

EPHEMERIDES

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>250232</b>	2002 <i>XQ</i> <sub>55</sub>		1 8.9 39°22	2°8/ 9.7 17			<b>284504</b>	2007 <i>PM</i> <sub>26</sub>		1 9.0 116°97	3°9/ 7.9 18		
12 3	7 46.40	+15 53.0	1.249	2.062	20.0	19.9	12 3	7 51.97	+30 29.3	1.746	2.543	15.8	20.5
12 13	7 42.10	+15 39.6	1.203	2.090	15.5	19.7	12 13	7 46.17	+31 10.4	1.678	2.555	12.4	20.3
12 23	7 34.57	+15 38.6	1.177	2.118	10.5	19.4	12 23	7 37.25	+31 50.2	1.631	2.568	8.4	20.1
1 2	7 24.83	+15 48.9	1.174	2.147	5.2	19.2	1 2	7 26.04	+32 22.0	1.612	2.580	4.8	19.9
1 12	7 14.41	+16 7.5	1.197	2.177	3.1	19.2	1 12	7 13.90	+32 40.4	1.620	2.591	4.3	19.9
1 22	7 4.91	+16 30.9	1.246	2.207	7.3	19.5	1 22	7 2.37	+32 43.1	1.657	2.603	7.6	20.1
2 1	6 57.63	+16 56.0	1.320	2.238	11.9	19.9	2 1	6 52.83	+32 31.0	1.721	2.613	11.3	20.4
2 11	6 53.43	+17 20.5	1.416	2.270	15.9	20.2	2 11	6 46.25	+32 7.6	1.809	2.624	14.7	20.6
<b>118845</b>	2000 <i>SP</i> <sub>245</sub>		1 8.9 140°89	0°4/ 9.1 18			<b>105176</b>	2000 <i>OW</i> <sub>25</sub>		1 9.0 208°92	2°4/ 8.5 18		
12 3	7 45.84	+20 33.5	2.068	2.857	14.0	20.4	12 3	7 50.48	+29 38.5	2.197	2.982	13.4	20.0
12 13	7 40.85	+20 38.1	1.986	2.861	10.8	20.2	12 13	7 44.46	+29 41.2	2.105	2.978	10.5	19.8
12 23	7 33.48	+20 47.6	1.927	2.866	7.1	19.9	12 23	7 35.89	+29 41.3	2.037	2.973	7.0	19.5
1 2	7 24.39	+20 59.8	1.895	2.870	3.1	19.7	1 2	7 25.43	+29 35.1	1.996	2.968	3.6	19.3
1 12	7 14.55	+21 12.4	1.892	2.874	1.3	19.6	1 12	7 14.15	+29 19.9	1.986	2.962	2.8	19.2
1 22	7 5.04	+21 23.3	1.919	2.878	5.4	19.9	1 22	7 3.25	+28 54.8	2.006	2.956	6.0	19.4
2 1	6 56.92	+21 31.6	1.975	2.882	9.3	20.1	2 1	6 53.86	+28 21.1	2.054	2.950	9.6	19.6
2 11	6 50.98	+21 36.9	2.055	2.885	12.6	20.3	2 11	6 46.84	+27 41.4	2.128	2.943	12.8	19.8
<b>3933</b>	Portugal		1 8.9 172°07	0°6/ 8.8 18			<b>424998</b>	2009 <i>CU</i> <sub>48</sub>		1 9.0 202°41	1°7/ 8.5 18		
12 3	7 42.66	+23 14.9	2.774	3.557	11.0	18.2	12 3	7 45.63	+28 5.7	2.614	3.398	11.5	21.3
12 13	7 37.88	+23 31.6	2.685	3.558	8.4	18.0	12 13	7 40.30	+28 9.5	2.523	3.396	8.9	21.2
12 23	7 31.30	+23 50.8	2.621	3.560	5.5	17.8	12 23	7 32.96	+28 12.1	2.457	3.394	5.9	21.0
1 2	7 23.42	+24 10.3	2.585	3.561	2.3	17.6	1 2	7 24.15	+28 10.9	2.419	3.392	2.9	20.8
1 12	7 14.96	+24 27.8	2.581	3.562	1.2	17.5	1 12	7 14.72	+28 3.8	2.412	3.389	2.1	20.7
1 22	7 6.72	+24 41.6	2.607	3.563	4.4	17.7	1 22	7 5.58	+27 49.9	2.435	3.387	5.0	20.9
2 1	6 59.46	+24 50.9	2.662	3.563	7.4	17.9	2 1	6 57.61	+27 29.6	2.487	3.384	8.1	21.1
2 11	6 53.82	+24 55.8	2.744	3.563	10.1	18.1	2 11	6 51.50	+27 4.2	2.566	3.381	10.8	21.3
<b>241198</b>	2007 <i>TU</i> <sub>4</sub>		1 9.0 161°47	0°5/ 9.2 18			<b>266525</b>	2008 <i>FN</i> <sub>15</sub>		1 9.0 1°61	8°5/ 11.9 18		
12 3	7 48.36	+19 22.3	2.054	2.836	14.3	22.0	12 3	7 40.55	+ 1 59.1	1.518	2.286	19.1	19.7
12 13	7 42.80	+19 39.1	1.971	2.843	11.1	21.8	12 13	7 37.47	+ 1 24.2	1.442	2.284	16.1	19.5
12 23	7 34.80	+20 2.4	1.911	2.848	7.3	21.6	12 23	7 31.65	+ 1 11.7	1.384	2.284	12.8	19.3
1 2	7 24.96	+20 29.6	1.879	2.854	3.2	21.4	1 2	7 23.75	+ 1 25.5	1.348	2.284	9.8	19.1
1 12	7 14.31	+20 57.7	1.876	2.858	1.3	21.2	1 12	7 14.87	+ 2 6.4	1.336	2.285	8.5	19.0
1 22	7 3.99	+21 23.8	1.904	2.862	5.5	21.5	1 22	7 6.28	+ 3 11.0	1.349	2.286	9.8	19.1
2 1	6 55.08	+21 46.2	1.961	2.865	9.5	21.8	2 1	6 59.25	+ 4 33.2	1.388	2.289	12.8	19.3
2 11	6 48.43	+22 4.4	2.042	2.867	12.8	22.0	2 11	6 54.75	+ 6 5.0	1.448	2.292	16.2	19.5
<b>74484</b>	1999 <i>CN</i> <sub>95</sub>		1 9.0 214°51	0°6/ 9.2 18			<b>216799</b>	2006 <i>SM</i> <sub>218</sub>		1 9.0 149°07	7°1/ 10.8 18		
12 3	7 42.71	+19 20.1	2.557	3.338	11.8	20.2	12 3	7 44.96	+ 4 9.9	1.971	2.717	16.0	20.4
12 13	7 38.08	+19 31.0	2.463	3.334	9.2	20.0	12 13	7 40.15	+ 3 12.4	1.890	2.721	13.4	20.2
12 23	7 31.53	+19 46.9	2.392	3.330	6.1	19.8	12 23	7 33.04	+ 2 29.3	1.830	2.724	10.5	20.1
1 2	7 23.56	+20 6.3	2.350	3.325	2.7	19.5	1 2	7 24.24	+ 2 3.9	1.795	2.728	8.0	19.9
1 12	7 14.92	+20 27.1	2.339	3.321	1.2	19.4	1 12	7 14.68	+ 1 57.7	1.787	2.731	7.1	19.9
1 22	7 6.46	+20 47.2	2.358	3.316	4.6	19.7	1 22	7 5.42	+ 2 10.1	1.807	2.734	8.5	20.0
2 1	6 59.02	+21 5.4	2.406	3.311	7.9	19.9	2 1	6 57.47	+ 2 38.5	1.853	2.736	11.1	20.1
2 11	6 53.29	+21 20.9	2.480	3.305	10.8	20.0	2 11	6 51.63	+ 3 18.4	1.923	2.739	13.9	20.3
<b>300378</b>	2007 <i>RD</i> <sub>146</sub>		1 9.0 37°85	6°8/ 7.7 18			<b>16407</b>	Ojuns kij		1 9.0 99°49	0°4/ 9.1 18		
12 3	7 50.31	+34 30.5	1.247	2.069	19.5	19.3	12 3	7 50.04	+21 29.1	1.639	2.436	16.7	18.1
12 13	7 46.01	+35 28.9	1.196	2.084	15.4	19.1	12 13	7 44.54	+21 19.6	1.569	2.449	12.9	17.9
12 23	7 37.64	+36 21.5	1.164	2.100	11.1	18.9	12 23	7 36.10	+21 14.4	1.520	2.461	8.5	17.7
1 2	7 26.27	+36 58.2	1.156	2.118	7.5	18.8	1 2	7 25.54	+21 11.2	1.498	2.473	3.6	17.4
1 12	7 13.81	+37 11.4	1.172	2.135	7.2	18.8	1 12	7 14.17	+21 7.6	1.503	2.485	1.5	17.3
1 22	7 2.38	+36 59.1	1.214	2.154	10.3	19.0	1 22	7 3.39	+21 2.4	1.538	2.497	6.4	17.6
2 1	6 53.76	+36 25.0	1.278	2.173	14.2	19.3	2 1	6 54.52	+20 55.1	1.599	2.509	10.8	17.9
2 11	6 48.98	+35 35.9	1.363	2.192	17.8	19.6	2 11	6 48.43	+20 46.3	1.684	2.520	14.6	18.2
<b>414214</b>	2008 <i>ES</i> <sub>44</sub>		1 9.0 141°31	0°7/ 8.8 18			<b>281349</b>	2007 <i>UT</i> <sub>136</sub>		1 9.0 104°03	1°2/ 9.6 18		
12 3	7 46.04	+22 31.3	1.873	2.670	14.9	21.4	12 3	7 42.59	+15 51.2	2.532	3.305	12.1	21.1
12 13	7 41.36	+22 53.0	1.791	2.672	11.5	21.2	12 13	7 37.89	+16 19.1	2.453	3.319	9.4	21.0
12 23	7 34.02	+23 19.6	1.731	2.673	7.6	21.0	12 23	7 31.34	+16 54.8	2.399	3.332	6.3	20.8
1 2	7 24.69	+23 47.7	1.698	2.674	3.2	20.7	1 2	7 23.48	+17 36.6	2.372	3.345	3.0	20.6
1 12	7 14.45	+24 13.6	1.694	2.676	1.6	20.6	1 12	7 15.04	+18 21.7	2.377	3.358	1.5	20.5
1 22	7 4.54	+24 34.3	1.719	2.677	6.0	20.9	1 22	7 6.85	+19 7.3	2.412	3.370	4.5	20.7
2 1	6 56.17	+24 48.5	1.771	2.678	10.2	21.1	2 1	6 59.71	+19 50.9	2.477	3.382	7.7	21.0
2 11	6 50.24	+24 56.3	1.848	2.679	13.7	21.4	2 11	6 54.25	+20 31.0	2.569	3.394	10.5	21.2
<b>50019</b>	2000 <i>AL</i> <sub>33</sub>		1 9.0 228°49	3°1/ 8.2 18			<b>463867</b>	2014 <i>UR</i> <sub>30</sub>		1 9.0 288°97	0°3/ 8.9 18		
12 3	7 49.94	+30 2.5	1.947	2.740	14.6	19.2	12 3	7 44.33	+20 43.1	1.905	2.702	14.7	21.5
12 13	7 44.48	+30 23.7	1.857	2.733	11.4	18.9	12 13	7 40.08	+21 13.9	1.816	2.696	11.4	21.3
12 23	7 36.15	+30 43.4	1.790	2.727	7.8	18.7	12 23	7 33.25	+21 52.0	1.750	2.691	7.5	21.0
1 2	7 25.61	+30 56.5	1.749	2.719	4.2	18.5	1 2	7 24.42	+22 34.2	1.710	2.686	3.2	20.7
1 12	7 14.05	+30 58.9	1.738	2.712	3.6	18.4	1 12	7 14.61	+23 16.3	1.700	2.682	1.5	20.6
1 22	7 2.84	+30 48.5	1.756	2.704	6.9	18.6	1 22	7 5.01	+23 54.5	1.718	2.677	5.9	20.9
2 1	6 53.29	+30 26.3	1.801	2.696	10.7	18.8	2 1	6 56.82	+24 26.5	1.764	2.672	10.1	21.1
2 11	6 46.41	+29 55.0	1.870	2.688	14.2	19.0	2 11	6 50.97	+24 51.3	1.834	2.667	13.7	21.3
<b>260613</b>	2005 <i>GM</i> <sub>28</sub>		1 9.0 182°59	1°3/ 8.4 17			<b>270635</b>	2002 <i>PF</i> <sub>73</sub>		1 9.0 114°11	4°9/ 10.9 18		
12 3	7 40.24	+27 23.1	3.528	4.308	8.9	20.							

EPHEMERIDES

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>167022</b>	2003 <i>QL</i> <sub>33</sub>		1 9.0 142°29	1°0/ 9.3 18			<b>152936</b>	2000 <i>EP</i> <sub>135</sub>		1 9.0 152°96	1°0/ 9.3 18		
12 3	7 48.60	+18 30.3	1.950	2.733	14.9	20.9	12 3	7 49.08	+17 42.4	1.803	2.589	15.8	19.9
12 13	7 43.05	+18 35.3	1.872	2.743	11.6	20.7	12 13	7 43.70	+18 2.1	1.724	2.597	12.4	19.7
12 23	7 34.98	+18 47.1	1.816	2.753	7.7	20.4	12 23	7 35.58	+18 31.1	1.666	2.604	8.2	19.5
1 2	7 25.07	+19 3.7	1.788	2.762	3.5	20.2	1 2	7 25.40	+19 6.5	1.636	2.610	3.7	19.2
1 12	7 14.38	+19 22.5	1.789	2.770	1.6	20.1	1 12	7 14.28	+19 44.8	1.634	2.616	1.6	19.1
1 22	7 4.09	+19 41.0	1.820	2.778	5.7	20.4	1 22	7 3.54	+20 22.1	1.662	2.621	6.1	19.4
2 1	6 55.32	+19 57.8	1.880	2.786	9.7	20.6	2 1	6 54.40	+20 55.9	1.718	2.626	10.4	19.6
2 11	6 48.90	+20 12.1	1.964	2.792	13.1	20.9	2 11	6 47.80	+21 25.0	1.799	2.629	14.1	19.9
<b>20809</b>	Eshinjolly		1 9.0 330°90	3°7/10.1 18 R			<b>301049</b>	2008 <i>TP</i> <sub>168</sub>		1 9.0 205°43	0°4/ 8.9 18		
12 3	7 41.63	+12 46.1	1.322	2.133	19.2	17.5	12 3	7 49.74	+21 54.9	1.901	2.689	15.0	22.1
12 13	7 38.98	+12 47.0	1.237	2.120	15.4	17.2	12 13	7 44.28	+22 12.4	1.809	2.684	11.7	21.8
12 23	7 33.06	+13 5.1	1.171	2.109	10.9	16.9	12 23	7 36.04	+22 35.3	1.739	2.679	7.7	21.6
1 2	7 24.50	+13 40.4	1.128	2.098	6.0	16.6	1 2	7 25.64	+23 0.1	1.697	2.673	3.3	21.3
1 12	7 14.56	+14 30.4	1.110	2.088	3.9	16.5	1 12	7 14.17	+23 23.2	1.684	2.666	1.5	21.2
1 22	7 4.80	+15 30.0	1.117	2.079	7.9	16.7	1 22	7 2.95	+23 41.6	1.701	2.658	6.1	21.5
2 1	6 56.85	+16 33.5	1.149	2.070	13.0	16.9	2 1	6 53.27	+23 54.0	1.746	2.650	10.4	21.7
2 11	6 51.95	+17 35.6	1.202	2.063	17.6	17.2	2 11	6 46.11	+24 0.7	1.815	2.641	14.2	21.9
<b>361334</b>	2006 <i>UZ</i> <sub>85</sub>		1 9.0 133°23	0°4/ 9.1 18			<b>418195</b>	2008 <i>CR</i> <sub>43</sub>		1 9.0 195°77	3°7/ 7.8 18		
12 3	7 48.25	+20 20.5	2.176	2.956	13.6	21.9	12 3	7 49.48	+31 39.0	2.228	3.014	13.2	21.9
12 13	7 42.49	+20 25.0	2.099	2.970	10.6	21.7	12 13	7 43.85	+32 18.3	2.140	3.012	10.4	21.7
12 23	7 34.46	+20 34.1	2.046	2.983	6.9	21.5	12 23	7 35.61	+32 55.8	2.077	3.009	7.2	21.5
1 2	7 24.81	+20 45.6	2.021	2.996	3.0	21.3	1 2	7 25.41	+33 26.4	2.041	3.006	4.4	21.3
1 12	7 14.51	+20 57.3	2.026	3.008	1.3	21.2	1 12	7 14.29	+33 45.5	2.035	3.002	4.1	21.3
1 22	7 4.61	+21 7.2	2.062	3.020	5.2	21.5	1 22	7 3.47	+33 50.7	2.058	2.998	6.7	21.5
2 1	6 56.10	+21 14.6	2.127	3.031	8.9	21.7	2 1	6 54.13	+33 42.2	2.110	2.994	9.9	21.6
2 11	6 49.73	+21 19.3	2.217	3.041	12.0	22.0	2 11	6 47.15	+33 22.7	2.186	2.989	12.9	21.8
<b>263632</b>	2008 <i>GW</i> <sub>59</sub>		1 9.0 308°68	3°7/10.3 18			<b>208001</b>	1998 <i>HE</i> <sub>140</sub>		1 9.0 270°28	2°2/ 8.3 18		
12 3	7 42.98	+11 4.0	1.770	2.552	16.2	20.1	12 3	7 47.08	+24 36.6	1.675	2.480	16.1	20.5
12 13	7 39.10	+11 9.1	1.681	2.547	13.0	19.9	12 13	7 42.80	+25 22.6	1.584	2.469	12.5	20.2
12 23	7 32.64	+11 29.0	1.613	2.541	9.3	19.7	12 23	7 35.39	+26 14.9	1.515	2.458	8.3	19.9
1 2	7 24.18	+12 3.4	1.571	2.536	5.4	19.4	1 2	7 25.48	+27 8.0	1.472	2.447	3.9	19.6
1 12	7 14.73	+12 50.2	1.556	2.531	3.8	19.3	1 12	7 14.25	+27 55.8	1.457	2.436	2.9	19.5
1 22	7 5.48	+13 45.6	1.569	2.526	6.7	19.5	1 22	7 3.18	+28 33.2	1.470	2.425	7.3	19.8
2 1	6 57.61	+14 45.3	1.610	2.521	10.7	19.7	2 1	6 53.78	+28 58.1	1.510	2.414	11.8	20.0
2 11	6 52.09	+15 45.0	1.674	2.516	14.4	19.9	2 11	6 47.24	+29 11.2	1.572	2.402	15.8	20.2
<b>370802</b>	2004 <i>TE</i> <sub>151</sub>		1 9.0 10°27	3°9/10.1 18			<b>158553</b>	2002 <i>JS</i> <sub>1</sub>		1 9.0 156°30	2°6/ 9.9 18 R		
12 3	7 43.10	+12 1.5	1.916	2.695	15.3	21.3	12 3	7 43.86	+13 16.0	2.656	3.417	11.9	21.0
12 13	7 38.88	+11 38.2	1.832	2.696	12.2	21.1	12 13	7 38.76	+13 4.1	2.569	3.424	9.4	20.8
12 23	7 32.30	+11 25.5	1.770	2.696	8.7	20.9	12 23	7 31.88	+12 59.6	2.507	3.431	6.6	20.7
1 2	7 23.97	+11 24.3	1.734	2.697	5.3	20.7	1 2	7 23.74	+13 2.2	2.472	3.437	3.8	20.5
1 12	7 14.86	+11 33.8	1.726	2.698	4.0	20.6	1 12	7 15.05	+13 11.2	2.468	3.442	2.7	20.4
1 22	7 6.03	+11 52.3	1.746	2.699	6.5	20.8	1 22	7 6.60	+13 25.2	2.495	3.447	4.9	20.6
2 1	6 58.54	+12 17.6	1.794	2.700	10.0	21.0	2 1	6 59.15	+13 42.7	2.551	3.452	7.7	20.8
2 11	6 53.21	+12 46.7	1.866	2.702	13.4	21.2	2 11	6 53.32	+14 2.2	2.634	3.456	10.4	21.0
<b>256334</b>	2006 <i>XP</i> <sub>27</sub>		1 9.0 55°07	4°2/ 7.5 18			<b>360309</b>	2001 <i>SM</i> <sub>33</sub>		1 9.0 169°63	10°3/ 4.7 18		
12 3	7 51.28	+27 9.6	1.474	2.282	17.7	19.4	12 3	8 8.91	+58 7.0	2.747	3.437	13.2	22.3
12 13	7 45.89	+28 45.8	1.431	2.316	13.6	19.2	12 13	7 59.88	+59 30.3	2.686	3.443	11.9	22.3
12 23	7 37.16	+30 24.2	1.409	2.350	9.1	19.0	12 23	7 46.66	+60 37.4	2.647	3.448	10.9	22.2
1 2	7 26.02	+31 55.2	1.414	2.384	5.1	18.9	1 2	7 30.20	+61 19.3	2.632	3.452	10.3	22.2
1 12	7 14.03	+33 10.0	1.447	2.418	4.8	18.9	1 12	7 12.31	+61 29.6	2.642	3.455	10.5	22.2
1 22	7 2.84	+34 3.6	1.508	2.452	8.3	19.2	1 22	6 55.22	+61 7.0	2.676	3.457	11.3	22.2
2 1	6 53.94	+34 35.7	1.595	2.486	12.1	19.5	2 1	6 40.91	+60 15.4	2.733	3.459	12.4	22.3
2 11	6 48.25	+34 49.8	1.704	2.520	15.4	19.8	2 11	6 30.62	+59 2.3	2.811	3.459	13.7	22.4
<b>503297</b>	2016 <i>AY</i> <sub>53</sub>		1 9.0 272°47	0°8/ 9.3 18			<b>156071</b>	2001 <i>SL</i> <sub>105</sub>		1 9.0 106°03	0°8/ 8.8 18		
12 3	7 44.78	+16 45.3	1.780	2.573	15.7	21.0	12 3	7 51.63	+23 35.2	1.599	2.398	17.0	19.8
12 13	7 40.65	+17 25.0	1.688	2.565	12.3	20.7	12 13	7 45.90	+23 45.2	1.532	2.413	13.1	19.6
12 23	7 33.77	+18 17.3	1.618	2.557	8.3	20.5	12 23	7 37.08	+23 58.8	1.487	2.429	8.6	19.4
1 2	7 24.71	+19 19.1	1.574	2.548	3.7	20.2	1 2	7 26.03	+24 12.0	1.468	2.444	3.6	19.1
1 12	7 14.51	+20 25.7	1.558	2.540	1.5	20.0	1 12	7 14.12	+24 21.1	1.477	2.458	1.8	19.0
1 22	7 4.44	+21 31.7	1.572	2.532	6.2	20.3	1 22	7 2.86	+24 23.7	1.514	2.472	6.7	19.4
2 1	6 55.80	+22 32.8	1.614	2.524	10.7	20.5	2 1	6 53.63	+24 20.0	1.578	2.486	11.1	19.7
2 11	6 49.63	+23 26.2	1.679	2.516	14.6	20.7	2 11	6 47.34	+24 11.2	1.666	2.499	14.9	19.9
<b>322333</b>	2011 <i>HV</i> <sub>22</sub>		1 9.0 202°79	4°0/10.5 18			<b>367608</b>	2009 <i>TX</i> <sub>32</sub>		1 9.0 81°15	0°8/ 9.3 18		
12 3	7 41.79	+ 9 8.0	2.354	3.114	13.3	20.9	12 3	7 45.70	+19 36.2	1.928	2.719	14.7	21.4
12 13	7 37.46	+ 8 55.9	2.264	3.113	10.8	20.7	12 13	7 40.86	+19 33.8	1.852	2.728	11.4	21.2
12 23	7 31.18	+ 8 55.1	2.196	3.112	7.9	20.5	12 23	7 33.58	+19 37.1	1.798	2.737	7.6	21.0
1 2	7 23.47	+ 9 6.1	2.155	3.110	5.1	20.4	1 2	7 24.53	+19 44.2	1.771	2.746	3.3	20.8
1 12	7 15.09	+ 9 28.1	2.142	3.109	4.0	20.3	1 12	7 14.74	+19 52.9	1.773	2.755	1.5	20.6
1 22	7 6.90	+ 9 59.4	2.160	3.107	5.9	20.4	1 22	7 5.36	+20 1.6	1.804	2.764	5.6	20.9
2 1	6 59.76	+10 37.4	2.205	3.105	8.8	20.6	2 1	6 57.46	+20 8.9	1.864	2.773	9.6	21.2
2 11	6 54.35	+11 19.2	2.276	3.103	11.6	20.8	2 11	6 51.85	+20 14.4	1.947	2.781	13.0	21.4
<b>190837</b>	2001 <i>ST</i> <sub>90</sub>		1 9.0 6°60	3°4/ 8.5 18			<b>379110</b>	2008 <i>YW</i> <sub>55</sub>		1 9.0 35°23	1°0/ 8.8 18		
12 3	7 44.77	+28 25.6	1.034	1.878</									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>387429</b>	2013 <i>WR</i> <sub>2</sub>		1 9.0 51°02	3°3/ 7.5	18		<b>157984</b>	2000 <i>JP</i> <sub>1</sub>		1 9.0 287°35	2°4/ 8.3	18	
12 3	7 45.42	+27 14.2	2.022	2.820	13.9	20.2	12 3	7 47.34	+24 16.0	1.443	2.257	17.7	20.2
12 13	7 40.79	+28 34.9	1.957	2.838	10.7	20.0	12 13	7 43.49	+25 8.3	1.358	2.248	13.8	19.9
12 23	7 33.63	+29 58.3	1.917	2.856	7.2	19.8	12 23	7 36.13	+26 8.8	1.293	2.238	9.2	19.6
1 2	7 24.58	+31 18.1	1.904	2.874	4.0	19.7	1 2	7 25.90	+27 11.1	1.253	2.229	4.3	19.3
1 12	7 14.71	+32 27.8	1.921	2.892	3.8	19.7	1 12	7 14.15	+28 7.6	1.240	2.219	3.2	19.2
1 22	7 5.18	+33 23.1	1.968	2.911	6.7	19.9	1 22	7 2.59	+28 52.1	1.254	2.210	8.1	19.5
2 1	6 57.15	+34 2.5	2.042	2.930	10.0	20.1	2 1	6 52.99	+29 21.8	1.293	2.200	13.1	19.7
2 11	6 51.46	+34 27.1	2.140	2.948	12.9	20.4	2 11	6 46.65	+29 37.6	1.354	2.191	17.4	20.0
<b>14550</b>	Lehký		1 9.0 181°54	3°1/10.0	18		<b>299544</b>	2006 <i>DL</i> <sub>80</sub>		1 9.0 156°04	3°4/ 8.2	18	
12 3	7 47.58	+12 45.9	1.865	2.640	15.8	18.6	12 3	7 52.26	+30 6.2	1.820	2.614	15.4	21.3
12 13	7 42.48	+12 45.4	1.779	2.641	12.6	18.4	12 13	7 46.37	+30 33.4	1.743	2.619	12.1	21.1
12 23	7 34.77	+12 56.9	1.714	2.642	8.8	18.2	12 23	7 37.44	+30 59.1	1.688	2.624	8.2	20.9
1 2	7 25.09	+13 19.9	1.675	2.642	4.9	17.9	1 2	7 26.24	+31 17.6	1.659	2.629	4.5	20.7
1 12	7 14.48	+13 52.1	1.665	2.641	3.3	17.8	1 12	7 14.08	+31 24.1	1.659	2.633	3.8	20.7
1 22	7 4.13	+14 30.7	1.684	2.640	6.4	18.0	1 22	7 2.43	+31 16.8	1.689	2.636	7.2	20.9
2 1	6 55.22	+15 12.4	1.732	2.638	10.4	18.3	2 1	6 52.67	+30 56.6	1.745	2.640	11.0	21.1
2 11	6 48.67	+15 54.3	1.803	2.635	14.0	18.5	2 11	6 45.77	+30 26.9	1.825	2.642	14.5	21.3
<b>91274</b>	1999 <i>DM</i> <sub>3</sub>		1 9.0 322°38	2°0/ 9.5	18		<b>170274</b>	2003 <i>QO</i> <sub>85</sub>		1 9.0 127°06	3°6/10.1	18	
12 3	7 42.94	+17 9.0	1.289	2.109	19.1	18.3	12 3	7 47.32	+12 29.2	1.838	2.613	16.0	21.0
12 13	7 40.21	+17 7.8	1.202	2.093	15.2	18.0	12 13	7 42.15	+12 12.4	1.762	2.624	12.7	20.8
12 23	7 34.03	+17 18.8	1.134	2.078	10.3	17.7	12 23	7 34.47	+12 6.7	1.708	2.634	8.9	20.6
1 2	7 25.01	+17 40.9	1.088	2.063	4.9	17.4	1 2	7 24.94	+12 12.4	1.679	2.644	5.2	20.4
1 12	7 14.46	+18 10.8	1.068	2.049	2.5	17.2	1 12	7 14.64	+12 28.0	1.680	2.653	3.7	20.3
1 22	7 4.10	+18 44.7	1.073	2.036	7.8	17.5	1 22	7 4.74	+12 51.5	1.709	2.662	6.5	20.5
2 1	6 55.64	+19 18.6	1.102	2.024	13.4	17.7	2 1	6 56.35	+13 20.1	1.766	2.671	10.3	20.7
2 11	6 50.43	+19 49.9	1.152	2.012	18.2	18.0	2 11	6 50.32	+13 51.1	1.847	2.679	13.7	21.0
<b>31788</b>	1999 <i>KQ</i> <sub>14</sub>		1 9.0 337°12	4°3/ 6.9	18		<b>125264</b>	2001 <i>UX</i> <sub>221</sub>		1 9.0 148°49	1°4/ 8.6	18	
12 3	7 44.33	+30 20.9	2.111	2.909	13.4	17.6	12 3	7 50.62	+23 53.7	1.814	2.606	15.5	21.0
12 13	7 40.19	+31 44.0	2.025	2.904	10.5	17.4	12 13	7 45.00	+24 24.2	1.737	2.615	12.0	20.8
12 23	7 33.43	+33 9.2	1.965	2.899	7.4	17.2	12 23	7 36.50	+24 59.0	1.683	2.623	7.9	20.6
1 2	7 24.60	+34 30.0	1.931	2.895	4.8	17.0	1 2	7 25.86	+25 33.4	1.655	2.630	3.4	20.3
1 12	7 14.69	+35 39.5	1.927	2.890	4.8	17.0	1 12	7 14.27	+26 2.8	1.657	2.637	2.1	20.2
1 22	7 4.90	+36 33.1	1.952	2.886	7.5	17.2	1 22	7 3.11	+26 24.0	1.688	2.643	6.4	20.5
2 1	6 56.46	+37 8.8	2.004	2.883	10.6	17.4	2 1	6 53.68	+26 36.2	1.747	2.649	10.6	20.8
2 11	6 50.37	+37 28.1	2.080	2.879	13.6	17.6	2 11	6 46.92	+26 40.2	1.830	2.654	14.1	21.0
<b>329545</b>	2002 <i>TN</i> <sub>271</sub>		1 9.0 151°99	1°7/ 9.8	17		<b>101563</b>	1999 <i>AK</i> <sub>15</sub>		1 9.0 19°94	0°5/ 8.9	18	
12 3	7 43.09	+15 1.4	3.217	3.975	10.1	22.3	12 3	7 44.01	+23 6.8	1.991	2.789	14.1	19.9
12 13	7 37.86	+14 59.1	3.130	3.986	7.9	22.1	12 13	7 39.65	+23 15.0	1.910	2.791	10.9	19.7
12 23	7 31.15	+15 2.3	3.069	3.996	5.4	22.0	12 23	7 32.85	+23 26.6	1.852	2.794	7.2	19.5
1 2	7 23.42	+15 10.4	3.038	4.006	2.8	21.8	1 2	7 24.28	+23 38.8	1.821	2.797	3.0	19.2
1 12	7 15.25	+15 22.2	3.037	4.015	1.8	21.8	1 12	7 14.94	+23 48.9	1.819	2.801	1.4	19.1
1 22	7 7.29	+15 36.5	3.069	4.023	3.9	21.9	1 22	7 5.95	+23 55.0	1.846	2.805	5.6	19.4
2 1	7 0.16	+15 52.3	3.131	4.031	6.5	22.1	2 1	6 58.38	+23 56.4	1.900	2.809	9.5	19.7
2 11	6 54.37	+16 8.6	3.221	4.038	8.8	22.3	2 11	6 53.04	+23 53.4	1.979	2.813	12.8	19.9
<b>445034</b>	2008 <i>RQ</i> <sub>29</sub>		1 9.0 55°93	5°2/10.6	15		<b>160801</b>	2000 <i>UP</i> <sub>90</sub>		1 9.0 35°57	0°4/ 8.9	17	
12 3	7 46.98	+10 6.9	1.267	2.065	20.6	21.5	12 3	7 47.04	+22 35.0	1.214	2.039	19.8	19.2
12 13	7 42.67	+9 52.1	1.213	2.086	16.5	21.3	12 13	7 43.13	+22 38.5	1.158	2.053	15.3	18.9
12 23	7 35.11	+9 56.3	1.178	2.107	11.8	21.1	12 23	7 35.63	+22 47.8	1.121	2.068	10.0	18.7
1 2	7 25.23	+10 19.7	1.165	2.128	7.2	20.9	1 2	7 25.53	+22 59.1	1.107	2.084	4.2	18.4
1 12	7 14.50	+10 59.8	1.177	2.150	5.2	20.8	1 12	7 14.46	+23 8.1	1.119	2.101	1.9	18.3
1 22	7 4.51	+11 51.4	1.216	2.172	8.2	21.1	1 22	7 4.22	+23 12.4	1.156	2.118	7.5	18.7
2 1	6 56.66	+12 49.0	1.279	2.194	12.5	21.4	2 1	6 56.37	+23 11.3	1.218	2.136	12.7	19.0
2 11	6 51.88	+13 47.3	1.365	2.216	16.5	21.7	2 11	6 51.90	+23 5.6	1.301	2.155	16.9	19.3
<b>425768</b>	2011 <i>CJ</i> <sub>26</sub>		1 9.0 53°35	3°0/ 8.3	18		<b>484997</b>	2009 <i>VC</i> <sub>19</sub>		1 9.0 27°74	3°6/ 8.4	17	
12 3	7 47.35	+29 7.9	1.854	2.654	14.9	21.6	12 3	7 47.30	+27 14.1	1.024	1.864	21.5	21.1
12 13	7 42.48	+29 34.2	1.779	2.660	11.6	21.4	12 13	7 44.20	+27 50.3	0.970	1.873	16.7	20.9
12 23	7 34.82	+29 59.9	1.727	2.667	7.8	21.2	12 23	7 36.80	+28 29.2	0.934	1.884	11.2	20.6
1 2	7 25.11	+30 19.9	1.702	2.673	4.1	21.0	1 2	7 26.14	+29 2.9	0.920	1.895	5.5	20.4
1 12	7 14.53	+30 30.2	1.705	2.680	3.4	20.9	1 12	7 14.19	+29 23.5	0.930	1.908	4.3	20.3
1 22	7 4.43	+30 28.6	1.736	2.686	6.8	21.2	1 22	7 3.20	+29 27.4	0.963	1.921	9.4	20.7
2 1	6 56.05	+30 15.7	1.794	2.693	10.5	21.4	2 1	6 55.09	+29 15.5	1.018	1.936	14.7	21.0
2 11	6 50.29	+29 53.9	1.876	2.700	13.9	21.6	2 11	6 51.04	+28 52.2	1.093	1.951	19.2	21.3
<b>326720</b>	2003 <i>EH</i> <sub>47</sub>		1 9.0 323°58	4°5/ 9.4	18		<b>422740</b>	2001 <i>SV</i> <sub>89</sub>		1 9.0 160°79	3°1/ 8.0	18	
12 3	7 44.35	+15 34.4	1.505	2.308	17.7	19.6	12 3	7 46.71	+32 8.3	2.607	3.389	11.6	21.2
12 13	7 40.75	+14 28.4	1.409	2.288	14.2	19.3	12 13	7 41.26	+32 31.8	2.523	3.392	9.1	21.1
12 23	7 34.08	+13 27.4	1.333	2.268	10.1	19.1	12 23	7 33.69	+32 52.4	2.464	3.395	6.3	20.9
1 2	7 24.95	+12 33.7	1.282	2.249	6.0	18.8	1 2	7 24.59	+33 6.4	2.433	3.398	3.8	20.7
1 12	7 14.56	+11 49.5	1.257	2.231	4.7	18.6	1 12	7 14.84	+33 10.8	2.432	3.400	3.4	20.7
1 22	7 4.35	+11 16.2	1.259	2.213	8.2	18.8	1 22	7 5.41	+33 4.3	2.461	3.403	5.7	20.9
2 1	6 55.81	+10 54.4	1.286	2.197	12.8	19.0	2 1	6 57.23	+32 47.3	2.520	3.405	8.5	21.1
2 11	6 50.07	+10 43.0	1.334	2.181	17.1	19.2	2 11	6 51.02	+32 22.0	2.603	3.406	11.1	21.2
<b>320864</b>	2008 <i>FA</i> <sub>130</sub>		1 9.0 277°78	7°2/ 6.5	18		<b>125315</b>	2001 <i>VY</i> <sub>34</sub>		1 9.0 31°21	0°0/ 8.9	17	
12 3	7 50.35	+38 9.0	1.869	2.661	15.1								

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>432520</b>	2010 <i>FA</i> <sub>100</sub>		1 9.0 189°56	7°1/12.0	18		<b>326035</b>	2010 <i>XJ</i> <sub>37</sub>		1 9.1 122°86	1°5/ 8.7	18	
12 3	7 40.63	- 1 51.2	2.621	3.327	13.4	21.8	12 3	7 47.27	+25 43.9	1.970	2.766	14.3	21.1
12 13	7 36.38	- 2 30.0	2.532	3.327	11.5	21.6	12 13	7 42.24	+25 57.1	1.889	2.769	11.1	20.9
12 23	7 30.42	- 2 53.7	2.464	3.326	9.5	21.5	12 23	7 34.61	+26 11.6	1.831	2.772	7.3	20.7
1 2	7 23.21	- 2 59.7	2.422	3.325	7.8	21.4	1 2	7 25.07	+26 24.1	1.800	2.775	3.3	20.4
1 12	7 15.42	- 2 47.1	2.406	3.324	7.1	21.3	1 12	7 14.70	+26 31.1	1.798	2.778	2.1	20.3
1 22	7 7.80	- 2 16.7	2.419	3.323	7.8	21.4	1 22	7 4.73	+26 30.9	1.825	2.780	6.0	20.6
2 1	7 1.07	- 1 31.2	2.458	3.322	9.5	21.5	2 1	6 56.29	+26 23.4	1.880	2.783	9.8	20.8
2 11	6 55.86	- 0 34.5	2.522	3.321	11.5	21.6	2 11	6 50.26	+26 10.0	1.959	2.786	13.2	21.1
<b>6785</b>	1990 <i>VA</i> <sub>7</sub>		1 9.1 309°02	8°0/ 5.0	18		<b>353300</b>	2010 <i>HN</i> <sub>78</sub>		1 9.1 232°44	1°1/ 8.7	18	
12 3	7 48.75	+43 16.6	2.264	3.039	13.3	16.2	12 3	7 48.85	+23 9.3	1.854	2.647	15.2	21.4
12 13	7 43.99	+44 48.7	2.184	3.031	11.2	16.0	12 13	7 43.84	+23 39.5	1.758	2.637	11.8	21.1
12 23	7 36.15	+46 13.8	2.128	3.022	9.2	15.9	12 23	7 35.95	+24 15.2	1.685	2.626	7.8	20.9
1 2	7 25.86	+47 23.6	2.097	3.014	8.1	15.8	1 2	7 25.76	+24 52.4	1.639	2.614	3.4	20.6
1 12	7 14.27	+48 11.0	2.094	3.006	8.4	15.8	1 12	7 14.37	+25 26.5	1.622	2.602	2.0	20.5
1 22	7 2.84	+48 32.6	2.118	2.998	10.0	15.9	1 22	7 3.14	+25 53.7	1.634	2.590	6.5	20.7
2 1	6 53.05	+48 28.9	2.166	2.990	12.2	16.0	2 1	6 53.43	+26 12.2	1.673	2.577	10.8	21.0
2 11	6 46.07	+48 4.4	2.236	2.983	14.3	16.1	2 11	6 46.32	+26 22.3	1.737	2.563	14.7	21.2
<b>140578</b>	2001 <i>TN</i> <sub>221</sub>		1 9.1 134°68	3°8/ 7.8	18		<b>448304</b>	2009 <i>BD</i> <sub>98</sub>		1 9.1 3°02	2°4/ 8.5	18	
12 3	7 46.34	+33 28.6	2.446	3.233	12.1	20.0	12 3	7 44.54	+25 6.1	1.219	2.050	19.3	20.4
12 13	7 41.20	+34 0.7	2.364	3.234	9.6	19.8	12 13	7 41.64	+25 39.2	1.149	2.048	15.0	20.1
12 23	7 33.77	+34 29.4	2.306	3.236	6.8	19.7	12 23	7 35.00	+26 17.8	1.100	2.048	10.0	19.8
1 2	7 24.66	+34 50.3	2.276	3.238	4.3	19.5	1 2	7 25.44	+26 55.9	1.072	2.049	4.6	19.5
1 12	7 14.84	+34 59.8	2.275	3.239	4.1	19.5	1 12	7 14.53	+27 26.8	1.070	2.050	3.2	19.4
1 22	7 5.34	+34 56.3	2.304	3.241	6.3	19.7	1 22	7 4.16	+27 45.8	1.093	2.053	8.4	19.7
2 1	6 57.18	+34 40.4	2.361	3.243	9.1	19.8	2 1	6 56.09	+27 51.8	1.140	2.056	13.5	20.0
2 11	6 51.14	+34 14.5	2.442	3.244	11.7	20.0	2 11	6 51.56	+27 46.7	1.207	2.061	18.0	20.3
<b>301270</b>	2009 <i>BX</i> <sub>83</sub>		1 9.1 73°54	1°4/ 9.5	17		<b>961</b>	Gunnie		1 9.1 148°51	5°4/ 7.2	18	
12 3	7 48.60	+16 41.5	1.497	2.295	18.0	21.1	12 3	7 50.40	+35 46.3	2.108	2.894	13.8	16.2
12 13	7 43.61	+17 1.9	1.438	2.317	14.0	20.9	12 13	7 44.84	+36 43.5	2.033	2.899	11.0	16.0
12 23	7 35.62	+17 33.7	1.400	2.339	9.3	20.7	12 23	7 36.42	+37 36.3	1.980	2.904	8.1	15.9
1 2	7 25.48	+18 13.9	1.387	2.361	4.2	20.5	1 2	7 25.87	+38 18.0	1.955	2.908	5.8	15.7
1 12	7 14.53	+18 58.0	1.402	2.383	1.9	20.4	1 12	7 14.37	+38 43.1	1.959	2.912	5.8	15.7
1 22	7 4.22	+19 41.5	1.444	2.405	6.6	20.7	1 22	7 3.27	+38 49.1	1.991	2.916	8.0	15.9
2 1	6 55.87	+20 21.2	1.514	2.426	11.1	21.0	2 1	6 53.86	+38 36.9	2.050	2.920	10.8	16.1
2 11	6 50.37	+20 55.4	1.606	2.448	14.9	21.3	2 11	6 47.09	+38 10.2	2.132	2.923	13.6	16.3
<b>267773</b>	2003 <i>SB</i> <sub>74</sub>		1 9.1 142°60	2°6/ 9.9	18		<b>309844</b>	2009 <i>CR</i> <sub>43</sub>		1 9.1 260°21	0°8/ 9.3	18	
12 3	7 43.47	+13 56.5	2.270	3.043	13.4	20.3	12 3	7 46.49	+18 50.6	1.789	2.583	15.6	21.5
12 13	7 38.84	+13 48.4	2.184	3.047	10.6	20.1	12 13	7 42.04	+19 2.3	1.692	2.569	12.3	21.2
12 23	7 32.15	+13 48.9	2.122	3.050	7.3	19.9	12 23	7 34.77	+19 22.4	1.616	2.556	8.2	21.0
1 2	7 23.97	+13 57.4	2.087	3.054	4.0	19.7	1 2	7 25.27	+19 48.5	1.567	2.542	3.7	20.6
1 12	7 15.13	+14 12.8	2.081	3.057	2.7	19.6	1 12	7 14.58	+20 17.6	1.546	2.527	1.6	20.5
1 22	7 6.55	+14 33.3	2.105	3.060	5.3	19.8	1 22	7 4.02	+20 46.2	1.553	2.513	6.3	20.7
2 1	6 59.11	+14 56.9	2.158	3.063	8.7	20.0	2 1	6 54.92	+21 11.9	1.588	2.498	10.9	21.0
2 11	6 53.54	+15 21.7	2.236	3.066	11.7	20.2	2 11	6 48.35	+21 33.7	1.647	2.483	14.9	21.2
<b>29240</b>	1992 <i>GE</i> <sub>3</sub>		1 9.1 184°10	5°1/10.6	18		<b>150567</b>	2000 <i>SO</i> <sub>336</sub>		1 9.1 108°28	3°1/ 8.3	18	
12 3	7 45.15	+ 7 12.4	2.270	3.018	14.1	19.5	12 3	7 49.83	+30 30.4	2.118	2.906	13.7	20.4
12 13	7 40.11	+ 6 42.0	2.180	3.018	11.5	19.3	12 13	7 43.99	+30 53.3	2.047	2.920	10.7	20.3
12 23	7 33.00	+ 6 23.5	2.112	3.018	8.7	19.1	12 23	7 35.62	+31 13.9	1.999	2.934	7.2	20.1
1 2	7 24.35	+ 6 18.3	2.070	3.017	6.1	19.0	1 2	7 25.45	+31 27.7	1.979	2.948	4.0	19.9
1 12	7 14.98	+ 6 26.6	2.058	3.016	5.1	18.9	1 12	7 14.59	+31 31.2	1.989	2.962	3.4	19.9
1 22	7 5.83	+ 6 47.1	2.075	3.014	6.7	19.0	1 22	7 4.25	+31 23.1	2.028	2.975	6.3	20.1
2 1	6 57.80	+ 7 17.6	2.120	3.012	9.5	19.2	2 1	6 55.53	+31 4.2	2.095	2.987	9.6	20.3
2 11	6 51.64	+ 7 54.8	2.191	3.009	12.3	19.3	2 11	6 49.21	+30 37.3	2.188	3.000	12.6	20.5
<b>251032</b>	2006 <i>QU</i> <sub>100</sub>		1 9.1 47°76	9°9/12.9	18		<b>185927</b>	2000 <i>TU</i> <sub>41</sub>		1 9.1 121°75	0°8/ 8.8	18	
12 3	7 45.89	- 0 43.2	1.401	2.154	21.1	19.8	12 3	7 46.78	+22 27.6	2.191	2.977	13.4	20.8
12 13	7 41.32	- 1 37.0	1.359	2.187	17.8	19.7	12 13	7 41.52	+23 0.3	2.115	2.990	10.3	20.7
12 23	7 33.96	- 2 4.1	1.334	2.219	14.3	19.6	12 23	7 33.97	+23 37.5	2.064	3.003	6.7	20.5
1 2	7 24.72	- 2 0.8	1.330	2.252	11.3	19.5	1 2	7 24.77	+24 15.6	2.040	3.015	2.9	20.2
1 12	7 14.89	- 1 27.2	1.350	2.286	9.9	19.5	1 12	7 14.86	+24 50.9	2.046	3.027	1.5	20.2
1 22	7 5.81	- 0 27.8	1.396	2.319	10.8	19.6	1 22	7 5.29	+25 20.6	2.083	3.039	5.3	20.4
2 1	6 58.65	+ 0 50.0	1.465	2.353	13.2	19.9	2 1	6 57.06	+25 43.3	2.148	3.050	8.9	20.7
2 11	6 54.16	+ 2 17.5	1.557	2.387	15.9	20.1	2 11	6 50.95	+25 59.0	2.239	3.061	12.0	20.9
<b>488856</b>	2005 <i>SM</i> <sub>53</sub>		1 9.1 153°26	4°9/10.9	18		<b>110561</b>	2001 <i>TA</i> <sub>108</sub>		1 9.1 66°90	3°9/ 9.7	18	
12 3	7 45.02	+ 5 37.1	2.590	3.323	12.9	22.6	12 3	7 50.61	+14 33.2	1.761	2.539	16.5	18.4
12 13	7 39.67	+ 5 10.6	2.506	3.333	10.6	22.5	12 13	7 44.44	+13 35.1	1.704	2.568	13.0	18.3
12 23	7 32.52	+ 4 55.7	2.445	3.342	8.1	22.3	12 23	7 35.78	+12 45.2	1.669	2.597	9.1	18.1
1 2	7 24.09	+ 4 53.7	2.411	3.351	5.8	22.2	1 2	7 25.45	+12 4.8	1.661	2.625	5.3	17.9
1 12	7 15.11	+ 5 4.4	2.407	3.359	5.0	22.2	1 12	7 14.63	+11 34.6	1.682	2.654	4.0	17.9
1 22	7 6.38	+ 5 26.7	2.433	3.367	6.2	22.2	1 22	7 4.53	+11 14.4	1.732	2.682	6.8	18.1
2 1	6 58.66	+ 5 58.3	2.488	3.373	8.6	22.4	2 1	6 56.19	+11 3.4	1.809	2.711	10.3	18.4
2 11	6 52.58	+ 6 36.2	2.569	3.379	11.0	22.6	2 11	6 50.33	+10 59.9	1.911	2.738	13.5	18.7
<b>393422</b>	2001 <i>RO</i> <sub>154</sub>		1 9.1 88°50	1°6/ 9.5	17		<b>151270</b>	2002 <i>AF</i> <sub>140</sub>		1 9.1 69°02	1		

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>36018</b>	1999 NA <sub>46</sub>		1 9.1 223°01	2°2/10.3	18		<b>489409</b>	2006 VQ <sub>33</sub>		1 9.1 31°41	3°5/10.2	18	
12 3	7 42.04	+11 24.6	2.737	3.495	11.7	18.7	12 3	7 41.30	+11 52.5	2.242	3.015	13.5	21.3
12 13	7 37.53	+11 58.9	2.636	3.489	9.3	18.5	12 13	7 37.17	+11 27.9	2.162	3.021	10.8	21.2
12 23	7 31.25	+12 44.2	2.560	3.484	6.5	18.3	12 23	7 31.08	+11 12.6	2.105	3.028	7.7	21.0
1 2	7 23.64	+13 39.2	2.512	3.478	3.6	18.1	1 2	7 23.58	+11 7.0	2.074	3.035	4.7	20.8
1 12	7 15.35	+14 41.5	2.495	3.472	2.3	18.0	1 12	7 15.48	+11 10.7	2.072	3.043	3.6	20.7
1 22	7 7.15	+15 47.8	2.510	3.465	4.6	18.2	1 22	7 7.67	+11 22.6	2.099	3.050	5.7	20.9
2 1	6 59.79	+16 54.9	2.555	3.459	7.6	18.4	2 1	7 0.99	+11 40.6	2.154	3.058	8.7	21.1
2 11	6 53.95	+17 59.8	2.627	3.452	10.3	18.5	2 11	6 56.11	+12 2.8	2.234	3.067	11.6	21.3
<b>138025</b>	2000 CB <sub>134</sub>		1 9.1 143°26	2°4/ 9.9	18		<b>326049</b>	2011 AJ <sub>8</sub>		1 9.1 147°44	0°1/ 9.0	18	
12 3	7 45.87	+14 1.5	1.961	2.739	15.0	20.9	12 3	7 45.91	+20 47.1	2.237	3.021	13.2	21.3
12 13	7 41.04	+14 10.4	1.880	2.746	11.8	20.7	12 13	7 40.86	+21 12.9	2.154	3.028	10.2	21.1
12 23	7 33.80	+14 30.1	1.821	2.751	8.1	20.5	12 23	7 33.59	+21 44.1	2.096	3.034	6.7	20.9
1 2	7 24.77	+14 59.5	1.788	2.757	4.3	20.2	1 2	7 24.68	+22 18.0	2.064	3.040	2.8	20.7
1 12	7 14.92	+15 36.0	1.784	2.762	2.6	20.1	1 12	7 15.02	+22 51.2	2.064	3.046	1.2	20.6
1 22	7 5.38	+16 16.5	1.810	2.767	5.8	20.4	1 22	7 5.65	+23 21.0	2.093	3.051	5.1	20.9
2 1	6 57.20	+16 58.0	1.864	2.772	9.6	20.6	2 1	6 57.53	+23 45.8	2.152	3.056	8.8	21.1
2 11	6 51.23	+17 37.9	1.942	2.776	13.1	20.8	2 11	6 51.44	+24 4.9	2.235	3.060	11.9	21.3
<b>293884</b>	2007 RT <sub>285</sub>		1 9.1 344°91	5°2/ 7.1	18		<b>142954</b>	2002 VD <sub>77</sub>		1 9.1 247°46	0°5/ 8.9	18	
12 3	7 46.42	+35 32.1	2.229	3.019	13.0	20.9	12 3	7 48.60	+21 5.2	1.566	2.369	17.1	20.1
12 13	7 41.69	+36 28.2	2.149	3.018	10.4	20.7	12 13	7 44.15	+21 34.6	1.476	2.359	13.4	19.8
12 23	7 34.35	+37 20.6	2.092	3.017	7.7	20.5	12 23	7 36.45	+22 12.7	1.406	2.349	8.9	19.5
1 2	7 25.04	+38 3.4	2.062	3.015	5.5	20.4	1 2	7 26.12	+22 55.7	1.362	2.338	3.8	19.2
1 12	7 14.80	+38 31.3	2.060	3.014	5.5	20.4	1 12	7 14.39	+23 38.2	1.346	2.328	1.8	19.0
1 22	7 4.86	+38 41.8	2.087	3.014	7.6	20.5	1 22	7 2.84	+24 15.4	1.357	2.317	7.1	19.3
2 1	6 56.40	+38 35.3	2.141	3.013	10.4	20.7	2 1	6 53.04	+24 44.5	1.395	2.305	12.1	19.6
2 11	6 50.32	+38 14.5	2.219	3.012	13.0	20.9	2 11	6 46.23	+25 5.1	1.456	2.293	16.4	19.8
<b>373093</b>	2011 FO <sub>146</sub>		1 9.1 16°71	4°8/10.6	18		<b>129798</b>	1999 JL <sub>129</sub>		1 9.1 199°09	0°8/ 9.4	18	
12 3	7 42.27	+ 9 6.7	1.916	2.689	15.5	20.6	12 3	7 47.56	+17 44.8	1.852	2.639	15.4	20.4
12 13	7 38.29	+ 8 44.6	1.834	2.690	12.6	20.4	12 13	7 42.69	+18 10.6	1.763	2.637	12.1	20.2
12 23	7 32.01	+ 8 35.8	1.774	2.692	9.2	20.2	12 23	7 35.11	+18 46.1	1.697	2.634	8.1	19.9
1 2	7 24.02	+ 8 41.2	1.738	2.694	6.1	20.0	1 2	7 25.43	+19 28.7	1.657	2.631	3.6	19.6
1 12	7 15.24	+ 9 0.5	1.730	2.697	4.8	20.0	1 12	7 14.71	+20 14.4	1.646	2.627	1.5	19.5
1 22	7 6.75	+ 9 31.5	1.750	2.699	6.9	20.1	1 22	7 4.21	+20 59.2	1.664	2.623	6.0	19.8
2 1	6 59.55	+10 11.1	1.797	2.702	10.2	20.3	2 1	6 55.16	+21 40.0	1.711	2.619	10.3	20.0
2 11	6 54.45	+10 55.6	1.869	2.705	13.4	20.5	2 11	6 48.57	+22 15.3	1.782	2.614	14.1	20.2
<b>309444</b>	2007 UK <sub>57</sub>		1 9.1 359°10	0°4/ 9.2	18		<b>88581</b>	2001 QV <sub>258</sub>		1 9.1 299°42	0°9/ 9.2	18	
12 3	7 44.05	+20 29.6	1.325	2.147	18.6	21.0	12 3	7 46.13	+20 43.0	1.714	2.514	15.9	19.2
12 13	7 40.86	+20 33.0	1.251	2.144	14.5	20.8	12 13	7 41.88	+20 26.2	1.618	2.499	12.5	19.0
12 23	7 34.30	+20 44.4	1.196	2.143	9.7	20.5	12 23	7 34.74	+20 13.7	1.543	2.484	8.4	18.7
1 2	7 25.14	+21 1.2	1.165	2.142	4.2	20.2	1 2	7 25.32	+20 3.9	1.494	2.469	3.7	18.4
1 12	7 14.77	+21 19.5	1.160	2.142	1.7	20.0	1 12	7 14.76	+19 55.2	1.472	2.454	1.7	18.2
1 22	7 4.85	+21 36.1	1.180	2.143	7.3	20.3	1 22	7 4.41	+19 46.3	1.479	2.439	6.5	18.5
2 1	6 56.96	+21 49.0	1.225	2.145	12.5	20.6	2 1	6 55.62	+19 36.9	1.513	2.425	11.1	18.7
2 11	6 52.22	+21 57.6	1.291	2.147	16.9	20.9	2 11	6 49.46	+19 27.1	1.569	2.411	15.2	18.9
<b>417444</b>	2006 OE <sub>2</sub>		1 9.1 261°64	4°9/11.8	18		<b>457148</b>	2008 FP <sub>130</sub>		1 9.1 251°13	4°8/10.9	17	
12 3	8 1.41	- 1 44.2	1.242	1.973	24.4	21.5	12 3	7 44.14	+ 6 48.6	2.228	2.977	14.3	22.2
12 13	7 55.77	+ 0 27.5	1.124	1.953	20.7	21.1	12 13	7 39.64	+ 6 43.4	2.120	2.960	11.7	22.0
12 23	7 45.45	+ 3 41.3	1.025	1.932	15.5	20.7	12 23	7 32.93	+ 6 52.4	2.034	2.943	8.8	21.8
1 2	7 30.56	+ 8 2.4	0.952	1.911	9.3	20.3	1 2	7 24.49	+ 7 16.6	1.974	2.924	6.0	21.6
1 12	7 12.21	+13 19.4	0.912	1.889	5.0	20.0	1 12	7 15.12	+ 7 55.5	1.943	2.906	4.8	21.5
1 22	6 52.56	+19 1.3	0.908	1.866	9.9	20.2	1 22	7 5.77	+ 8 46.6	1.941	2.886	6.6	21.5
2 1	6 34.41	+24 29.6	0.939	1.842	17.2	20.5	2 1	6 57.44	+ 9 46.6	1.968	2.867	9.8	21.7
2 11	6 20.27	+29 17.2	0.998	1.818	23.5	20.8	2 11	6 50.98	+10 51.2	2.021	2.847	12.9	21.9
<b>120317</b>	2004 LY <sub>6</sub>		1 9.1 216°06	1°8/ 9.5	18		<b>30472</b>	2000 OM <sub>23</sub>		1 9.1 82°71	2°4/ 8.6	18	
12 3	7 47.18	+17 48.4	2.253	3.028	13.4	20.1	12 3	7 48.75	+30 33.4	2.410	3.193	12.4	17.9
12 13	7 41.82	+17 26.7	2.156	3.022	10.5	19.9	12 13	7 42.78	+30 34.7	2.340	3.211	9.6	17.7
12 23	7 34.22	+17 9.7	2.082	3.015	7.1	19.7	12 23	7 34.65	+30 32.8	2.294	3.229	6.5	17.5
1 2	7 24.95	+16 56.9	2.036	3.007	3.5	19.5	1 2	7 25.06	+30 24.7	2.277	3.247	3.4	17.4
1 12	7 14.89	+16 47.4	2.020	3.000	2.0	19.4	1 12	7 14.97	+30 8.2	2.289	3.264	2.7	17.4
1 22	7 5.05	+16 40.5	2.035	2.991	5.4	19.6	1 22	7 5.40	+29 43.2	2.332	3.282	5.4	17.6
2 1	6 56.42	+16 35.6	2.078	2.982	9.0	19.8	2 1	6 57.26	+29 10.9	2.405	3.299	8.4	17.8
2 11	6 49.81	+16 32.3	2.148	2.973	12.3	20.0	2 11	6 51.21	+28 33.5	2.503	3.316	11.1	18.0
<b>272968</b>	2006 CJ <sub>65</sub>		1 9.1 346°53	0°5/ 9.2	18		<b>100173</b>	1993 XZ		1 9.1 57°64	1°4/ 8.7	17	
12 3	7 43.93	+19 22.9	2.032	2.823	14.1	21.2	12 3	7 49.68	+22 58.3	1.328	2.143	19.0	19.4
12 13	7 39.60	+19 37.5	1.946	2.823	11.0	21.0	12 13	7 44.94	+23 33.4	1.275	2.165	14.6	19.2
12 23	7 32.89	+19 58.8	1.883	2.822	7.3	20.8	12 23	7 36.76	+24 14.7	1.242	2.187	9.5	19.0
1 2	7 24.41	+20 24.6	1.846	2.822	3.2	20.5	1 2	7 26.10	+24 56.5	1.234	2.210	4.1	18.7
1 12	7 15.11	+20 52.0	1.839	2.821	1.3	20.4	1 12	7 14.55	+25 32.8	1.252	2.233	2.3	18.7
1 22	7 6.06	+21 18.3	1.861	2.821	5.5	20.6	1 22	7 3.81	+25 59.4	1.297	2.256	7.4	19.1
2 1	6 58.33	+21 41.6	1.911	2.821	9.4	20.9	2 1	6 55.39	+26 15.5	1.367	2.279	12.1	19.4
2 11	6 52.75	+22 0.8	1.986	2.820	12.8	21.1	2 11	6 50.22	+26 22.1	1.459	2.302	16.1	19.7
<b>204382</b>	2004 TU <sub>125</sub>		1 9.1 158°55	1°7/ 9.7	18		<b>319865</b>	2006 WC <sub>67</sub>		1 9.1 93°07	1°3/ 9.5	18	
12 3	7 48.17	+15 38.1	1.819	2.601	15.8	20.7	12 3	7 46.79	+17 2.1	1.857	2.644	15	

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>10039</b>	Keet Seel		1 9.1 124°17'	1.7/ 9.9	18		<b>110719</b>	2001 TB <sub>231</sub>		1 9.1 232°89'	4.7/ 6.8	18	
12 3	7 43.32	+14 53.2	3.204	3.961	10.2	19.2	12 3	7 46.30	+34 23.7	2.447	3.233	12.1	19.4
12 13	7 38.04	+14 49.3	3.126	3.981	7.9	19.0	12 13	7 41.46	+35 31.6	2.362	3.230	9.7	19.2
12 23	7 31.33	+14 50.9	3.075	4.000	5.4	18.9	12 23	7 34.18	+36 37.5	2.302	3.226	7.0	19.1
1 2	7 23.64	+14 57.3	3.052	4.019	2.9	18.7	1 2	7 25.05	+37 35.7	2.269	3.223	5.0	18.9
1 12	7 15.56	+15 7.6	3.061	4.038	1.8	18.7	1 12	7 14.98	+38 20.8	2.266	3.220	5.1	18.9
1 22	7 7.73	+15 20.6	3.102	4.056	3.9	18.9	1 22	7 5.07	+38 49.8	2.292	3.216	7.1	19.1
2 1	7 0.76	+15 35.1	3.173	4.073	6.4	19.0	2 1	6 56.43	+39 2.1	2.346	3.212	9.8	19.2
2 11	6 55.14	+15 50.2	3.272	4.089	8.7	19.2	2 11	6 49.95	+38 59.8	2.423	3.209	12.3	19.4
<b>19003</b>	Erinfrey		1 9.1 24°85'	2.2/ 9.7	18		<b>254092</b>	2004 JV <sub>27</sub>		1 9.1 271°37'	0.4/ 9.2	18	
12 3	7 43.78	+16 3.9	1.791	2.584	15.6	18.4	12 3	7 46.57	+20 48.4	1.956	2.747	14.6	21.2
12 13	7 39.68	+15 57.9	1.712	2.587	12.3	18.2	12 13	7 41.97	+20 50.1	1.851	2.728	11.4	20.9
12 23	7 33.05	+16 1.0	1.655	2.591	8.4	17.9	12 23	7 34.71	+20 56.9	1.769	2.709	7.6	20.7
1 2	7 24.53	+16 12.3	1.623	2.595	4.2	17.7	1 2	7 25.33	+21 6.8	1.714	2.689	3.3	20.3
1 12	7 15.17	+16 30.0	1.620	2.599	2.4	17.6	1 12	7 14.84	+21 17.1	1.687	2.669	1.4	20.2
1 22	7 6.16	+16 51.5	1.644	2.604	6.1	17.8	1 22	7 4.44	+21 25.8	1.690	2.649	5.9	20.4
2 1	6 58.63	+17 14.6	1.696	2.609	10.1	18.1	2 1	6 55.38	+21 31.5	1.720	2.629	10.3	20.6
2 11	6 53.43	+17 37.5	1.772	2.614	13.7	18.3	2 11	6 48.66	+21 34.1	1.775	2.608	14.1	20.8
<b>427044</b>	2014 TK <sub>44</sub>		1 9.1 119°89'	1.2/ 9.5	18		<b>201761</b>	2003 WX <sub>36</sub>		1 9.1 67°47'	6.1/ 7.1	18	
12 3	7 46.31	+17 55.9	2.016	2.801	14.4	22.0	12 3	7 49.97	+37 20.1	2.029	2.817	14.2	20.5
12 13	7 41.31	+18 0.4	1.938	2.810	11.2	21.8	12 13	7 44.55	+38 25.4	1.970	2.836	11.4	20.3
12 23	7 33.95	+18 12.0	1.883	2.819	7.5	21.6	12 23	7 36.27	+39 24.4	1.935	2.854	8.5	20.2
1 2	7 24.86	+18 28.9	1.855	2.828	3.5	21.3	1 2	7 25.89	+40 10.1	1.926	2.873	6.4	20.1
1 12	7 15.04	+18 48.8	1.856	2.837	1.6	21.2	1 12	7 14.69	+40 36.9	1.945	2.892	6.4	20.1
1 22	7 5.58	+19 9.3	1.886	2.845	5.5	21.5	1 22	7 4.05	+40 42.9	1.991	2.910	8.4	20.3
2 1	6 57.51	+19 28.7	1.945	2.853	9.3	21.7	2 1	6 55.24	+40 29.5	2.064	2.929	11.0	20.5
2 11	6 51.64	+19 46.0	2.029	2.861	12.6	22.0	2 11	6 49.14	+40 1.0	2.160	2.948	13.5	20.7
<b>277055</b>	2005 ET <sub>55</sub>		1 9.1 84°62'	4.4/10.9	18		<b>490154</b>	2008 UO <sub>196</sub>		1 9.1 69°00'	3.9/10.1	16	
12 3	7 42.00	+ 7 56.6	2.242	3.000	14.0	21.1	12 3	7 48.39	+13 2.2	1.395	2.190	19.2	22.1
12 13	7 37.75	+ 7 46.6	2.159	3.006	11.3	21.0	12 13	7 43.64	+12 46.7	1.335	2.209	15.2	21.9
12 23	7 31.51	+ 7 49.3	2.099	3.011	8.4	20.8	12 23	7 35.78	+12 45.5	1.296	2.228	10.6	21.7
1 2	7 23.82	+ 8 5.4	2.064	3.017	5.6	20.6	1 2	7 25.71	+12 58.1	1.280	2.248	5.9	21.5
1 12	7 15.48	+ 8 34.0	2.058	3.023	4.4	20.6	1 12	7 14.79	+13 22.5	1.291	2.267	4.0	21.4
1 22	7 7.38	+ 9 12.8	2.082	3.028	6.1	20.7	1 22	7 4.53	+13 55.0	1.328	2.286	7.4	21.7
2 1	7 0.40	+ 9 58.8	2.133	3.034	9.0	20.9	2 1	6 56.30	+14 31.8	1.392	2.305	11.8	21.9
2 11	6 55.21	+10 48.5	2.210	3.040	11.8	21.1	2 11	6 51.00	+15 9.5	1.478	2.324	15.7	22.2
<b>397178</b>	2005 YV <sub>254</sub>		1 9.1 183°97'	2.8/ 8.3	18		<b>116351</b>	2003 YW <sub>89</sub>		1 9.1 79°53'	1.4/ 8.7	17	
12 3	7 51.32	+27 27.4	1.846	2.639	15.3	21.8	12 3	7 51.34	+24 31.1	1.695	2.491	16.3	20.2
12 13	7 45.77	+28 7.5	1.762	2.640	11.9	21.6	12 13	7 45.48	+24 55.1	1.638	2.518	12.5	20.0
12 23	7 37.22	+28 49.4	1.701	2.640	8.0	21.3	12 23	7 36.76	+25 21.7	1.604	2.545	8.2	19.8
1 2	7 26.36	+29 27.7	1.667	2.639	4.1	21.1	1 2	7 26.05	+25 46.6	1.596	2.571	3.6	19.6
1 12	7 14.41	+29 56.9	1.662	2.638	3.3	21.0	1 12	7 14.66	+26 5.6	1.617	2.597	2.1	19.6
1 22	7 2.80	+30 13.5	1.686	2.636	7.0	21.3	1 22	7 3.98	+26 16.3	1.667	2.623	6.4	19.9
2 1	6 52.91	+30 17.2	1.738	2.634	11.0	21.5	2 1	6 55.25	+26 18.6	1.744	2.648	10.4	20.2
2 11	6 45.77	+30 10.1	1.813	2.631	14.5	21.7	2 11	6 49.28	+26 14.0	1.845	2.673	13.9	20.5
<b>494869</b>	2008 GZ <sub>15</sub>		1 9.1 180°14'	5.7/11.2	18		<b>243799</b>	2000 SR <sub>132</sub>		1 9.1 122°94'	7.5/12.5	18	
12 3	7 44.19	+ 3 50.5	2.443	3.174	13.6	22.6	12 3	7 41.97	- 6 28.2	3.090	3.755	12.3	21.5
12 13	7 39.27	+ 3 22.0	2.353	3.176	11.3	22.5	12 13	7 37.10	- 7 24.7	3.016	3.771	10.8	21.4
12 23	7 32.44	+ 3 6.8	2.285	3.177	8.8	22.3	12 23	7 30.78	- 8 6.5	2.964	3.786	9.2	21.3
1 2	7 24.21	+ 3 6.6	2.243	3.177	6.6	22.2	1 2	7 23.45	- 8 30.9	2.937	3.802	8.0	21.2
1 12	7 15.32	+ 3 21.7	2.230	3.176	5.7	22.1	1 12	7 15.70	- 8 36.7	2.937	3.817	7.5	21.2
1 22	7 6.62	+ 3 50.7	2.246	3.176	6.9	22.2	1 22	7 8.17	- 8 24.3	2.965	3.831	7.9	21.2
2 1	6 58.94	+ 4 31.2	2.290	3.174	9.2	22.3	2 1	7 1.45	- 7 55.8	3.019	3.845	9.0	21.3
2 11	6 52.96	+ 5 19.4	2.360	3.172	11.8	22.5	2 11	6 56.06	- 7 14.5	3.097	3.859	10.4	21.5
<b>378371</b>	2007 PH <sub>13</sub>		1 9.1 90°85'	1.8/ 9.9	18		<b>363186</b>	2001 TD <sub>209</sub>		1 9.1 108°85'	8.6/12.8	18	
12 3	7 43.77	+14 14.4	2.328	3.100	13.1	20.9	12 3	7 46.78	- 5 47.0	2.479	3.153	14.8	21.1
12 13	7 39.00	+14 38.0	2.255	3.118	10.2	20.7	12 13	7 41.00	- 6 46.6	2.417	3.181	12.8	21.0
12 23	7 32.26	+15 11.1	2.205	3.135	7.0	20.5	12 23	7 33.40	- 7 28.1	2.376	3.208	10.9	20.9
1 2	7 24.11	+15 51.9	2.182	3.153	3.5	20.3	1 2	7 24.56	- 7 48.3	2.359	3.234	9.3	20.8
1 12	7 15.39	+16 37.7	2.190	3.170	2.0	20.2	1 12	7 15.26	- 7 45.7	2.370	3.260	8.6	20.8
1 22	7 6.96	+17 25.3	2.229	3.186	4.9	20.5	1 22	7 6.33	- 7 21.7	2.407	3.284	9.1	20.9
2 1	6 59.68	+18 12.0	2.296	3.203	8.1	20.7	2 1	6 58.54	- 6 39.3	2.471	3.308	10.4	21.0
2 11	6 54.23	+18 55.8	2.390	3.219	11.1	20.9	2 11	6 52.48	- 5 43.5	2.560	3.331	12.1	21.2
<b>335870</b>	2007 RQ <sub>102</sub>		1 9.1 120°50'	4.2/ 7.8	18		<b>322736</b>	2000 SW <sub>251</sub>		1 9.1 95°59'	4.5/10.9	18	
12 3	7 48.11	+34 21.5	2.309	3.094	12.8	21.3	12 3	7 45.38	+ 7 48.7	2.125	2.880	14.7	21.2
12 13	7 42.74	+34 52.7	2.229	3.098	10.1	21.1	12 13	7 40.29	+ 7 39.7	2.057	2.902	11.9	21.0
12 23	7 34.91	+35 19.7	2.174	3.102	7.2	21.0	12 23	7 33.12	+ 7 44.1	2.011	2.923	8.7	20.8
1 2	7 25.28	+35 37.6	2.145	3.105	4.7	20.8	1 2	7 24.48	+ 8 2.5	1.992	2.944	5.8	20.7
1 12	7 14.90	+35 42.6	2.146	3.108	4.5	20.8	1 12	7 15.29	+ 8 33.3	2.001	2.965	4.5	20.7
1 22	7 4.91	+35 33.2	2.176	3.112	6.7	21.0	1 22	7 6.48	+ 9 13.9	2.039	2.985	6.3	20.8
2 1	6 56.40	+35 10.3	2.234	3.115	9.6	21.1	2 1	6 58.95	+10 1.1	2.106	3.005	9.2	21.0
2 11	6 50.19	+34 37.1	2.316	3.118	12.3	21.3	2 11	6 53.38	+10 51.2	2.198	3.025	12.0	21.2
<b>399465</b>	2002 QY <sub>74</sub>		1 9.1 100°42'	3.7/10.7	18		<b>458007</b>	2009 WJ <sub>88</sub>		1 9.1 267°91'	0.8/ 9.4	18	
12 3	7 46.82	+ 9 23.7	1.885	2.650	16.0	22.1	12 3	7 44.16	+18 49.2	2.064	2.853	14.0	

EPHEMERIDES

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>467892</b>	2011 <i>GD</i> <sub>85</sub>		1 9.1 269°62	4.2/ 7.5	16		<b>234494</b>	2001 <i>TA</i> <sub>83</sub>		1 9.1 54°31	3.9/ 8.4	18	
12 3	7 47.05	+32 37.4	2.238	3.028	13.0	21.9	12 3	7 51.87	+30 3.5	1.339	2.154	18.8	20.3
12 13	7 42.24	+33 24.3	2.141	3.014	10.3	21.7	12 13	7 46.99	+30 26.5	1.275	2.164	14.7	20.0
12 23	7 34.82	+34 9.8	2.069	3.000	7.3	21.5	12 23	7 38.34	+30 47.6	1.232	2.174	10.0	19.8
1 2	7 25.37	+34 48.5	2.023	2.985	4.7	21.3	1 2	7 26.89	+30 59.8	1.213	2.184	5.4	19.6
1 12	7 14.87	+35 15.4	2.007	2.971	4.6	21.3	1 12	7 14.34	+30 57.6	1.220	2.195	4.4	19.5
1 22	7 4.52	+35 27.3	2.019	2.956	7.1	21.4	1 22	7 2.63	+30 39.4	1.253	2.206	8.5	19.8
2 1	6 55.53	+35 24.2	2.059	2.941	10.2	21.6	2 1	6 53.42	+30 7.4	1.311	2.217	13.0	20.1
2 11	6 48.87	+35 8.1	2.124	2.926	13.2	21.7	2 11	6 47.78	+29 26.4	1.391	2.229	17.0	20.4
<b>404843</b>	2014 <i>KZ</i> <sub>4</sub>		1 9.1 152°89	0.5/ 9.2	18		<b>216233</b>	2006 <i>UF</i> <sub>241</sub>		1 9.1 129°84	0.6/ 9.3	18	
12 3	7 49.60	+19 31.5	1.960	2.742	14.9	21.7	12 3	7 47.29	+18 45.0	2.100	2.882	14.0	21.1
12 13	7 43.98	+19 46.7	1.879	2.751	11.5	21.5	12 13	7 42.00	+19 3.6	2.023	2.894	10.9	20.9
12 23	7 35.79	+20 8.4	1.822	2.759	7.6	21.3	12 23	7 34.39	+19 29.1	1.969	2.906	7.2	20.7
1 2	7 25.70	+20 34.1	1.792	2.767	3.3	21.0	1 2	7 25.09	+19 59.0	1.943	2.917	3.2	20.5
1 12	7 14.77	+21 0.4	1.791	2.773	1.3	20.9	1 12	7 15.06	+20 30.2	1.946	2.928	1.3	20.4
1 22	7 4.20	+21 24.6	1.821	2.779	5.7	21.2	1 22	7 5.38	+20 59.9	1.980	2.939	5.3	20.7
2 1	6 55.13	+21 45.0	1.879	2.785	9.7	21.4	2 1	6 57.07	+21 26.3	2.042	2.949	9.0	20.9
2 11	6 48.44	+22 1.1	1.962	2.789	13.2	21.7	2 11	6 50.91	+21 48.5	2.130	2.958	12.3	21.1
<b>464083</b>	2014 <i>WD</i> <sub>308</sub>		1 9.1 204°26	0.7/ 9.3	18		<b>308683</b>	2006 <i>DH</i> <sub>88</sub>		1 9.1 149°62	2.1/ 9.8	18	
12 3	7 47.29	+20 17.2	2.328	3.106	12.9	21.8	12 3	7 48.50	+15 9.6	2.016	2.789	14.8	21.7
12 13	7 41.88	+20 7.7	2.233	3.102	10.1	21.6	12 13	7 43.00	+15 12.4	1.935	2.799	11.6	21.5
12 23	7 34.28	+20 1.9	2.162	3.098	6.7	21.3	12 23	7 35.09	+15 24.4	1.877	2.808	7.9	21.3
1 2	7 25.04	+19 58.2	2.118	3.092	3.0	21.1	1 2	7 25.40	+15 44.3	1.846	2.817	4.0	21.0
1 12	7 15.04	+19 55.2	2.105	3.087	1.3	20.9	1 12	7 14.94	+16 9.8	1.845	2.824	2.3	20.9
1 22	7 5.28	+19 51.8	2.123	3.081	5.1	21.2	1 22	7 4.82	+16 38.5	1.874	2.831	5.7	21.2
2 1	6 56.73	+19 47.5	2.170	3.074	8.7	21.4	2 1	6 56.10	+17 7.9	1.932	2.837	9.5	21.4
2 11	6 50.16	+19 42.2	2.243	3.067	11.9	21.6	2 11	6 49.60	+17 36.2	2.015	2.843	12.9	21.6
<b>86841</b>	2000 <i>GC</i> <sub>163</sub>		1 9.1 176°25	10.4/ 4.2	18		<b>84818</b>	2002 <i>YA</i> <sub>20</sub>		1 9.1 68°97	0.6/ 8.9	18	
12 3	8 1.71	+47 8.6	2.014	2.769	15.4	19.9	12 3	7 47.93	+21 51.3	1.662	2.463	16.3	19.1
12 13	7 55.00	+49 14.1	1.947	2.772	13.3	19.7	12 13	7 43.02	+22 20.1	1.600	2.482	12.6	18.9
12 23	7 44.06	+51 9.5	1.903	2.774	11.4	19.6	12 23	7 35.28	+22 54.8	1.559	2.501	8.2	18.7
1 2	7 29.56	+52 42.2	1.885	2.775	10.5	19.6	1 2	7 25.50	+23 31.3	1.545	2.521	3.5	18.5
1 12	7 13.11	+53 42.2	1.893	2.776	10.8	19.6	1 12	7 14.92	+24 5.1	1.558	2.540	1.6	18.4
1 22	6 56.90	+54 5.3	1.927	2.776	12.4	19.7	1 22	7 4.92	+24 32.8	1.600	2.559	6.3	18.7
2 1	6 43.13	+53 54.1	1.985	2.775	14.4	19.8	2 1	6 56.72	+24 52.9	1.670	2.579	10.5	19.0
2 11	6 33.33	+53 16.7	2.063	2.773	16.5	20.0	2 11	6 51.19	+25 5.6	1.762	2.598	14.1	19.3
<b>383353</b>	2006 <i>RP</i> <sub>40</sub>		1 9.1 153°44	1.0/ 9.4	18		<b>275488</b>	3212 <i>T</i> <sub>-3</sub>		1 9.1 134°73	4.3/ 10.7	18	
12 3	7 44.08	+19 22.5	2.551	3.329	11.9	21.3	12 3	7 42.97	+ 8 17.2	2.450	3.202	13.1	20.9
12 13	7 39.16	+19 10.0	2.463	3.332	9.3	21.1	12 13	7 38.31	+ 7 56.5	2.367	3.209	10.6	20.8
12 23	7 32.34	+19 1.3	2.399	3.334	6.2	20.9	12 23	7 31.80	+ 7 46.8	2.306	3.216	7.9	20.6
1 2	7 24.17	+18 55.4	2.363	3.337	2.8	20.7	1 2	7 23.96	+ 7 48.8	2.272	3.223	5.3	20.5
1 12	7 15.42	+18 51.2	2.358	3.339	1.4	20.6	1 12	7 15.55	+ 8 2.0	2.268	3.230	4.3	20.4
1 22	7 6.93	+18 47.8	2.383	3.341	4.6	20.8	1 22	7 7.37	+ 8 25.1	2.293	3.236	5.9	20.5
2 1	6 59.51	+18 44.6	2.438	3.343	7.8	21.0	2 1	7 0.23	+ 8 55.8	2.346	3.242	8.5	20.7
2 11	6 53.82	+18 41.3	2.519	3.345	10.7	21.2	2 11	6 54.77	+ 9 31.3	2.426	3.248	11.1	20.9
<b>317983</b>	2004 <i>AT</i> <sub>6</sub>		1 9.1 139°16	1.3/ 8.7	18		<b>264239</b>	2010 <i>TP</i> <sub>72</sub>		1 9.1 87°83	1.1/ 9.4	18	
12 3	7 46.41	+26 31.6	2.540	3.323	11.8	20.7	12 3	7 48.29	+18 19.1	1.858	2.644	15.4	21.1
12 13	7 41.00	+26 35.4	2.457	3.330	9.1	20.5	12 13	7 42.90	+18 24.9	1.793	2.666	11.9	20.9
12 23	7 33.56	+26 39.0	2.399	3.336	6.0	20.3	12 23	7 34.99	+18 37.9	1.751	2.688	7.9	20.7
1 2	7 24.68	+26 39.9	2.368	3.342	2.7	20.1	1 2	7 25.33	+18 56.0	1.735	2.709	3.6	20.5
1 12	7 15.21	+26 36.1	2.369	3.348	1.7	20.0	1 12	7 15.01	+19 16.4	1.749	2.731	1.6	20.4
1 22	7 6.08	+26 26.6	2.400	3.354	4.9	20.2	1 22	7 5.22	+19 36.6	1.792	2.751	5.7	20.7
2 1	6 58.16	+26 11.6	2.460	3.359	8.0	20.5	2 1	6 57.04	+19 55.0	1.863	2.772	9.6	21.0
2 11	6 52.12	+25 52.2	2.546	3.364	10.8	20.6	2 11	6 51.24	+20 10.7	1.959	2.792	13.0	21.3
<b>165764</b>	2001 <i>QO</i> <sub>232</sub>		1 9.1 38°09	2.0/ 9.8	18		<b>355952</b>	2008 <i>YW</i> <sub>126</sub>		1 9.1 210°16	1.5/ 8.8	18	
12 3	7 42.61	+15 56.4	1.952	2.742	14.7	19.7	12 3	7 51.95	+26 33.0	2.103	2.886	14.0	21.6
12 13	7 38.49	+15 54.0	1.881	2.755	11.5	19.5	12 13	7 45.87	+26 37.0	2.007	2.879	10.9	21.4
12 23	7 32.11	+16 0.2	1.833	2.768	7.8	19.3	12 23	7 37.11	+26 40.9	1.934	2.872	7.3	21.2
1 2	7 24.11	+16 13.9	1.810	2.781	3.9	19.1	1 2	7 26.33	+26 41.3	1.890	2.864	3.3	20.9
1 12	7 15.45	+16 33.2	1.816	2.795	2.2	19.0	1 12	7 14.59	+26 35.2	1.875	2.855	2.1	20.8
1 22	7 7.18	+16 55.8	1.850	2.809	5.5	19.2	1 22	7 3.15	+26 21.2	1.891	2.845	5.9	21.0
2 1	6 57.07	+17 19.6	1.913	2.824	9.2	19.5	2 1	6 53.21	+25 59.8	1.936	2.835	9.9	21.2
2 11	6 55.46	+17 42.8	1.999	2.839	12.5	19.7	2 11	6 45.70	+25 33.2	2.006	2.824	13.3	21.4
<b>67004</b>	1999 <i>XU</i> <sub>119</sub>		1 9.1 121°80	3.1/ 9.9	18		<b>87854</b>	2000 <i>SY</i> <sub>219</sub>		1 9.1 102°47	3.8/ 10.6	18	
12 3	7 45.63	+14 0.2	2.232	3.002	13.7	19.7	12 3	7 44.77	+ 9 46.8	2.112	2.875	14.6	19.6
12 13	7 40.50	+13 27.0	2.150	3.010	10.8	19.5	12 13	7 39.94	+ 9 45.9	2.038	2.890	11.7	19.5
12 23	7 33.29	+13 1.1	2.091	3.017	7.6	19.3	12 23	7 32.98	+ 9 57.6	1.986	2.905	8.4	19.3
1 2	7 24.58	+12 42.8	2.060	3.025	4.4	19.2	1 2	7 24.49	+10 21.7	1.961	2.920	5.2	19.1
1 12	7 15.26	+12 32.0	2.059	3.032	3.2	19.1	1 12	7 15.37	+10 56.5	1.965	2.935	3.8	19.1
1 22	7 6.26	+12 28.0	2.087	3.039	5.7	19.3	1 22	7 6.58	+11 39.3	1.998	2.949	5.9	19.2
2 1	6 58.49	+12 29.7	2.144	3.046	8.9	19.5	2 1	6 59.05	+12 26.7	2.059	2.963	9.1	19.4
2 11	6 52.66	+12 35.7	2.226	3.052	11.9	19.7	2 11	6 53.50	+13 15.5	2.146	2.977	12.1	19.7
<b>160010</b>	6699 <i>P-L</i>		1 9.1 155°04	2.2/ 9.8	18		<b>362068</b>	2009 <i>BT</i> <sub>67</sub>		1 9.1 331°57	3.0/ 10.1	17	
12 3	7 48.92	+14 48.9	2.136	2.904</									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>125688</b>	2001 <i>XT</i> <sub>88</sub>		1 9.1 311°41	0°5/ 8.9	18		<b>508860</b>	2002 <i>RR</i> <sub>36</sub>		1 9.1 72°39	1°5/ 8.5	18	
12 3	7 45.46	+19 56.5	1.413	2.227	18.1	19.7	12 3	7 44.05	+27 53.2	3.120	3.898	10.0	21.3
12 13	7 42.06	+20 38.0	1.328	2.217	14.1	19.4	12 13	7 38.73	+28 4.4	3.058	3.928	7.6	21.1
12 23	7 35.29	+21 31.7	1.263	2.208	9.4	19.1	12 23	7 31.86	+28 14.8	3.022	3.957	5.0	21.0
1 2	7 25.77	+22 33.2	1.222	2.199	4.0	18.8	1 2	7 23.95	+28 22.0	3.014	3.987	2.4	20.9
1 12	7 14.79	+23 36.0	1.208	2.190	1.8	18.6	1 12	7 15.70	+28 24.4	3.038	4.016	1.8	20.9
1 22	7 3.98	+24 33.7	1.221	2.182	7.5	19.0	1 22	7 7.82	+28 21.2	3.094	4.044	4.1	21.1
2 1	6 55.02	+25 21.9	1.259	2.174	12.7	19.2	2 1	7 0.94	+28 12.4	3.179	4.073	6.6	21.3
2 11	6 49.19	+25 59.1	1.318	2.166	17.2	19.5	2 11	6 55.58	+27 59.1	3.291	4.101	8.8	21.4
<b>189693</b>	2001 <i>SO</i> <sub>270</sub>		1 9.1 83°38	1°8/ 9.8	18		<b>217775</b>	2000 <i>RK</i> <sub>83</sub>		1 9.1 43°31	0°0/ 8.9	18	
12 3	7 50.62	+13 55.9	1.504	2.292	18.4	19.5	12 3	7 47.94	+22 55.0	1.571	2.377	16.9	19.3
12 13	7 45.21	+14 42.2	1.446	2.318	14.3	19.3	12 13	7 43.11	+22 40.1	1.509	2.393	13.1	19.1
12 23	7 36.79	+15 43.9	1.409	2.344	9.6	19.1	12 23	7 35.37	+22 28.2	1.468	2.411	8.6	18.8
1 2	7 26.17	+16 57.0	1.397	2.370	4.6	18.9	1 2	7 25.57	+22 17.1	1.453	2.429	3.6	18.6
1 12	7 14.71	+18 15.0	1.414	2.395	2.1	18.8	1 12	7 15.06	+22 4.7	1.465	2.447	1.4	18.5
1 22	7 3.88	+19 31.6	1.460	2.420	6.6	19.1	1 22	7 5.23	+21 50.2	1.506	2.466	6.3	18.8
2 1	6 55.00	+20 41.6	1.533	2.445	11.1	19.5	2 1	6 57.33	+21 33.8	1.572	2.486	10.7	19.1
2 11	6 49.01	+21 42.4	1.630	2.469	14.9	19.8	2 11	6 52.20	+21 16.5	1.663	2.505	14.4	19.4
<b>77861</b>	2001 <i>RY</i> <sub>136</sub>		1 9.1 285°30	1°9/ 8.4	18		<b>492412</b>	2014 <i>KU</i> <sub>57</sub>		1 9.1 169°54	1°1/ 9.5	18	
12 3	7 44.05	+26 22.1	2.322	3.115	12.5	19.3	12 3	7 48.34	+16 50.5	1.800	2.586	15.9	22.2
12 13	7 39.60	+26 55.8	2.233	3.111	9.7	19.1	12 13	7 43.35	+17 17.5	1.716	2.589	12.4	22.0
12 23	7 32.91	+27 31.6	2.167	3.106	6.5	18.9	12 23	7 35.61	+17 55.2	1.655	2.591	8.3	21.7
1 2	7 24.53	+28 5.6	2.129	3.102	3.1	18.7	1 2	7 25.77	+18 41.0	1.620	2.594	3.8	21.5
1 12	7 15.35	+28 34.3	2.120	3.098	2.4	18.7	1 12	7 14.92	+19 30.7	1.614	2.595	1.6	21.3
1 22	7 6.37	+28 55.1	2.142	3.094	5.5	18.9	1 22	7 4.34	+20 19.9	1.637	2.596	6.1	21.6
2 1	6 58.58	+29 6.9	2.191	3.090	8.9	19.1	2 1	6 55.28	+21 5.4	1.688	2.597	10.4	21.9
2 11	6 52.80	+29 10.3	2.266	3.086	11.9	19.2	2 11	6 48.73	+21 45.3	1.764	2.597	14.2	22.1
<b>120888</b>	1998 <i>RM</i> <sub>70</sub>		1 9.1 55°31	2°5/ 9.9	18		<b>332680</b>	2009 <i>DR</i> <sub>51</sub>		1 9.1 156°24	1°2/ 8.7	18	
12 3	7 46.60	+14 7.1	1.328	2.133	19.5	19.2	12 3	7 49.78	+24 10.5	2.102	2.887	13.9	21.8
12 13	7 42.69	+14 26.3	1.260	2.141	15.4	19.0	12 13	7 44.08	+24 35.9	2.021	2.895	10.8	21.6
12 23	7 35.47	+15 1.9	1.212	2.150	10.5	18.7	12 23	7 35.87	+25 4.3	1.964	2.902	7.1	21.4
1 2	7 25.73	+15 51.7	1.187	2.159	5.3	18.5	1 2	7 25.81	+25 32.1	1.934	2.909	3.1	21.2
1 12	7 14.87	+16 50.9	1.189	2.169	2.8	18.3	1 12	7 14.93	+25 55.4	1.934	2.914	1.8	21.1
1 22	7 4.49	+17 53.4	1.217	2.179	7.3	18.7	1 22	7 4.40	+26 11.8	1.964	2.919	5.7	21.3
2 1	6 56.13	+18 53.8	1.270	2.189	12.3	19.0	2 1	6 55.33	+26 20.5	2.024	2.924	9.4	21.6
2 11	6 50.87	+19 48.6	1.346	2.199	16.6	19.2	2 11	6 48.56	+26 22.3	2.108	2.928	12.7	21.8
<b>348522</b>	2005 <i>UF</i> <sub>59</sub>		1 9.1 73°87	3°5/ 8.2	17		<b>256112</b>	2006 <i>UX</i> <sub>285</sub>		1 9.1 106°82	1°1/ 8.8	18	
12 3	7 52.38	+27 10.3	1.359	2.171	18.7	21.1	12 3	7 49.70	+23 48.8	2.016	2.803	14.3	21.6
12 13	7 47.21	+28 5.0	1.304	2.191	14.5	20.9	12 13	7 43.95	+24 15.9	1.948	2.823	11.0	21.4
12 23	7 38.40	+29 2.2	1.270	2.212	9.7	20.7	12 23	7 35.71	+24 46.1	1.904	2.843	7.2	21.2
1 2	7 26.93	+29 54.0	1.260	2.232	5.0	20.5	1 2	7 25.70	+25 15.6	1.888	2.863	3.1	21.0
1 12	7 14.43	+30 32.9	1.277	2.253	4.1	20.5	1 12	7 15.00	+25 40.6	1.901	2.882	1.8	20.9
1 22	7 2.74	+30 55.0	1.321	2.273	8.2	20.8	1 22	7 4.78	+25 58.7	1.944	2.900	5.7	21.2
2 1	6 53.49	+31 0.5	1.390	2.293	12.7	21.1	2 1	6 56.14	+26 9.2	2.016	2.918	9.4	21.5
2 11	6 47.70	+30 53.0	1.481	2.313	16.5	21.4	2 11	6 49.85	+26 12.8	2.113	2.935	12.6	21.7
<b>343148</b>	2009 <i>FF</i> <sub>69</sub>		1 9.1 334°11	9°3/12.9	18		<b>223662</b>	2004 <i>PS</i> <sub>36</sub>		1 9.1 136°28	2°4/ 9.9	18	
12 3	7 39.40	- 6 47.9	2.386	3.075	15.0	20.0	12 3	7 45.34	+14 27.5	2.230	3.002	13.6	20.9
12 13	7 35.75	- 7 41.0	2.299	3.069	13.2	19.8	12 13	7 40.37	+14 22.6	2.148	3.010	10.7	20.7
12 23	7 30.25	- 8 15.3	2.231	3.064	11.5	19.7	12 23	7 33.29	+14 26.0	2.090	3.019	7.4	20.5
1 2	7 23.38	- 8 27.1	2.185	3.059	10.0	19.6	1 2	7 24.68	+14 37.3	2.058	3.027	4.0	20.3
1 12	7 15.84	- 8 14.4	2.165	3.055	9.3	19.5	1 12	7 15.41	+14 54.7	2.057	3.034	2.5	20.3
1 22	7 8.45	- 7 37.8	2.170	3.051	9.8	19.5	1 22	7 6.43	+15 16.4	2.085	3.041	5.3	20.4
2 1	7 2.01	- 6 40.2	2.200	3.046	11.2	19.6	2 1	6 58.66	+15 40.4	2.142	3.048	8.7	20.7
2 11	6 57.21	- 5 26.8	2.254	3.043	13.0	19.7	2 11	6 52.83	+16 5.0	2.225	3.055	11.8	20.9
<b>367563</b>	2009 <i>SH</i> <sub>79</sub>		1 9.1 156°96	0°7/ 9.3	18		<b>453840</b>	2011 <i>SZ</i> <sub>252</sub>		1 9.1 165°59	0°5/ 8.9	18	
12 3	7 46.62	+19 48.3	2.169	2.951	13.6	21.7	12 3	7 50.05	+22 0.4	1.898	2.686	15.1	22.4
12 13	7 41.48	+19 46.0	2.084	2.956	10.6	21.5	12 13	7 44.55	+22 22.0	1.815	2.691	11.7	22.2
12 23	7 34.08	+19 48.5	2.022	2.959	7.0	21.3	12 23	7 36.33	+22 48.8	1.756	2.695	7.7	21.9
1 2	7 25.01	+19 54.1	1.989	2.963	3.1	21.1	1 2	7 26.06	+23 17.4	1.723	2.698	3.3	21.7
1 12	7 15.22	+20 0.9	1.984	2.966	1.3	20.9	1 12	7 14.84	+23 43.7	1.720	2.701	1.5	21.5
1 22	7 5.73	+20 7.3	2.010	2.969	5.2	21.2	1 22	7 3.97	+24 5.0	1.746	2.704	6.0	21.8
2 1	6 57.55	+20 12.3	2.065	2.972	8.9	21.4	2 1	6 54.67	+24 19.8	1.801	2.706	10.1	22.1
2 11	6 51.46	+20 15.6	2.145	2.974	12.2	21.7	2 11	6 47.88	+24 28.4	1.880	2.707	13.7	22.3
<b>88975</b>	2001 <i>TH</i> <sub>59</sub>		1 9.1 148°62	0°7/ 9.3	18		<b>519100</b>	2010 <i>LH</i> <sub>101</sub>		1 9.1 175°17	2°6/10.4	18	
12 3	7 46.73	+19 33.8	2.047	2.833	14.2	20.5	12 3	7 42.14	+11 11.8	2.372	3.137	13.1	21.2
12 13	7 41.72	+19 39.5	1.964	2.837	11.0	20.3	12 13	7 37.90	+11 36.3	2.281	3.137	10.4	21.0
12 23	7 34.31	+19 51.0	1.904	2.842	7.3	20.1	12 23	7 31.70	+12 12.9	2.213	3.137	7.3	20.8
1 2	7 25.13	+20 6.3	1.872	2.846	3.2	19.9	1 2	7 24.03	+13 0.4	2.172	3.137	4.1	20.6
1 12	7 15.17	+20 22.9	1.869	2.851	1.3	19.7	1 12	7 15.66	+13 56.4	2.162	3.137	2.7	20.5
1 22	7 5.53	+20 38.6	1.895	2.854	5.4	20.0	1 22	7 7.43	+14 57.4	2.181	3.138	5.1	20.7
2 1	6 57.27	+20 52.1	1.950	2.858	9.3	20.2	2 1	7 0.23	+16 0.1	2.230	3.138	8.3	20.9
2 11	6 51.20	+21 2.7	2.030	2.861	12.7	20.5	2 11	6 54.75	+17 1.1	2.306	3.137	11.3	21.1
<b>456743</b>	2007 <i>TS</i> <sub>28</sub>		1 9.1 123°52	0°0/ 8.9	18		<b>156143</b>	2001 <i>TN</i> <sub>61</sub>		1 9.1 99°27	1°4/ 8.7	18	
12 3	7 50.07	+21 9.5	1.918	2.7									



