

EPHEMERIDES

1 19.9

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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>122232</b>	2000 <i>OW</i> <sub>5</sub>		1 19.9 154°06	0°5/20.2	18		<b>268237</b>	2005 <i>GQ</i> <sub>50</sub>		1 20.0 173°78	0°7/19.7	18	
12 13	8 35.31	+18 37.9	2.476	3.238	12.6	20.0	12 13	8 38.53	+19 47.5	1.822	2.599	16.0	21.6
12 23	8 29.69	+18 31.9	2.388	3.246	9.9	19.8	12 23	8 33.14	+20 17.2	1.736	2.603	12.5	21.4
1 2	8 21.99	+18 30.9	2.325	3.254	6.7	19.6	1 2	8 24.84	+20 55.7	1.672	2.606	8.4	21.2
1 12	8 12.81	+18 33.0	2.290	3.262	3.1	19.4	1 12	8 14.30	+21 38.5	1.635	2.609	3.8	20.9
1 22	8 2.93	+18 36.1	2.285	3.268	0.8	19.2	1 22	8 2.58	+22 20.3	1.627	2.610	1.3	20.7
2 1	7 53.27	+18 38.3	2.312	3.274	4.4	19.5	2 1	7 51.04	+22 56.0	1.649	2.611	6.0	21.0
2 11	7 44.72	+18 38.3	2.369	3.280	7.8	19.7	2 11	7 41.04	+23 22.8	1.700	2.610	10.4	21.3
2 21	7 37.97	+18 35.6	2.453	3.285	10.8	19.9	2 21	7 33.55	+23 39.8	1.775	2.609	14.2	21.5
<b>61988</b>	2000 <i>RN</i> <sub>32</sub>		1 19.9 147°95	3°3/18.6	18		<b>44721</b>	1999 <i>TG</i> <sub>10</sub>		1 20.0 333°51	1°5/19.5	18	
12 13	8 36.73	+28 57.9	2.049	2.835	14.1	19.1	12 13	8 31.69	+22 11.7	1.390	2.204	18.2	18.1
12 23	8 31.47	+29 19.8	1.967	2.838	11.1	18.9	12 23	8 28.78	+22 27.7	1.306	2.194	14.4	17.8
1 2	8 23.53	+29 41.5	1.908	2.841	7.7	18.7	1 2	8 22.44	+22 51.7	1.241	2.184	9.7	17.5
1 12	8 13.60	+29 57.7	1.876	2.844	4.3	18.5	1 12	8 13.38	+23 18.9	1.200	2.176	4.5	17.2
1 22	8 2.73	+30 4.1	1.873	2.846	3.6	18.5	1 22	8 2.80	+23 43.4	1.185	2.168	2.1	17.0
2 1	7 52.16	+29 57.7	1.899	2.848	6.5	18.7	2 1	7 52.38	+24 0.2	1.196	2.160	7.2	17.3
2 11	7 43.10	+29 38.7	1.953	2.851	10.0	18.9	2 11	7 43.78	+24 6.3	1.232	2.154	12.4	17.6
2 21	7 36.40	+29 9.1	2.032	2.853	13.1	19.1	2 21	7 38.21	+24 1.8	1.289	2.148	16.9	17.8
<b>484283</b>	2007 <i>PP</i> <sub>3</sub>		1 19.9 181°43	0°0/19.9	18		<b>7242</b>	Oknyudo		1 20.0 79°48	0°1/19.9	18	
12 13	8 35.62	+17 48.4	2.148	2.916	14.1	22.1	12 13	8 36.52	+17 10.6	1.302	2.103	19.9	18.1
12 23	8 30.43	+18 19.0	2.056	2.917	11.1	21.9	12 23	8 32.30	+17 47.6	1.240	2.120	15.6	17.9
1 2	8 22.80	+18 58.7	1.987	2.918	7.5	21.7	1 2	8 24.58	+18 39.4	1.199	2.138	10.5	17.6
1 12	8 13.29	+19 44.0	1.945	2.918	3.4	21.4	1 12	8 14.22	+19 40.2	1.181	2.155	4.7	17.3
1 22	8 2.80	+20 30.7	1.934	2.917	0.9	21.2	1 22	8 2.64	+20 42.4	1.189	2.173	1.2	17.1
2 1	7 52.39	+21 14.3	1.954	2.916	5.1	21.5	2 1	7 51.57	+21 38.7	1.225	2.190	6.9	17.6
2 11	7 43.20	+21 51.6	2.003	2.913	9.0	21.7	2 11	7 42.62	+22 24.0	1.286	2.207	12.1	17.9
2 21	7 36.06	+22 20.9	2.077	2.910	12.5	21.9	2 21	7 36.82	+22 56.7	1.369	2.224	16.4	18.2
<b>14926</b>	Hoshide		1 20.0 102°38	2°4/21.1	18		<b>507751</b>	2013 <i>YP</i> <sub>20</sub>		1 20.0 169°24	1°1/19.3	18	
12 13	8 37.02	+12 39.3	1.691	2.459	17.4	18.9	12 13	8 28.59	+21 11.5	2.682	3.459	11.4	20.9
12 23	8 31.75	+12 44.3	1.624	2.482	13.8	18.7	12 23	8 24.56	+21 53.5	2.591	3.460	8.8	20.8
1 2	8 23.71	+13 3.1	1.579	2.504	9.6	18.5	1 2	8 18.66	+22 41.2	2.525	3.460	5.9	20.6
1 12	8 13.67	+13 33.6	1.559	2.526	5.1	18.3	1 12	8 11.37	+23 31.2	2.487	3.461	2.7	20.4
1 22	8 2.75	+14 11.9	1.567	2.547	2.4	18.2	1 22	8 3.36	+24 19.8	2.480	3.461	1.4	20.3
2 1	7 52.26	+14 53.6	1.604	2.568	5.8	18.4	2 1	7 55.42	+25 3.3	2.504	3.462	4.5	20.5
2 11	7 43.42	+15 34.3	1.669	2.588	10.0	18.7	2 11	7 48.37	+25 39.3	2.557	3.462	7.6	20.7
2 21	7 37.06	+16 11.0	1.759	2.607	13.7	19.0	2 21	7 42.85	+26 6.7	2.636	3.462	10.3	20.9
<b>31880</b>	2000 <i>FW</i> <sub>12</sub>		1 20.0 195°89	1°1/20.6	18		<b>108744</b>	2001 <i>OM</i> <sub>40</sub>		1 20.0 137°17	0°6/20.4	18	
12 13	8 35.62	+15 9.9	1.971	2.738	15.3	20.2	12 13	8 29.47	+15 30.3	2.695	3.457	11.7	20.4
12 23	8 30.67	+15 26.8	1.876	2.735	12.1	20.0	12 23	8 25.10	+16 1.3	2.608	3.466	9.2	20.2
1 2	8 23.09	+15 55.1	1.803	2.732	8.3	19.7	1 2	8 18.94	+16 40.8	2.546	3.474	6.2	20.0
1 12	8 13.49	+16 32.2	1.757	2.728	4.1	19.5	1 12	8 11.47	+17 26.2	2.511	3.483	3.0	19.8
1 22	8 2.77	+17 14.3	1.740	2.723	1.3	19.3	1 22	8 3.34	+18 14.5	2.507	3.491	0.8	19.6
2 1	7 52.11	+17 57.1	1.754	2.717	5.4	19.5	2 1	7 55.33	+19 2.3	2.535	3.498	4.0	19.9
2 11	7 42.73	+18 36.7	1.796	2.711	9.6	19.8	2 11	7 48.21	+19 46.6	2.593	3.506	7.1	20.1
2 21	7 35.54	+19 10.6	1.863	2.704	13.3	20.0	2 21	7 42.58	+20 25.5	2.677	3.513	9.9	20.3
<b>451707</b>	2013 <i>CL</i> <sub>106</sub>		1 20.0 91°04	1°0/19.6	18		<b>131468</b>	2001 <i>RM</i> <sub>7</sub>		1 20.0 136°50	1°2/19.0	17	
12 13	8 37.27	+21 14.8	1.567	2.361	17.4	21.8	12 13	8 27.62	+25 4.8	3.787	4.556	8.5	21.3
12 23	8 32.37	+21 32.4	1.499	2.376	13.6	21.5	12 23	8 23.17	+25 22.9	3.702	4.566	6.6	21.1
1 2	8 24.34	+21 57.2	1.453	2.391	9.1	21.3	1 2	8 17.39	+25 42.1	3.643	4.575	4.4	21.0
1 12	8 14.02	+22 24.7	1.431	2.406	4.1	21.1	1 12	8 10.69	+26 0.3	3.613	4.585	2.2	20.8
1 22	8 2.66	+22 49.3	1.437	2.420	1.6	20.9	1 22	8 3.56	+26 15.4	3.615	4.594	1.4	20.8
2 1	7 51.77	+23 7.2	1.472	2.435	6.4	21.3	2 1	7 56.56	+26 26.0	3.648	4.602	3.4	21.0
2 11	7 42.74	+23 16.1	1.533	2.449	10.9	21.6	2 11	7 50.23	+26 31.2	3.712	4.611	5.6	21.1
2 21	7 36.49	+23 16.3	1.618	2.463	14.8	21.8	2 21	7 45.01	+26 30.8	3.803	4.619	7.6	21.3
<b>417835</b>	2007 <i>GK</i> <sub>32</sub>		1 20.0 296°76	4°7/22.4	18		<b>238469</b>	2004 <i>RD</i> <sub>64</sub>		1 20.0 200°51	3°1/21.5	18	
12 13	8 29.00	+ 6 34.9	1.954	2.707	15.9	21.3	12 13	8 34.60	+10 17.3	2.011	2.763	15.5	21.4
12 23	8 25.48	+ 6 21.6	1.858	2.699	13.1	21.1	12 23	8 29.80	+10 19.2	1.913	2.759	12.5	21.2
1 2	8 19.59	+ 6 24.5	1.783	2.692	9.8	20.8	1 2	8 22.49	+10 35.1	1.837	2.755	9.0	20.9
1 12	8 11.88	+ 6 44.1	1.733	2.685	6.5	20.6	1 12	8 13.23	+11 4.1	1.787	2.749	5.2	20.7
1 22	8 3.17	+ 7 19.3	1.710	2.678	4.7	20.5	1 22	8 2.90	+11 43.8	1.766	2.743	3.1	20.5
2 1	7 54.50	+ 8 6.9	1.715	2.671	6.3	20.6	2 1	7 52.61	+12 30.4	1.775	2.736	5.6	20.7
2 11	7 46.95	+ 9 2.3	1.748	2.665	9.7	20.8	2 11	7 43.49	+13 19.5	1.813	2.728	9.5	20.9
2 21	7 41.36	+10 0.4	1.805	2.658	13.1	21.0	2 21	7 36.45	+14 7.5	1.876	2.720	13.1	21.1
<b>522490</b>	2016 <i>EN</i> <sub>230</sub>		1 20.0 250°47	1°4/20.8	17		<b>350745</b>	2001 <i>YC</i> <sub>124</sub>		1 20.0 46°68	4°2/18.8	17	
12 13	8 30.35	+14 22.6	2.190	2.959	13.9	21.8	12 13	8 39.16	+26 42.0	1.116	1.938	21.2	20.4
12 23	8 26.34	+14 37.1	2.090	2.950	11.0	21.5	12 23	8 34.76	+27 24.2	1.075	1.966	16.5	20.2
1 2	8 20.08	+15 2.4	2.012	2.940	7.6	21.3	1 2	8 26.27	+28 9.5	1.052	1.995	11.1	20.0
1 12	8 12.09	+15 36.6	1.960	2.930	3.9	21.1	1 12	8 14.93	+28 48.7	1.053	2.024	5.9	19.8
1 22	8 3.13	+16 16.7	1.938	2.920	1.5	20.9	1 22	8 2.55	+29 13.3	1.077	2.054	4.6	19.8
2 1	7 54.19	+16 59.0	1.946	2.910	4.9	21.1	2 1	7 51.22	+29 19.2	1.128	2.085	8.8	20.2
2 11	7 46.29	+17 39.8	1.983	2.900	8.7	21.3	2 11	7 42.65	+29 7.1	1.202	2.115	13.4	20.5
2 21	7 40.23	+18 16.6	2.045	2.889	12.1	21.5	2 21	7 37.73	+28 41.0	1.297	2.146	17.4	20.8
<b>140074</b>	2001 <i>SM</i> <sub>117</sub>		1 20.0 43°96	1°3/20.4	18		<b>164532</b>	2006 <i>HD</i> <sub>97</sub>		1 20.0 76°41	0°9/19.6	18	
12 13	8 34.12	+17 28.3	1.482	2.278	18.1								

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>301736</b>	2010 <i>GV</i> <sub>144</sub>		1 20.0 220°58	1.6°/19.4	18		<b>369591</b>	2011 <i>BA</i> <sub>161</sub>		1 20.0 4°97	1.5°/19.4	18	
12 13	8 36.01	+22 8.0	1.695	2.487	16.4	21.8	12 13	8 32.68	+23 1.8	1.754	2.551	15.7	20.9
12 23	8 31.54	+22 36.3	1.606	2.482	12.9	21.6	12 23	8 28.72	+23 18.4	1.672	2.551	12.3	20.7
1 2	8 23.99	+23 12.1	1.539	2.477	8.7	21.3	1 2	8 21.94	+23 40.2	1.612	2.551	8.2	20.4
1 12	8 14.02	+23 50.5	1.498	2.472	4.0	21.0	1 12	8 13.02	+24 2.9	1.578	2.552	3.8	20.2
1 22	8 2.72	+24 25.6	1.484	2.466	2.1	20.9	1 22	8 3.03	+24 22.0	1.571	2.553	2.0	20.1
2 1	7 51.55	+24 52.4	1.499	2.460	6.6	21.1	2 1	7 53.28	+24 33.8	1.593	2.554	6.1	20.3
2 11	7 41.96	+25 8.3	1.541	2.453	11.1	21.4	2 11	7 45.06	+24 36.4	1.641	2.556	10.4	20.6
2 21	7 35.03	+25 13.1	1.607	2.446	15.1	21.6	2 21	7 39.30	+24 30.1	1.713	2.558	14.1	20.8
<b>424672</b>	2008 <i>RT</i> <sub>80</sub>		1 20.0 26°03	2°6/21.1	18		<b>495505</b>	2014 <i>UJ</i> <sub>176</sub>		1 20.0 110°67	5°6/22.6	18	
12 13	8 30.12	+13 43.6	1.792	2.572	16.1	20.5	12 13	8 32.94	+ 5 11.4	1.981	2.719	16.1	21.7
12 23	8 26.39	+13 21.7	1.716	2.581	12.8	20.3	12 23	8 28.29	+ 4 32.8	1.902	2.731	13.4	21.6
1 2	8 20.16	+13 10.4	1.662	2.591	9.0	20.1	1 2	8 21.32	+ 4 9.6	1.844	2.742	10.2	21.4
1 12	8 12.12	+13 9.3	1.633	2.601	4.9	19.9	1 12	8 12.64	+ 4 3.1	1.810	2.753	7.2	21.2
1 22	8 3.23	+13 16.4	1.632	2.611	2.7	19.7	1 22	8 3.15	+ 4 13.0	1.805	2.764	5.6	21.1
2 1	7 54.62	+13 29.3	1.659	2.623	5.6	19.9	2 1	7 53.88	+ 4 37.2	1.827	2.775	6.9	21.2
2 11	7 47.40	+13 45.0	1.713	2.634	9.5	20.2	2 11	7 45.86	+ 5 12.0	1.878	2.785	9.7	21.4
2 21	7 42.36	+14 0.9	1.791	2.647	13.0	20.4	2 21	7 39.86	+ 5 52.8	1.953	2.795	12.7	21.6
<b>179299</b>	2001 <i>VK</i> <sub>77</sub>		1 20.0 120°48	6°8/14.4	18		<b>114971</b>	2003 <i>QX</i> <sub>62</sub>		1 20.0 88°04	0°4/19.8	18	
12 13	8 37.83	+43 29.6	2.963	3.718	10.9	20.4	12 13	8 31.45	+19 30.7	2.108	2.890	13.9	19.8
12 23	8 32.04	+44 58.1	2.905	3.736	9.2	20.3	12 23	8 27.18	+19 57.6	2.029	2.899	10.9	19.6
1 2	8 23.82	+46 19.4	2.872	3.753	7.6	20.2	1 2	8 20.61	+20 31.9	1.972	2.908	7.2	19.4
1 12	8 13.78	+47 26.8	2.868	3.770	6.8	20.2	1 12	8 12.33	+21 10.1	1.943	2.917	3.3	19.2
1 22	8 2.81	+48 15.3	2.892	3.786	7.1	20.2	1 22	8 3.23	+21 48.1	1.943	2.926	1.0	19.0
2 1	7 52.01	+48 42.0	2.944	3.802	8.3	20.3	2 1	7 54.34	+22 22.0	1.972	2.935	5.0	19.3
2 11	7 42.46	+48 47.6	3.022	3.818	9.9	20.5	2 11	7 46.67	+22 49.3	2.030	2.943	8.8	19.6
2 21	7 34.99	+48 34.8	3.123	3.832	11.4	20.6	2 21	7 40.98	+23 8.7	2.113	2.952	12.0	19.8
<b>268581</b>	2006 <i>BB</i> <sub>126</sub>		1 20.0 61°43	0°9/20.5	18		<b>309198</b>	2007 <i>ES</i> <sub>196</sub>		1 20.0 41°11	9°4/16.0	18	
12 13	8 30.99	+16 19.6	1.959	2.739	14.9	21.1	12 13	8 39.37	+41 43.7	1.676	2.467	16.6	20.0
12 23	8 26.95	+16 31.1	1.878	2.745	11.7	20.9	12 23	8 34.69	+43 3.2	1.620	2.478	13.8	19.8
1 2	8 20.51	+16 52.4	1.819	2.752	8.0	20.7	1 2	8 26.27	+44 13.1	1.586	2.490	11.2	19.7
1 12	8 12.29	+17 21.0	1.787	2.759	3.8	20.4	1 12	8 15.05	+45 2.8	1.576	2.502	9.5	19.6
1 22	8 3.19	+17 53.4	1.783	2.766	1.1	20.2	1 22	8 2.57	+45 24.1	1.591	2.515	9.7	19.6
2 1	7 54.29	+18 25.8	1.808	2.773	5.1	20.5	2 1	7 50.72	+45 14.0	1.632	2.528	11.6	19.8
2 11	7 46.68	+18 55.1	1.862	2.780	9.1	20.8	2 11	7 41.21	+44 35.2	1.695	2.541	14.1	20.0
2 21	7 41.14	+19 19.3	1.940	2.788	12.6	21.0	2 21	7 35.07	+43 34.6	1.780	2.555	16.5	20.2
<b>229036</b>	2004 <i>EX</i> <sub>55</sub>		1 20.0 261°06	1°6/20.5	18		<b>461059</b>	2014 <i>YC</i> <sub>11</sub>		1 20.0 78°92	2°4/18.8	18	
12 13	8 35.82	+16 34.1	1.533	2.322	18.0	20.7	12 13	8 33.57	+24 42.2	1.933	2.725	14.7	21.4
12 23	8 31.70	+16 21.8	1.437	2.309	14.4	20.4	12 23	8 29.10	+25 22.6	1.861	2.736	11.4	21.2
1 2	8 24.31	+16 19.9	1.362	2.296	10.0	20.1	1 2	8 22.02	+26 7.4	1.811	2.748	7.7	21.0
1 12	8 14.25	+16 26.5	1.310	2.282	5.0	19.8	1 12	8 13.00	+26 51.1	1.788	2.760	3.9	20.8
1 22	8 2.67	+16 38.8	1.286	2.269	1.8	19.5	1 22	8 3.07	+27 28.3	1.794	2.772	2.8	20.8
2 1	7 51.08	+16 53.2	1.289	2.255	6.6	19.8	2 1	7 53.43	+27 55.0	1.829	2.783	6.2	21.0
2 11	7 41.11	+17 6.5	1.319	2.240	11.8	20.1	2 11	7 45.26	+28 9.4	1.891	2.795	9.9	21.3
2 21	7 33.94	+17 16.7	1.371	2.226	16.3	20.3	2 21	7 39.37	+28 12.0	1.977	2.807	13.1	21.5
<b>506361</b>	2017 <i>QJ</i> <sub>10</sub>		1 20.0 100°73	1°7/18.7	17		<b>419110</b>	2009 <i>SL</i> <sub>185</sub>		1 20.0 102°78	1°8/20.9	18	
12 13	8 29.27	+27 7.0	3.704	4.473	8.7	22.1	12 13	8 32.33	+14 29.9	2.021	2.791	14.8	21.9
12 23	8 24.42	+27 26.5	3.632	4.495	6.7	22.0	12 23	8 27.88	+14 25.4	1.939	2.799	11.8	21.7
1 2	8 18.20	+27 46.0	3.586	4.517	4.5	21.8	1 2	8 21.08	+14 30.7	1.879	2.807	8.1	21.5
1 12	8 11.07	+28 3.2	3.570	4.539	2.4	21.7	1 12	8 12.55	+14 44.5	1.845	2.814	4.2	21.3
1 22	8 3.53	+28 16.0	3.586	4.561	1.9	21.7	1 22	8 3.18	+15 4.1	1.841	2.822	1.9	21.1
2 1	7 56.19	+28 22.9	3.633	4.582	3.7	21.9	2 1	7 54.04	+15 26.7	1.865	2.829	5.1	21.3
2 11	7 49.61	+28 23.4	3.710	4.603	5.8	22.0	2 11	7 46.15	+15 49.4	1.918	2.837	8.9	21.6
2 21	7 44.22	+28 17.6	3.814	4.623	7.8	22.2	2 21	7 40.28	+16 10.0	1.997	2.844	12.3	21.8
<b>189791</b>	2002 <i>EW</i> <sub>140</sub>		1 20.0 225°83	0°6/20.4	18		<b>176889</b>	2002 <i>VO</i> <sub>9</sub>		1 20.0 142°64	2°7/18.8	18	
12 13	8 31.36	+16 38.1	2.341	3.110	13.1	21.4	12 13	8 37.49	+26 42.4	2.159	2.938	13.7	20.9
12 23	8 26.99	+16 55.3	2.240	3.102	10.3	21.2	12 23	8 31.89	+27 14.3	2.081	2.949	10.7	20.7
1 2	8 20.47	+17 21.0	2.163	3.094	7.0	20.9	1 2	8 23.75	+27 48.1	2.026	2.960	7.3	20.5
1 12	8 12.28	+17 53.1	2.113	3.085	3.3	20.7	1 12	8 13.76	+28 18.5	2.000	2.969	3.9	20.3
1 22	8 3.20	+18 28.3	2.093	3.076	0.9	20.5	1 22	8 2.89	+28 41.1	2.003	2.978	3.0	20.3
2 1	7 54.15	+19 3.3	2.104	3.067	4.6	20.7	2 1	7 52.32	+28 52.5	2.036	2.987	6.0	20.5
2 11	7 46.10	+19 35.2	2.143	3.058	8.3	21.0	2 11	7 43.16	+28 52.1	2.098	2.995	9.4	20.7
2 21	7 39.81	+20 2.0	2.209	3.048	11.6	21.1	2 21	7 36.23	+28 40.9	2.184	3.002	12.5	20.9
<b>16771</b>	1996 <i>UQ</i> <sub>3</sub>		1 20.0 223°40	5°3/17.2	18		<b>450833</b>	2007 <i>VN</i> <sub>191</sub>		1 20.0 305°82	2°7/20.7	18	
12 13	8 37.56	+34 21.5	2.283	3.062	13.1	18.3	12 13	8 34.91	+15 58.6	1.626	2.411	17.3	20.8
12 23	8 32.24	+35 13.2	2.191	3.054	10.5	18.1	12 23	8 30.67	+15 14.5	1.532	2.400	13.9	20.5
1 2	8 24.19	+36 2.9	2.124	3.045	7.8	17.9	1 2	8 23.41	+14 37.5	1.458	2.389	9.8	20.2
1 12	8 14.04	+36 43.8	2.084	3.035	5.6	17.8	1 12	8 13.78	+14 7.6	1.409	2.378	5.3	20.0
1 22	8 2.76	+37 10.0	2.072	3.026	5.6	17.7	1 22	8 2.86	+13 44.1	1.387	2.367	2.8	19.8
2 1	7 51.61	+37 17.7	2.090	3.015	7.7	17.8	2 1	7 52.04	+13 26.2	1.394	2.357	6.5	20.0
2 11	7 41.83	+37 6.8	2.135	3.005	10.6	18.0	2 11	7 42.77	+13 12.5	1.427	2.347	11.1	20.2
2 21	7 34.37	+36 39.8	2.204	2.993	13.3	18.2	2 21	7 36.08	+13 1.7	1.483	2.338	15.3	20.4
<b>81091</b>	2000 <i>EO</i> <sub>95</sub>		1 20.0 356°03	3°2/21.1	18		<b>324596</b>	2006 <i>XF</i> <sub>55</sub>		1 20.0 31°87	2°8/18.8	18	
12 13	8 29.84	+											

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1 20.0

1 20.0

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>396549</b>	1998 <i>MD</i> <sub>1</sub>		1 20.0 122°10	0°6/19.7	18		<b>352837</b>	2008 <i>VU</i> <sub>16</sub>		1 20.0 293°64	2°4/19.1	18	
12 13	8 35.58	+19 13.5	1.980	2.757	14.9	21.4	12 13	8 33.52	+22 42.4	1.445	2.253	17.9	21.4
12 23	8 30.48	+19 49.3	1.906	2.773	11.6	21.2	12 23	8 30.36	+23 21.2	1.352	2.237	14.2	21.1
1 2	8 22.86	+20 33.5	1.854	2.788	7.7	21.0	1 2	8 23.70	+24 9.9	1.279	2.221	9.6	20.8
1 12	8 13.38	+21 21.8	1.830	2.803	3.5	20.8	1 12	8 14.13	+25 2.8	1.231	2.205	4.7	20.5
1 22	8 3.01	+22 9.1	1.835	2.818	1.2	20.6	1 22	8 2.83	+25 52.0	1.208	2.189	2.9	20.3
2 1	7 52.92	+22 51.0	1.870	2.832	5.4	21.0	2 1	7 51.46	+26 30.5	1.213	2.173	7.8	20.6
2 11	7 44.23	+23 24.4	1.934	2.845	9.3	21.2	2 11	7 41.81	+26 54.2	1.242	2.158	12.9	20.8
2 21	7 37.75	+23 48.5	2.023	2.858	12.7	21.5	2 21	7 35.22	+27 2.8	1.293	2.142	17.5	21.0
<b>306547</b>	2000 <i>AP</i> <sub>8</sub>		1 20.0 11°70	0°9/19.8	18		<b>406860</b>	2009 <i>BN</i> <sub>112</sub>		1 20.0 307°14	1°6/19.4	18	
12 13	8 33.39	+23 49.6	1.482	2.290	17.6	19.6	12 13	8 32.86	+22 11.3	1.508	2.314	17.4	21.5
12 23	8 29.61	+23 27.8	1.410	2.294	13.7	19.3	12 23	8 29.58	+22 33.4	1.416	2.300	13.8	21.3
1 2	8 22.65	+23 8.3	1.358	2.299	9.2	19.1	1 2	8 22.99	+23 3.8	1.345	2.286	9.3	21.0
1 12	8 13.36	+22 48.2	1.331	2.306	4.2	18.8	1 12	8 13.73	+23 37.6	1.298	2.273	4.4	20.6
1 22	8 3.03	+22 24.5	1.330	2.313	1.5	18.6	1 22	8 2.94	+24 8.8	1.278	2.260	2.1	20.4
2 1	7 53.16	+21 55.9	1.357	2.322	6.4	19.0	2 1	7 52.19	+24 32.0	1.285	2.247	7.1	20.7
2 11	7 45.18	+21 22.6	1.409	2.332	11.1	19.3	2 11	7 43.10	+24 44.1	1.317	2.235	12.1	21.0
2 21	7 40.00	+20 45.9	1.485	2.342	15.2	19.5	2 21	7 36.87	+24 44.8	1.371	2.223	16.5	21.2
<b>520662</b>	2014 <i>QG</i> <sub>387</sub>		1 20.0 96°85	3°0/21.8	18		<b>7117</b>	<i>Claudius</i>		1 20.0 293°20	0°9/20.4	18	
12 13	8 30.83	+ 8 45.7	1.908	2.667	16.0	20.9	12 13	8 32.75	+15 30.9	1.357	2.158	19.3	18.0
12 23	8 26.88	+ 9 10.1	1.826	2.676	12.9	20.7	12 23	8 29.66	+15 55.4	1.272	2.151	15.3	17.7
1 2	8 20.52	+ 9 51.7	1.766	2.684	9.2	20.5	1 2	8 23.13	+16 36.7	1.207	2.144	10.5	17.4
1 12	8 12.36	+10 48.9	1.731	2.693	5.4	20.3	1 12	8 13.83	+17 31.6	1.164	2.138	5.1	17.1
1 22	8 3.27	+11 57.7	1.724	2.702	3.0	20.1	1 22	8 2.92	+18 33.8	1.148	2.132	1.3	16.8
2 1	7 54.34	+13 12.7	1.747	2.710	5.5	20.3	2 1	7 52.07	+19 36.0	1.159	2.125	6.9	17.2
2 11	7 46.66	+14 28.1	1.799	2.719	9.2	20.6	2 11	7 42.97	+20 31.6	1.194	2.119	12.4	17.5
2 21	7 41.03	+15 38.9	1.875	2.727	12.8	20.8	2 21	7 36.89	+21 16.8	1.252	2.113	17.1	17.7
<b>281390</b>	2008 <i>QE</i> <sub>9</sub>		1 20.0 131°15	0°7/19.8	18		<b>368128</b>	2013 <i>JF</i> <sub>18</sub>		1 20.0 208°73	7°6/24.2	17	
12 13	8 39.14	+20 32.8	1.770	2.550	16.3	22.2	12 13	8 31.88	- 3 55.3	2.491	3.167	14.6	21.1
12 23	8 33.54	+20 51.6	1.696	2.565	12.7	22.0	12 23	8 27.21	- 4 39.9	2.388	3.160	12.7	20.9
1 2	8 25.04	+21 17.6	1.644	2.579	8.5	21.8	1 2	8 20.55	- 5 7.8	2.306	3.153	10.6	20.8
1 12	8 14.42	+21 46.4	1.618	2.592	3.8	21.6	1 12	8 12.36	- 5 16.0	2.248	3.144	8.7	20.6
1 22	8 2.79	+22 13.2	1.622	2.605	1.3	21.4	1 22	8 3.32	- 5 3.3	2.216	3.135	7.6	20.6
2 1	7 51.54	+22 34.1	1.655	2.617	5.9	21.7	2 1	7 54.27	- 4 30.5	2.213	3.126	8.1	20.6
2 11	7 41.96	+22 46.9	1.716	2.628	10.2	22.0	2 11	7 46.09	- 3 41.0	2.238	3.115	9.8	20.7
2 21	7 34.96	+22 51.6	1.801	2.638	13.9	22.3	2 21	7 39.49	- 2 39.5	2.288	3.104	12.0	20.8
<b>383685</b>	2007 <i>TX</i> <sub>266</sub>		1 20.0 16°97	6°1/23.2	18		<b>213704</b>	2002 <i>TJ</i> <sub>368</sub>		1 20.0 171°67	1°9/19.0	18	
12 13	8 27.51	+ 2 59.1	2.015	2.754	15.9	20.5	12 13	8 33.96	+21 57.0	1.974	2.759	14.6	21.2
12 23	8 24.15	+ 2 26.7	1.931	2.757	13.3	20.3	12 23	8 29.51	+22 50.0	1.888	2.761	11.4	21.0
1 2	8 18.62	+ 2 11.4	1.868	2.761	10.4	20.1	1 2	8 22.42	+23 51.0	1.826	2.763	7.6	20.8
1 12	8 11.47	+ 2 14.7	1.828	2.765	7.6	20.0	1 12	8 13.30	+24 54.5	1.791	2.764	3.6	20.5
1 22	8 3.51	+ 2 36.4	1.815	2.770	6.1	19.9	1 22	8 3.10	+25 54.5	1.785	2.765	2.3	20.4
2 1	7 55.68	+ 3 14.3	1.830	2.775	7.1	20.0	2 1	7 53.00	+26 45.6	1.809	2.766	6.0	20.7
2 11	7 48.97	+ 4 3.9	1.871	2.781	9.6	20.1	2 11	7 44.24	+27 24.3	1.861	2.766	9.9	20.9
2 21	7 44.09	+ 5 0.1	1.937	2.787	12.5	20.3	2 21	7 37.70	+27 50.0	1.938	2.766	13.4	21.1
<b>239467</b>	2007 <i>TO</i> <sub>375</sub>		1 20.0 195°67	0°5/19.8	18		<b>335861</b>	2007 <i>RV</i> <sub>51</sub>		1 20.0 82°01	2°1/19.1	18	
12 13	8 35.83	+19 18.3	2.090	2.862	14.3	21.6	12 13	8 34.06	+26 20.0	2.268	3.050	13.0	20.7
12 23	8 30.78	+19 48.8	1.995	2.860	11.3	21.4	12 23	8 29.05	+26 35.4	2.192	3.062	10.1	20.5
1 2	8 23.19	+20 27.7	1.923	2.857	7.6	21.1	1 2	8 21.77	+26 52.0	2.140	3.074	6.8	20.3
1 12	8 13.62	+21 11.1	1.879	2.852	3.4	20.9	1 12	8 12.86	+27 5.8	2.115	3.086	3.5	20.1
1 22	8 2.97	+21 54.6	1.864	2.848	1.1	20.7	1 22	8 3.24	+27 13.4	2.120	3.098	2.4	20.1
2 1	7 52.39	+22 33.6	1.881	2.842	5.3	21.0	2 1	7 53.92	+27 12.6	2.156	3.110	5.4	20.3
2 11	7 43.05	+23 5.1	1.926	2.835	9.4	21.2	2 11	7 45.90	+27 2.7	2.219	3.122	8.7	20.5
2 21	7 35.83	+23 27.9	1.996	2.828	12.9	21.4	2 21	7 39.88	+26 44.7	2.308	3.134	11.6	20.7
<b>116854</b>	2004 <i>FW</i> <sub>65</sub>		1 20.0 207°98	3°1/21.7	18		<b>492730</b>	2014 <i>QU</i> <sub>120</sub>		1 20.0 197°78	2°1/19.1	17	
12 13	8 31.80	+ 9 28.6	2.371	3.115	13.6	20.9	12 13	8 37.90	+24 58.2	2.132	2.909	13.9	22.9
12 23	8 27.25	+ 9 27.1	2.269	3.109	11.0	20.7	12 23	8 32.40	+25 24.9	2.038	2.906	10.9	22.6
1 2	8 20.61	+ 9 37.6	2.190	3.103	8.0	20.5	1 2	8 24.27	+25 55.0	1.968	2.902	7.4	22.4
1 12	8 12.38	+ 9 59.7	2.138	3.096	4.9	20.3	1 12	8 14.12	+26 23.9	1.926	2.897	3.7	22.2
1 22	8 3.28	+10 31.7	2.115	3.089	3.1	20.2	1 22	8 2.91	+26 46.7	1.913	2.892	2.5	22.1
2 1	7 54.21	+11 10.8	2.122	3.081	5.0	20.3	2 1	7 51.82	+27 0.1	1.931	2.886	5.9	22.3
2 11	7 46.09	+11 53.5	2.159	3.073	8.3	20.5	2 11	7 42.08	+27 2.4	1.977	2.879	9.6	22.5
2 21	7 39.67	+12 36.6	2.222	3.063	11.4	20.7	2 21	7 34.56	+26 54.6	2.049	2.871	13.0	22.7
<b>522662</b>	2016 <i>GP</i> <sub>264</sub>		1 20.0 221°31	0°4/19.8	17		<b>66422</b>	1999 <i>NN</i> <sub>23</sub>		1 20.0 106°81	0°5/20.3	18	
12 13	8 31.03	+20 8.8	2.646	3.416	11.7	22.8	12 13	8 36.30	+16 56.1	1.834	2.609	15.9	20.1
12 23	8 26.51	+20 26.8	2.545	3.409	9.2	22.6	12 23	8 31.14	+17 15.9	1.764	2.629	12.5	19.9
1 2	8 20.04	+20 50.2	2.468	3.401	6.1	22.4	1 2	8 23.34	+17 45.8	1.716	2.648	8.4	19.7
1 12	8 12.09	+21 16.3	2.420	3.393	2.8	22.2	1 12	8 13.63	+18 22.1	1.694	2.667	3.9	19.4
1 22	8 3.37	+21 42.2	2.401	3.385	0.9	22.0	1 22	8 3.05	+19 0.5	1.702	2.685	1.0	19.2
2 1	7 54.69	+22 5.1	2.414	3.376	4.3	22.2	2 1	7 52.83	+19 36.7	1.739	2.703	5.4	19.6
2 11	7 46.92	+22 23.2	2.457	3.367	7.6	22.4	2 11	7 44.14	+20 7.5	1.805	2.720	9.5	19.9
2 21	7 40.75	+22 35.3	2.526	3.357	10.5	22.6	2 21	7 37.79	+20 31.4	1.895	2.737	13.1	20.1
<b>487712</b>	2015 <i>RT</i> <sub>47</sub>		1 20.0 310°01	3°1/19.1	18		<b>67310</b>	2000 <i>HO</i> <sub>9</sub>		1 20.0 312°00	6°3/16.9	18	
12 13	8 36.43	+25 34.3	1.										

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1 20.0

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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>317166</b>	2003 <i>AW</i> <sub>68</sub>		1 20.0	33°45'	3°0'/19.3	18	<b>363786</b>	2005 <i>HR</i> <sub>9</sub>		1 20.1	293°08'	0°0'/20.0	16
12 13	8 38.28	+28 4.2	1.445	2.251	18.0	19.5	12 13	8 32.74	+18 57.0	1.620	2.415	16.9	21.7
12 23	8 33.52	+28 0.2	1.380	2.262	14.1	19.3	12 23	8 29.21	+19 8.1	1.523	2.401	13.4	21.4
1 2	8 25.30	+27 55.5	1.335	2.274	9.6	19.0	1 2	8 22.62	+19 29.0	1.448	2.386	9.1	21.1
1 12	8 14.59	+27 44.6	1.315	2.287	5.0	18.8	1 12	8 13.55	+19 56.5	1.397	2.371	4.2	20.8
1 22	8 2.83	+27 23.1	1.321	2.300	3.4	18.7	1 22	8 3.06	+20 26.2	1.373	2.356	1.0	20.5
2 1	7 51.74	+26 49.7	1.355	2.313	7.3	19.0	2 1	7 52.54	+20 53.4	1.376	2.342	6.3	20.8
2 11	7 42.83	+26 5.7	1.414	2.328	11.8	19.3	2 11	7 43.51	+21 14.5	1.407	2.327	11.3	21.1
2 21	7 37.02	+25 14.7	1.496	2.343	15.7	19.6	2 21	7 37.09	+21 27.8	1.460	2.313	15.6	21.3
<b>281187</b>	2007 <i>EZ</i> <sub>175</sub>		1 20.0	190°10'	2°0'/20.9	18	<b>229909</b>	6201 <i>P-L</i>		1 20.1	96°93'	1°4'/20.6	17
12 13	8 35.85	+13 22.1	1.966	2.728	15.5	22.3	12 13	8 38.94	+15 52.3	1.468	2.252	18.8	21.7
12 23	8 30.85	+13 25.9	1.873	2.727	12.4	22.1	12 23	8 33.75	+15 55.3	1.404	2.273	14.8	21.4
1 2	8 23.26	+13 41.5	1.801	2.725	8.7	21.8	1 2	8 25.35	+16 10.7	1.360	2.293	10.1	21.2
1 12	8 13.68	+14 7.3	1.755	2.723	4.6	21.6	1 12	8 14.62	+16 35.3	1.341	2.313	4.9	21.0
1 22	8 3.02	+14 40.3	1.739	2.720	2.1	21.4	1 22	8 2.86	+17 4.8	1.349	2.332	1.6	20.8
2 1	7 52.45	+15 16.8	1.753	2.716	5.4	21.6	2 1	7 51.62	+17 34.4	1.386	2.351	6.3	21.1
2 11	7 43.16	+15 53.0	1.795	2.711	9.5	21.9	2 11	7 42.34	+18 0.5	1.449	2.370	11.0	21.5
2 21	7 36.03	+16 26.2	1.863	2.706	13.2	22.1	2 21	7 35.94	+18 21.2	1.536	2.387	15.1	21.8
<b>30957</b>	1994 <i>SQ</i> <sub>7</sub>		1 20.0	289°42'	0°5'/19.9	18	<b>319673</b>	2006 <i>TZ</i> <sub>66</sub>		1 20.1	34°36'	1°2'/20.4	18
12 13	8 33.43	+19 25.4	1.460	2.262	18.1	19.3	12 13	8 34.69	+18 28.0	1.427	2.227	18.5	20.5
12 23	8 30.16	+19 44.7	1.365	2.246	14.3	19.0	12 23	8 30.60	+18 2.3	1.360	2.238	14.6	20.2
1 2	8 23.50	+20 15.4	1.290	2.230	9.8	18.7	1 2	8 23.32	+17 44.7	1.312	2.250	9.9	20.0
1 12	8 14.03	+20 53.6	1.239	2.214	4.5	18.4	1 12	8 13.72	+17 33.4	1.289	2.262	4.8	19.7
1 22	8 2.90	+21 33.5	1.214	2.197	1.3	18.1	1 22	8 3.07	+17 25.9	1.292	2.275	1.5	19.5
2 1	7 51.69	+22 9.2	1.216	2.181	7.0	18.4	2 1	7 52.92	+17 19.7	1.322	2.288	6.3	19.9
2 11	7 42.13	+22 36.2	1.244	2.166	12.4	18.7	2 11	7 44.67	+17 13.2	1.378	2.303	11.1	20.2
2 21	7 35.50	+22 52.9	1.294	2.150	17.1	18.9	2 21	7 39.24	+17 5.3	1.457	2.317	15.2	20.5
<b>379051</b>	2008 <i>WD</i> <sub>43</sub>		1 20.0	128°59'	3°7'/17.8	18	<b>139623</b>	2001 <i>QR</i> <sub>142</sub>		1 20.1	181°95'	3°2'/18.7	18
12 13	8 33.43	+29 45.7	2.441	3.224	12.2	21.7	12 13	8 37.95	+31 20.0	2.542	3.314	12.1	19.8
12 23	8 28.63	+30 39.5	2.364	3.232	9.6	21.5	12 23	8 31.94	+31 25.6	2.452	3.314	9.5	19.6
1 2	8 21.56	+31 33.8	2.311	3.241	6.7	21.4	1 2	8 23.65	+31 28.2	2.387	3.314	6.7	19.4
1 12	8 12.82	+32 23.2	2.287	3.249	4.2	21.2	1 12	8 13.73	+31 23.9	2.350	3.314	4.0	19.2
1 22	8 3.25	+33 2.8	2.292	3.257	4.0	21.2	1 22	8 3.07	+31 9.5	2.344	3.314	3.4	19.2
2 1	7 53.88	+33 29.1	2.327	3.265	6.3	21.4	2 1	7 52.70	+30 43.6	2.368	3.313	5.7	19.3
2 11	7 45.69	+33 41.1	2.390	3.272	9.0	21.6	2 11	7 43.61	+30 6.9	2.422	3.312	8.6	19.5
2 21	7 39.43	+33 39.7	2.477	3.280	11.6	21.8	2 21	7 36.53	+29 21.7	2.502	3.312	11.3	19.7
<b>30214</b>	2000 <i>GS</i> <sub>125</sub>		1 20.0	107°98'	0°7'/19.7	18 R	<b>396680</b>	2002 <i>ST</i>		1 20.1	52°82'	3°2'/20.5	16
12 13	8 36.05	+18 22.1	1.610	2.398	17.3	18.0	12 13	8 53.04	+18 22.0	1.424	2.189	20.2	20.3
12 23	8 31.47	+19 9.8	1.539	2.412	13.5	17.8	12 23	8 43.92	+16 43.6	1.377	2.233	15.9	20.1
1 2	8 23.87	+20 9.4	1.490	2.427	9.0	17.6	1 2	8 31.54	+15 10.5	1.351	2.276	10.9	19.9
1 12	8 13.98	+21 15.5	1.466	2.441	4.1	17.3	1 12	8 17.13	+13 44.2	1.353	2.320	5.8	19.7
1 22	8 2.98	+22 21.1	1.471	2.454	1.4	17.2	1 22	8 2.34	+12 26.9	1.384	2.363	3.3	19.7
2 1	7 52.29	+23 19.5	1.505	2.467	6.3	17.5	2 1	7 48.83	+11 20.8	1.447	2.406	6.9	20.0
2 11	7 43.30	+24 6.6	1.565	2.480	10.8	17.8	2 11	7 37.94	+10 26.6	1.537	2.448	11.2	20.4
2 21	7 36.98	+24 40.9	1.650	2.492	14.7	18.1	2 21	7 30.34	+9 43.5	1.653	2.490	14.9	20.7
<b>401884</b>	2001 <i>QG</i> <sub>333</sub>		1 20.1	153°40'	6°6'/16.6	18	<b>57779</b>	2001 <i>VX</i> <sub>73</sub>		1 20.1	157°15'	0°4'/19.9	18
12 13	8 41.63	+39 0.6	2.307	3.076	13.3	21.6	12 13	8 36.99	+21 42.9	2.184	2.956	13.8	19.2
12 23	8 35.37	+40 0.4	2.235	3.084	10.8	21.5	12 23	8 31.40	+21 37.4	2.097	2.961	10.8	19.0
1 2	8 26.25	+40 54.1	2.186	3.092	8.4	21.3	1 2	8 23.41	+21 35.5	2.033	2.966	7.2	18.8
1 12	8 15.00	+41 34.3	2.165	3.099	6.8	21.2	1 12	8 13.67	+21 34.3	1.998	2.971	3.3	18.6
1 22	8 2.74	+41 55.0	2.172	3.106	6.9	21.3	1 22	8 3.09	+21 31.3	1.992	2.975	1.0	18.4
2 1	7 50.84	+41 53.4	2.208	3.112	8.6	21.4	2 1	7 52.78	+21 24.5	2.017	2.979	5.0	18.7
2 11	7 40.59	+41 30.5	2.271	3.117	10.9	21.5	2 11	7 43.78	+21 13.2	2.071	2.982	8.7	18.9
2 21	7 32.88	+40 50.4	2.357	3.122	13.2	21.7	2 21	7 36.87	+20 57.5	2.151	2.985	12.0	19.2
<b>115439</b>	2003 <i>TN</i> <sub>6</sub>		1 20.1	42°08'	7°4'/16.0	18	<b>522433</b>	2016 <i>CM</i> <sub>316</sub>		1 20.1	33°74'	1°8'/19.4	18
12 13	8 34.81	+36 8.4	1.800	2.598	15.3	19.1	12 13	8 34.03	+23 31.4	1.451	2.259	17.9	21.4
12 23	8 30.75	+37 39.0	1.741	2.611	12.4	18.9	12 23	8 30.18	+23 44.9	1.386	2.271	13.9	21.2
1 2	8 23.50	+39 6.0	1.705	2.624	9.5	18.8	1 2	8 23.10	+24 3.7	1.342	2.283	9.3	20.9
1 12	8 13.85	+40 19.6	1.694	2.637	7.6	18.7	1 12	8 13.64	+24 22.7	1.322	2.296	4.4	20.7
1 22	8 3.02	+41 11.8	1.710	2.651	7.8	18.7	1 22	8 3.11	+24 36.7	1.328	2.310	2.2	20.6
2 1	7 52.55	+41 38.0	1.753	2.665	9.9	18.9	2 1	7 53.07	+24 41.8	1.362	2.324	6.8	20.9
2 11	7 43.91	+41 38.7	1.820	2.679	12.6	19.1	2 11	7 44.98	+24 37.0	1.421	2.339	11.4	21.2
2 21	7 38.09	+41 17.7	1.909	2.694	15.2	19.3	2 21	7 39.75	+24 23.1	1.502	2.354	15.3	21.5
<b>329037</b>	2011 <i>AH</i> <sub>38</sub>		1 20.1	68°20'	0°2'/20.1	18	<b>87774</b>	2000 <i>SO</i> <sub>99</sub>		1 20.1	153°83'	1°5'/20.7	18
12 13	8 33.50	+19 8.8	1.850	2.635	15.5	21.1	12 13	8 32.53	+15 25.6	2.035	2.807	14.7	20.2
12 23	8 29.09	+19 11.0	1.770	2.641	12.1	20.9	12 23	8 28.13	+15 22.0	1.947	2.808	11.6	20.0
1 2	8 22.06	+19 20.4	1.713	2.648	8.2	20.7	1 2	8 21.34	+15 27.7	1.881	2.810	8.0	19.8
1 12	8 13.10	+19 34.3	1.682	2.655	3.8	20.4	1 12	8 12.77	+15 40.8	1.842	2.812	4.1	19.5
1 22	8 3.21	+19 49.3	1.679	2.662	0.9	20.2	1 22	8 3.30	+15 59.0	1.832	2.814	1.6	19.4
2 1	7 53.58	+20 2.2	1.705	2.669	5.4	20.5	2 1	7 54.00	+16 19.4	1.851	2.815	5.1	19.6
2 11	7 45.40	+20 10.9	1.759	2.676	9.6	20.8	2 11	7 45.92	+16 39.1	1.898	2.816	9.0	19.8
2 21	7 39.50	+20 14.5	1.837	2.684	13.2	21.0	2 21	7 39.87	+16 56.4	1.971	2.817	12.4	20.1
<b>307142</b>	2002 <i>CK</i> <sub>197</sub>		1 20.1	299°37'	1°4'/19.5	18	<b>142397</b>	2002 <i>SM</i> <sub>19</sub>		1 20.1	98°80'	0°4'/20.2	18
12 13	8 32.84	+21 2.9	1.485										

EPHEMERIDES

1 20.1

1 20.1

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>446943</b>	2003 <i>FS</i> <sub>11</sub>		1 20.1 339°40	0°8/19.8	17		<b>422429</b>	2014 <i>SC</i> <sub>288</sub>		1 20.1 137°87	2°8/21.5	18	
12 13	8 31.98	+21 3.0	1.219	2.040	19.9	21.0	12 13	8 32.54	+10 37.8	2.004	2.762	15.3	21.3
12 23	8 29.46	+21 9.3	1.140	2.031	15.7	20.7	12 23	8 28.13	+10 42.9	1.920	2.770	12.3	21.1
1 2	8 23.21	+21 25.0	1.079	2.023	10.6	20.4	1 2	8 21.34	+11 1.8	1.857	2.777	8.8	20.9
1 12	8 13.93	+21 45.8	1.040	2.016	4.9	20.0	1 12	8 12.80	+11 33.2	1.821	2.784	5.0	20.6
1 22	8 3.00	+22 5.9	1.026	2.010	1.6	19.8	1 22	8 3.37	+12 14.3	1.813	2.791	2.8	20.5
2 1	7 52.25	+22 20.1	1.038	2.004	7.6	20.1	2 1	7 54.09	+13 1.2	1.834	2.797	5.3	20.7
2 11	7 43.56	+22 25.2	1.073	2.000	13.2	20.4	2 11	7 46.04	+13 49.7	1.885	2.803	9.0	20.9
2 21	7 38.21	+22 20.9	1.128	1.996	18.1	20.7	2 21	7 40.01	+14 36.1	1.960	2.808	12.4	21.1
<b>426865</b>	2013 <i>WA</i> <sub>7</sub>		1 20.1 89°50	0°9/19.5	18		<b>89749</b>	2002 <i>AT</i> <sub>23</sub>		1 20.1 238°88	0°3/19.9	18	
12 13	8 31.15	+20 2.3	2.343	3.120	12.8	20.9	12 13	8 34.73	+21 7.2	2.096	2.875	14.1	19.7
12 23	8 26.73	+20 47.8	2.269	3.137	9.9	20.7	12 23	8 29.92	+21 5.7	2.000	2.868	11.1	19.5
1 2	8 20.22	+21 40.1	2.219	3.154	6.6	20.5	1 2	8 22.61	+21 8.9	1.926	2.860	7.5	19.2
1 12	8 12.20	+22 35.3	2.197	3.171	3.0	20.3	1 12	8 13.41	+21 13.9	1.879	2.853	3.4	19.0
1 22	8 3.46	+23 28.8	2.205	3.188	1.3	20.2	1 22	8 3.21	+21 17.8	1.862	2.845	1.0	18.8
2 1	7 54.93	+24 16.7	2.244	3.204	4.8	20.5	2 1	7 53.13	+21 18.2	1.875	2.837	5.2	19.1
2 11	7 47.50	+24 56.1	2.312	3.220	8.1	20.7	2 11	7 44.31	+21 13.7	1.916	2.829	9.2	19.3
2 21	7 41.86	+25 26.0	2.406	3.236	11.0	20.9	2 21	7 37.59	+21 4.2	1.982	2.821	12.7	19.5
<b>226929</b>	2004 <i>TG</i> <sub>279</sub>		1 20.1 126°52	2°3/21.2	18		<b>291076</b>	2005 <i>YF</i> <sub>117</sub>		1 20.1 29°60	0°9/19.7	18	
12 13	8 31.75	+12 37.4	2.124	2.886	14.5	20.9	12 13	8 32.38	+21 23.9	1.827	2.619	15.3	21.6
12 23	8 27.37	+12 33.6	2.038	2.892	11.5	20.7	12 23	8 28.37	+21 40.9	1.746	2.622	12.0	21.4
1 2	8 20.75	+12 40.7	1.975	2.898	8.1	20.5	1 2	8 21.68	+22 4.5	1.688	2.626	8.0	21.2
1 12	8 12.48	+12 57.6	1.939	2.904	4.5	20.2	1 12	8 13.00	+22 30.6	1.656	2.630	3.7	20.9
1 22	8 3.39	+13 21.9	1.931	2.910	2.4	20.1	1 22	8 3.32	+22 54.9	1.651	2.634	1.4	20.8
2 1	7 54.47	+13 50.8	1.953	2.916	5.0	20.3	2 1	7 53.87	+23 13.8	1.676	2.638	5.7	21.1
2 11	7 46.72	+14 21.1	2.003	2.921	8.6	20.5	2 11	7 45.87	+23 24.9	1.727	2.643	9.9	21.3
2 21	7 40.86	+14 50.1	2.079	2.926	11.9	20.7	2 21	7 40.18	+23 28.0	1.803	2.648	13.5	21.6
<b>81370</b>	2000 <i>GV</i> <sub>64</sub>		1 20.1 234°01	8°3/24.2	18		<b>492498</b>	2014 <i>NB</i> <sub>61</sub>		1 20.1 162°85	1°5/19.3	18	
12 13	8 30.48	- 2 14.9	1.999	2.706	16.9	19.6	12 13	8 36.86	+22 15.4	2.012	2.790	14.6	22.5
12 23	8 26.61	- 3 2.3	1.905	2.701	14.6	19.4	12 23	8 31.65	+22 50.1	1.928	2.796	11.4	22.3
1 2	8 20.41	- 3 30.2	1.831	2.696	12.1	19.2	1 2	8 23.80	+23 30.8	1.867	2.802	7.6	22.0
1 12	8 12.40	- 3 35.0	1.779	2.691	9.7	19.0	1 12	8 13.95	+24 13.0	1.833	2.806	3.6	21.8
1 22	8 3.40	- 3 15.5	1.753	2.685	8.3	18.9	1 22	8 3.09	+24 51.5	1.829	2.811	1.9	21.7
2 1	7 54.43	- 2 33.0	1.754	2.680	8.9	19.0	2 1	7 52.42	+25 22.0	1.856	2.814	5.7	21.9
2 11	7 46.54	- 1 32.1	1.781	2.674	11.0	19.1	2 11	7 43.14	+25 42.2	1.910	2.816	9.7	22.2
2 21	7 40.59	- 0 19.0	1.832	2.668	13.7	19.2	2 21	7 36.13	+25 52.1	1.990	2.818	13.1	22.4
<b>401136</b>	2011 <i>UN</i> <sub>338</sub>		1 20.1 142°62	2°0/21.1	18		<b>83394</b>	2001 <i>SH</i> <sub>27</sub>		1 20.1 70°64	1°1/20.7	18	
12 13	8 35.05	+12 40.5	1.894	2.657	15.9	22.4	12 13	8 29.72	+15 37.0	2.291	3.061	13.3	20.0
12 23	8 30.21	+12 56.1	1.812	2.668	12.7	22.2	12 23	8 25.66	+15 47.2	2.207	3.069	10.5	19.8
1 2	8 22.80	+13 25.2	1.752	2.678	8.8	22.0	1 2	8 19.54	+16 6.1	2.147	3.077	7.1	19.6
1 12	8 13.46	+14 5.5	1.719	2.687	4.6	21.7	1 12	8 11.93	+16 31.8	2.114	3.085	3.5	19.4
1 22	8 3.16	+14 53.2	1.714	2.695	2.0	21.6	1 22	8 3.59	+17 1.4	2.110	3.093	1.2	19.2
2 1	7 53.07	+15 43.7	1.739	2.703	5.4	21.8	2 1	7 55.42	+17 31.9	2.136	3.101	4.5	19.5
2 11	7 44.33	+16 32.6	1.793	2.711	9.4	22.1	2 11	7 48.31	+18 0.5	2.191	3.109	8.0	19.7
2 21	7 37.81	+17 16.7	1.872	2.717	13.1	22.3	2 21	7 42.94	+18 25.3	2.272	3.117	11.1	19.9
<b>27753</b>	1991 <i>PF</i> <sub>5</sub>		1 20.1 239°22	0°8/19.8	18		<b>143520</b>	2003 <i>EJ</i> <sub>12</sub>		1 20.1 50°29	7°2/17.9	18	
12 13	8 37.59	+21 16.9	1.634	2.423	17.0	18.7	12 13	8 41.89	+37 46.9	1.660	2.451	16.7	18.8
12 23	8 32.98	+21 24.8	1.540	2.414	13.4	18.4	12 23	8 36.32	+38 24.2	1.598	2.464	13.5	18.7
1 2	8 25.13	+21 39.6	1.467	2.404	9.1	18.1	1 2	8 27.18	+38 53.8	1.558	2.476	10.2	18.5
1 12	8 14.70	+21 57.4	1.420	2.394	4.2	17.8	1 12	8 15.49	+39 6.8	1.542	2.489	7.7	18.4
1 22	8 2.84	+22 13.4	1.400	2.384	1.4	17.6	1 22	8 2.76	+38 56.9	1.552	2.503	7.4	18.4
2 1	7 51.06	+22 23.5	1.409	2.372	6.5	17.9	2 1	7 50.77	+38 22.3	1.590	2.516	9.6	18.5
2 11	7 40.91	+22 25.7	1.445	2.361	11.4	18.2	2 11	7 41.07	+37 26.3	1.653	2.530	12.7	18.8
2 21	7 33.54	+22 19.9	1.504	2.349	15.7	18.4	2 21	7 34.59	+36 15.0	1.738	2.544	15.7	19.0
<b>345152</b>	2005 <i>SJ</i> <sub>128</sub>		1 20.1 96°55	3°1/19.0	18		<b>446432</b>	2014 <i>JA</i> <sub>36</sub>		1 20.1 244°64	4°4/21.7	18	
12 13	8 40.79	+26 13.1	1.477	2.275	18.1	21.2	12 13	8 35.04	+ 9 16.6	1.738	2.497	17.3	21.7
12 23	8 35.48	+26 40.7	1.412	2.291	14.1	21.0	12 23	8 30.74	+ 8 54.0	1.635	2.483	14.2	21.4
1 2	8 26.67	+27 11.3	1.368	2.306	9.6	20.7	1 2	8 23.54	+ 8 46.0	1.551	2.467	10.5	21.2
1 12	8 15.29	+27 38.1	1.349	2.320	4.9	20.5	1 12	8 14.00	+ 8 53.5	1.493	2.451	6.6	20.9
1 22	8 2.76	+27 54.6	1.357	2.335	3.5	20.4	1 22	8 3.05	+ 9 15.5	1.461	2.434	4.4	20.7
2 1	7 50.81	+27 57.0	1.393	2.349	7.5	20.7	2 1	7 52.00	+ 9 49.3	1.458	2.417	6.9	20.8
2 11	7 41.03	+27 45.0	1.455	2.363	11.9	21.0	2 11	7 42.23	+10 30.4	1.482	2.399	11.1	21.0
2 21	7 34.40	+27 21.3	1.540	2.377	15.8	21.3	2 21	7 34.85	+11 14.4	1.530	2.380	15.2	21.2
<b>357595</b>	2004 <i>XO</i> <sub>43</sub>		1 20.1 16°62	1°0/20.4	18		<b>466822</b>	2015 <i>BN</i> <sub>167</sub>		1 20.1 92°38	1°2/19.5	18	
12 13	8 30.74	+17 35.6	1.153	1.974	20.8	20.4	12 13	8 32.30	+22 21.5	2.219	3.001	13.3	21.4
12 23	8 28.32	+17 29.3	1.089	1.979	16.4	20.1	12 23	8 27.79	+22 44.0	2.139	3.010	10.3	21.2
1 2	8 22.24	+17 35.7	1.043	1.986	11.2	19.9	1 2	8 21.02	+23 11.2	2.083	3.019	6.9	21.0
1 12	8 13.40	+17 52.2	1.019	1.993	5.3	19.6	1 12	8 12.62	+23 39.3	2.055	3.028	3.2	20.8
1 22	8 3.20	+18 14.0	1.018	2.002	1.4	19.3	1 22	8 3.43	+24 4.8	2.055	3.037	1.5	20.7
2 1	7 53.45	+18 36.0	1.043	2.012	7.1	19.7	2 1	7 54.47	+24 24.3	2.086	3.046	5.0	20.9
2 11	7 45.85	+18 54.2	1.091	2.023	12.6	20.1	2 11	7 46.72	+24 36.2	2.145	3.055	8.6	21.2
2 21	7 41.47	+19 6.3	1.160	2.035	17.3	20.4	2 21	7 40.91	+24 40.2	2.230	3.064	11.7	21.4
<b>163748</b>	2003 <i>NM</i> <sub>2</sub>		1 20.1 198°48	1°9/19.1	18		<b>248773</b>	2006 <i>SV</i> <sub>8</sub>		1 20.1 92°13	6°7/24.8	18	
12 13	8 36.09	+22											

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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>377937</b>	2006 <i>HU</i> <sub>40</sub>		1 20.1	74°60	6°6/15.5	18	<b>217451</b>	2005 <i>TG</i> <sub>104</sub>		1 20.1	125°74	4°9/22.4	18
12 13	8 39.87	+38 9.6	2.429	3.199	12.6	20.2	12 13	8 32.40	+6 24.7	2.078	2.818	15.4	20.3
12 23	8 33.80	+39 53.5	2.387	3.237	10.2	20.1	12 23	8 27.89	+5 52.3	1.994	2.826	12.7	20.1
1 2	8 25.10	+41 31.4	2.371	3.274	8.0	20.0	1 2	8 21.13	+5 33.9	1.931	2.834	9.6	19.9
1 12	8 14.49	+42 55.0	2.384	3.311	6.7	20.0	1 12	8 12.72	+5 30.5	1.894	2.841	6.5	19.8
1 22	8 3.00	+43 58.2	2.425	3.347	6.9	20.1	1 22	8 3.48	+5 41.4	1.884	2.848	4.9	19.7
2 1	7 51.87	+44 37.8	2.496	3.383	8.4	20.2	2 1	7 54.43	+6 4.9	1.903	2.854	6.3	19.8
2 11	7 42.27	+44 54.4	2.593	3.418	10.4	20.4	2 11	7 46.53	+6 37.2	1.951	2.861	9.3	20.0
2 21	7 35.00	+44 51.4	2.713	3.453	12.3	20.6	2 21	7 40.55	+7 14.5	2.023	2.867	12.3	20.2
<b>258440</b>	2001 <i>XX</i> <sub>234</sub>		1 20.1	64°14	3°3/18.5	18	<b>149871</b>	2005 <i>QQ</i> <sub>137</sub>		1 20.1	46°80	1°5/19.4	18
12 13	8 34.95	+25 48.8	1.711	2.509	16.0	20.4	12 13	8 33.27	+22 18.6	1.719	2.515	16.0	20.8
12 23	8 30.52	+26 40.4	1.648	2.527	12.4	20.2	12 23	8 29.26	+22 46.5	1.642	2.521	12.5	20.6
1 2	8 23.16	+27 36.0	1.608	2.545	8.4	20.0	1 2	8 22.39	+23 21.1	1.588	2.527	8.4	20.4
1 12	8 13.67	+28 28.8	1.593	2.564	4.5	19.8	1 12	8 13.39	+23 57.6	1.559	2.533	3.9	20.1
1 22	8 3.20	+29 12.3	1.607	2.582	3.6	19.8	1 22	8 3.33	+24 30.5	1.558	2.540	2.0	20.0
2 1	7 53.15	+29 41.8	1.648	2.601	7.0	20.1	2 1	7 53.54	+24 55.5	1.586	2.547	6.2	20.3
2 11	7 44.82	+29 55.8	1.717	2.619	10.8	20.3	2 11	7 45.32	+25 10.3	1.640	2.554	10.4	20.6
2 21	7 39.07	+29 55.5	1.808	2.638	14.2	20.6	2 21	7 39.59	+25 14.7	1.718	2.561	14.1	20.8
<b>306390</b>	1994 <i>SM</i> <sub>8</sub>		1 20.1	91°83	3°6/18.6	18	<b>452531</b>	2004 <i>TQ</i> <sub>143</sub>		1 20.1	108°17	0°6/19.8	17
12 13	8 39.83	+28 20.2	1.841	2.627	15.5	21.0	12 13	8 38.24	+20 11.5	1.727	2.510	16.5	22.5
12 23	8 34.02	+29 0.3	1.780	2.652	12.1	20.8	12 23	8 32.90	+20 33.3	1.658	2.528	12.9	22.3
1 2	8 25.33	+29 40.9	1.743	2.676	8.3	20.6	1 2	8 24.69	+21 2.8	1.611	2.547	8.6	22.1
1 12	8 14.59	+30 15.6	1.732	2.699	4.7	20.5	1 12	8 14.37	+21 35.5	1.591	2.564	3.9	21.8
1 22	8 3.00	+30 38.7	1.750	2.722	4.0	20.5	1 22	8 3.12	+22 6.4	1.599	2.582	1.2	21.7
2 1	7 51.94	+30 47.0	1.797	2.745	6.9	20.7	2 1	7 52.27	+22 31.5	1.636	2.598	5.9	22.0
2 11	7 42.69	+30 40.6	1.872	2.767	10.4	20.9	2 11	7 43.13	+22 48.4	1.701	2.615	10.1	22.3
2 21	7 36.06	+30 21.7	1.970	2.789	13.6	21.2	2 21	7 36.55	+22 56.8	1.790	2.630	13.8	22.6
<b>462093</b>	2007 <i>HR</i> <sub>35</sub>		1 20.1	248°68	3°5/21.8	17	<b>379097</b>	2008 <i>YO</i> <sub>5</sub>		1 20.1	32°04	0°3/20.2	18
12 13	8 30.87	+9 7.1	2.311	3.057	13.9	22.0	12 13	8 29.65	+17 7.6	1.682	2.476	16.4	20.3
12 23	8 26.68	+8 52.6	2.204	3.044	11.3	21.8	12 23	8 26.29	+17 32.4	1.616	2.492	12.8	20.1
1 2	8 20.35	+8 49.8	2.119	3.031	8.3	21.6	1 2	8 20.29	+18 8.3	1.572	2.509	8.6	19.9
1 12	8 12.38	+8 59.0	2.060	3.017	5.2	21.4	1 12	8 12.38	+18 51.4	1.553	2.526	4.0	19.6
1 22	8 3.49	+9 18.9	2.031	3.003	3.5	21.3	1 22	8 3.59	+19 37.1	1.561	2.544	0.9	19.4
2 1	7 54.57	+9 47.5	2.031	2.988	5.4	21.4	2 1	7 55.13	+20 20.3	1.597	2.563	5.5	19.8
2 11	7 46.58	+10 21.7	2.060	2.974	8.6	21.5	2 11	7 48.17	+20 57.2	1.661	2.583	9.7	20.1
2 21	7 40.30	+10 58.1	2.114	2.959	11.8	21.7	2 21	7 43.51	+21 25.9	1.748	2.603	13.4	20.4
<b>217446</b>	2005 <i>SD</i> <sub>272</sub>		1 20.1	107°07	1°0/20.7	18	<b>245046</b>	2004 <i>FT</i> <sub>31</sub>		1 20.1	170°67	11°2/26.9	18
12 13	8 32.69	+13 49.0	2.063	2.829	14.7	21.1	12 13	8 34.42	-8 55.5	1.425	2.121	23.1	20.4
12 23	8 28.16	+14 28.2	1.986	2.845	11.6	20.9	12 23	8 30.68	-9 5.0	1.342	2.124	20.4	20.2
1 2	8 21.32	+15 20.0	1.932	2.861	7.9	20.7	1 2	8 23.70	-8 37.5	1.273	2.126	17.1	20.0
1 12	8 12.79	+16 21.0	1.905	2.876	3.9	20.5	1 12	8 14.15	-7 27.0	1.224	2.128	13.8	19.8
1 22	8 3.42	+17 26.7	1.908	2.891	1.2	20.3	1 22	8 3.13	-5 33.0	1.198	2.129	11.5	19.6
2 1	7 54.26	+18 31.8	1.941	2.906	4.9	20.6	2 1	7 52.16	-3 1.7	1.198	2.129	11.5	19.6
2 11	7 46.32	+19 31.9	2.004	2.920	8.7	20.8	2 11	7 42.81	-0 6.6	1.224	2.129	13.9	19.8
2 21	7 40.38	+20 24.1	2.092	2.934	12.0	21.1	2 21	7 36.25	+2 56.5	1.274	2.129	17.4	20.0
<b>96371</b>	1997 <i>XC</i> <sub>8</sub>		1 20.1	25°20	0°1/20.1	18	<b>212561</b>	2006 <i>SP</i> <sub>73</sub>		1 20.1	227°52	4°1/22.7	17
12 13	8 33.99	+19 49.7	1.272	2.084	19.7	19.3	12 13	8 27.80	+5 26.5	2.673	3.402	12.6	20.6
12 23	8 30.59	+19 43.0	1.204	2.090	15.5	19.1	12 23	8 23.93	+5 15.5	2.573	3.398	10.4	20.5
1 2	8 23.65	+19 45.5	1.156	2.097	10.4	18.8	1 2	8 18.32	+5 16.9	2.495	3.393	7.9	20.3
1 12	8 14.04	+19 53.5	1.130	2.105	4.8	18.5	1 12	8 11.41	+5 31.2	2.444	3.389	5.4	20.1
1 22	8 3.14	+20 2.8	1.130	2.113	1.1	18.3	1 22	8 3.82	+5 57.5	2.422	3.385	4.1	20.0
2 1	7 52.70	+20 9.3	1.155	2.122	6.9	18.7	2 1	7 56.27	+6 33.8	2.429	3.380	5.2	20.1
2 11	7 44.35	+20 10.8	1.206	2.132	12.2	19.0	2 11	7 49.52	+7 16.9	2.466	3.375	7.6	20.2
2 21	7 39.13	+20 6.5	1.278	2.143	16.6	19.3	2 21	7 44.17	+8 3.5	2.528	3.370	10.2	20.4
<b>332728</b>	2009 <i>SD</i> <sub>283</sub>		1 20.1	74°08	3°4/18.3	18	<b>263121</b>	2007 <i>UU</i> <sub>107</sub>		1 20.1	268°81	1°4/19.5	18
12 13	8 33.82	+26 56.5	1.904	2.698	14.7	21.3	12 13	8 34.93	+22 2.6	1.632	2.429	16.7	21.3
12 23	8 29.55	+27 46.6	1.828	2.704	11.5	21.1	12 23	8 30.85	+22 24.5	1.547	2.425	13.1	21.0
1 2	8 22.53	+28 39.9	1.774	2.710	7.9	20.9	1 2	8 23.67	+22 53.7	1.482	2.421	8.9	20.8
1 12	8 13.43	+29 30.4	1.747	2.715	4.4	20.7	1 12	8 14.07	+23 25.5	1.443	2.417	4.1	20.5
1 22	8 3.29	+30 11.8	1.748	2.721	3.8	20.6	1 22	8 3.17	+23 54.4	1.431	2.413	1.9	20.3
2 1	7 53.39	+30 39.7	1.778	2.727	6.9	20.8	2 1	7 52.43	+24 15.8	1.447	2.409	6.5	20.6
2 11	7 44.97	+30 52.3	1.834	2.733	10.5	21.1	2 11	7 43.32	+24 27.0	1.490	2.405	11.2	20.9
2 21	7 38.94	+30 50.8	1.915	2.739	13.7	21.3	2 21	7 36.89	+24 28.0	1.555	2.401	15.2	21.1
<b>708</b>	<i>Raphaella</i>		1 20.1	293°65	1°8/19.3	18	<b>26529</b>	2000 <i>CM</i> <sub>94</sub>		1 20.1	329°16	5°9/23.1	18
12 13	8 33.35	+23 29.4	1.829	2.623	15.3	14.9	12 13	8 28.28	+4 15.5	1.590	2.351	18.6	17.7
12 23	8 29.35	+23 51.6	1.737	2.614	12.0	14.6	12 23	8 25.58	+4 7.8	1.499	2.343	15.5	17.5
1 2	8 22.52	+24 19.1	1.667	2.605	8.1	14.4	1 2	8 20.12	+4 22.4	1.427	2.335	11.9	17.2
1 12	8 13.49	+24 47.5	1.622	2.596	3.9	14.1	1 12	8 12.46	+5 1.0	1.378	2.328	8.2	17.0
1 22	8 3.27	+25 11.9	1.606	2.587	2.2	14.0	1 22	8 3.55	+6 2.1	1.354	2.321	5.9	16.9
2 1	7 53.14	+25 28.0	1.619	2.579	6.2	14.2	2 1	7 54.65	+7 20.7	1.357	2.314	7.5	16.9
2 11	7 44.43	+25 34.0	1.658	2.570	10.5	14.4	2 11	7 47.08	+8 49.3	1.386	2.308	11.2	17.1
2 21	7 38.13	+25 29.8	1.721	2.562	14.3	14.6	2 21	7 41.86	+10 20.1	1.438	2.303	15.1	17.3
<b>37313</b>	2001 <i>QC</i>		1 20.1	147°69	2°2/21.5	18	<b>110972</b>	2001 <i>UF</i> <sub>178</sub>		1 20.1	83°81	4°6/17.2	18
12 13	8 28.61	+10 50.4	2.358	3.115	13.4	19.1							

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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>153919</b>	2001 <i>YU</i> <sub>18</sub>		1 20.1	20°02'	2°5'/19.1	18	<b>133433</b>	2003 <i>SP</i> <sub>202</sub>		1 20.1	65°16'	1°3'/19.5	18
12 13	8 33.70	+25 11.0	1.705	2.505	16.0	19.9	12 13	8 32.75	+22 26.1	2.008	2.795	14.3	20.6
12 23	8 29.70	+25 36.0	1.628	2.508	12.5	19.7	12 23	8 28.41	+22 47.3	1.930	2.804	11.2	20.4
1 2	8 22.75	+26 4.8	1.572	2.511	8.4	19.5	1 2	8 21.60	+23 13.7	1.876	2.812	7.5	20.1
1 12	8 13.58	+26 32.3	1.541	2.514	4.2	19.2	1 12	8 12.98	+23 41.2	1.848	2.821	3.5	19.9
1 22	8 3.32	+26 53.1	1.538	2.518	2.9	19.1	1 22	8 3.50	+24 5.7	1.848	2.830	1.7	19.8
2 1	7 53.34	+27 3.3	1.564	2.522	6.6	19.4	2 1	7 54.28	+24 23.9	1.879	2.839	5.4	20.1
2 11	7 44.99	+27 1.6	1.615	2.526	10.8	19.6	2 11	7 46.40	+24 33.8	1.937	2.848	9.2	20.3
2 21	7 39.21	+26 48.8	1.690	2.530	14.5	19.9	2 21	7 40.66	+24 35.3	2.019	2.857	12.5	20.6
<b>327760</b>	2006 <i>US</i> <sub>36</sub>		1 20.1	346°63'	10°6'/23.1	18	<b>296080</b>	2009 <i>BA</i> <sub>12</sub>		1 20.1	230°61'	1°6'/20.9	17
12 13	8 25.35	+ 2 16.4	1.250	2.029	21.8	20.2	12 13	8 32.19	+15 25.7	2.780	3.533	11.6	20.8
12 23	8 23.95	+ 0 39.7	1.168	2.015	18.7	19.9	12 23	8 27.28	+15 5.1	2.674	3.524	9.2	20.6
1 2	8 19.38	- 0 37.1	1.103	2.002	15.4	19.7	1 2	8 20.54	+14 50.0	2.592	3.515	6.4	20.4
1 12	8 12.23	- 1 27.0	1.058	1.991	12.2	19.5	1 12	8 12.44	+14 39.7	2.538	3.505	3.4	20.2
1 22	8 3.60	- 1 44.9	1.034	1.982	10.6	19.3	1 22	8 3.63	+14 33.1	2.515	3.495	1.6	20.0
2 1	7 55.00	- 1 30.2	1.033	1.974	11.7	19.4	2 1	7 54.87	+14 29.1	2.523	3.485	4.1	20.2
2 11	7 48.01	- 0 47.7	1.054	1.968	14.8	19.5	2 11	7 46.98	+14 26.3	2.562	3.475	7.2	20.4
2 21	7 43.81	+ 0 14.1	1.094	1.964	18.4	19.7	2 21	7 40.56	+14 23.9	2.627	3.464	10.0	20.5
<b>277450</b>	2005 <i>UH</i> <sub>497</sub>		1 20.1	122°91'	0°2'/19.9	18	<b>123459</b>	2000 <i>WQ</i> <sub>139</sub>		1 20.1	3°30'	1°9'/19.2	18
12 13	8 37.36	+17 30.5	1.670	2.451	17.0	21.4	12 13	8 30.40	+22 32.2	1.571	2.379	16.7	19.7
12 23	8 32.41	+18 10.6	1.597	2.466	13.3	21.2	12 23	8 27.39	+23 6.9	1.493	2.378	13.1	19.4
1 2	8 24.50	+19 2.7	1.546	2.481	9.0	20.9	1 2	8 21.37	+23 49.5	1.437	2.378	8.8	19.2
1 12	8 14.36	+20 1.8	1.521	2.495	4.1	20.7	1 12	8 13.03	+24 34.5	1.405	2.379	4.2	18.9
1 22	8 3.14	+21 1.8	1.525	2.508	1.0	20.5	1 22	8 3.49	+25 15.9	1.400	2.381	2.4	18.8
2 1	7 52.22	+21 56.4	1.558	2.521	6.0	20.8	2 1	7 54.16	+25 48.2	1.422	2.383	6.7	19.1
2 11	7 42.96	+22 41.6	1.618	2.533	10.5	21.1	2 11	7 46.46	+26 8.4	1.470	2.386	11.2	19.3
2 21	7 36.30	+23 15.7	1.703	2.545	14.3	21.4	2 21	7 41.38	+26 16.1	1.540	2.390	15.1	19.6
<b>286144</b>	2001 <i>TG</i> <sub>207</sub>		1 20.1	197°36'	1°0'/19.6	18	<b>135156</b>	2001 <i>QS</i> <sub>229</sub>		1 20.1	208°99'	0°2'/19.9	18
12 13	8 37.86	+21 12.8	1.952	2.729	15.1	22.4	12 13	8 31.74	+20 14.3	2.918	3.682	10.9	21.0
12 23	8 32.63	+21 39.2	1.858	2.726	11.8	22.1	12 23	8 26.89	+20 22.2	2.816	3.676	8.5	20.9
1 2	8 24.63	+22 12.5	1.788	2.722	8.0	21.9	1 2	8 20.26	+20 34.1	2.738	3.669	5.7	20.7
1 12	8 14.46	+22 48.7	1.744	2.718	3.7	21.6	1 12	8 12.31	+20 48.0	2.690	3.662	2.6	20.4
1 22	8 3.11	+23 22.6	1.730	2.712	1.5	21.5	1 22	8 3.67	+21 1.7	2.672	3.655	0.7	20.3
2 1	7 51.85	+23 50.1	1.746	2.706	5.8	21.7	2 1	7 55.10	+21 13.0	2.685	3.647	3.9	20.5
2 11	7 41.98	+24 8.5	1.790	2.699	10.0	22.0	2 11	7 47.36	+21 20.6	2.729	3.639	7.0	20.7
2 21	7 34.46	+24 17.5	1.859	2.692	13.7	22.2	2 21	7 41.07	+21 23.7	2.800	3.630	9.7	20.9
<b>138149</b>	2000 <i>EG</i> <sub>64</sub>		1 20.1	279°23'	2°3'/21.2	17	<b>185311</b>	2006 <i>UO</i> <sub>324</sub>		1 20.1	132°13'	1°9'/19.2	18
12 13	8 31.59	+12 45.5	1.862	2.634	15.8	20.8	12 13	8 33.69	+22 32.8	1.820	2.612	15.4	20.6
12 23	8 27.95	+12 49.2	1.753	2.614	12.8	20.6	12 23	8 29.55	+23 11.9	1.738	2.614	12.0	20.4
1 2	8 21.64	+13 6.4	1.666	2.593	9.1	20.3	1 2	8 22.62	+23 58.1	1.678	2.616	8.1	20.2
1 12	8 13.17	+13 36.0	1.605	2.572	4.9	20.0	1 12	8 13.55	+24 46.3	1.644	2.617	3.9	19.9
1 22	8 3.39	+14 15.3	1.571	2.551	2.4	19.8	1 22	8 3.37	+25 30.6	1.638	2.618	2.3	19.8
2 1	7 53.47	+15 0.4	1.565	2.530	5.8	19.9	2 1	7 53.35	+26 6.1	1.661	2.620	6.2	20.1
2 11	7 44.70	+15 46.7	1.588	2.509	10.2	20.2	2 11	7 44.79	+26 29.9	1.711	2.621	10.3	20.3
2 21	7 38.09	+16 30.3	1.635	2.487	14.3	20.4	2 21	7 38.63	+26 41.8	1.785	2.622	14.0	20.5
<b>304992</b>	2007 <i>TV</i> <sub>240</sub>		1 20.1	52°40'	0°9'/20.4	18	<b>11559</b>	1993 <i>FS</i> <sub>23</sub>		1 20.1	119°63'	0°6'/19.8	18
12 13	8 36.04	+17 41.8	1.344	2.145	19.4	20.7	12 13	8 33.51	+20 46.5	2.123	2.902	13.9	19.3
12 23	8 31.75	+17 38.6	1.287	2.165	15.2	20.5	12 23	8 28.85	+21 2.5	2.041	2.910	10.9	19.1
1 2	8 24.16	+17 46.5	1.249	2.187	10.3	20.2	1 2	8 21.84	+21 24.3	1.982	2.917	7.3	18.9
1 12	8 14.19	+18 2.1	1.235	2.209	4.8	20.0	1 12	8 13.09	+21 48.7	1.950	2.924	3.3	18.7
1 22	8 3.22	+18 21.0	1.247	2.231	1.3	19.8	1 22	8 3.50	+22 11.8	1.948	2.931	1.1	18.5
2 1	7 52.86	+18 39.1	1.287	2.253	6.4	20.2	2 1	7 54.12	+22 30.6	1.976	2.938	5.0	18.8
2 11	7 44.57	+18 53.3	1.352	2.276	11.3	20.5	2 11	7 46.01	+22 43.0	2.032	2.944	8.8	19.1
2 21	7 39.23	+19 2.2	1.439	2.299	15.4	20.8	2 21	7 39.92	+22 48.6	2.113	2.951	12.1	19.3
<b>495982</b>	2007 <i>TS</i> <sub>332</sub>		1 20.1	134°43'	5°0'/23.4	16	<b>156749</b>	2002 <i>XS</i> <sub>86</sub>		1 20.1	44°08'	4°8'/18.5	17
12 13	8 29.70	+ 1 26.3	2.962	3.661	12.1	22.1	12 13	8 36.87	+26 40.9	1.101	1.928	21.1	19.9
12 23	8 25.08	+ 0 59.5	2.876	3.674	10.2	22.0	12 23	8 33.42	+27 38.9	1.052	1.946	16.5	19.6
1 2	8 18.91	+ 0 45.2	2.813	3.687	8.0	21.8	1 2	8 25.80	+28 41.9	1.022	1.965	11.2	19.4
1 12	8 11.63	+ 0 44.5	2.776	3.699	6.0	21.7	1 12	8 15.09	+29 39.4	1.014	1.986	6.3	19.2
1 22	8 3.82	+ 0 57.1	2.767	3.711	5.0	21.7	1 22	8 3.05	+30 21.4	1.031	2.006	5.2	19.2
2 1	7 56.13	+ 1 21.6	2.789	3.723	5.6	21.7	2 1	7 51.81	+30 41.8	1.073	2.028	9.4	19.5
2 11	7 49.23	+ 1 55.3	2.840	3.734	7.4	21.9	2 11	7 43.25	+30 40.3	1.137	2.050	14.1	19.8
2 21	7 43.63	+ 2 35.2	2.917	3.744	9.4	22.0	2 21	7 38.41	+30 20.9	1.222	2.072	18.2	20.2
<b>324510</b>	2006 <i>VG</i> <sub>37</sub>		1 20.1	60°55'	0°4'/19.9	18	<b>459317</b>	2012 <i>HT</i> <sub>1</sub>		1 20.1	281°41'	1°1'/19.4	17
12 13	8 36.42	+21 2.7	1.596	2.389	17.2	20.9	12 13	8 32.03	+17 53.8	1.953	2.735	14.9	20.8
12 23	8 31.66	+21 3.2	1.531	2.407	13.4	20.7	12 23	8 28.41	+19 4.6	1.840	2.711	11.8	20.5
1 2	8 23.92	+21 10.0	1.487	2.425	8.9	20.5	1 2	8 22.07	+20 30.8	1.750	2.686	8.0	20.2
1 12	8 14.05	+21 19.3	1.469	2.443	4.1	20.2	1 12	8 13.45	+22 7.7	1.688	2.662	3.7	19.9
1 22	8 3.26	+21 27.3	1.478	2.462	1.1	20.1	1 22	8 3.36	+23 48.2	1.655	2.637	1.7	19.7
2 1	7 52.97	+21 30.9	1.516	2.480	6.0	20.4	2 1	7 52.96	+25 24.2	1.652	2.612	6.2	20.0
2 11	7 44.50	+21 28.7	1.580	2.499	10.4	20.7	2 11	7 43.58	+26 49.0	1.678	2.587	10.6	20.2
2 21	7 38.68	+21 20.7	1.668	2.517	14.2	21.0	2 21	7 36.36	+27 58.9	1.729	2.561	14.6	20.3
<b>286944</b>	2002 <i>PD</i> <sub>164</sub>		1 20.1	105°11'	0°7'/19.7	18	<b>41846</b>	2000 <i>WB</i> <sub>86</sub>		1 20.1	31°50'	1°7'/19.4	18
12 13	8 36.												

