

EPHEMERIDES

7 29.9

7 30.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
109352	2001 QR ₁₅₃		7 29.9 295°58	0.7/29.7	18		64938	2001 YH ₁₁₆		7 30.0 98°84	0.3/30.2	18	R
6 20	21 6.01	-19 46.2	1.568	2.402	17.2	19.3	6 30	20 58.83	-16 7.5	2.257	3.150	10.4	19.4
6 30	21 2.65	-19 45.2	1.477	2.388	13.8	19.0	7 10	20 52.96	-16 30.6	2.203	3.163	7.3	19.2
7 10	20 56.41	-19 51.4	1.405	2.374	9.7	18.7	7 20	20 45.69	-16 59.1	2.175	3.176	3.8	19.0
7 20	20 47.76	-20 1.6	1.356	2.360	5.0	18.4	7 30	20 37.70	-17 30.0	2.173	3.189	0.3	18.8
7 30	20 37.64	-20 11.7	1.331	2.346	0.7	18.1	8 9	20 29.76	-18 0.1	2.201	3.201	3.6	19.1
8 9	20 27.34	-20 17.8	1.332	2.333	5.4	18.4	8 19	20 22.64	-18 26.8	2.255	3.213	7.0	19.3
8 19	20 18.18	-20 17.1	1.358	2.319	10.3	18.6	8 29	20 17.00	-18 48.0	2.336	3.225	10.0	19.5
8 29	20 11.34	-20 8.5	1.407	2.306	14.6	18.9	9 8	20 13.28	-19 2.8	2.438	3.237	12.5	19.7
438265	2005 XE ₂₅		7 29.9 221°54	4.6/2.1	18		473254	2015 MQ ₁₉		7 30.0 163°58	2.8/28.4	17	
6 20	21 2.69	-3 27.9	2.814	3.559	12.5	21.1	6 30	21 3.03	-24 57.0	1.934	2.839	11.4	21.4
6 30	20 58.43	-2 51.6	2.711	3.551	10.6	21.0	7 10	20 56.18	-25 32.3	1.877	2.842	7.9	21.2
7 10	20 52.57	-2 25.7	2.629	3.543	8.3	20.8	7 20	20 47.46	-26 6.6	1.844	2.845	4.5	21.0
7 20	20 45.47	-2 11.0	2.572	3.535	6.1	20.7	7 30	20 37.72	-26 35.0	1.839	2.847	2.9	20.9
7 30	20 37.65	-2 7.7	2.541	3.527	4.7	20.6	8 9	20 28.00	-26 53.6	1.860	2.850	5.5	21.1
8 9	20 29.73	-2 14.9	2.539	3.518	5.0	20.6	8 19	20 19.33	-27 0.4	1.909	2.851	9.0	21.3
8 19	20 22.36	-2 30.7	2.565	3.509	7.0	20.7	8 29	20 12.59	-26 55.3	1.981	2.853	12.3	21.5
8 29	20 16.14	-2 52.7	2.617	3.500	9.3	20.8	9 8	20 8.32	-26 39.5	2.073	2.854	15.0	21.7
50090	2000 AN ₉₆		7 29.9 129°26	1.3/30.9	17		508536	2016 SM		7 30.0 278°73	0.2/29.8	18	
6 20	21 4.87	-10 26.8	1.859	2.658	16.2	19.3	6 30	21 0.74	-12 38.5	1.842	2.732	12.6	20.5
6 30	21 0.95	-11 11.6	1.782	2.669	13.1	19.2	7 10	20 55.01	-14 33.1	1.748	2.707	8.9	20.2
7 10	20 54.74	-12 12.5	1.726	2.681	9.3	18.9	7 20	20 47.13	-16 46.5	1.680	2.682	4.6	19.9
7 20	20 46.70	-13 26.4	1.693	2.691	5.1	18.7	7 30	20 37.72	-19 11.4	1.641	2.656	0.3	19.5
7 30	20 37.64	-14 48.0	1.688	2.702	1.4	18.5	8 9	20 27.76	-21 37.9	1.632	2.630	4.9	19.8
8 9	20 28.57	-16 11.0	1.710	2.712	4.3	18.7	8 19	20 18.35	-23 56.1	1.652	2.604	9.5	20.0
8 19	20 20.48	-17 29.4	1.760	2.721	8.3	19.0	8 29	20 10.62	-25 58.4	1.699	2.577	13.7	20.2
8 29	20 14.24	-18 38.5	1.835	2.730	12.0	19.2	9 8	20 5.41	-27 40.7	1.767	2.551	17.1	20.4
361073	2006 AQ ₄₇		7 29.9 299°37	0.4/29.6	18		219520	2001 QG ₅₄		7 30.0 308°73	4.6/27.8	18	
6 20	20 59.56	-15 17.5	2.270	3.082	13.3	20.8	6 30	21 2.13	-26 42.6	1.361	2.281	14.1	19.4
6 30	20 56.53	-16 12.5	2.176	3.075	10.5	20.6	7 10	20 56.44	-27 29.4	1.288	2.259	10.1	19.1
7 10	20 51.59	-17 19.2	2.104	3.067	7.3	20.4	7 20	20 47.98	-28 15.7	1.238	2.238	6.1	18.8
7 20	20 45.09	-18 34.1	2.057	3.060	3.7	20.1	7 30	20 37.72	-28 53.5	1.211	2.217	4.7	18.7
7 30	20 37.65	-19 52.4	2.038	3.053	0.5	19.9	8 9	20 27.14	-29 15.8	1.208	2.196	8.0	18.8
8 9	20 30.06	-21 8.8	2.047	3.046	4.0	20.1	8 19	20 17.77	-29 19.1	1.229	2.176	12.5	19.0
8 19	20 23.14	-22 18.5	2.084	3.039	7.7	20.4	8 29	20 11.01	-29 3.3	1.270	2.157	16.8	19.2
8 29	20 17.65	-23 18.0	2.146	3.032	10.9	20.6	9 8	20 7.69	-28 31.1	1.329	2.138	20.5	19.4
122319	2000 QQ ₁₃		7 29.9 200°85	4.8/28.4	18		476074	2007 TL ₁₉		7 30.0 302°49	0.8/29.7	17	
6 20	21 17.90	-32 2.2	1.881	2.694	15.6	18.7	6 30	21 2.73	-20 26.4	1.668	2.575	12.7	21.1
6 30	21 11.48	-32 3.8	1.798	2.693	12.6	18.5	7 10	20 56.47	-20 27.0	1.578	2.544	9.0	20.8
7 10	21 2.11	-32 0.9	1.736	2.691	9.2	18.3	7 20	20 47.87	-20 30.0	1.510	2.514	4.7	20.5
7 20	20 50.46	-31 48.1	1.698	2.689	6.0	18.1	7 30	20 37.73	-20 32.0	1.469	2.484	0.8	20.1
7 30	20 37.65	-31 20.4	1.687	2.687	4.8	18.0	8 9	20 27.21	-20 29.4	1.454	2.454	5.1	20.4
8 9	20 25.07	-30 36.0	1.705	2.684	7.0	18.1	8 19	20 17.56	-20 20.1	1.465	2.423	9.9	20.6
8 19	20 14.00	-29 36.3	1.749	2.681	10.4	18.3	8 29	20 9.97	-20 3.3	1.499	2.393	14.2	20.8
8 29	20 5.45	-28 25.1	1.817	2.678	13.7	18.5	9 8	20 5.22	-19 39.2	1.552	2.364	17.9	21.0
264953	2002 XY ₁₇		7 29.9 211°33	0.3/30.2	17		176347	2001 TQ ₃₁		7 30.0 337°83	2.1/28.9	18	
6 20	21 6.35	-15 57.7	1.959	2.769	15.2	21.8	6 30	21 0.69	-23 16.2	1.724	2.635	12.1	19.2
6 30	21 2.18	-16 12.7	1.868	2.764	12.1	21.6	7 10	20 54.75	-23 31.0	1.660	2.629	8.5	19.0
7 10	20 55.66	-16 37.4	1.797	2.758	8.5	21.4	7 20	20 46.80	-23 46.1	1.619	2.623	4.5	18.7
7 20	20 47.23	-17 9.2	1.750	2.751	4.4	21.1	7 30	20 37.73	-23 57.3	1.605	2.617	2.1	18.6
7 30	20 37.67	-17 44.4	1.729	2.745	0.3	20.8	8 9	20 28.63	-24 1.1	1.616	2.612	5.3	18.8
8 9	20 27.98	-18 18.7	1.737	2.737	4.3	21.1	8 19	20 20.60	-23 55.5	1.653	2.607	9.3	19.0
8 19	20 19.20	-18 48.7	1.771	2.729	8.5	21.3	8 29	20 14.58	-23 40.3	1.713	2.603	13.0	19.2
8 29	20 12.25	-19 12.0	1.830	2.721	12.2	21.5	9 8	20 11.15	-23 16.3	1.794	2.599	16.1	19.4
444650	2007 BL ₁₃		7 30.0 141°17	1.4/29.0	18		181232	2005 TO ₉₆		7 30.0 75°04	0.8/30.5	18	
6 30	20 59.47	-21 56.4	2.360	3.260	9.8	21.9	6 30	20 58.59	-15 7.6	2.121	3.015	11.0	20.3
7 10	20 53.42	-22 20.8	2.300	3.264	6.7	21.7	7 10	20 52.91	-15 22.2	2.061	3.020	7.7	20.1
7 20	20 45.94	-22 46.3	2.266	3.268	3.5	21.5	7 20	20 45.73	-15 43.3	2.026	3.026	4.1	19.9
7 30	20 37.68	-23 9.6	2.259	3.272	1.4	21.3	7 30	20 37.74	-16 8.1	2.017	3.032	0.8	19.7
8 9	20 29.44	-23 27.7	2.281	3.276	4.1	21.5	8 9	20 29.77	-16 33.6	2.037	3.038	3.7	19.9
8 19	20 22.00	-23 38.8	2.330	3.279	7.3	21.7	8 19	20 22.62	-16 57.0	2.084	3.044	7.3	20.1
8 29	20 16.04	-23 41.8	2.404	3.282	10.2	21.9	8 29	20 17.02	-17 16.2	2.155	3.050	10.5	20.4
9 8	20 12.03	-23 37.1	2.501	3.285	12.7	22.1	9 8	20 13.43	-17 29.8	2.249	3.056	13.2	20.6
244497	2002 TZ ₈₀		7 30.0 313°76	3.5/1.1	18		180785	2004 RE ₁₅₂		7 30.0 97°54	7.1/5.0	18	R
6 30	20 56.60	-7 52.6	1.587	2.476	14.3	19.7	6 30	20 57.29	+ 5 37.0	2.369	3.172	13.1	19.7
7 10	20 52.20	-8 16.1	1.494	2.445	10.8	19.4	7 10	20 51.85	+ 5 55.2	2.310	3.186	10.9	19.6
7 20	20 45.67	-8 58.1	1.423	2.415	6.8	19.1	7 20	20 45.14	+ 5 54.6	2.273	3.200	8.8	19.5
7 30	20 37.68	-9 56.9	1.376	2.384	3.6	18.8	7 30	20 37.74	+ 5 34.8	2.260	3.214	7.4	19.4
8 9	20 29.24	-11 7.9	1.354	2.354	5.3	18.9	8 9	20 30.37	+ 4 57.6	2.273	3.227	7.3	19.5
8 19	20 21.49	-12 24.8	1.357	2.325	9.6	19.0	8 19	20 23.69	+ 4 6.3	2.312	3.240	8.4	19.6
8 29	20 15.56	-13 40.9	1.384	2.296	14.0	19.2	8 29	20 18.34	+ 3 5.5	2.376	3.253	10.3	19.7
9 8	20 12.29	-14 50.5	1.430	2.267	17.9	19.4	9 8	20 14.72	+ 2 0.2	2.462	3.266	12.3	19.9
123609	2000 YJ ₁₃		7 30.0 351°26	7.4/25.4	18		46440	2002 LS ₂₇		7 30.0 286°19	3.3/31.8	18	
6 30	20 52.83	-30 3.2	1.154										

EPHEMERIDES

7 30.0

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
439863	1999 <i>TH</i> ₅₀	7 30.0 118°62		8°2/ 7.1 18			387764	2003 <i>SF</i> ₂₄₂	7 30.0 206°98		4°1/ 1.9 18		
6 30	20 56.05	+10 53.6	2.464	3.232	13.6	21.5	6 30	20 58.97	- 4 44.4	2.236	3.094	11.9	21.6
7 10	20 51.02	+10 57.4	2.396	3.239	11.7	21.4	7 10	20 53.20	- 4 47.3	2.160	3.089	9.2	21.4
7 20	20 44.74	+10 39.5	2.348	3.246	9.9	21.3	7 20	20 45.95	- 5 3.9	2.108	3.085	6.3	21.3
7 30	20 37.75	+ 9 59.2	2.324	3.252	8.6	21.2	7 30	20 37.81	- 5 33.2	2.082	3.079	4.2	21.1
8 9	20 30.73	+ 8 58.4	2.325	3.259	8.2	21.2	8 9	20 29.58	- 6 12.6	2.083	3.074	4.9	21.1
8 19	20 24.35	+ 7 40.9	2.351	3.265	9.0	21.2	8 19	20 22.01	- 6 58.6	2.112	3.068	7.5	21.3
8 29	20 19.21	+ 6 11.9	2.402	3.272	10.5	21.3	8 29	20 15.85	- 7 47.4	2.167	3.061	10.4	21.5
9 8	20 15.76	+ 4 37.6	2.477	3.278	12.3	21.5	9 8	20 11.61	- 8 35.2	2.244	3.054	13.1	21.6
118878	2000 <i>TT</i> ₄₉	7 30.0 248°87		1°4/28.9 18			373272	2012 <i>HO</i> ₂₃	7 30.0 177°50		4°6/27.4 17		
6 30	20 58.09	-19 59.5	2.252	3.154	10.1	19.9	6 30	21 4.55	-27 41.9	1.609	2.519	12.9	21.1
7 10	20 52.67	-20 54.2	2.181	3.147	7.0	19.7	7 10	20 57.65	-28 43.4	1.555	2.520	9.2	20.9
7 20	20 45.68	-21 53.4	2.136	3.139	3.6	19.5	7 20	20 48.41	-29 42.3	1.524	2.521	5.8	20.7
7 30	20 37.75	-22 52.4	2.118	3.131	1.4	19.3	7 30	20 37.83	-30 30.8	1.519	2.521	4.8	20.6
8 9	20 29.69	-23 46.6	2.129	3.123	4.3	19.5	8 9	20 27.22	-31 3.2	1.541	2.521	7.5	20.8
8 19	20 22.33	-24 32.6	2.167	3.116	7.8	19.7	8 19	20 17.90	-31 16.9	1.587	2.521	11.1	21.0
8 29	20 16.43	-25 8.0	2.230	3.107	10.9	19.9	8 29	20 10.94	-31 12.3	1.655	2.521	14.6	21.2
9 8	20 12.54	-25 32.2	2.314	3.099	13.5	20.1	9 8	20 6.98	-30 52.4	1.742	2.520	17.6	21.4
234332	2001 <i>EC</i> ₁₅	7 30.0 86°03		9°7/24.3 18			449372	2013 <i>GA</i> ₉₃	7 30.0 166°78		6°9/24.4 18		
6 30	21 9.04	-44 15.1	1.845	2.722	13.2	20.1	6 30	21 2.84	-40 12.3	2.455	3.338	10.1	21.5
7 10	21 0.66	-45 25.6	1.818	2.738	11.1	20.0	7 10	20 56.02	-41 13.6	2.408	3.340	8.2	21.4
7 20	20 49.81	-46 17.3	1.814	2.754	9.9	19.9	7 20	20 47.42	-42 3.9	2.386	3.341	7.0	21.3
7 30	20 37.76	-46 43.1	1.833	2.770	10.0	20.0	7 30	20 37.83	-42 37.9	2.390	3.342	7.1	21.3
8 9	20 26.05	-46 40.0	1.877	2.785	11.3	20.1	8 9	20 28.26	-42 52.2	2.419	3.343	8.4	21.4
8 19	20 16.07	-46 9.3	1.943	2.801	13.2	20.2	8 19	20 19.68	-42 46.4	2.473	3.344	10.3	21.5
8 29	20 8.85	-45 15.8	2.029	2.816	15.2	20.4	8 29	20 12.95	-42 22.1	2.550	3.344	12.3	21.7
9 8	20 4.88	-44 5.8	2.133	2.831	17.0	20.6	9 8	20 8.58	-41 42.7	2.646	3.345	14.0	21.8
224247	2005 <i>SV</i> ₁₆₅	7 30.0 298°40		1°2/29.4 18			357888	2005 <i>UN</i> ₅₁₂	7 30.0 49°89		7°5/ 3.8 18		
6 30	21 0.72	-18 51.3	1.521	2.432	13.5	20.5	6 30	20 58.54	+ 2 46.6	2.052	2.879	14.0	20.1
7 10	20 54.99	-19 38.1	1.459	2.429	9.4	20.3	7 10	20 52.90	+ 3 32.3	1.994	2.888	11.6	19.9
7 20	20 47.04	-20 32.0	1.420	2.425	4.8	20.0	7 20	20 45.77	+ 3 59.4	1.958	2.898	9.2	19.8
7 30	20 37.77	-21 26.9	1.406	2.421	1.2	19.7	7 30	20 37.83	+ 4 6.7	1.945	2.909	7.7	19.7
8 9	20 28.38	-22 16.6	1.419	2.417	5.4	20.0	8 9	20 29.90	+ 3 55.3	1.958	2.919	7.8	19.7
8 19	20 20.11	-22 56.4	1.456	2.414	10.0	20.3	8 19	20 22.78	+ 3 27.9	1.996	2.930	9.3	19.9
8 29	20 14.02	-23 23.6	1.515	2.410	14.1	20.5	8 29	20 17.18	+ 2 48.9	2.058	2.941	11.5	20.0
9 8	20 10.76	-23 37.8	1.594	2.407	17.5	20.7	9 8	20 13.58	+ 2 3.6	2.142	2.952	13.7	20.2
361960	2008 <i>JC</i> ₁₈	7 30.0 67°98		3°6/27.1 18			332512	2008 <i>GK</i> ₁₀₂	7 30.0 88°65		0°9/29.6 17		
6 30	20 58.72	-27 1.7	2.197	3.104	10.1	21.1	6 30	21 2.39	-18 15.5	1.521	2.429	13.7	21.1
7 10	20 53.13	-28 8.5	2.143	3.107	7.1	20.9	7 10	20 55.97	-18 59.8	1.475	2.442	9.4	20.9
7 20	20 45.91	-29 13.7	2.115	3.111	4.5	20.8	7 20	20 47.46	-19 50.3	1.451	2.455	4.8	20.7
7 30	20 37.77	-30 11.9	2.114	3.115	3.8	20.7	7 30	20 37.84	-20 41.2	1.453	2.468	0.9	20.4
8 9	20 29.59	-30 58.6	2.140	3.118	5.9	20.9	8 9	20 28.32	-21 26.8	1.482	2.481	5.1	20.8
8 19	20 22.25	-31 30.9	2.193	3.122	8.8	21.1	8 19	20 20.08	-22 2.8	1.535	2.494	9.6	21.0
8 29	20 16.52	-31 48.4	2.270	3.126	11.5	21.3	8 29	20 14.06	-22 27.3	1.612	2.506	13.4	21.3
9 8	20 12.94	-31 51.9	2.367	3.129	13.9	21.4	9 8	20 10.80	-22 40.0	1.709	2.518	16.6	21.6
395065	2009 <i>FS</i> ₄₀	7 30.0 106°86		0°3/29.8 17			316524	2010 <i>VE</i> ₁₉₆	7 30.0 322°30		1°8/28.4 18		
6 30	20 59.37	-17 40.3	2.037	2.937	11.1	21.1	6 30	20 57.21	-16 47.6	1.781	2.687	12.1	19.3
7 10	20 53.53	-18 14.1	1.980	2.944	7.7	20.9	7 10	20 52.57	-18 52.7	1.700	2.668	8.4	19.1
7 20	20 46.09	-18 53.1	1.948	2.951	3.9	20.7	7 20	20 45.90	-21 12.3	1.645	2.650	4.3	18.8
7 30	20 37.78	-19 33.5	1.942	2.957	0.4	20.4	7 30	20 37.85	-23 37.5	1.619	2.631	2.0	18.6
8 9	20 29.48	-20 11.2	1.965	2.964	4.0	20.7	8 9	20 29.39	-25 58.1	1.621	2.614	5.7	18.8
8 19	20 22.05	-20 43.0	2.014	2.971	7.7	20.9	8 19	20 21.59	-28 5.0	1.651	2.597	10.0	19.0
8 29	20 16.27	-21 7.0	2.088	2.977	11.0	21.2	8 29	20 15.52	-29 51.8	1.705	2.580	13.8	19.2
9 8	20 12.63	-21 22.3	2.184	2.984	13.8	21.4	9 8	20 11.96	-31 16.1	1.780	2.564	17.0	19.4
422961	2003 <i>BN</i> ₃₈	7 30.0 156°29		0°6/29.7 17			440642	2005 <i>WP</i> ₁₀₇	7 30.0 286°58		3°6/27.2 18		
6 30	21 1.58	-17 36.0	1.792	2.694	12.3	21.1	6 30	20 58.96	-26 47.6	2.143	3.051	10.3	20.8
7 10	20 55.28	-18 22.2	1.734	2.698	8.5	20.8	7 10	20 53.44	-27 49.5	2.075	3.040	7.3	20.6
7 20	20 47.08	-19 15.1	1.699	2.702	4.3	20.6	7 20	20 46.18	-28 51.0	2.031	3.029	4.5	20.4
7 30	20 37.80	-20 9.5	1.691	2.706	0.6	20.3	7 30	20 37.85	-29 46.3	2.015	3.017	3.8	20.4
8 9	20 28.49	-21 0.1	1.711	2.709	4.6	20.6	8 9	20 29.37	-30 30.6	2.026	3.006	6.0	20.5
8 19	20 20.18	-21 42.7	1.757	2.712	8.7	20.9	8 19	20 21.68	-31 0.9	2.064	2.995	9.1	20.7
8 29	20 13.77	-22 15.0	1.827	2.715	12.4	21.1	8 29	20 15.62	-31 16.2	2.125	2.984	12.1	20.8
9 8	20 9.84	-22 36.2	1.918	2.717	15.4	21.3	9 8	20 11.79	-31 17.3	2.206	2.974	14.6	21.0
323749	2005 <i>NV</i> ₃₂	7 30.0 0°57		3°9/ 1.2 17			443075	2013 <i>GV</i> ₂₅	7 30.0 210°63		4°7/25.9 18		
6 30	20 57.36	- 7 59.1	1.221	2.123	16.8	20.2	6 30	21 0.05	-31 27.1	2.438	3.339	9.5	21.3
7 10	20 52.88	- 8 19.9	1.163	2.121	12.5	19.9	7 10	20 54.06	-32 37.0	2.379	3.335	7.0	21.1
7 20	20 46.04	- 9 1.7	1.125	2.120	7.8	19.6	7 20	20 46.44	-33 42.6	2.346	3.332	5.1	21.0
7 30	20 37.80	-10 1.0	1.110	2.119	4.1	19.4	7 30	20 37.85	-34 38.6	2.341	3.328	4.9	21.0
8 9	20 29.46	-11 11.5	1.118	2.120	5.8	19.5	8 9	20 29.17	-35 20.6	2.363	3.324	6.6	21.1
8 19	20 22.35	-12 25.3	1.150	2.121	10.4	19.8	8 19	20 21.25	-35 46.5	2.411	3.320	9.0	21.2
8 29	20 17.59	-13 35.2	1.203	2.124	14.9	20.1	8 29	20 14.89	-35 56.2	2.483	3.316	11.4	21.4
9 8	20 15.86	-14 35.5	1.275	2.126	18.8	20.3	9 8	20 10.64	-35 51.3	2.576	3.311	13.5	21.5
382764	2003 <i>QP</i> ₁₀	7 30.0 180°99		3°4/28.5 18			135033	2001 <i>MH</i> ₂₉ </					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
379372	2009 WA ₂₅₀	7 30.0 203°62		5°7/25.8 18			137721	1999 XW ₁₀₃	7 30.0 269°88		2°3/28.7 18		
6 30	21 3.81	-31 56.6	1.978	2.880	11.3	21.8	6 30	21 2.74	-21 46.1	1.584	2.495	13.1	20.1
7 10	20 56.99	-33 16.5	1.920	2.876	8.4	21.6	7 10	20 56.59	-22 35.2	1.508	2.477	9.2	19.9
7 20	20 48.06	-34 31.1	1.888	2.873	6.2	21.5	7 20	20 48.02	-23 29.2	1.455	2.459	4.9	19.6
7 30	20 37.87	-35 33.0	1.882	2.868	6.0	21.4	7 30	20 37.91	-24 21.4	1.428	2.440	2.4	19.4
8 9	20 27.54	-36 16.7	1.903	2.863	8.0	21.5	8 9	20 27.47	-25 5.5	1.426	2.421	6.1	19.6
8 19	20 18.24	-36 39.7	1.949	2.858	10.8	21.7	8 19	20 18.01	-25 37.0	1.450	2.402	10.6	19.8
8 29	20 10.96	-36 42.5	2.018	2.852	13.6	21.9	8 29	20 10.75	-25 53.7	1.497	2.382	14.8	20.0
9 8	20 6.36	-36 28.1	2.106	2.846	16.1	22.1	9 8	20 6.46	-25 56.3	1.562	2.363	18.3	20.2
512001	2015 KZ ₁₅₃	7 30.0 182°09		2°7/31.8 17			30652	1236 T ₋₁	7 30.0 214°20		2°8/28.7 18		
6 30	21 0.87	-9 30.2	2.150	3.024	11.7	21.5	6 30	21 6.76	-23 47.1	1.524	2.432	13.6	19.1
7 10	20 54.55	-9 31.7	2.080	3.024	8.6	21.3	7 10	20 59.32	-24 22.0	1.460	2.427	9.6	18.9
7 20	20 46.66	-9 43.6	2.035	3.025	5.3	21.1	7 20	20 49.36	-24 57.6	1.419	2.421	5.2	18.6
7 30	20 37.88	-10 4.2	2.017	3.024	2.8	20.9	7 30	20 37.92	-25 27.4	1.404	2.414	2.9	18.5
8 9	20 29.05	-10 30.8	2.026	3.024	4.2	21.0	8 9	20 26.37	-25 46.2	1.414	2.407	6.4	18.6
8 19	20 20.99	-11 0.5	2.064	3.023	7.4	21.2	8 19	20 16.11	-25 51.2	1.451	2.400	10.8	18.9
8 29	20 14.48	-11 30.2	2.127	3.021	10.6	21.4	8 29	20 8.32	-25 42.3	1.509	2.391	14.9	19.1
9 8	20 10.01	-11 57.3	2.212	3.019	13.4	21.6	9 8	20 3.70	-25 21.6	1.587	2.383	18.3	19.3
134989	2001 FG ₁₂₃	7 30.0 230°42		2°1/28.9 18			282339	2002 VW ₉₃	7 30.1 347°11		1°5/31.0 18		
6 30	21 5.10	-22 34.2	1.760	2.663	12.4	20.2	6 30	20 51.66	-11 33.9	1.139	2.061	16.1	18.5
7 10	20 57.95	-23 3.0	1.688	2.653	8.7	19.9	7 10	20 49.17	-12 29.1	1.072	2.044	11.6	18.2
7 20	20 48.58	-23 33.4	1.639	2.642	4.6	19.7	7 20	20 44.31	-13 45.9	1.025	2.029	6.5	17.9
7 30	20 37.88	-24 0.2	1.618	2.630	2.1	19.5	7 30	20 37.91	-15 18.3	1.001	2.015	1.6	17.5
8 9	20 27.03	-24 19.0	1.623	2.618	5.5	19.7	8 9	20 31.25	-16 57.4	0.999	2.003	5.5	17.7
8 19	20 17.21	-24 27.0	1.655	2.605	9.7	19.9	8 19	20 25.68	-18 32.8	1.019	1.994	10.9	18.0
8 29	20 9.48	-24 23.6	1.711	2.591	13.5	20.1	8 29	20 22.47	-19 56.0	1.060	1.986	15.9	18.3
9 8	20 4.53	-24 9.9	1.787	2.577	16.7	20.3	9 8	20 22.39	-21 1.5	1.118	1.981	20.1	18.5
333976	2000 QA ₇	7 30.0 323°32		6°1/28.3 18			442017	2010 OQ ₈₄	7 30.1 250°17		3°1/27.5 18		
6 30	21 6.24	-31 32.9	1.232	2.151	15.4	20.1	6 30	20 58.93	-26 13.6	2.431	3.334	9.4	21.1
7 10	20 59.71	-31 38.0	1.154	2.121	11.5	19.7	7 10	20 53.28	-27 10.2	2.361	3.324	6.6	20.9
7 20	20 49.88	-31 32.3	1.096	2.092	7.6	19.4	7 20	20 46.07	-28 6.4	2.316	3.314	4.0	20.7
7 30	20 37.89	-31 8.1	1.061	2.063	6.2	19.3	7 30	20 37.93	-28 57.5	2.300	3.303	3.2	20.6
8 9	20 25.55	-30 20.3	1.049	2.036	9.1	19.4	8 9	20 29.65	-29 39.3	2.311	3.292	5.3	20.7
8 19	20 14.73	-29 9.2	1.060	2.009	13.8	19.5	8 19	20 22.05	-30 9.2	2.350	3.282	8.2	20.9
8 29	20 7.04	-27 39.6	1.091	1.984	18.4	19.7	8 29	20 15.90	-30 26.1	2.413	3.270	10.9	21.1
9 8	20 3.35	-25 58.1	1.139	1.960	22.5	19.9	9 8	20 11.72	-30 30.5	2.497	3.259	13.3	21.2
342862	2008 YL ₂₇	7 30.0 257°79		1°3/29.2 18			240925	2006 FP ₅	7 30.1 79°09		5°8/3.3 18		
6 30	21 0.68	-19 31.6	2.072	2.972	10.9	21.7	6 30	20 58.78	-0 53.1	1.758	2.612	14.8	20.4
7 10	20 54.72	-20 22.4	1.988	2.953	7.6	21.5	7 10	20 53.25	-1 5.9	1.705	2.626	11.6	20.3
7 20	20 46.90	-21 18.8	1.929	2.932	3.9	21.2	7 20	20 46.04	-1 39.2	1.673	2.641	8.4	20.1
7 30	20 37.89	-22 16.1	1.898	2.912	1.3	21.0	7 30	20 37.93	-2 31.6	1.665	2.656	6.0	20.0
8 9	20 28.60	-23 9.3	1.895	2.891	4.7	21.2	8 9	20 29.86	-3 38.5	1.683	2.670	6.3	20.0
8 19	20 20.00	-23 54.2	1.919	2.869	8.5	21.4	8 19	20 22.75	-4 54.3	1.727	2.685	8.7	20.2
8 29	20 13.01	-24 28.2	1.968	2.847	12.0	21.6	8 29	20 17.39	-6 12.7	1.796	2.699	11.8	20.4
9 8	20 8.29	-24 50.5	2.037	2.824	15.1	21.7	9 8	20 14.28	-7 27.9	1.887	2.713	14.6	20.7
248927	2006 WD ₅	7 30.0 358°94		0°5/29.7 18			467722	2009 DR ₁₁₇	7 30.1 185°55		1°9/29.2 17		
6 30	20 58.19	-17 51.1	1.777	2.684	12.1	20.2	6 30	21 6.45	-22 3.3	1.519	2.426	13.7	21.2
7 10	20 52.98	-18 26.9	1.716	2.683	8.4	20.0	7 10	20 58.99	-22 23.7	1.459	2.426	9.6	21.0
7 20	20 45.96	-19 9.2	1.678	2.682	4.3	19.7	7 20	20 49.15	-22 45.6	1.423	2.426	5.0	20.7
7 30	20 37.89	-19 53.3	1.667	2.682	0.5	19.5	7 30	20 37.95	-23 3.8	1.412	2.425	1.9	20.5
8 9	20 29.78	-20 34.7	1.682	2.682	4.5	19.8	8 9	20 26.76	-23 13.9	1.428	2.424	5.7	20.8
8 19	20 22.60	-21 9.4	1.722	2.682	8.6	20.0	8 19	20 16.90	-23 13.7	1.469	2.423	10.3	21.0
8 29	20 17.23	-21 35.0	1.787	2.683	12.2	20.2	8 29	20 9.48	-23 2.9	1.533	2.421	14.3	21.3
9 8	20 14.22	-21 50.5	1.872	2.684	15.3	20.4	9 8	20 5.12	-22 42.8	1.616	2.419	17.7	21.5
138554	2000 QN ₄₄	7 30.0 316°17		0°1/29.9 18			206541	2003 UV ₁₉₆	7 30.1 270°01		1°3/29.3 18		
6 30	20 58.10	-17 2.3	1.855	2.759	11.8	20.0	6 30	21 0.85	-20 31.2	1.844	2.750	11.8	20.6
7 10	20 52.92	-17 33.6	1.784	2.749	8.3	19.7	7 10	20 54.88	-21 1.8	1.774	2.741	8.2	20.4
7 20	20 45.95	-18 12.1	1.736	2.739	4.3	19.5	7 20	20 46.99	-21 36.0	1.728	2.732	4.2	20.1
7 30	20 37.89	-18 53.6	1.715	2.730	0.1	19.1	7 30	20 37.94	-22 9.4	1.709	2.723	1.4	19.9
8 9	20 29.70	-19 33.8	1.721	2.721	4.3	19.4	8 9	20 28.78	-22 37.7	1.716	2.714	4.8	20.2
8 19	20 22.35	-20 8.8	1.752	2.713	8.4	19.7	8 19	20 20.53	-22 57.7	1.750	2.705	8.9	20.4
8 29	20 16.71	-20 36.0	1.808	2.704	12.1	19.9	8 29	20 14.14	-23 7.8	1.808	2.695	12.5	20.6
9 8	20 13.39	-20 53.9	1.885	2.696	15.2	20.1	9 8	20 10.20	-23 8.1	1.886	2.686	15.6	20.8
356539	2011 SM ₁₅₂	7 30.0 267°93		1°2/29.3 18			17674	1996 YG	7 30.1 150°71		0°8/29.5 18		
6 30	20 59.97	-20 29.9	1.984	2.888	11.1	21.7	6 30	21 0.04	-20 12.1	2.362	3.259	9.9	19.0
7 10	20 54.13	-21 0.4	1.916	2.882	7.7	21.5	7 10	20 53.89	-20 32.5	2.301	3.263	6.8	18.8
7 20	20 46.53	-21 34.2	1.872	2.875	4.0	21.2	7 20	20 46.30	-20 55.3	2.265	3.268	3.5	18.6
7 30	20 37.90	-22 7.3	1.855	2.869	1.3	21.0	7 30	20 37.94	-21 17.3	2.257	3.272	0.9	18.4
8 9	20 29.18	-22 35.6	1.866	2.863	4.6	21.2	8 9	20 29.60	-21 35.5	2.278	3.276	3.8	18.6
8 19	20 21.33	-22 56.1	1.903	2.856	8.3	21.5	8 19	20 22.04	-21 48.0	2.327	3.279	7.1	18.8
8 29	20 15.19	-23 7.5	1.964	2.850	11.8	21.7	8 29	20 15.95	-21 53.6	2.401	3.283	10.1	19.0
9 8	20 11.32	-23 9.5	2.047	2.844	14.7	21.8	9 8	20 11.80	-21 52.3	2.497	3.286	12.6	19.2
153278	2001 DH ₄₉	7 30.0 155°45		2°6/27.8 18			71105	1999 XP ₁₅₁	7 30.1 315°51		0°2/29.9 18		
6 30	20 59.45	-26 52.7	2.855	3.753	8.4	20.6	6 30	20 59.86	-18 5.2	1.491</			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
404110	2012 <i>WO</i> ₈	7 30.1 313°36		0°0/30.0 18			260231	2004 <i>RA</i> ₂₅₅	7 30.1 321°11		4°3/26.9 18		
6 30	21 0.15	-17 29.7	1.619	2.526	13.0	21.3	6 30	20 59.11	-28 31.2	2.032	2.941	10.7	19.9
7 10	20 54.57	-17 45.1	1.549	2.515	9.2	21.1	7 10	20 53.65	-29 34.4	1.970	2.934	7.7	19.7
7 20	20 46.89	-18 7.2	1.501	2.505	4.7	20.8	7 20	20 46.38	-30 35.4	1.933	2.928	5.1	19.5
7 30	20 37.96	-18 32.2	1.479	2.494	0.0	20.4	7 30	20 38.02	-31 28.1	1.923	2.921	4.5	19.4
8 9	20 28.87	-18 55.7	1.483	2.484	4.7	20.7	8 9	20 29.56	-32 7.6	1.939	2.915	6.6	19.6
8 19	20 20.79	-19 14.5	1.512	2.475	9.3	21.0	8 19	20 21.98	-32 31.3	1.981	2.909	9.7	19.7
8 29	20 14.71	-19 26.2	1.564	2.465	13.4	21.2	8 29	20 16.15	-32 38.7	2.046	2.903	12.6	19.9
9 8	20 11.30	-19 29.8	1.637	2.456	16.8	21.4	9 8	20 12.67	-32 31.2	2.131	2.898	15.1	20.1
216730	2005 <i>GE</i> ₁₂₃	7 30.1 17°23		1°3/29.5 17			199177	2005 <i>YU</i> ₂₁₉	7 30.1 199°00		0°9/30.6 18		
6 30	20 58.80	-18 50.5	1.038	1.968	16.5	19.6	6 30	21 3.21	-15 36.2	2.138	3.025	11.2	20.3
7 10	20 54.17	-19 31.2	0.996	1.973	11.5	19.4	7 10	20 56.25	-15 33.7	2.066	3.022	7.9	20.1
7 20	20 46.82	-20 20.4	0.973	1.980	5.8	19.1	7 20	20 47.62	-15 36.4	2.020	3.019	4.3	19.9
7 30	20 37.98	-21 10.5	0.973	1.987	1.4	18.8	7 30	20 38.05	-15 42.3	2.001	3.015	0.9	19.7
8 9	20 29.25	-21 53.9	0.994	1.996	6.4	19.2	8 9	20 28.42	-15 49.0	2.010	3.010	3.8	19.9
8 19	20 22.14	-22 25.1	1.038	2.006	11.8	19.5	8 19	20 19.63	-15 54.3	2.047	3.005	7.6	20.1
8 29	20 17.85	-22 41.6	1.101	2.017	16.4	19.8	8 29	20 12.49	-15 56.9	2.111	3.000	10.9	20.3
9 8	20 16.95	-22 43.6	1.182	2.029	20.3	20.1	9 8	20 7.51	-15 55.7	2.196	2.993	13.8	20.5
15076	Joellewis	7 30.1 11°30		3°8/ 1.2 18			514043	2014 <i>ME</i> ₃₅	7 30.1 173°03		4°1/ 1.7 18		
6 30	20 57.39	- 7 59.0	1.251	2.152	16.5	17.1	6 30	20 58.47	- 5 48.0	2.229	3.091	11.8	20.6
7 10	20 52.88	- 8 21.2	1.197	2.154	12.3	16.9	7 10	20 52.88	- 5 33.2	2.159	3.092	9.0	20.4
7 20	20 46.09	- 9 3.7	1.162	2.156	7.6	16.6	7 20	20 45.86	- 5 30.5	2.113	3.092	6.2	20.3
7 30	20 37.99	-10 3.1	1.150	2.160	4.0	16.4	7 30	20 38.03	- 5 39.3	2.094	3.092	4.2	20.1
8 9	20 29.84	-11 12.8	1.162	2.164	5.7	16.6	8 9	20 30.16	- 5 57.8	2.102	3.092	4.9	20.2
8 19	20 22.91	-12 25.3	1.198	2.169	10.1	16.8	8 19	20 22.99	- 6 23.4	2.136	3.092	7.4	20.3
8 29	20 18.27	-13 33.7	1.255	2.175	14.5	17.1	8 29	20 17.23	- 6 52.8	2.196	3.092	10.3	20.5
9 8	20 16.56	-14 32.6	1.331	2.181	18.3	17.4	9 8	20 13.36	- 7 22.7	2.279	3.092	12.9	20.7
4974	Elford	7 30.1 95°96		6°0/ 3.5 18 R			314414	2005 <i>UR</i> ₃₂₇	7 30.1 291°01		1°7/28.9 18		
6 30	20 58.88	+ 0 5.4	1.784	2.632	14.9	17.0	6 30	20 59.57	-22 11.8	2.107	3.012	10.6	20.7
7 10	20 53.36	- 0 11.8	1.726	2.643	11.8	16.8	7 10	20 53.90	-22 39.7	2.030	2.996	7.4	20.5
7 20	20 46.14	- 0 50.6	1.689	2.655	8.6	16.6	7 20	20 46.50	-23 9.5	1.978	2.980	3.9	20.2
7 30	20 37.99	- 1 49.2	1.677	2.666	6.3	16.5	7 30	20 38.05	-23 37.3	1.952	2.965	1.7	20.0
8 9	20 29.85	- 3 3.5	1.691	2.677	6.4	16.6	8 9	20 29.45	-23 59.4	1.954	2.949	4.7	20.2
8 19	20 22.62	- 4 27.2	1.731	2.687	8.8	16.7	8 19	20 21.61	-24 13.1	1.983	2.933	8.3	20.4
8 29	20 17.11	- 5 53.8	1.796	2.698	11.8	16.9	8 29	20 15.38	-24 17.3	2.036	2.918	11.6	20.6
9 8	20 13.86	- 7 17.0	1.883	2.708	14.7	17.2	9 8	20 11.34	-24 12.0	2.110	2.902	14.4	20.7
78126	2002 <i>NU</i> ₉	7 30.1 317°76		2°0/31.3 18			257734	1999 <i>YF</i> ₂₁	7 30.1 151°22		0°1/30.1 17		
6 30	20 58.01	-11 42.6	1.615	2.513	13.6	19.6	6 30	21 3.81	-16 54.2	1.870	2.764	12.2	21.5
7 10	20 53.09	-12 4.8	1.543	2.502	9.9	19.4	7 10	20 56.78	-17 16.0	1.812	2.773	8.5	21.3
7 20	20 46.16	-12 40.2	1.492	2.490	5.7	19.1	7 20	20 47.92	-17 43.6	1.778	2.780	4.4	21.1
7 30	20 37.99	-13 25.6	1.466	2.479	2.1	18.8	7 30	20 38.07	-18 13.2	1.772	2.787	0.1	20.7
8 9	20 29.63	-14 16.3	1.466	2.468	4.6	19.0	8 9	20 28.25	-18 40.9	1.794	2.794	4.2	21.1
8 19	20 22.17	-15 7.1	1.491	2.458	9.0	19.2	8 19	20 19.47	-19 3.8	1.842	2.800	8.3	21.3
8 29	20 16.58	-15 53.7	1.540	2.448	13.1	19.4	8 29	20 12.57	-19 19.8	1.916	2.805	11.9	21.6
9 8	20 13.56	-16 32.5	1.609	2.438	16.6	19.7	9 8	20 8.11	-19 28.5	2.010	2.810	14.8	21.8
366102	2012 <i>DL</i> ₉	7 30.1 185°56		1°4/31.3 18			71436	2000 <i>AF</i> ₂₀₈	7 30.1 2°67		3°1/28.4 17		
6 30	20 56.44	-11 17.3	2.582	3.462	9.8	21.4	6 30	20 55.42	-21 41.4	1.105	2.040	15.3	18.0
7 10	20 51.36	-11 53.9	2.511	3.461	7.0	21.2	7 10	20 51.86	-22 44.4	1.058	2.038	10.6	17.7
7 20	20 45.04	-12 39.3	2.466	3.461	4.0	21.0	7 20	20 45.71	-23 53.1	1.031	2.037	5.7	17.5
7 30	20 38.00	-13 30.9	2.448	3.461	1.5	20.8	7 30	20 38.06	-24 58.7	1.026	2.038	3.2	17.3
8 9	20 30.89	-14 25.3	2.460	3.460	3.2	21.0	8 9	20 30.40	-25 52.7	1.044	2.041	7.2	17.6
8 19	20 24.37	-15 18.9	2.499	3.459	6.2	21.2	8 19	20 24.16	-26 29.5	1.083	2.046	12.1	17.9
8 29	20 19.04	-16 8.9	2.565	3.458	9.1	21.3	8 29	20 20.54	-26 46.8	1.143	2.052	16.5	18.1
9 8	20 15.35	-16 52.9	2.655	3.457	11.5	21.5	9 8	20 20.17	-26 45.6	1.219	2.059	20.2	18.4
241734	2000 <i>WV</i> ₉₃	7 30.1 272°78		2°4/28.2 18			442138	2010 <i>UR</i> ₈₂	7 30.1 310°85		2°3/28.7 18		
6 30	20 59.86	-24 5.9	2.380	3.282	9.6	21.2	6 30	20 59.71	-23 30.0	1.893	2.802	11.3	20.8
7 10	20 54.04	-24 51.3	2.294	3.258	6.8	21.0	7 10	20 54.20	-23 58.1	1.813	2.781	8.0	20.6
7 20	20 46.55	-25 38.1	2.233	3.234	3.8	20.7	7 20	20 46.74	-24 27.5	1.758	2.760	4.3	20.3
7 30	20 38.01	-26 21.8	2.200	3.209	2.5	20.6	7 30	20 38.08	-24 53.6	1.729	2.740	2.4	20.1
8 9	20 29.23	-26 58.4	2.196	3.184	4.9	20.7	8 9	20 29.20	-25 12.2	1.726	2.720	5.3	20.3
8 19	20 21.07	-27 24.9	2.219	3.159	8.1	20.9	8 19	20 21.16	-25 20.6	1.750	2.700	9.2	20.5
8 29	20 14.34	-27 39.9	2.267	3.133	11.2	21.0	8 29	20 14.92	-25 17.7	1.797	2.681	12.8	20.7
9 8	20 9.64	-27 43.6	2.336	3.107	13.8	21.2	9 8	20 11.12	-25 4.1	1.864	2.662	15.9	20.8
363716	2004 <i>VL</i> ₂₂	7 30.1 303°61		6°0/25.5 18			90358	2003 <i>HP</i> ₂₆	7 30.1 34°58		9°2/23.3 18		
6 30	21 0.59	-33 32.8	2.077	2.981	10.7	20.4	6 30	21 2.63	-40 54.1	1.784	2.679	12.7	18.4
7 10	20 54.87	-34 40.0	2.002	2.957	8.2	20.2	7 10	20 56.44	-42 30.4	1.754	2.690	10.5	18.3
7 20	20 47.10	-35 42.1	1.951	2.932	6.3	20.1	7 20	20 47.91	-43 51.6	1.747	2.701	9.3	18.3
7 30	20 38.02	-36 32.2	1.926	2.908	6.2	20.0	7 30	20 38.08	-44 49.6	1.764	2.712	9.6	18.3
8 9	20 28.67	-37 5.2	1.927	2.884	8.1	20.1	8 9	20 28.33	-45 19.6	1.805	2.724	11.1	18.4
8 19	20 20.15	-37 18.3	1.953	2.860	10.9	20.2	8 19	20 19.97	-45 21.5	1.868	2.736	13.2	18.6
8 29	20 13.47	-37 11.7	2.001	2.837	13.7	20.4	8 29	20 14.06	-44 58.4	1.950	2.748	15.4	18.8
9 8	20 9.33	-36 47.9	2.068	2.813	16.2	20.5	9 8	20 11.15	-44 15.4	2.050	2.761	17.2	19.0
408653	2014 <i>MQ</i> ₁₅	7 30.1 8°24		3°0/31.7 18			437683	2014 <i>DZ</i> ₄	7 30.1 84°83		0°7/30.5 18		
6 30	20 57.42	-10 44											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
356103	2009 <i>EV</i> ₃₀		7 30.1	28°55'	0°9'/29.4	18	86121	1999 <i>RE</i> ₁₄₄		7 30.1	320°11'	0°9'/29.6	18 R
6 30	20 56.87	-16 13.8	1.574	2.485	13.1	19.6	6 30	21 0.55	-20 40.5	1.955	2.859	11.3	19.2
7 10	20 52.23	-17 40.1	1.528	2.497	9.0	19.4	7 10	20 54.62	-20 46.1	1.885	2.851	7.9	19.0
7 20	20 45.69	-19 16.1	1.505	2.509	4.5	19.2	7 20	20 46.91	-20 53.8	1.839	2.843	4.1	18.8
7 30	20 38.09	-20 54.2	1.508	2.523	1.0	19.0	7 30	20 38.17	-21 0.4	1.820	2.835	0.9	18.5
8 9	20 30.50	-22 26.4	1.538	2.537	5.0	19.3	8 9	20 29.39	-21 3.1	1.828	2.827	4.4	18.8
8 19	20 23.96	-23 46.3	1.594	2.552	9.3	19.6	8 19	20 21.49	-21 0.1	1.863	2.820	8.2	19.0
8 29	20 19.36	-24 50.1	1.673	2.567	13.0	19.8	8 29	20 15.34	-20 50.5	1.921	2.813	11.7	19.2
9 8	20 17.25	-25 36.6	1.772	2.584	16.0	20.1	9 8	20 11.48	-20 34.3	2.001	2.806	14.7	19.4
508271	2015 <i>HW</i> ₁₇₂		7 30.1	56°56'	2°3'/28.9	17	388101	2005 <i>UX</i> ₃₀₁		7 30.1	348°84'	6°8'/25.3	18
6 30	21 2.71	-22 35.4	1.518	2.431	13.4	20.7	6 30	20 57.99	-31 35.7	1.552	2.471	12.7	19.4
7 10	20 56.24	-23 9.1	1.478	2.448	9.2	20.5	7 10	20 53.42	-33 9.2	1.498	2.463	9.6	19.2
7 20	20 47.70	-23 43.9	1.461	2.465	4.9	20.3	7 20	20 46.51	-34 38.1	1.468	2.456	7.2	19.0
7 30	20 38.13	-24 14.1	1.470	2.482	2.3	20.2	7 30	20 38.17	-35 53.0	1.461	2.449	7.1	19.0
8 9	20 28.77	-24 35.2	1.504	2.500	5.7	20.4	8 9	20 29.69	-36 46.6	1.479	2.444	9.5	19.1
8 19	20 20.78	-24 44.8	1.563	2.517	9.8	20.7	8 19	20 22.34	-37 15.4	1.520	2.439	12.7	19.3
8 29	20 15.07	-24 42.6	1.646	2.535	13.4	21.0	8 29	20 17.28	-37 19.7	1.582	2.436	15.8	19.5
9 8	20 12.12	-24 29.7	1.747	2.553	16.4	21.2	9 8	20 15.19	-37 2.6	1.660	2.433	18.5	19.7
453224	2008 <i>JX</i> ₉		7 30.1	79°68'	0°8'/29.5	18	224186	2005 <i>QS</i> ₁₇₈		7 30.1	292°21'	0°2'/30.2	18
6 30	20 58.66	-19 14.5	2.199	3.100	10.4	21.1	6 30	21 0.89	-16 7.8	1.504	2.411	13.9	20.6
7 10	20 53.07	-19 47.8	2.143	3.107	7.2	20.9	7 10	20 55.42	-16 37.3	1.424	2.390	9.8	20.3
7 20	20 46.00	-20 24.8	2.111	3.115	3.6	20.7	7 20	20 47.58	-17 16.9	1.366	2.370	5.2	20.0
7 30	20 38.13	-21 1.8	2.107	3.122	0.8	20.5	7 30	20 38.19	-18 2.2	1.334	2.349	0.2	19.5
8 9	20 30.27	-21 35.0	2.131	3.129	4.0	20.8	8 9	20 28.44	-18 47.7	1.327	2.328	5.1	19.9
8 19	20 23.22	-22 1.9	2.182	3.137	7.4	21.0	8 19	20 19.61	-19 28.1	1.344	2.308	10.1	20.1
8 29	20 17.69	-22 20.8	2.258	3.144	10.4	21.2	8 29	20 12.92	-19 59.7	1.385	2.288	14.6	20.3
9 8	20 14.14	-22 31.1	2.356	3.151	13.0	21.4	9 8	20 9.15	-20 20.6	1.444	2.267	18.5	20.5
484542	2008 <i>GU</i> ₉		7 30.1	6°62'	4°4'/2.2	18	282748	2006 <i>GA</i> ₃		7 30.1	338°42'	0°1'/30.2	18
6 30	20 56.77	-4 27.4	2.041	2.905	12.6	21.0	6 30	20 56.31	-12 57.4	1.396	2.306	14.5	19.6
7 10	20 51.84	-4 29.5	1.974	2.906	9.7	20.8	7 10	20 52.24	-14 28.3	1.328	2.296	10.3	19.3
7 20	20 45.41	-4 46.7	1.929	2.906	6.7	20.6	7 20	20 45.93	-16 17.7	1.282	2.286	5.4	19.0
7 30	20 38.12	-5 17.8	1.909	2.907	4.6	20.5	7 30	20 38.18	-18 17.7	1.262	2.277	0.1	18.5
8 9	20 30.78	-6 0.0	1.916	2.908	5.1	20.6	8 9	20 30.17	-20 18.1	1.267	2.269	5.2	18.9
8 19	20 24.17	-6 49.4	1.950	2.909	7.8	20.7	8 19	20 23.12	-22 9.2	1.298	2.262	10.3	19.2
8 29	20 19.03	-7 41.6	2.008	2.911	10.8	20.9	8 29	20 18.18	-23 43.6	1.351	2.256	14.8	19.4
9 8	20 15.87	-8 32.4	2.088	2.912	13.5	21.1	9 8	20 16.10	-24 57.6	1.423	2.250	18.5	19.7
216398	2008 <i>EP</i> ₂₂		7 30.1	16°15'	5°6'/26.4	18	150593	2000 <i>WM</i> ₁₂₉		7 30.1	248°68'	3°9'/1.7	18
6 30	21 1.20	-31 54.8	1.890	2.798	11.4	19.4	6 30	20 58.38	-6 6.6	2.268	3.131	11.6	20.0
7 10	20 55.20	-32 56.9	1.840	2.799	8.5	19.2	7 10	20 52.89	-5 56.3	2.193	3.126	8.8	19.8
7 20	20 47.23	-33 53.0	1.813	2.801	6.1	19.1	7 20	20 45.97	-5 57.9	2.141	3.121	6.0	19.6
7 30	20 38.14	-34 36.4	1.813	2.803	5.8	19.1	7 30	20 38.20	-6 10.6	2.116	3.115	4.0	19.5
8 9	20 29.06	-35 2.6	1.838	2.805	7.7	19.2	8 9	20 30.34	-6 32.7	2.118	3.110	4.7	19.5
8 19	20 21.06	-35 9.7	1.889	2.807	10.6	19.4	8 19	20 23.14	-7 1.3	2.148	3.104	7.3	19.7
8 29	20 15.08	-34 58.8	1.961	2.810	13.4	19.6	8 29	20 17.31	-7 33.2	2.202	3.099	10.2	19.8
9 8	20 11.69	-34 32.5	2.053	2.813	15.8	19.8	9 8	20 13.34	-8 5.3	2.280	3.093	12.9	20.0
512552	2016 <i>SU</i> ₁₄		7 30.1	221°87'	1°8'/28.9	18	442171	2010 <i>WV</i> ₁₁		7 30.1	252°97'	2°9'/31.9	18
6 30	21 1.30	-22 17.4	2.096	2.998	10.7	21.8	6 30	20 59.19	-9 21.5	2.412	3.283	10.7	21.5
7 10	20 55.06	-22 48.5	2.028	2.993	7.5	21.6	7 10	20 53.39	-9 5.1	2.334	3.276	7.9	21.3
7 20	20 47.10	-23 21.2	1.986	2.988	3.9	21.3	7 20	20 46.20	-8 57.3	2.281	3.268	5.1	21.1
7 30	20 38.14	-23 51.3	1.970	2.983	1.8	21.2	7 30	20 38.20	-8 57.5	2.255	3.261	3.0	20.9
8 9	20 29.11	-24 15.0	1.983	2.977	4.7	21.4	8 9	20 30.12	-9 4.0	2.258	3.253	4.1	21.0
8 19	20 20.94	-24 29.9	2.022	2.971	8.2	21.6	8 19	20 22.68	-9 14.8	2.288	3.245	6.9	21.2
8 29	20 14.43	-24 35.0	2.086	2.965	11.5	21.8	8 29	20 16.56	-9 27.9	2.344	3.237	9.8	21.3
9 8	20 10.16	-24 30.5	2.172	2.959	14.2	21.9	9 8	20 12.24	-9 40.9	2.422	3.230	12.4	21.5
366045	2012 <i>CO</i> ₅		7 30.1	172°49'	2°2'/27.9	18	175716	1996 <i>XW</i> ₂₄		7 30.1	268°43'	6°6'/25.4	18
6 30	20 58.14	-23 14.2	2.730	3.629	8.6	21.0	6 30	21 3.20	-36 18.3	2.100	2.996	11.0	20.4
7 10	20 52.61	-24 21.8	2.668	3.631	6.0	20.8	7 10	20 56.64	-37 20.4	2.040	2.987	8.6	20.2
7 20	20 45.76	-25 30.8	2.633	3.633	3.3	20.6	7 20	20 48.03	-38 13.9	2.005	2.978	6.9	20.1
7 30	20 38.14	-26 36.8	2.626	3.634	2.3	20.6	7 30	20 38.22	-38 52.2	1.995	2.968	6.8	20.1
8 9	20 30.43	-27 35.6	2.649	3.635	4.4	20.7	8 9	20 28.31	-39 10.9	2.012	2.959	8.5	20.2
8 19	20 23.32	-28 24.4	2.701	3.636	7.1	20.9	8 19	20 19.43	-39 8.6	2.053	2.949	10.9	20.3
8 29	20 17.45	-29 1.7	2.778	3.637	9.6	21.1	8 29	20 12.53	-38 46.8	2.116	2.940	13.5	20.4
9 8	20 13.29	-29 27.3	2.877	3.637	11.7	21.2	9 8	20 8.25	-38 8.8	2.198	2.930	15.7	20.6
312555	2009 <i>FS</i> ₆₆		7 30.1	154°41'	1°0'/30.7	17	376128	2011 <i>AV</i> ₄₅		7 30.1	166°13'	0°4'/30.4	17
6 30	21 3.04	-13 54.4	1.518	2.417	14.3	21.5	6 30	21 2.61	-15 42.1	1.851	2.746	12.3	22.2
7 10	20 56.62	-14 28.6	1.460	2.422	10.1	21.3	7 10	20 56.06	-16 8.5	1.789	2.749	8.6	22.0
7 20	20 48.02	-15 14.0	1.425	2.426	5.4	21.0	7 20	20 47.66	-16 42.3	1.752	2.753	4.5	21.7
7 30	20 38.16	-16 5.9	1.415	2.429	1.0	20.7	7 30	20 38.22	-17 19.7	1.741	2.756	0.4	21.4
8 9	20 28.27	-16 58.6	1.431	2.432	4.8	21.0	8 9	20 28.75	-17 56.3	1.757	2.758	4.2	21.7
8 19	20 19.53	-17 46.9	1.472	2.435	9.4	21.3	8 19	20 20.25	-18 28.7	1.801	2.760	8.3	22.0
8 29	20 12.98	-18 27.0	1.538	2.438	13.6	21.6	8 29	20 13.60	-18 54.3	1.869	2.761	11.9	22.2
9 8	20 9.24	-18 56.9	1.623	2.440	17.0	21.8	9 8	20 9.35	-19 11.9	1.958	2.762	15.0	22.4
373800	2002 <i>VU</i> ₃₂		7 30.1	278°33'	1°1'/29.5	18	307207	2002 <i>FA</i> ₄₁		7 30.1	97°13'</		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
316105	2009 <i>OV</i> ₂₄	7 30.1 318°21		2°5/31.6 18			237798	2002 <i>BJ</i> ₂₇	7 30.1 150°78		0°9/29.4 18		
6 30	20 58.86	-11 8.0	2.137	3.019	11.4	19.8	6 30	21 0.97	-17 42.6	1.967	2.866	11.5	20.3
7 10	20 53.30	-10 54.6	2.063	3.013	8.4	19.5	7 10	20 54.91	-18 47.8	1.908	2.872	7.9	20.1
7 20	20 46.20	-10 49.7	2.014	3.006	5.1	19.3	7 20	20 47.10	-19 59.6	1.874	2.877	4.0	19.8
7 30	20 38.21	-10 52.4	1.991	3.000	2.6	19.2	7 30	20 38.29	-21 12.4	1.868	2.883	0.9	19.6
8 9	20 30.15	-11 0.5	1.996	2.994	4.1	19.3	8 9	20 29.41	-22 20.6	1.890	2.888	4.5	19.9
8 19	20 22.83	-11 11.9	2.027	2.988	7.4	19.4	8 19	20 21.40	-23 19.5	1.940	2.892	8.3	20.1
8 29	20 16.98	-11 24.3	2.084	2.983	10.6	19.6	8 29	20 15.11	-24 6.4	2.014	2.896	11.7	20.3
9 8	20 13.13	-11 35.4	2.163	2.977	13.4	19.8	9 8	20 11.09	-24 40.5	2.110	2.900	14.5	20.5
422837	2002 <i>DB</i> ₂₁	7 30.1 79°45		4°3/27.9 17			387348	2012 <i>WY</i> ₂₀	7 30.1 239°42		1°0/29.5 18		
6 30	21 5.18	-28 29.8	1.667	2.576	12.7	20.8	6 30	21 1.18	-20 3.9	1.949	2.851	11.4	21.1
7 10	20 57.93	-29 8.0	1.627	2.591	9.0	20.6	7 10	20 55.10	-20 30.3	1.882	2.847	7.9	20.9
7 20	20 48.61	-29 41.2	1.610	2.606	5.6	20.5	7 20	20 47.22	-21 0.2	1.839	2.842	4.1	20.7
7 30	20 38.25	-30 3.6	1.619	2.622	4.4	20.4	7 30	20 38.30	-21 29.6	1.823	2.837	1.1	20.4
8 9	20 28.12	-30 11.1	1.654	2.637	6.8	20.6	8 9	20 29.30	-21 54.6	1.834	2.832	4.5	20.7
8 19	20 19.37	-30 2.9	1.715	2.652	10.3	20.8	8 19	20 21.19	-22 12.4	1.872	2.827	8.4	20.9
8 29	20 12.94	-29 40.4	1.798	2.667	13.5	21.1	8 29	20 14.83	-22 21.5	1.935	2.822	11.8	21.1
9 8	20 9.30	-29 6.5	1.901	2.682	16.2	21.3	9 8	20 10.79	-22 21.8	2.018	2.816	14.8	21.3
439344	2012 <i>XE</i> ₂₀	7 30.1 33°91		5°2/ 1.9 16			443767	2015 <i>MG</i> ₅₅	7 30.1 283°14		6°6/ 3.9 18		
6 30	20 59.57	- 5 21.0	1.610	2.486	14.8	19.8	6 30	20 57.68	+ 1 29.2	1.824	2.666	14.9	20.7
7 10	20 54.03	- 4 58.1	1.555	2.493	11.4	19.6	7 10	20 52.76	+ 1 19.5	1.745	2.656	12.1	20.5
7 20	20 46.65	- 4 51.8	1.520	2.501	7.9	19.5	7 20	20 46.08	+ 0 47.2	1.687	2.645	9.1	20.3
7 30	20 38.24	- 5 1.7	1.510	2.509	5.4	19.3	7 30	20 38.29	- 0 7.6	1.652	2.635	7.0	20.1
8 9	20 29.86	- 5 25.1	1.526	2.517	6.2	19.4	8 9	20 30.29	- 1 21.5	1.643	2.625	7.0	20.1
8 19	20 22.51	- 5 58.1	1.566	2.526	9.2	19.6	8 19	20 23.03	- 2 49.1	1.660	2.615	9.3	20.2
8 29	20 17.06	- 6 36.0	1.629	2.536	12.6	19.8	8 29	20 17.38	- 4 23.4	1.702	2.605	12.3	20.4
9 8	20 14.06	- 7 14.1	1.713	2.545	15.6	20.1	9 8	20 13.98	- 5 57.1	1.765	2.595	15.3	20.5
317400	2002 <i>PE</i> ₁₁₄	7 30.1 22°59		1°0/30.6 17			322003	2010 <i>UE</i> ₈₂	7 30.1 276°82		2°1/31.6 18		
6 30	20 59.51	-14 49.1	1.059	1.981	17.0	20.4	6 30	20 58.02	-10 49.5	2.293	3.173	10.8	21.3
7 10	20 54.65	-15 10.2	1.016	1.988	12.0	20.2	7 10	20 52.73	-10 57.8	2.210	3.159	7.9	21.1
7 20	20 47.17	-15 44.5	0.992	1.996	6.4	19.9	7 20	20 45.97	-11 15.4	2.150	3.144	4.7	20.9
7 30	20 38.26	-16 26.4	0.991	2.006	1.1	19.5	7 30	20 38.30	-11 40.7	2.118	3.129	2.2	20.7
8 9	20 29.47	-17 9.1	1.012	2.016	5.6	19.9	8 9	20 30.47	-12 10.9	2.114	3.114	3.8	20.7
8 19	20 22.25	-17 46.7	1.055	2.027	11.1	20.2	8 19	20 23.25	-12 43.2	2.137	3.098	7.0	20.9
8 29	20 17.75	-18 15.2	1.119	2.040	15.8	20.6	8 29	20 17.37	-13 14.6	2.186	3.083	10.2	21.1
9 8	20 16.55	-18 32.4	1.200	2.053	19.7	20.8	9 8	20 13.37	-13 42.7	2.257	3.068	13.0	21.3
358864	2008 <i>FS</i> ₁₀₅	7 30.1 8°82		0°4/29.9 18			17282	2000 <i>LS</i> ₃₄	7 30.1 21°61		6°6/ 2.7 18		
6 30	20 57.96	-17 34.7	1.933	2.836	11.4	21.0	6 30	20 58.86	- 2 18.5	1.663	2.526	15.1	16.6
7 10	20 52.82	-18 11.9	1.872	2.837	7.9	20.8	7 10	20 53.54	- 1 40.3	1.606	2.531	12.0	16.4
7 20	20 46.01	-18 55.2	1.835	2.838	4.1	20.6	7 20	20 46.42	- 1 20.4	1.569	2.537	8.9	16.2
7 30	20 38.25	-19 40.4	1.824	2.839	0.4	20.3	7 30	20 38.30	- 1 19.4	1.556	2.544	6.8	16.1
8 9	20 30.45	-20 23.2	1.841	2.841	4.2	20.6	8 9	20 30.19	- 1 35.7	1.569	2.551	7.1	16.1
8 19	20 23.50	-20 59.8	1.884	2.843	8.0	20.8	8 19	20 23.04	- 2 5.6	1.605	2.559	9.6	16.3
8 29	20 18.20	-21 28.0	1.951	2.845	11.5	21.0	8 29	20 17.71	- 2 44.2	1.665	2.567	12.6	16.5
9 8	20 15.09	-21 46.5	2.040	2.848	14.3	21.2	9 8	20 14.74	- 3 26.2	1.745	2.576	15.4	16.7
433668	2014 <i>DV</i> ₂₃	7 30.1 343°51		3°0/ 1.4 17			445533	2011 <i>BE</i> ₁₆₁	7 30.1 265°09		3°9/ 2.6 17		
6 30	20 57.31	- 6 59.6	1.644	2.528	14.2	20.2	6 30	20 57.35	- 2 33.0	2.829	3.668	10.2	22.3
7 10	20 52.60	- 7 52.9	1.576	2.525	10.5	20.0	7 10	20 52.12	- 2 49.9	2.725	3.641	8.0	22.1
7 20	20 46.00	- 9 5.4	1.530	2.521	6.5	19.7	7 20	20 45.62	- 3 20.0	2.646	3.614	5.7	22.0
7 30	20 38.26	-10 33.0	1.509	2.519	3.2	19.5	7 30	20 38.30	- 4 2.6	2.594	3.586	4.1	21.8
8 9	20 30.36	-12 9.0	1.515	2.516	4.7	19.6	8 9	20 30.76	- 4 55.5	2.570	3.557	4.4	21.8
8 19	20 23.33	-13 46.1	1.547	2.514	8.7	19.8	8 19	20 23.60	- 5 55.6	2.576	3.528	6.5	21.9
8 29	20 18.10	-15 17.4	1.604	2.513	12.6	20.1	8 29	20 17.46	- 6 59.4	2.608	3.498	9.0	22.0
9 8	20 15.30	-16 37.7	1.681	2.511	16.0	20.3	9 8	20 12.83	- 8 3.0	2.664	3.468	11.5	22.1
27665	1978 <i>VZ</i> ₅	7 30.1 167°60		1°9/31.5 18			314068	2005 <i>BV</i> ₂₀	7 30.1 112°98		0°7/29.8 17		
6 30	20 59.61	-11 8.6	2.361	3.238	10.7	19.4	6 30	21 4.15	-18 25.1	1.440	2.348	14.3	21.2
7 10	20 53.68	-11 18.6	2.294	3.242	7.7	19.2	7 10	20 57.50	-18 57.2	1.388	2.355	9.9	20.9
7 20	20 46.36	-11 37.2	2.251	3.245	4.6	19.0	7 20	20 48.56	-19 35.6	1.359	2.362	5.1	20.7
7 30	20 38.27	-12 2.3	2.236	3.247	2.0	18.8	7 30	20 38.35	-20 14.8	1.354	2.369	0.7	20.4
8 9	20 30.14	-12 31.4	2.250	3.249	3.6	19.0	8 9	20 28.19	-20 49.3	1.376	2.376	5.3	20.7
8 19	20 22.72	-13 1.6	2.291	3.251	6.7	19.2	8 19	20 19.35	-21 15.2	1.423	2.383	10.0	21.0
8 29	20 16.67	-13 30.2	2.359	3.252	9.7	19.4	8 29	20 12.89	-21 30.6	1.492	2.389	14.1	21.3
9 8	20 12.46	-13 55.3	2.449	3.253	12.3	19.5	9 8	20 9.39	-21 35.3	1.580	2.395	17.5	21.5
393610	2003 <i>WD</i> ₁₇₂	7 30.1 273°40		2°1/28.6 18			490059	2008 <i>TQ</i> ₈₈	7 30.1 323°93		3°2/28.8 16		
6 30	21 0.58	-21 6.0	1.982	2.886	11.2	21.3	6 30	21 2.88	-25 13.2	1.386	2.304	14.0	21.4
7 10	20 54.88	-22 9.3	1.898	2.864	7.8	21.0	7 10	20 56.96	-25 29.2	1.318	2.289	9.9	21.1
7 20	20 47.23	-23 18.1	1.838	2.841	4.2	20.8	7 20	20 48.45	-25 43.9	1.272	2.275	5.6	20.9
7 30	20 38.28	-24 26.8	1.806	2.818	2.1	20.6	7 30	20 38.35	-25 51.4	1.250	2.261	3.3	20.7
8 9	20 29.00	-25 29.3	1.802	2.794	5.3	20.7	8 9	20 28.09	-25 47.2	1.252	2.247	6.7	20.9
8 19	20 20.40	-26 21.2	1.824	2.770	9.1	20.9	8 19	20 19.12	-25 29.4	1.279	2.234	11.3	21.1
8 29	20 13.47	-26 59.5	1.870	2.746	12.7	21.1	8 29	20 12.66	-24 58.5	1.327	2.222	15.6	21.3
9 8	20 8.93	-27 23.6	1.937	2.722	15.8	21.3	9 8	20 9.44	-24 16.9	1.392	2.211	19.3	21.5
429516	2011 <i>BA</i> ₃₂	7 30.1 134°56		0°5/29.8 17			392648	2011 <i>UB</i> ₁₄₄	7 30.1 300°32		6°3/26.3 18		
6 3													

EPHEMERIDES

7 30.1

7 30.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V	
294245	2007 <i>UL</i> ₅₂	7 30.1 348°45' 8°2/26.1 17						43469	2001 <i>AP</i> ₂₉	7 30.2 346°39' 10°0/23.2 18				
6 30	21 0.72	-31 4.3	1.012	1.946	16.5	19.3	6 30	20 58.06	-34 54.2	1.171	2.099	15.2	16.3	
7 10	20 56.15	-32 32.3	0.965	1.938	12.4	19.0	7 10	20 54.22	-37 1.8	1.123	2.087	12.1	16.1	
7 20	20 48.26	-33 54.1	0.938	1.932	9.0	18.8	7 20	20 47.30	-39 0.9	1.096	2.077	10.2	15.9	
7 30	20 38.35	-34 56.9	0.931	1.926	8.6	18.8	7 30	20 38.41	-40 37.3	1.091	2.067	10.7	15.9	
8 9	20 28.33	-35 30.9	0.946	1.922	11.6	18.9	8 9	20 29.25	-41 40.7	1.107	2.059	13.2	16.1	
8 19	20 20.13	-35 33.0	0.980	1.919	15.8	19.1	8 19	20 21.63	-42 6.8	1.143	2.053	16.6	16.2	
8 29	20 15.24	-35 5.5	1.032	1.917	19.9	19.4	8 29	20 17.04	-41 57.8	1.196	2.048	20.0	16.4	
9 8	20 14.39	-34 14.6	1.098	1.917	23.3	19.6	9 8	20 16.29	-41 19.6	1.264	2.045	22.8	16.6	
244821	2003 <i>TJ</i> ₆	7 30.1 287°13' 6°2/26.5 18						159582	2001 <i>XE</i> ₃₁	7 30.2 120°60' 11°3/20.5 18				
6 30	21 3.75	-28 49.4	1.378	2.296	14.1	20.0	6 30	21 13.96	-50 40.9	2.107	2.951	13.1	20.4	
7 10	20 57.86	-30 14.0	1.310	2.278	10.4	19.7	7 10	21 4.69	-52 39.7	2.092	2.970	11.8	20.4	
7 20	20 49.08	-31 37.8	1.265	2.260	7.0	19.5	7 20	20 52.45	-54 16.1	2.100	2.989	11.3	20.4	
7 30	20 38.37	-32 50.4	1.243	2.241	6.4	19.4	7 30	20 38.49	-55 21.7	2.132	3.007	11.7	20.4	
8 9	20 27.26	-33 42.8	1.246	2.223	9.4	19.5	8 9	20 24.53	-55 52.8	2.187	3.024	12.8	20.6	
8 19	20 17.35	-34 10.1	1.272	2.204	13.5	19.7	8 19	20 12.27	-55 50.9	2.263	3.041	14.2	20.7	
8 29	20 10.13	-34 12.1	1.318	2.186	17.5	19.9	8 29	20 3.04	-55 21.2	2.356	3.057	15.6	20.8	
9 8	20 6.46	-33 52.3	1.381	2.168	20.9	20.1	9 8	19 57.50	-54 30.6	2.465	3.072	16.8	21.0	
33139	1998 <i>DU</i> ₂	7 30.1 249°11' 2°3/28.4 18						472186	2014 <i>DW</i> ₁₀₈	7 30.2 355°46' 2°4/31.7 18				
6 30	21 2.40	-22 15.2	2.077	2.978	10.9	19.2	6 30	20 58.56	-10 4.4	1.801	2.688	12.9	21.0	
7 10	20 56.11	-23 18.2	1.994	2.958	7.6	19.0	7 10	20 53.35	-10 29.8	1.735	2.688	9.4	20.8	
7 20	20 47.87	-24 25.3	1.937	2.938	4.1	18.8	7 20	20 46.39	-11 8.3	1.693	2.687	5.6	20.5	
7 30	20 38.37	-25 30.6	1.907	2.918	2.4	18.6	7 30	20 38.40	-11 56.9	1.676	2.687	2.5	20.3	
8 9	20 28.55	-26 28.5	1.906	2.896	5.3	18.7	8 9	20 30.33	-12 51.1	1.685	2.686	4.3	20.5	
8 19	20 19.42	-27 14.8	1.932	2.874	9.0	18.9	8 19	20 23.11	-13 46.2	1.721	2.686	8.1	20.7	
8 29	20 11.95	-27 47.3	1.983	2.851	12.4	19.1	8 29	20 17.60	-14 37.7	1.782	2.686	11.8	20.9	
9 8	20 6.84	-28 6.0	2.054	2.828	15.4	19.3	9 8	20 14.37	-15 22.4	1.864	2.687	14.9	21.1	
490090	2008 <i>UN</i>	7 30.1 261°79' 3°0/31.8 18						388907	2008 <i>SD</i> ₇₀	7 30.2 270°84' 1°9/28.9 18				
6 30	21 0.86	-9 47.0	1.901	2.781	12.7	21.6	6 30	21 2.10	-21 36.2	1.842	2.747	11.8	21.4	
7 10	20 54.98	-9 45.2	1.819	2.767	9.4	21.3	7 10	20 56.05	-22 17.6	1.761	2.727	8.3	21.2	
7 20	20 47.26	-9 54.9	1.761	2.752	5.8	21.1	7 20	20 47.92	-23 2.8	1.705	2.708	4.4	20.9	
7 30	20 38.39	-10 14.7	1.728	2.737	3.1	20.9	7 30	20 38.46	-23 46.7	1.675	2.688	2.0	20.7	
8 9	20 29.30	-10 41.7	1.723	2.722	4.6	21.0	8 9	20 28.71	-24 24.0	1.672	2.667	5.3	20.9	
8 19	20 20.97	-11 12.6	1.744	2.706	8.3	21.1	8 19	20 19.78	-24 51.1	1.696	2.647	9.4	21.1	
8 29	20 14.29	-11 44.0	1.790	2.691	12.0	21.3	8 29	20 12.72	-25 6.1	1.743	2.626	13.2	21.3	
9 8	20 9.92	-12 12.6	1.857	2.675	15.2	21.5	9 8	20 8.22	-25 9.0	1.811	2.605	16.4	21.4	
309002	2006 <i>UG</i> ₅₀	7 30.1 330°45' 9°4/25.0 16						99676	2002 <i>JR</i> ₁₂	7 30.2 150°66' 2°3/28.9 18				
6 30	21 6.08	-41 18.0	1.660	2.553	13.6	21.1	6 30	21 3.78	-21 10.5	1.501	2.411	13.7	19.3	
7 10	20 59.16	-42 12.8	1.605	2.542	11.2	20.9	7 10	20 57.34	-22 8.8	1.446	2.415	9.5	19.0	
7 20	20 49.56	-42 52.0	1.572	2.531	9.6	20.8	7 20	20 48.57	-23 11.5	1.415	2.418	5.0	18.8	
7 30	20 38.41	-43 7.2	1.563	2.521	9.7	20.8	7 30	20 38.47	-24 11.4	1.409	2.421	2.4	18.6	
8 9	20 27.30	-42 54.1	1.576	2.512	11.3	20.9	8 9	20 28.32	-25 1.9	1.429	2.424	6.0	18.9	
8 19	20 17.71	-42 12.8	1.612	2.503	13.8	21.0	8 19	20 19.41	-25 38.6	1.474	2.426	10.4	19.1	
8 29	20 10.87	-41 7.5	1.669	2.494	16.4	21.2	8 29	20 12.81	-26 0.0	1.542	2.429	14.4	19.4	
9 8	20 7.38	-39 44.4	1.743	2.486	18.8	21.3	9 8	20 9.18	-26 6.7	1.629	2.431	17.6	19.6	
191687	2004 <i>RK</i> ₉₅	7 30.2 336°66' 2°0/31.1 17						364925	2008 <i>FK</i> ₁₃	7 30.2 172°89' 3°5/2.0 18				
6 30	21 0.66	-13 20.0	1.445	2.348	14.6	20.0	6 30	20 57.60	-5 23.7	2.357	3.217	11.3	21.6	
7 10	20 55.16	-13 19.7	1.380	2.342	10.5	19.7	7 10	20 52.36	-5 38.9	2.286	3.218	8.6	21.4	
7 20	20 47.44	-13 30.5	1.338	2.337	5.9	19.4	7 20	20 45.78	-6 7.1	2.240	3.219	5.8	21.2	
7 30	20 38.40	-13 49.6	1.319	2.332	2.0	19.2	7 30	20 38.43	-6 46.7	2.219	3.220	3.7	21.1	
8 9	20 29.25	-14 13.1	1.326	2.328	5.0	19.4	8 9	20 31.01	-7 34.8	2.227	3.221	4.3	21.2	
8 19	20 21.21	-14 37.1	1.357	2.324	9.6	19.6	8 19	20 24.23	-8 27.7	2.262	3.221	6.9	21.3	
8 29	20 15.34	-14 58.1	1.411	2.321	13.9	19.9	8 29	20 18.74	-9 21.7	2.323	3.221	9.7	21.5	
9 8	20 12.29	-15 13.6	1.484	2.318	17.5	20.1	9 8	20 15.02	-10 13.2	2.408	3.221	12.2	21.7	
467480	2006 <i>SJ</i> ₁₅₀	7 30.2 4°62' 1°8/30.9 17						434280	2003 <i>XB</i> ₃₂	7 30.2 345°89' 2°6/28.8 18				
6 30	20 56.66	-13 52.3	0.942	1.871	17.9	20.6	6 30	20 56.26	-21 22.6	1.183	2.113	14.9	19.9	
7 10	20 52.97	-13 59.7	0.895	1.870	12.8	20.3	7 10	20 52.58	-22 9.9	1.121	2.099	10.4	19.6	
7 20	20 46.48	-14 22.6	0.866	1.870	7.1	20.0	7 20	20 46.31	-23 3.6	1.081	2.086	5.5	19.3	
7 30	20 38.38	-14 56.9	0.858	1.872	1.9	19.7	7 30	20 38.43	-23 56.3	1.062	2.075	2.7	19.1	
8 9	20 30.28	-15 35.6	0.871	1.876	5.9	19.9	8 9	20 30.36	-24 40.4	1.067	2.065	6.8	19.3	
8 19	20 23.75	-16 12.5	0.905	1.881	11.6	20.3	8 19	20 23.54	-25 10.4	1.094	2.057	11.8	19.6	
8 29	20 20.05	-16 42.1	0.957	1.888	16.7	20.6	8 29	20 19.24	-25 23.6	1.140	2.051	16.4	19.8	
9 8	20 19.84	-17 1.3	1.027	1.897	21.0	20.9	9 8	20 18.21	-25 20.2	1.204	2.046	20.3	20.1	
487331	2014 <i>QC</i> ₁₇₄	7 30.2 310°66' 2°7/1.5 18						338723	2003 <i>UL</i> ₉₃	7 30.2 254°73' 5°8/2.9 18				
6 30	20 55.55	-7 28.6	2.537	3.406	10.3	21.5	6 30	20 59.66	-0 18.6	2.222	3.058	12.7	21.3	
7 10	20 50.89	-7 50.0	2.462	3.402	7.7	21.4	7 10	20 54.00	-0 7.3	2.130	3.039	10.3	21.1	
7 20	20 44.99	-8 22.5	2.412	3.398	4.9	21.2	7 20	20 46.74	-0 12.3	2.061	3.019	7.8	20.9	
7 30	20 38.37	-9 4.3	2.388	3.394	2.8	21.0	7 30	20 38.45	-0 34.1	2.017	2.999	6.0	20.8	
8 9	20 31.67	-9 52.6	2.393	3.390	3.7	21.1	8 9	20 29.90	-1 11.0	2.000	2.978	6.2	20.8	
8 19	20 25.53	-10 43.9	2.425	3.386	6.3	21.3	8 19	20 21.92	-2 0.0	2.009	2.957	8.4	20.8	
8 29	20 20.55	-11 34.9	2.483	3.382	9.1	21.4	8 29	20 15.29	-2 56.6	2.045	2.935	11.1	21.0	
9 8	20 17.18	-12 22.6	2.565	3.379	11.6	21.6	9 8	20 10.61	-3 56.1	2.102	2.913	13.9	21.1	
445808	2012 <i>BK</i> ₈₄	7 30.2 353°81' 0°9/29.6 18						489128	2006 <i>DT</i> ₃₃	7 30.2 160°59' 0°7/30.6 17				
6 30	20 58.47	-19 31.3	2.136	3.038	10.5	21.1	6 30	21 1.24	-14 40.0	2.088	2.978	11.3	22.3	
7 10	20 53.11	-20 2.0	2.072	3.037	7.3	20.9	7							

