 29	21 17.25	-22 14.3	1.111	2.082	10.4	19.3	8 29	21 20.86	-16 1.8	1.975	2.951	6.1	19.6
9 8	21 9.14	-22 11.8	1.149	2.069	15.3	19.5	9 8	21 13.98	-17 0.0	2.028	2.945	9.8	19.8
9 18	21 4.24	-21 51.4	1.205	2.055	19.6	19.8	9 18	21 8.96	-17 46.5	2.105	2.939	12.9	20.0
153300	2001 FD ₁₅₉	8 13.6 142°14 0°2/13.3 18					368892	2006 SU ₁₁₇	8 13.6 274°59 0°7/14.0 17				
7 10	21 54.73	-13 17.0	2.718	3.572	10.2	20.8	7 10	21 58.37	-10 40.7	1.565	2.432	15.6	21.8
7 20	21 49.97	-13 47.2	2.647	3.579	7.5	20.6	7 20	21 53.86	-11 2.3	1.477	2.415	11.9	21.5
7 30	21 43.86	-14 23.7	2.601	3.586	4.6	20.4	7 30	21 46.85	-11 38.2	1.411	2.397	7.5	21.2
8 9	21 36.87	-15 3.4	2.582	3.593	1.4	20.2	8 9	21 37.98	-12 24.5	1.369	2.379	2.7	20.8
8 19	21 29.59	-15 43.0	2.592	3.599	1.8	20.3	8 19	21 28.23	-13 15.7	1.352	2.361	2.7	20.8
8 29	21 22.66	-16 19.2	2.631	3.605	4.9	20.5	8 29	21 18.87	-14 5.4	1.362	2.342	7.7	21.1
9 8	21 16.69	-16 49.2	2.698	3.611	7.8	20.7	9 8	21 11.11	-14 47.8	1.395	2.324	12.4	21.3
9 18	21 12.15	-17 11.5	2.789	3.617	10.3	20.9	9 18	21 5.88	-15 19.0	1.450	2.305	16.6	21.5
510142	2010 VC ₄₆	8 13.6 174°09 8°0/22.7 18					48679	1996 AL ₁₉	8 13.6 228°00 3°2/16.0 18				
7 10	21 54.48	+14 47.6	2.770	3.474	13.6	21.2	7 10	21 57.32	- 4 2.1	1.719	2.561	15.6	19.4
7 20	21 49.87	+15 26.5	2.685	3.475	12.0	21.1	7 20	21 52.72	- 4 14.2	1.639	2.556	12.3	19.1
7 30	21 43.86	+15 46.5	2.619	3.476	10.3	21.0	7 30	21 45.94	- 4 44.3	1.579	2.550	8.4	18.9
8 9	21 36.89	+15 46.1	2.576	3.477	8.9	20.9	8 9	21 37.64	- 5 30.2	1.543	2.545	4.6	18.7
8 19	21 29.54	+15 25.1	2.557	3.478	8.1	20.8	8 19	21 28.69	- 6 28.0	1.534	2.539	3.5	18.6
8 29	21 22.45	+14 45.2	2.563	3.478	8.2	20.8	8 29	21 20.18	- 7 31.5	1.551	2.533	6.9	18.8
9 8	21 16.26	+13 50.5	2.595	3.478	9.2	20.9	9 8	21 13.13	- 8 34.4	1.594	2.526	10.9	19.0
9 18	21 11.48	+12 45.7	2.650	3.478	10.8	21.0	9 18	21 8.30	- 9 31.0	1.659	2.520	14.6	19.2
169548	2002 EQ ₉₇	8 13.6 108°45 5°1/17.1 18					396450	2014 FT ₉	8 13.6 282°11 4°1/17.1 18				
7 10	21 59.04	- 0 47.0	1.475	2.311	18.0	20.1	7 10	21 54.55	- 0 34.5	1.838	2.666	15.3	20.8
7 20	21 54.12	- 0 41.0	1.411	2.320	14.4	19.9	7 20	21 50.67	- 0 52.6	1.740	2.645	12.4	20.6
7 30	21 46.81	- 0 57.1	1.366	2.329	10.4	19.7	7 30	21 44.74	- 1 31.7	1.663	2.625	8.9	20.3
8 9	21 37.88	- 1 34.2	1.344	2.337	6.6	19.5	8 9	21 37.28	- 2 30.6	1.610	2.604	5.5	20.1
8 19	21 28.39	- 2 28.4	1.346	2.346	5.2	19.4	8 19	21 29.06	- 3 46.0	1.582	2.583	4.2	19.9
8 29	21 19.58	- 3 33.0	1.374	2.354	7.8	19.6	8 29	21 21.09	- 5 11.7	1.581	2.562	6.9	20.1
9 8	21 12.54	- 4 40.4	1.426	2.362	11.7	19.9	9 8	21 14.37	- 6 40.2	1.606	2.541	10.7	20.2
9 18	21 8.02	- 5 43.8	1.500	2.369	15.4	20.1	9 18	21 9.67	- 8 4.4	1.655	2.519	14.4	20.4
511148	2013 YU ₂₇	8 13.6 226°16 1°7/14.9 17					423013	2003 SJ ₃₉₂	8 13.6 308°11 6°2/ 9.6 17				
7 10	21 59.17	- 8 22.6	2.127	2.969	13.0	22.5	7 10	21 59.20	-24 33.9	1.284	2.184	16.3	21.5
7 20	21 53.75	- 8 28.8	2.038	2.959	10.0	22.2	7 20	21 55.04	-25 44.9	1.217	2.171	12.4	21.2

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
245211	2004 VY ₅₇		8 13.6 281°01	6°5/18.3	18		195195	2002 CN ₂₈₈		8 13.6 120°75	0°5/13.2	17	
7 10	21 56.06	+ 2 56.0	1.815	2.624	16.2	20.0	7 10	21 58.41	-13 4.7	1.898	2.761	13.5	21.2
7 20	21 51.78	+ 3 22.1	1.723	2.609	13.5	19.7	7 20	21 53.21	-13 45.0	1.836	2.773	10.0	21.0
7 30	21 45.40	+ 3 28.2	1.651	2.593	10.4	19.5	7 30	21 46.06	-14 34.7	1.797	2.784	6.1	20.8
8 9	21 37.48	+ 3 13.2	1.601	2.578	7.7	19.3	8 9	21 37.64	-15 28.9	1.783	2.795	1.9	20.5
8 19	21 28.84	+ 2 37.9	1.576	2.563	6.5	19.2	8 19	21 28.81	-16 22.4	1.798	2.805	2.5	20.6
8 29	21 20.49	+ 1 46.2	1.577	2.547	8.1	19.3	8 29	21 20.56	-17 9.7	1.840	2.815	6.6	20.9
9 8	21 13.45	+ 0 44.1	1.603	2.532	11.1	19.4	9 8	21 13.77	-17 47.3	1.907	2.825	10.3	21.1
9 18	21 8.50	- 0 21.5	1.651	2.517	14.4	19.6	9 18	21 9.05	-18 13.0	1.998	2.834	13.5	21.3
208358	2001 RQ ₅₆		8 13.6 42°54	1°0/14.4	18		220264	2003 AZ ₁₉		8 13.6 283°67	4°3/10.6	18	
7 10	21 54.81	- 9 9.3	1.765	2.628	14.4	20.2	7 10	21 59.18	-21 31.9	1.559	2.447	14.6	20.5
7 20	21 50.66	- 9 41.3	1.701	2.635	10.8	20.0	7 20	21 54.63	-22 32.9	1.478	2.427	11.0	20.3
7 30	21 44.55	-10 26.8	1.659	2.643	6.8	19.8	7 30	21 47.41	-23 40.1	1.418	2.407	7.1	20.0
8 9	21 37.16	-11 21.6	1.642	2.651	2.6	19.6	8 9	21 38.21	-24 45.3	1.382	2.387	4.3	19.8
8 19	21 29.32	-12 20.5	1.651	2.660	2.3	19.6	8 19	21 28.07	-25 40.3	1.372	2.366	6.0	19.8
8 29	21 22.04	-13 17.6	1.687	2.668	6.4	19.9	8 29	21 18.38	-26 17.9	1.387	2.346	10.1	20.0
9 8	21 16.19	-14 7.6	1.748	2.677	10.3	20.1	9 8	21 10.45	-26 34.9	1.425	2.326	14.3	20.2
9 18	21 12.40	-14 47.3	1.832	2.686	13.7	20.3	9 18	21 5.24	-26 31.1	1.483	2.305	18.0	20.4
150606	2000 XN ₃₀		8 13.6 169°33	2°0/15.5	18		430509	2001 VR ₁₂₇		8 13.6 295°91	0°7/14.1	18	
7 10	21 56.60	- 6 31.8	2.841	3.666	10.6	21.1	7 10	21 55.26	- 9 23.0	1.539	2.409	15.7	20.8
7 20	21 51.30	- 6 28.7	2.760	3.670	8.2	20.9	7 20	21 51.53	-10 2.9	1.455	2.394	12.0	20.5
7 30	21 44.66	- 6 34.5	2.703	3.673	5.5	20.7	7 30	21 45.41	-11 0.0	1.393	2.379	7.6	20.2
8 9	21 37.15	- 6 47.6	2.674	3.675	2.9	20.6	8 9	21 37.55	-12 10.0	1.355	2.365	2.7	19.9
8 19	21 29.33	- 7 6.2	2.673	3.678	2.3	20.5	8 19	21 28.88	-13 26.1	1.342	2.351	2.6	19.9
8 29	21 21.83	- 7 27.7	2.702	3.679	4.6	20.7	8 29	21 20.60	-14 40.6	1.355	2.336	7.6	20.1
9 8	21 15.25	- 7 49.4	2.759	3.681	7.3	20.9	9 8	21 13.90	-15 46.1	1.391	2.322	12.3	20.4
9 18	21 10.05	- 8 9.1	2.842	3.682	9.8	21.0	9 18	21 9.64	-16 37.8	1.449	2.308	16.4	20.6
440928	2006 XE ₁₆		8 13.6 118°65	5°5/ 7.7	18		507712	2013 TX ₁₄₀		8 13.6 238°10	2°0/12.2	17	
7 10	21 56.88	-28 47.8	2.295	3.172	10.9	20.8	7 10	22 0.46	-17 21.0	1.851	2.722	13.4	22.4
7 20	21 52.01	-30 13.7	2.242	3.179	8.4	20.6	7 20	21 55.07	-18 0.6	1.768	2.710	10.0	22.2
7 30	21 45.31	-31 37.1	2.213	3.186	6.3	20.5	7 30	21 47.43	-18 47.2	1.708	2.697	6.1	21.9
8 9	21 37.39	-32 51.2	2.212	3.192	5.5	20.5	8 9	21 38.16	-19 35.5	1.674	2.683	2.4	21.6
8 19	21 29.04	-33 50.2	2.237	3.199	6.7	20.6	8 19	21 28.20	-20 19.5	1.667	2.670	3.7	21.7
8 29	21 21.18	-34 30.2	2.289	3.205	9.0	20.7	8 29	21 18.66	-20 54.0	1.687	2.655	7.8	21.9
9 8	21 14.63	-34 50.3	2.365	3.212	11.4	20.9	9 8	21 10.62	-21 15.5	1.732	2.640	11.7	22.1
9 18	21 10.01	-34 51.5	2.462	3.218	13.5	21.1	9 18	21 4.86	-21 23.0	1.799	2.625	15.1	22.3
184322	2005 GH ₃₀		8 13.6 27°71	2°4/11.7	18		50041	2000 AL ₅₈		8 13.6 27°62	0°4/13.9	18	
7 10	21 56.82	-18 12.9	1.778	2.658	13.4	20.1	7 10	21 58.33	-12 34.0	1.746	2.613	14.3	18.1
7 20	21 52.25	-19 0.0	1.714	2.660	9.9	19.8	7 20	21 53.35	-12 39.0	1.677	2.615	10.8	17.9
7 30	21 45.58	-19 53.0	1.672	2.662	6.1	19.6	7 30	21 46.25	-12 53.2	1.631	2.617	6.7	17.7
8 9	21 37.50	-20 46.2	1.655	2.664	2.7	19.4	8 9	21 37.74	-13 13.3	1.609	2.620	2.3	17.4
8 19	21 28.93	-21 33.4	1.665	2.667	4.0	19.5	8 19	21 28.76	-13 35.2	1.614	2.623	2.4	17.4
8 29	21 20.93	-22 9.5	1.702	2.669	7.8	19.7	8 29	21 20.36	-13 54.8	1.646	2.626	6.7	17.7
9 8	21 14.46	-22 31.5	1.762	2.672	11.5	20.0	9 8	21 13.51	-14 8.7	1.702	2.629	10.7	17.9
9 18	21 10.20	-22 38.7	1.845	2.674	14.7	20.2	9 18	21 8.88	-14 14.8	1.781	2.632	14.2	18.2
354752	2005 TU ₁₅₆		8 13.6 47°31	4°2/17.2	18		470802	2008 VS ₁		8 13.6 244°17	7°1/ 7.8	18	
7 10	21 54.50	- 0 51.9	2.050	2.872	14.2	20.7	7 10	22 3.24	-32 57.9	2.045	2.915	12.4	21.6
7 20	21 50.21	- 0 48.1	1.976	2.877	11.3	20.5	7 20	21 57.16	-34 1.4	1.974	2.902	9.9	21.4
7 30	21 44.20	- 1 0.6	1.924	2.882	8.2	20.3	7 30	21 48.68	-34 59.1	1.927	2.890	7.8	21.3
8 9	21 37.04	- 1 28.6	1.896	2.887	5.3	20.1	8 9	21 38.56	-35 43.5	1.905	2.876	7.1	21.2
8 19	21 29.46	- 2 9.4	1.894	2.892	4.2	20.1	8 19	21 27.79	-36 8.3	1.909	2.863	8.3	21.3
8 29	21 22.32	- 2 58.6	1.920	2.897	6.2	20.2	8 29	21 17.60	-36 10.0	1.938	2.849	10.7	21.4
9 8	21 16.38	- 3 51.3	1.971	2.902	9.2	20.4	9 8	21 9.10	-35 48.8	1.991	2.834	13.3	21.5
9 18	21 12.23	- 4 42.4	2.046	2.907	12.2	20.6	9 18	21 3.04	-35 7.6	2.064	2.820	15.8	21.7
480589	2015 MS ₈₂		8 13.6 83°03	4°8/17.3	16		16960	1998 QS ₅₂		8 13.6 206°71	5°3/19.5	18	A
7 10	21 57.09	- 0 26.9	1.998	2.815	14.7	21.5	7 10	22 3.14	+ 8 51.4	3.350	4.066	11.2	20.7
7 20	21 52.12	- 0 5.5	1.929	2.825	11.8	21.3	7 20	21 56.08	+ 8 56.8	3.239	4.057	9.5	20.5
7 30	21 45.36	- 0 0.4	1.880	2.834	8.7	21.1	7 30	21 47.62	+ 8 47.3	3.151	4.045	7.7	20.4
8 9	21 37.41	- 0 11.1	1.856	2.843	5.8	21.0	8 9	21 38.16	+ 8 22.4	3.090	4.033	6.1	20.3
8 19	21 29.05	- 0 35.6	1.858	2.852	4.8	20.9	8 19	21 28.25	+ 7 42.9	3.059	4.018	5.3	20.2
8 29	21 21.18	- 1 10.3	1.887	2.861	6.6	21.1	8 29	21 18.51	+ 6 50.9	3.060	4.002	5.9	20.2
9 8	21 14.62	- 1 50.4	1.942	2.870	9.6	21.3	9 8	21 9.56	+ 5 50.2	3.090	3.985	7.6	20.3
9 18	21 9.96	- 2 31.2	2.021	2.879	12.4	21.5	9 18	21 1.91	+ 4 44.8	3.149	3.966	9.5	20.4
444699	2007 EA ₇₇		8 13.6 177°75	2°1/15.8	18		329183	2012 DN ₂₇		8 13.6 46°79	2°5/15.4	17	
7 10	21 53.33	- 4 49.4	2.483	3.314	11.7	21.6	7 10	21 56.36	- 5 18.7	1.174	2.047	19.4	20.2
7 20	21 49.10	- 5 15.7	2.402	3.315	9.1	21.4	7 20	21 52.40	- 5 55.9	1.131	2.068	14.8	20.0
7 30	21 43.43	- 5 54.8	2.345	3.315	6.1	21.2	7 30	21 45.83	- 6 56.1	1.107	2.090	9.7	19.8
8 9	21 36.78	- 6 44.2	2.313	3.315	3.2	21.0	8 9	21 37.61	- 8 13.3	1.105	2.112	4.4	19.5
8 19	21 29.77	- 7 40.6	2.310	3.315	2.4	21.0	8 19	21 28.99	- 9 39.1	1.127	2.135	3.2	19.5
8 29	21 23.07	- 8 39.8	2.335	3.315	5.0	21.2	8 29	21 21.35	-11 3.4	1.173	2.159	7.9	19.9
9 8	21 17.34	- 9 37.4	2.388	3.315	8.0	21.4	9 8	21 15.80	-12 17.8	1.242	2.182	12.6	20.2
9 18	21 13.11	-10 29.8	2.466	3.315	10.8	21.5	9 18	21 13.00	-13 17.1	1.331	2.207	16.5	20.5
89479	2001 XR ₂₆		8 13.6 266°72	5°8/ 8.4	18		109815	2001 RY ₁₀₅		8 13.6 46°39	0°9/14.2	17	
7 10	21 58.62												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
444464	2006 <i>FU</i> ₁₀	8 13.6 203°17'		1.7°/15.8 18			158138	2001 <i>FE</i> ₈₁	8 13.6 147°59'		4.3°/18.9 18		
7 10	21 53.09	- 4 49.7	3.083	3.904	9.9	22.1	7 10	21 53.71	+ 4 12.8	3.040	3.813	11.1	20.8
7 20	21 48.71	- 5 21.6	2.992	3.899	7.7	22.0	7 20	21 49.12	+ 4 10.5	2.960	3.822	9.2	20.7
7 30	21 43.12	- 6 4.2	2.925	3.894	5.2	21.8	7 30	21 43.34	+ 3 54.3	2.902	3.831	7.1	20.6
8 9	21 36.71	- 6 55.4	2.886	3.888	2.7	21.6	8 9	21 36.80	+ 3 24.6	2.870	3.839	5.2	20.4
8 19	21 29.97	- 7 52.5	2.877	3.882	2.0	21.6	8 19	21 29.98	+ 2 43.3	2.866	3.847	4.3	20.4
8 29	21 23.46	- 8 51.8	2.897	3.876	4.3	21.7	8 29	21 23.44	+ 1 53.1	2.891	3.855	5.2	20.5
9 8	21 17.70	- 9 49.9	2.946	3.869	6.9	21.9	9 8	21 17.71	+ 0 57.7	2.943	3.862	7.0	20.6
9 18	21 13.15	-10 43.5	3.020	3.861	9.2	22.1	9 18	21 13.22	+ 0 0.9	3.022	3.868	9.1	20.7
94128	2000 <i>YC</i> ₁₁₃	8 13.6 269°15'		0.9°/12.8 18			445437	2010 <i>UU</i> ₆₂	8 13.6 307°33'		8.5°/ 4.9 18		
7 10	21 55.46	-15 10.0	2.295	3.159	11.4	19.8	7 10	21 58.30	-36 35.0	2.033	2.907	12.3	20.4
7 20	21 50.91	-15 40.8	2.210	3.148	8.5	19.6	7 20	21 53.63	-38 6.3	1.972	2.895	10.2	20.2
7 30	21 44.67	-16 18.4	2.149	3.137	5.2	19.4	7 30	21 46.61	-39 30.0	1.934	2.883	8.8	20.1
8 9	21 37.25	-16 59.0	2.114	3.125	1.7	19.1	8 9	21 37.95	-40 37.7	1.921	2.871	8.7	20.1
8 19	21 29.34	-17 38.5	2.108	3.114	2.5	19.2	8 19	21 28.62	-41 22.6	1.932	2.859	9.9	20.2
8 29	21 21.76	-18 12.9	2.129	3.102	6.0	19.4	8 29	21 19.83	-41 40.8	1.967	2.848	12.0	20.3
9 8	21 15.30	-18 39.1	2.177	3.090	9.4	19.6	9 8	21 12.67	-41 32.6	2.023	2.836	14.3	20.4
9 18	21 10.54	-18 55.3	2.248	3.078	12.3	19.7	9 18	21 7.92	-41 0.7	2.097	2.825	16.4	20.5
308582	2005 <i>UL</i> ₄₈₆	8 13.6 313°42'		2.0°/15.1 18			173782	2001 <i>SZ</i> ₇₆	8 13.6 295°94'		0.2°/13.8 18		
7 10	21 55.42	- 7 56.9	1.986	2.837	13.5	20.7	7 10	21 57.42	-12 50.2	1.949	2.812	13.2	20.3
7 20	21 51.07	- 7 56.7	1.902	2.828	10.4	20.5	7 20	21 52.59	-12 58.6	1.870	2.805	9.9	20.0
7 30	21 44.84	- 8 8.2	1.841	2.819	6.8	20.3	7 30	21 45.80	-13 15.5	1.813	2.799	6.2	19.8
8 9	21 37.32	- 8 29.6	1.804	2.810	3.2	20.0	8 9	21 37.66	-13 37.7	1.781	2.792	2.0	19.5
8 19	21 29.27	- 8 57.6	1.794	2.801	2.6	20.0	8 19	21 28.99	-14 1.4	1.777	2.785	2.2	19.5
8 29	21 21.59	- 9 28.5	1.811	2.793	6.1	20.2	8 29	21 20.77	-14 22.7	1.800	2.779	6.4	19.8
9 8	21 15.16	- 9 58.1	1.854	2.784	9.8	20.4	9 8	21 13.89	-14 38.3	1.849	2.773	10.2	20.0
9 18	21 10.63	-10 23.0	1.920	2.777	13.1	20.6	9 18	21 9.03	-14 46.3	1.920	2.766	13.5	20.2
430091	2013 <i>SV</i> ₆₁	8 13.6 303°40'		3.5°/11.7 17			420780	2013 <i>GQ</i> ₇₆	8 13.6 46°34'		1.3°/14.5 17		
7 10	22 1.14	-20 49.9	1.388	2.277	15.9	21.5	7 10	21 55.72	- 6 48.3	1.066	1.950	20.0	20.4
7 20	21 56.20	-21 18.0	1.316	2.266	12.0	21.2	7 20	21 52.26	- 7 47.9	1.020	1.965	15.2	20.1
7 30	21 48.39	-21 50.3	1.264	2.255	7.5	20.9	7 30	21 45.93	- 9 12.0	0.993	1.981	9.6	19.9
8 9	21 38.53	-22 19.8	1.236	2.244	3.8	20.7	8 9	21 37.73	-10 52.8	0.987	1.997	3.7	19.6
8 19	21 27.85	-22 39.6	1.233	2.233	5.2	20.7	8 19	21 28.98	-12 39.2	1.004	2.014	3.0	19.6
8 29	21 17.87	-22 44.5	1.254	2.223	9.8	21.0	8 29	21 21.22	-14 19.0	1.045	2.031	8.7	20.0
9 8	21 9.95	-22 32.5	1.298	2.213	14.3	21.2	9 8	21 15.70	-15 42.7	1.108	2.049	13.8	20.4
9 18	21 4.99	-22 4.6	1.361	2.203	18.2	21.4	9 18	21 13.17	-16 45.5	1.191	2.067	18.1	20.7
163951	2003 <i>UP</i> ₂₂	8 13.6 313°98'		2.3°/11.7 18			356657	2011 <i>US</i> ₆₇	8 13.6 271°83'		6.0°/ 8.4 18		
7 10	21 56.04	-17 8.5	1.739	2.619	13.7	19.8	7 10	21 59.10	-29 34.1	2.037	2.915	12.1	20.9
7 20	21 51.81	-18 6.5	1.668	2.615	10.1	19.6	7 20	21 54.00	-30 39.0	1.968	2.906	9.4	20.7
7 30	21 45.42	-19 12.8	1.620	2.611	6.2	19.3	7 30	21 46.73	-31 41.0	1.923	2.897	7.0	20.5
8 9	21 37.53	-20 21.0	1.598	2.607	2.6	19.1	8 9	21 37.98	-32 32.9	1.904	2.887	6.0	20.5
8 19	21 29.05	-21 24.0	1.602	2.604	4.0	19.2	8 19	21 28.65	-33 8.7	1.911	2.878	7.3	20.5
8 29	21 21.07	-22 15.9	1.632	2.600	8.0	19.4	8 29	21 19.85	-33 24.5	1.944	2.869	9.8	20.7
9 8	21 14.61	-22 52.4	1.687	2.597	11.9	19.6	9 8	21 12.56	-33 19.5	2.000	2.860	12.6	20.8
9 18	21 10.38	-23 12.3	1.763	2.593	15.2	19.8	9 18	21 7.50	-32 55.4	2.077	2.851	15.1	21.0
386408	2008 <i>UL</i> ₂₃₉	8 13.6 39°17'		6.4°/17.9 17			428588	2008 <i>EZ</i> ₃₀	8 13.6 201°63'		2.6°/15.5 17		
7 10	21 57.81	+ 1 34.5	1.705	2.522	16.8	20.9	7 10	21 59.23	- 6 1.6	1.720	2.566	15.4	22.4
7 20	21 53.02	+ 2 13.9	1.634	2.525	13.8	20.7	7 20	21 54.15	- 6 11.1	1.642	2.564	12.0	22.1
7 30	21 46.11	+ 2 33.9	1.582	2.529	10.5	20.5	7 30	21 46.87	- 6 36.5	1.586	2.561	8.0	21.9
8 9	21 37.74	+ 2 33.5	1.552	2.532	7.6	20.3	8 9	21 38.04	- 7 15.4	1.554	2.558	4.0	21.7
8 19	21 28.82	+ 2 14.1	1.548	2.535	6.4	20.3	8 19	21 28.58	- 8 3.5	1.548	2.554	3.1	21.6
8 29	21 20.42	+ 1 39.4	1.569	2.539	8.1	20.4	8 29	21 19.60	- 8 55.4	1.569	2.550	6.8	21.8
9 8	21 13.52	+ 0 55.1	1.615	2.543	11.1	20.6	9 8	21 12.15	- 9 45.2	1.615	2.546	10.9	22.1
9 18	21 8.83	+ 0 7.3	1.682	2.547	14.2	20.8	9 18	21 6.96	-10 28.4	1.684	2.541	14.6	22.3
82599	2001 <i>OP</i> ₉₅	8 13.6 340°70'		8.5°/ 5.5 18			443383	2014 <i>HP</i> ₉	8 13.6 150°00'		1.2°/12.6 18		
7 10	21 55.79	-26 51.2	1.364	2.266	15.3	18.4	7 10	21 56.32	-15 25.1	2.010	2.880	12.6	21.6
7 20	21 52.47	-29 34.7	1.310	2.262	11.9	18.2	7 20	21 51.70	-16 4.1	1.939	2.880	9.3	21.4
7 30	21 46.25	-32 21.5	1.280	2.258	9.1	18.0	7 30	21 45.22	-16 50.5	1.892	2.880	5.6	21.1
8 9	21 37.89	-34 56.1	1.274	2.255	8.7	18.0	8 9	21 37.47	-17 39.7	1.870	2.881	1.9	20.9
8 19	21 28.58	-37 4.2	1.293	2.252	10.9	18.1	8 19	21 29.27	-18 26.7	1.876	2.881	2.9	21.0
8 29	21 19.88	-38 36.4	1.335	2.249	14.3	18.3	8 29	21 21.54	-19 6.6	1.909	2.881	6.7	21.2
9 8	21 13.25	-39 30.1	1.398	2.247	17.6	18.5	9 8	21 15.12	-19 36.1	1.968	2.882	10.2	21.4
9 18	21 9.65	-39 48.4	1.476	2.245	20.5	18.7	9 18	21 10.64	-19 53.7	2.049	2.882	13.3	21.6
78262	2002 <i>PN</i> ₂₁	8 13.6 263°97'		2.0°/15.2 18			308330	2005 <i>NK</i> ₅₂	8 13.6 25°69'		3.0°/11.9 17		
7 10	21 55.95	- 7 1.7	1.932	2.781	13.9	20.0	7 10	21 57.17	-18 2.5	1.130	2.033	17.7	18.9
7 20	21 51.52	- 7 16.9	1.849	2.773	10.7	19.8	7 20	21 53.34	-18 45.9	1.084	2.042	13.1	18.7
7 30	21 45.16	- 7 46.1	1.788	2.765	7.1	19.6	7 30	21 46.60	-19 37.6	1.057	2.051	8.0	18.4
8 9	21 37.44	- 8 26.7	1.751	2.757	3.3	19.3	8 9	21 37.95	-20 29.0	1.052	2.062	3.4	18.2
8 19	21 29.15	- 9 14.7	1.742	2.749	2.6	19.3	8 19	21 28.78	-21 11.8	1.070	2.073	5.0	18.4
8 29	21 21.25	-10 5.1	1.760	2.741	6.2	19.5	8 29	21 20.62	-21 39.3	1.111	2.086	9.9	18.7
9 8	21 14.63	-10 53.0	1.803	2.733	10.0	19.7	9 8	21 14.77	-21 48.5	1.173	2.099	14.5	19.0
9 18	21 9.97	-11 34.2	1.870	2.725	13.4	19.9	9 18	21 11.94	-21 39.7	1.254	2.113	18.4	19.3
440950	2007 <i>AG</i> ₃₁	8 13.6 51°35'		3.9°/ 9.8 18			250734	2005 <i>SO</i> ₇₅	8 13.6 0°58'		0.3°/13.8 18		