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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>254012</b>	2004 <i>FH</i> <sub>33</sub>		1 20.1 346°84	0°9/20.4	18		<b>327863</b>	2006 <i>YC</i> <sub>20</sub>		1 20.1 32°77	5°3/19.1	18	
12 13	8 30.92	+18 37.0	1.356	2.166	18.8	19.8	12 13	8 41.36	+32 46.2	1.249	2.062	19.9	19.8
12 23	8 28.21	+18 20.1	1.273	2.158	14.9	19.5	12 23	8 36.36	+32 50.0	1.200	2.084	15.7	19.5
1 2	8 22.16	+18 12.2	1.210	2.151	10.2	19.2	1 2	8 27.37	+32 48.1	1.171	2.107	11.0	19.3
1 12	8 13.48	+18 11.3	1.170	2.144	4.9	18.9	1 12	8 15.65	+32 32.8	1.165	2.131	6.7	19.2
1 22	8 3.40	+18 14.1	1.156	2.139	1.3	18.6	1 22	8 3.01	+31 59.2	1.184	2.156	5.6	19.2
2 1	7 53.50	+18 17.4	1.167	2.135	6.7	19.0	2 1	7 51.47	+31 7.1	1.229	2.181	8.8	19.4
2 11	7 45.40	+18 18.6	1.203	2.132	12.0	19.3	2 11	7 42.66	+30 0.7	1.299	2.208	13.0	19.8
2 21	7 40.22	+18 16.3	1.261	2.129	16.6	19.5	2 21	7 37.41	+28 46.3	1.391	2.235	16.8	20.1
<b>416918</b>	2005 <i>SA</i> <sub>39</sub>		1 20.1 126°73	2°2/19.0	18		<b>283536</b>	2001 <i>TA</i> <sub>218</sub>		1 20.1 115°67	3°4/21.4	18	
12 13	8 35.78	+24 58.8	2.108	2.890	13.9	22.1	12 13	8 36.71	+11 53.0	1.635	2.404	17.8	21.3
12 23	8 30.68	+25 29.7	2.030	2.901	10.8	21.9	12 23	8 31.85	+11 32.3	1.559	2.416	14.3	21.1
1 2	8 23.09	+26 3.8	1.976	2.911	7.3	21.7	1 2	8 24.11	+11 25.2	1.505	2.427	10.2	20.9
1 12	8 13.67	+26 36.4	1.950	2.921	3.7	21.5	1 12	8 14.22	+11 31.1	1.475	2.439	5.9	20.6
1 22	8 3.38	+27 2.9	1.953	2.931	2.5	21.5	1 22	8 3.31	+11 47.8	1.472	2.450	3.4	20.5
2 1	7 53.36	+27 19.9	1.985	2.940	5.7	21.7	2 1	7 52.71	+12 12.0	1.498	2.460	6.3	20.7
2 11	7 44.71	+27 26.1	2.046	2.949	9.3	21.9	2 11	7 43.74	+12 39.8	1.551	2.471	10.5	21.0
2 21	7 38.24	+27 22.2	2.132	2.958	12.4	22.1	2 21	7 37.30	+13 7.9	1.628	2.480	14.3	21.2
<b>453816</b>	2011 <i>SA</i> <sub>105</sub>		1 20.1 59°40	3°1/21.2	18		<b>489538</b>	2007 <i>RT</i> <sub>166</sub>		1 20.1 131°87	0°0/20.1	18	
12 13	8 35.33	+13 28.1	1.453	2.239	18.9	20.4	12 13	8 30.93	+18 32.2	2.388	3.161	12.7	22.1
12 23	8 31.03	+13 1.1	1.386	2.253	15.1	20.2	12 23	8 26.62	+18 52.6	2.301	3.166	10.0	22.0
1 2	8 23.64	+12 47.3	1.339	2.268	10.6	20.0	1 2	8 20.26	+19 20.0	2.238	3.171	6.7	21.8
1 12	8 14.00	+12 46.0	1.316	2.283	5.9	19.8	1 12	8 12.38	+19 51.6	2.203	3.176	3.1	21.5
1 22	8 3.32	+12 54.9	1.319	2.299	3.2	19.6	1 22	8 3.74	+20 24.2	2.197	3.181	0.7	21.3
2 1	7 53.08	+13 10.9	1.350	2.314	6.5	19.9	2 1	7 55.24	+20 54.6	2.222	3.185	4.5	21.6
2 11	7 44.67	+13 30.1	1.406	2.330	11.0	20.2	2 11	7 47.78	+21 20.3	2.276	3.189	7.9	21.9
2 21	7 39.00	+13 49.6	1.486	2.345	15.0	20.4	2 21	7 42.05	+21 40.1	2.355	3.194	11.0	22.1
<b>263505</b>	2008 <i>EC</i> <sub>123</sub>		1 20.1 286°60	1°8/19.3	18		<b>94406</b>	2001 <i>SR</i> <sub>347</sub>		1 20.1 277°74	2°8/20.9	18	
12 13	8 32.96	+22 39.4	1.794	2.588	15.5	21.1	12 13	8 35.12	+14 30.5	1.514	2.300	18.3	20.0
12 23	8 29.18	+23 11.8	1.699	2.576	12.2	20.8	12 23	8 31.19	+14 2.3	1.422	2.290	14.7	19.7
1 2	8 22.53	+23 51.5	1.626	2.565	8.2	20.6	1 2	8 24.07	+13 45.2	1.350	2.280	10.4	19.4
1 12	8 13.60	+24 33.7	1.580	2.553	3.9	20.3	1 12	8 14.38	+13 38.7	1.301	2.270	5.7	19.1
1 22	8 3.38	+25 12.7	1.561	2.542	2.2	20.1	1 22	8 3.24	+13 41.1	1.279	2.260	2.9	18.9
2 1	7 53.18	+25 43.6	1.570	2.530	6.4	20.4	2 1	7 52.16	+13 49.8	1.285	2.250	6.7	19.1
2 11	7 44.37	+26 3.3	1.607	2.519	10.8	20.6	2 11	7 42.69	+14 1.9	1.317	2.240	11.6	19.4
2 21	7 38.00	+26 11.4	1.667	2.507	14.6	20.8	2 21	7 35.97	+14 14.4	1.371	2.230	16.1	19.6
<b>158503</b>	2002 <i>EN</i> <sub>60</sub>		1 20.1 283°12	2°0/21.0	18		<b>469639</b>	2004 <i>TS</i> <sub>13</sub>		1 20.1 86°80	3°7/17.9	18	
12 13	8 31.16	+13 57.0	1.989	2.761	15.0	20.8	12 13	8 33.64	+27 1.2	1.999	2.791	14.2	21.0
12 23	8 27.24	+13 55.4	1.896	2.757	12.0	20.6	12 23	8 29.33	+28 7.9	1.925	2.800	11.1	20.8
1 2	8 20.91	+14 4.7	1.825	2.753	8.3	20.4	1 2	8 22.38	+29 18.2	1.876	2.810	7.6	20.7
1 12	8 12.75	+14 23.4	1.780	2.749	4.4	20.1	1 12	8 13.44	+30 25.7	1.853	2.820	4.5	20.5
1 22	8 3.60	+14 49.2	1.764	2.745	2.0	20.0	1 22	8 3.49	+31 23.5	1.859	2.830	4.0	20.5
2 1	7 54.54	+15 18.7	1.776	2.741	5.2	20.2	2 1	7 53.75	+32 6.8	1.894	2.839	6.9	20.7
2 11	7 46.67	+15 48.6	1.817	2.737	9.2	20.4	2 11	7 45.41	+32 33.4	1.957	2.849	10.2	20.9
2 21	7 40.81	+16 16.2	1.882	2.733	12.8	20.6	2 21	7 39.35	+32 44.2	2.043	2.858	13.3	21.1
<b>240839</b>	2006 <i>BU</i> <sub>80</sub>		1 20.1 218°82	2°8/18.8	18		<b>288254</b>	2003 <i>YV</i> <sub>124</sub>		1 20.1 145°83	11°0/13.3	18	
12 13	8 37.68	+25 40.8	1.948	2.732	14.8	21.5	12 13	8 44.15	+32 36.2	1.226	2.037	20.4	20.4
12 23	8 32.69	+26 20.6	1.853	2.724	11.7	21.2	12 23	8 40.32	+36 3.8	1.165	2.043	16.5	20.2
1 2	8 24.80	+27 4.9	1.781	2.715	8.0	21.0	1 2	8 31.56	+39 40.4	1.127	2.049	12.9	20.0
1 12	8 14.62	+27 48.0	1.736	2.706	4.2	20.7	1 12	8 18.35	+43 3.6	1.115	2.054	11.0	19.9
1 22	8 3.16	+28 23.8	1.719	2.696	3.2	20.6	1 22	8 2.25	+45 50.6	1.129	2.059	12.1	20.0
2 1	7 51.75	+28 47.6	1.733	2.685	6.7	20.8	2 1	7 45.91	+47 46.4	1.169	2.064	15.3	20.2
2 11	7 41.76	+28 57.4	1.774	2.674	10.6	21.1	2 11	7 32.25	+48 49.6	1.231	2.068	18.9	20.4
2 21	7 34.21	+28 54.1	1.839	2.662	14.2	21.3	2 21	7 23.29	+49 9.3	1.310	2.071	22.1	20.6
<b>113157</b>	2002 <i>RU</i> <sub>97</sub>		1 20.1 2°04	5°3/17.7	18		<b>406862</b>	2009 <i>BR</i> <sub>115</sub>		1 20.1 301°25	1°5/19.5	17	
12 13	8 34.99	+33 53.4	1.998	2.790	14.2	19.6	12 13	8 33.15	+21 28.8	1.495	2.300	17.6	21.8
12 23	8 30.53	+34 34.2	1.919	2.790	11.4	19.4	12 23	8 29.92	+21 57.3	1.404	2.287	13.9	21.5
1 2	8 23.24	+35 12.1	1.864	2.789	8.3	19.3	1 2	8 23.38	+22 35.5	1.333	2.274	9.4	21.2
1 12	8 13.82	+35 40.5	1.834	2.790	5.8	19.1	1 12	8 14.13	+23 18.5	1.286	2.261	4.4	20.9
1 22	8 3.37	+35 53.8	1.831	2.790	5.6	19.1	1 22	8 3.31	+23 59.9	1.266	2.248	2.1	20.7
2 1	7 53.21	+35 48.7	1.857	2.791	7.9	19.2	2 1	7 52.49	+24 33.4	1.273	2.236	7.1	21.0
2 11	7 44.62	+35 25.6	1.910	2.792	11.0	19.4	2 11	7 43.32	+24 55.5	1.305	2.224	12.2	21.2
2 21	7 38.50	+34 47.7	1.985	2.794	13.9	19.6	2 21	7 37.03	+25 5.1	1.360	2.212	16.6	21.5
<b>298873</b>	2004 <i>SE</i> <sub>10</sub>		1 20.1 141°12	2°3/18.9	18		<b>280782</b>	2005 <i>SA</i> <sub>130</sub>		1 20.1 99°02	1°0/20.5	18	
12 13	8 38.11	+23 15.7	1.867	2.650	15.4	21.6	12 13	8 39.06	+16 29.8	1.557	2.338	18.1	21.5
12 23	8 32.86	+24 5.8	1.791	2.661	12.0	21.4	12 23	8 33.75	+16 37.3	1.492	2.360	14.2	21.3
1 2	8 24.76	+25 2.3	1.737	2.673	8.1	21.2	1 2	8 25.38	+16 56.3	1.448	2.381	9.6	21.1
1 12	8 14.52	+25 59.2	1.711	2.683	4.0	21.0	1 12	8 14.79	+17 23.2	1.430	2.402	4.6	20.9
1 22	8 3.21	+26 50.1	1.714	2.693	2.7	20.9	1 22	8 3.21	+17 53.6	1.439	2.422	1.3	20.7
2 1	7 52.14	+27 29.8	1.747	2.702	6.4	21.2	2 1	7 52.13	+18 22.9	1.477	2.442	6.0	21.1
2 11	7 42.64	+27 55.9	1.807	2.710	10.3	21.4	2 11	7 42.91	+18 48.0	1.542	2.461	10.6	21.4
2 21	7 35.61	+28 8.8	1.892	2.718	13.8	21.6	2 21	7 36.43	+19 7.0	1.630	2.479	14.5	21.6
<b>491298</b>	2011 <i>WV</i> <sub>13</sub>		1 20.1 131°81	0°6/19.8	18		<b>28764</b>	2000 <i>HS</i> <sub>13</sub>		1 20.1 169°79	2°6/21.7	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>313200</b>	2001 <i>QH</i> <sub>217</sub>		1 20.1 163°62	3°8/22.5	18		<b>520992</b>	2015 <i>BM</i> <sub>3</sub>		1 20.1 87°73	5°7/16.7	18	
12 13	8 31.92	+ 6 1.0	2.318	3.049	14.2	21.8	12 13	8 39.16	+17 36.0	0.999	1.817	23.4	20.7
12 23	8 27.39	+ 6 10.3	2.226	3.055	11.7	21.6	12 23	8 36.25	+20 56.1	0.936	1.827	18.3	20.4
1 2	8 20.79	+ 6 34.9	2.156	3.060	8.7	21.4	1 2	8 28.65	+24 50.8	0.893	1.837	12.2	20.1
1 12	8 12.65	+ 7 14.4	2.113	3.064	5.6	21.2	1 12	8 16.93	+28 59.6	0.875	1.847	6.7	19.8
1 22	8 3.70	+ 8 6.6	2.098	3.068	3.8	21.1	1 22	8 2.67	+32 54.2	0.886	1.857	7.0	19.9
2 1	7 54.84	+ 9 7.8	2.115	3.071	5.3	21.2	2 1	7 48.35	+36 8.9	0.923	1.867	12.3	20.2
2 11	7 46.97	+10 13.6	2.160	3.073	8.3	21.4	2 11	7 36.67	+38 32.0	0.984	1.877	17.8	20.6
2 21	7 40.82	+11 19.4	2.232	3.075	11.3	21.6	2 21	7 29.45	+40 5.7	1.064	1.886	22.4	20.9
<b>327408</b>	2005 <i>VY</i> <sub>42</sub>		1 20.1 21°08	3°2/18.4	18		<b>414477</b>	2009 <i>PH</i> <sub>2</sub>		1 20.1 57°02	1°1/19.8	18	
12 13	8 28.75	+21 32.0	1.328	2.149	18.5	19.3	12 13	8 39.76	+24 28.0	1.678	2.467	16.6	19.9
12 23	8 26.56	+23 1.3	1.267	2.159	14.4	19.1	12 23	8 34.08	+24 10.3	1.614	2.487	13.0	19.7
1 2	8 21.05	+24 43.6	1.227	2.171	9.6	18.9	1 2	8 25.45	+23 54.2	1.571	2.507	8.7	19.5
1 12	8 12.99	+26 29.5	1.211	2.184	4.8	18.6	1 12	8 14.77	+23 36.4	1.554	2.528	4.0	19.2
1 22	8 3.62	+28 8.2	1.221	2.199	3.8	18.6	1 22	8 3.29	+23 14.0	1.566	2.549	1.6	19.1
2 1	7 54.57	+29 30.0	1.257	2.214	8.1	18.9	2 1	7 52.44	+22 45.9	1.607	2.570	5.9	19.4
2 11	7 47.41	+30 30.0	1.319	2.231	12.6	19.2	2 11	7 43.48	+22 12.6	1.676	2.591	10.2	19.7
2 21	7 43.18	+31 7.7	1.401	2.248	16.5	19.5	2 21	7 37.20	+21 36.0	1.769	2.612	13.8	20.0
<b>178867</b>	2001 <i>LA</i> <sub>7</sub>		1 20.1 115°53	3°7/21.9	18		<b>88027</b>	2000 <i>UD</i> <sub>81</sub>		1 20.1 103°54	2°7/21.4	18	
12 13	8 35.46	+ 9 13.2	2.233	2.972	14.5	19.7	12 13	8 33.14	+12 15.8	2.101	2.860	14.7	19.9
12 23	8 30.00	+ 8 48.2	2.157	2.993	11.7	19.6	12 23	8 28.46	+12 2.2	2.021	2.872	11.7	19.7
1 2	8 22.42	+ 8 34.8	2.104	3.013	8.5	19.4	1 2	8 21.54	+11 59.2	1.964	2.885	8.3	19.5
1 12	8 13.33	+ 8 32.8	2.077	3.032	5.4	19.2	1 12	8 13.00	+12 6.1	1.933	2.897	4.7	19.3
1 22	8 3.57	+ 8 41.3	2.080	3.051	3.7	19.2	1 22	8 3.69	+12 20.9	1.932	2.909	2.7	19.2
2 1	7 54.09	+ 8 58.1	2.113	3.069	5.4	19.3	2 1	7 54.62	+12 41.2	1.960	2.921	5.1	19.4
2 11	7 45.81	+ 9 20.3	2.176	3.086	8.4	19.5	2 11	7 46.77	+13 4.1	2.016	2.933	8.6	19.6
2 21	7 39.39	+ 9 45.3	2.264	3.103	11.3	19.7	2 21	7 40.85	+13 27.0	2.098	2.944	11.8	19.9
<b>246747</b>	2009 <i>BJ</i> <sub>115</sub>		1 20.1 278°89	0°5/19.7	16		<b>330887</b>	2009 <i>RZ</i> <sub>50</sub>		1 20.1 244°95	7°8/15.9	18	
12 13	8 31.21	+17 18.4	2.621	3.385	12.0	21.4	12 13	8 39.59	+40 15.7	2.075	2.853	14.2	20.5
12 23	8 27.03	+18 22.5	2.496	3.356	9.4	21.1	12 23	8 34.50	+41 25.9	1.994	2.846	11.8	20.3
1 2	8 20.76	+19 38.2	2.395	3.327	6.4	20.9	1 2	8 26.18	+42 30.2	1.935	2.839	9.5	20.1
1 12	8 12.76	+21 2.2	2.324	3.297	2.9	20.6	1 12	8 15.33	+43 19.9	1.902	2.832	7.9	20.0
1 22	8 3.67	+22 29.4	2.284	3.267	1.0	20.4	1 22	8 3.14	+43 47.5	1.897	2.824	8.1	20.0
2 1	7 54.31	+23 54.5	2.276	3.236	4.7	20.6	2 1	7 51.14	+43 48.9	1.918	2.816	10.0	20.1
2 11	7 45.64	+25 12.6	2.299	3.205	8.3	20.8	2 11	7 40.87	+43 24.8	1.964	2.809	12.5	20.3
2 21	7 38.49	+26 20.6	2.350	3.173	11.5	21.0	2 21	7 33.42	+42 39.8	2.033	2.801	15.0	20.4
<b>27926</b>	1997 <i>EM</i> <sub>15</sub>		1 20.1 221°98	3°6/18.7	18		<b>418994</b>	2009 <i>NG</i>		1 20.1 79°76	2°9/21.2	18	
12 13	8 39.70	+27 23.8	1.757	2.546	16.0	19.9	12 13	8 39.47	+13 21.6	2.088	2.838	15.1	20.5
12 23	8 34.64	+28 2.0	1.666	2.538	12.7	19.7	12 23	8 33.05	+12 41.3	2.025	2.871	12.0	20.3
1 2	8 26.33	+28 43.5	1.596	2.530	8.8	19.4	1 2	8 24.38	+12 9.7	1.986	2.904	8.4	20.2
1 12	8 15.41	+29 21.6	1.552	2.521	4.9	19.2	1 12	8 14.20	+11 46.5	1.974	2.936	4.8	20.0
1 22	8 3.06	+29 49.4	1.536	2.511	4.0	19.1	1 22	8 3.46	+11 30.9	1.991	2.968	2.9	20.0
2 1	7 50.81	+30 2.1	1.550	2.501	7.5	19.3	2 1	7 53.22	+11 21.8	2.040	2.999	5.2	20.2
2 11	7 40.22	+29 58.3	1.590	2.490	11.7	19.5	2 11	7 44.44	+11 17.3	2.118	3.030	8.6	20.4
2 21	7 32.43	+29 40.0	1.653	2.478	15.5	19.7	2 21	7 37.75	+11 15.9	2.222	3.060	11.6	20.7
<b>380703</b>	2005 <i>JS</i> <sub>141</sub>		1 20.1 264°74	3°4/17.9	17		<b>61474</b>	2000 <i>QA</i> <sub>36</sub>		1 20.1 17°95	4°9/22.9	18	
12 13	8 31.85	+28 20.7	2.426	3.211	12.2	20.9	12 13	8 27.94	+ 5 10.3	1.554	2.321	18.7	18.3
12 23	8 27.68	+29 15.4	2.328	3.199	9.6	20.7	12 23	8 25.29	+ 5 24.9	1.476	2.326	15.4	18.1
1 2	8 21.20	+30 12.8	2.255	3.187	6.7	20.5	1 2	8 19.90	+ 6 3.2	1.417	2.331	11.5	17.9
1 12	8 12.93	+31 7.6	2.209	3.174	4.1	20.3	1 12	8 12.41	+ 7 4.8	1.381	2.336	7.4	17.7
1 22	8 3.65	+31 54.7	2.193	3.162	3.8	20.3	1 22	8 3.83	+ 8 26.0	1.371	2.343	4.9	17.5
2 1	7 54.36	+32 29.6	2.207	3.149	6.3	20.4	2 1	7 55.40	+10 0.1	1.388	2.350	6.7	17.7
2 11	7 46.11	+32 50.5	2.248	3.136	9.3	20.6	2 11	7 48.40	+11 38.6	1.432	2.358	10.6	17.9
2 21	7 39.73	+32 57.6	2.315	3.123	12.2	20.7	2 21	7 43.74	+13 13.7	1.499	2.366	14.5	18.2
<b>242334</b>	2003 <i>YP</i> <sub>73</sub>		1 20.1 34°40	1°2/20.5	18		<b>127640</b>	2003 <i>CQ</i> <sub>8</sub>		1 20.1 322°73	0°2/20.3	17	
12 13	8 32.85	+17 50.0	1.882	2.665	15.3	19.8	12 13	8 28.35	+15 19.6	2.219	2.994	13.5	19.8
12 23	8 28.53	+17 29.9	1.805	2.674	12.1	19.6	12 23	8 24.96	+16 13.1	2.122	2.987	10.7	19.6
1 2	8 21.72	+17 16.6	1.750	2.683	8.2	19.4	1 2	8 19.38	+17 19.3	2.048	2.980	7.2	19.4
1 12	8 13.10	+17 8.6	1.721	2.693	4.0	19.2	1 12	8 12.12	+18 34.9	2.001	2.974	3.4	19.1
1 22	8 3.64	+17 4.0	1.720	2.703	1.3	19.0	1 22	8 3.90	+19 54.7	1.984	2.967	0.7	18.9
2 1	7 54.50	+17 0.7	1.749	2.714	5.2	19.3	2 1	7 55.66	+21 13.4	1.997	2.961	4.8	19.2
2 11	7 46.75	+16 57.2	1.805	2.725	9.2	19.6	2 11	7 48.39	+22 25.7	2.040	2.956	8.6	19.4
2 21	7 41.18	+16 52.3	1.885	2.736	12.7	19.8	2 21	7 42.88	+23 28.6	2.108	2.950	11.9	19.6
<b>300007</b>	2006 <i>UU</i> <sub>47</sub>		1 20.1 245°88	1°8/21.1	17		<b>282610</b>	2005 <i>JV</i> <sub>20</sub>		1 20.1 298°94	4°3/22.7	18	
12 13	8 30.79	+14 5.7	2.681	3.435	12.0	21.0	12 13	8 27.89	+ 5 38.5	2.214	2.956	14.5	20.6
12 23	8 26.35	+13 54.9	2.573	3.423	9.6	20.9	12 23	8 24.50	+ 5 39.5	2.112	2.946	12.0	20.4
1 2	8 20.04	+13 51.3	2.488	3.410	6.7	20.6	1 2	8 19.02	+ 5 56.4	2.032	2.937	9.0	20.2
1 12	8 12.31	+13 54.2	2.431	3.397	3.6	20.4	1 12	8 11.93	+ 6 29.5	1.977	2.927	6.0	20.0
1 22	8 3.82	+14 2.2	2.404	3.384	1.8	20.3	1 22	8 3.95	+ 7 17.4	1.950	2.918	4.3	19.9
2 1	7 55.34	+14 13.5	2.408	3.371	4.3	20.4	2 1	7 55.95	+ 8 16.7	1.952	2.908	5.7	19.9
2 11	7 47.69	+14 26.2	2.442	3.357	7.4	20.6	2 11	7 48.89	+ 9 22.7	1.982	2.899	8.7	20.1
2 21	7 41.54	+14 38.8	2.503	3.343	10.3	20.8	2 21	7 43.51	+10 30.5	2.038	2.890	11.9	20.3
<b>300452</b>	2007 <i>TY</i> <sub>70</sub>		1 20.1 59°97	3°5/18.7	18		<b>506371</b>	2017 <i>QA</i> <sub>25</sub>		1 20.1 220°83	1°5/19.4	17	
12 13	8 36.24	+25 25.9	1.453										

EPHEMERIDES

1 20.1

1 20.1

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>5449</b>	1992 <i>US</i> <sub>5</sub>		1 20.1 70°00	2°3/19.2	18 R		<b>69774</b>	1998 <i>QN</i> <sub>41</sub>		1 20.1 334°95	0°5/19.9	18	
12 13	8 35.07	+26 35.5	2.128	2.912	13.7	17.3	12 13	8 32.12	+20 24.7	2.045	2.829	14.2	18.9
12 23	8 30.10	+26 48.3	2.052	2.923	10.7	17.2	12 23	8 28.00	+20 39.6	1.956	2.828	11.1	18.7
1 2	8 22.69	+27 2.0	2.000	2.934	7.2	17.0	1 2	8 21.45	+21 0.9	1.891	2.827	7.5	18.5
1 12	8 13.54	+27 12.6	1.974	2.945	3.7	16.8	1 12	8 13.07	+21 25.6	1.852	2.826	3.4	18.2
1 22	8 3.60	+27 16.4	1.978	2.957	2.6	16.7	1 22	8 3.75	+21 49.8	1.842	2.825	1.0	18.0
2 1	7 54.00	+27 11.3	2.012	2.968	5.6	16.9	2 1	7 54.57	+22 10.2	1.861	2.824	5.2	18.3
2 11	7 45.79	+26 56.8	2.074	2.979	9.1	17.2	2 11	7 46.62	+22 24.5	1.908	2.823	9.1	18.6
2 21	7 39.72	+26 34.1	2.161	2.990	12.2	17.4	2 21	7 40.74	+22 31.9	1.980	2.823	12.6	18.8
<b>502513</b>	2015 <i>BR</i> <sub>424</sub>		1 20.1 226°03	0°1/20.0	17		<b>375373</b>	2008 <i>SN</i> <sub>140</sub>		1 20.1 136°64	0°6/19.9	18	
12 13	8 30.94	+19 31.7	2.507	3.279	12.2	22.1	12 13	8 35.16	+22 13.1	2.253	3.028	13.3	20.8
12 23	8 26.63	+19 45.4	2.410	3.275	9.6	21.9	12 23	8 30.03	+22 10.0	2.167	3.033	10.4	20.7
1 2	8 20.30	+20 4.9	2.337	3.270	6.4	21.7	1 2	8 22.61	+22 10.1	2.104	3.038	7.0	20.4
1 12	8 12.46	+20 27.8	2.292	3.265	3.0	21.5	1 12	8 13.53	+22 10.8	2.069	3.042	3.2	20.2
1 22	8 3.84	+20 51.0	2.276	3.260	0.7	21.3	1 22	8 3.66	+22 9.4	2.064	3.047	1.0	20.0
2 1	7 55.29	+21 12.0	2.291	3.254	4.4	21.5	2 1	7 54.02	+22 4.0	2.089	3.051	4.8	20.3
2 11	7 47.70	+21 28.6	2.336	3.249	7.8	21.8	2 11	7 45.62	+21 53.7	2.143	3.055	8.5	20.6
2 21	7 41.76	+21 39.7	2.406	3.243	10.8	21.9	2 21	7 39.19	+21 38.7	2.223	3.058	11.6	20.8
<b>358601</b>	2007 <i>UL</i> <sub>137</sub>		1 20.1 170°76	0°8/20.5	18		<b>455564</b>	2004 <i>QK</i> <sub>22</sub>		1 20.1 102°58	0°9/20.3	18	
12 13	8 36.14	+17 13.3	1.971	2.742	15.1	21.6	12 13	8 47.56	+20 53.8	1.735	2.500	17.1	20.5
12 23	8 31.13	+17 16.0	1.883	2.745	11.9	21.4	12 23	8 39.93	+20 4.8	1.663	2.522	13.4	20.3
1 2	8 23.54	+17 27.1	1.817	2.748	8.1	21.2	1 2	8 29.28	+19 18.1	1.614	2.544	9.1	20.1
1 12	8 14.01	+17 44.2	1.778	2.750	3.9	20.9	1 12	8 16.53	+18 32.4	1.593	2.565	4.3	19.8
1 22	8 3.48	+18 4.2	1.768	2.752	1.1	20.7	1 22	8 3.00	+17 46.8	1.602	2.585	1.2	19.7
2 1	7 53.13	+18 23.8	1.789	2.753	5.2	21.0	2 1	7 50.16	+17 1.6	1.642	2.605	5.8	20.0
2 11	7 44.12	+18 40.4	1.837	2.753	9.3	21.2	2 11	7 39.33	+16 17.8	1.712	2.625	10.2	20.3
2 21	7 37.30	+18 52.7	1.911	2.753	13.0	21.5	2 21	7 31.31	+15 36.5	1.807	2.643	13.9	20.6
<b>104124</b>	2000 <i>EU</i> <sub>57</sub>		1 20.1 326°31	2°2/20.9	18		<b>335627</b>	2006 <i>HW</i> <sub>62</sub>		1 20.1 248°81	0°8/19.7	18	
12 13	8 30.00	+14 45.8	1.476	2.274	18.1	19.9	12 13	8 31.39	+20 47.3	2.241	3.022	13.2	21.6
12 23	8 27.33	+14 37.3	1.384	2.260	14.5	19.6	12 23	8 27.29	+21 14.4	2.147	3.017	10.4	21.4
1 2	8 21.57	+14 41.9	1.312	2.247	10.2	19.3	1 2	8 20.92	+21 48.1	2.077	3.012	7.0	21.2
1 12	8 13.31	+14 58.6	1.263	2.234	5.3	19.0	1 12	8 12.83	+22 24.8	2.033	3.007	3.2	20.9
1 22	8 3.62	+15 24.4	1.240	2.222	2.2	18.8	1 22	8 3.82	+23 0.7	2.019	3.002	1.3	20.8
2 1	7 53.93	+15 55.1	1.243	2.210	6.5	19.0	2 1	7 54.87	+23 31.9	2.035	2.997	5.0	21.0
2 11	7 45.77	+16 26.2	1.272	2.200	11.5	19.2	2 11	7 47.02	+23 56.0	2.080	2.992	8.7	21.3
2 21	7 40.26	+16 54.3	1.323	2.190	16.1	19.5	2 21	7 41.03	+24 12.0	2.150	2.986	11.9	21.5
<b>110460</b>	2001 <i>TZ</i> <sub>46</sub>		1 20.1 63°19	3°4/18.7	17		<b>162462</b>	2000 <i>HV</i> <sub>103</sub>		1 20.1 146°74	2°5/21.8	18	
12 13	8 39.86	+26 34.7	1.661	2.453	16.7	19.8	12 13	8 29.30	+9 59.6	2.450	3.200	13.1	20.1
12 23	8 34.20	+27 25.2	1.615	2.490	12.9	19.7	12 23	8 25.31	+10 13.5	2.359	3.203	10.5	20.0
1 2	8 25.54	+28 17.8	1.592	2.527	8.7	19.5	1 2	8 19.40	+10 39.7	2.290	3.207	7.5	19.8
1 12	8 14.82	+29 5.2	1.595	2.564	4.7	19.4	1 12	8 12.07	+11 16.9	2.248	3.210	4.4	19.6
1 22	8 3.35	+29 41.1	1.626	2.600	3.8	19.4	1 22	8 4.01	+12 2.6	2.236	3.213	2.5	19.5
2 1	7 52.57	+30 1.6	1.685	2.636	7.0	19.7	2 1	7 56.03	+12 53.6	2.254	3.216	4.5	19.6
2 11	7 43.76	+30 6.6	1.772	2.672	10.7	20.0	2 11	7 48.97	+13 46.1	2.301	3.219	7.7	19.8
2 21	7 37.70	+29 58.3	1.882	2.707	13.9	20.2	2 21	7 43.48	+14 36.9	2.375	3.221	10.6	20.0
<b>372545</b>	2009 <i>TV</i> <sub>25</sub>		1 20.1 300°75	2°2/19.3	18		<b>454334</b>	2014 <i>KU</i> <sub>87</sub>		1 20.1 124°66	4°6/22.4	18	
12 13	8 35.82	+26 2.2	1.957	2.745	14.6	20.6	12 13	8 35.46	+7 2.9	1.813	2.560	17.1	22.0
12 23	8 31.04	+26 12.1	1.870	2.743	11.5	20.4	12 23	8 30.62	+6 48.9	1.736	2.574	14.0	21.8
1 2	8 23.55	+26 23.8	1.806	2.742	7.8	20.1	1 2	8 23.20	+6 51.8	1.680	2.588	10.4	21.7
1 12	8 14.03	+26 32.8	1.768	2.740	3.9	19.9	1 12	8 13.86	+7 11.5	1.648	2.602	6.7	21.5
1 22	8 3.49	+26 35.1	1.759	2.739	2.5	19.8	1 22	8 3.60	+7 46.2	1.645	2.614	4.6	21.4
2 1	7 53.18	+26 28.1	1.779	2.737	6.0	20.0	2 1	7 53.59	+8 32.0	1.670	2.627	6.4	21.5
2 11	7 44.34	+26 11.2	1.827	2.735	9.9	20.2	2 11	7 44.98	+9 24.1	1.723	2.638	9.9	21.7
2 21	7 37.85	+25 45.7	1.900	2.734	13.4	20.5	2 21	7 38.62	+10 17.6	1.801	2.649	13.3	22.0
<b>123885</b>	2001 <i>DM</i> <sub>42</sub>		1 20.1 183°20	0°2/20.0	18		<b>283025</b>	2007 <i>VN</i> <sub>269</sub>		1 20.1 96°48	5°2/23.2	18	
12 13	8 32.27	+19 43.1	2.147	2.926	13.8	20.1	12 13	8 30.70	+2 54.3	2.609	3.321	13.3	21.1
12 23	8 27.97	+19 57.4	2.058	2.926	10.8	19.9	12 23	8 26.09	+2 18.7	2.532	3.340	11.1	20.9
1 2	8 21.35	+20 18.3	1.992	2.926	7.3	19.7	1 2	8 19.73	+1 56.4	2.476	3.358	8.6	20.8
1 12	8 12.99	+20 42.8	1.953	2.926	3.3	19.4	1 12	8 12.15	+1 48.3	2.446	3.376	6.4	20.7
1 22	8 3.73	+21 7.6	1.943	2.926	0.9	19.2	1 22	8 4.01	+1 54.2	2.445	3.394	5.2	20.6
2 1	7 54.61	+21 29.3	1.963	2.926	4.9	19.5	2 1	7 56.05	+2 12.8	2.473	3.412	5.9	20.7
2 11	7 46.66	+21 45.7	2.011	2.926	8.7	19.7	2 11	7 49.02	+2 41.2	2.530	3.429	7.9	20.9
2 21	7 40.67	+21 55.8	2.084	2.925	12.1	20.0	2 21	7 43.48	+3 15.9	2.614	3.446	10.2	21.0
<b>16199</b>	Rozenblyum		1 20.1 32°41	0°6/19.8	18 R		<b>118285</b>	1998 <i>RF</i> <sub>65</sub>		1 20.1 62°12	4°0/21.7	18	
12 13	8 31.02	+20 1.3	1.971	2.758	14.6	18.8	12 13	8 34.04	+10 17.7	1.342	2.127	20.2	19.7
12 23	8 27.20	+20 27.9	1.889	2.762	11.4	18.6	12 23	8 30.38	+10 7.2	1.275	2.140	16.3	19.5
1 2	8 20.93	+21 2.1	1.829	2.766	7.6	18.4	1 2	8 23.46	+10 15.8	1.226	2.152	11.7	19.2
1 12	8 12.81	+21 40.4	1.796	2.770	3.5	18.1	1 12	8 14.10	+10 42.6	1.201	2.165	6.9	19.0
1 22	8 3.77	+22 18.2	1.792	2.775	1.2	18.0	1 22	8 3.55	+11 24.3	1.200	2.178	4.0	18.9
2 1	7 54.90	+22 51.5	1.816	2.779	5.3	18.3	2 1	7 53.37	+12 15.3	1.226	2.191	7.0	19.1
2 11	7 47.31	+23 17.4	1.869	2.784	9.3	18.5	2 11	7 45.05	+13 9.2	1.278	2.204	11.6	19.4
2 21	7 41.81	+23 34.8	1.946	2.789	12.7	18.7	2 21	7 39.60	+14 0.7	1.352	2.217	15.9	19.6
<b>142262</b>	2002 <i>RW</i> <sub>107</sub>		1 20.1 111°32	0°9/19.7	18		<b>261160</b>	2005 <i>TV</i> <sub>99</sub>		1 20.1 43°60	2°4/19.2	18	
12 13	8 37.10	+21 16.9	2.061	2.836</									

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1 20.1

1 20.2

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>61581</b>	2000 QR <sub>82</sub>		1 20.1 179°23	1.2°/20.7	18		<b>135265</b>	2001 SZ <sub>73</sub>		1 20.2 132°28	0°5/20.4	18	
12 13	8 35.08	+15 6.0	1.831	2.604	16.1	20.5	12 13	8 32.08	+18 18.6	2.575	3.340	12.1	20.1
12 23	8 30.56	+15 21.4	1.742	2.605	12.7	20.2	12 23	8 27.34	+18 15.3	2.487	3.347	9.5	19.9
1 2	8 23.33	+15 48.9	1.676	2.606	8.8	20.0	1 2	8 20.68	+18 17.3	2.423	3.353	6.4	19.7
1 12	8 14.01	+16 25.8	1.635	2.606	4.3	19.7	1 12	8 12.65	+18 22.8	2.387	3.359	3.0	19.5
1 22	8 3.56	+17 8.2	1.623	2.606	1.4	19.5	1 22	8 3.96	+18 29.8	2.382	3.365	0.8	19.4
2 1	7 53.24	+17 51.4	1.641	2.605	5.5	19.8	2 1	7 55.44	+18 36.4	2.407	3.371	4.1	19.6
2 11	7 44.28	+18 31.4	1.686	2.604	9.9	20.1	2 11	7 47.91	+18 41.0	2.462	3.376	7.4	19.8
2 21	7 37.62	+19 5.5	1.756	2.603	13.7	20.3	2 21	7 42.00	+18 42.9	2.543	3.382	10.3	20.0
<b>12085</b>	1998 HV <sub>19</sub>		1 20.1 45°06	3°4/19.1	18		<b>117011</b>	2004 JZ <sub>2</sub>		1 20.2 199°19	0°6/19.7	18	
12 13	8 37.72	+25 24.4	1.249	2.064	19.8	18.6	12 13	8 30.21	+21 5.1	2.879	3.649	10.9	21.1
12 23	8 33.94	+25 56.9	1.181	2.069	15.6	18.3	12 23	8 25.82	+21 26.3	2.783	3.646	8.5	20.9
1 2	8 26.24	+26 35.2	1.133	2.074	10.6	18.0	1 2	8 19.67	+21 51.9	2.711	3.644	5.7	20.7
1 12	8 15.50	+27 11.6	1.107	2.080	5.4	17.8	1 12	8 12.20	+22 19.3	2.667	3.641	2.6	20.5
1 22	8 3.24	+27 38.0	1.107	2.086	3.8	17.7	1 22	8 4.06	+22 45.8	2.655	3.637	1.0	20.4
2 1	7 51.43	+27 49.0	1.132	2.092	8.4	18.0	2 1	7 55.99	+23 8.8	2.673	3.634	4.0	20.6
2 11	7 41.95	+27 43.2	1.182	2.098	13.4	18.2	2 11	7 48.75	+23 26.5	2.721	3.630	7.0	20.8
2 21	7 35.97	+27 23.2	1.253	2.104	17.8	18.5	2 21	7 42.95	+23 38.2	2.796	3.626	9.7	21.0
<b>335694</b>	2006 WC <sub>193</sub>		1 20.1 72°39	3°5/21.3	17		<b>284174</b>	2006 AL		1 20.2 332°99	0°7/20.6	18	
12 13	8 36.63	+12 40.0	1.291	2.082	20.6	21.6	12 13	8 28.93	+13 50.2	1.746	2.531	16.2	20.1
12 23	8 32.52	+12 17.7	1.225	2.094	16.5	21.3	12 23	8 26.04	+14 41.8	1.654	2.524	12.9	19.9
1 2	8 24.95	+12 11.5	1.178	2.107	11.7	21.1	1 2	8 20.48	+15 50.7	1.583	2.517	8.8	19.6
1 12	8 14.80	+12 20.5	1.153	2.120	6.5	20.8	1 12	8 12.80	+17 13.3	1.537	2.510	4.3	19.3
1 22	8 3.42	+12 41.9	1.154	2.134	3.5	20.7	1 22	8 3.90	+18 43.5	1.520	2.504	1.0	19.1
2 1	7 52.49	+13 11.1	1.182	2.147	7.1	20.9	2 1	7 54.97	+20 13.9	1.532	2.498	5.7	19.4
2 11	7 43.60	+13 43.2	1.234	2.160	12.0	21.3	2 11	7 47.29	+21 37.4	1.571	2.492	10.2	19.6
2 21	7 37.76	+14 14.1	1.309	2.173	16.4	21.5	2 21	7 41.85	+22 49.5	1.634	2.487	14.2	19.9
<b>449133</b>	2013 AG <sub>36</sub>		1 20.1 356°27	3°4/18.7	17		<b>448258</b>	2008 YV		1 20.2 11°92	0°8/19.9	18	
12 13	8 32.81	+23 37.5	1.294	2.113	19.0	21.2	12 13	8 25.35	+18 33.4	0.936	1.782	22.5	20.6
12 23	8 30.11	+24 36.8	1.220	2.111	15.0	20.9	12 23	8 24.91	+19 5.1	0.881	1.787	17.6	20.3
1 2	8 23.74	+25 46.6	1.166	2.109	10.2	20.6	1 2	8 20.48	+19 53.9	0.843	1.793	11.9	20.0
1 12	8 14.42	+26 58.9	1.135	2.108	5.2	20.3	1 12	8 12.95	+20 53.5	0.826	1.802	5.4	19.7
1 22	8 3.48	+28 3.8	1.129	2.108	3.9	20.2	1 22	8 3.89	+21 54.9	0.830	1.814	1.6	19.5
2 1	7 52.74	+28 53.2	1.150	2.108	8.5	20.5	2 1	7 55.33	+22 48.7	0.858	1.827	8.0	19.9
2 11	7 44.01	+29 23.0	1.194	2.108	13.4	20.8	2 11	7 49.15	+23 28.7	0.906	1.842	13.9	20.3
2 21	7 38.54	+29 33.6	1.259	2.110	17.8	21.0	2 21	7 46.51	+23 52.9	0.974	1.859	18.8	20.7
<b>273051</b>	2006 DV <sub>158</sub>		1 20.1 166°02	0°1/20.2	18		<b>98526</b>	2000 VG <sub>31</sub>		1 20.2 18°28	1°5/20.7	18	
12 13	8 31.58	+17 59.9	2.241	3.015	13.4	20.7	12 13	8 30.55	+16 5.4	1.176	1.992	20.7	18.9
12 23	8 27.35	+18 20.6	2.151	3.016	10.5	20.5	12 23	8 28.19	+16 2.6	1.111	1.998	16.4	18.6
1 2	8 20.91	+18 49.3	2.085	3.018	7.1	20.3	1 2	8 22.29	+16 14.7	1.065	2.005	11.3	18.3
1 12	8 12.82	+19 23.2	2.046	3.019	3.3	20.1	1 12	8 13.68	+16 39.0	1.040	2.014	5.5	18.1
1 22	8 3.88	+19 58.7	2.036	3.020	0.7	19.9	1 22	8 3.73	+17 10.7	1.040	2.023	1.7	17.8
2 1	7 55.05	+20 32.4	2.057	3.021	4.7	20.2	2 1	7 54.19	+17 44.2	1.065	2.034	7.0	18.2
2 11	7 47.31	+21 1.4	2.106	3.022	8.4	20.4	2 11	7 46.71	+18 14.4	1.114	2.046	12.3	18.5
2 21	7 41.41	+21 24.1	2.181	3.022	11.6	20.6	2 21	7 42.36	+18 38.2	1.183	2.058	17.0	18.8
<b>213638</b>	2002 RU <sub>22</sub>		1 20.1 107°51	0°8/20.5	18		<b>40287</b>	1999 JS <sub>61</sub>		1 20.2 151°77	0°2/20.2	18	
12 13	8 34.91	+16 8.0	1.885	2.659	15.6	21.1	12 13	8 37.01	+18 2.0	1.399	2.195	19.0	19.1
12 23	8 30.18	+16 27.1	1.811	2.675	12.3	20.9	12 23	8 32.92	+18 15.4	1.321	2.197	15.0	18.8
1 2	8 22.89	+16 56.8	1.759	2.690	8.3	20.7	1 2	8 25.37	+18 40.9	1.262	2.200	10.2	18.6
1 12	8 13.74	+17 33.9	1.733	2.705	4.0	20.4	1 12	8 15.10	+19 14.6	1.228	2.202	4.8	18.3
1 22	8 3.69	+18 14.3	1.736	2.719	1.0	20.2	1 22	8 3.41	+19 50.9	1.220	2.203	1.1	18.0
2 1	7 53.91	+18 53.6	1.768	2.733	5.2	20.6	2 1	7 51.94	+20 24.3	1.239	2.205	6.7	18.4
2 11	7 45.55	+19 28.5	1.829	2.747	9.3	20.8	2 11	7 42.38	+20 50.6	1.284	2.206	12.0	18.7
2 21	7 39.41	+19 56.9	1.915	2.760	12.8	21.1	2 21	7 35.85	+21 8.3	1.352	2.208	16.5	19.0
<b>120835</b>	1998 HM <sub>153</sub>		1 20.1 255°51	1°5/19.3	18		<b>278679</b>	2008 RY <sub>105</sub>		1 20.2 99°83	4°8/22.8	18	
12 13	8 31.84	+20 58.5	2.081	2.866	14.0	19.7	12 13	8 30.10	+ 5 23.2	2.233	2.969	14.6	21.1
12 23	8 27.94	+21 49.2	1.986	2.858	11.0	19.5	12 23	8 26.07	+ 5 0.8	2.147	2.975	12.1	21.0
1 2	8 21.55	+22 48.6	1.913	2.850	7.4	19.2	1 2	8 19.99	+ 4 52.7	2.081	2.980	9.2	20.8
1 12	8 13.22	+23 52.3	1.868	2.842	3.5	19.0	1 12	8 12.40	+ 4 59.6	2.041	2.986	6.4	20.6
1 22	8 3.78	+24 54.6	1.852	2.833	1.9	18.8	1 22	8 4.04	+ 5 20.8	2.029	2.992	4.8	20.5
2 1	7 54.33	+25 50.0	1.866	2.825	5.7	19.1	2 1	7 55.81	+ 5 54.0	2.046	2.997	6.0	20.6
2 11	7 46.02	+26 34.8	1.908	2.816	9.5	19.3	2 11	7 48.61	+ 6 35.6	2.091	3.003	8.7	20.8
2 21	7 39.75	+27 7.5	1.975	2.808	13.0	19.5	2 21	7 43.12	+ 7 21.4	2.162	3.008	11.5	21.0
<b>440515</b>	2005 UT <sub>41</sub>		1 20.1 43°58	4°3/18.9	15		<b>459348</b>	2012 HF <sub>55</sub>		1 20.2 339°34	9°4/15.3	16	
12 13	8 38.55	+26 25.5	1.055	1.882	21.8	21.4	12 13	8 28.20	+34 9.5	1.244	2.077	18.8	20.3
12 23	8 34.74	+27 9.4	1.013	1.907	17.0	21.2	12 23	8 27.35	+35 57.0	1.165	2.058	15.4	20.0
1 2	8 26.68	+27 57.4	0.988	1.932	11.5	21.0	1 2	8 22.47	+37 48.1	1.106	2.039	11.9	19.8
1 12	8 15.58	+28 39.8	0.986	1.958	6.1	20.8	1 12	8 14.10	+39 29.5	1.070	2.022	9.6	19.6
1 22	8 3.31	+29 7.7	1.007	1.985	4.7	20.8	1 22	8 3.59	+40 47.1	1.056	2.006	10.1	19.6
2 1	7 52.03	+29 16.0	1.054	2.012	9.0	21.1	2 1	7 53.02	+41 30.4	1.066	1.992	13.2	19.7
2 11	7 43.57	+29 5.5	1.123	2.040	13.9	21.5	2 11	7 44.64	+41 36.9	1.097	1.980	17.1	19.9
2 21	7 38.86	+28 39.9	1.213	2.068	18.0	21.8	2 21	7 40.03	+41 10.9	1.145	1.970	20.9	20.1
<b>348812</b>	2006 QP <sub>183</sub>		1 20.2 102°19	4°5/18.1	18		<b>491159</b>	2011 SH <sub>219</sub>		1 20.2 185°43	1°6/19.5	18	
12 13	8 39.76	+30 19.4	1.936	2.721	14.9	21.8	12 13	8 37.81	+23 2.5	1			

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1 20.2

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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>411252</b>	2010 <i>RX</i> <sub>92</sub>		1 20.2	79°20	4°0/18.9	18	<b>16315</b>	2055 <i>T</i> <sub>-1</sub>		1 20.2	160°27	6°8/16.6	18
12 13	8 42.16	+30 27.1	1.713	2.502	16.4	21.4	12 13	8 43.66	+40 37.7	2.386	3.148	13.1	19.0
12 23	8 36.16	+30 43.8	1.650	2.521	12.9	21.3	12 23	8 37.07	+41 35.3	2.313	3.155	10.8	18.9
1 2	8 27.01	+30 58.4	1.609	2.540	8.9	21.1	1 2	8 27.59	+42 25.9	2.263	3.162	8.5	18.8
1 12	8 15.62	+31 4.5	1.593	2.559	5.2	20.9	1 12	8 15.96	+43 1.9	2.240	3.168	7.0	18.7
1 22	8 3.35	+30 57.3	1.606	2.578	4.3	20.9	1 22	8 3.31	+43 17.5	2.246	3.173	7.1	18.7
2 1	7 51.72	+30 34.7	1.648	2.597	7.3	21.1	2 1	7 51.02	+43 10.1	2.281	3.178	8.7	18.8
2 11	7 42.13	+29 58.4	1.716	2.616	11.0	21.3	2 11	7 40.40	+42 41.1	2.342	3.182	10.9	18.9
2 21	7 35.40	+29 11.9	1.809	2.634	14.3	21.6	2 21	7 32.35	+41 54.7	2.427	3.185	13.1	19.1
<b>351255</b>	2004 <i>RS</i> <sub>89</sub>		1 20.2	104°14	2°8/21.4	17	<b>56042</b>	1998 <i>XW</i> <sub>10</sub>		1 20.2	158°23	0°6/19.9	18
12 13	8 37.02	+12 9.0	1.679	2.446	17.5	21.8	12 13	8 39.09	+21 14.2	1.806	2.586	16.0	18.5
12 23	8 32.01	+12 3.6	1.609	2.465	14.0	21.6	12 23	8 33.73	+21 19.9	1.723	2.591	12.6	18.3
1 2	8 24.22	+12 12.2	1.560	2.484	9.8	21.4	1 2	8 25.47	+21 31.3	1.662	2.596	8.5	18.1
1 12	8 14.39	+12 33.1	1.536	2.502	5.4	21.2	1 12	8 15.03	+21 44.8	1.627	2.601	3.9	17.8
1 22	8 3.61	+13 3.4	1.540	2.519	2.8	21.0	1 22	8 3.51	+21 56.4	1.622	2.605	1.2	17.6
2 1	7 53.21	+13 38.9	1.573	2.536	5.9	21.3	2 1	7 52.27	+22 2.8	1.646	2.608	5.8	17.9
2 11	7 44.42	+14 15.4	1.633	2.553	10.0	21.5	2 11	7 42.61	+22 2.5	1.698	2.611	10.1	18.2
2 21	7 38.10	+14 49.6	1.718	2.569	13.8	21.8	2 21	7 35.47	+21 55.6	1.774	2.614	13.9	18.4
<b>162999</b>	2001 <i>SW</i> <sub>167</sub>		1 20.2	28°02	1°4/19.5	18	<b>128513</b>	2004 <i>PU</i> <sub>37</sub>		1 20.2	66°30	1°5/21.0	18
12 13	8 30.87	+22 29.3	1.884	2.679	14.8	19.3	12 13	8 33.08	+13 11.5	1.841	2.612	16.0	19.4
12 23	8 27.17	+22 51.5	1.812	2.689	11.5	19.1	12 23	8 28.70	+13 41.4	1.778	2.639	12.6	19.2
1 2	8 20.95	+23 19.1	1.762	2.700	7.7	18.9	1 2	8 21.87	+14 24.8	1.737	2.665	8.6	19.0
1 12	8 12.88	+23 47.9	1.738	2.712	3.6	18.7	1 12	8 13.28	+15 18.4	1.722	2.692	4.4	18.8
1 22	8 3.96	+24 13.8	1.742	2.724	1.8	18.6	1 22	8 3.93	+16 17.4	1.735	2.718	1.5	18.7
2 1	7 55.31	+24 33.0	1.774	2.736	5.6	18.9	2 1	7 54.92	+17 16.7	1.779	2.744	5.1	19.0
2 11	7 48.07	+24 43.7	1.834	2.749	9.5	19.1	2 11	7 47.34	+18 11.7	1.850	2.770	9.0	19.3
2 21	7 43.00	+24 45.6	1.918	2.763	12.8	19.4	2 21	7 41.91	+18 59.4	1.946	2.796	12.5	19.5
<b>225939</b>	2002 <i>AH</i> <sub>185</sub>		1 20.2	56°33	0°1/20.1	18	<b>186089</b>	2001 <i>SM</i> <sub>288</sub>		1 20.2	354°24	11°6/25.3	18
12 13	8 34.36	+20 0.7	1.747	2.536	16.1	20.6	12 13	8 28.32	- 5 27.3	1.583	2.299	20.4	19.4
12 23	8 30.01	+20 4.2	1.674	2.547	12.6	20.4	12 23	8 25.65	- 6 51.3	1.503	2.295	18.0	19.2
1 2	8 22.91	+20 14.5	1.622	2.558	8.5	20.2	1 2	8 20.25	- 7 51.1	1.439	2.292	15.5	19.0
1 12	8 13.80	+20 28.6	1.596	2.569	3.9	19.9	1 12	8 12.72	- 8 20.2	1.395	2.290	13.1	18.9
1 22	8 3.76	+20 42.8	1.597	2.581	0.9	19.7	1 22	8 4.02	- 8 15.0	1.374	2.289	11.7	18.8
2 1	7 54.04	+20 53.7	1.628	2.592	5.6	20.1	2 1	7 55.39	- 7 35.9	1.376	2.288	12.1	18.8
2 11	7 45.89	+20 59.5	1.685	2.604	9.9	20.4	2 11	7 48.11	- 6 28.3	1.401	2.288	13.9	18.9
2 21	7 40.13	+20 59.5	1.767	2.616	13.5	20.6	2 21	7 43.14	- 5 1.1	1.447	2.289	16.4	19.1
<b>433139</b>	2012 <i>TW</i> <sub>223</sub>		1 20.2	162°55	2°8/21.9	18	<b>443656</b>	2015 <i>FB</i> <sub>77</sub>		1 20.2	180°70	6°1/15.4	18
12 13	8 29.05	+ 9 49.6	2.521	3.268	12.8	21.5	12 13	8 33.82	+40 29.1	2.870	3.639	10.9	20.7
12 23	8 25.08	+ 9 48.4	2.427	3.270	10.3	21.4	12 23	8 29.12	+41 39.7	2.793	3.639	9.0	20.5
1 2	8 19.26	+ 9 58.3	2.357	3.271	7.5	21.0	1 2	8 22.15	+42 45.3	2.741	3.639	7.3	20.4
1 12	8 12.06	+10 18.7	2.313	3.272	4.5	21.2	1 12	8 13.46	+43 39.9	2.717	3.639	6.2	20.4
1 22	8 4.15	+10 48.0	2.298	3.273	2.8	20.9	1 22	8 3.87	+44 18.5	2.721	3.639	6.4	20.4
2 1	7 56.33	+11 23.4	2.314	3.274	4.6	21.0	2 1	7 54.38	+44 38.2	2.753	3.639	7.8	20.5
2 11	7 49.40	+12 2.1	2.358	3.275	7.6	21.2	2 11	7 46.00	+44 38.9	2.811	3.639	9.6	20.6
2 21	7 43.98	+12 41.0	2.429	3.275	10.4	21.4	2 21	7 39.51	+44 22.6	2.893	3.639	11.5	20.7
<b>433104</b>	2012 <i>TP</i> <sub>108</sub>		1 20.2	171°48	2°0/19.1	18	<b>246516</b>	2008 <i>CL</i> <sub>212</sub>		1 20.2	154°29	1°0/20.8	18
12 13	8 33.01	+26 7.8	2.563	3.341	11.8	21.5	12 13	8 32.91	+13 59.5	2.410	3.166	13.1	21.1
12 23	8 28.24	+26 25.8	2.474	3.342	9.2	21.3	12 23	8 28.19	+14 35.4	2.321	3.174	10.4	20.9
1 2	8 21.39	+26 45.1	2.410	3.343	6.3	21.1	1 2	8 21.41	+15 22.2	2.256	3.182	7.1	20.7
1 12	8 13.04	+27 2.4	2.373	3.344	3.2	20.9	1 12	8 13.09	+16 17.2	2.219	3.189	3.5	20.5
1 22	8 3.94	+27 14.3	2.366	3.344	2.2	20.8	1 22	8 3.97	+17 16.6	2.212	3.195	1.1	20.3
2 1	7 55.00	+27 18.5	2.390	3.345	5.0	21.0	2 1	7 54.94	+18 16.0	2.237	3.201	4.4	20.6
2 11	7 47.13	+27 14.2	2.443	3.345	8.0	21.2	2 11	7 46.91	+19 11.8	2.292	3.206	7.9	20.8
2 21	7 41.00	+27 1.8	2.522	3.345	10.8	21.4	2 21	7 40.59	+20 1.2	2.374	3.211	10.9	21.0
<b>284020</b>	2004 <i>UL</i> <sub>2</sub>		1 20.2	28°18	5°1/21.6	18	<b>366327</b>	2013 <i>EJ</i> <sub>74</sub>		1 20.2	282°64	0°6/19.7	17
12 13	8 32.70	+11 59.8	1.074	1.885	22.6	19.7	12 13	8 27.18	+21 10.4	3.172	3.943	9.9	21.3
12 23	8 29.86	+11 3.2	1.020	1.900	18.2	19.5	12 23	8 23.35	+21 31.3	3.075	3.940	7.7	21.2
1 2	8 23.33	+10 24.1	0.984	1.916	13.1	19.2	1 2	8 17.97	+21 56.2	3.003	3.936	5.2	21.0
1 12	8 14.11	+10 3.9	0.969	1.934	7.9	19.0	1 12	8 11.45	+22 22.8	2.959	3.932	2.4	20.8
1 22	8 3.72	+10 1.7	0.977	1.953	5.1	18.9	1 22	8 4.35	+22 48.7	2.946	3.929	0.9	20.7
2 1	7 53.97	+10 14.1	1.009	1.974	8.1	19.2	2 1	7 57.30	+23 11.7	2.964	3.925	3.7	20.9
2 11	7 46.49	+10 35.8	1.064	1.995	12.9	19.5	2 11	7 50.97	+23 30.0	3.012	3.922	6.4	21.1
2 21	7 42.25	+11 1.5	1.140	2.018	17.3	19.8	2 21	7 45.90	+23 42.8	3.087	3.918	8.8	21.2
<b>228763</b>	2002 <i>VN</i> <sub>104</sub>		1 20.2	63°73	0°6/20.3	18	<b>423786</b>	2006 <i>FE</i> <sub>8</sub>		1 20.2	270°39	8°3/15.3	18
12 13	8 37.43	+18 39.1	1.312	2.114	19.8	20.0	12 13	8 39.94	+43 7.3	2.245	3.014	13.6	21.2
12 23	8 33.23	+18 34.4	1.246	2.125	15.6	19.8	12 23	8 34.83	+44 19.0	2.157	2.999	11.5	21.1
1 2	8 25.49	+18 40.0	1.198	2.137	10.5	19.5	1 2	8 26.51	+45 23.8	2.092	2.984	9.5	20.9
1 12	8 15.11	+18 52.4	1.175	2.149	4.9	19.2	1 12	8 15.65	+46 12.9	2.053	2.968	8.4	20.8
1 22	8 3.49	+19 7.2	1.177	2.161	1.1	19.0	1 22	8 3.38	+46 39.0	2.041	2.953	8.6	20.8
2 1	7 52.35	+19 20.1	1.206	2.173	6.7	19.4	2 1	7 51.22	+46 38.1	2.055	2.937	10.3	20.9
2 11	7 43.32	+19 28.5	1.261	2.186	11.9	19.7	2 11	7 40.70	+46 10.8	2.095	2.921	12.5	21.0
2 21	7 37.43	+19 31.3	1.337	2.198	16.3	20.0	2 21	7 32.93	+45 21.6	2.156	2.906	14.8	21.1
<b>298846</b>	2004 <i>RK</i> <sub>196</sub>		1 20.2	167°89	1°9/20.9	18	<b>87562</b>	2000 <i>RZ</i> <sub>5</sub>		1 20.2	101°35	0°9/20.7	18
12 13	8 37.27	+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>381311</b>	2007 VG <sub>93</sub>		1 20.2	46°99	2.4/21.2	18	<b>170039</b>	2002 VS <sub>33</sub>		1 20.2	10°48	7.7/15.3	18
12 13	8 32.81	+14 20.1	2.018	2.787	14.9	20.4	12 13	8 31.84	+35 16.0	1.765	2.570	15.3	18.5
12 23	8 28.28	+13 51.0	1.946	2.804	11.8	20.2	12 23	8 28.82	+37 5.5	1.699	2.573	12.4	18.3
1 2	8 21.49	+13 30.6	1.896	2.821	8.3	20.0	1 2	8 22.62	+38 54.0	1.655	2.576	9.6	18.2
1 12	8 13.10	+13 18.3	1.872	2.839	4.5	19.8	1 12	8 13.91	+40 31.1	1.638	2.581	7.8	18.1
1 22	8 4.01	+13 12.9	1.877	2.857	2.4	19.7	1 22	8 3.82	+41 47.1	1.647	2.586	8.2	18.1
2 1	7 55.24	+13 12.6	1.912	2.875	5.1	19.9	2 1	7 53.88	+42 36.0	1.682	2.592	10.4	18.3
2 11	7 47.76	+13 15.4	1.974	2.893	8.6	20.2	2 11	7 45.62	+42 56.8	1.742	2.598	13.2	18.4
2 21	7 42.28	+13 19.5	2.062	2.912	11.8	20.4	2 21	7 40.14	+42 52.6	1.822	2.606	15.9	18.6
<b>408369</b>	2013 GP <sub>94</sub>		1 20.2	252°76	1°6/19.4	17	<b>154083</b>	2002 CQ <sub>227</sub>		1 20.2	209°38	3°4/22.1	17
12 13	8 35.50	+22 19.3	1.858	2.645	15.3	21.8	12 13	8 31.34	+ 8 27.7	2.419	3.159	13.5	21.0
12 23	8 31.22	+22 50.7	1.758	2.631	12.1	21.6	12 23	8 27.01	+ 8 22.2	2.318	3.154	11.0	20.8
1 2	8 24.03	+23 29.5	1.680	2.616	8.2	21.3	1 2	8 20.67	+ 8 29.0	2.239	3.148	8.1	20.6
1 12	8 14.52	+24 11.1	1.628	2.601	3.9	21.0	1 12	8 12.80	+ 8 47.9	2.187	3.142	5.1	20.4
1 22	8 3.64	+24 49.9	1.605	2.586	2.1	20.8	1 22	8 4.10	+ 9 17.4	2.164	3.136	3.4	20.3
2 1	7 52.72	+25 20.9	1.611	2.570	6.3	21.1	2 1	7 55.42	+ 9 55.0	2.171	3.129	5.1	20.4
2 11	7 43.14	+25 41.0	1.644	2.554	10.7	21.3	2 11	7 47.66	+10 37.3	2.208	3.122	8.1	20.6
2 21	7 35.96	+25 49.9	1.701	2.538	14.6	21.5	2 21	7 41.51	+11 20.9	2.271	3.114	11.1	20.7
<b>305691</b>	2009 BH <sub>130</sub>		1 20.2	12°93	0°1/20.1	18	<b>236999</b>	2008 RQ <sub>39</sub>		1 20.2	347°19	3°4/19.1	18
12 13	8 29.97	+16 55.1	1.255	2.070	19.8	20.0	12 13	8 35.20	+26 4.3	1.238	2.058	19.6	20.8
12 23	8 27.72	+17 32.6	1.185	2.072	15.6	19.7	12 23	8 32.21	+26 27.7	1.162	2.053	15.5	20.5
1 2	8 22.04	+18 26.8	1.133	2.076	10.5	19.4	1 2	8 25.29	+26 55.8	1.106	2.049	10.6	20.2
1 12	8 13.66	+19 32.7	1.105	2.080	4.9	19.1	1 12	8 15.25	+27 21.6	1.072	2.045	5.5	20.0
1 22	8 3.85	+20 42.6	1.101	2.085	1.1	18.9	1 22	8 3.54	+27 37.4	1.063	2.042	3.9	19.8
2 1	7 54.29	+21 48.1	1.124	2.091	7.0	19.3	2 1	7 52.13	+27 38.0	1.080	2.040	8.5	20.1
2 11	7 46.63	+22 43.0	1.171	2.098	12.3	19.6	2 11	7 42.96	+27 22.4	1.120	2.039	13.6	20.4
2 21	7 42.01	+23 24.1	1.239	2.106	16.9	19.9	2 21	7 37.27	+26 53.1	1.180	2.038	18.2	20.6
<b>157743</b>	2006 BW <sub>219</sub>		1 20.2	48°87	0°2/20.1	18	<b>84878</b>	2003 BV <sub>88</sub>		1 20.2	44°16	4°5/17.6	18
12 13	8 32.75	+19 17.6	1.825	2.613	15.5	20.4	12 13	8 33.50	+24 25.9	1.442	2.253	17.8	18.4
12 23	8 28.74	+19 32.0	1.746	2.619	12.2	20.2	12 23	8 30.23	+26 12.2	1.382	2.268	13.9	18.2
1 2	8 22.10	+19 54.5	1.689	2.626	8.2	20.0	1 2	8 23.59	+28 8.1	1.343	2.283	9.4	18.0
1 12	8 13.49	+20 21.8	1.658	2.632	3.8	19.8	1 12	8 14.34	+30 2.9	1.330	2.299	5.4	17.8
1 22	8 3.91	+20 49.8	1.656	2.639	0.9	19.5	1 22	8 3.75	+31 45.2	1.344	2.315	5.1	17.8
2 1	7 54.56	+21 14.4	1.682	2.646	5.4	19.9	2 1	7 53.47	+33 5.9	1.385	2.332	8.7	18.0
2 11	7 46.64	+21 33.2	1.735	2.653	9.6	20.1	2 11	7 45.07	+34 1.3	1.452	2.349	12.8	18.3
2 21	7 40.97	+21 44.9	1.812	2.661	13.3	20.4	2 21	7 39.65	+34 32.5	1.540	2.367	16.3	18.6
<b>259996</b>	2004 FT <sub>96</sub>		1 20.2	230°72	7°5/15.9	18	<b>304393</b>	2006 SL <sub>413</sub>		1 20.2	53°43	22°4/10.3	16
12 13	8 40.10	+38 55.2	2.116	2.893	14.0	20.6	12 13	8 58.57	+57 40.4	1.009	1.791	25.8	20.5
12 23	8 34.95	+40 13.1	2.030	2.884	11.6	20.4	12 23	8 56.59	+60 53.5	0.981	1.796	24.0	20.4
1 2	8 26.61	+41 27.0	1.968	2.874	9.2	20.3	1 2	8 45.47	+63 38.2	0.968	1.802	22.8	20.3
1 12	8 15.71	+42 27.9	1.931	2.864	7.6	20.2	1 12	8 25.69	+65 28.7	0.971	1.808	22.4	20.3
1 22	8 3.38	+43 8.1	1.923	2.853	7.8	20.2	1 22	8 1.21	+66 5.6	0.989	1.815	23.1	20.4
2 1	7 51.13	+43 22.7	1.942	2.842	9.8	20.2	2 1	7 38.67	+65 25.0	1.022	1.821	24.4	20.5
2 11	7 40.48	+43 11.7	1.986	2.831	12.4	20.4	2 11	7 23.52	+63 41.5	1.068	1.828	26.0	20.6
2 21	7 32.57	+42 39.2	2.053	2.819	14.9	20.5	2 21	7 17.29	+61 16.2	1.126	1.835	27.7	20.8
<b>152227</b>	Argoli		1 20.2	318°62	0°2/20.1	18	<b>34234</b>	Andrewfang		1 20.2	299°79	4°5/18.6	18
12 13	8 33.46	+20 40.8	1.671	2.466	16.4	20.4	12 13	8 37.13	+28 36.1	1.491	2.297	17.6	18.8
12 23	8 29.75	+20 36.2	1.579	2.456	13.0	20.1	12 23	8 33.27	+29 13.7	1.406	2.288	14.0	18.5
1 2	8 23.07	+20 37.8	1.507	2.445	8.8	19.8	1 2	8 25.81	+29 53.8	1.342	2.279	9.8	18.3
1 12	8 14.05	+20 42.8	1.461	2.435	4.1	19.5	1 12	8 15.46	+30 29.0	1.302	2.271	5.7	18.0
1 22	8 3.77	+20 47.7	1.441	2.425	1.0	19.3	1 22	8 3.52	+30 51.5	1.289	2.262	4.8	17.9
2 1	7 53.57	+20 49.3	1.450	2.415	6.0	19.6	2 1	7 51.74	+30 55.9	1.302	2.254	8.5	18.1
2 11	7 44.89	+20 45.9	1.485	2.406	10.7	19.8	2 11	7 41.89	+30 41.4	1.340	2.246	13.0	18.4
2 21	7 38.73	+20 36.8	1.544	2.398	14.9	20.1	2 21	7 35.21	+30 10.8	1.400	2.238	17.1	18.6
<b>49178</b>	1998 SB <sub>67</sub>		1 20.2	95°45	1°6/19.4	18	<b>304926</b>	2007 RH <sub>313</sub>		1 20.2	99°30	0°5/20.4	18
12 13	8 35.89	+21 58.7	1.809	2.596	15.7	19.5	12 13	8 34.75	+15 26.1	1.682	2.463	16.9	20.8
12 23	8 31.19	+22 38.4	1.739	2.612	12.2	19.3	12 23	8 30.47	+16 7.2	1.609	2.476	13.3	20.6
1 2	8 23.72	+23 25.0	1.691	2.627	8.1	19.1	1 2	8 23.37	+17 2.3	1.557	2.490	9.0	20.3
1 12	8 14.23	+24 13.1	1.670	2.643	3.8	18.9	1 12	8 14.14	+18 7.1	1.531	2.504	4.2	20.1
1 22	8 3.76	+24 57.2	1.677	2.658	2.0	18.8	1 22	8 3.84	+19 15.5	1.533	2.517	0.9	19.9
2 1	7 53.62	+25 32.4	1.714	2.673	6.0	19.1	2 1	7 53.80	+20 21.1	1.564	2.530	5.7	20.2
2 11	7 45.04	+25 56.3	1.778	2.688	10.0	19.3	2 11	7 45.30	+21 18.8	1.623	2.542	10.2	20.5
2 21	7 38.87	+26 8.8	1.866	2.702	13.5	19.6	2 21	7 39.24	+22 6.0	1.707	2.555	14.0	20.8
<b>193831</b>	2001 QU <sub>42</sub>		1 20.2	267°48	2°4/19.4	18	<b>341281</b>	2007 RC <sub>285</sub>		1 20.2	231°70	1°1/19.5	17
12 13	8 38.22	+24 27.5	1.547	2.344	17.4	20.1	12 13	8 31.84	+22 17.2	2.576	3.350	11.9	21.7
12 23	8 34.01	+24 46.8	1.450	2.328	13.8	19.8	12 23	8 27.42	+22 42.8	2.476	3.342	9.3	21.5
1 2	8 26.29	+25 11.6	1.374	2.312	9.5	19.5	1 2	8 20.97	+23 13.1	2.399	3.333	6.2	21.3
1 12	8 15.69	+25 36.4	1.322	2.295	4.7	19.2	1 12	8 12.96	+23 44.8	2.351	3.324	2.9	21.1
1 22	8 3.39	+25 54.9	1.297	2.278	2.8	19.0	1 22	8 4.11	+24 14.4	2.333	3.315	1.4	20.9
2 1	7 51.05	+26 2.0	1.301	2.261	7.4	19.3	2 1	7 55.29	+24 39.0	2.346	3.305	4.6	21.1
2 11	7 40.44	+25 55.9	1.330	2.243	12.4	19.5	2 11	7 47.41	+24 56.4	2.388	3.295	7.9	21.3
2 21	7 32.85	+25 37.8	1.381	2.226	16.9	19.7	2 21	7 41.18	+25 6.1	2.456	3.285	10.9	21.5
<b>304814</b>	2007 QQ <sub>5</sub>		1 20.2	155°84	0°7/20.6	18	<b>169517</b>	2002 EW <sub>2</sub>		1 20.2	281°60	3°5/18.8	18
12 13	8 36.91	+16 25.3	2.166	2.927	14.2	22.4	12 13	8 36.90	+26 39.4	1.64			

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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>60315</b>	1999 <i>XF</i> <sub>227</sub>		1 20.2 234°82		1°0/20.5 18		<b>318018</b>	2004 <i>DB</i> <sub>34</sub>		1 20.2 317°17		6°4/23.6 18	
12 13	8 37.89	+17 59.2	1.609	2.393	17.5	19.9	12 13	8 29.17	+2 26.4	1.686	2.433	18.2	20.4
12 23	8 33.32	+17 48.0	1.516	2.386	13.9	19.7	12 23	8 26.26	+2 15.6	1.593	2.425	15.3	20.2
1 2	8 25.57	+17 45.4	1.444	2.378	9.6	19.4	1 2	8 20.69	+2 27.3	1.519	2.417	12.0	19.9
1 12	8 15.29	+17 49.0	1.397	2.370	4.6	19.1	1 12	8 13.03	+3 3.5	1.467	2.410	8.6	19.7
1 22	8 3.61	+17 55.8	1.378	2.361	1.3	18.8	1 22	8 4.16	+4 3.2	1.441	2.402	6.5	19.6
2 1	7 52.01	+18 2.5	1.387	2.352	6.2	19.1	2 1	7 55.27	+5 22.1	1.442	2.396	7.7	19.6
2 11	7 42.02	+18 6.7	1.423	2.343	11.2	19.4	2 11	7 47.62	+6 53.0	1.470	2.389	11.0	19.8
2 21	7 34.75	+18 7.3	1.482	2.334	15.5	19.6	2 21	7 42.19	+8 28.0	1.521	2.383	14.6	20.0
<b>52974</b>	1998 <i>TE</i> <sub>34</sub>		1 20.2 203°41		0°5/20.4 18		<b>413964</b>	2007 <i>CB</i> <sub>29</sub>		1 20.2 45°50		0°4/20.1 18	
12 13	8 36.72	+16 43.6	1.878	2.650	15.7	19.8	12 13	8 34.75	+20 44.7	1.749	2.539	16.0	21.2
12 23	8 31.96	+17 7.1	1.783	2.646	12.5	19.6	12 23	8 30.45	+20 46.4	1.670	2.544	12.6	21.0
1 2	8 24.43	+17 41.8	1.710	2.641	8.5	19.4	1 2	8 23.35	+20 54.4	1.612	2.549	8.5	20.8
1 12	8 14.71	+18 24.6	1.663	2.635	4.0	19.1	1 12	8 14.16	+21 5.4	1.580	2.554	3.9	20.5
1 22	8 3.75	+19 10.8	1.645	2.629	0.9	18.8	1 22	8 3.94	+21 15.8	1.576	2.559	1.0	20.3
2 1	7 52.81	+19 55.5	1.657	2.622	5.6	19.1	2 1	7 53.99	+21 22.3	1.600	2.565	5.7	20.6
2 11	7 43.20	+20 34.7	1.698	2.614	10.0	19.4	2 11	7 45.58	+21 23.3	1.652	2.570	10.0	20.9
2 21	7 35.90	+21 6.3	1.763	2.605	13.9	19.6	2 21	7 39.60	+21 18.4	1.727	2.576	13.8	21.1
<b>430197</b>	2013 <i>TC</i> <sub>131</sub>		1 20.2		1°18 17°0/10.8 18		<b>423185</b>	2004 <i>KU</i> <sub>10</sub>		1 20.2 300°09		5°3/22.4 17	
12 13	8 42.05	+58 26.9	1.501	2.260	19.6	19.9	12 13	8 29.68	+5 34.8	2.270	3.006	14.4	20.8
12 23	8 39.86	+60 30.5	1.459	2.257	18.3	19.8	12 23	8 26.03	+4 53.7	2.154	2.981	12.0	20.6
1 2	8 31.68	+62 10.5	1.435	2.255	17.3	19.8	1 2	8 20.23	+4 24.7	2.059	2.957	9.3	20.3
1 12	8 18.53	+63 12.5	1.428	2.256	17.0	19.7	1 12	8 12.74	+4 9.6	1.990	2.932	6.7	20.1
1 22	8 2.93	+63 25.9	1.440	2.258	17.5	19.8	1 22	8 4.23	+4 9.0	1.949	2.908	5.3	20.0
2 1	7 48.37	+62 47.9	1.470	2.261	18.5	19.9	2 1	7 55.60	+4 22.3	1.936	2.883	6.6	20.0
2 11	7 37.90	+61 24.9	1.517	2.267	19.9	20.0	2 11	7 47.83	+4 46.9	1.950	2.859	9.4	20.2
2 21	7 32.88	+59 28.4	1.579	2.274	21.4	20.1	2 21	7 41.72	+5 19.3	1.990	2.834	12.4	20.3
<b>77877</b>	2001 <i>SC</i> <sub>59</sub>		1 20.2 193°49		6°3/15.5 18 R		<b>430325</b>	2013 <i>YD</i> <sub>26</sub>		1 20.2 127°82		3°6/17.9 18	
12 13	8 37.30	+41 46.9	2.926	3.686	10.9	19.3	12 13	8 33.56	+29 24.7	2.513	3.294	12.0	21.1
12 23	8 31.85	+42 52.6	2.846	3.684	9.1	19.2	12 23	8 28.86	+30 21.3	2.436	3.303	9.4	20.9
1 2	8 24.03	+43 52.4	2.790	3.682	7.4	19.1	1 2	8 21.97	+31 18.8	2.383	3.312	6.6	20.8
1 12	8 14.41	+44 40.3	2.762	3.679	6.4	19.0	1 12	8 13.44	+32 11.9	2.358	3.320	4.1	20.6
1 22	8 3.85	+45 11.4	2.763	3.676	6.6	19.0	1 22	8 4.10	+32 55.7	2.363	3.329	3.9	20.6
2 1	7 53.40	+45 22.8	2.792	3.673	7.9	19.1	2 1	7 54.91	+33 26.6	2.398	3.337	6.1	20.8
2 11	7 44.12	+45 14.6	2.847	3.669	9.7	19.2	2 11	7 46.84	+33 43.4	2.461	3.344	8.8	21.0
2 21	7 36.83	+44 49.5	2.926	3.664	11.5	19.4	2 21	7 40.62	+33 46.8	2.550	3.352	11.3	21.2
<b>235478</b>	2004 <i>BM</i> <sub>36</sub>		1 20.2 237°35		0°5/19.9 18		<b>222520</b>	2001 <i>TD</i> <sub>160</sub>		1 20.2 130°48		2°1/18.3 18	
12 13	8 31.10	+20 15.1	2.634	3.405	11.7	21.2	12 13	8 28.59	+29 9.5	4.043	4.812	8.0	21.6
12 23	8 26.80	+20 37.2	2.531	3.395	9.2	21.0	12 23	8 24.11	+29 39.0	3.963	4.825	6.2	21.5
1 2	8 20.54	+21 4.9	2.452	3.385	6.2	20.8	1 2	8 18.33	+30 8.2	3.910	4.838	4.3	21.4
1 12	8 12.79	+21 35.6	2.401	3.374	2.8	20.5	1 12	8 11.64	+30 34.4	3.886	4.850	2.6	21.3
1 22	8 4.21	+22 6.0	2.380	3.364	0.9	20.4	1 22	8 4.52	+30 55.6	3.893	4.862	2.3	21.2
2 1	7 55.66	+22 33.4	2.391	3.353	4.3	20.6	2 1	7 57.52	+31 10.0	3.932	4.874	3.8	21.4
2 11	7 47.98	+22 55.4	2.431	3.341	7.6	20.8	2 11	7 51.16	+31 17.0	4.001	4.886	5.7	21.5
2 21	7 41.87	+23 10.9	2.497	3.330	10.6	21.0	2 21	7 45.89	+31 16.7	4.097	4.897	7.4	21.7
<b>305648</b>	2009 <i>BW</i> <sub>51</sub>		1 20.2 89°31		0°4/20.0 18		<b>301792</b>	2010 <i>LX</i> <sub>14</sub>		1 20.2 273°56		4°4/22.1 18	
12 13	8 36.38	+19 1.0	1.600	2.390	17.3	21.4	12 13	8 32.54	+8 50.4	1.599	2.369	18.2	21.1
12 23	8 31.88	+19 28.8	1.531	2.405	13.5	21.2	12 23	8 29.06	+8 36.6	1.508	2.362	14.9	20.9
1 2	8 24.37	+20 6.7	1.483	2.420	9.1	21.0	1 2	8 22.68	+8 40.3	1.437	2.355	11.0	20.6
1 12	8 14.63	+20 50.1	1.461	2.435	4.1	20.7	1 12	8 13.99	+9 1.9	1.389	2.348	6.8	20.4
1 22	8 3.83	+21 33.1	1.466	2.450	1.1	20.5	1 22	8 3.98	+9 39.5	1.367	2.341	4.4	20.2
2 1	7 53.38	+22 10.8	1.500	2.464	6.0	20.9	2 1	7 53.98	+10 29.1	1.373	2.334	6.8	20.3
2 11	7 44.66	+22 39.6	1.561	2.479	10.6	21.2	2 11	7 45.39	+11 25.0	1.405	2.328	11.1	20.6
2 21	7 38.58	+22 58.7	1.645	2.493	14.4	21.5	2 21	7 39.26	+12 21.7	1.460	2.321	15.2	20.8
<b>409491</b>	2005 <i>SJ</i> <sub>130</sub>		1 20.2 168°61		3°7/18.7 18		<b>90301</b>	2003 <i>EN</i> <sub>45</sub>		1 20.2 207°60		3°4/22.0 18	
12 13	8 40.52	+27 3.9	1.725	2.513	16.3	21.8	12 13	8 32.22	+8 50.3	2.442	3.181	13.4	21.0
12 23	8 35.28	+27 49.8	1.645	2.517	12.8	21.5	12 23	8 27.70	+8 39.9	2.340	3.176	10.9	20.8
1 2	8 26.81	+28 39.4	1.587	2.521	8.8	21.3	1 2	8 21.17	+8 41.0	2.261	3.170	8.0	20.6
1 12	8 15.83	+29 25.4	1.555	2.523	4.9	21.1	1 12	8 13.10	+8 53.7	2.208	3.164	5.1	20.4
1 22	8 3.55	+30 0.8	1.551	2.526	4.0	21.0	1 22	8 4.20	+9 16.5	2.185	3.157	3.4	20.3
2 1	7 51.52	+30 20.7	1.577	2.527	7.4	21.2	2 1	7 55.32	+9 47.2	2.192	3.149	5.1	20.4
2 11	7 41.24	+30 23.6	1.629	2.528	11.5	21.5	2 11	7 47.35	+10 22.9	2.228	3.142	8.1	20.6
2 21	7 33.80	+30 11.7	1.704	2.528	15.1	21.7	2 21	7 41.00	+11 0.3	2.291	3.133	11.1	20.8
<b>354108</b>	2001 <i>YT</i> <sub>101</sub>		1 20.2		3°00 2°9/20.9 18		<b>76524</b>	2000 <i>GV</i> <sub>52</sub>		1 20.2 110°12		5°2/17.2 18	
12 13	8 30.72	+16 8.6	1.090	1.912	21.6	20.0	12 13	8 36.98	+35 59.4	2.498	3.273	12.2	19.1
12 23	8 28.72	+15 26.3	1.020	1.910	17.3	19.8	12 23	8 31.59	+36 51.0	2.430	3.287	9.8	19.0
1 2	8 22.93	+14 55.9	0.969	1.909	12.1	19.5	1 2	8 23.80	+37 38.6	2.385	3.301	7.3	18.8
1 12	8 14.18	+14 37.5	0.938	1.910	6.4	19.2	1 12	8 14.28	+38 16.2	2.368	3.314	5.5	18.7
1 22	8 3.91	+14 29.3	0.931	1.912	3.0	19.0	1 22	8 3.96	+38 39.0	2.381	3.327	5.5	18.7
2 1	7 53.99	+14 28.8	0.947	1.916	7.6	19.2	2 1	7 53.94	+38 44.5	2.422	3.340	7.2	18.9
2 11	7 46.24	+14 32.4	0.987	1.922	13.2	19.6	2 11	7 45.26	+38 33.0	2.491	3.352	9.5	19.0
2 21	7 41.83	+14 37.1	1.046	1.928	18.1	19.9	2 21	7 38.67	+38 7.0	2.583	3.365	11.8	19.2
<b>327287</b>	2005 <i>TE</i> <sub>55</sub>		1 20.2 63°89		1°3/19.6 18		<b>247617</b>	2002 <i>TP</i> <sub>303</sub>		1 20.2 9°48		15°9/13.9 18	
12 13	8 34.26	+22 8.5	1.837	2.627</									

EPHEMERIDES

1 20.2

1 20.2

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>492440</b>	2014 <i>MM</i> <sub>37</sub>		1 20.2 186°88	0°1/20.2 18			<b>276261</b>	2002 <i>RH</i> <sub>274</sub>		1 20.2 154°75	0°0/20.2 18		
12 13	8 35.00	+17 28.4	1.939	2.714	15.2	22.0	12 13	8 31.64	+18 23.5	2.475	3.244	12.5	21.8
12 23	8 30.52	+18 4.9	1.848	2.714	12.0	21.8	12 23	8 27.24	+18 46.7	2.386	3.249	9.7	21.6
1 2	8 23.40	+18 52.5	1.780	2.713	8.1	21.6	1 2	8 20.83	+19 17.0	2.321	3.253	6.6	21.4
1 12	8 14.24	+19 47.3	1.739	2.712	3.8	21.3	1 12	8 12.94	+19 51.6	2.284	3.257	3.0	21.2
1 22	8 3.95	+20 44.1	1.727	2.711	0.9	21.1	1 22	8 4.29	+20 27.2	2.277	3.260	0.7	21.0
2 1	7 53.72	+21 37.7	1.745	2.708	5.4	21.4	2 1	7 55.74	+21 0.5	2.300	3.264	4.3	21.3
2 11	7 44.77	+22 23.9	1.791	2.706	9.6	21.7	2 11	7 48.19	+21 29.2	2.353	3.267	7.7	21.5
2 21	7 38.03	+23 0.6	1.862	2.703	13.3	21.9	2 21	7 42.29	+21 51.6	2.432	3.269	10.7	21.7
<b>118705</b>	2000 <i>PJ</i> <sub>16</sub>		1 20.2 106°68	0°4/20.4 18			<b>91262</b>	1999 <i>CM</i> <sub>99</sub>		1 20.2 275°07	2°8/19.3 18		
12 13	8 33.42	+16 36.6	2.031	2.805	14.7	20.0	12 13	8 38.02	+25 47.1	1.540	2.340	17.4	19.5
12 23	8 28.97	+17 3.7	1.954	2.818	11.5	19.8	12 23	8 33.74	+26 6.5	1.454	2.333	13.8	19.2
1 2	8 22.14	+17 40.8	1.899	2.830	7.8	19.6	1 2	8 26.03	+26 29.7	1.389	2.327	9.4	19.0
1 12	8 13.56	+18 24.7	1.870	2.843	3.7	19.4	1 12	8 15.59	+26 50.7	1.349	2.321	4.8	18.7
1 22	8 4.12	+19 11.0	1.871	2.855	0.8	19.2	1 22	8 3.70	+27 3.5	1.335	2.314	3.2	18.6
2 1	7 54.89	+19 55.6	1.902	2.867	4.9	19.5	2 1	7 51.98	+27 3.7	1.349	2.308	7.4	18.8
2 11	7 46.91	+20 34.8	1.962	2.878	8.8	19.8	2 11	7 42.11	+26 50.2	1.389	2.302	12.1	19.1
2 21	7 40.97	+21 6.8	2.046	2.890	12.2	20.0	2 21	7 35.23	+26 25.1	1.452	2.295	16.2	19.3
<b>413644</b>	2005 <i>UZ</i> <sub>498</sub>		1 20.2 137°85	0°8/20.7 18			<b>26577</b>	2000 <i>EC</i> <sub>91</sub>		1 20.2 47°75	5°2/23.1 18		
12 13	8 33.12	+14 45.5	2.269	3.031	13.7	21.3	12 13	8 29.59	+4 38.6	2.040	2.780	15.7	17.9
12 23	8 28.51	+15 20.2	2.185	3.041	10.8	21.1	12 23	8 25.93	+4 16.9	1.958	2.788	13.0	17.7
1 2	8 21.74	+16 5.7	2.124	3.051	7.3	20.9	1 2	8 20.09	+4 11.6	1.897	2.796	9.9	17.6
1 12	8 13.36	+16 59.0	2.091	3.061	3.6	20.7	1 12	8 12.63	+4 23.4	1.860	2.804	6.9	17.4
1 22	8 4.16	+17 56.2	2.087	3.071	0.9	20.5	1 22	8 4.37	+4 51.5	1.851	2.812	5.3	17.3
2 1	7 55.10	+18 52.9	2.115	3.079	4.5	20.8	2 1	7 56.25	+5 33.0	1.870	2.821	6.4	17.4
2 11	7 47.11	+19 45.1	2.172	3.088	8.2	21.0	2 11	7 49.25	+6 23.6	1.916	2.830	9.2	17.6
2 21	7 40.94	+20 30.5	2.256	3.096	11.3	21.2	2 21	7 44.10	+7 18.5	1.987	2.839	12.2	17.8
<b>107887</b>	2001 <i>FL</i> <sub>92</sub>		1 20.2 145°51	0°6/20.5 18			<b>265739</b>	2005 <i>UM</i> <sub>501</sub>		1 20.2 55°88	2°7/21.8 18		
12 13	8 34.21	+15 29.9	1.942	2.714	15.3	19.6	12 13	8 30.65	+9 39.8	1.812	2.578	16.4	20.5
12 23	8 29.78	+16 5.5	1.858	2.720	12.1	19.3	12 23	8 27.11	+10 6.5	1.731	2.586	13.2	20.3
1 2	8 22.82	+16 53.3	1.796	2.727	8.2	19.1	1 2	8 21.08	+10 50.7	1.672	2.594	9.4	20.1
1 12	8 13.93	+17 49.8	1.761	2.733	3.9	18.9	1 12	8 13.15	+11 50.5	1.638	2.602	5.3	19.9
1 22	8 4.04	+18 50.2	1.755	2.739	0.9	18.7	1 22	8 4.25	+13 1.4	1.632	2.611	2.7	19.7
2 1	7 54.27	+19 49.1	1.780	2.744	5.2	19.0	2 1	7 55.49	+14 17.8	1.655	2.620	5.5	19.9
2 11	7 45.78	+20 42.2	1.832	2.749	9.3	19.2	2 11	7 48.02	+15 33.5	1.705	2.628	9.4	20.2
2 21	7 39.44	+21 26.7	1.910	2.754	12.9	19.5	2 21	7 42.66	+16 43.4	1.781	2.637	13.1	20.4
<b>265731</b>	2005 <i>UE</i> <sub>445</sub>		1 20.2 90°86	4°1/17.9 18			<b>298971</b>	2004 <i>VB</i> <sub>42</sub>		1 20.2 43°29	2°2/19.4 18		
12 13	8 35.38	+28 10.0	1.893	2.686	14.9	21.0	12 13	8 35.14	+22 20.9	1.270	2.084	19.6	20.4
12 23	8 30.98	+29 14.9	1.821	2.696	11.7	20.8	12 23	8 31.69	+22 58.2	1.211	2.099	15.3	20.2
1 2	8 23.75	+30 22.7	1.772	2.706	8.1	20.6	1 2	8 24.64	+23 44.4	1.171	2.113	10.2	19.9
1 12	8 14.39	+31 26.2	1.750	2.715	4.9	20.4	1 12	8 14.89	+24 32.7	1.155	2.129	4.8	19.7
1 22	8 3.94	+32 18.4	1.756	2.725	4.5	20.4	1 22	8 3.88	+25 15.4	1.164	2.145	2.7	19.6
2 1	7 53.73	+32 54.4	1.791	2.734	7.3	20.6	2 1	7 53.40	+25 46.3	1.199	2.162	7.5	19.9
2 11	7 45.05	+33 12.4	1.852	2.744	10.8	20.8	2 11	7 45.07	+26 2.9	1.259	2.179	12.4	20.2
2 21	7 38.82	+33 14.0	1.938	2.753	13.9	21.0	2 21	7 39.93	+26 5.6	1.340	2.196	16.6	20.5
<b>209440</b>	2004 <i>FH</i> <sub>04</sub>		1 20.2 208°93	3°4/22.3 18			<b>95063</b>	2002 <i>AV</i> <sub>61</sub>		1 20.2 28°14	1°4/20.7 18		
12 13	8 28.81	+7 50.9	2.555	3.294	12.9	20.8	12 13	8 31.48	+15 30.3	1.148	1.963	21.2	18.2
12 23	8 24.94	+7 47.5	2.458	3.293	10.5	20.6	12 23	8 29.02	+15 39.7	1.088	1.974	16.7	18.0
1 2	8 19.25	+7 56.3	2.383	3.291	7.7	20.4	1 2	8 22.95	+16 5.9	1.046	1.986	11.5	17.7
1 12	8 12.20	+8 16.9	2.336	3.289	5.0	20.2	1 12	8 14.15	+16 45.5	1.026	1.999	5.6	17.4
1 22	8 4.43	+8 48.0	2.317	3.287	3.4	20.1	1 22	8 4.04	+17 32.3	1.030	2.013	1.6	17.2
2 1	7 56.71	+9 27.1	2.328	3.285	4.8	20.2	2 1	7 54.39	+18 19.5	1.060	2.028	7.0	17.6
2 11	7 49.84	+10 10.9	2.368	3.283	7.6	20.4	2 11	7 46.86	+19 1.3	1.113	2.044	12.4	17.9
2 21	7 44.44	+10 56.1	2.435	3.281	10.4	20.6	2 21	7 42.51	+19 34.2	1.187	2.061	17.0	18.2
<b>315761</b>	2008 <i>FY</i> <sub>59</sub>		1 20.2 276°41	1°7/21.2 18			<b>272898</b>	2006 <i>BY</i> <sub>141</sub>		1 20.2 213°04	0°4/20.4 18		
12 13	8 31.10	+12 15.9	1.890	2.661	15.7	20.4	12 13	8 32.35	+17 47.0	2.177	2.951	13.8	21.0
12 23	8 27.64	+12 47.7	1.787	2.646	12.6	20.1	12 23	8 28.12	+17 57.1	2.085	2.949	10.9	20.8
1 2	8 21.61	+13 35.8	1.705	2.632	8.9	19.9	1 2	8 21.60	+18 15.1	2.015	2.947	7.4	20.6
1 12	8 13.49	+14 38.0	1.648	2.617	4.6	19.6	1 12	8 13.36	+18 38.5	1.973	2.945	3.5	20.4
1 22	8 4.12	+15 50.1	1.620	2.603	1.7	19.3	1 22	8 4.21	+19 4.2	1.959	2.943	0.8	20.1
2 1	7 54.63	+17 6.2	1.622	2.588	5.4	19.6	2 1	7 55.16	+19 28.9	1.976	2.940	4.8	20.4
2 11	7 46.26	+18 20.3	1.651	2.573	9.8	19.8	2 11	7 47.23	+19 50.1	2.021	2.938	8.6	20.7
2 21	7 39.99	+19 27.6	1.706	2.558	13.8	20.0	2 21	7 41.19	+20 6.3	2.091	2.935	11.9	20.9
<b>27560</b>	2000 <i>JK</i> <sub>81</sub>		1 20.2 140°18	1°6/21.3 18			<b>147754</b>	2005 <i>OO</i> <sub>13</sub>		1 20.2 220°78	3°0/18.8 18		
12 13	8 30.26	+12 38.4	2.795	3.544	11.7	19.6	12 13	8 37.91	+23 56.6	1.625	2.419	16.9	21.2
12 23	8 25.85	+12 53.7	2.707	3.554	9.3	19.4	12 23	8 33.60	+24 51.3	1.536	2.413	13.3	20.9
1 2	8 19.73	+13 18.0	2.643	3.564	6.5	19.3	1 2	8 25.95	+25 54.6	1.469	2.406	9.1	20.7
1 12	8 12.37	+13 50.0	2.607	3.573	3.5	19.1	1 12	8 15.61	+26 59.6	1.427	2.399	4.7	20.4
1 22	8 4.40	+14 27.1	2.601	3.581	1.6	19.0	1 22	8 3.71	+27 58.2	1.413	2.391	3.4	20.3
2 1	7 56.54	+15 6.8	2.627	3.590	3.9	19.1	2 1	7 51.81	+28 43.3	1.427	2.383	7.5	20.5
2 11	7 49.52	+15 46.1	2.682	3.598	6.8	19.3	2 11	7 41.56	+29 11.6	1.468	2.374	12.1	20.7
2 21	7 43.90	+16 23.0	2.765	3.605	9.5	19.5	2 21	7 34.16	+29 23.3	1.532	2.365	16.1	21.0
<b>426840</b>	2013 <i>VM</i> <sub>8</sub>		1 20.2 68°68	0°4/20.4 18			<b>325240</b>	2008 <i>GG</i> <sub>68</sub>		1 20.2 214°24	6°6/23.9 18		
12 13	8 31.50	+17 32.4	2.161										

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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>236230</b>	2005 <i>XM</i> <sub>75</sub>		1 20.2 331°69	1°9/19.6	18		<b>445894</b>	2012 <i>VV</i> <sub>42</sub>		1 20.2 57°41	4°5/21.7	18	
12 13	8 34.37	+22 52.0	1.309	2.123	19.1	20.5	12 13	8 35.53	+11 1.4	1.357	2.141	20.1	20.8
12 23	8 31.38	+23 10.9	1.228	2.115	15.1	20.2	12 23	8 31.67	+10 24.0	1.285	2.148	16.3	20.6
1 2	8 24.71	+23 37.9	1.166	2.108	10.3	19.9	1 2	8 24.52	+10 2.4	1.231	2.156	11.8	20.3
1 12	8 15.09	+24 7.3	1.127	2.102	4.9	19.6	1 12	8 14.86	+9 57.3	1.201	2.163	7.2	20.1
1 22	8 3.83	+24 32.6	1.114	2.096	2.4	19.4	1 22	8 3.94	+10 7.3	1.196	2.171	4.5	20.0
2 1	7 52.73	+24 48.1	1.127	2.091	7.6	19.7	2 1	7 53.34	+10 29.3	1.217	2.179	7.4	20.2
2 11	7 43.61	+24 51.3	1.164	2.086	12.9	20.0	2 11	7 44.60	+10 58.4	1.263	2.188	11.9	20.4
2 21	7 37.73	+24 42.5	1.222	2.082	17.6	20.2	2 21	7 38.74	+11 30.1	1.332	2.196	16.1	20.7
<b>421881</b>	2014 <i>QY</i> <sub>173</sub>		1 20.2 68°02	1°0/20.6	18		<b>204250</b>	2004 <i>EH</i> <sub>26</sub>		1 20.2 206°00	0°6/20.6	17	
12 13	8 34.12	+16 44.2	1.677	2.463	16.8	21.8	12 13	8 30.47	+16 55.6	2.735	3.497	11.6	21.2
12 23	8 30.07	+16 48.9	1.598	2.468	13.3	21.6	12 23	8 26.18	+17 6.8	2.636	3.493	9.1	21.0
1 2	8 23.19	+17 4.3	1.540	2.474	9.1	21.3	1 2	8 20.07	+17 24.6	2.561	3.490	6.2	20.8
1 12	8 14.16	+17 27.6	1.507	2.480	4.4	21.1	1 12	8 12.61	+17 47.3	2.515	3.486	3.0	20.6
1 22	8 4.06	+17 55.0	1.502	2.485	1.2	20.8	1 22	8 4.44	+18 12.5	2.498	3.482	0.8	20.4
2 1	7 54.18	+18 22.5	1.525	2.491	5.7	21.2	2 1	7 56.33	+18 37.6	2.513	3.477	3.9	20.7
2 11	7 45.83	+18 46.7	1.575	2.497	10.2	21.4	2 11	7 49.06	+19 0.5	2.558	3.473	7.1	20.9
2 21	7 39.93	+19 5.5	1.649	2.503	14.1	21.7	2 21	7 43.25	+19 19.7	2.629	3.468	10.0	21.0
<b>112465</b>	2002 <i>OR</i> <sub>13</sub>		1 20.2 43°24	5°8/23.3	18	R	<b>30250</b>	2000 <i>HG</i> <sub>14</sub>		1 20.2 137°87	2°2/21.4	18	
12 13	8 29.70	+3 43.6	1.998	2.736	16.0	19.0	12 13	8 34.32	+12 29.7	2.332	3.082	13.7	19.7
12 23	8 26.07	+3 14.3	1.917	2.743	13.4	18.8	12 23	8 29.31	+12 28.0	2.248	3.095	10.9	19.5
1 2	8 20.21	+3 1.8	1.856	2.751	10.3	18.6	1 2	8 22.21	+12 36.3	2.187	3.107	7.7	19.3
1 12	8 12.71	+3 7.5	1.820	2.759	7.4	18.4	1 12	8 13.59	+12 53.4	2.154	3.118	4.2	19.1
1 22	8 4.38	+3 30.9	1.810	2.768	5.8	18.4	1 22	8 4.24	+13 17.1	2.150	3.129	2.2	19.0
2 1	7 56.21	+4 9.3	1.828	2.776	6.8	18.4	2 1	7 55.08	+13 44.7	2.177	3.139	4.6	19.2
2 11	7 49.18	+4 58.5	1.873	2.785	9.5	18.6	2 11	7 47.00	+14 13.4	2.233	3.149	8.0	19.4
2 21	7 44.02	+5 53.4	1.944	2.794	12.4	18.8	2 21	7 40.69	+14 40.8	2.316	3.158	11.0	19.6
<b>214090</b>	2004 <i>JW</i> <sub>21</sub>		1 20.2 261°22	0°7/19.8	17		<b>376472</b>	2012 <i>JF</i> <sub>26</sub>		1 20.2 279°84	9°1/24.8	17	
12 13	8 30.72	+21 1.3	2.579	3.354	11.9	21.2	12 13	8 29.83	-4 26.3	1.993	2.690	17.3	21.1
12 23	8 26.59	+21 21.6	2.476	3.342	9.3	21.0	12 23	8 26.44	-5 15.1	1.891	2.676	15.2	20.9
1 2	8 20.47	+21 47.0	2.397	3.331	6.3	20.8	1 2	8 20.69	-5 43.2	1.808	2.662	12.8	20.7
1 12	8 12.83	+22 15.0	2.346	3.320	2.9	20.6	1 12	8 13.06	-5 46.3	1.746	2.647	10.5	20.5
1 22	8 4.35	+22 42.2	2.325	3.308	1.0	20.4	1 22	8 4.33	-5 22.3	1.710	2.633	9.2	20.4
2 1	7 55.89	+23 5.7	2.335	3.296	4.4	20.6	2 1	7 55.51	-4 32.2	1.699	2.618	9.6	20.4
2 11	7 48.33	+23 23.6	2.373	3.284	7.8	20.8	2 11	7 47.69	-3 20.4	1.714	2.604	11.6	20.5
2 21	7 42.38	+23 34.7	2.438	3.272	10.8	21.0	2 21	7 41.77	-1 54.0	1.753	2.589	14.2	20.6
<b>457199</b>	2008 <i>HC</i> <sub>39</sub>		1 20.2 211°41	6°1/17.0	16		<b>447252</b>	2005 <i>UA</i> <sub>255</sub>		1 20.2 61°01	7°0/17.8	18	
12 13	8 39.96	+36 28.7	2.226	3.002	13.5	22.3	12 13	8 40.88	+32 12.6	1.274	2.086	19.6	20.8
12 23	8 34.50	+37 25.4	2.139	2.996	10.9	22.1	12 23	8 36.59	+33 22.0	1.219	2.102	15.6	20.6
1 2	8 26.14	+38 18.6	2.076	2.990	8.3	21.9	1 2	8 28.16	+34 30.3	1.184	2.117	11.3	20.4
1 12	8 15.54	+39 0.9	2.040	2.984	6.4	21.8	1 12	8 16.59	+35 26.1	1.173	2.133	7.7	20.2
1 22	8 3.76	+39 26.0	2.032	2.977	6.4	21.8	1 22	8 3.61	+35 59.2	1.186	2.149	7.4	20.3
2 1	7 52.13	+39 30.1	2.053	2.970	8.4	21.9	2 1	7 51.32	+36 4.6	1.225	2.165	10.4	20.5
2 11	7 42.00	+39 13.3	2.100	2.962	11.1	22.1	2 11	7 41.64	+35 44.0	1.288	2.181	14.4	20.8
2 21	7 34.34	+38 38.9	2.172	2.954	13.7	22.2	2 21	7 35.68	+35 3.4	1.370	2.197	18.0	21.0
<b>145244</b>	2005 <i>JO</i> <sub>98</sub>		1 20.2 134°01	5°2/23.9	18		<b>62519</b>	2000 <i>SX</i> <sub>246</sub>		1 20.2 233°82	0°6/20.5	18	
12 13	8 28.44	+1 7.1	2.514	3.225	13.7	20.2	12 13	8 35.82	+16 42.4	1.930	2.702	15.4	20.3
12 23	8 24.67	+1 4.0	2.421	3.228	11.6	20.1	12 23	8 31.32	+17 1.8	1.827	2.690	12.2	20.1
1 2	8 19.08	+1 17.3	2.350	3.231	9.1	19.9	1 2	8 24.10	+17 32.2	1.746	2.677	8.4	19.8
1 12	8 12.16	+1 47.7	2.304	3.234	6.7	19.8	1 12	8 14.68	+18 10.8	1.691	2.663	4.0	19.5
1 22	8 4.52	+2 34.0	2.285	3.237	5.2	19.7	1 22	8 3.98	+18 53.3	1.664	2.648	0.9	19.3
2 1	7 56.96	+3 33.7	2.296	3.240	5.9	19.7	2 1	7 53.19	+19 35.2	1.668	2.633	5.5	19.6
2 11	7 50.25	+4 42.2	2.336	3.243	8.1	19.9	2 11	7 43.61	+20 12.4	1.700	2.617	9.9	19.8
2 21	7 45.01	+5 55.0	2.403	3.246	10.6	20.0	2 21	7 36.26	+20 42.8	1.757	2.600	13.9	20.0
<b>28762</b>	2000 <i>HG</i> <sub>13</sub>		1 20.2 50°37	4°0/22.3	18	R	<b>368029</b>	2012 <i>GX</i> <sub>19</sub>		1 20.2 78°55	3°3/18.6	18	
12 13	8 30.15	+7 56.7	2.264	3.009	14.2	18.8	12 13	8 34.55	+26 22.4	1.882	2.675	14.9	20.6
12 23	8 26.21	+7 34.8	2.173	3.011	11.6	18.6	12 23	8 30.35	+27 11.8	1.803	2.679	11.7	20.4
1 2	8 20.21	+7 25.2	2.104	3.012	8.6	18.4	1 2	8 23.37	+28 5.3	1.748	2.684	8.0	20.2
1 12	8 12.70	+7 28.5	2.061	3.014	5.7	18.2	1 12	8 14.27	+28 56.6	1.719	2.688	4.4	20.0
1 22	8 4.41	+7 43.6	2.046	3.015	4.0	18.1	1 22	8 4.09	+29 39.4	1.718	2.693	3.6	20.0
2 1	7 56.21	+8 8.5	2.061	3.017	5.5	18.2	2 1	7 54.11	+30 9.1	1.746	2.698	6.8	20.2
2 11	7 49.01	+8 40.1	2.103	3.018	8.4	18.4	2 11	7 45.60	+30 23.8	1.801	2.702	10.5	20.4
2 21	7 43.50	+9 15.0	2.172	3.020	11.4	18.6	2 21	7 39.48	+30 24.3	1.880	2.707	13.8	20.6
<b>8930</b>	Kubota		1 20.2 94°24	1°0/20.6	18		<b>5455</b>	Surkov		1 20.2 100°25	2°2/19.4	18	
12 13	8 40.71	+17 20.4	1.475	2.259	18.8	17.6	12 13	8 39.55	+23 35.1	1.487	2.284	18.1	17.2
12 23	8 35.33	+17 16.9	1.412	2.281	14.8	17.4	12 23	8 34.74	+24 4.3	1.419	2.297	14.1	17.0
1 2	8 26.71	+17 23.8	1.369	2.302	10.0	17.1	1 2	8 26.52	+24 39.8	1.371	2.309	9.5	16.7
1 12	8 15.75	+17 38.0	1.350	2.323	4.8	16.9	1 12	8 15.76	+25 15.2	1.348	2.322	4.6	16.5
1 22	8 3.77	+17 55.4	1.359	2.343	1.3	16.7	1 22	8 3.79	+25 44.1	1.353	2.334	2.6	16.4
2 1	7 52.33	+18 12.1	1.397	2.363	6.2	17.1	2 1	7 52.26	+26 1.6	1.385	2.346	7.0	16.7
2 11	7 42.88	+18 25.3	1.461	2.382	10.9	17.4	2 11	7 42.72	+26 6.3	1.444	2.357	11.6	17.0
2 21	7 36.33	+18 33.9	1.549	2.401	15.0	17.7	2 21	7 36.19	+25 59.1	1.525	2.368	15.6	17.2
<b>419037</b>	2009 <i>RH</i> <sub>8</sub>		1 20.2 136°76	2°2/21.4	18		<b>199872</b>	2007 <i>EP</i> <sub>169</sub>		1 20.2 164°71	0°6/20.6	18	
12 13	8 33.05	+12 40.1	2.188	2.946	14.2	22.2	12 13						



