

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>414884</b>	2010 <i>WR</i> <sub>21</sub>		1 30.9 51°07	0°7/30.6	18		<b>104471</b>	2000 <i>GO</i> <sub>16</sub>		1 30.9 212°97	1°5/	1.0	17
12 23	9 17.99	+17 23.0	1.699	2.486	16.5	21.6	12 23	9 18.36	+11 19.9	2.387	3.132	13.5	21.1
1 2	9 14.39	+17 46.1	1.622	2.492	13.0	21.4	1 2	9 13.94	+11 29.1	2.281	3.124	10.9	20.9
1 12	9 8.04	+18 19.9	1.565	2.499	8.9	21.2	1 12	9 7.40	+11 49.6	2.198	3.116	7.7	20.7
1 22	8 59.54	+19 0.1	1.534	2.507	4.3	20.9	1 22	8 59.18	+12 19.7	2.141	3.107	4.2	20.5
2 1	8 49.90	+19 41.0	1.530	2.514	1.0	20.7	2 1	8 49.98	+12 56.4	2.114	3.097	1.5	20.3
2 11	8 40.42	+20 16.9	1.554	2.522	5.6	21.0	2 11	8 40.70	+13 36.0	2.118	3.087	4.2	20.5
2 21	8 32.32	+20 43.9	1.605	2.530	10.0	21.3	2 21	8 32.27	+14 14.7	2.152	3.076	7.8	20.7
3 2	8 26.54	+20 59.8	1.680	2.538	13.8	21.5	3 2	8 25.48	+14 49.3	2.212	3.065	11.1	20.8
<b>140915</b>	2001 <i>VY</i> <sub>61</sub>		1 30.9 168°86	2°1/	1.6	18	<b>241820</b>	2001 <i>SY</i> <sub>87</sub>		1 31.0 117°79	2°8/29.2	18	
12 23	9 15.29	+ 9 31.0	2.758	3.494	12.1	20.4	12 23	9 21.31	+26 33.2	2.516	3.287	12.2	21.1
1 2	9 11.11	+ 9 25.3	2.661	3.496	9.8	20.3	1 2	9 16.03	+26 51.1	2.436	3.298	9.6	21.0
1 12	9 5.21	+ 9 29.4	2.587	3.498	7.0	20.1	1 12	9 8.63	+27 9.6	2.379	3.308	6.6	20.8
1 22	8 57.99	+ 9 42.3	2.540	3.500	4.1	19.9	1 22	8 59.66	+27 24.6	2.351	3.317	3.8	20.6
2 1	8 50.08	+10 2.3	2.522	3.501	2.1	19.8	2 1	8 49.94	+27 32.1	2.353	3.327	3.0	20.6
2 11	8 42.20	+10 26.8	2.536	3.503	3.8	19.9	2 11	8 40.43	+27 29.5	2.385	3.336	5.3	20.7
2 21	8 35.06	+10 52.9	2.579	3.504	6.7	20.1	2 21	8 32.01	+27 16.0	2.446	3.345	8.2	20.9
3 2	8 29.28	+11 18.2	2.650	3.505	9.4	20.3	3 2	8 25.39	+26 52.4	2.533	3.354	10.9	21.1
<b>7726</b>	Olegbykov		1 30.9 218°89	1°9/29.9	18		<b>260719</b>	2005 <i>JC</i> <sub>179</sub>		1 31.0 161°39	1°7/29.7	18	
12 23	9 24.10	+20 58.1	1.836	2.613	15.8	18.4	12 23	9 20.41	+20 30.9	2.488	3.251	12.5	22.2
1 2	9 19.28	+21 22.1	1.739	2.605	12.6	18.1	1 2	9 15.42	+21 14.5	2.400	3.259	9.8	22.0
1 12	9 11.50	+21 53.6	1.664	2.596	8.6	17.9	1 12	9 8.30	+22 4.4	2.337	3.267	6.7	21.8
1 22	9 1.30	+22 27.5	1.615	2.587	4.3	17.6	1 22	8 59.56	+22 56.2	2.302	3.273	3.3	21.6
2 1	8 49.69	+22 57.8	1.594	2.576	2.2	17.4	2 1	8 49.95	+23 44.8	2.298	3.279	1.9	21.5
2 11	8 38.03	+23 19.1	1.603	2.565	6.2	17.6	2 11	8 40.40	+24 25.8	2.325	3.284	4.9	21.7
2 21	8 27.68	+23 28.4	1.640	2.554	10.6	17.9	2 21	8 31.81	+24 56.5	2.382	3.288	8.1	21.9
3 2	8 19.76	+23 25.1	1.701	2.542	14.5	18.1	3 2	8 24.93	+25 15.8	2.465	3.291	11.0	22.1
<b>409805</b>	2006 <i>HH</i> <sub>53</sub>		1 30.9 202°93	3°7/28.6	18		<b>351253</b>	2004 <i>RZ</i> <sub>75</sub>		1 31.0 135°33	3°6/28.9	18	
12 23	9 20.99	+23 38.3	1.834	2.621	15.5	21.1	12 23	9 25.36	+24 58.0	1.906	2.684	15.3	21.7
1 2	9 16.88	+24 40.0	1.747	2.618	12.2	20.8	1 2	9 19.95	+25 45.8	1.832	2.698	12.0	21.5
1 12	9 9.87	+25 49.4	1.682	2.615	8.5	20.6	1 12	9 11.70	+26 37.7	1.782	2.712	8.3	21.3
1 22	9 0.51	+26 59.5	1.643	2.612	4.8	20.4	1 22	9 1.28	+27 27.0	1.758	2.725	4.8	21.1
2 1	8 49.78	+28 2.0	1.633	2.608	4.0	20.3	2 1	8 49.76	+28 6.6	1.763	2.737	3.9	21.1
2 11	8 39.05	+28 49.9	1.652	2.603	7.3	20.5	2 11	8 38.49	+28 31.5	1.798	2.749	6.8	21.3
2 21	8 29.62	+29 19.6	1.698	2.598	11.1	20.7	2 21	8 28.71	+28 39.9	1.861	2.759	10.4	21.5
3 2	8 22.59	+29 30.7	1.767	2.593	14.7	20.9	3 2	8 21.37	+28 32.6	1.948	2.769	13.7	21.7
<b>394356</b>	2007 <i>BB</i> <sub>48</sub>		1 30.9 48°37	2°8/29.7	17		<b>235600</b>	2004 <i>PV</i> <sub>55</sub>		1 31.0 135°94	0°2/31.1	18	
12 23	9 20.33	+20 6.5	1.184	1.998	20.7	21.2	12 23	9 20.81	+13 26.1	1.856	2.620	16.2	21.4
1 2	9 17.36	+20 50.2	1.123	2.010	16.3	20.9	1 2	9 16.34	+14 6.0	1.776	2.632	12.8	21.2
1 12	9 10.64	+21 46.4	1.081	2.023	11.0	20.7	1 12	9 9.25	+15 0.2	1.717	2.645	8.8	21.0
1 22	9 0.95	+22 47.2	1.062	2.036	5.5	20.4	1 22	9 0.12	+16 4.4	1.685	2.656	4.3	20.7
2 1	8 49.75	+23 42.4	1.068	2.050	3.1	20.3	2 1	8 49.89	+17 12.7	1.682	2.667	0.5	20.5
2 11	8 38.96	+24 23.6	1.099	2.064	7.9	20.6	2 11	8 39.79	+18 18.3	1.709	2.677	5.1	20.8
2 21	8 30.26	+24 46.5	1.154	2.079	13.0	21.0	2 21	8 30.96	+19 15.7	1.764	2.687	9.4	21.1
3 2	8 24.84	+24 50.8	1.231	2.094	17.5	21.3	3 2	8 24.31	+20 1.7	1.845	2.696	13.1	21.3
<b>500613</b>	2012 <i>UO</i> <sub>139</sub>		1 30.9 112°08	2°1/29.5	17		<b>244547</b>	2002 <i>UO</i> <sub>78</sub>		1 31.0 57°19	2°6/	1.8	18
12 23	9 19.19	+24 11.2	2.608	3.378	11.8	21.5	12 23	9 15.26	+ 8 57.2	2.147	2.897	14.7	20.7
1 2	9 14.27	+24 28.3	2.526	3.389	9.3	21.4	1 2	9 11.57	+ 8 50.6	2.062	2.905	11.9	20.5
1 12	9 7.38	+24 47.4	2.469	3.399	6.3	21.2	1 12	9 5.77	+ 8 57.0	1.998	2.913	8.6	20.3
1 22	8 59.04	+25 5.1	2.440	3.409	3.4	21.0	1 22	8 58.35	+ 9 15.3	1.961	2.922	5.1	20.1
2 1	8 49.98	+25 17.5	2.441	3.419	2.3	21.0	2 1	8 50.10	+ 9 43.1	1.951	2.930	2.6	20.0
2 11	8 41.10	+25 22.1	2.473	3.429	4.8	21.2	2 11	8 41.94	+10 16.9	1.971	2.939	4.5	20.1
2 21	8 33.20	+25 17.6	2.534	3.439	7.7	21.4	2 21	8 34.77	+10 52.6	2.019	2.948	8.0	20.3
3 2	8 26.96	+25 4.1	2.621	3.448	10.4	21.5	3 2	8 29.34	+11 26.6	2.093	2.957	11.2	20.6
<b>468404</b>	2016 <i>GB</i> <sub>133</sub>		1 30.9 205°13	0°9/30.4	18		<b>88638</b>	2001 <i>RL</i> <sub>46</sub>		1 31.0 171°50	7°2/	4.8	18
12 23	9 16.44	+17 48.4	2.166	2.940	13.8	21.2	12 23	9 15.28	- 2 39.9	1.901	2.607	17.7	20.0
1 2	9 12.66	+18 19.4	2.074	2.939	10.9	21.0	1 2	9 11.99	- 3 12.1	1.809	2.608	15.2	19.8
1 12	9 6.61	+18 59.2	2.006	2.938	7.4	20.8	1 12	9 6.30	- 3 22.6	1.736	2.608	12.3	19.6
1 22	8 58.80	+19 44.1	1.964	2.937	3.6	20.5	1 22	8 58.72	- 3 8.9	1.685	2.608	9.4	19.4
2 1	8 50.00	+20 29.4	1.952	2.936	1.1	20.4	2 1	8 50.05	- 2 31.0	1.660	2.608	7.4	19.3
2 11	8 41.23	+21 10.1	1.969	2.935	4.8	20.6	2 11	8 41.36	- 1 32.1	1.662	2.608	7.7	19.3
2 21	8 33.46	+21 42.6	2.015	2.933	8.6	20.8	2 21	8 33.70	- 0 18.2	1.690	2.608	10.0	19.5
3 2	8 27.52	+22 4.9	2.086	2.932	12.0	21.1	3 2	8 27.96	+ 1 3.2	1.743	2.608	13.0	19.7
<b>194326</b>	2001 <i>UA</i> <sub>122</sub>		1 30.9 50°82	4°6/	2.3	18	<b>17247</b>	Vanverst		1 31.0 170°24	0°9/31.6	18	
12 23	9 18.07	+ 6 35.9	1.411	2.179	20.2	19.8	12 23	9 20.73	+12 20.0	1.920	2.678	15.9	19.5
1 2	9 14.89	+ 6 11.1	1.336	2.186	16.6	19.6	1 2	9 16.27	+12 44.2	1.830	2.682	12.7	19.3
1 12	9 8.63	+ 6 6.7	1.278	2.194	12.3	19.4	1 12	9 9.23	+13 22.5	1.762	2.686	8.9	19.1
1 22	8 59.92	+ 6 22.9	1.243	2.202	7.8	19.1	1 22	9 0.14	+14 11.9	1.720	2.689	4.6	18.8
2 1	8 49.87	+ 6 57.4	1.234	2.210	4.7	19.0	2 1	8 49.91	+15 7.6	1.706	2.691	0.9	18.6
2 11	8 39.98	+ 7 44.7	1.250	2.218	6.6	19.1	2 11	8 39.70	+16 3.6	1.723	2.692	4.9	18.8
2 21	8 31.63	+ 8 37.9	1.292	2.226	11.0	19.4	2 21	8 30.66	+16 54.9	1.768	2.693	9.2	19.1
3 2	8 25.91	+ 9 30.2	1.357	2.235	15.2	19.6	3 2	8 23.73	+17 37.8	1.839	2.693	13.0	19.3
<b>324152</b>	2005 <i>YH</i> <sub>168</sub>		1 30.9 234°68	13°0/20.9	18		<b>393705</b>	2004 <i>TE</i> <sub>163</sub>		1 31.0 151°38	1°8/29.9	18	
12 23	9 23.68	+34 34.6	1.193	2.013	20.2	20.0	12 23</						

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>284989</b>	2010 <i>JP</i> <sub>38</sub>		1 31.0 192°26	2°0/ 1.9 17			<b>157357</b>	2004 <i>TZ</i> <sub>96</sub>		1 31.0 184°61	2°1/29.5 18		
12 23	9 13.51	+ 7 44.9	3.079	3.804	11.1	22.1	12 23	9 18.66	+21 47.6	2.214	2.991	13.5	20.7
1 2	9 9.60	+ 7 59.2	2.974	3.803	9.0	22.0	1 2	9 14.41	+22 23.3	2.124	2.991	10.6	20.5
1 12	9 4.14	+ 8 24.3	2.893	3.800	6.6	21.8	1 12	9 7.82	+23 5.0	2.058	2.991	7.2	20.3
1 22	8 57.51	+ 8 59.1	2.839	3.798	3.9	21.6	1 22	8 59.43	+23 48.0	2.019	2.990	3.7	20.1
2 1	8 50.22	+ 9 41.3	2.816	3.795	2.0	21.5	2 1	8 50.04	+24 27.1	2.009	2.990	2.4	20.0
2 11	8 42.91	+10 28.1	2.824	3.791	3.4	21.6	2 11	8 40.70	+24 57.6	2.030	2.989	5.4	20.2
2 21	8 36.22	+11 16.1	2.863	3.787	6.1	21.8	2 21	8 32.41	+25 17.0	2.078	2.987	9.0	20.4
3 2	8 30.69	+12 2.3	2.929	3.783	8.7	21.9	3 2	8 26.01	+25 24.3	2.152	2.986	12.1	20.6
<b>465702</b>	2009 <i>TN</i> <sub>22</sub>		1 31.0 90°29	3°2/ 2.1 18			<b>219353</b>	2000 <i>RM</i> <sub>29</sub>		1 31.0 97°00	1°8/30.1 18		
12 23	9 19.90	+ 7 29.6	2.138	2.872	15.2	21.2	12 23	9 23.71	+22 30.3	1.990	2.765	14.9	20.2
1 2	9 15.02	+ 7 13.4	2.065	2.897	12.3	21.0	1 2	9 18.39	+22 33.8	1.913	2.777	11.7	20.0
1 12	9 7.98	+ 7 10.7	2.014	2.921	9.0	20.9	1 12	9 10.50	+22 40.9	1.858	2.789	8.0	19.8
1 22	8 59.38	+ 7 20.7	1.990	2.945	5.5	20.7	1 22	9 0.67	+22 47.4	1.829	2.801	4.0	19.6
2 1	8 50.02	+ 7 41.2	1.994	2.969	3.2	20.6	2 1	8 49.92	+22 49.3	1.830	2.813	1.9	19.5
2 11	8 40.90	+ 8 9.0	2.028	2.993	4.8	20.7	2 11	8 39.45	+22 43.3	1.861	2.824	5.4	19.7
2 21	8 32.92	+ 8 40.2	2.090	3.015	8.0	21.0	2 21	8 30.37	+22 28.5	1.921	2.836	9.2	20.0
3 2	8 26.77	+ 9 11.3	2.180	3.038	11.1	21.2	3 2	8 23.50	+22 5.3	2.005	2.847	12.6	20.2
<b>90413</b>	2003 <i>YD</i> <sub>98</sub>		1 31.0 347°17	2°5/ 1.2 18			<b>336750</b>	2010 <i>GM</i> <sub>104</sub>		1 31.0 18°46	0°6/30.7 18		
12 23	9 16.52	+11 31.3	1.478	2.262	18.7	19.3	12 23	9 15.33	+17 37.8	1.833	2.620	15.5	20.8
1 2	9 13.73	+11 15.5	1.392	2.257	15.2	19.0	1 2	9 12.13	+17 54.4	1.753	2.625	12.2	20.5
1 12	9 7.91	+11 15.0	1.326	2.253	10.9	18.8	1 12	9 6.42	+18 20.2	1.696	2.630	8.3	20.3
1 22	8 59.65	+11 28.7	1.282	2.250	6.1	18.5	1 22	8 58.78	+18 51.7	1.663	2.636	4.0	20.1
2 1	8 49.97	+11 53.5	1.265	2.247	2.5	18.2	2 1	8 50.12	+19 24.0	1.658	2.643	0.9	19.8
2 11	8 40.32	+12 24.3	1.274	2.245	5.9	18.4	2 11	8 41.60	+19 52.3	1.682	2.650	5.1	20.2
2 21	8 32.09	+12 56.0	1.308	2.244	10.8	18.7	2 21	8 34.31	+20 13.2	1.733	2.658	9.3	20.4
3 2	8 26.40	+13 24.0	1.366	2.243	15.2	19.0	3 2	8 29.11	+20 24.8	1.808	2.667	12.9	20.7
<b>239931</b>	2000 <i>WL</i> <sub>162</sub>		1 31.0 166°66	4°0/27.9 18			<b>34727</b>	2001 <i>QV</i> <sub>28</sub>		1 31.0 70°91	0°2/31.2 18		
12 23	9 22.93	+25 38.7	2.161	2.936	13.8	21.3	12 23	9 16.00	+15 3.0	2.277	3.041	13.5	18.7
1 2	9 17.93	+26 51.4	2.078	2.943	10.9	21.1	1 2	9 12.01	+15 21.8	2.201	3.058	10.6	18.5
1 12	9 10.32	+28 9.0	2.020	2.948	7.6	20.9	1 12	9 5.98	+15 49.7	2.148	3.075	7.3	18.3
1 22	9 0.67	+29 24.6	1.989	2.953	4.7	20.8	1 22	8 58.45	+16 23.9	2.121	3.093	3.6	18.1
2 1	8 49.87	+30 30.4	1.988	2.956	4.4	20.7	2 1	8 50.16	+17 0.6	2.125	3.110	0.4	17.9
2 11	8 39.10	+31 20.7	2.018	2.959	7.0	20.9	2 11	8 42.05	+17 35.7	2.158	3.127	4.1	18.2
2 21	8 29.53	+31 52.5	2.076	2.961	10.2	21.1	2 21	8 34.94	+18 6.0	2.220	3.144	7.7	18.5
3 2	8 22.07	+32 6.1	2.158	2.962	13.1	21.3	3 2	8 29.52	+18 29.4	2.308	3.161	10.7	18.7
<b>132273</b>	2002 <i>EU</i> <sub>141</sub>		1 31.0 344°68	2°4/29.9 18			<b>468186</b>	2015 <i>AV</i> <sub>168</sub>		1 31.0 72°21	1°7/29.7 18		
12 23	9 15.87	+19 48.9	1.269	2.085	19.5	20.1	12 23	9 15.43	+18 10.7	2.072	2.852	14.2	21.4
1 2	9 13.92	+20 22.2	1.189	2.077	15.4	19.8	1 2	9 12.01	+19 13.5	1.989	2.858	11.1	21.2
1 12	9 8.45	+21 8.4	1.129	2.071	10.6	19.5	1 12	9 6.26	+20 26.8	1.930	2.864	7.5	21.0
1 22	9 0.05	+22 1.1	1.091	2.065	5.3	19.2	1 22	8 58.70	+21 45.5	1.897	2.870	3.7	20.7
2 1	8 49.93	+22 51.8	1.078	2.061	2.7	19.0	2 1	8 50.13	+23 2.8	1.894	2.876	2.0	20.6
2 11	8 39.84	+23 31.9	1.090	2.057	7.6	19.3	2 11	8 41.61	+24 12.3	1.920	2.882	5.4	20.9
2 21	8 31.49	+23 56.2	1.126	2.054	12.9	19.6	2 21	8 34.13	+25 9.4	1.975	2.888	9.1	21.1
3 2	8 26.18	+24 3.0	1.183	2.052	17.6	19.8	3 2	8 28.53	+25 51.6	2.055	2.894	12.4	21.3
<b>104040</b>	2000 <i>EK</i> <sub>6</sub>		1 31.0 31°95	3°9/28.6 18			<b>468506</b>	2005 <i>MA</i> <sub>30</sub>		1 31.0 203°60	2°2/ 1.9 17		
12 23	9 19.40	+27 8.9	2.043	2.831	14.1	19.8	12 23	9 16.09	+ 8 30.4	3.418	4.135	10.3	22.7
1 2	9 15.21	+27 44.1	1.963	2.834	11.1	19.6	1 2	9 11.42	+ 8 17.2	3.306	4.129	8.4	22.6
1 12	9 8.45	+28 21.2	1.906	2.837	7.8	19.4	1 12	9 5.29	+ 8 11.8	3.219	4.122	6.1	22.4
1 22	8 59.73	+28 54.3	1.875	2.840	4.8	19.2	1 22	8 58.06	+ 8 13.9	3.160	4.115	3.8	22.2
2 1	8 49.99	+29 17.7	1.873	2.844	4.1	19.2	2 1	8 50.21	+ 8 22.2	3.132	4.108	2.2	22.1
2 11	8 40.41	+29 27.4	1.899	2.847	6.7	19.4	2 11	8 42.35	+ 8 35.2	3.136	4.100	3.4	22.2
2 21	8 32.11	+29 21.8	1.952	2.851	10.0	19.6	2 21	8 35.06	+ 8 50.8	3.171	4.091	5.8	22.3
3 2	8 25.96	+29 2.0	2.030	2.855	13.1	19.8	3 2	8 28.85	+ 9 7.1	3.234	4.082	8.1	22.5
<b>337352</b>	2001 <i>OR</i> <sub>41</sub>		1 31.0 148°14	3°9/27.8 18			<b>70544</b>	1999 <i>TW</i> <sub>126</sub>		1 31.0 346°17	0°7/31.3 18		
12 23	9 20.05	+30 21.0	2.862	3.632	10.9	21.7	12 23	9 18.23	+15 15.2	1.488	2.278	18.3	18.8
1 2	9 14.94	+31 3.8	2.783	3.641	8.6	21.5	1 2	9 15.11	+15 12.2	1.403	2.275	14.6	18.5
1 12	9 7.86	+31 45.9	2.728	3.650	6.2	21.4	1 12	9 8.88	+15 21.7	1.338	2.272	10.2	18.3
1 22	8 59.32	+32 22.4	2.702	3.658	4.3	21.3	1 22	9 0.14	+15 40.9	1.297	2.269	5.1	18.0
2 1	8 50.04	+32 49.2	2.707	3.665	4.1	21.3	2 1	8 49.98	+16 5.4	1.282	2.267	0.8	17.6
2 11	8 40.89	+33 3.0	2.741	3.673	5.9	21.4	2 11	8 39.88	+16 29.8	1.294	2.265	5.8	18.0
2 21	8 32.69	+33 3.0	2.804	3.679	8.2	21.5	2 21	8 31.26	+16 49.7	1.332	2.264	10.9	18.3
3 2	8 26.12	+32 50.0	2.893	3.686	10.5	21.7	3 2	8 25.27	+17 2.1	1.392	2.263	15.3	18.5
<b>225377</b>	1999 <i>RW</i> <sub>216</sub>		1 31.0 4°64	1°6/ 1.0 18			<b>359651</b>	2011 <i>SU</i> <sub>4</sub>		1 31.0 149°25	3°4/ 2.1 18		
12 23	9 15.17	+11 16.7	1.875	2.642	15.9	20.4	12 23	9 20.14	+ 6 49.9	1.859	2.601	16.9	22.0
1 2	9 11.97	+11 27.6	1.786	2.642	12.8	20.2	1 2	9 15.80	+ 6 47.0	1.772	2.609	13.8	21.8
1 12	9 6.32	+11 52.9	1.718	2.642	9.0	20.0	1 12	9 8.90	+ 7 1.0	1.707	2.616	10.1	21.6
1 22	8 58.74	+12 30.5	1.675	2.643	4.9	19.7	1 22	9 0.00	+ 7 31.3	1.665	2.623	6.2	21.4
2 1	8 50.09	+13 16.4	1.660	2.643	1.6	19.5	2 1	8 50.01	+ 8 14.8	1.652	2.630	3.4	21.2
2 11	8 41.48	+14 5.5	1.673	2.644	4.8	19.7	2 11	8 40.08	+ 9 6.8	1.668	2.635	5.4	21.4
2 21	8 33.96	+14 52.7	1.715	2.645	9.0	20.0	2 21	8 31.35	+10 1.5	1.713	2.641	9.2	21.6
3 2	8 28.44	+15 33.8	1.781	2.646	12.8	20.2	3 2	8 24.73	+10 54.0	1.782	2.645	12.9	21.8
<b>328360</b>	2008 <i>OL</i> <sub>4</sub>		1 31.0 174°61	5°0/ 4.3 18			<b>365512</b>	2010 <i>RB</i> <sub>106</sub>		1 31.0 247°20	0°3/31.2 16	</	

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>235570</b>	2004 <i>HW</i> <sub>55</sub>		1 31.0 306°33	5°7/25.9	18		<b>428407</b>	2007 <i>TF</i> <sub>57</sub>		1 31.0 229°56	4°3/3.3	17	
12 23	9 16.85	+31 54.0	2.346	3.134	12.5	20.2	12 23	9 14.19	+2 40.8	2.515	3.228	13.6	21.3
1 2	9 13.19	+33 18.3	2.264	3.131	10.0	20.0	1 2	9 10.54	+2 25.2	2.412	3.224	11.4	21.2
1 12	9 7.13	+34 43.6	2.207	3.128	7.6	19.8	1 12	9 5.02	+2 24.1	2.330	3.219	8.8	21.0
1 22	8 59.16	+36 2.4	2.178	3.125	5.9	19.7	1 22	8 58.05	+2 37.8	2.273	3.214	6.1	20.8
2 1	8 50.10	+37 7.6	2.177	3.122	6.1	19.7	2 1	8 50.26	+3 5.4	2.245	3.209	4.4	20.7
2 11	8 41.01	+37 53.9	2.204	3.119	8.1	19.9	2 11	8 42.43	+3 44.3	2.246	3.203	5.1	20.7
2 21	8 32.96	+38 19.1	2.258	3.116	10.6	20.0	2 21	8 35.35	+4 30.6	2.276	3.198	7.6	20.9
3 2	8 26.84	+38 24.1	2.335	3.114	13.1	20.2	3 2	8 29.70	+5 20.2	2.333	3.192	10.4	21.0
<b>301074</b>	2008 <i>UL</i> <sub>208</sub>		1 31.0 338°44	4°7/2.2	18		<b>383732</b>	2007 <i>UH</i> <sub>136</sub>		1 31.0 62°30	4°2/3.5	18	
12 23	9 16.84	+7 18.7	1.369	2.145	20.3	20.8	12 23	9 13.86	+2 7.1	2.191	2.913	15.2	20.8
1 2	9 14.23	+6 46.6	1.284	2.140	16.8	20.6	1 2	9 10.39	+2 12.1	2.113	2.931	12.6	20.6
1 12	9 8.43	+6 33.7	1.217	2.136	12.5	20.3	1 12	9 4.92	+2 35.1	2.057	2.950	9.6	20.4
1 22	8 59.99	+6 41.2	1.172	2.132	7.9	20.0	1 22	8 57.98	+3 15.6	2.024	2.969	6.5	20.3
2 1	8 50.00	+7 7.5	1.152	2.128	4.8	19.9	2 1	8 50.27	+4 11.0	2.020	2.987	4.3	20.2
2 11	8 39.99	+7 47.8	1.157	2.125	6.9	20.0	2 11	8 42.71	+5 16.9	2.045	3.006	5.1	20.3
2 21	8 31.45	+8 35.4	1.187	2.123	11.5	20.2	2 21	8 36.09	+6 27.6	2.098	3.025	7.8	20.5
3 2	8 25.61	+9 23.6	1.239	2.121	16.1	20.5	3 2	8 31.12	+7 37.9	2.178	3.044	10.7	20.7
<b>334965</b>	2004 <i>DY</i> <sub>49</sub>		1 31.0 306°88	1°3/31.9	17		<b>469220</b>	2016 <i>HZ</i> <sub>5</sub>		1 31.0 163°29	6°9/23.2	17	
12 23	9 12.89	+10 58.9	2.088	2.851	14.6	20.9	12 23	9 24.07	+45 59.2	3.376	4.118	9.9	21.9
1 2	9 10.15	+11 21.6	1.974	2.829	11.8	20.7	1 2	9 18.29	+47 9.0	3.311	4.124	8.6	21.8
1 12	9 5.13	+11 59.1	1.882	2.806	8.4	20.4	1 12	9 10.28	+48 11.0	3.271	4.130	7.5	21.7
1 22	8 58.25	+12 49.7	1.816	2.784	4.5	20.1	1 22	9 0.58	+48 59.4	3.257	4.135	7.0	21.7
2 1	8 50.19	+13 49.6	1.778	2.762	1.3	19.8	2 1	8 49.99	+49 29.6	3.272	4.140	7.3	21.7
2 11	8 41.94	+14 53.6	1.769	2.740	4.6	20.0	2 11	8 39.52	+49 39.1	3.314	4.144	8.3	21.8
2 21	8 34.50	+15 56.1	1.789	2.718	8.8	20.2	2 21	8 30.12	+49 28.3	3.380	4.147	9.6	21.9
3 2	8 28.81	+16 52.3	1.833	2.697	12.6	20.4	3 2	8 22.54	+48 59.5	3.469	4.150	10.9	22.0
<b>372387</b>	2009 <i>QK</i> <sub>14</sub>		1 31.0 223°67	1°2/31.9	17		<b>166691</b>	2002 <i>TM</i> <sub>144</sub>		1 31.0 124°97	2°6/28.6	18	
12 23	9 18.38	+11 55.6	2.382	3.129	13.5	23.0	12 23	9 17.35	+23 4.8	2.738	3.508	11.3	20.8
1 2	9 14.03	+12 7.1	2.273	3.118	10.8	22.8	1 2	9 12.88	+24 10.5	2.661	3.523	8.8	20.7
1 12	9 7.54	+12 29.8	2.187	3.106	7.7	22.6	1 12	9 6.52	+25 20.8	2.609	3.539	6.0	20.5
1 22	8 59.33	+13 1.8	2.127	3.094	4.1	22.4	1 22	8 58.74	+26 30.7	2.586	3.553	3.4	20.3
2 1	8 50.10	+13 40.1	2.098	3.081	1.2	22.1	2 1	8 50.20	+27 35.1	2.594	3.568	2.8	20.3
2 11	8 40.77	+14 20.7	2.099	3.068	4.2	22.3	2 11	8 41.73	+28 29.5	2.634	3.582	5.1	20.5
2 21	8 32.26	+14 59.7	2.129	3.054	7.9	22.5	2 21	8 34.12	+29 11.3	2.702	3.595	7.8	20.7
3 2	8 25.39	+15 34.2	2.187	3.039	11.3	22.7	3 2	8 28.03	+29 39.5	2.797	3.608	10.3	20.9
<b>322358</b>	2011 <i>KF</i> <sub>16</sub>		1 31.0 134°25	1°9/1.9	18		<b>174843</b>	2003 <i>YD</i> <sub>146</sub>		1 31.0 122°44	5°7/27.3	18	
12 23	9 14.35	+6 33.1	2.594	3.323	12.9	20.5	12 23	9 24.13	+30 30.2	1.976	2.759	14.6	20.2
1 2	9 10.55	+7 17.9	2.500	3.331	10.5	20.4	1 2	9 19.10	+31 41.3	1.908	2.774	11.7	20.0
1 12	9 4.96	+8 17.8	2.429	3.339	7.5	20.2	1 12	9 11.22	+32 52.7	1.864	2.787	8.5	19.9
1 22	8 57.99	+9 30.7	2.386	3.346	4.4	20.0	1 22	9 1.14	+33 56.1	1.847	2.801	6.1	19.7
2 1	8 50.25	+10 52.7	2.373	3.353	1.9	19.8	2 1	8 49.94	+34 43.9	1.858	2.814	6.0	19.8
2 11	8 42.53	+12 18.5	2.392	3.360	3.8	20.0	2 11	8 38.99	+35 11.0	1.898	2.826	8.3	19.9
2 21	8 35.57	+13 43.0	2.441	3.367	6.9	20.2	2 21	8 29.52	+35 16.2	1.964	2.838	11.2	20.1
3 2	8 30.02	+15 1.5	2.519	3.374	9.9	20.4	3 2	8 22.50	+35 1.9	2.053	2.849	14.0	20.3
<b>430497</b>	2001 <i>UD</i> <sub>31</sub>		1 31.0 80°43	2°7/28.9	18		<b>69341</b>	1993 <i>TD</i> <sub>18</sub>		1 31.0 72°75	4°4/28.2	18	
12 23	9 18.01	+24 12.2	2.344	3.123	12.8	21.3	12 23	9 19.88	+28 0.4	2.048	2.836	14.0	19.7
1 2	9 13.63	+24 53.7	2.274	3.141	10.0	21.1	1 2	9 15.58	+28 48.6	1.975	2.845	11.1	19.5
1 12	9 7.11	+25 38.5	2.227	3.159	6.8	20.9	1 12	9 8.71	+29 38.3	1.926	2.855	7.9	19.4
1 22	8 59.02	+26 21.9	2.208	3.176	3.8	20.8	1 22	8 59.89	+30 23.1	1.902	2.865	5.0	19.2
2 1	8 50.15	+26 58.7	2.218	3.194	3.0	20.8	2 1	8 50.08	+30 56.9	1.908	2.874	4.6	19.2
2 11	8 41.48	+27 25.3	2.259	3.212	5.5	20.9	2 11	8 40.48	+31 15.1	1.941	2.884	7.1	19.4
2 21	8 33.90	+27 39.5	2.328	3.229	8.5	21.2	2 21	8 32.18	+31 16.4	2.002	2.894	10.2	19.6
3 2	8 28.11	+27 41.5	2.422	3.246	11.3	21.4	3 2	8 26.05	+31 1.9	2.087	2.904	13.1	19.8
<b>19347</b>	1997 <i>CH</i> <sub>9</sub>		1 31.0 79°59	1°4/30.2	18		<b>150477</b>	2000 <i>OQ</i> <sub>21</sub>		1 31.0 118°29	1°3/1.2	18	
12 23	9 20.81	+20 19.5	1.951	2.728	15.0	18.8	12 23	9 17.83	+9 6.1	2.377	3.114	13.7	20.5
1 2	9 16.14	+20 38.4	1.880	2.746	11.7	18.6	1 2	9 13.36	+9 51.1	2.296	3.134	11.0	20.4
1 12	9 8.98	+21 3.6	1.832	2.764	8.0	18.4	1 12	9 6.89	+10 50.3	2.238	3.154	7.7	20.2
1 22	8 59.96	+21 30.6	1.810	2.782	3.9	18.2	1 22	8 58.93	+12 0.7	2.207	3.173	4.1	20.0
2 1	8 50.06	+21 54.8	1.817	2.800	1.6	18.0	2 1	8 50.19	+13 17.6	2.207	3.191	1.3	19.8
2 11	8 40.43	+22 11.9	1.853	2.818	5.3	18.3	2 11	8 41.56	+14 35.6	2.239	3.208	4.0	20.0
2 21	8 32.13	+22 19.9	1.918	2.835	9.1	18.6	2 21	8 33.86	+15 49.4	2.301	3.225	7.4	20.3
3 2	8 25.98	+22 18.1	2.007	2.852	12.4	18.8	3 2	8 27.78	+16 55.3	2.391	3.241	10.5	20.5
<b>140099</b>	2001 <i>SE</i> <sub>131</sub>		1 31.0 16°71	2°3/1.3	18		<b>391030</b>	2005 <i>TY</i> <sub>1</sub>		1 31.0 240°27	2°6/29.8	18	
12 23	9 14.65	+11 4.7	1.409	2.199	19.2	19.5	12 23	9 23.61	+21 47.7	1.595	2.384	17.3	21.3
1 2	9 12.27	+10 58.4	1.335	2.204	15.5	19.3	1 2	9 19.46	+22 16.8	1.501	2.374	13.8	21.1
1 12	9 6.89	+11 9.4	1.280	2.210	11.0	19.0	1 12	9 12.00	+22 54.3	1.429	2.364	9.5	20.8
1 22	8 59.14	+11 35.9	1.248	2.216	6.1	18.8	1 22	9 1.76	+23 34.2	1.381	2.353	4.9	20.5
2 1	8 50.13	+12 13.7	1.241	2.224	2.3	18.6	2 1	8 49.87	+24 9.2	1.361	2.342	2.9	20.3
2 11	8 41.29	+12 56.9	1.261	2.233	5.8	18.8	2 11	8 37.91	+24 32.7	1.368	2.330	7.1	20.5
2 21	8 33.95	+13 39.3	1.306	2.243	10.6	19.1	2 21	8 27.45	+24 41.2	1.402	2.318	11.9	20.8
3 2	8 29.15	+14 15.9	1.373	2.253	14.9	19.4	3 2	8 19.75	+24 34.4	1.459	2.306	16.1	21.0
<b>242456</b>	2004 <i>RX</i> <sub>62</sub>		1 31.0 91°78	0°5/31.4	18		<b>160306</b>	2003 <i>GE</i> <sub>5</sub>		1 31.0 206°38	1°1/31.7	18	
12 23	9 19.35	+14 13.7	2.141	2.900	14.4	21.4	12 23	9 20.96					

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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>154656</b>	2004 <i>FE</i> <sub>3</sub>		1 31.0 133°16'	4.7/27.7	18		<b>345993</b>	2007 <i>TO</i> <sub>176</sub>		1 31.0 89°83'	4.0/27.9	18	
12 23	9 33.52	+33 14.0	2.800	3.545	11.7	21.9	12 23	9 17.83	+27 26.7	2.341	3.124	12.6	20.6
1 2	9 25.36	+34 3.7	2.731	3.571	9.4	21.8	1 2	9 13.67	+28 26.3	2.267	3.135	9.9	20.4
1 12	9 14.89	+34 49.9	2.688	3.596	7.0	21.6	1 12	9 7.28	+29 28.1	2.218	3.147	7.0	20.2
1 22	9 2.73	+35 26.6	2.675	3.620	5.1	21.6	1 22	8 59.18	+30 26.0	2.197	3.159	4.5	20.1
2 1	8 49.81	+35 48.6	2.694	3.641	4.9	21.6	2 1	8 50.21	+31 14.2	2.205	3.170	4.3	20.1
2 11	8 37.22	+35 53.2	2.745	3.662	6.6	21.7	2 11	8 41.37	+31 48.4	2.242	3.181	6.5	20.3
2 21	8 25.96	+35 40.7	2.826	3.681	8.8	21.9	2 21	8 33.62	+32 6.5	2.307	3.193	9.3	20.5
3 2	8 16.78	+35 13.4	2.934	3.699	11.0	22.1	3 2	8 27.71	+32 9.0	2.396	3.204	11.9	20.6
<b>3106</b>	Morabito		1 31.0 50°97'	1°2/30.1	18		<b>347800</b>	2002 <i>JS</i> <sub>17</sub>		1 31.0 255°18'	1°2/30.3	18	
12 23	9 15.21	+15 57.1	1.959	2.737	14.9	16.0	12 23	9 20.48	+18 36.9	1.846	2.624	15.7	21.6
1 2	9 11.79	+17 5.2	1.892	2.760	11.6	15.8	1 2	9 16.54	+19 3.2	1.741	2.608	12.5	21.3
1 12	9 6.06	+18 25.3	1.849	2.782	7.8	15.6	1 12	9 9.76	+19 39.7	1.659	2.592	8.6	21.1
1 22	8 58.59	+19 51.8	1.832	2.806	3.7	15.4	1 22	9 0.63	+20 22.1	1.602	2.575	4.2	20.8
2 1	8 50.24	+21 17.5	1.845	2.829	1.4	15.3	2 1	8 50.04	+21 4.6	1.574	2.558	1.5	20.5
2 11	8 42.07	+22 35.6	1.888	2.852	5.2	15.6	2 11	8 39.27	+21 41.2	1.575	2.540	5.8	20.8
2 21	8 35.06	+23 41.0	1.959	2.876	8.9	15.9	2 21	8 29.64	+22 7.8	1.603	2.523	10.4	21.0
3 2	8 29.98	+24 31.4	2.055	2.900	12.2	16.1	3 2	8 22.28	+22 22.2	1.656	2.504	14.5	21.2
<b>142992</b>	2002 <i>VZ</i> <sub>93</sub>		1 31.0 9°11'	0°5/31.3	18		<b>234392</b>	2001 <i>QH</i> <sub>240</sub>		1 31.0 319°74'	2°2/29.6	18	
12 23	9 18.43	+15 25.5	1.656	2.439	17.1	20.1	12 23	9 17.89	+23 3.9	2.181	2.963	13.5	19.9
1 2	9 14.91	+15 27.9	1.572	2.439	13.6	19.9	1 2	9 13.88	+23 25.5	2.090	2.958	10.6	19.7
1 12	9 8.55	+15 41.7	1.508	2.440	9.4	19.7	1 12	9 7.53	+23 51.3	2.021	2.954	7.3	19.5
1 22	8 59.94	+16 4.2	1.469	2.440	4.7	19.4	1 22	8 59.36	+24 17.0	1.979	2.950	3.8	19.3
2 1	8 50.09	+16 30.8	1.456	2.441	0.6	19.1	2 1	8 50.20	+24 38.2	1.967	2.946	2.4	19.2
2 11	8 40.33	+16 56.6	1.472	2.443	5.4	19.4	2 11	8 41.10	+24 50.8	1.983	2.943	5.5	19.4
2 21	8 31.93	+17 17.6	1.515	2.444	10.1	19.7	2 21	8 33.07	+24 52.8	2.028	2.939	9.0	19.6
3 2	8 25.90	+17 31.1	1.581	2.446	14.1	19.9	3 2	8 26.95	+24 43.8	2.097	2.936	12.2	19.8
<b>485054</b>	2010 <i>CQ</i> <sub>106</sub>		1 31.0 291°63'	2°4/30.1	18		<b>336003</b>	2007 <i>TV</i> <sub>374</sub>		1 31.0 315°71'	2°5/1.9	18	
12 23	9 22.56	+22 6.0	1.420	2.220	18.6	21.4	12 23	9 13.07	+ 7 2.7	2.111	2.859	14.9	20.6
1 2	9 19.07	+22 16.8	1.326	2.205	14.8	21.2	1 2	9 10.11	+ 7 26.4	2.012	2.854	12.2	20.4
1 12	9 11.99	+22 34.9	1.253	2.190	10.3	20.9	1 12	9 4.99	+ 8 7.2	1.935	2.848	8.9	20.2
1 22	9 1.86	+22 54.7	1.202	2.175	5.2	20.5	1 22	8 58.16	+ 9 3.7	1.882	2.843	5.2	20.0
2 1	8 49.88	+23 9.3	1.178	2.160	2.7	20.3	2 1	8 50.32	+10 12.3	1.858	2.838	2.5	19.8
2 11	8 37.79	+23 12.5	1.181	2.146	7.4	20.6	2 11	8 42.43	+11 27.6	1.864	2.833	4.6	19.9
2 21	8 27.35	+23 1.7	1.208	2.132	12.7	20.8	2 21	8 35.43	+12 43.6	1.898	2.829	8.2	20.1
3 2	8 19.97	+22 37.2	1.258	2.117	17.4	21.0	3 2	8 30.12	+13 54.8	1.958	2.824	11.8	20.3
<b>238400</b>	2004 <i>EJ</i> <sub>15</sub>		1 31.0 242°71'	6°2/25.5	17		<b>7246</b>	1991 <i>RP</i> <sub>25</sub>		1 31.0 33°22'	6°8/26.7	18	
12 23	9 20.63	+37 2.5	2.655	3.428	11.6	20.6	12 23	9 19.65	+33 32.6	1.835	2.632	15.1	17.4
1 2	9 15.99	+38 6.8	2.567	3.418	9.5	20.4	1 2	9 15.88	+34 41.0	1.774	2.644	12.1	17.2
1 12	9 8.96	+39 7.9	2.503	3.407	7.6	20.3	1 12	9 9.16	+35 46.9	1.734	2.655	9.2	17.0
1 22	9 0.06	+39 59.3	2.466	3.397	6.3	20.2	1 22	9 0.20	+36 41.8	1.720	2.668	7.1	16.9
2 1	8 50.09	+40 35.0	2.458	3.386	6.6	20.2	2 1	8 50.12	+37 17.9	1.733	2.680	7.2	17.0
2 11	8 40.14	+40 51.0	2.479	3.375	8.2	20.3	2 11	8 40.34	+37 30.9	1.773	2.694	9.3	17.1
2 21	8 31.23	+40 46.6	2.525	3.364	10.3	20.4	2 21	8 32.14	+37 20.3	1.837	2.707	12.1	17.3
3 2	8 24.23	+40 23.4	2.595	3.352	12.4	20.5	3 2	8 26.46	+36 49.2	1.923	2.721	14.8	17.5
<b>376628</b>	2013 <i>PZ</i> <sub>63</sub>		1 31.0 198°68'	1°4/1.2	17		<b>496684</b>	2016 <i>CY</i> <sub>248</sub>		1 31.0 22°17'	6°0/4.0	18	
12 23	9 18.05	+10 48.6	2.584	3.322	12.7	23.1	12 23	9 13.22	+ 0 37.3	1.491	2.239	20.1	21.0
1 2	9 13.53	+11 1.9	2.479	3.318	10.3	22.9	1 2	9 11.01	+ 0 33.9	1.411	2.244	16.9	20.8
1 12	9 7.06	+11 26.2	2.397	3.313	7.3	22.7	1 12	9 6.00	+ 0 57.4	1.349	2.249	13.1	20.6
1 22	8 59.07	+11 59.7	2.343	3.308	4.0	22.5	1 22	8 58.76	+ 1 48.9	1.308	2.254	9.1	20.4
2 1	8 50.20	+12 39.6	2.319	3.302	1.5	22.3	2 1	8 50.26	+ 3 5.7	1.293	2.260	6.2	20.2
2 11	8 41.29	+13 22.3	2.326	3.295	3.9	22.5	2 11	8 41.82	+ 4 40.7	1.303	2.267	7.0	20.3
2 21	8 33.16	+14 4.2	2.363	3.287	7.3	22.7	2 21	8 34.69	+ 6 24.2	1.339	2.274	10.6	20.5
3 2	8 26.52	+14 42.1	2.428	3.279	10.3	22.9	3 2	8 29.90	+ 8 6.4	1.400	2.282	14.5	20.7
<b>71983</b>	2000 <i>WG</i> <sub>157</sub>		1 31.0 352°43'	5°0/28.5	18		<b>198313</b>	2004 <i>TE</i> <sub>336</sub>		1 31.0 100°69'	0°5/31.4	18	
12 23	9 19.96	+26 12.5	1.443	2.252	17.9	18.8	12 23	9 17.22	+14 18.8	2.082	2.848	14.6	21.4
1 2	9 16.87	+27 5.0	1.367	2.249	14.2	18.5	1 2	9 13.29	+14 33.5	1.997	2.855	11.6	21.2
1 12	9 10.31	+28 3.0	1.311	2.247	10.0	18.3	1 12	9 7.08	+14 59.0	1.935	2.862	8.0	21.0
1 22	9 0.94	+28 58.2	1.279	2.246	6.1	18.1	1 22	8 59.13	+15 32.3	1.898	2.869	4.0	20.7
2 1	8 50.00	+29 41.0	1.273	2.245	5.4	18.0	2 1	8 50.24	+16 9.5	1.890	2.875	0.6	20.5
2 11	8 39.20	+30 4.2	1.293	2.244	8.8	18.2	2 11	8 41.45	+16 46.2	1.912	2.882	4.5	20.8
2 21	8 30.15	+30 5.4	1.337	2.244	13.1	18.5	2 21	8 33.73	+17 18.5	1.963	2.888	8.4	21.0
3 2	8 24.08	+29 46.0	1.403	2.244	17.0	18.7	3 2	8 27.87	+17 44.0	2.039	2.895	11.8	21.3
<b>205656</b>	2001 <i>XT</i> <sub>143</sub>		1 31.0 109°10'	0°3/31.3	18		<b>267762</b>	2003 <i>PK</i> <sub>5</sub>		1 31.0 218°30'	0°3/30.8	17	
12 23	9 15.46	+14 48.5	2.628	3.385	12.1	21.0	12 23	9 16.96	+15 55.3	2.449	3.209	12.8	21.6
1 2	9 11.36	+15 8.6	2.544	3.397	9.5	20.8	1 2	9 12.89	+16 26.0	2.346	3.202	10.1	21.4
1 12	9 5.46	+15 36.9	2.484	3.409	6.5	20.6	1 12	9 6.75	+17 6.1	2.267	3.194	6.9	21.2
1 22	8 58.23	+16 10.9	2.451	3.421	3.2	20.4	1 22	8 58.98	+17 52.5	2.215	3.186	3.4	21.0
2 1	8 50.31	+16 47.4	2.448	3.433	0.4	20.2	2 1	8 50.25	+18 41.1	2.193	3.178	0.5	20.7
2 11	8 42.48	+17 22.8	2.476	3.445	3.7	20.5	2 11	8 41.47	+19 27.4	2.202	3.168	4.3	21.0
2 21	8 35.49	+17 54.2	2.534	3.456	6.9	20.7	2 21	8 33.51	+20 7.7	2.240	3.159	7.9	21.2
3 2	8 29.96	+18 19.5	2.619	3.467	9.7	20.9	3 2	8 27.15	+20 39.5	2.305	3.149	11.1	21.4
<b>169084</b>	2001 <i>HF</i> <sub>49</sub>		1 31.0 339°89'	3°3/1.2	18		<b>498319</b>	2007 <i>VN</i> <sub>157</sub>		1 31.0 122°72'	3°8/27.9	17	
12 23	9 13.85	+12 33.4	1.208	2.015	20.8	19.1	12 23	9					