EPHEMERIDES

7 30.2

7 30.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
241833	2001 <i>SR</i> ₂₅₉		7 30.2 335°70		0°2/30.3 17		471610	2012 <i>SH</i> ₃₉		7 30.2 144°48		6°9/26.4 18	
6 30	21 1.12	-16 31.4	1.069	1.992	16.8	20.5	6 30	21 9.07	-38 1.8	2.040	2.927	11.7	21.3
7 10	20 56.10	-16 51.6	1.011	1.984	11.9	20.2	7 10	21 0.66	-38 41.6	1.994	2.933	9.2	21.1
7 20	20 48.18	-17 23.3	0.972	1.977	6.3	19.9	7 20	20 50.16	-39 9.2	1.971	2.940	7.3	21.0
7 30	20 38.47	-18 1.2	0.955	1.971	0.3	19.4	7 30	20 38.60	-39 18.6	1.975	2.946	7.0	21.0
8 9	20 28.59	-18 38.2	0.961	1.965	6.0	19.9	8 9	20 27.23	-39 7.0	2.005	2.952	8.5	21.1
8 19	20 20.16	-19 8.9	0.989	1.960	11.8	20.2	8 19	20 17.23	-38 34.7	2.060	2.957	10.9	21.3
8 29	20 14.57	-19 29.3	1.037	1.955	16.9	20.4	8 29	20 9.54	-37 45.0	2.138	2.962	13.3	21.5
9 8	20 12.59	-19 38.0	1.101	1.952	21.2	20.7	9 8	20 4.65	-36 42.5	2.236	2.967	15.5	21.7
176806	2002 <i>TR</i> ₂₆		7 30.2 275°60		3°3/ 1.4 18		430651	2003 <i>SO</i> ₂₂₉		7 30.2 353°97		6°9/26.5 18	
6 30	20 58.91	- 7 32.2	2.054	2.926	12.2	20.5	6 30	21 1.94	-32 13.8	1.399	2.317	13.9	20.1
7 10	20 53.61	- 7 46.0	1.964	2.905	9.2	20.3	7 10	20 56.39	-33 18.2	1.348	2.313	10.5	19.9
7 20	20 46.59	- 8 13.5	1.897	2.884	5.9	20.1	7 20	20 48.22	-34 15.0	1.320	2.310	7.6	19.8
7 30	20 38.47	- 8 53.2	1.857	2.863	3.4	19.9	7 30	20 38.56	-34 55.6	1.315	2.307	7.1	19.7
8 9	20 30.09	- 9 41.8	1.844	2.842	4.5	19.9	8 9	20 28.88	-35 13.8	1.334	2.305	9.5	19.9
8 19	20 22.31	-10 35.3	1.858	2.820	7.9	20.1	8 19	20 20.64	-35 7.8	1.375	2.304	13.0	20.1
8 29	20 16.00	-11 29.4	1.897	2.798	11.4	20.2	8 29	20 15.03	-34 39.6	1.437	2.304	16.4	20.3
9 8	20 11.78	-12 20.1	1.958	2.776	14.5	20.4	9 8	20 12.67	-33 53.6	1.516	2.305	19.3	20.5
324388	2006 <i>RH</i> ₁₁₂		7 30.2 96°23		0°9/30.7 17		346723	2009 <i>AJ</i> ₁₇		7 30.2 321°07		1°0/30.9 18	
6 30	21 3.38	-14 18.0	1.511	2.411	14.3	21.5	6 30	20 56.23	-11 18.2	1.367	2.274	15.0	20.3
7 10	20 56.83	-14 48.5	1.464	2.426	10.1	21.3	7 10	20 52.50	-12 33.7	1.280	2.245	10.8	20.0
7 20	20 48.22	-15 29.1	1.440	2.441	5.4	21.1	7 20	20 46.37	-14 11.8	1.214	2.216	6.0	19.6
7 30	20 38.50	-16 15.0	1.440	2.455	0.9	20.8	7 30	20 38.53	-16 7.0	1.173	2.188	1.1	19.2
8 9	20 28.89	-17 0.9	1.467	2.469	4.7	21.1	8 9	20 30.14	-18 10.0	1.157	2.160	5.2	19.4
8 19	20 20.54	-17 42.1	1.520	2.483	9.2	21.4	8 19	20 22.52	-20 9.9	1.165	2.134	10.7	19.7
8 29	20 14.38	-18 15.4	1.596	2.497	13.1	21.7	8 29	20 16.98	-21 57.4	1.196	2.108	15.7	19.9
9 8	20 10.96	-18 39.3	1.693	2.511	16.4	21.9	9 8	20 14.49	-23 26.4	1.246	2.083	20.0	20.1
152136	2004 <i>TW</i> ₁₉₂		7 30.2 31°99		0°4/30.5 18		311583	2006 <i>HL</i> ₄₉		7 30.2 250°85		4°1/28.1 17	
6 30	20 58.19	-15 40.2	2.023	2.921	11.3	20.3	6 30	21 4.66	-24 48.7	1.345	2.261	14.5	20.3
7 10	20 52.95	-16 5.9	1.964	2.926	7.9	20.1	7 10	20 58.31	-25 50.8	1.288	2.258	10.2	20.1
7 20	20 46.15	-16 38.6	1.929	2.930	4.2	19.8	7 20	20 49.26	-26 54.1	1.253	2.254	5.9	19.8
7 30	20 38.49	-17 14.9	1.920	2.935	0.4	19.5	7 30	20 38.59	-27 50.1	1.243	2.251	4.2	19.7
8 9	20 30.81	-17 50.8	1.939	2.941	3.8	19.8	8 9	20 27.80	-28 31.1	1.257	2.247	7.5	19.9
8 19	20 23.96	-18 23.3	1.985	2.946	7.5	20.1	8 19	20 18.39	-28 53.4	1.295	2.243	12.0	20.1
8 29	20 18.68	-18 49.8	2.055	2.952	10.8	20.3	8 29	20 11.62	-28 56.5	1.355	2.239	16.1	20.4
9 8	20 15.47	-19 8.9	2.147	2.958	13.6	20.5	9 8	20 8.22	-28 42.7	1.432	2.235	19.6	20.6
119034	2001 <i>FR</i>		7 30.2 318°84		0°7/29.6 18		188410	2004 <i>EP</i> ₇₅		7 30.2 36°57		0°7/30.6 17	
6 30	20 57.13	-17 26.5	2.187	3.087	10.4	19.2	6 30	21 0.03	-14 16.1	1.158	2.074	16.3	19.7
7 10	20 52.25	-18 27.8	2.117	3.082	7.2	19.0	7 10	20 54.89	-14 56.3	1.120	2.089	11.5	19.5
7 20	20 45.83	-19 35.9	2.073	3.076	3.7	18.8	7 20	20 47.36	-15 49.7	1.102	2.105	6.1	19.2
7 30	20 38.48	-20 46.3	2.057	3.071	0.7	18.5	7 30	20 38.57	-16 49.6	1.107	2.122	0.8	18.9
8 9	20 31.01	-21 53.7	2.068	3.066	4.0	18.8	8 9	20 29.96	-17 48.6	1.136	2.140	5.3	19.3
8 19	20 24.20	-22 54.1	2.107	3.061	7.6	19.0	8 19	20 22.84	-18 40.3	1.188	2.158	10.4	19.6
8 29	20 18.83	-23 44.2	2.171	3.057	10.8	19.2	8 29	20 18.26	-19 20.7	1.262	2.177	14.8	19.9
9 8	20 15.43	-24 22.7	2.257	3.052	13.5	19.4	9 8	20 16.74	-19 48.0	1.354	2.196	18.4	20.2
41124	1999 <i>VG</i> ₀₁		7 30.2 32°95		3°5/28.3 18		382539	2001 <i>TM</i> ₁₇₈		7 30.2 326°04		4°3/ 1.1 18	
6 30	21 2.17	-25 14.2	1.590	2.504	12.8	18.6	6 30	20 59.38	- 8 55.5	1.319	2.217	16.0	20.3
7 10	20 56.13	-25 59.6	1.539	2.507	9.0	18.3	7 10	20 54.54	- 8 41.3	1.249	2.204	12.1	20.0
7 20	20 47.92	-26 44.4	1.510	2.511	5.2	18.1	7 20	20 47.32	- 8 43.5	1.198	2.191	7.7	19.7
7 30	20 38.52	-27 22.2	1.508	2.516	3.6	18.0	7 30	20 38.58	- 9 1.1	1.171	2.178	4.4	19.5
8 9	20 29.15	-27 47.9	1.530	2.520	6.4	18.2	8 9	20 29.59	- 9 30.9	1.167	2.167	6.0	19.6
8 19	20 21.00	-27 58.9	1.578	2.525	10.3	18.5	8 19	20 21.65	-10 8.0	1.187	2.156	10.4	19.8
8 29	20 15.06	-27 55.1	1.648	2.530	13.9	18.7	8 29	20 15.96	-10 47.1	1.228	2.146	14.9	20.0
9 8	20 11.91	-27 38.2	1.738	2.535	16.9	18.9	9 8	20 13.27	-11 23.3	1.287	2.136	18.8	20.3
504890	2010 <i>WM</i> ₃₅		7 30.2 268°86		0°4/29.9 18		59639	1999 <i>JS</i> ₈₃		7 30.2 58°06		5°0/ 2.8 18	
6 30	21 3.20	-17 27.0	1.579	2.483	13.5	21.8	6 30	20 58.93	- 2 57.5	1.529	2.399	15.8	18.5
7 10	20 57.10	-18 1.2	1.498	2.463	9.5	21.6	7 10	20 53.78	- 3 31.2	1.475	2.411	12.1	18.3
7 20	20 48.61	-18 44.0	1.439	2.442	5.0	21.2	7 20	20 46.71	- 4 27.2	1.442	2.422	8.3	18.1
7 30	20 38.55	-19 30.6	1.406	2.421	0.4	20.9	7 30	20 38.57	- 5 42.5	1.433	2.434	5.3	17.9
8 9	20 28.10	-20 15.1	1.399	2.400	5.1	21.2	8 9	20 30.43	- 7 10.8	1.450	2.445	5.8	18.0
8 19	20 18.55	-20 52.6	1.418	2.378	10.0	21.4	8 19	20 23.34	- 8 44.7	1.492	2.457	9.1	18.2
8 29	20 11.11	-21 20.1	1.460	2.356	14.4	21.6	8 29	20 18.19	-10 16.5	1.558	2.469	12.7	18.5
9 8	20 6.57	-21 36.3	1.521	2.334	18.2	21.8	9 8	20 15.55	-11 40.3	1.645	2.482	16.0	18.7
479105	2013 <i>AP</i> ₁₆₀		7 30.2 309°04		3°3/ 1.7 18		92488	2000 <i>LH</i> ₃₆		7 30.2 337°05		4°2/27.9 18	
6 30	20 57.08	- 6 16.4	1.718	2.597	13.9	20.6	6 30	20 55.86	-21 45.8	0.915	1.857	16.9	17.8
7 10	20 52.57	- 7 2.7	1.635	2.581	10.5	20.4	7 10	20 52.94	-23 11.8	0.857	1.839	11.9	17.4
7 20	20 46.15	- 8 8.8	1.575	2.564	6.7	20.1	7 20	20 46.82	-24 49.1	0.817	1.823	6.6	17.1
7 30	20 38.51	- 9 31.8	1.541	2.548	3.6	19.9	7 30	20 38.58	-26 25.8	0.797	1.808	4.4	16.9
8 9	20 30.57	-11 5.7	1.532	2.533	4.8	20.0	8 9	20 29.93	-27 48.8	0.799	1.795	9.0	17.1
8 19	20 23.37	-12 43.6	1.550	2.517	8.7	20.1	8 19	20 22.74	-28 48.3	0.820	1.784	14.7	17.3
8 29	20 17.85	-14 18.2	1.593	2.502	12.6	20.4	8 29	20 18.70	-29 20.2	0.858	1.774	19.9	17.6
9 8	20 14.72	-15 43.8	1.657	2.488	16.1	20.5	9 8	20 18.71	-29 25.2	0.911	1.766	24.3	17.9
314059	2005 <i>AZ</i> ₅₂		7 30.2 193°85		3°7/ 1.1 17		45477	2000					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
120545	1994 <i>WS</i>		7 30.2 333°70	2°5/29.2	18		115250	2003 <i>SF</i> ₁₅₆		7 30.2 257°47	2°7/28.9	17	
6 30	20 57.72	-20 56.8	0.932	1.870	17.1	18.1	6 30	21 5.01	-23 8.4	1.477	2.389	13.8	20.1
7 10	20 54.21	-21 32.3	0.869	1.850	12.1	17.8	7 10	20 58.41	-23 43.0	1.411	2.380	9.7	19.9
7 20	20 47.48	-22 16.0	0.824	1.831	6.4	17.4	7 20	20 49.30	-24 19.3	1.368	2.371	5.3	19.6
7 30	20 38.60	-23 0.0	0.800	1.813	2.5	17.1	7 30	20 38.66	-24 51.3	1.350	2.362	2.7	19.4
8 9	20 29.32	-23 35.6	0.796	1.797	7.5	17.3	8 9	20 27.86	-25 13.2	1.358	2.353	6.3	19.6
8 19	20 21.50	-23 56.3	0.812	1.783	13.6	17.6	8 19	20 18.28	-25 21.9	1.390	2.343	10.8	19.8
8 29	20 16.81	-23 59.3	0.846	1.770	19.1	17.8	8 29	20 11.11	-25 16.8	1.445	2.334	15.0	20.1
9 8	20 16.15	-23 45.0	0.894	1.759	23.8	18.1	9 8	20 7.08	-24 59.4	1.518	2.324	18.5	20.3
423016	2003 <i>SQ</i> ₄₀₅		7 30.2 334°98	4°7/27.5	17		50390	2000 <i>CE</i> ₉₃		7 30.2 120°88	2°0/31.7	18	
6 30	20 59.11	-23 39.0	1.100	2.031	15.7	20.2	6 30	20 59.16	-10 3.7	2.039	2.920	11.9	19.1
7 10	20 54.88	-25 10.6	1.043	2.020	11.1	19.9	7 10	20 53.64	-10 40.5	1.977	2.927	8.7	18.9
7 20	20 47.70	-26 48.5	1.006	2.009	6.5	19.6	7 20	20 46.57	-11 29.2	1.940	2.934	5.1	18.7
7 30	20 38.61	-28 21.2	0.992	2.000	5.0	19.5	7 30	20 38.62	-12 26.3	1.929	2.941	2.1	18.5
8 9	20 29.23	-29 37.4	1.000	1.991	8.8	19.7	8 9	20 30.63	-13 27.5	1.947	2.947	3.9	18.7
8 19	20 21.24	-30 29.8	1.030	1.983	13.7	19.9	8 19	20 23.43	-14 28.1	1.991	2.954	7.4	18.9
8 29	20 16.12	-30 56.0	1.080	1.976	18.3	20.2	8 29	20 17.78	-15 24.3	2.061	2.960	10.7	19.1
9 8	20 14.70	-30 57.9	1.144	1.970	22.2	20.4	9 8	20 14.18	-16 13.0	2.154	2.966	13.5	19.3
189526	2000 <i>PW</i> ₄		7 30.2 6°86	0°5/30.1	16		2125	Karl-Ontjes		7 30.2 340°34	0°2/30.1	18	
6 30	21 3.29	-22 26.1	0.958	1.890	17.4	18.2	6 30	21 0.08	-17 48.4	1.615	2.523	13.0	15.7
7 10	20 57.58	-21 27.2	0.913	1.891	12.2	17.9	7 10	20 54.69	-18 5.1	1.550	2.517	9.1	15.5
7 20	20 48.88	-20 26.6	0.887	1.893	6.3	17.6	7 20	20 47.26	-18 28.0	1.508	2.512	4.7	15.2
7 30	20 38.63	-19 23.1	0.883	1.898	0.5	17.2	7 30	20 38.63	-18 53.4	1.491	2.507	0.2	14.8
8 9	20 28.67	-18 17.0	0.901	1.905	6.1	17.7	8 9	20 29.92	-19 16.9	1.501	2.502	4.6	15.2
8 19	20 20.64	-17 10.3	0.940	1.914	11.9	18.0	8 19	20 22.22	-19 35.3	1.535	2.498	9.1	15.4
8 29	20 15.76	-16 4.9	1.000	1.924	16.8	18.3	8 29	20 16.51	-19 46.2	1.593	2.495	13.1	15.7
9 8	20 14.54	-15 1.9	1.076	1.937	20.9	18.6	9 8	20 13.41	-19 48.9	1.670	2.492	16.4	15.9
193564	2001 <i>AW</i> ₁₅		7 30.2 216°08	1°4/29.1	18		42224	2001 <i>DT</i> ₆₅		7 30.2 138°01	3°2/2.0	18	
6 30	21 0.82	-19 12.8	2.029	2.929	11.1	20.3	6 30	20 56.82	-5 29.4	2.409	3.269	11.1	19.1
7 10	20 54.97	-20 20.1	1.959	2.923	7.7	20.0	7 10	20 51.86	-6 0.4	2.339	3.272	8.4	18.9
7 20	20 47.34	-21 33.4	1.915	2.918	4.0	19.8	7 20	20 45.61	-6 44.6	2.293	3.274	5.5	18.7
7 30	20 38.61	-22 47.2	1.898	2.912	1.5	19.6	7 30	20 38.60	-7 40.0	2.274	3.277	3.3	18.6
8 9	20 29.70	-23 55.6	1.910	2.905	4.7	19.8	8 9	20 31.54	-8 43.0	2.283	3.279	4.0	18.6
8 19	20 21.56	-24 54.1	1.949	2.899	8.5	20.0	8 19	20 25.08	-9 49.6	2.321	3.281	6.6	18.8
8 29	20 15.06	-25 40.0	2.013	2.891	11.8	20.2	8 29	20 19.87	-10 55.5	2.384	3.283	9.4	19.0
9 8	20 10.82	-26 12.4	2.098	2.884	14.7	20.4	9 8	20 16.37	-11 57.3	2.471	3.285	12.0	19.2
491065	2011 <i>QW</i> ₈₃		7 30.2 299°78	4°5/27.8	17		418124	2007 <i>YD</i> ₅₈		7 30.2 209°50	2°1/28.9	17	
6 30	21 3.78	-29 1.9	1.764	2.672	12.1	20.8	6 30	21 3.76	-20 54.1	1.669	2.575	12.8	21.7
7 10	20 57.44	-29 36.0	1.685	2.648	8.8	20.5	7 10	20 57.31	-21 53.7	1.604	2.571	8.9	21.5
7 20	20 48.78	-30 6.5	1.628	2.624	5.7	20.3	7 20	20 48.66	-22 58.3	1.563	2.566	4.7	21.2
7 30	20 38.64	-30 27.3	1.597	2.599	4.6	20.2	7 30	20 38.67	-24 1.2	1.549	2.561	2.2	21.0
8 9	20 28.23	-30 33.3	1.593	2.575	7.1	20.3	8 9	20 28.50	-24 56.1	1.561	2.555	5.7	21.3
8 19	20 18.80	-30 22.6	1.613	2.551	10.8	20.4	8 19	20 19.36	-25 38.3	1.599	2.549	9.9	21.5
8 29	20 11.49	-29 55.7	1.656	2.527	14.4	20.6	8 29	20 12.31	-26 5.8	1.661	2.543	13.7	21.7
9 8	20 7.04	-29 15.2	1.718	2.503	17.5	20.8	9 8	20 8.04	-26 18.9	1.742	2.536	17.0	21.9
392942	2012 <i>WU</i> ₅		7 30.2 232°50	1°8/29.1	18		438270	2005 <i>YZ</i>		7 30.2 151°24	9°3/21.2	17	
6 30	21 1.29	-21 43.6	1.933	2.837	11.4	21.4	6 30	21 11.92	-48 52.2	2.555	3.398	11.1	22.4
7 10	20 55.31	-22 21.8	1.868	2.834	7.9	21.2	7 10	21 2.94	-50 33.4	2.527	3.411	9.8	22.3
7 20	20 47.50	-23 2.5	1.828	2.831	4.2	20.9	7 20	20 51.55	-51 57.2	2.524	3.422	9.3	22.3
7 30	20 38.62	-23 41.0	1.815	2.828	1.9	20.8	7 30	20 38.73	-52 57.0	2.547	3.433	9.6	22.3
8 9	20 29.66	-24 13.0	1.829	2.824	4.9	21.0	8 9	20 25.79	-53 29.1	2.594	3.442	10.7	22.4
8 19	20 21.61	-24 35.4	1.870	2.821	8.6	21.2	8 19	20 14.09	-53 33.7	2.664	3.451	12.0	22.5
8 29	20 15.33	-24 46.8	1.934	2.817	12.1	21.4	8 29	20 4.74	-53 14.3	2.753	3.459	13.4	22.7
9 8	20 11.41	-24 47.6	2.020	2.813	15.0	21.6	9 8	19 58.41	-52 36.0	2.859	3.466	14.7	22.8
513355	2008 <i>AA</i> ₇		7 30.2 298°13	6°3/2.6	18		476485	2008 <i>FT</i> ₆₃		7 30.2 123°94	5°7/25.6	16	
6 30	20 59.94	-1 52.4	1.892	2.744	14.0	21.0	6 30	21 3.84	-37 8.0	2.610	3.496	9.5	21.2
7 10	20 54.34	-1 16.4	1.818	2.737	11.2	20.8	7 10	20 56.76	-38 4.2	2.571	3.510	7.4	21.1
7 20	20 47.00	-0 56.8	1.767	2.731	8.4	20.6	7 20	20 48.12	-38 51.3	2.558	3.525	6.0	21.0
7 30	20 38.61	-0 54.5	1.739	2.724	6.5	20.5	7 30	20 38.66	-39 24.7	2.571	3.538	5.9	21.1
8 9	20 30.09	-1 8.2	1.738	2.718	6.8	20.5	8 9	20 29.28	-39 41.4	2.612	3.552	7.2	21.2
8 19	20 22.34	-1 35.2	1.762	2.712	9.2	20.6	8 19	20 20.85	-39 40.9	2.679	3.565	9.1	21.3
8 29	20 16.21	-2 11.2	1.810	2.706	12.1	20.8	8 29	20 14.09	-39 24.5	2.769	3.577	11.0	21.5
9 8	20 12.30	-2 51.5	1.879	2.700	14.9	21.0	9 8	20 9.47	-38 54.9	2.880	3.589	12.8	21.6
353489	2011 <i>ST</i> ₇₀		7 30.2 276°74	0°1/30.3	18		188424	2004 <i>FS</i> ₈₀		7 30.2 115°06	1°8/29.2	17	
6 30	20 59.43	-16 17.5	1.980	2.878	11.5	20.6	6 30	21 4.29	-21 4.8	1.679	2.583	12.8	21.1
7 10	20 53.96	-16 48.2	1.911	2.873	8.0	20.4	7 10	20 57.46	-21 49.6	1.631	2.596	8.8	20.9
7 20	20 46.79	-17 25.9	1.867	2.869	4.2	20.1	7 20	20 48.61	-22 37.3	1.606	2.609	4.6	20.7
7 30	20 38.61	-18 7.0	1.849	2.864	0.2	19.8	7 30	20 38.68	-23 22.1	1.609	2.621	1.9	20.6
8 9	20 30.33	-18 47.3	1.858	2.859	4.0	20.1	8 9	20 28.84	-23 58.9	1.638	2.633	5.3	20.8
8 19	20 22.85	-19 23.2	1.894	2.854	7.9	20.3	8 19	20 20.19	-24 24.5	1.693	2.645	9.3	21.1
8 29	20 16.99	-19 52.0	1.955	2.850	11.4	20.5	8 29	20 13.66	-24 37.9	1.772	2.656	12.9	21.3
9 8	20 13.32	-20 12.4	2.037	2.845	14.4	20.7	9 8	20 9.79	-24 39.8	1.870	2.667	15.9	21.6
79418	Zhangjiajie		7 30.2 10°61	0°1/30.1	17		190520	2000 <i>PN</i> ₂₆		7 30.2 295°82	7°3/26.4	18	

EPHEMERIDES

7 30.2

7 30.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
252901	2002 <i>JW</i> ₁₂₃		7 30.2	84°41'	1°2'/30.9	17	454942	2015 <i>TL</i> ₁₈₄		7 30.2	304°56'	0°9'/29.6	18
6 30	21 2.46	-12 40.3	1.371	2.273	15.3	20.7	6 30	20 58.39	-19 17.5	2.133	3.035	10.6	20.8
7 10	20 56.44	-13 26.2	1.323	2.285	10.9	20.5	7 10	20 53.24	-19 51.0	2.058	3.023	7.4	20.6
7 20	20 48.18	-14 26.0	1.297	2.298	5.9	20.2	7 20	20 46.45	-20 29.1	2.008	3.011	3.8	20.4
7 30	20 38.69	-15 33.7	1.296	2.310	1.3	20.0	7 30	20 38.69	-21 7.9	1.984	2.999	0.9	20.1
8 9	20 29.25	-16 42.2	1.320	2.322	4.9	20.2	8 9	20 30.79	-21 43.5	1.989	2.987	4.1	20.3
8 19	20 21.10	-17 45.1	1.369	2.334	9.7	20.6	8 19	20 23.59	-22 12.8	2.020	2.976	7.8	20.5
8 29	20 15.27	-18 37.9	1.440	2.347	13.9	20.8	8 29	20 17.90	-22 33.7	2.076	2.964	11.1	20.7
9 8	20 12.33	-19 18.2	1.532	2.358	17.4	21.1	9 8	20 14.27	-22 45.4	2.153	2.953	13.9	20.9
459666	2013 <i>LQ</i>		7 30.2	62°87'	2°2'/31.2	17	149174	2002 <i>JX</i> ₃		7 30.2	92°44'	1°2'/31.4	18
6 30	21 4.68	-12 36.9	1.152	2.059	17.1	20.9	6 30	20 58.40	-10 10.9	2.326	3.203	10.8	19.6
7 10	20 58.08	-12 45.7	1.115	2.079	12.2	20.7	7 10	20 53.01	-11 27.5	2.266	3.216	7.7	19.5
7 20	20 49.01	-13 8.5	1.099	2.099	6.9	20.4	7 20	20 46.24	-12 55.6	2.233	3.229	4.3	19.3
7 30	20 38.71	-13 41.0	1.105	2.119	2.3	20.2	7 30	20 38.70	-14 30.3	2.228	3.241	1.3	19.1
8 9	20 28.69	-14 17.3	1.136	2.139	5.5	20.5	8 9	20 31.12	-16 6.3	2.253	3.254	3.4	19.3
8 19	20 20.34	-14 52.2	1.190	2.159	10.4	20.8	8 19	20 24.21	-17 38.1	2.307	3.267	6.7	19.5
8 29	20 14.69	-15 21.6	1.266	2.180	14.9	21.1	8 29	20 18.65	-19 1.6	2.388	3.279	9.7	19.7
9 8	20 12.24	-15 43.1	1.360	2.200	18.5	21.4	9 8	20 14.91	-20 13.8	2.493	3.292	12.3	19.9
201160	2002 <i>LK</i> ₃₂		7 30.2	67°39'	7°9'/4.5	18	47379	1999 <i>XB</i> ₉₇		7 30.2	126°53'	2°1'/31.3	18
6 30	20 59.16	+ 3 11.8	1.770	2.602	15.6	20.0	6 30	21 4.49	-12 25.2	1.678	2.566	13.7	18.2
7 10	20 53.82	+ 3 31.7	1.708	2.608	12.9	19.8	7 10	20 57.55	-12 25.5	1.622	2.576	9.9	17.9
7 20	20 46.75	+ 3 28.9	1.667	2.614	10.1	19.6	7 20	20 48.68	-12 35.9	1.590	2.587	5.7	17.7
7 30	20 38.68	+ 3 2.8	1.649	2.620	8.2	19.5	7 30	20 38.76	-12 53.8	1.584	2.596	2.2	17.5
8 9	20 30.56	+ 2 15.7	1.655	2.626	8.1	19.6	8 9	20 28.89	-13 15.8	1.605	2.606	4.5	17.7
8 19	20 23.32	+ 1 12.5	1.687	2.632	9.9	19.7	8 19	20 20.15	-13 38.4	1.652	2.615	8.6	18.0
8 29	20 17.79	- 0 0.7	1.742	2.638	12.5	19.9	8 29	20 13.44	-13 58.9	1.724	2.623	12.4	18.2
9 8	20 14.52	- 1 16.8	1.818	2.644	15.1	20.0	9 8	20 9.29	-14 15.0	1.816	2.632	15.5	18.4
180593	2004 <i>FG</i> ₅₁		7 30.2	91°69'	4°6'/27.9	18	503879	2000 <i>UJ</i> ₃		7 30.2	244°01'	13°4'/17.2	18
6 30	21 5.86	-27 47.9	1.499	2.411	13.6	20.0	6 30	21 20.90	-55 23.4	2.023	2.842	14.4	22.1
7 10	20 58.83	-28 35.9	1.454	2.419	9.7	19.8	7 10	21 10.75	-57 22.9	1.971	2.821	13.6	22.0
7 20	20 49.42	-29 20.0	1.431	2.428	6.0	19.6	7 20	20 56.33	-58 59.5	1.941	2.799	13.4	22.0
7 30	20 38.73	-29 52.9	1.433	2.436	4.7	19.5	7 30	20 38.93	-60 1.8	1.932	2.775	14.0	21.9
8 9	20 28.17	-30 9.7	1.461	2.445	7.4	19.7	8 9	20 20.81	-60 23.0	1.945	2.751	15.3	22.0
8 19	20 19.06	-30 8.6	1.513	2.453	11.1	19.9	8 19	20 4.54	-60 3.4	1.977	2.726	16.9	22.1
8 29	20 12.46	-29 51.0	1.587	2.461	14.7	20.2	8 29	19 52.19	-59 9.0	2.025	2.700	18.5	22.1
9 8	20 8.93	-29 19.8	1.680	2.469	17.7	20.4	9 8	19 44.80	-57 48.9	2.087	2.673	20.0	22.2
478386	2012 <i>BK</i> ₁₆		7 30.2	200°62'	1°6'/28.7	18	4721	Atahualpa		7 30.2	40°56'	4°2'/28.4	18
6 30	20 59.04	-23 19.1	3.227	4.120	7.6	23.3	6 30	21 4.27	-24 53.8	1.104	2.030	16.1	16.4
7 10	20 53.23	-23 56.0	3.155	4.115	5.3	23.1	7 10	20 58.17	-25 45.6	1.066	2.040	11.3	16.2
7 20	20 46.28	-24 33.5	3.109	4.110	2.9	22.9	7 20	20 49.23	-26 36.8	1.047	2.050	6.5	16.0
7 30	20 38.67	-25 8.5	3.093	4.103	1.6	22.8	7 30	20 38.76	-27 18.6	1.052	2.061	4.3	15.9
8 9	20 30.99	-25 38.4	3.107	4.097	3.5	23.0	8 9	20 28.50	-27 43.9	1.079	2.072	7.8	16.1
8 19	20 23.81	-26 1.5	3.150	4.090	6.0	23.1	8 19	20 20.02	-27 50.2	1.129	2.084	12.5	16.4
8 29	20 17.69	-26 16.6	3.219	4.082	8.3	23.3	8 29	20 14.55	-27 38.2	1.198	2.096	16.8	16.7
9 8	20 13.04	-26 23.8	3.311	4.074	10.3	23.4	9 8	20 12.62	-27 11.2	1.285	2.108	20.3	17.0
131569	2001 <i>VE</i> ₆₃		7 30.2	279°27'	4°0'/28.4	17	508324	2015 <i>LF</i> ₃₄		7 30.2	211°01'	0°7'/29.7	18
6 30	21 5.75	-25 15.4	1.324	2.240	14.7	20.4	6 30	21 0.08	-18 40.8	2.015	2.916	11.2	21.1
7 10	20 59.32	-25 59.8	1.254	2.224	10.5	20.1	7 10	20 54.41	-19 17.1	1.951	2.915	7.8	20.9
7 20	20 49.98	-26 45.0	1.206	2.207	6.1	19.8	7 20	20 47.06	-19 58.3	1.911	2.914	4.0	20.7
7 30	20 38.75	-27 22.8	1.182	2.190	4.1	19.6	7 30	20 38.73	-20 40.3	1.898	2.913	0.8	20.4
8 9	20 27.19	-27 46.4	1.182	2.173	7.6	19.8	8 9	20 30.33	-21 18.8	1.913	2.912	4.2	20.7
8 19	20 16.92	-27 51.9	1.206	2.156	12.4	20.0	8 19	20 22.76	-21 50.7	1.955	2.911	8.0	20.9
8 29	20 9.38	-27 39.3	1.251	2.139	16.9	20.2	8 29	20 16.84	-22 13.7	2.021	2.910	11.3	21.1
9 8	20 5.40	-27 11.2	1.313	2.122	20.7	20.4	9 8	20 13.09	-22 27.2	2.109	2.909	14.2	21.3
9544	Scottbirney		7 30.2	120°72'	2°4'/28.4	18	104724	2000 <i>GK</i> ₁₇₆		7 30.2	255°41'	0°0'/30.2	18
6 30	20 59.89	-24 39.0	2.451	3.352	9.4	17.7	6 30	21 0.49	-16 54.3	1.954	2.852	11.6	20.0
7 10	20 54.02	-25 19.5	2.396	3.359	6.6	17.5	7 10	20 54.76	-17 19.8	1.884	2.847	8.1	19.8
7 20	20 46.74	-25 59.6	2.367	3.367	3.7	17.4	7 20	20 47.27	-17 51.6	1.839	2.841	4.2	19.6
7 30	20 38.69	-26 35.3	2.366	3.374	2.4	17.3	7 30	20 38.74	-18 26.3	1.820	2.835	0.1	19.2
8 9	20 30.65	-27 3.3	2.394	3.382	4.6	17.4	8 9	20 30.10	-18 59.6	1.828	2.829	4.1	19.5
8 19	20 23.38	-27 21.5	2.448	3.389	7.4	17.6	8 19	20 22.29	-19 28.5	1.863	2.823	8.0	19.8
8 29	20 17.54	-27 29.4	2.528	3.396	10.1	17.8	8 29	20 16.14	-19 50.4	1.923	2.817	11.6	20.0
9 8	20 13.61	-27 27.4	2.629	3.403	12.4	18.0	9 8	20 12.25	-20 4.4	2.004	2.811	14.6	20.2
93010	2000 <i>RD</i> ₈₇		7 30.2	222°16'	3°1'/1.1	18	183624	2003 <i>UG</i> ₂₆₀		7 30.2	307°01'	6°5'/25.3	18
6 30	21 0.55	- 8 39.9	1.807	2.687	13.3	19.8	6 30	21 0.98	-30 24.2	1.612	2.527	12.6	19.1
7 10	20 54.85	- 8 52.4	1.737	2.684	9.9	19.6	7 10	20 55.82	-32 7.9	1.541	2.505	9.5	18.9
7 20	20 47.33	- 9 18.7	1.690	2.680	6.2	19.4	7 20	20 48.14	-33 50.7	1.494	2.483	7.0	18.7
7 30	20 38.71	- 9 56.7	1.668	2.676	3.2	19.2	7 30	20 38.76	-35 22.5	1.472	2.462	6.9	18.6
8 9	20 29.97	-10 42.4	1.673	2.672	4.7	19.3	8 9	20 28.93	-36 34.7	1.476	2.440	9.4	18.7
8 19	20 22.07	-11 31.4	1.705	2.668	8.3	19.5	8 19	20 20.04	-37 21.8	1.503	2.420	12.9	18.9
8 29	20 15.91	-12 19.4	1.761	2.664	12.0	19.7	8 29	20 13.40	-37 43.0	1.550	2.399	16.3	19.0
9 8	20 12.08	-13 2.7	1.838	2.660	15.2	19.9	9 8	20 9.86	-37 40.8	1.615	2.379	19.3	19.2
450127	2015 <i>RS</i> ₂₁₃		7 30.2	6°22'	0°6'/29.9	18	425646	2010 <i>VJ</i> ₁₉₆		7 30.2	183°55'		

EPHEMERIDES

7 30.2

7 30.2

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
506789	2007 <i>BY</i> ₄₂		7 30.2 202°02	0°3/30.1	17		167671	2004 <i>FR</i> ₄		7 30.2 236°74	13°2/29.1	18	
6 30	21 2.87	-17 9.9	1.896	2.792	12.0	22.5	6 30	21 38.84	-44 43.9	1.017	1.893	21.4	20.0
7 10	20 56.47	-17 45.7	1.828	2.789	8.4	22.3	7 10	21 23.96	-44 57.1	0.953	1.882	17.8	19.7
7 20	20 48.19	-18 28.2	1.783	2.785	4.3	22.1	7 20	21 3.18	-44 34.5	0.908	1.870	14.5	19.5
7 30	20 38.77	-19 13.1	1.766	2.781	0.3	21.7	7 30	20 39.17	-43 17.5	0.885	1.856	13.2	19.4
8 9	20 29.23	-19 55.6	1.776	2.776	4.3	22.0	8 9	20 15.92	-41 1.1	0.886	1.842	15.1	19.4
8 19	20 20.58	-20 32.0	1.814	2.771	8.4	22.3	8 19	19 56.92	-37 57.6	0.910	1.827	19.1	19.6
8 29	20 13.71	-20 59.8	1.876	2.765	12.1	22.5	8 29	19 44.13	-34 29.2	0.955	1.811	23.4	19.8
9 8	20 9.24	-21 18.1	1.959	2.758	15.1	22.7	9 8	19 37.72	-30 56.9	1.016	1.795	27.4	20.0
394708	2008 <i>DT</i> ₅₃		7 30.2 8°55	8°8/6.4	16		420390	2012 <i>CX</i> ₁₇		7 30.2 107°75	1°9/31.4	17	
6 30	20 55.46	+ 7 1.1	1.768	2.585	16.3	20.5	6 30	21 2.26	-10 59.0	1.457	2.351	15.0	21.6
7 10	20 51.31	+ 7 3.4	1.702	2.586	13.7	20.3	7 10	20 56.30	-11 40.2	1.402	2.359	10.8	21.4
7 20	20 45.49	+ 6 38.9	1.656	2.589	11.2	20.2	7 20	20 48.18	-12 36.4	1.370	2.368	6.1	21.1
7 30	20 38.72	+ 5 47.2	1.632	2.591	9.3	20.0	7 30	20 38.82	-13 43.0	1.362	2.376	2.1	20.9
8 9	20 31.86	+ 4 31.1	1.632	2.595	8.8	20.0	8 9	20 29.45	-14 53.1	1.381	2.383	4.8	21.1
8 19	20 25.80	+ 2 56.4	1.656	2.599	10.1	20.1	8 19	20 21.24	-16 0.3	1.425	2.391	9.4	21.4
8 29	20 21.36	+ 1 11.0	1.704	2.604	12.5	20.3	8 29	20 15.21	-16 59.6	1.492	2.398	13.5	21.7
9 8	20 19.08	- 0 36.9	1.774	2.610	15.0	20.5	9 8	20 11.96	-17 47.7	1.580	2.406	17.0	21.9
472043	2013 <i>YZ</i> ₃₉		7 30.2 243°57	1°1/30.9	18		138886	2000 <i>YJ</i> ₄₆		7 30.2 141°89	1°4/30.9	18	
6 30	21 0.95	-13 23.0	1.919	2.809	12.1	21.9	6 30	21 4.46	-14 14.6	1.514	2.411	14.4	19.7
7 10	20 55.15	-13 50.3	1.842	2.798	8.7	21.7	7 10	20 57.79	-14 19.4	1.455	2.415	10.2	19.5
7 20	20 47.52	-14 27.6	1.789	2.788	4.8	21.4	7 20	20 48.94	-14 33.8	1.419	2.419	5.6	19.2
7 30	20 38.77	-15 11.5	1.763	2.777	1.2	21.1	7 30	20 38.84	-14 54.5	1.409	2.423	1.5	19.0
8 9	20 29.81	-15 57.7	1.764	2.765	4.1	21.3	8 9	20 28.74	-15 17.4	1.424	2.426	4.8	19.2
8 19	20 21.63	-16 42.2	1.792	2.754	8.1	21.5	8 19	20 19.83	-15 38.9	1.465	2.429	9.3	19.5
8 29	20 15.12	-17 21.4	1.845	2.742	11.8	21.7	8 29	20 13.13	-15 56.3	1.529	2.432	13.5	19.7
9 8	20 10.90	-17 53.1	1.919	2.729	15.0	21.9	9 8	20 9.25	-16 7.7	1.613	2.434	16.9	20.0
375732	2009 <i>RM</i> ₁₂		7 30.2 264°29	1°8/29.3	18		510830	2013 <i>CT</i> ₁₇		7 30.2 121°83	0°6/29.8	18	
6 30	21 3.51	-21 23.5	1.648	2.555	12.8	21.4	6 30	20 59.29	-18 15.2	2.382	3.277	9.9	22.0
7 10	20 57.24	-21 57.1	1.576	2.543	9.0	21.1	7 10	20 53.63	-18 54.4	2.325	3.287	6.8	21.8
7 20	20 48.72	-22 34.3	1.527	2.530	4.8	20.8	7 20	20 46.59	-19 37.8	2.293	3.296	3.5	21.6
7 30	20 38.80	-23 9.8	1.503	2.516	1.9	20.6	7 30	20 38.79	-20 21.8	2.290	3.305	0.6	21.4
8 9	20 28.66	-23 38.4	1.506	2.503	5.5	20.8	8 9	20 30.98	-21 2.8	2.315	3.313	3.6	21.7
8 19	20 19.52	-23 56.7	1.535	2.490	9.9	21.1	8 19	20 23.91	-21 37.8	2.367	3.322	6.9	21.9
8 29	20 12.48	-24 3.0	1.587	2.476	13.9	21.3	8 29	20 18.22	-22 5.1	2.446	3.330	9.8	22.1
9 8	20 8.25	-23 57.9	1.658	2.462	17.3	21.5	9 8	20 14.38	-22 23.9	2.546	3.338	12.3	22.3
103268	2000 <i>AV</i> ₂₇		7 30.2 137°57	0°2/30.1	18		513446	2008 <i>VY</i> ₈₁		7 30.2 268°27	0°5/29.9	18	
6 30	21 2.78	-18 15.8	2.369	3.259	10.2	20.2	6 30	21 0.27	-17 20.3	1.864	2.765	11.9	21.4
7 10	20 55.97	-18 30.7	2.313	3.271	7.1	20.0	7 10	20 54.76	-18 4.5	1.791	2.755	8.3	21.1
7 20	20 47.75	-18 48.8	2.282	3.284	3.6	19.8	7 20	20 47.37	-18 56.1	1.742	2.745	4.3	20.9
7 30	20 38.78	-19 7.4	2.280	3.295	0.2	19.5	7 30	20 38.82	-19 50.7	1.720	2.735	0.5	20.6
8 9	20 29.87	-19 23.7	2.307	3.307	3.5	19.9	8 9	20 30.07	-20 42.9	1.724	2.724	4.4	20.8
8 19	20 21.79	-19 35.8	2.362	3.317	6.9	20.1	8 19	20 22.13	-21 28.4	1.756	2.714	8.6	21.1
8 29	20 15.22	-19 42.5	2.444	3.327	9.8	20.3	8 29	20 15.93	-22 4.3	1.811	2.703	12.3	21.3
9 8	20 10.60	-19 43.3	2.548	3.337	12.3	20.5	9 8	20 12.10	-22 29.2	1.887	2.693	15.4	21.5
509861	2008 <i>YG</i> ₁₆₆		7 30.2 207°52	1°9/31.5	18		278027	2006 <i>VC</i> ₁₀₅		7 30.2 184°45	1°4/29.4	17	
6 30	21 1.89	-11 37.8	2.507	3.379	10.3	22.4	6 30	21 4.42	-20 30.6	1.900	2.799	11.8	21.2
7 10	20 55.42	-11 37.4	2.427	3.373	7.5	22.2	7 10	20 57.55	-21 6.2	1.836	2.799	8.2	21.0
7 20	20 47.52	-11 44.3	2.373	3.365	4.4	22.0	7 20	20 48.76	-21 45.1	1.797	2.799	4.3	20.8
7 30	20 38.79	-11 57.1	2.347	3.357	2.0	21.8	7 30	20 38.85	-22 22.5	1.785	2.798	1.4	20.6
8 9	20 29.94	-12 13.7	2.350	3.349	3.5	21.9	8 9	20 28.88	-22 54.1	1.800	2.797	4.7	20.8
8 19	20 21.74	-12 31.7	2.382	3.340	6.6	22.1	8 19	20 19.88	-23 16.8	1.843	2.795	8.7	21.1
8 29	20 14.85	-12 49.1	2.440	3.330	9.6	22.3	8 29	20 12.76	-23 29.2	1.910	2.793	12.2	21.3
9 8	20 9.78	-13 4.2	2.522	3.319	12.2	22.4	9 8	20 8.11	-23 31.6	1.998	2.790	15.2	21.5
322084	2010 <i>VS</i> ₁₂₁		7 30.2 338°69	0°0/30.2	18		274726	2008 <i>UG</i> ₁₇₄		7 30.2 5°07	5°4/28.0	16	
6 30	20 59.50	-17 56.2	1.829	2.734	11.9	20.3	6 30	20 54.95	-26 40.3	0.895	1.840	16.8	18.9
7 10	20 54.16	-18 3.0	1.761	2.726	8.4	20.1	7 10	20 52.11	-27 25.2	0.857	1.839	12.0	18.6
7 20	20 47.00	-18 14.9	1.716	2.718	4.4	19.8	7 20	20 46.28	-28 7.2	0.837	1.841	7.3	18.4
7 30	20 38.78	-18 28.8	1.696	2.712	0.1	19.4	7 30	20 38.79	-28 37.3	0.837	1.845	5.5	18.3
8 9	20 30.48	-18 41.4	1.704	2.705	4.2	19.8	8 9	20 31.42	-28 48.4	0.857	1.852	9.0	18.5
8 19	20 23.06	-18 50.2	1.737	2.699	8.3	20.0	8 19	20 25.83	-28 37.8	0.897	1.861	13.7	18.8
8 29	20 17.41	-18 53.4	1.794	2.694	12.0	20.2	8 29	20 23.26	-28 7.0	0.955	1.873	18.2	19.1
9 8	20 14.08	-18 50.3	1.872	2.689	15.1	20.4	9 8	20 24.24	-27 19.5	1.029	1.887	21.9	19.4
50286	2000 <i>CA</i> ₂₆		7 30.2 272°80	0°6/30.6	18	R	257270	2009 <i>GW</i> ₂		7 30.2 211°46	15°3/3.6	17	
6 30	21 2.60	-15 24.4	1.586	2.486	13.6	19.8	6 30	21 9.00	+ 9 4.8	1.240	2.053	22.0	20.1
7 10	20 56.70	-15 48.1	1.506	2.468	9.7	19.5	7 10	21 1.56	+11 15.7	1.179	2.050	19.4	19.9
7 20	20 48.51	-16 21.6	1.449	2.450	5.2	19.2	7 20	20 51.20	+12 57.3	1.135	2.046	17.0	19.7
7 30	20 38.83	-17 1.0	1.417	2.432	0.6	18.8	7 30	20 38.93	+14 0.5	1.111	2.041	15.5	19.6
8 9	20 28.81	-17 41.3	1.411	2.413	4.8	19.1	8 9	20 26.28	+14 21.0	1.107	2.036	15.6	19.6
8 19	20 19.69	-18 17.9	1.431	2.394	9.6	19.3	8 19	20 14.86	+14 0.7	1.124	2.030	17.2	19.7
8 29	20 12.61	-18 47.3	1.474	2.375	14.0	19.5	8 29	20 6.11	+13 7.5	1.160	2.024	19.6	19.8
9 8	20 8.35	-19 7.5	1.536	2.356	17.7	19.7	9 8	20 0.92	+11 53.2	1.211	2.017	22.3	20.0
54297	2000 <i>JA</i> ₆₁		7 30.2 342°37	0°7/29.8	18		250825	2005 <i>UV</i> ₇₂ </					

EPHEMERIDES

7 30.2

7 30.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
503785	2016 <i>UW</i> ₆₇		7 30.2 194°46	3°3/27.2	18	R	93729	2000 <i>VK</i> ₄₄		7 30.3 193°30	7°0/25.4	18	
6 30	21 0.12	-28 53.0	2.856	3.753	8.4	21.9	6 30	21 6.53	-36 54.7	2.064	2.955	11.4	20.4
7 10	20 54.19	-29 44.3	2.793	3.751	6.1	21.8	7 10	20 59.19	-38 4.4	2.011	2.954	9.0	20.3
7 20	20 46.90	-30 33.0	2.756	3.748	4.0	21.6	7 20	20 49.70	-39 4.3	1.983	2.952	7.2	20.2
7 30	20 38.84	-31 15.2	2.748	3.745	3.4	21.6	7 30	20 38.95	-39 47.4	1.980	2.949	7.2	20.2
8 9	20 30.70	-31 47.5	2.768	3.742	5.1	21.7	8 9	20 28.14	-40 9.3	2.004	2.947	8.8	20.3
8 19	20 23.18	-32 8.3	2.816	3.738	7.4	21.8	8 19	20 18.46	-40 8.7	2.053	2.944	11.2	20.4
8 29	20 16.94	-32 17.0	2.889	3.734	9.7	22.0	8 29	20 10.90	-39 47.5	2.124	2.940	13.7	20.6
9 8	20 12.45	-32 14.4	2.984	3.729	11.7	22.1	9 8	20 6.09	-39 9.8	2.213	2.936	15.8	20.7
336914	2011 <i>HD</i> ₂₂		7 30.2 144°09	2°9/1.2	17		440487	2005 <i>TS</i> ₆₀		7 30.3 306°54	4°3/27.7	18	
6 30	21 0.89	-8 41.8	1.831	2.709	13.2	21.3	6 30	21 2.68	-29 36.7	1.959	2.865	11.2	21.4
7 10	20 55.05	-9 0.8	1.768	2.714	9.7	21.1	7 10	20 56.45	-30 9.4	1.892	2.854	8.2	21.2
7 20	20 47.46	-9 33.5	1.728	2.718	6.0	20.9	7 20	20 48.26	-30 37.7	1.849	2.843	5.3	21.0
7 30	20 38.85	-10 17.2	1.714	2.723	3.1	20.8	7 30	20 38.92	-30 56.4	1.833	2.832	4.4	21.0
8 9	20 30.19	-11 7.7	1.727	2.727	4.5	20.9	8 9	20 29.49	-31 1.7	1.842	2.822	6.6	21.1
8 19	20 22.42	-12 0.6	1.767	2.730	8.1	21.1	8 19	20 21.05	-30 52.0	1.878	2.812	9.7	21.2
8 29	20 16.39	-12 51.3	1.831	2.734	11.6	21.3	8 29	20 14.51	-30 27.9	1.936	2.802	12.8	21.4
9 8	20 12.63	-13 36.4	1.917	2.737	14.7	21.5	9 8	20 10.49	-29 51.8	2.015	2.792	15.5	21.6
151408	2002 <i>EN</i> ₁₂₁		7 30.3 70°71	7°2/25.6	18		377909	2006 <i>DE</i> ₂₀₀		7 30.3 167°53	1°7/31.5	17	
6 30	21 5.63	-39 59.9	2.197	3.081	11.1	19.6	6 30	21 2.06	-11 33.8	2.502	3.374	10.3	22.3
7 10	20 58.33	-40 45.5	2.154	3.088	8.9	19.5	7 10	20 55.50	-11 46.4	2.435	3.380	7.5	22.1
7 20	20 49.11	-41 18.7	2.135	3.095	7.5	19.4	7 20	20 47.59	-12 6.8	2.393	3.386	4.3	21.9
7 30	20 38.90	-41 34.0	2.142	3.101	7.4	19.4	7 30	20 38.91	-12 33.0	2.379	3.390	1.8	21.8
8 9	20 28.84	-41 28.6	2.174	3.108	8.7	19.5	8 9	20 30.20	-13 2.2	2.394	3.394	3.4	21.9
8 19	20 19.99	-41 2.7	2.231	3.115	10.7	19.7	8 19	20 22.18	-13 31.9	2.439	3.397	6.5	22.1
8 29	20 13.22	-40 18.9	2.310	3.122	12.8	19.8	8 29	20 15.50	-13 59.5	2.510	3.399	9.4	22.3
9 8	20 9.03	-39 21.3	2.409	3.129	14.7	20.0	9 8	20 10.63	-14 23.5	2.604	3.400	11.9	22.5
476170	2007 <i>TP</i> ₄₁₄		7 30.3 296°28	6°0/25.7	18		148399	2000 <i>UB</i> ₇₈		7 30.3 162°13	7°8/22.6	18	
6 30	21 1.67	-30 29.6	1.749	2.660	12.0	20.7	6 30	21 6.49	-46 35.5	2.863	3.717	9.7	20.9
7 10	20 56.16	-32 2.3	1.678	2.640	9.0	20.4	7 10	20 58.88	-47 46.1	2.825	3.722	8.5	20.8
7 20	20 48.30	-33 33.3	1.632	2.621	6.5	20.3	7 20	20 49.43	-48 43.1	2.812	3.727	7.8	20.8
7 30	20 38.89	-34 53.5	1.611	2.601	6.3	20.2	7 30	20 38.95	-49 21.3	2.824	3.732	8.0	20.8
8 9	20 29.10	-35 55.5	1.616	2.582	8.7	20.3	8 9	20 28.45	-49 38.1	2.861	3.736	9.0	20.9
8 19	20 20.21	-36 35.0	1.646	2.563	12.0	20.4	8 19	20 18.92	-49 33.3	2.922	3.740	10.4	21.0
8 29	20 13.42	-36 51.0	1.697	2.543	15.2	20.6	8 29	20 11.24	-49 8.9	3.005	3.743	11.8	21.1
9 8	20 9.52	-36 46.2	1.765	2.525	18.1	20.8	9 8	20 5.95	-48 28.8	3.105	3.746	13.1	21.2
312987	1999 <i>TC</i> ₆₃		7 30.3 261°13	4°6/26.8	18		206507	2003 <i>UV</i> ₁₁₉		7 30.3 316°55	2°7/28.3	18	
6 30	21 1.39	-31 16.2	2.313	3.213	9.9	20.5	6 30	20 58.24	-19 34.0	1.432	2.350	13.7	19.4
7 10	20 55.35	-32 6.4	2.249	3.206	7.3	20.3	7 10	20 54.06	-21 8.9	1.347	2.320	9.6	19.1
7 20	20 47.61	-32 52.1	2.211	3.199	5.2	20.2	7 20	20 47.38	-22 57.2	1.286	2.290	5.1	18.8
7 30	20 38.87	-33 28.0	2.200	3.192	4.7	20.1	7 30	20 38.91	-24 50.4	1.249	2.261	2.8	18.5
8 9	20 30.05	-33 50.4	2.216	3.184	6.5	20.2	8 9	20 29.83	-26 38.0	1.238	2.232	6.9	18.7
8 19	20 22.05	-33 57.6	2.258	3.177	9.1	20.4	8 19	20 21.54	-28 10.8	1.251	2.204	11.8	18.9
8 29	20 15.69	-33 49.7	2.324	3.170	11.7	20.5	8 29	20 15.38	-29 22.7	1.286	2.176	16.4	19.1
9 8	20 11.51	-33 28.7	2.410	3.162	13.9	20.7	9 8	20 12.36	-30 11.8	1.338	2.150	20.3	19.3
102252	1999 <i>TG</i> ₂₈		7 30.3 348°69	1°0/30.6	18		444642	2006 <i>XO</i> ₅₉		7 30.3 120°55	0°1/30.2	18	
6 30	20 56.15	-16 10.3	0.911	1.846	17.7	18.3	6 30	21 1.12	-18 16.5	2.310	3.204	10.2	21.1
7 10	20 52.99	-16 9.0	0.855	1.833	12.7	17.9	7 10	20 54.93	-18 24.0	2.250	3.210	7.1	20.9
7 20	20 46.86	-16 20.0	0.816	1.822	6.8	17.6	7 20	20 47.30	-18 34.8	2.215	3.217	3.7	20.7
7 30	20 38.86	-16 39.1	0.798	1.813	1.1	17.2	7 30	20 38.90	-18 46.4	2.208	3.223	0.1	20.4
8 9	20 30.65	-17 0.6	0.799	1.805	6.1	17.5	8 9	20 30.54	-18 56.3	2.229	3.230	3.5	20.7
8 19	20 23.94	-17 19.2	0.821	1.800	12.2	17.8	8 19	20 22.97	-19 2.7	2.278	3.236	6.9	21.0
8 29	20 20.17	-17 30.5	0.862	1.796	17.7	18.1	8 29	20 16.88	-19 4.4	2.353	3.242	10.0	21.2
9 8	20 15.11	-17 32.0	0.917	1.795	22.2	18.4	9 8	20 12.74	-19 0.9	2.450	3.247	12.5	21.3
72283	2001 <i>BT</i> ₇		7 30.3 210°36	2°4/28.9	18		282267	2002 <i>LY</i> ₆₁		7 30.3 344°27	2°4/31.0	18	
6 30	21 4.59	-22 8.4	1.596	2.503	13.2	19.7	6 30	21 4.30	-14 51.7	1.507	2.406	14.3	19.7
7 10	20 58.02	-22 57.5	1.533	2.500	9.2	19.4	7 10	20 57.76	-14 5.2	1.441	2.400	10.3	19.5
7 20	20 49.16	-23 49.7	1.494	2.496	4.9	19.2	7 20	20 49.00	-13 24.7	1.397	2.395	6.0	19.2
7 30	20 38.92	-24 38.8	1.481	2.492	2.5	19.0	7 30	20 38.95	-12 49.8	1.378	2.390	2.4	19.0
8 9	20 28.55	-25 18.6	1.494	2.488	5.9	19.2	8 9	20 28.86	-12 19.5	1.385	2.386	5.1	19.1
8 19	20 19.31	-25 45.3	1.532	2.483	10.2	19.5	8 19	20 19.93	-11 53.1	1.417	2.382	9.5	19.4
8 29	20 12.28	-25 57.8	1.594	2.478	14.1	19.7	8 29	20 13.20	-11 29.5	1.473	2.379	13.7	19.6
9 8	20 8.15	-25 56.8	1.675	2.473	17.4	19.9	9 8	20 9.31	-11 7.4	1.548	2.377	17.2	19.8
302284	2001 <i>XG</i> ₂₄₇		7 30.3 209°02	0°3/30.0	18		208898	2002 <i>TK</i> ₁₄₈		7 30.3 262°16	6°1/3.2	18	
6 30	20 59.89	-18 10.4	2.701	3.590	9.1	21.9	6 30	20 59.28	-0 31.3	2.023	2.866	13.6	20.3
7 10	20 54.02	-18 36.7	2.625	3.584	6.3	21.8	7 10	20 53.93	-0 16.2	1.942	2.855	10.9	20.1
7 20	20 46.83	-19 6.7	2.576	3.577	3.3	21.5	7 20	20 46.93	-0 18.6	1.884	2.844	8.2	19.9
7 30	20 38.87	-19 37.7	2.555	3.570	0.3	21.3	7 30	20 38.90	-0 38.8	1.850	2.833	6.3	19.8
8 9	20 30.82	-20 6.7	2.564	3.563	3.3	21.5	8 9	20 30.69	-1 15.0	1.842	2.822	6.5	19.8
8 19	20 23.36	-20 31.4	2.601	3.555	6.4	21.7	8 19	20 23.14	-2 3.8	1.860	2.811	8.7	19.9
8 29	20 17.12	-20 50.3	2.664	3.546	9.2	21.9	8 29	20 17.08	-3 0.2	1.903	2.800	11.6	20.0
9 8	20 12.57	-21 2.5	2.751	3.537	11.6	22.0	9 8	20 13.10	-3 59.2	1.968	2.788	14.3	20.2
452313	1998 <i>XR</i> ₁₆		7 30.3 89°57	5°9/26.3	16		183216	2002 <i>TJ</i> ₃₆		7 30.3 217°6			

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7 30.3

7 30.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
163071	2002 <i>AD</i> ₈		7 30.3 260°61	0°0/30.3 18			398994	2013 <i>EM</i> ₁₁₂		7 30.3 13°70	2°3/28.4 18		
6 30	21 3.72	-15 45.9	1.509	2.411	14.1	20.4	6 30	20 59.11	-22 29.0	2.150	3.055	10.4	20.0
7 10	20 57.67	-16 27.0	1.429	2.393	10.1	20.1	7 10	20 53.79	-23 33.2	2.089	3.055	7.2	19.9
7 20	20 49.15	-17 19.5	1.372	2.374	5.3	19.8	7 20	20 46.85	-24 40.0	2.054	3.055	3.9	19.7
7 30	20 38.98	-18 18.2	1.340	2.355	0.2	19.3	7 30	20 38.95	-25 43.9	2.045	3.055	2.4	19.5
8 9	20 28.39	-19 16.7	1.334	2.336	5.1	19.7	8 9	20 30.97	-26 40.1	2.065	3.056	4.9	19.7
8 19	20 18.73	-20 8.9	1.354	2.316	10.2	19.9	8 19	20 23.74	-27 25.0	2.112	3.056	8.2	19.9
8 29	20 11.23	-20 50.8	1.396	2.295	14.8	20.2	8 29	20 18.06	-27 56.7	2.183	3.056	11.3	20.1
9 8	20 6.74	-21 20.4	1.458	2.275	18.7	20.4	9 8	20 14.48	-28 15.4	2.275	3.057	13.8	20.3
209556	2004 <i>WG</i> ₄		7 30.3 319°19	0°3/30.1 17			208633	2002 <i>EC</i> ₉₀		7 30.3 59°63	0°0/30.2 17		
6 30	21 1.51	-16 52.4	1.167	2.086	16.0	20.1	6 30	21 4.69	-16 16.8	1.163	2.077	16.5	20.6
7 10	20 56.43	-17 25.9	1.104	2.076	11.3	19.8	7 10	20 58.17	-16 52.1	1.130	2.099	11.5	20.4
7 20	20 48.57	-18 10.7	1.061	2.066	5.9	19.5	7 20	20 49.20	-17 36.8	1.118	2.122	5.9	20.1
7 30	20 38.96	-19 1.0	1.041	2.056	0.3	19.0	7 30	20 39.02	-18 24.5	1.130	2.145	0.2	19.8
8 9	20 29.08	-19 49.4	1.045	2.047	5.9	19.4	8 9	20 29.15	-19 8.5	1.166	2.169	5.4	20.3
8 19	20 20.50	-20 29.6	1.071	2.039	11.5	19.7	8 19	20 20.97	-19 43.7	1.226	2.192	10.5	20.6
8 29	20 14.58	-20 57.9	1.118	2.031	16.4	20.0	8 29	20 15.50	-20 7.8	1.307	2.216	14.9	20.9
9 8	20 12.11	-21 12.6	1.182	2.024	20.6	20.2	9 8	20 13.22	-20 20.2	1.407	2.239	18.4	21.2
180179	2003 <i>JM</i> ₈		7 30.3 47°13	5°2/26.5 17			294730	2008 <i>BX</i> ₄₆		7 30.3 10°11	2°1/31.9 18		
6 30	21 0.86	-29 36.5	1.818	2.728	11.7	19.4	6 30	20 57.61	-9 25.4	1.955	2.838	12.3	20.7
7 10	20 55.18	-30 59.9	1.782	2.744	8.5	19.2	7 10	20 52.77	-10 6.3	1.889	2.839	9.0	20.5
7 20	20 47.57	-32 18.5	1.770	2.761	5.8	19.1	7 20	20 46.33	-11 0.7	1.846	2.839	5.3	20.2
7 30	20 38.93	-33 25.1	1.784	2.777	5.4	19.1	7 30	20 38.95	-12 5.0	1.829	2.840	2.3	20.0
8 9	20 30.35	-34 14.2	1.824	2.794	7.5	19.3	8 9	20 31.47	-13 14.5	1.840	2.842	3.9	20.2
8 19	20 22.88	-34 43.6	1.889	2.811	10.4	19.5	8 19	20 24.75	-14 24.0	1.878	2.843	7.6	20.4
8 29	20 17.41	-34 53.6	1.977	2.829	13.2	19.7	8 29	20 19.57	-15 28.8	1.941	2.845	11.0	20.6
9 8	20 14.45	-34 46.8	2.084	2.846	15.5	19.9	9 8	20 16.46	-16 25.6	2.026	2.847	14.0	20.8
266196	2006 <i>VG</i> ₁₅₂		7 30.3 306°40	0°1/30.3 17			223555	2004 <i>EW</i> ₈₄		7 30.3 30°03	2°0/29.3 17		
6 30	21 1.59	-16 42.6	1.304	2.217	15.1	21.2	6 30	21 0.90	-20 3.7	1.129	2.055	15.9	19.8
7 10	20 56.42	-17 1.7	1.226	2.195	10.8	20.9	7 10	20 55.77	-20 52.9	1.091	2.066	11.0	19.6
7 20	20 48.59	-17 30.9	1.170	2.173	5.7	20.6	7 20	20 48.07	-21 48.1	1.073	2.078	5.7	19.3
7 30	20 38.97	-18 5.7	1.137	2.152	0.2	20.1	7 30	20 38.99	-22 41.5	1.078	2.092	2.0	19.1
8 9	20 28.92	-18 40.4	1.128	2.131	5.5	20.5	8 9	20 30.07	-23 25.5	1.106	2.106	6.3	19.4
8 19	20 19.91	-19 9.8	1.143	2.110	11.0	20.7	8 19	20 22.72	-23 55.7	1.157	2.121	11.3	19.7
8 29	20 13.31	-19 30.5	1.179	2.090	15.9	20.9	8 29	20 18.06	-24 10.3	1.228	2.136	15.7	20.1
9 8	20 10.00	-19 40.6	1.233	2.071	20.2	21.1	9 8	20 16.63	-24 10.1	1.317	2.153	19.2	20.3
475235	2005 <i>WF</i> ₂		7 30.3 203°03	4°9/25.5 18			358403	2007 <i>BR</i> ₄₀		7 30.3 144°79	0°1/30.3 18		
6 30	21 1.29	-33 38.9	2.752	3.644	8.8	21.5	6 30	20 59.32	-16 39.5	2.492	3.382	9.7	22.6
7 10	20 55.17	-34 50.6	2.692	3.640	6.7	21.4	7 10	20 53.66	-17 5.8	2.430	3.388	6.8	22.4
7 20	20 47.52	-35 57.2	2.659	3.636	5.1	21.3	7 20	20 46.68	-17 37.0	2.393	3.394	3.5	22.2
7 30	20 38.94	-36 53.5	2.654	3.631	5.1	21.2	7 30	20 38.96	-18 10.2	2.384	3.399	0.1	21.9
8 9	20 30.24	-37 35.7	2.677	3.626	6.5	21.3	8 9	20 31.22	-18 42.3	2.404	3.404	3.3	22.2
8 19	20 22.19	-38 2.0	2.726	3.621	8.6	21.5	8 19	20 24.17	-19 10.7	2.452	3.409	6.5	22.4
8 29	20 15.56	-38 12.2	2.799	3.615	10.7	21.6	8 29	20 18.42	-19 33.6	2.526	3.414	9.4	22.6
9 8	20 10.87	-38 8.1	2.893	3.609	12.6	21.7	9 8	20 14.45	-19 49.9	2.622	3.418	11.8	22.8
475293	2005 <i>XQ</i> ₃₀		7 30.3 209°96	2°1/28.3 18			490153	2008 <i>UJ</i> ₁₀₆		7 30.3 198°43	2°1/28.9 15		
6 30	20 59.27	-23 42.1	2.755	3.653	8.6	22.0	6 30	21 2.59	-22 26.4	1.911	2.815	11.5	21.8
7 10	20 53.65	-24 34.9	2.685	3.647	6.0	21.8	7 10	20 56.34	-23 6.4	1.848	2.813	8.0	21.5
7 20	20 46.69	-25 28.7	2.642	3.641	3.4	21.6	7 20	20 48.22	-23 48.3	1.810	2.812	4.3	21.3
7 30	20 38.93	-26 19.6	2.627	3.635	2.2	21.6	7 30	20 39.00	-24 27.1	1.798	2.810	2.1	21.2
8 9	20 31.06	-27 3.9	2.641	3.629	4.2	21.7	8 9	20 29.72	-24 58.3	1.814	2.808	5.1	21.4
8 19	20 23.76	-27 39.1	2.683	3.622	7.0	21.9	8 19	20 21.37	-25 19.1	1.856	2.806	8.8	21.6
8 29	20 17.69	-28 3.8	2.752	3.615	9.5	22.0	8 29	20 14.86	-25 28.2	1.923	2.804	12.2	21.8
9 8	20 13.33	-28 18.0	2.842	3.607	11.8	22.2	9 8	20 10.76	-25 26.3	2.010	2.801	15.1	22.0
466143	2012 <i>HD</i> ₂₇		7 30.3 28°56	2°2/29.1 17			396794	2004 <i>KT</i>		7 30.3 182°45	15°0/ 9.9 14 C		
6 30	20 59.94	-19 23.9	1.107	2.034	16.0	20.4	6 30	21 16.23	+31 3.8	2.528	3.080	17.6	23.2
7 10	20 55.17	-20 32.9	1.068	2.044	11.1	20.2	7 10	21 5.86	+32 44.6	2.456	3.084	16.7	23.1
7 20	20 47.78	-21 49.6	1.050	2.055	5.7	19.9	7 20	20 53.25	+33 56.5	2.402	3.085	15.9	23.0
7 30	20 38.96	-23 5.0	1.054	2.067	2.2	19.7	7 30	20 39.15	+34 33.5	2.367	3.085	15.3	23.0
8 9	20 30.24	-24 9.9	1.081	2.080	6.6	20.1	8 9	20 24.65	+34 32.7	2.352	3.083	15.0	22.9
8 19	20 23.06	-24 58.4	1.131	2.094	11.6	20.4	8 19	20 10.88	+33 55.2	2.358	3.078	15.2	22.9
8 29	20 18.57	-25 28.0	1.202	2.109	16.0	20.7	8 29	19 58.94	+32 46.2	2.385	3.072	15.7	23.0
9 8	20 17.35	-25 39.4	1.290	2.124	19.6	21.0	9 8	19 49.57	+31 13.9	2.430	3.063	16.5	23.0
479046	2013 <i>AN</i> ₄₄		7 30.3 271°35	1°6/29.4 18			260331	2004 <i>TV</i> ₂₀₅		7 30.3 220°93	2°2/28.5 18		
6 30	21 2.82	-22 27.7	2.033	2.934	11.1	21.1	6 30	20 59.60	-24 30.0	2.650	3.549	8.9	21.4
7 10	20 56.45	-22 40.7	1.958	2.922	7.7	20.8	7 10	20 53.90	-25 6.9	2.581	3.543	6.2	21.2
7 20	20 48.26	-22 54.5	1.908	2.910	4.1	20.6	7 20	20 46.83	-25 43.8	2.538	3.538	3.5	21.0
7 30	20 38.99	-23 5.5	1.885	2.898	1.6	20.4	7 30	20 38.97	-26 17.0	2.523	3.532	2.2	20.9
8 9	20 29.59	-23 10.5	1.890	2.886	4.6	20.6	8 9	20 31.03	-26 43.5	2.537	3.526	4.3	21.0
8 19	20 21.06	-23 7.7	1.921	2.874	8.3	20.8	8 19	20 23.73	-27 1.2	2.578	3.519	7.1	21.2
8 29	20 14.25	-22 56.5	1.977	2.861	11.8	21.0	8 29	20 17.73	-27 9.3	2.645	3.513	9.7	21.4
9 8	20 9.76	-22 37.5	2.054	2.849	14.7	21.2	9 8	20 13.50	-27 7.9	2.734	3.506	12.0	21.5
519040	2010 <i>KC</i> ₂₂		7 30.3 358°62	5°7/ 3.4 18			396105	2013 <i>CH</i> ₁₄₆					

EPHEMERIDES

7 30.3

7 30.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
504419	2007 YS ₇₀	7 30.3 258°59		1.8°/29.1 17			507556	2005 SC ₂₁₅	7 30.3 12°06		5.2°/ 2.1 18		
6 30	21 2.87	-18 40.6	1.571	2.478	13.4	22.1	6 30	20 59.79	-5 2.3	1.826	2.694	13.7	19.4
7 10	20 57.06	-19 56.6	1.495	2.462	9.4	21.9	7 10	20 54.32	-4 29.6	1.763	2.695	10.7	19.3
7 20	20 48.84	-21 22.8	1.443	2.446	4.9	21.6	7 20	20 47.16	-4 11.5	1.721	2.697	7.5	19.1
7 30	20 39.04	-22 51.6	1.416	2.430	1.8	21.3	7 30	20 39.02	-4 8.2	1.705	2.700	5.4	19.0
8 9	20 28.82	-24 14.8	1.416	2.413	5.8	21.5	8 9	20 30.84	-4 17.9	1.714	2.703	6.0	19.0
8 19	20 19.50	-25 25.6	1.442	2.395	10.5	21.8	8 19	20 23.52	-4 38.0	1.749	2.706	8.7	19.2
8 29	20 12.28	-26 19.7	1.491	2.378	14.7	22.0	8 29	20 17.89	-5 4.5	1.808	2.710	11.8	19.4
9 8	20 7.99	-26 56.2	1.559	2.360	18.3	22.2	9 8	20 14.47	-5 33.3	1.887	2.714	14.6	19.6
318943	2005 UM ₁₅₄	7 30.3 255°90		0°1/30.2 18			361937	2008 HJ ₂₇	7 30.3 265°59		4°6/ 2.7 18		
6 30	20 59.70	-17 21.0	2.536	3.427	9.5	22.7	6 30	20 57.77	-3 0.1	2.250	3.101	12.1	21.1
7 10	20 54.05	-17 44.3	2.451	3.409	6.7	22.5	7 10	20 52.74	-3 2.0	2.174	3.097	9.4	21.0
7 20	20 46.96	-18 12.4	2.390	3.392	3.5	22.3	7 20	20 46.29	-3 18.8	2.121	3.092	6.7	20.8
7 30	20 38.99	-18 42.5	2.358	3.374	0.1	21.9	7 30	20 39.00	-3 49.6	2.094	3.087	4.8	20.7
8 9	20 30.84	-19 11.7	2.355	3.355	3.4	22.2	8 9	20 31.59	-4 32.1	2.094	3.082	5.1	20.7
8 19	20 23.25	-19 37.2	2.380	3.336	6.7	22.4	8 19	20 24.81	-5 22.6	2.121	3.077	7.4	20.8
8 29	20 16.92	-19 57.2	2.431	3.317	9.8	22.6	8 29	20 19.35	-6 17.1	2.173	3.073	10.2	21.0
9 8	20 12.38	-20 10.6	2.504	3.297	12.4	22.7	9 8	20 15.72	-7 11.3	2.248	3.068	12.8	21.1
177295	2003 XX ₁₇	7 30.3 127°65		3°9/28.2 17			190568	2000 SQ ₁₈₃	7 30.3 349°85		2°9/ 1.1 18		
6 30	21 7.91	-27 28.0	1.748	2.651	12.5	20.7	6 30	20 52.07	-9 1.8	1.007	1.928	17.8	19.5
7 10	21 0.06	-28 8.5	1.703	2.664	8.9	20.5	7 10	20 49.95	-9 49.1	0.946	1.915	13.1	19.2
7 20	20 50.11	-28 45.2	1.681	2.678	5.4	20.3	7 20	20 45.28	-11 2.9	0.902	1.903	7.9	18.8
7 30	20 39.07	-29 12.0	1.686	2.690	4.0	20.3	7 30	20 38.97	-12 38.0	0.880	1.893	3.2	18.5
8 9	20 28.19	-29 24.9	1.718	2.702	6.5	20.4	8 9	20 32.39	-14 24.6	0.879	1.885	5.7	18.7
8 19	20 18.64	-29 22.5	1.776	2.714	9.9	20.7	8 19	20 27.01	-16 11.2	0.900	1.879	11.3	18.9
8 29	20 11.35	-29 5.9	1.858	2.725	13.2	20.9	8 29	20 24.14	-17 47.0	0.940	1.875	16.5	19.2
9 8	20 6.86	-28 37.8	1.959	2.735	16.0	21.1	9 8	20 24.59	-19 4.7	0.998	1.874	20.9	19.5
370259	2002 QC ₂	7 30.3 323°28		5°6/ 1.9 17			507260	2011 CT ₄₅	7 30.3 261°61		3°7/28.4 17		
6 30	20 57.06	-6 27.6	1.135	2.037	17.8	20.0	6 30	21 5.48	-25 55.8	1.612	2.521	13.0	21.4
7 10	20 53.46	-6 19.9	1.056	2.011	13.8	19.7	7 10	20 58.79	-26 33.7	1.543	2.509	9.3	21.2
7 20	20 47.17	-6 35.3	0.995	1.985	9.3	19.4	7 20	20 49.69	-27 10.6	1.498	2.497	5.4	20.9
7 30	20 39.00	-7 14.0	0.955	1.960	5.8	19.1	7 30	20 39.10	-27 40.2	1.478	2.485	3.7	20.8
8 9	20 30.28	-8 12.0	0.936	1.937	7.1	19.1	8 9	20 28.33	-27 57.1	1.484	2.473	6.6	20.9
8 19	20 22.51	-9 22.6	0.940	1.914	11.7	19.3	8 19	20 18.69	-27 58.7	1.515	2.461	10.7	21.1
8 29	20 17.16	-10 37.1	0.963	1.893	16.8	19.5	8 29	20 11.34	-27 45.1	1.569	2.448	14.6	21.3
9 8	20 15.23	-11 47.3	1.003	1.873	21.4	19.7	9 8	20 6.99	-27 18.5	1.641	2.435	17.8	21.5
469996	2006 KF ₂₆	7 30.3 96°57		5°9/25.8 17			64740	2001 XP ₁₄₄	7 30.3 99°65		2°7/ 1.3 18		
6 30	21 2.94	-30 37.6	1.797	2.704	11.9	21.1	6 30	21 0.01	-8 34.7	2.342	3.210	11.1	19.8
7 10	20 56.83	-32 17.7	1.751	2.711	8.8	20.9	7 10	20 54.11	-8 40.4	2.288	3.228	8.2	19.6
7 20	20 48.56	-33 53.1	1.730	2.718	6.4	20.8	7 20	20 46.90	-8 56.1	2.260	3.246	5.1	19.5
7 30	20 39.04	-35 15.3	1.736	2.724	6.2	20.8	7 30	20 39.02	-9 20.3	2.258	3.264	2.8	19.3
8 9	20 29.42	-36 17.7	1.768	2.731	8.3	20.9	8 9	20 31.20	-9 50.2	2.284	3.282	3.8	19.4
8 19	20 20.89	-36 57.3	1.825	2.737	11.3	21.1	8 19	20 24.14	-10 22.9	2.339	3.299	6.6	19.6
8 29	20 14.48	-37 14.4	1.903	2.743	14.1	21.3	8 29	20 18.45	-10 55.6	2.419	3.316	9.4	19.8
9 8	20 10.79	-37 12.0	2.001	2.749	16.5	21.5	9 8	20 14.57	-11 25.6	2.523	3.332	11.9	20.0
446249	2013 HG ₅₅	7 30.3 112°23		3°9/ 2.2 18			33955	2000 NC ₃	7 30.3 290°06		0°3/30.5 18		
6 30	20 58.06	-4 58.6	2.367	3.224	11.4	21.2	6 30	21 1.14	-15 26.9	1.594	2.497	13.5	19.0
7 10	20 52.83	-4 57.2	2.299	3.228	8.7	21.0	7 10	20 55.60	-16 3.4	1.528	2.492	9.5	18.7
7 20	20 46.28	-5 8.4	2.256	3.232	6.0	20.9	7 20	20 47.96	-16 49.8	1.485	2.487	5.0	18.5
7 30	20 38.98	-5 31.1	2.238	3.235	4.0	20.8	7 30	20 39.05	-17 41.4	1.468	2.483	0.4	18.1
8 9	20 31.64	-6 3.1	2.248	3.239	4.5	20.8	8 9	20 30.00	-18 32.7	1.476	2.479	4.6	18.4
8 19	20 24.95	-6 41.3	2.285	3.243	6.9	21.0	8 19	20 21.92	-19 18.6	1.511	2.474	9.2	18.7
8 29	20 19.54	-7 22.3	2.348	3.246	9.6	21.1	8 29	20 15.86	-19 55.7	1.568	2.470	13.3	18.9
9 8	20 15.88	-8 2.7	2.434	3.250	12.1	21.3	9 8	20 12.45	-20 22.1	1.646	2.466	16.7	19.1
572	Rebekka	7 30.3 299°95		7°6/ 3.4 18			257921	2000 WA ₂₉	7 30.3 224°27		12°7/ 4.4 18		
6 30	20 59.26	-0 6.7	1.454	2.315	17.0	14.5	6 30	21 7.61	+8 36.8	1.450	2.254	19.8	21.3
7 10	20 54.50	+0 7.3	1.374	2.298	13.8	14.2	7 10	21 0.49	+9 51.5	1.373	2.243	17.2	21.1
7 20	20 47.51	-0 3.0	1.314	2.280	10.4	14.0	7 20	20 50.71	+10 38.3	1.314	2.231	14.7	20.9
7 30	20 39.02	-0 39.0	1.275	2.263	7.9	13.8	7 30	20 39.14	+10 51.1	1.275	2.217	13.0	20.7
8 9	20 30.16	-1 38.2	1.260	2.246	8.1	13.8	8 9	20 27.07	+10 28.3	1.260	2.202	12.9	20.7
8 19	20 22.14	-2 54.9	1.269	2.229	10.9	13.9	8 19	20 15.91	+9 32.8	1.266	2.186	14.6	20.7
8 29	20 16.11	-4 21.3	1.300	2.213	14.7	14.1	8 29	20 7.01	+8 12.3	1.294	2.168	17.4	20.9
9 8	20 12.86	-5 48.9	1.351	2.197	18.3	14.2	9 8	20 1.26	+6 37.6	1.340	2.150	20.3	21.0
53786	2000 EM ₉₇	7 30.3 341°49		1°8/30.9 18			520841	2014 UT ₂₃₆	7 30.3 78°15		3°2/31.6 17		
6 30	20 59.23	-14 43.1	1.137	2.056	16.3	17.0	6 30	21 5.47	-11 28.8	1.312	2.209	16.2	21.0
7 10	20 54.83	-14 34.3	1.073	2.043	11.8	16.7	7 10	20 58.70	-11 9.0	1.261	2.218	11.8	20.8
7 20	20 47.76	-14 37.0	1.029	2.031	6.6	16.4	7 20	20 49.55	-11 2.1	1.231	2.226	7.1	20.5
7 30	20 39.02	-14 48.3	1.007	2.021	1.9	16.1	7 30	20 39.10	-11 6.3	1.225	2.235	3.4	20.3
8 9	20 30.07	-15 4.1	1.007	2.011	5.6	16.3	8 9	20 28.74	-11 18.4	1.243	2.244	5.6	20.5
8 19	20 22.39	-15 19.9	1.030	2.003	11.0	16.6	8 19	20 19.77	-11 34.6	1.286	2.253	10.1	20.8
8 29	20 17.27	-15 32.2	1.073	1.997	16.0	16.8	8 29	20 13.28	-11 51.2	1.352	2.262	14.4	21.0
9 8	20 15.50	-15 38.2	1.133	1.991	20.2	17.1	9 8	20 9.86	-12 5.2	1.436	2.271	18.0	21.3
471583	2012 RK ₁₃	7 30.3 330°22		21°4/21.7 16			190018	2004 PU ₁₆	7 30.3 78°82		1°9/31.1 18		
6 30	20 55.35	+33 37.0	1.572	2.196	25.								