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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>307735</b>	2003 <i>UF</i> <sub>217</sub>		1 9.1 41°30	2°9/ 8.4	15		<b>342907</b>	2008 <i>YN</i> <sub>127</sub>		1 9.1 286°36	0°3/ 9.0	17	
12 3	7 48.77	+25 22.9	1.201	2.026	19.9	20.5	12 3	7 43.64	+22 37.6	2.351	3.140	12.5	21.4
12 13	7 44.63	+26 13.7	1.155	2.051	15.3	20.3	12 13	7 39.26	+22 44.9	2.251	3.127	9.7	21.2
12 23	7 36.78	+27 8.8	1.129	2.076	10.0	20.1	12 23	7 32.71	+22 55.3	2.174	3.114	6.4	20.9
1 2	7 26.28	+28 0.6	1.127	2.102	4.8	19.9	1 2	7 24.53	+23 6.9	2.125	3.100	2.7	20.7
1 12	7 14.86	+28 41.5	1.150	2.129	3.6	19.9	1 12	7 15.54	+23 17.1	2.105	3.087	1.2	20.5
1 22	7 4.39	+29 7.4	1.199	2.156	8.2	20.2	1 22	7 6.70	+23 24.3	2.116	3.074	5.0	20.8
2 1	6 56.45	+29 18.1	1.273	2.184	12.9	20.6	2 1	6 58.97	+23 27.6	2.155	3.061	8.6	21.0
2 11	6 52.00	+29 16.4	1.367	2.212	16.8	20.9	2 11	6 53.14	+23 27.0	2.219	3.048	11.8	21.2
<b>165821</b>	2001 <i>RK</i> <sub>112</sub>		1 9.1 27°19	4°9/ 7.7	18		<b>463324</b>	2012 <i>KJ</i> <sub>28</sub>		1 9.1 186°76	0°0/ 9.0	18	
12 3	7 47.80	+35 41.5	2.166	2.955	13.4	19.8	12 3	7 45.48	+20 11.4	2.322	3.104	12.8	22.3
12 13	7 42.77	+36 17.6	2.089	2.958	10.7	19.6	12 13	7 40.60	+20 36.3	2.232	3.104	10.0	22.1
12 23	7 35.12	+36 48.6	2.035	2.961	7.8	19.5	12 23	7 33.55	+21 6.9	2.166	3.103	6.6	21.9
1 2	7 25.53	+37 9.0	2.008	2.964	5.4	19.3	1 2	7 24.87	+21 40.9	2.127	3.102	2.8	21.7
1 12	7 15.12	+37 14.6	2.009	2.967	5.2	19.3	1 12	7 15.42	+22 15.0	2.119	3.101	1.1	21.6
1 22	7 5.13	+37 3.8	2.038	2.971	7.3	19.4	1 22	7 6.16	+22 46.6	2.141	3.099	5.0	21.8
2 1	6 56.74	+36 37.7	2.095	2.974	10.2	19.6	2 1	6 58.05	+23 13.8	2.193	3.097	8.6	22.0
2 11	6 50.78	+35 59.9	2.176	2.978	13.0	19.8	2 11	6 51.88	+23 35.9	2.270	3.095	11.7	22.2
<b>173073</b>	2006 <i>TS</i> <sub>49</sub>		1 9.1 184°78	0°9/ 8.8	18		<b>319605</b>	2006 <i>SB</i> <sub>217</sub>		1 9.1 81°13	1°1/ 8.9	18	
12 3	7 48.00	+23 13.7	2.055	2.844	14.1	21.0	12 3	7 50.47	+23 55.8	1.737	2.533	16.0	21.4
12 13	7 42.86	+23 38.6	1.968	2.844	10.9	20.8	12 13	7 44.85	+24 14.4	1.677	2.556	12.3	21.2
12 23	7 35.18	+24 7.7	1.904	2.844	7.2	20.6	12 23	7 36.44	+24 36.2	1.639	2.579	8.0	21.0
1 2	7 25.58	+24 37.5	1.868	2.843	3.1	20.3	1 2	7 26.07	+24 57.1	1.627	2.602	3.5	20.8
1 12	7 15.09	+25 4.2	1.861	2.842	1.7	20.2	1 12	7 14.99	+25 13.3	1.644	2.625	1.8	20.7
1 22	7 4.86	+25 24.9	1.884	2.841	5.7	20.5	1 22	7 4.57	+25 22.6	1.690	2.648	6.2	21.0
2 1	6 56.03	+25 38.6	1.936	2.839	9.6	20.7	2 1	6 55.99	+25 24.7	1.764	2.670	10.2	21.3
2 11	6 49.50	+25 45.5	2.012	2.836	13.0	20.9	2 11	6 50.07	+25 20.8	1.862	2.692	13.7	21.6
<b>70492</b>	1999 <i>TO</i> <sub>60</sub>		1 9.1 240°45	0°3/ 9.2	18		<b>1202</b>	Marina		1 9.1 90°89	0°9/ 8.7	18	
12 3	7 48.31	+20 35.6	1.917	2.705	14.9	20.9	12 3	7 40.82	+24 47.0	3.298	4.078	9.4	16.3
12 13	7 43.36	+20 43.7	1.818	2.693	11.7	20.7	12 13	7 36.33	+25 5.9	3.220	4.092	7.2	16.1
12 23	7 35.69	+20 57.6	1.741	2.680	7.8	20.4	12 23	7 30.39	+25 26.0	3.168	4.106	4.7	16.0
1 2	7 25.88	+21 15.0	1.692	2.667	3.4	20.1	1 2	7 23.42	+25 45.3	3.145	4.120	2.1	15.8
1 12	7 14.95	+21 32.7	1.671	2.653	1.3	19.9	1 12	7 16.04	+26 2.0	3.153	4.133	1.3	15.8
1 22	7 4.17	+21 48.2	1.680	2.639	6.0	20.2	1 22	7 8.87	+26 14.7	3.192	4.147	3.8	16.0
2 1	6 54.80	+22 0.1	1.717	2.624	10.4	20.4	2 1	7 2.54	+26 22.8	3.262	4.160	6.3	16.1
2 11	6 47.85	+22 8.0	1.778	2.609	14.2	20.6	2 11	6 57.54	+26 26.5	3.358	4.174	8.5	16.3
<b>435661</b>	2008 <i>SY</i> <sub>279</sub>		1 9.1 17°23	0°5/ 8.9	18		<b>95271</b>	2002 <i>CH</i> <sub>69</sub>		1 9.1 67°90	2°2/ 8.6	18	
12 3	7 43.57	+22 6.9	1.754	2.560	15.4	21.3	12 3	7 47.85	+27 30.8	1.912	2.709	14.6	20.0
12 13	7 39.74	+22 24.7	1.679	2.564	11.9	21.1	12 13	7 42.91	+27 47.4	1.833	2.712	11.4	19.8
12 23	7 33.24	+22 48.0	1.626	2.569	7.8	20.9	12 23	7 35.28	+28 4.1	1.776	2.716	7.6	19.6
1 2	7 24.77	+23 13.5	1.598	2.574	3.3	20.6	1 2	7 25.64	+28 17.0	1.746	2.719	3.7	19.3
1 12	7 15.44	+23 37.6	1.598	2.580	1.5	20.5	1 12	7 15.14	+28 22.4	1.744	2.722	2.7	19.3
1 22	7 6.48	+23 57.4	1.626	2.587	6.0	20.8	1 22	7 5.06	+28 18.5	1.772	2.726	6.3	19.5
2 1	6 59.08	+24 11.4	1.682	2.594	10.2	21.1	2 1	6 56.59	+28 5.5	1.827	2.729	10.2	19.7
2 11	6 54.15	+24 19.5	1.760	2.601	13.9	21.3	2 11	6 50.63	+27 45.4	1.906	2.733	13.5	20.0
<b>84604</b>	2002 <i>VW</i> <sub>33</sub>		1 9.1 323°98	9°4/ 9.8	18		<b>158916</b>	2004 <i>RR</i> <sub>32</sub>		1 9.1 106°52	0°7/ 8.9	17	
12 3	7 42.67	+ 1 41.4	1.936	2.678	16.4	18.4	12 3	7 51.84	+21 58.5	1.728	2.519	16.2	21.3
12 13	7 38.84	- 0 2.3	1.837	2.657	14.1	18.1	12 13	7 45.98	+22 29.1	1.664	2.541	12.5	21.1
12 23	7 32.64	- 1 34.4	1.758	2.637	11.8	17.9	12 23	7 37.24	+23 5.3	1.622	2.562	8.2	20.9
1 2	7 24.56	- 2 48.9	1.704	2.617	10.0	17.8	1 2	7 26.45	+23 42.7	1.607	2.582	3.5	20.6
1 12	7 15.49	- 3 41.0	1.676	2.597	9.5	17.7	1 12	7 14.84	+24 16.8	1.620	2.602	1.7	20.5
1 22	7 6.47	- 4 8.3	1.674	2.579	10.7	17.8	1 22	7 3.82	+24 44.0	1.664	2.621	6.2	20.9
2 1	6 58.61	- 4 11.2	1.697	2.561	13.0	17.9	2 1	6 54.64	+25 3.2	1.735	2.640	10.4	21.2
2 11	6 52.82	- 3 53.6	1.741	2.543	15.7	18.0	2 11	6 48.18	+25 15.0	1.830	2.658	14.0	21.4
<b>134814</b>	2000 <i>FQ</i> <sub>23</sub>		1 9.1 222°71	5°9/12.2	18		<b>459231</b>	2012 <i>EN</i> <sub>8</sub>		1 9.1 25°35	13°7/17.2	18	
12 3	7 41.55	- 0 49.7	2.951	3.653	12.1	20.7	12 3	7 42.55	-14 9.5	1.656	2.328	21.2	20.9
12 13	7 37.06	- 1 3.0	2.847	3.643	10.3	20.5	12 13	7 38.97	-14 46.2	1.586	2.333	19.2	20.7
12 23	7 30.99	- 1 2.2	2.765	3.632	8.4	20.4	12 23	7 32.77	-14 49.5	1.530	2.338	17.0	20.6
1 2	7 23.72	- 0 45.5	2.709	3.622	6.7	20.3	1 2	7 24.61	-14 12.9	1.492	2.344	15.1	20.5
1 12	7 15.86	- 0 12.9	2.681	3.610	5.9	20.2	1 12	7 15.55	-12 54.2	1.475	2.350	13.9	20.4
1 22	7 8.07	+ 0 34.5	2.683	3.598	6.7	20.2	1 22	7 6.81	-10 56.6	1.482	2.357	13.8	20.4
2 1	7 1.03	+ 1 33.7	2.714	3.586	8.4	20.3	2 1	6 59.57	- 8 28.5	1.513	2.364	15.0	20.5
2 11	6 55.34	+ 2 41.3	2.771	3.573	10.5	20.4	2 11	6 54.73	- 5 42.1	1.566	2.372	17.0	20.7
<b>289135</b>	2004 <i>VK</i> <sub>4</sub>		1 9.1 99°01	1°1/ 9.4	17		<b>272160</b>	2005 <i>ND</i> <sub>95</sub>		1 9.1 190°65	1°1/ 9.5	18	
12 3	7 51.36	+18 21.2	1.719	2.505	16.5	21.5	12 3	7 50.51	+17 34.6	1.827	2.609	15.8	22.7
12 13	7 45.45	+18 29.7	1.657	2.530	12.8	21.3	12 13	7 45.07	+17 50.7	1.738	2.608	12.4	22.4
12 23	7 36.80	+18 45.9	1.617	2.554	8.5	21.1	12 23	7 36.81	+18 16.1	1.671	2.606	8.3	22.2
1 2	7 26.20	+19 7.3	1.603	2.577	3.8	20.8	1 2	7 26.36	+18 48.4	1.630	2.604	3.8	21.9
1 12	7 14.90	+19 30.8	1.618	2.600	1.6	20.7	1 12	7 14.84	+19 24.0	1.619	2.600	1.7	21.7
1 22	7 4.22	+19 53.3	1.663	2.622	6.0	21.1	1 22	7 3.55	+19 59.4	1.637	2.596	6.1	22.0
2 1	6 55.34	+20 13.3	1.735	2.643	10.2	21.4	2 1	6 53.80	+20 31.9	1.684	2.591	10.6	22.3
2 11	6 49.09	+20 29.9	1.832	2.664	13.8	21.6	2 11	6 46.59	+21 0.2	1.755	2.585	14.4	22.5
<b>223739</b>	2004 <i>RO</i> <sub>156</sub>		1 9.1 92°17	6°0/11.5	18		<b>432004</b>	2008 <i>UO</i> <sub>337</sub>		1 9.1 336°98	4°6/ 7.3	18	
12 3	7 44.63	+ 4 4.3	2.133	2.874	15.1								

EPHEMERIDES

1 9.1

1 9.2

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>486004</b>	2012 <i>OP</i> <sub>5</sub>		1 9.1 76°71	1.2°/ 8.9	17		<b>455626</b>	2004 <i>VK</i> <sub>40</sub>		1 9.2 157°77	2.8°/ 8.2	18	
12 3	7 55.06	+24 43.8	1.304	2.112	19.6	20.9	12 3	7 51.16	+26 59.8	1.873	2.665	15.1	22.0
12 13	7 49.13	+24 47.5	1.251	2.136	15.1	20.7	12 13	7 45.63	+27 47.7	1.794	2.671	11.7	21.8
12 23	7 39.56	+24 53.7	1.217	2.160	9.9	20.4	12 23	7 37.19	+28 38.2	1.738	2.676	7.9	21.6
1 2	7 27.45	+24 57.9	1.208	2.184	4.3	20.2	1 2	7 26.53	+29 25.5	1.710	2.681	4.0	21.4
1 12	7 14.50	+24 55.9	1.226	2.207	2.2	20.1	1 12	7 14.85	+30 3.8	1.710	2.686	3.3	21.3
1 22	7 2.57	+24 46.2	1.271	2.231	7.4	20.5	1 22	7 3.53	+30 29.6	1.740	2.690	6.8	21.6
2 1	6 53.20	+24 29.9	1.342	2.253	12.3	20.8	2 1	6 53.89	+30 42.1	1.798	2.693	10.7	21.8
2 11	6 47.32	+24 9.5	1.435	2.276	16.4	21.2	2 11	6 46.94	+30 43.1	1.879	2.696	14.1	22.0
<b>413526</b>	2005 <i>SX</i> <sub>58</sub>		1 9.1 139°25	1.6°/ 9.7	18		<b>61828</b>	2000 <i>QC</i> <sub>195</sub>		1 9.2 246°61	3.8°/ 8.2	18	
12 3	7 46.49	+16 46.9	2.204	2.980	13.6	22.2	12 3	7 51.98	+30 12.1	1.768	2.564	15.7	19.6
12 13	7 41.32	+16 48.4	2.123	2.989	10.6	22.0	12 13	7 46.76	+30 47.2	1.673	2.550	12.4	19.4
12 23	7 33.97	+16 57.1	2.065	2.998	7.2	21.8	12 23	7 38.25	+31 22.2	1.600	2.536	8.6	19.1
1 2	7 25.03	+17 11.5	2.035	3.007	3.5	21.6	1 2	7 27.11	+31 50.7	1.553	2.522	4.9	18.9
1 12	7 15.41	+17 29.8	2.035	3.015	1.8	21.5	1 12	7 14.59	+32 6.9	1.534	2.507	4.3	18.8
1 22	7 6.11	+17 49.9	2.065	3.023	5.2	21.7	1 22	7 2.28	+32 7.3	1.544	2.491	7.8	19.0
2 1	6 58.06	+18 10.1	2.124	3.030	8.7	21.9	2 1	6 51.76	+31 52.2	1.581	2.475	12.0	19.2
2 11	6 52.02	+18 29.1	2.208	3.037	11.9	22.2	2 11	6 44.23	+31 25.0	1.640	2.459	15.8	19.4
<b>34990</b>	4270 <i>T</i> <sub>-3</sub>		1 9.1 165°88	1.0°/ 8.8	18		<b>367575</b>	2009 <i>SY</i> <sub>180</sub>		1 9.2 171°81	0.1°/ 9.2	17	
12 3	7 46.16	+22 55.3	2.143	2.932	13.5	19.5	12 3	7 46.99	+20 57.0	2.389	3.168	12.6	23.0
12 13	7 41.34	+23 27.4	2.058	2.935	10.5	19.3	12 13	7 41.65	+21 7.8	2.301	3.171	9.8	22.9
12 23	7 34.14	+24 4.1	1.997	2.936	6.9	19.1	12 23	7 34.19	+21 22.7	2.237	3.174	6.5	22.6
1 2	7 25.16	+24 41.9	1.963	2.938	3.0	18.8	1 2	7 25.16	+21 39.7	2.201	3.176	2.8	22.4
1 12	7 15.35	+25 17.0	1.959	2.940	1.6	18.7	1 12	7 15.42	+21 56.3	2.196	3.178	1.1	22.3
1 22	7 5.78	+25 46.3	1.984	2.941	5.5	19.0	1 22	7 5.93	+22 10.6	2.221	3.179	4.9	22.6
2 1	6 57.52	+26 8.3	2.039	2.942	9.2	19.2	2 1	6 57.63	+22 21.5	2.276	3.179	8.4	22.8
2 11	6 51.41	+26 22.9	2.118	2.942	12.5	19.4	2 11	6 51.25	+22 28.8	2.356	3.179	11.4	23.0
<b>399533</b>	2003 <i>KG</i> <sub>6</sub>		1 9.1 223°93	1.2°/ 8.8	18		<b>468721</b>	2010 <i>FT</i> <sub>89</sub>		1 9.2 345°34	9.1°/ 12.1	18	
12 3	7 50.14	+23 39.8	1.966	2.754	14.6	22.4	12 3	7 40.16	- 1 19.1	1.927	2.661	16.7	21.0
12 13	7 44.80	+24 6.5	1.868	2.743	11.4	22.2	12 13	7 36.82	- 2 16.0	1.842	2.655	14.4	20.9
12 23	7 36.67	+24 37.9	1.793	2.732	7.6	21.9	12 23	7 31.24	- 2 54.1	1.777	2.650	12.0	20.7
1 2	7 26.33	+25 9.8	1.746	2.721	3.3	21.6	1 2	7 23.97	- 3 9.2	1.734	2.645	9.9	20.6
1 12	7 14.85	+25 38.1	1.727	2.708	1.9	21.5	1 12	7 15.88	- 2 59.1	1.716	2.640	9.1	20.5
1 22	7 3.51	+25 59.4	1.739	2.695	6.2	21.7	1 22	7 7.97	- 2 24.6	1.724	2.636	9.9	20.5
2 1	6 53.62	+26 12.3	1.779	2.681	10.4	22.0	2 1	7 1.25	- 1 29.3	1.757	2.633	12.0	20.7
2 11	6 46.21	+26 17.4	1.844	2.667	14.1	22.2	2 11	6 56.52	- 0 19.1	1.812	2.630	14.5	20.8
<b>359633</b>	2011 <i>QB</i> <sub>49</sub>		1 9.1 88°88	2.3°/ 9.9	18		<b>127953</b>	2003 <i>HA</i> <sub>13</sub>		1 9.2 171°33	2.8°/ 10.2	18	
12 3	7 47.75	+14 39.4	1.574	2.365	17.5	21.0	12 3	7 44.44	+12 55.6	2.122	2.895	14.2	20.3
12 13	7 43.07	+14 54.6	1.505	2.379	13.8	20.8	12 13	7 39.90	+12 56.1	2.035	2.897	11.3	20.1
12 23	7 35.49	+15 22.8	1.457	2.392	9.4	20.5	12 23	7 33.15	+13 7.0	1.970	2.898	7.9	19.9
1 2	7 25.77	+16 2.1	1.434	2.405	4.7	20.3	1 2	7 24.75	+13 27.8	1.932	2.899	4.4	19.7
1 12	7 15.12	+16 48.6	1.438	2.418	2.5	20.2	1 12	7 15.58	+13 56.8	1.923	2.899	2.9	19.6
1 22	7 4.94	+17 37.7	1.471	2.431	6.5	20.5	1 22	7 6.63	+14 31.5	1.944	2.900	5.6	19.8
2 1	6 56.53	+18 25.7	1.530	2.443	11.0	20.7	2 1	6 58.88	+15 9.2	1.993	2.900	9.2	20.0
2 11	6 50.82	+19 9.8	1.613	2.456	14.8	21.0	2 11	6 53.13	+15 47.3	2.067	2.900	12.4	20.2
<b>324558</b>	2006 <i>WR</i> <sub>98</sub>		1 9.2 43°33	0.3°/ 9.2	18		<b>201411</b>	2002 <i>WY</i> <sub>3</sub>		1 9.2 356°38	0.9°/ 8.8	18	
12 3	7 46.49	+20 23.5	1.472	2.282	17.7	20.9	12 3	7 42.77	+22 30.8	1.983	2.783	14.1	20.0
12 13	7 42.28	+20 33.0	1.411	2.297	13.7	20.6	12 13	7 38.96	+23 4.2	1.898	2.781	10.9	19.8
12 23	7 35.02	+20 49.9	1.370	2.313	9.0	20.4	12 23	7 32.71	+23 43.3	1.837	2.779	7.2	19.6
1 2	7 25.56	+21 11.1	1.354	2.330	3.9	20.2	1 2	7 24.61	+24 24.5	1.802	2.778	3.1	19.3
1 12	7 15.25	+21 32.8	1.364	2.347	1.5	20.0	1 12	7 15.63	+25 3.7	1.796	2.777	1.7	19.2
1 22	7 5.55	+21 51.9	1.402	2.364	6.6	20.4	1 22	7 6.88	+25 37.5	1.819	2.777	5.7	19.5
2 1	6 57.79	+22 6.7	1.466	2.382	11.2	20.7	2 1	6 59.48	+26 3.9	1.869	2.777	9.6	19.7
2 11	6 52.89	+22 16.9	1.553	2.400	15.1	21.0	2 11	6 54.28	+26 22.5	1.944	2.778	13.0	19.9
<b>371276</b>	2006 <i>DX</i> <sub>99</sub>		1 9.2 32°73	1.1°/ 8.8	18		<b>96537</b>	1998 <i>SF</i> <sub>12</sub>		1 9.2 79°14	0.1°/ 9.2	18	
12 3	7 45.26	+23 47.7	1.945	2.743	14.4	21.4	12 3	7 44.97	+20 40.9	2.108	2.897	13.7	20.2
12 13	7 40.87	+24 12.3	1.864	2.746	11.1	21.2	12 13	7 40.32	+20 53.2	2.030	2.906	10.6	20.0
12 23	7 33.93	+24 40.7	1.807	2.748	7.3	21.0	12 23	7 33.40	+21 10.6	1.976	2.915	7.0	19.8
1 2	7 25.10	+25 9.5	1.776	2.751	3.2	20.8	1 2	7 24.84	+21 30.8	1.949	2.925	3.0	19.6
1 12	7 15.41	+25 34.8	1.773	2.754	1.8	20.7	1 12	7 15.57	+21 51.0	1.951	2.934	1.2	19.5
1 22	7 6.04	+25 53.9	1.800	2.757	5.9	20.9	1 22	7 6.64	+22 9.0	1.983	2.943	5.2	19.8
2 1	6 58.12	+26 5.5	1.854	2.760	9.8	21.2	2 1	6 59.04	+22 23.5	2.044	2.952	8.9	20.0
2 11	6 52.53	+26 10.2	1.932	2.764	13.2	21.4	2 11	6 53.52	+22 34.0	2.129	2.961	12.1	20.2
<b>246158</b>	2007 <i>PC</i> <sub>37</sub>		1 9.2 110°88	2.3°/ 9.8	18		<b>200875</b>	2001 <i>YL</i> <sub>106</sub>		1 9.2 3°98	0.6°/ 9.2	18	
12 3	7 49.56	+15 58.2	1.767	2.550	16.2	20.9	12 3	7 48.74	+22 12.8	1.372	2.185	18.5	19.6
12 13	7 44.08	+15 48.6	1.697	2.566	12.7	20.7	12 13	7 44.46	+21 49.0	1.297	2.185	14.5	19.4
12 23	7 35.95	+15 47.9	1.649	2.582	8.7	20.5	12 23	7 36.74	+21 28.7	1.241	2.185	9.6	19.1
1 2	7 25.92	+15 55.0	1.626	2.597	4.4	20.3	1 2	7 26.42	+21 9.9	1.209	2.185	4.2	18.8
1 12	7 15.12	+16 8.1	1.633	2.612	2.5	20.2	1 12	7 14.95	+20 50.9	1.204	2.186	1.7	18.6
1 22	7 4.82	+16 24.8	1.668	2.626	6.2	20.5	1 22	7 4.02	+20 30.7	1.225	2.187	7.2	19.0
2 1	6 56.18	+16 43.2	1.732	2.640	10.2	20.8	2 1	6 55.20	+20 9.9	1.272	2.189	12.4	19.3
2 11	6 50.04	+17 1.7	1.819	2.654	13.8	21.0	2 11	6 49.60	+19 49.4	1.341	2.191	16.8	19.5
<b>16538</b>	1991 <i>PO</i> <sub>12</sub>		1 9.2 32°92	3.0°/ 10.0	18		<b>283153</b>	2009 <i>AZ</i> <sub>43</sub>		1 9.2 73°81	3.4°/ 10.3	18	
12 3	7 44.88	+14 8.7	1.1										

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>491997</b>	2013 <i>ED</i> <sub>105</sub>		1 9.2 335°03	3°1/10.1	18		<b>154044</b>	2002 <i>CZ</i> <sub>93</sub>		1 9.2 182°43	1°1/ 8.8	18	
12 3	7 45.17	+13 13.4	1.468	2.266	18.3	21.6	12 3	7 46.05	+23 38.6	2.037	2.830	14.0	20.3
12 13	7 41.51	+13 23.0	1.387	2.263	14.6	21.3	12 13	7 41.41	+24 4.1	1.952	2.830	10.8	20.1
12 23	7 34.77	+13 48.3	1.326	2.261	10.1	21.0	12 23	7 34.30	+24 33.6	1.890	2.830	7.1	19.9
1 2	7 25.62	+14 28.3	1.288	2.258	5.4	20.8	1 2	7 25.31	+25 3.6	1.855	2.830	3.1	19.6
1 12	7 15.25	+15 19.7	1.277	2.256	3.2	20.6	1 12	7 15.45	+25 30.3	1.849	2.830	1.8	19.5
1 22	7 5.15	+16 17.6	1.293	2.254	7.2	20.8	1 22	7 5.86	+25 50.9	1.873	2.830	5.7	19.8
2 1	6 56.78	+17 16.9	1.335	2.252	11.9	21.1	2 1	6 57.65	+26 4.3	1.925	2.830	9.6	20.0
2 11	6 51.23	+18 13.4	1.400	2.251	16.2	21.4	2 11	6 51.70	+26 10.6	2.001	2.829	12.9	20.2
<b>123661</b>	2000 <i>YT</i> <sub>77</sub>		1 9.2 39°98	4°4/ 9.9	18		<b>145699</b>	3499 <i>T</i> <sub>-3</sub>		1 9.2 92°73	2°6/ 8.4	17	
12 3	7 46.20	+13 34.5	1.656	2.444	16.9	18.8	12 3	7 52.33	+27 34.6	1.939	2.727	14.8	21.0
12 13	7 41.60	+12 39.7	1.589	2.457	13.5	18.6	12 13	7 46.11	+28 12.2	1.881	2.755	11.4	20.9
12 23	7 34.37	+11 54.2	1.543	2.471	9.6	18.4	12 23	7 37.22	+28 50.1	1.846	2.783	7.6	20.7
1 2	7 25.27	+11 19.7	1.522	2.485	5.8	18.3	1 2	7 26.47	+29 23.0	1.838	2.810	3.8	20.5
1 12	7 15.46	+10 56.9	1.529	2.500	4.5	18.2	1 12	7 15.05	+29 46.6	1.860	2.836	3.0	20.5
1 22	7 6.18	+10 45.5	1.563	2.515	7.2	18.4	1 22	7 4.26	+29 58.7	1.912	2.862	6.3	20.8
2 1	6 58.56	+10 44.1	1.624	2.531	10.9	18.7	2 1	6 55.24	+29 59.5	1.992	2.887	9.8	21.0
2 11	6 53.41	+10 50.3	1.708	2.547	14.3	18.9	2 11	6 48.79	+29 51.1	2.096	2.911	12.9	21.3
<b>245145</b>	2004 <i>RW</i> <sub>291</sub>		1 9.2 165°88	1°3/ 9.5	18		<b>523760</b>	2014 <i>WQ</i> <sub>509</sub>		1 9.2 227°46	0°2/ 7.9	18	
12 3	7 50.12	+18 56.4	1.780	2.567	16.0	20.8	12 3	7 21.49	+31 21.6	42.625	43.404	0.8	22.2
12 13	7 44.72	+18 45.7	1.698	2.571	12.5	20.5	12 13	7 20.73	+31 24.3	42.533	43.402	0.6	22.1
12 23	7 36.53	+18 41.1	1.637	2.574	8.4	20.3	12 23	7 19.88	+31 26.8	42.468	43.399	0.4	22.1
1 2	7 26.25	+18 41.1	1.603	2.577	3.9	20.0	1 2	7 18.96	+31 29.0	42.432	43.397	0.2	22.1
1 12	7 15.04	+18 43.8	1.598	2.579	1.8	19.9	1 12	7 18.02	+31 30.8	42.426	43.395	0.2	22.1
1 22	7 4.22	+18 47.3	1.622	2.581	6.2	20.2	1 22	7 17.09	+31 32.2	42.451	43.392	0.4	22.1
2 1	6 55.03	+18 50.7	1.673	2.582	10.5	20.4	2 1	7 16.20	+31 33.1	42.506	43.390	0.6	22.1
2 11	6 48.42	+18 53.5	1.749	2.583	14.3	20.7	2 11	7 15.40	+31 33.5	42.588	43.387	0.8	22.2
<b>290542</b>	2005 <i>UM</i> <sub>77</sub>		1 9.2 6°64	5°7/10.5	18		<b>379453</b>	2010 <i>CH</i> <sub>117</sub>		1 9.2 6°19	3°6/ 8.4	18	
12 3	7 41.28	+10 39.9	1.394	2.196	18.9	20.0	12 3	7 46.95	+31 34.8	1.857	2.659	14.8	20.6
12 13	7 38.43	+9 54.1	1.323	2.197	15.3	19.8	12 13	7 42.44	+31 52.6	1.779	2.659	11.6	20.4
12 23	7 32.65	+9 22.9	1.271	2.199	11.2	19.5	12 23	7 35.10	+32 7.2	1.723	2.660	8.0	20.2
1 2	7 24.66	+9 8.6	1.241	2.202	7.3	19.3	1 2	7 25.67	+32 13.9	1.694	2.662	4.6	20.0
1 12	7 15.68	+9 11.9	1.237	2.206	5.8	19.2	1 12	7 15.35	+32 8.8	1.692	2.664	4.0	19.9
1 22	7 7.12	+9 30.9	1.258	2.212	8.4	19.4	1 22	7 5.50	+31 50.4	1.718	2.666	7.0	20.1
2 1	7 0.30	+10 2.1	1.304	2.219	12.3	19.6	2 1	6 57.37	+31 20.1	1.771	2.669	10.7	20.3
2 11	6 56.19	+10 40.7	1.371	2.226	16.2	19.9	2 11	6 51.87	+30 41.0	1.847	2.673	14.0	20.6
<b>81080</b>	2000 <i>ET</i> <sub>88</sub>		1 9.2 182°53	3°7/ 7.9	18		<b>425696</b>	2011 <i>AZ</i> <sub>72</sub>		1 9.2 323°25	4°5/ 8.1	18	
12 3	7 50.46	+31 15.8	2.236	3.020	13.2	19.9	12 3	7 49.00	+33 1.5	1.785	2.585	15.4	20.7
12 13	7 44.77	+32 0.2	2.151	3.021	10.4	19.7	12 13	7 44.32	+33 30.3	1.701	2.579	12.2	20.4
12 23	7 36.48	+32 43.5	2.090	3.021	7.2	19.5	12 23	7 36.53	+33 55.5	1.639	2.573	8.6	20.2
1 2	7 26.23	+33 20.2	2.056	3.021	4.4	19.4	1 2	7 26.35	+34 11.1	1.603	2.567	5.4	20.0
1 12	7 15.06	+33 45.6	2.052	3.020	4.0	19.3	1 12	7 15.08	+34 12.0	1.594	2.562	4.9	20.0
1 22	7 4.17	+33 57.0	2.078	3.019	6.7	19.5	1 22	7 4.21	+33 56.1	1.613	2.557	7.9	20.1
2 1	6 54.73	+33 54.5	2.133	3.017	9.8	19.7	2 1	6 55.18	+33 24.8	1.658	2.552	11.6	20.3
2 11	6 47.65	+33 40.5	2.212	3.014	12.8	19.9	2 11	6 49.03	+32 42.1	1.726	2.547	15.0	20.5
<b>322186</b>	2010 <i>XS</i> <sub>54</sub>		1 9.2 94°84	0°7/ 8.9	18		<b>406683</b>	2008 <i>ES</i> <sub>125</sub>		1 9.2 16°56	6°5/ 8.9	18	
12 3	7 48.41	+22 29.5	1.899	2.691	14.9	20.8	12 3	7 51.52	+36 58.1	1.190	2.013	20.2	19.8
12 13	7 43.18	+22 52.4	1.830	2.708	11.5	20.6	12 13	7 47.36	+37 2.2	1.132	2.020	16.2	19.6
12 23	7 35.37	+23 19.7	1.784	2.724	7.5	20.4	12 23	7 38.90	+36 54.5	1.093	2.028	11.7	19.3
1 2	7 25.71	+23 48.0	1.765	2.740	3.2	20.1	1 2	7 27.35	+36 27.1	1.075	2.038	7.7	19.2
1 12	7 15.30	+24 13.5	1.775	2.756	1.5	20.0	1 12	7 14.77	+35 35.5	1.082	2.050	6.8	19.1
1 22	7 5.36	+24 33.5	1.814	2.772	5.8	20.4	1 22	7 3.36	+34 21.5	1.114	2.063	9.9	19.4
2 1	6 57.01	+24 47.0	1.881	2.787	9.7	20.6	2 1	6 54.93	+32 52.2	1.170	2.077	14.2	19.6
2 11	6 51.08	+24 54.2	1.973	2.803	13.1	20.9	2 11	6 50.46	+31 16.3	1.247	2.092	18.1	19.9
<b>44662</b>	1999 <i>RV</i> <sub>170</sub>		1 9.2 34°52	1°2/ 9.5	18		<b>36478</b>	2000 <i>QQ</i> <sub>29</sub>		1 9.2 43°58	1°7/ 9.7	18	
12 3	7 47.84	+18 31.0	1.253	2.069	19.8	19.2	12 3	7 46.70	+16 41.7	1.250	2.065	19.9	18.0
12 13	7 44.02	+18 36.0	1.184	2.073	15.5	18.9	12 13	7 42.87	+16 54.1	1.194	2.081	15.5	17.7
12 23	7 36.62	+18 52.0	1.133	2.076	10.4	18.6	12 23	7 35.65	+17 19.8	1.157	2.099	10.4	17.5
1 2	7 26.44	+19 16.4	1.105	2.080	4.7	18.3	1 2	7 25.95	+17 55.8	1.143	2.117	4.8	17.2
1 12	7 14.99	+19 44.9	1.103	2.085	2.0	18.1	1 12	7 15.28	+18 37.5	1.154	2.136	2.2	17.1
1 22	7 4.06	+20 13.4	1.127	2.090	7.6	18.5	1 22	7 5.31	+19 19.9	1.192	2.155	7.2	17.5
2 1	6 55.33	+20 38.8	1.175	2.095	12.9	18.8	2 1	6 57.53	+19 59.1	1.254	2.175	12.2	17.8
2 11	6 49.97	+20 59.9	1.245	2.100	17.5	19.1	2 11	6 52.92	+20 32.9	1.339	2.195	16.5	18.1
<b>338323</b>	2002 <i>VV</i> <sub>98</sub>		1 9.2 137°68	1°9/ 9.7	18		<b>243541</b>	2010 <i>GL</i> <sub>75</sub>		1 9.2 243°92	0°9/ 8.9	18	
12 3	7 51.02	+16 48.6	1.665	2.451	16.9	21.1	12 3	7 49.25	+21 43.8	1.885	2.674	15.1	21.2
12 13	7 45.50	+16 44.5	1.591	2.462	13.3	20.8	12 13	7 44.36	+22 22.3	1.782	2.658	11.8	21.0
12 23	7 37.07	+16 49.4	1.537	2.472	9.0	20.6	12 23	7 36.59	+23 8.8	1.703	2.642	7.9	20.7
1 2	7 26.49	+17 1.9	1.510	2.482	4.4	20.4	1 2	7 26.46	+23 59.1	1.650	2.625	3.4	20.4
1 12	7 14.99	+17 19.4	1.511	2.491	2.3	20.2	1 12	7 15.02	+24 48.1	1.626	2.607	1.8	20.3
1 22	7 3.96	+17 39.2	1.540	2.499	6.5	20.5	1 22	7 3.59	+25 31.3	1.632	2.589	6.4	20.5
2 1	6 54.69	+17 59.3	1.598	2.507	10.9	20.8	2 1	6 53.55	+26 5.9	1.666	2.570	10.9	20.7
2 11	6 48.14	+18 18.3	1.679	2.514	14.7	21.0	2 11	6 46.04	+26 31.2	1.724	2.551	14.8	20.9
<b>406131</b>	2006 <i>VY</i> <sub>96</sub>		1 9.2 41°23	5°0/ 7.1	17		<b>401787</b>	2014 <i>FY</i> <sub>53</sub>		1 9.2 248°93	0°6/ 8.9	18	
12 3	7 48.05	+29 2											

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>427726</b>	2004 <i>NJ</i> <sub>5</sub>		1 9.2 122°95	4°3/ 8.4	18		<b>456332</b>	2006 <i>SC</i> <sub>356</sub>		1 9.2 58°19	5°0/ 7.8	18	
12 3	7 56.08	+36 53.3	2.420	3.187	12.8	21.1	12 3	7 51.09	+31 26.8	1.535	2.342	17.2	20.5
12 13	7 48.63	+37 4.5	2.348	3.204	10.2	20.9	12 13	7 46.07	+32 29.3	1.481	2.363	13.4	20.3
12 23	7 38.69	+37 8.2	2.301	3.221	7.4	20.8	12 23	7 37.66	+33 29.8	1.449	2.385	9.3	20.1
1 2	7 27.07	+36 59.9	2.282	3.237	4.9	20.7	1 2	7 26.81	+34 20.1	1.442	2.407	5.8	20.0
1 12	7 14.90	+36 36.6	2.293	3.252	4.5	20.7	1 12	7 15.02	+34 53.5	1.463	2.430	5.4	20.0
1 22	7 3.39	+35 58.5	2.335	3.267	6.5	20.8	1 22	7 3.99	+35 6.9	1.510	2.452	8.5	20.2
2 1	6 53.60	+35 8.1	2.406	3.281	9.2	21.0	2 1	6 55.18	+35 1.5	1.583	2.475	12.2	20.5
2 11	6 46.26	+34 9.5	2.503	3.295	11.8	21.2	2 11	6 49.57	+34 41.8	1.678	2.497	15.5	20.8
<b>69627</b>	1998 <i>FC</i> <sub>62</sub>		1 9.2 229°90	5°4/10.6	18		<b>442635</b>	2012 <i>TL</i> <sub>28</sub>		1 9.2 2°91	4°1/10.1	18	
12 3	7 46.41	+ 8 7.8	1.935	2.694	15.8	19.9	12 3	7 43.47	+13 54.8	1.094	1.919	21.5	20.7
12 13	7 41.74	+ 7 35.1	1.839	2.686	13.0	19.7	12 13	7 41.02	+13 36.3	1.026	1.917	17.2	20.4
12 23	7 34.58	+ 7 15.3	1.765	2.677	9.7	19.5	12 23	7 34.88	+13 34.3	0.976	1.917	12.0	20.1
1 2	7 25.50	+ 7 10.2	1.716	2.667	6.7	19.3	1 2	7 25.81	+13 49.3	0.946	1.917	6.6	19.8
1 12	7 15.45	+ 7 20.3	1.695	2.657	5.5	19.2	1 12	7 15.37	+14 19.1	0.940	1.919	4.3	19.7
1 22	7 5.53	+ 7 44.2	1.702	2.647	7.5	19.3	1 22	7 5.39	+14 59.2	0.958	1.921	8.6	19.9
2 1	6 56.89	+ 8 19.3	1.737	2.636	10.8	19.5	2 1	6 57.65	+15 44.5	0.999	1.925	14.0	20.2
2 11	6 50.44	+ 9 1.6	1.796	2.624	14.2	19.7	2 11	6 53.41	+16 30.1	1.060	1.929	18.8	20.5
<b>461967</b>	2006 <i>UR</i> <sub>129</sub>		1 9.2 15°92	0°9/ 8.9	16		<b>75239</b>	1999 <i>WZ</i> <sub>9</sub>		1 9.2 50°28	2°3/ 8.6	18	
12 3	7 43.01	+23 20.1	1.148	1.985	19.9	20.9	12 3	7 48.85	+25 58.3	1.456	2.268	17.7	18.4
12 13	7 40.48	+23 28.3	1.091	1.992	15.4	20.6	12 13	7 44.36	+26 28.1	1.394	2.282	13.7	18.2
12 23	7 34.32	+23 42.0	1.053	2.002	10.2	20.4	12 23	7 36.58	+27 0.6	1.353	2.297	9.1	18.0
1 2	7 25.46	+23 57.2	1.036	2.014	4.3	20.1	1 2	7 26.37	+27 30.3	1.337	2.311	4.2	17.7
1 12	7 15.51	+24 9.4	1.045	2.027	2.0	20.0	1 12	7 15.20	+27 51.9	1.347	2.327	2.9	17.7
1 22	7 6.30	+24 15.4	1.077	2.041	7.7	20.4	1 22	7 4.70	+28 2.3	1.385	2.342	7.3	18.0
2 1	6 59.43	+24 14.6	1.134	2.057	12.9	20.7	2 1	6 56.31	+28 1.4	1.449	2.358	11.8	18.3
2 11	6 55.92	+24 7.7	1.210	2.074	17.3	21.0	2 11	6 51.01	+27 51.4	1.534	2.374	15.6	18.6
<b>257876</b>	2000 <i>SH</i> <sub>131</sub>		1 9.2 37°32	0°9/ 9.1	18		<b>64665</b>	2001 <i>XD</i> <sub>62</sub>		1 9.2 140°98	0°7/ 9.4	18	
12 3	7 50.12	+26 19.8	1.567	2.373	17.0	19.8	12 3	7 49.86	+18 23.8	1.847	2.631	15.6	19.4
12 13	7 44.95	+25 54.2	1.501	2.385	13.1	19.5	12 13	7 44.44	+18 44.6	1.770	2.641	12.1	19.2
12 23	7 36.71	+25 27.4	1.456	2.399	8.7	19.3	12 23	7 36.33	+19 13.8	1.715	2.652	8.1	19.0
1 2	7 26.33	+24 57.0	1.437	2.413	3.8	19.1	1 2	7 26.23	+19 48.5	1.687	2.661	3.6	18.7
1 12	7 15.20	+24 21.5	1.446	2.427	1.8	18.9	1 12	7 15.25	+20 25.0	1.688	2.670	1.4	18.6
1 22	7 4.80	+23 41.5	1.483	2.443	6.5	19.3	1 22	7 4.64	+20 59.7	1.719	2.678	5.9	18.9
2 1	6 56.45	+22 58.8	1.546	2.458	11.0	19.6	2 1	6 55.60	+21 30.4	1.778	2.686	10.0	19.1
2 11	6 51.00	+22 16.1	1.633	2.474	14.7	19.9	2 11	6 49.04	+21 56.1	1.862	2.693	13.6	19.4
<b>81484</b>	2000 <i>GF</i> <sub>153</sub>		1 9.2 40°71	5°0/10.2	18		<b>192619</b>	1999 <i>JQ</i> <sub>4</sub>		1 9.2 326°11	18°5/27.6	16	
12 3	7 46.23	+12 17.9	1.444	2.238	18.7	17.9	12 3	7 51.90	+51 22.5	1.208	2.006	21.4	18.7
12 13	7 41.99	+11 29.1	1.382	2.253	14.9	17.7	12 13	7 51.34	+54 56.8	1.142	1.982	19.7	18.5
12 23	7 34.82	+10 52.9	1.339	2.268	10.7	17.5	12 23	7 44.56	+58 21.7	1.096	1.959	18.6	18.3
1 2	7 25.56	+10 31.0	1.321	2.284	6.6	17.3	1 2	7 31.19	+61 14.6	1.070	1.936	18.6	18.2
1 12	7 15.49	+10 23.8	1.329	2.300	5.1	17.3	1 12	7 12.94	+63 13.7	1.064	1.915	19.9	18.2
1 22	7 6.01	+10 29.7	1.363	2.317	7.9	17.5	1 22	6 53.80	+64 7.6	1.076	1.895	22.0	18.3
2 1	6 58.41	+10 46.1	1.423	2.334	11.8	17.7	2 1	6 38.79	+63 58.9	1.102	1.876	24.5	18.4
2 11	6 53.55	+11 9.3	1.505	2.351	15.5	18.0	2 11	6 31.36	+63 1.9	1.139	1.859	26.8	18.5
<b>455364</b>	2002 <i>TU</i> <sub>158</sub>		1 9.2 82°48	4°1/ 7.6	18		<b>256100</b>	2006 <i>UU</i> <sub>254</sub>		1 9.2 18°44	0°4/ 9.3	18	
12 3	7 52.10	+28 51.4	1.762	2.557	15.8	20.9	12 3	7 46.25	+20 11.4	1.687	2.487	16.2	20.8
12 13	7 46.43	+30 12.0	1.706	2.583	12.2	20.8	12 13	7 41.99	+20 18.4	1.606	2.488	12.6	20.6
12 23	7 37.73	+31 33.5	1.673	2.609	8.3	20.6	12 23	7 34.91	+20 32.1	1.548	2.489	8.4	20.3
1 2	7 26.81	+32 48.1	1.667	2.634	4.9	20.4	1 2	7 25.69	+20 50.2	1.515	2.491	3.6	20.0
1 12	7 14.99	+33 48.5	1.690	2.659	4.6	20.5	1 12	7 15.49	+21 9.5	1.510	2.492	1.4	19.9
1 22	7 3.73	+34 30.5	1.742	2.683	7.6	20.7	1 22	7 5.64	+21 27.0	1.533	2.494	6.2	20.2
2 1	6 54.40	+34 53.9	1.821	2.707	11.1	21.0	2 1	6 57.43	+21 41.3	1.583	2.496	10.7	20.5
2 11	6 47.93	+35 1.5	1.924	2.731	14.2	21.2	2 11	6 51.81	+21 51.6	1.656	2.498	14.5	20.7
<b>131834</b>	2002 <i>AO</i> <sub>110</sub>		1 9.2 278°32	1°3/ 8.8	18		<b>443890</b>	2001 <i>VO</i> <sub>125</sub>		1 9.2 11°94	2°9/ 8.5	18	
12 3	7 47.82	+23 13.7	1.604	2.409	16.7	20.3	12 3	7 43.80	+25 18.7	1.050	1.892	20.9	20.7
12 13	7 43.73	+23 43.4	1.508	2.393	13.1	20.1	12 13	7 41.67	+25 59.2	0.990	1.895	16.3	20.4
12 23	7 36.42	+24 20.0	1.434	2.377	8.7	19.8	12 23	7 35.47	+26 45.9	0.949	1.900	10.8	20.2
1 2	7 26.46	+24 59.0	1.385	2.360	3.8	19.4	1 2	7 26.11	+27 31.5	0.929	1.905	5.1	19.9
1 12	7 15.05	+25 35.0	1.363	2.344	2.2	19.3	1 12	7 15.34	+28 8.2	0.933	1.913	3.7	19.8
1 22	7 3.74	+26 3.5	1.369	2.328	7.2	19.5	1 22	7 5.25	+28 30.5	0.961	1.921	9.0	20.1
2 1	6 54.10	+26 22.3	1.402	2.311	12.1	19.8	2 1	6 57.77	+28 37.3	1.010	1.931	14.4	20.5
2 11	6 47.39	+26 31.8	1.457	2.295	16.4	20.0	2 11	6 54.11	+28 31.1	1.080	1.943	19.0	20.8
<b>8726</b>	Masamotonasu		1 9.2 29°50	3°6/10.2	18		<b>146439</b>	2001 <i>QD</i> <sub>284</sub>		1 9.2 94°38	0°5/ 8.9	18	
12 3	7 42.75	+12 7.0	2.174	2.946	13.9	17.4	12 3	7 46.97	+19 37.4	1.843	2.635	15.3	20.0
12 13	7 38.51	+11 38.4	2.091	2.950	11.1	17.2	12 13	7 42.33	+20 31.4	1.767	2.644	11.9	19.8
12 23	7 32.20	+11 18.9	2.031	2.954	8.0	17.1	12 23	7 35.04	+21 34.7	1.713	2.654	7.8	19.5
1 2	7 24.39	+11 9.1	1.997	2.958	4.9	16.9	1 2	7 25.73	+22 43.0	1.687	2.663	3.3	19.3
1 12	7 15.93	+11 8.9	1.992	2.962	3.7	16.8	1 12	7 15.48	+23 50.6	1.690	2.672	1.5	19.2
1 22	7 7.74	+11 17.1	2.015	2.967	5.9	16.9	1 22	7 5.53	+24 52.3	1.723	2.681	6.0	19.5
2 1	6 57.02	+11 31.9	2.067	2.972	9.0	17.1	2 1	6 57.09	+25 44.8	1.783	2.690	10.1	19.8
2 11	6 55.58	+11 51.3	2.144	2.977	12.0	17.4	2 11	6 51.07	+26 27.1	1.869	2.699	13.6	20.0
<b>187751</b>	1995 <i>GG</i> <sub>3</sub>		1 9.2 324°38	2°6/ 8.4	18		<b>104634</b>	2000 <i>GU</i> <sub>116</sub>		1 9.2 97°37	4°2/ 7.9	18	
12 3	7 46.64	+26 28.5	1.725	2.531									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>382156</b>	2012 <i>FD</i> <sub>74</sub>		1 9.2 172°35'	7.5/12.2	18		<b>29744</b>	1999 <i>BG</i> <sub>20</sub>		1 9.2 116°41'	6.4/7.9	18	
12 3	7 43.58	- 3 21.9	2.695	3.385	13.4	21.9	12 3	7 56.14	+39 34.3	1.970	2.747	15.0	18.6
12 13	7 38.75	- 4 7.6	2.608	3.388	11.6	21.7	12 13	7 49.57	+40 12.4	1.901	2.758	12.1	18.4
12 23	7 32.20	- 4 38.0	2.542	3.391	9.7	21.6	12 23	7 39.81	+40 41.4	1.855	2.769	9.2	18.3
1 2	7 24.40	- 4 50.3	2.501	3.393	8.2	21.5	1 2	7 27.75	+40 54.3	1.835	2.780	6.9	18.2
1 12	7 16.02	- 4 43.4	2.488	3.395	7.5	21.5	1 12	7 14.83	+40 45.9	1.843	2.790	6.7	18.2
1 22	7 7.81	- 4 18.0	2.502	3.396	8.1	21.5	1 22	7 2.62	+40 15.5	1.879	2.801	8.7	18.3
2 1	7 0.50	- 3 36.3	2.544	3.397	9.6	21.6	2 1	6 52.54	+39 26.2	1.942	2.810	11.5	18.5
2 11	6 54.70	- 2 42.5	2.610	3.397	11.5	21.7	2 11	6 45.50	+38 23.9	2.029	2.820	14.2	18.7
<b>277502</b>	2005 <i>WZ</i> <sub>134</sub>		1 9.2 158°96'	0°6/8.9	18		<b>425043</b>	2009 <i>PE</i> <sub>3</sub>		1 9.2 89°88'	3°3/10.5	18	
12 3	7 45.78	+21 44.3	2.139	2.928	13.6	20.8	12 3	7 47.54	+11 2.1	2.145	2.905	14.5	22.3
12 13	7 41.09	+22 14.8	2.054	2.930	10.5	20.6	12 13	7 42.00	+10 59.4	2.083	2.934	11.5	22.1
12 23	7 34.07	+22 50.8	1.993	2.932	6.9	20.3	12 23	7 34.38	+11 7.9	2.043	2.963	8.1	22.0
1 2	7 25.28	+23 29.0	1.959	2.934	3.0	20.1	1 2	7 25.33	+11 27.0	2.030	2.992	4.8	21.8
1 12	7 15.66	+24 5.8	1.954	2.936	1.4	20.0	1 12	7 15.77	+11 55.1	2.047	3.020	3.4	21.8
1 22	7 6.29	+24 38.0	1.980	2.937	5.4	20.3	1 22	7 6.65	+12 29.5	2.095	3.047	5.6	22.0
2 1	6 58.19	+25 3.8	2.034	2.939	9.1	20.5	2 1	6 58.87	+13 7.3	2.171	3.074	8.7	22.2
2 11	6 52.21	+25 22.8	2.113	2.940	12.4	20.7	2 11	6 53.09	+13 46.1	2.272	3.100	11.6	22.4
<b>132051</b>	2002 <i>CX</i> <sub>138</sub>		1 9.2 2°23'	5°1/10.5	18		<b>79697</b>	1998 <i>SP</i> <sub>68</sub>		1 9.2 48°64'	5°2/8.8	18	
12 3	7 44.94	+10 49.4	1.413	2.208	19.0	19.4	12 3	7 55.54	+35 16.4	1.456	2.259	18.2	19.6
12 13	7 41.37	+10 24.0	1.336	2.207	15.4	19.2	12 13	7 49.61	+35 22.8	1.397	2.275	14.4	19.4
12 23	7 34.72	+10 14.3	1.279	2.207	11.1	18.9	12 23	7 40.00	+35 20.4	1.359	2.292	10.2	19.2
1 2	7 25.69	+10 21.7	1.244	2.207	6.9	18.7	1 2	7 27.82	+35 2.8	1.345	2.309	6.3	19.0
1 12	7 15.53	+10 45.4	1.235	2.208	5.1	18.6	1 12	7 14.84	+34 26.0	1.358	2.326	5.5	19.0
1 22	7 5.71	+11 22.4	1.253	2.208	8.1	18.8	1 22	7 2.92	+33 30.9	1.398	2.344	8.6	19.3
2 1	6 57.67	+12 8.3	1.295	2.210	12.4	19.0	2 1	6 53.60	+32 22.5	1.464	2.362	12.5	19.5
2 11	6 52.47	+12 58.1	1.359	2.212	16.5	19.3	2 11	6 47.80	+31 7.5	1.553	2.381	16.0	19.8
<b>309456</b>	2007 <i>UC</i> <sub>133</sub>		1 9.2 138°91'	0°0/9.1	18		<b>187580</b>	2006 <i>WJ</i> <sub>35</sub>		1 9.2 312°71'	2°1/9.8	18	
12 3	7 49.86	+21 41.7	1.869	2.658	15.2	21.5	12 3	7 43.81	+15 46.6	1.640	2.438	16.6	20.4
12 13	7 44.44	+21 44.9	1.791	2.666	11.8	21.3	12 13	7 40.34	+15 52.2	1.547	2.425	13.2	20.1
12 23	7 36.34	+21 52.5	1.735	2.673	7.8	21.1	12 23	7 34.03	+16 9.4	1.475	2.412	9.1	19.9
1 2	7 26.26	+22 1.7	1.705	2.681	3.3	20.8	1 2	7 25.44	+16 37.1	1.427	2.400	4.5	19.6
1 12	7 15.35	+22 9.9	1.705	2.688	1.3	20.7	1 12	7 15.65	+17 12.5	1.407	2.387	2.4	19.4
1 22	7 4.85	+22 15.0	1.735	2.694	5.8	21.0	1 22	7 6.00	+17 52.1	1.414	2.375	6.6	19.6
2 1	6 55.95	+22 16.4	1.792	2.700	10.0	21.3	2 1	6 57.83	+18 32.3	1.448	2.364	11.2	19.9
2 11	6 49.55	+22 14.4	1.874	2.706	13.6	21.5	2 11	6 52.23	+19 10.3	1.504	2.353	15.4	20.1
<b>359107</b>	2009 <i>BY</i> <sub>8</sub>		1 9.2 0°16'	1°1/9.5	18		<b>191334</b>	2003 <i>QB</i> <sub>2</sub>		1 9.2 62°90'	0°0/9.1	18	
12 3	7 42.63	+18 17.3	1.179	2.008	20.0	20.6	12 3	7 45.62	+21 28.8	1.987	2.780	14.3	20.1
12 13	7 40.28	+18 30.1	1.108	2.005	15.7	20.3	12 13	7 41.03	+21 38.0	1.911	2.788	11.1	19.9
12 23	7 34.37	+18 55.8	1.056	2.003	10.5	20.0	12 23	7 34.03	+21 51.8	1.857	2.797	7.3	19.7
1 2	7 25.64	+19 31.5	1.026	2.002	4.7	19.7	1 2	7 25.27	+22 7.8	1.831	2.806	3.1	19.5
1 12	7 15.56	+20 12.6	1.021	2.003	1.9	19.5	1 12	7 15.77	+22 23.2	1.833	2.815	1.2	19.3
1 22	7 5.90	+20 53.5	1.040	2.005	7.7	19.8	1 22	7 6.65	+22 35.8	1.865	2.825	5.4	19.7
2 1	6 58.37	+21 30.3	1.083	2.008	13.2	20.2	2 1	6 58.94	+22 44.5	1.924	2.834	9.3	19.9
2 11	6 54.21	+22 0.7	1.146	2.012	17.9	20.4	2 11	6 53.46	+22 49.3	2.009	2.843	12.7	20.1
<b>120665</b>	1996 <i>XT</i>		1 9.2 64°27'	3°9/7.8	18		<b>520617</b>	2014 <i>OU</i> <sub>412</sub>		1 9.2 312°42'	6°6/8.0	18	
12 3	7 49.29	+28 53.8	1.739	2.540	15.7	19.5	12 3	7 53.05	+36 26.9	1.498	2.302	17.7	20.9
12 13	7 44.33	+29 59.9	1.680	2.561	12.2	19.3	12 13	7 48.29	+37 3.2	1.418	2.294	14.3	20.7
12 23	7 36.41	+31 6.8	1.644	2.581	8.3	19.1	12 23	7 39.62	+37 32.8	1.358	2.287	10.5	20.4
1 2	7 26.32	+32 7.5	1.634	2.602	4.7	18.9	1 2	7 27.89	+37 46.9	1.322	2.279	7.3	20.2
1 12	7 15.34	+32 55.5	1.652	2.623	4.3	19.0	1 12	7 14.73	+37 38.3	1.311	2.272	6.9	20.2
1 22	7 4.91	+33 27.1	1.699	2.644	7.4	19.2	1 22	7 2.14	+37 4.9	1.328	2.266	9.8	20.3
2 1	6 56.34	+33 42.0	1.773	2.665	11.0	19.5	2 1	6 51.96	+36 10.0	1.369	2.259	13.8	20.5
2 11	6 50.55	+33 42.8	1.869	2.686	14.2	19.7	2 11	6 45.45	+35 0.6	1.431	2.253	17.5	20.8
<b>428110</b>	2006 <i>RR</i> <sub>52</sub>		1 9.2 140°44'	0°4/9.0	18		<b>308712</b>	2006 <i>GR</i> <sub>29</sub>		1 9.2 121°96'	0°9/8.9	18	
12 3	7 43.80	+22 41.1	2.913	3.690	10.6	22.1	12 3	7 50.92	+23 14.7	1.929	2.715	14.9	22.2
12 13	7 38.88	+22 57.1	2.829	3.699	8.2	22.0	12 13	7 45.15	+23 39.1	1.857	2.732	11.5	22.0
12 23	7 32.26	+23 15.6	2.771	3.708	5.4	21.8	12 23	7 36.75	+24 7.2	1.809	2.748	7.6	21.8
1 2	7 24.43	+23 34.6	2.741	3.716	2.3	21.6	1 2	7 26.43	+24 35.4	1.788	2.763	3.3	21.6
1 12	7 16.08	+23 52.0	2.742	3.724	1.0	21.5	1 12	7 15.34	+24 59.7	1.796	2.777	1.7	21.5
1 22	7 7.95	+24 6.2	2.775	3.731	4.1	21.7	1 22	7 4.71	+25 17.4	1.835	2.791	5.8	21.8
2 1	7 0.77	+24 16.5	2.837	3.739	7.0	21.9	2 1	6 55.70	+25 27.8	1.901	2.805	9.8	22.1
2 11	6 55.13	+24 22.7	2.926	3.746	9.5	22.1	2 11	6 49.17	+25 31.6	1.993	2.818	13.1	22.3
<b>54797</b>	2001 <i>MR</i> <sub>12</sub>		1 9.2 35°00'	3°2/8.2	18		<b>162204</b>	1999 <i>RJ</i> <sub>160</sub>		1 9.2 60°66'	0°0/9.1	18	
12 3	7 47.29	+24 48.3	1.223	2.049	19.6	17.3	12 3	7 48.67	+19 28.0	1.443	2.248	18.2	19.4
12 13	7 43.55	+26 0.8	1.179	2.075	15.0	17.1	12 13	7 44.06	+20 1.8	1.385	2.269	14.0	19.2
12 23	7 36.21	+27 18.9	1.156	2.102	9.9	16.9	12 23	7 36.32	+20 45.2	1.348	2.291	9.2	19.0
1 2	7 26.28	+28 33.8	1.156	2.130	4.8	16.7	1 2	7 26.30	+21 33.9	1.336	2.312	3.9	18.7
1 12	7 15.40	+29 36.8	1.182	2.159	3.9	16.7	1 12	7 15.40	+22 22.1	1.351	2.334	1.5	18.6
1 22	7 5.38	+30 22.6	1.234	2.189	8.2	17.0	1 22	7 5.13	+23 5.2	1.394	2.355	6.7	19.0
2 1	6 57.78	+30 50.0	1.310	2.220	12.7	17.4	2 1	6 56.89	+23 40.4	1.463	2.377	11.3	19.3
2 11	6 53.55	+31 1.5	1.408	2.251	16.6	17.7	2 11	6 51.60	+24 7.2	1.555	2.399	15.2	19.6
<b>503314</b>	2016 <i>AO</i> <sub>127</sub>		1 9.2 102°47'	1°5/8.5	18		<b>265800</b>	2005 <i>WX</i> <sub>207</sub>		1 9.2 76°74'	0°9/8.9	18	
12 3	7 46.51	+23 7.1	2.153	2.942	13.5	20.8							

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>291457</b>	2006 <i>DJ</i> <sub>52</sub>		1 9.2 147°46	0°8/ 8.9	18		<b>116773</b>	2004 <i>ED</i> <sub>18</sub>		1 9.2 279°66	2°7/10.3	18	
12 3	7 45.77	+23 13.7	2.231	3.019	13.1	21.0	12 3	7 44.73	+12 5.6	1.816	2.597	15.9	20.0
12 13	7 41.00	+23 37.3	2.147	3.022	10.1	20.8	12 13	7 40.79	+12 34.1	1.720	2.586	12.8	19.8
12 23	7 33.97	+24 4.5	2.086	3.025	6.7	20.6	12 23	7 34.21	+13 18.3	1.645	2.575	8.9	19.5
1 2	7 25.26	+24 32.3	2.053	3.028	2.9	20.4	1 2	7 25.52	+14 17.0	1.595	2.564	4.8	19.3
1 12	7 15.79	+24 57.5	2.050	3.031	1.5	20.3	1 12	7 15.70	+15 26.8	1.574	2.552	2.8	19.1
1 22	7 6.57	+25 17.6	2.077	3.034	5.2	20.5	1 22	7 5.94	+16 42.4	1.582	2.541	6.2	19.3
2 1	6 58.62	+25 31.5	2.132	3.036	8.8	20.8	2 1	6 57.47	+17 58.7	1.618	2.530	10.5	19.5
2 11	6 52.71	+25 39.2	2.212	3.038	12.0	21.0	2 11	6 51.33	+19 11.2	1.678	2.519	14.4	19.7
<b>460360</b>	2014 <i>RA</i> <sub>48</sub>		1 9.2 44°37	2°4/ 9.9	18		<b>492060</b>	2013 <i>HH</i> <sub>52</sub>		1 9.2 203°43	1°0/ 9.5	18	
12 3	7 45.15	+15 17.8	1.653	2.447	16.7	21.1	12 3	7 48.60	+19 29.5	1.981	2.765	14.7	21.9
12 13	7 41.06	+15 17.8	1.579	2.455	13.1	20.9	12 13	7 43.44	+19 23.8	1.890	2.762	11.5	21.7
12 23	7 34.26	+15 29.0	1.527	2.463	9.0	20.7	12 23	7 35.73	+19 23.6	1.822	2.758	7.7	21.5
1 2	7 25.43	+15 50.0	1.500	2.471	4.6	20.4	1 2	7 26.08	+19 27.1	1.780	2.754	3.5	21.2
1 12	7 15.72	+16 18.3	1.500	2.480	2.6	20.3	1 12	7 15.52	+19 32.4	1.768	2.750	1.5	21.0
1 22	7 6.41	+16 50.6	1.529	2.489	6.3	20.6	1 22	7 5.22	+19 37.6	1.786	2.745	5.7	21.3
2 1	6 58.71	+17 24.1	1.584	2.498	10.6	20.9	2 1	6 56.32	+19 41.8	1.832	2.740	9.8	21.5
2 11	6 53.51	+17 56.2	1.662	2.508	14.3	21.1	2 11	6 49.73	+19 44.6	1.903	2.735	13.4	21.8
<b>394388</b>	2007 <i>EE</i> <sub>60</sub>		1 9.2 241°97	3°4/10.2	18		<b>490660</b>	2010 <i>GW</i> <sub>117</sub>		1 9.2 196°64	0°3/ 9.3	18	
12 3	7 48.37	+12 48.1	1.780	2.556	16.4	22.2	12 3	7 49.23	+19 17.1	2.158	2.934	13.9	23.1
12 13	7 43.67	+12 40.7	1.679	2.542	13.2	21.9	12 13	7 43.81	+19 43.7	2.063	2.931	10.8	22.9
12 23	7 36.14	+12 45.4	1.600	2.527	9.3	21.7	12 23	7 35.94	+20 17.7	1.992	2.928	7.2	22.7
1 2	7 26.35	+13 2.3	1.546	2.512	5.3	21.4	1 2	7 26.19	+20 56.1	1.948	2.923	3.1	22.4
1 12	7 15.32	+13 30.0	1.520	2.496	3.6	21.2	1 12	7 15.48	+21 35.4	1.935	2.918	1.2	22.2
1 22	7 4.34	+14 5.6	1.523	2.479	6.9	21.4	1 22	7 4.94	+22 12.3	1.953	2.911	5.4	22.5
2 1	6 54.75	+14 45.9	1.553	2.461	11.2	21.6	2 1	6 55.65	+22 44.6	2.000	2.904	9.3	22.7
2 11	6 47.63	+15 27.7	1.607	2.443	15.2	21.8	2 11	6 48.52	+23 11.4	2.073	2.897	12.7	22.9
<b>446850</b>	2001 <i>TT</i> <sub>99</sub>		1 9.2 83°27	1°5/ 9.6	15		<b>5194</b>	Böttger		1 9.2 229°08	1°3/ 9.6	18	
12 3	7 53.35	+18 2.6	1.522	2.313	18.1	22.2	12 3	7 45.31	+17 19.0	2.013	2.799	14.4	18.9
12 13	7 47.27	+18 0.5	1.468	2.342	14.0	22.0	12 13	7 40.88	+17 30.1	1.924	2.796	11.3	18.7
12 23	7 38.18	+18 7.0	1.435	2.372	9.3	21.8	12 23	7 34.04	+17 49.6	1.857	2.793	7.6	18.4
1 2	7 27.02	+18 19.7	1.427	2.401	4.3	21.6	1 2	7 25.37	+18 15.7	1.816	2.789	3.6	18.2
1 12	7 15.17	+18 35.5	1.448	2.429	2.0	21.5	1 12	7 15.81	+18 45.8	1.805	2.786	1.6	18.0
1 22	7 4.13	+18 51.7	1.497	2.457	6.5	21.8	1 22	7 6.45	+19 16.8	1.823	2.782	5.5	18.3
2 1	6 55.16	+19 6.7	1.573	2.484	10.9	22.1	2 1	6 58.38	+19 46.6	1.869	2.779	9.5	18.5
2 11	6 49.09	+19 19.7	1.673	2.510	14.6	22.4	2 11	6 52.47	+20 13.6	1.940	2.775	13.0	18.7
<b>496661</b>	2016 <i>BZ</i> <sub>36</sub>		1 9.2 245°70	0°5/ 9.4	17		<b>62007</b>	2000 <i>RP</i> <sub>39</sub>		1 9.2 135°01	1°5/ 8.8	18	
12 3	7 46.31	+17 41.7	2.208	2.986	13.5	21.8	12 3	7 51.81	+24 41.3	1.956	2.742	14.8	20.3
12 13	7 41.62	+18 19.9	2.102	2.971	10.6	21.5	12 13	7 45.89	+25 9.3	1.882	2.756	11.4	20.1
12 23	7 34.56	+19 7.9	2.020	2.956	7.1	21.3	12 23	7 37.28	+25 40.0	1.831	2.769	7.5	19.9
1 2	7 25.62	+20 2.9	1.966	2.940	3.2	21.0	1 2	7 26.71	+26 9.3	1.808	2.782	3.4	19.6
1 12	7 15.63	+21 1.1	1.942	2.924	1.2	20.8	1 12	7 15.32	+26 33.1	1.814	2.794	2.1	19.6
1 22	7 5.64	+21 58.4	1.948	2.907	5.3	21.1	1 22	7 4.37	+26 48.6	1.850	2.805	6.0	19.8
2 1	6 56.74	+22 51.5	1.984	2.890	9.3	21.3	2 1	6 55.05	+26 55.4	1.915	2.816	9.9	20.1
2 11	6 49.86	+23 38.2	2.046	2.872	12.8	21.5	2 11	6 48.23	+26 54.6	2.005	2.826	13.2	20.3
<b>491977</b>	2013 <i>EK</i> <sub>17</sub>		1 9.2 260°11	0°9/ 8.9	17		<b>236909</b>	2007 <i>TX</i> <sub>95</sub>		1 9.2 50°90	0°7/ 9.4	18	
12 3	7 48.69	+23 10.5	1.734	2.532	15.9	22.3	12 3	7 43.94	+19 27.0	2.161	2.949	13.5	21.0
12 13	7 44.13	+23 28.9	1.638	2.519	12.4	22.0	12 13	7 39.57	+19 32.6	2.080	2.955	10.5	20.8
12 23	7 36.55	+23 52.3	1.564	2.505	8.3	21.7	12 23	7 33.01	+19 43.7	2.023	2.961	6.9	20.6
1 2	7 26.55	+24 17.2	1.516	2.492	3.6	21.4	1 2	7 24.87	+19 58.6	1.993	2.968	3.1	20.4
1 12	7 15.27	+24 39.3	1.496	2.478	1.8	21.3	1 12	7 16.03	+20 15.2	1.992	2.974	1.2	20.2
1 22	7 4.15	+24 55.2	1.505	2.463	6.6	21.5	1 22	7 7.50	+20 31.3	2.021	2.981	5.1	20.5
2 1	6 54.61	+25 3.6	1.540	2.449	11.3	21.8	2 1	7 0.20	+20 45.6	2.078	2.988	8.7	20.8
2 11	6 47.80	+25 5.0	1.599	2.434	15.3	22.0	2 11	6 54.90	+20 57.3	2.160	2.995	11.9	21.0
<b>31467</b>	1999 <i>CG</i> <sub>29</sub>		1 9.2 93°31	2°7/ 8.7	18		<b>191477</b>	2003 <i>SE</i> <sub>297</sub>		1 9.2 94°84	0°7/ 9.5	18	
12 3	7 55.58	+28 7.1	1.614	2.409	17.0	19.4	12 3	7 44.92	+18 55.1	2.107	2.893	13.8	20.4
12 13	7 49.14	+28 28.4	1.556	2.434	13.2	19.2	12 13	7 40.40	+19 5.1	2.024	2.898	10.8	20.2
12 23	7 39.49	+28 49.1	1.520	2.458	8.8	19.0	12 23	7 33.62	+19 21.6	1.965	2.902	7.2	20.0
1 2	7 27.61	+29 3.6	1.510	2.482	4.3	18.8	1 2	7 25.15	+19 42.6	1.932	2.907	3.2	19.8
1 12	7 14.97	+29 7.5	1.528	2.505	3.2	18.7	1 12	7 15.93	+20 5.5	1.929	2.911	1.3	19.6
1 22	7 3.16	+28 59.2	1.575	2.528	7.0	19.0	1 22	7 6.99	+20 28.0	1.955	2.915	5.2	19.9
2 1	6 53.55	+28 40.3	1.649	2.550	11.1	19.3	2 1	6 59.32	+20 48.4	2.010	2.920	9.0	20.1
2 11	6 47.01	+28 14.1	1.747	2.572	14.7	19.6	2 11	6 53.72	+21 5.7	2.090	2.924	12.2	20.4
<b>429038</b>	2009 <i>CG</i> <sub>42</sub>		1 9.2 44°68	3°5/ 8.2	18		<b>373313</b>	2012 <i>JP</i> <sub>7</sub>		1 9.2 77°92	1°7/ 9.7	18	
12 3	7 46.93	+30 57.6	2.006	2.803	14.1	21.0	12 3	7 45.77	+17 20.0	1.972	2.758	14.7	21.4
12 13	7 42.16	+31 28.3	1.938	2.816	11.0	20.9	12 13	7 41.11	+17 12.0	1.895	2.766	11.5	21.2
12 23	7 34.82	+31 56.9	1.894	2.830	7.5	20.7	12 23	7 34.09	+17 11.1	1.840	2.775	7.7	21.0
1 2	7 25.63	+32 18.5	1.876	2.844	4.3	20.5	1 2	7 25.35	+17 16.3	1.811	2.783	3.8	20.8
1 12	7 15.71	+32 29.3	1.887	2.858	3.8	20.5	1 12	7 15.87	+17 25.7	1.811	2.792	2.0	20.7
1 22	7 6.28	+32 27.4	1.927	2.873	6.6	20.7	1 22	7 6.75	+17 37.5	1.841	2.800	5.5	20.9
2 1	6 58.45	+32 13.5	1.994	2.888	9.9	20.9	2 1	6 59.02	+17 50.2	1.898	2.809	9.4	21.2
2 11	6 53.03	+31 50.2	2.084	2.903	12.9	21.2	2 11	6 53.47	+18 2.6	1.980	2.817	12.7	21.4
<b>84342</b>	2002 <i>TP</i> <sub>64</sub>		1 9.2 59°27	5°2/10.4	18		<b>141142</b>	2001 <i>XF</i> <sub>97</sub>		1 9.2 62°47	5°4/ 9.7	18	
12 3	7 48.53	+11 41.4	1.269	2.068	20.5	19.6							

EPHEMERIDES

1 9.2

1 9.2

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>365214</b>	2009 <i>HZ</i> <sub>20</sub>		1 9.2 292°85	0°3/ 9.1	18		<b>145537</b>	2006 <i>GB</i> <sub>20</sub>		1 9.2 45°67	0°0/ 9.1	18	
12 3	7 46.21	+20 55.6	1.621	2.425	16.5	21.3	12 3	7 44.71	+20 43.5	1.950	2.745	14.5	20.7
12 13	7 42.41	+21 19.7	1.526	2.410	13.0	21.0	12 13	7 40.44	+21 3.6	1.873	2.752	11.2	20.5
12 23	7 35.54	+21 52.3	1.454	2.396	8.7	20.7	12 23	7 33.74	+21 29.8	1.819	2.760	7.4	20.2
1 2	7 26.18	+22 29.9	1.406	2.382	3.7	20.4	1 2	7 25.25	+21 59.2	1.792	2.767	3.2	20.0
1 12	7 15.49	+23 7.9	1.385	2.367	1.5	20.2	1 12	7 15.97	+22 28.5	1.793	2.775	1.2	19.9
1 22	7 4.90	+23 42.0	1.393	2.353	6.8	20.5	1 22	7 7.02	+22 54.8	1.823	2.784	5.5	20.2
2 1	6 55.91	+24 9.5	1.426	2.339	11.6	20.7	2 1	6 59.47	+23 16.3	1.882	2.792	9.4	20.4
2 11	6 49.69	+24 29.6	1.483	2.326	15.9	21.0	2 11	6 54.15	+23 32.5	1.964	2.800	12.8	20.7
<b>459169</b>	2012 <i>DA</i> <sub>23</sub>		1 9.2 129°59	0°5/ 9.1	18		<b>202604</b>	2006 <i>HP</i> <sub>25</sub>		1 9.2 200°84	1°1/ 8.8	18	
12 3	7 48.77	+23 3.1	2.179	2.963	13.5	22.1	12 3	7 45.22	+24 3.7	2.481	3.265	12.0	21.1
12 13	7 43.23	+23 10.8	2.102	2.974	10.5	21.9	12 13	7 40.45	+24 31.0	2.389	3.263	9.3	20.9
12 23	7 35.39	+23 21.2	2.048	2.986	6.9	21.7	12 23	7 33.59	+25 1.4	2.322	3.260	6.2	20.7
1 2	7 25.88	+23 31.8	2.021	2.997	2.9	21.5	1 2	7 25.17	+25 31.8	2.283	3.258	2.7	20.4
1 12	7 15.69	+23 39.9	2.025	3.007	1.3	21.4	1 12	7 15.99	+25 59.1	2.274	3.255	1.6	20.4
1 22	7 5.88	+23 43.9	2.059	3.017	5.2	21.7	1 22	7 7.00	+26 20.9	2.296	3.251	4.9	20.6
2 1	6 57.46	+23 43.4	2.122	3.027	8.8	21.9	2 1	6 59.11	+26 36.1	2.347	3.248	8.3	20.8
2 11	6 51.18	+23 38.9	2.211	3.036	12.0	22.2	2 11	6 53.06	+26 44.8	2.423	3.244	11.2	21.0
<b>320753</b>	2008 <i>EK</i> <sub>65</sub>		1 9.2 206°86	1°5/ 8.7	16		<b>357201</b>	2002 <i>GX</i> <sub>5</sub>		1 9.2 343°42	8°9/ 12.1	18	
12 3	7 49.04	+26 25.1	2.672	3.447	11.5	22.6	12 3	7 36.53	+ 4 30.8	1.085	1.897	22.5	19.4
12 13	7 43.26	+26 42.3	2.572	3.440	9.0	22.4	12 13	7 35.79	+ 3 58.4	1.006	1.880	19.0	19.1
12 23	7 35.37	+27 0.2	2.497	3.432	6.0	22.2	12 23	7 31.65	+ 3 53.0	0.943	1.865	14.9	18.9
1 2	7 25.90	+27 15.7	2.450	3.423	2.8	22.0	1 2	7 24.67	+ 4 20.7	0.898	1.851	10.9	18.6
1 12	7 15.67	+27 26.1	2.435	3.414	1.9	21.9	1 12	7 16.13	+ 5 23.0	0.876	1.839	8.9	18.4
1 22	7 5.62	+27 29.7	2.452	3.404	4.9	22.1	1 22	7 7.71	+ 6 55.0	0.875	1.829	10.9	18.5
2 1	6 56.65	+27 26.1	2.498	3.393	8.1	22.3	2 1	7 1.18	+ 8 47.3	0.896	1.822	15.2	18.7
2 11	6 49.53	+27 16.4	2.571	3.381	10.9	22.5	2 11	6 57.94	+10 47.6	0.937	1.816	19.8	18.9
<b>354867</b>	2006 <i>AB</i> <sub>80</sub>		1 9.2 81°46	2°0/ 8.8	17		<b>3697</b>	Guyhurst		1 9.2 292°74	4°4/ 8.3	18	
12 3	7 55.45	+26 14.7	1.501	2.299	17.9	21.1	12 3	7 51.14	+31 5.4	1.540	2.347	17.1	17.4
12 13	7 49.14	+26 31.6	1.447	2.327	13.8	20.9	12 13	7 46.51	+31 39.9	1.459	2.342	13.5	17.2
12 23	7 39.55	+26 49.6	1.415	2.355	9.1	20.7	12 23	7 38.35	+32 12.9	1.400	2.337	9.4	16.9
1 2	7 27.67	+27 3.4	1.408	2.382	4.2	20.5	1 2	7 27.40	+32 37.6	1.365	2.333	5.5	16.7
1 12	7 15.07	+27 8.7	1.430	2.409	2.6	20.5	1 12	7 15.13	+32 47.5	1.356	2.328	4.8	16.6
1 22	7 3.37	+27 3.8	1.479	2.436	7.0	20.8	1 22	7 3.29	+32 39.7	1.375	2.324	8.4	16.8
2 1	6 53.98	+26 50.0	1.556	2.462	11.4	21.1	2 1	6 53.56	+32 15.4	1.420	2.319	12.7	17.0
2 11	6 47.76	+26 29.8	1.656	2.487	15.0	21.4	2 11	6 47.13	+31 38.9	1.486	2.315	16.6	17.3
<b>51692</b>	2001 <i>KY</i> <sub>13</sub>		1 9.2 256°13	1°1/ 8.9	18		<b>435887</b>	2008 <i>YX</i> <sub>162</sub>		1 9.2 352°25	0°0/ 9.1	18	
12 3	7 47.54	+23 0.8	1.752	2.551	15.7	19.7	12 3	7 46.02	+23 52.1	1.877	2.676	14.8	20.7
12 13	7 43.11	+23 28.0	1.666	2.547	12.2	19.5	12 13	7 41.59	+23 24.7	1.790	2.671	11.5	20.5
12 23	7 35.79	+24 0.8	1.601	2.543	8.1	19.2	12 23	7 34.56	+22 57.6	1.726	2.667	7.6	20.3
1 2	7 26.22	+24 35.2	1.563	2.539	3.5	18.9	1 2	7 25.62	+22 29.6	1.689	2.664	3.3	20.0
1 12	7 15.55	+25 6.7	1.553	2.535	1.9	18.8	1 12	7 15.84	+21 59.5	1.680	2.662	1.3	19.8
1 22	7 5.12	+25 31.6	1.572	2.530	6.4	19.1	1 22	7 6.44	+21 27.4	1.699	2.660	5.8	20.1
2 1	6 56.30	+25 48.4	1.618	2.526	10.8	19.3	2 1	6 58.57	+20 54.2	1.747	2.659	9.9	20.4
2 11	6 50.10	+25 57.3	1.687	2.522	14.7	19.6	2 11	6 53.08	+20 21.2	1.818	2.658	13.5	20.6
<b>101221</b>	1998 <i>SB</i> <sub>62</sub>		1 9.2 87°17	2°1/ 8.9	17		<b>493365</b>	2014 <i>WV</i> <sub>63</sub>		1 9.2 151°23	6°4/ 11.3	18	
12 3	7 54.00	+26 45.3	1.441	2.245	18.2	19.7	12 3	7 45.89	+ 3 42.5	2.225	2.958	14.8	21.9
12 13	7 48.37	+26 54.7	1.378	2.261	14.1	19.5	12 13	7 40.89	+ 3 0.3	2.143	2.966	12.3	21.8
12 23	7 39.26	+27 4.8	1.335	2.277	9.4	19.2	12 23	7 33.82	+ 2 32.1	2.082	2.972	9.6	21.6
1 2	7 27.63	+27 10.4	1.318	2.292	4.3	19.0	1 2	7 25.24	+ 2 20.1	2.047	2.979	7.3	21.5
1 12	7 15.07	+27 7.3	1.328	2.308	2.7	18.9	1 12	7 15.99	+ 2 25.3	2.040	2.985	6.4	21.4
1 22	7 3.29	+26 53.9	1.365	2.323	7.3	19.2	1 22	7 6.99	+ 2 46.4	2.062	2.990	7.6	21.5
2 1	6 53.83	+26 31.7	1.429	2.338	12.0	19.5	2 1	6 59.14	+ 3 20.9	2.111	2.995	10.0	21.6
2 11	6 47.67	+26 3.8	1.515	2.352	15.9	19.8	2 11	6 53.16	+ 4 4.6	2.186	2.999	12.5	21.8
<b>236675</b>	2006 <i>QN</i> <sub>26</sub>		1 9.2 191°30	3°2/ 7.9	17		<b>485002</b>	2009 <i>VE</i> <sub>40</sub>		1 9.2 87°57	1°4/ 9.7	18	
12 3	7 47.45	+33 33.6	3.061	3.833	10.3	21.6	12 3	7 52.47	+16 24.3	1.386	2.182	19.3	21.0
12 13	7 41.84	+33 59.7	2.969	3.831	8.1	21.4	12 13	7 47.05	+16 50.7	1.329	2.206	15.0	20.8
12 23	7 34.32	+34 22.6	2.904	3.829	5.7	21.3	12 23	7 38.34	+17 30.0	1.292	2.231	10.0	20.5
1 2	7 25.42	+34 38.9	2.866	3.827	3.7	21.1	1 2	7 27.25	+18 18.5	1.280	2.254	4.6	20.3
1 12	7 15.90	+34 45.7	2.860	3.824	3.4	21.1	1 12	7 15.25	+19 10.6	1.296	2.277	1.9	20.2
1 22	7 6.60	+34 41.9	2.884	3.820	5.3	21.4	1 22	7 3.97	+20 1.1	1.339	2.300	6.9	20.6
2 1	6 58.34	+34 27.7	2.938	3.816	7.7	21.2	2 1	6 54.85	+20 46.4	1.409	2.322	11.7	20.9
2 11	6 51.79	+34 4.8	3.019	3.812	9.9	21.5	2 11	6 48.85	+21 24.7	1.501	2.344	15.7	21.2
<b>301156</b>	2008 <i>YA</i> <sub>19</sub>		1 9.2 99°52	0°9/ 9.0	18		<b>193079</b>	2000 <i>GD</i> <sub>34</sub>		1 9.2 324°13	1°6/ 8.7	18	
12 3	7 50.92	+23 58.1	1.626	2.426	16.7	20.9	12 3	7 44.37	+25 15.6	1.902	2.704	14.5	20.5
12 13	7 45.67	+24 6.5	1.555	2.436	13.0	20.7	12 13	7 40.52	+25 36.9	1.809	2.693	11.3	20.2
12 23	7 37.38	+24 18.0	1.506	2.447	8.5	20.4	12 23	7 34.03	+26 1.1	1.739	2.681	7.5	20.0
1 2	7 26.84	+24 28.9	1.482	2.457	3.7	20.2	1 2	7 25.47	+26 24.7	1.696	2.670	3.5	19.7
1 12	7 15.37	+24 35.7	1.486	2.468	1.8	20.0	1 12	7 15.88	+26 43.8	1.680	2.660	2.2	19.6
1 22	7 4.46	+24 36.1	1.519	2.478	6.5	20.4	1 22	7 6.49	+26 55.5	1.693	2.650	6.2	19.8
2 1	6 55.46	+24 30.2	1.578	2.487	11.0	20.7	2 1	6 58.52	+26 58.9	1.732	2.640	10.3	20.1
2 11	6 49.31	+24 19.1	1.661	2.497	14.8	20.9	2 11	6 52.93	+26 54.8	1.796	2.631	13.9	20.3
<b>31699</b>	1999 <i>JA</i> <sub>36</sub>		1 9.2 277°71	0°0/ 9.1	18 R		<b>457183</b>	2008 <i>GZ</i> <sub>123</sub>		1 9.2 238°17	6°0/ 7.		