EPHEMERIDES

1 31.0

1 31.1

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>131145</b>	2001 <i>BZ</i> <sub>72</sub>		1 31.0 281°14	3°0/	1.9 18		<b>472426</b>	2015 <i>BN</i> <sub>277</sub>		1 31.1 196°40	2°1/29.3	17	
12 23	9 16.01	+ 8 23.7	2.119	2.866	14.9	19.7	12 23	9 18.06	+24 24.3	2.985	3.751	10.6	22.1
1 2	9 12.45	+ 8 9.1	2.012	2.853	12.2	19.5	1 2	9 13.33	+24 49.8	2.888	3.748	8.3	21.9
1 12	9 6.63	+ 8 7.5	1.927	2.839	9.0	19.3	1 12	9 6.81	+25 17.5	2.816	3.745	5.7	21.8
1 22	8 58.99	+ 8 18.6	1.867	2.826	5.5	19.1	1 22	8 58.93	+25 44.1	2.773	3.741	3.1	21.6
2 1	8 50.25	+ 8 40.9	1.835	2.813	3.1	18.9	2 1	8 50.31	+26 6.0	2.761	3.737	2.3	21.5
2 11	8 41.42	+ 9 11.0	1.832	2.799	4.9	19.0	2 11	8 41.73	+26 20.2	2.779	3.733	4.5	21.7
2 21	8 33.47	+ 9 45.1	1.857	2.786	8.6	19.2	2 21	8 33.93	+26 25.4	2.828	3.728	7.2	21.8
3 2	8 27.28	+10 19.2	1.908	2.773	12.1	19.3	3 2	8 27.55	+26 21.1	2.903	3.723	9.7	22.0
<b>349524</b>	2008 <i>RG</i> <sub>74</sub>		1 31.0 139°40	1°7/30.1	18		<b>274567</b>	2008 <i>SX</i> <sub>291</sub>		1 31.1 225°04	1°3/31.9	17	
12 23	9 25.21	+19 58.8	1.893	2.663	15.7	21.9	12 23	9 18.40	+12 50.6	2.458	3.206	13.1	21.3
1 2	9 19.80	+20 31.7	1.815	2.677	12.3	21.7	1 2	9 13.96	+12 48.1	2.351	3.197	10.5	21.1
1 12	9 11.65	+21 12.4	1.760	2.691	8.4	21.5	1 12	9 7.46	+12 54.8	2.267	3.187	7.4	20.9
1 22	9 1.38	+21 55.6	1.732	2.704	4.1	21.2	1 22	8 59.33	+13 9.1	2.210	3.177	4.0	20.7
2 1	8 50.02	+22 35.2	1.733	2.716	1.9	21.1	2 1	8 50.26	+13 28.5	2.183	3.167	1.3	20.5
2 11	8 38.88	+23 6.1	1.765	2.727	5.7	21.4	2 11	8 41.15	+13 50.0	2.187	3.156	4.1	20.7
2 21	8 29.16	+23 25.2	1.824	2.737	9.7	21.6	2 21	8 32.86	+14 10.8	2.220	3.144	7.6	20.9
3 2	8 21.77	+23 32.1	1.909	2.747	13.3	21.9	3 2	8 26.16	+14 28.4	2.280	3.133	10.9	21.0
<b>253163</b>	2002 <i>VQ</i> <sub>146</sub>		1 31.0 14°56	3°9/	1.9 18		<b>73800</b>	1995 <i>ML</i> <sub>7</sub>		1 31.1 94°96	2°4/29.1	18	
12 23	9 13.37	+ 8 53.3	1.240	2.035	21.0	20.4	12 23	9 15.95	+21 15.2	2.269	3.049	13.1	19.7
1 2	9 11.61	+ 8 28.1	1.171	2.040	17.1	20.2	1 2	9 12.26	+22 16.0	2.187	3.056	10.2	19.5
1 12	9 6.64	+ 8 23.0	1.121	2.047	12.5	19.9	1 12	9 6.38	+23 23.9	2.129	3.063	7.0	19.3
1 22	8 59.12	+ 8 38.0	1.091	2.056	7.5	19.7	1 22	8 58.81	+24 33.9	2.099	3.070	3.7	19.1
2 1	8 50.26	+ 9 10.0	1.086	2.066	3.9	19.5	2 1	8 50.32	+25 39.7	2.098	3.076	2.7	19.0
2 11	8 41.60	+ 9 52.7	1.105	2.077	6.5	19.7	2 11	8 41.88	+26 36.0	2.127	3.083	5.5	19.2
2 21	8 34.61	+10 39.1	1.149	2.089	11.3	20.0	2 21	8 34.42	+27 19.2	2.185	3.089	8.8	19.4
3 2	8 30.35	+11 22.7	1.214	2.103	15.8	20.3	3 2	8 28.73	+27 48.0	2.267	3.096	11.8	19.6
<b>399683</b>	2004 <i>TU</i> <sub>48</sub>		1 31.0 89°01	0°9/30.5	16		<b>409550</b>	2005 <i>UX</i> <sub>74</sub>		1 31.1 80°75	6°5/	4.3 18	
12 23	9 23.62	+17 20.9	1.610	2.389	17.6	21.7	12 23	9 18.42	- 0 33.8	1.954	2.662	17.2	20.6
1 2	9 18.81	+17 52.7	1.547	2.414	13.8	21.6	1 2	9 14.20	- 1 16.1	1.880	2.682	14.6	20.4
1 12	9 11.05	+18 35.5	1.505	2.438	9.4	21.3	1 12	9 7.67	- 1 39.1	1.825	2.701	11.5	20.3
1 22	9 1.08	+19 24.0	1.489	2.462	4.5	21.1	1 22	8 59.40	- 1 41.1	1.794	2.721	8.6	20.1
2 1	8 50.06	+20 11.4	1.501	2.485	1.2	20.9	2 1	8 50.27	- 1 22.5	1.789	2.740	6.7	20.1
2 11	8 39.43	+20 51.5	1.541	2.508	5.8	21.3	2 11	8 41.31	- 0 46.2	1.812	2.759	7.1	20.1
2 21	8 30.44	+21 20.8	1.609	2.530	10.2	21.6	2 21	8 33.51	+ 0 2.6	1.862	2.778	9.4	20.3
3 2	8 24.02	+21 37.7	1.700	2.552	14.0	21.9	3 2	8 27.63	+ 0 57.9	1.938	2.797	12.2	20.5
<b>172802</b>	2004 <i>FJ</i> <sub>132</sub>		1 31.0 177°88	0°7/31.6	17		<b>423942</b>	2006 <i>TV</i> <sub>127</sub>		1 31.1 165°08	1°6/	1.1 18	
12 23	9 15.29	+13 45.0	2.580	3.334	12.4	21.1	12 23	9 19.19	+11 1.9	2.232	2.978	14.3	22.4
1 2	9 11.36	+13 58.0	2.484	3.335	9.8	20.9	1 2	9 14.69	+11 12.2	2.139	2.983	11.5	22.2
1 12	9 5.56	+14 19.9	2.411	3.335	6.8	20.7	1 12	9 7.99	+11 34.6	2.069	2.988	8.1	22.0
1 22	8 58.35	+14 48.7	2.366	3.335	3.5	20.5	1 22	8 59.58	+12 7.2	2.026	2.992	4.4	21.8
2 1	8 50.35	+15 21.3	2.351	3.336	0.7	20.3	2 1	8 50.25	+12 46.8	2.012	2.995	1.6	21.6
2 11	8 42.37	+15 54.4	2.366	3.336	3.8	20.5	2 11	8 40.95	+13 29.0	2.029	2.998	4.3	21.8
2 21	8 35.20	+16 24.9	2.411	3.335	7.1	20.7	2 21	8 32.63	+14 9.8	2.075	3.000	8.0	22.0
3 2	8 29.50	+16 50.3	2.483	3.335	10.1	20.9	3 2	8 26.08	+14 46.0	2.147	3.002	11.3	22.2
<b>333113</b>	2011 <i>UX</i> <sub>394</sub>		1 31.1 208°90	0°1/31.1	18		<b>54060</b>	2000 <i>GR</i> <sub>134</sub>		1 31.1 286°97	5°3/28.2	18	
12 23	9 21.64	+15 34.5	1.921	2.686	15.6	21.8	12 23	9 21.00	+25 50.2	1.445	2.252	18.0	18.9
1 2	9 17.17	+15 50.5	1.823	2.681	12.5	21.6	1 2	9 17.86	+26 55.2	1.363	2.245	14.3	18.6
1 12	9 10.01	+16 17.5	1.747	2.675	8.6	21.3	1 12	9 11.16	+28 8.0	1.302	2.238	10.1	18.4
1 22	9 0.69	+16 52.3	1.697	2.668	4.3	21.1	1 22	9 1.48	+29 19.5	1.264	2.231	6.3	18.1
2 1	8 50.10	+17 30.3	1.676	2.661	0.4	20.7	2 1	8 50.04	+30 18.7	1.253	2.224	5.7	18.1
2 11	8 39.45	+18 6.3	1.685	2.653	5.1	21.1	2 11	8 38.58	+30 57.2	1.268	2.217	9.2	18.3
2 21	8 29.96	+18 36.1	1.722	2.645	9.5	21.3	2 21	8 28.83	+31 11.3	1.307	2.210	13.6	18.5
3 2	8 22.63	+18 57.4	1.784	2.635	13.4	21.5	3 2	8 22.12	+31 2.1	1.368	2.204	17.6	18.7
<b>55426</b>	2001 <i>TL</i> <sub>45</sub>		1 31.1 46°90	0°3/30.9	18		<b>64341</b>	2001 <i>UX</i> <sub>72</sub>		1 31.1 1°38	0°6/31.4	18	
12 23	9 18.95	+17 9.9	1.689	2.473	16.7	18.4	12 23	9 16.72	+13 22.2	1.347	2.142	19.6	19.5
1 2	9 15.19	+17 19.3	1.612	2.481	13.2	18.2	1 2	9 14.27	+13 45.3	1.267	2.141	15.7	19.2
1 12	9 8.66	+17 38.6	1.556	2.489	9.0	17.9	1 12	9 8.55	+14 26.7	1.206	2.141	10.9	18.9
1 22	8 59.98	+18 4.2	1.525	2.497	4.4	17.7	1 22	9 0.15	+15 22.9	1.169	2.141	5.5	18.6
2 1	8 50.19	+18 31.3	1.521	2.506	0.6	17.4	2 1	8 50.19	+16 27.0	1.156	2.141	0.7	18.3
2 11	8 40.58	+18 54.8	1.546	2.515	5.4	17.8	2 11	8 40.28	+17 30.5	1.171	2.142	6.2	18.7
2 21	8 32.38	+19 11.3	1.597	2.524	9.9	18.1	2 21	8 31.94	+18 26.1	1.210	2.144	11.6	19.0
3 2	8 26.51	+19 19.1	1.673	2.533	13.7	18.3	3 2	8 26.39	+19 9.0	1.271	2.145	16.3	19.3
<b>49438</b>	1998 <i>YD</i> <sub>4</sub>		1 31.1 315°46	1°2/31.9	18		<b>420880</b>	2013 <i>LJ</i> <sub>1</sub>		1 31.1 148°48	5°1/26.4	18	
12 23	9 15.10	+12 29.2	2.144	2.906	14.3	18.3	12 23	9 22.37	+31 12.6	2.592	3.363	11.9	21.9
1 2	9 11.66	+12 37.1	2.048	2.902	11.5	18.1	1 2	9 17.18	+32 37.4	2.518	3.375	9.5	21.8
1 12	9 6.02	+12 56.6	1.974	2.898	8.1	17.9	1 12	9 9.70	+34 2.3	2.470	3.387	7.0	21.6
1 22	8 58.66	+13 25.7	1.926	2.894	4.3	17.6	1 22	9 0.43	+35 20.7	2.450	3.397	5.3	21.5
2 1	8 50.33	+14 1.0	1.906	2.890	1.2	17.4	2 1	8 50.18	+36 25.7	2.461	3.407	5.4	21.6
2 11	8 41.99	+14 38.6	1.916	2.886	4.4	17.6	2 11	8 39.98	+37 12.9	2.502	3.417	7.3	21.7
2 21	8 34.59	+15 14.3	1.954	2.883	8.2	17.8	2 21	8 30.82	+37 40.5	2.571	3.425	9.6	21.9
3 2	8 28.94	+15 45.0	2.018	2.879	11.7	18.0	3 2	8 23.52	+37 49.4	2.664	3.433	11.9	22.0
<b>201696</b>	2003 <i>UT</i> <sub>131</sub>		1 31.1 40°15	5°0/28.2	18		<b>376406</b>	2012 <i>FC</i> <sub>62</sub>		1 31.1 265°27	5°3/	3.6 17	
12 23	9 20.41	+29 26.0	1.893	2.686	14.8								

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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>494965</b>	2009 <i>TL</i> <sub>40</sub>		1 31.1 104°76	2°3/ 1.9 18			<b>238404</b>	2004 <i>EC</i> <sub>47</sub>		1 31.1 163°77	1°5/29.8 17		
12 23	9 17.52	+ 7 8.9	2.261	2.994	14.5	21.9	12 23	9 16.89	+21 25.6	2.884	3.648	10.9	21.4
1 2	9 13.21	+ 7 32.0	2.183	3.016	11.7	21.7	1 2	9 12.44	+21 53.5	2.793	3.653	8.6	21.2
1 12	9 6.86	+ 8 10.2	2.127	3.037	8.4	21.5	1 12	9 6.22	+22 25.6	2.727	3.656	5.8	21.1
1 22	8 58.99	+ 9 1.4	2.098	3.057	4.9	21.4	1 22	8 58.67	+22 58.5	2.689	3.660	2.9	20.9
2 1	8 50.35	+10 1.9	2.098	3.077	2.4	21.2	2 1	8 50.42	+23 28.8	2.682	3.663	1.7	20.8
2 11	8 41.86	+11 6.7	2.129	3.097	4.2	21.4	2 11	8 42.22	+23 53.2	2.706	3.666	4.2	21.0
2 21	8 34.36	+12 10.9	2.189	3.116	7.6	21.6	2 21	8 34.80	+24 9.7	2.760	3.668	7.0	21.1
3 2	8 28.54	+13 10.3	2.276	3.134	10.7	21.8	3 2	8 28.80	+24 17.5	2.841	3.670	9.6	21.3
<b>491856</b>	2013 <i>AB</i> <sub>115</sub>		1 31.1 16°68	3°3/ 1.5 18			<b>226878</b>	2004 <i>TD</i> <sub>94</sub>		1 31.1 116°97	2°6/ 1.9 18		
12 23	9 19.90	+10 19.2	1.435	2.210	19.6	21.3	12 23	9 16.74	+ 8 11.6	2.155	2.898	14.8	21.2
1 2	9 16.50	+ 9 52.9	1.352	2.211	15.9	21.0	1 2	9 12.81	+ 8 11.9	2.068	2.906	12.0	21.0
1 12	9 9.91	+ 9 42.6	1.289	2.212	11.5	20.8	1 12	9 6.73	+ 8 26.2	2.002	2.914	8.7	20.8
1 22	9 0.76	+ 9 47.8	1.248	2.213	6.7	20.5	1 22	8 59.00	+ 8 53.2	1.962	2.922	5.2	20.6
2 1	8 50.15	+10 6.0	1.233	2.214	3.3	20.3	2 1	8 50.38	+ 9 30.3	1.950	2.929	2.7	20.5
2 11	8 39.62	+10 32.7	1.245	2.215	6.2	20.5	2 11	8 41.84	+10 13.4	1.969	2.937	4.6	20.6
2 21	8 30.63	+11 2.6	1.283	2.217	11.0	20.8	2 21	8 34.28	+10 58.3	2.015	2.944	8.0	20.8
3 2	8 24.31	+11 30.8	1.343	2.218	15.5	21.0	3 2	8 28.47	+11 40.9	2.088	2.951	11.3	21.0
<b>327951</b>	2007 <i>EO</i> <sub>72</sub>		1 31.1 221°81	4°3/ 3.3 18			<b>366407</b>	2001 <i>SH</i> <sub>298</sub>		1 31.1 72°58	6°5/ 4.6 18		
12 23	9 14.96	+ 2 34.3	2.183	2.905	15.3	21.1	12 23	9 17.23	- 1 6.7	1.806	2.521	18.2	21.1
1 2	9 11.51	+ 2 36.2	2.082	2.901	12.7	20.9	1 2	9 13.48	- 1 30.9	1.734	2.541	15.4	21.0
1 12	9 5.92	+ 2 56.2	2.002	2.897	9.7	20.7	1 12	9 7.30	- 1 32.7	1.681	2.561	12.1	20.8
1 22	8 58.64	+ 3 34.4	1.947	2.892	6.6	20.5	1 22	8 59.29	- 1 11.0	1.651	2.582	8.9	20.6
2 1	8 50.38	+ 4 28.8	1.919	2.887	4.4	20.3	2 1	8 50.36	- 0 27.1	1.647	2.602	6.7	20.6
2 11	8 42.06	+ 5 35.3	1.920	2.883	5.3	20.4	2 11	8 41.62	+ 0 34.5	1.670	2.622	7.1	20.6
2 21	8 34.60	+ 6 48.2	1.951	2.878	8.3	20.5	2 21	8 34.09	+ 1 47.1	1.720	2.642	9.6	20.8
3 2	8 28.80	+ 8 1.8	2.007	2.872	11.6	20.7	3 2	8 28.61	+ 3 3.4	1.796	2.662	12.6	21.0
<b>116490</b>	2004 <i>BR</i> <sub>12</sub>		1 31.1 83°03	0°1/31.1 18			<b>416443</b>	2003 <i>UO</i> <sub>376</sub>		1 31.1 245°25	5°8/27.3 17		
12 23	9 15.82	+15 23.1	2.253	3.019	13.6	20.5	12 23	9 23.83	+33 49.7	2.257	3.034	13.2	21.3
1 2	9 12.06	+15 43.9	2.165	3.024	10.7	20.4	1 2	9 18.79	+34 34.7	2.166	3.025	10.8	21.2
1 12	9 6.20	+16 14.2	2.101	3.030	7.4	20.2	1 12	9 11.05	+35 17.3	2.099	3.016	8.1	21.0
1 22	8 58.72	+16 51.1	2.064	3.035	3.6	19.9	1 22	9 1.18	+35 50.7	2.059	3.006	6.1	20.8
2 1	8 50.39	+17 30.5	2.056	3.041	0.4	19.7	2 1	8 50.15	+36 8.6	2.047	2.997	6.1	20.8
2 11	8 42.12	+18 8.3	2.077	3.046	4.3	20.0	2 11	8 39.21	+36 6.9	2.064	2.987	8.1	20.9
2 21	8 34.82	+18 40.9	2.128	3.052	7.9	20.2	2 21	8 29.54	+35 45.2	2.108	2.977	10.8	21.1
3 2	8 29.22	+19 6.0	2.204	3.057	11.2	20.4	3 2	8 22.10	+35 5.7	2.175	2.967	13.5	21.2
<b>172985</b>	Ericmelin		1 31.1 134°04	0°1/31.2 18			<b>274029</b>	2007 <i>RS</i> <sub>91</sub>		1 31.1 237°39	0°1/31.2 17		
12 23	9 21.69	+15 12.9	2.011	2.772	15.2	22.7	12 23	9 16.88	+15 29.7	2.659	3.414	12.0	22.5
1 2	9 16.85	+15 32.9	1.930	2.785	12.0	22.5	1 2	9 12.69	+15 47.2	2.548	3.400	9.6	22.3
1 12	9 9.55	+16 3.3	1.871	2.798	8.2	22.3	1 12	9 6.57	+16 12.9	2.461	3.386	6.6	22.1
1 22	9 0.38	+16 40.7	1.839	2.810	4.0	22.0	1 22	8 58.93	+16 44.4	2.401	3.372	3.3	21.9
2 1	8 50.23	+17 20.5	1.837	2.822	0.4	21.8	2 1	8 50.39	+17 18.5	2.372	3.357	0.3	21.6
2 11	8 40.23	+17 58.0	1.864	2.833	4.7	22.1	2 11	8 41.76	+17 51.7	2.373	3.341	3.9	21.9
2 21	8 31.44	+18 29.3	1.921	2.843	8.8	22.4	2 21	8 33.86	+18 20.8	2.405	3.325	7.3	22.0
3 2	8 24.71	+18 52.3	2.003	2.853	12.2	22.6	3 2	8 27.42	+18 43.9	2.463	3.309	10.4	22.2
<b>53627</b>	2000 <i>CV</i> <sub>98</sub>		1 31.1 184°95	0°6/31.5 18			<b>412591</b>	2014 <i>OS</i> <sub>64</sub>		1 31.1 183°38	1°5/30.1 18		
12 23	9 19.07	+13 11.0	2.384	3.133	13.4	19.9	12 23	9 22.09	+19 30.9	2.046	2.816	14.6	22.3
1 2	9 14.53	+13 34.7	2.286	3.134	10.7	19.7	1 2	9 17.35	+20 3.9	1.955	2.817	11.6	22.1
1 12	9 7.87	+14 9.2	2.211	3.133	7.4	19.5	1 12	9 10.04	+20 45.0	1.887	2.817	7.9	21.9
1 22	8 59.56	+14 52.0	2.163	3.132	3.8	19.3	1 22	9 0.69	+21 29.7	1.845	2.817	3.9	21.6
2 1	8 50.31	+15 39.3	2.146	3.130	0.7	19.1	2 1	8 50.21	+22 12.4	1.833	2.816	1.7	21.5
2 11	8 41.04	+16 26.6	2.159	3.128	4.1	19.3	2 11	8 39.75	+22 47.9	1.851	2.814	5.4	21.7
2 21	8 32.67	+17 10.0	2.202	3.125	7.8	19.5	2 21	8 30.45	+23 12.8	1.897	2.811	9.4	22.0
3 2	8 25.95	+17 46.6	2.273	3.121	11.0	19.7	3 2	8 23.24	+23 25.9	1.969	2.808	12.9	22.2
<b>98006</b>	2000 <i>QC</i> <sub>205</sub>		1 31.1 157°83	0°7/31.5 18			<b>262701</b>	2006 <i>WZ</i> <sub>202</sub>		1 31.1 141°87	1°2/31.9 18		
12 23	9 21.67	+13 22.8	2.075	2.828	15.0	20.9	12 23	9 20.31	+12 18.8	2.361	3.105	13.6	21.8
1 2	9 16.82	+13 42.1	1.987	2.837	11.9	20.7	1 2	9 15.37	+12 29.0	2.275	3.118	10.9	21.6
1 12	9 9.55	+14 13.1	1.921	2.844	8.3	20.5	1 12	9 8.34	+12 49.6	2.212	3.131	7.6	21.4
1 22	9 0.40	+14 52.9	1.882	2.851	4.2	20.2	1 22	8 59.74	+13 18.3	2.176	3.143	4.0	21.2
2 1	8 50.23	+15 37.2	1.873	2.857	0.7	20.0	2 1	8 50.32	+13 52.1	2.170	3.154	1.2	21.0
2 11	8 40.13	+16 21.1	1.894	2.863	4.6	20.3	2 11	8 41.01	+14 26.9	2.196	3.165	4.1	21.3
2 21	8 31.16	+17 0.4	1.944	2.867	8.6	20.5	2 21	8 32.69	+14 59.6	2.251	3.174	7.6	21.5
3 2	8 24.17	+17 32.3	2.020	2.871	12.1	20.7	3 2	8 26.08	+15 27.5	2.333	3.183	10.7	21.7
<b>178654</b>	2000 <i>OW</i> <sub>26</sub>		1 31.1 254°83	0°8/31.6 17			<b>172046</b>	2001 <i>XA</i> <sub>51</sub>		1 31.1 146°96	3°5/ 2.9 18		
12 23	9 19.19	+15 6.9	2.718	3.464	12.0	19.9	12 23	9 16.56	+ 4 0.1	3.053	3.755	11.7	20.2
1 2	9 14.43	+14 54.5	2.601	3.447	9.6	19.7	1 2	9 11.93	+ 3 36.5	2.958	3.764	9.7	20.1
1 12	9 7.71	+14 48.2	2.508	3.429	6.7	19.5	1 12	9 5.75	+ 3 23.6	2.887	3.774	7.4	19.9
1 22	8 59.47	+14 46.5	2.442	3.411	3.5	19.2	1 22	8 58.41	+ 3 21.5	2.842	3.782	5.1	19.8
2 1	8 50.32	+14 47.5	2.408	3.392	0.8	19.0	2 1	8 50.46	+ 3 29.7	2.827	3.791	3.6	19.7
2 11	8 41.10	+14 49.1	2.405	3.373	3.8	19.2	2 11	8 42.56	+ 3 46.2	2.843	3.798	4.3	19.7
2 21	8 32.61	+14 49.3	2.432	3.354	7.2	19.4	2 21	8 35.35	+ 4 8.8	2.889	3.806	6.4	19.9
3 2	8 25.58	+14 46.8	2.486	3.334	10.2	19.5	3 2	8 29.36	+ 4 34.5	2.963	3.813	8.7	20.1
<b>460387</b>	2014 <i>SN</i> <sub>64</sub>		1 31.1 163°19	1°8/30.0 18			<b>160865</b>	2001 <i>JK</i> <sub>2</sub>		1 31.1 145°56	1°2/30.1 18		
12 23	9 21.48	+19 59.1	1.874	2.653	15.5	22.4	12						

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>112</b>	<b>112 Iphigenia</b> 1 31.1 138°09' 0°4/30.9 18						<b>405884</b>	<b>405884 2006 EN<sub>37</sub></b> 1 31.1 268°36' 12°8/23.3 17					
12 23	9 21.79	+16 50.9	1.889	2.659	15.7	14.2	12 23	9 38.19	+48 10.4	1.758	2.515	17.2	21.7
1 2	9 17.16	+17 7.7	1.807	2.668	12.4	14.0	1 2	9 32.33	+49 38.7	1.675	2.496	15.2	21.5
1 12	9 9.91	+17 34.2	1.746	2.676	8.5	13.8	1 12	9 21.65	+50 55.6	1.613	2.475	13.6	21.4
1 22	9 0.62	+18 6.7	1.712	2.684	4.1	13.5	1 22	9 6.84	+51 46.9	1.574	2.455	12.8	21.3
2 1	8 50.25	+18 40.2	1.706	2.691	0.6	13.3	2 1	8 49.64	+51 59.7	1.558	2.434	13.3	21.3
2 11	8 40.02	+19 10.0	1.730	2.698	5.1	13.6	2 11	8 32.64	+51 27.7	1.566	2.412	15.0	21.3
2 21	8 31.08	+19 32.6	1.782	2.705	9.3	13.9	2 21	8 18.30	+50 13.8	1.595	2.391	17.3	21.4
3 2	8 24.33	+19 46.1	1.860	2.711	13.0	14.1	3 2	8 8.29	+48 26.9	1.644	2.369	19.7	21.5
<b>41363</b>	<b>41363 2000 AA<sub>90</sub></b> 1 31.1 161°43' 0°5/31.6 18						<b>411420</b>	<b>411420 2010 VW<sub>200</sub></b> 1 31.1 48°65' 4°8/28.9 18					
12 23	9 12.76	+13 1.3	3.009	3.758	10.9	19.0	12 23	9 24.50	+27 58.7	1.505	2.305	17.7	20.9
1 2	9 9.14	+13 30.2	2.912	3.760	8.6	18.9	1 2	9 19.94	+28 30.0	1.447	2.324	14.0	20.7
1 12	9 3.95	+14 7.8	2.840	3.763	6.0	18.7	1 12	9 12.05	+29 2.1	1.410	2.343	9.8	20.5
1 22	8 57.58	+14 52.1	2.796	3.765	3.0	18.5	1 22	9 1.68	+29 27.3	1.397	2.362	6.0	20.4
2 1	8 50.57	+15 40.1	2.782	3.767	0.5	18.3	2 1	8 50.20	+29 38.4	1.411	2.383	5.1	20.4
2 11	8 43.56	+16 28.2	2.799	3.768	3.3	18.5	2 11	8 39.26	+29 31.3	1.452	2.403	8.0	20.6
2 21	8 37.19	+17 13.3	2.847	3.770	6.2	18.7	2 21	8 30.29	+29 6.4	1.518	2.424	11.9	20.8
3 2	8 32.03	+17 53.1	2.922	3.771	8.8	18.9	3 2	8 24.23	+28 26.4	1.607	2.445	15.4	21.1
<b>423563</b>	<b>423563 2005 UF<sub>441</sub></b> 1 31.1 84°65' 6°8/ 4.3 18						<b>427280</b>	<b>427280 2014 WN<sub>197</sub></b> 1 31.1 112°65' 4°8/27.4 18					
12 23	9 17.99	- 0 44.8	1.943	2.651	17.3	21.4	12 23	9 22.66	+28 14.2	2.159	2.938	13.7	21.7
1 2	9 13.98	- 1 32.2	1.863	2.664	14.7	21.2	1 2	9 17.69	+29 34.4	2.094	2.959	10.8	21.5
1 12	9 7.62	- 2 0.5	1.802	2.677	11.7	21.0	1 12	9 10.18	+30 56.5	2.053	2.979	7.7	21.4
1 22	8 59.48	- 2 7.8	1.765	2.690	8.8	20.9	1 22	9 0.73	+32 13.1	2.041	2.998	5.3	21.3
2 1	8 50.38	- 1 53.7	1.753	2.703	6.9	20.8	2 1	8 50.29	+33 16.6	2.057	3.017	5.1	21.3
2 11	8 41.39	- 1 20.9	1.769	2.715	7.3	20.8	2 11	8 40.04	+34 1.9	2.104	3.035	7.4	21.5
2 21	8 33.52	- 0 34.3	1.812	2.728	9.6	21.0	2 21	8 31.07	+34 27.2	2.178	3.053	10.2	21.7
3 2	8 27.58	+ 0 20.0	1.880	2.740	12.5	21.2	3 2	8 24.26	+34 33.5	2.275	3.070	12.9	21.9
<b>296128</b>	<b>296128 2009 BQ<sub>72</sub></b> 1 31.1 25°52' 1°6/ 1.1 18						<b>256746</b>	<b>256746 2008 BK<sub>24</sub></b> 1 31.1 247°80' 0°3/30.9 18					
12 23	9 15.56	+12 17.0	2.055	2.819	14.8	20.6	12 23	9 24.35	+19 12.4	1.892	2.662	15.7	20.4
1 2	9 12.04	+12 12.8	1.969	2.824	11.9	20.4	1 2	9 19.37	+18 57.3	1.793	2.653	12.5	20.1
1 12	9 6.29	+12 19.7	1.905	2.828	8.4	20.2	1 12	9 11.58	+18 47.6	1.716	2.645	8.6	19.9
1 22	8 58.82	+12 36.2	1.866	2.834	4.5	20.0	1 22	9 1.53	+18 40.3	1.665	2.636	4.2	19.6
2 1	8 50.45	+12 59.4	1.856	2.839	1.6	19.8	2 1	8 50.21	+18 32.1	1.643	2.628	0.6	19.3
2 11	8 42.16	+13 25.5	1.875	2.845	4.4	20.0	2 11	8 38.91	+18 20.1	1.650	2.618	5.3	19.6
2 21	8 34.92	+13 51.0	1.921	2.851	8.2	20.3	2 21	8 28.89	+18 2.7	1.686	2.609	9.7	19.9
3 2	8 29.49	+14 13.0	1.993	2.857	11.7	20.5	3 2	8 21.18	+17 39.6	1.748	2.600	13.6	20.1
<b>468959</b>	<b>468959 2015 AO<sub>39</sub></b> 1 31.1 151°04' 1°4/30.1 18						<b>375613</b>	<b>375613 2008 WG<sub>45</sub></b> 1 31.1 71°52' 0°4/31.4 18					
12 23	9 17.63	+19 39.3	2.158	2.935	13.8	21.4	12 23	9 17.55	+14 39.9	2.108	2.873	14.4	21.1
1 2	9 13.69	+20 9.3	2.070	2.936	10.8	21.2	1 2	9 13.45	+14 52.9	2.033	2.891	11.4	20.9
1 12	9 7.44	+20 46.6	2.005	2.937	7.4	21.0	1 12	9 7.14	+15 15.8	1.981	2.908	7.8	20.8
1 22	8 59.40	+21 27.1	1.966	2.939	3.6	20.8	1 22	8 59.21	+15 45.7	1.955	2.926	3.9	20.5
2 1	8 50.39	+22 6.0	1.957	2.940	1.6	20.6	2 1	8 50.46	+16 18.8	1.958	2.943	0.5	20.3
2 11	8 41.43	+22 38.6	1.977	2.941	5.0	20.8	2 11	8 41.89	+16 50.8	1.991	2.961	4.3	20.6
2 21	8 33.53	+23 1.9	2.026	2.942	8.7	21.1	2 21	8 34.44	+17 18.6	2.052	2.978	8.1	20.9
3 2	8 27.48	+23 14.4	2.100	2.943	12.0	21.3	3 2	8 28.82	+17 39.7	2.140	2.995	11.3	21.1
<b>135325</b>	<b>135325 2001 SW<sub>314</sub></b> 1 31.1 160°58' 2°6/ 2.1 18						<b>68480</b>	<b>68480 2001 TQ<sub>49</sub></b> 1 31.1 210°26' 6°5/25.9 18					
12 23	9 16.15	+ 7 42.9	2.824	3.549	12.1	20.6	12 23	9 20.88	+32 7.1	2.046	2.834	14.0	19.8
1 2	9 11.80	+ 7 30.4	2.727	3.553	9.8	20.5	1 2	9 16.86	+33 38.4	1.965	2.831	11.3	19.6
1 12	9 5.78	+ 7 28.0	2.654	3.558	7.2	20.3	1 12	9 9.99	+35 11.1	1.908	2.828	8.6	19.5
1 22	8 58.48	+ 7 35.3	2.607	3.562	4.5	20.1	1 22	9 0.81	+36 36.3	1.878	2.825	6.7	19.3
2 1	8 50.49	+ 7 50.8	2.590	3.565	2.6	20.0	2 1	8 50.28	+37 45.2	1.877	2.821	7.0	19.3
2 11	8 42.55	+ 8 12.3	2.604	3.568	3.9	20.1	2 11	8 39.71	+38 31.3	1.903	2.817	9.2	19.5
2 21	8 35.32	+ 8 37.0	2.648	3.571	6.6	20.3	2 21	8 30.41	+38 52.6	1.955	2.813	12.0	19.6
3 2	8 29.43	+ 9 2.3	2.719	3.574	9.2	20.5	3 2	8 23.45	+38 50.5	2.029	2.809	14.7	19.8
<b>148816</b>	<b>148816 2001 UB<sub>124</sub></b> 1 31.1 120°84' 1°0/31.9 18						<b>444182</b>	<b>444182 2005 QB<sub>180</sub></b> 1 31.1 155°51' 2°5/29.5 18					
12 23	9 17.08	+10 19.5	2.046	2.801	15.2	20.2	12 23	9 24.50	+20 52.8	1.899	2.672	15.5	22.0
1 2	9 13.27	+11 5.7	1.962	2.811	12.1	20.0	1 2	9 19.43	+21 46.8	1.818	2.682	12.2	21.8
1 12	9 7.16	+12 8.0	1.899	2.822	8.5	19.8	1 12	9 11.57	+22 49.4	1.759	2.691	8.3	21.6
1 22	8 59.28	+13 22.8	1.863	2.832	4.4	19.6	1 22	9 1.50	+23 54.3	1.728	2.699	4.3	21.3
2 1	8 50.42	+14 44.7	1.857	2.841	1.0	19.4	2 1	8 50.22	+24 54.1	1.726	2.706	2.8	21.2
2 11	8 41.61	+16 7.0	1.881	2.851	4.5	19.6	2 11	8 39.05	+25 42.5	1.754	2.712	6.2	21.5
2 21	8 33.84	+17 23.7	1.934	2.860	8.4	19.9	2 21	8 29.23	+26 15.8	1.811	2.717	10.2	21.7
3 2	8 27.93	+18 30.3	2.013	2.869	11.9	20.1	3 2	8 21.75	+26 33.2	1.892	2.722	13.7	21.9
<b>122485</b>	<b>122485 2000 QK<sub>171</sub></b> 1 31.1 232°04' 0°7/31.5 18						<b>346099</b>	<b>346099 2007 VN<sub>55</sub></b> 1 31.1 110°73' 5°8/25.9 18					
12 23	9 21.82	+14 39.6	1.843	2.609	16.2	20.7	12 23	9 19.51	+34 7.2	2.501	3.280	12.0	21.3
1 2	9 17.50	+14 41.3	1.742	2.599	13.0	20.4	1 2	9 15.11	+35 25.7	2.432	3.290	9.7	21.2
1 12	9 10.39	+14 54.2	1.662	2.588	9.1	20.2	1 12	9 8.38	+36 42.2	2.388	3.301	7.5	21.0
1 22	9 1.00	+15 15.7	1.607	2.577	4.6	19.9	1 22	8 59.86	+37 50.0	2.371	3.311	6.0	20.9
2 1	8 50.23	+15 42.1	1.581	2.565	0.8	19.6	2 1	8 50.40	+38 42.6	2.384	3.321	6.2	21.0
2 11	8 39.36	+16 8.6	1.584	2.553	5.2	19.9	2 11	8 41.03	+39 15.9	2.425	3.331	7.9	21.1
2 21	8 29.66	+16 31.3	1.615	2.541	9.8	20.1	2 21	8 32.77	+39 29.0	2.492	3.340	10.1	21.3
3 2	8 22.18	+16 47.6	1.670	2.528	13.9	20.3	3 2	8 26.42	+39 23.2	2.583	3.350	12.3	21.4
<b>281847</b>	<b>281847 2010 CC<sub>44</sub></b> 1 31.1 177°10' 1°5/29.8 18						<b>384206</b>	<b>384206 2009 BB<sub>186</sub></b> 1 31.1 9°24' 8°2/24.2 17					
12 23	9 15.99	+19 9.3	2.462	3.232	12.4	20.9	12 23	9 15.38	+33 42.0	1.755	2.562	15.2	19.8
1 2	9 12.14	+19 56.8	2.370	3.233	9.8	20.8	1 2	9 13.03	+35 45.6	1.690	2.565	12.4	19.6

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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>47790</b>	2000 <i>EJ</i> <sub>30</sub>		1 31.1 154°55	1°0/30.3	18		<b>237677</b>	2001 <i>TD</i> <sub>57</sub>		1 31.1 119°18	3°3/28.5	18	
12 23	9 15.72	+17 13.7	2.332	3.101	13.1	19.2	12 23	9 19.61	+27 28.0	2.655	3.428	11.6	20.9
1 2	9 12.04	+18 1.7	2.241	3.104	10.3	19.0	1 2	9 14.77	+28 5.6	2.579	3.441	9.1	20.8
1 12	9 6.26	+18 59.4	2.175	3.106	7.0	18.8	1 12	9 7.92	+28 44.0	2.527	3.453	6.4	20.6
1 22	8 58.85	+20 2.5	2.136	3.108	3.4	18.5	1 22	8 59.57	+29 18.6	2.503	3.466	4.0	20.5
2 1	8 50.52	+21 6.0	2.126	3.110	1.2	18.4	2 1	8 50.49	+29 45.1	2.509	3.478	3.5	20.4
2 11	8 42.21	+22 4.5	2.148	3.112	4.6	18.6	2 11	8 41.57	+30 0.3	2.546	3.490	5.5	20.6
2 21	8 34.79	+22 54.1	2.198	3.114	8.2	18.8	2 21	8 33.64	+30 2.9	2.611	3.501	8.2	20.8
3 2	8 29.03	+23 32.3	2.274	3.115	11.3	19.0	3 2	8 27.38	+29 53.4	2.702	3.512	10.6	21.0
<b>229723</b>	2007 <i>GG</i> <sub>2</sub>		1 31.1 148°48	1°6/29.9	18		<b>245035</b>	2004 <i>EK</i> <sub>63</sub>		1 31.1 39°77	10°7/10.9	18	
12 23	9 18.06	+20 0.7	2.171	2.947	13.7	21.0	12 23	9 12.60	-16 16.7	1.985	2.607	19.3	20.0
1 2	9 14.03	+20 36.8	2.085	2.950	10.8	20.8	1 2	9 9.80	-16 46.0	1.912	2.625	17.4	19.9
1 12	9 7.69	+21 20.2	2.021	2.954	7.3	20.6	1 12	9 4.81	-16 45.3	1.855	2.644	15.2	19.8
1 22	8 59.56	+22 6.5	1.984	2.956	3.6	20.4	1 22	8 58.15	-16 11.2	1.816	2.663	13.1	19.7
2 1	8 50.46	+22 50.5	1.977	2.959	1.8	20.3	2 1	8 50.64	-15 2.6	1.799	2.683	11.4	19.6
2 11	8 41.41	+23 27.5	2.000	2.962	5.2	20.5	2 11	8 43.27	-13 23.4	1.806	2.703	10.7	19.6
2 21	8 33.42	+23 54.3	2.050	2.964	8.8	20.7	2 21	8 36.96	-11 20.9	1.839	2.723	11.4	19.7
3 2	8 27.30	+24 9.5	2.127	2.966	12.0	20.9	3 2	8 32.46	-9 4.9	1.897	2.744	13.0	19.8
<b>230508</b>	2002 <i>VP</i> <sub>17</sub>		1 31.1 66°87	2°8/ 1.7	18		<b>369390</b>	2009 <i>VQ</i> <sub>62</sub>		1 31.1 48°34	2°0/ 1.3	18	
12 23	9 22.45	+ 7 51.2	1.286	2.059	21.6	20.3	12 23	9 16.76	+11 2.2	1.876	2.640	16.0	21.2
1 2	9 18.38	+ 8 12.3	1.234	2.090	17.3	20.1	1 2	9 13.22	+11 0.4	1.794	2.647	12.9	21.0
1 12	9 11.02	+ 8 56.8	1.200	2.122	12.3	19.9	1 12	9 7.23	+11 12.0	1.733	2.654	9.2	20.8
1 22	9 1.22	+10 0.9	1.188	2.153	6.9	19.7	1 22	8 59.38	+11 35.4	1.696	2.662	5.1	20.6
2 1	8 50.31	+11 17.6	1.202	2.184	2.8	19.5	2 1	8 50.52	+12 7.3	1.687	2.670	2.0	20.4
2 11	8 39.92	+12 37.5	1.244	2.215	6.0	19.8	2 11	8 41.77	+12 43.2	1.707	2.678	4.8	20.6
2 21	8 31.44	+13 52.1	1.312	2.246	10.8	20.1	2 21	8 34.18	+13 18.8	1.755	2.686	8.8	20.9
3 2	8 25.83	+14 55.8	1.403	2.276	15.1	20.5	3 2	8 28.58	+13 50.3	1.828	2.694	12.4	21.1
<b>185097</b>	2006 <i>SB</i> <sub>11</sub>		1 31.1 14°26	2°0/31.6	18		<b>338913</b>	2004 <i>DS</i> <sub>56</sub>		1 31.1 11°63	0°6/30.9	17	
12 23	9 22.57	+17 30.7	1.190	1.995	21.1	18.9	12 23	9 22.49	+18 10.9	1.309	2.108	19.9	21.2
1 2	9 19.06	+16 20.7	1.122	2.000	16.9	18.7	1 2	9 19.01	+18 10.5	1.231	2.108	15.9	20.9
1 12	9 11.85	+15 17.2	1.072	2.007	11.9	18.4	1 12	9 11.93	+18 21.2	1.172	2.108	10.9	20.6
1 22	9 1.76	+14 19.8	1.045	2.016	6.2	18.1	1 22	9 1.91	+18 38.5	1.136	2.109	5.3	20.3
2 1	8 50.26	+13 28.0	1.043	2.026	2.0	17.9	2 1	8 50.26	+18 56.6	1.125	2.110	0.9	20.0
2 11	8 39.19	+12 41.4	1.066	2.038	6.6	18.2	2 11	8 38.77	+19 9.6	1.141	2.111	6.6	20.4
2 21	8 30.22	+11 59.3	1.114	2.051	12.0	18.5	2 21	8 29.11	+19 14.0	1.182	2.113	12.1	20.7
3 2	8 24.45	+11 20.9	1.184	2.065	16.6	18.8	3 2	8 22.56	+19 8.4	1.245	2.114	16.8	21.0
<b>496057</b>	2009 <i>CQ</i> <sub>24</sub>		1 31.1 235°42	1°3/ 1.2	17		<b>502815</b>	2015 <i>DP</i> <sub>121</sub>		1 31.1 249°59	6°0/25.9	17	
12 23	9 13.71	+10 27.7	2.485	3.234	12.9	22.1	12 23	9 20.71	+36 0.1	2.600	3.374	11.8	21.5
1 2	9 10.29	+10 52.6	2.386	3.232	10.4	21.9	1 2	9 16.14	+37 0.7	2.510	3.364	9.6	21.4
1 12	9 4.98	+11 29.8	2.310	3.230	7.3	21.7	1 12	9 9.18	+37 58.6	2.445	3.353	7.6	21.2
1 22	8 58.21	+12 17.4	2.261	3.227	4.0	21.5	1 22	9 0.34	+38 47.3	2.407	3.342	6.2	21.1
2 1	8 50.61	+13 12.0	2.241	3.225	1.3	21.3	2 1	8 50.43	+39 20.9	2.397	3.331	6.4	21.1
2 11	8 42.98	+14 9.2	2.252	3.222	3.8	21.5	2 11	8 40.54	+39 35.5	2.416	3.320	8.0	21.2
2 21	8 36.13	+15 4.7	2.292	3.219	7.2	21.7	2 21	8 31.68	+39 30.0	2.462	3.309	10.2	21.3
3 2	8 30.73	+15 55.1	2.359	3.217	10.3	21.9	3 2	8 24.74	+39 6.2	2.530	3.297	12.5	21.4
<b>282999</b>	2007 <i>TM</i> <sub>373</sub>		1 31.1 115°99	0°1/31.0	18		<b>81789</b>	2000 <i>JH</i> <sub>82</sub>		1 31.1 95°82	1°0/30.5	18	
12 23	9 16.53	+15 47.5	2.595	3.353	12.2	21.4	12 23	9 21.76	+18 19.4	1.977	2.747	15.1	19.9
1 2	9 12.29	+16 10.9	2.512	3.366	9.6	21.3	1 2	9 16.91	+18 47.0	1.907	2.769	11.8	19.7
1 12	9 6.20	+16 42.2	2.452	3.379	6.6	21.1	1 12	9 9.60	+19 22.8	1.861	2.791	8.0	19.5
1 22	8 58.74	+17 18.5	2.421	3.392	3.2	20.9	1 22	9 0.46	+20 2.3	1.841	2.813	3.8	19.3
2 1	8 50.56	+17 56.4	2.419	3.404	0.3	20.7	2 1	8 50.44	+20 40.3	1.850	2.834	1.2	19.2
2 11	8 42.49	+18 32.1	2.448	3.416	3.8	21.0	2 11	8 40.69	+21 12.3	1.889	2.854	5.0	19.5
2 21	8 35.28	+19 2.8	2.507	3.428	7.1	21.2	2 21	8 32.23	+21 35.1	1.956	2.875	8.9	19.8
3 2	8 29.57	+19 26.7	2.593	3.440	9.9	21.4	3 2	8 25.89	+21 47.7	2.049	2.894	12.2	20.0
<b>328252</b>	2008 <i>FT</i> <sub>107</sub>		1 31.1 282°20	7°3/ 5.2	18		<b>238183</b>	2003 <i>SW</i> <sub>253</sub>		1 31.1 0°69	20°9/14.2	18	
12 23	9 14.44	- 3 35.0	1.890	2.593	17.9	21.2	12 23	9 13.18	-20 20.5	1.092	1.763	30.0	19.9
1 2	9 11.53	- 3 57.3	1.791	2.586	15.4	21.0	1 2	9 12.34	-22 37.8	1.028	1.762	28.2	19.7
1 12	9 6.22	- 3 56.2	1.710	2.580	12.6	20.8	1 12	9 7.82	-24 14.0	0.974	1.761	26.0	19.6
1 22	8 58.96	- 3 29.3	1.652	2.573	9.6	20.6	1 22	9 0.13	-24 55.8	0.930	1.761	23.8	19.4
2 1	8 50.53	- 2 36.2	1.618	2.566	7.6	20.4	2 1	8 50.43	-24 31.8	0.900	1.761	22.0	19.3
2 11	8 41.99	- 1 20.7	1.612	2.559	7.8	20.4	2 11	8 40.57	-22 59.3	0.886	1.762	20.9	19.2
2 21	8 34.41	+ 0 10.4	1.632	2.553	10.1	20.6	2 21	8 32.42	-20 26.2	0.889	1.764	21.2	19.2
3 2	8 28.74	+ 1 48.9	1.677	2.546	13.3	20.7	3 2	8 27.52	-17 9.7	0.908	1.766	22.6	19.3
<b>101976</b>	1999 <i>RS</i> <sub>51</sub>		1 31.1 99°92	3°1/ 1.8	18		<b>337800</b>	2001 <i>UR</i> <sub>212</sub>		1 31.1 147°42	3°7/ 3.2	18	
12 23	9 22.70	+ 8 22.9	1.481	2.242	19.7	20.1	12 23	9 14.30	+ 3 42.7	2.626	3.341	13.1	21.2
1 2	9 18.39	+ 8 22.6	1.412	2.261	15.9	19.9	1 2	9 10.56	+ 3 35.1	2.530	3.345	10.8	21.0
1 12	9 11.01	+ 8 41.7	1.362	2.280	11.5	19.7	1 12	9 5.06	+ 3 41.1	2.456	3.349	8.2	20.8
1 22	9 1.26	+ 9 18.5	1.335	2.298	6.6	19.4	1 22	8 58.23	+ 4 0.7	2.408	3.353	5.6	20.7
2 1	8 50.31	+10 8.5	1.335	2.316	3.1	19.3	2 1	8 50.67	+ 4 32.4	2.388	3.356	3.8	20.6
2 11	8 39.64	+11 5.0	1.363	2.333	5.9	19.5	2 11	8 43.12	+ 5 13.3	2.399	3.359	4.6	20.6
2 21	8 30.59	+12 1.4	1.418	2.350	10.4	19.8	2 21	8 36.31	+ 5 59.8	2.438	3.362	7.1	20.8
3 2	8 24.18	+12 52.0	1.497	2.366	14.5	20.1	3 2	8 30.88	+ 6 47.9	2.505	3.365	9.7	21.0
<b>362633</b>	2011 <i>SW</i> <sub>134</sub>		1 31.1 54°84	4°9/ 2.9	18		<b>216300</b>	2007 <i>RS</i> <sub>123</sub>		1 31.1 42°30	8°3/28.2	18	
12 23	9 17.04	+ 4 26.4	1.485	2.242	19.8								