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
106154	2000 <i>TV</i> ₅₈		8 13.6 316°31	1.2°/12.5	18		84076	2002 <i>QN</i>		8 13.6 288°55	0.9°/14.2	18	
7 10	21 53.22	-13 42.2	1.887	2.761	13.1	19.5	7 10	21 58.87	-11 45.5	1.871	2.730	13.8	19.0
7 20	21 49.63	-14 45.3	1.806	2.750	9.7	19.3	7 20	21 53.76	-11 41.9	1.790	2.723	10.5	18.8
7 30	21 44.09	-16 0.2	1.749	2.739	5.9	19.1	7 30	21 46.58	-11 47.2	1.732	2.716	6.6	18.6
8 9	21 37.16	-17 21.1	1.717	2.728	1.9	18.8	8 9	21 37.97	-11 58.8	1.699	2.709	2.4	18.3
8 19	21 29.63	-18 41.5	1.712	2.717	3.1	18.8	8 19	21 28.79	-12 13.5	1.693	2.702	2.3	18.3
8 29	21 22.46	-19 54.5	1.734	2.707	7.2	19.1	8 29	21 20.07	-12 27.5	1.715	2.695	6.5	18.5
9 8	21 16.58	-20 54.9	1.782	2.697	11.0	19.3	9 8	21 12.78	-12 37.7	1.762	2.688	10.4	18.7
9 18	21 12.67	-21 39.5	1.851	2.688	14.3	19.5	9 18	21 7.61	-12 41.9	1.831	2.681	13.9	18.9
66337	1999 <i>JP</i> ₆₃		8 13.6 2°58	8°3/18.6	18		311338	2005 <i>QA</i> ₄₇		8 13.6 342°74	1°6°/12.3	18	
7 10	21 50.23	+ 1 27.7	0.957	1.830	22.7	17.7	7 10	21 54.66	-16 9.1	1.778	2.658	13.5	20.9
7 20	21 48.53	+ 2 10.5	0.901	1.827	18.8	17.4	7 20	21 50.75	-16 52.5	1.706	2.653	10.0	20.6
7 30	21 43.90	+ 2 21.6	0.860	1.826	14.4	17.2	7 30	21 44.78	-17 44.0	1.657	2.648	6.1	20.4
8 9	21 37.17	+ 1 59.0	0.837	1.827	10.2	17.0	8 9	21 37.39	-18 38.4	1.633	2.643	2.2	20.1
8 19	21 29.64	+ 1 5.5	0.833	1.829	8.3	16.9	8 19	21 29.46	-19 29.8	1.635	2.639	3.4	20.2
8 29	21 22.88	- 0 10.7	0.849	1.833	10.4	17.0	8 29	21 22.01	-20 12.5	1.663	2.636	7.4	20.4
9 8	21 18.34	- 1 37.2	0.885	1.839	14.6	17.3	9 8	21 16.00	-20 42.7	1.716	2.633	11.3	20.7
9 18	21 16.89	- 3 2.0	0.939	1.847	18.8	17.6	9 18	21 12.12	-20 58.8	1.791	2.630	14.6	20.9
9840	1988 <i>RQ</i> ₂		8 13.6 109°40	1°1/14.4	18		386311	2008 <i>SW</i> ₅₉		8 13.6 246°72	3°5°/16.6	16	
7 10	22 0.23	-11 6.6	1.985	2.838	13.4	17.0	7 10	21 55.47	- 2 28.7	1.791	2.627	15.3	21.1
7 20	21 54.51	-10 58.4	1.916	2.844	10.2	16.8	7 20	21 51.28	- 2 45.8	1.713	2.626	12.1	20.9
7 30	21 46.88	-10 58.6	1.869	2.851	6.4	16.6	7 30	21 45.08	- 3 21.7	1.657	2.624	8.5	20.7
8 9	21 38.00	-11 5.1	1.849	2.857	2.5	16.4	8 9	21 37.50	- 4 14.4	1.624	2.623	4.9	20.5
8 19	21 28.73	-11 14.9	1.856	2.864	2.2	16.4	8 19	21 29.35	- 5 19.7	1.618	2.621	3.7	20.4
8 29	21 20.02	-11 24.9	1.891	2.870	6.1	16.6	8 29	21 21.65	- 6 31.5	1.638	2.619	6.6	20.6
9 8	21 12.72	-11 32.3	1.952	2.876	9.7	16.9	9 8	21 15.31	- 7 43.1	1.684	2.618	10.3	20.8
9 18	21 7.45	-11 35.0	2.036	2.882	12.9	17.1	9 18	21 11.03	- 8 48.8	1.752	2.616	13.8	21.0
294694	2008 <i>AU</i> ₁₃₆		8 13.6 208°04	2°5°/15.4	17		78742	2002 <i>TW</i> ₂₇₂		8 13.6 209°77	0°7°/14.2	18	
7 10	21 59.14	- 5 58.5	1.696	2.542	15.6	21.4	7 10	21 57.51	-10 53.6	2.147	2.999	12.5	20.0
7 20	21 54.15	- 6 11.8	1.617	2.539	12.1	21.2	7 20	21 52.50	-11 8.1	2.067	2.996	9.5	19.8
7 30	21 46.90	- 6 41.5	1.559	2.535	8.1	21.0	7 30	21 45.69	-11 31.9	2.010	2.993	6.0	19.6
8 9	21 38.08	- 7 25.1	1.526	2.531	4.0	20.7	8 9	21 37.67	-12 2.3	1.980	2.989	2.2	19.3
8 19	21 28.59	- 8 18.1	1.519	2.526	3.1	20.6	8 19	21 29.18	-12 35.5	1.977	2.985	2.0	19.3
8 29	21 19.58	- 9 14.6	1.539	2.521	6.9	20.9	8 29	21 21.09	-13 7.6	2.002	2.981	5.8	19.5
9 8	21 12.10	-10 8.6	1.584	2.515	11.1	21.1	9 8	21 14.23	-13 35.1	2.054	2.977	9.4	19.8
9 18	21 6.92	-10 55.4	1.652	2.509	14.8	21.3	9 18	21 9.19	-13 55.5	2.130	2.973	12.5	20.0
160664	2000 <i>AE</i> ₃		8 13.6 289°44	0°1°/13.6	18		155890	2001 <i>FY</i> ₈₄		8 13.6 22°09	10°5°/7.5	18	
7 10	22 1.48	-14 39.9	1.771	2.637	14.2	19.3	7 10	22 9.71	-44 6.0	1.874	2.721	14.3	18.7
7 20	21 55.97	-14 29.9	1.680	2.617	10.7	19.0	7 20	22 1.98	-44 43.3	1.834	2.729	12.4	18.6
7 30	21 48.09	-14 26.0	1.611	2.597	6.7	18.7	7 30	21 51.52	-45 2.9	1.814	2.737	10.9	18.6
8 9	21 38.48	-14 25.4	1.567	2.578	2.2	18.4	8 9	21 39.48	-44 57.2	1.817	2.745	10.5	18.6
8 19	21 28.10	-14 24.8	1.550	2.558	2.5	18.4	8 19	21 27.30	-44 22.4	1.844	2.755	11.3	18.6
8 29	21 18.13	-14 20.9	1.560	2.538	7.2	18.6	8 29	21 16.45	-43 18.8	1.895	2.765	12.9	18.8
9 8	21 9.70	-14 11.5	1.595	2.519	11.5	18.8	9 8	21 8.06	-41 51.1	1.967	2.775	14.8	18.9
9 18	21 3.63	-13 55.2	1.653	2.499	15.3	19.0	9 18	21 2.68	-40 5.7	2.059	2.786	16.7	19.1
178332	1995 <i>SN</i> ₄₁		8 13.6 228°43	2°4°/16.1	18		404111	2012 <i>XO</i> ₄₀		8 13.6 261°55	5°3°/8.8	18	
7 10	21 53.99	- 3 55.5	2.340	3.169	12.4	20.7	7 10	21 59.04	-26 31.2	2.067	2.945	11.9	21.2
7 20	21 49.77	- 4 22.0	2.253	3.164	9.7	20.5	7 20	21 54.04	-27 45.2	1.986	2.927	9.2	21.0
7 30	21 43.97	- 5 2.7	2.190	3.158	6.6	20.3	7 30	21 46.86	-29 0.2	1.929	2.908	6.5	20.8
8 9	21 37.09	- 5 55.6	2.152	3.153	3.6	20.1	8 9	21 38.11	-30 8.7	1.899	2.889	5.3	20.7
8 19	21 29.76	- 6 57.0	2.142	3.147	2.7	20.0	8 19	21 28.65	-31 4.0	1.895	2.870	6.7	20.8
8 29	21 22.74	- 8 2.3	2.161	3.141	5.3	20.2	8 29	21 19.54	-31 40.8	1.918	2.851	9.5	20.9
9 8	21 16.74	- 9 6.6	2.206	3.135	8.5	20.4	9 8	21 11.83	-31 57.1	1.964	2.831	12.5	21.1
9 18	21 12.32	-10 5.5	2.277	3.129	11.5	20.6	9 18	21 6.28	-31 53.5	2.032	2.811	15.3	21.2
479002	2012 <i>XF</i> ₁₄₀		8 13.6 132°08	4°2°/9.9	18		472141	2014 <i>BM</i> ₆₄		8 13.6 190°96	3°3°/11.4	18	
7 10	21 58.09	-23 38.1	2.024	2.902	12.1	21.1	7 10	22 2.67	-22 56.4	1.993	2.864	12.6	21.2
7 20	21 53.08	-24 45.9	1.964	2.907	9.1	20.9	7 20	21 56.48	-23 19.6	1.923	2.863	9.4	21.0
7 30	21 46.08	-25 55.1	1.928	2.913	6.0	20.7	7 30	21 48.17	-23 43.0	1.877	2.862	6.0	20.8
8 9	21 37.78	-26 58.8	1.919	2.918	4.2	20.6	8 9	21 38.48	-24 1.5	1.857	2.861	3.4	20.7
8 19	21 29.02	-27 51.1	1.937	2.922	5.5	20.7	8 19	21 28.32	-24 10.6	1.864	2.860	4.5	20.7
8 29	21 20.81	-28 27.4	1.981	2.927	8.4	20.9	8 29	21 18.79	-24 7.5	1.899	2.858	7.8	20.9
9 8	21 14.03	-28 46.0	2.050	2.931	11.4	21.1	9 8	21 10.82	-23 51.2	1.960	2.856	11.1	21.1
9 18	21 9.34	-28 47.3	2.141	2.936	14.1	21.3	9 18	21 5.08	-23 22.9	2.043	2.854	14.1	21.3
285510	2000 <i>EG</i> ₅₁		8 13.6 254°54	0°6°/14.1	18		330940	2009 <i>SW</i> ₂₃₆		8 13.6 316°49	6°4°/8.9	18	
7 10	21 57.02	-10 54.6	2.095	2.950	12.7	21.1	7 10	21 54.92	-23 9.3	1.260	2.166	16.1	20.1
7 20	21 52.27	-11 16.9	2.006	2.937	9.6	20.9	7 20	21 52.07	-24 45.1	1.185	2.143	12.2	19.8
7 30	21 45.63	-11 49.6	1.939	2.923	6.1	20.6	7 30	21 46.20	-26 29.6	1.131	2.120	8.4	19.5
8 9	21 37.66	-12 29.6	1.899	2.909	2.2	20.4	8 9	21 38.02	-28 11.3	1.099	2.098	6.4	19.3
8 19	21 29.10	-13 12.7	1.886	2.894	2.1	20.3	8 19	21 28.71	-29 37.7	1.090	2.077	8.6	19.4
8 29	21 20.86	-13 54.5	1.901	2.879	6.1	20.6	8 29	21 19.87	-30 38.5	1.104	2.056	12.8	19.5
9 8	21 13.82	-14 30.9	1.942	2.865	9.8	20.8	9 8	21 13.09	-31 8.8	1.139	2.037	17.2	19.7
9 18	21 8.66	-14 58.9	2.007	2.849	13.1	21.0	9 18	21 9.46	-31 9.1	1.190	2.018	21.2	19.9
435681	2008 <i>TK</i> ₆₃		8 13.6 181°41	5°9°/18.7	16		319059	2005 <i>WF</i> ₁₆					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
507270	2011 <i>EL</i> ₁		8 13.6 179°16	0°6/14.1	17		123730	2001 <i>AS</i> ₇		8 13.7 207°25	1°7/11.7	18	
7 10	21 59.12	-10 20.3	1.896	2.751	13.9	22.0	7 10	21 54.79	-17 9.7	2.696	3.559	10.0	20.6
7 20	21 53.90	-10 50.2	1.822	2.752	10.5	21.8	7 20	21 50.25	-18 10.7	2.616	3.554	7.3	20.4
7 30	21 46.65	-11 31.9	1.770	2.753	6.6	21.5	7 30	21 44.25	-19 17.2	2.561	3.549	4.5	20.2
8 9	21 38.01	-12 21.6	1.744	2.753	2.3	21.3	8 9	21 37.24	-20 24.9	2.535	3.544	1.9	20.0
8 19	21 28.84	-13 14.3	1.745	2.753	2.2	21.3	8 19	21 29.83	-21 29.2	2.538	3.538	3.0	20.1
8 29	21 20.16	-14 4.6	1.774	2.753	6.5	21.5	8 29	21 22.68	-22 25.8	2.570	3.532	5.8	20.3
9 8	21 12.89	-14 47.9	1.829	2.752	10.4	21.8	9 8	21 16.48	-23 11.6	2.629	3.526	8.7	20.4
9 18	21 7.72	-15 21.3	1.907	2.750	13.7	22.0	9 18	21 11.75	-23 45.2	2.713	3.519	11.1	20.6
60113	1999 <i>TB</i> ₂₁₇		8 13.6 358°61	6°7/19.0	18		94940	2001 <i>YP</i> ₇₈		8 13.7 167°04	0°6/14.1	18	
7 10	21 53.41	+ 3 50.5	1.565	2.385	17.9	18.3	7 10	22 0.34	-11 18.1	2.211	3.058	12.4	21.2
7 20	21 49.99	+ 4 1.7	1.491	2.383	14.8	18.1	7 20	21 54.50	-11 32.1	2.136	3.063	9.4	21.0
7 30	21 44.41	+ 3 47.8	1.436	2.382	11.4	17.9	7 30	21 46.89	-11 54.6	2.086	3.067	5.9	20.8
8 9	21 37.32	+ 3 8.5	1.402	2.381	8.3	17.7	8 9	21 38.09	-12 22.7	2.061	3.071	2.1	20.6
8 19	21 29.62	+ 2 6.5	1.392	2.381	6.7	17.6	8 19	21 28.89	-12 52.8	2.066	3.074	2.0	20.6
8 29	21 22.40	+ 0 47.7	1.407	2.382	8.2	17.7	8 29	21 20.14	-13 21.2	2.099	3.077	5.7	20.8
9 8	21 16.69	- 0 39.3	1.445	2.383	11.4	17.9	9 8	21 12.66	-13 44.8	2.160	3.079	9.2	21.0
9 18	21 13.22	- 2 6.0	1.506	2.384	14.8	18.1	9 18	21 7.03	-14 1.5	2.244	3.080	12.2	21.2
281896	2011 <i>BQ</i>		8 13.6 225°34	1°2/12.7	17		60441	2000 <i>CB</i> ₈₃		8 13.7 149°27	1°1/12.8	17	
7 10	21 58.78	-14 21.0	1.725	2.596	14.2	21.9	7 10	22 0.27	-14 44.9	1.789	2.656	14.0	20.2
7 20	21 53.94	-15 11.3	1.648	2.590	10.6	21.6	7 20	21 54.84	-15 25.7	1.723	2.663	10.4	20.0
7 30	21 46.83	-16 12.5	1.594	2.583	6.5	21.4	7 30	21 47.26	-16 15.3	1.681	2.669	6.3	19.7
8 9	21 38.11	-17 18.8	1.565	2.576	2.1	21.1	8 9	21 38.24	-17 8.3	1.664	2.675	2.1	19.5
8 19	21 28.72	-18 23.5	1.563	2.569	3.2	21.1	8 19	21 28.74	-17 58.7	1.674	2.680	3.0	19.6
8 29	21 19.79	-19 20.0	1.588	2.561	7.7	21.4	8 29	21 19.83	-18 41.3	1.712	2.685	7.2	19.8
9 8	21 12.40	-20 3.6	1.637	2.553	11.8	21.6	9 8	21 12.50	-19 12.3	1.775	2.689	11.1	20.1
9 18	21 7.34	-20 32.1	1.709	2.544	15.4	21.8	9 18	21 7.42	-19 30.3	1.860	2.693	14.4	20.3
65787	1995 <i>UU</i> ₁₄		8 13.7 138°65	0°2/13.8	18		440298	2004 <i>RA</i> ₂₅₈		8 13.7 293°79	0°7/13.1	18	
7 10	22 1.07	-11 56.9	1.761	2.621	14.5	20.1	7 10	21 58.49	-16 12.5	2.176	3.040	12.0	20.8
7 20	21 55.39	-12 21.0	1.697	2.631	10.9	19.9	7 20	21 53.25	-16 16.5	2.095	3.032	8.9	20.6
7 30	21 47.56	-12 55.6	1.654	2.640	6.7	19.7	7 30	21 46.19	-16 25.1	2.037	3.024	5.5	20.4
8 9	21 38.31	-13 36.4	1.637	2.648	2.2	19.4	8 9	21 37.89	-16 35.2	2.005	3.016	1.8	20.1
8 19	21 28.59	-14 18.3	1.648	2.656	2.4	19.5	8 19	21 29.13	-16 43.7	2.002	3.009	2.4	20.2
8 29	21 19.51	-14 56.3	1.685	2.663	6.8	19.8	8 29	21 20.79	-16 47.7	2.026	3.001	6.1	20.4
9 8	21 12.04	-15 26.4	1.749	2.670	10.8	20.0	9 8	21 13.70	-16 45.0	2.077	2.993	9.6	20.6
9 18	21 6.84	-15 46.4	1.834	2.677	14.2	20.3	9 18	21 8.49	-16 34.9	2.151	2.986	12.7	20.8
72227	2001 <i>AA</i> ₁₄		8 13.7 202°05	2°0/12.2	18		282781	2006 <i>KO</i> ₁₆		8 13.7 13°99	3°0/16.2	18	
7 10	22 0.35	-16 19.2	1.686	2.559	14.4	20.0	7 10	21 50.70	- 2 42.4	1.328	2.193	18.0	19.2
7 20	21 55.14	-17 11.2	1.613	2.556	10.7	19.8	7 20	21 48.22	- 3 33.2	1.267	2.197	14.1	18.9
7 30	21 47.58	-18 12.0	1.564	2.553	6.5	19.5	7 30	21 43.42	- 4 50.1	1.225	2.203	9.5	18.7
8 9	21 38.36	-19 15.5	1.540	2.550	2.5	19.2	8 9	21 37.05	- 6 28.4	1.205	2.209	4.9	18.4
8 19	21 28.49	-20 14.5	1.542	2.546	3.8	19.3	8 19	21 30.10	- 8 19.8	1.209	2.217	3.3	18.4
8 29	21 19.16	-21 2.9	1.571	2.541	8.1	19.6	8 29	21 23.77	-10 13.3	1.239	2.226	7.4	18.6
9 8	21 11.49	-21 36.5	1.625	2.536	12.2	19.8	9 8	21 19.13	-11 58.7	1.292	2.235	11.9	18.9
9 18	21 6.24	-21 54.2	1.701	2.531	15.7	20.0	9 18	21 16.92	-13 28.4	1.366	2.246	15.9	19.2
381175	2007 <i>JX</i> ₉		8 13.7 189°04	2°6/11.7	18		329209	2012 <i>DW</i> ₅₇		8 13.7 124°21	1°9/14.9	17	
7 10	22 2.21	-20 32.1	2.072	2.939	12.4	21.0	7 10	21 58.98	- 7 3.5	1.507	2.365	16.6	21.3
7 20	21 56.09	-21 3.0	2.000	2.939	9.2	20.8	7 20	21 54.17	- 7 32.2	1.442	2.371	12.7	21.1
7 30	21 47.94	-21 36.5	1.951	2.937	5.7	20.5	7 30	21 46.99	- 8 18.5	1.397	2.378	8.3	20.9
8 9	21 38.43	-22 7.5	1.928	2.936	2.8	20.4	8 9	21 38.19	- 9 18.5	1.377	2.384	3.6	20.6
8 19	21 28.44	-22 31.3	1.934	2.933	3.9	20.4	8 19	21 28.81	-10 25.8	1.382	2.390	2.8	20.6
8 29	21 18.98	-22 44.5	1.968	2.930	7.3	20.6	8 29	21 20.08	-11 33.2	1.414	2.396	7.3	20.9
9 8	21 10.99	-22 45.2	2.028	2.927	10.7	20.8	9 8	21 13.09	-12 33.9	1.470	2.402	11.7	21.2
9 18	21 5.11	-22 33.7	2.110	2.923	13.7	21.0	9 18	21 8.59	-13 23.4	1.547	2.407	15.5	21.4
365996	2012 <i>BZ</i> ₉₀		8 13.7 238°61	0°4/13.3	18		126839	2002 <i>EM</i> ₆₅		8 13.7 200°30	1°2/14.6	18	
7 10	21 55.58	-13 45.1	2.487	3.344	10.9	22.0	7 10	21 57.87	- 8 50.6	2.043	2.891	13.3	20.7
7 20	21 50.91	-14 12.1	2.402	3.336	8.1	22.0	7 20	21 52.89	- 9 14.0	1.963	2.888	10.1	20.5
7 30	21 44.67	-14 46.2	2.341	3.327	5.0	21.8	7 30	21 46.02	- 9 49.5	1.905	2.885	6.5	20.3
8 9	21 37.37	-15 23.9	2.308	3.319	1.6	21.5	8 9	21 37.86	-10 34.0	1.873	2.882	2.6	20.0
8 19	21 29.64	-16 1.7	2.302	3.310	2.0	21.6	8 19	21 29.17	-11 23.1	1.870	2.878	2.2	20.0
8 29	21 22.21	-16 36.0	2.326	3.300	5.5	21.8	8 29	21 20.89	-12 12.2	1.894	2.873	6.0	20.2
9 8	21 15.81	-17 3.8	2.376	3.291	8.6	22.0	9 8	21 13.88	-12 56.5	1.944	2.869	9.7	20.5
9 18	21 10.98	-17 23.1	2.450	3.281	11.4	22.1	9 18	21 8.78	-13 33.0	2.018	2.864	13.0	20.7
175231	2005 <i>GL</i> ₁₅₀		8 13.7 45°35	6°1/ 9.9	18		357221	2002 <i>HK</i> ₁₀		8 13.7 64°32	7°9/23.8	16	
7 10	21 59.94	-23 59.9	1.181	2.083	17.2	19.5	7 10	21 53.07	+15 2.0	2.251	2.973	15.9	20.8
7 20	21 55.39	-25 18.5	1.143	2.098	12.8	19.3	7 20	21 49.08	+14 46.9	2.181	2.990	13.8	20.7
7 30	21 47.86	-26 37.7	1.125	2.114	8.6	19.1	7 30	21 43.54	+14 5.9	2.129	3.007	11.6	20.5
8 9	21 38.43	-27 46.4	1.130	2.130	6.1	19.0	8 9	21 37.02	+12 58.9	2.099	3.024	9.4	20.4
8 19	21 28.55	-28 35.2	1.158	2.147	7.9	19.1	8 19	21 30.17	+11 28.3	2.094	3.041	8.1	20.4
8 29	21 19.81	-28 58.6	1.210	2.165	11.7	19.4	8 29	21 23.76	+ 9 39.2	2.115	3.059	8.1	20.4
9 8	21 13.49	-28 56.5	1.282	2.182	15.5	19.7	9 8	21 18.48	+ 7 39.2	2.162	3.076	9.5	20.5
9 18	21 10.28	-28 31.9	1.372	2.200	18.8	20.0	9 18	21 14.82	+ 5 36.1	2.236	3.093	11.4	20.7
290588	2005 <i>US</i> ₁₅₇		8 13.7 203°20	4°2/17.6	18		278483	2007 <i>UA</i> ₆₈					