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>519109</b>	2010 <i>MN</i> <sub>9</sub>		1 20.2 176°09	3°9/23.3	17		<b>354968</b>	2006 <i>HN</i> <sub>32</sub>		1 20.2 246°32	2°7/19.1	18	
12 13	8 28.81	+ 3 38.2	2.853	3.567	12.2	22.1	12 13	8 37.60	+24 59.4	1.812	2.600	15.6	21.9
12 23	8 24.75	+ 3 50.2	2.754	3.568	10.1	21.9	12 23	8 33.07	+25 33.3	1.714	2.587	12.3	21.7
1 2	8 19.05	+ 4 16.3	2.678	3.569	7.7	21.8	1 2	8 25.47	+26 12.5	1.638	2.573	8.5	21.4
1 12	8 12.13	+ 4 56.2	2.629	3.570	5.3	21.6	1 12	8 15.39	+26 51.5	1.588	2.559	4.3	21.1
1 22	8 4.57	+ 5 48.2	2.608	3.570	3.9	21.5	1 22	8 3.89	+27 24.1	1.566	2.545	3.0	21.0
2 1	7 57.05	+ 6 49.7	2.619	3.570	4.8	21.6	2 1	7 52.36	+27 45.2	1.574	2.530	6.8	21.2
2 11	7 50.26	+ 7 56.8	2.660	3.570	7.1	21.7	2 11	7 42.29	+27 52.7	1.608	2.515	11.1	21.4
2 21	7 44.79	+ 9 5.5	2.729	3.570	9.6	21.9	2 21	7 34.79	+27 47.2	1.667	2.499	15.0	21.6
<b>22930</b>	1999 <i>TN</i> <sub>128</sub>		1 20.2 153°13	3°1/18.9	18		<b>233856</b>	2008 <i>VM</i> <sub>3</sub>		1 20.2 131°42	4°3/18.6	18	
12 13	8 42.61	+26 37.4	1.815	2.596	15.9	19.8	12 13	8 42.13	+29 27.5	1.717	2.505	16.4	20.6
12 23	8 36.67	+27 14.0	1.738	2.606	12.5	19.6	12 23	8 36.50	+30 6.3	1.645	2.516	12.9	20.4
1 2	8 27.62	+27 53.4	1.683	2.615	8.5	19.4	1 2	8 27.59	+30 45.4	1.595	2.526	9.0	20.2
1 12	8 16.23	+28 29.2	1.654	2.623	4.6	19.2	1 12	8 16.25	+31 17.6	1.571	2.537	5.4	20.0
1 22	8 3.69	+28 55.3	1.655	2.631	3.5	19.1	1 22	8 3.74	+31 36.4	1.575	2.546	4.6	20.0
2 1	7 51.48	+29 7.4	1.685	2.637	6.9	19.4	2 1	7 51.67	+31 37.9	1.608	2.555	7.7	20.2
2 11	7 41.02	+29 4.8	1.743	2.643	10.8	19.6	2 11	7 41.51	+31 22.4	1.668	2.564	11.5	20.5
2 21	7 33.29	+28 49.6	1.826	2.648	14.3	19.8	2 21	7 34.25	+30 53.1	1.751	2.572	14.9	20.7
<b>12555</b>	1998 <i>QP</i> <sub>47</sub>		1 20.2 115°28	0°6/20.6	18		<b>257562</b>	1998 <i>TT</i> <sub>35</sub>		1 20.2 118°44	1°7/19.5	18	
12 13	8 32.08	+16 42.2	2.212	2.983	13.7	17.6	12 13	8 36.37	+22 51.5	1.851	2.637	15.4	21.9
12 23	8 27.80	+16 58.0	2.128	2.990	10.8	17.4	12 23	8 31.66	+23 21.0	1.773	2.646	12.0	21.7
1 2	8 21.33	+17 22.5	2.067	2.997	7.3	17.2	1 2	8 24.19	+23 56.3	1.718	2.654	8.1	21.5
1 12	8 13.24	+17 53.2	2.033	3.004	3.5	17.0	1 12	8 14.65	+24 32.5	1.690	2.663	3.9	21.2
1 22	8 4.34	+18 26.7	2.028	3.011	0.8	16.8	1 22	8 4.08	+25 4.4	1.690	2.671	2.1	21.1
2 1	7 55.60	+18 59.6	2.053	3.018	4.6	17.1	2 1	7 53.78	+25 27.9	1.719	2.679	5.9	21.4
2 11	7 47.97	+19 29.1	2.107	3.024	8.3	17.3	2 11	7 44.98	+25 40.9	1.776	2.687	10.0	21.6
2 21	7 42.18	+19 53.4	2.186	3.030	11.5	17.5	2 21	7 38.57	+25 43.6	1.858	2.694	13.5	21.9
<b>109403</b>	2001 <i>QV</i> <sub>180</sub>		1 20.2 88°57	8°7/13.7	18		<b>116789</b>	2004 <i>EU</i> <sub>38</sub>		1 20.2 263°30	5°7/24.0	18	
12 13	8 41.33	+46 20.3	2.490	3.244	12.8	19.6	12 13	8 28.19	- 0 12.5	2.647	3.347	13.3	20.4
12 23	8 35.71	+48 9.8	2.443	3.266	10.9	19.5	12 23	8 24.52	- 0 26.5	2.536	3.333	11.4	20.2
1 2	8 27.04	+49 49.3	2.420	3.287	9.4	19.4	1 2	8 19.06	- 0 24.8	2.446	3.318	9.1	20.1
1 12	8 16.00	+51 10.0	2.424	3.308	8.7	19.4	1 12	8 12.22	- 0 5.9	2.381	3.303	7.0	19.9
1 22	8 3.75	+52 5.6	2.455	3.329	9.1	19.5	1 22	8 4.59	+ 0 30.0	2.344	3.288	5.7	19.8
2 1	7 51.72	+52 32.9	2.512	3.350	10.3	19.6	2 1	7 56.92	+ 1 21.1	2.336	3.273	6.3	19.8
2 11	7 41.35	+52 33.4	2.593	3.370	11.8	19.7	2 11	7 49.98	+ 2 23.8	2.357	3.258	8.3	19.9
2 21	7 33.65	+52 11.5	2.695	3.390	13.4	19.9	2 21	7 44.42	+ 3 33.5	2.404	3.242	10.8	20.0
<b>519383</b>	2011 <i>RN</i> <sub>10</sub>		1 20.2 205°11	1°5/21.2	17		<b>337245</b>	2000 <i>QX</i> <sub>148</sub>		1 20.2 223°50	5°9/15.6	17	
12 13	8 29.73	+13 39.6	2.981	3.731	11.0	22.2	12 13	8 35.83	+39 4.0	2.841	3.609	11.0	21.0
12 23	8 25.43	+13 40.5	2.879	3.727	8.7	22.0	12 23	8 30.85	+40 16.8	2.753	3.600	9.1	20.9
1 2	8 19.49	+13 48.9	2.801	3.722	6.1	21.9	1 2	8 23.51	+41 25.9	2.689	3.591	7.2	20.8
1 12	8 12.34	+14 3.6	2.752	3.718	3.3	21.7	1 12	8 14.34	+42 25.1	2.654	3.582	6.0	20.7
1 22	8 4.55	+14 23.0	2.732	3.713	1.6	21.5	1 22	8 4.14	+43 8.9	2.648	3.573	6.3	20.7
2 1	7 56.80	+14 45.2	2.744	3.707	3.7	21.7	2 1	7 53.93	+43 34.0	2.670	3.563	7.8	20.7
2 11	7 49.80	+15 8.0	2.786	3.701	6.6	21.9	2 11	7 44.80	+43 39.6	2.719	3.552	9.8	20.9
2 21	7 44.10	+15 29.8	2.856	3.695	9.2	22.0	2 21	7 37.57	+43 27.7	2.792	3.542	11.8	21.0
<b>284829</b>	2009 <i>BZ</i> <sub>3</sub>		1 20.2 321°57	3°5/21.7	18		<b>463914</b>	2014 <i>UL</i> <sub>135</sub>		1 20.2 195°32	5°6/22.7	18	
12 13	8 30.53	+10 54.0	2.134	2.893	14.5	20.4	12 13	8 32.72	+ 5 26.5	1.977	2.716	16.1	20.9
12 23	8 26.73	+10 22.8	2.036	2.885	11.8	20.2	12 23	8 28.55	+ 4 46.1	1.886	2.716	13.4	20.7
1 2	8 20.72	+10 1.8	1.960	2.877	8.6	19.9	1 2	8 22.00	+ 4 20.4	1.816	2.715	10.3	20.5
1 12	8 13.02	+ 9 51.4	1.910	2.869	5.3	19.7	1 12	8 13.64	+ 4 11.2	1.771	2.714	7.3	20.3
1 22	8 4.40	+ 9 51.0	1.887	2.861	3.5	19.6	1 22	8 4.31	+ 4 18.5	1.753	2.713	5.7	20.2
2 1	7 55.84	+ 9 59.0	1.894	2.854	5.5	19.7	2 1	7 55.07	+ 4 40.7	1.763	2.712	6.9	20.3
2 11	7 48.33	+10 13.2	1.929	2.847	8.9	19.9	2 11	7 46.98	+ 5 14.2	1.801	2.711	9.9	20.5
2 21	7 42.63	+10 30.7	1.989	2.840	12.2	20.1	2 21	7 40.88	+ 5 54.6	1.863	2.710	13.0	20.7
<b>367595</b>	2009 <i>SF</i> <sub>312</sub>		1 20.2 87°54	3°2/18.8	18		<b>466398</b>	2013 <i>SL</i> <sub>61</sub>		1 20.2 124°45	1°6/19.5	18	
12 13	8 35.93	+27 21.5	1.907	2.697	14.9	21.1	12 13	8 34.75	+23 51.1	2.065	2.849	14.1	21.8
12 23	8 31.36	+27 54.7	1.828	2.702	11.7	20.9	12 23	8 30.17	+24 6.7	1.980	2.851	11.0	21.5
1 2	8 24.01	+28 29.9	1.771	2.706	8.0	20.7	1 2	8 23.08	+24 26.1	1.917	2.853	7.4	21.3
1 12	8 14.57	+29 1.5	1.741	2.710	4.4	20.5	1 12	8 14.13	+24 45.2	1.882	2.855	3.6	21.1
1 22	8 4.09	+29 24.3	1.740	2.715	3.5	20.4	1 22	8 4.23	+25 0.1	1.875	2.856	1.9	21.0
2 1	7 53.86	+29 34.4	1.767	2.719	6.6	20.6	2 1	7 54.53	+25 7.8	1.898	2.858	5.5	21.2
2 11	7 45.14	+29 30.9	1.821	2.723	10.3	20.8	2 11	7 46.15	+25 7.0	1.950	2.860	9.2	21.4
2 21	7 38.84	+29 15.4	1.899	2.727	13.6	21.1	2 21	7 39.90	+24 58.0	2.025	2.861	12.6	21.7
<b>397529</b>	2007 <i>TX</i> <sub>193</sub>		1 20.2 132°66	1°0/20.7	18		<b>119627</b>	2001 <i>WJ</i> <sub>99</sub>		1 20.2 217°89	3°1/18.3	18	
12 13	8 37.72	+15 47.7	2.152	2.910	14.4	22.6	12 13	8 33.99	+24 38.1	2.068	2.855	14.0	19.7
12 23	8 32.11	+15 58.9	2.074	2.928	11.4	22.4	12 23	8 29.84	+25 52.4	1.978	2.851	11.0	19.4
1 2	8 24.17	+16 19.2	2.019	2.945	7.8	22.2	1 2	8 23.07	+27 13.9	1.912	2.847	7.5	19.2
1 12	8 14.54	+16 46.0	1.992	2.962	3.8	22.0	1 12	8 14.23	+28 36.3	1.873	2.842	4.1	19.0
1 22	8 4.11	+17 16.0	1.994	2.977	1.1	21.8	1 22	8 4.19	+29 52.4	1.864	2.838	3.5	19.0
2 1	7 53.93	+17 45.8	2.028	2.992	4.7	22.1	2 1	7 54.13	+30 56.0	1.885	2.833	6.6	19.1
2 11	7 45.04	+18 12.7	2.091	3.005	8.5	22.4	2 11	7 45.27	+31 43.4	1.933	2.828	10.2	19.3
2 21	7 38.18	+18 35.1	2.180	3.018	11.7	22.6	2 21	7 38.57	+32 14.4	2.006	2.823	13.5	19.5
<b>422035</b>	2014 <i>QM</i> <sub>350</sub>		1 20.2 141°79	0°3/20.1	18		<b>15315</b>	1993 <i>FX</i> <sub>35</sub>		1 20.2 148°59	11°1/14.9	18	
12 13	8 34.58</												

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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>456588</b>	2007 <i>DH</i> <sub>60</sub>		1 20.2 313°62	4.8/22.8	17		<b>123449</b>	2000 <i>WK</i> <sub>133</sub>		1 20.3 148°06	3°0/19.0	18	
12 13	8 28.60	+ 6 5.4	1.720	2.481	17.4	21.1	12 13	8 40.12	+26 54.0	1.846	2.630	15.5	20.1
12 23	8 25.92	+ 6 6.1	1.619	2.465	14.4	20.8	12 23	8 34.71	+27 23.2	1.767	2.638	12.2	19.9
1 2	8 20.60	+ 6 27.0	1.537	2.449	10.9	20.6	1 2	8 26.33	+27 54.6	1.711	2.645	8.3	19.7
1 12	8 13.15	+ 7 9.0	1.479	2.434	7.1	20.3	1 12	8 15.71	+28 22.4	1.681	2.651	4.5	19.4
1 22	8 4.42	+ 8 10.3	1.448	2.419	4.8	20.1	1 22	8 3.99	+28 41.0	1.680	2.657	3.3	19.4
2 1	7 55.58	+ 9 26.3	1.443	2.404	6.7	20.2	2 1	7 52.58	+28 46.7	1.709	2.662	6.7	19.6
2 11	7 47.91	+10 50.1	1.466	2.390	10.6	20.4	2 11	7 42.83	+28 39.0	1.765	2.667	10.6	19.8
2 21	7 42.41	+12 14.7	1.512	2.377	14.6	20.6	2 21	7 35.68	+28 19.7	1.845	2.671	14.0	20.1
<b>495052</b>	2011 <i>CW</i> <sub>22</sub>		1 20.2 90°28	2°4/21.5	18		<b>452536</b>	2004 <i>TM</i> <sub>211</sub>		1 20.3 122°05	0°1/20.3	18	
12 13	8 32.81	+12 16.3	2.014	2.776	15.1	22.1	12 13	8 38.85	+18 24.6	1.848	2.621	15.9	22.9
12 23	8 28.48	+12 15.7	1.936	2.790	12.1	21.9	12 23	8 33.43	+18 39.1	1.775	2.638	12.5	22.7
1 2	8 21.85	+12 26.9	1.880	2.802	8.5	21.7	1 2	8 25.29	+19 2.0	1.723	2.655	8.4	22.5
1 12	8 13.52	+12 48.8	1.850	2.815	4.7	21.5	1 12	8 15.17	+19 29.9	1.698	2.671	3.9	22.2
1 22	8 4.38	+13 18.6	1.849	2.828	2.4	21.4	1 22	8 4.12	+19 58.5	1.703	2.686	0.8	22.0
2 1	7 55.46	+13 52.9	1.877	2.841	5.1	21.6	2 1	7 53.39	+20 24.0	1.737	2.701	5.4	22.4
2 11	7 47.78	+14 28.3	1.933	2.853	8.7	21.8	2 11	7 44.21	+20 43.8	1.799	2.715	9.6	22.7
2 21	7 42.07	+15 1.7	2.015	2.865	12.1	22.0	2 21	7 37.41	+20 56.9	1.887	2.728	13.2	22.9
<b>427248</b>	2014 <i>WN</i> <sub>70</sub>		1 20.2 212°95	1°0/19.7	18		<b>238430</b>	2004 <i>HM</i> <sub>63</sub>		1 20.3 319°74	3°2/22.7	18	
12 13	8 33.50	+20 30.3	1.984	2.767	14.6	21.7	12 13	8 28.67	+ 5 57.7	2.257	2.997	14.3	19.9
12 23	8 29.37	+21 3.2	1.894	2.765	11.5	21.5	12 23	8 25.25	+ 6 36.5	2.156	2.991	11.7	19.7
1 2	8 22.67	+21 44.2	1.827	2.763	7.7	21.3	1 2	8 19.75	+ 7 33.5	2.077	2.986	8.6	19.5
1 12	8 14.00	+22 29.0	1.787	2.761	3.6	21.0	1 12	8 12.65	+ 8 47.7	2.024	2.980	5.4	19.2
1 22	8 4.27	+23 12.9	1.776	2.758	1.4	20.8	1 22	8 4.65	+10 15.6	2.000	2.975	3.3	19.1
2 1	7 54.61	+23 51.2	1.794	2.755	5.5	21.1	2 1	7 56.61	+11 52.0	2.007	2.970	5.0	19.2
2 11	7 46.20	+24 20.8	1.840	2.753	9.5	21.4	2 11	7 49.48	+13 30.6	2.044	2.965	8.3	19.4
2 21	7 39.95	+24 40.6	1.910	2.750	13.1	21.6	2 21	7 44.00	+15 5.7	2.108	2.960	11.5	19.6
<b>406912</b>	2009 <i>EX</i> <sub>24</sub>		1 20.3 299°17	1°4/19.8	18		<b>103600</b>	2000 <i>CM</i> <sub>16</sub>		1 20.3 110°79	2°3/21.4	18	
12 13	8 34.47	+22 0.9	1.546	2.346	17.3	21.4	12 13	8 37.60	+11 58.4	1.631	2.399	17.9	19.8
12 23	8 31.05	+22 17.5	1.451	2.331	13.7	21.1	12 23	8 32.75	+12 16.6	1.561	2.417	14.3	19.6
1 2	8 24.35	+22 42.0	1.377	2.317	9.3	20.8	1 2	8 24.99	+12 50.9	1.511	2.436	10.0	19.4
1 12	8 14.99	+23 9.8	1.328	2.302	4.4	20.5	1 12	8 15.09	+13 38.6	1.486	2.454	5.3	19.1
1 22	8 4.07	+23 35.4	1.305	2.287	1.8	20.3	1 22	8 4.15	+14 34.9	1.490	2.471	2.3	19.0
2 1	7 53.13	+23 53.8	1.309	2.273	6.8	20.6	2 1	7 53.54	+15 34.1	1.522	2.487	5.8	19.3
2 11	7 43.78	+24 2.0	1.340	2.259	11.8	20.8	2 11	7 44.56	+16 30.8	1.582	2.503	10.2	19.5
2 21	7 37.24	+23 59.9	1.392	2.245	16.3	21.1	2 21	7 38.11	+17 21.2	1.667	2.518	14.1	19.8
<b>7286</b>	1990 <i>QZ</i> <sub>4</sub>		1 20.3 78°25	2°1/21.7	18		<b>256228</b>	2006 <i>VY</i> <sub>146</sub>		1 20.3 138°01	0°2/20.4	18	
12 13	8 30.69	+10 23.3	2.320	3.071	13.7	17.3	12 13	8 35.09	+17 15.0	2.170	2.937	14.0	21.2
12 23	8 26.52	+10 54.9	2.245	3.092	10.9	17.1	12 23	8 30.21	+17 42.1	2.088	2.948	11.0	21.0
1 2	8 20.38	+11 39.6	2.193	3.112	7.7	16.9	1 2	8 23.02	+18 18.1	2.029	2.960	7.4	20.8
1 12	8 12.82	+12 35.2	2.168	3.132	4.2	16.7	1 12	8 14.12	+18 59.8	1.998	2.970	3.5	20.6
1 22	8 4.58	+13 38.1	2.173	3.152	2.1	16.6	1 22	8 4.37	+19 43.3	1.997	2.980	0.7	20.4
2 1	7 56.53	+14 43.8	2.208	3.172	4.4	16.8	2 1	7 54.79	+20 24.3	2.026	2.990	4.8	20.7
2 11	7 49.51	+15 48.2	2.273	3.192	7.7	17.1	2 11	7 46.41	+21 0.0	2.084	2.999	8.5	21.0
2 21	7 44.17	+16 47.8	2.365	3.212	10.6	17.3	2 21	7 39.98	+21 28.5	2.169	3.007	11.8	21.2
<b>305043</b>	2007 <i>UP</i> <sub>1</sub>		1 20.3 78°37	3°0/19.1	18		<b>338072</b>	2002 <i>PM</i> <sub>32</sub>		1 20.3 145°80	1°0/20.7	15	
12 13	8 38.49	+25 28.3	1.578	2.374	17.2	21.0	12 13	8 40.13	+16 27.2	1.830	2.596	16.3	22.5
12 23	8 33.73	+26 7.1	1.514	2.392	13.4	20.8	12 23	8 34.51	+16 34.6	1.750	2.609	12.9	22.3
1 2	8 25.77	+26 50.1	1.472	2.409	9.1	20.6	1 2	8 26.09	+16 51.9	1.692	2.621	8.8	22.0
1 12	8 15.44	+27 30.6	1.455	2.426	4.7	20.3	1 12	8 15.59	+17 16.3	1.661	2.632	4.3	21.8
1 22	8 4.04	+28 2.0	1.465	2.443	3.4	20.3	1 22	8 4.06	+17 44.0	1.659	2.642	1.2	21.6
2 1	7 53.11	+28 19.9	1.504	2.460	7.1	20.6	2 1	7 52.80	+18 11.1	1.687	2.651	5.5	21.9
2 11	7 44.09	+28 23.1	1.569	2.477	11.2	20.8	2 11	7 43.07	+18 34.6	1.743	2.659	9.8	22.2
2 21	7 37.91	+28 13.4	1.657	2.494	14.9	21.1	2 21	7 35.76	+18 53.0	1.825	2.667	13.5	22.4
<b>14028</b>	Nakamurahiroshi		1 20.3 69°62	2°9/21.6	18		<b>174256</b>	2002 <i>RS</i> <sub>200</sub>		1 20.3 140°14	0°5/20.0	18	
12 13	8 34.84	+11 21.2	1.633	2.404	17.8	18.1	12 13	8 35.06	+18 35.3	1.979	2.755	14.9	20.6
12 23	8 30.47	+11 22.7	1.570	2.427	14.2	17.9	12 23	8 30.49	+19 13.2	1.897	2.763	11.7	20.4
1 2	8 23.35	+11 39.6	1.526	2.450	10.0	17.7	1 2	8 23.38	+20 0.7	1.838	2.771	7.8	20.2
1 12	8 14.27	+12 10.1	1.508	2.473	5.6	17.5	1 12	8 14.34	+20 53.5	1.805	2.779	3.6	19.9
1 22	8 4.30	+12 50.7	1.516	2.496	2.9	17.4	1 22	8 4.32	+21 46.6	1.802	2.786	1.0	19.8
2 1	7 54.72	+13 36.6	1.554	2.518	5.8	17.6	2 1	7 54.44	+22 35.0	1.829	2.792	5.3	20.1
2 11	7 46.74	+14 22.9	1.618	2.541	9.9	17.9	2 11	7 45.87	+23 15.2	1.885	2.799	9.3	20.3
2 21	7 41.17	+15 5.9	1.707	2.563	13.6	18.2	2 21	7 39.46	+23 45.6	1.966	2.804	12.8	20.6
<b>430555</b>	2002 <i>JT</i> <sub>67</sub>		1 20.3 118°65	19°4/ 8.7	16		<b>114486</b>	2003 <i>AJ</i> <sub>57</sub>		1 20.3 218°46	1°5/19.1	18	
12 13	8 53.13	+52 37.5	1.146	1.932	23.0	20.5	12 13	8 30.70	+21 54.7	2.780	3.552	11.2	20.0
12 23	8 50.68	+56 10.6	1.108	1.935	21.0	20.4	12 23	8 26.53	+22 49.2	2.681	3.547	8.7	19.8
1 2	8 40.84	+59 24.8	1.089	1.937	19.7	20.3	1 2	8 20.46	+23 49.7	2.608	3.541	5.8	19.6
1 12	8 23.79	+61 55.1	1.088	1.940	19.5	20.3	1 12	8 12.94	+24 52.6	2.563	3.535	2.8	19.4
1 22	8 2.13	+63 21.6	1.107	1.943	20.4	20.4	1 22	8 4.61	+25 53.5	2.549	3.529	1.8	19.3
2 1	7 40.79	+63 37.0	1.142	1.945	22.1	20.5	2 1	7 56.26	+26 48.3	2.566	3.522	4.6	19.5
2 11	7 24.78	+62 50.7	1.193	1.947	24.1	20.7	2 11	7 48.71	+27 34.2	2.614	3.515	7.6	19.7
2 21	7 16.49	+61 20.4	1.255	1.950	26.0	20.8	2 21	7 42.65	+28 10.0	2.688	3.508	10.3	19.8
<b>365124</b>	2009 <i>DS</i> <sub>1</sub>		1 20.3 351°02	3°5/21.4	17		<b>122934</b>	2000 <i>SS</i> <sub>185</sub>		1 20.3 68°86	0°7/19.9	18	R
12 13	8 28.64	+13											

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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>523680</b>	2013 YJ <sub>151</sub>		1 20.3	12°43	0°1/19.7	18	<b>54681</b>	2001 AE <sub>49</sub>		1 20.3	100°59	3°4/18.8	18
12 13	8 9.19	+23 2.8	42.217	42.985	0.8	22.0	12 13	8 36.45	+25 37.0	1.638	2.436	16.6	19.5
12 23	8 8.48	+23 3.9	42.126	42.990	0.6	22.0	12 23	8 32.33	+26 27.3	1.561	2.439	13.0	19.3
1 2	8 7.68	+23 5.1	42.062	42.995	0.4	22.0	1 2	8 25.03	+27 23.1	1.506	2.443	8.9	19.0
1 12	8 6.83	+23 6.4	42.028	43.001	0.2	21.9	1 12	8 15.26	+28 17.7	1.476	2.446	4.8	18.8
1 22	8 5.94	+23 7.6	42.024	43.006	0.1	21.9	1 22	8 4.21	+29 3.4	1.473	2.449	3.8	18.7
2 1	8 5.06	+23 8.7	42.051	43.012	0.3	22.0	2 1	7 53.37	+29 34.8	1.499	2.453	7.4	19.0
2 11	8 4.22	+23 9.5	42.109	43.017	0.5	22.0	2 11	7 44.25	+29 49.6	1.551	2.456	11.5	19.2
2 21	8 3.45	+23 10.0	42.194	43.022	0.7	22.0	2 21	7 37.87	+29 49.0	1.625	2.459	15.3	19.5
<b>49458</b>	1999 AH <sub>2</sub>		1 20.3	53°60	2°6/19.2	18	<b>306580</b>	2000 EC <sub>134</sub>		1 20.3	269°35	7°7/15.9	18
12 13	8 35.69	+24 49.3	1.618	2.417	16.7	18.4	12 13	8 39.44	+37 30.6	1.948	2.733	14.8	20.2
12 23	8 31.56	+25 22.5	1.548	2.427	13.1	18.1	12 23	8 34.96	+38 53.4	1.853	2.713	12.2	19.9
1 2	8 24.35	+26 0.6	1.500	2.438	8.8	17.9	1 2	8 27.09	+40 14.5	1.781	2.693	9.6	19.7
1 12	8 14.85	+26 37.4	1.477	2.449	4.5	17.7	1 12	8 16.38	+41 24.5	1.735	2.673	7.9	19.6
1 22	8 4.24	+27 7.0	1.481	2.460	3.0	17.6	1 22	8 3.94	+42 13.9	1.716	2.652	8.1	19.6
2 1	7 53.99	+27 25.0	1.513	2.472	6.8	17.9	2 1	7 51.38	+42 36.6	1.724	2.631	10.3	19.6
2 11	7 45.50	+27 29.7	1.572	2.483	11.0	18.1	2 11	7 40.41	+42 31.7	1.757	2.610	13.3	19.8
2 21	7 39.69	+27 22.2	1.654	2.495	14.7	18.4	2 21	7 32.32	+42 2.8	1.811	2.588	16.2	19.9
<b>262386</b>	2006 UD <sub>1</sub>		1 20.3	164°94	7°3/24.1	18	<b>282828</b>	2006 SL <sub>405</sub>		1 20.3	167°94	0°0/20.3	17
12 13	8 32.67	- 0 43.4	2.117	2.822	16.2	20.7	12 13	8 30.71	+18 43.3	2.922	3.684	10.9	21.7
12 23	8 28.36	- 1 24.1	2.028	2.825	13.8	20.5	12 23	8 26.28	+19 2.3	2.829	3.688	8.5	21.6
1 2	8 21.83	- 1 46.6	1.959	2.829	11.2	20.3	1 2	8 20.15	+19 26.8	2.760	3.690	5.7	21.4
1 12	8 13.61	- 1 48.4	1.914	2.831	8.7	20.2	1 12	8 12.77	+19 54.6	2.721	3.693	2.7	21.2
1 22	8 4.51	- 1 29.0	1.895	2.834	7.3	20.1	1 22	8 4.75	+20 23.2	2.712	3.695	0.6	21.0
2 1	7 55.48	- 0 50.1	1.904	2.835	7.9	20.1	2 1	7 56.81	+20 49.9	2.734	3.697	3.7	21.3
2 11	7 47.52	+ 0 4.1	1.941	2.837	10.1	20.3	2 11	7 49.69	+21 12.9	2.786	3.699	6.7	21.5
2 21	7 41.41	+ 1 7.9	2.002	2.838	12.7	20.4	2 21	7 43.95	+21 31.0	2.866	3.700	9.4	21.6
<b>341599</b>	2007 UC <sub>104</sub>		1 20.3	189°45	3°3/22.2	18	<b>4773</b>	Hayakawa		1 20.3	355°12	3°2/18.9	18
12 13	8 30.03	+ 8 54.7	2.554	3.296	12.8	21.4	12 13	8 32.45	+24 40.0	1.503	2.313	17.3	16.6
12 23	8 25.94	+ 8 38.3	2.459	3.295	10.4	21.2	12 23	8 29.50	+25 26.3	1.425	2.310	13.6	16.4
1 2	8 20.01	+ 8 32.6	2.386	3.295	7.7	21.0	1 2	8 23.29	+26 19.8	1.367	2.308	9.2	16.1
1 12	8 12.71	+ 8 37.6	2.340	3.294	4.9	20.9	1 12	8 14.53	+27 13.7	1.334	2.306	4.8	15.9
1 22	8 4.71	+ 8 52.2	2.323	3.294	3.3	20.7	1 22	8 4.39	+28 0.5	1.327	2.305	3.6	15.8
2 1	7 56.77	+ 9 14.6	2.336	3.293	4.8	20.8	2 1	7 54.41	+28 34.0	1.347	2.305	7.5	16.0
2 11	7 49.70	+ 9 42.1	2.378	3.292	7.6	21.0	2 11	7 46.15	+28 51.3	1.392	2.305	12.0	16.3
2 21	7 44.13	+10 12.1	2.446	3.291	10.4	21.2	2 21	7 40.72	+28 53.0	1.459	2.306	16.0	16.5
<b>164845</b>	1999 TT <sub>149</sub>		1 20.3	59°13	2°2/19.4	18	<b>27485</b>	2000 GO <sub>94</sub>		1 20.3	165°95	0°4/19.9	18
12 13	8 37.53	+23 22.8	1.447	2.249	18.2	20.1	12 13	8 31.14	+18 40.8	2.591	3.359	12.0	18.8
12 23	8 33.14	+23 54.2	1.388	2.269	14.2	19.9	12 23	8 26.91	+19 21.9	2.500	3.362	9.4	18.6
1 2	8 25.44	+24 31.8	1.350	2.289	9.5	19.7	1 2	8 20.73	+20 10.6	2.433	3.365	6.3	18.4
1 12	8 15.34	+25 9.4	1.336	2.310	4.6	19.4	1 12	8 13.11	+21 3.7	2.394	3.367	2.9	18.2
1 22	8 4.18	+25 40.6	1.350	2.331	2.6	19.4	1 22	8 4.70	+21 57.1	2.386	3.369	0.8	18.1
2 1	7 53.56	+26 0.5	1.391	2.352	6.9	19.7	2 1	7 56.35	+22 47.2	2.409	3.371	4.3	18.3
2 11	7 44.96	+26 7.7	1.458	2.373	11.4	20.0	2 11	7 48.90	+23 30.9	2.461	3.372	7.6	18.5
2 21	7 39.29	+26 3.2	1.547	2.394	15.2	20.3	2 21	7 43.03	+24 6.5	2.540	3.373	10.4	18.7
<b>186986</b>	2004 SQ <sub>48</sub>		1 20.3	111°02	1°2/19.5	18	<b>34052</b>	2000 OL <sub>37</sub>		1 20.3	78°80	6°7/24.9	18
12 13	8 35.39	+20 45.3	2.559	3.323	12.2	20.7	12 13	8 30.88	- 2 0.0	1.923	2.634	17.4	17.5
12 23	8 30.05	+21 38.2	2.488	3.349	9.5	20.5	12 23	8 27.20	- 1 47.1	1.839	2.642	14.8	17.4
1 2	8 22.71	+22 36.9	2.442	3.373	6.3	20.4	1 2	8 21.18	- 1 9.5	1.774	2.651	11.8	17.2
1 12	8 13.93	+23 37.2	2.425	3.398	2.9	20.2	1 12	8 13.38	- 0 6.0	1.732	2.659	8.7	17.0
1 22	8 4.47	+24 34.4	2.440	3.421	1.5	20.1	1 22	8 4.66	+ 1 21.1	1.717	2.668	6.8	16.9
2 1	7 55.21	+25 24.8	2.486	3.444	4.5	20.4	2 1	7 56.05	+ 3 6.6	1.730	2.676	7.3	17.0
2 11	7 47.03	+26 5.8	2.563	3.466	7.7	20.6	2 11	7 48.59	+ 5 2.5	1.772	2.685	9.9	17.1
2 21	7 40.57	+26 36.8	2.666	3.487	10.4	20.8	2 21	7 43.11	+ 7 0.3	1.840	2.693	12.9	17.3
<b>491879</b>	2013 BJ <sub>31</sub>		1 20.3	263°12	2°6/18.8	17	<b>101813</b>	Elizabethmarston		1 20.3	101°37	17°8/11.5	18
12 13	8 35.23	+21 31.0	1.684	2.477	16.4	21.7	12 13	8 54.81	+50 52.1	1.186	1.970	22.5	18.8
12 23	8 31.60	+22 42.9	1.584	2.460	13.0	21.4	12 23	8 50.97	+54 5.1	1.152	1.982	20.1	18.7
1 2	8 24.80	+24 8.3	1.505	2.443	8.8	21.1	1 2	8 40.19	+56 58.9	1.137	1.994	18.4	18.6
1 12	8 15.31	+25 40.5	1.453	2.425	4.4	20.8	1 12	8 23.16	+59 10.4	1.141	2.006	17.8	18.6
1 22	8 4.13	+27 10.8	1.428	2.407	3.1	20.7	1 22	8 2.58	+60 22.1	1.166	2.018	18.5	18.7
2 1	7 52.68	+28 30.3	1.433	2.389	7.4	20.9	2 1	7 42.82	+60 28.7	1.209	2.029	20.1	18.9
2 11	7 42.59	+29 33.0	1.465	2.370	12.0	21.1	2 11	7 27.95	+59 39.7	1.269	2.040	22.1	19.0
2 21	7 35.14	+30 16.9	1.519	2.352	16.2	21.3	2 21	7 19.85	+58 11.7	1.343	2.051	24.0	19.2
<b>339030</b>	2004 HL <sub>36</sub>		1 20.3	302°40	6°5/17.7	18	<b>183421</b>	2003 AX <sub>17</sub>		1 20.3	28°11	6°7/16.5	18
12 13	8 37.01	+30 33.1	1.332	2.147	18.8	20.2	12 13	8 34.17	+30 33.3	1.531	2.341	17.0	19.3
12 23	8 33.96	+31 41.3	1.250	2.135	15.1	20.0	12 23	8 31.04	+32 23.6	1.465	2.347	13.5	19.1
1 2	8 26.86	+32 53.6	1.187	2.123	10.9	19.7	1 2	8 24.46	+34 17.9	1.422	2.354	9.8	18.9
1 12	8 16.38	+33 59.5	1.148	2.111	7.3	19.5	1 12	8 15.12	+36 4.7	1.404	2.361	7.1	18.7
1 22	8 3.91	+34 47.8	1.134	2.100	7.0	19.4	1 22	8 4.28	+37 32.8	1.412	2.369	7.3	18.8
2 1	7 51.47	+35 10.4	1.145	2.089	10.5	19.6	2 1	7 53.62	+38 34.3	1.448	2.377	10.1	18.9
2 11	7 41.18	+35 5.5	1.180	2.078	15.0	19.8	2 11	7 44.83	+39 7.1	1.507	2.386	13.6	19.2
2 21	7 34.51	+34 37.3	1.234	2.068	19.2	20.0	2 21	7 39.08	+39 14.0	1.587	2.395	16.8	19.4
<b>236069</b>	2005 JZ <sub>98</sub>		1 20.3	280°63	4°5/17.8	18	<b>323778</b>	2005 QY <sub>55</sub>		1 20.3	98°59	2°6/21.8	18
12 13	8 34.50	+31 43.2	2.243	3.029	13.1	20.7	12 13	8 34.18	+10 37.6	2.070	2.823</		

EPHEMERIDES

1 20.3

1 20.3

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>127769</b>	2003 <i>FB</i> <sub>47</sub>		1 20.3 91°46	2°6/19.1	18		<b>112461</b>	2002 <i>OX</i> <sub>12</sub>		1 20.3 55°20	1°9/19.6	18	
12 13	8 35.81	+25 32.3	1.921	2.709	14.8	20.2	12 13	8 38.55	+26 10.5	1.958	2.740	14.8	17.8
12 23	8 31.23	+26 7.7	1.846	2.719	11.6	20.0	12 23	8 32.98	+26 8.4	1.896	2.765	11.5	17.6
1 2	8 23.95	+26 46.7	1.793	2.729	7.9	19.8	1 2	8 24.85	+26 6.9	1.857	2.791	7.7	17.4
1 12	8 14.67	+27 23.9	1.767	2.738	4.1	19.6	1 12	8 14.97	+26 2.3	1.844	2.816	3.8	17.2
1 22	8 4.41	+27 54.0	1.770	2.748	2.9	19.5	1 22	8 4.43	+25 51.4	1.861	2.841	2.2	17.2
2 1	7 54.42	+28 13.0	1.802	2.757	6.2	19.8	2 1	7 54.41	+25 32.8	1.908	2.867	5.5	17.4
2 11	7 45.90	+28 19.6	1.861	2.766	9.9	20.0	2 11	7 46.00	+25 6.8	1.983	2.893	9.2	17.7
2 21	7 39.72	+28 14.5	1.945	2.776	13.3	20.2	2 21	7 39.92	+24 34.9	2.083	2.918	12.3	18.0
<b>330966</b>	2009 <i>SB</i> <sub>349</sub>		1 20.3 143°48	1°1/19.8	18		<b>430040</b>	2013 <i>RH</i> <sub>83</sub>		1 20.3 15°03	7°1/18.0	18	
12 13	8 34.26	+21 36.9	2.107	2.887	14.0	21.8	12 13	8 39.63	+38 0.8	1.722	2.514	16.2	20.6
12 23	8 29.78	+22 1.2	2.022	2.891	10.9	21.6	12 23	8 34.88	+38 34.1	1.653	2.518	13.2	20.4
1 2	8 22.88	+22 31.3	1.960	2.894	7.4	21.4	1 2	8 26.70	+38 59.8	1.605	2.523	10.0	20.2
1 12	8 14.16	+23 3.5	1.925	2.898	3.4	21.2	1 12	8 16.01	+39 9.9	1.581	2.528	7.6	20.1
1 22	8 4.52	+23 33.6	1.919	2.902	1.4	21.0	1 22	8 4.20	+38 58.2	1.584	2.534	7.3	20.1
2 1	7 55.04	+23 57.9	1.943	2.905	5.2	21.3	2 1	7 52.94	+38 22.5	1.613	2.541	9.4	20.2
2 11	7 46.79	+24 14.3	1.996	2.908	9.0	21.5	2 11	7 43.76	+37 25.6	1.668	2.548	12.4	20.4
2 21	7 40.59	+24 22.2	2.074	2.911	12.3	21.7	2 21	7 37.61	+36 12.9	1.746	2.556	15.4	20.6
<b>180036</b>	2003 <i>AD</i> <sub>63</sub>		1 20.3 312°39	0°2/20.2	18		<b>254683</b>	2005 <i>MD</i> <sub>4</sub>		1 20.3 165°11	2°2/21.4	18	
12 13	8 32.80	+18 34.7	1.766	2.554	16.0	20.4	12 13	8 34.28	+12 50.0	2.050	2.810	15.0	21.8
12 23	8 29.18	+18 59.1	1.677	2.550	12.6	20.2	12 23	8 29.77	+12 51.5	1.961	2.814	12.0	21.6
1 2	8 22.78	+19 33.7	1.610	2.546	8.5	20.0	1 2	8 22.88	+13 4.7	1.894	2.817	8.4	21.4
1 12	8 14.23	+20 14.9	1.569	2.543	4.0	19.7	1 12	8 14.19	+13 27.9	1.853	2.819	4.6	21.2
1 22	8 4.49	+20 57.8	1.556	2.539	0.9	19.4	1 22	8 4.56	+13 58.7	1.841	2.822	2.2	21.0
2 1	7 54.84	+21 37.5	1.571	2.536	5.7	19.8	2 1	7 55.04	+14 33.6	1.860	2.824	5.1	21.2
2 11	7 46.54	+22 10.2	1.613	2.532	10.2	20.0	2 11	7 46.70	+15 9.1	1.906	2.825	8.9	21.5
2 21	7 40.59	+22 34.1	1.679	2.529	14.1	20.2	2 21	7 40.36	+15 42.2	1.978	2.826	12.3	21.7
<b>14155</b>	<i>Cibronen</i>		1 20.3 18°87	2°9/21.3	18		<b>282467</b>	2004 <i>FS</i> <sub>56</sub>		1 20.3 230°44	4°0/18.5	18	
12 13	8 33.51	+13 53.5	1.250	2.051	20.5	17.6	12 13	8 39.65	+27 9.3	1.746	2.535	16.1	21.0
12 23	8 30.56	+13 35.5	1.177	2.054	16.5	17.3	12 23	8 34.97	+28 3.0	1.652	2.525	12.8	20.8
1 2	8 24.11	+13 33.0	1.124	2.058	11.6	17.0	1 2	8 27.00	+29 2.0	1.580	2.514	8.9	20.5
1 12	8 14.94	+13 45.0	1.092	2.062	6.3	16.7	1 12	8 16.33	+29 58.9	1.534	2.502	5.1	20.2
1 22	8 4.36	+14 8.3	1.085	2.066	2.9	16.6	1 22	8 4.09	+30 45.8	1.516	2.489	4.3	20.2
2 1	7 54.05	+14 38.3	1.104	2.071	7.0	16.8	2 1	7 51.81	+31 16.4	1.527	2.476	7.8	20.3
2 11	7 45.68	+15 9.8	1.147	2.077	12.2	17.1	2 11	7 41.11	+31 28.4	1.565	2.462	12.0	20.6
2 21	7 40.38	+15 38.9	1.211	2.084	16.9	17.4	2 21	7 33.19	+31 23.3	1.625	2.448	15.8	20.8
<b>173394</b>	2000 <i>CP</i> <sub>137</sub>		1 20.3 129°17	0°9/20.8	18		<b>148083</b>	1999 <i>CZ</i> <sub>11</sub>		1 20.3 34°86	6°4/20.5	16	
12 13	8 35.45	+15 22.0	2.167	2.928	14.2	21.3	12 13	8 59.33	+37 7.4	0.916	1.728	25.5	18.5
12 23	8 30.46	+15 45.7	2.087	2.944	11.2	21.1	12 23	8 52.43	+36 17.5	0.855	1.735	20.7	18.2
1 2	8 23.20	+16 19.5	2.031	2.958	7.7	20.9	1 2	8 39.45	+35 9.2	0.810	1.743	15.0	17.9
1 12	8 14.27	+17 0.6	2.002	2.973	3.7	20.7	1 12	8 22.01	+33 31.1	0.786	1.752	9.1	17.6
1 22	8 4.51	+17 45.1	2.003	2.986	1.0	20.5	1 22	8 3.04	+31 19.0	0.786	1.762	6.5	17.5
2 1	7 54.96	+18 29.0	2.035	2.999	4.7	20.8	2 1	7 45.91	+28 40.8	0.812	1.772	10.7	17.8
2 11	7 46.60	+19 9.0	2.096	3.012	8.4	21.1	2 11	7 33.22	+25 52.9	0.862	1.782	16.5	18.1
2 21	7 40.19	+19 43.0	2.183	3.023	11.6	21.3	2 21	7 25.94	+23 11.0	0.932	1.794	21.6	18.5
<b>463800</b>	2014 <i>SV</i> <sub>320</sub>		1 20.3 130°89	0°9/19.9	18		<b>37836</b>	1998 <i>BD</i> <sub>44</sub>		1 20.3 9°79	5°0/18.5	18	
12 13	8 36.19	+21 7.3	2.032	2.809	14.5	21.9	12 13	8 36.32	+28 51.1	1.348	2.163	18.6	18.2
12 23	8 31.29	+21 30.0	1.952	2.819	11.4	21.7	12 23	8 32.98	+29 38.2	1.277	2.163	14.8	17.9
1 2	8 23.89	+21 58.9	1.895	2.829	7.6	21.5	1 2	8 25.88	+30 28.1	1.226	2.164	10.3	17.7
1 12	8 14.62	+22 30.1	1.865	2.838	3.5	21.3	1 12	8 15.81	+31 12.0	1.199	2.166	6.2	17.5
1 22	8 4.44	+22 59.3	1.864	2.847	1.3	21.1	1 22	8 4.23	+31 41.5	1.196	2.169	5.4	17.4
2 1	7 54.48	+23 22.9	1.894	2.855	5.3	21.4	2 1	7 52.99	+31 50.7	1.220	2.172	9.0	17.6
2 11	7 45.86	+23 38.6	1.951	2.864	9.1	21.6	2 11	7 43.90	+31 39.2	1.268	2.175	13.4	17.9
2 21	7 39.40	+23 46.2	2.034	2.871	12.5	21.9	2 21	7 38.14	+31 10.3	1.337	2.179	17.4	18.1
<b>400203</b>	2007 <i>AW</i> <sub>24</sub>		1 20.3 50°88	1°5/19.9	18		<b>188295</b>	2003 <i>CE</i> <sub>3</sub>		1 20.3 323°07	2°6/21.5	18	
12 13	8 42.50	+24 56.2	1.466	2.260	18.4	20.5	12 13	8 29.90	+12 18.6	1.607	2.392	17.4	20.0
12 23	8 36.67	+24 41.0	1.414	2.290	14.3	20.4	12 23	8 27.20	+12 21.5	1.513	2.380	14.1	19.8
1 2	8 27.56	+24 27.9	1.383	2.320	9.6	20.2	1 2	8 21.64	+12 40.1	1.438	2.367	10.0	19.5
1 12	8 16.24	+24 12.4	1.376	2.350	4.5	19.9	1 12	8 13.80	+13 13.5	1.388	2.356	5.6	19.2
1 22	8 4.16	+23 51.4	1.398	2.380	1.9	19.8	1 22	8 4.63	+13 58.5	1.364	2.344	2.6	19.0
2 1	7 52.92	+23 23.6	1.447	2.411	6.4	20.2	2 1	7 55.42	+14 50.2	1.367	2.334	6.1	19.2
2 11	7 43.88	+23 49.9	1.524	2.441	10.8	20.5	2 11	7 47.54	+15 43.3	1.396	2.323	10.7	19.4
2 21	7 37.84	+22 12.4	1.624	2.472	14.6	20.8	2 21	7 42.06	+16 32.8	1.449	2.314	15.0	19.7
<b>271739</b>	2004 <i>RB</i> <sub>302</sub>		1 20.3 179°72	2°4/19.1	18		<b>57093</b>	2001 <i>OM</i> <sub>46</sub>		1 20.3 115°75	0°5/20.5	18	
12 13	8 35.01	+25 27.7	2.129	2.912	13.7	21.3	12 13	8 40.42	+18 15.8	1.693	2.469	17.0	19.6
12 23	8 30.46	+26 1.8	2.042	2.913	10.8	21.0	12 23	8 34.91	+18 17.5	1.622	2.487	13.4	19.4
1 2	8 23.39	+26 39.3	1.979	2.913	7.3	20.8	1 2	8 26.46	+18 27.8	1.572	2.504	9.1	19.2
1 12	8 14.43	+27 15.6	1.943	2.913	3.8	20.6	1 12	8 15.85	+18 43.5	1.548	2.520	4.3	18.9
1 22	8 4.48	+27 45.8	1.936	2.913	2.7	20.5	1 22	8 4.25	+19 0.8	1.552	2.536	0.9	18.7
2 1	7 54.67	+28 6.0	1.958	2.913	5.8	20.7	2 1	7 53.06	+19 16.0	1.586	2.551	5.7	19.1
2 11	7 46.13	+28 14.7	2.009	2.912	9.4	21.0	2 11	7 43.57	+19 26.9	1.648	2.565	10.1	19.4
2 21	7 39.70	+28 12.4	2.085	2.912	12.6	21.2	2 21	7 36.69	+19 32.7	1.734	2.579	13.9	19.6
<b>363929</b>	2005 <i>TF</i> <sub>6</sub>		1 20.3 137°57	2°6/21.7	18		<b>348226</b>	2004 <i>RO</i> <sub>221</sub>		1 20.3 170°07	9°7/26.9	18	
12 13	8 35.14	+10 59.5											

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1 20.3

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>61900</b>	2000 <i>QQ</i> <sub>228</sub>		1 20.3 338°18	1.0°/20.7	18		<b>492628</b>	2014 <i>OH</i> <sub>290</sub>		1 20.3 286°08	5°0'/18.1	18	
12 13	8 30.63	+16 56.8	1.551	2.349	17.4	19.0	12 13	8 36.26	+27 56.9	1.527	2.333	17.3	21.2
12 23	8 27.86	+16 58.0	1.462	2.339	13.8	18.8	12 23	8 32.91	+29 0.5	1.434	2.315	13.8	20.9
1 2	8 22.12	+17 10.6	1.393	2.330	9.5	18.5	1 2	8 25.98	+30 10.7	1.361	2.298	9.7	20.6
1 12	8 14.02	+17 32.2	1.349	2.321	4.7	18.2	1 12	8 16.03	+31 19.2	1.313	2.280	5.9	20.4
1 22	8 4.61	+17 59.1	1.330	2.314	1.2	17.9	1 22	8 4.23	+32 16.1	1.292	2.263	5.4	20.3
2 1	7 55.25	+18 26.9	1.339	2.307	6.0	18.2	2 1	7 52.28	+32 53.8	1.297	2.245	9.0	20.4
2 11	7 47.37	+18 51.9	1.374	2.301	10.9	18.5	2 11	7 42.05	+33 8.8	1.328	2.228	13.5	20.6
2 21	7 42.03	+19 11.4	1.431	2.295	15.2	18.7	2 21	7 34.90	+33 2.9	1.379	2.210	17.6	20.8
<b>40605</b>	1999 <i>RA</i> <sub>155</sub>		1 20.3 53°42	3°2'/21.9	18		<b>466462</b>	2013 <i>TY</i> <sub>121</sub>		1 20.3 113°14	4°6'/17.6	18	
12 13	8 31.32	+10 15.0	1.939	2.701	15.7	19.1	12 13	8 35.69	+32 33.9	2.361	3.142	12.6	21.7
12 23	8 27.57	+10 10.4	1.855	2.706	12.6	18.9	12 23	8 30.85	+33 30.4	2.287	3.151	10.0	21.5
1 2	8 21.45	+10 19.6	1.792	2.710	9.1	18.6	1 2	8 23.59	+34 25.7	2.237	3.161	7.3	21.4
1 12	8 13.55	+10 42.1	1.754	2.715	5.4	18.4	1 12	8 14.54	+35 13.6	2.215	3.170	5.1	21.3
1 22	8 4.73	+11 15.5	1.743	2.720	3.2	18.3	1 22	8 4.59	+35 48.9	2.222	3.180	4.9	21.3
2 1	7 56.04	+11 56.3	1.762	2.725	5.5	18.5	2 1	7 54.86	+36 8.2	2.258	3.189	6.9	21.4
2 11	7 48.54	+12 40.4	1.808	2.730	9.1	18.7	2 11	7 46.40	+36 10.9	2.322	3.197	9.6	21.6
2 21	7 43.04	+13 23.9	1.880	2.735	12.6	18.9	2 21	7 40.02	+35 58.9	2.410	3.206	12.1	21.8
<b>244996</b>	2004 <i>BK</i> <sub>152</sub>		1 20.3 157°57	0°8'/19.9	18		<b>424298</b>	2007 <i>TV</i> <sub>263</sub>		1 20.3 90°00	4°5'/18.1	18	
12 13	8 33.50	+22 19.7	2.393	3.168	12.7	20.6	12 13	8 36.75	+33 17.1	2.310	3.091	12.9	20.6
12 23	8 28.89	+22 27.5	2.303	3.169	9.9	20.5	12 23	8 31.68	+33 51.0	2.233	3.097	10.3	20.5
1 2	8 22.14	+22 38.9	2.237	3.170	6.7	20.3	1 2	8 24.13	+34 22.2	2.179	3.103	7.4	20.3
1 12	8 13.81	+22 51.2	2.199	3.172	3.1	20.0	1 12	8 14.78	+34 45.2	2.152	3.109	5.1	20.2
1 22	8 4.69	+23 1.3	2.190	3.173	1.2	19.9	1 22	8 4.56	+34 55.4	2.155	3.115	4.7	20.1
2 1	7 55.72	+23 7.0	2.212	3.174	4.6	20.1	2 1	7 54.63	+34 50.3	2.186	3.121	6.8	20.3
2 11	7 47.84	+23 7.0	2.263	3.175	8.1	20.3	2 11	7 46.06	+34 30.1	2.245	3.127	9.6	20.5
2 21	7 41.75	+23 1.0	2.340	3.176	11.1	20.5	2 21	7 39.64	+33 57.3	2.329	3.133	12.2	20.6
<b>287606</b>	2003 <i>GD</i> <sub>36</sub>		1 20.3 266°36	0°0'/20.3	18		<b>270607</b>	2002 <i>NO</i> <sub>68</sub>		1 20.3 80°33	0°4'/20.6	18	
12 13	8 32.10	+16 15.6	2.028	2.803	14.6	20.4	12 13	8 31.33	+15 48.9	2.133	2.906	14.1	20.9
12 23	8 28.42	+17 4.0	1.924	2.789	11.6	20.2	12 23	8 27.43	+16 27.6	2.051	2.915	11.1	20.7
1 2	8 22.23	+18 5.8	1.843	2.775	7.9	19.9	1 2	8 21.30	+17 17.3	1.992	2.923	7.5	20.5
1 12	8 14.03	+19 17.3	1.788	2.761	3.7	19.6	1 12	8 13.49	+18 14.7	1.960	2.932	3.6	20.2
1 22	8 4.62	+20 33.2	1.763	2.747	0.8	19.4	1 22	8 4.82	+19 15.2	1.958	2.941	0.7	20.0
2 1	7 55.07	+21 47.5	1.768	2.732	5.3	19.7	2 1	7 56.28	+20 14.0	1.985	2.950	4.7	20.3
2 11	7 46.58	+22 54.8	1.801	2.717	9.5	19.9	2 11	7 48.85	+21 7.2	2.042	2.959	8.5	20.6
2 21	7 40.10	+23 51.7	1.860	2.703	13.3	20.1	2 21	7 43.29	+21 52.2	2.124	2.968	11.8	20.8
<b>331706</b>	2002 <i>RN</i> <sub>92</sub>		1 20.3 140°15	2°4'/21.9	18		<b>417193</b>	2005 <i>WS</i> <sub>186</sub>		1 20.3 77°94	0°6'/20.6	18	
12 13	8 31.12	+ 9 48.7	2.942	3.675	11.5	22.2	12 13	8 35.28	+18 0.3	1.872	2.651	15.6	21.3
12 23	8 26.50	+ 9 55.5	2.854	3.688	9.2	22.0	12 23	8 30.69	+18 0.6	1.798	2.664	12.2	21.1
1 2	8 20.26	+10 12.2	2.790	3.701	6.6	21.9	1 2	8 23.53	+18 8.9	1.746	2.678	8.3	20.9
1 12	8 12.87	+10 37.7	2.754	3.713	4.0	21.7	1 12	8 14.52	+18 22.6	1.720	2.692	3.9	20.7
1 22	8 4.90	+11 10.2	2.749	3.724	2.4	21.6	1 22	8 4.63	+18 38.5	1.723	2.706	0.9	20.5
2 1	7 57.04	+11 47.4	2.775	3.735	3.9	21.7	2 1	7 55.04	+18 53.5	1.755	2.720	5.1	20.8
2 11	7 49.98	+12 26.5	2.831	3.745	6.6	21.9	2 11	7 46.88	+19 5.4	1.814	2.734	9.2	21.1
2 21	7 44.25	+13 5.1	2.915	3.755	9.1	22.1	2 21	7 40.94	+19 12.8	1.899	2.748	12.8	21.3
<b>247444</b>	2002 <i>ED</i> <sub>134</sub>		1 20.3 197°56	2°5'/21.6	18		<b>235562</b>	2004 <i>GW</i> <sub>1</sub>		1 20.3 292°66	3°7'/18.8	18	
12 13	8 31.75	+11 49.5	2.074	2.836	14.8	20.9	12 13	8 35.53	+24 46.3	1.370	2.181	18.6	20.1
12 23	8 27.82	+11 50.6	1.983	2.835	11.9	20.7	12 23	8 32.60	+25 36.6	1.278	2.164	14.8	19.8
1 2	8 21.60	+12 3.9	1.913	2.835	8.4	20.5	1 2	8 25.92	+26 36.5	1.207	2.148	10.2	19.5
1 12	8 13.63	+12 28.5	1.870	2.834	4.8	20.2	1 12	8 16.06	+27 38.5	1.159	2.131	5.4	19.2
1 22	8 4.74	+13 1.7	1.855	2.834	2.5	20.1	1 22	8 4.25	+28 33.5	1.137	2.115	4.1	19.1
2 1	7 55.92	+13 40.4	1.869	2.833	5.1	20.2	2 1	7 52.29	+29 12.9	1.141	2.098	8.6	19.3
2 11	7 48.20	+14 20.6	1.911	2.832	8.8	20.5	2 11	7 42.16	+29 32.8	1.169	2.082	13.8	19.5
2 21	7 42.39	+14 59.2	1.979	2.831	12.2	20.7	2 21	7 35.31	+29 33.9	1.219	2.067	18.4	19.8
<b>111186</b>	2001 <i>WA</i> <sub>8</sub>		1 20.3 144°44	0°9'/19.8	18		<b>292390</b>	2006 <i>SB</i> <sub>268</sub>		1 20.3 181°55	0°8'/19.8	17	
12 13	8 34.84	+20 15.1	2.265	3.036	13.4	20.4	12 13	8 31.95	+22 14.8	2.926	3.694	10.8	21.8
12 23	8 30.05	+20 54.1	2.181	3.046	10.5	20.2	12 23	8 27.32	+22 31.0	2.832	3.694	8.4	21.7
1 2	8 23.00	+21 40.2	2.122	3.055	7.0	20.0	1 2	8 20.92	+22 50.6	2.762	3.694	5.6	21.5
1 12	8 14.25	+22 29.5	2.090	3.063	3.2	19.8	1 12	8 13.23	+23 11.0	2.722	3.694	2.6	21.3
1 22	8 4.63	+23 17.2	2.089	3.071	1.3	19.6	1 22	8 4.88	+23 29.6	2.711	3.694	1.1	21.2
2 1	7 55.15	+23 59.4	2.118	3.079	4.9	19.9	2 1	7 56.63	+23 44.1	2.733	3.693	4.0	21.4
2 11	7 46.82	+24 33.3	2.176	3.086	8.5	20.1	2 11	7 49.21	+23 53.1	2.784	3.692	6.9	21.6
2 21	7 40.38	+24 57.8	2.260	3.092	11.6	20.3	2 21	7 43.24	+23 56.3	2.862	3.690	9.5	21.7
<b>373862</b>	2003 <i>RK</i> <sub>4</sub>		1 20.3 218°38	3°9'/22.2	17		<b>57706</b>	2001 <i>UJ</i> <sub>116</sub>		1 20.3 311°82	2°0'/19.4	18	
12 13	8 33.21	+ 7 55.6	2.583	3.312	13.0	20.9	12 13	8 33.49	+23 0.5	1.766	2.561	15.7	19.6
12 23	8 28.49	+ 7 25.7	2.477	3.304	10.7	20.7	12 23	8 29.86	+23 34.7	1.677	2.555	12.3	19.4
1 2	8 21.83	+ 7 6.0	2.393	3.295	8.0	20.5	1 2	8 23.36	+24 15.8	1.610	2.548	8.4	19.1
1 12	8 13.69	+ 6 57.0	2.337	3.286	5.3	20.4	1 12	8 14.59	+24 59.0	1.569	2.542	4.1	18.9
1 22	8 4.75	+ 6 58.5	2.310	3.276	3.9	20.3	1 22	8 4.59	+25 38.4	1.555	2.536	2.4	18.7
2 1	7 55.81	+ 7 9.2	2.313	3.266	5.3	20.3	2 1	7 54.64	+26 9.0	1.570	2.530	6.4	19.0
2 11	7 47.72	+ 7 27.1	2.346	3.255	8.0	20.5	2 11	7 46.13	+26 27.9	1.612	2.525	10.6	19.2
2 21	7 41.17	+ 7 49.5	2.406	3.244	10.8	20.6	2 21	7 40.04	+26 34.8	1.677	2.519	14.5	19.4
<b>411590</b>	2011 <i>EY</i> <sub>73</sub>		1 20.3 336°61	9°9'/14.2	16		<b>502089</b>	2015 <i>AJ</i> <sub>241</sub>		1 20.3 21°05	0°9'/20.9	18	
12 13	8 29.74	+35 30											

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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>90278</b>	2003 <i>DH</i> <sub>9</sub>		1 20.3	51°37'	7.6°/16.9	18	<b>204632</b>	2005 <i>XY</i> <sub>114</sub>		1 20.3	168°16'	0.6°/20.0	18
12 13	8 42.11	+43 41.3	2.314	3.077	13.4	19.3	12 13	8 37.95	+20 13.9	2.024	2.796	14.7	21.8
12 23	8 36.17	+44 24.7	2.245	3.083	11.2	19.2	12 23	8 32.79	+20 35.9	1.937	2.801	11.6	21.6
1 2	8 27.28	+44 58.4	2.198	3.088	9.2	19.1	1 2	8 25.02	+21 4.9	1.873	2.805	7.8	21.4
1 12	8 16.25	+45 15.2	2.176	3.094	7.8	19.0	1 12	8 15.28	+21 37.3	1.836	2.808	3.6	21.1
1 22	8 4.30	+45 9.9	2.182	3.100	7.8	19.0	1 22	8 4.51	+22 8.5	1.828	2.811	1.1	20.9
2 1	7 52.82	+44 40.7	2.216	3.107	9.2	19.1	2 1	7 53.90	+22 34.9	1.851	2.813	5.3	21.2
2 11	7 43.14	+43 49.7	2.275	3.113	11.2	19.2	2 11	7 44.61	+22 53.8	1.902	2.815	9.3	21.5
2 21	7 36.08	+42 42.0	2.357	3.119	13.4	19.4	2 21	7 37.52	+23 4.7	1.979	2.815	12.8	21.7
<b>433073</b>	2012 <i>TV</i> <sub>48</sub>		1 20.3	187°00'	0°0'/20.3	17	<b>233381</b>	2006 <i>DY</i> <sub>214</sub>		1 20.3	29°49'	2°9'/18.9	18
12 13	8 31.58	+19 9.5	2.561	3.330	12.1	22.1	12 13	8 34.56	+26 40.8	2.004	2.794	14.3	21.5
12 23	8 27.28	+19 22.2	2.468	3.330	9.5	21.9	12 23	8 30.29	+27 11.3	1.922	2.795	11.2	21.3
1 2	8 21.03	+19 40.8	2.398	3.329	6.4	21.7	1 2	8 23.40	+27 44.4	1.862	2.797	7.7	21.1
1 12	8 13.33	+20 2.8	2.356	3.329	3.0	21.5	1 12	8 14.53	+28 14.9	1.829	2.799	4.1	20.9
1 22	8 4.88	+20 25.5	2.345	3.328	0.6	21.3	1 22	8 4.67	+28 37.8	1.825	2.801	3.1	20.9
2 1	7 56.52	+20 46.2	2.363	3.327	4.2	21.6	2 1	7 55.00	+28 49.8	1.849	2.803	6.2	21.1
2 11	7 49.09	+21 3.0	2.412	3.326	7.5	21.8	2 11	7 46.70	+28 49.4	1.901	2.806	9.8	21.3
2 21	7 43.27	+21 14.8	2.486	3.325	10.5	22.0	2 21	7 40.64	+28 37.6	1.977	2.808	13.1	21.5
<b>13316</b>	Llano		1 20.3	305°05'	1°4'/19.8	18	<b>219352</b>	2000 <i>RK</i> <sub>19</sub>		1 20.3	161°88'	1°9'/21.4	18
12 13	8 34.84	+20 55.6	1.372	2.179	18.8	18.2	12 13	8 34.41	+12 59.7	2.641	3.385	12.4	20.8
12 23	8 31.75	+21 22.0	1.286	2.170	14.9	18.0	12 23	8 29.29	+12 56.4	2.549	3.392	9.9	20.6
1 2	8 25.12	+21 59.2	1.220	2.161	10.1	17.7	1 2	8 22.29	+13 1.5	2.481	3.399	7.0	20.4
1 12	8 15.59	+22 42.2	1.178	2.152	4.8	17.3	1 12	8 13.90	+13 14.0	2.440	3.404	3.8	20.3
1 22	8 4.39	+23 24.1	1.161	2.144	1.9	17.1	1 22	8 4.81	+13 32.1	2.430	3.410	1.9	20.1
2 1	7 53.23	+23 58.4	1.171	2.136	7.2	17.4	2 1	7 55.84	+13 53.5	2.452	3.414	4.2	20.3
2 11	7 43.87	+24 20.9	1.206	2.128	12.6	17.7	2 11	7 47.80	+14 16.0	2.504	3.418	7.3	20.5
2 21	7 37.60	+24 31.0	1.262	2.121	17.3	17.9	2 21	7 41.32	+14 37.5	2.583	3.421	10.1	20.7
<b>171463</b>	6272 <i>P-L</i>		1 20.3	57°62'	0°8'/19.9	18	<b>366271</b>	2013 <i>AS</i> <sub>38</sub>		1 20.3	244°37'	0°4'/20.5	18
12 13	8 33.48	+21 49.9	2.134	2.916	13.8	20.3	12 13	8 35.57	+16 54.3	1.729	2.509	16.6	21.7
12 23	8 28.99	+22 2.7	2.065	2.934	10.7	20.1	12 23	8 31.56	+17 15.4	1.631	2.498	13.2	21.4
1 2	8 22.23	+22 20.1	2.018	2.953	7.2	19.9	1 2	8 24.61	+17 48.5	1.554	2.487	9.1	21.1
1 12	8 13.87	+22 38.8	1.998	2.971	3.3	19.7	1 12	8 15.27	+18 30.8	1.503	2.475	4.3	20.8
1 22	8 4.80	+22 55.4	2.008	2.990	1.2	19.6	1 22	8 4.52	+19 17.3	1.479	2.463	0.9	20.5
2 1	7 56.02	+23 7.1	2.047	3.009	4.8	19.9	2 1	7 53.70	+20 2.7	1.485	2.450	5.9	20.9
2 11	7 48.53	+23 12.6	2.114	3.028	8.4	20.1	2 11	7 44.23	+20 42.6	1.518	2.438	10.7	21.1
2 21	7 43.00	+23 11.5	2.207	3.048	11.5	20.3	2 21	7 37.21	+21 14.4	1.574	2.424	14.9	21.3
<b>32244</b>	2000 <i>OK</i> <sub>43</sub>		1 20.3	225°12'	1°4'/19.7	18	<b>28675</b>	Suejohnton		1 20.3	172°96'	0°2'/20.5	18
12 13	8 35.19	+25 10.9	2.604	3.375	11.8	18.3	12 13	8 31.67	+17 55.8	2.769	3.531	11.5	20.1
12 23	8 30.08	+25 11.0	2.507	3.371	9.3	18.2	12 23	8 27.19	+18 12.4	2.675	3.533	9.0	19.9
1 2	8 22.90	+25 12.2	2.435	3.366	6.3	18.0	1 2	8 20.90	+18 35.2	2.606	3.535	6.1	19.7
1 12	8 14.20	+25 11.6	2.390	3.362	3.1	17.7	1 12	8 13.27	+19 2.1	2.565	3.537	2.9	19.5
1 22	8 4.72	+25 6.7	2.376	3.357	1.6	17.6	1 22	8 4.95	+19 30.4	2.554	3.538	0.6	19.3
2 1	7 55.38	+24 55.7	2.393	3.352	4.6	17.8	2 1	7 56.72	+19 57.4	2.575	3.539	3.9	19.6
2 11	7 47.09	+24 38.1	2.439	3.346	7.8	18.0	2 11	7 49.33	+20 21.1	2.625	3.539	7.0	19.8
2 21	7 40.52	+24 14.6	2.512	3.341	10.7	18.2	2 21	7 43.42	+20 40.2	2.703	3.539	9.8	19.9
<b>47757</b>	2000 <i>DD</i> <sub>98</sub>		1 20.3	38°23'	8°4'/17.9	18	<b>494958</b>	2009 <i>SZ</i> <sub>46</sub>		1 20.3	158°68'	0°1'/20.4	18
12 13	8 43.29	+38 46.2	1.449	2.247	18.4	19.0	12 13	8 35.01	+18 45.8	2.452	3.215	12.7	22.5
12 23	8 38.37	+39 33.8	1.391	2.258	15.0	18.8	12 23	8 29.98	+18 58.1	2.363	3.222	10.0	22.4
1 2	8 29.37	+40 12.6	1.352	2.269	11.6	18.6	1 2	8 22.86	+19 16.5	2.298	3.228	6.7	22.2
1 12	8 17.37	+40 32.0	1.336	2.281	9.0	18.5	1 12	8 14.20	+19 38.6	2.262	3.234	3.2	21.9
1 22	8 4.10	+40 24.4	1.346	2.293	8.7	18.5	1 22	8 4.77	+20 1.3	2.255	3.239	0.6	21.7
2 1	7 51.61	+39 47.2	1.381	2.306	10.9	18.7	2 1	7 55.48	+20 22.0	2.280	3.243	4.3	22.0
2 11	7 41.73	+38 44.6	1.440	2.319	14.1	18.9	2 11	7 47.24	+20 38.5	2.334	3.247	7.8	22.3
2 21	7 35.48	+37 24.2	1.520	2.332	17.2	19.2	2 21	7 40.74	+20 50.0	2.415	3.251	10.8	22.5
<b>48172</b>	2001 <i>HY</i> <sub>18</sub>		1 20.3	234°46'	0°1'/20.3	17	<b>402244</b>	2005 <i>JJ</i> <sub>137</sub>		1 20.3	342°98'	1°5'/20.9	18
12 13	8 32.51	+19 9.8	2.438	3.207	12.6	20.6	12 13	8 30.25	+15 8.1	1.376	2.180	18.9	20.6
12 23	8 28.19	+19 25.3	2.337	3.199	9.9	20.4	12 23	8 27.94	+15 17.2	1.293	2.172	15.1	20.3
1 2	8 21.76	+19 47.2	2.259	3.191	6.7	20.2	1 2	8 22.42	+15 41.7	1.228	2.165	10.5	20.0
1 12	8 13.73	+20 13.0	2.209	3.182	3.1	19.9	1 12	8 14.30	+16 19.5	1.186	2.159	5.3	19.7
1 22	8 4.81	+20 39.7	2.189	3.173	0.7	19.7	1 22	8 4.72	+17 5.8	1.170	2.153	1.6	19.4
2 1	7 55.91	+21 4.2	2.200	3.163	4.4	20.0	2 1	7 55.20	+17 54.7	1.180	2.148	6.5	19.7
2 11	7 47.96	+21 24.1	2.239	3.154	8.0	20.2	2 11	7 47.31	+18 40.4	1.215	2.145	11.7	20.0
2 21	7 41.72	+21 38.4	2.305	3.144	11.2	20.4	2 21	7 42.21	+19 18.9	1.271	2.142	16.3	20.3
<b>204670</b>	2006 <i>DC</i> <sub>24</sub>		1 20.3	103°55'	0°9'/19.9	18	<b>428702</b>	2008 <i>QL</i> <sub>38</sub>		1 20.3	111°11'	6°5'/24.3	18
12 13	8 38.29	+20 4.8	1.667	2.452	16.9	21.0	12 13	8 36.21	- 1 11.4	1.174	1.926	24.4	20.7
12 23	8 33.42	+20 35.2	1.598	2.469	13.2	20.8	12 23	8 33.00	- 0 16.2	1.098	1.934	20.5	20.5
1 2	8 25.59	+21 14.4	1.550	2.486	8.9	20.5	1 2	8 26.06	+ 1 21.6	1.038	1.941	15.7	20.2
1 12	8 15.54	+21 57.5	1.528	2.502	4.1	20.3	1 12	8 16.09	+ 3 42.9	0.999	1.948	10.5	19.9
1 22	8 4.46	+22 38.8	1.534	2.517	1.3	20.1	1 22	8 4.36	+ 6 40.2	0.985	1.956	6.7	19.7
2 1	7 53.72	+23 13.2	1.570	2.533	6.0	20.5	2 1	7 52.69	+ 9 57.5	0.999	1.962	8.4	19.8
2 11	7 44.67	+23 38.0	1.632	2.548	10.4	20.8	2 11	7 42.97	+13 15.1	1.039	1.969	13.3	20.1
2 21	7 38.23	+23 52.6	1.719	2.562	14.1	21.0	2 21	7 36.55	+16 16.7	1.104	1.975	18.2	20.4
<b>281068</b>	Chipolin		1 20.3	114°15'	0°9'/20.9	18	<b>332384</b>	2007 <i>FT</i> <sub>46</sub>		1 20.3	218°02'	3°0'/22.0	17
12 13	8 30.45	+13 48.1	2.468	3.228	12.7	20.6							

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1 20.3

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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>87241</b>	2000 <i>OL</i> <sub>45</sub>		1 20.3 148°82	2°1/21.3	18		<b>295992</b>	2008 <i>YR</i> <sub>87</sub>		1 20.3 273°17	0°1/20.4	18	
12 13	8 35.85	+14 5.2	2.339	3.091	13.6	19.6	12 13	8 30.87	+17 56.3	2.340	3.112	13.0	20.9
12 23	8 30.63	+13 47.3	2.251	3.099	10.8	19.4	12 23	8 27.03	+18 17.1	2.240	3.104	10.2	20.7
1 2	8 23.29	+13 37.5	2.186	3.107	7.6	19.2	1 2	8 21.06	+18 45.9	2.164	3.096	7.0	20.4
1 12	8 14.40	+13 34.7	2.149	3.114	4.2	19.0	1 12	8 13.47	+19 20.2	2.115	3.088	3.3	20.2
1 22	8 4.74	+13 37.6	2.141	3.121	2.1	18.9	1 22	8 4.97	+19 56.5	2.096	3.080	0.6	20.0
2 1	7 55.26	+13 44.2	2.165	3.127	4.6	19.1	2 1	7 56.48	+20 31.5	2.107	3.071	4.5	20.2
2 11	7 46.88	+13 52.6	2.218	3.133	8.0	19.3	2 11	7 48.96	+21 2.2	2.146	3.063	8.2	20.5
2 21	7 40.29	+14 1.3	2.297	3.139	11.1	19.5	2 21	7 43.15	+21 26.9	2.212	3.055	11.4	20.7
<b>242184</b>	2003 <i>HY</i> <sub>54</sub>		1 20.3 229°65	2°3/21.6	18		<b>255897</b>	2006 <i>SY</i> <sub>289</sub>		1 20.3 223°50	0°1/20.4	18	
12 13	8 32.05	+11 54.7	2.165	2.923	14.3	21.0	12 13	8 35.25	+18 57.9	1.771	2.556	16.1	20.6
12 23	8 28.05	+12 1.8	2.067	2.918	11.5	20.8	12 23	8 31.09	+19 6.3	1.684	2.554	12.7	20.4
1 2	8 21.80	+12 21.0	1.990	2.911	8.2	20.6	1 2	8 24.11	+19 23.2	1.619	2.553	8.6	20.2
1 12	8 13.80	+12 51.3	1.940	2.905	4.6	20.4	1 12	8 14.97	+19 45.4	1.579	2.552	4.1	19.9
1 22	8 4.85	+13 30.0	1.919	2.898	2.3	20.2	1 22	8 4.67	+20 9.1	1.567	2.550	0.8	19.6
2 1	7 55.90	+14 13.6	1.927	2.892	4.9	20.3	2 1	7 54.50	+20 30.2	1.584	2.549	5.6	20.0
2 11	7 47.97	+14 58.3	1.965	2.884	8.6	20.6	2 11	7 45.77	+20 46.0	1.628	2.547	10.1	20.2
2 21	7 41.87	+15 40.7	2.028	2.877	12.0	20.8	2 21	7 39.42	+20 55.3	1.696	2.546	14.0	20.5
<b>82954</b>	2001 <i>QW</i> <sub>126</sub>		1 20.3 66°51	1°2/20.8	18		<b>3890</b>	Bunin		1 20.3 137°58	2°1/21.2	18	
12 13	8 35.27	+17 44.5	2.185	2.952	13.9	19.0	12 13	8 38.04	+14 24.2	1.795	2.561	16.6	17.9
12 23	8 30.27	+17 19.8	2.106	2.966	11.0	18.9	12 23	8 33.02	+14 14.5	1.714	2.571	13.2	17.7
1 2	8 23.06	+17 0.8	2.051	2.980	7.5	18.7	1 2	8 25.25	+14 15.7	1.655	2.581	9.2	17.5
1 12	8 14.28	+16 46.1	2.023	2.993	3.7	18.5	1 12	8 15.44	+14 26.3	1.622	2.590	4.9	17.2
1 22	8 4.78	+16 34.3	2.025	3.007	1.3	18.3	1 22	8 4.60	+14 43.6	1.617	2.598	2.1	17.1
2 1	7 55.58	+16 24.1	2.056	3.021	4.6	18.6	2 1	7 54.00	+15 4.3	1.641	2.606	5.6	17.3
2 11	7 47.61	+16 14.2	2.117	3.035	8.2	18.8	2 11	7 44.88	+15 25.3	1.694	2.613	9.8	17.6
2 21	7 41.57	+16 4.0	2.204	3.049	11.4	19.0	2 21	7 38.12	+15 44.4	1.771	2.620	13.5	17.8
<b>382247</b>	2012 <i>TV</i> <sub>3</sub>		1 20.3 135°15	5°1/23.3	18		<b>492401</b>	2014 <i>JQ</i> <sub>59</sub>		1 20.3 196°63	2°0/19.4	18	
12 13	8 30.11	+ 3 41.9	2.403	3.126	14.0	21.0	12 13	8 38.28	+22 21.3	1.866	2.648	15.5	22.2
12 23	8 26.18	+ 3 17.2	2.312	3.129	11.7	20.8	12 23	8 33.50	+23 7.0	1.776	2.645	12.2	22.0
1 2	8 20.33	+ 3 6.8	2.242	3.131	9.1	20.6	1 2	8 25.80	+24 0.8	1.708	2.642	8.3	21.7
1 12	8 13.05	+ 3 11.6	2.197	3.134	6.5	20.5	1 12	8 15.81	+24 57.1	1.666	2.639	4.0	21.5
1 22	8 5.03	+ 3 31.2	2.180	3.136	5.1	20.4	1 22	8 4.52	+25 49.5	1.654	2.634	2.3	21.4
2 1	7 57.08	+ 4 3.8	2.192	3.138	6.0	20.5	2 1	7 53.26	+26 32.3	1.671	2.629	6.3	21.6
2 11	7 50.04	+ 4 45.8	2.233	3.141	8.4	20.6	2 11	7 43.41	+27 2.5	1.716	2.623	10.5	21.8
2 21	7 44.57	+ 5 33.3	2.299	3.143	11.0	20.8	2 21	7 36.00	+27 19.5	1.786	2.617	14.2	22.1
<b>408755</b>	1993 <i>TG</i> <sub>6</sub>		1 20.3 63°80	3°8/22.1	14 C		<b>422799</b>	2001 <i>XA</i> <sub>127</sub>		1 20.4 31°73	2°0/19.4	18	
12 13	8 36.25	+ 9 54.8	1.635	2.398	18.1	22.0	12 13	8 32.53	+21 24.3	1.590	2.391	16.9	20.4
12 23	8 31.53	+ 9 38.1	1.577	2.428	14.5	21.8	12 23	8 29.27	+22 15.7	1.517	2.398	13.2	20.2
1 2	8 24.11	+ 9 37.2	1.539	2.457	10.4	21.7	1 2	8 23.03	+23 16.8	1.467	2.406	8.8	19.9
1 12	8 14.80	+ 9 51.3	1.526	2.486	6.3	21.5	1 12	8 14.50	+24 21.6	1.441	2.415	4.2	19.7
1 22	8 4.70	+10 17.7	1.540	2.515	3.8	21.4	1 22	8 4.80	+25 22.9	1.442	2.423	2.4	19.6
2 1	7 55.08	+10 52.5	1.582	2.544	6.1	21.6	2 1	7 55.31	+26 14.3	1.472	2.433	6.6	19.9
2 11	7 47.08	+11 31.1	1.652	2.573	9.8	21.9	2 11	7 47.43	+26 51.9	1.527	2.443	11.0	20.1
2 21	7 41.48	+12 9.5	1.746	2.602	13.3	22.2	2 21	7 42.13	+27 15.1	1.606	2.453	14.8	20.4
<b>352809</b>	2008 <i>UO</i> <sub>277</sub>		1 20.3 250°99	3°3/18.9	18		<b>172376</b>	2002 <i>YE</i> <sub>25</sub>		1 20.4 64°70	2°0/21.2	18	
12 13	8 37.33	+25 10.5	1.542	2.342	17.4	21.3	12 13	8 33.22	+14 49.7	2.306	3.067	13.5	19.6
12 23	8 33.41	+25 55.1	1.458	2.337	13.7	21.0	12 23	8 28.66	+14 24.2	2.219	3.072	10.7	19.4
1 2	8 26.07	+26 46.4	1.395	2.333	9.4	20.8	1 2	8 22.02	+14 6.0	2.154	3.078	7.5	19.3
1 12	8 16.01	+27 37.3	1.357	2.328	5.0	20.5	1 12	8 13.86	+13 54.3	2.117	3.083	4.1	19.0
1 22	8 4.43	+28 20.2	1.346	2.324	3.7	20.4	1 22	8 4.95	+13 48.0	2.109	3.088	2.0	18.9
2 1	7 52.95	+28 49.0	1.363	2.319	7.6	20.6	2 1	7 56.21	+13 45.6	2.131	3.094	4.6	19.1
2 11	7 43.24	+29 1.0	1.405	2.314	12.2	20.9	2 11	7 48.55	+13 45.6	2.182	3.100	8.0	19.3
2 21	7 36.47	+28 57.3	1.469	2.309	16.3	21.1	2 21	7 42.64	+13 46.5	2.259	3.105	11.1	19.5
<b>520911</b>	2014 <i>WE</i> <sub>530</sub>		1 20.3 111°67	5°3/17.6	18		<b>338875</b>	2004 <i>BM</i> <sub>50</sub>		1 20.4 44°82	1°2/20.0	17	
12 13	8 39.83	+34 8.2	2.173	2.951	13.7	21.5	12 13	8 38.81	+22 16.9	1.181	1.995	20.8	20.4
12 23	8 34.27	+35 6.0	2.107	2.968	10.9	21.4	12 23	8 35.02	+22 17.3	1.117	2.004	16.4	20.1
1 2	8 25.99	+36 0.8	2.065	2.985	8.0	21.2	1 2	8 27.29	+22 25.1	1.072	2.013	11.1	19.9
1 12	8 15.72	+36 45.7	2.050	3.001	5.8	21.1	1 12	8 16.56	+22 35.2	1.049	2.023	5.2	19.6
1 22	8 4.52	+37 15.0	2.063	3.016	5.6	21.1	1 22	8 4.41	+22 41.8	1.051	2.034	1.7	19.4
2 1	7 53.66	+37 25.4	2.106	3.032	7.6	21.3	2 1	7 52.80	+22 40.8	1.078	2.045	7.4	19.8
2 11	7 44.36	+37 17.2	2.175	3.046	10.3	21.5	2 11	7 43.57	+22 31.0	1.130	2.056	12.9	20.1
2 21	7 37.44	+36 53.2	2.269	3.061	12.9	21.7	2 21	7 37.82	+22 13.3	1.203	2.068	17.5	20.4
<b>350703</b>	2001 <i>WS</i> <sub>64</sub>		1 20.3 45°30	6°2/18.1	18		<b>503161</b>	2015 <i>GS</i> <sub>36</sub>		1 20.4 180°86	3°4/17.9	17	
12 13	8 38.12	+29 33.7	1.208	2.028	20.0	20.6	12 13	8 32.01	+30 18.4	2.855	3.632	10.8	21.5
12 23	8 34.65	+30 46.1	1.156	2.044	15.8	20.4	12 23	8 27.64	+31 7.1	2.768	3.633	8.5	21.3
1 2	8 27.10	+32 0.7	1.122	2.060	11.2	20.2	1 2	8 21.32	+31 56.0	2.706	3.633	6.0	21.1
1 12	8 16.45	+33 6.4	1.112	2.077	7.1	20.0	1 12	8 13.55	+32 40.7	2.672	3.633	3.9	21.0
1 22	8 4.38	+33 52.6	1.126	2.094	6.6	20.1	1 22	8 5.01	+33 17.1	2.668	3.633	3.6	21.0
2 1	7 52.95	+34 13.1	1.166	2.112	10.0	20.3	2 1	7 56.55	+33 42.3	2.695	3.632	5.6	21.1
2 11	7 44.02	+34 8.2	1.228	2.131	14.2	20.6	2 11	7 49.00	+33 55.0	2.750	3.632	8.0	21.3
2 21	7 38.72	+33 42.7	1.311	2.149	18.0	20.9	2 21	7 43.05	+33 55.7	2.831	3.631	10.4	21.4
<b>53212</b>	1999 <i>CD</i> <sub>80</sub>		1 20.3 45°74	7°7/24.6	18		<b>264711</b>	2002 <i>AQ</i> <sub>203</sub>		1 20.4 354°02	5°4/23.0	18	
12 13	8 30.67	- 0 15.2	1.608										

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1 20.4

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>195278</b>	2002 <i>EH</i> <sub>72</sub>		1 20.4 200°57	0°7/19.9	18		<b>52988</b>	1998 <i>UN</i> <sub>22</sub>		1 20.4 343°30	5°2/22.0	18	
12 13	8 34.17	+21 3.2	2.298	3.072	13.2	21.0	12 13	8 32.18	+10 14.0	1.264	2.057	20.8	18.8
12 23	8 29.63	+21 22.3	2.204	3.070	10.3	20.8	12 23	8 29.65	+9 34.0	1.183	2.051	17.1	18.5
1 2	8 22.82	+21 47.1	2.134	3.067	7.0	20.6	1 2	8 23.70	+9 11.2	1.121	2.046	12.6	18.2
1 12	8 14.29	+22 14.2	2.091	3.064	3.2	20.4	1 12	8 15.00	+9 7.4	1.080	2.042	7.9	18.0
1 22	8 4.86	+22 40.1	2.078	3.061	1.1	20.2	1 22	8 4.75	+9 21.8	1.063	2.038	5.2	17.8
2 1	7 55.51	+23 1.6	2.095	3.057	4.8	20.4	2 1	7 54.59	+9 51.3	1.070	2.034	7.9	17.9
2 11	7 47.25	+23 16.7	2.141	3.054	8.4	20.7	2 11	7 46.20	+10 30.2	1.102	2.032	12.7	18.2
2 21	7 40.85	+23 24.5	2.213	3.049	11.7	20.9	2 21	7 40.78	+11 12.6	1.155	2.030	17.3	18.5
<b>239930</b>	2000 <i>WQ</i> <sub>138</sub>		1 20.4 79°18	4°0/18.6	18		<b>165799</b>	2001 <i>RJ</i> <sub>48</sub>		1 20.4 63°89	4°4/17.9	18	
12 13	8 38.40	+26 33.3	1.541	2.340	17.4	20.4	12 13	8 34.76	+31 55.1	2.257	3.042	13.0	19.5
12 23	8 34.00	+27 33.6	1.477	2.356	13.6	20.2	12 23	8 30.26	+32 42.5	2.183	3.050	10.3	19.4
1 2	8 26.26	+28 38.5	1.435	2.371	9.3	20.0	1 2	8 23.30	+33 28.7	2.132	3.059	7.4	19.2
1 12	8 16.00	+29 39.8	1.417	2.386	5.3	19.8	1 12	8 14.53	+34 7.9	2.109	3.067	5.0	19.1
1 22	8 4.53	+30 29.4	1.428	2.401	4.4	19.8	1 22	8 4.88	+34 35.2	2.114	3.076	4.7	19.1
2 1	7 53.47	+31 1.5	1.465	2.416	7.8	20.0	2 1	7 55.45	+34 47.2	2.148	3.084	6.8	19.2
2 11	7 44.33	+31 14.8	1.529	2.431	11.9	20.3	2 11	7 47.34	+34 43.6	2.210	3.093	9.7	19.4
2 21	7 38.13	+31 11.2	1.615	2.446	15.5	20.5	2 21	7 41.33	+34 26.0	2.295	3.101	12.3	19.6
<b>109955</b>	2001 <i>SK</i> <sub>47</sub>		1 20.4 169°15	3°3/18.5	18		<b>132229</b>	2002 <i>ET</i> <sub>72</sub>		1 20.4 209°31	3°7/22.1	18	
12 13	8 37.77	+28 22.0	2.370	3.145	12.8	20.9	12 13	8 34.38	+9 27.6	1.848	2.605	16.5	19.9
12 23	8 32.45	+29 6.7	2.285	3.149	10.0	20.7	12 23	8 30.26	+9 19.9	1.755	2.601	13.5	19.7
1 2	8 24.72	+29 52.9	2.224	3.153	7.0	20.5	1 2	8 23.53	+9 27.3	1.682	2.598	9.8	19.4
1 12	8 15.18	+30 35.3	2.191	3.156	4.1	20.4	1 12	8 14.74	+9 49.6	1.634	2.594	6.0	19.2
1 22	8 4.70	+31 8.7	2.188	3.159	3.5	20.3	1 22	8 4.82	+10 24.7	1.614	2.589	3.7	19.1
2 1	7 54.36	+31 29.8	2.216	3.161	6.0	20.5	2 1	7 54.92	+11 9.1	1.622	2.584	6.0	19.2
2 11	7 45.23	+31 37.2	2.272	3.162	9.1	20.7	2 11	7 46.25	+11 58.0	1.659	2.579	9.9	19.4
2 21	7 38.13	+31 32.1	2.353	3.163	11.9	20.9	2 21	7 39.75	+12 47.0	1.720	2.574	13.6	19.6
<b>15732</b>	Vitusbering		1 20.4 162°38	0°2/20.5	18		<b>87974</b>	2000 <i>TR</i> <sub>41</sub>		1 20.4 235°78	7°1/15.9	18	
12 13	8 30.40	+16 47.5	2.570	3.335	12.1	17.9	12 13	8 41.55	+40 2.5	2.394	3.160	12.9	20.4
12 23	8 26.41	+17 20.2	2.477	3.337	9.5	17.7	12 23	8 36.03	+41 13.6	2.300	3.145	10.7	20.2
1 2	8 20.51	+18 1.3	2.409	3.339	6.5	17.5	1 2	8 27.54	+42 20.2	2.231	3.130	8.6	20.0
1 12	8 13.18	+18 48.2	2.368	3.340	3.1	17.3	1 12	8 16.67	+43 14.4	2.188	3.115	7.2	19.9
1 22	8 5.09	+19 37.5	2.358	3.342	0.6	17.1	1 22	8 4.44	+43 49.2	2.174	3.099	7.4	19.9
2 1	7 57.06	+20 25.4	2.379	3.343	4.1	17.4	2 1	7 52.19	+44 0.2	2.187	3.082	9.1	20.0
2 11	7 49.91	+21 8.9	2.429	3.344	7.4	17.6	2 11	7 41.35	+43 47.5	2.227	3.065	11.5	20.1
2 21	7 44.30	+21 46.0	2.506	3.345	10.4	17.8	2 21	7 32.97	+43 14.3	2.290	3.047	13.8	20.2
<b>401582</b>	2013 <i>FV</i> <sub>27</sub>		1 20.4 196°79	3°2/22.0	18		<b>302481</b>	2002 <i>GD</i> <sub>24</sub>		1 20.4 295°22	3°6/18.9	18	
12 13	8 34.24	+9 40.2	1.967	2.719	15.8	21.5	12 13	8 36.55	+26 11.8	1.548	2.350	17.2	20.8
12 23	8 29.98	+9 41.9	1.872	2.718	12.8	21.3	12 23	8 33.18	+26 46.4	1.442	2.323	13.8	20.5
1 2	8 23.23	+9 58.2	1.799	2.715	9.3	21.1	1 2	8 26.28	+27 27.1	1.358	2.296	9.6	20.2
1 12	8 14.55	+10 28.7	1.752	2.712	5.5	20.8	1 12	8 16.34	+28 7.5	1.297	2.268	5.2	19.9
1 22	8 4.81	+11 10.8	1.733	2.709	3.2	20.7	1 22	8 4.47	+28 39.8	1.263	2.241	3.9	19.7
2 1	7 55.10	+12 0.6	1.743	2.705	5.6	20.8	2 1	7 52.32	+28 57.5	1.257	2.213	8.1	19.9
2 11	7 46.54	+12 53.6	1.781	2.701	9.4	21.0	2 11	7 41.73	+28 57.7	1.275	2.186	13.1	20.1
2 21	7 40.03	+13 45.5	1.845	2.696	13.0	21.2	2 21	7 34.15	+28 41.6	1.315	2.159	17.6	20.3
<b>423342</b>	2005 <i>GY</i> <sub>135</sub>		1 20.4 326°25	0°4/20.6	17		<b>30551</b>	2001 <i>OH</i> <sub>50</sub>		1 20.4 126°77	2°3/21.4	18	
12 13	8 28.88	+16 21.2	1.850	2.638	15.4	20.7	12 13	8 38.50	+12 51.2	1.780	2.541	16.9	20.2
12 23	8 26.16	+16 50.6	1.750	2.622	12.2	20.4	12 23	8 33.36	+12 51.4	1.704	2.557	13.5	20.0
1 2	8 20.87	+17 32.6	1.673	2.607	8.4	20.2	1 2	8 25.48	+13 4.6	1.649	2.572	9.4	19.8
1 12	8 13.54	+18 24.4	1.620	2.593	4.0	19.9	1 12	8 15.58	+13 29.0	1.620	2.586	5.1	19.5
1 22	8 5.00	+19 21.5	1.595	2.579	0.8	19.6	1 22	8 4.69	+14 1.3	1.620	2.600	2.4	19.4
2 1	7 56.40	+20 18.5	1.599	2.566	5.4	19.9	2 1	7 54.08	+14 37.5	1.649	2.613	5.6	19.6
2 11	7 48.94	+21 10.4	1.630	2.553	9.8	20.1	2 11	7 44.97	+15 13.6	1.706	2.625	9.7	19.9
2 21	7 43.58	+21 54.0	1.685	2.541	13.7	20.3	2 21	7 38.22	+15 46.7	1.788	2.637	13.4	20.1
<b>233304</b>	2006 <i>BW</i> <sub>56</sub>		1 20.4 93°49	0°8/20.8	18		<b>368961</b>	2007 <i>BA</i> <sub>43</sub>		1 20.4 329°72	0°2/20.3	18	
12 13	8 32.97	+15 50.6	2.056	2.828	14.6	20.9	12 13	8 33.77	+20 7.7	1.676	2.469	16.5	20.9
12 23	8 28.78	+16 10.4	1.977	2.838	11.5	20.8	12 23	8 30.18	+20 8.4	1.586	2.462	13.0	20.6
1 2	8 22.26	+16 40.3	1.920	2.849	7.8	20.5	1 2	8 23.66	+20 16.4	1.518	2.455	8.9	20.4
1 12	8 14.03	+17 17.7	1.889	2.860	3.8	20.3	1 12	8 14.86	+20 28.7	1.475	2.449	4.2	20.1
1 22	8 4.94	+17 58.8	1.887	2.871	1.0	20.1	1 22	8 4.82	+20 41.5	1.459	2.443	0.9	19.8
2 1	7 56.02	+18 39.5	1.916	2.881	4.8	20.4	2 1	7 54.88	+20 51.3	1.471	2.437	5.9	20.1
2 11	7 48.32	+19 16.5	1.972	2.892	8.6	20.7	2 11	7 46.42	+20 55.8	1.510	2.432	10.5	20.4
2 21	7 42.57	+19 47.6	2.055	2.902	12.0	20.9	2 21	7 40.44	+20 54.2	1.572	2.427	14.6	20.6
<b>238755</b>	2005 <i>JA</i> <sub>1</sub>		1 20.4 341°52	4°8/23.1	18		<b>421941</b>	2014 <i>QH</i> <sub>252</sub>		1 20.4 103°67	1°0/20.9	18	
12 13	8 29.36	+4 47.9	2.258	2.991	14.5	20.4	12 13	8 33.75	+13 39.4	1.835	2.607	16.1	21.1
12 23	8 25.80	+4 31.6	2.164	2.990	12.0	20.2	12 23	8 29.73	+14 23.5	1.756	2.617	12.7	20.9
1 2	8 20.20	+4 30.2	2.092	2.989	9.2	20.0	1 2	8 23.12	+15 22.6	1.698	2.627	8.7	20.6
1 12	8 13.08	+4 44.6	2.044	2.988	6.4	19.8	1 12	8 14.53	+16 33.0	1.666	2.637	4.3	20.4
1 22	8 5.14	+5 13.8	2.025	2.987	4.8	19.7	1 22	8 4.90	+17 49.1	1.663	2.646	1.1	20.2
2 1	7 57.24	+5 55.5	2.034	2.986	5.9	19.8	2 1	7 55.41	+19 4.7	1.690	2.656	5.2	20.5
2 11	7 50.30	+6 45.6	2.071	2.985	8.6	19.9	2 11	7 47.23	+20 14.0	1.745	2.665	9.5	20.8
2 21	7 45.00	+7 39.9	2.134	2.984	11.5	20.1	2 21	7 41.25	+21 13.6	1.825	2.674	13.2	21.0
<b>331457</b>	2012 <i>HN</i> <sub>26</sub>		1 20.4 197°04	0°5/20.1	18		<b>381275</b>	2007 <i>TH</i> <sub>282</sub>		1 20.4 64°32	4°4/18.3	18	
12 13	8 33.94	+19 54.7	2.282	3.054	13								