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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>114947</b>	2003 QR <sub>54</sub>		1 31.1 192°23	0°3/30.9	18		<b>312753</b>	2010 TA <sub>97</sub>		1 31.1 289°84	0°3/30.9	18	
12 23	9 19.42	+14 46.3	1.886	2.655	15.7	20.3	12 23	9 17.73	+15 57.3	1.676	2.460	16.8	21.0
1 2	9 15.51	+15 25.0	1.794	2.654	12.5	20.0	1 2	9 14.63	+16 19.3	1.580	2.449	13.4	20.7
1 12	9 8.98	+16 17.4	1.723	2.653	8.6	19.8	1 12	9 8.66	+16 54.5	1.504	2.437	9.3	20.4
1 22	9 0.33	+17 19.4	1.679	2.651	4.2	19.5	1 22	9 0.30	+17 39.1	1.453	2.425	4.6	20.1
2 1	8 50.46	+18 25.1	1.663	2.648	0.6	19.2	2 1	8 50.49	+18 27.6	1.429	2.414	0.6	19.8
2 11	8 40.54	+19 27.9	1.677	2.646	5.2	19.6	2 11	8 40.56	+19 13.5	1.433	2.402	5.7	20.1
2 21	8 31.76	+20 22.2	1.720	2.642	9.6	19.8	2 21	8 31.85	+19 51.6	1.463	2.391	10.5	20.4
3 2	8 25.10	+21 4.8	1.787	2.639	13.4	20.0	3 2	8 25.48	+20 18.6	1.518	2.379	14.8	20.6
<b>413884</b>	2006 VR <sub>63</sub>		1 31.1 115°08	1°3/31.9	18		<b>219812</b>	2002 AM <sub>193</sub>		1 31.1 106°22	1°2/30.3	18	
12 23	9 20.71	+12 4.9	2.093	2.844	15.0	22.1	12 23	9 18.53	+17 51.7	2.056	2.829	14.5	20.9
1 2	9 15.94	+12 13.1	2.015	2.862	11.9	21.9	1 2	9 14.45	+18 34.5	1.978	2.842	11.4	20.7
1 12	9 8.89	+12 33.1	1.959	2.880	8.4	21.7	1 12	9 8.01	+19 26.8	1.923	2.854	7.7	20.5
1 22	9 0.13	+13 2.5	1.930	2.897	4.4	21.5	1 22	8 59.76	+20 23.9	1.894	2.866	3.7	20.3
2 1	8 50.50	+13 37.5	1.930	2.914	1.3	21.3	2 1	8 50.56	+21 20.2	1.895	2.878	1.4	20.2
2 11	8 41.05	+14 14.0	1.960	2.930	4.4	21.6	2 11	8 41.49	+22 10.0	1.926	2.890	5.1	20.5
2 21	8 32.74	+14 48.1	2.019	2.945	8.2	21.8	2 21	8 33.54	+22 49.7	1.985	2.902	8.8	20.7
3 2	8 26.34	+15 17.0	2.104	2.960	11.5	22.1	3 2	8 27.54	+23 17.3	2.069	2.913	12.2	20.9
<b>244309</b>	2002 GQ <sub>93</sub>		1 31.1 244°85	2°8/ 1.9	18		<b>107286</b>	2001 BU <sub>76</sub>		1 31.1 327°14	0°1/31.1	18	
12 23	9 16.86	+ 8 34.7	2.178	2.921	14.7	20.7	12 23	9 15.93	+15 10.6	1.437	2.234	18.5	20.1
1 2	9 13.06	+ 8 24.2	2.076	2.915	12.0	20.5	1 2	9 13.65	+15 29.5	1.348	2.224	14.8	19.8
1 12	9 7.07	+ 8 26.5	1.997	2.908	8.8	20.3	1 12	9 8.22	+16 4.0	1.278	2.214	10.3	19.5
1 22	8 59.32	+ 8 41.2	1.942	2.902	5.3	20.1	1 22	9 0.16	+16 50.4	1.232	2.205	5.1	19.2
2 1	8 50.57	+ 9 6.2	1.917	2.895	2.8	19.9	2 1	8 50.51	+17 42.6	1.211	2.196	0.5	18.8
2 11	8 41.77	+ 9 38.1	1.920	2.888	4.7	20.0	2 11	8 40.77	+18 33.1	1.217	2.188	6.1	19.2
2 21	8 33.87	+10 13.2	1.953	2.881	8.2	20.2	2 21	8 32.45	+19 15.7	1.248	2.181	11.4	19.5
3 2	8 27.70	+10 47.7	2.011	2.874	11.6	20.4	3 2	8 26.76	+19 46.4	1.302	2.174	16.1	19.7
<b>282086</b>	2000 QS <sub>39</sub>		1 31.1 114°59	0°7/31.5	18		<b>316895</b>	2000 SW <sub>138</sub>		1 31.1 170°28	2°6/29.2	18	
12 23	9 22.68	+13 3.8	1.896	2.653	16.1	21.8	12 23	9 21.91	+24 51.2	2.589	3.355	12.0	21.9
1 2	9 17.73	+13 29.0	1.823	2.675	12.8	21.6	1 2	9 16.68	+25 24.7	2.500	3.359	9.5	21.7
1 12	9 10.23	+14 7.2	1.772	2.696	8.8	21.4	1 12	9 9.32	+26 0.8	2.436	3.363	6.5	21.6
1 22	9 0.81	+14 54.8	1.747	2.716	4.4	21.2	1 22	9 0.35	+26 35.2	2.399	3.367	3.7	21.4
2 1	8 50.44	+15 46.6	1.751	2.736	0.7	20.9	2 1	8 50.51	+27 3.3	2.394	3.369	2.8	21.3
2 11	8 40.29	+16 37.0	1.785	2.755	4.8	21.3	2 11	8 40.76	+27 21.5	2.419	3.371	5.2	21.5
2 21	8 31.45	+17 21.5	1.848	2.773	8.9	21.6	2 21	8 31.99	+27 28.1	2.474	3.372	8.2	21.7
3 2	8 24.77	+17 57.2	1.937	2.790	12.5	21.8	3 2	8 24.94	+27 23.2	2.555	3.373	10.9	21.9
<b>415302</b>	2013 GX <sub>83</sub>		1 31.1 234°52	1°0/30.5	18		<b>113957</b>	2002 UD <sub>6</sub>		1 31.1 69°02	2°4/ 2.1	18	
12 23	9 20.69	+18 2.4	1.963	2.735	15.1	21.9	12 23	9 14.13	+ 7 21.0	2.221	2.965	14.4	20.0
1 2	9 16.53	+18 28.9	1.861	2.724	12.0	21.7	1 2	9 10.81	+ 7 40.1	2.131	2.970	11.7	19.8
1 12	9 9.72	+19 5.2	1.782	2.713	8.3	21.4	1 12	9 5.44	+ 8 14.6	2.063	2.976	8.5	19.6
1 22	9 0.73	+19 47.3	1.729	2.701	4.0	21.1	1 22	8 58.50	+ 9 2.8	2.021	2.981	5.0	19.4
2 1	8 50.43	+20 29.9	1.705	2.689	1.2	20.9	2 1	8 50.70	+10 1.6	2.007	2.987	2.4	19.3
2 11	8 40.03	+21 7.4	1.710	2.676	5.4	21.1	2 11	8 42.92	+11 5.9	2.023	2.992	4.3	19.4
2 21	8 30.71	+21 35.9	1.744	2.663	9.7	21.4	2 21	8 36.04	+12 10.7	2.068	2.998	7.7	19.6
3 2	8 23.50	+21 53.3	1.802	2.649	13.5	21.6	3 2	8 30.79	+13 11.4	2.139	3.004	11.0	19.8
<b>94145</b>	2000 YH <sub>140</sub>		1 31.1 66°98	0°4/30.9	18		<b>412677</b>	2014 OM <sub>214</sub>		1 31.1 170°95	0°1/31.2	18	
12 23	9 19.89	+17 32.0	1.853	2.630	15.7	19.9	12 23	9 23.10	+16 24.2	1.982	2.744	15.3	22.0
1 2	9 15.66	+17 42.8	1.780	2.645	12.4	19.7	1 2	9 18.17	+16 30.5	1.891	2.748	12.2	21.8
1 12	9 8.87	+18 2.3	1.729	2.661	8.4	19.5	1 12	9 10.65	+16 45.9	1.824	2.751	8.4	21.6
1 22	9 0.17	+18 26.8	1.704	2.676	4.1	19.3	1 22	9 1.11	+17 7.2	1.782	2.753	4.1	21.3
2 1	8 50.51	+18 51.8	1.707	2.692	0.7	19.0	2 1	8 50.46	+17 30.4	1.770	2.755	0.4	21.0
2 11	8 41.09	+19 13.0	1.739	2.707	5.0	19.4	2 11	8 39.88	+17 51.2	1.787	2.756	4.9	21.4
2 21	8 32.99	+19 27.5	1.798	2.723	9.1	19.7	2 21	8 30.51	+18 6.6	1.834	2.756	9.1	21.6
3 2	8 27.06	+19 33.7	1.883	2.738	12.7	19.9	3 2	8 23.27	+18 14.9	1.906	2.756	12.7	21.9
<b>81567</b>	2000 HH <sub>33</sub>		1 31.1 189°87	1°1/ 1.0	18		<b>14098</b>	Şimek		1 31.1 175°01	1°1/30.3	18	
12 23	9 16.89	+ 9 51.8	2.141	2.890	14.7	19.9	12 23	9 17.69	+19 12.0	2.390	3.159	12.8	19.4
1 2	9 13.16	+10 37.0	2.043	2.890	11.8	19.7	1 2	9 13.54	+19 38.4	2.298	3.160	10.1	19.3
1 12	9 7.18	+11 38.5	1.968	2.888	8.3	19.5	1 12	9 7.28	+20 11.5	2.230	3.161	6.9	19.1
1 22	8 59.40	+12 53.4	1.920	2.887	4.4	19.2	1 22	8 59.40	+20 47.9	2.189	3.161	3.3	18.8
2 1	8 50.57	+14 16.6	1.901	2.885	1.1	19.0	2 1	8 50.64	+21 23.2	2.178	3.162	1.3	18.7
2 11	8 41.67	+15 41.8	1.913	2.883	4.4	19.2	2 11	8 41.92	+21 53.4	2.198	3.162	4.6	18.9
2 21	8 33.70	+17 2.6	1.954	2.880	8.4	19.4	2 21	8 34.12	+22 15.7	2.246	3.162	8.0	19.1
3 2	8 27.48	+18 14.3	2.022	2.877	11.9	19.6	3 2	8 28.00	+22 28.8	2.320	3.162	11.1	19.3
<b>461797</b>	2005 WC <sub>83</sub>		1 31.1 160°71	0°6/31.6	18		<b>43259</b>	Wangzhenyi		1 31.1 215°45	0°2/31.3	18	
12 23	9 18.95	+13 41.8	2.454	3.203	13.1	22.7	12 23	9 17.75	+13 21.0	2.224	2.981	14.0	18.2
1 2	9 14.35	+13 57.4	2.362	3.210	10.4	22.6	1 2	9 13.84	+14 1.1	2.121	2.974	11.2	18.0
1 12	9 7.73	+14 22.5	2.294	3.216	7.2	22.4	1 12	9 7.66	+14 54.2	2.042	2.967	7.8	17.8
1 22	8 59.57	+14 54.8	2.252	3.221	3.7	22.1	1 22	8 59.68	+15 57.1	1.989	2.959	3.9	17.5
2 1	8 50.56	+15 30.8	2.241	3.226	0.7	21.9	2 1	8 50.61	+17 5.0	1.966	2.951	0.4	17.2
2 11	8 41.62	+16 6.7	2.261	3.230	4.0	22.2	2 11	8 41.43	+18 12.2	1.973	2.942	4.5	17.5
2 21	8 33.56	+16 39.3	2.311	3.234	7.4	22.4	2 21	8 33.14	+19 13.5	2.010	2.933	8.4	17.7
3 2	8 27.13	+17 6.2	2.387	3.237	10.5	22.6	3 2	8 26.58	+20 5.3	2.074	2.923	11.9	17.9
<b>367334</b>	2008 CO <sub>127</sub>		1 31.1 301°43	2°2/30.2	18		<b>124632</b>	2001 SA <sub>63</sub>		1 31.1 41°15	3°8/ 2.3	18	
12 23	9 22.36	+22 38.2	1.652	2.442	16.8	20.9	12 23	9 16.82	+ 6 39.3	1.382	2.155	20.3	19.5
1 2	9 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>149479</b>	2003 <i>ER</i> <sub>25</sub>		1 31.1 294°56	1°3/30.3	18		<b>240902</b>	2006 <i>DW</i> <sub>105</sub>		1 31.1 196°65	0°6/31.5	18	
12 23	9 17.19	+18 26.0	1.808	2.594	15.7	20.5	12 23	9 20.94	+13 28.0	2.121	2.875	14.7	21.6
1 2	9 14.06	+18 57.4	1.708	2.579	12.5	20.3	1 2	9 16.42	+13 50.9	2.022	2.872	11.8	21.4
1 12	9 8.20	+19 39.7	1.630	2.565	8.6	20.0	1 12	9 9.48	+14 25.9	1.945	2.868	8.2	21.2
1 22	9 0.07	+20 28.6	1.577	2.550	4.2	19.7	1 22	9 0.61	+15 10.1	1.894	2.864	4.2	20.9
2 1	8 50.57	+21 18.0	1.552	2.536	1.6	19.5	2 1	8 50.61	+15 59.3	1.874	2.859	0.6	20.7
2 11	8 40.93	+22 1.8	1.555	2.521	5.8	19.7	2 11	8 40.55	+16 48.3	1.884	2.853	4.6	21.0
2 21	8 32.41	+22 35.2	1.585	2.507	10.3	20.0	2 21	8 31.48	+17 32.6	1.923	2.846	8.7	21.2
3 2	8 26.08	+22 55.7	1.639	2.493	14.3	20.2	3 2	8 24.32	+18 9.1	1.988	2.838	12.3	21.4
<b>307628</b>	2003 <i>SF</i> <sub>83</sub>		1 31.1 77°97	1°3/30.4	18		<b>73511</b>	Lovas		1 31.1 198°83	2°7/28.6	18	
12 23	9 22.60	+18 29.9	1.590	2.375	17.6	21.1	12 23	9 15.98	+23 4.6	2.647	3.421	11.6	19.5
1 2	9 18.20	+18 59.8	1.526	2.396	13.8	20.9	1 2	9 12.15	+24 9.1	2.554	3.419	9.1	19.3
1 12	9 10.81	+19 39.8	1.484	2.417	9.3	20.7	1 12	9 6.35	+25 19.4	2.486	3.417	6.2	19.1
1 22	9 1.19	+20 24.3	1.466	2.438	4.5	20.5	1 22	8 59.00	+26 30.4	2.447	3.415	3.5	18.9
2 1	8 50.49	+21 6.8	1.475	2.459	1.6	20.3	2 1	8 50.76	+27 36.9	2.438	3.412	3.0	18.9
2 11	8 40.14	+21 41.4	1.514	2.480	5.9	20.6	2 11	8 42.48	+28 33.7	2.460	3.409	5.3	19.1
2 21	8 31.42	+22 4.4	1.579	2.500	10.3	20.9	2 21	8 34.99	+29 17.8	2.511	3.406	8.2	19.2
3 2	8 25.26	+22 15.0	1.668	2.521	14.1	21.2	3 2	8 29.01	+29 47.9	2.588	3.403	10.9	19.4
<b>203282</b>	2001 <i>RG</i> <sub>117</sub>		1 31.1 61°18	0°7/31.6	18		<b>496296</b>	2013 <i>BB</i> <sub>71</sub>		1 31.1 314°14	3°3/1.9	17	
12 23	9 15.61	+13 34.7	2.199	2.963	14.0	20.8	12 23	9 13.76	+ 8 18.7	1.334	2.121	20.2	21.4
1 2	9 11.97	+13 50.8	2.117	2.972	11.1	20.6	1 2	9 12.26	+ 8 18.6	1.236	2.101	16.7	21.1
1 12	9 6.23	+14 17.6	2.056	2.982	7.7	20.4	1 12	9 7.55	+ 8 41.2	1.156	2.081	12.3	20.7
1 22	8 58.89	+14 52.4	2.022	2.992	3.9	20.2	1 22	9 0.02	+ 9 26.6	1.097	2.062	7.3	20.4
2 1	8 50.72	+15 31.6	2.017	3.002	0.7	19.9	2 1	8 50.64	+10 31.6	1.063	2.044	3.3	20.1
2 11	8 42.65	+16 11.0	2.042	3.012	4.2	20.2	2 11	8 40.93	+11 48.6	1.053	2.026	6.5	20.2
2 21	8 35.56	+16 46.6	2.095	3.022	7.8	20.5	2 21	8 32.50	+13 8.4	1.069	2.009	12.0	20.5
3 2	8 30.18	+17 15.9	2.174	3.033	11.1	20.7	3 2	8 26.79	+14 22.3	1.106	1.993	17.1	20.7
<b>194505</b>	2001 <i>WO</i> <sub>88</sub>		1 31.1 129°55	1°5/30.2	18		<b>463490</b>	2013 <i>QG</i> <sub>30</sub>		1 31.1 175°02	2°8/29.5	18	
12 23	9 24.82	+19 23.1	1.881	2.651	15.8	21.4	12 23	9 23.89	+25 20.5	2.205	2.977	13.7	21.6
1 2	9 19.59	+19 56.6	1.806	2.667	12.4	21.3	1 2	9 18.63	+25 39.4	2.116	2.979	10.8	21.4
1 12	9 11.62	+20 38.4	1.753	2.683	8.4	21.0	1 12	9 10.89	+26 0.5	2.051	2.980	7.5	21.2
1 22	9 1.58	+21 23.2	1.727	2.699	4.1	20.8	1 22	9 1.23	+26 18.9	2.013	2.981	4.2	21.0
2 1	8 50.48	+22 5.1	1.730	2.713	1.7	20.7	2 1	8 50.56	+26 29.9	2.005	2.982	3.0	20.9
2 11	8 39.60	+22 38.8	1.763	2.727	5.6	21.0	2 11	8 40.03	+26 30.0	2.027	2.982	5.8	21.1
2 21	8 30.12	+23 1.2	1.825	2.740	9.6	21.2	2 21	8 30.71	+26 17.9	2.077	2.982	9.2	21.3
3 2	8 22.96	+23 11.4	1.911	2.752	13.2	21.5	3 2	8 23.45	+25 54.6	2.153	2.981	12.3	21.5
<b>292394</b>	2006 <i>SZ</i> <sub>269</sub>		1 31.1 100°70	6°4/4.8	18		<b>7002</b>	Bronshthen		1 31.1 130°53	2°0/1.5	18	
12 23	9 18.68	- 2 3.6	2.009	2.706	17.1	21.4	12 23	9 22.57	+ 9 24.0	2.184	2.918	14.9	19.7
1 2	9 14.44	- 2 28.2	1.933	2.727	14.5	21.2	1 2	9 17.32	+ 9 37.2	2.103	2.938	12.0	19.5
1 12	9 7.95	- 2 31.9	1.876	2.746	11.6	21.1	1 12	9 9.84	+10 3.7	2.045	2.958	8.5	19.3
1 22	8 59.74	- 2 13.5	1.842	2.766	8.6	20.9	1 22	9 0.66	+10 41.6	2.014	2.977	4.8	19.1
2 1	8 50.66	- 1 34.0	1.834	2.785	6.6	20.8	2 1	8 50.63	+11 27.3	2.013	2.994	2.0	18.9
2 11	8 41.73	- 0 37.1	1.855	2.803	6.9	20.9	2 11	8 40.76	+12 16.1	2.042	3.011	4.4	19.1
2 21	8 33.90	+ 0 31.2	1.904	2.821	9.2	21.1	2 21	8 31.98	+13 3.7	2.102	3.026	8.0	19.4
3 2	8 27.95	+ 1 44.4	1.979	2.839	11.9	21.3	3 2	8 25.07	+13 46.7	2.188	3.041	11.2	19.6
<b>383441</b>	2006 <i>WC</i> <sub>33</sub>		1 31.1 120°61	0°8/31.8	17		<b>83294</b>	2001 <i>RD</i> <sub>99</sub>		1 31.1 44°64	2°1/29.9	18	
12 23	9 15.35	+13 19.7	2.633	3.385	12.2	21.8	12 23	9 19.68	+23 10.0	2.136	2.915	13.8	19.4
1 2	9 11.41	+13 33.2	2.543	3.392	9.7	21.6	1 2	9 15.33	+23 24.1	2.053	2.920	10.9	19.2
1 12	9 5.67	+13 55.6	2.477	3.400	6.7	21.4	1 12	9 8.62	+23 41.8	1.994	2.926	7.4	19.0
1 22	8 58.58	+14 24.9	2.438	3.407	3.5	21.2	1 22	9 0.11	+23 59.0	1.961	2.932	3.9	18.8
2 1	8 50.78	+14 58.2	2.429	3.414	0.8	21.0	2 1	8 50.68	+24 11.3	1.957	2.938	2.3	18.7
2 11	8 43.04	+15 32.0	2.451	3.421	3.6	21.3	2 11	8 41.42	+24 15.2	1.983	2.944	5.3	18.9
2 21	8 36.09	+16 3.4	2.502	3.427	6.8	21.5	2 21	8 33.33	+24 9.4	2.037	2.950	8.9	19.1
3 2	8 30.57	+16 30.0	2.580	3.434	9.7	21.7	3 2	8 27.20	+23 53.6	2.116	2.956	12.0	19.3
<b>191751</b>	2004 <i>SC</i> <sub>50</sub>		1 31.1 210°07	0°9/30.6	18		<b>100129</b>	1993 <i>RQ</i> <sub>1</sub>		1 31.1 13°65	1°9/1.0	18	
12 23	9 22.96	+18 4.3	1.899	2.669	15.6	21.2	12 23	9 15.46	+12 2.8	1.201	2.005	21.1	20.0
1 2	9 18.38	+18 26.0	1.802	2.664	12.4	20.9	1 2	9 13.60	+12 1.7	1.130	2.007	17.0	19.8
1 12	9 11.03	+18 57.3	1.727	2.657	8.5	20.7	1 12	9 8.32	+12 19.8	1.077	2.011	12.0	19.5
1 22	9 1.43	+19 34.1	1.678	2.650	4.2	20.4	1 22	9 0.26	+12 54.9	1.045	2.016	6.4	19.2
2 1	8 50.50	+20 10.9	1.658	2.643	1.1	20.2	2 1	8 50.66	+13 41.5	1.038	2.022	1.9	18.9
2 11	8 39.52	+20 42.5	1.668	2.634	5.5	20.5	2 11	8 41.22	+14 31.9	1.055	2.029	6.3	19.2
2 21	8 29.74	+21 5.1	1.706	2.625	9.9	20.7	2 21	8 33.52	+15 18.8	1.097	2.036	11.8	19.6
3 2	8 22.19	+21 17.0	1.768	2.615	13.7	20.9	3 2	8 28.76	+15 56.7	1.159	2.045	16.6	19.9
<b>415214</b>	2012 <i>HQ</i> <sub>44</sub>		1 31.1 338°77	1°9/30.1	18		<b>377506</b>	2005 <i>EG</i> <sub>183</sub>		1 31.1 26°26	0°9/30.6	18	
12 23	9 18.01	+20 8.0	1.689	2.482	16.4	20.8	12 23	9 17.20	+18 31.9	2.043	2.821	14.4	21.6
1 2	9 14.80	+20 37.2	1.603	2.478	12.9	20.6	1 2	9 13.51	+18 50.1	1.957	2.823	11.4	21.4
1 12	9 8.71	+21 15.6	1.538	2.474	8.9	20.3	1 12	9 7.46	+19 16.1	1.894	2.826	7.7	21.2
1 22	9 0.32	+21 58.1	1.498	2.471	4.4	20.0	1 22	8 59.59	+19 46.3	1.857	2.829	3.8	21.0
2 1	8 50.62	+22 38.4	1.485	2.467	2.1	19.9	2 1	8 50.73	+20 16.4	1.848	2.833	1.1	20.8
2 11	8 40.95	+23 10.4	1.500	2.465	6.2	20.1	2 11	8 41.97	+20 41.8	1.869	2.836	4.9	21.0
2 21	8 32.61	+23 30.3	1.541	2.462	10.6	20.4	2 21	8 34.30	+20 59.7	1.918	2.840	8.8	21.3
3 2	8 26.64	+23 36.9	1.606	2.460	14.5	20.6	3 2	8 28.56	+21 8.4	1.991	2.844	12.2	21.5
<b>385862</b>	2006 <i>QK</i> <sub>184</sub>		1 31.1 80°35	4°1/28.2	18		<b>396634</b>	2001 <i>VM</i> <sub>13</sub>		1 31.1 118°72	3°3/29.3	17	
12 23	9 19.32	+28 59.5	2.392	3.172	12.5	21.1	12 23	9 27.52	+				