EPHEMERIDES

8 13.7

8 13.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
307571	2003 <i>FA</i> ₉₂		8 13.7 81°20	0°3/13.4	17		519375	2011 <i>PG</i> ₁₆		8 13.7 357°48	1°7/15.0	18	
7 10	21 55.74	-12 15.3	2.136	2.996	12.3	21.0	7 10	21 54.94	-7 37.5	1.726	2.585	14.8	21.3
7 20	21 51.08	-13 1.9	2.079	3.014	9.1	20.8	7 20	21 50.97	-8 0.5	1.653	2.584	11.4	21.1
7 30	21 44.77	-13 57.5	2.045	3.032	5.5	20.6	7 30	21 44.96	-8 38.8	1.602	2.583	7.4	20.8
8 9	21 37.41	-14 57.6	2.038	3.049	1.7	20.4	8 9	21 37.55	-9 28.8	1.575	2.582	3.2	20.6
8 19	21 29.74	-15 57.1	2.059	3.067	2.2	20.5	8 19	21 29.60	-10 25.7	1.574	2.582	2.5	20.5
8 29	21 22.58	-16 51.3	2.109	3.084	5.9	20.7	8 29	21 22.13	-11 23.5	1.599	2.582	6.5	20.8
9 8	21 16.66	-17 36.4	2.184	3.102	9.2	21.0	9 8	21 16.09	-12 16.6	1.650	2.583	10.6	21.0
9 18	21 12.51	-18 10.4	2.283	3.119	12.0	21.2	9 18	21 12.16	-13 0.6	1.723	2.583	14.1	21.2
294765	2008 <i>CP</i> ₃₁		8 13.7 244°82	1°0/13.1	17		84150	2002 <i>RJ</i> ₆₈		8 13.7 286°06	3°4/15.6	18	
7 10	22 2.10	-15 27.9	1.617	2.488	15.0	21.8	7 10	21 59.34	-6 14.0	1.496	2.351	16.9	19.1
7 20	21 56.60	-15 45.2	1.537	2.478	11.3	21.5	7 20	21 54.66	-5 56.6	1.415	2.340	13.2	18.9
7 30	21 48.57	-16 10.7	1.479	2.468	6.9	21.2	7 30	21 47.46	-5 54.8	1.354	2.330	9.1	18.6
8 9	21 38.74	-16 39.6	1.446	2.457	2.3	20.9	8 9	21 38.42	-6 7.7	1.316	2.319	4.9	18.3
8 19	21 28.16	-17 6.7	1.439	2.446	3.1	20.9	8 19	21 28.57	-6 32.3	1.303	2.309	3.8	18.2
8 29	21 18.10	-17 27.0	1.459	2.435	7.9	21.2	8 29	21 19.19	-7 3.7	1.316	2.298	7.7	18.5
9 8	21 9.78	-17 37.0	1.503	2.423	12.3	21.4	9 8	21 11.52	-7 36.5	1.352	2.288	12.2	18.7
9 18	21 4.03	-17 35.6	1.569	2.411	16.2	21.7	9 18	21 6.41	-8 5.7	1.409	2.277	16.3	18.9
482416	2012 <i>BA</i> ₁₀₆		8 13.7 181°48	3°1/16.7	18		228852	2003 <i>FJ</i> ₇₇		8 13.7 114°45	0°6/14.1	17	
7 10	21 56.76	-2 35.4	2.925	3.731	10.8	22.0	7 10	22 0.17	-11 12.3	1.774	2.633	14.5	20.8
7 20	21 51.49	-2 20.0	2.839	3.732	8.6	21.8	7 20	21 54.70	-11 27.8	1.711	2.643	10.9	20.6
7 30	21 44.91	-2 14.9	2.777	3.732	6.1	21.7	7 30	21 47.15	-11 54.0	1.670	2.654	6.8	20.3
8 9	21 37.46	-2 19.3	2.742	3.732	3.9	21.5	8 9	21 38.23	-12 27.0	1.654	2.664	2.4	20.1
8 19	21 29.67	-2 32.0	2.735	3.731	3.2	21.5	8 19	21 28.88	-13 2.5	1.665	2.673	2.3	20.1
8 29	21 22.17	-2 50.7	2.757	3.730	4.8	21.6	8 29	21 20.17	-13 35.5	1.703	2.683	6.6	20.4
9 8	21 15.53	-3 12.7	2.808	3.729	7.2	21.7	9 8	21 13.02	-14 2.4	1.767	2.692	10.5	20.7
9 18	21 10.23	-3 35.4	2.884	3.727	9.6	21.9	9 18	21 8.09	-14 20.6	1.854	2.701	13.9	20.9
189172	2002 <i>VT</i> ₁₃₃		8 13.7 250°85	0°1/13.6	18		209880	2005 <i>JL</i> ₁₅₀		8 13.7 179°79	1°1/12.7	18	
7 10	21 58.40	-11 48.3	1.678	2.544	14.8	21.1	7 10	21 56.25	-14 36.5	1.981	2.850	12.8	20.9
7 20	21 53.76	-12 23.8	1.596	2.534	11.2	20.8	7 20	21 51.74	-15 22.4	1.910	2.850	9.5	20.7
7 30	21 46.79	-13 12.3	1.537	2.524	6.9	20.6	7 30	21 45.34	-16 16.8	1.862	2.850	5.7	20.5
8 9	21 38.17	-14 9.1	1.502	2.513	2.2	20.2	8 9	21 37.66	-17 15.0	1.839	2.850	1.9	20.2
8 19	21 28.81	-15 8.3	1.493	2.502	2.6	20.2	8 19	21 29.50	-18 11.4	1.845	2.850	2.8	20.3
8 29	21 19.88	-16 3.3	1.512	2.490	7.4	20.5	8 29	21 21.79	-19 0.8	1.877	2.850	6.7	20.5
9 8	21 12.49	-16 48.7	1.555	2.478	11.8	20.7	9 8	21 15.39	-19 39.3	1.936	2.850	10.3	20.8
9 18	21 7.44	-17 21.4	1.619	2.467	15.5	21.0	9 18	21 10.95	-20 5.0	2.016	2.850	13.4	21.0
39515	1986 <i>XD</i> ₅		8 13.7 311°63	7°6/ 8.3	18		60085	1999 <i>TA</i> ₁₅₂		8 13.7 359°51	5°7/18.8	18	
7 10	21 56.82	-25 28.2	1.190	2.097	16.7	18.0	7 10	21 49.64	+3 1.3	1.575	2.404	17.4	18.3
7 20	21 53.78	-27 3.4	1.115	2.071	12.9	17.7	7 20	21 47.19	+2 48.2	1.501	2.401	14.2	18.1
7 30	21 47.45	-28 44.9	1.060	2.047	9.3	17.4	7 30	21 42.72	+2 9.2	1.446	2.399	10.7	17.9
8 9	21 38.53	-30 20.0	1.027	2.022	7.6	17.2	8 9	21 36.85	+1 5.0	1.413	2.399	7.4	17.7
8 19	21 28.31	-31 35.7	1.016	1.998	9.8	17.3	8 19	21 30.41	-0 20.1	1.404	2.399	5.7	17.6
8 29	21 18.59	-32 21.5	1.027	1.975	14.1	17.4	8 29	21 24.44	-1 58.7	1.419	2.400	7.5	17.7
9 8	21 11.14	-32 33.6	1.058	1.953	18.5	17.6	9 8	21 19.87	-3 41.7	1.460	2.403	10.9	17.9
9 18	21 7.14	-32 13.9	1.104	1.931	22.6	17.8	9 18	21 17.41	-5 20.2	1.522	2.406	14.3	18.1
483614	2004 <i>SU</i> ₃₀		8 13.7 289°71	8°7/ 6.1	17		521569	2015 <i>OG</i> ₁₀₅		8 13.7 136°70	3°8/17.7	18	
7 10	22 6.79	-40 53.3	2.293	3.140	12.0	21.0	7 10	21 53.92	+0 30.5	2.369	3.177	12.9	21.5
7 20	21 59.87	-41 43.8	2.214	3.115	10.3	20.9	7 20	21 49.68	+0 14.9	2.290	3.181	10.4	21.4
7 30	21 50.46	-42 23.2	2.158	3.089	9.0	20.7	7 30	21 43.93	-0 16.8	2.233	3.186	7.6	21.2
8 9	21 39.33	-42 44.0	2.127	3.064	8.7	20.7	8 9	21 37.19	-1 3.4	2.202	3.190	4.9	21.0
8 19	21 27.53	-42 40.8	2.122	3.038	9.7	20.7	8 19	21 30.06	-2 1.7	2.197	3.194	3.9	21.0
8 29	21 16.37	-42 11.2	2.141	3.012	11.5	20.8	8 29	21 23.27	-3 7.6	2.221	3.197	5.5	21.1
9 8	21 6.98	-41 16.8	2.182	2.986	13.7	20.9	9 8	21 17.51	-4 15.8	2.272	3.201	8.3	21.3
9 18	21 0.15	-40 1.5	2.244	2.960	15.7	21.0	9 18	21 13.30	-5 21.6	2.347	3.204	11.0	21.5
98730	2000 <i>YM</i> ₂₆		8 13.7 263°24	1°6/15.1	18		202635	2006 <i>JD</i> ₁		8 13.7 267°70	3°6/16.6	18	
7 10	21 55.03	-6 6.7	1.815	2.665	14.6	19.6	7 10	21 55.75	-2 25.1	1.869	2.701	14.9	20.9
7 20	21 51.05	-6 55.7	1.731	2.657	11.2	19.4	7 20	21 51.56	-2 36.9	1.779	2.689	11.9	20.7
7 30	21 45.04	-8 2.7	1.670	2.649	7.3	19.2	7 30	21 45.36	-3 6.8	1.710	2.676	8.4	20.5
8 9	21 37.58	-9 23.9	1.633	2.640	3.2	18.9	8 9	21 37.72	-3 53.5	1.665	2.663	4.9	20.3
8 19	21 29.49	-10 53.4	1.623	2.632	2.4	18.8	8 19	21 29.40	-4 53.6	1.647	2.649	3.8	20.2
8 29	21 21.76	-12 23.6	1.641	2.623	6.5	19.1	8 29	21 21.41	-6 1.4	1.655	2.636	6.6	20.3
9 8	21 15.36	-13 47.3	1.685	2.614	10.6	19.3	9 8	21 14.68	-7 10.6	1.689	2.622	10.3	20.5
9 18	21 11.00	-14 59.3	1.752	2.606	14.2	19.5	9 18	21 9.97	-8 15.4	1.746	2.609	13.9	20.7
519545	2012 <i>PG</i> ₄₅		8 13.7 228°87	1°4/14.9	18		439460	2013 <i>YZ</i> ₃₄		8 13.7 209°48	4°0/16.0	18	
7 10	21 55.26	-5 52.8	1.774	2.624	14.8	21.1	7 10	22 1.60	-4 53.7	1.818	2.652	15.2	20.8
7 20	21 51.22	-6 53.3	1.696	2.622	11.4	20.8	7 20	21 55.84	-4 16.1	1.739	2.650	12.0	20.5
7 30	21 45.14	-8 12.9	1.639	2.619	7.4	20.6	7 30	21 47.92	-3 51.4	1.683	2.649	8.5	20.3
8 9	21 37.62	-9 46.9	1.608	2.616	3.1	20.3	8 9	21 38.53	-3 39.3	1.651	2.647	5.1	20.1
8 19	21 29.49	-11 28.4	1.604	2.613	2.3	20.3	8 19	21 28.55	-3 38.6	1.645	2.646	4.2	20.1
8 29	21 21.77	-13 9.3	1.628	2.610	6.6	20.5	8 29	21 19.08	-3 46.5	1.667	2.644	7.0	20.2
9 8	21 15.43	-14 41.9	1.678	2.607	10.7	20.8	9 8	21 11.10	-3 59.2	1.715	2.642	10.6	20.5
9 18	21 11.17	-16 0.8	1.751	2.603	14.3	21.0	9 18	21 5.34	-4 12.9	1.785	2.640	14.0	20.7
487784	2015 <i>RJ</i> ₂₂₉		8 13.7 287°27	1°2/12.6	17		424034	2006 <i>YO</i> ₂₂		8 13.7 180°56	0°5/14.0	18	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
355431	2007 VS ₄₂	8 13.7 275°55'		5°2' / 9.0 18			49398	1998 XO ₄₁	8 13.7 227°29'		2°7' / 11.4 18		
7 10	21 58.06	-26 27.7	2.001	2.882	12.2	20.9	7 10	21 59.63	-21 14.1	2.342	3.209	11.1	19.3
7 20	21 53.32	-27 36.5	1.927	2.869	9.3	20.7	7 20	21 54.10	-21 49.9	2.260	3.199	8.3	19.1
7 30	21 46.45	-28 45.4	1.877	2.857	6.6	20.5	7 30	21 46.76	-22 28.1	2.203	3.189	5.2	18.9
8 9	21 38.07	-29 47.4	1.853	2.845	5.2	20.4	8 9	21 38.16	-23 3.9	2.173	3.178	2.8	18.7
8 19	21 29.05	-30 35.9	1.855	2.832	6.6	20.5	8 19	21 29.06	-23 33.0	2.171	3.167	3.9	18.7
8 29	21 20.48	-31 6.2	1.883	2.820	9.4	20.6	8 29	21 20.35	-23 51.8	2.197	3.156	6.9	18.9
9 8	21 13.35	-31 16.5	1.935	2.807	12.4	20.8	9 8	21 12.85	-23 58.5	2.250	3.144	10.0	19.1
9 18	21 8.39	-31 7.5	2.008	2.795	15.2	21.0	9 18	21 7.19	-23 52.8	2.325	3.131	12.8	19.3
2301	Whitford	8 13.7 249°00'		4°0' / 9.2 18			473363	2015 TS ₂₉₂	8 13.7 263°59'		5°6' / 19.3 18		
7 10	21 56.52	-25 56.1	2.708	3.579	9.7	16.6	7 10	21 53.63	+ 5 22.3	2.527	3.304	13.0	21.0
7 20	21 51.68	-26 56.1	2.626	3.564	7.3	16.4	7 20	21 49.49	+ 5 35.2	2.433	3.294	10.9	20.8
7 30	21 45.21	-27 56.3	2.569	3.548	5.1	16.2	7 30	21 43.87	+ 5 31.2	2.360	3.284	8.6	20.6
8 9	21 37.63	-28 51.7	2.540	3.532	4.0	16.1	8 9	21 37.22	+ 5 10.2	2.311	3.275	6.6	20.5
8 19	21 29.56	-29 37.7	2.539	3.516	5.0	16.2	8 19	21 30.12	+ 4 33.2	2.288	3.265	5.6	20.4
8 29	21 21.76	-30 10.5	2.565	3.500	7.3	16.3	8 29	21 23.26	+ 3 43.1	2.293	3.254	6.5	20.5
9 8	21 14.98	-30 28.5	2.618	3.483	9.8	16.4	9 8	21 17.31	+ 2 44.4	2.324	3.244	8.5	20.6
9 18	21 9.79	-30 31.6	2.692	3.466	12.1	16.6	9 18	21 12.83	+ 1 42.0	2.379	3.234	10.9	20.7
260232	2004 RZ ₂₅₇	8 13.7 34°22'		5°0' / 17.9 18			166539	2002 RH ₃₂	8 13.7 204°28'		0°7' / 13.1 18		
7 10	21 55.15	+ 0 37.2	2.034	2.849	14.5	20.1	7 10	21 59.99	-15 43.7	2.188	3.048	12.1	20.2
7 20	21 50.81	+ 0 56.2	1.961	2.854	11.8	20.0	7 20	21 54.37	-15 56.4	2.110	3.045	9.0	20.0
7 30	21 44.72	+ 0 58.3	1.909	2.859	8.8	19.8	7 30	21 46.90	-16 14.4	2.055	3.042	5.5	19.8
8 9	21 37.48	+ 0 43.9	1.881	2.864	6.1	19.6	8 9	21 38.21	-16 34.4	2.027	3.038	1.8	19.6
8 19	21 29.80	+ 0 14.9	1.879	2.870	5.0	19.6	8 19	21 29.05	-16 52.8	2.028	3.034	2.4	19.6
8 29	21 22.56	- 0 25.1	1.903	2.876	6.6	19.7	8 29	21 20.34	-17 6.2	2.056	3.030	6.1	19.9
9 8	21 16.54	- 1 11.0	1.953	2.882	9.4	19.9	9 8	21 12.91	-17 12.4	2.112	3.026	9.6	20.1
9 18	21 12.31	- 1 58.1	2.026	2.889	12.2	20.1	9 18	21 7.37	-17 10.2	2.190	3.021	12.6	20.3
488395	2016 WQ ₅₂	8 13.7 276°90'		5°5' / 8.9 18			520354	2014 GQ ₆₃	8 13.7 356°61'		8°6' / 6.7 18		
7 10	21 58.90	-28 37.9	2.112	2.989	11.7	20.7	7 10	21 59.04	-34 37.0	1.717	2.600	13.7	20.4
7 20	21 53.81	-29 34.9	2.043	2.981	9.1	20.5	7 20	21 54.41	-35 56.0	1.665	2.597	11.2	20.3
7 30	21 46.67	-30 29.4	1.998	2.973	6.6	20.4	7 30	21 47.23	-37 6.9	1.635	2.596	9.2	20.2
8 9	21 38.13	-31 15.0	1.978	2.966	5.5	20.3	8 9	21 38.35	-38 0.5	1.629	2.594	8.7	20.1
8 19	21 29.06	-31 46.2	1.986	2.958	6.7	20.3	8 19	21 28.91	-38 30.1	1.647	2.594	10.0	20.2
8 29	21 20.50	-31 59.2	2.019	2.950	9.2	20.5	8 29	21 20.23	-38 32.2	1.689	2.594	12.3	20.3
9 8	21 13.38	-31 53.3	2.076	2.942	12.0	20.7	9 8	21 13.47	-38 7.8	1.751	2.594	14.9	20.5
9 18	21 8.37	-31 29.9	2.154	2.934	14.5	20.8	9 18	21 9.35	-37 20.7	1.832	2.595	17.2	20.7
397092	2005 UH ₃₅₇	8 13.7 19°60'		5°9' / 8.4 18			516251	2016 UF ₉₅	8 13.7 260°09'		2°3' / 15.6 18		
7 10	21 56.38	-27 27.8	1.865	2.751	12.6	20.0	7 10	21 56.28	- 6 3.0	2.102	2.941	13.2	22.5
7 20	21 52.08	-28 47.2	1.810	2.754	9.7	19.8	7 20	21 51.77	- 6 14.4	2.010	2.928	10.3	22.3
7 30	21 45.65	-30 5.1	1.779	2.758	7.0	19.7	7 30	21 45.42	- 6 39.2	1.941	2.914	6.9	22.1
8 9	21 37.80	-31 13.7	1.773	2.762	5.9	19.6	8 9	21 37.76	- 7 15.5	1.897	2.900	3.5	21.8
8 19	21 29.46	-32 6.0	1.793	2.766	7.2	19.7	8 19	21 29.52	- 8 0.1	1.880	2.886	2.7	21.8
8 29	21 21.71	-32 37.8	1.839	2.770	9.9	19.9	8 29	21 21.57	- 8 48.4	1.891	2.872	5.9	21.9
9 8	21 15.53	-32 47.9	1.907	2.775	12.8	20.1	9 8	21 14.77	- 9 35.7	1.928	2.857	9.5	22.1
9 18	21 11.57	-32 37.7	1.995	2.780	15.3	20.3	9 18	21 9.79	-10 18.1	1.989	2.842	12.8	22.3
403305	2009 BZ ₁₈₄	8 13.7 87°89'		4°7' / 16.8 17			242477	2004 TH ₄₉	8 13.7 285°79'		4°5' / 17.2 18		
7 10	21 58.36	- 2 5.3	1.355	2.203	18.7	20.3	7 10	21 55.45	- 0 51.9	1.739	2.570	15.9	20.7
7 20	21 54.00	- 2 4.3	1.287	2.205	14.9	20.1	7 20	21 51.54	- 0 55.0	1.647	2.553	12.9	20.5
7 30	21 47.06	- 2 26.4	1.239	2.208	10.5	19.9	7 30	21 45.47	- 1 18.4	1.575	2.537	9.3	20.2
8 9	21 38.31	- 3 10.0	1.212	2.210	6.3	19.6	8 9	21 37.83	- 2 1.3	1.527	2.520	5.9	20.0
8 19	21 28.87	- 4 10.5	1.210	2.212	4.8	19.5	8 19	21 29.43	- 3 0.9	1.504	2.504	4.6	19.9
8 29	21 20.06	- 5 20.7	1.232	2.215	8.1	19.7	8 29	21 21.33	- 4 11.5	1.507	2.487	7.2	20.0
9 8	21 13.12	- 6 32.0	1.278	2.217	12.4	20.0	9 8	21 14.57	- 5 26.0	1.535	2.471	11.0	20.2
9 18	21 8.86	- 7 37.1	1.344	2.219	16.4	20.3	9 18	21 9.95	- 6 37.6	1.586	2.454	14.7	20.4
30201	Caruana	8 13.7 53°36'		0°9' / 14.3 17			128630	2004 RM ₁₁	8 13.7 274°70'		0°3' / 13.9 18		
7 10	21 57.77	- 9 30.7	1.353	2.227	17.2	18.6	7 10	21 56.60	-12 15.9	2.317	3.172	11.7	20.6
7 20	21 53.36	-10 3.9	1.304	2.244	13.0	18.4	7 20	21 51.86	-12 27.2	2.225	3.156	8.8	20.4
7 30	21 46.51	-10 53.2	1.274	2.260	8.1	18.2	7 30	21 45.40	-12 46.3	2.156	3.140	5.5	20.2
8 9	21 38.08	-11 52.9	1.267	2.277	3.0	17.9	8 9	21 37.75	-13 10.6	2.114	3.124	1.9	19.9
8 19	21 29.21	-12 56.1	1.286	2.295	2.6	17.9	8 19	21 29.57	-13 36.8	2.100	3.108	1.9	19.9
8 29	21 21.18	-13 55.3	1.330	2.313	7.6	18.3	8 29	21 21.68	-14 1.5	2.113	3.092	5.6	20.1
9 8	21 15.06	-14 44.5	1.397	2.330	12.0	18.6	9 8	21 14.87	-14 21.5	2.154	3.075	9.1	20.3
9 18	21 11.53	-15 20.3	1.485	2.348	15.8	18.9	9 18	21 9.75	-14 34.8	2.219	3.059	12.1	20.5
509521	2007 WX ₁₅	8 13.7 66°38'		1°9' / 15.3 18			70578	1999 TF ₁₆₄	8 13.7 313°47'		5°7' / 18.7 18		
7 10	21 56.00	- 7 2.2	1.941	2.789	13.8	21.8	7 10	21 53.50	+ 3 17.3	1.713	2.529	16.8	19.4
7 20	21 51.55	- 7 17.5	1.867	2.791	10.7	21.6	7 20	21 50.02	+ 3 6.2	1.629	2.521	13.8	19.2
7 30	21 45.24	- 7 46.3	1.815	2.792	7.0	21.3	7 30	21 44.49	+ 2 30.6	1.564	2.513	10.5	18.9
8 9	21 37.67	- 8 25.9	1.787	2.793	3.3	21.1	8 9	21 37.50	+ 1 30.8	1.522	2.505	7.2	18.7
8 19	21 29.62	- 9 12.5	1.787	2.794	2.5	21.1	8 19	21 29.85	+ 0 10.3	1.505	2.498	5.7	18.6
8 29	21 22.02	-10 1.0	1.814	2.796	6.0	21.3	8 29	21 22.58	- 1 24.5	1.513	2.491	7.5	18.7
9 8	21 15.71	-10 46.7	1.867	2.797	9.7	21.5	9 8	21 16.66	- 3 4.9	1.547	2.484	10.8	18.9
9 18	21 11.33	-11 25.8	1.943	2.799	13.0	21.7	9 18	21 12.83	- 4 42.6	1.603	2.477	14.3	19.1
494358	2016 TY ₉₀	8 13.7 266°31'		1°2' / 12.7 18			46063	2001 DV ₉₁	8 13.7 1°63'		3°9' / 12.3 18		
7 10	21 56.34	-15 21.9	2.031	2.900	12.5	21.2	7						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
512703	2016 <i>UJ</i> ₉		8 13.7 220°19	7.4/19.6	18		371874	2008 <i>CN</i> ₃₀		8 13.7 134°25	1.4/12.9	17	
7 10	21 57.12	+ 6 41.2	2.063	2.840	15.6	20.7	7 10	22 2.03	-16 15.8	1.502	2.379	15.6	21.5
7 20	21 52.37	+ 7 21.9	1.980	2.838	13.2	20.5	7 20	21 56.59	-16 36.9	1.437	2.381	11.7	21.3
7 30	21 45.77	+ 7 43.0	1.918	2.835	10.7	20.4	7 30	21 48.58	-17 5.8	1.394	2.383	7.1	21.0
8 9	21 37.88	+ 7 43.0	1.878	2.833	8.4	20.2	8 9	21 38.85	-17 36.9	1.374	2.385	2.4	20.7
8 19	21 29.45	+ 7 22.2	1.863	2.831	7.4	20.1	8 19	21 28.52	-18 4.6	1.381	2.387	3.4	20.8
8 29	21 21.37	+ 6 43.4	1.874	2.829	8.2	20.2	8 29	21 18.93	-18 23.7	1.413	2.389	8.1	21.1
9 8	21 14.50	+ 5 51.7	1.910	2.826	10.4	20.3	9 8	21 11.23	-18 31.3	1.470	2.391	12.5	21.4
9 18	21 9.50	+ 4 53.1	1.970	2.824	12.9	20.5	9 18	21 6.21	-18 26.6	1.547	2.393	16.2	21.6
207906	2008 <i>UQ</i> ₂₀₁		8 13.7 228°31	6.5/19.2	18		318309	2004 <i>TN</i> ₁₁₇		8 13.7 295°74	2.9/12.2	17	
7 10	21 56.98	+ 5 30.8	2.131	2.913	15.0	20.3	7 10	22 1.23	-18 45.9	1.253	2.145	17.1	21.1
7 20	21 52.26	+ 5 54.2	2.041	2.905	12.6	20.1	7 20	21 56.82	-19 14.6	1.173	2.125	12.9	20.7
7 30	21 45.71	+ 5 58.3	1.971	2.897	10.0	19.9	7 30	21 49.23	-19 51.3	1.113	2.105	8.1	20.4
8 9	21 37.87	+ 5 42.3	1.925	2.889	7.6	19.8	8 9	21 39.21	-20 29.0	1.075	2.084	3.5	20.1
8 19	21 29.45	+ 5 7.1	1.904	2.880	6.5	19.7	8 19	21 28.03	-20 59.6	1.060	2.064	5.0	20.1
8 29	21 21.33	+ 4 15.9	1.909	2.871	7.6	19.7	8 29	21 17.38	-21 16.2	1.070	2.044	10.3	20.4
9 8	21 14.36	+ 3 14.1	1.941	2.861	10.0	19.9	9 8	21 8.89	-21 15.2	1.101	2.024	15.5	20.6
9 18	21 9.18	+ 2 7.7	1.996	2.851	12.7	20.0	9 18	21 3.64	-20 56.4	1.150	2.005	20.0	20.8
171438	2007 <i>RG</i> ₈₄		8 13.7 340°78	3.7/11.3	18		93392	2000 <i>SX</i> ₂₈₄		8 13.7 176°38	0.1/13.7	18	
7 10	21 56.07	-20 36.4	1.415	2.310	15.3	19.4	7 10	22 1.55	-13 40.4	2.093	2.947	12.7	19.9
7 20	21 52.42	-21 20.9	1.346	2.300	11.4	19.2	7 20	21 55.58	-13 49.4	2.018	2.949	9.6	19.7
7 30	21 46.17	-22 10.8	1.299	2.291	7.2	18.9	7 30	21 47.70	-14 5.4	1.966	2.951	5.9	19.5
8 9	21 38.08	-22 58.7	1.275	2.282	3.9	18.7	8 9	21 38.53	-14 25.1	1.941	2.952	1.9	19.2
8 19	21 29.27	-23 37.4	1.276	2.275	5.4	18.8	8 19	21 28.92	-14 44.9	1.944	2.952	2.2	19.2
8 29	21 21.10	-24 0.6	1.300	2.268	9.6	19.0	8 29	21 19.79	-15 1.4	1.976	2.952	6.1	19.5
9 8	21 14.79	-24 5.5	1.347	2.262	13.9	19.2	9 8	21 12.04	-15 11.9	2.034	2.952	9.7	19.7
9 18	21 11.16	-23 52.2	1.413	2.257	17.6	19.4	9 18	21 6.27	-15 15.0	2.116	2.951	12.9	19.9
75975	2000 <i>CD</i> ₁₂₁		8 13.7 195°99	1°1/14.8	18		513375	2008 <i>EX</i> ₁₄₉		8 13.7 196°09	2°2/11.6	18	
7 10	21 55.94	- 7 50.8	2.149	2.994	12.8	20.4	7 10	21 58.35	-20 25.2	2.553	3.417	10.4	22.7
7 20	21 51.42	- 8 29.0	2.068	2.992	9.8	20.2	7 20	21 52.98	-20 57.7	2.477	3.415	7.7	22.5
7 30	21 45.15	- 9 20.2	2.011	2.991	6.3	20.0	7 30	21 46.01	-21 32.5	2.426	3.412	4.8	22.3
8 9	21 37.68	-10 21.1	1.981	2.988	2.6	19.7	8 9	21 37.98	-22 5.6	2.403	3.409	2.4	22.1
8 19	21 29.74	-11 27.0	1.978	2.986	2.0	19.7	8 19	21 29.56	-22 33.2	2.408	3.406	3.3	22.2
8 29	21 22.15	-12 32.6	2.003	2.983	5.7	19.9	8 29	21 21.52	-22 52.1	2.442	3.402	6.2	22.4
9 8	21 15.73	-13 32.9	2.055	2.980	9.3	20.2	9 8	21 14.58	-23 0.6	2.502	3.398	9.1	22.6
9 18	21 11.07	-14 24.1	2.131	2.977	12.4	20.4	9 18	21 9.30	-22 58.3	2.586	3.394	11.6	22.7
323019	2002 <i>PB</i> ₁₇₆		8 13.7 317°98	5°1/16.9	17		364991	2008 <i>JL</i> ₃₃		8 13.7 5°46	3°5/10.3	18	
7 10	21 55.89	- 2 10.9	1.344	2.197	18.5	20.4	7 10	21 54.77	-21 2.2	2.035	2.916	11.9	20.3
7 20	21 52.34	- 1 57.4	1.266	2.187	14.9	20.1	7 20	21 50.73	-22 14.0	1.970	2.916	8.9	20.1
7 30	21 46.19	- 2 6.2	1.207	2.176	10.7	19.9	7 30	21 44.81	-23 29.9	1.929	2.917	5.7	19.9
8 9	21 38.13	- 2 36.9	1.169	2.166	6.6	19.6	8 9	21 37.62	-24 43.5	1.914	2.917	3.5	19.8
8 19	21 29.21	- 3 26.5	1.155	2.156	5.2	19.5	8 19	21 29.95	-25 48.3	1.926	2.918	4.9	19.9
8 29	21 20.77	- 4 28.5	1.164	2.147	8.3	19.7	8 29	21 22.73	-26 39.2	1.965	2.919	8.0	20.1
9 8	21 14.09	- 5 34.6	1.196	2.139	12.8	19.9	9 8	21 16.81	-27 13.4	2.029	2.920	11.1	20.3
9 18	21 10.08	- 6 37.0	1.249	2.131	17.0	20.1	9 18	21 12.82	-27 30.2	2.114	2.922	13.8	20.4
176065	2000 <i>VS</i> ₄₃		8 13.7 245°57	1°6/14.7	17		470735	2008 <i>UA</i> ₇₉		8 13.7 299°87	0°6/14.1	17	
7 10	22 0.85	- 9 28.2	1.523	2.384	16.3	20.7	7 10	21 58.03	-11 39.7	1.597	2.466	15.2	21.4
7 20	21 55.78	- 9 31.1	1.444	2.377	12.5	20.4	7 20	21 53.81	-11 49.3	1.501	2.440	11.7	21.1
7 30	21 48.18	- 9 47.9	1.387	2.369	8.1	20.2	7 30	21 47.10	-12 11.0	1.426	2.413	7.4	20.8
8 9	21 38.75	-10 15.5	1.353	2.361	3.4	19.9	8 9	21 38.48	-12 41.8	1.375	2.386	2.7	20.5
8 19	21 28.55	-10 49.6	1.345	2.353	2.8	19.8	8 19	21 28.90	-13 16.9	1.350	2.359	2.6	20.4
8 29	21 18.87	-11 24.6	1.362	2.345	7.5	20.1	8 29	21 19.58	-13 50.8	1.351	2.332	7.7	20.6
9 8	21 10.92	-11 55.4	1.404	2.336	12.2	20.3	9 8	21 11.78	-14 18.5	1.375	2.306	12.4	20.8
9 18	21 5.57	-12 18.3	1.468	2.327	16.2	20.5	9 18	21 6.45	-14 36.6	1.421	2.280	16.7	21.0
108641	2001 <i>NU</i> ₉		8 13.7 73°55	2°4/15.4	17		101209	1998 <i>SL</i> ₄₈		8 13.7 174°64	4°2/10.3	18	
7 10	21 59.09	- 7 23.5	1.869	2.715	14.4	19.7	7 10	22 0.87	-25 8.8	2.131	3.004	11.8	20.3
7 20	21 53.79	- 7 14.8	1.806	2.728	11.1	19.6	7 20	21 55.16	-25 53.5	2.066	3.005	8.9	20.1
7 30	21 46.58	- 7 18.4	1.766	2.741	7.3	19.4	7 30	21 47.47	-26 37.6	2.025	3.006	6.0	19.9
8 9	21 38.14	- 7 32.1	1.751	2.755	3.6	19.2	8 9	21 38.48	-27 15.2	2.010	3.007	4.2	19.8
8 19	21 29.32	- 7 53.0	1.762	2.768	2.8	19.1	8 19	21 29.04	-27 41.5	2.022	3.008	5.3	19.9
8 29	21 21.10	- 8 17.2	1.801	2.782	6.2	19.4	8 29	21 20.16	-27 53.2	2.062	3.008	8.1	20.0
9 8	21 14.34	- 8 40.8	1.865	2.795	9.7	19.6	9 8	21 12.73	-27 49.1	2.126	3.008	11.1	20.2
9 18	21 9.63	- 9 0.7	1.953	2.808	12.9	19.9	9 18	21 7.37	-27 30.4	2.213	3.008	13.7	20.4
213086	1999 <i>TF</i> ₂₃₀		8 13.7 357°74	2°1/12.3	18		46434	2002 <i>JK</i> ₁₄₃		8 13.7 296°47	8°1/ 6.3	18	
7 10	21 51.53	-13 50.6	1.028	1.936	18.6	18.8	7 10	21 58.50	-30 44.3	1.670	2.558	13.8	18.4
7 20	21 49.60	-15 0.7	0.971	1.932	13.9	18.6	7 20	21 54.35	-32 30.1	1.597	2.538	11.0	18.2
7 30	21 44.68	-16 29.1	0.933	1.929	8.4	18.3	7 30	21 47.50	-34 14.7	1.548	2.517	8.7	18.0
8 9	21 37.66	-18 6.4	0.916	1.927	2.9	17.9	8 9	21 38.63	-35 47.7	1.522	2.497	8.2	18.0
8 19	21 29.80	-19 40.6	0.920	1.927	4.7	18.0	8 19	21 28.80	-36 59.0	1.522	2.477	9.9	18.0
8 29	21 22.73	-20 59.8	0.948	1.928	10.3	18.4	8 29	21 19.42	-37 42.0	1.545	2.457	12.8	18.2
9 8	21 17.87	-21 56.4	0.995	1.930	15.6	18.7	9 8	21 11.81	-37 55.1	1.589	2.437	15.9	18.3
9 18	21 16.11	-22 27.5	1.060	1.934	20.0	19.0	9 18	21 6.95	-37 40.3	1.651	2.418	18.7	18.5
346966	2010 <i>CD</i> ₇		8 13.7 103°38	4°0/10.2	18		337287	200					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
474532	2003 VG ₁		8 13.7 267°96	0°7/13.1	16	C	344690	2003 SK ₃₁₂		8 13.7 347°10	4°2/11.1	18	
7 10	22 1.92	-15 8.3	2.759	3.603	10.3	24.4	7 10	21 54.97	-20 50.9	1.287	2.189	16.0	19.7
7 20	21 55.79	-15 33.9	2.639	3.566	7.8	24.2	7 20	21 51.83	-21 40.5	1.223	2.180	12.0	19.5
7 30	21 47.90	-16 5.4	2.544	3.527	4.8	24.0	7 30	21 45.95	-22 36.0	1.179	2.171	7.6	19.2
8 9	21 38.69	-16 39.8	2.477	3.487	1.6	23.7	8 9	21 38.13	-23 29.1	1.157	2.164	4.3	19.0
8 19	21 28.76	-17 13.4	2.440	3.446	2.2	23.7	8 19	21 29.54	-24 11.7	1.159	2.158	5.9	19.1
8 29	21 18.90	-17 42.8	2.435	3.404	5.6	23.8	8 29	21 21.65	-24 36.9	1.184	2.153	10.3	19.3
9 8	21 9.90	-18 5.1	2.457	3.361	8.9	24.0	9 8	21 15.76	-24 41.7	1.231	2.149	14.7	19.5
9 18	21 2.45	-18 18.8	2.505	3.316	11.8	24.1	9 18	21 12.71	-24 26.4	1.296	2.146	18.5	19.8
209543	2004 US ₅		8 13.7 196°94	2°6/15.5	17		478743	2012 UK ₈₀		8 13.7 301°81	8°7/20.1	18	
7 10	22 0.44	-5 55.4	1.603	2.450	16.3	20.9	7 10	21 56.15	+7 43.4	1.766	2.551	17.5	21.3
7 20	21 55.34	-6 8.4	1.526	2.449	12.7	20.7	7 20	21 52.05	+8 30.0	1.681	2.542	15.0	21.1
7 30	21 47.85	-6 38.6	1.471	2.447	8.5	20.5	7 30	21 45.83	+8 53.9	1.614	2.532	12.3	20.9
8 9	21 38.69	-7 23.5	1.439	2.444	4.2	20.2	8 9	21 38.06	+8 52.4	1.569	2.523	9.9	20.7
8 19	21 28.83	-8 18.3	1.434	2.441	3.1	20.1	8 19	21 29.59	+8 25.2	1.547	2.514	8.7	20.6
8 29	21 19.48	-9 16.6	1.455	2.437	7.2	20.4	8 29	21 21.45	+7 35.3	1.549	2.505	9.5	20.7
9 8	21 11.78	-10 12.1	1.501	2.433	11.5	20.6	9 8	21 14.66	+6 29.1	1.575	2.496	11.8	20.8
9 18	21 6.50	-10 59.7	1.569	2.428	15.4	20.9	9 18	21 10.00	+5 14.2	1.623	2.487	14.7	21.0
71603	2000 DU ₉₈		8 13.7 296°44	2°1/11.7	18		284034	2004 XA ₁₆₃		8 13.7 218°16	2°3/15.4	18	
7 10	21 54.93	-18 22.1	2.239	3.112	11.3	19.0	7 10	22 0.83	-7 27.6	2.249	3.081	12.7	21.0
7 20	21 50.75	-19 7.8	2.155	3.098	8.4	18.8	7 20	21 55.04	-7 14.9	2.159	3.073	9.9	20.8
7 30	21 44.82	-19 59.0	2.095	3.084	5.2	18.6	7 30	21 47.42	-7 12.1	2.093	3.065	6.6	20.5
8 9	21 37.66	-20 51.0	2.062	3.070	2.3	18.4	8 9	21 38.53	-7 17.8	2.053	3.056	3.4	20.3
8 19	21 29.97	-21 38.9	2.056	3.057	3.5	18.4	8 19	21 29.11	-7 29.9	2.042	3.047	2.7	20.3
8 29	21 22.61	-22 18.1	2.078	3.043	6.8	18.6	8 29	21 20.04	-7 45.7	2.059	3.037	5.7	20.4
9 8	21 16.37	-22 45.7	2.125	3.030	10.0	18.8	9 8	21 12.14	-8 1.8	2.104	3.027	9.1	20.6
9 18	21 11.89	-23 0.1	2.195	3.016	12.9	19.0	9 18	21 6.06	-8 15.7	2.172	3.017	12.2	20.8
66411	1999 NB ₇		8 13.7 232°66	2°9/15.7	18		22160	2000 WP ₁₂₀		8 13.7 238°25	3°0/11.3	18	
7 10	22 0.90	-6 19.4	2.024	2.858	13.9	18.4	7 10	22 0.02	-20 43.1	2.046	2.917	12.3	18.3
7 20	21 55.27	-5 59.4	1.936	2.849	10.9	18.2	7 20	21 54.73	-21 29.0	1.964	2.906	9.2	18.1
7 30	21 47.64	-5 50.9	1.870	2.840	7.4	18.0	7 30	21 47.36	-22 18.7	1.907	2.894	5.8	17.9
8 9	21 38.60	-5 52.8	1.830	2.831	4.1	17.7	8 9	21 38.54	-23 6.6	1.876	2.882	3.1	17.7
8 19	21 28.95	-6 3.2	1.817	2.821	3.3	17.7	8 19	21 29.10	-23 47.2	1.873	2.870	4.4	17.7
8 29	21 19.67	-6 19.2	1.832	2.811	6.3	17.8	8 29	21 20.06	-24 15.9	1.897	2.857	7.8	17.9
9 8	21 11.69	-6 36.9	1.874	2.800	9.9	18.0	9 8	21 12.40	-24 30.1	1.946	2.843	11.2	18.1
9 18	21 5.71	-6 53.4	1.939	2.789	13.2	18.2	9 18	21 6.82	-24 29.6	2.018	2.830	14.2	18.3