EPHEMERIDES

1 20.4

1 20.4

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>182619</b>	2001 <i>UJ</i> <sub>101</sub>		1 20.4	80°47'	0°3'/20.6	18	<b>186023</b>	2001 <i>QO</i> <sub>201</sub>		1 20.4	23°93'	12°2'/28.6	18
12 13	8 32.22	+17 37.0	2.355	3.124	13.0	21.3	12 13	8 28.43	-11 5.8	1.580	2.264	21.6	19.2
12 23	8 27.84	+17 54.0	2.280	3.142	10.2	21.1	12 23	8 25.92	-11 51.6	1.507	2.270	19.3	19.0
1 2	8 21.45	+18 18.3	2.229	3.159	6.9	21.0	1 2	8 20.72	-12 5.2	1.450	2.278	16.8	18.9
1 12	8 13.61	+18 47.4	2.205	3.176	3.2	20.7	1 12	8 13.48	-11 41.0	1.411	2.286	14.3	18.8
1 22	8 5.10	+19 18.0	2.210	3.194	0.6	20.6	1 22	8 5.17	-10 37.0	1.393	2.295	12.6	18.7
2 1	7 56.79	+19 47.1	2.246	3.211	4.3	20.9	2 1	7 57.01	- 8 56.6	1.399	2.305	12.3	18.7
2 11	7 49.56	+20 12.3	2.311	3.228	7.7	21.1	2 11	7 50.22	- 6 48.4	1.428	2.316	13.6	18.8
2 21	7 44.05	+20 32.2	2.402	3.245	10.6	21.3	2 21	7 45.72	- 4 24.6	1.481	2.327	15.9	18.9
<b>273403</b>	2006 <i>VC</i> <sub>138</sub>		1 20.4	258°38'	0°1'/20.4	18	<b>391839</b>	2008 <i>SO</i> <sub>179</sub>		1 20.4	183°67'	0°7'/20.0	18
12 13	8 36.67	+18 19.5	1.445	2.240	18.6	21.3	12 13	8 39.50	+20 8.5	1.973	2.744	15.1	22.2
12 23	8 33.07	+18 37.3	1.354	2.230	14.8	21.0	12 23	8 34.20	+20 35.3	1.882	2.745	11.9	22.0
1 2	8 26.01	+19 7.7	1.283	2.220	10.1	20.7	1 2	8 26.17	+21 10.0	1.813	2.745	8.1	21.8
1 12	8 16.12	+19 46.8	1.236	2.210	4.8	20.4	1 12	8 16.00	+21 48.4	1.772	2.744	3.8	21.5
1 22	8 4.56	+20 28.9	1.216	2.199	1.0	20.1	1 22	8 4.68	+22 25.8	1.760	2.743	1.2	21.3
2 1	7 52.95	+21 7.8	1.222	2.189	6.7	20.4	2 1	7 53.44	+22 57.7	1.778	2.740	5.5	21.6
2 11	7 43.03	+21 39.0	1.255	2.178	12.1	20.7	2 11	7 43.55	+23 21.2	1.825	2.737	9.7	21.8
2 21	7 36.05	+22 0.4	1.309	2.167	16.8	21.0	2 21	7 35.96	+23 35.7	1.898	2.733	13.4	22.0
<b>413049</b>	2001 <i>QY</i> <sub>196</sub>		1 20.4	189°61'	5°3'/17.5	18	<b>397885</b>	2008 <i>UL</i> <sub>146</sub>		1 20.4	149°70'	3°1'/18.9	18
12 13	8 40.02	+34 13.7	2.277	3.051	13.2	21.2	12 13	8 41.15	+26 21.2	1.934	2.713	15.1	22.1
12 23	8 34.56	+35 10.1	2.192	3.050	10.6	21.0	12 23	8 35.56	+27 7.4	1.857	2.724	11.9	21.9
1 2	8 26.35	+36 4.5	2.130	3.049	7.9	20.8	1 2	8 27.07	+27 57.0	1.802	2.734	8.1	21.7
1 12	8 16.04	+36 50.1	2.096	3.047	5.7	20.7	1 12	8 16.39	+28 43.8	1.774	2.743	4.4	21.5
1 22	8 4.61	+37 20.8	2.092	3.044	5.6	20.7	1 22	8 4.62	+29 21.5	1.776	2.751	3.4	21.5
2 1	7 53.32	+37 32.8	2.116	3.041	7.7	20.8	2 1	7 53.09	+29 45.6	1.808	2.759	6.6	21.7
2 11	7 43.42	+37 25.7	2.168	3.037	10.4	21.0	2 11	7 43.12	+29 54.9	1.867	2.765	10.3	21.9
2 21	7 35.84	+37 2.3	2.244	3.033	13.1	21.1	2 21	7 35.65	+29 50.6	1.951	2.771	13.6	22.2
<b>239337</b>	2007 <i>RT</i> <sub>98</sub>		1 20.4	60°83'	0°9'/20.9	18	<b>229707</b>	2007 <i>EE</i> <sub>117</sub>		1 20.4	89°76'	2°6'/18.9	18
12 13	8 31.35	+15 29.5	2.133	2.904	14.1	20.3	12 13	8 34.63	+25 3.6	2.003	2.791	14.4	21.0
12 23	8 27.40	+15 50.6	2.058	2.920	11.1	20.1	12 23	8 30.37	+25 47.9	1.925	2.798	11.2	20.9
1 2	8 21.28	+16 21.7	2.006	2.936	7.6	19.9	1 2	8 23.52	+26 36.6	1.870	2.805	7.6	20.6
1 12	8 13.57	+17 0.1	1.981	2.952	3.7	19.7	1 12	8 14.73	+27 24.3	1.841	2.812	4.0	20.4
1 22	8 5.11	+17 42.2	1.985	2.968	1.0	19.5	1 22	8 4.94	+28 5.6	1.842	2.819	2.9	20.4
2 1	7 56.85	+18 24.2	2.018	2.984	4.5	19.8	2 1	7 55.34	+28 36.0	1.871	2.826	6.1	20.6
2 11	7 49.74	+19 2.7	2.080	3.000	8.2	20.0	2 11	7 47.08	+28 53.7	1.929	2.833	9.7	20.8
2 21	7 44.47	+19 35.6	2.168	3.016	11.4	20.3	2 21	7 41.02	+28 58.8	2.010	2.839	12.9	21.0
<b>60925</b>	2000 <i>JB</i> <sub>45</sub>		1 20.4	159°42'	0°7'/19.9	18	<b>500339</b>	2012 <i>SH</i> <sub>52</sub>		1 20.4	85°48'	5°2'/23.5	18
12 13	8 35.15	+20 12.5	2.111	2.886	14.1	20.3	12 13	8 29.72	+ 3 1.3	2.401	3.122	14.1	21.5
12 23	8 30.56	+20 40.8	2.024	2.890	11.1	20.1	12 23	8 25.90	+ 2 40.0	2.313	3.128	11.8	21.3
1 2	8 23.55	+21 16.4	1.961	2.894	7.5	19.9	1 2	8 20.19	+ 2 33.6	2.247	3.134	9.2	21.2
1 12	8 14.70	+21 55.5	1.925	2.898	3.5	19.7	1 12	8 13.09	+ 2 43.0	2.205	3.140	6.7	21.0
1 22	8 4.89	+22 33.6	1.918	2.901	1.1	19.5	1 22	8 5.27	+ 3 7.6	2.192	3.146	5.2	20.9
2 1	7 55.21	+23 6.9	1.942	2.904	5.1	19.8	2 1	7 57.54	+ 3 45.3	2.207	3.152	6.0	21.0
2 11	7 46.74	+23 32.6	1.994	2.906	8.9	20.0	2 11	7 50.73	+ 4 32.5	2.250	3.158	8.3	21.1
2 21	7 40.30	+23 49.8	2.071	2.909	12.3	20.2	2 21	7 45.47	+ 5 25.0	2.320	3.165	10.9	21.3
<b>405165</b>	2002 <i>UG</i> <sub>37</sub>		1 20.4	68°54'	5°6'/22.9	18	<b>316588</b>	2011 <i>UA</i> <sub>159</sub>		1 20.4	43°34'	18°0'/15.6	17
12 13	8 35.37	+ 6 1.2	1.663	2.413	18.3	21.1	12 13	9 0.13	+58 30.3	1.318	2.069	22.2	19.7
12 23	8 30.91	+ 5 26.4	1.599	2.436	15.0	20.9	12 23	8 54.84	+60 30.4	1.292	2.087	20.3	19.7
1 2	8 23.80	+ 5 9.7	1.554	2.459	11.3	20.7	1 2	8 42.19	+62 2.9	1.281	2.105	18.8	19.6
1 12	8 14.78	+ 5 11.9	1.534	2.482	7.7	20.6	1 12	8 23.80	+62 50.2	1.289	2.124	18.1	19.6
1 22	8 4.91	+ 5 31.9	1.540	2.505	5.7	20.5	1 22	8 3.26	+62 40.6	1.315	2.144	18.2	19.7
2 1	7 55.41	+ 6 6.5	1.574	2.528	7.1	20.6	2 1	7 44.96	+61 34.3	1.359	2.164	19.1	19.8
2 11	7 47.45	+ 6 50.4	1.635	2.551	10.3	20.9	2 11	7 32.13	+59 42.7	1.421	2.184	20.5	20.0
2 21	7 41.80	+ 7 38.5	1.719	2.573	13.6	21.1	2 21	7 25.71	+57 21.4	1.499	2.205	21.9	20.2
<b>455120</b>	2015 <i>VT</i> <sub>31</sub>		1 20.4	51°09'	2°4'/21.2	16	<b>177020</b>	2003 <i>BW</i> <sub>61</sub>		1 20.4	10°79'	7°6'/23.4	18
12 13	8 37.89	+14 45.1	1.247	2.043	20.9	21.7	12 13	8 32.34	+ 0 5.4	2.245	2.950	15.3	19.8
12 23	8 33.66	+14 28.7	1.195	2.069	16.5	21.5	12 23	8 28.10	- 1 13.6	2.156	2.951	13.2	19.6
1 2	8 25.99	+14 26.9	1.162	2.095	11.4	21.2	1 2	8 21.76	- 2 18.4	2.088	2.952	10.8	19.4
1 12	8 15.86	+14 37.6	1.151	2.121	5.9	21.0	1 12	8 13.86	- 3 5.7	2.044	2.954	8.7	19.3
1 22	8 4.73	+14 56.9	1.166	2.148	2.5	20.9	1 22	8 5.12	- 3 33.2	2.027	2.955	7.6	19.2
2 1	7 54.26	+15 20.3	1.208	2.175	6.6	21.2	2 1	7 56.46	- 3 40.8	2.038	2.957	8.3	19.3
2 11	7 45.96	+15 43.6	1.275	2.203	11.5	21.5	2 11	7 48.79	- 3 30.6	2.075	2.959	10.1	19.4
2 21	7 40.71	+16 3.8	1.364	2.230	15.7	21.9	2 21	7 42.84	- 3 6.6	2.137	2.962	12.4	19.5
<b>105027</b>	2000 <i>KT</i> <sub>31</sub>		1 20.4	148°24'	1°5'/19.5	18	<b>163629</b>	2002 <i>UU</i> <sub>9</sub>		1 20.4	103°83'	2°7'/18.7	18
12 13	8 35.93	+22 33.2	2.391	3.162	12.8	20.6	12 13	8 33.44	+26 10.5	2.340	3.122	12.7	19.9
12 23	8 30.87	+23 12.2	2.308	3.172	10.0	20.5	12 23	8 29.08	+26 59.2	2.261	3.131	9.9	19.7
1 2	8 23.60	+23 56.2	2.249	3.181	6.7	20.3	1 2	8 22.47	+27 50.9	2.206	3.139	6.8	19.5
1 12	8 14.69	+24 41.1	2.219	3.190	3.2	20.1	1 12	8 14.19	+28 40.7	2.179	3.148	3.7	19.3
1 22	8 4.94	+25 22.5	2.218	3.199	1.8	20.0	1 22	8 5.06	+29 23.9	2.182	3.156	3.0	19.3
2 1	7 55.33	+25 56.7	2.249	3.206	4.9	20.2	2 1	7 56.08	+29 56.6	2.214	3.164	5.6	19.5
2 11	7 46.84	+26 21.5	2.309	3.214	8.3	20.4	2 11	7 48.23	+30 16.9	2.275	3.172	8.8	19.7
2 21	7 40.21	+26 36.6	2.395	3.220	11.3	20.6	2 21	7 42.28	+30 25.2	2.360	3.180	11.6	19.9
<b>451006</b>	2008 <i>UX</i> <sub>46</sub>		1 20.4	58°17'	5°6'/18.5	17	<b>190200</b>	2005 <i>YZ</i> <sub>138</sub>		1 20.4	167°53'	0°2'/20.5	18
12 13	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>458787</b>	2011 SC <sub>133</sub>		1 20.4 137°82	2°7/19.1	18		<b>122713</b>	2000 SV <sub>32</sub>		1 20.4 162°71	1°6/21.3	18	
12 13	8 38.44	+24 26.9	1.750	2.538	16.1	21.4	12 13	8 32.75	+13 26.1	2.079	2.844	14.7	20.3
12 23	8 33.73	+25 11.9	1.673	2.546	12.6	21.2	12 23	8 28.69	+13 41.1	1.990	2.846	11.7	20.1
1 2	8 26.00	+26 2.6	1.618	2.553	8.6	21.0	1 2	8 22.32	+14 8.0	1.922	2.848	8.2	19.9
1 12	8 15.96	+26 52.9	1.589	2.560	4.4	20.7	1 12	8 14.18	+14 44.9	1.881	2.849	4.3	19.6
1 22	8 4.73	+27 36.1	1.588	2.567	3.0	20.7	1 22	8 5.10	+15 28.4	1.869	2.851	1.7	19.4
2 1	7 53.72	+28 7.1	1.617	2.573	6.7	20.9	2 1	7 56.10	+16 14.6	1.886	2.852	4.8	19.7
2 11	7 44.33	+28 23.7	1.672	2.578	10.8	21.2	2 11	7 48.21	+16 59.5	1.932	2.853	8.7	19.9
2 21	7 37.54	+28 26.7	1.751	2.584	14.4	21.4	2 21	7 42.25	+17 40.1	2.004	2.854	12.1	20.1
<b>408134</b>	2013 CQ <sub>67</sub>		1 20.4 286°62	3°5/21.8	17		<b>407286</b>	2010 GW <sub>140</sub>		1 20.4 207°90	2°3/21.5	17	
12 13	8 32.87	+10 47.9	1.572	2.348	18.1	22.0	12 13	8 36.98	+12 20.4	2.326	3.070	13.9	23.0
12 23	8 29.80	+10 42.9	1.470	2.330	14.8	21.7	12 23	8 31.81	+12 18.8	2.219	3.062	11.2	22.8
1 2	8 23.69	+10 54.7	1.388	2.311	10.8	21.4	1 2	8 24.36	+12 27.6	2.136	3.054	8.0	22.5
1 12	8 15.06	+11 23.6	1.329	2.293	6.3	21.1	1 12	8 15.14	+12 45.8	2.080	3.044	4.5	22.3
1 22	8 4.87	+12 6.9	1.296	2.274	3.5	20.9	1 22	8 4.92	+13 11.3	2.055	3.034	2.3	22.1
2 1	7 54.48	+13 0.3	1.291	2.256	6.6	21.0	2 1	7 54.66	+13 41.3	2.060	3.022	4.8	22.3
2 11	7 45.40	+13 57.8	1.311	2.238	11.4	21.2	2 11	7 45.40	+14 12.7	2.095	3.010	8.4	22.5
2 21	7 38.84	+14 54.0	1.355	2.219	15.9	21.5	2 21	7 37.93	+14 43.0	2.157	2.996	11.8	22.7
<b>439928</b>	2001 RH <sub>12</sub>		1 20.4 72°52	1°5/19.8	15		<b>456585</b>	2007 DK <sub>51</sub>		1 20.4 274°45	4°6/18.5	18	
12 13	8 43.74	+21 41.1	1.410	2.200	19.2	21.9	12 13	8 39.89	+32 6.6	2.064	2.845	14.2	20.8
12 23	8 37.88	+22 10.1	1.363	2.236	14.9	21.7	12 23	8 34.85	+32 34.2	1.959	2.824	11.4	20.6
1 2	8 28.64	+22 46.6	1.335	2.272	9.9	21.6	1 2	8 26.83	+33 0.3	1.877	2.803	8.3	20.4
1 12	8 17.04	+23 24.0	1.333	2.307	4.6	21.3	1 12	8 16.42	+33 18.8	1.821	2.781	5.4	20.2
1 22	8 4.57	+23 55.9	1.359	2.341	1.9	21.2	1 22	8 4.66	+33 23.7	1.794	2.760	4.8	20.1
2 1	7 52.88	+24 17.8	1.412	2.375	6.6	21.6	2 1	7 52.90	+33 11.6	1.796	2.738	7.4	20.2
2 11	7 43.44	+24 28.2	1.493	2.408	11.2	22.0	2 11	7 42.55	+32 42.1	1.825	2.716	10.9	20.4
2 21	7 37.08	+24 28.1	1.596	2.440	15.0	22.3	2 21	7 34.68	+31 58.3	1.879	2.693	14.3	20.5
<b>36364</b>	2000 OT <sub>5</sub>		1 20.4 76°68	2°4/21.3	18		<b>500371</b>	2012 TC <sub>46</sub>		1 20.4 145°48	1°9/19.4	18	
12 13	8 41.50	+14 9.7	1.562	2.331	18.5	18.7	12 13	8 34.23	+25 43.3	2.534	3.309	12.0	21.6
12 23	8 35.73	+13 54.4	1.506	2.365	14.6	18.5	12 23	8 29.47	+25 59.5	2.447	3.313	9.4	21.5
1 2	8 27.02	+13 51.4	1.472	2.397	10.1	18.3	1 2	8 22.62	+26 17.4	2.384	3.316	6.4	21.3
1 12	8 16.26	+13 58.9	1.462	2.430	5.4	18.1	1 12	8 14.24	+26 33.5	2.348	3.319	3.2	21.1
1 22	8 4.72	+14 13.6	1.481	2.462	2.4	18.0	1 22	8 5.11	+26 44.5	2.343	3.322	2.1	21.0
2 1	7 53.79	+14 32.3	1.528	2.493	5.9	18.3	2 1	7 56.14	+26 48.2	2.368	3.324	4.8	21.2
2 11	7 44.74	+14 51.5	1.603	2.524	10.1	18.6	2 11	7 48.24	+26 43.7	2.423	3.327	8.0	21.4
2 21	7 38.37	+15 8.9	1.702	2.554	13.8	18.9	2 21	7 42.09	+26 31.3	2.503	3.329	10.8	21.6
<b>51574</b>	2001 HA <sub>5</sub>		1 20.4 201°46	2°2/21.2	18		<b>417773</b>	2007 DZ <sub>115</sub>		1 20.4 107°74	1°7/19.7	18	
12 13	8 38.87	+14 38.7	1.744	2.512	16.9	19.4	12 13	8 35.76	+23 45.4	1.951	2.736	14.8	22.0
12 23	8 34.00	+14 24.0	1.651	2.509	13.6	19.2	12 23	8 31.31	+24 2.4	1.866	2.738	11.6	21.8
1 2	8 26.19	+14 19.9	1.580	2.505	9.6	18.9	1 2	8 24.20	+24 23.6	1.804	2.739	7.8	21.5
1 12	8 16.09	+14 25.1	1.533	2.501	5.1	18.6	1 12	8 15.08	+24 44.9	1.768	2.741	3.8	21.3
1 22	8 4.71	+14 37.4	1.515	2.496	2.2	18.4	1 22	8 4.95	+25 1.8	1.761	2.742	2.0	21.2
2 1	7 53.40	+14 53.7	1.526	2.490	5.9	18.7	2 1	7 55.00	+25 11.1	1.783	2.744	5.7	21.4
2 11	7 43.53	+15 10.9	1.564	2.484	10.4	18.9	2 11	7 46.43	+25 11.2	1.833	2.745	9.6	21.6
2 21	7 36.13	+15 26.8	1.627	2.477	14.4	19.1	2 21	7 40.11	+25 2.6	1.907	2.746	13.1	21.9
<b>17639</b>	1996 PA <sub>4</sub>		1 20.4 266°93	0°6/20.1	18		<b>114942</b>	2003 QJ <sub>53</sub>		1 20.4 93°13	1°5/19.7	18	
12 13	8 35.53	+19 14.5	1.692	2.480	16.6	18.9	12 13	8 39.83	+22 18.3	1.727	2.510	16.5	20.1
12 23	8 31.79	+19 42.6	1.591	2.463	13.2	18.6	12 23	8 34.53	+22 47.3	1.663	2.533	12.8	19.9
1 2	8 24.99	+20 21.8	1.510	2.446	9.0	18.3	1 2	8 26.34	+23 22.4	1.621	2.555	8.6	19.7
1 12	8 15.66	+21 8.3	1.455	2.429	4.2	18.0	1 12	8 16.03	+23 58.3	1.605	2.578	4.1	19.5
1 22	8 4.77	+21 56.4	1.427	2.411	1.2	17.8	1 22	8 4.80	+24 29.6	1.617	2.599	1.9	19.3
2 1	7 53.73	+22 40.2	1.428	2.393	6.2	18.1	2 1	7 54.00	+24 52.2	1.659	2.620	6.0	19.7
2 11	7 44.05	+23 15.4	1.456	2.374	11.1	18.3	2 11	7 44.92	+25 4.3	1.729	2.641	10.1	19.9
2 21	7 36.89	+23 40.0	1.507	2.356	15.5	18.5	2 21	7 38.42	+25 6.3	1.823	2.661	13.7	20.2
<b>326197</b>	2012 CX <sub>13</sub>		1 20.4 237°27	0°2/20.5	18		<b>161002</b>	2002 CQ <sub>314</sub>		1 20.4 147°70	3°2/21.9	18	
12 13	8 34.39	+17 50.1	2.057	2.830	14.5	22.0	12 13	8 35.56	+ 9 59.8	1.882	2.636	16.3	20.7
12 23	8 30.17	+18 9.5	1.957	2.821	11.5	21.8	12 23	8 31.05	+10 1.4	1.798	2.644	13.2	20.5
1 2	8 23.45	+18 38.0	1.880	2.811	7.8	21.6	1 2	8 23.99	+10 17.9	1.734	2.651	9.5	20.2
1 12	8 14.77	+19 13.0	1.829	2.801	3.7	21.3	1 12	8 14.99	+10 48.4	1.696	2.658	5.6	20.0
1 22	8 4.97	+19 50.4	1.807	2.791	0.7	21.0	1 22	8 4.98	+11 30.1	1.687	2.664	3.2	19.9
2 1	7 55.14	+20 26.1	1.815	2.780	5.1	21.3	2 1	7 55.11	+12 18.8	1.706	2.669	5.6	20.0
2 11	7 46.45	+20 56.9	1.852	2.769	9.2	21.6	2 11	7 46.52	+13 9.9	1.754	2.674	9.4	20.3
2 21	7 39.79	+21 20.9	1.913	2.758	12.9	21.8	2 21	7 40.08	+13 59.3	1.827	2.679	13.0	20.5
<b>363861</b>	2005 RQ <sub>20</sub>		1 20.4 153°79	5°2/23.5	18		<b>158491</b>	2002 ED <sub>27</sub>		1 20.4 297°29	0°4/20.6	18	
12 13	8 33.12	+ 2 52.4	2.369	3.082	14.4	21.9	12 13	8 32.60	+17 38.5	1.934	2.714	15.0	20.5
12 23	8 28.57	+ 2 35.2	2.279	3.090	12.1	21.8	12 23	8 28.89	+17 51.9	1.840	2.708	11.9	20.3
1 2	8 22.01	+ 2 33.5	2.211	3.097	9.4	21.6	1 2	8 22.64	+18 14.7	1.768	2.701	8.1	20.1
1 12	8 13.96	+ 2 48.1	2.169	3.104	6.7	21.4	1 12	8 14.41	+18 44.3	1.722	2.695	3.9	19.8
1 22	8 5.15	+ 3 18.1	2.155	3.110	5.2	21.4	1 22	8 5.09	+19 16.8	1.705	2.688	0.8	19.5
2 1	7 56.42	+ 4 1.3	2.170	3.116	6.1	21.4	2 1	7 55.81	+19 48.3	1.716	2.682	5.2	19.8
2 11	7 48.67	+ 4 53.6	2.214	3.121	8.5	21.6	2 11	7 47.73	+20 15.6	1.756	2.676	9.4	20.1
2 21	7 42.56	+ 5 50.7	2.285	3.125	11.2	21.8	2 21	7 41.76	+20 36.7	1.819	2.670	13.1	20.3
<b>495284</b>	2013 RG <sub>79</sub>		1 20.4 150°65	0°8/20.8	18		<b>225765</b>	2001 SD <sub>255</sub>		1 20.4 152°12	1°2/21.5	17	
12 13	8 33.91	+16 17.0	2.459	3.218	12.8	22.6	12 13	8 26.53	+13 13				

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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>363184</b>	2001 <i>TT</i> <sub>182</sub>		1 20.4	65°07	2°5/21.4	18	<b>224860</b>	2006 <i>YF</i> <sub>51</sub>		1 20.4	121°80	1°1/19.9	18
12 13	8 37.94	+13 36.2	1.698	2.466	17.3	20.7	12 13	8 37.46	+22 26.5	2.087	2.863	14.3	21.3
12 23	8 32.80	+13 20.2	1.640	2.497	13.7	20.5	12 23	8 32.32	+22 40.7	2.009	2.875	11.1	21.1
1 2	8 25.00	+13 16.1	1.604	2.528	9.5	20.4	1 2	8 24.71	+22 59.4	1.953	2.886	7.5	20.9
1 12	8 15.35	+13 22.4	1.592	2.559	5.2	20.2	1 12	8 15.30	+23 18.8	1.925	2.898	3.5	20.7
1 22	8 4.96	+13 36.5	1.609	2.589	2.5	20.1	1 22	8 5.01	+23 35.1	1.926	2.909	1.4	20.5
2 1	7 55.07	+13 55.1	1.655	2.619	5.5	20.3	2 1	7 54.99	+23 45.5	1.958	2.919	5.1	20.8
2 11	7 46.82	+14 15.1	1.728	2.650	9.5	20.6	2 11	7 46.32	+23 48.4	2.018	2.929	8.9	21.1
2 21	7 40.96	+14 34.0	1.826	2.679	13.0	20.9	2 21	7 39.78	+23 44.0	2.103	2.939	12.2	21.3
<b>178613</b>	2000 <i>EF</i> <sub>78</sub>		1 20.4	294°82	3°8/22.4	17	<b>106653</b>	2000 <i>WW</i> <sub>140</sub>		1 20.4	124°81	1°2/19.8	18
12 13	8 30.89	+ 8 1.4	1.720	2.484	17.3	21.2	12 13	8 38.30	+21 11.4	1.836	2.616	15.7	20.6
12 23	8 28.02	+ 8 13.8	1.612	2.462	14.2	20.9	12 23	8 33.35	+21 43.2	1.761	2.629	12.3	20.4
1 2	8 22.39	+ 8 46.1	1.523	2.440	10.5	20.6	1 2	8 25.60	+22 22.4	1.707	2.642	8.3	20.1
1 12	8 14.46	+ 9 38.8	1.458	2.419	6.5	20.3	1 12	8 15.78	+23 4.2	1.681	2.654	3.9	19.9
1 22	8 5.08	+10 49.0	1.421	2.397	3.8	20.1	1 22	8 4.92	+23 43.1	1.683	2.665	1.6	19.8
2 1	7 55.45	+12 11.5	1.411	2.375	6.3	20.2	2 1	7 54.32	+24 14.6	1.715	2.676	5.7	20.1
2 11	7 46.92	+13 39.0	1.428	2.354	10.7	20.4	2 11	7 45.23	+24 36.3	1.774	2.687	9.9	20.3
2 21	7 40.62	+15 4.7	1.470	2.332	15.0	20.6	2 21	7 38.55	+24 47.8	1.858	2.697	13.4	20.6
<b>51675</b>	2001 <i>KS</i> <sub>7</sub>		1 20.4	141°89	1°3/21.1	18	<b>166998</b>	2003 <i>PE</i> <sub>5</sub>		1 20.4	113°07	1°1/19.9	18
12 13	8 35.59	+14 26.4	2.249	3.005	13.9	20.1	12 13	8 39.02	+21 43.9	1.732	2.516	16.4	20.1
12 23	8 30.64	+14 42.2	2.165	3.017	11.0	20.0	12 23	8 34.04	+21 59.3	1.658	2.528	12.9	19.9
1 2	8 23.48	+15 8.1	2.104	3.029	7.6	19.8	1 2	8 26.13	+22 20.9	1.605	2.540	8.7	19.6
1 12	8 14.69	+15 41.8	2.071	3.039	3.9	19.6	1 12	8 16.03	+22 44.5	1.578	2.551	4.0	19.4
1 22	8 5.08	+16 20.0	2.067	3.050	1.3	19.4	1 22	8 4.89	+23 5.1	1.579	2.562	1.4	19.2
2 1	7 55.63	+16 59.3	2.094	3.059	4.5	19.6	2 1	7 54.06	+23 19.2	1.610	2.573	5.9	19.6
2 11	7 47.30	+17 36.4	2.151	3.068	8.1	19.9	2 11	7 44.88	+23 24.8	1.668	2.583	10.2	19.8
2 21	7 40.82	+18 9.1	2.234	3.076	11.3	20.1	2 21	7 38.24	+23 22.2	1.750	2.593	13.9	20.1
<b>464306</b>	2016 <i>AG</i> <sub>101</sub>		1 20.4	54°66	2°7/19.5	16	<b>487990</b>	2015 <i>TZ</i> <sub>329</sub>		1 20.4	183°28	2°5/19.1	18
12 13	8 39.64	+25 3.4	1.441	2.242	18.3	21.2	12 13	8 38.12	+21 57.2	1.675	2.463	16.7	21.2
12 23	8 34.86	+25 29.6	1.388	2.268	14.3	21.0	12 23	8 33.80	+23 3.7	1.590	2.464	13.1	20.9
1 2	8 26.73	+25 59.7	1.356	2.294	9.6	20.8	1 2	8 26.31	+24 20.9	1.528	2.464	8.9	20.7
1 12	8 16.25	+26 27.4	1.349	2.321	4.8	20.6	1 12	8 16.28	+25 42.1	1.491	2.464	4.4	20.4
1 22	8 4.81	+26 46.5	1.369	2.348	3.0	20.5	1 22	8 4.81	+26 58.7	1.484	2.463	2.9	20.3
2 1	7 54.04	+26 53.4	1.416	2.375	7.0	20.9	2 1	7 53.36	+28 3.2	1.505	2.461	7.0	20.6
2 11	7 45.37	+26 47.6	1.489	2.403	11.3	21.2	2 11	7 43.47	+28 51.1	1.553	2.460	11.4	20.8
2 21	7 39.68	+26 30.9	1.585	2.430	15.0	21.5	2 21	7 36.26	+29 21.8	1.625	2.457	15.3	21.1
<b>522230</b>	2016 <i>AM</i> <sub>267</sub>		1 20.4	257°20	4°9/22.7	17	<b>34428</b>	2000 <i>SA</i> <sub>27</sub>		1 20.4	98°80	8°7/26.6	18
12 13	8 32.86	+ 6 12.3	2.096	2.833	15.4	22.2	12 13	8 29.12	- 9 33.5	2.623	3.265	14.6	19.1
12 23	8 28.90	+ 5 47.7	1.988	2.818	12.8	22.0	12 23	8 25.34	-10 21.6	2.537	3.272	13.0	19.0
1 2	8 22.59	+ 5 37.5	1.901	2.802	9.8	21.8	1 2	8 19.81	-10 50.7	2.471	3.279	11.3	18.8
1 12	8 14.41	+ 5 42.8	1.839	2.786	6.7	21.6	1 12	8 12.98	-10 57.7	2.426	3.285	9.7	18.7
1 22	8 5.12	+ 6 3.4	1.804	2.769	4.9	21.4	1 22	8 5.48	-10 41.5	2.406	3.292	8.8	18.7
2 1	7 55.73	+ 6 37.2	1.799	2.752	6.4	21.5	2 1	7 58.04	-10 3.0	2.413	3.298	8.8	18.7
2 11	7 47.31	+ 7 20.5	1.821	2.735	9.6	21.6	2 11	7 51.43	- 9 5.7	2.446	3.304	9.8	18.8
2 21	7 40.75	+ 8 8.8	1.869	2.718	12.9	21.8	2 21	7 46.25	- 7 54.5	2.503	3.310	11.4	18.9
<b>256781</b>	2008 <i>CS</i> <sub>15</sub>		1 20.4	208°08	0°5/20.2	18	<b>70272</b>	1999 <i>RG</i> <sub>107</sub>		1 20.4	27°25	0°2/20.4	18
12 13	8 34.94	+19 16.8	2.099	2.873	14.2	21.2	12 13	8 34.33	+19 43.2	1.292	2.102	19.5	18.8
12 23	8 30.54	+19 45.0	2.004	2.869	11.2	21.0	12 23	8 31.22	+19 46.9	1.227	2.111	15.4	18.5
1 2	8 23.68	+20 21.6	1.932	2.865	7.6	20.8	1 2	8 24.65	+20 0.5	1.180	2.121	10.4	18.3
1 12	8 14.89	+21 3.0	1.887	2.860	3.5	20.5	1 12	8 15.46	+20 20.2	1.157	2.131	4.9	18.0
1 22	8 5.04	+21 44.9	1.871	2.855	0.9	20.3	1 22	8 5.00	+20 40.7	1.159	2.142	1.0	17.7
2 1	7 55.22	+22 22.9	1.886	2.849	5.1	20.6	2 1	7 54.96	+20 57.4	1.187	2.155	6.6	18.1
2 11	7 46.56	+22 54.0	1.929	2.843	9.1	20.8	2 11	7 46.90	+21 7.4	1.240	2.167	11.8	18.5
2 21	7 39.91	+23 16.6	1.997	2.837	12.6	21.0	2 21	7 41.87	+21 9.8	1.314	2.181	16.2	18.8
<b>215908</b>	2005 <i>HH</i> <sub>6</sub>		1 20.4	220°51	1°8/21.3	18	<b>415877</b>	2001 <i>SC</i> <sub>312</sub>		1 20.4	190°95	3°6/18.7	18
12 13	8 33.46	+13 16.5	1.835	2.606	16.1	21.1	12 13	8 40.55	+30 36.2	2.386	3.156	12.8	21.6
12 23	8 29.64	+13 30.7	1.744	2.604	12.9	20.8	12 23	8 34.71	+31 4.7	2.294	3.154	10.2	21.5
1 2	8 23.20	+13 58.6	1.675	2.601	9.0	20.6	1 2	8 26.35	+31 32.3	2.227	3.152	7.2	21.3
1 12	8 14.71	+14 38.3	1.630	2.599	4.8	20.3	1 12	8 16.10	+31 53.8	2.187	3.150	4.4	21.1
1 22	8 5.08	+15 26.0	1.614	2.596	1.9	20.1	1 22	8 4.88	+32 4.6	2.178	3.146	3.8	21.0
2 1	7 55.49	+16 17.1	1.627	2.593	5.4	20.4	2 1	7 53.83	+32 2.0	2.199	3.142	6.2	21.2
2 11	7 47.16	+17 6.8	1.668	2.590	9.7	20.6	2 11	7 44.06	+31 45.7	2.249	3.138	9.3	21.4
2 21	7 41.00	+17 51.5	1.733	2.587	13.5	20.8	2 21	7 36.42	+31 17.8	2.325	3.132	12.1	21.5
<b>255846</b>	2006 <i>SQ</i> <sub>121</sub>		1 20.4	61°91	2°5/19.5	17	<b>490900</b>	2011 <i>BK</i> <sub>100</sub>		1 20.4	354°78	6°2/22.9	16
12 13	8 41.61	+25 11.2	1.566	2.357	17.5	20.3	12 13	8 25.28	+ 7 17.6	1.280	2.076	20.5	20.9
12 23	8 36.03	+25 35.5	1.517	2.391	13.6	20.1	12 23	8 24.19	+ 6 40.8	1.201	2.067	17.0	20.7
1 2	8 27.32	+26 2.8	1.488	2.424	9.1	19.9	1 2	8 20.01	+ 6 24.7	1.139	2.060	12.9	20.4
1 12	8 16.47	+26 27.1	1.485	2.457	4.6	19.7	1 12	8 13.38	+ 6 31.9	1.098	2.055	8.7	20.2
1 22	8 4.80	+26 43.1	1.510	2.490	2.8	19.7	1 22	8 5.38	+ 7 1.9	1.080	2.051	6.2	20.0
2 1	7 53.85	+26 47.5	1.564	2.522	6.6	20.0	2 1	7 57.45	+ 7 50.9	1.087	2.050	8.1	20.1
2 11	7 44.93	+26 40.2	1.644	2.555	10.6	20.3	2 11	7 51.09	+ 8 52.0	1.117	2.050	12.2	20.3
2 21	7 38.84	+26 23.1	1.748	2.587	14.1	20.6	2 21	7 47.41	+ 9 57.3	1.168	2.052	16.5	20.6
<b>83795</b>	2001 <i>TX</i> <sub>211</sub>		1 20.4	211°61	1°9/21.3	18	<b>111668</b>	2002 <i>BU</i> <sub>9</sub>		1 20.4	316°41	1°5/19.9	18
12 13	8 34.11												

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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>352828</b>	2008 UK <sub>351</sub>		1 20.4 260°11	3°8/21.8 18			<b>464142</b>	2014 XD <sub>5</sub>		1 20.4 151°92	3°1/18.9 18		
12 13	8 35.29	+11 20.3	1.602	2.374	18.0	21.3	12 13	8 37.11	+27 19.2	2.043	2.827	14.2	21.1
12 23	8 31.52	+10 56.9	1.509	2.366	14.7	21.1	12 23	8 32.36	+27 54.5	1.960	2.830	11.2	20.9
1 2	8 24.74	+10 47.5	1.436	2.358	10.7	20.8	1 2	8 24.95	+28 31.9	1.901	2.833	7.7	20.7
1 12	8 15.55	+10 52.4	1.386	2.349	6.4	20.6	1 12	8 15.52	+29 6.0	1.868	2.836	4.3	20.5
1 22	8 4.99	+11 10.1	1.364	2.341	3.8	20.4	1 22	8 5.07	+29 31.7	1.864	2.839	3.4	20.4
2 1	7 54.42	+11 37.5	1.369	2.332	6.6	20.5	2 1	7 54.80	+29 45.2	1.890	2.841	6.3	20.6
2 11	7 45.28	+12 10.2	1.400	2.324	11.1	20.7	2 11	7 45.92	+29 45.4	1.943	2.844	9.8	20.9
2 21	7 38.65	+12 44.3	1.455	2.315	15.3	21.0	2 21	7 39.31	+29 33.5	2.021	2.846	13.1	21.1
<b>365653</b>	2010 VD <sub>26</sub>		1 20.4 160°15	0°9/19.9 18			<b>458354</b>	2010 VU <sub>189</sub>		1 20.4 98°72	4°8/17.9 18		
12 13	8 36.18	+20 50.0	2.248	3.019	13.5	21.8	12 13	8 37.42	+29 54.2	1.864	2.655	15.1	21.5
12 23	8 31.26	+21 18.4	2.161	3.025	10.6	21.6	12 23	8 32.95	+30 58.2	1.792	2.664	12.0	21.3
1 2	8 24.01	+21 53.0	2.098	3.030	7.1	21.4	1 2	8 25.52	+32 3.7	1.742	2.672	8.5	21.1
1 12	8 15.01	+22 30.2	2.063	3.035	3.3	21.2	1 12	8 15.84	+33 3.2	1.719	2.681	5.5	21.0
1 22	8 5.12	+23 5.8	2.057	3.040	1.2	21.1	1 22	8 5.01	+33 49.5	1.724	2.689	5.1	21.0
2 1	7 55.35	+23 36.1	2.082	3.044	4.9	21.3	2 1	7 54.40	+34 17.8	1.757	2.697	7.8	21.1
2 11	7 46.73	+23 58.8	2.136	3.047	8.5	21.6	2 11	7 45.39	+34 26.7	1.816	2.705	11.1	21.3
2 21	7 40.06	+24 13.1	2.216	3.050	11.7	21.8	2 21	7 38.92	+34 18.6	1.899	2.713	14.2	21.6
<b>112430</b>	2002 NJ <sub>51</sub>		1 20.4 165°28	0°4/20.2 18 R			<b>450978</b>	2008 SB <sub>9</sub>		1 20.4 145°61	2°9/21.8 18		
12 13	8 35.91	+21 42.0	2.394	3.163	12.8	20.2	12 13	8 37.26	+11 3.1	1.749	2.509	17.2	21.8
12 23	8 30.85	+21 38.9	2.304	3.166	10.1	20.0	12 23	8 32.61	+11 6.1	1.667	2.518	13.8	21.6
1 2	8 23.62	+21 39.3	2.237	3.168	6.8	19.8	1 2	8 25.20	+11 24.4	1.606	2.526	9.9	21.4
1 12	8 14.79	+21 40.7	2.197	3.170	3.2	19.5	1 12	8 15.67	+11 56.4	1.570	2.534	5.6	21.2
1 22	8 5.17	+21 40.6	2.188	3.172	0.8	19.3	1 22	8 5.05	+12 39.1	1.562	2.541	2.9	21.0
2 1	7 55.71	+21 37.0	2.210	3.173	4.5	19.6	2 1	7 54.59	+13 27.7	1.584	2.548	5.8	21.2
2 11	7 47.36	+21 29.0	2.261	3.174	8.0	19.8	2 11	7 45.56	+14 17.5	1.633	2.554	9.9	21.4
2 21	7 40.84	+21 16.6	2.338	3.175	11.1	20.0	2 21	7 38.87	+15 4.3	1.707	2.559	13.8	21.7
<b>282177</b>	2001 TZ <sub>23</sub>		1 20.4 102°21	6°5/23.4 18			<b>484773</b>	2009 BY <sub>154</sub>		1 20.4 270°45	1°9/19.6 17		
12 13	8 38.17	+ 3 26.8	1.707	2.439	18.6	21.0	12 13	8 36.26	+22 30.5	1.717	2.508	16.2	21.9
12 23	8 33.10	+ 2 49.1	1.640	2.461	15.5	20.8	12 23	8 32.43	+23 3.2	1.616	2.491	12.9	21.7
1 2	8 25.35	+ 2 30.8	1.591	2.484	11.9	20.6	1 2	8 25.49	+23 44.2	1.537	2.474	8.8	21.4
1 12	8 15.63	+ 2 33.7	1.567	2.505	8.5	20.5	1 12	8 16.00	+24 28.5	1.483	2.456	4.3	21.1
1 22	8 5.01	+ 2 57.1	1.569	2.526	6.6	20.4	1 22	8 4.96	+25 9.9	1.457	2.439	2.3	20.9
2 1	7 54.73	+ 3 37.6	1.599	2.547	7.7	20.5	2 1	7 53.79	+25 42.7	1.460	2.421	6.6	21.1
2 11	7 45.98	+ 4 29.9	1.656	2.566	10.6	20.7	2 11	7 44.02	+26 3.6	1.489	2.403	11.3	21.4
2 21	7 39.58	+ 5 27.8	1.738	2.585	13.8	21.0	2 21	7 36.82	+26 11.8	1.542	2.385	15.5	21.6
<b>137016</b>	1998 SH <sub>131</sub>		1 20.4 30°81	3°7/19.4 18			<b>207681</b>	Caiqiao		1 20.4 57°39	6°2/18.4 17		
12 13	8 37.75	+26 41.9	1.057	1.885	21.7	18.8	12 13	8 43.14	+31 59.2	1.352	2.157	19.1	18.9
12 23	8 34.29	+27 3.4	1.019	1.913	16.9	18.5	12 23	8 38.09	+32 56.3	1.306	2.184	15.1	18.7
1 2	8 26.74	+27 27.5	0.998	1.942	11.4	18.3	1 2	8 29.18	+33 50.9	1.280	2.211	10.8	18.5
1 12	8 16.33	+27 46.4	1.000	1.972	5.9	18.1	1 12	8 17.51	+34 33.1	1.278	2.239	7.1	18.4
1 22	8 4.92	+27 53.0	1.025	2.004	4.0	18.1	1 22	8 4.75	+34 54.6	1.302	2.267	6.5	18.4
2 1	7 54.52	+27 44.2	1.076	2.037	8.3	18.5	2 1	7 52.84	+34 52.0	1.353	2.295	9.4	18.7
2 11	7 46.82	+27 20.9	1.149	2.071	13.1	18.8	2 11	7 43.45	+34 27.4	1.428	2.323	13.1	19.0
2 21	7 42.66	+26 46.8	1.243	2.106	17.2	19.2	2 21	7 37.51	+33 46.2	1.524	2.350	16.5	19.3
<b>180541</b>	2004 ES <sub>10</sub>		1 20.4 325°62	1°8/19.6 18			<b>429938</b>	2012 TU <sub>307</sub>		1 20.4 252°65	0°4/20.6 18		
12 13	8 33.78	+22 15.1	1.619	2.418	16.7	20.4	12 13	8 32.88	+18 42.7	2.454	3.221	12.6	20.6
12 23	8 30.46	+22 47.4	1.532	2.412	13.2	20.1	12 23	8 28.49	+18 37.8	2.358	3.218	9.9	20.4
1 2	8 24.07	+23 28.1	1.467	2.405	8.9	19.8	1 2	8 22.06	+18 38.3	2.285	3.215	6.8	20.2
1 12	8 15.24	+24 11.9	1.426	2.400	4.3	19.6	1 12	8 14.11	+18 42.3	2.240	3.212	3.2	20.0
1 22	8 5.06	+24 52.8	1.413	2.394	2.2	19.4	1 22	8 5.37	+18 47.8	2.225	3.208	0.7	19.8
2 1	7 54.94	+25 25.3	1.427	2.389	6.6	19.7	2 1	7 56.72	+18 52.6	2.240	3.205	4.2	20.1
2 11	7 46.36	+25 45.9	1.467	2.384	11.2	19.9	2 11	7 49.05	+18 55.3	2.285	3.202	7.7	20.3
2 21	7 40.39	+25 54.3	1.530	2.380	15.2	20.1	2 21	7 43.06	+18 54.9	2.355	3.198	10.8	20.5
<b>453267</b>	2008 SX <sub>241</sub>		1 20.4 131°78	1°8/21.3 18			<b>495495</b>	2014 UF <sub>136</sub>		1 20.4 133°66	2°5/21.6 18		
12 13	8 38.59	+12 58.2	1.893	2.651	16.1	22.7	12 13	8 34.41	+12 26.1	2.024	2.783	15.2	21.9
12 23	8 33.35	+13 15.1	1.816	2.668	12.9	22.5	12 23	8 30.02	+12 17.3	1.938	2.789	12.2	21.7
1 2	8 25.51	+13 45.1	1.761	2.684	9.0	22.3	1 2	8 23.26	+12 19.7	1.874	2.795	8.6	21.5
1 12	8 15.73	+14 25.8	1.732	2.699	4.7	22.1	1 12	8 14.72	+12 32.6	1.836	2.800	4.9	21.3
1 22	8 4.99	+15 13.1	1.732	2.713	1.8	21.9	1 22	8 5.27	+12 53.6	1.826	2.805	2.5	21.1
2 1	7 54.49	+16 2.4	1.762	2.727	5.2	22.1	2 1	7 55.97	+13 20.0	1.847	2.810	5.1	21.3
2 11	7 45.38	+16 49.4	1.821	2.740	9.3	22.4	2 11	7 47.85	+13 48.4	1.895	2.815	8.8	21.5
2 21	7 38.51	+17 31.1	1.906	2.752	12.8	22.7	2 21	7 41.73	+14 16.0	1.969	2.820	12.3	21.8
<b>460718</b>	2014 VY <sub>3</sub>		1 20.4 118°93	2°6/19.2 18			<b>459841</b>	2013 TF <sub>13</sub>		1 20.4 182°76	1°7/21.4 16		
12 13	8 39.49	+26 34.8	2.120	2.896	14.0	21.6	12 13	8 32.77	+13 7.5	2.476	3.228	12.9	22.4
12 23	8 33.91	+27 2.6	2.047	2.913	11.0	21.5	12 23	8 28.37	+13 16.5	2.381	3.229	10.3	22.2
1 2	8 25.78	+27 32.0	1.997	2.929	7.5	21.3	1 2	8 21.98	+13 35.4	2.308	3.229	7.2	22.0
1 12	8 15.81	+27 58.2	1.975	2.944	4.0	21.1	1 12	8 14.09	+14 2.6	2.263	3.229	3.9	21.8
1 22	8 5.00	+28 16.7	1.982	2.959	2.8	21.0	1 22	8 5.40	+14 35.8	2.247	3.228	1.7	21.6
2 1	7 54.50	+28 24.4	2.020	2.973	5.8	21.3	2 1	7 56.76	+15 12.0	2.262	3.227	4.3	21.8
2 11	7 45.44	+28 20.7	2.086	2.987	9.2	21.5	2 11	7 49.04	+15 48.2	2.307	3.225	7.6	22.0
2 21	7 38.61	+28 6.8	2.177	3.001	12.3	21.7	2 21	7 42.92	+16 21.9	2.379	3.223	10.7	22.2
<b>89966</b>	2002 RX <sub>24</sub>		1 20.4 34°93	4°8/18.6 18			<b>195861</b>	2002 QC <sub>90</sub>		1 20.4 135°16	0°2/20.6 18		
12 13	8 35.63	+27 28.9	1.285	2.103	19.2	18.7	12 13	8 31.94	+16 39.1				

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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>331036</b>	2009 <i>VX</i> <sub>49</sub>		1 20.4 130°14	2°7/18.9	18		<b>360439</b>	2002 <i>JP</i> <sub>121</sub>		1 20.4 193°33	3°3/18.4	18	
12 13	8 35.81	+25 53.4	2.234	3.014	13.3	21.5	12 13	8 37.31	+24 23.0	1.990	2.772	14.6	20.8
12 23	8 31.09	+26 40.0	2.155	3.023	10.4	21.3	12 23	8 32.80	+25 42.3	1.901	2.770	11.5	20.6
1 2	8 23.96	+27 29.9	2.100	3.032	7.1	21.1	1 2	8 25.49	+27 9.7	1.835	2.769	7.9	20.4
1 12	8 15.05	+28 18.0	2.072	3.041	3.8	21.0	1 12	8 15.94	+28 38.3	1.797	2.766	4.3	20.2
1 22	8 5.23	+28 59.2	2.074	3.050	3.0	20.9	1 22	8 5.08	+30 0.0	1.789	2.763	3.6	20.1
2 1	7 55.58	+29 29.6	2.107	3.058	5.8	21.1	2 1	7 54.17	+31 8.2	1.811	2.759	6.8	20.3
2 11	7 47.16	+29 47.3	2.167	3.066	9.1	21.3	2 11	7 44.53	+31 58.9	1.861	2.755	10.6	20.5
2 21	7 40.75	+29 52.8	2.253	3.074	12.0	21.5	2 21	7 37.19	+32 31.7	1.935	2.751	13.9	20.7
<b>388030</b>	2005 <i>SL</i> <sub>94</sub>		1 20.4 184°24	4°8/22.6	18		<b>56936</b>	2000 <i>RW</i> <sub>53</sub>		1 20.4 216°37	0°0/20.5	18	
12 13	8 35.80	+7 1.9	1.640	2.395	18.4	21.2	12 13	8 34.86	+20 42.7	2.612	3.376	12.0	19.0
12 23	8 31.76	+6 53.4	1.553	2.395	15.1	21.0	12 23	8 29.90	+20 31.2	2.514	3.373	9.4	18.8
1 2	8 24.83	+7 4.0	1.484	2.395	11.3	20.8	1 2	8 22.95	+20 22.9	2.440	3.370	6.4	18.6
1 12	8 15.61	+7 34.1	1.440	2.395	7.3	20.5	1 12	8 14.54	+20 16.1	2.394	3.366	3.0	18.3
1 22	8 5.11	+8 21.8	1.422	2.394	4.8	20.4	1 22	8 5.37	+20 8.8	2.379	3.362	0.6	18.1
2 1	7 54.66	+9 22.3	1.432	2.393	6.8	20.5	2 1	7 56.32	+19 59.6	2.395	3.359	4.1	18.4
2 11	7 45.61	+10 29.5	1.469	2.391	10.8	20.7	2 11	7 48.24	+19 47.6	2.440	3.355	7.4	18.6
2 21	7 38.99	+11 37.1	1.531	2.388	14.8	20.9	2 21	7 41.81	+19 32.7	2.513	3.350	10.4	18.8
<b>47627</b>	2000 <i>CX</i>		1 20.4 198°08	1°4/21.3	18		<b>64156</b>	2001 <i>TN</i> <sub>42</sub>		1 20.4 10°99	8°6/16.1	18	
12 13	8 31.38	+13 49.7	2.324	3.085	13.4	19.1	12 13	8 36.09	+36 41.6	1.558	2.364	17.0	18.1
12 23	8 27.46	+14 5.9	2.230	3.084	10.7	18.9	12 23	8 32.93	+38 17.1	1.493	2.365	13.9	17.9
1 2	8 21.46	+14 32.6	2.158	3.083	7.4	18.7	1 2	8 26.10	+39 49.7	1.449	2.368	10.8	17.8
1 12	8 13.88	+15 8.1	2.114	3.082	3.9	18.4	1 12	8 16.34	+41 8.0	1.429	2.371	8.8	17.6
1 22	8 5.45	+15 49.2	2.099	3.081	1.4	18.2	1 22	8 5.02	+42 1.9	1.434	2.375	9.0	17.7
2 1	7 57.07	+16 32.6	2.114	3.080	4.4	18.5	2 1	7 53.95	+42 25.4	1.465	2.379	11.3	17.8
2 11	7 49.65	+17 14.8	2.158	3.078	7.9	18.7	2 11	7 44.92	+42 18.8	1.519	2.384	14.3	18.0
2 21	7 43.91	+17 53.1	2.229	3.076	11.1	18.9	2 21	7 39.11	+41 47.0	1.593	2.390	17.3	18.2
<b>299515</b>	2006 <i>CD</i> <sub>46</sub>		1 20.4 213°21	0°9/20.0	18		<b>431389</b>	2007 <i>EE</i> <sub>199</sub>		1 20.4 290°53	17°9/7.9	16	
12 13	8 38.56	+20 51.9	1.999	2.772	14.9	21.9	12 13	8 44.37	+45 50.4	1.091	1.903	22.3	20.2
12 23	8 33.62	+21 15.2	1.900	2.765	11.8	21.7	12 23	8 43.33	+49 42.8	1.036	1.893	19.9	20.0
1 2	8 25.95	+21 45.8	1.824	2.757	8.0	21.5	1 2	8 35.99	+53 30.4	1.001	1.883	18.2	19.8
1 12	8 16.11	+22 19.7	1.775	2.748	3.8	21.2	1 12	8 22.25	+56 46.6	0.987	1.873	18.1	19.8
1 22	8 5.04	+22 52.2	1.755	2.738	1.3	21.0	1 22	8 3.76	+59 6.5	0.994	1.863	19.5	19.8
2 1	7 53.97	+23 19.2	1.766	2.728	5.5	21.3	2 1	7 44.41	+60 16.3	1.019	1.854	22.0	19.9
2 11	7 44.17	+23 37.8	1.805	2.717	9.7	21.5	2 11	7 28.90	+60 19.4	1.060	1.844	24.7	20.1
2 21	7 36.60	+23 47.5	1.869	2.705	13.5	21.7	2 21	7 20.27	+59 31.1	1.112	1.835	27.3	20.3
<b>279909</b>	2001 <i>QT</i> <sub>281</sub>		1 20.4 74°33	4°7/17.3	18		<b>354366</b>	2003 <i>OV</i> <sub>1</sub>		1 20.4 201°23	0°6/20.2	18	
12 13	8 35.70	+31 4.4	2.288	3.070	12.9	20.1	12 13	8 41.38	+22 4.1	2.142	2.908	14.3	21.9
12 23	8 31.03	+32 26.0	2.227	3.093	10.2	19.9	12 23	8 35.53	+22 2.3	2.044	2.903	11.3	21.7
1 2	8 23.93	+33 47.4	2.191	3.116	7.3	19.8	1 2	8 27.06	+22 4.3	1.968	2.898	7.7	21.4
1 12	8 15.03	+35 1.9	2.183	3.139	5.1	19.7	1 12	8 16.57	+22 6.8	1.920	2.892	3.6	21.2
1 22	8 5.26	+36 3.2	2.205	3.161	5.0	19.7	1 22	8 5.00	+22 6.6	1.902	2.885	1.0	21.0
2 1	7 55.72	+36 47.1	2.256	3.184	7.1	19.9	2 1	7 53.54	+22 1.4	1.915	2.878	5.1	21.2
2 11	7 47.46	+37 12.6	2.334	3.206	9.7	20.1	2 11	7 43.37	+21 50.2	1.958	2.869	9.2	21.5
2 21	7 41.28	+37 21.1	2.437	3.228	12.1	20.3	2 21	7 35.39	+21 33.5	2.027	2.860	12.7	21.7
<b>204604</b>	2005 <i>JZ</i> <sub>4</sub>		1 20.4 237°56	0°1/20.5	18		<b>126101</b>	2001 <i>YO</i> <sub>106</sub>		1 20.4 257°56	1°0/20.9	18	
12 13	8 31.17	+17 36.3	2.502	3.269	12.4	20.9	12 13	8 34.17	+14 34.3	1.629	2.411	17.4	19.9
12 23	8 27.23	+18 4.1	2.402	3.263	9.7	20.7	12 23	8 30.72	+15 4.6	1.537	2.404	13.9	19.6
1 2	8 21.28	+18 39.9	2.327	3.257	6.6	20.5	1 2	8 24.29	+15 50.8	1.465	2.397	9.6	19.4
1 12	8 13.81	+19 21.3	2.279	3.251	3.1	20.3	1 12	8 15.45	+16 50.0	1.419	2.390	4.8	19.1
1 22	8 5.49	+20 4.8	2.260	3.244	0.6	20.0	1 22	8 5.20	+17 56.6	1.399	2.383	1.1	18.8
2 1	7 57.17	+20 46.7	2.273	3.237	4.2	20.3	2 1	7 54.91	+19 4.1	1.409	2.376	5.9	19.1
2 11	7 49.73	+21 24.3	2.315	3.231	7.7	20.5	2 11	7 46.00	+20 6.3	1.445	2.368	10.8	19.3
2 21	7 43.89	+21 55.5	2.383	3.224	10.8	20.7	2 21	7 39.59	+20 59.3	1.504	2.361	15.1	19.6
<b>345597</b>	2006 <i>SK</i> <sub>99</sub>		1 20.4 215°55	6°2/24.6	17		<b>219409</b>	2000 <i>SS</i> <sub>243</sub>		1 20.4 62°96	5°5/18.1	18	
12 13	8 29.21	-2 4.2	2.774	3.459	13.1	21.3	12 13	8 39.89	+32 21.5	1.733	2.526	16.1	19.8
12 23	8 25.38	-2 33.9	2.674	3.455	11.3	21.1	12 23	8 34.92	+33 17.4	1.678	2.548	12.7	19.6
1 2	8 19.87	-2 48.6	2.595	3.451	9.3	21.0	1 2	8 26.81	+34 11.2	1.644	2.571	9.1	19.4
1 12	8 13.09	-2 46.5	2.540	3.447	7.4	20.8	1 12	8 16.43	+34 54.8	1.636	2.594	6.2	19.3
1 22	8 5.63	-2 27.2	2.512	3.443	6.3	20.8	1 22	8 5.07	+35 21.6	1.656	2.617	5.8	19.3
2 1	7 58.17	-1 52.1	2.514	3.438	6.6	20.8	2 1	7 54.24	+35 28.1	1.703	2.640	8.2	19.5
2 11	7 51.45	-1 4.1	2.543	3.433	8.3	20.9	2 11	7 45.31	+35 14.9	1.776	2.663	11.4	19.8
2 21	7 46.04	-0 7.3	2.598	3.428	10.3	21.0	2 21	7 39.16	+34 45.8	1.873	2.686	14.4	20.0
<b>135226</b>	2001 <i>RE</i> <sub>120</sub>		1 20.4 205°64	0°3/20.2	17		<b>380377</b>	2002 <i>TM</i> <sub>348</sub>		1 20.4 72°54	3°4/18.4	18	
12 13	8 31.88	+19 19.9	2.671	3.438	11.7	20.8	12 13	8 34.48	+26 55.1	2.165	2.950	13.5	21.1
12 23	8 27.63	+19 45.7	2.573	3.434	9.2	20.6	12 23	8 30.11	+27 58.7	2.098	2.969	10.5	20.9
1 2	8 21.47	+20 17.8	2.500	3.430	6.2	20.4	1 2	8 23.34	+29 5.2	2.055	2.987	7.2	20.8
1 12	8 13.87	+20 53.5	2.454	3.426	2.9	20.2	1 12	8 14.79	+30 8.6	2.039	3.005	4.2	20.6
1 22	8 5.48	+21 29.6	2.438	3.422	0.7	20.0	1 22	8 5.37	+31 3.0	2.052	3.024	3.7	20.6
2 1	7 57.13	+22 3.0	2.454	3.417	4.1	20.3	2 1	7 56.17	+31 44.2	2.096	3.042	6.2	20.8
2 11	7 49.63	+22 31.3	2.500	3.412	7.4	20.5	2 11	7 48.26	+32 10.3	2.167	3.060	9.3	21.0
2 21	7 43.65	+22 53.2	2.571	3.407	10.2	20.7	2 21	7 42.40	+32 22.0	2.262	3.078	12.2	21.2
<b>44341</b>	1998 <i>RX</i> <sub>66</sub>		1 20.4 134°46	3°9/18.9	18		<b>72873</b>	2001 <i>JX</i> <sub>4</sub>		1 20.4 32°62	5°7/17.2	18	
12 13	8 41.77	+30 14.4	2.007	2.785									

EPHEMERIDES

1 20.4

1 20.5

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>267677</b>	2002 <i>TG</i> <sub>385</sub>		1 20.4	69°02	2°4/21.9	18 R	<b>404176</b>	2013 <i>CO</i> <sub>87</sub>		1 20.5	227°89	0°0/20.5	18
12 13	8 30.86	+10 16.8	2.179	2.934	14.4	20.1	12 13	8 36.70	+17 50.1	1.812	2.590	16.0	22.4
12 23	8 27.08	+10 38.6	2.099	2.947	11.5	20.0	12 23	8 32.45	+18 14.5	1.715	2.581	12.7	22.2
1 2	8 21.20	+11 14.2	2.041	2.959	8.2	19.8	1 2	8 25.34	+18 49.9	1.640	2.572	8.7	21.9
1 12	8 13.77	+12 1.8	2.009	2.972	4.7	19.6	1 12	8 15.93	+19 32.9	1.590	2.563	4.1	21.6
1 22	8 5.56	+12 58.2	2.006	2.985	2.4	19.5	1 22	8 5.18	+20 18.5	1.569	2.553	0.8	21.3
2 1	7 57.49	+13 58.9	2.033	2.998	4.6	19.6	2 1	7 54.38	+21 1.6	1.577	2.542	5.7	21.7
2 11	7 50.47	+14 59.6	2.089	3.011	8.1	19.9	2 11	7 44.89	+21 38.1	1.613	2.531	10.3	21.9
2 21	7 45.20	+15 56.5	2.171	3.024	11.2	20.1	2 21	7 37.75	+22 5.9	1.673	2.520	14.3	22.1
<b>486246</b>	2013 <i>BJ</i> <sub>32</sub>		1 20.5	205°28	3°0/19.2	18	<b>413114</b>	2001 <i>VF</i> <sub>123</sub>		1 20.5	340°61	7°4/23.2	18
12 13	8 42.06	+27 19.5	2.001	2.776	14.8	21.8	12 13	8 30.70	+ 4 13.0	1.598	2.354	18.7	20.5
12 23	8 36.44	+27 45.1	1.906	2.771	11.7	21.6	12 23	8 27.87	+ 3 12.8	1.509	2.346	15.8	20.3
1 2	8 27.88	+28 12.6	1.835	2.766	8.1	21.4	1 2	8 22.27	+ 2 30.0	1.440	2.338	12.5	20.1
1 12	8 17.03	+28 36.4	1.791	2.759	4.4	21.2	1 12	8 14.49	+ 2 8.1	1.392	2.332	9.2	19.9
1 22	8 4.95	+28 51.2	1.776	2.752	3.3	21.1	1 22	8 5.46	+ 2 8.7	1.369	2.326	7.5	19.8
2 1	7 52.97	+28 53.3	1.790	2.743	6.5	21.2	2 1	7 56.45	+ 2 30.8	1.372	2.320	8.6	19.8
2 11	7 42.46	+28 41.9	1.834	2.734	10.3	21.5	2 11	7 48.76	+ 3 9.9	1.400	2.316	11.7	20.0
2 21	7 34.41	+28 18.9	1.902	2.725	13.8	21.7	2 21	7 43.38	+ 3 59.9	1.451	2.312	15.3	20.2
<b>79808</b>	1998 <i>VG</i> <sub>23</sub>		1 20.5	133°85	1°2/19.8	18	<b>362597</b>	2010 <i>WG</i> <sub>7</sub>		1 20.5	154°70	5°2/17.1	18
12 13	8 37.54	+21 46.9	2.079	2.854	14.3	20.5	12 13	8 39.13	+32 31.0	2.282	3.058	13.2	21.2
12 23	8 32.49	+22 15.8	2.000	2.866	11.2	20.3	12 23	8 33.95	+33 51.3	2.205	3.066	10.5	21.0
1 2	8 24.95	+22 50.5	1.944	2.877	7.5	20.1	1 2	8 26.10	+35 11.6	2.153	3.073	7.7	20.9
1 12	8 15.55	+23 26.8	1.915	2.888	3.6	19.9	1 12	8 16.20	+36 24.5	2.128	3.080	5.6	20.7
1 22	8 5.24	+24 0.2	1.916	2.898	1.5	19.7	1 22	8 5.18	+37 23.2	2.134	3.086	5.5	20.7
2 1	7 55.13	+24 26.9	1.947	2.908	5.2	20.0	2 1	7 54.25	+38 3.0	2.168	3.092	7.6	20.9
2 11	7 46.34	+24 44.7	2.007	2.918	9.0	20.2	2 11	7 44.64	+38 22.7	2.231	3.097	10.3	21.1
2 21	7 39.69	+24 53.4	2.092	2.926	12.3	20.5	2 21	7 37.25	+38 24.2	2.317	3.101	12.9	21.2
<b>331967</b>	2004 <i>XM</i> <sub>70</sub>		1 20.5	71°73	5°7/22.8	18	<b>484060</b>	2006 <i>HZ</i>		1 20.5	309°94	2°1/19.7	18
12 13	8 34.85	+ 5 53.1	1.997	2.732	16.1	20.7	12 13	8 33.96	+22 36.0	1.374	2.185	18.5	21.0
12 23	8 30.25	+ 4 58.3	1.921	2.747	13.3	20.5	12 23	8 31.45	+23 2.7	1.278	2.164	14.8	20.7
1 2	8 23.34	+ 4 17.2	1.866	2.762	10.2	20.3	1 2	8 25.34	+23 39.1	1.203	2.144	10.2	20.4
1 12	8 14.76	+ 3 51.8	1.836	2.777	7.3	20.2	1 12	8 16.19	+24 19.8	1.150	2.124	5.0	20.1
1 22	8 5.39	+ 3 42.5	1.833	2.792	5.7	20.1	1 22	8 5.14	+24 57.7	1.123	2.105	2.5	19.8
2 1	7 56.25	+ 3 48.0	1.860	2.806	6.8	20.2	2 1	7 53.92	+25 26.1	1.122	2.086	7.6	20.1
2 11	7 48.34	+ 4 5.4	1.913	2.821	9.5	20.4	2 11	7 44.38	+25 40.9	1.146	2.068	13.1	20.3
2 21	7 42.40	+ 4 30.6	1.992	2.836	12.4	20.6	2 21	7 37.96	+25 41.8	1.190	2.050	17.9	20.6
<b>81220</b>	2000 <i>FO</i> <sub>21</sub>		1 20.5	204°75	4°0/22.9	18	<b>8214</b>	Mirellalilli		1 20.5	233°67	6°3/22.8	18
12 13	8 33.09	+ 5 49.3	2.297	3.026	14.4	20.1	12 13	8 34.71	+ 4 45.7	2.009	2.740	16.2	17.7
12 23	8 28.84	+ 5 56.3	2.195	3.022	11.9	19.9	12 23	8 30.36	+ 3 47.4	1.915	2.736	13.6	17.5
1 2	8 22.45	+ 6 19.0	2.115	3.016	8.9	19.7	1 2	8 23.62	+ 3 2.6	1.841	2.732	10.6	17.3
1 12	8 14.41	+ 6 57.4	2.061	3.011	5.9	19.5	1 12	8 15.02	+ 2 33.8	1.792	2.728	7.8	17.1
1 22	8 5.44	+ 7 49.5	2.036	3.005	4.0	19.4	1 22	8 5.41	+ 2 22.2	1.770	2.724	6.3	17.0
2 1	7 56.43	+ 8 51.9	2.041	2.998	5.4	19.5	2 1	7 55.82	+ 2 27.3	1.776	2.719	7.4	17.1
2 11	7 48.35	+ 9 59.7	2.075	2.991	8.5	19.6	2 11	7 47.35	+ 2 46.2	1.809	2.715	10.2	17.2
2 21	7 41.96	+11 8.3	2.136	2.983	11.6	19.8	2 21	7 40.84	+ 3 15.0	1.867	2.710	13.2	17.4
<b>40341</b>	1999 <i>NU</i> <sub>8</sub>		1 20.5	98°02	0°7/20.8	18	<b>521040</b>	2015 <i>DF</i> <sub>235</sub>		1 20.5	21°69	2°4/19.5	18
12 13	8 38.11	+16 15.4	1.797	2.568	16.4	19.4	12 13	8 36.28	+26 47.4	1.961	2.749	14.6	20.8
12 23	8 33.10	+16 37.3	1.729	2.591	12.9	19.2	12 23	8 31.77	+26 55.8	1.880	2.752	11.5	20.6
1 2	8 25.41	+17 10.1	1.683	2.613	8.7	19.0	1 2	8 24.60	+27 5.2	1.821	2.755	7.8	20.4
1 12	8 15.76	+17 50.2	1.664	2.635	4.2	18.8	1 12	8 15.45	+27 11.4	1.788	2.758	4.1	20.1
1 22	8 5.21	+18 33.2	1.673	2.656	0.9	18.6	1 22	8 5.34	+27 10.4	1.784	2.762	2.7	20.0
2 1	7 55.01	+19 14.2	1.711	2.677	5.2	18.9	2 1	7 55.50	+26 59.7	1.809	2.767	5.9	20.3
2 11	7 46.32	+19 49.8	1.778	2.697	9.4	19.2	2 11	7 47.10	+26 39.2	1.861	2.771	9.6	20.5
2 21	7 39.98	+20 18.1	1.870	2.717	13.0	19.5	2 21	7 40.99	+26 10.2	1.938	2.776	13.0	20.7
<b>335955</b>	2007 <i>TS</i> <sub>108</sub>		1 20.5	120°62	3°6/18.5	18	<b>113007</b>	2002 <i>RJ</i> <sub>39</sub>		1 20.5	336°45	4°7/18.3	18
12 13	8 36.07	+30 42.0	2.446	3.224	12.3	20.6	12 13	8 37.08	+32 26.4	2.074	2.860	14.0	19.3
12 23	8 31.14	+31 16.4	2.367	3.231	9.7	20.5	12 23	8 32.50	+33 1.2	1.991	2.858	11.2	19.1
1 2	8 23.92	+31 49.9	2.311	3.238	6.9	20.3	1 2	8 25.17	+33 34.3	1.930	2.856	8.1	18.9
1 12	8 15.04	+32 17.7	2.283	3.245	4.3	20.1	1 12	8 15.76	+33 59.4	1.895	2.854	5.4	18.7
1 22	8 5.35	+32 35.5	2.285	3.252	3.8	20.1	1 22	8 5.28	+34 11.5	1.889	2.852	4.9	18.7
2 1	7 55.86	+32 40.8	2.316	3.258	6.0	20.3	2 1	7 55.02	+34 7.1	1.911	2.851	7.3	18.8
2 11	7 47.57	+32 32.9	2.376	3.265	8.8	20.4	2 11	7 46.20	+33 46.5	1.960	2.849	10.4	19.0
2 21	7 41.23	+32 13.5	2.461	3.271	11.5	20.6	2 21	7 39.73	+33 11.9	2.033	2.848	13.4	19.2
<b>522431</b>	2016 <i>CC</i> <sub>315</sub>		1 20.5	59°87	2°7/22.6	16	<b>366941</b>	2005 <i>VS</i> <sub>54</sub>		1 20.5	165°71	0°1/20.5	18
12 13	8 31.19	+ 6 23.8	2.204	2.942	14.7	20.8	12 13	8 34.94	+17 52.6	2.407	3.170	12.9	22.6
12 23	8 27.36	+ 7 19.1	2.119	2.955	11.9	20.6	12 23	8 30.17	+18 15.4	2.317	3.175	10.2	22.4
1 2	8 21.42	+ 8 32.9	2.056	2.967	8.6	20.4	1 2	8 23.28	+18 45.8	2.250	3.179	6.9	22.2
1 12	8 13.91	+10 3.0	2.020	2.979	5.1	20.2	1 12	8 14.79	+19 21.1	2.211	3.183	3.3	22.0
1 22	8 5.56	+11 44.5	2.015	2.992	2.7	20.1	1 22	8 5.47	+19 57.7	2.202	3.186	0.6	21.7
2 1	7 57.30	+13 31.3	2.040	3.004	4.7	20.2	2 1	7 56.24	+20 32.3	2.225	3.189	4.4	22.0
2 11	7 50.03	+15 16.6	2.096	3.017	8.1	20.5	2 11	7 48.02	+21 2.1	2.277	3.191	7.9	22.3
2 21	7 44.49	+16 54.9	2.179	3.030	11.3	20.7	2 21	7 41.55	+21 25.8	2.355	3.192	11.0	22.5
<b>30635</b>	6186 <i>P-L</i>		1 20.5	181°56	3°2/21.9	18	<b>502107</b>	2015 <i>AU</i> <sub>278</sub>		1 20.5	166°87	1°1/19.9	17
12 13	8 37.36	+10 25.5	1.951	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>280867</b>	2005 <i>UQ</i> <sub>484</sub>		1 20.5 102°06		3°7/22.2 17		<b>303238</b>	2004 <i>PC</i> <sub>50</sub>		1 20.5 165°38		1°5/19.5 17	
12 13	8 37.27	+ 8 59.6	1.563	2.325	18.8	21.3	12 13	8 32.64	+25 20.8	3.228	3.994	9.9	21.7
12 23	8 32.86	+ 9 4.3	1.493	2.343	15.2	21.1	12 23	8 27.87	+25 36.9	3.137	3.998	7.7	21.5
1 2	8 25.50	+ 9 27.8	1.442	2.360	11.0	20.8	1 2	8 21.46	+25 54.3	3.071	4.001	5.2	21.4
1 12	8 15.93	+10 8.9	1.415	2.376	6.5	20.6	1 12	8 13.88	+26 10.4	3.034	4.004	2.6	21.2
1 22	8 5.28	+11 3.7	1.416	2.392	3.7	20.5	1 22	8 5.71	+26 22.8	3.028	4.007	1.6	21.1
2 1	7 54.92	+12 6.4	1.444	2.408	6.3	20.7	2 1	7 57.65	+26 29.6	3.054	4.010	3.9	21.3
2 11	7 46.18	+13 10.9	1.500	2.423	10.5	21.0	2 11	7 50.38	+26 29.8	3.110	4.012	6.5	21.5
2 21	7 39.98	+14 11.7	1.580	2.438	14.4	21.2	2 21	7 44.46	+26 23.7	3.193	4.014	8.8	21.6
<b>123151</b>	2000 <i>TJ</i> <sub>33</sub>		1 20.5 346°43		0°9/20.7 18		<b>416944</b>	2005 <i>SY</i> <sub>138</sub>		1 20.5 103°98		3°2/18.9 18	
12 13	8 40.19	+21 6.7	1.717	2.498	16.6	18.6	12 13	8 36.98	+26 54.0	1.914	2.702	14.9	21.5
12 23	8 35.11	+20 14.8	1.627	2.494	13.2	18.3	12 23	8 32.48	+27 35.0	1.837	2.709	11.7	21.3
1 2	8 27.02	+19 24.5	1.558	2.490	9.1	18.1	1 2	8 25.20	+28 19.0	1.782	2.716	8.1	21.1
1 12	8 16.66	+18 34.5	1.515	2.487	4.4	17.8	1 12	8 15.81	+29 0.0	1.754	2.722	4.5	20.9
1 22	8 5.16	+17 44.3	1.501	2.484	1.2	17.5	1 22	8 5.36	+29 32.4	1.754	2.729	3.5	20.8
2 1	7 53.91	+16 54.2	1.516	2.482	5.7	17.8	2 1	7 55.13	+29 51.8	1.783	2.735	6.6	21.0
2 11	7 44.28	+16 5.1	1.559	2.480	10.3	18.1	2 11	7 46.37	+29 57.0	1.839	2.741	10.2	21.3
2 21	7 37.25	+15 18.2	1.626	2.478	14.4	18.3	2 21	7 39.99	+29 49.2	1.919	2.747	13.5	21.5
<b>320962</b>	2008 <i>HC</i> <sub>34</sub>		1 20.5 228°33		3°9/22.6 18		<b>38465</b>	1999 <i>TL</i> <sub>28</sub>		1 20.5 282°36		4°6/22.8 18 R	
12 13	8 32.55	+ 7 27.1	2.157	2.898	14.9	21.1	12 13	8 31.33	+ 6 39.8	2.037	2.782	15.5	18.4
12 23	8 28.60	+ 7 22.3	2.056	2.891	12.2	20.9	12 23	8 27.79	+ 6 22.9	1.938	2.773	12.9	18.2
1 2	8 22.41	+ 7 32.2	1.977	2.884	9.1	20.7	1 2	8 21.95	+ 6 21.2	1.859	2.764	9.7	18.0
1 12	8 14.47	+ 7 56.8	1.924	2.877	5.9	20.5	1 12	8 14.30	+ 6 35.3	1.805	2.756	6.5	17.8
1 22	8 5.55	+ 8 34.6	1.898	2.869	3.9	20.3	1 22	8 5.62	+ 7 4.4	1.779	2.747	4.6	17.6
2 1	7 56.60	+ 9 22.5	1.902	2.861	5.5	20.4	2 1	7 56.92	+ 7 45.8	1.781	2.738	6.1	17.7
2 11	7 48.63	+10 16.1	1.935	2.853	8.8	20.6	2 11	7 49.24	+ 8 35.3	1.811	2.729	9.3	17.9
2 21	7 42.45	+11 11.3	1.993	2.844	12.1	20.8	2 21	7 43.42	+ 9 28.3	1.866	2.721	12.7	18.1
<b>116221</b>	2003 <i>YU</i> <sub>3</sub>		1 20.5 165°62		2°6/20.2 18		<b>275839</b>	2001 <i>RF</i> <sub>146</sub>		1 20.5 146°40		5°0/24.1 18	
12 13	8 55.72	+28 48.7	1.282	2.067	21.0	18.6	12 13	8 30.79	+ 0 24.3	3.074	3.761	11.9	21.6
12 23	8 48.47	+28 12.4	1.202	2.071	16.8	18.4	12 23	8 26.37	+ 0 3.3	2.983	3.772	10.1	21.5
1 2	8 36.65	+27 31.0	1.142	2.074	11.6	18.1	1 2	8 20.43	+ 0 4.7	2.915	3.782	8.0	21.4
1 12	8 21.31	+26 38.1	1.106	2.077	5.9	17.8	1 12	8 13.40	+ 0 1.0	2.873	3.791	6.1	21.3
1 22	8 4.33	+25 29.9	1.097	2.078	2.8	17.6	1 22	8 5.81	+ 0 20.2	2.859	3.800	5.0	21.2
2 1	7 48.10	+24 7.2	1.118	2.080	8.0	17.9	2 1	7 58.30	+ 0 51.4	2.876	3.809	5.5	21.2
2 11	7 34.78	+22 36.1	1.165	2.081	13.6	18.2	2 11	7 51.50	+ 1 31.9	2.922	3.817	7.1	21.4
2 21	7 25.59	+21 3.8	1.235	2.081	18.4	18.5	2 21	7 45.93	+ 2 18.3	2.995	3.824	9.1	21.5
<b>377032</b>	2002 <i>RA</i> <sub>278</sub>		1 20.5 32°75		0°6/20.7 18		<b>39479</b>	1980 <i>UQ</i> <sub>1</sub>		1 20.5 64°59		2°2/21.2 18	
12 13	8 34.67	+18 52.5	2.105	2.879	14.2	20.9	12 13	8 38.47	+15 20.6	1.365	2.154	19.8	18.7
12 23	8 30.23	+18 39.6	2.017	2.881	11.2	20.7	12 23	8 34.18	+15 3.0	1.301	2.171	15.7	18.5
1 2	8 23.44	+18 32.3	1.952	2.883	7.7	20.5	1 2	8 26.56	+14 58.2	1.256	2.188	10.9	18.3
1 12	8 14.90	+18 28.9	1.914	2.886	3.7	20.3	1 12	8 16.48	+15 4.2	1.235	2.205	5.7	18.0
1 22	8 5.49	+18 27.2	1.905	2.888	0.8	20.0	1 22	8 5.27	+15 17.8	1.240	2.222	2.2	17.9
2 1	7 56.25	+18 25.1	1.925	2.891	4.7	20.3	2 1	7 54.52	+15 35.2	1.272	2.239	6.4	18.2
2 11	7 48.21	+18 21.2	1.974	2.894	8.6	20.6	2 11	7 45.73	+15 52.7	1.330	2.257	11.2	18.5
2 21	7 42.16	+18 14.8	2.049	2.897	12.0	20.8	2 21	7 39.86	+16 7.8	1.411	2.274	15.5	18.8
<b>8284</b>	Cranach		1 20.5 326°41		2°3/21.3 18		<b>227857</b>	2007 <i>DW</i> <sub>68</sub>		1 20.5 200°86		1°9/19.6 18	
12 13	8 33.28	+15 12.9	2.038	2.807	14.7	17.1	12 13	8 35.87	+24 3.6	2.130	2.910	13.9	21.4
12 23	8 29.31	+14 39.0	1.939	2.797	11.8	16.9	12 23	8 31.34	+24 30.0	2.040	2.908	10.9	21.1
1 2	8 22.94	+14 12.2	1.862	2.788	8.4	16.7	1 2	8 24.32	+25 0.6	1.973	2.906	7.4	20.9
1 12	8 14.73	+13 52.2	1.812	2.778	4.6	16.4	1 12	8 15.39	+25 31.3	1.933	2.904	3.7	20.7
1 22	8 5.52	+13 38.2	1.790	2.769	2.3	16.2	1 22	8 5.45	+25 57.4	1.922	2.902	2.1	20.6
2 1	7 56.36	+13 28.9	1.796	2.761	5.2	16.4	2 1	7 55.60	+26 15.5	1.941	2.899	5.5	20.8
2 11	7 48.34	+13 22.8	1.831	2.753	9.0	16.6	2 11	7 46.98	+26 23.7	1.988	2.897	9.2	21.0
2 21	7 42.28	+13 18.4	1.891	2.745	12.6	16.8	2 21	7 40.44	+26 22.2	2.060	2.894	12.5	21.2
<b>457037</b>	2008 <i>CB</i> <sub>191</sub>		1 20.5 5°79		1°0/20.1 16		<b>460919</b>	2014 <i>WB</i> <sub>220</sub>		1 20.5 101°93		1°0/20.9 18	
12 13	8 32.89	+21 38.9	1.294	2.110	19.2	21.5	12 13	8 35.36	+17 8.6	1.922	2.696	15.4	21.0
12 23	8 30.35	+21 44.7	1.222	2.110	15.1	21.2	12 23	8 31.00	+17 4.2	1.837	2.700	12.2	20.8
1 2	8 24.30	+21 58.6	1.169	2.111	10.3	20.9	1 2	8 24.10	+17 8.0	1.774	2.704	8.4	20.6
1 12	8 15.54	+22 16.1	1.138	2.113	4.8	20.6	1 12	8 15.28	+17 18.2	1.737	2.708	4.1	20.3
1 22	8 5.37	+22 32.1	1.133	2.116	1.5	20.4	1 22	8 5.48	+17 31.8	1.729	2.712	1.1	20.1
2 1	7 55.49	+22 41.8	1.153	2.121	6.9	20.8	2 1	7 55.85	+17 45.9	1.750	2.716	5.1	20.4
2 11	7 47.54	+22 42.8	1.198	2.126	12.1	21.1	2 11	7 47.53	+17 58.1	1.799	2.720	9.2	20.7
2 21	7 42.63	+22 35.0	1.264	2.133	16.6	21.3	2 21	7 41.36	+18 6.9	1.873	2.724	12.8	20.9
<b>29591</b>	1998 <i>FK</i> <sub>121</sub>		1 20.5 165°98		1°5/19.2 18		<b>49192</b>	1998 <i>SU</i> <sub>89</sub>		1 20.5 138°76		0°7/20.8 18	
12 13	8 29.12	+25 45.8	3.705	4.472	8.7	19.7	12 13	8 36.34	+16 44.3	1.961	2.731	15.2	20.5
12 23	8 24.98	+26 12.0	3.613	4.475	6.8	19.6	12 23	8 31.71	+16 55.1	1.878	2.739	12.0	20.3
1 2	8 19.45	+26 39.5	3.547	4.477	4.6	19.4	1 2	8 24.55	+17 15.3	1.817	2.746	8.2	20.1
1 12	8 12.91	+27 6.0	3.510	4.479	2.4	19.2	1 12	8 15.48	+17 42.3	1.782	2.753	4.0	19.8
1 22	8 5.87	+27 29.0	3.504	4.481	1.7	19.2	1 22	8 5.45	+18 12.5	1.777	2.760	0.9	19.6
2 1	7 58.89	+27 46.8	3.530	4.483	3.6	19.3	2 1	7 55.57	+18 42.2	1.801	2.767	5.0	19.9
2 11	7 52.54	+27 58.1	3.586	4.485	5.8	19.5	2 11	7 47.00	+19 8.3	1.853	2.772	9.1	20.2
2 21	7 47.31	+28 2.7	3.669	4.487	7.9	19.6	2 21	7 40.57	+19 29.0	1.931	2.778	12.6	20.4
<b>280899</b>	2005 <i>XQ</i> <sub>3</sub>		1 20.5 114°54		0°7/20.2 18		<b>354095</b>	2001 <i>XX</i> <sub>219</sub>		1 20.5 1°56		4°1/19.1 17	
12 13	8 41.70	+20 52.8	1.646	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>505704</b>	2015 <i>AK</i> <sub>54</sub>		1 20.5 238°81	0°8/20.9	17		<b>274</b>	Philagoria		1 20.5 278°84	0°8/20.0	18	R
12 13	8 34.46	+17 26.6	2.321	3.086	13.3	21.4	12 13	8 32.13	+20 32.6	2.291	3.068	13.1	15.0
12 23	8 29.97	+17 22.1	2.219	3.077	10.6	21.2	12 23	8 28.32	+20 59.7	2.189	3.056	10.3	14.8
1 2	8 23.27	+17 24.3	2.141	3.068	7.3	21.0	1 2	8 22.26	+21 33.7	2.111	3.044	7.0	14.6
1 12	8 14.88	+17 31.4	2.089	3.059	3.6	20.8	1 12	8 14.47	+22 11.4	2.060	3.033	3.3	14.3
1 22	8 5.56	+17 41.2	2.067	3.050	0.9	20.5	1 22	8 5.68	+22 48.9	2.038	3.021	1.1	14.1
2 1	7 56.27	+17 51.3	2.075	3.040	4.5	20.8	2 1	7 56.86	+23 22.2	2.046	3.009	4.8	14.4
2 11	7 47.98	+17 59.8	2.113	3.031	8.2	21.0	2 11	7 49.03	+23 48.8	2.083	2.997	8.5	14.6
2 21	7 41.48	+18 5.4	2.176	3.021	11.5	21.2	2 21	7 42.99	+24 7.2	2.145	2.985	11.8	14.8
<b>230813</b>	2004 <i>HX</i> <sub>37</sub>		1 20.5 159°86	0°9/19.9	18		<b>65872</b>	1997 <i>VQ</i> <sub>2</sub>		1 20.5 113°60	2°8/19.4	18	
12 13	8 36.08	+20 46.2	2.430	3.196	12.7	21.8	12 13	8 41.95	+27 52.9	2.075	2.849	14.4	19.4
12 23	8 31.08	+21 19.3	2.343	3.203	10.0	21.6	12 23	8 35.93	+28 9.8	2.003	2.866	11.3	19.2
1 2	8 23.93	+21 58.3	2.279	3.210	6.7	21.4	1 2	8 27.27	+28 26.9	1.954	2.884	7.7	19.0
1 12	8 15.15	+22 39.8	2.244	3.216	3.1	21.2	1 12	8 16.71	+28 39.2	1.932	2.900	4.2	18.8
1 22	8 5.53	+23 19.7	2.239	3.221	1.2	21.1	1 22	8 5.31	+28 42.5	1.940	2.916	3.0	18.8
2 1	7 56.01	+23 54.4	2.265	3.226	4.6	21.3	2 1	7 54.32	+28 34.5	1.979	2.932	5.9	19.0
2 11	7 47.54	+24 21.5	2.321	3.230	8.0	21.5	2 11	7 44.88	+28 15.4	2.046	2.947	9.4	19.2
2 21	7 40.86	+24 40.2	2.403	3.233	11.1	21.7	2 21	7 37.78	+27 47.1	2.138	2.962	12.5	19.5
<b>30987</b>	1995 <i>SO</i> <sub>34</sub>		1 20.5 57°32	0°1/20.4	18		<b>767</b>	Bondia		1 20.5 112°09	0°6/20.1	18	
12 13	8 33.04	+18 57.8	2.119	2.895	14.0	19.6	12 13	8 33.30	+20 35.9	2.605	3.372	11.9	15.6
12 23	8 28.85	+19 15.4	2.049	2.915	11.0	19.5	12 23	8 28.70	+21 0.4	2.525	3.387	9.3	15.5
1 2	8 22.44	+19 40.2	2.001	2.934	7.4	19.3	1 2	8 22.19	+21 29.8	2.470	3.401	6.2	15.3
1 12	8 14.43	+20 8.9	1.981	2.954	3.4	19.1	1 12	8 14.30	+22 1.4	2.443	3.415	2.9	15.1
1 22	8 5.68	+20 38.2	1.990	2.973	0.6	18.9	1 22	8 5.74	+22 31.9	2.446	3.429	0.9	15.0
2 1	7 57.18	+21 4.5	2.028	2.993	4.6	19.2	2 1	7 57.33	+22 58.4	2.480	3.443	4.1	15.2
2 11	7 49.91	+21 25.6	2.095	3.013	8.3	19.5	2 11	7 49.91	+23 18.9	2.544	3.456	7.3	15.5
2 21	7 44.54	+21 40.4	2.187	3.033	11.4	19.7	2 21	7 44.09	+23 32.8	2.634	3.469	10.1	15.7
<b>506385</b>	2017 <i>RB</i> <sub>7</sub>		1 20.5 232°29	5°8/24.8	17		<b>470703</b>	2008 <i>TC</i> <sub>92</sub>		1 20.5 39°50	21°3/28.7	18	
12 13	8 29.86	- 1 43.8	2.676	3.364	13.5	22.0	12 13	8 35.33	-14 27.5	1.080	1.778	29.0	20.2
12 23	8 26.06	- 1 48.8	2.569	3.355	11.6	21.8	12 23	8 32.71	-17 36.4	1.028	1.784	26.9	20.0
1 2	8 20.48	- 1 36.7	2.483	3.347	9.3	21.6	1 2	8 26.23	-20 9.1	0.989	1.791	24.7	19.9
1 12	8 13.55	- 1 6.3	2.421	3.338	7.2	21.5	1 12	8 16.63	-21 51.0	0.964	1.799	22.8	19.8
1 22	8 5.84	- 0 18.1	2.388	3.328	5.9	21.4	1 22	8 5.29	-22 31.5	0.955	1.807	21.6	19.7
2 1	7 58.09	+ 0 45.8	2.384	3.319	6.3	21.4	2 1	7 54.08	-22 7.3	0.961	1.816	21.4	19.8
2 11	7 51.08	+ 2 1.2	2.408	3.309	8.2	21.5	2 11	7 44.96	-20 45.8	0.983	1.825	22.2	19.8
2 21	7 45.44	+ 3 23.1	2.460	3.299	10.5	21.6	2 21	7 39.26	-18 42.1	1.021	1.834	23.8	20.0
<b>458311</b>	2010 <i>VM</i> <sub>60</sub>		1 20.5 140°75	5°2/18.0	18		<b>135454</b>	2001 <i>VW</i> <sub>43</sub>		1 20.5 43°79	0°1/20.4	18	
12 13	8 42.51	+34 14.3	2.176	2.949	13.8	21.8	12 13	8 34.46	+18 45.7	1.840	2.623	15.6	19.1
12 23	8 36.58	+35 1.3	2.102	2.960	11.1	21.7	12 23	8 30.13	+19 6.5	1.786	2.655	12.1	18.9
1 2	8 27.84	+35 45.2	2.052	2.971	8.1	21.5	1 2	8 23.34	+19 35.3	1.754	2.688	8.1	18.7
1 12	8 17.03	+36 19.2	2.029	2.981	5.8	21.4	1 12	8 14.85	+20 8.5	1.749	2.722	3.8	18.5
1 22	8 5.24	+36 37.5	2.034	2.990	5.5	21.4	1 22	8 5.66	+20 41.7	1.772	2.755	0.7	18.4
2 1	7 53.75	+36 37.3	2.070	2.999	7.5	21.5	2 1	7 56.90	+21 11.1	1.824	2.789	5.0	18.8
2 11	7 43.84	+36 18.9	2.132	3.007	10.3	21.7	2 11	7 49.61	+21 34.1	1.903	2.823	8.8	19.1
2 21	7 36.38	+35 45.6	2.219	3.015	13.0	21.9	2 21	7 44.50	+21 49.9	2.008	2.857	12.1	19.3
<b>109637</b>	2001 <i>QU</i> <sub>330</sub>		1 20.5 208°44	4°7/17.6	18		<b>100157</b>	1993 <i>TU</i> <sub>26</sub>		1 20.5 31°92	0°8/20.2	18	
12 13	8 35.23	+33 1.5	2.418	3.198	12.4	19.9	12 13	8 33.26	+19 19.1	1.451	2.254	18.1	19.5
12 23	8 30.77	+33 56.3	2.334	3.197	9.9	19.7	12 23	8 30.17	+19 50.2	1.383	2.264	14.2	19.3
1 2	8 23.91	+34 50.1	2.274	3.196	7.3	19.5	1 2	8 23.34	+20 32.5	1.336	2.275	9.6	19.0
1 12	8 15.21	+35 36.9	2.241	3.195	5.1	19.4	1 12	8 15.34	+21 21.1	1.312	2.286	4.5	18.8
1 22	8 5.55	+36 11.5	2.238	3.194	5.0	19.4	1 22	8 5.54	+22 9.6	1.315	2.298	1.2	18.6
2 1	7 55.98	+36 30.2	2.263	3.193	7.0	19.5	2 1	7 56.05	+22 52.1	1.345	2.311	6.3	18.9
2 11	7 47.59	+36 32.3	2.316	3.191	9.6	19.7	2 11	7 48.28	+23 24.5	1.401	2.325	11.0	19.3
2 21	7 41.19	+36 19.4	2.393	3.190	12.2	19.8	2 21	7 43.22	+23 45.4	1.479	2.338	15.1	19.5
<b>176227</b>	2001 <i>QA</i> <sub>133</sub>		1 20.5 208°63	0°3/20.4	18		<b>450132</b>	2015 <i>SO</i> <sub>5</sub>		1 20.5 111°37	1°1/20.1	18	
12 13	8 39.45	+21 34.1	2.072	2.842	14.5	20.3	12 13	8 42.32	+22 12.6	1.573	2.359	17.7	21.5
12 23	8 34.13	+21 22.5	1.977	2.839	11.5	20.0	12 23	8 36.97	+22 19.1	1.502	2.373	13.9	21.3
1 2	8 26.20	+21 14.4	1.904	2.835	7.8	19.8	1 2	8 28.37	+22 31.3	1.452	2.387	9.4	21.0
1 12	8 16.30	+21 7.4	1.858	2.830	3.7	19.6	1 12	8 17.35	+22 44.7	1.427	2.400	4.4	20.8
1 22	8 5.36	+20 58.7	1.842	2.826	0.8	19.3	1 22	8 5.20	+22 54.6	1.430	2.413	1.5	20.6
2 1	7 54.56	+20 46.4	1.856	2.821	5.1	19.6	2 1	7 53.48	+22 57.4	1.462	2.426	6.2	20.9
2 11	7 45.06	+20 29.8	1.900	2.815	9.1	19.9	2 11	7 43.64	+22 52.1	1.521	2.438	10.9	21.2
2 21	7 37.75	+20 9.2	1.969	2.809	12.7	20.1	2 21	7 36.67	+22 39.3	1.604	2.450	14.8	21.5
<b>245775</b>	2006 <i>GS</i> <sub>21</sub>		1 20.5 262°02	4°3/22.3	18		<b>464975</b>	2005 <i>YH</i> <sub>48</sub>		1 20.5 66°05	0°1/20.6	18	
12 13	8 34.19	+ 9 0.1	1.643	2.408	17.9	20.6	12 13	8 34.88	+19 3.0	1.919	2.699	15.2	21.4
12 23	8 30.65	+ 8 43.5	1.550	2.401	14.7	20.4	12 23	8 30.64	+19 7.6	1.839	2.706	11.9	21.2
1 2	8 24.23	+ 8 43.4	1.477	2.393	10.9	20.1	1 2	8 23.86	+19 19.6	1.781	2.714	8.1	21.0
1 12	8 15.52	+ 9 0.5	1.428	2.386	6.8	19.9	1 12	8 15.19	+19 36.2	1.749	2.721	3.8	20.7
1 22	8 5.48	+ 9 33.0	1.404	2.379	4.3	19.7	1 22	8 5.58	+19 53.9	1.745	2.729	0.7	20.5
2 1	7 55.41	+10 17.4	1.409	2.371	6.6	19.8	2 1	7 56.18	+20 9.5	1.771	2.736	5.1	20.9
2 11	7 46.68	+11 8.3	1.440	2.364	10.8	20.0	2 11	7 48.11	+20 20.7	1.824	2.744	9.1	21.1
2 21	7 40.34	+12 0.6	1.495	2.356	14.9	20.3	2 21	7 42.20	+20 26.7	1.902	2.752	12.7	21.3
<b>12194</b>	1979 <i>KO</i> <sub>1</sub>		1 20.5 219°73	2°0/21.4	18		<b>432486</b>	2010 <i>EY</i> <sub>37</sub>		1 20.5 307°60	1°9/21.5	18	
12 13	8 37.35	+14 4.5	2.186	2.939	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>329928</b>	2005 <i>NF</i> <sub>81</sub>		1 20.5 147°27	0°3/20.4	18		<b>473513</b>	2015 <i>XD</i> <sub>140</sub>		1 20.5 318°51	3°9/18.6	18	
12 13	8 37.07	+19 54.4	2.151	2.921	14.1	22.0	12 13	8 36.00	+25 3.6	1.521	2.325	17.4	21.3
12 23	8 32.09	+20 6.5	2.067	2.929	11.1	21.8	12 23	8 32.63	+26 10.0	1.441	2.322	13.7	21.0
1 2	8 24.71	+20 24.9	2.005	2.936	7.5	21.6	1 2	8 25.89	+27 24.9	1.381	2.319	9.5	20.8
1 12	8 15.56	+20 46.5	1.971	2.943	3.5	21.4	1 12	8 16.41	+28 40.4	1.347	2.317	5.2	20.5
1 22	8 5.52	+21 7.7	1.966	2.949	0.7	21.1	1 22	8 5.38	+29 47.4	1.339	2.315	4.3	20.4
2 1	7 55.65	+21 25.4	1.992	2.956	4.8	21.5	2 1	7 54.41	+30 38.2	1.359	2.313	8.0	20.7
2 11	7 47.00	+21 37.7	2.046	2.961	8.6	21.7	2 11	7 45.15	+31 9.1	1.404	2.310	12.4	20.9
2 21	7 40.37	+21 43.8	2.126	2.966	11.9	21.9	2 21	7 38.80	+31 20.8	1.471	2.309	16.4	21.1
<b>109215</b>	2001 <i>QP</i> <sub>85</sub>		1 20.5 43°42	2°0/19.9	18		<b>465163</b>	2007 <i>DY</i> <sub>69</sub>		1 20.5 20°27	2°9/19.6	16	
12 13	8 41.28	+26 31.7	1.679	2.467	16.7	19.0	12 13	8 33.93	+25 19.4	1.276	2.096	19.2	20.9
12 23	8 36.05	+26 17.8	1.602	2.474	13.1	18.8	12 23	8 31.15	+25 38.3	1.216	2.106	15.1	20.7
1 2	8 27.68	+26 3.9	1.546	2.481	9.0	18.5	1 2	8 24.80	+26 1.7	1.175	2.118	10.2	20.4
1 12	8 17.00	+25 45.7	1.516	2.488	4.5	18.3	1 12	8 15.78	+26 23.2	1.158	2.131	5.2	20.2
1 22	8 5.28	+25 20.0	1.514	2.495	2.3	18.1	1 22	8 5.53	+26 36.7	1.165	2.145	3.2	20.1
2 1	7 53.98	+24 45.4	1.541	2.503	6.2	18.4	2 1	7 55.79	+26 38.0	1.198	2.161	7.5	20.4
2 11	7 44.52	+24 2.9	1.596	2.511	10.6	18.7	2 11	7 48.15	+26 26.2	1.255	2.178	12.2	20.7
2 21	7 37.80	+23 15.0	1.674	2.519	14.4	18.9	2 21	7 43.60	+26 3.2	1.334	2.195	16.3	21.0
<b>85247</b>	1993 <i>RE</i> <sub>5</sub>		1 20.5 64°54	1°7/21.2	17		<b>71536</b>	2000 <i>CF</i> <sub>94</sub>		1 20.5 315°94	3°8/18.7	18	
12 13	8 37.80	+14 39.7	1.390	2.178	19.5	19.5	12 13	8 36.10	+30 1.3	2.118	2.904	13.7	18.5
12 23	8 33.55	+14 47.1	1.332	2.201	15.5	19.3	12 23	8 31.69	+30 32.4	2.031	2.900	10.9	18.3
1 2	8 26.09	+15 9.1	1.293	2.224	10.6	19.1	1 2	8 24.65	+31 3.5	1.967	2.896	7.7	18.1
1 12	8 16.27	+15 42.8	1.277	2.248	5.4	18.8	1 12	8 15.62	+31 29.1	1.929	2.893	4.7	17.9
1 22	8 5.41	+16 23.0	1.288	2.271	1.7	18.6	1 22	8 5.55	+31 44.4	1.920	2.890	4.0	17.9
2 1	7 55.04	+17 4.2	1.327	2.295	6.1	19.0	2 1	7 55.63	+31 46.0	1.940	2.886	6.6	18.0
2 11	7 46.59	+17 41.8	1.392	2.318	10.9	19.3	2 11	7 47.05	+31 33.4	1.987	2.883	9.9	18.2
2 21	7 40.96	+18 13.0	1.480	2.341	15.0	19.6	2 21	7 40.67	+31 8.3	2.058	2.880	13.0	18.4
<b>84640</b>	2002 <i>VZ</i> <sub>55</sub>		1 20.5 38°98	3°6/18.3	18		<b>160297</b>	2003 <i>FV</i> <sub>22</sub>		1 20.5 330°42	1°3/19.9	18	
12 13	8 33.32	+27 29.2	2.138	2.927	13.5	19.4	12 13	8 31.58	+20 28.9	1.558	2.361	17.1	20.1
12 23	8 29.45	+28 28.7	2.059	2.931	10.6	19.2	12 23	8 28.99	+21 2.4	1.467	2.349	13.5	19.9
1 2	8 23.11	+29 31.4	2.002	2.935	7.4	19.0	1 2	8 23.34	+21 46.7	1.398	2.337	9.2	19.6
1 12	8 14.88	+30 31.5	1.973	2.939	4.4	18.8	1 12	8 15.20	+22 37.3	1.353	2.327	4.4	19.3
1 22	8 5.65	+31 23.0	1.972	2.943	3.9	18.8	1 22	8 5.61	+23 27.9	1.334	2.317	1.7	19.1
2 1	7 56.52	+32 1.4	2.001	2.947	6.5	18.9	2 1	7 55.98	+24 12.2	1.342	2.307	6.5	19.3
2 11	7 48.62	+32 24.4	2.057	2.952	9.7	19.2	2 11	7 47.83	+24 45.8	1.377	2.298	11.4	19.6
2 21	7 42.78	+32 32.7	2.138	2.956	12.7	19.4	2 21	7 42.28	+25 7.0	1.433	2.290	15.6	19.8
<b>319737</b>	2006 <i>UP</i> <sub>124</sub>		1 20.5 33°03	2°0/21.3	18		<b>182761</b>	2001 <i>XY</i> <sub>166</sub>		1 20.5 75°35	0°4/20.3	18	
12 13	8 34.01	+14 55.8	1.509	2.298	18.2	20.9	12 13	8 36.55	+18 37.2	1.833	2.611	15.8	19.9
12 23	8 30.58	+14 48.4	1.435	2.305	14.5	20.7	12 23	8 31.92	+19 11.6	1.769	2.636	12.3	19.7
1 2	8 24.14	+14 53.8	1.381	2.313	10.1	20.5	1 2	8 24.68	+19 55.3	1.728	2.661	8.3	19.5
1 12	8 15.42	+15 10.2	1.351	2.321	5.3	20.2	1 12	8 15.56	+20 43.6	1.713	2.686	3.8	19.3
1 22	8 5.56	+15 34.2	1.347	2.329	2.0	20.0	1 22	8 5.58	+21 31.5	1.727	2.711	0.9	19.1
2 1	7 55.94	+16 1.6	1.371	2.338	5.9	20.3	2 1	7 55.95	+22 14.1	1.771	2.735	5.2	19.5
2 11	7 47.95	+16 28.4	1.420	2.348	10.6	20.6	2 11	7 47.81	+22 48.4	1.842	2.759	9.3	19.7
2 21	7 42.54	+16 51.8	1.493	2.357	14.7	20.9	2 21	7 41.93	+23 13.1	1.939	2.783	12.7	20.0
<b>410605</b>	2008 <i>JF</i> <sub>24</sub>		1 20.5 26°19	2°9/18.5	16		<b>230512</b>	2002 <i>VT</i> <sub>40</sub>		1 20.5 42°00	2°0/21.2	18	
12 13	8 34.10	+20 39.4	1.774	2.563	15.8	20.3	12 13	8 36.51	+15 36.2	1.281	2.079	20.3	20.6
12 23	8 30.62	+22 25.9	1.690	2.565	12.4	20.0	12 23	8 33.09	+15 24.2	1.210	2.086	16.2	20.4
1 2	8 24.26	+24 26.6	1.631	2.568	8.4	19.8	1 2	8 26.14	+15 26.0	1.158	2.092	11.3	20.1
1 12	8 15.57	+26 33.3	1.598	2.570	4.3	19.6	1 12	8 16.47	+15 39.5	1.128	2.099	5.8	19.8
1 22	8 5.51	+28 35.9	1.596	2.572	3.4	19.5	1 22	8 5.41	+16 0.9	1.124	2.107	2.0	19.6
2 1	7 55.37	+30 24.5	1.623	2.575	7.1	19.7	2 1	7 54.64	+16 25.6	1.146	2.114	6.7	19.9
2 11	7 46.55	+31 53.0	1.678	2.578	11.2	20.0	2 11	7 45.84	+16 49.2	1.193	2.122	11.9	20.2
2 21	7 40.14	+32 59.4	1.757	2.581	14.7	20.2	2 21	7 40.11	+17 8.8	1.261	2.130	16.5	20.5
<b>33618</b>	1999 <i>JA</i> <sub>66</sub>		1 20.5 324°63	1°9/19.8	18		<b>39545</b>	1992 <i>DH</i> <sub>3</sub>		1 20.5 275°37	2°3/19.5	18	
12 13	8 32.56	+21 22.8	1.295	2.110	19.2	18.7	12 13	8 35.98	+25 34.9	2.103	2.885	13.9	19.5
12 23	8 30.46	+21 55.8	1.208	2.096	15.2	18.4	12 23	8 31.65	+25 55.0	2.001	2.870	11.0	19.3
1 2	8 24.74	+22 40.6	1.140	2.082	10.4	18.0	1 2	8 24.70	+26 18.1	1.922	2.856	7.6	19.0
1 12	8 15.99	+23 32.0	1.095	2.069	5.0	17.7	1 12	8 15.70	+26 40.0	1.870	2.841	3.9	18.8
1 22	8 5.43	+24 22.2	1.075	2.057	2.3	17.5	1 22	8 5.53	+26 56.1	1.847	2.826	2.5	18.7
2 1	7 54.78	+25 3.6	1.080	2.045	7.6	17.8	2 1	7 55.36	+27 3.0	1.853	2.810	5.8	18.8
2 11	7 45.93	+25 31.3	1.110	2.035	13.1	18.0	2 11	7 46.39	+26 59.3	1.887	2.795	9.6	19.0
2 21	7 40.25	+25 44.1	1.160	2.025	18.0	18.3	2 21	7 39.56	+26 45.4	1.946	2.780	13.1	19.2
<b>397960</b>	2008 <i>YV</i> <sub>103</sub>		1 20.5 73°31	0°3/20.4	17		<b>132236</b>	2002 <i>EH</i> <sub>79</sub>		1 20.5 237°32	3°4/21.9	18	
12 13	8 38.87	+18 13.0	1.477	2.266	18.5	21.6	12 13	8 35.75	+11 20.3	1.788	2.550	16.8	20.3
12 23	8 34.29	+18 45.9	1.418	2.291	14.5	21.4	12 23	8 31.66	+11 1.8	1.691	2.543	13.6	20.1
1 2	8 26.55	+19 30.4	1.380	2.316	9.7	21.2	1 2	8 24.81	+10 56.4	1.616	2.535	9.9	19.8
1 12	8 16.49	+20 21.2	1.367	2.340	4.5	20.9	1 12	8 15.79	+11 3.9	1.565	2.527	5.9	19.5
1 22	8 5.40	+21 11.8	1.381	2.365	0.9	20.7	1 22	8 5.52	+11 22.7	1.541	2.518	3.4	19.4
2 1	7 54.79	+21 56.3	1.424	2.389	6.1	21.1	2 1	7 55.23	+11 49.9	1.546	2.510	6.0	19.5
2 11	7 46.06	+22 31.0	1.493	2.414	10.7	21.5	2 11	7 46.21	+12 21.6	1.579	2.501	10.2	19.7
2 21	7 40.12	+22 54.9	1.585	2.437	14.7	21.8	2 21	7 39.45	+12 54.2	1.636	2.491	14.1	20.0
<b>133039</b>	2003 <i>AJ</i> <sub>34</sub>		1 20.5 7°67	4°4/22.0	17		<b>288383</b>	2004 <i>CS</i> <sub>74</sub>		1 20.5 294°86	2°7/21.7	18	
12 13	8 23.87	+11 45											