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1 31.1

1 31.2

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>246683</b>	2008 YW <sub>161</sub>		1 31.1 356°60	5°0/26.7	18		<b>281066</b>	2006 KT <sub>122</sub>		1 31.2 263°89	1°1/31.9	17	
12 23	9 16.21	+27 28.7	2.146	2.937	13.4	20.3	12 23	9 15.57	+11 52.3	2.300	3.055	13.7	21.5
1 2	9 12.98	+29 4.8	2.064	2.936	10.6	20.1	1 2	9 12.07	+12 9.9	2.193	3.042	11.0	21.3
1 12	9 7.29	+30 46.1	2.007	2.936	7.6	19.9	1 12	9 6.46	+12 39.6	2.108	3.029	7.8	21.1
1 22	8 59.60	+32 24.7	1.977	2.935	5.4	19.8	1 22	8 59.14	+13 19.4	2.049	3.016	4.1	20.8
2 1	8 50.74	+33 52.2	1.977	2.935	5.5	19.8	2 1	8 50.81	+14 6.1	2.019	3.003	1.1	20.6
2 11	8 41.82	+35 1.8	2.006	2.935	7.8	19.9	2 11	8 42.38	+14 55.2	2.020	2.990	4.2	20.8
2 21	8 33.94	+35 50.1	2.061	2.935	10.8	20.1	2 21	8 34.74	+15 42.4	2.049	2.977	8.0	21.0
3 2	8 28.05	+36 16.8	2.139	2.935	13.5	20.3	3 2	8 28.73	+16 24.1	2.105	2.963	11.4	21.2
<b>110365</b>	2001 SR <sub>325</sub>		1 31.1 292°17	4°4/28.1	18		<b>421856</b>	2014 QP <sub>137</sub>		1 31.2 216°82	0°4/30.9	17	
12 23	9 19.44	+29 8.1	2.264	3.048	13.0	19.6	12 23	9 21.48	+16 45.8	1.979	2.746	15.2	22.5
1 2	9 15.26	+29 52.3	2.178	3.045	10.3	19.4	1 2	9 17.12	+17 6.9	1.880	2.739	12.1	22.3
1 12	9 8.67	+30 37.3	2.115	3.042	7.4	19.2	1 12	9 10.13	+17 38.2	1.803	2.731	8.3	22.0
1 22	9 0.20	+31 17.5	2.079	3.039	5.0	19.0	1 22	9 1.02	+18 16.1	1.751	2.723	4.1	21.8
2 1	8 50.70	+31 46.9	2.072	3.036	4.6	19.0	2 1	8 50.64	+18 55.8	1.729	2.714	0.7	21.5
2 11	8 41.27	+32 1.6	2.093	3.033	6.9	19.1	2 11	8 40.20	+19 32.1	1.737	2.705	5.1	21.8
2 21	8 32.96	+31 59.9	2.142	3.030	9.8	19.3	2 21	8 30.84	+20 1.0	1.773	2.695	9.4	22.0
3 2	8 26.61	+31 42.7	2.215	3.027	12.6	19.5	3 2	8 23.57	+20 20.2	1.835	2.684	13.2	22.2
<b>341796</b>	2007 XD <sub>20</sub>		1 31.1 130°47	1°5/ 1.2	18		<b>256367</b>	2006 XH <sub>67</sub>		1 31.2 53°87	1°3/30.3	18	
12 23	9 17.76	+12 15.9	2.609	3.352	12.5	20.8	12 23	9 17.18	+14 42.5	1.567	2.354	17.7	19.6
1 2	9 13.27	+12 6.2	2.518	3.360	10.0	20.6	1 2	9 14.08	+16 0.6	1.503	2.374	13.8	19.4
1 12	9 6.94	+12 5.0	2.450	3.367	7.1	20.4	1 12	9 8.14	+17 35.4	1.460	2.395	9.4	19.1
1 22	8 59.23	+12 10.9	2.410	3.374	3.9	20.2	1 22	9 0.01	+19 19.8	1.443	2.416	4.5	18.9
2 1	8 50.80	+12 22.0	2.399	3.381	1.5	20.0	2 1	8 50.75	+21 4.3	1.454	2.438	1.5	18.7
2 11	8 42.44	+12 35.7	2.419	3.388	3.7	20.2	2 11	8 41.69	+22 39.2	1.493	2.459	6.0	19.1
2 21	8 34.92	+12 49.6	2.469	3.395	6.9	20.4	2 21	8 34.09	+23 57.7	1.560	2.481	10.5	19.4
3 2	8 28.89	+13 1.8	2.546	3.401	9.8	20.6	3 2	8 28.88	+24 56.7	1.650	2.503	14.3	19.7
<b>512955</b>	2017 OO <sub>41</sub>		1 31.1 159°97	3°1/ 3.3	18		<b>432478</b>	2010 DJ <sub>58</sub>		1 31.2 237°02	6°6/ 7.0	16	
12 23	9 13.63	+ 3 17.7	3.014	3.720	11.7	21.9	12 23	9 13.48	-10 28.7	3.265	3.880	12.4	22.5
1 2	9 9.84	+ 3 26.2	2.915	3.725	9.7	21.7	1 2	9 9.75	-10 47.5	3.144	3.865	11.0	22.3
1 12	9 4.51	+ 3 47.8	2.839	3.729	7.4	21.6	1 12	9 4.50	-10 49.6	3.043	3.849	9.4	22.2
1 22	8 58.03	+ 4 21.7	2.789	3.733	4.9	21.4	1 22	8 58.07	-10 33.2	2.965	3.833	7.9	22.0
2 1	8 50.91	+ 5 6.2	2.769	3.737	3.2	21.3	2 1	8 50.93	- 9 57.7	2.914	3.816	6.8	21.9
2 11	8 43.80	+ 5 58.5	2.779	3.741	4.0	21.3	2 11	8 43.69	- 9 4.4	2.891	3.799	6.7	21.9
2 21	8 37.31	+ 6 54.9	2.820	3.744	6.2	21.5	2 21	8 36.96	- 7 56.4	2.897	3.781	7.7	21.9
3 2	8 32.00	+ 7 51.7	2.889	3.747	8.7	21.7	3 2	8 31.29	- 6 38.1	2.930	3.763	9.3	22.0
<b>462999</b>	2011 FT <sub>103</sub>		1 31.1 237°69	0°1/31.2	17		<b>63756</b>	2001 QM <sub>269</sub>		1 31.2 119°63	1°3/ 1.0	18	
12 23	9 16.32	+14 26.3	2.231	2.994	13.8	21.6	12 23	9 22.04	+10 43.9	1.817	2.571	16.8	19.6
1 2	9 12.72	+14 58.1	2.131	2.988	11.0	21.4	1 2	9 17.44	+11 15.0	1.741	2.590	13.4	19.4
1 12	9 6.91	+15 41.4	2.053	2.981	7.6	21.2	1 12	9 10.21	+12 2.2	1.687	2.608	9.4	19.2
1 22	8 59.36	+16 33.2	2.003	2.974	3.8	20.9	1 22	9 0.96	+13 2.1	1.658	2.626	4.9	19.0
2 1	8 50.78	+17 29.0	1.981	2.966	0.3	20.6	2 1	8 50.67	+14 9.1	1.659	2.643	1.3	18.8
2 11	8 42.14	+18 23.6	1.990	2.959	4.4	20.9	2 11	8 40.55	+15 16.5	1.689	2.659	4.9	19.1
2 21	8 34.37	+19 12.7	2.027	2.951	8.3	21.2	2 21	8 31.74	+16 18.6	1.747	2.674	9.1	19.4
3 2	8 28.32	+19 52.9	2.091	2.943	11.7	21.4	3 2	8 25.13	+17 11.3	1.832	2.689	12.9	19.6
<b>461706</b>	2005 SX <sub>44</sub>		1 31.2 41°91	15°3/16.7	16		<b>402935</b>	2007 TH <sub>239</sub>		1 31.2 181°28	1°3/30.3	18	
12 23	9 15.02	-24 3.4	1.604	2.189	24.4	20.7	12 23	9 22.23	+18 45.3	2.164	2.928	14.1	22.4
1 2	9 12.32	-25 14.3	1.553	2.218	22.5	20.6	1 2	9 17.41	+19 22.6	2.071	2.930	11.2	22.2
1 12	9 6.86	-25 46.5	1.513	2.247	20.5	20.5	1 12	9 10.15	+20 8.5	2.001	2.930	7.6	22.0
1 22	8 59.33	-25 33.8	1.487	2.276	18.4	20.4	1 22	9 0.95	+20 58.6	1.959	2.930	3.7	21.7
2 1	8 50.80	-24 33.0	1.478	2.306	16.6	20.4	2 1	8 50.67	+21 47.5	1.947	2.930	1.5	21.6
2 11	8 42.56	-22 47.3	1.488	2.337	15.5	20.4	2 11	8 40.38	+22 29.8	1.965	2.928	5.1	21.8
2 21	8 35.77	-20 25.7	1.521	2.368	15.4	20.4	2 21	8 31.16	+23 2.1	2.012	2.926	8.9	22.1
3 2	8 31.31	-17 41.2	1.575	2.399	16.3	20.6	3 2	8 23.90	+23 22.8	2.085	2.923	12.3	22.3
<b>5780</b>	Lafontaine		1 31.2 133°59	3°1/ 2.9	18		<b>20376</b>	Joyhines		1 31.2 297°30	1°4/30.4	18	
12 23	9 14.37	+ 5 5.4	2.940	3.654	11.8	18.1	12 23	9 18.44	+18 28.7	1.565	2.359	17.4	18.9
1 2	9 10.42	+ 4 56.4	2.846	3.662	9.7	17.9	1 2	9 15.54	+18 55.9	1.469	2.344	13.9	18.6
1 12	9 4.91	+ 4 58.8	2.775	3.670	7.3	17.8	1 12	9 9.54	+19 35.1	1.394	2.330	9.6	18.3
1 22	8 58.22	+ 5 12.2	2.730	3.678	4.8	17.6	1 22	9 0.91	+20 21.7	1.342	2.316	4.7	18.0
2 1	8 50.91	+ 5 35.3	2.715	3.685	3.1	17.5	2 1	8 50.66	+21 9.0	1.318	2.302	1.7	17.7
2 11	8 43.63	+ 6 5.7	2.730	3.692	4.0	17.6	2 11	8 40.25	+21 49.9	1.321	2.288	6.4	18.0
2 21	8 37.04	+ 6 40.5	2.776	3.699	6.3	17.7	2 21	8 31.16	+22 19.3	1.349	2.274	11.4	18.2
3 2	8 31.66	+ 7 16.6	2.848	3.705	8.8	17.9	3 2	8 24.64	+22 34.6	1.401	2.261	15.9	18.5
<b>456664</b>	2007 RQ <sub>55</sub>		1 31.2 105°29	1°6/ 1.3	18		<b>301981</b>	2000 JB <sub>20</sub>		1 31.2 282°65	0°6/31.4	17	
12 23	9 16.81	+11 14.0	2.436	3.182	13.2	21.8	12 23	9 20.92	+15 5.0	1.565	2.346	18.0	21.4
1 2	9 12.66	+11 17.2	2.351	3.194	10.6	21.6	1 2	9 17.68	+15 6.6	1.454	2.320	14.6	21.1
1 12	9 6.59	+11 30.9	2.289	3.206	7.5	21.5	1 12	9 11.19	+15 21.2	1.363	2.293	10.3	20.7
1 22	8 59.08	+11 53.4	2.253	3.218	4.1	21.3	1 22	9 1.84	+15 46.6	1.295	2.266	5.3	20.4
2 1	8 50.83	+12 22.0	2.248	3.230	1.6	21.1	2 1	8 50.56	+16 18.3	1.254	2.239	0.7	20.0
2 11	8 42.67	+12 53.3	2.272	3.242	3.9	21.3	2 11	8 38.84	+16 50.4	1.241	2.211	6.1	20.3
2 21	8 35.41	+13 24.1	2.326	3.253	7.2	21.5	2 21	8 28.29	+17 17.6	1.253	2.184	11.6	20.5
3 2	8 29.70	+13 51.6	2.407	3.264	10.2	21.7	3 2	8 20.33	+17 36.5	1.289	2.156	16.6	20.7
<b>313843</b>	2004 DQ <sub>26</sub>		1 31.2 282°92	0°1/31.2	18		<b>116880</b>	2004 FB <sub>116</sub>		1 31.2 197°65	0°8/31.9	17	
12 23	9 16.34	+13 13.0	1.795	2.570	16.2	21.1	12 23	9 14.37	+11 41.9	3.046	3.786	11.0	20.4
1 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>34186</b>	2000 QT <sub>47</sub>		1 31.2 195°16	1°6/	1.7 18		<b>400799</b>	2010 GW <sub>15</sub>		1 31.2 181°82	1°6/	1.1 18	
12 23	9 14.21	+ 9 6.3	2.827	3.561	11.8	20.3	12 23	9 24.96	+12 59.4	2.295	3.033	14.2	21.7
1 2	9 10.49	+ 9 29.2	2.724	3.559	9.5	20.2	1 2	9 19.27	+12 40.3	2.195	3.034	11.4	21.5
1 12	9 5.08	+10 3.7	2.644	3.557	6.8	20.0	1 12	9 11.27	+12 29.6	2.119	3.035	8.1	21.3
1 22	8 58.38	+10 48.1	2.592	3.555	3.9	19.8	1 22	9 1.47	+12 25.9	2.070	3.035	4.4	21.1
2 1	8 50.94	+11 39.6	2.570	3.552	1.6	19.6	2 1	8 50.68	+12 27.3	2.051	3.034	1.6	20.9
2 11	8 43.47	+12 34.5	2.580	3.549	3.5	19.7	2 11	8 39.92	+12 31.2	2.064	3.032	4.4	21.1
2 21	8 36.67	+13 29.2	2.619	3.546	6.5	19.9	2 21	8 30.20	+12 35.5	2.107	3.029	8.1	21.3
3 2	8 31.14	+14 20.2	2.686	3.542	9.3	20.1	3 2	8 22.33	+12 38.1	2.177	3.026	11.4	21.5
<b>311671</b>	2006 SC <sub>48</sub>		1 31.2 316°12	0°4/31.4	18		<b>58947</b>	1998 QX <sub>52</sub>		1 31.2 89°74	5°6/	4.5 18	
12 23	9 17.40	+14 23.7	1.638	2.420	17.2	20.7	12 23	9 20.55	- 0 55.4	1.988	2.688	17.2	20.7
1 2	9 14.39	+14 40.6	1.547	2.415	13.8	20.5	1 2	9 15.84	- 1 2.9	1.920	2.719	14.4	20.6
1 12	9 8.52	+15 11.7	1.478	2.409	9.6	20.2	1 12	9 8.87	- 0 49.1	1.872	2.750	11.2	20.5
1 22	9 0.32	+15 53.7	1.432	2.404	4.8	19.9	1 22	9 0.24	- 0 14.1	1.848	2.780	8.0	20.3
2 1	8 50.75	+16 41.4	1.414	2.399	0.5	19.6	2 1	8 50.81	+ 0 40.0	1.852	2.810	5.8	20.2
2 11	8 41.14	+17 28.6	1.423	2.394	5.5	19.9	2 11	8 41.63	+ 1 48.3	1.885	2.839	6.2	20.3
2 21	8 32.80	+18 9.8	1.459	2.389	10.3	20.2	2 21	8 33.65	+ 3 4.3	1.946	2.867	8.7	20.5
3 2	8 26.81	+18 41.3	1.519	2.385	14.5	20.4	3 2	8 27.59	+ 4 21.6	2.034	2.894	11.6	20.8
<b>428122</b>	2006 SJ <sub>2</sub>		1 31.2 63°81	6°6/30.7	16		<b>420078</b>	2011 EZ <sub>33</sub>		1 31.2 353°45	2°9/29.9	18	
12 23	9 49.62	+33 50.5	0.917	1.720	26.1	20.6	12 23	9 19.21	+23 57.6	1.510	2.314	17.4	20.4
1 2	9 41.78	+33 15.3	0.863	1.737	21.2	20.3	1 2	9 16.14	+24 6.4	1.428	2.309	13.8	20.2
1 12	9 27.98	+32 28.2	0.825	1.754	15.3	20.0	1 12	9 9.85	+24 19.5	1.367	2.304	9.6	19.9
1 22	9 9.74	+31 17.0	0.807	1.772	9.4	19.8	1 22	9 0.99	+24 31.6	1.329	2.301	5.1	19.7
2 1	8 49.94	+29 34.8	0.815	1.790	6.7	19.7	2 1	8 50.73	+24 36.5	1.318	2.299	3.1	19.5
2 11	8 31.98	+27 26.0	0.848	1.808	10.6	20.0	2 11	8 40.61	+24 29.7	1.333	2.297	7.0	19.7
2 21	8 18.32	+25 3.6	0.905	1.826	16.1	20.4	2 21	8 32.10	+24 9.6	1.374	2.297	11.5	20.0
3 2	8 10.04	+22 40.8	0.983	1.844	21.0	20.7	3 2	8 26.30	+23 37.2	1.438	2.297	15.6	20.2
<b>31396</b>	1998 YQ <sub>12</sub>		1 31.2 225°58	2°5/29.6	18		<b>419804</b>	2010 WC <sub>54</sub>		1 31.2 236°12	1°1/31.8	18	
12 23	9 20.33	+19 22.3	1.711	2.497	16.5	18.5	12 23	9 19.47	+13 44.1	1.928	2.693	15.6	21.1
1 2	9 16.76	+20 22.4	1.619	2.491	13.0	18.3	1 2	9 15.50	+13 41.3	1.833	2.689	12.5	20.9
1 12	9 10.21	+21 35.3	1.549	2.484	8.9	18.0	1 12	9 8.99	+13 49.5	1.760	2.685	8.8	20.7
1 22	9 1.19	+22 54.6	1.505	2.477	4.5	17.8	1 22	9 0.46	+14 6.7	1.712	2.681	4.6	20.4
2 1	8 50.67	+24 12.0	1.489	2.470	2.7	17.6	2 1	8 50.78	+14 29.4	1.693	2.677	1.1	20.1
2 11	8 40.02	+25 19.0	1.501	2.462	6.7	17.8	2 11	8 41.09	+14 53.7	1.702	2.673	4.8	20.4
2 21	8 30.65	+26 10.0	1.541	2.454	11.2	18.1	2 21	8 32.51	+15 15.9	1.740	2.668	9.1	20.6
3 2	8 23.69	+26 42.8	1.604	2.445	15.2	18.3	3 2	8 25.98	+15 33.2	1.802	2.664	12.9	20.9
<b>286757</b>	2002 GG <sub>186</sub>		1 31.2 221°73	4°6/	2.9 18		<b>450472</b>	2005 WB <sub>145</sub>		1 31.2 242°28	3°6/	1.9 18	
12 23	9 18.36	+ 4 1.5	1.917	2.648	16.8	21.4	12 23	9 21.47	+ 8 56.2	1.659	2.415	18.1	21.1
1 2	9 14.65	+ 3 48.5	1.816	2.642	14.0	21.2	1 2	9 17.59	+ 8 29.4	1.560	2.406	14.9	20.8
1 12	9 8.45	+ 3 53.6	1.736	2.635	10.7	21.0	1 12	9 10.76	+ 8 17.6	1.481	2.396	11.0	20.5
1 22	9 0.22	+ 4 17.4	1.679	2.628	7.1	20.7	1 22	9 1.47	+ 8 20.8	1.426	2.386	6.7	20.3
2 1	8 50.77	+ 4 58.4	1.650	2.621	4.7	20.6	2 1	8 50.69	+ 8 37.5	1.398	2.376	3.6	20.1
2 11	8 41.20	+ 5 52.5	1.649	2.613	5.9	20.6	2 11	8 39.77	+ 9 3.9	1.397	2.365	6.0	20.2
2 21	8 32.64	+ 6 54.0	1.677	2.605	9.4	20.8	2 21	8 30.07	+ 9 35.3	1.424	2.354	10.5	20.4
3 2	8 26.05	+ 7 56.8	1.729	2.596	13.0	21.0	3 2	8 22.76	+10 6.9	1.475	2.343	14.7	20.6
<b>257563</b>	1998 UA <sub>2</sub>		1 31.2 43°50	9°1/27.6	18		<b>73767</b>	Bibianderson		1 31.2 11°21	8°2/	6.5 18	
12 23	9 28.69	+36 2.5	1.308	2.114	19.5	19.8	12 23	9 13.56	- 8 56.9	1.071	1.808	27.1	18.8
1 2	9 24.02	+37 6.8	1.267	2.139	15.9	19.6	1 2	9 12.65	- 8 3.5	0.991	1.808	23.6	18.5
1 12	9 15.25	+38 3.7	1.246	2.165	12.2	19.5	1 12	9 8.11	- 6 14.6	0.924	1.809	19.0	18.2
1 22	9 3.47	+38 41.4	1.247	2.192	9.5	19.4	1 22	9 0.44	- 3 24.7	0.874	1.811	13.8	17.9
2 1	8 50.50	+38 50.2	1.273	2.219	9.4	19.5	2 1	8 50.78	+ 0 21.9	0.848	1.813	9.2	17.6
2 11	8 38.45	+38 27.3	1.323	2.247	11.6	19.7	2 11	8 40.95	+ 4 45.8	0.848	1.816	8.9	17.6
2 21	8 29.01	+37 36.4	1.397	2.275	14.7	19.9	2 21	8 32.82	+ 9 18.2	0.874	1.819	13.3	17.9
3 2	8 23.16	+36 24.6	1.491	2.303	17.6	20.2	3 2	8 27.88	+13 31.5	0.925	1.823	18.6	18.2
<b>502495</b>	2015 BM <sub>395</sub>		1 31.2 310°08	2°6/29.1	18		<b>166236</b>	2002 FM <sub>33</sub>		1 31.2 285°09	7°0/27.1	18	
12 23	9 16.07	+21 7.2	2.146	2.929	13.7	20.8	12 23	9 22.54	+30 35.9	1.582	2.383	16.9	19.7
1 2	9 12.70	+22 8.9	2.057	2.927	10.7	20.6	1 2	9 19.24	+31 49.3	1.491	2.366	13.7	19.4
1 12	9 7.00	+23 19.1	1.991	2.925	7.3	20.4	1 12	9 12.37	+33 6.7	1.422	2.349	10.2	19.2
1 22	8 59.46	+24 32.2	1.953	2.924	3.9	20.1	1 22	9 2.44	+34 17.9	1.377	2.332	7.5	19.0
2 1	8 50.85	+25 41.8	1.944	2.922	2.8	20.1	2 1	8 50.60	+35 12.0	1.358	2.315	7.5	18.9
2 11	8 42.21	+26 41.6	1.964	2.920	5.8	20.3	2 11	8 38.59	+35 40.4	1.365	2.298	10.4	19.0
2 21	8 34.57	+27 27.6	2.012	2.919	9.3	20.5	2 21	8 28.16	+35 40.4	1.396	2.281	14.2	19.2
3 2	8 28.77	+27 58.2	2.085	2.917	12.5	20.7	3 2	8 20.75	+35 14.4	1.449	2.264	17.9	19.4
<b>145710</b>	1989 SF <sub>3</sub>		1 31.2 100°67	2°0/29.8	18		<b>379386</b>	2009 XV <sub>19</sub>		1 31.2 20°07	0°1/31.2	18	
12 23	9 23.56	+20 54.2	2.109	2.877	14.3	20.4	12 23	9 16.83	+16 7.7	1.744	2.528	16.3	21.2
1 2	9 18.23	+21 36.4	2.044	2.905	11.2	20.3	1 2	9 13.60	+16 14.9	1.664	2.533	12.9	21.0
1 12	9 10.51	+22 24.5	2.002	2.932	7.6	20.1	1 12	9 7.75	+16 32.7	1.606	2.538	8.9	20.8
1 22	9 1.03	+23 13.5	1.988	2.958	3.8	19.9	1 22	8 59.85	+16 57.8	1.572	2.544	4.4	20.5
2 1	8 50.72	+23 57.5	2.003	2.984	2.2	19.8	2 1	8 50.86	+17 26.0	1.565	2.550	0.4	20.2
2 11	8 40.70	+24 32.2	2.050	3.009	5.3	20.1	2 11	8 42.00	+17 52.3	1.587	2.557	5.1	20.6
2 21	8 31.97	+24 54.9	2.125	3.034	8.8	20.3	2 21	8 34.42	+18 13.0	1.635	2.564	9.4	20.8
3 2	8 25.30	+25 5.3	2.225	3.057	11.9	20.6	3 2	8 29.01	+18 25.9	1.708	2.572	13.3	21.1
<b>253146</b>	2002 VC <sub>72</sub>		1 31.2 68°84	1°0/30.5	18		<b>14719</b>	Sobey		1 31.2 45°57	2°2/30.2	18	
12 23	9 20.67	+16 43.3	1.631	2.414	17.3	21.1	12 23	9 22.26	+20 30.3	1.247	2.054	20.2	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>258478</b>	2002 AY <sub>18</sub>		1 31.2	25°95'	7.1/ 2.4	18	<b>232015</b>	2001 SG <sub>256</sub>		1 31.2	154°02'	1.4/ 1.1	18
12 23	9 26.70	+ 4 24.1	1.834	2.553	17.9	19.8	12 23	9 21.88	+11 19.2	1.891	2.645	16.3	21.9
1 2	9 21.18	+ 2 38.1	1.743	2.555	15.1	19.6	1 2	9 17.36	+11 37.3	1.805	2.653	13.1	21.7
1 12	9 12.88	+ 1 2.8	1.673	2.558	11.9	19.4	1 12	9 10.24	+12 10.1	1.740	2.661	9.2	21.4
1 22	9 2.37	- 0 17.7	1.628	2.560	8.8	19.2	1 22	9 1.09	+12 54.8	1.701	2.668	4.9	21.2
2 1	8 50.63	- 1 20.1	1.611	2.563	7.1	19.1	2 1	8 50.80	+13 46.9	1.690	2.674	1.4	21.0
2 11	8 38.94	- 2 2.9	1.623	2.566	8.1	19.2	2 11	8 40.58	+14 40.8	1.710	2.680	4.8	21.2
2 21	8 28.53	- 2 27.5	1.663	2.570	10.9	19.3	2 21	8 31.56	+15 31.3	1.758	2.685	9.1	21.5
3 2	8 20.39	- 2 37.5	1.727	2.573	14.1	19.5	3 2	8 24.66	+16 14.4	1.831	2.689	12.9	21.7
<b>472570</b>	2015 DN <sub>84</sub>		1 31.2	193°69'	2°0/ 1.8	17	<b>361541</b>	2007 PF <sub>9</sub>		1 31.2	121°43'	2°2/ 1.6	18
12 23	9 14.35	+ 8 33.8	2.395	3.137	13.5	21.7	12 23	9 19.78	+ 8 47.1	1.774	2.528	17.2	21.1
1 2	9 10.93	+ 8 54.3	2.297	3.137	10.9	21.5	1 2	9 15.82	+ 9 7.0	1.693	2.539	13.9	20.9
1 12	9 5.57	+ 9 28.6	2.222	3.137	7.9	21.3	1 12	9 9.24	+ 9 44.7	1.633	2.551	9.9	20.6
1 22	8 58.70	+10 14.9	2.174	3.136	4.5	21.1	1 22	9 0.60	+10 37.7	1.598	2.562	5.6	20.4
2 1	8 50.97	+11 10.2	2.154	3.135	2.0	20.9	2 1	8 50.86	+11 41.4	1.590	2.573	2.2	20.2
2 11	8 43.22	+12 10.0	2.165	3.135	4.0	21.0	2 11	8 41.21	+12 49.4	1.612	2.583	5.0	20.4
2 21	8 36.27	+13 9.7	2.205	3.134	7.4	21.2	2 21	8 32.80	+13 55.2	1.662	2.593	9.2	20.7
3 2	8 30.83	+14 5.3	2.272	3.133	10.5	21.4	3 2	8 26.57	+14 53.9	1.737	2.602	13.1	20.9
<b>72074</b>	2000 YV <sub>35</sub>		1 31.2	337°81'	0°5/30.9	18	<b>205884</b>	2002 FC <sub>2</sub>		1 31.2	285°95'	3°2/ 1.9	18
12 23	9 12.51	+14 16.1	1.278	2.088	19.7	18.3	12 23	9 17.07	+ 8 12.8	1.642	2.405	18.0	19.9
1 2	9 11.40	+14 57.4	1.192	2.075	15.8	18.0	1 2	9 14.33	+ 8 11.3	1.533	2.384	14.8	19.6
1 12	9 7.01	+15 59.6	1.125	2.064	11.0	17.7	1 12	9 8.70	+ 8 28.5	1.444	2.362	10.9	19.3
1 22	8 59.81	+17 18.3	1.080	2.054	5.4	17.4	1 22	9 0.59	+ 9 4.1	1.378	2.340	6.5	19.0
2 1	8 50.86	+18 45.2	1.059	2.044	0.8	17.0	2 1	8 50.84	+ 9 55.7	1.338	2.318	3.2	18.8
2 11	8 41.75	+20 9.5	1.065	2.036	6.7	17.4	2 11	8 40.75	+10 57.6	1.326	2.297	5.8	18.9
2 21	8 34.13	+21 22.0	1.094	2.029	12.4	17.7	2 21	8 31.71	+12 2.9	1.340	2.275	10.6	19.1
3 2	8 29.33	+22 16.7	1.145	2.023	17.4	17.9	3 2	8 24.95	+13 5.0	1.378	2.253	15.2	19.3
<b>408890</b>	2001 UU <sub>28</sub>		1 31.2	52°34'	1°3/31.9	18	<b>201279</b>	2002 RT <sub>255</sub>		1 31.2	90°47'	5°2/ 4.3	18
12 23	9 18.27	+11 58.0	1.578	2.355	18.0	20.8	12 23	9 15.66	- 0 1.0	2.304	3.007	15.0	21.1
1 2	9 14.80	+12 13.2	1.513	2.375	14.3	20.6	1 2	9 11.90	- 0 18.2	2.220	3.021	12.6	21.0
1 12	9 8.56	+12 44.2	1.468	2.395	10.0	20.4	1 12	9 6.18	- 0 18.0	2.156	3.035	9.9	20.8
1 22	9 0.22	+13 27.7	1.447	2.416	5.2	20.1	1 22	8 58.99	+ 0 0.2	2.117	3.048	7.2	20.7
2 1	8 50.85	+14 18.4	1.453	2.437	1.3	19.9	2 1	8 51.02	+ 0 35.2	2.106	3.062	5.3	20.6
2 11	8 41.75	+15 9.9	1.487	2.459	5.2	20.2	2 11	8 43.12	+ 1 23.8	2.123	3.075	5.8	20.6
2 21	8 34.11	+15 56.6	1.548	2.480	9.6	20.6	2 21	8 36.12	+ 2 21.3	2.168	3.089	8.0	20.8
3 2	8 28.82	+16 34.8	1.633	2.502	13.5	20.8	3 2	8 30.70	+ 3 22.6	2.240	3.102	10.7	21.0
<b>340609</b>	2006 QC <sub>55</sub>		1 31.2	148°99'	3°3/28.7	17	<b>431327</b>	2006 WP <sub>176</sub>		1 31.2	212°08'	7°0/ 7.2	17
12 23	9 22.00	+29 3.0	2.885	3.650	10.9	21.2	12 23	9 14.17	-11 27.8	3.351	3.956	12.2	21.9
1 2	9 16.56	+29 27.8	2.801	3.658	8.7	21.0	1 2	9 10.24	-12 5.0	3.240	3.948	10.9	21.8
1 12	9 9.18	+29 52.0	2.743	3.665	6.2	20.9	1 12	9 4.84	-12 26.7	3.148	3.940	9.5	21.7
1 22	9 0.37	+30 11.4	2.713	3.673	3.9	20.8	1 22	8 58.29	-12 30.7	3.079	3.932	8.1	21.6
2 1	8 50.85	+30 22.2	2.713	3.679	3.5	20.7	2 1	8 51.08	-12 16.1	3.036	3.923	7.1	21.5
2 11	8 41.48	+30 22.0	2.744	3.686	5.3	20.9	2 11	8 43.80	-11 43.6	3.021	3.913	7.0	21.5
2 21	8 33.06	+30 10.0	2.805	3.692	7.8	21.0	2 21	8 37.04	-10 55.8	3.034	3.903	7.8	21.5
3 2	8 26.26	+29 47.1	2.892	3.698	10.1	21.2	3 2	8 31.33	- 9 56.5	3.073	3.893	9.2	21.6
<b>283131</b>	2008 WM <sub>90</sub>		1 31.2	59°63'	2°8/28.9	18	<b>140261</b>	2001 SJ <sub>263</sub>		1 31.2	69°02'	2°8/ 1.6	18
12 23	9 16.59	+20 38.0	2.049	2.833	14.2	20.4	12 23	9 22.82	+10 53.7	1.750	2.506	17.3	19.0
1 2	9 13.07	+21 59.4	1.981	2.851	11.0	20.2	1 2	9 18.01	+10 22.8	1.681	2.528	13.9	18.8
1 12	9 7.20	+23 29.5	1.936	2.870	7.5	20.1	1 12	9 10.57	+10 4.4	1.632	2.549	10.0	18.6
1 22	8 59.53	+25 1.6	1.918	2.888	4.0	19.9	1 22	9 1.17	+ 9 57.9	1.609	2.571	5.8	18.4
2 1	8 50.92	+26 28.0	1.930	2.907	3.1	19.9	2 1	8 50.84	+10 1.0	1.613	2.593	2.8	18.3
2 11	8 42.42	+27 42.1	1.972	2.926	6.0	20.1	2 11	8 40.82	+10 10.6	1.646	2.615	5.2	18.5
2 21	8 35.04	+28 39.8	2.042	2.945	9.4	20.3	2 21	8 32.23	+10 23.1	1.707	2.636	9.1	18.8
3 2	8 29.59	+29 19.7	2.137	2.964	12.4	20.5	3 2	8 25.91	+10 35.5	1.793	2.658	12.7	19.0
<b>240537</b>	2004 GU <sub>46</sub>		1 31.2	94°07'	4°0/ 3.4	18	<b>281124</b>	2007 BH <sub>70</sub>		1 31.2	238°68'	5°1/27.1	17
12 23	9 14.26	+ 3 1.0	2.470	3.186	13.8	20.7	12 23	9 23.47	+32 41.0	2.601	3.370	11.9	21.5
1 2	9 10.72	+ 2 52.0	2.377	3.191	11.5	20.5	1 2	9 18.36	+33 33.3	2.499	3.354	9.6	21.3
1 12	9 5.34	+ 2 57.9	2.306	3.197	8.8	20.3	1 12	9 10.85	+34 25.0	2.422	3.337	7.2	21.2
1 22	8 58.56	+ 3 18.6	2.260	3.202	6.0	20.2	1 22	9 1.40	+35 9.9	2.372	3.320	5.4	21.0
2 1	8 51.01	+ 3 52.8	2.242	3.208	4.1	20.1	2 1	8 50.80	+35 42.1	2.352	3.301	5.4	21.0
2 11	8 43.49	+ 4 37.4	2.253	3.213	4.9	20.1	2 11	8 40.13	+35 57.3	2.361	3.283	7.3	21.1
2 21	8 36.76	+ 5 28.2	2.294	3.219	7.4	20.3	2 21	8 30.44	+35 54.3	2.399	3.264	9.8	21.2
3 2	8 31.47	+ 6 20.9	2.361	3.224	10.1	20.5	3 2	8 22.62	+35 34.0	2.461	3.244	12.3	21.3
<b>429021</b>	2009 BB <sub>136</sub>		1 31.2	224°97'	0°9/31.9	17	<b>425012</b>	2009 DN <sub>124</sub>		1 31.2	337°33'	0°6/30.8	18
12 23	9 14.29	+11 27.1	2.452	3.204	13.0	21.8	12 23	9 14.47	+17 2.2	2.056	2.835	14.3	20.9
1 2	9 10.88	+11 58.7	2.354	3.202	10.4	21.6	1 2	9 11.51	+17 25.5	1.960	2.827	11.3	20.7
1 12	9 5.54	+12 42.6	2.278	3.200	7.3	21.4	1 12	9 6.24	+17 58.5	1.888	2.820	7.8	20.5
1 22	8 58.70	+13 36.3	2.230	3.198	3.8	21.2	1 22	8 59.15	+18 37.9	1.841	2.813	3.8	20.2
2 1	8 51.00	+14 36.2	2.211	3.196	0.9	21.0	2 1	8 51.01	+19 19.0	1.822	2.807	0.8	20.0
2 11	8 43.27	+15 37.5	2.223	3.193	3.9	21.2	2 11	8 42.85	+19 57.2	1.833	2.801	4.8	20.3
2 21	8 36.31	+16 35.8	2.264	3.191	7.4	21.4	2 21	8 35.66	+20 28.4	1.871	2.795	8.8	20.5
3 2	8 30.85	+17 27.5	2.332	3.188	10.5	21.6	3 2	8 30.30	+20 50.2	1.934	2.790	12.3	20.7
<b>166694</b>	2002 TU <sub>159</sub>		1 31.2	40°73'	1°2/30.2	18	<b>421270</b>	2013 SY <sub>69</sub>		1 31.2	168°70'	0°6/30.8	18
12 23	9 14.87	+16 37.3	1.979	2.759	14.7	19.3	12 23	9 18.35	+17 15.3	2.182	2.950	13.9	21.4

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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>245812</b>	2006 <i>JM</i>		1 31.2 249°21	3°1/29.3	18		<b>168515</b>	1999 <i>TY</i> <sub>142</sub>		1 31.2 130°13	1°6/1.2	18	
12 23	9 22.97	+23 17.2	1.915	2.695	15.2	21.5	12 23	9 21.58	+11 9.8	2.024	2.772	15.5	21.4
1 2	9 18.70	+23 59.5	1.811	2.678	12.1	21.3	1 2	9 16.87	+11 18.0	1.942	2.787	12.4	21.2
1 12	9 11.53	+24 49.0	1.729	2.661	8.4	21.0	1 12	9 9.76	+11 39.3	1.882	2.801	8.8	21.0
1 22	9 1.92	+25 39.9	1.673	2.642	4.6	20.7	1 22	9 0.83	+12 11.2	1.848	2.814	4.8	20.8
2 1	8 50.79	+26 25.0	1.646	2.623	3.4	20.6	2 1	8 50.94	+12 50.1	1.844	2.827	1.6	20.6
2 11	8 39.45	+26 58.0	1.648	2.604	6.8	20.8	2 11	8 41.18	+13 31.5	1.869	2.839	4.5	20.8
2 21	8 29.26	+27 15.4	1.677	2.584	10.9	21.0	2 21	8 32.58	+14 11.0	1.923	2.850	8.4	21.1
3 2	8 21.38	+27 16.4	1.731	2.563	14.7	21.2	3 2	8 25.95	+14 45.4	2.004	2.861	11.9	21.3
<b>449222</b>	2013 <i>CO</i> <sub>106</sub>		1 31.2 36°68	1°1/31.8	18		<b>489911</b>	2008 <i>OQ</i> <sub>21</sub>		1 31.2 56°58	2°0/30.4	15	
12 23	9 16.89	+11 12.5	1.385	2.172	19.6	21.4	12 23	9 26.94	+20 43.1	1.221	2.022	20.9	21.9
1 2	9 14.39	+11 45.8	1.309	2.177	15.7	21.1	1 2	9 22.35	+20 55.6	1.171	2.049	16.4	21.7
1 12	9 8.74	+12 40.2	1.252	2.182	11.0	20.9	1 12	9 14.04	+21 16.9	1.140	2.077	11.1	21.5
1 22	9 0.55	+13 51.7	1.217	2.188	5.7	20.6	1 22	9 2.99	+21 40.4	1.131	2.104	5.4	21.2
2 1	8 50.92	+15 13.3	1.209	2.194	1.1	20.3	2 1	8 50.76	+21 58.8	1.149	2.132	2.2	21.1
2 11	8 41.36	+16 35.5	1.228	2.200	5.9	20.6	2 11	8 39.26	+22 6.7	1.193	2.160	7.0	21.5
2 21	8 33.31	+17 49.9	1.273	2.207	11.1	20.9	2 21	8 30.03	+22 2.4	1.262	2.188	11.9	21.8
3 2	8 27.92	+18 50.9	1.340	2.214	15.6	21.2	3 2	8 24.07	+21 46.5	1.353	2.216	16.2	22.2
<b>128730</b>	2004 <i>RE</i> <sub>150</sub>		1 31.2 48°11	3°0/2.3	18		<b>502767</b>	2015 <i>DZ</i> <sub>80</sub>		1 31.2 221°05	2°8/29.1	17	
12 23	9 15.30	+6 41.8	1.775	2.530	17.1	19.8	12 23	9 19.23	+25 37.3	2.632	3.403	11.7	22.1
1 2	9 12.28	+6 56.8	1.698	2.543	13.9	19.6	1 2	9 14.74	+26 8.0	2.535	3.398	9.2	21.9
1 12	9 6.79	+7 30.9	1.641	2.555	10.1	19.4	1 12	9 8.20	+26 41.0	2.463	3.392	6.4	21.7
1 22	8 59.42	+8 22.4	1.608	2.568	6.1	19.2	1 22	9 0.05	+27 12.2	2.419	3.385	3.7	21.5
2 1	8 51.03	+9 27.0	1.602	2.582	3.0	19.0	2 1	8 51.02	+27 37.1	2.405	3.379	3.0	21.5
2 11	8 42.76	+10 38.6	1.625	2.595	5.0	19.1	2 11	8 42.01	+27 52.3	2.421	3.372	5.3	21.6
2 21	8 35.66	+11 50.5	1.675	2.609	8.9	19.4	2 21	8 33.88	+27 56.1	2.466	3.365	8.2	21.8
3 2	8 30.58	+12 56.9	1.751	2.623	12.6	19.7	3 2	8 27.38	+27 48.3	2.537	3.358	10.9	21.9
<b>495003</b>	2010 <i>JT</i> <sub>80</sub>		1 31.2 245°82	9°3/23.0	17		<b>377472</b>	2004 <i>YG</i> <sub>25</sub>		1 31.2 43°11	1°2/31.9	18	
12 23	9 24.58	+35 3.6	1.812	2.602	15.5	21.0	12 23	9 18.15	+13 42.4	1.978	2.744	15.2	21.2
1 2	9 20.92	+37 30.2	1.726	2.587	12.9	20.8	1 2	9 14.32	+13 36.2	1.893	2.749	12.2	21.0
1 12	9 13.71	+40 1.0	1.665	2.573	10.5	20.6	1 12	9 8.10	+13 40.3	1.829	2.754	8.5	20.8
1 22	9 3.29	+42 22.8	1.630	2.557	9.3	20.5	1 22	9 0.05	+13 52.9	1.791	2.760	4.5	20.6
2 1	8 50.67	+44 21.4	1.624	2.541	10.1	20.5	2 1	8 51.03	+14 10.8	1.782	2.766	1.2	20.3
2 11	8 37.54	+45 46.4	1.644	2.525	12.5	20.6	2 11	8 42.10	+14 30.5	1.801	2.772	4.5	20.6
2 21	8 25.75	+46 34.3	1.688	2.508	15.4	20.8	2 21	8 34.29	+14 48.6	1.848	2.778	8.5	20.8
3 2	8 16.90	+46 47.7	1.751	2.491	18.2	20.9	3 2	8 28.43	+15 2.6	1.921	2.784	12.1	21.1
<b>207864</b>	2007 <i>VP</i> <sub>133</sub>		1 31.2 340°48	0°5/30.9	18		<b>453347</b>	2008 <i>YE</i> <sub>124</sub>		1 31.2 101°93	1°1/31.9	18	
12 23	9 14.71	+16 38.7	1.996	2.776	14.6	20.7	12 23	9 22.41	+12 40.2	1.682	2.447	17.5	22.3
1 2	9 11.77	+17 2.2	1.903	2.770	11.6	20.5	1 2	9 17.98	+12 51.9	1.609	2.465	14.0	22.1
1 12	9 6.47	+17 35.9	1.832	2.764	8.0	20.3	1 12	9 10.75	+13 17.7	1.557	2.482	9.7	21.9
1 22	8 59.30	+18 16.6	1.786	2.758	3.9	20.0	1 22	9 1.38	+13 54.6	1.530	2.499	5.1	21.6
2 1	8 51.06	+18 59.6	1.768	2.753	0.7	19.8	2 1	8 50.92	+14 37.7	1.531	2.516	1.1	21.4
2 11	8 42.79	+19 39.7	1.780	2.749	4.8	20.1	2 11	8 40.68	+15 21.2	1.561	2.532	5.1	21.7
2 21	8 35.54	+20 12.8	1.819	2.744	8.9	20.3	2 21	8 31.89	+16 0.4	1.618	2.547	9.6	22.0
3 2	8 30.18	+20 36.6	1.882	2.741	12.5	20.5	3 2	8 25.46	+16 31.8	1.701	2.562	13.5	22.3
<b>204138</b>	2003 <i>YU</i> <sub>46</sub>		1 31.2 342°23	4°3/2.8	18		<b>340685</b>	2006 <i>RD</i> <sub>100</sub>		1 31.2 131°43	1°4/1.2	18	
12 23	9 16.40	+5 31.7	2.090	2.825	15.5	19.8	12 23	9 17.23	+12 15.9	2.597	3.341	12.5	20.9
1 2	9 12.84	+4 59.7	1.995	2.823	12.8	19.6	1 2	9 12.97	+12 9.9	2.504	3.347	10.0	20.8
1 12	9 7.07	+4 41.8	1.920	2.821	9.7	19.4	1 12	9 6.85	+12 12.7	2.435	3.353	7.1	20.6
1 22	8 59.55	+4 38.5	1.870	2.819	6.5	19.2	1 22	8 59.35	+12 22.7	2.393	3.359	3.9	20.4
2 1	8 51.04	+4 49.1	1.847	2.817	4.4	19.1	2 1	8 51.10	+12 38.0	2.381	3.364	1.4	20.2
2 11	8 42.52	+5 11.2	1.853	2.816	5.5	19.1	2 11	8 42.92	+12 55.8	2.400	3.369	3.7	20.4
2 21	8 34.94	+5 40.9	1.887	2.814	8.6	19.3	2 21	8 35.55	+13 13.4	2.448	3.375	6.9	20.6
3 2	8 29.12	+6 14.2	1.947	2.813	11.8	19.5	3 2	8 29.66	+13 28.9	2.524	3.379	9.8	20.8
<b>324489</b>	2006 <i>UD</i> <sub>202</sub>		1 31.2 19°97	4°8/28.9	18		<b>152665</b>	1998 <i>FG</i> <sub>6</sub>		1 31.2 29°61	1°2/30.5	18	
12 23	9 16.51	+24 39.9	1.156	1.984	20.2	20.2	12 23	9 17.80	+18 16.3	1.788	2.573	15.9	20.5
1 2	9 14.74	+25 30.3	1.101	1.995	15.9	20.0	1 2	9 14.44	+18 47.2	1.706	2.576	12.5	20.4
1 12	9 9.23	+26 27.6	1.065	2.008	11.0	19.7	1 12	9 8.41	+19 28.2	1.646	2.580	8.6	20.0
1 22	9 0.80	+27 22.5	1.051	2.022	6.4	19.5	1 22	9 0.29	+20 14.8	1.610	2.583	4.2	19.8
2 1	8 50.93	+28 4.8	1.062	2.038	5.2	19.5	2 1	8 51.02	+21 1.2	1.603	2.587	1.4	19.6
2 11	8 41.51	+28 27.1	1.096	2.055	8.9	19.8	2 11	8 41.82	+21 41.4	1.624	2.591	5.5	19.9
2 21	8 34.16	+28 27.3	1.154	2.074	13.5	20.1	2 21	8 33.87	+22 11.4	1.672	2.595	9.8	20.1
3 2	8 29.99	+28 7.3	1.232	2.093	17.5	20.4	3 2	8 28.11	+22 29.2	1.744	2.599	13.5	20.4
<b>31230</b>	<i>Tuyuyou</i>		1 31.2 46°51	3°1/28.9	18		<b>152547</b>	5052 <i>T</i> <sub>-2</sub>		1 31.2 222°85	0°3/31.4	17	
12 23	9 16.81	+19 15.4	1.613	2.409	16.9	17.3	12 23	9 20.62	+15 41.6	2.526	3.276	12.7	20.7
1 2	9 13.96	+20 43.8	1.544	2.422	13.2	17.1	1 2	9 15.86	+15 45.4	2.417	3.265	10.1	20.5
1 12	9 8.23	+22 25.3	1.497	2.435	8.9	16.9	1 12	9 9.00	+15 56.5	2.331	3.254	7.1	20.3
1 22	9 0.23	+24 11.8	1.477	2.448	4.7	16.7	1 22	9 0.49	+16 12.9	2.272	3.242	3.6	20.1
2 1	8 50.98	+25 53.0	1.484	2.462	3.4	16.6	2 1	8 51.01	+16 31.8	2.244	3.230	0.4	19.8
2 11	8 41.85	+27 19.7	1.519	2.476	7.1	16.9	2 11	8 41.45	+16 49.8	2.248	3.216	4.0	20.1
2 21	8 34.12	+28 26.2	1.581	2.491	11.2	17.2	2 21	8 32.72	+17 4.5	2.281	3.203	7.6	20.3
3 2	8 28.80	+29 10.6	1.666	2.506	14.8	17.4	3 2	8 25.57	+17 14.1	2.341	3.188	10.8	20.4
<b>429020</b>	2009 <i>BU</i> <sub>130</sub>		1 31.2 41°39	4°9/28.4	18		<b>252342</b>	2001 <i>SE</i> <sub>134</sub>		1 31.2 14°06	7°3/29.0	18	
12 23	9 22.38	+31 9.5	2.113	2.896	13.8	20.9	12 23						

EPHEMERIDES

1 31.2

1 31.2

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>236670</b>	2006 PA <sub>23</sub>		1 31.2 149°41'	4.8/27.2	17		<b>110802</b>	2001 UQ <sub>41</sub>		1 31.2 143°40'	0.5/31.7	18	
12 23	9 22.62	+34 34.5	2.979	3.742	10.7	20.5	12 23	9 16.16	+13 37.9	2.867	3.613	11.4	21.2
1 2	9 17.15	+35 17.0	2.901	3.751	8.6	20.4	1 2	9 11.97	+13 56.9	2.776	3.622	9.1	21.0
1 12	9 9.68	+35 56.4	2.849	3.759	6.5	20.2	1 12	9 6.10	+14 24.2	2.709	3.631	6.3	20.8
1 22	9 0.71	+36 27.7	2.825	3.767	5.0	20.2	1 22	8 58.98	+14 57.5	2.671	3.639	3.2	20.7
2 1	8 51.00	+36 46.5	2.831	3.774	5.0	20.2	2 1	8 51.19	+15 34.1	2.662	3.647	0.6	20.4
2 11	8 41.44	+36 50.3	2.866	3.781	6.4	20.3	2 11	8 43.44	+16 10.6	2.685	3.655	3.4	20.7
2 21	8 32.86	+36 38.5	2.930	3.787	8.5	20.4	2 21	8 36.43	+16 44.3	2.739	3.662	6.4	20.9
3 2	8 25.96	+36 12.8	3.019	3.793	10.5	20.6	3 2	8 30.74	+17 12.9	2.819	3.669	9.1	21.1
<b>76520</b>	2000 GS <sub>46</sub>		1 31.2 352°87'	0°/31.2	18		<b>63351</b>	2001 FW <sub>117</sub>		1 31.2 187°47'	2°/1.5	18	
12 23	9 15.32	+16 4.2	1.771	2.557	16.0	18.9	12 23	9 21.96	+ 9 40.6	1.835	2.585	16.8	20.5
1 2	9 12.53	+16 15.8	1.683	2.552	12.7	18.7	1 2	9 17.65	+ 9 50.3	1.741	2.585	13.7	20.3
1 12	9 7.14	+16 38.4	1.616	2.549	8.8	18.5	1 12	9 10.64	+10 16.1	1.667	2.584	9.8	20.0
1 22	8 59.70	+17 8.9	1.574	2.546	4.3	18.2	1 22	9 1.45	+10 56.3	1.618	2.583	5.5	19.8
2 1	8 51.08	+17 42.8	1.559	2.544	0.4	17.9	2 1	8 50.97	+11 46.9	1.598	2.580	2.2	19.5
2 11	8 42.49	+18 14.9	1.572	2.542	5.1	18.2	2 11	8 40.43	+12 42.4	1.607	2.577	5.1	19.7
2 21	8 35.06	+18 41.1	1.611	2.541	9.5	18.5	2 21	8 31.05	+13 37.1	1.645	2.573	9.5	20.0
3 2	8 29.76	+18 58.7	1.675	2.541	13.4	18.7	3 2	8 23.84	+14 26.2	1.708	2.569	13.4	20.2
<b>68496</b>	2001 UD <sub>33</sub>		1 31.2 60°06'	6°3/27.4	18		<b>488976</b>	2005 UZ <sub>334</sub>		1 31.2 68°06'	4°6/28.7	18	
12 23	9 22.61	+29 43.2	1.628	2.427	16.6	18.0	12 23	9 21.47	+23 29.1	1.393	2.198	18.6	20.9
1 2	9 18.58	+31 5.8	1.574	2.448	13.2	17.8	1 2	9 18.27	+24 39.9	1.323	2.205	14.7	20.6
1 12	9 11.37	+32 29.4	1.543	2.470	9.6	17.6	1 12	9 11.57	+26 0.4	1.274	2.212	10.2	20.4
1 22	9 1.74	+33 44.2	1.536	2.492	6.8	17.5	1 22	9 2.03	+27 21.2	1.249	2.219	5.9	20.2
2 1	8 50.93	+34 40.7	1.557	2.514	6.7	17.6	2 1	8 50.92	+28 31.5	1.251	2.226	4.9	20.1
2 11	8 40.49	+35 13.2	1.604	2.537	9.2	17.8	2 11	8 39.97	+29 22.5	1.279	2.233	8.6	20.4
2 21	8 31.80	+35 20.8	1.677	2.559	12.4	18.0	2 21	8 30.82	+29 50.1	1.332	2.240	13.0	20.6
3 2	8 25.86	+35 6.4	1.771	2.581	15.4	18.2	3 2	8 24.67	+29 55.0	1.406	2.247	16.9	20.9
<b>399212</b>	2014 GE <sub>30</sub>		1 31.2 167°40'	4°0/28.9	18		<b>83116</b>	2001 QE <sub>243</sub>		1 31.2 59°36'	3°9/3.3	18	
12 23	9 25.61	+24 54.1	1.744	2.528	16.3	21.7	12 23	9 14.10	+ 3 24.4	2.376	3.097	14.2	19.5
1 2	9 20.85	+25 45.8	1.664	2.532	12.9	21.5	1 2	9 10.77	+ 3 22.7	2.279	3.098	11.8	19.4
1 12	9 12.97	+26 43.3	1.605	2.536	9.0	21.3	1 12	9 5.52	+ 3 36.8	2.203	3.098	9.0	19.2
1 22	9 2.60	+27 39.0	1.572	2.539	5.2	21.0	1 22	8 58.78	+ 4 6.4	2.152	3.098	6.0	19.0
2 1	8 50.85	+28 24.9	1.567	2.541	4.3	21.0	2 1	8 51.20	+ 4 49.9	2.130	3.099	4.0	18.9
2 11	8 39.19	+28 54.7	1.591	2.543	7.4	21.2	2 11	8 43.61	+ 5 43.7	2.137	3.099	4.8	18.9
2 21	8 29.06	+29 5.7	1.642	2.544	11.4	21.4	2 21	8 36.81	+ 6 43.2	2.172	3.099	7.6	19.1
3 2	8 21.54	+28 58.9	1.717	2.545	15.0	21.6	3 2	8 31.50	+ 7 43.5	2.234	3.100	10.5	19.3
<b>235601</b>	2004 PW <sub>56</sub>		1 31.2 134°00'	1°3/1.1	18		<b>29941</b>	1999 JB <sub>76</sub>		1 31.2 305°98'	0°7/30.7	18	
12 23	9 23.41	+11 29.4	2.050	2.794	15.4	21.5	12 23	9 16.34	+18 3.1	2.230	3.004	13.5	18.6
1 2	9 18.26	+11 45.6	1.969	2.812	12.4	21.4	1 2	9 12.80	+18 23.5	2.133	2.997	10.7	18.4
1 12	9 10.71	+12 14.7	1.911	2.829	8.7	21.2	1 12	9 7.07	+18 51.9	2.059	2.990	7.3	18.2
1 22	9 1.32	+12 54.1	1.879	2.845	4.6	20.9	1 22	8 59.59	+19 25.0	2.011	2.984	3.6	17.9
2 1	8 50.97	+13 39.6	1.876	2.860	1.3	20.7	2 1	8 51.13	+19 58.7	1.993	2.977	0.9	17.7
2 11	8 40.77	+14 26.3	1.905	2.874	4.5	21.0	2 11	8 42.65	+20 28.6	2.004	2.971	4.6	18.0
2 21	8 31.75	+15 9.8	1.963	2.888	8.4	21.2	2 21	8 35.10	+20 51.7	2.043	2.965	8.3	18.2
3 2	8 24.73	+15 46.9	2.047	2.900	11.9	21.5	3 2	8 29.28	+21 6.1	2.108	2.959	11.7	18.4
<b>49541</b>	1999 CO <sub>66</sub>		1 31.2 337°99'	1°4/1.0	18		<b>230415</b>	Matthiasjung		1 31.2 191°83'	3°0/29.7	18	
12 23	9 18.15	+13 27.0	2.185	2.942	14.2	18.7	12 23	9 26.63	+22 53.0	1.746	2.525	16.5	20.9
1 2	9 14.14	+13 13.1	2.090	2.941	11.4	18.5	1 2	9 21.68	+23 29.6	1.658	2.524	13.1	20.7
1 12	9 7.91	+13 8.3	2.017	2.939	8.0	18.3	1 12	9 13.59	+24 13.1	1.591	2.522	9.1	20.4
1 22	8 59.97	+13 11.1	1.971	2.938	4.3	18.1	1 22	9 2.95	+24 57.2	1.550	2.519	4.9	20.2
2 1	8 51.08	+13 19.3	1.953	2.937	1.4	17.9	2 1	8 50.84	+25 34.5	1.537	2.516	3.2	20.1
2 11	8 42.23	+13 29.9	1.965	2.935	4.3	18.1	2 11	8 38.76	+25 58.9	1.554	2.512	6.8	20.3
2 21	8 34.34	+13 40.3	2.006	2.934	8.0	18.3	2 21	8 28.15	+26 7.7	1.597	2.507	11.1	20.5
3 2	8 28.23	+13 48.1	2.073	2.933	11.4	18.5	3 2	8 20.14	+26 0.9	1.665	2.501	15.0	20.7
<b>411401</b>	2010 VX <sub>113</sub>		1 31.2 40°12'	1°3/30.6	16		<b>285750</b>	2000 TG <sub>43</sub>		1 31.2 114°63'	6°5/26.5	18	
12 23	9 20.61	+19 23.0	1.464	2.260	18.3	21.8	12 23	9 25.40	+35 4.3	2.220	2.995	13.5	20.5
1 2	9 17.01	+19 34.5	1.400	2.276	14.4	21.6	1 2	9 20.10	+36 16.7	2.158	3.012	10.9	20.3
1 12	9 10.29	+19 55.1	1.357	2.293	9.8	21.4	1 12	9 12.09	+37 25.7	2.119	3.029	8.4	20.2
1 22	9 1.21	+20 19.7	1.337	2.310	4.8	21.2	1 22	9 2.03	+38 23.5	2.107	3.045	6.7	20.1
2 1	8 50.98	+20 42.7	1.344	2.328	1.5	21.0	2 1	8 50.94	+39 3.0	2.123	3.061	6.8	20.2
2 11	8 41.12	+20 58.7	1.378	2.346	6.0	21.3	2 11	8 40.10	+39 20.4	2.168	3.076	8.6	20.3
2 21	8 32.95	+21 4.8	1.438	2.365	10.7	21.6	2 21	8 30.68	+39 15.6	2.239	3.091	11.0	20.5
3 2	8 27.44	+21 0.4	1.521	2.384	14.7	21.9	3 2	8 23.56	+38 51.1	2.333	3.105	13.3	20.7
<b>212552</b>	2006 SU <sub>36</sub>		1 31.2 303°49'	7°7/6.5	18		<b>73523</b>	2003 MQ <sub>3</sub>		1 31.2 162°21'	0°0/31.2	18	
12 23	9 13.14	- 7 31.5	2.420	3.081	15.3	20.2	12 23	9 24.86	+16 43.8	2.162	2.916	14.5	20.2
1 2	9 10.07	- 8 9.7	2.317	3.074	13.5	20.0	1 2	9 19.39	+16 47.7	2.072	2.923	11.5	20.0
1 12	9 5.08	- 8 28.6	2.233	3.067	11.4	19.9	1 12	9 11.50	+16 59.3	2.005	2.929	7.9	19.8
1 22	8 58.59	- 8 25.5	2.170	3.060	9.4	19.7	1 22	9 1.73	+17 15.7	1.965	2.935	3.9	19.6
2 1	8 51.20	- 7 59.3	2.134	3.053	8.0	19.6	2 1	8 50.97	+17 33.2	1.955	2.940	0.3	19.3
2 11	8 43.74	- 7 11.7	2.123	3.046	7.9	19.6	2 11	8 40.31	+17 48.3	1.976	2.944	4.5	19.6
2 21	8 37.00	- 6 6.7	2.140	3.040	9.2	19.7	2 21	8 30.79	+17 58.5	2.027	2.948	8.4	19.9
3 2	8 31.71	- 4 50.1	2.183	3.033	11.4	19.8	3 2	8 23.26	+18 2.3	2.104	2.950	11.9	20.1
<b>421671</b>	2014 OK <sub>378</sub>		1 31.2 133°25'	1°0/30.6	18		<b>67041</b>	1999 XR <sub>187</sub>		1 31.2 124°21'	2°2/1.7	18	
12 23	9 21.80	+17 34.1	2.036	2.802	14.8	21.6	12 23	9 20.93	+10 29.4	2.479	3.212	13.3	19.6
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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>28515</b>	2000 <i>DK</i> <sub>3</sub>		1 31.2 227°40	3°1/29.3	18		<b>465533</b>	2008 <i>UJ</i> <sub>262</sub>		1 31.2 97°80	5°7/27.1	18	
12 23	9 23.36	+24 52.0	2.097	2.873	14.2	19.3	12 23	9 23.16	+33 32.9	2.341	3.117	12.8	21.6
1 2	9 18.64	+25 23.1	2.000	2.864	11.2	19.1	1 2	9 18.12	+34 33.1	2.277	3.135	10.3	21.4
1 12	9 11.25	+25 58.1	1.925	2.855	7.8	18.9	1 12	9 10.62	+35 30.7	2.238	3.152	7.8	21.3
1 22	9 1.73	+26 31.7	1.878	2.845	4.4	18.6	1 22	9 1.29	+36 18.9	2.225	3.170	5.9	21.2
2 1	8 50.97	+26 58.0	1.859	2.835	3.3	18.5	2 1	8 51.07	+36 51.8	2.241	3.187	5.9	21.2
2 11	8 40.19	+27 12.5	1.870	2.824	6.3	18.7	2 11	8 41.09	+37 5.8	2.286	3.204	7.7	21.4
2 21	8 30.56	+27 12.9	1.909	2.813	9.9	18.9	2 21	8 32.39	+37 0.6	2.358	3.220	10.1	21.6
3 2	8 23.07	+26 59.5	1.973	2.802	13.3	19.1	3 2	8 25.77	+36 38.2	2.453	3.236	12.4	21.7
<b>465883</b>	2010 <i>TF</i> <sub>147</sub>		1 31.2 67°46	8°4/6.1	18		<b>375560</b>	2008 <i>UD</i> <sub>313</sub>		1 31.2 27°61	1°3/31.9	18	
12 23	9 19.39	- 5 5.6	1.741	2.434	19.5	21.0	12 23	9 18.91	+13 46.4	2.122	2.881	14.5	20.7
1 2	9 15.37	- 5 51.2	1.678	2.462	16.8	20.9	1 2	9 14.80	+13 33.8	2.030	2.882	11.6	20.5
1 12	9 8.84	- 6 11.6	1.632	2.489	13.7	20.7	1 12	9 8.42	+13 30.3	1.960	2.883	8.2	20.3
1 22	9 0.43	- 6 4.5	1.608	2.517	10.7	20.6	1 22	9 0.27	+13 34.4	1.916	2.884	4.4	20.1
2 1	8 51.11	- 5 29.9	1.608	2.545	8.7	20.6	2 1	8 51.15	+13 43.6	1.901	2.885	1.3	19.9
2 11	8 42.05	- 4 32.0	1.635	2.572	8.6	20.6	2 11	8 42.09	+13 54.9	1.916	2.886	4.4	20.1
2 21	8 34.30	- 3 17.7	1.688	2.599	10.5	20.8	2 21	8 34.06	+14 5.5	1.959	2.887	8.2	20.3
3 2	8 28.68	- 1 55.4	1.765	2.626	13.1	21.0	3 2	8 27.86	+14 13.2	2.028	2.888	11.7	20.5
<b>318010</b>	2004 <i>CJ</i> <sub>93</sub>		1 31.2 36°50	17°3/29.5	16		<b>426907</b>	2013 <i>WZ</i> <sub>75</sub>		1 31.2 86°09	0°2/31.4	18	
12 23	9 55.32	+50 25.9	0.973	1.758	26.2	19.9	12 23	9 17.89	+14 56.1	2.314	3.074	13.5	21.9
1 2	9 48.30	+51 21.0	0.926	1.765	23.1	19.7	1 2	9 13.68	+15 16.9	2.239	3.093	10.6	21.8
1 12	9 33.55	+51 51.2	0.893	1.773	20.1	19.5	1 12	9 7.45	+15 46.8	2.186	3.112	7.3	21.6
1 22	9 12.86	+51 33.2	0.877	1.781	17.9	19.4	1 22	8 59.70	+16 22.9	2.161	3.131	3.6	21.4
2 1	8 50.12	+50 10.1	0.881	1.790	17.3	19.4	2 1	8 51.21	+17 1.4	2.165	3.150	0.3	21.1
2 11	8 30.02	+47 42.9	0.906	1.800	18.8	19.5	2 11	8 42.87	+17 38.2	2.199	3.169	4.0	21.5
2 21	8 15.62	+44 29.8	0.952	1.811	21.5	19.7	2 21	8 35.52	+18 10.1	2.263	3.187	7.5	21.7
3 2	8 7.86	+40 54.0	1.016	1.822	24.5	20.0	3 2	8 29.85	+18 34.9	2.353	3.205	10.6	22.0
<b>3230</b>	Vamplov		1 31.2 159°16	3°8/27.2	18		<b>148731</b>	2001 <i>TA</i> <sub>88</sub>		1 31.2 53°26	1°0/30.7	18	
12 23	9 18.81	+30 53.5	3.337	4.103	9.6	18.2	12 23	9 21.17	+19 4.8	1.665	2.450	16.9	19.9
1 2	9 14.02	+31 52.2	3.256	4.111	7.6	18.1	1 2	9 17.18	+19 14.1	1.591	2.461	13.3	19.6
1 12	9 7.51	+32 50.6	3.201	4.118	5.6	18.0	1 12	9 10.31	+19 31.7	1.539	2.472	9.1	19.4
1 22	8 59.70	+33 44.2	3.175	4.125	4.1	17.9	1 22	9 1.25	+19 53.3	1.511	2.484	4.4	19.2
2 1	8 51.18	+34 28.7	3.179	4.131	4.0	17.9	2 1	8 51.08	+20 13.9	1.511	2.496	1.2	19.0
2 11	8 42.69	+35 0.9	3.215	4.137	5.5	18.0	2 11	8 41.14	+20 28.8	1.540	2.508	5.6	19.3
2 21	8 34.93	+35 19.6	3.279	4.142	7.5	18.1	2 21	8 32.68	+20 35.2	1.595	2.520	10.0	19.6
3 2	8 28.51	+35 25.0	3.369	4.146	9.4	18.2	3 2	8 26.64	+20 32.1	1.674	2.533	13.8	19.8
<b>458955</b>	2011 <i>UU</i> <sub>396</sub>		1 31.2 138°41	0°8/31.8	18		<b>416956</b>	2005 <i>SB</i> <sub>200</sub>		1 31.2 51°04	3°5/2.5	18	
12 23	9 22.93	+13 9.7	2.024	2.776	15.4	22.4	12 23	9 16.44	+ 6 31.7	1.777	2.529	17.2	21.6
1 2	9 17.99	+13 26.0	1.942	2.790	12.3	22.2	1 2	9 13.26	+ 6 30.5	1.694	2.535	14.1	21.4
1 12	9 10.59	+13 54.2	1.882	2.804	8.5	22.0	1 12	9 7.58	+ 6 47.5	1.631	2.542	10.4	21.2
1 22	9 1.31	+14 31.3	1.848	2.816	4.4	21.8	1 22	8 59.92	+ 7 21.9	1.591	2.549	6.4	20.9
2 1	8 51.04	+15 13.1	1.844	2.828	0.8	21.5	2 1	8 51.18	+ 8 10.7	1.579	2.556	3.6	20.8
2 11	8 40.91	+15 54.7	1.870	2.840	4.6	21.8	2 11	8 42.50	+ 9 8.5	1.595	2.563	5.3	20.9
2 21	8 31.94	+16 31.9	1.925	2.850	8.6	22.1	2 21	8 34.97	+10 9.3	1.638	2.571	9.1	21.1
3 2	8 25.01	+17 2.1	2.007	2.860	12.1	22.3	3 2	8 29.50	+11 7.4	1.706	2.578	12.9	21.4
<b>400373</b>	2007 <i>WW</i> <sub>29</sub>		1 31.2 101°18	0°8/30.8	18		<b>160810</b>	2000 <i>VE</i> <sub>54</sub>		1 31.2 101°50	3°1/29.6	18	
12 23	9 24.30	+18 7.5	1.801	2.572	16.3	21.5	12 23	9 25.33	+23 36.3	1.672	2.458	16.8	20.0
1 2	9 19.30	+18 24.6	1.730	2.592	12.8	21.3	1 2	9 20.51	+24 10.0	1.603	2.472	13.2	19.8
1 12	9 11.57	+18 50.4	1.681	2.611	8.8	21.1	1 12	9 12.63	+24 49.0	1.554	2.487	9.1	19.5
1 22	9 1.79	+19 20.6	1.658	2.630	4.2	20.9	1 22	9 2.40	+25 26.7	1.531	2.501	4.9	19.3
2 1	8 51.01	+19 49.9	1.664	2.649	1.0	20.7	2 1	8 50.99	+25 56.4	1.537	2.515	3.4	19.3
2 11	8 40.51	+20 13.6	1.700	2.667	5.2	21.0	2 11	8 39.89	+26 12.8	1.570	2.529	6.8	19.5
2 21	8 31.47	+20 28.9	1.763	2.685	9.4	21.3	2 21	8 30.43	+26 13.9	1.631	2.542	10.8	19.8
3 2	8 24.76	+20 34.6	1.851	2.702	13.1	21.6	3 2	8 23.59	+26 0.8	1.715	2.555	14.4	20.0
<b>491765</b>	2012 <i>VU</i> <sub>110</sub>		1 31.2 49°25	0°5/31.4	15		<b>364802</b>	2008 <i>AN</i> <sub>134</sub>		1 31.2 52°35	5°1/28.6	17	
12 23	9 26.19	+16 9.3	1.077	1.881	23.0	21.4	12 23	9 22.83	+26 28.1	1.431	2.235	18.2	20.5
1 2	9 22.02	+15 59.4	1.032	1.910	18.1	21.2	1 2	9 19.06	+27 27.8	1.375	2.254	14.3	20.3
1 12	9 13.95	+16 4.0	1.004	1.940	12.4	21.0	1 12	9 11.87	+28 31.6	1.340	2.274	10.1	20.1
1 22	9 3.02	+16 18.6	0.998	1.971	6.1	20.7	1 22	9 2.08	+29 30.2	1.328	2.294	6.2	19.9
2 1	8 50.92	+16 37.0	1.017	2.002	0.6	20.5	2 1	8 51.03	+30 14.3	1.344	2.315	5.4	19.9
2 11	8 39.62	+16 53.1	1.061	2.033	6.6	21.0	2 11	8 40.43	+30 37.9	1.386	2.335	8.5	20.1
2 21	8 30.75	+17 2.9	1.129	2.065	12.0	21.4	2 21	8 31.75	+30 39.5	1.452	2.356	12.4	20.4
3 2	8 25.27	+17 4.6	1.219	2.096	16.6	21.7	3 2	8 26.01	+30 21.4	1.541	2.377	16.0	20.7
<b>326172</b>	2012 <i>BV</i> <sub>112</sub>		1 31.2 216°62	0°8/30.8	18		<b>354973</b>	2006 <i>HC</i> <sub>95</sub>		1 31.2 316°09	5°4/28.7	18	
12 23	9 20.97	+18 17.1	2.042	2.812	14.7	21.7	12 23	9 23.50	+27 34.1	1.453	2.256	18.0	20.8
1 2	9 16.67	+18 33.7	1.946	2.807	11.7	21.5	1 2	9 19.99	+28 18.7	1.372	2.251	14.4	20.6
1 12	9 9.86	+18 58.6	1.872	2.802	8.0	21.3	1 12	9 12.87	+29 7.3	1.312	2.245	10.3	20.3
1 22	9 1.04	+19 28.1	1.824	2.796	3.9	21.0	1 22	9 2.77	+29 51.2	1.275	2.240	6.5	20.1
2 1	8 51.07	+19 57.6	1.806	2.790	1.0	20.8	2 1	8 50.97	+30 21.1	1.265	2.236	5.7	20.0
2 11	8 41.07	+20 22.7	1.817	2.784	5.0	21.0	2 11	8 39.26	+30 30.0	1.280	2.231	9.0	20.2
2 21	8 32.16	+20 40.1	1.857	2.778	9.1	21.3	2 21	8 29.34	+30 16.4	1.321	2.227	13.3	20.4
3 2	8 25.27	+20 48.2	1.922	2.771	12.7	21.5	3 2	8 22.52	+29 42.6	1.383	2.223	17.2	20.6
<b>352421</b>	2007 <i>YM</i> <sub>22</sub>		1 31.2 163°65	3°2/2.8	17		<b>94627</b>	2001 <i>WJ</i> <sub>9</sub>		1 31.2 350°38	3°5/29.4	18	
12 23	9 16.85	+ 5 30.3	3.060	3.768	11.5	2							