78445	2002 RS ₁₉		8 13.7 333°53	6°1/10.1	18		250051	2002 CM ₂₉₅		8 13.7 298°38	1°4/15.1	18	
7 10	21 58.47	-26 39.9	1.387	2.285	15.4	18.5	7 10	21 53.26	-6 21.7	2.096	2.942	13.0	20.2
7 20	21 54.48	-27 19.9	1.315	2.266	11.9	18.2	7 20	21 49.56	-7 10.5	2.010	2.934	10.0	20.0
7 30	21 47.61	-27 58.5	1.263	2.249	8.3	17.9	7 30	21 44.12	-8 14.9	1.948	2.926	6.5	19.8
8 9	21 38.66	-28 27.3	1.234	2.232	6.1	17.8	8 9	21 37.46	-9 31.3	1.910	2.917	2.8	19.5
8 19	21 28.87	-28 39.0	1.229	2.217	7.6	17.8	8 19	21 30.28	-10 54.7	1.901	2.909	2.1	19.5
8 29	21 19.76	-28 28.5	1.247	2.203	11.3	18.0	8 29	21 23.41	-12 18.7	1.920	2.901	5.8	19.7
9 8	21 12.70	-27 55.4	1.286	2.189	15.3	18.2	9 8	21 17.64	-13 37.3	1.965	2.893	9.4	19.9
9 18	21 8.61	-27 2.3	1.344	2.177	18.9	18.4	9 18	21 13.62	-14 45.9	2.034	2.886	12.6	20.1
53285	Mojmir		8 13.7 69°39	0°9/14.4	18		173174	1997 GO ₁₂		8 13.7 71°79	1°5/12.7	18	
7 10	21 57.56	-10 29.3	1.936	2.793	13.5	19.2	7 10	22 0.65	-15 33.5	1.419	2.300	16.2	19.9
7 20	21 52.66	-10 42.6	1.874	2.805	10.2	19.1	7 20	21 55.55	-16 12.2	1.367	2.313	12.0	19.7
7 30	21 45.92	-11 6.2	1.835	2.818	6.4	18.9	7 30	21 47.94	-17 0.1	1.337	2.327	7.2	19.5
8 9	21 37.99	-11 36.7	1.821	2.830	2.4	18.6	8 9	21 38.70	-17 50.6	1.330	2.341	2.5	19.2
8 19	21 29.70	-12 10.3	1.834	2.843	2.1	18.6	8 19	21 29.00	-18 36.8	1.348	2.354	3.6	19.3
8 29	21 21.97	-12 42.7	1.875	2.855	6.0	18.9	8 29	21 20.15	-19 12.7	1.393	2.368	8.2	19.7
9 8	21 15.62	-13 10.2	1.941	2.868	9.6	19.2	9 8	21 13.27	-19 34.8	1.460	2.382	12.5	20.0
9 18	21 11.23	-13 30.4	2.031	2.881	12.7	19.4	9 18	21 9.05	-19 42.1	1.549	2.396	16.1	20.2
211834	2004 EN ₈₆		8 13.7 246°06	0°5/13.3	18		512229	2015 UG ₇₃		8 13.7 286°87	4°5/18.2	18	
7 10	21 56.41	-13 25.0	2.066	2.929	12.5	20.5	7 10	21 53.42	+1 45.9	2.344	3.147	13.2	21.0
7 20	21 51.89	-14 0.2	1.988	2.925	9.4	20.2	7 20	21 49.45	+1 42.3	2.258	3.143	10.8	20.8
7 30	21 45.53	-14 44.3	1.933	2.920	5.7	20.0	7 30	21 43.95	+1 21.9	2.193	3.139	8.1	20.7
8 9	21 37.90	-15 33.3	1.905	2.916	1.8	19.7	8 9	21 37.39	+0 45.6	2.153	3.135	5.6	20.5
8 19	21 29.77	-16 22.3	1.904	2.911	2.4	19.8	8 19	21 30.40	-0 4.5	2.140	3.131	4.5	20.4
8 29	21 22.04	-17 6.6	1.930	2.906	6.3	20.0	8 29	21 23.70	-1 4.3	2.153	3.127	5.9	20.5
9 8	21 15.54	-17 42.3	1.983	2.901	9.9	20.2	9 8	21 18.00	-2 9.0	2.194	3.123	8.5	20.7
9 18	21 10.93	-18 7.1	2.058	2.896	13.0	20.4	9 18	21 13.85	-3 13.4	2.259	3.120	11.2	20.8
257099	2008 GO ₄₆		8 13.7 353°61	4°7/9.2	18		482294	2011 TH ₁₅		8 13.7 296°52	2°3/15.7	18	
7 10	21 56.44	-25 41.1	2.127	3.007	11.5	20.4	7 10	21 54.36	-5 7.5	1.875	2.721	14.3	20.9
7 20	21 51.96	-26 50.2	2.064	3.006	8.7	20.3	7 20	21 50.70	-5 36.7	1.776	2.697	11.2	20.7
7 30	21 45.58	-27 59.3	2.025	3.006	6.1	20.1	7 30	21 45.02	-6 23.8	1.699	2.674	7.6	20.4
8 9	21 37.91	-29 2.0	2.012	3.005	4.7	20.0	8 9	21 37.83	-7 26.3	1.645	2.650	3.8	20.2
8 19	21 29.77	-29 52.3	2.026	3.005	6.0	20.1	8 19	21 29.89	-8 39.9	1.619	2.626	2.8	20.0
8 29	21 22.11	-30 26.2	2.067	3.005	8.6	20.3	8 29	21 22.16	-9 58.4	1.619	2.602	6.5	20.2
9 8	21 15.78	-30 41.8	2.131	3.005	11.4	20.4	9 8	21 15.62	-11 14.8	1.645	2.578	10.6	20.4
9 18	21 11.41	-30 39.8	2.217	3.005	13.9	20.6	9 18	21 11.07	-12 23.3	1.694	2.555	14.3	20.6
259506	2003 SC ₃₀₁		8 13.7 291°66	3°6/15.9	18		246355	2007 TJ ₃₂₆		8 13.7 327°77	1°2/14.5	18	
7 10	21 57.91	-5 7.4	1.392	2.250	17.7	21.3	7 10						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
423774	2006 <i>DD</i> ₁₅₉		8 13.7 52°39	4.6/11.5	16		314452	2005 <i>VR</i> ₁₁₃		8 13.8 185°03	0.4/13.3	18	
7 10	22 6.85	-25 11.9	1.447	2.329	15.8	20.4	7 10	21 56.42	-14 21.5	2.729	3.582	10.1	22.7
7 20	21 59.90	-25 30.1	1.411	2.356	11.8	20.2	7 20	21 51.47	-14 45.7	2.650	3.582	7.5	22.5
7 30	21 50.39	-25 45.3	1.398	2.383	7.7	20.1	7 30	21 45.10	-15 15.5	2.596	3.582	4.6	22.3
8 9	21 39.44	-25 51.0	1.409	2.411	4.8	20.0	8 9	21 37.79	-15 48.0	2.570	3.581	1.5	22.1
8 19	21 28.38	-25 42.6	1.445	2.439	5.9	20.1	8 19	21 30.13	-16 19.8	2.573	3.580	1.9	22.2
8 29	21 18.57	-25 18.6	1.507	2.467	9.3	20.4	8 29	21 22.79	-16 48.1	2.604	3.578	5.0	22.4
9 8	21 11.07	-24 40.1	1.593	2.495	12.9	20.7	9 8	21 16.42	-17 10.2	2.664	3.576	7.9	22.6
9 18	21 6.40	-23 50.2	1.699	2.523	16.0	20.9	9 18	21 11.49	-17 24.7	2.748	3.574	10.5	22.7
246333	2007 <i>TK</i> ₂₃₈		8 13.7 261°29	3.2/11.1	18		9406	1994 <i>WG</i> ₂		8 13.8 231°93	0.8/14.5	18	
7 10	21 58.47	-21 12.5	1.967	2.843	12.5	20.4	7 10	21 56.32	-9 16.7	2.011	2.864	13.2	17.9
7 20	21 53.61	-22 0.3	1.892	2.836	9.3	20.2	7 20	21 51.89	-9 50.4	1.930	2.859	10.1	17.7
7 30	21 46.69	-22 51.7	1.841	2.828	5.9	20.0	7 30	21 45.60	-10 36.8	1.872	2.854	6.4	17.4
8 9	21 38.35	-23 40.6	1.816	2.821	3.4	19.8	8 9	21 38.01	-11 32.2	1.840	2.849	2.4	17.2
8 19	21 29.43	-24 21.5	1.817	2.813	4.6	19.8	8 19	21 29.88	-12 31.8	1.835	2.844	2.1	17.1
8 29	21 20.97	-24 49.7	1.846	2.805	8.0	20.0	8 29	21 22.13	-13 30.4	1.858	2.839	6.1	17.4
9 8	21 13.93	-25 2.8	1.899	2.797	11.4	20.2	9 8	21 15.61	-14 22.8	1.907	2.833	9.8	17.6
9 18	21 8.99	-25 0.7	1.974	2.789	14.4	20.4	9 18	21 10.98	-15 5.6	1.980	2.827	13.1	17.8
272194	2005 <i>QA</i> ₇		8 13.7 356°93	2.4/15.5	17		329168	2012 <i>CW</i> ₃₉		8 13.8 234°01	1.1/14.9	18	
7 10	21 53.50	-5 24.2	1.283	2.155	18.1	20.4	7 10	21 54.76	-8 31.6	2.477	3.320	11.4	21.3
7 20	21 50.59	-6 0.3	1.216	2.152	14.1	20.2	7 20	21 50.40	-8 55.4	2.392	3.314	8.7	21.1
7 30	21 45.14	-6 59.9	1.168	2.150	9.3	19.9	7 30	21 44.54	-9 29.6	2.330	3.308	5.6	20.9
8 9	21 37.89	-8 18.7	1.142	2.149	4.3	19.6	8 9	21 37.64	-10 11.6	2.294	3.302	2.4	20.7
8 19	21 29.92	-9 49.1	1.140	2.148	3.1	19.6	8 19	21 30.32	-10 58.0	2.287	3.295	1.8	20.6
8 29	21 22.54	-11 21.5	1.162	2.149	7.8	19.8	8 29	21 23.29	-11 44.8	2.309	3.289	5.1	20.8
9 8	21 16.98	-12 46.1	1.207	2.150	12.7	20.1	9 8	21 17.23	-12 28.3	2.357	3.282	8.2	21.0
9 18	21 14.04	-13 56.2	1.273	2.151	17.0	20.4	9 18	21 12.69	-13 5.5	2.430	3.275	11.1	21.2
392291	2010 <i>CJ</i> ₄₃		8 13.7 210°73	7.8/23.1	18		237774	2002 <i>AD</i> ₉₇		8 13.8 227°92	1.0/13.0	18	
7 10	21 56.44	+15 20.1	2.475	3.180	15.0	21.6	7 10	21 59.20	-14 37.9	1.927	2.792	13.2	20.9
7 20	21 51.72	+15 6.3	2.376	3.173	13.2	21.5	7 20	21 54.17	-15 14.0	1.846	2.784	9.9	20.7
7 30	21 45.38	+14 27.8	2.295	3.166	11.1	21.3	7 30	21 47.07	-15 58.9	1.789	2.776	6.1	20.5
8 9	21 37.91	+13 23.4	2.237	3.157	9.2	21.2	8 9	21 38.51	-16 47.9	1.757	2.768	2.0	20.2
8 19	21 29.92	+11 54.4	2.204	3.148	7.9	21.1	8 19	21 29.35	-17 35.7	1.753	2.759	2.8	20.2
8 29	21 22.20	+10 4.8	2.199	3.139	8.1	21.1	8 29	21 20.59	-18 17.1	1.776	2.750	6.9	20.5
9 8	21 15.48	+8 1.4	2.221	3.129	9.5	21.1	9 8	21 13.21	-18 48.3	1.825	2.741	10.8	20.7
9 18	21 10.35	+5 52.1	2.270	3.118	11.6	21.3	9 18	21 7.93	-19 7.4	1.897	2.731	14.1	20.9
402460	2006 <i>BL</i> ₉₈		8 13.7 150°40	1.5/15.1	18		49258	1998 <i>TM</i> ₃₂		8 13.8 31°60	0.5/14.0	18	
7 10	21 57.18	-8 50.7	2.513	3.351	11.4	21.6	7 10	21 58.70	-11 50.4	1.291	2.172	17.4	18.0
7 20	21 52.08	-8 46.9	2.435	3.354	8.7	21.5	7 20	21 54.37	-12 4.0	1.234	2.179	13.1	17.7
7 30	21 45.48	-8 51.6	2.381	3.357	5.7	21.3	7 30	21 47.38	-12 31.2	1.197	2.186	8.2	17.5
8 9	21 37.90	-9 2.9	2.354	3.360	2.6	21.1	8 9	21 38.63	-13 7.0	1.182	2.193	2.8	17.2
8 19	21 29.97	-9 18.6	2.355	3.362	2.0	21.0	8 19	21 29.30	-13 45.5	1.192	2.201	2.8	17.2
8 29	21 22.41	-9 36.0	2.385	3.364	5.0	21.2	8 29	21 20.78	-14 20.3	1.227	2.210	8.0	17.5
9 8	21 15.88	-9 52.4	2.442	3.367	8.0	21.4	9 8	21 14.27	-14 46.4	1.284	2.219	12.7	17.8
9 18	21 10.91	-10 5.4	2.524	3.369	10.7	21.6	9 18	21 10.53	-15 1.1	1.361	2.229	16.8	18.1
216952	1999 <i>VS</i> ₁₀₂		8 13.7 221°23	4.0/17.7	18		512756	2016 <i>UY</i> ₄₅		8 13.8 300°40	3.0/15.7	18	
7 10	21 54.60	+0 21.9	2.483	3.287	12.5	20.6	7 10	21 58.40	-6 33.2	1.806	2.653	14.8	21.0
7 20	21 50.25	+0 24.5	2.396	3.284	10.1	20.4	7 20	21 53.65	-6 14.8	1.722	2.643	11.6	20.8
7 30	21 44.42	+0 12.5	2.331	3.280	7.5	20.3	7 30	21 46.80	-6 9.2	1.660	2.633	7.9	20.6
8 9	21 37.57	+0 13.4	2.292	3.277	5.0	20.1	8 9	21 38.44	-6 15.2	1.621	2.623	4.2	20.3
8 19	21 30.31	+0 51.2	2.279	3.273	4.1	20.0	8 19	21 29.45	-6 30.7	1.609	2.614	3.3	20.2
8 29	21 23.34	-1 37.6	2.295	3.269	5.6	20.1	8 29	21 20.85	-6 51.8	1.623	2.605	6.7	20.4
9 8	21 17.32	-2 28.4	2.338	3.265	8.2	20.3	9 8	21 13.65	-7 14.6	1.663	2.596	10.5	20.6
9 18	21 12.80	-3 19.2	2.405	3.261	10.8	20.5	9 18	21 8.59	-7 35.0	1.725	2.587	14.1	20.8
39500	1981 <i>EK</i> ₃₀		8 13.8 45°64	4.8/16.5	18		380797	2005 <i>WU</i> ₁₃₃		8 13.8 246°18	2.2/12.2	17	
7 10	21 59.85	-3 53.1	1.260	2.118	19.2	19.1	7 10	21 59.14	-17 17.6	1.685	2.563	14.2	21.5
7 20	21 55.22	-3 27.1	1.203	2.127	15.2	18.9	7 20	21 54.36	-18 2.0	1.614	2.559	10.6	21.3
7 30	21 47.90	-3 21.7	1.163	2.135	10.7	18.6	7 30	21 47.28	-18 53.9	1.566	2.556	6.5	21.0
8 9	21 38.77	-3 36.0	1.146	2.145	6.3	18.4	8 9	21 38.60	-19 47.4	1.543	2.552	2.6	20.8
8 19	21 29.04	-4 6.3	1.152	2.154	5.0	18.4	8 19	21 29.30	-20 35.9	1.546	2.549	3.9	20.8
8 29	21 20.12	-4 46.8	1.181	2.164	8.3	18.6	8 29	21 20.54	-21 13.7	1.575	2.545	8.0	21.1
9 8	21 13.24	-5 30.2	1.234	2.175	12.7	18.9	9 8	21 13.41	-21 37.4	1.629	2.542	12.0	21.3
9 18	21 9.17	-6 10.3	1.307	2.185	16.6	19.2	9 18	21 8.64	-21 45.9	1.704	2.538	15.5	21.5
190610	2000 <i>VY</i> ₃₆		8 13.8 298°47	2.0/15.2	18		328157	2008 <i>CB</i> ₁₃₂		8 13.8 112°98	1.0/13.1	17	
7 10	21 56.66	-7 17.5	1.657	2.514	15.4	19.3	7 10	22 2.29	-14 48.3	1.650	2.518	14.9	21.4
7 20	21 52.80	-7 33.3	1.553	2.482	12.1	19.1	7 20	21 56.51	-15 20.6	1.593	2.532	11.1	21.2
7 30	21 46.55	-8 6.1	1.469	2.449	8.0	18.7	7 30	21 48.46	-16 1.2	1.558	2.546	6.7	21.0
8 9	21 38.43	-8 53.7	1.410	2.416	3.7	18.4	8 9	21 38.94	-16 45.0	1.549	2.560	2.2	20.7
8 19	21 29.27	-9 52.0	1.375	2.384	2.8	18.3	8 19	21 28.99	-17 26.0	1.566	2.573	3.0	20.8
8 29	21 20.25	-10 54.6	1.367	2.351	7.4	18.5	8 29	21 19.78	-17 59.2	1.610	2.585	7.4	21.1
9 8	21 12.58	-11 54.7	1.384	2.318	12.1	18.7	9 8	21 12.33	-18 21.3	1.679	2.598	11.4	21.4
9 18	21 7.23	-12 46.6	1.422	2.285	16.4	18.8	9 18	21 7.31	-18 31.0	1.770	2.609	14.8	21.6
330259	2006 <i>RL</i> ₁₁₈		8 13.8 150°95	0.5/14.1	15		207435	2006 <i>DA</i> ₁₉₉		8 13.8 117°37	0.6/14.2		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
434089	2002 <i>CO</i> ₁₆₂		8 13.8 213°55	2°3/11.3	18		186339	2002 <i>EC</i> ₅₃		8 13.8 179°18	1°4/15.2	18	
7 10	21 57.82	-13 45.2	1.953	2.818	13.1	21.2	7 10	21 54.28	-6 49.9	2.312	3.153	12.1	20.4
7 20	21 53.23	-15 45.4	1.874	2.813	9.7	20.9	7 20	21 50.14	-7 26.5	2.233	3.153	9.3	20.3
7 30	21 46.57	-17 59.9	1.820	2.808	5.8	20.7	7 30	21 44.43	-8 15.9	2.177	3.153	6.1	20.1
8 9	21 38.39	-20 20.4	1.794	2.803	2.5	20.5	8 9	21 37.66	-9 14.9	2.147	3.153	2.7	19.8
8 19	21 29.50	-22 37.1	1.798	2.797	4.1	20.6	8 19	21 30.48	-10 19.5	2.145	3.153	2.0	19.8
8 29	21 20.91	-24 40.5	1.831	2.791	8.0	20.8	8 29	21 23.62	-11 24.7	2.172	3.153	5.2	20.0
9 8	21 13.61	-26 23.9	1.892	2.785	11.7	21.0	9 8	21 17.81	-12 25.8	2.226	3.153	8.5	20.2
9 18	21 8.35	-27 44.4	1.975	2.778	14.8	21.2	9 18	21 13.59	-13 19.2	2.304	3.153	11.5	20.4
129740	1999 <i>CK</i> ₃₄		8 13.8 227°93	0°9/13.2	18		329761	2004 <i>FO</i> ₄		8 13.8 52°58	1°0/13.2	17	
7 10	22 3.04	-15 4.9	1.476	2.350	16.0	19.2	7 10	22 2.07	-15 26.7	1.302	2.186	17.2	20.4
7 20	21 57.58	-15 23.0	1.402	2.344	12.1	18.9	7 20	21 56.75	-15 40.5	1.255	2.202	12.7	20.2
7 30	21 49.41	-15 50.3	1.350	2.339	7.4	18.6	7 30	21 48.76	-16 2.9	1.228	2.219	7.7	19.9
8 9	21 39.34	-16 21.8	1.322	2.333	2.4	18.3	8 9	21 39.09	-16 28.6	1.225	2.236	2.5	19.7
8 19	21 28.51	-16 51.6	1.320	2.328	3.2	18.4	8 19	21 29.02	-16 51.5	1.246	2.253	3.2	19.8
8 29	21 18.30	-17 14.2	1.344	2.321	8.2	18.6	8 29	21 19.96	-17 6.8	1.292	2.271	8.2	20.1
9 8	21 10.01	-17 26.0	1.391	2.315	12.9	18.9	9 8	21 13.05	-17 11.5	1.361	2.289	12.7	20.4
9 18	21 4.48	-17 25.7	1.460	2.308	16.9	19.1	9 18	21 8.97	-17 4.9	1.451	2.307	16.5	20.7
254001	2004 <i>FT</i> ₂		8 13.8 135°18	14°4/ 8.9	17		87743	2000 <i>SP</i> ₆₅		8 13.8 356°62	3°6/17.0	18	
7 10	22 24.20	-42 19.7	1.089	1.955	21.0	20.3	7 10	21 52.78	-1 42.3	1.773	2.612	15.4	19.1
7 20	22 14.74	-43 25.3	1.049	1.962	17.9	20.1	7 20	21 49.45	-2 4.5	1.697	2.609	12.2	18.9
7 30	22 0.34	-44 7.1	1.026	1.967	15.4	20.0	7 30	21 44.20	-2 46.6	1.641	2.608	8.6	18.6
8 9	21 42.86	-44 9.1	1.023	1.973	14.4	19.9	8 9	21 37.63	-3 46.6	1.609	2.607	5.1	18.4
8 19	21 24.98	-43 22.5	1.042	1.978	15.4	20.0	8 19	21 30.52	-5 0.0	1.603	2.606	3.7	18.4
8 29	21 9.56	-41 49.4	1.081	1.983	17.9	20.2	8 29	21 23.83	-6 20.3	1.622	2.606	6.4	18.5
9 8	20 58.51	-39 41.2	1.139	1.987	20.8	20.4	9 8	21 18.44	-7 40.5	1.668	2.606	10.1	18.7
9 18	20 52.45	-37 11.7	1.214	1.991	23.7	20.6	9 18	21 15.02	-8 54.2	1.736	2.607	13.5	19.0
428543	2008 <i>CC</i> ₁₉		8 13.8 225°81	0°7/14.3	17		328102	2008 <i>AZ</i> ₂₂		8 13.8 232°76	1°8/12.5	17	
7 10	21 59.90	-9 52.2	1.811	2.666	14.4	22.1	7 10	22 0.54	-15 44.7	1.706	2.577	14.3	21.4
7 20	21 54.85	-10 24.7	1.726	2.656	11.0	21.9	7 20	21 55.51	-16 35.0	1.626	2.568	10.7	21.2
7 30	21 47.59	-11 10.9	1.663	2.646	7.0	21.6	7 30	21 48.09	-17 35.2	1.569	2.557	6.6	20.9
8 9	21 38.74	-12 6.8	1.626	2.635	2.5	21.3	8 9	21 38.95	-18 39.2	1.536	2.547	2.4	20.6
8 19	21 29.17	-13 7.1	1.615	2.624	2.3	21.3	8 19	21 29.06	-19 40.2	1.531	2.535	3.6	20.7
8 29	21 19.98	-14 5.6	1.632	2.612	6.8	21.6	8 29	21 19.60	-20 31.6	1.553	2.524	8.0	20.9
9 8	21 12.22	-14 56.9	1.675	2.599	11.0	21.8	9 8	21 11.71	-21 8.8	1.599	2.511	12.2	21.2
9 18	21 6.65	-15 37.3	1.741	2.586	14.7	22.0	9 18	21 6.23	-21 30.1	1.666	2.499	15.9	21.4
4331	Hubbard		8 13.8 20°75	6°5/10.2	18		324879	2007 <i>TN</i> ₃₈₀		8 13.8 223°08	2°8/15.8	17	
7 10	21 55.22	-22 37.9	0.859	1.783	19.7	15.2	7 10	21 59.58	-5 7.9	1.630	2.475	16.2	22.0
7 20	21 52.75	-23 55.8	0.824	1.791	14.8	15.0	7 20	21 54.79	-5 24.0	1.548	2.469	12.7	21.8
7 30	21 46.77	-25 17.1	0.807	1.801	9.7	14.7	7 30	21 47.65	-5 58.4	1.487	2.462	8.6	21.5
8 9	21 38.48	-26 28.5	0.809	1.813	6.6	14.6	8 9	21 38.81	-6 48.5	1.451	2.454	4.4	21.2
8 19	21 29.60	-27 18.2	0.832	1.827	8.6	14.8	8 19	21 29.23	-7 49.7	1.440	2.446	3.2	21.2
8 29	21 22.02	-27 39.0	0.875	1.842	13.1	15.1	8 29	21 20.07	-8 55.4	1.455	2.438	7.1	21.4
9 8	21 17.22	-27 30.4	0.936	1.859	17.6	15.4	9 8	21 12.47	-9 58.9	1.496	2.429	11.4	21.6
9 18	21 15.93	-26 56.3	1.013	1.876	21.5	15.7	9 18	21 7.23	-10 54.5	1.559	2.420	15.3	21.8
391292	2006 <i>SP</i> ₂₉₃		8 13.8 60°16	1°4/12.8	18		342810	2008 <i>XQ</i> ₃		8 13.8 283°70	1°6/12.6	18	
7 10	21 59.30	-17 2.7	1.887	2.758	13.2	21.1	7 10	21 58.83	-16 38.1	1.769	2.643	13.8	21.0
7 20	21 54.12	-17 22.0	1.822	2.764	9.8	20.8	7 20	21 54.20	-17 9.7	1.683	2.626	10.3	20.8
7 30	21 46.95	-17 46.5	1.781	2.770	6.0	20.6	7 30	21 47.27	-17 49.0	1.620	2.609	6.4	20.5
8 9	21 38.46	-18 12.0	1.765	2.776	2.1	20.4	8 9	21 38.69	-18 31.1	1.581	2.592	2.3	20.2
8 19	21 29.56	-18 34.0	1.776	2.782	3.0	20.5	8 19	21 29.36	-19 10.3	1.569	2.575	3.4	20.3
8 29	21 21.25	-18 48.9	1.815	2.788	6.9	20.7	8 29	21 20.42	-19 41.4	1.584	2.557	7.7	20.5
9 8	21 14.42	-18 54.2	1.878	2.794	10.5	21.0	9 8	21 12.94	-20 0.5	1.623	2.540	11.8	20.7
9 18	21 9.71	-18 49.2	1.964	2.801	13.6	21.2	9 18	21 7.75	-20 6.3	1.684	2.523	15.4	20.9
399920	2005 <i>YJ</i> ₃₈		8 13.8 156°99	4°2/17.4	18		318205	2004 <i>RT</i> ₁₆₈		8 13.8 355°29	5°1/18.1	18	
7 10	22 1.33	+ 0 23.0	2.995	3.775	11.1	20.6	7 10	21 49.65	+ 0 44.4	1.507	2.350	17.3	19.8
7 20	21 54.93	+ 1 4.7	2.911	3.781	9.1	20.4	7 20	21 47.43	+ 0 32.7	1.432	2.344	14.1	19.5
7 30	21 47.17	+ 1 36.0	2.851	3.787	6.8	20.3	7 30	21 43.11	- 0 3.8	1.376	2.338	10.4	19.3
8 9	21 38.51	+ 1 56.5	2.818	3.792	4.9	20.2	8 9	21 37.31	- 1 4.0	1.342	2.334	6.7	19.1
8 19	21 29.52	+ 2 6.5	2.815	3.797	4.2	20.1	8 19	21 30.90	- 2 23.6	1.332	2.332	5.1	19.0
8 29	21 20.84	+ 2 7.5	2.841	3.802	5.4	20.2	8 29	21 24.94	- 3 55.1	1.346	2.330	7.3	19.1
9 8	21 13.07	+ 2 1.6	2.896	3.806	7.5	20.4	9 8	21 20.43	- 5 29.3	1.385	2.330	11.1	19.3
9 18	21 6.70	+ 1 51.6	2.978	3.810	9.6	20.5	9 18	21 18.08	- 6 58.0	1.445	2.331	14.8	19.6
418039	2007 <i>VG</i> ₂₆		8 13.8 57°83	4°8/16.7	17		56870	2000 <i>QL</i> ₁₀₄		8 13.8 344°83	0°4/14.2	18	
7 10	21 59.50	- 2 50.4	1.302	2.154	19.1	20.7	7 10	21 54.47	- 9 36.4	2.079	2.935	12.8	19.1
7 20	21 54.96	- 2 34.8	1.241	2.161	15.1	20.5	7 20	21 50.47	-10 25.9	2.003	2.934	9.6	18.9
7 30	21 47.79	- 2 41.0	1.199	2.169	10.7	20.3	7 30	21 44.73	-11 28.1	1.950	2.934	6.0	18.7
8 9	21 38.82	- 3 7.9	1.179	2.177	6.4	20.0	8 9	21 37.80	-12 38.6	1.923	2.933	2.1	18.4
8 19	21 29.22	- 3 51.4	1.182	2.184	5.0	20.0	8 19	21 30.40	-13 52.2	1.924	2.933	2.0	18.4
8 29	21 20.36	- 4 45.0	1.210	2.193	8.2	20.2	8 29	21 23.37	-15 3.0	1.953	2.933	5.9	18.7
9 8	21 13.47	- 5 40.8	1.261	2.201	12.5	20.5	9 8	21 17.51	-16 5.9	2.009	2.932	9.5	18.9
9 18	21 9.32	- 6 32.1	1.332	2.209	16.4	20.7	9 18	21 13.43	-16 57.6	2.087	2.932	12.6	19.1
365604	2010 <i>TG</i> ₁₈₄		8 13.8 68°01	2°6/15.3	17		255053	2005 <i>TE</i> ₁₄₁		8 13.8 20°26	5°8/		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
1197	Rhodesia		8 13.8 137°89	5°0/18.9	18		21002	1987 QU ₇		8 13.8 347°81	2°0/15.3	18	R
7 10	21 57.55	+ 3 53.2	2.626	3.402	12.6	15.7	7 10	21 49.11	- 6 12.9	1.152	2.040	18.6	17.4
7 20	21 52.32	+ 4 8.6	2.551	3.414	10.4	15.6	7 20	21 47.64	- 6 50.2	1.082	2.027	14.5	17.1
7 30	21 45.66	+ 4 8.8	2.498	3.426	8.0	15.4	7 30	21 43.56	- 7 52.9	1.030	2.016	9.5	16.8
8 9	21 38.08	+ 3 54.0	2.470	3.438	5.9	15.3	8 9	21 37.57	- 9 16.8	0.999	2.007	4.2	16.5
8 19	21 30.17	+ 3 25.5	2.469	3.449	5.0	15.3	8 19	21 30.73	-10 53.8	0.990	1.999	3.0	16.4
8 29	21 22.61	+ 2 46.3	2.497	3.459	6.0	15.4	8 29	21 24.44	-12 32.6	1.004	1.993	8.3	16.7
9 8	21 16.05	+ 2 0.4	2.551	3.469	8.0	15.5	9 8	21 20.00	-14 2.2	1.040	1.989	13.5	17.0
9 18	21 10.96	+ 1 11.8	2.631	3.479	10.3	15.7	9 18	21 18.31	-15 14.9	1.096	1.986	18.1	17.2
438328	2006 KP ₅₃		8 13.8 353°31	6°1/ 9.3	16		189549	2000 RA ₆₇		8 13.8 341°33	6°7/10.6	18	
7 10	21 51.03	-22 46.8	1.175	2.089	16.3	20.1	7 10	21 56.17	-26 21.9	1.054	1.968	17.8	18.2
7 20	21 49.18	-24 14.3	1.117	2.079	12.3	19.9	7 20	21 53.54	-26 52.1	0.986	1.947	13.7	17.9
7 30	21 44.52	-25 47.8	1.080	2.072	8.3	19.6	7 30	21 47.49	-27 20.5	0.936	1.927	9.5	17.6
8 9	21 37.85	-27 16.1	1.064	2.065	6.1	19.5	8 9	21 38.92	-27 37.5	0.907	1.909	6.8	17.4
8 19	21 30.39	-28 28.0	1.071	2.061	8.1	19.6	8 19	21 29.28	-27 34.1	0.899	1.893	8.4	17.4
8 29	21 23.64	-29 14.8	1.100	2.058	12.1	19.8	8 29	21 20.45	-27 5.1	0.912	1.879	12.7	17.6
9 8	21 18.95	-29 33.1	1.148	2.057	16.2	20.0	9 8	21 14.12	-26 10.7	0.943	1.867	17.5	17.8
9 18	21 17.19	-29 24.0	1.214	2.058	19.9	20.3	9 18	21 11.32	-24 55.0	0.992	1.857	21.7	18.1
471227	2011 AE ₁₄		8 13.8 69°60	2°4/12.2	17		330366	2006 WS ₁₈		8 13.8 237°41	3°1/11.4	18	
7 10	22 1.18	-17 43.5	1.463	2.345	15.7	20.8	7 10	21 59.30	-18 14.1	1.602	2.483	14.6	20.4
7 20	21 55.95	-18 25.6	1.414	2.361	11.6	20.6	7 20	21 54.71	-19 21.4	1.531	2.478	10.9	20.2
7 30	21 48.25	-19 14.2	1.386	2.376	7.1	20.4	7 30	21 47.66	-20 37.3	1.483	2.473	6.7	19.9
8 9	21 38.97	-20 2.5	1.382	2.391	2.9	20.2	8 9	21 38.87	-21 54.1	1.460	2.467	3.3	19.7
8 19	21 29.26	-20 43.8	1.404	2.407	4.1	20.3	8 19	21 29.36	-23 3.6	1.462	2.462	4.8	19.8
8 29	21 20.42	-21 12.6	1.451	2.422	8.4	20.6	8 29	21 20.38	-23 58.7	1.491	2.456	8.9	20.0
9 8	21 13.53	-21 26.4	1.522	2.438	12.5	20.9	9 8	21 13.08	-24 35.3	1.544	2.450	13.0	20.3
9 18	21 9.25	-21 25.1	1.614	2.453	15.9	21.2	9 18	21 8.29	-24 52.5	1.617	2.444	16.5	20.5
133062	2003 FP ₂₀		8 13.8 209°08	14°1/24.9	17		10742	1988 VK ₂		8 13.8 310°11	4°9/10.1	18	
7 10	22 0.51	+19 4.1	1.476	2.198	22.9	19.9	7 10	21 57.79	-22 41.6	1.511	2.403	14.7	17.2
7 20	21 55.92	+20 2.0	1.397	2.194	20.7	19.8	7 20	21 53.83	-23 51.0	1.439	2.390	11.1	17.0
7 30	21 48.60	+20 24.6	1.331	2.188	18.3	19.6	7 30	21 47.25	-25 5.4	1.388	2.376	7.3	16.7
8 9	21 39.22	+20 5.5	1.282	2.182	16.0	19.4	8 9	21 38.77	-26 16.0	1.361	2.363	5.0	16.6
8 19	21 28.84	+19 1.5	1.252	2.175	14.4	19.3	8 19	21 29.46	-27 14.2	1.360	2.351	6.6	16.6
8 29	21 18.85	+17 15.6	1.244	2.167	14.3	19.3	8 29	21 20.67	-27 52.9	1.382	2.338	10.4	16.8
9 8	21 10.61	+14 57.9	1.257	2.159	15.7	19.3	9 8	21 13.69	-28 9.2	1.428	2.326	14.4	17.0
9 18	21 5.14	+12 22.2	1.292	2.149	18.1	19.5	9 18	21 9.37	-28 3.4	1.492	2.315	17.9	17.2
64165	2001 TW ₄₉		8 13.8 326°78	0°2/13.9	18		152376	2005 UO ₁₈₀		8 13.8 187°51	2°5/11.2	18	
7 10	21 56.64	-12 13.9	1.829	2.695	13.8	19.5	7 10	21 56.81	-20 46.7	2.552	3.420	10.3	20.7
7 20	21 52.34	-12 32.0	1.752	2.689	10.4	19.2	7 20	21 51.97	-21 33.6	2.480	3.420	7.6	20.5
7 30	21 46.00	-13 0.2	1.697	2.684	6.5	19.0	7 30	21 45.55	-22 23.1	2.433	3.419	4.8	20.3
8 9	21 38.26	-13 34.9	1.668	2.678	2.2	18.7	8 9	21 38.09	-23 10.8	2.413	3.418	2.6	20.2
8 19	21 29.96	-14 11.7	1.665	2.673	2.2	18.7	8 19	21 30.24	-23 52.3	2.421	3.417	3.6	20.2
8 29	21 22.11	-14 45.7	1.688	2.669	6.6	19.0	8 29	21 22.75	-24 24.2	2.458	3.415	6.4	20.4
9 8	21 15.65	-15 13.0	1.737	2.664	10.5	19.2	9 8	21 16.33	-24 44.3	2.521	3.414	9.1	20.6
9 18	21 11.26	-15 30.9	1.808	2.660	14.0	19.4	9 18	21 11.50	-24 52.1	2.608	3.412	11.6	20.8
38195	1999 LD ₁₄		8 13.8 349°38	6°2/17.8	18		261490	2005 WV ₅		8 13.8 219°46	3°4/ 9.9	18	
7 10	21 51.10	- 0 29.7	1.205	2.067	19.7	17.7	7 10	21 56.98	-24 2.9	2.790	3.657	9.5	21.1
7 20	21 49.01	- 0 8.9	1.134	2.057	16.0	17.4	7 20	21 52.06	-25 0.2	2.711	3.649	7.2	20.9
7 30	21 44.34	- 0 13.9	1.080	2.048	11.9	17.1	7 30	21 45.62	-25 58.5	2.658	3.640	4.8	20.7
8 9	21 37.80	- 0 45.0	1.047	2.040	7.9	16.9	8 9	21 38.13	-26 53.1	2.633	3.631	3.4	20.6
8 19	21 30.44	- 1 39.4	1.034	2.034	6.2	16.8	8 19	21 30.20	-27 39.7	2.637	3.621	4.4	20.7
8 29	21 23.62	- 2 49.9	1.045	2.030	8.8	16.9	8 29	21 22.56	-28 14.8	2.669	3.611	6.7	20.8
9 8	21 18.60	- 4 6.8	1.077	2.027	13.0	17.2	9 8	21 15.89	-28 36.5	2.727	3.600	9.2	21.0
9 18	21 16.27	- 5 20.8	1.128	2.025	17.2	17.4	9 18	21 10.74	-28 44.6	2.808	3.590	11.4	21.1
131781	2002 AL ₂₅		8 13.8 160°86	0°1/13.8	17		221402	2005 YW ₇₁		8 13.8 116°87	0°8/13.1	18	
7 10	22 4.51	-13 27.7	1.539	2.404	15.9	19.7	7 10	21 57.20	-15 36.3	2.433	3.293	11.0	20.4
7 20	21 58.47	-13 32.1	1.471	2.408	12.0	19.5	7 20	21 52.21	-15 57.5	2.364	3.300	8.2	20.2
7 30	21 49.88	-13 45.8	1.425	2.411	7.5	19.2	7 30	21 45.67	-16 23.9	2.319	3.306	5.0	20.0
8 9	21 39.55	-14 4.7	1.403	2.414	2.5	18.9	8 9	21 38.12	-16 52.0	2.302	3.312	1.6	19.8
8 19	21 28.61	-14 24.4	1.408	2.416	2.6	18.9	8 19	21 30.24	-17 18.5	2.312	3.318	2.2	19.9
8 29	21 18.40	-14 40.0	1.439	2.418	7.6	19.3	8 29	21 22.79	-17 40.2	2.351	3.325	5.5	20.1
9 8	21 10.07	-14 48.4	1.495	2.420	12.0	19.5	9 8	21 16.44	-17 54.8	2.417	3.330	8.6	20.3
9 18	21 4.40	-14 48.0	1.572	2.421	15.8	19.8	9 18	21 11.72	-18 1.1	2.507	3.336	11.2	20.5
365669	2010 VN ₅₃		8 13.8 269°84	3°7/17.4	18		314462	2005 WW ₁₇		8 13.8 326°88	4°9/ 9.2	18	
7 10	21 54.39	- 0 54.1	2.325	3.140	12.9	20.8	7 10	21 57.00	-26 14.7	2.106	2.986	11.7	20.6
7 20	21 50.26	- 0 57.1	2.238	3.134	10.4	20.6	7 20	21 52.50	-27 21.5	2.041	2.983	8.9	20.4
7 30	21 44.55	- 1 15.3	2.173	3.129	7.5	20.4	7 30	21 46.06	-28 28.0	2.000	2.980	6.2	20.3
8 9	21 37.76	- 1 47.5	2.133	3.124	4.8	20.2	8 9	21 38.30	-29 27.6	1.985	2.978	4.9	20.2
8 19	21 30.52	- 2 31.3	2.120	3.118	3.8	20.2	8 19	21 30.04	-30 14.6	1.997	2.975	6.1	20.2
8 29	21 23.57	- 3 23.0	2.135	3.113	5.7	20.3	8 29	21 22.24	-30 44.6	2.035	2.973	8.8	20.4
9 8	21 17.64	- 4 17.8	2.177	3.107	8.5	20.4	9 8	21 15.80	-30 56.1	2.097	2.970	11.6	20.6
9 18	21 13.28	- 5 11.4	2.243	3.102	11.3	20.6	9 18	21 11.35	-30 49.9	2.180	2.968	14.1	20.8
146488	2001 RP ₁₅₃		8 13.8 54°22	3°2/15.8	18		313361	2002 GT ₁₈₃		8 13.8 133°36	4°4/ 9.7	18	
7 10	21 59.46												