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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>92381</b>	2000 <i>HT</i> <sub>69</sub>		1 20.5 236°19	1.3/19.9	18		<b>378512</b>	2007 <i>UE</i> <sub>19</sub>		1 20.5 44°48	0°3/20.4	18	
12 13	8 38.74	+21 49.4	1.692	2.478	16.6	20.9	12 13	8 32.66	+19 47.1	2.105	2.884	14.0	21.2
12 23	8 34.39	+22 10.9	1.598	2.470	13.2	20.6	12 23	8 28.73	+20 2.2	2.024	2.892	11.0	21.0
1 2	8 26.88	+22 40.0	1.525	2.460	9.0	20.4	1 2	8 22.50	+20 24.0	1.966	2.900	7.4	20.8
1 12	8 16.84	+23 12.2	1.477	2.450	4.3	20.1	1 12	8 14.58	+20 49.5	1.935	2.908	3.5	20.6
1 22	8 5.34	+23 42.0	1.458	2.440	1.7	19.9	1 22	8 5.81	+21 15.1	1.933	2.917	0.8	20.4
2 1	7 53.82	+24 4.4	1.467	2.429	6.3	20.1	2 1	7 57.21	+21 37.5	1.960	2.925	4.8	20.7
2 11	7 43.82	+24 16.6	1.503	2.418	11.1	20.4	2 11	7 49.80	+21 54.5	2.016	2.934	8.5	20.9
2 21	7 36.45	+24 18.5	1.562	2.407	15.2	20.6	2 21	7 44.31	+22 5.0	2.096	2.943	11.8	21.2
<b>193977</b>	2001 <i>RG</i> <sub>120</sub>		1 20.5 214°80	0°7/20.9	18		<b>462877</b>	2010 <i>VQ</i> <sub>135</sub>		1 20.5 52°19	0°2/20.6	18	
12 13	8 36.28	+15 20.2	1.675	2.453	17.1	20.6	12 13	8 35.03	+18 10.2	1.614	2.403	17.2	21.6
12 23	8 32.35	+15 50.5	1.584	2.449	13.7	20.3	12 23	8 31.19	+18 24.9	1.543	2.416	13.5	21.3
1 2	8 25.45	+16 35.5	1.513	2.444	9.4	20.1	1 2	8 24.46	+18 49.8	1.494	2.429	9.2	21.1
1 12	8 16.15	+17 31.8	1.468	2.439	4.6	19.8	1 12	8 15.57	+19 21.2	1.470	2.443	4.3	20.9
1 22	8 5.46	+18 34.1	1.450	2.434	0.9	19.5	1 22	8 5.64	+19 54.6	1.473	2.457	0.7	20.6
2 1	7 54.74	+19 35.9	1.461	2.428	5.8	19.8	2 1	7 56.01	+20 25.2	1.504	2.471	5.6	21.0
2 11	7 45.42	+20 31.9	1.500	2.422	10.6	20.1	2 11	7 47.97	+20 49.7	1.562	2.485	10.1	21.3
2 21	7 38.58	+21 18.5	1.563	2.415	14.8	20.3	2 21	7 42.42	+21 6.8	1.644	2.500	14.0	21.6
<b>28568</b>	Jacobjohnson		1 20.5 290°68	0°2/20.6	18		<b>203832</b>	2002 <i>UW</i> <sub>61</sub>		1 20.5 141°83	3°6/22.5	18	
12 13	8 34.52	+18 22.3	1.740	2.526	16.3	19.7	12 13	8 32.38	+ 8 8.9	2.495	3.229	13.3	21.5
12 23	8 30.88	+18 32.0	1.646	2.517	12.9	19.4	12 23	8 28.05	+ 7 51.3	2.405	3.235	10.8	21.3
1 2	8 24.38	+18 51.4	1.574	2.508	8.9	19.2	1 2	8 21.83	+ 7 45.0	2.337	3.241	8.0	21.2
1 12	8 15.62	+19 17.4	1.526	2.499	4.2	18.9	1 12	8 14.21	+ 7 50.2	2.296	3.247	5.2	21.0
1 22	8 5.57	+19 45.9	1.506	2.490	0.7	18.6	1 22	8 5.88	+ 8 5.8	2.283	3.253	3.6	20.9
2 1	7 55.53	+20 12.8	1.515	2.481	5.6	18.9	2 1	7 57.64	+ 8 29.8	2.301	3.258	4.9	21.0
2 11	7 46.83	+20 34.6	1.550	2.472	10.3	19.2	2 11	7 50.31	+ 8 59.4	2.348	3.263	7.7	21.2
2 21	7 40.51	+20 49.7	1.609	2.464	14.4	19.4	2 21	7 44.53	+ 9 31.7	2.422	3.267	10.5	21.4
<b>31429</b>	Diegoazzaro		1 20.5 213°70	3°6/18.7	18 R		<b>288173</b>	2003 <i>WE</i> <sub>165</sub>		1 20.5 118°18	1°0/19.9	18	
12 13	8 38.48	+25 35.6	1.737	2.528	16.1	18.8	12 13	8 33.72	+21 10.8	2.328	3.102	13.0	21.4
12 23	8 34.22	+26 37.0	1.650	2.523	12.7	18.5	12 23	8 29.37	+21 39.7	2.245	3.110	10.2	21.2
1 2	8 26.79	+27 45.4	1.584	2.518	8.8	18.3	1 2	8 22.85	+22 14.3	2.185	3.118	6.8	21.0
1 12	8 16.81	+28 53.5	1.544	2.513	4.9	18.1	1 12	8 14.73	+22 51.2	2.153	3.125	3.2	20.8
1 22	8 5.36	+29 53.4	1.533	2.508	4.0	18.0	1 22	8 5.79	+23 26.4	2.150	3.133	1.2	20.6
2 1	7 53.90	+30 38.3	1.550	2.502	7.4	18.2	2 1	7 56.98	+23 56.4	2.178	3.140	4.7	20.9
2 11	7 43.97	+31 5.2	1.594	2.495	11.6	18.4	2 11	7 49.25	+24 19.1	2.235	3.147	8.1	21.1
2 21	7 36.71	+31 14.7	1.661	2.488	15.3	18.6	2 21	7 43.33	+24 33.6	2.317	3.154	11.2	21.3
<b>150251</b>	1999 <i>JR</i> <sub>99</sub>		1 20.5 250°97	5°9/24.0	18		<b>391480</b>	2007 <i>HK</i> <sub>78</sub>		1 20.5 267°74	0°7/20.2	18	
12 13	8 32.05	+ 0 49.3	2.306	3.014	14.9	20.4	12 13	8 35.33	+17 54.0	1.490	2.284	18.1	21.1
12 23	8 28.19	+ 0 38.0	2.194	2.997	12.7	20.2	12 23	8 32.07	+18 38.0	1.402	2.278	14.4	20.8
1 2	8 22.19	+ 0 44.5	2.101	2.980	10.1	20.0	1 2	8 25.53	+19 36.9	1.335	2.272	9.8	20.5
1 12	8 14.50	+ 1 10.3	2.034	2.963	7.5	19.8	1 12	8 16.30	+20 46.1	1.292	2.266	4.6	20.2
1 22	8 5.78	+ 1 55.2	1.994	2.945	6.0	19.7	1 22	8 5.49	+21 58.0	1.276	2.259	1.2	20.0
2 1	7 56.93	+ 2 56.9	1.983	2.927	6.7	19.7	2 1	7 54.64	+23 4.9	1.288	2.253	6.6	20.3
2 11	7 48.91	+ 4 10.7	2.000	2.908	9.2	19.8	2 11	7 45.36	+24 0.6	1.326	2.247	11.7	20.6
2 21	7 42.51	+ 5 31.1	2.044	2.889	12.1	20.0	2 21	7 38.87	+24 42.4	1.386	2.241	16.2	20.8
<b>189278</b>	2005 <i>SK</i> <sub>142</sub>		1 20.5 33°91	1°9/19.6	18		<b>27144</b>	1998 <i>XN</i> <sub>74</sub>		1 20.5 331°66	0°5/20.8	18	
12 13	8 34.25	+22 17.2	1.681	2.477	16.3	20.8	12 13	8 32.63	+18 25.0	1.951	2.733	14.9	18.4
12 23	8 30.69	+22 55.4	1.605	2.482	12.8	20.6	12 23	8 29.02	+18 21.0	1.857	2.725	11.8	18.1
1 2	8 24.20	+23 41.3	1.550	2.488	8.6	20.3	1 2	8 22.91	+18 24.3	1.785	2.718	8.1	17.9
1 12	8 15.49	+24 29.6	1.520	2.493	4.2	20.1	1 12	8 14.87	+18 32.8	1.739	2.711	3.9	17.6
1 22	8 5.62	+25 14.2	1.518	2.500	2.2	19.9	1 22	8 5.78	+18 43.7	1.720	2.704	0.8	17.4
2 1	7 55.94	+25 49.9	1.544	2.506	6.3	20.2	2 1	7 56.76	+18 54.3	1.731	2.698	5.0	17.7
2 11	7 47.78	+26 13.6	1.597	2.513	10.5	20.5	2 11	7 48.93	+19 2.2	1.769	2.692	9.2	17.9
2 21	7 42.11	+26 24.9	1.673	2.520	14.3	20.7	2 21	7 43.16	+19 6.2	1.832	2.687	12.9	18.1
<b>156585</b>	2002 <i>GN</i> <sub>37</sub>		1 20.5 49°65	2°2/21.6	18		<b>496596</b>	2015 <i>BP</i> <sub>497</sub>		1 20.5 162°44	0°5/20.9	17	
12 13	8 32.88	+13 7.8	1.907	2.676	15.6	20.0	12 13	8 31.71	+15 48.2	2.654	3.412	12.0	21.9
12 23	8 29.10	+13 6.2	1.823	2.681	12.5	19.8	12 23	8 27.54	+16 17.3	2.562	3.416	9.4	21.7
1 2	8 22.87	+13 16.6	1.761	2.686	8.8	19.6	1 2	8 21.51	+16 55.0	2.493	3.419	6.5	21.5
1 12	8 14.79	+13 37.7	1.724	2.691	4.8	19.3	1 12	8 14.09	+17 38.9	2.452	3.422	3.2	21.3
1 22	8 5.75	+14 6.7	1.715	2.696	2.2	19.2	1 22	8 5.93	+18 25.8	2.441	3.425	0.7	21.1
2 1	7 56.84	+14 40.1	1.735	2.701	5.1	19.4	2 1	7 57.82	+19 12.3	2.462	3.427	3.9	21.4
2 11	7 49.17	+15 14.2	1.783	2.706	9.1	19.6	2 11	7 50.56	+19 55.4	2.513	3.430	7.1	21.6
2 21	7 43.54	+15 46.0	1.856	2.712	12.7	19.9	2 21	7 44.78	+20 33.0	2.591	3.431	10.0	21.8
<b>57370</b>	2001 <i>RO</i> <sub>45</sub>		1 20.5 79°82	1°3/21.2	18		<b>145256</b>	2005 <i>JL</i> <sub>125</sub>		1 20.5 173°05	0°3/20.7	18	
12 13	8 34.59	+14 19.7	1.815	2.587	16.2	19.7	12 13	8 31.26	+16 18.6	2.595	3.357	12.1	20.6
12 23	8 30.49	+14 38.9	1.741	2.602	12.8	19.5	12 23	8 27.26	+16 51.9	2.501	3.358	9.6	20.4
1 2	8 23.81	+15 10.9	1.689	2.617	8.9	19.3	1 2	8 21.37	+17 34.0	2.431	3.359	6.5	20.3
1 12	8 15.22	+15 52.7	1.663	2.632	4.5	19.1	1 12	8 14.04	+18 22.2	2.389	3.360	3.1	20.0
1 22	8 5.68	+16 40.2	1.664	2.647	1.4	18.9	1 22	8 5.94	+19 13.1	2.377	3.360	0.6	19.8
2 1	7 56.38	+17 28.6	1.695	2.662	5.1	19.2	2 1	7 57.87	+20 3.1	2.396	3.361	4.0	20.1
2 11	7 48.44	+18 13.5	1.754	2.676	9.3	19.5	2 11	7 50.65	+20 49.0	2.445	3.361	7.3	20.3
2 21	7 42.70	+18 52.2	1.837	2.691	12.9	19.7	2 21	7 44.95	+21 28.6	2.520	3.361	10.3	20.5
<b>294121</b>	2007 <i>TZ</i> <sub>259</sub>		1 20.5 195°29	1°0/20.9	18		<b>306356</b>	2011 <i>SB</i> <sub>196</sub>		1 20.5 15°37	1°8/21.2	18	
12 13	8 37.58	+16 6.0	2.086										

EPHEMERIDES

1 20.5

1 20.5

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>430034</b>	2013 <i>RE</i> <sub>69</sub>		1 20.5	91°46'	4°6'/18.3	18	<b>335902</b>	2007 <i>RQ</i> <sub>285</sub>		1 20.5	114°54'	2°6'/18.7	18
12 13	8 38.40	+32 51.3	2.211	2.990	13.4	21.0	12 13	8 34.32	+25 43.8	2.568	3.342	11.9	21.1
12 23	8 33.29	+33 31.8	2.139	3.003	10.7	20.8	12 23	8 29.71	+26 40.4	2.492	3.357	9.3	20.9
1 2	8 25.61	+34 10.1	2.091	3.015	7.7	20.6	1 2	8 23.03	+27 40.3	2.440	3.371	6.3	20.8
1 12	8 16.05	+34 40.1	2.070	3.027	5.2	20.5	1 12	8 14.83	+28 38.5	2.417	3.385	3.5	20.6
1 22	8 5.60	+34 56.9	2.078	3.039	4.9	20.5	1 22	8 5.84	+29 30.5	2.424	3.398	2.8	20.6
2 1	7 55.46	+34 57.7	2.115	3.051	7.0	20.7	2 1	7 56.98	+30 12.3	2.462	3.411	5.2	20.8
2 11	7 46.75	+34 42.6	2.179	3.063	9.8	20.9	2 11	7 49.15	+30 42.2	2.530	3.424	8.1	21.0
2 21	7 40.27	+34 14.1	2.268	3.074	12.5	21.1	2 21	7 43.02	+30 59.9	2.623	3.437	10.7	21.2
<b>80073</b>	1999 <i>JA</i> <sub>99</sub>		1 20.5	276°07'	2°3'/18.7	17	<b>243400</b>	2009 <i>AP</i> <sub>1</sub>		1 20.5	185°92'	1°2'/20.8	18
12 13	8 32.43	+22 21.6	2.408	3.185	12.5	18.9	12 13	8 45.56	+19 25.1	1.947	2.704	15.8	20.5
12 23	8 28.64	+23 40.8	2.305	3.173	9.8	18.7	12 23	8 38.99	+18 41.7	1.851	2.704	12.6	20.2
1 2	8 22.60	+25 8.8	2.227	3.160	6.7	18.4	1 2	8 29.57	+18 1.1	1.778	2.704	8.7	20.0
1 12	8 14.75	+26 40.6	2.177	3.147	3.5	18.2	1 12	8 17.98	+17 22.1	1.733	2.703	4.3	19.7
1 22	8 5.80	+28 9.8	2.158	3.135	2.6	18.1	1 22	8 5.30	+16 43.9	1.719	2.701	1.4	19.5
2 1	7 56.69	+29 30.4	2.170	3.122	5.6	18.3	2 1	7 52.85	+16 6.0	1.735	2.699	5.4	19.8
2 11	7 48.44	+30 37.9	2.212	3.109	9.0	18.5	2 11	7 41.91	+15 29.0	1.782	2.696	9.7	20.0
2 21	7 41.92	+31 30.7	2.279	3.097	12.0	18.7	2 21	7 33.42	+14 53.3	1.854	2.693	13.5	20.3
<b>48320</b>	2002 <i>NE</i> <sub>27</sub>		1 20.5	145°76'	0°3'/20.7	18	<b>323799</b>	2005 <i>QT</i> <sub>151</sub>		1 20.5	60°87'	8°7'/17.0	18
12 13	8 33.42	+17 32.4	2.882	3.636	11.2	20.9	12 13	8 44.37	+40 13.1	1.677	2.461	16.8	20.3
12 23	8 28.63	+17 48.5	2.794	3.647	8.8	20.7	12 23	8 38.99	+41 31.7	1.631	2.486	13.8	20.1
1 2	8 22.11	+18 10.5	2.731	3.658	6.0	20.6	1 2	8 29.92	+42 41.4	1.606	2.512	11.0	20.0
1 12	8 14.32	+18 36.5	2.697	3.667	2.9	20.4	1 12	8 18.17	+43 31.5	1.606	2.537	9.0	20.0
1 22	8 5.91	+19 3.9	2.693	3.677	0.5	20.2	1 22	8 5.29	+43 54.5	1.632	2.562	9.0	20.0
2 1	7 57.61	+19 30.2	2.721	3.686	3.6	20.5	2 1	7 53.12	+43 47.4	1.684	2.587	10.8	20.2
2 11	7 50.15	+19 53.4	2.780	3.694	6.6	20.7	2 11	7 43.29	+43 13.4	1.760	2.613	13.3	20.4
2 21	7 44.11	+20 12.3	2.866	3.702	9.3	20.8	2 21	7 36.75	+42 19.0	1.857	2.638	15.8	20.6
<b>522445</b>	2016 <i>CN</i> <sub>319</sub>		1 20.5	341°41'	0°6'/20.8	16	<b>471450</b>	2011 <i>UG</i> <sub>159</sub>		1 20.5	38°50'	18°2'/24.4	18
12 13	8 28.76	+14 46.0	1.531	2.328	17.6	21.1	12 13	8 38.94	- 5 17.2	1.002	1.749	28.0	20.3
12 23	8 26.76	+15 27.7	1.441	2.317	14.0	20.8	12 23	8 35.73	- 8 31.2	0.946	1.755	25.1	20.1
1 2	8 21.84	+16 27.2	1.371	2.307	9.7	20.5	1 2	8 28.42	-11 17.8	0.905	1.761	22.1	19.9
1 12	8 14.54	+17 41.1	1.325	2.298	4.7	20.2	1 12	8 17.78	-13 21.9	0.881	1.768	19.6	19.7
1 22	8 5.84	+19 3.1	1.306	2.290	0.9	19.9	1 22	8 5.33	-14 31.9	0.874	1.775	18.3	19.7
2 1	7 57.07	+20 25.4	1.314	2.282	6.0	20.3	2 1	7 53.10	-14 43.3	0.887	1.783	18.7	19.8
2 11	7 49.66	+21 40.7	1.348	2.276	11.0	20.5	2 11	7 43.15	-14 2.8	0.918	1.791	20.6	19.9
2 21	7 44.74	+22 44.1	1.405	2.271	15.4	20.8	2 21	7 36.86	-12 44.4	0.964	1.800	23.1	20.1
<b>162904</b>	2001 <i>JV</i> <sub>10</sub>		1 20.5	160°23'	3°2'/22.6	18	<b>465218</b>	2007 <i>RA</i> <sub>86</sub>		1 20.5	111°67'	4°0'/23.2	18
12 13	8 31.59	+ 7 52.3	2.699	3.429	12.5	20.9	12 13	8 31.47	+ 5 32.1	2.502	3.227	13.5	21.8
12 23	8 27.32	+ 7 50.3	2.605	3.434	10.2	20.7	12 23	8 27.33	+ 5 25.6	2.418	3.240	11.1	21.7
1 2	8 21.30	+ 7 59.8	2.534	3.439	7.5	20.5	1 2	8 21.34	+ 5 32.6	2.355	3.252	8.4	21.5
1 12	8 13.97	+ 8 20.4	2.490	3.443	4.8	20.4	1 12	8 14.01	+ 5 53.2	2.319	3.264	5.6	21.3
1 22	8 5.97	+ 8 50.7	2.476	3.447	3.2	20.3	1 22	8 6.01	+ 6 25.9	2.311	3.276	4.0	21.3
2 1	7 58.02	+ 9 28.2	2.492	3.450	4.5	20.4	2 1	7 58.13	+ 7 8.2	2.333	3.287	5.1	21.3
2 11	7 50.89	+10 10.0	2.538	3.453	7.1	20.5	2 11	7 51.14	+ 7 56.5	2.385	3.299	7.6	21.5
2 21	7 45.17	+10 52.9	2.611	3.456	9.8	20.7	2 21	7 45.67	+ 8 47.0	2.463	3.310	10.3	21.7
<b>118911</b>	2000 <i>VL</i> <sub>2</sub>		1 20.5	306°57'	11°4'/20.6	18	<b>422027</b>	2014 <i>QF</i> <sub>342</sub>		1 20.5	64°57'	0°7'/20.8	18
12 13	8 45.14	+ 8 25.9	1.113	1.889	24.1	18.0	12 13	8 36.54	+16 52.2	1.595	2.380	17.6	21.3
12 23	8 40.65	+ 5 35.1	1.030	1.880	20.5	17.7	12 23	8 32.31	+17 5.8	1.531	2.400	13.8	21.1
1 2	8 31.88	+ 2 48.4	0.965	1.870	16.4	17.5	1 2	8 25.18	+17 30.6	1.487	2.420	9.4	20.9
1 12	8 19.50	+ 0 15.8	0.922	1.861	12.7	17.2	1 12	8 15.93	+18 3.2	1.468	2.440	4.5	20.7
1 22	8 4.97	- 1 51.0	0.903	1.853	11.4	17.1	1 22	8 5.70	+18 38.9	1.477	2.460	0.9	20.4
2 1	7 50.42	- 3 22.7	0.909	1.845	13.6	17.2	2 1	7 55.84	+19 13.0	1.513	2.480	5.6	20.8
2 11	7 38.07	- 4 17.1	0.937	1.837	17.7	17.4	2 11	7 47.64	+19 42.0	1.577	2.501	10.0	21.1
2 21	7 29.46	- 4 39.2	0.984	1.830	22.0	17.6	2 21	7 41.96	+20 3.9	1.665	2.521	13.9	21.4
<b>517698</b>	2015 <i>FB</i> <sub>37</sub>		1 20.5	68°71'	16°4'/31.9	18	<b>503815</b>	2017 <i>KB</i> <sub>12</sub>		1 20.5	270°88'	3°0'/21.7	18
12 13	8 34.26	-16 50.7	1.152	1.830	28.5	20.5	12 13	8 34.84	+12 30.5	1.724	2.495	17.0	21.8
12 23	8 31.58	-17 41.0	1.094	1.844	25.9	20.3	12 23	8 31.12	+12 15.2	1.628	2.485	13.8	21.5
1 2	8 25.29	-17 44.8	1.046	1.859	22.9	20.1	1 2	8 24.57	+12 12.6	1.552	2.475	9.9	21.3
1 12	8 16.17	-16 52.2	1.012	1.874	19.8	20.0	1 12	8 15.78	+12 22.4	1.501	2.465	5.7	21.0
1 22	8 5.59	-14 59.6	0.996	1.889	17.4	19.9	1 22	8 5.69	+12 42.6	1.476	2.455	3.0	20.8
2 1	7 55.29	-12 12.2	1.000	1.904	16.4	19.9	2 1	7 55.56	+13 9.9	1.480	2.445	6.0	21.0
2 11	7 47.00	- 8 46.0	1.027	1.918	17.3	20.0	2 11	7 46.73	+13 40.6	1.511	2.435	10.3	21.2
2 21	7 41.89	- 5 2.5	1.076	1.933	19.7	20.2	2 21	7 40.23	+14 10.9	1.566	2.425	14.4	21.4
<b>163516</b>	2002 <i>TP</i> <sub>13</sub>		1 20.5	133°83'	1°2'/19.8	18	<b>265563</b>	2005 <i>QX</i> <sub>33</sub>		1 20.5	126°05'	1°3'/21.3	18
12 13	8 33.51	+21 59.0	2.430	3.204	12.5	20.3	12 13	8 35.44	+14 14.8	2.207	2.964	14.1	21.5
12 23	8 29.16	+22 28.0	2.345	3.210	9.8	20.1	12 23	8 30.71	+14 33.1	2.126	2.978	11.2	21.3
1 2	8 22.70	+23 2.1	2.283	3.215	6.6	19.9	1 2	8 23.77	+15 2.0	2.068	2.992	7.7	21.1
1 12	8 14.68	+23 37.7	2.249	3.221	3.1	19.7	1 12	8 15.20	+15 39.0	2.037	3.006	4.0	20.9
1 22	8 5.86	+24 11.1	2.244	3.226	1.4	19.6	1 22	8 5.82	+16 20.7	2.036	3.019	1.3	20.7
2 1	7 57.16	+24 39.0	2.271	3.231	4.6	19.8	2 1	7 56.59	+17 3.5	2.066	3.031	4.5	21.0
2 11	7 49.48	+24 59.2	2.326	3.236	8.0	20.0	2 11	7 48.50	+17 43.8	2.124	3.043	8.1	21.2
2 21	7 43.53	+25 11.3	2.407	3.241	10.9	20.2	2 21	7 42.26	+18 19.2	2.209	3.054	11.3	21.4
<b>156070</b>	2001 <i>SG</i> <sub>95</sub>		1 20.5	238°62'	3°1'/21.9	18	<b>88554</b>	2001 <i>QW</i> <sub>199</sub>		1 20.5	198°84'	8°2'/14.7	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>155978</b>	2001 <i>QF</i> <sub>242</sub>		1 20.5 163°33	0°8/20.2	18		<b>330480</b>	2007 <i>GE</i> <sub>9</sub>		1 20.5 125°51	2°0/19.5	18	
12 13	8 40.13	+20 55.7	1.758	2.537	16.4	21.1	12 13	8 36.23	+24 32.7	2.202	2.980	13.5	21.3
12 23	8 35.16	+21 12.7	1.675	2.542	12.9	20.9	12 23	8 31.51	+25 2.9	2.122	2.989	10.6	21.1
1 2	8 27.21	+21 36.9	1.613	2.546	8.8	20.7	1 2	8 24.42	+25 36.8	2.065	2.997	7.2	20.9
1 12	8 16.96	+22 4.3	1.577	2.550	4.1	20.4	1 12	8 15.55	+26 10.0	2.035	3.005	3.6	20.7
1 22	8 5.51	+22 29.8	1.569	2.553	1.2	20.2	1 22	8 5.79	+26 37.9	2.034	3.013	2.3	20.6
2 1	7 54.25	+22 49.4	1.591	2.555	5.8	20.5	2 1	7 56.21	+26 57.4	2.064	3.021	5.4	20.8
2 11	7 44.53	+23 0.7	1.641	2.557	10.3	20.8	2 11	7 47.87	+27 6.7	2.122	3.028	8.8	21.0
2 21	7 37.36	+23 3.4	1.715	2.558	14.2	21.0	2 21	7 41.54	+27 6.1	2.205	3.035	11.9	21.2
<b>498935</b>	2009 <i>BL</i> <sub>38</sub>		1 20.5 290°23	2°0/19.6	17		<b>249071</b>	2007 <i>UK</i> <sub>61</sub>		1 20.5 228°30	2°5/19.3	18	
12 13	8 34.71	+25 43.0	2.367	3.145	12.7	21.6	12 13	8 38.45	+24 23.2	1.970	2.750	14.8	21.6
12 23	8 30.23	+25 56.6	2.275	3.142	10.0	21.4	12 23	8 33.83	+25 3.7	1.872	2.740	11.7	21.4
1 2	8 23.51	+26 12.2	2.206	3.139	6.8	21.2	1 2	8 26.38	+25 50.1	1.796	2.729	8.0	21.1
1 12	8 15.11	+26 26.0	2.165	3.136	3.5	21.0	1 12	8 16.65	+26 37.1	1.748	2.718	4.2	20.9
1 22	8 5.84	+26 34.6	2.154	3.133	2.2	20.9	1 22	8 5.59	+27 18.8	1.728	2.706	2.8	20.7
2 1	7 56.69	+26 35.6	2.172	3.130	5.1	21.1	2 1	7 54.48	+27 50.0	1.738	2.694	6.3	20.9
2 11	7 48.64	+26 28.0	2.219	3.127	8.4	21.3	2 11	7 44.65	+28 8.2	1.776	2.681	10.3	21.1
2 21	7 42.46	+26 12.2	2.292	3.124	11.5	21.5	2 21	7 37.15	+28 13.3	1.838	2.667	14.0	21.3
<b>182174</b>	2000 <i>SQ</i> <sub>247</sub>		1 20.5 171°53	2°6/19.1	18		<b>463527</b>	2013 <i>RH</i> <sub>2</sub>		1 20.5 150°23	0°0/20.6	18	
12 13	8 37.10	+26 4.9	2.324	3.099	13.0	21.1	12 13	8 35.42	+18 42.8	2.644	3.402	12.0	22.4
12 23	8 32.17	+26 42.8	2.237	3.102	10.2	21.0	12 23	8 30.38	+18 59.5	2.557	3.412	9.4	22.2
1 2	8 24.86	+27 23.5	2.173	3.104	7.0	20.8	1 2	8 23.40	+19 22.2	2.494	3.422	6.4	22.0
1 12	8 15.76	+28 2.5	2.137	3.106	3.8	20.6	1 12	8 15.01	+19 48.3	2.459	3.431	3.0	21.8
1 22	8 5.73	+28 34.9	2.132	3.108	2.8	20.5	1 22	8 5.90	+20 14.9	2.455	3.439	0.5	21.6
2 1	7 55.79	+28 57.3	2.156	3.109	5.6	20.7	2 1	7 56.92	+20 39.2	2.483	3.447	4.0	21.9
2 11	7 47.02	+29 8.0	2.210	3.109	8.9	20.9	2 11	7 48.90	+20 59.4	2.541	3.454	7.2	22.1
2 21	7 40.22	+29 7.4	2.288	3.110	11.8	21.1	2 21	7 42.47	+21 14.3	2.626	3.461	10.1	22.3
<b>436033</b>	2009 <i>KF</i> <sub>11</sub>		1 20.5 198°83	3°2/18.2	18		<b>217461</b>	2005 <i>UZ</i> <sub>274</sub>		1 20.5 94°36	3°5/22.3	18	
12 13	8 32.50	+29 32.5	2.869	3.645	10.8	21.4	12 13	8 36.41	+ 9 43.8	2.105	2.848	15.2	20.5
12 23	8 28.25	+30 22.1	2.779	3.643	8.5	21.2	12 23	8 31.40	+ 9 24.5	2.033	2.871	12.2	20.4
1 2	8 22.05	+31 12.6	2.715	3.642	6.0	21.0	1 2	8 24.18	+ 9 17.4	1.983	2.894	8.9	20.2
1 12	8 14.40	+31 59.6	2.678	3.640	3.8	20.9	1 12	8 15.37	+ 9 22.2	1.960	2.916	5.5	20.0
1 22	8 5.96	+32 39.0	2.672	3.638	3.4	20.9	1 22	8 5.85	+ 9 37.4	1.965	2.938	3.5	19.9
2 1	7 57.56	+33 7.6	2.696	3.636	5.4	21.0	2 1	7 56.60	+10 0.4	2.000	2.960	5.3	20.1
2 11	7 50.04	+33 24.0	2.749	3.634	7.9	21.2	2 11	7 48.58	+10 27.9	2.064	2.981	8.4	20.3
2 21	7 44.08	+33 28.6	2.828	3.632	10.3	21.3	2 21	7 42.47	+10 57.0	2.154	3.001	11.5	20.6
<b>522496</b>	2016 <i>EB</i> <sub>232</sub>		1 20.5 98°63	11°8/29.9	18		<b>500441</b>	2012 <i>TM</i> <sub>170</sub>		1 20.5 158°02	0°2/20.7	17	
12 13	8 32.06	-15 56.1	2.059	2.673	18.9	21.3	12 13	8 32.44	+18 16.5	2.837	3.596	11.3	22.4
12 23	8 28.34	-16 35.8	1.979	2.682	17.2	21.1	12 23	8 27.98	+18 31.0	2.745	3.601	8.8	22.3
1 2	8 22.32	-16 47.1	1.914	2.691	15.3	21.0	1 2	8 21.75	+18 51.4	2.678	3.606	6.0	22.1
1 12	8 14.58	-16 25.2	1.869	2.699	13.5	20.9	1 12	8 14.23	+19 15.4	2.639	3.611	2.9	21.9
1 22	8 5.94	-15 28.1	1.845	2.708	12.2	20.8	1 22	8 6.05	+19 40.5	2.631	3.615	0.5	21.7
2 1	7 57.39	-13 57.7	1.845	2.716	11.8	20.8	2 1	7 57.95	+20 4.2	2.654	3.619	3.7	22.0
2 11	7 49.97	-12 0.3	1.871	2.724	12.6	20.9	2 11	7 50.69	+20 24.7	2.707	3.622	6.8	22.2
2 21	7 44.43	- 9 45.2	1.921	2.732	14.2	21.0	2 21	7 44.85	+20 40.7	2.787	3.625	9.5	22.3
<b>335847</b>	2007 <i>OJ</i> <sub>10</sub>		1 20.5 152°92	4°2/18.4	16		<b>519096</b>	2010 <i>LD</i> <sub>92</sub>		1 20.5 329°39	3°7/22.1	18	
12 13	8 39.36	+33 49.9	2.599	3.368	11.9	21.6	12 13	8 31.75	+10 24.2	2.052	2.809	15.0	20.9
12 23	8 33.70	+34 17.9	2.517	3.373	9.5	21.5	12 23	8 28.15	+ 9 56.0	1.956	2.803	12.3	20.7
1 2	8 25.74	+34 42.6	2.459	3.378	6.9	21.3	1 2	8 22.25	+ 9 39.2	1.882	2.797	9.0	20.5
1 12	8 16.11	+34 59.3	2.429	3.383	4.7	21.2	1 12	8 14.59	+ 9 34.2	1.833	2.791	5.6	20.3
1 22	8 5.69	+35 4.0	2.429	3.388	4.4	21.2	1 22	8 5.98	+ 9 40.0	1.812	2.786	3.7	20.2
2 1	7 55.50	+34 54.4	2.458	3.392	6.2	21.3	2 1	7 57.39	+ 9 54.9	1.820	2.780	5.6	20.3
2 11	7 46.55	+34 31.0	2.517	3.396	8.8	21.5	2 11	7 49.87	+10 16.0	1.855	2.775	9.0	20.5
2 21	7 39.57	+33 55.9	2.601	3.400	11.2	21.6	2 21	7 44.21	+10 40.2	1.915	2.771	12.3	20.7
<b>363567</b>	2004 <i>AH</i> <sub>8</sub>		1 20.5 27°91	2°4/21.1	18 R		<b>421206</b>	2013 <i>SR</i> <sub>14</sub>		1 20.5 19°12	0°3/20.4	18	
12 13	8 38.87	+18 4.6	1.378	2.172	19.4	19.3	12 13	8 31.78	+19 39.5	1.530	2.332	17.4	20.8
12 23	8 34.20	+17 1.1	1.326	2.199	15.3	19.1	12 23	8 28.88	+19 49.4	1.461	2.341	13.6	20.6
1 2	8 26.38	+16 5.2	1.295	2.227	10.5	18.9	1 2	8 23.04	+20 8.2	1.413	2.351	9.2	20.3
1 12	8 16.41	+15 16.8	1.287	2.257	5.5	18.7	1 12	8 15.01	+20 32.3	1.389	2.363	4.3	20.1
1 22	8 5.66	+14 35.8	1.306	2.287	2.4	18.5	1 22	8 5.92	+20 57.2	1.391	2.375	0.8	19.8
2 1	7 55.63	+14 1.8	1.352	2.319	6.2	18.9	2 1	7 57.13	+21 18.5	1.421	2.388	5.8	20.2
2 11	7 47.63	+13 33.8	1.425	2.351	10.6	19.2	2 11	7 49.95	+21 33.5	1.476	2.402	10.4	20.5
2 21	7 42.44	+13 10.8	1.520	2.384	14.5	19.5	2 21	7 45.28	+21 40.9	1.555	2.418	14.3	20.8
<b>10690</b>	Massera		1 20.5 155°61	0°4/20.8	18		<b>463881</b>	2014 <i>UG</i> <sub>53</sub>		1 20.5 60°78	1°9/21.5	18	
12 13	8 32.79	+18 0.7	2.796	3.555	11.4	19.2	12 13	8 33.02	+13 2.2	1.858	2.629	15.9	21.4
12 23	8 28.24	+18 3.3	2.704	3.559	9.0	19.0	12 23	8 29.33	+13 12.9	1.776	2.634	12.7	21.2
1 2	8 21.91	+18 11.4	2.636	3.564	6.1	18.8	1 2	8 23.13	+13 37.0	1.714	2.640	8.9	21.0
1 12	8 14.28	+18 23.1	2.597	3.568	3.0	18.6	1 12	8 15.02	+14 12.3	1.678	2.646	4.8	20.7
1 22	8 6.00	+18 36.3	2.588	3.571	0.6	18.4	1 22	8 5.91	+14 55.6	1.670	2.652	2.0	20.6
2 1	7 57.82	+18 49.0	2.610	3.575	3.7	18.7	2 1	7 56.93	+15 42.3	1.691	2.658	5.2	20.8
2 11	7 50.49	+18 59.6	2.662	3.578	6.8	18.9	2 11	7 49.20	+16 28.2	1.740	2.664	9.2	21.0
2 21	7 44.62	+19 7.0	2.741	3.581	9.6	19.1	2 21	7 43.57	+17 9.7	1.813	2.670	12.9	21.3
<b>65273</b>	2002 <i>GN</i> <sub>45</sub>		1 20.5 168°65	1°8/19.3	18		<b>328024</b>	2007 <i>JS</i> <sub>18</sub>		1 20.5 118°23	4°3/17.6	18	
12 13	8 32.07	+25 27.5	2.917	3.									

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1 20.6

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>128868</b>	2004 SQ <sub>33</sub>		1 20.5 133°70	4.7/18.3	18		<b>345545</b>	2006 QC <sub>147</sub>		1 20.6 317°92	3.8/18.8	18	
12 13	8 41.50	+29 21.4	1.789	2.575	15.9	20.3	12 13	8 35.82	+30 33.1	2.232	3.015	13.2	20.9
12 23	8 36.40	+30 25.2	1.717	2.586	12.6	20.1	12 23	8 31.41	+31 0.3	2.142	3.009	10.5	20.7
1 2	8 28.14	+31 31.1	1.667	2.597	8.9	19.9	1 2	8 24.49	+31 26.9	2.075	3.004	7.4	20.5
1 12	8 17.44	+32 31.0	1.644	2.607	5.6	19.7	1 12	8 15.68	+31 47.8	2.035	2.999	4.6	20.3
1 22	8 5.51	+33 17.2	1.649	2.616	5.0	19.7	1 22	8 5.87	+31 58.4	2.024	2.993	4.0	20.3
2 1	7 53.83	+33 44.6	1.683	2.625	7.9	19.9	2 1	7 56.20	+31 55.9	2.042	2.988	6.4	20.4
2 11	7 43.87	+33 52.1	1.744	2.634	11.4	20.1	2 11	7 47.78	+31 39.7	2.088	2.984	9.5	20.6
2 21	7 36.65	+33 42.1	1.827	2.642	14.7	20.3	2 21	7 41.46	+31 11.6	2.159	2.979	12.5	20.8
<b>285534</b>	2000 GK <sub>36</sub>		1 20.5 231°92	1.7/21.4	16		<b>371987</b>	2008 GM <sub>104</sub>		1 20.6 261°53	2.8/21.9	16	
12 13	8 35.08	+13 41.4	2.268	3.022	13.9	22.4	12 13	8 33.23	+10 56.2	1.983	2.742	15.5	22.0
12 23	8 30.64	+13 46.5	2.160	3.010	11.2	22.2	12 23	8 29.54	+10 58.8	1.880	2.730	12.6	21.8
1 2	8 23.92	+14 1.9	2.075	2.997	7.9	21.9	1 2	8 23.37	+11 15.3	1.798	2.717	9.1	21.6
1 12	8 15.41	+14 26.3	2.017	2.983	4.2	21.7	1 12	8 15.24	+11 45.1	1.741	2.704	5.3	21.3
1 22	8 5.85	+14 57.2	1.988	2.969	1.7	21.5	1 22	8 5.95	+12 25.6	1.713	2.691	2.8	21.1
2 1	7 56.21	+15 31.4	1.990	2.955	4.7	21.7	2 1	7 56.56	+13 13.2	1.714	2.678	5.4	21.2
2 11	7 47.52	+16 5.6	2.021	2.939	8.5	21.9	2 11	7 48.23	+14 3.4	1.742	2.665	9.3	21.5
2 21	7 40.62	+16 37.3	2.078	2.924	11.9	22.0	2 21	7 41.87	+14 52.2	1.796	2.651	13.1	21.7
<b>305759</b>	2009 DC <sub>16</sub>		1 20.5 26°93	2.0/19.7	18		<b>55362</b>	2001 SM <sub>178</sub>		1 20.6 245°38	7.6/24.6	18	
12 13	8 34.02	+21 23.9	1.254	2.069	19.7	20.4	12 13	8 32.20	- 1 40.6	2.088	2.790	16.4	19.2
12 23	8 31.40	+22 6.0	1.189	2.077	15.5	20.1	12 23	8 28.51	- 2 17.5	1.988	2.782	14.2	19.0
1 2	8 25.18	+22 59.3	1.144	2.086	10.4	19.9	1 2	8 22.55	- 2 35.4	1.907	2.773	11.6	18.8
1 12	8 16.16	+23 57.1	1.121	2.096	5.0	19.6	1 12	8 14.81	- 2 31.2	1.850	2.764	9.2	18.7
1 22	8 5.73	+24 51.1	1.124	2.106	2.5	19.4	1 22	8 6.03	- 2 4.0	1.818	2.755	7.7	18.5
2 1	7 55.62	+25 34.0	1.153	2.117	7.4	19.8	2 1	7 57.19	- 1 15.4	1.814	2.746	8.2	18.6
2 11	7 47.55	+26 1.9	1.206	2.129	12.5	20.1	2 11	7 49.31	- 0 9.9	1.837	2.737	10.4	18.7
2 21	7 42.60	+26 14.5	1.280	2.142	16.8	20.4	2 21	7 43.24	+ 1 6.3	1.885	2.727	13.1	18.8
<b>77649</b>	2001 KZ <sub>69</sub>		1 20.6 137°24	0.2/20.4	18		<b>379063</b>	2008 WY <sub>79</sub>		1 20.6 261°32	3.3/22.4	18	
12 13	8 33.05	+18 1.4	2.903	3.659	11.1	20.5	12 13	8 31.53	+ 9 19.7	2.267	3.014	14.1	21.5
12 23	8 28.40	+18 42.4	2.818	3.672	8.7	20.4	12 23	8 27.74	+ 9 9.6	2.172	3.012	11.5	21.3
1 2	8 22.02	+19 30.1	2.757	3.685	5.8	20.2	1 2	8 21.87	+ 9 11.8	2.099	3.010	8.4	21.1
1 12	8 14.37	+20 21.7	2.726	3.698	2.7	20.0	1 12	8 14.42	+ 9 25.9	2.051	3.008	5.2	20.9
1 22	8 6.07	+21 13.7	2.726	3.709	0.6	19.8	1 22	8 6.12	+ 9 50.7	2.033	3.006	3.3	20.8
2 1	7 57.84	+22 2.8	2.758	3.721	3.7	20.1	2 1	7 57.85	+10 23.5	2.043	3.004	5.0	20.9
2 11	7 50.43	+22 46.2	2.820	3.731	6.7	20.3	2 11	7 50.54	+11 0.9	2.083	3.002	8.2	21.1
2 21	7 44.42	+23 22.6	2.911	3.742	9.3	20.5	2 21	7 44.91	+11 39.6	2.148	3.000	11.3	21.2
<b>5298</b>	Paraskevopoulos		1 20.6 82°99	0.8/20.1	18		<b>416954</b>	2005 SD <sub>197</sub>		1 20.6 111°37	2.3/21.8	18	
12 13	8 35.22	+20 43.2	2.211	2.985	13.6	18.1	12 13	8 34.10	+12 12.7	1.960	2.722	15.5	22.1
12 23	8 30.54	+21 9.2	2.142	3.006	10.6	17.9	12 23	8 30.04	+12 17.7	1.876	2.729	12.4	21.9
1 2	8 23.65	+21 41.1	2.095	3.027	7.1	17.7	1 2	8 23.56	+12 35.5	1.814	2.735	8.8	21.7
1 12	8 15.16	+22 15.2	2.076	3.049	3.3	17.5	1 12	8 15.26	+13 4.6	1.777	2.742	4.9	21.5
1 22	8 5.94	+22 47.6	2.086	3.069	1.1	17.4	1 22	8 6.00	+13 42.2	1.769	2.749	2.3	21.3
2 1	7 56.97	+23 14.9	2.127	3.090	4.7	17.7	2 1	7 56.87	+14 24.3	1.790	2.755	5.1	21.5
2 11	7 49.22	+23 35.0	2.197	3.110	8.2	17.9	2 11	7 48.95	+15 6.8	1.839	2.762	8.9	21.7
2 21	7 43.37	+23 47.4	2.292	3.130	11.2	18.2	2 21	7 43.04	+15 46.6	1.914	2.768	12.4	22.0
<b>147599</b>	2004 GU <sub>26</sub>		1 20.6 272°69	4.9/17.5	18		<b>118713</b>	2000 QY <sub>22</sub>		1 20.6 189°53	5.0/23.6	18	
12 13	8 35.74	+28 5.7	1.859	2.652	15.1	19.5	12 13	8 32.47	+ 3 33.9	2.175	2.899	15.3	20.3
12 23	8 32.12	+29 34.9	1.767	2.641	12.0	19.3	12 23	8 28.57	+ 3 30.2	2.079	2.898	12.7	20.2
1 2	8 25.49	+31 10.8	1.699	2.631	8.5	19.0	1 2	8 22.50	+ 3 43.8	2.005	2.898	9.8	20.0
1 12	8 16.35	+32 45.3	1.658	2.620	5.5	18.8	1 12	8 14.76	+ 4 15.3	1.955	2.897	6.8	19.8
1 22	8 5.70	+34 9.2	1.644	2.609	5.4	18.8	1 22	8 6.09	+ 5 3.4	1.933	2.895	5.0	19.7
2 1	7 54.88	+35 14.7	1.660	2.598	8.3	18.9	2 1	7 57.43	+ 6 4.8	1.941	2.894	6.1	19.7
2 11	7 45.39	+35 58.1	1.702	2.587	11.9	19.1	2 11	7 49.75	+ 7 14.5	1.977	2.892	8.9	19.9
2 21	7 38.40	+36 19.9	1.766	2.576	15.3	19.3	2 21	7 43.81	+ 8 27.2	2.039	2.889	11.9	20.1
<b>256646</b>	2007 WJ <sub>4</sub>		1 20.6 190°43	1.7/21.4	18		<b>238355</b>	2004 BF <sub>162</sub>		1 20.6 263°50	4.5/17.2	18	
12 13	8 37.41	+14 15.2	2.210	2.962	14.3	22.0	12 13	8 34.27	+30 33.2	2.472	3.252	12.1	20.2
12 23	8 32.42	+14 16.6	2.112	2.961	11.4	21.8	12 23	8 30.22	+31 51.0	2.374	3.240	9.7	20.0
1 2	8 25.08	+14 27.7	2.037	2.959	8.0	21.6	1 2	8 23.79	+33 11.5	2.302	3.227	7.0	19.8
1 12	8 15.94	+14 46.9	1.990	2.956	4.2	21.3	1 12	8 15.45	+34 28.5	2.257	3.214	4.9	19.6
1 22	8 5.81	+15 11.8	1.972	2.953	1.7	21.1	1 22	8 5.97	+35 35.6	2.243	3.201	4.8	19.6
2 1	7 55.71	+15 39.2	1.984	2.949	4.7	21.3	2 1	7 56.36	+36 27.7	2.258	3.188	7.0	19.7
2 11	7 46.70	+16 6.3	2.026	2.944	8.5	21.6	2 11	7 47.72	+37 2.2	2.301	3.175	9.7	19.9
2 21	7 39.59	+16 30.8	2.095	2.938	11.9	21.8	2 21	7 40.94	+37 19.6	2.368	3.161	12.4	20.0
<b>311046</b>	2004 BF <sub>114</sub>		1 20.6 36°70	13.9/30.4	18		<b>306332</b>	2011 SF <sub>117</sub>		1 20.6 57°43	0.3/20.5	18	
12 13	8 31.88	-14 13.9	1.057	1.765	29.0	20.1	12 13	8 38.55	+19 43.7	1.392	2.189	19.0	21.5
12 23	8 30.14	-14 11.7	0.989	1.772	26.0	19.9	12 23	8 34.35	+19 53.5	1.332	2.209	14.9	21.3
1 2	8 24.63	-13 16.1	0.932	1.780	22.3	19.7	1 2	8 26.82	+20 12.9	1.292	2.229	10.1	21.0
1 12	8 16.07	-11 17.3	0.891	1.788	18.4	19.5	1 12	8 16.85	+20 37.3	1.275	2.249	4.7	20.8
1 22	8 5.78	- 8 14.3	0.868	1.797	15.0	19.3	1 22	8 5.78	+21 1.4	1.285	2.269	0.9	20.6
2 1	7 55.61	- 4 17.9	0.869	1.806	13.9	19.3	2 1	7 55.21	+21 20.8	1.323	2.290	6.2	21.0
2 11	7 47.46	+ 0 7.8	0.895	1.816	15.9	19.4	2 11	7 46.61	+21 32.8	1.386	2.310	11.1	21.3
2 21	7 42.65	+ 4 35.4	0.944	1.827	19.5	19.7	2 21	7 40.93	+21 36.9	1.472	2.331	15.2	21.6
<b>215986</b>	2005 SR <sub>48</sub>		1 20.6 140°19	1.1/21.1	18		<b>456436</b>	2006 VZ <sub>35</sub>		1 20.6 71°36	1.6/19.9	18	
12 13	8 35.42	+15 44.0	2.126	2.889	14.4	20.7	12 13	8 38.68	+22 0.5	1.6			

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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>212616</b>	2006 <i>SF</i> <sub>396</sub>		1 20.6 346°79	3°5/22.6	18		<b>63570</b>	2001 <i>QN</i> <sub>22</sub>		1 20.6 111°86	3°2/19.2	18	
12 13	8 30.10	+ 8 31.3	2.280	3.027	14.0	20.7	12 13	8 39.79	+27 48.5	1.965	2.746	14.8	19.2
12 23	8 26.63	+ 8 24.0	2.186	3.025	11.5	20.5	12 23	8 34.66	+28 16.6	1.889	2.757	11.6	19.0
1 2	8 21.13	+ 8 29.6	2.113	3.023	8.5	20.3	1 2	8 26.76	+28 45.8	1.837	2.768	8.0	18.8
1 12	8 14.10	+ 8 48.0	2.067	3.022	5.4	20.1	1 12	8 16.82	+29 10.8	1.811	2.778	4.5	18.6
1 22	8 6.24	+ 9 17.6	2.048	3.020	3.5	20.0	1 22	8 5.89	+29 26.5	1.814	2.789	3.4	18.6
2 1	7 58.42	+ 9 55.8	2.059	3.019	5.0	20.1	2 1	7 55.25	+29 29.6	1.846	2.798	6.3	18.8
2 11	7 51.52	+10 39.0	2.098	3.018	8.1	20.3	2 11	7 46.14	+29 19.8	1.906	2.808	9.9	19.0
2 21	7 46.25	+11 23.4	2.163	3.018	11.2	20.5	2 21	7 39.42	+28 58.6	1.906	2.817	13.1	19.2
<b>73319</b>	2002 <i>JK</i> <sub>89</sub>		1 20.6 271°97	2°6/21.6	18		<b>173900</b>	2001 <i>UG</i> <sub>149</sub>		1 20.6 76°20	0°5/20.3	18	
12 13	8 35.84	+13 40.2	1.648	2.423	17.5	20.1	12 13	8 33.51	+19 59.9	2.352	3.124	13.0	20.5
12 23	8 32.00	+13 24.2	1.559	2.420	14.1	19.9	12 23	8 29.15	+20 23.6	2.279	3.142	10.1	20.3
1 2	8 25.25	+13 20.4	1.490	2.416	10.0	19.6	1 2	8 22.73	+20 53.3	2.229	3.161	6.8	20.1
1 12	8 16.20	+13 28.0	1.446	2.413	5.5	19.4	1 12	8 14.83	+21 25.8	2.207	3.179	3.2	19.9
1 22	8 5.89	+13 44.7	1.429	2.409	2.6	19.2	1 22	8 6.22	+21 57.6	2.214	3.197	0.8	19.8
2 1	7 55.63	+14 7.2	1.440	2.406	5.9	19.4	2 1	7 57.82	+22 25.5	2.252	3.216	4.4	20.1
2 11	7 46.80	+14 31.8	1.478	2.403	10.5	19.6	2 11	7 50.51	+22 47.5	2.319	3.234	7.7	20.3
2 21	7 40.42	+14 55.4	1.539	2.399	14.6	19.9	2 21	7 44.94	+23 2.5	2.412	3.252	10.7	20.5
<b>186586</b>	2003 <i>AK</i> <sub>78</sub>		1 20.6 323°94	8°2/16.4	18		<b>198932</b>	2005 <i>UX</i> <sub>243</sub>		1 20.6 116°18	0°9/20.9	18	
12 13	8 37.58	+36 31.0	1.635	2.435	16.5	19.4	12 13	8 41.29	+17 7.9	1.670	2.443	17.4	21.2
12 23	8 34.27	+37 57.6	1.556	2.426	13.6	19.2	12 23	8 36.01	+17 7.4	1.598	2.459	13.7	21.0
1 2	8 27.30	+39 22.6	1.499	2.417	10.6	19.0	1 2	8 27.76	+17 16.6	1.546	2.475	9.4	20.7
1 12	8 17.35	+40 35.2	1.466	2.409	8.5	18.8	1 12	8 17.31	+17 32.7	1.520	2.491	4.6	20.5
1 22	8 5.69	+41 25.4	1.459	2.401	8.7	18.8	1 22	8 5.81	+17 51.9	1.523	2.506	1.1	20.3
2 1	7 54.07	+41 46.5	1.477	2.394	11.0	18.9	2 1	7 54.65	+18 10.6	1.554	2.520	5.6	20.6
2 11	7 44.33	+41 38.1	1.519	2.387	14.2	19.1	2 11	7 45.17	+18 26.0	1.614	2.534	10.1	20.9
2 21	7 37.76	+41 4.6	1.581	2.380	17.3	19.3	2 21	7 38.27	+18 36.7	1.697	2.547	13.9	21.2
<b>271877</b>	2004 <i>TE</i> <sub>354</sub>		1 20.6 246°74	4°4/17.9	18		<b>82579</b>	2001 <i>OV</i> <sub>86</sub>		1 20.6 270°95	8°6/23.9	18	
12 13	8 35.91	+29 59.5	2.159	2.943	13.5	21.0	12 13	8 33.61	- 0 52.6	1.919	2.630	17.4	19.3
12 23	8 31.73	+31 0.7	2.069	2.937	10.8	20.8	12 23	8 29.92	- 1 58.4	1.817	2.616	15.1	19.1
1 2	8 24.91	+32 4.0	2.003	2.931	7.7	20.6	1 2	8 23.72	- 2 46.9	1.735	2.603	12.5	18.9
1 12	8 16.00	+33 2.9	1.964	2.925	5.0	20.4	1 12	8 15.50	- 3 13.7	1.676	2.589	10.0	18.7
1 22	8 5.93	+33 51.1	1.954	2.918	4.7	20.4	1 22	8 6.08	- 3 16.3	1.642	2.575	8.7	18.6
2 1	7 55.86	+34 23.6	1.972	2.911	7.1	20.5	2 1	7 56.54	- 2 54.7	1.634	2.562	9.3	18.6
2 11	7 47.01	+34 38.8	2.019	2.905	10.3	20.7	2 11	7 48.03	- 2 12.5	1.652	2.548	11.6	18.7
2 21	7 40.34	+34 37.5	2.088	2.898	13.3	20.9	2 21	7 41.52	- 1 15.3	1.694	2.534	14.5	18.9
<b>117226</b>	2004 <i>RZ</i> <sub>325</sub>		1 20.6 75°10	7°3/23.1	18		<b>340606</b>	2006 <i>QG</i> <sub>52</sub>		1 20.6 161°38	0°4/20.3	17	
12 13	8 38.76	+ 5 5.7	1.528	2.275	19.8	19.7	12 13	8 32.76	+19 59.9	2.962	3.722	10.8	22.2
12 23	8 34.10	+ 3 54.3	1.461	2.293	16.5	19.5	12 23	8 28.23	+20 22.9	2.871	3.728	8.5	22.0
1 2	8 26.48	+ 3 0.8	1.413	2.310	12.8	19.3	1 2	8 21.97	+20 50.8	2.804	3.733	5.7	21.9
1 12	8 16.68	+ 2 28.3	1.388	2.328	9.2	19.2	1 12	8 14.45	+21 21.2	2.766	3.737	2.7	21.7
1 22	8 5.85	+ 2 18.1	1.389	2.346	7.3	19.1	1 22	8 6.28	+21 51.2	2.758	3.742	0.7	21.5
2 1	7 55.36	+ 2 28.6	1.417	2.363	8.6	19.2	2 1	7 58.18	+22 18.2	2.783	3.745	3.7	21.7
2 11	7 46.55	+ 2 55.3	1.470	2.381	11.6	19.4	2 11	7 50.88	+22 40.5	2.837	3.749	6.6	21.9
2 21	7 40.30	+ 3 32.2	1.546	2.398	15.0	19.7	2 21	7 44.96	+22 57.0	2.919	3.752	9.2	22.1
<b>329815</b>	2004 <i>RM</i> <sub>124</sub>		1 20.6 107°18	1°6/21.4	18		<b>128048</b>	2003 <i>MG</i> <sub>3</sub>		1 20.6 208°40	0°9/20.9	18	
12 13	8 34.38	+14 3.5	2.092	2.854	14.6	22.1	12 13	8 39.40	+17 11.1	2.099	2.859	14.7	20.9
12 23	8 30.08	+14 8.9	2.010	2.864	11.7	21.9	12 23	8 34.23	+17 9.7	1.998	2.853	11.7	20.7
1 2	8 23.50	+14 24.8	1.950	2.874	8.1	21.7	1 2	8 26.50	+17 16.0	1.919	2.845	8.1	20.5
1 12	8 15.23	+14 49.5	1.917	2.884	4.3	21.5	1 12	8 16.77	+17 28.1	1.867	2.837	4.0	20.2
1 22	8 6.09	+15 20.0	1.912	2.894	1.7	21.3	1 22	8 5.90	+17 43.0	1.845	2.829	1.0	19.9
2 1	7 57.11	+15 53.1	1.937	2.903	4.7	21.6	2 1	7 55.04	+17 58.0	1.854	2.819	5.0	20.2
2 11	7 49.29	+16 25.3	1.991	2.912	8.4	21.8	2 11	7 45.34	+18 10.5	1.892	2.809	9.1	20.4
2 21	7 43.37	+16 54.3	2.071	2.922	11.8	22.0	2 21	7 37.72	+18 19.3	1.955	2.798	12.7	20.6
<b>57838</b>	2001 <i>XF</i> <sub>49</sub>		1 20.6 335°09	0°2/20.5	18		<b>492616</b>	2014 <i>ON</i> <sub>231</sub>		1 20.6 189°62	0°3/20.5	18	
12 13	8 29.37	+19 20.7	1.781	2.577	15.5	19.0	12 13	8 38.41	+19 48.7	2.083	2.851	14.5	22.1
12 23	8 26.96	+19 33.8	1.680	2.557	12.3	18.7	12 23	8 33.45	+20 1.7	1.989	2.851	11.5	21.9
1 2	8 21.89	+19 55.8	1.600	2.538	8.5	18.4	1 2	8 25.95	+20 21.5	1.919	2.849	7.8	21.6
1 12	8 14.67	+20 24.1	1.546	2.519	4.0	18.1	1 12	8 16.49	+20 45.0	1.875	2.847	3.7	21.4
1 22	8 6.18	+20 54.4	1.518	2.502	0.8	17.8	1 22	8 5.96	+21 8.3	1.861	2.845	0.7	21.1
2 1	7 57.60	+21 22.7	1.518	2.485	5.5	18.1	2 1	7 55.51	+21 28.1	1.877	2.842	5.0	21.5
2 11	7 50.23	+21 45.3	1.545	2.470	10.1	18.4	2 11	7 46.28	+21 42.0	1.922	2.838	9.0	21.7
2 21	7 45.04	+22 0.3	1.595	2.455	14.1	18.6	2 21	7 39.15	+21 49.2	1.993	2.834	12.6	21.9
<b>100022</b>	1990 <i>SG</i> <sub>5</sub>		1 20.6 85°38	0°7/20.9	18		<b>143849</b>	2003 <i>YG</i> <sub>6</sub>		1 20.6 136°03	3°4/19.4	18	
12 13	8 41.24	+16 2.2	1.355	2.141	20.0	19.7	12 13	8 43.76	+26 24.0	1.489	2.282	18.2	20.2
12 23	8 36.50	+16 26.7	1.296	2.165	15.8	19.5	12 23	8 38.70	+26 55.0	1.416	2.290	14.4	20.0
1 2	8 28.33	+17 5.8	1.257	2.190	10.7	19.3	1 2	8 30.01	+27 29.8	1.363	2.298	9.9	19.7
1 12	8 17.62	+17 54.9	1.241	2.213	5.2	19.0	1 12	8 18.53	+28 1.2	1.335	2.305	5.3	19.5
1 22	8 5.76	+18 47.2	1.253	2.237	0.9	18.8	1 22	8 5.64	+28 22.1	1.334	2.312	3.7	19.4
2 1	7 54.40	+19 36.4	1.292	2.259	6.3	19.2	2 1	7 53.11	+28 27.8	1.361	2.318	7.6	19.6
2 11	7 45.09	+20 17.7	1.358	2.282	11.3	19.6	2 11	7 42.63	+28 17.6	1.415	2.324	12.1	19.9
2 21	7 38.81	+20 49.0	1.446	2.303	15.5	19.9	2 21	7 35.33	+27 54.2	1.490	2.330	16.1	20.2
<b>77903</b>	2001 <i>TQ</i> <sub>142</sub>		1 20.6 302°06	2°1/18.9	18		<b>425984</b>	2011 <i>HF</i> <sub>77</sub>		1 20.6 243°18	0°3/20.4	18	
12 13	8 29.8												

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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>110165</b>	2001 <i>SD</i> <sub>166</sub>		1 20.6	4°18	0°9/20.3	18	<b>447082</b>	2004 <i>TX</i> <sub>40</sub>		1 20.6	80°19	5°2/18.7	18
12 13	8 32.48	+20 32.1	1.398	2.207	18.4	19.0	12 13	8 41.96	+30 8.7	1.499	2.297	17.9	21.1
12 23	8 29.95	+20 48.1	1.322	2.206	14.5	18.7	12 23	8 37.30	+30 59.6	1.435	2.310	14.2	20.9
1 2	8 24.15	+21 13.7	1.266	2.206	9.9	18.5	1 2	8 29.05	+31 51.2	1.391	2.323	10.0	20.7
1 12	8 15.80	+21 44.6	1.233	2.208	4.7	18.2	1 12	8 18.07	+32 34.8	1.373	2.336	6.3	20.5
1 22	8 6.09	+22 15.3	1.227	2.210	1.3	17.9	1 22	8 5.78	+33 2.3	1.381	2.349	5.5	20.5
2 1	7 56.57	+22 40.4	1.246	2.213	6.5	18.3	2 1	7 53.95	+33 9.2	1.416	2.362	8.6	20.7
2 11	7 48.79	+22 56.6	1.291	2.217	11.5	18.6	2 11	7 44.23	+32 55.5	1.476	2.375	12.5	21.0
2 21	7 43.80	+23 3.0	1.357	2.223	15.8	18.9	2 21	7 37.67	+32 25.3	1.559	2.388	16.0	21.2
<b>502974</b>	2015 <i>FA</i> <sub>44</sub>		1 20.6	322°16	8°7/26.7	18	<b>193823</b>	2001 <i>QL</i> <sub>26</sub>		1 20.6	127°02	0°1/20.6	18
12 13	8 28.49	- 9 0.2	2.551	3.202	14.9	21.1	12 13	8 39.79	+17 30.6	1.791	2.562	16.4	20.9
12 23	8 25.22	- 9 43.3	2.455	3.196	13.2	20.9	12 23	8 34.78	+18 3.9	1.716	2.578	12.9	20.7
1 2	8 20.13	-10 7.1	2.377	3.192	11.5	20.8	1 2	8 26.94	+18 48.2	1.662	2.593	8.8	20.5
1 12	8 13.67	-10 8.5	2.321	3.187	9.8	20.7	1 12	8 16.98	+19 39.2	1.636	2.608	4.1	20.2
1 22	8 6.45	- 9 46.1	2.290	3.182	8.8	20.6	1 22	8 5.96	+20 31.2	1.638	2.621	0.7	20.0
2 1	7 59.22	- 9 0.7	2.285	3.178	8.9	20.6	2 1	7 55.16	+21 19.1	1.670	2.635	5.4	20.4
2 11	7 52.76	- 7 55.8	2.306	3.174	10.0	20.7	2 11	7 45.87	+21 58.9	1.730	2.647	9.8	20.6
2 21	7 47.73	- 6 36.7	2.351	3.169	11.7	20.8	2 21	7 38.98	+22 29.1	1.815	2.659	13.5	20.9
<b>232669</b>	2003 <i>XV</i> <sub>12</sub>		1 20.6	14°98	6°3/17.9	18	<b>465795</b>	2010 <i>CW</i> <sub>34</sub>		1 20.6	287°88	0°8/21.1	17
12 13	8 38.51	+35 56.9	1.888	2.676	15.1	19.9	12 13	8 31.42	+14 43.9	2.238	3.004	13.7	21.1
12 23	8 34.12	+36 39.3	1.814	2.679	12.2	19.7	12 23	8 27.84	+15 16.8	2.142	3.001	10.9	20.9
1 2	8 26.64	+37 17.1	1.763	2.682	9.2	19.5	1 2	8 22.10	+16 1.2	2.070	2.997	7.5	20.7
1 12	8 16.85	+37 42.9	1.736	2.686	6.8	19.4	1 12	8 14.68	+16 54.6	2.024	2.994	3.8	20.5
1 22	8 5.94	+37 50.7	1.737	2.690	6.5	19.3	1 22	8 6.33	+17 53.1	2.007	2.991	0.9	20.2
2 1	7 55.36	+37 37.3	1.765	2.695	8.6	19.5	2 1	7 57.97	+18 52.1	2.021	2.988	4.5	20.5
2 11	7 46.49	+37 3.8	1.819	2.700	11.5	19.7	2 11	7 50.56	+19 47.4	2.064	2.984	8.2	20.7
2 21	7 40.29	+36 14.0	1.896	2.705	14.4	19.9	2 21	7 44.89	+20 36.1	2.132	2.981	11.5	20.9
<b>462251</b>	2008 <i>CU</i> <sub>189</sub>		1 20.6	295°63	8°2/23.9	17	<b>355852</b>	2008 <i>UB</i> <sub>157</sub>		1 20.6	25°40	1°6/20.0	18
12 13	8 31.81	+ 0 41.0	1.760	2.490	18.2	21.2	12 13	8 34.54	+21 10.6	1.168	1.987	20.6	20.6
12 23	8 28.87	- 0 7.5	1.652	2.467	15.7	21.0	12 23	8 32.08	+21 39.4	1.105	1.995	16.2	20.4
1 2	8 23.25	- 0 36.9	1.562	2.444	12.8	20.8	1 2	8 25.84	+22 19.3	1.061	2.004	11.0	20.1
1 12	8 15.41	- 0 43.1	1.494	2.421	9.9	20.5	1 12	8 16.66	+23 4.2	1.040	2.014	5.2	19.8
1 22	8 6.15	- 0 24.0	1.451	2.398	8.2	20.4	1 22	8 6.01	+23 46.3	1.042	2.025	2.1	19.7
2 1	7 56.64	+ 0 19.7	1.435	2.376	9.1	20.4	2 1	7 55.75	+24 18.8	1.070	2.037	7.4	20.0
2 11	7 48.16	+ 0 23.2	1.443	2.353	11.9	20.5	2 11	7 47.65	+24 38.0	1.122	2.050	12.8	20.4
2 21	7 41.81	+ 2 39.7	1.475	2.331	15.4	20.6	2 21	7 42.85	+24 43.8	1.195	2.063	17.3	20.7
<b>153891</b>	2001 <i>XZ</i> <sub>193</sub>		1 20.6	11°15	0°7/20.2	18	<b>155943</b>	2001 <i>QR</i> <sub>55</sub>		1 20.6	80°39	0°1/20.7	18
12 13	8 33.07	+18 57.9	1.742	2.532	16.1	19.9	12 13	8 37.77	+16 15.0	1.441	2.229	18.9	20.0
12 23	8 29.78	+19 34.9	1.659	2.532	12.7	19.7	12 23	8 33.79	+16 55.5	1.375	2.247	14.9	19.8
1 2	8 23.73	+20 22.8	1.598	2.534	8.6	19.4	1 2	8 26.57	+17 51.1	1.329	2.264	10.1	19.5
1 12	8 15.53	+21 17.1	1.562	2.535	4.0	19.2	1 12	8 16.89	+18 56.7	1.308	2.281	4.8	19.3
1 22	8 6.16	+22 12.3	1.554	2.537	1.1	18.9	1 22	8 5.99	+20 5.0	1.314	2.298	0.8	19.0
2 1	7 56.88	+23 2.6	1.574	2.539	5.7	19.3	2 1	7 55.40	+21 8.7	1.347	2.314	6.1	19.4
2 11	7 48.95	+23 43.7	1.621	2.541	10.1	19.5	2 11	7 46.62	+22 2.4	1.408	2.331	11.0	19.8
2 21	7 43.34	+24 13.9	1.692	2.544	13.9	19.8	2 21	7 40.65	+22 43.7	1.491	2.347	15.2	20.1
<b>19884</b>	4125 <i>T</i> <sub>-1</sub>		1 20.6	142°23	1°3/20.1	18	<b>244905</b>	2003 <i>WJ</i> <sub>120</sub>		1 20.6	115°36	0°3/20.5	18
12 13	8 41.49	+20 50.1	1.537	2.323	18.0	19.2	12 13	8 39.06	+20 13.4	1.825	2.602	15.9	20.1
12 23	8 36.71	+21 21.5	1.461	2.332	14.2	19.0	12 23	8 34.16	+20 20.7	1.747	2.613	12.5	19.9
1 2	8 28.59	+22 2.5	1.406	2.341	9.6	18.7	1 2	8 26.50	+20 34.9	1.692	2.624	8.5	19.7
1 12	8 17.87	+22 47.4	1.375	2.348	4.6	18.4	1 12	8 16.77	+20 52.3	1.662	2.635	4.0	19.5
1 22	8 5.79	+23 29.7	1.373	2.356	1.7	18.3	1 22	8 6.02	+21 9.2	1.661	2.645	0.8	19.2
2 1	7 53.94	+24 3.5	1.399	2.362	6.5	18.6	2 1	7 55.54	+21 22.1	1.690	2.655	5.4	19.6
2 11	7 43.90	+24 25.8	1.451	2.368	11.3	18.9	2 11	7 46.55	+21 29.0	1.746	2.664	9.6	19.9
2 21	7 36.76	+24 36.3	1.527	2.374	15.4	19.1	2 21	7 39.94	+21 29.5	1.827	2.674	13.3	20.1
<b>117425</b>	2005 <i>AK</i> <sub>20</sub>		1 20.6	309°39	1°3/19.9	18	<b>381681</b>	2009 <i>BF</i> <sub>112</sub>		1 20.6	325°73	0°0/20.6	18
12 13	8 33.80	+21 52.9	2.097	2.879	14.0	19.8	12 13	8 34.15	+20 11.3	2.215	2.990	13.6	20.6
12 23	8 29.90	+22 20.0	2.007	2.877	11.0	19.6	12 23	8 29.96	+20 5.7	2.121	2.985	10.7	20.4
1 2	8 23.57	+22 53.3	1.940	2.874	7.4	19.4	1 2	8 23.51	+20 4.9	2.050	2.981	7.3	20.2
1 12	8 15.38	+23 28.9	1.900	2.872	3.6	19.1	1 12	8 15.33	+20 7.0	2.005	2.977	3.5	19.9
1 22	8 6.19	+24 2.5	1.888	2.870	1.5	19.0	1 22	8 6.25	+20 9.3	1.990	2.973	0.6	19.7
2 1	7 57.06	+24 30.1	1.906	2.868	5.2	19.2	2 1	7 57.27	+20 9.6	2.004	2.970	4.6	20.0
2 11	7 49.09	+24 49.4	1.952	2.866	9.0	19.4	2 11	7 49.38	+20 6.6	2.047	2.966	8.4	20.2
2 21	7 43.11	+24 59.5	2.023	2.864	12.4	19.7	2 21	7 43.36	+19 59.7	2.116	2.963	11.7	20.4
<b>236945</b>	2007 <i>TE</i> <sub>353</sub>		1 20.6	74°51	6°8/24.9	18	<b>363236</b>	2001 <i>XQ</i> <sub>262</sub>		1 20.6	103°24	4°3/22.8	18
12 13	8 30.38	- 1 37.5	2.349	3.046	14.9	20.4	12 13	8 36.92	+ 7 8.5	2.186	2.915	15.1	21.8
12 23	8 26.76	- 2 8.7	2.260	3.050	12.8	20.2	12 23	8 31.79	+ 6 44.3	2.113	2.939	12.3	21.6
1 2	8 21.20	- 2 22.4	2.191	3.054	10.4	20.1	1 2	8 24.52	+ 6 33.6	2.062	2.962	9.2	21.4
1 12	8 14.18	- 2 16.6	2.145	3.058	8.2	20.0	1 12	8 15.72	+ 6 36.4	2.037	2.985	6.1	21.3
1 22	8 6.40	- 1 51.1	2.127	3.062	6.9	19.9	1 22	8 6.21	+ 6 51.8	2.040	3.007	4.3	21.2
2 1	7 58.66	- 1 7.7	2.136	3.066	7.3	19.9	2 1	7 56.95	+ 7 17.2	2.074	3.028	5.6	21.3
2 11	7 51.83	- 0 10.5	2.172	3.070	9.1	20.0	2 11	7 48.86	+ 7 49.3	2.136	3.049	8.4	21.5
2 21	7 46.55	+ 0 55.6	2.234	3.074	11.4	20.2	2 21	7 42.61	+ 8 24.6	2.224	3.069	11.3	21.8
<b>414278</b>	2008 <i>JW</i> <sub>35</sub>		1 20.6	82°53	3°4/18.9	18	<b>251341</b>	2007 <i>OO</i> <sub>9</sub>		1 20.6	171°70	14°6/29.4	18
12 13	8 36.54	+26											

EPHEMERIDES

1 20.6

1 20.6

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>379953</b>	2012 <i>PC</i> <sub>18</sub>		1 20.6 242°03	2°8/19.2	18		<b>347144</b>	2010 <i>OR</i> <sub>98</sub>		1 20.6 182°26	2°8/22.4	17	
12 13	8 36.55	+28 2.1	2.288	3.067	13.1	20.7	12 13	8 31.37	+9 11.3	3.034	3.763	11.2	22.4
12 23	8 31.89	+28 23.4	2.198	3.065	10.3	20.5	12 23	8 27.08	+8 59.3	2.935	3.763	9.1	22.2
1 2	8 24.83	+28 45.4	2.132	3.063	7.1	20.3	1 2	8 21.21	+8 56.3	2.858	3.763	6.7	22.1
1 12	8 15.97	+29 3.8	2.093	3.060	4.0	20.1	1 12	8 14.16	+9 2.0	2.810	3.763	4.3	21.9
1 22	8 6.17	+29 14.4	2.083	3.058	3.0	20.0	1 22	8 6.50	+9 15.6	2.791	3.762	2.8	21.8
2 1	7 56.49	+29 14.6	2.102	3.055	5.7	20.2	2 1	7 58.88	+9 35.4	2.804	3.761	4.1	21.9
2 11	7 48.02	+29 3.5	2.151	3.052	9.0	20.4	2 11	7 51.96	+9 59.3	2.846	3.760	6.5	22.0
2 21	7 41.55	+28 42.3	2.224	3.050	12.0	20.6	2 21	7 46.29	+10 25.1	2.916	3.758	9.0	22.2
<b>150353</b>	2000 <i>AL</i> <sub>22</sub>		1 20.6 60°59	1°6/20.1	18		<b>46606</b>	1993 <i>LK</i> <sub>2</sub>		1 20.6 45°30	1°5/19.9	18	
12 13	8 40.66	+22 32.3	1.256	2.062	20.2	20.2	12 13	8 35.11	+19 44.5	1.399	2.202	18.7	18.8
12 23	8 36.55	+22 46.0	1.194	2.076	15.9	19.9	12 23	8 31.86	+20 37.4	1.337	2.218	14.6	18.6
1 2	8 28.66	+23 7.2	1.152	2.091	10.8	19.7	1 2	8 25.35	+21 42.4	1.296	2.236	9.8	18.4
1 12	8 17.92	+23 30.2	1.133	2.107	5.1	19.4	1 12	8 16.35	+22 52.9	1.280	2.253	4.6	18.1
1 22	8 5.86	+23 48.5	1.140	2.122	2.0	19.3	1 22	8 6.15	+24 0.8	1.289	2.272	1.9	18.0
2 1	7 54.33	+23 57.4	1.173	2.138	7.1	19.6	2 1	7 56.29	+24 58.7	1.326	2.290	6.7	18.3
2 11	7 45.07	+23 55.4	1.231	2.154	12.3	20.0	2 11	7 48.27	+25 42.3	1.389	2.309	11.4	18.6
2 21	7 39.12	+23 43.5	1.311	2.170	16.7	20.3	2 21	7 43.08	+26 10.5	1.474	2.329	15.4	18.9
<b>296483</b>	2009 <i>HJ</i> <sub>103</sub>		1 20.6 118°26	5°9/24.2	18		<b>321924</b>	2010 <i>TR</i> <sub>80</sub>		1 20.6 15°95	3°8/19.3	18	
12 13	8 35.71	+0 58.5	2.311	3.011	15.1	21.1	12 13	8 35.49	+27 1.6	1.395	2.207	18.2	20.0
12 23	8 30.79	+0 31.3	2.234	3.032	12.7	21.0	12 23	8 32.45	+27 34.1	1.326	2.211	14.4	19.7
1 2	8 23.83	+0 20.7	2.178	3.052	10.0	20.9	1 2	8 25.90	+28 10.2	1.278	2.217	9.9	19.5
1 12	8 15.41	+0 27.9	2.146	3.071	7.5	20.7	1 12	8 16.68	+28 42.7	1.252	2.223	5.5	19.3
1 22	8 6.27	+0 52.3	2.143	3.089	6.0	20.7	1 22	8 6.10	+29 4.7	1.253	2.230	4.1	19.2
2 1	7 57.32	+1 31.7	2.168	3.107	6.6	20.7	2 1	7 55.86	+29 11.3	1.280	2.238	7.8	19.4
2 11	7 49.41	+2 22.0	2.223	3.124	8.7	20.9	2 11	7 47.58	+29 1.6	1.331	2.246	12.2	19.7
2 21	7 43.21	+3 18.5	2.304	3.141	11.2	21.1	2 21	7 42.32	+28 37.8	1.404	2.256	16.2	20.0
<b>390575</b>	2001 <i>MT</i> <sub>22</sub>		1 20.6 184°64	2°8/19.2	18		<b>216733</b>	2005 <i>HN</i> <sub>2</sub>		1 20.6 313°81	1°3/20.1	18	
12 13	8 41.11	+24 47.0	1.922	2.699	15.2	21.9	12 13	8 34.37	+21 2.2	1.508	2.310	17.6	20.6
12 23	8 36.00	+25 37.6	1.834	2.700	12.0	21.7	12 23	8 31.47	+21 26.0	1.417	2.297	14.0	20.4
1 2	8 27.95	+26 34.1	1.768	2.700	8.2	21.5	1 2	8 25.32	+21 59.5	1.345	2.284	9.6	20.1
1 12	8 17.58	+27 30.4	1.730	2.699	4.4	21.2	1 12	8 16.50	+22 38.4	1.298	2.272	4.6	19.7
1 22	8 5.91	+28 19.7	1.720	2.697	3.1	21.1	1 22	8 6.10	+23 16.6	1.277	2.260	1.6	19.5
2 1	7 54.28	+28 56.7	1.741	2.695	6.5	21.4	2 1	7 55.64	+23 48.3	1.283	2.248	6.6	19.8
2 11	7 44.08	+29 18.7	1.789	2.691	10.5	21.6	2 11	7 46.73	+24 9.7	1.314	2.237	11.7	20.1
2 21	7 36.32	+29 26.3	1.862	2.687	14.0	21.8	2 21	7 40.58	+24 19.5	1.368	2.226	16.2	20.3
<b>15878</b>	1996 <i>XC</i> <sub>3</sub>		1 20.6 123°99	0°8/20.0	18 R		<b>178165</b>	2006 <i>UB</i> <sub>41</sub>		1 20.6 191°29	0°1/20.7	18	
12 13	8 32.75	+20 18.4	2.738	3.503	11.5	18.5	12 13	8 31.97	+18 20.8	2.913	3.672	11.0	21.1
12 23	8 28.39	+20 59.6	2.654	3.515	9.0	18.4	12 23	8 27.70	+18 34.6	2.815	3.671	8.7	21.0
1 2	8 22.20	+21 46.7	2.596	3.526	6.0	18.2	1 2	8 21.70	+18 54.1	2.742	3.670	5.9	20.8
1 12	8 14.65	+22 36.3	2.565	3.538	2.8	18.0	1 12	8 14.43	+19 17.2	2.697	3.668	2.8	20.6
1 22	8 6.40	+23 24.7	2.566	3.548	1.1	17.9	1 22	8 6.47	+19 41.5	2.682	3.666	0.4	20.4
2 1	7 58.24	+24 8.6	2.598	3.559	4.1	18.1	2 1	7 58.55	+20 4.7	2.699	3.664	3.6	20.6
2 11	7 50.96	+24 45.4	2.660	3.569	7.1	18.3	2 11	7 51.41	+20 24.8	2.745	3.661	6.7	20.8
2 21	7 45.17	+25 13.9	2.748	3.580	9.8	18.5	2 21	7 45.63	+20 40.5	2.819	3.658	9.4	21.0
<b>85517</b>	1997 <i>VL</i> <sub>1</sub>		1 20.6 17°70	6°0/18.4	18		<b>461366</b>	2000 <i>LJ</i> <sub>7</sub>		1 20.6 279°35	0°4/20.4	18	
12 13	8 35.68	+29 2.9	1.174	2.000	20.2	18.1	12 13	8 33.90	+17 49.9	1.842	2.624	15.6	21.5
12 23	8 33.36	+30 7.9	1.113	2.004	16.0	17.8	12 23	8 30.51	+18 28.6	1.740	2.608	12.4	21.2
1 2	8 26.94	+31 16.9	1.070	2.010	11.3	17.6	1 2	8 24.37	+19 19.8	1.659	2.593	8.5	21.0
1 12	8 17.29	+32 19.2	1.050	2.016	7.1	17.4	1 12	8 15.97	+20 19.9	1.604	2.577	4.1	20.7
1 22	8 5.97	+33 4.2	1.053	2.024	6.4	17.3	1 22	8 6.20	+21 23.2	1.578	2.561	0.9	20.4
2 1	7 55.04	+33 24.6	1.082	2.032	10.0	17.6	2 1	7 56.26	+22 23.7	1.580	2.546	5.6	20.7
2 11	7 46.47	+33 19.7	1.132	2.042	14.5	17.8	2 11	7 47.48	+23 16.4	1.611	2.530	10.2	20.9
2 21	7 41.50	+32 53.6	1.203	2.052	18.5	18.1	2 21	7 40.92	+23 58.3	1.665	2.514	14.2	21.1
<b>467368</b>	2004 <i>CD</i> <sub>30</sub>		1 20.6 49°28	1°0/21.2	18		<b>414826</b>	2010 <i>UZ</i> <sub>44</sub>		1 20.6 168°57	5°0/22.9	18	
12 13	8 31.40	+14 18.4	2.253	3.017	13.7	20.9	12 13	8 36.40	+5 36.6	2.262	2.983	14.8	22.1
12 23	8 27.77	+14 49.1	2.162	3.019	10.8	20.8	12 23	8 31.53	+5 1.5	2.169	2.987	12.3	21.9
1 2	8 22.02	+15 31.3	2.094	3.020	7.5	20.5	1 2	8 24.49	+4 39.5	2.098	2.991	9.4	21.7
1 12	8 14.65	+16 22.4	2.053	3.022	3.8	20.3	1 12	8 15.81	+4 31.8	2.053	2.994	6.6	21.5
1 22	8 6.40	+17 18.6	2.041	3.024	1.0	20.1	1 22	8 6.26	+4 38.2	2.036	2.997	5.0	21.4
2 1	7 58.18	+18 15.7	2.059	3.026	4.4	20.4	2 1	7 56.78	+4 57.2	2.050	2.999	6.1	21.5
2 11	7 50.94	+19 9.5	2.106	3.028	8.0	20.6	2 11	7 48.32	+5 25.7	2.091	3.000	8.8	21.7
2 21	7 45.42	+19 57.2	2.180	3.029	11.3	20.8	2 21	7 41.62	+6 0.1	2.159	3.001	11.7	21.9
<b>113223</b>	2002 <i>RK</i> <sub>121</sub>		1 20.6 122°24	1°5/21.4	18		<b>354560</b>	2004 <i>TK</i> <sub>72</sub>		1 20.6 143°65	0°8/20.3	18	
12 13	8 34.22	+15 10.3	2.419	3.175	13.1	19.7	12 13	8 39.53	+20 11.3	1.816	2.593	16.0	21.8
12 23	8 29.68	+15 1.1	2.332	3.183	10.4	19.5	12 23	8 34.66	+20 37.8	1.736	2.602	12.6	21.6
1 2	8 23.13	+14 59.4	2.267	3.190	7.2	19.3	1 2	8 26.95	+21 12.4	1.678	2.610	8.5	21.4
1 12	8 15.10	+15 4.1	2.230	3.198	3.8	19.1	1 12	8 17.06	+21 51.0	1.646	2.618	4.0	21.1
1 22	8 6.34	+15 13.3	2.223	3.205	1.5	19.0	1 22	8 6.06	+22 28.3	1.642	2.626	1.2	20.9
2 1	7 57.71	+15 24.9	2.246	3.211	4.2	19.2	2 1	7 55.23	+22 59.7	1.669	2.633	5.6	21.3
2 11	7 50.08	+15 36.9	2.299	3.218	7.6	19.4	2 11	7 45.89	+23 22.4	1.723	2.639	9.9	21.5
2 21	7 44.11	+15 47.7	2.378	3.225	10.6	19.6	2 21	7 38.96	+23 35.6	1.802	2.645	13.6	21.8
<b>457011</b>	2008 <i>CY</i> <sub>92</sub>		1 20.6 13°60	3°3/19.6	18		<b>360295</b>	2001 <i>OO</i> <sub>85</sub>		1 20.6 139°49	2°7/21.9	18	
12 13	8 34.57	+26 10.2	1.215	2.037									