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>497109</b>	2004 DV <sub>55</sub>		1 9.2 10°30	4.3/ 8.3	18		<b>381307</b>	2007 VB <sub>38</sub>		1 9.2 301°58	6°1/ 6.6	18	
12 3	7 48.68	+34 11.0	2.014	2.807	14.1	21.2	12 3	7 47.62	+37 38.0	2.237	3.023	13.1	20.9
12 13	7 43.69	+34 28.6	1.935	2.808	11.2	21.0	12 13	7 43.06	+38 46.6	2.150	3.014	10.7	20.7
12 23	7 35.95	+34 41.1	1.879	2.810	7.9	20.8	12 23	7 35.73	+39 51.3	2.087	3.004	8.1	20.6
1 2	7 26.21	+34 43.5	1.849	2.812	5.0	20.6	1 2	7 26.24	+40 45.1	2.050	2.995	6.3	20.4
1 12	7 15.64	+34 32.1	1.847	2.814	4.6	20.6	1 12	7 15.63	+41 22.2	2.042	2.986	6.4	20.4
1 22	7 5.55	+34 5.9	1.874	2.817	7.1	20.7	1 22	7 5.20	+41 39.1	2.061	2.977	8.4	20.5
2 1	6 57.14	+33 26.6	1.928	2.820	10.3	20.9	2 1	6 56.22	+41 36.0	2.107	2.968	11.0	20.7
2 11	6 51.29	+32 38.1	2.007	2.823	13.4	21.1	2 11	6 49.72	+41 16.0	2.176	2.959	13.6	20.8
<b>275409</b>	2011 BT <sub>54</sub>		1 9.2 201°15	0°8/ 8.9	18		<b>6716</b>	1990 RO <sub>1</sub>		1 9.2 38°59	2°2/ 9.9	18	
12 3	7 46.14	+22 41.4	2.212	3.000	13.2	21.1	12 3	7 44.47	+15 19.7	1.867	2.655	15.3	17.5
12 13	7 41.41	+23 11.7	2.123	2.998	10.3	20.9	12 13	7 40.34	+15 21.9	1.787	2.658	12.1	17.3
12 23	7 34.35	+23 46.8	2.056	2.995	6.8	20.7	12 23	7 33.74	+15 34.0	1.728	2.662	8.3	17.1
1 2	7 25.54	+24 23.3	2.018	2.993	2.9	20.4	1 2	7 25.30	+15 55.1	1.696	2.666	4.2	16.9
1 12	7 15.87	+24 57.6	2.009	2.990	1.5	20.3	1 12	7 16.03	+16 22.7	1.691	2.671	2.4	16.7
1 22	7 6.40	+25 26.7	2.031	2.988	5.3	20.6	1 22	7 7.04	+16 54.0	1.715	2.675	5.8	17.0
2 1	6 58.15	+25 48.9	2.081	2.984	9.0	20.8	2 1	6 59.45	+17 26.4	1.767	2.680	9.8	17.2
2 11	6 51.98	+26 4.2	2.156	2.981	12.3	21.0	2 11	6 54.10	+17 57.6	1.843	2.684	13.3	17.4
<b>78648</b>	2002 TS <sub>49</sub>		1 9.2 107°37	1°4/ 9.8	18		<b>421088</b>	2013 QR <sub>50</sub>		1 9.2 215°53	2°1/ 9.9	18	
12 3	7 44.89	+16 33.3	2.623	3.392	11.9	20.6	12 3	7 44.77	+15 27.4	2.046	2.828	14.4	21.3
12 13	7 39.79	+16 38.5	2.549	3.411	9.2	20.4	12 13	7 40.38	+15 24.5	1.959	2.827	11.3	21.1
12 23	7 32.92	+16 49.8	2.500	3.431	6.2	20.2	12 23	7 33.69	+15 30.3	1.894	2.826	7.8	20.9
1 2	7 24.80	+17 6.0	2.478	3.449	3.0	20.1	1 2	7 25.27	+15 43.9	1.855	2.826	4.0	20.7
1 12	7 16.19	+17 25.4	2.488	3.468	1.6	20.0	1 12	7 16.04	+16 3.6	1.846	2.825	2.3	20.5
1 22	7 7.89	+17 46.2	2.528	3.486	4.4	20.2	1 22	7 7.03	+16 27.2	1.865	2.824	5.6	20.8
2 1	7 0.63	+18 6.9	2.599	3.504	7.4	20.4	2 1	6 59.29	+16 52.5	1.913	2.823	9.3	21.0
2 11	6 55.02	+18 26.4	2.695	3.521	10.1	20.6	2 11	6 53.62	+17 17.6	1.986	2.822	12.7	21.2
<b>7994</b>	Bethellen		1 9.2 320°57	0°0/ 9.1	18		<b>457050</b>	2008 DJ <sub>25</sub>		1 9.2 314°83	2°6/ 8.4	16	
12 3	7 43.71	+21 15.4	2.049	2.844	13.9	17.4	12 3	7 45.57	+25 22.8	1.550	2.363	16.7	21.5
12 13	7 39.71	+21 24.9	1.956	2.835	10.8	17.2	12 13	7 42.22	+26 8.2	1.459	2.348	13.1	21.2
12 23	7 33.33	+21 39.4	1.886	2.827	7.2	17.0	12 23	7 35.61	+26 59.8	1.389	2.332	8.8	21.0
1 2	7 25.13	+21 56.7	1.843	2.819	3.1	16.7	1 2	7 26.33	+27 52.1	1.343	2.318	4.3	20.6
1 12	7 16.04	+22 14.1	1.828	2.811	1.2	16.5	1 12	7 15.59	+28 38.3	1.325	2.303	3.2	20.5
1 22	7 7.14	+22 29.2	1.843	2.803	5.4	16.8	1 22	7 4.97	+29 13.2	1.334	2.290	7.7	20.8
2 1	6 59.50	+22 40.7	1.885	2.796	9.4	17.0	2 1	6 56.07	+29 34.3	1.368	2.276	12.4	21.0
2 11	6 54.00	+22 48.2	1.952	2.789	12.9	17.2	2 11	6 50.17	+29 42.6	1.424	2.264	16.6	21.2
<b>363804</b>	2005 LO <sub>15</sub>		1 9.2 220°12	0°2/ 9.3	17		<b>126054</b>	2001 YJ <sub>77</sub>		1 9.3 192°87	1°2/ 8.8	18	
12 3	7 47.67	+17 59.8	2.232	3.007	13.5	22.0	12 3	7 49.67	+22 19.6	1.823	2.615	15.5	20.2
12 13	7 42.66	+18 48.4	2.131	2.998	10.6	21.8	12 13	7 44.70	+23 3.0	1.737	2.614	12.0	20.0
12 23	7 35.26	+19 46.8	2.053	2.989	7.0	21.6	12 23	7 36.84	+23 53.4	1.673	2.612	8.0	19.8
1 2	7 25.99	+20 51.9	2.004	2.979	3.1	21.3	1 2	7 26.73	+24 46.3	1.635	2.610	3.5	19.5
1 12	7 15.69	+21 59.2	1.986	2.968	1.1	21.1	1 12	7 15.49	+25 36.3	1.627	2.608	1.9	19.4
1 22	7 5.43	+23 4.2	1.999	2.957	5.3	21.4	1 22	7 4.45	+26 18.9	1.648	2.605	6.4	19.7
2 1	6 56.27	+24 3.2	2.042	2.945	9.2	21.6	2 1	6 54.97	+26 51.5	1.697	2.601	10.7	19.9
2 11	6 49.15	+24 54.5	2.111	2.933	12.6	21.8	2 11	6 48.09	+27 14.2	1.770	2.597	14.4	20.1
<b>328670</b>	2009 SM <sub>285</sub>		1 9.2 105°88	1°4/ 8.8	18		<b>46744</b>	1997 WP <sub>38</sub>		1 9.3 60°61	0°0/ 9.1	18	
12 3	7 48.91	+25 21.1	2.099	2.887	13.8	21.7	12 3	7 45.86	+21 29.9	2.036	2.827	14.1	18.6
12 13	7 43.47	+25 40.8	2.028	2.903	10.7	21.5	12 13	7 41.10	+21 39.7	1.969	2.846	10.9	18.4
12 23	7 35.61	+26 2.1	1.979	2.918	7.0	21.3	12 23	7 34.05	+21 53.9	1.924	2.864	7.1	18.2
1 2	7 26.02	+26 21.5	1.958	2.933	3.2	21.1	1 2	7 25.37	+22 10.0	1.907	2.882	3.0	18.0
1 12	7 15.74	+26 35.8	1.967	2.947	2.0	21.1	1 12	7 16.07	+22 25.2	1.919	2.901	1.2	17.9
1 22	7 5.90	+26 42.9	2.006	2.961	5.5	21.3	1 22	7 7.19	+22 37.7	1.960	2.920	5.2	18.2
2 1	6 57.53	+26 42.7	2.073	2.975	9.1	21.6	2 1	6 59.74	+22 46.4	2.029	2.938	8.9	18.5
2 11	6 51.42	+26 36.2	2.165	2.988	12.3	21.8	2 11	6 54.44	+22 51.2	2.124	2.957	12.1	18.7
<b>163594</b>	2002 TH <sub>207</sub>		1 9.2 45°89	1°7/ 8.8	18 R		<b>337945</b>	2001 YW <sub>123</sub>		1 9.3 11°83	5°8/ 8.6	18	
12 3	7 48.10	+25 57.5	1.773	2.574	15.5	19.8	12 3	7 55.24	+20 25.9	1.084	1.901	22.1	19.5
12 13	7 43.07	+26 14.7	1.720	2.602	11.9	19.7	12 13	7 49.99	+17 51.6	1.016	1.904	17.6	19.3
12 23	7 35.39	+26 33.0	1.689	2.630	7.8	19.5	12 23	7 40.65	+15 12.0	0.969	1.908	12.4	19.0
1 2	7 25.90	+26 48.6	1.684	2.659	3.6	19.3	1 2	7 28.35	+12 34.2	0.946	1.914	7.3	18.7
1 12	7 15.82	+26 57.9	1.708	2.688	2.2	19.3	1 12	7 14.97	+10 8.3	0.949	1.921	6.2	18.7
1 22	7 6.40	+26 59.3	1.761	2.717	6.0	19.6	1 22	7 2.61	+8 4.2	0.978	1.930	10.4	18.9
2 1	6 58.76	+26 53.0	1.840	2.747	9.8	19.9	2 1	6 53.02	+6 27.6	1.031	1.939	15.5	19.3
2 11	6 53.65	+26 40.6	1.944	2.776	13.1	20.1	2 11	6 47.27	+5 18.5	1.104	1.951	19.9	19.6
<b>369319</b>	2009 ST <sub>118</sub>		1 9.2 89°30	2°9/10.1	18		<b>419067</b>	2009 SY <sub>46</sub>		1 9.3 282°99	6°7/10.9	18	
12 3	7 45.33	+14 4.4	1.965	2.744	14.9	21.6	12 3	7 43.93	+5 13.2	1.987	2.739	15.7	21.0
12 13	7 40.82	+13 50.3	1.884	2.749	11.8	21.4	12 13	7 39.84	+4 22.4	1.891	2.728	13.1	20.8
12 23	7 33.95	+13 45.6	1.825	2.754	8.3	21.2	12 23	7 33.43	+3 45.0	1.817	2.716	10.3	20.6
1 2	7 25.35	+13 50.2	1.793	2.760	4.6	21.0	1 2	7 25.22	+3 24.1	1.766	2.705	7.7	20.4
1 12	7 15.99	+14 2.7	1.789	2.765	3.0	20.9	1 12	7 16.09	+3 21.2	1.743	2.693	6.8	20.4
1 22	7 6.93	+14 21.2	1.814	2.770	5.9	21.1	1 22	7 7.09	+3 36.1	1.748	2.681	8.2	20.4
2 1	6 59.21	+14 43.6	1.866	2.776	9.6	21.3	2 1	6 59.25	+4 6.2	1.779	2.670	11.1	20.6
2 11	6 53.64	+15 7.7	1.944	2.781	12.9	21.5	2 11	6 53.45	+4 47.7	1.833	2.658	14.1	20.7
<b>239715</b>	2009 BT <sub>2</sub>		1 9.2 16°52	0°5/ 9.4	18		<b>46993</b>	1998 TF <sub>18</sub>		1 9.3 30°84	3°7/10.2	18	
12 3	7 42.94	+19 53.8	1.828	2.629	15.1	20.1	12 3	7 44.92	+14 11.7	1.330	2.137	19.3	18.1



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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>438035</b>	2004 <i>HT</i> <sub>3</sub>		1 9.3 102°63	6°2/ 7.6 17			<b>494183</b>	2016 <i>GA</i> <sub>247</sub>		1 9.3 68°05	7°3/ 6.5 18		
12 3	7 59.25	+35 29.4	1.706	2.491	16.6	21.6	12 3	7 51.12	+42 16.5	2.229	3.004	13.5	21.3
12 13	7 52.28	+36 40.7	1.653	2.518	13.2	21.5	12 13	7 45.83	+43 24.2	2.157	3.006	11.2	21.2
12 23	7 41.80	+37 46.1	1.622	2.545	9.6	21.3	12 23	7 37.56	+44 23.6	2.108	3.009	9.0	21.0
1 2	7 28.78	+38 36.6	1.617	2.570	6.8	21.2	1 2	7 27.05	+45 7.5	2.085	3.012	7.5	20.9
1 12	7 14.82	+39 5.0	1.641	2.595	6.6	21.2	1 12	7 15.50	+45 29.9	2.090	3.015	7.6	20.9
1 22	7 1.70	+39 9.1	1.693	2.619	9.0	21.4	1 22	7 4.35	+45 28.7	2.121	3.018	9.2	21.0
2 1	6 50.96	+38 51.6	1.771	2.643	12.2	21.7	2 1	6 54.95	+45 5.4	2.178	3.021	11.4	21.2
2 11	6 43.60	+38 18.4	1.872	2.665	15.1	21.9	2 11	6 48.29	+44 24.8	2.258	3.024	13.7	21.4
<b>221135</b>	2005 <i>SX</i> <sub>280</sub>		1 9.3 80°41	3°6/ 8.5 18			<b>409598</b>	2005 <i>UJ</i> <sub>353</sub>		1 9.3 32°68	4°6/ 8.2 18		
12 3	7 52.47	+31 29.8	1.890	2.681	15.0	20.8	12 3	7 49.07	+32 3.5	1.586	2.394	16.7	20.8
12 13	7 46.50	+31 52.0	1.828	2.702	11.7	20.6	12 13	7 44.62	+32 39.1	1.520	2.403	13.1	20.6
12 23	7 37.71	+32 10.8	1.789	2.723	8.0	20.4	12 23	7 36.90	+33 11.7	1.476	2.412	9.1	20.4
1 2	7 26.96	+32 21.0	1.776	2.743	4.6	20.2	1 2	7 26.76	+33 34.7	1.456	2.422	5.5	20.2
1 12	7 15.52	+32 18.9	1.792	2.764	3.9	20.2	1 12	7 15.64	+33 42.7	1.463	2.433	5.0	20.2
1 22	7 4.76	+32 3.5	1.838	2.784	6.8	20.5	1 22	7 5.14	+33 33.6	1.498	2.444	8.1	20.4
2 1	6 55.87	+31 36.3	1.910	2.804	10.3	20.7	2 1	6 56.71	+33 8.9	1.558	2.456	11.9	20.6
2 11	6 49.68	+31 0.9	2.007	2.824	13.3	20.9	2 11	6 51.34	+32 32.9	1.640	2.468	15.3	20.9
<b>350070</b>	2011 <i>HP</i> <sub>39</sub>		1 9.3 164°58	2°1/ 9.9 18			<b>140820</b>	2001 <i>UO</i> <sub>163</sub>		1 9.3 173°88	6°9/ 12.0 18		
12 3	7 50.72	+14 48.2	1.937	2.708	15.4	21.9	12 3	7 42.68	- 4 43.6	3.287	3.957	11.5	20.6
12 13	7 45.08	+14 59.6	1.853	2.715	12.2	21.7	12 13	7 37.84	- 5 40.0	3.198	3.960	10.1	20.5
12 23	7 36.85	+15 21.5	1.791	2.721	8.3	21.5	12 23	7 31.58	- 6 23.8	3.132	3.962	8.6	20.4
1 2	7 26.68	+15 52.3	1.756	2.726	4.2	21.3	1 2	7 24.31	- 6 52.3	3.091	3.964	7.4	20.3
1 12	7 15.59	+16 29.1	1.751	2.730	2.3	21.2	1 12	7 16.56	- 7 4.2	3.077	3.966	6.9	20.2
1 22	7 4.78	+17 8.7	1.776	2.734	5.9	21.4	1 22	7 8.94	- 6 59.6	3.092	3.966	7.4	20.3
2 1	6 55.42	+17 48.0	1.830	2.736	9.9	21.6	2 1	7 2.04	- 6 39.8	3.134	3.967	8.6	20.4
2 11	6 48.41	+18 25.0	1.908	2.738	13.4	21.9	2 11	6 56.37	- 6 7.7	3.201	3.967	10.0	20.5
<b>415722</b>	1999 <i>TV</i> <sub>67</sub>		1 9.3 52°59	1°9/ 9.8 18			<b>249370</b>	2009 <i>AV</i> <sub>47</sub>		1 9.3 202°25	3°3/ 10.3 18		
12 3	7 45.83	+16 28.8	1.765	2.556	15.9	20.9	12 3	7 47.10	+12 22.5	2.009	2.778	15.0	21.3
12 13	7 41.33	+16 27.4	1.702	2.576	12.4	20.7	12 13	7 42.28	+12 15.6	1.917	2.775	12.0	21.1
12 23	7 34.32	+16 35.1	1.660	2.596	8.4	20.6	12 23	7 35.03	+12 19.7	1.847	2.771	8.5	20.8
1 2	7 25.53	+16 50.5	1.644	2.616	4.1	20.3	1 2	7 25.95	+12 34.8	1.803	2.767	4.9	20.6
1 12	7 16.06	+17 11.0	1.656	2.636	2.1	20.2	1 12	7 15.94	+12 59.3	1.788	2.763	3.4	20.5
1 22	7 7.08	+17 34.0	1.696	2.657	5.8	20.5	1 22	7 6.13	+13 31.0	1.803	2.758	6.1	20.7
2 1	6 59.67	+17 57.4	1.764	2.677	9.8	20.8	2 1	6 57.58	+14 7.0	1.846	2.752	9.8	20.9
2 11	6 54.61	+18 19.5	1.856	2.698	13.2	21.1	2 11	6 51.17	+14 44.6	1.913	2.746	13.3	21.1
<b>497003</b>	2002 <i>UG</i> <sub>78</sub>		1 9.3 85°56	0°0/ 9.1 18			<b>53293</b>	1999 <i>GA</i> <sub>14</sub>		1 9.3 311°17	0°6/ 9.5 18		
12 3	7 41.59	+21 28.6	3.335	4.109	9.5	21.8	12 3	7 43.48	+19 33.6	2.154	2.943	13.5	19.5
12 13	7 36.96	+21 36.9	3.263	4.130	7.3	21.7	12 13	7 39.43	+19 40.8	2.060	2.935	10.5	19.3
12 23	7 30.95	+21 47.5	3.216	4.152	4.8	21.5	12 23	7 33.13	+19 53.9	1.989	2.927	7.0	19.0
1 2	7 23.98	+21 59.1	3.199	4.173	2.0	21.4	1 2	7 25.12	+20 11.1	1.944	2.919	3.1	18.8
1 12	7 16.66	+22 10.4	3.212	4.194	0.8	21.3	1 12	7 16.27	+20 30.1	1.929	2.911	1.2	18.6
1 22	7 9.57	+22 20.0	3.257	4.215	3.5	21.5	1 22	7 7.58	+20 48.6	1.943	2.903	5.2	18.9
2 1	7 3.30	+22 27.4	3.333	4.236	6.0	21.7	2 1	7 0.07	+21 5.2	1.985	2.896	9.0	19.1
2 11	6 58.32	+22 32.3	3.435	4.257	8.2	21.9	2 11	6 54.56	+21 18.8	2.052	2.889	12.4	19.3
<b>219789</b>	2002 <i>AS</i> <sub>85</sub>		1 9.3 37°54	2°9/ 10.1 18			<b>368956</b>	2007 <i>BC</i> <sub>1</sub>		1 9.3 306°01	1°5/ 8.9 18		
12 3	7 44.81	+14 29.3	1.704	2.494	16.4	20.1	12 3	7 47.04	+25 43.6	1.730	2.534	15.7	20.2
12 13	7 40.77	+14 19.7	1.629	2.501	13.0	19.9	12 13	7 42.98	+25 50.4	1.632	2.516	12.3	19.9
12 23	7 34.11	+14 21.0	1.576	2.509	9.0	19.7	12 23	7 35.92	+25 59.0	1.556	2.498	8.2	19.6
1 2	7 25.51	+14 32.7	1.547	2.516	4.8	19.5	1 2	7 26.46	+26 5.7	1.506	2.481	3.8	19.3
1 12	7 16.06	+14 52.8	1.547	2.524	3.0	19.4	1 12	7 15.75	+26 6.9	1.483	2.464	2.2	19.2
1 22	7 6.98	+15 18.8	1.574	2.533	6.3	19.6	1 22	7 5.22	+26 0.2	1.488	2.447	6.7	19.4
2 1	6 59.44	+15 47.9	1.628	2.541	10.4	19.8	2 1	6 56.27	+25 45.6	1.520	2.430	11.3	19.6
2 11	6 54.31	+16 17.5	1.705	2.550	14.0	20.1	2 11	6 50.05	+25 24.7	1.575	2.414	15.3	19.8
<b>339705</b>	2005 <i>RB</i> <sub>22</sub>		1 9.3 63°36	7°2/ 7.6 18			<b>352647</b>	2008 <i>OD</i> <sub>14</sub>		1 9.3 73°08	0°0/ 9.1 17		
12 3	8 0.06	+33 42.2	1.227	2.036	20.5	20.2	12 3	7 53.63	+22 55.6	1.363	2.169	19.0	20.8
12 13	7 53.69	+35 15.9	1.194	2.074	16.1	20.0	12 13	7 48.09	+22 41.6	1.304	2.188	14.7	20.6
12 23	7 43.02	+36 43.6	1.180	2.111	11.5	19.9	12 23	7 39.11	+22 31.2	1.265	2.207	9.7	20.4
1 2	7 29.32	+37 52.7	1.190	2.149	7.9	19.8	1 2	7 27.68	+22 21.5	1.251	2.226	4.2	20.1
1 12	7 14.71	+38 33.8	1.226	2.185	7.6	19.9	1 12	7 15.38	+22 9.8	1.263	2.246	1.5	20.0
1 22	7 1.44	+38 44.6	1.288	2.222	10.5	20.2	1 22	7 3.94	+21 55.0	1.304	2.265	7.0	20.4
2 1	6 51.34	+38 29.6	1.374	2.258	14.2	20.5	2 1	6 54.84	+21 37.7	1.370	2.284	11.9	20.7
2 11	6 45.35	+37 56.7	1.481	2.293	17.5	20.8	2 11	6 49.01	+21 19.3	1.458	2.303	16.0	21.0
<b>271141</b>	2003 <i>SN</i> <sub>134</sub>		1 9.3 10°00	1°3/ 9.6 18			<b>79832</b>	1998 <i>WB</i> <sub>11</sub>		1 9.3 351°92	1°6/ 8.8 18		
12 3	7 45.27	+18 30.8	2.021	2.808	14.3	20.6	12 3	7 41.58	+22 28.6	1.248	2.080	18.9	18.5
12 13	7 40.82	+18 21.0	1.935	2.809	11.2	20.4	12 13	7 39.59	+23 9.5	1.172	2.072	14.8	18.3
12 23	7 34.00	+18 17.2	1.873	2.809	7.5	20.1	12 23	7 34.10	+24 0.3	1.116	2.065	9.8	18.0
1 2	7 25.44	+18 18.0	1.836	2.810	3.5	19.9	1 2	7 25.77	+24 55.8	1.082	2.059	4.3	17.6
1 12	7 16.09	+18 22.1	1.829	2.810	1.7	19.8	1 12	7 16.01	+25 48.9	1.074	2.055	2.5	17.5
1 22	7 7.02	+18 27.7	1.851	2.811	5.4	20.0	1 22	7 6.55	+26 33.4	1.090	2.052	7.9	17.8
2 1	6 59.27	+18 33.8	1.901	2.812	9.3	20.3	2 1	6 59.13	+27 5.7	1.130	2.051	13.2	18.1
2 11	6 53.67	+18 39.5	1.975	2.812	12.7	20.5	2 11	6 55.01	+27 25.5	1.191	2.051	17.8	18.4
<b>71632</b>	2000 <i>ER</i> <sub>76</sub>		1 9.3 11°44	5°0/ 7.5 18			<b>247044</b>	2000 <i>GA</i> <sub>24</sub>		1 9.3 196°95	1°4/ 8.7 18		
12 3	7 48.12	+34 35.7	2.097	2.8									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>486765</b>	2014 <i>GN</i> <sub>39</sub>		1 9.3 237°27	4.8/ 7.8	18		<b>232333</b>	2002 <i>TJ</i> <sub>189</sub>		1 9.3 65°11	2.4/ 8.7	18	
12 3	7 52.23	+30 23.8	1.589	2.392	16.9	21.7	12 3	7 48.19	+29 12.8	2.135	2.926	13.5	20.0
12 13	7 47.50	+31 25.6	1.504	2.384	13.4	21.4	12 13	7 43.03	+29 22.7	2.058	2.934	10.5	19.8
12 23	7 39.19	+32 29.3	1.440	2.376	9.4	21.2	12 23	7 35.43	+29 30.9	2.005	2.942	7.1	19.6
1 2	7 27.96	+33 26.8	1.401	2.368	5.7	21.0	1 2	7 26.08	+29 33.8	1.979	2.950	3.6	19.4
1 12	7 15.19	+34 9.7	1.390	2.359	5.3	20.9	1 12	7 16.03	+29 28.6	1.982	2.959	2.8	19.3
1 22	7 2.64	+34 32.9	1.407	2.350	8.8	21.1	1 22	7 6.40	+29 14.1	2.015	2.967	5.8	19.5
2 1	6 52.08	+34 35.8	1.449	2.341	13.0	21.3	2 1	6 58.27	+28 51.3	2.076	2.975	9.3	19.8
2 11	6 44.82	+34 22.1	1.513	2.332	16.9	21.5	2 11	6 52.41	+28 22.1	2.161	2.984	12.3	20.0
<b>416549</b>	2004 <i>BK</i> <sub>80</sub>		1 9.3 24°86	6.7/13.5	18		<b>288804</b>	2004 <i>RO</i> <sub>158</sub>		1 9.3 91°21	1.9/ 8.9	18	
12 3	7 43.59	- 1 16.2	1.788	2.521	17.9	20.0	12 3	7 52.33	+26 26.7	1.526	2.329	17.4	20.9
12 13	7 39.71	- 0 33.2	1.710	2.531	15.0	19.8	12 13	7 47.10	+26 35.6	1.455	2.338	13.6	20.6
12 23	7 33.39	+ 0 37.1	1.652	2.542	11.7	19.6	12 23	7 38.55	+26 45.5	1.406	2.347	9.0	20.4
1 2	7 25.25	+ 2 15.0	1.618	2.554	8.6	19.5	1 2	7 27.53	+26 51.8	1.381	2.356	4.2	20.1
1 12	7 16.27	+ 4 17.0	1.612	2.566	6.7	19.4	1 12	7 15.50	+26 50.3	1.384	2.365	2.5	20.1
1 22	7 7.55	+ 6 35.6	1.635	2.579	7.8	19.5	1 22	7 4.09	+26 39.4	1.416	2.373	7.1	20.4
2 1	7 0.20	+ 9 1.3	1.687	2.593	10.7	19.7	2 1	6 54.79	+26 19.8	1.473	2.382	11.6	20.6
2 11	6 55.05	+11 25.1	1.766	2.607	13.8	19.9	2 11	6 48.59	+25 54.3	1.553	2.390	15.6	20.9
<b>104560</b>	2000 <i>GK</i> <sub>71</sub>		1 9.3 184°05	3°1/10.3	18		<b>111790</b>	2002 <i>CQ</i> <sub>238</sub>		1 9.3 276°51	1°3/ 9.0	18	
12 3	7 46.31	+12 21.4	2.244	3.007	13.8	21.0	12 3	7 50.08	+25 4.3	1.589	2.392	16.9	20.0
12 13	7 41.37	+12 12.4	2.153	3.007	11.0	20.8	12 13	7 45.43	+25 8.7	1.504	2.387	13.2	19.7
12 23	7 34.28	+12 13.1	2.085	3.007	7.8	20.6	12 23	7 37.56	+25 15.4	1.440	2.382	8.8	19.5
1 2	7 25.59	+12 23.4	2.043	3.007	4.6	20.4	1 2	7 27.18	+25 20.4	1.402	2.377	3.9	19.2
1 12	7 16.14	+12 42.1	2.032	3.006	3.2	20.3	1 12	7 15.61	+25 20.0	1.391	2.372	2.0	19.0
1 22	7 6.88	+13 7.3	2.050	3.004	5.6	20.5	1 22	7 4.40	+25 12.2	1.408	2.367	6.9	19.3
2 1	6 58.77	+13 36.8	2.098	3.002	8.9	20.7	2 1	6 55.06	+24 57.1	1.451	2.362	11.6	19.6
2 11	6 52.57	+14 8.3	2.171	2.999	12.0	20.9	2 11	6 48.69	+24 36.6	1.517	2.357	15.7	19.8
<b>196952</b>	2003 <i>UX</i> <sub>48</sub>		1 9.3 56°35	0°8/ 9.5	18		<b>263709</b>	2008 <i>HX</i> <sub>33</sub>		1 9.3 96°05	0°9/ 8.8	17	
12 3	7 47.99	+18 37.7	1.833	2.622	15.5	20.1	12 3	7 41.84	+24 16.7	3.534	4.309	9.0	21.0
12 13	7 42.80	+18 51.7	1.781	2.655	11.9	19.9	12 13	7 37.18	+24 47.3	3.462	4.330	6.9	20.9
12 23	7 35.18	+19 12.9	1.751	2.688	7.9	19.7	12 23	7 31.15	+25 19.4	3.416	4.352	4.5	20.8
1 2	7 25.90	+19 38.6	1.747	2.722	3.5	19.5	1 2	7 24.16	+25 50.9	3.399	4.373	2.0	20.6
1 12	7 16.08	+20 5.7	1.773	2.755	1.4	19.4	1 12	7 16.78	+26 19.8	3.414	4.394	1.2	20.6
1 22	7 6.86	+20 31.3	1.828	2.788	5.5	19.8	1 22	7 9.60	+26 44.4	3.461	4.415	3.6	20.8
2 1	6 59.26	+20 53.9	1.910	2.821	9.3	20.1	2 1	7 3.19	+27 3.9	3.538	4.435	5.9	20.9
2 11	6 53.99	+21 12.5	2.018	2.854	12.5	20.3	2 11	6 58.03	+27 18.3	3.643	4.455	8.0	21.1
<b>231675</b>	1994 <i>RV</i> <sub>5</sub>		1 9.3 297°22	3°0/ 9.9	18		<b>135249</b>	2001 <i>SX</i> <sub>30</sub>		1 9.3 188°35	3°6/ 10.9	18	
12 3	7 46.71	+15 30.7	1.433	2.235	18.4	20.6	12 3	7 42.42	+ 8 26.4	2.833	3.578	11.6	21.0
12 13	7 43.04	+15 15.6	1.345	2.224	14.7	20.3	12 13	7 37.94	+ 8 17.9	2.739	3.577	9.4	20.9
12 23	7 36.13	+15 11.0	1.277	2.214	10.2	20.0	12 23	7 31.83	+ 8 19.2	2.667	3.576	7.0	20.7
1 2	7 26.61	+15 19.7	1.232	2.203	5.4	19.7	1 2	7 24.52	+ 8 30.8	2.623	3.575	4.6	20.6
1 12	7 15.73	+15 35.8	1.214	2.193	3.2	19.5	1 12	7 16.63	+ 8 52.0	2.609	3.573	3.6	20.5
1 22	7 5.04	+15 59.1	1.222	2.183	7.5	19.8	1 22	7 8.89	+ 9 21.3	2.625	3.571	5.1	20.6
2 1	6 56.11	+16 26.1	1.256	2.173	12.5	20.0	2 1	7 1.97	+ 9 56.7	2.671	3.569	7.5	20.7
2 11	6 50.14	+16 54.1	1.311	2.164	17.0	20.3	2 11	6 56.48	+10 35.7	2.744	3.566	10.0	20.9
<b>445112</b>	2008 <i>UM</i> <sub>140</sub>		1 9.3 62°63	0°4/ 9.4	17		<b>415247</b>	2012 <i>JH</i> <sub>42</sub>		1 9.3 352°45	1°4/ 8.8	18	
12 3	7 49.97	+20 2.0	1.354	2.163	19.0	21.1	12 3	7 46.52	+24 16.0	1.905	2.703	14.7	21.0
12 13	7 45.36	+20 11.7	1.295	2.180	14.7	20.9	12 13	7 42.13	+24 43.5	1.822	2.702	11.4	20.8
12 23	7 37.41	+20 29.7	1.255	2.197	9.7	20.6	12 23	7 35.10	+25 14.8	1.761	2.702	7.6	20.5
1 2	7 27.01	+20 52.8	1.239	2.215	4.2	20.4	1 2	7 26.05	+25 46.3	1.726	2.701	3.4	20.3
1 12	7 15.66	+21 16.6	1.250	2.232	1.5	20.2	1 12	7 16.06	+26 13.6	1.721	2.701	2.0	20.2
1 22	7 5.00	+21 37.6	1.288	2.250	7.0	20.6	1 22	7 6.34	+26 33.8	1.744	2.701	6.0	20.4
2 1	6 56.50	+21 54.0	1.351	2.268	11.9	21.0	2 1	6 58.09	+26 45.7	1.794	2.701	10.1	20.7
2 11	6 51.14	+22 5.5	1.437	2.286	16.0	21.2	2 11	6 52.25	+26 49.7	1.869	2.701	13.6	20.9
<b>29770</b>	<i>Timpiper</i>		1 9.3 75°23	1°5/ 9.8	18		<b>251214</b>	2006 <i>UB</i> <sub>189</sub>		1 9.3 103°22	5°0/ 10.6	18	
12 3	7 49.21	+15 52.4	1.436	2.234	18.6	18.7	12 3	7 49.11	+ 9 25.6	1.977	2.734	15.6	21.1
12 13	7 44.60	+16 19.7	1.374	2.252	14.5	18.5	12 13	7 43.52	+ 8 42.7	1.909	2.755	12.6	21.0
12 23	7 36.86	+17 0.5	1.331	2.269	9.8	18.2	12 23	7 35.65	+ 8 11.5	1.862	2.775	9.3	20.8
1 2	7 26.78	+17 51.5	1.313	2.287	4.6	18.0	1 2	7 26.16	+ 7 53.3	1.842	2.794	6.2	20.6
1 12	7 15.73	+18 47.6	1.323	2.304	2.0	17.9	1 12	7 16.06	+ 7 48.4	1.850	2.813	5.0	20.6
1 22	7 5.24	+19 43.2	1.360	2.321	6.7	18.2	1 22	7 6.41	+ 7 55.6	1.888	2.832	6.9	20.8
2 1	6 56.71	+20 34.3	1.423	2.339	11.4	18.5	2 1	6 58.19	+ 8 12.7	1.953	2.850	9.9	21.0
2 11	6 51.13	+21 18.5	1.510	2.356	15.5	18.8	2 11	6 52.13	+ 8 36.7	2.043	2.867	12.9	21.2
<b>70257</b>	1999 <i>RG</i> <sub>89</sub>		1 9.3 190°29	3°1/10.3	18		<b>69669</b>	1998 <i>FF</i> <sub>137</sub>		1 9.3 257°00	1°1/ 9.6	18	
12 3	7 47.75	+12 38.2	2.046	2.813	14.8	20.0	12 3	7 48.29	+18 37.3	1.832	2.620	15.5	20.8
12 13	7 42.73	+12 31.7	1.955	2.812	11.8	19.8	12 13	7 43.69	+18 37.8	1.731	2.605	12.3	20.5
12 23	7 35.31	+12 35.7	1.886	2.811	8.4	19.6	12 23	7 36.29	+18 45.6	1.652	2.589	8.3	20.2
1 2	7 26.09	+12 50.1	1.844	2.809	4.8	19.4	1 2	7 26.65	+18 59.1	1.599	2.573	3.9	19.9
1 12	7 15.99	+13 13.4	1.831	2.806	3.2	19.3	1 12	7 15.81	+19 15.8	1.574	2.556	1.6	19.7
1 22	7 6.08	+13 43.4	1.848	2.803	6.0	19.4	1 22	7 5.05	+19 33.2	1.579	2.539	6.2	20.0
2 1	6 57.45	+14 17.3	1.893	2.799	9.6	19.7	2 1	6 55.70	+19 49.3	1.611	2.521	10.7	20.2
2 11	6 50.93	+14 52.6	1.964	2.795	13.0	19.9	2 11	6 48.80	+20 3.3	1.667	2.504	14.7	20.4
<b>267940</b>	2004 <i>EM</i> <sub>20</sub>		1 9.3 139°26	16°9/ 9.1	18		<b>236911</b>	2007 <i>TX</i> <sub>99</sub>		1 9.3 214°45	0°1/ 9.4	17	
12 3	9 16.06	+44 25.5	0.768	1.5									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>99446</b>	2002 <i>CS</i> <sub>24</sub>		1 9.3 305°62	3°0/ 9.9	18		<b>174886</b>	2004 <i>BW</i> <sub>83</sub>		1 9.3 285°68	4°1/ 8.6	18	
12 3	7 47.37	+16 18.6	1.506	2.305	17.8	19.6	12 3	7 53.61	+32 56.5	1.821	2.612	15.5	19.9
12 13	7 43.34	+15 49.6	1.420	2.298	14.2	19.4	12 13	7 48.26	+33 5.0	1.715	2.587	12.4	19.7
12 23	7 36.20	+15 29.1	1.354	2.291	9.8	19.1	12 23	7 39.56	+33 8.6	1.630	2.562	8.8	19.4
1 2	7 26.63	+15 17.4	1.313	2.284	5.2	18.8	1 2	7 28.16	+33 1.5	1.571	2.537	5.2	19.1
1 12	7 15.84	+15 13.7	1.298	2.277	3.2	18.7	1 12	7 15.33	+32 38.9	1.540	2.511	4.4	19.0
1 22	7 5.34	+15 16.6	1.310	2.270	7.2	18.9	1 22	7 2.69	+31 58.9	1.538	2.486	7.8	19.2
2 1	6 56.57	+15 24.4	1.348	2.264	12.0	19.1	2 1	6 51.84	+31 3.8	1.563	2.460	11.9	19.3
2 11	6 50.64	+15 35.3	1.409	2.258	16.2	19.4	2 11	6 44.00	+29 58.6	1.612	2.434	15.8	19.5
<b>485100</b>	2010 <i>GG</i> <sub>97</sub>		1 9.3 165°05	4°6/ 7.4	18		<b>364298</b>	2006 <i>TD</i> <sub>129</sub>		1 9.3 168°52	5°8/ 7.4	18	
12 3	7 53.31	+32 7.5	2.103	2.885	14.0	22.0	12 3	7 53.62	+36 55.7	2.114	2.893	14.0	21.3
12 13	7 47.40	+33 19.5	2.024	2.891	11.0	21.8	12 13	7 47.71	+37 51.4	2.036	2.897	11.3	21.2
12 23	7 38.62	+34 30.9	1.969	2.897	7.8	21.6	12 23	7 38.83	+38 42.0	1.981	2.900	8.4	21.0
1 2	7 27.60	+35 34.6	1.941	2.901	5.2	21.5	1 2	7 27.70	+39 20.5	1.953	2.902	6.2	20.8
1 12	7 15.49	+36 24.0	1.944	2.905	5.0	21.5	1 12	7 15.54	+39 41.0	1.954	2.904	6.1	20.8
1 22	7 3.64	+36 55.4	1.976	2.908	7.5	21.6	1 22	7 3.77	+39 41.1	1.983	2.906	8.2	21.0
2 1	6 53.38	+37 8.4	2.036	2.910	10.7	21.8	2 1	6 53.74	+39 22.1	2.040	2.907	11.0	21.2
2 11	6 45.72	+37 5.8	2.120	2.912	13.6	22.0	2 11	6 46.44	+38 48.1	2.120	2.908	13.7	21.3
<b>259899</b>	2004 <i>DC</i> <sub>74</sub>		1 9.3 16°92	1°2/ 8.9	18		<b>329611</b>	2003 <i>HX</i> <sub>4</sub>		1 9.3 274°21	2°7/ 10.2	18	
12 3	7 48.22	+24 24.5	1.667	2.470	16.2	21.1	12 3	7 45.17	+13 33.6	2.073	2.847	14.4	21.5
12 13	7 43.76	+24 37.1	1.588	2.471	12.6	20.9	12 13	7 40.97	+13 34.2	1.963	2.826	11.6	21.2
12 23	7 36.32	+24 52.8	1.530	2.472	8.4	20.7	12 23	7 34.36	+13 45.4	1.876	2.805	8.1	21.0
1 2	7 26.62	+25 8.1	1.498	2.473	3.7	20.4	1 2	7 25.82	+14 6.8	1.816	2.783	4.5	20.7
1 12	7 15.88	+25 19.1	1.493	2.474	1.9	20.3	1 12	7 16.21	+14 36.9	1.783	2.761	2.8	20.6
1 22	7 5.53	+25 23.1	1.517	2.476	6.5	20.6	1 22	7 6.58	+15 13.2	1.781	2.738	5.9	20.7
2 1	6 56.93	+25 19.9	1.567	2.477	11.0	20.8	2 1	6 58.05	+15 52.8	1.806	2.716	9.8	20.9
2 11	6 51.08	+25 10.5	1.640	2.479	14.8	21.1	2 11	6 51.56	+16 32.9	1.857	2.693	13.5	21.1
<b>502564</b>	2015 <i>BL</i> <sub>492</sub>		1 9.3 209°95	1°7/ 8.7	17		<b>75519</b>	1999 <i>XM</i> <sub>205</sub>		1 9.3 228°74	4°1/ 8.4	18	
12 3	7 46.34	+28 0.0	2.887	3.665	10.7	21.7	12 3	7 53.46	+33 5.1	2.017	2.802	14.4	19.0
12 13	7 41.10	+28 12.6	2.790	3.659	8.3	21.5	12 13	7 47.61	+33 25.3	1.924	2.793	11.5	18.8
12 23	7 33.97	+28 24.6	2.719	3.653	5.6	21.3	12 23	7 38.79	+33 41.5	1.855	2.785	8.1	18.5
1 2	7 25.47	+28 33.4	2.675	3.647	2.8	21.1	1 2	7 27.70	+33 48.2	1.812	2.776	4.9	18.3
1 12	7 16.32	+28 36.7	2.663	3.640	2.0	21.1	1 12	7 15.55	+33 40.9	1.798	2.766	4.4	18.3
1 22	7 7.37	+28 33.3	2.682	3.633	4.6	21.2	1 22	7 3.74	+33 18.0	1.813	2.756	7.2	18.4
2 1	6 59.41	+28 23.0	2.731	3.626	7.5	21.4	2 1	6 53.63	+32 41.0	1.856	2.746	10.7	18.6
2 11	6 53.12	+28 6.9	2.806	3.618	10.1	21.6	2 11	6 46.22	+31 53.9	1.924	2.736	14.0	18.8
<b>26271</b>	Lindapuster		1 9.3 224°67	2°6/ 10.1	18		<b>465729</b>	2009 <i>VV</i> <sub>12</sub>		1 9.3 315°43	1°3/ 9.7	18	
12 3	7 48.95	+14 13.8	1.721	2.502	16.7	19.3	12 3	7 45.81	+18 25.6	1.997	2.784	14.5	22.0
12 13	7 44.27	+14 18.6	1.627	2.494	13.3	19.0	12 13	7 41.34	+18 20.3	1.910	2.783	11.3	21.8
12 23	7 36.71	+14 35.6	1.555	2.486	9.2	18.8	12 23	7 34.46	+18 21.2	1.846	2.783	7.6	21.6
1 2	7 26.85	+15 4.1	1.507	2.477	4.9	18.5	1 2	7 25.78	+18 27.3	1.809	2.782	3.6	21.4
1 12	7 15.77	+15 41.3	1.488	2.467	2.8	18.3	1 12	7 16.27	+18 36.4	1.800	2.781	1.6	21.2
1 22	7 4.83	+16 23.7	1.498	2.457	6.6	18.5	1 22	7 7.02	+18 46.9	1.821	2.781	5.5	21.5
2 1	6 55.37	+17 7.6	1.536	2.447	11.1	18.8	2 1	6 59.10	+18 57.3	1.869	2.780	9.4	21.7
2 11	6 48.48	+17 50.2	1.597	2.436	15.1	19.0	2 11	6 53.36	+19 6.7	1.942	2.780	12.9	21.9
<b>6748</b>	Bratton		1 9.3 199°06	1°0/ 8.9	18		<b>274312</b>	2008 <i>QH</i> <sub>41</sub>		1 9.3 63°58	0°5/ 9.5	18	
12 3	7 49.30	+23 4.8	2.078	2.863	14.0	18.7	12 3	7 45.71	+20 1.7	2.001	2.791	14.3	21.1
12 13	7 44.11	+23 34.2	1.986	2.860	10.9	18.5	12 13	7 41.21	+20 7.5	1.922	2.798	11.1	20.9
12 23	7 36.34	+24 8.3	1.918	2.856	7.2	18.2	12 23	7 34.32	+20 19.1	1.867	2.805	7.4	20.7
1 2	7 26.61	+24 43.5	1.877	2.852	3.2	18.0	1 2	7 25.70	+20 34.2	1.837	2.812	3.3	20.5
1 12	7 15.89	+25 15.6	1.867	2.848	1.7	17.8	1 12	7 16.31	+20 50.3	1.837	2.820	1.2	20.3
1 22	7 5.36	+25 41.7	1.886	2.842	5.7	18.1	1 22	7 7.26	+21 5.3	1.867	2.827	5.3	20.7
2 1	6 56.20	+26 0.0	1.934	2.837	9.6	18.3	2 1	6 59.57	+21 17.8	1.924	2.834	9.2	20.9
2 11	6 49.31	+26 10.9	2.006	2.830	13.1	18.5	2 11	6 54.07	+21 27.2	2.006	2.842	12.6	21.1
<b>270637</b>	2002 <i>PO</i> <sub>78</sub>		1 9.3 201°02	0°4/ 9.2	18		<b>217428</b>	2005 <i>RY</i> <sub>43</sub>		1 9.3 156°31	3°1/ 10.2	18	
12 3	7 51.85	+21 7.1	1.738	2.527	16.2	21.8	12 3	7 47.82	+12 35.5	2.528	3.282	12.7	21.2
12 13	7 46.58	+21 34.7	1.648	2.524	12.7	21.5	12 13	7 42.20	+12 9.2	2.442	3.291	10.1	21.1
12 23	7 38.25	+22 9.9	1.581	2.519	8.4	21.3	12 23	7 34.68	+11 50.2	2.380	3.299	7.2	20.9
1 2	7 27.51	+22 48.7	1.539	2.514	3.7	21.0	1 2	7 25.78	+11 39.0	2.346	3.306	4.3	20.7
1 12	7 15.55	+23 26.5	1.527	2.509	1.5	20.8	1 12	7 16.30	+11 35.2	2.342	3.313	3.2	20.7
1 22	7 3.78	+23 58.9	1.544	2.502	6.5	21.1	1 22	7 7.07	+11 38.0	2.369	3.319	5.2	20.8
2 1	6 53.66	+24 24.0	1.588	2.495	11.1	21.4	2 1	6 58.92	+11 46.1	2.426	3.324	8.2	21.0
2 11	6 46.28	+24 41.4	1.657	2.487	15.1	21.6	2 11	6 52.51	+11 58.1	2.509	3.329	10.9	21.2
<b>257835</b>	2000 <i>JR</i> <sub>18</sub>		1 9.3 234°32	3°5/ 10.7	18		<b>181748</b>	1996 <i>DC</i> <sub>2</sub>		1 9.3 337°35	29°0/ 26.6	18	
12 3	7 45.86	+ 9 48.8	2.290	3.045	13.8	20.9	12 3	7 43.56	-30 25.8	1.096	1.714	32.6	19.6
12 13	7 41.16	+ 9 56.6	2.184	3.032	11.2	20.7	12 13	7 41.66	-33 15.9	1.052	1.709	31.7	19.5
12 23	7 34.29	+10 17.0	2.101	3.019	8.1	20.5	12 23	7 35.83	-35 18.1	1.013	1.705	30.9	19.4
1 2	7 25.71	+10 50.1	2.045	3.004	5.0	20.3	1 2	7 26.72	-36 17.1	0.981	1.701	30.1	19.3
1 12	7 16.22	+11 34.2	2.018	2.989	3.5	20.1	1 12	7 15.86	-36 0.9	0.957	1.698	29.4	19.2
1 22	7 6.76	+12 26.5	2.021	2.974	5.8	20.3	1 22	7 5.23	-34 24.8	0.942	1.695	29.0	19.2
2 1	6 58.30	+13 23.7	2.054	2.958	9.1	20.4	2 1	6 56.85	-31 32.7	0.937	1.693	29.0	19.2
2 11	6 51.68	+14 22.2	2.113	2.941	12.3	20.6	2 11	6 52.24	-27 38.4	0.944	1.692	29.5	19.2
<b>151947</b>	2004 <i>FK</i> <sub>117</sub>		1 9.3 292°25	1°7/ 9.6	18		<b>499518</b>	2010 <i>PZ</i> <sub>54</sub>		1 9.3 259°46	7°8/ 13.2	17	
12 3	7 49.47	+18 28.7	1.402	2.206	18.6								

EPHEMERIDES

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>32454</b>	2000 <i>SD</i> <sub>50</sub>		1 9.3 161°42	1°1/ 9.7 18			<b>485918</b>	2012 <i>GA</i> <sub>27</sub>		1 9.3 305°74	18°1/10.2 17		
12 3	7 43.67	+18 2.9	2.755	3.527	11.3	19.9	12 3	7 47.64	- 6 35.7	1.195	1.934	24.8	21.0
12 13	7 38.98	+18 1.4	2.666	3.530	8.8	19.8	12 13	7 44.24	- 9 31.1	1.126	1.926	22.5	20.8
12 23	7 32.56	+18 4.8	2.601	3.533	5.9	19.6	12 23	7 37.25	-12 3.2	1.073	1.917	20.2	20.6
1 2	7 24.88	+18 11.9	2.564	3.536	2.8	19.4	1 2	7 27.30	-13 57.8	1.038	1.909	18.6	20.4
1 12	7 16.64	+18 21.4	2.557	3.538	1.3	19.3	1 12	7 15.76	-15 3.2	1.022	1.901	18.2	20.4
1 22	7 8.59	+18 31.9	2.582	3.541	4.2	19.5	1 22	7 4.36	-15 14.6	1.025	1.894	19.1	20.4
2 1	7 1.48	+18 42.5	2.636	3.543	7.3	19.7	2 1	6 54.91	-14 35.1	1.046	1.887	21.1	20.5
2 11	6 55.93	+18 52.2	2.717	3.544	9.9	19.9	2 11	6 48.76	-13 15.8	1.084	1.880	23.6	20.7
<b>518702</b>	2009 <i>AA</i> <sub>52</sub>		1 9.3 127°05	2°2/10.4 17			<b>429256</b>	2010 <i>BW</i> <sub>71</sub>		1 9.3 243°12	4°2/11.4 17		
12 3	7 43.22	+12 14.9	2.438	3.203	12.8	21.5	12 3	7 42.13	+ 6 4.6	2.596	3.338	12.7	21.6
12 13	7 38.90	+12 44.1	2.349	3.206	10.1	21.3	12 13	7 37.98	+ 6 11.6	2.497	3.331	10.4	21.5
12 23	7 32.66	+13 24.5	2.283	3.209	7.0	21.1	12 23	7 32.04	+ 6 31.9	2.419	3.324	7.8	21.3
1 2	7 24.97	+14 14.7	2.245	3.212	3.8	20.9	1 2	7 24.74	+ 7 5.8	2.369	3.317	5.4	21.1
1 12	7 16.60	+15 12.0	2.237	3.215	2.3	20.8	1 12	7 16.75	+ 7 52.2	2.348	3.309	4.2	21.0
1 22	7 8.37	+16 13.0	2.259	3.217	4.8	21.0	1 22	7 8.86	+ 8 48.8	2.357	3.302	5.6	21.1
2 1	7 1.13	+17 14.3	2.312	3.220	8.0	21.2	2 1	7 1.82	+ 9 52.2	2.395	3.294	8.2	21.3
2 11	6 55.58	+18 13.0	2.391	3.222	11.0	21.4	2 11	6 56.32	+10 58.7	2.460	3.287	10.9	21.4
<b>393718</b>	2004 <i>VJ</i> <sub>18</sub>		1 9.3 103°20	1°4/ 8.9 17			<b>424965</b>	2009 <i>AM</i> <sub>15</sub>		1 9.3 146°35	51°1/29.2 15		
12 3	7 53.24	+24 14.4	1.727	2.518	16.2	21.8	12 3	9 39.93	-52 59.9	0.578	1.056	67.0	20.1
12 13	7 47.29	+24 39.3	1.663	2.540	12.5	21.6	12 13	9 15.17	-55 39.9	0.567	1.107	62.6	20.0
12 23	7 38.43	+25 7.6	1.622	2.561	8.2	21.4	12 23	8 40.44	-57 26.8	0.547	1.147	58.9	19.9
1 2	7 27.47	+25 34.5	1.607	2.582	3.6	21.1	1 2	7 55.26	-57 32.3	0.522	1.177	55.8	19.8
1 12	7 15.72	+25 55.8	1.621	2.602	2.0	21.1	1 12	7 5.77	-55 2.6	0.497	1.197	53.2	19.6
1 22	7 4.57	+26 8.8	1.664	2.621	6.3	21.4	1 22	6 21.88	-49 31.5	0.475	1.207	51.5	19.5
2 1	6 55.31	+26 13.2	1.735	2.640	10.4	21.7	2 1	5 50.08	-41 17.5	0.463	1.207	51.2	19.4
2 11	6 48.82	+26 10.4	1.831	2.659	14.0	21.9	2 11	5 30.81	-31 17.9	0.461	1.197	52.5	19.4
<b>116942</b>	2004 <i>GG</i> <sub>41</sub>		1 9.3 172°29	2°5/ 8.7 18			<b>130650</b>	2000 <i>SB</i> <sub>83</sub>		1 9.3 246°30	2°8/10.0 18		
12 3	7 51.54	+29 43.9	2.306	3.086	13.0	20.2	12 3	7 47.81	+15 0.2	1.672	2.460	16.8	20.5
12 13	7 45.54	+29 57.5	2.220	3.089	10.1	20.0	12 13	7 43.45	+14 49.4	1.582	2.453	13.4	20.2
12 23	7 37.11	+30 9.1	2.158	3.091	6.9	19.8	12 23	7 36.20	+14 49.1	1.513	2.446	9.3	20.0
1 2	7 26.89	+30 15.1	2.124	3.093	3.6	19.6	1 2	7 26.69	+14 58.9	1.469	2.439	5.0	19.7
1 12	7 15.91	+30 12.1	2.120	3.095	2.9	19.6	1 12	7 16.03	+15 17.2	1.453	2.431	3.0	19.5
1 22	7 5.29	+29 59.1	2.146	3.096	5.8	19.8	1 22	7 5.57	+15 41.2	1.464	2.424	6.7	19.8
2 1	6 56.09	+29 36.7	2.202	3.096	9.1	20.0	2 1	6 56.65	+16 8.3	1.503	2.416	11.2	20.0
2 11	6 49.13	+29 7.2	2.283	3.096	12.1	20.2	2 11	6 50.32	+16 36.2	1.565	2.408	15.2	20.2
<b>36496</b>	2000 <i>QK</i> <sub>49</sub>		1 9.3 42°92	1°6/ 8.9 18			<b>296394</b>	2009 <i>FE</i> <sub>71</sub>		1 9.3 232°96	3°8/10.5 18		
12 3	7 49.77	+24 19.6	1.215	2.037	19.9	18.1	12 3	7 46.32	+11 27.9	1.864	2.637	15.8	21.2
12 13	7 45.63	+24 37.8	1.162	2.055	15.4	17.8	12 13	7 41.95	+11 17.9	1.772	2.632	12.8	21.0
12 23	7 37.80	+25 0.5	1.128	2.074	10.1	17.6	12 23	7 35.03	+11 20.5	1.702	2.626	9.2	20.8
1 2	7 27.30	+25 22.4	1.117	2.093	4.5	17.3	1 2	7 26.14	+11 35.9	1.657	2.620	5.5	20.5
1 12	7 15.80	+25 38.2	1.132	2.113	2.4	17.3	1 12	7 16.25	+12 2.8	1.640	2.613	3.9	20.4
1 22	7 5.16	+25 44.9	1.173	2.134	7.6	17.6	1 22	7 6.52	+12 38.8	1.652	2.607	6.6	20.6
2 1	6 56.97	+25 42.5	1.238	2.155	12.6	18.0	2 1	6 58.12	+13 20.4	1.691	2.600	10.4	20.8
2 11	6 52.24	+25 32.8	1.324	2.176	16.8	18.3	2 11	6 51.98	+14 4.5	1.754	2.593	14.0	21.0
<b>428987</b>	2009 <i>AY</i> <sub>12</sub>		1 9.3 331°10	1°2/ 9.6 18			<b>252521</b>	2001 <i>UJ</i> <sub>203</sub>		1 9.3 159°90	2°1/ 9.9 18		
12 3	7 45.10	+19 35.1	2.196	2.980	13.4	21.1	12 3	7 46.90	+16 41.0	1.938	2.721	15.0	20.8
12 13	7 40.58	+19 16.1	2.105	2.977	10.5	20.9	12 13	7 42.23	+16 25.8	1.853	2.722	11.8	20.6
12 23	7 33.86	+19 1.1	2.038	2.974	7.0	20.6	12 23	7 35.09	+16 17.8	1.790	2.723	8.1	20.4
1 2	7 25.52	+18 49.2	1.998	2.971	3.3	20.4	1 2	7 26.11	+16 16.4	1.753	2.724	4.1	20.2
1 12	7 16.43	+18 39.4	1.987	2.968	1.5	20.3	1 12	7 16.29	+16 20.4	1.745	2.725	2.3	20.0
1 22	7 7.60	+18 30.8	2.006	2.965	5.1	20.5	1 22	7 6.75	+16 28.0	1.767	2.725	5.8	20.3
2 1	6 59.98	+18 23.0	2.053	2.963	8.8	20.7	2 1	6 58.60	+16 38.0	1.816	2.726	9.7	20.5
2 11	6 54.34	+18 15.7	2.126	2.961	12.0	20.9	2 11	6 52.68	+16 48.9	1.889	2.727	13.2	20.7
<b>419687</b>	2010 <i>UC</i> <sub>12</sub>		1 9.3 21°91	5°3/10.6 18			<b>485448</b>	2011 <i>QS</i> <sub>88</sub>		1 9.3 152°00	1°6/ 8.9 18		
12 3	7 43.93	+11 10.6	1.397	2.196	19.0	20.5	12 3	7 52.89	+25 23.3	1.976	2.759	14.7	22.3
12 13	7 40.60	+10 31.7	1.331	2.203	15.3	20.3	12 13	7 46.90	+25 47.9	1.897	2.769	11.4	22.1
12 23	7 34.30	+10 7.6	1.283	2.211	11.1	20.1	12 23	7 38.18	+26 14.6	1.841	2.778	7.6	21.9
1 2	7 25.79	+ 9 59.9	1.259	2.221	7.0	19.9	1 2	7 27.44	+26 39.2	1.813	2.787	3.5	21.7
1 12	7 16.35	+10 8.5	1.260	2.231	5.3	19.8	1 12	7 15.82	+26 57.7	1.814	2.794	2.2	21.6
1 22	7 7.37	+10 31.0	1.287	2.242	8.0	20.0	1 22	7 4.59	+27 7.7	1.846	2.801	6.0	21.8
2 1	7 0.20	+11 3.7	1.339	2.254	12.0	20.2	2 1	6 54.98	+27 8.7	1.906	2.807	9.9	22.1
2 11	6 55.76	+11 42.0	1.413	2.267	15.9	20.5	2 11	6 47.89	+27 2.3	1.991	2.812	13.3	22.3
<b>247451</b>	2002 <i>GP</i> <sub>37</sub>		1 9.3 229°11	1°6/ 9.8 18			<b>220614</b>	2004 <i>PH</i> <sub>54</sub>		1 9.3 190°28	2°8/ 8.7 18		
12 3	7 48.75	+17 4.9	1.996	2.774	14.8	21.5	12 3	7 50.93	+30 24.8	2.107	2.893	13.8	20.3
12 13	7 43.77	+17 5.0	1.896	2.763	11.7	21.3	12 13	7 45.35	+30 34.8	2.021	2.893	10.8	20.1
12 23	7 36.21	+17 12.9	1.819	2.752	8.0	21.1	12 23	7 37.15	+30 42.1	1.958	2.892	7.4	19.9
1 2	7 26.63	+17 27.4	1.768	2.740	3.9	20.8	1 2	7 26.99	+30 42.8	1.922	2.892	4.0	19.7
1 12	7 16.01	+17 46.4	1.747	2.728	1.9	20.6	1 12	7 15.99	+30 33.5	1.916	2.891	3.2	19.6
1 22	7 5.49	+18 7.3	1.755	2.714	5.8	20.9	1 22	7 5.37	+30 13.1	1.939	2.889	6.2	19.8
2 1	6 56.27	+18 28.3	1.792	2.701	9.9	21.1	2 1	6 56.30	+29 42.8	1.991	2.888	9.7	20.0
2 11	6 49.31	+18 48.1	1.854	2.686	13.6	21.3	2 11	6 49.65	+29 5.2	2.067	2.886	12.9	20.2
<b>43092</b>	1999 <i>XT</i> <sub>5</sub>		1 9.3 117°26	0°4/ 9.4 18			<b>473239</b>	2015 <i>LL</i> <sub>6</sub>		1 9.3 168°70	1°0/ 8.8 17		
12 3	7 46.24	+20 12.8	2.188	2									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>229529</b>	2005 <i>XO</i> <sub>43</sub>		1 9.3 161°62	1°5/ 8.9	18		<b>183023</b>	2002 <i>PG</i> <sub>113</sub>		1 9.3 166°07	3°6/ 8.3	18	
12 3	7 47.68	+25 11.3	2.029	2.821	14.1	21.5	12 3	7 56.81	+30 23.5	1.996	2.775	14.8	21.8
12 13	7 42.90	+25 34.2	1.945	2.822	10.9	21.3	12 13	7 50.11	+31 3.9	1.916	2.783	11.6	21.6
12 23	7 35.58	+25 59.7	1.884	2.824	7.3	21.1	12 23	7 40.43	+31 43.1	1.858	2.789	8.0	21.4
1 2	7 26.35	+26 24.0	1.850	2.825	3.3	20.8	1 2	7 28.49	+32 15.2	1.828	2.795	4.6	21.2
1 12	7 16.24	+26 43.5	1.845	2.825	2.1	20.7	1 12	7 15.53	+32 34.8	1.828	2.799	3.9	21.2
1 22	7 6.41	+26 55.6	1.870	2.826	5.8	21.0	1 22	7 2.98	+32 39.3	1.859	2.803	7.0	21.4
2 1	6 58.02	+26 59.7	1.923	2.827	9.6	21.2	2 1	6 52.20	+32 29.3	1.917	2.805	10.6	21.6
2 11	6 51.92	+26 56.5	2.000	2.827	13.0	21.4	2 11	6 44.17	+32 8.0	2.000	2.806	13.8	21.8
<b>51540</b>	2001 <i>FQ</i> <sub>143</sub>		1 9.3 152°99	2°8/10.5	18		<b>186593</b>	2003 <i>BB</i> <sub>26</sub>		1 9.3 350°04	11°7/11.5	18	
12 3	7 47.55	+11 55.3	2.326	3.083	13.5	20.4	12 3	7 39.01	+ 1 40.2	1.253	2.038	21.5	19.8
12 13	7 42.25	+11 59.9	2.242	3.093	10.8	20.2	12 13	7 37.29	+ 0 2.1	1.177	2.027	18.5	19.5
12 23	7 34.87	+12 14.9	2.181	3.102	7.6	20.0	12 23	7 32.48	- 1 15.4	1.119	2.017	15.4	19.3
1 2	7 25.97	+12 39.5	2.147	3.110	4.4	19.8	1 2	7 25.21	- 2 4.0	1.081	2.009	12.7	19.1
1 12	7 16.39	+13 12.0	2.143	3.118	2.9	19.7	1 12	7 16.69	- 2 18.1	1.065	2.002	11.7	19.1
1 22	7 7.04	+13 49.9	2.170	3.125	5.3	19.9	1 22	7 8.39	- 1 57.0	1.070	1.997	13.0	19.1
2 1	6 58.84	+14 30.4	2.227	3.131	8.5	20.1	2 1	7 1.82	- 1 5.0	1.097	1.994	15.8	19.3
2 11	6 52.49	+15 11.2	2.310	3.136	11.5	20.3	2 11	6 58.10	+ 0 8.9	1.143	1.993	19.1	19.5
<b>289826</b>	2005 <i>KX</i> <sub>13</sub>		1 9.3 248°98	2°4/10.2	17		<b>269012</b>	2007 <i>ET</i> <sub>169</sub>		1 9.3 45°32	1°5/ 8.9	18	
12 3	7 43.43	+13 20.7	2.756	3.517	11.6	21.9	12 3	7 46.80	+24 28.2	1.855	2.653	15.0	20.8
12 13	7 38.95	+13 13.8	2.647	3.501	9.2	21.7	12 13	7 42.41	+24 55.2	1.778	2.658	11.6	20.6
12 23	7 32.67	+13 14.4	2.561	3.485	6.5	21.5	12 23	7 35.35	+25 25.8	1.723	2.664	7.7	20.4
1 2	7 25.04	+13 22.1	2.504	3.468	3.7	21.3	1 2	7 26.29	+25 56.0	1.694	2.669	3.5	20.1
1 12	7 16.71	+13 36.2	2.477	3.452	2.5	21.2	1 12	7 16.33	+26 21.8	1.694	2.675	2.1	20.0
1 22	7 8.44	+13 55.2	2.480	3.434	4.7	21.4	1 22	7 6.71	+26 40.1	1.723	2.681	6.1	20.3
2 1	6 50.99	+14 17.7	2.513	3.417	7.7	21.5	2 1	6 58.64	+26 49.9	1.779	2.687	10.1	20.5
2 11	6 55.04	+14 42.0	2.573	3.399	10.5	21.7	2 11	6 53.02	+26 51.9	1.859	2.693	13.6	20.8
<b>209076</b>	2003 <i>RX</i> <sub>15</sub>		1 9.3 73°08	3°2/ 8.7	18		<b>32608</b>	Hallas		1 9.3 4°85	1°7/ 9.6	18	
12 3	7 52.75	+29 3.6	1.543	2.346	17.3	20.4	12 3	7 47.58	+19 56.7	1.208	2.029	20.1	18.6
12 13	7 47.43	+29 26.7	1.480	2.362	13.4	20.2	12 13	7 44.16	+19 26.8	1.137	2.028	15.8	18.4
12 23	7 38.79	+29 48.7	1.438	2.377	9.1	20.0	12 23	7 37.09	+19 3.4	1.084	2.028	10.7	18.1
1 2	7 27.74	+30 4.0	1.421	2.393	4.7	19.8	1 2	7 27.18	+18 45.6	1.054	2.029	5.0	17.8
1 12	7 15.77	+30 7.7	1.432	2.408	3.6	19.7	1 12	7 16.00	+18 31.9	1.050	2.031	2.3	17.6
1 22	7 4.51	+29 58.0	1.470	2.423	7.4	20.0	1 22	7 5.36	+18 21.0	1.070	2.034	7.7	17.9
2 1	6 55.41	+29 36.2	1.535	2.439	11.6	20.3	2 1	6 56.96	+18 12.5	1.114	2.037	13.2	18.2
2 11	6 49.44	+29 6.0	1.622	2.454	15.3	20.5	2 11	6 51.96	+18 5.7	1.180	2.041	17.8	18.5
<b>403260</b>	2008 <i>YE</i> <sub>80</sub>		1 9.3 263°51	1°8/ 9.9	18		<b>29774</b>	1999 <i>CL</i> <sub>44</sub>		1 9.3 22°80	0°1/ 9.4	18	
12 3	7 47.07	+16 15.5	1.687	2.478	16.5	21.4	12 3	7 45.75	+19 4.1	1.190	2.014	20.1	18.3
12 13	7 42.95	+16 25.7	1.595	2.469	13.1	21.1	12 13	7 42.80	+19 36.0	1.125	2.019	15.7	18.0
12 23	7 35.94	+16 47.0	1.523	2.459	9.0	20.9	12 23	7 36.22	+20 20.8	1.080	2.026	10.5	17.8
1 2	7 26.64	+17 17.9	1.477	2.450	4.4	20.6	1 2	7 26.82	+21 14.2	1.057	2.033	4.5	17.5
1 12	7 16.13	+17 55.3	1.459	2.440	2.1	20.4	1 12	7 16.13	+22 9.5	1.059	2.041	1.6	17.3
1 22	7 5.75	+18 35.4	1.468	2.430	6.4	20.7	1 22	7 5.96	+23 0.4	1.086	2.050	7.6	17.7
2 1	6 56.86	+19 14.7	1.505	2.419	11.0	20.9	2 1	6 58.00	+23 42.7	1.138	2.060	13.0	18.0
2 11	6 50.55	+19 51.0	1.566	2.409	15.1	21.1	2 11	6 53.43	+24 15.1	1.210	2.071	17.6	18.3
<b>252235</b>	2001 <i>PY</i> <sub>18</sub>		1 9.3 112°00	2°5/ 8.5	18		<b>457146</b>	2008 <i>FE</i> <sub>128</sub>		1 9.3 327°56	3°4/ 8.2	18	
12 3	7 51.39	+27 50.2	2.085	2.870	14.0	21.2	12 3	7 47.29	+27 55.8	1.664	2.472	16.0	21.4
12 13	7 45.56	+28 24.2	2.017	2.889	10.8	21.0	12 13	7 43.39	+28 44.2	1.581	2.466	12.6	21.2
12 23	7 37.19	+28 58.5	1.972	2.907	7.3	20.8	12 23	7 36.36	+29 35.5	1.520	2.460	8.6	21.0
1 2	7 26.99	+29 28.3	1.954	2.925	3.7	20.6	1 2	7 26.85	+30 23.6	1.483	2.455	4.6	20.7
1 12	7 16.06	+29 49.7	1.966	2.942	2.9	20.6	1 12	7 16.10	+31 2.1	1.475	2.449	3.9	20.6
1 22	7 5.59	+30 0.4	2.009	2.959	6.0	20.8	1 22	7 5.60	+31 26.6	1.493	2.445	7.6	20.9
2 1	6 56.70	+30 0.3	2.079	2.975	9.5	21.1	2 1	6 56.83	+31 36.0	1.538	2.440	11.7	21.1
2 11	6 50.18	+29 51.4	2.175	2.991	12.5	21.3	2 11	6 50.92	+31 32.3	1.606	2.436	15.5	21.3
<b>408413</b>	2013 <i>GT</i> <sub>127</sub>		1 9.3 158°56	2°8/10.4	18		<b>378942</b>	2008 <i>UN</i> <sub>144</sub>		1 9.3 94°31	2°7/10.3	18	
12 3	7 47.00	+12 44.5	2.127	2.894	14.4	21.8	12 3	7 45.13	+13 38.5	2.270	3.039	13.5	21.7
12 13	7 42.07	+12 48.1	2.042	2.899	11.4	21.6	12 13	7 40.39	+13 25.7	2.193	3.052	10.7	21.5
12 23	7 34.89	+13 2.3	1.979	2.904	8.0	21.4	12 23	7 33.64	+13 21.5	2.140	3.065	7.4	21.3
1 2	7 26.03	+13 26.5	1.943	2.909	4.5	21.2	1 2	7 25.45	+13 25.4	2.113	3.078	4.2	21.1
1 12	7 16.39	+13 58.8	1.937	2.913	2.9	21.1	1 12	7 16.66	+13 36.4	2.116	3.091	2.8	21.1
1 22	7 6.99	+14 36.5	1.960	2.916	5.6	21.2	1 22	7 8.18	+13 52.9	2.149	3.104	5.2	21.3
2 1	6 58.81	+15 16.6	2.012	2.919	9.1	21.5	2 1	7 0.87	+14 13.0	2.210	3.117	8.4	21.5
2 11	6 52.65	+15 56.7	2.090	2.922	12.3	21.7	2 11	6 55.40	+14 34.8	2.297	3.129	11.4	21.7
<b>144428</b>	2004 <i>EC</i> <sub>27</sub>		1 9.3 338°87	2°3/ 8.7	18		<b>48277</b>	2002 <i>EQ</i> <sub>26</sub>		1 9.3 189°46	3°1/10.2	18	
12 3	7 45.60	+25 36.8	1.451	2.269	17.5	19.6	12 3	7 48.65	+13 57.8	1.903	2.677	15.5	19.9
12 13	7 42.41	+26 5.7	1.368	2.259	13.7	19.3	12 13	7 43.66	+13 41.9	1.814	2.676	12.4	19.7
12 23	7 35.88	+26 39.0	1.306	2.251	9.2	19.1	12 23	7 36.12	+13 35.7	1.748	2.675	8.7	19.4
1 2	7 26.68	+27 11.5	1.269	2.243	4.3	18.8	1 2	7 26.63	+13 39.0	1.707	2.674	4.8	19.2
1 12	7 16.13	+27 37.5	1.257	2.237	2.9	18.6	1 12	7 16.21	+13 50.6	1.696	2.672	3.2	19.1
1 22	7 5.87	+27 52.9	1.272	2.230	7.6	18.9	1 22	7 6.03	+14 8.6	1.713	2.669	6.2	19.3
2 1	6 57.50	+27 56.7	1.312	2.225	12.4	19.2	2 1	6 57.24	+14 30.9	1.759	2.667	10.1	19.5
2 11	6 52.23	+27 50.1	1.373	2.221	16.6	19.4	2 11	6 50.75	+14 55.3	1.829	2.663	13.7	19.7
<b>227884</b>	2007 <i>EU</i> <sub>42</sub>		1 9.3 175°61	2°4/ 8.6	18		<b>453400</b>	2009 <i>DU</i> <sub>112</sub>		1 9.3 311°67	0°5/ 9.5	18	
12 3	7 48.19	+27 42.6	2.096	2.887									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>52622</b>	1997 <i>VT</i> <sub>5</sub>		1 9.3 148°70	3°7/ 7.9 18			<b>376634</b>	2013 <i>PY</i> <sub>69</sub>		1 9.4 197°07	1°8/ 9.8 18		
12 3	7 50.82	+31 8.6	2.271	3.053	13.1	19.5	12 3	7 48.27	+17 18.9	2.330	3.100	13.2	20.8
12 13	7 45.19	+32 2.4	2.193	3.062	10.3	19.3	12 13	7 42.92	+16 57.7	2.235	3.097	10.4	20.6
12 23	7 37.04	+32 55.2	2.140	3.070	7.1	19.1	12 23	7 35.40	+16 41.5	2.164	3.094	7.1	20.4
1 2	7 27.00	+33 41.6	2.114	3.078	4.4	19.0	1 2	7 26.29	+16 29.8	2.121	3.091	3.6	20.1
1 12	7 16.09	+34 16.6	2.118	3.085	4.1	18.9	1 12	7 16.43	+16 21.7	2.108	3.087	2.0	20.0
1 22	7 5.47	+34 37.3	2.153	3.091	6.6	19.1	1 22	7 6.79	+16 16.6	2.125	3.082	5.1	20.2
2 1	6 56.28	+34 43.6	2.215	3.097	9.6	19.3	2 1	6 58.31	+16 13.7	2.172	3.077	8.6	20.4
2 11	6 49.38	+34 37.6	2.302	3.103	12.4	19.5	2 11	6 51.75	+16 12.3	2.245	3.072	11.8	20.6
<b>318286</b>	2004 <i>TS</i> <sub>39</sub>		1 9.3 172°31	1°2/ 9.7 18			<b>165714</b>	2001 <i>QR</i> <sub>36</sub>		1 9.4 213°29	1°6/ 8.9 18		
12 3	7 46.16	+18 3.7	2.192	2.972	13.6	21.4	12 3	7 50.63	+26 33.8	2.090	2.876	13.9	20.3
12 13	7 41.43	+18 5.8	2.104	2.973	10.6	21.2	12 13	7 45.19	+26 43.2	1.997	2.871	10.9	20.1
12 23	7 34.48	+18 14.4	2.039	2.974	7.1	20.9	12 23	7 37.14	+26 53.0	1.928	2.865	7.3	19.8
1 2	7 25.87	+18 27.9	2.002	2.975	3.4	20.7	1 2	7 27.10	+26 59.8	1.886	2.859	3.4	19.6
1 12	7 16.50	+18 44.4	1.994	2.976	1.5	20.6	1 12	7 16.13	+27 0.4	1.873	2.853	2.1	19.5
1 22	7 7.36	+19 1.7	2.016	2.976	5.1	20.8	1 22	7 5.41	+26 53.2	1.890	2.846	5.8	19.7
2 1	6 59.43	+19 18.3	2.067	2.976	8.8	21.0	2 1	6 56.15	+26 38.2	1.936	2.839	9.7	19.9
2 11	6 53.49	+19 33.3	2.144	2.976	12.0	21.3	2 11	6 49.23	+26 17.3	2.007	2.831	13.1	20.1
<b>119465</b>	2001 <i>TG</i> <sub>233</sub>		1 9.3 306°67	6°2/ 6.7 18			<b>126934</b>	2002 <i>EF</i> <sub>146</sub>		1 9.4 184°66	1°0/ 9.7 18		
12 3	7 48.49	+32 58.0	1.711	2.515	15.8	19.1	12 3	7 49.65	+18 12.9	2.097	2.873	14.2	21.1
12 13	7 44.65	+34 27.7	1.624	2.503	12.7	18.9	12 13	7 44.28	+18 22.7	2.007	2.873	11.2	20.9
12 23	7 37.45	+35 59.1	1.560	2.491	9.3	18.7	12 23	7 36.47	+18 39.5	1.939	2.873	7.5	20.7
1 2	7 27.44	+37 23.1	1.522	2.479	6.6	18.5	1 2	7 26.80	+19 1.5	1.899	2.872	3.5	20.4
1 12	7 15.87	+38 30.6	1.511	2.468	6.7	18.5	1 12	7 16.24	+19 25.9	1.889	2.871	1.4	20.3
1 22	7 4.35	+39 15.1	1.527	2.457	9.5	18.6	1 22	7 5.89	+19 50.2	1.909	2.869	5.4	20.5
2 1	6 54.59	+39 35.4	1.568	2.446	13.1	18.8	2 1	6 56.85	+20 12.4	1.958	2.865	9.3	20.8
2 11	6 47.91	+39 34.5	1.631	2.435	16.5	19.0	2 11	6 49.99	+20 31.7	2.033	2.862	12.7	21.0
<b>371045</b>	2005 <i>UE</i> <sub>167</sub>		1 9.3 271°21	2°6/ 8.5 18			<b>438161</b>	2005 <i>SH</i> <sub>250</sub>		1 9.4 90°37	0°7/ 9.6 18		
12 3	7 47.88	+27 14.5	1.938	2.734	14.5	21.4	12 3	7 53.32	+18 41.3	1.502	2.295	18.2	21.7
12 13	7 43.39	+27 49.0	1.846	2.725	11.3	21.2	12 13	7 47.63	+18 59.0	1.444	2.320	14.1	21.5
12 23	7 36.13	+28 25.6	1.777	2.716	7.7	21.0	12 23	7 38.83	+19 25.8	1.407	2.345	9.3	21.3
1 2	7 26.70	+28 59.7	1.735	2.707	3.9	20.7	1 2	7 27.79	+19 58.2	1.395	2.369	4.1	21.1
1 12	7 16.18	+29 26.4	1.721	2.698	3.0	20.6	1 12	7 15.92	+20 31.8	1.411	2.393	1.5	20.9
1 22	7 5.84	+29 42.4	1.736	2.689	6.6	20.8	1 22	7 4.74	+21 2.7	1.455	2.416	6.5	21.3
2 1	6 56.96	+29 47.0	1.779	2.680	10.5	21.1	2 1	6 55.62	+21 28.8	1.527	2.439	11.1	21.6
2 11	6 50.57	+29 41.4	1.845	2.670	14.0	21.3	2 11	6 49.45	+21 49.4	1.622	2.461	14.9	21.9
<b>389815</b>	2011 <i>VC</i> <sub>23</sub>		1 9.3 125°79	1°1/ 8.9 18			<b>142459</b>	2002 <i>TD</i> <sub>6</sub>		1 9.4 43°82	0°4/ 9.5 18		
12 3	7 52.14	+22 37.4	1.935	2.718	15.0	21.3	12 3	7 46.93	+18 59.0	1.436	2.244	18.1	19.7
12 13	7 46.31	+23 19.0	1.863	2.736	11.6	21.1	12 13	7 42.98	+19 25.2	1.374	2.260	14.0	19.5
12 23	7 37.80	+24 5.9	1.815	2.753	7.6	20.9	12 23	7 35.94	+20 1.7	1.334	2.276	9.3	19.2
1 2	7 27.32	+24 53.5	1.794	2.769	3.3	20.7	1 2	7 26.61	+20 44.5	1.317	2.293	4.1	19.0
1 12	7 16.00	+25 36.9	1.804	2.785	1.8	20.6	1 12	7 16.33	+21 28.6	1.327	2.310	1.4	18.8
1 22	7 5.08	+26 12.4	1.843	2.799	5.9	20.9	1 22	7 6.61	+22 9.4	1.365	2.328	6.6	19.2
2 1	6 55.76	+26 38.6	1.911	2.813	9.8	21.2	2 1	6 58.82	+22 44.0	1.429	2.346	11.3	19.5
2 11	6 48.93	+26 55.8	2.004	2.827	13.2	21.4	2 11	6 53.90	+23 11.3	1.515	2.364	15.2	19.8
<b>243132</b>	2007 <i>RH</i> <sub>289</sub>		1 9.3 73°92	3°8/ 8.0 18			<b>261330</b>	2005 <i>UU</i> <sub>240</sub>		1 9.4 157°73	0°0/ 9.3 18		
12 3	7 47.85	+32 1.3	2.212	3.002	13.2	20.6	12 3	7 46.33	+20 20.6	1.949	2.740	14.6	20.6
12 13	7 42.92	+32 43.3	2.139	3.012	10.3	20.4	12 13	7 41.95	+20 47.0	1.864	2.741	11.4	20.3
12 23	7 35.52	+33 23.2	2.090	3.022	7.2	20.2	12 23	7 35.04	+21 20.6	1.802	2.741	7.6	20.1
1 2	7 26.33	+33 55.8	2.068	3.032	4.5	20.1	1 2	7 26.21	+21 58.1	1.766	2.741	3.3	19.8
1 12	7 16.36	+34 17.0	2.075	3.041	4.1	20.1	1 12	7 16.45	+22 35.9	1.759	2.742	1.2	19.7
1 22	7 6.75	+34 24.6	2.111	3.051	6.5	20.2	1 22	7 6.93	+23 10.4	1.782	2.742	5.6	20.0
2 1	6 58.59	+34 18.8	2.175	3.061	9.5	20.4	2 1	6 58.77	+23 39.5	1.832	2.742	9.7	20.2
2 11	6 52.69	+34 2.0	2.263	3.071	12.3	20.6	2 11	6 52.88	+24 2.3	1.907	2.742	13.2	20.5
<b>167893</b>	2005 <i>EK</i> <sub>69</sub>		1 9.3 132°09	5°9/ 7.6 18			<b>145410</b>	2005 <i>NN</i> <sub>87</sub>		1 9.4 148°57	3°2/ 10.4 18		
12 3	7 51.96	+40 22.1	2.400	3.171	12.8	20.0	12 3	7 47.70	+12 7.3	2.254	3.013	13.9	20.2
12 13	7 46.14	+41 2.2	2.323	3.175	10.4	19.8	12 13	7 42.43	+11 53.6	2.171	3.023	11.1	20.0
12 23	7 37.66	+41 34.4	2.270	3.179	8.0	19.7	12 23	7 35.04	+11 49.5	2.111	3.032	7.8	19.8
1 2	7 27.26	+41 53.0	2.244	3.183	6.3	19.6	1 2	7 26.12	+11 54.8	2.078	3.040	4.6	19.6
1 12	7 16.04	+41 53.8	2.246	3.186	6.2	19.6	1 12	7 16.52	+12 8.6	2.075	3.048	3.3	19.5
1 22	7 5.26	+41 35.3	2.276	3.190	7.8	19.7	1 22	7 7.18	+12 29.1	2.102	3.055	5.6	19.7
2 1	6 56.10	+40 59.5	2.334	3.193	10.1	19.8	2 1	6 59.04	+12 54.3	2.158	3.062	8.8	19.9
2 11	6 49.39	+40 10.3	2.416	3.197	12.5	20.0	2 11	6 52.82	+13 21.9	2.240	3.068	11.8	20.1
<b>157233</b>	2004 <i>RU</i> <sub>77</sub>		1 9.4 135°84	1°8/ 8.7 18			<b>3639</b>	Weidenschilling		1 9.4 50°82	1°5/ 9.7 18		
12 3	7 47.87	+25 49.0	2.200	2.987	13.3	20.2	12 3	7 48.32	+18 15.0	1.433	2.237	18.3	16.7
12 13	7 42.86	+26 22.4	2.119	2.994	10.3	20.0	12 13	7 44.10	+18 10.0	1.364	2.246	14.3	16.4
12 23	7 35.48	+26 58.0	2.063	3.000	6.8	19.8	12 23	7 36.72	+18 14.2	1.315	2.255	9.6	16.2
1 2	7 26.34	+27 31.9	2.033	3.007	3.3	19.6	1 2	7 26.97	+18 25.7	1.291	2.265	4.5	15.9
1 12	7 16.40	+28 0.1	2.034	3.013	2.3	19.5	1 12	7 16.21	+18 41.5	1.293	2.275	2.0	15.8
1 22	7 6.75	+28 20.1	2.065	3.018	5.6	19.7	1 22	7 5.95	+18 58.8	1.323	2.285	6.8	16.1
2 1	6 58.43	+28 31.0	2.124	3.024	9.1	19.9	2 1	6 57.64	+19 15.5	1.378	2.295	11.6	16.4
2 11	6 52.25	+28 33.6	2.208	3.029	12.2	20.2	2 11	6 52.27	+19 30.1	1.455	2.306	15.7	16.7
<b>377255</b>	2004 <i>CM</i> <sub>55</sub>		1 9.4 314°38	1°6/ 9.9 18			<b>300303</b>	2007 <i>PM</i> <sub>18</sub>		1 9.4 94°20	1°4/ 9.0 17		
12 3	7 42.88	+16 35.2	2.085	2.872	1								

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>33433</b>	Maurilia		1 9.4 63°19	1.6/ 8.8	18		<b>67237</b>	2000 EA <sub>24</sub>		1 9.4 271°32	2°5/ 8.8	18	
12 3	7 50.27	+21 19.4	1.367	2.176	18.8	17.8	12 3	7 50.96	+26 35.2	1.481	2.289	17.7	20.2
12 13	7 45.82	+22 24.2	1.309	2.195	14.5	17.6	12 13	7 46.57	+26 59.7	1.397	2.283	13.9	19.9
12 23	7 37.96	+23 39.1	1.272	2.215	9.5	17.4	12 23	7 38.66	+27 27.1	1.335	2.277	9.3	19.6
1 2	7 27.53	+24 57.0	1.259	2.235	4.2	17.1	1 2	7 27.96	+27 51.6	1.297	2.271	4.5	19.3
1 12	7 16.01	+26 9.7	1.274	2.255	2.4	17.1	1 12	7 15.86	+28 7.7	1.286	2.265	3.1	19.2
1 22	7 5.10	+27 10.5	1.316	2.275	7.4	17.4	1 22	7 4.09	+28 11.8	1.302	2.258	7.7	19.5
2 1	6 56.33	+27 56.5	1.384	2.294	12.1	17.7	2 1	6 54.34	+28 3.7	1.343	2.252	12.5	19.7
2 11	6 50.77	+28 28.1	1.474	2.314	16.1	18.0	2 11	6 47.84	+27 46.0	1.407	2.246	16.8	20.0
<b>118039</b>	3075 T <sub>-2</sub>		1 9.4 18°52	1°0/ 9.1	18		<b>307352</b>	2002 RP <sub>183</sub>		1 9.4 77°86	0°8/ 9.3	18	
12 3	7 44.54	+22 27.7	1.104	1.940	20.6	19.1	12 3	7 53.29	+26 4.7	1.705	2.499	16.3	20.3
12 13	7 42.08	+22 50.1	1.046	1.947	16.0	18.8	12 13	7 47.51	+25 38.4	1.628	2.506	12.7	20.1
12 23	7 35.83	+23 20.7	1.007	1.956	10.6	18.5	12 23	7 38.72	+25 10.7	1.574	2.513	8.4	19.9
1 2	7 26.69	+23 54.4	0.990	1.967	4.6	18.2	1 2	7 27.78	+24 39.3	1.545	2.520	3.7	19.6
1 12	7 16.32	+24 25.2	0.996	1.978	2.1	18.1	1 12	7 15.98	+24 2.6	1.546	2.527	1.6	19.5
1 22	7 6.63	+24 48.5	1.028	1.992	7.9	18.5	1 22	7 4.79	+23 21.0	1.575	2.535	6.3	19.8
2 1	6 59.35	+25 2.3	1.082	2.006	13.3	18.9	2 1	6 55.52	+22 36.6	1.632	2.542	10.7	20.1
2 11	6 55.59	+25 7.2	1.157	2.022	17.9	19.2	2 11	6 49.06	+21 51.9	1.714	2.549	14.4	20.3
<b>38958</b>	2000 SL <sub>337</sub>		1 9.4 346°26	0°2/ 9.4	18		<b>347606</b>	2001 RR <sub>65</sub>		1 9.4 104°64	6°1/ 11.8	18	
12 3	7 44.66	+21 8.2	1.571	2.380	16.7	19.3	12 3	7 47.55	+3 34.7	2.187	2.917	15.1	21.1
12 13	7 41.27	+21 11.2	1.487	2.374	13.1	19.0	12 13	7 42.20	+3 4.2	2.120	2.941	12.5	20.9
12 23	7 34.91	+21 20.4	1.425	2.368	8.7	18.7	12 23	7 34.81	+2 48.9	2.074	2.964	9.7	20.8
1 2	7 26.25	+21 33.4	1.387	2.363	3.8	18.4	1 2	7 25.99	+2 50.4	2.054	2.987	7.2	20.7
1 12	7 16.46	+21 47.1	1.376	2.358	1.4	18.2	1 12	7 16.62	+3 8.6	2.062	3.009	6.1	20.6
1 22	7 6.96	+21 58.7	1.392	2.355	6.5	18.6	1 22	7 7.63	+3 41.5	2.099	3.031	7.2	20.7
2 1	6 59.13	+22 6.7	1.434	2.352	11.2	18.8	2 1	6 59.87	+4 25.8	2.165	3.051	9.6	20.9
2 11	6 54.02	+22 10.8	1.499	2.350	15.3	19.1	2 11	6 54.02	+5 17.2	2.255	3.072	12.1	21.1
<b>187037</b>	2005 JJ <sub>74</sub>		1 9.4 128°09	1°3/ 8.9	18		<b>113954</b>	2002 UE <sub>1</sub>		1 9.4 290°57	2°6/ 10.4	18	
12 3	7 53.79	+22 30.2	1.624	2.416	17.0	21.0	12 3	7 43.03	+12 41.8	2.232	3.004	13.6	19.8
12 13	7 48.13	+23 13.5	1.554	2.431	13.2	20.8	12 13	7 39.07	+12 51.4	2.136	2.997	10.8	19.6
12 23	7 39.30	+24 3.7	1.506	2.445	8.7	20.5	12 23	7 33.01	+13 12.0	2.063	2.989	7.6	19.4
1 2	7 28.09	+24 55.1	1.484	2.459	3.8	20.3	1 2	7 25.33	+13 42.8	2.016	2.982	4.3	19.2
1 12	7 15.83	+25 41.8	1.490	2.471	2.0	20.2	1 12	7 16.84	+14 21.9	1.998	2.975	2.7	19.1
1 22	7 4.05	+26 19.2	1.526	2.484	6.7	20.5	1 22	7 8.45	+15 6.5	2.010	2.968	5.3	19.2
2 1	6 54.19	+26 45.6	1.590	2.495	11.2	20.8	2 1	7 1.12	+15 53.6	2.050	2.961	8.8	19.4
2 11	6 47.28	+27 1.8	1.676	2.506	15.0	21.0	2 11	6 55.62	+16 40.4	2.116	2.954	12.0	19.6
<b>119315</b>	2001 SQ <sub>73</sub>		1 9.4 133°53	0°9/ 6.9	16		<b>230996</b>	2005 CV <sub>56</sub>		1 9.4 4°13	2°4/ 8.7	18	
12 3	7 26.52	+40 18.8	18.997	19.756	1.9	22.7	12 3	7 47.33	+28 15.3	2.012	2.807	14.1	20.3
12 13	7 24.81	+40 27.0	18.916	19.760	1.5	22.7	12 13	7 42.73	+28 32.8	1.929	2.807	11.0	20.1
12 23	7 22.85	+40 33.9	18.862	19.764	1.2	22.6	12 23	7 35.55	+28 50.0	1.869	2.807	7.4	19.8
1 2	7 20.71	+40 39.4	18.836	19.768	0.9	22.6	1 2	7 26.43	+29 3.0	1.836	2.808	3.7	19.6
1 12	7 18.51	+40 43.0	18.841	19.773	0.9	22.6	1 12	7 16.46	+29 8.3	1.831	2.808	2.8	19.5
1 22	7 16.33	+40 44.6	18.875	19.777	1.2	22.6	1 22	7 6.81	+29 4.0	1.855	2.809	6.1	19.8
2 1	7 14.27	+40 44.3	18.937	19.781	1.5	22.7	2 1	6 58.65	+28 50.4	1.907	2.810	9.8	20.0
2 11	7 12.42	+40 41.9	19.026	19.785	1.9	22.7	2 11	6 52.85	+28 29.2	1.984	2.811	13.1	20.2
<b>421317</b>	2013 TE <sub>54</sub>		1 9.4 197°61	1°3/ 9.8	18		<b>39064</b>	2000 UD <sub>111</sub>		1 9.4 15°05	2°2/ 10.0	18	
12 3	7 45.68	+18 1.6	2.278	3.057	13.2	21.6	12 3	7 44.84	+15 39.2	1.798	2.588	15.7	19.2
12 13	7 41.00	+17 54.1	2.188	3.056	10.3	21.4	12 13	7 40.88	+15 36.7	1.716	2.589	12.4	19.0
12 23	7 34.18	+17 52.2	2.121	3.054	7.0	21.2	12 23	7 34.38	+15 44.1	1.656	2.591	8.5	18.7
1 2	7 25.79	+17 54.9	2.081	3.053	3.3	20.9	1 2	7 25.95	+16 0.3	1.622	2.593	4.4	18.5
1 12	7 16.66	+18 0.7	2.071	3.052	1.6	20.8	1 12	7 16.62	+16 23.2	1.616	2.595	2.4	18.4
1 22	7 7.75	+18 8.2	2.091	3.050	5.0	21.0	1 22	7 7.58	+16 50.1	1.637	2.598	6.0	18.6
2 1	6 59.99	+18 16.1	2.140	3.049	8.5	21.3	2 1	6 59.96	+17 18.5	1.686	2.601	10.1	18.9
2 11	6 54.14	+18 23.7	2.214	3.047	11.7	21.5	2 11	6 54.65	+17 46.3	1.759	2.604	13.7	19.1
<b>1534</b>	Näsi		1 9.4 0°06	6°3/ 7.1	18 R		<b>499857</b>	2011 EB <sub>69</sub>		1 9.4 218°92	1°0/ 8.9	17	
12 3	7 41.59	+30 9.9	1.211	2.049	19.0	14.8	12 3	7 46.09	+23 50.4	2.736	3.512	11.2	22.7
12 13	7 40.09	+31 41.8	1.145	2.045	15.0	14.6	12 13	7 41.14	+24 19.7	2.634	3.504	8.7	22.5
12 23	7 34.79	+33 17.6	1.099	2.042	10.6	14.3	12 23	7 34.23	+24 52.1	2.558	3.494	5.8	22.3
1 2	7 26.38	+34 46.8	1.075	2.041	7.0	14.1	1 2	7 25.83	+25 24.8	2.510	3.485	2.6	22.1
1 12	7 16.40	+35 58.2	1.075	2.042	6.9	14.1	1 12	7 16.66	+25 54.8	2.494	3.474	1.5	22.0
1 22	7 6.81	+36 44.5	1.100	2.045	10.5	14.3	1 22	7 7.59	+26 19.9	2.508	3.464	4.6	22.2
2 1	6 59.50	+37 4.0	1.147	2.050	14.8	14.6	2 1	6 59.46	+26 38.6	2.553	3.452	7.8	22.4
2 11	6 55.82	+37 0.5	1.214	2.056	18.7	14.8	2 11	6 53.01	+26 51.0	2.624	3.441	10.6	22.5
<b>135904</b>	2002 TN <sub>90</sub>		1 9.4 86°57	1°4/ 9.8	18		<b>222258</b>	2000 QU <sub>158</sub>		1 9.4 174°19	5°5/ 11.6	18	
12 3	7 46.76	+17 28.5	2.376	3.148	12.9	19.9	12 3	7 45.38	+3 38.8	2.551	3.276	13.3	21.2
12 13	7 41.50	+17 22.8	2.308	3.172	10.0	19.8	12 13	7 40.45	+3 15.1	2.461	3.279	11.1	21.0
12 23	7 34.29	+17 22.8	2.264	3.196	6.7	19.6	12 23	7 33.68	+3 4.5	2.393	3.282	8.6	20.9
1 2	7 25.75	+17 27.5	2.248	3.220	3.2	19.4	1 2	7 25.55	+3 8.4	2.351	3.283	6.4	20.7
1 12	7 16.70	+17 35.2	2.262	3.243	1.6	19.3	1 12	7 16.78	+3 27.1	2.338	3.285	5.5	20.7
1 22	7 8.05	+17 44.5	2.307	3.266	4.7	19.6	1 22	7 8.18	+3 59.1	2.355	3.285	6.6	20.7
2 1	7 0.60	+17 54.3	2.381	3.288	7.9	19.8	2 1	7 0.53	+4 41.7	2.400	3.285	8.8	20.9
2 11	6 54.99	+18 3.7	2.481	3.310	10.7	20.0	2 11	6 54.50	+5 31.5	2.471	3.285	11.2	21.0
<b>424139</b>	2007 FC <sub>41</sub>		1 9.4 250°56	2°1/ 10.2	18		<b>489230</b>	2006 MT <sub>7</sub>		1 9.4 214°05	0°7/ 9.6	18	
12 3	7 45.36	+14 3.2	2.405	3.171	12.9	21.5	12 3	7 48.62	+18 18.9	2.047	2.826	14.4	22.4
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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>157252</b>	2004 <i>RG</i> <sub>149</sub>		1 9.4 116°17'	1.2°/ 8.9 18			<b>498228</b>	2007 <i>UH</i> <sub>19</sub>		1 9.4 42°91'	0°6'/ 9.2 18		
12 3	7 47.52	+23 51.0	2.128	2.917	13.7	20.4	12 3	7 45.02	+22 52.0	2.223	3.012	13.1	21.9
12 13	7 42.63	+24 21.4	2.050	2.925	10.6	20.2	12 13	7 40.62	+23 7.7	2.139	3.015	10.2	21.7
12 23	7 35.36	+24 55.3	1.995	2.934	7.0	20.0	12 23	7 34.01	+23 27.0	2.079	3.018	6.7	21.5
1 2	7 26.33	+25 29.2	1.968	2.942	3.1	19.7	1 2	7 25.76	+23 47.2	2.046	3.021	2.9	21.3
1 12	7 16.51	+25 59.4	1.970	2.950	1.8	19.6	1 12	7 16.77	+24 5.6	2.043	3.024	1.3	21.1
1 22	7 7.00	+26 23.0	2.002	2.958	5.4	19.9	1 22	7 8.03	+24 19.9	2.069	3.028	5.1	21.4
2 1	6 58.84	+26 38.9	2.062	2.966	9.1	20.1	2 1	7 0.53	+24 29.1	2.124	3.031	8.7	21.6
2 11	6 52.84	+26 47.4	2.148	2.974	12.3	20.4	2 11	6 55.01	+24 33.3	2.203	3.035	11.8	21.8
<b>336921</b>	2011 <i>HO</i> <sub>49</sub>		1 9.4 160°30'	4°3'/11.2 18			<b>269637</b>	2011 <i>AF</i> <sub>46</sub>		1 9.4 299°91'	2°4'/10.3 18		
12 3	7 43.10	+ 6 19.0	2.884	3.618	11.7	21.7	12 3	7 44.30	+13 49.5	1.936	2.718	15.1	20.6
12 13	7 38.48	+ 5 59.2	2.795	3.623	9.6	21.6	12 13	7 40.41	+14 3.1	1.843	2.711	12.0	20.4
12 23	7 32.26	+ 5 49.7	2.729	3.628	7.3	21.4	12 23	7 34.09	+14 28.8	1.773	2.704	8.3	20.2
1 2	7 24.91	+ 5 51.4	2.691	3.633	5.2	21.3	1 2	7 25.88	+15 5.3	1.728	2.697	4.4	19.9
1 12	7 17.04	+ 6 4.1	2.682	3.637	4.3	21.2	1 12	7 16.70	+15 50.1	1.712	2.691	2.5	19.8
1 22	7 9.32	+ 6 26.6	2.703	3.641	5.5	21.3	1 22	7 7.65	+16 39.6	1.724	2.684	5.8	20.0
2 1	7 2.45	+ 6 57.0	2.753	3.644	7.6	21.5	2 1	6 59.84	+17 30.2	1.765	2.678	9.8	20.2
2 11	6 56.97	+ 7 32.8	2.830	3.647	9.9	21.6	2 11	6 54.18	+18 18.8	1.830	2.672	13.4	20.4
<b>308753</b>	2006 <i>JD</i> <sub>79</sub>		1 9.4 149°44'	0°6'/ 9.5 18			<b>366980</b>	2005 <i>XF</i> <sub>22</sub>		1 9.4 142°96'	1°8'/ 9.9 18		
12 3	7 50.34	+19 28.0	2.045	2.823	14.5	22.4	12 3	7 47.93	+16 23.3	2.475	3.240	12.6	22.0
12 13	7 44.80	+19 38.2	1.964	2.833	11.3	22.2	12 13	7 42.43	+16 13.5	2.393	3.252	9.9	21.8
12 23	7 36.78	+19 54.5	1.906	2.841	7.5	22.0	12 23	7 34.97	+16 9.6	2.334	3.263	6.7	21.6
1 2	7 26.95	+20 14.6	1.876	2.850	3.3	21.8	1 2	7 26.11	+16 11.0	2.304	3.273	3.4	21.4
1 12	7 16.31	+20 35.5	1.875	2.857	1.2	21.6	1 12	7 16.66	+16 16.3	2.304	3.284	1.9	21.3
1 22	7 6.00	+20 55.0	1.905	2.864	5.4	21.9	1 22	7 7.49	+16 24.2	2.336	3.293	4.7	21.5
2 1	6 57.10	+21 11.5	1.963	2.870	9.3	22.2	2 1	6 59.45	+16 33.7	2.397	3.302	8.0	21.8
2 11	6 50.46	+21 24.5	2.047	2.876	12.7	22.4	2 11	6 53.20	+16 43.6	2.485	3.310	10.8	22.0
<b>207537</b>	2006 <i>KF</i> <sub>39</sub>		1 9.4 177°01'	2°8'/10.3 18			<b>464019</b>	2014 <i>WJ</i> <sub>123</sub>		1 9.4 276°64'	0°7'/ 9.5 17		
12 3	7 48.45	+13 19.3	2.081	2.848	14.6	21.5	12 3	7 48.06	+20 43.8	2.031	2.817	14.3	21.1
12 13	7 43.31	+13 15.1	1.992	2.850	11.6	21.3	12 13	7 43.36	+20 30.3	1.924	2.797	11.3	20.9
12 23	7 35.82	+13 21.0	1.926	2.852	8.2	21.1	12 23	7 36.09	+20 20.4	1.839	2.776	7.6	20.6
1 2	7 26.55	+13 36.3	1.887	2.853	4.6	20.9	1 2	7 26.78	+20 12.8	1.781	2.755	3.4	20.3
1 12	7 16.45	+13 59.6	1.877	2.853	2.9	20.7	1 12	7 16.38	+20 5.6	1.752	2.734	1.3	20.1
1 22	7 6.56	+14 28.5	1.897	2.853	5.7	20.9	1 22	7 6.05	+19 57.8	1.752	2.712	5.7	20.3
2 1	6 57.94	+15 0.4	1.946	2.852	9.4	21.1	2 1	6 56.99	+19 48.9	1.781	2.691	9.9	20.5
2 11	6 51.41	+15 33.0	2.020	2.851	12.7	21.4	2 11	6 50.17	+19 39.1	1.834	2.669	13.7	20.7
<b>76572</b>	2000 <i>GX</i> <sub>113</sub>		1 9.4 188°43'	0°5'/ 9.2 18			<b>235672</b>	2004 <i>RR</i> <sub>259</sub>		1 9.4 238°34'	0°7'/ 9.2 18		
12 3	7 45.28	+23 23.5	3.229	3.999	9.8	21.3	12 3	7 51.22	+22 59.8	1.785	2.576	15.8	21.1
12 13	7 40.11	+23 35.1	3.132	3.997	7.6	21.1	12 13	7 46.21	+23 12.8	1.688	2.564	12.4	20.8
12 23	7 33.33	+23 48.5	3.061	3.996	5.0	21.0	12 23	7 38.18	+23 30.4	1.613	2.552	8.3	20.5
1 2	7 25.38	+24 1.7	3.019	3.993	2.2	20.8	1 2	7 27.74	+23 49.3	1.564	2.539	3.6	20.2
1 12	7 16.89	+24 13.1	3.009	3.991	1.0	20.6	1 12	7 16.03	+24 5.3	1.543	2.525	1.6	20.1
1 22	7 8.54	+24 21.4	3.031	3.987	3.8	20.9	1 22	7 4.46	+24 15.8	1.552	2.511	6.4	20.3
2 1	7 1.03	+24 25.8	3.083	3.983	6.6	21.0	2 1	6 54.45	+24 19.4	1.588	2.496	11.0	20.6
2 11	6 54.91	+24 26.4	3.163	3.979	9.0	21.2	2 11	6 47.13	+24 17.0	1.648	2.481	15.0	20.8
<b>163565</b>	2002 <i>TK</i> <sub>130</sub>		1 9.4 82°18'	0°1'/ 9.3 18			<b>290628</b>	2005 <i>UB</i> <sub>241</sub>		1 9.4 52°80'	0°8'/ 9.6 18		
12 3	7 45.82	+20 34.3	2.242	3.025	13.2	20.2	12 3	7 47.15	+18 17.5	1.631	2.429	16.7	20.8
12 13	7 41.08	+21 3.0	2.169	3.042	10.2	20.1	12 13	7 42.75	+18 37.7	1.570	2.449	13.0	20.6
12 23	7 34.21	+21 37.3	2.121	3.059	6.7	19.9	12 23	7 35.60	+19 7.2	1.530	2.469	8.6	20.4
1 2	7 25.81	+22 14.1	2.100	3.075	2.9	19.6	1 2	7 26.47	+19 42.8	1.516	2.490	3.9	20.1
1 12	7 16.74	+22 50.3	2.109	3.092	1.1	19.5	1 12	7 16.54	+20 20.5	1.529	2.511	1.4	20.0
1 22	7 8.00	+23 23.0	2.149	3.108	4.9	19.8	1 22	7 7.14	+20 56.6	1.571	2.532	6.0	20.4
2 1	7 0.49	+23 50.5	2.217	3.124	8.4	20.1	2 1	6 59.45	+21 28.4	1.639	2.554	10.3	20.7
2 11	6 54.95	+24 12.2	2.311	3.140	11.4	20.3	2 11	6 54.33	+21 54.9	1.732	2.575	13.9	20.9
<b>423351</b>	2005 <i>GU</i> <sub>178</sub>		1 9.4 220°16'	4°3'/ 8.0 17			<b>165860</b>	2001 <i>SB</i> <sub>43</sub>		1 9.4 109°76'	6°7'/ 6.9 18		
12 3	7 52.17	+38 10.5	3.002	3.763	10.7	21.3	12 3	7 53.90	+44 40.3	2.698	3.452	12.0	20.6
12 13	7 45.77	+38 28.7	2.904	3.754	8.6	21.2	12 13	7 47.49	+45 37.0	2.637	3.469	10.0	20.5
12 23	7 37.21	+38 40.6	2.831	3.744	6.4	21.0	12 23	7 38.51	+46 24.0	2.599	3.486	8.1	20.4
1 2	7 27.09	+38 42.3	2.785	3.733	4.6	20.9	1 2	7 27.68	+46 55.6	2.588	3.502	6.9	20.3
1 12	7 16.28	+38 30.7	2.771	3.723	4.4	20.9	1 12	7 16.11	+47 7.3	2.605	3.518	6.9	20.3
1 22	7 5.74	+38 5.0	2.787	3.711	6.0	20.9	1 22	7 5.02	+46 58.2	2.650	3.534	8.1	20.4
2 1	6 56.42	+37 26.2	2.833	3.700	8.3	21.1	2 1	6 55.54	+46 30.0	2.722	3.550	9.9	20.6
2 11	6 49.04	+36 37.5	2.905	3.687	10.5	21.2	2 11	6 48.47	+45 47.0	2.818	3.565	11.7	20.7
<b>227437</b>	2005 <i>WB</i> <sub>22</sub>		1 9.4 170°22'	2°3'/ 8.6 18			<b>46898</b>	1998 <i>RW</i> <sub>57</sub>		1 9.4 99°78'	0°0'/ 9.4 18		
12 3	7 48.67	+27 9.0	2.205	2.992	13.3	21.3	12 3	7 49.01	+20 28.3	1.789	2.580	15.7	19.8
12 13	7 43.57	+27 43.3	2.120	2.994	10.3	21.1	12 13	7 44.10	+20 45.6	1.716	2.592	12.2	19.6
12 23	7 36.03	+28 18.9	2.059	2.996	6.9	20.9	12 23	7 36.49	+21 9.4	1.665	2.603	8.1	19.4
1 2	7 26.66	+28 51.8	2.026	2.998	3.5	20.7	1 2	7 26.88	+21 36.7	1.640	2.615	3.5	19.1
1 12	7 16.43	+29 17.8	2.022	2.999	2.7	20.6	1 12	7 16.40	+22 3.9	1.644	2.626	1.2	19.0
1 22	7 6.45	+29 34.3	2.048	3.000	5.8	20.8	1 22	7 6.32	+22 27.8	1.677	2.637	5.8	19.3
2 1	6 57.81	+29 40.6	2.103	3.000	9.3	21.0	2 1	6 57.86	+22 46.9	1.737	2.648	10.1	19.6
2 11	6 51.37	+29 37.9	2.183	3.001	12.4	21.2	2 11	6 51.90	+23 0.7	1.822	2.658	13.7	19.8
<b>179253</b>	2001 <i>UF</i> <sub>130</sub>		1 9.4 212°07'	2°1'/10.0 18			<b>369728</b>	2012 <i>DA</i> <sub>87</sub>		1 9.4 311°68'	2°4'/ 8.8 18		
12 3	7 46.85	+15 33.1	2.167	2.94									