EPHEMERIDES

8 13.8

8 13.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
482167	2010 <i>TQ</i> ₁₅₂		8 13.8 137°35	3°7/10.3	18		200240	1999 <i>VS</i> ₈₂		8 13.8 299°50	3°6/16.6	18	
7 10	21 58.80	-24 54.4	2.390	3.261	10.8	21.3	7 10	21 55.62	-2 59.3	1.707	2.548	15.7	20.0
7 20	21 53.51	-25 38.8	2.328	3.266	8.1	21.2	7 20	21 51.77	-3 8.1	1.623	2.538	12.5	19.7
7 30	21 46.52	-26 22.6	2.289	3.271	5.4	21.0	7 30	21 45.79	-3 35.8	1.560	2.528	8.8	19.5
8 9	21 38.42	-27 0.8	2.278	3.276	3.8	20.9	8 9	21 38.28	-4 21.0	1.520	2.518	5.1	19.2
8 19	21 29.95	-27 29.3	2.295	3.281	4.8	21.0	8 19	21 30.09	-5 19.7	1.505	2.509	3.8	19.1
8 29	21 21.97	-27 44.8	2.339	3.285	7.3	21.2	8 29	21 22.26	-6 26.2	1.516	2.499	6.8	19.3
9 8	21 15.23	-27 46.3	2.409	3.289	10.0	21.3	9 8	21 15.82	-7 33.5	1.553	2.490	10.8	19.5
9 18	21 10.28	-27 34.3	2.501	3.294	12.4	21.5	9 18	21 11.52	-8 35.7	1.611	2.480	14.5	19.7
130896	2000 <i>VY</i> ₂₈		8 13.8 260°51	3°1/11.0	18		395597	2011 <i>UT</i> ₃₂₃		8 13.8 24°75	5°3/18.3	18	
7 10	22 0.40	-20 29.7	2.143	3.012	11.9	19.7	7 10	21 55.08	+ 1 31.9	1.845	2.661	15.7	21.2
7 20	21 55.19	-21 27.6	2.047	2.987	9.0	19.4	7 20	21 51.11	+ 1 37.7	1.770	2.664	12.8	21.0
7 30	21 47.86	-22 31.0	1.975	2.961	5.7	19.2	7 30	21 45.23	+ 1 23.4	1.716	2.667	9.6	20.8
8 9	21 38.96	-23 34.1	1.929	2.934	3.2	19.0	8 9	21 38.06	+ 0 49.7	1.686	2.670	6.6	20.7
8 19	21 29.27	-24 30.6	1.912	2.907	4.5	19.0	8 19	21 30.38	- 0 0.8	1.680	2.673	5.3	20.6
8 29	21 19.80	-25 15.1	1.923	2.879	7.9	19.2	8 29	21 23.14	- 1 3.0	1.700	2.677	7.0	20.7
9 8	21 11.55	-25 44.2	1.959	2.850	11.4	19.3	9 8	21 17.21	- 2 10.6	1.746	2.680	10.0	20.9
9 18	21 5.31	-25 57.0	2.018	2.821	14.5	19.5	9 18	21 13.22	- 3 17.4	1.815	2.684	13.1	21.1
294850	2008 <i>CY</i> ₁₇₆		8 13.8 119°22	3°7/10.9	17		99117	2001 <i>FB</i> ₆₈		8 13.8 77°61	4°9/10.3	17	
7 10	22 0.23	-19 36.9	1.532	2.416	15.0	20.6	7 10	22 2.47	-25 43.4	1.786	2.664	13.5	19.9
7 20	21 55.39	-20 50.9	1.474	2.422	11.1	20.4	7 20	21 56.60	-26 34.2	1.741	2.682	10.1	19.7
7 30	21 48.04	-22 11.4	1.438	2.427	7.0	20.1	7 30	21 48.53	-27 23.0	1.719	2.701	6.9	19.5
8 9	21 38.99	-23 29.9	1.427	2.433	3.9	20.0	8 9	21 39.10	-28 3.0	1.722	2.719	4.9	19.5
8 19	21 29.33	-24 37.8	1.441	2.438	5.4	20.1	8 19	21 29.35	-28 28.6	1.752	2.737	6.1	19.6
8 29	21 20.37	-25 28.4	1.482	2.443	9.4	20.3	8 29	21 20.43	-28 36.7	1.808	2.755	9.0	19.8
9 8	21 13.24	-25 58.6	1.546	2.448	13.2	20.6	9 8	21 13.29	-28 27.1	1.888	2.773	12.1	20.0
9 18	21 8.72	-26 8.5	1.630	2.453	16.6	20.8	9 18	21 8.53	-28 1.7	1.989	2.791	14.8	20.2
399928	2005 <i>YU</i> ₁₃₁		8 13.8 162°74	2°5/16.0	18		100891	1998 <i>HJ</i> ₁₂₄		8 13.8 50°70	4°1/16.9	18	
7 10	21 58.00	- 5 42.4	2.623	3.446	11.4	21.3	7 10	21 58.41	- 1 23.1	1.135	1.994	20.9	18.4
7 20	21 52.70	- 5 26.0	2.542	3.448	8.9	21.1	7 20	21 54.14	- 1 56.7	1.098	2.023	16.3	18.2
7 30	21 45.94	- 5 19.0	2.485	3.450	6.1	20.9	7 30	21 47.22	- 2 58.0	1.080	2.053	11.2	18.0
8 9	21 38.23	- 5 20.5	2.454	3.453	3.5	20.8	8 9	21 38.69	- 4 21.5	1.082	2.083	6.2	17.8
8 19	21 30.16	- 5 28.9	2.452	3.454	2.7	20.7	8 19	21 29.83	- 5 58.3	1.108	2.113	4.3	17.8
8 29	21 22.42	- 5 41.7	2.479	3.456	5.0	20.9	8 29	21 22.03	- 7 37.4	1.158	2.144	7.9	18.1
9 8	21 15.68	- 5 56.5	2.533	3.458	7.8	21.1	9 8	21 16.39	- 9 8.7	1.231	2.175	12.4	18.5
9 18	21 10.43	- 6 10.5	2.613	3.459	10.3	21.2	9 18	21 13.52	-10 25.4	1.325	2.206	16.3	18.8
188313	2003 <i>FM</i> ₃₆		8 13.8 29°04	4°8/10.3	18		480386	2015 <i>KC</i> ₄₇		8 13.8 337°46	9°3/20.3	16	
7 10	22 1.15	-27 6.3	2.009	2.885	12.3	19.8	7 10	21 53.26	+ 6 46.3	1.471	2.281	19.3	20.8
7 20	21 55.56	-27 41.3	1.947	2.886	9.4	19.6	7 20	21 50.34	+ 7 35.0	1.390	2.269	16.5	20.6
7 30	21 47.90	-28 13.6	1.909	2.889	6.5	19.4	7 30	21 45.08	+ 7 57.8	1.327	2.257	13.5	20.4
8 9	21 38.89	-28 37.5	1.896	2.891	4.8	19.3	8 9	21 38.10	+ 7 51.6	1.283	2.246	10.7	20.2
8 19	21 29.47	-28 48.3	1.910	2.893	5.9	19.4	8 19	21 30.33	+ 7 16.0	1.261	2.236	9.3	20.1
8 29	21 20.69	-28 43.2	1.950	2.895	8.6	19.5	8 29	21 22.92	+ 6 14.8	1.262	2.227	10.2	20.1
9 8	21 13.47	-28 21.9	2.015	2.898	11.5	19.7	9 8	21 17.05	+ 4 56.0	1.285	2.219	12.9	20.2
9 18	21 8.44	-27 46.3	2.102	2.901	14.2	19.9	9 18	21 13.56	+ 3 29.0	1.329	2.212	16.1	20.4
313996	2004 <i>TE</i> ₂₂₅		8 13.8 5°31	1°7/12.5	18		106984	2000 <i>YJ</i> ₉₈		8 13.8 271°08	0°1/13.7	18	
7 10	21 56.37	-17 18.3	2.001	2.875	12.4	20.9	7 10	22 0.51	-12 35.7	1.543	2.412	15.7	20.1
7 20	21 51.97	-17 50.2	1.932	2.875	9.2	20.7	7 20	21 55.83	-12 59.6	1.454	2.394	11.9	19.8
7 30	21 45.70	-18 27.6	1.886	2.875	5.6	20.5	7 30	21 48.54	-13 36.1	1.387	2.375	7.5	19.5
8 9	21 38.18	-19 6.1	1.866	2.876	2.2	20.3	8 9	21 39.27	-14 21.0	1.344	2.355	2.5	19.2
8 19	21 30.22	-19 40.9	1.873	2.877	3.1	20.4	8 19	21 29.05	-15 8.4	1.327	2.336	2.8	19.1
8 29	21 22.73	-20 7.9	1.907	2.878	6.8	20.6	8 29	21 19.19	-15 51.7	1.336	2.316	8.0	19.4
9 8	21 16.56	-20 24.2	1.966	2.880	10.2	20.8	9 8	21 10.97	-16 25.5	1.368	2.295	12.8	19.6
9 18	21 12.33	-20 28.9	2.047	2.881	13.3	21.0	9 18	21 5.36	-16 46.8	1.422	2.275	17.0	19.9
264408	2000 <i>GL</i> ₄₈		8 13.8 88°13	0°5/14.2	17		364507	2007 <i>EY</i> ₈₈		8 13.8 154°62	0°6/14.4	18	
7 10	22 0.49	-10 48.6	1.588	2.452	15.6	21.1	7 10	21 55.66	-10 11.6	2.669	3.512	10.6	22.2
7 20	21 55.27	-11 15.0	1.532	2.467	11.7	20.9	7 20	21 50.98	-10 39.2	2.594	3.518	8.0	22.1
7 30	21 47.80	-11 53.9	1.498	2.483	7.3	20.7	7 30	21 44.91	-11 15.2	2.543	3.523	5.0	21.9
8 9	21 38.87	-12 40.6	1.489	2.499	2.6	20.4	8 9	21 37.93	-11 56.8	2.519	3.528	1.9	21.7
8 19	21 29.53	-13 29.4	1.505	2.514	2.4	20.5	8 19	21 30.61	-12 40.7	2.524	3.533	1.6	21.7
8 29	21 20.91	-14 14.5	1.548	2.529	7.0	20.8	8 29	21 23.62	-13 23.3	2.558	3.537	4.8	21.9
9 8	21 14.02	-14 51.3	1.616	2.544	11.1	21.1	9 8	21 17.59	-14 1.5	2.620	3.541	7.7	22.1
9 18	21 9.51	-15 17.2	1.706	2.559	14.6	21.3	9 18	21 12.97	-14 32.9	2.707	3.544	10.3	22.3
85618	1998 <i>HM</i> ₁₀₂		8 13.8 105°88	7°2/20.1	18		108746	2001 <i>OZ</i> ₄₀		8 13.8 350°57	2°3/12.3	18	
7 10	21 58.05	+ 6 50.4	1.934	2.713	16.4	19.6	7 10	21 58.34	-17 4.9	1.347	2.237	16.3	19.6
7 20	21 53.18	+ 7 15.0	1.866	2.726	13.8	19.4	7 20	21 54.28	-17 45.6	1.283	2.234	12.1	19.3
7 30	21 46.43	+ 7 17.4	1.816	2.738	11.0	19.3	7 30	21 47.53	-18 35.5	1.240	2.232	7.4	19.0
8 9	21 38.43	+ 6 57.2	1.790	2.750	8.4	19.1	8 9	21 38.90	-19 27.6	1.219	2.229	3.0	18.8
8 19	21 29.98	+ 6 15.8	1.788	2.761	7.2	19.1	8 19	21 29.56	-20 14.4	1.223	2.228	4.3	18.9
8 29	21 22.01	+ 5 17.4	1.812	2.773	8.0	19.2	8 29	21 20.91	-20 49.0	1.252	2.227	9.1	19.1
9 8	21 15.39	+ 4 8.5	1.862	2.784	10.3	19.3	9 8	21 14.21	-21 7.6	1.303	2.226	13.6	19.4
9 18	21 10.71	+ 2 55.7	1.935	2.794	12.9	19.5	9 18	21 10.30	-21 9.2	1.374	2.226	17.5	19.6
83267	2001 <i>RY</i> ₇₇		8 13.8 347°48	0°5/14.2	18		23475	1990 <i>VM</i>					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
377317	2004 <i>HM</i> ₄₄		8 13.8 70°74	8°2/20.1	17		13622	McArthur		8 13.8 228°58	0°3/13.5	18	
7 10	21 58.44	+ 6 34.1	1.546	2.344	19.0	21.1	7 10	21 55.34	-13 20.1	2.813	3.664	9.9	19.3
7 20	21 53.85	+ 7 7.0	1.485	2.358	16.0	20.9	7 20	21 50.79	-13 51.5	2.725	3.655	7.4	19.1
7 30	21 47.02	+ 7 13.5	1.442	2.371	12.7	20.7	7 30	21 44.85	-14 29.5	2.661	3.645	4.6	18.9
8 9	21 38.69	+ 6 52.5	1.420	2.385	9.7	20.6	8 9	21 37.97	-15 11.2	2.625	3.635	1.5	18.7
8 19	21 29.84	+ 6 6.0	1.422	2.399	8.2	20.5	8 19	21 30.68	-15 53.2	2.618	3.625	1.8	18.7
8 29	21 21.61	+ 4 59.3	1.448	2.413	9.2	20.6	8 29	21 23.63	-16 32.2	2.640	3.614	4.9	18.9
9 8	21 15.05	+ 3 40.7	1.498	2.426	11.8	20.8	9 8	21 17.46	-17 5.3	2.689	3.603	7.8	19.1
9 18	21 10.84	+ 2 18.9	1.570	2.440	14.7	21.0	9 18	21 12.65	-17 30.5	2.764	3.592	10.4	19.2
475278	2005 <i>WS</i> ₁₄₄		8 13.8 294°74	0°4/13.6	18		364658	2007 <i>TZ</i> ₁₉₃		8 13.8 6°05	3°4/15.6	17	
7 10	21 59.22	-13 50.8	1.552	2.427	15.3	21.6	7 10	21 52.67	- 7 39.5	0.869	1.772	21.6	20.0
7 20	21 54.78	-14 8.0	1.469	2.411	11.6	21.4	7 20	21 50.82	- 7 21.7	0.818	1.771	16.8	19.7
7 30	21 47.83	-14 35.6	1.407	2.395	7.2	21.1	7 30	21 45.74	- 7 26.8	0.784	1.772	11.2	19.4
8 9	21 39.04	-15 9.5	1.369	2.380	2.4	20.7	8 9	21 38.40	- 7 52.3	0.768	1.775	5.5	19.1
8 19	21 29.41	-15 44.1	1.357	2.365	2.8	20.7	8 19	21 30.24	- 8 32.3	0.771	1.780	4.1	19.1
8 29	21 20.22	-16 13.9	1.370	2.350	7.8	21.0	8 29	21 23.03	- 9 17.9	0.795	1.787	9.3	19.4
9 8	21 12.68	-16 34.4	1.407	2.335	12.4	21.2	9 8	21 18.28	-10 0.2	0.839	1.795	14.9	19.7
9 18	21 7.67	-16 43.2	1.465	2.320	16.5	21.4	9 18	21 16.85	-10 32.5	0.899	1.805	19.7	20.0
356778	2011 <i>UA</i> ₂₉₁		8 13.8 349°49	1°2/12.9	18		217541	2007 <i>BZ</i> ₂₀		8 13.8 315°55	1°9/15.4	18	
7 10	21 57.41	-15 50.6	1.842	2.715	13.4	21.2	7 10	21 52.10	- 4 22.5	1.299	2.169	18.1	18.9
7 20	21 52.92	-16 18.5	1.771	2.713	10.0	21.0	7 20	21 49.87	- 5 24.7	1.211	2.146	14.2	18.6
7 30	21 46.40	-16 53.7	1.722	2.711	6.1	20.7	7 30	21 45.05	- 6 56.6	1.141	2.124	9.4	18.2
8 9	21 38.49	-17 31.6	1.699	2.710	2.1	20.5	8 9	21 38.21	- 8 54.2	1.095	2.102	4.2	17.9
8 19	21 30.07	-18 7.1	1.702	2.709	2.9	20.5	8 19	21 30.31	-11 9.0	1.072	2.081	2.9	17.7
8 29	21 22.15	-18 35.8	1.733	2.708	7.0	20.8	8 29	21 22.69	-13 28.0	1.074	2.061	8.3	18.0
9 8	21 15.66	-18 54.2	1.788	2.707	10.8	21.0	9 8	21 16.73	-15 37.8	1.099	2.041	13.7	18.2
9 18	21 11.26	-19 1.2	1.865	2.707	14.0	21.2	9 18	21 13.47	-17 28.4	1.145	2.022	18.5	18.5
355204	2006 <i>XZ</i> ₆₉		8 13.8 17°75	2°7/15.7	18		156374	2001 <i>YU</i> ₁₆		8 13.8 157°97	4°6/ 9.9	18	
7 10	21 58.01	- 7 2.9	1.887	2.733	14.3	20.2	7 10	22 0.17	-23 16.8	1.842	2.721	13.1	20.4
7 20	21 53.23	- 6 43.4	1.815	2.736	11.1	20.0	7 20	21 55.09	-24 32.9	1.781	2.724	9.8	20.2
7 30	21 46.52	- 6 35.7	1.765	2.739	7.5	19.8	7 30	21 47.79	-25 51.3	1.743	2.728	6.5	20.0
8 9	21 38.52	- 6 38.6	1.740	2.742	3.9	19.6	8 9	21 38.98	-27 4.3	1.732	2.731	4.6	19.9
8 19	21 30.06	- 6 49.7	1.741	2.746	3.1	19.5	8 19	21 29.61	-28 4.7	1.747	2.733	6.0	20.0
8 29	21 22.09	- 7 5.7	1.769	2.750	6.2	19.7	8 29	21 20.81	-28 47.1	1.789	2.735	9.1	20.2
9 8	21 15.49	- 7 22.9	1.822	2.755	9.8	19.9	9 8	21 13.60	-29 9.6	1.854	2.738	12.4	20.4
9 18	21 10.88	- 7 37.9	1.899	2.759	13.0	20.2	9 18	21 8.67	-29 12.7	1.941	2.739	15.2	20.6
245321	2005 <i>EU</i> ₈₁		8 13.8 244°18	0°3/14.1	18		392163	2009 <i>HL</i> ₁₀₄		8 13.8 17°34	6°2/19.3	15	
7 10	21 58.12	-11 43.0	1.950	2.809	13.4	21.2	7 10	21 52.50	+ 3 40.3	1.624	2.444	17.4	21.4
7 20	21 53.38	-12 4.0	1.871	2.804	10.1	20.9	7 20	21 49.39	+ 3 42.3	1.558	2.450	14.3	21.2
7 30	21 46.67	-12 35.2	1.814	2.798	6.3	20.7	7 30	21 44.28	+ 3 19.8	1.511	2.457	10.9	21.0
8 9	21 38.60	-13 12.9	1.782	2.792	2.2	20.4	8 9	21 37.82	+ 2 33.3	1.485	2.465	7.8	20.9
8 19	21 29.96	-13 52.9	1.778	2.787	2.1	20.4	8 19	21 30.86	+ 1 26.3	1.483	2.474	6.2	20.8
8 29	21 21.74	-14 30.5	1.801	2.781	6.3	20.7	8 29	21 24.40	+ 0 5.0	1.506	2.483	7.6	20.9
9 8	21 14.84	-15 1.6	1.850	2.775	10.1	20.9	9 8	21 19.37	- 1 22.3	1.554	2.493	10.6	21.1
9 18	21 9.93	-15 23.8	1.922	2.768	13.5	21.1	9 18	21 16.41	- 2 47.7	1.624	2.504	13.8	21.3
256845	2008 <i>CW</i> ₁₆₈		8 13.8 74°82	4°1/11.1	17		435198	2007 <i>RU</i> ₁₂₃		8 13.8 5°61	8°6/20.9	17	
7 10	22 1.67	-20 47.9	1.404	2.292	15.9	20.1	7 10	21 51.08	+ 7 10.5	1.349	2.167	20.3	20.2
7 20	21 56.54	-21 52.2	1.357	2.306	11.8	19.9	7 20	21 48.74	+ 7 28.5	1.282	2.167	17.2	20.0
7 30	21 48.76	-23 0.7	1.331	2.321	7.4	19.7	7 30	21 44.08	+ 7 15.2	1.232	2.169	13.8	19.8
8 9	21 39.28	-24 4.6	1.330	2.335	4.3	19.5	8 9	21 37.79	+ 6 29.3	1.201	2.171	10.5	19.6
8 19	21 29.31	-24 55.9	1.353	2.349	5.7	19.7	8 19	21 30.86	+ 5 13.2	1.192	2.175	8.7	19.6
8 29	21 20.26	-25 28.7	1.402	2.364	9.7	19.9	8 29	21 24.47	+ 3 34.3	1.206	2.180	9.5	19.6
9 8	21 13.27	-25 41.2	1.473	2.378	13.6	20.2	9 8	21 19.72	+ 1 43.5	1.243	2.186	12.4	19.8
9 18	21 9.05	-25 34.6	1.564	2.392	16.9	20.5	9 18	21 17.38	- 0 8.1	1.301	2.193	15.8	20.0
199098	2005 <i>YN</i> ₂₈		8 13.8 37°96	2°2/12.3	18		504696	2009 <i>HE</i> ₉₉		8 13.8 294°97	6°3/ 9.9	17	
7 10	21 57.42	-16 11.2	1.384	2.272	16.0	19.6	7 10	22 1.95	-25 25.1	1.337	2.231	16.1	20.9
7 20	21 53.36	-17 5.2	1.333	2.283	11.8	19.3	7 20	21 57.32	-26 31.0	1.270	2.220	12.3	20.7
7 30	21 46.82	-18 8.7	1.303	2.295	7.2	19.1	7 30	21 49.61	-27 38.4	1.225	2.210	8.5	20.4
8 9	21 38.65	-19 14.3	1.297	2.307	2.8	18.9	8 9	21 39.68	-28 37.3	1.202	2.200	6.3	20.3
8 19	21 29.98	-20 13.8	1.316	2.320	4.1	19.0	8 19	21 28.83	-29 18.2	1.203	2.189	8.0	20.4
8 29	21 22.10	-21 0.7	1.359	2.333	8.6	19.3	8 29	21 18.71	-29 34.6	1.228	2.179	11.8	20.6
9 8	21 16.11	-21 30.9	1.426	2.347	12.8	19.6	9 8	21 10.79	-29 25.2	1.273	2.170	15.9	20.8
9 18	21 12.71	-21 43.6	1.513	2.361	16.4	19.8	9 18	21 6.01	-28 52.7	1.338	2.160	19.5	21.0
280544	2004 <i>RG</i> ₉₅		8 13.8 291°61	4°0/16.4	18		339116	2004 <i>RN</i> ₂₃₃		8 13.8 301°91	1°4/12.9	18	
7 10	21 58.12	- 3 41.4	1.694	2.534	15.9	20.3	7 10	21 58.19	-15 35.5	1.565	2.444	15.0	21.3
7 20	21 53.91	- 3 30.3	1.591	2.505	12.8	20.1	7 20	21 54.04	-16 5.3	1.481	2.426	11.3	21.1
7 30	21 47.33	- 3 36.3	1.509	2.477	9.1	19.8	7 30	21 47.41	-16 44.8	1.418	2.408	7.0	20.8
8 9	21 38.93	- 3 59.0	1.450	2.448	5.4	19.5	8 9	21 38.93	-17 29.0	1.379	2.390	2.4	20.5
8 19	21 29.54	- 4 36.2	1.416	2.419	4.2	19.4	8 19	21 29.60	-18 11.6	1.366	2.372	3.4	20.5
8 29	21 20.30	- 5 23.3	1.408	2.390	7.4	19.5	8 29	21 20.68	-18 46.5	1.378	2.355	8.2	20.7
9 8	21 12.40	- 6 14.4	1.425	2.361	11.7	19.6	9 8	21 13.38	-19 9.2	1.414	2.338	12.7	20.9
9 18	21 6.77	- 7 3.5	1.464	2.331	15.8	19.8	9 18	21 8.58	-19 17.7	1.470	2.321	16.7	21.2
82307	2001 <i>KX</i> ₄₈		8 13.8 20°62	2°6/12.3	17		240962	2006 <i>HD</i> ₈₂					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V	
480461	2015 <i>LP</i> ₃		8 13.8	47°13	5°7/10.6	16	267758	2003 <i>MJ</i> ₁		8 13.8	52°96	13°2/31.3	17	
7 10	22 4.38	-27 30.4	1.513	2.398	15.1	19.9	7 10	21 56.74	+26 52.6	1.563	2.225	23.9	20.2	
7 20	21 58.37	-28 4.5	1.469	2.412	11.5	19.8	7 20	21 52.59	+26 40.5	1.512	2.255	21.6	20.1	
7 30	21 49.77	-28 34.3	1.446	2.428	7.9	19.6	7 30	21 46.20	+25 45.2	1.472	2.286	19.0	20.0	
8 9	21 39.59	-28 52.4	1.448	2.444	5.8	19.5	8 9	21 38.44	+24 4.2	1.449	2.317	16.4	19.9	
8 19	21 29.09	-28 53.4	1.474	2.460	6.9	19.6	8 19	21 30.35	+21 39.8	1.446	2.349	14.3	19.9	
8 29	21 19.64	-28 35.0	1.526	2.476	10.1	19.8	8 29	21 23.08	+18 40.5	1.466	2.380	13.2	19.9	
9 8	21 12.33	-27 58.5	1.600	2.493	13.4	20.1	9 8	21 17.59	+15 20.5	1.511	2.411	13.6	20.0	
9 18	21 7.80	-27 6.9	1.695	2.510	16.4	20.3	9 18	21 14.46	+11 55.2	1.581	2.443	15.1	20.2	
370018	2000 <i>DC</i> ₈₇		8 13.8	211°98	3°5/11.5	18	80982	2000 <i>EU</i> ₁₂		8 13.8	293°38	7°7/	8.4	18
7 10	22 3.88	-21 59.2	1.745	2.619	13.9	20.7	7 10	22 1.68	-28 50.7	1.457	2.347	15.3	18.7	
7 20	21 57.97	-22 34.7	1.674	2.615	10.5	20.5	7 20	21 57.13	-30 10.0	1.384	2.328	12.0	18.5	
7 30	21 49.63	-23 12.5	1.625	2.611	6.7	20.2	7 30	21 49.55	-31 28.5	1.332	2.310	9.0	18.2	
8 9	21 39.61	-23 46.2	1.602	2.607	3.7	20.1	8 9	21 39.71	-32 35.7	1.304	2.291	7.7	18.1	
8 19	21 28.97	-24 10.0	1.605	2.602	4.9	20.1	8 19	21 28.86	-33 21.6	1.300	2.273	9.3	18.2	
8 29	21 18.94	-24 19.5	1.635	2.596	8.6	20.3	8 29	21 18.59	-33 39.7	1.320	2.255	12.7	18.3	
9 8	21 10.65	-24 13.3	1.690	2.590	12.4	20.5	9 8	21 10.38	-33 28.9	1.360	2.237	16.4	18.5	
9 18	21 4.86	-23 52.2	1.766	2.584	15.7	20.8	9 18	21 5.26	-32 52.1	1.418	2.219	19.7	18.7	
152796	1999 <i>TB</i> ₁₁₅		8 13.8	325°14	0°1/13.9	18	176094	2001 <i>AR</i> ₁₈		8 13.8	332°34	7°7/17.3	18	
7 10	21 56.90	-13 22.6	1.836	2.704	13.6	19.8	7 10	21 52.32	-2 6.8	1.005	1.884	21.4	18.4	
7 20	21 52.65	-13 26.3	1.751	2.690	10.3	19.5	7 20	21 50.61	-1 3.2	0.926	1.859	17.7	18.1	
7 30	21 46.32	-13 38.4	1.689	2.676	6.4	19.3	7 30	21 45.82	-0 21.6	0.864	1.836	13.4	17.8	
8 9	21 38.52	-13 55.8	1.652	2.663	2.2	19.0	8 9	21 38.57	-0 5.4	0.819	1.813	9.3	17.5	
8 19	21 30.10	-14 14.6	1.641	2.650	2.3	18.9	8 19	21 30.01	-0 15.7	0.794	1.793	7.8	17.3	
8 29	21 22.08	-14 31.0	1.657	2.638	6.6	19.2	8 29	21 21.83	-0 48.9	0.789	1.774	10.7	17.4	
9 8	21 15.42	-14 41.5	1.697	2.626	10.6	19.4	9 8	21 15.71	-1 36.6	0.803	1.757	15.6	17.6	
9 18	21 10.85	-14 44.2	1.760	2.614	14.2	19.6	9 18	21 12.90	-2 29.0	0.833	1.742	20.5	17.8	
34290	2000 <i>QQ</i> ₁₅₀		8 13.8	310°23	1°8/12.6	18	449427	2013 <i>HW</i> ₇₄		8 13.8	3°68	4°3/17.7	15	
7 10	21 59.55	-18 40.3	1.981	2.852	12.7	17.6	7 10	21 54.05	-0 27.5	2.059	2.880	14.2	21.5	
7 20	21 54.46	-18 53.0	1.903	2.844	9.5	17.4	7 20	21 50.21	-0 25.1	1.981	2.880	11.4	21.3	
7 30	21 47.34	-19 9.4	1.847	2.836	5.8	17.2	7 30	21 44.67	-0 39.5	1.924	2.880	8.3	21.1	
8 9	21 38.84	-19 25.4	1.818	2.828	2.3	16.9	8 9	21 37.97	-1 9.9	1.891	2.880	5.4	20.9	
8 19	21 29.81	-19 37.0	1.816	2.820	3.2	17.0	8 19	21 30.81	-1 53.5	1.884	2.881	4.3	20.9	
8 29	21 21.25	-19 40.8	1.841	2.812	6.9	17.2	8 29	21 24.01	-2 46.3	1.904	2.882	6.1	21.0	
9 8	21 14.08	-19 34.9	1.891	2.805	10.6	17.4	9 8	21 18.37	-3 42.7	1.950	2.884	9.1	21.2	
9 18	21 8.98	-19 19.0	1.964	2.798	13.7	17.6	9 18	21 14.46	-4 37.8	2.020	2.886	12.1	21.4	
199356	2006 <i>BW</i> ₁₈₂		8 13.8	357°27	0°8/13.3	18	57657	2001 <i>TF</i> ₂₃₀		8 13.8	270°07	4°1/10.7	18	
7 10	21 54.06	-13 38.5	1.231	2.126	17.1	19.3	7 10	21 59.13	-20 54.3	1.627	2.512	14.2	19.5	
7 20	21 51.24	-14 10.5	1.168	2.121	12.9	19.0	7 20	21 54.68	-22 4.7	1.555	2.503	10.7	19.2	
7 30	21 45.74	-14 56.1	1.125	2.118	7.9	18.7	7 30	21 47.76	-23 21.3	1.505	2.493	6.9	19.0	
8 9	21 38.38	-15 49.3	1.104	2.116	2.6	18.4	8 9	21 39.07	-24 36.1	1.480	2.484	4.2	18.8	
8 19	21 30.30	-16 42.7	1.107	2.115	3.3	18.5	8 19	21 29.61	-25 40.8	1.481	2.475	5.7	18.9	
8 29	21 22.90	-17 28.3	1.133	2.115	8.6	18.8	8 29	21 20.66	-26 28.5	1.508	2.466	9.5	19.1	
9 8	21 17.43	-18 0.7	1.181	2.117	13.5	19.1	9 8	21 13.38	-26 56.0	1.558	2.456	13.4	19.3	
9 18	21 14.72	-18 17.1	1.248	2.120	17.7	19.3	9 18	21 8.61	-27 2.9	1.628	2.447	16.8	19.5	
507601	2013 <i>CH</i> ₁₆		8 13.8	68°16	2°1/12.3	17	467726	2009 <i>HM</i> ₂₃		8 13.8	86°95	0°2/13.7	16	
7 10	22 2.30	-20 30.0	2.126	2.992	12.1	20.8	7 10	22 3.21	-12 36.5	1.412	2.282	16.8	22.2	
7 20	21 56.05	-20 42.1	2.078	3.016	9.0	20.7	7 20	21 57.52	-13 5.7	1.363	2.302	12.6	22.0	
7 30	21 48.05	-20 55.5	2.053	3.039	5.5	20.5	7 30	21 49.30	-13 46.6	1.335	2.322	7.7	21.8	
8 9	21 38.99	-21 6.2	2.055	3.063	2.5	20.4	8 9	21 39.49	-14 33.6	1.331	2.342	2.5	21.5	
8 19	21 29.75	-21 10.8	2.086	3.087	3.3	20.5	8 19	21 29.27	-15 20.0	1.353	2.361	2.8	21.6	
8 29	21 21.21	-21 7.1	2.144	3.111	6.5	20.7	8 29	21 19.97	-15 59.8	1.400	2.380	7.7	22.0	
9 8	21 14.15	-20 54.2	2.229	3.134	9.6	21.0	9 8	21 12.69	-16 28.7	1.472	2.399	12.1	22.3	
9 18	21 9.07	-20 32.5	2.337	3.158	12.3	21.2	9 18	21 8.08	-16 44.9	1.565	2.417	15.8	22.5	
37603	1992 <i>HG</i> ₁		8 13.8	82°01	3°1/15.9	18	383603	2007 <i>HW</i> ₃₆		8 13.8	163°86	0°6/13.4	17	
7 10	22 0.60	-5 2.4	1.373	2.227	18.1	19.5	7 10	22 0.09	-14 3.7	1.835	2.699	13.8	21.4	
7 20	21 55.67	-5 12.2	1.317	2.242	14.1	19.3	7 20	21 54.92	-14 32.7	1.764	2.702	10.3	21.2	
7 30	21 48.24	-5 41.8	1.281	2.257	9.5	19.0	7 30	21 47.66	-15 10.4	1.717	2.704	6.3	20.9	
8 9	21 39.15	-6 28.0	1.268	2.271	4.9	18.8	8 9	21 38.97	-15 52.5	1.695	2.706	2.1	20.6	
8 19	21 29.55	-7 25.2	1.279	2.286	3.5	18.8	8 19	21 29.76	-16 33.6	1.700	2.707	2.6	20.7	
8 29	21 20.74	-8 26.1	1.316	2.300	7.5	19.0	8 29	21 21.08	-17 9.0	1.732	2.709	6.8	21.0	
9 8	21 13.86	-9 23.5	1.377	2.315	11.9	19.3	9 8	21 13.88	-17 35.0	1.790	2.710	10.7	21.2	
9 18	21 9.60	-10 12.2	1.460	2.329	15.7	19.6	9 18	21 8.85	-17 49.7	1.870	2.711	14.1	21.4	
417633	2006 <i>WZ</i> ₁₈₉		8 13.8	228°48	4°1/10.4	18	339401	2005 <i>CD</i> ₁₂		8 13.8	285°22	2°3/12.3	18	
7 10	22 0.57	-21 20.3	1.815	2.692	13.4	21.0	7 10	22 0.47	-19 0.2	1.775	2.650	13.7	20.7	
7 20	21 55.57	-22 38.9	1.739	2.683	10.0	20.8	7 20	21 55.50	-19 26.3	1.691	2.634	10.3	20.4	
7 30	21 48.23	-24 3.1	1.687	2.674	6.5	20.6	7 30	21 48.19	-19 57.4	1.629	2.617	6.4	20.1	
8 9	21 39.20	-25 25.1	1.661	2.663	4.2	20.4	8 9	21 39.20	-20 28.4	1.592	2.601	2.8	19.9	
8 19	21 29.41	-26 37.0	1.662	2.653	5.7	20.5	8 19	21 29.47	-20 53.8	1.581	2.584	3.9	19.9	
8 29	21 20.05	-27 32.2	1.689	2.641	9.2	20.7	8 29	21 20.16	-21 9.0	1.597	2.567	8.0	20.1	
9 8	21 12.22	-28 7.2	1.741	2.629	12.8	20.9	9 8	21 12.38	-21 11.4	1.638	2.551	12.0	20.3	
9 18	21 6.74	-28 21.8	1.814	2.617	15.9	21.0	9 18	21 6.94	-21 0.4	1.700	2.534	15.5	20.5	
162097	1998 <i>QF</i> ₃₀		8 13.8	307°51	4°2/17.2	18	390664	2002 <i>RT</i> ₁₆₄		8				