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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>235485</b>	2004 <i>BD</i> <sub>56</sub>		1 20.6 270°95	2°3/22.2	18		<b>243002</b>	Lemmy		1 20.6 256°51	0°4/20.3	17	
12 13	8 30.66	+10 16.1	2.388	3.137	13.4	20.4	12 13	8 32.24	+19 23.5	2.717	3.481	11.6	21.8
12 23	8 27.12	+10 35.8	2.285	3.129	10.8	20.3	12 23	8 28.23	+19 53.6	2.605	3.465	9.1	21.6
1 2	8 21.57	+11 8.7	2.205	3.121	7.8	20.0	1 2	8 22.28	+20 30.6	2.518	3.448	6.2	21.4
1 12	8 14.47	+11 53.5	2.151	3.113	4.5	19.8	1 12	8 14.83	+21 11.7	2.459	3.431	2.9	21.1
1 22	8 6.47	+12 47.6	2.126	3.104	2.3	19.7	1 22	8 6.49	+21 53.7	2.431	3.414	0.7	20.9
2 1	7 58.43	+13 47.2	2.131	3.096	4.4	19.8	2 1	7 58.06	+22 33.0	2.433	3.397	4.1	21.2
2 11	7 51.23	+14 48.1	2.166	3.088	7.8	20.0	2 11	7 50.40	+23 7.0	2.466	3.379	7.4	21.3
2 21	7 45.60	+15 46.5	2.227	3.079	11.0	20.2	2 21	7 44.19	+23 34.1	2.525	3.361	10.4	21.5
<b>15898</b>	Kharasterteam		1 20.6 254°55	4°1/19.2	18		<b>426494</b>	2013 <i>RN</i> <sub>31</sub>		1 20.6 170°51	1°9/21.5	18	
12 13	8 42.16	+30 48.1	1.877	2.659	15.4	17.4	12 13	8 35.40	+14 10.4	2.246	3.001	14.0	21.3
12 23	8 36.96	+31 3.9	1.786	2.653	12.3	17.2	12 23	8 30.85	+14 1.7	2.154	3.004	11.2	21.1
1 2	8 28.64	+31 18.0	1.718	2.646	8.7	17.0	1 2	8 24.09	+14 1.9	2.084	3.006	7.9	20.9
1 12	8 17.91	+31 24.5	1.676	2.640	5.3	16.8	1 12	8 15.67	+14 9.9	2.041	3.007	4.3	20.7
1 22	8 5.93	+31 18.0	1.662	2.633	4.3	16.7	1 22	8 6.37	+14 23.8	2.028	3.008	1.9	20.6
2 1	7 54.14	+30 55.7	1.676	2.626	7.1	16.8	2 1	7 57.16	+14 41.1	2.044	3.009	4.6	20.7
2 11	7 44.00	+30 18.2	1.719	2.619	10.9	17.0	2 11	7 49.00	+14 59.2	2.090	3.010	8.2	21.0
2 21	7 36.51	+29 28.8	1.785	2.612	14.4	17.3	2 21	7 42.65	+15 16.3	2.162	3.010	11.4	21.2
<b>243600</b>	1998 <i>SV</i> <sub>154</sub>		1 20.6 59°38	3°4/22.0	17		<b>473887</b>	2016 <i>EG</i> <sub>144</sub>		1 20.6 254°71	1°2/20.0	17	
12 13	8 38.99	+11 27.2	1.508	2.278	19.1	20.3	12 13	8 35.19	+22 14.9	2.187	2.964	13.6	22.0
12 23	8 34.19	+11 11.7	1.455	2.311	15.2	20.2	12 23	8 31.01	+22 37.4	2.087	2.953	10.8	21.8
1 2	8 26.48	+11 11.7	1.422	2.343	10.8	20.0	1 2	8 24.40	+23 5.4	2.010	2.943	7.3	21.6
1 12	8 16.73	+11 26.0	1.413	2.376	6.2	19.8	1 12	8 15.90	+23 35.5	1.960	2.932	3.5	21.3
1 22	8 6.15	+11 51.3	1.431	2.409	3.4	19.7	1 22	8 6.33	+24 3.4	1.939	2.922	1.5	21.2
2 1	7 56.12	+12 23.5	1.477	2.441	6.0	20.0	2 1	7 56.74	+24 25.5	1.949	2.911	5.1	21.4
2 11	7 47.88	+12 58.0	1.549	2.474	10.1	20.3	2 11	7 48.23	+24 39.5	1.986	2.899	8.9	21.6
2 21	7 42.21	+13 31.2	1.646	2.506	13.8	20.6	2 21	7 41.68	+24 44.8	2.049	2.888	12.4	21.8
<b>98209</b>	2000 <i>SK</i> <sub>130</sub>		1 20.6 201°93	3°6/21.9	18		<b>58428</b>	1996 <i>EC</i> <sub>8</sub>		1 20.6 166°60	0°7/20.3	18	
12 13	8 36.65	+11 19.3	2.089	2.838	15.1	19.8	12 13	8 39.89	+20 0.7	1.944	2.715	15.3	21.2
12 23	8 31.98	+10 39.9	1.995	2.837	12.3	19.6	12 23	8 34.82	+20 25.1	1.858	2.720	12.1	20.9
1 2	8 24.93	+10 10.0	1.922	2.835	9.0	19.4	1 2	8 27.03	+20 57.3	1.794	2.725	8.2	20.7
1 12	8 16.07	+9 50.2	1.875	2.833	5.6	19.2	1 12	8 17.14	+21 33.4	1.756	2.728	3.9	20.5
1 22	8 6.25	+9 40.0	1.857	2.831	3.6	19.0	1 22	8 6.14	+22 8.6	1.748	2.732	1.0	20.3
2 1	7 56.50	+9 38.4	1.869	2.829	5.6	19.2	2 1	7 55.25	+22 38.6	1.770	2.734	5.3	20.6
2 11	7 47.88	+9 43.2	1.909	2.826	9.0	19.4	2 11	7 45.73	+23 0.7	1.821	2.736	9.5	20.8
2 21	7 41.20	+9 52.1	1.975	2.823	12.3	19.6	2 21	7 38.48	+23 14.0	1.897	2.737	13.2	21.0
<b>198855</b>	2005 <i>LH</i> <sub>3</sub>		1 20.6 143°78	16°6/29.2	18		<b>398741</b>	2013 <i>AD</i> <sub>6</sub>		1 20.6 265°37	2°7/21.6	18	
12 13	8 37.65	-14 37.4	1.360	2.022	25.4	20.7	12 13	8 37.31	+13 56.0	1.534	2.312	18.4	21.1
12 23	8 34.04	-16 20.2	1.292	2.029	23.2	20.5	12 23	8 33.62	+13 37.1	1.438	2.301	14.9	20.8
1 2	8 27.04	-17 28.7	1.236	2.036	20.8	20.3	1 2	8 26.72	+13 30.7	1.363	2.290	10.7	20.5
1 12	8 17.32	-17 52.7	1.197	2.042	18.5	20.2	1 12	8 17.19	+13 36.3	1.311	2.278	5.9	20.2
1 22	8 6.05	-17 25.9	1.176	2.047	17.0	20.1	1 22	8 6.11	+13 51.5	1.285	2.266	2.7	20.0
2 1	7 54.83	-16 7.9	1.175	2.052	16.7	20.1	2 1	7 54.94	+14 13.1	1.287	2.254	6.4	20.2
2 11	7 45.33	-14 7.2	1.196	2.056	17.7	20.2	2 11	7 45.25	+14 37.0	1.316	2.242	11.4	20.4
2 21	7 38.73	-11 37.8	1.236	2.060	19.7	20.3	2 21	7 38.23	+15 0.1	1.367	2.230	15.9	20.7
<b>470412</b>	2007 <i>UR</i> <sub>137</sub>		1 20.6 284°62	3°9/22.7	18		<b>286003</b>	2001 <i>SY</i> <sub>90</sub>		1 20.6 187°18	2°5/19.3	18	
12 13	8 31.60	+7 56.3	2.399	3.137	13.6	21.3	12 13	8 35.88	+27 29.7	2.555	3.329	12.0	21.3
12 23	8 27.74	+7 33.3	2.303	3.135	11.2	21.1	12 23	8 31.12	+27 53.0	2.465	3.328	9.4	21.1
1 2	8 21.91	+7 22.0	2.229	3.133	8.4	20.9	1 2	8 24.22	+28 17.3	2.398	3.328	6.5	20.9
1 12	8 14.60	+7 22.7	2.181	3.132	5.5	20.7	1 12	8 15.71	+28 38.7	2.360	3.327	3.6	20.7
1 22	8 6.51	+7 34.7	2.162	3.130	3.9	20.6	1 22	8 6.38	+28 53.6	2.351	3.326	2.7	20.7
2 1	7 58.44	+7 56.2	2.172	3.129	5.2	20.7	2 1	7 57.15	+28 59.2	2.373	3.325	5.1	20.8
2 11	7 51.28	+8 24.4	2.211	3.127	8.0	20.9	2 11	7 48.98	+28 54.8	2.423	3.324	8.2	21.0
2 21	7 45.68	+8 56.2	2.276	3.126	10.9	21.0	2 21	7 42.57	+28 40.9	2.500	3.322	10.9	21.2
<b>89108</b>	2001 <i>TE</i> <sub>208</sub>		1 20.6 195°41	0°5/20.3	17		<b>70170</b>	1999 <i>OD</i> <sub>1</sub>		1 20.6 108°71	0°3/20.5	18	
12 13	8 33.22	+20 36.7	2.726	3.491	11.5	21.3	12 13	8 39.28	+18 30.8	1.879	2.650	15.8	20.3
12 23	8 28.84	+20 56.2	2.629	3.489	9.0	21.1	12 23	8 34.22	+19 1.3	1.808	2.671	12.4	20.2
1 2	8 22.58	+21 20.7	2.557	3.487	6.1	20.9	1 2	8 26.50	+19 40.9	1.760	2.691	8.4	20.0
1 12	8 14.90	+21 47.6	2.513	3.485	2.9	20.7	1 12	8 16.83	+20 25.5	1.738	2.710	3.9	19.7
1 22	8 6.47	+22 13.9	2.499	3.482	0.8	20.5	1 22	8 6.21	+21 9.9	1.746	2.729	0.8	19.5
2 1	7 58.07	+22 36.9	2.516	3.479	4.0	20.8	2 1	7 55.88	+21 49.7	1.783	2.748	5.2	19.9
2 11	7 50.53	+22 54.6	2.563	3.476	7.2	21.0	2 11	7 47.00	+22 21.6	1.849	2.765	9.3	20.2
2 21	7 44.50	+23 6.3	2.637	3.472	10.0	21.2	2 21	7 40.40	+22 44.6	1.940	2.782	12.8	20.4
<b>192547</b>	1998 <i>TW</i> <sub>6</sub>		1 20.6 212°72	2°7/19.3	18		<b>90023</b>	2002 <i>UP</i> <sub>2</sub>		1 20.6 341°74	9°1/18.4	18	
12 13	8 42.56	+25 38.2	2.175	2.942	14.0	22.7	12 13	8 51.92	+43 22.7	1.718	2.486	17.2	18.3
12 23	8 36.93	+26 18.4	2.072	2.932	11.1	22.5	12 23	8 45.34	+43 54.4	1.641	2.484	14.4	18.1
1 2	8 28.53	+27 3.0	1.993	2.922	7.7	22.3	1 2	8 34.62	+44 14.0	1.585	2.482	11.6	17.9
1 12	8 17.90	+27 46.5	1.941	2.910	4.1	22.0	1 12	8 20.80	+44 10.9	1.553	2.481	9.5	17.8
1 22	8 5.97	+28 23.2	1.920	2.897	2.9	21.9	1 22	8 5.60	+43 37.7	1.547	2.480	9.2	17.7
2 1	7 53.97	+28 48.5	1.930	2.883	6.1	22.1	2 1	7 51.11	+42 32.3	1.568	2.479	11.0	17.8
2 11	7 43.19	+29 0.3	1.968	2.867	9.8	22.3	2 11	7 39.23	+40 59.9	1.615	2.478	13.8	18.0
2 21	7 34.63	+28 59.3	2.033	2.851	13.2	22.5	2 21	7 31.05	+39 9.3	1.685	2.477	16.7	18.2
<b>458846</b>	2011 <i>UR</i> <sub>65</sub>		1 20.6 82°66	1°1/20.1	18		<b>373022</b>	2011 <i>DO</i> <sub>39</sub>		1 20.6 238°09	0°5/20.4	18	
12 13	8 38.01	+19 52.3	1.570	2.360	17.6								

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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>417994</b>	2007 <i>TV</i> <sub>360</sub>		1 20.6	55°06	2°4/19.1	18	<b>179563</b>	2002 <i>ED</i> <sub>50</sub>		1 20.7	215°27	2°9/19.5	18
12 13	8 32.96	+24 21.7	2.258	3.040	13.1	20.6	12 13	8 40.46	+26 11.3	1.782	2.567	16.0	20.6
12 23	8 29.14	+25 14.9	2.176	3.046	10.2	20.5	12 23	8 35.77	+26 38.3	1.693	2.563	12.6	20.3
1 2	8 23.04	+26 13.0	2.118	3.052	7.0	20.3	1 2	8 27.97	+27 8.9	1.626	2.559	8.7	20.1
1 12	8 15.22	+27 11.4	2.088	3.058	3.7	20.1	1 12	8 17.72	+27 37.2	1.585	2.554	4.7	19.8
1 22	8 6.48	+28 4.5	2.087	3.064	2.7	20.0	1 22	8 6.14	+27 57.5	1.572	2.550	3.2	19.7
2 1	7 57.83	+28 48.2	2.116	3.070	5.5	20.2	2 1	7 54.66	+28 5.5	1.587	2.544	6.7	19.9
2 11	7 50.27	+29 19.8	2.173	3.076	8.8	20.4	2 11	7 44.74	+27 59.8	1.630	2.539	10.9	20.2
2 21	7 44.57	+29 38.9	2.255	3.082	11.8	20.6	2 21	7 37.44	+27 41.9	1.697	2.533	14.6	20.4
<b>66182</b>	1998 <i>WC</i> <sub>23</sub>		1 20.6	80°69	1°0/20.2	18	<b>313700</b>	2003 <i>TV</i> <sub>56</sub>		1 20.7	50°82	3°6/19.0	18
12 13	8 36.15	+20 47.2	1.759	2.545	16.1	19.8	12 13	8 36.87	+24 31.5	1.441	2.246	18.1	20.9
12 23	8 32.21	+21 13.4	1.676	2.548	12.7	19.6	12 23	8 33.41	+25 35.2	1.376	2.258	14.2	20.7
1 2	8 25.42	+21 47.8	1.616	2.551	8.6	19.4	1 2	8 26.55	+26 46.6	1.332	2.271	9.7	20.4
1 12	8 16.44	+22 26.1	1.580	2.553	4.1	19.1	1 12	8 17.07	+27 57.6	1.313	2.284	5.2	20.2
1 22	8 6.29	+23 3.1	1.573	2.556	1.4	18.9	1 22	8 6.26	+28 59.2	1.320	2.297	3.9	20.2
2 1	7 56.27	+23 34.0	1.595	2.559	5.7	19.2	2 1	7 55.75	+29 44.7	1.354	2.310	7.7	20.4
2 11	7 47.69	+23 55.8	1.643	2.562	10.1	19.5	2 11	7 47.12	+30 11.1	1.414	2.324	12.1	20.7
2 21	7 41.50	+24 7.6	1.716	2.564	13.9	19.7	2 21	7 41.43	+30 19.4	1.496	2.338	15.9	21.0
<b>95401</b>	2002 <i>CK</i> <sub>199</sub>		1 20.7	164°20	0°2/20.8	18	<b>119568</b>	2001 <i>VP</i> <sub>81</sub>		1 20.7	0°82	8°0/24.1	18
12 13	8 34.57	+17 44.3	2.101	2.873	14.3	20.5	12 13	8 30.38	+ 2 21.8	1.525	2.278	19.6	19.1
12 23	8 30.46	+18 3.8	2.012	2.874	11.3	20.3	12 23	8 27.92	+ 1 27.4	1.444	2.276	16.6	18.9
1 2	8 23.98	+18 32.2	1.945	2.876	7.7	20.1	1 2	8 22.66	+ 0 53.8	1.381	2.275	13.3	18.7
1 12	8 15.69	+19 6.4	1.905	2.877	3.7	19.8	1 12	8 15.20	+ 0 44.7	1.340	2.275	10.0	18.5
1 22	8 6.43	+19 42.8	1.894	2.878	0.6	19.6	1 22	8 6.54	+ 1 1.3	1.322	2.276	8.1	18.4
2 1	7 57.24	+20 17.6	1.913	2.879	4.7	19.9	2 1	7 57.94	+ 1 41.4	1.330	2.277	8.9	18.4
2 11	7 49.18	+20 47.5	1.960	2.880	8.7	20.1	2 11	7 50.71	+ 2 39.4	1.362	2.280	11.9	18.6
2 21	7 43.07	+21 10.8	2.033	2.880	12.1	20.4	2 21	7 45.82	+ 3 47.6	1.417	2.283	15.3	18.8
<b>492455</b>	2014 <i>MG</i> <sub>61</sub>		1 20.7	180°49	0°3/20.5	18	<b>357203</b>	2002 <i>GA</i> <sub>38</sub>		1 20.7	284°92	2°1/21.5	18
12 13	8 38.25	+18 56.2	2.073	2.840	14.6	22.7	12 13	8 35.12	+14 18.6	1.622	2.402	17.5	21.3
12 23	8 33.42	+19 22.3	1.981	2.842	11.5	22.5	12 23	8 31.82	+14 14.3	1.521	2.385	14.2	21.0
1 2	8 26.04	+19 56.8	1.913	2.843	7.9	22.2	1 2	8 25.49	+14 23.0	1.439	2.368	10.1	20.7
1 12	8 16.69	+20 36.2	1.871	2.843	3.7	22.0	1 12	8 16.66	+14 43.6	1.382	2.351	5.4	20.4
1 22	8 6.27	+21 16.1	1.859	2.842	0.7	21.7	1 22	8 6.30	+15 13.1	1.352	2.334	2.1	20.1
2 1	7 55.90	+21 52.3	1.877	2.841	5.0	22.1	2 1	7 55.77	+15 47.5	1.350	2.317	6.0	20.3
2 11	7 46.73	+22 21.6	1.924	2.840	9.1	22.3	2 11	7 46.55	+16 22.3	1.373	2.300	10.9	20.6
2 21	7 39.65	+22 42.7	1.997	2.837	12.6	22.5	2 21	7 39.81	+16 53.8	1.421	2.283	15.4	20.8
<b>464237</b>	2015 <i>CO</i> <sub>1</sub>		1 20.7	60°39	2°6/22.5	18	<b>408356</b>	2013 <i>GE</i> <sub>89</sub>		1 20.7	250°31	2°4/19.6	18
12 13	8 31.72	+ 8 35.2	2.088	2.838	15.1	20.5	12 13	8 37.26	+23 26.7	1.669	2.462	16.6	21.3
12 23	8 28.08	+ 9 8.7	2.009	2.852	12.1	20.3	12 23	8 33.43	+24 7.4	1.583	2.458	13.1	21.0
1 2	8 22.27	+ 9 58.6	1.952	2.867	8.7	20.1	1 2	8 26.48	+24 55.7	1.519	2.455	8.9	20.8
1 12	8 14.84	+11 2.7	1.921	2.882	5.1	19.9	1 12	8 17.06	+25 45.8	1.480	2.452	4.5	20.5
1 22	8 6.58	+12 17.1	1.919	2.897	2.6	19.8	1 22	8 6.25	+26 30.8	1.468	2.448	2.7	20.4
2 1	7 58.44	+13 36.6	1.947	2.912	4.7	20.0	2 1	7 55.49	+27 5.1	1.485	2.444	6.7	20.6
2 11	7 51.37	+14 55.4	2.004	2.927	8.2	20.2	2 11	7 46.25	+27 25.6	1.528	2.441	11.1	20.8
2 21	7 46.11	+16 9.1	2.087	2.943	11.5	20.4	2 21	7 39.64	+27 32.3	1.594	2.437	15.1	21.1
<b>110388</b>	2001 <i>TN</i> <sub>4</sub>		1 20.7	82°36	0°2/20.6	18	<b>104883</b>	2000 <i>HT</i> <sub>103</sub>		1 20.7	156°68	2°0/19.5	18
12 13	8 36.64	+19 23.4	1.832	2.612	15.8	20.3	12 13	8 36.21	+22 1.6	2.010	2.790	14.6	20.3
12 23	8 32.32	+19 35.5	1.755	2.622	12.4	20.1	12 23	8 31.99	+22 56.7	1.925	2.794	11.4	20.1
1 2	8 25.33	+19 55.4	1.700	2.633	8.4	19.8	1 2	8 25.17	+23 59.7	1.864	2.797	7.7	19.8
1 12	8 16.34	+20 19.8	1.671	2.643	4.0	19.6	1 12	8 16.33	+25 5.5	1.829	2.800	3.8	19.6
1 22	8 6.35	+20 44.6	1.670	2.654	0.7	19.4	1 22	8 6.39	+26 7.7	1.823	2.803	2.3	19.5
2 1	7 56.58	+21 6.1	1.698	2.664	5.2	19.7	2 1	7 56.48	+27 1.0	1.847	2.806	5.8	19.7
2 11	7 48.24	+21 21.7	1.754	2.674	9.4	20.0	2 11	7 47.82	+27 41.7	1.900	2.808	9.6	20.0
2 21	7 42.17	+21 30.6	1.835	2.685	13.1	20.2	2 21	7 41.29	+28 9.1	1.977	2.810	13.0	20.2
<b>25251</b>	1998 <i>UL</i> <sub>25</sub>		1 20.7	125°12	2°4/22.0	18	<b>317321</b>	2002 <i>JZ</i> <sub>1</sub>		1 20.7	290°05	1°6/21.4	18
12 13	8 37.11	+11 11.3	2.238	2.981	14.4	19.6	12 13	8 33.91	+14 3.4	1.595	2.377	17.6	20.4
12 23	8 32.05	+11 18.3	2.159	3.000	11.5	19.5	12 23	8 30.93	+14 18.2	1.495	2.362	14.2	20.1
1 2	8 24.82	+11 37.2	2.103	3.018	8.2	19.3	1 2	8 24.92	+14 48.6	1.416	2.347	10.0	19.9
1 12	8 16.00	+12 6.5	2.073	3.035	4.7	19.1	1 12	8 16.41	+15 32.7	1.362	2.331	5.2	19.5
1 22	8 6.41	+12 43.4	2.073	3.052	2.4	19.0	1 22	8 6.36	+16 26.3	1.333	2.316	1.6	19.3
2 1	7 56.99	+13 24.6	2.104	3.068	4.6	19.1	2 1	7 56.12	+17 23.7	1.333	2.301	6.0	19.5
2 11	7 48.70	+14 6.5	2.164	3.083	8.0	19.4	2 11	7 47.20	+18 18.9	1.359	2.286	11.0	19.7
2 21	7 42.24	+14 46.1	2.251	3.097	11.1	19.6	2 21	7 40.77	+19 7.6	1.408	2.271	15.5	20.0
<b>249432</b>	2009 <i>FU</i> <sub>5</sub>		1 20.7	205°51	0°4/20.9	18	<b>370658</b>	2004 <i>CC</i> <sub>50</sub>		1 20.7	30°71	10°8/18.6	18
12 13	8 37.34	+17 29.5	2.050	2.817	14.8	21.7	12 13	8 54.59	+49 29.3	1.740	2.494	17.5	19.6
12 23	8 32.76	+17 42.8	1.953	2.812	11.7	21.5	12 23	8 47.30	+50 3.1	1.687	2.510	15.1	19.5
1 2	8 25.64	+18 5.0	1.879	2.808	8.1	21.3	1 2	8 35.71	+50 19.3	1.654	2.526	12.8	19.4
1 12	8 16.53	+18 33.5	1.831	2.802	3.9	21.0	1 12	8 21.17	+50 7.4	1.643	2.543	11.2	19.3
1 22	8 6.31	+19 4.6	1.813	2.797	0.7	20.7	1 22	8 5.71	+49 21.0	1.657	2.560	10.9	19.3
2 1	7 56.09	+19 34.6	1.824	2.790	4.9	21.1	2 1	7 51.54	+48 0.5	1.698	2.579	12.1	19.4
2 11	7 47.04	+20 0.3	1.865	2.783	9.1	21.3	2 11	7 40.42	+46 12.6	1.762	2.598	14.1	19.6
2 21	7 40.05	+20 20.1	1.931	2.776	12.7	21.5	2 21	7 33.20	+44 7.5	1.850	2.617	16.3	19.8
<b>10217</b>	Richardcook		1 20.7	85°61	6°3/18.2	18 R	<b>111083</b>	2001 <i>VJ</i> <sub>58</sub>		1 20.7	73°39	2°0/19.8	18
12 13	8 46.38	+36 7.6	1.882	2.65									

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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>340792</b>	2006 <i>TW</i> <sub>15</sub>		1 20.7 180°09	6°3/24.6	18		<b>369085</b>	2008 <i>GU</i> <sub>21</sub>		1 20.7 191°06	5°3/23.9	18	
12 13	8 30.20	- 0 57.0	2.548	3.243	13.9	20.7	12 13	8 33.89	+ 1 57.0	2.588	3.288	13.6	22.0
12 23	8 26.55	- 1 29.6	2.453	3.243	11.9	20.5	12 23	8 29.41	+ 1 34.0	2.487	3.287	11.5	21.9
1 2	8 21.09	- 1 46.6	2.379	3.243	9.7	20.4	1 2	8 23.04	+ 1 25.2	2.408	3.284	9.1	21.7
1 12	8 14.28	- 1 46.2	2.330	3.243	7.6	20.2	1 12	8 15.22	+ 1 31.9	2.354	3.282	6.7	21.5
1 22	8 6.73	- 1 28.0	2.307	3.243	6.4	20.2	1 22	8 6.62	+ 1 53.9	2.328	3.278	5.3	21.5
2 1	7 59.20	- 0 53.6	2.312	3.243	6.8	20.2	2 1	7 58.00	+ 2 29.5	2.333	3.274	6.0	21.5
2 11	7 52.47	- 0 6.1	2.346	3.243	8.5	20.3	2 11	7 50.20	+ 3 15.4	2.366	3.270	8.2	21.6
2 21	7 47.18	+ 0 50.1	2.405	3.243	10.8	20.4	2 21	7 43.88	+ 4 7.6	2.427	3.264	10.7	21.8
<b>182390</b>	2001 <i>QD</i> <sub>261</sub>		1 20.7 140°62	2°8/19.6	18		<b>199207</b>	2006 <i>AB</i> <sub>20</sub>		1 20.7 321°92	4°0/18.8	18	
12 13	8 40.99	+27 41.6	1.978	2.757	14.8	20.2	12 13	8 36.72	+24 57.9	1.430	2.236	18.2	19.9
12 23	8 35.70	+27 55.6	1.896	2.762	11.7	20.0	12 23	8 33.65	+26 4.9	1.350	2.232	14.4	19.6
1 2	8 27.62	+28 10.1	1.836	2.767	8.1	19.8	1 2	8 27.02	+27 21.3	1.290	2.229	9.9	19.3
1 12	8 17.45	+28 20.3	1.803	2.771	4.4	19.6	1 12	8 17.48	+28 38.8	1.255	2.225	5.5	19.1
1 22	8 6.25	+28 21.8	1.798	2.775	3.0	19.5	1 22	8 6.25	+29 47.6	1.247	2.222	4.4	19.0
2 1	7 55.31	+28 11.8	1.824	2.779	6.1	19.7	2 1	7 55.04	+30 39.3	1.265	2.219	8.3	19.2
2 11	7 45.87	+28 50.3	1.877	2.783	9.8	19.9	2 11	7 45.62	+31 10.1	1.308	2.217	12.9	19.5
2 21	7 38.83	+27 19.2	1.955	2.786	13.2	20.1	2 21	7 39.28	+31 20.6	1.372	2.214	17.1	19.7
<b>5</b>	<i>Astraea</i>		1 20.7 344°43	1°7/21.4	18		<b>5031</b>	<i>Švejar</i>		1 20.7 260°21	1°2/20.1	18	
12 13	8 29.09	+13 58.6	1.335	2.140	19.3	10.1	12 13	8 36.89	+21 3.7	1.776	2.561	16.0	18.3
12 23	8 27.56	+14 13.2	1.249	2.129	15.5	9.8	12 23	8 33.02	+21 31.7	1.678	2.549	12.7	18.0
1 2	8 22.82	+14 45.8	1.183	2.119	10.9	9.5	1 2	8 26.20	+22 8.6	1.602	2.537	8.7	17.7
1 12	8 15.45	+15 34.5	1.139	2.110	5.7	9.2	1 12	8 16.97	+22 49.8	1.551	2.524	4.2	17.4
1 22	8 6.54	+16 34.4	1.119	2.102	1.7	8.9	1 22	8 6.33	+23 30.0	1.528	2.511	1.5	17.2
2 1	7 57.57	+17 38.4	1.126	2.096	6.4	9.2	2 1	7 55.60	+24 3.9	1.534	2.498	6.0	17.5
2 11	7 50.16	+18 39.4	1.157	2.091	11.7	9.5	2 11	7 46.19	+24 28.0	1.567	2.485	10.6	17.7
2 21	7 45.51	+19 32.2	1.209	2.087	16.5	9.7	2 21	7 39.21	+24 41.3	1.625	2.471	14.6	17.9
<b>49615</b>	1999 <i>FW</i> <sub>41</sub>		1 20.7 19°26	1°8/21.6	18		<b>231405</b>	2006 <i>WZ</i> <sub>201</sub>		1 20.7 78°14	0°6/20.4	17	
12 13	8 31.17	+13 47.1	1.838	2.615	15.8	18.8	12 13	8 39.46	+17 51.0	1.328	2.123	19.9	21.0
12 23	8 28.06	+13 54.2	1.758	2.621	12.6	18.6	12 23	8 35.45	+18 34.6	1.266	2.142	15.6	20.8
1 2	8 22.48	+14 13.9	1.699	2.626	8.9	18.3	1 2	8 27.93	+19 32.6	1.224	2.161	10.6	20.6
1 12	8 15.04	+14 44.3	1.664	2.633	4.7	18.1	1 12	8 17.74	+20 38.8	1.206	2.179	5.0	20.3
1 22	8 6.63	+15 21.9	1.658	2.640	1.8	17.9	1 22	8 6.25	+21 45.2	1.215	2.198	1.1	20.1
2 1	7 58.35	+16 2.9	1.679	2.647	5.0	18.2	2 1	7 55.15	+22 44.0	1.250	2.217	6.6	20.5
2 11	7 51.30	+16 42.9	1.728	2.655	9.1	18.4	2 11	7 46.07	+23 30.2	1.312	2.235	11.7	20.8
2 21	7 46.30	+17 18.8	1.802	2.664	12.7	18.7	2 21	7 40.05	+24 2.4	1.396	2.253	16.0	21.2
<b>121983</b>	2000 <i>EN</i> <sub>164</sub>		1 20.7 249°06	1°3/20.2	18		<b>486861</b>	2014 <i>KZ</i> <sub>2</sub>		1 20.7 209°86	1°6/19.9	18	
12 13	8 39.51	+22 2.4	1.592	2.381	17.4	20.4	12 13	8 39.47	+20 56.1	1.875	2.651	15.6	22.7
12 23	8 35.39	+22 17.6	1.499	2.372	13.8	20.1	12 23	8 34.88	+21 43.3	1.779	2.645	12.4	22.5
1 2	8 27.96	+22 40.2	1.428	2.363	9.5	19.9	1 2	8 27.38	+22 40.4	1.706	2.638	8.4	22.2
1 12	8 17.84	+23 5.7	1.381	2.354	4.6	19.6	1 12	8 17.52	+23 42.1	1.659	2.631	4.1	22.0
1 22	8 6.18	+23 28.4	1.361	2.344	1.7	19.3	1 22	8 6.26	+24 42.0	1.641	2.622	1.9	21.8
2 1	7 54.51	+23 43.7	1.370	2.334	6.5	19.6	2 1	7 54.91	+25 33.9	1.653	2.613	6.0	22.0
2 11	7 44.44	+23 49.0	1.405	2.324	11.4	19.9	2 11	7 44.86	+26 13.8	1.693	2.603	10.4	22.3
2 21	7 37.15	+23 44.3	1.463	2.314	15.8	20.1	2 21	7 37.19	+26 40.6	1.757	2.593	14.2	22.5
<b>462914</b>	2011 <i>AZ</i> <sub>13</sub>		1 20.7 43°22	2°0/19.5	18		<b>270633</b>	2002 <i>PG</i> <sub>70</sub>		1 20.7 127°96	5°2/24.4	18	
12 13	8 33.90	+19 52.1	1.606	2.401	17.0	20.9	12 13	8 32.12	+ 0 54.1	2.668	3.365	13.3	20.9
12 23	8 30.68	+21 7.7	1.538	2.415	13.3	20.7	12 23	8 27.88	+ 0 41.8	2.581	3.378	11.2	20.8
1 2	8 24.52	+22 35.7	1.491	2.429	8.9	20.5	1 2	8 21.89	+ 0 44.5	2.517	3.390	8.9	20.7
1 12	8 16.09	+24 9.0	1.470	2.443	4.3	20.3	1 12	8 14.64	+ 1 3.0	2.477	3.402	6.6	20.5
1 22	8 6.47	+25 39.0	1.477	2.458	2.4	20.2	1 22	8 6.74	+ 1 36.5	2.466	3.414	5.2	20.5
2 1	7 57.03	+26 57.6	1.513	2.473	6.5	20.5	2 1	7 58.93	+ 2 22.7	2.485	3.425	5.7	20.5
2 11	7 49.13	+28 0.0	1.575	2.489	10.8	20.7	2 11	7 51.95	+ 3 18.1	2.532	3.436	7.7	20.6
2 21	7 43.73	+28 44.6	1.661	2.505	14.5	21.0	2 21	7 46.37	+ 4 18.4	2.607	3.447	10.0	20.8
<b>347916</b>	2003 <i>BO</i> <sub>37</sub>		1 20.7 7°98	5°3/19.6	17		<b>245773</b>	2006 <i>GY</i> <sub>8</sub>		1 20.7 208°51	0°9/20.2	18	
12 13	8 32.15	+29 16.9	0.872	1.724	23.2	19.7	12 13	8 38.46	+20 11.5	2.056	2.826	14.6	22.0
12 23	8 31.59	+29 30.7	0.818	1.724	18.5	19.4	12 23	8 33.75	+20 42.6	1.958	2.821	11.6	21.8
1 2	8 26.25	+29 44.4	0.780	1.727	13.0	19.1	1 2	8 26.41	+21 22.0	1.883	2.814	7.9	21.6
1 12	8 17.19	+29 48.9	0.761	1.733	7.4	18.8	1 12	8 16.98	+22 5.6	1.835	2.807	3.8	21.3
1 22	8 6.31	+29 36.2	0.763	1.741	5.5	18.8	1 22	8 6.36	+22 48.6	1.816	2.799	1.2	21.1
2 1	7 56.09	+29 2.5	0.787	1.751	9.9	19.0	2 1	7 55.70	+23 26.3	1.828	2.790	5.3	21.4
2 11	7 48.77	+28 10.1	0.831	1.763	15.4	19.4	2 11	7 46.21	+23 55.7	1.868	2.781	9.4	21.6
2 21	7 45.54	+27 4.9	0.893	1.777	20.2	19.7	2 21	7 38.84	+24 15.4	1.933	2.771	13.0	21.8
<b>429849</b>	2012 <i>QC</i> <sub>51</sub>		1 20.7 113°01	3°4/23.3	18		<b>375479</b>	2008 <i>UB</i> <sub>25</sub>		1 20.7 1°36	3°0/22.2	18	
12 13	8 31.59	+ 5 32.3	2.708	3.428	12.7	21.4	12 13	8 32.48	+10 43.5	2.026	2.784	15.2	21.5
12 23	8 27.43	+ 5 44.6	2.623	3.443	10.4	21.2	12 23	8 28.88	+10 38.2	1.935	2.783	12.3	21.3
1 2	8 21.57	+ 6 10.3	2.561	3.458	7.8	21.1	1 2	8 22.96	+10 45.8	1.866	2.783	8.9	21.1
1 12	8 14.47	+ 6 48.8	2.526	3.473	5.1	20.9	1 12	8 15.28	+11 5.8	1.822	2.783	5.3	20.9
1 22	8 6.74	+ 7 38.0	2.519	3.487	3.5	20.9	1 22	8 6.63	+11 36.0	1.806	2.784	3.0	20.7
2 1	7 59.10	+ 8 35.0	2.544	3.501	4.5	20.9	2 1	7 58.04	+12 13.4	1.820	2.784	5.2	20.9
2 11	7 52.28	+ 9 35.9	2.599	3.515	7.0	21.1	2 11	7 50.53	+12 53.9	1.861	2.784	8.8	21.1
2 21	7 46.85	+10 37.1	2.681	3.528	9.5	21.3	2 21	7 44.91	+13 34.1	1.927	2.785	12.2	21.3
<b>264306</b>	1999 <i>LW</i> <sub>12</sub>		1 20.7 191°05	2°7/18.7	18		<b>490707</b>	2010 <i>QZ</i> <sub>1</sub>		1 20.7 89°62	12°9/12.7	17	
12 13	8 36.87	+26 23.9	2.747	3.513									

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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>48020</b>	2001 DC		1 20.7 302°72	0°1/20.7 18			<b>132068</b>	2002 CY <sub>150</sub>		1 20.7 214°55	0°5/20.9 18		
12 13	8 38.44	+19 13.5	1.344	2.143	19.5	19.8	12 13	8 37.65	+16 24.9	2.106	2.867	14.6	20.9
12 23	8 34.96	+19 13.1	1.262	2.139	15.6	19.5	12 23	8 33.05	+16 47.6	2.003	2.859	11.6	20.7
1 2	8 27.87	+19 23.0	1.198	2.135	10.7	19.2	1 2	8 25.92	+17 20.6	1.924	2.850	8.0	20.5
1 12	8 17.87	+19 39.7	1.158	2.131	5.2	18.9	1 12	8 16.79	+18 1.4	1.871	2.841	4.0	20.2
1 22	8 6.22	+19 58.3	1.144	2.127	0.8	18.6	1 22	8 6.49	+18 45.9	1.847	2.831	0.7	19.9
2 1	7 54.67	+20 14.1	1.156	2.124	6.7	19.0	2 1	7 56.11	+19 29.8	1.854	2.820	4.9	20.2
2 11	7 44.99	+20 23.8	1.193	2.120	12.2	19.2	2 11	7 46.80	+20 9.2	1.890	2.808	9.0	20.4
2 21	7 38.41	+20 26.4	1.252	2.117	16.9	19.5	2 21	7 39.49	+20 42.0	1.952	2.796	12.7	20.6
<b>424991</b>	2009 CB <sub>19</sub>		1 20.7 240°97	5°6/25.3 17			<b>206906</b>	2004 JZ <sub>27</sub>		1 20.7 292°17	2°5/19.7 18		
12 13	8 30.19	- 2 55.5	2.954	3.627	12.6	21.8	12 13	8 37.92	+28 4.4	2.324	3.099	13.0	20.0
12 23	8 26.38	- 2 53.9	2.840	3.615	10.9	21.6	12 23	8 33.13	+28 8.5	2.217	3.081	10.3	19.8
1 2	8 20.93	- 2 35.9	2.748	3.602	8.9	21.5	1 2	8 25.88	+28 12.2	2.134	3.063	7.2	19.6
1 12	8 14.23	- 2 0.3	2.680	3.589	6.9	21.3	1 12	8 16.72	+28 11.8	2.077	3.045	3.9	19.4
1 22	8 6.80	- 1 7.4	2.640	3.576	5.7	21.2	1 22	8 6.51	+28 3.7	2.050	3.027	2.7	19.3
2 1	7 59.31	+ 0 0.5	2.631	3.563	6.0	21.2	2 1	7 56.32	+27 45.6	2.054	3.009	5.5	19.4
2 11	7 52.44	+ 1 19.7	2.651	3.549	7.6	21.3	2 11	7 47.26	+27 17.4	2.086	2.991	9.0	19.6
2 21	7 46.79	+ 2 45.4	2.699	3.535	9.8	21.4	2 21	7 40.20	+26 40.5	2.143	2.974	12.2	19.8
<b>413900</b>	2006 WO <sub>6</sub>		1 20.7 130°01	2°6/22.1 18			<b>427002</b>	2014 QA <sub>409</sub>		1 20.7 207°13	2°7/22.1 18		
12 13	8 36.09	+11 4.8	2.103	2.852	15.0	22.2	12 13	8 35.51	+11 13.3	2.138	2.888	14.8	21.6
12 23	8 31.49	+11 5.3	2.020	2.864	12.1	22.0	12 23	8 31.19	+11 8.9	2.040	2.884	12.0	21.4
1 2	8 24.61	+11 18.3	1.959	2.875	8.6	21.8	1 2	8 24.55	+11 16.6	1.963	2.879	8.6	21.2
1 12	8 16.02	+11 42.6	1.925	2.886	5.0	21.6	1 12	8 16.09	+11 35.5	1.913	2.874	5.1	20.9
1 22	8 6.55	+12 15.7	1.919	2.897	2.6	21.5	1 22	8 6.61	+12 3.7	1.891	2.868	2.7	20.8
2 1	7 57.23	+12 54.2	1.943	2.907	4.9	21.7	2 1	7 57.12	+12 38.2	1.899	2.862	5.0	20.9
2 11	7 49.06	+13 34.4	1.996	2.917	8.5	21.9	2 11	7 48.67	+13 15.3	1.935	2.856	8.7	21.1
2 21	7 42.79	+14 13.1	2.076	2.926	11.7	22.1	2 21	7 42.08	+13 52.0	1.998	2.849	12.1	21.3
<b>464025</b>	2014 WJ <sub>130</sub>		1 20.7 330°46	0°8/21.1 18			<b>375896</b>	2009 VZ <sub>86</sub>		1 20.7 10°41	2°2/21.8 18		
12 13	8 34.71	+16 51.1	1.892	2.668	15.5	21.8	12 13	8 33.19	+12 56.1	1.975	2.740	15.3	21.4
12 23	8 30.87	+16 56.6	1.803	2.667	12.3	21.5	12 23	8 29.53	+12 56.6	1.885	2.740	12.3	21.2
1 2	8 24.45	+17 11.7	1.735	2.666	8.5	21.3	1 2	8 23.48	+13 9.0	1.817	2.741	8.7	21.0
1 12	8 16.04	+17 34.1	1.694	2.665	4.2	21.1	1 12	8 15.58	+13 32.2	1.775	2.741	4.8	20.7
1 22	8 6.55	+18 0.4	1.680	2.664	0.9	20.8	1 22	8 6.69	+14 3.5	1.761	2.742	2.2	20.6
2 1	7 57.13	+18 26.9	1.696	2.663	5.1	21.1	2 1	7 57.86	+14 39.3	1.776	2.742	5.0	20.8
2 11	7 48.96	+18 50.5	1.739	2.662	9.3	21.3	2 11	7 50.17	+15 15.9	1.819	2.743	8.9	21.0
2 21	7 42.92	+19 9.1	1.807	2.662	13.0	21.6	2 21	7 44.45	+15 50.1	1.887	2.744	12.4	21.2
<b>432581</b>	2010 OF <sub>99</sub>		1 20.7 214°32	5°0/17.8 17			<b>140718</b>	2001 UG <sub>93</sub>		1 20.7 292°37	4°1/23.6 18		
12 13	8 42.19	+39 20.9	3.075	3.827	10.6	22.4	12 13	8 30.11	+ 4 32.7	2.400	3.126	13.9	19.8
12 23	8 35.90	+39 47.8	2.981	3.819	8.7	22.3	12 23	8 26.71	+ 4 41.3	2.300	3.122	11.6	19.6
1 2	8 27.40	+40 8.8	2.911	3.812	6.8	22.1	1 2	8 21.36	+ 5 5.8	2.221	3.118	8.8	19.4
1 12	8 17.29	+40 19.3	2.870	3.804	5.3	22.0	1 12	8 14.52	+ 5 46.3	2.168	3.113	6.0	19.2
1 22	8 6.38	+40 15.3	2.858	3.796	5.2	22.0	1 22	8 6.86	+ 6 41.1	2.143	3.109	4.2	19.1
2 1	7 55.64	+39 55.2	2.877	3.787	6.5	22.1	2 1	7 59.17	+ 7 46.8	2.148	3.105	5.2	19.2
2 11	7 46.03	+39 19.4	2.924	3.778	8.5	22.2	2 11	7 52.30	+ 8 58.8	2.182	3.100	7.9	19.3
2 21	7 38.29	+38 30.6	2.997	3.769	10.6	22.3	2 21	7 46.95	+10 12.2	2.242	3.096	10.9	19.5
<b>60946</b>	2000 JY <sub>57</sub>		1 20.7 275°73	1°8/19.7 18			<b>458880</b>	2011 UG <sub>161</sub>		1 20.7 67°97	0°6/20.9 17		
12 13	8 35.81	+22 11.0	1.909	2.693	15.1	19.7	12 13	8 38.73	+17 0.1	1.491	2.277	18.5	21.4
12 23	8 32.11	+22 50.7	1.803	2.674	12.0	19.4	12 23	8 34.40	+17 12.8	1.430	2.299	14.6	21.2
1 2	8 25.59	+23 39.0	1.719	2.654	8.2	19.2	1 2	8 26.95	+17 37.4	1.388	2.321	9.9	21.0
1 12	8 16.74	+24 31.3	1.661	2.633	4.1	18.9	1 12	8 17.23	+18 10.0	1.371	2.343	4.8	20.7
1 22	8 6.45	+25 21.6	1.631	2.613	2.1	18.7	1 22	8 6.46	+18 45.7	1.381	2.365	0.8	20.5
2 1	7 55.95	+26 4.4	1.631	2.592	6.1	18.9	2 1	7 56.12	+19 19.3	1.419	2.387	5.8	20.9
2 11	7 46.62	+26 35.7	1.658	2.571	10.4	19.1	2 11	7 47.57	+19 47.3	1.484	2.409	10.4	21.2
2 21	7 39.53	+26 54.4	1.709	2.550	14.3	19.3	2 21	7 41.72	+20 7.9	1.572	2.430	14.4	21.5
<b>325151</b>	2008 EB <sub>169</sub>		1 20.7 258°87	2°1/19.3 17			<b>233172</b>	2005 VL <sub>21</sub>		1 20.7 336°17	2°4/19.7 18		
12 13	8 35.94	+21 26.4	2.123	2.899	14.0	21.5	12 13	8 36.13	+21 48.1	1.347	2.154	19.0	21.2
12 23	8 31.97	+22 32.8	2.013	2.880	11.1	21.3	12 23	8 33.28	+22 34.5	1.268	2.151	15.1	20.9
1 2	8 25.38	+23 49.9	1.927	2.860	7.6	21.1	1 2	8 26.84	+23 32.7	1.208	2.148	10.3	20.6
1 12	8 16.61	+25 12.5	1.868	2.840	3.8	20.8	1 12	8 17.46	+24 36.0	1.171	2.145	5.1	20.3
1 22	8 6.47	+26 33.9	1.840	2.819	2.4	20.6	1 22	8 6.41	+25 36.0	1.161	2.142	2.7	20.2
2 1	7 56.05	+27 47.4	1.841	2.798	5.9	20.8	2 1	7 55.39	+26 24.6	1.177	2.140	7.5	20.4
2 11	7 46.60	+28 48.1	1.872	2.777	9.9	21.0	2 11	7 46.21	+26 57.3	1.218	2.138	12.7	20.7
2 21	7 39.15	+29 33.9	1.928	2.755	13.5	21.2	2 21	7 40.14	+27 13.4	1.280	2.136	17.2	21.0
<b>205788</b>	2002 CX <sub>119</sub>		1 20.7 34°83	2°8/21.9 18			<b>231536</b>	2008 SV <sub>156</sub>		1 20.7 68°23	0°3/20.5 18		
12 13	8 33.95	+11 57.5	1.313	2.105	20.3	19.7	12 13	8 35.42	+19 39.1	1.990	2.768	14.8	21.0
12 23	8 31.19	+12 3.2	1.243	2.113	16.3	19.5	12 23	8 31.17	+19 54.6	1.916	2.782	11.6	20.8
1 2	8 25.12	+12 28.0	1.192	2.122	11.6	19.2	1 2	8 24.48	+20 17.3	1.865	2.797	7.8	20.6
1 12	8 16.50	+13 9.9	1.163	2.131	6.4	19.0	1 12	8 16.00	+20 43.7	1.839	2.812	3.7	20.4
1 22	8 6.53	+14 4.3	1.160	2.141	2.8	18.8	1 22	8 6.66	+21 10.1	1.843	2.826	0.7	20.2
2 1	7 56.79	+15 4.6	1.182	2.151	6.4	19.0	2 1	7 57.54	+21 32.9	1.876	2.841	4.9	20.5
2 11	7 48.82	+16 3.8	1.230	2.162	11.4	19.3	2 11	7 49.73	+21 49.9	1.937	2.856	8.7	20.8
2 21	7 43.68	+16 56.8	1.300	2.173	15.9	19.6	2 21	7 43.97	+22 0.1	2.023	2.871	12.1	21.0
<b>301348</b>	2009 CE <sub>9</sub>		1 20.7 20°21	2°1/21.7 18			<b>358006</b>	2006 DZ <sub>80</sub>		1 20.7 28°13	3°6/22.2 17		
12 13	8 33.29	+12 19.5	1.407	2.195	19.3	20.5	12 13	8 32.36	+11 8.5	1.097			

EPHEMERIDES

1 20.7

1 20.7

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>157989</b>	2000 <i>KU</i> <sub>26</sub>		1 20.7 141°74	2°2/21.7	18		<b>110580</b>	2001 <i>TQ</i> <sub>119</sub>		1 20.7 246°99	5°6/22.7	18	
12 13	8 40.24	+13 32.1	1.977	2.729	15.7	20.7	12 13	8 36.89	+ 6 18.2	2.107	2.835	15.6	19.7
12 23	8 34.90	+13 24.6	1.895	2.742	12.6	20.5	12 23	8 32.35	+ 5 22.1	2.001	2.823	13.0	19.5
1 2	8 27.02	+13 27.9	1.834	2.754	8.9	20.3	1 2	8 25.42	+ 4 37.5	1.917	2.811	10.1	19.3
1 12	8 17.24	+13 40.4	1.801	2.766	4.9	20.1	1 12	8 16.58	+ 4 6.4	1.858	2.799	7.2	19.1
1 22	8 6.51	+13 59.8	1.796	2.776	2.2	19.9	1 22	8 6.63	+ 3 50.1	1.827	2.786	5.6	19.0
2 1	7 55.96	+14 22.9	1.822	2.786	5.1	20.2	2 1	7 56.61	+ 3 48.4	1.825	2.772	6.9	19.0
2 11	7 46.74	+14 46.7	1.876	2.795	9.0	20.4	2 11	7 47.59	+ 3 59.0	1.851	2.759	9.8	19.2
2 21	7 39.67	+15 8.8	1.956	2.804	12.5	20.6	2 21	7 40.46	+ 4 18.7	1.902	2.745	13.0	19.4
<b>183828</b>	2004 <i>BV</i> <sub>95</sub>		1 20.7 76°80	1°1/20.3	18		<b>335636</b>	2006 <i>JZ</i> <sub>35</sub>		1 20.7 159°02	0°1/20.8	17	
12 13	8 43.07	+20 24.3	1.301	2.097	20.2	19.6	12 13	8 33.51	+18 5.8	3.071	3.824	10.6	22.5
12 23	8 38.24	+20 52.2	1.246	2.122	15.8	19.4	12 23	8 28.85	+18 26.4	2.979	3.831	8.4	22.4
1 2	8 29.78	+21 30.2	1.211	2.147	10.7	19.1	1 2	8 22.54	+18 52.7	2.912	3.838	5.7	22.2
1 12	8 18.63	+22 12.3	1.199	2.172	5.0	18.9	1 12	8 15.03	+19 22.4	2.874	3.844	2.7	22.0
1 22	8 6.32	+22 51.1	1.214	2.197	1.5	18.7	1 22	8 6.89	+19 53.1	2.866	3.850	0.4	21.8
2 1	7 54.61	+23 21.0	1.256	2.222	6.7	19.1	2 1	7 58.80	+20 22.2	2.891	3.855	3.5	22.1
2 11	7 45.14	+23 39.3	1.324	2.246	11.7	19.5	2 11	7 51.48	+20 47.8	2.946	3.860	6.3	22.3
2 21	7 38.88	+23 46.2	1.415	2.270	15.9	19.8	2 21	7 45.47	+21 8.7	3.029	3.864	8.9	22.4
<b>199790</b>	2006 <i>MN</i> <sub>7</sub>		1 20.7 64°17	1°4/21.2	18		<b>18072</b>	2000 <i>CL</i> <sub>71</sub>		1 20.7 280°38	7°6/24.6	18	
12 13	8 37.59	+17 28.3	2.235	2.995	13.9	20.1	12 13	8 32.28	- 0 30.5	1.868	2.585	17.6	18.5
12 23	8 32.52	+16 54.1	2.149	3.003	11.0	19.9	12 23	8 29.14	- 0 59.9	1.763	2.570	15.2	18.3
1 2	8 25.24	+16 25.0	2.087	3.012	7.6	19.7	1 2	8 23.47	- 1 8.5	1.677	2.554	12.3	18.1
1 12	8 16.33	+16 0.1	2.052	3.020	4.0	19.5	1 12	8 15.74	- 0 52.7	1.613	2.538	9.5	17.9
1 22	8 6.66	+15 38.5	2.047	3.029	1.5	19.4	1 22	8 6.75	- 0 11.8	1.575	2.521	7.7	17.7
2 1	7 57.20	+15 19.2	2.072	3.037	4.5	19.6	2 1	7 57.58	+ 0 52.2	1.563	2.505	8.4	17.7
2 11	7 48.91	+15 1.4	2.127	3.046	8.1	19.8	2 11	7 49.42	+ 2 13.7	1.578	2.489	11.0	17.9
2 21	7 42.50	+14 44.5	2.207	3.055	11.3	20.0	2 21	7 43.25	+ 3 45.1	1.618	2.473	14.3	18.0
<b>5280</b>	Andrewbecker		1 20.7 266°12	6°8/24.0	18		<b>244611</b>	2003 <i>AH</i> <sub>13</sub>		1 20.7 62°79	2°6/22.3	18	
12 13	8 33.47	+ 0 58.8	2.077	2.791	16.2	18.3	12 13	8 36.69	+ 8 32.0	1.619	2.378	18.4	19.9
12 23	8 29.81	+ 0 25.3	1.965	2.772	13.9	18.1	12 23	8 32.47	+ 9 21.4	1.560	2.409	14.7	19.7
1 2	8 23.79	+ 0 9.2	1.873	2.752	11.2	17.9	1 2	8 25.51	+10 31.4	1.521	2.440	10.4	19.5
1 12	8 15.85	+ 0 13.2	1.805	2.732	8.5	17.6	1 12	8 16.55	+11 58.0	1.508	2.471	5.8	19.3
1 22	8 6.71	+ 0 38.2	1.763	2.711	6.9	17.5	1 22	8 6.67	+13 34.6	1.522	2.502	2.6	19.2
2 1	7 57.37	+ 1 22.9	1.749	2.690	7.7	17.5	2 1	7 57.14	+15 13.3	1.566	2.533	5.4	19.4
2 11	7 48.93	+ 2 23.0	1.762	2.669	10.3	17.6	2 11	7 49.17	+16 46.4	1.639	2.564	9.6	19.7
2 21	7 42.29	+ 3 32.8	1.800	2.647	13.4	17.8	2 21	7 43.57	+18 8.9	1.736	2.594	13.3	20.0
<b>312133</b>	2007 <i>TT</i> <sub>279</sub>		1 20.7 146°65	1°7/19.8	18		<b>185783</b>	1999 <i>UP</i> <sub>48</sub>		1 20.7 132°81	4°4/18.8	17	
12 13	8 39.32	+21 56.2	2.031	2.804	14.7	21.8	12 13	8 44.53	+28 8.5	1.699	2.482	16.7	21.3
12 23	8 34.35	+22 40.7	1.950	2.814	11.5	21.6	12 23	8 39.06	+29 8.0	1.628	2.496	13.2	21.1
1 2	8 26.76	+23 32.3	1.892	2.823	7.8	21.4	1 2	8 30.27	+30 10.5	1.580	2.510	9.2	20.9
1 12	8 17.17	+24 25.8	1.861	2.832	3.8	21.2	1 12	8 18.93	+31 7.7	1.558	2.523	5.5	20.7
1 22	8 6.53	+25 15.6	1.860	2.841	1.9	21.0	1 22	8 6.31	+31 51.9	1.565	2.536	4.7	20.7
2 1	7 56.02	+25 57.0	1.889	2.848	5.5	21.3	2 1	7 53.99	+32 17.7	1.600	2.547	7.7	20.9
2 11	7 46.83	+26 27.1	1.947	2.855	9.4	21.5	2 11	7 43.52	+32 24.0	1.662	2.558	11.5	21.1
2 21	7 39.82	+26 45.5	2.029	2.862	12.7	21.8	2 21	7 35.93	+32 13.4	1.748	2.568	15.0	21.4
<b>341487</b>	2007 <i>TK</i> <sub>371</sub>		1 20.7 126°19	2°9/18.4	18		<b>99493</b>	2002 <i>CR</i> <sub>237</sub>		1 20.7 191°21	3°4/18.9	18	
12 13	8 35.70	+27 45.1	2.933	3.700	10.8	21.1	12 13	8 38.51	+29 38.1	2.426	3.198	12.6	19.8
12 23	8 30.77	+28 48.0	2.857	3.717	8.4	20.9	12 23	8 33.46	+30 12.5	2.336	3.197	10.0	19.6
1 2	8 23.95	+29 52.6	2.807	3.733	5.8	20.8	1 2	8 26.04	+30 47.1	2.269	3.196	7.0	19.4
1 12	8 15.72	+30 54.2	2.786	3.749	3.5	20.6	1 12	8 16.81	+31 17.1	2.231	3.194	4.3	19.2
1 22	8 6.76	+31 48.5	2.796	3.764	3.1	20.6	1 22	8 6.63	+31 37.9	2.222	3.191	3.6	19.2
2 1	7 57.89	+32 32.1	2.838	3.779	5.1	20.8	2 1	7 56.55	+31 46.4	2.243	3.189	5.9	19.3
2 11	7 49.91	+33 3.2	2.909	3.794	7.6	21.0	2 11	7 47.62	+31 41.7	2.293	3.186	8.9	19.5
2 21	7 43.47	+33 22.0	3.007	3.807	9.8	21.1	2 21	7 40.65	+31 25.1	2.368	3.182	11.7	19.7
<b>181715</b>	1993 <i>TO</i> <sub>34</sub>		1 20.7 113°10	0°7/21.0	18		<b>51952</b>	2001 <i>QG</i> <sub>226</sub>		1 20.7 197°98	3°8/22.9	18	
12 13	8 41.16	+15 40.2	1.554	2.329	18.4	20.7	12 13	8 31.94	+ 7 12.1	2.525	3.255	13.2	18.6
12 23	8 36.31	+16 7.0	1.485	2.347	14.5	20.5	12 23	8 27.99	+ 6 55.0	2.427	3.254	10.9	18.5
1 2	8 28.33	+16 47.6	1.436	2.365	10.0	20.3	1 2	8 22.17	+ 6 49.6	2.352	3.253	8.2	18.3
1 12	8 17.97	+17 38.0	1.412	2.383	4.9	20.0	1 12	8 14.92	+ 6 56.4	2.303	3.252	5.5	18.1
1 22	8 6.43	+18 32.2	1.415	2.399	0.9	19.8	1 22	8 6.92	+ 7 14.5	2.283	3.250	3.8	18.0
2 1	7 55.20	+19 24.2	1.448	2.415	5.8	20.2	2 1	7 58.93	+ 7 41.9	2.292	3.248	5.0	18.1
2 11	7 45.70	+20 9.2	1.508	2.430	10.5	20.5	2 11	7 51.78	+ 8 15.7	2.331	3.246	7.7	18.2
2 21	7 38.91	+20 44.9	1.592	2.445	14.6	20.8	2 21	7 46.12	+ 8 52.8	2.396	3.244	10.4	18.4
<b>9198</b>	Sasagamine		1 20.7 359°03	0°9/21.0	18		<b>122806</b>	2000 <i>SR</i> <sub>99</sub>		1 20.7 55°63	1°1/21.2	18	
12 13	8 34.78	+16 50.6	1.252	2.059	20.3	17.3	12 13	8 35.40	+16 24.0	1.797	2.574	16.2	20.0
12 23	8 32.25	+16 56.2	1.176	2.057	16.2	17.0	12 23	8 31.44	+16 22.9	1.719	2.583	12.8	19.8
1 2	8 26.13	+17 16.1	1.118	2.056	11.2	16.7	1 2	8 24.84	+16 31.7	1.663	2.593	8.8	19.6
1 12	8 17.14	+17 47.5	1.082	2.055	5.5	16.4	1 12	8 16.28	+16 48.2	1.633	2.603	4.5	19.3
1 22	8 6.54	+18 24.9	1.072	2.055	1.1	16.1	1 22	8 6.72	+17 9.2	1.630	2.613	1.2	19.1
2 1	7 56.06	+19 2.3	1.086	2.056	6.7	16.4	2 1	7 57.36	+17 31.1	1.655	2.623	5.1	19.4
2 11	7 47.45	+19 34.5	1.126	2.057	12.3	16.8	2 11	7 49.38	+17 51.0	1.709	2.633	9.3	19.7
2 21	7 41.94	+19 58.7	1.186	2.059	17.1	17.0	2 21	7 43.63	+18 6.9	1.787	2.644	13.0	19.9
<b>328935</b>	2010 <i>VW</i> <sub>25</sub>		1 20.7 353°18	2°0/19.9	16		<b>304494</b>	2006 <i>UF</i> <sub>126</sub>		1 20.7 156°55	0°3/20.5	17	
12 13	8 32.84	+22 18.2	1.456	2.26									

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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>500454</b>	2012 <i>TS</i> <sub>203</sub>		1 20.7 151°01	0°3/20.5	17		<b>274944</b>	2009 <i>SF</i> <sub>244</sub>		1 20.7 359°12	5°5/23.5	18	
12 13	8 33.38	+19 25.4	2.813	3.574	11.3	22.5	12 13	8 30.07	+5 39.1	1.617	2.379	18.3	20.4
12 23	8 28.94	+19 47.1	2.724	3.581	8.9	22.2	12 23	8 27.62	+5 20.6	1.533	2.377	15.2	20.1
1 2	8 22.70	+20 14.2	2.658	3.587	6.0	22.2	1 2	8 22.49	+5 21.8	1.467	2.375	11.6	19.9
1 12	8 15.14	+20 44.3	2.621	3.593	2.8	22.0	1 12	8 15.27	+5 44.1	1.424	2.375	7.9	19.7
1 22	8 6.90	+21 14.5	2.615	3.599	0.6	21.8	1 22	8 6.89	+6 26.2	1.407	2.375	5.6	19.6
2 1	7 58.73	+21 42.1	2.640	3.604	3.8	22.0	2 1	7 58.54	+7 24.1	1.416	2.376	7.0	19.7
2 11	7 51.40	+22 5.1	2.695	3.609	6.8	22.3	2 11	7 51.47	+8 31.6	1.451	2.377	10.5	19.9
2 21	7 45.52	+22 22.4	2.777	3.614	9.5	22.4	2 21	7 46.63	+9 41.9	1.510	2.380	14.2	20.1
<b>387038</b>	2012 <i>SU</i> <sub>57</sub>		1 20.7 131°84	1°0/21.2	17 R		<b>356310</b>	2010 <i>GD</i> <sub>161</sub>		1 20.7 277°76	2°8/21.9	18	
12 13	8 41.56	+15 51.6	1.676	2.444	17.5	21.7	12 13	8 34.81	+11 36.8	1.578	2.353	18.1	21.6
12 23	8 36.45	+16 3.4	1.600	2.459	13.9	21.5	12 23	8 31.71	+11 41.4	1.479	2.338	14.8	21.3
1 2	8 28.35	+16 27.0	1.545	2.473	9.6	21.2	1 2	8 25.56	+12 3.0	1.399	2.324	10.7	21.0
1 12	8 17.99	+16 59.4	1.516	2.486	4.8	21.0	1 12	8 16.88	+12 40.9	1.344	2.309	6.0	20.7
1 22	8 6.48	+17 36.1	1.515	2.498	1.1	20.8	1 22	8 6.64	+13 32.0	1.314	2.295	2.8	20.5
2 1	7 55.22	+18 12.3	1.543	2.510	5.5	21.1	2 1	7 56.21	+14 30.9	1.313	2.280	6.2	20.7
2 11	7 45.56	+18 44.2	1.599	2.520	10.1	21.4	2 11	7 47.09	+15 31.4	1.337	2.265	11.1	20.9
2 21	7 38.47	+19 9.7	1.680	2.530	14.0	21.6	2 21	7 40.46	+16 28.2	1.385	2.251	15.6	21.1
<b>80007</b>	1999 <i>FE</i> <sub>61</sub>		1 20.7 293°71	2°5/22.1	18		<b>191100</b>	2002 <i>EH</i> <sub>14</sub>		1 20.7 126°22	14°6/30.1	18	
12 13	8 31.47	+11 24.4	2.264	3.019	13.9	19.7	12 13	8 35.09	-14 2.6	1.211	1.897	26.9	20.4
12 23	8 27.98	+11 23.4	2.161	3.009	11.2	19.5	12 23	8 32.59	-14 31.4	1.135	1.899	24.4	20.2
1 2	8 22.36	+11 33.9	2.081	2.998	8.1	19.2	1 2	8 26.49	-14 15.7	1.070	1.900	21.3	20.0
1 12	8 15.10	+11 55.3	2.026	2.988	4.7	19.0	1 12	8 17.42	-13 5.5	1.021	1.902	18.0	19.8
1 22	8 6.90	+12 25.6	2.000	2.978	2.5	18.8	1 22	8 6.57	-10 56.5	0.991	1.903	15.4	19.6
2 1	7 58.66	+13 1.8	2.003	2.968	4.7	19.0	2 1	7 55.66	-7 53.8	0.983	1.905	14.6	19.6
2 11	7 51.31	+13 40.7	2.035	2.958	8.2	19.2	2 11	7 46.51	-4 13.9	1.000	1.906	16.3	19.7
2 21	7 45.64	+14 18.9	2.093	2.948	11.5	19.4	2 21	7 40.47	-0 18.8	1.040	1.907	19.4	19.9
<b>115265</b>	2003 <i>SC</i> <sub>173</sub>		1 20.7 99°21	0°7/21.1	18		<b>231417</b>	2007 <i>DH</i> <sub>63</sub>		1 20.7 174°28	0°8/21.1	18	
12 13	8 38.76	+15 42.7	1.799	2.567	16.5	20.5	12 13	8 37.59	+14 32.3	1.606	2.382	17.8	20.9
12 23	8 33.98	+16 9.8	1.729	2.589	13.0	20.3	12 23	8 33.71	+15 7.4	1.520	2.384	14.2	20.7
1 2	8 26.50	+16 48.8	1.682	2.610	8.9	20.1	1 2	8 26.76	+15 58.7	1.455	2.385	9.9	20.4
1 12	8 17.04	+17 36.0	1.660	2.631	4.4	19.9	1 12	8 17.37	+17 2.7	1.415	2.386	4.9	20.2
1 22	8 6.63	+18 26.5	1.667	2.651	0.8	19.7	1 22	8 6.59	+18 13.2	1.403	2.387	1.0	19.9
2 1	7 56.50	+19 15.1	1.704	2.671	5.1	20.0	2 1	7 55.82	+19 23.4	1.419	2.387	5.8	20.2
2 11	7 47.83	+19 57.9	1.769	2.690	9.3	20.3	2 11	7 46.52	+20 27.1	1.463	2.386	10.7	20.5
2 21	7 41.47	+20 32.7	1.859	2.709	13.0	20.6	2 21	7 39.78	+21 20.4	1.531	2.386	14.9	20.7
<b>55949</b>	1998 <i>HZ</i> <sub>45</sub>		1 20.7 355°60	0°7/20.4	18 R		<b>14089</b>	1997 <i>JC</i> <sub>14</sub>		1 20.7 110°41	5°1/23.5	18	
12 13	8 31.39	+20 32.6	1.828	2.621	15.3	18.5	12 13	8 36.24	+4 30.2	2.037	2.762	16.1	18.7
12 23	8 28.48	+20 49.2	1.742	2.617	12.1	18.3	12 23	8 31.64	+4 13.9	1.960	2.780	13.4	18.6
1 2	8 22.97	+21 13.5	1.677	2.614	8.2	18.1	1 2	8 24.76	+4 14.3	1.904	2.798	10.2	18.4
1 12	8 15.46	+21 41.8	1.638	2.611	3.9	17.8	1 12	8 16.19	+4 32.0	1.873	2.816	7.0	18.2
1 22	8 6.86	+22 10.1	1.626	2.610	1.0	17.6	1 22	8 6.79	+5 5.6	1.870	2.833	5.1	18.1
2 1	7 58.34	+22 34.3	1.643	2.609	5.3	17.9	2 1	7 57.58	+5 51.9	1.896	2.849	6.2	18.2
2 11	7 51.08	+22 51.5	1.686	2.609	9.6	18.1	2 11	7 49.54	+6 46.2	1.951	2.865	9.0	18.4
2 21	7 45.98	+23 0.7	1.754	2.610	13.3	18.4	2 21	7 43.43	+7 43.6	2.031	2.880	12.0	18.7
<b>58044</b>	2002 <i>WF</i>		1 20.7 66°35	0°4/20.5	18		<b>448155</b>	2008 <i>SA</i> <sub>241</sub>		1 20.7 147°94	2°6/19.6	18	
12 13	8 41.95	+22 11.3	2.178	2.941	14.1	18.2	12 13	8 41.79	+24 14.0	1.772	2.552	16.2	22.2
12 23	8 35.71	+22 0.3	2.120	2.977	11.0	18.1	12 23	8 36.74	+24 56.2	1.693	2.561	12.8	21.9
1 2	8 27.21	+21 52.3	2.085	3.014	7.4	17.9	1 2	8 28.64	+25 44.2	1.637	2.570	8.7	21.7
1 12	8 17.20	+21 44.8	2.078	3.049	3.5	17.7	1 12	8 18.18	+26 31.9	1.607	2.577	4.5	21.5
1 22	8 6.64	+21 35.3	2.101	3.085	0.7	17.6	1 22	8 6.49	+27 12.8	1.606	2.584	2.8	21.4
2 1	7 56.57	+21 22.4	2.156	3.120	4.5	17.9	2 1	7 54.99	+27 41.8	1.633	2.591	6.5	21.6
2 11	7 47.95	+21 5.8	2.240	3.155	8.0	18.2	2 11	7 45.09	+27 56.8	1.689	2.597	10.6	21.9
2 21	7 41.40	+20 46.0	2.351	3.189	11.0	18.5	2 21	7 37.79	+27 58.4	1.768	2.602	14.3	22.1
<b>331246</b>	2011 <i>BF</i> <sub>132</sub>		1 20.7 136°60	1°4/21.6	18		<b>360230</b>	1999 <i>VG</i> <sub>116</sub>		1 20.7 100°71	1°5/21.4	18	
12 13	8 34.97	+13 47.3	2.517	3.265	12.8	21.9	12 13	8 36.92	+14 40.6	1.743	2.514	16.8	21.1
12 23	8 30.30	+14 0.5	2.431	3.277	10.2	21.8	12 23	8 32.73	+14 47.4	1.665	2.525	13.4	20.9
1 2	8 23.68	+14 23.1	2.369	3.289	7.1	21.6	1 2	8 25.80	+15 6.5	1.608	2.535	9.3	20.7
1 12	8 15.63	+14 53.2	2.335	3.301	3.8	21.4	1 12	8 16.78	+15 35.5	1.576	2.545	4.8	20.4
1 22	8 6.85	+15 28.1	2.330	3.312	1.4	21.2	1 22	8 6.70	+16 10.7	1.572	2.555	1.6	20.2
2 1	7 58.18	+16 4.7	2.357	3.323	4.0	21.4	2 1	7 56.80	+16 47.8	1.597	2.565	5.3	20.5
2 11	7 50.45	+16 40.2	2.414	3.332	7.3	21.7	2 11	7 48.33	+17 22.8	1.650	2.574	9.6	20.8
2 21	7 44.32	+17 12.4	2.497	3.342	10.2	21.9	2 21	7 42.17	+17 52.9	1.727	2.583	13.4	21.0
<b>144642</b>	2004 <i>FO</i> <sub>96</sub>		1 20.7 48°56	3°2/22.6	18		<b>109582</b>	2001 <i>QL</i> <sub>275</sub>		1 20.7 155°11	1°7/21.4	18	
12 13	8 33.06	+8 1.2	1.722	2.482	17.4	19.7	12 13	8 37.69	+16 22.7	2.485	3.235	12.9	18.9
12 23	8 29.81	+8 30.9	1.638	2.486	14.2	19.5	12 23	8 32.45	+15 47.8	2.390	3.237	10.3	18.7
1 2	8 23.91	+9 21.0	1.573	2.490	10.3	19.2	1 2	8 25.15	+15 17.7	2.318	3.239	7.2	18.5
1 12	8 15.93	+10 30.0	1.533	2.494	6.1	19.0	1 12	8 16.34	+14 52.1	2.275	3.241	3.9	18.3
1 22	8 6.79	+11 53.4	1.520	2.498	3.2	18.8	1 22	8 6.78	+14 30.0	2.262	3.243	1.7	18.1
2 1	7 57.69	+13 24.5	1.536	2.502	5.6	19.0	2 1	7 57.34	+14 10.8	2.281	3.245	4.3	18.3
2 11	7 49.84	+14 55.9	1.580	2.507	9.8	19.2	2 11	7 48.92	+13 53.7	2.329	3.246	7.6	18.5
2 21	7 44.19	+16 21.2	1.649	2.511	13.6	19.5	2 21	7 42.20	+13 38.0	2.404	3.248	10.6	18.7
<b>202314</b>	2005 <i>EM</i> <sub>18</sub>		1 20.7 236°07	1°4/19.7	17		<b>400855</b>	2010 <i>MN</i> <sub>113</sub>		1 20.7 168°02	0°3/20.9	18	
12 13	8 30.83	+25 22.8	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>428806</b>	2008 <i>TC</i> <sub>26</sub>		1 20.7 143°61	16°6/16.2	16		<b>136302</b>	2004 <i>BL</i> <sub>19</sub>		1 20.7 71°42	3°8/19.3	18	R
12 13	9 5.31	+52 18.3	1.240	2.004	22.7	21.1	12 13	8 42.00	+27 30.3	1.605	2.397	17.2	19.4
12 23	8 59.26	+54 10.3	1.189	2.009	20.2	20.9	12 23	8 36.98	+28 10.6	1.548	2.420	13.5	19.2
1 2	8 46.12	+55 43.1	1.155	2.014	18.1	20.8	1 2	8 28.74	+28 53.0	1.511	2.444	9.3	19.1
1 12	8 27.06	+56 35.8	1.141	2.019	16.8	20.7	1 12	8 18.16	+29 30.3	1.500	2.468	5.2	18.9
1 22	8 5.21	+56 31.9	1.147	2.023	16.9	20.7	1 22	8 6.55	+29 56.0	1.517	2.492	4.0	18.9
2 1	7 44.88	+55 27.6	1.173	2.027	18.3	20.8	2 1	7 55.46	+30 6.2	1.562	2.515	7.2	19.1
2 11	7 29.62	+53 33.6	1.219	2.030	20.6	21.0	2 11	7 46.30	+30 0.5	1.633	2.539	11.1	19.4
2 21	7 20.85	+51 7.8	1.283	2.033	23.0	21.2	2 21	7 39.97	+29 41.5	1.728	2.562	14.5	19.6
<b>154325</b>	2002 <i>VW</i> <sub>63</sub>		1 20.7 62°20	2°2/20.0	17		<b>34646</b>	2000 <i>WT</i> <sub>95</sub>		1 20.7 47°46	0°1/20.7	18	
12 13	8 41.21	+23 36.5	1.283	2.088	19.9	20.4	12 13	8 34.83	+18 54.0	1.897	2.678	15.3	19.4
12 23	8 37.12	+23 56.3	1.221	2.102	15.7	20.2	12 23	8 30.99	+19 9.9	1.814	2.682	12.1	19.2
1 2	8 29.26	+24 22.8	1.177	2.116	10.7	20.0	1 2	8 24.58	+19 34.3	1.753	2.686	8.2	18.9
1 12	8 18.54	+24 49.6	1.157	2.130	5.2	19.7	1 12	8 16.22	+20 3.9	1.718	2.691	3.9	18.7
1 22	8 6.46	+25 9.8	1.163	2.144	2.5	19.6	1 22	8 6.82	+20 34.7	1.711	2.695	0.6	18.4
2 1	7 54.87	+25 18.8	1.195	2.159	7.3	19.9	2 1	7 57.56	+21 2.7	1.733	2.700	5.1	18.8
2 11	7 45.49	+25 15.0	1.252	2.174	12.3	20.2	2 11	7 49.57	+21 25.0	1.783	2.705	9.2	19.0
2 21	7 39.42	+25 0.0	1.331	2.188	16.6	20.5	2 21	7 43.73	+21 40.2	1.858	2.710	12.9	19.3
<b>38345</b>	1999 <i>RO</i> <sub>141</sub>		1 20.7 217°83	0°7/20.5	18		<b>470874</b>	2009 <i>AQ</i> <sub>46</sub>		1 20.7 284°77	1°3/21.5	16	
12 13	8 39.57	+21 7.9	1.853	2.630	15.7	19.1	12 13	8 31.92	+14 32.9	2.442	3.201	12.9	22.0
12 23	8 34.92	+21 14.8	1.759	2.625	12.5	18.9	12 23	8 28.31	+14 44.5	2.326	3.179	10.3	21.8
1 2	8 27.39	+21 27.8	1.687	2.620	8.5	18.6	1 2	8 22.62	+15 5.9	2.234	3.158	7.3	21.6
1 12	8 17.61	+21 43.7	1.641	2.614	4.1	18.3	1 12	8 15.28	+15 35.5	2.168	3.136	3.8	21.3
1 22	8 6.58	+21 58.2	1.624	2.608	1.0	18.1	1 22	8 6.95	+16 10.9	2.131	3.114	1.3	21.1
2 1	7 55.59	+22 7.8	1.636	2.601	5.5	18.4	2 1	7 58.49	+16 48.9	2.125	3.091	4.3	21.3
2 11	7 45.98	+22 10.5	1.676	2.594	10.0	18.6	2 11	7 50.81	+17 26.2	2.148	3.069	7.9	21.5
2 21	7 38.75	+22 6.1	1.741	2.587	13.8	18.9	2 21	7 44.69	+18 0.3	2.197	3.047	11.2	21.6
<b>113321</b>	2002 <i>RE</i> <sub>204</sub>		1 20.7 82°07	0°4/20.9	18		<b>24865</b>	1996 <i>EG</i> <sub>1</sub>		1 20.7 212°09	5°9/24.2	18	
12 13	8 38.20	+17 53.5	1.706	2.485	16.8	20.2	12 13	8 32.05	+ 1 14.1	2.408	3.115	14.4	19.0
12 23	8 33.74	+18 1.9	1.635	2.501	13.3	20.0	12 23	8 28.21	+ 0 46.5	2.310	3.112	12.2	18.8
1 2	8 26.45	+18 19.8	1.585	2.517	9.1	19.8	1 2	8 22.41	+ 0 34.3	2.233	3.109	9.7	18.6
1 12	8 17.07	+18 44.0	1.561	2.532	4.4	19.6	1 12	8 15.12	+ 0 39.3	2.180	3.105	7.3	18.5
1 22	8 6.68	+19 10.3	1.564	2.548	0.7	19.3	1 22	8 6.99	+ 1 1.3	2.155	3.102	5.9	18.4
2 1	7 56.58	+19 34.8	1.597	2.564	5.3	19.7	2 1	7 58.85	+ 1 38.7	2.158	3.098	6.5	18.4
2 11	7 48.04	+19 54.4	1.657	2.579	9.7	20.0	2 11	7 51.57	+ 2 28.0	2.190	3.094	8.7	18.5
2 21	7 41.91	+20 7.9	1.741	2.595	13.5	20.3	2 21	7 45.82	+ 3 24.7	2.247	3.090	11.2	18.7
<b>241403</b>	2008 <i>UM</i> <sub>28</sub>		1 20.7 40°03	2°7/21.7	18		<b>170984</b>	2005 <i>CO</i> <sub>53</sub>		1 20.7 223°08	1°0/20.2	18	
12 13	8 35.84	+13 29.3	1.162	1.965	21.7	19.9	12 13	8 36.72	+19 35.9	1.851	2.630	15.7	20.1
12 23	8 32.89	+13 22.3	1.106	1.983	17.4	19.7	12 23	8 32.77	+20 18.4	1.757	2.625	12.4	19.9
1 2	8 26.36	+13 33.3	1.068	2.001	12.2	19.5	1 2	8 26.01	+21 11.6	1.686	2.619	8.4	19.6
1 12	8 17.14	+14 0.0	1.052	2.021	6.5	19.2	1 12	8 17.01	+22 10.8	1.641	2.614	4.0	19.3
1 22	8 6.67	+14 37.7	1.059	2.041	2.7	19.1	1 22	8 6.70	+23 10.1	1.624	2.607	1.4	19.1
2 1	7 56.68	+15 20.2	1.093	2.062	6.7	19.4	2 1	7 56.34	+24 3.7	1.637	2.601	5.7	19.4
2 11	7 48.78	+16 1.7	1.150	2.083	11.9	19.7	2 11	7 47.24	+24 47.1	1.678	2.594	10.1	19.6
2 21	7 43.99	+16 37.7	1.229	2.106	16.4	20.0	2 21	7 40.43	+25 18.6	1.743	2.587	13.9	19.9
<b>94523</b>	2001 <i>UM</i> <sub>121</sub>		1 20.7 239°50	4°5/22.5	18		<b>148</b>	Gallia		1 20.7 59°62	6°0/25.2	18	
12 13	8 36.35	+ 8 57.1	1.657	2.416	18.0	19.9	12 13	8 33.64	- 1 32.6	1.822	2.534	18.2	11.9
12 23	8 32.62	+ 8 35.0	1.563	2.409	14.8	19.7	12 23	8 29.94	- 0 56.7	1.747	2.553	15.3	11.7
1 2	8 25.97	+ 8 28.8	1.489	2.403	11.0	19.5	1 2	8 23.79	+ 0 6.1	1.690	2.572	12.0	11.5
1 12	8 17.00	+ 8 39.3	1.439	2.396	7.0	19.2	1 12	8 15.81	+ 1 35.5	1.658	2.592	8.5	11.4
1 22	8 6.66	+ 9 5.3	1.415	2.389	4.5	19.0	1 22	8 6.90	+ 3 27.5	1.653	2.611	6.2	11.3
2 1	7 56.28	+ 9 43.5	1.419	2.381	6.6	19.1	2 1	7 58.16	+ 5 34.8	1.677	2.631	6.7	11.4
2 11	7 47.21	+10 29.1	1.450	2.374	10.7	19.4	2 11	7 50.65	+ 7 47.8	1.730	2.650	9.6	11.6
2 21	7 40.53	+11 16.8	1.505	2.366	14.8	19.6	2 21	7 45.20	+ 9 57.6	1.810	2.670	12.8	11.8
<b>128946</b>	2004 <i>TG</i> <sub>131</sub>		1 20.7 143°29	1°1/19.9	18		<b>156263</b>	2001 <i>VC</i> <sub>24</sub>		1 20.7 118°37	1°9/19.9	18	
12 13	8 36.15	+21 9.2	2.667	3.428	11.9	21.1	12 13	8 41.65	+22 47.9	1.720	2.501	16.6	20.8
12 23	8 31.23	+21 52.1	2.583	3.441	9.3	21.0	12 23	8 36.58	+23 23.4	1.649	2.517	13.0	20.6
1 2	8 24.33	+22 40.6	2.524	3.453	6.2	20.8	1 2	8 28.48	+24 5.6	1.599	2.532	8.8	20.3
1 12	8 15.97	+23 30.9	2.493	3.464	3.0	20.6	1 12	8 18.10	+24 48.6	1.575	2.546	4.3	20.1
1 22	8 6.85	+24 19.1	2.493	3.475	1.3	20.5	1 22	8 6.59	+25 26.4	1.579	2.560	2.2	20.0
2 1	7 57.81	+25 1.5	2.526	3.485	4.3	20.7	2 1	7 55.37	+25 54.1	1.613	2.574	6.1	20.3
2 11	7 49.71	+25 35.8	2.588	3.495	7.4	20.9	2 11	7 45.82	+26 9.7	1.675	2.587	10.4	20.5
2 21	7 43.21	+26 1.1	2.677	3.504	10.2	21.1	2 21	7 38.87	+26 13.5	1.760	2.599	14.1	20.8
<b>301238</b>	2009 <i>BD</i> <sub>42</sub>		1 20.7 237°06	3°3/18.9	17		<b>130453</b>	2000 <i>QT</i> <sub>59</sub>		1 20.7 193°71	0°7/20.1	17	
12 13	8 40.83	+33 4.2	3.102	3.858	10.5	21.3	12 13	8 29.71	+22 28.2	3.833	4.593	8.6	20.7
12 23	8 34.78	+33 16.2	2.994	3.843	8.4	21.1	12 23	8 25.67	+22 45.4	3.734	4.591	6.7	20.6
1 2	8 26.70	+33 25.2	2.910	3.828	6.1	20.9	1 2	8 20.32	+23 5.1	3.660	4.589	4.5	20.4
1 12	8 17.09	+33 27.4	2.856	3.813	4.0	20.7	1 12	8 14.01	+23 25.4	3.616	4.587	2.2	20.2
1 22	8 6.69	+33 19.6	2.833	3.797	3.5	20.7	1 22	8 7.20	+23 44.4	3.602	4.585	0.9	20.1
2 1	7 56.35	+33 0.1	2.841	3.780	5.2	20.8	2 1	8 0.41	+24 0.3	3.621	4.582	3.1	20.3
2 11	7 46.98	+32 29.0	2.880	3.763	7.7	20.9	2 11	7 54.20	+24 12.0	3.670	4.579	5.4	20.5
2 21	7 39.25	+31 48.1	2.946	3.746	10.0	21.1	2 21	7 49.00	+24 18.8	3.747	4.576	7.5	20.6
<b>317592</b>	2002 <i>XK</i> <sub>29</sub>		1 20.7 342°84	12°1/ 9.4	18		<b>127641</b>	2003 <i>CL</i> <sub>9</sub>		1 20.7 57°65	3°4/21.7	18	
12 13	8 26.91	+26 42.6	1.055	1.899</									

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1 20.8

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>378248</b>	2007 <i>CX</i> <sub>63</sub>		1 20.7 287°79	4°3/23.1	17		<b>372000</b>	2008 <i>HS</i> <sub>22</sub>		1 20.7 253°52	1°5/20.1	17	
12 13	8 32.75	+ 6 8.0	2.033	2.773	15.7	21.2	12 13	8 37.22	+22 34.4	2.024	2.802	14.5	22.0
12 23	8 29.49	+ 6 13.6	1.911	2.744	13.1	21.0	12 23	8 32.99	+22 56.9	1.923	2.790	11.5	21.8
1 2	8 23.77	+ 6 37.2	1.810	2.715	10.0	20.7	1 2	8 26.08	+23 25.2	1.844	2.777	7.9	21.5
1 12	8 16.00	+ 7 19.7	1.734	2.686	6.6	20.4	1 12	8 17.06	+23 55.5	1.792	2.764	3.9	21.2
1 22	8 6.89	+ 8 19.6	1.685	2.656	4.3	20.2	1 22	8 6.80	+24 23.1	1.769	2.751	1.7	21.1
2 1	7 57.44	+ 9 33.3	1.665	2.626	5.9	20.3	2 1	7 56.48	+24 44.0	1.776	2.738	5.5	21.3
2 11	7 48.83	+10 54.8	1.674	2.596	9.7	20.4	2 11	7 47.34	+24 55.7	1.810	2.724	9.6	21.5
2 21	7 42.04	+12 18.1	1.708	2.566	13.5	20.6	2 21	7 40.34	+24 57.9	1.869	2.710	13.3	21.7
<b>322656</b>	1999 <i>LV</i> <sub>35</sub>		1 20.7 257°60	2°8/22.4	18		<b>114263</b>	2002 <i>XV</i> <sub>1</sub>		1 20.7 108°66	1°3/21.4	18	
12 13	8 33.81	+ 9 8.1	2.260	3.001	14.3	21.2	12 13	8 37.19	+14 25.9	1.978	2.740	15.4	20.3
12 23	8 29.97	+ 9 25.1	2.144	2.982	11.7	20.9	12 23	8 32.58	+14 41.9	1.902	2.756	12.2	20.1
1 2	8 23.87	+ 9 57.0	2.051	2.963	8.6	20.7	1 2	8 25.52	+15 9.4	1.848	2.773	8.5	19.9
1 12	8 15.95	+10 43.1	1.983	2.942	5.1	20.5	1 12	8 16.65	+15 45.7	1.821	2.789	4.4	19.7
1 22	8 6.91	+11 41.0	1.945	2.922	2.8	20.3	1 22	8 6.89	+16 27.1	1.822	2.805	1.3	19.5
2 1	7 57.66	+12 46.7	1.937	2.901	4.9	20.4	2 1	7 57.32	+17 9.4	1.853	2.820	4.8	19.8
2 11	7 49.24	+13 55.3	1.958	2.879	8.5	20.5	2 11	7 49.02	+17 48.9	1.913	2.835	8.7	20.1
2 21	7 42.51	+15 2.2	2.006	2.857	12.1	20.7	2 21	7 42.79	+18 23.1	1.999	2.849	12.1	20.3
<b>85631</b>	1998 <i>KX</i> <sub>49</sub>		1 20.7 193°11	1°8/19.5	18		<b>155027</b>	2005 <i>QF</i> <sub>75</sub>		1 20.8 35°96	6°9/19.3	18	
12 13	8 35.50	+22 19.3	2.513	3.281	12.3	20.0	12 13	8 46.02	+36 28.0	1.404	2.201	18.9	19.5
12 23	8 31.05	+23 16.0	2.418	3.280	9.7	19.8	12 23	8 40.78	+36 46.4	1.350	2.219	15.3	19.3
1 2	8 24.44	+24 19.2	2.347	3.277	6.6	19.6	1 2	8 31.58	+36 56.8	1.315	2.239	11.3	19.1
1 12	8 16.15	+25 24.7	2.304	3.275	3.3	19.4	1 12	8 19.57	+36 50.2	1.304	2.259	7.9	19.0
1 22	8 6.90	+26 27.2	2.292	3.271	2.0	19.3	1 22	8 6.50	+36 20.8	1.319	2.280	7.0	19.0
2 1	7 57.60	+27 22.4	2.311	3.268	4.9	19.5	2 1	7 54.34	+35 27.6	1.361	2.302	9.4	19.2
2 11	7 49.22	+28 6.9	2.360	3.264	8.2	19.7	2 11	7 44.77	+34 15.3	1.427	2.324	13.0	19.5
2 21	7 42.53	+28 39.8	2.435	3.259	11.2	19.9	2 21	7 38.68	+32 50.9	1.516	2.347	16.3	19.7
<b>118431</b>	1999 <i>TD</i> <sub>187</sub>		1 20.7 38°57	6°2/23.9	18		<b>201958</b>	2004 <i>NF</i> <sub>7</sub>		1 20.8 113°39	4°0/22.6	18	
12 13	8 32.10	+ 2 8.3	2.355	3.067	14.5	18.9	12 13	8 37.82	+ 8 42.5	1.689	2.443	17.9	20.3
12 23	8 28.19	+ 1 13.0	2.271	3.075	12.3	18.8	12 23	8 33.47	+ 8 33.0	1.613	2.456	14.6	20.1
1 2	8 22.34	+ 0 31.7	2.208	3.084	9.8	18.6	1 2	8 26.35	+ 8 40.4	1.556	2.469	10.7	19.9
1 12	8 15.07	+ 0 6.3	2.170	3.093	7.5	18.5	1 12	8 17.13	+ 9 4.3	1.524	2.481	6.6	19.7
1 22	8 7.08	+ 0 2.3	2.160	3.103	6.2	18.4	1 22	8 6.83	+ 9 42.2	1.519	2.493	4.1	19.6
2 1	7 59.18	+ 0 5.0	2.177	3.112	6.8	18.5	2 1	7 56.71	+10 29.9	1.542	2.505	6.1	19.7
2 11	7 52.22	+ 0 25.7	2.222	3.122	8.8	18.6	2 11	7 48.04	+11 22.1	1.593	2.516	10.0	20.0
2 21	7 46.83	+ 0 55.9	2.293	3.132	11.2	18.8	2 21	7 41.71	+12 13.9	1.669	2.527	13.7	20.2
<b>219324</b>	2000 <i>GT</i> <sub>154</sub>		1 20.7 253°29	0°9/20.3	17		<b>170098</b>	2002 <i>XH</i> <sub>62</sub>		1 20.8 313°39	4°9/17.3	18	
12 13	8 38.29	+21 42.1	2.133	2.905	14.1	21.6	12 13	8 33.27	+29 10.5	2.057	2.849	13.9	19.1
12 23	8 33.72	+21 56.5	2.024	2.886	11.2	21.3	12 23	8 30.19	+30 36.2	1.958	2.831	11.1	18.9
1 2	8 26.54	+22 16.0	1.937	2.868	7.7	21.1	1 2	8 24.40	+32 7.6	1.884	2.813	8.0	18.7
1 12	8 17.27	+22 39.0	1.877	2.848	3.7	20.8	1 12	8 16.36	+33 37.3	1.836	2.796	5.4	18.5
1 22	8 6.74	+22 59.9	1.846	2.829	1.2	20.6	1 22	8 6.91	+34 57.2	1.817	2.778	5.3	18.5
2 1	7 56.09	+23 15.5	1.845	2.808	5.2	20.8	2 1	7 57.24	+36 0.6	1.826	2.762	7.9	18.6
2 11	7 46.52	+23 23.6	1.873	2.788	9.3	21.0	2 11	7 48.67	+36 43.6	1.862	2.745	11.2	18.7
2 21	7 38.99	+23 23.8	1.927	2.766	13.0	21.2	2 21	7 42.28	+37 6.3	1.921	2.729	14.3	18.9
<b>423007</b>	2003 <i>SO</i> <sub>282</sub>		1 20.7 79°56	2°1/21.8	18		<b>192102</b>	2006 <i>BY</i> <sub>278</sub>		1 20.8 146°32	0°0/20.8	18	
12 13	8 35.89	+13 10.5	2.139	2.894	14.6	21.9	12 13	8 35.22	+18 51.4	2.245	3.013	13.6	20.8
12 23	8 31.25	+13 5.1	2.068	2.917	11.6	21.7	12 23	8 30.90	+19 4.5	2.156	3.017	10.7	20.6
1 2	8 24.43	+13 10.0	2.020	2.940	8.2	21.5	1 2	8 24.35	+19 24.6	2.091	3.020	7.3	20.4
1 12	8 16.05	+13 23.8	1.997	2.962	4.5	21.4	1 12	8 16.11	+19 48.9	2.052	3.024	3.5	20.2
1 22	8 6.95	+13 44.1	2.004	2.984	2.1	21.2	1 22	8 6.98	+20 14.3	2.043	3.027	0.5	20.0
2 1	7 58.10	+14 8.1	2.041	3.006	4.6	21.4	2 1	7 57.95	+20 37.5	2.064	3.030	4.5	20.3
2 11	7 50.44	+14 33.0	2.107	3.028	8.0	21.7	2 11	7 49.99	+20 56.2	2.114	3.033	8.2	20.5
2 21	7 44.64	+14 56.4	2.199	3.050	11.2	21.9	2 21	7 43.87	+21 9.1	2.190	3.035	11.4	20.7
<b>301364</b>	2009 <i>CA</i> <sub>44</sub>		1 20.7 299°36	2°0/21.9	17		<b>16405</b>	1985 <i>DA</i> <sub>2</sub>		1 20.8 261°19	0°2/20.7	18	
12 13	8 31.13	+12 39.7	2.364	3.121	13.3	21.0	12 13	8 40.63	+20 17.7	1.806	2.581	16.2	17.9
12 23	8 27.65	+12 43.7	2.262	3.111	10.7	20.8	12 23	8 36.11	+20 17.7	1.696	2.560	13.0	17.6
1 2	8 22.14	+12 58.2	2.182	3.102	7.6	20.6	1 2	8 28.52	+20 24.4	1.607	2.538	9.0	17.4
1 12	8 15.05	+13 22.2	2.128	3.093	4.3	20.4	1 12	8 18.37	+20 35.0	1.544	2.516	4.4	17.0
1 22	8 7.08	+13 53.4	2.103	3.083	2.0	20.2	1 22	8 6.63	+20 45.3	1.509	2.492	0.7	16.7
2 1	7 59.08	+14 29.1	2.108	3.074	4.4	20.3	2 1	7 54.67	+20 52.0	1.503	2.469	5.8	17.0
2 11	7 51.94	+15 5.9	2.142	3.065	7.8	20.5	2 11	7 43.99	+20 52.6	1.525	2.444	10.7	17.2
2 21	7 46.39	+15 41.1	2.202	3.056	11.0	20.7	2 21	7 35.76	+20 46.7	1.571	2.419	15.0	17.4
<b>352138</b>	2007 <i>JN</i> <sub>8</sub>		1 20.7 355°21	5°2/22.4	18		<b>3759</b>	Piironen		1 20.8 15°01	1°2/21.1	18 A	
12 13	8 33.34	+10 25.0	1.205	2.001	21.5	20.6	12 13	8 39.03	+19 33.3	1.618	2.402	17.3	15.8
12 23	8 31.17	+ 9 43.1	1.128	1.997	17.7	20.3	12 23	8 34.66	+18 51.8	1.537	2.405	13.8	15.5
1 2	8 25.47	+ 9 18.8	1.069	1.994	13.1	20.0	1 2	8 27.27	+18 15.1	1.476	2.408	9.5	15.3
1 12	8 16.94	+ 9 14.1	1.031	1.992	8.2	19.7	1 12	8 17.59	+17 42.0	1.441	2.412	4.8	15.0
1 22	8 6.80	+ 9 28.1	1.016	1.991	5.2	19.6	1 22	8 6.78	+17 11.0	1.433	2.416	1.3	14.8
2 1	7 56.75	+ 9 57.6	1.026	1.991	7.8	19.7	2 1	7 56.24	+16 41.5	1.454	2.421	5.7	15.1
2 11	7 48.50	+10 36.5	1.059	1.992	12.7	20.0	2 11	7 47.33	+16 13.0	1.501	2.427	10.3	15.4
2 21	7 43.29	+11 18.8	1.113	1.994	17.4	20.2	2 21	7 41.01	+15 45.5	1.573	2.433	14.3	15.6
<b>213200</b>	2000 <i>SV</i> <sub>364</sub>		1 20.7 76°30	4°5/23.9	18		<b>414829</b>	2010 <i>UF</i> <sub>59</sub>		1 20.8 298°71	5°2/22.4	18	
12 13	8 30.57	+ 3 38.8	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>277962</b>	2006 <i>SV</i> <sub>284</sub>		1 20.8 86°90	3°3/19.2	18		<b>120009</b>	2003 <i>AU</i> <sub>5</sub>		1 20.8 210°77	2°0/22.1	18	
12 13	8 39.71	+26 0.1	1.779	2.566	15.9	21.3	12 13	8 34.26	+9 12.1	1.989	2.739	15.7	19.3
12 23	8 35.04	+26 52.7	1.714	2.585	12.5	21.1	12 23	8 30.55	+10 7.8	1.892	2.737	12.7	19.1
1 2	8 27.44	+27 49.4	1.670	2.603	8.6	20.9	1 2	8 24.39	+11 23.0	1.818	2.736	9.1	18.9
1 12	8 17.65	+28 43.4	1.653	2.621	4.7	20.7	1 12	8 16.28	+12 54.9	1.769	2.734	5.0	18.6
1 22	8 6.79	+29 28.1	1.664	2.639	3.6	20.7	1 22	8 7.01	+14 38.4	1.750	2.732	2.0	18.4
2 1	7 56.25	+29 58.6	1.704	2.657	6.7	20.9	2 1	7 57.65	+16 26.1	1.762	2.729	4.9	18.6
2 11	7 47.32	+30 13.3	1.771	2.675	10.4	21.1	2 11	7 49.34	+18 10.7	1.804	2.727	9.0	18.9
2 21	7 40.93	+30 13.4	1.862	2.692	13.8	21.4	2 21	7 42.97	+19 46.2	1.872	2.724	12.7	19.1
<b>79584</b>	1998 <i>RW</i> <sub>5</sub>		1 20.8 168°83	1°8/20.0	18		<b>284986</b>	2010 <i>HT</i> <sub>23</sub>		1 20.8 205°68	1°7/19.5	18	
12 13	8 41.17	+22 36.4	1.653	2.438	17.0	19.8	12 13	8 33.05	+22 39.5	2.658	3.429	11.6	20.6
12 23	8 36.54	+23 3.9	1.571	2.441	13.5	19.6	12 23	8 29.04	+23 31.7	2.563	3.426	9.1	20.4
1 2	8 28.71	+23 38.4	1.509	2.443	9.2	19.3	1 2	8 23.04	+24 29.7	2.492	3.424	6.2	20.2
1 12	8 18.37	+24 14.8	1.473	2.445	4.5	19.1	1 12	8 15.52	+25 29.4	2.450	3.421	3.1	20.0
1 22	8 6.68	+24 47.0	1.465	2.447	2.1	18.9	1 22	8 7.14	+26 26.5	2.438	3.418	1.9	19.9
2 1	7 55.11	+25 10.0	1.486	2.448	6.4	19.2	2 1	7 58.72	+27 16.8	2.458	3.415	4.7	20.1
2 11	7 45.19	+25 21.4	1.533	2.448	10.9	19.5	2 11	7 51.15	+27 57.6	2.507	3.411	7.7	20.3
2 21	7 37.98	+25 21.4	1.604	2.449	14.9	19.7	2 21	7 45.13	+28 27.8	2.582	3.408	10.5	20.5
<b>131402</b>	2001 <i>LP</i> <sub>3</sub>		1 20.8 122°21	2°1/22.2	18		<b>387650</b>	2002 <i>RN</i> <sub>34</sub>		1 20.8 101°89	3°4/19.4	17	
12 13	8 34.51	+11 19.4	3.080	3.809	11.1	20.3	12 13	8 44.24	+25 35.7	1.514	2.303	18.1	21.6
12 23	8 29.51	+11 12.4	2.998	3.829	8.9	20.2	12 23	8 39.06	+26 23.6	1.451	2.323	14.2	21.3
1 2	8 22.96	+11 13.4	2.940	3.849	6.4	20.1	1 2	8 30.40	+27 16.5	1.409	2.343	9.7	21.1
1 12	8 15.31	+11 21.5	2.911	3.869	3.8	19.9	1 12	8 19.14	+28 6.5	1.393	2.362	5.2	20.9
1 22	8 7.14	+11 35.5	2.912	3.888	2.1	19.8	1 22	8 6.64	+28 46.0	1.404	2.381	3.7	20.9
2 1	7 59.11	+11 53.5	2.945	3.906	3.6	19.9	2 1	7 54.58	+29 9.6	1.443	2.399	7.4	21.1
2 11	7 51.86	+12 13.7	3.009	3.924	6.2	20.1	2 11	7 44.56	+29 16.2	1.509	2.416	11.6	21.4
2 21	7 45.91	+12 34.2	3.100	3.941	8.5	20.3	2 21	7 37.57	+29 7.8	1.597	2.433	15.4	21.7
<b>321563</b>	2009 <i>SL</i> <sub>351</sub>		1 20.8 102°70	2°6/22.1	18		<b>235061</b>	2003 <i>FL</i> <sub>104</sub>		1 20.8 222°50	2°3/19.8	18	
12 13	8 35.04	+11 53.4	1.986	2.744	15.5	21.2	12 13	8 41.36	+24 32.2	1.937	2.713	15.2	21.0
12 23	8 30.95	+11 49.1	1.903	2.752	12.5	21.0	12 23	8 36.43	+25 0.1	1.839	2.704	12.1	20.8
1 2	8 24.47	+11 57.1	1.841	2.760	8.9	20.8	1 2	8 28.55	+25 32.8	1.762	2.694	8.3	20.6
1 12	8 16.20	+12 16.3	1.805	2.768	5.1	20.6	1 12	8 18.33	+26 5.4	1.713	2.683	4.3	20.3
1 22	8 7.00	+12 44.4	1.796	2.775	2.6	20.5	1 22	8 6.73	+26 32.4	1.692	2.672	2.5	20.1
2 1	7 57.92	+13 18.1	1.818	2.783	5.0	20.6	2 1	7 55.09	+26 49.3	1.701	2.659	6.1	20.4
2 11	7 50.01	+13 53.6	1.867	2.790	8.8	20.9	2 11	7 44.80	+26 54.0	1.738	2.646	10.3	20.6
2 21	7 44.08	+14 27.7	1.942	2.797	12.2	21.1	2 21	7 36.90	+26 47.2	1.799	2.633	14.0	20.8
<b>125360</b>	2001 <i>VL</i> <sub>65</sub>		1 20.8 21°92	2°5/21.5	18		<b>163089</b>	2002 <i>AU</i> <sub>77</sub>		1 20.8 216°29	2°1/19.7	18	
12 13	8 36.68	+15 46.8	1.244	2.045	20.7	19.4	12 13	8 37.98	+21 38.0	1.729	2.515	16.4	20.4
12 23	8 33.62	+15 15.0	1.174	2.050	16.6	19.2	12 23	8 34.05	+22 31.3	1.640	2.511	12.9	20.1
1 2	8 27.00	+14 55.3	1.122	2.055	11.7	18.9	1 2	8 27.09	+23 34.8	1.572	2.507	8.8	19.9
1 12	8 17.61	+14 47.0	1.092	2.061	6.2	18.6	1 12	8 17.68	+24 42.8	1.530	2.502	4.4	19.6
1 22	8 6.81	+14 47.6	1.087	2.068	2.5	18.4	1 22	8 6.82	+25 47.9	1.517	2.497	2.4	19.5
2 1	7 56.29	+14 54.0	1.107	2.076	6.7	18.7	2 1	7 55.91	+26 43.3	1.532	2.492	6.5	19.7
2 11	7 47.73	+15 2.6	1.152	2.085	12.0	19.0	2 11	7 46.41	+27 24.7	1.574	2.487	10.9	19.9
2 21	7 42.24	+15 10.9	1.219	2.094	16.6	19.3	2 21	7 39.42	+27 51.2	1.640	2.481	14.8	20.2
<b>110289</b>	Dufu		1 20.8 101°94	5°9/16.9	18		<b>224593</b>	2005 <i>YR</i> <sub>7</sub>		1 20.8 6°82	0°6/20.5	18	
12 13	8 38.56	+37 43.7	2.543	3.313	12.1	19.4	12 13	8 32.41	+18 55.6	1.583	2.380	17.1	20.2
12 23	8 33.62	+38 50.8	2.476	3.326	9.9	19.2	12 23	8 29.72	+19 25.3	1.504	2.381	13.5	19.9
1 2	8 26.24	+39 53.6	2.433	3.340	7.7	19.1	1 2	8 24.10	+20 6.2	1.445	2.382	9.2	19.7
1 12	8 17.03	+40 45.7	2.417	3.352	6.1	19.0	1 12	8 16.20	+20 54.3	1.411	2.384	4.4	19.4
1 22	8 6.90	+41 21.6	2.430	3.365	6.2	19.0	1 22	8 7.05	+21 43.7	1.404	2.387	1.0	19.2
2 1	7 56.95	+41 38.5	2.472	3.378	7.7	19.2	2 1	7 58.01	+22 28.7	1.424	2.391	5.9	19.5
2 11	7 48.27	+41 36.1	2.540	3.390	9.8	19.3	2 11	7 50.43	+23 4.9	1.470	2.395	10.5	19.8
2 21	7 41.64	+41 17.0	2.632	3.402	11.9	19.5	2 21	7 45.31	+23 30.4	1.539	2.400	14.6	20.1
<b>110358</b>	2001 <i>SA</i> <sub>317</sub>		1 20.8 89°02	10°1/14.7	18		<b>343511</b>	2010 <i>EV</i> <sub>112</sub>		1 20.8 143°16	3°9/18.4	18	
12 13	8 48.28	+51 46.6	2.387	3.121	13.8	19.5	12 13	8 36.46	+31 23.1	2.521	3.297	12.1	21.3
12 23	8 42.19	+53 6.5	2.333	3.132	12.2	19.4	12 23	8 31.86	+32 5.8	2.438	3.300	9.6	21.2
1 2	8 32.52	+54 13.0	2.301	3.142	10.8	19.3	1 2	8 25.01	+32 47.8	2.379	3.303	6.9	21.0
1 12	8 20.14	+54 57.3	2.293	3.153	10.2	19.2	1 12	8 16.46	+33 24.2	2.348	3.306	4.5	20.8
1 22	8 6.46	+55 12.9	2.309	3.164	10.4	19.3	1 22	8 7.05	+33 50.4	2.346	3.309	4.1	20.8
2 1	7 53.25	+54 57.6	2.351	3.174	11.4	19.4	2 1	7 57.74	+34 3.2	2.374	3.312	6.1	21.0
2 11	7 42.16	+54 14.0	2.415	3.185	12.8	19.5	2 11	7 49.54	+34 2.1	2.429	3.315	8.8	21.1
2 21	7 34.23	+53 8.2	2.500	3.195	14.3	19.6	2 21	7 43.21	+33 48.1	2.510	3.317	11.4	21.3
<b>207619</b>	2006 <i>RU</i> <sub>60</sub>		1 20.8 196°74	0°1/20.7	17		<b>152020</b>	2004 <i>KS</i> <sub>13</sub>		1 20.8 124°64	2°9/22.3	18	
12 13	8 33.90	+19 36.7	2.759	3.520	11.5	20.9	12 13	8 37.47	+9 46.0	1.610	2.372	18.4	20.2
12 23	8 29.48	+19 46.8	2.661	3.518	9.1	20.8	12 23	8 33.48	+10 8.0	1.531	2.382	14.9	19.9
1 2	8 23.20	+20 1.9	2.588	3.516	6.2	20.6	1 2	8 26.56	+10 49.3	1.472	2.391	10.7	19.7
1 12	8 15.53	+20 19.9	2.542	3.513	2.9	20.4	1 12	8 17.36	+11 47.9	1.437	2.400	6.1	19.5
1 22	8 7.12	+20 38.2	2.526	3.510	0.5	20.1	1 22	8 6.93	+12 59.0	1.430	2.409	2.9	19.3
2 1	7 58.74	+20 54.5	2.542	3.507	3.8	20.4	2 1	7 56.60	+14 16.1	1.451	2.417	5.8	19.5
2 11	7 51.20	+21 7.0	2.588	3.504	7.0	20.6	2 11	7 47.75	+15 32.2	1.499	2.425	10.3	19.8
2 21	7 45.14	+21 14.8	2.661	3.500	9.8	20.8	2 21	7 41.35	+16 41.8	1.573	2.433	14.3	20.0
<b>408299</b>	2013 <i>GP</i> <sub>23</sub>		1 20.8 266°95	4°0/22.4	18		<b>271492</b>	2004 <i>FV</i> <sub>80</sub>		1 20.8 326°39	6°9/16.7	18	
12 13	8 35.37	+9 44.9	1.70										