EPHEMERIDES

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>64720</b>	2001 XJ <sub>101</sub>		1 9.4 40°21	2°1/ 8.8 18			<b>171942</b>	2001 SA <sub>256</sub>		1 9.4 88°23	0°5/ 9.2 18		
12 3	7 48.09	+26 13.0	1.726	2.528	15.8	19.7	12 3	7 45.08	+22 8.9	2.402	3.185	12.4	20.7
12 13	7 43.65	+26 35.5	1.651	2.534	12.2	19.4	12 13	7 40.44	+22 30.9	2.324	3.197	9.6	20.5
12 23	7 36.33	+27 0.0	1.599	2.540	8.2	19.2	12 23	7 33.78	+22 56.8	2.270	3.208	6.3	20.3
1 2	7 26.84	+27 22.1	1.573	2.547	3.9	19.0	1 2	7 25.65	+23 23.9	2.245	3.220	2.7	20.1
1 12	7 16.41	+27 37.5	1.574	2.554	2.6	18.9	1 12	7 16.89	+23 49.5	2.249	3.231	1.1	20.0
1 22	7 6.41	+27 43.6	1.604	2.561	6.5	19.2	1 22	7 8.40	+24 11.4	2.284	3.242	4.7	20.3
2 1	6 58.13	+27 40.2	1.660	2.568	10.6	19.4	2 1	7 1.05	+24 28.2	2.347	3.253	8.0	20.5
2 11	6 52.52	+27 28.8	1.740	2.575	14.3	19.7	2 11	6 55.55	+24 39.8	2.437	3.264	10.9	20.7
<b>375323</b>	2008 RQ <sub>101</sub>		1 9.4 156°56	4°4/11.1 18			<b>294627</b>	2008 AM <sub>40</sub>		1 9.4 51°82	1°6/ 8.9 18		
12 3	7 44.17	+ 8 0.9	2.285	3.038	13.9	21.5	12 3	7 48.74	+24 9.9	1.542	2.349	17.1	20.5
12 13	7 39.77	+ 7 47.2	2.198	3.041	11.3	21.3	12 13	7 44.39	+24 37.8	1.475	2.360	13.3	20.3
12 23	7 33.37	+ 7 45.8	2.133	3.043	8.4	21.1	12 23	7 36.92	+25 10.2	1.429	2.372	8.8	20.0
1 2	7 25.48	+ 7 57.4	2.094	3.046	5.6	21.0	1 2	7 27.14	+25 42.4	1.409	2.384	3.9	19.8
1 12	7 16.89	+ 8 21.4	2.084	3.048	4.4	20.9	1 12	7 16.36	+26 9.4	1.416	2.396	2.2	19.7
1 22	7 8.50	+ 8 55.9	2.103	3.050	6.1	21.0	1 22	7 6.11	+26 27.7	1.450	2.409	6.8	20.0
2 1	7 1.17	+ 9 37.9	2.150	3.051	8.9	21.2	2 1	6 57.77	+26 36.4	1.511	2.422	11.2	20.3
2 11	6 55.62	+10 24.2	2.224	3.053	11.8	21.4	2 11	6 52.32	+26 36.7	1.594	2.435	15.1	20.6
<b>100780</b>	1998 FU <sub>55</sub>		1 9.4 359°52	2°2/ 8.8 18			<b>237280</b>	2008 XK <sub>10</sub>		1 9.4 331°19	5°4/ 6.4 18		
12 3	7 44.64	+24 9.5	1.197	2.028	19.6	19.2	12 3	7 46.99	+31 19.9	1.962	2.761	14.3	19.8
12 13	7 42.22	+24 46.6	1.127	2.025	15.3	18.9	12 13	7 43.07	+33 5.6	1.876	2.752	11.3	19.6
12 23	7 36.07	+25 31.1	1.075	2.023	10.2	18.6	12 23	7 36.24	+34 54.9	1.813	2.744	8.2	19.4
1 2	7 26.94	+26 17.1	1.046	2.022	4.7	18.3	1 2	7 26.98	+36 39.4	1.779	2.737	5.7	19.2
1 12	7 16.35	+26 57.4	1.042	2.023	3.0	18.2	1 12	7 16.35	+38 10.2	1.773	2.729	5.9	19.2
1 22	7 6.19	+27 26.5	1.063	2.024	8.2	18.5	1 22	7 5.70	+39 21.0	1.795	2.723	8.6	19.3
2 1	6 58.27	+27 42.4	1.107	2.027	13.5	18.8	2 1	6 56.46	+40 9.2	1.845	2.716	11.8	19.5
2 11	6 53.85	+27 46.0	1.172	2.031	18.1	19.1	2 11	6 49.81	+40 36.5	1.917	2.710	14.8	19.7
<b>284952</b>	2010 EG <sub>127</sub>		1 9.4 261°93	3°7/ 7.9 18			<b>51918</b>	2001 QG <sub>85</sub>		1 9.4 236°36	2°0/10.1 18		
12 3	7 47.29	+32 20.9	2.514	3.297	11.9	20.9	12 3	7 43.97	+15 20.9	2.522	3.292	12.3	19.3
12 13	7 42.47	+33 1.1	2.415	3.283	9.4	20.7	12 13	7 39.55	+15 16.6	2.423	3.285	9.7	19.1
12 23	7 35.33	+33 39.8	2.340	3.269	6.7	20.5	12 23	7 33.21	+15 19.3	2.349	3.278	6.7	18.9
1 2	7 26.40	+34 12.4	2.293	3.255	4.2	20.3	1 2	7 25.44	+15 28.3	2.302	3.270	3.5	18.7
1 12	7 16.55	+34 34.9	2.276	3.241	4.0	20.3	1 12	7 16.96	+15 42.5	2.285	3.263	2.1	18.6
1 22	7 6.82	+34 44.7	2.288	3.227	6.2	20.4	1 22	7 8.61	+16 0.3	2.298	3.255	4.7	18.8
2 1	6 58.24	+34 41.5	2.329	3.212	9.2	20.6	2 1	7 1.23	+16 20.0	2.340	3.248	8.0	19.0
2 11	6 51.69	+34 27.1	2.394	3.197	11.9	20.7	2 11	6 55.50	+16 40.1	2.409	3.240	10.9	19.1
<b>222358</b>	2000 WP <sub>181</sub>		1 9.4 60°22	0°7/ 9.8 18			<b>364300</b>	2006 UE <sub>9</sub>		1 9.4 71°42	6°8/11.5 18		
12 3	7 49.33	+13 35.8	1.739	2.518	16.6	19.7	12 3	7 47.51	+ 5 23.4	1.717	2.474	17.6	21.0
12 13	7 44.36	+15 4.3	1.674	2.542	13.0	19.5	12 13	7 42.73	+ 4 38.2	1.655	2.495	14.5	20.8
12 23	7 36.68	+16 49.1	1.632	2.566	8.6	19.3	12 23	7 35.45	+ 4 10.0	1.613	2.516	11.1	20.6
1 2	7 26.98	+18 44.7	1.617	2.590	3.9	19.1	1 2	7 26.40	+ 4 1.2	1.596	2.537	8.1	20.5
1 12	7 16.37	+20 43.0	1.633	2.615	1.3	18.9	1 12	7 16.65	+ 4 12.0	1.605	2.558	6.8	20.5
1 22	7 6.13	+22 35.7	1.679	2.639	5.9	19.3	1 22	7 7.39	+ 4 40.2	1.641	2.579	8.3	20.6
2 1	6 57.48	+24 16.8	1.755	2.664	10.1	19.6	2 1	6 59.69	+ 5 22.0	1.704	2.600	11.1	20.8
2 11	6 51.33	+25 43.2	1.856	2.688	13.6	19.9	2 11	6 54.33	+ 6 12.2	1.790	2.621	14.1	21.1
<b>285911</b>	2001 QN <sub>150</sub>		1 9.4 63°26	3°4/ 9.5 18			<b>270021</b>	2001 FS <sub>119</sub>		1 9.4 117°67	4°4/ 7.8 18		
12 3	7 56.85	+18 45.7	1.666	2.444	17.3	20.3	12 3	7 49.35	+33 50.4	2.280	3.065	13.0	20.6
12 13	7 49.89	+17 14.9	1.598	2.464	13.6	20.1	12 13	7 44.15	+34 36.7	2.204	3.071	10.3	20.4
12 23	7 40.08	+15 46.1	1.553	2.483	9.3	19.9	12 23	7 36.44	+35 19.9	2.151	3.078	7.3	20.2
1 2	7 28.32	+14 21.5	1.535	2.502	5.1	19.6	1 2	7 26.87	+35 54.6	2.126	3.085	4.9	20.1
1 12	7 15.95	+13 4.2	1.546	2.522	3.7	19.6	1 12	7 16.48	+36 16.3	2.130	3.091	4.7	20.1
1 22	7 4.36	+11 56.9	1.588	2.541	7.0	19.8	1 22	7 6.41	+36 22.7	2.163	3.098	6.9	20.2
2 1	6 54.76	+11 1.5	1.659	2.561	11.0	20.1	2 1	6 57.79	+36 14.2	2.224	3.104	9.7	20.4
2 11	6 47.94	+10 18.1	1.753	2.580	14.5	20.4	2 11	6 51.47	+35 53.6	2.309	3.110	12.4	20.6
<b>149968</b>	Trondal		1 9.4 306°11	0°5/ 9.2 18			<b>289100</b>	2004 TR <sub>302</sub>		1 9.4 83°05	0°2/ 9.5 17		
12 3	7 46.70	+21 44.0	1.869	2.664	15.0	20.6	12 3	7 51.80	+19 49.6	1.542	2.337	17.6	21.0
12 13	7 42.41	+22 5.9	1.783	2.662	11.7	20.4	12 13	7 46.50	+20 10.1	1.482	2.360	13.7	20.8
12 23	7 35.47	+22 33.7	1.720	2.660	7.8	20.2	12 23	7 38.17	+20 38.6	1.443	2.382	9.0	20.6
1 2	7 26.49	+23 4.3	1.683	2.658	3.4	19.9	1 2	7 27.63	+21 11.5	1.429	2.404	3.9	20.3
1 12	7 16.53	+23 33.8	1.674	2.656	1.4	19.7	1 12	7 16.25	+21 44.2	1.444	2.426	1.3	20.2
1 22	7 6.80	+23 59.1	1.695	2.655	5.9	20.0	1 22	7 5.50	+22 13.0	1.487	2.448	6.4	20.6
2 1	6 58.52	+24 18.2	1.743	2.653	10.0	20.3	2 1	6 56.70	+22 36.1	1.557	2.469	10.9	20.9
2 11	6 52.63	+24 31.0	1.815	2.651	13.7	20.5	2 11	6 50.78	+22 53.1	1.650	2.490	14.7	21.2
<b>457027</b>	2008 CQ <sub>146</sub>		1 9.4 287°85	5°6/ 8.6 17			<b>374310</b>	2005 SG <sub>198</sub>		1 9.4 175°55	16°8/15.8 18		
12 3	7 55.50	+36 46.1	1.763	2.551	16.0	21.0	12 3	7 48.63	-13 5.5	1.339	2.030	24.6	21.7
12 13	7 49.89	+37 0.1	1.669	2.536	13.0	20.8	12 13	7 44.70	-14 35.6	1.271	2.031	22.5	21.5
12 23	7 40.76	+37 6.0	1.596	2.522	9.5	20.6	12 23	7 37.42	-15 31.4	1.217	2.032	20.1	21.4
1 2	7 28.88	+36 57.0	1.549	2.507	6.4	20.3	1 2	7 27.50	-15 42.1	1.179	2.033	18.1	21.2
1 12	7 15.70	+36 27.5	1.529	2.492	5.9	20.3	1 12	7 16.24	-15 1.5	1.160	2.033	16.9	21.2
1 22	7 2.96	+35 36.4	1.538	2.478	8.6	20.4	1 22	7 5.23	-13 30.4	1.161	2.033	17.1	21.2
2 1	6 52.31	+34 27.2	1.573	2.463	12.3	20.6	2 1	6 56.07	-11 17.0	1.184	2.033	18.6	21.3
2 11	6 44.91	+33 6.5	1.632	2.449	15.9	20.8	2 11	6 49.97	- 8 35.6	1.226	2.032	20.8	21.4
<b>55611</b>	2002 SR <sub>50</sub>		1 9.4 353°53	5°1/ 7.5 18			<b>349499</b>	2008 OX <sub>5</sub>		1 9.4 108°19	0°4/ 9.3 17		
12 3	7 47.65	+34 30.0	2.064	2.858	13.8	18.9	12 3	7 53.47	+22 29.0	1.579	2.374		

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>62868</b>	2000 <i>UV</i> <sub>83</sub>		1 9.4 79°48	1.4/ 9.9	18		<b>137050</b>	1998 <i>VL</i> <sub>15</sub>		1 9.4 18°05	10°5/11.5	18	
12 3	7 46.11	+16 41.9	1.934	2.719	14.9	19.1	12 3	7 42.61	+ 5 1.9	1.119	1.920	22.6	18.3
12 13	7 41.68	+16 54.6	1.857	2.728	11.7	18.9	12 13	7 40.14	+ 3 16.0	1.067	1.930	19.0	18.1
12 23	7 34.83	+17 16.4	1.802	2.737	7.9	18.7	12 23	7 34.34	+ 1 51.8	1.033	1.943	15.1	17.9
1 2	7 26.20	+17 45.3	1.774	2.746	3.8	18.5	1 2	7 26.12	+ 0 56.6	1.018	1.958	11.8	17.8
1 12	7 16.76	+18 18.6	1.774	2.755	1.7	18.4	1 12	7 16.92	+ 0 34.5	1.026	1.974	10.5	17.8
1 22	7 7.63	+18 53.0	1.803	2.764	5.5	18.6	1 22	7 8.37	+ 0 44.6	1.055	1.992	12.0	17.9
2 1	6 59.88	+19 26.1	1.861	2.773	9.4	18.9	2 1	7 1.89	+ 1 21.4	1.107	2.011	15.1	18.2
2 11	6 54.32	+19 56.1	1.943	2.782	12.8	19.1	2 11	6 58.47	+ 2 16.1	1.178	2.032	18.4	18.4
<b>488036</b>	2015 <i>UR</i> <sub>39</sub>		1 9.4 222°95	2°9/10.2	18		<b>88720</b>	2001 <i>ST</i> <sub>26</sub>		1 9.4 306°79	5°7/11.2	18	
12 3	7 49.66	+14 11.6	1.666	2.448	17.1	21.9	12 3	7 44.85	+ 7 14.8	1.830	2.594	16.4	19.8
12 13	7 45.03	+14 9.8	1.574	2.441	13.6	21.6	12 13	7 40.89	+ 6 48.5	1.743	2.591	13.5	19.6
12 23	7 37.43	+14 20.1	1.503	2.434	9.5	21.3	12 23	7 34.46	+ 6 37.3	1.677	2.588	10.2	19.3
1 2	7 27.48	+14 41.9	1.457	2.426	5.1	21.1	1 2	7 26.14	+ 6 43.0	1.635	2.585	7.1	19.2
1 12	7 16.30	+15 13.0	1.439	2.417	3.0	20.9	1 12	7 16.88	+ 7 5.6	1.621	2.583	5.7	19.1
1 22	7 5.25	+15 49.9	1.449	2.408	6.7	21.1	1 22	7 7.82	+ 7 42.9	1.634	2.580	7.5	19.2
2 1	6 55.75	+16 29.3	1.486	2.399	11.3	21.4	2 1	7 0.06	+ 8 31.3	1.673	2.578	10.8	19.4
2 11	6 48.88	+17 8.2	1.547	2.389	15.4	21.6	2 11	6 54.51	+ 9 26.1	1.737	2.575	14.1	19.6
<b>159262</b>	2005 <i>YH</i> <sub>177</sub>		1 9.4 195°37	0°1/ 9.4	18		<b>188704</b>	2005 <i>TB</i> <sub>64</sub>		1 9.4 284°46	1°0/ 9.7	18	
12 3	7 46.23	+20 2.8	2.176	2.960	13.5	20.4	12 3	7 46.63	+18 38.1	1.893	2.683	15.1	20.7
12 13	7 41.67	+20 23.9	2.086	2.959	10.5	20.2	12 13	7 42.28	+18 42.2	1.807	2.682	11.8	20.4
12 23	7 34.81	+20 51.1	2.020	2.958	7.0	20.0	12 23	7 35.37	+18 53.5	1.743	2.681	7.9	20.2
1 2	7 26.22	+21 22.2	1.982	2.956	3.1	19.7	1 2	7 26.53	+19 10.3	1.706	2.679	3.7	19.9
1 12	7 16.78	+21 53.8	1.972	2.955	1.1	19.6	1 12	7 16.76	+19 30.0	1.697	2.678	1.5	19.8
1 22	7 7.54	+22 23.3	1.993	2.953	5.1	19.9	1 22	7 7.23	+19 49.9	1.716	2.677	5.7	20.1
2 1	6 59.50	+22 48.6	2.043	2.951	8.9	20.1	2 1	6 59.10	+20 8.4	1.764	2.676	9.8	20.3
2 11	6 53.49	+23 9.0	2.118	2.949	12.2	20.3	2 11	6 53.26	+20 24.2	1.836	2.675	13.4	20.5
<b>213156</b>	2000 <i>QJ</i> <sub>25</sub>		1 9.4 57°03	17°4/ 9.7	18		<b>113712</b>	2002 <i>TN</i> <sub>132</sub>		1 9.4 357°41	3°3/10.1	18	
12 3	8 16.78	+54 25.7	1.019	1.798	25.8	19.9	12 3	7 42.67	+15 10.6	1.659	2.458	16.5	18.7
12 13	8 10.42	+55 49.7	0.976	1.809	22.8	19.7	12 13	7 39.47	+14 37.2	1.578	2.454	13.1	18.5
12 23	7 56.11	+56 45.3	0.948	1.820	20.0	19.6	12 23	7 33.63	+14 12.4	1.517	2.451	9.2	18.3
1 2	7 35.73	+56 50.7	0.937	1.832	17.9	19.5	1 2	7 25.79	+13 57.1	1.481	2.449	5.2	18.0
1 12	7 13.63	+55 51.6	0.945	1.843	17.4	19.5	1 12	7 17.02	+13 50.9	1.471	2.448	3.4	17.9
1 22	6 54.60	+53 51.2	0.974	1.856	18.7	19.6	1 22	7 8.54	+13 52.8	1.489	2.448	6.6	18.1
2 1	6 41.80	+51 7.0	1.021	1.868	21.0	19.8	2 1	7 1.55	+14 1.0	1.533	2.449	10.7	18.3
2 11	6 36.00	+48 1.7	1.087	1.881	23.7	20.1	2 11	6 56.95	+14 13.4	1.600	2.451	14.4	18.6
<b>134175</b>	2005 <i>CF</i> <sub>12</sub>		1 9.4 226°52	2°9/10.7	18		<b>159767</b>	2003 <i>HU</i> <sub>8</sub>		1 9.4 239°59	1°4/ 9.8	18	
12 3	7 43.59	+11 24.2	2.350	3.114	13.2	20.2	12 3	7 49.36	+17 40.5	1.751	2.538	16.2	21.3
12 13	7 39.40	+11 32.6	2.256	3.111	10.6	20.0	12 13	7 44.75	+17 43.2	1.655	2.528	12.8	21.1
12 23	7 33.20	+11 52.0	2.186	3.108	7.5	19.8	12 23	7 37.25	+17 54.7	1.581	2.517	8.7	20.8
1 2	7 25.49	+12 22.0	2.142	3.105	4.4	19.6	1 2	7 27.44	+18 13.4	1.533	2.506	4.2	20.5
1 12	7 17.05	+13 0.9	2.127	3.101	3.0	19.5	1 12	7 16.42	+18 36.4	1.513	2.495	1.8	20.3
1 22	7 8.73	+13 46.0	2.142	3.098	5.2	19.6	1 22	7 5.52	+19 0.9	1.522	2.483	6.3	20.6
2 1	7 1.42	+14 34.4	2.187	3.095	8.4	19.8	2 1	6 56.11	+19 24.5	1.558	2.470	10.9	20.8
2 11	6 55.85	+15 23.1	2.257	3.091	11.5	20.0	2 11	6 49.25	+19 45.7	1.618	2.458	14.9	21.0
<b>331025</b>	2009 <i>VG</i> <sub>4</sub>		1 9.4 138°53	0°7/ 9.6	18		<b>131882</b>	2002 <i>AA</i> <sub>166</sub>		1 9.4 284°59	1°3/ 9.7	18	
12 3	7 47.64	+19 49.2	2.275	3.053	13.2	21.5	12 3	7 48.20	+18 56.3	1.577	2.377	17.1	20.3
12 13	7 42.50	+19 48.1	2.193	3.061	10.3	21.3	12 13	7 44.21	+18 49.1	1.482	2.362	13.6	20.0
12 23	7 35.20	+19 51.6	2.134	3.069	6.8	21.1	12 23	7 37.09	+18 49.6	1.408	2.347	9.2	19.7
1 2	7 26.33	+19 58.1	2.103	3.076	3.1	20.9	1 2	7 27.43	+18 56.1	1.358	2.332	4.3	19.4
1 12	7 16.77	+20 5.7	2.101	3.083	1.2	20.7	1 12	7 16.42	+19 6.3	1.335	2.317	1.8	19.2
1 22	7 7.51	+20 12.7	2.130	3.090	4.9	21.0	1 22	7 5.53	+19 17.7	1.340	2.302	6.8	19.5
2 1	6 59.49	+20 18.3	2.189	3.096	8.4	21.2	2 1	6 56.26	+19 28.4	1.371	2.287	11.7	19.7
2 11	6 53.42	+20 22.1	2.272	3.102	11.5	21.4	2 11	6 49.80	+19 37.5	1.425	2.273	16.1	19.9
<b>51658</b>	2001 <i>JJ</i> <sub>1</sub>		1 9.4 145°51	4°5/11.2	18		<b>61200</b>	2000 <i>OC</i> <sub>4</sub>		1 9.4 217°76	3°5/10.5	18	
12 3	7 43.71	+ 7 35.9	2.357	3.107	13.6	19.7	12 3	7 48.96	+11 45.1	1.976	2.741	15.4	20.1
12 13	7 39.39	+ 7 18.8	2.270	3.110	11.1	19.5	12 13	7 44.03	+11 40.5	1.877	2.732	12.4	19.9
12 23	7 33.13	+ 7 13.8	2.205	3.113	8.3	19.4	12 23	7 36.56	+11 47.9	1.801	2.723	8.8	19.7
1 2	7 25.45	+ 7 21.6	2.166	3.116	5.7	19.2	1 2	7 27.09	+12 7.3	1.750	2.713	5.2	19.4
1 12	7 17.11	+ 7 41.9	2.156	3.118	4.5	19.1	1 12	7 16.57	+12 37.2	1.729	2.703	3.5	19.3
1 22	7 8.96	+ 8 12.9	2.176	3.121	6.0	19.2	1 22	7 6.14	+13 15.0	1.737	2.692	6.3	19.4
2 1	7 1.83	+ 8 51.9	2.223	3.123	8.7	19.4	2 1	6 56.96	+13 57.4	1.773	2.680	10.1	19.6
2 11	6 56.41	+ 9 35.8	2.297	3.125	11.5	19.6	2 11	6 49.98	+14 41.5	1.834	2.667	13.7	19.8
<b>286689</b>	2002 <i>FK</i> <sub>11</sub>		1 9.4 302°99	1°0/ 9.2	18		<b>95710</b>	2002 <i>UJ</i> <sub>38</sub>		1 9.4 203°84	3°9/10.3	18	
12 3	7 47.94	+23 7.0	1.487	2.297	17.5	21.0	12 3	7 51.07	+13 9.3	1.763	2.536	16.7	20.5
12 13	7 44.26	+23 23.2	1.398	2.285	13.7	20.7	12 13	7 45.88	+12 39.5	1.672	2.532	13.4	20.3
12 23	7 37.24	+23 45.4	1.329	2.272	9.2	20.4	12 23	7 37.86	+12 19.5	1.603	2.528	9.5	20.1
1 2	7 27.51	+24 9.7	1.284	2.260	4.1	20.1	1 2	7 27.67	+12 10.2	1.559	2.523	5.6	19.8
1 12	7 16.35	+24 31.3	1.266	2.248	1.9	19.9	1 12	7 16.38	+12 11.2	1.543	2.517	4.0	19.7
1 22	7 5.36	+24 46.6	1.275	2.236	7.2	20.2	1 22	7 5.31	+12 21.1	1.556	2.510	7.0	19.9
2 1	6 56.18	+24 53.8	1.310	2.225	12.3	20.5	2 1	6 55.74	+12 37.8	1.597	2.503	11.1	20.1
2 11	6 50.05	+24 53.8	1.366	2.214	16.7	20.7	2 11	6 48.69	+12 59.1	1.661	2.496	14.9	20.3
<b>281862</b>	2010 <i>CM</i> <sub>167</sub>		1 9.4 30°78	2°7/10.3	18		<b>293911</b>	2007 <i>SK</i> <sub>5</sub>		1 9.4 162°62	0°6/ 9.6	18	
12 3	7 43.84	+13 49.3	2										

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>425414</b>	2010 <i>CL</i> <sub>161</sub>		1 9.4	3°88	1°6/ 9.2	18	<b>406159</b>	2006 <i>WU</i> <sub>11</sub>		1 9.4	16°58	10°0/ 5.7	18
12 3	7 48.82	+27 23.0	1.809	2.608	15.3	21.0	12 3	7 47.02	+36 43.9	1.210	2.038	19.6	19.6
12 13	7 44.12	+27 10.8	1.728	2.608	11.9	20.8	12 13	7 44.76	+38 59.1	1.159	2.046	16.0	19.4
12 23	7 36.63	+26 57.3	1.668	2.608	8.0	20.6	12 23	7 38.18	+41 10.3	1.128	2.055	12.4	19.3
1 2	7 27.06	+26 39.4	1.635	2.609	3.7	20.3	1 2	7 28.09	+43 2.6	1.120	2.066	10.2	19.2
1 12	7 16.62	+26 14.8	1.630	2.610	2.1	20.2	1 12	7 16.29	+44 22.7	1.136	2.078	10.6	19.2
1 22	7 6.62	+25 43.3	1.653	2.612	6.1	20.5	1 22	7 5.07	+45 4.4	1.175	2.091	13.1	19.4
2 1	6 58.31	+25 6.1	1.704	2.614	10.3	20.7	2 1	6 56.59	+45 9.5	1.235	2.106	16.4	19.7
2 11	6 52.57	+24 25.7	1.779	2.617	13.9	20.9	2 11	6 52.23	+44 45.8	1.314	2.122	19.5	19.9
<b>324718</b>	2007 <i>EB</i> <sub>139</sub>		1 9.4	182°06	1°8/10.1	18	<b>405922</b>	2006 <i>KZ</i> <sub>53</sub>		1 9.4	158°46	1°1/ 9.8	18
12 3	7 45.77	+15 17.2	2.119	2.896	14.1	21.4	12 3	7 49.83	+17 51.9	2.134	2.907	14.1	22.4
12 13	7 41.32	+15 28.4	2.031	2.896	11.1	21.2	12 13	7 44.39	+18 1.8	2.050	2.915	11.0	22.2
12 23	7 34.60	+15 49.1	1.965	2.896	7.6	21.0	12 23	7 36.59	+18 18.8	1.989	2.922	7.4	22.0
1 2	7 26.17	+16 17.9	1.926	2.896	3.9	20.8	1 2	7 27.04	+18 40.9	1.955	2.928	3.5	21.7
1 12	7 16.92	+16 52.4	1.916	2.896	2.0	20.7	1 12	7 16.69	+19 5.7	1.952	2.933	1.4	21.6
1 22	7 7.85	+17 29.7	1.936	2.895	5.3	20.9	1 22	7 6.61	+19 30.4	1.979	2.938	5.2	21.9
2 1	6 59.97	+18 7.1	1.984	2.895	9.0	21.1	2 1	6 57.83	+19 53.3	2.035	2.942	9.0	22.1
2 11	6 54.10	+18 42.5	2.058	2.894	12.3	21.3	2 11	6 51.19	+20 13.5	2.116	2.945	12.3	22.3
<b>137076</b>	1998 <i>XK</i> <sub>3</sub>		1 9.4	38°28	4°6/ 9.6	18	<b>271893</b>	2004 <i>VA</i> <sub>34</sub>		1 9.4	46°34	0°1/ 9.5	18
12 3	7 54.53	+17 47.3	1.313	2.112	20.0	17.8	12 3	7 45.91	+20 15.2	1.942	2.734	14.6	21.1
12 13	7 48.72	+16 2.9	1.259	2.135	15.7	17.6	12 13	7 41.66	+20 33.8	1.862	2.738	11.4	20.9
12 23	7 39.61	+14 23.4	1.224	2.158	11.0	17.4	12 23	7 34.93	+20 59.1	1.804	2.743	7.6	20.7
1 2	7 28.27	+12 52.6	1.215	2.182	6.3	17.2	1 2	7 26.36	+21 28.2	1.772	2.747	3.3	20.5
1 12	7 16.28	+11 34.2	1.233	2.206	4.8	17.2	1 12	7 16.92	+21 57.9	1.769	2.751	1.1	20.3
1 22	7 5.27	+10 31.4	1.278	2.232	8.2	17.4	1 22	7 7.76	+22 25.1	1.795	2.756	5.5	20.6
2 1	6 56.58	+9 45.0	1.349	2.258	12.5	17.8	2 1	6 59.98	+22 47.9	1.849	2.761	9.5	20.9
2 11	6 51.04	+9 13.6	1.442	2.284	16.3	18.1	2 11	6 54.44	+23 5.6	1.928	2.766	13.0	21.1
<b>321799</b>	2010 <i>PA</i> <sub>61</sub>		1 9.4	31°87	1°1/ 9.7	18	<b>123619</b>	2000 <i>YA</i> <sub>26</sub>		1 9.4	312°20	3°0/ 8.3	18
12 3	7 47.20	+18 26.2	1.608	2.407	16.9	21.0	12 3	7 45.87	+26 27.4	1.786	2.590	15.2	19.4
12 13	7 43.12	+18 30.7	1.530	2.410	13.2	20.8	12 13	7 42.31	+27 22.2	1.691	2.574	11.9	19.1
12 23	7 36.12	+18 43.9	1.474	2.413	8.9	20.6	12 23	7 35.80	+28 22.4	1.618	2.559	8.1	18.9
1 2	7 26.92	+19 3.8	1.442	2.416	4.1	20.3	1 2	7 26.91	+29 22.3	1.571	2.543	4.2	18.6
1 12	7 16.68	+19 27.2	1.437	2.419	1.6	20.1	1 12	7 16.69	+30 15.5	1.552	2.528	3.5	18.5
1 22	7 6.79	+19 51.0	1.461	2.423	6.3	20.4	1 22	7 6.51	+30 56.8	1.561	2.513	7.2	18.7
2 1	6 58.57	+20 13.0	1.511	2.427	10.9	20.7	2 1	6 57.79	+31 23.8	1.597	2.499	11.4	18.9
2 11	6 53.00	+20 31.7	1.584	2.431	14.8	21.0	2 11	6 51.70	+31 37.2	1.655	2.485	15.1	19.1
<b>405936</b>	2006 <i>RC</i> <sub>28</sub>		1 9.4	127°03	3°0/10.5	18	<b>440422</b>	2005 <i>QX</i> <sub>180</sub>		1 9.4	127°25	4°6/10.8	17
12 3	7 48.49	+12 30.1	2.117	2.880	14.5	22.4	12 3	7 51.15	+9 55.7	1.714	2.480	17.3	22.2
12 13	7 43.22	+12 26.7	2.040	2.895	11.5	22.3	12 13	7 45.75	+9 40.5	1.642	2.495	14.0	22.0
12 23	7 35.72	+12 33.8	1.986	2.909	8.1	22.1	12 23	7 37.64	+9 39.7	1.590	2.509	10.1	21.8
1 2	7 26.61	+12 50.7	1.959	2.923	4.6	21.9	1 2	7 27.52	+9 53.9	1.564	2.523	6.3	21.6
1 12	7 16.81	+13 15.8	1.961	2.937	3.1	21.8	1 12	7 16.54	+10 21.4	1.566	2.536	4.6	21.5
1 22	7 7.33	+13 46.6	1.994	2.949	5.6	22.0	1 22	7 5.98	+10 59.4	1.596	2.549	7.0	21.7
2 1	6 59.15	+14 20.6	2.055	2.961	9.0	22.2	2 1	6 57.03	+11 43.9	1.654	2.560	10.8	21.9
2 11	6 53.00	+14 55.4	2.142	2.973	12.1	22.4	2 11	6 50.60	+12 31.1	1.736	2.571	14.3	22.2
<b>236041</b>	2005 <i>GN</i> <sub>210</sub>		1 9.4	187°58	3°2/ 7.7	18	<b>88024</b>	2000 <i>UU</i> <sub>75</sub>		1 9.4	132°81	0°6/ 9.2	18
12 3	7 46.94	+28 58.3	2.455	3.240	12.1	20.4	12 3	7 48.34	+21 42.1	2.501	3.275	12.2	20.6
12 13	7 42.23	+30 6.1	2.368	3.240	9.5	20.3	12 13	7 42.93	+22 19.5	2.422	3.290	9.5	20.4
12 23	7 35.24	+31 15.7	2.306	3.240	6.5	20.1	12 23	7 35.47	+23 1.4	2.369	3.304	6.2	20.2
1 2	7 26.48	+32 22.0	2.273	3.239	3.9	19.9	1 2	7 26.51	+23 44.6	2.344	3.318	2.7	20.0
1 12	7 16.83	+33 19.9	2.270	3.238	3.6	19.9	1 12	7 16.90	+24 25.8	2.350	3.331	1.2	19.9
1 22	7 7.27	+34 5.6	2.297	3.238	6.1	20.0	1 22	7 7.53	+25 2.2	2.387	3.344	4.7	20.2
2 1	6 58.85	+34 37.6	2.353	3.237	9.0	20.2	2 1	6 59.29	+25 32.0	2.455	3.356	7.9	20.4
2 11	6 52.40	+34 56.6	2.434	3.236	11.8	20.4	2 11	6 52.90	+25 55.0	2.549	3.368	10.8	20.6
<b>390807</b>	2004 <i>HA</i> <sub>47</sub>		1 9.4	213°85	4°3/ 8.1	18	<b>137026</b>	1998 <i>TX</i> <sub>16</sub>		1 9.4	183°43	2°2/ 8.8	18
12 3	7 53.88	+30 10.1	1.734	2.527	16.1	21.5	12 3	7 51.10	+27 14.9	2.150	2.933	13.7	21.2
12 13	7 48.64	+31 5.0	1.646	2.522	12.7	21.2	12 13	7 45.59	+27 41.1	2.062	2.934	10.7	21.0
12 23	7 40.05	+32 1.2	1.581	2.515	8.9	21.0	12 23	7 37.50	+28 8.3	1.998	2.934	7.2	20.8
1 2	7 28.75	+32 51.4	1.542	2.509	5.3	20.8	1 2	7 27.48	+28 32.3	1.962	2.934	3.6	20.5
1 12	7 16.04	+33 28.3	1.531	2.501	4.7	20.7	1 12	7 16.55	+28 49.1	1.955	2.933	2.6	20.5
1 22	7 3.54	+33 47.6	1.549	2.493	8.1	20.9	1 22	7 5.88	+28 56.3	1.979	2.931	5.9	20.7
2 1	6 52.87	+33 48.7	1.593	2.484	12.1	21.1	2 1	6 56.63	+28 53.8	2.031	2.929	9.5	20.9
2 11	6 45.25	+33 35.0	1.660	2.475	15.8	21.3	2 11	6 49.68	+28 43.0	2.108	2.926	12.7	21.1
<b>330485</b>	2007 <i>GB</i> <sub>44</sub>		1 9.4	193°94	2°8/10.3	18	<b>89447</b>	2001 <i>WT</i> <sub>86</sub>		1 9.4	98°53	2°5/10.0	18
12 3	7 45.58	+13 51.6	2.098	2.872	14.3	21.4	12 3	7 53.08	+15 58.9	1.689	2.468	17.0	20.1
12 13	7 41.16	+13 40.6	2.009	2.871	11.4	21.2	12 13	7 47.15	+15 43.4	1.626	2.492	13.4	19.9
12 23	7 34.49	+13 38.8	1.943	2.871	8.0	21.0	12 23	7 38.47	+15 37.0	1.585	2.516	9.1	19.7
1 2	7 26.14	+13 45.9	1.904	2.870	4.5	20.8	1 2	7 27.83	+15 38.6	1.569	2.539	4.7	19.5
1 12	7 16.99	+14 0.7	1.893	2.869	2.9	20.7	1 12	7 16.47	+15 46.5	1.583	2.562	2.6	19.4
1 22	7 8.04	+14 21.4	1.912	2.869	5.6	20.8	1 22	7 5.73	+15 58.4	1.625	2.584	6.2	19.7
2 1	7 0.30	+14 45.8	1.958	2.868	9.2	21.1	2 1	6 56.78	+16 12.6	1.695	2.605	10.3	20.0
2 11	6 54.56	+15 11.7	2.030	2.867	12.5	21.3	2 11	6 50.45	+16 27.5	1.790	2.626	13.9	20.3
<b>322817</b>	2001 <i>SS</i> <sub>89</sub>		1 9.4	47°73	7°2/11.8	18	<b>296052</b>	2009 <i>AG</i> <sub>28</sub>		1 9.4	343°28	1°6/10.2	18
12 3	7 45.00	+4 26.5	1.636										

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>26596</b>	2000 <i>EE</i> <sub>171</sub>		1 9.4 197°09	6°4/ 7.1 18			<b>30750</b>	1981 <i>EY</i> <sub>28</sub>		1 9.4 68°14	6°4/ 8.5 18		
12 3	7 53.31	+37 24.1	2.012	2.795	14.5	19.7	12 3	7 57.73	+38 52.3	1.751	2.534	16.3	18.3
12 13	7 47.95	+38 32.4	1.931	2.793	11.8	19.5	12 13	7 51.21	+39 22.7	1.694	2.556	13.1	18.2
12 23	7 39.43	+39 36.2	1.874	2.791	8.9	19.3	12 23	7 41.33	+39 43.4	1.660	2.578	9.8	18.0
1 2	7 28.43	+40 27.6	1.843	2.789	6.8	19.2	1 2	7 29.10	+39 46.9	1.650	2.600	7.1	17.9
1 12	7 16.21	+40 59.6	1.840	2.786	6.7	19.2	1 12	7 16.12	+39 28.6	1.668	2.622	6.6	17.9
1 22	7 4.28	+41 9.1	1.865	2.784	8.9	19.3	1 22	7 4.09	+38 48.7	1.714	2.643	8.7	18.1
2 1	6 54.12	+40 56.7	1.916	2.780	11.7	19.4	2 1	6 54.42	+37 51.2	1.787	2.665	11.7	18.3
2 11	6 46.82	+40 26.9	1.990	2.777	14.5	19.6	2 11	6 47.97	+36 42.5	1.882	2.687	14.6	18.5
<b>110039</b>	2001 <i>SH</i> <sub>81</sub>		1 9.4 238°20	1°8/ 9.9 18			<b>397484</b>	2007 <i>RY</i> <sub>20</sub>		1 9.4 128°65	0°9/ 9.7 18		
12 3	7 48.02	+16 43.0	2.130	2.905	14.1	21.1	12 3	7 51.03	+18 14.1	1.927	2.705	15.2	21.9
12 13	7 43.18	+16 36.3	2.028	2.892	11.1	20.8	12 13	7 45.49	+18 28.7	1.852	2.720	11.9	21.7
12 23	7 35.94	+16 36.8	1.948	2.880	7.7	20.6	12 23	7 37.40	+18 51.0	1.800	2.734	7.9	21.5
1 2	7 26.84	+16 43.5	1.896	2.866	3.9	20.3	1 2	7 27.43	+19 18.4	1.775	2.748	3.6	21.3
1 12	7 16.77	+16 54.8	1.873	2.853	2.0	20.2	1 12	7 16.65	+19 47.9	1.779	2.761	1.4	21.1
1 22	7 6.79	+17 9.1	1.879	2.838	5.5	20.4	1 22	7 6.26	+20 16.4	1.814	2.774	5.5	21.5
2 1	6 57.99	+17 24.5	1.915	2.824	9.4	20.6	2 1	6 57.38	+20 41.9	1.877	2.786	9.5	21.7
2 11	6 51.26	+17 39.9	1.976	2.808	12.9	20.8	2 11	6 50.85	+21 3.4	1.965	2.797	13.0	22.0
<b>107433</b>	2001 <i>DW</i> <sub>14</sub>		1 9.4 312°93	1°5/ 9.8 18			<b>520861</b>	2014 <i>VE</i> <sub>39</sub>		1 9.4 58°25	7°8/ 5.4 17		
12 3	7 45.67	+17 54.7	1.477	2.284	17.8	20.4	12 3	7 53.76	+35 4.7	1.725	2.519	16.1	20.3
12 13	7 42.45	+17 54.2	1.385	2.268	14.1	20.1	12 13	7 48.88	+37 33.0	1.666	2.534	13.0	20.1
12 23	7 36.06	+18 3.7	1.313	2.253	9.6	19.8	12 23	7 40.41	+40 0.3	1.632	2.550	9.9	19.9
1 2	7 27.07	+18 21.8	1.264	2.238	4.6	19.5	1 2	7 29.01	+42 13.9	1.625	2.566	7.9	19.9
1 12	7 16.67	+18 45.7	1.242	2.224	2.0	19.2	1 12	7 16.05	+44 2.3	1.646	2.583	8.4	19.9
1 22	7 6.38	+19 11.8	1.247	2.210	7.0	19.5	1 22	7 3.29	+45 18.9	1.695	2.599	10.7	20.1
2 1	6 57.73	+19 37.4	1.277	2.197	12.1	19.8	2 1	6 52.51	+46 3.4	1.770	2.615	13.5	20.3
2 11	6 51.98	+20 0.5	1.329	2.184	16.6	20.0	2 11	6 45.05	+46 20.8	1.866	2.632	16.1	20.5
<b>427704</b>	2004 <i>FH</i> <sub>63</sub>		1 9.4 273°29	6°5/ 6.8 18			<b>114656</b>	2003 <i>FE</i> <sub>3</sub>		1 9.4 42°32	1°7/ 10.5 18 R		
12 3	7 50.14	+41 0.3	2.440	3.212	12.6	20.7	12 3	7 50.07	+ 8 56.7	1.656	2.422	17.8	18.5
12 13	7 45.07	+42 0.1	2.355	3.205	10.4	20.6	12 13	7 45.34	+10 46.0	1.575	2.434	14.1	18.3
12 23	7 37.30	+42 53.3	2.294	3.198	8.2	20.4	12 23	7 37.69	+13 0.6	1.517	2.445	9.7	18.1
1 2	7 27.45	+43 33.6	2.259	3.191	6.7	20.3	1 2	7 27.71	+15 35.2	1.487	2.457	4.8	17.8
1 12	7 16.57	+43 55.6	2.252	3.184	6.7	20.3	1 12	7 16.53	+18 19.7	1.488	2.470	1.9	17.7
1 22	7 5.93	+43 56.9	2.273	3.177	8.3	20.4	1 22	7 5.50	+21 2.0	1.521	2.482	6.3	18.0
2 1	6 56.74	+43 38.3	2.321	3.170	10.6	20.5	2 1	6 56.02	+23 31.9	1.585	2.495	10.9	18.3
2 11	6 49.98	+43 3.5	2.392	3.163	12.9	20.7	2 11	6 49.15	+25 43.2	1.675	2.509	14.8	18.5
<b>274875</b>	2009 <i>RD</i> <sub>72</sub>		1 9.4 3°65	2°6/ 8.6 18			<b>142702</b>	2002 <i>TY</i> <sub>254</sub>		1 9.4 79°72	1°9/ 10.1 18		
12 3	7 47.98	+27 24.6	1.885	2.682	14.8	21.2	12 3	7 48.78	+15 50.2	1.729	2.515	16.4	20.4
12 13	7 43.54	+27 56.6	1.803	2.682	11.5	21.0	12 13	7 43.93	+16 0.1	1.664	2.534	12.9	20.2
12 23	7 36.34	+28 30.1	1.744	2.682	7.8	20.8	12 23	7 36.43	+16 20.5	1.619	2.553	8.7	20.0
1 2	7 27.03	+29 0.5	1.710	2.683	4.0	20.6	1 2	7 27.02	+16 49.3	1.601	2.572	4.3	19.8
1 12	7 16.73	+29 23.1	1.706	2.683	3.0	20.5	1 12	7 16.82	+17 23.5	1.611	2.591	2.1	19.6
1 22	7 6.73	+29 35.0	1.730	2.683	6.5	20.7	1 22	7 7.09	+17 59.4	1.650	2.610	5.9	19.9
2 1	6 58.28	+29 35.8	1.781	2.684	10.4	21.0	2 1	6 58.98	+18 34.3	1.716	2.629	10.0	20.2
2 11	6 52.34	+29 27.0	1.856	2.684	13.8	21.2	2 11	6 53.34	+19 6.2	1.806	2.647	13.6	20.5
<b>50711</b>	2000 <i>ER</i> <sub>134</sub>		1 9.4 32°55	0°5/ 9.3 18			<b>428101</b>	2006 <i>QD</i> <sub>135</sub>		1 9.4 147°72	4°5/ 7.8 18		
12 3	7 46.55	+20 54.3	1.258	2.079	19.4	17.7	12 3	7 50.07	+37 42.2	2.857	3.625	11.0	21.4
12 13	7 43.19	+21 25.6	1.203	2.096	15.0	17.4	12 13	7 44.29	+38 16.5	2.779	3.632	8.9	21.2
12 23	7 36.40	+22 6.1	1.168	2.114	9.9	17.2	12 23	7 36.38	+38 45.3	2.725	3.639	6.6	21.1
1 2	7 27.08	+22 51.0	1.156	2.132	4.3	16.9	1 2	7 26.94	+39 4.3	2.699	3.646	4.8	21.0
1 12	7 16.75	+23 34.2	1.170	2.152	1.7	16.8	1 12	7 16.85	+39 10.1	2.702	3.652	4.7	21.0
1 22	7 7.09	+24 10.7	1.210	2.173	7.1	17.2	1 22	7 7.08	+39 1.6	2.736	3.658	6.3	21.1
2 1	6 59.61	+24 38.2	1.274	2.194	12.1	17.6	2 1	6 58.54	+38 39.5	2.798	3.663	8.4	21.2
2 11	6 55.30	+24 56.4	1.361	2.216	16.3	17.9	2 11	6 51.96	+38 6.7	2.886	3.668	10.6	21.4
<b>26843</b>	1991 <i>UK</i> <sub>1</sub>		1 9.4 98°56	2°3/ 8.9 18			<b>445879</b>	2012 <i>UG</i> <sub>91</sub>		1 9.4 168°35	2°0/ 8.9 18		
12 3	7 56.18	+26 50.2	1.586	2.379	17.3	18.4	12 3	7 54.46	+25 16.6	1.775	2.562	16.0	22.4
12 13	7 49.99	+27 11.8	1.525	2.402	13.4	18.2	12 13	7 48.69	+25 50.6	1.693	2.568	12.5	22.1
12 23	7 40.55	+27 34.3	1.486	2.424	8.9	18.0	12 23	7 39.83	+26 28.2	1.634	2.572	8.3	21.9
1 2	7 28.79	+27 52.2	1.473	2.446	4.3	17.8	1 2	7 28.60	+27 4.1	1.602	2.575	3.9	21.6
1 12	7 16.17	+28 1.0	1.488	2.467	2.8	17.7	1 12	7 16.25	+27 33.2	1.599	2.578	2.5	21.5
1 22	7 4.31	+27 58.5	1.532	2.487	6.9	18.0	1 22	7 4.25	+27 51.9	1.625	2.580	6.7	21.8
2 1	6 54.61	+27 45.8	1.602	2.507	11.2	18.3	2 1	6 54.01	+27 59.4	1.679	2.581	10.9	22.1
2 11	6 47.99	+27 25.7	1.697	2.526	14.8	18.6	2 11	6 46.59	+27 57.3	1.757	2.581	14.6	22.3
<b>346909</b>	2009 <i>WR</i> <sub>41</sub>		1 9.4 68°81	2°0/ 9.8 17			<b>128715</b>	2004 <i>RA</i> <sub>115</sub>		1 9.4 53°44	0°7/ 9.6 18		
12 3	7 51.63	+18 46.9	1.323	2.128	19.5	21.3	12 3	7 48.33	+17 59.3	1.386	2.193	18.7	20.1
12 13	7 47.00	+18 20.7	1.255	2.137	15.3	21.1	12 13	7 44.42	+18 28.5	1.318	2.202	14.6	19.8
12 23	7 38.89	+18 2.2	1.206	2.146	10.4	20.8	12 23	7 37.22	+19 10.0	1.270	2.211	9.8	19.6
1 2	7 28.18	+17 50.3	1.181	2.155	5.0	20.5	1 2	7 27.50	+20 0.1	1.246	2.221	4.4	19.3
1 12	7 16.37	+17 43.3	1.183	2.164	2.4	20.4	1 12	7 16.64	+20 53.2	1.248	2.231	1.5	19.1
1 22	7 5.17	+17 39.5	1.211	2.173	7.3	20.7	1 22	7 6.22	+21 43.8	1.278	2.241	6.9	19.5
2 1	6 56.13	+17 38.1	1.265	2.182	12.4	21.0	2 1	6 57.76	+22 28.0	1.333	2.251	11.8	19.8
2 11	6 50.33	+17 38.2	1.340	2.192	16.7	21.3	2 11	6 52.34	+23 4.1	1.411	2.262	16.1	20.1
<b>360308</b>	2001 <i>SS</i> <sub>10</sub>		1 9.4 183°86	3°8/ 8.1 18			<b>200827</b>	2001 <i>XU</i> <sub>220</sub>		1 9.4 206°77	1°6/ 9.8 18		
12 3	7 52.61	+32 55.7	2.435										

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>241922</b>	2002 BU		1 9.4 260°80	7°0/ 5.7	18		<b>125091</b>	2001 UX <sub>24</sub>		1 9.4 65°26	1°0/ 9.3	18	R
12 3	7 55.97	+23 56.4	1.164	1.979	21.1	19.6	12 3	7 53.37	+24 53.0	1.377	2.185	18.8	19.0
12 13	7 52.42	+27 3.5	1.079	1.968	16.7	19.3	12 13	7 48.27	+24 45.3	1.313	2.198	14.6	18.7
12 23	7 44.11	+30 38.6	1.016	1.957	11.7	19.0	12 23	7 39.68	+24 39.5	1.270	2.212	9.7	18.5
1 2	7 31.22	+34 24.6	0.980	1.946	7.5	18.7	1 2	7 28.53	+24 31.8	1.250	2.226	4.3	18.2
1 12	7 15.14	+37 56.7	0.972	1.935	8.3	18.7	1 12	7 16.39	+24 19.1	1.258	2.240	1.8	18.1
1 22	6 58.28	+40 52.3	0.991	1.923	13.1	19.0	1 22	7 5.00	+24 0.3	1.292	2.254	7.1	18.4
2 1	6 43.64	+43 0.7	1.035	1.912	18.4	19.2	2 1	6 55.89	+23 36.5	1.353	2.268	12.0	18.8
2 11	6 33.64	+44 24.7	1.098	1.900	23.0	19.5	2 11	6 50.06	+23 9.8	1.436	2.282	16.1	19.0
<b>311694</b>	2006 SN <sub>122</sub>		1 9.4 139°21	1°4/ 9.1	18		<b>190189</b>	2005 WA <sub>76</sub>		1 9.4 111°41	0°5/ 9.6	18	
12 3	7 53.38	+26 38.0	2.133	2.912	13.9	21.0	12 3	7 54.52	+20 15.1	1.730	2.513	16.5	21.0
12 13	7 47.13	+26 35.8	2.054	2.923	10.8	20.8	12 13	7 48.36	+20 20.4	1.665	2.536	12.8	20.8
12 23	7 38.38	+26 32.9	1.998	2.934	7.2	20.6	12 23	7 39.34	+20 31.6	1.621	2.557	8.5	20.6
1 2	7 27.83	+26 26.6	1.970	2.944	3.3	20.3	1 2	7 28.30	+20 45.9	1.604	2.578	3.8	20.3
1 12	7 16.56	+26 14.2	1.973	2.953	1.8	20.3	1 12	7 16.47	+21 0.2	1.616	2.599	1.3	20.2
1 22	7 5.76	+25 55.1	2.006	2.962	5.5	20.5	1 22	7 5.23	+21 12.0	1.658	2.618	5.9	20.6
2 1	6 56.49	+25 30.1	2.069	2.971	9.2	20.8	2 1	6 55.82	+21 20.3	1.728	2.637	10.2	20.8
2 11	6 49.57	+25 1.1	2.156	2.979	12.4	21.0	2 11	6 49.11	+21 25.2	1.822	2.655	13.8	21.1
<b>427665</b>	2004 BV <sub>60</sub>		1 9.4 317°40	1°4/ 9.1	18		<b>165747</b>	2001 QT <sub>184</sub>		1 9.5 167°76	2°2/10.2	18	
12 3	7 47.34	+26 42.1	2.062	2.855	13.9	20.9	12 3	7 45.04	+14 23.2	2.866	3.624	11.2	20.2
12 13	7 42.81	+26 39.3	1.968	2.845	10.8	20.7	12 13	7 40.10	+14 6.7	2.774	3.627	8.9	20.0
12 23	7 35.75	+26 36.2	1.897	2.835	7.3	20.5	12 23	7 33.50	+13 56.2	2.707	3.631	6.2	19.8
1 2	7 26.78	+26 30.0	1.852	2.826	3.4	20.2	1 2	7 25.69	+13 51.5	2.669	3.634	3.5	19.7
1 12	7 16.90	+26 18.3	1.836	2.817	1.9	20.1	1 12	7 17.35	+13 52.0	2.661	3.636	2.3	19.6
1 22	7 7.27	+25 59.8	1.850	2.808	5.7	20.3	1 22	7 9.18	+13 56.7	2.684	3.638	4.4	19.7
2 1	6 59.02	+25 35.1	1.892	2.799	9.6	20.5	2 1	7 1.91	+14 4.7	2.737	3.640	7.2	19.9
2 11	6 53.03	+25 5.9	1.958	2.791	13.0	20.7	2 11	6 56.11	+14 14.7	2.817	3.641	9.7	20.1
<b>113978</b>	2002 UR <sub>20</sub>		1 9.4 111°20	0°7/ 9.6	17		<b>415636</b>	2014 QJ <sub>379</sub>		1 9.5 89°40	0°1/ 9.4	18	
12 3	7 53.30	+20 2.3	1.540	2.333	17.8	20.6	12 3	7 48.81	+21 54.1	1.791	2.585	15.6	21.7
12 13	7 47.84	+20 2.1	1.471	2.348	13.9	20.4	12 13	7 44.12	+22 1.2	1.712	2.590	12.2	21.5
12 23	7 39.23	+20 8.7	1.424	2.362	9.2	20.1	12 23	7 36.70	+22 13.2	1.656	2.595	8.1	21.2
1 2	7 28.30	+20 19.6	1.401	2.376	4.1	19.9	1 2	7 27.22	+22 27.2	1.625	2.600	3.5	21.0
1 12	7 16.41	+20 31.3	1.407	2.389	1.5	19.7	1 12	7 16.82	+22 40.1	1.623	2.605	1.2	20.8
1 22	7 5.09	+20 41.5	1.441	2.402	6.5	20.1	1 22	7 6.79	+22 49.5	1.650	2.610	5.9	21.1
2 1	6 55.74	+20 48.8	1.502	2.415	11.2	20.4	2 1	6 58.34	+22 54.4	1.704	2.615	10.1	21.4
2 11	6 49.33	+20 53.2	1.586	2.427	15.1	20.7	2 11	6 52.40	+22 55.1	1.782	2.620	13.8	21.6
<b>421524</b>	2014 OS <sub>116</sub>		1 9.4 177°43	0°5/ 9.6	18		<b>281105</b>	2006 WT <sub>198</sub>		1 9.5 44°60	4°3/ 9.1	18	
12 3	7 50.29	+19 25.2	2.047	2.826	14.5	22.5	12 3	7 56.44	+33 38.7	1.438	2.241	18.4	18.7
12 13	7 44.96	+19 39.1	1.959	2.828	11.3	22.3	12 13	7 50.55	+33 31.4	1.381	2.259	14.4	18.5
12 23	7 37.12	+19 59.6	1.894	2.830	7.6	22.1	12 23	7 41.04	+33 16.5	1.344	2.279	10.0	18.3
1 2	7 27.37	+20 24.2	1.857	2.830	3.4	21.8	1 2	7 29.04	+32 48.3	1.331	2.299	5.7	18.1
1 12	7 16.71	+20 49.9	1.849	2.831	1.2	21.7	1 12	7 16.28	+32 4.0	1.346	2.319	4.5	18.1
1 22	7 6.28	+21 13.9	1.871	2.830	5.4	22.0	1 22	7 4.58	+31 4.8	1.388	2.340	7.9	18.3
2 1	6 57.21	+21 34.5	1.922	2.829	9.4	22.2	2 1	6 55.43	+29 55.6	1.456	2.361	12.0	18.6
2 11	6 50.38	+21 51.0	1.998	2.828	12.9	22.4	2 11	6 49.69	+28 42.4	1.547	2.383	15.7	18.9
<b>52161</b>	4302 T <sub>-1</sub>		1 9.4 294°49	2°9/ 8.5	18		<b>256277</b>	2006 WV <sub>08</sub>		1 9.5 127°47	3°9/10.5	18	
12 3	7 48.34	+26 52.8	1.726	2.529	15.8	19.1	12 3	7 49.04	+11 28.3	2.142	2.900	14.5	21.8
12 13	7 44.24	+27 35.3	1.638	2.520	12.3	18.8	12 13	7 43.62	+10 57.2	2.064	2.914	11.6	21.6
12 23	7 37.08	+28 21.4	1.572	2.512	8.4	18.6	12 23	7 36.01	+10 35.6	2.010	2.927	8.4	21.4
1 2	7 27.49	+29 5.5	1.531	2.503	4.3	18.3	1 2	7 26.83	+10 24.3	1.982	2.940	5.2	21.3
1 12	7 16.64	+29 41.7	1.518	2.495	3.3	18.2	1 12	7 16.99	+10 23.0	1.983	2.952	3.9	21.2
1 22	7 5.97	+30 5.9	1.534	2.487	7.1	18.4	1 22	7 7.49	+10 30.6	2.014	2.964	6.0	21.4
2 1	6 56.94	+30 16.7	1.576	2.479	11.4	18.7	2 1	6 59.27	+10 45.3	2.074	2.975	9.2	21.6
2 11	6 50.66	+30 15.5	1.640	2.471	15.2	18.9	2 11	6 53.06	+11 4.8	2.159	2.986	12.2	21.8
<b>111470</b>	2001 YE <sub>8</sub>		1 9.4 294°70	0°5/ 9.3	18		<b>193780</b>	2001 OX <sub>24</sub>		1 9.5 167°54	1°7/10.0	18	
12 3	7 46.85	+24 41.4	2.435	3.218	12.3	19.8	12 3	7 51.26	+15 39.7	1.949	2.721	15.3	21.6
12 13	7 41.92	+24 30.9	2.343	3.215	9.6	19.6	12 13	7 45.78	+15 54.8	1.864	2.726	12.1	21.4
12 23	7 34.89	+24 20.9	2.275	3.212	6.3	19.4	12 23	7 37.72	+16 19.9	1.801	2.731	8.2	21.1
1 2	7 26.33	+24 9.5	2.234	3.209	2.8	19.2	1 2	7 27.68	+16 53.1	1.764	2.735	4.1	20.9
1 12	7 17.09	+23 55.3	2.224	3.205	1.2	19.0	1 12	7 16.70	+17 31.5	1.758	2.738	1.9	20.7
1 22	7 8.10	+23 37.4	2.244	3.202	4.7	19.3	1 22	7 5.96	+18 11.5	1.781	2.741	5.7	21.0
2 1	7 0.27	+23 16.2	2.293	3.199	8.2	19.5	2 1	6 56.63	+18 50.3	1.834	2.742	9.8	21.2
2 11	6 54.33	+22 52.6	2.368	3.196	11.2	19.7	2 11	6 49.62	+19 25.9	1.912	2.743	13.3	21.5
<b>460176</b>	2014 QX <sub>36</sub>		1 9.4 44°59	1°2/ 9.3	18		<b>10318</b>	Sumaura		1 9.5 60°76	1°9/ 8.9	18	
12 3	7 51.38	+25 40.3	1.422	2.232	18.2	20.9	12 3	7 54.04	+23 27.3	1.283	2.093	19.7	17.1
12 13	7 46.57	+25 31.5	1.361	2.247	14.1	20.7	12 13	7 48.82	+24 13.7	1.238	2.124	15.2	16.9
12 23	7 38.45	+25 23.6	1.321	2.263	9.3	20.5	12 23	7 40.01	+25 6.2	1.212	2.155	10.0	16.7
1 2	7 27.94	+25 13.1	1.305	2.280	4.1	20.2	1 2	7 28.66	+25 57.6	1.211	2.186	4.5	16.5
1 12	7 16.57	+24 57.2	1.316	2.297	1.9	20.1	1 12	7 16.43	+26 41.0	1.236	2.217	2.6	16.5
1 22	7 5.95	+24 34.9	1.354	2.315	6.8	20.5	1 22	7 5.13	+27 12.1	1.289	2.248	7.5	16.8
2 1	6 57.51	+24 7.7	1.418	2.333	11.5	20.8	2 1	6 56.28	+27 29.9	1.367	2.278	12.2	17.2
2 11	6 52.19	+23 37.8	1.505	2.351	15.5	21.1	2 11	6 50.83	+27 36.6	1.467	2.309	16.1	17.5
<b>263754</b>	2008 JS <sub>34</sub>		1 9.4 315°65	10°0/11.4	18	R	<b>286752</b>	2002 GM <sub>180</sub>		1 9.5 330°09	3°3/10.1	18	
12 3	7 42.83	+ 1 14.8	1.601	2.357	18.8	19.7	12 3	7 45.17	+15 25.6	1.704	2.497	16.3	

EPHEMERIDES

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>131481</b>	2001 RT <sub>111</sub>		1 9.5 130°30	0°1/ 9.4 18			<b>89327</b>	2001 VD <sub>46</sub>		1 9.5 96°03	2°3/ 8.7 18		
12 3	7 41.29	+21 44.2	3.569	4.340	8.9	21.0	12 3	7 52.46	+24 18.2	1.582	2.380	17.1	19.2
12 13	7 36.98	+21 55.5	3.482	4.348	6.9	20.8	12 13	7 47.34	+25 12.7	1.517	2.397	13.3	19.0
12 23	7 31.34	+22 9.1	3.421	4.356	4.5	20.7	12 23	7 39.03	+26 12.9	1.474	2.414	8.8	18.8
1 2	7 24.75	+22 23.8	3.389	4.363	2.0	20.5	1 2	7 28.31	+27 12.4	1.456	2.430	4.1	18.5
1 12	7 17.74	+22 37.9	3.388	4.371	0.7	20.4	1 12	7 16.54	+28 4.2	1.467	2.446	2.8	18.5
1 22	7 10.88	+22 50.4	3.419	4.378	3.3	20.6	1 22	7 5.28	+28 43.8	1.506	2.462	7.0	18.8
2 1	7 4.74	+23 0.5	3.481	4.385	5.7	20.8	2 1	6 55.97	+29 9.5	1.572	2.477	11.3	19.1
2 11	6 59.77	+23 7.8	3.570	4.392	7.9	20.9	2 11	6 49.63	+29 22.8	1.662	2.492	15.1	19.3
<b>391009</b>	2005 SU <sub>171</sub>		1 9.5 226°32	3°8/ 8.6 18			<b>502599</b>	2015 CQ <sub>10</sub>		1 9.5 351°23	0°0/ 9.3 18		
12 3	7 54.62	+29 59.1	1.636	2.432	16.8	21.5	12 3	7 44.78	+20 44.9	2.058	2.850	13.9	21.1
12 13	7 49.39	+30 31.3	1.548	2.425	13.3	21.2	12 13	7 40.76	+21 0.9	1.971	2.848	10.9	20.9
12 23	7 40.65	+31 3.2	1.482	2.417	9.2	21.0	12 23	7 34.39	+21 22.7	1.907	2.846	7.2	20.7
1 2	7 29.13	+31 28.3	1.440	2.409	5.1	20.7	1 2	7 26.24	+21 47.9	1.870	2.845	3.2	20.4
1 12	7 16.20	+31 40.4	1.427	2.401	4.2	20.7	1 12	7 17.24	+22 13.4	1.862	2.844	1.1	20.3
1 22	7 3.56	+31 36.2	1.442	2.392	7.9	20.8	1 22	7 8.45	+22 36.5	1.882	2.843	5.3	20.6
2 1	6 52.89	+31 16.3	1.483	2.382	12.3	21.1	2 1	7 0.92	+22 55.6	1.931	2.843	9.1	20.8
2 11	6 45.42	+30 44.7	1.547	2.372	16.2	21.3	2 11	6 55.48	+23 10.0	2.005	2.842	12.5	21.0
<b>95921</b>	2003 HJ <sub>53</sub>		1 9.5 206°78	3°0/ 8.8 18			<b>113559</b>	2002 TT <sub>31</sub>		1 9.5 127°32	0°5/ 9.6 18		
12 3	7 53.56	+28 57.1	1.766	2.559	15.9	20.3	12 3	7 52.42	+19 22.1	1.584	2.376	17.4	20.5
12 13	7 48.17	+29 19.6	1.680	2.555	12.5	20.1	12 13	7 47.20	+19 36.6	1.511	2.387	13.6	20.3
12 23	7 39.61	+29 41.7	1.615	2.552	8.5	19.9	12 23	7 38.89	+19 59.6	1.460	2.398	9.1	20.0
1 2	7 28.59	+29 58.2	1.577	2.548	4.5	19.6	1 2	7 28.25	+20 27.9	1.434	2.408	4.0	19.8
1 12	7 16.40	+30 4.2	1.567	2.543	3.4	19.5	1 12	7 16.56	+20 57.4	1.435	2.418	1.4	19.6
1 22	7 4.55	+29 57.1	1.586	2.538	7.1	19.7	1 22	7 5.33	+21 24.3	1.466	2.427	6.4	19.9
2 1	6 54.50	+29 37.7	1.632	2.533	11.2	20.0	2 1	6 55.95	+21 46.7	1.523	2.436	11.1	20.2
2 11	6 47.35	+29 9.0	1.702	2.528	15.0	20.2	2 11	6 49.43	+22 4.0	1.604	2.444	15.0	20.5
<b>10141</b>	Gotenba		1 9.5 143°10	6°0/ 7.2 18			<b>463367</b>	2012 UQ <sub>115</sub>		1 9.5 184°68	3°6/ 10.8 17		
12 3	7 54.21	+37 23.1	2.199	2.975	13.7	17.4	12 3	7 43.52	+ 9 20.7	2.870	3.615	11.5	21.8
12 13	7 48.29	+38 32.1	2.128	2.985	11.0	17.2	12 13	7 38.97	+ 8 59.0	2.776	3.615	9.3	21.6
12 23	7 39.48	+39 36.1	2.079	2.994	8.3	17.0	12 23	7 32.79	+ 8 45.9	2.705	3.615	6.9	21.5
1 2	7 28.47	+40 27.9	2.058	3.003	6.3	16.9	1 2	7 25.44	+ 8 41.9	2.662	3.614	4.6	21.3
1 12	7 16.45	+41 1.4	2.066	3.011	6.2	17.0	1 12	7 17.53	+ 8 47.0	2.649	3.613	3.6	21.2
1 22	7 4.79	+41 14.0	2.103	3.019	8.2	17.1	1 22	7 9.75	+ 9 0.1	2.666	3.612	5.1	21.3
2 1	6 54.79	+41 6.5	2.166	3.026	10.8	17.3	2 1	7 2.81	+ 9 19.8	2.713	3.610	7.5	21.5
2 11	6 47.43	+40 42.9	2.253	3.033	13.3	17.4	2 11	6 57.27	+ 9 44.0	2.786	3.608	9.9	21.7
<b>440563</b>	2005 US <sub>327</sub>		1 9.5 110°46	2°2/ 8.9 15			<b>282099</b>	2000 SH <sub>96</sub>		1 9.5 172°57	0°2/ 9.4 18		
12 3	7 54.97	+25 57.9	1.633	2.426	16.9	22.2	12 3	7 46.63	+23 27.1	2.720	3.496	11.3	20.5
12 13	7 49.11	+26 27.2	1.567	2.444	13.1	22.0	12 13	7 41.51	+23 20.1	2.629	3.497	8.8	20.3
12 23	7 40.07	+26 58.8	1.523	2.462	8.7	21.8	12 23	7 34.53	+23 14.4	2.563	3.498	5.8	20.1
1 2	7 28.71	+27 27.2	1.506	2.479	4.1	21.5	1 2	7 26.20	+23 8.4	2.525	3.499	2.5	19.9
1 12	7 16.41	+27 47.4	1.516	2.495	2.7	21.5	1 12	7 17.28	+23 0.6	2.518	3.500	0.9	19.8
1 22	7 4.71	+27 56.6	1.556	2.511	6.8	21.8	1 22	7 8.60	+22 50.2	2.542	3.501	4.3	20.0
2 1	6 55.04	+27 54.9	1.622	2.527	11.1	22.1	2 1	7 0.95	+22 37.1	2.596	3.501	7.4	20.2
2 11	6 48.35	+27 44.6	1.713	2.542	14.7	22.3	2 11	6 54.97	+22 21.9	2.677	3.501	10.2	20.4
<b>418822</b>	2008 VO <sub>71</sub>		1 9.5 4°01	2°2/ 8.5 18			<b>118709</b>	2000 QS <sub>5</sub>		1 9.5 76°07	2°2/ 10.2 18		
12 3	7 44.49	+23 44.7	1.816	2.620	15.0	20.6	12 3	7 46.45	+14 44.2	1.873	2.655	15.5	19.8
12 13	7 41.00	+24 49.4	1.736	2.619	11.7	20.4	12 13	7 42.07	+14 53.0	1.797	2.665	12.2	19.6
12 23	7 34.80	+26 1.2	1.678	2.620	7.8	20.2	12 23	7 35.25	+15 12.6	1.744	2.675	8.4	19.4
1 2	7 26.49	+27 14.7	1.647	2.621	3.7	19.9	1 2	7 26.60	+15 41.6	1.716	2.686	4.3	19.2
1 12	7 17.12	+28 23.6	1.644	2.622	2.7	19.9	1 12	7 17.14	+16 17.3	1.717	2.696	2.3	19.1
1 22	7 7.93	+29 22.4	1.670	2.625	6.5	20.1	1 22	7 8.00	+16 56.3	1.746	2.706	5.7	19.3
2 1	7 0.17	+30 8.1	1.723	2.628	10.5	20.3	2 1	7 0.25	+17 35.7	1.804	2.717	9.6	19.6
2 11	6 54.85	+30 40.4	1.799	2.631	14.0	20.6	2 11	6 54.74	+18 13.0	1.886	2.727	13.1	19.8
<b>88978</b>	2001 TR <sub>62</sub>		1 9.5 105°30	1°3/ 9.9 18			<b>250177</b>	2002 TO <sub>223</sub>		1 9.5 36°88	2°7/ 10.1 18		
12 3	7 47.86	+17 37.8	1.933	2.717	15.0	19.5	12 3	7 46.97	+15 53.0	1.324	2.132	19.3	20.0
12 13	7 43.11	+17 40.5	1.856	2.726	11.7	19.3	12 13	7 43.22	+15 41.2	1.268	2.150	15.2	19.8
12 23	7 35.89	+17 50.8	1.800	2.735	7.9	19.1	12 23	7 36.30	+15 41.5	1.231	2.169	10.4	19.6
1 2	7 26.86	+18 7.2	1.771	2.744	3.8	18.9	1 2	7 27.09	+15 52.8	1.217	2.189	5.3	19.4
1 12	7 17.02	+18 27.1	1.771	2.753	1.7	18.8	1 12	7 17.00	+16 12.5	1.229	2.209	2.9	19.3
1 22	7 7.52	+18 48.1	1.801	2.761	5.5	19.0	1 22	7 7.55	+16 37.1	1.268	2.230	7.0	19.6
2 1	6 59.43	+19 8.4	1.858	2.770	9.4	19.3	2 1	7 0.12	+17 3.5	1.331	2.252	11.6	19.9
2 11	6 53.58	+19 26.7	1.940	2.778	12.9	19.5	2 11	6 55.62	+17 29.3	1.417	2.274	15.6	20.2
<b>354195</b>	2002 EL <sub>92</sub>		1 9.5 325°14	9°6/ 11.9 18			<b>341496</b>	2007 TZ <sub>390</sub>		1 9.5 218°43	4°5/ 7.4 18		
12 3	7 42.01	+ 3 5.7	1.322	2.103	20.8	20.3	12 3	7 49.83	+36 35.3	2.901	3.670	10.9	21.4
12 13	7 39.81	+ 2 10.0	1.234	2.085	17.7	20.1	12 13	7 44.30	+37 23.2	2.806	3.661	8.7	21.3
12 23	7 34.47	+ 1 35.8	1.163	2.068	14.3	19.8	12 23	7 36.58	+38 7.5	2.735	3.651	6.5	21.1
1 2	7 26.51	+ 1 29.3	1.112	2.052	11.1	19.6	1 2	7 27.18	+38 43.3	2.693	3.641	4.8	21.0
1 12	7 17.08	+ 1 53.8	1.085	2.036	9.6	19.5	1 12	7 16.93	+39 6.7	2.681	3.630	4.7	20.9
1 22	7 7.67	+ 2 48.1	1.080	2.021	11.2	19.5	1 22	7 6.81	+39 15.4	2.698	3.619	6.4	21.0
2 1	6 59.86	+ 4 6.6	1.099	2.008	14.7	19.6	2 1	6 57.78	+39 9.6	2.745	3.607	8.7	21.2
2 11	6 54.93	+ 5 40.1	1.138	1.995	18.7	19.8	2 11	6 50.64	+38 51.2	2.816	3.595	10.9	21.3
<b>55444</b>	2001 TC <sub>96</sub>		1 9.5 117°68	0°4/ 9.6 18			<b>187904</b>	2000 SM <sub>363</sub>		1 9.5 53°71	6°6/ 11.7 18		
12 3	7 45.53	+20 25.8	2.592	3.368	11.8	19.3	12 3	7 44.96	+ 4 55.4	1.821	2.576	16.8	19.7

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>303342</b>	2004 <i>TQ</i> <sub>210</sub>		1 9.5 285°28	4.9/ 8.2	18		<b>317554</b>	2002 <i>UD</i> <sub>60</sub>		1 9.5 36°03	2.9/ 8.4	18	
12 3	7 52.03	+31 25.2	1.531	2.336	17.3	21.6	12 3	7 47.74	+24 30.5	1.445	2.259	17.7	20.1
12 13	7 47.64	+32 11.3	1.449	2.330	13.7	21.3	12 13	7 44.09	+25 41.7	1.381	2.269	13.8	19.9
12 23	7 39.64	+32 56.8	1.388	2.324	9.7	21.1	12 23	7 37.11	+27 0.3	1.337	2.280	9.2	19.6
1 2	7 28.75	+33 34.1	1.352	2.319	5.9	20.8	1 2	7 27.58	+28 18.8	1.318	2.292	4.5	19.4
1 12	7 16.40	+33 55.9	1.343	2.313	5.3	20.8	1 12	7 16.85	+29 28.8	1.327	2.304	3.5	19.4
1 22	7 4.39	+33 58.2	1.360	2.307	8.7	21.0	1 22	7 6.56	+30 24.1	1.362	2.317	7.7	19.6
2 1	6 54.46	+33 41.7	1.403	2.301	12.9	21.2	2 1	6 58.23	+31 2.2	1.423	2.330	12.1	19.9
2 11	6 47.87	+33 10.6	1.468	2.296	16.8	21.4	2 11	6 52.96	+31 24.3	1.506	2.344	16.0	20.2
<b>257620</b>	1999 <i>TN</i> <sub>75</sub>		1 9.5 267°03	4.2/10.4	18		<b>267114</b>	2000 <i>CJ</i> <sub>114</sub>		1 9.5 129°54	0°5/ 9.7	18	
12 3	7 47.39	+12 24.3	1.747	2.526	16.5	20.9	12 3	7 46.24	+18 39.1	2.493	3.267	12.3	20.5
12 13	7 43.18	+11 54.8	1.654	2.516	13.4	20.7	12 13	7 41.35	+18 59.6	2.412	3.278	9.6	20.3
12 23	7 36.23	+11 36.0	1.581	2.507	9.6	20.4	12 23	7 34.51	+19 26.1	2.355	3.289	6.4	20.1
1 2	7 27.14	+11 29.1	1.534	2.497	5.9	20.2	1 2	7 26.24	+19 56.6	2.326	3.299	2.9	19.9
1 12	7 16.95	+11 33.9	1.514	2.487	4.2	20.1	1 12	7 17.34	+20 28.4	2.327	3.309	1.0	19.8
1 22	7 6.90	+11 48.8	1.522	2.476	7.0	20.2	1 22	7 8.66	+20 59.1	2.359	3.319	4.5	20.1
2 1	6 58.25	+12 11.6	1.556	2.466	11.0	20.4	2 1	7 1.06	+21 27.0	2.421	3.328	7.8	20.3
2 11	6 52.02	+12 39.4	1.614	2.456	14.9	20.6	2 11	6 55.20	+21 51.1	2.510	3.338	10.6	20.5
<b>401376</b>	2013 <i>CE</i>		1 9.5 44°12	4.0/10.6	18		<b>216615</b>	2002 <i>UK</i> <sub>46</sub>		1 9.5 86°42	1.3/10.2	18	
12 3	7 47.43	+12 35.1	1.395	2.191	19.2	20.9	12 3	7 41.46	+15 25.6	3.364	4.124	9.7	20.9
12 13	7 43.63	+12 21.0	1.324	2.197	15.3	20.7	12 13	7 37.11	+15 38.6	3.289	4.146	7.5	20.8
12 23	7 36.69	+12 21.8	1.273	2.204	10.9	20.4	12 23	7 31.43	+15 57.1	3.240	4.168	5.1	20.7
1 2	7 27.35	+12 37.8	1.244	2.211	6.2	20.2	1 2	7 24.82	+16 20.1	3.220	4.189	2.6	20.5
1 12	7 16.91	+13 6.9	1.242	2.218	4.1	20.1	1 12	7 17.83	+16 46.3	3.231	4.210	1.4	20.5
1 22	7 6.89	+13 45.4	1.266	2.226	7.4	20.3	1 22	7 11.04	+17 13.9	3.273	4.231	3.5	20.6
2 1	6 58.72	+14 29.0	1.316	2.234	12.0	20.6	2 1	7 4.99	+17 41.6	3.346	4.252	5.9	20.8
2 11	6 53.43	+15 13.7	1.388	2.242	16.1	20.8	2 11	7 0.15	+18 8.2	3.446	4.273	8.1	21.0
<b>108979</b>	2001 <i>PD</i> <sub>48</sub>		1 9.5 114°04	10°8/ 6.3	18		<b>405941</b>	2006 <i>RM</i> <sub>53</sub>		1 9.5 35°86	5.4/11.1	18	
12 3	8 6.89	+57 57.1	2.494	3.194	14.1	19.4	12 3	7 45.36	+ 9 30.4	1.403	2.194	19.3	21.3
12 13	7 58.94	+59 3.0	2.435	3.201	12.7	19.3	12 13	7 41.84	+ 9 7.4	1.341	2.208	15.6	21.1
12 23	7 46.87	+59 51.7	2.397	3.207	11.5	19.2	12 23	7 35.37	+ 9 2.0	1.298	2.223	11.4	20.9
1 2	7 31.74	+60 14.1	2.382	3.213	10.9	19.2	1 2	7 26.73	+ 9 15.3	1.279	2.238	7.3	20.7
1 12	7 15.46	+60 4.3	2.390	3.220	10.9	19.2	1 12	7 17.19	+ 9 45.8	1.284	2.254	5.4	20.6
1 22	7 0.21	+59 21.8	2.423	3.226	11.7	19.3	1 22	7 8.15	+10 29.8	1.316	2.271	7.8	20.8
2 1	6 47.82	+58 10.9	2.479	3.232	12.9	19.4	2 1	7 0.90	+11 22.1	1.373	2.289	11.8	21.1
2 11	6 39.37	+56 39.5	2.556	3.238	14.2	19.5	2 11	6 56.36	+12 17.5	1.453	2.307	15.5	21.4
<b>121988</b>	2000 <i>FW</i> <sub>8</sub>		1 9.5 171°84	0°2/ 9.6	17		<b>274370</b>	2008 <i>RC</i> <sub>76</sub>		1 9.5 157°08	0°9/ 9.8	18	
12 3	7 45.44	+20 19.1	2.800	3.572	11.1	21.4	12 3	7 45.91	+18 18.8	2.166	2.947	13.7	21.3
12 13	7 40.57	+20 30.3	2.709	3.575	8.6	21.2	12 13	7 41.47	+18 29.7	2.079	2.949	10.7	21.1
12 23	7 33.92	+20 45.4	2.643	3.577	5.7	21.0	12 23	7 34.79	+18 47.6	2.015	2.950	7.2	20.9
1 2	7 25.96	+21 2.9	2.605	3.579	2.5	20.8	1 2	7 26.43	+19 10.5	1.978	2.951	3.3	20.7
1 12	7 17.40	+21 20.6	2.598	3.581	0.9	20.7	1 12	7 17.28	+19 36.0	1.970	2.952	1.3	20.5
1 22	7 9.01	+21 37.0	2.623	3.582	4.1	20.9	1 22	7 8.33	+20 1.6	1.992	2.953	5.0	20.8
2 1	7 1.55	+21 50.9	2.677	3.583	7.2	21.1	2 1	7 0.58	+20 25.4	2.043	2.954	8.8	21.0
2 11	6 55.66	+22 1.8	2.758	3.583	9.9	21.3	2 11	6 54.81	+20 46.2	2.119	2.955	12.0	21.2
<b>469202</b>	2016 <i>GJ</i> <sub>192</sub>		1 9.5 324°82	5°4/11.5	18		<b>313852</b>	2004 <i>ED</i> <sub>43</sub>		1 9.5 315°09	3°9/10.5	18	
12 3	7 42.45	+ 5 34.1	2.250	2.998	14.2	21.1	12 3	7 43.68	+12 45.3	1.504	2.302	17.9	20.4
12 13	7 38.66	+ 5 9.7	2.158	2.993	11.8	20.9	12 13	7 40.94	+12 33.8	1.404	2.278	14.5	20.1
12 23	7 32.86	+ 4 58.9	2.088	2.989	9.0	20.7	12 23	7 35.17	+12 36.5	1.323	2.255	10.4	19.8
1 2	7 25.56	+ 5 3.3	2.043	2.985	6.5	20.5	1 2	7 26.86	+12 54.2	1.265	2.232	6.1	19.5
1 12	7 17.53	+ 5 22.8	2.026	2.981	5.4	20.4	1 12	7 17.08	+13 25.9	1.233	2.209	4.0	19.3
1 22	7 9.63	+ 5 56.1	2.037	2.977	6.8	20.5	1 22	7 7.23	+14 8.5	1.227	2.187	7.5	19.5
2 1	7 2.75	+ 6 40.1	2.076	2.974	9.4	20.7	2 1	6 58.82	+14 57.7	1.246	2.166	12.3	19.7
2 11	6 57.61	+ 7 31.2	2.140	2.971	12.1	20.8	2 11	6 53.13	+15 49.2	1.288	2.146	16.9	19.9
<b>288788</b>	2004 <i>RH</i> <sub>128</sub>		1 9.5 195°83	2°1/10.2	18		<b>190768</b>	2001 <i>QV</i> <sub>167</sub>		1 9.5 68°68	0°5/ 9.7	17	
12 3	7 46.48	+14 58.0	2.319	3.088	13.3	21.4	12 3	7 50.36	+17 40.0	1.358	2.162	19.2	20.2
12 13	7 41.74	+14 58.0	2.226	3.086	10.5	21.3	12 13	7 45.99	+18 18.2	1.297	2.179	14.9	20.0
12 23	7 34.89	+15 6.0	2.156	3.084	7.3	21.0	12 23	7 38.28	+19 9.4	1.256	2.196	10.0	19.7
1 2	7 26.45	+15 21.4	2.113	3.081	3.8	20.8	1 2	7 28.06	+20 9.1	1.239	2.214	4.4	19.5
1 12	7 17.23	+15 42.5	2.099	3.078	2.2	20.7	1 12	7 16.76	+21 10.9	1.249	2.231	1.4	19.3
1 22	7 8.18	+16 7.2	2.116	3.074	5.0	20.9	1 22	7 6.02	+22 8.6	1.286	2.249	6.9	19.7
2 1	7 0.21	+16 33.6	2.162	3.070	8.5	21.1	2 1	6 57.35	+22 58.3	1.349	2.266	11.8	20.0
2 11	6 54.08	+16 59.8	2.234	3.066	11.6	21.3	2 11	6 51.80	+23 38.3	1.435	2.284	16.0	20.3
<b>247586</b>	2002 <i>TA</i> <sub>85</sub>		1 9.5 57°00	1.7/10.0	17		<b>51231</b>	2000 <i>JM</i> <sub>28</sub>		1 9.5 180°24	3°9/ 7.9	18	
12 3	7 50.32	+15 46.1	1.474	2.268	18.4	20.6	12 3	7 48.45	+33 14.1	2.537	3.317	11.9	19.0
12 13	7 45.40	+16 7.4	1.424	2.299	14.3	20.4	12 13	7 43.37	+33 56.7	2.452	3.318	9.4	18.9
12 23	7 37.52	+16 41.0	1.395	2.331	9.6	20.2	12 23	7 36.02	+34 36.8	2.391	3.318	6.7	18.7
1 2	7 27.57	+17 23.8	1.390	2.362	4.6	20.0	1 2	7 26.97	+35 10.0	2.358	3.318	4.4	18.6
1 12	7 16.91	+18 11.1	1.413	2.394	2.0	19.9	1 12	7 17.11	+35 32.0	2.355	3.318	4.1	18.5
1 22	7 6.94	+18 58.2	1.464	2.426	6.3	20.2	1 22	7 7.48	+35 40.8	2.382	3.317	6.2	18.7
2 1	6 58.92	+19 41.6	1.541	2.457	10.7	20.6	2 1	6 59.08	+35 36.3	2.437	3.317	8.9	18.8
2 11	6 53.69	+20 19.5	1.643	2.489	14.4	20.9	2 11	6 52.69	+35 20.6	2.517	3.316	11.5	19.0
<b>347727</b>	2001 <i>XG</i> <sub>249</sub>		1 9.5 266°31	0°3/ 9.4	18		<b>306007</b>	2010 <i>CP</i> <sub>93</sub>		1 9.5 196°38	0°6/ 9.7	18	
12 3	7 48.77	+20 11.1	1.664	2.461									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>38942</b>	2000 SA <sub>271</sub>		1 9.5 299°89	2°9/10.3	18		<b>455517</b>	2003 WF <sub>173</sub>		1 9.5 71°60	2°5/10.1	16	
12 3	7 45.93	+14 21.0	1.498	2.295	18.0	18.9	12 3	7 51.08	+15 46.5	1.557	2.345	17.8	21.2
12 13	7 42.70	+14 21.5	1.401	2.277	14.4	18.6	12 13	7 45.91	+15 36.7	1.499	2.370	14.0	21.0
12 23	7 36.34	+14 35.7	1.324	2.259	10.1	18.3	12 23	7 37.86	+15 37.4	1.462	2.395	9.5	20.8
1 2	7 27.37	+15 3.6	1.271	2.241	5.4	18.0	1 2	7 27.78	+15 47.3	1.449	2.420	4.9	20.6
1 12	7 16.93	+15 42.6	1.244	2.223	3.0	17.8	1 12	7 16.95	+16 4.0	1.465	2.444	2.6	20.6
1 22	7 6.47	+16 28.8	1.243	2.205	7.2	18.0	1 22	7 6.77	+16 24.6	1.509	2.469	6.4	20.8
2 1	6 57.54	+17 17.8	1.269	2.188	12.2	18.2	2 1	6 58.44	+16 46.8	1.579	2.493	10.6	21.1
2 11	6 51.43	+18 5.7	1.316	2.171	16.8	18.5	2 11	6 52.82	+17 8.6	1.673	2.517	14.3	21.4
<b>131985</b>	2002 CL <sub>80</sub>		1 9.5 238°83	1°0/ 9.2	18		<b>506345</b>	2017 OW <sub>48</sub>		1 9.5 182°11	2°2/10.5	17	
12 3	7 50.34	+23 1.1	1.814	2.606	15.5	20.9	12 3	7 44.63	+13 15.6	2.902	3.656	11.2	22.0
12 13	7 45.62	+23 26.0	1.719	2.596	12.2	20.7	12 13	7 39.87	+13 14.7	2.806	3.657	8.9	21.9
12 23	7 37.97	+23 56.5	1.646	2.585	8.1	20.4	12 23	7 33.45	+13 21.1	2.735	3.657	6.2	21.7
1 2	7 27.98	+24 28.8	1.600	2.574	3.6	20.1	1 2	7 25.82	+13 34.4	2.693	3.657	3.5	21.5
1 12	7 16.75	+24 58.3	1.582	2.563	1.7	20.0	1 12	7 17.61	+13 53.5	2.681	3.656	2.3	21.4
1 22	7 5.64	+25 21.4	1.593	2.551	6.3	20.2	1 22	7 9.53	+14 16.7	2.700	3.655	4.3	21.6
2 1	6 56.03	+25 36.4	1.631	2.539	10.8	20.5	2 1	7 2.28	+14 42.4	2.749	3.653	7.1	21.7
2 11	6 49.02	+25 43.7	1.693	2.527	14.7	20.7	2 11	6 56.47	+15 9.1	2.825	3.651	9.7	21.9
<b>191127</b>	2002 FC <sub>1</sub>		1 9.5 283°57	3°1/10.4	18		<b>193877</b>	2001 QF <sub>174</sub>		1 9.5 153°11	2°9/ 8.8	18	
12 3	7 45.20	+13 23.8	2.027	2.803	14.7	20.8	12 3	7 54.90	+28 28.4	1.753	2.544	16.0	20.5
12 13	7 41.19	+13 11.6	1.925	2.787	11.8	20.6	12 13	7 49.12	+28 53.8	1.676	2.550	12.6	20.3
12 23	7 34.80	+13 9.3	1.844	2.771	8.4	20.3	12 23	7 40.20	+29 19.1	1.621	2.557	8.5	20.1
1 2	7 26.53	+13 16.9	1.790	2.755	4.8	20.1	1 2	7 28.92	+29 39.0	1.591	2.562	4.4	19.8
1 12	7 17.25	+13 33.5	1.763	2.739	3.2	19.9	1 12	7 16.57	+29 48.5	1.591	2.567	3.3	19.8
1 22	7 8.04	+13 57.1	1.766	2.723	6.0	20.1	1 22	7 4.69	+29 45.3	1.619	2.572	6.9	20.0
2 1	6 59.96	+14 25.5	1.797	2.707	9.8	20.3	2 1	6 54.70	+29 30.1	1.675	2.576	11.0	20.3
2 11	6 53.94	+14 56.1	1.852	2.691	13.3	20.5	2 11	6 47.60	+29 5.9	1.755	2.579	14.6	20.5
<b>81164</b>	2000 ED <sub>159</sub>		1 9.5 340°33	1°4/ 9.8	18		<b>429869</b>	2012 ST <sub>19</sub>		1 9.5 72°18	4°8/11.3	18	
12 3	7 47.06	+18 21.0	1.614	2.413	16.8	19.3	12 3	7 43.28	+ 7 2.6	2.369	3.118	13.6	21.3
12 13	7 43.15	+18 15.9	1.531	2.410	13.3	19.1	12 13	7 39.15	+ 6 37.3	2.283	3.121	11.1	21.2
12 23	7 36.31	+18 19.1	1.468	2.407	9.0	18.8	12 23	7 33.13	+ 6 23.9	2.219	3.124	8.4	21.0
1 2	7 27.23	+18 28.8	1.431	2.404	4.3	18.6	1 2	7 25.71	+ 6 23.6	2.182	3.128	5.9	20.8
1 12	7 17.04	+18 42.8	1.420	2.402	1.8	18.4	1 12	7 17.65	+ 6 36.3	2.173	3.131	4.8	20.8
1 22	7 7.13	+18 58.4	1.438	2.400	6.4	18.7	1 22	7 9.78	+ 7 0.6	2.192	3.135	6.2	20.9
2 1	6 58.84	+19 13.7	1.481	2.398	11.0	18.9	2 1	7 2.91	+ 7 34.0	2.240	3.138	8.8	21.0
2 11	6 53.19	+19 27.3	1.548	2.397	15.0	19.2	2 11	6 57.71	+ 8 13.5	2.313	3.142	11.4	21.2
<b>406038</b>	2006 TG <sub>04</sub>		1 9.5 92°19	0°2/ 9.4	18		<b>360470</b>	2002 TL <sub>22</sub>		1 9.5 84°81	9°3/ 7.2	18	
12 3	7 49.42	+21 9.7	1.785	2.577	15.7	21.8	12 3	7 59.64	+44 18.5	1.767	2.540	16.6	21.0
12 13	7 44.58	+21 28.5	1.712	2.589	12.2	21.6	12 13	7 53.41	+45 35.2	1.713	2.557	13.9	20.9
12 23	7 37.02	+21 53.5	1.662	2.601	8.1	21.3	12 23	7 43.30	+46 39.7	1.680	2.575	11.3	20.8
1 2	7 27.44	+22 21.2	1.638	2.613	3.5	21.1	1 2	7 30.29	+47 21.7	1.672	2.592	9.5	20.7
1 12	7 17.00	+22 48.0	1.643	2.625	1.2	20.9	1 12	7 16.14	+47 33.8	1.689	2.610	9.5	20.7
1 22	7 6.96	+23 10.7	1.676	2.637	5.8	21.3	1 22	7 2.85	+47 14.8	1.733	2.627	11.1	20.9
2 1	6 58.53	+23 27.8	1.737	2.649	10.0	21.6	2 1	6 52.14	+46 28.7	1.801	2.644	13.4	21.1
2 11	6 52.60	+23 39.2	1.823	2.660	13.6	21.8	2 11	6 45.10	+45 23.6	1.890	2.660	15.8	21.3
<b>26195</b>	Černohlávek		1 9.5 286°95	0°7/ 9.7	18		<b>82607</b>	2001 OT <sub>07</sub>		1 9.5 140°95	5°6/ 7.9	18	
12 3	7 48.67	+18 24.5	1.404	2.210	18.6	19.0	12 3	7 56.02	+37 52.1	2.188	2.961	13.8	19.9
12 13	7 44.98	+18 44.2	1.320	2.203	14.6	18.7	12 13	7 49.59	+38 33.9	2.115	2.971	11.1	19.8
12 23	7 37.89	+19 15.9	1.256	2.197	9.9	18.4	12 23	7 40.29	+39 8.9	2.065	2.981	8.3	19.6
1 2	7 28.04	+19 56.4	1.216	2.191	4.5	18.1	1 2	7 28.89	+39 30.8	2.042	2.990	6.1	19.5
1 12	7 16.75	+20 41.1	1.202	2.184	1.5	17.9	1 12	7 16.61	+39 34.8	2.048	2.999	5.8	19.5
1 22	7 5.64	+21 24.6	1.215	2.178	7.1	18.2	1 22	7 4.84	+39 19.4	2.083	3.007	7.8	19.6
2 1	6 56.38	+22 3.2	1.254	2.172	12.4	18.5	2 1	6 54.84	+38 46.5	2.146	3.015	10.5	19.8
2 11	6 50.23	+22 35.0	1.314	2.166	17.0	18.8	2 11	6 47.53	+38 0.6	2.232	3.022	13.1	20.0
<b>28468</b>	Shichangxu		1 9.5 225°00	5°4/ 7.7	18 R		<b>489209</b>	2006 JJ <sub>45</sub>		1 9.5 201°01	3°3/10.6	18	
12 3	7 52.03	+34 21.6	1.917	2.707	14.9	18.1	12 3	7 49.09	+12 4.5	2.184	2.943	14.3	22.8
12 13	7 47.04	+35 18.9	1.834	2.703	11.9	17.9	12 13	7 43.92	+11 54.2	2.088	2.939	11.5	22.6
12 23	7 38.94	+36 13.6	1.773	2.699	8.7	17.7	12 23	7 36.46	+11 54.0	2.013	2.934	8.2	22.4
1 2	7 28.40	+36 58.5	1.738	2.695	6.0	17.5	1 2	7 27.24	+12 4.0	1.966	2.928	4.8	22.2
1 12	7 16.65	+37 27.1	1.732	2.691	5.8	17.5	1 12	7 17.14	+12 22.9	1.948	2.922	3.3	22.1
1 22	7 5.16	+37 36.0	1.754	2.687	8.3	17.6	1 22	7 7.16	+12 49.0	1.960	2.914	5.8	22.2
2 1	6 55.40	+37 25.5	1.802	2.682	11.5	17.8	2 1	6 58.33	+13 19.8	2.002	2.907	9.3	22.4
2 11	6 48.45	+36 59.5	1.873	2.677	14.7	18.0	2 11	6 51.49	+13 52.9	2.069	2.898	12.5	22.6
<b>260758</b>	2005 MU <sub>34</sub>		1 9.5 154°53	0°6/ 9.3	18		<b>134423</b>	1998 QT <sub>4</sub>		1 9.5 98°05	5°8/11.7	18	
12 3	7 50.32	+23 21.6	2.275	3.053	13.2	22.0	12 3	7 47.79	+ 5 32.8	1.848	2.599	16.8	20.0
12 13	7 44.75	+23 31.3	2.191	3.060	10.2	21.8	12 13	7 43.03	+ 5 16.4	1.778	2.616	13.8	19.8
12 23	7 36.88	+23 43.6	2.131	3.067	6.8	21.6	12 23	7 35.86	+ 5 17.0	1.728	2.632	10.4	19.7
1 2	7 27.35	+23 55.8	2.100	3.074	3.0	21.4	1 2	7 26.94	+ 5 35.9	1.703	2.648	7.3	19.5
1 12	7 17.07	+24 5.2	2.098	3.080	1.2	21.2	1 12	7 17.27	+ 6 12.0	1.705	2.664	5.8	19.4
1 22	7 7.09	+24 10.3	2.127	3.085	5.0	21.5	1 22	7 7.95	+ 7 2.2	1.736	2.680	7.4	19.6
2 1	6 58.41	+24 10.3	2.186	3.090	8.6	21.7	2 1	7 0.05	+ 8 2.1	1.794	2.695	10.4	19.8
2 11	6 51.81	+24 5.8	2.270	3.094	11.7	21.9	2 11	6 54.36	+ 9 6.5	1.876	2.710	13.4	20.0
<b>266225</b>	2006 WW <sub>202</sub>		1 9.5 48°69	0°4/ 9.6	18		<b>442624</b>	2012 SF <sub>18</sub>		1 9.5 66°32	4°6/10.4	17	
12 3	7 48.59	+21 11.5	1.663	2.461	16.4	20.5	12 3	7 50.03	+13 11.9	1.336	2.132	19.8	21.7