EPHEMERIDES

8 13.8

8 13.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
180147	2003 <i>GL</i> ₉		8 13.8	52°60	2°9/11.4	18	184007	2004 <i>EX</i> ₉₂		8 13.9	40°31	4°1/10.9	17
7 10	21 57.49	-20 2.8	1.902	2.780	12.8	19.6	7 10	21 57.00	-18 12.9	1.196	2.096	17.2	19.1
7 20	21 52.85	-20 53.0	1.849	2.794	9.4	19.4	7 20	21 53.37	-19 47.2	1.156	2.112	12.6	18.9
7 30	21 46.28	-21 46.6	1.820	2.808	5.9	19.2	7 30	21 46.98	-21 30.2	1.136	2.129	7.8	18.7
8 9	21 38.48	-22 37.8	1.816	2.823	3.1	19.1	8 9	21 38.80	-23 10.5	1.140	2.147	4.3	18.5
8 19	21 30.32	-23 21.1	1.840	2.838	4.2	19.2	8 19	21 30.10	-24 37.0	1.168	2.165	6.1	18.7
8 29	21 22.77	-23 52.2	1.890	2.852	7.5	19.4	8 29	21 22.35	-25 41.4	1.219	2.184	10.4	19.0
9 8	21 16.67	-24 8.9	1.964	2.867	10.8	19.6	9 8	21 16.74	-26 20.4	1.292	2.204	14.6	19.3
9 18	21 12.62	-24 11.1	2.061	2.883	13.6	19.9	9 18	21 13.99	-26 34.5	1.383	2.224	18.1	19.6
371536	2006 <i>UZ</i> ₂₆₅		8 13.8	331°34	1°9/12.9	18	469939	2006 <i>BX</i> ₄₀		8 13.9	308°26	0°6/13.3	18
7 10	21 59.42	-17 28.6	1.185	2.081	17.6	20.5	7 10	21 53.94	-9 42.6	1.500	2.375	15.8	20.9
7 20	21 55.56	-17 37.6	1.115	2.068	13.3	20.2	7 20	21 50.98	-11 6.8	1.415	2.357	12.0	20.6
7 30	21 48.61	-17 54.4	1.063	2.056	8.2	19.9	7 30	21 45.61	-12 52.8	1.351	2.340	7.4	20.3
8 9	21 39.41	-18 13.1	1.034	2.045	3.0	19.5	8 9	21 38.43	-14 53.8	1.312	2.323	2.4	20.0
8 19	21 29.26	-18 27.3	1.027	2.034	4.1	19.6	8 19	21 30.34	-17 0.0	1.298	2.306	3.1	20.0
8 29	21 19.81	-18 31.5	1.044	2.024	9.5	19.9	8 29	21 22.57	-19 0.2	1.311	2.290	8.3	20.3
9 8	21 12.55	-18 22.4	1.082	2.016	14.7	20.1	9 8	21 16.31	-20 44.5	1.349	2.274	13.1	20.5
9 18	21 8.46	-17 59.6	1.139	2.008	19.2	20.4	9 18	21 12.49	-22 7.0	1.407	2.258	17.2	20.7
178559	1999 <i>VR</i> ₁₄₃		8 13.9	317°38	1°1/13.3	18	114472	2003 <i>AR</i> ₄₀		8 13.9	273°10	3°3/15.9	18
7 10	21 58.23	-15 23.3	1.218	2.111	17.4	19.8	7 10	21 59.35	-5 31.0	1.641	2.488	16.0	20.1
7 20	21 54.71	-15 37.7	1.138	2.090	13.2	19.5	7 20	21 54.73	-5 21.4	1.556	2.476	12.6	19.9
7 30	21 48.16	-16 3.2	1.078	2.070	8.2	19.1	7 30	21 47.77	-5 27.6	1.492	2.465	8.7	19.6
8 9	21 39.30	-16 34.5	1.040	2.051	2.8	18.7	8 9	21 39.11	-5 48.3	1.451	2.453	4.7	19.4
8 19	21 29.34	-17 5.0	1.024	2.032	3.6	18.7	8 19	21 29.67	-6 20.4	1.436	2.441	3.6	19.3
8 29	21 19.88	-17 27.8	1.032	2.014	9.4	19.0	8 29	21 20.62	-6 59.2	1.447	2.429	7.2	19.5
9 8	21 12.45	-17 38.1	1.062	1.997	14.8	19.3	9 8	21 13.09	-7 39.2	1.483	2.418	11.4	19.7
9 18	21 8.13	-17 33.6	1.110	1.981	19.4	19.5	9 18	21 7.89	-8 15.3	1.540	2.406	15.2	19.9
69765	1998 <i>QN</i> ₁₂		8 13.9	335°03	3°4/16.1	18	306301	2011 <i>SH</i> ₅₈		8 13.9	317°83	1°7/12.7	18
7 10	21 52.32	-5 21.4	1.333	2.204	17.6	17.9	7 10	21 58.52	-17 12.9	1.787	2.662	13.6	20.2
7 20	21 49.90	-5 21.4	1.251	2.185	13.9	17.6	7 20	21 53.91	-17 37.5	1.711	2.655	10.2	19.9
7 30	21 44.98	-5 41.8	1.187	2.166	9.6	17.3	7 30	21 47.14	-18 8.4	1.659	2.648	6.2	19.7
8 9	21 38.20	-6 21.1	1.145	2.149	5.1	17.0	8 9	21 38.86	-18 40.7	1.631	2.641	2.3	19.4
8 19	21 30.53	-7 15.2	1.126	2.133	3.8	16.9	8 19	21 29.99	-19 9.5	1.630	2.635	3.3	19.5
8 29	21 23.25	-8 17.1	1.131	2.119	7.8	17.1	8 29	21 21.61	-19 30.1	1.655	2.629	7.4	19.7
9 8	21 17.63	-9 18.8	1.159	2.105	12.7	17.3	9 8	21 14.73	-19 39.8	1.705	2.623	11.3	19.9
9 18	21 14.59	-10 13.2	1.206	2.093	17.1	17.5	9 18	21 10.05	-19 37.5	1.777	2.617	14.7	20.2
34132	Theoquerin		8 13.9	40°71	1°7/14.9	18	476637	2008 <i>SX</i> ₂₅₀		8 13.9	320°69	0°9/13.3	16
7 10	21 57.93	-8 6.8	1.064	1.949	20.0	18.0	7 10	21 55.91	-14 11.4	1.366	2.254	16.2	21.6
7 20	21 54.20	-8 30.6	1.018	1.962	15.2	17.7	7 20	21 52.69	-14 37.3	1.282	2.231	12.3	21.3
7 30	21 47.55	-9 15.5	0.990	1.977	9.8	17.5	7 30	21 46.79	-15 15.8	1.218	2.210	7.7	21.0
8 9	21 38.98	-10 15.7	0.983	1.992	4.0	17.2	8 9	21 38.85	-16 2.0	1.177	2.188	2.5	20.6
8 19	21 29.86	-11 23.0	0.999	2.009	3.0	17.2	8 19	21 29.93	-16 49.1	1.160	2.168	3.3	20.6
8 29	21 21.73	-12 28.0	1.038	2.025	8.5	17.6	8 29	21 21.40	-17 30.0	1.167	2.148	8.6	20.9
9 8	21 15.89	-13 22.8	1.099	2.043	13.5	17.9	9 8	21 14.62	-17 59.0	1.196	2.129	13.7	21.1
9 18	21 13.06	-14 2.9	1.179	2.060	17.8	18.3	9 18	21 10.57	-18 13.0	1.245	2.111	18.1	21.3
50248	2000 <i>BB</i> ₁₆		8 13.9	340°77	6°6/10.1	18	254306	2004 <i>RU</i> ₃₀₄		8 13.9	265°77	0°9/12.9	18
7 10	22 0.31	-26 1.3	1.224	2.125	16.8	18.4	7 10	21 55.53	-14 40.1	2.380	3.241	11.2	20.6
7 20	21 56.23	-26 56.5	1.164	2.117	12.9	18.1	7 20	21 51.24	-15 21.7	2.293	3.229	8.3	20.4
7 30	21 48.99	-27 51.5	1.124	2.110	8.9	17.9	7 30	21 45.31	-16 10.9	2.229	3.216	5.1	20.2
8 9	21 39.52	-28 36.2	1.105	2.104	6.6	17.7	8 9	21 38.24	-17 3.8	2.193	3.204	1.7	19.9
8 19	21 29.22	-29 1.7	1.110	2.098	8.2	17.8	8 19	21 30.65	-17 55.9	2.185	3.191	2.4	20.0
8 29	21 19.79	-29 2.2	1.137	2.093	12.1	18.0	8 29	21 23.34	-18 42.9	2.205	3.178	5.9	20.2
9 8	21 12.70	-28 37.5	1.185	2.090	16.2	18.2	9 8	21 17.06	-19 21.1	2.252	3.165	9.1	20.4
9 18	21 8.85	-27 50.7	1.251	2.086	19.9	18.5	9 18	21 12.40	-19 48.6	2.322	3.152	12.0	20.5
128833	2004 <i>RU</i> ₃₂₂		8 13.9	168°62	0°1/13.9	18	477828	2011 <i>EW</i> ₆₀		8 13.9	44°27	6°4/9.5	17
7 10	21 58.17	-13 21.1	2.327	3.181	11.6	19.9	7 10	22 0.06	-25 31.0	1.343	2.239	15.9	20.3
7 20	21 53.08	-13 26.8	2.251	3.182	8.7	19.7	7 20	21 55.53	-26 51.9	1.303	2.254	12.0	20.1
7 30	21 46.35	-13 38.8	2.198	3.182	5.4	19.5	7 30	21 48.25	-28 11.8	1.284	2.269	8.3	19.9
8 9	21 38.52	-13 54.6	2.172	3.182	1.8	19.2	8 9	21 39.22	-29 20.4	1.288	2.284	6.4	19.8
8 19	21 30.30	-14 11.2	2.174	3.183	1.9	19.2	8 19	21 29.71	-30 9.3	1.317	2.300	7.9	20.0
8 29	21 22.48	-14 25.5	2.205	3.183	5.4	19.5	8 29	21 21.19	-30 33.3	1.369	2.317	11.3	20.2
9 8	21 15.80	-14 35.1	2.262	3.183	8.7	19.7	9 8	21 14.83	-30 32.4	1.443	2.333	14.8	20.5
9 18	21 10.82	-14 38.5	2.343	3.183	11.6	19.9	9 18	21 11.31	-30 9.2	1.536	2.351	17.8	20.7
485225	2010 <i>VQ</i> ₁₉		8 13.9	282°43	3°6/17.1	18	213352	2001 <i>SJ</i> ₃₄₁		8 13.9	27°04	1°8/15.4	18
7 10	21 55.22	-1 55.7	2.284	3.103	13.0	21.6	7 10	21 55.53	-6 49.7	1.887	2.737	14.1	20.7
7 20	21 51.07	-1 55.0	2.185	3.085	10.4	21.4	7 20	21 51.48	-7 15.5	1.814	2.739	10.9	20.5
7 30	21 45.24	-2 8.8	2.108	3.067	7.5	21.2	7 30	21 45.54	-7 56.0	1.763	2.741	7.1	20.2
8 9	21 38.20	-2 36.4	2.056	3.049	4.7	21.0	8 9	21 38.32	-8 48.0	1.737	2.743	3.3	20.0
8 19	21 30.59	-3 15.7	2.031	3.031	3.7	21.0	8 19	21 30.60	-9 47.0	1.738	2.746	2.4	20.0
8 29	21 23.20	-4 3.0	2.034	3.013	5.8	21.0	8 29	21 23.32	-10 47.2	1.765	2.748	6.0	20.2
9 8	21 16.80	-4 53.7	2.063	2.994	8.9	21.2	9 8	21 17.34	-11 43.3	1.819	2.751	9.8	20.4
9 18	21 12.03	-5 43.4	2.117	2.976	11.9	21.3	9 18	21 13.29	-12 31.2	1.895	2.754	13.1	20.7
100865	1998 <i>HA</i> ₅₈		8 13.9	95°14	1°6/12.8	17	19592	1999 <i>NZ</i> ₂₂		8 13.9	315°03		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
1548	Palomaa		8 13.9 104°82	3°4/10.5	18	R	245257	2005 AG ₈		8 13.9 188°80	1°3/12.6	18	
7 10	21 57.21	-19 25.8	1.963	2.839	12.5	16.1	7 10	21 58.95	-16 11.0	2.458	3.316	11.0	21.7
7 20	21 52.75	-20 56.4	1.903	2.847	9.2	15.9	7 20	21 53.68	-16 55.9	2.380	3.315	8.2	21.6
7 30	21 46.33	-22 32.7	1.867	2.855	5.8	15.7	7 30	21 46.77	-17 46.7	2.327	3.313	5.0	21.4
8 9	21 38.59	-24 7.4	1.858	2.863	3.5	15.6	8 9	21 38.73	-18 39.2	2.301	3.311	1.9	21.1
8 19	21 30.34	-25 32.9	1.877	2.870	4.9	15.7	8 19	21 30.25	-19 29.0	2.304	3.308	2.7	21.2
8 29	21 22.57	-26 43.0	1.924	2.878	8.1	15.9	8 29	21 22.11	-20 11.8	2.337	3.305	5.9	21.4
9 8	21 16.17	-27 34.5	1.995	2.885	11.3	16.1	9 8	21 15.05	-20 44.8	2.396	3.301	9.0	21.6
9 18	21 11.79	-28 6.4	2.089	2.892	14.1	16.3	9 18	21 9.66	-21 6.5	2.479	3.296	11.7	21.8
340383	2006 DX ₂₀₃		8 13.9 69°00	6°2/18.3	18		433474	2013 VN ₁₉		8 13.9 275°18	1°5/12.8	17	
7 10	21 59.82	+ 1 43.7	1.698	2.511	17.0	20.0	7 10	21 59.83	-15 32.5	1.624	2.498	14.8	21.4
7 20	21 54.71	+ 2 18.3	1.637	2.527	13.9	19.8	7 20	21 55.27	-16 10.6	1.538	2.481	11.1	21.1
7 30	21 47.52	+ 2 32.7	1.597	2.542	10.5	19.6	7 30	21 48.23	-16 59.0	1.473	2.463	6.9	20.8
8 9	21 38.97	+ 2 26.7	1.579	2.558	7.5	19.5	8 9	21 39.33	-17 52.1	1.434	2.444	2.4	20.5
8 19	21 29.98	+ 2 2.1	1.586	2.574	6.2	19.4	8 19	21 29.55	-18 43.4	1.420	2.426	3.5	20.5
8 29	21 21.61	+ 1 23.2	1.619	2.590	7.8	19.6	8 29	21 20.15	-19 26.4	1.433	2.408	8.2	20.8
9 8	21 14.79	+ 0 36.0	1.677	2.606	10.7	19.8	9 8	21 12.33	-19 56.3	1.470	2.389	12.6	21.0
9 18	21 10.17	- 0 13.3	1.758	2.622	13.7	20.0	9 18	21 6.99	-20 11.2	1.527	2.370	16.5	21.2
109784	2001 RV ₈₇		8 13.9 144°58	3°8/17.1	17		317750	2003 SD ₅₈		8 13.9 284°86	6°9/18.2	18	
7 10	21 57.35	- 1 21.9	1.737	2.567	16.0	19.5	7 10	21 59.65	+ 2 25.7	1.816	2.621	16.4	19.9
7 20	21 52.99	- 1 42.9	1.663	2.570	12.7	19.3	7 20	21 54.78	+ 3 18.5	1.728	2.610	13.6	19.7
7 30	21 46.55	- 2 24.4	1.610	2.574	9.0	19.1	7 30	21 47.74	+ 3 53.8	1.661	2.600	10.7	19.5
8 9	21 38.68	- 3 24.2	1.580	2.577	5.3	18.9	8 9	21 39.13	+ 4 9.6	1.617	2.590	8.0	19.3
8 19	21 30.25	- 4 37.6	1.577	2.580	3.9	18.8	8 19	21 29.79	+ 4 5.8	1.597	2.579	6.9	19.2
8 29	21 22.28	- 5 58.2	1.600	2.582	6.7	19.0	8 29	21 20.77	+ 3 44.6	1.604	2.569	8.4	19.3
9 8	21 15.74	- 7 18.3	1.649	2.585	10.4	19.2	9 8	21 13.11	+ 3 10.9	1.635	2.559	11.3	19.4
9 18	21 11.32	- 8 31.9	1.722	2.587	13.9	19.4	9 18	21 7.58	+ 2 30.5	1.688	2.549	14.4	19.6
419625	2010 SQ ₁₈		8 13.9 249°57	3°3/11.8	17		8386	Vanvinckenroye		8 13.9 338°44	0°6/13.4	18	
7 10	22 2.39	-19 49.8	1.511	2.393	15.3	21.1	7 10	21 57.34	-14 14.8	1.923	2.790	13.1	17.8
7 20	21 57.26	-20 33.9	1.439	2.386	11.5	20.9	7 20	21 52.85	-14 38.2	1.849	2.788	9.8	17.6
7 30	21 49.44	-21 23.8	1.389	2.378	7.2	20.6	7 30	21 46.41	-15 9.8	1.798	2.785	6.0	17.4
8 9	21 39.70	-22 12.5	1.362	2.370	3.6	20.4	8 9	21 38.64	-15 45.4	1.772	2.783	2.0	17.1
8 19	21 29.17	-22 52.5	1.362	2.362	5.0	20.5	8 19	21 30.35	-16 20.7	1.773	2.781	2.4	17.1
8 29	21 19.24	-23 18.0	1.387	2.354	9.3	20.7	8 29	21 22.53	-16 51.0	1.802	2.779	6.5	17.4
9 8	21 11.19	-23 26.2	1.435	2.345	13.5	20.9	9 8	21 16.05	-17 13.1	1.856	2.778	10.3	17.6
9 18	21 5.89	-23 17.0	1.503	2.336	17.2	21.1	9 18	21 11.57	-17 25.0	1.932	2.776	13.5	17.8
111303	2001 XT ₅₈		8 13.9 299°09	2°5/15.9	18		478015	2011 SM ₁₉₁		8 13.9 300°69	5°7/9.5	18	
7 10	21 55.86	- 5 50.6	1.989	2.831	13.8	19.4	7 10	22 0.38	-27 26.8	1.803	2.685	13.2	20.5
7 20	21 51.74	- 5 55.8	1.901	2.820	10.8	19.2	7 20	21 55.56	-28 20.4	1.726	2.668	10.2	20.3
7 30	21 45.74	- 6 15.0	1.835	2.808	7.3	19.0	7 30	21 48.31	-29 12.9	1.671	2.651	7.3	20.1
8 9	21 38.42	- 6 46.2	1.794	2.797	3.8	18.8	8 9	21 39.33	-29 56.9	1.642	2.634	5.7	19.9
8 19	21 30.51	- 7 26.4	1.780	2.786	2.8	18.7	8 19	21 29.61	-30 25.6	1.638	2.617	7.0	20.0
8 29	21 22.92	- 8 11.0	1.793	2.775	6.0	18.9	8 29	21 20.38	-30 34.6	1.659	2.601	10.1	20.1
9 8	21 16.52	- 8 55.3	1.831	2.764	9.7	19.1	9 8	21 12.79	-30 22.5	1.703	2.584	13.4	20.3
9 18	21 12.00	- 9 35.0	1.893	2.754	13.0	19.2	9 18	21 7.64	-29 51.2	1.768	2.568	16.4	20.5
150282	1999 TK ₇₃		8 13.9 287°96	3°4/11.3	18		218447	2004 RZ ₂₁₆		8 13.9 6°41	0°4/13.6	18	
7 10	22 0.23	-23 27.1	2.158	3.030	11.7	20.1	7 10	22 0.59	-15 56.2	1.917	2.783	13.3	19.3
7 20	21 54.94	-23 52.9	2.077	3.017	8.8	19.9	7 20	21 55.20	-15 45.3	1.846	2.783	9.9	19.1
7 30	21 47.68	-24 19.1	2.018	3.003	5.8	19.7	7 30	21 47.81	-15 39.1	1.797	2.784	6.1	18.9
8 9	21 39.05	-24 40.9	1.987	2.990	3.5	19.5	8 9	21 39.09	-15 34.7	1.775	2.786	2.0	18.6
8 19	21 29.87	-24 54.0	1.982	2.976	4.5	19.5	8 19	21 29.93	-15 29.3	1.779	2.787	2.3	18.6
8 29	21 21.12	-24 55.0	2.005	2.963	7.6	19.7	8 29	21 21.33	-15 20.3	1.811	2.789	6.4	18.9
9 8	21 13.70	-24 42.8	2.054	2.949	10.7	19.9	9 8	21 14.19	-15 6.0	1.869	2.792	10.1	19.1
9 18	21 8.28	-24 17.8	2.124	2.936	13.6	20.1	9 18	21 9.15	-14 45.7	1.949	2.795	13.4	19.4
507297	2011 KB ₃₁		8 13.9 101°08	1°5/12.7	17		427732	2004 PN ₈₄		8 13.9 5°96	4°3/15.8	17	
7 10	22 0.28	-15 51.0	1.825	2.694	13.7	21.8	7 10	21 57.75	- 7 36.7	1.117	1.998	19.6	19.8
7 20	21 54.98	-16 36.8	1.769	2.709	10.1	21.7	7 20	21 54.13	- 6 43.1	1.059	1.998	15.3	19.6
7 30	21 47.65	-17 29.8	1.736	2.725	6.1	21.5	7 30	21 47.62	- 6 5.5	1.019	1.999	10.5	19.3
8 9	21 39.01	-18 24.5	1.729	2.740	2.2	21.2	8 9	21 39.12	- 5 44.0	0.999	2.002	5.8	19.1
8 19	21 29.97	-19 14.9	1.750	2.754	3.2	21.3	8 19	21 29.90	- 5 36.8	1.001	2.007	4.7	19.0
8 29	21 21.57	-19 56.1	1.797	2.769	7.1	21.6	8 29	21 21.51	- 5 39.9	1.027	2.013	8.7	19.3
9 8	21 14.72	-20 24.9	1.870	2.783	10.7	21.9	9 8	21 15.29	- 5 47.9	1.073	2.020	13.4	19.6
9 18	21 10.02	-20 40.2	1.965	2.797	13.8	22.1	9 18	21 12.05	- 5 55.8	1.139	2.029	17.7	19.8
481745	2008 GN ₁₃₀		8 13.9 60°96	5°5/9.2	18		142850	2002 VX ₂₃		8 13.9 257°29	1°1/13.1	18	
7 10	22 0.04	-29 21.0	2.157	3.031	11.7	21.1	7 10	22 1.41	-15 8.8	1.833	2.698	13.8	21.2
7 20	21 54.76	-30 12.9	2.099	3.034	9.0	20.9	7 20	21 56.24	-15 41.6	1.740	2.678	10.4	20.9
7 30	21 47.50	-31 1.1	2.064	3.037	6.6	20.8	7 30	21 48.74	-16 23.4	1.670	2.657	6.4	20.6
8 9	21 38.96	-31 39.5	2.054	3.040	5.5	20.7	8 9	21 39.51	-17 9.8	1.626	2.636	2.2	20.3
8 19	21 30.01	-32 3.2	2.072	3.043	6.5	20.8	8 19	21 29.44	-17 55.0	1.608	2.615	3.0	20.3
8 29	21 21.63	-32 9.2	2.116	3.046	8.9	20.9	8 29	21 19.66	-18 33.4	1.618	2.592	7.5	20.6
9 8	21 14.70	-31 57.3	2.183	3.049	11.5	21.1	9 8	21 11.30	-19 0.9	1.654	2.570	11.7	20.8
9 18	21 9.84	-31 29.1	2.273	3.052	13.8	21.3	9 18	21 5.20	-19 15.6	1.711	2.546	15.4	20.9
326945	2004 DF ₃₉		8 13.9 74°11	0°4/13.6	17		378634	2008 FM ₁₁₆		8 13.9 341°53	3°6/11.7	17	
7 10	22 0.26	-12 29.5											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
445358	2010 NG ₁₁₃		8 13.9 357°44	2°8/15.9	18		232197	2002 GT ₅₄		8 13.9 228°95	3°6/17.1	18	
7 10	21 57.41	- 6 6.3	2.019	2.858	13.7	20.9	7 10	21 57.54	- 1 24.0	2.106	2.924	14.0	21.2
7 20	21 52.78	- 5 52.9	1.941	2.858	10.7	20.7	7 20	21 52.94	- 1 37.0	2.015	2.914	11.2	21.0
7 30	21 46.32	- 5 51.8	1.886	2.857	7.3	20.5	7 30	21 46.50	- 2 7.0	1.945	2.904	8.0	20.8
8 9	21 38.63	- 6 1.5	1.855	2.856	4.0	20.3	8 9	21 38.74	- 2 52.7	1.900	2.894	4.9	20.6
8 19	21 30.45	- 6 19.8	1.852	2.856	3.1	20.2	8 19	21 30.39	- 3 51.0	1.882	2.883	3.7	20.5
8 29	21 22.68	- 6 43.1	1.875	2.856	5.9	20.4	8 29	21 22.31	- 4 57.1	1.892	2.871	6.1	20.6
9 8	21 16.17	- 7 7.6	1.925	2.857	9.4	20.6	9 8	21 15.37	- 6 5.3	1.928	2.859	9.4	20.8
9 18	21 11.51	- 7 29.9	1.998	2.857	12.5	20.8	9 18	21 10.24	- 7 10.1	1.989	2.847	12.6	21.0
306254	2011 QX ₉₅		8 13.9 19°52	10°3/24.7	16		260294	2004 TS ₁₀₁		8 13.9 227°67	3°4/10.3	18	
7 10	21 48.28	+14 14.8	1.201	1.996	23.6	19.2	7 10	21 58.45	-25 6.2	2.807	3.672	9.5	20.9
7 20	21 46.80	+13 58.5	1.149	2.010	20.5	19.0	7 20	21 53.24	-25 46.8	2.728	3.663	7.2	20.7
7 30	21 42.96	+12 58.7	1.111	2.026	16.9	18.9	7 30	21 46.48	-26 27.0	2.673	3.653	4.9	20.6
8 9	21 37.54	+11 15.1	1.091	2.044	13.3	18.7	8 9	21 38.69	-27 2.7	2.646	3.643	3.4	20.5
8 19	21 31.61	+ 8 53.1	1.092	2.064	10.7	18.6	8 19	21 30.48	-27 30.1	2.648	3.632	4.3	20.5
8 29	21 26.39	+ 6 4.8	1.115	2.085	10.6	18.7	8 29	21 22.59	-27 46.3	2.678	3.622	6.6	20.6
9 8	21 22.93	+ 3 6.7	1.162	2.108	12.7	18.9	9 8	21 15.70	-27 50.1	2.734	3.610	9.1	20.8
9 18	21 21.89	+ 0 14.7	1.231	2.132	15.8	19.2	9 18	21 10.35	-27 41.4	2.813	3.599	11.3	20.9
77266	2001 FX ₅₁		8 13.9 196°44	0°1/13.8	18		428080	2006 JG ₈₀		8 13.9 48°70	4°8/ 9.8	16	
7 10	22 1.31	-11 56.7	1.924	2.779	13.7	20.3	7 10	21 57.49	-21 43.0	1.541	2.431	14.6	20.5
7 20	21 55.87	-12 31.2	1.845	2.776	10.3	20.1	7 20	21 53.36	-23 19.6	1.496	2.447	10.8	20.3
7 30	21 48.33	-13 16.6	1.789	2.773	6.4	19.9	7 30	21 46.88	-24 59.9	1.474	2.462	7.0	20.1
8 9	21 39.32	-14 8.5	1.759	2.769	2.1	19.6	8 9	21 38.86	-26 34.2	1.478	2.478	4.9	20.0
8 19	21 29.71	-15 1.8	1.756	2.764	2.3	19.6	8 19	21 30.35	-27 53.6	1.506	2.495	6.4	20.2
8 29	21 20.53	-15 50.9	1.782	2.759	6.6	19.9	8 29	21 22.58	-28 51.7	1.560	2.511	9.8	20.4
9 8	21 12.74	-16 31.5	1.834	2.753	10.5	20.1	9 8	21 16.58	-29 26.0	1.637	2.528	13.3	20.7
9 18	21 7.06	-17 1.0	1.908	2.746	13.9	20.3	9 18	21 13.04	-29 37.6	1.734	2.546	16.2	20.9
286330	2001 XD ₉		8 13.9 301°66	1°1/13.1	18		503691	2016 HD ₂₂		8 13.9 124°00	1°1/13.2	17	
7 10	21 58.13	-16 2.2	1.901	2.772	13.1	20.6	7 10	22 2.60	-14 47.7	1.430	2.305	16.3	21.9
7 20	21 53.63	-16 21.6	1.814	2.754	9.9	20.3	7 20	21 57.33	-15 17.7	1.368	2.311	12.2	21.6
7 30	21 47.03	-16 47.8	1.748	2.737	6.1	20.1	7 30	21 49.43	-15 57.8	1.327	2.316	7.5	21.4
8 9	21 38.92	-17 16.9	1.708	2.719	2.1	19.8	8 9	21 39.74	-16 42.2	1.310	2.321	2.5	21.1
8 19	21 30.14	-17 44.4	1.695	2.702	2.8	19.8	8 19	21 29.42	-17 24.2	1.318	2.325	3.2	21.2
8 29	21 21.71	-18 5.7	1.709	2.685	7.0	20.0	8 29	21 19.85	-17 57.8	1.352	2.330	8.2	21.5
9 8	21 14.62	-18 17.8	1.748	2.668	10.9	20.2	9 8	21 12.24	-18 19.0	1.410	2.334	12.7	21.7
9 18	21 9.61	-18 19.1	1.809	2.651	14.4	20.4	9 18	21 7.35	-18 26.4	1.489	2.338	16.5	22.0
112988	2002 RO ₃₁		8 13.9 243°77	1°0/14.7	18		436239	2010 AB ₈₀		8 13.9 217°13	2°3/15.7	18	
7 10	21 58.63	-10 13.5	2.046	2.897	13.1	19.7	7 10	21 59.10	- 6 27.9	1.936	2.777	14.2	21.2
7 20	21 53.75	-10 22.8	1.962	2.890	10.0	19.5	7 20	21 54.19	- 6 33.2	1.854	2.772	11.0	20.9
7 30	21 46.97	-10 42.4	1.902	2.883	6.4	19.3	7 30	21 47.30	- 6 52.2	1.794	2.768	7.4	20.7
8 9	21 38.87	-11 9.4	1.867	2.876	2.5	19.0	8 9	21 39.01	- 7 22.6	1.759	2.763	3.7	20.5
8 19	21 30.22	-11 40.4	1.860	2.868	2.1	19.0	8 19	21 30.15	- 8 1.2	1.751	2.758	2.7	20.4
8 29	21 21.95	-12 11.3	1.880	2.861	5.9	19.2	8 29	21 21.68	- 8 43.3	1.770	2.752	6.2	20.6
9 8	21 14.92	-12 38.4	1.926	2.853	9.7	19.4	9 8	21 14.51	- 9 24.2	1.816	2.746	9.9	20.8
9 18	21 9.79	-12 58.8	1.996	2.845	13.0	19.6	9 18	21 9.34	-10 0.0	1.885	2.740	13.3	21.0
109575	2001 QQ ₂₇₀		8 13.9 31°22	2°1/12.1	18		5546	Salavat		8 13.9 148°12	4°0/16.8	18	
7 10	21 56.07	-16 6.0	1.672	2.552	14.1	19.3	7 10	22 1.27	- 2 54.3	2.048	2.867	14.3	17.2
7 20	21 52.14	-17 8.5	1.611	2.558	10.4	19.0	7 20	21 55.60	- 2 30.6	1.973	2.873	11.4	17.0
7 30	21 46.08	-18 19.9	1.574	2.564	6.4	18.8	7 30	21 48.05	- 2 20.7	1.920	2.879	8.1	16.8
8 9	21 38.58	-19 33.7	1.561	2.570	2.6	18.6	8 9	21 39.24	- 2 24.1	1.892	2.885	5.1	16.6
8 19	21 30.56	-20 42.5	1.574	2.577	3.8	18.7	8 19	21 29.96	- 2 38.9	1.891	2.890	4.1	16.6
8 29	21 23.11	-21 39.9	1.614	2.584	7.8	19.0	8 29	21 21.13	- 3 2.1	1.918	2.894	6.3	16.7
9 8	21 17.20	-22 21.8	1.677	2.592	11.6	19.2	9 8	21 13.62	- 3 29.5	1.972	2.899	9.5	16.9
9 18	21 13.50	-22 46.6	1.763	2.600	14.9	19.4	9 18	21 8.04	- 3 57.1	2.049	2.903	12.5	17.1
328206	2008 EJ ₆₉		8 13.9 104°17	6°8/ 8.8	17		107303	2001 CE ₆		8 13.9 203°58	1°3/12.9	18	
7 10	22 4.34	-28 10.3	1.617	2.498	14.5	20.7	7 10	22 0.99	-14 33.8	1.696	2.564	14.6	20.6
7 20	21 58.45	-29 39.0	1.575	2.515	11.1	20.6	7 20	21 55.92	-15 19.9	1.622	2.561	10.9	20.4
7 30	21 49.99	-31 4.1	1.556	2.531	8.1	20.4	7 30	21 48.50	-16 16.4	1.570	2.558	6.7	20.1
8 9	21 39.86	-32 15.9	1.562	2.548	6.8	20.4	8 9	21 39.45	-17 17.6	1.543	2.554	2.3	19.8
8 19	21 29.27	-33 6.7	1.593	2.563	8.2	20.5	8 19	21 29.71	-18 16.8	1.544	2.550	3.2	19.9
8 29	21 19.58	-33 32.4	1.650	2.579	11.0	20.7	8 29	21 20.47	-19 7.7	1.571	2.545	7.6	20.2
9 8	21 11.91	-33 33.1	1.728	2.594	14.0	21.0	9 8	21 12.83	-19 45.7	1.623	2.540	11.8	20.4
9 18	21 6.96	-33 12.1	1.827	2.608	16.6	21.2	9 18	21 7.55	-20 9.0	1.697	2.534	15.4	20.6
358935	2008 HO ₅₃		8 13.9 0°61	0°5/14.3	18		95090	2002 AF ₉₉		8 13.9 97°72	0°4/13.7	18	
7 10	21 53.81	- 9 30.8	2.006	2.864	13.0	20.5	7 10	22 2.78	-14 21.1	1.780	2.642	14.3	19.4
7 20	21 50.17	-10 18.0	1.931	2.863	9.9	20.3	7 20	21 56.87	-14 32.2	1.721	2.657	10.7	19.2
7 30	21 44.75	-11 18.2	1.879	2.863	6.2	20.0	7 30	21 48.86	-14 50.8	1.685	2.671	6.5	19.0
8 9	21 38.13	-12 27.2	1.853	2.863	2.2	19.8	8 9	21 39.49	-15 12.8	1.675	2.686	2.1	18.7
8 19	21 31.03	-13 39.5	1.854	2.863	2.0	19.8	8 19	21 29.75	-15 33.9	1.692	2.700	2.4	18.8
8 29	21 24.30	-14 49.3	1.883	2.864	5.9	20.0	8 29	21 20.70	-15 50.3	1.736	2.714	6.7	19.1
9 8	21 18.77	-15 51.3	1.938	2.865	9.6	20.3	9 8	21 13.29	-15 59.3	1.806	2.728	10.5	19.3
9 18	21 15.03	-16 41.9	2.016	2.866	12.8	20.5	9 18	21 8.14	-15 59.5	1.899	2.741	13.8	19.6
150905	2001 SG ₃₅₃		8 13.9 102°26	4°3/11.1	17		23897	Daikuroda		8 13.9 154°44	1°1/12.9	18	
7 10	22 3.18	-23 6.5	1.633										