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
19569	1999 <i>KM</i> ₁₅		7 30.3 43°85	7°0/ 2.8 18			371389	2006 <i>RS</i> ₁₀		7 30.3 293°63	2°1/29.3 17		
6 30	21 1.64	- 2 22.8	1.515	2.379	16.2	16.8	6 30	21 3.78	-21 15.0	1.394	2.308	14.3	21.4
7 10	20 55.80	- 1 40.6	1.462	2.388	12.8	16.6	7 10	20 58.00	-21 49.2	1.314	2.284	10.1	21.1
7 20	20 47.98	- 1 18.2	1.429	2.398	9.5	16.4	7 20	20 49.50	-22 28.8	1.256	2.259	5.4	20.8
7 30	20 39.06	- 1 16.3	1.420	2.408	7.2	16.3	7 30	20 39.17	-23 7.5	1.221	2.235	2.1	20.5
8 9	20 30.17	- 1 33.1	1.435	2.418	7.5	16.3	8 9	20 28.35	-23 39.1	1.212	2.211	6.2	20.7
8 19	20 22.38	- 2 4.5	1.474	2.429	10.2	16.5	8 19	20 18.56	-23 58.7	1.227	2.186	11.3	20.9
8 29	20 16.62	- 2 45.1	1.536	2.440	13.4	16.7	8 29	20 11.18	-24 4.4	1.264	2.162	16.1	21.2
9 8	20 13.45	- 3 28.9	1.618	2.451	16.3	17.0	9 8	20 7.10	-23 56.5	1.318	2.138	20.1	21.4
440717	2005 <i>YV</i> ₂₄₈		7 30.3 196°24	2°1/31.7 18			44214	1998 <i>OC</i> ₁₄		7 30.3 255°60	1°6/31.6 18		
6 30	21 0.47	-11 10.0	2.780	3.650	9.5	21.3	6 30	20 59.61	-10 41.0	2.001	2.884	12.0	18.6
7 10	20 54.37	-10 57.6	2.705	3.647	6.9	21.1	7 10	20 54.30	-11 26.5	1.920	2.871	8.8	18.4
7 20	20 47.06	-10 51.7	2.655	3.645	4.2	20.9	7 20	20 47.25	-12 25.2	1.863	2.859	5.1	18.2
7 30	20 39.06	-10 51.4	2.633	3.642	2.1	20.8	7 30	20 39.10	-13 33.4	1.833	2.846	1.8	17.9
8 9	20 31.00	-10 55.1	2.641	3.638	3.3	20.8	8 9	20 30.72	-14 46.2	1.831	2.833	3.9	18.0
8 19	20 23.53	-11 1.2	2.677	3.635	6.0	21.0	8 19	20 23.01	-15 58.2	1.857	2.820	7.8	18.2
8 29	20 17.23	-11 8.2	2.740	3.631	8.7	21.2	8 29	20 16.82	-17 4.9	1.908	2.807	11.4	18.4
9 8	20 12.53	-11 14.4	2.827	3.626	11.0	21.3	9 8	20 12.79	-18 2.7	1.981	2.793	14.6	18.6
154811	2004 <i>PK</i> ₁₀₇		7 30.3 7°89	2°5/31.6 18			254279	2004 <i>RA</i> ₂₁₀		7 30.3 341°48	7°8/ 5.5 18		
6 30	21 1.62	-11 24.2	1.573	2.466	14.2	20.2	6 30	20 57.07	+ 6 4.4	2.141	2.948	14.1	20.1
7 10	20 55.87	-11 27.5	1.511	2.466	10.3	20.0	7 10	20 52.34	+ 6 21.3	2.068	2.946	11.9	19.9
7 20	20 48.07	-11 43.1	1.471	2.466	6.1	19.8	7 20	20 46.14	+ 6 17.0	2.016	2.944	9.8	19.8
7 30	20 39.08	-12 8.4	1.455	2.467	2.6	19.6	7 30	20 39.07	+ 5 50.9	1.987	2.942	8.2	19.7
8 9	20 30.03	-12 39.6	1.466	2.467	4.8	19.7	8 9	20 31.89	+ 5 4.3	1.983	2.940	7.9	19.7
8 19	20 22.00	-13 12.5	1.502	2.468	9.0	19.9	8 19	20 25.36	+ 4 1.1	2.004	2.938	9.2	19.8
8 29	20 15.99	-13 43.4	1.561	2.469	12.9	20.2	8 29	20 20.20	+ 2 46.6	2.049	2.937	11.3	19.9
9 8	20 12.59	-14 9.1	1.640	2.469	16.3	20.4	9 8	20 16.93	+ 1 26.8	2.117	2.936	13.5	20.0
159082	2004 <i>TU</i> ₂₃₇		7 30.3 209°52	5°2/25.6 18			467354	2003 <i>NB</i> ₁₃		7 30.3 326°20	1°0/30.8 18		
6 30	21 2.40	-36 18.2	2.813	3.700	8.8	20.7	6 30	20 57.45	-13 25.1	1.060	1.982	17.0	20.3
7 10	20 55.93	-37 10.0	2.754	3.695	6.9	20.6	7 10	20 53.89	-14 6.2	0.989	1.961	12.3	20.0
7 20	20 47.95	-37 54.7	2.720	3.690	5.5	20.5	7 20	20 47.47	-15 6.6	0.938	1.942	6.7	19.6
7 30	20 39.08	-38 27.7	2.714	3.684	5.4	20.4	7 30	20 39.11	-16 21.0	0.908	1.923	1.2	19.2
8 9	20 30.16	-38 45.9	2.735	3.678	6.7	20.5	8 9	20 30.28	-17 40.6	0.901	1.906	5.9	19.4
8 19	20 21.97	-38 48.3	2.782	3.672	8.6	20.6	8 19	20 22.59	-18 56.0	0.915	1.889	12.0	19.7
8 29	20 15.24	-38 35.5	2.853	3.665	10.6	20.8	8 29	20 17.57	-19 59.5	0.949	1.874	17.4	20.0
9 8	20 10.49	-38 9.8	2.944	3.658	12.4	20.9	9 8	20 16.17	-20 46.5	0.999	1.860	22.1	20.2
127064	2002 <i>GA</i> ₅₄		7 30.3 76°32	5°2/ 3.2 18			445418	2010 <i>TL</i> ₁₄₄		7 30.3 277°22	4°8/ 2.6 18		
6 30	20 59.32	- 1 53.3	1.737	2.595	14.8	19.1	6 30	20 58.38	- 3 3.2	2.270	3.120	12.0	20.9
7 10	20 54.05	- 2 19.4	1.679	2.606	11.5	18.9	7 10	20 53.20	- 2 49.5	2.191	3.111	9.5	20.7
7 20	20 47.04	- 3 6.1	1.643	2.616	8.1	18.7	7 20	20 46.57	- 2 49.8	2.135	3.103	6.9	20.5
7 30	20 39.07	- 4 11.2	1.631	2.627	5.5	18.6	7 30	20 39.08	- 3 3.9	2.104	3.095	5.0	20.4
8 9	20 31.07	- 5 29.8	1.646	2.638	5.8	18.6	8 9	20 31.46	- 3 29.9	2.101	3.086	5.4	20.4
8 19	20 23.98	- 6 55.5	1.687	2.649	8.5	18.8	8 19	20 24.44	- 4 5.2	2.124	3.078	7.6	20.5
8 29	20 18.63	- 8 21.7	1.752	2.660	11.8	19.1	8 29	20 18.75	- 4 46.0	2.173	3.070	10.3	20.7
9 8	20 15.56	- 9 42.5	1.840	2.670	14.8	19.3	9 8	20 14.89	- 5 28.5	2.244	3.061	12.9	20.8
241686	2000 <i>RV</i> ₉₈		7 30.3 305°32	9°3/ 3.2 18			335067	2004 <i>RH</i> ₂₂₄		7 30.3 256°93	7°6/ 4.5 18		
6 30	21 0.04	+ 1 58.0	1.542	2.388	16.9	19.9	6 30	20 59.65	+ 3 40.6	1.930	2.753	14.9	20.9
7 10	20 55.11	+ 2 50.0	1.449	2.358	14.2	19.7	7 10	20 54.36	+ 3 51.1	1.846	2.740	12.3	20.7
7 20	20 47.91	+ 3 20.7	1.376	2.328	11.4	19.4	7 20	20 47.30	+ 3 39.5	1.782	2.726	9.8	20.5
7 30	20 39.10	+ 3 26.3	1.325	2.299	9.5	19.2	7 30	20 39.11	+ 3 5.0	1.742	2.712	7.9	20.3
8 9	20 29.75	+ 3 6.1	1.297	2.269	9.7	19.2	8 9	20 30.66	+ 2 9.4	1.728	2.698	7.8	20.3
8 19	20 21.05	+ 2 22.5	1.293	2.239	12.1	19.2	8 19	20 22.87	+ 0 56.8	1.739	2.683	9.7	20.4
8 29	20 14.21	+ 1 21.3	1.309	2.210	15.4	19.4	8 29	20 16.63	- 0 26.4	1.774	2.669	12.4	20.5
9 8	20 10.11	+ 0 10.4	1.345	2.181	18.9	19.5	9 8	20 12.57	- 1 53.4	1.831	2.654	15.2	20.7
394324	2006 <i>WC</i> ₁₀₉		7 30.3 348°08	4°2/27.3 18			230479	2002 <i>TT</i> ₃₆		7 30.3 316°54	5°7/27.5 17		
6 30	21 0.00	-26 54.2	1.774	2.687	11.8	20.3	6 30	21 3.95	-28 44.6	1.305	2.225	14.6	19.9
7 10	20 54.77	-28 3.0	1.717	2.684	8.4	20.1	7 10	20 58.19	-29 40.1	1.243	2.212	10.7	19.7
7 20	20 47.52	-29 11.0	1.683	2.681	5.3	19.9	7 20	20 49.57	-30 32.5	1.203	2.200	7.0	19.4
7 30	20 39.08	-30 11.2	1.676	2.678	4.4	19.8	7 30	20 39.18	-31 12.9	1.186	2.188	5.9	19.3
8 9	20 30.53	-30 57.9	1.694	2.675	6.9	20.0	8 9	20 28.56	-31 34.0	1.193	2.176	8.8	19.5
8 19	20 22.96	-31 27.7	1.737	2.674	10.2	20.2	8 19	20 19.33	-31 32.8	1.222	2.165	13.0	19.7
8 29	20 17.33	-31 39.8	1.803	2.672	13.5	20.4	8 29	20 12.85	-31 10.3	1.272	2.155	17.0	19.9
9 8	20 14.26	-31 35.6	1.888	2.671	16.2	20.6	9 8	20 9.88	-30 30.3	1.339	2.145	20.5	20.1
322267	2011 <i>ET</i> ₂₆		7 30.3 13°60	0°8/29.9 17			271633	2004 <i>PU</i> ₇₃		7 30.3 325°13	3°7/28.9 18		
6 30	21 1.56	-18 14.7	1.470	2.380	13.9	20.6	6 30	21 3.39	-25 46.3	1.298	2.218	14.6	20.1
7 10	20 55.98	-18 53.2	1.413	2.381	9.7	20.4	7 10	20 57.76	-26 3.2	1.228	2.200	10.5	19.8
7 20	20 48.19	-19 39.0	1.378	2.382	5.0	20.1	7 20	20 49.34	-26 18.3	1.180	2.182	6.0	19.5
7 30	20 39.10	-20 26.5	1.369	2.384	0.8	19.8	7 30	20 39.17	-26 25.4	1.155	2.165	3.7	19.3
8 9	20 29.95	-21 9.7	1.385	2.385	5.1	20.1	8 9	20 28.75	-26 19.2	1.153	2.148	7.1	19.5
8 19	20 21.96	-21 44.2	1.425	2.387	9.8	20.4	8 19	20 19.63	-25 57.8	1.175	2.133	11.9	19.7
8 29	20 16.17	-22 7.4	1.489	2.389	13.9	20.7	8 29	20 13.17	-25 22.0	1.218	2.118	16.4	19.9
9 8	20 13.20	-22 18.7	1.571	2.392	17.3	20.9	9 8	20 10.13	-24 34.4	1.278	2.104	20.3	20.2
307919	2004 <i>ET</i> ₁₀		7 30.3 88°01	0°6/29.9 17			173068	2006 <i>S</i>					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
448612	2010 <i>UH</i> ₄₇		7 30.3 237°83	4°0/ 2.2 18			498090	2007 <i>RO</i> ₂₄₅		7 30.3 314°61	4°7/28.1 18		
6 30	20 58.40	- 4 51.5	2.386	3.241	11.3	21.6	6 30	21 2.42	-25 13.0	1.113	2.041	15.8	20.6
7 10	20 53.14	- 4 45.3	2.310	3.237	8.7	21.5	7 10	20 57.54	-26 10.0	1.044	2.019	11.4	20.3
7 20	20 46.51	- 4 51.5	2.258	3.233	6.1	21.3	7 20	20 49.46	-27 9.9	0.996	1.999	6.8	20.0
7 30	20 39.09	- 5 9.4	2.232	3.229	4.2	21.2	7 30	20 39.23	-28 3.1	0.970	1.978	4.9	19.8
8 9	20 31.58	- 5 37.0	2.234	3.224	4.7	21.2	8 9	20 28.51	-28 40.2	0.966	1.959	8.6	20.0
8 19	20 24.67	- 6 11.5	2.263	3.220	7.0	21.3	8 19	20 19.14	-28 55.8	0.984	1.940	13.8	20.2
8 29	20 19.03	- 6 49.6	2.318	3.215	9.8	21.5	8 29	20 12.75	-28 48.9	1.021	1.922	18.7	20.4
9 8	20 15.13	- 7 27.9	2.396	3.211	12.3	21.7	9 8	20 10.28	-28 22.2	1.073	1.905	22.9	20.6
19360	1997 <i>JS</i> ₁₂		7 30.3 129°39	0°1/30.4 18			58837	1998 <i>HQ</i> ₄₆		7 30.3 83°32	4°4/ 2.7 18		
6 30	20 59.62	-16 38.0	2.434	3.325	9.9	19.6	6 30	20 58.25	- 3 30.2	2.129	2.984	12.5	18.5
7 10	20 53.92	-17 2.3	2.374	3.332	6.9	19.4	7 10	20 53.13	- 3 37.8	2.063	2.989	9.7	18.3
7 20	20 46.88	-17 31.5	2.339	3.340	3.6	19.2	7 20	20 46.54	- 4 0.7	2.020	2.993	6.8	18.1
7 30	20 39.11	-18 2.7	2.332	3.347	0.2	18.9	7 30	20 39.13	- 4 37.7	2.002	2.998	4.7	18.0
8 9	20 31.33	-18 32.8	2.353	3.354	3.3	19.2	8 9	20 31.67	- 5 25.7	2.012	3.003	5.0	18.0
8 19	20 24.25	-18 59.4	2.403	3.361	6.6	19.4	8 19	20 24.92	- 6 20.9	2.048	3.007	7.5	18.2
8 29	20 18.53	-19 20.5	2.478	3.368	9.5	19.6	8 29	20 19.58	- 7 18.7	2.110	3.012	10.4	18.4
9 8	20 14.60	-19 35.2	2.576	3.374	12.0	19.8	9 8	20 16.15	- 8 14.9	2.195	3.016	13.0	18.6
264013	2009 <i>PX</i> ₅		7 30.3 37°75	4°7/ 2.4 18			51688	2001 <i>KW</i> ₁₂		7 30.3 50°27	1°6/31.2 18		
6 30	20 58.87	- 3 56.4	2.150	3.006	12.4	20.4	6 30	21 1.42	-12 17.7	1.392	2.294	15.1	18.8
7 10	20 53.53	- 3 39.2	2.083	3.008	9.7	20.2	7 10	20 55.91	-12 50.4	1.338	2.299	10.8	18.5
7 20	20 46.73	- 3 35.9	2.039	3.011	6.9	20.1	7 20	20 48.18	-13 37.2	1.305	2.305	6.1	18.3
7 30	20 39.10	- 3 46.2	2.021	3.013	4.9	19.9	7 30	20 39.18	-14 33.2	1.297	2.311	1.7	18.0
8 9	20 31.43	- 4 8.0	2.029	3.016	5.3	20.0	8 9	20 30.14	-15 32.3	1.314	2.317	4.8	18.2
8 19	20 24.46	- 4 38.6	2.064	3.019	7.7	20.1	8 19	20 22.29	-16 28.4	1.356	2.323	9.6	18.5
8 29	20 18.92	- 5 14.3	2.124	3.022	10.5	20.3	8 29	20 16.66	-17 16.8	1.420	2.330	13.8	18.8
9 8	20 15.29	- 5 51.3	2.206	3.025	13.0	20.5	9 8	20 13.87	-17 54.7	1.504	2.337	17.4	19.0
218416	2004 <i>RE</i> ₉₇		7 30.3 292°45	2°8/ 1.0 18 R			498488	2008 <i>CV</i> ₁₃₀		7 30.3 153°27	0°7/30.7 17		
6 30	20 59.40	- 9 46.1	2.179	3.055	11.5	19.9	6 30	21 3.83	-14 35.9	1.727	2.620	13.1	22.0
7 10	20 53.98	- 9 36.5	2.099	3.044	8.5	19.7	7 10	20 57.30	-15 7.7	1.668	2.627	9.3	21.8
7 20	20 47.02	- 9 36.5	2.043	3.032	5.3	19.5	7 20	20 48.82	-15 48.7	1.632	2.633	5.0	21.6
7 30	20 39.12	- 9 45.2	2.014	3.021	2.9	19.3	7 30	20 39.21	-16 34.5	1.623	2.638	0.8	21.3
8 9	20 31.08	-10 0.4	2.012	3.010	4.2	19.4	8 9	20 29.57	-17 20.4	1.641	2.643	4.3	21.6
8 19	20 23.70	-10 19.7	2.037	2.998	7.3	19.6	8 19	20 20.95	-18 1.9	1.686	2.647	8.6	21.8
8 29	20 17.74	-10 40.3	2.087	2.987	10.5	19.7	8 29	20 14.28	-18 36.1	1.754	2.651	12.4	22.1
9 8	20 13.73	-10 59.8	2.160	2.976	13.4	19.9	9 8	20 10.14	-19 1.4	1.844	2.654	15.6	22.3
57544	2001 <i>TL</i> ₂₀		7 30.3 236°71	2°3/31.7 18			357867	2005 <i>UB</i> ₃₁₀		7 30.3 45°28	5°3/26.3 18		
6 30	21 0.98	-11 11.1	2.281	3.157	11.0	19.8	6 30	21 1.73	-32 27.5	2.139	3.041	10.6	20.9
7 10	20 55.00	-11 2.2	2.203	3.150	8.1	19.6	7 10	20 55.76	-33 30.9	2.088	3.043	7.9	20.8
7 20	20 47.52	-11 1.5	2.150	3.142	4.9	19.4	7 20	20 47.99	-34 28.4	2.061	3.045	5.8	20.6
7 30	20 39.14	-11 7.7	2.125	3.134	2.4	19.2	7 30	20 39.19	-35 14.2	2.061	3.047	5.5	20.6
8 9	20 30.65	-11 18.8	2.127	3.126	3.9	19.3	8 9	20 30.36	-35 43.9	2.087	3.049	7.3	20.7
8 19	20 22.85	-11 32.5	2.157	3.118	7.1	19.5	8 19	20 22.46	-35 55.9	2.139	3.051	9.8	20.9
8 29	20 16.44	-11 46.7	2.213	3.109	10.2	19.6	8 29	20 16.35	-35 50.5	2.213	3.054	12.4	21.1
9 8	20 11.97	-11 59.3	2.292	3.100	12.9	19.8	9 8	20 12.58	-35 30.3	2.308	3.056	14.6	21.3
243120	2007 <i>RE</i> ₁₉₉		7 30.3 9°05	1°9/29.4 18			213500	2002 <i>GE</i> ₅₂		7 30.3 132°41	1°7/31.3 17		
6 30	21 2.36	-22 6.5	1.560	2.472	13.1	20.0	6 30	21 3.47	-12 17.0	1.482	2.377	14.7	21.2
7 10	20 56.46	-22 27.5	1.504	2.473	9.2	19.8	7 10	20 57.27	-12 45.1	1.425	2.383	10.6	20.9
7 20	20 48.41	-22 50.5	1.471	2.474	4.8	19.5	7 20	20 48.88	-13 26.3	1.390	2.388	6.0	20.7
7 30	20 39.16	-23 10.5	1.462	2.476	1.9	19.3	7 30	20 39.23	-14 16.3	1.380	2.394	1.8	20.4
8 9	20 29.92	-23 23.3	1.480	2.478	5.4	19.6	8 9	20 29.53	-15 9.3	1.396	2.399	4.7	20.6
8 19	20 21.86	-23 26.5	1.522	2.480	9.6	19.8	8 19	20 20.98	-16 0.0	1.438	2.403	9.3	20.9
8 29	20 15.96	-23 19.3	1.587	2.483	13.5	20.1	8 29	20 14.62	-16 44.1	1.502	2.408	13.5	21.2
9 8	20 12.81	-23 2.5	1.672	2.486	16.7	20.3	9 8	20 11.06	-17 18.9	1.587	2.412	17.0	21.4
31892	2000 <i>FC</i> ₄₃		7 30.3 22°95	0°3/30.2 18			520149	2014 <i>BN</i> ₆₉		7 30.3 246°95	4°0/ 2.3 16		
6 30	21 1.53	-16 22.7	1.042	1.965	17.1	18.4	6 30	20 59.23	- 4 33.1	1.903	2.767	13.4	21.6
7 10	20 56.50	-17 5.6	0.996	1.969	12.0	18.1	7 10	20 54.05	- 5 4.8	1.827	2.761	10.3	21.4
7 20	20 48.65	-18 1.1	0.969	1.974	6.2	17.8	7 20	20 47.15	- 5 54.6	1.773	2.754	6.9	21.2
7 30	20 39.17	-19 1.5	0.964	1.979	0.3	17.4	7 30	20 39.18	- 7 0.0	1.746	2.748	4.2	21.0
8 9	20 29.70	-19 58.6	0.982	1.985	6.0	17.8	8 9	20 31.03	- 8 16.7	1.745	2.741	4.9	21.0
8 19	20 21.81	-20 45.4	1.022	1.992	11.6	18.2	8 19	20 23.60	- 9 38.9	1.771	2.734	8.1	21.2
8 29	20 16.76	-21 18.1	1.082	1.999	16.5	18.5	8 29	20 17.75	-11 0.5	1.823	2.728	11.5	21.4
9 8	20 15.21	-21 35.7	1.160	2.008	20.5	18.8	9 8	20 14.08	-12 16.6	1.896	2.720	14.6	21.6
276054	2002 <i>CH</i> ₃₃		7 30.3 107°16	1°7/29.0 17			134611	1999 <i>TN</i> ₂₁₇		7 30.3 220°93	2°9/31.9 18		
6 30	21 2.25	-19 10.9	1.827	2.729	12.1	20.7	6 30	21 2.34	- 9 28.9	1.629	2.513	14.2	20.1
7 10	20 56.13	-20 29.9	1.778	2.743	8.3	20.5	7 10	20 56.44	- 9 46.4	1.559	2.509	10.5	19.8
7 20	20 48.17	-21 54.3	1.754	2.757	4.3	20.3	7 20	20 48.46	-10 18.7	1.512	2.505	6.4	19.6
7 30	20 39.17	-23 17.4	1.758	2.770	1.8	20.2	7 30	20 39.22	-11 3.0	1.489	2.500	3.0	19.4
8 9	20 30.15	-24 32.5	1.789	2.784	5.0	20.4	8 9	20 29.81	-11 54.7	1.494	2.494	4.8	19.5
8 19	20 22.13	-25 35.0	1.847	2.797	8.8	20.7	8 19	20 21.33	-12 48.6	1.524	2.489	9.0	19.7
8 29	20 15.96	-26 22.4	1.929	2.809	12.2	20.9	8 29	20 14.79	-13 39.9	1.577	2.483	13.0	19.9
9 8	20 12.20	-26 54.7	2.033	2.822	15.0	21.1	9 8	20 10.85	-14 24.7	1.652	2.477	16.4	20.1
455107	2015 <i>UK</i> ₈₂		7 30.3 200°03	16°0/ 9.6 17			132199	2002 <i>EB</i> ₄₅					

EPHEMERIDES

7 30.3

7 30.3

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
121735	1999 <i>XD</i> ₁₈₅	7 30.3 313°42		0°1/30.3 18			103212	1999 <i>XV</i> ₂₅₈	7 30.3 144°83		1°7/29.1 18		
6 30	21 2.27	-19 10.1	1.938	2.837	11.6	19.1	6 30	21 2.04	-21 9.9	2.026	2.927	11.1	20.4
7 10	20 56.22	-18 58.2	1.857	2.819	8.2	18.9	7 10	20 55.92	-21 58.8	1.969	2.933	7.7	20.2
7 20	20 48.29	-18 48.8	1.800	2.802	4.3	18.6	7 20	20 48.08	-22 50.6	1.937	2.939	4.1	19.9
7 30	20 39.22	-18 39.6	1.769	2.785	0.1	18.2	7 30	20 39.26	-23 40.3	1.931	2.944	1.8	19.8
8 9	20 30.00	-18 28.4	1.766	2.768	4.1	18.5	8 9	20 30.41	-24 23.4	1.954	2.949	4.7	20.0
8 19	20 21.59	-18 13.7	1.790	2.751	8.2	18.7	8 19	20 22.45	-24 56.6	2.004	2.953	8.2	20.2
8 29	20 14.92	-17 54.9	1.838	2.735	11.9	18.9	8 29	20 16.18	-25 18.4	2.078	2.958	11.5	20.4
9 8	20 10.60	-17 31.8	1.908	2.719	15.1	19.1	9 8	20 12.16	-25 28.8	2.173	2.962	14.2	20.6
397097	2005 <i>UJ</i> ₄₅₉	7 30.3 276°10		5°1/3.1 16			177578	2004 <i>FL</i> ₁₅₂	7 30.3 310°32		0°8/30.8 18		
6 30	20 57.89	-1 36.9	2.225	3.070	12.4	21.4	6 30	21 0.01	-14 53.1	1.851	2.747	12.2	20.7
7 10	20 52.90	-1 33.9	2.148	3.065	9.8	21.2	7 10	20 54.65	-15 11.0	1.780	2.740	8.7	20.4
7 20	20 46.46	-1 46.8	2.095	3.059	7.2	21.1	7 20	20 47.49	-15 37.2	1.733	2.733	4.7	20.2
7 30	20 39.17	-2 15.0	2.066	3.054	5.3	20.9	7 30	20 39.25	-16 8.6	1.711	2.726	0.9	19.9
8 9	20 31.75	-2 56.3	2.064	3.048	5.6	20.9	8 9	20 30.87	-16 41.3	1.717	2.719	4.0	20.1
8 19	20 24.96	-3 47.2	2.089	3.043	7.7	21.1	8 19	20 23.32	-17 11.6	1.749	2.713	8.1	20.3
8 29	20 19.49	-4 43.4	2.139	3.037	10.4	21.2	8 29	20 17.48	-17 36.9	1.805	2.706	11.8	20.6
9 8	20 15.87	-5 40.4	2.212	3.032	13.0	21.4	9 8	20 13.93	-17 55.1	1.882	2.700	15.0	20.8
78361	2002 <i>PX</i> ₁₀₉	7 30.3 279°98		1°3/29.5 18			511191	2013 <i>YM</i> ₁₁₄	7 30.3 241°78		0°0/30.4 18		
6 30	21 1.93	-18 6.6	1.468	2.378	13.9	19.3	6 30	21 4.26	-17 53.2	1.922	2.816	11.9	22.3
7 10	20 56.50	-19 8.1	1.397	2.365	9.8	19.0	7 10	20 57.61	-17 57.6	1.846	2.806	8.4	22.1
7 20	20 48.65	-20 19.5	1.349	2.353	5.1	18.7	7 20	20 49.04	-18 6.5	1.794	2.795	4.4	21.8
7 30	20 39.25	-21 34.1	1.326	2.340	1.3	18.4	7 30	20 39.30	-18 16.9	1.769	2.784	0.2	21.4
8 9	20 29.52	-22 44.1	1.329	2.328	5.6	18.7	8 9	20 29.41	-18 25.7	1.771	2.772	4.2	21.7
8 19	20 20.79	-23 43.2	1.356	2.315	10.5	19.0	8 19	20 20.39	-18 30.7	1.801	2.760	8.3	22.0
8 29	20 14.26	-24 27.4	1.406	2.302	14.9	19.2	8 29	20 13.16	-18 30.3	1.855	2.748	12.0	22.2
9 8	20 10.72	-24 55.6	1.475	2.290	18.5	19.4	9 8	20 8.35	-18 24.2	1.931	2.735	15.2	22.4
444338	2005 <i>WD</i> ₉₈	7 30.3 235°71		0°0/30.3 18			59421	1999 <i>GV</i> ₃	7 30.3 170°94		0°5/30.8 18		
6 30	20 59.49	-17 4.6	2.851	3.737	8.8	22.7	6 30	21 0.39	-15 3.9	2.506	3.391	9.9	20.6
7 10	20 53.83	-17 27.4	2.766	3.723	6.1	22.5	7 10	20 54.50	-15 29.7	2.439	3.394	7.0	20.4
7 20	20 46.90	-17 54.5	2.708	3.708	3.2	22.3	7 20	20 47.25	-16 1.5	2.397	3.397	3.7	20.2
7 30	20 39.20	-18 23.4	2.678	3.693	0.1	22.0	7 30	20 39.24	-16 36.6	2.384	3.399	0.6	20.0
8 9	20 31.36	-18 51.5	2.677	3.677	3.0	22.3	8 9	20 31.18	-17 11.7	2.400	3.401	3.2	20.2
8 19	20 24.03	-19 16.5	2.705	3.661	6.1	22.5	8 19	20 23.77	-17 44.2	2.444	3.402	6.5	20.4
8 29	20 17.82	-19 36.8	2.761	3.645	8.8	22.6	8 29	20 17.68	-18 11.9	2.514	3.403	9.4	20.6
9 8	20 13.19	-19 51.2	2.839	3.628	11.2	22.8	9 8	20 13.35	-18 33.5	2.607	3.404	11.9	20.8
290944	2005 <i>WF</i> ₁₅₆	7 30.3 261°11		4°4/2.7 18			249318	2008 <i>UH</i> ₂₀₁	7 30.3 42°11		9°8/5.1 17		
6 30	20 58.26	-2 46.6	2.509	3.353	11.2	21.4	6 30	21 0.51	+5 14.9	1.589	2.416	17.4	19.3
7 10	20 53.11	-2 46.5	2.418	3.335	8.8	21.2	7 10	20 55.06	+6 7.2	1.534	2.424	14.6	19.2
7 20	20 46.58	-2 59.9	2.350	3.318	6.4	21.0	7 20	20 47.70	+6 34.1	1.498	2.433	12.0	19.0
7 30	20 39.20	-3 26.4	2.309	3.300	4.6	20.9	7 30	20 39.26	+6 33.4	1.484	2.442	10.1	18.9
8 9	20 31.62	-4 4.1	2.295	3.281	4.9	20.9	8 9	20 30.78	+6 6.3	1.493	2.451	9.9	19.0
8 19	20 24.54	-4 50.2	2.309	3.263	7.1	21.0	8 19	20 23.30	+5 17.2	1.526	2.461	11.4	19.1
8 29	20 18.62	-5 40.9	2.349	3.244	9.7	21.1	8 29	20 17.72	+4 12.7	1.580	2.471	13.8	19.2
9 8	20 14.38	-6 32.4	2.412	3.225	12.3	21.3	9 8	20 14.62	+3 0.8	1.655	2.481	16.3	19.4
476114	2007 <i>TT</i> ₁₇₆	7 30.3 347°94		4°1/27.9 18			311161	2004 <i>TZ</i> ₈₇	7 30.3 169°73		5°3/4.6 18		
6 30	21 2.66	-27 24.8	1.758	2.668	12.0	20.8	6 30	20 57.20	+3 1.0	2.882	3.690	10.9	21.3
7 10	20 56.64	-28 13.8	1.702	2.667	8.6	20.6	7 10	20 52.14	+2 57.1	2.807	3.693	8.9	21.2
7 20	20 48.54	-29 0.5	1.668	2.665	5.3	20.4	7 20	20 45.99	+2 38.3	2.755	3.695	6.9	21.1
7 30	20 39.26	-29 38.7	1.661	2.664	4.2	20.3	7 30	20 39.21	+2 4.9	2.730	3.697	5.5	21.0
8 9	20 29.93	-30 3.5	1.680	2.664	6.7	20.5	8 9	20 32.37	+1 18.6	2.732	3.699	5.5	21.0
8 19	20 21.67	-30 12.5	1.724	2.663	10.1	20.7	8 19	20 26.03	+0 22.5	2.761	3.701	6.7	21.1
8 29	20 15.47	-30 5.9	1.791	2.662	13.4	20.9	8 29	20 20.72	+0 39.8	2.817	3.702	8.6	21.2
9 8	20 11.92	-29 45.6	1.877	2.662	16.2	21.1	9 8	20 16.85	-1 44.2	2.897	3.703	10.6	21.3
511983	2015 <i>KO</i> ₈₆	7 30.3 176°73		4°4/26.9 18			19700	Teitelbaum	7 30.3 354°69		6°4/1.3 18 R		
6 30	21 3.07	-27 12.5	1.917	2.823	11.4	21.3	6 30	21 2.43	-7 33.3	1.294	2.184	16.8	17.1
7 10	20 56.89	-28 41.6	1.861	2.824	8.2	21.1	7 10	20 56.79	-6 18.5	1.232	2.179	13.0	16.8
7 20	20 48.69	-30 9.8	1.830	2.825	5.3	20.9	7 20	20 48.76	-5 18.0	1.191	2.175	9.1	16.6
7 30	20 39.27	-31 29.6	1.827	2.825	4.6	20.9	7 30	20 39.31	-4 34.1	1.173	2.172	6.5	16.4
8 9	20 29.69	-32 34.5	1.851	2.826	7.0	21.0	8 9	20 29.76	-4 7.3	1.179	2.170	7.6	16.5
8 19	20 21.05	-33 20.8	1.900	2.826	10.2	21.2	8 19	20 21.43	-3 55.9	1.207	2.169	11.1	16.7
8 29	20 14.31	-33 47.6	1.973	2.825	13.2	21.4	8 29	20 15.43	-3 56.3	1.257	2.170	15.1	16.9
9 8	20 10.12	-33 56.7	2.066	2.825	15.8	21.6	9 8	20 12.45	-4 3.7	1.326	2.171	18.6	17.2
106717	2000 <i>WQ</i> ₁₇₄	7 30.3 215°87		0°5/29.9 18			324940	2007 <i>XE</i> ₄₆	7 30.3 275°48		1°5/29.4 18		
6 30	21 1.24	-16 38.8	1.968	2.864	11.6	20.1	6 30	21 2.70	-18 8.7	1.430	2.341	14.2	20.6
7 10	20 55.48	-17 37.8	1.898	2.860	8.1	19.8	7 10	20 57.20	-19 16.8	1.355	2.323	10.0	20.3
7 20	20 47.92	-18 45.0	1.852	2.854	4.2	19.6	7 20	20 49.14	-20 36.3	1.302	2.306	5.2	20.0
7 30	20 39.25	-19 55.3	1.834	2.849	0.5	19.3	7 30	20 39.36	-21 59.6	1.274	2.288	1.6	19.7
8 9	20 30.40	-21 3.0	1.843	2.843	4.3	19.6	8 9	20 29.14	-23 18.3	1.272	2.270	5.9	20.0
8 19	20 22.32	-22 3.3	1.880	2.836	8.2	19.8	8 19	20 19.87	-24 25.2	1.294	2.252	11.0	20.2
8 29	20 15.89	-22 53.0	1.942	2.830	11.8	20.0	8 29	20 12.87	-25 15.7	1.339	2.234	15.5	20.4
9 8	20 11.73	-23 30.5	2.025	2.823	14.8	20.2	9 8	20 9.00	-25 48.7	1.402	2.216	19.4	20.6
367254	2007 <i>RS</i> ₈₅	7 30.3 341°87		1°0/29.8 17			311374	2005 <i>SP</i> ₂₀₀	7 30.3 219°06		2°5/1.3 18		
6 30	20 54.10	-16 8.1	0.869	1.808									

EPHEMERIDES

7 30.3

7 30.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
204290	2004 <i>PV</i> ₂₁		7 30.3 41°16'	1.1°/30.9	18		137587	1999 <i>VU</i> ₁₄₆		7 30.4 170°76'	0.9°/29.9	18	
6 30	21 1.44	-12 38.5	1.078	1.993	17.4	19.6	6 30	21 5.03	-19 5.8	1.772	2.671	12.5	20.5
7 10	20 56.37	-13 33.9	1.033	2.001	12.4	19.3	7 10	20 58.22	-19 38.6	1.711	2.674	8.8	20.3
7 20	20 48.63	-14 47.0	1.007	2.009	6.7	19.0	7 20	20 49.41	-20 16.1	1.674	2.677	4.5	20.1
7 30	20 39.34	-16 10.3	1.004	2.018	1.2	18.7	7 30	20 39.44	-20 53.7	1.664	2.679	0.9	19.8
8 9	20 30.06	-17 34.1	1.024	2.028	5.6	19.0	8 9	20 29.42	-21 26.5	1.681	2.680	4.7	20.1
8 19	20 22.27	-18 49.7	1.067	2.038	11.1	19.4	8 19	20 20.43	-21 51.4	1.725	2.681	8.8	20.3
8 29	20 17.21	-19 51.1	1.130	2.048	15.9	19.7	8 29	20 13.43	-22 6.7	1.793	2.682	12.6	20.6
9 8	20 15.49	-20 35.8	1.212	2.059	19.9	20.0	9 8	20 9.00	-22 12.1	1.882	2.682	15.7	20.8
81114	2000 <i>EV</i> ₁₂₃		7 30.3 246°20'	1.7°/31.4	18		63253	2001 <i>BG</i> ₅₀		7 30.4 130°74'	3°1'/1.1	18	
6 30	21 1.55	-11 23.6	1.648	2.538	13.8	19.6	6 30	21 3.40	-9 32.1	2.060	2.932	12.2	19.4
7 10	20 55.96	-12 1.2	1.575	2.531	10.0	19.3	7 10	20 56.75	-9 15.1	1.999	2.941	9.1	19.3
7 20	20 48.30	-12 53.0	1.526	2.523	5.7	19.1	7 20	20 48.51	-9 8.1	1.963	2.950	5.7	19.1
7 30	20 39.34	-13 55.0	1.501	2.515	1.9	18.8	7 30	20 39.41	-9 10.0	1.953	2.959	3.2	18.9
8 9	20 30.15	-15 1.4	1.504	2.506	4.5	19.0	8 9	20 30.33	-9 18.7	1.971	2.967	4.4	19.0
8 19	20 21.84	-16 6.5	1.532	2.498	8.9	19.2	8 19	20 22.12	-9 32.0	2.016	2.976	7.5	19.2
8 29	20 15.43	-17 5.1	1.585	2.489	13.0	19.4	8 29	20 15.53	-9 47.1	2.087	2.983	10.7	19.4
9 8	20 11.61	-17 54.1	1.658	2.480	16.5	19.7	9 8	20 11.07	-10 1.7	2.180	2.991	13.5	19.6
60256	1999 <i>WB</i> ₂₀		7 30.4 155°40'	1.7°/31.8	18		276063	2002 <i>CY</i> ₁₂₀		7 30.4 237°37'	1.4°/31.3	18	
6 30	20 57.96	-10 40.7	2.373	3.251	10.6	19.4	6 30	21 1.59	-12 17.6	1.967	2.852	12.1	21.6
7 10	20 52.90	-11 13.2	2.304	3.252	7.7	19.2	7 10	20 55.78	-12 51.2	1.887	2.840	8.7	21.3
7 20	20 46.49	-11 55.5	2.260	3.254	4.5	19.0	7 20	20 48.16	-13 35.9	1.831	2.828	4.9	21.1
7 30	20 39.30	-12 45.1	2.243	3.255	1.8	18.8	7 30	20 39.40	-14 28.4	1.803	2.816	1.5	20.8
8 9	20 32.03	-13 38.3	2.255	3.256	3.4	19.0	8 9	20 30.41	-15 24.1	1.801	2.803	4.0	21.0
8 19	20 25.39	-14 31.4	2.294	3.257	6.5	19.2	8 19	20 22.13	-16 18.5	1.828	2.790	8.0	21.2
8 29	20 20.03	-15 21.1	2.360	3.258	9.6	19.4	8 29	20 15.46	-17 7.7	1.879	2.776	11.6	21.4
9 8	20 16.43	-16 4.8	2.448	3.259	12.2	19.5	9 8	20 11.03	-17 49.0	1.952	2.762	14.8	21.6
480285	2015 <i>HR</i> ₁₂₈		7 30.4 280°80'	4°5'/2.0	17		396382	2014 <i>DP</i> ₁₁₇		7 30.4 65°92'	3°4'/28.1	17	
6 30	21 0.27	-5 42.3	1.694	2.567	14.4	21.1	6 30	21 2.17	-25 41.8	1.870	2.778	11.5	20.9
7 10	20 55.01	-5 46.2	1.618	2.556	11.0	20.9	7 10	20 56.23	-26 35.3	1.813	2.779	8.2	20.7
7 20	20 47.80	-6 7.2	1.563	2.546	7.4	20.6	7 20	20 48.37	-27 28.3	1.781	2.780	4.8	20.5
7 30	20 39.35	-6 44.3	1.533	2.535	4.7	20.5	7 30	20 39.40	-28 14.7	1.775	2.781	3.5	20.4
8 9	20 30.67	-7 33.9	1.528	2.524	5.5	20.5	8 9	20 30.38	-28 49.7	1.795	2.782	6.0	20.6
8 19	20 22.80	-8 31.1	1.550	2.514	9.0	20.7	8 19	20 22.34	-29 10.6	1.842	2.783	9.4	20.8
8 29	20 16.71	-9 30.5	1.595	2.503	12.7	20.9	8 29	20 16.18	-29 16.6	1.912	2.784	12.7	21.0
9 8	20 13.06	-10 27.0	1.661	2.492	16.1	21.1	9 8	20 12.50	-29 9.3	2.002	2.785	15.4	21.2
179597	2002 <i>NS</i> ₁₉		7 30.4 352°38'	4°0'/31.8	18		282228	2002 <i>AG</i> ₂₂		7 30.4 114°35'	1°1'/31.4	18	
6 30	21 1.29	-11 19.0	1.110	2.021	17.4	19.2	6 30	21 3.18	-9 5.6	2.013	2.885	12.5	20.6
7 10	20 56.31	-10 44.4	1.052	2.015	12.9	18.9	7 10	20 56.71	-10 51.5	1.955	2.902	8.9	20.4
7 20	20 48.65	-10 24.1	1.014	2.010	8.0	18.6	7 20	20 48.55	-12 52.0	1.924	2.919	5.0	20.2
7 30	20 39.38	-10 17.5	0.997	2.007	4.2	18.4	7 30	20 39.42	-15 0.5	1.922	2.936	1.2	19.9
8 9	20 29.98	-10 22.0	1.002	2.004	6.3	18.5	8 9	20 30.21	-17 8.8	1.950	2.952	3.8	20.2
8 19	20 21.96	-10 33.8	1.030	2.003	11.2	18.8	8 19	20 21.83	-19 9.3	2.009	2.967	7.6	20.4
8 29	20 16.56	-10 48.5	1.079	2.003	15.9	19.0	8 29	20 15.10	-20 56.5	2.095	2.982	11.1	20.7
9 8	20 14.50	-11 1.9	1.144	2.003	20.0	19.3	9 8	20 10.54	-22 27.4	2.204	2.997	13.9	20.9
17813	1998 <i>FL</i> ₁₀₉		7 30.4 70°63'	5°2'/2.9	18		382586	2002 <i>CC</i> ₂₁₄		7 30.4 256°84'	0°5'/30.7	18	
6 30	20 58.95	-2 18.3	2.094	2.944	12.9	18.2	6 30	21 3.29	-14 49.1	2.203	3.087	11.0	23.2
7 10	20 53.68	-2 8.6	2.028	2.948	10.2	18.0	7 10	20 56.97	-15 23.6	2.106	3.060	7.9	22.9
7 20	20 46.93	-2 14.7	1.985	2.952	7.4	17.9	7 20	20 48.82	-16 6.6	2.034	3.033	4.3	22.6
7 30	20 39.33	-2 36.2	1.967	2.957	5.4	17.8	7 30	20 39.44	-16 54.9	1.989	3.004	0.6	22.3
8 9	20 31.67	-3 10.5	1.976	2.961	5.7	17.8	8 9	20 29.69	-17 44.2	1.974	2.975	3.8	22.5
8 19	20 24.74	-3 54.4	2.011	2.966	7.9	17.9	8 19	20 20.48	-18 30.6	1.987	2.945	7.8	22.7
8 29	20 19.26	-4 43.4	2.071	2.970	10.6	18.1	8 29	20 12.71	-19 11.0	2.026	2.914	11.4	22.9
9 8	20 15.73	-5 33.3	2.153	2.975	13.2	18.3	9 8	20 7.07	-19 43.3	2.087	2.881	14.5	23.0
521407	2015 <i>MQ</i> ₁₄₄		7 30.4 280°76'	0°4'/30.6	18		7929	1987 <i>SK</i> ₁₂		7 30.4 123°14'	0°9'/29.9	18	
6 30	21 2.39	-17 33.6	2.256	3.147	10.6	20.5	6 30	21 5.84	-18 17.5	1.429	2.335	14.5	17.4
7 10	20 56.04	-17 21.3	2.183	3.141	7.4	20.3	7 10	20 59.05	-18 56.0	1.379	2.344	10.1	17.2
7 20	20 48.15	-17 12.4	2.135	3.136	4.0	20.1	7 20	20 49.93	-19 41.2	1.350	2.353	5.2	16.9
7 30	20 39.38	-17 4.8	2.115	3.130	0.5	19.8	7 30	20 39.48	-20 27.2	1.347	2.362	0.9	16.7
8 9	20 30.56	-16 56.9	2.123	3.125	3.5	20.0	8 9	20 29.08	-21 8.0	1.370	2.370	5.2	17.0
8 19	20 22.51	-16 47.2	2.159	3.119	7.1	20.3	8 19	20 20.00	-21 39.2	1.417	2.378	10.0	17.3
8 29	20 15.96	-16 35.0	2.221	3.114	10.3	20.5	8 29	20 13.31	-21 59.0	1.488	2.385	14.1	17.6
9 8	20 11.44	-16 19.7	2.305	3.108	13.1	20.6	9 8	20 9.62	-22 7.1	1.578	2.392	17.6	17.8
29551	1998 <i>CH</i> ₁		7 30.4 258°77'	0°9'/30.9	18		520210	2014 <i>DQ</i> ₁₅₁		7 30.4 120°79'	0°9'/30.9	18	
6 30	21 0.06	-14 27.3	2.097	2.987	11.2	19.3	6 30	21 0.42	-14 12.1	1.952	2.844	11.9	21.7
7 10	20 54.56	-14 47.7	2.024	2.981	8.0	19.1	7 10	20 54.86	-14 38.5	1.888	2.846	8.4	21.5
7 20	20 47.45	-15 15.9	1.975	2.974	4.4	18.8	7 20	20 47.62	-15 13.4	1.848	2.847	4.6	21.3
7 30	20 39.37	-15 49.0	1.953	2.967	0.9	18.6	7 30	20 39.41	-15 53.5	1.835	2.849	0.9	21.0
8 9	20 31.16	-16 23.5	1.958	2.960	3.7	18.8	8 9	20 31.13	-16 34.7	1.849	2.851	3.8	21.3
8 19	20 23.67	-16 56.0	1.991	2.953	7.4	19.0	8 19	20 23.68	-17 13.3	1.890	2.852	7.7	21.5
8 29	20 17.70	-17 24.0	2.049	2.946	10.8	19.2	8 29	20 17.86	-17 46.3	1.955	2.854	11.2	21.7
9 8	20 13.79	-17 45.5	2.128	2.939	13.7	19.4	9 8	20 14.22	-18 11.9	2.042	2.856	14.1	21.9
292323	2006 <i>SV</i> ₁₇₀		7 30.4 138°21'	5°5'/3.2	17		512610	2016 <i>TH</i> ₁₆		7 30.4 290			

EPHEMERIDES

7 30.4

7 30.4

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
348086	2003 <i>WP</i> ₁₀₁		7 30.4 296°22	2.7/28.3	18		198387	2004 <i>VL</i> ₃₃		7 30.4 135°35	2.5/	1.1 17	
6 30	21 0.46	-20 49.0	1.703	2.613	12.4	20.1	6 30	21 1.65	-9 36.5	2.026	2.901	12.2	21.2
7 10	20 55.44	-22 16.9	1.622	2.590	8.7	19.8	7 10	20 55.62	-9 53.9	1.965	2.911	9.0	21.0
7 20	20 48.20	-23 53.5	1.565	2.567	4.7	19.5	7 20	20 47.99	-10 22.7	1.929	2.920	5.4	20.8
7 30	20 39.44	-25 31.2	1.534	2.545	2.8	19.3	7 30	20 39.48	-11 0.4	1.919	2.928	2.6	20.6
8 9	20 30.23	-27 1.6	1.530	2.522	6.1	19.5	8 9	20 30.94	-11 43.4	1.936	2.936	4.0	20.7
8 19	20 21.75	-28 17.9	1.552	2.499	10.4	19.7	8 19	20 23.24	-12 27.9	1.981	2.944	7.4	21.0
8 29	20 15.15	-29 16.0	1.598	2.477	14.3	19.9	8 29	20 17.13	-13 10.2	2.052	2.951	10.7	21.2
9 8	20 11.25	-29 55.2	1.662	2.455	17.7	20.1	9 8	20 13.11	-13 47.6	2.145	2.958	13.5	21.4
382568	2002 <i>AA</i> ₅₅		7 30.4 239°65	0.9/30.9	18		267733	2003 <i>FF</i> ₆₁		7 30.4 117°05	0.7/29.9	18	
6 30	21 3.61	-14 58.4	2.046	2.933	11.6	22.6	6 30	21 3.25	-17 52.6	1.754	2.654	12.6	20.6
7 10	20 57.17	-15 10.3	1.963	2.919	8.3	22.4	7 10	20 56.95	-18 35.9	1.702	2.665	8.8	20.4
7 20	20 48.89	-15 29.4	1.905	2.903	4.6	22.1	7 20	20 48.76	-19 25.4	1.673	2.675	4.5	20.1
7 30	20 39.47	-15 53.0	1.873	2.888	0.9	21.8	7 30	20 39.51	-20 15.8	1.670	2.685	0.7	19.9
8 9	20 29.82	-16 17.6	1.870	2.871	3.9	22.0	8 9	20 30.27	-21 2.0	1.695	2.695	4.5	20.2
8 19	20 20.89	-16 40.4	1.894	2.854	7.9	22.2	8 19	20 22.07	-21 40.2	1.746	2.704	8.6	20.5
8 29	20 13.59	-16 59.0	1.944	2.837	11.5	22.4	8 29	20 15.79	-22 8.1	1.821	2.713	12.2	20.7
9 8	20 8.54	-17 11.8	2.015	2.819	14.6	22.6	9 8	20 12.00	-22 25.0	1.917	2.722	15.3	20.9
164746	1998 <i>TF</i> ₁₁		7 30.4 254°11	3.3/28.3	18		234314	2001 <i>BY</i> ₃₀		7 30.4 179°15	0.5/30.1	18	
6 30	21 3.41	-26 11.3	1.940	2.844	11.3	20.4	6 30	21 3.68	-19 5.9	2.298	3.189	10.4	21.1
7 10	20 57.12	-26 51.0	1.873	2.837	8.1	20.2	7 10	20 56.96	-19 23.6	2.232	3.191	7.3	20.9
7 20	20 48.89	-27 29.5	1.831	2.829	4.8	20.0	7 20	20 48.68	-19 44.3	2.191	3.192	3.8	20.7
7 30	20 39.48	-28 1.5	1.815	2.821	3.4	19.9	7 30	20 39.51	-20 5.1	2.177	3.192	0.5	20.4
8 9	20 29.97	-28 22.7	1.826	2.813	5.9	20.0	8 9	20 30.31	-20 22.8	2.193	3.192	3.7	20.7
8 19	20 21.38	-28 30.6	1.863	2.805	9.3	20.2	8 19	20 21.89	-20 35.4	2.237	3.192	7.2	20.9
8 29	20 14.66	-28 25.1	1.924	2.797	12.6	20.4	8 29	20 15.01	-20 41.5	2.307	3.190	10.3	21.1
9 8	20 10.41	-28 7.5	2.006	2.788	15.4	20.6	9 8	20 10.16	-20 41.0	2.399	3.189	13.0	21.3
424542	2008 <i>EB</i> ₁₄₀		7 30.4 227°58	1.6/29.5	17		478524	2012 <i>SV</i> ₅₇		7 30.4 253°47	6.8/25.9	18	
6 30	21 5.26	-20 38.3	1.708	2.610	12.7	21.8	6 30	21 7.06	-36 17.2	2.036	2.928	11.5	21.3
7 10	20 58.61	-21 13.5	1.637	2.602	8.9	21.6	7 10	20 59.86	-37 14.9	1.969	2.914	9.0	21.1
7 20	20 49.74	-21 52.9	1.590	2.593	4.7	21.3	7 20	20 50.41	-38 3.7	1.926	2.898	7.1	21.0
7 30	20 39.52	-22 31.1	1.570	2.584	1.6	21.0	7 30	20 39.58	-38 36.6	1.908	2.883	7.0	20.9
8 9	20 29.10	-23 3.0	1.576	2.574	5.2	21.3	8 9	20 28.57	-38 49.0	1.917	2.867	8.7	21.0
8 19	20 19.67	-23 25.2	1.609	2.563	9.5	21.5	8 19	20 18.59	-38 39.5	1.951	2.851	11.3	21.1
8 29	20 12.30	-23 35.9	1.665	2.553	13.4	21.7	8 29	20 10.74	-38 9.7	2.007	2.835	13.9	21.3
9 8	20 7.67	-23 35.6	1.741	2.541	16.7	21.9	9 8	20 5.67	-37 23.5	2.082	2.818	16.3	21.4
519597	2012 <i>TB</i> ₃₂₉		7 30.4 14°38	8.0/26.3	16		111506	2001 <i>YB</i> ₇₄		7 30.4 121°70	1.0/29.7	18	
6 30	21 1.03	-32 21.4	1.152	2.079	15.5	20.0	6 30	21 0.97	-20 4.2	2.281	3.177	10.2	20.6
7 10	20 56.27	-33 41.0	1.116	2.085	11.7	19.8	7 10	20 55.06	-20 31.9	2.222	3.185	7.1	20.4
7 20	20 48.65	-34 51.3	1.101	2.092	8.6	19.7	7 20	20 47.67	-21 2.3	2.190	3.192	3.7	20.2
7 30	20 39.47	-35 41.5	1.108	2.100	8.2	19.7	7 30	20 39.47	-21 32.0	2.184	3.198	1.0	20.0
8 9	20 30.41	-36 5.0	1.137	2.109	10.7	19.9	8 9	20 31.28	-21 57.7	2.207	3.205	3.8	20.2
8 19	20 23.07	-36 0.2	1.187	2.120	14.2	20.1	8 19	20 23.87	-22 16.9	2.258	3.212	7.2	20.4
8 29	20 18.64	-35 30.1	1.256	2.132	17.6	20.4	8 29	20 17.95	-22 28.5	2.333	3.218	10.2	20.6
9 8	20 17.68	-34 40.1	1.341	2.146	20.6	20.6	9 8	20 13.99	-22 32.1	2.431	3.224	12.7	20.8
37688	1995 <i>ST</i> ₁₇		7 30.4 42°40	10.0/25.6	17		26180	1996 <i>GS</i> ₉		7 30.4 315°18	1.6/31.4	18	
6 30	21 10.02	-41 50.4	1.529	2.420	14.6	19.3	6 30	20 59.94	-12 44.6	1.719	2.614	13.1	18.7
7 10	21 2.22	-42 49.7	1.493	2.428	12.1	19.1	7 10	20 54.79	-13 2.5	1.648	2.606	9.4	18.5
7 20	20 51.62	-43 30.6	1.479	2.436	10.3	19.0	7 20	20 47.72	-13 31.4	1.599	2.598	5.4	18.2
7 30	20 39.58	-43 44.6	1.487	2.444	10.2	19.1	7 30	20 39.48	-14 8.4	1.576	2.590	1.7	18.0
8 9	20 27.85	-43 28.0	1.519	2.453	11.7	19.2	8 9	20 31.07	-14 49.2	1.579	2.582	4.3	18.1
8 19	20 17.99	-42 42.5	1.573	2.462	14.1	19.3	8 19	20 23.51	-15 29.5	1.608	2.574	8.5	18.4
8 29	20 11.15	-41 33.4	1.647	2.471	16.6	19.5	8 29	20 17.74	-16 5.5	1.661	2.567	12.4	18.6
9 8	20 7.83	-40 8.0	1.738	2.481	18.9	19.7	9 8	20 14.39	-16 34.7	1.734	2.560	15.7	18.8
490750	2010 <i>TA</i> ₉₃		7 30.4 349°25	5.7/	2.2 17		307922	2004 <i>EX</i> ₂₇		7 30.4 46°43	0.7/29.9	18	
6 30	20 58.67	-5 57.6	1.089	1.990	18.5	20.9	6 30	21 1.33	-18 53.9	1.929	2.830	11.6	21.4
7 10	20 54.56	-5 50.7	1.030	1.983	14.2	20.7	7 10	20 55.55	-19 18.6	1.868	2.831	8.1	21.2
7 20	20 47.82	-6 7.9	0.989	1.978	9.6	20.4	7 20	20 48.02	-19 47.7	1.830	2.833	4.2	21.0
7 30	20 39.46	-6 48.1	0.969	1.974	6.0	20.2	7 30	20 39.50	-20 17.4	1.820	2.834	0.7	20.7
8 9	20 30.89	-7 46.1	0.971	1.970	7.0	20.2	8 9	20 30.93	-20 43.9	1.836	2.836	4.2	21.0
8 19	20 23.56	-8 54.4	0.995	1.968	11.3	20.5	8 19	20 23.26	-21 4.2	1.879	2.838	8.1	21.2
8 29	20 18.77	-10 4.5	1.039	1.967	16.0	20.7	8 29	20 17.31	-21 16.7	1.946	2.839	11.5	21.4
9 8	20 17.27	-11 8.8	1.100	1.967	20.1	21.0	9 8	20 13.63	-21 20.8	2.035	2.841	14.4	21.6
78900	2003 <i>SM</i> ₆₅		7 30.4 322°80	9.5/	5.5 18		121786	2000 <i>AB</i> ₈₉		7 30.4 239°51	0.8/29.5	18	
6 30	20 57.91	+ 5 40.2	1.605	2.432	17.2	19.6	6 30	20 59.26	-17 10.4	2.681	3.570	9.1	19.9
7 10	20 53.48	+ 6 3.6	1.529	2.422	14.5	19.4	7 10	20 53.89	-18 29.6	2.600	3.559	6.4	19.7
7 20	20 47.08	+ 6 0.2	1.473	2.411	11.9	19.2	7 20	20 47.12	-19 55.8	2.546	3.548	3.3	19.5
7 30	20 39.44	+ 5 27.9	1.438	2.401	9.9	19.0	7 30	20 39.47	-21 24.2	2.522	3.536	0.8	19.3
8 9	20 31.55	+ 4 28.2	1.426	2.391	9.6	19.0	8 9	20 31.60	-22 50.0	2.528	3.525	3.6	19.5
8 19	20 24.45	+ 3 6.2	1.437	2.382	11.2	19.1	8 19	20 24.20	-24 8.8	2.564	3.512	6.7	19.7
8 29	20 19.14	+ 1 29.8	1.471	2.373	13.9	19.2	8 29	20 17.95	-25 17.3	2.627	3.500	9.6	19.8
9 8	20 16.30	- 0 12.0	1.525	2.365	16.8	19.4	9 8	20 13.38	-26 14.0	2.713	3.487	12.0	20.0
296182	2009 <i>BW</i> ₁₅₃		7 30.4 230°75	0.9/29.8	18		162723	2000 <i>VM</i> ₂					

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
211396	2002 VZ ₁₂		7 30.4 305°08	1.5/31.3	18		16059	Marybuda		7 30.4 282°41	2.1/29.1	18	
6 30	21 0.74	-13 26.9	1.822	2.715	12.6	20.6	6 30	21 1.88	-20 22.5	1.621	2.530	12.9	17.6
7 10	20 55.26	-13 33.3	1.750	2.707	9.0	20.4	7 10	20 56.31	-21 25.9	1.558	2.526	9.0	17.4
7 20	20 47.94	-13 48.8	1.701	2.699	5.1	20.1	7 20	20 48.59	-22 35.1	1.519	2.523	4.8	17.1
7 30	20 39.51	-14 11.0	1.678	2.691	1.6	19.9	7 30	20 39.56	-23 43.6	1.506	2.519	2.1	16.9
8 9	20 30.93	-14 36.5	1.681	2.683	4.1	20.0	8 9	20 30.35	-24 44.6	1.519	2.515	5.6	17.2
8 19	20 23.19	-15 1.9	1.711	2.676	8.2	20.3	8 19	20 22.14	-25 33.1	1.558	2.512	9.8	17.4
8 29	20 17.17	-15 24.2	1.765	2.669	11.9	20.5	8 29	20 15.97	-26 6.5	1.620	2.508	13.7	17.6
9 8	20 13.48	-15 41.5	1.840	2.662	15.1	20.7	9 8	20 12.51	-26 24.7	1.701	2.504	16.9	17.8
506780	2006 YE ₂₈		7 30.4 253°46	1.4/29.6	17		451188	2009 SG ₃₃₂		7 30.4 289°87	6.7/3.9	17	
6 30	21 4.18	-20 2.7	1.722	2.625	12.6	22.3	6 30	20 58.44	+ 2 39.2	2.386	3.204	12.5	21.1
7 10	20 57.92	-20 42.2	1.645	2.610	8.9	22.1	7 10	20 53.42	+ 3 7.1	2.290	3.180	10.4	20.9
7 20	20 49.45	-21 27.1	1.592	2.595	4.7	21.8	7 20	20 46.94	+ 3 18.8	2.216	3.157	8.3	20.7
7 30	20 39.57	-22 12.1	1.565	2.579	1.5	21.5	7 30	20 39.50	+ 3 13.2	2.168	3.133	6.9	20.6
8 9	20 29.40	-22 51.7	1.565	2.563	5.1	21.7	8 9	20 31.81	+ 2 50.9	2.145	3.109	6.9	20.5
8 19	20 20.12	-23 21.8	1.591	2.547	9.5	22.0	8 19	20 24.59	+ 2 13.9	2.148	3.086	8.5	20.6
8 29	20 12.82	-23 40.4	1.641	2.530	13.5	22.2	8 29	20 18.57	+ 1 26.1	2.176	3.062	10.8	20.7
9 8	20 8.23	-23 47.1	1.711	2.513	16.9	22.4	9 8	20 14.31	+ 0 32.1	2.227	3.038	13.2	20.8
95059	2002 AH ₅₉		7 30.4 25°11	0.1/30.4	18		33954	2000 ND		7 30.4 258°99	1.5/31.1	18	
6 30	21 2.63	-17 37.2	1.372	2.283	14.6	18.4	6 30	21 4.10	-13 34.4	1.431	2.331	14.9	19.1
7 10	20 56.86	-17 43.4	1.321	2.289	10.3	18.2	7 10	20 58.10	-13 51.8	1.359	2.319	10.8	18.9
7 20	20 48.83	-17 56.2	1.292	2.295	5.4	17.9	7 20	20 49.63	-14 21.4	1.308	2.308	6.0	18.6
7 30	20 39.55	-18 11.8	1.287	2.302	0.2	17.5	7 30	20 39.60	-14 59.6	1.282	2.296	1.6	18.2
8 9	20 30.33	-18 25.9	1.307	2.310	4.9	17.9	8 9	20 29.28	-15 41.1	1.281	2.284	5.0	18.5
8 19	20 22.41	-18 35.3	1.351	2.318	9.7	18.2	8 19	20 19.99	-16 20.9	1.306	2.272	10.0	18.7
8 29	20 16.82	-18 38.2	1.418	2.327	13.9	18.5	8 29	20 12.95	-16 54.8	1.353	2.260	14.6	18.9
9 8	20 14.12	-18 33.8	1.504	2.336	17.4	18.7	9 8	20 8.93	-17 20.2	1.418	2.247	18.5	19.2
390835	2004 PJ ₁₀₀		7 30.4 16°28	7.3/6.2	18		58660	1997 XR		7 30.4 309°26	3.2/31.5	18	
6 30	20 55.20	+ 5 26.2	1.484	2.322	17.8	19.5	6 30	21 3.94	-12 41.2	1.223	2.128	16.5	18.4
7 10	20 51.54	+ 4 19.8	1.425	2.331	14.5	19.3	7 10	20 58.27	-12 11.9	1.151	2.112	12.2	18.1
7 20	20 46.02	+ 2 39.9	1.386	2.342	11.0	19.1	7 20	20 49.84	-11 53.8	1.099	2.096	7.3	17.7
7 30	20 39.44	+ 0 29.8	1.370	2.353	8.1	19.0	7 30	20 39.61	-11 46.1	1.069	2.081	3.3	17.5
8 9	20 32.82	- 2 2.2	1.379	2.366	7.4	19.0	8 9	20 29.03	-11 46.2	1.063	2.066	5.9	17.6
8 19	20 27.15	- 4 44.9	1.415	2.380	9.5	19.2	8 19	20 19.61	-11 51.1	1.081	2.051	11.1	17.8
8 29	20 23.31	- 7 25.9	1.475	2.395	12.7	19.4	8 29	20 12.73	-11 57.5	1.119	2.037	16.1	18.1
9 8	20 21.87	- 9 55.0	1.559	2.411	15.9	19.6	9 8	20 9.24	-12 2.3	1.175	2.023	20.3	18.3
511962	2015 KB ₁₃		7 30.4 138°29	2.3/1.2	18		398431	2011 UL ₂₂		7 30.4 331°59	2.1/31.5	18	
6 30	21 0.21	- 8 48.4	1.919	2.797	12.7	21.7	6 30	21 0.90	-12 30.3	1.822	2.712	12.7	20.9
7 10	20 54.76	- 9 30.3	1.854	2.801	9.3	21.5	7 10	20 55.34	-12 25.4	1.753	2.708	9.2	20.7
7 20	20 47.63	-10 26.3	1.813	2.805	5.6	21.3	7 20	20 47.97	-12 29.9	1.708	2.704	5.4	20.5
7 30	20 39.51	-11 32.8	1.799	2.809	2.5	21.1	7 30	20 39.54	-12 41.8	1.688	2.700	2.2	20.2
8 9	20 31.30	-12 44.7	1.812	2.813	4.1	21.2	8 9	20 31.02	-12 58.3	1.695	2.696	4.2	20.4
8 19	20 23.90	-13 56.7	1.852	2.817	7.7	21.4	8 19	20 23.35	-13 16.5	1.727	2.693	8.1	20.6
8 29	20 18.10	-15 4.0	1.918	2.820	11.2	21.7	8 29	20 17.42	-13 33.6	1.784	2.689	11.8	20.8
9 8	20 14.48	-16 3.0	2.006	2.823	14.2	21.9	9 8	20 13.79	-13 47.3	1.863	2.686	14.9	21.0
36379	2000 OA ₂₄		7 30.4 312°36	0.9/30.8	18		510513	2012 BE ₇₀		7 30.4 214°27	1.6/28.8	18	
6 30	21 2.42	-16 27.6	1.716	2.615	12.8	17.4	6 30	20 59.89	-19 36.5	2.595	3.489	9.2	21.3
7 10	20 56.76	-16 15.6	1.622	2.583	9.2	17.1	7 10	20 54.37	-21 2.5	2.523	3.484	6.4	21.1
7 20	20 48.90	-16 9.1	1.551	2.551	5.1	16.8	7 20	20 47.40	-22 33.7	2.477	3.479	3.4	20.9
7 30	20 39.56	-16 6.0	1.505	2.520	1.0	16.4	7 30	20 39.52	-24 4.9	2.461	3.473	1.6	20.8
8 9	20 29.80	-16 3.7	1.486	2.488	4.5	16.6	8 9	20 31.45	-25 30.9	2.476	3.467	4.1	20.9
8 19	20 20.78	-16 0.0	1.492	2.457	9.2	16.8	8 19	20 23.90	-26 47.2	2.519	3.461	7.2	21.1
8 29	20 13.60	-15 53.2	1.523	2.426	13.5	17.0	8 29	20 17.59	-27 51.1	2.589	3.455	10.0	21.3
9 8	20 9.06	-15 42.1	1.573	2.396	17.2	17.2	9 8	20 13.05	-28 41.7	2.682	3.448	12.3	21.5
439520	2014 BQ ₄₂		7 30.4 120°21	1.1/31.1	18		443017	2013 DL ₁₁		7 30.4 107°61	4.0/28.0	18	
6 30	21 2.33	-14 25.3	1.865	2.757	12.4	21.2	6 30	21 5.39	-30 55.0	2.330	3.224	10.1	20.9
7 10	20 56.25	-14 33.8	1.804	2.761	8.8	21.0	7 10	20 58.11	-31 16.5	2.281	3.236	7.4	20.8
7 20	20 48.39	-14 50.1	1.766	2.765	4.9	20.8	7 20	20 49.25	-31 32.1	2.258	3.248	4.9	20.6
7 30	20 39.54	-15 11.5	1.755	2.769	1.2	20.5	7 30	20 39.59	-31 37.9	2.262	3.259	4.1	20.6
8 9	20 30.67	-15 34.5	1.770	2.772	4.0	20.7	8 9	20 30.07	-31 31.4	2.295	3.271	5.7	20.7
8 19	20 22.71	-15 56.2	1.813	2.776	7.9	21.0	8 19	20 21.57	-31 12.3	2.354	3.282	8.4	20.9
8 29	20 16.52	-16 14.1	1.880	2.779	11.5	21.2	8 29	20 14.81	-30 41.8	2.438	3.293	10.9	21.1
9 8	20 12.63	-16 26.5	1.968	2.783	14.5	21.4	9 8	20 10.24	-30 2.2	2.544	3.303	13.1	21.3
294758	2008 CU ₂₀		7 30.4 180°61	2.0/29.0	17		473055	2015 HM ₈₇		7 30.4 71°33	3.7/1.8	17	
6 30	21 4.34	-20 22.2	1.777	2.678	12.4	21.3	6 30	21 0.47	- 6 51.5	1.700	2.577	14.1	21.1
7 10	20 57.88	-21 31.8	1.715	2.680	8.6	21.1	7 10	20 55.06	- 7 6.8	1.640	2.583	10.6	20.9
7 20	20 49.36	-22 46.8	1.678	2.680	4.5	20.9	7 20	20 47.82	- 7 38.3	1.603	2.589	6.9	20.7
7 30	20 39.58	-24 0.3	1.668	2.681	2.1	20.7	7 30	20 39.54	- 8 23.6	1.590	2.596	3.9	20.5
8 9	20 29.66	-25 5.8	1.686	2.680	5.3	20.9	8 9	20 31.21	- 9 18.3	1.604	2.602	4.9	20.6
8 19	20 20.70	-25 58.6	1.730	2.679	9.4	21.2	8 19	20 23.82	-10 17.2	1.643	2.609	8.4	20.8
8 29	20 13.69	-26 36.3	1.799	2.678	13.0	21.4	8 29	20 18.22	-11 15.2	1.707	2.615	12.0	21.1
9 8	20 9.29	-26 59.1	1.887	2.676	16.0	21.6	9 8	20 14.97	-12 8.0	1.792	2.622	15.1	21.3
314966	2006 WC ₁₉₈		7 30.4 209°72	0.9/31.0	18		426163	2012 HT ₇₄		7 30.4 65°80	4.1/28.1	17	
6 30	21 1.00	-14 51.5	2.430	3.314</									