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1 31.3

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>80098</b>	1999 <i>MV</i> <sub>1</sub>		1 31.2 118°95	0°6/30.9	18		<b>248014</b>	2004 <i>FC</i> <sub>13</sub>		1 31.2 299°46	10°4/10.1	18	
12 23	9 26.91	+16 11.5	1.781	2.543	16.8	20.5	12 23	9 12.90	-17 12.7	2.430	3.022	16.7	20.2
1 2	9 21.38	+16 45.1	1.711	2.568	13.3	20.3	1 2	9 10.01	-17 54.0	2.326	3.013	15.3	20.1
1 12	9 13.03	+17 30.1	1.663	2.591	9.0	20.1	1 12	9 5.16	-18 11.4	2.238	3.004	13.7	19.9
1 22	9 2.55	+18 21.5	1.642	2.613	4.4	19.8	1 22	8 58.73	-18 0.5	2.170	2.995	12.1	19.8
2 1	8 51.01	+19 12.9	1.649	2.634	0.8	19.6	2 1	8 51.36	-17 19.1	2.123	2.986	10.8	19.7
2 11	8 39.75	+19 58.5	1.687	2.654	5.3	20.0	2 11	8 43.89	-16 8.1	2.101	2.977	10.4	19.6
2 21	8 30.00	+20 34.2	1.753	2.673	9.6	20.3	2 21	8 37.16	-14 31.6	2.104	2.969	11.0	19.7
3 2	8 22.67	+20 58.3	1.845	2.691	13.3	20.6	3 2	8 31.92	-12 36.8	2.132	2.960	12.4	19.7
<b>295220</b>	2008 <i>FD</i> <sub>137</sub>		1 31.2 251°54	6°1/ 4.4	17		<b>192025</b>	2005 <i>YH</i> <sub>193</sub>		1 31.2 259°20	0°3/31.5	18	
12 23	9 17.28	- 1 31.5	2.281	2.973	15.4	22.4	12 23	9 18.53	+15 22.8	2.061	2.827	14.7	20.5
1 2	9 13.57	- 1 57.1	2.164	2.955	13.3	22.2	1 2	9 14.70	+15 29.7	1.965	2.823	11.7	20.3
1 12	9 7.69	- 2 4.9	2.067	2.936	10.7	22.0	1 12	9 8.50	+15 46.3	1.891	2.819	8.1	20.1
1 22	9 0.01	- 1 52.9	1.993	2.917	8.1	21.8	1 22	9 0.40	+16 10.0	1.843	2.814	4.1	19.8
2 1	8 51.20	- 1 20.9	1.947	2.897	6.3	21.6	2 1	8 51.24	+16 37.2	1.824	2.810	0.4	19.5
2 11	8 42.17	+ 0 30.9	1.929	2.877	6.7	21.6	2 11	8 42.05	+17 3.8	1.835	2.805	4.6	19.9
2 21	8 33.86	+ 0 32.5	1.940	2.856	9.0	21.7	2 21	8 33.89	+17 26.1	1.874	2.800	8.6	20.1
3 2	8 27.14	+ 1 43.5	1.976	2.835	12.0	21.9	3 2	8 27.63	+17 42.0	1.938	2.796	12.2	20.3
<b>53808</b>	2000 <i>EH</i> <sub>132</sub>		1 31.2 41°65	2°3/ 1.4	18		<b>39355</b>	2002 <i>AH</i> <sub>161</sub>		1 31.2 288°69	0°6/31.6	18	
12 23	9 19.09	+11 1.2	1.279	2.068	20.8	19.5	12 23	9 19.30	+14 28.6	1.586	2.367	17.7	19.1
1 2	9 16.34	+10 58.5	1.208	2.076	16.8	19.3	1 2	9 16.39	+14 35.9	1.477	2.343	14.4	18.8
1 12	9 10.21	+11 14.9	1.156	2.084	12.0	19.0	1 12	9 10.37	+14 57.5	1.388	2.319	10.2	18.5
1 22	9 1.39	+11 48.5	1.125	2.093	6.6	18.8	1 22	9 1.64	+15 31.0	1.323	2.295	5.2	18.1
2 1	8 51.10	+12 34.3	1.119	2.102	2.3	18.5	2 1	8 51.12	+16 11.7	1.285	2.270	0.7	17.7
2 11	8 40.99	+13 24.8	1.139	2.112	6.1	18.8	2 11	8 40.21	+16 53.6	1.274	2.246	5.9	18.0
2 21	8 32.59	+14 13.2	1.184	2.122	11.4	19.1	2 21	8 30.44	+17 30.6	1.289	2.221	11.2	18.3
3 2	8 27.05	+14 54.0	1.252	2.132	16.0	19.4	3 2	8 23.15	+17 58.8	1.328	2.197	16.1	18.5
<b>179119</b>	2001 <i>SN</i> <sub>250</sub>		1 31.2 172°38	2°6/29.3	18		<b>115727</b>	2003 <i>UD</i> <sub>183</sub>		1 31.3 30°41	0°8/31.8	18	
12 23	9 21.79	+23 25.0	2.463	3.230	12.5	21.7	12 23	9 16.61	+13 43.0	1.956	2.726	15.3	20.3
1 2	9 16.88	+24 8.4	2.374	3.234	9.9	21.6	1 2	9 13.23	+13 54.0	1.871	2.730	12.2	20.1
1 12	9 9.75	+24 56.4	2.309	3.237	6.8	21.4	1 12	9 7.48	+14 16.7	1.807	2.734	8.5	19.9
1 22	9 0.92	+25 44.0	2.272	3.240	3.7	21.2	1 22	8 59.89	+14 48.6	1.769	2.738	4.4	19.6
2 1	8 51.15	+26 26.2	2.265	3.241	2.8	21.1	2 1	8 51.29	+15 25.6	1.758	2.743	0.8	19.3
2 11	8 41.41	+26 58.5	2.289	3.243	5.3	21.3	2 11	8 42.75	+16 3.1	1.777	2.748	4.6	19.6
2 21	8 32.65	+27 18.7	2.342	3.243	8.5	21.5	2 21	8 35.29	+16 37.0	1.823	2.753	8.6	19.9
3 2	8 25.65	+27 26.2	2.422	3.243	11.4	21.7	3 2	8 29.76	+17 4.2	1.895	2.758	12.2	20.1
<b>504669</b>	2009 <i>BN</i> <sub>184</sub>		1 31.2 290°05	2°9/29.6	17		<b>264779</b>	2002 <i>JN</i> <sub>69</sub>		1 31.3 322°89	3°3/28.9	18	
12 23	9 21.91	+26 11.6	2.326	3.100	13.0	21.0	12 23	9 15.00	+21 8.3	1.674	2.474	16.1	19.8
1 2	9 17.26	+26 22.5	2.219	3.082	10.3	20.7	1 2	9 12.80	+22 14.3	1.580	2.459	12.8	19.5
1 12	9 10.20	+26 34.7	2.136	3.064	7.3	20.5	1 12	9 7.73	+23 32.5	1.507	2.445	8.8	19.2
1 22	9 1.22	+26 43.7	2.079	3.047	4.1	20.3	1 22	9 0.24	+24 56.4	1.459	2.431	4.8	19.0
2 1	8 51.12	+26 45.3	2.053	3.029	3.0	20.2	2 1	8 51.24	+26 17.0	1.439	2.417	3.6	18.9
2 11	8 41.00	+26 36.2	2.056	3.011	5.7	20.3	2 11	8 42.06	+27 25.8	1.446	2.404	7.3	19.0
2 21	8 31.89	+26 15.2	2.088	2.993	9.1	20.5	2 21	8 34.07	+28 16.7	1.479	2.392	11.6	19.3
3 2	8 24.69	+25 43.0	2.145	2.976	12.3	20.7	3 2	8 28.42	+28 47.4	1.535	2.380	15.6	19.5
<b>456596</b>	2007 <i>EO</i> <sub>75</sub>		1 31.2 81°01	3°1/29.4	18		<b>27608</b>	2001 <i>KZ</i> <sub>11</sub>		1 31.3 107°08	0°8/30.6	18	
12 23	9 21.17	+24 12.8	1.932	2.717	14.9	20.9	12 23	9 18.11	+17 31.1	2.564	3.324	12.3	19.3
1 2	9 16.96	+24 45.3	1.852	2.722	11.7	20.7	1 2	9 13.71	+18 7.2	2.487	3.343	9.6	19.1
1 12	9 10.09	+25 22.1	1.795	2.727	8.1	20.5	1 12	9 7.42	+18 50.7	2.435	3.362	6.5	19.0
1 22	9 1.16	+25 57.8	1.763	2.732	4.5	20.3	1 22	8 59.72	+19 37.8	2.410	3.381	3.2	18.8
2 1	8 51.14	+26 26.3	1.761	2.738	3.3	20.2	2 1	8 51.31	+20 24.5	2.415	3.400	0.9	18.6
2 11	8 41.27	+26 43.1	1.786	2.743	6.3	20.4	2 11	8 43.02	+21 6.6	2.452	3.417	4.0	18.9
2 21	8 32.69	+26 46.2	1.840	2.748	9.9	20.7	2 21	8 35.63	+21 41.4	2.518	3.435	7.2	19.1
3 2	8 26.33	+26 35.7	1.917	2.754	13.3	20.9	3 2	8 29.78	+22 7.1	2.612	3.452	10.0	19.3
<b>135207</b>	2001 <i>RD</i> <sub>67</sub>		1 31.2 113°99	1°8/30.0	18		<b>221518</b>	2006 <i>RT</i> <sub>53</sub>		1 31.3 125°44	0°2/31.2	18	
12 23	9 19.74	+22 34.1	2.470	3.240	12.4	19.9	12 23	9 23.23	+15 13.6	1.429	2.213	19.2	21.6
1 2	9 15.14	+22 51.1	2.385	3.247	9.8	19.7	1 2	9 19.39	+15 38.3	1.353	2.221	15.3	21.3
1 12	9 8.47	+23 11.6	2.325	3.254	6.7	19.5	1 12	9 12.23	+16 18.3	1.297	2.229	10.6	21.1
1 22	9 0.25	+23 32.1	2.291	3.262	3.4	19.3	1 22	9 2.40	+17 9.0	1.264	2.236	5.2	20.8
2 1	8 51.23	+23 48.6	2.288	3.269	2.0	19.2	2 1	8 51.09	+18 3.3	1.258	2.243	0.5	20.5
2 11	8 42.33	+23 58.1	2.315	3.276	4.7	19.4	2 11	8 39.91	+18 53.6	1.280	2.250	6.1	20.9
2 21	8 34.42	+23 58.9	2.371	3.282	7.9	19.6	2 21	8 30.39	+19 34.2	1.328	2.257	11.3	21.2
3 2	8 28.20	+23 50.7	2.453	3.289	10.8	19.8	3 2	8 23.68	+20 2.1	1.399	2.263	15.7	21.5
<b>295039</b>	2008 <i>EP</i> <sub>93</sub>		1 31.2 127°40	4°1/28.1	18		<b>29389</b>	1996 <i>LZ</i>		1 31.3 270°98	0°1/31.3	18	
12 23	9 21.83	+24 26.7	2.014	2.794	14.5	20.8	12 23	9 19.02	+15 31.5	1.874	2.647	15.7	19.1
1 2	9 17.46	+25 52.6	1.940	2.808	11.4	20.6	1 2	9 15.48	+15 44.8	1.772	2.634	12.6	18.9
1 12	9 10.46	+27 25.0	1.890	2.820	7.9	20.4	1 12	9 9.29	+16 9.5	1.692	2.621	8.8	18.6
1 22	9 1.37	+28 56.1	1.868	2.833	4.9	20.2	1 22	9 0.92	+16 42.7	1.637	2.608	4.4	18.3
2 1	8 51.14	+30 17.4	1.876	2.844	4.4	20.2	2 1	8 51.22	+17 19.9	1.610	2.595	0.3	18.0
2 11	8 40.98	+31 22.2	1.913	2.856	7.1	20.4	2 11	8 41.38	+17 55.9	1.612	2.581	5.1	18.3
2 21	8 32.04	+32 7.1	1.977	2.866	10.4	20.6	2 21	8 32.61	+18 26.4	1.641	2.568	9.6	18.6
3 2	8 25.28	+32 31.8	2.066	2.877	13.4	20.8	3 2	8 25.94	+18 48.4	1.695	2.555	13.6	18.8
<b>215529</b>	2002 <i>VK</i> <sub>101</sub>		1 31.2 107°90	5°8/27.1	18		<b>165693</b>	2001 <i>PC</i> <sub>18</sub>		1 31.3 107°17	3°6/28.3	18	
12 23	9 22.79	+29 19.6	1.900	2.688									

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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>500388</b>	2012 <i>TP</i> <sub>84</sub>		1 31.3 192°42'	4°0'/28.3 17			<b>69208</b>	3078 <i>T</i> <sub>-2</sub>		1 31.3 195°61'	5°0'/27.9 18		
12 23	9 19.76	+28 55.9	2.497	3.274	12.1	21.9	12 23	9 24.20	+31 2.9	2.251	3.027	13.3	20.2
1 2	9 15.37	+29 36.9	2.410	3.273	9.6	21.7	1 2	9 19.21	+31 49.5	2.165	3.025	10.7	20.1
1 12	9 8.77	+30 18.7	2.348	3.273	6.9	21.5	1 12	9 11.61	+32 35.8	2.102	3.023	7.9	19.9
1 22	9 0.48	+30 55.9	2.312	3.272	4.5	21.4	1 22	9 1.98	+33 15.2	2.066	3.020	5.5	19.7
2 1	8 51.27	+31 23.6	2.307	3.271	4.2	21.4	2 1	8 51.23	+33 41.4	2.059	3.018	5.3	19.7
2 11	8 42.13	+31 38.0	2.330	3.270	6.2	21.5	2 11	8 40.57	+33 50.4	2.082	3.014	7.4	19.8
2 21	8 33.99	+31 37.8	2.382	3.269	9.0	21.7	2 21	8 31.12	+33 41.2	2.131	3.011	10.2	20.0
3 2	8 27.63	+31 23.6	2.459	3.268	11.6	21.8	3 2	8 23.81	+33 15.2	2.205	3.007	13.0	20.2
<b>6207</b>	Bourvil		1 31.3 33°71'	2°0'/30.3 18			<b>352829</b>	2008 <i>UU</i> <sub>355</sub>		1 31.3 343°10'	5°4'/28.4 18		
12 23	9 18.40	+18 19.7	1.116	1.934	21.4	17.0	12 23	9 19.58	+24 56.7	1.337	2.150	18.8	20.5
1 2	9 16.24	+18 59.1	1.060	1.949	16.8	16.8	1 2	9 17.18	+26 7.1	1.260	2.146	14.9	20.2
1 12	9 10.33	+19 53.3	1.023	1.965	11.4	16.5	1 12	9 11.15	+27 26.9	1.204	2.142	10.5	19.9
1 22	9 1.50	+20 54.9	1.007	1.982	5.6	16.3	1 22	9 2.08	+28 46.6	1.172	2.139	6.5	19.7
2 1	8 51.20	+21 54.1	1.016	2.000	2.3	16.1	2 1	8 51.21	+29 54.5	1.164	2.137	5.8	19.6
2 11	8 41.31	+22 41.6	1.050	2.018	7.4	16.5	2 11	8 40.36	+30 41.1	1.183	2.135	9.4	19.8
2 21	8 33.50	+23 12.3	1.107	2.038	12.7	16.8	2 21	8 31.28	+31 2.2	1.225	2.133	13.9	20.1
3 2	8 28.89	+23 25.0	1.185	2.058	17.2	17.1	3 2	8 25.31	+30 58.6	1.287	2.132	18.0	20.3
<b>333772</b>	2011 <i>EG</i> <sub>43</sub>		1 31.3 230°85'	0°2'/31.5 17			<b>116757</b>	2004 <i>EF</i> <sub>1</sub>		1 31.3 157°87'	16°7'/21.3 18		
12 23	9 17.14	+14 19.6	2.442	3.198	12.9	21.5	12 23	9 41.99	+50 14.7	1.338	2.110	20.9	19.5
1 2	9 13.29	+14 44.6	2.337	3.189	10.3	21.3	1 2	9 37.35	+52 48.4	1.293	2.115	18.8	19.3
1 12	9 7.38	+15 19.9	2.255	3.179	7.2	21.1	1 12	9 26.48	+55 5.7	1.267	2.119	17.2	19.3
1 22	8 59.84	+16 2.7	2.200	3.170	3.6	20.9	1 22	9 10.09	+56 46.8	1.262	2.123	16.7	19.2
2 1	8 51.35	+16 49.4	2.174	3.159	0.3	20.6	2 1	8 50.57	+57 34.7	1.277	2.127	17.4	19.3
2 11	8 42.76	+17 35.7	2.180	3.149	4.0	20.9	2 11	8 31.68	+57 23.6	1.312	2.129	19.0	19.4
2 21	8 34.96	+18 17.7	2.214	3.138	7.7	21.1	2 21	8 16.76	+56 20.2	1.364	2.132	21.1	19.6
3 2	8 28.71	+18 52.5	2.276	3.127	10.9	21.2	3 2	8 7.65	+54 38.1	1.432	2.133	23.1	19.7
<b>457019</b>	2008 <i>CL</i> <sub>123</sub>		1 31.3 333°06'	2°1'/ 1.5 16			<b>378688</b>	2008 <i>JN</i> <sub>38</sub>		1 31.3 184°74'	5°4'/ 4.8 16		
12 23	9 12.17	+ 9 48.3	1.371	2.163	19.5	21.8	12 23	9 16.69	- 2 14.2	2.512	3.194	14.4	22.6
1 2	9 10.97	+10 2.9	1.277	2.147	15.9	21.6	1 2	9 12.76	- 2 21.3	2.410	3.194	12.3	22.5
1 12	9 6.72	+10 39.6	1.202	2.132	11.5	21.2	1 12	9 6.93	- 2 10.4	2.328	3.194	9.8	22.3
1 22	8 59.86	+11 37.1	1.149	2.118	6.4	20.9	1 22	8 59.60	- 1 40.7	2.271	3.193	7.3	22.1
2 1	8 51.33	+12 50.5	1.121	2.105	2.2	20.6	2 1	8 51.42	- 0 53.1	2.241	3.192	5.6	22.0
2 11	8 42.59	+14 11.3	1.119	2.093	6.0	20.8	2 11	8 43.19	+ 0 9.5	2.241	3.190	5.8	22.0
2 21	8 35.14	+15 30.5	1.141	2.082	11.4	21.1	2 21	8 35.71	+ 1 22.1	2.270	3.187	7.9	22.2
3 2	8 30.25	+16 40.3	1.186	2.072	16.3	21.3	3 2	8 29.67	+ 2 39.3	2.327	3.184	10.5	22.3
<b>118749</b>	2000 <i>QD</i> <sub>171</sub>		1 31.3 92°97'	0°2'/31.4 18			<b>459686</b>	2013 <i>MW</i> <sub>8</sub>		1 31.3 300°48'	3°5'/ 1.7 18		
12 23	9 21.23	+16 15.3	1.960	2.727	15.3	19.8	12 23	9 21.65	+10 31.0	1.819	2.573	16.8	20.9
1 2	9 16.78	+16 16.9	1.880	2.739	12.1	19.6	1 2	9 17.51	+ 9 42.8	1.720	2.564	13.8	20.7
1 12	9 9.86	+16 27.4	1.822	2.750	8.4	19.4	1 12	9 10.66	+ 9 4.9	1.641	2.556	10.1	20.5
1 22	9 1.06	+16 43.8	1.790	2.761	4.2	19.1	1 22	9 1.60	+ 8 37.7	1.587	2.547	6.2	20.2
2 1	8 51.28	+17 2.4	1.787	2.772	0.3	18.9	2 1	8 51.26	+ 8 20.8	1.561	2.539	3.5	20.0
2 11	8 41.68	+17 19.3	1.813	2.783	4.7	19.2	2 11	8 40.85	+ 8 12.4	1.564	2.531	5.7	20.1
2 21	8 33.29	+17 31.8	1.868	2.794	8.7	19.5	2 21	8 31.59	+ 8 10.2	1.594	2.523	9.7	20.4
3 2	8 26.95	+17 37.9	1.948	2.804	12.2	19.7	3 2	8 24.50	+ 8 11.2	1.649	2.515	13.6	20.6
<b>358088</b>	2006 <i>JX</i> <sub>31</sub>		1 31.3 182°23'	2°7'/ 1.9 18			<b>117626</b>	2005 <i>EO</i> <sub>118</sub>		1 31.3 252°62'	2°7'/ 1.7 18		
12 23	9 19.62	+ 8 9.2	1.896	2.643	16.5	21.7	12 23	9 20.60	+ 9 48.8	1.963	2.711	15.9	20.8
1 2	9 15.74	+ 8 14.4	1.803	2.644	13.4	21.5	1 2	9 16.61	+ 9 35.1	1.853	2.695	13.0	20.6
1 12	9 9.33	+ 8 35.9	1.731	2.644	9.8	21.2	1 12	9 10.04	+ 9 34.3	1.764	2.678	9.5	20.3
1 22	9 0.90	+ 9 12.6	1.683	2.644	5.8	21.0	1 22	9 1.33	+ 9 46.1	1.700	2.661	5.6	20.0
2 1	8 51.29	+10 1.4	1.663	2.643	2.8	20.8	2 1	8 51.28	+10 8.4	1.664	2.644	2.7	19.8
2 11	8 41.65	+10 56.9	1.673	2.642	5.0	20.9	2 11	8 41.01	+10 37.6	1.657	2.626	5.1	19.9
2 21	8 33.09	+11 53.6	1.710	2.641	9.0	21.2	2 21	8 31.70	+11 9.5	1.679	2.608	9.3	20.1
3 2	8 26.55	+12 46.5	1.773	2.639	12.8	21.4	3 2	8 24.37	+11 40.2	1.725	2.589	13.2	20.3
<b>21244</b>	1995 <i>XU</i> <sub>1</sub>		1 31.3 174°79'	0°9'/31.8 18			<b>114699</b>	2003 <i>FO</i> <sub>115</sub>		1 31.3 176°18'	2°6'/ 1.9 18		
12 23	9 21.21	+12 56.8	2.126	2.877	14.7	19.6	12 23	9 22.03	+ 8 25.5	2.077	2.812	15.5	20.7
1 2	9 16.70	+13 13.4	2.032	2.880	11.8	19.4	1 2	9 17.37	+ 8 25.6	1.982	2.815	12.7	20.5
1 12	9 9.82	+13 41.8	1.961	2.883	8.3	19.1	1 12	9 10.31	+ 8 40.0	1.908	2.818	9.2	20.3
1 22	9 1.08	+14 19.4	1.916	2.884	4.3	18.9	1 22	9 1.34	+ 9 7.6	1.860	2.819	5.5	20.0
2 1	8 51.29	+15 2.3	1.901	2.885	0.9	18.6	2 1	8 51.29	+ 9 45.8	1.841	2.820	2.7	19.9
2 11	8 41.49	+15 45.7	1.916	2.886	4.4	18.9	2 11	8 41.21	+10 30.1	1.852	2.820	4.8	20.0
2 21	8 32.73	+16 25.5	1.960	2.885	8.4	19.1	2 21	8 32.17	+11 16.0	1.892	2.819	8.5	20.2
3 2	8 25.84	+16 58.6	2.030	2.884	11.9	19.4	3 2	8 25.04	+11 59.3	1.958	2.817	12.1	20.4
<b>53268</b>	1999 <i>FU</i> <sub>18</sub>		1 31.3 315°35'	2°3'/29.8 18			<b>492499</b>	2014 <i>NF</i> <sub>61</sub>		1 31.3 260°25'	1°5'/30.6 18		
12 23	9 17.49	+22 22.7	2.052	2.837	14.1	18.8	12 23	9 23.89	+19 52.2	1.621	2.405	17.3	22.2
1 2	9 14.09	+22 49.6	1.954	2.824	11.2	18.6	1 2	9 19.94	+20 5.8	1.521	2.390	13.9	21.9
1 12	9 8.22	+23 22.4	1.878	2.812	7.7	18.4	1 12	9 12.75	+20 28.4	1.442	2.375	9.6	21.6
1 22	9 0.36	+23 56.6	1.829	2.800	4.1	18.1	1 22	9 2.81	+20 55.4	1.387	2.359	4.8	21.3
2 1	8 51.34	+24 27.0	1.808	2.788	2.5	18.0	2 1	8 51.16	+21 20.7	1.360	2.343	1.7	21.0
2 11	8 42.26	+24 48.7	1.816	2.777	5.7	18.2	2 11	8 39.33	+21 38.5	1.360	2.327	6.4	21.3
2 21	8 34.23	+24 58.9	1.851	2.766	9.5	18.4	2 21	8 28.85	+21 45.1	1.387	2.310	11.4	21.5
3 2	8 28.17	+24 56.9	1.911	2.756	13.0	18.6	3 2	8 21.02	+21 39.5	1.438	2.293	15.8	21.8
<b>135416</b>	2001 <i>UA</i> <sub>25</sub>		1 31.3 82°44'	0°4'/31.0 18			<b>425203</b>	2009 <i>VW</i> <sub>14</sub>		1 31.3 35°02'	1°4'/ 1.1 18		
12 23	9 19.00	+18 13.5	2.356	3.120	13.1	19							

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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>399536</b>	2003 <i>MV</i> <sub>2</sub>		1 31.3 185°87	0°8/31.8	18		<b>242759</b>	2005 <i>WH</i> <sub>91</sub>		1 31.3 36°72	3°1/29.9	18	
12 23	9 22.07	+13 16.5	2.135	2.886	14.7	23.2	12 23	9 20.60	+20 59.2	1.194	2.008	20.5	20.4
1 2	9 17.40	+13 30.8	2.038	2.886	11.8	23.0	1 2	9 17.95	+21 39.5	1.132	2.018	16.2	20.2
1 12	9 10.33	+13 56.5	1.964	2.885	8.3	22.7	1 12	9 11.57	+22 31.2	1.088	2.029	11.1	19.9
1 22	9 1.36	+14 31.1	1.916	2.884	4.3	22.5	1 22	9 2.20	+23 26.3	1.067	2.040	5.7	19.6
2 1	8 51.30	+15 10.7	1.897	2.882	0.8	22.2	2 1	8 51.27	+24 15.3	1.071	2.052	3.3	19.5
2 11	8 41.21	+15 50.8	1.910	2.879	4.5	22.5	2 11	8 40.68	+24 49.9	1.100	2.065	7.8	19.8
2 21	8 32.13	+16 27.3	1.951	2.876	8.5	22.7	2 21	8 32.11	+25 6.1	1.153	2.078	12.9	20.2
3 2	8 24.95	+16 57.3	2.019	2.871	12.0	22.9	3 2	8 26.76	+25 4.0	1.227	2.092	17.3	20.5
<b>59527</b>	1999 <i>JE</i> <sub>24</sub>		1 31.3 69°98	8°0/26.4	18		<b>206327</b>	2003 <i>OY</i> <sub>3</sub>		1 31.3 210°03	0°2/31.4	18	
12 23	9 25.44	+35 45.6	1.774	2.563	15.8	18.0	12 23	9 21.44	+14 33.8	2.024	2.783	15.1	21.7
1 2	9 20.89	+37 7.2	1.718	2.580	12.9	17.8	1 2	9 17.16	+14 56.2	1.923	2.777	12.1	21.5
1 12	9 13.07	+38 24.4	1.685	2.597	10.1	17.7	1 12	9 10.34	+15 30.5	1.845	2.770	8.4	21.2
1 22	9 2.75	+39 27.3	1.677	2.615	8.2	17.6	1 22	9 1.45	+16 13.6	1.793	2.763	4.2	21.0
2 1	8 51.20	+40 7.3	1.696	2.632	8.3	17.6	2 1	8 51.33	+17 1.0	1.770	2.755	0.3	20.6
2 11	8 40.02	+40 19.7	1.741	2.649	10.3	17.8	2 11	8 41.12	+17 47.2	1.777	2.746	4.8	21.0
2 21	8 30.65	+40 5.1	1.810	2.667	12.9	18.0	2 21	8 31.92	+18 27.7	1.813	2.737	9.1	21.2
3 2	8 24.09	+39 27.7	1.901	2.684	15.5	18.2	3 2	8 24.72	+18 59.5	1.875	2.727	12.8	21.4
<b>408259</b>	2013 <i>FZ</i> <sub>8</sub>		1 31.3 228°90	0°1/31.4	18		<b>498459</b>	2008 <i>BN</i> <sub>53</sub>		1 31.3 330°38	3°3/29.2	17	
12 23	9 19.40	+13 47.2	1.874	2.640	15.9	21.4	12 23	9 15.53	+24 12.6	1.954	2.748	14.4	20.5
1 2	9 15.79	+14 22.6	1.774	2.633	12.7	21.2	1 2	9 12.80	+24 49.4	1.854	2.730	11.4	20.2
1 12	9 9.53	+15 12.7	1.697	2.624	8.9	20.9	1 12	9 7.50	+25 31.9	1.777	2.712	8.0	20.0
1 22	9 1.09	+16 14.1	1.645	2.616	4.5	20.7	1 22	9 0.10	+26 14.8	1.725	2.695	4.5	19.7
2 1	8 51.32	+17 21.1	1.622	2.607	0.3	20.3	2 1	8 51.44	+26 51.9	1.702	2.678	3.5	19.6
2 11	8 41.41	+18 27.1	1.628	2.597	5.1	20.7	2 11	8 42.67	+27 17.8	1.706	2.662	6.5	19.8
2 21	8 32.55	+19 26.0	1.662	2.587	9.6	20.9	2 21	8 34.97	+27 29.3	1.737	2.647	10.3	20.0
3 2	8 25.78	+20 13.9	1.721	2.577	13.6	21.1	3 2	8 29.32	+27 25.8	1.791	2.633	13.8	20.2
<b>461338</b>	2015 <i>XY</i> <sub>337</sub>		1 31.3 343°76	2°4/1.3	18		<b>275463</b>	2011 <i>DQ</i> <sub>3</sub>		1 31.3 359°83	2°4/1.9	18	
12 23	9 17.20	+12 22.6	1.327	2.121	20.0	20.5	12 23	9 14.04	+ 8 6.1	1.739	2.503	17.1	20.1
1 2	9 14.98	+12 0.7	1.243	2.113	16.2	20.3	1 2	9 11.60	+ 8 28.5	1.650	2.502	13.9	19.9
1 12	9 9.46	+11 54.0	1.176	2.107	11.6	20.0	1 12	9 6.64	+ 9 10.2	1.582	2.501	10.0	19.6
1 22	9 1.20	+12 1.8	1.132	2.101	6.5	19.7	1 22	8 59.65	+10 9.5	1.537	2.501	5.8	19.4
2 1	8 51.31	+12 20.9	1.113	2.096	2.4	19.4	2 1	8 51.48	+11 21.7	1.519	2.501	2.4	19.2
2 11	8 41.38	+12 46.2	1.119	2.092	6.2	19.6	2 11	8 43.28	+12 40.1	1.530	2.502	5.0	19.3
2 21	8 32.98	+13 12.3	1.149	2.088	11.5	19.9	2 21	8 36.18	+13 57.4	1.568	2.503	9.3	19.6
3 2	8 27.35	+13 34.4	1.202	2.086	16.3	20.2	3 2	8 31.12	+15 7.6	1.631	2.505	13.3	19.8
<b>262647</b>	2006 <i>WJ</i> <sub>55</sub>		1 31.3 140°82	2°7/29.3	18		<b>338443</b>	2003 <i>EU</i> <sub>40</sub>		1 31.3 337°82	2°2/29.4	17	
12 23	9 22.59	+23 13.3	2.253	3.024	13.5	21.3	12 23	9 14.08	+19 0.5	2.122	2.905	13.8	19.8
1 2	9 17.68	+24 1.2	2.174	3.036	10.6	21.2	1 2	9 11.33	+20 10.5	2.028	2.899	10.8	19.6
1 12	9 10.41	+24 54.1	2.118	3.048	7.3	21.0	1 12	9 6.30	+21 31.6	1.959	2.893	7.4	19.4
1 22	9 1.34	+25 46.6	2.090	3.059	4.0	20.8	1 22	8 59.45	+22 58.4	1.916	2.888	3.8	19.2
2 1	8 51.32	+26 32.9	2.093	3.069	2.9	20.7	2 1	8 51.50	+24 24.1	1.903	2.883	2.4	19.1
2 11	8 41.41	+27 8.2	2.125	3.079	5.7	20.9	2 11	8 43.46	+25 41.6	1.919	2.878	5.6	19.3
2 21	8 32.62	+27 30.1	2.186	3.088	8.9	21.2	2 21	8 36.33	+26 45.9	1.963	2.874	9.3	19.5
3 2	8 25.75	+27 38.4	2.273	3.097	11.9	21.4	3 2	8 30.98	+27 34.1	2.032	2.870	12.6	19.7
<b>162198</b>	1999 <i>RM</i> <sub>55</sub>		1 31.3 185°07	1°1/30.6	18		<b>522214</b>	2016 <i>AQ</i> <sub>263</sub>		1 31.3 144°42	1°4/1.3	18	
12 23	9 22.65	+18 25.8	2.112	2.876	14.4	20.9	12 23	9 17.97	+11 12.9	2.261	3.009	14.1	21.8
1 2	9 17.95	+18 54.5	2.019	2.877	11.4	20.7	1 2	9 13.97	+11 26.1	2.170	3.015	11.3	21.6
1 12	9 10.76	+19 31.9	1.948	2.877	7.8	20.5	1 12	9 7.86	+11 51.4	2.103	3.021	8.0	21.4
1 22	9 1.59	+20 13.6	1.904	2.876	3.8	20.2	1 22	9 0.11	+12 26.7	2.061	3.027	4.3	21.2
2 1	8 51.31	+20 54.8	1.890	2.874	1.2	20.1	2 1	8 51.47	+13 8.6	2.049	3.032	1.4	21.0
2 11	8 41.02	+21 30.3	1.906	2.872	5.0	20.3	2 11	8 42.86	+13 52.9	2.067	3.037	4.1	21.2
2 21	8 31.81	+21 56.7	1.951	2.868	9.0	20.5	2 21	8 35.17	+14 35.6	2.114	3.042	7.7	21.4
3 2	8 24.87	+22 12.5	2.022	2.865	12.4	20.8	3 2	8 29.17	+15 13.3	2.187	3.046	11.0	21.6
<b>152892</b>	2000 <i>CD</i> <sub>98</sub>		1 31.3 241°99	0°4/31.1	18		<b>427497</b>	2002 <i>CK</i> <sub>14</sub>		1 31.3 73°52	4°5/3.5	18	
12 23	9 23.83	+17 22.4	1.681	2.457	17.1	20.3	12 23	9 18.71	- 2 11.3	1.041	1.803	26.2	20.4
1 2	9 19.69	+17 30.2	1.582	2.445	13.7	20.0	1 2	9 16.79	- 0 45.7	0.973	1.817	21.9	20.1
1 12	9 12.46	+17 48.3	1.503	2.433	9.6	19.7	1 12	9 11.06	+ 1 29.7	0.920	1.831	16.4	19.8
1 22	9 2.63	+18 13.2	1.449	2.421	4.7	19.4	1 22	9 2.12	+ 4 32.8	0.887	1.845	10.2	19.5
2 1	8 51.22	+18 39.7	1.423	2.408	0.6	19.1	2 1	8 51.30	+ 8 11.0	0.879	1.859	4.9	19.3
2 11	8 39.66	+19 2.5	1.426	2.395	5.8	19.4	2 11	8 40.55	+12 1.1	0.899	1.873	7.1	19.5
2 21	8 29.39	+19 17.6	1.455	2.381	10.7	19.7	2 21	8 31.74	+15 38.3	0.945	1.887	13.0	19.8
3 2	8 21.63	+19 23.1	1.509	2.367	15.1	19.9	3 2	8 26.30	+18 45.1	1.014	1.900	18.4	20.2
<b>293162</b>	2006 <i>YA</i> <sub>21</sub>		1 31.3 81°24	2°0/30.1	18		<b>104080</b>	2000 <i>EE</i> <sub>30</sub>		1 31.3 17°24	3°8/29.4	18	
12 23	9 20.66	+20 8.7	1.785	2.569	16.0	20.7	12 23	9 19.19	+21 37.7	1.221	2.037	20.1	18.7
1 2	9 16.70	+20 47.2	1.712	2.581	12.5	20.5	1 2	9 16.97	+22 34.4	1.151	2.039	15.9	18.4
1 12	9 10.02	+21 34.2	1.660	2.594	8.5	20.3	1 12	9 11.04	+23 43.5	1.101	2.042	10.9	18.1
1 22	9 1.23	+22 24.3	1.634	2.606	4.3	20.0	1 22	9 2.04	+24 56.3	1.073	2.045	5.9	17.9
2 1	8 51.35	+23 10.9	1.636	2.618	2.2	19.9	2 1	8 51.31	+26 2.0	1.070	2.049	4.2	17.8
2 11	8 41.64	+23 48.3	1.667	2.631	5.9	20.2	2 11	8 40.72	+26 50.8	1.092	2.054	8.5	18.0
2 21	8 33.29	+24 13.2	1.726	2.643	9.9	20.4	2 21	8 32.04	+27 17.7	1.138	2.060	13.5	18.3
3 2	8 27.22	+24 24.4	1.808	2.655	13.5	20.7	3 2	8 26.56	+27 22.5	1.205	2.065	17.9	18.6
<b>460691</b>	2014 <i>UV</i> <sub>189</sub>		1 31.3 94°21	0°7/31.7	18		<b>202052</b>	2004 <i>RF</i> <sub>190</sub>		1 31.3 119°80	3°5/2.7	18	
12 23	9 20.86	+13 49.1	1.919	2.681	1								