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
189762	2002 <i>AF</i> ₁₅₇		8 13.9 239°28	1°3/14.9	18		316526	2010 <i>VX</i> ₂₀₀		8 13.9 245°29	0°3/13.7	17	
7 10	21 59.09	- 8 53.1	1.887	2.737	14.1	20.7	7 10	21 58.60	-14 32.8	2.578	3.430	10.7	21.3
7 20	21 54.29	- 9 8.9	1.802	2.728	10.8	20.4	7 20	21 53.42	-14 42.1	2.488	3.418	8.0	21.1
7 30	21 47.42	- 9 37.3	1.740	2.719	7.0	20.2	7 30	21 46.66	-14 56.7	2.422	3.406	5.0	20.9
8 9	21 39.08	-10 15.6	1.703	2.710	2.9	19.9	8 9	21 38.82	-15 13.9	2.384	3.394	1.6	20.6
8 19	21 30.10	-10 59.6	1.692	2.701	2.3	19.9	8 19	21 30.53	-15 31.0	2.374	3.382	1.9	20.7
8 29	21 21.49	-11 44.2	1.710	2.691	6.3	20.1	8 29	21 22.52	-15 45.0	2.394	3.369	5.2	20.9
9 8	21 14.22	-12 24.7	1.752	2.681	10.3	20.3	9 8	21 15.52	-15 53.6	2.440	3.357	8.4	21.0
9 18	21 9.00	-12 57.5	1.818	2.671	13.9	20.5	9 18	21 10.07	-15 55.7	2.512	3.344	11.2	21.2
120627	1996 <i>EM</i> ₉		8 13.9 149°29	0°6/13.3	18		187028	2005 <i>EY</i> ₁₅₀		8 13.9 271°12	1°8/15.2	18	
7 10	21 56.91	-14 27.5	2.528	3.384	10.8	21.0	7 10	21 57.87	- 6 48.7	1.485	2.345	16.7	20.5
7 20	21 52.08	-14 56.3	2.456	3.389	8.0	20.9	7 20	21 53.91	- 7 20.6	1.404	2.335	13.0	20.2
7 30	21 45.76	-15 31.1	2.408	3.394	4.9	20.7	7 30	21 47.46	- 8 12.2	1.345	2.325	8.5	20.0
8 9	21 38.46	-16 8.6	2.387	3.398	1.6	20.5	8 9	21 39.20	- 9 19.8	1.308	2.315	3.8	19.7
8 19	21 30.80	-16 45.2	2.395	3.402	2.0	20.5	8 19	21 30.10	-10 37.1	1.297	2.305	2.7	19.6
8 29	21 23.51	-17 17.4	2.432	3.406	5.3	20.7	8 29	21 21.42	-11 55.9	1.311	2.295	7.5	19.8
9 8	21 17.26	-17 42.6	2.495	3.410	8.3	20.9	9 8	21 14.36	-13 8.4	1.350	2.285	12.2	20.1
9 18	21 12.54	-17 59.3	2.583	3.413	10.9	21.1	9 18	21 9.82	-14 8.8	1.410	2.275	16.4	20.3
369095	2008 <i>GT</i> ₁₂₂		8 13.9 245°90	5°1/ 9.1	18		221621	2006 <i>XL</i> ₅₄		8 13.9 30°85	19°0/27.4	18	
7 10	21 59.58	-28 23.5	2.292	3.164	11.1	21.0	7 10	22 3.46	+21 1.5	1.267	1.989	26.0	18.6
7 20	21 54.44	-29 19.2	2.222	3.157	8.6	20.8	7 20	21 58.48	+24 1.3	1.223	2.002	24.1	18.5
7 30	21 47.39	-30 12.7	2.176	3.151	6.2	20.7	7 30	21 50.46	+26 24.2	1.192	2.016	22.1	18.4
8 9	21 39.04	-30 58.2	2.157	3.144	5.1	20.6	8 9	21 40.22	+28 0.6	1.177	2.031	20.4	18.3
8 19	21 30.19	-31 30.3	2.164	3.137	6.2	20.6	8 19	21 29.07	+28 44.3	1.178	2.046	19.3	18.3
8 29	21 21.78	-31 45.9	2.199	3.129	8.6	20.8	8 29	21 18.62	+28 35.9	1.197	2.063	19.0	18.3
9 8	21 14.68	-31 43.8	2.257	3.122	11.2	20.9	9 8	21 10.37	+27 43.4	1.232	2.080	19.5	18.4
9 18	21 9.53	-31 25.1	2.338	3.115	13.6	21.1	9 18	21 5.30	+26 19.2	1.283	2.099	20.6	18.6
436293	2010 <i>DT</i> ₄₅		8 13.9 47°50	1°3/14.8	16		228610	2002 <i>BO</i> ₁₉		8 13.9 144°35	2°3/11.9	18	
7 10	21 59.12	-10 0.4	1.555	2.420	15.8	20.9	7 10	22 0.86	-18 31.9	2.046	2.913	12.5	21.0
7 20	21 54.37	-10 6.7	1.501	2.435	12.0	20.7	7 20	21 55.38	-19 19.7	1.983	2.922	9.3	20.8
7 30	21 47.42	-10 25.8	1.467	2.450	7.6	20.5	7 30	21 47.96	-20 12.3	1.943	2.930	5.7	20.6
8 9	21 39.04	-10 54.0	1.457	2.466	3.1	20.3	8 9	21 39.26	-21 4.1	1.930	2.938	2.6	20.4
8 19	21 30.25	-11 26.6	1.473	2.482	2.4	20.3	8 19	21 30.13	-21 49.9	1.945	2.945	3.6	20.5
8 29	21 22.18	-11 58.7	1.515	2.498	6.8	20.6	8 29	21 21.52	-22 25.1	1.987	2.952	7.1	20.8
9 8	21 15.80	-12 25.6	1.581	2.515	10.9	20.9	9 8	21 14.32	-22 47.3	2.056	2.958	10.4	21.0
9 18	21 11.76	-12 44.6	1.670	2.532	14.4	21.1	9 18	21 9.13	-22 55.9	2.147	2.964	13.3	21.2
319201	2005 <i>YK</i> ₁₈₁		8 13.9 188°82	4°5/ 8.8	18		505379	2013 <i>JM</i> ₂		8 13.9 20°40	0°5/13.7	17	
7 10	21 59.56	-30 30.4	3.062	3.922	9.0	21.7	7 10	21 55.21	-12 1.2	0.940	1.845	20.2	20.7
7 20	21 53.96	-31 18.0	2.994	3.921	7.0	21.6	7 20	21 52.63	-12 38.9	0.894	1.852	15.2	20.4
7 30	21 46.88	-32 2.1	2.952	3.919	5.2	21.4	7 30	21 46.89	-13 35.3	0.866	1.860	9.4	20.2
8 9	21 38.84	-32 38.3	2.938	3.917	4.5	21.4	8 9	21 39.00	-14 42.4	0.857	1.869	3.0	19.8
8 19	21 30.45	-33 3.2	2.952	3.914	5.3	21.5	8 19	21 30.42	-15 50.2	0.870	1.880	3.5	19.9
8 29	21 22.42	-33 14.4	2.995	3.911	7.1	21.6	8 29	21 22.86	-16 48.5	0.905	1.891	9.5	20.3
9 8	21 15.40	-33 11.4	3.062	3.908	9.1	21.7	9 8	21 17.72	-17 30.3	0.960	1.904	14.9	20.6
9 18	21 9.91	-32 54.9	3.153	3.904	10.9	21.8	9 18	21 15.80	-17 52.6	1.033	1.918	19.4	21.0
343328	2010 <i>CH</i> ₉		8 13.9 168°52	5°8/ 8.2	18		12723	1991 <i>PD</i> ₁₀		8 13.9 231°65	1°0/13.3	18	
7 10	22 0.05	-28 12.2	2.109	2.984	11.8	20.7	7 10	22 3.58	-16 4.0	1.567	2.438	15.4	17.7
7 20	21 54.95	-29 39.6	2.050	2.987	9.1	20.5	7 20	21 58.00	-16 13.4	1.495	2.435	11.6	17.4
7 30	21 47.78	-31 5.4	2.016	2.989	6.7	20.4	7 30	21 49.87	-16 29.9	1.444	2.432	7.1	17.2
8 9	21 39.20	-32 22.0	2.007	2.991	5.8	20.4	8 9	21 39.97	-16 48.8	1.418	2.429	2.4	16.9
8 19	21 30.07	-33 22.7	2.027	2.992	7.1	20.4	8 19	21 29.40	-17 5.3	1.418	2.426	3.0	16.9
8 29	21 21.44	-34 3.1	2.072	2.993	9.5	20.6	8 29	21 19.47	-17 14.8	1.445	2.422	7.8	17.2
9 8	21 14.23	-34 21.9	2.141	2.994	12.1	20.8	9 8	21 11.34	-17 14.8	1.496	2.419	12.2	17.4
9 18	21 9.14	-34 20.4	2.231	2.995	14.5	20.9	9 18	21 5.83	-17 4.2	1.568	2.415	16.0	17.7
123216	2000 <i>UZ</i> ₃₉		8 13.9 272°73	0°1/13.9	18		39493	1981 <i>EV</i> ₁₀		8 13.9 246°59	3°6/16.2	18	
7 10	21 58.74	-12 15.8	1.795	2.658	14.1	20.8	7 10	22 0.09	- 4 35.0	1.530	2.376	17.0	20.0
7 20	21 54.22	-12 42.4	1.707	2.643	10.7	20.5	7 20	21 55.47	- 4 31.8	1.451	2.370	13.4	19.8
7 30	21 47.50	-13 20.3	1.641	2.627	6.7	20.3	7 30	21 48.38	- 4 46.8	1.391	2.363	9.3	19.5
8 9	21 39.16	-14 5.6	1.600	2.611	2.3	20.0	8 9	21 39.51	- 5 18.6	1.355	2.356	5.1	19.2
8 19	21 30.08	-14 53.3	1.586	2.594	2.4	19.9	8 19	21 29.84	- 6 3.4	1.344	2.349	3.8	19.2
8 29	21 21.33	-15 37.6	1.598	2.578	7.0	20.2	8 29	21 20.64	- 6 55.5	1.358	2.341	7.4	19.4
9 8	21 13.96	-16 13.9	1.636	2.561	11.2	20.4	9 8	21 13.07	- 7 48.0	1.397	2.334	11.8	19.6
9 18	21 8.79	-16 39.2	1.696	2.545	14.9	20.6	9 18	21 7.98	- 8 35.4	1.458	2.326	15.8	19.8
479628	2014 <i>DH</i> ₃₈		8 13.9 195°28	4°1/18.1	18		178009	2006 <i>QC</i> ₁₄₆		8 13.9 186°93	2°8/12.1	17	
7 10	21 56.48	+ 1 37.4	2.373	3.170	13.2	22.3	7 10	22 5.18	-20 13.0	1.818	2.686	13.8	20.8
7 20	21 51.93	+ 1 19.0	2.285	3.168	10.7	22.1	7 20	21 58.91	-20 44.0	1.747	2.686	10.3	20.6
7 30	21 45.77	+ 0 43.3	2.218	3.165	7.9	21.9	7 30	21 50.30	-21 18.4	1.699	2.685	6.5	20.4
8 9	21 38.52	+ 0 8.6	2.177	3.162	5.3	21.7	8 9	21 40.09	-21 50.4	1.676	2.684	3.1	20.2
8 19	21 30.79	- 1 13.8	2.163	3.158	4.1	21.6	8 19	21 29.30	-22 14.6	1.682	2.682	4.2	20.2
8 29	21 23.35	- 2 27.7	2.178	3.154	5.7	21.7	8 29	21 19.12	-22 26.9	1.714	2.679	8.0	20.5
9 8	21 16.92	- 3 44.7	2.220	3.149	8.5	21.9	9 8	21 10.61	-22 25.4	1.772	2.676	11.7	20.7
9 18	21 12.07	- 4 59.8	2.288	3.144	11.3	22.1	9 18	21 4.51	-22 10.7	1.852	2.673	15.0	20.9
220160	2002 <i>TA</i> ₂₅₁		8 13.9 343°14	5°5/17.2	17		145581	2006 <i>PJ</i>					