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
25131	Katiemelua		7 30.4 359°35	3°1/	1.1 18		375232	2008 FA ₉₉		7 30.4 286°49	2°7/28.8 18		
6 30	20 58.45	- 9 47.7	1.408	2.306	15.2	18.4	6 30	21 2.50	-21 18.5	1.477	2.390	13.7	20.7
7 10	20 53.98	- 9 56.2	1.347	2.304	11.2	18.2	7 10	20 57.02	-22 25.6	1.410	2.379	9.6	20.5
7 20	20 47.38	-10 20.4	1.308	2.302	6.9	17.9	7 20	20 49.10	-23 39.0	1.366	2.369	5.2	20.2
7 30	20 39.53	-10 57.9	1.291	2.302	3.3	17.7	7 30	20 39.64	-24 51.1	1.347	2.359	2.7	20.0
8 9	20 31.57	-11 43.9	1.300	2.302	5.1	17.8	8 9	20 29.89	-25 54.1	1.354	2.348	6.3	20.2
8 19	20 24.65	-12 32.9	1.332	2.303	9.4	18.1	8 19	20 21.19	-26 42.3	1.385	2.338	10.8	20.4
8 29	20 19.80	-13 19.7	1.387	2.305	13.5	18.3	8 29	20 14.73	-27 13.2	1.438	2.328	15.0	20.7
9 8	20 17.63	-14 0.0	1.461	2.308	17.1	18.5	9 8	20 11.28	-27 27.0	1.510	2.318	18.5	20.9
166021	2002 AN ₁₆₃		7 30.4 252°21	1°0/31.0 18			392847	2012 UK ₃₉		7 30.4 257°86	2°0/31.5 18		
6 30	21 2.69	-12 57.4	1.417	2.317	15.0	20.0	6 30	21 1.85	-12 22.6	1.857	2.745	12.6	21.2
7 10	20 57.09	-13 43.2	1.349	2.311	10.7	19.7	7 10	20 56.02	-12 25.6	1.786	2.739	9.2	21.0
7 20	20 49.10	-14 43.9	1.304	2.304	5.9	19.5	7 20	20 48.36	-12 38.3	1.738	2.733	5.3	20.7
7 30	20 39.60	-15 54.2	1.282	2.297	1.2	19.1	7 30	20 39.61	-12 58.4	1.715	2.728	2.1	20.5
8 9	20 29.84	-17 6.9	1.287	2.290	4.9	19.4	8 9	20 30.73	-13 22.8	1.720	2.722	4.2	20.6
8 19	20 21.12	-18 15.2	1.316	2.283	10.0	19.6	8 19	20 22.68	-13 48.2	1.751	2.716	8.1	20.9
8 29	20 14.62	-19 13.5	1.369	2.275	14.5	19.9	8 29	20 16.35	-14 11.7	1.807	2.710	11.8	21.1
9 8	20 11.09	-19 59.0	1.440	2.268	18.3	20.1	9 8	20 12.34	-14 30.8	1.884	2.704	14.9	21.3
102859	1999 WH ₁		7 30.4 307°41	3°8/28.5 18			343827	2011 HA ₂₄		7 30.4 344°77	4°9/28.8 18		
6 30	21 2.97	-23 48.6	1.266	2.187	14.9	19.6	6 30	20 56.49	-27 1.3	0.921	1.863	16.7	18.7
7 10	20 57.87	-24 40.8	1.187	2.160	10.6	19.3	7 10	20 53.73	-27 12.0	0.857	1.838	12.1	18.3
7 20	20 49.79	-25 37.7	1.129	2.132	6.1	19.0	7 20	20 47.72	-27 18.7	0.811	1.815	7.3	18.0
7 30	20 39.64	-26 31.2	1.094	2.104	3.9	18.8	7 30	20 39.59	-27 13.6	0.784	1.794	4.9	17.8
8 9	20 28.88	-27 12.7	1.083	2.077	7.6	18.9	8 9	20 31.11	-26 50.7	0.778	1.776	8.6	17.9
8 19	20 19.19	-27 36.5	1.095	2.051	12.8	19.1	8 19	20 24.17	-26 8.0	0.790	1.761	14.0	18.1
8 29	20 12.12	-27 40.6	1.127	2.024	17.6	19.3	8 29	20 20.37	-25 7.2	0.821	1.748	19.2	18.4
9 8	20 8.67	-27 26.4	1.175	1.999	21.8	19.5	9 8	20 20.57	-23 52.5	0.866	1.739	23.7	18.6
92373	2000 HR ₅₂		7 30.4 65°32	3°6/	1.1 18		369040	2008 BE ₂₂		7 30.4 129°22	1°1/29.8 17		
6 30	21 3.93	- 9 40.0	1.216	2.114	17.1	18.6	6 30	21 2.89	-17 34.5	1.446	2.354	14.2	20.5
7 10	20 57.94	- 9 42.6	1.166	2.123	12.6	18.3	7 10	20 57.15	-18 35.4	1.388	2.355	9.9	20.2
7 20	20 49.48	-10 2.6	1.137	2.131	7.7	18.1	7 20	20 49.09	-19 45.6	1.353	2.356	5.1	19.9
7 30	20 39.62	-10 36.9	1.130	2.140	3.7	17.9	7 30	20 39.64	-20 58.2	1.343	2.357	1.1	19.7
8 9	20 29.79	-11 20.3	1.148	2.149	5.7	18.0	8 9	20 30.05	-22 5.5	1.359	2.359	5.4	20.0
8 19	20 21.35	-12 6.6	1.189	2.159	10.4	18.3	8 19	20 21.61	-23 1.8	1.399	2.360	10.1	20.2
8 29	20 15.45	-12 50.4	1.252	2.168	14.8	18.6	8 29	20 15.42	-23 43.6	1.463	2.360	14.3	20.5
9 8	20 12.68	-13 27.6	1.334	2.178	18.6	18.9	9 8	20 12.15	-24 10.1	1.545	2.361	17.8	20.7
144098	2004 BE ₅₉		7 30.4 150°53	2°3/31.8 17			348567	2005 VJ ₉₈		7 30.4 216°30	6°1/24.9 18		
6 30	21 4.05	-10 43.7	1.839	2.719	13.1	20.6	6 30	21 4.32	-39 9.7	2.757	3.637	9.2	21.5
7 10	20 57.45	-10 58.8	1.779	2.727	9.5	20.4	7 10	20 57.54	-40 7.7	2.698	3.630	7.5	21.4
7 20	20 49.04	-11 25.4	1.742	2.735	5.6	20.1	7 20	20 49.08	-40 56.8	2.665	3.622	6.3	21.3
7 30	20 39.60	-12 0.7	1.731	2.742	2.4	19.9	7 30	20 39.64	-41 32.0	2.658	3.614	6.3	21.3
8 9	20 30.14	-12 40.6	1.748	2.748	4.3	20.1	8 9	20 30.10	-41 50.1	2.678	3.606	7.5	21.4
8 19	20 21.62	-13 21.3	1.791	2.754	8.1	20.3	8 19	20 21.35	-41 50.0	2.724	3.597	9.4	21.5
8 29	20 14.91	-13 59.0	1.860	2.759	11.7	20.6	8 29	20 14.18	-41 32.7	2.793	3.588	11.3	21.6
9 8	20 10.56	-14 31.3	1.951	2.764	14.7	20.8	9 8	20 9.14	-41 1.1	2.881	3.579	13.0	21.7
441436	2008 HG ₉		7 30.4 80°17	0°6/29.9 17			468482	2004 TO ₉₇		7 30.4 353°78	11°7/	6.5 16	
6 30	20 59.77	-17 32.7	2.196	3.092	10.6	21.0	6 30	20 54.55	+ 6 9.0	1.168	2.021	20.7	20.5
7 10	20 54.25	-18 26.2	2.147	3.109	7.3	20.9	7 10	20 51.57	+ 6 48.5	1.106	2.013	17.7	20.3
7 20	20 47.29	-19 24.9	2.124	3.126	3.8	20.7	7 20	20 46.28	+ 6 53.5	1.061	2.007	14.7	20.1
7 30	20 39.53	-20 24.3	2.128	3.143	0.6	20.4	7 30	20 39.54	+ 6 20.3	1.034	2.002	12.3	19.9
8 9	20 31.80	-21 20.0	2.160	3.159	3.8	20.7	8 9	20 32.58	+ 5 10.8	1.028	1.998	11.7	19.9
8 19	20 24.87	-22 8.3	2.220	3.176	7.2	21.0	8 19	20 26.67	+ 3 32.1	1.041	1.996	13.3	20.0
8 29	20 19.42	-22 47.1	2.306	3.193	10.2	21.2	8 29	20 22.99	+ 1 35.4	1.075	1.996	16.3	20.1
9 8	20 15.92	-23 15.5	2.414	3.209	12.7	21.4	9 8	20 22.28	- 0 26.6	1.127	1.998	19.5	20.3
472803	2015 FQ ₁₆₀		7 30.4 245°18	3°3/	1.5 17		470784	2008 UX ₂₉₇		7 30.4 10°85	7°8/	2.9 16	
6 30	21 0.67	- 7 51.0	1.694	2.574	14.0	21.0	6 30	21 1.11	- 1 40.9	1.438	2.303	16.9	20.5
7 10	20 55.29	- 8 12.3	1.626	2.572	10.5	20.8	7 10	20 55.77	- 0 46.5	1.379	2.304	13.6	20.3
7 20	20 48.00	- 8 49.5	1.581	2.571	6.6	20.5	7 20	20 48.31	- 0 12.7	1.340	2.307	10.3	20.1
7 30	20 39.57	- 9 40.1	1.561	2.569	3.5	20.4	7 30	20 39.62	- 0 1.3	1.324	2.309	8.0	20.0
8 9	20 31.00	-10 39.3	1.568	2.568	4.8	20.4	8 9	20 30.85	- 0 11.2	1.332	2.313	8.3	20.0
8 19	20 23.31	-11 41.7	1.600	2.566	8.5	20.7	8 19	20 23.15	- 0 38.7	1.363	2.317	10.8	20.2
8 29	20 17.42	-12 42.2	1.656	2.564	12.3	20.9	8 29	20 17.52	- 1 18.2	1.415	2.322	14.1	20.4
9 8	20 13.95	-13 36.4	1.734	2.563	15.6	21.1	9 8	20 14.58	- 2 3.1	1.488	2.328	17.2	20.6
344499	2002 QF ₁₁₅		7 30.4 207°41	2°8/28.8 18			330972	2009 TC ₁		7 30.4 352°21	0°7/30.7 18		
6 30	21 5.58	-26 21.7	2.165	3.062	10.7	21.4	6 30	20 58.29	-15 53.0	1.049	1.975	16.8	20.3
7 10	20 58.45	-26 39.9	2.098	3.058	7.6	21.2	7 10	20 54.44	-16 5.7	0.993	1.967	12.0	20.0
7 20	20 49.54	-26 55.6	2.056	3.054	4.4	21.0	7 20	20 47.86	-16 30.6	0.956	1.960	6.4	19.7
7 30	20 39.63	-27 4.7	2.042	3.049	2.8	20.9	7 30	20 39.60	-17 3.0	0.940	1.955	0.8	19.3
8 9	20 29.69	-27 4.3	2.056	3.045	5.1	21.0	8 9	20 31.19	-17 36.7	0.946	1.951	5.6	19.6
8 19	20 20.67	-26 53.2	2.097	3.039	8.4	21.2	8 19	20 24.14	-18 6.0	0.974	1.949	11.3	19.9
8 29	20 13.41	-26 31.8	2.163	3.034	11.5	21.4	8 29	20 19.77	-18 26.7	1.022	1.948	16.4	20.2
9 8	20 8.46	-26 1.5	2.251	3.028	14.1	21.6	9 8	20 18.81	-18 36.5	1.086	1.949	20.6	20.4
167254	2003 UU ₁₁₃		7 30.4 317°94	8°5/24.1 18			411614	2011 SU ₁₀₅		7 30.4 196°78	0°1/30.5 17		
6 30	21 3.2												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
279438	2010 <i>OO</i> ₂₀	7 30.4 256°35		2°4/ 1.2 18			340227	2006 <i>BZ</i> ₆₂	7 30.4 194°48		1°9/31.9 18		
6 30	20 58.80	- 9 26.3	2.249	3.125	11.2	20.6	6 30	21 0.57	- 9 22.5	1.860	2.741	12.9	20.7
7 10	20 53.64	- 9 39.1	2.178	3.123	8.3	20.4	7 10	20 55.15	-10 19.0	1.791	2.740	9.4	20.5
7 20	20 47.03	-10 2.4	2.131	3.121	5.1	20.2	7 20	20 47.95	-11 30.5	1.745	2.739	5.5	20.2
7 30	20 39.58	-10 34.5	2.110	3.118	2.6	20.1	7 30	20 39.65	-12 52.8	1.726	2.738	2.1	20.0
8 9	20 32.04	-11 12.3	2.117	3.116	3.8	20.1	8 9	20 31.19	-14 19.9	1.734	2.736	4.0	20.1
8 19	20 25.16	-11 52.4	2.151	3.114	6.9	20.3	8 19	20 23.51	-15 45.4	1.770	2.735	8.0	20.4
8 29	20 19.63	-12 31.7	2.211	3.112	10.0	20.5	8 29	20 17.49	-17 4.0	1.831	2.733	11.7	20.6
9 8	20 15.96	-13 7.4	2.294	3.110	12.7	20.7	9 8	20 13.73	-18 11.9	1.915	2.731	14.8	20.8
41834	2000 <i>WL</i> ₅₈	7 30.4 160°59		0°6/30.9 18			398482	2011 <i>UN</i> ₁₄₂	7 30.4 134°02		3°4/ 1.7 18		
6 30	20 59.63	-14 55.1	2.686	3.569	9.3	20.3	6 30	21 0.43	- 7 20.3	2.272	3.136	11.5	21.2
7 10	20 54.00	-15 15.9	2.620	3.573	6.6	20.2	7 10	20 54.72	- 7 11.0	2.205	3.141	8.7	21.0
7 20	20 47.14	-15 42.3	2.579	3.578	3.6	20.0	7 20	20 47.58	- 7 12.6	2.163	3.145	5.7	20.8
7 30	20 39.59	-16 11.7	2.567	3.582	0.7	19.7	7 30	20 39.66	- 7 24.4	2.147	3.149	3.6	20.7
8 9	20 32.00	-16 41.6	2.584	3.585	3.0	19.9	8 9	20 31.69	- 7 44.0	2.159	3.153	4.3	20.7
8 19	20 25.02	-17 9.5	2.630	3.589	6.0	20.1	8 19	20 24.43	- 8 9.0	2.198	3.157	7.0	20.9
8 29	20 19.23	-17 33.5	2.702	3.592	8.8	20.3	8 29	20 18.55	- 8 36.3	2.263	3.161	9.9	21.1
9 8	20 15.08	-17 52.3	2.797	3.594	11.1	20.5	9 8	20 14.52	- 9 3.1	2.350	3.164	12.5	21.3
111946	2002 <i>GA</i> ₅₆	7 30.4 357°87		8°2/23.5 18			453685	2010 <i>VZ</i> ₁₇₅	7 30.4 270°75		5°3/26.5 18		
6 30	21 2.80	-39 49.4	2.044	2.936	11.5	18.6	6 30	21 3.14	-33 55.2	2.321	3.216	10.1	21.0
7 10	20 56.96	-41 21.8	2.000	2.935	9.4	18.5	7 10	20 56.86	-34 42.1	2.257	3.208	7.7	20.8
7 20	20 48.96	-42 42.8	1.979	2.934	8.3	18.4	7 20	20 48.80	-35 22.5	2.219	3.199	5.8	20.7
7 30	20 39.67	-43 44.9	1.983	2.933	8.5	18.4	7 30	20 39.71	-35 51.1	2.207	3.191	5.4	20.7
8 9	20 30.26	-44 23.2	2.012	2.933	10.0	18.5	8 9	20 30.54	-36 4.2	2.222	3.182	7.0	20.8
8 19	20 21.89	-44 36.1	2.064	2.933	12.1	18.6	8 19	20 22.22	-36 0.6	2.263	3.173	9.5	20.9
8 29	20 15.59	-44 25.4	2.137	2.934	14.2	18.8	8 29	20 15.61	-35 41.0	2.327	3.165	11.9	21.1
9 8	20 12.01	-43 55.2	2.227	2.934	16.1	18.9	9 8	20 11.26	-35 7.9	2.412	3.156	14.1	21.2
126746	2002 <i>CO</i> ₃₁₁	7 30.4 279°23		1°7/31.4 18			252151	2001 <i>BZ</i> ₁₄	7 30.4 248°12		0°5/30.9 18		
6 30	21 1.31	-12 27.3	1.685	2.578	13.4	20.3	6 30	20 59.04	-14 10.3	2.686	3.569	9.4	21.0
7 10	20 55.83	-12 48.2	1.614	2.571	9.7	20.0	7 10	20 53.75	-14 50.5	2.599	3.552	6.7	20.8
7 20	20 48.35	-13 20.8	1.567	2.564	5.5	19.8	7 20	20 47.12	-15 38.2	2.536	3.535	3.6	20.6
7 30	20 39.65	-14 1.9	1.544	2.557	1.8	19.5	7 30	20 39.65	-16 30.5	2.503	3.518	0.6	20.3
8 9	20 30.78	-14 46.8	1.548	2.551	4.3	19.7	8 9	20 31.98	-17 23.9	2.498	3.500	3.1	20.5
8 19	20 22.78	-15 31.1	1.578	2.544	8.6	19.9	8 19	20 24.78	-18 15.0	2.523	3.481	6.3	20.7
8 29	20 16.65	-16 10.7	1.632	2.537	12.6	20.1	8 29	20 18.72	-19 1.0	2.574	3.463	9.2	20.9
9 8	20 13.01	-16 42.9	1.706	2.530	16.0	20.3	9 8	20 14.28	-19 40.0	2.649	3.444	11.8	21.0
338769	2003 <i>UB</i> ₂₄₉	7 30.4 47°46		5°8/27.2 17			386426	2008 <i>VC</i> ₁₄	7 30.4 285°89		5°5/26.5 18		
6 30	21 4.83	-31 25.2	1.665	2.573	12.7	19.9	6 30	21 2.93	-29 13.6	1.709	2.619	12.3	20.2
7 10	20 58.35	-32 20.5	1.618	2.578	9.4	19.7	7 10	20 57.24	-30 39.5	1.645	2.607	9.0	20.0
7 20	20 49.64	-33 9.1	1.594	2.584	6.6	19.6	7 20	20 49.23	-32 3.7	1.604	2.596	6.2	19.8
7 30	20 39.70	-33 44.0	1.596	2.589	5.9	19.5	7 30	20 39.74	-33 17.8	1.590	2.585	5.8	19.7
8 9	20 29.81	-34 0.3	1.623	2.595	8.0	19.7	8 9	20 29.97	-34 14.4	1.601	2.573	8.2	19.8
8 19	20 21.21	-33 56.7	1.674	2.602	11.2	19.9	8 19	20 21.17	-34 49.6	1.637	2.562	11.5	20.0
8 29	20 14.91	-33 34.7	1.748	2.608	14.2	20.1	8 29	20 14.51	-35 2.9	1.695	2.551	14.8	20.2
9 8	20 11.47	-32 57.8	1.840	2.614	16.9	20.3	9 8	20 10.70	-34 56.6	1.771	2.539	17.7	20.4
510990	2013 <i>JH</i> ₅	7 30.4 157°04		2°7/27.9 18			469488	2002 <i>TZ</i> ₃₀₆	7 30.4 275°58		1°6/29.3 18		
6 30	21 0.54	-26 1.4	2.768	3.665	8.6	21.9	6 30	21 1.19	-20 21.5	1.958	2.861	11.3	21.3
7 10	20 54.70	-26 55.6	2.711	3.671	6.1	21.8	7 10	20 55.68	-21 9.6	1.880	2.845	7.9	21.1
7 20	20 47.54	-27 48.8	2.680	3.676	3.7	21.6	7 20	20 48.29	-22 2.6	1.827	2.830	4.2	20.8
7 30	20 39.62	-28 37.0	2.677	3.681	2.8	21.6	7 30	20 39.70	-22 55.6	1.801	2.814	1.6	20.6
8 9	20 31.66	-29 16.8	2.704	3.686	4.6	21.7	8 9	20 30.87	-23 43.6	1.802	2.798	4.8	20.8
8 19	20 24.33	-29 46.0	2.759	3.690	7.1	21.9	8 19	20 22.77	-24 22.5	1.829	2.783	8.6	21.0
8 29	20 18.27	-30 3.8	2.839	3.695	9.5	22.0	8 29	20 16.35	-24 49.9	1.881	2.767	12.2	21.2
9 8	20 13.95	-30 10.7	2.941	3.698	11.6	22.2	9 8	20 12.24	-25 5.4	1.954	2.751	15.3	21.4
173567	2001 <i>BY</i> ₉	7 30.4 304°30		1°3/31.1 18			254424	2004 <i>WO</i> ₇	7 30.4 166°74		5°3/ 1.7 17		
6 30	21 1.89	-13 53.6	1.291	2.199	15.6	19.8	6 30	21 5.94	- 6 28.2	1.509	2.382	15.8	20.5
7 10	20 56.79	-14 13.3	1.219	2.184	11.3	19.5	7 10	20 59.13	- 5 54.3	1.446	2.384	12.1	20.3
7 20	20 49.09	-14 46.6	1.168	2.169	6.3	19.2	7 20	20 50.11	- 5 36.2	1.404	2.386	8.2	20.1
7 30	20 39.69	-15 29.3	1.140	2.154	1.4	18.8	7 30	20 39.78	- 5 34.0	1.387	2.387	5.5	19.9
8 9	20 29.94	-16 15.8	1.136	2.140	5.2	19.1	8 9	20 29.37	- 5 45.6	1.396	2.389	6.4	20.0
8 19	20 21.25	-17 0.0	1.156	2.125	10.6	19.3	8 19	20 20.07	- 6 7.5	1.430	2.390	9.9	20.2
8 29	20 14.93	-17 37.2	1.197	2.112	15.5	19.6	8 29	20 12.94	- 6 35.4	1.487	2.390	13.7	20.4
9 8	20 11.82	-18 4.4	1.257	2.098	19.6	19.8	9 8	20 8.62	- 7 4.6	1.563	2.391	17.1	20.7
99498	2002 <i>CQ</i> ₂₄₆	7 30.4 99°67		11°2/ 9.6 18			361020	2005 <i>WJ</i> ₃₉	7 30.4 111°39		0°9/29.8 18		
6 30	21 2.70	+14 22.8	1.593	2.361	19.8	19.2	6 30	21 0.30	-19 43.9	2.365	3.262	9.9	21.3
7 10	20 56.67	+14 6.3	1.539	2.380	17.2	19.0	7 10	20 54.56	-20 15.9	2.307	3.269	6.9	21.1
7 20	20 48.70	+13 13.6	1.502	2.399	14.4	18.9	7 20	20 47.51	-20 51.1	2.275	3.277	3.6	20.9
7 30	20 39.67	+11 44.0	1.487	2.418	12.2	18.8	7 30	20 39.68	-21 25.7	2.270	3.284	0.9	20.7
8 9	20 30.69	+ 9 42.3	1.494	2.436	11.2	18.8	8 9	20 31.84	-21 56.6	2.293	3.291	3.7	20.9
8 19	20 22.80	+ 7 17.2	1.526	2.454	12.0	18.9	8 19	20 24.73	-22 21.3	2.344	3.298	7.0	21.2
8 29	20 16.91	+ 4 40.4	1.583	2.472	13.9	19.1	8 29	20 19.04	-22 38.2	2.420	3.305	9.9	21.4
9 8	20 13.57	+ 2 3.6	1.662	2.488	16.3	19.3	9 8	20 15.21	-22 46.9	2.519	3.312	12.4	21.5
178057	2006 <i>SH</i> ₂₆	7 30.4 299°28		1°1/30.9 18			352486	2008 <i>BW</i> ₄₉	7 30.4 173°12		0°3/30.7 18		
6 30	2												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
288718	2004 RO ₂₃	7 30.4 268°63		6°3/27.2 18			237033	2008 SO ₈₀	7 30.4 271°10		3°6/28.4 18		
6 30	21 9.31	-34 16.5	1.816	2.712	12.4	21.2	6 30	21 5.38	-26 47.4	1.845	2.748	11.9	20.5
7 10	21 1.66	-34 54.5	1.743	2.694	9.5	21.0	7 10	20 58.80	-27 22.8	1.767	2.730	8.5	20.3
7 20	20 51.52	-35 23.8	1.693	2.675	7.0	20.8	7 20	20 50.01	-27 56.5	1.714	2.711	5.2	20.1
7 30	20 39.85	-35 37.2	1.669	2.657	6.5	20.7	7 30	20 39.84	-28 23.0	1.687	2.692	3.7	19.9
8 9	20 27.98	-35 30.0	1.672	2.637	8.4	20.8	8 9	20 29.41	-28 37.5	1.686	2.673	6.3	20.1
8 19	20 17.29	-35 1.4	1.699	2.618	11.5	20.9	8 19	20 19.90	-28 37.5	1.712	2.654	10.0	20.2
8 29	20 8.95	-34 13.6	1.749	2.598	14.7	21.1	8 29	20 12.38	-28 23.2	1.761	2.634	13.5	20.4
9 8	20 3.68	-33 11.2	1.818	2.579	17.6	21.3	9 8	20 7.57	-27 56.2	1.830	2.614	16.6	20.6
137596	1999 VV ₁₆₁	7 30.4 273°87		4°8/27.9 18			386351	2008 SY ₂₉₉	7 30.4 200°82		4°1/27.7 16		
6 30	21 5.96	-27 36.6	1.481	2.393	13.7	20.1	6 30	21 5.87	-29 45.3	2.218	3.114	10.5	21.6
7 10	20 59.55	-28 30.2	1.417	2.382	9.9	19.9	7 10	20 58.77	-30 26.9	2.154	3.110	7.6	21.4
7 20	20 50.50	-29 22.0	1.374	2.371	6.2	19.6	7 20	20 49.83	-31 4.3	2.115	3.106	5.0	21.2
7 30	20 39.82	-30 3.9	1.356	2.360	4.9	19.5	7 30	20 39.84	-31 32.3	2.104	3.101	4.2	21.2
8 9	20 28.90	-30 29.5	1.364	2.348	7.7	19.7	8 9	20 29.77	-31 47.1	2.121	3.096	6.2	21.3
8 19	20 19.21	-30 35.6	1.395	2.337	11.8	19.9	8 19	20 20.61	-31 47.3	2.164	3.091	9.0	21.4
8 29	20 12.00	-30 22.8	1.449	2.326	15.7	20.1	8 29	20 13.23	-31 33.3	2.232	3.084	11.8	21.6
9 8	20 8.03	-29 53.8	1.520	2.314	19.0	20.3	9 8	20 8.19	-31 7.3	2.320	3.078	14.3	21.8
166102	2002 CF ₁₆₀	7 30.4 101°01		4°2/28.8 17			273341	2006 TU ₁₀₁	7 30.4 273°27		0°2/30.5 18		
6 30	21 9.29	-27 2.3	1.353	2.264	14.8	19.8	6 30	21 4.03	-16 26.3	1.567	2.468	13.8	21.6
7 10	21 1.73	-27 31.2	1.305	2.271	10.5	19.5	7 10	20 58.06	-16 48.4	1.486	2.449	9.8	21.3
7 20	20 51.51	-27 56.2	1.278	2.277	6.3	19.3	7 20	20 49.73	-17 19.3	1.429	2.431	5.2	21.0
7 30	20 39.85	-28 10.4	1.277	2.284	4.3	19.2	7 30	20 39.84	-17 55.0	1.396	2.411	0.3	20.6
8 9	20 28.34	-28 9.1	1.300	2.290	7.2	19.4	8 9	20 29.58	-18 30.3	1.390	2.392	4.8	20.9
8 19	20 18.45	-27 51.3	1.348	2.296	11.5	19.7	8 19	20 20.22	-19 0.8	1.409	2.372	9.7	21.2
8 29	20 11.35	-27 18.9	1.417	2.303	15.4	19.9	8 29	20 12.94	-19 23.5	1.451	2.353	14.1	21.4
9 8	20 7.61	-26 35.3	1.505	2.308	18.8	20.2	9 8	20 8.53	-19 36.8	1.513	2.333	17.9	21.6
516837	2010 WO ₆₁	7 30.4 260°79		3°7/27.4 18			12713	1991 FY ₃	7 30.4 352°06		11°2/24.4 18		
6 30	21 0.66	-28 17.1	2.392	3.293	9.6	21.2	6 30	21 6.50	-45 11.9	1.568	2.454	14.6	15.4
7 10	20 55.06	-29 12.4	2.326	3.286	6.9	21.0	7 10	21 0.08	-46 9.2	1.521	2.446	12.6	15.3
7 20	20 47.86	-30 5.7	2.285	3.279	4.5	20.9	7 20	20 50.78	-46 46.5	1.496	2.439	11.4	15.2
7 30	20 39.71	-30 52.1	2.272	3.271	3.8	20.8	7 30	20 39.87	-46 55.3	1.492	2.433	11.5	15.2
8 9	20 31.43	-31 27.7	2.287	3.264	5.7	20.9	8 9	20 29.08	-46 31.5	1.510	2.428	12.9	15.3
8 19	20 23.86	-31 49.9	2.328	3.256	8.4	21.1	8 19	20 20.02	-45 36.1	1.548	2.425	15.0	15.4
8 29	20 17.76	-31 58.2	2.394	3.249	11.1	21.2	8 29	20 13.93	-44 14.3	1.607	2.422	17.4	15.6
9 8	20 13.70	-31 53.6	2.480	3.241	13.4	21.4	9 8	20 11.35	-42 33.6	1.682	2.421	19.5	15.7
166404	2002 NP ₄₁	7 30.4 348°62		2°7/28.4 18			478926	2012 XJ ₁₀	7 30.4 277°35		3°2/ 1.1 18		
6 30	20 59.53	-20 39.9	1.537	2.452	13.1	19.3	6 30	21 2.42	- 9 36.5	1.922	2.799	12.7	21.7
7 10	20 54.84	-22 9.5	1.477	2.448	9.1	19.1	7 10	20 56.57	- 9 25.7	1.832	2.777	9.6	21.5
7 20	20 47.96	-23 46.3	1.441	2.444	4.9	18.9	7 20	20 48.81	- 9 25.8	1.765	2.755	6.0	21.2
7 30	20 39.72	-25 21.9	1.430	2.441	2.9	18.7	7 30	20 39.81	- 9 36.0	1.725	2.732	3.3	21.0
8 9	20 31.27	-26 47.9	1.446	2.439	6.2	18.9	8 9	20 30.49	- 9 54.0	1.711	2.709	4.7	21.0
8 19	20 23.81	-27 57.9	1.486	2.437	10.4	19.2	8 19	20 21.84	-10 17.0	1.724	2.686	8.3	21.2
8 29	20 18.41	-28 48.7	1.549	2.435	14.3	19.4	8 29	20 14.79	-10 41.6	1.762	2.663	12.1	21.4
9 8	20 15.76	-29 19.9	1.630	2.434	17.5	19.6	9 8	20 10.04	-11 4.9	1.820	2.640	15.4	21.6
423930	2006 TV ₁₆	7 30.4 249°07		2°9/28.9 17			397147	2005 WJ ₁₇₁	7 30.4 325°74		0°7/30.9 17		
6 30	21 5.29	-23 34.5	1.583	2.491	13.2	21.7	6 30	20 58.42	-15 6.9	1.657	2.562	12.9	20.7
7 10	20 58.87	-24 18.4	1.516	2.483	9.3	21.5	7 10	20 54.00	-15 27.9	1.575	2.539	9.3	20.4
7 20	20 50.07	-25 4.0	1.473	2.474	5.2	21.2	7 20	20 47.54	-15 58.9	1.515	2.516	5.1	20.1
7 30	20 39.81	-25 45.1	1.455	2.465	3.0	21.1	7 30	20 39.76	-16 36.3	1.480	2.495	0.8	19.8
8 9	20 29.35	-26 15.8	1.463	2.456	6.2	21.3	8 9	20 31.66	-17 15.9	1.470	2.474	4.4	20.0
8 19	20 19.99	-26 32.6	1.496	2.447	10.4	21.5	8 19	20 24.34	-17 53.0	1.486	2.453	8.9	20.2
8 29	20 12.87	-26 34.7	1.552	2.437	14.4	21.7	8 29	20 18.81	-18 23.9	1.525	2.434	13.1	20.4
9 8	20 8.70	-26 23.4	1.627	2.428	17.7	21.9	9 8	20 15.80	-18 46.4	1.583	2.415	16.7	20.6
476610	2008 SE ₁₃₂	7 30.4 268°07		2°0/29.3 18			166049	2002 CN ₂₁	7 30.4 184°55		0°3/30.6 17		
6 30	21 3.35	-22 2.8	1.768	2.673	12.2	21.8	6 30	21 5.45	-15 52.9	1.549	2.447	14.0	20.9
7 10	20 57.29	-22 35.9	1.699	2.665	8.6	21.6	7 10	20 58.87	-16 20.0	1.486	2.448	9.9	20.6
7 20	20 49.16	-23 11.6	1.654	2.656	4.6	21.3	7 20	20 50.04	-16 56.0	1.446	2.448	5.3	20.4
7 30	20 39.77	-23 44.8	1.634	2.647	2.0	21.1	7 30	20 39.87	-17 36.3	1.432	2.447	0.4	20.0
8 9	20 30.23	-24 10.9	1.642	2.638	5.2	21.3	8 9	20 29.58	-18 15.6	1.444	2.446	4.7	20.3
8 19	20 21.63	-24 26.8	1.675	2.629	9.3	21.5	8 19	20 20.41	-18 49.6	1.482	2.445	9.4	20.6
8 29	20 14.98	-24 31.3	1.732	2.620	13.0	21.7	8 29	20 13.41	-19 15.4	1.543	2.443	13.6	20.9
9 8	20 10.91	-24 24.8	1.809	2.611	16.1	21.9	9 8	20 9.24	-19 31.7	1.625	2.441	17.1	21.1
442543	2011 YV ₃₁	7 30.4 176°31		1°0/31.1 18			389745	2011 SX ₁₃₄	7 30.4 4°28		7°5/ 3.7 15		
6 30	21 0.89	-14 33.4	2.433	3.317	10.2	20.9	6 30	20 53.33	- 2 29.6	1.072	1.969	19.0	20.0
7 10	20 55.01	-14 35.5	2.365	3.318	7.2	20.7	7 10	20 50.78	- 2 9.7	1.021	1.967	15.1	19.8
7 20	20 47.76	-14 43.2	2.321	3.318	4.0	20.5	7 20	20 45.92	- 2 17.7	0.988	1.969	11.0	19.5
7 30	20 39.73	-14 54.7	2.305	3.319	1.1	20.3	7 30	20 39.69	- 2 53.5	0.975	1.972	8.0	19.4
8 9	20 31.67	-15 7.8	2.318	3.319	3.3	20.5	8 9	20 33.39	- 3 52.6	0.983	1.978	8.1	19.4
8 19	20 24.28	-15 20.3	2.358	3.319	6.5	20.7	8 19	20 28.30	- 5 7.0	1.012	1.986	11.2	19.6
8 29	20 18.23	-15 30.6	2.425	3.319	9.5	20.9	8 29	20 25.50	- 6 27.2	1.061	1.996	15.1	19.9
9 8	20 13.98	-15 37.2	2.515	3.319	12.1	21.0	9 8	20 25.62	- 7 44.2	1.129	2.008	18.8	20.1
474398	2002 TO ₃₄₀	7 30.4 269°28		4°4/27.4 18			182763	2001 X7 ₁₈₀	7 30.4 224°43		2°8/ 1.3 18		
6 30	21 3.65	-28 57.4	2.070	2.972	10.9	21.8	6 30</						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
285190	1996 <i>VV</i> ₁₀		7 30.4	77°71	1°2/30.9	17	239969	2001 <i>PW</i> ₃₃		7 30.5	313°94	5°8/27.5	18
6 30	21 6.32	-15 37.8	1.364	2.267	15.3	20.4	6 30	21 3.91	-26 44.0	1.117	2.043	15.9	19.8
7 10	20 59.53	-15 31.7	1.312	2.274	10.9	20.2	7 10	20 58.75	-28 1.7	1.058	2.031	11.5	19.5
7 20	20 50.37	-15 34.0	1.281	2.282	5.9	19.9	7 20	20 50.39	-29 20.5	1.019	2.018	7.3	19.2
7 30	20 39.90	-15 41.4	1.275	2.289	1.3	19.6	7 30	20 39.94	-30 29.2	1.002	2.007	6.0	19.1
8 9	20 29.50	-15 50.2	1.294	2.297	4.9	19.9	8 9	20 29.14	-31 17.8	1.009	1.995	9.4	19.2
8 19	20 20.47	-15 57.4	1.338	2.305	9.8	20.2	8 19	20 19.81	-31 40.7	1.036	1.984	14.2	19.5
8 29	20 13.88	-16 1.0	1.405	2.313	14.1	20.5	8 29	20 13.51	-31 37.9	1.083	1.974	18.7	19.7
9 8	20 10.32	-15 59.4	1.491	2.320	17.7	20.7	9 8	20 11.11	-31 13.0	1.145	1.965	22.5	19.9
105425	2000 <i>QF</i> ₁₇₃		7 30.5	269°38	3°3/31.9	18	316931	2001 <i>AE</i>		7 30.5	261°01	0°8/29.8	18
6 30	21 3.98	-10 10.0	1.423	2.314	15.5	19.5	6 30	21 0.75	-19 35.2	2.532	3.424	9.5	21.9
7 10	20 58.10	-10 6.3	1.348	2.301	11.5	19.3	7 10	20 55.08	-20 4.5	2.445	3.405	6.6	21.7
7 20	20 49.78	-10 17.3	1.295	2.288	7.1	19.0	7 20	20 47.92	-20 37.4	2.383	3.385	3.5	21.5
7 30	20 39.89	-10 41.2	1.265	2.275	3.5	18.7	7 30	20 39.83	-21 10.7	2.350	3.364	0.8	21.2
8 9	20 29.67	-11 14.1	1.261	2.262	5.4	18.8	8 9	20 31.54	-21 41.1	2.345	3.343	3.6	21.4
8 19	20 20.46	-11 51.3	1.282	2.249	10.0	19.0	8 19	20 23.79	-22 6.0	2.369	3.322	6.9	21.6
8 29	20 13.44	-12 28.2	1.325	2.236	14.5	19.3	8 29	20 17.31	-22 23.7	2.418	3.301	10.0	21.8
9 8	20 9.42	-13 0.6	1.387	2.222	18.4	19.5	9 8	20 12.65	-22 33.4	2.490	3.279	12.6	21.9
357766	2005 <i>SS</i> ₁₂₉		7 30.5	343°22	7°5/25.7	18	233912	2009 <i>NC</i>		7 30.5	299°36	17°2/7.5	18
6 30	21 4.99	-38 1.6	1.907	2.802	12.0	20.0	6 30	21 1.54	+19 48.6	1.593	2.323	21.2	19.8
7 10	20 58.51	-38 58.2	1.856	2.798	9.6	19.8	7 10	20 56.42	+21 42.3	1.517	2.305	19.8	19.6
7 20	20 49.82	-39 43.7	1.827	2.795	7.8	19.7	7 20	20 48.97	+23 4.8	1.457	2.288	18.5	19.5
7 30	20 39.88	-40 11.1	1.823	2.792	7.7	19.7	7 30	20 39.89	+23 48.2	1.414	2.270	17.5	19.4
8 9	20 29.93	-40 16.2	1.845	2.789	9.3	19.8	8 9	20 30.28	+23 48.3	1.389	2.253	17.3	19.3
8 19	20 21.18	-39 58.5	1.890	2.787	11.7	19.9	8 19	20 21.38	+23 5.3	1.381	2.236	17.8	19.3
8 29	20 14.64	-39 20.3	1.956	2.785	14.2	20.1	8 29	20 14.42	+21 44.9	1.392	2.219	19.0	19.3
9 8	20 10.90	-38 25.9	2.042	2.783	16.4	20.3	9 8	20 10.28	+19 57.2	1.418	2.202	20.6	19.4
509743	2008 <i>TX</i> ₅₃		7 30.5	284°73	0°1/30.4	18	294932	2008 <i>DE</i> ₄₈		7 30.5	164°79	0°6/30.8	17
6 30	21 1.84	-16 37.0	1.697	2.598	12.9	21.8	6 30	21 4.23	-14 42.4	1.761	2.653	13.0	21.4
7 10	20 56.37	-17 9.1	1.619	2.582	9.1	21.5	7 10	20 57.81	-15 16.1	1.699	2.657	9.2	21.2
7 20	20 48.78	-17 49.8	1.564	2.566	4.8	21.2	7 20	20 49.43	-15 58.9	1.661	2.661	4.9	20.9
7 30	20 39.84	-18 34.8	1.534	2.550	0.2	20.8	7 30	20 39.91	-16 46.6	1.649	2.664	0.7	20.6
8 9	20 30.61	-19 19.1	1.532	2.533	4.5	21.1	8 9	20 30.32	-17 34.2	1.664	2.666	4.2	20.9
8 19	20 22.21	-19 58.0	1.554	2.517	9.1	21.4	8 19	20 21.69	-18 17.3	1.707	2.669	8.5	21.2
8 29	20 15.68	-20 28.3	1.601	2.501	13.2	21.6	8 29	20 14.96	-18 52.9	1.773	2.670	12.3	21.4
9 8	20 11.75	-20 48.4	1.668	2.484	16.7	21.8	9 8	20 10.72	-19 19.3	1.861	2.671	15.4	21.6
63337	2001 <i>FW</i> ₆₇		7 30.5	144°02	4°2/27.9	17	183042	2002 <i>QH</i> ₅₂		7 30.5	304°31	0°8/30.0	18
6 30	21 3.98	-27 53.8	1.846	2.752	11.8	19.4	6 30	21 1.85	-17 42.8	1.324	2.238	14.9	20.0
7 10	20 57.67	-28 45.0	1.791	2.753	8.4	19.2	7 10	20 56.94	-18 23.9	1.245	2.215	10.6	19.7
7 20	20 49.35	-29 33.4	1.759	2.754	5.3	19.1	7 20	20 49.34	-19 16.0	1.188	2.192	5.6	19.3
7 30	20 39.86	-30 13.0	1.754	2.755	4.3	19.0	7 30	20 39.92	-20 13.2	1.154	2.169	0.8	18.9
8 9	20 30.34	-30 38.9	1.775	2.756	6.6	19.1	8 9	20 29.98	-21 8.2	1.144	2.146	5.7	19.2
8 19	20 21.86	-30 49.0	1.822	2.757	9.9	19.3	8 19	20 21.01	-21 54.6	1.158	2.123	11.1	19.4
8 29	20 15.38	-30 43.4	1.892	2.758	13.0	19.6	8 29	20 14.39	-22 28.1	1.194	2.101	16.1	19.7
9 8	20 11.48	-30 24.2	1.981	2.759	15.7	19.7	9 8	20 11.04	-22 47.1	1.247	2.080	20.3	19.9
126200	2002 <i>AQ</i> ₃₇		7 30.5	111°74	0°7/30.9	18	27892	1996 <i>HG</i> ₂₅		7 30.5	186°55	0°5/30.1	18
6 30	21 3.33	-14 8.8	1.858	2.748	12.5	20.0	6 30	21 3.98	-17 50.8	1.863	2.759	12.2	19.1
7 10	20 56.98	-14 43.6	1.807	2.764	8.8	19.8	7 10	20 57.60	-18 26.8	1.798	2.759	8.5	18.9
7 20	20 48.89	-15 27.0	1.780	2.779	4.8	19.6	7 20	20 49.32	-19 9.0	1.757	2.758	4.4	18.6
7 30	20 39.85	-16 15.0	1.779	2.794	0.8	19.3	7 30	20 39.91	-19 52.7	1.742	2.757	0.5	18.3
8 9	20 30.86	-17 2.8	1.807	2.809	3.9	19.6	8 9	20 30.39	-20 33.2	1.756	2.756	4.3	18.6
8 19	20 22.85	-17 46.5	1.861	2.823	7.9	19.9	8 19	20 21.78	-21 6.9	1.796	2.754	8.4	18.9
8 29	20 16.63	-18 23.2	1.940	2.837	11.4	20.1	8 29	20 14.99	-21 31.5	1.861	2.752	12.1	19.1
9 8	20 12.72	-18 51.2	2.041	2.850	14.3	20.3	9 8	20 10.63	-21 46.2	1.947	2.749	15.1	19.3
249776	2000 <i>WD</i> ₄₄		7 30.5	335°54	4°6/2.6	18	81347	2000 <i>GB</i> ₄₇		7 30.5	152°32	1°3/31.3	18
6 30	20 59.05	-4 12.4	2.054	2.913	12.8	20.0	6 30	21 4.10	-13 15.8	1.849	2.735	12.7	20.5
7 10	20 53.97	-4 4.9	1.983	2.911	9.9	19.9	7 10	20 57.60	-13 36.1	1.788	2.742	9.1	20.3
7 20	20 47.34	-4 12.3	1.935	2.909	7.0	19.7	7 20	20 49.28	-14 5.6	1.751	2.748	5.1	20.0
7 30	20 39.80	-4 33.8	1.911	2.907	4.8	19.5	7 30	20 39.92	-14 41.3	1.740	2.754	1.4	19.8
8 9	20 32.15	-5 7.0	1.914	2.905	5.3	19.6	8 9	20 30.51	-15 18.9	1.757	2.759	4.0	20.0
8 19	20 25.20	-5 48.5	1.944	2.903	7.8	19.7	8 19	20 22.06	-15 54.7	1.802	2.764	8.0	20.3
8 29	20 19.70	-6 34.1	1.998	2.901	10.8	19.9	8 29	20 15.40	-16 25.7	1.871	2.769	11.7	20.5
9 8	20 16.18	-7 19.8	2.075	2.900	13.5	20.1	9 8	20 11.11	-16 50.0	1.961	2.772	14.7	20.7
154788	2004 <i>PU</i> ₅₃		7 30.5	16°80	2°4/29.2	17	84926	Marywalker		7 30.5	327°86	5°0/2.2	18
6 30	21 1.22	-21 4.2	1.293	2.213	14.7	19.3	6 30	21 0.25	-5 30.7	1.647	2.521	14.7	19.2
7 10	20 56.19	-21 57.9	1.244	2.217	10.2	19.1	7 10	20 55.15	-5 15.0	1.576	2.514	11.3	19.0
7 20	20 48.72	-22 56.8	1.217	2.221	5.4	18.8	7 20	20 48.10	-5 15.7	1.527	2.507	7.8	18.8
7 30	20 39.85	-23 53.4	1.213	2.226	2.5	18.6	7 30	20 39.87	-5 32.6	1.501	2.501	5.2	18.6
8 9	20 30.96	-24 40.4	1.234	2.232	6.2	18.9	8 9	20 31.46	-6 3.0	1.501	2.495	5.9	18.6
8 19	20 23.39	-25 13.3	1.278	2.238	10.9	19.2	8 19	20 23.91	-6 42.9	1.526	2.489	9.1	18.8
8 29	20 18.24	-25 30.2	1.344	2.245	15.1	19.4	8 29	20 18.17	-7 27.4	1.574	2.484	12.7	19.0
9 8	20 16.15	-25 31.7	1.427	2.253	18.5	19.7	9 8	20 14.87	-8 11.5	1.642	2.479	16.0	19.2
190519	2000 <i>NR</i> ₁₇		7 30.5	0°52	5°5/27.8	16	243291	2008 <i>DK</i> ₄₇		7 30.5	221°88	1°3/3	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
305495	2008 <i>EK</i> ₅₈	7 30.5 239°95		2°1/31.9 18			501861	2014 <i>WD</i> ₂₆₃	7 30.5 225°89		1°2/29.8 17		
6 30	20 59.69	-10 21.3	2.174	3.052	11.4	21.2	6 30	21 4.37	-17 50.7	1.511	2.416	13.9	22.1
7 10	20 54.41	-10 42.7	2.100	3.047	8.4	21.0	7 10	20 58.35	-18 51.2	1.445	2.410	9.8	21.8
7 20	20 47.59	-11 15.0	2.049	3.042	5.0	20.8	7 20	20 49.95	-20 1.1	1.401	2.404	5.1	21.6
7 30	20 39.86	-11 55.6	2.025	3.036	2.2	20.6	7 30	20 40.05	-21 13.5	1.383	2.398	1.2	21.3
8 9	20 31.98	-12 41.1	2.029	3.030	3.7	20.7	8 9	20 29.89	-22 21.1	1.392	2.391	5.4	21.5
8 19	20 24.77	-13 27.8	2.061	3.024	7.1	20.9	8 19	20 20.77	-23 17.8	1.425	2.384	10.1	21.8
8 29	20 18.97	-14 12.2	2.118	3.018	10.4	21.1	8 29	20 13.85	-24 0.3	1.482	2.377	14.4	22.0
9 8	20 15.10	-14 51.5	2.197	3.012	13.2	21.3	9 8	20 9.86	-24 27.5	1.558	2.369	17.9	22.3
252200	2001 <i>FP</i> ₈₃	7 30.5 112°42		0°7/30.1 17			386370	2008 <i>TO</i> ₁₃₉	7 30.5 248°85		3°1/ 1.3 16		
6 30	21 6.66	-18 33.2	1.638	2.537	13.4	21.4	6 30	21 1.86	- 9 14.1	1.823	2.702	13.2	21.5
7 10	20 59.48	-19 3.4	1.591	2.554	9.3	21.2	7 10	20 56.18	- 9 15.9	1.750	2.696	9.8	21.3
7 20	20 50.26	-19 38.5	1.568	2.570	4.8	20.9	7 20	20 48.64	- 9 30.2	1.701	2.691	6.2	21.1
7 30	20 39.98	-20 13.7	1.571	2.586	0.7	20.7	7 30	20 40.00	- 9 55.5	1.677	2.685	3.2	20.9
8 9	20 29.81	-20 44.1	1.601	2.602	4.7	21.0	8 9	20 31.19	-10 28.5	1.680	2.679	4.6	21.0
8 19	20 20.88	-21 6.7	1.658	2.616	8.9	21.3	8 19	20 23.20	-11 5.4	1.709	2.674	8.2	21.2
8 29	20 14.10	-21 20.0	1.738	2.631	12.7	21.6	8 29	20 16.92	-11 42.3	1.763	2.668	11.9	21.4
9 8	20 10.01	-21 23.9	1.839	2.645	15.8	21.8	9 8	20 12.96	-12 15.8	1.837	2.662	15.1	21.6
242092	2002 <i>TK</i> ₃₀₀	7 30.5 318°13		0°1/30.4 18			474139	1995 <i>UH</i> ₃₁	7 30.5 301°21		5°5/27.5 18		
6 30	20 59.24	-15 31.5	1.642	2.546	13.0	19.7	6 30	21 4.86	-29 50.1	1.594	2.505	13.0	21.4
7 10	20 54.59	-16 23.2	1.568	2.533	9.2	19.4	7 10	20 58.85	-30 40.6	1.521	2.484	9.6	21.1
7 20	20 47.88	-17 26.1	1.517	2.520	4.9	19.1	7 20	20 50.29	-31 27.5	1.470	2.463	6.5	20.9
7 30	20 39.88	-18 35.1	1.492	2.507	0.2	18.7	7 30	20 40.08	-32 3.2	1.443	2.442	5.6	20.8
8 9	20 31.61	-19 43.8	1.493	2.495	4.6	19.1	8 9	20 29.54	-32 21.5	1.442	2.421	8.1	20.9
8 19	20 24.16	-20 46.3	1.520	2.484	9.1	19.3	8 19	20 20.07	-32 19.6	1.465	2.401	11.8	21.0
8 29	20 18.56	-21 38.1	1.570	2.472	13.2	19.5	8 29	20 12.92	-31 57.9	1.510	2.381	15.5	21.2
9 8	20 15.52	-22 17.1	1.639	2.462	16.7	19.7	9 8	20 8.88	-31 19.8	1.573	2.361	18.7	21.4
27084	1998 <i>TD</i> ₃₃	7 30.5 330°67		3°1/31.8 18			479513	2014 <i>BY</i> ₁₇	7 30.5 83°76		2°0/31.6 16		
6 30	20 58.52	-11 43.7	0.952	1.875	18.4	18.0	6 30	21 2.75	-12 27.6	1.811	2.699	12.9	21.0
7 10	20 55.03	-11 42.3	0.886	1.856	13.6	17.7	7 10	20 56.69	-12 25.7	1.752	2.705	9.3	20.8
7 20	20 48.50	-11 59.9	0.838	1.838	8.1	17.3	7 20	20 48.85	-12 33.3	1.715	2.711	5.4	20.6
7 30	20 39.91	-12 34.1	0.809	1.822	3.3	17.0	7 30	20 40.01	-12 48.1	1.705	2.717	2.1	20.4
8 9	20 30.85	-13 19.2	0.801	1.807	6.3	17.1	8 9	20 31.16	-13 7.1	1.721	2.723	4.2	20.5
8 19	20 23.05	-14 7.9	0.814	1.793	12.3	17.4	8 19	20 23.26	-13 27.3	1.764	2.729	8.0	20.8
8 29	20 18.11	-14 53.0	0.845	1.780	17.9	17.6	8 29	20 17.13	-13 45.8	1.831	2.735	11.6	21.0
9 8	20 16.99	-15 28.8	0.892	1.770	22.7	17.9	9 8	20 13.34	-14 0.6	1.920	2.741	14.6	21.2
90037	2002 <i>UL</i> ₄₁	7 30.5 245°37		0°5/30.2 18			481729	2008 <i>FP</i> ₇₀	7 30.5 99°82		11°3/11.5 16		
6 30	21 4.04	-17 41.1	1.759	2.658	12.6	20.2	6 30	20 59.15	+20 50.7	2.494	3.176	15.4	21.3
7 10	20 57.88	-18 17.3	1.683	2.645	8.9	19.9	7 10	20 53.91	+21 36.5	2.433	3.186	14.1	21.2
7 20	20 49.61	-19 0.8	1.630	2.632	4.7	19.7	7 20	20 47.32	+21 57.2	2.389	3.197	12.8	21.2
7 30	20 39.99	-19 46.8	1.603	2.618	0.5	19.3	7 30	20 39.94	+21 50.3	2.365	3.207	11.8	21.1
8 9	20 30.09	-20 30.4	1.604	2.604	4.6	19.6	8 9	20 32.50	+21 16.1	2.362	3.217	11.4	21.1
8 19	20 21.05	-21 7.0	1.631	2.590	9.0	19.8	8 19	20 25.69	+20 16.9	2.381	3.227	11.5	21.1
8 29	20 13.89	-21 34.1	1.682	2.575	13.0	20.0	8 29	20 20.18	+18 57.7	2.422	3.236	12.2	21.2
9 8	20 9.33	-21 50.6	1.753	2.560	16.4	20.2	9 8	20 16.43	+17 24.9	2.484	3.246	13.3	21.3
260211	2004 <i>RV</i> ₂₀₀	7 30.5 304°42		2°2/29.3 18			154510	2003 <i>FZ</i> ₅₅	7 30.5 52°22		3°0/ 1.2 17		
6 30	21 2.65	-24 2.9	2.047	2.949	10.9	20.1	6 30	21 2.01	- 9 36.3	1.399	2.292	15.6	19.9
7 10	20 56.74	-24 17.1	1.963	2.927	7.7	19.8	7 10	20 56.44	- 9 53.0	1.354	2.308	11.4	19.7
7 20	20 48.94	-24 31.1	1.904	2.905	4.3	19.6	7 20	20 48.79	-10 25.5	1.329	2.323	6.9	19.5
7 30	20 39.97	-24 41.1	1.871	2.883	2.2	19.4	7 30	20 40.01	-11 10.1	1.329	2.340	3.2	19.3
8 9	20 30.78	-24 43.8	1.866	2.861	4.9	19.5	8 9	20 31.32	-12 1.5	1.354	2.356	4.9	19.4
8 19	20 22.35	-24 37.3	1.887	2.839	8.5	19.7	8 19	20 23.85	-12 53.9	1.404	2.373	9.2	19.7
8 29	20 15.60	-24 21.0	1.933	2.817	12.0	19.9	8 29	20 18.55	-13 42.3	1.477	2.390	13.2	20.0
9 8	20 11.17	-23 55.9	1.999	2.796	15.0	20.1	9 8	20 15.95	-14 23.1	1.569	2.407	16.5	20.3
481145	2005 <i>UX</i> ₁₁₃	7 30.5 238°54		2°1/28.9 18			516285	2016 <i>WA</i> ₂₉	7 30.5 295°98		3°0/28.2 18		
6 30	21 1.07	-23 36.1	2.453	3.351	9.5	21.8	6 30	21 0.54	-24 1.6	2.047	2.953	10.8	21.3
7 10	20 55.33	-24 13.0	2.380	3.342	6.7	21.6	7 10	20 55.23	-25 7.4	1.982	2.947	7.6	21.1
7 20	20 48.08	-24 50.8	2.334	3.334	3.7	21.4	7 20	20 48.15	-26 15.1	1.942	2.942	4.4	20.9
7 30	20 39.93	-25 25.5	2.315	3.325	2.1	21.3	7 30	20 39.99	-27 18.8	1.929	2.936	3.0	20.8
8 9	20 31.66	-25 53.6	2.325	3.316	4.4	21.4	8 9	20 31.66	-28 13.2	1.943	2.931	5.5	20.9
8 19	20 24.05	-26 12.9	2.362	3.307	7.4	21.6	8 19	20 24.11	-28 54.6	1.984	2.926	8.8	21.1
8 29	20 17.83	-26 22.2	2.424	3.297	10.3	21.8	8 29	20 18.19	-29 21.4	2.049	2.921	12.0	21.3
9 8	20 13.52	-26 21.7	2.508	3.288	12.8	21.9	9 8	20 14.50	-29 33.9	2.134	2.916	14.6	21.5
386299	2008 <i>SL</i> ₁₆	7 30.5 322°47		1°8/31.3 18			505976	2015 <i>FG</i> ₃₃₅	7 30.5 158°12		11°1/20.2 17		
6 30	21 0.48	-13 25.1	1.363	2.269	15.0	20.7	6 30	21 14.08	-51 22.1	2.216	3.054	12.7	22.1
7 10	20 55.77	-13 32.9	1.289	2.252	10.9	20.4	7 10	21 5.37	-53 12.2	2.188	3.061	11.6	22.0
7 20	20 48.65	-13 53.1	1.236	2.236	6.2	20.1	7 20	20 53.72	-54 42.0	2.184	3.067	11.1	22.0
7 30	20 39.97	-14 23.0	1.207	2.220	1.9	19.8	7 30	20 40.25	-55 43.1	2.202	3.073	11.5	22.1
8 9	20 30.97	-14 57.7	1.202	2.205	5.0	19.9	8 9	20 26.60	-56 11.5	2.244	3.078	12.6	22.1
8 19	20 22.95	-15 32.4	1.220	2.191	10.0	20.2	8 19	20 14.43	-56 7.7	2.306	3.082	14.0	22.3
8 29	20 17.13	-16 2.6	1.261	2.178	14.7	20.4	8 29	20 5.11	-55 36.1	2.386	3.086	15.4	22.4
9 8	20 14.29	-16 25.4	1.320	2.165	18.7	20.6	9 8	19 59.37	-54 43.2	2.482	3.090	16.7	22.5
399993	2006 <i>DV</i> ₁₄	7 30.5 262°30		2°2/29.2 18			399605	2003 <i>WO</i> ₁₀₃	7 30.5 213°15		3°6/ 2.4 18		</

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7 30.5

7 30.5

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
183723	2003 YN ₈₅		7 30.5 304°81	4.9/1.7	18		48325	2002 NO ₄₂		7 30.5 312°52	2.7/29.3	18	
6 30	21 2.27	-7 29.1	1.345	2.233	16.4	19.8	6 30	21 3.24	-22 18.0	1.245	2.166	15.1	19.2
7 10	20 57.02	-7 11.4	1.273	2.221	12.5	19.5	7 10	20 58.08	-22 52.3	1.173	2.145	10.7	18.9
7 20	20 49.32	-7 11.1	1.220	2.208	8.3	19.2	7 20	20 50.06	-23 31.2	1.121	2.125	5.9	18.5
7 30	20 40.05	-7 27.9	1.191	2.196	5.1	19.0	7 30	20 40.12	-24 7.8	1.092	2.105	2.7	18.3
8 9	20 30.46	-7 58.7	1.186	2.184	6.3	19.1	8 9	20 29.74	-24 35.0	1.087	2.085	6.7	18.5
8 19	20 21.89	-8 38.7	1.205	2.173	10.5	19.3	8 19	20 20.54	-24 48.2	1.105	2.066	12.0	18.7
8 29	20 15.53	-9 22.3	1.245	2.162	14.9	19.5	8 29	20 13.95	-24 45.9	1.143	2.048	16.8	18.9
9 8	20 12.19	-10 4.1	1.304	2.151	18.8	19.7	9 8	20 10.86	-24 28.9	1.198	2.031	21.0	19.2
47894	2000 GS ₂₁		7 30.5 267°35	0.8/31.0	18		276442	2003 EF ₁₇		7 30.5 58°69	1.6/29.6	17	
6 30	21 1.79	-14 32.1	2.076	2.965	11.4	19.7	6 30	21 3.47	-18 59.8	1.398	2.309	14.4	20.1
7 10	20 56.09	-14 51.9	1.990	2.946	8.2	19.4	7 10	20 57.51	-19 59.2	1.360	2.329	10.0	19.8
7 20	20 48.63	-15 19.9	1.927	2.926	4.5	19.2	7 20	20 49.37	-21 4.4	1.345	2.349	5.1	19.6
7 30	20 40.03	-15 53.1	1.892	2.906	0.9	18.8	7 30	20 40.07	-22 8.3	1.355	2.369	1.6	19.4
8 9	20 31.16	-16 28.0	1.884	2.886	3.8	19.0	8 9	20 30.92	-23 4.0	1.390	2.389	5.4	19.7
8 19	20 22.93	-17 1.2	1.903	2.865	7.7	19.2	8 19	20 23.12	-23 47.1	1.451	2.410	9.9	20.1
8 29	20 16.21	-17 29.8	1.948	2.844	11.3	19.4	8 29	20 17.63	-24 15.5	1.533	2.431	13.8	20.3
9 8	20 11.64	-17 51.9	2.014	2.823	14.5	19.6	9 8	20 14.97	-24 29.4	1.635	2.451	17.0	20.6
374924	2006 YD ₉		7 30.5 295°09	1.5/29.8	18		396389	2014 DZ ₁₂₀		7 30.5 231°76	3.8/2.4	18	
6 30	21 3.50	-19 49.2	1.443	2.354	14.1	21.0	6 30	21 1.24	-4 39.1	2.272	3.124	11.9	21.8
7 10	20 57.98	-20 23.9	1.364	2.332	10.0	20.7	7 10	20 55.55	-4 59.1	2.184	3.111	9.2	21.6
7 20	20 49.90	-21 5.6	1.307	2.311	5.3	20.3	7 20	20 48.29	-5 33.9	2.120	3.097	6.3	21.4
7 30	20 40.10	-21 48.4	1.275	2.289	1.5	20.0	7 30	20 40.04	-6 22.1	2.082	3.082	4.0	21.2
8 9	20 29.86	-22 26.1	1.267	2.267	5.7	20.2	8 9	20 31.54	-7 20.4	2.073	3.067	4.5	21.2
8 19	20 20.57	-22 53.9	1.284	2.245	10.7	20.5	8 19	20 23.61	-8 24.8	2.091	3.051	7.3	21.4
8 29	20 13.55	-23 9.1	1.323	2.224	15.3	20.7	8 29	20 17.01	-9 30.6	2.137	3.034	10.4	21.5
9 8	20 9.64	-23 11.4	1.381	2.203	19.2	20.9	9 8	20 12.31	-10 33.8	2.205	3.017	13.3	21.7
445778	2011 YW ₁₇		7 30.5 248°34	0.3/30.3	18		33720	1999 LD ₂₇		7 30.5 21°10	5.3/26.9	18	
6 30	21 1.70	-18 15.4	2.308	3.201	10.3	21.5	6 30	21 1.02	-25 39.9	1.329	2.251	14.2	16.8
7 10	20 55.83	-18 31.7	2.231	3.190	7.2	21.3	7 10	20 56.21	-27 30.9	1.285	2.256	10.1	16.6
7 20	20 48.40	-18 52.1	2.178	3.179	3.8	21.1	7 20	20 48.89	-29 22.9	1.263	2.262	6.4	16.4
7 30	20 40.03	-19 13.7	2.152	3.167	0.3	20.7	7 30	20 40.06	-31 4.7	1.267	2.268	5.6	16.3
8 9	20 31.51	-19 33.4	2.155	3.156	3.6	21.0	8 9	20 31.13	-32 26.8	1.294	2.275	8.5	16.5
8 19	20 23.66	-19 49.0	2.186	3.144	7.1	21.2	8 19	20 23.48	-33 23.6	1.345	2.283	12.5	16.8
8 29	20 17.23	-19 58.7	2.242	3.132	10.3	21.4	8 29	20 18.31	-33 54.5	1.417	2.292	16.1	17.0
9 8	20 12.77	-20 1.9	2.321	3.120	13.1	21.6	9 8	20 16.28	-34 1.9	1.506	2.301	19.1	17.3
238577	2004 XM ₁₂₄		7 30.5 147°03	9.3/22.0	18		506761	2006 WH ₆₈		7 30.5 254°96	3.9/27.8	18	
6 30	21 9.60	-45 11.3	2.237	3.102	11.6	20.4	6 30	21 5.05	-25 2.7	1.740	2.646	12.4	21.5
7 10	21 1.89	-46 57.5	2.204	3.111	10.1	20.3	7 10	20 58.84	-26 19.1	1.665	2.629	8.8	21.2
7 20	20 51.77	-48 28.1	2.196	3.119	9.3	20.3	7 20	20 50.28	-27 38.3	1.613	2.611	5.3	21.0
7 30	20 40.18	-49 35.2	2.213	3.126	9.6	20.3	7 30	20 40.15	-28 52.5	1.588	2.593	4.0	20.8
8 9	20 28.46	-50 14.5	2.254	3.133	10.9	20.4	8 9	20 29.61	-29 54.3	1.590	2.574	6.9	21.0
8 19	20 17.90	-50 25.6	2.318	3.140	12.6	20.6	8 19	20 19.92	-30 38.8	1.617	2.555	10.7	21.2
8 29	20 9.67	-50 11.3	2.402	3.146	14.3	20.7	8 29	20 12.27	-31 4.3	1.667	2.535	14.4	21.3
9 8	20 4.42	-49 36.9	2.502	3.152	15.8	20.8	9 8	20 7.46	-31 11.8	1.737	2.515	17.6	21.5
192196	2007 HU ₂		7 30.5 23°00	2.6/31.9	17		8086	Peterthomas		7 30.5 352°15	5.6/26.3	18	
6 30	21 1.73	-10 41.7	1.573	2.464	14.3	20.4	6 30	21 0.30	-34 50.2	2.254	3.154	10.2	16.5
7 10	20 56.25	-10 53.2	1.512	2.465	10.5	20.1	7 10	20 55.00	-35 36.0	2.197	3.148	7.9	16.4
7 20	20 48.74	-11 18.3	1.472	2.467	6.3	19.9	7 20	20 48.01	-36 14.6	2.165	3.143	6.0	16.2
7 30	20 40.04	-11 53.9	1.457	2.468	2.7	19.7	7 30	20 40.04	-36 40.8	2.158	3.139	5.8	16.2
8 9	20 31.25	-12 35.8	1.468	2.470	4.6	19.8	8 9	20 32.04	-36 51.2	2.178	3.135	7.3	16.3
8 19	20 23.46	-13 19.2	1.504	2.472	8.8	20.1	8 19	20 24.90	-36 44.6	2.222	3.132	9.6	16.4
8 29	20 17.63	-13 59.7	1.564	2.474	12.8	20.3	8 29	20 19.44	-36 21.9	2.289	3.130	12.0	16.6
9 8	20 14.37	-14 34.0	1.645	2.477	16.2	20.5	9 8	20 16.17	-35 45.5	2.376	3.128	14.1	16.8
192402	1997 AW ₁₂		7 30.5 149°66	0.7/30.1	18		173780	2001 SV ₃₂		7 30.5 61°08	3.0/28.7	18	
6 30	21 6.36	-20 20.0	2.060	2.952	11.3	20.1	6 30	21 3.14	-25 30.3	1.969	2.873	11.2	20.1
7 10	20 59.07	-20 22.7	2.000	2.959	7.9	19.9	7 10	20 57.01	-26 5.1	1.911	2.874	7.9	19.9
7 20	20 50.05	-20 27.0	1.964	2.966	4.1	19.7	7 20	20 49.07	-26 38.9	1.877	2.876	4.6	19.7
7 30	20 40.10	-20 30.1	1.957	2.972	0.7	19.4	7 30	20 40.10	-27 6.8	1.870	2.878	3.0	19.6
8 9	20 30.20	-20 29.4	1.978	2.977	4.0	19.7	8 9	20 31.10	-27 24.9	1.890	2.879	5.4	19.7
8 19	20 21.27	-20 23.5	2.027	2.983	7.7	20.0	8 19	20 23.06	-27 31.1	1.936	2.881	8.8	19.9
8 29	20 14.12	-20 11.7	2.101	2.987	11.1	20.2	8 29	20 16.82	-27 25.2	2.006	2.883	12.0	20.1
9 8	20 9.25	-19 54.5	2.197	2.992	13.9	20.4	9 8	20 12.94	-27 8.5	2.097	2.884	14.7	20.3
188634	2005 QX ₈₀		7 30.5 317°34	7.8/2.8	17		369527	2010 WE ₆₂		7 30.5 336°42	3.2/31.7	18	
6 30	21 0.31	-2 21.0	1.325	2.199	17.5	19.6	6 30	21 0.90	-12 21.9	1.093	2.007	17.3	20.1
7 10	20 55.73	-1 37.9	1.246	2.179	14.1	19.4	7 10	20 56.43	-12 1.4	1.028	1.994	12.8	19.8
7 20	20 48.71	-1 16.1	1.187	2.160	10.6	19.1	7 20	20 49.16	-11 54.9	0.982	1.981	7.6	19.5
7 30	20 40.05	-1 17.9	1.150	2.141	8.1	18.9	7 30	20 40.11	-12 1.0	0.958	1.970	3.4	19.2
8 9	20 30.96	-1 42.5	1.135	2.122	8.5	18.9	8 9	20 30.76	-12 16.2	0.956	1.960	6.0	19.3
8 19	20 22.75	-2 26.0	1.143	2.105	11.6	19.0	8 19	20 22.66	-12 35.8	0.976	1.951	11.3	19.6
8 29	20 16.70	-3 21.8	1.171	2.088	15.6	19.2	8 29	20 17.20	-12 55.4	1.016	1.943	16.4	19.9
9 8	20 13.64	-4 22.2	1.219	2.072	19.4	19.4	9 8	20 15.19	-13 10.9	1.073	1.936	20.7	20.1
161518	2004 RK ₃₃₄		7 30.5 339°52	1.2/31.5	18		123754	2001 AR ₃₂		7 30.5 303°27	1.4/29.8	18	R
6 30	20 58.05	-11 35.2	1.973	2.									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
415440	2013 <i>RQ</i> ₈₈		7 30.5 11 ^o 17	3 ^o 4/	2.2 18		139349	2001 <i>KL</i> ₇₄		7 30.5 56 ^o 24	2 ^o 1/	29.5 17	
6 30	20 56.46	- 6 12.3	2.509	3.371	10.6	20.6	6 30	21 5.03	-21 4.3	1.305	2.220	15.0	19.4
7 10	20 51.99	- 6 10.8	2.442	3.374	8.1	20.4	7 10	20 58.82	-21 44.2	1.264	2.233	10.4	19.2
7 20	20 46.33	- 6 20.3	2.398	3.377	5.5	20.3	7 20	20 50.18	-22 27.8	1.243	2.247	5.5	19.0
7 30	20 39.98	- 6 39.8	2.381	3.381	3.5	20.2	7 30	20 40.25	-23 8.4	1.247	2.261	2.1	18.8
8 9	20 33.58	- 7 7.4	2.391	3.384	4.0	20.2	8 9	20 30.44	-23 40.0	1.276	2.275	5.9	19.1
8 19	20 27.76	- 7 40.1	2.428	3.389	6.4	20.4	8 19	20 22.11	-23 59.1	1.329	2.289	10.5	19.4
8 29	20 23.10	- 8 15.2	2.491	3.393	8.9	20.5	8 29	20 16.30	-24 4.7	1.403	2.303	14.6	19.7
9 8	20 20.01	- 8 49.6	2.577	3.398	11.3	20.7	9 8	20 13.58	-23 57.9	1.497	2.318	18.0	19.9
52796	1998 <i>QA</i> ₅₂		7 30.5 291 ^o 77	1 ^o 2/	30.9 18		521543	2015 <i>OG</i> ₁₀₁		7 30.5 266 ^o 45	3 ^o 4/	1.8 18	
6 30	21 6.06	-15 57.3	1.227	2.136	16.2	18.7	6 30	21 0.12	- 7 29.2	2.230	3.097	11.6	20.9
7 10	20 59.99	-15 47.9	1.155	2.120	11.7	18.4	7 10	20 54.72	- 7 21.0	2.158	3.095	8.8	20.7
7 20	20 51.04	-15 47.1	1.104	2.105	6.5	18.0	7 20	20 47.86	- 7 23.9	2.109	3.092	5.8	20.5
7 30	20 40.22	-15 52.1	1.076	2.090	1.3	17.6	7 30	20 40.14	- 7 37.1	2.087	3.090	3.6	20.4
8 9	20 29.02	-15 58.8	1.072	2.075	5.5	17.9	8 9	20 32.32	- 7 58.5	2.092	3.088	4.3	20.4
8 19	20 19.05	-16 3.8	1.091	2.061	11.1	18.2	8 19	20 25.17	- 8 25.2	2.125	3.085	7.1	20.6
8 29	20 11.70	-16 4.6	1.132	2.046	16.2	18.4	8 29	20 19.39	- 8 54.2	2.182	3.083	10.1	20.8
9 8	20 7.85	-15 59.7	1.190	2.032	20.5	18.6	9 8	20 15.49	- 9 22.6	2.263	3.081	12.8	21.0
17916	1999 <i>GZ</i> ₃		7 30.5 192 ^o 13	3 ^o 1/	1.1 18		61358	2000 <i>PK</i> ₁₂		7 30.5 316 ^o 15	1 ^o 0/	31.3 18	
6 30	21 5.33	-10 8.6	1.570	2.454	14.7	19.4	6 30	20 58.74	-11 1.7	1.404	2.305	15.0	18.3
7 10	20 58.84	-10 8.0	1.504	2.453	10.9	19.1	7 10	20 54.65	-12 19.2	1.325	2.286	10.9	18.0
7 20	20 50.17	-10 20.9	1.460	2.452	6.6	18.9	7 20	20 48.21	-13 58.0	1.267	2.267	6.1	17.7
7 30	20 40.19	-10 44.9	1.441	2.451	3.2	18.7	7 30	20 40.17	-15 52.1	1.234	2.249	1.2	17.3
8 9	20 30.07	-11 16.4	1.448	2.449	5.0	18.8	8 9	20 31.67	-17 52.1	1.227	2.231	4.9	17.5
8 19	20 20.98	-11 51.1	1.481	2.446	9.2	19.0	8 19	20 23.98	-19 47.6	1.245	2.214	10.1	17.8
8 29	20 13.96	-12 24.9	1.538	2.444	13.2	19.2	8 29	20 18.34	-21 30.2	1.286	2.197	14.9	18.0
9 8	20 9.67	-12 54.4	1.615	2.440	16.7	19.5	9 8	20 15.62	-22 54.5	1.347	2.182	18.9	18.2
273517	2007 <i>BS</i> ₁₃		7 30.5 245 ^o 39	1 ^o 3/	29.8 18		517016	2012 <i>UW</i> ₆₇		7 30.5 301 ^o 72	16 ^o 6/	8.6 18	
6 30	21 5.30	-20 13.7	1.809	2.708	12.3	21.7	6 30	21 16.64	-58 48.6	1.677	2.498	16.9	20.4
7 10	20 58.81	-20 44.5	1.731	2.694	8.7	21.4	7 10	21 9.90	-61 51.9	1.635	2.470	16.6	20.3
7 20	20 50.18	-21 19.7	1.677	2.679	4.6	21.2	7 20	20 57.63	-64 29.3	1.614	2.441	17.1	20.3
7 30	20 40.21	-21 54.5	1.650	2.665	1.3	20.9	7 30	20 40.68	-66 25.7	1.612	2.413	18.2	20.3
8 9	20 29.96	-22 24.1	1.651	2.649	4.8	21.1	8 9	20 21.64	-67 31.8	1.628	2.385	19.7	20.3
8 19	20 20.58	-22 45.2	1.678	2.633	9.1	21.3	8 19	20 4.22	-67 46.6	1.657	2.357	21.3	20.4
8 29	20 13.11	-22 55.9	1.728	2.617	13.0	21.5	8 29	19 51.90	-67 17.0	1.699	2.330	22.9	20.5
9 8	20 8.24	-22 56.3	1.800	2.600	16.3	21.7	9 8	19 46.39	-66 13.7	1.748	2.302	24.2	20.6
428308	2007 <i>FC</i> ₂₅		7 30.5 136 ^o 48	3 ^o 3/	1.8 17		483796	2005 <i>VY</i> ₉₆		7 30.5 279 ^o 02	4 ^o 0/	2.1 17	
6 30	21 2.66	- 6 56.5	1.939	2.806	13.1	21.8	6 30	21 0.20	- 5 36.0	2.295	3.152	11.7	22.4
7 10	20 56.58	- 7 15.6	1.878	2.816	9.8	21.7	7 10	20 54.88	- 5 25.7	2.202	3.131	9.0	22.2
7 20	20 48.83	- 7 48.9	1.841	2.826	6.3	21.5	7 20	20 48.01	- 5 27.6	2.133	3.109	6.2	22.0
7 30	20 40.14	- 8 34.2	1.830	2.836	3.6	21.3	7 30	20 40.16	- 5 41.3	2.090	3.088	4.2	21.8
8 9	20 31.41	- 9 27.3	1.847	2.844	4.5	21.4	8 9	20 32.05	- 6 5.0	2.074	3.066	4.8	21.8
8 19	20 23.53	-10 23.8	1.890	2.853	7.7	21.6	8 19	20 24.47	- 6 36.3	2.085	3.044	7.4	22.0
8 29	20 17.30	-11 19.1	1.959	2.861	11.0	21.8	8 29	20 18.17	- 7 11.7	2.123	3.021	10.4	22.1
9 8	20 13.24	-12 9.6	2.051	2.869	13.9	22.0	9 8	20 13.72	- 7 47.8	2.182	2.999	13.2	22.3
1023	Thomana		7 30.5 291 ^o 51	4 ^o 4/	2.8 18		116030	2003 <i>WY</i> ₉₀		7 30.5 358 ^o 78	0 ^o 1/	30.5 18	
6 30	20 58.22	- 3 34.3	2.263	3.116	12.0	14.7	6 30	21 1.26	-16 29.5	1.703	2.604	12.8	19.6
7 10	20 53.42	- 3 37.8	2.182	3.106	9.3	14.5	7 10	20 55.91	-17 4.7	1.641	2.604	9.0	19.4
7 20	20 47.18	- 3 55.8	2.125	3.097	6.6	14.4	7 20	20 48.62	-17 48.0	1.601	2.603	4.8	19.1
7 30	20 40.06	- 4 27.6	2.093	3.088	4.6	14.2	7 30	20 40.19	-18 34.8	1.588	2.603	0.2	18.7
8 9	20 32.79	- 5 10.6	2.088	3.078	4.9	14.2	8 9	20 31.65	-19 20.1	1.601	2.603	4.3	19.1
8 19	20 26.09	- 6 1.5	2.110	3.069	7.3	14.3	8 19	20 24.04	-19 59.6	1.640	2.603	8.6	19.3
8 29	20 20.68	- 6 56.0	2.158	3.060	10.1	14.5	8 29	20 18.29	-20 30.3	1.703	2.604	12.4	19.6
9 8	20 17.07	- 7 50.1	2.228	3.051	12.8	14.7	9 8	20 14.99	-20 50.9	1.786	2.604	15.7	19.8
319234	2006 <i>AT</i> ₂₄		7 30.5 238 ^o 44	0 ^o 2/	30.6 18		355540	2008 <i>AC</i> ₁₃₇		7 30.5 280 ^o 94	2 ^o 8/	1.8 18	
6 30	21 0.57	-16 54.2	2.525	3.413	9.7	21.8	6 30	20 59.97	- 6 59.2	2.056	2.924	12.4	21.0
7 10	20 54.95	-17 9.0	2.447	3.404	6.8	21.6	7 10	20 54.94	- 7 42.7	1.960	2.900	9.3	20.8
7 20	20 47.94	-17 28.5	2.396	3.396	3.6	21.4	7 20	20 48.15	- 8 42.7	1.888	2.875	5.9	20.5
7 30	20 40.11	-17 50.0	2.372	3.387	0.3	21.1	7 30	20 40.18	- 9 56.8	1.842	2.850	3.0	20.3
8 9	20 32.16	-18 10.9	2.376	3.378	3.2	21.3	8 9	20 31.85	-11 20.4	1.824	2.825	4.2	20.3
8 19	20 24.81	-18 29.1	2.409	3.368	6.5	21.5	8 19	20 24.03	-12 47.7	1.834	2.799	7.7	20.5
8 29	20 18.73	-18 42.7	2.468	3.359	9.5	21.7	8 29	20 17.61	-14 13.0	1.870	2.773	11.4	20.7
9 8	20 14.42	-18 50.7	2.550	3.349	12.0	21.9	9 8	20 13.28	-15 31.4	1.929	2.747	14.7	20.8
428285	2007 <i>EK</i> ₁₀₂		7 30.5 92 ^o 54	9 ^o 1/	25.9 18		335931	2007 <i>TW</i> ₂₃		7 30.5 330 ^o 78	21 ^o 5/	14.9 17	
6 30	21 11.65	-40 39.0	1.660	2.548	13.8	20.7	6 30	21 0.90	+23 26.9	1.112	1.859	27.7	20.7
7 10	21 3.42	-41 38.9	1.623	2.558	11.3	20.6	7 10	20 56.55	+25 10.1	1.058	1.856	26.0	20.5
7 20	20 52.56	-42 22.4	1.609	2.568	9.5	20.5	7 20	20 49.34	+26 5.8	1.015	1.852	24.2	20.4
7 30	20 40.34	-42 41.6	1.618	2.578	9.3	20.5	7 30	20 40.24	+26 3.8	0.984	1.849	22.7	20.3
8 9	20 28.37	-42 32.6	1.652	2.588	10.8	20.6	8 9	20 30.74	+24 59.8	0.967	1.847	21.7	20.2
8 19	20 18.12	-41 56.6	1.709	2.598	13.2	20.8	8 19	20 22.43	+22 57.5	0.965	1.845	21.6	20.2
8 29	20 10.70	-40 58.2	1.786	2.608	15.7	21.0	8 29	20 16.80	+20 8.4	0.979	1.843	22.5	20.3
9 8	20 6.63	-39 43.9	1.882	2.617	17.9	21.2	9 8						