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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>323171</b>	2003 <i>GK</i> <sub>10</sub>		1 9.5 279°24	7°9/12.2	18		<b>459672</b>	2013 <i>LM</i> <sub>22</sub>		1 9.5 217°91	0°9/ 9.9	17	
12 3	7 44.35	+ 0 46.9	1.977	2.710	16.4	20.3	12 3	7 48.73	+15 29.0	2.140	2.910	14.2	21.5
12 13	7 40.45	+ 0 3.9	1.888	2.705	14.0	20.1	12 13	7 43.89	+16 18.2	2.040	2.903	11.2	21.3
12 23	7 34.25	- 0 21.5	1.818	2.699	11.3	20.0	12 23	7 36.62	+17 19.8	1.963	2.895	7.6	21.0
1 2	7 26.30	- 0 25.9	1.772	2.694	9.0	19.8	1 2	7 27.40	+18 30.8	1.914	2.887	3.6	20.8
1 12	7 17.46	- 0 7.7	1.752	2.688	7.9	19.7	1 12	7 17.12	+19 46.9	1.896	2.878	1.3	20.6
1 22	7 8.75	+ 0 31.8	1.759	2.683	8.9	19.8	1 22	7 6.85	+21 2.9	1.909	2.869	5.3	20.8
2 1	7 1.20	+ 1 28.9	1.792	2.678	11.3	19.9	2 1	6 57.69	+22 14.4	1.951	2.859	9.3	21.1
2 11	6 55.65	+ 2 38.0	1.849	2.672	14.0	20.1	2 11	6 50.60	+23 18.6	2.020	2.849	12.8	21.3
<b>282914</b>	2007 <i>LR</i> <sub>14</sub>		1 9.5 92°56	0°6/ 9.7	18		<b>172857</b>	2005 <i>EL</i> <sub>49</sub>		1 9.5 273°72	0°9/ 9.7	18	
12 3	7 53.06	+18 47.0	1.664	2.450	17.0	21.2	12 3	7 48.52	+19 19.4	1.733	2.526	16.1	21.0
12 13	7 47.38	+19 7.7	1.604	2.476	13.2	21.0	12 13	7 44.32	+19 19.9	1.635	2.511	12.7	20.7
12 23	7 38.84	+19 36.8	1.565	2.501	8.7	20.8	12 23	7 37.20	+19 27.6	1.558	2.496	8.6	20.4
1 2	7 28.25	+20 10.8	1.552	2.526	3.9	20.5	1 2	7 27.74	+19 40.8	1.507	2.481	4.0	20.1
1 12	7 16.87	+20 45.7	1.568	2.550	1.3	20.4	1 12	7 17.01	+19 56.6	1.483	2.465	1.5	19.9
1 22	7 6.09	+21 17.7	1.613	2.574	6.0	20.8	1 22	7 6.37	+20 12.4	1.488	2.450	6.3	20.2
2 1	6 57.14	+21 44.9	1.686	2.597	10.3	21.1	2 1	6 57.20	+20 26.3	1.520	2.435	11.0	20.4
2 11	6 50.88	+22 6.5	1.784	2.620	13.9	21.3	2 11	6 50.59	+20 37.4	1.576	2.419	15.1	20.6
<b>461771</b>	2005 <i>UC</i> <sub>377</sub>		1 9.5 55°88	7°2/ 7.2	18		<b>458300</b>	2010 <i>VZ</i> <sub>15</sub>		1 9.5 19°34	1°2/ 9.3	18	
12 3	7 52.58	+38 9.6	1.772	2.564	15.8	21.3	12 3	7 48.53	+25 19.9	1.437	2.250	17.8	21.1
12 13	7 47.74	+39 23.6	1.708	2.574	12.8	21.1	12 13	7 44.62	+25 16.4	1.367	2.255	13.9	20.8
12 23	7 39.50	+40 31.4	1.666	2.583	9.8	20.9	12 23	7 37.42	+25 14.6	1.318	2.261	9.2	20.6
1 2	7 28.68	+41 24.1	1.648	2.593	7.6	20.8	1 2	7 27.77	+25 10.9	1.292	2.268	4.1	20.3
1 12	7 16.70	+41 54.5	1.658	2.603	7.5	20.8	1 12	7 17.08	+25 2.2	1.294	2.275	1.9	20.2
1 22	7 5.22	+41 59.6	1.694	2.613	9.6	21.0	1 22	7 6.95	+24 46.9	1.322	2.284	6.9	20.5
2 1	6 55.80	+41 41.2	1.756	2.623	12.5	21.2	2 1	6 58.83	+24 25.7	1.376	2.293	11.6	20.8
2 11	6 49.53	+41 4.7	1.839	2.633	15.3	21.4	2 11	6 53.75	+24 0.5	1.452	2.303	15.7	21.1
<b>121339</b>	1999 <i>TO</i> <sub>15</sub>		1 9.5 88°56	0°8/ 9.8	18		<b>121031</b>	1999 <i>BU</i> <sub>30</sub>		1 9.5 61°35	0°4/ 9.6	17	
12 3	7 47.21	+18 55.8	2.053	2.836	14.2	20.3	12 3	7 50.34	+17 45.3	1.314	2.121	19.6	20.2
12 13	7 42.51	+19 1.0	1.976	2.847	11.1	20.1	12 13	7 46.09	+18 26.9	1.256	2.140	15.2	20.0
12 23	7 35.49	+19 12.5	1.922	2.858	7.4	19.9	12 23	7 38.43	+19 21.9	1.218	2.159	10.1	19.8
1 2	7 26.79	+19 28.4	1.895	2.869	3.4	19.7	1 2	7 28.23	+20 25.3	1.204	2.179	4.5	19.5
1 12	7 17.35	+19 46.3	1.897	2.880	1.3	19.6	1 12	7 16.96	+21 30.2	1.216	2.199	1.4	19.3
1 22	7 8.23	+20 4.1	1.929	2.890	5.2	19.9	1 22	7 6.29	+22 30.3	1.256	2.219	7.0	19.7
2 1	7 0.45	+20 20.0	1.990	2.901	8.9	20.1	2 1	6 57.77	+23 21.4	1.321	2.239	11.9	20.1
2 11	6 54.79	+20 33.3	2.075	2.911	12.2	20.3	2 11	6 52.41	+24 2.0	1.408	2.259	16.1	20.4
<b>65132</b>	2002 <i>CF</i> <sub>91</sub>		1 9.5 160°78	1°0/ 9.2	18		<b>424050</b>	2007 <i>BE</i> <sub>42</sub>		1 9.5 309°18	7°9/ 9.9	16	
12 3	7 51.78	+23 16.6	2.003	2.786	14.6	20.4	12 3	8 9.94	+40 28.4	1.090	1.891	23.1	20.4
12 13	7 46.28	+23 43.4	1.921	2.792	11.3	20.1	12 13	8 3.16	+40 16.7	1.018	1.890	19.0	20.1
12 23	7 38.13	+24 14.4	1.861	2.798	7.5	19.9	12 23	7 50.65	+39 46.4	0.963	1.888	14.2	19.8
1 2	7 28.00	+24 45.8	1.829	2.803	3.3	19.7	1 2	7 33.74	+38 44.7	0.929	1.887	9.6	19.5
1 12	7 16.93	+25 13.7	1.826	2.808	1.6	19.6	1 12	7 15.18	+37 4.4	0.920	1.886	8.1	19.5
1 22	7 6.16	+25 35.0	1.854	2.811	5.7	19.8	1 22	6 58.18	+34 49.8	0.937	1.884	11.4	19.6
2 1	6 56.87	+25 48.6	1.910	2.814	9.7	20.1	2 1	6 45.27	+32 15.4	0.978	1.883	16.5	19.9
2 11	6 49.95	+25 55.0	1.991	2.817	13.1	20.3	2 11	6 37.70	+29 38.1	1.040	1.882	21.2	20.2
<b>380700</b>	2005 <i>JM</i> <sub>111</sub>		1 9.5 182°39	6°0/ 6.7	18		<b>466035</b>	2011 <i>JL</i> <sub>13</sub>		1 9.5 156°84	2°1/10.7	17	
12 3	7 50.05	+38 51.6	2.478	3.253	12.3	20.5	12 3	7 44.36	+12 4.5	2.924	3.676	11.2	22.5
12 13	7 44.98	+40 2.9	2.399	3.253	10.1	20.3	12 13	7 39.68	+12 27.5	2.834	3.682	8.9	22.3
12 23	7 37.33	+41 9.3	2.343	3.253	7.8	20.2	12 23	7 33.36	+12 59.4	2.767	3.688	6.2	22.1
1 2	7 27.68	+42 4.5	2.315	3.253	6.2	20.1	1 2	7 25.84	+13 39.4	2.729	3.693	3.5	22.0
1 12	7 17.03	+42 43.0	2.316	3.253	6.2	20.1	1 12	7 17.76	+14 25.3	2.722	3.698	2.1	21.9
1 22	7 6.56	+43 1.9	2.345	3.252	7.9	20.2	1 22	7 9.80	+15 14.7	2.747	3.703	4.2	22.0
2 1	6 57.46	+43 1.5	2.401	3.252	10.2	20.3	2 1	7 2.66	+16 5.2	2.802	3.707	6.9	22.2
2 11	6 50.65	+42 44.8	2.480	3.251	12.4	20.5	2 11	6 56.92	+16 54.4	2.885	3.711	9.5	22.4
<b>360039</b>	2013 <i>AU</i> <sub>44</sub>		1 9.5 297°83	1°2/ 9.2	18		<b>343225</b>	2009 <i>WX</i> <sub>83</sub>		1 9.5 139°41	4°2/ 8.3	18	
12 3	7 48.44	+23 3.7	1.475	2.285	17.6	21.1	12 3	7 58.25	+30 48.7	1.792	2.575	16.0	21.6
12 13	7 44.86	+23 28.6	1.385	2.271	13.9	20.8	12 13	7 51.73	+31 40.8	1.722	2.591	12.6	21.4
12 23	7 37.89	+24 0.6	1.315	2.258	9.3	20.5	12 23	7 41.97	+32 31.8	1.674	2.605	8.7	21.2
1 2	7 28.13	+24 35.4	1.269	2.244	4.2	20.1	1 2	7 29.76	+33 14.5	1.653	2.618	5.2	21.0
1 12	7 16.85	+25 7.5	1.249	2.231	2.0	20.0	1 12	7 16.48	+33 42.5	1.662	2.631	4.6	21.0
1 22	7 5.68	+25 32.4	1.257	2.218	7.3	20.3	1 22	7 3.73	+33 52.7	1.699	2.642	7.6	21.2
2 1	6 56.30	+25 47.8	1.290	2.205	12.4	20.5	2 1	6 52.98	+33 46.0	1.765	2.653	11.3	21.5
2 11	6 50.01	+25 54.2	1.345	2.193	16.9	20.7	2 11	6 45.27	+33 26.2	1.854	2.663	14.6	21.7
<b>223852</b>	2004 <i>TH</i> <sub>211</sub>		1 9.5 89°02	2°0/10.1	18		<b>321936</b>	2010 <i>TP</i> <sub>117</sub>		1 9.5 347°18	2°6/10.3	18	
12 3	7 47.15	+16 32.8	2.043	2.821	14.5	20.4	12 3	7 42.67	+15 19.1	1.358	2.171	18.7	20.6
12 13	7 42.45	+16 19.1	1.964	2.830	11.4	20.2	12 13	7 40.32	+15 17.1	1.277	2.162	14.9	20.3
12 23	7 35.45	+16 12.5	1.907	2.839	7.8	20.0	12 23	7 34.81	+15 28.8	1.215	2.154	10.3	20.0
1 2	7 26.77	+16 12.3	1.878	2.848	4.0	19.8	1 2	7 26.77	+15 53.4	1.175	2.147	5.4	19.7
1 12	7 17.37	+16 17.3	1.877	2.856	2.2	19.7	1 12	7 17.43	+16 28.2	1.161	2.141	2.8	19.6
1 22	7 8.28	+16 25.7	1.906	2.865	5.4	19.9	1 22	7 8.30	+17 9.2	1.172	2.137	7.1	19.8
2 1	7 0.52	+16 36.3	1.962	2.873	9.1	20.2	2 1	7 0.90	+17 51.9	1.209	2.133	12.2	20.1
2 11	6 54.84	+16 47.6	2.044	2.882	12.3	20.4	2 11	6 56.39	+18 32.8	1.266	2.131	16.7	20.3
<b>271956</b>	2005 <i>AC</i> <sub>38</sub>		1 9.5 72°41	1°4/ 8.9	18		<b>426853</b>	2013 <i>VB</i> <sub>23</sub>		1 9.5 74°30	3°8/10.7	18	
12 3	7 46.37	+23 32.6	2.132	2.9									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>125624</b>	2001 <i>XN</i> <sub>58</sub>		1 9.5 15°47' 0.2"/ 9.5 17				<b>249571</b>	1993 <i>TM</i> <sub>30</sub>		1 9.5 34°30' 1.9"/10.1 18			
12 3	7 46.53	+20 9.7	1.222	2.044	19.8	19.5	12 3	7 46.17	+16 3.3	1.350	2.158	19.0	20.3
12 13	7 43.64	+20 38.3	1.154	2.047	15.5	19.2	12 13	7 42.72	+16 14.3	1.291	2.174	14.9	20.1
12 23	7 37.14	+21 18.3	1.105	2.050	10.3	18.9	12 23	7 36.12	+16 38.3	1.252	2.192	10.1	19.8
1 2	7 27.81	+22 5.2	1.079	2.055	4.5	18.6	1 2	7 27.23	+17 13.1	1.237	2.210	4.9	19.6
1 12	7 17.13	+22 52.9	1.078	2.060	1.6	18.4	1 12	7 17.38	+17 54.4	1.248	2.229	2.2	19.5
1 22	7 6.88	+23 35.5	1.102	2.066	7.5	18.8	1 22	7 8.10	+18 37.6	1.285	2.249	6.7	19.8
2 1	6 58.78	+24 9.5	1.151	2.073	12.9	19.1	2 1	7 0.76	+19 18.7	1.347	2.269	11.4	20.1
2 11	6 54.03	+24 33.9	1.221	2.081	17.4	19.4	2 11	6 56.31	+19 55.2	1.432	2.290	15.5	20.4
<b>101827</b>	1999 <i>JM</i> <sub>24</sub>		1 9.5 315°72' 2.9"/10.2 18				<b>466949</b>	2016 <i>AN</i> <sub>127</sub>		1 9.5 227°16' 4.9"/ 7.5 18			
12 3	7 45.88	+15 43.0	1.685	2.477	16.5	19.2	12 3	7 49.94	+33 3.6	2.088	2.877	13.9	21.5
12 13	7 42.22	+15 19.0	1.591	2.465	13.2	18.9	12 13	7 45.22	+34 11.3	2.004	2.875	11.0	21.3
12 23	7 35.77	+15 3.6	1.519	2.453	9.2	18.7	12 23	7 37.69	+35 18.1	1.944	2.872	7.9	21.1
1 2	7 27.12	+14 57.0	1.472	2.441	5.0	18.4	1 2	7 27.96	+36 17.3	1.911	2.869	5.4	20.9
1 12	7 17.34	+14 58.4	1.451	2.430	3.0	18.2	1 12	7 17.10	+37 2.7	1.906	2.866	5.3	20.9
1 22	7 7.70	+15 6.2	1.459	2.419	6.6	18.4	1 22	7 6.41	+37 30.3	1.930	2.863	7.7	21.1
2 1	6 59.51	+15 18.7	1.492	2.408	11.0	18.7	2 1	6 57.19	+37 39.7	1.981	2.859	10.8	21.2
2 11	6 53.81	+15 33.9	1.549	2.398	15.0	18.9	2 11	6 50.46	+37 33.3	2.056	2.856	13.7	21.4
<b>29334</b>	1994 <i>XJ</i>		1 9.5 306°85' 3.7"/ 8.4 18				<b>376835</b>	2001 <i>QD</i> <sub>9</sub>		1 9.5 55°26' 6.0"/ 8.4 18			
12 3	7 49.78	+26 54.9	1.462	2.273	17.7	17.7	12 3	7 54.56	+39 35.7	2.059	2.836	14.4	20.0
12 13	7 46.04	+27 53.6	1.380	2.267	13.9	17.5	12 13	7 48.49	+40 2.3	1.999	2.855	11.7	19.9
12 23	7 38.75	+28 58.0	1.320	2.261	9.5	17.2	12 23	7 39.53	+40 19.8	1.961	2.875	8.8	19.8
1 2	7 28.57	+30 0.7	1.283	2.255	5.1	16.9	1 2	7 28.58	+40 22.1	1.949	2.894	6.5	19.7
1 12	7 16.86	+30 53.5	1.274	2.250	4.2	16.9	1 12	7 16.97	+40 5.5	1.965	2.914	6.2	19.7
1 22	7 5.36	+31 30.5	1.292	2.244	8.3	17.1	1 22	7 6.07	+39 29.7	2.009	2.934	7.9	19.8
2 1	6 55.81	+31 49.6	1.334	2.239	12.9	17.3	2 1	6 57.13	+38 37.8	2.081	2.954	10.6	20.0
2 11	6 49.52	+31 53.0	1.398	2.234	17.1	17.6	2 11	6 50.92	+37 34.9	2.177	2.974	13.1	20.2
<b>404731</b>	2014 <i>JJ</i> <sub>22</sub>		1 9.5 240°51' 0.8"/ 9.8 18				<b>81283</b>	2000 <i>FF</i> <sub>59</sub>		1 9.5 337°06' 2.6"/ 8.5 18			
12 3	7 50.76	+18 28.6	1.730	2.517	16.4	22.1	12 3	7 47.31	+24 5.9	1.587	2.394	16.7	19.2
12 13	7 46.11	+18 42.3	1.631	2.504	12.9	21.8	12 13	7 43.77	+25 13.3	1.504	2.389	13.0	18.9
12 23	7 38.46	+19 5.3	1.554	2.491	8.8	21.5	12 23	7 37.06	+26 29.4	1.443	2.385	8.7	18.7
1 2	7 28.37	+19 35.3	1.503	2.477	4.1	21.2	1 2	7 27.78	+27 47.6	1.407	2.381	4.3	18.4
1 12	7 16.93	+20 8.7	1.480	2.462	1.4	21.0	1 12	7 17.15	+29 0.1	1.400	2.378	3.2	18.3
1 22	7 5.53	+20 41.6	1.486	2.447	6.3	21.3	1 22	7 6.65	+30 0.4	1.419	2.374	7.4	18.6
2 1	6 55.61	+21 11.2	1.519	2.432	11.1	21.5	2 1	6 57.83	+30 45.1	1.465	2.371	11.9	18.8
2 11	6 48.32	+21 36.3	1.576	2.415	15.3	21.7	2 11	6 51.89	+31 14.2	1.534	2.369	15.8	19.1
<b>502419</b>	2015 <i>BD</i> <sub>256</sub>		1 9.5 178°73' 0.9"/ 9.8 17				<b>166006</b>	2002 <i>AH</i> <sub>61</sub>		1 9.5 298°77' 2.1"/10.0 18			
12 3	7 45.55	+18 44.2	2.730	3.500	11.4	21.7	12 3	7 46.93	+16 43.5	1.474	2.276	18.0	20.5
12 13	7 40.75	+18 42.9	2.638	3.501	8.9	21.5	12 13	7 43.64	+16 41.6	1.377	2.257	14.4	20.2
12 23	7 34.15	+18 46.2	2.570	3.502	6.0	21.3	12 23	7 37.11	+16 51.0	1.299	2.238	9.9	19.9
1 2	7 26.22	+18 52.8	2.530	3.502	2.8	21.1	1 2	7 27.88	+17 10.8	1.246	2.218	5.0	19.5
1 12	7 17.69	+19 1.2	2.521	3.502	1.2	21.0	1 12	7 17.10	+17 38.3	1.218	2.199	2.3	19.3
1 22	7 9.33	+19 10.2	2.543	3.502	4.2	21.2	1 22	7 6.31	+18 9.9	1.218	2.181	7.1	19.5
2 1	7 1.92	+19 18.6	2.594	3.501	7.3	21.4	2 1	6 57.12	+18 42.3	1.243	2.162	12.4	19.8
2 11	6 56.08	+19 25.9	2.673	3.501	10.1	21.6	2 11	6 50.84	+19 12.9	1.289	2.144	17.0	20.0
<b>272298</b>	2005 <i>SR</i> <sub>24</sub>		1 9.5 107°13' 2.2"/ 8.9 17				<b>372904</b>	2011 <i>AF</i> <sub>58</sub>		1 9.5 334°99' 1.5"/10.1 18			
12 3	7 54.43	+24 28.9	1.566	2.362	17.4	21.1	12 3	7 45.54	+15 48.8	1.852	2.639	15.4	21.1
12 13	7 48.96	+25 17.9	1.501	2.380	13.5	20.8	12 13	7 41.68	+16 13.1	1.765	2.637	12.2	20.9
12 23	7 40.22	+26 12.0	1.458	2.397	9.0	20.6	12 23	7 35.27	+16 48.9	1.700	2.634	8.3	20.6
1 2	7 29.03	+27 5.0	1.441	2.414	4.2	20.4	1 2	7 26.88	+17 34.2	1.660	2.632	4.0	20.4
1 12	7 16.78	+27 50.2	1.452	2.431	2.7	20.3	1 12	7 17.48	+18 25.4	1.649	2.630	1.7	20.2
1 22	7 5.07	+28 23.2	1.491	2.447	7.0	20.6	1 22	7 8.24	+19 18.1	1.666	2.628	5.7	20.5
2 1	6 55.39	+28 42.9	1.557	2.462	11.4	20.9	2 1	7 0.33	+20 8.8	1.712	2.626	9.9	20.7
2 11	6 48.75	+28 50.9	1.647	2.477	15.2	21.2	2 11	6 54.68	+20 54.8	1.781	2.625	13.6	20.9
<b>88272</b>	2001 <i>LU</i> <sub>16</sub>		1 9.5 264°69' 1.9"/ 9.8 18				<b>469052</b>	2015 <i>AV</i> <sub>264</sub>		1 9.5 182°82' 2.0"/ 8.5 17			
12 3	7 51.45	+19 11.5	1.493	2.291	18.0	19.8	12 3	7 46.40	+24 57.1	2.389	3.174	12.4	21.2
12 13	7 46.94	+18 42.8	1.404	2.282	14.3	19.5	12 13	7 41.91	+25 54.3	2.300	3.174	9.7	21.0
12 23	7 39.12	+18 19.6	1.336	2.273	9.8	19.3	12 23	7 35.20	+26 55.8	2.237	3.174	6.4	20.8
1 2	7 28.66	+18 1.2	1.292	2.265	4.7	18.9	1 2	7 26.80	+27 57.2	2.201	3.174	3.2	20.6
1 12	7 16.86	+17 46.5	1.275	2.256	2.2	18.7	1 12	7 17.52	+28 53.9	2.196	3.173	2.4	20.6
1 22	7 5.32	+17 34.3	1.285	2.247	7.1	19.0	1 22	7 8.36	+29 42.2	2.221	3.173	5.4	20.8
2 1	6 55.60	+17 24.4	1.322	2.238	12.1	19.3	2 1	7 0.29	+30 19.9	2.276	3.173	8.7	21.0
2 11	6 48.88	+17 16.4	1.381	2.228	16.6	19.5	2 11	6 54.14	+30 46.9	2.355	3.172	11.6	21.2
<b>400148</b>	2006 <i>UT</i> <sub>288</sub>		1 9.5 71°05' 4.0"/ 8.0 17				<b>195321</b>	2002 <i>EQ</i> <sub>117</sub>		1 9.5 239°53' 1.0"/ 9.8 18			
12 3	7 53.89	+28 0.7	1.683	2.477	16.4	20.3	12 3	7 47.02	+18 40.2	2.202	2.981	13.5	21.1
12 13	7 48.32	+29 22.5	1.631	2.508	12.7	20.1	12 13	7 42.44	+18 42.2	2.105	2.973	10.6	20.9
12 23	7 39.65	+30 45.9	1.603	2.538	8.6	19.9	12 23	7 35.58	+18 50.3	2.030	2.964	7.2	20.6
1 2	7 28.72	+32 2.8	1.601	2.569	4.9	19.8	1 2	7 26.97	+19 3.0	1.983	2.956	3.4	20.4
1 12	7 16.89	+33 5.6	1.628	2.599	4.4	19.8	1 12	7 17.47	+19 18.1	1.965	2.947	1.3	20.2
1 22	7 5.67	+33 49.9	1.684	2.628	7.5	20.1	1 22	7 8.10	+19 33.8	1.977	2.938	5.1	20.4
2 1	6 56.42	+34 15.5	1.767	2.658	11.1	20.3	2 1	6 59.88	+19 48.4	2.018	2.928	8.9	20.7
2 11	6 50.08	+34 25.0	1.873	2.686	14.3	20.6	2 11	6 53.65	+20 1.0	2.084	2.918	12.3	20.9
<b>503707</b>	2016 <i>JL</i> <sub>16</sub>		1 9.5 154°36' 2.5"/ 8.4 18				<b>81107</b>	2000 <i>EY</i> <sub>116</sub>		1 9.5 272°00' 0.1"/ 9.5 18			
12 3	7 46.49	+27 49.0	2.										

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>428825</b>	2008 <i>TK</i> <sub>112</sub>		1 9.5 316°67	22°5/11.5	18		<b>236036</b>	2005 <i>GW</i> <sub>171</sub>		1 9.5 283°52	3°7/10.9	18	
12 3	7 46.27	-13 22.3	1.110	1.827	27.5	20.5	12 3	7 43.81	+10 20.9	2.319	3.079	13.5	20.2
12 13	7 43.78	-16 37.4	1.049	1.817	25.8	20.3	12 13	7 39.73	+10 8.1	2.227	3.078	10.9	20.1
12 23	7 37.55	-19 21.9	1.001	1.808	24.1	20.1	12 23	7 33.66	+10 5.9	2.159	3.076	7.9	19.9
1 2	7 28.18	-21 19.2	0.968	1.800	22.9	20.0	1 2	7 26.10	+10 14.8	2.116	3.074	5.0	19.7
1 12	7 17.03	-22 16.3	0.950	1.792	22.5	19.9	1 12	7 17.83	+10 34.0	2.103	3.072	3.7	19.6
1 22	7 5.94	-22 7.8	0.948	1.784	23.0	19.9	1 22	7 9.71	+11 1.6	2.118	3.070	5.6	19.7
2 1	6 56.82	-20 57.4	0.960	1.777	24.4	20.0	2 1	7 2.60	+11 35.4	2.163	3.069	8.6	19.9
2 11	6 51.18	-18 57.9	0.986	1.771	26.2	20.1	2 11	6 57.23	+12 12.5	2.232	3.067	11.5	20.1
<b>383711</b>	2007 <i>UG</i> <sub>5</sub>		1 9.5 116°97	3°3/10.7	18		<b>246854</b>	2010 <i>GL</i> <sub>97</sub>		1 9.5 222°82	1°2/10.0	17	
12 3	7 45.05	+11 28.0	2.535	3.291	12.6	21.6	12 3	7 44.52	+17 20.2	2.720	3.490	11.5	21.8
12 13	7 40.39	+11 6.0	2.453	3.301	10.1	21.4	12 13	7 40.04	+17 22.5	2.621	3.484	9.0	21.6
12 23	7 33.91	+10 52.5	2.393	3.310	7.3	21.2	12 23	7 33.75	+17 30.4	2.546	3.477	6.1	21.4
1 2	7 26.13	+10 47.9	2.361	3.320	4.5	21.1	1 2	7 26.12	+17 42.9	2.499	3.471	3.0	21.2
1 12	7 17.79	+10 51.8	2.359	3.329	3.3	21.0	1 12	7 17.82	+17 58.4	2.483	3.464	1.4	21.1
1 22	7 9.68	+11 2.9	2.387	3.338	5.1	21.1	1 22	7 9.64	+18 15.4	2.497	3.457	4.3	21.3
2 1	7 2.56	+11 19.6	2.444	3.346	7.9	21.3	2 1	7 2.34	+18 32.5	2.541	3.449	7.4	21.5
2 11	6 57.07	+11 40.1	2.527	3.355	10.6	21.5	2 11	6 56.60	+18 48.7	2.612	3.442	10.2	21.6
<b>354139</b>	2002 <i>CR</i> <sub>73</sub>		1 9.5 2°29	3°0/10.6	18		<b>425005</b>	2009 <i>DU</i> <sub>46</sub>		1 9.5 303°08	2°1/ 8.9	18	
12 3	7 42.81	+12 35.3	1.158	1.977	20.9	20.0	12 3	7 47.47	+28 17.0	2.227	3.017	13.1	20.7
12 13	7 40.86	+13 1.8	1.087	1.975	16.7	19.8	12 13	7 42.99	+28 23.5	2.124	2.998	10.3	20.5
12 23	7 35.41	+13 50.2	1.034	1.974	11.7	19.5	12 23	7 36.05	+28 29.2	2.043	2.980	7.0	20.2
1 2	7 27.14	+14 58.8	1.003	1.974	6.2	19.2	1 2	7 27.23	+28 30.9	1.989	2.961	3.5	20.0
1 12	7 17.42	+16 21.9	0.996	1.976	3.1	19.0	1 12	7 17.44	+28 25.6	1.965	2.943	2.4	19.9
1 22	7 8.00	+17 51.2	1.013	1.979	7.7	19.3	1 22	7 7.79	+28 11.8	1.970	2.925	5.7	20.1
2 1	7 0.58	+19 18.3	1.055	1.983	13.1	19.6	2 1	6 59.38	+27 49.7	2.004	2.907	9.3	20.2
2 11	6 56.43	+20 37.0	1.117	1.988	17.9	19.9	2 11	6 53.11	+27 21.0	2.062	2.890	12.6	20.4
<b>31317</b>	1998 <i>GL</i> <sub>8</sub>		1 9.5 354°55	4°0/11.4	18		<b>142087</b>	2002 <i>QM</i> <sub>50</sub>		1 9.5 29°70	3°5/10.4	18	
12 3	7 42.38	+ 8 21.0	2.096	2.860	14.6	18.1	12 3	7 46.23	+14 11.5	1.377	2.180	19.0	19.9
12 13	7 38.86	+ 8 32.3	2.007	2.858	11.9	17.9	12 13	7 42.77	+13 54.3	1.311	2.189	15.1	19.6
12 23	7 33.21	+ 8 58.6	1.939	2.856	8.7	17.7	12 23	7 36.21	+13 50.2	1.264	2.199	10.5	19.4
1 2	7 25.93	+ 9 39.8	1.897	2.854	5.5	17.5	1 2	7 27.33	+13 59.3	1.241	2.210	5.8	19.2
1 12	7 17.84	+10 34.0	1.883	2.853	4.0	17.4	1 12	7 17.45	+14 19.4	1.244	2.221	3.6	19.0
1 22	7 9.89	+11 37.8	1.898	2.852	5.9	17.5	1 22	7 8.04	+14 47.4	1.272	2.234	7.1	19.3
2 1	7 3.02	+12 46.8	1.941	2.852	9.1	17.7	2 1	7 0.49	+15 19.7	1.326	2.247	11.7	19.6
2 11	6 58.01	+13 56.7	2.010	2.852	12.3	17.9	2 11	6 55.79	+15 52.9	1.403	2.260	15.8	19.9
<b>154559</b>	2003 <i>HL</i> <sub>10</sub>		1 9.5 218°79	1°8/10.3	18		<b>175554</b>	2006 <i>SA</i> <sub>329</sub>		1 9.5 210°10	1°2/ 9.9	18	
12 3	7 46.43	+14 42.5	2.343	3.110	13.2	20.6	12 3	7 48.35	+17 43.8	1.955	2.737	14.9	21.2
12 13	7 41.84	+14 59.9	2.243	3.103	10.4	20.4	12 13	7 43.73	+17 51.7	1.864	2.734	11.7	21.0
12 23	7 35.13	+15 26.9	2.167	3.096	7.2	20.2	12 23	7 36.58	+18 7.8	1.796	2.731	8.0	20.7
1 2	7 26.77	+16 2.1	2.119	3.088	3.7	19.9	1 2	7 27.47	+18 30.2	1.754	2.727	3.8	20.5
1 12	7 17.57	+16 43.1	2.100	3.080	1.9	19.8	1 12	7 17.38	+18 56.2	1.741	2.723	1.5	20.3
1 22	7 8.44	+17 27.0	2.112	3.072	4.9	20.0	1 22	7 7.47	+19 23.0	1.758	2.718	5.6	20.5
2 1	7 0.33	+18 11.0	2.154	3.063	8.5	20.2	2 1	6 58.88	+19 48.4	1.802	2.714	9.7	20.8
2 11	6 54.03	+18 52.9	2.222	3.054	11.7	20.4	2 11	6 52.54	+20 11.0	1.871	2.709	13.3	21.0
<b>347054</b>	2010 <i>EZ</i> <sub>137</sub>		1 9.5 251°47	7°1/ 6.1	18		<b>186067</b>	2001 <i>SQ</i> <sub>173</sub>		1 9.5 4°29	7°8/12.2	18	
12 3	7 52.16	+43 6.8	2.562	3.325	12.3	20.6	12 3	7 42.70	+ 3 57.0	1.490	2.263	19.2	18.9
12 13	7 46.86	+44 19.1	2.474	3.313	10.3	20.4	12 13	7 39.88	+ 3 20.7	1.415	2.262	16.1	18.7
12 23	7 38.78	+45 24.7	2.409	3.302	8.4	20.3	12 23	7 34.27	+ 3 5.2	1.357	2.263	12.6	18.5
1 2	7 28.48	+46 16.6	2.371	3.290	7.2	20.2	1 2	7 26.51	+ 3 14.2	1.322	2.264	9.4	18.3
1 12	7 17.00	+46 49.0	2.361	3.278	7.3	20.2	1 12	7 17.70	+ 3 48.1	1.311	2.266	7.8	18.2
1 22	7 5.64	+46 59.0	2.379	3.266	8.8	20.2	1 22	7 9.16	+ 4 44.0	1.326	2.269	9.3	18.3
2 1	6 55.69	+46 47.1	2.422	3.253	10.8	20.4	2 1	7 2.14	+ 5 56.1	1.365	2.273	12.5	18.5
2 11	6 48.19	+46 17.0	2.489	3.240	12.9	20.5	2 11	6 57.65	+ 7 17.0	1.426	2.277	15.9	18.7
<b>356474</b>	2011 <i>QG</i> <sub>63</sub>		1 9.5 167°50	5°5/ 8.1	18		<b>382236</b>	2012 <i>SM</i> <sub>2</sub>		1 9.5 97°26	0°4/ 9.7	18	
12 3	7 56.56	+34 59.2	1.861	2.644	15.5	21.1	12 3	7 45.74	+20 27.1	2.405	3.185	12.5	21.3
12 13	7 50.60	+35 48.1	1.783	2.648	12.4	20.9	12 13	7 41.15	+20 29.7	2.322	3.191	9.7	21.1
12 23	7 41.36	+36 32.7	1.727	2.652	9.0	20.7	12 23	7 34.54	+20 36.6	2.262	3.198	6.5	20.9
1 2	7 29.60	+37 5.7	1.698	2.655	6.2	20.5	1 2	7 26.46	+20 46.0	2.230	3.204	2.9	20.7
1 12	7 16.68	+37 20.6	1.697	2.657	5.8	20.5	1 12	7 17.74	+20 56.0	2.228	3.210	1.0	20.5
1 22	7 4.19	+37 14.9	1.725	2.659	8.3	20.7	1 22	7 9.26	+21 5.0	2.256	3.216	4.6	20.8
2 1	6 53.66	+36 50.1	1.779	2.660	11.7	20.9	2 1	7 1.90	+21 12.0	2.313	3.222	8.0	21.0
2 11	6 46.15	+36 11.0	1.857	2.660	14.8	21.1	2 11	6 56.34	+21 16.6	2.396	3.228	10.9	21.2
<b>416662</b>	2004 <i>TO</i> <sub>277</sub>		1 9.5 55°78	5°9/ 7.5	16		<b>405533</b>	2005 <i>EM</i> <sub>256</sub>		1 9.5 328°71	1°0/ 9.3	18	
12 3	7 51.14	+34 48.9	1.813	2.608	15.4	21.0	12 3	7 47.14	+23 35.6	1.400	2.216	18.1	21.2
12 13	7 46.37	+36 0.1	1.752	2.624	12.3	20.8	12 13	7 43.97	+23 45.1	1.315	2.204	14.2	20.9
12 23	7 38.50	+37 7.5	1.714	2.640	9.0	20.7	12 23	7 37.37	+23 59.8	1.249	2.193	9.5	20.6
1 2	7 28.31	+38 3.2	1.702	2.656	6.4	20.6	1 2	7 28.00	+24 15.8	1.207	2.183	4.3	20.3
1 12	7 17.11	+38 40.7	1.717	2.673	6.2	20.6	1 12	7 17.19	+24 28.8	1.191	2.173	1.8	20.1
1 22	7 6.41	+38 56.8	1.760	2.690	8.5	20.8	1 22	7 6.61	+24 35.4	1.202	2.164	7.3	20.4
2 1	6 57.59	+38 52.5	1.829	2.707	11.6	21.0	2 1	6 57.92	+24 34.5	1.237	2.156	12.5	20.7
2 11	6 51.64	+38 31.9	1.921	2.724	14.4	21.2	2 11	6 52.38	+24 26.9	1.294	2.148	17.0	20.9
<b>85104</b>	2415 <i>T</i> <sub>-3</sub>		1 9.5 6°95	4°5/10.7	18		<b>9955</b>	1991 <i>PU</i> <sub>11</sub>		1 9.5 77°37	3°1/ 8.9	18	
12 3	7 46.32	+11 50.2	1.615	2.400									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>100164</b>	1993 <i>TV</i> <sub>38</sub>		1 9.5 94° 94'	4.8/11.4	18		<b>192987</b>	2000 <i>DD</i> <sub>67</sub>		1 9.6 43° 61'	4.4/ 8.7	18	
12 3	7 48.86	+ 7 43.1	1.996	2.747	15.7	20.0	12 3	7 51.73	+33 41.7	1.817	2.611	15.4	19.5
12 13	7 43.66	+ 7 28.2	1.930	2.771	12.7	19.8	12 13	7 46.57	+34 1.2	1.752	2.626	12.2	19.3
12 23	7 36.22	+ 7 27.6	1.885	2.794	9.4	19.6	12 23	7 38.45	+34 15.5	1.709	2.640	8.6	19.2
1 2	7 27.19	+ 7 41.7	1.866	2.818	6.2	19.5	1 2	7 28.24	+34 19.4	1.692	2.656	5.3	19.0
1 12	7 17.53	+ 8 9.4	1.876	2.840	4.8	19.4	1 12	7 17.23	+34 8.8	1.703	2.671	4.6	19.0
1 22	7 8.28	+ 8 47.9	1.915	2.862	6.5	19.6	1 22	7 6.86	+33 42.9	1.742	2.687	7.3	19.2
2 1	7 0.38	+ 9 33.8	1.982	2.884	9.5	19.8	2 1	6 58.39	+33 3.9	1.808	2.703	10.7	19.4
2 11	6 54.57	+10 23.1	2.074	2.905	12.4	20.0	2 11	6 52.67	+32 16.0	1.898	2.720	13.8	19.7
<b>149998</b>	2005 <i>UK</i> <sub>130</sub>		1 9.5 221° 43'	0° 2/ 9.5	18		<b>432092</b>	2008 <i>YY</i> <sub>157</sub>		1 9.6 348° 83'	7° 6/ 8.3	18	
12 3	7 47.86	+19 19.4	2.225	3.003	13.5	20.3	12 3	7 50.64	+40 38.8	1.644	2.441	16.6	19.7
12 13	7 43.19	+20 4.1	2.127	2.996	10.5	20.1	12 13	7 46.67	+41 7.8	1.564	2.431	13.7	19.5
12 23	7 36.17	+20 57.3	2.053	2.989	7.0	19.9	12 23	7 39.07	+41 26.3	1.504	2.422	10.6	19.3
1 2	7 27.31	+21 55.9	2.007	2.981	3.1	19.6	1 2	7 28.68	+41 26.1	1.468	2.414	8.2	19.1
1 12	7 17.46	+22 55.5	1.991	2.973	1.1	19.4	1 12	7 17.06	+41 1.2	1.457	2.407	7.8	19.1
1 22	7 7.64	+23 51.9	2.006	2.965	5.2	19.7	1 22	7 6.00	+40 10.6	1.472	2.401	9.9	19.2
2 1	6 58.94	+24 42.0	2.050	2.956	9.0	19.9	2 1	6 57.16	+38 58.0	1.512	2.396	13.1	19.4
2 11	6 52.23	+25 24.3	2.119	2.947	12.4	20.1	2 11	6 51.66	+37 30.5	1.574	2.393	16.3	19.6
<b>370219</b>	2002 <i>LS</i> <sub>38</sub>		1 9.5 102° 62'	1° 0/ 9.8	18		<b>458336</b>	2010 <i>VM</i> <sub>136</sub>		1 9.6 178° 92'	2° 8/ 8.5	18	
12 3	7 49.43	+19 24.0	2.538	3.304	12.3	20.6	12 3	7 50.63	+27 59.4	2.173	2.958	13.5	21.7
12 13	7 43.66	+19 7.3	2.466	3.327	9.5	20.4	12 13	7 45.43	+28 43.0	2.087	2.959	10.6	21.5
12 23	7 36.00	+18 54.2	2.418	3.349	6.4	20.2	12 23	7 37.67	+29 28.1	2.025	2.960	7.2	21.3
1 2	7 27.04	+18 43.8	2.399	3.371	3.0	20.0	1 2	7 27.96	+30 9.8	1.991	2.960	3.8	21.1
1 12	7 17.60	+18 34.9	2.411	3.392	1.3	19.9	1 12	7 17.29	+30 43.4	1.986	2.960	3.1	21.1
1 22	7 8.55	+18 27.0	2.454	3.413	4.4	20.2	1 22	7 6.83	+31 5.7	2.011	2.960	6.1	21.2
2 1	7 0.66	+18 19.6	2.528	3.434	7.5	20.4	2 1	6 57.73	+31 15.9	2.064	2.959	9.6	21.5
2 11	6 54.56	+18 12.5	2.628	3.454	10.3	20.6	2 11	6 50.90	+31 15.4	2.143	2.958	12.7	21.7
<b>414926</b>	2011 <i>AP</i> <sub>45</sub>		1 9.5 22° 85'	1° 7/10.2	18		<b>282814</b>	2006 <i>RQ</i> <sub>38</sub>		1 9.6 128° 28'	3° 7/11.1	18	
12 3	7 44.23	+14 39.0	1.469	2.272	18.0	20.2	12 3	7 43.97	+ 8 41.8	2.783	3.526	11.9	21.2
12 13	7 41.16	+15 14.1	1.401	2.281	14.2	19.9	12 13	7 39.41	+ 8 23.3	2.699	3.536	9.6	21.0
12 23	7 35.15	+16 4.9	1.352	2.290	9.7	19.7	12 23	7 33.22	+ 8 14.3	2.639	3.546	7.1	20.9
1 2	7 26.90	+17 8.2	1.328	2.301	4.7	19.4	1 2	7 25.87	+ 8 15.4	2.606	3.556	4.8	20.7
1 12	7 17.62	+18 18.9	1.331	2.312	2.0	19.3	1 12	7 18.00	+ 8 26.0	2.602	3.565	3.7	20.7
1 22	7 8.69	+19 30.7	1.361	2.325	6.4	19.6	1 22	7 10.32	+ 8 44.9	2.629	3.574	5.1	20.8
2 1	7 1.45	+20 38.1	1.417	2.338	11.0	19.9	2 1	7 3.52	+ 9 10.4	2.685	3.583	7.5	21.0
2 11	6 56.89	+21 37.6	1.496	2.352	15.1	20.2	2 11	6 58.17	+ 9 40.2	2.768	3.592	9.9	21.1
<b>75985</b>	2000 <i>DY</i> <sub>2</sub>		1 9.5 238° 05'	0° 2/ 9.6	18 R		<b>125211</b>	1998 <i>HT</i> <sub>95</sub>		1 9.6 173° 29'	0° 0/ 9.4	18	
12 3	7 45.42	+18 41.2	2.262	3.042	13.2	19.7	12 3	7 50.40	+20 17.3	2.101	2.879	14.1	18.1
12 13	7 41.18	+19 16.8	2.170	3.040	10.3	19.5	12 13	7 45.14	+20 39.1	2.014	2.882	11.0	17.9
12 23	7 34.76	+20 0.4	2.102	3.038	6.9	19.2	12 23	7 37.43	+21 7.1	1.950	2.885	7.4	17.7
1 2	7 26.65	+20 49.4	2.061	3.036	3.1	19.0	1 2	7 27.84	+21 38.5	1.913	2.887	3.3	17.4
1 12	7 17.69	+21 40.1	2.051	3.033	1.0	18.8	1 12	7 17.35	+22 9.8	1.906	2.888	1.1	17.3
1 22	7 8.85	+22 29.0	2.070	3.031	4.9	19.1	1 22	7 7.07	+22 38.2	1.929	2.889	5.3	17.6
2 1	7 1.10	+23 13.2	2.119	3.028	8.6	19.3	2 1	6 58.11	+23 1.7	1.982	2.889	9.2	17.8
2 11	6 55.24	+23 51.3	2.193	3.026	11.8	19.5	2 11	6 51.33	+23 19.8	2.059	2.888	12.6	18.0
<b>281310</b>	2007 <i>TV</i> <sub>13</sub>		1 9.5 137° 89'	3° 0/ 8.4	18		<b>321708</b>	2010 <i>GC</i> <sub>98</sub>		1 9.6 348° 07'	5° 5/ 11.0	18	
12 3	7 48.07	+30 18.7	2.450	3.233	12.2	20.8	12 3	7 43.57	+ 8 8.4	2.039	2.801	15.0	20.0
12 13	7 43.13	+30 56.2	2.368	3.238	9.6	20.7	12 13	7 39.82	+ 7 23.3	1.951	2.798	12.4	19.8
12 23	7 35.97	+31 32.9	2.310	3.243	6.6	20.5	12 23	7 33.87	+ 6 49.8	1.885	2.794	9.4	19.6
1 2	7 27.14	+32 4.5	2.280	3.247	3.8	20.3	1 2	7 26.26	+ 6 30.1	1.843	2.791	6.6	19.5
1 12	7 17.55	+32 27.3	2.280	3.251	3.3	20.3	1 12	7 17.87	+ 6 24.9	1.829	2.788	5.5	19.4
1 22	7 8.20	+32 39.0	2.310	3.255	5.7	20.4	1 22	7 9.66	+ 6 33.6	1.843	2.786	7.1	19.5
2 1	7 0.07	+32 39.5	2.368	3.259	8.7	20.6	2 1	7 2.59	+ 6 54.2	1.883	2.784	10.0	19.6
2 11	6 53.94	+32 30.2	2.452	3.262	11.4	20.8	2 11	6 57.46	+ 7 23.4	1.948	2.783	13.0	19.8
<b>470887</b>	2009 <i>BS</i> <sub>89</sub>		1 9.5 280° 36'	2° 7/10.8	16		<b>57624</b>	2001 <i>TZ</i> <sub>157</sub>		1 9.6 27° 83'	4° 2/ 11.3	18	
12 3	7 43.79	+11 10.2	2.554	3.312	12.5	22.0	12 3	7 42.96	+ 8 39.9	2.201	2.961	14.1	19.4
12 13	7 39.75	+11 25.1	2.438	3.289	10.0	21.8	12 13	7 39.15	+ 8 32.1	2.117	2.965	11.5	19.2
12 23	7 33.75	+11 51.2	2.345	3.265	7.2	21.5	12 23	7 33.32	+ 8 37.0	2.055	2.969	8.4	19.0
1 2	7 26.22	+12 28.1	2.279	3.241	4.2	21.3	1 2	7 25.99	+ 8 55.2	2.019	2.974	5.5	18.8
1 12	7 17.82	+13 14.3	2.243	3.217	2.8	21.2	1 12	7 17.97	+ 9 25.4	2.011	2.978	4.2	18.8
1 22	7 9.36	+14 7.1	2.237	3.193	5.0	21.3	1 22	7 10.13	+10 5.5	2.032	2.983	5.9	18.9
2 1	7 1.70	+15 3.4	2.261	3.169	8.2	21.4	2 1	7 3.36	+10 52.2	2.081	2.988	8.8	19.1
2 11	6 55.61	+16 0.2	2.312	3.144	11.3	21.6	2 11	6 58.38	+11 42.1	2.156	2.993	11.8	19.3
<b>163187</b>	2002 <i>DD</i> <sub>16</sub>		1 9.5 235° 02'	0° 2/ 9.5	18		<b>241614</b>	1999 <i>TT</i> <sub>146</sub>		1 9.6 89° 52'	0° 9/ 9.3	18	
12 3	7 50.23	+21 8.6	1.849	2.637	15.4	21.1	12 3	7 53.94	+22 38.0	1.784	2.569	16.0	21.3
12 13	7 45.53	+21 28.6	1.753	2.627	12.1	20.8	12 13	7 47.97	+23 5.7	1.725	2.598	12.3	21.1
12 23	7 37.98	+21 55.3	1.679	2.617	8.1	20.6	12 23	7 39.24	+23 37.8	1.690	2.627	8.1	20.9
1 2	7 28.18	+22 25.6	1.632	2.607	3.6	20.3	1 2	7 28.57	+24 10.3	1.680	2.655	3.6	20.7
1 12	7 17.18	+22 55.6	1.613	2.595	1.2	20.1	1 12	7 17.17	+24 38.7	1.701	2.682	1.5	20.6
1 22	7 6.27	+23 21.8	1.624	2.584	6.0	20.4	1 22	7 6.38	+25 0.2	1.750	2.709	5.8	20.9
2 1	6 56.80	+23 42.1	1.662	2.572	10.5	20.6	2 1	6 57.38	+25 13.9	1.828	2.735	9.9	21.2
2 11	6 49.83	+23 56.2	1.725	2.560	14.4	20.8	2 11	6 51.00	+25 20.5	1.931	2.761	13.3	21.5
<b>492597</b>	2014 <i>OL</i> <sub>198</sub>		1 9.5 106° 49'	6° 8/ 12.3	18		<b>186633</b>	2003 <i>GP</i> <sub>44</sub>		1 9.6 358° 71'	2° 5/ 8.4	18	
12 3	7 47.12	+											

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>63418</b>	2001 <i>KW</i> <sub>62</sub>		1 9.6 157°11	1°0/10.0	18		<b>321581</b>	2009 <i>TA</i> <sub>48</sub>		1 9.6 174°91	3°7/ 8.2	18	
12 3	7 49.09	+15 57.5	2.192	2.961	13.9	19.6	12 3	7 50.70	+31 13.9	2.243	3.026	13.2	21.6
12 13	7 44.00	+16 36.0	2.106	2.968	10.9	19.4	12 13	7 45.49	+32 2.1	2.159	3.028	10.4	21.4
12 23	7 36.61	+17 24.6	2.043	2.974	7.4	19.2	12 23	7 37.74	+32 49.5	2.099	3.029	7.3	21.2
1 2	7 27.49	+18 20.7	2.008	2.980	3.5	18.9	1 2	7 28.03	+33 30.7	2.066	3.030	4.5	21.1
1 12	7 17.50	+19 20.5	2.003	2.985	1.3	18.8	1 12	7 17.38	+34 0.9	2.063	3.031	4.0	21.0
1 22	7 7.69	+20 19.7	2.030	2.990	5.0	19.0	1 22	7 6.95	+34 17.3	2.090	3.031	6.6	21.2
2 1	6 59.06	+21 15.2	2.086	2.994	8.8	19.3	2 1	6 57.91	+34 19.5	2.145	3.031	9.7	21.4
2 11	6 52.45	+22 4.8	2.168	2.997	12.0	19.5	2 11	6 51.14	+34 9.6	2.224	3.031	12.6	21.6
<b>258337</b>	2001 <i>VK</i> <sub>72</sub>		1 9.6 35°67	0°8/ 9.4	18		<b>462737</b>	2010 <i>BF</i> <sub>49</sub>		1 9.6 204°40	8°0/ 4.3	17	
12 3	7 48.67	+23 41.5	1.547	2.353	17.1	20.8	12 3	7 56.50	+51 1.3	3.117	3.842	11.1	22.1
12 13	7 44.52	+23 47.6	1.478	2.363	13.3	20.6	12 13	7 50.25	+52 30.4	3.041	3.837	9.7	22.0
12 23	7 37.31	+23 57.6	1.431	2.373	8.8	20.4	12 23	7 41.10	+53 49.8	2.989	3.832	8.6	21.9
1 2	7 27.84	+24 7.8	1.409	2.384	3.9	20.1	1 2	7 29.61	+54 52.6	2.963	3.826	8.0	21.8
1 12	7 17.42	+24 14.8	1.413	2.395	1.6	20.0	1 12	7 16.83	+55 33.4	2.964	3.820	8.2	21.8
1 22	7 7.51	+24 16.3	1.446	2.407	6.4	20.3	1 22	7 4.08	+55 49.9	2.992	3.814	9.2	21.9
2 1	6 59.46	+24 11.9	1.504	2.420	10.9	20.6	2 1	6 52.74	+55 42.8	3.044	3.807	10.5	22.0
2 11	6 54.22	+24 2.4	1.586	2.432	14.8	20.9	2 11	6 43.90	+55 16.1	3.118	3.800	11.9	22.1
<b>188746</b>	2005 <i>UO</i> <sub>162</sub>		1 9.6 63°13	2°8/10.5	18		<b>158745</b>	2003 <i>QU</i> <sub>49</sub>		1 9.6 127°34	1°0/ 9.2	18	
12 3	7 46.45	+13 20.7	1.809	2.589	16.0	20.4	12 3	7 48.23	+23 37.9	2.374	3.154	12.7	20.7
12 13	7 42.28	+13 25.6	1.733	2.599	12.7	20.2	12 13	7 43.16	+24 2.7	2.294	3.165	9.8	20.5
12 23	7 35.60	+13 42.7	1.679	2.608	8.8	20.0	12 23	7 35.95	+24 30.4	2.239	3.175	6.5	20.4
1 2	7 27.05	+14 10.9	1.651	2.618	4.8	19.8	1 2	7 27.17	+24 58.2	2.211	3.185	2.9	20.1
1 12	7 17.66	+14 47.9	1.650	2.628	2.9	19.7	1 12	7 17.69	+25 22.9	2.214	3.195	1.4	20.0
1 22	7 8.58	+15 30.1	1.679	2.638	5.9	19.9	1 22	7 8.47	+25 42.2	2.248	3.205	4.9	20.3
2 1	7 0.91	+16 14.1	1.734	2.649	9.8	20.2	2 1	7 0.46	+25 55.0	2.310	3.214	8.2	20.5
2 11	6 55.51	+16 56.9	1.815	2.659	13.4	20.4	2 11	6 54.37	+26 1.7	2.399	3.223	11.2	20.7
<b>291819</b>	2006 <i>KO</i> <sub>116</sub>		1 9.6 234°51	0°3/ 9.6	18		<b>101768</b>	1999 <i>FS</i> <sub>50</sub>		1 9.6 270°21	6°1/ 7.9	18	
12 3	7 50.06	+19 58.3	1.893	2.678	15.2	22.2	12 3	7 54.21	+37 32.4	1.937	2.720	15.0	19.2
12 13	7 45.32	+20 13.6	1.796	2.668	12.0	21.9	12 13	7 48.95	+38 12.2	1.845	2.708	12.2	19.0
12 23	7 37.83	+20 36.0	1.720	2.657	8.1	21.7	12 23	7 40.43	+38 46.0	1.776	2.696	9.1	18.8
1 2	7 28.14	+21 3.1	1.671	2.645	3.6	21.4	1 2	7 29.33	+39 6.6	1.733	2.683	6.7	18.6
1 12	7 17.28	+21 31.3	1.651	2.634	1.2	21.2	1 12	7 16.96	+39 7.8	1.717	2.671	6.4	18.6
1 22	7 6.51	+21 57.3	1.661	2.621	5.8	21.5	1 22	7 4.88	+38 47.1	1.729	2.658	8.7	18.7
2 1	6 57.12	+22 19.2	1.698	2.609	10.3	21.7	2 1	6 54.64	+38 6.3	1.768	2.646	11.9	18.9
2 11	6 50.13	+22 36.1	1.760	2.595	14.1	21.9	2 11	6 47.35	+37 10.5	1.829	2.633	15.0	19.0
<b>55225</b>	2001 <i>RG</i> <sub>70</sub>		1 9.6 5°46	0°0/ 9.4	18		<b>184528</b>	2005 <i>QO</i> <sub>22</sub>		1 9.6 186°47	0°6/ 9.8	18	
12 3	7 45.30	+22 9.9	1.933	2.729	14.5	18.8	12 3	7 48.76	+19 23.4	2.167	2.945	13.8	21.6
12 13	7 41.39	+22 5.8	1.850	2.729	11.3	18.6	12 13	7 43.81	+19 32.8	2.077	2.945	10.8	21.4
12 23	7 35.01	+22 5.3	1.791	2.730	7.5	18.4	12 23	7 36.53	+19 48.3	2.010	2.944	7.2	21.2
1 2	7 26.80	+22 6.4	1.757	2.732	3.3	18.1	1 2	7 27.48	+20 7.7	1.970	2.943	3.3	20.9
1 12	7 17.77	+22 7.1	1.751	2.734	1.1	18.0	1 12	7 17.58	+20 28.5	1.960	2.942	1.1	20.8
1 22	7 9.03	+22 5.6	1.775	2.737	5.4	18.3	1 22	7 7.87	+20 48.4	1.980	2.940	5.1	21.1
2 1	7 1.67	+22 1.5	1.826	2.740	9.4	18.5	2 1	6 59.38	+21 5.7	2.029	2.938	8.9	21.3
2 11	6 56.53	+21 54.7	1.901	2.744	12.9	18.7	2 11	6 52.96	+21 19.7	2.103	2.935	12.3	21.5
<b>522211</b>	2016 <i>AK</i> <sub>263</sub>		1 9.6 22°81	2°2/ 9.2	18		<b>345731</b>	2007 <i>CV</i> <sub>56</sub>		1 9.6 289°00	1°8/10.1	18	
12 3	7 50.22	+28 6.1	1.678	2.480	16.2	20.9	12 3	7 48.50	+16 33.0	1.411	2.213	18.7	20.7
12 13	7 45.61	+28 4.2	1.603	2.484	12.6	20.6	12 13	7 44.92	+16 43.0	1.325	2.205	14.8	20.5
12 23	7 37.98	+28 1.1	1.550	2.489	8.5	20.4	12 23	7 38.00	+17 6.0	1.259	2.197	10.2	20.2
1 2	7 28.13	+27 52.8	1.522	2.495	4.1	20.2	1 2	7 28.36	+17 40.3	1.216	2.190	5.0	19.8
1 12	7 17.35	+27 36.4	1.521	2.501	2.6	20.1	1 12	7 17.27	+18 21.8	1.200	2.182	2.1	19.6
1 22	7 7.07	+27 11.0	1.549	2.507	6.5	20.3	1 22	7 6.33	+19 5.9	1.211	2.174	7.1	19.9
2 1	6 58.63	+26 38.0	1.604	2.514	10.8	20.6	2 1	6 57.16	+19 48.4	1.247	2.167	12.3	20.2
2 11	6 52.96	+26 0.0	1.682	2.521	14.5	20.9	2 11	6 51.03	+20 26.6	1.306	2.160	16.9	20.4
<b>147238</b>	2002 <i>XX</i> <sub>54</sub>		1 9.6 305°17	0°7/ 9.8	18		<b>487799</b>	2015 <i>SA</i> <sub>3</sub>		1 9.6 130°49	4°2/ 8.4	18	
12 3	7 45.83	+18 29.3	1.640	2.440	16.6	19.5	12 3	7 56.45	+30 31.5	1.699	2.489	16.5	21.6
12 13	7 42.58	+18 49.4	1.538	2.418	13.1	19.2	12 13	7 50.58	+31 20.6	1.629	2.502	12.9	21.4
12 23	7 36.34	+19 20.4	1.457	2.396	8.9	18.9	12 23	7 41.39	+32 8.9	1.582	2.515	9.0	21.2
1 2	7 27.61	+19 59.9	1.400	2.375	4.1	18.6	1 2	7 29.69	+32 49.3	1.560	2.526	5.3	21.0
1 12	7 17.45	+20 44.0	1.371	2.354	1.4	18.3	1 12	7 16.89	+33 15.4	1.567	2.538	4.6	21.0
1 22	7 7.22	+21 28.2	1.370	2.333	6.5	18.6	1 22	7 4.62	+33 24.0	1.603	2.548	7.7	21.2
2 1	6 58.40	+22 8.7	1.395	2.312	11.5	18.8	2 1	6 54.37	+33 15.9	1.665	2.558	11.6	21.5
2 11	6 52.21	+22 43.4	1.443	2.292	15.9	19.1	2 11	6 47.21	+32 54.8	1.751	2.567	15.0	21.7
<b>236591</b>	2006 <i>HW</i> <sub>121</sub>		1 9.6 136°40	3°9/11.4	18		<b>487846</b>	2015 <i>TE</i> <sub>96</sub>		1 9.6 267°75	2°0/ 9.0	18	
12 3	7 44.31	+ 7 24.8	2.657	3.398	12.4	20.4	12 3	7 51.14	+24 49.3	1.585	2.386	17.0	21.5
12 13	7 39.80	+ 7 21.9	2.572	3.407	10.1	20.3	12 13	7 46.93	+25 20.2	1.490	2.371	13.4	21.2
12 23	7 33.56	+ 7 30.6	2.510	3.415	7.5	20.1	12 23	7 39.36	+25 56.6	1.415	2.356	9.0	20.9
1 2	7 26.08	+ 7 50.8	2.474	3.424	5.1	20.0	1 2	7 28.99	+26 33.6	1.366	2.340	4.3	20.6
1 12	7 18.02	+ 8 21.9	2.469	3.432	3.9	19.9	1 12	7 17.07	+27 5.2	1.344	2.324	2.6	20.5
1 22	7 10.14	+ 9 1.6	2.493	3.439	5.3	20.0	1 22	7 5.20	+27 26.8	1.350	2.308	7.3	20.7
2 1	7 3.16	+ 9 47.4	2.547	3.447	7.8	20.2	2 1	6 55.04	+27 36.8	1.382	2.292	12.2	20.9
2 11	6 57.69	+10 36.3	2.627	3.454	10.3	20.3	2 11	6 47.91	+27 36.3	1.436	2.275	16.5	21.2
<b>405658</b>	2005 <i>UR</i> <sub>76</sub>		1 9.6 47°96	6°6/10.9	16		<b>396792</b>	2004 <i>HF</i> <sub>53</sub>		1 9.6 272°34	2°8/10.0	18	
12 3	7 52.39	+ 9 26.3	1.486	2.258	1								

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>234511</b>	2001 <i>TC</i> <sub>184</sub>		1 9.6 207°50	2°3/ 9.0	18		<b>209991</b>	2006 <i>HU</i> <sub>102</sub>		1 9.6 105°96	0°6/ 9.8	18	
12 3	7 52.94	+26 26.7	1.604	2.402	16.9	20.8	12 3	7 50.01	+18 51.7	1.687	2.478	16.6	21.6
12 13	7 48.08	+26 47.9	1.521	2.400	13.3	20.6	12 13	7 45.34	+19 8.0	1.612	2.487	12.9	21.4
12 23	7 39.90	+27 11.4	1.459	2.398	9.0	20.3	12 23	7 37.81	+19 33.0	1.559	2.496	8.7	21.1
1 2	7 29.12	+27 32.1	1.423	2.396	4.3	20.0	1 2	7 28.12	+20 3.8	1.531	2.505	3.9	20.9
1 12	7 17.08	+27 44.9	1.414	2.393	2.7	19.9	1 12	7 17.46	+20 36.5	1.531	2.514	1.3	20.7
1 22	7 5.38	+27 46.9	1.433	2.390	7.1	20.2	1 22	7 7.15	+21 7.7	1.560	2.522	6.0	21.0
2 1	6 55.56	+27 37.9	1.479	2.387	11.7	20.5	2 1	6 58.48	+21 34.8	1.616	2.530	10.4	21.3
2 11	6 48.77	+27 20.3	1.548	2.384	15.7	20.7	2 11	6 52.42	+21 56.9	1.697	2.538	14.3	21.6
<b>246699</b>	2009 <i>AH</i> <sub>30</sub>		1 9.6 359°88	1°6/ 9.9	18		<b>347645</b>	2001 <i>TT</i> <sub>52</sub>		1 9.6 71°56	0°3/ 9.5	18	
12 3	7 46.50	+19 33.1	1.901	2.692	15.0	19.9	12 3	7 53.42	+20 28.9	1.383	2.185	19.0	21.2
12 13	7 42.31	+19 0.5	1.816	2.690	11.7	19.7	12 13	7 48.31	+20 58.9	1.329	2.210	14.7	21.0
12 23	7 35.63	+18 31.8	1.753	2.689	8.0	19.4	12 23	7 39.86	+21 37.6	1.295	2.236	9.7	20.7
1 2	7 27.11	+18 6.7	1.716	2.689	3.9	19.2	1 2	7 29.00	+22 20.1	1.286	2.261	4.2	20.5
1 12	7 17.75	+17 44.5	1.708	2.689	1.8	19.0	1 12	7 17.21	+23 0.6	1.304	2.286	1.4	20.4
1 22	7 8.71	+17 25.0	1.729	2.690	5.6	19.3	1 22	7 6.15	+23 34.7	1.350	2.311	6.8	20.8
2 1	7 1.07	+17 8.1	1.777	2.691	9.6	19.5	2 1	6 57.28	+24 0.5	1.421	2.336	11.5	21.1
2 11	6 55.66	+16 53.5	1.850	2.693	13.2	19.8	2 11	6 51.54	+24 18.0	1.516	2.361	15.5	21.4
<b>395300</b>	2011 <i>KW</i> <sub>31</sub>		1 9.6 190°99	0°7/ 9.8	18		<b>310935</b>	2003 <i>SX</i> <sub>313</sub>		1 9.6 107°53	0°8/ 9.3	11 C	
12 3	7 51.88	+18 11.6	1.804	2.585	16.0	21.9	12 3	7 52.41	+22 28.8	1.842	2.628	15.5	22.1
12 13	7 46.78	+18 35.1	1.715	2.585	12.6	21.7	12 13	7 46.89	+22 55.0	1.774	2.647	12.0	21.9
12 23	7 38.82	+19 8.2	1.648	2.583	8.5	21.4	12 23	7 38.66	+23 26.2	1.728	2.665	8.0	21.7
1 2	7 28.62	+19 48.1	1.607	2.581	3.9	21.1	1 2	7 28.43	+23 58.3	1.709	2.683	3.5	21.4
1 12	7 17.26	+20 30.5	1.595	2.578	1.3	21.0	1 12	7 17.38	+24 27.2	1.719	2.701	1.5	21.3
1 22	7 6.06	+21 11.6	1.613	2.574	6.0	21.3	1 22	7 6.79	+24 49.8	1.759	2.718	5.8	21.7
2 1	6 56.37	+21 48.2	1.659	2.570	10.5	21.5	2 1	6 57.84	+25 5.0	1.826	2.734	9.8	21.9
2 11	6 49.21	+22 19.0	1.729	2.564	14.3	21.7	2 11	6 51.42	+25 13.2	1.919	2.750	13.3	22.2
<b>487366</b>	2014 <i>QR</i> <sub>251</sub>		1 9.6 252°20	1°5/10.1	18		<b>318683</b>	2005 <i>QD</i> <sub>35</sub>		1 9.6 143°24	3°6/ 8.5	18	
12 3	7 49.11	+15 25.4	1.912	2.689	15.4	22.0	12 3	7 51.89	+30 55.4	2.029	2.816	14.3	21.3
12 13	7 44.66	+15 53.7	1.806	2.671	12.3	21.8	12 13	7 46.60	+31 31.7	1.950	2.821	11.2	21.1
12 23	7 37.49	+16 34.6	1.722	2.654	8.4	21.5	12 23	7 38.55	+32 6.5	1.894	2.826	7.8	20.9
1 2	7 28.09	+17 26.2	1.664	2.635	4.1	21.2	1 2	7 28.44	+32 34.7	1.865	2.831	4.6	20.7
1 12	7 17.40	+18 24.8	1.635	2.616	1.7	21.0	1 12	7 17.38	+32 51.3	1.865	2.836	3.9	20.7
1 22	7 6.62	+19 25.7	1.636	2.597	5.9	21.2	1 22	7 6.68	+32 54.1	1.894	2.840	6.7	20.9
2 1	6 57.04	+20 24.7	1.665	2.577	10.3	21.4	2 1	6 57.55	+32 43.4	1.951	2.844	10.1	21.1
2 11	6 49.77	+21 18.7	1.720	2.557	14.3	21.6	2 11	6 50.93	+32 21.8	2.032	2.847	13.3	21.3
<b>122487</b>	2000 <i>QX</i> <sub>171</sub>		1 9.6 144°55	1°6/ 9.2	18		<b>321455</b>	2009 <i>RX</i> <sub>11</sub>		1 9.6 192°90	2°4/ 8.8	18	
12 3	7 53.82	+25 33.8	1.862	2.648	15.4	20.7	12 3	7 50.21	+27 50.7	2.250	3.033	13.2	21.4
12 13	7 48.11	+25 51.3	1.784	2.657	12.0	20.5	12 13	7 45.04	+28 19.6	2.161	3.032	10.3	21.2
12 23	7 39.54	+26 10.8	1.729	2.666	8.0	20.3	12 23	7 37.41	+28 49.4	2.095	3.030	7.0	21.0
1 2	7 28.85	+26 28.1	1.700	2.674	3.7	20.0	1 2	7 27.92	+29 15.7	2.057	3.028	3.6	20.8
1 12	7 17.22	+26 39.2	1.701	2.681	2.1	19.9	1 12	7 17.54	+29 34.8	2.049	3.026	2.7	20.7
1 22	7 6.00	+26 41.9	1.732	2.688	6.1	20.2	1 22	7 7.37	+29 44.2	2.071	3.023	5.7	20.9
2 1	6 56.46	+26 36.1	1.790	2.695	10.2	20.5	2 1	6 58.51	+29 43.6	2.121	3.019	9.2	21.1
2 11	6 49.55	+26 23.6	1.873	2.701	13.7	20.7	2 11	6 51.82	+29 34.3	2.197	3.016	12.3	21.3
<b>5711</b>	Eneev		1 9.6 148°65	1°8/ 8.6	18		<b>450483</b>	2005 <i>YN</i> <sub>7</sub>		1 9.6 96°75	1°0/ 9.2	17	
12 3	7 43.15	+29 8.3	3.732	4.505	8.6	17.8	12 3	7 51.97	+21 12.0	1.541	2.339	17.6	21.8
12 13	7 38.58	+29 30.4	3.646	4.511	6.6	17.7	12 13	7 47.17	+21 58.8	1.474	2.353	13.6	21.6
12 23	7 32.61	+29 51.8	3.585	4.517	4.5	17.5	12 23	7 39.18	+22 54.4	1.427	2.367	9.0	21.4
1 2	7 25.65	+30 10.4	3.554	4.523	2.4	17.4	1 2	7 28.78	+23 53.5	1.406	2.381	4.0	21.1
1 12	7 18.25	+30 24.1	3.554	4.528	2.0	17.4	1 12	7 17.28	+24 49.6	1.413	2.395	1.8	21.0
1 22	7 11.00	+30 31.9	3.586	4.533	3.8	17.5	1 22	7 6.22	+25 37.5	1.448	2.408	6.7	21.3
2 1	7 4.47	+30 33.4	3.647	4.539	5.9	17.7	2 1	6 57.05	+26 14.4	1.510	2.421	11.3	21.6
2 11	6 59.16	+30 29.1	3.736	4.543	7.9	17.8	2 11	6 50.81	+26 40.3	1.595	2.434	15.2	21.9
<b>266326</b>	2007 <i>DV</i> <sub>9</sub>		1 9.6 109°75	1°9/10.3	18		<b>148853</b>	2001 <i>VJ</i> <sub>34</sub>		1 9.6 12°46	3°1/ 8.6	18	
12 3	7 46.70	+15 8.6	2.013	2.791	14.7	21.0	12 3	7 45.36	+25 36.8	1.365	2.187	18.1	18.8
12 13	7 42.32	+15 21.9	1.931	2.796	11.6	20.8	12 13	7 42.61	+26 32.8	1.298	2.191	14.1	18.6
12 23	7 35.59	+15 45.3	1.871	2.802	8.0	20.6	12 23	7 36.47	+27 34.7	1.251	2.196	9.5	18.3
1 2	7 27.10	+16 17.3	1.837	2.807	4.0	20.3	1 2	7 27.68	+28 35.6	1.228	2.202	4.8	18.1
1 12	7 17.77	+16 55.2	1.832	2.812	2.0	20.2	1 12	7 17.63	+29 28.0	1.231	2.209	3.6	18.0
1 22	7 8.67	+17 35.8	1.857	2.818	5.4	20.4	1 22	7 7.99	+30 6.4	1.260	2.217	7.9	18.3
2 1	7 0.84	+18 16.1	1.910	2.823	9.2	20.7	2 1	7 0.35	+30 28.8	1.314	2.226	12.5	18.6
2 11	6 55.10	+18 53.9	1.988	2.828	12.6	20.9	2 11	6 55.84	+30 36.5	1.389	2.237	16.5	18.8
<b>223719</b>	2004 <i>RW</i> <sub>95</sub>		1 9.6 36°51	0°2/ 9.5	18		<b>82596</b>	2001 <i>OG</i> <sub>93</sub>		1 9.6 104°91	4°4/ 8.1	18	
12 3	7 50.59	+24 14.8	1.723	2.519	16.0	20.1	12 3	7 50.28	+34 48.5	2.396	3.175	12.6	19.8
12 13	7 45.68	+23 51.5	1.648	2.527	12.5	19.8	12 13	7 44.98	+35 27.2	2.321	3.184	10.0	19.6
12 23	7 37.93	+23 28.9	1.595	2.534	8.3	19.6	12 23	7 37.28	+36 1.7	2.270	3.193	7.2	19.4
1 2	7 28.12	+23 5.2	1.567	2.542	3.7	19.3	1 2	7 27.83	+36 27.3	2.246	3.202	4.9	19.3
1 12	7 17.47	+22 38.9	1.568	2.551	1.2	19.2	1 12	7 17.61	+36 39.9	2.252	3.211	4.6	19.3
1 22	7 7.32	+22 9.7	1.598	2.559	5.9	19.5	1 22	7 7.75	+36 37.7	2.286	3.220	6.6	19.4
2 1	6 58.92	+21 38.7	1.655	2.568	10.3	19.8	2 1	6 59.28	+36 21.6	2.349	3.228	9.3	19.6
2 11	6 53.13	+21 7.3	1.736	2.578	14.0	20.1	2 11	6 53.00	+35 54.2	2.437	3.237	11.8	19.8
<b>445043</b>	2008 <i>RM</i> <sub>141</sub>		1 9.6 146°64	1°2/ 9.3	18		<b>376765</b>	1999 <i>XZ</i> <sub>144</sub>		1 9.6 79°51	4°0/10.8	18	
12 3	7 54.78	+24 35.0	1.755	2.542									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>305655</b>	2009 <i>BZ</i> <sub>64</sub>		1 9.6 339°39	2°1/ 9.1 18			<b>234912</b>	2002 <i>TZ</i> <sub>277</sub>		1 9.6 112°75	1°3/ 9.9 18		
12 3	7 47.67	+25 5.6	1.332	2.152	18.6	20.7	12 3	7 47.39	+18 29.1	2.404	3.177	12.7	20.4
12 13	7 44.62	+25 28.1	1.252	2.144	14.6	20.5	12 13	7 42.40	+18 13.2	2.322	3.186	10.0	20.2
12 23	7 37.97	+25 55.5	1.192	2.137	9.8	20.2	12 23	7 35.42	+18 1.8	2.263	3.195	6.7	20.0
1 2	7 28.42	+26 22.6	1.155	2.130	4.6	19.9	1 2	7 27.01	+17 54.2	2.232	3.204	3.3	19.8
1 12	7 17.39	+26 43.7	1.144	2.124	2.7	19.7	1 12	7 17.98	+17 49.3	2.231	3.212	1.5	19.7
1 22	7 6.66	+26 54.7	1.158	2.119	7.7	20.0	1 22	7 9.23	+17 46.0	2.261	3.221	4.6	19.9
2 1	6 57.97	+26 54.5	1.197	2.115	12.9	20.3	2 1	7 1.61	+17 43.8	2.320	3.229	8.0	20.1
2 11	6 52.59	+26 44.8	1.257	2.111	17.4	20.5	2 11	6 55.80	+17 42.1	2.405	3.237	10.9	20.3
<b>63050</b>	2000 <i>WG</i> <sub>96</sub>		1 9.6 27°59	3°0/ 8.2 18			<b>276655</b>	2003 <i>UN</i> <sub>368</sub>		1 9.6 270°17	3°1/ 8.3 18		
12 3	7 45.63	+28 32.5	2.319	3.109	12.6	18.8	12 3	7 47.76	+28 7.4	2.159	2.950	13.4	21.4
12 13	7 41.46	+29 25.5	2.239	3.114	9.8	18.7	12 13	7 43.39	+29 3.1	2.071	2.945	10.5	21.2
12 23	7 35.03	+30 19.9	2.183	3.118	6.7	18.5	12 23	7 36.50	+30 1.3	2.005	2.941	7.2	21.0
1 2	7 26.89	+31 11.0	2.154	3.122	3.8	18.3	1 2	7 27.64	+30 56.8	1.967	2.936	4.0	20.8
1 12	7 17.92	+31 54.1	2.155	3.127	3.3	18.3	1 12	7 17.75	+31 44.3	1.959	2.932	3.5	20.7
1 22	7 9.14	+32 26.3	2.186	3.132	5.9	18.4	1 22	7 7.98	+32 19.9	1.980	2.927	6.3	20.9
2 1	7 1.56	+32 46.3	2.244	3.137	9.0	18.6	2 1	6 59.48	+32 42.2	2.028	2.922	9.8	21.1
2 11	6 55.99	+32 55.0	2.327	3.143	11.8	18.8	2 11	6 53.19	+32 52.0	2.101	2.918	12.9	21.3
<b>417007</b>	2005 <i>UX</i> <sub>7</sub>		1 9.6 48°93	6°4/11.4 16			<b>68430</b>	2001 <i>RB</i> <sub>37</sub>		1 9.6 29°84	4°8/10.9 18		
12 3	7 48.94	+7 39.8	1.532	2.303	18.8	20.8	12 3	7 46.81	+11 58.7	1.185	1.993	21.2	19.2
12 13	7 44.25	+6 49.0	1.481	2.332	15.3	20.6	12 13	7 43.74	+11 35.4	1.122	2.001	17.0	19.0
12 23	7 36.86	+6 15.1	1.450	2.362	11.5	20.5	12 23	7 37.21	+11 29.5	1.078	2.010	12.2	18.7
1 2	7 27.62	+6 0.3	1.443	2.392	7.9	20.4	1 2	7 28.02	+11 42.0	1.055	2.020	7.2	18.5
1 12	7 17.73	+6 4.7	1.462	2.422	6.4	20.3	1 12	7 17.66	+12 11.0	1.056	2.031	4.9	18.4
1 22	7 8.49	+6 25.8	1.508	2.453	8.2	20.5	1 22	7 7.81	+12 52.2	1.082	2.043	8.2	18.6
2 1	7 1.00	+6 59.6	1.579	2.483	11.3	20.8	2 1	7 0.06	+13 40.4	1.132	2.055	13.0	18.9
2 11	6 56.05	+7 41.2	1.674	2.514	14.5	21.0	2 11	6 55.50	+14 30.3	1.203	2.068	17.3	19.2
<b>7170</b>	Livesey		1 9.6 84°20	4°8/ 8.7 18			<b>246722</b>	2009 <i>BN</i> <sub>35</sub>		1 9.6 43°41	2°9/ 8.7 18		
12 3	7 56.06	+34 57.8	1.899	2.682	15.2	17.0	12 3	7 48.64	+30 51.4	2.326	3.111	12.7	20.3
12 13	7 49.83	+35 21.6	1.835	2.701	12.1	16.8	12 13	7 43.73	+31 9.3	2.242	3.113	10.0	20.2
12 23	7 40.62	+35 39.3	1.794	2.720	8.6	16.6	12 23	7 36.49	+31 25.0	2.182	3.115	6.9	20.0
1 2	7 29.29	+35 45.1	1.780	2.739	5.6	16.5	1 2	7 27.53	+31 34.8	2.150	3.117	3.9	19.8
1 12	7 17.21	+35 34.7	1.793	2.758	5.0	16.5	1 12	7 17.82	+31 35.4	2.146	3.119	3.2	19.7
1 22	7 5.82	+35 7.6	1.836	2.776	7.4	16.7	1 22	7 8.41	+31 25.5	2.173	3.121	5.8	19.9
2 1	6 56.42	+34 26.3	1.906	2.794	10.6	16.9	2 1	7 0.32	+31 5.5	2.228	3.124	8.9	20.1
2 11	6 49.84	+33 35.3	2.001	2.812	13.6	17.1	2 11	6 54.33	+30 37.5	2.308	3.126	11.8	20.3
<b>453983</b>	2012 <i>BH</i> <sub>139</sub>		1 9.6 357°86	1°0/10.0 18			<b>32142</b>	2000 <i>LU</i> <sub>26</sub>		1 9.6 100°49	2°9/10.4 18		
12 3	7 47.03	+15 16.7	1.677	2.467	16.7	21.0	12 3	7 49.39	+14 8.2	2.076	2.843	14.6	19.0
12 13	7 43.23	+16 7.7	1.592	2.466	13.2	20.7	12 13	7 44.13	+13 45.0	2.003	2.861	11.6	18.8
12 23	7 36.60	+17 14.0	1.529	2.465	8.9	20.5	12 23	7 36.64	+13 30.3	1.954	2.878	8.1	18.6
1 2	7 27.71	+18 32.2	1.492	2.465	4.2	20.2	1 2	7 27.55	+13 23.8	1.931	2.896	4.6	18.4
1 12	7 17.65	+19 56.6	1.483	2.465	1.4	20.0	1 12	7 17.83	+13 24.9	1.937	2.912	3.0	18.4
1 22	7 7.71	+21 20.4	1.503	2.465	6.1	20.3	1 22	7 8.48	+13 32.1	1.973	2.929	5.6	18.6
2 1	6 59.24	+22 38.0	1.550	2.465	10.7	20.6	2 1	7 0.47	+13 43.7	2.038	2.945	9.0	18.8
2 11	6 53.30	+23 46.0	1.622	2.466	14.7	20.8	2 11	6 54.52	+13 58.2	2.128	2.961	12.1	19.0
<b>302889</b>	2003 <i>NE</i> <sub>13</sub>		1 9.6 122°53	0°3/ 9.7 18			<b>96598</b>	1998 <i>XS</i> <sub>41</sub>		1 9.6 341°54	0°5/ 9.5 18		
12 3	7 52.09	+19 36.9	1.935	2.714	15.2	22.1	12 3	7 48.14	+25 13.8	1.720	2.522	15.8	18.3
12 13	7 46.51	+19 55.8	1.863	2.731	11.8	21.9	12 13	7 44.06	+24 46.1	1.630	2.512	12.4	18.1
12 23	7 38.37	+20 21.5	1.813	2.748	7.9	21.7	12 23	7 37.09	+24 17.6	1.561	2.502	8.3	17.8
1 2	7 28.34	+20 50.9	1.789	2.763	3.5	21.5	1 2	7 27.91	+23 46.5	1.518	2.493	3.7	17.5
1 12	7 17.50	+21 20.7	1.796	2.779	1.1	21.4	1 12	7 17.69	+23 11.3	1.503	2.485	1.3	17.3
1 22	7 7.06	+21 47.7	1.833	2.793	5.4	21.7	1 22	7 7.78	+22 32.2	1.515	2.478	6.1	17.6
2 1	6 58.13	+22 10.2	1.898	2.807	9.4	22.0	2 1	6 59.50	+21 50.5	1.555	2.471	10.6	17.9
2 11	6 51.56	+22 27.7	1.988	2.820	12.9	22.2	2 11	6 53.83	+21 8.4	1.619	2.466	14.6	18.1
<b>221182</b>	2005 <i>UG</i> <sub>25</sub>		1 9.6 228°93	0°5/ 9.4 18			<b>27471</b>	2000 <i>GG</i> <sub>76</sub>		1 9.6 234°77	0°5/ 9.4 18 R		
12 3	7 48.40	+22 30.2	1.947	2.737	14.7	21.4	12 3	7 46.47	+22 49.7	2.626	3.403	11.6	19.5
12 13	7 43.89	+22 43.5	1.860	2.736	11.4	21.1	12 13	7 41.79	+23 4.8	2.525	3.393	9.1	19.3
12 23	7 36.79	+23 1.3	1.796	2.734	7.6	20.9	12 23	7 35.13	+23 23.1	2.448	3.383	6.0	19.1
1 2	7 27.71	+23 20.7	1.758	2.733	3.4	20.6	1 2	7 26.94	+23 42.3	2.399	3.373	2.7	18.8
1 12	7 17.68	+23 38.4	1.749	2.732	1.3	20.5	1 12	7 18.00	+24 0.0	2.380	3.362	1.1	18.7
1 22	7 7.89	+23 51.8	1.770	2.730	5.6	20.8	1 22	7 9.14	+24 14.1	2.393	3.351	4.5	18.9
2 1	6 59.50	+23 59.8	1.818	2.729	9.7	21.0	2 1	7 1.26	+24 23.7	2.435	3.340	7.8	19.1
2 11	6 53.42	+24 2.5	1.891	2.727	13.2	21.2	2 11	6 55.07	+24 28.7	2.503	3.329	10.7	19.3
<b>34700</b>	2001 <i>OE</i> <sub>45</sub>		1 9.6 36°97	1°7/ 9.9 18			<b>221137</b>	2005 <i>SP</i> <sub>283</sub>		1 9.6 190°78	4°3/11.5 18		
12 3	7 47.48	+18 46.0	2.086	2.868	14.1	17.0	12 3	7 46.57	+7 18.3	2.345	3.088	13.8	21.6
12 13	7 42.78	+18 15.0	2.005	2.873	11.1	16.8	12 13	7 41.92	+7 16.5	2.250	3.086	11.3	21.4
12 23	7 35.81	+17 48.2	1.946	2.879	7.5	16.6	12 23	7 35.23	+7 27.8	2.178	3.085	8.4	21.2
1 2	7 27.20	+17 25.3	1.914	2.885	3.7	16.4	1 2	7 26.99	+7 52.9	2.132	3.083	5.6	21.0
1 12	7 17.88	+17 5.9	1.911	2.892	1.9	16.2	1 12	7 17.98	+8 30.7	2.116	3.080	4.3	21.0
1 22	7 8.89	+16 49.4	1.938	2.898	5.2	16.5	1 22	7 9.09	+9 18.7	2.129	3.077	5.9	21.0
2 1	7 1.21	+16 35.7	1.994	2.905	8.9	16.7	2 1	7 1.19	+10 13.6	2.172	3.074	8.8	21.2
2 11	6 55.59	+16 24.4	2.074	2.912	12.2	16.9	2 11	6 55.05	+11 11.8	2.240	3.070	11.7	21.4
<b>358071</b>	2006 <i>HB</i> <sub>105</sub>		1 9.6 206°17	5°8/11.6 18			<b>117426</b>	2005 <i>AM</i> <sub>20</sub>		1 9.6 2°39	1°5/ 9.9 18		
12 3	7 48.29	+5 13.8	2.070	2.810	15.5	21.8	12 3	7 4					