EPHEMERIDES

1 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>334390</b>	2002 <i>CT</i> <sub>90</sub>		1 20.8 310°06	3°3/22.8	18		<b>393700</b>	2004 <i>TC</i> <sub>115</sub>		1 20.8 172°07	2°2/21.8	18	
12 13	8 32.29	+ 8 10.1	1.949	2.701	15.9	20.8	12 13	8 39.67	+12 55.4	2.161	2.906	14.8	22.3
12 23	8 29.01	+ 8 25.8	1.854	2.697	13.0	20.6	12 23	8 34.46	+12 52.4	2.068	2.911	11.9	22.1
1 2	8 23.34	+ 8 58.8	1.781	2.694	9.6	20.3	1 2	8 26.85	+13 0.0	1.998	2.915	8.4	21.9
1 12	8 15.79	+ 9 48.4	1.732	2.691	5.8	20.1	1 12	8 17.42	+13 17.0	1.954	2.918	4.7	21.7
1 22	8 7.16	+10 51.5	1.711	2.688	3.3	19.9	1 22	8 7.00	+13 40.9	1.940	2.920	2.2	21.5
2 1	7 58.50	+12 3.3	1.720	2.685	5.3	20.1	2 1	7 56.65	+14 8.8	1.957	2.921	4.8	21.7
2 11	7 50.89	+13 17.9	1.756	2.682	9.1	20.3	2 11	7 47.42	+14 37.6	2.003	2.922	8.5	21.9
2 21	7 45.21	+14 30.1	1.818	2.679	12.7	20.5	2 21	7 40.14	+15 4.7	2.075	2.921	12.0	22.1
<b>209059</b>	2003 <i>QR</i> <sub>44</sub>		1 20.8 158°49	0°5/21.0	18		<b>161609</b>	2005 <i>UA</i> <sub>83</sub>		1 20.8 329°31	9°4/24.3	18	
12 13	8 39.45	+17 14.4	2.114	2.873	14.6	21.9	12 13	8 30.29	+ 0 16.8	1.572	2.313	19.6	20.0
12 23	8 34.34	+17 27.0	2.026	2.881	11.6	21.7	12 23	8 28.12	- 0 54.8	1.476	2.296	17.0	19.8
1 2	8 26.78	+17 48.2	1.962	2.888	7.9	21.5	1 2	8 23.14	- 1 47.0	1.398	2.280	14.0	19.5
1 12	8 17.36	+18 15.1	1.924	2.895	3.9	21.3	1 12	8 15.87	- 2 14.3	1.341	2.264	11.2	19.3
1 22	8 6.96	+18 44.4	1.916	2.900	0.7	21.0	1 22	8 7.20	- 2 13.5	1.307	2.249	9.5	19.2
2 1	7 56.68	+19 12.3	1.939	2.905	4.7	21.4	2 1	7 58.35	- 1 44.5	1.298	2.235	10.2	19.2
2 11	7 47.60	+19 36.3	1.991	2.909	8.6	21.6	2 11	7 50.69	- 0 51.7	1.312	2.222	12.8	19.3
2 21	7 40.55	+19 54.7	2.069	2.913	12.1	21.8	2 21	7 45.32	+ 0 17.4	1.349	2.210	16.2	19.4
<b>253895</b>	2004 <i>BX</i> <sub>93</sub>		1 20.8 289°47	3°4/22.1	18		<b>301263</b>	2009 <i>BB</i> <sub>77</sub>		1 20.8 48°18	2°9/19.4	17	
12 13	8 35.01	+11 32.8	1.742	2.508	17.0	20.1	12 13	8 37.40	+20 54.9	1.237	2.047	20.2	20.2
12 23	8 31.50	+11 12.6	1.646	2.499	13.9	19.9	12 23	8 34.26	+22 13.6	1.184	2.069	15.8	20.0
1 2	8 25.23	+11 5.4	1.571	2.491	10.1	19.6	1 2	8 27.46	+23 45.2	1.152	2.092	10.6	19.8
1 12	8 16.76	+11 11.4	1.520	2.482	6.0	19.4	1 12	8 17.87	+25 20.3	1.142	2.115	5.3	19.6
1 22	8 7.03	+11 28.9	1.496	2.473	3.4	19.2	1 22	8 6.95	+26 47.8	1.159	2.139	3.2	19.5
2 1	7 57.24	+11 55.1	1.500	2.464	5.9	19.3	2 1	7 56.47	+27 58.5	1.202	2.163	7.7	19.8
2 11	7 48.70	+12 26.1	1.531	2.456	10.1	19.5	2 11	7 48.12	+28 48.2	1.270	2.188	12.5	20.2
2 21	7 42.40	+12 58.0	1.585	2.448	14.1	19.7	2 21	7 42.96	+29 17.0	1.360	2.213	16.6	20.5
<b>34912</b>	4314 <i>P-L</i>		1 20.8 63°63	3°3/19.5	18		<b>230458</b>	2002 <i>RM</i> <sub>120</sub>		1 20.8 209°66	0°8/20.4	18	
12 13	8 43.45	+27 19.6	1.709	2.493	16.6	19.1	12 13	8 40.91	+19 16.9	1.861	2.632	15.9	21.5
12 23	8 37.78	+27 51.1	1.659	2.527	12.9	19.0	12 23	8 36.16	+19 53.5	1.763	2.625	12.7	21.3
1 2	8 29.12	+28 23.8	1.631	2.562	8.8	18.8	1 2	8 28.46	+20 40.7	1.687	2.617	8.7	21.0
1 12	8 18.38	+28 51.3	1.628	2.596	4.8	18.6	1 12	8 18.38	+21 34.1	1.637	2.609	4.2	20.7
1 22	8 6.85	+29 8.2	1.654	2.630	3.5	18.6	1 22	8 6.86	+22 27.9	1.616	2.599	1.1	20.5
2 1	7 55.93	+29 11.6	1.710	2.664	6.5	18.9	2 1	7 55.23	+23 16.2	1.625	2.589	5.7	20.8
2 11	7 46.91	+29 1.6	1.792	2.698	10.2	19.2	2 11	7 44.88	+23 55.0	1.663	2.577	10.3	21.0
2 21	7 40.56	+28 40.5	1.898	2.731	13.5	19.5	2 21	7 36.91	+24 22.7	1.725	2.565	14.2	21.2
<b>307675</b>	2003 <i>SP</i> <sub>327</sub>		1 20.8 195°48	2°2/21.8	18		<b>457840</b>	2009 <i>SW</i> <sub>107</sub>		1 20.8 165°07	4°2/23.2	18	
12 13	8 37.81	+12 48.7	2.036	2.789	15.3	21.9	12 13	8 34.39	+ 6 21.3	2.328	3.055	14.3	21.8
12 23	8 33.23	+12 46.6	1.939	2.787	12.3	21.7	12 23	8 30.13	+ 6 6.5	2.235	3.058	11.8	21.6
1 2	8 26.15	+12 56.1	1.865	2.784	8.8	21.5	1 2	8 23.81	+ 6 5.4	2.163	3.062	8.9	21.4
1 12	8 17.11	+13 16.0	1.816	2.781	4.9	21.2	1 12	8 15.93	+ 6 18.2	2.118	3.065	6.0	21.2
1 22	8 6.99	+13 43.8	1.797	2.777	2.3	21.0	1 22	8 7.22	+ 6 43.9	2.101	3.067	4.2	21.1
2 1	7 56.86	+14 16.2	1.807	2.772	5.0	21.2	2 1	7 58.54	+ 7 20.0	2.114	3.069	5.4	21.2
2 11	7 47.87	+14 49.6	1.846	2.767	9.0	21.4	2 11	7 50.81	+ 8 2.9	2.155	3.071	8.2	21.4
2 21	7 40.88	+15 21.2	1.911	2.761	12.6	21.7	2 21	7 44.72	+ 8 48.9	2.223	3.072	11.1	21.6
<b>155401</b>	1995 <i>UM</i> <sub>14</sub>		1 20.8 158°63	0°1/20.9	18		<b>63082</b>	2000 <i>WU</i> <sub>133</sub>		1 20.8 22°85	1°0/21.1	18	
12 13	8 36.43	+18 30.1	2.436	3.196	12.9	21.3	12 13	8 36.80	+18 31.6	1.661	2.446	17.0	18.5
12 23	8 31.67	+18 42.4	2.346	3.202	10.2	21.1	12 23	8 32.87	+18 8.5	1.582	2.451	13.5	18.3
1 2	8 24.80	+19 1.3	2.280	3.207	6.9	20.9	1 2	8 26.07	+17 52.5	1.524	2.456	9.3	18.1
1 12	8 16.37	+19 24.2	2.241	3.212	3.3	20.7	1 12	8 17.11	+17 41.9	1.491	2.462	4.6	17.8
1 22	8 7.11	+19 48.2	2.233	3.217	0.5	20.5	1 22	8 7.06	+17 34.4	1.485	2.469	1.1	17.6
2 1	7 57.95	+20 10.3	2.255	3.221	4.2	20.8	2 1	7 57.24	+17 27.9	1.508	2.476	5.4	17.9
2 11	7 49.79	+20 28.5	2.307	3.224	7.7	21.0	2 11	7 48.95	+17 20.5	1.557	2.483	9.9	18.2
2 21	7 43.35	+20 41.5	2.386	3.227	10.7	21.2	2 21	7 43.10	+17 11.6	1.631	2.492	13.9	18.4
<b>248566</b>	2006 <i>AF</i> <sub>3</sub>		1 20.8 109°14	6°6/19.9	16		<b>255971</b>	2006 <i>TL</i> <sub>47</sub>		1 20.8 181°51	0°4/20.6	18	
12 13	8 56.85	+35 11.5	1.236	2.026	21.4	20.0	12 13	8 37.43	+19 29.7	2.039	2.811	14.7	21.7
12 23	8 50.10	+35 15.9	1.168	2.035	17.3	19.8	12 23	8 32.99	+19 50.8	1.949	2.811	11.6	21.5
1 2	8 38.47	+35 12.2	1.119	2.044	12.7	19.5	1 2	8 26.01	+20 19.8	1.881	2.812	7.9	21.3
1 12	8 23.14	+34 49.6	1.093	2.053	8.2	19.3	1 12	8 17.07	+20 53.2	1.840	2.812	3.8	21.0
1 22	8 6.21	+34 0.3	1.093	2.062	6.7	19.3	1 22	8 7.06	+21 26.9	1.828	2.811	0.7	20.8
2 1	7 50.27	+32 43.8	1.120	2.070	9.9	19.5	2 1	7 57.10	+21 56.8	1.845	2.811	5.0	21.1
2 11	7 37.56	+31 7.1	1.173	2.078	14.5	19.7	2 11	7 48.35	+22 20.1	1.892	2.809	9.0	21.3
2 21	7 29.23	+29 20.5	1.247	2.086	18.7	20.0	2 21	7 41.66	+22 35.6	1.963	2.808	12.6	21.6
<b>93873</b>	2000 <i>WC</i> <sub>122</sub>		1 20.8 26°82	2°2/19.7	18		<b>166162</b>	2002 <i>EK</i> <sub>39</sub>		1 20.8 280°69	1°7/21.5	18	
12 13	8 35.28	+23 16.6	1.902	2.689	15.0	19.9	12 13	8 35.89	+14 33.6	1.660	2.437	17.3	21.2
12 23	8 31.56	+23 58.5	1.819	2.691	11.8	19.7	12 23	8 32.61	+14 38.3	1.553	2.416	14.0	21.0
1 2	8 25.16	+24 47.0	1.757	2.692	8.0	19.4	1 2	8 26.30	+14 56.5	1.467	2.395	9.9	20.7
1 12	8 16.69	+25 36.9	1.723	2.694	4.1	19.2	1 12	8 17.45	+15 27.0	1.405	2.374	5.3	20.3
1 22	8 7.09	+26 22.5	1.716	2.696	2.4	19.1	1 22	8 6.98	+16 6.2	1.370	2.352	1.7	20.1
2 1	7 57.56	+26 59.0	1.738	2.698	5.9	19.3	2 1	7 56.24	+16 49.4	1.363	2.331	5.9	20.3
2 11	7 49.34	+27 23.3	1.788	2.700	9.8	19.6	2 11	7 46.71	+17 31.7	1.382	2.309	10.9	20.5
2 21	7 43.34	+27 35.3	1.862	2.702	13.3	19.8	2 21	7 39.61	+18 9.2	1.426	2.287	15.4	20.7
<b>59578</b>	1999 <i>JA</i> <sub>53</sub>		1 20.8 328°74	8°2/24.5	18		<b>203831</b>	2002 <i>UY</i> <sub>37</sub>		1 20.8 3°83	5°8/17.8	18	
12 13	8 30.83												

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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>28387</b>	1999 <i>JE</i> <sub>79</sub>		1 20.8 343°70	0°1/20.7	18		<b>151272</b>	2002 <i>AG</i> <sub>147</sub>		1 20.8 132°61	0°8/20.3	18	
12 13	8 30.38	+15 4.7	1.870	2.651	15.5	17.1	12 13	8 35.79	+19 48.6	2.064	2.838	14.4	20.7
12 23	8 27.81	+16 9.3	1.775	2.643	12.3	16.9	12 23	8 31.66	+20 24.7	1.979	2.844	11.3	20.5
1 2	8 22.71	+17 30.2	1.703	2.636	8.4	16.6	1 2	8 25.08	+21 9.2	1.917	2.849	7.7	20.2
1 12	8 15.59	+19 3.3	1.657	2.629	4.1	16.4	1 12	8 16.63	+21 58.1	1.882	2.854	3.7	20.0
1 22	8 7.26	+20 42.1	1.640	2.623	0.6	16.1	1 22	8 7.17	+22 46.3	1.876	2.859	1.1	19.8
2 1	7 58.82	+22 18.8	1.652	2.618	5.3	16.4	2 1	7 57.78	+23 29.5	1.900	2.864	5.0	20.1
2 11	7 51.47	+23 46.7	1.692	2.614	9.6	16.7	2 11	7 49.57	+24 4.2	1.952	2.868	8.9	20.3
2 21	7 46.15	+25 1.5	1.757	2.610	13.4	16.9	2 21	7 43.37	+24 29.2	2.030	2.872	12.3	20.6
<b>390815</b>	2004 <i>JW</i> <sub>44</sub>		1 20.8 259°31	1°8/19.6	17		<b>396839</b>	2004 <i>RV</i> <sub>186</sub>		1 20.8 127°02	0°4/20.7	18	
12 13	8 32.99	+23 15.6	2.605	3.378	11.8	21.0	12 13	8 42.48	+20 24.2	1.802	2.573	16.3	21.8
12 23	8 29.12	+23 59.9	2.503	3.368	9.3	20.8	12 23	8 37.08	+20 29.8	1.725	2.587	12.9	21.6
1 2	8 23.21	+24 49.6	2.425	3.357	6.3	20.6	1 2	8 28.81	+20 42.0	1.670	2.601	8.8	21.4
1 12	8 15.69	+25 40.9	2.375	3.345	3.2	20.4	1 12	8 18.40	+20 57.1	1.642	2.614	4.2	21.1
1 22	8 7.26	+26 29.4	2.355	3.334	2.0	20.3	1 22	8 6.93	+21 11.2	1.642	2.626	0.7	20.9
2 1	7 58.75	+27 11.4	2.365	3.323	4.8	20.5	2 1	7 55.75	+21 21.0	1.672	2.638	5.4	21.3
2 11	7 51.09	+27 44.1	2.405	3.311	7.9	20.7	2 11	7 46.14	+21 24.6	1.731	2.649	9.7	21.5
2 21	7 44.99	+28 6.5	2.471	3.299	10.8	20.8	2 21	7 39.00	+21 21.9	1.814	2.659	13.4	21.8
<b>454321</b>	2014 <i>KQ</i> <sub>40</sub>		1 20.8 133°20	2°3/19.5	18		<b>373288</b>	2012 <i>HN</i> <sub>51</sub>		1 20.8 155°37	2°1/22.1	18	
12 13	8 41.18	+22 39.4	1.973	2.745	15.1	22.1	12 13	8 34.27	+11 12.0	2.415	3.159	13.4	21.6
12 23	8 36.00	+23 42.6	1.897	2.761	11.8	21.9	12 23	8 30.00	+11 29.1	2.323	3.165	10.8	21.4
1 2	8 28.07	+24 53.2	1.845	2.776	8.0	21.7	1 2	8 23.72	+11 58.1	2.255	3.170	7.7	21.2
1 12	8 18.06	+26 4.9	1.821	2.791	4.1	21.5	1 12	8 15.91	+12 37.4	2.213	3.175	4.4	21.0
1 22	8 6.94	+27 10.9	1.826	2.805	2.6	21.4	1 22	8 7.28	+13 24.3	2.201	3.180	2.1	20.9
2 1	7 55.98	+28 5.4	1.862	2.818	6.0	21.7	2 1	7 58.70	+14 15.2	2.219	3.185	4.3	21.0
2 11	7 46.40	+28 45.3	1.926	2.830	9.7	21.9	2 11	7 51.03	+15 6.3	2.268	3.189	7.6	21.2
2 21	7 39.13	+29 10.6	2.015	2.841	13.1	22.2	2 21	7 44.98	+15 54.5	2.343	3.192	10.6	21.4
<b>451062</b>	2008 <i>YU</i> <sub>157</sub>		1 20.8 53°66	2°8/19.9	18		<b>354168</b>	2002 <i>CS</i> <sub>265</sub>		1 20.8 28°94	0°6/20.6	18	
12 13	8 42.17	+25 40.8	1.333	2.135	19.4	20.6	12 13	8 36.62	+20 17.9	1.219	2.030	20.4	20.8
12 23	8 37.77	+25 54.6	1.273	2.153	15.3	20.3	12 23	8 33.76	+20 26.6	1.154	2.039	16.1	20.5
1 2	8 29.68	+26 11.9	1.234	2.171	10.4	20.1	1 2	8 27.21	+20 45.7	1.108	2.048	11.0	20.3
1 12	8 18.87	+26 26.4	1.218	2.189	5.3	19.9	1 12	8 17.83	+21 10.5	1.085	2.059	5.2	20.0
1 22	8 6.85	+26 32.0	1.228	2.208	3.0	19.8	1 22	8 7.03	+21 35.1	1.086	2.070	1.1	19.7
2 1	7 55.41	+26 25.2	1.265	2.227	7.2	20.1	2 1	7 56.59	+21 54.1	1.113	2.081	6.8	20.1
2 11	7 46.21	+26 5.9	1.327	2.246	11.9	20.4	2 11	7 48.23	+22 4.5	1.164	2.094	12.1	20.5
2 21	7 40.21	+25 36.6	1.411	2.265	16.0	20.7	2 21	7 43.05	+22 5.7	1.237	2.107	16.7	20.8
<b>148358</b>	2000 <i>SY</i> <sub>18</sub>		1 20.8 234°88	0°1/20.8	17		<b>399176</b>	2014 <i>FR</i> <sub>48</sub>		1 20.8 210°41	1°6/21.4	18	
12 13	8 37.38	+19 23.0	2.364	3.126	13.2	21.0	12 13	8 40.73	+15 24.5	1.841	2.603	16.4	21.5
12 23	8 32.69	+19 32.1	2.256	3.113	10.5	20.8	12 23	8 35.91	+15 20.2	1.743	2.597	13.2	21.2
1 2	8 25.71	+19 47.6	2.171	3.099	7.2	20.6	1 2	8 28.23	+15 26.4	1.665	2.590	9.3	21.0
1 12	8 16.92	+20 6.7	2.113	3.084	3.5	20.3	1 12	8 18.26	+15 41.1	1.614	2.582	4.9	20.7
1 22	8 7.09	+20 26.5	2.085	3.069	0.5	20.0	1 22	8 6.96	+16 1.6	1.591	2.574	1.6	20.5
2 1	7 57.19	+20 44.1	2.088	3.054	4.5	20.3	2 1	7 55.60	+16 24.2	1.598	2.564	5.4	20.7
2 11	7 48.24	+20 57.1	2.121	3.037	8.3	20.5	2 11	7 45.54	+16 45.8	1.633	2.554	9.9	20.9
2 21	7 41.07	+21 4.6	2.180	3.021	11.6	20.7	2 21	7 37.81	+17 4.2	1.693	2.543	14.0	21.2
<b>129533</b>	1996 <i>EN</i> <sub>14</sub>		1 20.8 311°71	0°7/21.1	18		<b>27301</b>	Joeingalls		1 20.8 296°30	5°3/22.8	18	
12 13	8 33.83	+16 34.5	2.065	2.836	14.5	20.9	12 13	8 34.99	+ 8 27.4	1.418	2.191	19.9	19.2
12 23	8 30.11	+16 48.2	1.973	2.834	11.5	20.6	12 23	8 32.17	+ 7 57.8	1.327	2.180	16.5	18.9
1 2	8 24.03	+17 11.5	1.903	2.832	8.0	20.4	1 2	8 26.12	+ 7 46.5	1.254	2.170	12.4	18.6
1 12	8 16.12	+17 42.0	1.859	2.830	4.0	20.2	1 12	8 17.40	+ 7 55.2	1.203	2.160	8.0	18.3
1 22	8 7.21	+18 16.3	1.845	2.828	0.8	19.9	1 22	8 7.07	+ 8 23.1	1.177	2.150	5.3	18.2
2 1	7 58.33	+18 50.6	1.859	2.826	4.7	20.2	2 1	7 56.60	+ 9 6.8	1.177	2.140	7.5	18.2
2 11	7 50.54	+19 21.7	1.902	2.825	8.7	20.4	2 11	7 47.61	+10 0.2	1.202	2.131	12.0	18.5
2 21	7 44.67	+19 47.3	1.970	2.823	12.2	20.7	2 21	7 41.32	+10 57.0	1.250	2.122	16.5	18.7
<b>145900</b>	1999 <i>TO</i> <sub>219</sub>		1 20.8 139°57	1°3/21.3	18		<b>148044</b>	1998 <i>SL</i> <sub>34</sub>		1 20.8 88°24	8°2/17.3	18	
12 13	8 42.14	+16 24.0	1.628	2.399	17.8	20.6	12 13	8 47.15	+39 40.6	1.789	2.565	16.3	20.2
12 23	8 37.13	+16 18.2	1.549	2.409	14.2	20.4	12 23	8 41.38	+40 55.4	1.736	2.586	13.4	20.0
1 2	8 29.03	+16 22.8	1.491	2.418	9.9	20.1	1 2	8 32.02	+42 2.7	1.704	2.608	10.5	19.9
1 12	8 18.56	+16 35.5	1.458	2.427	5.0	19.9	1 12	8 19.98	+42 52.2	1.697	2.628	8.6	19.8
1 22	8 6.88	+16 52.9	1.452	2.435	1.4	19.6	1 22	8 6.75	+43 16.3	1.717	2.649	8.5	19.9
2 1	7 55.43	+17 11.2	1.476	2.443	5.7	19.9	2 1	7 54.08	+43 11.6	1.764	2.669	10.3	20.0
2 11	7 45.61	+17 27.3	1.527	2.450	10.4	20.2	2 11	7 43.59	+42 40.7	1.835	2.689	12.8	20.2
2 21	7 38.43	+17 39.6	1.602	2.456	14.4	20.5	2 21	7 36.27	+41 49.6	1.929	2.708	15.3	20.4
<b>166325</b>	2002 <i>JO</i> <sub>83</sub>		1 20.8 175°57	3°5/19.1	18		<b>14266</b>	2000 <i>AG</i> <sub>143</sub>		1 20.8 212°14	0°5/21.0	18	
12 13	8 40.51	+27 2.4	1.921	2.702	15.1	21.0	12 13	8 38.97	+18 26.7	2.233	2.993	13.9	18.5
12 23	8 35.75	+27 49.3	1.837	2.704	11.9	20.8	12 23	8 33.99	+18 23.5	2.132	2.987	11.1	18.3
1 2	8 28.08	+28 39.8	1.775	2.705	8.3	20.6	1 2	8 26.61	+18 26.5	2.053	2.980	7.6	18.1
1 12	8 18.13	+29 27.6	1.740	2.706	4.7	20.4	1 12	8 17.37	+18 33.7	2.002	2.972	3.8	17.8
1 22	8 6.94	+30 6.3	1.733	2.707	3.7	20.3	1 22	8 7.10	+18 42.5	1.980	2.964	0.6	17.6
2 1	7 55.85	+30 31.1	1.756	2.707	6.7	20.5	2 1	7 56.83	+18 50.3	1.989	2.955	4.6	17.8
2 11	7 46.20	+30 40.2	1.806	2.707	10.5	20.7	2 11	7 47.64	+18 55.2	2.028	2.946	8.5	18.1
2 21	7 38.98	+30 34.8	1.880	2.706	13.9	20.9	2 21	7 40.37	+18 56.4	2.093	2.936	11.9	18.3
<b>109184</b>	2001 <i>QE</i> <sub>69</sub>		1 20.8 133°90	1°4/21.9	18		<b>211481</b>	2003 <i>FT</i> <sub>18</sub>		1 20.8 152°66	1°3/21.5	18	
12 13	8 29.46	+13 5.1											

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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>463858</b>	2014 <i>UT</i> <sub>19</sub>		1 20.8	96°63	1°8/19.9	18	<b>21404</b>	Atluri		1 20.8	256°88	3°4/22.2	18
12 13	8 36.11	+22 1.6	1.891	2.675	15.2	21.6	12 13	8 37.24	+11 11.0	1.526	2.297	18.8	18.0
12 23	8 32.21	+22 44.1	1.808	2.678	12.0	21.3	12 23	8 33.82	+11 2.6	1.428	2.285	15.4	17.7
1 2	8 25.63	+23 34.3	1.748	2.682	8.1	21.1	1 2	8 27.22	+11 10.8	1.351	2.273	11.2	17.4
1 12	8 16.96	+24 27.2	1.714	2.686	4.0	20.9	1 12	8 17.96	+11 35.5	1.296	2.260	6.6	17.1
1 22	8 7.16	+25 17.0	1.708	2.689	2.0	20.8	1 22	8 7.07	+12 14.2	1.268	2.247	3.4	16.9
2 1	7 57.44	+25 58.5	1.732	2.693	5.7	21.0	2 1	7 56.00	+13 2.3	1.267	2.234	6.5	17.1
2 11	7 49.04	+26 28.5	1.783	2.697	9.8	21.2	2 11	7 46.31	+13 54.1	1.292	2.220	11.4	17.3
2 21	7 42.87	+26 46.4	1.859	2.700	13.3	21.5	2 21	7 39.24	+14 44.3	1.341	2.206	16.0	17.5
<b>468268</b>	2015 <i>BO</i> <sub>497</sub>		1 20.8	87°19	0°5/20.5	18	<b>473911</b>	2016 <i>EU</i> <sub>150</sub>		1 20.8	154°78	0°6/20.5	18
12 13	8 34.83	+20 27.6	2.253	3.026	13.4	21.7	12 13	8 34.59	+20 6.2	2.472	3.239	12.5	21.9
12 23	8 30.65	+20 43.0	2.168	3.032	10.5	21.6	12 23	8 30.31	+20 32.2	2.382	3.243	9.8	21.7
1 2	8 24.24	+21 4.3	2.107	3.038	7.2	21.4	1 2	8 23.97	+21 4.3	2.316	3.246	6.7	21.5
1 12	8 16.19	+21 28.4	2.072	3.044	3.4	21.1	1 12	8 16.07	+21 39.5	2.278	3.250	3.2	21.3
1 22	8 7.28	+21 52.0	2.067	3.050	0.8	20.9	1 22	8 7.36	+22 14.3	2.270	3.253	0.8	21.1
2 1	7 58.50	+22 12.0	2.092	3.057	4.5	21.2	2 1	7 58.70	+22 45.4	2.292	3.256	4.3	21.3
2 11	7 50.80	+22 26.3	2.145	3.063	8.1	21.5	2 11	7 51.01	+23 10.4	2.344	3.259	7.7	21.6
2 21	7 44.93	+22 34.0	2.224	3.069	11.3	21.7	2 21	7 44.97	+23 28.2	2.422	3.262	10.7	21.8
<b>61696</b>	2000 <i>QL</i> <sub>132</sub>		1 20.8	96°64	1°0/20.4	18	<b>168110</b>	2006 <i>EE</i> <sub>61</sub>		1 20.8	193°53	2°8/22.0	18
12 13	8 40.40	+19 47.9	1.645	2.426	17.2	19.7	12 13	8 38.07	+12 5.6	1.881	2.637	16.3	20.7
12 23	8 35.72	+20 24.5	1.578	2.446	13.5	19.5	12 23	8 33.67	+11 55.4	1.787	2.636	13.2	20.4
1 2	8 28.03	+21 10.7	1.532	2.465	9.2	19.3	1 2	8 26.61	+11 57.7	1.715	2.634	9.5	20.2
1 12	8 18.08	+22 1.4	1.511	2.484	4.3	19.1	1 12	8 17.47	+12 11.7	1.669	2.632	5.5	20.0
1 22	8 7.03	+22 50.1	1.519	2.502	1.3	18.9	1 22	8 7.17	+12 35.2	1.650	2.629	2.8	19.8
2 1	7 56.29	+23 31.6	1.555	2.520	5.8	19.2	2 1	7 56.88	+13 5.0	1.661	2.626	5.5	19.9
2 11	7 47.21	+24 2.4	1.619	2.537	10.2	19.5	2 11	7 47.82	+13 37.4	1.700	2.622	9.5	20.2
2 21	7 40.72	+24 21.8	1.707	2.554	14.0	19.8	2 21	7 40.91	+14 9.0	1.763	2.618	13.3	20.4
<b>66926</b>	1999 <i>VE</i> <sub>193</sub>		1 20.8	68°38	0°4/20.9	18	<b>338075</b>	2002 <i>PM</i> <sub>55</sub>		1 20.8	179°57	1°2/20.3	18
12 13	8 36.32	+18 22.8	1.955	2.729	15.1	18.7	12 13	8 43.97	+22 5.9	1.889	2.658	15.8	21.5
12 23	8 32.06	+18 24.6	1.877	2.740	11.9	18.5	12 23	8 38.40	+22 23.0	1.799	2.660	12.5	21.2
1 2	8 25.31	+18 34.0	1.822	2.752	8.2	18.3	1 2	8 29.87	+22 45.8	1.732	2.662	8.5	21.0
1 12	8 16.73	+18 48.5	1.792	2.763	4.0	18.0	1 12	8 19.04	+23 10.2	1.691	2.662	4.1	20.7
1 22	8 7.23	+19 4.8	1.791	2.775	0.6	17.8	1 22	8 6.97	+23 31.3	1.679	2.662	1.4	20.5
2 1	7 57.95	+19 19.9	1.820	2.787	4.8	18.1	2 1	7 55.00	+23 45.1	1.698	2.661	5.6	20.8
2 11	7 49.95	+19 31.5	1.876	2.798	8.8	18.4	2 11	7 44.49	+23 49.9	1.745	2.658	10.0	21.1
2 21	7 44.05	+19 38.4	1.958	2.810	12.3	18.6	2 21	7 36.44	+23 45.8	1.818	2.655	13.7	21.3
<b>304780</b>	2007 <i>LO</i> <sub>21</sub>		1 20.8	139°32	3°2/22.5	18	<b>160086</b>	2000 <i>LT</i> <sub>23</sub>		1 20.8	201°84	4°9/22.7	18
12 13	8 39.25	+ 9 30.4	2.059	2.797	15.6	21.8	12 13	8 39.63	+ 7 32.3	2.010	2.741	16.1	20.8
12 23	8 34.14	+ 9 28.8	1.977	2.812	12.7	21.6	12 23	8 34.70	+ 6 52.6	1.910	2.737	13.4	20.6
1 2	8 26.64	+ 9 41.0	1.916	2.826	9.2	21.4	1 2	8 27.23	+ 6 25.6	1.832	2.732	10.1	20.4
1 12	8 17.35	+10 6.1	1.882	2.839	5.5	21.2	1 12	8 17.76	+ 6 12.7	1.779	2.727	6.9	20.1
1 22	8 7.15	+10 41.6	1.876	2.852	3.2	21.1	1 22	8 7.14	+ 6 13.9	1.755	2.721	4.9	20.0
2 1	7 57.09	+11 24.1	1.901	2.863	5.2	21.2	2 1	7 56.49	+ 6 27.8	1.760	2.714	6.4	20.1
2 11	7 48.23	+12 9.4	1.955	2.874	8.7	21.4	2 11	7 46.96	+ 6 51.3	1.793	2.706	9.7	20.3
2 21	7 41.36	+12 53.8	2.035	2.884	12.0	21.7	2 21	7 39.47	+ 7 20.8	1.851	2.697	13.1	20.5
<b>38742</b>	2000 <i>QP</i> <sub>184</sub>		1 20.8	33°94	2°5/19.8	18	<b>56939</b>	2000 <i>RC</i> <sub>68</sub>		1 20.8	112°10	2°9/19.3	18
12 13	8 34.94	+20 33.2	1.102	1.924	21.4	18.5	12 13	8 38.07	+29 21.9	2.664	3.432	11.7	19.6
12 23	8 32.73	+21 36.2	1.050	1.942	16.7	18.2	12 23	8 32.84	+29 43.7	2.587	3.446	9.2	19.5
1 2	8 26.64	+22 53.2	1.018	1.961	11.3	18.0	1 2	8 25.54	+30 4.9	2.534	3.459	6.4	19.3
1 12	8 17.60	+24 15.2	1.007	1.981	5.5	17.7	1 12	8 16.77	+30 21.5	2.509	3.473	3.8	19.2
1 22	8 7.12	+25 31.6	1.021	2.002	2.9	17.6	1 22	8 7.29	+30 30.2	2.514	3.485	3.0	19.1
2 1	7 57.13	+26 33.1	1.059	2.024	7.8	18.0	2 1	7 58.03	+30 28.9	2.550	3.498	5.1	19.3
2 11	7 49.41	+27 15.0	1.122	2.047	13.0	18.4	2 11	7 49.87	+30 17.2	2.615	3.510	7.8	19.5
2 21	7 45.02	+27 37.4	1.205	2.071	17.4	18.7	2 21	7 43.46	+29 56.3	2.706	3.522	10.4	19.7
<b>5379</b>	Abehiroshi		1 20.8	233°95	2°5/19.7	18	<b>457110</b>	2008 <i>FF</i> <sub>12</sub>		1 20.8	344°55	0°8/21.1	18
12 13	8 38.89	+24 0.9	1.702	2.491	16.5	16.9	12 13	8 33.55	+17 7.2	1.455	2.252	18.3	21.6
12 23	8 34.87	+24 36.6	1.614	2.486	13.0	16.7	12 23	8 30.98	+17 9.8	1.370	2.246	14.7	21.4
1 2	8 27.73	+25 18.8	1.548	2.482	8.9	16.4	1 2	8 25.24	+17 24.4	1.304	2.240	10.2	21.1
1 12	8 18.10	+26 2.0	1.507	2.478	4.6	16.2	1 12	8 16.96	+17 48.6	1.262	2.234	5.1	20.8
1 22	8 7.06	+26 39.7	1.493	2.473	2.7	16.0	1 22	8 7.24	+18 18.2	1.246	2.230	1.0	20.5
2 1	7 56.04	+27 6.5	1.508	2.468	6.6	16.3	2 1	7 57.55	+18 48.2	1.257	2.226	6.0	20.8
2 11	7 46.54	+27 19.8	1.550	2.463	11.0	16.5	2 11	7 49.40	+19 14.5	1.293	2.223	11.1	21.1
2 21	7 39.64	+27 19.9	1.615	2.458	14.9	16.7	2 21	7 43.93	+19 34.3	1.351	2.221	15.6	21.3
<b>89619</b>	2001 <i>XE</i> <sub>192</sub>		1 20.8	86°67	0°3/20.9	17	<b>62194</b>	2000 <i>SV</i> <sub>47</sub>		1 20.8	289°62	2°9/21.9	18
12 13	8 40.46	+16 3.6	1.586	2.362	18.0	20.3	12 13	8 35.83	+13 6.4	1.886	2.650	16.0	19.4
12 23	8 35.73	+16 38.9	1.524	2.387	14.2	20.1	12 23	8 31.94	+12 40.2	1.790	2.642	12.9	19.1
1 2	8 28.01	+17 27.6	1.483	2.413	9.7	19.9	1 2	8 25.45	+12 24.1	1.715	2.635	9.3	18.9
1 12	8 18.07	+18 24.8	1.466	2.437	4.7	19.7	1 12	8 16.93	+12 18.2	1.665	2.628	5.4	18.6
1 22	8 7.09	+19 24.5	1.478	2.462	0.6	19.4	1 22	8 7.26	+12 21.0	1.643	2.621	2.9	18.5
2 1	7 56.47	+20 20.2	1.519	2.486	5.6	19.8	2 1	7 57.59	+12 30.5	1.649	2.614	5.5	18.6
2 11	7 47.56	+21 7.7	1.587	2.509	10.1	20.2	2 11	7 49.10	+12 44.0	1.683	2.607	9.5	18.8
2 21	7 41.24	+21 44.7	1.680	2.532	14.0	20.4	2 21	7 42.72	+12 58.9	1.742	2.600	13.3	19.1
<b>377257</b>	2004 <i>CG</i> <sub>59</sub>		1 20.8	24°86	2°2/19.5	18	<b>363352</b>	2002 <i>QK</i> <sub>152</sub>		1 20.8	58°78	4°0/19.3	18
12 13	8 32.89	+22 4.9	1.933	2.722	14.								

EPHEMERIDES

1 20.8

1 20.8

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>252291</b>	2001 <i>QR</i> <sub>330</sub>		1 20.8	29°81'	6°0'/24.3	18	<b>493902</b>	2015 <i>XT</i> <sub>262</sub>		1 20.8	52°17'	2°3'/21.6	18
12 13	8 30.81	+ 2 51.9	1.328	2.094	21.4	19.6	12 13	8 38.72	+15 25.3	1.453	2.238	19.0	21.0
12 23	8 28.64	+ 3 2.2	1.267	2.112	17.7	19.4	12 23	8 34.77	+14 58.8	1.380	2.246	15.2	20.8
1 2	8 23.45	+ 3 40.9	1.223	2.130	13.5	19.2	1 2	8 27.61	+14 43.6	1.326	2.255	10.7	20.6
1 12	8 15.99	+ 4 48.1	1.201	2.150	9.1	19.0	1 12	8 18.01	+14 38.5	1.296	2.265	5.7	20.3
1 22	8 7.40	+ 6 19.2	1.203	2.171	6.1	18.9	1 22	8 7.18	+14 41.2	1.293	2.274	2.3	20.1
2 1	7 59.09	+ 8 5.8	1.231	2.193	7.3	19.0	2 1	7 56.62	+14 48.7	1.316	2.284	6.1	20.4
2 11	7 52.41	+ 9 57.2	1.285	2.216	11.0	19.3	2 11	7 47.80	+14 58.1	1.366	2.294	10.9	20.7
2 21	7 48.28	+11 44.2	1.362	2.240	14.9	19.6	2 21	7 41.72	+15 6.9	1.439	2.305	15.1	20.9
<b>24143</b>	1999 <i>VY</i> <sub>124</sub>		1 20.8	115°02'	2°5'/19.8	18	<b>56764</b>	2000 <i>ON</i> <sub>24</sub>		1 20.8	133°82'	1°5'/20.0	18
12 13	8 45.90	+24 16.1	1.647	2.425	17.4	19.5	12 13	8 37.59	+25 25.3	2.737	3.501	11.5	19.2
12 23	8 40.09	+24 53.4	1.581	2.447	13.6	19.3	12 23	8 32.38	+25 31.9	2.651	3.510	9.0	19.1
1 2	8 31.03	+25 36.0	1.537	2.468	9.3	19.1	1 2	8 25.21	+25 39.6	2.590	3.518	6.2	18.9
1 12	8 19.55	+26 17.2	1.519	2.489	4.7	18.9	1 12	8 16.63	+25 45.5	2.557	3.527	3.1	18.7
1 22	8 6.93	+26 50.5	1.529	2.509	2.8	18.8	1 22	8 7.38	+25 47.0	2.555	3.535	1.7	18.6
2 1	7 54.74	+27 11.1	1.569	2.528	6.5	19.1	2 1	7 58.29	+25 42.3	2.584	3.543	4.3	18.8
2 11	7 44.44	+27 17.7	1.636	2.545	10.8	19.4	2 11	7 50.20	+25 30.8	2.643	3.551	7.3	19.0
2 21	7 36.99	+27 11.9	1.727	2.562	14.5	19.6	2 21	7 43.75	+25 13.0	2.729	3.558	9.9	19.2
<b>38803</b>	2000 <i>RH</i> <sub>62</sub>		1 20.8	194°40'	1°1'/21.4	18	<b>141377</b>	2002 <i>AJ</i> <sub>64</sub>		1 20.8	259°00'	2°0'/22.2	17
12 13	8 38.46	+15 26.0	2.091	2.849	14.8	19.3	12 13	8 30.88	+11 23.5	2.705	3.450	12.1	19.8
12 23	8 33.76	+15 36.8	1.994	2.847	11.8	19.1	12 23	8 27.27	+11 34.8	2.601	3.442	9.8	19.6
1 2	8 26.57	+15 57.8	1.920	2.844	8.2	18.9	1 2	8 21.86	+11 56.6	2.519	3.434	7.0	19.4
1 12	8 17.44	+16 26.8	1.872	2.841	4.2	18.6	1 12	8 15.10	+12 27.7	2.464	3.426	4.0	19.2
1 22	8 7.21	+17 0.5	1.853	2.836	1.1	18.4	1 22	8 7.57	+13 6.0	2.439	3.418	2.0	19.0
2 1	7 56.97	+17 35.2	1.865	2.832	4.8	18.6	2 1	7 59.99	+13 48.8	2.445	3.410	3.9	19.2
2 11	7 47.85	+18 7.4	1.906	2.826	8.8	18.9	2 11	7 53.15	+14 33.0	2.480	3.402	7.0	19.3
2 21	7 40.72	+18 35.0	1.973	2.820	12.4	19.1	2 21	7 47.68	+15 15.6	2.543	3.393	9.8	19.5
<b>499483</b>	2010 <i>JK</i> <sub>112</sub>		1 20.8	240°77'	0°7'/20.4	17	<b>418376</b>	2008 <i>GG</i> <sub>146</sub>		1 20.8	330°61'	8°2'/25.3	18
12 13	8 33.43	+20 56.1	2.695	3.461	11.6	22.1	12 13	8 31.56	- 1 31.6	1.764	2.483	18.5	21.2
12 23	8 29.34	+21 19.7	2.592	3.452	9.2	21.9	12 23	8 28.74	- 2 4.0	1.672	2.478	15.9	21.0
1 2	8 23.31	+21 48.6	2.513	3.443	6.2	21.7	1 2	8 23.38	- 2 13.7	1.599	2.473	13.0	20.7
1 12	8 15.79	+22 20.0	2.461	3.433	3.0	21.4	1 12	8 15.99	- 1 57.1	1.547	2.468	10.1	20.6
1 22	8 7.44	+22 50.9	2.440	3.423	0.9	21.3	1 22	8 7.44	- 1 13.6	1.520	2.464	8.3	20.4
2 1	7 59.05	+23 18.1	2.450	3.413	4.1	21.5	2 1	7 58.83	- 0 5.8	1.519	2.460	8.7	20.5
2 11	7 51.48	+23 39.5	2.489	3.403	7.4	21.7	2 11	7 51.35	+ 1 19.9	1.545	2.456	11.2	20.6
2 21	7 45.41	+23 54.0	2.555	3.392	10.3	21.8	2 21	7 45.93	+ 2 55.5	1.594	2.452	14.2	20.8
<b>97550</b>	2000 <i>DT</i> <sub>59</sub>		1 20.8	268°01'	0°5'/21.1	18	<b>18389</b>	1992 <i>JU</i> <sub>2</sub>		1 20.8	122°98'	3°3'/22.3	18
12 13	8 33.85	+17 11.2	2.216	2.984	13.8	20.2	12 13	8 41.76	+10 37.3	1.721	2.471	17.8	18.9
12 23	8 30.00	+17 23.4	2.122	2.982	10.9	20.0	12 23	8 36.54	+10 30.6	1.647	2.490	14.4	18.7
1 2	8 23.91	+17 44.0	2.051	2.980	7.5	19.8	1 2	8 28.50	+10 38.9	1.594	2.509	10.3	18.5
1 12	8 16.12	+18 10.7	2.007	2.978	3.7	19.5	1 12	8 18.35	+11 1.2	1.565	2.526	6.1	18.3
1 22	8 7.39	+18 40.4	1.992	2.975	0.6	19.3	1 22	8 7.15	+11 34.4	1.565	2.543	3.3	18.1
2 1	7 58.69	+19 9.7	2.006	2.973	4.4	19.6	2 1	7 56.20	+12 14.5	1.594	2.558	5.8	18.3
2 11	7 51.01	+19 35.8	2.049	2.971	8.2	19.8	2 11	7 46.78	+12 56.8	1.652	2.573	9.8	18.6
2 21	7 45.12	+19 56.7	2.118	2.968	11.6	20.0	2 21	7 39.77	+13 37.6	1.734	2.587	13.5	18.8
<b>449656</b>	2014 <i>KG</i> <sub>62</sub>		1 20.8	220°00'	4°5'/18.7	18	<b>234218</b>	2000 <i>SD</i> <sub>114</sub>		1 20.8	129°53'	1°7'/21.7	18
12 13	8 41.84	+28 4.5	1.760	2.546	16.1	21.4	12 13	8 39.60	+13 22.7	1.979	2.732	15.7	21.2
12 23	8 37.34	+29 4.2	1.669	2.539	12.8	21.2	12 23	8 34.56	+13 33.7	1.901	2.749	12.5	21.0
1 2	8 29.55	+30 8.7	1.601	2.531	9.1	20.9	1 2	8 27.02	+13 56.7	1.844	2.764	8.8	20.8
1 12	8 19.06	+31 10.4	1.558	2.523	5.5	20.7	1 12	8 17.60	+14 29.5	1.813	2.779	4.7	20.6
1 22	8 6.98	+32 0.8	1.543	2.514	4.7	20.7	1 22	8 7.25	+15 8.7	1.812	2.794	1.8	20.4
2 1	7 54.83	+32 33.8	1.557	2.504	7.9	20.8	2 1	7 57.07	+15 50.0	1.841	2.807	4.9	20.7
2 11	7 44.22	+32 46.7	1.598	2.494	11.8	21.0	2 11	7 48.18	+16 29.8	1.899	2.820	8.8	20.9
2 21	7 36.35	+32 41.4	1.661	2.484	15.5	21.2	2 21	7 41.39	+17 5.3	1.983	2.832	12.3	21.2
<b>459120</b>	2012 <i>BV</i> <sub>134</sub>		1 20.8	346°29'	2°3'/21.6	18	<b>344549</b>	2002 <i>VJ</i> <sub>98</sub>		1 20.8	130°24'	2°9'/19.5	17
12 13	8 35.90	+15 21.4	1.560	2.344	17.9	20.6	12 13	8 44.34	+25 7.2	1.759	2.537	16.4	21.6
12 23	8 32.52	+14 57.0	1.474	2.340	14.4	20.4	12 23	8 38.82	+25 52.8	1.687	2.553	12.9	21.4
1 2	8 26.12	+14 43.0	1.408	2.337	10.2	20.1	1 2	8 30.19	+26 43.1	1.638	2.569	8.9	21.2
1 12	8 17.33	+14 38.8	1.366	2.334	5.5	19.9	1 12	8 19.20	+27 31.7	1.614	2.583	4.7	21.0
1 22	8 7.24	+14 42.2	1.350	2.332	2.3	19.6	1 22	8 7.04	+28 11.7	1.620	2.597	3.2	20.9
2 1	7 57.22	+14 50.4	1.362	2.330	5.9	19.9	2 1	7 55.15	+28 38.2	1.655	2.611	6.6	21.2
2 11	7 48.70	+15 0.6	1.400	2.328	10.6	20.1	2 11	7 44.98	+28 49.6	1.718	2.623	10.6	21.4
2 21	7 42.70	+15 10.3	1.461	2.327	14.8	20.4	2 21	7 37.48	+28 47.2	1.805	2.635	14.2	21.7
<b>157600</b>	2005 <i>VH</i> <sub>96</sub>		1 20.8	73°09'	5°6'/18.7	18	<b>383696</b>	2007 <i>TO</i> <sub>403</sub>		1 20.8	73°72'	3°8'/22.9	18
12 13	8 42.34	+29 39.5	1.380	2.184	18.9	20.0	12 13	8 33.17	+ 8 22.1	2.331	3.069	14.0	21.1
12 23	8 38.26	+30 40.9	1.317	2.195	15.0	19.7	12 23	8 29.17	+ 7 58.4	2.245	3.077	11.4	20.9
1 2	8 30.33	+31 44.6	1.274	2.206	10.7	19.5	1 2	8 23.18	+ 7 46.4	2.181	3.085	8.5	20.7
1 12	8 19.41	+32 40.8	1.254	2.218	6.7	19.3	1 12	8 15.72	+ 7 46.4	2.142	3.094	5.6	20.6
1 22	8 6.98	+33 20.2	1.261	2.229	5.9	19.3	1 22	8 7.50	+ 7 57.5	2.133	3.102	3.8	20.5
2 1	7 54.95	+33 36.7	1.294	2.241	9.1	19.5	2 1	7 59.38	+ 8 17.7	2.153	3.110	5.1	20.6
2 11	7 45.12	+33 30.1	1.351	2.253	13.2	19.8	2 11	7 52.22	+ 8 44.2	2.201	3.119	7.9	20.7
2 21	7 38.65	+33 4.4	1.430	2.264	17.0	20.1	2 21	7 46.68	+ 9 13.8	2.275	3.127	10.8	20.9
<b>376692</b>	2013 <i>QU</i> <sub>75</sub>		1 20.8	122°18'	2°0'/21.9	18	<b>459182</b>	2012 <i>DM</i> <sub>39</sub>		1 20.8	334°18'	0°0'/20.8	16
12 13	8 34.37												

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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>84259</b>	2002 <i>ST</i> <sub>46</sub>		1 20.8	44°10'	4°9'/23.5	18	<b>74530</b>	1999 <i>GW</i> <sub>39</sub>		1 20.8	1°39'	6°0'/17.7	18
12 13	8 32.19	+ 5 22.7	2.143	2.877	15.2	19.5	12 13	8 35.77	+33 19.9	1.875	2.669	14.9	18.1
12 23	8 28.62	+ 4 58.3	2.057	2.883	12.6	19.3	12 23	8 32.36	+34 23.5	1.798	2.668	12.0	17.9
1 2	8 22.92	+ 4 48.6	1.993	2.889	9.6	19.1	1 2	8 25.98	+35 26.2	1.743	2.668	8.9	17.7
1 12	8 15.64	+ 4 54.8	1.953	2.896	6.7	19.0	1 12	8 17.28	+36 20.5	1.714	2.668	6.4	17.6
1 22	8 7.52	+ 5 15.8	1.940	2.903	4.9	18.9	1 22	8 7.32	+36 59.2	1.712	2.669	6.2	17.6
2 1	7 59.47	+ 5 49.5	1.956	2.910	6.0	18.9	2 1	7 57.49	+37 17.4	1.738	2.670	8.5	17.7
2 11	7 52.44	+ 6 32.0	2.000	2.917	8.7	19.1	2 11	7 49.17	+37 14.4	1.789	2.672	11.6	17.9
2 21	7 47.13	+ 7 19.0	2.070	2.924	11.6	19.3	2 21	7 43.34	+36 52.7	1.862	2.674	14.5	18.1
<b>411339</b>	2010 <i>UY</i> <sub>56</sub>		1 20.8	75°10'	7°6'/17.1	18	<b>426839</b>	2013 <i>VC</i> <sub>8</sub>		1 20.8	344°27'	5°4'/17.9	18
12 13	8 45.31	+36 44.4	1.756	2.537	16.3	20.8	12 13	8 37.23	+33 12.9	2.054	2.840	14.1	20.5
12 23	8 39.88	+38 16.8	1.709	2.567	13.2	20.7	12 23	8 33.24	+34 9.4	1.972	2.838	11.3	20.3
1 2	8 31.02	+39 44.0	1.685	2.596	10.1	20.6	1 2	8 26.44	+35 5.0	1.913	2.836	8.4	20.2
1 12	8 19.59	+40 55.4	1.686	2.625	8.0	20.5	1 12	8 17.46	+35 52.7	1.880	2.834	6.0	20.0
1 22	8 7.00	+41 42.9	1.715	2.654	7.9	20.6	1 22	8 7.30	+36 26.1	1.875	2.832	5.7	20.0
2 1	7 54.93	+42 2.3	1.771	2.682	9.9	20.7	2 1	7 57.24	+36 40.9	1.898	2.831	7.9	20.1
2 11	7 44.92	+41 55.3	1.852	2.710	12.5	20.9	2 11	7 48.56	+36 36.5	1.948	2.830	10.8	20.3
2 21	7 37.95	+41 26.9	1.955	2.737	15.0	21.2	2 21	7 42.22	+36 14.9	2.021	2.829	13.7	20.5
<b>454761</b>	2014 <i>WX</i> <sub>67</sub>		1 20.8	104°09'	3°0'/22.3	18	<b>197184</b>	2003 <i>UT</i> <sub>309</sub>		1 20.8	14°35'	6°5'/17.2	18
12 13	8 34.93	+11 4.8	1.983	2.739	15.6	21.4	12 13	8 38.45	+35 36.0	2.021	2.806	14.3	19.9
12 23	8 31.00	+10 56.3	1.897	2.744	12.6	21.2	12 23	8 34.34	+36 46.0	1.945	2.807	11.6	19.7
1 2	8 24.67	+11 0.5	1.832	2.748	9.1	21.0	1 2	8 27.26	+37 53.7	1.891	2.808	8.9	19.5
1 12	8 16.52	+11 16.8	1.792	2.753	5.4	20.8	1 12	8 17.88	+38 51.1	1.864	2.809	6.8	19.4
1 22	8 7.41	+11 43.0	1.780	2.758	3.0	20.7	1 22	8 7.25	+39 31.1	1.864	2.810	6.8	19.4
2 1	7 58.38	+12 16.0	1.798	2.762	5.2	20.8	2 1	7 56.73	+39 49.1	1.891	2.811	8.8	19.5
2 11	7 50.49	+12 52.2	1.843	2.767	8.8	21.0	2 11	7 47.70	+39 44.7	1.944	2.813	11.5	19.7
2 21	7 44.57	+13 27.9	1.914	2.771	12.3	21.3	2 21	7 41.16	+39 20.8	2.020	2.814	14.2	19.9
<b>341516</b>	2007 <i>TR</i> <sub>426</sub>		1 20.8	62°94'	3°6'/22.7	18	<b>231058</b>	2005 <i>LJ</i> <sub>34</sub>		1 20.8	309°12'	0°9'/21.3	18
12 13	8 33.64	+ 9 20.1	2.268	3.010	14.2	21.1	12 13	8 32.69	+16 17.0	2.101	2.873	14.3	20.9
12 23	8 29.59	+ 8 53.0	2.183	3.019	11.6	20.9	12 23	8 29.33	+16 23.3	1.999	2.860	11.4	20.7
1 2	8 23.50	+ 8 37.1	2.120	3.028	8.6	20.7	1 2	8 23.63	+16 38.9	1.919	2.847	8.0	20.4
1 12	8 15.89	+ 8 32.6	2.083	3.036	5.5	20.6	1 12	8 16.09	+17 2.1	1.864	2.834	4.0	20.2
1 22	8 7.50	+ 8 38.6	2.074	3.045	3.6	20.4	1 22	8 7.48	+17 29.9	1.838	2.822	1.0	19.9
2 1	7 59.23	+ 8 53.5	2.095	3.054	5.1	20.6	2 1	7 58.81	+17 58.9	1.842	2.810	4.7	20.2
2 11	7 51.96	+ 9 14.4	2.144	3.063	8.1	20.8	2 11	7 51.14	+18 26.0	1.873	2.798	8.7	20.4
2 21	7 46.37	+ 9 38.5	2.219	3.072	11.0	21.0	2 21	7 45.31	+18 48.9	1.930	2.786	12.3	20.6
<b>234184</b>	2000 <i>QT</i> <sub>53</sub>		1 20.8	146°91'	1°3'/21.5	18	<b>126119</b>	2001 <i>YZ</i> <sub>113</sub>		1 20.8	333°70'	0°4'/21.0	18
12 13	8 39.33	+13 51.1	2.097	2.848	15.0	21.4	12 13	8 30.72	+17 15.3	2.036	2.816	14.4	19.8
12 23	8 34.29	+14 15.1	2.013	2.861	11.9	21.2	12 23	8 27.88	+17 32.7	1.937	2.804	11.5	19.6
1 2	8 26.83	+14 51.1	1.951	2.872	8.3	21.0	1 2	8 22.70	+17 59.8	1.860	2.791	7.9	19.3
1 12	8 17.54	+15 36.2	1.916	2.883	4.3	20.8	1 12	8 15.66	+18 34.3	1.808	2.780	3.9	19.1
1 22	8 7.29	+16 26.7	1.910	2.893	1.3	20.6	1 22	8 7.55	+19 12.6	1.785	2.769	0.5	18.8
2 1	7 57.13	+17 17.9	1.936	2.902	4.6	20.8	2 1	7 59.38	+19 50.6	1.790	2.758	4.7	19.1
2 11	7 48.15	+18 5.9	1.991	2.910	8.5	21.1	2 11	7 52.24	+20 24.7	1.824	2.748	8.8	19.3
2 21	7 41.17	+18 48.0	2.072	2.918	12.0	21.3	2 21	7 46.97	+20 52.6	1.882	2.739	12.5	19.5
<b>427828</b>	2005 <i>JB</i> <sub>100</sub>		1 20.8	269°24'	0°6'/20.5	18	<b>466020</b>	2011 <i>HQ</i> <sub>35</sub>		1 20.8	64°79'	3°9'/18.4	18
12 13	8 32.86	+18 53.2	2.346	3.117	13.0	21.1	12 13	8 35.87	+28 5.4	2.103	2.888	13.8	20.5
12 23	8 29.17	+19 31.7	2.253	3.115	10.2	20.9	12 23	8 31.87	+29 12.7	2.031	2.901	10.9	20.3
1 2	8 23.34	+20 18.7	2.183	3.114	7.0	20.7	1 2	8 25.33	+30 22.8	1.983	2.913	7.6	20.2
1 12	8 15.88	+21 10.6	2.141	3.113	3.3	20.4	1 12	8 16.87	+31 29.2	1.962	2.926	4.7	20.0
1 22	8 7.50	+22 3.3	2.128	3.112	0.8	20.2	1 22	8 7.41	+32 25.7	1.970	2.939	4.2	20.0
2 1	7 59.12	+22 52.6	2.146	3.111	4.5	20.5	2 1	7 58.08	+33 7.4	2.007	2.951	6.6	20.2
2 11	7 51.68	+23 35.0	2.193	3.109	8.0	20.7	2 11	7 50.03	+33 32.4	2.072	2.964	9.8	20.4
2 21	7 45.93	+24 8.8	2.266	3.108	11.2	20.9	2 21	7 44.08	+33 41.5	2.161	2.977	12.6	20.6
<b>455047</b>	2015 <i>UY</i> <sub>9</sub>		1 20.8	344°74'	1°3'/20.4	18	<b>166818</b>	2002 <i>VS</i> <sub>92</sub>		1 20.8	348°35'	0°1'/20.9	18
12 13	8 32.31	+20 19.4	1.127	1.952	20.9	20.7	12 13	8 31.60	+18 0.6	1.847	2.633	15.4	19.5
12 23	8 31.03	+20 44.1	1.049	1.942	16.6	20.4	12 23	8 28.78	+18 18.1	1.756	2.627	12.2	19.3
1 2	8 25.89	+21 22.3	0.990	1.934	11.4	20.1	1 2	8 23.40	+18 45.4	1.688	2.621	8.4	19.0
1 12	8 17.53	+22 9.0	0.952	1.926	5.5	19.8	1 12	8 16.03	+19 19.8	1.644	2.617	4.1	18.7
1 22	8 7.26	+22 56.4	0.937	1.920	1.7	19.5	1 22	8 7.53	+19 57.1	1.629	2.612	0.5	18.4
2 1	7 56.99	+23 36.5	0.947	1.915	7.6	19.8	2 1	7 59.05	+20 33.0	1.641	2.609	5.1	18.8
2 11	7 48.71	+24 4.0	0.979	1.912	13.5	20.1	2 11	7 51.76	+21 3.7	1.681	2.606	9.4	19.0
2 21	7 43.82	+24 17.2	1.031	1.910	18.6	20.4	2 21	7 46.55	+21 27.2	1.745	2.604	13.2	19.3
<b>367194</b>	2007 <i>AY</i> <sub>25</sub>		1 20.8	91°42'	3°1'/22.9	18	<b>131953</b>	2002 <i>CB</i> <sub>36</sub>		1 20.8	290°84'	0°1'/20.9	18
12 13	8 34.09	+ 6 17.8	1.918	2.660	16.5	20.3	12 13	8 35.71	+17 28.2	1.537	2.327	17.9	20.0
12 23	8 30.52	+ 7 7.5	1.826	2.663	13.5	20.1	12 23	8 32.73	+17 51.1	1.442	2.314	14.3	19.7
1 2	8 24.49	+ 8 18.9	1.756	2.667	9.9	19.9	1 2	8 26.55	+18 27.5	1.367	2.301	9.9	19.4
1 12	8 16.51	+ 9 50.0	1.712	2.670	5.9	19.7	1 12	8 17.73	+19 14.0	1.316	2.289	4.8	19.1
1 22	8 7.42	+11 35.9	1.696	2.673	3.1	19.5	1 22	8 7.29	+20 5.0	1.292	2.276	0.6	18.8
2 1	7 58.30	+13 29.2	1.711	2.677	5.2	19.6	2 1	7 56.69	+20 54.4	1.295	2.263	6.1	19.1
2 11	7 50.27	+15 21.9	1.755	2.680	9.1	19.9	2 11	7 47.51	+21 36.7	1.325	2.251	11.3	19.4
2 21	7 44.22	+17 7.1	1.826	2.683	12.8	20.1	2 21	7 40.98	+22 9.2	1.377	2.238	15.9	19.6
<b>31585</b>	1999 <i>FJ</i> <sub>31</sub>		1 20.8	187°83'	5°1'/17.7	18	<b>356298</b>	2010 <i>FT</i> <sub>47</sub>		1 20.8	235°81'	2°1'/21.8	17
12 13	8 40.57	+33 44											

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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>456872</b>	2007 <i>VO</i> <sub>49</sub>		1 20.8 154°43	1.2°/21.3	18		<b>55614</b>	2002 <i>TJ</i> <sub>59</sub>		1 20.9 130°03	0°5'/21.1	18	
12 13	8 39.72	+16 29.1	1.942	2.705	15.6	21.7	12 13	8 35.97	+18 8.9	2.561	3.318	12.4	19.2
12 23	8 34.84	+16 23.9	1.856	2.711	12.4	21.4	12 23	8 31.23	+18 7.3	2.474	3.328	9.8	19.0
1 2	8 27.34	+16 27.6	1.792	2.717	8.6	21.2	1 2	8 24.53	+18 11.3	2.411	3.337	6.7	18.8
1 12	8 17.85	+16 38.1	1.753	2.722	4.4	21.0	1 12	8 16.41	+18 19.1	2.376	3.346	3.3	18.6
1 22	8 7.31	+16 52.5	1.744	2.727	1.2	20.8	1 22	8 7.57	+18 28.5	2.371	3.354	0.6	18.4
2 1	7 56.91	+17 7.8	1.764	2.731	5.0	21.0	2 1	7 58.85	+18 37.4	2.396	3.362	3.9	18.7
2 11	7 47.81	+17 21.5	1.813	2.735	9.1	21.3	2 11	7 51.10	+18 44.1	2.452	3.370	7.2	18.9
2 21	7 40.89	+17 32.1	1.888	2.738	12.7	21.5	2 21	7 44.96	+18 47.7	2.534	3.378	10.1	19.1
<b>28357</b>	1999 <i>FB</i> <sub>40</sub>		1 20.9 285°00	4°8'/19.3	18		<b>58631</b>	1997 <i>WE</i> <sub>2</sub>		1 20.9 82°57	4°6'/18.7	18	
12 13	8 43.41	+32 28.1	1.843	2.625	15.6	18.1	12 13	8 42.62	+26 42.4	1.536	2.328	17.8	18.4
12 23	8 38.34	+32 45.7	1.754	2.618	12.6	17.9	12 23	8 37.93	+28 1.7	1.479	2.353	13.9	18.2
1 2	8 30.05	+33 0.5	1.686	2.611	9.1	17.6	1 2	8 29.82	+29 25.9	1.444	2.376	9.7	18.0
1 12	8 19.25	+33 5.9	1.644	2.605	5.8	17.4	1 12	8 19.14	+30 45.5	1.434	2.400	5.7	17.8
1 22	8 7.14	+32 56.3	1.630	2.598	4.9	17.4	1 22	8 7.21	+31 51.3	1.452	2.423	4.9	17.8
2 1	7 55.23	+32 28.8	1.644	2.591	7.6	17.5	2 1	7 55.69	+32 36.9	1.498	2.446	8.0	18.1
2 11	7 45.01	+31 44.4	1.686	2.584	11.2	17.7	2 11	7 46.12	+33 0.5	1.570	2.469	11.9	18.4
2 21	7 37.53	+30 46.9	1.751	2.578	14.7	17.9	2 21	7 39.52	+33 4.6	1.665	2.491	15.3	18.6
<b>11771</b>	Maestlin		1 20.9 118°49	3°1'/18.9	18		<b>24737</b>	1992 <i>ED</i> <sub>14</sub>		1 20.9 113°59	3°4'/22.8	18	
12 13	8 38.50	+28 31.5	2.488	3.259	12.4	19.4	12 13	8 37.05	+ 8 27.2	2.050	2.789	15.6	18.3
12 23	8 33.41	+29 13.5	2.414	3.275	9.7	19.2	12 23	8 32.46	+ 8 29.2	1.973	2.807	12.7	18.2
1 2	8 26.11	+29 56.3	2.364	3.290	6.8	19.1	1 2	8 25.57	+ 8 46.1	1.916	2.825	9.3	18.0
1 12	8 17.17	+30 35.1	2.342	3.306	4.0	18.9	1 12	8 16.96	+ 9 16.8	1.886	2.841	5.7	17.8
1 22	8 7.44	+31 5.4	2.350	3.320	3.3	18.9	1 22	8 7.50	+ 9 59.0	1.883	2.858	3.4	17.7
2 1	7 57.89	+31 24.2	2.388	3.335	5.5	19.1	2 1	7 58.20	+10 48.7	1.911	2.873	5.2	17.8
2 11	7 49.48	+31 30.4	2.455	3.349	8.4	19.3	2 11	7 50.07	+11 41.5	1.968	2.889	8.5	18.1
2 21	7 42.94	+31 25.0	2.548	3.362	11.0	19.5	2 21	7 43.86	+12 33.3	2.050	2.903	11.8	18.3
<b>63115</b>	2000 <i>WH</i> <sub>165</sub>		1 20.9 285°85	3°5'/19.1	18		<b>242786</b>	2005 <i>YT</i> <sub>166</sub>		1 20.9 222°94	1°1'/21.5	18	
12 13	8 37.06	+24 4.8	1.593	2.390	17.0	19.1	12 13	8 38.70	+14 19.5	2.048	2.803	15.1	21.4
12 23	8 34.05	+25 7.6	1.491	2.369	13.6	18.8	12 23	8 34.20	+14 43.2	1.941	2.792	12.2	21.2
1 2	8 27.68	+26 21.6	1.411	2.347	9.5	18.5	1 2	8 27.09	+15 19.7	1.857	2.780	8.5	21.0
1 12	8 18.40	+27 39.8	1.355	2.325	5.2	18.2	1 12	8 17.87	+16 6.7	1.799	2.767	4.4	20.7
1 22	8 7.23	+28 53.3	1.326	2.303	3.9	18.1	1 22	8 7.36	+17 0.1	1.770	2.753	1.2	20.4
2 1	7 55.70	+29 53.5	1.325	2.281	7.8	18.3	2 1	7 56.67	+17 55.1	1.772	2.738	5.0	20.6
2 11	7 45.54	+30 35.0	1.350	2.260	12.6	18.5	2 11	7 47.02	+18 47.2	1.803	2.723	9.2	20.9
2 21	7 38.15	+30 57.0	1.397	2.238	16.9	18.7	2 21	7 39.40	+19 33.1	1.859	2.706	13.1	21.1
<b>246912</b>	1998 <i>RB</i> <sub>41</sub>		1 20.9 126°50	3°5'/19.4	18		<b>362059</b>	2009 <i>BZ</i> <sub>51</sub>		1 20.9 279°82	0°6'/20.6	17	
12 13	8 42.97	+28 47.2	1.960	2.736	15.0	20.7	12 13	8 36.82	+19 20.3	1.643	2.430	17.0	21.6
12 23	8 37.51	+29 15.7	1.884	2.748	11.9	20.5	12 23	8 33.49	+19 44.2	1.543	2.414	13.6	21.3
1 2	8 29.19	+29 44.8	1.831	2.759	8.3	20.3	1 2	8 27.03	+20 19.1	1.463	2.397	9.4	21.0
1 12	8 18.73	+30 8.5	1.804	2.770	4.8	20.1	1 12	8 17.99	+21 1.3	1.408	2.381	4.5	20.7
1 22	8 7.24	+30 21.6	1.807	2.780	3.7	20.1	1 22	8 7.33	+21 45.3	1.381	2.364	1.0	20.4
2 1	7 56.03	+30 21.0	1.838	2.790	6.5	20.2	2 1	7 56.48	+22 25.2	1.381	2.347	6.1	20.7
2 11	7 46.39	+30 6.3	1.898	2.799	10.0	20.5	2 11	7 46.97	+22 56.8	1.408	2.331	11.1	21.0
2 21	7 39.21	+29 39.9	1.983	2.808	13.2	20.7	2 21	7 40.00	+23 18.0	1.458	2.314	15.5	21.2
<b>286973</b>	2002 <i>QK</i> <sub>17</sub>		1 20.9 103°01	1°9'/21.9	14	18	<b>369541</b>	2011 <i>AE</i> <sub>12</sub>		1 20.9 60°49	0°2'/20.9	18	
12 13	8 39.21	+12 13.1	2.095	2.841	15.1	22.5	12 13	8 38.58	+20 6.9	1.890	2.666	15.5	20.5
12 23	8 34.01	+12 30.1	2.025	2.868	12.1	22.3	12 23	8 34.05	+19 54.5	1.806	2.670	12.3	20.3
1 2	8 26.51	+12 59.4	1.977	2.895	8.5	22.2	1 2	8 26.85	+19 47.5	1.743	2.674	8.4	20.0
1 12	8 17.36	+13 38.7	1.957	2.921	4.6	22.0	1 12	8 17.65	+19 43.7	1.707	2.678	4.1	19.8
1 22	8 7.42	+14 24.2	1.966	2.947	1.9	21.8	1 22	8 7.42	+19 40.3	1.699	2.683	0.5	19.5
2 1	7 57.74	+15 12.1	2.005	2.971	4.6	22.1	2 1	7 57.37	+19 35.0	1.720	2.687	5.0	19.8
2 11	7 49.30	+15 58.3	2.075	2.995	8.2	22.3	2 11	7 48.70	+19 26.6	1.770	2.692	9.2	20.1
2 21	7 42.83	+16 40.1	2.170	3.018	11.4	22.6	2 21	7 42.26	+19 14.7	1.844	2.697	12.9	20.3
<b>230431</b>	2002 <i>PB</i> <sub>123</sub>		1 20.9 122°26	1°9'/21.8	18		<b>433783</b>	2015 <i>BS</i> <sub>75</sub>		1 20.9 1°95	3°1'/19.2	18	
12 13	8 35.96	+14 28.8	2.348	3.101	13.5	20.9	12 13	8 35.17	+26 13.3	2.052	2.838	14.1	21.1
12 23	8 31.38	+14 12.5	2.260	3.108	10.8	20.7	12 23	8 31.44	+26 59.2	1.967	2.838	11.1	20.9
1 2	8 24.72	+14 4.0	2.195	3.115	7.6	20.5	1 2	8 25.15	+27 49.1	1.905	2.838	7.7	20.7
1 12	8 16.52	+14 2.6	2.157	3.122	4.2	20.3	1 12	8 16.87	+28 37.7	1.870	2.838	4.3	20.5
1 22	8 7.53	+14 6.5	2.148	3.129	1.9	20.2	1 22	8 7.51	+29 19.3	1.863	2.838	3.3	20.4
2 1	7 58.66	+14 14.0	2.170	3.135	4.3	20.3	2 1	7 58.21	+29 49.4	1.885	2.839	6.1	20.6
2 11	7 50.81	+14 23.0	2.221	3.141	7.7	20.6	2 11	7 50.14	+30 5.9	1.935	2.839	9.7	20.8
2 21	7 44.67	+14 31.7	2.298	3.148	10.8	20.8	2 21	7 44.17	+30 9.1	2.009	2.840	12.9	21.0
<b>406048</b>	2006 <i>UA</i> <sub>9</sub>		1 20.9 73°22	6°9'/17.4	18		<b>451658</b>	2012 <i>XT</i> <sub>67</sub>		1 20.9 10°03	8°1'/18.6	18	
12 13	8 42.43	+33 48.7	1.693	2.483	16.5	20.5	12 13	8 34.15	+32 25.9	0.937	1.782	22.6	19.3
12 23	8 37.76	+35 19.4	1.639	2.505	13.2	20.3	12 23	8 33.43	+33 24.2	0.884	1.784	18.2	19.0
1 2	8 29.70	+36 48.2	1.607	2.527	9.9	20.2	1 2	8 27.90	+34 21.3	0.848	1.788	13.3	18.8
1 12	8 19.08	+38 4.9	1.601	2.550	7.3	20.1	1 12	8 18.56	+35 4.6	0.831	1.795	9.2	18.6
1 22	8 7.21	+39 0.6	1.622	2.572	7.2	20.1	1 22	8 7.30	+35 22.6	0.835	1.803	8.4	18.6
2 1	7 55.72	+39 30.3	1.671	2.594	9.4	20.3	2 1	7 56.62	+35 9.0	0.861	1.813	11.8	18.8
2 11	7 46.17	+39 34.2	1.744	2.616	12.4	20.5	2 11	7 48.82	+34 26.2	0.908	1.825	16.3	19.1
2 21	7 39.56	+39 16.7	1.840	2.638	15.2	20.8	2 21	7 45.16	+33 21.6	0.973	1.838	20.6	19.4
<b>235016</b>	2003 <i>EC</i> <sub>18</sub>		1 20.9 202°44	3°4'/19.3	18		<b>121896</b>	2000 <i>DW</i> <sub>33</sub>		1 20.9 191°99	3°4'/22.6	18	
12 13	8 43.50	+27 39.0	2.043										

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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>381256</b>	2007 <i>TN</i> <sub>153</sub>		1 20.9	80°96	4°1/18.7	18	<b>424952</b>	2008 <i>YY</i> <sub>149</sub>		1 20.9	231°58	0°2/21.0	18
12 13	8 38.07	+31 28.7	2.279	3.057	13.1	20.8	12 13	8 32.61	+16 22.9	2.402	3.166	12.9	21.0
12 23	8 33.41	+32 6.3	2.202	3.065	10.4	20.6	12 23	8 28.94	+16 59.8	2.307	3.164	10.2	20.8
1 2	8 26.29	+32 42.9	2.148	3.073	7.5	20.4	1 2	8 23.21	+17 46.6	2.235	3.163	7.0	20.6
1 12	8 17.35	+33 13.0	2.121	3.080	4.9	20.3	1 12	8 15.90	+18 40.5	2.190	3.161	3.4	20.3
1 22	8 7.49	+33 31.9	2.123	3.088	4.3	20.3	1 22	8 7.71	+19 37.4	2.176	3.159	0.4	20.1
2 1	7 57.82	+33 36.6	2.154	3.096	6.5	20.4	2 1	7 59.49	+20 33.1	2.191	3.158	4.2	20.4
2 11	7 49.43	+33 26.6	2.213	3.103	9.3	20.6	2 11	7 52.16	+21 24.0	2.237	3.156	7.7	20.6
2 21	7 43.11	+33 3.7	2.297	3.111	12.1	20.8	2 21	7 46.44	+22 7.5	2.308	3.154	10.9	20.8
<b>121039</b>	1999 <i>CQ</i> <sub>11</sub>		1 20.9	27°24	7°4/21.3	18	<b>330662</b>	2008 <i>GC</i> <sub>73</sub>		1 20.9	184°91	1°5/21.7	17
12 13	9 3.77	+40 36.6	1.060	1.853	24.0	18.1	12 13	8 36.20	+13 47.0	2.430	3.178	13.2	22.2
12 23	8 55.84	+39 43.5	1.002	1.866	19.8	17.9	12 23	8 31.64	+13 56.5	2.333	3.178	10.6	22.0
1 2	8 42.31	+38 29.5	0.960	1.881	14.7	17.6	1 2	8 24.99	+14 15.8	2.258	3.178	7.5	21.8
1 12	8 24.96	+36 44.0	0.941	1.898	9.7	17.4	1 12	8 16.73	+14 43.1	2.211	3.177	4.0	21.6
1 22	8 6.59	+34 23.8	0.947	1.915	7.4	17.3	1 22	8 7.60	+15 15.9	2.193	3.175	1.5	21.4
2 1	7 50.18	+31 37.1	0.980	1.934	10.2	17.5	2 1	7 58.48	+15 51.1	2.207	3.173	4.2	21.6
2 11	7 37.93	+28 39.9	1.040	1.954	14.9	17.9	2 11	7 50.27	+16 25.7	2.250	3.170	7.7	21.8
2 21	7 30.64	+25 47.3	1.122	1.975	19.3	18.2	2 21	7 43.71	+16 57.3	2.321	3.167	10.8	22.0
<b>287530</b>	2003 <i>DH</i> <sub>4</sub>		1 20.9	330°56	8°2/22.7	18	<b>448125</b>	2008 <i>RM</i> <sub>139</sub>		1 20.9	62°10	4°3/19.5	17
12 13	8 31.36	+ 6 55.7	1.374	2.151	20.2	19.8	12 13	8 44.00	+27 49.6	1.304	2.107	19.8	21.5
12 23	8 29.58	+ 5 28.4	1.274	2.126	17.2	19.5	12 23	8 39.47	+28 25.2	1.248	2.127	15.6	21.3
1 2	8 24.61	+ 4 13.6	1.192	2.101	13.6	19.2	1 2	8 31.06	+29 3.1	1.212	2.148	10.8	21.1
1 12	8 16.93	+ 3 16.4	1.131	2.077	10.1	18.9	1 12	8 19.78	+29 35.0	1.200	2.168	6.1	20.9
1 22	8 7.51	+ 2 41.1	1.094	2.055	8.2	18.7	1 22	8 7.23	+29 53.0	1.214	2.189	4.5	20.8
2 1	7 57.78	+ 2 29.6	1.081	2.034	9.8	18.7	2 1	7 55.31	+29 53.1	1.254	2.210	8.1	21.1
2 11	7 49.38	+ 2 39.6	1.092	2.014	13.6	18.9	2 11	7 45.76	+29 35.4	1.319	2.231	12.6	21.4
2 21	7 43.63	+ 3 6.1	1.122	1.996	17.8	19.1	2 21	7 39.59	+29 3.9	1.405	2.252	16.5	21.7
<b>296094</b>	2009 <i>BB</i> <sub>32</sub>		1 20.9	303°43	0°7/20.5	17	<b>75279</b>	1999 <i>XX</i> <sub>19</sub>		1 20.9	41°65	1°5/20.3	18
12 13	8 33.22	+20 30.3	2.243	3.019	13.4	21.0	12 13	8 37.50	+20 57.5	1.294	2.100	19.7	19.2
12 23	8 29.65	+20 53.5	2.144	3.009	10.6	20.8	12 23	8 34.24	+21 27.7	1.237	2.119	15.5	18.9
1 2	8 23.82	+21 23.4	2.067	3.000	7.2	20.6	1 2	8 27.46	+22 8.0	1.199	2.138	10.5	18.7
1 12	8 16.23	+21 57.1	2.018	2.990	3.5	20.3	1 12	8 18.07	+22 52.3	1.184	2.158	5.0	18.5
1 22	8 7.63	+22 30.6	1.997	2.980	1.0	20.1	1 22	8 7.45	+23 33.5	1.195	2.178	1.8	18.3
2 1	7 59.00	+23 0.4	2.006	2.971	4.7	20.4	2 1	7 57.27	+24 5.7	1.233	2.199	6.7	18.7
2 11	7 51.34	+23 23.6	2.044	2.962	8.4	20.6	2 11	7 49.12	+24 25.7	1.295	2.221	11.6	19.0
2 21	7 45.48	+23 39.0	2.107	2.953	11.8	20.8	2 21	7 43.98	+24 33.4	1.380	2.242	15.8	19.3
<b>30285</b>	2000 <i>HB</i> <sub>59</sub>		1 20.9	145°52	3°8/23.1	18	<b>341282</b>	2007 <i>RX</i> <sub>285</sub>		1 20.9	0°64	2°1/21.9	18
12 13	8 33.56	+ 6 51.1	2.649	3.371	12.9	19.0	12 13	8 31.93	+13 57.2	1.927	2.700	15.4	20.5
12 23	8 29.28	+ 6 29.8	2.557	3.377	10.6	18.9	12 23	8 28.83	+13 46.3	1.839	2.698	12.3	20.3
1 2	8 23.21	+ 6 19.9	2.487	3.383	8.0	18.7	1 2	8 23.33	+13 46.2	1.773	2.698	8.7	20.1
1 12	8 15.80	+ 6 21.5	2.444	3.389	5.4	18.5	1 12	8 16.01	+13 55.7	1.731	2.698	4.8	19.9
1 22	8 7.70	+ 6 34.0	2.430	3.395	3.9	18.4	1 22	8 7.70	+14 12.7	1.717	2.698	2.1	19.7
2 1	7 59.66	+ 6 55.7	2.446	3.400	4.9	18.5	2 1	7 59.46	+14 34.5	1.732	2.699	4.9	19.9
2 11	7 52.44	+ 7 24.0	2.491	3.405	7.3	18.7	2 11	7 52.35	+14 57.7	1.774	2.701	8.8	20.1
2 21	7 46.65	+ 7 55.8	2.564	3.410	9.9	18.9	2 21	7 47.20	+15 19.7	1.841	2.704	12.4	20.3
<b>10053</b>	1987 <i>SR</i> <sub>12</sub>		1 20.9	186°02	2°1/21.9	18	<b>287455</b>	2002 <i>XL</i> <sub>119</sub>		1 20.9	52°93	4°9/17.8	18
12 13	8 38.95	+12 48.5	1.878	2.635	16.3	18.3	12 13	8 36.15	+31 26.7	2.178	2.962	13.4	20.6
12 23	8 34.45	+12 54.4	1.786	2.635	13.1	18.0	12 23	8 32.21	+32 37.6	2.101	2.967	10.7	20.4
1 2	8 27.25	+13 13.6	1.714	2.635	9.3	17.8	1 2	8 25.68	+33 49.2	2.048	2.973	7.8	20.3
1 12	8 17.94	+13 44.4	1.668	2.634	5.1	17.5	1 12	8 17.16	+34 54.7	2.022	2.978	5.4	20.1
1 22	8 7.42	+14 23.6	1.651	2.632	2.1	17.3	1 22	8 7.56	+35 47.7	2.025	2.983	5.2	20.1
2 1	7 56.90	+15 6.9	1.663	2.630	5.2	17.5	2 1	7 58.03	+36 23.6	2.056	2.989	7.3	20.3
2 11	7 47.61	+15 50.0	1.704	2.627	9.5	17.8	2 11	7 49.75	+36 40.8	2.115	2.995	10.2	20.5
2 21	7 40.52	+16 29.5	1.770	2.623	13.3	18.0	2 21	7 43.59	+36 40.7	2.197	3.000	12.9	20.7
<b>231087</b>	2005 <i>QO</i> <sub>180</sub>		1 20.9	150°02	0°9/21.3	18	<b>397119</b>	2005 <i>VK</i> <sub>124</sub>		1 20.9	287°90	2°0/21.5	18
12 13	8 39.84	+15 48.2	1.617	2.391	17.8	21.8	12 13	8 38.38	+16 17.2	1.476	2.262	18.7	20.9
12 23	8 35.55	+16 3.3	1.535	2.397	14.2	21.5	12 23	8 35.00	+15 53.8	1.377	2.245	15.1	20.6
1 2	8 28.19	+16 31.3	1.474	2.402	9.8	21.3	1 2	8 28.25	+15 40.5	1.298	2.228	10.7	20.3
1 12	8 18.43	+17 9.3	1.437	2.407	4.9	21.0	1 12	8 18.67	+15 36.1	1.242	2.211	5.7	19.9
1 22	8 7.36	+17 52.4	1.428	2.412	1.0	20.7	1 22	8 7.35	+15 38.4	1.211	2.194	2.0	19.7
2 1	7 56.40	+18 35.3	1.448	2.416	5.7	21.1	2 1	7 55.83	+15 44.5	1.209	2.177	6.4	19.9
2 11	7 46.97	+19 13.6	1.495	2.420	10.4	21.4	2 11	7 45.81	+15 51.4	1.231	2.160	11.7	20.1
2 21	7 40.11	+19 44.5	1.567	2.423	14.6	21.6	2 21	7 38.58	+15 56.8	1.277	2.143	16.5	20.4
<b>68991</b>	2002 <i>TK</i> <sub>45</sub>		1 20.9	67°37	4°2/23.2	18	<b>496511</b>	2014 <i>UE</i> <sub>161</sub>		1 20.9	76°68	7°4/24.2	18
12 13	8 33.09	+ 7 8.3	2.229	2.966	14.6	19.3	12 13	8 35.81	+ 1 36.9	1.890	2.610	17.4	21.0
12 23	8 29.26	+ 6 46.3	2.143	2.973	12.0	19.1	12 23	8 31.74	+ 0 37.3	1.811	2.620	14.8	20.8
1 2	8 23.37	+ 6 37.5	2.079	2.981	9.0	19.0	1 2	8 25.23	+ 0 4.8	1.752	2.630	11.8	20.6
1 12	8 15.94	+ 6 42.4	2.040	2.988	6.0	18.8	1 12	8 16.89	+ 0 26.5	1.716	2.640	9.0	20.5
1 22	8 7.70	+ 7 0.0	2.029	2.996	4.2	18.7	1 22	8 7.60	+ 0 26.8	1.706	2.651	7.4	20.4
2 1	7 59.54	+ 7 28.0	2.047	3.004	5.4	18.8	2 1	7 58.44	+ 0 6.9	1.723	2.661	8.1	20.5
2 11	7 52.38	+ 8 3.2	2.093	3.012	8.3	19.0	2 11	7 50.48	+ 0 29.2	1.767	2.671	10.4	20.6
2 21	7 46.89	+ 8 41.8	2.166	3.019	11.2	19.2	2 21	7 44.52	+ 1 16.0	1.835	2.682	13.2	20.8
<b>291466</b>	2006 <i>DE</i> <sub>69</sub>		1 20.9	249°79	5°3/18.3	18	<b>415223</b>	2012 <i>HN</i> <sub>65</sub>		1 20.9	350°12	7°7/24.6	18
12 13	8 40.1												