EPHEMERIDES

1 31.3

1 31.3

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>223754</b>	2004 RR <sub>208</sub>		1 31.3 68°91	2°0/ 1.2 18			<b>130701</b>	2000 SG <sub>168</sub>		1 31.3 69°20	1°6/ 1.0 18		
12 23	9 23.22	+13 39.9	1.952	2.708	15.7	19.8	12 23	9 23.11	+13 50.9	1.509	2.285	18.7	19.4
1 2	9 18.39	+13 3.3	1.863	2.712	12.7	19.6	1 2	9 19.02	+13 33.2	1.434	2.296	15.0	19.2
1 12	9 11.03	+12 35.0	1.797	2.717	9.0	19.3	1 12	9 11.83	+13 27.9	1.379	2.306	10.6	19.0
1 22	9 1.72	+12 14.1	1.756	2.721	5.0	19.1	1 22	9 2.23	+13 33.2	1.348	2.317	5.6	18.7
2 1	8 51.36	+11 59.2	1.744	2.726	2.0	18.9	2 1	8 51.38	+13 45.3	1.344	2.328	1.6	18.5
2 11	8 41.12	+11 48.3	1.761	2.731	4.8	19.1	2 11	8 40.74	+14 0.0	1.368	2.339	5.5	18.8
2 21	8 32.10	+11 39.3	1.807	2.735	8.8	19.4	2 21	8 31.69	+14 13.4	1.418	2.350	10.3	19.1
3 2	8 25.17	+11 30.4	1.879	2.740	12.4	19.6	3 2	8 25.26	+14 22.6	1.491	2.361	14.5	19.4
<b>364313</b>	2006 UB <sub>54</sub>		1 31.3 142°22	2°5/ 2.1 18			<b>464886</b>	2005 LO <sub>13</sub>		1 31.3 61°48	3°3/ 28.6 18		
12 23	9 20.65	+ 8 0.2	2.358	3.085	14.1	22.2	12 23	9 16.78	+23 38.1	2.228	3.011	13.2	20.8
1 2	9 15.89	+ 8 2.6	2.270	3.098	11.5	22.0	1 2	9 13.30	+24 46.1	2.148	3.017	10.3	20.6
1 12	9 9.07	+ 8 17.9	2.204	3.111	8.3	21.9	1 12	9 7.55	+26 0.2	2.091	3.023	7.2	20.4
1 22	9 0.68	+ 8 45.0	2.165	3.123	5.0	21.7	1 22	9 0.04	+27 14.4	2.062	3.030	4.2	20.3
2 1	8 51.45	+ 9 21.1	2.156	3.134	2.5	21.5	2 1	8 51.54	+28 22.1	2.063	3.036	3.6	20.2
2 11	8 42.30	+10 2.7	2.177	3.145	4.2	21.7	2 11	8 43.08	+29 17.6	2.093	3.042	6.1	20.4
2 21	8 34.09	+10 45.6	2.229	3.155	7.5	21.9	2 21	8 35.61	+29 57.6	2.151	3.049	9.3	20.6
3 2	8 27.53	+11 26.4	2.307	3.164	10.6	22.1	3 2	8 29.95	+30 21.3	2.233	3.055	12.2	20.8
<b>459236</b>	2012 FH <sub>1</sub>		1 31.3 272°93	3°1/ 28.9 17			<b>486687</b>	2013 TP <sub>121</sub>		1 31.3 20°72	19°6/ 15.4 17		
12 23	9 18.43	+20 59.3	2.004	2.786	14.5	21.4	12 23	9 13.06	-21 0.0	1.112	1.776	29.9	21.3
1 2	9 15.16	+22 12.9	1.896	2.765	11.5	21.1	1 2	9 12.33	-22 53.7	1.050	1.779	27.9	21.1
1 12	9 9.24	+23 38.6	1.811	2.744	8.0	20.8	1 12	9 8.02	-24 3.4	0.997	1.782	25.6	20.9
1 22	9 1.06	+25 10.1	1.752	2.722	4.4	20.6	1 22	9 0.68	-24 16.9	0.955	1.787	23.2	20.8
2 1	8 51.40	+26 39.3	1.723	2.700	3.4	20.5	2 1	8 51.48	-23 24.6	0.927	1.792	21.1	20.6
2 11	8 41.43	+27 58.2	1.724	2.678	6.7	20.6	2 11	8 42.21	-21 25.8	0.915	1.798	19.8	20.6
2 21	8 32.36	+29 0.7	1.752	2.656	10.7	20.8	2 21	8 34.65	-18 30.6	0.921	1.804	19.9	20.6
3 2	8 25.31	+29 44.3	1.805	2.633	14.3	21.0	3 2	8 30.21	-14 57.8	0.947	1.812	21.3	20.7
<b>60794</b>	2000 HR <sub>7</sub>		1 31.3 197°11	0°5/ 31.7 18			<b>456661</b>	2007 RD <sub>54</sub>		1 31.3 130°19	0°1/ 31.4 18		
12 23	9 16.85	+14 4.1	2.478	3.233	12.8	20.0	12 23	9 24.21	+15 56.2	1.939	2.699	15.7	22.0
1 2	9 12.97	+14 18.3	2.381	3.232	10.2	19.8	1 2	9 19.19	+16 7.3	1.859	2.714	12.4	21.8
1 12	9 7.12	+14 41.9	2.307	3.230	7.1	19.6	1 12	9 11.59	+16 28.1	1.801	2.727	8.6	21.5
1 22	8 59.75	+15 12.5	2.259	3.228	3.6	19.4	1 22	9 2.01	+16 55.3	1.770	2.740	4.2	21.3
2 1	8 51.53	+15 46.9	2.242	3.227	0.6	19.1	2 1	8 51.40	+17 24.5	1.767	2.753	0.3	21.0
2 11	8 43.30	+16 21.4	2.255	3.224	3.9	19.4	2 11	8 40.97	+17 51.1	1.795	2.764	4.8	21.4
2 21	8 35.88	+16 52.9	2.297	3.222	7.3	19.6	2 21	8 31.82	+18 11.9	1.852	2.775	8.9	21.7
3 2	8 29.98	+17 18.7	2.366	3.220	10.4	19.8	3 2	8 24.81	+18 25.1	1.934	2.786	12.5	21.9
<b>402916</b>	2007 TE <sub>130</sub>		1 31.3 121°49	1°2/ 31.9 18			<b>106032</b>	2000 SO <sub>302</sub>		1 31.3 219°09	3°9/ 3.5 17		
12 23	9 20.93	+12 27.7	1.786	2.549	16.7	22.0	12 23	9 15.40	+ 3 4.3	2.828	3.532	12.5	20.6
1 2	9 16.87	+12 39.6	1.704	2.558	13.4	21.8	1 2	9 11.56	+ 2 47.0	2.720	3.527	10.4	20.5
1 12	9 10.15	+13 5.5	1.643	2.567	9.4	21.5	1 12	9 6.04	+ 2 42.2	2.635	3.520	8.0	20.3
1 22	9 1.35	+13 42.4	1.608	2.576	4.9	21.3	1 22	8 59.20	+ 2 50.1	2.575	3.514	5.6	20.1
2 1	8 51.41	+14 26.1	1.600	2.585	1.2	21.1	2 1	8 51.62	+ 3 10.1	2.544	3.507	4.0	20.0
2 11	8 41.57	+15 10.9	1.622	2.593	4.9	21.3	2 11	8 43.97	+ 3 39.9	2.543	3.501	4.6	20.0
2 21	8 32.99	+15 52.1	1.671	2.601	9.3	21.6	2 21	8 36.97	+ 4 16.6	2.572	3.493	6.9	20.2
3 2	8 26.61	+16 26.0	1.745	2.608	13.1	21.9	3 2	8 31.22	+ 4 56.7	2.628	3.486	9.4	20.3
<b>398356</b>	2011 SV <sub>35</sub>		1 31.3 124°16	0°2/ 31.4 18			<b>423518</b>	2005 UZ <sub>67</sub>		1 31.3 167°37	4°4/ 27.7 18		
12 23	9 23.09	+14 29.1	1.883	2.644	16.1	22.1	12 23	9 22.97	+29 14.5	2.491	3.262	12.3	21.9
1 2	9 18.38	+14 54.9	1.806	2.660	12.7	21.9	1 2	9 17.98	+30 17.7	2.409	3.268	9.8	21.7
1 12	9 11.07	+15 32.9	1.750	2.676	8.8	21.7	1 12	9 10.68	+31 22.3	2.351	3.272	7.1	21.6
1 22	9 1.76	+16 19.3	1.721	2.691	4.4	21.4	1 22	9 1.56	+32 22.0	2.321	3.276	4.9	21.4
2 1	8 51.40	+17 8.7	1.721	2.706	0.3	21.1	2 1	8 51.45	+33 10.7	2.321	3.280	4.7	21.4
2 11	8 41.20	+17 55.5	1.750	2.720	4.8	21.5	2 11	8 41.37	+33 44.0	2.351	3.282	6.7	21.5
2 21	8 32.29	+18 35.5	1.809	2.733	9.0	21.8	2 21	8 32.33	+34 0.0	2.409	3.284	9.4	21.7
3 2	8 25.54	+19 5.9	1.892	2.746	12.7	22.0	3 2	8 25.14	+33 59.4	2.492	3.286	11.9	21.9
<b>149925</b>	2005 SL <sub>119</sub>		1 31.3 173°60	1°6/ 30.0 18			<b>457126</b>	2008 FJ <sub>52</sub>		1 31.3 226°63	6°2/ 4.9 16		
12 23	9 20.03	+19 17.6	2.394	3.158	12.9	21.2	12 23	9 16.61	- 2 27.0	2.173	2.866	16.1	22.3
1 2	9 15.61	+20 5.3	2.302	3.161	10.2	21.0	1 2	9 13.14	- 2 41.2	2.068	2.859	13.8	22.2
1 12	9 9.02	+21 1.0	2.234	3.163	6.9	20.8	1 12	9 7.48	- 2 35.1	1.982	2.851	11.1	22.0
1 22	9 0.73	+22 0.2	2.194	3.165	3.5	20.5	1 22	9 0.05	- 2 7.0	1.920	2.843	8.4	21.8
2 1	8 51.48	+22 57.6	2.185	3.167	1.8	20.4	2 1	8 51.56	- 1 17.3	1.884	2.835	6.4	21.6
2 11	8 42.21	+23 48.2	2.206	3.168	4.8	20.6	2 11	8 42.94	- 0 9.2	1.877	2.826	6.7	21.6
2 21	8 33.86	+24 28.5	2.257	3.168	8.3	20.8	2 21	8 35.14	+ 1 11.5	1.897	2.817	9.0	21.7
3 2	8 27.20	+24 56.7	2.334	3.167	11.3	21.0	3 2	8 29.01	+ 2 38.2	1.944	2.808	11.9	21.9
<b>173477</b>	2000 SG <sub>35</sub>		1 31.3 126°83	0°1/ 31.2 18			<b>336755</b>	2010 KA <sub>95</sub>		1 31.3 297°63	0°9/ 30.7 18		
12 23	9 16.46	+15 50.6	2.764	3.518	11.6	21.0	12 23	9 19.97	+19 51.2	2.216	2.986	13.7	20.2
1 2	9 12.37	+16 13.4	2.676	3.528	9.2	20.9	1 2	9 15.70	+19 56.4	2.123	2.984	10.8	20.0
1 12	9 6.55	+16 43.7	2.613	3.538	6.3	20.7	1 12	9 9.14	+20 7.0	2.053	2.983	7.4	19.8
1 22	8 59.41	+17 18.8	2.577	3.548	3.1	20.5	1 22	9 0.81	+20 20.0	2.010	2.981	3.7	19.5
2 1	8 51.59	+17 55.4	2.572	3.557	0.3	20.3	2 1	8 51.51	+20 31.7	1.996	2.980	1.1	19.3
2 11	8 43.82	+18 30.2	2.598	3.566	3.6	20.6	2 11	8 42.27	+20 38.8	2.012	2.978	4.6	19.6
2 21	8 36.82	+19 0.4	2.653	3.575	6.7	20.8	2 21	8 34.05	+20 39.1	2.056	2.977	8.4	19.8
3 2	8 31.20	+19 24.2	2.736	3.583	9.4	21.0	3 2	8 27.67	+20 31.9	2.126	2.975	11.7	20.0
<b>264136</b>	2009 UE <sub>62</sub>		1 31.3 159°35	0°8/ 30.7 18			<b>165994</b>	2002 AO <sub>20</sub>		1 31.3 332°54	2°7/ 1.9 18		
12 23	9 19.22	+17 23.1	2.131	2.899	14.2	21.3	12 23	9 12.02	+ 8 3.6	1.253	2.047	20.9</	

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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>72697</b>	2001 <i>FX</i> <sub>75</sub>		1 31.3 151°74	3°7/28.4	18		<b>57215</b>	2001 <i>QA</i> <sub>65</sub>		1 31.3 127°97	2°4/29.9	18	
12 23	9 21.06	+27 57.3	2.573	3.345	11.9	19.8	12 23	9 23.96	+20 5.4	1.708	2.488	16.7	19.7
1 2	9 16.31	+28 45.0	2.491	3.352	9.4	19.6	1 2	9 19.53	+20 58.2	1.634	2.501	13.2	19.5
1 12	9 9.43	+29 34.0	2.434	3.359	6.7	19.5	1 12	9 12.14	+22 1.0	1.581	2.513	9.0	19.3
1 22	9 0.91	+30 19.1	2.405	3.365	4.3	19.3	1 22	9 2.42	+23 7.2	1.554	2.525	4.6	19.1
2 1	8 51.51	+30 55.2	2.405	3.371	3.9	19.3	2 1	8 51.44	+24 9.0	1.555	2.536	2.6	19.0
2 11	8 42.20	+31 18.6	2.436	3.376	6.0	19.4	2 11	8 40.61	+24 59.2	1.586	2.547	6.4	19.2
2 21	8 33.88	+31 27.5	2.495	3.381	8.7	19.6	2 21	8 31.24	+25 34.0	1.643	2.557	10.6	19.5
3 2	8 27.29	+31 22.5	2.579	3.386	11.2	19.8	3 2	8 24.36	+25 52.4	1.725	2.566	14.3	19.7
<b>211688</b>	2003 <i>WE</i> <sub>108</sub>		1 31.3 201°10	3°1/ 2.1	18		<b>322417</b>	2011 <i>SV</i> <sub>96</sub>		1 31.3 65°89	0°7/30.9	18	
12 23	9 20.34	+ 8 39.3	1.848	2.597	16.7	20.4	12 23	9 23.89	+17 19.7	1.446	2.232	18.9	21.0
1 2	9 16.43	+ 8 25.6	1.754	2.595	13.7	20.2	1 2	9 19.64	+17 37.9	1.386	2.256	14.9	20.8
1 12	9 9.92	+ 8 26.7	1.680	2.593	10.0	19.9	1 12	9 12.22	+18 7.6	1.346	2.279	10.2	20.6
1 22	9 1.31	+ 8 42.1	1.631	2.591	6.0	19.7	1 22	9 2.40	+18 43.7	1.330	2.302	4.9	20.3
2 1	8 51.48	+ 9 9.6	1.610	2.589	3.1	19.5	2 1	8 51.45	+19 19.8	1.341	2.326	0.9	20.1
2 11	8 41.61	+ 9 45.0	1.617	2.586	5.3	19.6	2 11	8 40.92	+19 49.9	1.380	2.349	5.9	20.5
2 21	8 32.86	+10 23.6	1.652	2.583	9.3	19.9	2 21	8 32.15	+20 10.2	1.445	2.373	10.6	20.8
3 2	8 26.19	+11 0.9	1.712	2.579	13.1	20.1	3 2	8 26.13	+20 19.4	1.533	2.396	14.6	21.1
<b>190794</b>	2001 <i>RS</i> <sub>30</sub>		1 31.3 63°98	0°8/31.0	18		<b>279676</b>	2011 <i>FE</i> <sub>31</sub>		1 31.3 186°31	3°2/28.5	17	
12 23	9 24.70	+18 50.3	1.392	2.183	19.3	19.6	12 23	9 20.20	+27 34.1	2.956	3.722	10.7	22.0
1 2	9 20.67	+18 48.6	1.318	2.191	15.3	19.3	1 2	9 15.40	+28 17.2	2.864	3.721	8.4	21.8
1 12	9 13.19	+18 56.2	1.264	2.198	10.6	19.1	1 12	9 8.70	+29 1.5	2.796	3.720	6.0	21.7
1 22	9 3.00	+19 9.0	1.234	2.206	5.2	18.8	1 22	9 0.55	+29 42.9	2.758	3.719	3.8	21.5
2 1	8 51.36	+19 21.2	1.229	2.214	1.0	18.5	2 1	8 51.59	+30 16.8	2.750	3.717	3.4	21.5
2 11	8 39.98	+19 27.9	1.253	2.222	6.2	18.9	2 11	8 42.64	+30 40.0	2.773	3.714	5.3	21.6
2 21	8 30.40	+19 26.3	1.301	2.231	11.4	19.2	2 21	8 34.50	+30 50.9	2.825	3.711	7.8	21.8
3 2	8 23.77	+19 15.6	1.373	2.239	15.8	19.5	3 2	8 27.83	+30 49.4	2.903	3.708	10.1	21.9
<b>116814</b>	2004 <i>EM</i> <sub>80</sub>		1 31.3 280°53	1°2/30.3	17		<b>358069</b>	2006 <i>HA</i> <sub>89</sub>		1 31.3 286°02	2°0/30.1	17	
12 23	9 15.39	+17 41.0	2.378	3.148	12.8	20.2	12 23	9 19.15	+18 35.2	1.579	2.371	17.3	21.3
1 2	9 12.14	+18 30.3	2.271	3.133	10.2	20.0	1 2	9 16.43	+19 20.4	1.476	2.350	13.9	21.0
1 12	9 6.78	+19 29.7	2.188	3.119	7.0	19.8	1 12	9 10.56	+20 20.0	1.393	2.329	9.6	20.7
1 22	8 59.71	+20 35.4	2.132	3.104	3.4	19.5	1 22	9 1.92	+21 28.8	1.334	2.307	4.9	20.4
2 1	8 51.60	+21 42.2	2.106	3.089	1.4	19.4	2 1	8 51.46	+22 38.8	1.303	2.286	2.3	20.1
2 11	8 43.35	+22 44.5	2.110	3.074	4.7	19.6	2 11	8 40.65	+23 41.3	1.299	2.264	6.9	20.4
2 21	8 35.86	+23 37.9	2.143	3.059	8.3	19.8	2 21	8 31.02	+24 29.5	1.321	2.242	11.9	20.6
3 2	8 29.95	+24 19.6	2.202	3.044	11.6	19.9	3 2	8 23.95	+25 0.1	1.365	2.221	16.5	20.8
<b>235915</b>	2005 <i>EO</i> <sub>44</sub>		1 31.3 204°14	3°2/29.2	18		<b>451039</b>	2008 <i>XO</i> <sub>46</sub>		1 31.3 128°96	2°2/29.9	18	
12 23	9 21.06	+26 20.7	2.402	3.176	12.6	20.7	12 23	9 23.94	+19 35.5	1.836	2.610	15.9	22.0
1 2	9 16.48	+26 49.1	2.311	3.174	10.0	20.5	1 2	9 19.27	+20 29.9	1.762	2.626	12.5	21.8
1 12	9 9.64	+27 19.4	2.244	3.172	7.0	20.3	1 12	9 11.83	+21 34.1	1.709	2.640	8.5	21.6
1 22	9 1.05	+27 46.9	2.204	3.170	4.1	20.1	1 22	9 2.23	+22 41.8	1.683	2.654	4.3	21.3
2 1	8 51.51	+28 6.9	2.194	3.167	3.3	20.0	2 1	8 51.47	+23 45.6	1.686	2.667	2.4	21.2
2 11	8 42.04	+28 15.8	2.214	3.165	5.7	20.2	2 11	8 40.85	+24 39.0	1.719	2.680	6.0	21.5
2 21	8 33.59	+28 12.1	2.262	3.162	8.8	20.4	2 21	8 31.59	+25 17.8	1.779	2.692	10.0	21.7
3 2	8 26.95	+27 56.2	2.336	3.160	11.6	20.6	3 2	8 24.65	+25 41.1	1.865	2.703	13.5	22.0
<b>171257</b>	2005 <i>QP</i> <sub>77</sub>		1 31.3 198°21	0°7/30.7	17		<b>156537</b>	2002 <i>CU</i> <sub>300</sub>		1 31.3 251°98	0°5/31.6	18	
12 23	9 16.25	+18 15.0	2.825	3.585	11.3	20.9	12 23	9 19.30	+15 8.8	2.083	2.847	14.6	20.6
1 2	9 12.29	+18 40.4	2.726	3.583	8.9	20.7	1 2	9 15.38	+15 12.3	1.984	2.840	11.7	20.4
1 12	9 6.56	+19 12.1	2.653	3.580	6.1	20.6	1 12	9 9.08	+15 25.4	1.908	2.834	8.2	20.1
1 22	8 59.48	+19 47.3	2.607	3.578	3.0	20.4	1 22	9 0.87	+15 45.7	1.857	2.827	4.2	19.9
2 1	8 51.64	+20 22.4	2.591	3.575	0.9	20.2	2 1	8 51.56	+16 9.7	1.835	2.820	0.5	19.6
2 11	8 43.79	+20 54.1	2.607	3.572	3.8	20.4	2 11	8 42.21	+16 33.6	1.842	2.813	4.5	19.9
2 21	8 36.65	+21 19.9	2.652	3.569	6.9	20.6	2 21	8 33.85	+16 53.9	1.878	2.805	8.6	20.1
3 2	8 30.88	+21 38.1	2.724	3.566	9.6	20.8	3 2	8 27.37	+17 8.2	1.940	2.798	12.2	20.3
<b>258378</b>	2001 <i>XC</i> <sub>34</sub>		1 31.3 14°83	2°6/ 1.2	18		<b>197591</b>	2004 <i>HQ</i> <sub>36</sub>		1 31.3 200°96	3°3/ 2.3	18	
12 23	9 21.98	+14 24.9	1.415	2.200	19.3	19.4	12 23	9 22.18	+ 7 16.1	1.909	2.646	16.7	21.4
1 2	9 18.34	+13 26.9	1.339	2.205	15.6	19.2	1 2	9 17.86	+ 7 8.9	1.809	2.642	13.7	21.2
1 12	9 11.48	+12 38.2	1.283	2.211	11.1	19.0	1 12	9 10.92	+ 7 17.7	1.730	2.638	10.1	20.9
1 22	9 2.12	+11 58.7	1.250	2.217	6.2	18.7	1 22	9 1.84	+ 7 42.2	1.675	2.632	6.2	20.7
2 1	8 51.44	+11 27.6	1.243	2.225	2.6	18.5	2 1	8 51.49	+ 8 20.1	1.649	2.626	3.4	20.5
2 11	8 40.99	+11 3.1	1.263	2.234	6.0	18.7	2 11	8 41.03	+ 9 6.8	1.652	2.620	5.3	20.6
2 21	8 32.21	+10 43.3	1.308	2.243	10.8	19.0	2 21	8 31.62	+ 9 57.2	1.683	2.612	9.3	20.8
3 2	8 26.14	+10 26.1	1.377	2.254	15.0	19.3	3 2	8 24.28	+10 46.1	1.741	2.604	13.1	21.0
<b>382288</b>	2012 <i>TN</i> <sub>322</sub>		1 31.3 138°32	1°9/ 1.7	17		<b>81677</b>	2000 <i>JW</i> <sub>1</sub>		1 31.3 208°56	2°0/29.9	18	
12 23	9 18.91	+10 57.8	2.760	3.493	12.1	21.0	12 23	9 20.62	+20 39.8	2.155	2.927	13.9	20.1
1 2	9 14.24	+10 38.3	2.666	3.500	9.8	20.8	1 2	9 16.45	+21 21.4	2.059	2.922	11.0	19.9
1 12	9 7.81	+10 27.0	2.596	3.507	7.0	20.6	1 12	9 9.83	+22 10.8	1.987	2.918	7.6	19.7
1 22	9 0.05	+10 23.1	2.552	3.513	4.1	20.4	1 22	9 1.27	+23 3.2	1.941	2.912	3.9	19.4
2 1	8 51.60	+10 25.2	2.540	3.519	2.0	20.3	2 1	8 51.56	+23 52.8	1.925	2.906	2.2	19.3
2 11	8 43.21	+10 31.2	2.558	3.525	3.7	20.4	2 11	8 41.80	+24 34.2	1.939	2.900	5.4	19.5
2 21	8 35.61	+10 39.2	2.606	3.531	6.6	20.6	2 21	8 33.04	+25 4.1	1.982	2.893	9.2	19.7
3 2	8 29.39	+10 47.1	2.682	3.537	9.3	20.8	3 2	8 26.21	+25 20.8	2.049	2.886	12.5	19.9
<b>381610</b>	2008 <i>WF</i> <sub>71</sub>		1 31.3 93°59	3°4/ 2.7	18		<b>303381</b>	2004 <i>XM</i> <sub>9</sub>		1 31.3 37°48	5°5/28.3	18	
12 23	9 17.96	+ 6 16.2	2.255	2.985	14.6								

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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>354158</b>	2002 <i>CF</i> <sub>190</sub>		1 31.3 294°11	1°1/30.7	18		<b>324590</b>	2006 <i>XN</i> <sub>20</sub>		1 31.3 73°13	0°7/30.9	18	
12 23	9 18.03	+15 44.0	1.530	2.320	17.9	20.8	12 23	9 19.68	+16 29.5	1.754	2.533	16.4	20.9
1 2	9 15.39	+16 32.8	1.440	2.313	14.3	20.5	1 2	9 15.98	+17 2.5	1.681	2.546	12.9	20.7
1 12	9 9.69	+17 38.4	1.371	2.306	9.9	20.2	1 12	9 9.60	+17 47.2	1.629	2.560	8.8	20.5
1 22	9 1.40	+18 55.9	1.326	2.299	4.8	19.9	1 22	9 1.16	+18 38.9	1.602	2.574	4.3	20.3
2 1	8 51.54	+20 17.3	1.308	2.293	1.3	19.7	2 1	8 51.63	+19 31.5	1.603	2.588	0.9	20.0
2 11	8 41.54	+21 33.3	1.318	2.286	6.3	20.0	2 11	8 42.27	+20 19.1	1.634	2.602	5.3	20.4
2 21	8 32.86	+22 36.7	1.354	2.280	11.3	20.2	2 21	8 34.22	+20 57.1	1.691	2.616	9.5	20.7
3 2	8 26.71	+23 23.4	1.413	2.274	15.7	20.5	3 2	8 28.40	+21 23.3	1.773	2.630	13.2	20.9
<b>50800</b>	2000 <i>FU</i> <sub>26</sub>		1 31.3 176°59	2°1/29.5	18		<b>344509</b>	2002 <i>RL</i> <sub>80</sub>		1 31.3 109°02	7°8/6.5	18	
12 23	9 19.06	+23 34.2	2.958	3.721	10.7	19.8	12 23	9 21.17	- 6 58.1	1.688	2.369	20.4	20.8
1 2	9 14.43	+24 7.4	2.865	3.723	8.4	19.6	1 2	9 17.13	- 6 52.3	1.612	2.390	17.6	20.7
1 12	9 8.00	+24 43.8	2.797	3.725	5.8	19.5	1 12	9 10.40	- 6 15.8	1.552	2.410	14.3	20.5
1 22	9 0.20	+25 19.7	2.758	3.726	3.2	19.3	1 22	9 1.56	- 5 6.9	1.515	2.430	10.8	20.3
2 1	8 51.65	+25 51.4	2.749	3.727	2.2	19.2	2 1	8 51.61	- 3 27.7	1.503	2.449	8.2	20.2
2 11	8 43.13	+26 15.5	2.772	3.727	4.4	19.4	2 11	8 41.79	- 1 25.4	1.519	2.467	8.1	20.2
2 21	8 35.37	+26 30.2	2.824	3.726	7.2	19.5	2 21	8 33.29	+ 0 49.2	1.562	2.484	10.4	20.4
3 2	8 29.02	+26 35.0	2.904	3.726	9.7	19.7	3 2	8 27.04	+ 3 5.0	1.633	2.501	13.6	20.6
<b>207621</b>	2006 <i>RK</i> <sub>81</sub>		1 31.3 193°84	0°6/30.8	17		<b>493964</b>	2016 <i>AD</i> <sub>58</sub>		1 31.3 238°36	0°1/31.3	18	
12 23	9 17.03	+17 57.5	2.839	3.596	11.3	21.6	12 23	9 19.55	+14 53.4	1.808	2.581	16.2	21.7
1 2	9 12.90	+18 21.3	2.740	3.594	8.9	21.5	1 2	9 16.05	+15 21.2	1.713	2.574	13.0	21.5
1 12	9 7.00	+18 51.6	2.665	3.592	6.1	21.3	1 12	9 9.83	+16 2.4	1.639	2.568	9.0	21.2
1 22	8 59.73	+19 25.3	2.619	3.590	3.0	21.1	1 22	9 1.39	+16 53.6	1.589	2.561	4.5	20.9
2 1	8 51.69	+19 59.3	2.603	3.587	0.7	20.9	2 1	8 51.62	+17 49.2	1.569	2.554	0.4	20.6
2 11	8 43.65	+20 30.1	2.618	3.584	3.8	21.1	2 11	8 41.73	+18 43.0	1.576	2.546	5.2	20.9
2 21	8 36.33	+20 55.3	2.663	3.580	6.8	21.3	2 21	8 32.98	+19 29.4	1.612	2.539	9.8	21.2
3 2	8 30.36	+21 13.1	2.735	3.577	9.6	21.5	3 2	8 26.39	+20 5.2	1.672	2.531	13.8	21.4
<b>58246</b>	1993 <i>OP</i> <sub>12</sub>		1 31.3 124°73	0°6/31.7	18		<b>307673</b>	2003 <i>SG</i> <sub>320</sub>		1 31.3 204°22	3°5/2.4	18	
12 23	9 22.61	+13 28.9	1.768	2.532	16.9	19.6	12 23	9 20.69	+ 7 22.7	1.888	2.630	16.7	21.7
1 2	9 18.24	+13 51.4	1.690	2.545	13.4	19.3	1 2	9 16.70	+ 7 7.1	1.791	2.627	13.7	21.5
1 12	9 11.14	+14 27.7	1.632	2.558	9.3	19.1	1 12	9 10.13	+ 7 7.0	1.715	2.624	10.2	21.2
1 22	9 1.91	+15 14.1	1.600	2.570	4.7	18.9	1 22	9 1.49	+ 7 22.2	1.663	2.620	6.3	21.0
2 1	8 51.55	+16 5.4	1.597	2.582	0.6	18.6	2 1	8 51.62	+ 7 50.7	1.639	2.616	3.6	20.8
2 11	8 41.31	+16 55.5	1.623	2.593	5.0	18.9	2 11	8 41.68	+ 8 28.5	1.644	2.611	5.4	20.9
2 21	8 32.40	+17 39.3	1.677	2.604	9.4	19.2	2 21	8 32.81	+ 9 11.0	1.676	2.606	9.2	21.1
3 2	8 25.76	+18 13.9	1.755	2.614	13.3	19.5	3 2	8 25.98	+ 9 53.2	1.734	2.601	13.0	21.3
<b>340649</b>	2006 <i>QK</i> <sub>183</sub>		1 31.3 103°82	0°5/31.7	18		<b>240324</b>	2003 <i>KK</i> <sub>36</sub>		1 31.3 225°85	3°2/29.2	18	
12 23	9 16.29	+14 2.3	2.503	3.258	12.7	21.6	12 23	9 21.27	+21 9.9	1.730	2.517	16.3	20.4
1 2	9 12.48	+14 18.8	2.415	3.266	10.1	21.4	1 2	9 17.72	+22 15.7	1.639	2.511	12.9	20.1
1 12	9 6.78	+14 44.4	2.349	3.273	7.0	21.2	1 12	9 11.17	+23 32.8	1.571	2.504	8.9	19.9
1 22	8 59.64	+15 16.9	2.311	3.280	3.6	21.0	1 22	9 2.13	+24 54.4	1.527	2.498	4.8	19.6
2 1	8 51.73	+15 52.9	2.302	3.287	0.5	20.8	2 1	8 51.57	+26 11.7	1.512	2.490	3.5	19.5
2 11	8 43.87	+16 28.8	2.324	3.294	3.7	21.1	2 11	8 40.86	+27 16.1	1.526	2.483	7.1	19.7
2 21	8 36.83	+17 1.3	2.375	3.301	7.1	21.3	2 21	8 31.42	+28 2.6	1.566	2.475	11.4	19.9
3 2	8 31.30	+17 28.1	2.452	3.307	10.1	21.5	3 2	8 24.40	+28 29.5	1.630	2.467	15.2	20.2
<b>518585</b>	2007 <i>TT</i> <sub>455</sub>		1 31.3 29°61	3°7/29.0	18		<b>295357</b>	2008 <i>HB</i> <sub>36</sub>		1 31.3 322°39	1°5/30.4	18	
12 23	9 20.56	+27 7.5	2.136	2.919	13.7	21.1	12 23	9 17.47	+18 4.4	1.672	2.462	16.6	20.8
1 2	9 16.38	+27 38.7	2.054	2.922	10.8	20.9	1 2	9 14.67	+18 42.3	1.582	2.455	13.2	20.5
1 12	9 9.72	+28 11.6	1.995	2.925	7.6	20.7	1 12	9 9.02	+19 32.4	1.513	2.448	9.1	20.3
1 22	9 1.17	+28 40.8	1.963	2.928	4.7	20.5	1 22	9 1.03	+20 29.8	1.469	2.441	4.5	20.0
2 1	8 51.62	+29 0.9	1.960	2.931	3.9	20.5	2 1	8 51.65	+21 27.9	1.452	2.435	1.7	19.8
2 11	8 42.20	+29 8.1	1.985	2.935	6.3	20.6	2 11	8 42.19	+22 19.5	1.462	2.429	6.0	20.0
2 21	8 33.97	+29 0.9	2.038	2.939	9.6	20.8	2 21	8 33.97	+22 59.3	1.500	2.424	10.6	20.3
3 2	8 27.77	+28 40.3	2.115	2.942	12.6	21.0	3 2	8 28.08	+23 24.7	1.560	2.419	14.7	20.5
<b>496561</b>	2014 <i>XL</i> <sub>4</sub>		1 31.3 305°54	4°2/2.5	18		<b>336387</b>	2008 <i>UY</i> <sub>79</sub>		1 31.3 270°78	4°2/3.0	18	
12 23	9 18.74	+ 7 15.5	1.801	2.550	17.1	20.5	12 23	9 17.08	+ 5 2.3	2.203	2.931	15.0	21.1
1 2	9 15.30	+ 6 40.1	1.704	2.543	14.2	20.3	1 2	9 13.45	+ 4 36.2	2.102	2.926	12.4	20.9
1 12	9 9.25	+ 6 19.2	1.627	2.535	10.6	20.0	1 12	9 7.68	+ 4 24.2	2.022	2.920	9.5	20.7
1 22	9 1.06	+ 6 13.4	1.574	2.529	6.9	19.8	1 22	9 0.20	+ 4 26.7	1.967	2.915	6.4	20.5
2 1	8 51.62	+ 6 22.0	1.548	2.522	4.3	19.6	2 1	8 51.72	+ 4 43.0	1.940	2.909	4.3	20.3
2 11	8 42.09	+ 6 42.3	1.549	2.515	5.9	19.7	2 11	8 43.19	+ 5 10.4	1.942	2.904	5.3	20.4
2 21	8 33.65	+ 7 9.9	1.578	2.509	9.6	19.9	2 21	8 35.51	+ 5 45.2	1.971	2.898	8.3	20.6
3 2	8 27.29	+ 7 40.4	1.631	2.503	13.4	20.1	3 2	8 29.49	+ 6 23.1	2.027	2.892	11.4	20.7
<b>187572</b>	2006 <i>VV</i> <sub>142</sub>		1 31.3 9°42	11°7/26.6	18 R		<b>104414</b>	2000 <i>FZ</i> <sub>56</sub>		1 31.3 194°84	1°6/30.3	18	
12 23	9 28.84	+42 14.3	1.352	2.151	19.3	18.8	12 23	9 20.74	+21 46.0	2.469	3.235	12.5	19.4
1 2	9 25.10	+43 20.2	1.294	2.153	16.5	18.6	1 2	9 16.11	+21 59.6	2.374	3.234	9.9	19.2
1 12	9 16.81	+44 14.4	1.254	2.156	13.7	18.4	1 12	9 9.35	+22 17.2	2.304	3.232	6.8	19.0
1 22	9 4.94	+44 43.7	1.236	2.160	12.0	18.4	1 22	9 0.96	+22 35.5	2.260	3.231	3.4	18.8
2 1	8 51.35	+44 37.1	1.241	2.164	12.0	18.4	2 1	8 51.67	+22 50.7	2.247	3.229	1.7	18.6
2 11	8 38.43	+43 50.8	1.269	2.170	13.9	18.5	2 11	8 42.43	+22 59.5	2.264	3.226	4.6	18.8
2 21	8 28.23	+42 29.3	1.319	2.177	16.6	18.7	2 21	8 34.13	+23 0.2	2.310	3.224	7.9	19.0
3 2	8 21.96	+40 41.8	1.388	2.185	19.5	18.9	3 2	8 27.52	+22 52.3	2.383	3.221	10.9	19.2
<b>500510</b>	2012 <i>TL</i> <sub>288</sub>		1 31.3 172°01	3°0/2.6	17		<b>385025</b>	2012 <i>TS</i> <sub>288</sub>		1 31.3 130°63	0°4/31.6	18	
12 23	9 17.14	+ 6 54.8	2.665	3.387	12.8								