EPHEMERIDES

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>470413</b>	2007 VG <sub>24</sub>		1 9.6 84°16'	6°8/12.2	18		<b>219868</b>	2002 CV <sub>273</sub>		1 9.6 65°86'	1°3/10.0	18	
12 3	7 43.80	+ 1 5.5	2.404	3.125	14.1	21.7	12 3	7 47.14	+17 28.6	1.882	2.668	15.3	20.5
12 13	7 39.63	+ 0 20.3	2.322	3.131	12.0	21.5	12 13	7 42.85	+17 37.3	1.804	2.676	12.0	20.3
12 23	7 33.61	- 0 10.5	2.262	3.137	9.7	21.4	12 23	7 36.06	+17 54.5	1.749	2.684	8.1	20.1
1 2	7 26.24	- 0 24.3	2.226	3.143	7.7	21.3	1 2	7 27.41	+18 18.4	1.720	2.692	3.9	19.9
1 12	7 18.25	- 0 20.2	2.217	3.149	6.8	21.2	1 12	7 17.91	+18 46.1	1.719	2.700	1.5	19.7
1 22	7 10.44	+ 0 1.1	2.237	3.155	7.6	21.3	1 22	7 8.71	+19 14.6	1.747	2.709	5.5	20.0
2 1	7 3.61	+ 0 36.9	2.283	3.161	9.5	21.4	2 1	7 0.92	+19 41.8	1.803	2.717	9.5	20.3
2 11	6 58.41	+ 1 23.4	2.354	3.167	11.8	21.6	2 11	6 55.36	+20 5.9	1.883	2.725	13.0	20.5
<b>275414</b>	2011 CL <sub>2</sub>		1 9.6 64°41'	1°6/ 8.9	18		<b>384196</b>	2009 BZ <sub>132</sub>		1 9.6 282°21'	3°7/ 8.8	17	
12 3	7 48.40	+21 43.4	1.829	2.622	15.4	19.9	12 3	7 52.05	+34 41.9	2.464	3.239	12.4	20.9
12 13	7 44.07	+22 52.4	1.755	2.633	11.9	19.7	12 13	7 46.39	+34 46.0	2.363	3.225	9.9	20.8
12 23	7 37.02	+24 9.9	1.704	2.644	7.9	19.5	12 23	7 38.30	+34 44.7	2.286	3.211	7.1	20.5
1 2	7 27.87	+25 30.4	1.681	2.655	3.6	19.3	1 2	7 28.38	+34 33.9	2.236	3.196	4.5	20.4
1 12	7 17.72	+26 47.1	1.686	2.666	2.1	19.2	1 12	7 17.61	+34 10.5	2.216	3.182	3.9	20.3
1 22	7 7.81	+27 54.4	1.721	2.678	6.2	19.5	1 22	7 7.11	+33 33.9	2.226	3.168	6.1	20.4
2 1	6 59.39	+28 49.0	1.784	2.689	10.2	19.8	2 1	6 57.95	+32 45.5	2.265	3.154	9.1	20.6
2 11	6 53.42	+29 30.3	1.871	2.701	13.6	20.0	2 11	6 50.98	+31 48.7	2.330	3.140	12.0	20.7
<b>30000</b>	Camenzind		1 9.6 235°06'	4°6/ 8.4	18		<b>359387</b>	2010 GU <sub>127</sub>		1 9.6 167°32'	1°1/10.0	18	
12 3	7 54.14	+30 54.0	1.601	2.399	17.0	18.4	12 3	7 50.21	+16 53.1	1.857	2.636	15.7	21.5
12 13	7 49.35	+31 39.6	1.516	2.393	13.5	18.2	12 13	7 45.37	+17 16.5	1.772	2.640	12.3	21.3
12 23	7 41.00	+32 25.2	1.452	2.387	9.4	17.9	12 23	7 37.85	+17 50.1	1.709	2.643	8.4	21.1
1 2	7 29.79	+33 3.5	1.414	2.380	5.7	17.7	1 2	7 28.26	+18 31.5	1.673	2.645	3.9	20.8
1 12	7 17.11	+33 27.3	1.403	2.373	5.0	17.6	1 12	7 17.65	+19 16.9	1.665	2.647	1.5	20.6
1 22	7 4.70	+33 32.5	1.419	2.366	8.4	17.8	1 22	7 7.24	+20 2.3	1.688	2.649	5.7	20.9
2 1	6 54.27	+33 19.4	1.461	2.359	12.6	18.0	2 1	6 58.27	+20 44.5	1.738	2.650	10.0	21.2
2 11	6 47.09	+32 52.0	1.526	2.351	16.4	18.3	2 11	6 51.68	+21 21.6	1.813	2.651	13.7	21.4
<b>201184</b>	2002 PW <sub>52</sub>		1 9.6 115°32'	1°4/10.3	18		<b>225888</b>	2001 YD <sub>111</sub>		1 9.6 45°81'	4°3/ 8.9	18	
12 3	7 45.91	+15 19.6	2.353	3.123	13.0	20.6	12 3	7 53.68	+32 57.5	1.619	2.418	16.8	19.8
12 13	7 41.39	+15 44.4	2.270	3.132	10.2	20.4	12 13	7 48.46	+33 11.5	1.555	2.432	13.2	19.6
12 23	7 34.86	+16 18.2	2.211	3.141	7.0	20.2	12 23	7 39.98	+33 20.3	1.513	2.446	9.2	19.4
1 2	7 26.82	+16 59.2	2.179	3.150	3.5	20.0	1 2	7 29.14	+33 18.3	1.496	2.461	5.5	19.2
1 12	7 18.09	+17 44.7	2.178	3.158	1.6	19.9	1 12	7 17.43	+33 1.3	1.506	2.477	4.6	19.2
1 22	7 9.54	+18 31.5	2.206	3.167	4.7	20.1	1 22	7 6.45	+32 28.7	1.544	2.493	7.6	19.4
2 1	7 2.07	+19 16.8	2.265	3.175	8.1	20.3	2 1	6 57.61	+31 43.4	1.608	2.509	11.4	19.6
2 11	6 56.38	+19 58.7	2.349	3.183	11.1	20.6	2 11	6 51.82	+30 50.0	1.695	2.525	14.8	19.9
<b>377206</b>	2003 WY <sub>145</sub>		1 9.6 68°99'	4°8/10.9	18		<b>63989</b>	2001 SJ <sub>107</sub>		1 9.6 17°09'	6°9/10.8	18	
12 3	7 46.44	+ 9 29.0	2.122	2.880	14.7	20.6	12 3	7 46.87	+ 8 42.1	1.575	2.352	18.2	18.1
12 13	7 41.87	+ 8 43.3	2.043	2.889	11.9	20.4	12 13	7 42.97	+ 7 26.4	1.501	2.355	15.0	17.9
12 23	7 35.19	+ 8 8.2	1.987	2.898	8.9	20.2	12 23	7 36.30	+ 6 23.2	1.446	2.359	11.4	17.7
1 2	7 26.95	+ 7 45.1	1.957	2.908	6.0	20.0	1 2	7 27.57	+ 5 36.5	1.416	2.364	8.2	17.5
1 12	7 18.05	+ 7 34.6	1.955	2.917	4.9	20.0	1 12	7 17.89	+ 5 8.9	1.411	2.369	6.9	17.4
1 22	7 9.44	+ 7 36.1	1.982	2.927	6.5	20.1	1 22	7 8.57	+ 5 0.5	1.433	2.375	8.8	17.6
2 1	7 2.02	+ 7 47.8	2.036	2.936	9.4	20.3	2 1	7 0.83	+ 5 9.2	1.480	2.382	12.1	17.8
2 11	6 56.52	+ 8 7.1	2.116	2.946	12.3	20.5	2 11	6 55.60	+ 5 31.0	1.549	2.389	15.5	18.0
<b>96716</b>	1999 KD <sub>9</sub>		1 9.6 211°40'	3°1/10.3	18		<b>413571</b>	2005 TF <sub>126</sub>		1 9.6 94°16'	3°1/10.5	18	
12 3	7 50.39	+15 3.0	1.760	2.539	16.4	19.6	12 3	7 47.08	+13 36.2	1.914	2.690	15.4	21.4
12 13	7 45.61	+14 36.8	1.671	2.535	13.1	19.4	12 13	7 42.76	+13 22.0	1.830	2.693	12.3	21.2
12 23	7 38.05	+14 19.3	1.603	2.532	9.2	19.2	12 23	7 36.00	+13 18.0	1.768	2.695	8.7	21.0
1 2	7 28.35	+14 10.6	1.561	2.528	5.1	18.9	1 2	7 27.41	+13 24.1	1.732	2.698	4.9	20.8
1 12	7 17.59	+14 9.9	1.547	2.524	3.2	18.8	1 12	7 17.95	+13 38.9	1.724	2.700	3.2	20.7
1 22	7 7.05	+14 15.9	1.561	2.519	6.5	19.0	1 22	7 8.73	+14 0.4	1.745	2.702	6.0	20.8
2 1	6 57.99	+14 26.9	1.603	2.515	10.7	19.2	2 1	7 0.83	+14 26.3	1.793	2.705	9.7	21.1
2 11	6 51.41	+14 41.0	1.669	2.509	14.5	19.4	2 11	6 55.11	+14 54.0	1.866	2.707	13.2	21.3
<b>14995</b>	Archytas		1 9.6 77°11'	1°4/10.1	18		<b>467888</b>	2011 FD <sub>26</sub>		1 9.6 247°04'	0°9/ 9.2	18	
12 3	7 46.06	+17 26.9	2.228	3.006	13.4	17.9	12 3	7 46.95	+22 26.8	2.378	3.159	12.6	21.4
12 13	7 41.58	+17 24.3	2.148	3.015	10.5	17.7	12 13	7 42.48	+23 4.2	2.277	3.148	9.8	21.2
12 23	7 34.99	+17 28.3	2.092	3.024	7.1	17.5	12 23	7 35.79	+23 47.0	2.200	3.137	6.6	21.0
1 2	7 26.87	+17 37.6	2.062	3.033	3.5	17.3	1 2	7 27.34	+24 32.1	2.151	3.125	2.9	20.7
1 12	7 18.08	+17 50.5	2.062	3.043	1.6	17.2	1 12	7 17.97	+25 15.6	2.131	3.113	1.4	20.6
1 22	7 9.55	+18 5.1	2.091	3.052	4.9	17.4	1 22	7 8.62	+25 54.2	2.143	3.100	5.0	20.8
2 1	7 2.20	+18 20.0	2.149	3.061	8.4	17.7	2 1	7 0.31	+26 25.9	2.183	3.088	8.6	21.0
2 11	6 56.74	+18 34.0	2.233	3.070	11.5	17.9	2 11	6 53.88	+26 49.9	2.249	3.075	11.8	21.2
<b>247197</b>	2001 OV <sub>84</sub>		1 9.6 147°66'	4°4/11.4	18		<b>205270</b>	2000 SM <sub>65</sub>		1 9.6 36°10'	5°6/ 8.3	18	
12 3	7 44.56	+ 6 36.6	2.764	3.498	12.1	21.2	12 3	7 52.27	+32 5.2	1.338	2.153	18.8	20.0
12 13	7 39.96	+ 6 14.3	2.678	3.506	10.0	21.0	12 13	7 48.27	+32 58.4	1.275	2.161	14.9	19.7
12 23	7 33.71	+ 6 2.6	2.614	3.513	7.6	20.9	12 23	7 40.39	+33 49.7	1.232	2.169	10.5	19.5
1 2	7 26.27	+ 6 2.2	2.577	3.520	5.3	20.7	1 2	7 29.51	+34 30.4	1.213	2.178	6.6	19.3
1 12	7 18.27	+ 6 13.2	2.570	3.526	4.4	20.7	1 12	7 17.32	+34 52.5	1.219	2.187	6.0	19.3
1 22	7 10.45	+ 6 34.3	2.592	3.532	5.5	20.8	1 22	7 5.76	+34 52.5	1.250	2.197	9.3	19.5
2 1	7 3.49	+ 7 3.5	2.644	3.537	7.8	20.9	2 1	6 56.63	+34 32.2	1.306	2.207	13.5	19.8
2 11	6 57.98	+ 7 38.2	2.722	3.543	10.1	21.1	2 11	6 51.09	+33 56.7	1.383	2.218	17.3	20.0
<b>77484</b>	2001 HQ <sub>31</sub>		1 9.6 154°89'	3°3/ 8.1	18		<b>334199</b>	2001 SO <sub>255</sub>		1 9.6 70°89'	2°2/10.4	18	
12 3	7 52.60	+28 53.3	2.347	3.123	12.9	19.4	12 3	7 45.11	+14 36.7	2.297	3.068	13.3	21.0
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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>249933</b>	2001 <i>TB</i> <sub>54</sub>		1 9.6 65°24	4.2/11.4	18		<b>491083</b>	2011 <i>SK</i> <sub>3</sub>		1 9.6 69°93	5°6/ 8.5	17	
12 3	7 47.80	+ 8 34.1	1.724	2.491	17.2	19.9	12 3	7 58.01	+33 34.0	1.470	2.268	18.2	20.8
12 13	7 43.35	+ 8 47.7	1.660	2.513	13.8	19.7	12 13	7 52.10	+34 22.4	1.420	2.295	14.4	20.6
12 23	7 36.36	+ 9 18.4	1.617	2.535	10.0	19.5	12 23	7 42.51	+35 5.9	1.391	2.322	10.2	20.4
1 2	7 27.54	+10 5.5	1.599	2.558	6.1	19.3	1 2	7 30.29	+35 36.1	1.387	2.348	6.5	20.3
1 12	7 17.95	+11 5.9	1.608	2.580	4.2	19.3	1 12	7 17.17	+35 46.4	1.409	2.375	5.9	20.3
1 22	7 8.78	+12 14.5	1.646	2.602	6.5	19.5	1 22	7 4.99	+35 35.4	1.459	2.401	8.7	20.5
2 1	7 1.12	+13 26.3	1.712	2.625	10.1	19.7	2 1	6 55.32	+35 6.1	1.534	2.427	12.4	20.8
2 11	6 55.79	+14 36.5	1.803	2.647	13.4	20.0	2 11	6 49.12	+34 24.2	1.632	2.452	15.7	21.1
<b>86011</b>	1999 <i>JU</i> <sub>94</sub>		1 9.6 115°08	0°3/ 9.8	18		<b>256307</b>	2006 <i>WN</i> <sub>185</sub>		1 9.6 73°90	1°5/ 9.0	18	
12 3	7 48.56	+17 25.1	2.112	2.888	14.1	19.6	12 3	7 50.72	+22 4.9	1.687	2.482	16.4	20.5
12 13	7 43.74	+18 13.8	2.033	2.900	11.0	19.4	12 13	7 45.97	+23 5.7	1.623	2.502	12.7	20.3
12 23	7 36.58	+19 12.1	1.977	2.911	7.4	19.2	12 23	7 38.31	+24 14.1	1.582	2.521	8.4	20.1
1 2	7 27.66	+20 16.8	1.949	2.923	3.3	19.0	1 2	7 28.48	+25 24.2	1.567	2.541	3.8	19.9
1 12	7 17.90	+21 23.2	1.951	2.934	1.0	18.8	1 12	7 17.70	+26 29.4	1.581	2.561	2.1	19.8
1 22	7 8.35	+22 26.7	1.984	2.944	5.1	19.2	1 22	7 7.34	+27 24.6	1.623	2.581	6.4	20.1
2 1	7 0.05	+23 24.0	2.046	2.955	8.9	19.4	2 1	6 58.70	+28 7.2	1.693	2.600	10.5	20.4
2 11	6 53.83	+24 13.3	2.134	2.965	12.1	19.6	2 11	6 52.73	+28 37.3	1.787	2.620	14.1	20.7
<b>133084</b>	2003 <i>MU</i> <sub>4</sub>		1 9.6 232°28	2°1/10.3	18		<b>310898</b>	2003 <i>SD</i> <sub>11</sub>		1 9.6 88°84	11°5/ 9.7	18	
12 3	7 50.42	+15 17.2	2.025	2.795	14.9	21.3	12 3	7 59.56	+ 8 1.2	1.085	1.868	24.3	19.7
12 13	7 45.47	+15 18.2	1.921	2.781	11.9	21.1	12 13	7 53.79	+ 5 16.8	1.025	1.879	20.3	19.4
12 23	7 37.95	+15 28.6	1.838	2.767	8.3	20.8	12 23	7 43.97	+ 2 44.3	0.983	1.890	16.1	19.2
1 2	7 28.36	+15 47.5	1.783	2.752	4.3	20.5	1 2	7 31.08	+ 0 35.1	0.962	1.900	12.6	19.1
1 12	7 17.65	+16 12.8	1.757	2.736	2.3	20.4	1 12	7 16.90	- 1 0.6	0.967	1.911	11.6	19.0
1 22	7 6.96	+16 42.0	1.760	2.719	5.8	20.6	1 22	7 3.51	- 1 57.8	0.995	1.921	13.8	19.2
2 1	6 57.46	+17 12.5	1.793	2.702	9.9	20.8	2 1	6 52.75	- 2 18.1	1.045	1.931	17.4	19.4
2 11	6 50.15	+17 42.4	1.850	2.684	13.6	21.0	2 11	6 45.80	- 2 9.1	1.114	1.941	21.1	19.7
<b>291753</b>	2006 <i>KZ</i> <sub>5</sub>		1 9.6 261°94	1°6/ 8.8	17		<b>149305</b>	2002 <i>TL</i> <sub>376</sub>		1 9.6 169°15	6°6/12.4	18	
12 3	7 42.77	+27 19.2	3.477	4.252	9.1	21.5	12 3	7 47.77	- 0 2.8	2.541	3.243	13.9	21.7
12 13	7 38.55	+27 45.0	3.371	4.239	7.1	21.3	12 13	7 42.62	- 0 33.8	2.452	3.248	11.8	21.5
12 23	7 32.81	+28 11.6	3.292	4.226	4.8	21.1	12 23	7 35.60	- 0 49.9	2.385	3.253	9.5	21.4
1 2	7 25.92	+28 36.5	3.241	4.212	2.4	20.9	1 2	7 27.18	- 0 48.8	2.343	3.257	7.5	21.3
1 12	7 18.46	+28 57.5	3.222	4.198	1.8	20.9	1 12	7 18.10	- 0 29.9	2.330	3.260	6.6	21.2
1 22	7 11.06	+29 13.1	3.233	4.184	3.9	21.0	1 22	7 9.18	+ 0 5.5	2.346	3.262	7.4	21.3
2 1	7 4.35	+29 22.5	3.275	4.170	6.4	21.2	2 1	7 1.22	+ 0 54.5	2.390	3.264	9.3	21.4
2 11	6 58.90	+29 25.8	3.343	4.156	8.6	21.3	2 11	6 54.88	+ 1 53.0	2.460	3.265	11.6	21.5
<b>144633</b>	Georgecarroll		1 9.6 20°75	9°6/ 7.2	18		<b>143302</b>	2003 <i>AZ</i> <sub>39</sub>		1 9.6 307°55	3°6/11.3	18	
12 3	7 53.00	+40 58.7	1.419	2.223	18.5	18.5	12 3	7 43.20	+ 9 15.3	2.338	3.096	13.5	19.4
12 13	7 49.22	+42 22.4	1.360	2.229	15.3	18.4	12 13	7 39.42	+ 9 22.5	2.242	3.089	10.9	19.2
12 23	7 41.23	+43 36.6	1.322	2.235	12.2	18.2	12 23	7 33.66	+ 9 42.4	2.168	3.083	8.0	19.0
1 2	7 29.96	+44 29.7	1.305	2.243	10.0	18.1	1 2	7 26.39	+10 14.9	2.120	3.077	5.0	18.8
1 12	7 17.21	+44 52.3	1.314	2.251	9.9	18.1	1 12	7 18.35	+10 58.6	2.101	3.071	3.6	18.7
1 22	7 5.15	+44 41.4	1.346	2.260	12.0	18.2	1 22	7 10.39	+11 50.6	2.112	3.066	5.4	18.8
2 1	6 55.77	+44 0.7	1.401	2.270	15.0	18.4	2 1	7 3.38	+12 47.7	2.151	3.060	8.5	19.0
2 11	6 50.28	+42 58.4	1.477	2.280	17.9	18.7	2 11	6 58.06	+13 46.3	2.217	3.054	11.5	19.2
<b>252293</b>	2001 <i>RO</i> <sub>5</sub>		1 9.6 167°75	1°0/ 9.9	18		<b>153511</b>	2001 <i>RT</i> <sub>146</sub>		1 9.6 152°23	3°3/ 8.4	18	
12 3	7 49.51	+18 15.7	2.325	3.094	13.2	22.1	12 3	7 54.09	+26 47.9	1.736	2.527	16.1	20.4
12 13	7 44.23	+18 18.2	2.236	3.099	10.3	21.9	12 13	7 48.86	+27 53.9	1.659	2.534	12.6	20.2
12 23	7 36.78	+18 26.5	2.172	3.103	7.0	21.7	12 23	7 40.45	+29 4.3	1.605	2.541	8.6	19.9
1 2	7 27.72	+18 39.1	2.135	3.107	3.3	21.4	1 2	7 29.54	+30 12.2	1.577	2.547	4.6	19.7
1 12	7 17.91	+18 54.1	2.128	3.109	1.3	21.3	1 12	7 17.40	+31 10.0	1.578	2.552	3.8	19.7
1 22	7 8.32	+19 9.4	2.152	3.112	4.8	21.5	1 22	7 5.52	+31 52.6	1.607	2.557	7.3	19.9
2 1	6 59.88	+19 23.8	2.205	3.113	8.4	21.8	2 1	6 55.41	+32 18.4	1.665	2.561	11.4	20.1
2 11	6 53.37	+19 36.4	2.285	3.114	11.5	22.0	2 11	6 48.17	+32 29.4	1.745	2.565	14.9	20.4
<b>369309</b>	2009 <i>SZ</i> <sub>60</sub>		1 9.6 125°10	2°4/10.3	18		<b>50852</b>	2000 <i>FZ</i> <sub>47</sub>		1 9.6 122°67	2°5/ 8.5	18	
12 3	7 47.54	+15 40.4	2.011	2.788	14.7	21.2	12 3	7 47.56	+26 51.1	2.339	3.125	12.7	18.8
12 13	7 43.02	+15 24.0	1.926	2.791	11.7	21.0	12 13	7 42.97	+27 43.9	2.257	3.129	9.8	18.6
12 23	7 36.13	+15 15.4	1.863	2.793	8.1	20.7	12 23	7 36.10	+28 39.3	2.198	3.133	6.6	18.4
1 2	7 27.47	+15 14.2	1.826	2.795	4.3	20.5	1 2	7 27.50	+29 32.7	2.167	3.138	3.5	18.2
1 12	7 17.99	+15 19.2	1.818	2.797	2.5	20.4	1 12	7 18.05	+30 19.6	2.167	3.142	2.8	18.2
1 22	7 8.76	+15 28.9	1.839	2.798	5.6	20.6	1 22	7 8.77	+30 56.5	2.197	3.146	5.6	18.4
2 1	7 0.81	+15 41.7	1.889	2.800	9.3	20.8	2 1	7 0.67	+31 22.1	2.255	3.150	8.8	18.6
2 11	6 54.96	+15 55.9	1.963	2.802	12.7	21.1	2 11	6 54.57	+31 36.8	2.338	3.154	11.7	18.8
<b>428920</b>	2008 <i>WX</i> <sub>11</sub>		1 9.6 77°63	0°7/ 9.9	18		<b>205240</b>	2000 <i>QT</i> <sub>175</sub>		1 9.6 59°32	0°6/ 9.8	16	
12 3	7 47.61	+19 5.8	2.161	2.941	13.7	21.4	12 3	7 54.40	+20 48.3	1.330	2.133	19.5	20.6
12 13	7 42.80	+19 14.6	2.091	2.960	10.7	21.2	12 13	7 49.09	+20 40.2	1.280	2.162	15.1	20.4
12 23	7 35.80	+19 29.3	2.045	2.980	7.1	21.0	12 23	7 40.40	+20 38.7	1.250	2.190	10.0	20.2
1 2	7 27.26	+19 48.0	2.025	2.999	3.2	20.8	1 2	7 29.37	+20 41.1	1.244	2.219	4.5	20.0
1 12	7 18.08	+20 8.1	2.035	3.018	1.1	20.7	1 12	7 17.56	+20 44.0	1.265	2.247	1.4	19.9
1 22	7 9.26	+20 27.4	2.076	3.037	4.8	21.0	1 22	7 6.63	+20 45.5	1.313	2.276	6.7	20.3
2 1	7 1.72	+20 44.6	2.144	3.055	8.4	21.3	2 1	6 58.00	+20 44.8	1.387	2.305	11.5	20.6
2 11	6 56.18	+20 58.7	2.239	3.074	11.5	21.5	2 11	6 52.54	+20 42.2	1.483	2.333	15.5	20.9
<b>232779</b>	2004 <i>PM</i> <sub>85</sub>		1 9.6 101°87	1°1/ 9.3	18		<b>520048</b>	2013 <i>VW</i> <sub>29</sub>		1 9.6 203°93	2°2/10.3	17	
12 3	7 54.60	+22 58.6	1.725	2.512	16.								

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>243124</b>	2007 <i>RT</i> <sub>239</sub>		1 9.6 192°11	1°1/ 9.2 18			<b>215228</b>	2000 <i>YX</i> <sub>8</sub>		1 9.6 304°89	0°8/ 9.8 18		
12 3	7 51.08	+22 1.8	1.852	2.640	15.4	20.6	12 3	7 47.81	+19 23.1	1.529	2.331	17.4	20.9
12 13	7 46.27	+22 44.3	1.765	2.639	12.0	20.4	12 13	7 44.31	+19 27.3	1.437	2.318	13.8	20.6
12 23	7 38.62	+23 34.1	1.700	2.637	8.0	20.1	12 23	7 37.65	+19 40.2	1.365	2.306	9.4	20.3
1 2	7 28.73	+24 26.9	1.661	2.636	3.6	19.8	1 2	7 28.42	+19 59.5	1.318	2.293	4.3	20.0
1 12	7 17.69	+25 17.3	1.652	2.633	1.7	19.7	1 12	7 17.81	+20 22.1	1.298	2.281	1.4	19.7
1 22	7 6.80	+26 0.8	1.672	2.631	6.1	20.0	1 22	7 7.30	+20 44.3	1.305	2.269	6.7	20.1
2 1	6 57.38	+26 34.8	1.720	2.627	10.4	20.2	2 1	6 58.42	+21 3.8	1.338	2.257	11.7	20.3
2 11	6 50.47	+26 59.0	1.793	2.624	14.1	20.5	2 11	6 52.38	+21 19.5	1.393	2.246	16.1	20.5
<b>327393</b>	2005 <i>UU</i> <sub>463</sub>		1 9.6 86°97	2°2/ 8.9 18			<b>284995</b>	2010 <i>KF</i> <sub>124</sub>		1 9.6 274°94	0°0/ 9.6 15		
12 3	7 49.55	+25 45.6	1.899	2.692	14.9	21.2	12 3	7 46.41	+21 6.7	2.383	3.163	12.6	21.5
12 13	7 44.92	+26 27.7	1.824	2.701	11.6	21.0	12 13	7 42.07	+21 15.8	2.274	3.144	9.9	21.3
12 23	7 37.58	+27 13.0	1.772	2.710	7.7	20.8	12 23	7 35.55	+21 29.5	2.190	3.126	6.6	21.1
1 2	7 28.20	+27 56.8	1.746	2.718	3.8	20.5	1 2	7 27.32	+21 45.7	2.133	3.107	3.0	20.8
1 12	7 17.88	+28 33.9	1.749	2.727	2.6	20.5	1 12	7 18.17	+22 2.1	2.105	3.088	0.9	20.6
1 22	7 7.86	+29 0.9	1.781	2.736	6.2	20.7	1 22	7 9.05	+22 16.7	2.108	3.069	4.8	20.9
2 1	6 59.38	+29 16.6	1.840	2.744	10.0	21.0	2 1	7 0.94	+22 28.0	2.140	3.049	8.5	21.1
2 11	6 53.35	+29 22.1	1.924	2.753	13.4	21.2	2 11	6 54.67	+22 35.6	2.197	3.030	11.8	21.2
<b>184101</b>	2004 <i>HE</i> <sub>11</sub>		1 9.6 229°14	0°9/ 9.3 18			<b>179030</b>	2001 <i>RZ</i> <sub>113</sub>		1 9.6 220°37	1°9/ 9.0 18		
12 3	7 48.95	+22 15.1	2.042	2.827	14.2	21.1	12 3	7 50.29	+25 46.1	2.019	2.807	14.3	21.1
12 13	7 44.39	+22 47.6	1.947	2.821	11.1	20.9	12 13	7 45.47	+26 14.2	1.928	2.802	11.2	20.9
12 23	7 37.25	+23 26.3	1.876	2.814	7.4	20.7	12 23	7 37.99	+26 45.2	1.860	2.797	7.5	20.6
1 2	7 28.10	+24 7.4	1.832	2.807	3.3	20.4	1 2	7 28.43	+27 14.8	1.819	2.792	3.6	20.4
1 12	7 17.89	+24 46.7	1.817	2.799	1.5	20.2	1 12	7 17.83	+27 38.8	1.806	2.786	2.3	20.3
1 22	7 7.79	+25 20.7	1.832	2.791	5.6	20.5	1 22	7 7.41	+27 54.2	1.824	2.780	6.0	20.5
2 1	6 58.97	+25 47.2	1.876	2.783	9.6	20.7	2 1	6 58.38	+28 0.1	1.869	2.773	9.9	20.7
2 11	6 52.38	+26 5.8	1.944	2.775	13.2	20.9	2 11	6 51.70	+27 57.4	1.939	2.767	13.3	20.9
<b>499958</b>	2011 <i>JN</i> <sub>13</sub>		1 9.6 192°93	4°7/12.0 17			<b>428898</b>	2008 <i>UF</i> <sub>357</sub>		1 9.7 52°28	3°4/ 8.6 18		
12 3	7 43.98	+3 40.0	2.933	3.652	11.8	23.0	12 3	7 48.91	+29 59.5	2.010	2.803	14.2	21.0
12 13	7 39.54	+3 30.8	2.835	3.650	9.9	22.8	12 13	7 44.32	+30 37.4	1.938	2.813	11.1	20.8
12 23	7 33.51	+3 33.7	2.760	3.648	7.7	22.7	12 23	7 37.12	+31 14.5	1.889	2.824	7.6	20.6
1 2	7 26.29	+3 49.7	2.712	3.645	5.7	22.5	1 2	7 27.98	+31 46.0	1.867	2.835	4.4	20.4
1 12	7 18.48	+4 18.4	2.693	3.642	4.7	22.5	1 12	7 18.00	+32 7.2	1.874	2.846	3.7	20.4
1 22	7 10.76	+4 58.3	2.704	3.638	5.6	22.5	1 22	7 8.39	+32 15.8	1.909	2.857	6.5	20.6
2 1	7 3.80	+5 46.9	2.744	3.634	7.7	22.6	2 1	7 0.30	+32 11.8	1.972	2.869	9.8	20.8
2 11	6 58.19	+6 41.2	2.811	3.629	9.9	22.8	2 11	6 54.59	+31 57.3	2.059	2.880	12.9	21.0
<b>378846</b>	2008 <i>TF</i> <sub>18</sub>		1 9.6 79°00	7°1/ 6.7 18			<b>450315</b>	2004 <i>RM</i> <sub>252</sub>		1 9.7 79°02	2°9/ 9.8 18		
12 3	7 52.23	+40 34.3	2.197	2.973	13.7	21.5	12 3	8 1.25	+19 46.1	1.542	2.319	18.5	20.1
12 13	7 47.25	+41 48.6	2.122	2.974	11.3	21.3	12 13	7 53.79	+18 27.0	1.480	2.346	14.5	19.9
12 23	7 39.30	+42 56.6	2.070	2.975	8.9	21.1	12 23	7 43.22	+17 10.5	1.441	2.372	9.9	19.7
1 2	7 29.03	+43 50.5	2.044	2.976	7.3	21.1	1 2	7 30.55	+15 57.9	1.429	2.398	5.1	19.5
1 12	7 17.62	+44 24.2	2.046	2.977	7.3	21.1	1 12	7 17.27	+14 51.1	1.446	2.424	3.1	19.4
1 22	7 6.48	+44 34.5	2.075	2.978	9.0	21.2	1 22	7 4.91	+13 52.6	1.492	2.449	6.9	19.7
2 1	6 56.98	+44 22.5	2.130	2.979	11.4	21.3	2 1	6 54.79	+13 4.0	1.567	2.474	11.2	20.0
2 11	6 50.15	+43 52.3	2.208	2.980	13.7	21.5	2 11	6 47.70	+12 25.5	1.666	2.499	14.9	20.3
<b>276861</b>	2004 <i>RX</i> <sub>149</sub>		1 9.6 88°24	1°5/ 9.2 18			<b>459110</b>	2012 <i>BY</i> <sub>116</sub>		1 9.7 24°34	0°6/ 9.5 18		
12 3	7 50.37	+24 45.9	2.049	2.835	14.2	21.4	12 3	7 48.91	+23 41.4	1.325	2.142	18.9	20.8
12 13	7 45.17	+25 13.9	1.982	2.855	11.0	21.2	12 13	7 45.27	+23 36.1	1.260	2.150	14.7	20.6
12 23	7 37.52	+25 44.6	1.938	2.875	7.3	21.1	12 23	7 38.20	+23 34.6	1.215	2.159	9.8	20.3
1 2	7 28.10	+26 13.9	1.920	2.894	3.4	20.9	1 2	7 28.55	+23 33.5	1.193	2.169	4.3	20.1
1 12	7 17.95	+26 38.3	1.933	2.913	1.9	20.8	1 12	7 17.83	+23 29.7	1.198	2.180	1.5	19.9
1 22	7 8.22	+26 55.2	1.975	2.932	5.5	21.1	1 22	7 7.71	+23 21.1	1.228	2.192	7.0	20.3
2 1	6 59.96	+27 3.8	2.046	2.951	9.1	21.3	2 1	6 59.72	+23 7.9	1.283	2.204	11.9	20.6
2 11	6 53.96	+27 5.1	2.141	2.969	12.2	21.6	2 11	6 54.88	+22 51.3	1.361	2.218	16.2	20.9
<b>205854</b>	2002 <i>EJ</i> <sub>68</sub>		1 9.6 275°35	1°4/ 9.3 18			<b>290393</b>	2005 <i>TQ</i> <sub>21</sub>		1 9.7 274°60	1°6/ 9.1 18		
12 3	7 50.56	+24 11.9	1.652	2.451	16.5	21.0	12 3	7 48.75	+24 41.0	1.889	2.683	14.9	21.2
12 13	7 46.39	+24 31.7	1.555	2.436	13.0	20.8	12 13	7 44.47	+25 9.9	1.798	2.676	11.7	20.9
12 23	7 39.02	+24 56.3	1.480	2.420	8.8	20.5	12 23	7 37.44	+25 43.0	1.729	2.668	7.8	20.7
1 2	7 29.03	+25 21.6	1.430	2.404	4.0	20.1	1 2	7 28.23	+26 16.2	1.687	2.660	3.7	20.4
1 12	7 17.61	+25 42.8	1.407	2.388	2.0	20.0	1 12	7 17.90	+26 45.0	1.673	2.653	2.1	20.3
1 22	7 6.25	+25 56.3	1.412	2.372	6.8	20.2	1 22	7 7.72	+27 5.9	1.687	2.645	6.1	20.5
2 1	6 56.51	+26 0.8	1.444	2.356	11.6	20.5	2 1	6 58.97	+27 17.6	1.729	2.637	10.3	20.8
2 11	6 49.61	+25 57.0	1.499	2.340	15.9	20.7	2 11	6 52.66	+27 20.7	1.796	2.630	13.9	21.0
<b>327360</b>	2005 <i>UV</i> <sub>244</sub>		1 9.6 191°12	3°2/10.4 18			<b>34202</b>	<i>Sionaprasad</i>		1 9.7 40°51	2°5/10.6 18		
12 3	7 49.32	+13 40.9	2.327	3.085	13.5	20.5	12 3	7 46.15	+13 36.2	1.701	2.488	16.6	18.5
12 13	7 44.07	+13 3.5	2.233	3.084	10.8	20.3	12 13	7 42.37	+13 51.9	1.626	2.495	13.2	18.3
12 23	7 36.69	+12 32.6	2.162	3.083	7.7	20.1	12 23	7 35.94	+14 21.0	1.572	2.504	9.1	18.1
1 2	7 27.75	+12 9.0	2.119	3.081	4.6	19.9	1 2	7 27.51	+15 2.0	1.543	2.512	4.9	17.9
1 12	7 18.06	+11 52.8	2.106	3.079	3.3	19.8	1 12	7 18.14	+15 51.7	1.542	2.521	2.6	17.7
1 22	7 8.56	+11 43.6	2.123	3.076	5.6	19.9	1 22	7 9.06	+16 45.6	1.569	2.530	6.0	18.0
2 1	7 0.18	+11 40.7	2.170	3.073	8.8	20.1	2 1	7 1.46	+17 39.6	1.623	2.540	10.2	18.2
2 11	6 53.66	+11 42.8	2.242	3.069	11.8	20.3	2 11	6 56.23	+18 30.4	1.701	2.550	13.9	18.5
<b>33846</b>	2000 <i>GO</i> <sub>167</sub>		1 9.6 175°24	2°1/ 8.9 18			<b>194162</b>	2001 <i>TK</i> <sub>22</sub>		1 9.7 55°72	0°8/ 9.5 17		
12 3	7 51.83	+27 34.4	2.403	3.178	12.6								

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>362127</b>	2009 <i>DM</i> <sub>25</sub>		1 9.7 230°90	0°0/ 9.5 18			<b>217566</b>	2007 <i>RU</i> <sub>36</sub>		1 9.7 91°16	0°6/ 9.5 18		
12 3	7 50.37	+20 40.7	1.952	2.735	14.9	22.1	12 3	7 47.65	+22 45.8	2.393	3.172	12.6	20.6
12 13	7 45.61	+20 59.2	1.854	2.726	11.7	21.8	12 13	7 42.73	+23 3.1	2.319	3.189	9.7	20.5
12 23	7 38.15	+21 24.4	1.779	2.715	7.9	21.6	12 23	7 35.77	+23 23.6	2.270	3.206	6.4	20.3
1 2	7 28.55	+21 53.4	1.731	2.705	3.5	21.3	1 2	7 27.34	+23 44.8	2.249	3.223	2.8	20.1
1 12	7 17.81	+22 22.6	1.711	2.694	1.1	21.1	1 12	7 18.29	+24 3.9	2.257	3.239	1.1	20.0
1 22	7 7.15	+22 48.8	1.721	2.682	5.7	21.4	1 22	7 9.55	+24 18.9	2.296	3.255	4.6	20.3
2 1	6 57.82	+23 9.9	1.760	2.670	10.0	21.6	2 1	7 1.99	+24 29.0	2.364	3.271	7.9	20.5
2 11	6 50.84	+23 25.4	1.823	2.658	13.7	21.8	2 11	6 56.30	+24 34.2	2.459	3.287	10.8	20.7
<b>220649</b>	2004 <i>RG</i> <sub>86</sub>		1 9.7 124°62	3°1/10.9 18			<b>488737</b>	2004 <i>RE</i> <sub>124</sub>		1 9.7 110°68	2°9/ 8.5 18		
12 3	7 47.44	+11 29.9	2.282	3.040	13.8	20.9	12 3	7 51.97	+29 13.4	2.423	3.199	12.5	21.9
12 13	7 42.58	+11 26.6	2.203	3.052	11.0	20.7	12 13	7 46.15	+29 59.4	2.356	3.222	9.8	21.7
12 23	7 35.68	+11 33.7	2.146	3.065	7.8	20.5	12 23	7 38.07	+30 45.0	2.313	3.244	6.6	21.6
1 2	7 27.29	+11 50.9	2.116	3.077	4.7	20.4	1 2	7 28.37	+31 25.6	2.299	3.265	3.7	21.4
1 12	7 18.23	+12 16.8	2.115	3.088	3.2	20.3	1 12	7 17.99	+31 57.1	2.315	3.286	3.1	21.4
1 22	7 9.42	+12 49.1	2.145	3.099	5.3	20.4	1 22	7 7.95	+32 17.2	2.361	3.307	5.6	21.6
2 1	7 1.74	+13 25.2	2.203	3.110	8.4	20.7	2 1	6 59.24	+32 25.5	2.437	3.326	8.5	21.8
2 11	6 55.89	+14 2.6	2.288	3.120	11.4	20.9	2 11	6 52.61	+32 23.8	2.538	3.345	11.2	22.0
<b>201993</b>	2004 <i>PM</i> <sub>84</sub>		1 9.7 55°17	3°5/ 8.9 17			<b>258309</b>	2001 <i>UM</i> <sub>171</sub>		1 9.7 69°15	2°0/10.3 18 R		
12 3	7 54.38	+27 49.5	1.278	2.092	19.6	19.4	12 3	7 47.93	+16 13.0	1.803	2.588	15.9	21.0
12 13	7 49.60	+28 30.4	1.229	2.116	15.2	19.2	12 13	7 43.61	+16 10.0	1.725	2.595	12.5	20.8
12 23	7 41.05	+29 12.5	1.199	2.140	10.3	19.0	12 23	7 36.71	+16 16.3	1.669	2.602	8.6	20.6
1 2	7 29.78	+29 48.4	1.193	2.164	5.3	18.8	1 2	7 27.86	+16 30.6	1.638	2.609	4.4	20.3
1 12	7 17.51	+30 11.2	1.213	2.189	4.0	18.8	1 12	7 18.14	+16 50.8	1.636	2.616	2.2	20.2
1 22	7 6.13	+30 18.1	1.259	2.214	8.1	19.1	1 22	7 8.72	+17 14.2	1.662	2.624	5.8	20.5
2 1	6 57.25	+30 10.0	1.330	2.240	12.6	19.4	2 1	7 0.75	+17 38.6	1.716	2.631	9.9	20.7
2 11	6 51.88	+29 50.7	1.423	2.265	16.5	19.7	2 11	6 55.12	+18 1.9	1.794	2.639	13.5	21.0
<b>521937</b>	2015 <i>VC</i>		1 9.7 99°24	7°5/12.4 18			<b>132270</b>	2002 <i>EN</i> <sub>138</sub>		1 9.7 194°34	0°5/ 9.8 18		
12 3	7 52.31	+ 2 18.3	1.797	2.528	17.9	21.8	12 3	7 51.03	+19 21.8	2.049	2.825	14.5	21.1
12 13	7 46.61	+ 1 38.4	1.737	2.556	14.9	21.7	12 13	7 45.89	+19 35.1	1.956	2.823	11.4	20.9
12 23	7 38.43	+ 1 17.6	1.697	2.583	11.7	21.5	12 23	7 38.20	+19 55.2	1.887	2.821	7.7	20.7
1 2	7 28.50	+ 1 18.3	1.681	2.610	8.8	21.4	1 2	7 28.56	+20 19.7	1.844	2.818	3.5	20.4
1 12	7 17.90	+ 1 40.6	1.692	2.636	7.5	21.4	1 12	7 17.93	+20 45.6	1.831	2.814	1.1	20.2
1 22	7 7.79	+ 2 21.7	1.731	2.661	8.6	21.5	1 22	7 7.46	+21 10.0	1.849	2.809	5.4	20.5
2 1	6 59.24	+ 3 17.1	1.797	2.685	11.1	21.7	2 1	6 58.29	+21 31.1	1.895	2.804	9.4	20.8
2 11	6 53.01	+ 4 20.8	1.887	2.709	13.9	21.9	2 11	6 51.35	+21 48.0	1.966	2.799	13.0	21.0
<b>428467</b>	2007 <i>UA</i> <sub>76</sub>		1 9.7 147°42	2°5/ 8.6 18			<b>228318</b>	2000 <i>QF</i> <sub>82</sub>		1 9.7 186°55	3°5/ 8.2 18		
12 3	7 48.24	+29 40.7	2.804	3.580	11.0	21.8	12 3	7 49.52	+35 8.2	3.216	3.981	10.0	21.2
12 13	7 43.07	+30 13.5	2.721	3.587	8.6	21.6	12 13	7 43.94	+35 37.4	3.126	3.981	7.9	21.0
12 23	7 35.96	+30 45.7	2.664	3.595	5.9	21.5	12 23	7 36.49	+36 2.9	3.060	3.980	5.7	20.9
1 2	7 27.41	+31 13.6	2.635	3.602	3.3	21.3	1 2	7 27.67	+36 21.2	3.024	3.978	3.9	20.8
1 12	7 18.22	+31 34.2	2.636	3.608	2.8	21.3	1 12	7 18.22	+36 29.5	3.018	3.976	3.7	20.7
1 22	7 9.24	+31 45.7	2.669	3.615	5.0	21.4	1 22	7 8.96	+36 26.5	3.043	3.974	5.3	20.8
2 1	7 1.31	+31 47.7	2.730	3.621	7.7	21.6	2 1	7 0.68	+36 12.4	3.097	3.971	7.4	21.0
2 11	6 55.11	+31 41.3	2.818	3.626	10.2	21.8	2 11	6 54.05	+35 49.0	3.178	3.968	9.6	21.1
<b>427164</b>	2014 <i>UT</i> <sub>190</sub>		1 9.7 29°77	0°3/ 9.7 18			<b>408176</b>	2013 <i>CM</i> <sub>218</sub>		1 9.7 241°40	0°5/ 9.5 17		
12 3	7 49.03	+21 46.9	1.655	2.454	16.5	20.5	12 3	7 51.56	+22 31.7	1.880	2.667	15.3	22.5
12 13	7 44.73	+21 35.2	1.579	2.459	12.9	20.3	12 13	7 46.71	+22 44.6	1.781	2.654	12.0	22.3
12 23	7 37.55	+21 27.7	1.525	2.465	8.6	20.1	12 23	7 39.00	+23 2.3	1.704	2.641	8.1	22.0
1 2	7 28.24	+21 22.3	1.496	2.471	3.9	19.8	1 2	7 29.00	+23 21.8	1.653	2.627	3.6	21.7
1 12	7 17.98	+21 16.9	1.495	2.477	1.2	19.6	1 12	7 17.78	+23 39.4	1.631	2.613	1.3	21.5
1 22	7 8.14	+21 10.0	1.521	2.484	6.0	20.0	1 22	7 6.63	+23 52.2	1.639	2.599	6.0	21.8
2 1	6 59.98	+21 1.2	1.575	2.491	10.5	20.2	2 1	6 56.90	+23 58.9	1.674	2.584	10.4	22.0
2 11	6 54.45	+20 50.8	1.652	2.499	14.3	20.5	2 11	6 49.67	+23 59.9	1.734	2.568	14.3	22.3
<b>149176</b>	2002 <i>JN</i> <sub>4</sub>		1 9.7 37°99	1°1/ 9.1 18			<b>432521</b>	2010 <i>FA</i> <sub>101</sub>		1 9.7 288°61	2°5/10.5 17		
12 3	7 53.91	+11 10.2	1.020	1.827	23.9	18.9	12 3	7 44.81	+14 28.9	2.314	3.085	13.2	21.3
12 13	7 50.66	+13 50.6	0.946	1.830	19.0	18.6	12 13	7 40.79	+14 16.4	2.211	3.071	10.5	21.1
12 23	7 42.92	+17 14.1	0.892	1.833	12.8	18.2	12 23	7 34.68	+14 11.7	2.131	3.058	7.4	20.9
1 2	7 31.17	+21 9.6	0.861	1.837	5.6	17.8	1 2	7 26.97	+14 14.6	2.078	3.044	4.1	20.7
1 12	7 16.98	+25 14.3	0.859	1.841	2.5	17.7	1 12	7 18.42	+14 24.3	2.054	3.031	2.6	20.5
1 22	7 2.66	+29 1.2	0.885	1.845	9.7	18.1	1 22	7 9.94	+14 39.2	2.059	3.017	5.2	20.7
2 1	6 50.77	+32 11.6	0.938	1.850	16.2	18.5	2 1	7 2.45	+14 57.7	2.093	3.004	8.6	20.9
2 11	6 43.22	+34 39.5	1.011	1.855	21.5	18.8	2 11	6 56.74	+15 18.1	2.153	2.991	11.8	21.1
<b>239443</b>	2007 <i>TY</i> <sub>177</sub>		1 9.7 60°67	3°8/10.9 18			<b>61023</b>	2000 <i>KV</i> <sub>50</sub>		1 9.7 138°14	0°5/ 9.8 18		
12 3	7 45.02	+10 59.0	2.273	3.035	13.7	20.6	12 3	7 53.49	+20 9.0	1.880	2.659	15.5	19.7
12 13	7 40.75	+10 32.5	2.192	3.042	11.0	20.4	12 13	7 47.81	+20 13.8	1.803	2.671	12.1	19.5
12 23	7 34.50	+10 15.7	2.133	3.050	8.0	20.2	12 23	7 39.43	+20 24.4	1.749	2.683	8.1	19.3
1 2	7 26.80	+10 9.2	2.100	3.058	5.1	20.1	1 2	7 29.06	+20 38.3	1.721	2.694	3.7	19.1
1 12	7 18.45	+10 12.7	2.097	3.065	3.8	20.0	1 12	7 17.82	+20 52.6	1.722	2.705	1.1	18.9
1 22	7 10.34	+10 25.0	2.122	3.073	5.7	20.1	1 22	7 6.95	+21 5.0	1.754	2.715	5.6	19.2
2 1	7 3.31	+10 44.3	2.176	3.081	8.6	20.3	2 1	6 57.67	+21 14.1	1.814	2.724	9.7	19.5
2 11	6 58.05	+11 8.0	2.255	3.089	11.4	20.5	2 11	6 50.85	+21 20.0	1.899	2.732	13.3	19.7
<b>174319</b>	2002 <i>TJ</i> <sub>97</sub>		1 9.7 98°21	0°6/ 9.5 18			<b>212701</b>	2007 <i>QR</i> <sub>9</sub>		1 9.7 86°86	0°4/ 9.8 17		
12 3	7 50.05	+22 17.7	1.760	2.553									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>109459</b>	2001 <i>QS</i> <sub>211</sub>		1 9.7 107°09	0°0/ 9.6 18			<b>291767</b>	2006 <i>KT</i> <sub>19</sub>		1 9.7 199°65	1°1/10.0 18		
12 3	7 47.06	+21 4.9	2.592	3.366	11.9	20.7	12 3	7 50.82	+18 5.4	2.051	2.826	14.6	21.6
12 13	7 42.12	+21 16.6	2.515	3.382	9.2	20.6	12 13	7 45.71	+18 10.0	1.957	2.823	11.5	21.4
12 23	7 35.30	+21 32.1	2.463	3.397	6.1	20.4	12 23	7 38.09	+18 21.8	1.886	2.819	7.8	21.2
1 2	7 27.14	+21 49.3	2.438	3.412	2.7	20.2	1 2	7 28.53	+18 39.0	1.842	2.814	3.7	20.9
1 12	7 18.41	+22 6.2	2.444	3.427	0.8	20.1	1 12	7 18.00	+18 59.2	1.827	2.809	1.4	20.7
1 22	7 9.94	+22 20.8	2.481	3.441	4.2	20.3	1 22	7 7.61	+19 19.8	1.843	2.804	5.4	21.0
2 1	7 2.54	+22 32.3	2.548	3.455	7.4	20.6	2 1	6 58.51	+19 39.1	1.887	2.797	9.4	21.2
2 11	6 56.83	+22 40.3	2.641	3.469	10.2	20.8	2 11	6 51.60	+19 56.1	1.957	2.790	13.0	21.4
<b>491936</b>	2013 <i>CU</i> <sub>110</sub>		1 9.7 37°01	0°3/ 9.6 17			<b>237078</b>	2008 <i>SE</i> <sub>281</sub>		1 9.7 109°86	0°2/ 9.6 18		
12 3	7 48.29	+19 7.6	1.225	2.043	20.1	21.1	12 3	7 47.08	+21 19.3	2.327	3.107	12.9	21.2
12 13	7 45.07	+19 53.1	1.165	2.055	15.6	20.9	12 13	7 42.45	+21 38.8	2.246	3.116	10.0	21.0
12 23	7 38.27	+20 51.7	1.124	2.068	10.4	20.6	12 23	7 35.70	+22 3.0	2.188	3.124	6.6	20.8
1 2	7 28.71	+21 58.2	1.106	2.082	4.6	20.3	1 2	7 27.39	+22 29.3	2.158	3.132	2.9	20.6
1 12	7 17.92	+23 4.9	1.113	2.096	1.5	20.1	1 12	7 18.36	+22 54.9	2.158	3.140	1.0	20.4
1 22	7 7.65	+24 4.9	1.147	2.111	7.3	20.6	1 22	7 9.58	+23 17.4	2.188	3.148	4.7	20.7
2 1	6 59.54	+24 53.8	1.205	2.127	12.5	20.9	2 1	7 1.94	+23 35.5	2.247	3.156	8.2	20.9
2 11	6 54.74	+25 30.6	1.285	2.143	16.9	21.2	2 11	6 56.19	+23 48.6	2.332	3.163	11.2	21.1
<b>334132</b>	2001 <i>RQ</i> <sub>39</sub>		1 9.7 88°76	8°2/ 8.3 18			<b>90666</b>	4374 <i>T</i> <sub>-3</sub>		1 9.7 192°51	5°7/11.9 18		
12 3	8 4.05	+50 1.8	2.483	3.213	13.5	20.5	12 3	7 47.34	+ 4 31.6	2.206	2.940	14.8	19.8
12 13	7 55.91	+50 35.7	2.423	3.231	11.5	20.4	12 13	7 42.72	+ 4 13.6	2.113	2.939	12.3	19.6
12 23	7 44.63	+50 55.1	2.385	3.249	9.7	20.3	12 23	7 35.96	+ 4 10.5	2.042	2.937	9.5	19.4
1 2	7 31.24	+50 53.1	2.373	3.266	8.4	20.2	1 2	7 27.55	+ 4 23.9	1.996	2.935	6.9	19.3
1 12	7 17.21	+50 25.6	2.387	3.284	8.3	20.2	1 12	7 18.31	+ 4 53.7	1.978	2.932	5.7	19.2
1 22	7 4.13	+49 32.9	2.430	3.301	9.3	20.3	1 22	7 9.19	+ 5 37.9	1.989	2.928	7.0	19.2
2 1	6 53.30	+48 19.1	2.499	3.318	10.9	20.5	2 1	7 1.14	+ 6 33.0	2.029	2.925	9.6	19.4
2 11	6 45.53	+46 50.9	2.593	3.335	12.7	20.6	2 11	6 54.94	+ 7 34.6	2.094	2.920	12.5	19.6
<b>364352</b>	2006 <i>UH</i> <sub>217</sub>		1 9.7 46°82	4°5/10.7 18			<b>173013</b>	2006 <i>PQ</i> <sub>19</sub>		1 9.7 217°05	0°0/ 9.5 18		
12 3	7 48.59	+12 38.2	1.524	2.311	18.2	20.1	12 3	7 50.88	+21 11.1	2.037	2.818	14.4	21.9
12 13	7 44.35	+11 58.5	1.459	2.326	14.6	19.9	12 13	7 45.87	+21 21.8	1.941	2.811	11.3	21.7
12 23	7 37.27	+11 31.0	1.415	2.342	10.4	19.7	12 23	7 38.27	+21 37.8	1.868	2.803	7.6	21.4
1 2	7 28.12	+11 16.7	1.395	2.358	6.3	19.5	1 2	7 28.64	+21 56.4	1.821	2.795	3.4	21.2
1 12	7 18.12	+11 15.6	1.402	2.375	4.5	19.4	1 12	7 17.98	+22 14.7	1.804	2.787	1.0	21.0
1 22	7 8.63	+11 25.6	1.435	2.392	7.2	19.6	1 22	7 7.46	+22 30.0	1.817	2.778	5.5	21.3
2 1	7 0.88	+11 44.3	1.495	2.409	11.1	19.9	2 1	6 58.24	+22 41.0	1.859	2.768	9.6	21.5
2 11	6 55.73	+12 8.3	1.578	2.427	14.8	20.1	2 11	6 51.28	+22 47.5	1.926	2.758	13.2	21.7
<b>319635</b>	2006 <i>SC</i> <sub>367</sub>		1 9.7 67°00	1°3/ 9.9 18			<b>295986</b>	2008 <i>YJ</i> <sub>62</sub>		1 9.7 30°50	1°6/10.3 18		
12 3	7 53.92	+20 45.9	1.636	2.425	17.1	20.2	12 3	7 44.72	+15 52.6	2.040	2.823	14.4	20.3
12 13	7 48.25	+20 8.5	1.572	2.446	13.3	20.0	12 13	7 40.89	+16 5.5	1.960	2.829	11.3	20.1
12 23	7 39.69	+19 34.7	1.530	2.466	8.9	19.8	12 23	7 34.80	+16 27.8	1.902	2.835	7.7	19.9
1 2	7 29.12	+19 3.9	1.514	2.487	4.2	19.6	1 2	7 27.04	+16 57.9	1.871	2.842	3.9	19.7
1 12	7 17.84	+18 35.4	1.526	2.508	1.7	19.4	1 12	7 18.50	+17 33.3	1.868	2.848	1.8	19.5
1 22	7 7.22	+18 9.0	1.568	2.529	6.1	19.8	1 22	7 10.18	+18 10.8	1.894	2.856	5.1	19.8
2 1	6 58.48	+17 45.2	1.636	2.550	10.4	20.1	2 1	7 3.07	+18 47.7	1.948	2.863	8.9	20.0
2 11	6 52.46	+17 24.4	1.729	2.570	14.0	20.3	2 11	6 57.96	+19 22.1	2.028	2.871	12.2	20.3
<b>421606</b>	2014 <i>OA</i> <sub>232</sub>		1 9.7 34°32	11°5/ 8.2 18			<b>245798</b>	2006 <i>HJ</i> <sub>66</sub>		1 9.7 129°23	0°6/ 9.9 18		
12 3	8 6.43	+51 1.6	1.698	2.451	18.0	20.8	12 3	7 51.89	+19 16.3	1.957	2.735	15.0	22.2
12 13	7 59.63	+51 56.5	1.634	2.454	15.6	20.7	12 13	7 46.47	+19 27.8	1.881	2.749	11.7	22.0
12 23	7 48.10	+52 33.2	1.589	2.458	13.4	20.5	12 23	7 38.52	+19 46.0	1.828	2.762	7.9	21.8
1 2	7 33.04	+52 40.0	1.566	2.462	11.9	20.5	1 2	7 28.69	+20 8.4	1.801	2.775	3.6	21.5
1 12	7 16.67	+52 8.9	1.568	2.466	11.7	20.4	1 12	7 18.03	+20 31.9	1.804	2.787	1.1	21.4
1 22	7 1.53	+50 59.4	1.594	2.471	12.9	20.5	1 22	7 7.72	+20 53.8	1.837	2.798	5.4	21.7
2 1	6 49.71	+49 18.7	1.644	2.476	15.0	20.7	2 1	6 58.88	+21 12.5	1.899	2.809	9.4	22.0
2 11	6 42.32	+47 18.0	1.715	2.480	17.4	20.9	2 11	6 52.35	+21 27.4	1.986	2.820	12.8	22.2
<b>493370</b>	2014 <i>WC</i> <sub>77</sub>		1 9.7 152°31	1°1/10.1 18			<b>279489</b>	2010 <i>XY</i> <sub>49</sub>		1 9.7 27°67	3°5/10.8 18		
12 3	7 48.24	+17 39.5	2.095	2.873	14.2	22.2	12 3	7 46.20	+12 28.0	1.641	2.426	17.2	20.7
12 13	7 43.57	+17 49.5	2.010	2.877	11.1	22.0	12 13	7 42.55	+12 22.7	1.564	2.431	13.7	20.5
12 23	7 36.57	+18 6.7	1.947	2.880	7.5	21.8	12 23	7 36.17	+12 31.0	1.507	2.436	9.7	20.3
1 2	7 27.81	+18 29.8	1.912	2.884	3.6	21.5	1 2	7 27.73	+12 52.7	1.475	2.441	5.6	20.0
1 12	7 18.21	+18 56.1	1.905	2.887	1.4	21.4	1 12	7 18.30	+13 25.8	1.470	2.446	3.6	19.9
1 22	7 8.83	+19 23.0	1.929	2.890	5.1	21.7	1 22	7 9.16	+14 6.7	1.493	2.452	6.5	20.1
2 1	7 0.70	+19 48.4	1.981	2.893	8.9	21.9	2 1	7 1.52	+14 51.7	1.542	2.459	10.6	20.4
2 11	6 54.64	+20 11.1	2.059	2.895	12.3	22.1	2 11	6 56.33	+15 37.1	1.614	2.465	14.4	20.6
<b>41838</b>	2000 <i>WK</i> <sub>59</sub>		1 9.7 34°90	0°1/ 9.6 18			<b>146382</b>	2001 <i>QS</i> <sub>52</sub>		1 9.7 149°65	2°0/ 9.1 18		
12 3	7 46.79	+20 2.3	1.724	2.522	16.0	18.6	12 3	7 51.67	+26 27.1	2.126	2.909	13.8	20.7
12 13	7 42.96	+20 32.7	1.650	2.529	12.4	18.3	12 13	7 46.32	+26 54.1	2.045	2.916	10.8	20.6
12 23	7 36.41	+21 11.4	1.597	2.537	8.3	18.1	12 23	7 38.44	+27 22.6	1.987	2.923	7.2	20.3
1 2	7 27.80	+21 54.9	1.571	2.546	3.7	17.9	1 2	7 28.67	+27 48.6	1.957	2.929	3.5	20.1
1 12	7 18.22	+22 38.8	1.572	2.554	1.1	17.7	1 12	7 18.04	+28 8.2	1.956	2.935	2.3	20.1
1 22	7 8.95	+23 18.9	1.601	2.564	5.8	18.0	1 22	7 7.70	+28 19.0	1.985	2.940	5.7	20.3
2 1	7 1.22	+23 52.6	1.658	2.573	10.1	18.3	2 1	6 58.77	+28 20.5	2.043	2.945	9.3	20.5
2 11	6 55.93	+24 18.8	1.738	2.583	13.8	18.6	2 11	6 52.11	+28 14.0	2.126	2.949	12.5	20.7
<b>3675</b>	Kemstach		1 9.7 318°23	3°9/ 8.5 18			<b>41014</b>	1999 <i>UP</i> <sub>23</sub>		1 9.7 49°38	5°4/ 8.6 18		
12 3	7 48.50	+33 44.4	2.401	3.184	12.4								

EPHEMERIDES

1 9.7

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>61209</b>	2000 <i>OM</i> <sub>9</sub>		1 9.7 158°88	0°3/ 9.6	18		<b>354123</b>	2002 <i>AR</i> <sub>172</sub>		1 9.7 326°39	1°1/ 9.4	17	
12 3	7 52.17	+20 30.7	1.882	2.664	15.4	20.1	12 3	7 45.68	+22 0.6	1.258	2.082	19.3	21.0
12 13	7 46.98	+21 3.2	1.800	2.670	12.0	19.9	12 13	7 43.50	+22 28.5	1.170	2.065	15.2	20.7
12 23	7 39.05	+21 43.2	1.740	2.676	8.0	19.7	12 23	7 37.66	+23 6.6	1.102	2.048	10.3	20.3
1 2	7 29.00	+22 27.0	1.707	2.681	3.6	19.4	1 2	7 28.72	+23 50.5	1.057	2.033	4.7	20.0
1 12	7 17.93	+23 10.1	1.703	2.686	1.2	19.3	1 12	7 18.01	+24 34.1	1.036	2.018	1.9	19.7
1 22	7 7.10	+23 48.4	1.729	2.690	5.7	19.6	1 22	7 7.35	+25 11.3	1.041	2.005	7.8	20.1
2 1	6 57.76	+24 19.6	1.784	2.693	10.0	19.9	2 1	6 58.62	+25 38.5	1.069	1.992	13.5	20.3
2 11	6 50.87	+24 43.3	1.863	2.695	13.6	20.1	2 11	6 53.29	+25 55.0	1.117	1.980	18.5	20.6
<b>422036</b>	2014 <i>QA</i> <sub>351</sub>		1 9.7 38°57	0°4/ 9.5	18		<b>26679</b>	Thomassilver		1 9.7 175°18	2°7/ 10.5	18	
12 3	7 48.18	+21 19.3	1.531	2.336	17.3	20.9	12 3	7 49.87	+14 5.2	2.278	3.038	13.7	19.4
12 13	7 44.34	+21 43.0	1.464	2.347	13.5	20.7	12 13	7 44.60	+13 49.0	2.187	3.041	10.9	19.2
12 23	7 37.46	+22 14.2	1.417	2.358	9.0	20.4	12 23	7 37.16	+13 40.8	2.120	3.043	7.7	19.0
1 2	7 28.31	+22 48.9	1.395	2.370	4.0	20.2	1 2	7 28.10	+13 40.2	2.080	3.044	4.3	18.8
1 12	7 18.15	+23 22.5	1.400	2.382	1.3	20.0	1 12	7 18.26	+13 46.4	2.069	3.045	2.8	18.7
1 22	7 8.42	+23 51.0	1.432	2.395	6.3	20.4	1 22	7 8.63	+13 57.9	2.090	3.046	5.3	18.9
2 1	6 50.48	+24 12.4	1.491	2.408	10.9	20.7	2 1	7 0.14	+14 13.1	2.139	3.045	8.7	19.1
2 11	6 55.31	+24 26.5	1.573	2.422	14.8	20.9	2 11	6 53.55	+14 30.4	2.214	3.044	11.8	19.3
<b>147995</b>	1996 <i>GX</i> <sub>15</sub>		1 9.7 107°78	2°4/ 8.9	18		<b>467579</b>	2007 <i>US</i> <sub>15</sub>		1 9.7 158°18	3°9/ 11.3	18	
12 3	7 53.44	+27 24.6	2.166	2.944	13.8	20.4	12 3	7 44.79	+ 8 55.8	2.498	3.247	12.9	21.7
12 13	7 47.49	+28 3.0	2.100	2.968	10.7	20.2	12 13	7 40.48	+ 8 40.5	2.409	3.250	10.5	21.5
12 23	7 39.08	+28 42.0	2.057	2.991	7.2	20.1	12 23	7 34.33	+ 8 35.9	2.342	3.252	7.8	21.4
1 2	7 28.90	+29 17.0	2.043	3.013	3.7	19.9	1 2	7 26.82	+ 8 42.4	2.302	3.254	5.1	21.2
1 12	7 18.00	+29 43.9	2.059	3.035	2.7	19.9	1 12	7 18.65	+ 8 59.6	2.291	3.256	3.9	21.1
1 22	7 7.53	+30 0.3	2.105	3.056	5.7	20.1	1 22	7 10.64	+ 9 25.8	2.309	3.258	5.5	21.2
2 1	6 58.55	+30 5.8	2.180	3.076	9.0	20.3	2 1	7 3.57	+ 9 58.8	2.357	3.259	8.2	21.4
2 11	6 51.86	+30 2.2	2.280	3.096	12.0	20.6	2 11	6 58.10	+10 35.9	2.430	3.261	10.9	21.6
<b>162725</b>	2000 <i>VT</i> <sub>11</sub>		1 9.7 64°19	2°8/ 10.4	18		<b>325836</b>	2010 <i>SP</i> <sub>38</sub>		1 9.7 8°96	5°5/ 9.3	18	
12 3	7 49.54	+15 7.3	1.505	2.298	18.2	20.0	12 3	7 54.34	+35 37.6	1.345	2.155	19.0	19.2
12 13	7 45.33	+14 55.6	1.434	2.307	14.4	19.8	12 13	7 49.94	+35 35.5	1.276	2.157	15.2	18.9
12 23	7 38.10	+14 55.4	1.383	2.316	10.0	19.6	12 23	7 41.55	+35 23.7	1.225	2.159	10.9	18.7
1 2	7 28.60	+15 6.1	1.355	2.325	5.3	19.3	1 2	7 30.19	+34 55.5	1.199	2.163	6.9	18.5
1 12	7 18.07	+15 25.5	1.355	2.334	3.0	19.2	1 12	7 17.66	+34 6.5	1.197	2.168	5.7	18.4
1 22	7 7.95	+15 50.5	1.382	2.344	6.7	19.5	1 22	7 5.97	+32 57.5	1.222	2.173	8.9	18.6
2 1	6 59.59	+16 18.1	1.436	2.353	11.2	19.7	2 1	6 56.86	+31 34.2	1.272	2.180	13.2	18.9
2 11	6 53.98	+16 45.9	1.512	2.363	15.2	20.0	2 11	6 51.41	+30 4.1	1.344	2.188	17.1	19.1
<b>242051</b>	2002 <i>RF</i> <sub>222</sub>		1 9.7 27°10	2°8/ 10.9	18		<b>364407</b>	2006 <i>VF</i> <sub>121</sub>		1 9.7 175°24	5°0/ 10.8	18	
12 3	7 44.45	+11 59.9	1.933	2.709	15.3	19.9	12 3	7 49.54	+10 23.2	1.940	2.710	15.7	20.5
12 13	7 40.80	+12 16.8	1.853	2.715	12.2	19.7	12 13	7 44.68	+ 9 31.8	1.863	2.711	12.8	20.3
12 23	7 34.82	+12 47.0	1.794	2.721	8.6	19.5	12 23	7 37.37	+ 8 50.2	1.798	2.711	9.5	20.1
1 2	7 27.09	+13 29.5	1.762	2.727	4.8	19.3	1 2	7 28.24	+ 8 20.5	1.759	2.712	6.3	19.9
1 12	7 18.52	+14 21.6	1.757	2.734	2.9	19.2	1 12	7 18.23	+ 8 3.7	1.748	2.712	5.1	19.8
1 22	7 10.16	+15 19.2	1.781	2.741	5.6	19.4	1 22	7 8.46	+ 7 59.4	1.766	2.712	7.0	19.9
2 1	6 57.98	+16 18.3	1.834	2.749	9.3	19.6	2 1	7 0.00	+ 8 6.3	1.811	2.712	10.3	20.1
2 11	6 57.98	+17 15.4	1.911	2.757	12.7	19.9	2 11	6 53.70	+ 8 21.6	1.881	2.712	13.5	20.3
<b>219360</b>	2000 <i>RB</i> <sub>83</sub>		1 9.7 2°95	0°2/ 9.7	18		<b>492408</b>	2014 <i>KC</i> <sub>12</sub>		1 9.7 286°64	1°4/ 10.0	17	
12 3	7 42.80	+24 3.4	1.097	1.937	20.4	18.1	12 3	7 49.46	+18 1.2	1.423	2.226	18.5	22.4
12 13	7 41.23	+23 25.3	1.032	1.935	16.0	17.9	12 13	7 45.89	+18 2.8	1.333	2.214	14.7	22.1
12 23	7 35.92	+22 48.3	0.985	1.934	10.7	17.6	12 23	7 38.93	+18 14.8	1.263	2.202	10.1	21.8
1 2	7 27.75	+22 11.2	0.960	1.936	4.8	17.3	1 2	7 29.19	+18 35.6	1.216	2.189	4.8	21.4
1 12	7 18.33	+21 33.1	0.958	1.941	1.4	17.0	1 12	7 17.91	+19 1.9	1.195	2.177	1.8	21.2
1 22	7 9.51	+20 54.4	0.980	1.948	7.5	17.4	1 22	7 6.72	+19 29.8	1.202	2.166	7.1	21.5
2 1	6 59.81	+20 16.6	1.026	1.957	13.0	17.8	2 1	6 57.28	+19 56.3	1.233	2.154	12.4	21.8
2 11	6 59.81	+19 41.2	1.091	1.968	17.8	18.1	2 11	6 50.89	+20 19.5	1.287	2.142	17.1	22.0
<b>325339</b>	2008 <i>JD</i> <sub>40</sub>		1 9.7 151°94	3°6/ 10.9	18		<b>391821</b>	2008 <i>SV</i> <sub>39</sub>		1 9.7 178°22	3°4/ 8.7	18	
12 3	7 47.52	+10 42.3	2.285	3.040	13.8	22.2	12 3	7 55.10	+28 36.2	1.798	2.586	15.8	21.9
12 13	7 42.74	+10 29.3	2.199	3.046	11.1	22.0	12 13	7 49.65	+29 19.9	1.715	2.588	12.4	21.7
12 23	7 35.89	+10 26.8	2.136	3.052	8.1	21.8	12 23	7 41.05	+30 5.1	1.655	2.590	8.5	21.4
1 2	7 27.51	+10 35.0	2.100	3.058	5.0	21.7	1 2	7 29.99	+30 45.6	1.621	2.590	4.7	21.2
1 12	7 18.42	+10 53.1	2.092	3.063	3.6	21.6	1 12	7 17.71	+31 15.3	1.616	2.590	3.7	21.2
1 22	7 9.53	+11 19.1	2.115	3.067	5.6	21.7	1 22	7 5.71	+31 30.5	1.640	2.590	7.1	21.4
2 1	6 57.13	+11 50.7	2.167	3.072	8.6	21.9	2 1	6 55.47	+31 31.0	1.691	2.589	11.1	21.6
2 11	6 55.76	+12 25.3	2.244	3.076	11.6	22.1	2 11	6 48.06	+31 19.3	1.766	2.587	14.7	21.8
<b>351299</b>	2004 <i>TJ</i> <sub>129</sub>		1 9.7 87°43	0°3/ 9.8	18		<b>424902</b>	2008 <i>WF</i> <sub>55</sub>		1 9.7 83°35	0°4/ 9.6	18	
12 3	7 52.07	+19 8.5	1.553	2.346	17.6	20.8	12 3	7 47.62	+21 45.6	2.201	2.984	13.4	22.0
12 13	7 47.22	+19 35.3	1.487	2.364	13.7	20.6	12 13	7 42.98	+22 6.8	2.126	2.997	10.4	21.8
12 23	7 39.30	+20 11.5	1.443	2.381	9.2	20.4	12 23	7 36.11	+22 32.6	2.074	3.011	6.9	21.6
1 2	7 29.12	+20 53.4	1.424	2.398	4.1	20.1	1 2	7 27.63	+23 0.1	2.050	3.024	3.0	21.4
1 12	7 17.95	+21 35.9	1.433	2.415	1.2	20.0	1 12	7 18.44	+23 26.3	2.055	3.037	1.0	21.2
1 22	7 7.26	+22 14.8	1.470	2.432	6.2	20.3	1 22	7 9.55	+23 48.7	2.090	3.050	4.9	21.5
2 1	6 58.43	+22 47.3	1.534	2.449	10.8	20.7	2 1	7 1.90	+24 6.0	2.154	3.063	8.5	21.8
2 11	6 52.41	+23 12.6	1.621	2.465	14.7	20.9	2 11	6 56.25	+24 17.8	2.244	3.076	11.6	22.0
<b>349124</b>	2007 <i>HW</i> <sub>23</sub>		1 9.7 62°57	5°7/ 11.1	17		<b>267828</b>	2003 <i>UL</i> <sub>82</sub>		1 9.7 145°76	0°1/ 9.7	18	
12 3	7 50.11	+10 11.7	1.369	2.155									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>138523</b>	2000 <i>NL</i> <sub>20</sub>		1 9.7 148°88	0°0/ 9.7 18			<b>348476</b>	2005 <i>SC</i> <sub>120</sub>		1 9.7 64°09	3°8/10.5 17		
12 3	7 48.58	+23 0.8	2.899	3.667	10.9	20.2	12 3	7 51.14	+14 24.8	1.336	2.133	19.8	21.1
12 13	7 43.13	+22 49.7	2.811	3.674	8.5	20.1	12 13	7 46.87	+13 55.2	1.270	2.144	15.8	20.8
12 23	7 35.92	+22 39.8	2.748	3.681	5.6	19.9	12 23	7 39.29	+13 38.0	1.223	2.155	11.1	20.6
1 2	7 27.48	+22 29.7	2.715	3.688	2.5	19.7	1 2	7 29.21	+13 33.5	1.199	2.167	6.2	20.4
1 12	7 18.50	+22 18.2	2.712	3.695	0.8	19.5	1 12	7 18.04	+13 40.5	1.201	2.178	3.9	20.2
1 22	7 9.77	+22 4.8	2.742	3.701	3.9	19.8	1 22	7 7.39	+13 56.6	1.230	2.190	7.5	20.5
2 1	7 2.02	+21 49.3	2.801	3.707	6.9	20.0	2 1	6 58.75	+14 18.6	1.283	2.202	12.2	20.8
2 11	6 55.85	+21 32.4	2.888	3.712	9.5	20.2	2 11	6 53.17	+14 43.7	1.359	2.214	16.4	21.1
<b>128853</b>	2004 <i>SH</i> <sub>16</sub>		1 9.7 144°95	0°2/ 9.8 18			<b>149750</b>	2004 <i>OE</i> <sub>5</sub>		1 9.7 151°19	0°4/ 9.9 18		
12 3	7 51.86	+18 43.8	1.784	2.567	16.1	20.3	12 3	7 48.53	+18 38.1	2.298	3.071	13.2	20.5
12 13	7 46.86	+19 18.6	1.704	2.575	12.6	20.1	12 13	7 43.65	+19 4.9	2.213	3.078	10.3	20.3
12 23	7 39.04	+20 3.1	1.647	2.583	8.4	19.8	12 23	7 36.59	+19 38.7	2.151	3.084	6.9	20.1
1 2	7 29.05	+20 53.6	1.616	2.590	3.8	19.6	1 2	7 27.90	+20 17.2	2.117	3.090	3.1	19.9
1 12	7 18.01	+21 45.3	1.614	2.597	1.1	19.4	1 12	7 18.42	+20 57.1	2.113	3.096	0.9	19.7
1 22	7 7.23	+22 33.6	1.642	2.603	5.9	19.7	1 22	7 9.13	+21 35.4	2.140	3.101	4.7	20.0
2 1	6 58.00	+23 15.5	1.697	2.608	10.2	20.0	2 1	7 0.98	+22 9.9	2.197	3.106	8.3	20.2
2 11	6 51.30	+23 49.6	1.777	2.613	14.0	20.2	2 11	6 54.73	+22 39.3	2.279	3.110	11.5	20.5
<b>422473</b>	2014 <i>SP</i> <sub>320</sub>		1 9.7 60°23	3°5/ 8.8 18			<b>192965</b>	2000 <i>CP</i> <sub>129</sub>		1 9.7 248°28	0°7/ 9.5 18		
12 3	7 51.51	+29 18.2	1.712	2.511	16.0	21.5	12 3	7 52.99	+23 10.7	1.660	2.453	16.7	21.0
12 13	7 46.78	+29 54.1	1.646	2.524	12.5	21.3	12 13	7 48.28	+23 19.4	1.563	2.440	13.2	20.8
12 23	7 39.01	+30 29.7	1.601	2.538	8.6	21.1	12 23	7 40.35	+23 32.7	1.488	2.427	8.9	20.5
1 2	7 29.01	+30 59.3	1.582	2.551	4.7	20.9	1 2	7 29.79	+23 47.2	1.438	2.413	4.0	20.2
1 12	7 18.05	+31 17.7	1.591	2.565	3.8	20.9	1 12	7 17.82	+23 58.7	1.417	2.399	1.5	20.0
1 22	7 7.59	+31 22.4	1.628	2.579	7.0	21.1	1 22	7 5.94	+24 4.4	1.423	2.384	6.6	20.3
2 1	6 58.97	+31 13.7	1.691	2.593	10.9	21.4	2 1	6 55.71	+24 3.2	1.457	2.369	11.5	20.5
2 11	6 53.13	+30 54.4	1.778	2.607	14.3	21.6	2 11	6 48.34	+23 56.0	1.514	2.354	15.8	20.7
<b>204325</b>	2004 <i>RE</i> <sub>101</sub>		1 9.7 166°73	0°8/ 9.9 18			<b>8450</b>	Egorov		1 9.7 78°15	2°2/ 9.1 18		
12 3	7 52.94	+19 9.5	1.940	2.715	15.2	21.6	12 3	7 50.76	+27 16.8	1.902	2.694	14.9	17.6
12 13	7 47.43	+19 12.3	1.855	2.721	12.0	21.4	12 13	7 45.89	+27 37.6	1.827	2.703	11.6	17.4
12 23	7 39.28	+19 21.6	1.792	2.725	8.1	21.2	12 23	7 38.29	+27 59.1	1.775	2.712	7.8	17.2
1 2	7 29.12	+19 35.2	1.756	2.729	3.7	21.0	1 2	7 28.69	+28 17.0	1.749	2.721	3.9	16.9
1 12	7 18.01	+19 50.4	1.750	2.732	1.3	20.8	1 12	7 18.20	+28 27.6	1.752	2.731	2.6	16.9
1 22	7 7.17	+20 5.0	1.774	2.734	5.5	21.1	1 22	7 8.11	+28 28.6	1.784	2.740	6.1	17.1
2 1	6 57.80	+20 17.4	1.826	2.736	9.7	21.3	2 1	6 59.60	+28 20.2	1.844	2.749	9.9	17.4
2 11	6 50.79	+20 27.1	1.903	2.737	13.3	21.6	2 11	6 53.58	+28 4.1	1.927	2.758	13.3	17.6
<b>115655</b>	2003 <i>US</i> <sub>137</sub>		1 9.7 32°67	5°9/11.9 18			<b>79186</b>	1993 <i>QN</i>		1 9.7 64°63	9°5/10.5 18		
12 3	7 44.41	+5 46.2	1.919	2.675	16.1	19.2	12 3	8 21.04	+49 21.7	1.680	2.415	18.8	18.0
12 13	7 40.71	+5 20.4	1.841	2.681	13.3	19.0	12 13	8 9.58	+49 27.4	1.630	2.447	15.8	17.9
12 23	7 34.73	+5 10.2	1.784	2.688	10.1	18.9	12 23	7 53.70	+49 11.3	1.601	2.480	12.7	17.7
1 2	7 27.07	+5 17.5	1.752	2.696	7.2	18.7	1 2	7 35.15	+48 23.2	1.596	2.512	10.3	17.7
1 12	7 18.63	+5 42.1	1.746	2.704	5.9	18.6	1 12	7 16.45	+46 59.3	1.620	2.543	9.5	17.7
1 22	7 10.43	+6 21.6	1.768	2.712	7.3	18.7	1 22	6 59.99	+45 4.2	1.672	2.575	10.8	17.8
2 1	7 3.45	+7 12.4	1.816	2.720	10.1	18.9	2 1	6 47.35	+42 49.0	1.752	2.606	13.2	18.1
2 11	6 58.50	+8 9.5	1.889	2.729	13.1	19.1	2 11	6 39.17	+40 26.2	1.857	2.637	15.7	18.3
<b>244234</b>	2002 <i>CP</i> <sub>69</sub>		1 9.7 253°55	3°2/ 8.9 18			<b>67219</b>	2000 <i>DE</i> <sub>64</sub>		1 9.7 117°19	0°2/ 9.8 18		
12 3	7 53.03	+31 37.2	2.214	2.994	13.5	20.5	12 3	7 52.04	+20 39.4	2.203	2.975	13.8	19.6
12 13	7 47.57	+31 49.9	2.113	2.980	10.7	20.3	12 13	7 46.27	+20 47.6	2.130	2.995	10.7	19.4
12 23	7 39.43	+31 59.7	2.035	2.966	7.5	20.0	12 23	7 38.23	+21 0.4	2.082	3.015	7.1	19.2
1 2	7 29.23	+32 2.1	1.985	2.951	4.3	19.8	1 2	7 28.57	+21 15.4	2.061	3.034	3.2	19.0
1 12	7 18.00	+31 53.6	1.964	2.937	3.5	19.7	1 12	7 18.26	+21 30.0	2.070	3.053	0.9	18.9
1 22	7 6.96	+31 32.4	1.973	2.922	6.3	19.9	1 22	7 8.32	+21 42.2	2.111	3.071	4.9	19.2
2 1	6 57.32	+30 59.5	2.011	2.906	9.7	20.1	2 1	6 59.74	+21 51.2	2.180	3.088	8.5	19.4
2 11	6 50.03	+30 17.9	2.073	2.891	13.0	20.2	2 11	6 53.24	+21 56.7	2.276	3.104	11.6	19.7
<b>308232</b>	2005 <i>EH</i> <sub>260</sub>		1 9.7 334°13	1°9/ 9.2 18			<b>492425</b>	2014 <i>LE</i> <sub>20</sub>		1 9.7 184°84	0°2/ 9.8 18		
12 3	7 46.39	+24 3.1	1.337	2.158	18.5	20.7	12 3	7 52.08	+19 21.9	2.057	2.831	14.5	23.2
12 13	7 43.82	+24 32.3	1.253	2.145	14.6	20.4	12 13	7 46.76	+19 49.1	1.966	2.832	11.4	23.0
12 23	7 37.72	+25 8.5	1.188	2.133	9.8	20.1	12 23	7 38.87	+20 23.8	1.898	2.831	7.7	22.8
1 2	7 28.71	+25 46.7	1.147	2.122	4.6	19.7	1 2	7 28.99	+21 3.3	1.857	2.830	3.4	22.5
1 12	7 18.13	+26 20.9	1.131	2.112	2.5	19.6	1 12	7 18.10	+21 43.6	1.846	2.829	1.0	22.3
1 22	7 7.70	+26 45.9	1.141	2.103	7.7	19.8	1 22	7 7.35	+22 21.2	1.866	2.826	5.4	22.6
2 1	6 59.18	+26 59.4	1.175	2.095	12.9	20.1	2 1	6 57.91	+22 53.6	1.915	2.823	9.4	22.9
2 11	6 53.92	+27 2.1	1.230	2.088	17.5	20.4	2 11	6 50.71	+23 20.0	1.989	2.819	13.0	23.1
<b>181755</b>	1996 <i>TV</i> <sub>17</sub>		1 9.7 112°02	2°7/ 8.8 18			<b>421378</b>	2013 <i>TY</i> <sub>137</sub>		1 9.7 93°81	4°2/11.4 18		
12 3	7 51.95	+28 25.6	2.116	2.900	13.9	21.0	12 3	7 45.38	+8 30.5	2.342	3.092	13.7	21.1
12 13	7 46.53	+29 0.0	2.044	2.915	10.8	20.9	12 13	7 41.01	+8 15.6	2.263	3.104	11.1	20.9
12 23	7 38.58	+29 34.5	1.995	2.929	7.3	20.7	12 23	7 34.72	+8 12.2	2.206	3.115	8.2	20.8
1 2	7 28.77	+30 4.6	1.974	2.943	3.9	20.5	1 2	7 27.03	+8 21.1	2.175	3.127	5.4	20.6
1 12	7 18.16	+30 26.0	1.982	2.957	3.0	20.4	1 12	7 18.72	+8 41.5	2.173	3.138	4.2	20.5
1 22	7 7.93	+30 36.4	2.020	2.970	5.9	20.7	1 22	7 10.63	+9 11.4	2.201	3.149	5.7	20.7
2 1	6 59.18	+30 35.6	2.086	2.983	9.3	20.9	2 1	7 3.59	+9 48.2	2.257	3.160	8.4	20.8
2 11	6 52.74	+30 25.6	2.177	2.996	12.4	21.1	2 11	6 58.25	+10 29.1	2.339	3.171	11.2	21.0
<b>341356</b>	2007 <i>TW</i> <sub>62</sub>		1 9.7 328°66	7°0/11.5 18			<b>235526</b>	2004 <i>CJ</i> <sub>51</sub>		1 9.7 257°32	6°4/13.0 18		
12 3	7 43.23	+4 39.4	1.992	2.744	15.7	20.2	12 3</						

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>43980</b>	1997 GR <sub>20</sub>		1 9.7 133°99	0°6/ 9.5 18			<b>413943</b>	2006 YD <sub>35</sub>		1 9.7 233°78	1°8/ 8.9 18		
12 3	7 51.64	+22 32.0	1.979	2.761	14.7	20.2	12 3	7 49.49	+24 40.3	2.173	2.957	13.5	21.2
12 13	7 46.40	+22 50.7	1.900	2.772	11.5	20.0	12 13	7 44.85	+25 25.6	2.076	2.948	10.6	21.0
12 23	7 38.58	+23 13.9	1.845	2.781	7.6	19.8	12 23	7 37.68	+26 15.7	2.002	2.939	7.1	20.8
1 2	7 28.82	+23 38.2	1.816	2.791	3.4	19.6	1 2	7 28.53	+27 6.4	1.956	2.929	3.4	20.5
1 12	7 18.20	+24 0.1	1.817	2.799	1.3	19.4	1 12	7 18.29	+27 52.8	1.940	2.919	2.2	20.4
1 22	7 7.90	+24 16.9	1.848	2.808	5.5	19.7	1 22	7 8.10	+28 31.0	1.953	2.908	5.7	20.6
2 1	6 59.07	+24 27.6	1.907	2.816	9.4	20.0	2 1	6 59.10	+28 59.0	1.995	2.897	9.5	20.8
2 11	6 52.58	+24 32.3	1.991	2.823	12.9	20.2	2 11	6 52.25	+29 16.8	2.063	2.886	12.8	21.0
<b>197477</b>	2004 AB <sub>11</sub>		1 9.7 51°00	3°1/ 8.7 18			<b>58424</b>	Jamesdunlop		1 9.7 345°34	1°9/ 9.4 18		
12 3	7 48.92	+29 17.7	2.017	2.810	14.1	20.3	12 3	7 48.19	+26 3.7	1.366	2.184	18.3	18.6
12 13	7 44.39	+29 53.2	1.945	2.820	11.0	20.1	12 13	7 45.07	+26 7.9	1.285	2.176	14.4	18.3
12 23	7 37.27	+30 28.6	1.895	2.831	7.6	19.9	12 23	7 38.43	+26 14.0	1.225	2.169	9.8	18.1
1 2	7 28.24	+30 58.9	1.873	2.842	4.2	19.7	1 2	7 28.99	+26 17.6	1.188	2.162	4.6	17.7
1 12	7 18.38	+31 19.9	1.879	2.853	3.4	19.7	1 12	7 18.17	+26 14.7	1.176	2.157	2.4	17.6
1 22	7 8.87	+31 29.0	1.914	2.864	6.3	19.9	1 22	7 7.68	+26 2.6	1.190	2.153	7.4	17.9
2 1	7 0.85	+31 26.3	1.976	2.875	9.7	20.1	2 1	6 59.21	+25 41.9	1.230	2.149	12.5	18.2
2 11	6 55.18	+31 13.6	2.063	2.887	12.8	20.3	2 11	6 53.95	+25 14.8	1.290	2.147	16.9	18.4
<b>265774</b>	2005 WY <sub>62</sub>		1 9.7 351°51	1°2/ 9.2 18			<b>421224</b>	2013 SH <sub>37</sub>		1 9.7 131°80	0°4/ 9.6 18		
12 3	7 44.81	+20 33.7	1.515	2.326	17.2	19.8	12 3	7 48.00	+21 48.3	2.207	2.989	13.4	21.5
12 13	7 42.09	+21 31.9	1.433	2.320	13.5	19.6	12 13	7 43.38	+22 10.6	2.123	2.994	10.4	21.3
12 23	7 36.29	+22 42.1	1.372	2.315	9.0	19.3	12 23	7 36.50	+22 37.8	2.063	2.999	6.9	21.1
1 2	7 28.01	+23 59.3	1.335	2.311	4.0	19.0	1 2	7 27.91	+23 6.9	2.029	3.004	3.1	20.8
1 12	7 18.41	+25 16.3	1.326	2.308	1.9	18.9	1 12	7 18.51	+23 34.8	2.026	3.008	1.1	20.7
1 22	7 8.93	+26 26.3	1.344	2.306	6.8	19.2	1 22	7 9.33	+23 58.8	2.052	3.013	5.0	21.0
2 1	7 1.06	+27 24.4	1.388	2.304	11.6	19.4	2 1	7 1.36	+24 17.5	2.108	3.017	8.6	21.2
2 11	6 55.97	+28 8.9	1.455	2.304	15.8	19.7	2 11	6 55.41	+24 30.5	2.188	3.021	11.8	21.4
<b>351730</b>	2006 CV <sub>45</sub>		1 9.7 175°97	2°5/ 9.2 18			<b>90953</b>	Hideosaitou		1 9.7 359°33	4°3/ 10.6 18		
12 3	7 54.12	+27 19.0	1.648	2.444	16.7	21.7	12 3	7 43.53	+14 26.0	1.100	1.925	21.4	18.3
12 13	7 49.05	+27 37.3	1.567	2.445	13.1	21.5	12 13	7 41.77	+13 53.8	1.030	1.921	17.2	18.0
12 23	7 40.73	+27 56.6	1.508	2.445	8.9	21.2	12 23	7 36.39	+13 36.0	0.978	1.918	12.2	17.7
1 2	7 29.90	+28 11.9	1.474	2.446	4.4	21.0	1 2	7 28.12	+13 33.9	0.947	1.917	6.9	17.4
1 12	7 17.88	+28 18.5	1.467	2.446	2.9	20.9	1 12	7 18.43	+13 46.8	0.939	1.917	4.4	17.3
1 22	7 6.23	+28 13.8	1.489	2.446	6.9	21.1	1 22	7 9.10	+14 11.3	0.955	1.919	8.3	17.5
2 1	6 56.45	+27 58.2	1.538	2.446	11.3	21.4	2 1	7 1.87	+14 43.5	0.993	1.923	13.6	17.8
2 11	6 49.63	+27 34.4	1.611	2.445	15.2	21.6	2 11	6 57.98	+15 18.7	1.052	1.928	18.4	18.1
<b>503519</b>	2016 FO <sub>9</sub>		1 9.7 241°07	2°5/ 8.8 18			<b>76324</b>	2000 EX <sub>145</sub>		1 9.7 149°09	1°3/ 10.3 18		
12 3	7 48.90	+27 30.3	2.252	3.038	13.1	21.5	12 3	7 46.54	+16 33.6	2.602	3.368	12.0	20.0
12 13	7 44.28	+28 7.2	2.158	3.030	10.2	21.3	12 13	7 41.82	+16 42.6	2.515	3.374	9.5	19.9
12 23	7 37.22	+28 45.9	2.088	3.023	7.0	21.1	12 23	7 35.24	+16 58.3	2.452	3.381	6.4	19.7
1 2	7 28.27	+29 22.1	2.045	3.015	3.7	20.9	1 2	7 27.29	+17 19.3	2.417	3.387	3.2	19.5
1 12	7 18.35	+29 51.7	2.031	3.007	2.8	20.8	1 12	7 18.71	+17 43.8	2.412	3.393	1.4	19.4
1 22	7 8.55	+30 11.6	2.047	2.999	5.8	21.0	1 22	7 10.29	+18 9.6	2.438	3.398	4.3	19.6
2 1	6 59.95	+30 20.8	2.092	2.991	9.2	21.2	2 1	7 2.85	+18 35.1	2.494	3.403	7.5	19.8
2 11	6 53.47	+30 20.2	2.161	2.982	12.4	21.4	2 11	6 57.04	+18 59.0	2.577	3.408	10.3	20.0
<b>207134</b>	2005 BO <sub>7</sub>		1 9.7 220°33	2°2/ 9.1 18			<b>425009</b>	2009 DZ <sub>88</sub>		1 9.7 299°63	6°5/ 10.1 17		
12 3	7 52.61	+26 47.0	1.785	2.577	15.7	20.8	12 3	7 48.79	+ 6 59.5	2.319	3.056	14.1	20.6
12 13	7 47.71	+27 7.7	1.697	2.573	12.3	20.5	12 13	7 44.00	+ 5 34.4	2.200	3.027	11.9	20.3
12 23	7 39.78	+27 30.1	1.632	2.569	8.4	20.3	12 23	7 36.99	+ 4 15.7	2.103	2.997	9.4	20.1
1 2	7 29.48	+27 49.7	1.592	2.565	4.1	20.0	1 2	7 28.21	+ 3 6.9	2.034	2.967	7.2	19.9
1 12	7 18.00	+28 1.8	1.581	2.560	2.6	19.9	1 12	7 18.41	+ 2 11.3	1.994	2.938	6.5	19.8
1 22	7 6.78	+28 3.7	1.598	2.555	6.6	20.2	1 22	7 8.54	+ 1 31.1	1.983	2.908	8.0	19.9
2 1	6 57.21	+27 55.2	1.643	2.550	10.8	20.4	2 1	6 59.57	+ 1 6.8	1.999	2.878	10.7	20.0
2 11	6 50.36	+27 38.3	1.712	2.544	14.6	20.6	2 11	6 52.38	+ 0 57.0	2.041	2.848	13.5	20.1
<b>55898</b>	1998 AG <sub>10</sub>		1 9.7 42°31	2°6/ 8.8 18			<b>234781</b>	2002 PP <sub>184</sub>		1 9.7 123°70	2°1/ 10.7 18		
12 3	7 48.96	+24 40.9	1.575	2.381	16.9	18.3	12 3	7 46.03	+13 20.3	2.321	3.086	13.3	21.2
12 13	7 45.08	+25 40.8	1.508	2.392	13.1	18.1	12 13	7 41.67	+13 40.0	2.235	3.092	10.6	21.1
12 23	7 38.10	+26 46.8	1.462	2.403	8.8	17.8	12 23	7 35.28	+14 10.0	2.172	3.098	7.4	20.9
1 2	7 28.73	+27 52.4	1.441	2.414	4.3	17.6	1 2	7 27.35	+14 49.2	2.137	3.104	4.0	20.7
1 12	7 18.24	+28 50.7	1.448	2.426	3.1	17.5	1 12	7 18.70	+15 35.0	2.131	3.109	2.2	20.6
1 22	7 8.13	+29 36.4	1.483	2.439	7.0	17.8	1 22	7 10.21	+16 24.2	2.155	3.115	4.8	20.7
2 1	6 59.80	+30 7.5	1.544	2.451	11.3	18.1	2 1	7 2.76	+17 13.9	2.209	3.120	8.2	21.0
2 11	6 54.31	+30 24.8	1.627	2.465	15.0	18.3	2 11	6 57.09	+18 1.5	2.289	3.126	11.2	21.2
<b>10076</b>	1989 PK		1 9.7 96°74	6°7/ 8.7 18			<b>456999</b>	2008 CJ <sub>50</sub>		1 9.7 317°52	7°9/ 8.1 16		
12 3	8 4.79	+41 51.9	2.084	2.840	14.9	18.5	12 3	7 53.26	+38 25.1	1.472	2.275	18.0	21.3
12 13	7 56.56	+42 24.1	2.029	2.869	12.2	18.4	12 13	7 49.65	+39 8.4	1.379	2.252	14.8	21.0
12 23	7 45.16	+42 45.0	1.996	2.897	9.4	18.2	12 23	7 41.92	+39 44.6	1.306	2.230	11.4	20.7
1 2	7 31.62	+42 47.6	1.990	2.925	7.2	18.2	1 2	7 30.73	+40 4.1	1.256	2.208	8.5	20.5
1 12	7 17.46	+42 27.4	2.012	2.952	6.8	18.2	1 12	7 17.65	+39 57.8	1.231	2.187	8.1	20.4
1 22	7 4.26	+41 44.8	2.064	2.978	8.4	18.3	1 22	7 4.79	+39 22.0	1.232	2.166	10.8	20.5
2 1	6 53.35	+40 44.0	2.144	3.004	10.9	18.5	2 1	6 54.24	+38 19.1	1.256	2.146	14.7	20.7
2 11	6 45.55	+39 31.5	2.248	3.029	13.3	18.7	2 11	6 47.50	+36 57.2	1.300	2.127	18.6	20.9
<b>50034</b>	2000 AJ <sub>48</sub>		1 9.7 129°44	0°0/ 9.7 18 R			<b>269969</b>	2000 SG <sub>345</sub>		1 9.7 66°64	1°3/ 9.3 18		
12 3	7 51.23	+19 40.8	2.105	2.880	14.2	19.8	12 3	7 50.32	+23 8.9	1.794	2.587	15.6	20.8