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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>263507</b>	2008 <i>EG</i> <sub>126</sub>		1 20.9 156°89	1.6/21.7	18		<b>431623</b>	2007 <i>VG</i> <sub>328</sub>		1 20.9 85°79	1.7/21.7	18	
12 13	8 36.36	+14 9.7	2.093	2.851	14.8	21.6	12 13	8 34.93	+14 51.4	2.386	3.141	13.3	20.9
12 23	8 32.08	+14 15.7	2.003	2.855	11.8	21.4	12 23	8 30.58	+14 37.2	2.300	3.150	10.6	20.8
1 2	8 25.44	+14 32.3	1.936	2.859	8.3	21.2	1 2	8 24.21	+14 30.7	2.237	3.158	7.4	20.6
1 12	8 17.00	+14 58.0	1.895	2.862	4.4	21.0	1 12	8 16.35	+14 30.8	2.201	3.167	4.0	20.4
1 22	8 7.59	+15 29.6	1.883	2.865	1.6	20.8	1 22	8 7.74	+14 36.0	2.194	3.175	1.7	20.2
2 1	7 58.25	+16 3.8	1.901	2.868	4.7	21.0	2 1	7 59.25	+14 44.2	2.218	3.184	4.2	20.4
2 11	7 50.01	+16 37.0	1.948	2.871	8.5	21.2	2 11	7 51.76	+14 53.4	2.271	3.192	7.5	20.6
2 21	7 43.69	+17 6.9	2.021	2.873	11.9	21.4	2 21	7 45.93	+15 2.2	2.350	3.201	10.5	20.8
<b>166867</b>	2002 <i>XH</i> <sub>38</sub>		1 20.9 358°68	5.4/17.8	18		<b>301786</b>	2010 <i>KD</i> <sub>9</sub>		1 20.9 206°46	4.6/22.9	18	
12 13	8 35.76	+32 32.0	2.028	2.818	14.1	19.3	12 13	8 37.41	+7 46.7	1.843	2.587	17.0	20.9
12 23	8 32.17	+33 36.3	1.948	2.817	11.3	19.1	12 23	8 33.30	+7 25.0	1.748	2.584	14.0	20.7
1 2	8 25.80	+34 40.6	1.891	2.816	8.3	18.9	1 2	8 26.53	+7 18.7	1.673	2.580	10.5	20.4
1 12	8 17.27	+35 37.8	1.861	2.815	5.9	18.8	1 12	8 17.65	+7 28.6	1.623	2.575	6.9	20.2
1 22	8 7.56	+36 21.1	1.858	2.815	5.7	18.7	1 22	8 7.56	+7 53.5	1.600	2.571	4.6	20.1
2 1	7 57.92	+36 45.9	1.883	2.815	7.9	18.9	2 1	7 57.43	+8 30.7	1.606	2.566	6.3	20.2
2 11	7 49.63	+36 51.1	1.934	2.816	10.9	19.1	2 11	7 48.49	+9 15.7	1.639	2.560	9.9	20.4
2 21	7 43.63	+36 38.3	2.008	2.817	13.7	19.3	2 21	7 41.68	+10 3.7	1.698	2.554	13.6	20.6
<b>36013</b>	1999 <i>NZ</i> <sub>39</sub>		1 20.9 189°70	2.4/19.7	18		<b>362118</b>	2009 <i>CP</i> <sub>63</sub>		1 20.9 350°95	1.3/21.3	16	
12 13	8 39.56	+26 45.4	2.383	3.152	12.9	19.7	12 13	8 33.14	+16 46.6	1.241	2.050	20.2	21.1
12 23	8 34.45	+27 6.7	2.290	3.151	10.2	19.5	12 23	8 31.24	+16 39.6	1.162	2.044	16.2	20.9
1 2	8 26.99	+27 29.6	2.221	3.150	7.0	19.3	1 2	8 25.80	+16 45.9	1.101	2.039	11.3	20.6
1 12	8 17.73	+27 49.8	2.180	3.148	3.8	19.1	1 12	8 17.51	+17 3.6	1.062	2.034	5.8	20.2
1 22	8 7.53	+28 3.5	2.169	3.146	2.6	19.0	1 22	8 7.58	+17 28.5	1.048	2.031	1.4	19.9
2 1	7 57.41	+28 7.8	2.188	3.143	5.3	19.2	2 1	7 57.71	+17 55.3	1.058	2.029	6.6	20.3
2 11	7 48.42	+28 1.6	2.237	3.140	8.6	19.4	2 11	7 49.62	+18 19.5	1.093	2.028	12.1	20.6
2 21	7 41.37	+27 45.9	2.311	3.137	11.6	19.6	2 21	7 44.55	+18 38.0	1.149	2.028	17.0	20.8
<b>290460</b>	2005 <i>TD</i> <sub>168</sub>		1 20.9 323°92	0.8/21.2	18		<b>431540</b>	2007 <i>TF</i> <sub>383</sub>		1 20.9 54°80	9.7/14.1	18	
12 13	8 35.05	+17 15.2	1.749	2.531	16.4	20.9	12 13	8 42.81	+47 29.2	2.269	3.025	13.8	20.7
12 23	8 31.68	+17 17.4	1.657	2.524	13.1	20.7	12 23	8 38.17	+49 9.2	2.210	3.031	12.0	20.6
1 2	8 25.53	+17 29.6	1.587	2.518	9.1	20.4	1 2	8 30.17	+50 39.2	2.173	3.037	10.5	20.5
1 12	8 17.18	+17 49.4	1.541	2.512	4.5	20.1	1 12	8 19.49	+51 49.9	2.161	3.044	9.7	20.4
1 22	8 7.59	+18 13.3	1.523	2.506	0.9	19.8	1 22	8 7.35	+52 33.9	2.175	3.050	10.0	20.5
2 1	7 58.01	+18 37.5	1.533	2.501	5.3	20.2	2 1	7 55.35	+52 47.6	2.214	3.056	11.3	20.5
2 11	7 49.72	+18 58.6	1.570	2.496	9.9	20.4	2 11	7 45.10	+52 32.3	2.276	3.063	12.9	20.7
2 21	7 43.71	+19 14.6	1.631	2.491	13.9	20.6	2 21	7 37.73	+51 52.8	2.357	3.070	14.6	20.8
<b>401432</b>	2013 <i>CS</i> <sub>108</sub>		1 20.9 163°25	3.7/19.5	18		<b>454531</b>	2014 <i>OT</i> <sub>286</sub>		1 20.9 248°88	4.2/18.8	18	
12 13	8 42.87	+28 0.6	1.731	2.516	16.4	21.5	12 13	8 40.06	+27 7.2	1.757	2.545	16.0	21.0
12 23	8 37.99	+28 30.0	1.650	2.518	13.0	21.3	12 23	8 36.06	+28 5.9	1.662	2.533	12.8	20.8
1 2	8 29.88	+29 1.2	1.590	2.521	9.1	21.0	1 2	8 28.83	+29 10.5	1.589	2.521	9.0	20.5
1 12	8 19.27	+29 28.0	1.556	2.523	5.2	20.8	1 12	8 18.94	+30 14.0	1.542	2.508	5.3	20.3
1 22	8 7.34	+29 44.0	1.549	2.524	3.9	20.7	1 22	8 7.41	+31 8.1	1.523	2.495	4.4	20.2
2 1	7 55.61	+29 45.2	1.572	2.526	7.1	20.9	2 1	7 55.73	+31 46.2	1.531	2.481	7.7	20.3
2 11	7 45.57	+29 31.1	1.621	2.527	11.1	21.2	2 11	7 45.48	+32 5.2	1.567	2.468	11.8	20.6
2 21	7 38.28	+29 3.9	1.694	2.528	14.7	21.4	2 21	7 37.89	+32 6.0	1.625	2.453	15.6	20.8
<b>128600</b>	2004 <i>QT</i> <sub>11</sub>		1 20.9 192°37	1.7/20.0	18		<b>401890</b>	2001 <i>RD</i> <sub>85</sub>		1 20.9 64°52	0.7/21.2	16	
12 13	8 39.81	+21 3.4	1.815	2.592	16.0	21.0	12 13	8 41.65	+17 31.8	1.672	2.444	17.4	21.7
12 23	8 35.44	+21 50.1	1.725	2.591	12.6	20.8	12 23	8 36.39	+17 33.1	1.617	2.479	13.6	21.5
1 2	8 28.13	+22 46.6	1.657	2.590	8.6	20.6	1 2	8 28.33	+17 43.7	1.584	2.513	9.3	21.3
1 12	8 18.46	+23 47.4	1.616	2.587	4.2	20.3	1 12	8 18.33	+18 0.4	1.576	2.547	4.5	21.1
1 22	8 7.43	+24 46.0	1.603	2.585	1.9	20.1	1 22	8 7.53	+18 19.4	1.597	2.580	0.8	20.9
2 1	7 56.37	+25 36.3	1.620	2.581	6.0	20.4	2 1	7 57.25	+18 37.1	1.646	2.613	5.2	21.3
2 11	7 46.67	+26 14.3	1.664	2.577	10.4	20.6	2 11	7 48.68	+18 51.2	1.723	2.646	9.4	21.6
2 21	7 39.37	+26 39.0	1.733	2.573	14.2	20.9	2 21	7 42.57	+19 0.4	1.826	2.679	13.0	21.9
<b>262922</b>	2007 <i>CH</i> <sub>65</sub>		1 20.9 229°97	1.4/21.7	18		<b>457203</b>	2008 <i>HT</i> <sub>55</sub>		1 20.9 292°08	0.3/20.7	17	
12 13	8 35.21	+14 7.7	2.217	2.974	14.1	21.4	12 13	8 35.19	+18 51.5	1.802	2.585	15.9	21.6
12 23	8 31.19	+14 20.2	2.115	2.966	11.3	21.2	12 23	8 31.87	+19 13.9	1.702	2.571	12.7	21.4
1 2	8 24.88	+14 43.4	2.035	2.957	8.0	21.0	1 2	8 25.76	+19 46.4	1.624	2.557	8.7	21.1
1 12	8 16.79	+15 15.8	1.981	2.948	4.2	20.7	1 12	8 17.37	+20 25.9	1.571	2.544	4.2	20.8
1 22	8 7.65	+15 54.4	1.957	2.939	1.4	20.5	1 22	8 7.62	+21 7.5	1.546	2.530	0.7	20.5
2 1	7 58.45	+16 35.4	1.963	2.930	4.5	20.7	2 1	7 57.74	+21 46.2	1.550	2.516	5.5	20.8
2 11	7 50.20	+17 15.4	1.998	2.920	8.3	20.9	2 11	7 49.06	+22 18.0	1.580	2.503	10.1	21.0
2 21	7 43.74	+17 51.5	2.059	2.910	11.8	21.1	2 21	7 42.65	+22 41.0	1.635	2.490	14.2	21.3
<b>312056</b>	2007 <i>RD</i> <sub>321</sub>		1 20.9 51°89	0.2/20.8	18		<b>108790</b>	2001 <i>OT</i> <sub>65</sub>		1 20.9 175°56	1.0/20.4	18	
12 13	8 39.24	+19 24.3	1.370	2.166	19.3	20.7	12 13	8 39.52	+22 1.9	2.168	2.936	14.0	20.3
12 23	8 35.37	+19 31.9	1.309	2.184	15.2	20.5	12 23	8 34.59	+22 16.8	2.077	2.938	11.1	20.1
1 2	8 28.13	+19 49.5	1.267	2.203	10.4	20.3	1 2	8 27.18	+22 36.7	2.010	2.939	7.5	19.9
1 12	8 18.38	+20 12.8	1.249	2.222	5.0	20.0	1 12	8 17.88	+22 58.0	1.969	2.941	3.7	19.7
1 22	8 7.47	+20 36.7	1.258	2.242	0.7	19.8	1 22	8 7.58	+23 16.9	1.958	2.941	1.2	19.5
2 1	7 56.99	+20 56.5	1.293	2.261	6.1	20.2	2 1	7 57.36	+23 30.3	1.978	2.941	4.9	19.7
2 11	7 48.46	+21 9.3	1.354	2.281	11.0	20.5	2 11	7 48.34	+23 36.4	2.027	2.941	8.7	20.0
2 21	7 42.83	+21 14.4	1.438	2.301	15.2	20.8	2 21	7 41.34	+23 34.9	2.101	2.940	12.1	20.2
<b>456498</b>	2006 <i>WS</i> <sub>181</sub>		1 20.9 17°23	6.0/23.1	18		<b>176792</b>	2002 <i>SA</i> <sub>41</sub>		1 20.9 63°61	1.6/21.7	18	
12 13	8 35.28	+7 11											

EPHEMERIDES

1 20.9

1 20.9

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>281293</b>	2007 <i>RW</i> <sub>167</sub>		1 20.9 76°55'	0°1'/20.9 18			<b>280254</b>	2002 <i>XP</i> <sub>49</sub>		1 20.9 78°12'	3°9'/22.9 18		
12 13	8 34.83	+17 51.5	2.229	2.997	13.7	20.8	12 13	8 34.48	+ 8 10.0	2.306	3.041	14.2	20.0
12 23	8 30.67	+18 12.1	2.153	3.013	10.8	20.6	12 23	8 30.23	+ 7 43.2	2.226	3.056	11.6	19.9
1 2	8 24.36	+18 40.7	2.100	3.029	7.3	20.5	1 2	8 23.98	+ 7 28.3	2.168	3.071	8.7	19.7
1 12	8 16.46	+19 14.2	2.074	3.045	3.5	20.2	1 12	8 16.27	+ 7 25.5	2.136	3.086	5.7	19.6
1 22	8 7.78	+19 49.2	2.077	3.061	0.4	20.0	1 22	8 7.83	+ 7 34.1	2.132	3.101	3.9	19.5
2 1	7 59.26	+20 22.2	2.111	3.077	4.3	20.3	2 1	7 59.54	+ 7 52.1	2.158	3.116	5.2	19.6
2 11	7 51.83	+20 50.4	2.173	3.093	7.9	20.6	2 11	7 52.25	+ 8 16.6	2.213	3.130	7.9	19.8
2 21	7 46.20	+21 12.4	2.261	3.109	11.0	20.8	2 21	7 46.62	+ 8 44.5	2.294	3.145	10.8	20.0
<b>456494</b>	2006 <i>WG</i> <sub>160</sub>		1 20.9 340°17'	0°1'/20.9 18			<b>127872</b>	2003 <i>GV</i>		1 20.9 218°22'	1°2'/20.4 18		
12 13	8 39.57	+21 37.2	1.635	2.421	17.1	20.2	12 13	8 41.70	+21 54.4	2.038	2.805	14.8	20.8
12 23	8 35.43	+21 7.4	1.545	2.415	13.6	19.9	12 23	8 36.67	+22 15.2	1.935	2.796	11.8	20.6
1 2	8 28.17	+20 40.9	1.477	2.410	9.4	19.7	1 2	8 28.86	+22 42.3	1.856	2.785	8.1	20.3
1 12	8 18.49	+20 15.7	1.433	2.405	4.6	19.4	1 12	8 18.83	+23 11.6	1.803	2.774	4.0	20.1
1 22	8 7.52	+19 49.3	1.417	2.401	0.6	19.1	1 22	8 7.50	+23 38.5	1.779	2.762	1.4	19.8
2 1	7 56.68	+19 20.6	1.429	2.397	5.7	19.4	2 1	7 56.09	+23 58.9	1.786	2.749	5.4	20.1
2 11	7 47.42	+18 49.2	1.468	2.393	10.5	19.7	2 11	7 45.88	+24 10.4	1.822	2.735	9.6	20.3
2 21	7 40.77	+18 15.9	1.531	2.390	14.7	19.9	2 21	7 37.88	+24 12.7	1.883	2.721	13.3	20.5
<b>451740</b>	2013 <i>EA</i> <sub>38</sub>		1 20.9 356°30'	8°8'/17.9 17			<b>154797</b>	2004 <i>PS</i> <sub>76</sub>		1 20.9 141°83'	4°4'/23.8 18		
12 13	8 38.70	+35 23.1	1.193	2.014	20.2	20.6	12 13	8 34.15	+ 4 8.9	2.226	2.947	15.0	20.5
12 23	8 36.52	+36 28.8	1.126	2.009	16.5	20.4	12 23	8 30.19	+ 4 19.3	2.135	2.954	12.5	20.3
1 2	8 29.88	+37 31.7	1.077	2.006	12.6	20.1	1 2	8 24.11	+ 4 47.0	2.066	2.960	9.5	20.2
1 12	8 19.61	+38 19.4	1.050	2.004	9.5	19.9	1 12	8 16.42	+ 5 32.1	2.021	2.966	6.4	20.0
1 22	8 7.37	+38 40.5	1.046	2.003	9.1	19.9	1 22	8 7.85	+ 6 32.2	2.006	2.972	4.4	19.9
2 1	7 55.45	+38 28.8	1.066	2.003	11.9	20.1	2 1	7 59.30	+ 7 43.4	2.020	2.977	5.4	19.9
2 11	7 46.07	+37 45.8	1.107	2.004	15.8	20.3	2 11	7 51.71	+ 9 0.4	2.063	2.982	8.3	20.1
2 21	7 40.60	+36 39.0	1.167	2.007	19.7	20.5	2 21	7 45.81	+10 18.0	2.133	2.987	11.3	20.3
<b>393446</b>	2001 <i>TC</i> <sub>231</sub>		1 20.9 162°74'	1°0'/21.5 18			<b>218743</b>	2005 <i>UT</i> <sub>480</sub>		1 20.9 216°10'	6°4'/18.4 18		
12 13	8 40.37	+14 23.1	2.128	2.877	14.8	22.1	12 13	8 53.35	+40 59.4	2.467	3.209	13.2	20.4
12 23	8 35.21	+14 50.4	2.038	2.885	11.8	21.9	12 23	8 45.56	+41 25.6	2.370	3.200	11.0	20.2
1 2	8 27.60	+15 29.3	1.971	2.893	8.2	21.7	1 2	8 34.71	+41 43.6	2.296	3.190	8.7	20.0
1 12	8 18.10	+16 17.2	1.931	2.899	4.2	21.4	1 12	8 21.54	+41 46.1	2.250	3.180	6.8	19.9
1 22	8 7.57	+17 9.8	1.921	2.905	1.0	21.2	1 22	8 7.23	+41 27.7	2.233	3.169	6.6	19.8
2 1	7 57.08	+18 2.6	1.943	2.909	4.6	21.5	2 1	7 53.20	+40 46.1	2.247	3.158	8.1	19.9
2 11	7 47.74	+18 51.5	1.994	2.913	8.6	21.7	2 11	7 40.87	+39 43.4	2.290	3.145	10.5	20.1
2 21	7 40.38	+19 33.9	2.072	2.915	12.1	21.9	2 21	7 31.20	+38 24.7	2.359	3.133	13.0	20.2
<b>376856</b>	2001 <i>SN</i> <sub>290</sub>		1 20.9 62°25'	6°1'/24.1 18			<b>502943</b>	2015 <i>EG</i> <sub>52</sub>		1 20.9 181°03'	2°6'/22.3 17		
12 13	8 37.19	+ 2 32.3	2.190	2.898	15.6	20.4	12 13	8 33.61	+11 21.8	2.490	3.234	13.1	21.5
12 23	8 32.24	+ 1 39.2	2.129	2.932	13.1	20.2	12 23	8 29.56	+11 7.9	2.394	3.234	10.6	21.3
1 2	8 25.23	+ 1 1.6	2.088	2.965	10.3	20.1	1 2	8 23.57	+11 3.6	2.321	3.234	7.7	21.1
1 12	8 16.80	+ 0 41.3	2.073	2.998	7.6	20.0	1 12	8 16.12	+11 8.5	2.275	3.234	4.6	20.9
1 22	8 7.76	+ 0 38.4	2.085	3.031	6.2	20.0	1 22	8 7.89	+11 21.2	2.258	3.234	2.6	20.8
2 1	7 59.00	+ 0 51.2	2.126	3.064	6.8	20.1	2 1	7 59.70	+11 39.8	2.271	3.234	4.4	20.9
2 11	7 51.41	+ 1 16.4	2.195	3.096	8.8	20.3	2 11	7 52.37	+12 1.8	2.313	3.234	7.4	21.1
2 21	7 45.59	+ 1 49.8	2.289	3.128	11.2	20.5	2 21	7 46.58	+12 24.8	2.382	3.233	10.4	21.3
<b>152204</b>	2005 <i>QQ</i> <sub>154</sub>		1 20.9 100°53'	0°4'/20.8 18			<b>340653</b>	2006 <i>RM</i> <sub>7</sub>		1 20.9 138°99'	5°0'/24.8 18		
12 13	8 42.56	+21 50.8	2.000	2.767	15.1	20.8	12 13	8 31.92	+ 0 9.0	2.946	3.633	12.4	21.6
12 23	8 36.89	+21 39.5	1.925	2.784	11.9	20.6	12 23	8 27.85	- 0 3.8	2.855	3.643	10.5	21.5
1 2	8 28.64	+21 32.0	1.872	2.801	8.1	20.4	1 2	8 22.20	- 0 2.6	2.786	3.652	8.4	21.3
1 12	8 18.52	+21 25.4	1.846	2.818	3.9	20.1	1 12	8 15.40	+ 0 13.3	2.742	3.661	6.3	21.2
1 22	8 7.54	+21 17.0	1.850	2.834	0.7	19.9	1 22	8 7.99	+ 0 43.4	2.727	3.670	5.1	21.1
2 1	7 56.90	+21 4.9	1.885	2.850	4.9	20.3	2 1	8 0.63	+ 1 25.8	2.741	3.679	5.5	21.2
2 11	7 47.71	+20 48.6	1.948	2.866	8.8	20.5	2 11	7 53.98	+ 2 17.4	2.785	3.687	7.2	21.3
2 21	7 40.77	+20 28.4	2.037	2.881	12.2	20.8	2 21	7 48.56	+ 3 14.4	2.856	3.694	9.2	21.4
<b>12159</b>	Bettybiegel		1 20.9 304°99'	0°5'/21.1 18			<b>273915</b>	2007 <i>HG</i> <sub>73</sub>		1 20.9 119°15'	0°4'/21.1 18		
12 13	8 35.92	+18 5.0	1.503	2.296	18.1	18.1	12 13	8 35.49	+17 9.1	2.172	2.938	14.1	20.9
12 23	8 33.04	+18 7.0	1.406	2.279	14.5	17.8	12 23	8 31.36	+17 28.1	2.087	2.945	11.1	20.7
1 2	8 26.90	+18 19.9	1.329	2.263	10.1	17.5	1 2	8 24.95	+17 56.1	2.024	2.952	7.6	20.5
1 12	8 18.06	+18 41.1	1.275	2.248	5.0	17.2	1 12	8 16.83	+18 30.1	1.988	2.958	3.7	20.3
1 22	8 7.56	+19 6.4	1.248	2.232	0.7	16.8	1 22	8 7.81	+19 6.7	1.981	2.965	0.5	20.0
2 1	7 56.89	+19 31.1	1.248	2.217	6.1	17.2	2 1	7 58.87	+19 42.0	2.004	2.971	4.4	20.4
2 11	7 47.68	+19 51.2	1.273	2.202	11.4	17.4	2 11	7 51.02	+20 13.1	2.057	2.977	8.2	20.6
2 21	7 41.17	+20 4.6	1.321	2.188	16.1	17.7	2 21	7 45.02	+20 38.1	2.135	2.983	11.5	20.8
<b>129055</b>	2004 <i>VC</i> <sub>16</sub>		1 20.9 53°69'	3°4'/22.9 18			<b>359089</b>	2008 <i>YU</i> <sub>172</sub>		1 20.9 56°09'	1°6'/20.3 18		
12 13	8 33.34	+ 8 11.4	1.843	2.597	16.6	20.0	12 13	8 39.73	+21 24.4	1.338	2.139	19.5	21.0
12 23	8 29.93	+ 8 25.4	1.768	2.611	13.5	19.8	12 23	8 35.95	+21 55.6	1.279	2.158	15.3	20.7
1 2	8 24.08	+ 8 56.9	1.713	2.626	9.9	19.6	1 2	8 28.67	+22 36.3	1.239	2.177	10.4	20.5
1 12	8 16.41	+ 9 44.6	1.682	2.641	6.0	19.4	1 12	8 18.75	+23 20.1	1.223	2.196	5.0	20.3
1 22	8 7.80	+10 45.1	1.680	2.656	3.4	19.3	1 22	8 7.58	+24 0.2	1.233	2.215	1.9	20.1
2 1	7 59.33	+11 53.1	1.706	2.671	5.3	19.4	2 1	7 56.84	+24 30.5	1.269	2.235	6.7	20.5
2 11	7 52.07	+13 3.0	1.760	2.686	9.0	19.7	2 11	7 48.12	+24 48.3	1.332	2.255	11.6	20.8
2 21	7 46.83	+14 9.7	1.839	2.702	12.4	19.9	2 21	7 42.43	+24 53.8	1.416	2.275	15.7	21.1
<b>321491</b>	2009 <i>SA</i> <sub>61</sub>		1 20.9 173°14'	1°0'/20.4 18			<b>27651</b>	2025 <i>T</i> <sub>-3</sub>		1 20.9 55°18'	3°4'/22.1 18		
12 13	8 38.35	+21 58.5	2.361										

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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>409958</b>	2006 <i>UO</i> <sub>264</sub>		1 20.9 355°94	1.7°/21.6	18		<b>256851</b>	2008 <i>CV</i> <sub>182</sub>		1 20.9 28°80	3°0'/19.4	18	
12 13	8 33.58	+15 22.7	1.439	2.233	18.7	21.1	12 13	8 37.10	+24 22.4	1.709	2.501	16.2	20.7
12 23	8 31.07	+15 18.9	1.357	2.230	15.0	20.8	12 23	8 33.53	+25 14.5	1.628	2.503	12.8	20.5
1 2	8 25.42	+15 28.4	1.295	2.228	10.5	20.6	1 2	8 26.96	+26 13.7	1.569	2.504	8.8	20.3
1 12	8 17.28	+15 49.6	1.256	2.226	5.5	20.3	1 12	8 18.00	+27 13.6	1.536	2.506	4.7	20.0
1 22	8 7.75	+16 18.7	1.242	2.225	1.7	20.0	1 22	8 7.73	+28 7.1	1.530	2.508	3.3	19.9
2 1	7 58.27	+16 51.1	1.255	2.225	6.0	20.3	2 1	7 57.52	+28 48.2	1.552	2.510	6.8	20.2
2 11	7 50.35	+17 22.1	1.293	2.225	11.0	20.6	2 11	7 48.78	+29 13.7	1.601	2.512	10.9	20.4
2 21	7 45.05	+17 48.4	1.354	2.227	15.4	20.8	2 21	7 42.56	+29 23.8	1.674	2.514	14.6	20.6
<b>405147</b>	2002 <i>RD</i> <sub>266</sub>		1 20.9 79°68	4°4'/19.5	18		<b>373663</b>	2002 <i>QF</i> <sub>80</sub>		1 20.9 43°80	0°7'/21.2	18	
12 13	8 46.23	+30 54.3	1.714	2.496	16.7	22.1	12 13	8 36.24	+17 56.6	1.832	2.610	15.9	20.6
12 23	8 40.37	+31 18.7	1.653	2.518	13.2	22.0	12 23	8 32.21	+17 50.7	1.762	2.627	12.5	20.4
1 2	8 31.27	+31 41.2	1.614	2.541	9.3	21.8	1 2	8 25.62	+17 53.0	1.714	2.644	8.6	20.2
1 12	8 19.86	+31 54.9	1.601	2.564	5.7	21.6	1 12	8 17.18	+18 0.9	1.691	2.662	4.3	19.9
1 22	8 7.48	+31 54.5	1.615	2.586	4.6	21.6	1 22	8 7.86	+18 11.6	1.696	2.680	0.8	19.7
2 1	7 55.66	+31 37.4	1.659	2.608	7.3	21.8	2 1	7 58.81	+18 22.2	1.730	2.698	4.9	20.1
2 11	7 45.83	+31 5.0	1.729	2.629	10.9	22.1	2 11	7 51.15	+18 30.5	1.792	2.717	8.9	20.3
2 21	7 38.86	+30 21.1	1.823	2.651	14.1	22.3	2 21	7 45.65	+18 35.1	1.879	2.736	12.5	20.6
<b>184987</b>	2006 <i>DY</i> <sub>157</sub>		1 20.9 135°83	2°1'/19.9	18		<b>43727</b>	1979 <i>MQ</i> <sub>2</sub>		1 20.9 257°84	2°1'/21.9	18	
12 13	8 42.40	+23 54.2	1.973	2.744	15.1	21.2	12 13	8 36.39	+12 56.2	1.864	2.627	16.2	19.4
12 23	8 37.06	+24 29.1	1.896	2.758	11.9	21.0	12 23	8 32.71	+13 3.5	1.759	2.612	13.1	19.2
1 2	8 28.96	+25 8.7	1.841	2.771	8.1	20.8	1 2	8 26.32	+13 24.4	1.675	2.597	9.4	18.9
1 12	8 18.80	+25 48.0	1.814	2.784	4.1	20.6	1 12	8 17.72	+13 57.8	1.616	2.582	5.2	18.6
1 22	8 7.59	+26 21.6	1.816	2.796	2.3	20.5	1 22	8 7.76	+14 40.6	1.585	2.566	2.1	18.4
2 1	7 56.59	+26 45.3	1.848	2.807	5.7	20.7	2 1	7 57.61	+15 28.3	1.583	2.550	5.3	18.6
2 11	7 47.02	+26 57.2	1.909	2.817	9.5	21.0	2 11	7 48.56	+16 16.3	1.608	2.534	9.8	18.8
2 21	7 39.78	+26 58.0	1.995	2.827	12.9	21.2	2 21	7 41.63	+17 0.7	1.659	2.517	13.8	19.0
<b>498927</b>	2009 <i>BD</i> <sub>30</sub>		1 20.9 268°75	0°6'/20.6	17		<b>303555</b>	2005 <i>GY</i> <sub>34</sub>		1 20.9 349°09	0°0'/20.9	18	
12 13	8 37.70	+19 12.6	1.753	2.534	16.4	22.2	12 13	8 34.36	+18 56.5	1.307	2.114	19.5	21.3
12 23	8 34.09	+19 39.5	1.648	2.515	13.1	22.0	12 23	8 32.14	+19 2.2	1.226	2.108	15.5	21.0
1 2	8 27.47	+20 17.3	1.564	2.496	9.0	21.7	1 2	8 26.42	+19 19.4	1.165	2.103	10.7	20.7
1 12	8 18.34	+21 2.4	1.505	2.477	4.4	21.3	1 12	8 17.89	+19 44.8	1.126	2.099	5.2	20.4
1 22	8 7.63	+21 49.4	1.474	2.457	0.9	21.0	1 22	8 7.76	+20 13.1	1.112	2.096	0.6	20.1
2 1	7 56.66	+22 32.6	1.471	2.437	5.9	21.3	2 1	7 57.66	+20 38.9	1.123	2.093	6.5	20.5
2 11	7 46.91	+23 7.5	1.496	2.417	10.7	21.6	2 11	7 49.33	+20 58.0	1.160	2.091	12.0	20.7
2 21	7 39.56	+23 32.1	1.545	2.397	15.0	21.8	2 21	7 43.96	+21 8.6	1.217	2.091	16.7	21.0
<b>133846</b>	2003 <i>YD</i> <sub>71</sub>		1 20.9 222°26	1°4'/21.6	18		<b>276529</b>	2003 <i>SU</i> <sub>2</sub>		1 20.9 35°10	0°0'/20.9	18	
12 13	8 35.80	+15 57.2	2.349	3.106	13.4	19.7	12 13	8 35.21	+18 50.5	1.928	2.707	15.2	21.1
12 23	8 31.45	+15 44.4	2.251	3.103	10.7	19.5	12 23	8 31.48	+19 0.9	1.846	2.711	12.0	20.9
1 2	8 24.95	+15 38.6	2.177	3.100	7.5	19.3	1 2	8 25.22	+19 19.3	1.785	2.716	8.2	20.7
1 12	8 16.84	+15 38.7	2.130	3.097	4.0	19.1	1 12	8 17.05	+19 42.9	1.750	2.721	4.0	20.5
1 22	8 7.84	+15 42.9	2.111	3.094	1.4	18.9	1 22	8 7.88	+20 7.9	1.743	2.727	0.5	20.2
2 1	7 58.88	+15 49.3	2.124	3.090	4.3	19.1	2 1	7 58.82	+20 30.7	1.765	2.733	4.9	20.5
2 11	7 50.90	+15 55.9	2.165	3.087	7.8	19.3	2 11	7 51.01	+20 48.7	1.815	2.738	9.0	20.8
2 21	7 44.62	+16 1.3	2.233	3.083	11.0	19.5	2 21	7 45.28	+21 0.4	1.890	2.745	12.5	21.0
<b>501883</b>	2014 <i>WQ</i> <sub>399</sub>		1 20.9 322°78	2°6'/22.0	18		<b>37381</b>	2001 <i>VZ</i> <sub>119</sub>		1 20.9 217°24	1°8'/20.1	18	
12 13	8 35.11	+13 11.5	2.187	2.942	14.3	20.6	12 13	8 40.68	+22 20.5	1.936	2.710	15.3	19.2
12 23	8 31.05	+12 44.0	2.091	2.939	11.6	20.4	12 23	8 36.08	+22 56.7	1.838	2.702	12.1	19.0
1 2	8 24.76	+12 25.3	2.018	2.936	8.3	20.1	1 2	8 28.60	+23 40.3	1.762	2.693	8.3	18.8
1 12	8 16.77	+12 15.0	1.971	2.933	4.8	19.9	1 12	8 18.81	+24 26.7	1.713	2.684	4.2	18.5
1 22	8 7.86	+12 12.1	1.952	2.930	2.6	19.8	1 22	8 7.65	+25 10.0	1.693	2.674	2.0	18.3
2 1	7 58.99	+12 15.0	1.963	2.928	4.8	19.9	2 1	7 56.40	+25 45.0	1.702	2.663	5.8	18.5
2 11	7 51.14	+12 21.7	2.003	2.925	8.3	20.1	2 11	7 46.40	+26 8.7	1.740	2.652	10.1	18.8
2 21	7 45.08	+12 30.2	2.068	2.923	11.6	20.3	2 21	7 38.70	+26 20.5	1.803	2.640	13.8	19.0
<b>416843</b>	2005 <i>LA</i> <sub>20</sub>		1 20.9 170°42	1°4'/21.9	18		<b>364386</b>	2006 <i>VN</i> <sub>60</sub>		1 20.9 223°46	5°4'/23.5	18	
12 13	8 37.00	+12 36.1	2.718	3.453	12.3	22.8	12 13	8 35.84	+ 5 3.7	2.022	2.751	16.1	21.9
12 23	8 32.06	+13 2.5	2.621	3.459	9.8	22.6	12 23	8 31.88	+ 4 35.3	1.923	2.745	13.5	21.7
1 2	8 25.22	+13 39.1	2.548	3.464	6.9	22.4	1 2	8 25.50	+ 4 22.4	1.844	2.739	10.4	21.5
1 12	8 16.93	+14 24.1	2.503	3.467	3.7	22.2	1 12	8 17.23	+ 4 26.4	1.790	2.732	7.3	21.3
1 22	8 7.86	+15 14.4	2.489	3.471	1.4	22.1	1 22	8 7.86	+ 4 47.2	1.763	2.725	5.4	21.2
2 1	7 58.79	+16 6.6	2.507	3.473	3.8	22.3	2 1	7 58.41	+ 5 22.6	1.765	2.718	6.5	21.2
2 11	7 50.53	+16 57.3	2.556	3.474	7.0	22.5	2 11	7 49.99	+ 6 8.6	1.794	2.710	9.6	21.4
2 21	7 43.75	+17 43.9	2.633	3.474	9.9	22.6	2 21	7 43.47	+ 7 0.3	1.849	2.702	12.8	21.5
<b>169252</b>	2001 <i>SC</i> <sub>116</sub>		1 20.9 108°84	0°8'/20.5	18		<b>88844</b>	2001 <i>SE</i> <sub>179</sub>		1 20.9 112°42	6°0'/24.5	18	
12 13	8 36.03	+21 37.1	2.550	3.315	12.2	20.6	12 13	8 35.13	+ 1 39.2	2.084	2.797	16.2	20.0
12 23	8 31.39	+21 52.0	2.469	3.328	9.6	20.4	12 23	8 31.05	+ 1 17.5	2.002	2.809	13.6	19.8
1 2	8 24.76	+22 11.0	2.412	3.341	6.5	20.2	1 2	8 24.74	+ 1 14.0	1.940	2.821	10.7	19.7
1 12	8 16.69	+22 31.4	2.382	3.354	3.1	20.0	1 12	8 16.77	+ 1 29.9	1.902	2.833	7.9	19.5
1 22	8 7.90	+22 50.2	2.383	3.366	0.9	19.9	1 22	8 7.93	+ 2 4.5	1.891	2.844	6.1	19.4
2 1	7 59.26	+23 4.8	2.415	3.379	4.1	20.1	2 1	7 59.19	+ 2 55.0	1.909	2.855	6.8	19.5
2 11	7 51.61	+23 13.7	2.476	3.391	7.3	20.4	2 11	7 51.51	+ 3 56.4	1.955	2.866	9.2	19.7
2 21	7 45.61	+23 16.4	2.564	3.402	10.2	20.6	2 21	7 45.65	+ 5 3.4	2.026	2.876	12.0	19.9
<b>494675</b>	2002 <i>VX</i> <sub>14</sub>		1 20.9 79°51	1°5'/19.8	18		<b>43403</b>	2000 <i>WY</i> <sub>122</sub>		1 20.9 29°73	6°0'/18.3	18	
12 13	8 33.73												

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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>402850</b>	2007 <i>QV</i> <sub>16</sub>		1 20.9	49°38'	4.9°/23.6	16	<b>288514</b>	2004 <i>FE</i> <sub>118</sub>		1 20.9	258°78'	6.7°/24.7	18
12 13	8 36.18	+ 5 15.8	1.290	2.058	21.8	20.9	12 13	8 33.65	+ 0 35.6	1.957	2.673	17.0	21.1
12 23	8 32.95	+ 5 34.8	1.236	2.086	17.8	20.7	12 23	8 30.30	+ 0 15.2	1.857	2.664	14.5	20.9
1 2	8 26.52	+ 6 20.7	1.200	2.113	13.1	20.5	1 2	8 24.53	+ 0 14.8	1.776	2.655	11.6	20.7
1 12	8 17.73	+ 7 31.6	1.185	2.142	8.3	20.3	1 12	8 16.82	+ 0 36.8	1.718	2.646	8.7	20.5
1 22	8 7.83	+ 9 1.6	1.196	2.170	4.9	20.2	1 22	8 7.97	+ 1 21.3	1.686	2.637	6.8	20.4
2 1	7 58.35	+10 41.9	1.234	2.199	6.8	20.4	2 1	7 59.01	+ 2 25.4	1.682	2.628	7.5	20.4
2 11	7 50.69	+12 22.4	1.297	2.229	11.0	20.7	2 11	7 51.03	+ 3 43.7	1.705	2.618	10.1	20.5
2 21	7 45.78	+13 55.2	1.384	2.258	15.0	21.0	2 21	7 44.95	+ 5 9.2	1.753	2.609	13.3	20.7
<b>370846</b>	2005 <i>CY</i> <sub>14</sub>		1 20.9	67°36'	0°3'/20.8	18	<b>274594</b>	2008 <i>TF</i> <sub>29</sub>		1 20.9	188°95'	0°5'/20.7	18
12 13	8 35.09	+18 46.9	2.054	2.828	14.5	20.9	12 13	8 36.01	+20 4.7	2.193	2.964	13.8	21.3
12 23	8 31.19	+19 11.1	1.975	2.839	11.4	20.7	12 23	8 31.87	+20 20.7	2.102	2.964	10.9	21.1
1 2	8 24.93	+19 43.6	1.918	2.849	7.8	20.5	1 2	8 25.41	+20 43.2	2.033	2.964	7.4	20.8
1 12	8 16.89	+20 21.0	1.888	2.859	3.7	20.3	1 12	8 17.16	+21 9.3	1.992	2.963	3.6	20.6
1 22	8 7.93	+20 59.2	1.886	2.870	0.6	20.1	1 22	8 7.95	+21 35.3	1.979	2.963	0.7	20.4
2 1	7 59.10	+21 34.1	1.914	2.881	4.7	20.4	2 1	7 58.79	+21 57.8	1.997	2.962	4.6	20.7
2 11	7 51.45	+22 2.9	1.971	2.891	8.5	20.7	2 11	7 50.71	+22 14.6	2.043	2.961	8.4	20.9
2 21	7 45.75	+22 24.0	2.052	2.902	11.9	20.9	2 21	7 44.50	+22 24.6	2.114	2.960	11.7	21.1
<b>155446</b>	1998 <i>HK</i> <sub>40</sub>		1 20.9	237°30'	6°5'/17.2	18	<b>142542</b>	2002 <i>TS</i> <sub>51</sub>		1 20.9	69°41'	10°2'/26.7	18
12 13	8 40.94	+36 25.5	2.167	2.942	13.8	20.2	12 13	8 37.98	- 5 54.9	1.742	2.426	19.8	20.1
12 23	8 36.34	+37 33.2	2.080	2.935	11.3	20.0	12 23	8 33.52	- 7 5.1	1.684	2.455	17.3	20.0
1 2	8 28.80	+38 38.6	2.016	2.928	8.7	19.8	1 2	8 26.51	- 7 50.4	1.643	2.484	14.5	19.9
1 12	8 18.90	+39 33.8	1.979	2.920	6.8	19.7	1 12	8 17.64	- 8 6.3	1.624	2.512	12.0	19.8
1 22	8 7.67	+40 11.9	1.969	2.912	6.7	19.7	1 22	8 7.92	- 7 51.7	1.628	2.541	10.4	19.7
2 1	7 56.44	+40 28.1	1.988	2.904	8.7	19.8	2 1	7 58.50	- 7 8.8	1.658	2.569	10.5	19.8
2 11	7 46.59	+40 21.9	2.033	2.895	11.3	19.9	2 11	7 50.50	- 6 3.7	1.713	2.597	12.0	20.0
2 21	7 39.17	+39 56.0	2.100	2.887	14.0	20.1	2 21	7 44.68	- 4 44.6	1.792	2.624	14.1	20.2
<b>397091</b>	2005 <i>UB</i> <sub>350</sub>		1 20.9	83°43'	1°7'/21.5	17	<b>362361</b>	2010 <i>NY</i> <sub>5</sub>		1 20.9	192°60'	0°6'/21.3	18
12 13	8 42.75	+16 27.1	1.448	2.227	19.3	20.9	12 13	8 39.28	+17 1.1	2.081	2.841	14.8	22.2
12 23	8 37.96	+16 7.6	1.381	2.245	15.4	20.7	12 23	8 34.56	+17 9.6	1.985	2.840	11.8	22.0
1 2	8 29.87	+15 58.8	1.334	2.262	10.7	20.5	1 2	8 27.33	+17 27.0	1.912	2.838	8.2	21.7
1 12	8 19.34	+15 58.8	1.311	2.280	5.5	20.2	1 12	8 18.14	+17 50.7	1.866	2.835	4.1	21.5
1 22	8 7.65	+16 4.5	1.315	2.297	1.7	20.0	1 22	8 7.85	+18 17.5	1.848	2.832	0.7	21.2
2 1	7 56.36	+16 12.7	1.346	2.314	5.9	20.3	2 1	7 57.56	+18 43.9	1.861	2.828	4.7	21.5
2 11	7 46.95	+16 20.4	1.405	2.331	10.8	20.7	2 11	7 48.41	+19 6.8	1.903	2.823	8.8	21.7
2 21	7 40.39	+16 26.1	1.487	2.348	14.9	20.9	2 21	7 41.29	+19 24.7	1.971	2.818	12.4	22.0
<b>495261</b>	2013 <i>PW</i> <sub>61</sub>		1 20.9	147°75'	4°2'/23.7	18	<b>464270</b>	2015 <i>RB</i> <sub>31</sub>		1 20.9	36°86'	2°3'/21.7	18
12 13	8 34.62	+ 4 34.7	2.404	3.121	14.2	22.5	12 13	8 38.24	+15 30.2	1.259	2.055	20.7	20.7
12 23	8 30.40	+ 4 39.1	2.313	3.129	11.7	22.3	12 23	8 35.01	+15 6.5	1.191	2.064	16.6	20.4
1 2	8 24.19	+ 4 59.0	2.244	3.137	8.9	22.1	1 2	8 28.23	+14 55.9	1.141	2.073	11.7	20.2
1 12	8 16.49	+ 5 34.2	2.201	3.144	6.0	22.0	1 12	8 18.71	+14 57.2	1.114	2.083	6.2	19.9
1 22	8 7.99	+ 6 23.0	2.186	3.151	4.2	21.9	1 22	8 7.79	+15 7.3	1.111	2.093	2.3	19.7
2 1	7 59.53	+ 7 22.1	2.201	3.157	5.2	21.9	2 1	7 57.18	+15 22.3	1.135	2.104	6.5	20.0
2 11	7 51.95	+ 8 27.0	2.246	3.163	7.9	22.1	2 11	7 48.51	+15 38.2	1.183	2.116	11.7	20.3
2 21	7 45.96	+ 9 33.4	2.319	3.169	10.7	22.3	2 21	7 42.89	+15 52.2	1.254	2.128	16.3	20.6
<b>96368</b>	1997 <i>XH</i> <sub>2</sub>		1 20.9	342°89'	2°6'/19.9	18	<b>293539</b>	2007 <i>HD</i> <sub>6</sub>		1 20.9	165°85'	1°0'/20.5	18
12 13	8 34.30	+23 2.9	1.240	2.058	19.7	18.9	12 13	8 42.56	+21 13.1	2.027	2.792	15.0	22.1
12 23	8 32.47	+23 36.1	1.160	2.049	15.7	18.6	12 23	8 37.19	+21 37.3	1.940	2.798	11.8	21.9
1 2	8 26.90	+24 19.4	1.099	2.041	10.8	18.3	1 2	8 29.13	+22 8.1	1.875	2.804	8.1	21.7
1 12	8 18.24	+25 6.4	1.061	2.034	5.5	18.0	1 12	8 19.00	+22 41.3	1.838	2.809	3.9	21.4
1 22	8 7.76	+25 49.0	1.047	2.028	2.9	17.8	1 22	8 7.76	+23 12.3	1.830	2.813	1.2	21.2
2 1	7 57.28	+26 20.0	1.058	2.023	7.8	18.1	2 1	7 56.61	+23 36.9	1.853	2.816	5.2	21.5
2 11	7 48.69	+26 35.3	1.093	2.019	13.1	18.4	2 11	7 46.78	+23 52.9	1.904	2.818	9.2	21.8
2 21	7 43.33	+26 34.8	1.148	2.016	17.9	18.7	2 21	7 39.17	+24 0.0	1.982	2.819	12.8	22.0
<b>279161</b>	2009 <i>SV</i> <sub>133</sub>		1 20.9	41°99'	0°7'/20.6	18	<b>977</b>	Philippa		1 20.9	330°20'	4°8'/17.7	18
12 13	8 35.49	+19 35.3	1.850	2.632	15.6	21.0	12 13	8 35.75	+30 54.6	2.270	3.052	13.0	14.6
12 23	8 31.88	+20 3.1	1.767	2.636	12.3	20.8	12 23	8 31.95	+32 10.6	2.185	3.051	10.4	14.5
1 2	8 25.61	+20 40.0	1.707	2.640	8.4	20.5	1 2	8 25.64	+33 28.5	2.125	3.049	7.6	14.3
1 12	8 17.30	+21 21.9	1.672	2.644	4.0	20.3	1 12	8 17.36	+34 41.6	2.092	3.048	5.2	14.1
1 22	8 7.89	+22 4.0	1.665	2.649	0.9	20.1	1 22	8 7.94	+35 43.4	2.088	3.047	5.1	14.1
2 1	7 58.57	+22 41.5	1.687	2.653	5.3	20.4	2 1	7 58.49	+36 28.6	2.113	3.045	7.2	14.2
2 11	7 50.53	+23 11.0	1.737	2.658	9.5	20.6	2 11	7 50.16	+36 55.4	2.165	3.044	10.0	14.4
2 21	7 44.69	+23 31.2	1.811	2.663	13.1	20.9	2 21	7 43.84	+37 4.5	2.242	3.043	12.7	14.6
<b>402878</b>	2007 <i>RN</i> <sub>248</sub>		1 20.9	263°78'	2°4'/22.0	18	<b>423568</b>	2005 <i>UF</i> <sub>497</sub>		1 20.9	93°29'	0°9'/21.5	18
12 13	8 36.29	+12 21.8	1.697	2.465	17.3	21.5	12 13	8 38.16	+15 2.3	2.066	2.824	14.9	21.8
12 23	8 32.90	+12 28.8	1.597	2.453	14.1	21.3	12 23	8 33.41	+15 26.1	1.996	2.848	11.8	21.6
1 2	8 26.62	+12 51.3	1.516	2.440	10.1	21.0	1 2	8 26.32	+16 0.5	1.949	2.873	8.1	21.4
1 12	8 17.94	+13 28.1	1.461	2.426	5.6	20.7	1 12	8 17.54	+16 42.6	1.928	2.897	4.1	21.2
1 22	8 7.80	+14 15.9	1.432	2.413	2.4	20.5	1 22	8 7.94	+17 28.3	1.937	2.920	0.9	21.0
2 1	7 57.47	+15 9.8	1.432	2.399	5.7	20.6	2 1	7 58.58	+18 13.5	1.976	2.943	4.5	21.3
2 11	7 48.35	+16 4.3	1.458	2.386	10.4	20.9	2 11	7 50.45	+18 54.5	2.044	2.965	8.2	21.6
2 21	7 41.57	+16 54.8	1.509	2.372	14.7	21.1	2 21	7 44.29	+19 29.2	2.139	2.987	11.5	21.8
<b>319050</b>	2005 <i>VM</i> <sub>126</sub>		1 20.9	259°75'	1°7'/21.8	18	<b>340757</b>	2006 <i>SQ</i> <sub>294</sub>		1 20.9	136°03'	3°5'/23.5	17
12 13	8 35.66	+13 58.1											

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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>424320</b>	2007 <i>TZ</i> <sub>432</sub>		1 20.9 115°40	2°8/19.5	18		<b>353317</b>	2010 <i>KY</i> <sub>36</sub>		1 20.9 250°09	1°0/21.4	18	
12 13	8 38.02	+28 7.3	2.472	3.243	12.4	21.2	12 13	8 39.25	+16 24.3	1.834	2.602	16.2	22.0
12 23	8 33.17	+28 32.4	2.391	3.252	9.8	21.0	12 23	8 35.11	+16 27.0	1.728	2.586	13.1	21.7
1 2	8 26.12	+28 58.1	2.334	3.261	6.8	20.8	1 2	8 28.09	+16 40.1	1.643	2.570	9.2	21.4
1 12	8 17.44	+29 20.2	2.304	3.270	3.9	20.6	1 12	8 18.70	+17 1.7	1.584	2.553	4.7	21.1
1 22	8 7.96	+29 34.9	2.304	3.279	2.9	20.6	1 22	8 7.85	+17 28.2	1.552	2.536	1.1	20.8
2 1	7 58.64	+29 39.6	2.335	3.287	5.3	20.8	2 1	7 56.80	+17 55.8	1.550	2.518	5.4	21.1
2 11	7 50.44	+29 33.6	2.395	3.295	8.2	21.0	2 11	7 46.93	+18 20.8	1.576	2.499	10.1	21.3
2 21	7 44.08	+29 17.7	2.480	3.303	11.0	21.2	2 21	7 39.34	+18 41.1	1.626	2.480	14.3	21.5
<b>309856</b>	2009 <i>DX</i> <sub>40</sub>		1 20.9 315°52	1°4/20.4	17		<b>266746</b>	2009 <i>SF</i> <sub>52</sub>		1 20.9 225°17	1°1/20.4	18	
12 13	8 35.86	+20 50.8	1.449	2.250	18.2	21.3	12 13	8 36.83	+21 18.2	1.994	2.772	14.8	21.5
12 23	8 33.19	+21 17.2	1.359	2.239	14.5	21.0	12 23	8 32.85	+21 43.9	1.904	2.770	11.7	21.3
1 2	8 27.16	+21 54.3	1.289	2.227	10.0	20.7	1 2	8 26.28	+22 16.6	1.836	2.768	8.0	21.1
1 12	8 18.33	+22 37.5	1.243	2.216	4.9	20.4	1 12	8 17.69	+22 52.5	1.794	2.766	3.9	20.8
1 22	8 7.83	+23 20.4	1.222	2.205	1.6	20.2	1 22	8 7.99	+23 26.9	1.781	2.763	1.3	20.6
2 1	7 57.22	+23 56.4	1.228	2.195	6.7	20.5	2 1	7 58.31	+23 55.5	1.797	2.761	5.2	20.9
2 11	7 48.18	+24 21.3	1.260	2.185	11.9	20.7	2 11	7 49.82	+24 15.7	1.841	2.759	9.3	21.1
2 21	7 41.97	+24 33.9	1.314	2.176	16.5	21.0	2 21	7 43.44	+24 26.6	1.910	2.756	12.8	21.4
<b>502405</b>	2015 <i>BD</i> <sub>253</sub>		1 20.9 356°81	0°4/21.1	18		<b>155995</b>	2001 <i>RX</i> <sub>5</sub>		1 20.9 175°59	0°6/20.7	18	
12 13	8 36.43	+19 12.8	2.115	2.885	14.3	20.8	12 13	8 41.86	+20 7.6	1.826	2.597	16.1	21.2
12 23	8 32.24	+19 2.9	2.024	2.885	11.3	20.6	12 23	8 36.99	+20 24.6	1.738	2.600	12.8	20.9
1 2	8 25.67	+18 58.6	1.955	2.884	7.8	20.4	1 2	8 29.20	+20 49.5	1.672	2.602	8.8	20.7
1 12	8 17.30	+18 58.1	1.913	2.884	3.8	20.2	1 12	8 19.14	+21 18.4	1.632	2.603	4.2	20.4
1 22	8 7.98	+18 59.0	1.900	2.884	0.5	19.9	1 22	8 7.83	+21 46.7	1.620	2.604	0.9	20.2
2 1	7 58.76	+18 58.9	1.916	2.884	4.6	20.2	2 1	7 56.58	+22 10.1	1.639	2.604	5.5	20.5
2 11	7 50.67	+18 56.4	1.961	2.884	8.5	20.4	2 11	7 46.75	+22 25.9	1.685	2.603	9.9	20.8
2 21	7 44.52	+18 50.8	2.032	2.884	11.9	20.7	2 21	7 39.33	+22 33.3	1.756	2.602	13.8	21.0
<b>286326</b>	2001 <i>WV</i> <sub>99</sub>		1 20.9 43°19	5°4/17.9	17		<b>2750</b>	Loviisa		1 20.9 349°87	4°5/19.2	18	R
12 13	8 37.08	+28 12.5	1.609	2.409	16.7	20.3	12 13	8 38.22	+26 9.0	1.241	2.057	19.9	16.2
12 23	8 33.82	+29 47.9	1.543	2.421	13.2	20.1	12 23	8 35.70	+27 3.1	1.167	2.053	15.8	16.0
1 2	8 27.33	+31 28.4	1.500	2.432	9.4	19.9	1 2	8 29.20	+28 5.1	1.112	2.051	11.1	15.7
1 12	8 18.28	+33 4.4	1.483	2.445	6.1	19.8	1 12	8 19.43	+29 6.2	1.079	2.049	6.3	15.4
1 22	8 7.86	+34 26.0	1.492	2.457	5.8	19.8	1 22	8 7.79	+29 56.2	1.071	2.047	4.8	15.3
2 1	7 57.57	+35 25.8	1.529	2.470	8.6	20.0	2 1	7 56.22	+30 27.1	1.089	2.046	8.9	15.5
2 11	7 48.96	+36 1.2	1.592	2.484	12.2	20.2	2 11	7 46.75	+30 36.0	1.130	2.046	13.8	15.8
2 21	7 43.10	+36 13.9	1.677	2.497	15.5	20.5	2 21	7 40.73	+30 25.0	1.191	2.046	18.3	16.1
<b>411415</b>	2010 <i>VS</i> <sub>174</sub>		1 20.9 112°78	1°9/19.9	18		<b>459877</b>	2014 <i>HL</i> <sub>66</sub>		1 20.9 141°02	2°9/19.5	18	
12 13	8 41.79	+24 13.2	2.219	2.985	13.8	21.7	12 13	8 43.14	+24 59.2	1.993	2.764	15.0	22.4
12 23	8 36.19	+24 45.2	2.149	3.008	10.8	21.5	12 23	8 37.76	+25 52.3	1.916	2.778	11.8	22.2
1 2	8 28.19	+25 20.7	2.102	3.030	7.3	21.4	1 2	8 29.58	+26 50.4	1.862	2.791	8.1	22.0
1 12	8 18.45	+25 55.2	2.083	3.052	3.7	21.2	1 12	8 19.26	+27 47.2	1.836	2.804	4.4	21.8
1 22	8 7.88	+26 24.0	2.094	3.074	2.1	21.1	1 22	8 7.83	+28 36.4	1.839	2.816	3.1	21.8
2 1	7 57.57	+26 44.0	2.136	3.094	5.1	21.3	2 1	7 56.55	+29 13.1	1.873	2.827	6.1	22.0
2 11	7 48.57	+26 53.8	2.207	3.114	8.5	21.6	2 11	7 46.70	+29 35.0	1.935	2.836	9.8	22.2
2 21	7 41.64	+26 53.7	2.304	3.133	11.5	21.8	2 21	7 39.20	+29 43.0	2.021	2.846	13.1	22.5
<b>152064</b>	2004 <i>PL</i> <sub>94</sub>		1 20.9 171°70	3°6/23.4	18		<b>494773</b>	2006 <i>JE</i> <sub>27</sub>		1 20.9 240°89	6°6/17.2	17	
12 13	8 34.68	+ 6 11.1	2.521	3.241	13.5	21.1	12 13	8 43.67	+34 28.4	1.996	2.772	14.8	22.3
12 23	8 30.42	+ 6 18.3	2.424	3.244	11.1	21.0	12 23	8 38.96	+35 48.6	1.899	2.756	12.1	22.1
1 2	8 24.23	+ 6 39.5	2.349	3.247	8.3	20.8	1 2	8 30.96	+37 9.8	1.825	2.740	9.2	21.9
1 12	8 16.57	+ 7 14.3	2.301	3.249	5.5	20.6	1 12	8 20.19	+38 23.1	1.777	2.723	7.0	21.7
1 22	8 8.10	+ 8 0.9	2.282	3.251	3.6	20.5	1 22	8 7.70	+39 19.3	1.758	2.706	7.0	21.7
2 1	7 59.62	+ 8 56.3	2.293	3.252	4.8	20.6	2 1	7 54.97	+39 51.9	1.767	2.687	9.2	21.8
2 11	7 51.98	+ 9 56.3	2.335	3.253	7.5	20.7	2 11	7 43.63	+39 59.2	1.802	2.668	12.4	21.9
2 21	7 45.84	+10 56.9	2.404	3.253	10.4	20.9	2 21	7 34.96	+39 43.8	1.860	2.649	15.4	22.1
<b>40800</b>	1999 <i>TD</i> <sub>38</sub>		1 20.9 172°65	1°5/20.2	18		<b>379460</b>	2010 <i>CS</i> <sub>159</sub>		1 20.9 331°84	2°6/22.2	17	
12 13	8 40.56	+22 18.5	2.137	2.905	14.2	20.4	12 13	8 31.42	+12 37.4	1.790	2.565	16.3	20.9
12 23	8 35.55	+22 49.5	2.048	2.908	11.2	20.2	12 23	8 28.89	+12 31.0	1.691	2.550	13.2	20.6
1 2	8 28.00	+23 26.3	1.982	2.911	7.7	20.0	1 2	8 23.77	+12 37.6	1.612	2.536	9.5	20.4
1 12	8 18.47	+24 4.8	1.943	2.914	3.8	19.7	1 12	8 16.57	+12 56.9	1.558	2.523	5.4	20.1
1 22	8 7.88	+24 40.1	1.934	2.915	1.7	19.6	1 22	8 8.14	+13 26.4	1.530	2.510	2.6	19.9
2 1	7 57.33	+25 8.1	1.955	2.916	5.2	19.8	2 1	7 59.61	+14 2.7	1.530	2.498	5.4	20.1
2 11	7 48.00	+25 26.6	2.005	2.916	9.0	20.0	2 11	7 52.18	+14 41.4	1.557	2.487	9.6	20.3
2 21	7 40.74	+25 35.1	2.081	2.916	12.3	20.3	2 21	7 46.83	+15 18.8	1.608	2.476	13.6	20.5
<b>267786</b>	2003 <i>SN</i> <sub>168</sub>		1 20.9 140°52	5°4/17.5	18		<b>496665</b>	2016 <i>BP</i> <sub>58</sub>		1 20.9 211°99	2°3/22.4	17	
12 13	8 39.48	+34 3.2	2.355	3.128	12.9	20.2	12 13	8 35.27	+10 5.9	2.224	2.967	14.4	21.2
12 23	8 34.77	+35 12.0	2.278	3.135	10.4	20.0	12 23	8 31.30	+10 32.2	2.122	2.962	11.7	21.0
1 2	8 27.49	+36 19.4	2.225	3.142	7.7	19.9	1 2	8 25.09	+11 13.3	2.042	2.956	8.4	20.8
1 12	8 18.23	+37 18.8	2.200	3.148	5.7	19.8	1 12	8 17.11	+12 7.7	1.989	2.950	4.9	20.6
1 22	8 7.92	+38 3.9	2.204	3.154	5.6	19.8	1 22	8 8.09	+13 12.0	1.965	2.944	2.3	20.4
2 1	7 57.68	+38 30.9	2.237	3.159	7.4	19.9	2 1	7 58.97	+14 21.8	1.971	2.937	4.6	20.5
2 11	7 48.69	+38 38.7	2.297	3.165	10.0	20.1	2 11	7 50.77	+15 31.9	2.007	2.930	8.3	20.7
2 21	7 41.80	+38 29.4	2.381	3.170	12.5	20.2	2 21	7 44.30	+16 38.0	2.070	2.922	11.7	20.9
<b>313586</b>	2003 <i>FW</i> <sub>88</sub>		1 20.9 202°49	4°7/23.9	18		<b>146385</b>	2001 <i>QY</i> <sub>62</sub>		1 20.9 25°78	5°1/19.7	18	
12 13	8 34.52	+ 3 52.2											

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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>82871</b>	2001 QA <sub>66</sub>		1 20.9 159°29	4°0/23.6	18		<b>226796</b>	2004 RO <sub>188</sub>		1 20.9 156°82	2°2/22.1	18	
12 13	8 32.48	+ 5 26.0	2.562	3.283	13.3	19.9	12 13	8 36.84	+13 0.6	2.301	3.048	13.9	20.3
12 23	8 28.67	+ 5 20.1	2.467	3.286	11.0	19.7	12 23	8 32.30	+12 48.3	2.209	3.053	11.2	20.1
1 2	8 23.03	+ 5 27.7	2.394	3.288	8.4	19.6	1 2	8 25.60	+12 45.5	2.140	3.057	8.0	19.9
1 12	8 16.01	+ 5 48.8	2.346	3.290	5.7	19.4	1 12	8 17.29	+12 51.1	2.098	3.061	4.5	19.7
1 22	8 8.23	+ 6 22.3	2.328	3.292	4.0	19.3	1 22	8 8.12	+13 3.5	2.085	3.064	2.2	19.6
2 1	8 0.46	+ 7 5.7	2.339	3.294	5.0	19.4	2 1	7 59.02	+13 20.5	2.103	3.068	4.5	19.7
2 11	7 53.50	+ 7 55.5	2.379	3.296	7.5	19.5	2 11	7 50.93	+13 39.5	2.150	3.071	7.9	20.0
2 21	7 47.97	+ 8 47.9	2.446	3.297	10.2	19.7	2 21	7 44.56	+13 58.4	2.223	3.073	11.1	20.2
<b>289738</b>	2005 JU <sub>35</sub>		1 20.9 134°40	0°1/20.9	18		<b>518131</b>	2016 CT <sub>288</sub>		1 20.9 269°90	3°8/22.7	18	
12 13	8 38.60	+17 54.3	2.236	2.995	13.9	21.7	12 13	8 34.89	+ 9 24.6	2.168	2.911	14.8	21.3
12 23	8 33.75	+18 25.9	2.154	3.009	11.0	21.5	12 23	8 30.96	+ 8 56.1	2.073	2.909	12.1	21.1
1 2	8 26.62	+19 6.1	2.096	3.023	7.5	21.3	1 2	8 24.81	+ 8 39.0	1.999	2.906	9.0	20.9
1 12	8 17.77	+19 51.4	2.065	3.036	3.6	21.1	1 12	8 16.96	+ 8 33.8	1.950	2.904	5.8	20.7
1 22	8 8.03	+20 37.5	2.064	3.048	0.5	20.9	1 22	8 8.16	+ 8 39.8	1.930	2.901	3.8	20.6
2 1	7 58.40	+21 20.4	2.094	3.060	4.4	21.2	2 1	7 59.37	+ 8 55.2	1.939	2.899	5.4	20.7
2 11	7 49.89	+21 57.0	2.154	3.071	8.1	21.5	2 11	7 51.58	+ 9 17.3	1.976	2.896	8.5	20.9
2 21	7 43.25	+22 25.7	2.239	3.081	11.3	21.7	2 21	7 45.54	+ 9 42.9	2.039	2.894	11.7	21.1
<b>206710</b>	2004 BK <sub>37</sub>		1 20.9 37°82	0°8/20.6	18		<b>486902</b>	2014 KF <sub>95</sub>		1 20.9 284°56	4°7/19.2	18	
12 13	8 36.07	+21 22.4	1.858	2.642	15.4	20.0	12 13	8 40.53	+27 29.4	1.410	2.214	18.5	21.6
12 23	8 32.21	+21 30.9	1.786	2.655	12.1	19.8	12 23	8 37.35	+28 17.5	1.320	2.199	14.9	21.3
1 2	8 25.75	+21 45.4	1.735	2.668	8.2	19.6	1 2	8 30.34	+29 11.9	1.250	2.185	10.5	21.1
1 12	8 17.38	+22 2.3	1.710	2.682	4.0	19.4	1 12	8 20.07	+30 4.3	1.203	2.171	6.2	20.8
1 22	8 8.08	+22 17.8	1.713	2.696	1.0	19.2	1 22	8 7.79	+30 45.3	1.182	2.156	5.0	20.7
2 1	7 59.01	+22 28.8	1.745	2.711	5.1	19.5	2 1	7 55.34	+31 7.4	1.188	2.142	8.7	20.8
2 11	7 51.32	+22 33.2	1.804	2.726	9.1	19.8	2 11	7 44.72	+31 7.9	1.217	2.128	13.6	21.0
2 21	7 45.81	+22 30.9	1.888	2.741	12.6	20.0	2 21	7 37.36	+30 49.0	1.269	2.114	18.0	21.3
<b>502652</b>	2015 CX <sub>43</sub>		1 20.9 76°05	3°1/22.9	18		<b>13976</b>	1992 EZ <sub>6</sub>		1 20.9 207°52	0°8/21.5	18	
12 13	8 32.59	+ 8 29.0	2.292	3.033	14.1	21.2	12 13	8 36.96	+14 29.8	2.367	3.117	13.5	19.5
12 23	8 28.98	+ 8 35.0	2.203	3.039	11.5	21.0	12 23	8 32.54	+15 1.0	2.263	3.111	10.8	19.3
1 2	8 23.35	+ 8 54.7	2.137	3.045	8.5	20.8	1 2	8 25.90	+15 43.5	2.182	3.104	7.5	19.1
1 12	8 16.19	+ 9 27.3	2.096	3.051	5.3	20.7	1 12	8 17.52	+16 34.7	2.128	3.096	3.9	18.9
1 22	8 8.22	+10 10.7	2.084	3.058	3.1	20.5	1 22	8 8.11	+17 31.1	2.105	3.088	0.9	18.6
2 1	8 0.28	+11 1.5	2.101	3.064	4.7	20.6	2 1	7 58.59	+18 28.2	2.113	3.079	4.3	18.8
2 11	7 53.28	+11 55.5	2.147	3.071	7.8	20.8	2 11	7 49.97	+19 22.0	2.150	3.070	8.0	19.1
2 21	7 47.89	+12 48.9	2.220	3.077	10.8	21.1	2 21	7 43.03	+20 9.6	2.215	3.060	11.3	19.3
<b>176187</b>	2001 OX <sub>31</sub>		1 20.9 258°08	5°7/19.7	18		<b>456987</b>	2008 CU <sub>9</sub>		1 20.9 296°90	3°0/20.0	16	
12 13	8 57.01	+37 37.0	2.098	2.846	15.1	20.3	12 13	8 41.34	+27 24.5	1.680	2.469	16.6	21.8
12 23	8 49.01	+37 37.1	1.988	2.828	12.4	20.1	12 23	8 37.29	+27 31.3	1.577	2.448	13.3	21.5
1 2	8 37.47	+37 28.5	1.901	2.809	9.4	19.9	1 2	8 29.87	+27 39.3	1.495	2.428	9.4	21.2
1 12	8 23.16	+37 3.5	1.842	2.790	6.6	19.7	1 12	8 19.69	+27 43.3	1.439	2.408	5.1	20.9
1 22	8 7.41	+36 16.3	1.812	2.770	5.8	19.6	1 22	8 7.86	+27 37.8	1.409	2.388	3.2	20.8
2 1	7 51.92	+35 5.1	1.814	2.750	7.9	19.6	2 1	7 55.91	+27 18.9	1.408	2.368	6.9	20.9
2 11	7 38.35	+33 33.5	1.846	2.729	11.3	19.8	2 11	7 45.50	+26 46.4	1.433	2.348	11.5	21.1
2 21	7 27.84	+31 48.4	1.905	2.708	14.6	20.0	2 21	7 37.87	+26 2.6	1.482	2.329	15.8	21.3
<b>219428</b>	2000 TN <sub>23</sub>		1 20.9 162°12	0°6/20.6	18		<b>259975</b>	2004 FK <sub>33</sub>		1 20.9 320°86	7°1/24.7	18	
12 13	8 38.14	+20 37.0	2.495	3.254	12.6	21.9	12 13	8 33.67	+ 1 6.7	1.773	2.500	18.1	20.3
12 23	8 33.21	+20 56.9	2.405	3.261	9.9	21.7	12 23	8 30.54	+ 0 39.1	1.682	2.498	15.4	20.1
1 2	8 26.18	+21 22.2	2.339	3.266	6.8	21.5	1 2	8 24.83	+ 0 32.6	1.611	2.495	12.3	19.9
1 12	8 17.55	+21 50.0	2.300	3.271	3.3	21.3	1 12	8 17.08	+ 0 49.7	1.562	2.493	9.2	19.7
1 22	8 8.08	+22 16.7	2.292	3.276	0.8	21.1	1 22	8 8.17	+ 1 30.4	1.538	2.491	7.2	19.5
2 1	7 58.68	+22 39.4	2.316	3.279	4.2	21.4	2 1	7 59.20	+ 2 31.7	1.541	2.489	7.9	19.6
2 11	7 50.28	+22 56.0	2.369	3.283	7.6	21.6	2 11	7 51.39	+ 3 47.6	1.571	2.487	10.6	19.7
2 21	7 43.58	+23 5.9	2.448	3.285	10.6	21.8	2 21	7 45.65	+ 5 10.8	1.625	2.485	13.9	19.9
<b>19289</b>	1996 HY <sub>12</sub>		1 20.9 179°41	1°1/21.4	18		<b>230</b>	Athamantis		1 20.9 92°91	5°7/23.2	18	
12 13	8 41.62	+15 46.6	1.613	2.384	18.0	19.3	12 13	8 38.36	+ 7 12.1	1.628	2.378	18.6	11.1
12 23	8 37.16	+15 55.5	1.526	2.386	14.4	19.0	12 23	8 34.32	+ 6 24.9	1.548	2.385	15.5	10.9
1 2	8 29.55	+16 17.1	1.459	2.387	10.1	18.8	1 2	8 27.42	+ 5 53.7	1.488	2.392	11.7	10.7
1 12	8 19.42	+16 48.8	1.418	2.387	5.1	18.5	1 12	8 18.32	+ 5 40.4	1.451	2.399	8.0	10.5
1 22	8 7.86	+17 25.9	1.404	2.387	1.2	18.2	1 22	8 8.03	+ 5 44.9	1.440	2.406	5.8	10.4
2 1	7 56.32	+18 3.6	1.418	2.386	5.7	18.5	2 1	7 57.87	+ 6 5.1	1.456	2.412	7.2	10.5
2 11	7 46.31	+18 37.4	1.460	2.385	10.6	18.8	2 11	7 49.14	+ 6 36.9	1.499	2.419	10.7	10.7
2 21	7 38.92	+19 4.8	1.526	2.382	14.9	19.0	2 21	7 42.79	+ 7 15.1	1.565	2.425	14.4	10.9
<b>97921</b>	2000 QE <sub>96</sub>		1 20.9 125°76	2°6/19.8	18		<b>131791</b>	2002 AU <sub>39</sub>		1 20.9 40°83	1°7/21.6	17	
12 13	8 43.43	+25 11.7	1.843	2.619	15.8	20.2	12 13	8 37.14	+14 44.4	1.164	1.967	21.7	19.9
12 23	8 38.13	+25 45.3	1.769	2.634	12.5	20.0	12 23	8 34.25	+14 49.0	1.109	1.987	17.2	19.6
1 2	8 29.89	+26 22.9	1.718	2.648	8.6	19.8	1 2	8 27.75	+15 10.9	1.072	2.007	12.0	19.4
1 12	8 19.43	+26 58.8	1.693	2.662	4.5	19.6	1 12	8 18.53	+15 46.6	1.057	2.028	6.2	19.1
1 22	8 7.87	+27 27.2	1.696	2.675	2.8	19.5	1 22	8 8.02	+16 30.5	1.067	2.050	1.7	18.9
2 1	7 56.57	+27 43.9	1.729	2.687	6.1	19.7	2 1	7 57.98	+17 15.8	1.102	2.072	6.4	19.3
2 11	7 46.85	+27 47.7	1.790	2.699	10.1	20.0	2 11	7 50.03	+17 56.8	1.161	2.095	11.7	19.6
2 21	7 39.64	+27 39.7	1.876	2.710	13.5	20.2	2 21	7 45.18	+18 30.1	1.242	2.119	16.2	20.0
<b>460281</b>	2014 QZ <sub>347</sub>		1 20.9 63°93	0°1/20.9	18		<b>344544</b>	2002 VP <sub>54</sub>		1 20.9 132°13	0°6/21.2	17	
12 13	8 38.36	+17 50.7	1.630	2.412	17.4	21.6	12 13	8 45.01	+18 20.0	1.767			

EPHEMERIDES

1 20.9

1 20.9

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>284877</b>	2009 <i>DA</i> <sub>66</sub>		1 20.9 147°75	2°1/22.5	17		<b>468533</b>	2006 <i>BN</i> <sub>50</sub>		1 20.9 335°97	3°3/19.9	18	
12 13	8 32.60	+10 48.2	2.895	3.630	11.6	22.0	12 13	8 41.76	+29 14.3	1.810	2.595	15.8	20.7
12 23	8 28.55	+10 54.9	2.802	3.636	9.4	21.9	12 23	8 37.11	+29 14.7	1.721	2.589	12.6	20.5
1 2	8 22.84	+11 11.3	2.732	3.643	6.7	21.7	1 2	8 29.39	+29 13.7	1.654	2.585	8.8	20.3
1 12	8 15.91	+11 36.2	2.689	3.649	4.0	21.5	1 12	8 19.29	+29 6.4	1.613	2.580	5.0	20.0
1 22	8 8.33	+12 7.9	2.677	3.654	2.1	21.4	1 22	8 7.97	+28 48.4	1.599	2.576	3.4	19.9
2 1	8 0.79	+12 44.0	2.696	3.660	3.7	21.5	2 1	7 56.83	+28 17.4	1.614	2.572	6.5	20.1
2 11	7 53.98	+13 21.6	2.744	3.665	6.4	21.7	2 11	7 47.30	+27 34.3	1.657	2.568	10.5	20.3
2 21	7 48.46	+13 58.5	2.821	3.669	9.0	21.9	2 21	7 40.36	+26 41.8	1.723	2.565	14.2	20.5
<b>62865</b>	2000 <i>UL</i> <sub>82</sub>		1 20.9 145°92	5°4/17.9	18		<b>296047</b>	2009 <i>AD</i> <sub>21</sub>		1 20.9 13°69	2°3/19.5	18	
12 13	8 43.21	+35 22.8	2.362	3.128	13.1	20.3	12 13	8 34.23	+23 19.2	2.111	2.893	13.9	20.3
12 23	8 37.64	+36 17.1	2.286	3.138	10.5	20.1	12 23	8 30.75	+24 14.1	2.025	2.894	10.9	20.1
1 2	8 29.42	+37 8.3	2.235	3.147	7.9	20.0	1 2	8 24.85	+25 15.8	1.962	2.896	7.5	19.9
1 12	8 19.19	+37 49.7	2.210	3.156	5.9	19.9	1 12	8 17.06	+26 19.1	1.927	2.897	3.9	19.7
1 22	8 7.95	+38 15.8	2.215	3.164	5.6	19.9	1 22	8 8.22	+27 18.4	1.920	2.899	2.5	19.6
2 1	7 56.90	+38 23.2	2.249	3.171	7.4	20.0	2 1	7 59.39	+28 8.4	1.943	2.900	5.6	19.8
2 11	7 47.22	+38 12.1	2.310	3.178	9.9	20.2	2 11	7 51.65	+28 46.0	1.994	2.902	9.2	20.0
2 21	7 39.77	+37 45.1	2.396	3.185	12.4	20.4	2 21	7 45.87	+29 10.3	2.069	2.905	12.4	20.2
<b>292314</b>	2006 <i>SY</i> <sub>159</sub>		1 20.9 191°95	1°5/22.0	17		<b>298919</b>	2004 <i>TB</i> <sub>116</sub>		1 20.9 95°03	1°4/21.7	18	
12 13	8 32.90	+13 11.5	2.911	3.653	11.4	21.9	12 13	8 38.48	+13 24.8	1.589	2.361	18.1	20.6
12 23	8 28.83	+13 19.2	2.810	3.652	9.1	21.8	12 23	8 34.55	+13 51.9	1.516	2.375	14.5	20.4
1 2	8 23.07	+13 35.2	2.733	3.650	6.5	21.6	1 2	8 27.64	+14 35.0	1.463	2.389	10.1	20.2
1 12	8 16.04	+13 58.3	2.684	3.648	3.6	21.4	1 12	8 18.46	+15 31.0	1.434	2.403	5.3	19.9
1 22	8 8.32	+14 26.6	2.665	3.646	1.5	21.2	1 22	8 8.07	+16 34.4	1.433	2.416	1.5	19.7
2 1	8 0.59	+14 57.7	2.677	3.643	3.6	21.4	2 1	7 57.86	+17 38.6	1.460	2.429	5.5	20.0
2 11	7 53.57	+15 29.1	2.720	3.640	6.5	21.6	2 11	7 49.17	+18 38.0	1.515	2.442	10.1	20.3
2 21	7 47.85	+15 58.8	2.789	3.637	9.2	21.7	2 21	7 42.98	+19 28.8	1.594	2.454	14.2	20.6
<b>182509</b>	2001 <i>SV</i> <sub>255</sub>		1 20.9 98°78	1°8/22.1	18		<b>381640</b>	2008 <i>YK</i> <sub>104</sub>		1 20.9 41°94	0°5/20.8	18	
12 13	8 38.94	+12 23.2	2.201	2.945	14.6	21.0	12 13	8 37.88	+22 1.0	2.149	2.921	14.0	21.3
12 23	8 33.84	+12 37.6	2.131	2.973	11.6	20.8	12 23	8 33.32	+21 50.9	2.065	2.927	11.0	21.1
1 2	8 26.56	+13 3.4	2.084	3.001	8.2	20.7	1 2	8 26.39	+21 44.2	2.003	2.933	7.5	20.9
1 12	8 17.72	+13 38.5	2.064	3.028	4.5	20.5	1 12	8 17.71	+21 38.6	1.968	2.939	3.6	20.7
1 22	8 8.14	+14 19.6	2.074	3.054	1.8	20.3	1 22	8 8.17	+21 31.4	1.962	2.946	0.7	20.4
2 1	7 58.80	+15 3.1	2.114	3.080	4.3	20.6	2 1	7 58.80	+21 21.0	1.986	2.952	4.6	20.7
2 11	7 50.62	+15 45.3	2.184	3.105	7.8	20.8	2 11	7 50.64	+21 6.3	2.039	2.959	8.3	21.0
2 21	7 44.30	+16 23.7	2.281	3.129	10.9	21.1	2 21	7 44.45	+20 47.6	2.118	2.966	11.6	21.2
<b>280428</b>	2003 <i>YW</i> <sub>84</sub>		1 20.9 8°52	4°6/18.4	18		<b>465895</b>	2010 <i>UE</i> <sub>44</sub>		1 20.9 7°15	8°8/17.5	16	
12 13	8 35.60	+29 4.8	1.928	2.720	14.7	19.9	12 13	8 27.39	+32 1.0	0.965	1.816	21.5	20.4
12 23	8 32.21	+30 11.0	1.848	2.721	11.6	19.7	12 23	8 28.10	+33 33.6	0.914	1.818	17.3	20.1
1 2	8 26.04	+31 20.2	1.792	2.722	8.3	19.5	1 2	8 24.42	+35 7.0	0.882	1.823	12.9	19.9
1 12	8 17.69	+32 25.5	1.761	2.723	5.3	19.3	1 12	8 17.23	+36 27.6	0.869	1.830	9.5	19.7
1 22	8 8.13	+33 19.8	1.758	2.725	4.8	19.3	1 22	8 8.21	+37 22.1	0.878	1.840	9.3	19.8
2 1	7 58.61	+33 57.7	1.784	2.727	7.4	19.5	2 1	7 59.58	+37 42.6	0.908	1.853	12.3	20.0
2 11	7 50.42	+34 17.1	1.836	2.730	10.7	19.7	2 11	7 53.49	+37 29.0	0.959	1.868	16.4	20.2
2 21	7 44.53	+34 18.9	1.911	2.733	13.8	19.9	2 21	7 51.13	+36 47.5	1.027	1.886	20.2	20.5
<b>146322</b>	2001 <i>LM</i> <sub>17</sub>		1 20.9 145°62	0°5/21.3	18	R	<b>138596</b>	2000 <i>QL</i> <sub>161</sub>		1 20.9 157°92	3°1/23.2	18	
12 13	8 37.17	+14 27.2	2.186	2.941	14.3	20.2	12 13	8 32.67	+7 9.9	3.064	3.780	11.4	21.3
12 23	8 32.78	+15 14.2	2.099	2.950	11.4	20.0	12 23	8 28.49	+7 7.0	2.968	3.787	9.3	21.2
1 2	8 26.08	+16 13.7	2.034	2.958	7.9	19.8	1 2	8 22.76	+7 14.7	2.896	3.793	7.0	21.0
1 12	8 17.60	+17 22.4	1.997	2.966	3.9	19.5	1 12	8 15.87	+7 32.5	2.851	3.798	4.6	20.9
1 22	8 8.14	+18 35.3	1.990	2.974	0.6	19.3	1 22	8 8.38	+7 59.2	2.835	3.803	3.1	20.8
2 1	7 58.70	+19 47.0	2.014	2.980	4.4	19.6	2 1	8 0.92	+8 33.0	2.851	3.808	4.1	20.8
2 11	7 50.30	+20 52.8	2.068	2.987	8.3	19.8	2 11	7 54.13	+9 11.1	2.896	3.812	6.3	21.0
2 21	7 43.75	+21 49.7	2.148	2.993	11.6	20.1	2 21	7 48.55	+9 50.9	2.970	3.816	8.7	21.2
<b>378975</b>	2008 <i>UT</i> <sub>242</sub>		1 20.9 36°60	0°6/21.2	18		<b>2164</b>	<i>Lyalya</i>		1 20.9 162°11	0°1/20.9	18	
12 13	8 36.96	+18 49.6	2.007	2.779	14.9	20.7	12 13	8 34.01	+18 41.2	2.824	3.581	11.4	17.6
12 23	8 32.74	+18 35.6	1.923	2.785	11.8	20.5	12 23	8 29.78	+19 1.3	2.731	3.585	8.9	17.5
1 2	8 26.07	+18 27.7	1.862	2.791	8.1	20.2	1 2	8 23.75	+19 27.4	2.662	3.589	6.1	17.3
1 12	8 17.58	+18 24.0	1.826	2.797	4.0	20.0	1 12	8 16.39	+19 57.1	2.621	3.592	3.0	17.1
1 22	8 8.16	+18 22.3	1.819	2.803	0.7	19.8	1 22	8 8.33	+20 27.6	2.611	3.595	0.4	16.8
2 1	7 58.90	+18 20.4	1.842	2.810	4.7	20.1	2 1	8 0.29	+20 56.3	2.632	3.598	3.6	17.1
2 11	7 50.87	+18 16.6	1.893	2.817	8.6	20.3	2 11	7 53.05	+21 21.0	2.683	3.600	6.7	17.3
2 21	7 44.87	+18 10.3	1.969	2.824	12.1	20.6	2 21	7 47.22	+21 40.3	2.761	3.602	9.5	17.5
<b>424611</b>	2008 <i>JD</i>		1 20.9 217°93	2°2/22.4	18		<b>455788</b>	2005 <i>QC</i> <sub>137</sub>		1 20.9 178°47	1°1/20.4	18	
12 13	8 35.56	+10 22.2	2.489	3.225	13.3	21.9	12 13	8 38.13	+21 12.0	2.177	2.946	13.9	22.2
12 23	8 31.32	+10 43.1	2.381	3.216	10.8	21.7	12 23	8 33.65	+21 41.1	2.086	2.947	11.0	22.0
1 2	8 25.02	+11 16.7	2.294	3.206	7.8	21.5	1 2	8 26.74	+22 16.7	2.018	2.948	7.5	21.8
1 12	8 17.09	+12 1.9	2.235	3.196	4.5	21.3	1 12	8 17.96	+22 55.1	1.977	2.949	3.7	21.6
1 22	8 8.21	+12 55.9	2.206	3.185	2.2	21.1	1 22	8 8.14	+23 31.9	1.966	2.949	1.3	21.4
2 1	7 59.20	+13 55.1	2.208	3.174	4.3	21.2	2 1	7 58.36	+24 3.1	1.985	2.948	4.9	21.7
2 11	7 50.99	+14 55.3	2.241	3.161	7.6	21.4	2 11	7 49.68	+24 26.0	2.033	2.948	8.7	21.9
2 21	7 44.32	+15 52.8	2.300	3.149	10.8	21.6	2 21	7 42.96	+24 39.8	2.106	2.946	12.0	22.1
<b>203851</b>	2002 <i>VB</i> <sub>101</sub>		1 20.9 90°52	2°5/22.2	18		<b>365239</b>	2009 <i>KN</i> <sub>8</sub>		1 20.9 118°92	4°6/23.9	18	
12 13	8 35.49	+12 25.3	2.320	3.067									

EPHEMERIDES

1 20.9							1 21.0						
2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>255266</b>	2005 <i>VH</i> <sub>42</sub>		1 20.9	30°80	6°9/17.1	17	<b>364360</b>	2006 <i>US</i> <sub>269</sub>		1 21.0	116°85	6°6/24.0	18
12 13	8 36.67	+30 47.1	1.509	2.316	17.4	19.5	12 13	8 38.15	+2 39.2	2.012	2.726	16.6	20.9
12 23	8 33.89	+32 36.8	1.448	2.327	13.8	19.3	12 23	8 33.55	+1 45.6	1.931	2.738	14.1	20.7
1 2	8 27.63	+34 29.9	1.410	2.339	10.2	19.1	1 2	8 26.59	+1 7.9	1.870	2.750	11.1	20.5
1 12	8 18.60	+36 14.9	1.396	2.351	7.4	19.0	1 12	8 17.86	+0 48.7	1.834	2.761	8.3	20.4
1 22	8 8.07	+37 40.6	1.408	2.364	7.3	19.0	1 22	8 8.21	+0 48.5	1.824	2.773	6.7	20.3
2 1	7 57.69	+38 39.4	1.447	2.378	10.0	19.2	2 1	7 58.68	+1 6.0	1.843	2.784	7.4	20.4
2 11	7 49.13	+39 9.3	1.510	2.392	13.3	19.5	2 11	7 50.30	+1 37.7	1.889	2.794	9.8	20.6
2 21	7 43.56	+39 13.3	1.594	2.407	16.5	19.7	2 21	7 43.87	+2 18.7	1.960	2.804	12.6	20.7
<b>203064</b>	2000 <i>NH</i> <sub>20</sub>		1 20.9	79°27	0°9/21.3	17	<b>48803</b>	1997 <i>UN</i> <sub>10</sub>		1 21.0	14°48	4°3/23.2	18
12 13	8 45.69	+18 26.2	1.549	2.322	18.5	19.6	12 13	8 33.58	+7 36.6	2.139	2.879	15.0	18.6
12 23	8 39.96	+18 7.4	1.489	2.349	14.6	19.4	12 23	8 29.96	+7 8.5	2.048	2.880	12.4	18.4
1 2	8 31.10	+17 56.7	1.449	2.377	10.0	19.2	1 2	8 24.16	+6 53.5	1.978	2.881	9.3	18.2
1 12	8 20.00	+17 51.6	1.434	2.404	5.0	19.0	1 12	8 16.70	+6 52.2	1.933	2.882	6.3	18.0
1 22	8 7.96	+17 49.0	1.448	2.431	1.0	18.8	1 22	8 8.34	+7 3.9	1.916	2.884	4.4	17.9
2 1	7 56.47	+17 46.3	1.490	2.458	5.5	19.2	2 1	8 0.01	+7 26.8	1.928	2.886	5.6	18.0
2 11	7 46.89	+17 42.0	1.560	2.484	10.1	19.5	2 11	7 52.67	+7 57.6	1.968	2.887	8.6	18.2
2 21	7 40.08	+17 35.3	1.655	2.510	14.0	19.8	2 21	7 47.07	+8 32.5	2.033	2.889	11.7	18.4
<b>518782</b>	2010 <i>AB</i> <sub>141</sub>		1 20.9	86°04	1°1/21.7	18	<b>362356</b>	2010 <i>MN</i> <sub>97</sub>		1 21.0	87°45	3°5/19.4	17
12 13	8 34.11	+13 47.6	2.191	2.950	14.2	21.6	12 13	8 44.92	+28 3.1	1.968	2.740	15.1	20.8
12 23	8 30.33	+14 16.3	2.107	2.960	11.3	21.4	12 23	8 38.96	+28 47.2	1.912	2.773	11.9	20.6
1 2	8 24.38	+14 56.7	2.046	2.970	7.9	21.2	1 2	8 30.24	+29 32.1	1.878	2.805	8.2	20.5
1 12	8 16.78	+15 46.4	2.011	2.979	4.1	21.0	1 12	8 19.56	+30 11.6	1.872	2.836	4.8	20.3
1 22	8 8.31	+16 41.6	2.006	2.989	1.1	20.8	1 22	8 8.04	+30 40.1	1.894	2.867	3.7	20.3
2 1	7 59.90	+17 37.7	2.031	2.998	4.3	21.0	2 1	7 56.96	+30 54.2	1.947	2.897	6.3	20.5
2 11	7 52.51	+18 30.7	2.084	3.008	8.0	21.2	2 11	7 47.53	+30 53.7	2.028	2.926	9.6	20.8
2 21	7 46.88	+19 17.7	2.164	3.017	11.2	21.5	2 21	7 40.52	+30 40.5	2.134	2.955	12.6	21.0
<b>425514</b>	2010 <i>JF</i> <sub>116</sub>		1 20.9	224°26	4°8/23.7	17	<b>62469</b>	2000 <i>SD</i> <sub>215</sub>		1 21.0	355°40	0°6/20.7	18
12 13	8 33.96	+3 35.6	2.870	3.571	12.4	21.1	12 13	8 36.28	+19 53.9	1.873	2.653	15.5	19.9
12 23	8 29.68	+2 56.9	2.762	3.563	10.4	20.9	12 23	8 32.59	+20 14.5	1.785	2.652	12.2	19.7
1 2	8 23.69	+2 29.1	2.677	3.555	8.2	20.8	1 2	8 26.23	+20 43.4	1.720	2.652	8.4	19.5
1 12	8 16.39	+2 13.5	2.618	3.547	6.1	20.6	1 12	8 17.80	+21 17.0	1.680	2.652	4.1	19.2
1 22	8 8.35	+2 10.6	2.588	3.538	4.9	20.5	1 22	8 8.22	+21 50.8	1.668	2.652	0.8	19.0
2 1	8 0.27	+2 19.5	2.588	3.529	5.5	20.6	2 1	7 58.68	+22 20.4	1.685	2.651	5.2	19.3
2 11	7 52.87	+2 38.4	2.616	3.519	7.5	20.7	2 11	7 50.41	+22 42.9	1.730	2.652	9.4	19.5
2 21	7 46.75	+3 4.5	2.672	3.509	9.8	20.8	2 21	7 44.31	+22 56.8	1.799	2.652	13.2	19.8
<b>305081</b>	2007 <i>UT</i> <sub>119</sub>		1 20.9	306°15	3°4/22.3	18	<b>401003</b>	2011 <i>QG</i> <sub>40</sub>		1 21.0	129°34	2°4/22.2	18
12 13	8 35.32	+11 50.7	1.525	2.302	18.6	21.1	12 13	8 39.95	+11 50.6	1.843	2.596	16.7	22.2
12 23	8 32.47	+11 33.3	1.431	2.290	15.2	20.8	12 23	8 35.26	+11 58.8	1.764	2.610	13.4	22.0
1 2	8 26.56	+11 30.8	1.355	2.279	11.1	20.5	1 2	8 27.91	+12 21.1	1.706	2.624	9.6	21.8
1 12	8 18.11	+11 43.5	1.303	2.267	6.5	20.2	1 12	8 18.56	+12 55.8	1.673	2.637	5.3	21.6
1 22	8 8.14	+12 9.2	1.277	2.256	3.4	20.0	1 22	8 8.15	+13 39.2	1.669	2.649	2.4	21.4
2 1	7 58.03	+12 44.3	1.277	2.245	6.3	20.2	2 1	7 57.88	+14 26.9	1.694	2.661	5.2	21.6
2 11	7 49.28	+13 23.8	1.304	2.234	11.1	20.4	2 11	7 48.95	+15 14.3	1.748	2.672	9.2	21.9
2 21	7 43.04	+14 3.2	1.353	2.224	15.5	20.6	2 21	7 42.23	+15 58.0	1.827	2.682	12.9	22.1
<b>25341</b>	1999 <i>RT</i> <sub>38</sub>		1 20.9	61°79	3°2/19.8	18	<b>273387</b>	2006 <i>VN</i> <sub>49</sub>		1 21.0	253°19	2°4/20.1	18
12 13	8 41.76	+23 41.9	1.230	2.037	20.5	18.0	12 13	8 40.94	+23 1.2	1.445	2.240	18.6	20.8
12 23	8 38.08	+24 29.9	1.173	2.055	16.1	17.8	12 23	8 37.36	+23 33.6	1.357	2.233	14.8	20.5
1 2	8 30.51	+25 26.6	1.134	2.073	11.0	17.5	1 2	8 30.16	+24 14.9	1.289	2.225	10.2	20.2
1 12	8 19.96	+26 23.5	1.119	2.091	5.7	17.3	1 12	8 19.96	+24 59.2	1.244	2.216	5.2	19.9
1 22	8 7.96	+27 11.6	1.130	2.109	3.4	17.2	1 22	8 7.97	+25 39.0	1.227	2.208	2.6	19.7
2 1	7 56.43	+27 43.8	1.166	2.128	7.8	17.5	2 1	7 55.90	+26 7.6	1.236	2.199	7.2	20.0
2 11	7 47.17	+27 58.0	1.227	2.147	12.7	17.9	2 11	7 45.56	+26 21.7	1.271	2.190	12.3	20.3
2 21	7 41.27	+27 55.8	1.310	2.165	16.9	18.2	2 21	7 38.27	+26 21.4	1.328	2.182	16.9	20.5
<b>419108</b>	2009 <i>SN</i> <sub>183</sub>		1 20.9	85°21	3°2/22.5	18	<b>328544</b>	2009 <i>RO</i> <sub>35</sub>		1 21.0	75°94	5°0/23.9	18
12 13	8 37.17	+10 48.8	2.001	2.750	15.6	21.3	12 13	8 36.14	+4 46.9	1.979	2.708	16.4	21.0
12 23	8 32.77	+10 29.5	1.925	2.767	12.7	21.1	12 23	8 31.92	+4 31.1	1.909	2.732	13.6	20.9
1 2	8 26.03	+10 22.5	1.870	2.783	9.2	20.9	1 2	8 25.42	+4 32.4	1.860	2.755	10.3	20.7
1 12	8 17.56	+10 27.1	1.840	2.799	5.6	20.7	1 12	8 17.26	+4 51.1	1.835	2.778	7.1	20.6
1 22	8 8.23	+10 41.8	1.839	2.815	3.2	20.6	1 22	8 8.30	+5 25.5	1.838	2.802	5.1	20.5
2 1	7 59.10	+11 3.9	1.867	2.830	5.2	20.7	2 1	7 59.56	+6 12.3	1.869	2.824	6.0	20.6
2 11	7 51.16	+11 30.2	1.923	2.846	8.6	21.0	2 11	7 52.01	+7 6.6	1.929	2.847	8.8	20.8
2 21	7 45.19	+11 57.4	2.005	2.861	11.9	21.2	2 21	7 46.37	+8 3.5	2.014	2.870	11.8	21.0
<b>19081</b>	<i>Mravinskij</i>		1 20.9	78°26	8°6/25.7	18	<b>21566</b>	1998 <i>QM</i> <sub>103</sub>		1 21.0	154°55	0°7/20.6	18
12 13	8 35.28	-2 42.6	1.800	2.503	18.7	17.2	12 13	8 35.87	+20 15.7	2.264	3.034	13.5	19.0
12 23	8 31.61	-3 30.3	1.724	2.516	16.1	17.1	12 23	8 31.76	+20 42.8	2.175	3.036	10.6	18.8
1 2	8 25.42	-3 55.5	1.667	2.528	13.3	16.9	1 2	8 25.39	+21 16.7	2.109	3.039	7.2	18.6
1 12	8 17.34	-3 54.8	1.631	2.541	10.5	16.8	1 12	8 17.31	+21 54.2	2.069	3.041	3.5	18.3
1 22	8 8.25	-3 27.5	1.620	2.553	8.8	16.7	1 22	8 8.29	+22 31.1	2.060	3.043	0.9	18.1
2 1	7 59.29	-2 35.8	1.635	2.566	9.1	16.7	2 1	7 59.31	+23 3.7	2.080	3.045	4.6	18.4
2 11	7 51.55	-1 25.8	1.677	2.578	11.1	16.9	2 11	7 51.37	+23 29.5	2.130	3.047	8.2	18.6
2 21	7 45.88	-0 4.7	1.742	2.591	13.7	17.1	2 21	7 45.23	+23 47.1	2.205	3.048	11.4	18.8
<b>105424</b>	2000 <i>QD</i> <sub>173</sub>		1 20.9	190°11	4°4/24.4	18	<b>98863</b>	2001 <i>AR</i> <sub>46</sub>		1 21.0	322°08	18°3/9.4	18
12 13	8 31.94	+1 42.3	3.037	3.730	11.9	20.9	12 13	8 53.17	+57 34.2				