EPHEMERIDES

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
476195	2007 <i>UJ</i> ₄₁		7 30.5 259°24		5°0/27.2 18		96388	1998 <i>BD</i> ₄₂		7 30.5 105°85		2°7/28.9 17	
6 30	21 4.86	-30 54.9	2.060	2.959	11.0	21.2	6 30	21 7.60	-22 10.0	1.569	2.473	13.6	19.7
7 10	20 58.44	-31 48.4	1.989	2.945	8.2	21.0	7 10	21 0.35	-23 16.8	1.530	2.495	9.4	19.5
7 20	20 49.99	-32 37.6	1.943	2.931	5.7	20.8	7 20	20 50.93	-24 25.4	1.514	2.515	5.1	19.3
7 30	20 40.28	-33 16.5	1.924	2.917	5.1	20.8	7 30	20 40.36	-25 28.4	1.524	2.535	2.8	19.2
8 9	20 30.36	-33 40.3	1.931	2.902	7.1	20.9	8 9	20 29.91	-26 19.6	1.562	2.555	5.9	19.5
8 19	20 21.32	-33 46.7	1.964	2.887	10.0	21.0	8 19	20 20.79	-26 55.4	1.625	2.573	9.9	19.8
8 29	20 14.13	-33 36.1	2.021	2.872	13.0	21.2	8 29	20 13.98	-27 15.1	1.711	2.592	13.5	20.0
9 8	20 9.45	-33 10.7	2.097	2.857	15.5	21.3	9 8	20 10.01	-27 20.1	1.817	2.609	16.5	20.3
105529	2000 <i>RG</i> ₂₇		7 30.5 269°06		1°1/31.2 18		481251	2005 <i>WX</i> ₁₆₀		7 30.5 155°03		4°4/27.1 18	
6 30	21 2.36	-14 57.2	2.125	3.013	11.2	19.1	6 30	21 2.40	-30 49.9	2.347	3.245	9.9	21.0
7 10	20 56.38	-14 51.6	2.052	3.007	8.1	18.9	7 10	20 56.43	-31 44.2	2.291	3.247	7.3	20.8
7 20	20 48.77	-14 51.8	2.004	3.002	4.5	18.7	7 20	20 48.81	-32 34.2	2.261	3.249	5.1	20.7
7 30	20 40.22	-14 56.2	1.982	2.996	1.2	18.4	7 30	20 40.25	-33 14.8	2.258	3.250	4.6	20.6
8 9	20 31.56	-15 2.3	1.988	2.990	3.6	18.6	8 9	20 31.64	-33 42.1	2.282	3.251	6.3	20.7
8 19	20 23.66	-15 8.1	2.022	2.985	7.3	18.8	8 19	20 23.84	-33 54.4	2.333	3.253	8.8	20.9
8 29	20 17.30	-15 11.8	2.081	2.979	10.6	19.0	8 29	20 17.64	-33 51.9	2.407	3.254	11.3	21.1
9 8	20 13.00	-15 12.1	2.162	2.973	13.5	19.2	9 8	20 13.55	-33 36.2	2.502	3.255	13.5	21.2
361124	2006 <i>GC</i> ₄		7 30.5 58°84		3°5/ 1.4 17		277437	2005 <i>UG</i> ₄₃₃		7 30.5 150°46		1°0/29.8 18	
6 30	21 3.50	- 8 58.8	1.199	2.096	17.3	20.7	6 30	21 0.70	-20 8.0	2.609	3.502	9.2	21.2
7 10	20 57.86	- 9 14.1	1.151	2.107	12.8	20.5	7 10	20 54.99	-20 39.7	2.547	3.507	6.4	21.0
7 20	20 49.75	- 9 48.4	1.124	2.118	7.8	20.2	7 20	20 47.97	-21 13.8	2.512	3.513	3.3	20.9
7 30	20 40.27	-10 38.0	1.119	2.129	3.8	20.0	7 30	20 40.21	-21 47.3	2.504	3.518	1.0	20.7
8 9	20 30.81	-11 36.3	1.138	2.140	5.6	20.2	8 9	20 32.42	-22 17.0	2.525	3.523	3.5	20.9
8 19	20 22.72	-12 36.5	1.181	2.152	10.2	20.5	8 19	20 25.28	-22 40.7	2.575	3.527	6.5	21.1
8 29	20 17.14	-13 32.4	1.245	2.164	14.7	20.8	8 29	20 19.42	-22 57.1	2.650	3.532	9.2	21.3
9 8	20 14.66	-14 19.3	1.328	2.176	18.5	21.1	9 8	20 15.28	-23 5.7	2.749	3.536	11.6	21.4
178427	1998 <i>SU</i> ₁₁₈		7 30.5 324°88		5°0/ 2.2 18		512695	2016 <i>US</i> ₅		7 30.5 320°28		10°4/22.5 18	
6 30	20 59.73	- 6 3.5	1.296	2.186	16.8	19.3	6 30	21 2.48	-36 31.5	1.314	2.230	14.8	19.9
7 10	20 55.34	- 6 5.4	1.225	2.173	12.9	19.0	7 10	20 58.05	-38 44.4	1.249	2.204	12.1	19.6
7 20	20 48.56	- 6 28.7	1.174	2.161	8.7	18.7	7 20	20 50.37	-40 51.2	1.206	2.178	10.5	19.5
7 30	20 40.22	- 7 12.4	1.145	2.150	5.3	18.5	7 30	20 40.37	-42 37.5	1.186	2.153	11.1	19.4
8 9	20 31.56	- 8 11.8	1.140	2.139	6.3	18.5	8 9	20 29.66	-43 51.6	1.188	2.129	13.6	19.5
8 19	20 23.89	- 9 20.4	1.157	2.129	10.4	18.7	8 19	20 20.13	-44 27.8	1.210	2.106	17.0	19.6
8 29	20 18.42	-10 30.6	1.197	2.119	14.8	19.0	8 29	20 13.54	-44 26.9	1.250	2.083	20.4	19.8
9 8	20 15.93	-11 35.7	1.256	2.111	18.8	19.2	9 8	20 10.96	-43 54.6	1.303	2.062	23.3	19.9
472098	2014 <i>AM</i> ₂₁		7 30.5 303°69		2°1/29.8 18		26478	<i>Cristianrosu</i>		7 30.5 106°65		4°6/ 2.6 18	
6 30	21 6.96	-23 37.7	1.523	2.430	13.7	21.0	6 30	21 1.24	- 4 15.4	1.976	2.834	13.3	18.6
7 10	21 0.25	-23 36.0	1.451	2.417	9.7	20.8	7 10	20 55.61	- 4 11.8	1.914	2.842	10.2	18.4
7 20	20 51.06	-23 33.4	1.401	2.403	5.3	20.5	7 20	20 48.39	- 4 23.6	1.875	2.850	7.1	18.3
7 30	20 40.35	-23 25.5	1.376	2.389	2.1	20.2	7 30	20 40.26	- 4 49.7	1.861	2.858	4.8	18.1
8 9	20 29.46	-23 9.0	1.378	2.376	5.6	20.4	8 9	20 32.09	- 5 27.2	1.874	2.865	5.3	18.2
8 19	20 19.75	-22 42.7	1.405	2.363	10.2	20.7	8 19	20 24.72	- 6 12.4	1.914	2.873	7.9	18.4
8 29	20 12.38	-22 7.2	1.454	2.351	14.4	20.9	8 29	20 18.91	- 7 0.8	1.978	2.881	10.9	18.6
9 8	20 8.06	-21 24.4	1.523	2.338	18.0	21.1	9 8	20 15.18	- 7 48.2	2.065	2.888	13.7	18.8
492343	2014 <i>GW</i> ₄₆		7 30.5 136°11		17°5/12.5 16		380732	2005 <i>SB</i> ₇		7 30.5 292°98		2°7/31.9 18	
6 30	21 3.85	+20 32.7	1.300	2.045	24.5	21.7	6 30	21 2.28	-10 45.2	1.528	2.419	14.6	21.2
7 10	20 58.23	+21 41.6	1.246	2.050	22.4	21.5	7 10	20 57.03	-10 52.5	1.443	2.397	10.8	20.9
7 20	20 50.06	+22 7.6	1.204	2.055	20.3	21.4	7 20	20 49.46	-11 14.0	1.380	2.375	6.6	20.6
7 30	20 40.30	+21 43.9	1.178	2.060	18.6	21.3	7 30	20 40.33	-11 47.7	1.341	2.352	2.9	20.3
8 9	20 30.34	+20 29.4	1.170	2.065	17.6	21.2	8 9	20 30.76	-12 29.5	1.327	2.330	5.0	20.4
8 19	20 21.56	+18 30.0	1.180	2.069	17.8	21.3	8 19	20 21.98	-13 14.5	1.339	2.307	9.6	20.6
8 29	20 15.21	+15 57.4	1.209	2.073	19.0	21.4	8 29	20 15.17	-13 57.7	1.373	2.285	14.1	20.8
9 8	20 12.05	+13 7.0	1.256	2.076	20.9	21.5	9 8	20 11.17	-14 35.3	1.427	2.263	18.0	21.0
329600	2003 <i>FF</i> ₈		7 30.5 345°85		10°8/ 6.1 18		188150	2002 <i>FV</i> ₃₈		7 30.6 135°36		0°1/30.6 18	
6 30	20 58.81	+ 6 36.9	1.421	2.251	18.9	20.1	6 30	21 0.01	-15 59.8	2.462	3.351	9.9	20.6
7 10	20 54.49	+ 7 17.8	1.354	2.246	16.1	19.9	7 10	20 54.57	-16 37.6	2.401	3.358	6.9	20.4
7 20	20 48.02	+ 7 29.2	1.306	2.240	13.4	19.7	7 20	20 47.79	-17 21.2	2.364	3.364	3.7	20.2
7 30	20 40.21	+ 7 8.0	1.277	2.236	11.3	19.6	7 30	20 40.25	-18 7.3	2.356	3.371	0.2	20.0
8 9	20 32.17	+ 6 15.4	1.271	2.232	10.9	19.5	8 9	20 32.65	-18 52.3	2.376	3.377	3.2	20.2
8 19	20 25.06	+ 4 56.7	1.286	2.229	12.4	19.6	8 19	20 25.71	-19 33.1	2.425	3.383	6.5	20.5
8 29	20 19.93	+ 3 20.6	1.323	2.227	15.0	19.8	8 29	20 20.07	-20 7.5	2.499	3.389	9.4	20.7
9 8	20 17.49	+ 1 37.1	1.379	2.225	17.9	20.0	9 8	20 16.18	-20 34.1	2.596	3.395	11.9	20.8
93226	2000 <i>SJ</i> ₁₄₂		7 30.5 287°96		5°7/ 2.7 18 R		244799	2003 <i>SX</i> ₂₅₁		7 30.6 296°58		7°2/25.8 18	
6 30	21 1.25	- 3 33.4	1.685	2.548	14.9	19.4	6 30	21 5.26	-34 22.8	1.716	2.619	12.6	19.5
7 10	20 56.05	- 3 18.6	1.602	2.531	11.7	19.2	7 10	20 59.21	-35 35.3	1.647	2.601	9.8	19.3
7 20	20 48.82	- 3 21.8	1.540	2.514	8.4	18.9	7 20	20 50.62	-36 40.9	1.602	2.582	7.6	19.1
7 30	20 40.25	- 3 43.4	1.502	2.497	6.0	18.7	7 30	20 40.41	-37 31.2	1.582	2.563	7.4	19.1
8 9	20 31.36	- 4 21.0	1.489	2.480	6.4	18.7	8 9	20 29.87	-37 59.5	1.587	2.545	9.5	19.2
8 19	20 23.20	- 5 10.5	1.502	2.463	9.5	18.9	8 19	20 20.39	-38 3.2	1.615	2.526	12.5	19.3
8 29	20 16.79	- 6 6.6	1.538	2.446	13.1	19.0	8 29	20 13.22	-37 43.5	1.664	2.508	15.6	19.5
9 8	20 12.86	- 7 3.5	1.594	2.429	16.5	19.2	9 8	20 9.11	-37 4.3	1.731	2.490	18.4	19.6
328918	2010 <i>US</i> ₃₄		7 30.5 236°13		4°1/28.5 17		186337	2002 <i>ED</i>					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
66315	1999 <i>JB</i> ₄₈		7 30.6 88°62	0°5/30.8	18		148416	2000 <i>WQ</i> ₇₃		7 30.6 204°10	1°0/29.7	18	
6 30	21 5.06	-16 15.6	1.657	2.553	13.4	19.1	6 30	21 1.38	-21 0.0	2.942	3.830	8.4	21.6
7 10	20 58.47	-16 27.4	1.607	2.567	9.4	18.9	7 10	20 55.43	-21 24.6	2.867	3.825	5.9	21.5
7 20	20 49.93	-16 46.1	1.580	2.581	5.0	18.7	7 20	20 48.24	-21 50.8	2.818	3.819	3.1	21.3
7 30	20 40.36	-17 8.1	1.579	2.594	0.6	18.4	7 30	20 40.32	-22 15.9	2.799	3.813	1.0	21.1
8 9	20 30.87	-17 29.4	1.606	2.608	4.2	18.7	8 9	20 32.31	-22 37.3	2.809	3.806	3.3	21.3
8 19	20 22.53	-17 47.0	1.658	2.621	8.5	19.0	8 19	20 24.85	-22 53.3	2.848	3.798	6.1	21.4
8 29	20 16.22	-17 58.8	1.734	2.634	12.3	19.2	8 29	20 18.53	-23 2.6	2.914	3.790	8.7	21.6
9 8	20 12.46	-18 3.9	1.831	2.647	15.4	19.5	9 8	20 13.79	-23 5.1	3.003	3.782	10.9	21.8
75622	2000 <i>AH</i> ₄₆		7 30.6 252°56	2°5/31.7	18		505925	2015 <i>EP</i> ₆₃		7 30.6 45°56	4°1/2.6	18	
6 30	21 5.49	-12 22.6	1.570	2.460	14.4	19.5	6 30	20 59.86	-4 31.9	1.472	2.349	15.9	20.2
7 10	20 59.07	-12 7.7	1.500	2.453	10.5	19.3	7 10	20 55.05	-5 20.7	1.420	2.361	12.0	20.0
7 20	20 50.42	-12 3.0	1.451	2.447	6.3	19.0	7 20	20 48.25	-6 31.6	1.389	2.374	7.9	19.7
7 30	20 40.41	-12 6.7	1.428	2.440	2.7	18.8	7 30	20 40.32	-8 0.3	1.382	2.387	4.5	19.6
8 9	20 30.22	-12 16.2	1.431	2.432	4.9	18.9	8 9	20 32.36	-9 39.4	1.400	2.400	5.2	19.7
8 19	20 21.03	-12 28.5	1.459	2.425	9.2	19.2	8 19	20 25.45	-11 20.8	1.444	2.414	8.9	19.9
8 29	20 13.93	-12 40.5	1.511	2.418	13.4	19.4	8 29	20 20.50	-12 56.5	1.513	2.428	12.8	20.2
9 8	20 9.58	-12 50.0	1.583	2.410	16.9	19.6	9 8	20 18.10	-14 21.0	1.602	2.443	16.1	20.4
256675	2007 <i>YE</i> ₁₉		7 30.6 355°52	0°9/30.1	18		80792	2000 <i>CN</i> ₈₆		7 30.6 1°38	8°5/28.7	18	
6 30	20 57.37	-16 30.1	0.955	1.887	17.4	19.5	6 30	21 8.07	-35 35.7	0.995	1.918	17.7	16.8
7 10	20 54.22	-17 30.2	0.903	1.881	12.3	19.2	7 10	21 1.84	-35 41.0	0.950	1.915	13.6	16.6
7 20	20 48.16	-18 45.8	0.870	1.876	6.4	18.9	7 20	20 52.11	-35 28.7	0.923	1.913	9.9	16.4
7 30	20 40.29	-20 8.4	0.858	1.873	0.9	18.5	7 30	20 40.52	-34 50.4	0.918	1.913	8.6	16.3
8 9	20 32.22	-21 27.1	0.867	1.871	6.4	18.8	8 9	20 29.23	-33 43.3	0.933	1.915	10.8	16.4
8 19	20 25.57	-22 32.8	0.898	1.871	12.3	19.2	8 19	20 20.18	-32 11.1	0.969	1.919	14.8	16.7
8 29	20 21.75	-23 19.7	0.947	1.873	17.4	19.5	8 29	20 14.72	-30 21.6	1.025	1.924	18.8	16.9
9 8	20 21.51	-23 46.2	1.013	1.876	21.7	19.7	9 8	20 13.32	-28 23.2	1.096	1.931	22.4	17.2
128817	2004 <i>RE</i> ₂₉₁		7 30.6 235°18	3°7/1.9	18		129338	Andrewlowman		7 30.6 311°97	4°1/2.3	18	
6 30	21 2.33	-6 40.9	1.998	2.863	12.8	20.5	6 30	20 59.33	-5 38.2	2.049	2.914	12.6	19.6
7 10	20 56.54	-6 45.9	1.917	2.852	9.8	20.3	7 10	20 54.37	-5 33.2	1.973	2.906	9.7	19.4
7 20	20 48.99	-7 4.9	1.858	2.841	6.5	20.1	7 20	20 47.82	-5 42.1	1.919	2.898	6.6	19.2
7 30	20 40.34	-7 36.6	1.826	2.830	3.9	19.9	7 30	20 40.30	-6 4.1	1.891	2.890	4.3	19.1
8 9	20 31.46	-8 17.9	1.821	2.817	4.7	20.0	8 9	20 32.63	-6 36.7	1.889	2.883	4.9	19.1
8 19	20 23.26	-9 5.1	1.843	2.805	7.9	20.1	8 19	20 25.62	-7 16.6	1.914	2.876	7.7	19.3
8 29	20 16.60	-9 53.8	1.890	2.792	11.4	20.3	8 29	20 20.05	-7 59.7	1.964	2.869	10.8	19.4
9 8	20 12.10	-10 40.1	1.960	2.779	14.4	20.5	9 8	20 16.48	-8 42.2	2.035	2.862	13.7	19.6
100326	1995 <i>OR</i> ₄		7 30.6 343°13	0°3/30.8	18		383978	2008 <i>TK</i> ₁₀₆		7 30.6 224°44	0°4/30.3	18	
6 30	21 0.27	-15 44.6	1.845	2.743	12.1	19.8	6 30	21 3.38	-17 59.4	1.914	2.810	11.9	21.9
7 10	20 55.16	-16 13.0	1.778	2.740	8.6	19.5	7 10	20 57.33	-18 26.1	1.844	2.805	8.4	21.6
7 20	20 48.26	-16 49.4	1.736	2.737	4.6	19.3	7 20	20 49.42	-18 58.4	1.799	2.800	4.4	21.4
7 30	20 40.30	-17 30.0	1.719	2.734	0.4	19.0	7 30	20 40.40	-19 32.4	1.780	2.795	0.4	21.1
8 9	20 32.22	-18 10.5	1.729	2.732	4.0	19.2	8 9	20 31.23	-20 3.9	1.788	2.789	4.1	21.4
8 19	20 24.97	-18 46.9	1.765	2.730	8.0	19.5	8 19	20 22.90	-20 29.6	1.823	2.783	8.2	21.6
8 29	20 19.41	-19 16.5	1.826	2.728	11.7	19.7	8 29	20 16.30	-20 47.5	1.883	2.777	11.8	21.8
9 8	20 16.11	-19 37.4	1.908	2.726	14.8	19.9	9 8	20 12.05	-20 56.7	1.964	2.770	14.9	22.0
129437	1978 <i>NG</i>		7 30.6 339°76	4°6/31.6	18		398229	2010 <i>PJ</i> ₇₈		7 30.6 317°43	4°8/27.2	18	
6 30	21 3.36	-12 16.4	1.286	2.188	16.0	17.5	6 30	21 0.98	-27 53.6	1.751	2.663	11.9	20.0
7 10	20 57.98	-10 58.4	1.211	2.168	12.1	17.2	7 10	20 56.11	-29 1.7	1.671	2.636	8.7	19.7
7 20	20 50.02	-9 47.3	1.156	2.150	7.7	16.9	7 20	20 49.00	-30 10.1	1.614	2.609	5.7	19.5
7 30	20 40.41	-8 45.1	1.126	2.133	4.6	16.7	7 30	20 40.38	-31 11.5	1.583	2.583	5.0	19.4
8 9	20 30.48	-7 53.0	1.119	2.117	6.5	16.8	8 9	20 31.35	-31 59.2	1.577	2.557	7.4	19.5
8 19	20 21.65	-7 11.6	1.135	2.103	11.0	17.0	8 19	20 23.11	-32 28.8	1.596	2.531	11.0	19.6
8 29	20 15.18	-6 39.8	1.173	2.091	15.5	17.2	8 29	20 16.81	-32 38.9	1.636	2.506	14.6	19.8
9 8	20 11.87	-6 14.8	1.230	2.080	19.5	17.4	9 8	20 13.24	-32 30.9	1.696	2.481	17.7	19.9
512135	2015 <i>PO</i> ₄₇		7 30.6 172°72	4°3/27.8	18		423222	2004 <i>RB</i> ₂₀₄		7 30.6 325°03	1°2/30.2	17	
6 30	21 4.72	-31 13.6	2.328	3.223	10.1	21.2	6 30	21 4.58	-21 9.7	1.004	1.931	17.2	20.4
7 10	20 58.02	-31 45.1	2.269	3.224	7.4	21.1	7 10	20 59.52	-20 58.1	0.936	1.911	12.3	20.1
7 20	20 49.66	-32 11.2	2.236	3.225	5.1	20.9	7 20	20 51.12	-20 49.0	0.887	1.892	6.6	19.7
7 30	20 40.38	-32 27.4	2.231	3.225	4.4	20.9	7 30	20 40.50	-20 37.6	0.859	1.874	1.2	19.3
8 9	20 31.10	-32 30.7	2.252	3.226	6.0	21.0	8 9	20 29.44	-20 19.6	0.853	1.857	6.5	19.6
8 19	20 22.73	-32 20.2	2.301	3.226	8.6	21.1	8 19	20 19.84	-19 52.8	0.868	1.841	12.7	19.9
8 29	20 16.04	-31 56.6	2.373	3.226	11.2	21.3	8 29	20 13.35	-19 17.3	0.902	1.826	18.3	20.1
9 8	20 11.53	-31 22.2	2.467	3.226	13.5	21.5	9 8	20 10.88	-18 34.5	0.952	1.812	23.0	20.4
802	Ерґаха		7 30.6 182°47	3°4/28.9	18 R		360955	2005 <i>US</i> ₉₅		7 30.6 45°51	10°0/8.1	17	
6 30	21 8.78	-24 41.4	1.461	2.368	14.1	16.2	6 30	20 58.95	+13 29.0	2.295	3.044	14.9	20.4
7 10	21 1.57	-25 22.3	1.404	2.369	10.0	16.0	7 10	20 53.98	+14 8.4	2.225	3.045	13.3	20.2
7 20	20 51.79	-26 3.1	1.369	2.369	5.7	15.7	7 20	20 47.58	+14 24.6	2.173	3.046	11.6	20.1
7 30	20 40.51	-26 36.7	1.360	2.369	3.5	15.6	7 30	20 40.31	+14 15.4	2.143	3.046	10.4	20.0
8 9	20 29.15	-26 57.5	1.376	2.369	6.6	15.8	8 9	20 32.92	+13 41.2	2.136	3.047	10.0	20.0
8 19	20 19.15	-27 2.8	1.418	2.368	10.9	16.0	8 19	20 26.15	+12 44.9	2.153	3.048	10.6	20.1
8 29	20 11.67	-26 52.8	1.482	2.366	14.9	16.3	8 29	20 20.68	+11 31.3	2.193	3.049	11.9	20.1
9 8	20 7.39	-26 29.8	1.564	2.365	18.3	16.5	9 8	20 17.05	+10 7.0	2.254	3.050	13.5	20.3
32852	1992 <i>RE</i> ₇		7 30.6 271°95	4°2/28.2	18		288981	2004 <i>TH</i> ₅₀		7 30.6 261°26	1°6/29.4	18	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
213710	2002 <i>UK</i> ₃₈		7 30.6 327 ^o .15	6 ^o .5/26.9	18		239463	2007 <i>TX</i> ₃₁₆		7 30.6 36 ^o .75	5 ^o .9/26.9	17	
6 30	21 2.88	-31 24.6	1.442	2.359	13.7	19.9	6 30	21 3.70	-30 45.6	1.644	2.554	12.7	19.3
7 10	20 57.78	-32 21.2	1.373	2.337	10.3	19.7	7 10	20 57.86	-31 58.3	1.599	2.561	9.4	19.1
7 20	20 49.98	-33 12.7	1.326	2.317	7.4	19.5	7 20	20 49.80	-33 5.4	1.578	2.568	6.6	18.9
7 30	20 40.45	-33 50.6	1.302	2.297	6.7	19.4	7 30	20 40.48	-33 59.1	1.583	2.575	6.0	18.9
8 9	20 30.59	-34 8.1	1.302	2.278	9.2	19.5	8 9	20 31.15	-34 33.8	1.612	2.583	8.2	19.1
8 19	20 21.90	-34 2.1	1.324	2.259	12.9	19.6	8 19	20 23.04	-34 47.2	1.665	2.591	11.3	19.3
8 29	20 15.70	-33 33.6	1.367	2.242	16.6	19.8	8 29	20 17.16	-34 40.4	1.740	2.599	14.3	19.5
9 8	20 12.78	-32 46.4	1.428	2.226	19.9	20.0	9 8	20 14.09	-34 16.5	1.834	2.608	17.0	19.7
132274	2002 <i>EB</i> ₁₄₅		7 30.6 188 ^o .82	2 ^o .3/29.3	18		6503	1994 <i>CP</i>		7 30.6 272 ^o .62	0 ^o .2/30.7	18	
6 30	21 5.48	-23 40.3	1.898	2.798	11.7	20.3	6 30	21 1.20	-15 53.4	1.963	2.857	11.7	17.6
7 10	20 58.81	-24 8.6	1.835	2.798	8.3	20.1	7 10	20 55.77	-16 23.5	1.894	2.854	8.3	17.3
7 20	20 50.19	-24 37.2	1.797	2.797	4.6	19.9	7 20	20 48.62	-17 1.1	1.850	2.851	4.4	17.1
7 30	20 40.46	-25 1.4	1.785	2.796	2.4	19.8	7 30	20 40.43	-17 42.4	1.832	2.847	0.4	16.8
8 9	20 30.66	-25 17.3	1.801	2.795	5.1	19.9	8 9	20 32.12	-18 23.4	1.842	2.844	3.8	17.1
8 19	20 21.85	-25 22.6	1.844	2.794	8.8	20.2	8 19	20 24.58	-19 0.2	1.878	2.840	7.8	17.3
8 29	20 14.94	-25 16.8	1.910	2.792	12.2	20.4	8 29	20 18.66	-19 30.1	1.939	2.837	11.3	17.5
9 8	20 10.51	-25 1.1	1.998	2.790	15.1	20.6	9 8	20 14.92	-19 51.7	2.021	2.834	14.3	17.7
206041	2002 <i>QU</i> ₆₁		7 30.6 300 ^o .05	1 ^o .5/31.5	18		21799	<i>Ciocciaria</i>		7 30.6 329 ^o .08	8 ^o .6/ 6.2	18	
6 30	21 1.22	-13 3.9	1.766	2.658	12.9	20.2	6 30	20 57.65	+ 7 4.1	1.977	2.783	15.2	18.1
7 10	20 55.96	-13 18.4	1.691	2.647	9.3	20.0	7 10	20 53.30	+ 7 22.9	1.899	2.774	13.0	18.0
7 20	20 48.78	-13 43.1	1.639	2.636	5.3	19.7	7 20	20 47.33	+ 7 18.3	1.841	2.765	10.7	17.8
7 30	20 40.39	-14 15.5	1.612	2.625	1.7	19.4	7 30	20 40.36	+ 6 49.0	1.805	2.757	9.1	17.7
8 9	20 31.80	-14 51.5	1.612	2.615	4.1	19.6	8 9	20 33.20	+ 5 56.1	1.793	2.749	8.7	17.7
8 19	20 24.01	-15 27.1	1.638	2.604	8.3	19.8	8 19	20 26.68	+ 4 43.8	1.806	2.742	9.9	17.7
8 29	20 17.96	-15 58.9	1.688	2.594	12.2	20.0	8 29	20 21.60	+ 3 18.1	1.842	2.735	12.1	17.8
9 8	20 14.30	-16 24.2	1.758	2.584	15.6	20.2	9 8	20 18.53	+ 1 46.2	1.900	2.728	14.5	18.0
440287	2004 <i>RY</i> ₂₁₆		7 30.6 289 ^o .64	0 ^o .7/30.2	17		340433	2006 <i>FC</i> ₄₆		7 30.6 79 ^o .97	6 ^o .9/ 4.7	17	
6 30	21 3.20	-20 13.7	2.247	3.141	10.5	21.1	6 30	21 1.72	+ 2 8.9	1.800	2.633	15.4	20.7
7 10	20 57.12	-20 17.0	2.156	3.117	7.4	20.9	7 10	20 56.03	+ 2 13.3	1.750	2.653	12.5	20.6
7 20	20 49.32	-20 22.5	2.091	3.092	3.9	20.6	7 20	20 48.68	+ 1 55.7	1.720	2.672	9.5	20.4
7 30	20 40.43	-20 27.3	2.053	3.067	0.7	20.3	7 30	20 40.43	+ 1 16.8	1.714	2.692	7.3	20.4
8 9	20 31.30	-20 28.8	2.043	3.042	3.8	20.5	8 9	20 32.23	+ 0 19.9	1.734	2.711	7.2	20.4
8 19	20 22.81	-20 25.3	2.060	3.018	7.5	20.7	8 19	20 24.96	- 0 49.5	1.779	2.730	9.0	20.5
8 29	20 15.79	-20 15.8	2.103	2.993	10.9	20.9	8 29	20 19.39	- 2 5.3	1.849	2.749	11.7	20.7
9 8	20 10.86	-20 0.1	2.168	2.968	13.9	21.0	9 8	20 16.03	- 3 21.1	1.941	2.768	14.3	21.0
165953	2001 <i>XT</i> ₁₈		7 30.6 220 ^o .80	1 ^o .2/31.1	17		414393	2008 <i>YK</i> ₁₄₉		7 30.6 307 ^o .91	1 ^o .3/29.9	17	
6 30	21 8.16	-15 47.1	1.436	2.334	15.0	20.0	6 30	21 2.99	-18 41.1	1.098	2.020	16.5	21.3
7 10	21 1.10	-15 34.3	1.370	2.330	10.7	19.7	7 10	20 58.34	-19 18.4	1.024	1.998	11.8	21.0
7 20	20 51.57	-15 28.8	1.327	2.327	5.9	19.4	7 20	20 50.55	-20 6.8	0.970	1.975	6.3	20.6
7 30	20 40.55	-15 27.9	1.309	2.323	1.4	19.1	7 30	20 40.57	-20 59.6	0.938	1.953	1.3	20.2
8 9	20 29.41	-15 28.5	1.316	2.319	4.9	19.3	8 9	20 29.96	-21 48.4	0.928	1.931	6.5	20.5
8 19	20 19.49	-15 28.2	1.349	2.315	9.8	19.6	8 19	20 20.51	-22 26.2	0.941	1.909	12.5	20.7
8 29	20 11.95	-15 24.9	1.405	2.310	14.3	19.9	8 29	20 13.85	-22 48.8	0.972	1.889	18.0	21.0
9 8	20 7.48	-15 17.7	1.480	2.305	18.0	20.1	9 8	20 11.01	-22 55.3	1.020	1.869	22.7	21.2
394484	2007 <i>TK</i> ₆₉		7 30.6 250 ^o .02	4 ^o .0/27.7	18		86174	1999 <i>RV</i> ₂₁₂		7 30.6 348 ^o .04	1 ^o .2/29.9	18	
6 30	21 4.54	-28 34.0	2.227	3.125	10.4	21.8	6 30	21 2.94	-21 36.7	1.880	2.783	11.7	18.7
7 10	20 58.16	-29 23.5	2.151	3.109	7.5	21.6	7 10	20 57.03	-21 40.6	1.815	2.779	8.2	18.5
7 20	20 49.91	-30 10.8	2.100	3.093	4.9	21.4	7 20	20 49.28	-21 46.0	1.774	2.776	4.4	18.2
7 30	20 40.49	-30 50.5	2.077	3.076	4.0	21.3	7 30	20 40.49	-21 49.4	1.759	2.773	1.2	18.0
8 9	20 30.84	-31 18.1	2.081	3.059	6.1	21.4	8 9	20 31.65	-21 47.9	1.771	2.770	4.4	18.2
8 19	20 21.93	-31 31.3	2.112	3.042	9.1	21.5	8 19	20 23.74	-21 39.9	1.809	2.768	8.3	18.5
8 29	20 14.68	-31 29.7	2.167	3.024	12.0	21.7	8 29	20 17.63	-21 24.9	1.872	2.767	11.8	18.7
9 8	20 9.72	-31 14.8	2.243	3.005	14.6	21.9	9 8	20 13.88	-21 3.2	1.956	2.765	14.8	18.9
366252	2012 <i>XJ</i> ₁₅₁		7 30.6 244 ^o .63	1 ^o .5/31.4	18		360915	2005 <i>SS</i> ₂₈₂		7 30.6 258 ^o .86	1 ^o .5/29.5	18	
6 30	21 4.20	-13 59.2	2.192	3.073	11.2	20.9	6 30	21 1.33	-21 5.4	2.228	3.126	10.3	21.3
7 10	20 57.74	-13 47.2	2.110	3.061	8.1	20.7	7 10	20 55.79	-21 42.4	2.155	3.118	7.2	21.1
7 20	20 49.61	-13 41.4	2.053	3.049	4.7	20.5	7 20	20 48.63	-22 22.3	2.107	3.109	3.9	20.8
7 30	20 40.47	-13 40.1	2.024	3.037	1.6	20.3	7 30	20 40.48	-23 1.2	2.087	3.100	1.5	20.7
8 9	20 31.16	-13 41.4	2.023	3.024	3.7	20.4	8 9	20 32.19	-23 35.2	2.095	3.091	4.2	20.8
8 19	20 22.55	-13 43.5	2.050	3.011	7.3	20.6	8 19	20 24.59	-24 1.3	2.129	3.082	7.6	21.0
8 29	20 15.45	-13 44.7	2.102	2.998	10.7	20.8	8 29	20 18.46	-24 17.9	2.189	3.073	10.8	21.2
9 8	20 10.42	-13 43.6	2.177	2.984	13.6	20.9	9 8	20 14.36	-24 24.7	2.271	3.064	13.5	21.4
238954	2006 <i>BJ</i> ₈₀		7 30.6 109 ^o .16	0 ^o .6/30.2	17		215781	2004 <i>HL</i> ₇₃		7 30.6 27 ^o .62	1 ^o .1/29.9	18	
6 30	21 2.51	-16 58.1	1.807	2.705	12.4	20.5	6 30	21 1.68	-19 54.6	1.789	2.694	12.1	20.3
7 10	20 56.74	-17 53.1	1.751	2.713	8.6	20.3	7 10	20 56.18	-20 22.6	1.733	2.699	8.5	20.1
7 20	20 49.12	-18 55.6	1.720	2.722	4.5	20.0	7 20	20 48.86	-20 54.6	1.701	2.704	4.4	19.9
7 30	20 40.44	-20 0.1	1.715	2.730	0.6	19.8	7 30	20 40.50	-21 26.3	1.695	2.709	1.1	19.7
8 9	20 31.71	-21 0.9	1.737	2.738	4.3	20.1	8 9	20 32.12	-21 53.2	1.715	2.715	4.5	19.9
8 19	20 23.90	-21 53.5	1.786	2.745	8.4	20.3	8 19	20 24.70	-22 12.6	1.761	2.721	8.4	20.2
8 29	20 17.90	-22 34.9	1.860	2.753	12.0	20.6	8 29	20 19.11	-22 22.8	1.831	2.727	12.0	20.4
9 8	20 14.26	-23 4.2	1.954	2.760	15.0	20.8	9 8	20 15.87	-22 23.				

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
23307	Alexramek		7 30.6 315°61	3°2/	1.4	18	287846	2003 SD ₂₃₁		7 30.6 290°42	2°0/	31.7	17
6 30	21 0.52	- 8 46.4	1.259	2.157	16.6	18.6	6 30	21 2.28	-11 10.0	1.362	2.260	15.6	20.4
7 10	20 56.08	- 9 15.6	1.188	2.145	12.4	18.3	7 10	20 57.22	-11 44.8	1.290	2.248	11.4	20.1
7 20	20 49.13	-10 5.8	1.138	2.133	7.6	18.0	7 20	20 49.71	-12 36.8	1.239	2.237	6.6	19.8
7 30	20 40.53	-11 13.8	1.110	2.121	3.5	17.7	7 30	20 40.59	-13 42.0	1.212	2.226	2.2	19.5
8 9	20 31.56	-12 32.7	1.106	2.109	5.4	17.8	8 9	20 31.13	-14 53.4	1.210	2.214	5.0	19.7
8 19	20 23.59	-13 54.4	1.125	2.098	10.4	18.0	8 19	20 22.64	-16 4.0	1.233	2.203	10.0	19.9
8 29	20 17.91	-15 11.0	1.167	2.088	15.2	18.3	8 29	20 16.37	-17 7.4	1.278	2.192	14.7	20.2
9 8	20 15.35	-16 16.7	1.227	2.078	19.4	18.5	9 8	20 13.11	-17 59.4	1.342	2.181	18.7	20.4
359449	2010 NV ₁₁		7 30.6 212°31	5°4/	26.9	18	122429	2000 QC ₁₀₉		7 30.6 304°17	1°6/	31.7	18
6 30	21 5.18	-34 18.6	2.247	3.141	10.5	20.7	6 30	21 0.13	-10 52.4	1.517	2.413	14.5	19.7
7 10	20 58.52	-34 59.8	2.191	3.140	8.0	20.6	7 10	20 55.58	-11 46.9	1.438	2.395	10.6	19.5
7 20	20 50.05	-35 33.4	2.159	3.139	6.0	20.4	7 20	20 48.81	-12 59.4	1.380	2.378	6.1	19.2
7 30	20 40.57	-35 54.4	2.154	3.138	5.6	20.4	7 30	20 40.54	-14 25.4	1.347	2.361	1.8	18.8
8 9	20 31.09	-35 59.3	2.176	3.137	7.1	20.5	8 9	20 31.88	-15 57.5	1.340	2.344	4.6	19.0
8 19	20 22.56	-35 47.3	2.223	3.136	9.5	20.6	8 19	20 24.00	-17 27.9	1.358	2.327	9.4	19.2
8 29	20 15.83	-35 19.6	2.295	3.135	12.0	20.8	8 29	20 18.06	-18 49.7	1.400	2.311	13.9	19.4
9 8	20 11.44	-34 39.2	2.386	3.133	14.2	21.0	9 8	20 14.84	-19 58.2	1.462	2.295	17.8	19.7
22792	1999 NU		7 30.6 317°24	2°6/	31.5	18	282005	2011 HS ₅₂		7 30.6 106°26	4°7/	3.1	18
6 30	21 4.31	-13 31.9	1.228	2.134	16.4	18.3	6 30	21 1.71	- 2 54.2	1.834	2.689	14.2	20.5
7 10	20 58.82	-13 7.0	1.158	2.120	12.0	18.0	7 10	20 56.10	- 3 16.8	1.775	2.701	11.0	20.3
7 20	20 50.60	-12 52.8	1.107	2.106	7.1	17.7	7 20	20 48.80	- 3 58.0	1.739	2.713	7.6	20.1
7 30	20 40.62	-12 47.7	1.080	2.093	2.8	17.4	7 30	20 40.54	- 4 55.7	1.728	2.725	5.0	20.0
8 9	20 30.31	-12 49.1	1.076	2.080	5.6	17.5	8 9	20 32.25	- 6 5.5	1.743	2.737	5.3	20.0
8 19	20 21.17	-12 53.7	1.096	2.067	10.8	17.8	8 19	20 24.82	- 7 21.6	1.786	2.748	8.1	20.2
8 29	20 14.53	-12 58.4	1.137	2.056	15.7	18.0	8 29	20 19.06	- 8 38.1	1.853	2.759	11.3	20.4
9 8	20 11.22	-13 0.4	1.195	2.045	20.0	18.2	9 8	20 15.50	- 9 50.0	1.943	2.770	14.2	20.7
349709	2008 YY ₃		7 30.6 330°41	4°6/	27.9	18	315889	2008 KH ₃₁		7 30.6 24°28	3°0/	1.9	18
6 30	21 2.78	-27 8.5	1.528	2.443	13.2	20.8	6 30	20 58.65	- 7 23.1	2.082	2.953	12.1	20.6
7 10	20 57.46	-28 2.7	1.466	2.433	9.5	20.6	7 10	20 53.88	- 7 44.6	2.016	2.956	9.1	20.4
7 20	20 49.75	-28 55.8	1.426	2.424	6.0	20.4	7 20	20 47.61	- 8 19.4	1.973	2.959	5.8	20.2
7 30	20 40.57	-29 40.3	1.411	2.415	4.7	20.3	7 30	20 40.48	- 9 5.4	1.956	2.962	3.2	20.0
8 9	20 31.20	-30 10.2	1.421	2.407	7.3	20.4	8 9	20 33.26	- 9 58.9	1.966	2.966	4.1	20.1
8 19	20 22.95	-30 22.1	1.454	2.399	11.2	20.6	8 19	20 26.74	-10 55.5	2.004	2.969	7.1	20.3
8 29	20 16.94	-30 15.8	1.510	2.392	14.9	20.8	8 29	20 21.63	-11 51.1	2.067	2.973	10.3	20.5
9 8	20 13.88	-29 53.5	1.584	2.385	18.1	21.0	9 8	20 18.45	-12 42.1	2.152	2.977	13.1	20.7
31559	Alonmillet		7 30.6 208°78	0°7/	30.2	17	436946	2012 TO ₁₃₈		7 30.6 340°06	3°9/	28.7	17
6 30	21 5.17	-16 59.8	1.521	2.423	14.0	19.0	6 30	21 4.47	-26 22.3	1.494	2.407	13.5	20.8
7 10	20 59.04	-17 54.3	1.456	2.420	9.9	18.8	7 10	20 58.60	-26 57.1	1.434	2.402	9.7	20.5
7 20	20 50.56	-18 58.5	1.414	2.416	5.2	18.5	7 20	20 50.33	-27 30.2	1.397	2.397	5.8	20.3
7 30	20 40.62	-20 6.1	1.397	2.412	0.7	18.2	7 30	20 40.64	-27 55.2	1.385	2.392	4.0	20.2
8 9	20 30.45	-21 10.1	1.407	2.408	5.0	18.5	8 9	20 30.85	-28 7.0	1.398	2.388	6.8	20.3
8 19	20 21.32	-22 4.7	1.442	2.403	9.8	18.7	8 19	20 22.27	-28 3.2	1.434	2.385	10.8	20.5
8 29	20 14.37	-22 46.4	1.501	2.398	14.1	19.0	8 29	20 16.04	-27 44.2	1.493	2.382	14.6	20.8
9 8	20 10.30	-23 14.0	1.579	2.392	17.6	19.2	9 8	20 12.79	-27 12.3	1.571	2.379	17.9	21.0
152471	2005 WE ₁		7 30.6 147°71	3°8/	28.1	18	96485	1998 HE ₁₄₇		7 30.6 168°98	4°6/	27.1	18
6 30	21 4.37	-29 45.6	2.313	3.210	10.1	20.5	6 30	21 4.93	-28 30.4	2.022	2.923	11.1	19.0
7 10	20 57.83	-30 13.4	2.255	3.211	7.3	20.3	7 10	20 58.53	-29 50.7	1.967	2.926	8.1	18.9
7 20	20 49.65	-30 36.6	2.222	3.213	4.8	20.2	7 20	20 50.17	-31 8.7	1.937	2.929	5.4	18.7
7 30	20 40.57	-30 51.2	2.216	3.215	3.9	20.1	7 30	20 40.63	-32 17.3	1.935	2.931	4.7	18.7
8 9	20 31.50	-30 54.2	2.238	3.216	5.6	20.2	8 9	20 30.96	-33 11.0	1.960	2.933	6.8	18.8
8 19	20 23.31	-30 44.6	2.286	3.218	8.4	20.4	8 19	20 22.19	-33 46.6	2.011	2.934	9.8	19.0
8 29	20 16.78	-30 22.9	2.359	3.219	11.0	20.6	8 29	20 15.26	-34 3.8	2.086	2.935	12.7	19.2
9 8	20 12.39	-29 51.0	2.454	3.221	13.3	20.8	9 8	20 10.79	-34 4.5	2.180	2.936	15.1	19.4
360	Carlova		7 30.6 265°24	0°4/	30.9	18 R	104071	2000 ET ₂₃		7 30.6 19°75	1°5/	31.3	17
6 30	20 59.97	-14 14.2	2.299	3.185	10.6	13.5	6 30	21 1.43	-13 47.3	1.178	2.091	16.4	18.5
7 10	20 54.84	-15 0.2	2.214	3.170	7.5	13.3	7 10	20 56.59	-14 2.0	1.130	2.097	11.8	18.3
7 20	20 48.16	-15 55.2	2.155	3.154	4.1	13.0	7 20	20 49.29	-14 30.0	1.102	2.103	6.5	18.0
7 30	20 40.49	-16 55.6	2.123	3.138	0.6	12.7	7 30	20 40.58	-15 6.9	1.096	2.110	1.7	17.7
8 9	20 32.59	-17 57.1	2.120	3.122	3.4	12.9	8 9	20 31.87	-15 46.8	1.114	2.119	5.1	18.0
8 19	20 25.23	-18 55.5	2.145	3.106	7.1	13.1	8 19	20 24.51	-16 24.0	1.155	2.128	10.2	18.3
8 29	20 19.18	-19 47.4	2.195	3.089	10.4	13.3	8 29	20 19.62	-16 54.4	1.217	2.138	14.8	18.6
9 8	20 15.03	-20 30.5	2.269	3.073	13.2	13.5	9 8	20 17.80	-17 15.3	1.298	2.149	18.6	18.9
247369	2001 XH ₆₁		7 30.6 300°47	5°9/	25.6	18	238710	Halassy		7 30.6 353°35	3°1/	28.8	18
6 30	21 2.28	-30 29.7	1.878	2.785	11.5	20.0	6 30	21 3.05	-24 34.3	1.678	2.588	12.5	20.5
7 10	20 57.05	-32 10.0	1.804	2.763	8.7	19.8	7 10	20 57.38	-25 17.0	1.619	2.586	8.8	20.3
7 20	20 49.58	-33 49.4	1.754	2.741	6.4	19.6	7 20	20 49.60	-26 0.1	1.584	2.584	5.1	20.1
7 30	20 40.58	-35 19.2	1.731	2.718	6.2	19.5	7 30	20 40.60	-26 37.8	1.574	2.583	3.2	20.0
8 9	20 31.13	-36 31.9	1.734	2.696	8.4	19.6	8 9	20 31.52	-27 4.9	1.591	2.583	5.9	20.1
8 19	20 22.41	-37 22.6	1.762	2.675	11.5	19.8	8 19	20 23.48	-27 18.6	1.632	2.582	9.8	20.4
8 29	20 15.59	-37 50.0	1.812	2.653	14.6	19.9	8 29	20 17.48	-27 18.2	1.697	2.582	13.3	20.6
9 8	20 11.47	-37 56.1	1.880	2.631	17.3	20.1	9 8	20 14.12	-27 5.0	1.781	2.582	16.4	20.8
144927	2005 CF ₅₂		7 30.6 72°11	0°4/	30.8	17	257279	2009 HY ₇		7 30.6 330°09	5°6/	27.4	18
6 30	21 6.40	-16 3.0	1.321	2.225									

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
240123	2002 <i>FD</i> ₂₄		7 30.6 208°29'	3°7'	2.1	17	49669	1999 <i>RZ</i> ₃₀		7 30.6 69°50'	10°1'	29.6	18
6 30	21 1.52	- 6 34.4	1.835	2.705	13.6	20.8	6 30	21 26.49	-39 19.0	0.968	1.869	20.2	16.9
7 10	20 56.09	- 6 48.8	1.765	2.703	10.3	20.6	7 10	21 14.90	-39 12.1	0.926	1.876	15.8	16.7
7 20	20 48.87	- 7 18.8	1.717	2.702	6.7	20.3	7 20	20 59.03	-38 38.5	0.902	1.883	11.8	16.5
7 30	20 40.57	- 8 2.4	1.695	2.700	3.9	20.2	7 30	20 41.19	-37 28.2	0.901	1.890	10.1	16.4
8 9	20 32.11	- 8 55.7	1.700	2.698	4.8	20.2	8 9	20 24.32	-35 40.6	0.922	1.897	12.0	16.5
8 19	20 24.45	- 9 54.0	1.731	2.696	8.1	20.4	8 19	20 10.82	-33 25.2	0.965	1.904	16.0	16.8
8 29	20 18.45	-10 52.2	1.787	2.694	11.6	20.6	8 29	20 2.08	-30 55.7	1.029	1.912	20.1	17.1
9 8	20 14.70	-11 46.2	1.864	2.691	14.8	20.8	9 8	19 58.33	-28 24.3	1.109	1.919	23.7	17.4
449613	2014 <i>JA</i> ₇₃		7 30.6 330°70'	5°8'	3.2	18	332466	2008 <i>DV</i> ₄₃		7 30.6 73°61'	1°5'	29.8	17
6 30	20 59.39	- 2 12.2	1.886	2.740	13.9	20.5	6 30	21 5.44	-19 46.8	1.420	2.329	14.4	20.7
7 10	20 54.58	- 1 51.7	1.811	2.732	11.1	20.3	7 10	20 59.12	-20 29.2	1.376	2.343	10.0	20.5
7 20	20 48.07	- 1 48.2	1.757	2.724	8.2	20.1	7 20	20 50.53	-21 16.7	1.354	2.357	5.2	20.3
7 30	20 40.53	- 2 1.9	1.728	2.717	6.1	19.9	7 30	20 40.71	-22 2.8	1.357	2.371	1.5	20.0
8 9	20 32.80	- 2 31.1	1.725	2.710	6.3	19.9	8 9	20 30.97	-22 41.6	1.386	2.385	5.3	20.3
8 19	20 25.79	- 3 12.2	1.746	2.704	8.7	20.1	8 19	20 22.57	-23 9.3	1.439	2.399	9.9	20.6
8 29	20 20.31	- 4 0.6	1.792	2.697	11.7	20.2	8 29	20 16.51	-23 24.3	1.515	2.413	13.9	20.9
9 8	20 16.96	- 4 51.2	1.859	2.692	14.6	20.4	9 8	20 13.35	-23 27.1	1.611	2.427	17.2	21.2
285498	2000 <i>DU</i> ₂₀		7 30.6 121°66'	0°0'	30.5	17	483814	2005 <i>WK</i> ₉₉		7 30.6 309°07'	0°2'	30.5	17
6 30	21 6.60	-17 19.7	1.691	2.586	13.2	20.9	6 30	21 0.85	-17 11.5	1.866	2.766	12.0	21.4
7 10	20 59.66	-17 34.8	1.637	2.597	9.3	20.7	7 10	20 55.88	-17 37.3	1.774	2.736	8.5	21.1
7 20	20 50.72	-17 55.7	1.607	2.608	4.9	20.4	7 20	20 48.92	-18 10.6	1.705	2.707	4.6	20.8
7 30	20 40.68	-18 18.5	1.604	2.619	0.3	20.1	7 30	20 40.63	-18 47.8	1.662	2.677	0.3	20.4
8 9	20 30.70	-18 39.2	1.627	2.629	4.3	20.4	8 9	20 31.95	-19 24.6	1.646	2.648	4.2	20.7
8 19	20 21.84	-18 55.0	1.677	2.639	8.6	20.7	8 19	20 23.89	-19 57.0	1.656	2.619	8.6	20.9
8 29	20 15.03	-19 4.1	1.751	2.648	12.4	21.0	8 29	20 17.47	-20 21.9	1.690	2.591	12.6	21.1
9 8	20 10.82	-19 5.9	1.846	2.658	15.5	21.2	9 8	20 13.42	-20 37.7	1.745	2.562	16.0	21.2
476936	2008 <i>WX</i> ₁₂₉		7 30.6 247°08'	10°5'	5.1	17	335573	2006 <i>CQ</i> ₄₇		7 30.6 320°80'	0°1'	30.6	18
6 30	21 3.58	+ 8 47.4	1.940	2.726	16.1	20.7	6 30	21 1.61	-16 20.6	1.497	2.404	13.9	20.5
7 10	20 57.52	+10 4.5	1.868	2.722	14.0	20.5	7 10	20 56.58	-16 56.5	1.430	2.395	9.9	20.2
7 20	20 49.64	+10 59.6	1.817	2.719	12.1	20.4	7 20	20 49.32	-17 42.2	1.384	2.386	5.3	19.9
7 30	20 40.63	+11 29.1	1.788	2.715	10.8	20.3	7 30	20 40.65	-18 33.0	1.363	2.378	0.3	19.5
8 9	20 31.39	+11 32.0	1.783	2.711	10.6	20.3	8 9	20 31.75	-19 22.7	1.367	2.370	4.7	19.9
8 19	20 22.88	+11 10.1	1.801	2.707	11.7	20.4	8 19	20 23.82	-20 6.2	1.396	2.362	9.5	20.1
8 29	20 15.99	+10 28.2	1.842	2.703	13.6	20.5	8 29	20 17.96	-20 39.8	1.448	2.355	13.8	20.4
9 8	20 11.33	+ 9 32.9	1.903	2.699	15.6	20.6	9 8	20 14.87	-21 1.9	1.520	2.348	17.4	20.6
190647	2000 <i>XH</i> ₂₄		7 30.6 242°77'	3°8'	28.3	18	514501	2016 <i>WS</i> ₂₃		7 30.6 171°92'	2°7'	28.8	18
6 30	21 6.87	-28 3.8	2.046	2.943	11.2	20.3	6 30	21 4.67	-27 48.0	2.749	3.639	8.9	21.5
7 10	20 59.93	-28 40.4	1.971	2.930	8.1	20.1	7 10	20 57.83	-28 3.2	2.686	3.642	6.4	21.3
7 20	20 50.95	-29 14.3	1.921	2.915	5.1	19.9	7 20	20 49.62	-28 15.2	2.649	3.644	3.9	21.2
7 30	20 40.72	-29 40.0	1.898	2.901	3.9	19.8	7 30	20 40.67	-28 21.0	2.641	3.645	2.7	21.1
8 9	20 30.29	-29 53.3	1.903	2.886	6.1	19.9	8 9	20 31.73	-28 18.4	2.662	3.647	4.4	21.2
8 19	20 20.73	-29 52.3	1.934	2.870	9.4	20.0	8 19	20 23.53	-28 6.4	2.711	3.648	7.0	21.4
8 29	20 13.03	-29 37.1	1.989	2.854	12.6	20.2	8 29	20 16.73	-27 45.6	2.787	3.649	9.5	21.6
9 8	20 7.83	-29 9.7	2.065	2.837	15.4	20.4	9 8	20 11.76	-27 17.0	2.885	3.649	11.6	21.7
392161	2009 <i>HM</i> ₉₉		7 30.6 359°95'	6°0'	26.6	18	144088	2004 <i>BV</i> ₅₄		7 30.6 261°77'	1°6'	29.7	18
6 30	21 3.07	-32 11.8	1.783	2.690	12.0	20.1	6 30	21 4.62	-19 41.1	1.552	2.458	13.6	20.6
7 10	20 57.44	-33 17.8	1.731	2.689	9.1	19.9	7 10	20 58.75	-20 28.3	1.480	2.446	9.6	20.3
7 20	20 49.66	-34 17.6	1.702	2.688	6.6	19.8	7 20	20 50.50	-21 22.2	1.432	2.435	5.1	20.0
7 30	20 40.64	-35 4.2	1.699	2.688	6.2	19.8	7 30	20 40.73	-22 16.8	1.409	2.423	1.6	19.8
8 9	20 31.54	-35 32.4	1.721	2.688	8.1	19.9	8 9	20 30.66	-23 5.6	1.412	2.411	5.4	20.0
8 19	20 23.52	-35 40.0	1.768	2.689	11.0	20.1	8 19	20 21.56	-23 43.7	1.440	2.399	10.0	20.2
8 29	20 17.58	-35 28.0	1.836	2.690	14.0	20.3	8 29	20 14.60	-24 8.5	1.492	2.386	14.3	20.5
9 8	20 14.33	-34 59.3	1.923	2.691	16.5	20.5	9 8	20 10.53	-24 19.7	1.562	2.374	17.8	20.7
280074	2002 <i>CP</i> ₂₂₅		7 30.6 187°71'	1°9'	29.3	18	437567	2014 <i>AM</i> ₁₄		7 30.6 204°21'	4°9'	27.3	18
6 30	21 4.87	-22 20.8	2.206	3.101	10.6	21.3	6 30	21 5.75	-29 48.7	1.980	2.880	11.3	21.3
7 10	20 58.28	-23 2.8	2.140	3.101	7.4	21.1	7 10	20 59.18	-30 53.3	1.920	2.877	8.3	21.1
7 20	20 49.98	-23 46.6	2.099	3.100	4.0	20.9	7 20	20 50.57	-31 54.4	1.884	2.874	5.7	20.9
7 30	20 40.67	-24 27.5	2.086	3.098	2.0	20.8	7 30	20 40.73	-32 45.2	1.875	2.870	5.0	20.9
8 9	20 31.24	-25 1.6	2.102	3.095	4.5	21.0	8 9	20 30.74	-33 20.5	1.893	2.866	7.0	21.0
8 19	20 22.61	-25 26.0	2.145	3.093	7.9	21.2	8 19	20 21.70	-33 38.0	1.937	2.861	10.0	21.2
8 29	20 15.58	-25 39.6	2.214	3.089	11.1	21.4	8 29	20 14.57	-33 37.7	2.004	2.856	13.0	21.4
9 8	20 10.72	-25 42.6	2.304	3.085	13.7	21.5	9 8	20 10.01	-33 22.0	2.091	2.851	15.6	21.5
508144	2015 <i>FR</i> ₇₅		7 30.6 140°44'	3°2'	28.6	17	54548	2000 <i>QO</i> ₇₆		7 30.6 23°87'	2°3'	29.4	18
6 30	21 6.14	-25 43.8	1.958	2.858	11.5	21.6	6 30	21 4.43	-24 18.8	1.928	2.830	11.5	18.6
7 10	20 59.26	-26 27.6	1.906	2.867	8.1	21.5	7 10	20 58.07	-24 32.6	1.869	2.832	8.1	18.4
7 20	20 50.50	-27 9.9	1.878	2.875	4.8	21.3	7 20	20 49.89	-24 45.5	1.833	2.834	4.5	18.2
7 30	20 40.70	-27 45.6	1.876	2.883	3.3	21.2	7 30	20 40.69	-24 53.8	1.825	2.836	2.3	18.0
8 9	20 30.90	-28 10.2	1.903	2.890	5.6	21.4	8 9	20 31.49	-24 54.1	1.843	2.838	4.9	18.2
8 19	20 22.12	-28 21.6	1.956	2.898	8.9	21.6	8 19	20 23.28	-24 45.2	1.888	2.840	8.5	18.4
8 29	20 15.24	-28 19.8	2.033	2.904	12.1	21.8	8 29	20 16.91	-24 26.9	1.957	2.843	11.8	18.6
9 8	20 10.81	-28 6.4	2.131	2.910	14.7	22.0	9 8	20 12.92	-24 0.5	2.048	2.846	14.6	18.8
512576	20												

EPHEMERIDES

7 30.6

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
11801	Frigeri		7 30.6 234°28	4°0/ 2.4	18		259336	2003 FU ₁₁₈		7 30.6 89°83	2°6/ 1.7	18	
6 30	21 0.54	- 5 10.0	2.387	3.240	11.4	18.2	6 30	20 59.75	- 8 11.3	2.114	2.986	11.9	20.5
7 10	20 55.11	- 4 58.6	2.308	3.234	8.8	18.1	7 10	20 54.67	- 8 42.2	2.049	2.991	8.9	20.3
7 20	20 48.28	- 4 59.1	2.254	3.228	6.1	17.9	7 20	20 48.09	- 9 25.9	2.008	2.996	5.5	20.1
7 30	20 40.61	- 5 11.0	2.225	3.222	4.2	17.8	7 30	20 40.64	-10 19.8	1.993	3.002	2.8	20.0
8 9	20 32.80	- 5 32.6	2.225	3.215	4.6	17.8	8 9	20 33.12	-11 19.8	2.006	3.007	3.8	20.1
8 19	20 25.58	- 6 1.3	2.251	3.209	7.0	17.9	8 19	20 26.29	-12 21.3	2.047	3.012	7.0	20.3
8 29	20 19.63	- 6 33.9	2.304	3.202	9.8	18.1	8 29	20 20.89	-13 20.3	2.113	3.017	10.2	20.5
9 8	20 15.44	- 7 7.2	2.380	3.195	12.3	18.2	9 8	20 17.42	-14 13.4	2.202	3.022	13.0	20.7
96828	1999 RT ₁₈₇		7 30.6 213°58	3°6/ 2.6	18		321778	2010 OQ ₈₁		7 30.6 293°73	0°5/30.3	18	
6 30	21 1.42	- 4 21.6	2.363	3.211	11.7	20.3	6 30	21 0.40	-17 44.5	2.103	3.000	10.9	21.1
7 10	20 55.79	- 4 46.2	2.279	3.204	9.0	20.1	7 10	20 55.34	-18 23.2	2.019	2.980	7.7	20.8
7 20	20 48.67	- 5 25.4	2.220	3.195	6.1	19.9	7 20	20 48.57	-19 8.5	1.959	2.960	4.1	20.6
7 30	20 40.64	- 6 17.4	2.187	3.186	3.9	19.8	7 30	20 40.68	-19 56.6	1.926	2.941	0.6	20.3
8 9	20 32.42	- 7 19.0	2.183	3.177	4.3	19.8	8 9	20 32.52	-20 43.0	1.920	2.921	3.9	20.5
8 19	20 24.75	- 8 26.0	2.207	3.167	7.0	19.9	8 19	20 24.98	-21 24.0	1.941	2.901	7.8	20.7
8 29	20 18.36	- 9 34.1	2.258	3.156	9.9	20.1	8 29	20 18.90	-21 56.5	1.988	2.881	11.3	20.9
9 8	20 13.78	-10 39.2	2.332	3.144	12.6	20.3	9 8	20 14.91	-22 19.4	2.056	2.861	14.3	21.1
172330	2002 VH ₁₈		7 30.6 274°82	3°8/28.1	18		427271	2014 WQ ₁₆₈		7 30.6 217°05	1°7/29.7	17	
6 30	21 3.48	-26 50.6	1.935	2.839	11.4	20.1	6 30	21 6.86	-19 57.2	1.682	2.581	13.1	22.1
7 10	20 57.60	-27 41.4	1.869	2.832	8.1	19.9	7 10	21 0.20	-20 47.4	1.611	2.574	9.2	21.8
7 20	20 49.75	-28 31.1	1.828	2.824	5.0	19.7	7 20	20 51.25	-21 43.4	1.564	2.566	4.9	21.5
7 30	20 40.71	-29 13.8	1.813	2.817	3.9	19.6	7 30	20 40.85	-22 39.2	1.543	2.557	1.7	21.3
8 9	20 31.51	-29 44.8	1.825	2.809	6.1	19.7	8 9	20 30.18	-23 28.5	1.550	2.547	5.2	21.5
8 19	20 23.19	-30 1.1	1.862	2.801	9.5	19.9	8 19	20 20.46	-24 6.9	1.583	2.537	9.6	21.8
8 29	20 16.70	-30 2.3	1.924	2.794	12.7	20.1	8 29	20 12.80	-24 32.1	1.639	2.526	13.6	22.0
9 8	20 12.67	-29 49.8	2.005	2.786	15.5	20.3	9 8	20 7.94	-24 44.0	1.716	2.515	17.0	22.2
490241	2008 WA ₄₇		7 30.6 300°82	4°3/28.0	18		32457	2000 SZ ₈₅		7 30.6 306°59	5°8/26.5	18	
6 30	21 3.39	-26 8.5	1.603	2.515	12.9	21.7	6 30	21 3.71	-33 1.3	2.024	2.924	11.1	18.7
7 10	20 57.97	-27 10.3	1.530	2.497	9.3	21.4	7 10	20 57.78	-34 4.2	1.965	2.919	8.4	18.5
7 20	20 50.14	-28 13.2	1.480	2.478	5.7	21.2	7 20	20 49.87	-35 1.0	1.931	2.913	6.3	18.3
7 30	20 40.74	-29 9.6	1.456	2.460	4.4	21.1	7 30	20 40.76	-35 45.3	1.923	2.908	5.9	18.3
8 9	20 30.98	-29 52.8	1.456	2.443	7.1	21.2	8 9	20 31.53	-36 12.4	1.941	2.903	7.7	18.4
8 19	20 22.18	-30 18.4	1.482	2.425	11.1	21.4	8 19	20 23.23	-36 20.3	1.984	2.898	10.4	18.6
8 29	20 15.51	-30 25.2	1.529	2.408	14.9	21.6	8 29	20 16.83	-36 9.6	2.049	2.893	13.1	18.7
9 8	20 11.77	-30 15.0	1.595	2.391	18.2	21.7	9 8	20 12.91	-35 43.0	2.134	2.888	15.5	18.9
61156	2000 NJ ₁₄		7 30.6 169°71	0°3/30.5	18		395031	2009 DE ₂₆		7 30.6 277°60	2°1/29.4	18	
6 30	21 6.81	-18 52.1	1.903	2.796	12.1	18.6	6 30	21 3.50	-22 37.0	1.885	2.788	11.7	21.4
7 10	20 59.74	-18 55.7	1.839	2.799	8.5	18.3	7 10	20 57.61	-23 8.9	1.816	2.780	8.2	21.2
7 20	20 50.79	-19 2.7	1.800	2.801	4.5	18.1	7 20	20 49.77	-23 42.7	1.771	2.772	4.5	20.9
7 30	20 40.77	-19 10.1	1.788	2.803	0.4	17.8	7 30	20 40.76	-24 13.6	1.752	2.764	2.1	20.8
8 9	20 30.72	-19 14.7	1.803	2.804	4.1	18.1	8 9	20 31.61	-24 37.4	1.761	2.757	5.0	20.9
8 19	20 21.66	-19 14.7	1.846	2.805	8.1	18.3	8 19	20 23.32	-24 51.2	1.796	2.749	8.8	21.2
8 29	20 14.46	-19 9.1	1.913	2.806	11.7	18.6	8 29	20 16.85	-24 53.9	1.854	2.741	12.3	21.4
9 8	20 9.68	-18 57.7	2.003	2.806	14.7	18.8	9 8	20 12.79	-24 46.0	1.934	2.733	15.3	21.6
504873	2010 VU ₄₇		7 30.6 229°57	0°4/30.9	17		162295	1999 VW ₁₄₉		7 30.6 307°88	0°6/30.9	18	
6 30	21 5.84	-15 55.3	1.789	2.681	12.8	22.7	6 30	21 2.44	-15 49.0	1.628	2.529	13.4	20.0
7 10	20 59.32	-16 14.3	1.713	2.671	9.1	22.4	7 10	20 57.07	-16 2.3	1.555	2.517	9.5	19.8
7 20	20 50.70	-16 41.1	1.660	2.660	5.0	22.1	7 20	20 49.58	-16 24.0	1.504	2.505	5.2	19.5
7 30	20 40.78	-17 11.9	1.634	2.649	0.6	21.8	7 30	20 40.76	-16 50.6	1.478	2.493	0.7	19.2
8 9	20 30.60	-17 42.6	1.635	2.637	4.2	22.1	8 9	20 31.70	-17 18.0	1.478	2.481	4.4	19.4
8 19	20 21.28	-18 9.5	1.662	2.624	8.6	22.3	8 19	20 23.54	-17 42.4	1.504	2.470	8.9	19.7
8 29	20 13.83	-18 30.1	1.714	2.611	12.6	22.5	8 29	20 17.30	-18 0.9	1.553	2.459	13.1	19.9
9 8	20 8.93	-18 42.9	1.787	2.598	16.0	22.7	9 8	20 13.68	-18 11.9	1.622	2.449	16.6	20.1
204516	2005 EH ₂₁		7 30.6 218°26	1°9/29.3	18		144225	2004 CL ₃₇		7 30.6 244°47	0°6/30.9	18	
6 30	21 4.12	-22 27.6	2.247	3.143	10.4	21.5	6 30	21 5.43	-15 28.6	1.731	2.624	13.1	20.3
7 10	20 57.80	-23 3.6	2.174	3.135	7.3	21.3	7 10	20 59.12	-15 46.8	1.653	2.611	9.4	20.0
7 20	20 49.77	-23 41.2	2.126	3.127	4.0	21.1	7 20	20 50.66	-16 13.5	1.598	2.598	5.1	19.7
7 30	20 40.72	-24 16.4	2.106	3.118	1.9	20.9	7 30	20 40.83	-16 45.1	1.569	2.584	0.8	19.4
8 9	20 31.51	-24 45.1	2.114	3.109	4.4	21.1	8 9	20 30.71	-17 17.2	1.567	2.570	4.3	19.6
8 19	20 23.03	-25 4.9	2.150	3.099	7.8	21.3	8 19	20 21.43	-17 46.1	1.591	2.555	8.8	19.8
8 29	20 16.09	-25 14.4	2.212	3.089	11.0	21.5	8 29	20 14.05	-18 8.8	1.640	2.539	12.9	20.1
9 8	20 11.26	-25 14.0	2.294	3.078	13.7	21.6	9 8	20 9.29	-18 23.8	1.709	2.524	16.4	20.3
312690	2010 NE ₆₄		7 30.6 27°61	0°5/30.9	18		373636	2002 OJ ₂₅		7 30.6 315°39	0°6/30.3	17	
6 30	21 2.23	-16 34.5	1.924	2.819	11.9	19.9	6 30	21 0.47	-16 22.6	1.201	2.119	15.7	21.0
7 10	20 56.49	-16 35.5	1.864	2.824	8.4	19.7	7 10	20 56.45	-17 13.5	1.121	2.092	11.3	20.6
7 20	20 49.06	-16 42.1	1.828	2.828	4.5	19.5	7 20	20 49.61	-18 19.7	1.062	2.066	6.0	20.3
7 30	20 40.68	-16 51.6	1.818	2.833	0.6	19.2	7 30	20 40.78	-19 35.0	1.025	2.040	0.6	19.8
8 9	20 32.28	-17 1.2	1.835	2.838	3.8	19.4	8 9	20 31.31	-20 50.5	1.012	2.015	5.9	20.1
8 19	20 24.77	-17 8.7	1.879	2.843	7.6	19.7	8 19	20 22.77	-21 57.8	1.021	1.991	11.7	20.4
8 29	20 18.95	-17 12.2	1.947	2.848	11.1	19.9	8 29	20 16.67	-22 50.6	1.051	1.967	17.0	20.6
9 8	20 15.33	-17 10.9	2.037	2.854	14.0	20.1	9 8	20 14.04	-23 26.0	1.098	1.945	21.5	20.8
122499	2000 QC ₁₉₀		7 30.6 305°90	8°6/26.9	18		97872	2000 QG ₃₅		7 30.6 315°30	1°0/31.2	18	
6 30	21 11.44	-38 10.1	1.5										