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>327306</b>	2005 <i>TD</i> <sub>193</sub>		1 9.7 49°42	0°5/ 9.9	18		<b>109954</b>	2001 <i>SC</i> <sub>47</sub>		1 9.7 127°08	5°5/ 7.8	18	
12 3	7 47.84	+18 56.0	1.740	2.533	16.0	20.8	12 3	7 55.81	+36 45.9	2.203	2.976	13.7	20.4
12 13	7 43.79	+19 17.6	1.664	2.540	12.5	20.6	12 13	7 49.75	+37 43.5	2.134	2.991	11.0	20.2
12 23	7 37.04	+19 47.9	1.610	2.548	8.4	20.3	12 23	7 40.88	+38 36.0	2.089	3.005	8.2	20.1
1 2	7 28.22	+20 24.2	1.582	2.556	3.8	20.1	1 2	7 29.91	+39 16.6	2.070	3.018	6.0	19.9
1 12	7 18.45	+21 2.4	1.581	2.564	1.1	19.9	1 12	7 18.02	+39 39.9	2.081	3.031	5.8	20.0
1 22	7 8.98	+21 38.8	1.610	2.572	5.7	20.2	1 22	7 6.54	+39 43.9	2.120	3.044	7.7	20.1
2 1	7 1.03	+22 10.7	1.665	2.581	10.0	20.5	2 1	6 56.73	+39 29.4	2.188	3.055	10.3	20.3
2 11	6 55.51	+22 36.8	1.744	2.590	13.8	20.8	2 11	6 49.50	+39 0.6	2.279	3.067	12.9	20.5
<b>357998</b>	2006 <i>DN</i> <sub>54</sub>		1 9.7 198°34	3°2/10.8	18		<b>119748</b>	2001 <i>YO</i> <sub>53</sub>		1 9.7 202°46	2°5/ 8.8	18	
12 3	7 49.99	+12 19.9	1.947	2.712	15.5	21.8	12 3	7 49.55	+26 18.3	1.995	2.785	14.4	20.2
12 13	7 45.22	+12 18.3	1.854	2.710	12.5	21.5	12 13	7 45.07	+27 6.3	1.909	2.785	11.2	20.0
12 23	7 37.91	+12 28.7	1.784	2.707	8.9	21.3	12 23	7 37.92	+27 57.9	1.847	2.784	7.6	19.8
1 2	7 28.63	+12 50.6	1.739	2.703	5.1	21.1	1 2	7 28.68	+28 48.1	1.811	2.783	3.9	19.6
1 12	7 18.34	+13 22.4	1.723	2.699	3.2	21.0	1 12	7 18.38	+29 31.5	1.804	2.781	2.9	19.5
1 22	7 8.17	+14 1.0	1.736	2.694	6.0	21.1	1 22	7 8.24	+30 4.4	1.827	2.780	6.2	19.7
2 1	6 59.28	+14 43.4	1.778	2.689	9.9	21.3	2 1	6 59.50	+30 25.0	1.877	2.779	10.0	19.9
2 11	6 52.58	+15 26.5	1.845	2.683	13.5	21.6	2 11	6 53.11	+30 34.3	1.952	2.777	13.4	20.1
<b>150548</b>	2000 <i>SE</i> <sub>176</sub>		1 9.7 139°58	5°1/ 8.2	18		<b>304059</b>	2006 <i>FX</i> <sub>3</sub>		1 9.7 236°63	3°2/ 8.8	18	
12 3	7 55.00	+36 52.2	2.318	3.090	13.2	20.1	12 3	7 53.45	+28 28.3	1.877	2.665	15.2	21.7
12 13	7 48.95	+37 32.9	2.244	3.100	10.6	20.0	12 13	7 48.47	+29 6.9	1.781	2.654	12.0	21.5
12 23	7 40.25	+38 8.2	2.192	3.109	7.8	19.8	12 23	7 40.41	+29 47.3	1.708	2.642	8.3	21.2
1 2	7 29.59	+38 32.1	2.168	3.118	5.6	19.7	1 2	7 29.88	+30 23.9	1.660	2.630	4.5	21.0
1 12	7 18.09	+38 40.2	2.173	3.126	5.3	19.7	1 12	7 18.02	+30 51.0	1.642	2.617	3.5	20.9
1 22	7 6.99	+38 30.8	2.207	3.134	7.2	19.8	1 22	7 6.25	+31 4.9	1.653	2.604	7.0	21.1
2 1	6 57.46	+38 5.2	2.269	3.142	9.8	20.0	2 1	6 56.02	+31 4.7	1.691	2.590	11.0	21.3
2 11	6 50.36	+37 27.2	2.356	3.149	12.4	20.2	2 11	6 48.49	+30 52.6	1.753	2.575	14.7	21.5
<b>332778</b>	2009 <i>VK</i> <sub>37</sub>		1 9.7 67°94	7°2/ 6.9	17		<b>22795</b>	1999 <i>NX</i> <sub>14</sub>		1 9.7 113°35	0°9/ 9.5	18	
12 3	7 53.56	+38 8.5	1.911	2.696	15.1	20.4	12 3	7 53.50	+22 38.3	1.879	2.662	15.4	19.0
12 13	7 48.62	+39 39.1	1.850	2.711	12.3	20.2	12 13	7 47.92	+23 6.9	1.810	2.681	12.0	18.9
12 23	7 40.46	+41 4.4	1.812	2.726	9.4	20.1	12 23	7 39.64	+23 40.4	1.763	2.699	7.9	18.6
1 2	7 29.82	+42 15.2	1.800	2.740	7.5	20.0	1 2	7 29.37	+24 14.7	1.743	2.717	3.5	18.4
1 12	7 18.01	+43 4.2	1.816	2.755	7.5	20.0	1 12	7 18.25	+24 45.5	1.752	2.734	1.5	18.3
1 22	7 6.59	+43 27.8	1.859	2.770	9.4	20.2	1 22	7 7.55	+25 9.7	1.791	2.750	5.7	18.6
2 1	6 57.05	+43 27.2	1.927	2.785	12.0	20.4	2 1	6 58.46	+25 26.1	1.858	2.766	9.7	18.9
2 11	6 50.45	+43 7.1	2.018	2.800	14.5	20.6	2 11	6 51.86	+25 35.1	1.951	2.781	13.1	19.1
<b>369770</b>	2012 <i>GS</i> <sub>12</sub>		1 9.7 119°84	6°4/12.6	18		<b>398492</b>	2011 <i>UH</i> <sub>164</sub>		1 9.7 73°82	1°3/ 9.3	17	
12 3	7 46.13	+1 10.7	2.339	3.057	14.5	20.9	12 3	7 53.61	+21 38.8	1.547	2.342	17.6	21.4
12 13	7 41.60	+0 46.7	2.260	3.069	12.2	20.7	12 13	7 48.45	+22 31.8	1.492	2.369	13.6	21.2
12 23	7 35.14	+0 38.7	2.202	3.081	9.7	20.6	12 23	7 40.18	+23 32.4	1.457	2.396	9.0	21.0
1 2	7 27.28	+0 48.4	2.169	3.092	7.5	20.5	1 2	7 29.64	+24 34.8	1.449	2.423	4.0	20.8
1 12	7 18.78	+1 16.1	2.164	3.103	6.4	20.4	1 12	7 18.18	+25 32.3	1.468	2.450	1.9	20.7
1 22	7 10.48	+1 59.6	2.187	3.114	7.3	20.5	1 22	7 7.32	+26 20.0	1.517	2.476	6.5	21.1
2 1	7 3.23	+2 55.7	2.238	3.124	9.3	20.6	2 1	6 58.40	+26 55.7	1.592	2.502	10.8	21.4
2 11	6 57.67	+3 59.6	2.315	3.134	11.7	20.8	2 11	6 52.37	+27 19.8	1.691	2.528	14.5	21.7
<b>186923</b>	2004 <i>PS</i> <sub>51</sub>		1 9.7 104°30	1°0/10.2	18		<b>366947</b>	2005 <i>VX</i> <sub>126</sub>		1 9.7 218°65	0°9/10.1	18	
12 3	7 49.15	+16 50.0	2.238	3.007	13.6	20.6	12 3	7 49.06	+18 15.5	2.230	3.003	13.6	22.3
12 13	7 44.06	+17 15.3	2.165	3.028	10.7	20.5	12 13	7 44.28	+18 23.5	2.132	2.996	10.7	22.1
12 23	7 36.82	+17 48.6	2.116	3.047	7.2	20.3	12 23	7 37.19	+18 38.2	2.056	2.988	7.3	21.9
1 2	7 28.03	+18 27.7	2.095	3.067	3.4	20.1	1 2	7 28.32	+18 58.0	2.008	2.980	3.4	21.6
1 12	7 18.56	+19 9.5	2.104	3.086	1.2	19.9	1 12	7 18.54	+19 20.5	1.990	2.972	1.2	21.4
1 22	7 9.39	+19 50.7	2.143	3.104	4.7	20.2	1 22	7 8.84	+19 43.3	2.002	2.963	5.0	21.7
2 1	7 1.44	+20 29.1	2.212	3.122	8.2	20.5	2 1	7 0.27	+20 4.5	2.043	2.953	8.8	21.9
2 11	6 55.43	+21 3.1	2.307	3.140	11.3	20.7	2 11	6 53.67	+20 23.2	2.110	2.943	12.2	22.1
<b>395309</b>	2011 <i>OB</i> <sub>5</sub>		1 9.7 252°66	1°6/10.2	18		<b>496399</b>	2013 <i>TT</i> <sub>99</sub>		1 9.7 98°84	0°4/ 9.6	18	
12 3	7 50.12	+16 21.6	1.582	2.372	17.5	20.8	12 3	7 49.47	+23 0.6	2.417	3.193	12.6	22.3
12 13	7 46.10	+16 38.0	1.489	2.362	13.9	20.5	12 13	7 44.17	+23 7.5	2.345	3.212	9.7	22.1
12 23	7 38.96	+17 7.1	1.417	2.352	9.6	20.2	12 23	7 36.83	+23 16.9	2.296	3.231	6.4	21.9
1 2	7 29.26	+17 46.8	1.369	2.342	4.7	19.9	1 2	7 28.04	+23 26.6	2.276	3.250	2.9	21.7
1 12	7 18.15	+18 33.3	1.349	2.331	1.8	19.7	1 12	7 18.67	+23 34.2	2.286	3.268	1.0	21.6
1 22	7 7.08	+19 21.9	1.357	2.320	6.6	20.0	1 22	7 9.64	+23 38.3	2.327	3.286	4.5	21.9
2 1	6 57.56	+20 8.3	1.392	2.309	11.5	20.2	2 1	7 1.82	+23 38.4	2.397	3.304	7.8	22.1
2 11	6 50.80	+20 50.1	1.450	2.298	15.9	20.5	2 11	6 55.88	+23 34.8	2.493	3.321	10.7	22.4
<b>387808</b>	2004 <i>EX</i> <sub>10</sub>		1 9.7 216°60	2°6/ 9.0	18		<b>217426</b>	2005 <i>RR</i> <sub>23</sub>		1 9.7 105°60	3°5/ 8.9	18	
12 3	7 54.22	+26 26.8	1.640	2.435	16.8	21.4	12 3	7 56.20	+32 20.4	2.146	2.922	14.0	20.5
12 13	7 49.34	+27 1.1	1.552	2.430	13.2	21.2	12 13	7 49.74	+32 37.2	2.078	2.942	11.0	20.3
12 23	7 41.11	+27 39.1	1.486	2.424	9.0	20.9	12 23	7 40.67	+32 50.0	2.034	2.962	7.6	20.1
1 2	7 30.20	+28 15.0	1.446	2.418	4.5	20.6	1 2	7 29.77	+32 54.3	2.017	2.982	4.5	20.0
1 12	7 17.88	+28 42.7	1.433	2.411	3.0	20.5	1 12	7 18.19	+32 46.6	2.030	3.001	3.7	20.0
1 22	7 5.76	+28 58.1	1.449	2.404	7.2	20.7	1 22	7 7.17	+32 26.2	2.073	3.019	6.2	20.2
2 1	6 55.44	+29 0.5	1.491	2.397	11.8	21.0	2 1	6 57.83	+31 54.6	2.145	3.037	9.4	20.4
2 11	6 48.13	+28 51.9	1.557	2.389	15.8	21.2	2 11	6 50.95	+31 15.1	2.242	3.055	12.3	20.6
<b>244946</b>	2003 <i>YZ</i> <sub>80</sub>		1 9.7 330°21	2°6/ 9.3	18		<b>105940</b>	2000 <i>SR</i> <sub>230</sub>		1 9.8 41°06	1°4/ 9.4	18	
12 3	7 50.29	+30 0.4	1.973	2.765	14.4</								



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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>46686</b>	Anitasohus		1 9.8 87°56	2.3/ 9.3	18		<b>64141</b>	2001 TH <sub>36</sub>		1 9.8 126°00	3.6/ 8.9	18	
12 3	7 57.39	+26 42.8	1.391	2.192	18.9	19.0	12 3	7 55.56	+29 20.9	1.659	2.452	16.7	19.3
12 13	7 51.83	+26 58.9	1.330	2.211	14.8	18.8	12 13	7 50.20	+29 57.2	1.586	2.462	13.1	19.1
12 23	7 42.64	+27 16.3	1.290	2.229	9.9	18.5	12 23	7 41.54	+30 33.6	1.535	2.470	9.0	18.9
1 2	7 30.79	+27 29.4	1.274	2.248	4.7	18.3	1 2	7 30.37	+31 3.6	1.510	2.479	5.0	18.7
1 12	7 17.90	+27 33.2	1.286	2.266	2.8	18.2	1 12	7 18.08	+31 21.5	1.513	2.487	3.9	18.6
1 22	7 5.78	+27 25.4	1.325	2.283	7.3	18.5	1 22	7 6.25	+31 24.3	1.544	2.495	7.4	18.9
2 1	6 56.02	+27 7.4	1.390	2.301	12.0	18.8	2 1	6 56.40	+31 12.7	1.602	2.503	11.4	19.1
2 11	6 49.65	+26 42.3	1.477	2.318	16.0	19.1	2 11	6 49.57	+30 49.8	1.683	2.510	15.1	19.4
<b>287385</b>	2002 VW <sub>21</sub>		1 9.8 82°50	1.9/ 8.9	18		<b>239220</b>	2006 RN <sub>56</sub>		1 9.8 164°51	0.4/ 9.9	18	
12 3	7 45.91	+29 32.7	3.329	4.101	9.5	20.9	12 3	7 45.74	+19 41.2	3.045	3.811	10.5	21.7
12 13	7 40.96	+29 51.9	3.260	4.124	7.4	20.8	12 13	7 41.02	+19 52.0	2.954	3.815	8.1	21.5
12 23	7 34.48	+30 9.9	3.217	4.148	5.0	20.6	12 23	7 34.66	+20 6.7	2.888	3.819	5.5	21.4
1 2	7 26.95	+30 24.1	3.203	4.171	2.7	20.5	1 2	7 27.13	+20 23.9	2.850	3.823	2.5	21.2
1 12	7 19.01	+30 32.7	3.220	4.194	2.1	20.5	1 12	7 19.03	+20 42.0	2.844	3.826	0.7	21.0
1 22	7 11.32	+30 34.6	3.269	4.217	4.0	20.7	1 22	7 11.08	+20 59.2	2.869	3.829	3.7	21.3
2 1	7 4.53	+30 29.8	3.347	4.240	6.3	20.8	2 1	7 3.95	+21 14.5	2.924	3.832	6.6	21.4
2 11	6 59.14	+30 19.1	3.452	4.262	8.4	21.0	2 11	6 58.22	+21 27.2	3.007	3.834	9.1	21.6
<b>59960</b>	1999 RY <sub>233</sub>		1 9.8 157°90	1.4/10.4	18		<b>382686</b>	2002 VZ <sub>14</sub>		1 9.8 92°92	2.5/10.6	18	
12 3	7 47.76	+15 39.6	2.572	3.333	12.3	20.4	12 3	7 47.08	+14 20.0	2.376	3.140	13.1	21.3
12 13	7 42.83	+15 56.8	2.483	3.340	9.7	20.2	12 13	7 42.34	+14 5.0	2.299	3.155	10.4	21.2
12 23	7 35.99	+16 21.7	2.419	3.346	6.6	20.0	12 23	7 35.65	+13 57.6	2.245	3.170	7.2	21.0
1 2	7 27.72	+16 52.9	2.383	3.352	3.3	19.8	1 2	7 27.58	+13 57.4	2.219	3.184	4.1	20.8
1 12	7 18.77	+17 28.0	2.377	3.357	1.5	19.7	1 12	7 18.91	+14 3.6	2.222	3.199	2.5	20.7
1 22	7 9.98	+18 4.6	2.402	3.362	4.4	19.9	1 22	7 10.52	+14 14.6	2.256	3.213	4.9	20.9
2 1	7 2.17	+18 40.5	2.458	3.367	7.6	20.1	2 1	7 3.23	+14 28.9	2.318	3.227	8.0	21.1
2 11	6 56.01	+19 14.0	2.540	3.370	10.5	20.3	2 11	6 57.68	+14 45.0	2.407	3.241	10.8	21.3
<b>337102</b>	1999 FL <sub>66</sub>		1 9.8 133°25	9.4/15.4	18		<b>206280</b>	2003 AR <sub>21</sub>		1 9.8 311°95	2.7/ 9.2	18	
12 3	7 44.20	-12 9.9	2.737	3.368	14.3	21.4	12 3	7 50.13	+30 27.4	2.115	2.903	13.7	19.5
12 13	7 39.93	-12 52.4	2.657	3.376	12.9	21.3	12 13	7 45.49	+30 27.0	2.012	2.884	10.9	19.3
12 23	7 33.98	-13 15.4	2.597	3.384	11.4	21.2	12 23	7 38.21	+30 23.6	1.932	2.866	7.5	19.1
1 2	7 26.81	-13 15.3	2.558	3.391	10.2	21.1	1 2	7 28.88	+30 13.5	1.878	2.848	4.1	18.8
1 12	7 19.06	-12 50.7	2.543	3.398	9.5	21.1	1 12	7 18.51	+29 53.8	1.853	2.830	3.0	18.7
1 22	7 11.47	-12 2.5	2.554	3.405	9.6	21.1	1 22	7 8.32	+29 23.3	1.858	2.812	6.1	18.9
2 1	7 4.73	-10 53.8	2.591	3.411	10.5	21.2	2 1	6 59.50	+28 43.2	1.891	2.795	9.8	19.1
2 11	6 59.46	-9 29.9	2.652	3.417	11.9	21.3	2 11	6 53.00	+27 56.1	1.948	2.778	13.2	19.2
<b>55534</b>	2001 WU <sub>23</sub>		1 9.8 292°76	0.5/ 9.6	18		<b>342835</b>	2008 XX <sub>46</sub>		1 9.8 347°23	8.2/12.2	18	
12 3	7 45.86	+22 29.4	2.365	3.149	12.6	19.9	12 3	7 41.69	+2 17.9	1.788	2.541	17.2	19.7
12 13	7 41.75	+22 44.0	2.266	3.138	9.8	19.7	12 13	7 38.99	+1 22.1	1.700	2.531	14.6	19.5
12 23	7 35.49	+23 2.5	2.191	3.127	6.6	19.5	12 23	7 33.90	+0 43.5	1.632	2.522	11.8	19.3
1 2	7 27.58	+23 22.6	2.143	3.117	2.9	19.2	1 2	7 26.96	+0 26.1	1.586	2.514	9.4	19.1
1 12	7 18.82	+23 41.6	2.124	3.106	1.0	19.1	1 12	7 19.07	+0 32.2	1.566	2.507	8.2	19.0
1 22	7 10.16	+23 57.3	2.135	3.096	4.8	19.3	1 22	7 11.28	+1 1.0	1.571	2.501	9.3	19.1
2 1	7 2.53	+24 8.4	2.175	3.085	8.4	19.5	2 1	7 4.69	+1 49.1	1.601	2.496	11.8	19.2
2 11	6 56.75	+24 14.7	2.241	3.075	11.5	19.7	2 11	7 0.19	+2 50.9	1.654	2.492	14.7	19.4
<b>148365</b>	2000 SP <sub>94</sub>		1 9.8 202°77	3.5/ 8.7	18		<b>205809</b>	2002 CV <sub>195</sub>		1 9.8 265°07	0.0/ 9.7	18	
12 3	7 53.44	+32 18.4	2.377	3.152	12.8	20.5	12 3	7 50.51	+20 45.4	1.663	2.457	16.6	20.9
12 13	7 47.72	+32 43.9	2.285	3.148	10.1	20.3	12 13	7 46.35	+20 56.7	1.569	2.446	13.1	20.7
12 23	7 39.49	+33 6.7	2.216	3.143	7.1	20.1	12 23	7 39.12	+21 15.3	1.496	2.434	8.9	20.4
1 2	7 29.37	+33 22.3	2.175	3.138	4.3	20.0	1 2	7 29.41	+21 38.3	1.448	2.422	4.0	20.1
1 12	7 18.34	+33 26.7	2.164	3.133	3.7	19.9	1 12	7 18.36	+22 2.0	1.428	2.410	1.2	19.9
1 22	7 7.54	+33 18.2	2.183	3.127	6.1	20.0	1 22	7 7.39	+22 22.8	1.436	2.398	6.3	20.2
2 1	6 58.08	+32 57.4	2.231	3.120	9.2	20.2	2 1	6 57.97	+22 38.8	1.470	2.386	11.2	20.4
2 11	6 50.84	+32 26.7	2.305	3.113	12.1	20.4	2 11	6 51.25	+22 49.5	1.529	2.373	15.4	20.6
<b>331743</b>	2002 TT <sub>293</sub>		1 9.8 68°89	1.2/10.2	18		<b>240809</b>	2005 YT <sub>207</sub>		1 9.8 355°94	2.7/ 8.9	18	
12 3	7 50.22	+18 0.9	2.177	2.949	13.9	21.0	12 3	7 48.81	+24 27.8	1.266	2.087	19.3	20.6
12 13	7 44.76	+17 57.9	2.119	2.982	10.8	20.9	12 13	7 45.91	+25 17.4	1.193	2.085	15.2	20.3
12 23	7 37.20	+18 0.9	2.085	3.016	7.3	20.7	12 23	7 39.27	+26 15.3	1.138	2.083	10.2	20.0
1 2	7 28.21	+18 8.5	2.077	3.049	3.5	20.5	1 2	7 29.58	+27 14.7	1.107	2.081	5.0	19.7
1 12	7 18.72	+18 18.6	2.100	3.082	1.4	20.4	1 12	7 18.31	+28 7.4	1.101	2.081	3.3	19.6
1 22	7 9.71	+18 29.6	2.153	3.114	4.7	20.7	1 22	7 7.34	+28 47.0	1.121	2.081	8.2	19.9
2 1	7 2.04	+18 40.3	2.236	3.146	8.1	21.0	2 1	6 58.49	+29 10.8	1.165	2.082	13.3	20.2
2 11	6 56.36	+18 49.9	2.344	3.178	11.1	21.2	2 11	6 53.10	+29 20.1	1.230	2.083	17.8	20.5
<b>467986</b>	2012 SN <sub>52</sub>		1 9.8 256°98	3.5/11.0	18		<b>466203</b>	2012 PE <sub>3</sub>		1 9.8 189°97	4.6/12.0	17	
12 3	7 45.07	+10 56.1	2.406	3.164	13.1	21.5	12 3	7 44.90	+4 31.7	2.889	3.610	11.9	22.5
12 13	7 40.94	+10 38.2	2.310	3.158	10.6	21.3	12 13	7 40.43	+4 21.3	2.791	3.609	9.9	22.4
12 23	7 34.84	+10 29.7	2.236	3.152	7.7	21.1	12 23	7 34.32	+4 22.7	2.717	3.607	7.7	22.2
1 2	7 27.27	+10 31.2	2.189	3.146	4.9	20.9	1 2	7 27.01	+4 36.8	2.669	3.605	5.6	22.1
1 12	7 18.96	+10 42.3	2.170	3.140	3.6	20.8	1 12	7 19.10	+5 3.2	2.650	3.602	4.6	22.0
1 22	7 10.75	+11 1.5	2.182	3.134	5.4	20.9	1 22	7 11.27	+5 40.4	2.662	3.599	5.6	22.1
2 1	7 3.50	+11 27.0	2.222	3.128	8.4	21.1	2 1	7 4.21	+6 26.0	2.703	3.596	7.7	22.2
2 11	6 57.92	+11 56.3	2.287	3.122	11.3	21.3	2 11	6 58.52	+7 17.0	2.772	3.592	10.0	22.3
<b>414954</b>	2011 BF <sub>116</sub>		1 9.8 13°67	0.5/ 9.9	18		<b>202053</b>	2004 RH <sub>192</sub>		1 9.8 154°39	2.7/10.6	18	
12 3	7 45.92	+18 53.2	1.534	2.340	17.3	21.1	12 3	7 52.13	+14 7.0	1.931	2.697	15.6	21.0
12 13													

EPHEMERIDES

1 9.8

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>78198</b>	2002 <i>NN</i> <sub>47</sub>		1 9.8 51°15'	1.9/10.2	18		<b>185892</b>	2000 <i>QT</i> <sub>229</sub>		1 9.8 134°60'	4°0'/11.4	18	
12 3	7 48.60	+18 3.3	1.985	2.766	14.7	19.2	12 3	7 47.57	+9 9.8	2.182	2.934	14.5	20.8
12 13	7 43.96	+17 36.3	1.908	2.775	11.6	19.0	12 13	7 42.99	+9 4.1	2.099	2.942	11.7	20.7
12 23	7 36.96	+17 14.7	1.852	2.785	7.9	18.8	12 23	7 36.27	+9 10.9	2.037	2.950	8.6	20.5
1 2	7 28.24	+16 58.2	1.823	2.794	4.0	18.6	1 2	7 27.97	+9 30.5	2.002	2.958	5.5	20.3
1 12	7 18.78	+16 45.9	1.823	2.804	2.0	18.5	1 12	7 18.92	+10 1.7	1.996	2.965	4.0	20.2
1 22	7 9.66	+16 36.9	1.853	2.813	5.4	18.7	1 22	7 10.07	+10 41.9	2.020	2.972	5.8	20.4
2 1	7 1.91	+16 30.8	1.910	2.823	9.1	19.0	2 1	7 2.35	+11 28.0	2.072	2.979	8.9	20.6
2 11	6 56.30	+16 26.6	1.992	2.833	12.5	19.2	2 11	6 56.51	+12 16.6	2.150	2.985	11.9	20.8
<b>375123</b>	2007 <i>UX</i> <sub>77</sub>		1 9.8 333°11'	4°9/10.9	17		<b>455252</b>	2001 <i>TV</i> <sub>95</sub>		1 9.8 48°54'	5°6'/11.3	16	
12 3	7 43.97	+10 16.3	1.914	2.687	15.5	20.6	12 3	7 51.60	+9 49.1	1.445	2.222	19.5	20.8
12 13	7 40.66	+9 36.4	1.819	2.674	12.7	20.4	12 13	7 46.63	+9 3.0	1.399	2.257	15.6	20.7
12 23	7 34.98	+9 7.2	1.745	2.662	9.4	20.2	12 23	7 38.81	+8 33.0	1.373	2.291	11.4	20.5
1 2	7 27.46	+8 50.7	1.696	2.651	6.3	19.9	1 2	7 29.05	+8 20.6	1.371	2.326	7.4	20.4
1 12	7 18.98	+8 47.5	1.673	2.640	4.9	19.8	1 12	7 18.66	+8 25.2	1.394	2.361	5.7	20.3
1 22	7 10.60	+8 56.9	1.679	2.630	6.9	19.9	1 22	7 9.02	+8 44.2	1.445	2.397	7.7	20.5
2 1	7 3.39	+9 16.9	1.711	2.620	10.3	20.1	2 1	7 1.29	+9 13.7	1.522	2.432	11.3	20.8
2 11	6 58.22	+9 44.3	1.767	2.611	13.6	20.3	2 11	6 56.24	+9 49.3	1.622	2.467	14.6	21.1
<b>1891</b>	Gondola		1 9.8 127°02'	3°5'/9.0	18		<b>336462</b>	2008 <i>UK</i> <sub>368</sub>		1 9.8 214°47'	1°7'/10.2	18	
12 3	7 54.11	+31 47.2	2.026	2.810	14.4	16.7	12 3	7 47.23	+17 36.1	2.389	3.160	12.8	20.1
12 13	7 48.50	+32 1.9	1.947	2.815	11.4	16.5	12 13	7 42.62	+17 16.5	2.297	3.159	10.1	20.0
12 23	7 40.11	+32 13.2	1.890	2.821	7.9	16.3	12 23	7 35.98	+17 1.8	2.229	3.158	6.9	19.8
1 2	7 29.68	+32 16.6	1.860	2.826	4.6	16.1	1 2	7 27.83	+16 51.6	2.187	3.157	3.5	19.5
1 12	7 18.37	+32 8.2	1.859	2.831	3.7	16.1	1 12	7 18.98	+16 45.1	2.176	3.156	1.8	19.4
1 22	7 7.48	+31 46.8	1.888	2.836	6.5	16.2	1 22	7 10.31	+16 41.3	2.195	3.155	4.7	19.6
2 1	6 58.25	+31 13.8	1.944	2.841	9.9	16.5	2 1	7 2.70	+16 39.4	2.243	3.154	8.1	19.8
2 11	6 51.54	+30 32.6	2.025	2.846	13.1	16.7	2 11	6 56.88	+16 38.8	2.317	3.153	11.2	20.0
<b>493515</b>	2015 <i>CO</i> <sub>21</sub>		1 9.8 59°98'	0°1'/9.7	18		<b>456269</b>	2006 <i>RQ</i> <sub>47</sub>		1 9.8 84°00'	2°1'/10.5	16	
12 3	7 46.70	+20 55.1	2.176	2.961	13.5	21.7	12 3	7 51.30	+15 19.9	1.792	2.569	16.3	21.8
12 13	7 42.45	+21 15.4	2.095	2.967	10.5	21.5	12 13	7 46.19	+15 23.4	1.728	2.592	12.8	21.6
12 23	7 35.97	+21 41.2	2.037	2.974	7.0	21.3	12 23	7 38.50	+15 37.2	1.686	2.616	8.8	21.4
1 2	7 27.82	+22 9.9	2.006	2.981	3.1	21.1	1 2	7 28.96	+15 59.5	1.670	2.639	4.5	21.2
1 12	7 18.90	+22 38.3	2.005	2.987	0.9	20.9	1 12	7 18.68	+16 27.6	1.682	2.662	2.2	21.1
1 22	7 10.21	+23 3.9	2.033	2.994	4.9	21.2	1 22	7 8.86	+16 58.4	1.723	2.684	5.7	21.4
2 1	7 2.72	+23 24.9	2.090	3.001	8.6	21.5	2 1	7 0.60	+17 29.4	1.793	2.706	9.6	21.7
2 11	6 57.20	+23 40.8	2.172	3.008	11.7	21.7	2 11	6 54.73	+17 58.5	1.887	2.728	13.1	21.9
<b>380040</b>	2013 <i>RC</i> <sub>35</sub>		1 9.8 106°13'	3°3'/10.8	18		<b>236913</b>	2007 <i>TJ</i> <sub>111</sub>		1 9.8 195°76'	1°7'/10.3	18	
12 3	7 48.45	+12 24.1	2.276	3.034	13.8	21.1	12 3	7 47.03	+16 37.8	2.584	3.349	12.1	20.4
12 13	7 43.47	+11 57.3	2.199	3.049	11.0	20.9	12 13	7 42.32	+16 23.7	2.489	3.347	9.6	20.2
12 23	7 36.45	+11 39.2	2.145	3.063	7.9	20.7	12 23	7 35.71	+16 15.1	2.418	3.345	6.6	20.0
1 2	7 27.98	+11 30.2	2.117	3.077	4.8	20.6	1 2	7 27.70	+16 11.4	2.375	3.343	3.4	19.8
1 12	7 18.88	+11 29.8	2.119	3.091	3.4	20.5	1 12	7 19.02	+16 11.8	2.362	3.341	1.8	19.7
1 22	7 10.07	+11 36.8	2.151	3.105	5.4	20.7	1 22	7 10.49	+16 15.0	2.379	3.338	4.5	19.9
2 1	7 2.41	+11 49.6	2.212	3.118	8.5	20.9	2 1	7 2.92	+16 20.1	2.427	3.336	7.7	20.1
2 11	6 56.60	+12 6.2	2.299	3.131	11.3	21.1	2 11	6 56.99	+16 26.2	2.500	3.332	10.5	20.3
<b>372499</b>	2009 <i>SH</i> <sub>262</sub>		1 9.8 218°88'	4°7'/8.3	18		<b>437316</b>	2013 <i>OS</i> <sub>3</sub>		1 9.8 337°04'	29°8'/22.0	18	
12 3	7 54.18	+35 4.4	2.286	3.061	13.2	21.9	12 3	8 53.32	+69 6.6	0.583	1.370	38.8	19.5
12 13	7 48.57	+35 41.1	2.194	3.054	10.6	21.7	12 13	9 1.18	+69 31.8	0.471	1.303	39.2	18.9
12 23	7 40.24	+36 14.0	2.125	3.046	7.7	21.5	12 23	8 50.49	+69 13.9	0.361	1.239	38.8	18.2
1 2	7 29.81	+36 37.3	2.083	3.039	5.3	21.3	1 2	8 11.62	+66 40.0	0.256	1.177	36.7	17.3
1 12	7 18.34	+36 46.3	2.070	3.030	4.9	21.3	1 12	7 4.73	+56 10.2	0.161	1.120	30.0	16.0
1 22	7 7.09	+36 38.9	2.087	3.021	7.1	21.4	1 22	5 54.31	+19 29.5	0.099	1.069	29.8	14.8
2 1	6 57.29	+36 15.6	2.132	3.012	10.0	21.6	2 1	5 3.46	-31 34.4	0.126	1.027	67.2	16.3
2 11	6 49.88	+35 39.8	2.201	3.003	12.9	21.8	2 11	4 30.60	-52 41.3	0.204	0.996	81.5	17.8
<b>51967</b>	2001 <i>QC</i> <sub>283</sub>		1 9.8 359°60'	6°8'/10.8	18		<b>275515</b>	1996 <i>TM</i>		1 9.8 67°98'	7°3'/8.2	18	
12 3	7 45.93	+8 7.2	1.798	2.564	16.6	17.5	12 3	7 57.24	+35 3.2	1.298	2.107	19.6	20.9
12 13	7 42.18	+6 46.5	1.715	2.562	13.8	17.3	12 13	7 52.74	+36 9.0	1.235	2.114	15.8	20.6
12 23	7 35.95	+5 36.6	1.654	2.560	10.6	17.1	12 23	7 43.93	+37 10.7	1.192	2.121	11.6	20.4
1 2	7 27.88	+4 41.3	1.617	2.560	7.9	16.9	1 2	7 31.70	+37 57.4	1.171	2.129	8.1	20.3
1 12	7 18.92	+4 3.5	1.607	2.560	6.8	16.9	1 12	7 17.90	+38 19.3	1.176	2.136	7.6	20.2
1 22	7 10.19	+3 43.9	1.623	2.561	8.4	17.0	1 22	7 4.79	+38 12.8	1.205	2.144	10.6	20.4
2 1	7 2.79	+3 41.6	1.666	2.563	11.3	17.2	2 1	6 54.40	+37 40.6	1.259	2.151	14.6	20.7
2 11	6 57.57	+3 53.0	1.732	2.565	14.4	17.3	2 11	6 48.03	+36 50.4	1.333	2.159	18.3	20.9
<b>288938</b>	2004 <i>SQ</i> <sub>42</sub>		1 9.8 82°63'	2°5'/9.3	18		<b>33632</b>	1999 <i>JP</i> <sub>78</sub>		1 9.8 200°29'	0°1'/9.7	18	
12 3	7 55.29	+27 23.0	1.505	2.304	17.8	20.9	12 3	7 51.43	+18 19.7	1.876	2.655	15.5	18.5
12 13	7 50.10	+27 39.7	1.439	2.318	13.9	20.7	12 13	7 46.71	+19 12.0	1.784	2.653	12.2	18.3
12 23	7 41.51	+27 57.1	1.394	2.332	9.4	20.5	12 23	7 39.21	+20 16.0	1.715	2.650	8.2	18.1
1 2	7 30.39	+28 9.8	1.374	2.346	4.6	20.2	1 2	7 29.47	+21 27.6	1.672	2.646	3.7	17.8
1 12	7 18.24	+28 13.1	1.381	2.360	2.9	20.2	1 12	7 18.51	+22 41.0	1.659	2.642	1.1	17.6
1 22	7 6.71	+28 5.0	1.416	2.374	7.1	20.5	1 22	7 7.60	+23 50.6	1.677	2.637	5.8	17.9
2 1	6 57.31	+27 46.3	1.477	2.387	11.5	20.7	2 1	6 58.03	+24 52.1	1.723	2.632	10.2	18.1
2 11	6 51.05	+27 20.1	1.562	2.401	15.4	21.0	2 11	6 50.87	+25 43.5	1.793	2.627	14.0	18.4
<b>324012</b>	2005 <i>UO</i> <sub>312</sub>		1 9.8 155°52'	4°3'/11.2	18		<b>335654</b>	2006 <i>PY</i> <sub>3</sub>		1 9.8 108°79'	8°4'/7.9	18	
12 3	7 48.61	+8 47.2	2.400	3.142	13.6	21.9	12 3	8 4.36	+51				

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>264034</b>	2009 QX <sub>39</sub>		1 9.8 114°05	1.5/10.6	18		<b>489755</b>	2007 YA <sub>71</sub>		1 9.8 87°47	2°0/10.2	18	
12 3	7 42.64	+15 5.5	3.877	4.627	8.7	21.8	12 3	7 49.72	+17 41.4	2.441	3.206	12.8	20.6
12 13	7 38.21	+14 58.6	3.796	4.645	6.8	21.6	12 13	7 44.37	+16 59.0	2.357	3.215	10.1	20.4
12 23	7 32.62	+14 56.1	3.741	4.662	4.7	21.5	12 23	7 37.04	+16 20.1	2.297	3.224	6.9	20.3
1 2	7 26.23	+14 57.7	3.714	4.680	2.6	21.4	1 2	7 28.30	+15 45.1	2.265	3.233	3.7	20.1
1 12	7 19.49	+15 2.5	3.720	4.697	1.5	21.3	1 12	7 18.98	+15 14.0	2.263	3.241	2.2	20.0
1 22	7 12.91	+15 9.8	3.757	4.713	3.1	21.5	1 22	7 9.95	+14 47.0	2.293	3.250	4.8	20.2
2 1	7 6.96	+15 18.8	3.825	4.730	5.2	21.6	2 1	7 2.06	+14 24.2	2.352	3.259	8.0	20.4
2 11	7 2.05	+15 28.5	3.920	4.746	7.2	21.8	2 11	6 55.96	+14 5.3	2.437	3.267	10.8	20.6
<b>416263</b>	2003 FQ <sub>24</sub>		1 9.8 358°85	8°4/ 7.6	18		<b>90304</b>	2003 EM <sub>53</sub>		1 9.8 163°06	4°8/12.2	18	
12 3	7 56.23	+41 59.1	1.786	2.567	16.2	20.4	12 3	7 47.06	+ 4 42.8	2.466	3.194	13.6	20.2
12 13	7 51.22	+43 0.4	1.713	2.566	13.4	20.2	12 13	7 42.40	+ 4 43.5	2.376	3.199	11.2	20.0
12 23	7 42.54	+43 52.5	1.661	2.566	10.7	20.0	12 23	7 35.82	+ 4 58.5	2.308	3.203	8.6	19.8
1 2	7 30.99	+44 26.1	1.633	2.566	8.7	19.9	1 2	7 27.81	+ 5 28.5	2.266	3.207	6.1	19.7
1 12	7 18.12	+44 33.9	1.631	2.566	8.6	19.9	1 12	7 19.10	+ 6 12.5	2.254	3.211	4.8	19.6
1 22	7 5.74	+44 13.3	1.656	2.566	10.4	20.0	1 22	7 10.53	+ 7 7.9	2.271	3.214	6.0	19.7
2 1	6 55.56	+43 27.3	1.705	2.566	13.1	20.2	2 1	7 2.90	+ 8 11.2	2.318	3.217	8.5	19.8
2 11	6 48.76	+42 22.5	1.776	2.567	15.9	20.4	2 11	6 56.91	+ 9 18.3	2.392	3.219	11.1	20.0
<b>377079</b>	2002 UE <sub>72</sub>		1 9.8 11°14	6°4/ 8.0	18		<b>308667</b>	2006 BF <sub>269</sub>		1 9.8 319°29	10°2/15.1	18	
12 3	7 48.66	+35 56.6	1.645	2.450	16.3	20.1	12 3	7 45.67	- 5 6.6	1.384	2.119	22.1	19.4
12 13	7 45.18	+36 50.9	1.578	2.454	13.1	19.9	12 13	7 43.15	- 4 51.8	1.285	2.099	19.4	19.1
12 23	7 38.40	+37 40.2	1.532	2.459	9.7	19.7	12 23	7 37.42	- 3 59.4	1.202	2.080	16.1	18.9
1 2	7 29.10	+38 16.7	1.510	2.465	7.0	19.6	1 2	7 28.92	- 2 22.3	1.139	2.062	12.7	18.6
1 12	7 18.66	+38 34.0	1.515	2.472	6.7	19.6	1 12	7 18.72	+ 0 0.5	1.099	2.044	10.4	18.4
1 22	7 8.68	+38 29.4	1.545	2.480	9.0	19.7	1 22	7 8.27	+ 3 2.0	1.086	2.028	11.0	18.4
2 1	7 0.66	+38 4.3	1.601	2.489	12.3	19.9	2 1	6 59.24	+ 6 28.2	1.099	2.012	14.3	18.5
2 11	6 55.64	+37 23.5	1.678	2.499	15.4	20.2	2 11	6 53.04	+10 1.2	1.136	1.997	18.5	18.7
<b>163506</b>	2002 SJ <sub>55</sub>		1 9.8 17°56	2°2/ 9.2	18		<b>456962</b>	2008 AN <sub>83</sub>		1 9.8 305°43	2°7/ 9.5	18	
12 3	7 48.24	+27 24.8	1.782	2.583	15.4	19.4	12 3	7 53.45	+29 31.1	1.586	2.386	17.0	21.1
12 13	7 44.24	+27 37.7	1.707	2.588	12.0	19.2	12 13	7 49.07	+29 23.3	1.488	2.367	13.5	20.8
12 23	7 37.46	+27 51.0	1.654	2.593	8.1	18.9	12 23	7 41.19	+29 12.3	1.410	2.348	9.3	20.5
1 2	7 28.59	+28 0.8	1.627	2.600	4.0	18.7	1 2	7 30.50	+28 53.5	1.358	2.330	4.8	20.2
1 12	7 18.81	+28 3.5	1.627	2.606	2.6	18.6	1 12	7 18.32	+28 22.9	1.332	2.311	3.0	20.0
1 22	7 9.42	+27 57.2	1.656	2.614	6.2	18.9	1 22	7 6.33	+27 39.5	1.334	2.293	7.3	20.3
2 1	7 1.64	+27 42.1	1.711	2.622	10.2	19.1	2 1	6 56.22	+26 45.6	1.363	2.275	12.1	20.5
2 11	6 56.38	+27 20.0	1.791	2.631	13.7	19.4	2 11	6 49.23	+25 45.6	1.415	2.258	16.5	20.7
<b>325792</b>	2010 RO <sub>51</sub>		1 9.8 48°65	9°1/13.6	17		<b>164203</b>	2004 ED <sub>11</sub>		1 9.8 41°89	11°1/15.5	18	
12 3	7 48.14	- 0 5.0	1.473	2.220	20.5	20.3	12 3	7 45.93	- 7 40.9	1.694	2.394	19.8	19.6
12 13	7 44.05	- 0 44.6	1.423	2.248	17.3	20.1	12 13	7 42.35	- 8 12.1	1.620	2.401	17.5	19.5
12 23	7 37.21	- 0 59.0	1.390	2.276	13.8	20.0	12 23	7 36.19	- 8 15.0	1.563	2.408	14.9	19.3
1 2	7 28.43	- 0 44.8	1.379	2.304	10.7	19.9	1 2	7 28.08	- 7 44.6	1.527	2.415	12.6	19.2
1 12	7 18.90	- 0 2.7	1.392	2.333	9.1	19.9	1 12	7 19.04	- 6 39.5	1.513	2.423	11.2	19.1
1 22	7 9.93	+ 1 3.1	1.431	2.363	9.9	20.0	1 22	7 10.22	- 5 3.3	1.525	2.431	11.5	19.1
2 1	7 2.67	+ 2 25.5	1.495	2.392	12.4	20.2	2 1	7 2.79	- 3 3.4	1.562	2.439	13.2	19.3
2 11	6 57.95	+ 3 56.0	1.582	2.421	15.2	20.5	2 11	6 57.64	- 0 49.9	1.622	2.447	15.6	19.4
<b>307749</b>	2003 UX <sub>308</sub>		1 9.8 142°50	1°3/ 9.4	18		<b>292948</b>	2006 VR <sub>99</sub>		1 9.8 83°42	1°0/ 9.6	18	
12 3	7 52.95	+23 59.7	1.956	2.739	14.9	21.6	12 3	7 55.21	+22 30.7	1.314	2.119	19.6	21.4
12 13	7 47.62	+24 27.8	1.877	2.749	11.6	21.4	12 13	7 50.39	+22 55.4	1.253	2.136	15.3	21.2
12 23	7 39.60	+24 59.7	1.821	2.757	7.7	21.2	12 23	7 41.92	+23 27.2	1.212	2.152	10.2	20.9
1 2	7 29.55	+25 31.5	1.792	2.766	3.6	20.9	1 2	7 30.70	+24 0.8	1.194	2.169	4.6	20.7
1 12	7 18.57	+25 58.8	1.793	2.774	1.8	20.8	1 12	7 18.32	+24 30.4	1.203	2.186	1.8	20.5
1 22	7 7.89	+26 18.7	1.823	2.781	5.7	21.1	1 22	7 6.59	+24 51.7	1.240	2.202	7.2	20.9
2 1	6 58.71	+26 30.1	1.882	2.788	9.7	21.3	2 1	6 57.14	+25 3.7	1.302	2.218	12.2	21.2
2 11	6 51.95	+26 33.8	1.965	2.794	13.1	21.6	2 11	6 51.07	+25 7.3	1.385	2.234	16.5	21.5
<b>88998</b>	2001 TV <sub>76</sub>		1 9.8 191°44	1°4/ 9.3	18		<b>467479</b>	2006 SS <sub>135</sub>		1 9.8 160°34	2°8/10.8	18	
12 3	7 50.15	+24 16.3	2.035	2.821	14.3	19.9	12 3	7 46.87	+12 30.4	3.010	3.755	11.0	21.5
12 13	7 45.46	+24 43.5	1.947	2.820	11.1	19.7	12 13	7 41.85	+12 2.2	2.919	3.761	8.8	21.3
12 23	7 38.20	+25 14.5	1.883	2.820	7.5	19.5	12 23	7 35.24	+11 40.1	2.852	3.766	6.3	21.1
1 2	7 28.96	+25 45.6	1.845	2.819	3.5	19.2	1 2	7 27.50	+11 24.6	2.813	3.771	3.9	21.0
1 12	7 18.74	+26 12.7	1.837	2.817	1.8	19.1	1 12	7 19.24	+11 15.5	2.805	3.776	2.8	20.9
1 22	7 8.70	+26 32.9	1.858	2.816	5.6	19.3	1 22	7 11.14	+11 12.2	2.829	3.780	4.4	21.0
2 1	7 0.01	+26 44.9	1.907	2.814	9.5	19.6	2 1	7 3.87	+11 14.0	2.882	3.783	6.9	21.2
2 11	6 53.59	+26 49.1	1.981	2.812	12.9	19.8	2 11	6 57.98	+11 19.6	2.963	3.786	9.3	21.4
<b>413421</b>	2004 VA <sub>15</sub>		1 9.8 31°67	13°6/ 9.3	15 C		<b>84787</b>	2002 XZ <sub>78</sub>		1 9.8 293°54	3°7/ 7.7	18	
12 3	8 20.99	+47 13.4	1.084	1.864	24.5	21.0	12 3	7 48.82	+29 5.8	2.364	3.148	12.6	18.8
12 13	8 11.32	+49 37.8	1.096	1.937	20.2	20.9	12 13	7 44.37	+30 30.9	2.276	3.146	9.9	18.6
12 23	7 55.70	+51 30.9	1.126	2.009	16.5	21.0	12 23	7 37.51	+31 59.1	2.213	3.144	6.9	18.4
1 2	7 36.39	+52 36.5	1.176	2.081	14.1	21.0	1 2	7 28.71	+33 24.4	2.179	3.142	4.3	18.3
1 12	7 16.88	+52 48.2	1.250	2.153	13.7	21.2	1 12	7 18.86	+34 40.5	2.174	3.140	4.1	18.2
1 22	7 0.42	+52 12.8	1.347	2.224	14.8	21.5	1 22	7 9.01	+35 42.6	2.200	3.138	6.5	18.4
2 1	6 48.93	+51 4.3	1.465	2.294	16.7	21.8	2 1	7 0.26	+36 28.6	2.255	3.136	9.5	18.6
2 11	6 42.91	+49 37.6	1.601	2.363	18.6	22.1	2 11	6 53.54	+36 58.9	2.335	3.134	12.3	18.8
<b>20086</b>	1994 LW		1 9.8 172°50	4°1/12.2	18		<b>180697</b>	2004 HF <sub>32</sub>		1 9.8 351°79	0°9/10.1	18	
12 3	7 43.81	+ 0 42.6	4.470	5.151	8.5	24.1	12 3	7 45.70	+18 47.7	1.384	2.197	18.	

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>60064</b>	1999 <i>TG</i> <sub>123</sub>		1 9.8 15°94	0°6/10.0	18		<b>165893</b>	2001 <i>SF</i> <sub>201</sub>		1 9.8 182°08	6°3/7.2	18	
12 3	7 47.36	+19 2.1	1.952	2.739	14.8	19.1	12 3	7 53.87	+42 33.7	2.687	3.445	11.9	20.7
12 13	7 43.30	+19 15.3	1.867	2.740	11.6	18.9	12 13	7 48.20	+43 29.4	2.607	3.445	9.9	20.5
12 23	7 36.76	+19 35.9	1.805	2.741	7.8	18.6	12 23	7 39.96	+44 17.6	2.551	3.445	7.9	20.4
1 2	7 28.34	+20 1.7	1.768	2.742	3.6	18.4	1 2	7 29.78	+44 52.5	2.521	3.445	6.6	20.3
1 12	7 19.00	+20 29.8	1.760	2.743	1.1	18.2	1 12	7 18.67	+45 9.4	2.520	3.445	6.5	20.3
1 22	7 9.85	+20 57.1	1.781	2.744	5.3	18.5	1 22	7 7.81	+45 6.3	2.548	3.444	7.9	20.4
2 1	7 2.01	+21 21.5	1.830	2.745	9.3	18.7	2 1	6 58.34	+44 44.2	2.602	3.443	9.8	20.5
2 11	6 56.34	+21 41.9	1.904	2.747	12.9	19.0	2 11	6 51.15	+44 6.8	2.680	3.442	11.9	20.6
<b>109844</b>	2001 <i>RN</i> <sub>127</sub>		1 9.8 58°89	1°7/10.4	18		<b>271874</b>	2004 <i>TM</i> <sub>337</sub>		1 9.8 152°13	2°1/10.5	18	
12 3	7 48.91	+16 5.5	1.653	2.442	16.9	20.0	12 3	7 48.03	+15 17.2	2.185	2.954	13.9	21.3
12 13	7 44.72	+16 19.1	1.585	2.457	13.3	19.8	12 13	7 43.47	+15 13.0	2.098	2.958	11.0	21.2
12 23	7 37.77	+16 43.8	1.539	2.473	9.1	19.6	12 23	7 36.71	+15 17.1	2.034	2.961	7.7	20.9
1 2	7 28.79	+17 17.5	1.518	2.489	4.5	19.4	1 2	7 28.30	+15 28.7	1.996	2.964	4.1	20.7
1 12	7 18.91	+17 56.6	1.524	2.506	1.9	19.2	1 12	7 19.11	+15 46.0	1.988	2.967	2.2	20.6
1 22	7 9.43	+18 37.1	1.559	2.522	5.9	19.5	1 22	7 10.10	+16 7.1	2.010	2.970	5.1	20.8
2 1	7 1.55	+19 15.8	1.621	2.539	10.1	19.8	2 1	7 2.25	+16 29.9	2.060	2.972	8.6	21.0
2 11	6 56.17	+19 50.6	1.707	2.556	13.9	20.1	2 11	6 56.33	+16 52.9	2.136	2.974	11.9	21.2
<b>120464</b>	1991 <i>PV</i> <sub>5</sub>		1 9.8 117°14	1°0/10.1	18		<b>182501</b>	2001 <i>SH</i> <sub>219</sub>		1 9.8 167°88	0°9/9.5	18	
12 3	7 54.57	+17 33.3	1.734	2.511	16.7	20.7	12 3	7 50.86	+23 33.5	2.048	2.831	14.3	21.0
12 13	7 48.97	+17 51.7	1.665	2.531	13.1	20.5	12 13	7 45.97	+23 52.4	1.962	2.834	11.1	20.8
12 23	7 40.54	+18 19.5	1.617	2.550	8.8	20.3	12 23	7 38.53	+24 15.0	1.900	2.836	7.5	20.6
1 2	7 30.01	+18 53.9	1.596	2.568	4.1	20.0	1 2	7 29.17	+24 38.1	1.864	2.838	3.4	20.3
1 12	7 18.57	+19 30.9	1.603	2.586	1.4	19.9	1 12	7 18.88	+24 58.0	1.857	2.839	1.4	20.2
1 22	7 7.57	+20 6.8	1.641	2.602	5.8	20.2	1 22	7 8.81	+25 12.3	1.881	2.840	5.4	20.5
2 1	6 58.25	+20 38.9	1.706	2.618	10.1	20.5	2 1	7 0.10	+25 19.8	1.932	2.841	9.3	20.7
2 11	6 51.53	+21 6.2	1.796	2.633	13.8	20.8	2 11	6 53.64	+25 21.0	2.009	2.841	12.7	20.9
<b>132797</b>	2002 <i>PW</i> <sub>166</sub>		1 9.8 37°66	4°9/11.3	18		<b>8585</b>	<i>Purpurea</i>		1 9.8 252°45	3°6/8.4	18	
12 3	7 46.13	+8 58.3	2.107	2.865	14.8	20.2	12 3	7 49.46	+33 12.0	2.720	3.495	11.3	18.0
12 13	7 42.00	+8 21.0	2.023	2.868	12.1	20.0	12 13	7 44.54	+33 44.1	2.620	3.482	9.0	17.8
12 23	7 35.72	+7 55.0	1.960	2.871	9.0	19.9	12 23	7 37.43	+34 14.0	2.544	3.469	6.5	17.6
1 2	7 27.83	+7 41.7	1.923	2.874	6.1	19.7	1 2	7 28.65	+34 37.5	2.496	3.456	4.2	17.5
1 12	7 19.18	+7 41.5	1.914	2.877	4.9	19.6	1 12	7 19.02	+34 51.1	2.478	3.442	3.8	17.4
1 22	7 10.74	+7 53.3	1.934	2.881	6.5	19.7	1 22	7 9.48	+34 52.5	2.490	3.428	5.8	17.5
2 1	7 3.43	+8 15.1	1.981	2.885	9.4	19.9	2 1	7 1.01	+34 41.9	2.530	3.415	8.5	17.7
2 11	6 58.02	+8 43.7	2.053	2.888	12.4	20.1	2 11	6 54.39	+34 20.9	2.597	3.400	11.1	17.8
<b>130986</b>	2000 <i>WD</i> <sub>138</sub>		1 9.8 23°73	1°2/9.5	18		<b>34649</b>	2000 <i>WB</i> <sub>103</sub>		1 9.8 337°32	3°7/11.3	18	
12 3	7 49.03	+23 14.7	1.237	2.058	19.7	19.8	12 3	7 43.40	+10 1.8	2.332	3.092	13.4	18.6
12 13	7 45.90	+23 32.4	1.173	2.065	15.4	19.6	12 13	7 39.80	+9 52.4	2.238	3.087	10.9	18.4
12 23	7 39.13	+23 56.5	1.128	2.073	10.3	19.3	12 23	7 34.24	+9 54.0	2.166	3.082	8.0	18.2
1 2	7 29.55	+24 22.5	1.106	2.082	4.7	19.0	1 2	7 27.20	+10 7.1	2.121	3.078	5.1	18.0
1 12	7 18.71	+24 44.8	1.109	2.092	1.9	18.9	1 12	7 19.43	+10 30.9	2.104	3.074	3.7	17.9
1 22	7 8.40	+24 59.6	1.138	2.102	7.3	19.2	1 22	7 11.75	+11 3.3	2.116	3.070	5.5	18.0
2 1	7 0.30	+25 5.5	1.191	2.113	12.5	19.5	2 1	7 5.03	+11 41.9	2.157	3.066	8.4	18.2
2 11	6 55.52	+25 3.5	1.266	2.126	17.0	19.8	2 11	6 59.97	+12 23.7	2.223	3.063	11.4	18.4
<b>284161</b>	2005 <i>YM</i> <sub>66</sub>		1 9.8 137°53	1°4/9.5	18		<b>222517</b>	2001 <i>TY</i> <sub>128</sub>		1 9.8 154°88	2°6/11.2	18	
12 3	7 56.43	+25 49.6	1.745	2.531	16.3	21.4	12 3	7 41.44	+10 27.2	3.601	4.343	9.4	21.2
12 13	7 50.60	+25 53.0	1.668	2.540	12.7	21.2	12 13	7 37.50	+10 19.6	3.508	4.346	7.6	21.1
12 23	7 41.73	+25 57.5	1.614	2.550	8.5	21.0	12 23	7 32.32	+10 18.9	3.439	4.350	5.5	20.9
1 2	7 30.58	+25 59.1	1.585	2.558	4.0	20.7	1 2	7 26.23	+10 25.2	3.398	4.353	3.5	20.8
1 12	7 18.45	+25 54.4	1.585	2.567	1.9	20.6	1 12	7 19.72	+10 37.8	3.387	4.356	2.6	20.7
1 22	7 6.79	+25 41.8	1.615	2.574	6.2	20.9	1 22	7 13.31	+10 55.7	3.408	4.358	3.8	20.8
2 1	6 56.96	+25 22.1	1.673	2.581	10.5	21.1	2 1	7 7.51	+11 17.7	3.458	4.361	5.8	21.0
2 11	6 49.92	+24 57.4	1.755	2.588	14.2	21.4	2 11	7 2.77	+11 42.3	3.537	4.364	7.9	21.1
<b>347248</b>	2011 <i>KX</i> <sub>1</sub>		1 9.8 191°78	2°0/10.9	18		<b>114485</b>	2003 <i>AJ</i> <sub>55</sub>		1 9.8 58°37	3°3/9.3	17	
12 3	7 45.43	+12 41.4	3.115	3.863	10.6	22.1	12 3	7 56.63	+28 18.5	1.235	2.047	20.2	19.7
12 13	7 40.82	+12 53.7	3.015	3.861	8.5	21.9	12 13	7 51.72	+28 40.3	1.182	2.068	15.8	19.5
12 23	7 34.65	+13 13.8	2.939	3.858	6.0	21.7	12 23	7 42.88	+29 2.2	1.149	2.089	10.7	19.3
1 2	7 27.30	+13 41.1	2.892	3.855	3.4	21.6	1 2	7 31.16	+29 17.4	1.139	2.111	5.5	19.0
1 12	7 19.36	+14 13.9	2.875	3.852	2.0	21.5	1 12	7 18.38	+29 19.9	1.154	2.132	3.7	19.0
1 22	7 11.49	+14 50.6	2.891	3.848	3.9	21.6	1 22	7 6.53	+29 8.0	1.196	2.154	8.0	19.3
2 1	7 4.35	+15 28.9	2.937	3.843	6.6	21.8	2 1	6 57.30	+28 43.5	1.263	2.176	12.8	19.6
2 11	6 58.50	+16 7.2	3.010	3.838	9.1	21.9	2 11	6 51.71	+28 10.6	1.351	2.199	16.9	20.0
<b>32425</b>	2000 <i>RL</i> <sub>64</sub>		1 9.8 357°03	9°5/11.6	18		<b>288809</b>	2004 <i>RA</i> <sub>169</sub>		1 9.8 139°81	3°7/10.9	18	
12 3	7 45.51	+3 25.1	1.542	2.305	19.1	18.2	12 3	7 51.98	+12 16.1	1.794	2.561	16.6	22.0
12 13	7 42.32	+1 55.0	1.465	2.301	16.2	18.0	12 13	7 46.92	+12 0.7	1.715	2.570	13.3	21.8
12 23	7 36.36	+0 41.2	1.406	2.299	13.2	17.8	12 23	7 39.20	+11 57.2	1.657	2.579	9.5	21.6
1 2	7 28.25	-0 10.4	1.370	2.297	10.5	17.7	1 2	7 29.48	+12 5.6	1.625	2.588	5.6	21.4
1 12	7 19.08	-0 35.7	1.357	2.297	9.5	17.6	1 12	7 18.82	+12 24.5	1.622	2.596	3.7	21.3
1 22	7 10.13	-0 34.2	1.370	2.297	10.7	17.7	1 22	7 8.46	+12 51.5	1.647	2.604	6.4	21.5
2 1	7 2.66	-0 8.6	1.406	2.298	13.4	17.8	2 1	6 59.59	+13 23.7	1.700	2.611	10.2	21.7
2 11	6 57.65	+0 35.1	1.464	2.300	16.5	18.0	2 11	6 53.10	+13 58.1	1.777	2.617	13.8	21.9
<b>36549</b>	2000 <i>QP</i> <sub>99</sub>		1 9.8 117°98	0°4/9.7	18		<b>519005</b>	2010 <i>JA</i> <sub>93</sub>		1 9.8 106°24	4°4/11.2	18	
12 3	7 53.53	+21 11.4	1.790	2.574	16.0	20.1	12 3						

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>187818</b>	1999 TA <sub>229</sub>		1 9.8 60°64	1.6/10.3	18		<b>422944</b>	2002 TA <sub>371</sub>		1 9.8 184°96	2.2/10.9	17	
12 3	7 53.97	+16 29.8	1.175	1.982	21.4	20.0	12 3	7 45.81	+12 48.6	2.635	3.391	12.2	21.4
12 13	7 49.46	+16 48.1	1.126	2.008	16.8	19.8	12 13	7 41.43	+13 2.7	2.540	3.391	9.7	21.2
12 23	7 41.29	+17 20.7	1.096	2.034	11.3	19.5	12 23	7 35.23	+13 26.2	2.469	3.390	6.8	21.0
1 2	7 30.45	+18 4.0	1.088	2.061	5.4	19.3	1 2	7 27.64	+13 58.1	2.425	3.390	3.8	20.8
1 12	7 18.60	+18 52.1	1.106	2.088	1.9	19.1	1 12	7 19.38	+14 36.6	2.412	3.389	2.2	20.7
1 22	7 7.55	+19 39.3	1.150	2.115	7.1	19.6	1 22	7 11.20	+15 19.2	2.429	3.388	4.5	20.9
2 1	6 58.90	+20 21.5	1.219	2.142	12.3	19.9	2 1	7 3.90	+16 3.5	2.476	3.386	7.5	21.1
2 11	6 53.64	+20 56.8	1.310	2.168	16.6	20.3	2 11	6 58.14	+16 47.0	2.551	3.384	10.3	21.2
<b>397493</b>	2007 RE <sub>149</sub>		1 9.8 153°61	5°0/ 8.6	18		<b>167538</b>	2004 AM <sub>1</sub>		1 9.8 324°51	0°1/ 9.8	18	
12 3	7 57.61	+34 20.6	1.900	2.681	15.3	21.3	12 3	7 45.73	+21 4.4	1.962	2.755	14.5	19.7
12 13	7 51.66	+34 59.4	1.823	2.687	12.2	21.1	12 13	7 42.22	+21 19.2	1.866	2.743	11.4	19.4
12 23	7 42.54	+35 34.0	1.769	2.693	8.8	20.9	12 23	7 36.21	+21 40.0	1.793	2.731	7.7	19.2
1 2	7 31.02	+35 57.6	1.740	2.699	5.8	20.7	1 2	7 28.22	+22 4.6	1.745	2.720	3.5	18.9
1 12	7 18.41	+36 4.8	1.741	2.704	5.2	20.7	1 12	7 19.20	+22 29.6	1.726	2.708	1.0	18.7
1 22	7 6.25	+35 53.3	1.769	2.708	7.7	20.9	1 22	7 10.26	+22 52.3	1.735	2.698	5.4	19.0
2 1	6 55.96	+35 24.7	1.826	2.712	11.1	21.1	2 1	7 2.55	+23 10.6	1.772	2.688	9.6	19.2
2 11	6 48.56	+34 43.4	1.906	2.715	14.2	21.3	2 11	6 57.01	+23 23.8	1.834	2.678	13.2	19.4
<b>296761</b>	2009 UP <sub>41</sub>		1 9.8 319°67	0°6/ 9.7	18		<b>494796</b>	2006 WV <sub>181</sub>		1 9.8 154°18	4°4/10.9	18	
12 3	7 48.71	+22 20.3	1.951	2.740	14.7	21.5	12 3	7 49.87	+11 32.1	1.963	2.725	15.5	21.7
12 13	7 44.45	+22 37.5	1.864	2.739	11.5	21.2	12 13	7 45.10	+10 50.3	1.877	2.728	12.6	21.5
12 23	7 37.61	+22 59.6	1.800	2.738	7.7	21.0	12 23	7 37.91	+10 18.1	1.814	2.731	9.2	21.3
1 2	7 28.80	+23 23.7	1.762	2.737	3.5	20.8	1 2	7 28.90	+9 57.0	1.776	2.733	5.9	21.1
1 12	7 19.01	+23 46.4	1.753	2.736	1.2	20.6	1 12	7 19.04	+9 47.2	1.767	2.735	4.4	21.0
1 22	7 9.43	+24 4.7	1.773	2.735	5.5	20.9	1 22	7 9.41	+9 48.0	1.786	2.737	6.5	21.1
2 1	7 1.19	+24 17.2	1.821	2.734	9.6	21.1	2 1	7 1.07	+9 57.9	1.833	2.739	9.9	21.3
2 11	6 55.22	+24 23.9	1.894	2.733	13.1	21.3	2 11	6 54.88	+10 14.4	1.905	2.741	13.2	21.6
<b>301228</b>	2009 BN <sub>13</sub>		1 9.8 9°50	5°1/11.6	18		<b>264685</b>	2001 YH <sub>136</sub>		1 9.8 20°38	4°1/10.1	18	
12 3	7 44.38	+9 28.8	1.213	2.017	21.0	19.5	12 3	7 53.77	+15 44.6	1.814	2.586	16.3	20.0
12 13	7 42.21	+9 27.9	1.143	2.018	17.1	19.2	12 13	7 48.28	+14 26.4	1.728	2.587	13.1	19.8
12 23	7 36.70	+9 49.0	1.091	2.021	12.5	19.0	12 23	7 40.09	+13 12.0	1.664	2.588	9.3	19.6
1 2	7 28.55	+10 33.0	1.061	2.024	7.7	18.7	1 2	7 29.89	+12 3.7	1.627	2.589	5.6	19.4
1 12	7 19.08	+11 36.8	1.054	2.029	5.1	18.6	1 12	7 18.77	+11 3.8	1.618	2.590	4.2	19.3
1 22	7 9.91	+12 54.2	1.073	2.035	8.0	18.8	1 22	7 8.00	+10 14.1	1.639	2.591	6.9	19.5
2 1	7 2.61	+14 17.2	1.115	2.042	12.7	19.0	2 1	6 58.78	+9 35.7	1.688	2.593	10.7	19.7
2 11	6 58.36	+15 38.6	1.179	2.050	17.2	19.3	2 11	6 51.99	+9 8.0	1.762	2.594	14.2	19.9
<b>331154</b>	2010 XL <sub>25</sub>		1 9.8 312°08	8°1/11.2	17		<b>485184</b>	2010 TM <sub>19</sub>		1 9.8 82°10	15°8/20.9	18	
12 3	7 45.94	+5 24.3	1.695	2.456	17.7	20.4	12 3	7 48.30	-23 53.2	2.010	2.577	20.4	20.3
12 13	7 42.67	+4 12.3	1.595	2.436	15.0	20.2	12 13	7 43.88	-25 19.0	1.958	2.595	19.2	20.2
12 23	7 36.70	+3 13.2	1.515	2.415	11.9	19.9	12 23	7 37.06	-26 13.6	1.918	2.613	17.9	20.1
1 2	7 28.51	+2 32.0	1.458	2.395	9.2	19.7	1 2	7 28.49	-26 30.3	1.894	2.631	16.8	20.1
1 12	7 19.07	+2 11.9	1.426	2.375	8.1	19.6	1 12	7 19.16	-26 5.4	1.887	2.648	16.0	20.1
1 22	7 9.60	+2 14.0	1.421	2.356	9.6	19.7	1 22	7 10.15	-24 59.6	1.900	2.666	15.8	20.1
2 1	7 1.37	+2 36.6	1.440	2.337	12.7	19.8	2 1	7 2.49	-23 18.0	1.933	2.683	16.1	20.1
2 11	6 55.46	+3 15.0	1.481	2.318	16.2	20.0	2 11	6 57.00	-21 9.3	1.985	2.700	16.9	20.2
<b>325799</b>	2010 RV <sub>79</sub>		1 9.8 134°22	16°9/14.9	18		<b>457548</b>	2008 YL <sub>20</sub>		1 9.8 39°86	0°1/ 9.9	17	
12 3	7 50.99	-11 27.8	1.358	2.052	24.2	20.5	12 3	7 49.74	+19 34.7	1.229	2.044	20.1	21.3
12 13	7 47.01	-13 30.1	1.295	2.057	22.0	20.3	12 13	7 46.30	+19 59.2	1.172	2.060	15.7	21.1
12 23	7 39.75	-15 1.6	1.247	2.062	19.8	20.1	12 23	7 39.31	+20 34.9	1.133	2.076	10.5	20.8
1 2	7 29.89	-15 51.7	1.216	2.066	17.9	20.0	1 2	7 29.65	+21 17.2	1.118	2.093	4.7	20.6
1 12	7 18.72	-15 53.0	1.204	2.070	16.9	20.0	1 12	7 18.84	+22 0.4	1.128	2.111	1.3	20.4
1 22	7 7.81	-15 5.2	1.212	2.074	17.2	20.0	1 22	7 8.64	+22 39.1	1.164	2.129	7.0	20.8
2 1	6 58.70	-13 34.5	1.240	2.078	18.6	20.1	2 1	7 0.62	+23 10.3	1.225	2.148	12.2	21.1
2 11	6 52.55	-11 33.0	1.287	2.081	20.6	20.3	2 11	6 55.84	+23 33.2	1.308	2.168	16.5	21.4
<b>451074</b>	2009 BV <sub>31</sub>		1 9.8 24°89	1°4/ 9.5	16		<b>26989</b>	1997 WO <sub>7</sub>		1 9.8 12°76	4°2/ 8.1	18	
12 3	7 48.63	+22 51.4	1.202	2.026	20.0	21.4	12 3	7 48.64	+31 2.0	2.030	2.823	14.0	17.6
12 13	7 45.71	+23 20.7	1.141	2.034	15.6	21.2	12 13	7 44.56	+32 3.0	1.951	2.825	11.1	17.4
12 23	7 39.09	+23 57.9	1.098	2.043	10.4	20.9	12 23	7 37.79	+33 4.2	1.895	2.826	7.8	17.2
1 2	7 29.61	+24 37.7	1.077	2.053	4.7	20.6	1 2	7 28.93	+33 59.7	1.865	2.828	4.9	17.0
1 12	7 18.82	+25 13.6	1.082	2.064	2.1	20.5	1 12	7 19.02	+34 43.5	1.864	2.830	4.5	17.0
1 22	7 8.57	+25 40.6	1.112	2.076	7.5	20.9	1 22	7 9.31	+35 12.0	1.891	2.833	7.1	17.2
2 1	7 0.56	+25 56.9	1.166	2.088	12.7	21.2	2 1	7 1.01	+35 24.3	1.946	2.836	10.3	17.4
2 11	6 55.93	+26 3.0	1.241	2.102	17.2	21.5	2 11	6 55.10	+35 22.2	2.024	2.839	13.3	17.6
<b>499969</b>	2011 KN <sub>23</sub>		1 9.8 142°37	1°7/ 9.1	18		<b>426465</b>	2013 QO <sub>82</sub>		1 9.8 200°13	0°6/10.0	18	
12 3	7 48.38	+26 21.9	2.631	3.408	11.6	21.9	12 3	7 48.89	+19 49.0	2.185	2.963	13.7	21.8
12 13	7 43.51	+26 53.5	2.548	3.415	9.0	21.7	12 13	7 44.26	+19 50.7	2.094	2.962	10.7	21.6
12 23	7 36.63	+27 26.6	2.488	3.422	6.1	21.5	12 23	7 37.32	+19 57.7	2.026	2.960	7.2	21.4
1 2	7 28.27	+27 57.9	2.457	3.429	3.0	21.3	1 2	7 28.65	+20 8.1	1.985	2.958	3.4	21.2
1 12	7 19.21	+28 24.2	2.457	3.435	2.0	21.3	1 12	7 19.12	+20 19.9	1.974	2.956	1.0	21.0
1 22	7 10.33	+28 43.3	2.487	3.441	4.8	21.5	1 22	7 9.77	+20 31.1	1.992	2.954	4.9	21.3
2 1	7 2.51	+28 54.4	2.547	3.447	7.8	21.7	2 1	7 1.60	+20 40.4	2.039	2.951	8.7	21.5
2 11	6 56.43	+28 57.9	2.633	3.452	10.5	21.9	2 11	6 55.43	+20 47.3	2.112	2.948	12.0	21.7
<b>317049</b>	2001 SO <sub>49</sub>		1 9.8 137°43	6°1/ 7.6	18		<b>353495</b>	2011 SQ <sub>82</sub>		1 9.8 59°46	2°5/10.5	17	
12 3	7 56.21	+37 53.3	2.184	2.956	13.9	20.9	12 3	7 50.83	+15 46.1	1.422	2.218	18.9	

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>439974</b>	2001 <i>WH</i> <sub>15</sub>		1 9.8	74°80	6°6/10.8	16	<b>238058</b>	2003 <i>CC</i> <sub>2</sub>		1 9.9	12°56	0°6/10.0	18
12 3	8 1.83	+10 16.8	1.526	2.280	19.6	20.4	12 3	7 48.74	+17 25.9	1.301	2.110	19.6	19.8
12 13	7 54.28	+8 40.4	1.477	2.319	15.9	20.2	12 13	7 45.65	+18 3.2	1.227	2.111	15.4	19.5
12 23	7 43.81	+7 16.7	1.449	2.357	11.7	20.1	12 23	7 39.08	+18 55.6	1.172	2.113	10.5	19.2
1 2	7 31.40	+6 9.6	1.447	2.395	8.1	20.0	1 2	7 29.70	+19 59.4	1.140	2.115	4.8	18.9
1 12	7 18.46	+5 21.9	1.473	2.432	6.7	20.0	1 12	7 18.87	+21 7.9	1.134	2.117	1.3	18.7
1 22	7 6.44	+4 53.9	1.528	2.468	8.6	20.2	1 22	7 8.29	+22 14.1	1.155	2.120	7.1	19.1
2 1	6 56.55	+4 43.6	1.611	2.503	11.9	20.4	2 1	6 59.63	+23 12.4	1.200	2.123	12.4	19.4
2 11	6 49.57	+4 47.3	1.716	2.538	15.0	20.7	2 11	6 54.16	+24 0.3	1.268	2.127	17.0	19.7
<b>288580</b>	2004 <i>HE</i> <sub>65</sub>		1 9.8	9°12	2°5/ 9.6	18	<b>261527</b>	2005 <i>WC</i> <sub>84</sub>		1 9.9	24°44	2°4/ 9.1	18
12 3	7 54.11	+29 43.0	1.497	2.301	17.7	19.5	12 3	7 49.77	+26 21.3	1.874	2.668	15.0	20.4
12 13	7 49.41	+29 24.4	1.421	2.302	14.0	19.3	12 13	7 45.50	+26 57.5	1.792	2.669	11.7	20.2
12 23	7 41.26	+29 1.7	1.365	2.303	9.5	19.0	12 23	7 38.45	+27 36.7	1.733	2.670	7.9	20.0
1 2	7 30.51	+28 30.7	1.333	2.305	4.8	18.7	1 2	7 29.26	+28 14.0	1.699	2.671	4.0	19.8
1 12	7 18.65	+27 49.0	1.329	2.308	2.8	18.6	1 12	7 19.01	+28 44.7	1.695	2.673	2.7	19.7
1 22	7 7.38	+26 56.7	1.352	2.312	7.0	18.9	1 22	7 9.00	+29 5.2	1.718	2.674	6.3	19.9
2 1	6 58.23	+25 57.3	1.401	2.316	11.7	19.2	2 1	7 0.48	+29 14.5	1.769	2.675	10.2	20.1
2 11	6 52.24	+24 55.0	1.474	2.321	15.7	19.4	2 11	6 54.43	+29 13.8	1.844	2.677	13.7	20.4
<b>255986</b>	2006 <i>TL</i> <sub>82</sub>		1 9.8	9°02	0°1/ 9.9	18	<b>50617</b>	2000 <i>EG</i> <sub>62</sub>		1 9.9	166°65	0°6/ 9.6	18
12 3	7 48.58	+21 42.0	1.461	2.269	17.8	20.6	12 3	7 47.94	+23 3.2	2.802	3.572	11.2	20.2
12 13	7 45.09	+21 38.0	1.385	2.270	14.0	20.4	12 13	7 43.01	+23 19.6	2.712	3.576	8.7	20.0
12 23	7 38.41	+21 39.7	1.330	2.271	9.4	20.1	12 23	7 36.24	+23 38.7	2.646	3.580	5.8	19.8
1 2	7 29.28	+21 44.5	1.299	2.274	4.3	19.8	1 2	7 28.11	+23 58.2	2.610	3.583	2.6	19.6
1 12	7 18.99	+21 49.4	1.294	2.277	1.2	19.6	1 12	7 19.34	+24 15.8	2.604	3.586	1.0	19.5
1 22	7 9.07	+21 51.8	1.316	2.281	6.5	20.0	1 22	7 10.73	+24 29.8	2.629	3.588	4.1	19.7
2 1	7 0.97	+21 51.0	1.364	2.285	11.4	20.3	2 1	7 3.06	+24 39.3	2.685	3.590	7.2	19.9
2 11	6 55.76	+21 46.9	1.434	2.290	15.6	20.5	2 11	6 56.98	+24 44.1	2.767	3.592	9.9	20.1
<b>217563</b>	2007 <i>PJ</i> <sub>17</sub>		1 9.8	88°02	2°0/10.5	18	<b>49862</b>	1999 <i>XC</i> <sub>104</sub>		1 9.9	23°36	5°4/ 8.1	17
12 3	7 51.78	+15 1.7	1.614	2.396	17.5	20.4	12 3	7 46.73	+25 21.9	0.912	1.760	22.9	17.5
12 13	7 47.02	+15 18.7	1.547	2.415	13.8	20.2	12 13	7 45.38	+27 8.9	0.865	1.772	17.8	17.3
12 23	7 39.38	+15 48.3	1.502	2.433	9.5	19.9	12 23	7 39.51	+29 6.5	0.836	1.785	12.1	17.0
1 2	7 29.61	+16 28.1	1.481	2.452	4.8	19.7	1 2	7 30.00	+31 1.5	0.827	1.800	6.8	16.8
1 12	7 18.91	+17 14.2	1.489	2.469	2.1	19.6	1 12	7 18.81	+32 38.9	0.842	1.816	6.0	16.8
1 22	7 8.64	+18 2.1	1.525	2.487	6.0	19.9	1 22	7 8.32	+33 48.4	0.879	1.834	10.6	17.1
2 1	7 0.05	+18 48.1	1.588	2.504	10.4	20.2	2 1	7 0.71	+34 27.6	0.937	1.854	15.7	17.5
2 11	6 54.09	+19 29.7	1.675	2.521	14.2	20.4	2 11	6 57.31	+34 40.8	1.014	1.875	20.2	17.8
<b>500153</b>	2012 <i>DW</i> <sub>66</sub>		1 9.8	270°94	0°9/ 9.6	17	<b>468253</b>	2015 <i>BQ</i> <sub>291</sub>		1 9.9	354°71	2°6/10.9	18
12 3	7 50.04	+23 15.8	1.924	2.713	14.9	22.1	12 3	7 44.63	+12 42.0	2.013	2.788	14.8	21.1
12 13	7 45.75	+23 33.6	1.823	2.697	11.7	21.9	12 13	7 41.13	+12 55.5	1.925	2.786	11.8	20.9
12 23	7 38.69	+23 56.0	1.744	2.682	7.9	21.6	12 23	7 35.36	+13 21.3	1.858	2.785	8.3	20.6
1 2	7 29.42	+24 19.9	1.692	2.666	3.6	21.3	1 2	7 27.83	+13 58.6	1.817	2.783	4.6	20.4
1 12	7 18.93	+24 41.4	1.668	2.650	1.5	21.1	1 12	7 19.41	+14 45.0	1.804	2.782	2.7	20.3
1 22	7 8.47	+24 57.5	1.673	2.634	5.8	21.4	1 22	7 11.11	+15 36.9	1.821	2.782	5.4	20.5
2 1	6 59.33	+25 6.6	1.706	2.617	10.2	21.6	2 1	7 3.96	+16 30.6	1.865	2.782	9.1	20.7
2 11	6 52.56	+25 9.0	1.763	2.601	14.0	21.8	2 11	6 58.78	+17 22.9	1.935	2.782	12.5	20.9
<b>87921</b>	2000 <i>SC</i> <sub>318</sub>		1 9.9	204°25	1°5/ 9.4	18	<b>368808</b>	2005 <i>YR</i> <sub>118</sub>		1 9.9	338°57	1°8/ 9.4	18
12 3	7 52.96	+27 9.1	2.665	3.432	11.7	20.5	12 3	7 49.43	+25 50.6	1.867	2.662	15.0	21.2
12 13	7 47.07	+27 16.3	2.564	3.426	9.2	20.3	12 13	7 45.22	+26 7.9	1.782	2.659	11.8	21.0
12 23	7 39.04	+27 23.3	2.488	3.420	6.2	20.1	12 23	7 38.26	+26 27.5	1.718	2.657	7.9	20.8
1 2	7 29.40	+27 27.1	2.441	3.412	3.0	19.9	1 2	7 29.17	+26 45.4	1.681	2.654	3.8	20.5
1 12	7 18.97	+27 25.3	2.425	3.404	1.8	19.8	1 12	7 19.05	+26 57.8	1.672	2.652	2.1	20.4
1 22	7 8.70	+27 16.5	2.440	3.395	4.7	20.0	1 22	7 9.16	+27 2.3	1.691	2.650	6.0	20.6
2 1	6 59.52	+27 0.9	2.486	3.386	7.9	20.2	2 1	7 0.76	+26 58.3	1.738	2.648	10.1	20.9
2 11	6 52.20	+26 39.8	2.559	3.375	10.8	20.4	2 11	6 54.81	+26 47.0	1.809	2.647	13.7	21.1
<b>483801</b>	2005 <i>WL</i> <sub>11</sub>		1 9.9	350°77	4°1/ 8.6	18	<b>240468</b>	2004 <i>BV</i> <sub>30</sub>		1 9.9	4°68	2°8/ 9.1	18
12 3	7 49.40	+26 42.3	1.233	2.056	19.6	20.8	12 3	7 47.52	+28 10.9	1.778	2.580	15.4	19.9
12 13	7 46.72	+27 44.2	1.159	2.052	15.5	20.5	12 13	7 43.88	+28 35.1	1.699	2.581	12.0	19.6
12 23	7 40.11	+28 53.0	1.105	2.049	10.6	20.2	12 23	7 37.42	+28 59.8	1.643	2.581	8.2	19.4
1 2	7 30.26	+30 0.4	1.074	2.046	5.7	20.0	1 2	7 28.79	+29 20.7	1.612	2.583	4.3	19.2
1 12	7 18.70	+30 57.0	1.068	2.044	4.6	19.9	1 12	7 19.16	+29 33.2	1.608	2.585	3.1	19.1
1 22	7 7.39	+31 35.6	1.087	2.043	9.0	20.1	1 22	7 9.83	+29 35.0	1.632	2.588	6.5	19.3
2 1	6 58.31	+31 54.0	1.129	2.042	14.0	20.4	2 1	7 2.09	+29 25.8	1.683	2.592	10.4	19.6
2 11	6 52.87	+31 54.8	1.192	2.042	18.5	20.7	2 11	6 56.87	+29 7.5	1.757	2.596	14.0	19.8
<b>522272</b>	2016 <i>AX</i> <sub>277</sub>		1 9.9	227°16	3°5/11.4	18	<b>320735</b>	2008 <i>EP</i> <sub>29</sub>		1 9.9	352°29	2°6/10.6	18
12 3	7 47.78	+9 40.2	2.111	2.867	14.8	21.1	12 3	7 45.24	+15 19.9	1.420	2.225	18.4	20.2
12 13	7 43.51	+9 54.1	2.013	2.861	12.0	20.9	12 13	7 42.59	+15 18.1	1.339	2.219	14.7	20.0
12 23	7 36.93	+10 22.1	1.937	2.854	8.7	20.7	12 23	7 36.84	+15 29.3	1.278	2.215	10.2	19.7
1 2	7 28.54	+11 4.2	1.887	2.847	5.3	20.5	1 2	7 28.64	+15 52.8	1.241	2.211	5.4	19.4
1 12	7 19.19	+11 58.3	1.866	2.839	3.5	20.4	1 12	7 19.18	+16 25.9	1.229	2.209	2.7	19.3
1 22	7 9.87	+13 0.6	1.875	2.831	5.7	20.5	1 22	7 9.92	+17 4.6	1.243	2.207	6.8	19.5
2 1	7 1.62	+14 7.1	1.912	2.823	9.3	20.7	2 1	7 2.31	+17 44.8	1.282	2.207	11.6	19.8
2 11	6 55.31	+15 13.7	1.976	2.815	12.6	20.9	2 11	6 57.49	+18 23.3	1.344	2.207	16.0	20.0
<b>104623</b>	2000 <i>GN</i> <sub>111</sub>		1 9.9	76°89	4°4/11.4	18	<b>13835</b>	1999 <i>XJ</i> <sub>20</sub>		1 9.9	147°32	1°0/ 9.5	18
12 3	7 46.20	+9 2.8	2.211	2.965	14.2								

EPHEMERIDES

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>427827</b>	2005 <i>JT</i> <sub>80</sub>		1 9.9 216°15	2°2/ 8.5 17			<b>271803</b>	2004 <i>TB</i> <sub>86</sub>		1 9.9 50°81	2°1/10.5 18		
12 3	7 49.38	+25 6.7	2.738	3.510	11.4	21.0	12 3	7 47.74	+15 54.3	1.854	2.637	15.6	20.7
12 13	7 44.47	+26 23.0	2.639	3.504	8.9	20.8	12 13	7 43.64	+15 51.5	1.777	2.645	12.3	20.5
12 23	7 37.46	+27 44.4	2.565	3.498	6.0	20.6	12 23	7 37.05	+15 58.0	1.722	2.653	8.5	20.3
1 2	7 28.78	+29 6.2	2.522	3.492	3.1	20.4	1 2	7 28.60	+16 12.7	1.692	2.662	4.4	20.1
1 12	7 19.16	+30 23.5	2.510	3.485	2.5	20.4	1 12	7 19.29	+16 33.6	1.691	2.671	2.2	19.9
1 22	7 9.48	+31 31.8	2.531	3.478	5.1	20.6	1 22	7 10.27	+16 57.9	1.718	2.680	5.5	20.2
2 1	7 0.66	+32 28.5	2.582	3.471	8.1	20.7	2 1	7 2.63	+17 23.3	1.773	2.689	9.5	20.4
2 11	6 53.52	+33 13.0	2.659	3.463	10.8	20.9	2 11	6 57.21	+17 47.9	1.852	2.698	13.0	20.7
<b>460337</b>	2014 <i>RS</i> <sub>6</sub>		1 9.9 89°34	2°9/ 9.0 18			<b>493362</b>	2014 <i>WH</i> <sub>58</sub>		1 9.9 103°06	1°7/ 9.3 18		
12 3	7 53.25	+28 29.4	1.902	2.690	15.1	21.5	12 3	7 51.92	+25 29.0	2.128	2.910	13.9	21.9
12 13	7 47.98	+29 2.9	1.835	2.707	11.7	21.3	12 13	7 46.61	+25 59.8	2.058	2.928	10.8	21.7
12 23	7 39.93	+29 36.6	1.790	2.724	8.0	21.1	12 23	7 38.87	+26 32.9	2.011	2.946	7.2	21.5
1 2	7 29.85	+30 5.3	1.772	2.741	4.3	20.9	1 2	7 29.36	+27 4.1	1.991	2.964	3.5	21.3
1 12	7 18.91	+30 24.5	1.783	2.758	3.2	20.9	1 12	7 19.10	+27 29.7	2.002	2.981	2.1	21.2
1 22	7 8.43	+30 31.8	1.823	2.775	6.3	21.1	1 22	7 9.19	+27 47.0	2.042	2.998	5.4	21.5
2 1	6 59.61	+30 27.3	1.890	2.791	10.0	21.4	2 1	7 0.69	+27 55.5	2.111	3.015	8.9	21.7
2 11	6 53.33	+30 13.2	1.982	2.807	13.2	21.6	2 11	6 54.40	+27 56.1	2.205	3.031	12.0	21.9
<b>279926</b>	2001 <i>SC</i> <sub>8</sub>		1 9.9 175°21	3°1/11.3 18			<b>14739</b>	Edgarchavez		1 9.9 73°31	3°6/10.9 18		
12 3	7 45.38	+10 20.6	2.617	3.366	12.4	20.9	12 3	7 47.92	+12 24.7	2.127	2.891	14.4	17.6
12 13	7 41.10	+10 20.9	2.524	3.367	10.0	20.7	12 13	7 43.34	+11 52.9	2.050	2.903	11.6	17.4
12 23	7 35.02	+10 31.3	2.454	3.368	7.2	20.5	12 23	7 36.62	+11 30.2	1.995	2.915	8.3	17.2
1 2	7 27.60	+10 51.7	2.412	3.369	4.5	20.3	1 2	7 28.34	+11 17.3	1.967	2.927	5.1	17.0
1 12	7 19.52	+11 21.0	2.399	3.370	3.1	20.3	1 12	7 19.38	+11 13.7	1.967	2.939	3.6	17.0
1 22	7 11.56	+11 57.0	2.416	3.370	4.9	20.4	1 22	7 10.71	+11 18.6	1.997	2.951	5.7	17.1
2 1	7 4.47	+12 37.4	2.463	3.370	7.7	20.5	2 1	7 3.24	+11 30.1	2.055	2.963	8.9	17.3
2 11	6 58.91	+13 19.7	2.536	3.370	10.4	20.7	2 11	6 57.71	+11 46.2	2.138	2.975	11.9	17.5
<b>253254</b>	2003 <i>AB</i> <sub>54</sub>		1 9.9 28°89	4°0/ 8.9 18			<b>360458</b>	2002 <i>QQ</i> <sub>152</sub>		1 9.9 121°47	4°5/ 8.6 18		
12 3	7 49.79	+28 21.4	1.214	2.039	19.8	19.8	12 3	7 56.14	+33 0.9	1.947	2.729	15.0	21.4
12 13	7 46.59	+29 6.1	1.164	2.057	15.4	19.5	12 13	7 50.37	+33 44.2	1.876	2.742	11.9	21.2
12 23	7 39.62	+29 52.0	1.133	2.076	10.5	19.3	12 23	7 41.63	+34 24.5	1.828	2.755	8.4	21.0
1 2	7 29.84	+30 31.5	1.125	2.097	5.7	19.1	1 2	7 30.68	+34 55.4	1.806	2.767	5.4	20.8
1 12	7 18.95	+30 57.5	1.142	2.118	4.4	19.1	1 12	7 18.76	+35 11.7	1.813	2.779	4.8	20.8
1 22	7 8.82	+31 6.5	1.184	2.141	8.3	19.4	1 22	7 7.28	+35 10.9	1.850	2.790	7.3	21.0
2 1	7 1.10	+30 59.3	1.250	2.164	12.8	19.7	2 1	6 57.58	+34 54.1	1.913	2.801	10.6	21.2
2 11	6 56.81	+30 39.4	1.338	2.189	16.8	20.0	2 11	6 50.60	+34 25.0	2.001	2.812	13.6	21.4
<b>445862</b>	2012 <i>TO</i> <sub>54</sub>		1 9.9 337°62	2°2/ 9.5 18			<b>457322</b>	2008 <i>SB</i> <sub>115</sub>		1 9.9 189°09	2°7/ 8.9 18		
12 3	7 51.78	+26 35.3	1.228	2.048	19.9	20.5	12 3	7 55.04	+26 36.1	1.822	2.608	15.7	21.8
12 13	7 48.49	+26 39.6	1.150	2.041	15.7	20.2	12 13	7 49.80	+27 21.2	1.735	2.607	12.3	21.6
12 23	7 41.22	+26 45.6	1.092	2.035	10.7	19.9	12 23	7 41.49	+28 9.8	1.671	2.606	8.4	21.4
1 2	7 30.75	+26 48.1	1.055	2.030	5.1	19.6	1 2	7 30.74	+28 56.3	1.634	2.605	4.3	21.1
1 12	7 18.65	+26 42.1	1.044	2.025	2.7	19.4	1 12	7 18.72	+29 34.6	1.625	2.602	3.1	21.0
1 22	7 6.93	+26 25.0	1.058	2.021	8.0	19.7	1 22	7 6.88	+30 0.6	1.646	2.599	6.8	21.3
2 1	6 57.52	+25 57.7	1.096	2.017	13.5	20.0	2 1	6 56.65	+30 13.0	1.694	2.595	10.9	21.5
2 11	6 51.76	+25 23.6	1.155	2.014	18.3	20.3	2 11	6 49.16	+30 13.5	1.766	2.591	14.6	21.7
<b>205959</b>	2002 <i>KQ</i> <sub>10</sub>		1 9.9 261°24	1°2/ 9.5 18			<b>215266</b>	2001 <i>OK</i> <sub>63</sub>		1 9.9 94°44	4°6/12.0 18		
12 3	7 51.14	+23 6.9	1.755	2.548	15.9	20.9	12 3	7 50.28	+ 6 31.0	2.034	2.776	15.7	20.8
12 13	7 46.92	+23 36.2	1.658	2.535	12.6	20.7	12 13	7 45.17	+ 6 38.1	1.966	2.801	12.8	20.7
12 23	7 39.66	+24 11.9	1.583	2.521	8.5	20.4	12 23	7 37.83	+ 7 1.2	1.920	2.826	9.5	20.5
1 2	7 29.95	+24 49.9	1.533	2.508	3.9	20.1	1 2	7 28.88	+ 7 39.9	1.900	2.851	6.2	20.4
1 12	7 18.86	+25 25.3	1.512	2.494	1.8	19.9	1 12	7 19.26	+ 8 32.2	1.909	2.875	4.6	20.3
1 22	7 7.79	+25 53.8	1.519	2.480	6.4	20.2	1 22	7 9.99	+ 9 34.3	1.948	2.898	6.2	20.4
2 1	6 58.18	+26 13.4	1.554	2.465	11.0	20.4	2 1	7 2.01	+10 41.6	2.015	2.921	9.2	20.7
2 11	6 51.21	+26 23.9	1.612	2.451	15.0	20.6	2 11	6 56.06	+11 49.7	2.109	2.943	12.1	20.9
<b>15735</b>	Andakerkhoven		1 9.9 106°30	1°0/ 9.4 18			<b>49307</b>	1998 <i>VJ</i> <sub>15</sub>		1 9.9 105°57	3°1/10.7 18		
12 3	7 47.08	+22 50.9	2.460	3.239	12.3	18.2	12 3	7 50.60	+14 1.2	1.861	2.633	15.9	19.5
12 13	7 42.67	+23 29.9	2.376	3.246	9.5	18.1	12 13	7 45.77	+13 42.5	1.785	2.644	12.7	19.3
12 23	7 36.19	+24 14.0	2.317	3.253	6.3	17.9	12 23	7 38.42	+13 33.7	1.731	2.656	8.9	19.1
1 2	7 28.17	+24 59.3	2.286	3.259	2.9	17.7	1 2	7 29.21	+13 34.6	1.702	2.667	5.0	18.9
1 12	7 19.40	+25 42.1	2.285	3.266	1.4	17.6	1 12	7 19.17	+13 43.9	1.702	2.679	3.1	18.8
1 22	7 10.78	+26 19.6	2.314	3.272	4.7	17.8	1 22	7 9.45	+13 59.6	1.731	2.689	5.9	19.0
2 1	7 3.21	+26 49.8	2.373	3.279	8.0	18.0	2 1	7 1.17	+14 19.6	1.788	2.700	9.7	19.3
2 11	6 57.43	+27 12.4	2.458	3.285	10.9	18.2	2 11	6 55.15	+14 41.8	1.869	2.711	13.2	19.5
<b>116704</b>	2004 <i>CZ</i> <sub>101</sub>		1 9.9 294°37	3°3/10.6 18			<b>414239</b>	2008 <i>FH</i> <sub>112</sub>		1 9.9 146°68	4°8/ 7.9 18		
12 3	7 47.33	+13 50.2	2.277	3.042	13.6	19.9	12 3	7 52.82	+32 39.8	2.080	2.864	14.1	20.9
12 13	7 42.92	+13 10.5	2.180	3.035	10.9	19.7	12 13	7 47.84	+33 47.0	2.001	2.868	11.2	20.7
12 23	7 36.40	+12 37.2	2.106	3.027	7.8	19.5	12 23	7 40.03	+34 53.3	1.947	2.873	8.0	20.5
1 2	7 28.28	+12 11.3	2.058	3.020	4.7	19.3	1 2	7 30.03	+35 52.1	1.919	2.877	5.4	20.3
1 12	7 19.36	+11 53.0	2.040	3.013	3.3	19.2	1 12	7 18.93	+36 36.9	1.920	2.881	5.1	20.3
1 22	7 10.58	+11 42.1	2.051	3.005	5.6	19.3	1 22	7 8.04	+37 4.1	1.950	2.885	7.4	20.5
2 1	7 2.86	+11 37.9	2.091	2.998	8.8	19.5	2 1	6 58.64	+37 13.3	2.007	2.888	10.5	20.7
2 11	6 56.95	+11 39.0	2.156	2.991	11.9	19.7	2 11	6 51.74	+37 7.0	2.089	2.891	13.4	20.9
<b>172280</b>	2002 <i>TM</i> <sub>124</sub>		1 9.9 4°51	0°9/10.1 18			<b>419178</b>	2009 <i>TU</i> <sub>33</sub>		1 9.9 67°77	1°5/10.2 18		
12 3	7 48.50	+20 23.6	2.093	2.875	14.1	19.5							