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1 31.3

1 31.4

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>131793</b>	2002 <i>AF</i> <sub>41</sub>		1 31.3 317°42	1.7/	1.1 18		<b>65094</b>	2002 <i>CU</i> <sub>2</sub>		1 31.3 128°27	2.5/29.4 18		
12 23	9 18.29	+12 43.3	1.425	2.211	19.2	20.3	12 23	9 18.74	+20 38.6	2.043	2.822	14.4	19.4
1 2	9 15.78	+12 38.5	1.334	2.201	15.5	20.0	1 2	9 15.08	+21 41.0	1.959	2.827	11.3	19.2
1 12	9 10.06	+12 49.4	1.262	2.192	11.1	19.7	1 12	9 8.95	+22 52.4	1.899	2.831	7.7	19.0
1 22	9 1.66	+13 14.5	1.213	2.182	6.0	19.4	1 22	9 0.89	+24 7.0	1.865	2.836	4.1	18.8
2 1	8 51.61	+13 49.6	1.189	2.173	1.7	19.1	2 1	8 51.72	+25 17.7	1.861	2.840	2.7	18.7
2 11	8 41.43	+14 28.5	1.192	2.165	5.9	19.3	2 11	8 42.56	+26 18.2	1.887	2.845	5.9	18.9
2 21	8 32.63	+15 5.5	1.220	2.157	11.2	19.6	2 21	8 34.48	+27 4.3	1.940	2.849	9.5	19.1
3 2	8 26.49	+15 35.8	1.271	2.149	16.0	19.8	3 2	8 28.37	+27 34.4	2.018	2.852	12.8	19.4
<b>209451</b>	2004 <i>FF</i> <sub>141</sub>		1 31.3 353°77	3.0/	2.3 18		<b>85341</b>	1995 <i>SL</i> <sub>49</sub>		1 31.3 260°46	5.2/28.3 18		
12 23	9 14.33	+ 8 2.8	1.957	2.711	15.7	20.0	12 23	9 24.32	+30 33.4	2.052	2.833	14.3	19.3
1 2	9 11.57	+ 7 54.2	1.864	2.708	12.9	19.8	1 2	9 19.74	+31 14.3	1.959	2.823	11.5	19.1
1 12	9 6.52	+ 8 0.5	1.791	2.705	9.5	19.6	1 12	9 12.32	+31 55.3	1.889	2.812	8.4	18.9
1 22	8 59.66	+ 8 21.2	1.744	2.703	5.8	19.3	1 22	9 2.62	+32 29.7	1.844	2.801	5.8	18.7
2 1	8 51.77	+ 8 54.0	1.723	2.701	3.1	19.2	2 1	8 51.61	+32 50.7	1.828	2.790	5.4	18.7
2 11	8 43.85	+ 9 34.8	1.731	2.700	4.9	19.3	2 11	8 40.60	+32 53.6	1.841	2.779	7.7	18.8
2 21	8 36.91	+10 19.0	1.766	2.700	8.5	19.5	2 21	8 30.87	+32 37.3	1.880	2.768	11.0	19.0
3 2	8 31.78	+11 1.9	1.826	2.700	12.1	19.7	3 2	8 23.46	+32 3.5	1.944	2.757	14.1	19.1
<b>384148</b>	2008 <i>YD</i> <sub>154</sub>		1 31.3 50°47	1.1/30.4 18			<b>522362</b>	2016 <i>CK</i> <sub>300</sub>		1 31.3 285°14	2.8/29.6 18		
12 23	9 15.61	+16 32.9	2.111	2.885	14.1	20.7	12 23	9 19.59	+22 0.7	1.806	2.594	15.6	21.8
1 2	9 12.41	+17 29.8	2.030	2.895	11.1	20.5	1 2	9 16.23	+22 44.1	1.713	2.585	12.4	21.6
1 12	9 6.99	+18 37.9	1.973	2.904	7.5	20.3	1 12	9 10.06	+23 36.0	1.642	2.576	8.6	21.3
1 22	8 59.85	+19 57.5	1.942	2.914	3.7	20.1	1 22	9 1.56	+24 30.4	1.596	2.566	4.6	21.1
2 1	8 51.76	+21 7.5	1.940	2.924	1.3	19.9	2 1	8 51.68	+25 20.5	1.578	2.557	3.1	20.9
2 11	8 43.72	+22 16.7	1.969	2.934	4.8	20.2	2 11	8 41.71	+25 59.7	1.588	2.548	6.5	21.1
2 21	8 36.66	+23 15.4	2.025	2.945	8.6	20.5	2 21	8 32.94	+26 24.1	1.625	2.539	10.7	21.4
3 2	8 31.38	+24 0.8	2.108	2.955	11.8	20.7	3 2	8 26.45	+26 32.5	1.686	2.530	14.5	21.6
<b>160179</b>	2001 <i>WD</i> <sub>75</sub>		1 31.3 174°15	1.6/30.1 18			<b>419</b>	Aurelia		1 31.3 236°61	1.9/ 1.6 18		
12 23	9 21.10	+20 15.5	2.398	3.162	12.9	21.6	12 23	9 19.71	+10 20.1	2.356	3.094	13.8	13.5
1 2	9 16.48	+20 53.2	2.307	3.165	10.2	21.4	1 2	9 15.51	+10 23.2	2.242	3.080	11.2	13.3
1 12	9 9.67	+21 37.6	2.239	3.167	7.0	21.2	1 12	9 9.13	+10 38.1	2.150	3.064	8.1	13.1
1 22	9 1.15	+22 24.4	2.199	3.169	3.5	21.0	1 22	9 0.98	+11 3.6	2.085	3.048	4.6	12.8
2 1	8 51.68	+23 8.8	2.189	3.171	1.8	20.8	2 1	8 51.73	+11 37.3	2.049	3.031	1.9	12.6
2 11	8 42.21	+23 46.2	2.210	3.171	4.8	21.0	2 11	8 42.31	+12 15.4	2.044	3.014	4.2	12.7
2 21	8 33.69	+24 13.6	2.260	3.171	8.2	21.2	2 21	8 33.67	+12 54.2	2.069	2.996	7.9	12.9
3 2	8 26.90	+24 29.9	2.337	3.171	11.3	21.4	3 2	8 26.64	+13 30.0	2.120	2.977	11.4	13.1
<b>205490</b>	2001 <i>QR</i> <sub>255</sub>		1 31.3 69°29	4.2/ 3.8 18			<b>292084</b>	2006 <i>RH</i> <sub>34</sub>		1 31.4 121°19	4.7/ 5.3 18		
12 23	9 15.13	+ 2 14.3	2.256	2.973	14.9	20.1	12 23	9 14.71	- 2 57.3	2.893	3.564	12.9	21.2
1 2	9 11.72	+ 2 13.7	2.172	2.986	12.4	19.9	1 2	9 10.93	- 2 51.1	2.801	3.578	10.9	21.1
1 12	9 6.34	+ 2 30.3	2.109	3.000	9.5	19.7	1 12	9 5.58	- 2 28.4	2.730	3.591	8.7	21.0
1 22	8 59.47	+ 3 3.8	2.071	3.014	6.5	19.6	1 22	8 59.05	- 1 49.0	2.685	3.604	6.5	20.8
2 1	8 51.80	+ 3 52.3	2.061	3.027	4.4	19.5	2 1	8 51.88	- 0 54.3	2.668	3.617	4.9	20.7
2 11	8 44.20	+ 4 51.7	2.079	3.041	5.1	19.5	2 11	8 44.75	+ 0 12.5	2.681	3.629	5.0	20.8
2 21	8 37.48	+ 5 56.8	2.127	3.054	7.7	19.7	2 21	8 38.29	+ 1 27.0	2.724	3.641	6.7	20.9
3 2	8 32.34	+ 7 2.5	2.201	3.068	10.6	19.9	3 2	8 33.06	+ 2 44.6	2.795	3.652	8.9	21.0
<b>317787</b>	2003 <i>SE</i> <sub>163</sub>		1 31.3 159°24	1.2/30.6 18			<b>327981</b>	2007 <i>FC</i> <sub>47</sub>		1 31.4 222°00	3.0/ 2.8 17		
12 23	9 23.23	+18 36.7	2.113	2.877	14.5	22.1	12 23	9 17.26	+ 5 30.3	2.560	3.278	13.3	22.6
1 2	9 18.39	+19 8.2	2.026	2.884	11.4	21.9	1 2	9 13.34	+ 5 37.7	2.448	3.269	11.0	22.4
1 12	9 11.10	+19 48.0	1.962	2.891	7.8	21.7	1 12	9 7.49	+ 5 59.4	2.359	3.258	8.2	22.2
1 22	9 1.90	+20 31.8	1.926	2.897	3.8	21.5	1 22	9 0.11	+ 6 34.6	2.295	3.247	5.2	22.0
2 1	8 51.64	+21 14.3	1.918	2.902	1.3	21.3	2 1	8 51.80	+ 7 21.4	2.261	3.236	3.0	21.8
2 11	8 41.44	+21 50.7	1.942	2.907	5.0	21.6	2 11	8 43.37	+ 8 16.2	2.258	3.224	4.3	21.9
2 21	8 32.36	+22 17.7	1.994	2.911	8.8	21.8	2 21	8 35.63	+ 9 14.7	2.284	3.211	7.3	22.1
3 2	8 25.27	+22 33.7	2.072	2.914	12.2	22.0	3 2	8 29.31	+10 12.6	2.338	3.198	10.3	22.2
<b>184107</b>	2004 <i>HB</i> <sub>28</sub>		1 31.3 237°93	0.6/31.8 17			<b>213595</b>	2002 <i>PZ</i> <sub>29</sub>		1 31.4 227°29	1.5/ 1.2 17		
12 23	9 18.91	+13 23.0	2.118	2.876	14.6	21.2	12 23	9 21.20	+12 16.6	2.036	2.789	15.3	21.6
1 2	9 15.13	+13 43.5	2.013	2.866	11.7	21.0	1 2	9 17.01	+12 17.4	1.932	2.780	12.4	21.4
1 12	9 8.99	+14 16.3	1.931	2.855	8.2	20.8	1 12	9 10.34	+12 30.1	1.850	2.770	8.8	21.1
1 22	9 0.93	+14 58.7	1.875	2.844	4.2	20.5	1 22	9 1.63	+12 53.0	1.793	2.759	4.8	20.9
2 1	8 51.71	+15 46.9	1.847	2.832	0.6	20.2	2 1	8 51.70	+13 22.9	1.765	2.749	1.5	20.6
2 11	8 42.35	+16 35.7	1.850	2.820	4.5	20.5	2 11	8 41.64	+13 55.7	1.767	2.737	4.7	20.8
2 21	8 33.90	+17 20.5	1.881	2.808	8.6	20.7	2 21	8 32.56	+14 27.4	1.797	2.725	8.8	21.0
3 2	8 27.26	+17 58.0	1.939	2.795	12.3	20.9	3 2	8 25.42	+14 54.5	1.853	2.713	12.6	21.3
<b>6141</b>	Durda		1 31.3 45°52	11.4/ 1.8 18 R			<b>41813</b>	2000 <i>WY</i> <sub>35</sub>		1 31.4 1°63	1.9/ 1.6 18		
12 23	9 35.52	+ 8 30.2	0.819	1.614	29.1	16.2	12 23	9 15.29	+10 17.2	1.719	2.489	17.0	19.0
1 2	9 30.77	+ 5 18.8	0.766	1.628	24.5	15.9	1 2	9 12.69	+10 29.3	1.632	2.489	13.7	18.7
1 12	9 20.99	+ 2 19.9	0.728	1.642	19.1	15.7	1 12	9 7.51	+10 58.1	1.565	2.488	9.8	18.5
1 22	9 7.15	- 0 14.5	0.710	1.658	14.0	15.5	1 22	9 0.25	+11 41.7	1.522	2.488	5.5	18.2
2 1	8 51.28	- 2 12.1	0.713	1.674	11.4	15.4	2 1	8 51.79	+12 35.7	1.506	2.489	1.9	18.0
2 11	8 36.15	- 3 26.8	0.738	1.691	13.2	15.6	2 11	8 43.33	+13 34.2	1.518	2.490	5.0	18.2
2 21	8 24.10	- 4 1.8	0.784	1.708	17.5	15.9	2 21	8 36.01	+14 31.2	1.557	2.492	9.4	18.5
3 2	8 16.60	- 4 7.0	0.847	1.726	21.9	16.2	3 2	8 30.78	+15 21.5	1.620	2.494	13.4	18.7
<b>51791</b>	2001 <i>MD</i> <sub>24</sub>		1 31.3 300°67	5.9/ 2.9 18			<b>298785</b>	2004 <i>PU</i> <sub>47</sub>		1 31.4 206°16	1.7/ 1.4 18		
12 23	9 21.22	+ 4 50.1	1.787	2.522	17.7	18.2	12 23	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>117672</b>	2005 <i>EV</i> <sub>211</sub>		1 31.4	5°71	0°9/30.6	18	<b>321549</b>	2009 <i>SD</i> <sub>290</sub>		1 31.4	230°01	0°9/31.9	17
12 23	9 16.05	+16 29.7	2.191	2.962	13.8	20.0	12 23	9 18.84	+12 28.8	2.338	3.087	13.6	21.6
1 2	9 12.76	+17 19.6	2.100	2.962	10.9	19.8	1 2	9 14.85	+12 49.2	2.229	3.075	11.0	21.4
1 12	9 7.27	+18 20.5	2.032	2.962	7.4	19.5	1 12	9 8.69	+13 21.4	2.143	3.063	7.7	21.1
1 22	9 0.04	+19 28.3	1.990	2.962	3.6	19.3	1 22	9 0.78	+14 3.1	2.083	3.051	4.1	20.9
2 1	8 51.81	+20 37.5	1.978	2.962	1.1	19.1	2 1	8 51.80	+14 50.8	2.054	3.038	0.9	20.6
2 11	8 43.55	+21 42.1	1.996	2.963	4.7	19.4	2 11	8 42.68	+15 40.0	2.054	3.025	4.1	20.8
2 21	8 36.19	+22 37.5	2.043	2.963	8.5	19.6	2 21	8 34.37	+16 26.4	2.084	3.011	7.9	21.0
3 2	8 30.57	+23 20.9	2.115	2.963	11.8	19.8	3 2	8 27.67	+17 6.7	2.141	2.996	11.4	21.2
<b>451692</b>	2013 <i>CO</i> <sub>9</sub>		1 31.4	356°91	4°8/ 2.5	17	<b>335963</b>	2007 <i>TC</i> <sub>154</sub>		1 31.4	44°53	4°9/ 3.8	18
12 23	9 16.46	+ 7 49.5	1.243	2.030	21.4	21.2	12 23	9 15.85	+ 2 41.6	2.088	2.811	15.8	20.4
1 2	9 14.59	+ 7 13.0	1.164	2.026	17.7	20.9	1 2	9 12.49	+ 2 15.9	2.004	2.822	13.2	20.2
1 12	9 9.37	+ 6 56.6	1.102	2.024	13.2	20.6	1 12	9 7.00	+ 2 7.0	1.941	2.832	10.2	20.1
1 22	9 1.37	+ 7 1.5	1.062	2.022	8.3	20.3	1 22	8 59.87	+ 2 15.4	1.902	2.843	7.1	19.9
2 1	8 51.73	+ 7 26.1	1.044	2.022	4.8	20.1	2 1	8 51.87	+ 2 40.1	1.890	2.854	5.0	19.8
2 11	8 42.07	+ 8 5.3	1.051	2.022	7.0	20.3	2 11	8 43.94	+ 3 17.9	1.906	2.865	5.7	19.8
2 21	8 33.99	+ 8 52.0	1.083	2.023	11.8	20.5	2 21	8 36.97	+ 4 4.2	1.950	2.877	8.4	20.0
3 2	8 28.74	+ 9 38.9	1.135	2.026	16.5	20.8	3 2	8 31.71	+ 4 53.9	2.020	2.888	11.3	20.2
<b>185738</b>	1999 <i>CQ</i> <sub>65</sub>		1 31.4	36°06	3°7/ 2.4	18	<b>69405</b>	1995 <i>SW</i> <sub>48</sub>		1 31.4	101°74	21°2/12.3	18
12 23	9 17.28	+ 7 29.6	1.308	2.087	20.9	18.7	12 23	9 25.19	-21 28.3	1.295	1.911	28.2	18.6
1 2	9 14.69	+ 7 22.6	1.250	2.108	17.0	18.5	1 2	9 21.70	-24 36.2	1.238	1.921	26.5	18.5
1 12	9 9.01	+ 7 37.8	1.210	2.131	12.4	18.3	1 12	9 14.47	-27 9.5	1.192	1.932	24.7	18.4
1 22	9 0.97	+ 8 13.5	1.192	2.154	7.4	18.1	1 22	9 4.02	-28 55.2	1.160	1.942	23.0	18.3
2 1	8 51.78	+ 9 5.2	1.199	2.178	3.8	17.9	2 1	8 51.57	-29 42.5	1.143	1.952	21.7	18.2
2 11	8 42.92	+10 5.5	1.231	2.203	6.0	18.1	2 11	8 38.97	-29 27.7	1.142	1.961	21.2	18.2
2 21	8 35.72	+11 6.7	1.289	2.228	10.5	18.5	2 21	8 28.09	-28 16.0	1.157	1.970	21.5	18.2
3 2	8 31.13	+12 2.2	1.370	2.255	14.6	18.8	3 2	8 20.42	-26 20.2	1.189	1.979	22.5	18.3
<b>117015</b>	2004 <i>JR</i> <sub>6</sub>		1 31.4	187°39	1°0/30.6	18	<b>227171</b>	2005 <i>QF</i> <sub>41</sub>		1 31.4	125°16	1°8/30.3	18
12 23	9 20.81	+18 40.3	2.414	3.174	12.9	20.8	12 23	9 24.92	+22 7.1	2.115	2.883	14.3	20.7
1 2	9 16.25	+19 8.2	2.318	3.174	10.2	20.6	1 2	9 19.65	+22 20.3	2.035	2.895	11.3	20.5
1 12	9 9.54	+19 43.4	2.245	3.173	7.0	20.4	1 12	9 11.90	+22 37.7	1.978	2.907	7.7	20.3
1 22	9 1.13	+20 22.2	2.200	3.171	3.5	20.2	1 22	9 2.28	+22 55.2	1.948	2.918	3.9	20.1
2 1	8 51.77	+21 0.4	2.185	3.169	1.1	20.0	2 1	8 51.72	+23 8.2	1.947	2.929	1.9	20.0
2 11	8 42.39	+21 33.6	2.201	3.166	4.5	20.2	2 11	8 41.36	+23 13.4	1.977	2.939	5.2	20.2
2 21	8 33.91	+21 59.0	2.247	3.163	8.0	20.4	2 21	8 32.24	+23 9.1	2.035	2.950	8.8	20.5
3 2	8 27.13	+22 15.0	2.318	3.159	11.1	20.6	3 2	8 25.19	+22 55.4	2.120	2.959	12.1	20.7
<b>396746</b>	2003 <i>SP</i> <sub>140</sub>		1 31.4	102°69	6°8/ 3.9	18	<b>288576</b>	2004 <i>HR</i> <sub>51</sub>		1 31.4	295°22	8°7/ 5.5	18
12 23	9 21.28	+ 1 26.1	1.738	2.460	18.6	20.9	12 23	9 16.52	- 4 23.9	1.831	2.529	18.6	20.8
1 2	9 17.25	+ 0 29.3	1.654	2.467	15.7	20.7	1 2	9 13.60	- 5 20.5	1.732	2.519	16.2	20.6
1 12	9 10.55	- 0 8.9	1.590	2.475	12.4	20.5	1 12	9 8.16	- 5 55.7	1.651	2.510	13.5	20.4
1 22	9 1.73	- 0 26.2	1.549	2.482	9.1	20.3	1 22	9 0.63	- 6 5.6	1.591	2.501	10.8	20.2
2 1	8 51.72	- 0 21.7	1.533	2.489	6.9	20.2	2 1	8 51.82	- 5 47.9	1.556	2.492	9.0	20.0
2 11	8 41.77	+ 0 2.2	1.545	2.497	7.6	20.3	2 11	8 42.84	- 5 4.3	1.546	2.483	9.1	20.0
2 21	8 33.04	+ 0 40.6	1.583	2.504	10.4	20.5	2 21	8 34.83	- 3 59.8	1.562	2.474	11.1	20.1
3 2	8 26.49	+ 1 27.3	1.645	2.510	13.7	20.7	3 2	8 28.78	- 2 41.9	1.602	2.466	14.0	20.3
<b>128458</b>	2004 <i>NE</i> <sub>29</sub>		1 31.4	62°75	2°8/ 2.4	18	<b>142266</b>	2002 <i>RQ</i> <sub>111</sub>		1 31.4	152°31	1°0/30.7	18
12 23	9 18.03	+ 6 22.2	1.795	2.542	17.2	19.6	12 23	9 23.96	+19 22.5	2.346	3.103	13.4	20.5
1 2	9 14.44	+ 6 47.5	1.727	2.567	14.0	19.4	1 2	9 18.67	+19 41.0	2.259	3.113	10.5	20.3
1 12	9 8.42	+ 7 32.1	1.681	2.593	10.1	19.2	1 12	9 11.14	+20 5.7	2.196	3.123	7.2	20.1
1 22	9 0.57	+ 8 33.4	1.659	2.618	6.0	19.1	1 22	9 1.90	+20 32.7	2.161	3.131	3.6	19.9
2 1	8 51.81	+ 9 46.6	1.664	2.644	2.8	18.9	2 1	8 51.75	+20 58.0	2.155	3.139	1.1	19.7
2 11	8 43.26	+11 5.0	1.699	2.670	4.8	19.1	2 11	8 41.71	+21 18.0	2.182	3.147	4.5	20.0
2 21	8 35.95	+12 21.7	1.762	2.695	8.6	19.4	2 21	8 32.72	+21 30.2	2.237	3.153	8.0	20.2
3 2	8 30.65	+13 31.4	1.851	2.721	12.2	19.6	3 2	8 25.56	+21 33.9	2.320	3.159	11.2	20.4
<b>59799</b>	1999 <i>PC</i> <sub>2</sub>		1 31.4	228°97	0°3/31.5	18	<b>413544</b>	2005 <i>SW</i> <sub>174</sub>		1 31.4	65°80	0°1/31.3	18
12 23	9 21.54	+13 40.2	1.554	2.330	18.3	19.8	12 23	9 21.11	+16 52.0	1.811	2.586	16.1	21.3
1 2	9 18.16	+14 8.2	1.460	2.323	14.7	19.6	1 2	9 17.09	+16 54.6	1.729	2.592	12.8	21.1
1 12	9 11.64	+14 53.2	1.387	2.316	10.3	19.3	1 12	9 10.41	+17 6.4	1.669	2.598	8.8	20.9
1 22	9 2.47	+15 51.7	1.337	2.308	5.2	19.0	1 22	9 1.64	+17 24.3	1.633	2.605	4.4	20.6
2 1	8 51.66	+16 57.2	1.315	2.300	0.4	18.6	2 1	8 51.77	+17 44.2	1.626	2.611	0.3	20.3
2 11	8 40.68	+18 1.9	1.321	2.292	5.8	19.0	2 11	8 42.02	+18 1.6	1.648	2.618	5.0	20.7
2 21	8 31.02	+18 58.8	1.353	2.283	11.0	19.2	2 21	8 33.55	+18 13.5	1.697	2.624	9.3	21.0
3 2	8 23.91	+19 43.5	1.409	2.273	15.6	19.5	3 2	8 27.28	+18 18.1	1.770	2.631	13.1	21.2
<b>284753</b>	2008 <i>VK</i> <sub>11</sub>		1 31.4	142°88	1°1/ 1.0	18	<b>165425</b>	2000 <i>YK</i> <sub>60</sub>		1 31.4	24°73	2°2/ 1.3	18
12 23	9 22.70	+11 59.2	1.843	2.599	16.5	21.7	12 23	9 20.79	+12 50.5	1.418	2.201	19.4	19.2
1 2	9 18.27	+12 20.6	1.760	2.609	13.3	21.5	1 2	9 17.53	+12 25.1	1.341	2.205	15.7	18.9
1 12	9 11.18	+12 56.5	1.698	2.620	9.3	21.3	1 12	9 11.09	+12 13.4	1.283	2.210	11.2	18.7
1 22	9 2.02	+13 44.0	1.661	2.629	4.9	21.0	1 22	9 2.11	+12 14.1	1.247	2.215	6.2	18.4
2 1	8 51.72	+14 38.1	1.653	2.638	1.1	20.8	2 1	8 51.74	+12 24.3	1.238	2.221	2.2	18.2
2 11	8 41.48	+15 32.9	1.675	2.646	4.8	21.0	2 11	8 41.50	+12 39.5	1.255	2.227	5.8	18.4
2 21	8 32.48	+16 23.1	1.726	2.653	9.2	21.3	2 21	8 32.82	+12 55.3	1.298	2.234	10.7	18.7
3 2	8 25.64	+17 4.9	1.801	2.660	13.0	21.6	3 2	8 26.83	+13 8.3	1.363	2.241	15.1	19.0
<b>328703</b>	2009 <i>TN</i> <sub>1</sub>		1 31.4	94°60	3°3/ 2.9	18	<b>247131</b>	2000 <i>VG</i> <sub>43</sub>		1 31.4	88°11	1°6/30.5	18
12 23	9 20.67	+ 5 17.5	2.322	3.039	14.								



EPHEMERIDES

1 31.4

1 31.4

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>87485</b>	2000 QT <sub>150</sub>		1 31.4 47°68	4.9/29.2	18		<b>275790</b>	2001 QS <sub>130</sub>		1 31.4 186°15	2.2/ 2.6	17	
12 23	9 26.70	+29 46.2	1.699	2.488	16.4	18.1	12 23	9 15.95	+ 6 34.1	3.281	3.992	10.8	22.3
1 2	9 21.77	+30 7.7	1.631	2.500	13.1	17.9	1 2	9 11.80	+ 6 43.0	3.174	3.991	8.8	22.1
1 12	9 13.69	+30 28.0	1.585	2.513	9.4	17.7	1 12	9 6.16	+ 7 2.4	3.091	3.990	6.5	22.0
1 22	9 3.24	+30 40.2	1.564	2.526	6.0	17.6	1 22	8 59.40	+ 7 31.4	3.036	3.988	4.1	21.8
2 1	8 51.68	+30 37.9	1.570	2.539	5.1	17.5	2 1	8 52.00	+ 8 8.2	3.011	3.986	2.3	21.7
2 11	8 40.53	+30 18.0	1.604	2.553	7.7	17.7	2 11	8 44.57	+ 8 50.1	3.018	3.983	3.3	21.7
2 21	8 31.14	+29 40.9	1.665	2.567	11.3	18.0	2 21	8 37.69	+ 9 34.3	3.055	3.980	5.7	21.9
3 2	8 24.47	+28 49.9	1.749	2.581	14.6	18.2	3 2	8 31.91	+10 17.9	3.121	3.976	8.2	22.0
<b>32796</b>	Ehrenfest		1 31.4 251°77	5°6/ 4.4	18		<b>184079</b>	2004 GC <sub>27</sub>		1 31.4 263°89	2°5/ 2.3	18	
12 23	9 16.66	- 0 20.7	2.178	2.881	15.8	18.5	12 23	9 17.45	+ 6 47.6	2.126	2.863	15.2	20.7
1 2	9 13.29	- 0 35.5	2.068	2.869	13.4	18.3	1 2	9 14.11	+ 7 11.6	2.008	2.842	12.5	20.4
1 12	9 7.73	- 0 31.6	1.977	2.855	10.7	18.1	1 12	9 8.44	+ 7 53.6	1.911	2.820	9.2	20.2
1 22	9 0.36	- 0 7.3	1.910	2.842	7.8	17.9	1 22	9 0.81	+ 8 52.9	1.839	2.798	5.5	19.9
2 1	8 51.88	+ 0 36.7	1.871	2.828	5.8	17.8	2 1	8 51.89	+10 6.1	1.796	2.776	2.6	19.7
2 11	8 43.23	+ 1 37.5	1.859	2.814	6.3	17.8	2 11	8 42.69	+11 27.7	1.783	2.753	4.7	19.8
2 21	8 35.35	+ 2 49.6	1.876	2.800	8.8	17.9	2 21	8 34.24	+12 51.3	1.799	2.730	8.6	19.9
3 2	8 29.12	+ 4 6.9	1.919	2.785	12.0	18.1	3 2	8 27.50	+14 10.7	1.842	2.706	12.5	20.1
<b>357228</b>	2002 JO <sub>92</sub>		1 31.4 175°45	0°0/31.4	18		<b>144493</b>	2004 ES <sub>65</sub>		1 31.4 234°63	0°3/31.6	18	
12 23	9 22.63	+15 34.4	2.267	3.019	13.9	22.0	12 23	9 19.37	+14 24.8	1.909	2.677	15.6	21.1
1 2	9 17.78	+15 53.0	2.173	3.023	11.1	21.8	1 2	9 15.76	+14 43.9	1.814	2.672	12.5	20.9
1 12	9 10.65	+16 20.8	2.101	3.025	7.7	21.6	1 12	9 9.58	+15 15.3	1.740	2.667	8.7	20.6
1 22	9 1.73	+16 55.0	2.057	3.027	3.8	21.3	1 22	9 1.34	+15 56.2	1.691	2.662	4.4	20.4
2 1	8 51.80	+17 31.4	2.043	3.028	0.3	21.0	2 1	8 51.87	+16 41.9	1.671	2.656	0.4	20.0
2 11	8 41.88	+18 5.7	2.060	3.028	4.3	21.4	2 11	8 42.33	+17 26.9	1.680	2.651	4.8	20.4
2 21	8 32.94	+18 34.6	2.106	3.028	8.1	21.6	2 21	8 33.86	+18 6.5	1.717	2.645	9.2	20.6
3 2	8 25.81	+18 56.0	2.179	3.026	11.5	21.8	3 2	8 27.42	+18 37.6	1.779	2.639	13.0	20.8
<b>289415</b>	2005 CW <sub>79</sub>		1 31.4 324°03	4°9/ 4.1	17		<b>135680</b>	2002 NF <sub>54</sub>		1 31.4 190°05	0°4/31.7	18	
12 23	9 12.68	+ 0 57.1	1.893	2.623	17.0	20.6	12 23	9 22.41	+14 49.9	2.180	2.933	14.4	20.8
1 2	9 10.51	+ 1 6.4	1.788	2.610	14.4	20.4	1 2	9 17.75	+15 0.1	2.083	2.932	11.5	20.6
1 12	9 6.00	+ 1 38.8	1.703	2.597	11.2	20.1	1 12	9 10.72	+15 20.0	2.008	2.931	8.0	20.4
1 22	8 59.57	+ 2 34.9	1.640	2.584	7.7	19.9	1 22	9 1.82	+15 47.1	1.959	2.928	4.1	20.2
2 1	8 51.95	+ 3 52.8	1.604	2.572	5.1	19.7	2 1	8 51.85	+16 17.7	1.941	2.926	0.4	19.9
2 11	8 44.15	+ 5 27.1	1.596	2.561	5.9	19.7	2 11	8 41.85	+16 47.5	1.952	2.922	4.4	20.2
2 21	8 37.23	+ 7 9.8	1.615	2.549	9.2	19.9	2 21	8 32.85	+17 13.2	1.993	2.918	8.3	20.4
3 2	8 32.12	+ 8 52.9	1.660	2.539	12.8	20.1	3 2	8 25.70	+17 32.4	2.061	2.913	11.9	20.6
<b>369385</b>	2009 UW <sub>154</sub>		1 31.4 65°25	1°9/ 1.6	18		<b>335927</b>	2007 TX <sub>16</sub>		1 31.4 104°09	3°8/29.0	18	
12 23	9 19.43	+11 8.9	1.864	2.623	16.3	21.8	12 23	9 24.34	+29 10.5	2.419	3.188	12.7	20.6
1 2	9 15.54	+11 5.1	1.789	2.639	13.1	21.6	1 2	9 18.98	+29 33.3	2.341	3.200	10.0	20.4
1 12	9 9.21	+11 14.7	1.735	2.655	9.3	21.4	1 12	9 11.34	+29 55.4	2.288	3.212	7.2	20.3
1 22	9 1.01	+11 35.6	1.706	2.671	5.2	21.2	1 22	9 2.01	+30 11.8	2.262	3.223	4.5	20.1
2 1	8 51.87	+12 4.6	1.705	2.687	2.0	21.0	2 1	8 51.85	+30 18.2	2.266	3.234	3.9	20.1
2 11	8 42.89	+12 37.4	1.732	2.703	4.7	21.3	2 11	8 41.92	+30 11.6	2.300	3.245	6.0	20.2
2 21	8 35.11	+13 9.7	1.788	2.720	8.6	21.5	2 21	8 33.17	+29 51.8	2.363	3.256	8.8	20.4
3 2	8 29.37	+13 38.1	1.869	2.736	12.2	21.8	3 2	8 26.35	+29 20.1	2.451	3.267	11.4	20.6
<b>37918</b>	1998 FD <sub>104</sub>		1 31.4 248°67	7°0/ 5.6	18		<b>185514</b>	2007 UE <sub>79</sub>		1 31.4 299°42	0°3/31.5	18	
12 23	9 16.96	- 5 23.4	2.461	3.125	15.0	19.6	12 23	9 18.63	+14 58.4	1.551	2.337	17.9	20.5
1 2	9 13.29	- 5 55.6	2.343	3.108	13.2	19.4	1 2	9 15.96	+15 9.6	1.452	2.320	14.4	20.3
1 12	9 7.61	- 6 9.7	2.246	3.090	11.0	19.2	1 12	9 10.72	+15 34.9	1.372	2.304	10.1	20.0
1 22	9 0.28	- 6 3.2	2.171	3.072	8.8	19.0	1 22	9 1.87	+16 11.7	1.316	2.288	5.2	19.6
2 1	8 51.91	- 5 35.0	2.123	3.054	7.2	18.9	2 1	8 51.85	+16 54.7	1.287	2.272	0.4	19.2
2 11	8 43.35	- 4 46.6	2.103	3.035	7.3	18.9	2 11	8 41.59	+17 37.4	1.284	2.256	5.8	19.6
2 21	8 35.44	- 3 42.2	2.110	3.016	9.0	18.9	2 21	8 32.56	+18 14.2	1.308	2.240	11.0	19.8
3 2	8 28.98	- 2 27.1	2.144	2.996	11.5	19.0	3 2	8 26.02	+18 41.1	1.354	2.225	15.7	20.1
<b>269944</b>	2000 SR <sub>14</sub>		1 31.4 127°18	2°5/30.0	18		<b>314628</b>	2006 HU <sub>2</sub>		1 31.4 210°59	2°0/30.2	18	
12 23	9 25.85	+24 28.6	2.147	2.915	14.1	20.8	12 23	9 22.72	+19 59.8	1.900	2.675	15.5	22.3
1 2	9 20.39	+24 40.7	2.066	2.926	11.1	20.6	1 2	9 18.54	+20 39.5	1.805	2.670	12.3	22.0
1 12	9 12.43	+24 55.2	2.007	2.935	7.7	20.4	1 12	9 11.60	+21 28.6	1.733	2.664	8.4	21.8
1 22	9 2.58	+25 7.4	1.976	2.945	4.1	20.2	1 22	9 2.39	+22 21.8	1.687	2.658	4.3	21.5
2 1	8 51.78	+25 13.0	1.975	2.954	2.6	20.1	2 1	8 51.83	+23 12.8	1.669	2.651	2.2	21.4
2 11	8 41.18	+25 8.7	2.004	2.963	5.5	20.3	2 11	8 41.19	+23 55.2	1.681	2.644	5.9	21.6
2 21	8 31.86	+24 53.7	2.062	2.971	9.0	20.5	2 21	8 31.72	+24 25.1	1.721	2.636	10.1	21.8
3 2	8 24.65	+24 28.6	2.145	2.979	12.1	20.8	3 2	8 24.46	+24 40.8	1.786	2.628	13.8	22.0
<b>330715</b>	2008 PO <sub>14</sub>		1 31.4 160°12	1°0/ 1.1	18		<b>476</b>	Hedwig		1 31.4 206°65	2°6/ 1.8	18	
12 23	9 17.85	+11 58.6	2.334	3.083	13.6	21.7	12 23	9 21.57	+10 36.5	2.089	2.833	15.2	13.3
1 2	9 13.95	+12 19.9	2.241	3.087	10.9	21.5	1 2	9 17.15	+10 11.2	1.991	2.831	12.4	13.0
1 12	9 7.97	+12 53.0	2.170	3.090	7.7	21.3	1 12	9 10.35	+ 9 56.6	1.915	2.828	9.0	12.8
1 22	9 0.39	+13 35.5	2.126	3.094	4.1	21.1	1 22	9 1.66	+ 9 52.2	1.864	2.825	5.3	12.6
2 1	8 51.92	+14 23.6	2.112	3.096	1.0	20.8	2 1	8 51.89	+ 9 56.4	1.842	2.822	2.6	12.4
2 11	8 43.44	+15 13.1	2.128	3.099	4.0	21.1	2 11	8 42.11	+10 6.6	1.850	2.819	4.7	12.5
2 21	8 35.83	+15 59.7	2.174	3.101	7.6	21.3	2 21	8 33.33	+10 19.6	1.887	2.815	8.5	12.8
3 2	8 29.84	+16 40.2	2.246	3.103	10.8	21.5	3 2	8 26.43	+10 32.8	1.949	2.811	12.0	13.0
<b>354941</b>	2006 EM <sub>29</sub>		1 31.4 22°07	1°2/30.9	18		<b>338962</b>	2004 FC <sub>23</sub>		1 31.4 230°81	2°9/ 2.8	17	
12 23	9 18.59	+18 25.7	1.092	1.912	21.7	20.9	12 23	9 14.96	+ 5 45.9	2.535	3.261	13.3	21.0
1 2	9 16.												

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>187727</b>	2008 <i>FW</i> <sub>55</sub>		1 31.4 221°53	4°2/29.4	18		<b>153324</b>	2001 <i>OB</i> <sub>28</sub>		1 31.4 262°82	3°5/29.8	18	
12 23	9 25.59	+24 10.6	1.437	2.234	18.5	21.1	12 23	9 25.40	+23 53.1	1.553	2.344	17.6	20.5
1 2	9 21.82	+24 55.5	1.354	2.230	14.8	20.8	1 2	9 21.54	+24 22.9	1.457	2.330	14.1	20.3
1 12	9 14.41	+25 48.4	1.292	2.227	10.4	20.6	1 12	9 14.20	+24 59.5	1.382	2.315	9.9	20.0
1 22	9 3.97	+26 41.2	1.254	2.223	5.9	20.3	1 22	9 3.90	+25 36.4	1.331	2.301	5.5	19.7
2 1	8 51.74	+27 24.4	1.242	2.219	4.4	20.2	2 1	8 51.77	+26 5.5	1.307	2.286	3.8	19.5
2 11	8 39.52	+27 50.2	1.257	2.214	8.2	20.4	2 11	8 39.47	+26 20.0	1.311	2.271	7.6	19.7
2 21	8 29.03	+27 55.5	1.297	2.210	12.9	20.6	2 21	8 28.68	+26 16.9	1.340	2.256	12.4	19.9
3 2	8 21.62	+27 41.3	1.359	2.205	17.2	20.9	3 2	8 20.76	+25 56.7	1.392	2.240	16.7	20.2
<b>278296</b>	2007 <i>GL</i> <sub>61</sub>		1 31.4 243°63	0°2/31.5	17		<b>431467</b>	2007 <i>RW</i> <sub>301</sub>		1 31.4 131°38	0°1/31.4	17	
12 23	9 19.36	+15 38.9	2.088	2.852	14.6	21.6	12 23	9 17.51	+15 36.7	2.528	3.284	12.5	22.1
1 2	9 15.49	+15 47.1	1.991	2.848	11.6	21.4	1 2	9 13.51	+15 59.6	2.439	3.292	9.9	22.0
1 12	9 9.25	+16 4.7	1.917	2.844	8.1	21.1	1 12	9 7.59	+16 30.9	2.374	3.299	6.8	21.8
1 22	9 1.13	+16 29.2	1.869	2.839	4.1	20.9	1 22	9 0.21	+17 7.8	2.336	3.306	3.4	21.6
2 1	8 51.94	+16 56.8	1.850	2.835	0.3	20.6	2 1	8 52.03	+17 46.7	2.328	3.313	0.2	21.3
2 11	8 42.71	+17 23.3	1.860	2.830	4.5	20.9	2 11	8 43.90	+18 23.8	2.351	3.320	3.8	21.6
2 21	8 34.48	+17 45.4	1.899	2.826	8.5	21.1	2 21	8 36.61	+18 56.0	2.403	3.326	7.2	21.8
3 2	8 28.12	+18 0.8	1.963	2.821	12.1	21.3	3 2	8 30.83	+19 21.1	2.482	3.333	10.2	22.0
<b>282502</b>	2004 <i>PK</i> <sub>83</sub>		1 31.4 118°44	2°6/ 2.3	18		<b>289446</b>	2005 <i>EW</i> <sub>42</sub>		1 31.4 268°46	1°5/ 2.0	17	
12 23	9 21.54	+ 6 20.8	1.839	2.577	17.2	21.2	12 23	9 12.01	+ 8 54.6	3.378	4.107	10.2	20.6
1 2	9 17.29	+ 6 51.2	1.760	2.595	14.0	21.0	1 2	9 8.79	+ 9 15.0	3.262	4.094	8.2	20.4
1 12	9 10.50	+ 7 41.4	1.703	2.613	10.1	20.8	1 12	9 4.17	+ 9 45.2	3.171	4.080	6.0	20.2
1 22	9 1.73	+ 8 48.8	1.670	2.630	6.0	20.6	1 22	8 58.48	+10 23.9	3.106	4.067	3.5	20.0
2 1	8 51.90	+10 8.6	1.666	2.646	2.7	20.4	2 1	8 52.15	+11 9.2	3.073	4.053	1.5	19.9
2 11	8 42.18	+11 33.7	1.691	2.662	4.9	20.6	2 11	8 45.74	+11 58.1	3.070	4.040	3.0	20.0
2 21	8 33.66	+12 56.9	1.746	2.677	8.9	20.8	2 21	8 39.81	+12 47.6	3.098	4.026	5.5	20.1
3 2	8 27.24	+14 12.3	1.827	2.691	12.6	21.1	3 2	8 34.88	+13 35.0	3.154	4.012	8.0	20.3
<b>57592</b>	2001 <i>TB</i> <sub>77</sub>		1 31.4 48°60	0°0/31.4	18		<b>367206</b>	2007 <i>CO</i> <sub>55</sub>		1 31.4 26°13	1°0/31.8	18	
12 23	9 18.58	+15 5.3	1.776	2.552	16.3	18.7	12 23	9 22.89	+15 40.2	1.820	2.587	16.3	20.7
1 2	9 15.24	+15 27.8	1.693	2.557	13.0	18.4	1 2	9 18.55	+15 19.0	1.731	2.588	13.1	20.5
1 12	9 9.25	+16 2.9	1.631	2.561	9.0	18.2	1 12	9 11.48	+15 6.1	1.663	2.589	9.2	20.3
1 22	9 1.17	+16 46.9	1.594	2.565	4.5	18.0	1 22	9 2.28	+14 59.8	1.621	2.590	4.8	20.0
2 1	8 51.93	+17 34.6	1.585	2.570	0.3	17.6	2 1	8 51.90	+14 57.3	1.606	2.591	1.0	19.7
2 11	8 42.74	+18 20.2	1.604	2.575	5.0	18.0	2 11	8 41.59	+14 55.6	1.621	2.592	4.9	20.0
2 21	8 34.76	+18 58.9	1.651	2.580	9.4	18.3	2 21	8 32.55	+14 52.3	1.664	2.593	9.3	20.3
3 2	8 28.94	+19 27.8	1.722	2.585	13.3	18.5	3 2	8 25.74	+14 45.7	1.731	2.595	13.2	20.5
<b>292113</b>	2006 <i>RT</i> <sub>58</sub>		1 31.4 218°88	2°4/29.5	17		<b>448763</b>	2011 <i>QL</i> <sub>91</sub>		1 31.4 61°93	1°5/ 1.2	16	
12 23	9 18.74	+24 6.2	2.630	3.400	11.7	21.3	12 23	9 22.47	+12 4.4	1.398	2.176	19.9	21.5
1 2	9 14.56	+24 38.4	2.534	3.396	9.3	21.1	1 2	9 18.66	+12 11.9	1.338	2.200	15.8	21.3
1 12	9 8.36	+25 14.0	2.463	3.392	6.4	20.9	1 12	9 11.72	+12 36.5	1.297	2.224	11.1	21.1
1 22	9 0.61	+25 49.0	2.419	3.387	3.6	20.7	1 22	9 2.39	+13 14.6	1.279	2.248	5.9	20.9
2 1	8 51.98	+26 19.1	2.406	3.382	2.6	20.6	2 1	8 51.91	+14 0.7	1.288	2.272	1.5	20.6
2 11	8 43.34	+26 40.7	2.422	3.377	5.0	20.8	2 11	8 41.79	+14 47.7	1.324	2.296	5.5	21.0
2 21	8 35.55	+26 51.6	2.468	3.372	8.0	21.0	2 21	8 33.39	+15 30.1	1.386	2.320	10.4	21.3
3 2	8 29.32	+26 51.5	2.540	3.367	10.7	21.1	3 2	8 27.67	+16 3.9	1.472	2.344	14.5	21.6
<b>211139</b>	2002 <i>GW</i> <sub>90</sub>		1 31.4 298°16	3°6/ 2.4	18		<b>523757</b>	2014 <i>WH</i> <sub>509</sub>		1 31.4 71°07	0°3/27.3	18	
12 23	9 17.65	+ 7 19.9	1.584	2.346	18.6	20.7	12 23	8 55.83	+32 18.5	41.918	42.687	0.8	21.6
1 2	9 14.93	+ 7 14.1	1.490	2.338	15.3	20.5	1 2	8 55.12	+32 23.6	41.835	42.692	0.7	21.6
1 12	9 9.34	+ 7 27.8	1.415	2.330	11.3	20.2	1 12	8 54.30	+32 28.4	41.779	42.696	0.5	21.6
1 22	9 1.37	+ 8 0.7	1.363	2.323	7.0	19.9	1 22	8 53.42	+32 32.9	41.752	42.701	0.4	21.5
2 1	8 51.92	+ 8 50.1	1.337	2.316	3.6	19.7	2 1	8 52.50	+32 36.8	41.754	42.706	0.3	21.5
2 11	8 42.34	+ 9 50.1	1.338	2.308	5.8	19.8	2 11	8 51.58	+32 40.0	41.787	42.710	0.5	21.6
2 21	8 33.94	+10 53.8	1.365	2.301	10.3	20.0	2 21	8 50.70	+32 42.5	41.848	42.715	0.6	21.6
3 2	8 27.87	+11 54.6	1.417	2.295	14.6	20.3	3 2	8 49.89	+32 44.0	41.936	42.720	0.8	21.6
<b>469084</b>	2015 <i>BH</i> <sub>290</sub>		1 31.4 258°36	2°8/ 2.7	17		<b>380486</b>	2004 <i>BB</i> <sub>50</sub>		1 31.4 57°98	0°6/31.8	18	
12 23	9 16.16	+ 5 22.8	2.476	3.199	13.6	22.1	12 23	9 19.70	+15 32.8	2.151	2.912	14.3	20.7
1 2	9 12.69	+ 5 42.8	2.356	3.180	11.3	21.9	1 2	9 15.54	+15 25.6	2.064	2.919	11.4	20.5
1 12	9 7.22	+ 6 18.7	2.259	3.161	8.4	21.6	1 12	9 9.14	+15 26.6	2.001	2.926	7.9	20.3
1 22	9 0.13	+ 7 10.0	2.187	3.141	5.3	21.4	1 22	9 1.02	+15 33.5	1.963	2.933	4.0	20.1
2 1	8 52.01	+ 8 14.1	2.144	3.121	2.9	21.2	2 1	8 52.00	+15 43.6	1.955	2.940	0.6	19.8
2 11	8 43.69	+ 9 26.8	2.132	3.100	4.3	21.3	2 11	8 43.08	+15 53.7	1.976	2.947	4.2	20.1
2 21	8 36.01	+10 42.7	2.150	3.079	7.5	21.4	2 21	8 35.20	+16 1.2	2.026	2.954	8.0	20.3
3 2	8 29.76	+11 56.9	2.196	3.058	10.8	21.6	3 2	8 29.14	+16 4.5	2.102	2.961	11.4	20.6
<b>210225</b>	2007 <i>RA</i> <sub>97</sub>		1 31.4 328°96	0°8/31.8	18		<b>334136</b>	2001 <i>RC</i> <sub>41</sub>		1 31.4 116°81	2°2/ 2.2	18	
12 23	9 17.89	+14 6.1	1.409	2.201	19.1	20.7	12 23	9 17.95	+ 8 36.5	2.751	3.476	12.3	21.5
1 2	9 15.55	+14 12.2	1.321	2.193	15.4	20.5	1 2	9 13.55	+ 8 32.5	2.665	3.493	10.0	21.4
1 12	9 10.00	+14 34.0	1.252	2.185	10.8	20.2	1 12	9 7.45	+ 8 38.9	2.602	3.508	7.2	21.2
1 22	9 1.77	+15 8.6	1.206	2.177	5.6	19.8	1 22	9 0.09	+ 8 54.6	2.567	3.524	4.3	21.1
2 1	8 51.91	+15 50.9	1.185	2.170	0.8	19.5	2 1	8 52.06	+ 9 17.8	2.561	3.539	2.3	20.9
2 11	8 41.94	+16 34.2	1.191	2.164	5.9	19.8	2 11	8 44.13	+ 9 45.7	2.586	3.554	3.7	21.1
2 21	8 33.39	+17 12.3	1.222	2.158	11.3	20.1	2 21	8 36.96	+10 15.4	2.641	3.568	6.4	21.3
3 2	8 27.51	+17 40.9	1.275	2.152	16.0	20.4	3 2	8 31.16	+10 44.1	2.724	3.582	9.1	21.5
<b>83086</b>	2001 <i>QN</i> <sub>228</sub>		1 31.4 48°63	2°6/ 2.0	18		<b>258144</b>	2001 <i>RW</i> <sub>120</sub>		1 31.4 120°99	1°0/30.3	18	
12 23	9 18.39	+ 9 55.3	2.175	2.92									

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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>132186</b>	2002 <i>EW</i> <sub>29</sub>		1 31.4 259°33	1.9°/ 1.6	18		<b>215118</b>	1998 <i>TO</i> <sub>12</sub>		1 31.4 153°51	0.2°/31.5	18	
12 23	9 18.91	+10 13.2	1.699	2.463	17.4	20.3	12 23	9 21.56	+14 55.7	2.131	2.887	14.6	22.0
1 2	9 15.79	+10 25.2	1.601	2.454	14.2	20.1	1 2	9 17.09	+15 14.8	2.042	2.894	11.6	21.8
1 12	9 9.88	+10 54.6	1.523	2.445	10.2	19.8	1 12	9 10.27	+15 44.3	1.977	2.901	8.0	21.6
1 22	9 1.63	+11 39.7	1.470	2.436	5.7	19.5	1 22	9 1.63	+16 20.9	1.938	2.907	4.0	21.3
2 1	8 51.95	+12 36.2	1.443	2.426	2.0	19.3	2 1	8 51.99	+17 0.6	1.928	2.913	0.3	21.0
2 11	8 42.09	+13 38.0	1.444	2.416	5.2	19.4	2 11	8 42.39	+17 38.7	1.949	2.918	4.4	21.4
2 21	8 33.36	+14 38.5	1.473	2.406	9.9	19.7	2 21	8 33.84	+18 11.4	1.998	2.923	8.3	21.6
3 2	8 26.85	+15 32.2	1.526	2.396	14.2	19.9	3 2	8 27.17	+18 36.4	2.074	2.927	11.8	21.8
<b>259223</b>	2003 <i>BQ</i> <sub>23</sub>		1 31.4 49°10	7.6°/ 4.5	18		<b>103587</b>	2000 <i>CT</i> <sub>7</sub>		1 31.4 62°33	3°1°/29.9	18	
12 23	9 19.54	+ 0 7.3	1.637	2.362	19.5	19.8	12 23	9 23.93	+20 39.0	1.251	2.055	20.3	19.5
1 2	9 16.00	- 0 56.4	1.563	2.375	16.5	19.6	1 2	9 20.45	+21 29.6	1.194	2.074	16.0	19.2
1 12	9 9.77	- 1 39.5	1.508	2.389	13.2	19.5	1 12	9 13.31	+22 31.5	1.156	2.094	10.9	19.0
1 22	9 1.43	- 1 59.0	1.474	2.403	9.9	19.3	1 22	9 3.31	+23 36.4	1.141	2.113	5.6	18.8
2 1	8 51.97	- 1 54.0	1.466	2.418	7.7	19.2	2 1	8 51.88	+24 34.3	1.152	2.133	3.3	18.7
2 11	8 42.65	- 1 27.2	1.484	2.433	8.2	19.3	2 11	8 40.87	+25 16.8	1.190	2.153	7.6	19.0
2 21	8 34.62	- 0 44.1	1.527	2.448	10.7	19.4	2 21	8 31.90	+25 40.1	1.251	2.173	12.5	19.3
3 2	8 28.83	+ 0 8.4	1.594	2.463	13.8	19.7	3 2	8 26.08	+25 44.6	1.335	2.193	16.7	19.6
<b>163465</b>	2002 <i>RF</i> <sub>174</sub>		1 31.4 152°96	3.7°/ 3.3	18		<b>35553</b>	1998 <i>FK</i> <sub>116</sub>		1 31.4 306°22	4.8°/ 3.2	18	
12 23	9 16.43	+ 4 20.5	2.429	3.147	13.9	20.3	12 23	9 16.25	+ 4 27.5	1.852	2.593	17.0	19.6
1 2	9 12.73	+ 4 13.6	2.333	3.151	11.6	20.1	1 2	9 13.40	+ 4 4.3	1.750	2.581	14.2	19.4
1 12	9 7.11	+ 4 21.3	2.259	3.154	8.7	20.0	1 12	9 8.06	+ 3 58.6	1.668	2.569	10.9	19.1
1 22	9 0.01	+ 4 43.1	2.210	3.157	5.8	19.8	1 22	9 0.68	+ 4 11.3	1.609	2.558	7.4	18.9
2 1	8 52.07	+ 5 17.7	2.189	3.159	3.8	19.7	2 1	8 52.04	+ 4 41.5	1.576	2.547	4.9	18.7
2 11	8 44.12	+ 6 1.7	2.199	3.162	4.7	19.7	2 11	8 43.25	+ 5 25.9	1.571	2.536	6.0	18.8
2 21	8 36.96	+ 6 50.9	2.237	3.164	7.4	19.9	2 21	8 35.41	+ 6 18.9	1.593	2.525	9.5	18.9
3 2	8 31.29	+ 7 41.3	2.302	3.166	10.3	20.1	3 2	8 29.52	+ 7 14.9	1.640	2.515	13.2	19.1
<b>85085</b>	3014 <i>T</i> <sub>-2</sub>		1 31.4 96°05	6°6°/26.8	18		<b>416239</b>	2003 <i>BK</i> <sub>55</sub>		1 31.4 329°04	1°9°/30.0	18	
12 23	9 25.82	+37 56.2	2.418	3.186	12.7	20.2	12 23	9 13.08	+15 8.5	1.478	2.278	18.0	20.3
1 2	9 20.46	+38 46.6	2.350	3.196	10.5	20.0	1 2	9 11.79	+16 30.5	1.382	2.262	14.3	20.0
1 12	9 12.53	+39 31.4	2.306	3.207	8.3	19.9	1 12	9 7.50	+18 14.9	1.308	2.246	9.9	19.7
1 22	9 2.68	+40 3.8	2.288	3.218	6.8	19.8	1 22	9 0.62	+20 15.8	1.258	2.231	4.9	19.4
2 1	8 51.90	+40 18.3	2.298	3.228	6.8	19.9	2 1	8 52.04	+22 22.6	1.234	2.217	2.2	19.1
2 11	8 41.39	+40 11.9	2.337	3.239	8.3	20.0	2 11	8 43.15	+24 22.9	1.239	2.204	7.0	19.4
2 21	8 32.23	+39 45.1	2.401	3.249	10.5	20.1	2 21	8 35.45	+26 6.0	1.269	2.192	12.1	19.7
3 2	8 25.25	+39 0.9	2.490	3.259	12.6	20.3	3 2	8 30.23	+27 25.8	1.321	2.181	16.7	19.9
<b>246762</b>	2009 <i>CT</i> <sub>13</sub>		1 31.4 71°92	3°1°/28.9	18		<b>417162</b>	2005 <i>WK</i> <sub>43</sub>		1 31.4 88°50	4°2°/ 3.5	18	
12 23	9 17.63	+23 13.0	2.227	3.008	13.3	20.6	12 23	9 19.61	+ 3 21.8	2.048	2.768	16.2	21.5
1 2	9 14.04	+24 15.0	2.149	3.017	10.4	20.4	1 2	9 15.41	+ 3 17.3	1.974	2.792	13.4	21.4
1 12	9 8.19	+25 22.9	2.094	3.026	7.2	20.2	1 12	9 9.00	+ 3 30.5	1.921	2.816	10.1	21.2
1 22	9 0.59	+26 31.0	2.067	3.035	4.1	20.1	1 22	9 0.94	+ 4 1.0	1.893	2.839	6.7	21.1
2 1	8 52.03	+27 33.0	2.069	3.043	3.3	20.0	2 1	8 52.04	+ 4 46.3	1.892	2.862	4.3	21.0
2 11	8 43.53	+28 23.6	2.100	3.052	5.9	20.2	2 11	8 43.31	+ 5 41.9	1.921	2.884	5.2	21.0
2 21	8 36.03	+28 59.6	2.160	3.061	9.1	20.4	2 21	8 35.67	+ 6 42.3	1.978	2.906	8.2	21.3
3 2	8 30.35	+29 20.2	2.244	3.070	12.0	20.6	3 2	8 29.84	+ 7 42.4	2.062	2.928	11.3	21.5
<b>149674</b>	2004 <i>GN</i> <sub>11</sub>		1 31.4 158°68	1°8°/29.6	18		<b>135273</b>	2001 <i>SR</i> <sub>123</sub>		1 31.4 143°96	1°7°/30.2	18	
12 23	9 21.06	+15 59.4	2.288	3.044	13.7	20.0	12 23	9 20.38	+22 6.0	2.564	3.329	12.1	20.1
1 2	9 16.74	+17 43.1	2.195	3.050	10.8	19.8	1 2	9 15.77	+22 23.3	2.475	3.334	9.6	19.9
1 12	9 10.11	+19 41.2	2.128	3.056	7.3	19.6	1 12	9 9.15	+22 44.4	2.411	3.339	6.6	19.7
1 22	9 1.61	+21 47.2	2.090	3.061	3.6	19.4	1 22	9 1.00	+23 5.8	2.374	3.344	3.4	19.5
2 1	8 51.97	+23 52.8	2.084	3.065	2.1	19.3	2 1	8 52.04	+23 23.8	2.368	3.349	1.8	19.4
2 11	8 42.18	+25 49.3	2.111	3.069	5.4	19.5	2 11	8 43.17	+23 35.3	2.392	3.354	4.5	19.6
2 21	8 33.25	+27 30.4	2.170	3.073	9.0	19.7	2 21	8 35.21	+23 38.6	2.446	3.358	7.6	19.8
3 2	8 26.08	+28 52.5	2.255	3.075	12.1	19.9	3 2	8 28.88	+23 33.1	2.525	3.362	10.5	20.0
<b>500197</b>	2012 <i>HB</i> <sub>3</sub>		1 31.4 232°00	0°8°/ 1.1	17		<b>423567</b>	2005 <i>UD</i> <sub>493</sub>		1 31.4 111°43	2°4°/ 1.9	18	
12 23	9 17.49	+11 10.1	2.243	2.993	14.1	22.0	12 23	9 23.38	+ 9 39.0	2.328	3.057	14.2	21.9
1 2	9 13.94	+11 48.3	2.138	2.984	11.4	21.8	1 2	9 18.05	+ 9 23.2	2.250	3.080	11.5	21.7
1 12	9 8.19	+12 41.0	2.054	2.975	8.0	21.6	1 12	9 10.64	+ 9 18.4	2.194	3.102	8.3	21.5
1 22	9 0.65	+13 45.8	1.998	2.965	4.2	21.3	1 22	9 1.70	+ 9 23.4	2.165	3.124	4.9	21.4
2 1	8 52.03	+14 58.1	1.971	2.955	0.8	21.1	2 1	8 52.00	+ 9 36.4	2.166	3.145	2.4	21.2
2 11	8 43.27	+16 12.1	1.974	2.945	4.2	21.3	2 11	8 42.48	+ 9 54.3	2.197	3.165	4.2	21.4
2 21	8 35.31	+17 22.3	2.007	2.934	8.1	21.5	2 21	8 34.00	+10 14.4	2.259	3.184	7.4	21.6
3 2	8 29.01	+18 24.3	2.067	2.923	11.6	21.7	3 2	8 27.25	+10 33.7	2.348	3.203	10.5	21.8
<b>130703</b>	2000 <i>SH</i> <sub>170</sub>		1 31.4 108°38	4°0°/29.3	18		<b>97861</b>	2000 <i>QM</i> <sub>27</sub>		1 31.4 62°88	0°6°/31.7	18	
12 23	9 25.74	+25 15.2	1.672	2.459	16.7	20.1	12 23	9 22.57	+14 5.1	1.400	2.183	19.6	19.5
1 2	9 21.16	+25 59.3	1.600	2.470	13.2	19.9	1 2	9 18.82	+14 18.7	1.338	2.204	15.5	19.3
1 12	9 13.45	+26 48.1	1.551	2.482	9.2	19.6	1 12	9 11.89	+14 47.6	1.295	2.226	10.8	19.1
1 22	9 3.30	+27 34.2	1.526	2.493	5.4	19.4	1 22	9 2.52	+15 27.7	1.276	2.247	5.4	18.8
2 1	8 51.87	+28 9.9	1.529	2.504	4.2	19.4	2 1	8 51.95	+16 12.7	1.283	2.268	0.6	18.5
2 11	8 40.68	+28 29.5	1.561	2.514	7.3	19.6	2 11	8 41.71	+16 55.8	1.318	2.290	5.6	19.0
2 21	8 31.12	+28 31.3	1.619	2.525	11.2	19.9	2 21	8 33.20	+17 31.9	1.379	2.311	10.5	19.3
3 2	8 24.21	+28 16.4	1.700	2.535	14.8	20.1	3 2	8 27.40	+17 57.8	1.463	2.333	14.7	19.6
<b>100655</b>	1997 <i>WJ</i> <sub>14</sub>		1 31.4 53°58	0°1°/31.4	18		<b>274740</b>	2008 <i>UH</i> <sub>211</sub>		1 31.4 225°83	0°8°/30.8	17	
12 23	9 17.18	+15 35.6	2.113										