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7 30.6

7 30.7

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
509543	2008 <i>AD</i> ₆₅	7 30.6 123°91		0°7/30.2 18			69360	1994 <i>PJ</i> ₁₂	7 30.7 323°27		1°1/31.2 18		
6 30	21 4.61	-20 26.7	2.212	3.105	10.7	21.9	6 30	21 1.01	-14 48.7	1.436	2.342	14.4	18.9
7 10	20 57.99	-20 29.3	2.152	3.111	7.5	21.7	7 10	20 56.34	-14 57.6	1.359	2.323	10.4	18.7
7 20	20 49.81	-20 33.7	2.117	3.118	3.9	21.5	7 20	20 49.34	-15 17.0	1.304	2.304	5.8	18.4
7 30	20 40.78	-20 36.9	2.109	3.124	0.7	21.2	7 30	20 40.80	-15 43.7	1.272	2.286	1.3	18.0
8 9	20 31.77	-20 36.8	2.130	3.130	3.7	21.5	8 9	20 31.92	-16 13.4	1.265	2.269	4.7	18.2
8 19	20 23.63	-20 31.7	2.178	3.135	7.2	21.7	8 19	20 23.95	-16 41.6	1.282	2.253	9.7	18.4
8 29	20 17.07	-20 21.2	2.252	3.141	10.4	21.9	8 29	20 18.06	-17 4.5	1.322	2.237	14.3	18.7
9 8	20 12.59	-20 5.3	2.349	3.146	13.0	22.1	9 8	20 15.05	-17 19.6	1.380	2.222	18.2	18.9
32375	2000 <i>QM</i> ₁₆₉	7 30.6 132°42		4°4/ 2.8 18			507814	2014 <i>DY</i> ₄₀	7 30.7 243°15		0°4/30.4 18		
6 30	21 0.05	- 4 1.3	2.148	3.002	12.5	19.1	6 30	21 3.05	-16 57.1	2.068	2.960	11.3	21.9
7 10	20 54.88	- 4 3.0	2.078	3.004	9.7	18.9	7 10	20 57.23	-17 40.6	1.987	2.946	8.0	21.7
7 20	20 48.23	- 4 19.3	2.032	3.005	6.8	18.7	7 20	20 49.61	-18 31.6	1.931	2.932	4.2	21.4
7 30	20 40.69	- 4 49.3	2.010	3.006	4.6	18.6	7 30	20 40.82	-19 25.6	1.902	2.917	0.4	21.1
8 9	20 33.06	- 5 30.3	2.016	3.008	4.9	18.6	8 9	20 31.76	-20 18.1	1.901	2.902	4.0	21.4
8 19	20 26.11	- 6 18.6	2.049	3.009	7.4	18.8	8 19	20 23.37	-21 4.8	1.928	2.886	7.9	21.6
8 29	20 20.54	- 7 10.1	2.107	3.010	10.3	19.0	8 29	20 16.52	-21 42.7	1.980	2.870	11.5	21.8
9 8	20 16.87	- 8 0.6	2.188	3.011	13.0	19.2	9 8	20 11.87	-22 10.5	2.053	2.853	14.5	22.0
130602	2000 <i>SE</i> ₄	7 30.6 345°74		4°0/28.9 18			58888	1998 <i>HE</i> ₁₄₄	7 30.7 62°93		0°1/30.6 18		
6 30	20 59.60	-23 29.9	0.915	1.853	17.3	18.6	6 30	21 4.36	-15 15.1	1.263	2.171	15.8	19.1
7 10	20 56.19	-24 14.9	0.860	1.841	12.3	18.2	7 10	20 58.54	-16 14.1	1.223	2.189	11.1	18.8
7 20	20 49.53	-25 4.2	0.824	1.830	7.0	17.9	7 20	20 50.35	-17 24.5	1.204	2.207	5.8	18.6
7 30	20 40.79	-25 48.4	0.809	1.820	4.1	17.7	7 30	20 40.86	-18 38.8	1.210	2.225	0.4	18.2
8 9	20 31.77	-26 18.4	0.813	1.812	8.2	17.9	8 9	20 31.48	-19 49.1	1.241	2.244	5.1	18.6
8 19	20 24.32	-26 28.8	0.838	1.806	13.7	18.2	8 19	20 23.49	-20 48.8	1.296	2.263	10.1	19.0
8 29	20 20.02	-26 18.6	0.880	1.802	18.9	18.5	8 29	20 17.97	-21 34.4	1.374	2.281	14.4	19.3
9 8	20 19.64	-25 49.8	0.937	1.799	23.2	18.7	9 8	20 15.46	-22 4.8	1.470	2.300	17.9	19.6
509482	2007 <i>TB</i> ₁₃₃	7 30.6 284°54		3°0/28.7 18			49741	1999 <i>VW</i> ₁₂₄	7 30.7 90°04		3°0/ 1.3 18		
6 30	21 3.39	-24 34.5	1.852	2.757	11.7	21.6	6 30	21 5.66	- 9 35.5	1.516	2.399	15.2	19.2
7 10	20 57.65	-25 19.9	1.780	2.745	8.3	21.3	7 10	20 59.12	- 9 44.0	1.469	2.418	11.1	19.0
7 20	20 49.87	-26 6.3	1.732	2.732	4.8	21.1	7 20	20 50.55	-10 6.9	1.445	2.436	6.8	18.8
7 30	20 40.81	-26 48.0	1.710	2.719	3.1	20.9	7 30	20 40.89	-10 41.1	1.445	2.454	3.2	18.7
8 9	20 31.52	-27 20.1	1.715	2.706	5.7	21.1	8 9	20 31.32	-11 21.9	1.471	2.472	4.8	18.8
8 19	20 23.09	-27 39.3	1.746	2.693	9.4	21.3	8 19	20 22.96	-12 4.7	1.523	2.490	8.8	19.1
8 29	20 16.51	-27 44.5	1.801	2.681	12.9	21.5	8 29	20 16.72	-12 45.0	1.599	2.507	12.7	19.4
9 8	20 12.45	-27 36.6	1.875	2.668	16.0	21.7	9 8	20 13.13	-13 19.5	1.695	2.524	15.9	19.6
4111	Lamy	7 30.7 70°95		1°9/31.6 18			344746	2003 <i>UG</i> ₂₄₅	7 30.7 349°07		3°0/28.9 18		
6 30	21 5.97	-12 57.0	1.296	2.196	16.1	17.9	6 30	21 0.18	-22 2.2	1.347	2.268	14.2	19.5
7 10	20 59.60	-13 5.6	1.250	2.210	11.6	17.7	7 10	20 55.84	-23 4.8	1.289	2.261	10.0	19.3
7 20	20 50.87	-13 26.8	1.226	2.224	6.6	17.5	7 20	20 49.07	-24 12.7	1.252	2.255	5.5	19.0
7 30	20 40.87	-13 56.7	1.226	2.239	2.1	17.2	7 30	20 40.81	-25 18.1	1.238	2.250	3.1	18.8
8 9	20 30.97	-14 30.2	1.250	2.254	4.9	17.5	8 9	20 32.34	-26 13.4	1.250	2.245	6.5	19.0
8 19	20 22.46	-15 2.4	1.299	2.268	9.7	17.8	8 19	20 25.00	-26 53.1	1.284	2.242	11.0	19.3
8 29	20 16.40	-15 29.7	1.370	2.283	14.0	18.1	8 29	20 19.96	-27 15.0	1.340	2.240	15.2	19.5
9 8	20 13.35	-15 49.6	1.461	2.298	17.6	18.4	9 8	20 17.92	-27 19.4	1.414	2.238	18.7	19.8
80976	2000 <i>EK</i> ₃	7 30.7 32°89		6°1/ 3.5 18			69140	2003 <i>FB</i> ₁₀₀	7 30.7 167°83		5°0/27.0 18		
6 30	21 0.15	- 2 23.8	1.265	2.142	17.9	18.6	6 30	21 4.51	-32 15.1	2.264	3.160	10.3	19.7
7 10	20 55.60	- 2 39.5	1.214	2.151	14.0	18.4	7 10	20 58.13	-33 7.2	2.209	3.161	7.7	19.6
7 20	20 48.82	- 3 21.3	1.183	2.161	9.8	18.2	7 20	20 50.00	-33 53.5	2.179	3.162	5.5	19.4
7 30	20 40.75	- 4 26.9	1.173	2.172	6.5	18.0	7 30	20 40.87	-34 28.8	2.175	3.164	5.1	19.4
8 9	20 32.64	- 5 49.9	1.187	2.183	6.7	18.1	8 9	20 31.69	-34 49.4	2.199	3.165	6.7	19.5
8 19	20 25.70	- 7 21.8	1.225	2.195	10.1	18.3	8 19	20 23.39	-34 53.6	2.249	3.165	9.2	19.7
8 29	20 20.97	- 8 53.6	1.285	2.208	14.0	18.6	8 29	20 16.81	-34 42.1	2.323	3.166	11.8	19.8
9 8	20 19.06	-10 18.0	1.365	2.221	17.6	18.8	9 8	20 12.47	-34 17.2	2.416	3.167	14.0	20.0
364030	2005 <i>WX</i> ₉	7 30.7 270°77		1°2/31.5 16			358273	2006 <i>TR</i> ₁₂₃	7 30.7 171°65		4°1/27.8 18		
6 30	21 0.95	-13 32.2	2.311	3.194	10.6	22.1	6 30	21 3.63	-28 30.1	2.112	3.013	10.7	21.4
7 10	20 55.55	-13 41.8	2.228	3.180	7.7	21.9	7 10	20 57.58	-29 23.2	2.054	3.014	7.7	21.2
7 20	20 48.62	-13 58.8	2.169	3.165	4.4	21.7	7 20	20 49.74	-30 13.5	2.022	3.015	5.0	21.0
7 30	20 40.74	-14 21.1	2.137	3.151	1.4	21.4	7 30	20 40.86	-30 55.5	2.016	3.015	4.2	21.0
8 9	20 32.68	-14 46.0	2.134	3.136	3.4	21.6	8 9	20 31.90	-31 24.8	2.037	3.015	6.1	21.1
8 19	20 25.21	-15 10.7	2.158	3.121	6.9	21.8	8 19	20 23.81	-31 39.4	2.084	3.016	9.1	21.3
8 29	20 19.07	-15 32.9	2.208	3.106	10.1	21.9	8 29	20 17.45	-31 39.0	2.156	3.016	11.9	21.5
9 8	20 14.80	-15 50.7	2.280	3.091	12.9	22.1	9 8	20 13.36	-31 25.3	2.247	3.016	14.4	21.7
121507	1999 <i>TU</i> ₃₀₄	7 30.7 52°27		9°7/26.1 18			132379	2002 <i>GH</i> ₈₀	7 30.7 282°97		1°8/31.8 17		
6 30	21 10.81	-40 7.3	1.446	2.342	15.0	18.6	6 30	21 1.82	-11 41.1	1.723	2.612	13.3	19.6
7 10	21 3.09	-41 19.0	1.426	2.366	12.1	18.5	7 10	20 56.52	-12 6.4	1.653	2.606	9.7	19.4
7 20	20 52.67	-42 12.3	1.428	2.391	10.1	18.4	7 20	20 49.28	-12 44.2	1.605	2.601	5.6	19.2
7 30	20 40.98	-42 38.8	1.453	2.416	9.9	18.5	7 30	20 40.84	-13 31.1	1.583	2.596	2.0	18.9
8 9	20 29.73	-42 34.9	1.502	2.441	11.4	18.6	8 9	20 32.21	-14 22.5	1.587	2.590	4.2	19.0
8 19	20 20.42	-42 2.6	1.572	2.466	13.8	18.8	8 19	20 24.42	-15 13.5	1.618	2.585	8.4	19.3
8 29	20 14.12	-41 7.3	1.662	2.492	16.3	19.1	8 29	20 18.40	-15 59.9	1.672	2.580	12.3	19.5
9 8	20 11.22	-39 55.7	1.770	2.517	18.4	19.3	9 8	20 14.80	-16 38.5	1.748	2.574	15.6	19.7
482964	2014 <i>KD</i> ₆₇	7 30.7 8°66		3°7/27.9 18			102341	1999 <i>TR</i> ₁₁₈	7 30.7 315°43		0°8/31.1 18		
6 30	21 1.17												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
441748	2009 <i>BF</i> ₁₅₇		7 30.7 44°37'	5°0'	3.9	18	432764	2011 <i>FF</i> ₁₃		7 30.7 32°28'	6°0'	27.9	16
6 30	20 59.34	- 0 46.4	1.673	2.528	15.4	20.7	6 30	21 5.36	-29 37.7	1.253	2.173	15.1	20.6
7 10	20 54.63	- 1 41.2	1.620	2.544	12.0	20.5	7 10	20 59.44	-30 31.3	1.219	2.186	11.0	20.4
7 20	20 48.19	- 2 59.4	1.588	2.560	8.4	20.3	7 20	20 50.90	-31 18.3	1.205	2.200	7.3	20.2
7 30	20 40.77	- 4 37.2	1.580	2.577	5.4	20.2	7 30	20 40.98	-31 50.5	1.215	2.215	6.1	20.2
8 9	20 33.34	- 6 27.8	1.599	2.594	5.5	20.2	8 9	20 31.28	-32 2.2	1.248	2.231	8.6	20.4
8 19	20 26.81	- 8 23.0	1.645	2.612	8.3	20.4	8 19	20 23.22	-31 52.6	1.304	2.247	12.3	20.7
8 29	20 22.00	-10 14.9	1.716	2.630	11.6	20.7	8 29	20 17.91	-31 23.7	1.381	2.265	15.9	20.9
9 8	20 19.44	-11 56.9	1.810	2.648	14.7	20.9	9 8	20 15.85	-30 40.0	1.475	2.282	18.9	21.2
118372	1999 <i>GV</i> ₃₃		7 30.7 140°96'	5°1'	3.6	18	50684	2000 <i>ER</i> ₁₁₁		7 30.7 285°57'	10°2'	23.1	18
6 30	21 2.78	- 1 9.4	2.048	2.887	13.6	20.1	6 30	21 9.81	-44 43.9	1.904	2.778	13.0	17.4
7 10	20 56.83	- 1 21.9	1.984	2.898	10.7	20.0	7 10	21 2.68	-46 5.1	1.847	2.763	11.2	17.2
7 20	20 49.30	- 1 52.4	1.943	2.908	7.7	19.8	7 20	20 52.77	-47 10.7	1.812	2.747	10.2	17.1
7 30	20 40.86	- 2 39.4	1.928	2.918	5.5	19.7	7 30	20 41.12	-47 51.9	1.801	2.732	10.5	17.1
8 9	20 32.36	- 3 39.5	1.940	2.927	5.6	19.7	8 9	20 29.23	-48 3.3	1.814	2.716	11.9	17.2
8 19	20 24.64	- 4 47.9	1.979	2.935	7.9	19.9	8 19	20 18.63	-47 44.2	1.848	2.701	14.0	17.3
8 29	20 18.44	- 5 59.4	2.044	2.943	10.7	20.1	8 29	20 10.63	-46 57.8	1.902	2.686	16.2	17.4
9 8	20 14.29	- 7 8.9	2.131	2.951	13.4	20.3	9 8	20 6.00	-45 50.2	1.972	2.670	18.2	17.5
257015	2008 <i>FJ</i> ₈		7 30.7 55°07'	4°2'	2.8	18	433821	2015 <i>BH</i> ₁₈₀		7 30.7 122°71'	3°0'	28.8	17
6 30	20 59.51	- 4 21.0	2.078	2.937	12.7	20.5	6 30	21 5.81	-23 9.1	1.680	2.584	12.8	21.3
7 10	20 54.54	- 4 29.7	2.015	2.943	9.8	20.3	7 10	20 59.36	-24 13.7	1.630	2.594	9.0	21.1
7 20	20 48.09	- 4 53.5	1.974	2.950	6.7	20.1	7 20	20 50.78	-25 20.0	1.603	2.604	5.0	20.9
7 30	20 40.79	- 5 30.9	1.959	2.957	4.4	20.0	7 30	20 40.99	-26 21.2	1.603	2.613	3.1	20.8
8 9	20 33.42	- 6 18.8	1.971	2.964	4.8	20.0	8 9	20 31.17	-27 11.0	1.630	2.622	5.9	21.0
8 19	20 26.77	- 7 13.1	2.009	2.971	7.4	20.2	8 19	20 22.46	-27 46.0	1.683	2.630	9.7	21.3
8 29	20 21.55	- 8 9.3	2.073	2.979	10.3	20.4	8 29	20 15.84	-28 5.0	1.759	2.638	13.2	21.5
9 8	20 18.24	- 9 3.3	2.159	2.986	13.0	20.6	9 8	20 11.92	-28 9.1	1.855	2.646	16.2	21.7
520473	2014 <i>KQ</i> ₁₀₉		7 30.7 72°30'	2°8'	1.9	18	21114	Bernson		7 30.7 249°04'	3°1'	29.1	18
6 30	20 59.73	- 7 47.3	2.115	2.986	12.0	21.3	6 30	21 6.95	-23 50.6	1.567	2.474	13.4	19.1
7 10	20 54.68	- 8 12.9	2.054	2.994	8.9	21.1	7 10	21 0.48	-24 34.3	1.499	2.464	9.5	18.9
7 20	20 48.16	- 8 51.4	2.015	3.002	5.6	21.0	7 20	20 51.54	-25 19.7	1.453	2.454	5.4	18.6
7 30	20 40.80	- 9 40.2	2.004	3.011	3.0	20.8	7 30	20 41.05	-26 0.2	1.433	2.443	3.1	18.4
8 9	20 33.38	-10 35.5	2.019	3.019	3.9	20.9	8 9	20 30.30	-26 29.9	1.439	2.432	6.2	18.6
8 19	20 26.69	-11 33.1	2.063	3.028	7.0	21.1	8 19	20 20.63	-26 45.3	1.470	2.421	10.5	18.8
8 29	20 21.41	-12 28.7	2.131	3.036	10.1	21.3	8 29	20 13.22	-26 45.5	1.523	2.409	14.5	19.0
9 8	20 18.03	-13 19.2	2.223	3.045	12.8	21.5	9 8	20 8.81	-26 31.9	1.596	2.398	18.0	19.2
490510	2009 <i>UF</i> ₈₃		7 30.7 273°52'	0°7'	31.1	18	116707	2004 <i>CD</i> ₁₀₇		7 30.7 168°33'	4°1'	2.1	18
6 30	21 3.78	-14 55.4	1.680	2.575	13.3	22.1	6 30	21 3.91	- 6 44.9	1.669	2.541	14.6	20.0
7 10	20 58.11	-15 19.8	1.598	2.557	9.6	21.8	7 10	20 57.98	- 6 46.0	1.603	2.543	11.1	19.7
7 20	20 50.25	-15 54.3	1.539	2.539	5.3	21.5	7 20	20 50.06	- 7 3.0	1.560	2.544	7.3	19.5
7 30	20 40.95	-16 35.1	1.505	2.520	0.8	21.1	7 30	20 40.96	- 7 34.5	1.541	2.545	4.4	19.4
8 9	20 31.28	-17 17.4	1.498	2.501	4.4	21.4	8 9	20 31.73	- 8 16.6	1.549	2.546	5.2	19.4
8 19	20 22.41	-17 56.7	1.517	2.482	9.0	21.6	8 19	20 23.43	- 9 4.9	1.582	2.547	8.7	19.6
8 29	20 15.41	-18 29.2	1.560	2.463	13.2	21.8	8 29	20 16.99	- 9 54.3	1.640	2.548	12.4	19.8
9 8	20 11.04	-18 53.0	1.623	2.444	16.9	22.0	9 8	20 13.04	-10 40.4	1.719	2.548	15.7	20.1
333912	1999 <i>TN</i> ₆₅		7 30.7 312°11'	1°3'	31.4	18	429902	2012 <i>TZ</i> ₉₆		7 30.7 9°35'	2°3'	29.8	16
6 30	21 1.38	-13 54.2	1.500	2.401	14.2	20.5	6 30	21 1.22	-22 7.1	1.093	2.022	16.0	19.8
7 10	20 56.61	-14 10.2	1.418	2.379	10.3	20.2	7 10	20 56.75	-22 23.4	1.049	2.024	11.3	19.5
7 20	20 49.53	-14 38.0	1.358	2.358	5.8	19.9	7 20	20 49.59	-22 42.5	1.024	2.028	6.0	19.3
7 30	20 40.90	-15 14.4	1.322	2.336	1.5	19.5	7 30	20 40.93	-22 58.4	1.021	2.034	2.3	19.0
8 9	20 31.88	-15 54.7	1.311	2.315	4.6	19.7	8 9	20 32.32	-23 5.9	1.040	2.041	6.2	19.3
8 19	20 23.67	-16 33.9	1.325	2.295	9.6	19.9	8 19	20 25.23	-23 2.0	1.082	2.050	11.3	19.6
8 29	20 17.46	-17 7.7	1.362	2.275	14.1	20.2	8 29	20 20.84	-22 46.2	1.144	2.061	15.8	19.9
9 8	20 14.05	-17 33.3	1.418	2.255	18.0	20.4	9 8	20 19.72	-22 19.7	1.223	2.073	19.6	20.2
521215	2015 <i>GS</i> ₃₁		7 30.7 198°70'	1°2'	29.9	17	9558	1986 <i>QB</i> ₃		7 30.7 322°31'	1°1'	29.9	18
6 30	21 5.61	-19 51.6	1.928	2.824	11.8	22.5	6 30	21 0.06	-19 29.4	1.956	2.859	11.3	17.3
7 10	20 59.06	-20 26.6	1.860	2.821	8.3	22.3	7 10	20 55.22	-20 2.7	1.880	2.845	8.0	17.1
7 20	20 50.59	-21 5.7	1.817	2.818	4.4	22.0	7 20	20 48.60	-20 41.0	1.828	2.831	4.2	16.8
7 30	20 40.97	-21 44.4	1.800	2.814	1.2	21.8	7 30	20 40.87	-21 20.2	1.803	2.817	1.1	16.6
8 9	20 31.19	-22 18.1	1.811	2.810	4.5	22.0	8 9	20 32.94	-21 56.0	1.805	2.804	4.3	16.8
8 19	20 22.29	-22 43.6	1.850	2.805	8.4	22.3	8 19	20 25.73	-22 24.8	1.832	2.792	8.2	17.0
8 29	20 15.18	-22 59.2	1.913	2.800	12.0	22.5	8 29	20 20.11	-22 44.4	1.884	2.780	11.7	17.2
9 8	20 10.47	-23 4.8	1.997	2.794	15.0	22.7	9 8	20 16.70	-22 54.0	1.957	2.768	14.8	17.4
321311	2009 <i>HX</i> ₃₅		7 30.7 25°54'	1°9'	31.7	17	259327	2003 <i>FD</i> ₉₁		7 30.7 117°46'	2°7'	28.9	16
6 30	21 1.41	-11 46.0	1.110	2.021	17.3	20.4	6 30	21 4.86	-26 31.8	2.424	3.318	9.8	21.2
7 10	20 56.79	-12 20.4	1.062	2.027	12.5	20.1	7 10	20 58.13	-26 57.5	2.374	3.332	6.9	21.0
7 20	20 49.60	-13 12.6	1.035	2.035	7.1	19.8	7 20	20 49.93	-27 20.9	2.349	3.345	4.1	20.8
7 30	20 40.90	-14 16.8	1.029	2.043	2.1	19.6	7 30	20 40.95	-27 38.3	2.352	3.359	2.8	20.8
8 9	20 32.16	-15 25.2	1.046	2.051	5.2	19.8	8 9	20 32.05	-27 46.8	2.384	3.371	4.7	20.9
8 19	20 24.80	-16 29.9	1.087	2.061	10.5	20.1	8 19	20 24.00	-27 45.4	2.444	3.384	7.5	21.1
8 29	20 20.00	-17 24.9	1.148	2.071	15.3	20.4	8 29	20 17.50	-27 34.1	2.529	3.396	10.1	21.3
9 8	20 18.39	-18 6.6	1.228	2.082	19.2	20.7	9 8	20 13.00	-27 14.0	2.635	3.408	12.4	21.5
37892	1998 <i>FA</i> ₆₁		7 30.7 338°98'	9°8'	26.3	18 R	497153	2004 <i>RC</i> ₁₇₀		7 30.			

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
40024	1998 <i>HW</i> ₁₄₈		7 30.7 331°31	0°2/30.6	18		21989	Wernitz		7 30.7 247°57	1°4/31.8	18	
6 30	21 2.66	-17 27.1	1.548	2.454	13.6	18.5	6 30	21 0.28	-12 12.4	2.567	3.443	10.0	19.4
7 10	20 57.32	-17 48.7	1.483	2.448	9.6	18.2	7 10	20 55.01	-12 29.8	2.483	3.430	7.2	19.2
7 20	20 49.81	-18 17.7	1.439	2.442	5.1	18.0	7 20	20 48.38	-12 55.2	2.424	3.418	4.2	19.0
7 30	20 40.97	-18 49.8	1.421	2.436	0.4	17.6	7 30	20 40.91	-13 26.4	2.392	3.404	1.5	18.8
8 9	20 31.97	-19 20.2	1.428	2.431	4.6	17.9	8 9	20 33.27	-14 0.7	2.389	3.391	3.1	18.9
8 19	20 23.96	-19 44.8	1.460	2.426	9.2	18.2	8 19	20 26.15	-14 35.3	2.415	3.378	6.3	19.0
8 29	20 17.99	-20 1.2	1.516	2.422	13.4	18.4	8 29	20 20.20	-15 7.7	2.467	3.364	9.2	19.2
9 8	20 14.72	-20 8.3	1.591	2.418	16.9	18.6	9 8	20 15.93	-15 35.7	2.542	3.350	11.8	19.4
521309	2015 <i>KX</i> ₁₆₉		7 30.7 157°77	2°7/1.6	17		448697	2010 <i>XV</i> ₂₆		7 30.7 22°28	6°3/3.5	15	
6 30	21 3.12	-8 48.7	2.168	3.035	11.9	22.2	6 30	21 0.91	-0 46.7	2.033	2.874	13.6	20.2
7 10	20 57.06	-9 0.2	2.102	3.041	8.8	22.0	7 10	20 55.58	-0 5.6	1.969	2.879	10.9	20.1
7 20	20 49.45	-9 22.9	2.060	3.047	5.5	21.8	7 20	20 48.70	+0 19.4	1.927	2.883	8.4	19.9
7 30	20 40.95	-9 54.9	2.045	3.052	2.9	21.7	7 30	20 40.93	+0 27.4	1.909	2.888	6.6	19.8
8 9	20 32.39	-10 32.9	2.058	3.057	3.9	21.8	8 9	20 33.08	+0 19.5	1.917	2.893	6.7	19.8
8 19	20 24.56	-11 13.5	2.099	3.061	7.1	22.0	8 19	20 25.98	-0 1.7	1.950	2.898	8.6	19.9
8 29	20 18.20	-11 53.4	2.166	3.065	10.2	22.2	8 29	20 20.35	-0 32.4	2.008	2.904	11.1	20.1
9 8	20 13.82	-12 29.6	2.255	3.068	13.0	22.4	9 8	20 16.71	-1 8.1	2.088	2.910	13.6	20.3
444035	2004 <i>PL</i> ₃₂		7 30.7 12°46	1°0/29.9	18		324328	2006 <i>KM</i> ₆₁		7 30.7 332°73	5°8/2.5	17	
6 30	20 58.89	-16 51.1	1.664	2.571	12.8	19.8	6 30	20 58.89	-5 47.4	1.072	1.973	18.7	20.2
7 10	20 54.52	-18 5.6	1.608	2.574	8.9	19.6	7 10	20 55.34	-5 40.1	1.004	1.957	14.5	19.9
7 20	20 48.27	-19 29.5	1.575	2.578	4.6	19.3	7 20	20 49.06	-5 57.7	0.954	1.943	9.9	19.6
7 30	20 40.88	-20 56.2	1.568	2.583	1.0	19.1	7 30	20 40.97	-6 39.9	0.925	1.930	6.2	19.3
8 9	20 33.37	-22 18.5	1.588	2.588	4.7	19.4	8 9	20 32.45	-7 42.0	0.917	1.917	7.1	19.3
8 19	20 26.75	-23 30.4	1.633	2.594	8.9	19.6	8 19	20 25.03	-8 56.3	0.930	1.906	11.5	19.6
8 29	20 21.92	-24 28.0	1.702	2.601	12.6	19.9	8 29	20 20.11	-10 13.4	0.964	1.897	16.4	19.8
9 8	20 19.50	-25 9.8	1.792	2.608	15.7	20.1	9 8	20 18.58	-11 25.0	1.014	1.888	20.9	20.0
355144	2006 <i>UY</i> ₃₃₀		7 30.7 335°10	1°1/31.5	18		254290	2004 <i>RT</i> ₂₄₂		7 30.7 206°13	1°2/31.7	18	
6 30	20 59.74	-12 11.9	1.845	2.736	12.5	20.8	6 30	20 59.97	-12 29.2	2.514	3.392	10.1	20.7
7 10	20 55.01	-13 2.3	1.776	2.732	9.0	20.5	7 10	20 54.77	-12 54.7	2.440	3.390	7.3	20.5
7 20	20 48.49	-14 5.1	1.730	2.728	5.1	20.3	7 20	20 48.23	-13 28.3	2.392	3.387	4.1	20.3
7 30	20 40.90	-15 16.2	1.711	2.725	1.2	20.0	7 30	20 40.91	-14 7.5	2.371	3.384	1.3	20.1
8 9	20 33.12	-16 29.8	1.718	2.721	3.8	20.2	8 9	20 33.47	-14 49.1	2.378	3.381	3.1	20.2
8 19	20 26.08	-17 40.4	1.752	2.718	7.9	20.4	8 19	20 26.59	-15 30.0	2.414	3.377	6.2	20.4
8 29	20 20.67	-18 43.4	1.811	2.716	11.6	20.7	8 29	20 20.94	-16 7.5	2.476	3.373	9.2	20.6
9 8	20 17.47	-19 35.7	1.891	2.713	14.8	20.9	9 8	20 16.97	-16 39.6	2.561	3.370	11.8	20.8
18796	Acosta		7 30.7 63°28	4°4/28.5	18		79163	1993 <i>FK</i> ₂₄		7 30.7 204°35	1°0/30.1	18	
6 30	21 7.40	-25 0.2	1.202	2.120	15.7	18.0	6 30	21 6.64	-19 38.7	1.852	2.747	12.3	20.1
7 10	21 0.91	-26 7.9	1.168	2.138	11.1	17.8	7 10	20 59.89	-20 6.4	1.782	2.743	8.6	19.8
7 20	20 51.72	-27 14.7	1.155	2.155	6.5	17.6	7 20	20 51.10	-20 38.3	1.737	2.738	4.6	19.6
7 30	20 41.11	-28 11.2	1.166	2.173	4.5	17.5	7 30	20 41.10	-21 9.9	1.719	2.733	1.0	19.3
8 9	20 30.68	-28 50.1	1.201	2.191	7.6	17.7	8 9	20 30.93	-21 36.9	1.728	2.728	4.5	19.6
8 19	20 21.94	-29 8.6	1.259	2.210	11.9	18.0	8 19	20 21.69	-21 56.3	1.764	2.721	8.6	19.8
8 29	20 16.03	-29 7.3	1.338	2.228	15.9	18.3	8 29	20 14.32	-22 6.3	1.825	2.715	12.3	20.0
9 8	20 13.48	-28 49.5	1.434	2.246	19.1	18.6	9 8	20 9.47	-22 7.0	1.907	2.707	15.5	20.2
352181	2007 <i>RL</i> ₁₄₇		7 30.7 324°40	9°3/25.6	18		302804	2003 <i>AL</i> ₆₄		7 30.7 208°87	5°8/26.1	18	
6 30	21 9.00	-40 7.1	1.623	2.516	13.8	20.0	6 30	21 5.34	-34 40.6	2.331	3.223	10.2	20.7
7 10	21 2.11	-41 7.0	1.569	2.507	11.3	19.9	7 10	20 58.85	-35 46.2	2.273	3.219	7.9	20.6
7 20	20 52.45	-41 52.5	1.537	2.499	9.6	19.8	7 20	20 50.51	-36 45.0	2.239	3.214	6.1	20.5
7 30	20 41.16	-42 14.8	1.528	2.492	9.4	19.7	7 30	20 41.06	-37 31.2	2.233	3.210	5.9	20.4
8 9	20 29.81	-42 8.9	1.543	2.484	11.1	19.8	8 9	20 31.47	-38 0.5	2.253	3.205	7.5	20.5
8 19	20 19.94	-41 34.6	1.581	2.477	13.7	20.0	8 19	20 22.72	-38 11.1	2.299	3.199	9.8	20.7
8 29	20 12.80	-40 35.8	1.639	2.470	16.4	20.1	8 29	20 15.69	-38 3.7	2.368	3.194	12.1	20.8
9 8	20 9.03	-39 18.7	1.715	2.464	18.8	20.3	9 8	20 10.97	-37 40.9	2.457	3.188	14.2	21.0
102458	1999 <i>TH</i> ₂₂₅		7 30.7 212°16	3°0/28.6	18		475370	2006 <i>DV</i> ₁₃₂		7 30.7 27°78	6°1/28.2	16	
6 30	21 3.86	-27 8.9	2.405	3.301	9.8	20.1	6 30	21 5.70	-30 31.4	1.242	2.161	15.2	20.1
7 10	20 57.58	-27 36.6	2.339	3.298	7.0	20.0	7 10	20 59.71	-31 12.8	1.208	2.175	11.1	19.9
7 20	20 49.73	-28 1.9	2.299	3.295	4.2	19.8	7 20	20 51.08	-31 46.3	1.195	2.189	7.5	19.7
7 30	20 40.98	-28 21.0	2.287	3.291	3.0	19.7	7 30	20 41.10	-32 4.0	1.205	2.205	6.2	19.7
8 9	20 32.17	-28 30.9	2.302	3.288	4.9	19.8	8 9	20 31.39	-32 1.5	1.238	2.221	8.6	19.9
8 19	20 24.13	-28 30.0	2.345	3.284	7.8	20.0	8 19	20 23.38	-31 38.4	1.294	2.238	12.3	20.1
8 29	20 17.60	-28 18.3	2.413	3.280	10.6	20.2	8 29	20 18.15	-30 57.6	1.370	2.257	15.8	20.4
9 8	20 13.09	-27 57.0	2.503	3.276	12.9	20.3	9 8	20 16.17	-30 3.6	1.465	2.275	18.9	20.7
90747	1993 <i>PP</i> ₂		7 30.7 130°44	2°0/1.6	18		235829	2004 <i>XE</i> ₁₄₄		7 30.7 283°84	0°9/31.4	18	
6 30	20 59.81	-8 32.6	2.552	3.417	10.4	19.5	6 30	21 1.18	-11 57.5	1.718	2.609	13.3	19.7
7 10	20 54.58	-9 13.5	2.487	3.426	7.6	19.3	7 10	20 56.24	-13 2.2	1.640	2.596	9.6	19.5
7 20	20 48.09	-10 5.1	2.448	3.436	4.7	19.1	7 20	20 49.29	-14 22.3	1.585	2.584	5.3	19.2
7 30	20 40.88	-11 4.7	2.436	3.445	2.2	19.0	7 30	20 41.01	-15 52.6	1.557	2.571	1.1	18.9
8 9	20 33.61	-12 8.5	2.453	3.454	3.2	19.1	8 9	20 32.40	-17 26.0	1.555	2.559	4.2	19.1
8 19	20 26.93	-13 12.7	2.499	3.462	6.1	19.3	8 19	20 24.52	-18 55.5	1.581	2.546	8.7	19.3
8 29	20 21.44	-14 13.7	2.572	3.471	8.9	19.5	8 29	20 18.38	-20 15.2	1.631	2.534	12.8	19.5
9 8	20 17.58	-15 8.7	2.669	3.479	11.3	19.6	9 8	20 14.70	-21 21.4	1.701	2.521	16.2	19.7
9719	Yakage		7 30.7 178°99	2°3/29.3	18		522857	2016 <i>NX</i> ₈₆		7 30.7 282°79	4°7/28.8	18	
6 30	21 4.54												

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
284299	2006 KY ₁₄₀		7 30.7	2°95	1.2/31.4	18	316480	2010 VX ₄₆		7 30.7	333°35	5°3/26.8	18
6 30	21 2.35	-14 13.0	1.616	2.514	13.6	20.4	6 30	21 2.86	-32 2.1	2.101	3.002	10.8	20.5
7 10	20 56.98	-14 23.2	1.554	2.513	9.8	20.2	7 10	20 57.22	-33 0.8	2.043	2.998	8.1	20.3
7 20	20 49.60	-14 43.0	1.514	2.513	5.5	19.9	7 20	20 49.71	-33 54.3	2.009	2.994	5.9	20.2
7 30	20 41.04	-15 9.1	1.500	2.514	1.4	19.7	7 30	20 41.10	-34 36.7	2.002	2.990	5.4	20.1
8 9	20 32.39	-15 37.7	1.511	2.514	4.2	19.9	8 9	20 32.38	-35 3.6	2.020	2.987	7.2	20.2
8 19	20 24.70	-16 4.8	1.547	2.515	8.6	20.1	8 19	20 24.54	-35 13.0	2.065	2.983	9.8	20.4
8 29	20 18.93	-16 27.3	1.608	2.517	12.6	20.4	8 29	20 18.46	-35 5.2	2.132	2.980	12.5	20.6
9 8	20 15.69	-16 43.3	1.688	2.518	15.9	20.6	9 8	20 14.72	-34 42.5	2.219	2.977	14.8	20.7
238288	2003 WS ₁₄₅		7 30.7	85°50	3°2/28.7	17	117204	2004 RD ₁₉₂		7 30.7	298°07	4°2/28.2	18
6 30	21 5.33	-25 7.0	1.898	2.800	11.7	20.0	6 30	21 5.31	-29 49.3	2.118	3.016	10.8	20.0
7 10	20 58.77	-25 58.9	1.858	2.820	8.2	19.9	7 10	20 59.02	-30 16.8	2.034	2.991	8.0	19.8
7 20	20 50.40	-26 49.5	1.842	2.840	4.8	19.7	7 20	20 50.73	-30 40.3	1.975	2.966	5.2	19.6
7 30	20 41.09	-27 33.2	1.853	2.860	3.2	19.6	7 30	20 41.18	-30 54.7	1.942	2.941	4.3	19.5
8 9	20 31.88	-28 5.7	1.892	2.880	5.6	19.8	8 9	20 31.38	-30 56.2	1.936	2.916	6.2	19.5
8 19	20 23.75	-28 24.7	1.957	2.900	8.8	20.1	8 19	20 22.35	-30 43.1	1.957	2.891	9.4	19.7
8 29	20 17.53	-28 30.1	2.046	2.919	11.9	20.3	8 29	20 15.08	-30 15.7	2.001	2.867	12.5	19.8
9 8	20 13.69	-28 23.1	2.155	2.938	14.5	20.5	9 8	20 10.21	-29 36.1	2.067	2.842	15.3	20.0
190383	1999 RN ₁₅₁		7 30.7	296°74	2°9/29.2	18	236486	2006 FS ₃₆		7 30.7	152°19	5°0/3.8	18
6 30	21 5.58	-24 3.5	1.669	2.575	12.8	19.3	6 30	21 2.14	-0 41.1	2.280	3.112	12.6	20.7
7 10	20 59.66	-24 36.8	1.580	2.544	9.2	19.0	7 10	20 56.35	-0 53.1	2.212	3.120	10.0	20.5
7 20	20 51.27	-25 11.9	1.514	2.514	5.2	18.7	7 20	20 49.13	-1 21.6	2.167	3.128	7.3	20.4
7 30	20 41.21	-25 43.2	1.473	2.483	3.0	18.5	7 30	20 41.07	-2 5.6	2.149	3.136	5.3	20.3
8 9	20 30.63	-26 4.9	1.459	2.453	6.0	18.6	8 9	20 32.94	-3 2.0	2.158	3.143	5.3	20.3
8 19	20 20.84	-26 13.4	1.469	2.422	10.4	18.8	8 19	20 25.48	-4 6.7	2.195	3.149	7.4	20.4
8 29	20 13.10	-26 7.7	1.503	2.391	14.6	19.0	8 29	20 19.38	-5 15.0	2.258	3.154	10.0	20.6
9 8	20 8.25	-25 48.6	1.556	2.360	18.2	19.2	9 8	20 15.12	-6 22.3	2.344	3.160	12.5	20.8
41399	2000 AR ₁₇₇		7 30.7	276°05	0°1/30.7	18	449899	2015 MN ₁₁₀		7 30.7	41°55	0°2/30.6	15
6 30	20 59.59	-15 3.2	2.316	3.205	10.4	18.1	6 30	21 5.60	-19 5.7	1.527	2.432	13.8	20.2
7 10	20 54.71	-16 5.2	2.239	3.196	7.3	17.9	7 10	20 59.11	-19 0.3	1.488	2.452	9.7	20.0
7 20	20 48.33	-17 15.9	2.187	3.187	3.9	17.7	7 20	20 50.63	-18 58.8	1.471	2.473	5.1	19.8
7 30	20 41.01	-18 31.1	2.163	3.178	0.3	17.4	7 30	20 41.17	-18 58.1	1.480	2.495	0.4	19.5
8 9	20 33.47	-19 45.9	2.168	3.169	3.5	17.6	8 9	20 31.94	-18 55.1	1.514	2.517	4.4	19.9
8 19	20 26.49	-20 55.7	2.200	3.160	7.0	17.8	8 19	20 24.01	-18 48.1	1.574	2.539	8.7	20.2
8 29	20 20.81	-21 56.7	2.259	3.151	10.2	18.0	8 29	20 18.26	-18 36.3	1.657	2.562	12.5	20.5
9 8	20 16.98	-22 47.0	2.341	3.142	12.9	18.2	9 8	20 15.15	-18 19.5	1.761	2.585	15.6	20.7
169665	2002 JM ₇₄		7 30.7	51°32	6°8/2.6	17	313163	2001 FX ₁₅		7 30.7	190°60	4°3/4.2	18
6 30	21 5.55	-4 36.4	1.254	2.132	18.0	19.5	6 30	20 58.83	+0 45.6	3.219	4.032	9.7	21.9
7 10	20 59.47	-3 51.6	1.205	2.143	14.0	19.3	7 10	20 53.76	+0 35.8	3.137	4.030	7.8	21.8
7 20	20 51.00	-3 27.5	1.175	2.153	10.0	19.1	7 20	20 47.68	+0 13.4	3.079	4.028	5.9	21.6
7 30	20 41.18	-3 24.8	1.168	2.164	7.0	18.9	7 30	20 40.98	-0 21.1	3.048	4.025	4.5	21.5
8 9	20 31.38	-3 41.0	1.184	2.175	7.6	19.0	8 9	20 34.19	-1 5.7	3.046	4.022	4.5	21.5
8 19	20 22.90	-4 11.6	1.223	2.187	10.9	19.2	8 19	20 27.81	-1 58.1	3.072	4.018	5.8	21.6
8 29	20 16.83	-4 50.4	1.284	2.199	14.7	19.5	8 29	20 22.33	-2 55.0	3.125	4.014	7.8	21.7
9 8	20 13.79	-5 31.0	1.364	2.211	18.1	19.7	9 8	20 18.15	-3 53.2	3.203	4.009	9.7	21.9
11984	Manet		7 30.7	18°06	0°1/30.8	18	234306	2001 AZ ₂₇		7 30.7	160°49	4°5/27.1	17
6 30	21 3.35	-16 53.5	1.513	2.417	13.9	18.3	6 30	21 6.45	-31 0.6	2.433	3.325	9.9	22.1
7 10	20 57.78	-17 9.8	1.455	2.419	9.9	18.1	7 10	20 59.47	-32 3.2	2.381	3.332	7.3	21.9
7 20	20 50.07	-17 33.6	1.420	2.422	5.3	17.8	7 20	20 50.82	-33 1.2	2.354	3.339	5.1	21.8
7 30	20 41.12	-18 0.8	1.410	2.425	0.4	17.5	7 30	20 41.19	-33 49.1	2.355	3.345	4.6	21.8
8 9	20 32.10	-18 26.9	1.425	2.428	4.5	17.8	8 9	20 31.51	-34 22.9	2.385	3.351	6.2	21.9
8 19	20 24.18	-18 48.2	1.465	2.432	9.1	18.1	8 19	20 22.65	-34 40.9	2.441	3.356	8.7	22.1
8 29	20 18.36	-19 2.2	1.529	2.436	13.2	18.3	8 29	20 15.41	-34 43.4	2.522	3.360	11.1	22.2
9 8	20 15.23	-19 7.9	1.612	2.441	16.6	18.6	9 8	20 10.33	-34 32.3	2.624	3.363	13.2	22.4
472164	2014 DU ₂₅		7 30.7	244°64	6°0/26.9	18	224167	2005 QM ₉₉		7 30.7	304°02	1°3/31.3	18
6 30	21 9.05	-34 36.8	2.095	2.985	11.3	22.1	6 30	21 4.72	-15 7.3	1.442	2.344	14.7	20.1
7 10	21 1.69	-35 24.7	2.025	2.971	8.7	21.9	7 10	20 59.00	-15 3.2	1.370	2.332	10.6	19.8
7 20	20 52.15	-36 5.0	1.978	2.956	6.6	21.7	7 20	20 50.86	-15 8.0	1.320	2.320	6.0	19.5
7 30	20 41.27	-36 31.3	1.959	2.941	6.1	21.7	7 30	20 41.21	-15 18.9	1.294	2.308	1.5	19.2
8 9	20 30.19	-36 39.0	1.966	2.925	7.8	21.8	8 9	20 31.28	-15 32.3	1.293	2.297	4.7	19.4
8 19	20 20.08	-36 26.9	1.998	2.909	10.5	21.9	8 19	20 22.37	-15 44.7	1.317	2.285	9.7	19.6
8 29	20 11.98	-35 56.3	2.054	2.892	13.3	22.0	8 29	20 15.66	-15 53.5	1.363	2.275	14.2	19.9
9 8	20 6.55	-35 10.9	2.130	2.875	15.8	22.2	9 8	20 11.89	-15 56.6	1.429	2.264	18.0	20.1
494342	2016 TQ ₄₆		7 30.7	227°92	5°6/3.3	18	188946	2007 DX ₈₅		7 30.7	182°61	1°0/31.5	18
6 30	21 1.36	-1 53.9	2.076	2.920	13.2	21.3	6 30	21 0.33	-13 22.7	2.361	3.244	10.5	21.0
7 10	20 55.95	-1 32.4	2.005	2.920	10.5	21.1	7 10	20 55.11	-13 49.0	2.292	3.244	7.5	20.8
7 20	20 48.97	-1 26.7	1.956	2.919	7.8	20.9	7 20	20 48.49	-14 23.0	2.247	3.244	4.2	20.6
7 30	20 41.05	-1 36.7	1.932	2.918	5.8	20.8	7 30	20 41.04	-15 2.2	2.230	3.244	1.1	20.4
8 9	20 33.01	-2 0.9	1.935	2.918	6.0	20.8	8 9	20 33.50	-15 43.1	2.241	3.244	3.2	20.5
8 19	20 25.66	-2 36.1	1.964	2.917	8.1	21.0	8 19	20 26.58	-16 22.6	2.280	3.243	6.5	20.7
8 29	20 19.76	-3 18.2	2.017	2.916	10.9	21.1	8 29	20 20.96	-16 57.8	2.345	3.243	9.6	20.9
9 8	20 15.85	-4 2.9	2.093	2.916	13.5	21.3	9 8	20 17.14	-17 27.0	2.432	3.242	12.2	21.1
221076	2005 SM ₁₄		7 30.7	298°20	5°7/27.7	17	314384	2005 UF ₁₀₁		7 30.7	209°88	0°2/30.5	18
6 30	21 6.33	-29 14.5	1.454	2.366	13.9	19.8	6 30						

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
261337	2005 <i>UR</i> ₂₅₂	7 30.7 101°81		3°5/ 2.1 18			389750	2011 <i>SY</i> ₁₅₄	7 30.7 321°87		1°7/29.7 18		
6 30	21 1.02	- 7 0.8	2.235	3.098	11.7	20.0	6 30	21 2.60	-21 1.6	1.806	2.711	12.0	20.7
7 10	20 55.61	- 6 53.0	2.167	3.101	8.9	19.8	7 10	20 57.13	-21 37.4	1.741	2.706	8.5	20.4
7 20	20 48.76	- 6 56.7	2.122	3.103	5.9	19.7	7 20	20 49.73	-22 16.9	1.699	2.701	4.5	20.2
7 30	20 41.07	- 7 11.0	2.104	3.105	3.7	19.5	7 30	20 41.16	-22 55.1	1.683	2.696	1.7	20.0
8 9	20 33.31	- 7 33.7	2.112	3.108	4.3	19.6	8 9	20 32.44	-23 27.5	1.694	2.692	4.8	20.2
8 19	20 26.22	- 8 1.9	2.148	3.110	7.0	19.7	8 19	20 24.61	-23 50.7	1.730	2.688	8.7	20.4
8 29	20 20.49	- 8 32.6	2.210	3.112	9.9	19.9	8 29	20 18.59	-24 2.9	1.791	2.684	12.4	20.6
9 8	20 16.61	- 9 2.6	2.294	3.114	12.6	20.1	9 8	20 15.00	-24 4.1	1.872	2.680	15.4	20.9
447191	2005 <i>ST</i> ₁₂₉	7 30.7 329°58		8°4/25.1 18			313944	2004 <i>RZ</i> ₁₅₅	7 30.7 200°56		2°9/28.9 18		
6 30	21 7.44	-41 7.8	1.987	2.870	12.1	20.7	6 30	21 4.37	-26 55.1	2.333	3.230	10.0	20.2
7 10	21 0.69	-42 8.8	1.936	2.866	10.0	20.6	7 10	20 58.00	-27 16.0	2.270	3.229	7.1	20.1
7 20	20 51.64	-42 56.6	1.908	2.862	8.6	20.5	7 20	20 50.04	-27 34.4	2.232	3.228	4.3	19.9
7 30	20 41.27	-43 24.2	1.904	2.857	8.6	20.5	7 30	20 41.18	-27 46.6	2.221	3.227	2.9	19.8
8 9	20 30.86	-43 27.4	1.926	2.854	10.0	20.5	8 9	20 32.29	-27 49.8	2.238	3.226	4.9	19.9
8 19	20 21.65	-43 5.9	1.970	2.850	12.1	20.7	8 19	20 24.22	-27 42.6	2.283	3.225	7.8	20.1
8 29	20 14.71	-42 22.4	2.036	2.846	14.4	20.8	8 29	20 17.71	-27 25.3	2.353	3.224	10.6	20.3
9 8	20 10.63	-41 21.7	2.120	2.843	16.4	21.0	9 8	20 13.26	-26 59.0	2.444	3.223	13.1	20.4
131778	2002 <i>AL</i> ₂₃	7 30.7 101°27		4°7/ 1.9 17			280638	2004 <i>YB</i> ₃₃	7 30.7 299°28		7°3/ 3.8 18		
6 30	21 6.51	- 7 11.4	1.402	2.281	16.4	19.9	6 30	21 1.40	- 0 3.7	1.669	2.517	15.7	20.1
7 10	21 0.02	- 6 55.4	1.349	2.292	12.4	19.7	7 10	20 56.42	+ 0 24.1	1.589	2.503	12.8	19.9
7 20	20 51.28	- 6 56.5	1.316	2.302	8.2	19.5	7 20	20 49.44	+ 0 31.5	1.530	2.490	9.8	19.6
7 30	20 41.25	- 7 13.5	1.308	2.312	4.9	19.3	7 30	20 41.15	+ 0 17.0	1.493	2.476	7.6	19.5
8 9	20 31.21	- 7 42.8	1.324	2.322	5.9	19.4	8 9	20 32.55	- 0 17.8	1.482	2.463	7.7	19.5
8 19	20 22.40	- 8 19.8	1.365	2.331	9.7	19.6	8 19	20 24.68	- 1 9.0	1.494	2.450	10.0	19.6
8 29	20 15.84	- 8 59.1	1.429	2.341	13.7	19.9	8 29	20 18.56	- 2 10.9	1.530	2.437	13.2	19.7
9 8	20 12.14	- 9 36.3	1.513	2.350	17.1	20.2	9 8	20 14.87	- 3 16.7	1.587	2.424	16.4	19.9
284289	2006 <i>KM</i> ₃₉	7 30.7 358°35		16°5/ 8.9 17			503903	2002 <i>AR</i> ₁₄₇	7 30.7 201°00		0°9/30.1 17		
6 30	21 1.32	+17 56.8	1.535	2.283	21.2	19.6	6 30	21 5.82	-19 56.6	2.311	3.199	10.4	23.1
7 10	20 56.52	+19 58.3	1.477	2.280	19.5	19.4	7 10	20 59.05	-20 21.8	2.237	3.195	7.3	22.9
7 20	20 49.53	+21 27.5	1.435	2.278	18.0	19.3	7 20	20 50.63	-20 49.8	2.189	3.189	3.9	22.7
7 30	20 41.14	+22 17.3	1.410	2.277	16.9	19.2	7 30	20 41.23	-21 17.3	2.169	3.183	0.9	22.4
8 9	20 32.45	+22 24.9	1.403	2.277	16.5	19.2	8 9	20 31.68	-21 40.8	2.178	3.176	3.8	22.7
8 19	20 24.63	+21 51.8	1.414	2.277	16.9	19.2	8 19	20 22.86	-21 57.9	2.215	3.169	7.3	22.9
8 29	20 18.78	+20 44.6	1.444	2.279	18.0	19.3	8 29	20 15.54	-22 7.2	2.278	3.161	10.5	23.1
9 8	20 15.64	+19 13.4	1.490	2.282	19.4	19.4	9 8	20 10.29	-22 8.6	2.364	3.152	13.2	23.2
74690	1999 <i>RF</i> ₁₃₀	7 30.7 285°82		2°6/29.6 18			480496	2015 <i>LB</i> ₃₃	7 30.7 73°02		2°5/28.9 18		
6 30	21 7.59	-23 20.8	1.413	2.323	14.4	19.4	6 30	21 2.44	-22 52.3	1.973	2.876	11.2	21.1
7 10	21 1.24	-23 42.7	1.339	2.306	10.3	19.1	7 10	20 56.88	-23 46.3	1.915	2.879	7.9	20.9
7 20	20 52.16	-24 6.0	1.288	2.290	5.7	18.8	7 20	20 49.54	-24 42.2	1.881	2.882	4.4	20.7
7 30	20 41.32	-24 24.7	1.261	2.273	2.7	18.6	7 30	20 41.15	-25 34.7	1.874	2.884	2.5	20.5
8 9	20 30.13	-24 33.5	1.259	2.257	6.2	18.7	8 9	20 32.67	-26 18.9	1.895	2.887	5.1	20.7
8 19	20 20.09	-24 29.4	1.282	2.240	11.0	19.0	8 19	20 25.03	-26 51.5	1.941	2.890	8.5	20.9
8 29	20 12.50	-24 12.1	1.326	2.224	15.5	19.2	8 29	20 19.10	-27 11.0	2.012	2.893	11.8	21.1
9 8	20 8.20	-23 43.3	1.389	2.207	19.3	19.4	9 8	20 15.43	-27 17.9	2.104	2.896	14.5	21.3
225191	2008 <i>JZ</i> ₁	7 30.7 342°23		5°3/ 2.2 17			425734	2011 <i>BM</i> ₈₂	7 30.7 96°78		2°8/29.1 17		
6 30	21 0.10	- 6 55.9	1.181	2.078	17.6	19.6	6 30	21 5.70	-22 37.5	1.574	2.481	13.3	20.9
7 10	20 56.00	- 6 41.1	1.116	2.068	13.5	19.3	7 10	20 59.43	-23 33.7	1.525	2.491	9.3	20.7
7 20	20 49.37	- 6 46.8	1.070	2.059	9.1	19.0	7 20	20 50.97	-24 32.2	1.499	2.500	5.2	20.5
7 30	20 41.13	- 7 12.8	1.046	2.051	5.6	18.8	7 30	20 41.25	-25 26.2	1.499	2.509	2.8	20.4
8 9	20 32.60	- 7 54.9	1.044	2.044	6.5	18.8	8 9	20 31.52	-26 9.6	1.525	2.519	5.8	20.6
8 19	20 25.17	- 8 47.2	1.064	2.038	10.8	19.1	8 19	20 22.97	-26 38.7	1.576	2.528	9.9	20.8
8 29	20 20.08	- 9 42.5	1.106	2.033	15.3	19.3	8 29	20 16.60	-26 52.7	1.650	2.537	13.6	21.1
9 8	20 18.12	-10 34.4	1.165	2.030	19.4	19.5	9 8	20 13.02	-26 52.5	1.744	2.545	16.7	21.3
356706	2011 <i>UZ</i> ₁₄₃	7 30.7 97°36		4°3/27.5 18			505117	2012 <i>DW</i> ₆₉	7 30.7 198°02		1°2/31.3 17		
6 30	21 3.51	-29 34.6	2.184	3.084	10.5	21.1	6 30	21 7.49	-14 58.0	1.541	2.434	14.4	21.5
7 10	20 57.52	-30 31.9	2.134	3.091	7.6	20.9	7 10	21 0.74	-14 56.9	1.476	2.433	10.3	21.2
7 20	20 49.82	-31 25.5	2.108	3.098	5.1	20.8	7 20	20 51.71	-15 4.2	1.433	2.432	5.8	21.0
7 30	20 41.15	-32 9.8	2.110	3.105	4.4	20.8	7 30	20 41.31	-15 17.0	1.416	2.430	1.4	20.7
8 9	20 32.45	-32 40.8	2.138	3.113	6.2	20.9	8 9	20 30.78	-15 31.6	1.425	2.428	4.5	20.9
8 19	20 24.62	-32 56.5	2.193	3.119	8.9	21.1	8 19	20 21.35	-15 44.8	1.459	2.425	9.2	21.2
8 29	20 18.48	-32 56.9	2.272	3.126	11.6	21.3	8 29	20 14.09	-15 54.1	1.518	2.422	13.4	21.4
9 8	20 14.54	-32 43.9	2.371	3.133	13.9	21.4	9 8	20 9.67	-15 58.2	1.596	2.419	17.0	21.6
254248	2004 <i>RA</i> ₁₅₅	7 30.7 242°65		4°2/ 2.9 18			75212	1999 <i>VK</i> ₂₀₁	7 30.7 225°67		2°0/29.7 18		
6 30	20 59.66	- 3 41.5	2.409	3.257	11.5	20.5	6 30	21 8.36	-22 33.4	1.724	2.624	12.8	19.9
7 10	20 54.64	- 3 43.0	2.331	3.252	9.0	20.3	7 10	21 1.32	-22 56.5	1.654	2.616	9.1	19.7
7 20	20 48.26	- 3 57.9	2.275	3.246	6.3	20.1	7 20	20 52.02	-23 21.0	1.607	2.608	4.9	19.4
7 30	20 41.06	- 4 25.5	2.246	3.240	4.4	20.0	7 30	20 41.34	-23 42.0	1.586	2.599	2.1	19.2
8 9	20 33.71	- 5 3.5	2.244	3.234	4.7	20.0	8 9	20 30.47	-23 55.1	1.593	2.589	5.2	19.4
8 19	20 26.92	- 5 48.8	2.270	3.228	6.9	20.1	8 19	20 20.61	-23 57.8	1.625	2.580	9.4	19.6
8 29	20 21.34	- 6 37.7	2.321	3.222	9.6	20.3	8 29	20 12.85	-23 49.5	1.682	2.569	13.3	19.9
9 8	20 17.46	- 7 26.5	2.396	3.216	12.1	20.5	9 8	20 7.87	-23 31.3	1.759	2.559	16.6	20.1
202222	2004 <i>XG</i> ₁₄₈	7 30.7 143°46		0°2/30.6 18			58350	1995 <i>DN</i> ₆	7 30.7 19°16		0°3/30.9 18		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
283684	2002 QL ₁₂₁	7 30.7 326°42		2°2/31.9 18			484207	2007 AD ₃₀	7 30.7 283°33		0°3/30.5 17		
6 30	21 0.22	-12 3.7	1.471	2.370	14.6	20.6	6 30	21 1.14	-15 49.3	2.189	3.080	10.8	21.6
7 10	20 55.84	-12 12.0	1.393	2.352	10.7	20.4	7 10	20 56.04	-16 49.4	2.096	3.054	7.7	21.4
7 20	20 49.23	-12 33.6	1.337	2.334	6.3	20.1	7 20	20 49.21	-17 59.1	2.028	3.028	4.1	21.1
7 30	20 41.15	-13 6.1	1.304	2.317	2.4	19.8	7 30	20 41.20	-19 14.2	1.987	3.002	0.4	20.8
8 9	20 32.74	-13 45.1	1.297	2.301	4.7	19.9	8 9	20 32.82	-20 29.2	1.975	2.976	3.8	21.0
8 19	20 25.17	-14 25.7	1.313	2.285	9.4	20.1	8 19	20 24.92	-21 39.2	1.991	2.949	7.7	21.2
8 29	20 19.58	-15 3.2	1.353	2.270	13.8	20.3	8 29	20 18.38	-22 40.0	2.032	2.922	11.2	21.4
9 8	20 16.74	-15 34.0	1.411	2.256	17.7	20.5	9 8	20 13.87	-23 29.4	2.096	2.895	14.3	21.5
365752	2010 WR ₅₅	7 30.7 272°91		1°6/29.4 18			520480	2014 KZ ₁₁₀	7 30.7 37°81		4°0/ 1.9 18		
6 30	21 0.35	-20 57.4	2.436	3.332	9.6	20.8	6 30	21 2.70	- 7 54.1	1.858	2.730	13.3	20.4
7 10	20 55.26	-21 49.0	2.358	3.319	6.8	20.6	7 10	20 56.95	- 7 24.0	1.802	2.741	10.1	20.2
7 20	20 48.66	-22 44.2	2.305	3.306	3.6	20.4	7 20	20 49.54	- 7 6.2	1.769	2.752	6.7	20.0
7 30	20 41.12	-23 38.9	2.280	3.292	1.6	20.2	7 30	20 41.21	- 7 0.0	1.761	2.764	4.2	19.9
8 9	20 33.37	-24 29.0	2.284	3.279	4.1	20.3	8 9	20 32.90	- 7 3.8	1.780	2.775	5.0	20.0
8 19	20 26.18	-25 11.1	2.315	3.265	7.3	20.5	8 19	20 25.49	- 7 14.9	1.825	2.788	8.0	20.2
8 29	20 20.28	-25 43.0	2.372	3.252	10.2	20.7	8 29	20 19.76	- 7 30.4	1.895	2.800	11.1	20.4
9 8	20 16.23	-26 4.1	2.451	3.238	12.8	20.9	9 8	20 16.19	- 7 46.8	1.986	2.813	14.0	20.6
154863	2004 RY ₈₂	7 30.7 228°59		4°1/ 3.3 18			481309	2005 YS ₂₆₉	7 30.7 312°53		0°3/30.9 18		
6 30	20 59.06	- 3 1.5	2.335	3.183	11.8	20.3	6 30	21 4.08	-18 1.9	2.183	3.073	10.9	20.7
7 10	20 54.26	- 3 22.2	2.260	3.181	9.2	20.1	7 10	20 57.86	-17 48.8	2.110	3.067	7.7	20.5
7 20	20 48.08	- 3 58.1	2.208	3.180	6.5	19.9	7 20	20 50.03	-17 38.8	2.062	3.062	4.2	20.3
7 30	20 41.08	- 4 47.7	2.183	3.178	4.4	19.8	7 30	20 41.26	-17 29.9	2.042	3.057	0.4	20.0
8 9	20 33.95	- 5 47.9	2.185	3.176	4.6	19.8	8 9	20 32.41	-17 20.3	2.050	3.052	3.5	20.2
8 19	20 27.39	- 6 54.5	2.214	3.175	6.9	19.9	8 19	20 24.34	-17 8.7	2.085	3.047	7.2	20.4
8 29	20 22.08	- 8 3.1	2.269	3.173	9.6	20.1	8 29	20 17.80	-16 54.2	2.146	3.042	10.5	20.6
9 8	20 18.50	- 9 9.3	2.348	3.171	12.2	20.3	9 8	20 13.32	-16 36.4	2.229	3.038	13.3	20.8
122995	2000 SK ₂₅₀	7 30.7 237°89		0°4/31.0 18			424479	2008 CV ₂₁₀	7 30.7 164°97		1°6/29.8 17		
6 30	21 3.29	-14 36.4	1.982	2.870	11.9	20.2	6 30	21 6.60	-20 22.9	1.746	2.645	12.7	22.2
7 10	20 57.55	-15 16.5	1.903	2.858	8.5	20.0	7 10	20 59.97	-21 8.0	1.687	2.649	8.9	22.0
7 20	20 49.97	-16 6.1	1.848	2.847	4.6	19.7	7 20	20 51.27	-21 57.3	1.651	2.653	4.7	21.7
7 30	20 41.22	-17 1.2	1.820	2.835	0.6	19.4	7 30	20 41.35	-22 45.2	1.642	2.656	1.7	21.5
8 9	20 32.20	-17 57.0	1.820	2.822	3.8	19.6	8 9	20 31.33	-23 26.3	1.661	2.658	4.9	21.7
8 19	20 23.87	-18 49.0	1.847	2.809	7.9	19.8	8 19	20 22.32	-23 57.0	1.705	2.660	9.0	22.0
8 29	20 17.13	-19 33.6	1.899	2.796	11.6	20.0	8 29	20 15.31	-24 15.6	1.774	2.662	12.7	22.2
9 8	20 12.62	-20 8.9	1.973	2.782	14.7	20.2	9 8	20 10.90	-24 22.4	1.863	2.663	15.8	22.4
236407	2006 DC ₇₄	7 30.7 266°58		4°2/ 2.6 18			92237	2000 AO ₁₂₀	7 30.8 223°54		1°8/ 1.2 18 R		
6 30	21 1.71	- 4 37.8	1.864	2.725	13.8	21.2	6 30	21 0.00	-10 46.9	2.668	3.538	9.8	19.9
7 10	20 56.54	- 5 0.6	1.777	2.709	10.6	21.0	7 10	20 54.82	-11 0.4	2.589	3.532	7.2	19.7
7 20	20 49.49	- 5 41.6	1.712	2.691	7.2	20.7	7 20	20 48.36	-11 22.2	2.535	3.526	4.3	19.5
7 30	20 41.19	- 6 39.4	1.672	2.674	4.5	20.5	7 30	20 41.15	-11 50.4	2.509	3.519	1.9	19.4
8 9	20 32.55	- 7 50.0	1.659	2.656	5.1	20.5	8 9	20 33.82	-12 22.7	2.511	3.512	3.1	19.4
8 19	20 24.53	- 9 7.9	1.673	2.638	8.3	20.7	8 19	20 27.00	-12 56.2	2.542	3.505	6.0	19.6
8 29	20 18.07	-10 27.0	1.711	2.619	12.0	20.9	8 29	20 21.31	-13 28.6	2.600	3.498	8.8	19.8
9 8	20 13.88	-11 41.8	1.772	2.601	15.3	21.1	9 8	20 17.20	-13 57.6	2.681	3.491	11.2	20.0
61683	2000 QX ₁₂₅	7 30.7 178°74		1°4/31.6 18			478641	2012 TY ₁₉₅	7 30.8 260°16		6°9/ 3.8 18		
6 30	21 3.87	-13 3.1	1.801	2.688	12.9	19.6	6 30	21 2.90	+ 1 33.5	2.144	2.966	13.6	21.9
7 10	20 57.95	-13 20.9	1.735	2.689	9.3	19.4	7 10	20 57.21	+ 2 4.4	2.051	2.947	11.2	21.7
7 20	20 50.15	-13 48.7	1.692	2.689	5.3	19.1	7 20	20 49.80	+ 2 18.3	1.980	2.926	8.8	21.5
7 30	20 41.24	-14 23.4	1.676	2.689	1.6	18.9	7 30	20 41.26	+ 2 13.8	1.934	2.906	7.1	21.4
8 9	20 32.20	-15 0.8	1.687	2.690	4.0	19.0	8 9	20 32.39	+ 1 51.6	1.914	2.884	7.2	21.3
8 19	20 24.03	-15 37.1	1.724	2.689	8.1	19.3	8 19	20 24.05	+ 1 14.1	1.920	2.863	9.0	21.4
8 29	20 17.64	-16 9.0	1.785	2.689	11.8	19.5	8 29	20 17.08	+ 0 25.5	1.951	2.841	11.7	21.5
9 8	20 13.61	-16 34.2	1.868	2.688	15.0	19.7	9 8	20 12.13	- 0 29.0	2.004	2.818	14.3	21.7
138309	2000 GY ₆₀	7 30.7 108°31		1°2/30.1 18			235347	2003 UP ₂₆₀	7 30.8 332°06		4°0/28.4 18		
6 30	21 7.01	-19 44.4	1.683	2.582	13.1	20.1	6 30	21 4.82	-26 44.6	1.711	2.618	12.4	20.2
7 10	21 0.15	-20 15.9	1.635	2.597	9.1	19.9	7 10	20 58.85	-27 31.2	1.652	2.616	8.9	20.0
7 20	20 51.28	-20 51.2	1.610	2.612	4.8	19.6	7 20	20 50.73	-28 16.2	1.616	2.614	5.5	19.8
7 30	20 41.32	-21 25.4	1.612	2.626	1.2	19.4	7 30	20 41.32	-28 53.5	1.606	2.611	4.0	19.7
8 9	20 31.42	-21 53.9	1.640	2.640	4.6	19.7	8 9	20 31.81	-29 17.8	1.623	2.609	6.5	19.8
8 19	20 22.69	-22 13.7	1.695	2.653	8.8	20.0	8 19	20 23.35	-29 26.6	1.664	2.608	10.1	20.0
8 29	20 16.02	-22 23.6	1.774	2.667	12.5	20.2	8 29	20 16.97	-29 19.8	1.728	2.606	13.5	20.2
9 8	20 11.97	-22 23.7	1.873	2.679	15.5	20.5	9 8	20 13.27	-28 59.3	1.812	2.604	16.5	20.5
224099	2005 OP ₁₆	7 30.7 355°92		0°7/31.1 18			1795	Woltjer	7 30.8 25°34		5°1/ 2.9 18		
6 30	20 59.94	-15 43.8	1.054	1.977	16.9	19.4	6 30	20 59.85	- 4 53.8	1.416	2.296	16.2	15.4
7 10	20 56.08	-15 56.7	0.999	1.971	12.1	19.1	7 10	20 55.35	- 4 57.3	1.365	2.306	12.4	15.2
7 20	20 49.49	-16 22.0	0.963	1.967	6.6	18.8	7 20	20 48.84	- 5 21.2	1.335	2.317	8.5	15.0
7 30	20 41.20	-16 54.9	0.949	1.964	0.9	18.4	7 30	20 41.19	- 6 3.7	1.327	2.329	5.4	14.9
8 9	20 32.75	-17 29.1	0.957	1.962	5.4	18.7	8 9	20 33.52	- 6 59.9	1.344	2.341	5.9	15.0
8 19	20 25.64	-17 59.0	0.986	1.962	11.1	19.0	8 19	20 26.91	- 8 3.7	1.385	2.355	9.2	15.2
8 29	20 21.18	-18 20.3	1.036	1.963	16.1	19.3	8 29	20 22.29	- 9 8.3	1.449	2.369	12.9	15.4
9 8	20 20.08	-18 30.7	1.102	1.966	20.3	19.6	9 8	20 20.22	-10 8.2	1.533	2.384	16.2	15.7
353338	2010 RP ₁₆	7 30.7 14°51		0°2/30.9 18			7296	Lamarck	7 30.8 205°08		0°8/31.2 18		
6 30	21 5.09	-18 28.6	1.726	2.625	12.8	19.9	6 30	21 5.43	-14 38.5	1			