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>43593</b>	2001 QR <sub>73</sub>		1 9.9 62°41'	3:7/10.8	18		<b>281388</b>	2008 QZ <sub>1</sub>		1 9.9 127°56'	1:2/10.2	18	
12 3	7 52.01	+13 51.3	1.343	2.137	19.9	18.8	12 3	7 55.13	+18 9.0	1.816	2.590	16.2	21.5
12 13	7 47.63	+13 29.4	1.283	2.155	15.8	18.6	12 13	7 49.37	+18 13.4	1.743	2.607	12.7	21.3
12 23	7 40.01	+13 21.2	1.243	2.173	11.1	18.3	12 23	7 40.87	+18 25.4	1.692	2.624	8.6	21.1
1 2	7 29.99	+13 26.4	1.225	2.192	6.2	18.1	1 2	7 30.33	+18 43.0	1.668	2.640	4.1	20.9
1 12	7 18.99	+13 43.2	1.234	2.211	3.8	18.0	1 12	7 18.92	+19 3.1	1.672	2.654	1.4	20.7
1 22	7 8.57	+14 8.3	1.269	2.230	7.2	18.3	1 22	7 7.91	+19 23.0	1.707	2.668	5.6	21.0
2 1	7 0.17	+14 38.2	1.330	2.250	11.7	18.6	2 1	6 58.52	+19 41.0	1.770	2.682	9.8	21.3
2 11	6 54.75	+15 9.5	1.414	2.269	15.8	18.9	2 11	6 51.63	+19 56.3	1.858	2.694	13.4	21.6
<b>22311</b>	1991 EF <sub>2</sub>		1 9.9 279°53'	4:1/10.9	18		<b>90748</b>	1993 QL <sub>4</sub>		1 9.9 131°46'	0:8/10.2	18	
12 3	7 49.84	+12 36.5	1.412	2.203	19.2	17.6	12 3	7 54.00	+18 12.4	1.978	2.748	15.2	20.4
12 13	7 46.26	+12 22.0	1.327	2.196	15.6	17.4	12 13	7 48.31	+18 27.5	1.902	2.765	11.9	20.2
12 23	7 39.41	+12 22.2	1.261	2.190	11.2	17.1	12 23	7 40.08	+18 50.3	1.850	2.781	8.0	20.0
1 2	7 29.90	+12 37.9	1.218	2.183	6.5	16.8	1 2	7 29.97	+19 18.1	1.824	2.796	3.8	19.8
1 12	7 18.96	+13 7.5	1.200	2.177	4.1	16.7	1 12	7 19.02	+19 47.9	1.829	2.811	1.2	19.6
1 22	7 8.14	+13 47.5	1.209	2.170	7.5	16.8	1 22	7 8.40	+20 16.5	1.863	2.824	5.3	19.9
2 1	6 59.02	+14 33.4	1.244	2.164	12.3	17.1	2 1	6 59.25	+20 41.9	1.927	2.837	9.2	20.2
2 11	6 52.83	+15 20.9	1.301	2.158	16.8	17.3	2 11	6 52.39	+21 3.4	2.016	2.849	12.7	20.4
<b>301306</b>	2009 BF <sub>134</sub>		1 9.9 68°33'	1:5/10.3	18		<b>363751</b>	2005 AZ <sub>37</sub>		1 9.9 0°94'	2:5/ 9.1	18	
12 3	7 50.88	+16 41.6	1.489	2.283	18.2	21.1	12 3	7 44.70	+23 11.4	1.128	1.962	20.3	20.4
12 13	7 46.65	+16 57.3	1.422	2.297	14.3	20.9	12 13	7 43.16	+24 7.2	1.060	1.959	15.9	20.2
12 23	7 39.35	+17 24.9	1.376	2.312	9.7	20.6	12 23	7 37.79	+25 14.1	1.010	1.958	10.7	19.9
1 2	7 29.72	+18 1.8	1.354	2.326	4.7	20.4	1 2	7 29.29	+26 25.2	0.982	1.957	5.1	19.5
1 12	7 19.05	+18 43.7	1.359	2.341	1.7	20.2	1 12	7 19.16	+27 31.3	0.978	1.959	3.1	19.4
1 22	7 8.81	+19 26.1	1.391	2.355	6.3	20.6	1 22	7 9.34	+28 24.6	0.999	1.961	8.4	19.7
2 1	7 0.38	+20 5.4	1.450	2.370	11.0	20.9	2 1	7 1.72	+29 1.1	1.042	1.966	13.8	20.0
2 11	6 54.74	+20 39.7	1.533	2.384	15.0	21.1	2 11	6 57.66	+29 21.1	1.106	1.971	18.5	20.3
<b>276397</b>	2002 XA <sub>40</sub>		1 9.9 43°25'	1:0/ 9.7	17		<b>200777</b>	2001 XX <sub>44</sub>		1 9.9 73°85'	4:9/ 8.5	18	
12 3	8 12.40	+23 58.6	0.874	1.687	26.5	19.1	12 3	7 55.07	+30 22.1	1.457	2.261	18.1	20.0
12 13	8 3.34	+23 58.6	0.864	1.749	20.1	19.0	12 13	7 50.43	+31 22.5	1.395	2.275	14.3	19.8
12 23	7 49.88	+24 3.0	0.870	1.812	13.0	18.9	12 23	7 42.14	+32 23.2	1.353	2.288	9.9	19.6
1 2	7 33.93	+24 5.0	0.899	1.874	5.7	18.7	1 2	7 31.06	+33 15.8	1.336	2.302	6.0	19.4
1 12	7 18.11	+23 59.9	0.953	1.935	1.8	18.7	1 12	7 18.72	+33 52.4	1.345	2.315	5.2	19.4
1 22	7 4.69	+23 47.2	1.033	1.996	8.0	19.2	1 22	7 6.93	+34 8.9	1.382	2.329	8.5	19.6
2 1	6 55.11	+23 29.6	1.136	2.056	13.3	19.7	2 1	6 57.37	+34 5.8	1.443	2.343	12.6	19.9
2 11	6 49.88	+23 9.8	1.261	2.115	17.4	20.1	2 11	6 51.15	+33 47.3	1.527	2.356	16.2	20.2
<b>190284</b>	1991 TN <sub>16</sub>		1 9.9 59°42'	1:6/10.3	17		<b>335939</b>	2007 TW <sub>54</sub>		1 9.9 109°38'	4:2/11.4	18	
12 3	7 51.92	+16 48.6	1.290	2.093	20.0	20.6	12 3	7 46.24	+ 8 37.4	2.529	3.273	12.9	20.8
12 13	7 47.80	+16 59.1	1.231	2.111	15.7	20.3	12 13	7 41.73	+ 8 9.9	2.447	3.283	10.5	20.7
12 23	7 40.25	+17 22.5	1.191	2.129	10.7	20.1	12 23	7 35.42	+ 7 52.5	2.388	3.294	7.8	20.5
1 2	7 30.14	+17 55.9	1.175	2.148	5.2	19.8	1 2	7 27.81	+ 7 46.1	2.355	3.304	5.3	20.4
1 12	7 18.95	+18 34.9	1.185	2.167	1.9	19.7	1 12	7 19.61	+ 7 50.6	2.352	3.314	4.2	20.3
1 22	7 8.35	+19 14.5	1.221	2.186	6.8	20.0	1 22	7 11.61	+ 8 4.8	2.378	3.324	5.6	20.4
2 1	6 59.87	+19 51.0	1.283	2.205	11.9	20.4	2 1	7 4.57	+ 8 26.8	2.433	3.334	8.1	20.6
2 11	6 54.53	+20 22.5	1.367	2.224	16.1	20.7	2 11	6 59.11	+ 8 54.2	2.515	3.343	10.6	20.8
<b>393262</b>	2013 VW <sub>8</sub>		1 9.9 41°18'	2:6/ 8.7	18		<b>124978</b>	2001 TE <sub>114</sub>		1 9.9 45°39'	1:9/10.2	18	
12 3	7 47.87	+26 49.8	2.133	2.923	13.6	20.5	12 3	7 52.34	+19 5.4	1.344	2.148	19.4	19.3
12 13	7 43.72	+27 42.3	2.054	2.928	10.6	20.3	12 13	7 48.12	+18 35.8	1.276	2.156	15.3	19.0
12 23	7 37.13	+28 37.7	1.998	2.934	7.2	20.1	12 23	7 40.49	+18 13.2	1.226	2.164	10.4	18.8
1 2	7 28.69	+29 31.1	1.970	2.940	3.8	19.9	1 2	7 30.29	+17 56.9	1.201	2.173	5.1	18.5
1 12	7 19.33	+30 17.5	1.970	2.946	2.9	19.8	1 12	7 18.95	+17 45.3	1.201	2.182	2.2	18.3
1 22	7 10.16	+30 53.4	2.000	2.952	5.9	20.0	1 22	7 8.13	+17 37.2	1.228	2.192	6.9	18.7
2 1	7 2.26	+31 17.3	2.059	2.959	9.3	20.2	2 1	6 59.37	+17 31.6	1.281	2.202	11.9	19.0
2 11	6 56.51	+31 29.7	2.141	2.965	12.4	20.5	2 11	6 53.72	+17 28.0	1.355	2.212	16.3	19.3
<b>348650</b>	2005 YP <sub>217</sub>		1 9.9 350°53'	2:1/ 9.4	18		<b>50042</b>	2000 AW <sub>58</sub>		1 9.9 179°41'	3:0/ 9.2	18	
12 3	7 48.12	+24 57.8	1.177	2.004	20.1	20.6	12 3	7 56.26	+30 58.9	2.142	2.917	14.0	19.4
12 13	7 45.74	+25 17.7	1.103	1.998	15.8	20.3	12 13	7 50.19	+31 10.2	2.054	2.919	11.0	19.2
12 23	7 39.47	+25 43.0	1.047	1.993	10.7	20.0	12 23	7 41.41	+31 18.6	1.990	2.920	7.6	19.0
1 2	7 30.02	+26 8.4	1.014	1.989	5.1	19.6	1 2	7 30.60	+31 19.9	1.953	2.920	4.3	18.8
1 12	7 18.95	+26 27.7	1.005	1.986	2.7	19.5	1 12	7 18.86	+31 10.3	1.946	2.920	3.3	18.7
1 22	7 8.22	+26 36.6	1.020	1.984	8.0	19.8	1 22	7 7.47	+30 48.7	1.969	2.919	6.1	18.9
2 1	6 59.72	+26 33.9	1.059	1.983	13.6	20.1	2 1	6 57.62	+30 16.2	2.021	2.918	9.6	19.1
2 11	6 54.82	+26 21.6	1.118	1.983	18.4	20.4	2 11	6 50.22	+29 35.9	2.098	2.916	12.8	19.3
<b>181226</b>	2005 TD <sub>35</sub>		1 9.9 113°69'	2:0/10.8	17		<b>458793</b>	2011 SS <sub>167</sub>		1 9.9 145°98'	0:6/ 9.7	18	
12 3	7 44.78	+13 55.3	2.836	3.593	11.3	21.5	12 3	7 53.90	+21 57.3	1.973	2.751	14.9	22.1
12 13	7 40.47	+13 56.5	2.751	3.603	9.0	21.4	12 13	7 48.39	+22 21.8	1.893	2.761	11.7	21.9
12 23	7 34.52	+14 4.9	2.690	3.613	6.3	21.2	12 23	7 40.24	+22 51.5	1.837	2.771	7.8	21.7
1 2	7 27.38	+14 20.0	2.657	3.622	3.5	21.1	1 2	7 30.08	+23 22.9	1.807	2.781	3.5	21.4
1 12	7 19.70	+14 40.3	2.654	3.631	2.0	21.0	1 12	7 19.00	+23 52.2	1.807	2.789	1.2	21.3
1 22	7 12.19	+15 4.3	2.682	3.640	4.1	21.1	1 22	7 8.20	+24 16.1	1.837	2.797	5.5	21.6
2 1	7 5.52	+15 30.2	2.740	3.649	6.9	21.3	2 1	6 58.88	+24 33.3	1.896	2.805	9.5	21.9
2 11	7 0.27	+15 56.5	2.825	3.658	9.4	21.5	2 11	6 51.93	+24 43.9	1.980	2.811	13.0	22.1
<b>122583</b>	2000 RV <sub>25</sub>		1 9.9 135°37'	1:7/ 9.5	18		<b>354393</b>	2003 SH <sub>328</sub>		1 9.9 151°26'	2:3/ 9.3	18	
12 3	7 57.51	+26 39.0	2.033	2.807	14.7	20.7	12 3	7 55.13	+27 27.9	1.910	2.694	15.2	



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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>78865</b>	2003 QX <sub>78</sub>		1 9.9 77°78	5°2/ 8.2	18		<b>88859</b>	2001 SF <sub>245</sub>		1 9.9 211°96	1°5/10.4	18	
12 3	7 52.84	+35 49.9	2.124	2.905	13.9	18.8	12 3	7 48.69	+16 55.8	1.893	2.674	15.3	20.1
12 13	7 47.71	+36 35.8	2.053	2.915	11.1	18.7	12 13	7 44.50	+17 3.5	1.806	2.674	12.1	19.8
12 23	7 39.83	+37 17.0	2.005	2.926	8.2	18.5	12 23	7 37.76	+17 20.3	1.740	2.673	8.3	19.6
1 2	7 29.90	+37 47.3	1.983	2.936	5.8	18.4	1 2	7 29.03	+17 44.7	1.701	2.672	4.1	19.4
1 12	7 19.07	+38 2.0	1.990	2.946	5.4	18.4	1 12	7 19.32	+18 13.8	1.690	2.672	1.6	19.2
1 22	7 8.63	+37 58.9	2.025	2.957	7.4	18.5	1 22	7 9.78	+18 44.6	1.708	2.671	5.5	19.4
2 1	6 59.80	+37 39.2	2.088	2.967	10.2	18.7	2 1	7 1.55	+19 14.5	1.754	2.670	9.6	19.7
2 11	6 53.45	+37 6.4	2.174	2.977	12.9	18.9	2 11	6 55.57	+19 41.8	1.825	2.669	13.3	19.9
<b>427323</b>	2014 WM <sub>295</sub>		1 9.9 59°30	2°5/10.9	18		<b>297848</b>	2002 CS <sub>7</sub>		1 9.9 6°10	1°3/ 9.6	18	
12 3	7 48.91	+13 10.8	1.757	2.535	16.5	21.2	12 3	7 48.27	+23 34.4	1.197	2.022	20.0	19.7
12 13	7 44.53	+13 29.5	1.695	2.558	13.1	21.0	12 13	7 45.65	+23 49.0	1.128	2.022	15.7	19.4
12 23	7 37.63	+14 1.3	1.653	2.581	9.0	20.9	12 23	7 39.27	+24 10.0	1.077	2.023	10.6	19.2
1 2	7 28.88	+14 44.3	1.637	2.605	4.8	20.7	1 2	7 29.90	+24 32.7	1.049	2.025	4.8	18.8
1 12	7 19.36	+15 35.0	1.650	2.629	2.5	20.6	1 12	7 19.10	+24 51.8	1.045	2.027	2.0	18.7
1 22	7 10.25	+16 28.9	1.691	2.653	5.6	20.8	1 22	7 8.71	+25 3.2	1.067	2.031	7.6	19.0
2 1	7 2.64	+17 22.3	1.760	2.676	9.5	21.1	2 1	7 0.54	+25 5.6	1.112	2.036	13.0	19.3
2 11	6 57.32	+18 12.0	1.854	2.700	13.0	21.4	2 11	6 55.80	+25 0.1	1.178	2.042	17.6	19.6
<b>200339</b>	2000 HX <sub>50</sub>		1 9.9 222°25	1°3/ 9.5	18		<b>11058</b>	1991 PN <sub>10</sub>		1 9.9 205°82	15°3/16.4	18	R
12 3	7 54.12	+23 45.7	1.946	2.726	15.0	21.9	12 3	7 50.85	-11 59.1	1.399	2.087	23.9	17.9
12 13	7 48.94	+24 12.7	1.847	2.716	11.8	21.6	12 13	7 47.05	-13 2.9	1.322	2.085	21.6	17.8
12 23	7 40.88	+24 44.5	1.770	2.705	8.0	21.4	12 23	7 39.97	-13 32.8	1.259	2.082	19.2	17.6
1 2	7 30.51	+25 17.2	1.720	2.694	3.7	21.1	1 2	7 30.21	-13 19.2	1.213	2.079	16.9	17.4
1 12	7 18.88	+25 46.1	1.700	2.681	1.8	20.9	1 12	7 19.00	-12 16.5	1.187	2.075	15.4	17.3
1 22	7 7.29	+26 7.8	1.710	2.668	6.0	21.2	1 22	7 7.87	-10 26.3	1.183	2.071	15.6	17.3
2 1	6 57.09	+26 20.6	1.748	2.654	10.3	21.4	2 1	6 58.41	-7 57.3	1.202	2.067	17.2	17.4
2 11	6 49.36	+26 25.1	1.810	2.640	14.1	21.6	2 11	6 51.86	-5 3.9	1.242	2.062	19.7	17.5
<b>216745</b>	2005 MG <sub>47</sub>		1 9.9 112°02	0°9/ 9.5	18		<b>460762</b>	2014 VQ <sub>33</sub>		1 9.9 222°60	2°1/10.5	18	
12 3	7 52.25	+21 33.6	2.202	2.975	13.7	21.3	12 3	7 48.86	+16 21.6	1.950	2.728	15.1	21.1
12 13	7 46.81	+22 24.6	2.130	2.996	10.6	21.1	12 13	7 44.52	+16 10.5	1.862	2.727	12.0	20.9
12 23	7 39.02	+23 21.6	2.083	3.017	7.1	20.9	12 23	7 37.70	+16 7.4	1.796	2.726	8.3	20.6
1 2	7 29.50	+24 20.2	2.063	3.037	3.2	20.7	1 2	7 28.99	+16 11.4	1.755	2.725	4.3	20.4
1 12	7 19.19	+25 15.8	2.075	3.056	1.4	20.6	1 12	7 19.36	+16 21.1	1.744	2.724	2.2	20.2
1 22	7 9.16	+26 4.5	2.117	3.075	5.1	20.9	1 22	7 9.91	+16 34.6	1.761	2.723	5.5	20.5
2 1	7 0.43	+26 44.2	2.189	3.093	8.6	21.1	2 1	7 1.75	+16 50.0	1.807	2.721	9.5	20.7
2 11	6 53.80	+27 14.7	2.286	3.110	11.7	21.4	2 11	6 55.76	+17 5.8	1.877	2.720	13.0	20.9
<b>30267</b>	Raghuvanshi		1 9.9 108°36	0°2/ 9.9	18		<b>31481</b>	1999 CX <sub>47</sub>		1 9.9 241°25	0°1/ 9.9	18	
12 3	7 50.26	+20 31.8	1.863	2.649	15.4	19.1	12 3	7 47.19	+20 53.7	2.466	3.242	12.3	19.6
12 13	7 45.73	+20 41.1	1.782	2.654	12.0	18.9	12 13	7 42.80	+21 3.8	2.369	3.236	9.7	19.4
12 23	7 38.55	+20 56.6	1.723	2.659	8.1	18.7	12 23	7 36.35	+21 18.3	2.295	3.229	6.5	19.1
1 2	7 29.36	+21 15.7	1.690	2.664	3.7	18.4	1 2	7 28.34	+21 35.4	2.249	3.223	2.9	18.9
1 12	7 19.22	+21 35.2	1.686	2.668	1.0	18.2	1 12	7 19.53	+21 52.7	2.233	3.216	0.8	18.7
1 22	7 9.35	+21 52.5	1.711	2.673	5.5	18.5	1 22	7 10.83	+22 8.3	2.248	3.209	4.5	19.0
2 1	7 0.93	+22 6.0	1.763	2.678	9.7	18.8	2 1	7 3.13	+22 20.8	2.291	3.202	8.0	19.2
2 11	6 54.86	+22 15.3	1.840	2.682	13.3	19.0	2 11	6 57.18	+22 29.7	2.361	3.195	11.0	19.4
<b>73644</b>	1978 UD <sub>7</sub>		1 9.9 174°10	4°7/ 8.5	18		<b>278423</b>	2007 RP <sub>210</sub>		1 9.9 193°71	0°1/ 9.8	17	
12 3	7 58.83	+32 50.0	1.926	2.704	15.3	19.0	12 3	7 48.31	+21 40.0	2.697	3.467	11.6	22.2
12 13	7 52.71	+33 38.4	1.844	2.707	12.1	18.8	12 13	7 43.44	+21 50.0	2.602	3.465	9.0	22.0
12 23	7 43.40	+34 24.7	1.785	2.710	8.7	18.6	12 23	7 36.65	+22 3.4	2.530	3.463	6.0	21.8
1 2	7 31.61	+35 2.0	1.752	2.712	5.6	18.4	1 2	7 28.44	+22 18.3	2.487	3.460	2.7	21.6
1 12	7 18.61	+35 23.8	1.749	2.714	5.0	18.4	1 12	7 19.52	+22 32.6	2.475	3.457	0.8	21.4
1 22	7 5.92	+35 27.2	1.775	2.714	7.6	18.6	1 22	7 10.72	+22 44.5	2.493	3.454	4.2	21.7
2 1	6 55.02	+35 12.8	1.828	2.714	11.1	18.8	2 1	7 2.87	+22 53.0	2.542	3.450	7.4	21.9
2 11	6 47.00	+34 44.5	1.905	2.713	14.3	19.0	2 11	6 56.66	+22 58.0	2.617	3.445	10.3	22.0
<b>200440</b>	2000 UY <sub>83</sub>		1 9.9 32°91	0°7/10.1	18		<b>221282</b>	2005 UP <sub>353</sub>		1 9.9 120°87	2°4/ 9.2	18	
12 3	7 48.71	+18 38.0	1.226	2.042	20.1	19.7	12 3	7 51.94	+27 43.3	2.001	2.788	14.4	20.6
12 13	7 45.60	+18 57.1	1.166	2.054	15.8	19.5	12 13	7 46.98	+28 5.7	1.921	2.794	11.3	20.4
12 23	7 38.97	+19 28.3	1.125	2.067	10.6	19.2	12 23	7 39.36	+28 28.6	1.864	2.799	7.7	20.2
1 2	7 29.66	+20 8.0	1.106	2.081	4.9	18.9	1 2	7 29.74	+28 47.8	1.833	2.804	3.9	20.0
1 12	7 19.15	+20 50.6	1.113	2.096	1.3	18.7	1 12	7 19.19	+28 59.4	1.831	2.809	2.7	19.9
1 22	7 9.18	+21 31.0	1.145	2.111	7.0	19.1	1 22	7 8.95	+29 1.2	1.859	2.814	6.0	20.2
2 1	7 1.33	+22 5.5	1.202	2.127	12.2	19.5	2 1	7 0.20	+28 53.1	1.914	2.819	9.7	20.4
2 11	6 56.68	+22 32.6	1.281	2.144	16.6	19.8	2 11	6 53.84	+28 36.8	1.995	2.823	13.0	20.6
<b>302246</b>	2001 XY <sub>3</sub>		1 9.9 72°86	14°6/ 2.5	18		<b>171107</b>	2005 EG <sub>287</sub>		1 9.9 235°91	3°6/11.2	18	
12 3	8 1.96	+37 42.6	1.020	1.839	23.1	20.0	12 3	7 45.80	+10 11.1	2.480	3.232	12.9	20.5
12 13	7 59.29	+41 47.6	0.967	1.843	19.3	19.7	12 13	7 41.61	+9 54.9	2.382	3.226	10.5	20.3
12 23	7 50.58	+45 56.9	0.935	1.848	16.1	19.6	12 23	7 35.51	+9 48.5	2.307	3.219	7.7	20.1
1 2	7 35.93	+49 42.5	0.927	1.852	14.6	19.5	1 2	7 27.95	+9 52.5	2.258	3.213	5.0	19.9
1 12	7 17.27	+52 36.3	0.942	1.856	15.8	19.6	1 12	7 19.66	+10 6.3	2.238	3.207	3.7	19.8
1 22	6 58.22	+54 23.2	0.980	1.860	18.7	19.8	1 22	7 11.45	+10 28.6	2.248	3.200	5.4	19.9
2 1	6 42.86	+55 6.1	1.036	1.865	22.1	20.0	2 1	7 4.15	+10 57.3	2.287	3.193	8.2	20.1
2 11	6 33.95	+55 0.6	1.106	1.869	25.1	20.2	2 11	6 58.46	+11 30.0	2.352	3.186	11.1	20.3
<b>406007</b>	2006 SJ <sub>368</sub>		1 9.9 31°21	2°1/10.4	18		<b>464623</b>	1995 SB <sub>41</sub>		1 9.9 186°25	5°0/12.4	17	
12 3	7 48.69	+17 47.2	1.312	2.121	19.4	20.7	12 3	7 44.54	+2 11.4	3.110	3.817	11.4	22.7

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>489837</b>	2008 <i>EY</i> <sub>126</sub>		1 9.9 159°69	5°0/ 7.9 18			<b>451871</b>	2014 <i>HP</i> <sub>32</sub>		1 9.9 135°67	0°1/ 9.9 18		
12 3	7 55.92	+37 34.6	2.602	3.364	12.1	22.3	12 3	7 54.00	+19 47.5	1.888	2.665	15.6	22.2
12 13	7 49.69	+38 22.6	2.523	3.372	9.8	22.2	12 13	7 48.56	+20 11.8	1.812	2.678	12.2	22.0
12 23	7 40.99	+39 5.4	2.468	3.379	7.4	22.0	12 23	7 40.42	+20 43.4	1.757	2.691	8.2	21.7
1 2	7 30.44	+39 37.5	2.441	3.386	5.4	21.9	1 2	7 30.25	+21 19.1	1.730	2.703	3.7	21.5
1 12	7 19.03	+39 54.5	2.444	3.391	5.2	21.9	1 12	7 19.13	+21 54.8	1.732	2.715	1.0	21.3
1 22	7 7.90	+39 54.4	2.476	3.397	6.9	22.0	1 22	7 8.33	+22 27.0	1.764	2.726	5.5	21.7
2 1	6 58.14	+39 38.0	2.537	3.401	9.2	22.2	2 1	6 59.05	+22 53.7	1.825	2.736	9.6	21.9
2 11	6 50.60	+39 8.4	2.623	3.405	11.6	22.4	2 11	6 52.19	+23 14.3	1.911	2.745	13.2	22.2
<b>330411</b>	2007 <i>BM</i> <sub>48</sub>		1 9.9 290°91	0°0/ 9.8 18			<b>176670</b>	2002 <i>PW</i> <sub>33</sub>		1 9.9 23°57	7°6/ 9.1 18		
12 3	7 48.28	+19 58.2	1.893	2.681	15.1	21.1	12 3	7 57.81	+39 13.6	1.410	2.209	18.8	20.4
12 13	7 44.33	+20 26.2	1.802	2.676	11.9	20.8	12 13	7 52.99	+39 41.1	1.345	2.215	15.4	20.2
12 23	7 37.75	+21 2.3	1.734	2.671	8.0	20.6	12 23	7 44.03	+39 57.8	1.300	2.221	11.6	20.0
1 2	7 29.10	+21 43.6	1.691	2.665	3.6	20.3	1 2	7 31.98	+39 54.7	1.277	2.228	8.4	19.9
1 12	7 19.36	+22 25.9	1.678	2.660	1.0	20.1	1 12	7 18.70	+39 25.2	1.280	2.236	7.7	19.8
1 22	7 9.72	+23 5.5	1.693	2.655	5.6	20.4	1 22	7 6.28	+38 29.2	1.308	2.245	10.1	20.0
2 1	7 1.39	+23 39.5	1.736	2.650	9.8	20.7	2 1	6 56.56	+37 12.0	1.362	2.254	13.7	20.2
2 11	6 55.34	+24 6.7	1.803	2.645	13.5	20.9	2 11	6 50.63	+35 42.2	1.437	2.264	17.1	20.5
<b>343667</b>	2010 <i>OY</i> <sub>49</sub>		1 9.9 161°66	5°9/ 6.9 18			<b>489269</b>	2006 <i>SO</i> <sub>31</sub>		1 9.9 134°29	0°9/ 10.2 18		
12 3	7 52.06	+40 47.3	2.738	3.500	11.6	21.1	12 3	7 52.34	+18 29.8	2.200	2.967	13.9	22.4
12 13	7 46.83	+41 52.5	2.659	3.503	9.5	21.0	12 13	7 46.81	+18 34.6	2.121	2.982	10.9	22.2
12 23	7 39.18	+42 51.9	2.606	3.505	7.5	20.8	12 23	7 39.01	+18 45.6	2.066	2.996	7.4	22.0
1 2	7 29.67	+43 39.6	2.579	3.508	6.2	20.8	1 2	7 29.54	+19 0.9	2.038	3.010	3.5	21.8
1 12	7 19.24	+44 11.0	2.581	3.510	6.2	20.8	1 12	7 19.34	+19 18.1	2.040	3.022	1.2	21.6
1 22	7 8.97	+44 23.5	2.612	3.512	7.5	20.9	1 22	7 9.42	+19 35.1	2.073	3.034	4.8	21.9
2 1	6 59.95	+44 17.7	2.669	3.513	9.5	21.0	2 1	7 0.79	+19 50.5	2.136	3.046	8.5	22.2
2 11	6 53.05	+43 56.3	2.751	3.515	11.5	21.1	2 11	6 54.20	+20 3.4	2.224	3.057	11.7	22.4
<b>166197</b>	2002 <i>EE</i> <sub>103</sub>		1 9.9 239°73	0°6/ 10.1 18			<b>467597</b>	2007 <i>VA</i> <sub>218</sub>		1 9.9 125°37	3°4/ 11.0 18		
12 3	7 51.30	+19 8.4	1.831	2.614	15.7	21.4	12 3	7 46.28	+11 37.3	2.534	3.288	12.6	21.4
12 13	7 46.82	+19 19.8	1.734	2.604	12.4	21.1	12 13	7 41.86	+11 11.1	2.446	3.292	10.2	21.2
12 23	7 39.52	+19 39.2	1.659	2.593	8.5	20.9	12 23	7 35.60	+10 53.1	2.381	3.296	7.4	21.0
1 2	7 29.95	+20 4.4	1.609	2.582	4.0	20.6	1 2	7 27.99	+10 43.7	2.343	3.300	4.6	20.8
1 12	7 19.15	+20 31.9	1.588	2.571	1.1	20.3	1 12	7 19.75	+10 42.9	2.334	3.304	3.4	20.8
1 22	7 8.40	+20 58.6	1.597	2.559	5.8	20.6	1 22	7 11.68	+10 49.6	2.356	3.308	5.1	20.9
2 1	6 59.01	+21 22.0	1.633	2.547	10.3	20.9	2 1	7 4.56	+11 2.4	2.406	3.312	7.9	21.1
2 11	6 52.07	+21 41.1	1.693	2.534	14.3	21.1	2 11	6 59.04	+11 19.4	2.483	3.315	10.6	21.2
<b>400372</b>	2007 <i>WK</i> <sub>21</sub>		1 9.9 68°31	0°6/ 10.0 18			<b>85479</b>	1997 <i>NF</i> <sub>3</sub>		1 9.9 85°91	1°8/ 9.4 18		
12 3	7 53.05	+21 11.2	1.558	2.353	17.5	21.3	12 3	7 56.01	+24 5.1	1.527	2.321	17.8	19.8
12 13	7 48.24	+20 56.7	1.488	2.365	13.7	21.1	12 13	7 50.65	+24 44.0	1.468	2.345	13.9	19.6
12 23	7 40.37	+20 47.2	1.439	2.377	9.2	20.9	12 23	7 42.02	+25 27.8	1.430	2.368	9.2	19.4
1 2	7 30.23	+20 40.6	1.416	2.389	4.2	20.6	1 2	7 30.99	+26 10.8	1.418	2.391	4.3	19.1
1 12	7 19.12	+20 34.5	1.419	2.402	1.2	20.4	1 12	7 18.97	+26 46.9	1.433	2.414	2.3	19.1
1 22	7 8.51	+20 27.6	1.451	2.415	6.1	20.8	1 22	7 7.57	+27 12.4	1.477	2.436	6.7	19.4
2 1	6 59.76	+20 19.4	1.510	2.427	10.8	21.1	2 1	6 58.20	+27 26.2	1.548	2.458	11.1	19.7
2 11	6 53.82	+20 10.2	1.592	2.440	14.7	21.4	2 11	6 51.86	+27 30.0	1.642	2.479	14.9	20.0
<b>350304</b>	2012 <i>UT</i> <sub>38</sub>		1 9.9 187°43	2°0/ 10.3 18			<b>397365</b>	2006 <i>UG</i> <sub>182</sub>		1 9.9 52°17	9°5/ 13.4 18		
12 3	7 54.27	+17 31.2	1.637	2.419	17.4	21.6	12 3	7 48.44	- 0 20.4	1.546	2.286	19.9	20.2
12 13	7 49.26	+17 16.7	1.551	2.419	13.8	21.4	12 13	7 44.39	- 1 19.8	1.490	2.308	17.0	20.1
12 23	7 41.17	+17 10.3	1.486	2.418	9.5	21.1	12 23	7 37.66	- 1 55.9	1.452	2.331	13.8	19.9
1 2	7 30.68	+17 10.8	1.447	2.417	4.8	20.8	1 2	7 28.98	- 2 4.4	1.435	2.354	11.0	19.8
1 12	7 18.98	+17 16.3	1.435	2.416	2.2	20.6	1 12	7 19.51	- 1 44.2	1.443	2.377	9.6	19.8
1 22	7 7.53	+17 24.6	1.452	2.414	6.4	20.9	1 22	7 10.50	- 0 58.1	1.476	2.400	10.3	19.9
2 1	6 57.75	+17 34.1	1.496	2.411	11.0	21.2	2 1	7 3.11	+ 0 8.0	1.534	2.424	12.6	20.1
2 11	6 50.70	+17 43.7	1.564	2.408	15.1	21.4	2 11	6 58.16	+ 1 26.4	1.615	2.447	15.3	20.3
<b>75728</b>	2000 <i>AJ</i> <sub>132</sub>		1 9.9 316°73	1°5/ 9.4 18			<b>130454</b>	2000 <i>QK</i> <sub>61</sub>		1 9.9 41°61	2°2/ 9.4 18		
12 3	7 49.50	+22 58.1	1.631	2.432	16.6	19.6	12 3	7 51.89	+25 11.7	1.329	2.142	19.0	19.3
12 13	7 45.80	+23 36.1	1.546	2.426	13.0	19.3	12 13	7 48.07	+25 39.8	1.265	2.152	14.9	19.1
12 23	7 39.02	+24 21.4	1.481	2.421	8.8	19.1	12 23	7 40.66	+26 12.4	1.220	2.162	10.0	18.9
1 2	7 29.77	+25 9.5	1.442	2.416	4.1	18.8	1 2	7 30.49	+26 43.8	1.199	2.173	4.8	18.6
1 12	7 19.21	+25 54.7	1.430	2.412	2.0	18.6	1 12	7 19.10	+27 7.9	1.205	2.185	2.7	18.5
1 22	7 8.79	+26 32.1	1.447	2.407	6.6	18.9	1 22	7 8.24	+27 21.0	1.236	2.197	7.4	18.8
2 1	6 59.97	+26 59.2	1.489	2.403	11.2	19.2	2 1	6 59.55	+27 22.4	1.293	2.209	12.2	19.1
2 11	6 53.88	+27 15.9	1.555	2.399	15.2	19.4	2 11	6 54.15	+27 14.2	1.371	2.222	16.4	19.4
<b>210157</b>	2006 <i>SP</i> <sub>199</sub>		1 9.9 170°68	0°2/ 9.9 17			<b>283620</b>	2002 <i>CO</i> <sub>153</sub>		1 9.9 32°24	0°4/ 9.8 17		
12 3	7 46.70	+20 36.3	2.887	3.655	10.9	21.4	12 3	7 50.26	+22 3.6	1.155	1.978	20.7	20.4
12 13	7 42.04	+20 46.4	2.794	3.657	8.5	21.2	12 13	7 47.05	+22 11.7	1.098	1.991	16.2	20.2
12 23	7 35.66	+21 0.4	2.727	3.659	5.7	21.1	12 23	7 40.06	+22 27.4	1.060	2.004	10.8	19.9
1 2	7 27.99	+21 16.4	2.688	3.661	2.6	20.8	1 2	7 30.23	+22 46.4	1.043	2.019	4.9	19.6
1 12	7 19.72	+21 32.6	2.680	3.663	0.7	20.7	1 12	7 19.19	+23 4.0	1.052	2.035	1.4	19.4
1 22	7 11.58	+21 47.5	2.703	3.664	3.9	20.9	1 22	7 8.81	+23 16.4	1.086	2.051	7.3	19.9
2 1	7 4.31	+21 59.8	2.756	3.665	6.9	21.1	2 1	7 0.79	+23 22.2	1.143	2.068	12.7	20.2
2 11	6 58.53	+22 9.2	2.836	3.665	9.5	21.3	2 11	6 56.21	+23 22.1	1.222	2.086	17.1	20.5
<b>287456</b>	2002 <i>YC</i> <sub>15</sub>		1 9.9 314°61	0°1/ 9.9 18			<b>433919</b>	2015 <i>BZ</i> <sub>511</sub>		1 9.9 129°88	2°0/ 10.9 18		
12 3	7 47.76	+17 22.3											

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1 9.9

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>83164</b>	2001 <i>QE</i> <sub>277</sub>		1 9.9 62°89	1.6°/10.8	18		<b>36768</b>	2000 <i>RA</i> <sub>93</sub>		1 9.9 120°67	0.8°/10.2	18	
12 3	7 46.98	+13 30.9	2.182	2.949	14.0	19.2	12 3	7 52.03	+19 22.1	2.460	3.223	12.7	19.9
12 13	7 42.74	+14 13.5	2.106	2.965	11.1	19.1	12 13	7 46.27	+19 15.5	2.384	3.243	9.9	19.8
12 23	7 36.35	+15 8.0	2.053	2.980	7.6	18.9	12 23	7 38.50	+19 13.2	2.333	3.262	6.7	19.6
1 2	7 28.38	+16 11.9	2.027	2.996	3.9	18.7	1 2	7 29.30	+19 13.7	2.309	3.281	3.2	19.4
1 12	7 19.67	+17 21.4	2.031	3.012	1.7	18.5	1 12	7 19.52	+19 15.5	2.317	3.299	1.1	19.3
1 22	7 11.15	+18 32.1	2.066	3.028	4.7	18.8	1 22	7 10.06	+19 17.4	2.356	3.316	4.4	19.6
2 1	7 3.77	+19 39.9	2.130	3.043	8.3	19.0	2 1	7 1.77	+19 18.5	2.424	3.333	7.7	19.8
2 11	6 58.25	+20 42.0	2.220	3.059	11.4	19.3	2 11	6 55.33	+19 18.7	2.520	3.349	10.6	20.0
<b>256897</b>	2008 <i>DN</i> <sub>47</sub>		1 9.9 21°71	10°1/14.0	18		<b>252602</b>	2001 <i>XD</i> <sub>48</sub>		1 9.9 13°92	6°2/ 7.9	18 R	
12 3	7 44.93	- 2 2.1	1.504	2.247	20.3	19.6	12 3	7 50.21	+33 24.2	1.519	2.328	17.2	19.3
12 13	7 41.99	- 2 46.2	1.434	2.252	17.5	19.4	12 13	7 46.83	+34 33.6	1.451	2.331	13.8	19.0
12 23	7 36.29	- 3 4.6	1.382	2.259	14.5	19.2	12 23	7 39.93	+35 41.4	1.404	2.335	10.0	18.8
1 2	7 28.48	- 2 52.3	1.349	2.266	11.7	19.0	1 2	7 30.26	+36 39.0	1.380	2.340	6.9	18.7
1 12	7 19.66	- 2 8.1	1.341	2.274	10.2	19.0	1 12	7 19.23	+37 18.0	1.383	2.345	6.5	18.7
1 22	7 11.09	- 0 55.2	1.356	2.283	10.8	19.0	1 22	7 8.59	+37 34.2	1.413	2.352	9.3	18.8
2 1	7 4.03	+ 0 39.4	1.396	2.292	13.2	19.2	2 1	6 59.98	+37 28.0	1.466	2.359	12.9	19.1
2 11	6 59.43	+ 2 26.4	1.459	2.302	16.1	19.4	2 11	6 54.56	+37 3.8	1.541	2.366	16.3	19.3
<b>455130</b>	2015 <i>VU</i> <sub>78</sub>		1 9.9 66°44	1°5/ 9.4	17		<b>95328</b>	2002 <i>CE</i> <sub>111</sub>		1 9.9 191°61	2°3/ 9.2	18	
12 3	7 52.51	+21 43.8	1.398	2.203	18.7	21.2	12 3	7 50.82	+27 17.8	2.082	2.868	14.0	19.8
12 13	7 48.34	+22 36.1	1.335	2.218	14.6	21.0	12 13	7 45.98	+27 46.1	1.995	2.868	10.9	19.6
12 23	7 40.74	+23 37.7	1.293	2.233	9.7	20.7	12 23	7 38.76	+28 15.7	1.932	2.867	7.4	19.4
1 2	7 30.54	+24 42.6	1.274	2.249	4.4	20.5	1 2	7 29.58	+28 42.5	1.896	2.867	3.8	19.1
1 12	7 19.13	+25 43.3	1.283	2.265	2.0	20.4	1 12	7 19.42	+29 2.5	1.889	2.866	2.6	19.0
1 22	7 8.18	+26 33.9	1.319	2.281	7.0	20.7	1 22	7 9.48	+29 12.9	1.911	2.866	5.8	19.3
2 1	6 59.26	+27 11.4	1.382	2.296	11.8	21.0	2 1	7 0.89	+29 13.1	1.961	2.865	9.5	19.5
2 11	6 53.45	+27 36.2	1.466	2.312	15.9	21.3	2 11	6 54.57	+29 4.5	2.036	2.864	12.8	19.7
<b>404787</b>	2014 <i>JC</i> <sub>52</sub>		1 9.9 201°95	0°0/ 9.9	14 C		<b>465828</b>	2010 <i>GB</i> <sub>135</sub>		1 9.9 151°81	6°4/ 7.0	18	
12 3	7 53.86	+20 16.3	2.101	2.871	14.4	23.9	12 3	7 52.88	+41 20.8	2.557	3.321	12.3	21.3
12 13	7 48.43	+20 35.4	2.003	2.866	11.3	23.7	12 13	7 47.69	+42 26.2	2.480	3.323	10.1	21.1
12 23	7 40.40	+21 1.0	1.928	2.861	7.6	23.5	12 23	7 39.89	+43 25.1	2.427	3.326	8.1	21.0
1 2	7 30.33	+21 30.1	1.881	2.854	3.5	23.2	1 2	7 30.08	+44 11.2	2.400	3.328	6.6	20.9
1 12	7 19.17	+21 59.5	1.864	2.846	0.9	23.0	1 12	7 19.29	+44 39.4	2.402	3.330	6.6	20.9
1 22	7 8.09	+22 26.0	1.877	2.838	5.3	23.3	1 22	7 8.71	+44 47.2	2.432	3.332	8.0	21.0
2 1	6 58.27	+22 47.6	1.920	2.829	9.4	23.5	2 1	6 59.50	+44 35.4	2.489	3.334	10.1	21.1
2 11	6 50.67	+23 3.9	1.988	2.818	12.9	23.7	2 11	6 52.60	+44 7.4	2.569	3.335	12.2	21.3
<b>51349</b>	2000 <i>QQ</i> <sub>173</sub>		1 9.9 263°44	0°1/ 9.9	18		<b>238330</b>	2004 <i>BA</i> <sub>5</sub>		1 9.9 316°47	1°5/ 9.4	18	
12 3	7 44.61	+22 50.4	3.359	4.127	9.5	19.2	12 3	7 47.67	+25 3.9	2.111	2.901	13.7	20.2
12 13	7 40.27	+22 47.8	3.253	4.116	7.4	19.1	12 13	7 43.68	+25 23.8	2.018	2.892	10.7	20.0
12 23	7 34.42	+22 46.7	3.172	4.105	5.0	18.9	12 23	7 37.24	+25 46.5	1.947	2.884	7.2	19.8
1 2	7 27.46	+22 45.9	3.120	4.093	2.2	18.7	1 2	7 28.90	+26 8.8	1.903	2.877	3.4	19.5
1 12	7 19.95	+22 44.2	3.099	4.082	0.6	18.5	1 12	7 19.60	+26 27.1	1.888	2.869	1.8	19.4
1 22	7 12.53	+22 40.6	3.110	4.070	3.5	18.7	1 22	7 10.43	+26 39.0	1.903	2.862	5.4	19.6
2 1	7 5.81	+22 34.8	3.150	4.058	6.1	18.9	2 1	7 2.48	+26 43.4	1.945	2.854	9.2	19.8
2 11	7 0.35	+22 26.7	3.219	4.046	8.5	19.1	2 11	6 56.65	+26 40.7	2.012	2.848	12.6	20.0
<b>275316</b>	2010 <i>TB</i> <sub>176</sub>		1 9.9 99°66	0°1/ 9.9	18		<b>394378</b>	2007 <i>DG</i> <sub>110</sub>		1 9.9 231°92	2°0/ 9.4	18	
12 3	7 52.82	+18 44.4	2.040	2.812	14.7	21.1	12 3	7 55.38	+25 40.8	1.807	2.592	15.8	22.1
12 13	7 47.37	+19 33.7	1.973	2.837	11.4	20.9	12 13	7 50.27	+26 5.5	1.709	2.580	12.5	21.9
12 23	7 39.48	+20 31.4	1.929	2.862	7.6	20.8	12 23	7 42.01	+26 33.7	1.632	2.568	8.5	21.6
1 2	7 29.81	+21 33.4	1.913	2.886	3.4	20.5	1 2	7 31.20	+27 0.6	1.582	2.554	4.1	21.3
1 12	7 19.34	+22 34.9	1.927	2.909	0.9	20.4	1 12	7 18.98	+27 21.2	1.560	2.540	2.4	21.2
1 22	7 9.21	+23 31.4	1.971	2.932	5.1	20.7	1 22	7 6.82	+27 31.9	1.568	2.525	6.6	21.4
2 1	7 0.47	+24 20.1	2.046	2.954	8.9	21.0	2 1	6 56.20	+27 31.9	1.603	2.510	11.0	21.6
2 11	6 53.94	+25 0.1	2.146	2.976	12.1	21.3	2 11	6 48.31	+27 22.6	1.663	2.494	15.0	21.8
<b>86991</b>	2000 <i>JX</i> <sub>34</sub>		1 9.9 106°82	0°3/ 9.9	18		<b>276612</b>	2003 <i>UK</i> <sub>83</sub>		1 9.9 355°20	3°4/10.7	18	
12 3	7 56.03	+20 15.2	1.779	2.556	16.3	20.2	12 3	7 48.15	+13 45.0	2.095	2.863	14.5	20.1
12 13	7 50.11	+20 26.4	1.713	2.580	12.7	20.0	12 13	7 43.77	+13 7.5	2.006	2.862	11.6	19.9
12 23	7 41.40	+20 43.9	1.670	2.604	8.5	19.8	12 23	7 37.13	+12 37.7	1.940	2.862	8.3	19.7
1 2	7 30.67	+21 4.5	1.653	2.626	3.9	19.5	1 2	7 28.80	+12 16.2	1.899	2.862	5.0	19.5
1 12	7 19.13	+21 24.9	1.665	2.648	1.0	19.4	1 12	7 19.66	+12 3.2	1.888	2.861	3.5	19.4
1 22	7 8.10	+21 42.2	1.707	2.669	5.6	19.7	1 22	7 10.71	+11 58.0	1.906	2.861	5.8	19.5
2 1	6 58.78	+21 55.2	1.778	2.689	9.8	20.0	2 1	7 2.95	+11 59.6	1.952	2.861	9.2	19.7
2 11	6 52.05	+22 3.8	1.873	2.709	13.4	20.3	2 11	6 57.16	+12 6.4	2.022	2.861	12.4	20.0
<b>133949</b>	2004 <i>TC</i> <sub>75</sub>		1 9.9 19°08	4°3/ 8.8	18		<b>416876</b>	2005 <i>QM</i>		1 9.9 146°38	1°6/10.7	18	
12 3	7 50.75	+28 28.8	1.262	2.083	19.4	19.5	12 3	7 50.25	+13 56.2	2.307	3.065	13.6	21.5
12 13	7 47.64	+29 19.2	1.196	2.087	15.3	19.2	12 13	7 45.21	+14 29.4	2.222	3.075	10.8	21.4
12 23	7 40.66	+30 12.4	1.150	2.091	10.5	19.0	12 23	7 38.01	+15 13.5	2.160	3.085	7.4	21.2
1 2	7 30.63	+31 0.3	1.126	2.097	5.9	18.7	1 2	7 29.18	+16 6.2	2.125	3.093	3.8	20.9
1 12	7 19.13	+31 34.9	1.128	2.103	4.7	18.7	1 12	7 19.56	+17 4.4	2.121	3.102	1.7	20.8
1 22	7 8.10	+31 51.2	1.155	2.110	8.7	18.9	1 22	7 10.08	+18 4.2	2.149	3.110	4.7	21.0
2 1	6 59.37	+31 49.0	1.206	2.118	13.4	19.2	2 1	7 1.70	+19 2.1	2.206	3.117	8.2	21.3
2 11	6 54.19	+31 31.9	1.278	2.127	17.6	19.5	2 11	6 55.17	+19 55.8	2.291	3.123	11.4	21.5
<b>495085</b>	2011 <i>KL</i> <sub>20</sub>		1 9.9 169°82	1°1/ 9.4	18		<b>495458</b>	2014 <i>TY</i> <sub>40</sub>		1 9.9 61°19	0°2/ 9.8	18	
12 3	7 47.99	+23 18.6	2.490	3.267									

EPHEMERIDES

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>331661</b>	2002 <i>PG</i> <sub>102</sub>		1 9.9 122°62	2°6/11.0	18		<b>237416</b>	1998 <i>UT</i> <sub>19</sub>		1 9.9 85°66	6°6/ 7.9	17	
12 3	7 47.85	+12 28.2	2.757	3.505	11.9	22.2	12 3	8 1.51	+37 31.7	1.914	2.686	15.5	20.8
12 13	7 42.86	+12 21.2	2.678	3.522	9.5	22.1	12 13	7 54.68	+38 49.4	1.867	2.721	12.5	20.7
12 23	7 36.17	+12 22.2	2.622	3.539	6.7	21.9	12 23	7 44.62	+40 0.1	1.843	2.755	9.4	20.5
1 2	7 28.27	+12 30.7	2.595	3.555	3.9	21.8	1 2	7 32.20	+40 55.1	1.845	2.788	7.0	20.5
1 12	7 19.85	+12 45.6	2.598	3.571	2.6	21.7	1 12	7 18.89	+41 28.0	1.876	2.821	6.8	20.5
1 22	7 11.63	+13 5.5	2.632	3.587	4.4	21.9	1 22	7 6.27	+41 36.7	1.935	2.853	8.7	20.7
2 1	7 4.34	+13 28.7	2.696	3.602	7.1	22.1	2 1	6 55.77	+41 23.4	2.021	2.884	11.3	20.9
2 11	6 58.56	+13 53.4	2.787	3.616	9.7	22.2	2 11	6 48.33	+40 53.6	2.131	2.914	13.8	21.2
<b>453022</b>	2007 <i>RS</i> <sub>51</sub>		1 9.9 231°31	2°9/10.6	18		<b>164415</b>	2006 <i>BC</i> <sub>34</sub>		1 9.9 193°97	1°1/ 9.6	18	
12 3	7 51.28	+15 28.3	1.734	2.513	16.6	21.3	12 3	7 54.03	+23 44.1	2.017	2.795	14.6	21.3
12 13	7 46.82	+15 5.4	1.644	2.509	13.3	21.0	12 13	7 48.70	+24 4.4	1.925	2.793	11.5	21.1
12 23	7 39.52	+14 51.1	1.575	2.504	9.4	20.8	12 23	7 40.66	+24 28.6	1.856	2.791	7.7	20.8
1 2	7 30.01	+14 45.6	1.531	2.498	5.1	20.5	1 2	7 30.51	+24 53.1	1.814	2.788	3.6	20.6
1 12	7 19.36	+14 47.8	1.515	2.493	3.0	20.4	1 12	7 19.29	+25 13.9	1.802	2.784	1.5	20.4
1 22	7 8.88	+14 56.1	1.527	2.487	6.3	20.6	1 22	7 8.23	+25 28.3	1.820	2.779	5.6	20.7
2 1	6 59.85	+15 8.6	1.566	2.481	10.6	20.8	2 1	6 58.56	+25 35.2	1.867	2.774	9.7	20.9
2 11	6 53.30	+15 23.5	1.630	2.475	14.6	21.0	2 11	6 51.26	+25 35.2	1.938	2.768	13.2	21.1
<b>522027</b>	2015 <i>XK</i> <sub>405</sub>		1 9.9 103°65	4°0/ 8.2	17		<b>259236</b>	2003 <i>BR</i> <sub>52</sub>		1 9.9 255°93	3°2/11.4	18	
12 3	7 54.74	+28 16.2	1.873	2.659	15.3	21.0	12 3	7 47.83	+10 23.2	1.951	2.715	15.6	20.4
12 13	7 49.49	+29 39.7	1.806	2.677	12.0	20.8	12 13	7 43.87	+10 44.4	1.856	2.709	12.6	20.2
12 23	7 41.28	+31 6.2	1.762	2.694	8.3	20.7	12 23	7 37.46	+11 21.0	1.782	2.703	9.1	19.9
1 2	7 30.78	+32 27.9	1.745	2.711	4.9	20.5	1 2	7 29.09	+12 12.5	1.734	2.696	5.3	19.7
1 12	7 19.17	+33 37.2	1.758	2.728	4.3	20.5	1 12	7 19.66	+13 16.0	1.714	2.690	3.3	19.5
1 22	7 7.86	+34 29.3	1.800	2.744	7.2	20.7	1 22	7 10.26	+14 27.2	1.723	2.683	5.8	19.7
2 1	6 58.19	+35 2.6	1.870	2.759	10.7	20.9	2 1	7 2.01	+15 41.1	1.762	2.676	9.7	19.9
2 11	6 51.19	+35 19.2	1.964	2.775	13.8	21.2	2 11	6 55.85	+16 53.4	1.825	2.670	13.3	20.1
<b>24058</b>	1999 <i>TR</i> <sub>89</sub>		1 9.9 72°24	2°1/10.6	18		<b>81331</b>	2000 <i>GF</i> <sub>32</sub>		1 9.9 53°93	2°7/ 9.2	18	
12 3	7 53.10	+15 7.3	1.290	2.087	20.3	18.4	12 3	7 51.84	+26 55.9	1.641	2.440	16.6	19.3
12 13	7 48.81	+15 26.0	1.230	2.106	16.1	18.1	12 13	7 47.50	+27 28.0	1.569	2.449	13.0	19.1
12 23	7 41.07	+16 0.2	1.189	2.124	11.0	17.9	12 23	7 40.07	+28 2.3	1.519	2.457	8.8	18.9
1 2	7 30.71	+16 46.9	1.171	2.143	5.5	17.6	1 2	7 30.27	+28 33.6	1.494	2.466	4.5	18.6
1 12	7 19.22	+17 40.8	1.180	2.161	2.2	17.5	1 12	7 19.38	+28 56.5	1.496	2.475	3.0	18.5
1 22	7 8.28	+18 36.1	1.216	2.180	6.9	17.8	1 22	7 8.89	+29 7.9	1.527	2.484	6.8	18.8
2 1	6 59.45	+19 27.9	1.277	2.198	11.9	18.2	2 1	7 0.19	+29 7.2	1.584	2.493	11.0	19.1
2 11	6 53.78	+20 13.4	1.360	2.217	16.2	18.5	2 11	6 54.30	+28 56.6	1.664	2.502	14.7	19.3
<b>203911</b>	2003 <i>JV</i> <sub>8</sub>		1 9.9 276°65	0°4/10.1	18		<b>319777</b>	2006 <i>UF</i> <sub>273</sub>		1 9.9 239°31	3°9/ 8.6	18	
12 3	7 50.16	+18 26.6	1.565	2.360	17.4	20.5	12 3	7 53.30	+30 53.2	2.053	2.837	14.2	21.3
12 13	7 46.54	+18 54.6	1.470	2.347	13.8	20.2	12 13	7 48.41	+31 37.8	1.958	2.826	11.3	21.1
12 23	7 39.72	+19 34.5	1.396	2.334	9.4	19.9	12 23	7 40.64	+32 22.5	1.885	2.815	8.0	20.9
1 2	7 30.26	+20 23.6	1.347	2.321	4.4	19.6	1 2	7 30.57	+33 1.5	1.840	2.804	4.8	20.7
1 12	7 19.28	+21 16.7	1.324	2.307	1.1	19.3	1 12	7 19.28	+33 29.3	1.823	2.792	4.2	20.6
1 22	7 8.26	+22 8.5	1.330	2.294	6.5	19.6	1 22	7 8.06	+33 42.4	1.835	2.780	7.0	20.8
2 1	6 58.77	+22 54.8	1.362	2.280	11.6	19.9	2 1	6 58.26	+33 40.1	1.875	2.768	10.5	20.9
2 11	6 52.07	+23 33.3	1.417	2.267	16.1	20.1	2 11	6 50.95	+33 24.9	1.940	2.755	13.8	21.1
<b>176944</b>	2002 <i>WW</i> <sub>21</sub>		1 9.9 56°16	2°2/ 9.1	18		<b>343850</b>	2011 <i>HP</i> <sub>43</sub>		1 9.9 124°94	0°4/ 9.7	18	
12 3	7 50.40	+23 35.1	1.687	2.484	16.3	20.1	12 3	7 47.86	+20 37.1	2.786	3.554	11.3	21.1
12 13	7 46.37	+24 35.5	1.610	2.489	12.7	19.9	12 13	7 43.06	+21 21.4	2.704	3.566	8.8	20.9
12 23	7 39.35	+25 43.3	1.556	2.495	8.5	19.6	12 23	7 36.44	+22 11.0	2.646	3.579	5.8	20.7
1 2	7 29.97	+26 52.7	1.527	2.500	4.1	19.4	1 2	7 28.47	+23 2.9	2.618	3.591	2.6	20.5
1 12	7 19.39	+27 56.9	1.527	2.506	2.6	19.3	1 12	7 19.86	+23 53.9	2.621	3.603	0.9	20.4
1 22	7 9.03	+28 50.2	1.555	2.512	6.6	19.6	1 22	7 11.38	+24 41.0	2.656	3.615	4.1	20.7
2 1	7 0.27	+29 30.0	1.610	2.518	10.9	19.8	2 1	7 3.81	+25 22.2	2.721	3.626	7.1	20.9
2 11	6 54.19	+29 56.2	1.688	2.524	14.6	20.1	2 11	6 57.80	+25 56.6	2.813	3.637	9.7	21.1
<b>155975</b>	2001 <i>QS</i> <sub>238</sub>		1 9.9 123°45	4°2/11.3	18		<b>504302</b>	2007 <i>EN</i> <sub>224</sub>		1 9.9 143°93	1°9/ 8.8	18	
12 3	7 52.41	+10 45.0	1.694	2.460	17.5	20.6	12 3	7 44.61	+30 26.4	4.229	4.993	7.8	22.3
12 13	7 47.50	+10 32.0	1.620	2.473	14.1	20.4	12 13	7 39.99	+30 51.0	4.145	5.004	6.1	22.2
12 23	7 39.84	+10 33.2	1.566	2.485	10.2	20.2	12 23	7 34.11	+31 14.3	4.087	5.014	4.2	22.0
1 2	7 30.09	+10 48.8	1.536	2.496	6.2	20.0	1 2	7 27.34	+31 34.4	4.059	5.024	2.4	21.9
1 12	7 19.39	+11 17.1	1.535	2.508	4.2	19.9	1 12	7 20.17	+31 49.6	4.063	5.033	2.0	21.9
1 22	7 9.01	+11 55.2	1.562	2.518	6.7	20.1	1 22	7 13.11	+31 58.8	4.098	5.042	3.5	22.0
2 1	7 0.18	+12 39.0	1.616	2.528	10.6	20.3	2 1	7 6.69	+32 1.7	4.163	5.051	5.3	22.2
2 11	6 53.83	+13 25.0	1.695	2.538	14.2	20.6	2 11	7 1.35	+31 58.6	4.257	5.060	7.1	22.3
<b>167036</b>	2003 <i>QF</i> <sub>45</sub>		1 9.9 142°97	1°3/ 9.5	18		<b>506084</b>	2015 <i>XE</i> <sub>111</sub>		1 9.9 286°78	2°7/10.7	18	
12 3	7 54.37	+24 11.4	2.015	2.793	14.7	21.1	12 3	7 48.95	+14 38.1	1.600	2.388	17.4	21.6
12 13	7 48.81	+24 39.1	1.936	2.804	11.4	20.9	12 13	7 45.39	+14 35.8	1.506	2.375	14.0	21.4
12 23	7 40.61	+25 10.4	1.880	2.815	7.7	20.7	12 23	7 38.84	+14 45.8	1.431	2.363	9.9	21.1
1 2	7 30.42	+25 41.3	1.852	2.825	3.6	20.4	1 2	7 29.84	+15 7.8	1.381	2.350	5.3	20.8
1 12	7 19.31	+26 7.4	1.853	2.834	1.7	20.3	1 12	7 19.47	+15 39.5	1.358	2.337	2.8	20.6
1 22	7 8.50	+26 26.1	1.885	2.843	5.6	20.6	1 22	7 9.11	+16 17.4	1.362	2.324	6.6	20.8
2 1	6 59.17	+26 36.3	1.945	2.851	9.4	20.8	2 1	7 0.20	+16 57.9	1.392	2.312	11.3	21.0
2 11	6 52.20	+26 38.8	2.030	2.858	12.8	21.1	2 11	6 53.90	+17 37.7	1.446	2.299	15.6	21.3
<b>260846</b>	2005 <i>QR</i> <sub>64</sub>		1 9.9 57°89	1°0/10.3	18		<b>312354</b>	2008 <i>DC</i> <sub>23</sub>		1 9.9 231°69	0°1/ 9.9	18	
12 3	7 49.35	+17 37.2	1.691	2.									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>343532</b>	2010 <i>EV</i> <sub>138</sub>		1 9.9 201 <sup>o</sup> .77	5 <sup>o</sup> .8/ 7.3	18		<b>465790</b>	2010 <i>BH</i> <sub>9</sub>		1 9.9 43 <sup>o</sup> .60	3 <sup>o</sup> .9/ 8.0	18	
12 3	7 52.90	+40 14.9	2.704	3.467	11.7	21.1	12 3	7 49.18	+30 12.6	2.287	3.072	12.9	20.8
12 13	7 47.57	+41 11.5	2.619	3.464	9.6	20.9	12 13	7 44.85	+31 24.2	2.205	3.074	10.2	20.6
12 23	7 39.77	+42 2.4	2.558	3.461	7.5	20.8	12 23	7 38.07	+32 37.2	2.146	3.076	7.2	20.4
1 2	7 30.08	+42 42.0	2.525	3.458	6.0	20.7	1 2	7 29.37	+33 45.8	2.116	3.078	4.5	20.3
1 12	7 19.45	+43 5.5	2.520	3.454	6.0	20.7	1 12	7 19.67	+34 44.4	2.115	3.081	4.2	20.2
1 22	7 8.97	+43 10.6	2.544	3.450	7.4	20.8	1 22	7 10.07	+35 28.8	2.143	3.083	6.5	20.4
2 1	6 59.76	+42 57.8	2.596	3.446	9.5	20.9	2 1	7 1.66	+35 57.5	2.200	3.085	9.5	20.6
2 11	6 52.68	+42 30.1	2.671	3.442	11.7	21.0	2 11	6 55.36	+36 11.8	2.281	3.087	12.3	20.8
<b>288998</b>	2004 <i>TS</i> <sub>67</sub>		1 9.9 88 <sup>o</sup> .60	0 <sup>o</sup> .5/ 9.8	18		<b>2731</b>	<i>Cucula</i>		1 9.9 186 <sup>o</sup> .59	3 <sup>o</sup> .0/ 11.5	18	
12 3	7 53.16	+19 58.3	1.564	2.356	17.6	20.3	12 3	7 45.11	+ 9 10.8	3.057	3.794	11.0	16.8
12 13	7 48.48	+20 42.4	1.498	2.373	13.7	20.0	12 13	7 40.75	+ 9 13.7	2.959	3.793	8.9	16.7
12 23	7 40.70	+21 36.3	1.452	2.390	9.2	19.8	12 23	7 34.83	+ 9 26.0	2.885	3.793	6.6	16.5
1 2	7 30.56	+22 35.1	1.432	2.406	4.1	19.6	1 2	7 27.76	+ 9 47.6	2.838	3.791	4.2	16.3
1 12	7 19.34	+23 32.7	1.440	2.422	1.3	19.4	1 12	7 20.11	+10 17.6	2.822	3.790	3.0	16.3
1 22	7 8.53	+24 23.7	1.476	2.438	6.3	19.8	1 22	7 12.53	+10 54.1	2.836	3.788	4.4	16.3
2 1	6 59.51	+25 5.0	1.540	2.454	10.8	20.1	2 1	7 5.68	+11 35.1	2.881	3.785	6.8	16.5
2 11	6 53.32	+25 36.1	1.627	2.469	14.7	20.3	2 11	7 0.11	+12 18.2	2.954	3.782	9.2	16.7
<b>163556</b>	2002 <i>TY</i> <sub>118</sub>		1 9.9 12 <sup>o</sup> .67	3 <sup>o</sup> .8/ 9.1	18		<b>491645</b>	2012 <i>TO</i> <sub>213</sub>		1 9.9 13 <sup>o</sup> .95	3 <sup>o</sup> .2/ 10.7	17	
12 3	7 50.93	+32 2.5	1.896	2.689	14.9	19.4	12 3	7 48.65	+15 42.2	1.147	1.963	21.3	21.7
12 13	7 46.51	+32 19.8	1.818	2.691	11.8	19.2	12 13	7 45.94	+15 23.7	1.079	1.965	17.0	21.4
12 23	7 39.25	+32 33.9	1.762	2.694	8.3	19.0	12 23	7 39.54	+15 18.8	1.029	1.968	11.8	21.2
1 2	7 29.87	+32 39.9	1.732	2.697	4.9	18.8	1 2	7 30.21	+15 27.5	1.000	1.971	6.3	20.9
1 12	7 19.54	+32 33.9	1.729	2.701	4.0	18.7	1 12	7 19.46	+15 47.2	0.996	1.976	3.3	20.7
1 22	7 9.60	+32 14.3	1.756	2.706	6.8	18.9	1 22	7 9.12	+16 14.2	1.016	1.981	7.7	21.0
2 1	7 1.29	+31 42.5	1.809	2.710	10.3	19.1	2 1	7 0.91	+16 44.6	1.060	1.987	13.1	21.3
2 11	6 55.54	+31 1.7	1.886	2.716	13.5	19.3	2 11	6 56.07	+17 14.9	1.124	1.994	17.9	21.6
<b>113785</b>	2002 <i>TS</i> <sub>191</sub>		1 9.9 152 <sup>o</sup> .35	3 <sup>o</sup> .3/ 8.9	18		<b>115896</b>	2003 <i>VF</i> <sub>6</sub>		1 9.9 145 <sup>o</sup> .83	5 <sup>o</sup> .1/ 7.9	18	
12 3	7 52.83	+33 18.4	2.652	3.421	11.7	19.7	12 3	7 51.71	+35 11.7	2.219	3.000	13.4	19.7
12 13	7 47.12	+33 36.3	2.568	3.427	9.3	19.5	12 13	7 46.97	+36 7.6	2.138	3.001	10.7	19.5
12 23	7 39.23	+33 50.5	2.508	3.433	6.6	19.4	12 23	7 39.54	+37 0.5	2.080	3.001	7.9	19.3
1 2	7 29.75	+33 57.3	2.477	3.438	4.1	19.2	1 2	7 30.04	+37 44.2	2.049	3.002	5.6	19.2
1 12	7 19.58	+33 53.8	2.476	3.443	3.5	19.2	1 12	7 19.51	+38 13.3	2.047	3.003	5.4	19.2
1 22	7 9.70	+33 38.7	2.505	3.447	5.5	19.3	1 22	7 9.19	+38 24.8	2.073	3.003	7.4	19.3
2 1	7 1.05	+33 12.9	2.563	3.451	8.2	19.5	2 1	7 0.29	+38 19.0	2.127	3.004	10.2	19.5
2 11	6 54.36	+32 38.6	2.648	3.455	10.8	19.7	2 11	6 53.75	+37 58.7	2.204	3.004	12.9	19.7
<b>454276</b>	2014 <i>HU</i> <sub>30</sub>		1 9.9 171 <sup>o</sup> .60	1 <sup>o</sup> .1/ 10.3	18		<b>293664</b>	2007 <i>PL</i> <sub>18</sub>		1 9.9 128 <sup>o</sup> .75	0 <sup>o</sup> .8/ 9.7	18	
12 3	7 53.48	+17 34.0	2.003	2.772	15.0	22.9	12 3	7 55.15	+22 56.0	1.945	2.722	15.1	21.8
12 13	7 48.14	+17 47.7	1.915	2.776	11.9	22.6	12 13	7 49.42	+23 14.7	1.871	2.738	11.8	21.6
12 23	7 40.22	+18 9.7	1.850	2.780	8.1	22.4	12 23	7 41.02	+23 37.5	1.819	2.753	7.9	21.4
1 2	7 30.31	+18 37.9	1.811	2.783	3.9	22.2	1 2	7 30.63	+24 0.8	1.795	2.768	3.6	21.1
1 12	7 19.42	+19 9.2	1.803	2.785	1.3	22.0	1 12	7 19.38	+24 20.8	1.800	2.782	1.3	21.0
1 22	7 8.71	+19 40.5	1.824	2.786	5.3	22.3	1 22	7 8.50	+24 35.0	1.835	2.795	5.5	21.3
2 1	6 59.33	+20 9.4	1.875	2.786	9.4	22.5	2 1	6 59.17	+24 42.5	1.899	2.807	9.5	21.6
2 11	6 52.21	+20 34.7	1.951	2.786	13.0	22.7	2 11	6 52.27	+24 44.0	1.988	2.819	12.9	21.8
<b>411440</b>	2010 <i>WR</i> <sub>41</sub>		1 9.9 127 <sup>o</sup> .23	1 <sup>o</sup> .7/ 9.4	18		<b>492583</b>	2014 <i>OS</i> <sub>189</sub>		1 9.9 79 <sup>o</sup> .50	0 <sup>o</sup> .8/ 10.2	18	
12 3	7 52.80	+25 41.8	2.077	2.858	14.2	21.7	12 3	7 50.96	+18 36.5	1.792	2.576	16.0	21.6
12 13	7 47.53	+26 4.9	1.999	2.869	11.1	21.5	12 13	7 46.30	+18 46.9	1.722	2.592	12.5	21.4
12 23	7 39.73	+26 29.9	1.945	2.880	7.4	21.3	12 23	7 38.99	+19 5.2	1.674	2.608	8.4	21.2
1 2	7 30.05	+26 53.1	1.917	2.890	3.6	21.1	1 2	7 29.73	+19 29.0	1.652	2.625	4.0	20.9
1 12	7 19.51	+27 10.8	1.920	2.900	2.0	21.0	1 12	7 19.62	+19 55.1	1.658	2.641	1.2	20.8
1 22	7 9.28	+27 20.4	1.952	2.909	5.5	21.2	1 22	7 9.88	+20 20.5	1.694	2.657	5.5	21.1
2 1	7 0.48	+27 21.6	2.013	2.918	9.2	21.5	2 1	7 1.68	+20 43.0	1.757	2.672	9.6	21.4
2 11	6 53.95	+27 15.5	2.098	2.927	12.4	21.7	2 11	6 55.87	+21 1.7	1.844	2.688	13.2	21.6
<b>358050</b>	2006 <i>HT</i> <sub>17</sub>		1 9.9 196 <sup>o</sup> .44	2 <sup>o</sup> .9/ 10.9	18		<b>40416</b>	1999 <i>RO</i> <sub>14</sub>		1 9.9 348 <sup>o</sup> .41	3 <sup>o</sup> .0/ 10.8	18	
12 3	7 51.08	+13 25.6	1.883	2.652	15.9	21.6	12 3	7 49.37	+14 15.7	1.597	2.383	17.5	18.4
12 13	7 46.44	+13 21.1	1.793	2.650	12.7	21.3	12 13	7 45.54	+14 7.7	1.514	2.382	14.0	18.2
12 23	7 39.18	+13 27.9	1.723	2.648	9.0	21.1	12 23	7 38.80	+14 11.8	1.452	2.382	9.9	17.9
1 2	7 29.88	+13 45.4	1.680	2.645	5.1	20.9	1 2	7 29.78	+14 27.7	1.413	2.381	5.4	17.7
1 12	7 19.53	+14 11.9	1.665	2.642	3.0	20.7	1 12	7 19.59	+14 53.2	1.402	2.381	3.0	17.5
1 22	7 9.30	+14 44.6	1.679	2.638	6.0	20.9	1 22	7 9.60	+15 25.3	1.418	2.380	6.5	17.7
2 1	7 0.38	+15 20.5	1.721	2.634	10.0	21.1	2 1	7 1.15	+16 0.5	1.461	2.380	10.9	18.0
2 11	6 53.74	+15 57.0	1.788	2.629	13.6	21.3	2 11	6 55.29	+16 35.9	1.527	2.380	15.0	18.2
<b>80520</b>	2000 <i>AV</i> <sub>60</sub>		1 9.9 28 <sup>o</sup> .40	2 <sup>o</sup> .7/ 9.6	18		<b>356335</b>	2010 <i>JZ</i> <sub>172</sub>		1 9.9 211 <sup>o</sup> .67	0 <sup>o</sup> .6/ 9.8	18	
12 3	7 54.34	+28 7.3	1.142	1.964	20.9	18.2	12 3	7 53.39	+22 7.0	1.982	2.761	14.9	22.5
12 13	7 50.58	+28 4.6	1.080	1.972	16.5	17.9	12 13	7 48.32	+22 28.0	1.886	2.755	11.7	22.3
12 23	7 42.66	+28 1.0	1.036	1.980	11.2	17.7	12 23	7 40.51	+22 54.5	1.813	2.748	7.9	22.0
1 2	7 31.57	+27 51.1	1.015	1.988	5.5	17.4	1 2	7 30.53	+23 23.2	1.766	2.740	3.6	21.8
1 12	7 19.13	+27 30.2	1.018	1.998	3.1	17.3	1 12	7 19.39	+23 50.2	1.749	2.731	1.2	21.6
1 22	7 7.45	+26 57.4	1.046	2.008	8.1	17.6	1 22	7 8.35	+24 12.4	1.762	2.722	5.6	21.9
2 1	6 58.41	+26 15.4	1.098	2.019	13.4	17.9	2 1	6 58.64	+24 27.9	1.803	2.713	9.8	22.1
2 11	6 53.16	+25 28.6	1.170	2.031	18.0	18.2	2 11	6 51.29	+24 36.9	1.870	2.702	13.5	22.3
<b>325470</b>	2009 <i>QO</i> <sub>57</sub>		1 9.9 129 <sup></sup>										

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>393311</b>	2013 <i>YM</i> <sub>142</sub>		1 9.9 216°98	3°0/10.8	18		<b>392283</b>	2010 <i>BT</i> <sub>62</sub>		1 9.9 16°79	5°5/10.3	18	
12 3	7 48.18	+13 7.1	2.778	3.526	11.8	20.7	12 3	7 52.94	+12 3.3	1.979	2.736	15.6	19.9
12 13	7 43.27	+12 32.8	2.676	3.520	9.5	20.5	12 13	7 47.52	+10 24.1	1.894	2.739	12.7	19.7
12 23	7 36.59	+12 4.4	2.598	3.513	6.8	20.3	12 23	7 39.67	+8 50.1	1.832	2.743	9.5	19.5
1 2	7 28.59	+11 42.5	2.547	3.506	4.2	20.1	1 2	7 30.06	+7 25.1	1.798	2.747	6.6	19.4
1 12	7 19.92	+11 27.1	2.528	3.499	3.0	20.0	1 12	7 19.65	+6 12.5	1.793	2.752	5.6	19.3
1 22	7 11.36	+11 17.9	2.539	3.491	4.8	20.1	1 22	7 9.56	+5 14.8	1.818	2.757	7.5	19.4
2 1	7 3.65	+11 14.3	2.580	3.483	7.5	20.3	2 1	7 0.83	+4 32.6	1.870	2.763	10.5	19.6
2 11	6 57.44	+11 15.3	2.648	3.475	10.2	20.5	2 11	6 54.27	+4 4.9	1.947	2.769	13.5	19.8
<b>47714</b>	2000 <i>DS</i> <sub>24</sub>		1 9.9 161°42	0°1/ 9.9	18		<b>408647</b>	2014 <i>MG</i> <sub>14</sub>		1 9.9 199°34	0°0/ 9.9	18	
12 3	7 48.47	+21 12.6	2.528	3.301	12.2	19.9	12 3	7 52.99	+20 13.1	2.089	2.862	14.4	22.5
12 13	7 43.75	+21 27.1	2.439	3.304	9.5	19.8	12 13	7 47.82	+20 33.8	1.994	2.858	11.3	22.3
12 23	7 37.02	+21 45.8	2.374	3.308	6.4	19.6	12 23	7 40.10	+21 1.0	1.921	2.854	7.6	22.0
1 2	7 28.80	+22 6.6	2.338	3.311	2.9	19.3	1 2	7 30.36	+21 32.2	1.876	2.849	3.5	21.8
1 12	7 19.87	+22 26.9	2.331	3.314	0.8	19.2	1 12	7 19.57	+22 3.6	1.861	2.843	0.9	21.6
1 22	7 11.09	+22 44.9	2.355	3.316	4.3	19.4	1 22	7 8.87	+22 32.2	1.876	2.837	5.2	21.9
2 1	7 3.34	+22 59.1	2.409	3.318	7.7	19.7	2 1	6 59.41	+22 55.9	1.920	2.830	9.3	22.1
2 11	6 57.31	+23 9.3	2.489	3.320	10.6	19.9	2 11	6 52.15	+23 14.2	1.989	2.822	12.8	22.3
<b>468233</b>	2015 <i>BV</i> <sub>216</sub>		1 9.9 338°54	2°9/ 8.9	18		<b>333789</b>	2011 <i>GF</i> <sub>67</sub>		1 9.9 284°03	0°1/10.0	18	
12 3	7 48.32	+27 31.6	1.830	2.629	15.1	21.3	12 3	7 47.67	+18 13.6	2.095	2.875	14.1	20.1
12 13	7 44.69	+28 9.5	1.744	2.623	11.9	21.1	12 13	7 43.74	+18 59.1	1.999	2.868	11.1	19.9
12 23	7 38.23	+28 49.9	1.679	2.617	8.1	20.9	12 23	7 37.41	+19 54.7	1.926	2.861	7.5	19.6
1 2	7 29.52	+29 27.9	1.640	2.611	4.3	20.6	1 2	7 29.16	+20 57.4	1.880	2.853	3.4	19.4
1 12	7 19.67	+29 58.1	1.629	2.606	3.2	20.6	1 12	7 19.87	+22 2.7	1.863	2.846	0.9	19.2
1 22	7 9.97	+30 17.1	1.646	2.601	6.6	20.8	1 22	7 10.59	+23 6.0	1.876	2.839	5.1	19.5
2 1	7 1.74	+30 23.5	1.690	2.597	10.6	21.0	2 1	7 2.40	+24 3.5	1.919	2.831	9.1	19.7
2 11	6 56.01	+30 18.8	1.757	2.593	14.1	21.2	2 11	6 56.24	+24 53.0	1.986	2.824	12.6	19.9
<b>423125</b>	2004 <i>CX</i> <sub>14</sub>		1 9.9 53°75	6°6/ 8.9	18		<b>116763</b>	2004 <i>EW</i> <sub>7</sub>		1 9.9 154°72	9°9/15.5	18	
12 3	7 59.34	+42 4.7	2.093	2.857	14.6	20.1	12 3	7 48.60	-12 32.9	2.633	3.255	15.0	21.2
12 13	7 52.87	+42 23.5	2.024	2.869	12.0	19.9	12 13	7 43.66	-13 19.2	2.553	3.264	13.5	21.1
12 23	7 43.34	+42 31.4	1.977	2.881	9.3	19.8	12 23	7 36.89	-13 45.1	2.491	3.273	12.0	21.0
1 2	7 31.65	+42 22.0	1.956	2.893	7.2	19.7	1 2	7 28.77	-13 46.8	2.452	3.281	10.7	20.9
1 12	7 19.18	+41 51.3	1.963	2.906	6.7	19.7	1 12	7 20.01	-13 22.4	2.436	3.289	9.9	20.9
1 22	7 7.44	+40 59.3	1.998	2.918	8.3	19.8	1 22	7 11.39	-12 33.0	2.447	3.295	10.1	20.9
2 1	6 57.73	+39 49.7	2.061	2.931	10.8	20.0	2 1	7 3.69	-11 21.8	2.483	3.301	11.0	21.0
2 11	6 50.89	+38 28.6	2.148	2.943	13.3	20.2	2 11	6 57.58	-9 54.3	2.544	3.307	12.4	21.1
<b>204420</b>	2004 <i>VX</i> <sub>62</sub>		1 9.9 26°47	1°7/ 9.5	18		<b>314737</b>	2006 <i>SD</i> <sub>115</sub>		1 9.9 39°85	0°8/10.2	18	
12 3	7 49.53	+23 15.1	1.205	2.027	20.0	19.8	12 3	7 50.04	+19 9.6	1.665	2.457	16.7	21.5
12 13	7 46.59	+23 47.1	1.144	2.036	15.7	19.6	12 13	7 45.99	+19 14.8	1.585	2.460	13.1	21.2
12 23	7 39.93	+24 26.7	1.101	2.045	10.5	19.3	12 23	7 39.07	+19 28.1	1.527	2.463	8.9	21.0
1 2	7 30.38	+25 8.4	1.081	2.056	4.8	19.0	1 2	7 29.93	+19 47.1	1.493	2.466	4.2	20.7
1 12	7 19.49	+25 45.4	1.085	2.067	2.2	18.9	1 12	7 19.72	+20 8.6	1.487	2.470	1.2	20.5
1 22	7 9.13	+26 12.6	1.116	2.079	7.5	19.3	1 22	7 9.76	+20 29.7	1.510	2.473	5.9	20.8
2 1	7 1.00	+26 28.3	1.170	2.092	12.7	19.6	2 1	7 1.38	+20 48.3	1.559	2.477	10.4	21.1
2 11	6 56.27	+26 33.2	1.245	2.106	17.1	19.9	2 11	6 55.56	+21 3.2	1.632	2.481	14.3	21.3
<b>297499</b>	2000 <i>WB</i> <sub>47</sub>		1 9.9 49°73	0°7/10.2	17		<b>30514</b>	Chiomento		1 9.9 179°87	1°6/ 9.6	18	
12 3	7 51.63	+18 37.6	1.300	2.106	19.7	20.4	12 3	7 56.48	+24 52.1	1.849	2.630	15.7	19.9
12 13	7 47.66	+18 55.5	1.244	2.127	15.4	20.2	12 13	7 50.89	+25 14.1	1.763	2.632	12.3	19.7
12 23	7 40.30	+19 24.5	1.208	2.148	10.4	19.9	12 23	7 42.31	+25 39.4	1.698	2.633	8.3	19.4
1 2	7 30.43	+20 0.9	1.195	2.169	4.8	19.7	1 2	7 31.41	+26 3.6	1.661	2.633	3.9	19.2
1 12	7 19.52	+20 39.5	1.208	2.191	1.3	19.5	1 12	7 19.34	+26 22.3	1.652	2.633	2.0	19.0
1 22	7 9.22	+21 15.7	1.248	2.213	6.6	19.9	1 22	7 7.52	+26 32.5	1.674	2.632	6.1	19.3
2 1	7 1.03	+21 46.4	1.313	2.235	11.6	20.2	2 1	6 57.30	+26 33.5	1.723	2.630	10.4	19.5
2 11	6 55.94	+22 10.5	1.401	2.258	15.8	20.6	2 11	6 49.73	+26 26.6	1.797	2.627	14.1	19.8
<b>457109</b>	2008 <i>FO</i> <sub>11</sub>		1 9.9 332°70	5°7/ 8.8	18		<b>311704</b>	2006 <i>SX</i> <sub>196</sub>		1 9.9 62°36	3°2/11.4	18	
12 3	7 54.83	+35 8.9	1.642	2.437	16.7	21.4	12 3	7 48.74	+10 27.7	1.694	2.466	17.2	20.1
12 13	7 50.30	+35 42.7	1.561	2.433	13.5	21.2	12 13	7 44.83	+10 57.9	1.617	2.475	13.8	19.9
12 23	7 42.23	+36 11.5	1.501	2.429	9.9	21.0	12 23	7 38.23	+11 45.7	1.560	2.484	9.8	19.7
1 2	7 31.40	+36 27.8	1.466	2.425	6.6	20.8	1 2	7 29.54	+12 49.5	1.529	2.493	5.6	19.5
1 12	7 19.24	+36 25.5	1.458	2.421	6.0	20.7	1 12	7 19.82	+14 5.2	1.525	2.503	3.2	19.3
1 22	7 7.47	+36 2.1	1.476	2.418	8.6	20.9	1 22	7 10.32	+15 27.0	1.551	2.512	6.1	19.5
2 1	6 57.73	+35 19.7	1.521	2.415	12.3	21.1	2 1	7 2.25	+16 48.8	1.604	2.522	10.2	19.8
2 11	6 51.20	+34 23.7	1.587	2.413	15.9	21.3	2 11	6 56.56	+18 6.0	1.681	2.531	13.9	20.0
<b>29985</b>	1999 <i>VX</i> <sub>153</sub>		1 9.9 272°47	1°4/10.6	18		<b>453811</b>	2011 <i>SK</i> <sub>80</sub>		1 9.9 102°08	0°9/10.2	15	
12 3	7 49.77	+14 7.2	1.959	2.730	15.3	18.1	12 3	7 54.95	+18 52.4	1.745	2.523	16.6	22.6
12 13	7 45.71	+14 52.6	1.847	2.708	12.3	17.8	12 13	7 49.41	+18 57.8	1.678	2.545	13.0	22.4
12 23	7 38.96	+15 53.5	1.757	2.686	8.5	17.6	12 23	7 41.09	+19 10.5	1.633	2.566	8.7	22.2
1 2	7 29.97	+17 7.9	1.693	2.663	4.3	17.3	1 2	7 30.74	+19 28.2	1.615	2.587	4.1	22.0
1 12	7 19.59	+18 31.3	1.658	2.640	1.6	17.0	1 12	7 19.55	+19 47.7	1.625	2.607	1.2	21.8
1 22	7 8.97	+19 57.9	1.654	2.617	5.6	17.2	1 22	7 8.84	+20 6.3	1.664	2.627	5.6	22.2
2 1	6 59.39	+21 22.0	1.679	2.593	10.1	17.4	2 1	6 59.81	+20 22.2	1.732	2.646	9.9	22.4
2 11	6 51.98	+22 39.3	1.729	2.569	14.1	17.6	2 11	6 53.34	+20 34.9	1.824	2.664	13.5	22.7
<b>241650</b>	2000 <i>GO</i> <sub>3</sub>		1 9.9 334°00	26°7/15.2	18		<b>145677</b>	2172 <i>T</i> <sub>-2</sub>		1 9.9 98°53	7°3/ 8.1	18	
12 3	7 46.50	-20 36.0	1.060	1.742	30.4	20.0							

EPHEMERIDES

1 9.9

1 10.0

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>321518</b>	2009 SE <sub>208</sub>		1 9.9 168°22	2°2/ 9.2 18			<b>159601</b>	2001 YY <sub>7</sub>		1 9.9 112°48	2°2/ 9.5 18		
12 3	7 52.25	+27 29.8	2.341	3.117	12.9	21.5	12 3	7 56.75	+26 39.0	1.644	2.434	17.0	19.9
12 13	7 46.98	+27 56.5	2.254	3.121	10.1	21.3	12 13	7 51.27	+26 55.9	1.573	2.447	13.3	19.7
12 23	7 39.37	+28 24.1	2.192	3.124	6.9	21.1	12 23	7 42.60	+27 14.2	1.523	2.459	9.0	19.5
1 2	7 29.98	+28 48.6	2.156	3.127	3.5	20.9	1 2	7 31.53	+27 29.0	1.500	2.472	4.4	19.2
1 12	7 19.74	+29 6.4	2.152	3.129	2.4	20.8	1 12	7 19.42	+27 35.7	1.504	2.484	2.5	19.1
1 22	7 9.71	+29 15.3	2.177	3.131	5.3	21.0	1 22	7 7.81	+27 32.1	1.537	2.495	6.6	19.4
2 1	7 0.92	+29 14.9	2.232	3.132	8.7	21.2	2 1	6 58.13	+27 18.7	1.597	2.506	10.9	19.7
2 11	6 54.18	+29 6.3	2.312	3.133	11.7	21.4	2 11	6 51.37	+26 57.9	1.681	2.517	14.6	20.0
<b>343124</b>	2009 EA <sub>17</sub>		1 9.9 343°36	1°7/10.6 18			<b>459705</b>	2013 PE <sub>23</sub>		1 9.9 187°41	4°4/11.9 17		
12 3	7 45.80	+16 24.7	2.240	3.015	13.4	21.0	12 3	7 47.84	+ 7 1.6	2.450	3.186	13.5	22.3
12 13	7 41.96	+16 21.2	2.148	3.012	10.6	20.8	12 13	7 43.30	+ 6 50.4	2.356	3.186	11.1	22.2
12 23	7 36.02	+16 25.1	2.080	3.009	7.4	20.6	12 23	7 36.80	+ 6 51.6	2.283	3.185	8.4	22.0
1 2	7 28.47	+16 35.5	2.037	3.007	3.8	20.4	1 2	7 28.82	+ 7 5.8	2.237	3.184	5.7	21.8
1 12	7 20.12	+16 50.8	2.024	3.005	1.8	20.2	1 12	7 20.09	+ 7 32.5	2.220	3.182	4.4	21.7
1 22	7 11.91	+17 9.1	2.041	3.003	4.8	20.4	1 22	7 11.46	+ 8 9.8	2.233	3.180	5.8	21.8
2 1	7 4.75	+17 28.6	2.085	3.001	8.4	20.7	2 1	7 3.75	+ 8 55.0	2.275	3.177	8.5	22.0
2 11	6 59.41	+17 47.9	2.156	2.999	11.6	20.9	2 11	6 57.69	+ 9 44.7	2.343	3.174	11.2	22.2
<b>518879</b>	2010 EG <sub>50</sub>		1 9.9 263°30	5°2/ 8.4 16			<b>458307</b>	2010 VO <sub>44</sub>		1 9.9 341°06	2°4/10.5 18		
12 3	7 56.92	+40 27.0	2.846	3.598	11.4	22.1	12 3	7 47.98	+17 30.7	1.498	2.299	17.8	21.0
12 13	7 50.59	+40 48.5	2.736	3.576	9.4	21.9	12 13	7 44.78	+17 3.6	1.413	2.291	14.2	20.8
12 23	7 41.79	+41 3.0	2.650	3.553	7.3	21.7	12 23	7 38.50	+16 44.4	1.347	2.283	9.9	20.5
1 2	7 31.09	+41 5.3	2.592	3.530	5.6	21.6	1 2	7 29.79	+16 32.8	1.306	2.277	5.1	20.2
1 12	7 19.46	+40 51.5	2.563	3.507	5.3	21.5	1 12	7 19.84	+16 27.9	1.291	2.271	2.6	20.0
1 22	7 7.98	+40 20.2	2.565	3.483	6.8	21.6	1 22	7 10.08	+16 28.1	1.302	2.266	6.6	20.3
2 1	6 57.76	+39 32.7	2.595	3.458	9.1	21.7	2 1	7 1.94	+16 31.9	1.339	2.261	11.4	20.5
2 11	6 49.68	+38 32.6	2.652	3.433	11.5	21.8	2 11	6 56.53	+16 37.9	1.399	2.258	15.7	20.8
<b>293585</b>	2007 JB <sub>3</sub>		1 9.9 221°25	3°2/10.8 18			<b>326439</b>	2001 UO <sub>202</sub>		1 9.9 20°87	0°3/10.1 18		
12 3	7 52.11	+13 59.3	1.716	2.491	17.0	21.7	12 3	7 49.59	+21 24.5	1.561	2.362	17.2	20.7
12 13	7 47.59	+13 43.1	1.624	2.485	13.6	21.4	12 13	7 45.82	+21 18.9	1.486	2.366	13.5	20.5
12 23	7 40.20	+13 37.6	1.552	2.478	9.7	21.2	12 23	7 39.03	+21 18.9	1.432	2.371	9.1	20.3
1 2	7 30.50	+13 43.0	1.506	2.472	5.5	20.9	1 2	7 29.96	+21 21.9	1.403	2.377	4.2	20.0
1 12	7 19.59	+13 57.9	1.487	2.464	3.3	20.7	1 12	7 19.83	+21 25.4	1.400	2.383	1.0	19.8
1 22	7 8.78	+14 20.1	1.497	2.457	6.5	20.9	1 22	7 10.06	+21 27.1	1.425	2.390	6.1	20.1
2 1	6 59.41	+14 46.8	1.534	2.449	10.8	21.2	2 1	7 2.01	+21 26.1	1.477	2.397	10.7	20.4
2 11	6 52.55	+15 15.4	1.595	2.440	14.8	21.4	2 11	6 56.66	+21 22.3	1.551	2.405	14.7	20.7
<b>443869</b>	2001 TO <sub>24</sub>		1 9.9 109°67	1°3/ 9.7 15			<b>258576</b>	2002 CF <sub>143</sub>		1 9.9 28°68	4°9/11.9 18		
12 3	7 57.51	+24 39.7	1.678	2.463	16.9	21.8	12 3	7 45.85	+ 8 17.5	1.358	2.147	19.9	19.6
12 13	7 51.65	+24 50.9	1.610	2.482	13.1	21.6	12 13	7 43.01	+ 8 26.1	1.299	2.163	16.1	19.4
12 23	7 42.71	+25 4.7	1.565	2.500	8.8	21.4	12 23	7 37.17	+ 8 56.1	1.258	2.181	11.8	19.2
1 2	7 31.51	+25 17.0	1.545	2.518	4.1	21.1	1 2	7 29.11	+ 9 47.2	1.239	2.199	7.4	19.0
1 12	7 19.38	+25 23.9	1.554	2.535	1.7	21.0	1 12	7 20.05	+10 55.8	1.246	2.219	4.9	18.9
1 22	7 7.80	+25 23.2	1.592	2.552	6.1	21.3	1 22	7 11.42	+12 15.3	1.279	2.240	7.3	19.1
2 1	6 58.12	+25 15.0	1.657	2.568	10.5	21.6	2 1	7 4.53	+13 38.7	1.338	2.261	11.3	19.4
2 11	6 51.28	+25 1.2	1.747	2.583	14.2	21.9	2 11	7 0.32	+14 59.5	1.420	2.284	15.2	19.7
<b>374585</b>	2006 DY <sub>27</sub>		1 9.9 340°52	9°3/ 7.7 18			<b>30094</b>	Rolfebode		1 9.9 167°62	3°7/ 8.9 18		
12 3	7 57.63	+45 18.3	1.834	2.606	16.1	20.6	12 3	7 57.53	+30 1.9	1.865	2.647	15.5	18.9
12 13	7 52.71	+46 16.1	1.758	2.600	13.7	20.4	12 13	7 51.83	+30 43.3	1.784	2.652	12.3	18.7
12 23	7 43.99	+47 2.5	1.703	2.595	11.3	20.2	12 23	7 43.02	+31 24.7	1.726	2.656	8.5	18.5
1 2	7 32.28	+47 27.7	1.671	2.591	9.6	20.1	1 2	7 31.78	+31 59.7	1.693	2.660	4.9	18.3
1 12	7 19.17	+47 24.5	1.665	2.587	9.5	20.1	1 12	7 19.37	+32 22.7	1.690	2.662	4.0	18.2
1 22	7 6.58	+46 50.7	1.684	2.583	11.0	20.2	1 22	7 7.26	+32 30.3	1.716	2.664	7.1	18.4
2 1	6 56.27	+45 49.5	1.728	2.580	13.5	20.3	2 1	6 56.87	+32 22.8	1.770	2.666	10.8	18.6
2 11	6 49.44	+44 28.4	1.794	2.577	16.1	20.5	2 11	6 49.27	+32 3.2	1.847	2.666	14.3	18.9
<b>416005</b>	2002 CJ <sub>14</sub>		1 9.9 49°46	14°9/18.5 18			<b>7216</b>	Ishkov		1 10.0 164°75	0°2/10.1 18		
12 3	7 50.91	-12 41.9	1.089	1.803	28.1	20.5	12 3	7 56.50	+20 35.3	1.739	2.518	16.6	18.5
12 13	7 47.90	-12 48.7	1.022	1.809	25.1	20.3	12 13	7 50.95	+20 42.5	1.656	2.524	13.1	18.3
12 23	7 41.06	-12 6.9	0.966	1.814	21.7	20.1	12 23	7 42.38	+20 56.1	1.595	2.529	8.8	18.0
1 2	7 31.09	-10 25.9	0.926	1.820	18.1	19.9	1 2	7 31.48	+21 13.1	1.560	2.533	4.1	17.8
1 12	7 19.45	- 7 43.3	0.906	1.827	15.4	19.7	1 12	7 19.46	+21 29.9	1.554	2.537	1.0	17.5
1 22	7 8.06	- 4 8.6	0.909	1.833	15.0	19.7	1 22	7 7.72	+21 43.8	1.578	2.540	5.9	17.9
2 1	6 58.78	- 0 1.9	0.936	1.840	17.2	19.9	2 1	6 57.65	+21 53.3	1.629	2.542	10.5	18.2
2 11	6 53.04	+ 4 12.2	0.987	1.847	20.6	20.1	2 11	6 50.27	+21 58.6	1.705	2.543	14.4	18.4
<b>120127</b>	2003 FJ <sub>101</sub>		1 9.9 296°45	2°5/11.0 18			<b>439914</b>	2001 OF <sub>30</sub>		1 10.0 88°59	2°3/ 9.4 18		
12 3	7 47.73	+12 52.1	1.870	2.644	15.8	20.0	12 3	8 0.06	+25 54.5	1.588	2.373	17.6	21.9
12 13	7 43.95	+13 11.2	1.779	2.640	12.6	19.8	12 13	7 53.67	+26 27.2	1.534	2.405	13.7	21.7
12 23	7 37.63	+13 44.0	1.709	2.636	8.9	19.6	12 23	7 44.04	+27 2.0	1.502	2.437	9.2	21.5
1 2	7 29.31	+14 29.4	1.665	2.632	4.9	19.3	1 2	7 32.11	+27 33.2	1.495	2.467	4.4	21.3
1 12	7 19.92	+15 24.3	1.650	2.629	2.6	19.2	1 12	7 19.35	+27 55.4	1.518	2.497	2.6	21.3
1 22	7 10.61	+16 24.5	1.663	2.625	5.7	19.4	1 22	7 7.33	+28 5.8	1.569	2.526	6.6	21.6
2 1	7 2.53	+17 25.7	1.704	2.621	9.8	19.6	2 1	6 57.45	+28 4.8	1.648	2.555	10.8	21.9
2 11	6 56.63	+18 24.0	1.770	2.618	13.5	19.8	2 11	6 50.62	+27 54.9	1.751	2.582	14.4	22.2
<b>381</b>	Myrrha		1 9.9 202°91	1°3/10.7 18			<b>486027</b>	2012 TF <sub>25</sub>		1 10.0 143°82	1°0/ 9.8 18		
12 3	7 45.86	+15 16.2	2.743	3.504	11.6	13.9	12 3	7 56.44	+23 26.5	1.545	2.337	17.8	22.1