EPHEMERIDES

8 13.9

8 13.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
261437	2005 <i>UO</i> ₅₃₀		8 13.9 152°10	3°6/17.4	18		169886	2002 <i>RA</i> ₁₅₈		8 13.9 229°30	0°9/13.2	18	
7 10	21 56.23	- 1 6.4	2.524	3.332	12.2	20.7	7 10	22 0.40	-15 59.1	2.321	3.177	11.6	21.0
7 20	21 51.60	- 1 3.2	2.444	3.336	9.8	20.5	7 20	21 54.96	-16 18.5	2.234	3.167	8.7	20.8
7 30	21 45.51	- 1 13.2	2.387	3.340	7.1	20.3	7 30	21 47.72	-16 43.2	2.171	3.157	5.3	20.6
8 9	21 38.45	- 1 35.7	2.355	3.343	4.6	20.2	8 9	21 39.24	-17 9.8	2.135	3.146	1.8	20.4
8 19	21 31.01	- 2 8.4	2.350	3.347	3.6	20.1	8 19	21 30.24	-17 34.7	2.128	3.134	2.4	20.4
8 29	21 23.89	- 2 48.4	2.374	3.350	5.3	20.2	8 29	21 21.57	-17 54.2	2.149	3.123	6.0	20.6
9 8	21 17.74	- 3 31.5	2.425	3.353	7.9	20.4	9 8	21 14.06	-18 6.0	2.198	3.110	9.4	20.8
9 18	21 13.08	- 4 14.1	2.501	3.356	10.5	20.6	9 18	21 8.32	-18 8.8	2.270	3.098	12.3	21.0
91723	1999 <i>TD</i> ₁₅₈		8 13.9 352°74	2°5/12.1	18		276423	2003 <i>BA</i> ₃		8 13.9 123°49	8°4/11.8	18	
7 10	21 54.71	-18 11.8	1.582	2.471	14.3	18.9	7 10	22 23.01	-32 27.6	1.113	1.988	20.0	19.7
7 20	21 51.36	-18 52.8	1.514	2.465	10.7	18.6	7 20	22 13.50	-32 34.0	1.059	1.994	15.8	19.5
7 30	21 45.77	-19 40.7	1.468	2.460	6.6	18.4	7 30	21 59.74	-32 26.6	1.025	1.999	11.5	19.3
8 9	21 38.61	-20 29.6	1.446	2.455	2.9	18.2	8 9	21 43.27	-31 54.2	1.014	2.005	8.6	19.1
8 19	21 30.84	-21 12.9	1.449	2.452	4.1	18.2	8 19	21 26.35	-30 50.9	1.026	2.010	9.5	19.2
8 29	21 23.61	-21 45.1	1.477	2.449	8.2	18.5	8 29	21 11.36	-29 18.4	1.063	2.015	13.3	19.4
9 8	21 17.97	-22 2.6	1.528	2.448	12.2	18.7	9 8	21 0.08	-27 24.9	1.122	2.019	17.5	19.7
9 18	21 14.63	-22 4.4	1.600	2.447	15.7	18.9	9 18	20 53.22	-25 20.3	1.200	2.024	21.3	20.0
412409	2014 <i>CN</i> ₁₈		8 13.9 178°12	1°8/15.9	18		265262	2004 <i>EL</i> ₉₅		8 13.9 216°30	2°6/12.1	17	
7 10	21 57.07	- 4 50.9	2.438	3.263	12.1	22.2	7 10	22 1.67	-18 24.3	1.696	2.571	14.3	21.2
7 20	21 52.32	- 5 30.9	2.355	3.264	9.4	22.1	7 20	21 56.50	-19 9.9	1.624	2.567	10.6	21.0
7 30	21 46.01	- 6 24.5	2.296	3.266	6.3	21.9	7 30	21 48.94	-20 2.2	1.574	2.563	6.6	20.7
8 9	21 38.63	- 7 28.9	2.263	3.267	3.1	21.7	8 9	21 39.70	-20 54.7	1.549	2.558	3.0	20.5
8 19	21 30.82	- 8 40.1	2.260	3.267	2.2	21.6	8 19	21 29.79	-21 40.9	1.551	2.553	4.2	20.6
8 29	21 23.32	- 9 53.1	2.286	3.266	5.1	21.8	8 29	21 20.42	-22 15.1	1.580	2.548	8.2	20.8
9 8	21 16.83	-11 3.0	2.340	3.265	8.2	22.0	9 8	21 12.69	-22 34.2	1.632	2.542	12.2	21.0
9 18	21 11.89	-12 5.7	2.419	3.264	11.1	22.2	9 18	21 7.39	-22 37.6	1.707	2.536	15.7	21.2
107550	2001 <i>DO</i> ₇₄		8 13.9 48°90	10°3/ 9.4	18		422986	2003 <i>SV</i> ₃		8 13.9 311°45	3°5/16.3	17	
7 10	22 11.00	-36 0.8	1.233	2.116	18.0	18.2	7 10	21 56.16	- 4 7.7	1.301	2.163	18.5	21.3
7 20	22 4.03	-36 52.4	1.200	2.132	14.5	18.1	7 20	21 52.94	- 4 20.1	1.222	2.151	14.6	21.0
7 30	21 53.60	-37 28.9	1.187	2.150	11.6	17.9	7 30	21 47.04	- 4 55.8	1.163	2.139	10.1	20.7
8 9	21 41.14	-37 39.7	1.196	2.167	10.3	17.9	8 9	21 39.15	- 5 52.9	1.124	2.128	5.4	20.4
8 19	21 28.45	-37 18.7	1.227	2.185	11.4	18.0	8 19	21 30.33	- 7 6.1	1.110	2.117	3.9	20.3
8 29	21 17.41	-36 26.0	1.280	2.204	13.9	18.2	8 29	21 21.95	- 8 27.0	1.119	2.106	8.0	20.5
9 8	21 9.38	-35 7.3	1.354	2.223	16.9	18.5	9 8	21 15.34	- 9 46.0	1.152	2.096	13.0	20.8
9 18	21 4.95	-33 30.3	1.446	2.242	19.6	18.7	9 18	21 11.46	-10 55.4	1.204	2.086	17.5	21.0
513693	2012 <i>BS</i> ₁₀₂		8 13.9 173°48	1°5/12.2	18		505130	2012 <i>HU</i> ₁₉		8 13.9 46°14	14°6/28.2	17	
7 10	21 55.92	-16 58.5	2.806	3.665	9.7	22.4	7 10	21 56.42	+21 35.1	1.505	2.213	23.0	20.3
7 20	21 51.31	-17 51.2	2.731	3.667	7.2	22.2	7 20	21 52.79	+22 44.5	1.443	2.221	21.0	20.2
7 30	21 45.31	-18 48.9	2.683	3.669	4.4	22.1	7 30	21 46.74	+23 17.6	1.394	2.230	18.8	20.0
8 9	21 38.38	-19 47.4	2.662	3.671	1.8	21.9	8 9	21 38.99	+23 9.2	1.362	2.239	16.7	19.9
8 19	21 31.09	-20 42.8	2.670	3.672	2.6	21.9	8 19	21 30.55	+22 17.1	1.347	2.249	15.2	19.8
8 29	21 24.09	-21 31.2	2.708	3.673	5.4	22.1	8 29	21 22.67	+20 44.8	1.352	2.259	14.6	19.8
9 8	21 18.00	-22 10.1	2.773	3.673	8.1	22.3	9 8	21 16.49	+18 41.8	1.378	2.269	15.3	19.9
9 18	21 13.31	-22 37.9	2.862	3.673	10.5	22.5	9 18	21 12.80	+16 20.3	1.425	2.279	16.9	20.1
501814	2014 <i>WB</i> ₅₉		8 13.9 7°11	2°6/15.4	17		105541	2000 <i>RL</i> ₄₀		8 13.9 246°36	0°2/13.8	18	
7 10	21 49.86	- 7 16.0	0.804	1.714	22.2	20.3	7 10	22 0.82	-14 40.8	2.197	3.053	12.2	19.2
7 20	21 48.96	- 7 25.9	0.756	1.714	17.2	20.0	7 20	21 55.28	-14 38.3	2.117	3.049	9.2	19.0
7 30	21 44.82	- 8 3.0	0.725	1.716	11.3	19.7	7 30	21 47.92	-14 41.2	2.061	3.045	5.7	18.7
8 9	21 38.38	- 9 2.6	0.711	1.720	5.1	19.4	8 9	21 39.32	-14 46.8	2.031	3.041	1.9	18.5
8 19	21 31.11	-10 15.6	0.716	1.726	3.6	19.3	8 19	21 30.26	-14 52.1	2.029	3.037	2.0	18.5
8 29	21 24.79	-11 30.0	0.741	1.734	9.4	19.7	8 29	21 21.63	-14 54.6	2.055	3.033	5.8	18.7
9 8	21 20.93	-12 34.5	0.785	1.743	15.2	20.0	9 8	21 14.24	-14 51.9	2.108	3.029	9.3	18.9
9 18	21 20.39	-13 21.7	0.845	1.755	20.1	20.4	9 18	21 8.72	-14 43.2	2.185	3.024	12.4	19.1
100852	1998 <i>HY</i> ₃₃		8 13.9 35°23	8°3/19.8	18		311547	2005 <i>YV</i> ₂₇₄		8 13.9 217°41	1°6/15.4	17	
7 10	21 55.80	+ 4 18.6	1.017	1.866	23.4	18.2	7 10	21 59.03	- 8 21.0	2.922	3.748	10.3	21.5
7 20	21 52.64	+ 4 39.8	0.978	1.887	19.3	18.0	7 20	21 53.55	- 8 11.0	2.829	3.740	7.9	21.3
7 30	21 46.67	+ 4 25.8	0.955	1.910	14.7	17.8	7 30	21 46.69	- 8 8.2	2.761	3.732	5.3	21.1
8 9	21 38.90	+ 3 37.3	0.950	1.933	10.5	17.7	8 9	21 38.89	- 8 11.3	2.720	3.724	2.6	20.9
8 19	21 30.66	+ 2 19.9	0.966	1.958	8.3	17.7	8 19	21 30.70	- 8 18.7	2.709	3.715	2.0	20.8
8 29	21 23.44	+ 0 44.2	1.004	1.984	9.8	17.8	8 29	21 22.76	- 8 28.3	2.727	3.706	4.5	21.0
9 8	21 18.43	- 0 57.0	1.062	2.011	13.3	18.1	9 8	21 15.69	- 8 37.9	2.774	3.696	7.3	21.2
9 18	21 16.32	- 2 32.5	1.141	2.038	17.1	18.4	9 18	21 9.98	- 8 45.5	2.847	3.686	9.8	21.3
487184	2014 <i>OK</i> ₃₃₄		8 13.9 307°62	2°3/15.8	18		104016	2000 <i>DH</i> ₁₀₈		8 13.9 32°41	2°0/15.8	18	
7 10	21 56.72	- 6 53.8	2.241	3.079	12.6	21.0	7 10	21 54.10	- 4 21.6	1.599	2.453	16.1	18.6
7 20	21 52.21	- 6 46.2	2.155	3.072	9.8	20.8	7 20	21 50.75	- 5 19.0	1.535	2.461	12.4	18.4
7 30	21 46.01	- 6 49.4	2.093	3.065	6.6	20.6	7 30	21 45.32	- 6 37.3	1.492	2.469	8.2	18.2
8 9	21 38.66	- 7 2.0	2.055	3.058	3.4	20.4	8 9	21 38.49	- 8 11.7	1.473	2.478	3.8	18.0
8 19	21 30.83	- 7 21.5	2.045	3.051	2.6	20.4	8 19	21 31.13	- 9 54.8	1.479	2.488	2.5	17.9
8 29	21 23.31	- 7 44.9	2.063	3.045	5.5	20.5	8 29	21 24.30	-11 37.7	1.513	2.498	6.6	18.2
9 8	21 16.89	- 8 8.7	2.108	3.038	8.8	20.7	9 8	21 18.94	-13 12.2	1.572	2.509	10.7	18.5
9 18	21 12.15	- 8 29.9	2.176	3.032	11.8	20.9	9 18	21 15.72	-14 32.5	1.653	2.519	14.3	18.7
343818	2011 <i>HZ</i> ₁₁		8 13.9 35°23	6°5/19.7	18		247429	20					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
161066	2002 <i>KB</i> ₂		8 13.9	23°39'	4.6°/10.8	18	474165	1999 <i>TU</i> ₆₁		8 13.9	350°92'	1.5°/14.7	16
7 10	21 58.07	-21 54.0	1.412	2.306	15.4	19.3	7 10	21 45.35	-11 10.6	0.890	1.809	19.7	19.9
7 20	21 54.08	-22 57.2	1.360	2.312	11.5	19.1	7 20	21 45.54	-10 59.5	0.825	1.789	15.2	19.6
7 30	21 47.52	-24 4.0	1.330	2.319	7.4	18.9	7 30	21 42.78	-11 6.2	0.777	1.772	9.9	19.2
8 9	21 39.25	-25 6.0	1.323	2.326	4.6	18.7	8 9	21 37.81	-11 27.8	0.747	1.758	3.9	18.9
8 19	21 30.42	-25 55.0	1.340	2.335	6.1	18.9	8 19	21 31.86	-11 58.8	0.736	1.747	3.1	18.8
8 29	21 22.37	-26 25.2	1.382	2.343	9.9	19.1	8 29	21 26.57	-12 31.0	0.745	1.739	9.2	19.1
9 8	21 16.24	-26 34.5	1.446	2.352	13.7	19.3	9 8	21 23.44	-12 56.5	0.773	1.734	15.0	19.4
9 18	21 12.75	-26 24.1	1.530	2.362	17.0	19.6	9 18	21 23.47	-13 9.6	0.817	1.732	20.0	19.7
350032	2010 <i>JH</i> ₁₅₁		8 13.9	107°52'	5.5°/18.8	18	444127	2004 <i>TW</i> ₂₃₄		8 13.9	232°23'	6.7°/7.3	18
7 10	21 58.35	+ 2 58.5	2.084	2.879	14.9	21.0	7 10	22 2.92	-36 44.4	2.641	3.495	10.4	20.8
7 20	21 53.43	+ 3 15.2	2.014	2.891	12.2	20.9	7 20	21 56.84	-37 34.7	2.575	3.488	8.6	20.7
7 30	21 46.77	+ 3 13.6	1.965	2.903	9.3	20.7	7 30	21 48.89	-38 17.4	2.534	3.480	7.1	20.6
8 9	21 38.95	+ 2 53.9	1.940	2.915	6.7	20.6	8 9	21 39.68	-38 46.7	2.519	3.473	6.7	20.5
8 19	21 30.72	+ 2 18.0	1.941	2.927	5.5	20.5	8 19	21 30.04	-38 58.7	2.531	3.465	7.5	20.6
8 29	21 22.94	+ 1 30.0	1.969	2.938	6.8	20.6	8 29	21 20.91	-38 51.0	2.568	3.457	9.2	20.7
9 8	21 16.38	+ 0 35.0	2.023	2.949	9.3	20.8	9 8	21 13.11	-38 24.3	2.629	3.448	11.2	20.8
9 18	21 11.64	- 0 21.6	2.101	2.960	12.0	21.0	9 18	21 7.28	-37 40.8	2.712	3.440	13.0	20.9
284889	2009 <i>QJ</i> ₄₆		8 13.9	300°24'	0.1°/13.9	18	451331	2010 <i>VH</i> ₁₀₁		8 13.9	179°01'	6.4°/20.9	18
7 10	21 58.87	-12 35.4	1.436	2.313	16.2	21.1	7 10	21 55.36	+ 9 9.6	2.678	3.424	13.1	21.5
7 20	21 54.92	-12 53.6	1.349	2.292	12.4	20.8	7 20	21 50.97	+ 9 31.7	2.592	3.425	11.2	21.3
7 30	21 48.29	-13 25.0	1.283	2.271	7.8	20.5	7 30	21 45.18	+ 9 36.4	2.526	3.425	9.2	21.2
8 9	21 39.62	-14 5.3	1.239	2.250	2.7	20.1	8 9	21 38.44	+ 9 23.0	2.484	3.425	7.4	21.1
8 19	21 29.94	-14 48.7	1.221	2.230	2.8	20.1	8 19	21 31.29	+ 8 52.2	2.468	3.425	6.5	21.0
8 29	21 20.61	-15 28.6	1.227	2.209	8.2	20.3	8 29	21 24.40	+ 8 6.3	2.478	3.425	6.9	21.1
9 8	21 12.98	-15 59.4	1.256	2.189	13.2	20.6	9 8	21 18.40	+ 7 9.7	2.515	3.425	8.4	21.2
9 18	21 8.04	-16 17.7	1.306	2.169	17.6	20.8	9 18	21 13.80	+ 6 7.1	2.576	3.424	10.4	21.3
71963	2000 <i>WJ</i> ₁₁₆		8 13.9	70°03'	2.6°/12.4	18	391824	2008 <i>SP</i> ₈₈		8 13.9	317°08'	9.2°/8.0	18
7 10	22 3.10	-18 8.4	1.327	2.213	16.8	18.0	7 10	22 3.54	-33 36.8	1.442	2.328	15.6	20.4
7 20	21 57.84	-18 45.9	1.276	2.224	12.5	17.8	7 20	21 58.75	-34 40.9	1.372	2.309	12.7	20.2
7 30	21 49.83	-19 30.2	1.246	2.237	7.7	17.6	7 30	21 50.78	-35 37.8	1.323	2.290	10.2	20.0
8 9	21 40.02	-20 14.0	1.239	2.249	3.2	17.3	8 9	21 40.47	-36 16.9	1.296	2.272	9.3	19.9
8 19	21 29.69	-20 49.9	1.257	2.261	4.4	17.5	8 19	21 29.21	-36 29.2	1.293	2.254	10.7	19.9
8 29	21 20.29	-21 12.6	1.300	2.273	9.0	17.8	8 29	21 18.69	-36 10.2	1.312	2.237	13.6	20.0
9 8	21 13.04	-21 19.3	1.366	2.286	13.4	18.0	9 8	21 10.44	-35 21.1	1.351	2.220	16.9	20.2
9 18	21 8.66	-21 10.5	1.452	2.298	17.1	18.3	9 18	21 5.44	-34 6.9	1.408	2.204	20.1	20.4
44846	1999 <i>TN</i> ₂₉₀		8 13.9	68°99'	6.5°/19.8	18	261721	2006 <i>AD</i> ₂₄		8 13.9	255°81'	0.1°/14.1	18
7 10	21 56.48	+ 5 23.0	1.766	2.563	17.0	18.6	7 10	21 56.73	-12 16.2	2.259	3.115	11.9	21.0
7 20	21 52.33	+ 5 26.6	1.699	2.575	14.2	18.4	7 20	21 52.23	-12 37.9	2.181	3.113	8.9	20.8
7 30	21 46.22	+ 5 6.3	1.652	2.587	11.0	18.2	7 30	21 46.05	-13 8.0	2.127	3.111	5.6	20.6
8 9	21 38.79	+ 4 22.3	1.627	2.599	8.0	18.1	8 9	21 38.75	-13 43.1	2.099	3.109	1.9	20.3
8 19	21 30.90	+ 3 17.5	1.626	2.611	6.5	18.0	8 19	21 31.00	-14 19.7	2.098	3.107	1.9	20.3
8 29	21 23.51	+ 1 57.9	1.652	2.623	7.6	18.1	8 29	21 23.62	-14 53.8	2.126	3.105	5.5	20.5
9 8	21 17.52	+ 0 31.0	1.703	2.635	10.3	18.3	9 8	21 17.35	-15 22.0	2.180	3.103	8.9	20.8
9 18	21 13.56	- 0 55.5	1.777	2.647	13.3	18.5	9 18	21 12.77	-15 42.2	2.258	3.101	11.9	20.9
254584	2005 <i>GV</i> ₄₅		8 13.9	218°33'	2.6°/12.3	18	4169	Celsius		8 13.9	307°73'	2.8°/11.6	18 R
7 10	22 4.00	-19 2.6	1.571	2.446	15.1	21.2	7 10	21 58.45	-22 17.3	2.301	3.172	11.1	16.0
7 20	21 58.41	-19 33.4	1.500	2.443	11.3	20.9	7 20	21 53.60	-22 40.5	2.217	3.157	8.4	15.8
7 30	21 50.21	-20 9.5	1.450	2.439	7.1	20.7	7 30	21 46.96	-23 4.8	2.157	3.142	5.4	15.6
8 9	21 40.19	-20 44.9	1.426	2.434	3.1	20.4	8 9	21 39.07	-23 26.1	2.123	3.128	3.0	15.4
8 19	21 29.46	-21 13.2	1.427	2.430	4.2	20.5	8 19	21 30.67	-23 40.4	2.117	3.113	3.9	15.5
8 29	21 19.37	-21 29.4	1.455	2.425	8.6	20.7	8 29	21 22.63	-23 44.6	2.138	3.099	6.9	15.6
9 8	21 11.12	-21 31.0	1.507	2.420	12.8	21.0	9 8	21 15.78	-23 37.2	2.185	3.085	10.0	15.8
9 18	21 5.53	-21 18.2	1.579	2.414	16.4	21.2	9 18	21 10.73	-23 18.1	2.255	3.072	12.8	16.0
308888	2006 <i>SE</i> ₁₄₄		8 13.9	209°83'	0.4°/14.3	18	513823	2013 <i>EB</i> ₂₁		8 13.9	137°95'	3.9°/17.7	18
7 10	21 57.72	-11 20.6	2.068	2.924	12.8	21.7	7 10	21 55.85	- 0 25.9	2.225	3.038	13.5	21.7
7 20	21 53.09	-11 40.9	1.992	2.923	9.7	21.5	7 20	21 51.56	- 0 30.1	2.146	3.040	10.8	21.6
7 30	21 46.63	-12 10.9	1.939	2.922	6.1	21.2	7 30	21 45.64	- 0 50.2	2.088	3.042	7.9	21.4
8 9	21 38.94	-12 47.4	1.911	2.921	2.2	21.0	8 9	21 38.61	- 1 25.2	2.055	3.045	5.1	21.2
8 19	21 30.76	-13 26.2	1.911	2.920	2.0	21.0	8 19	21 31.14	- 2 12.4	2.049	3.047	3.9	21.1
8 29	21 22.99	-14 3.0	1.939	2.919	5.9	21.2	8 29	21 24.02	- 3 7.6	2.071	3.049	5.8	21.3
9 8	21 16.45	-14 34.1	1.993	2.918	9.5	21.4	9 8	21 17.99	- 4 5.8	2.119	3.051	8.7	21.4
9 18	21 11.77	-14 57.0	2.070	2.917	12.6	21.7	9 18	21 13.60	- 5 2.2	2.192	3.052	11.5	21.6
471721	2012 <i>UB</i>		8 13.9	0°18'	16.1°/27.4	16	114086	2002 <i>VG</i> ₃₆		8 13.9	349°96'	3.6°/16.0	18 R
7 10	21 47.16	+16 18.8	1.077	1.873	25.7	19.6	7 10	21 53.52	- 6 37.0	1.280	2.156	17.9	17.8
7 20	21 46.47	+17 58.9	1.019	1.867	23.4	19.4	7 20	21 50.90	- 6 13.6	1.208	2.144	14.1	17.6
7 30	21 43.15	+18 59.2	0.973	1.864	20.9	19.2	7 30	21 45.75	- 6 7.4	1.154	2.135	9.7	17.3
8 9	21 37.89	+19 12.0	0.942	1.863	18.4	19.1	8 9	21 38.75	- 6 17.6	1.122	2.126	5.2	17.0
8 19	21 31.79	+18 33.5	0.926	1.864	16.6	19.0	8 19	21 30.97	- 6 41.0	1.113	2.119	3.9	16.9
8 29	21 26.26	+17 7.0	0.928	1.868	16.1	19.0	8 29	21 23.72	- 7 12.3	1.126	2.114	7.9	17.1
9 8	21 22.63	+15 3.8	0.947	1.874	17.1	19.0	9 8	21 18.23	- 7 45.1	1.162	2.110	12.5	17.4
9 18	21 21.82	+12 39.4	0.985	1.882	19.1	19.2	9 18	21 15.35	- 8 13.8	1.218	2.108	16.7	17.6
68888	2002 <i>JM</i> ₇₃		8 13.9	343°02'	5.5°/19.5	18	489687	2007 <i>VU</</i>					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
75603	2000 AT ₂₈		8 13.9 109°37'	3°7/11.2	18		206652	2003 YH ₂₅		8 13.9 285°48'	0°7/14.5	18	
7 10	22 1.31	-19 54.5	1.574	2.456	14.8	19.0	7 10	21 59.01	-11 17.1	1.852	2.711	13.9	20.4
7 20	21 56.29	-21 2.2	1.518	2.464	11.0	18.8	7 20	21 54.39	-11 24.7	1.764	2.697	10.7	20.2
7 30	21 48.83	-22 15.4	1.484	2.472	6.9	18.5	7 30	21 47.65	-11 42.6	1.699	2.682	6.8	19.9
8 9	21 39.72	-23 26.1	1.475	2.481	3.8	18.4	8 9	21 39.38	-12 8.0	1.659	2.668	2.6	19.6
8 19	21 30.06	-24 26.3	1.492	2.489	5.2	18.5	8 19	21 30.42	-12 36.9	1.645	2.654	2.2	19.5
8 29	21 21.09	-25 10.1	1.535	2.497	9.0	18.7	8 29	21 21.81	-13 5.1	1.658	2.639	6.5	19.8
9 8	21 13.93	-25 34.5	1.601	2.504	12.8	19.0	9 8	21 14.54	-13 28.4	1.696	2.625	10.6	20.0
9 18	21 9.31	-25 39.9	1.689	2.512	16.1	19.2	9 18	21 9.38	-13 44.1	1.758	2.611	14.2	20.2
392910	2012 VP ₆₄		8 13.9 150°58'	5°9/8.6	18		517747	2015 MO ₁₃₅		8 13.9 297°70'	0°8/14.7	18	
7 10	22 2.50	-30 43.4	2.235	3.103	11.5	21.3	7 10	21 54.47	-8 40.8	2.157	3.008	12.5	21.2
7 20	21 56.66	-31 46.1	2.179	3.109	9.0	21.2	7 20	21 50.70	-9 21.7	2.072	2.999	9.6	21.0
7 30	21 48.82	-32 44.2	2.147	3.114	6.8	21.0	7 30	21 45.21	-10 15.6	2.009	2.990	6.1	20.8
8 9	21 39.68	-33 31.3	2.142	3.120	5.9	21.0	8 9	21 38.52	-11 19.0	1.972	2.980	2.4	20.5
8 19	21 30.11	-34 2.2	2.163	3.125	6.9	21.1	8 19	21 31.30	-12 27.1	1.962	2.971	1.9	20.5
8 29	21 21.11	-34 14.0	2.211	3.130	9.1	21.2	8 29	21 24.38	-13 34.6	1.981	2.962	5.6	20.7
9 8	21 13.58	-34 6.4	2.283	3.134	11.6	21.4	9 8	21 18.52	-14 36.3	2.026	2.954	9.2	20.9
9 18	21 8.15	-33 41.5	2.376	3.138	13.8	21.6	9 18	21 14.37	-15 28.4	2.095	2.945	12.4	21.1
126913	2002 EN ₁₂₃		8 13.9 258°00'	1°0/14.7	18		421653	2014 OO ₃₄₉		8 13.9 181°90'	2°4/16.5	18	
7 10	21 57.95	-9 13.8	1.807	2.663	14.4	20.8	7 10	21 55.15	-4 8.8	2.630	3.452	11.4	21.7
7 20	21 53.59	-9 42.0	1.725	2.655	11.0	20.6	7 20	21 50.83	-4 21.5	2.547	3.452	8.9	21.5
7 30	21 47.13	-10 24.0	1.665	2.646	7.0	20.3	7 30	21 45.10	-4 46.1	2.487	3.452	6.2	21.3
8 9	21 39.18	-11 16.3	1.629	2.638	2.8	20.1	8 9	21 38.45	-5 20.7	2.454	3.452	3.5	21.2
8 19	21 30.56	-12 13.8	1.620	2.629	2.2	20.0	8 19	21 31.41	-6 2.8	2.448	3.452	2.5	21.1
8 29	21 22.32	-13 10.7	1.639	2.621	6.5	20.3	8 29	21 24.66	-6 49.0	2.471	3.451	4.8	21.3
9 8	21 15.44	-14 1.5	1.682	2.612	10.6	20.5	9 8	21 18.81	-7 35.3	2.522	3.451	7.6	21.4
9 18	21 10.66	-14 42.2	1.749	2.603	14.2	20.7	9 18	21 14.37	-8 18.5	2.598	3.450	10.2	21.6
134951	2001 CK ₇		8 13.9 247°46'	2°2/12.4	18		227281	2005 SK ₁₆₃		8 13.9 338°05'	0°2/13.9	18	
7 10	22 0.64	-16 25.8	1.569	2.446	15.1	20.3	7 10	21 53.60	-12 12.7	1.137	2.034	18.1	20.5
7 20	21 55.98	-17 18.8	1.493	2.437	11.3	20.0	7 20	21 51.37	-12 36.6	1.065	2.018	13.8	20.2
7 30	21 48.80	-18 21.8	1.439	2.428	7.0	19.7	7 30	21 46.27	-13 17.3	1.011	2.003	8.7	19.8
8 9	21 39.78	-19 28.4	1.409	2.419	2.8	19.5	8 9	21 39.01	-14 9.7	0.978	1.990	2.9	19.4
8 19	21 29.95	-20 30.7	1.406	2.410	4.0	19.5	8 19	21 30.77	-15 6.2	0.968	1.977	3.1	19.4
8 29	21 20.60	-21 21.7	1.428	2.400	8.5	19.8	8 29	21 23.07	-15 58.2	0.980	1.966	9.0	19.7
9 8	21 12.94	-21 56.7	1.475	2.390	12.9	20.0	9 8	21 17.37	-16 38.2	1.013	1.957	14.4	20.0
9 18	21 7.84	-22 14.2	1.542	2.380	16.6	20.2	9 18	21 14.65	-17 2.0	1.065	1.949	19.1	20.3
157037	2003 SV ₂₅		8 13.9 340°36'	5°4/19.3	18		327094	2004 XO ₃₃		8 13.9 273°29'	9°4/1.0	18	
7 10	21 52.34	+3 58.3	1.999	2.802	15.1	19.7	7 10	22 1.12	-43 24.2	2.467	3.312	11.3	20.6
7 20	21 49.19	+3 47.7	1.913	2.795	12.5	19.5	7 20	21 56.16	-45 19.2	2.411	3.298	10.1	20.5
7 30	21 44.31	+3 15.3	1.847	2.788	9.6	19.3	7 30	21 48.86	-47 3.9	2.379	3.284	9.4	20.4
8 9	21 38.20	+2 21.8	1.804	2.782	6.8	19.1	8 9	21 39.82	-48 30.1	2.373	3.270	9.7	20.4
8 19	21 31.56	+1 9.9	1.786	2.776	5.4	19.0	8 19	21 29.96	-49 31.6	2.390	3.256	10.8	20.4
8 29	21 25.23	-0 15.1	1.795	2.770	6.7	19.1	8 29	21 20.43	-50 5.1	2.431	3.241	12.3	20.5
9 8	21 20.01	-1 46.2	1.829	2.765	9.5	19.2	9 8	21 12.38	-50 10.8	2.491	3.226	13.9	20.6
9 18	21 16.53	-3 16.5	1.888	2.761	12.5	19.4	9 18	21 6.63	-49 51.8	2.568	3.212	15.4	20.7
476313	2007 XE ₂₁		8 13.9 332°55'	1°4/13.0	18		10301	Kataoka		8 13.9 92°70'	1°8/12.8	18	
7 10	21 58.40	-16 19.3	1.665	2.542	14.3	20.9	7 10	22 2.46	-15 34.9	1.367	2.248	16.7	17.8
7 20	21 54.08	-16 42.3	1.591	2.535	10.7	20.7	7 20	21 57.35	-16 21.7	1.313	2.259	12.4	17.6
7 30	21 47.48	-17 12.7	1.539	2.528	6.6	20.5	7 30	21 49.57	-17 18.6	1.280	2.270	7.6	17.4
8 9	21 39.29	-17 45.8	1.512	2.522	2.3	20.2	8 9	21 40.01	-18 18.4	1.271	2.281	2.7	17.1
8 19	21 30.48	-18 16.3	1.510	2.516	3.1	20.2	8 19	21 29.88	-19 13.2	1.287	2.292	3.8	17.2
8 29	21 22.17	-18 39.2	1.534	2.511	7.5	20.5	8 29	21 20.59	-19 56.3	1.328	2.303	8.6	17.5
9 8	21 15.43	-18 51.2	1.583	2.506	11.6	20.7	9 8	21 13.33	-20 23.6	1.393	2.314	13.0	17.8
9 18	21 11.00	-18 51.1	1.653	2.501	15.2	20.9	9 18	21 8.85	-20 34.3	1.478	2.325	16.8	18.1
284258	2006 GH ₂₇		8 13.9 29°68'	3°9/11.4	16		283451	2001 DL ₄₇		8 13.9 87°70'	0°2/14.2	17	
7 10	21 58.90	-21 3.4	1.400	2.293	15.6	20.5	7 10	21 57.55	-9 20.6	1.845	2.700	14.1	21.4
7 20	21 54.64	-21 52.0	1.352	2.303	11.6	20.3	7 20	21 53.06	-10 22.4	1.785	2.716	10.6	21.2
7 30	21 47.84	-22 44.3	1.324	2.314	7.3	20.1	7 30	21 46.66	-11 37.9	1.748	2.732	6.6	21.0
8 9	21 39.38	-23 32.5	1.320	2.326	4.1	19.9	8 9	21 39.00	-13 1.7	1.737	2.748	2.3	20.8
8 19	21 30.45	-24 9.5	1.340	2.338	5.4	20.0	8 19	21 30.91	-14 27.1	1.754	2.763	2.1	20.8
8 29	21 22.36	-24 30.1	1.385	2.352	9.3	20.3	8 29	21 23.36	-15 47.1	1.799	2.778	6.3	21.1
9 8	21 16.21	-24 32.6	1.453	2.365	13.2	20.6	9 8	21 17.20	-16 56.3	1.869	2.793	10.1	21.3
9 18	21 12.71	-24 17.8	1.541	2.380	16.6	20.8	9 18	21 13.03	-17 51.4	1.963	2.808	13.3	21.6
183114	Vicques		8 13.9 311°14'	0°8/13.6	18		138913	2001 AJ ₁₁		8 13.9 124°49'	2°3/15.5	18	
7 10	22 1.24	-15 31.8	1.338	2.221	16.8	19.0	7 10	22 2.23	-7 27.9	1.568	2.420	16.4	20.3
7 20	21 56.83	-15 33.8	1.258	2.205	12.8	18.7	7 20	21 56.90	-7 29.9	1.502	2.427	12.7	20.1
7 30	21 49.53	-15 44.4	1.199	2.189	8.0	18.4	7 30	21 49.19	-7 47.0	1.458	2.435	8.4	19.8
8 9	21 40.08	-15 59.3	1.163	2.174	2.7	18.0	8 9	21 39.89	-8 16.3	1.437	2.442	3.9	19.6
8 19	21 29.65	-16 13.0	1.151	2.159	3.2	18.0	8 19	21 30.02	-8 53.6	1.441	2.449	2.9	19.5
8 29	21 19.76	-16 20.4	1.163	2.145	8.6	18.3	8 29	21 20.78	-9 33.4	1.473	2.456	7.0	19.8
9 8	21 11.82	-16 18.1	1.198	2.131	13.7	18.5	9 8	21 13.27	-10 10.4	1.529	2.462	11.2	20.1
9 18	21 6.81	-16 4.6	1.253	2.118	18.1	18.8	9 18	21 8.20	-10 40.6	1.607	2.468	14.9	20.3
215408	2002 ER ₁₂₉		8 13.9 249°64'	2°3/15.6	18		312214	2007 VN ₃₁₄		8 13.9 44°53'	1°2/13.2	17	
7 10	21 59.85	-5 50.6	1.611	2.459	16.2								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
454949	2015 <i>TK</i> ₁₉₂		8 13.9 354°09	2°6/11.8	18		331242	2011 <i>BN</i> ₁₁₆		8 13.9 6°42	2°1/12.4	17	
7 10	21 55.89	-18 42.5	1.853	2.733	13.0	20.2	7 10	21 55.31	-13 49.5	1.254	2.147	17.1	20.0
7 20	21 52.01	-19 30.6	1.784	2.730	9.6	20.0	7 20	21 52.34	-15 6.9	1.194	2.147	12.7	19.7
7 30	21 46.12	-20 24.5	1.739	2.728	6.0	19.7	7 30	21 46.69	-16 40.3	1.155	2.148	7.7	19.4
8 9	21 38.86	-21 18.4	1.718	2.726	2.8	19.5	8 9	21 39.15	-18 20.9	1.138	2.149	2.8	19.1
8 19	21 31.07	-22 6.6	1.724	2.725	4.0	19.6	8 19	21 30.86	-19 57.9	1.146	2.151	4.2	19.2
8 29	21 23.75	-22 43.8	1.756	2.724	7.6	19.8	8 29	21 23.22	-21 21.0	1.177	2.154	9.3	19.5
9 8	21 17.81	-23 6.9	1.813	2.724	11.1	20.1	9 8	21 17.50	-22 23.4	1.231	2.157	14.0	19.8
9 18	21 13.93	-23 15.1	1.891	2.724	14.3	20.3	9 18	21 14.54	-23 2.4	1.305	2.161	18.0	20.1
415363	2013 <i>KQ</i> ₅		8 13.9 72°56	4°9/17.2	17		478552	2012 <i>TW</i> ₃₄		8 13.9 284°58	0°3/14.2	18	
7 10	21 59.42	-1 36.3	1.328	2.174	19.1	20.8	7 10	21 59.64	-12 4.6	1.781	2.643	14.3	21.7
7 20	21 55.21	-1 33.2	1.261	2.177	15.3	20.5	7 20	21 55.07	-12 18.4	1.687	2.621	10.9	21.4
7 30	21 48.37	-1 54.0	1.213	2.180	10.9	20.3	7 30	21 48.22	-12 43.0	1.615	2.600	6.9	21.1
8 9	21 39.67	-2 37.3	1.187	2.183	6.7	20.1	8 9	21 39.67	-13 15.1	1.567	2.578	2.5	20.8
8 19	21 30.24	-3 38.7	1.184	2.186	5.0	20.0	8 19	21 30.28	-13 50.2	1.547	2.556	2.3	20.7
8 29	21 21.44	-4 50.6	1.206	2.189	8.1	20.2	8 29	21 21.17	-14 23.3	1.553	2.533	7.0	21.0
9 8	21 14.49	-6 4.1	1.251	2.192	12.4	20.4	9 8	21 13.44	-14 50.0	1.584	2.511	11.3	21.2
9 18	21 10.24	-7 11.7	1.317	2.195	16.5	20.7	9 18	21 7.93	-15 7.4	1.637	2.489	15.2	21.4
176366	2001 <i>TD</i> ₁₃₉		8 13.9 296°02	3°4/11.1	18		331377	2012 <i>DO</i> ₈₃		8 13.9 101°69	0°3/14.2	17	
7 10	21 57.74	-20 43.3	1.889	2.768	12.8	19.9	7 10	22 2.13	-11 0.3	1.548	2.411	16.0	21.5
7 20	21 53.55	-21 39.3	1.805	2.750	9.6	19.7	7 20	21 56.79	-11 31.4	1.492	2.426	12.0	21.3
7 30	21 47.19	-22 40.6	1.745	2.732	6.2	19.5	7 30	21 49.11	-12 15.5	1.457	2.441	7.5	21.1
8 9	21 39.27	-23 40.9	1.710	2.715	3.5	19.3	8 9	21 39.88	-13 7.4	1.446	2.456	2.6	20.8
8 19	21 30.63	-24 33.9	1.701	2.697	4.8	19.3	8 19	21 30.19	-14 0.9	1.462	2.471	2.4	20.9
8 29	21 22.32	-25 13.7	1.719	2.679	8.4	19.5	8 29	21 21.22	-14 49.9	1.504	2.485	7.1	21.2
9 8	21 15.38	-25 37.0	1.761	2.662	12.0	19.7	9 8	21 14.03	-15 29.4	1.571	2.498	11.4	21.5
9 18	21 10.59	-25 43.1	1.825	2.644	15.2	19.9	9 18	21 9.30	-15 56.9	1.660	2.512	15.0	21.7
300742	2007 <i>VN</i> ₁₆₇		8 13.9 261°41	0°9/14.7	18		426521	2013 <i>RQ</i> ₄₈		8 13.9 136°61	1°3/13.2	17	
7 10	21 58.52	-10 20.8	1.989	2.842	13.4	20.9	7 10	22 3.60	-16 11.5	1.622	2.492	15.0	21.6
7 20	21 53.82	-10 31.1	1.909	2.837	10.2	20.7	7 20	21 57.93	-16 32.9	1.558	2.498	11.2	21.3
7 30	21 47.19	-10 51.8	1.851	2.833	6.5	20.5	7 30	21 49.85	-17 1.4	1.515	2.503	6.9	21.1
8 9	21 39.23	-11 20.1	1.819	2.828	2.6	20.2	8 9	21 40.16	-17 32.0	1.497	2.508	2.4	20.8
8 19	21 30.73	-11 52.4	1.814	2.823	2.0	20.2	8 19	21 29.90	-17 59.2	1.506	2.512	3.1	20.9
8 29	21 22.62	-12 24.3	1.836	2.818	6.0	20.4	8 29	21 20.33	-18 18.4	1.541	2.517	7.6	21.2
9 8	21 15.79	-12 52.0	1.884	2.813	9.8	20.7	9 8	21 12.53	-18 26.8	1.601	2.521	11.7	21.4
9 18	21 10.89	-13 12.7	1.956	2.807	13.1	20.9	9 18	21 7.23	-18 23.6	1.683	2.525	15.3	21.7
256975	2008 <i>EE</i> ₁₁₃		8 13.9 42°51	2°9/16.5	18		30243	2000 <i>HS</i> ₉		8 13.9 142°72	1°5/13.0	18	
7 10	21 56.05	-4 22.7	1.974	2.811	14.1	20.8	7 10	22 2.91	-14 53.3	1.422	2.297	16.4	19.5
7 20	21 51.87	-4 28.2	1.905	2.819	11.0	20.6	7 20	21 57.74	-15 37.1	1.360	2.303	12.3	19.2
7 30	21 45.92	-4 48.5	1.858	2.826	7.6	20.4	7 30	21 49.89	-16 31.9	1.318	2.308	7.5	19.0
8 9	21 38.78	-5 21.5	1.835	2.835	4.2	20.3	8 9	21 40.20	-17 31.0	1.301	2.312	2.6	18.7
8 19	21 31.22	-6 4.0	1.838	2.843	3.1	20.2	8 19	21 29.85	-18 26.7	1.310	2.316	3.5	18.7
8 29	21 24.10	-6 51.3	1.869	2.851	5.8	20.4	8 29	21 20.21	-19 12.1	1.344	2.320	8.4	19.1
9 8	21 18.23	-7 38.5	1.926	2.860	9.2	20.6	9 8	21 12.53	-19 42.9	1.402	2.324	12.9	19.3
9 18	21 14.19	-8 21.3	2.006	2.869	12.3	20.8	9 18	21 7.59	-19 57.7	1.481	2.327	16.8	19.6
326181	2012 <i>BE</i> ₁₃₂		8 13.9 163°66	0°3/13.7	18		440509	2005 <i>UW</i> ₃₀		8 13.9 348°52	2°5/15.8	15	
7 10	21 58.30	-14 22.9	2.823	3.671	10.0	21.5	7 10	21 53.84	-6 52.8	1.562	2.426	15.8	20.9
7 20	21 53.06	-14 36.0	2.747	3.675	7.5	21.4	7 20	21 50.77	-6 56.3	1.486	2.417	12.3	20.6
7 30	21 46.44	-14 54.0	2.696	3.679	4.6	21.2	7 30	21 45.53	-7 15.9	1.430	2.409	8.3	20.4
8 9	21 38.92	-15 14.3	2.672	3.683	1.5	21.0	8 9	21 38.74	-7 49.5	1.397	2.403	4.1	20.1
8 19	21 31.09	-15 34.2	2.678	3.686	1.7	21.0	8 19	21 31.30	-8 32.8	1.389	2.397	2.9	20.0
8 29	21 23.59	-15 51.2	2.713	3.689	4.7	21.2	8 29	21 24.29	-9 20.3	1.406	2.392	6.8	20.2
9 8	21 17.03	-16 3.1	2.776	3.691	7.6	21.4	9 8	21 18.76	-10 5.9	1.447	2.388	11.1	20.5
9 18	21 11.89	-16 8.7	2.864	3.693	10.0	21.6	9 18	21 15.45	-10 44.7	1.509	2.386	14.9	20.7
119754	2001 <i>YU</i> ₉₁		8 13.9 191°37	1°9/15.5	18		121775	2000 <i>AF</i> ₂₉		8 13.9 197°08	0°2/14.2	18	
7 10	21 58.66	-8 2.6	2.285	3.123	12.4	19.8	7 10	21 57.01	-12 14.5	2.658	3.505	10.6	20.2
7 20	21 53.64	-7 57.4	2.205	3.123	9.5	19.6	7 20	21 52.23	-12 30.9	2.576	3.503	7.9	20.0
7 30	21 46.95	-8 2.0	2.148	3.122	6.3	19.4	7 30	21 46.01	-12 54.0	2.519	3.501	5.0	19.8
8 9	21 39.13	-8 14.8	2.117	3.121	3.1	19.2	8 9	21 38.82	-13 21.4	2.489	3.499	1.7	19.6
8 19	21 30.87	-8 33.1	2.114	3.121	2.3	19.2	8 19	21 31.25	-13 50.1	2.488	3.496	1.6	19.6
8 29	21 22.98	-8 54.0	2.139	3.120	5.3	19.4	8 29	21 23.99	-14 17.0	2.516	3.494	4.8	19.8
9 8	21 16.21	-9 14.3	2.191	3.119	8.6	19.6	9 8	21 17.67	-14 39.4	2.571	3.491	7.8	20.0
9 18	21 11.13	-9 31.2	2.267	3.118	11.6	19.8	9 18	21 12.81	-14 55.5	2.651	3.488	10.5	20.2
361954	2008 <i>JV</i> ₆		8 13.9 41°59	4°6/18.4	18		22933	Mareverett		8 13.9 259°07	0°1/13.9	18	
7 10	21 54.97	+1 32.0	2.180	2.986	14.0	20.9	7 10	21 59.08	-12 28.1	1.943	2.803	13.4	19.8
7 20	21 50.96	+1 32.6	2.102	2.989	11.4	20.7	7 20	21 54.40	-12 54.0	1.856	2.790	10.1	19.5
7 30	21 45.32	+1 15.9	2.046	2.992	8.5	20.5	7 30	21 47.67	-13 30.2	1.791	2.776	6.3	19.3
8 9	21 38.59	+0 42.5	2.013	2.996	5.8	20.4	8 9	21 39.46	-14 12.8	1.752	2.763	2.1	19.0
8 19	21 31.42	-0 5.0	2.007	3.000	4.6	20.3	8 19	21 30.58	-14 57.1	1.740	2.749	2.2	19.0
8 29	21 24.60	-1 2.5	2.028	3.003	6.1	20.4	8 29	21 22.03	-15 38.2	1.756	2.735	6.5	19.2
9 8	21 18.86	-2 4.8	2.075	3.007	8.8	20.6	9 8	21 14.77	-16 11.8	1.797	2.720	10.5	19.4
9 18	21 14.78	-3 6.6	2.147	3.011	11.6	20.8	9 18	21 9.53	-16 35.2	1.861	2.706	13.9	19.6
326376	2001 <i>CE</i> ₇		8 13.9 154°60	1°0/13.2	17		504918	2011 <i>BL</i> ₃₆		8 13.9 227°60	0°7/14.5	1	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
14150	1998 SQ ₆₅		8 13.9 105°29	2°0/12.5 18			335526	2006 AD ₂₅		8 14.0 93°48	2°3/15.5 18		
7 10	22 2.20	-16 36.8	1.648	2.520	14.7	18.1	7 10	22 2.03	-7 48.6	1.745	2.591	15.2	20.8
7 20	21 56.79	-17 25.1	1.593	2.535	10.9	17.9	7 20	21 56.51	-7 39.1	1.682	2.603	11.7	20.6
7 30	21 49.08	-18 20.8	1.560	2.549	6.7	17.7	7 30	21 48.88	-7 42.3	1.639	2.615	7.8	20.4
8 9	21 39.89	-19 17.5	1.553	2.563	2.6	17.5	8 9	21 39.86	-7 56.0	1.622	2.626	3.8	20.2
8 19	21 30.24	-20 8.6	1.572	2.576	3.6	17.6	8 19	21 30.39	-8 16.9	1.631	2.638	2.8	20.2
8 29	21 21.30	-20 48.5	1.618	2.589	7.7	17.9	8 29	21 21.53	-8 41.0	1.667	2.649	6.4	20.4
9 8	21 14.10	-21 14.2	1.689	2.602	11.6	18.1	9 8	21 14.24	-9 4.0	1.729	2.660	10.3	20.7
9 18	21 9.28	-21 24.9	1.781	2.615	14.9	18.4	9 18	21 9.17	-9 22.8	1.813	2.671	13.7	20.9
255510	2006 BM ₁₄₅		8 13.9 168°18	1°2/15.2 18			359597	2010 VN ₁₃₁		8 14.0 324°73	1°6/15.4 18		
7 10	21 56.37	-8 37.4	2.684	3.520	10.8	20.9	7 10	21 54.41	-7 12.0	1.922	2.774	13.8	20.6
7 20	21 51.72	-8 50.1	2.604	3.522	8.3	20.7	7 20	21 50.89	-7 37.0	1.838	2.764	10.7	20.4
7 30	21 45.68	-9 11.6	2.548	3.524	5.4	20.5	7 30	21 45.48	-8 16.6	1.775	2.753	7.0	20.2
8 9	21 38.71	-9 39.7	2.519	3.526	2.4	20.3	8 9	21 38.75	-9 7.9	1.737	2.743	3.2	19.9
8 19	21 31.39	-10 11.8	2.519	3.527	1.7	20.3	8 19	21 31.43	-10 6.6	1.725	2.734	2.2	19.8
8 29	21 24.38	-10 44.7	2.548	3.528	4.6	20.5	8 29	21 24.43	-11 7.3	1.740	2.724	6.0	20.1
9 8	21 18.28	-11 15.4	2.604	3.529	7.5	20.7	9 8	21 18.63	-12 4.2	1.781	2.716	9.8	20.3
9 18	21 13.60	-11 41.5	2.685	3.530	10.1	20.8	9 18	21 14.69	-12 53.1	1.845	2.707	13.3	20.5
418920	2009 CZ ₃₁		8 14.0 158°27	1°9/12.9 17			47647	2000 CH ₃₈		8 14.0 292°94	0°2/13.8 18		
7 10	22 6.84	-17 59.5	1.514	2.385	15.8	21.4	7 10	21 57.67	-12 30.8	1.829	2.694	13.8	19.5
7 20	22 0.56	-18 14.1	1.448	2.389	11.9	21.1	7 20	21 53.40	-13 3.2	1.751	2.688	10.4	19.2
7 30	21 51.59	-18 34.0	1.405	2.393	7.3	20.9	7 30	21 47.07	-13 46.5	1.696	2.682	6.5	19.0
8 9	21 40.80	-18 53.8	1.386	2.396	2.8	20.6	8 9	21 39.29	-14 36.4	1.666	2.677	2.2	18.7
8 19	21 29.39	-19 7.9	1.393	2.398	3.6	20.7	8 19	21 30.91	-15 27.6	1.663	2.671	2.3	18.7
8 29	21 18.76	-19 12.2	1.427	2.401	8.3	20.9	8 29	21 22.94	-16 14.5	1.686	2.666	6.7	19.0
9 8	21 10.13	-19 4.8	1.485	2.403	12.6	21.2	9 8	21 16.34	-16 52.6	1.735	2.660	10.7	19.2
9 18	21 4.29	-18 45.7	1.564	2.404	16.3	21.5	9 18	21 11.82	-17 19.3	1.806	2.655	14.1	19.4
326652	2002 TS ₉₉		8 14.0 6°68	5°5/17.1 17			38543	1999 VW ₉		8 14.0 296°97	6°9/ 6.5 18		
7 10	21 56.64	-3 1.1	1.145	2.011	20.2	19.9	7 10	21 57.85	-31 22.4	2.117	2.995	11.7	17.9
7 20	21 53.44	-2 30.0	1.084	2.011	16.2	19.7	7 20	21 53.61	-32 59.4	2.049	2.983	9.3	17.8
7 30	21 47.43	-2 21.9	1.040	2.012	11.6	19.4	7 30	21 47.26	-34 33.7	2.006	2.971	7.4	17.6
8 9	21 39.45	-2 36.7	1.017	2.014	7.2	19.2	8 9	21 39.37	-35 57.2	1.989	2.959	7.0	17.6
8 19	21 30.70	-3 11.1	1.015	2.018	5.6	19.1	8 19	21 30.81	-37 3.0	1.998	2.947	8.3	17.6
8 29	21 22.64	-3 58.6	1.036	2.022	8.7	19.3	8 29	21 22.60	-37 46.0	2.031	2.935	10.6	17.7
9 8	21 16.62	-4 50.8	1.079	2.027	13.2	19.6	9 8	21 15.77	-38 4.8	2.088	2.924	13.1	17.9
9 18	21 13.49	-5 40.1	1.141	2.033	17.5	19.8	9 18	21 11.06	-38 0.9	2.164	2.912	15.3	18.0
424028	2006 XN ₆₂		8 14.0 104°51	3°7/11.2 18			124078	2001 GM ₃		8 14.0 56°54	16°4/29.2 17		
7 10	22 0.55	-19 41.8	1.608	2.489	14.6	20.5	7 10	22 2.03	-36 4.2	0.922	1.833	20.0	18.1
7 20	21 55.75	-20 54.8	1.551	2.497	10.8	20.3	7 20	21 59.36	-40 50.1	0.900	1.839	17.3	18.0
7 30	21 48.57	-22 13.7	1.517	2.505	6.8	20.1	7 30	21 52.14	-45 18.1	0.900	1.846	16.4	18.0
8 9	21 39.77	-23 30.5	1.507	2.513	3.8	19.9	8 9	21 41.30	-48 59.9	0.922	1.854	17.6	18.1
8 19	21 30.41	-24 37.1	1.524	2.520	5.2	20.1	8 19	21 28.84	-51 36.4	0.964	1.862	20.1	18.3
8 29	21 21.70	-25 27.1	1.567	2.528	9.0	20.3	8 29	21 17.53	-53 2.5	1.022	1.869	22.9	18.5
9 8	21 14.73	-25 57.5	1.634	2.535	12.7	20.5	9 8	21 9.81	-53 25.8	1.093	1.878	25.5	18.7
9 18	21 10.22	-26 8.3	1.721	2.542	15.9	20.8	9 18	21 6.95	-52 59.2	1.175	1.886	27.6	19.0
7256	Bonhoeffer		8 14.0 244°34	1°5/12.8 18			87311	2000 QJ ₁		8 14.0 100°74	5°3/17.3 18		
7 10	21 59.80	-15 26.3	1.807	2.676	13.8	18.2	7 10	22 23.06	+ 2 4.0	1.101	1.909	24.6	19.2
7 20	21 55.10	-16 12.4	1.726	2.666	10.3	18.0	7 20	22 12.53	+ 1 20.1	1.068	1.961	19.3	19.0
7 30	21 48.18	-17 7.9	1.668	2.656	6.4	17.7	7 30	21 58.73	+ 0 4.0	1.053	2.010	13.4	18.8
8 9	21 39.67	-18 7.4	1.636	2.646	2.3	17.4	8 9	21 43.10	-1 38.2	1.061	2.056	7.7	18.6
8 19	21 30.46	-19 4.6	1.631	2.636	3.2	17.5	8 19	21 27.46	-3 35.4	1.097	2.099	5.4	18.7
8 29	21 21.64	-19 53.5	1.652	2.625	7.4	17.7	8 29	21 13.65	-5 34.0	1.160	2.138	9.0	19.0
9 8	21 14.26	-20 29.7	1.699	2.614	11.5	17.9	9 8	21 3.01	-7 22.4	1.248	2.175	13.7	19.4
9 18	21 9.09	-20 51.5	1.768	2.603	14.9	18.1	9 18	20 56.13	-8 53.7	1.358	2.210	17.7	19.7
459101	2012 BU ₁₀₀		8 14.0 18°84	1°9/12.8 17			518275	2016 XA ₁₂		8 14.0 207°16	6°0/ 7.4 18		
7 10	21 56.59	-13 48.9	1.115	2.012	18.4	20.1	7 10	22 0.42	-33 11.7	2.598	3.461	10.3	21.8
7 20	21 53.52	-14 52.9	1.061	2.016	13.7	19.8	7 20	21 55.08	-34 19.3	2.534	3.457	8.2	21.7
7 30	21 47.52	-16 13.0	1.027	2.020	8.4	19.6	7 30	21 47.94	-35 22.0	2.496	3.453	6.6	21.6
8 9	21 39.49	-17 40.3	1.014	2.025	2.9	19.3	8 9	21 39.56	-36 13.8	2.483	3.449	6.1	21.5
8 19	21 30.70	-19 4.0	1.024	2.031	4.2	19.4	8 19	21 30.72	-36 50.0	2.498	3.444	7.0	21.6
8 29	21 22.73	-20 13.9	1.058	2.037	9.6	19.7	8 29	21 22.28	-37 7.7	2.539	3.439	8.9	21.7
9 8	21 16.92	-21 3.6	1.112	2.044	14.6	20.0	9 8	21 15.06	-37 6.4	2.604	3.433	11.0	21.8
9 18	21 14.12	-21 31.0	1.186	2.052	18.8	20.3	9 18	21 9.67	-36 47.6	2.690	3.428	12.9	22.0
314147	2005 ED ₂₃₃		8 14.0 109°24	3°0/11.9 17			120329	2004 ND ₁₇		8 14.0 43°00	0°3/14.3 18		
7 10	22 3.00	-18 26.4	1.539	2.416	15.3	20.7	7 10	21 53.50	-11 26.6	2.734	3.585	10.2	19.8
7 20	21 57.57	-19 27.4	1.485	2.430	11.3	20.5	7 20	21 49.57	-11 52.6	2.666	3.594	7.7	19.7
7 30	21 49.67	-20 35.0	1.454	2.443	7.0	20.3	7 30	21 44.35	-12 25.9	2.621	3.604	4.8	19.5
8 9	21 40.14	-21 41.4	1.448	2.456	3.3	20.1	8 9	21 38.31	-13 3.8	2.604	3.613	1.7	19.3
8 19	21 30.09	-22 38.8	1.468	2.469	4.6	20.2	8 19	21 31.98	-13 43.1	2.615	3.623	1.5	19.3
8 29	21 20.82	-23 21.2	1.515	2.481	8.7	20.5	8 29	21 25.97	-14 20.5	2.654	3.634	4.5	19.5
9 8	21 13.42	-23 45.8	1.585	2.493	12.6	20.7	9 8	21 20.85	-14 53.2	2.721	3.644	7.4	19.7
9 18	21 8.62	-23 52.6	1.676	2.504	16.0	21.0	9 18	21 17.05	-15 19.1	2.812	3.654	9.8	19.9
115392	2003 SM ₂₈₃		8 14.0 170°84	4°1/17.9 18			443556	2014 KU ₂₃		8 14.0 338°41	2°8/11.9 17		
7 10	21 56.32	+ 0 17.2	2.561	3.360	12.3								