EPHEMERIDES

7 30.8

7 30.8

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
106243	2000 <i>UX</i> ₄₇		7 30.8 252°40	4.2/ 1.8 18			520148	2014 <i>BM</i> ₆₉		7 30.8 263°48	0.6/30.5 18		
6 30	21 5.09	- 7 47.4	1.530	2.408	15.3	19.9	6 30	21 6.68	-19 39.0	1.887	2.781	12.1	21.7
7 10	20 59.19	- 7 39.7	1.454	2.398	11.6	19.6	7 10	21 0.09	-19 45.8	1.804	2.763	8.6	21.5
7 20	20 51.01	- 7 47.9	1.401	2.387	7.6	19.4	7 20	20 51.42	-19 55.9	1.744	2.745	4.6	21.2
7 30	20 41.36	- 8 10.9	1.371	2.377	4.4	19.2	7 30	20 41.43	-20 5.7	1.712	2.727	0.7	20.9
8 9	20 31.40	- 8 45.3	1.367	2.366	5.5	19.2	8 9	20 31.16	-20 12.1	1.707	2.708	4.3	21.1
8 19	20 22.33	- 9 26.8	1.388	2.354	9.5	19.4	8 19	20 21.69	-20 12.6	1.729	2.689	8.5	21.3
8 29	20 15.29	-10 10.3	1.432	2.343	13.7	19.6	8 29	20 14.03	-20 6.2	1.776	2.669	12.4	21.5
9 8	20 11.01	-10 51.1	1.497	2.331	17.4	19.8	9 8	20 8.86	-19 52.7	1.843	2.649	15.7	21.7
429624	2011 <i>FV</i> ₄₄		7 30.8 127°44	2.5/ 1.4 17			282324	2002 <i>TB</i> ₂₃₁		7 30.8 304°69	0.4/31.1 18		
6 30	21 4.00	- 9 20.4	1.903	2.777	13.0	22.4	6 30	21 0.70	-13 58.6	1.693	2.590	13.1	19.9
7 10	20 57.89	- 9 45.2	1.845	2.789	9.5	22.2	7 10	20 56.10	-14 50.8	1.607	2.567	9.4	19.6
7 20	20 50.07	-10 22.6	1.811	2.801	5.8	22.0	7 20	20 49.41	-15 56.5	1.543	2.543	5.2	19.3
7 30	20 41.29	-11 9.6	1.802	2.812	2.7	21.8	7 30	20 41.30	-17 11.0	1.505	2.520	0.6	18.9
8 9	20 32.46	-12 1.9	1.822	2.823	4.0	21.9	8 9	20 32.74	-18 28.2	1.494	2.497	4.3	19.1
8 19	20 24.51	-12 55.0	1.868	2.833	7.6	22.2	8 19	20 24.86	-19 41.4	1.508	2.474	9.0	19.4
8 29	20 18.24	-13 44.8	1.940	2.843	11.1	22.4	8 29	20 18.70	-20 45.3	1.547	2.452	13.2	19.6
9 8	20 14.18	-14 28.4	2.035	2.853	14.0	22.6	9 8	20 15.08	-21 36.8	1.605	2.430	16.9	19.8
35780	1999 <i>JR</i> ₁₈		7 30.8 2°79	2.5/29.9 17			107159	2001 <i>BP</i> ₁₈		7 30.8 275°53	2.7/29.3 18		
6 30	21 2.36	-23 6.9	1.076	2.005	16.2	17.4	6 30	21 5.59	-21 49.2	1.430	2.340	14.2	19.7
7 10	20 57.76	-23 13.3	1.027	2.002	11.5	17.2	7 10	20 59.83	-22 42.7	1.361	2.329	10.1	19.5
7 20	20 50.35	-23 20.9	0.997	2.002	6.3	16.9	7 20	20 51.48	-23 41.6	1.315	2.317	5.5	19.2
7 30	20 41.31	-23 23.8	0.990	2.003	2.5	16.7	7 30	20 41.45	-24 38.4	1.294	2.306	2.7	19.0
8 9	20 32.26	-23 17.5	1.004	2.006	6.4	16.9	8 9	20 31.08	-25 26.0	1.298	2.294	6.2	19.2
8 19	20 24.76	-22 59.8	1.041	2.010	11.6	17.2	8 19	20 21.79	-25 59.3	1.326	2.282	10.9	19.4
8 29	20 20.04	-22 31.0	1.097	2.016	16.2	17.5	8 29	20 14.83	-26 16.2	1.376	2.270	15.3	19.6
9 8	20 18.73	-21 52.7	1.171	2.023	20.1	17.8	9 8	20 11.00	-26 17.3	1.445	2.259	18.9	19.8
288287	2004 <i>AB</i> ₁₃		7 30.8 162°57	0.5/30.4 18			86233	1999 <i>TT</i> ₁₁₁		7 30.8 5°46	7.0/27.8 18		
6 30	21 3.10	-18 14.0	2.313	3.203	10.4	21.6	6 30	21 7.47	-35 44.4	1.602	2.504	13.4	18.5
7 10	20 57.12	-18 47.9	2.249	3.207	7.3	21.4	7 10	21 0.83	-36 9.2	1.552	2.504	10.4	18.3
7 20	20 49.63	-19 26.3	2.211	3.212	3.8	21.2	7 20	20 51.79	-36 22.2	1.525	2.506	7.8	18.2
7 30	20 41.26	-20 5.5	2.200	3.215	0.6	21.0	7 30	20 41.46	-36 17.0	1.522	2.508	7.1	18.1
8 9	20 32.82	-20 41.9	2.218	3.219	3.6	21.2	8 9	20 31.27	-35 50.4	1.543	2.511	8.8	18.2
8 19	20 25.09	-21 12.6	2.264	3.221	7.0	21.4	8 19	20 22.52	-35 3.0	1.589	2.515	11.7	18.4
8 29	20 18.80	-21 35.7	2.336	3.224	10.1	21.6	8 29	20 16.26	-33 58.4	1.656	2.519	14.7	18.6
9 8	20 14.44	-21 50.5	2.430	3.226	12.7	21.8	9 8	20 13.03	-32 41.4	1.742	2.525	17.4	18.8
448650	2010 <i>VD</i> ₁₀₄		7 30.8 287°82	1.5/31.8 18			326912	2003 <i>WM</i> ₁₇₂		7 30.8 246°46	0.8/31.3 18 R		
6 30	21 0.81	-12 44.0	2.225	3.108	11.0	21.5	6 30	21 5.05	-13 40.9	1.754	2.643	13.2	21.5
7 10	20 55.66	-12 55.0	2.140	3.091	8.0	21.3	7 10	20 59.09	-14 21.0	1.671	2.627	9.5	21.2
7 20	20 48.94	-13 14.5	2.079	3.074	4.7	21.0	7 20	20 50.98	-15 13.1	1.612	2.610	5.3	21.0
7 30	20 41.22	-13 40.4	2.044	3.057	1.6	20.8	7 30	20 41.43	-16 12.8	1.579	2.593	1.0	20.6
8 9	20 33.27	-14 9.7	2.038	3.040	3.5	20.9	8 9	20 31.50	-17 14.7	1.573	2.575	4.2	20.8
8 19	20 25.91	-14 39.6	2.058	3.023	7.0	21.1	8 19	20 22.30	-18 13.3	1.593	2.557	8.8	21.0
8 29	20 19.89	-15 7.1	2.104	3.006	10.4	21.3	8 29	20 14.90	-19 4.1	1.639	2.538	12.9	21.3
9 8	20 15.80	-15 30.0	2.173	2.989	13.3	21.4	9 8	20 10.06	-19 44.7	1.705	2.519	16.5	21.4
148457	2000 <i>YB</i> ₈₈		7 30.8 123°16	0.9/29.9 18			210362	2007 <i>UF</i> ₆₁		7 30.8 345°57	0.9/31.3 18		
6 30	21 0.76	-18 21.2	2.369	3.262	10.0	20.1	6 30	21 1.99	-14 37.3	1.708	2.605	13.0	20.2
7 10	20 55.48	-19 18.4	2.308	3.268	7.0	19.9	7 10	20 56.78	-14 56.6	1.643	2.602	9.3	20.0
7 20	20 48.76	-20 20.7	2.273	3.274	3.7	19.7	7 20	20 49.63	-15 25.1	1.600	2.600	5.2	19.7
7 30	20 41.20	-21 23.6	2.265	3.280	0.9	19.5	7 30	20 41.34	-15 59.5	1.583	2.597	1.0	19.4
8 9	20 33.55	-22 22.7	2.287	3.285	3.7	19.7	8 9	20 32.90	-16 35.3	1.592	2.595	4.0	19.6
8 19	20 26.55	-23 14.4	2.336	3.291	7.0	19.9	8 19	20 25.34	-17 8.6	1.627	2.594	8.3	19.9
8 29	20 20.90	-23 56.3	2.411	3.296	9.9	20.1	8 29	20 19.59	-17 36.2	1.685	2.592	12.2	20.1
9 8	20 17.08	-24 27.5	2.509	3.301	12.4	20.3	9 8	20 16.26	-17 56.1	1.765	2.591	15.5	20.4
402794	2007 <i>DL</i> ₅₀		7 30.8 204°71	0.1/30.7 18			474507	2003 <i>UP</i> ₈₃		7 30.8 299°69	2.9/29.3 18		
6 30	21 0.66	-15 52.3	2.377	3.265	10.2	21.5	6 30	21 5.46	-24 23.0	1.664	2.571	12.8	21.0
7 10	20 55.43	-16 39.6	2.306	3.262	7.2	21.3	7 10	20 59.55	-24 49.1	1.583	2.548	9.1	20.7
7 20	20 48.76	-17 33.7	2.260	3.260	3.8	21.1	7 20	20 51.29	-25 15.9	1.525	2.525	5.2	20.5
7 30	20 41.20	-18 31.1	2.242	3.258	0.3	20.8	7 30	20 41.47	-25 37.8	1.492	2.503	2.9	20.3
8 9	20 33.51	-19 27.4	2.253	3.255	3.3	21.1	8 9	20 31.29	-25 50.1	1.486	2.480	5.9	20.4
8 19	20 26.42	-20 19.0	2.292	3.252	6.8	21.3	8 19	20 22.01	-25 49.8	1.504	2.458	10.1	20.6
8 29	20 20.63	-21 3.1	2.357	3.249	9.8	21.5	8 29	20 14.79	-25 36.3	1.546	2.436	14.1	20.8
9 8	20 16.66	-21 38.2	2.445	3.245	12.5	21.6	9 8	20 10.41	-25 10.9	1.607	2.414	17.6	21.0
477119	2009 <i>CR</i> ₂₈		7 30.8 317°32	0.0/30.8 18			119789	2002 <i>AG</i> ₈₅		7 30.8 181°78	3.5/ 2.0 18		
6 30	21 1.35	-15 44.7	1.746	2.645	12.7	21.1	6 30	21 1.93	- 7 24.0	2.252	3.115	11.7	19.9
7 10	20 56.34	-16 24.2	1.677	2.638	9.0	20.8	7 10	20 56.32	- 7 11.9	2.181	3.115	8.8	19.8
7 20	20 49.40	-17 12.9	1.631	2.632	4.8	20.6	7 20	20 49.25	- 7 10.9	2.134	3.115	5.9	19.6
7 30	20 41.25	-18 6.5	1.610	2.625	0.4	20.2	7 30	20 41.32	- 7 19.9	2.113	3.115	3.6	19.4
8 9	20 32.91	-18 59.6	1.616	2.619	4.2	20.5	8 9	20 33.30	- 7 37.2	2.120	3.115	4.3	19.5
8 19	20 25.38	-19 47.5	1.648	2.612	8.5	20.8	8 19	20 25.93	- 8 0.1	2.154	3.115	7.0	19.7
8 29	20 19.61	-20 26.6	1.704	2.607	12.3	21.0	8 29	20 19.93	- 8 25.7	2.213	3.114	10.0	19.8
9 8	20 16.24	-20 55.2	1.780	2.601	15.6	21.2	9 8	20 15.80	- 8 51.0	2.296	3.114	12.6	20.0
432880	2011 <i>KV</i> ₂₅		7 30.8 42°79	8.8/ 5.4 16			79049	4207 <i>T</i> _{-2</}					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
277291	2005 <i>SH</i> ₁₀₅		7 30.8 335°95	8:7/24.5	18		179713	2002 <i>RJ</i> ₅₉		7 30.8	0°24	3°9/	1.6 17
6 30	21 5.61	-39 52.6	1.849	2.741	12.4	19.5	6 30	21 1.85	-9 41.7	1.158	2.062	17.3	19.7
7 10	20 59.66	-41 11.0	1.798	2.734	10.3	19.3	7 10	20 57.27	-9 33.2	1.102	2.060	13.0	19.4
7 20	20 51.30	-42 17.3	1.770	2.728	8.8	19.2	7 20	20 50.14	-9 42.5	1.064	2.058	8.1	19.2
7 30	20 41.49	-43 3.5	1.766	2.722	8.9	19.2	7 30	20 41.44	-10 7.6	1.048	2.058	4.2	18.9
8 9	20 31.54	-43 24.4	1.786	2.716	10.5	19.3	8 9	20 32.59	-10 44.0	1.056	2.059	5.8	19.0
8 19	20 22.74	-43 18.7	1.828	2.711	12.8	19.4	8 19	20 24.97	-11 25.7	1.086	2.060	10.5	19.3
8 29	20 16.22	-42 48.8	1.892	2.706	15.2	19.6	8 29	20 19.80	-12 7.0	1.136	2.062	15.1	19.6
9 8	20 12.66	-41 59.2	1.972	2.702	17.3	19.7	9 8	20 17.78	-12 42.7	1.205	2.066	19.1	19.9
262029	2006 <i>QH</i> ₁₂₁		7 30.8 310°39	4°8/	2.3 18		445013	2008 <i>HC</i> ₃₇		7 30.8	79°34	4°5/27.4	18
6 30	21 1.93	-6 28.8	1.313	2.200	16.8	20.4	6 30	21 3.47	-30 16.0	2.198	3.098	10.4	21.1
7 10	20 57.27	-6 29.9	1.239	2.186	12.9	20.1	7 10	20 57.62	-31 11.8	2.144	3.100	7.7	21.0
7 20	20 50.16	-6 51.8	1.186	2.173	8.6	19.8	7 20	20 50.03	-32 3.6	2.114	3.103	5.3	20.8
7 30	20 41.42	-7 33.2	1.155	2.161	5.1	19.6	7 30	20 41.44	-32 45.9	2.111	3.105	4.6	20.8
8 9	20 32.30	-8 29.9	1.148	2.148	6.1	19.6	8 9	20 32.78	-33 14.6	2.135	3.108	6.4	20.9
8 19	20 24.13	-9 35.3	1.165	2.137	10.3	19.8	8 19	20 24.97	-33 27.8	2.186	3.110	9.1	21.1
8 29	20 18.14	-10 42.2	1.204	2.125	14.8	20.1	8 29	20 18.82	-33 25.5	2.259	3.113	11.7	21.2
9 8	20 15.17	-11 44.2	1.261	2.114	18.9	20.3	9 8	20 14.88	-33 9.5	2.354	3.115	14.0	21.4
329763	2004 <i>FY</i> ₉₃		7 30.8 59°11	0°2/30.9	17		8987	1978 <i>VD</i> ₄		7 30.8	4°04	2°4/29.5	18
6 30	21 4.81	-15 42.6	1.364	2.269	15.1	20.6	6 30	21 3.53	-22 9.5	1.489	2.401	13.6	17.8
7 10	20 58.94	-16 15.6	1.319	2.283	10.7	20.4	7 10	20 58.14	-22 50.0	1.433	2.401	9.6	17.5
7 20	20 50.82	-16 58.2	1.297	2.298	5.7	20.1	7 20	20 50.48	-23 33.6	1.399	2.401	5.2	17.3
7 30	20 41.46	-17 45.1	1.299	2.314	0.5	19.8	7 30	20 41.48	-24 14.3	1.390	2.402	2.4	17.1
8 9	20 32.17	-18 30.2	1.326	2.329	4.7	20.2	8 9	20 32.37	-24 46.2	1.406	2.403	5.7	17.3
8 19	20 24.17	-19 8.6	1.377	2.345	9.5	20.5	8 19	20 24.40	-25 5.8	1.446	2.404	10.0	17.6
8 29	20 18.48	-19 37.4	1.452	2.361	13.7	20.8	8 29	20 18.61	-25 11.9	1.509	2.406	14.0	17.8
9 8	20 15.65	-19 55.2	1.546	2.377	17.1	21.0	9 8	20 15.65	-25 5.0	1.591	2.409	17.3	18.0
342026	2008 <i>RY</i> ₉₉		7 30.8 251°62	1°6/31.9	18		295269	2008 <i>GF</i> ₆₉		7 30.8	12°12	12°4/11.9	18
6 30	21 3.49	-11 47.4	2.116	2.994	11.7	21.8	6 30	20 59.03	+20 14.0	2.168	2.868	17.0	20.2
7 10	20 57.71	-12 13.6	2.026	2.975	8.6	21.6	7 10	20 54.47	+21 0.5	2.101	2.869	15.6	20.1
7 20	20 50.15	-12 50.5	1.961	2.955	5.0	21.3	7 20	20 48.36	+21 19.1	2.049	2.871	14.2	20.0
7 30	20 41.42	-13 35.4	1.922	2.935	1.7	21.1	7 30	20 41.32	+21 6.6	2.017	2.873	13.0	19.9
8 9	20 32.37	-14 24.5	1.911	2.914	3.7	21.2	8 9	20 34.13	+20 22.9	2.005	2.875	12.4	19.8
8 19	20 23.89	-15 13.7	1.929	2.892	7.5	21.4	8 19	20 27.59	+19 10.6	2.015	2.878	12.6	19.9
8 29	20 16.86	-15 59.2	1.972	2.870	11.1	21.6	8 29	20 22.45	+17 35.5	2.046	2.880	13.5	19.9
9 8	20 11.93	-16 38.5	2.037	2.848	14.3	21.7	9 8	20 19.25	+15 45.4	2.097	2.883	14.7	20.0
98952	2001 <i>CW</i> ₂₈		7 30.8 95°17	1°5/29.5	18		41080	1999 <i>VX</i> ₄₅		7 30.8	53°45	9°2/	6.9 18
6 30	21 0.59	-19 27.7	2.284	3.180	10.2	19.0	6 30	21 0.40	+9 32.9	2.161	2.940	14.9	18.0
7 10	20 55.49	-20 36.2	2.221	3.183	7.1	18.8	7 10	20 55.32	+10 15.1	2.098	2.947	12.9	17.9
7 20	20 48.86	-21 49.6	2.184	3.186	3.8	18.6	7 20	20 48.76	+10 35.2	2.055	2.955	11.0	17.8
7 30	20 41.33	-23 2.9	2.175	3.188	1.5	18.4	7 30	20 41.35	+10 31.5	2.034	2.963	9.6	17.7
8 9	20 33.66	-24 11.0	2.195	3.191	4.1	18.6	8 9	20 33.85	+10 4.5	2.037	2.971	9.2	17.7
8 19	20 26.64	-25 9.9	2.242	3.193	7.4	18.8	8 19	20 27.02	+9 17.5	2.065	2.979	10.0	17.8
8 29	20 21.00	-25 57.1	2.315	3.196	10.4	19.0	8 29	20 21.58	+8 15.3	2.115	2.987	11.6	17.9
9 8	20 17.28	-26 31.7	2.410	3.199	13.0	19.2	9 8	20 18.03	+7 4.3	2.188	2.996	13.5	18.1
48519	1993 <i>FC</i> ₃₇		7 30.8 72°56	3°4/	1.8 18		283716	2002 <i>TU</i> ₁₄₈		7 30.8	289°51	5°6/	2.6 18
6 30	21 3.80	-8 4.9	1.444	2.328	15.7	18.9	6 30	21 3.02	-4 2.1	1.872	2.728	13.9	19.9
7 10	20 58.16	-8 24.8	1.393	2.340	11.7	18.7	7 10	20 57.51	-3 28.2	1.786	2.711	11.0	19.7
7 20	20 50.40	-9 2.1	1.363	2.353	7.3	18.5	7 20	20 50.11	-3 8.9	1.722	2.693	8.0	19.5
7 30	20 41.44	-9 53.5	1.357	2.365	3.7	18.3	7 30	20 41.47	-3 4.8	1.683	2.675	5.8	19.3
8 9	20 32.47	-10 53.2	1.376	2.378	5.0	18.4	8 9	20 32.52	-3 15.2	1.670	2.657	6.2	19.3
8 19	20 24.62	-11 55.2	1.420	2.390	9.0	18.7	8 19	20 24.22	-3 37.4	1.682	2.639	9.0	19.4
8 29	20 18.87	-12 53.9	1.488	2.402	13.0	18.9	8 29	20 17.52	-4 7.7	1.719	2.622	12.2	19.6
9 8	20 15.81	-13 44.8	1.577	2.415	16.5	19.2	9 8	20 13.07	-4 41.7	1.777	2.604	15.4	19.8
434759	2006 <i>HG</i> ₁₀₄		7 30.8 43°31	5°6/	3.9 18		420820	2013 <i>HZ</i> ₉₄		7 30.8	323°21	6°3/28.2	17
6 30	21 0.31	-1 5.7	1.626	2.482	15.7	20.9	6 30	21 4.65	-27 55.4	0.986	1.918	17.1	19.9
7 10	20 55.57	-1 28.5	1.567	2.491	12.3	20.7	7 10	21 0.17	-28 47.1	0.922	1.897	12.6	19.6
7 20	20 48.99	-2 14.0	1.530	2.501	8.8	20.5	7 20	20 52.13	-29 37.5	0.877	1.876	8.1	19.2
7 30	20 41.34	-3 20.1	1.516	2.510	6.1	20.4	7 30	20 41.64	-30 15.7	0.852	1.857	6.4	19.1
8 9	20 33.62	-4 41.8	1.528	2.520	6.1	20.4	8 9	20 30.60	-30 32.0	0.848	1.839	9.8	19.2
8 19	20 26.79	-6 12.1	1.566	2.531	8.8	20.6	8 19	20 21.08	-30 21.9	0.864	1.822	15.0	19.4
8 29	20 21.74	-7 43.7	1.627	2.541	12.1	20.8	8 29	20 14.86	-29 46.6	0.898	1.806	20.0	19.6
9 8	20 19.02	-9 10.0	1.711	2.552	15.2	21.0	9 8	20 12.91	-28 50.8	0.947	1.792	24.3	19.9
43538	2001 <i>EJ</i> ₆		7 30.8 321°31	1°7/	1.2 18		200288	2000 <i>AZ</i> ₆₁		7 30.8	283°01	0°3/30.7	18
6 30	20 59.27	-10 21.9	2.256	3.133	11.1	18.6	6 30	21 7.12	-19 9.4	1.903	2.796	12.1	19.6
7 10	20 54.54	-11 1.6	2.183	3.131	8.1	18.4	7 10	21 0.51	-19 5.3	1.811	2.769	8.7	19.3
7 20	20 48.36	-11 52.5	2.135	3.128	4.8	18.2	7 20	20 51.76	-19 4.0	1.742	2.743	4.7	19.0
7 30	20 41.30	-12 51.5	2.114	3.126	1.9	18.0	7 30	20 41.61	-19 2.8	1.700	2.715	0.4	18.6
8 9	20 34.10	-13 54.6	2.121	3.124	3.3	18.1	8 9	20 31.07	-18 58.8	1.686	2.688	4.2	18.9
8 19	20 27.50	-14 57.5	2.156	3.122	6.7	18.3	8 19	20 21.26	-18 50.1	1.699	2.660	8.6	19.1
8 29	20 22.21	-15 56.2	2.217	3.120	9.9	18.5	8 29	20 13.21	-18 35.8	1.737	2.632	12.5	19.2
9 8	20 18.73	-16 47.8	2.300	3.118	12.6	18.7	9 8	20 7.67	-18 15.8	1.796	2.604	16.0	19.4
61733	2000 <i>QU</i> ₁₅₀		7 30.8 354°01	11°8/	6.5 18		45314	2000 <i>AP</i> ₆₀		7 30.8	300°11	0°	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
92889	2000 QZ ₂₃₀		7 30.8 287°44	3°2/29.0	18		474397	2002 TK ₃₂₇		7 30.8 294°76	3°5/28.7	18	
6 30	21 5.61	-24 33.0	1.649	2.556	12.9	20.0	6 30	21 4.55	-25 53.4	1.809	2.714	12.0	21.1
7 10	20 59.70	-25 13.7	1.572	2.537	9.2	19.7	7 10	20 58.72	-26 34.4	1.739	2.703	8.6	20.8
7 20	20 51.42	-25 55.8	1.518	2.518	5.3	19.5	7 20	20 50.79	-27 14.9	1.694	2.692	5.1	20.6
7 30	20 41.58	-26 33.0	1.490	2.499	3.3	19.3	7 30	20 41.57	-27 49.2	1.674	2.681	3.5	20.5
8 9	20 31.39	-26 59.6	1.488	2.480	6.2	19.4	8 9	20 32.14	-28 12.5	1.681	2.670	6.0	20.6
8 19	20 22.11	-27 12.2	1.510	2.461	10.3	19.6	8 19	20 23.62	-28 21.9	1.714	2.660	9.6	20.8
8 29	20 14.92	-27 9.8	1.556	2.442	14.3	19.8	8 29	20 17.02	-28 16.9	1.769	2.649	13.1	21.0
9 8	20 10.60	-26 53.5	1.621	2.423	17.7	20.0	9 8	20 13.01	-27 58.9	1.845	2.639	16.2	21.2
311965	2007 DP ₈₉		7 30.8 151°24	1°2/29.9	18		99999	1981 FP		7 30.8 91°79	1°3/31.6	17	
6 30	21 2.92	-21 17.6	2.479	3.371	9.7	21.1	6 30	21 5.63	-13 11.5	1.565	2.457	14.3	19.9
7 10	20 56.96	-21 38.0	2.416	3.375	6.8	21.0	7 10	20 59.34	-13 36.2	1.516	2.472	10.2	19.7
7 20	20 49.60	-21 59.9	2.379	3.379	3.6	20.8	7 20	20 51.01	-14 11.9	1.490	2.487	5.7	19.5
7 30	20 41.44	-22 20.3	2.369	3.383	1.2	20.6	7 30	20 41.58	-14 54.3	1.488	2.502	1.5	19.3
8 9	20 33.24	-22 36.3	2.388	3.386	3.6	20.8	8 9	20 32.18	-15 38.4	1.514	2.517	4.2	19.5
8 19	20 25.74	-22 46.2	2.435	3.389	6.7	21.0	8 19	20 23.91	-16 19.6	1.565	2.532	8.6	19.8
8 29	20 19.61	-22 48.9	2.508	3.392	9.6	21.2	8 29	20 17.71	-16 54.4	1.640	2.547	12.5	20.0
9 8	20 15.32	-22 44.4	2.604	3.395	12.0	21.4	9 8	20 14.12	-17 20.8	1.736	2.561	15.8	20.3
474183	1999 VD ₁₃₆		7 30.8 311°96	10°1/4.3	17		354115	2002 AS ₉₃		7 30.8 188°68	1°3/29.8	18	
6 30	21 1.19	+ 4 1.0	1.562	2.395	17.3	21.0	6 30	21 1.93	-20 15.1	2.373	3.267	10.0	21.0
7 10	20 56.62	+ 5 1.1	1.471	2.368	14.8	20.7	7 10	20 56.40	-20 59.2	2.307	3.267	7.0	20.8
7 20	20 49.83	+ 5 38.9	1.400	2.340	12.2	20.5	7 20	20 49.37	-21 46.6	2.265	3.266	3.7	20.6
7 30	20 41.48	+ 5 50.2	1.350	2.313	10.4	20.3	7 30	20 41.46	-22 33.5	2.252	3.265	1.3	20.4
8 9	20 32.58	+ 5 33.5	1.322	2.286	10.4	20.3	8 9	20 33.43	-23 15.9	2.267	3.264	3.9	20.6
8 19	20 24.29	+ 4 51.2	1.317	2.259	12.3	20.3	8 19	20 26.05	-23 50.8	2.310	3.263	7.1	20.8
8 29	20 17.77	+ 3 48.7	1.334	2.234	15.3	20.4	8 29	20 20.04	-24 16.4	2.378	3.261	10.1	21.0
9 8	20 13.91	+ 2 34.3	1.369	2.208	18.5	20.6	9 8	20 15.92	-24 32.2	2.468	3.259	12.6	21.2
313313	2002 EW ₃₉		7 30.8 153°60	0°6/31.1	17		341206	2007 RD ₁₀₉		7 30.8 260°26	2°5/29.4	18	
6 30	21 7.73	-14 57.5	1.768	2.654	13.2	22.2	6 30	21 5.33	-24 2.0	1.888	2.789	11.8	20.5
7 10	21 0.73	-15 24.8	1.708	2.663	9.4	22.0	7 10	20 59.12	-24 30.5	1.821	2.784	8.3	20.3
7 20	20 51.74	-16 0.4	1.673	2.672	5.1	21.8	7 20	20 50.94	-24 59.3	1.778	2.778	4.7	20.1
7 30	20 41.61	-16 40.4	1.664	2.679	0.8	21.5	7 30	20 41.59	-25 23.7	1.762	2.772	2.5	19.9
8 9	20 31.42	-17 20.0	1.683	2.686	4.1	21.7	8 9	20 32.10	-25 39.6	1.772	2.766	5.2	20.1
8 19	20 22.24	-17 55.3	1.729	2.692	8.3	22.0	8 19	20 23.52	-25 44.6	1.809	2.760	8.9	20.3
8 29	20 15.00	-18 23.6	1.800	2.697	12.1	22.3	8 29	20 16.79	-25 38.1	1.870	2.754	12.3	20.5
9 8	20 10.28	-18 43.6	1.892	2.702	15.3	22.5	9 8	20 12.53	-25 21.3	1.951	2.748	15.3	20.7
28439	Miguelreyes		7 30.8 88°99	1°6/29.8	18		362697	2011 UJ ₁₅₂		7 30.8 18°95	5°2/28.4	17	
6 30	21 3.81	-20 24.5	1.856	2.757	12.0	18.8	6 30	21 3.79	-25 6.2	0.944	1.877	17.4	19.7
7 10	20 57.93	-21 8.9	1.803	2.767	8.4	18.6	7 10	20 59.16	-26 15.8	0.905	1.882	12.4	19.4
7 20	20 50.23	-21 57.0	1.775	2.776	4.4	18.4	7 20	20 51.32	-27 26.2	0.885	1.888	7.4	19.2
7 30	20 41.49	-22 43.7	1.773	2.786	1.6	18.2	7 30	20 41.62	-28 25.9	0.886	1.894	5.3	19.1
8 9	20 32.74	-23 24.1	1.798	2.796	4.6	18.4	8 9	20 31.93	-29 5.8	0.909	1.902	8.8	19.3
8 19	20 24.93	-23 54.9	1.850	2.806	8.4	18.7	8 19	20 24.05	-29 21.5	0.952	1.911	13.7	19.6
8 29	20 18.91	-24 14.5	1.925	2.815	11.8	18.9	8 29	20 19.36	-29 13.7	1.014	1.921	18.2	19.9
9 8	20 15.24	-24 22.9	2.022	2.825	14.6	19.1	9 8	20 18.46	-28 46.1	1.091	1.932	22.0	20.2
263544	2008 FE ₂₈		7 30.8 102°45	2°1/29.7	17		359853	2011 UQ ₃₈₂		7 30.8 248°15	4°8/27.2	18	
6 30	21 7.08	-21 21.6	1.575	2.479	13.5	21.2	6 30	21 4.13	-30 45.2	2.181	3.080	10.5	20.5
7 10	21 0.44	-22 6.3	1.527	2.492	9.5	21.0	7 10	20 58.19	-31 43.8	2.120	3.075	7.8	20.3
7 20	20 51.62	-22 53.9	1.503	2.505	5.1	20.8	7 20	20 50.43	-32 38.4	2.083	3.070	5.5	20.2
7 30	20 41.60	-23 38.3	1.505	2.517	2.1	20.6	7 30	20 41.56	-33 23.2	2.073	3.065	4.9	20.1
8 9	20 31.62	-24 14.2	1.533	2.530	5.3	20.9	8 9	20 32.55	-33 53.8	2.090	3.060	6.7	20.2
8 19	20 22.86	-24 38.1	1.586	2.542	9.5	21.2	8 19	20 24.35	-34 8.0	2.133	3.055	9.4	20.4
8 29	20 16.30	-24 48.9	1.663	2.554	13.3	21.4	8 29	20 17.85	-34 5.8	2.200	3.050	12.1	20.6
9 8	20 12.51	-24 47.6	1.760	2.565	16.4	21.7	9 8	20 13.63	-33 49.1	2.286	3.045	14.4	20.7
443031	2013 EP ₃₆		7 30.8 353°60	0°2/30.6	18		102741	1999 VX ₁₀₉		7 30.8 0°95	1°7/31.5	17	
6 30	21 0.81	-17 4.5	1.955	2.853	11.6	20.6	6 30	20 58.62	-14 24.8	0.910	1.840	18.3	18.9
7 10	20 55.82	-17 37.6	1.890	2.851	8.2	20.4	7 10	20 55.44	-14 23.9	0.861	1.836	13.3	18.6
7 20	20 49.13	-18 17.3	1.848	2.850	4.3	20.2	7 20	20 49.34	-14 37.9	0.830	1.834	7.5	18.3
7 30	20 41.42	-18 59.8	1.833	2.848	0.4	19.9	7 30	20 41.48	-15 3.0	0.819	1.833	2.0	17.9
8 9	20 33.60	-19 40.6	1.845	2.848	3.8	20.2	8 9	20 33.48	-15 32.9	0.828	1.835	5.7	18.2
8 19	20 26.54	-20 16.2	1.884	2.847	7.7	20.4	8 19	20 26.97	-16 1.6	0.858	1.838	11.5	18.5
8 29	20 21.07	-20 43.9	1.947	2.847	11.2	20.6	8 29	20 23.29	-16 24.0	0.907	1.844	16.8	18.8
9 8	20 17.74	-21 2.5	2.032	2.847	14.1	20.8	9 8	20 23.14	-16 36.7	0.972	1.851	21.1	19.1
111754	2002 CJ ₁₁₉		7 30.8 286°89	0°6/31.3	18		336871	2011 FK ₁₅₂		7 30.8 65°21	3°5/2.0	17	
6 30	21 0.39	-13 23.6	2.143	3.029	11.2	19.9	6 30	21 4.60	- 7 38.8	1.540	2.419	15.3	20.0
7 10	20 55.42	-14 13.6	2.074	3.028	8.0	19.7	7 10	20 58.50	- 7 53.1	1.501	2.445	11.3	19.8
7 20	20 48.88	-15 13.2	2.029	3.028	4.4	19.4	7 20	20 50.51	- 8 23.4	1.483	2.471	7.2	19.6
7 30	20 41.41	-16 18.6	2.012	3.027	0.8	19.2	7 30	20 41.56	- 9 6.6	1.490	2.497	3.8	19.5
8 9	20 33.78	-17 25.0	2.023	3.026	3.4	19.4	8 9	20 32.75	- 9 57.7	1.523	2.523	4.8	19.6
8 19	20 26.81	-18 27.8	2.061	3.025	7.1	19.6	8 19	20 25.10	-10 51.3	1.581	2.549	8.5	19.9
8 29	20 21.25	-19 23.4	2.125	3.024	10.4	19.8	8 29	20 19.47	-11 42.5	1.664	2.575	12.1	20.2
9 8	20 17.65	-20 9.4	2.212	3.023	13.3	20.0	9 8	20 16.34	-12 27.6	1.767	2.601	15.2	20.5
481302	2005 YY ₂₁₈		7 30.8 213°57	3°3/27.8	18		300013	2006 UG ₇₂		7 30.8 324°05	0°2/30.9	18	
6 30	21 2.35	-27 40											

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
190592	2000 <i>TQ</i> ₃₅		7 30.8 312°34	0°5/30.6	18		427602	2003 <i>SF</i> ₂₁₉		7 30.8 281°66	11°4/7.2	18	
6 30	21 2.97	-17 51.2	1.425	2.334	14.3	20.6	6 30	21 3.41	+11 35.7	1.693	2.472	18.4	21.6
7 10	20 58.08	-18 14.4	1.345	2.312	10.2	20.3	7 10	20 58.26	+11 49.3	1.587	2.439	16.2	21.3
7 20	20 50.68	-18 46.0	1.287	2.289	5.5	20.0	7 20	20 50.81	+11 31.3	1.499	2.405	13.9	21.1
7 30	20 41.61	-19 21.6	1.252	2.268	0.6	19.6	7 30	20 41.66	+10 36.8	1.432	2.371	12.0	20.9
8 9	20 32.09	-19 55.4	1.243	2.246	5.0	19.9	8 9	20 31.79	+9 5.0	1.387	2.335	11.5	20.8
8 19	20 23.46	-20 22.9	1.258	2.225	10.2	20.1	8 19	20 22.36	+7 0.1	1.367	2.299	12.8	20.7
8 29	20 16.99	-20 40.6	1.295	2.205	14.9	20.3	8 29	20 14.60	+4 31.1	1.370	2.263	15.4	20.8
9 8	20 13.54	-20 47.4	1.350	2.185	18.9	20.5	9 8	20 9.43	+1 50.4	1.395	2.226	18.6	20.9
479696	2014 <i>DS</i> ₁₀₉		7 30.8 212°35	0°8/31.4	18		68217	2001 <i>CX</i> ₂₆		7 30.8 47°62	0°1/30.8	18	
6 30	21 2.53	-13 30.4	2.090	2.974	11.5	21.7	6 30	20 59.95	-15 7.2	2.216	3.106	10.7	18.8
7 10	20 56.98	-14 5.4	2.017	2.970	8.3	21.5	7 10	20 55.08	-16 7.2	2.152	3.110	7.6	18.6
7 20	20 49.77	-14 49.7	1.969	2.966	4.6	21.2	7 20	20 48.72	-17 15.3	2.113	3.113	4.0	18.4
7 30	20 41.53	-15 39.9	1.947	2.962	1.0	21.0	7 30	20 41.47	-18 27.3	2.102	3.117	0.3	18.1
8 9	20 33.12	-16 31.6	1.954	2.957	3.5	21.1	8 9	20 34.11	-19 37.9	2.120	3.121	3.5	18.3
8 19	20 25.40	-17 20.8	1.988	2.952	7.3	21.4	8 19	20 27.39	-20 42.9	2.165	3.126	7.0	18.6
8 29	20 19.17	-18 4.1	2.047	2.946	10.8	21.6	8 29	20 22.05	-21 38.9	2.236	3.130	10.2	18.8
9 8	20 15.00	-18 39.5	2.129	2.941	13.7	21.8	9 8	20 18.59	-22 24.0	2.329	3.134	12.9	19.0
476141	2007 <i>TN</i> ₂₈₈		7 30.8 273°67	0°8/30.3	18		83115	2001 <i>QB</i> ₂₄₃		7 30.8 199°86	0°6/31.2	18	
6 30	21 3.08	-18 11.7	1.965	2.861	11.6	21.6	6 30	21 2.11	-14 52.0	2.050	2.940	11.5	19.6
7 10	20 57.60	-18 52.1	1.882	2.843	8.2	21.3	7 10	20 56.68	-15 18.0	1.983	2.939	8.2	19.4
7 20	20 50.21	-19 39.3	1.823	2.824	4.4	21.0	7 20	20 49.60	-15 51.8	1.940	2.939	4.5	19.2
7 30	20 41.58	-20 28.9	1.791	2.805	0.8	20.7	7 30	20 41.55	-16 30.1	1.923	2.938	0.8	18.9
8 9	20 32.62	-21 16.0	1.786	2.786	4.2	21.0	8 9	20 33.37	-17 8.9	1.935	2.938	3.6	19.1
8 19	20 24.33	-21 56.5	1.808	2.767	8.3	21.2	8 19	20 25.94	-17 44.9	1.973	2.937	7.3	19.3
8 29	20 17.64	-22 27.5	1.854	2.747	12.0	21.4	8 29	20 20.03	-18 15.2	2.036	2.936	10.7	19.6
9 8	20 13.24	-22 47.9	1.922	2.727	15.2	21.5	9 8	20 16.20	-18 38.2	2.121	2.935	13.7	19.8
111415	2001 <i>XR</i> ₁₉₀		7 30.8 273°82	1°6/31.9	18		394521	2007 <i>TL</i> ₃₃₃		7 30.8 256°43	2°5/1.4	18	
6 30	21 1.55	-12 11.0	2.176	3.057	11.3	20.6	6 30	21 2.52	-10 13.3	1.969	2.847	12.5	21.3
7 10	20 56.29	-12 25.4	2.092	3.042	8.3	20.4	7 10	20 57.04	-10 17.9	1.896	2.842	9.2	21.1
7 20	20 49.41	-12 49.0	2.033	3.027	4.8	20.2	7 20	20 49.83	-10 33.6	1.846	2.836	5.7	20.8
7 30	20 41.52	-13 19.7	2.000	3.012	1.8	19.9	7 30	20 41.58	-10 58.6	1.821	2.831	2.7	20.6
8 9	20 33.39	-13 54.3	1.994	2.997	3.5	20.0	8 9	20 33.15	-11 29.6	1.824	2.825	4.0	20.7
8 19	20 25.85	-14 29.5	2.016	2.981	7.1	20.2	8 19	20 25.46	-12 3.4	1.854	2.820	7.6	20.9
8 29	20 19.70	-15 2.2	2.064	2.966	10.5	20.4	8 29	20 19.32	-12 36.4	1.909	2.814	11.1	21.1
9 8	20 15.52	-15 30.0	2.134	2.951	13.5	20.6	9 8	20 15.31	-13 5.8	1.985	2.809	14.1	21.3
151379	2002 <i>ED</i> ₄₅		7 30.8 65°91	0°9/30.3	18		498276	2007 <i>VT</i> ₃₃		7 30.8 200°89	4°3/28.4	17	
6 30	21 3.11	-20 5.6	2.104	3.001	11.0	19.7	6 30	21 9.31	-27 2.6	1.639	2.542	13.2	22.2
7 10	20 57.27	-20 23.6	2.049	3.010	7.7	19.5	7 10	21 2.26	-27 56.4	1.578	2.539	9.5	21.9
7 20	20 49.84	-20 44.4	2.017	3.019	4.0	19.3	7 20	20 52.77	-28 48.5	1.540	2.536	5.9	21.7
7 30	20 41.54	-21 4.5	2.013	3.028	0.9	19.1	7 30	20 41.81	-29 31.5	1.529	2.532	4.4	21.6
8 9	20 33.24	-21 20.8	2.037	3.037	3.8	19.3	8 9	20 30.67	-29 59.6	1.543	2.528	7.0	21.8
8 19	20 25.79	-21 31.1	2.087	3.046	7.4	19.6	8 19	20 20.69	-30 10.0	1.583	2.524	10.7	22.0
8 29	20 19.92	-21 34.3	2.163	3.055	10.6	19.8	8 29	20 13.01	-30 2.9	1.646	2.519	14.3	22.2
9 8	20 16.13	-21 30.2	2.260	3.064	13.2	20.0	9 8	20 8.31	-29 41.0	1.728	2.513	17.4	22.4
472309	2014 <i>XM</i> ₁₄		7 30.8 114°15	4°1/28.5	17		152237	2005 <i>SA</i> ₅₁		7 30.8 194°82	4°4/27.7	18	
6 30	21 6.99	-24 40.1	1.431	2.342	14.2	21.2	6 30	21 4.78	-30 47.9	2.277	3.173	10.2	20.1
7 10	21 0.74	-25 51.6	1.380	2.347	10.1	21.0	7 10	20 58.54	-31 31.4	2.218	3.173	7.6	19.9
7 20	20 51.97	-27 4.2	1.353	2.352	5.9	20.8	7 20	20 50.58	-32 10.4	2.184	3.172	5.2	19.7
7 30	20 41.71	-28 9.3	1.350	2.357	4.2	20.7	7 30	20 41.63	-32 39.8	2.177	3.171	4.5	19.7
8 9	20 31.35	-28 59.6	1.372	2.362	7.1	20.9	8 9	20 32.62	-32 56.0	2.197	3.170	6.2	19.8
8 19	20 22.27	-29 30.8	1.419	2.366	11.2	21.1	8 19	20 24.44	-32 57.5	2.244	3.169	8.8	20.0
8 29	20 15.63	-29 42.6	1.488	2.371	15.0	21.4	8 29	20 17.92	-32 44.6	2.314	3.168	11.4	20.1
9 8	20 12.10	-29 37.0	1.576	2.375	18.2	21.6	9 8	20 13.59	-32 19.4	2.406	3.167	13.7	20.3
290021	2005 <i>QY</i> ₁₉		7 30.8 324°51	1°7/31.9	18		399938	2005 <i>YL</i> ₂₅₃		7 30.8 158°15	1°0/29.9	18	
6 30	20 59.87	-11 51.1	1.740	2.632	13.1	20.5	6 30	21 1.31	-20 7.6	2.624	3.516	9.2	21.9
7 10	20 55.42	-12 15.1	1.662	2.617	9.6	20.2	7 10	20 55.85	-20 41.6	2.560	3.519	6.4	21.8
7 20	20 49.06	-12 51.7	1.607	2.603	5.6	20.0	7 20	20 49.06	-21 18.4	2.522	3.522	3.4	21.6
7 30	20 41.49	-13 37.8	1.576	2.589	1.9	19.7	7 30	20 41.52	-21 54.5	2.511	3.525	1.0	21.4
8 9	20 33.65	-14 29.0	1.572	2.576	4.1	19.8	8 9	20 33.90	-22 27.0	2.530	3.528	3.4	21.6
8 19	20 26.54	-15 20.4	1.594	2.563	8.2	20.0	8 19	20 26.90	-22 53.5	2.577	3.531	6.4	21.8
8 29	20 21.10	-16 7.5	1.640	2.551	12.2	20.2	8 29	20 21.13	-23 12.3	2.649	3.533	9.2	22.0
9 8	20 17.99	-16 47.1	1.706	2.540	15.6	20.4	9 8	20 17.06	-23 23.1	2.745	3.535	11.5	22.1
161477	2004 <i>FJ</i> ₁₆₀		7 30.8 271°26	2°2/31.8	18		310869	2003 <i>GK</i> ₄₇		7 30.8 29°23	2°2/1.4	18	
6 30	21 5.89	-13 11.3	2.015	2.895	12.1	19.6	6 30	21 0.15	-9 55.1	1.865	2.748	12.8	20.1
7 10	20 59.35	-12 42.4	1.938	2.887	8.9	19.3	7 10	20 55.37	-10 23.4	1.805	2.754	9.4	19.9
7 20	20 51.03	-12 19.9	1.885	2.879	5.3	19.1	7 20	20 48.92	-11 4.5	1.767	2.760	5.7	19.7
7 30	20 41.64	-12 3.0	1.860	2.871	2.3	18.9	7 30	20 41.51	-11 55.2	1.755	2.766	2.4	19.5
8 9	20 32.10	-11 50.4	1.862	2.863	4.0	19.0	8 9	20 34.02	-12 51.3	1.770	2.772	3.9	19.6
8 19	20 23.35	-11 40.6	1.891	2.854	7.7	19.2	8 19	20 27.32	-13 47.8	1.811	2.779	7.5	19.9
8 29	20 16.23	-11 32.0	1.946	2.846	11.2	19.4	8 29	20 22.20	-14 40.4	1.877	2.787	11.0	20.1
9 8	20 11.33	-11 23.4	2.023	2.838	14.2	19.6	9 8	20 19.20	-15 26.1	1.965	2.794	14.0	20.3
38869	2000 <i>SL</i> ₁₁₃		7 30.8 208°53	2°6/1.3	18		334340	2001 <i>XS</i> ₂₁₇					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
9132	Walteranderson		7 30.8	23°39	0°3/30.6	18	26695	2001 FC ₁₁₁		7 30.8	226°77	2°8/	2.3 18
6 30	21 0.92	-17 15.6	1.725	2.628	12.6	16.7	6 30	20 59.89	-6 37.1	2.809	3.662	9.9	20.6
7 10	20 56.02	-17 47.6	1.671	2.635	8.8	16.5	7 10	20 54.83	-6 53.4	2.724	3.653	7.5	20.4
7 20	20 49.30	-18 26.4	1.641	2.643	4.7	16.3	7 20	20 48.55	-7 20.3	2.663	3.643	5.0	20.3
7 30	20 41.55	-19 7.5	1.637	2.652	0.4	16.0	7 30	20 41.52	-7 56.3	2.630	3.633	3.0	20.1
8 9	20 33.77	-19 46.4	1.658	2.661	4.1	16.3	8 9	20 34.34	-8 39.1	2.626	3.622	3.5	20.1
8 19	20 26.92	-20 19.3	1.706	2.671	8.2	16.6	8 19	20 27.61	-9 25.8	2.650	3.611	5.9	20.3
8 29	20 21.86	-20 43.5	1.777	2.681	11.8	16.8	8 29	20 21.91	-10 13.2	2.701	3.600	8.5	20.4
9 8	20 19.11	-20 58.1	1.869	2.692	14.9	17.0	9 8	20 17.70	-10 58.6	2.776	3.588	10.8	20.6
475355	2006 CP ₂		7 30.8	117°34	0°2/30.7	17	359931	2011 WR ₁₅₂		7 30.8	180°96	0°7/31.4	18
6 30	21 5.82	-17 55.8	1.788	2.683	12.6	22.0	6 30	21 1.08	-13 43.4	2.357	3.240	10.5	21.3
7 10	20 59.41	-18 10.9	1.730	2.690	8.9	21.7	7 10	20 55.82	-14 22.3	2.288	3.240	7.5	21.1
7 20	20 51.09	-18 31.2	1.696	2.697	4.7	21.5	7 20	20 49.12	-15 9.3	2.243	3.240	4.1	20.9
7 30	20 41.69	-18 52.9	1.688	2.703	0.4	21.2	7 30	20 41.57	-16 1.1	2.226	3.240	0.8	20.6
8 9	20 32.27	-19 12.3	1.707	2.710	4.1	21.5	8 9	20 33.89	-16 53.9	2.237	3.240	3.2	20.8
8 19	20 23.84	-19 26.6	1.753	2.716	8.2	21.8	8 19	20 26.83	-17 44.0	2.277	3.240	6.6	21.0
8 29	20 17.30	-19 34.2	1.824	2.722	11.9	22.0	8 29	20 21.06	-18 28.3	2.342	3.239	9.7	21.2
9 8	20 13.20	-19 34.5	1.915	2.728	15.0	22.2	9 8	20 17.11	-19 5.1	2.431	3.238	12.3	21.4
149773	2004 RE ₃₇		7 30.8	39°81	3°0/28.9	18	260268	2004 SY ₄₂		7 30.8	335°31	3°3/29.0	18
6 30	21 3.68	-25 43.6	2.033	2.935	11.0	19.8	6 30	21 4.93	-27 15.0	2.011	2.912	11.2	20.0
7 10	20 57.82	-26 17.1	1.977	2.939	7.8	19.6	7 10	20 58.77	-27 33.4	1.947	2.908	8.0	19.8
7 20	20 50.22	-26 49.3	1.945	2.943	4.6	19.4	7 20	20 50.77	-27 48.9	1.907	2.903	4.8	19.6
7 30	20 41.62	-27 15.8	1.940	2.947	3.0	19.3	7 30	20 41.70	-27 57.3	1.893	2.899	3.3	19.5
8 9	20 33.00	-27 32.6	1.962	2.952	5.2	19.4	8 9	20 32.57	-27 55.2	1.906	2.895	5.4	19.7
8 19	20 25.29	-27 38.0	2.010	2.956	8.5	19.7	8 19	20 24.37	-27 41.5	1.946	2.892	8.7	19.8
8 29	20 19.28	-27 31.7	2.083	2.961	11.5	19.9	8 29	20 17.95	-27 16.6	2.010	2.888	11.9	20.0
9 8	20 15.52	-27 14.7	2.176	2.966	14.1	20.1	9 8	20 13.88	-26 42.0	2.094	2.885	14.6	20.2
375277	2008 HF ₅₈		7 30.8	336°59	4°7/	2.1 17	193223	2000 RJ ₄₄		7 30.8	331°33	2°2/30.2	18
6 30	21 1.76	-7 30.6	1.270	2.162	16.9	20.2	6 30	21 3.71	-23 5.5	1.131	2.056	15.9	19.2
7 10	20 57.20	-7 20.5	1.204	2.154	12.9	19.9	7 10	20 59.17	-22 57.7	1.054	2.027	11.5	18.9
7 20	20 50.20	-7 29.5	1.157	2.146	8.5	19.7	7 20	20 51.54	-22 49.8	0.996	2.000	6.4	18.5
7 30	20 41.64	-7 56.5	1.132	2.139	5.0	19.4	7 30	20 41.79	-22 36.7	0.960	1.974	2.2	18.1
8 9	20 32.80	-8 37.5	1.131	2.132	6.1	19.5	8 9	20 31.49	-22 14.2	0.947	1.949	6.4	18.3
8 19	20 25.00	-9 27.0	1.154	2.126	10.3	19.7	8 19	20 22.37	-21 40.1	0.956	1.926	12.1	18.6
8 29	20 19.45	-10 18.6	1.197	2.121	14.7	19.9	8 29	20 16.01	-20 55.2	0.984	1.905	17.4	18.8
9 8	20 16.90	-11 6.3	1.260	2.117	18.7	20.2	9 8	20 13.37	-20 1.2	1.029	1.885	22.0	19.0
12272	Geddylee		7 30.8	291°09	0°9/31.2	18	202009	2004 RN ₅		7 30.8	17°66	3°5/28.9	17
6 30	21 6.66	-16 37.3	1.739	2.631	13.1	17.4	6 30	21 3.09	-21 2.4	1.016	1.944	17.0	19.2
7 10	21 0.27	-16 18.7	1.655	2.613	9.4	17.1	7 10	20 58.58	-22 23.3	0.971	1.947	11.9	18.9
7 20	20 51.71	-16 4.8	1.596	2.595	5.2	16.8	7 20	20 51.06	-23 52.0	0.947	1.951	6.6	18.6
7 30	20 41.76	-15 53.8	1.562	2.576	1.1	16.5	7 30	20 41.73	-25 17.4	0.944	1.956	3.5	18.5
8 9	20 31.52	-15 43.4	1.555	2.558	4.2	16.7	8 9	20 32.28	-26 28.7	0.964	1.961	7.6	18.7
8 19	20 22.11	-15 31.9	1.574	2.539	8.7	16.9	8 19	20 24.39	-27 18.9	1.005	1.967	12.8	19.0
8 29	20 14.61	-15 18.0	1.618	2.521	12.8	17.1	8 29	20 19.43	-27 45.7	1.066	1.975	17.5	19.3
9 8	20 9.72	-15 1.2	1.682	2.503	16.4	17.3	9 8	20 18.09	-27 50.7	1.143	1.982	21.3	19.6
36132	1999 RU ₁₅₈		7 30.8	322°63	3°0/	2.1 18	335098	2004 TZ ₉₁		7 30.8	342°96	3°2/29.3	17
6 30	20 59.51	-7 17.8	2.004	2.876	12.5	18.0	6 30	21 5.50	-24 25.4	1.518	2.428	13.5	20.4
7 10	20 54.93	-7 46.9	1.929	2.870	9.4	17.8	7 10	20 59.62	-24 59.5	1.459	2.425	9.6	20.2
7 20	20 48.73	-8 30.8	1.877	2.863	6.0	17.6	7 20	20 51.39	-25 34.1	1.422	2.422	5.5	19.9
7 30	20 41.53	-9 26.9	1.850	2.857	3.2	17.4	7 30	20 41.77	-26 2.9	1.410	2.420	3.2	19.8
8 9	20 34.14	-10 31.3	1.851	2.851	4.1	17.5	8 9	20 32.03	-26 20.8	1.423	2.418	6.1	20.0
8 19	20 27.40	-11 38.9	1.878	2.846	7.4	17.7	8 19	20 23.44	-26 25.1	1.461	2.416	10.3	20.2
8 29	20 22.10	-12 44.9	1.931	2.840	10.8	17.9	8 29	20 17.10	-26 15.5	1.521	2.414	14.2	20.4
9 8	20 18.80	-13 45.3	2.006	2.835	13.8	18.1	9 8	20 13.66	-25 53.4	1.601	2.413	17.5	20.7
119932	2002 FS ₃₈		7 30.8	246°92	1°7/	1.2 18	99236	2001 KV ₃₁		7 30.8	71°84	9°3/23.1	18
6 30	21 0.14	-10 25.5	2.300	3.176	11.0	19.8	6 30	21 9.26	-39 20.8	1.767	2.657	13.0	18.4
7 10	20 55.21	-11 3.0	2.225	3.171	8.0	19.6	7 10	21 2.34	-41 40.0	1.748	2.681	10.7	18.3
7 20	20 48.82	-11 51.4	2.174	3.166	4.8	19.4	7 20	20 52.86	-43 44.0	1.753	2.705	9.4	18.3
7 30	20 41.54	-12 47.9	2.149	3.161	1.9	19.2	7 30	20 41.89	-45 22.4	1.784	2.728	9.7	18.4
8 9	20 34.10	-13 48.6	2.154	3.156	3.3	19.3	8 9	20 30.85	-46 29.4	1.840	2.752	11.3	18.5
8 19	20 27.23	-14 49.2	2.186	3.151	6.6	19.5	8 19	20 21.14	-47 4.2	1.918	2.775	13.4	18.7
8 29	20 21.65	-15 46.0	2.244	3.146	9.8	19.7	8 29	20 13.94	-47 9.8	2.016	2.799	15.4	18.9
9 8	20 17.88	-16 36.1	2.325	3.140	12.6	19.9	9 8	20 9.90	-46 52.3	2.131	2.822	17.2	19.1
481328	2006 BS ₃₅		7 30.8	272°77	6°8/24.0	18	71206	1999 XK ₂₄₄		7 30.8	251°63	5°5/	4.0 18
6 30	21 4.60	-36 18.5	2.305	3.195	10.4	21.1	6 30	21 1.11	-0 24.9	1.974	2.815	13.9	19.5
7 10	20 58.79	-38 1.6	2.239	3.179	8.3	20.9	7 10	20 56.11	-0 43.1	1.893	2.806	11.1	19.3
7 20	20 50.94	-39 38.8	2.199	3.163	6.9	20.8	7 20	20 49.41	-1 21.3	1.834	2.798	8.2	19.1
7 30	20 41.71	-41 2.5	2.186	3.147	7.1	20.8	7 30	20 41.63	-2 18.7	1.800	2.789	5.8	19.0
8 9	20 32.08	-42 6.6	2.199	3.131	8.7	20.9	8 9	20 33.62	-3 31.9	1.792	2.780	5.8	19.0
8 19	20 23.11	-42 48.2	2.237	3.115	11.0	21.0	8 19	20 26.24	-4 55.4	1.811	2.772	8.2	19.1
8 29	20 15.83	-43 7.1	2.298	3.098	13.3	21.1	8 29	20 20.32	-6 23.2	1.856	2.762	11.3	19.2
9 8	20 10.96	-43 5.9	2.377	3.082	15.3	21.3	9 8	20 16.48	-7 49.0	1.923	2.753	14.3	19.4
264865	2002 RT ₁₆₅		7 30.8	288°59	0°2/30.9	18	71808	2000 SX ₃₀₆		7 30.8	131°86	0°6/31.2	18
6 30	21 5.06	-16 19.8	1.466	2.368	14.4	21.							

EPHEMERIDES

7 30.8

7 30.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
203659	2002 <i>JF</i> ₁₈		7 30.8 125°23	7°0/ 4.6 18			92778	2000 <i>QE</i> ₁₃₅		7 30.9 231°81	6°8/27.9 18		
6 30	21 3.45	+ 2 13.1	2.003	2.826	14.4	20.9	6 30	21 15.75	-37 14.3	1.928	2.809	12.5	19.3
7 10	20 57.59	+ 2 36.2	1.941	2.835	11.8	20.7	7 10	21 6.65	-37 36.5	1.862	2.800	9.8	19.1
7 20	20 50.12	+ 2 39.9	1.900	2.845	9.2	20.6	7 20	20 55.09	-37 46.1	1.819	2.791	7.5	19.0
7 30	20 41.72	+ 2 23.9	1.883	2.854	7.3	20.5	7 30	20 42.14	-37 36.8	1.803	2.782	6.9	18.9
8 9	20 33.24	+ 1 49.9	1.892	2.863	7.2	20.5	8 9	20 29.20	-37 5.3	1.813	2.772	8.4	19.0
8 19	20 25.54	+ 1 1.6	1.927	2.872	8.8	20.6	8 19	20 17.63	-36 12.1	1.850	2.762	11.2	19.1
8 29	20 19.37	+ 0 4.3	1.987	2.880	11.3	20.8	8 29	20 8.54	-35 1.2	1.911	2.751	14.0	19.3
9 8	20 15.28	- 0 56.6	2.068	2.888	13.8	21.0	9 8	20 2.54	-33 38.1	1.991	2.740	16.6	19.5
315176	2007 <i>HX</i> ₄₁		7 30.9 208°49	1°3/29.9 18			14773	4264 <i>T</i> ₋₁		7 30.9 15°01	6°2/27.7 18		
6 30	21 2.43	-21 16.4	2.372	3.267	9.9	21.5	6 30	21 4.50	-31 7.3	1.416	2.331	14.0	17.6
7 10	20 56.80	-21 42.6	2.306	3.266	7.0	21.3	7 10	20 59.05	-31 59.6	1.372	2.336	10.4	17.4
7 20	20 49.67	-22 10.8	2.264	3.264	3.7	21.1	7 20	20 51.13	-32 44.9	1.351	2.342	7.2	17.2
7 30	20 41.68	-22 37.7	2.250	3.263	1.3	20.9	7 30	20 41.83	-33 15.5	1.353	2.348	6.3	17.2
8 9	20 33.60	-23 0.1	2.264	3.261	3.8	21.1	8 9	20 32.57	-33 26.3	1.378	2.356	8.5	17.3
8 19	20 26.20	-23 15.6	2.305	3.260	7.0	21.3	8 19	20 24.70	-33 15.7	1.427	2.365	11.9	17.6
8 29	20 20.20	-23 23.1	2.372	3.258	10.0	21.5	8 29	20 19.31	-32 45.8	1.497	2.374	15.3	17.8
9 8	20 16.09	-23 22.5	2.462	3.256	12.6	21.7	9 8	20 16.97	-32 0.3	1.585	2.384	18.2	18.0
100505	1997 <i>AA</i> ₉		7 30.9 298°96	0°3/31.0 18			435183	2007 <i>RR</i> ₂₀		7 30.9 351°11	2°7/ 1.5 18		
6 30	21 3.33	-17 8.3	2.009	2.902	11.6	19.1	6 30	20 56.32	- 9 43.8	1.153	2.064	16.8	19.9
7 10	20 57.66	-17 12.0	1.934	2.892	8.2	18.9	7 10	20 53.55	-10 19.2	1.090	2.053	12.5	19.6
7 20	20 50.23	-17 20.9	1.882	2.882	4.5	18.7	7 20	20 48.37	-11 16.3	1.046	2.044	7.5	19.3
7 30	20 41.74	-17 32.2	1.857	2.873	0.5	18.3	7 30	20 41.63	-12 30.8	1.024	2.036	3.0	19.0
8 9	20 33.07	-17 43.0	1.860	2.863	3.7	18.6	8 9	20 34.61	-13 54.9	1.025	2.030	5.1	19.1
8 19	20 25.15	-17 51.1	1.889	2.853	7.6	18.8	8 19	20 28.63	-15 19.6	1.048	2.026	10.2	19.4
8 29	20 18.83	-17 54.6	1.944	2.844	11.2	19.0	8 29	20 24.91	-16 36.5	1.092	2.024	15.1	19.7
9 8	20 14.69	-17 52.7	2.020	2.835	14.2	19.2	9 8	20 24.22	-17 39.8	1.154	2.023	19.2	19.9
343554	2010 <i>FD</i> ₃₀		7 30.9 110°22	0°0/30.8 17			507300	2011 <i>KS</i> ₄₀		7 30.9 93°94	0°9/30.4 17		
6 30	21 3.51	-16 3.2	1.941	2.833	12.0	21.0	6 30	21 5.45	-19 2.9	1.742	2.641	12.7	21.5
7 10	20 57.72	-16 38.8	1.884	2.842	8.4	20.8	7 10	20 59.23	-19 31.6	1.689	2.651	8.9	21.3
7 20	20 50.22	-17 21.5	1.850	2.850	4.5	20.6	7 20	20 51.07	-20 4.8	1.660	2.661	4.7	21.0
7 30	20 41.73	-18 7.3	1.844	2.859	0.4	20.3	7 30	20 41.84	-20 38.2	1.657	2.672	0.9	20.8
8 9	20 33.19	-18 51.6	1.865	2.868	3.8	20.6	8 9	20 32.60	-21 7.3	1.681	2.682	4.4	21.1
8 19	20 25.51	-19 30.8	1.913	2.876	7.6	20.9	8 19	20 24.40	-21 28.9	1.731	2.691	8.5	21.3
8 29	20 19.49	-20 2.1	1.987	2.884	11.1	21.1	8 29	20 18.12	-21 41.4	1.805	2.701	12.1	21.6
9 8	20 15.66	-20 24.4	2.081	2.892	14.0	21.3	9 8	20 14.31	-21 44.5	1.900	2.711	15.1	21.8
390659	2002 <i>QC</i> ₁₃₅		7 30.9 346°71	3°3/29.1 18			12143	Harwit		7 30.9 103°67	5°0/28.5 18		
6 30	21 5.43	-25 29.1	1.678	2.585	12.7	21.0	6 30	21 9.69	-28 21.3	1.438	2.346	14.3	17.7
7 10	20 59.42	-25 59.2	1.618	2.582	9.0	20.8	7 10	21 2.68	-29 7.6	1.388	2.351	10.4	17.5
7 20	20 51.25	-26 28.2	1.581	2.580	5.3	20.6	7 20	20 53.08	-29 49.8	1.361	2.356	6.6	17.3
7 30	20 41.82	-26 50.8	1.570	2.578	3.3	20.5	7 30	20 42.01	-30 20.0	1.359	2.362	5.1	17.3
8 9	20 32.30	-27 2.5	1.584	2.577	5.9	20.6	8 9	20 30.94	-30 32.9	1.382	2.367	7.6	17.4
8 19	20 23.86	-27 1.1	1.624	2.575	9.7	20.8	8 19	20 21.31	-30 26.7	1.428	2.372	11.4	17.7
8 29	20 17.49	-26 46.6	1.687	2.574	13.3	21.1	8 29	20 14.28	-30 2.9	1.497	2.376	15.1	17.9
9 8	20 13.81	-26 20.7	1.770	2.574	16.4	21.3	9 8	20 10.47	-29 25.0	1.585	2.381	18.3	18.1
296073	2009 <i>BP</i> ₃		7 30.9 265°89	1°8/ 1.3 18			191808	2004 <i>TX</i> ₂₆₁		7 30.9 217°62	1°8/ 1.1 18		
6 30	21 1.93	- 9 37.2	1.964	2.841	12.5	21.0	6 30	21 4.23	-11 34.5	2.170	3.044	11.6	20.9
7 10	20 56.81	-10 29.2	1.878	2.825	9.2	20.7	7 10	20 58.21	-11 47.4	2.091	3.036	8.5	20.7
7 20	20 49.87	-11 36.4	1.815	2.808	5.5	20.5	7 20	20 50.52	-12 9.8	2.036	3.028	5.0	20.5
7 30	20 41.73	-12 55.1	1.780	2.792	2.1	20.2	7 30	20 41.81	-12 39.5	2.008	3.019	2.0	20.3
8 9	20 33.24	-14 19.8	1.772	2.775	3.8	20.3	8 9	20 32.90	-13 13.2	2.008	3.010	3.6	20.4
8 19	20 25.33	-15 44.6	1.791	2.758	7.8	20.5	8 19	20 24.64	-13 47.7	2.036	3.000	7.2	20.6
8 29	20 18.93	-17 3.9	1.837	2.740	11.5	20.7	8 29	20 17.83	-14 20.1	2.090	2.990	10.5	20.7
9 8	20 14.69	-18 13.6	1.904	2.723	14.8	20.9	9 8	20 13.05	-14 47.8	2.167	2.979	13.5	20.9
507405	2012 <i>KP</i> ₁₅		7 30.9 44°40	4°2/ 2.2 17			390904	2005 <i>EE</i> ₇₇		7 30.9 195°71	1°5/29.8 18		
6 30	21 3.13	- 6 59.0	1.385	2.269	16.3	21.3	6 30	21 5.51	-21 59.2	2.386	3.276	10.1	22.2
7 10	20 57.91	- 7 7.2	1.330	2.276	12.3	21.0	7 10	20 58.99	-22 26.3	2.315	3.274	7.1	22.0
7 20	20 50.48	- 7 34.3	1.295	2.283	8.0	20.8	7 20	20 50.88	-22 54.9	2.271	3.270	3.8	21.8
7 30	20 41.76	- 8 17.9	1.284	2.290	4.5	20.6	7 30	20 41.84	-23 21.2	2.254	3.267	1.5	21.6
8 9	20 32.96	- 9 13.0	1.297	2.298	5.5	20.7	8 9	20 32.68	-23 42.0	2.266	3.262	4.0	21.8
8 19	20 25.27	-10 13.2	1.335	2.306	9.4	21.0	8 19	20 24.23	-23 55.2	2.306	3.257	7.2	22.0
8 29	20 19.70	-11 12.5	1.396	2.314	13.5	21.2	8 29	20 17.25	-23 59.7	2.372	3.252	10.3	22.2
9 8	20 16.88	-12 5.8	1.477	2.322	17.0	21.5	9 8	20 12.25	-23 55.8	2.461	3.246	12.8	22.4
290776	2005 <i>VV</i> ₁₄		7 30.9 114°86	1°7/29.5 18			2747	Český Krumlov		7 30.9 15°62	2°1/29.7 18 R		
6 30	21 2.07	-21 32.5	2.348	3.244	10.0	21.3	6 30	21 3.57	-23 16.5	1.802	2.708	12.0	16.0
7 10	20 56.54	-22 17.2	2.290	3.251	7.0	21.1	7 10	20 57.92	-23 35.8	1.746	2.711	8.5	15.8
7 20	20 49.54	-23 4.2	2.257	3.258	3.8	20.9	7 20	20 50.39	-23 55.7	1.713	2.714	4.7	15.5
7 30	20 41.69	-23 49.2	2.253	3.265	1.7	20.7	7 30	20 41.81	-24 11.9	1.707	2.719	2.1	15.4
8 9	20 33.78	-24 28.4	2.276	3.272	4.0	20.9	8 9	20 33.20	-24 20.8	1.726	2.723	4.9	15.6
8 19	20 26.58	-24 59.1	2.327	3.278	7.2	21.1	8 19	20 25.58	-24 20.4	1.772	2.728	8.6	15.8
8 29	20 20.79	-25 19.9	2.404	3.285	10.1	21.3	8 29	20 19.82	-24 10.1	1.841	2.734	12.1	16.0
9 8	20 16.89	-25 30.5	2.502	3.292	12.5	21.5	9 8	20 16.46	-23 50.8	1.931	2.740	15.0	16.3
442094	2010 <i>TA</i> ₃₄		7 30.9 237°27	3°8/27.8 18			172299	2002 <i>TD</i> ₂₁₇		7 30.9 280°11	2°4/		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
158373	2001 <i>XJ</i> ₁₈₈		7 30.9 241°68	0°5/31.2	18		149082	2002 <i>CQ</i> ₉₃		7 30.9 23°04	1°1/30.2	18	
6 30	21 4.61	-15 15.3	1.842	2.733	12.5	20.6	6 30	21 1.69	-19 31.6	1.792	2.696	12.1	19.2
7 10	20 58.75	-15 40.2	1.767	2.724	9.0	20.3	7 10	20 56.61	-20 6.1	1.737	2.702	8.5	18.9
7 20	20 50.92	-16 13.7	1.715	2.714	4.9	20.1	7 20	20 49.71	-20 45.1	1.706	2.708	4.5	18.7
7 30	20 41.87	-16 52.1	1.689	2.704	0.7	19.7	7 30	20 41.79	-21 24.2	1.700	2.715	1.1	18.5
8 9	20 32.56	-17 31.0	1.691	2.694	4.0	20.0	8 9	20 33.81	-21 58.7	1.722	2.722	4.3	18.7
8 19	20 24.04	-18 6.5	1.719	2.684	8.2	20.2	8 19	20 26.75	-22 25.4	1.768	2.730	8.3	19.0
8 29	20 17.25	-18 35.6	1.772	2.673	12.1	20.4	8 29	20 21.45	-22 42.3	1.839	2.738	11.8	19.2
9 8	20 12.85	-18 56.5	1.846	2.662	15.3	20.6	9 8	20 18.45	-22 48.9	1.931	2.746	14.8	19.4
3247	Di Martino		7 30.9 100°49	2°7/29.4	18 R		199185	2005 <i>YU</i> ₂₆₄		7 30.9 17°44	1°0/30.5	16	
6 30	21 8.14	-22 45.2	1.525	2.430	13.8	16.7	6 30	21 3.73	-19 52.0	1.171	2.091	15.9	19.8
7 10	21 1.34	-23 32.1	1.479	2.443	9.7	16.5	7 10	20 58.63	-19 58.0	1.126	2.097	11.2	19.6
7 20	20 52.28	-24 20.6	1.456	2.457	5.3	16.3	7 20	20 50.97	-20 9.0	1.101	2.105	5.9	19.3
7 30	20 41.96	-25 4.1	1.459	2.470	2.7	16.2	7 30	20 41.89	-20 20.2	1.099	2.114	1.0	19.0
8 9	20 31.70	-25 36.9	1.488	2.483	5.8	16.4	8 9	20 32.88	-20 26.9	1.121	2.125	5.3	19.3
8 19	20 22.73	-25 56.1	1.542	2.496	9.9	16.7	8 19	20 25.32	-20 26.3	1.166	2.136	10.4	19.6
8 29	20 16.06	-26 1.1	1.620	2.509	13.7	16.9	8 29	20 20.34	-20 17.1	1.231	2.149	14.9	19.9
9 8	20 12.27	-25 53.3	1.717	2.521	16.8	17.2	9 8	20 18.49	-19 59.5	1.315	2.162	18.6	20.2
515908	2015 <i>PW</i> ₁₈₀		7 30.9 309°96	3°2/29.2	18		431412	2007 <i>HV</i> ₆₉		7 30.9 144°29	2°3/29.2	17	
6 30	21 5.31	-26 26.6	1.929	2.831	11.5	21.4	6 30	21 5.86	-22 8.6	2.022	2.918	11.3	21.9
7 10	20 59.21	-26 46.4	1.858	2.820	8.3	21.2	7 10	20 59.43	-23 10.8	1.967	2.927	7.9	21.7
7 20	20 51.14	-27 4.2	1.811	2.809	4.9	20.9	7 20	20 51.20	-24 15.4	1.937	2.937	4.4	21.5
7 30	20 41.88	-27 15.3	1.791	2.799	3.2	20.8	7 30	20 41.92	-25 16.6	1.935	2.945	2.4	21.3
8 9	20 32.48	-27 16.2	1.798	2.788	5.5	20.9	8 9	20 32.56	-26 9.2	1.961	2.953	4.9	21.5
8 19	20 23.99	-27 5.3	1.830	2.778	9.0	21.1	8 19	20 24.07	-26 49.7	2.014	2.961	8.4	21.8
8 29	20 17.33	-26 42.7	1.887	2.769	12.4	21.3	8 29	20 17.31	-27 16.6	2.092	2.968	11.6	22.0
9 8	20 13.12	-26 10.0	1.964	2.759	15.3	21.5	9 8	20 12.84	-27 30.3	2.191	2.975	14.3	22.2
123779	2001 <i>BW</i> ₁₂		7 30.9 112°24	4°9/27.1	18		302138	2001 <i>RZ</i> ₉₉		7 30.9 288°00	2°5/29.8	17	
6 30	21 4.74	-32 55.8	2.396	3.288	9.9	19.5	6 30	21 7.25	-21 33.7	1.243	2.158	15.6	20.4
7 10	20 58.50	-33 47.4	2.346	3.296	7.5	19.4	7 10	21 1.43	-22 11.2	1.177	2.146	11.1	20.1
7 20	20 50.62	-34 32.8	2.322	3.304	5.5	19.3	7 20	20 52.70	-22 53.9	1.132	2.135	6.1	19.8
7 30	20 41.83	-35 7.3	2.325	3.311	5.0	19.3	7 30	20 42.07	-23 34.6	1.111	2.124	2.5	19.5
8 9	20 33.03	-35 27.3	2.356	3.318	6.5	19.4	8 9	20 31.07	-24 6.2	1.114	2.113	6.4	19.7
8 19	20 25.07	-35 31.5	2.412	3.325	8.8	19.5	8 19	20 21.33	-24 24.0	1.139	2.102	11.6	20.0
8 29	20 18.72	-35 20.5	2.492	3.332	11.2	19.7	8 29	20 14.25	-24 26.4	1.186	2.091	16.4	20.3
9 8	20 14.50	-34 56.6	2.593	3.339	13.2	19.9	9 8	20 10.66	-24 14.5	1.251	2.080	20.4	20.5
216270	2006 <i>WQ</i> ₉₉		7 30.9 42°06	2°1/29.9	17		397499	2007 <i>RR</i> ₂₉₈		7 30.9 247°54	4°1/2.8	18	
6 30	21 5.29	-20 26.9	1.193	2.110	15.8	19.8	6 30	21 2.29	-4 32.2	2.267	3.117	12.0	22.0
7 10	20 59.67	-21 10.5	1.154	2.125	11.1	19.5	7 10	20 56.85	-4 31.8	2.179	3.102	9.4	21.8
7 20	20 51.48	-21 59.2	1.136	2.139	5.9	19.3	7 20	20 49.84	-4 45.1	2.114	3.088	6.5	21.6
7 30	20 41.91	-22 45.5	1.141	2.155	2.1	19.1	7 30	20 41.83	-5 11.4	2.076	3.072	4.4	21.4
8 9	20 32.45	-23 22.8	1.170	2.171	5.9	19.4	8 9	20 33.57	-5 48.5	2.064	3.057	4.8	21.4
8 19	20 24.50	-23 46.9	1.223	2.187	10.8	19.7	8 19	20 25.84	-6 33.1	2.081	3.040	7.3	21.5
8 29	20 19.16	-23 56.5	1.297	2.204	15.1	20.0	8 29	20 19.42	-7 21.5	2.123	3.024	10.3	21.7
9 8	20 16.99	-23 52.4	1.389	2.222	18.6	20.3	9 8	20 14.86	-8 9.5	2.188	3.007	13.1	21.9
482936	2014 <i>JR</i> ₃₈		7 30.9 355°38	6°7/25.3	18		41892	2000 <i>WS</i> ₁₁₀		7 30.9 302°90	3°3/29.0	18	
6 30	21 3.69	-33 51.5	1.931	2.833	11.5	20.8	6 30	21 4.62	-24 10.5	1.563	2.473	13.2	18.3
7 10	20 58.26	-35 28.7	1.880	2.832	8.9	20.6	7 10	20 59.20	-24 57.6	1.489	2.456	9.5	18.0
7 20	20 50.72	-36 59.6	1.854	2.831	7.0	20.5	7 20	20 51.37	-25 47.0	1.439	2.439	5.5	17.8
7 30	20 41.86	-38 16.1	1.854	2.830	7.0	20.5	7 30	20 41.96	-26 32.1	1.413	2.422	3.4	17.6
8 9	20 32.79	-39 12.2	1.879	2.829	8.8	20.6	8 9	20 32.20	-27 6.5	1.412	2.405	6.3	17.7
8 19	20 24.64	-39 45.0	1.929	2.829	11.3	20.8	8 19	20 23.38	-27 26.3	1.436	2.389	10.6	17.9
8 29	20 18.43	-39 54.9	2.000	2.829	13.9	21.0	8 29	20 16.69	-27 30.0	1.483	2.373	14.6	18.2
9 8	20 14.83	-39 44.8	2.090	2.830	16.2	21.1	9 8	20 12.93	-27 18.7	1.548	2.357	18.1	18.3
145801	1998 <i>RF</i> ₈₀		7 30.9 289°50	4°3/28.4	18		250835	2005 <i>UW</i> ₁₄₀		7 30.9 286°22	4°7/3.4	18	
6 30	21 6.11	-25 26.3	1.494	2.405	13.7	19.5	6 30	21 0.11	-2 41.3	2.178	3.026	12.6	20.4
7 10	21 0.48	-26 28.1	1.416	2.382	9.9	19.2	7 10	20 55.31	-2 45.3	2.099	3.018	9.9	20.3
7 20	20 52.15	-27 32.4	1.361	2.360	6.0	18.9	7 20	20 49.01	-3 5.0	2.042	3.010	7.1	20.1
7 30	20 42.00	-28 31.2	1.331	2.337	4.3	18.7	7 30	20 41.77	-3 39.8	2.010	3.002	5.0	19.9
8 9	20 31.32	-29 16.6	1.325	2.314	7.3	18.9	8 9	20 34.35	-4 27.0	2.005	2.994	5.1	19.9
8 19	20 21.58	-29 43.7	1.344	2.291	11.7	19.1	8 19	20 27.51	-5 22.9	2.027	2.987	7.5	20.0
8 29	20 14.13	-29 51.0	1.385	2.269	15.8	19.2	8 29	20 21.98	-6 22.9	2.074	2.979	10.3	20.2
9 8	20 9.87	-29 40.1	1.444	2.246	19.5	19.4	9 8	20 18.31	-7 22.6	2.144	2.971	13.1	20.4
127008	2002 <i>GU</i> ₈		7 30.9 30°53	11°1/25.9	18		477517	2010 <i>CB</i> ₂₃₀		7 30.9 233°42	2°3/29.8	18	
6 30	21 9.44	-41 8.1	1.263	2.166	16.3	18.6	6 30	21 8.04	-24 38.1	1.942	2.839	11.7	21.4
7 10	21 2.88	-42 22.1	1.239	2.181	13.4	18.4	7 10	21 1.04	-24 44.0	1.876	2.836	8.3	21.2
7 20	20 53.24	-43 15.6	1.235	2.197	11.4	18.4	7 20	20 52.09	-24 48.3	1.834	2.833	4.7	21.0
7 30	20 42.05	-43 39.1	1.253	2.215	11.2	18.4	7 30	20 42.03	-24 47.4	1.818	2.830	2.3	20.8
8 9	20 31.22	-43 28.5	1.292	2.233	12.8	18.6	8 9	20 31.91	-24 38.2	1.831	2.826	4.8	21.0
8 19	20 22.44	-42 45.8	1.352	2.252	15.3	18.8	8 19	20 22.77	-24 19.8	1.870	2.823	8.5	21.2
8 29	20 16.88	-41 37.3	1.431	2.271	17.9	19.0	8 29	20 15.52	-23 52.4	1.934	2.819	11.9	21.4
9 8	20 14.97	-40 10.8	1.526	2.292	20.2	19.2	9 8	20 10.74	-23 17.6	2.019	2.816	14.9	21.6
391855	2008 <i>SG</i> ₃₀₀		7 30.9 303°20	1°6/31.6	18		11454	Mariomelita		7 30.9 242°18	3°3		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
493613	2015 <i>OR</i> ₉		7 30.9 253°70	3°7/ 2.2	18		37470	6834 <i>P-L</i>		7 30.9 58°60	1°5/29.9	18	
6 30	21 2.41	- 7 1.9	2.104	2.967	12.3	21.3	6 30	21 3.67	-21 13.6	1.956	2.855	11.5	18.5
7 10	20 56.93	- 6 50.8	2.030	2.964	9.4	21.1	7 10	20 57.81	-21 43.8	1.910	2.873	8.0	18.4
7 20	20 49.87	- 6 51.8	1.980	2.961	6.3	20.9	7 20	20 50.30	-22 15.9	1.889	2.891	4.3	18.2
7 30	20 41.85	- 7 4.1	1.956	2.958	3.9	20.8	7 30	20 41.90	-22 46.0	1.895	2.908	1.5	18.0
8 9	20 33.69	- 7 25.5	1.959	2.954	4.6	20.8	8 9	20 33.57	-23 10.2	1.928	2.926	4.3	18.2
8 19	20 26.20	- 7 53.2	1.988	2.951	7.4	21.0	8 19	20 26.19	-23 26.1	1.988	2.944	7.8	18.5
8 29	20 20.16	- 8 23.8	2.043	2.947	10.5	21.2	8 29	20 20.52	-23 32.7	2.072	2.962	11.0	18.7
9 8	20 16.09	- 8 54.0	2.121	2.944	13.3	21.4	9 8	20 17.04	-23 30.2	2.177	2.981	13.7	18.9
131670	2001 <i>XJ</i> ₁₇₆		7 30.9 306°41	0°5/30.6	18		91136	1998 <i>KK</i> ₆		7 30.9 182°41	10°9/19.9	18	
6 30	21 4.23	-17 1.5	1.196	2.111	16.1	19.4	6 30	21 16.30	-52 7.1	2.370	3.199	12.3	19.9
7 10	20 59.36	-17 38.9	1.127	2.096	11.5	19.1	7 10	21 7.60	-53 55.1	2.336	3.200	11.2	19.9
7 20	20 51.64	-18 28.2	1.078	2.081	6.2	18.7	7 20	20 55.95	-55 23.9	2.325	3.200	10.9	19.8
7 30	20 42.01	-19 23.4	1.052	2.067	0.7	18.3	7 30	20 42.39	-56 25.5	2.337	3.200	11.2	19.9
8 9	20 31.93	-20 16.7	1.049	2.053	5.6	18.6	8 9	20 28.49	-56 55.5	2.373	3.199	12.3	19.9
8 19	20 22.96	-21 1.6	1.070	2.040	11.3	18.9	8 19	20 15.89	-56 54.1	2.429	3.197	13.6	20.0
8 29	20 16.54	-21 33.5	1.111	2.026	16.4	19.1	8 29	20 5.98	-56 25.1	2.504	3.195	15.0	20.1
9 8	20 13.56	-21 50.9	1.170	2.014	20.6	19.4	9 8	19 59.58	-55 34.6	2.594	3.192	16.2	20.3
218500	2004 <i>TT</i> ₇₇		7 30.9 335°44	5°6/25.6	18		490628	2010 <i>BW</i> ₄		7 30.9 197°71	1°1/30.2	17	
6 30	21 1.14	-27 19.3	1.767	2.679	11.9	19.1	6 30	21 6.07	-20 16.3	2.080	2.972	11.2	22.5
7 10	20 56.68	-29 33.5	1.703	2.666	8.7	18.9	7 10	20 59.60	-20 43.4	2.011	2.970	7.9	22.2
7 20	20 50.03	-31 50.4	1.664	2.655	6.1	18.7	7 20	20 51.34	-21 13.6	1.966	2.967	4.2	22.0
7 30	20 41.88	-33 59.7	1.652	2.644	5.9	18.7	7 30	20 42.01	-21 43.1	1.949	2.963	1.2	21.8
8 9	20 33.29	-35 51.7	1.667	2.634	8.4	18.8	8 9	20 32.54	-22 7.8	1.960	2.959	4.1	22.0
8 19	20 25.43	-37 19.9	1.707	2.624	11.6	19.0	8 19	20 23.88	-22 25.3	1.999	2.955	7.8	22.2
8 29	20 19.43	-38 21.8	1.770	2.615	14.8	19.2	8 29	20 16.86	-22 34.1	2.063	2.950	11.2	22.4
9 8	20 16.10	-38 58.6	1.851	2.607	17.4	19.3	9 8	20 12.07	-22 34.1	2.148	2.945	14.1	22.6
37608	Löns		7 30.9 262°62	4°2/28.6	18		107102	2001 <i>AV</i> ₃₃		7 30.9 268°49	4°1/28.5	18	
6 30	21 8.14	-28 3.4	1.781	2.682	12.4	19.5	6 30	21 7.12	-24 58.9	1.490	2.400	13.8	19.5
7 10	21 1.47	-28 41.0	1.709	2.669	9.0	19.3	7 10	21 1.16	-26 4.7	1.419	2.384	9.9	19.2
7 20	20 52.50	-29 15.9	1.660	2.655	5.7	19.1	7 20	20 52.53	-27 13.2	1.370	2.369	6.0	18.9
7 30	20 42.08	-29 41.9	1.638	2.641	4.3	19.0	7 30	20 42.13	-28 16.1	1.346	2.353	4.2	18.8
8 9	20 31.42	-29 54.0	1.642	2.627	6.6	19.1	8 9	20 31.29	-29 5.4	1.348	2.337	7.2	18.9
8 19	20 21.74	-29 50.1	1.671	2.612	10.2	19.3	8 19	20 21.47	-29 36.4	1.374	2.321	11.5	19.1
8 29	20 14.15	-29 30.4	1.724	2.598	13.8	19.4	8 29	20 13.98	-29 47.6	1.422	2.304	15.6	19.3
9 8	20 9.35	-28 57.4	1.797	2.583	16.8	19.6	9 8	20 9.67	-29 40.7	1.488	2.288	19.1	19.5
257265	2009 <i>FY</i> ₅₈		7 30.9 358°70	2°5/ 1.0	17		438933	2010 <i>FS</i> ₂₂		7 30.9 240°56	0°5/31.2	18	
6 30	20 59.77	-12 27.2	0.949	1.871	18.4	19.7	6 30	21 3.64	-14 48.0	1.970	2.858	12.0	21.4
7 10	20 56.33	-12 29.8	0.897	1.867	13.5	19.4	7 10	20 58.01	-15 21.4	1.893	2.849	8.6	21.1
7 20	20 50.00	-12 50.2	0.863	1.864	7.9	19.1	7 20	20 50.56	-16 3.7	1.840	2.839	4.7	20.9
7 30	20 41.88	-13 24.8	0.849	1.862	2.8	18.8	7 30	20 41.96	-16 51.2	1.814	2.829	0.7	20.6
8 9	20 33.56	-14 7.1	0.856	1.862	5.7	19.0	8 9	20 33.11	-17 39.5	1.816	2.819	3.7	20.8
8 19	20 26.66	-14 50.1	0.884	1.864	11.3	19.3	8 19	20 24.97	-18 24.2	1.844	2.808	7.8	21.0
8 29	20 22.51	-15 27.5	0.931	1.867	16.6	19.6	8 29	20 18.42	-19 2.3	1.898	2.797	11.5	21.2
9 8	20 21.88	-15 55.0	0.995	1.872	21.0	19.9	9 8	20 14.08	-19 31.7	1.973	2.786	14.6	21.4
115172	2003 <i>SN</i> ₈₂		7 30.9 6°85	0°9/30.5	17		519076	2010 <i>LJ</i> ₂₃		7 30.9 144°14	8°1/ 4.5	17	
6 30	21 2.90	-17 36.4	1.085	2.007	16.7	19.5	6 30	21 5.10	+ 3 26.0	1.998	2.811	14.8	20.8
7 10	20 58.35	-18 17.5	1.035	2.007	11.8	19.2	7 10	20 58.87	+ 4 21.0	1.931	2.815	12.3	20.6
7 20	20 51.00	-19 9.5	1.003	2.008	6.3	18.9	7 20	20 50.94	+ 4 57.1	1.886	2.819	10.0	20.5
7 30	20 41.96	-20 5.1	0.994	2.009	0.9	18.6	7 30	20 41.99	+ 5 12.4	1.864	2.823	8.3	20.4
8 9	20 32.77	-20 56.4	1.008	2.012	5.8	18.9	8 9	20 32.91	+ 5 7.3	1.869	2.827	8.2	20.4
8 19	20 24.98	-21 36.9	1.044	2.015	11.3	19.2	8 19	20 24.59	+ 4 44.1	1.898	2.831	9.7	20.5
8 29	20 19.89	-22 3.1	1.101	2.020	16.1	19.5	8 29	20 17.84	+ 4 7.2	1.952	2.834	12.0	20.6
9 8	20 18.19	-22 14.2	1.174	2.025	20.2	19.8	9 8	20 13.22	+ 3 22.2	2.027	2.837	14.3	20.8
264853	2002 <i>RA</i> ₅₅		7 30.9 336°97	0°1/30.9	17 R		275711	2000 <i>WP</i> ₆₅		7 30.9 330°54	3°1/28.9	18	
6 30	21 3.93	-19 17.0	1.062	1.985	16.8	19.3	6 30	21 2.30	-24 19.9	1.818	2.726	11.8	20.5
7 10	20 59.31	-18 59.2	0.996	1.969	12.1	19.0	7 10	20 57.24	-25 7.7	1.752	2.717	8.4	20.3
7 20	20 51.66	-18 46.2	0.949	1.954	6.6	18.6	7 20	20 50.20	-25 56.9	1.709	2.708	4.9	20.0
7 30	20 42.03	-18 34.4	0.924	1.940	0.5	18.2	7 30	20 41.95	-26 41.8	1.691	2.700	3.1	19.9
8 9	20 32.04	-18 20.2	0.922	1.927	5.7	18.5	8 9	20 33.49	-27 17.2	1.701	2.692	5.6	20.1
8 19	20 23.39	-18 1.2	0.940	1.915	11.6	18.8	8 19	20 25.89	-27 39.8	1.735	2.685	9.3	20.3
8 29	20 17.55	-17 36.4	0.979	1.906	16.9	19.1	8 29	20 20.09	-27 48.4	1.793	2.678	12.7	20.5
9 8	20 15.37	-17 5.8	1.034	1.897	21.4	19.3	9 8	20 16.73	-27 43.4	1.871	2.672	15.7	20.7
482211	2010 <i>VA</i> ₂₁₅		7 30.9 72°62	3°7/ 2.3	18		71000	Hughdowns		7 30.9 270°67	4°1/27.8	18	
6 30	21 1.98	- 6 42.1	2.232	3.092	11.8	20.9	6 30	21 4.58	-25 46.9	1.904	2.807	11.6	18.5
7 10	20 56.52	- 6 27.1	2.164	3.095	9.0	20.7	7 10	20 58.98	-27 7.8	1.827	2.789	8.4	18.3
7 20	20 49.61	- 6 23.6	2.119	3.097	6.1	20.6	7 20	20 51.23	-28 31.0	1.775	2.771	5.2	18.1
7 30	20 41.85	- 6 30.9	2.100	3.100	3.9	20.4	7 30	20 42.05	-29 49.2	1.750	2.752	4.2	18.0
8 9	20 34.00	- 6 47.1	2.109	3.103	4.5	20.5	8 9	20 32.45	-30 55.4	1.752	2.734	6.6	18.1
8 19	20 26.83	- 7 9.6	2.145	3.106	7.0	20.6	8 19	20 23.57	-31 44.9	1.780	2.715	10.1	18.3
8 29	20 21.02	- 7 35.5	2.206	3.109	9.9	20.8	8 29	20 16.47	-32 15.7	1.831	2.696	13.5	18.4
9 8	20 17.06	- 8 1.6	2.290	3.112	12.5	21.0	9 8	20 11.91	-32 28.6	1.902	2.677	16.4	18.6
128860	2004 <i>SL</i> ₂₆		7 30.9 300°45	3°4/ 2.9	18		9832	Xiaobinwang		7 30.9 318°18	4°2/ 1.6	18	

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
86143	1999 <i>RV</i> ₁₈₆		7 30.9 289°54	1°1/30.2	18		350887	2002 <i>QN</i> ₁₂₁		7 30.9 348°72	1°7/31.8	18	
6 30	21 3.43	-20 45.4	2.129	3.026	10.8	20.0	6 30	21 2.89	-13 31.2	1.568	2.464	14.0	20.8
7 10	20 57.78	-21 2.7	2.052	3.013	7.7	19.8	7 10	20 57.73	-13 32.3	1.502	2.460	10.2	20.6
7 20	20 50.41	-21 22.6	2.000	3.000	4.1	19.6	7 20	20 50.50	-13 43.6	1.459	2.457	5.9	20.3
7 30	20 41.98	-21 41.7	1.974	2.988	1.1	19.3	7 30	20 42.01	-14 2.5	1.440	2.454	1.9	20.1
8 9	20 33.36	-21 56.7	1.976	2.975	4.0	19.5	8 9	20 33.36	-14 25.3	1.447	2.451	4.3	20.2
8 19	20 25.45	-22 5.2	2.005	2.963	7.7	19.7	8 19	20 25.65	-14 48.3	1.479	2.449	8.7	20.5
8 29	20 19.08	-22 6.0	2.059	2.950	11.0	19.9	8 29	20 19.89	-15 8.3	1.534	2.448	12.8	20.7
9 8	20 14.82	-21 59.0	2.134	2.938	13.9	20.1	9 8	20 16.70	-15 22.8	1.610	2.447	16.2	21.0
445270	2009 <i>SC</i> ₃₂₉		7 30.9 313°16	7°5/5.2	17		442075	2010 <i>RX</i> ₁₆₄		7 30.9 285°39	0°3/30.7	18	
6 30	20 59.06	+ 3 46.9	2.004	2.826	14.5	20.7	6 30	21 4.42	-19 3.5	2.124	3.017	11.0	21.1
7 10	20 54.88	+ 3 57.3	1.903	2.795	12.2	20.5	7 10	20 58.49	-19 6.4	2.043	3.002	7.8	20.9
7 20	20 48.97	+ 3 46.2	1.823	2.764	9.8	20.2	7 20	20 50.81	-19 12.4	1.987	2.987	4.2	20.6
7 30	20 41.87	+ 3 12.3	1.765	2.734	7.9	20.1	7 30	20 42.06	-19 19.0	1.957	2.972	0.4	20.3
8 9	20 34.36	+ 2 16.4	1.733	2.704	7.7	20.0	8 9	20 33.10	-19 23.3	1.956	2.957	3.7	20.6
8 19	20 27.30	+ 1 2.3	1.725	2.674	9.4	20.0	8 19	20 24.84	-19 23.4	1.981	2.943	7.5	20.8
8 29	20 21.59	- 0 24.3	1.742	2.645	12.1	20.1	8 29	20 18.13	-19 18.1	2.032	2.928	11.0	21.0
9 8	20 17.90	- 1 56.4	1.781	2.616	15.0	20.3	9 8	20 13.55	-19 7.1	2.105	2.913	14.0	21.1
342294	2008 <i>TP</i> ₃₈		7 30.9 207°05	8°4/24.9	18		304484	2006 <i>UP</i> ₁₀₃		7 30.9 227°18	0°8/31.5	18	
6 30	21 12.71	-42 57.4	2.234	3.101	11.6	21.0	6 30	21 2.30	-14 20.5	2.184	3.069	11.1	21.7
7 10	21 4.57	-43 59.9	2.179	3.096	9.7	20.9	7 10	20 56.89	-14 43.4	2.112	3.066	8.0	21.5
7 20	20 54.11	-44 48.8	2.149	3.090	8.5	20.8	7 20	20 49.91	-15 14.0	2.065	3.062	4.4	21.3
7 30	20 42.29	-45 17.0	2.144	3.084	8.5	20.8	7 30	20 41.99	-15 49.3	2.044	3.058	1.0	21.0
8 9	20 30.37	-45 20.6	2.164	3.078	9.8	20.9	8 9	20 33.91	-16 25.9	2.051	3.054	3.4	21.2
8 19	20 19.62	-44 59.5	2.209	3.071	11.7	21.0	8 19	20 26.50	-17 0.5	2.086	3.050	7.0	21.4
8 29	20 11.12	-44 16.3	2.275	3.063	13.7	21.1	8 29	20 20.51	-17 30.4	2.146	3.046	10.3	21.6
9 8	20 5.50	-43 16.1	2.360	3.055	15.6	21.2	9 8	20 16.48	-17 53.8	2.229	3.042	13.1	21.8
85759	1998 <i>ST</i> ₁₆₁		7 30.9 345°67	4°1/2.2	18		151315	2002 <i>CQ</i> ₁₁₅		7 30.9 199°16	1°1/30.0	18	
6 30	20 58.48	- 7 41.2	1.100	2.006	17.9	18.4	6 30	21 2.63	-20 32.3	2.698	3.587	9.1	21.5
7 10	20 55.25	- 8 0.2	1.037	1.995	13.6	18.1	7 10	20 56.91	-21 4.0	2.626	3.584	6.4	21.4
7 20	20 49.42	- 8 43.1	0.992	1.986	8.7	17.8	7 20	20 49.85	-21 38.1	2.580	3.580	3.4	21.2
7 30	20 41.91	- 9 47.2	0.968	1.977	4.5	17.5	7 30	20 41.98	-22 11.6	2.562	3.576	1.1	21.0
8 9	20 34.06	-11 5.6	0.966	1.971	5.8	17.6	8 9	20 34.00	-22 41.2	2.574	3.572	3.4	21.1
8 19	20 27.30	-12 29.4	0.987	1.965	10.7	17.8	8 19	20 26.58	-23 4.8	2.614	3.567	6.4	21.3
8 29	20 22.95	-13 49.5	1.028	1.961	15.6	18.1	8 29	20 20.38	-23 20.9	2.680	3.562	9.1	21.5
9 8	20 21.80	-14 58.6	1.087	1.958	19.9	18.3	9 8	20 15.86	-23 29.0	2.769	3.556	11.5	21.7
435137	2007 <i>GH</i> ₂₃		7 30.9 64°05	6°4/27.4	17		85554	1997 <i>YF</i> ₁₄		7 30.9 229°67	0°7/31.3	18	
6 30	21 8.16	-32 0.2	1.549	2.455	13.6	20.9	6 30	21 6.12	-15 29.7	1.984	2.869	12.0	19.9
7 10	21 1.56	-33 4.7	1.508	2.466	10.2	20.7	7 10	20 59.77	-15 38.9	1.906	2.860	8.6	19.7
7 20	20 52.52	-34 1.5	1.491	2.477	7.3	20.6	7 20	20 51.53	-15 54.8	1.852	2.850	4.8	19.4
7 30	20 42.16	-34 42.5	1.497	2.488	6.5	20.6	7 30	20 42.13	-16 14.7	1.825	2.839	0.9	19.1
8 9	20 31.85	-35 2.5	1.529	2.500	8.6	20.7	8 9	20 32.51	-16 35.3	1.826	2.828	3.7	19.3
8 19	20 22.94	-35 0.1	1.585	2.512	11.7	20.9	8 19	20 23.63	-16 53.7	1.854	2.817	7.8	19.5
8 29	20 16.49	-34 37.5	1.662	2.523	14.8	21.1	8 29	20 16.41	-17 7.7	1.907	2.805	11.5	19.7
9 8	20 13.08	-33 58.7	1.758	2.535	17.5	21.4	9 8	20 11.48	-17 15.9	1.982	2.793	14.6	19.9
13637	1995 <i>YO</i> ₃		7 30.9 245°27	0°4/31.1	18		348375	2005 <i>EG</i> ₂₀₅		7 30.9 248°99	5°7/27.5	18	
6 30	21 6.05	-15 40.2	1.751	2.643	13.0	18.7	6 30	21 8.54	-33 18.0	1.992	2.886	11.6	20.7
7 10	20 59.95	-16 3.9	1.673	2.630	9.4	18.4	7 10	21 1.61	-34 0.8	1.928	2.878	8.8	20.5
7 20	20 51.72	-16 36.3	1.618	2.617	5.1	18.2	7 20	20 52.55	-34 36.5	1.888	2.870	6.4	20.4
7 30	20 42.11	-17 13.4	1.589	2.604	0.7	17.8	7 30	20 42.21	-34 58.9	1.874	2.862	5.8	20.3
8 9	20 32.19	-17 50.8	1.587	2.590	4.2	18.0	8 9	20 31.75	-35 3.8	1.886	2.853	7.5	20.4
8 19	20 23.06	-18 24.3	1.611	2.575	8.7	18.3	8 19	20 22.30	-34 50.0	1.924	2.845	10.3	20.6
8 29	20 15.79	-18 50.8	1.660	2.561	12.7	18.5	8 29	20 14.87	-34 18.9	1.985	2.836	13.2	20.7
9 8	20 11.07	-19 8.8	1.729	2.546	16.2	18.7	9 8	20 10.09	-33 33.8	2.067	2.827	15.7	20.9
311508	2005 <i>WB</i> ₁₃₉		7 30.9 210°03	2°3/29.1	18		218489	2004 <i>TK</i> ₄₅		7 30.9 327°08	4°8/27.8	18	
6 30	21 2.62	-24 7.3	2.488	3.384	9.5	21.4	6 30	21 4.38	-30 49.7	2.048	2.948	11.0	19.7
7 10	20 57.02	-24 50.1	2.421	3.380	6.7	21.2	7 10	20 58.59	-31 32.4	1.985	2.942	8.2	19.5
7 20	20 49.93	-25 33.6	2.379	3.377	3.8	21.0	7 20	20 50.89	-32 10.4	1.947	2.936	5.6	19.3
7 30	20 41.95	-26 13.6	2.365	3.373	2.3	20.9	7 30	20 42.07	-32 38.2	1.935	2.930	4.9	19.3
8 9	20 33.85	-26 46.4	2.379	3.370	4.4	21.0	8 9	20 33.13	-32 51.9	1.949	2.924	6.7	19.4
8 19	20 26.39	-27 9.8	2.421	3.366	7.3	21.2	8 19	20 25.09	-32 49.6	1.989	2.918	9.5	19.5
8 29	20 20.27	-27 22.5	2.489	3.362	10.1	21.4	8 29	20 18.83	-32 31.8	2.052	2.913	12.4	19.7
9 8	20 16.02	-27 24.7	2.578	3.357	12.5	21.5	9 8	20 14.94	-32 0.7	2.135	2.908	14.9	19.9
439834	1995 <i>UV</i> ₄₂		7 30.9 299°04	2°7/29.2	17		260546	2005 <i>EG</i> ₁₈₁		7 30.9 51°57	4°1/29.3	17	
6 30	21 3.69	-24 5.9	1.954	2.856	11.4	21.6	6 30	21 9.32	-25 51.0	1.201	2.117	15.9	19.9
7 10	20 58.19	-24 41.2	1.875	2.838	8.1	21.4	7 10	21 2.62	-26 24.4	1.162	2.130	11.3	19.7
7 20	20 50.74	-25 17.7	1.820	2.820	4.6	21.2	7 20	20 53.17	-26 55.5	1.144	2.144	6.6	19.4
7 30	20 42.03	-25 50.5	1.792	2.802	2.7	21.0	7 30	20 42.26	-27 16.6	1.149	2.158	4.1	19.3
8 9	20 33.05	-26 15.1	1.791	2.784	5.2	21.1	8 9	20 31.55	-27 22.7	1.179	2.173	7.2	19.6
8 19	20 24.81	-26 28.5	1.815	2.766	8.9	21.3	8 19	20 22.54	-27 12.1	1.231	2.188	11.6	19.9
8 29	20 18.28	-26 29.7	1.864	2.748	12.4	21.5	8 29	20 16.39	-26 46.3	1.305	2.203	15.7	20.2
9 8	20 14.12	-26 19.2	1.933	2.731	15.4	21.7	9 8	20 13.63	-26 8.6	1.397	2.218	19.1	20.4
447294	2005 <i>WS</i> ₆₂		7 30.9 298°77	1°1/30.1	17		436335	2010 <i>GB</i> ₁₇₂					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
319796	2006 <i>VK</i> ₆		7 30.9 197°87	4°0/ 2.2 18			520485	2014 <i>KJ</i> ₁₁₁		7 30.9 46°51	3°7/ 2.7 18		
6 30	21 5.13	- 7 10.1	1.662	2.534	14.7	20.7	6 30	21 0.63	- 5 46.3	2.086	2.948	12.5	21.2
7 10	20 59.23	- 7 7.7	1.594	2.533	11.1	20.5	7 10	20 55.71	- 5 55.8	2.020	2.953	9.5	21.0
7 20	20 51.30	- 7 20.7	1.547	2.531	7.3	20.3	7 20	20 49.29	- 6 19.4	1.978	2.958	6.4	20.8
7 30	20 42.13	- 7 47.9	1.525	2.530	4.3	20.1	7 30	20 41.99	- 6 55.4	1.961	2.963	4.0	20.7
8 9	20 32.76	- 8 25.8	1.529	2.528	5.2	20.2	8 9	20 34.60	- 7 40.7	1.972	2.968	4.4	20.7
8 19	20 24.28	- 9 9.9	1.560	2.526	8.7	20.4	8 19	20 27.90	- 8 31.4	2.009	2.974	7.2	20.9
8 29	20 17.66	- 9 55.5	1.614	2.523	12.5	20.6	8 29	20 22.60	- 9 23.1	2.072	2.979	10.2	21.1
9 8	20 13.54	-10 38.2	1.689	2.520	15.8	20.8	9 8	20 19.22	-10 12.2	2.157	2.985	13.0	21.3
461179	2015 <i>VE</i> ₄		7 30.9 275°32	3°6/ 2.2 17			175342	2005 <i>NS</i> ₈₀		7 30.9 19°51	7°4/ 4.5 17		
6 30	21 2.90	- 6 43.8	2.602	3.453	10.6	21.4	6 30	21 0.00	- 0 24.5	1.170	2.045	19.3	19.1
7 10	20 57.21	- 6 22.2	2.502	3.429	8.2	21.2	7 10	20 56.07	- 0 29.9	1.118	2.051	15.4	18.8
7 20	20 50.08	- 6 9.8	2.428	3.404	5.6	21.0	7 20	20 49.76	- 1 5.2	1.084	2.057	11.3	18.6
7 30	20 42.03	- 6 6.6	2.380	3.378	3.7	20.9	7 30	20 42.04	- 2 9.2	1.070	2.064	8.0	18.5
8 9	20 33.70	- 6 11.6	2.361	3.353	4.3	20.9	8 9	20 34.19	- 3 35.9	1.079	2.073	7.8	18.5
8 19	20 25.81	- 6 23.0	2.369	3.327	6.7	21.0	8 19	20 27.50	- 5 16.0	1.111	2.082	10.8	18.7
8 29	20 19.04	- 6 38.6	2.405	3.300	9.5	21.1	8 29	20 23.09	- 6 59.0	1.164	2.092	14.7	19.0
9 8	20 13.93	- 6 55.8	2.463	3.274	12.1	21.3	9 8	20 21.61	- 8 35.7	1.236	2.103	18.3	19.2
321447	2009 <i>QJ</i> ₆₀		7 30.9 359°06	0°0/30.8 18			255196	2005 <i>UH</i> ₃₁₃		7 30.9 319°86	3°7/ 1.9 18		
6 30	21 0.06	-16 37.2	1.691	2.595	12.7	20.1	6 30	21 2.11	- 8 14.5	1.928	2.801	12.9	20.3
7 10	20 55.65	-17 4.6	1.629	2.593	9.0	19.8	7 10	20 56.96	- 7 55.4	1.851	2.790	9.8	20.1
7 20	20 49.36	-17 39.8	1.590	2.591	4.9	19.6	7 20	20 50.05	- 7 48.0	1.795	2.780	6.5	19.9
7 30	20 41.96	-18 18.9	1.575	2.590	0.4	19.2	7 30	20 42.07	- 7 51.8	1.766	2.770	3.9	19.7
8 9	20 34.43	-18 57.1	1.587	2.590	4.1	19.5	8 9	20 33.87	- 8 4.8	1.763	2.760	4.7	19.7
8 19	20 27.76	-19 30.5	1.624	2.591	8.3	19.8	8 19	20 26.37	- 8 24.4	1.786	2.751	7.9	19.9
8 29	20 22.84	-19 56.0	1.684	2.593	12.1	20.0	8 29	20 20.41	- 8 47.3	1.833	2.741	11.3	20.1
9 8	20 20.28	-20 12.1	1.765	2.595	15.3	20.2	9 8	20 16.59	- 9 10.1	1.902	2.733	14.4	20.3
259165	2002 <i>YD</i> ₂₁		7 30.9 161°32	3°2/28.6 18			452012	2014 <i>OC</i> ₉₃		7 30.9 330°95	2°4/ 1.6 18		
6 30	21 7.07	-24 19.5	2.015	2.912	11.4	21.0	6 30	21 1.20	-10 10.6	2.301	3.173	11.1	21.0
7 10	21 0.43	-25 30.1	1.959	2.918	8.0	20.9	7 10	20 56.04	-10 7.3	2.228	3.171	8.2	20.8
7 20	20 51.87	-26 41.5	1.927	2.924	4.7	20.7	7 20	20 49.45	-10 13.2	2.180	3.168	5.1	20.6
7 30	20 42.18	-27 47.5	1.923	2.929	3.2	20.6	7 30	20 42.01	-10 27.0	2.158	3.166	2.6	20.5
8 9	20 32.34	-28 42.4	1.947	2.934	5.6	20.7	8 9	20 34.46	-10 46.3	2.163	3.164	3.6	20.5
8 19	20 23.39	-29 22.7	1.998	2.938	8.9	20.9	8 19	20 27.53	-11 8.6	2.196	3.162	6.6	20.7
8 29	20 16.22	-29 47.4	2.074	2.941	12.0	21.2	8 29	20 21.91	-11 31.4	2.255	3.160	9.7	20.9
9 8	20 11.44	-29 57.3	2.171	2.944	14.7	21.3	9 8	20 18.09	-11 52.2	2.337	3.158	12.3	21.1
146880	2002 <i>CV</i> ₈		7 30.9 162°58	0°9/31.5 18			484313	2007 <i>TE</i> ₁₁₂		7 30.9 289°58	3°5/ 1.8 17		
6 30	21 3.67	-15 19.7	2.209	3.094	11.0	20.2	6 30	21 4.26	- 8 37.3	1.920	2.791	13.0	22.1
7 10	20 57.79	-15 19.8	2.142	3.095	7.9	20.0	7 10	20 58.70	- 8 28.6	1.819	2.759	9.9	21.8
7 20	20 50.36	-15 25.6	2.098	3.095	4.4	19.8	7 20	20 51.14	- 8 32.0	1.741	2.727	6.5	21.6
7 30	20 42.05	-15 34.9	2.082	3.096	1.0	19.5	7 30	20 42.18	- 8 46.8	1.689	2.695	3.7	21.3
8 9	20 33.65	-15 45.4	2.094	3.097	3.3	19.7	8 9	20 32.73	- 9 10.9	1.663	2.662	4.7	21.3
8 19	20 25.98	-15 54.8	2.133	3.097	6.9	19.9	8 19	20 23.79	- 9 41.1	1.664	2.629	8.4	21.5
8 29	20 19.77	-16 1.4	2.198	3.097	10.1	20.1	8 29	20 16.36	-10 13.9	1.690	2.596	12.2	21.6
9 8	20 15.53	-16 4.1	2.285	3.098	12.9	20.3	9 8	20 11.22	-10 45.5	1.737	2.562	15.8	21.8
365523	2010 <i>RA</i> ₁₂₇		7 30.9 196°06	2°8/28.7 18			474352	2002 <i>QH</i> ₆₃		7 30.9 321°53	0°6/31.3 18		
6 30	21 3.59	-26 24.0	2.594	3.488	9.2	21.9	6 30	21 2.62	-15 57.6	1.508	2.412	14.0	20.9
7 10	20 57.68	-27 2.7	2.529	3.486	6.6	21.7	7 10	20 57.83	-16 5.2	1.430	2.393	10.1	20.6
7 20	20 50.30	-27 40.1	2.489	3.484	4.0	21.6	7 20	20 50.74	-16 21.5	1.373	2.373	5.6	20.3
7 30	20 42.07	-28 12.4	2.477	3.482	2.8	21.5	7 30	20 42.14	-16 43.3	1.340	2.355	0.9	19.9
8 9	20 33.73	-28 36.3	2.494	3.479	4.6	21.6	8 9	20 33.18	-17 6.4	1.332	2.337	4.5	20.2
8 19	20 26.05	-28 49.8	2.538	3.476	7.3	21.8	8 19	20 25.07	-17 27.0	1.349	2.319	9.4	20.4
8 29	20 19.72	-28 52.3	2.607	3.473	9.9	21.9	8 29	20 18.96	-17 41.9	1.389	2.303	13.8	20.6
9 8	20 15.23	-28 44.6	2.699	3.469	12.2	22.1	9 8	20 15.63	-17 49.2	1.448	2.287	17.6	20.8
520326	2014 <i>GH</i> ₆₀		7 30.9 7°28	2°3/29.6 18			521604	2015 <i>PO</i> ₃₁₉		7 30.9 318°73	0°4/31.2 18		
6 30	21 5.12	-23 42.8	1.878	2.780	11.8	21.0	6 30	21 1.08	-15 7.7	2.080	2.971	11.3	21.2
7 10	20 59.10	-24 6.8	1.817	2.780	8.3	20.8	7 10	20 56.14	-15 38.0	2.008	2.965	8.1	20.9
7 20	20 51.17	-24 31.0	1.780	2.780	4.7	20.6	7 20	20 49.58	-16 16.2	1.961	2.960	4.4	20.7
7 30	20 42.15	-24 51.1	1.770	2.781	2.3	20.4	7 30	20 42.03	-16 59.0	1.940	2.955	0.6	20.4
8 9	20 33.05	-25 3.2	1.786	2.781	4.9	20.6	8 9	20 34.32	-17 42.2	1.946	2.950	3.5	20.6
8 19	20 24.90	-25 5.3	1.828	2.782	8.6	20.8	8 19	20 27.28	-18 22.3	1.980	2.945	7.2	20.9
8 29	20 18.58	-24 56.9	1.895	2.783	12.0	21.0	8 29	20 21.70	-18 56.3	2.039	2.940	10.7	21.1
9 8	20 14.66	-24 38.9	1.982	2.784	14.9	21.2	9 8	20 18.13	-19 22.3	2.119	2.936	13.6	21.3
309132	2006 <i>XP</i> ₃₁		7 30.9 294°71	1°5/29.9 18			217371	2004 <i>TM</i> ₁₆₉		7 30.9 314°96	1°8/29.7 18		
6 30	21 2.42	-20 13.0	1.988	2.888	11.3	20.7	6 30	21 1.61	-21 14.6	1.960	2.863	11.3	19.8
7 10	20 57.22	-20 55.3	1.915	2.878	8.0	20.5	7 10	20 56.71	-21 55.3	1.883	2.848	8.0	19.6
7 20	20 50.21	-21 42.3	1.866	2.868	4.3	20.2	7 20	20 49.98	-22 40.1	1.831	2.832	4.4	19.4
7 30	20 42.07	-22 29.3	1.844	2.857	1.5	20.0	7 30	20 42.07	-23 24.1	1.804	2.817	1.8	19.2
8 9	20 33.71	-23 11.7	1.849	2.847	4.4	20.2	8 9	20 33.91	-24 2.8	1.805	2.802	4.6	19.3
8 19	20 26.07	-23 45.7	1.880	2.837	8.2	20.4	8 19	20 26.45	-24 32.5	1.831	2.788	8.4	19.5
8 29	20 20.03	-24 9.1	1.936	2.827	11.6	20.6	8 29	20 20.60	-24 51.2	1.882	2.774	11.9	19.7
9 8	20 16.20	-24 21.3	2.013	2.818	14.6	20.8	9 8	20 16.98	-24 58.2	1.953	2.760	14.9	19.9
443743	2015 <i>LM</i> ₃₄		7 30.9 114°49	2°4/29.0 18			445416	2010 <i>TT</i> ₁₁₅					

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
490888	2011 <i>BD</i> ₅₃		7 30.9 292°75	0°3/30.7	17		288729	2004 <i>RA</i> ₄₅		7 30.9	2°01	3°1/ 2.3	18
6 30	21 1.50	-14 22.1	2.284	3.168	10.7	21.0	6 30	20 59.86	-7 17.2	1.935	2.808	12.8	20.1
7 10	20 56.56	-15 45.3	2.186	3.141	7.6	20.7	7 10	20 55.34	-7 43.3	1.866	2.807	9.7	19.9
7 20	20 49.91	-17 20.6	2.114	3.113	4.1	20.5	7 20	20 49.19	-8 24.2	1.821	2.807	6.2	19.7
7 30	20 42.08	-19 3.3	2.070	3.085	0.4	20.1	7 30	20 42.06	-9 17.5	1.801	2.807	3.3	19.5
8 9	20 33.82	-20 47.0	2.056	3.057	3.7	20.3	8 9	20 34.79	-10 18.8	1.807	2.808	4.1	19.6
8 19	20 25.95	-22 25.6	2.072	3.029	7.5	20.5	8 19	20 28.21	-11 23.5	1.840	2.809	7.4	19.8
8 29	20 19.33	-23 54.0	2.114	3.001	11.0	20.7	8 29	20 23.12	-12 26.4	1.898	2.810	10.8	20.0
9 8	20 14.63	-25 9.0	2.178	2.973	14.0	20.9	9 8	20 20.06	-13 23.7	1.979	2.812	13.8	20.2
263088	2007 <i>TL</i> ₁₁		7 30.9 294°78	5°5/28.3	18		20483	<i>Sinay</i>		7 30.9 327°95	4°2/29.6	18	
6 30	21 8.52	-28 5.6	1.288	2.203	15.1	20.1	6 30	21 7.78	-26 32.2	1.118	2.040	16.3	17.4
7 10	21 2.45	-29 0.2	1.226	2.192	11.1	19.8	7 10	21 2.19	-26 41.4	1.053	2.023	11.9	17.1
7 20	20 53.38	-29 52.7	1.185	2.181	7.2	19.6	7 20	20 53.36	-26 47.3	1.007	2.008	7.0	16.7
7 30	20 42.39	-30 33.8	1.167	2.170	5.6	19.5	7 30	20 42.45	-26 42.6	0.983	1.993	4.2	16.5
8 9	20 31.07	-30 55.9	1.173	2.160	8.5	19.6	8 9	20 31.21	-26 22.2	0.983	1.980	7.5	16.7
8 19	20 21.10	-30 55.8	1.202	2.149	12.8	19.8	8 19	20 21.44	-25 44.5	1.004	1.967	12.7	16.9
8 29	20 13.90	-30 34.3	1.252	2.139	17.0	20.0	8 29	20 14.68	-24 51.7	1.045	1.955	17.6	17.2
9 8	20 10.30	-29 55.3	1.319	2.129	20.6	20.3	9 8	20 11.76	-23 47.8	1.103	1.945	21.8	17.4
158721	2003 <i>KN</i> ₁₀		7 30.9 22°00	0°4/30.6	17		356402	2010 <i>RD</i> ₁₂₈		7 30.9 12°30	1°0/30.5	18	
6 30	20 57.68	-12 12.4	1.015	1.936	17.6	18.5	6 30	21 4.86	-21 0.6	1.752	2.655	12.5	20.3
7 10	20 54.63	-14 11.6	0.980	1.951	12.4	18.2	7 10	20 58.97	-21 1.3	1.693	2.657	8.8	20.1
7 20	20 49.00	-16 30.7	0.965	1.969	6.5	18.0	7 20	20 51.15	-21 3.9	1.658	2.659	4.7	19.8
7 30	20 42.04	-18 57.0	0.972	1.987	0.6	17.6	7 30	20 42.25	-21 5.1	1.648	2.663	1.1	19.6
8 9	20 34.94	-21 16.0	1.003	2.008	5.6	18.1	8 9	20 33.33	-21 2.1	1.665	2.666	4.3	19.8
8 19	20 29.26	-23 15.8	1.058	2.030	11.1	18.4	8 19	20 25.41	-20 53.1	1.708	2.671	8.4	20.1
8 29	20 26.09	-24 49.4	1.133	2.053	15.7	18.8	8 29	20 19.38	-20 37.5	1.775	2.675	12.0	20.3
9 8	20 26.00	-25 55.2	1.226	2.077	19.4	19.1	9 8	20 15.81	-20 15.6	1.862	2.681	15.1	20.5
270459	2002 <i>CK</i> ₂₅₆		7 30.9 64°15	2°1/29.7	17		50037	2000 <i>AR</i> ₅₄		7 30.9 325°39	1°3/30.3	18	
6 30	21 5.56	-20 38.0	1.527	2.434	13.7	19.6	6 30	21 3.25	-18 42.4	1.242	2.159	15.5	18.4
7 10	20 59.56	-21 33.2	1.487	2.452	9.6	19.4	7 10	20 58.65	-19 22.4	1.176	2.146	11.0	18.1
7 20	20 51.46	-22 32.1	1.469	2.471	5.1	19.2	7 20	20 51.35	-20 11.8	1.130	2.134	5.9	17.8
7 30	20 42.21	-23 28.3	1.477	2.490	2.1	19.1	7 30	20 42.29	-21 4.1	1.108	2.122	1.3	17.4
8 9	20 33.04	-24 15.7	1.511	2.509	5.3	19.3	8 9	20 32.86	-21 52.0	1.109	2.111	5.7	17.7
8 19	20 25.07	-24 50.3	1.570	2.528	9.4	19.6	8 19	20 24.54	-22 29.4	1.133	2.101	11.0	18.0
8 29	20 19.27	-25 10.8	1.652	2.547	13.1	19.9	8 29	20 18.66	-22 53.0	1.178	2.091	15.8	18.2
9 8	20 16.15	-25 17.8	1.755	2.566	16.2	20.1	9 8	20 16.05	-23 1.8	1.241	2.083	19.8	18.5
439435	2013 <i>GR</i> ₈₄		7 30.9 93°87	0°2/30.7	18		385221	2000 <i>DT</i> ₈₈		7 30.9 139°53	2°2/29.7	17	
6 30	21 0.88	-16 18.5	2.320	3.209	10.3	20.5	6 30	21 6.63	-23 50.7	2.060	2.956	11.2	21.2
7 10	20 55.84	-17 7.2	2.256	3.213	7.3	20.3	7 10	21 0.02	-24 12.9	2.001	2.961	7.9	21.0
7 20	20 49.37	-18 2.3	2.217	3.217	3.9	20.1	7 20	20 51.66	-24 34.8	1.967	2.966	4.4	20.8
7 30	20 42.04	-19 0.1	2.206	3.221	0.4	19.8	7 30	20 42.30	-24 52.4	1.960	2.971	2.2	20.7
8 9	20 34.61	-19 56.3	2.223	3.225	3.3	20.1	8 9	20 32.92	-25 2.4	1.981	2.976	4.6	20.9
8 19	20 27.80	-20 47.1	2.268	3.229	6.8	20.3	8 19	20 24.45	-25 3.1	2.029	2.980	8.1	21.1
8 29	20 22.33	-21 29.8	2.339	3.233	9.8	20.5	8 29	20 17.72	-24 54.0	2.102	2.985	11.2	21.3
9 8	20 18.67	-22 3.0	2.433	3.237	12.4	20.7	9 8	20 13.26	-24 36.1	2.196	2.989	13.9	21.5
154465	2003 <i>DB</i> ₁₃		7 30.9 40°91	2°1/29.9	17		60008	<i>Jarda</i>		7 30.9 314°37	0°7/31.5	18	
6 30	21 5.10	-20 47.2	1.313	2.227	15.0	19.5	6 30	21 1.52	-14 46.8	1.984	2.876	11.8	18.7
7 10	20 59.51	-21 29.5	1.271	2.240	10.5	19.2	7 10	20 56.57	-15 5.0	1.908	2.864	8.4	18.5
7 20	20 51.53	-22 16.2	1.250	2.253	5.6	19.0	7 20	20 49.90	-15 31.3	1.855	2.853	4.7	18.2
7 30	20 42.24	-23 0.5	1.253	2.267	2.1	18.8	7 30	20 42.15	-16 2.8	1.828	2.843	1.0	17.9
8 9	20 33.00	-23 36.2	1.281	2.281	5.6	19.1	8 9	20 34.20	-16 35.9	1.829	2.832	3.6	18.1
8 19	20 25.12	-23 59.4	1.333	2.296	10.2	19.4	8 19	20 26.93	-17 7.0	1.855	2.822	7.5	18.3
8 29	20 19.66	-24 8.9	1.407	2.311	14.3	19.7	8 29	20 21.17	-17 33.3	1.907	2.812	11.1	18.5
9 8	20 17.17	-24 5.2	1.500	2.327	17.7	19.9	9 8	20 17.54	-17 53.0	1.980	2.803	14.2	18.7
375762	2009 <i>SN</i> ₁₁₈		7 30.9 212°91	1°1/31.6	18		342793	2008 <i>WR</i> ₁₂₉		7 30.9 298°70	3°7/28.6	18	
6 30	21 5.90	-13 56.2	1.924	2.807	12.4	22.0	6 30	21 4.83	-25 15.1	1.727	2.634	12.4	20.7
7 10	20 59.66	-14 12.9	1.849	2.802	9.0	21.8	7 10	20 59.19	-26 14.4	1.665	2.630	8.8	20.5
7 20	20 51.54	-14 38.3	1.799	2.795	5.1	21.5	7 20	20 51.40	-27 14.5	1.627	2.625	5.3	20.3
7 30	20 42.25	-15 9.5	1.775	2.789	1.3	21.3	7 30	20 42.29	-28 8.6	1.615	2.621	3.7	20.2
8 9	20 32.75	-15 42.5	1.779	2.782	3.8	21.4	8 9	20 32.98	-28 50.8	1.629	2.617	6.3	20.3
8 19	20 24.02	-16 14.0	1.809	2.774	7.8	21.7	8 19	20 24.62	-29 17.4	1.668	2.613	9.9	20.5
8 29	20 16.98	-16 40.9	1.866	2.766	11.6	21.9	8 29	20 18.24	-29 27.6	1.730	2.609	13.4	20.8
9 8	20 12.24	-17 1.4	1.943	2.757	14.7	22.1	9 8	20 14.50	-29 22.6	1.811	2.605	16.4	21.0
144178	2004 <i>BD</i> ₁₁₄		7 30.9 174°43	1°1/31.6	17		48185	2001 <i>HK</i> ₄₄		7 30.9 18°67	3°0/ 1.9	18	
6 30	21 6.58	-13 40.1	1.899	2.782	12.6	21.0	6 30	21 2.28	-8 36.5	1.753	2.631	13.7	19.1
7 10	21 0.09	-14 2.4	1.833	2.784	9.1	20.7	7 10	20 57.17	-8 50.1	1.688	2.633	10.2	18.9
7 20	20 51.74	-14 33.8	1.790	2.787	5.1	20.5	7 20	20 50.23	-9 18.0	1.645	2.634	6.5	18.7
7 30	20 42.27	-15 10.9	1.774	2.788	1.3	20.3	7 30	20 42.19	-9 57.8	1.627	2.635	3.3	18.5
8 9	20 32.67	-15 49.6	1.786	2.789	3.8	20.4	8 9	20 34.01	-10 45.5	1.636	2.637	4.4	18.6
8 19	20 23.92	-16 26.0	1.825	2.790	7.8	20.7	8 19	20 26.65	-11 36.5	1.670	2.639	8.0	18.8
8 29	20 16.90	-16 57.3	1.890	2.789	11.5	20.9	8 29	20 20.99	-12 26.0	1.729	2.641	11.7	19.0
9 8	20 12.21	-17 21.4	1.976	2.789	14.6	21.1	9 8	20 17.62	-13 10.3	1.809	2.643	14.9	19.2
479209	2013 <i>CV</i> ₁₂₇		7 30.9 156°09	4°3/27.0	18		323622	2004 <i>VG</i> ₅₄		7 30.9 235°19	2°8/28.9</		

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2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
493468	2014 <i>WD</i> ₄₈₈		7 30.9 288°51	0°7/31.3	17		291686	2006 <i>HM</i> ₉₉		7 30.9 33°92	0°9/31.5	17	
6 30	21 4.84	-13 59.6	1.292	2.196	15.9	21.4	6 30	21 3.69	-14 26.3	1.750	2.642	13.0	21.2
7 10	20 59.85	-14 38.7	1.212	2.175	11.5	21.1	7 10	20 58.20	-14 47.6	1.687	2.644	9.3	21.0
7 20	20 52.09	-15 33.7	1.153	2.154	6.5	20.8	7 20	20 50.80	-15 18.0	1.647	2.645	5.2	20.7
7 30	20 42.39	-16 39.5	1.118	2.133	1.0	20.3	7 30	20 42.28	-15 54.1	1.632	2.647	1.1	20.4
8 9	20 32.07	-17 48.8	1.107	2.112	5.1	20.6	8 9	20 33.62	-16 31.5	1.644	2.648	3.9	20.7
8 19	20 22.64	-18 53.8	1.120	2.090	10.8	20.8	8 19	20 25.85	-17 6.2	1.683	2.650	8.1	20.9
8 29	20 15.53	-19 48.6	1.155	2.069	15.9	21.1	8 29	20 19.86	-17 35.1	1.745	2.652	11.9	21.1
9 8	20 11.72	-20 29.7	1.207	2.048	20.3	21.3	9 8	20 16.25	-17 56.4	1.829	2.653	15.1	21.4
104303	2000 <i>EA</i> ₁₇₉		7 30.9 95°86	2°8/28.9	18		384516	2010 <i>CP</i> ₁₈₂		7 30.9 162°06	1°6/29.7	18	
6 30	21 4.95	-23 25.5	1.966	2.865	11.4	19.3	6 30	21 5.79	-21 26.2	2.375	3.265	10.2	22.6
7 10	20 58.91	-24 30.1	1.919	2.881	8.0	19.1	7 10	20 59.30	-22 9.7	2.314	3.272	7.1	22.4
7 20	20 51.09	-25 35.7	1.898	2.896	4.6	18.9	7 20	20 51.26	-22 55.3	2.278	3.278	3.9	22.2
7 30	20 42.27	-26 36.3	1.903	2.912	2.8	18.8	7 30	20 42.32	-23 38.8	2.271	3.283	1.6	22.1
8 9	20 33.43	-27 26.9	1.936	2.927	5.2	19.0	8 9	20 33.30	-24 16.4	2.293	3.288	4.0	22.3
8 19	20 25.51	-28 4.1	1.996	2.941	8.6	19.2	8 19	20 25.00	-24 45.3	2.343	3.293	7.2	22.5
8 29	20 19.35	-28 26.9	2.080	2.956	11.6	19.5	8 29	20 18.17	-25 4.3	2.419	3.296	10.2	22.7
9 8	20 15.48	-28 36.1	2.185	2.970	14.2	19.7	9 8	20 13.31	-25 13.3	2.517	3.299	12.6	22.8
286450	2002 <i>AJ</i> ₇₃		7 30.9 203°97	1°0/30.2	18	R	202272	2005 <i>BA</i> ₃		7 30.9 326°66	1°4/30.0	18	
6 30	21 3.23	-20 17.6	2.757	3.644	9.0	22.2	6 30	21 0.53	-17 3.9	1.386	2.299	14.4	18.8
7 10	20 57.38	-20 46.3	2.683	3.639	6.3	22.0	7 10	20 56.59	-18 20.3	1.314	2.282	10.2	18.5
7 20	20 50.19	-21 17.5	2.634	3.634	3.4	21.8	7 20	20 50.24	-19 50.3	1.263	2.267	5.5	18.2
7 30	20 42.20	-21 48.1	2.614	3.628	1.0	21.6	7 30	20 42.26	-21 26.4	1.237	2.251	1.4	17.9
8 9	20 34.09	-22 15.3	2.623	3.621	3.3	21.8	8 9	20 33.84	-22 59.5	1.236	2.237	5.5	18.2
8 19	20 26.52	-22 36.8	2.661	3.615	6.3	22.0	8 19	20 26.30	-24 21.1	1.259	2.223	10.5	18.4
8 29	20 20.14	-22 51.2	2.725	3.607	9.0	22.2	8 29	20 20.86	-25 25.5	1.304	2.210	15.1	18.6
9 8	20 15.42	-22 58.2	2.813	3.599	11.4	22.3	9 8	20 18.38	-26 10.6	1.367	2.198	18.9	18.9
102786	1999 <i>VV</i> ₁₅₃		7 30.9 27°03	2°3/29.9	17		187222	2005 <i>SZ</i> ₁₃₅		7 30.9 237°15	0°3/31.2	18	
6 30	21 3.32	-20 5.0	1.019	1.946	17.1	19.0	6 30	21 2.26	-15 48.4	2.309	3.195	10.5	21.7
7 10	20 58.72	-20 56.5	0.982	1.957	12.0	18.7	7 10	20 56.90	-16 14.6	2.234	3.189	7.5	21.5
7 20	20 51.29	-21 54.9	0.964	1.969	6.4	18.5	7 20	20 50.03	-16 47.2	2.185	3.183	4.1	21.3
7 30	20 42.30	-22 51.5	0.969	1.982	2.3	18.3	7 30	20 42.23	-17 23.2	2.162	3.177	0.5	21.0
8 9	20 33.38	-23 37.9	0.995	1.997	6.4	18.6	8 9	20 34.27	-17 59.2	2.168	3.170	3.3	21.2
8 19	20 26.07	-24 9.0	1.044	2.012	11.6	18.9	8 19	20 26.92	-18 32.0	2.201	3.164	6.8	21.4
8 29	20 21.58	-24 22.8	1.113	2.029	16.2	19.2	8 29	20 20.92	-18 59.4	2.260	3.157	10.0	21.6
9 8	20 20.47	-24 20.3	1.198	2.046	20.0	19.5	9 8	20 16.79	-19 19.7	2.342	3.150	12.7	21.8
228580	2001 <i>YP</i> ₉₆		7 30.9 241°37	2°6/29.4	18		470786	2008 <i>UN</i> ₃₀₁		7 30.9 323°74	0°2/31.1	18	
6 30	21 6.81	-23 27.5	1.936	2.834	11.7	20.6	6 30	21 3.57	-17 36.6	1.323	2.234	15.1	20.5
7 10	21 0.48	-24 9.6	1.860	2.821	8.3	20.4	7 10	20 58.85	-17 35.5	1.243	2.210	10.9	20.2
7 20	20 52.08	-24 53.6	1.809	2.808	4.7	20.1	7 20	20 51.51	-17 41.6	1.185	2.187	6.0	19.8
7 30	20 42.39	-25 34.0	1.785	2.795	2.6	20.0	7 30	20 42.38	-17 51.4	1.150	2.165	0.6	19.4
8 9	20 32.41	-26 5.9	1.788	2.781	5.2	20.1	8 9	20 32.78	-18 0.8	1.139	2.144	5.0	19.7
8 19	20 23.23	-26 26.2	1.818	2.767	9.0	20.3	8 19	20 24.13	-18 6.2	1.152	2.123	10.4	19.9
8 29	20 15.84	-26 33.5	1.872	2.752	12.5	20.5	8 29	20 17.77	-18 5.0	1.185	2.104	15.3	20.1
9 8	20 10.93	-26 28.7	1.946	2.737	15.5	20.7	9 8	20 14.57	-17 56.2	1.238	2.085	19.5	20.3
513681	2011 <i>YY</i> ₃₂		7 30.9 83°52	3°3/ 2.1	18		243835	2000 <i>UH</i> ₆₈		7 30.9 285°35	6°6/ 2.9	18	
6 30	21 2.54	- 7 58.6	2.281	3.144	11.5	20.4	6 30	21 5.14	- 2 34.3	1.773	2.623	14.9	20.1
7 10	20 56.97	- 7 44.5	2.215	3.149	8.7	20.2	7 10	20 59.46	- 1 52.1	1.679	2.598	12.0	19.8
7 20	20 49.99	- 7 40.8	2.173	3.155	5.7	20.0	7 20	20 51.65	- 1 25.6	1.607	2.572	9.0	19.6
7 30	20 42.19	- 7 46.7	2.157	3.160	3.4	19.9	7 30	20 42.39	- 1 16.5	1.559	2.546	6.8	19.4
8 9	20 34.33	- 8 0.1	2.170	3.166	4.1	20.0	8 9	20 32.64	- 1 24.5	1.536	2.520	7.1	19.4
8 19	20 27.15	- 8 18.7	2.209	3.171	6.8	20.1	8 19	20 23.47	- 1 47.6	1.539	2.494	9.8	19.5
8 29	20 21.31	- 8 39.8	2.274	3.177	9.7	20.3	8 29	20 15.95	- 2 21.5	1.565	2.467	13.3	19.6
9 8	20 17.29	- 9 0.7	2.362	3.182	12.3	20.5	9 8	20 10.87	- 3 1.1	1.612	2.440	16.6	19.8
220800	2004 <i>TU</i> ₂₂₂		7 30.9 218°54	1°7/ 1.4	18		27666	1978 <i>VU</i> ₆		7 30.9 287°47	0°7/31.4	18	
6 30	21 1.00	-10 56.8	2.569	3.440	10.1	21.0	6 30	21 5.29	-15 18.2	1.580	2.477	13.9	18.8
7 10	20 55.85	-11 12.0	2.492	3.436	7.4	20.8	7 10	20 59.75	-15 31.8	1.497	2.456	10.1	18.5
7 20	20 49.39	-11 35.7	2.440	3.431	4.5	20.6	7 20	20 51.87	-15 55.0	1.436	2.436	5.6	18.2
7 30	20 42.15	-12 5.9	2.416	3.427	1.9	20.4	7 30	20 42.41	-16 24.3	1.400	2.415	1.0	17.8
8 9	20 34.76	-12 40.1	2.420	3.422	3.1	20.5	8 9	20 32.52	-16 55.3	1.390	2.394	4.4	18.0
8 19	20 27.92	-13 15.5	2.452	3.417	6.1	20.7	8 19	20 23.43	-17 23.6	1.405	2.373	9.3	18.2
8 29	20 22.23	-13 49.3	2.511	3.412	8.9	20.9	8 29	20 16.30	-17 46.0	1.444	2.352	13.8	18.4
9 8	20 18.18	-14 19.3	2.593	3.406	11.5	21.0	9 8	20 11.95	-18 0.5	1.502	2.332	17.6	18.6
311283	2005 <i>EF</i> ₃₂₄		7 30.9 63°56	4°9/28.8	17		328995	2010 <i>XL</i> ₈		7 30.9 301°63	4°3/ 2.9	18	
6 30	21 10.27	-27 19.7	1.262	2.175	15.5	20.2	6 30	21 0.79	- 4 26.1	2.228	3.081	12.1	20.4
7 10	21 3.24	-28 9.3	1.229	2.195	11.1	20.0	7 10	20 55.89	- 4 16.4	2.148	3.073	9.5	20.2
7 20	20 53.56	-28 54.7	1.217	2.214	6.8	19.9	7 20	20 49.51	- 4 20.2	2.092	3.064	6.7	20.0
7 30	20 42.50	-29 27.7	1.229	2.234	5.0	19.8	7 30	20 42.20	- 4 37.0	2.060	3.056	4.6	19.9
8 9	20 31.70	-29 42.7	1.266	2.254	7.6	20.0	8 9	20 34.71	- 5 4.9	2.056	3.047	4.9	19.9
8 19	20 22.61	-29 38.4	1.325	2.274	11.7	20.3	8 19	20 27.79	- 5 40.8	2.078	3.039	7.3	20.0
8 29	20 16.33	-29 16.7	1.407	2.294	15.4	20.6	8 29	20 22.17	- 6 21.2	2.126	3.031	10.1	20.2
9 8	20 13.37	-28 41.2	1.506	2.314	18.5	20.9	9 8	20 18.38	- 7 2.2	2.197	3.023	12.8	20.4
128682	2004 <i>RT</i> ₇₅		7 30.9 315°07	0°9/30.4	18		66864	1999 <i>VD</i> ₄					

EPHEMERIDES

7 30.9

7 30.9

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
137529	1999 VR ₅₄		7 30.9 233°48	1.9°/29.9	18		17600	Dobřichovice		7 30.9 196°28	3.9°/3.2	18	
6 30	21 7.81	-21 5.0	1.783	2.680	12.6	20.9	6 30	21 1.20	-4 2.6	2.406	3.253	11.5	19.9
7 10	21 1.32	-21 45.4	1.708	2.669	8.9	20.7	7 10	20 56.07	-4 11.4	2.330	3.251	9.0	19.7
7 20	20 52.61	-22 29.9	1.656	2.657	4.9	20.4	7 20	20 49.57	-4 33.7	2.277	3.249	6.3	19.5
7 30	20 42.49	-23 13.2	1.631	2.644	1.9	20.2	7 30	20 42.24	-5 8.4	2.251	3.247	4.2	19.4
8 9	20 32.06	-23 49.8	1.634	2.631	5.0	20.4	8 9	20 34.77	-5 52.9	2.253	3.245	4.4	19.4
8 19	20 22.47	-24 16.1	1.663	2.618	9.2	20.6	8 19	20 27.86	-6 43.8	2.282	3.243	6.7	19.6
8 29	20 14.82	-24 30.1	1.716	2.603	13.1	20.8	8 29	20 22.16	-7 37.3	2.338	3.240	9.4	19.7
9 8	20 9.80	-24 32.1	1.789	2.589	16.4	21.0	9 8	20 18.18	-8 29.6	2.417	3.238	12.0	19.9
340336	2006 DO ₄₆		7 30.9 41°75	9°3/28.5	16		280059	2002 CG ₇₇		7 30.9 133°03	0°4/30.7	18	
6 30	21 16.90	-40 20.4	1.369	2.260	16.0	19.3	6 30	21 5.48	-17 18.2	1.922	2.814	12.1	21.0
7 10	21 7.80	-40 39.2	1.341	2.281	12.7	19.2	7 10	20 59.33	-17 56.2	1.865	2.823	8.5	20.8
7 20	20 55.87	-40 38.4	1.333	2.301	10.1	19.1	7 20	20 51.38	-18 40.4	1.831	2.832	4.5	20.6
7 30	20 42.74	-40 10.8	1.349	2.323	9.3	19.1	7 30	20 42.40	-19 26.3	1.825	2.840	0.5	20.3
8 9	20 30.29	-39 15.3	1.389	2.345	10.7	19.2	8 9	20 33.36	-20 9.3	1.846	2.848	3.9	20.6
8 19	20 20.08	-37 55.6	1.452	2.368	13.3	19.5	8 19	20 25.20	-20 45.8	1.895	2.856	7.8	20.8
8 29	20 13.13	-36 19.0	1.536	2.391	16.1	19.7	8 29	20 18.76	-21 13.5	1.968	2.863	11.3	21.1
9 8	20 9.77	-34 32.8	1.639	2.414	18.6	19.9	9 8	20 14.59	-21 31.4	2.063	2.870	14.2	21.3
92963	2000 RN ₄₈		7 30.9 254°47	0°1/30.9	18 R		323563	2004 TC ₈₅		7 30.9 246°77	5°1/27.1	18	
6 30	21 7.71	-18 38.3	1.835	2.727	12.5	18.6	6 30	21 6.15	-34 20.7	2.503	3.391	9.8	21.2
7 10	21 1.09	-18 36.1	1.759	2.717	8.9	18.4	7 10	20 59.72	-35 3.0	2.436	3.381	7.5	21.0
7 20	20 52.42	-18 37.7	1.707	2.707	4.8	18.1	7 20	20 51.59	-35 38.8	2.395	3.372	5.6	20.9
7 30	20 42.48	-18 40.0	1.681	2.696	0.4	17.8	7 30	20 42.43	-36 3.2	2.381	3.362	5.2	20.8
8 9	20 32.33	-18 40.1	1.683	2.685	4.1	18.0	8 9	20 33.15	-36 12.9	2.393	3.353	6.6	20.9
8 19	20 23.05	-18 36.1	1.711	2.674	8.4	18.3	8 19	20 24.64	-36 6.7	2.433	3.343	8.9	21.1
8 29	20 15.62	-18 26.7	1.764	2.663	12.2	18.5	8 29	20 17.70	-35 45.2	2.496	3.333	11.3	21.2
9 8	20 10.70	-18 11.9	1.839	2.651	15.5	18.7	9 8	20 12.89	-35 10.8	2.580	3.322	13.4	21.3
471086	2009 YT ₅		7 30.9 25°29	3°7/28.2	18		509903	2009 DK ₁₉		7 30.9 208°27	1°6/29.9	18	
6 30	21 3.13	-21 59.9	1.480	2.393	13.7	19.8	6 30	21 5.19	-21 48.2	2.323	3.215	10.3	22.3
7 10	20 58.24	-23 49.9	1.428	2.396	9.6	19.6	7 10	20 59.00	-22 18.7	2.252	3.210	7.2	22.1
7 20	20 51.02	-25 45.8	1.400	2.401	5.5	19.4	7 20	20 51.19	-22 51.1	2.205	3.205	3.9	21.9
7 30	20 42.35	-27 37.5	1.397	2.405	3.9	19.3	7 30	20 42.40	-23 21.6	2.186	3.199	1.6	21.7
8 9	20 33.45	-29 15.4	1.421	2.410	6.9	19.5	8 9	20 33.46	-23 46.6	2.196	3.193	4.0	21.9
8 19	20 25.59	-30 32.6	1.469	2.415	11.0	19.7	8 19	20 25.21	-24 3.8	2.234	3.186	7.4	22.1
8 29	20 19.89	-31 26.5	1.540	2.421	14.7	20.0	8 29	20 18.43	-24 11.9	2.297	3.179	10.4	22.3
9 8	20 17.04	-31 57.9	1.629	2.427	17.8	20.2	9 8	20 13.65	-24 11.0	2.382	3.171	13.1	22.5
330684	2008 HJ ₄₆		7 30.9 91°47	0°0/30.9	17 R		226344	2003 FX ₁₂₁		7 30.9 84°30	4°7/28.6	18	
6 30	21 6.37	-15 59.4	1.563	2.459	14.0	21.1	6 30	21 9.76	-28 49.9	1.631	2.534	13.2	20.0
7 10	21 0.16	-16 39.1	1.514	2.475	9.9	20.9	7 10	21 2.56	-29 35.1	1.592	2.551	9.6	19.8
7 20	20 51.87	-17 27.3	1.489	2.490	5.3	20.7	7 20	20 53.14	-30 15.3	1.576	2.569	6.1	19.6
7 30	20 42.42	-18 18.8	1.489	2.504	0.5	20.4	7 30	20 42.57	-30 43.9	1.585	2.586	4.8	19.6
8 9	20 32.97	-19 7.8	1.516	2.519	4.3	20.7	8 9	20 32.13	-30 56.5	1.620	2.603	7.0	19.7
8 19	20 24.66	-19 49.8	1.569	2.533	8.8	21.0	8 19	20 23.06	-30 51.9	1.681	2.620	10.3	20.0
8 29	20 18.43	-20 21.9	1.645	2.548	12.7	21.3	8 29	20 16.30	-30 31.4	1.764	2.636	13.6	20.2
9 8	20 14.85	-20 43.0	1.742	2.562	15.9	21.5	9 8	20 12.40	-29 58.3	1.867	2.653	16.3	20.5
127998	2003 HA ₅₁		7 30.9 105°11	0°4/30.7	18		198389	2004 VH ₃₄		7 30.9 246°91	1°7/29.9	18	
6 30	21 5.47	-16 25.4	1.813	2.705	12.6	19.4	6 30	21 5.21	-20 33.6	1.951	2.847	11.7	21.3
7 10	20 59.34	-17 19.8	1.763	2.722	8.9	19.2	7 10	20 59.35	-21 18.8	1.874	2.835	8.3	21.1
7 20	20 51.38	-18 21.6	1.738	2.738	4.7	19.0	7 20	20 51.52	-22 8.8	1.822	2.823	4.5	20.8
7 30	20 42.38	-19 25.4	1.739	2.754	0.5	18.7	7 30	20 42.45	-22 58.3	1.797	2.810	1.7	20.6
8 9	20 33.36	-20 25.6	1.768	2.769	4.1	19.0	8 9	20 33.09	-23 42.4	1.799	2.797	4.6	20.8
8 19	20 25.30	-21 17.8	1.823	2.784	8.1	19.3	8 19	20 24.46	-24 17.2	1.828	2.783	8.5	21.0
8 29	20 19.05	-21 59.0	1.904	2.799	11.6	19.5	8 29	20 17.51	-24 40.5	1.882	2.769	12.1	21.2
9 8	20 15.16	-22 28.4	2.006	2.813	14.6	19.8	9 8	20 12.92	-24 51.9	1.956	2.755	15.2	21.4
479725	2014 DE ₁₃₄		7 30.9 11°93	1°5/1.0	17		256842	2008 CU ₁₆₀		7 30.9 103°19	1°4/30.2	18	
6 30	21 2.11	-11 49.6	1.802	2.689	13.0	21.3	6 30	21 5.41	-21 59.3	2.176	3.070	10.8	20.4
7 10	20 57.07	-12 20.7	1.736	2.689	9.4	21.1	7 10	20 59.12	-22 11.6	2.117	3.077	7.6	20.2
7 20	20 50.23	-13 3.7	1.694	2.690	5.5	20.8	7 20	20 51.21	-22 24.9	2.083	3.083	4.1	20.0
7 30	20 42.29	-13 55.1	1.678	2.691	1.8	20.6	7 30	20 42.41	-22 35.8	2.076	3.089	1.4	19.8
8 9	20 34.20	-14 50.1	1.688	2.692	3.8	20.7	8 9	20 33.59	-22 41.7	2.097	3.095	4.0	20.0
8 19	20 26.91	-15 43.9	1.724	2.693	7.8	21.0	8 19	20 25.62	-22 40.7	2.145	3.101	7.4	20.3
8 29	20 21.28	-16 32.3	1.786	2.694	11.5	21.2	8 29	20 19.23	-22 32.5	2.219	3.107	10.5	20.5
9 8	20 17.91	-17 12.5	1.868	2.696	14.7	21.4	9 8	20 14.94	-22 17.2	2.315	3.113	13.1	20.7
257574	1999 CP ₁₀		7 30.9 97°26	6°0/5.0	17		371397	2006 RA ₆₀		7 30.9 324°01	20°5/14.6	18	
6 30	21 6.83	+ 2 48.0	1.520	2.353	17.8	20.1	6 30	20 58.70	+24 37.8	1.343	2.060	25.0	20.0
7 10	21 0.44	+ 1 36.5	1.469	2.377	14.1	19.9	7 10	20 55.49	+26 15.6	1.269	2.040	23.8	19.8
7 20	20 52.02	- 0 4.5	1.439	2.401	10.1	19.7	7 20	20 49.79	+27 13.1	1.207	2.021	22.5	19.6
7 30	20 42.45	- 2 10.3	1.434	2.425	6.8	19.6	7 30	20 42.30	+27 20.6	1.158	2.002	21.3	19.5
8 9	20 32.90	- 4 32.0	1.456	2.447	6.4	19.6	8 9	20 34.22	+26 32.4	1.123	1.985	20.6	19.4
8 19	20 24.46	- 6 58.7	1.505	2.470	9.1	19.9	8 19	20 26.90	+24 48.5	1.104	1.968	20.6	19.3
8 29	20 18.08	- 9 19.9	1.580	2.491	12.6	20.1	8 29	20 21.71	+22 16.1	1.101	1.952	21.3	19.3
9 8	20 14.32	-11 27.5	1.679	2.512	15.9	20.4	9 8	20 19.63	+19 8.9	1.114	1.938	22.7	19.4
102941	1999 XF ₅₀		7 30.9 40°65	5°7/27.9	17		253872	2004 BO ₆		7 30.9 298°45	3°2/29.0	18	
6 30	21 6.54	-27 23.4	1.										

EPHEMERIDES

7 30.9

7 31.0

2020	α_{2000}	δ_{2000}	Δ	r	β	V	2020	α_{2000}	δ_{2000}	Δ	r	β	V
271865	2004 <i>TM</i> ₃₀₅		7 30.9 42°16'	3°0'/29.4	17		298127	2002 <i>RF</i> ₂₅₁		7 31.0 63°45'	3°1'/2.4	16	
6 30	21 6.62	-24 3.4	1.583	2.490	13.3	20.1	6 30	21 1.92	-6 43.0	1.776	2.647	13.9	20.4
7 10	21 0.51	-24 40.1	1.528	2.492	9.4	19.8	7 10	20 56.93	-7 21.5	1.715	2.655	10.4	20.2
7 20	20 52.16	-25 17.5	1.495	2.495	5.4	19.6	7 20	20 50.18	-8 16.8	1.676	2.662	6.6	19.9
7 30	20 42.50	-25 49.4	1.488	2.499	3.0	19.5	7 30	20 42.37	-9 25.6	1.663	2.670	3.5	19.8
8 9	20 32.78	-26 10.9	1.507	2.502	5.8	19.6	8 9	20 34.46	-10 42.4	1.676	2.678	4.3	19.8
8 19	20 24.19	-26 19.3	1.551	2.505	9.8	19.9	8 19	20 27.35	-12 1.2	1.717	2.686	7.8	20.1
8 29	20 17.77	-26 14.1	1.618	2.509	13.6	20.1	8 29	20 21.91	-13 16.2	1.782	2.694	11.4	20.3
9 8	20 14.14	-25 56.8	1.704	2.512	16.7	20.4	9 8	20 18.68	-14 23.2	1.869	2.702	14.5	20.5
377637	2005 <i>TV</i> ₇₅		7 30.9 257°68'	6°0'/3.1	18		514053	2014 <i>OM</i> ₁₂₉		7 31.0 7°17'	3°3'/2.5	18	
6 30	21 5.88	-2 26.7	1.922	2.766	14.1	21.3	6 30	20 59.96	-6 37.5	1.880	2.752	13.2	20.7
7 10	20 59.84	-1 56.3	1.831	2.746	11.3	21.1	7 10	20 55.52	-7 3.4	1.813	2.752	10.0	20.5
7 20	20 51.83	-1 41.4	1.761	2.726	8.4	20.9	7 20	20 49.41	-7 45.0	1.768	2.753	6.5	20.3
7 30	20 42.49	-1 43.1	1.717	2.705	6.2	20.7	7 30	20 42.31	-8 39.9	1.749	2.755	3.6	20.2
8 9	20 32.76	-2 0.6	1.699	2.683	6.5	20.7	8 9	20 35.06	-9 43.8	1.756	2.757	4.3	20.2
8 19	20 23.61	-2 31.0	1.707	2.661	9.1	20.8	8 19	20 28.53	-10 51.4	1.790	2.759	7.5	20.4
8 29	20 16.02	-3 10.4	1.740	2.639	12.3	20.9	8 29	20 23.52	-11 57.7	1.848	2.762	10.9	20.6
9 8	20 10.70	-3 53.8	1.794	2.616	15.5	21.1	9 8	20 20.58	-12 58.1	1.929	2.765	14.0	20.8
147351	2003 <i>BB</i> ₈₁		7 30.9 204°23'	2°0'/31.9	18		328529	2009 <i>QA</i> ₆₂		7 31.0 342°32'	4°2'/28.8	17	
6 30	21 8.51	-13 25.5	1.820	2.700	13.2	19.9	6 30	20 57.19	-22 14.2	0.943	1.882	16.8	19.2
7 10	21 1.60	-13 8.9	1.748	2.697	9.6	19.7	7 10	20 55.01	-23 25.4	0.882	1.863	12.0	18.9
7 20	20 52.68	-13 0.0	1.700	2.694	5.6	19.5	7 20	20 49.74	-24 46.3	0.840	1.845	6.9	18.6
7 30	20 42.56	-12 57.2	1.678	2.690	2.1	19.2	7 30	20 42.38	-26 6.4	0.817	1.829	4.2	18.4
8 9	20 32.28	-12 58.2	1.684	2.686	4.1	19.4	8 9	20 34.52	-27 14.0	0.816	1.814	8.3	18.5
8 19	20 22.90	-13 0.8	1.717	2.682	8.2	19.6	8 19	20 27.94	-28 0.4	0.834	1.802	13.8	18.8
8 29	20 15.37	-13 2.9	1.775	2.677	12.0	19.8	8 29	20 24.25	-28 21.4	0.870	1.793	19.0	19.0
9 8	20 10.30	-13 2.9	1.854	2.672	15.2	20.0	9 8	20 24.38	-28 17.6	0.921	1.785	23.3	19.3
119780	2002 <i>AA</i> ₄₆		7 30.9 5°78'	0°5'/30.7	18		89162	2001 <i>UA</i> ₄₉		7 31.0 287°64'	1°1'/30.3	18	
6 30	21 2.14	-17 48.1	1.846	2.746	12.1	19.5	6 30	21 3.17	-19 34.2	1.993	2.891	11.4	19.6
7 10	20 57.10	-18 20.5	1.784	2.746	8.5	19.2	7 10	20 57.87	-20 8.9	1.918	2.879	8.1	19.4
7 20	20 50.26	-18 59.2	1.745	2.746	4.5	19.0	7 20	20 50.73	-20 48.6	1.866	2.867	4.3	19.1
7 30	20 42.34	-19 39.8	1.732	2.747	0.6	18.7	7 30	20 42.46	-21 28.9	1.840	2.855	1.1	18.9
8 9	20 34.31	-20 18.1	1.746	2.749	4.0	19.0	8 9	20 33.94	-22 5.4	1.842	2.842	4.2	19.1
8 19	20 27.10	-20 50.2	1.787	2.750	8.0	19.2	8 19	20 26.12	-22 34.8	1.871	2.830	8.0	19.3
8 29	20 21.57	-21 13.7	1.851	2.752	11.6	19.4	8 29	20 19.90	-22 54.7	1.924	2.818	11.6	19.5
9 8	20 18.30	-21 27.6	1.936	2.754	14.6	19.7	9 8	20 15.89	-23 4.4	1.999	2.807	14.6	19.7
74701	1999 <i>RT</i> ₁₄₅		7 30.9 300°02'	1°3'/31.5	18		128136	2003 <i>QR</i> ₅₀		7 31.0 65°03'	1°0'/30.2	18	
6 30	21 6.03	-14 55.1	1.335	2.237	15.6	19.2	6 30	21 1.67	-19 22.3	2.303	3.197	10.2	19.7
7 10	21 0.72	-14 54.6	1.249	2.211	11.4	18.9	7 10	20 56.51	-20 1.8	2.241	3.201	7.2	19.5
7 20	20 52.64	-15 4.6	1.184	2.184	6.5	18.6	7 20	20 49.87	-20 45.4	2.204	3.204	3.8	19.3
7 30	20 42.60	-15 22.2	1.143	2.157	1.6	18.2	7 30	20 42.37	-21 29.0	2.194	3.208	1.0	19.1
8 9	20 31.91	-15 43.2	1.126	2.130	5.0	18.3	8 9	20 34.78	-22 9.0	2.212	3.212	3.6	19.3
8 19	20 22.07	-16 3.1	1.132	2.104	10.6	18.6	8 19	20 27.86	-22 42.3	2.258	3.216	7.0	19.5
8 29	20 14.51	-16 18.4	1.161	2.077	15.7	18.8	8 29	20 22.32	-23 7.0	2.329	3.219	10.0	19.7
9 8	20 10.21	-16 26.7	1.208	2.052	20.1	19.0	9 8	20 18.64	-23 22.3	2.423	3.223	12.6	19.9
88232	2001 <i>BN</i> ₇₂		7 30.9 181°14'	2°0'/1.9	18		291547	2006 <i>EP</i> ₅₄		7 31.0 98°12'	1°1'/31.8	17	
6 30	21 0.55	-8 42.4	2.569	3.433	10.4	19.8	6 30	21 4.85	-13 5.5	1.826	2.712	12.9	20.9
7 10	20 55.58	-9 16.7	2.496	3.434	7.7	19.6	7 10	20 58.92	-13 35.7	1.773	2.726	9.3	20.7
7 20	20 49.31	-10 1.7	2.447	3.434	4.8	19.4	7 20	20 51.20	-14 15.6	1.744	2.741	5.2	20.5
7 30	20 42.27	-10 55.0	2.425	3.434	2.3	19.3	7 30	20 42.50	-15 1.7	1.741	2.755	1.4	20.3
8 9	20 35.11	-11 53.1	2.432	3.434	3.2	19.3	8 9	20 33.78	-15 49.1	1.765	2.769	3.7	20.5
8 19	20 28.47	-12 52.5	2.468	3.433	6.0	19.5	8 19	20 25.98	-16 33.7	1.816	2.782	7.7	20.8
8 29	20 22.97	-13 49.6	2.531	3.433	8.8	19.7	8 29	20 19.92	-17 12.2	1.892	2.796	11.2	21.0
9 8	20 19.07	-14 41.4	2.617	3.432	11.4	19.9	9 8	20 16.14	-17 42.5	1.990	2.809	14.2	21.2
405745	2005 <i>YW</i> ₇₇		7 30.9 208°47'	0°6'/31.3	17		446438	2014 <i>JJ</i> ₄₃		7 31.0 352°65'	3°8'/28.2	18	
6 30	21 9.43	-16 14.6	1.378	2.277	15.4	21.4	6 30	21 1.00	-24 22.9	1.706	2.618	12.2	20.0
7 10	21 2.76	-16 19.6	1.315	2.275	11.1	21.2	7 10	20 56.59	-25 44.2	1.647	2.614	8.7	19.8
7 20	20 53.51	-16 33.0	1.273	2.273	6.1	20.9	7 20	20 50.14	-27 8.1	1.611	2.610	5.2	19.6
7 30	20 42.67	-16 50.8	1.255	2.270	0.9	20.5	7 30	20 42.42	-28 27.3	1.601	2.607	3.9	19.5
8 9	20 31.64	-17 8.6	1.263	2.267	4.8	20.8	8 9	20 34.47	-29 34.5	1.617	2.604	6.4	19.6
8 19	20 21.81	-17 22.7	1.296	2.264	9.9	21.1	8 19	20 27.39	-30 25.1	1.658	2.602	10.0	19.8
8 29	20 14.39	-17 30.8	1.352	2.261	14.5	21.3	8 29	20 22.16	-30 56.9	1.721	2.601	13.5	20.0
9 8	20 10.10	-17 31.6	1.427	2.257	18.3	21.6	9 8	20 19.44	-31 10.6	1.804	2.601	16.4	20.2
359806	2011 <i>US</i> ₂₅₁		7 30.9 210°19'	0°8'/31.7	18		131536	2001 <i>UW</i> ₁₁₂		7 31.0 214°40'	1°6'/31.8	18	
6 30	21 2.26	-13 46.3	2.659	3.535	9.7	22.5	6 30	21 8.24	-13 34.5	1.454	2.346	15.2	19.8
7 10	20 56.78	-14 9.2	2.581	3.529	7.0	22.3	7 10	21 1.85	-13 39.4	1.387	2.343	11.0	19.5
7 20	20 49.97	-14 38.9	2.528	3.523	3.9	22.1	7 20	20 53.03	-13 55.2	1.343	2.340	6.3	19.3
7 30	20 42.35	-15 12.9	2.502	3.516	1.0	21.9	7 30	20 42.70	-14 18.9	1.322	2.336	1.9	19.0
8 9	20 34.59	-15 48.4	2.506	3.509	2.9	22.0	8 9	20 32.13	-14 46.1	1.328	2.332	4.6	19.2
8 19	20 27.34	-16 22.6	2.539	3.502	6.0	22.2	8 19	20 22.64	-15 12.5	1.359	2.327	9.5	19.4
8 29	20 21.24	-16 53.2	2.598	3.494	8.9	22.4	8 29	20 15.37	-15 34.8	1.413	2.322	13.9	19.7
9 8	20 16.77	-17 18.6	2.681	3.486	11.4	22.6	9 8	20 11.05	-15 50.7	1.486	2.317	17.6	19.9
478607	2012 <i>TX</i> ₁₄₃		7 30.9 163°94'	2°6'/1.7	17		33114	1998 <i>BH</i> ₅		7 31.0 321°88'	0°2		