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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>45855</b>	2000 <i>TA</i> <sub>2</sub>		1 31.4 189°78	0°3/31.2	18		<b>74195</b>	1998 <i>RJ</i> <sub>49</sub>		1 31.4 20°32	0°6/31.1	18	
12 23	9 23.55	+16 28.1	2.116	2.873	14.6	19.8	12 23	9 19.80	+17 19.9	1.518	2.309	18.0	18.7
1 2	9 18.80	+16 49.5	2.019	2.872	11.7	19.6	1 2	9 16.71	+17 33.6	1.439	2.311	14.3	18.4
1 12	9 11.55	+17 20.5	1.945	2.871	8.1	19.4	1 12	9 10.56	+17 58.8	1.380	2.315	9.9	18.2
1 22	9 2.33	+17 57.8	1.898	2.868	4.0	19.1	1 22	9 1.96	+18 31.4	1.346	2.318	4.9	17.9
2 1	8 51.96	+18 36.6	1.880	2.865	0.5	18.9	2 1	8 52.01	+19 5.5	1.337	2.322	0.8	17.6
2 11	8 41.54	+19 12.3	1.893	2.861	4.7	19.2	2 11	8 42.14	+19 35.3	1.356	2.327	5.8	18.0
2 21	8 32.17	+19 41.1	1.935	2.856	8.8	19.4	2 21	8 33.76	+19 56.4	1.401	2.332	10.6	18.2
3 2	8 24.75	+20 0.9	2.003	2.851	12.3	19.6	3 2	8 27.92	+20 6.6	1.470	2.337	14.9	18.5
<b>212403</b>	2006 <i>JQ</i> <sub>60</sub>		1 31.4 219°56	0°8/31.9	18		<b>153592</b>	2001 <i>SG</i> <sub>266</sub>		1 31.4 159°16	1°7/1.5	18	
12 23	9 21.84	+13 17.3	2.125	2.876	14.8	22.0	12 23	9 23.74	+10 33.4	2.069	2.809	15.5	21.8
1 2	9 17.50	+13 32.7	2.019	2.867	11.9	21.7	1 2	9 18.84	+10 43.5	1.980	2.818	12.5	21.6
1 12	9 10.73	+14 0.0	1.935	2.857	8.4	21.5	1 12	9 11.51	+11 7.1	1.911	2.826	8.9	21.4
1 22	9 1.96	+14 36.7	1.878	2.846	4.4	21.2	1 22	9 2.28	+11 42.0	1.870	2.834	4.9	21.1
2 1	8 51.98	+15 19.1	1.849	2.834	0.8	20.9	2 1	8 51.99	+12 24.7	1.857	2.840	1.7	20.9
2 11	8 41.84	+16 2.3	1.851	2.822	4.5	21.2	2 11	8 41.73	+13 10.4	1.875	2.845	4.5	21.1
2 21	8 32.63	+16 42.0	1.883	2.808	8.7	21.4	2 21	8 32.55	+13 54.6	1.923	2.850	8.4	21.4
3 2	8 25.29	+17 14.9	1.940	2.795	12.4	21.6	3 2	8 25.32	+14 33.7	1.996	2.853	12.0	21.6
<b>61246</b>	2000 <i>OX</i> <sub>22</sub>		1 31.4 213°88	1°4/30.6	18		<b>424954</b>	2008 <i>YK</i> <sub>150</sub>		1 31.4 94°89	1°5/30.1	18	
12 23	9 24.22	+19 13.1	1.865	2.636	15.8	19.9	12 23	9 16.07	+17 5.2	2.352	3.120	13.0	20.8
1 2	9 19.79	+19 37.3	1.768	2.630	12.6	19.7	1 2	9 12.71	+18 16.2	2.261	3.123	10.2	20.6
1 12	9 12.51	+20 10.4	1.694	2.624	8.7	19.4	1 12	9 7.26	+19 38.2	2.195	3.125	7.0	20.4
1 22	9 2.91	+20 48.0	1.645	2.616	4.3	19.2	1 22	9 0.17	+21 6.5	2.156	3.128	3.4	20.2
2 1	8 51.92	+21 24.5	1.625	2.608	1.5	18.9	2 1	8 52.12	+22 34.8	2.148	3.131	1.6	20.0
2 11	8 40.84	+21 54.2	1.634	2.600	5.6	19.2	2 11	8 44.01	+23 56.7	2.171	3.133	4.6	20.3
2 21	8 30.97	+22 13.5	1.671	2.591	10.0	19.4	2 21	8 36.73	+25 7.4	2.223	3.136	8.3	20.5
3 2	8 23.37	+22 21.0	1.733	2.581	13.9	19.6	3 2	8 31.06	+26 3.9	2.301	3.139	11.3	20.7
<b>522659</b>	2016 <i>GW</i> <sub>263</sub>		1 31.4 10°71	4°5/3.6	17		<b>149239</b>	2002 <i>RO</i> <sub>192</sub>		1 31.4 16°70	4°4/29.8	18	
12 23	9 15.31	+3 11.2	2.150	2.875	15.4	21.2	12 23	9 24.74	+25 19.1	1.184	1.998	20.7	19.7
1 2	9 12.15	+2 56.4	2.056	2.875	12.8	21.0	1 2	9 21.68	+25 43.2	1.115	2.000	16.5	19.4
1 12	9 6.89	+2 58.1	1.982	2.876	9.9	20.8	1 12	9 14.56	+26 12.6	1.064	2.002	11.6	19.2
1 22	8 59.97	+3 16.7	1.933	2.877	6.8	20.6	1 22	9 4.11	+26 39.1	1.035	2.006	6.5	18.9
2 1	8 52.11	+3 51.1	1.911	2.878	4.6	20.5	2 1	8 51.87	+26 53.3	1.031	2.010	4.7	18.8
2 11	8 44.23	+4 37.6	1.918	2.880	5.4	20.6	2 11	8 39.92	+26 49.0	1.052	2.014	8.7	19.0
2 21	8 37.22	+5 31.6	1.952	2.881	8.2	20.7	2 21	8 30.16	+26 25.0	1.097	2.019	13.7	19.3
3 2	8 31.86	+6 28.0	2.013	2.883	11.3	20.9	3 2	8 23.90	+25 44.0	1.162	2.025	18.3	19.6
<b>278170</b>	2007 <i>DE</i> <sub>56</sub>		1 31.4 300°37	2°1/1.9	18		<b>214239</b>	2005 <i>ET</i> <sub>182</sub>		1 31.4 288°14	1°6/30.5	18	
12 23	9 15.74	+8 4.2	1.890	2.645	16.2	20.5	12 23	9 19.89	+18 50.4	1.641	2.430	16.9	20.8
1 2	9 12.95	+8 34.9	1.792	2.639	13.2	20.2	1 2	9 16.88	+19 20.5	1.543	2.414	13.5	20.5
1 12	9 7.71	+9 24.6	1.715	2.633	9.6	20.0	1 12	9 10.83	+20 2.2	1.465	2.399	9.4	20.3
1 22	9 0.50	+10 31.3	1.663	2.627	5.5	19.7	1 22	9 2.21	+20 50.7	1.412	2.384	4.7	19.9
2 1	8 52.08	+11 50.6	1.639	2.621	2.1	19.5	2 1	8 51.99	+21 39.4	1.386	2.369	1.8	19.7
2 11	8 43.54	+13 15.6	1.644	2.616	4.7	19.7	2 11	8 41.55	+22 21.4	1.387	2.354	6.2	20.0
2 21	8 35.97	+14 39.1	1.677	2.611	8.9	19.9	2 21	8 32.34	+22 51.5	1.415	2.339	11.1	20.2
3 2	8 30.31	+15 55.3	1.736	2.605	12.8	20.1	3 2	8 25.58	+23 7.4	1.466	2.324	15.4	20.4
<b>160094</b>	2000 <i>QR</i> <sub>67</sub>		1 31.4 136°19	0°4/31.1	18		<b>115400</b>	2003 <i>SJ</i> <sub>291</sub>		1 31.4 137°41	0°7/30.9	18	R
12 23	9 21.65	+14 46.0	1.803	2.571	16.4	20.6	12 23	9 18.98	+17 53.7	2.250	3.017	13.6	20.2
1 2	9 17.64	+15 30.6	1.721	2.581	13.0	20.4	1 2	9 14.99	+18 15.1	2.161	3.020	10.7	20.0
1 12	9 10.91	+16 29.2	1.662	2.590	9.0	20.2	1 12	9 8.80	+18 44.4	2.095	3.023	7.4	19.8
1 22	9 2.05	+17 37.3	1.627	2.599	4.4	19.9	1 22	9 0.91	+19 18.2	2.055	3.027	3.6	19.6
2 1	8 51.98	+18 48.1	1.622	2.607	0.6	19.6	2 1	8 52.09	+19 52.2	2.045	3.030	0.8	19.4
2 11	8 41.97	+19 54.7	1.646	2.615	5.2	20.0	2 11	8 43.30	+20 22.2	2.065	3.033	4.4	19.7
2 21	8 33.19	+20 51.3	1.698	2.622	9.6	20.3	2 21	8 35.48	+20 45.3	2.114	3.036	8.1	19.9
3 2	8 26.62	+21 34.9	1.775	2.629	13.4	20.5	3 2	8 29.41	+20 59.7	2.188	3.038	11.4	20.1
<b>258788</b>	2002 <i>JO</i> <sub>138</sub>		1 31.4 213°19	1°1/30.7	18		<b>277983</b>	2006 <i>TQ</i> <sub>81</sub>		1 31.4 60°80	0°9/31.9	18	
12 23	9 22.27	+18 1.1	2.056	2.822	14.7	22.1	12 23	9 22.45	+14 8.1	1.577	2.351	18.1	21.0
1 2	9 17.96	+18 31.5	1.957	2.816	11.7	21.9	1 2	9 18.33	+14 10.6	1.513	2.374	14.4	20.8
1 12	9 11.10	+19 11.6	1.880	2.808	8.1	21.7	1 12	9 11.34	+14 26.1	1.470	2.397	10.0	20.6
1 22	9 2.16	+19 57.2	1.829	2.801	4.0	21.4	1 22	9 2.20	+14 51.2	1.451	2.421	5.1	20.4
2 1	8 51.98	+20 43.0	1.808	2.792	1.2	21.2	2 1	8 52.01	+15 21.3	1.459	2.444	0.9	20.1
2 11	8 41.69	+21 23.6	1.817	2.783	5.1	21.4	2 11	8 42.16	+15 51.2	1.496	2.467	5.1	20.5
2 21	8 32.44	+21 55.1	1.854	2.774	9.2	21.7	2 21	8 33.85	+16 16.5	1.559	2.491	9.6	20.8
3 2	8 25.19	+22 15.4	1.917	2.763	12.9	21.9	3 2	8 27.99	+16 34.8	1.647	2.514	13.5	21.1
<b>184640</b>	2005 <i>SF</i> <sub>20</sub>		1 31.4 111°44	6°8/26.8	18		<b>292762</b>	2006 <i>UO</i> <sub>191</sub>		1 31.4 148°71	5°9/28.0	18	
12 23	9 26.24	+34 47.1	2.084	2.861	14.2	20.0	12 23	9 29.39	+33 19.8	2.090	2.862	14.3	21.0
1 2	9 21.19	+35 59.9	2.020	2.876	11.5	19.8	1 2	9 23.59	+34 5.4	2.015	2.869	11.6	20.8
1 12	9 13.28	+37 9.6	1.979	2.890	8.9	19.7	1 12	9 14.89	+34 48.2	1.962	2.877	8.7	20.7
1 22	9 3.16	+38 8.0	1.965	2.904	7.0	19.6	1 22	9 3.96	+35 20.9	1.935	2.884	6.4	20.5
2 1	8 51.92	+38 47.5	1.979	2.918	7.1	19.6	2 1	8 51.90	+35 36.7	1.938	2.890	6.1	20.5
2 11	8 40.91	+39 3.8	2.020	2.932	8.9	19.8	2 11	8 40.08	+35 32.0	1.969	2.896	8.1	20.6
2 21	8 31.39	+38 56.8	2.088	2.945	11.4	19.9	2 21	8 29.78	+35 6.7	2.027	2.901	10.9	20.8
3 2	8 24.29	+38 29.4	2.179	2.957	13.9	20.1	3 2	8 21.94	+34 24.0	2.110	2.906	13.7	21.0
<b>117026</b>	2004 <i>JN</i> <sub>12</sub>		1 31.4 170°80	0°9/30.5	18		<b>464096</b>	2014 <i>WU</i> <sub>391</sub>		1 31.4 338°50	7°5/25.6	17	
12 23	9 15.75	+16 34.5	2.753	3.511	11.6								

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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>318198</b>	2004 <i>RJ</i> <sub>125</sub>		1 31.4	50°37'	0°9'	31.0 18	<b>34219</b>	Megantang		1 31.4	52°43'	1°1'	30.8 18
12 23	9 23.68	+18 45.0	1.367	2.161	19.4	20.7	12 23	9 21.75	+19 15.0	1.684	2.467	16.8	19.1
1 2	9 20.03	+18 49.2	1.296	2.170	15.4	20.5	1 2	9 17.77	+19 27.4	1.614	2.483	13.2	18.9
1 12	9 12.94	+19 3.6	1.245	2.180	10.6	20.2	1 12	9 10.98	+19 48.0	1.566	2.499	9.0	18.7
1 22	9 3.16	+19 23.4	1.217	2.190	5.2	20.0	1 22	9 2.06	+20 12.4	1.542	2.515	4.4	18.4
2 1	8 51.95	+19 42.8	1.216	2.200	1.1	19.7	2 1	8 52.07	+20 35.3	1.547	2.531	1.3	18.2
2 11	8 41.01	+19 56.1	1.241	2.211	6.2	20.1	2 11	8 42.34	+20 52.1	1.579	2.548	5.4	18.6
2 21	8 31.87	+20 0.1	1.291	2.222	11.3	20.4	2 21	8 34.07	+21 0.0	1.639	2.564	9.7	18.9
3 2	8 25.63	+19 53.9	1.365	2.233	15.7	20.7	3 2	8 28.17	+20 58.2	1.723	2.581	13.5	19.1
<b>338232</b>	2002 <i>TD</i> <sub>75</sub>		1 31.4	94°33'	5°1'	28.8 17	<b>187104</b>	2005 <i>QU</i> <sub>37</sub>		1 31.4	94°41'	6°3'	5.3 18
12 23	9 29.49	+26 6.4	1.500	2.289	18.2	20.6	12 23	9 17.16	- 2 27.0	1.970	2.670	17.3	20.8
1 2	9 24.35	+27 13.7	1.444	2.314	14.4	20.4	1 2	9 13.76	- 2 39.3	1.886	2.681	14.8	20.6
1 12	9 15.72	+28 25.4	1.409	2.339	10.1	20.2	1 12	9 8.07	- 2 29.2	1.820	2.692	11.8	20.5
1 22	9 4.44	+29 31.8	1.399	2.364	6.2	20.1	1 22	9 0.60	- 1 55.6	1.777	2.703	8.8	20.3
2 1	8 51.88	+30 23.2	1.417	2.387	5.3	20.1	2 1	8 52.16	- 0 59.5	1.761	2.714	6.6	20.2
2 11	8 39.79	+30 53.1	1.463	2.411	8.4	20.3	2 11	8 43.74	+ 0 14.4	1.772	2.724	6.8	20.2
2 21	8 29.69	+31 0.2	1.534	2.433	12.2	20.6	2 21	8 36.34	+ 1 39.6	1.811	2.734	9.1	20.4
3 2	8 22.61	+30 47.3	1.628	2.455	15.7	20.9	3 2	8 30.77	+ 3 8.7	1.876	2.745	12.1	20.6
<b>377178</b>	2003 <i>UW</i> <sub>114</sub>		1 31.4	63°77'	2°7'	2.3 18	<b>363368</b>	2002 <i>TJ</i> <sub>52</sub>		1 31.4	88°40'	2°9'	2.4 18
12 23	9 17.26	+ 8 19.8	2.080	2.825	15.2	21.8	12 23	9 24.24	+ 7 17.6	2.030	2.757	16.1	21.5
1 2	9 13.71	+ 8 14.6	1.994	2.833	12.4	21.6	1 2	9 18.93	+ 7 16.5	1.965	2.793	13.0	21.4
1 12	9 7.96	+ 8 23.5	1.929	2.841	9.0	21.4	1 12	9 11.34	+ 7 30.4	1.922	2.827	9.5	21.2
1 22	9 0.51	+ 8 45.3	1.890	2.849	5.4	21.2	1 22	9 2.09	+ 7 57.8	1.905	2.861	5.7	21.0
2 1	8 52.13	+ 9 17.7	1.878	2.857	2.8	21.0	2 1	8 52.08	+ 8 35.4	1.917	2.894	3.0	20.9
2 11	8 43.81	+ 9 56.6	1.896	2.865	4.6	21.2	2 11	8 42.36	+ 9 18.9	1.959	2.926	4.6	21.1
2 21	8 36.47	+10 37.8	1.942	2.874	8.0	21.4	2 21	8 33.88	+10 3.7	2.030	2.958	8.0	21.4
3 2	8 30.89	+11 17.2	2.014	2.882	11.4	21.6	3 2	8 27.37	+10 45.8	2.128	2.988	11.2	21.6
<b>202760</b>	2007 <i>RP</i> <sub>64</sub>		1 31.4	171°33'	0°4'	31.1 17	<b>172502</b>	2003 <i>SZ</i> <sub>180</sub>		1 31.4	139°68'	0°6'	31.8 18
12 23	9 18.72	+17 10.6	2.487	3.246	12.6	21.5	12 23	9 23.92	+14 49.4	1.919	2.678	15.9	20.9
1 2	9 14.56	+17 29.0	2.393	3.248	10.0	21.3	1 2	9 19.18	+14 52.6	1.835	2.687	12.7	20.7
1 12	9 8.40	+17 55.0	2.323	3.249	6.9	21.1	1 12	9 11.85	+15 6.2	1.773	2.697	8.8	20.5
1 22	9 0.69	+18 25.4	2.280	3.251	3.4	20.9	1 22	9 2.50	+15 27.4	1.736	2.705	4.5	20.3
2 1	8 52.13	+18 56.7	2.267	3.252	0.5	20.6	2 1	8 52.06	+15 52.3	1.728	2.713	0.6	20.0
2 11	8 43.57	+19 25.3	2.285	3.253	4.0	20.9	2 11	8 41.72	+16 16.7	1.750	2.721	4.7	20.3
2 21	8 35.88	+19 48.2	2.331	3.253	7.5	21.1	2 21	8 32.62	+16 37.0	1.801	2.728	8.9	20.6
3 2	8 29.75	+20 3.9	2.405	3.253	10.5	21.3	3 2	8 25.65	+16 51.0	1.877	2.734	12.6	20.8
<b>110747</b>	2001 <i>UX</i> <sub>7</sub>		1 31.4	231°03'	2°4'	2.0 18	<b>306330</b>	2011 <i>SR</i> <sub>112</sub>		1 31.4	80°90'	0°1'	31.4 18
12 23	9 19.12	+ 9 3.1	2.132	2.874	15.0	20.6	12 23	9 22.39	+14 29.2	1.560	2.336	18.2	20.7
1 2	9 15.31	+ 9 3.6	2.028	2.866	12.2	20.4	1 2	9 18.46	+15 1.4	1.493	2.356	14.4	20.5
1 12	9 9.19	+ 9 17.9	1.944	2.857	8.9	20.1	1 12	9 11.58	+15 48.4	1.447	2.376	9.9	20.3
1 22	9 1.20	+ 9 45.0	1.887	2.847	5.3	19.9	1 22	9 2.41	+16 45.2	1.425	2.396	4.9	20.1
2 1	8 52.09	+10 22.3	1.857	2.838	2.4	19.7	2 1	8 52.08	+17 45.2	1.431	2.416	0.3	19.8
2 11	8 42.86	+11 5.7	1.858	2.828	4.6	19.8	2 11	8 42.00	+18 41.1	1.465	2.435	5.4	20.2
2 21	8 34.50	+11 50.8	1.887	2.817	8.4	20.0	2 21	8 33.44	+19 27.6	1.526	2.454	10.1	20.5
3 2	8 27.91	+12 33.3	1.942	2.806	11.9	20.2	3 2	8 27.38	+20 1.7	1.611	2.473	14.1	20.8
<b>275822</b>	2001 <i>RE</i> <sub>51</sub>		1 31.4	174°30'	4°1'	27.1 17	<b>502921</b>	2015 <i>EX</i> <sub>23</sub>		1 31.4	220°91'	1°9'	29.9 17
12 23	9 20.31	+31 42.4	3.283	4.046	9.8	21.9	12 23	9 19.68	+22 37.3	2.626	3.393	11.9	22.0
1 2	9 15.50	+32 42.4	3.197	4.049	7.8	21.7	1 2	9 15.33	+23 1.8	2.527	3.387	9.4	21.8
1 12	9 8.89	+33 42.0	3.138	4.052	5.8	21.6	1 12	9 8.96	+23 30.2	2.452	3.380	6.5	21.6
1 22	9 0.89	+34 36.4	3.107	4.054	4.3	21.5	1 22	9 1.02	+23 59.1	2.404	3.374	3.4	21.4
2 1	8 52.13	+35 21.1	3.107	4.056	4.3	21.5	2 1	8 52.19	+24 24.3	2.387	3.367	2.1	21.3
2 11	8 43.35	+35 52.8	3.138	4.056	5.8	21.6	2 11	8 43.33	+24 42.4	2.400	3.360	4.6	21.4
2 21	8 35.30	+36 10.2	3.197	4.057	7.8	21.7	2 21	8 35.31	+24 51.4	2.443	3.352	7.8	21.6
3 2	8 28.63	+36 13.5	3.282	4.057	9.7	21.9	3 2	8 28.85	+24 50.5	2.512	3.345	10.6	21.8
<b>340691</b>	2006 <i>RT</i> <sub>122</sub>		1 31.4	82°77'	1°2'	1.1 18	<b>11624</b>	1996 <i>UF</i>		1 31.4	123°88'	0°4'	31.6 18
12 23	9 22.40	+14 43.1	2.437	3.182	13.2	20.2	12 23	9 24.80	+14 0.0	1.586	2.355	18.3	18.3
1 2	9 17.28	+14 16.6	2.352	3.195	10.6	20.0	1 2	9 20.42	+14 22.9	1.510	2.369	14.6	18.1
1 12	9 10.13	+13 56.6	2.289	3.208	7.4	19.9	1 12	9 13.00	+15 0.4	1.455	2.382	10.1	17.9
1 22	9 1.49	+13 41.8	2.255	3.221	4.0	19.7	1 22	9 3.18	+15 48.7	1.425	2.395	5.1	17.6
2 1	8 52.10	+13 30.8	2.250	3.234	1.2	19.5	2 1	8 52.07	+16 41.5	1.422	2.407	0.4	17.3
2 11	8 42.85	+13 21.5	2.277	3.246	3.8	19.7	2 11	8 41.11	+17 32.1	1.448	2.419	5.4	17.7
2 21	8 34.60	+13 12.4	2.333	3.259	7.2	19.9	2 21	8 31.65	+18 15.1	1.501	2.430	10.2	18.0
3 2	8 28.01	+13 2.4	2.417	3.271	10.2	20.1	3 2	8 24.76	+18 47.3	1.579	2.440	14.4	18.2
<b>238118</b>	2003 <i>OF</i> <sub>18</sub>		1 31.4	148°85'	2°1'	1.9 18	<b>340577</b>	2006 <i>OY</i> <sub>5</sub>		1 31.4	163°62'	2°4'	28.8 17
12 23	9 22.24	+ 9 15.4	2.143	2.879	15.1	22.0	12 23	9 18.12	+23 53.8	3.192	3.953	10.1	21.8
1 2	9 17.55	+ 9 24.2	2.055	2.890	12.2	21.8	1 2	9 13.74	+24 53.6	3.102	3.959	7.9	21.6
1 12	9 10.57	+ 9 46.8	1.989	2.901	8.8	21.6	1 12	9 7.68	+25 57.2	3.039	3.965	5.5	21.4
1 22	9 1.81	+10 21.4	1.949	2.910	5.0	21.4	1 22	9 0.33	+27 0.4	3.005	3.970	3.2	21.3
2 1	8 52.08	+11 4.8	1.938	2.919	2.1	21.2	2 1	8 52.25	+27 58.8	3.002	3.975	2.6	21.3
2 11	8 42.39	+11 52.5	1.958	2.927	4.4	21.4	2 11	8 44.14	+28 48.7	3.031	3.979	4.6	21.4
2 21	8 33.73	+12 39.8	2.007	2.935	8.1	21.6	2 21	8 36.69	+29 27.6	3.090	3.982	7.0	21.6
3 2	8 26.91	+13 23.1	2.083	2.941	11.5	21.8	3 2	8 30.51	+29 54.6	3.177	3.985	9.2	21.7
<b>116919</b>	2004 <i>GZ</i> <sub>22</sub>		1 31.4	184°24'	2°6'	2.8 17	<b>454248</b>	2013 <i>LB</i> <sub>24</sub>		1 31.4	161°73'	7°6'	5.4 18
12 23	9 15.72	+ 6 6.6	3.119	3.831	11.3	21.2	12 23	9 18.71					

EPHEMERIDES

1 31.4

1 31.5

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>124415</b>	2001 QA <sub>219</sub>		1 31.4 356°20	16°7/31.3	18		<b>196873</b>	2003 SB <sub>293</sub>		1 31.4 134°00	2°4/29.9	18	
12 23	9 57.61	+52 14.9	1.041	1.815	25.6	18.2	12 23	9 22.61	+23 48.7	2.333	3.102	13.1	20.4
1 2	9 50.37	+52 30.2	0.977	1.807	22.9	17.9	1 2	9 17.79	+24 10.5	2.249	3.109	10.3	20.2
1 12	9 35.41	+52 17.0	0.927	1.802	20.0	17.7	1 12	9 10.71	+24 35.5	2.188	3.117	7.1	20.0
1 22	9 14.48	+51 12.5	0.894	1.798	17.6	17.6	1 22	9 1.91	+24 59.4	2.155	3.124	3.8	19.8
2 1	8 51.43	+48 59.5	0.882	1.797	16.7	17.5	2 1	8 52.21	+25 17.8	2.152	3.131	2.5	19.7
2 11	8 30.94	+45 39.5	0.893	1.797	17.9	17.6	2 11	8 42.64	+25 27.3	2.179	3.137	5.2	19.9
2 21	8 16.06	+41 33.0	0.927	1.799	20.7	17.7	2 21	8 34.13	+25 26.1	2.235	3.143	8.4	20.1
3 2	8 7.76	+37 6.8	0.981	1.804	24.0	18.0	3 2	8 27.47	+25 14.5	2.316	3.149	11.4	20.3
<b>417833</b>	2007 GG <sub>4</sub>		1 31.4 298°72	6°1/27.4	18		<b>472581</b>	2015 DC <sub>118</sub>		1 31.4 144°55	0°5/31.0	18	
12 23	9 21.15	+30 19.7	1.847	2.640	15.1	20.7	12 23	9 16.24	+15 54.9	2.590	3.349	12.2	20.7
1 2	9 17.80	+31 25.6	1.756	2.626	12.2	20.5	1 2	9 12.59	+16 35.4	2.498	3.353	9.6	20.5
1 12	9 11.42	+32 34.2	1.687	2.613	9.1	20.2	1 12	9 7.07	+17 25.0	2.430	3.357	6.6	20.4
1 22	9 2.52	+33 37.3	1.644	2.599	6.5	20.1	1 22	9 0.10	+18 20.4	2.390	3.361	3.2	20.1
2 1	8 52.10	+34 26.1	1.628	2.586	6.4	20.0	2 1	8 52.32	+19 17.3	2.379	3.364	0.6	19.9
2 11	8 41.57	+34 54.0	1.639	2.572	8.9	20.1	2 11	8 44.52	+20 11.4	2.400	3.367	3.9	20.2
2 21	8 32.33	+34 58.5	1.675	2.559	12.3	20.3	2 21	8 37.49	+20 58.8	2.450	3.371	7.2	20.4
3 2	8 25.55	+34 40.8	1.734	2.547	15.5	20.5	3 2	8 31.91	+21 37.3	2.527	3.374	10.1	20.6
<b>333973</b>	2000 JY <sub>92</sub>		1 31.4 94°48	4°6/4.6	18		<b>327248</b>	2005 SS <sub>53</sub>		1 31.4 99°02	6°6/27.4	18	
12 23	9 15.41	- 0 27.8	2.396	3.094	14.6	21.0	12 23	9 27.75	+34 24.5	2.030	2.806	14.5	21.1
1 2	9 11.96	- 0 20.4	2.307	3.106	12.3	20.8	1 2	9 22.38	+35 26.2	1.969	2.825	11.8	20.9
1 12	9 6.63	+ 0 5.6	2.239	3.118	9.6	20.7	1 12	9 14.10	+36 24.4	1.930	2.843	9.0	20.8
1 22	8 59.85	+ 0 49.9	2.196	3.129	6.8	20.5	1 22	9 3.64	+37 11.2	1.918	2.861	6.9	20.7
2 1	8 52.30	+ 1 50.7	2.180	3.140	4.8	20.4	2 1	8 52.11	+37 39.3	1.934	2.878	6.8	20.7
2 11	8 44.77	+ 3 3.7	2.194	3.152	5.2	20.4	2 11	8 40.92	+37 44.9	1.978	2.896	8.7	20.9
2 21	8 38.05	+ 4 23.5	2.237	3.163	7.5	20.6	2 21	8 31.29	+37 28.3	2.048	2.912	11.3	21.1
3 2	8 32.80	+ 5 44.6	2.308	3.174	10.2	20.8	3 2	8 24.16	+36 52.7	2.141	2.929	13.8	21.3
<b>450502</b>	2005 YP <sub>238</sub>		1 31.4 89°76	1°4/1.1	18		<b>263926</b>	2009 HE <sub>20</sub>		1 31.4 271°37	6°8/26.7	18	
12 23	9 22.90	+13 22.7	1.496	2.272	18.9	21.5	12 23	9 23.25	+30 30.9	1.789	2.581	15.6	21.0
1 2	9 19.17	+13 15.8	1.416	2.277	15.2	21.3	1 2	9 19.78	+31 55.8	1.692	2.562	12.7	20.7
1 12	9 12.29	+13 22.9	1.356	2.283	10.7	21.0	1 12	9 13.05	+33 25.7	1.618	2.542	9.6	20.5
1 22	9 2.90	+13 41.8	1.319	2.288	5.7	20.8	1 22	9 3.49	+34 51.1	1.570	2.522	7.1	20.3
2 1	8 52.11	+14 8.1	1.309	2.294	1.4	20.5	2 1	8 52.10	+36 1.2	1.548	2.502	7.2	20.3
2 11	8 41.42	+14 36.6	1.327	2.299	5.6	20.8	2 11	8 40.39	+36 47.7	1.554	2.481	9.9	20.4
2 21	8 32.24	+15 2.5	1.371	2.305	10.5	21.1	2 21	8 29.96	+37 6.8	1.585	2.461	13.4	20.5
3 2	8 25.69	+15 22.3	1.439	2.310	14.9	21.3	3 2	8 22.17	+36 59.8	1.638	2.440	16.8	20.7
<b>437801</b>	2015 CK <sub>59</sub>		1 31.4 311°09	5°3/28.5	17		<b>160962</b>	2002 AA <sub>182</sub>		1 31.4 307°53	4°1/28.5	18	
12 23	9 23.59	+31 18.6	2.012	2.796	14.4	20.8	12 23	9 17.17	+22 59.3	1.726	2.523	15.9	19.8
1 2	9 19.43	+31 47.4	1.910	2.775	11.7	20.5	1 2	9 14.78	+24 13.2	1.627	2.505	12.6	19.5
1 12	9 12.38	+32 15.2	1.831	2.754	8.6	20.3	1 12	9 9.46	+25 38.5	1.551	2.486	8.9	19.2
1 22	9 2.94	+32 35.5	1.777	2.734	6.0	20.1	1 22	9 1.64	+27 7.9	1.500	2.468	5.2	19.0
2 1	8 52.11	+32 41.7	1.751	2.714	5.5	20.0	2 1	8 52.21	+28 32.1	1.477	2.450	4.5	18.9
2 11	8 41.21	+32 29.5	1.754	2.694	7.9	20.1	2 11	8 42.50	+29 42.0	1.481	2.433	7.8	19.0
2 21	8 31.57	+31 58.0	1.783	2.675	11.2	20.3	2 21	8 33.90	+30 31.8	1.511	2.416	12.0	19.2
3 2	8 24.27	+31 9.2	1.835	2.656	14.5	20.5	3 2	8 27.65	+30 59.6	1.563	2.399	15.8	19.4
<b>80036</b>	1999 JZ <sub>26</sub>		1 31.4 266°95	1°1/30.6	18		<b>468701</b>	2009 WP <sub>113</sub>		1 31.5 244°41	13°6/15.9	16	
12 23	9 17.32	+18 58.1	2.461	3.228	12.5	20.0	12 23	9 47.26	+60 49.8	2.380	3.070	14.9	21.6
1 2	9 13.67	+19 26.9	2.356	3.216	9.9	19.8	1 2	9 40.75	+62 45.8	2.319	3.054	14.1	21.6
1 12	9 7.96	+20 3.1	2.275	3.204	6.8	19.6	1 12	9 28.74	+64 25.8	2.278	3.037	13.7	21.5
1 22	9 0.60	+20 43.3	2.221	3.192	3.4	19.4	1 22	9 11.73	+65 37.7	2.258	3.019	13.7	21.5
2 1	8 52.26	+21 23.3	2.196	3.180	1.3	19.2	2 1	8 51.61	+66 10.7	2.259	3.001	14.3	21.5
2 11	8 43.82	+21 58.7	2.202	3.167	4.4	19.4	2 11	8 31.53	+66 0.2	2.280	2.983	15.3	21.5
2 21	8 36.17	+22 26.5	2.237	3.155	7.9	19.6	2 21	8 14.53	+65 9.2	2.319	2.963	16.4	21.6
3 2	8 30.09	+22 44.9	2.298	3.142	11.1	19.8	3 2	8 2.63	+63 45.7	2.373	2.944	17.6	21.6
<b>341189</b>	2007 RK <sub>51</sub>		1 31.4 209°16	1°7/30.4	18		<b>456647</b>	2007 RH <sub>15</sub>		1 31.5 167°61	1°0/1.2	18	
12 23	9 21.17	+22 11.3	2.318	3.087	13.2	20.6	12 23	9 23.01	+12 21.5	2.203	2.946	14.5	22.6
1 2	9 16.72	+22 23.3	2.225	3.087	10.4	20.4	1 2	9 18.20	+12 37.0	2.110	2.952	11.7	22.4
1 12	9 10.03	+22 39.3	2.156	3.085	7.2	20.2	1 12	9 11.09	+13 4.2	2.039	2.957	8.2	22.2
1 22	9 1.59	+22 55.6	2.114	3.084	3.7	20.0	1 22	9 2.16	+13 40.6	1.995	2.962	4.4	21.9
2 1	8 52.21	+23 8.4	2.101	3.083	1.8	19.9	2 1	8 52.21	+14 22.7	1.981	2.965	1.0	21.7
2 11	8 42.88	+23 14.3	2.119	3.082	4.8	20.1	2 11	8 42.27	+15 5.7	1.998	2.968	4.2	21.9
2 21	8 34.55	+23 11.4	2.165	3.081	8.3	20.3	2 21	8 33.31	+15 45.7	2.044	2.970	8.1	22.2
3 2	8 28.02	+22 59.5	2.237	3.079	11.4	20.5	3 2	8 26.18	+16 19.5	2.117	2.971	11.5	22.4
<b>79423</b>	1997 MY <sub>8</sub>		1 31.4 90°24	1°3/1.2	18		<b>411313</b>	2010 TY <sub>147</sub>		1 31.5 90°97	8°2/6.5	18	
12 23	9 22.36	+12 23.3	1.887	2.643	16.2	20.1	12 23	9 22.77	- 6 35.1	2.099	2.757	17.5	21.3
1 2	9 17.86	+12 29.7	1.815	2.664	12.9	19.9	1 2	9 17.85	- 7 31.7	2.030	2.786	15.2	21.2
1 12	9 10.86	+12 48.6	1.764	2.685	9.1	19.7	1 12	9 10.69	- 8 6.9	1.980	2.815	12.6	21.1
1 22	9 2.00	+13 17.6	1.739	2.706	4.8	19.5	1 22	9 1.87	- 8 18.0	1.953	2.844	10.2	21.0
2 1	8 52.19	+13 52.5	1.743	2.727	1.3	19.3	2 1	8 52.24	- 8 4.2	1.951	2.872	8.5	20.9
2 11	8 42.60	+14 28.6	1.776	2.747	4.5	19.5	2 11	8 42.79	- 7 27.9	1.977	2.899	8.4	21.0
2 21	8 34.28	+15 1.9	1.838	2.767	8.6	19.8	2 21	8 34.45	- 6 34.3	2.030	2.926	9.8	21.1
3 2	8 28.03	+15 29.3	1.925	2.787	12.1	20.1	3 2	8 27.98	- 5 29.8	2.108	2.952	12.0	21.3
<b>11020</b>	Orwell		1 31.4 205°03	0°5/31.8	18		<b>33247</b>	Iannacone		1 31.5 343°99	3°9/2.4	18	
12 23	9 16.84	+13 55.3	2.796	3.543	11.7	18.3	12 23	9 15.15	+ 8 13.9	1.528	2.301	18.7	18.3

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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>162626</b>	2000 <i>SH</i> <sub>129</sub>		1 31.5 207°80	0°9/ 1.0 18			<b>374581</b>	2006 <i>CP</i> <sub>61</sub>		1 31.5 230°17	1°3/ 1.2 18		
12 23	9 22.79	+13 5.7	2.057	2.808	15.2	21.7	12 23	9 20.73	+13 36.3	2.204	2.956	14.3	20.4
1 2	9 18.36	+13 19.0	1.955	2.802	12.2	21.5	1 2	9 16.48	+13 24.9	2.104	2.951	11.5	20.2
1 12	9 11.41	+13 44.6	1.874	2.795	8.6	21.3	1 12	9 9.95	+13 22.6	2.026	2.946	8.1	19.9
1 22	9 2.42	+14 19.8	1.820	2.788	4.5	21.0	1 22	9 1.63	+13 27.8	1.974	2.941	4.4	19.7
2 1	8 52.20	+15 1.0	1.795	2.780	0.9	20.7	2 1	8 52.27	+13 38.1	1.952	2.936	1.3	19.5
2 11	8 41.85	+15 43.1	1.800	2.771	4.6	21.0	2 11	8 42.89	+13 50.4	1.960	2.930	4.2	19.7
2 21	8 32.49	+16 21.7	1.834	2.761	8.8	21.2	2 21	8 34.44	+14 2.1	1.996	2.925	8.1	19.9
3 2	8 25.08	+16 53.7	1.894	2.750	12.6	21.4	3 2	8 27.77	+14 10.8	2.059	2.919	11.5	20.1
<b>198605</b>	2005 <i>AM</i> <sub>19</sub>		1 31.5 110°31	0°4/31.2 18			<b>88457</b>	2001 <i>QV</i> <sub>94</sub>		1 31.5 164°33	1°7/ 1.5 18		
12 23	9 18.65	+16 23.3	2.239	3.002	13.7	20.7	12 23	9 22.64	+10 21.1	1.877	2.626	16.5	20.7
1 2	9 14.74	+16 51.1	2.154	3.011	10.9	20.5	1 2	9 18.35	+10 37.8	1.788	2.632	13.4	20.5
1 12	9 8.66	+17 28.0	2.092	3.020	7.5	20.3	1 12	9 11.44	+11 10.0	1.719	2.637	9.5	20.3
1 22	9 0.93	+18 10.8	2.057	3.028	3.7	20.1	1 22	9 2.43	+11 55.5	1.676	2.641	5.3	20.1
2 1	8 52.29	+18 54.9	2.052	3.037	0.5	19.9	2 1	8 52.23	+12 49.9	1.661	2.645	1.7	19.8
2 11	8 43.71	+19 35.8	2.076	3.045	4.3	20.2	2 11	8 42.02	+13 47.6	1.676	2.647	4.8	20.0
2 21	8 36.10	+20 9.9	2.130	3.053	8.0	20.4	2 21	8 32.94	+14 42.8	1.720	2.649	9.1	20.3
3 2	8 30.22	+20 35.2	2.209	3.061	11.2	20.6	3 2	8 25.97	+15 31.2	1.789	2.651	12.9	20.5
<b>381229</b>	2007 <i>SM</i> <sub>3</sub>		1 31.5 50°11	5°3/28.4 18			<b>56381</b>	2000 <i>EN</i> <sub>43</sub>		1 31.5 339°03	3°0/ 2.1 18		
12 23	9 23.89	+30 50.4	1.925	2.711	14.9	20.3	12 23	9 17.94	+ 8 20.3	1.385	2.161	20.1	19.5
1 2	9 19.26	+31 35.8	1.869	2.735	11.8	20.2	1 2	9 15.62	+ 8 25.2	1.300	2.158	16.5	19.2
1 12	9 11.88	+32 19.8	1.836	2.759	8.6	20.0	1 12	9 10.12	+ 8 52.0	1.234	2.156	12.0	19.0
1 22	9 2.50	+32 55.3	1.828	2.784	5.9	19.9	1 22	9 1.99	+ 9 39.7	1.189	2.153	7.0	18.7
2 1	8 52.21	+33 16.1	1.848	2.809	5.5	19.9	2 1	8 52.26	+10 43.8	1.170	2.151	3.1	18.4
2 11	8 42.31	+33 18.7	1.896	2.834	7.6	20.1	2 11	8 42.43	+11 56.8	1.177	2.150	6.0	18.6
2 21	8 33.94	+33 3.0	1.971	2.859	10.5	20.3	2 21	8 34.00	+13 9.9	1.209	2.148	11.0	18.9
3 2	8 27.91	+32 31.4	2.069	2.884	13.3	20.6	3 2	8 28.20	+14 16.0	1.265	2.147	15.7	19.1
<b>254015</b>	2004 <i>FO</i> <sub>51</sub>		1 31.5 182°22	0°7/30.9 18			<b>434305</b>	2004 <i>FM</i> <sub>25</sub>		1 31.5 347°26	9°6/ 7.4 15		
12 23	9 20.08	+16 24.9	1.998	2.766	15.0	20.5	12 23	9 7.62	- 6 33.0	1.535	2.256	20.7	20.2
1 2	9 16.27	+17 2.8	1.907	2.767	11.9	20.3	1 2	9 7.16	- 7 7.8	1.438	2.239	18.3	20.0
1 12	9 9.98	+17 52.2	1.838	2.767	8.2	20.1	1 12	9 4.14	- 7 13.0	1.358	2.224	15.4	19.7
1 22	9 1.69	+18 48.9	1.795	2.767	4.0	19.8	1 22	8 58.97	- 6 43.6	1.297	2.210	12.4	19.5
2 1	8 52.25	+19 47.3	1.782	2.766	0.9	19.6	2 1	8 52.44	- 5 37.6	1.258	2.198	10.1	19.4
2 11	8 42.77	+20 41.3	1.798	2.765	5.0	19.9	2 11	8 45.72	- 3 58.4	1.242	2.188	9.8	19.3
2 21	8 34.35	+21 26.5	1.842	2.764	9.1	20.1	2 21	8 40.03	- 1 55.0	1.251	2.180	11.8	19.4
3 2	8 27.89	+22 0.0	1.912	2.763	12.7	20.4	3 2	8 36.45	+ 0 20.9	1.283	2.173	15.0	19.6
<b>468141</b>	2014 <i>UY</i> <sub>142</sub>		1 31.5 24°79	12°9/ 8.9 18			<b>456833</b>	2007 <i>TC</i> <sub>435</sub>		1 31.5 174°40	1°4/ 1.3 18		
12 23	9 17.54	-14 3.2	1.827	2.463	20.4	20.7	12 23	9 21.86	+11 49.4	1.978	2.729	15.7	22.3
1 2	9 14.50	-15 43.0	1.745	2.466	18.6	20.5	1 2	9 17.62	+11 57.1	1.885	2.732	12.7	22.1
1 12	9 8.89	-16 57.6	1.679	2.469	16.5	20.4	1 12	9 10.87	+12 17.8	1.814	2.734	9.0	21.9
1 22	9 1.20	-17 40.4	1.631	2.472	14.6	20.2	1 22	9 2.14	+12 49.3	1.769	2.735	4.9	21.6
2 1	8 52.28	-17 46.8	1.604	2.475	13.3	20.2	2 1	8 52.27	+13 28.0	1.752	2.736	1.4	21.4
2 11	8 43.26	-17 16.5	1.600	2.479	12.9	20.2	2 11	8 42.37	+14 9.3	1.765	2.736	4.6	21.6
2 21	8 35.30	-16 14.0	1.618	2.483	13.7	20.2	2 21	8 33.56	+14 48.4	1.807	2.736	8.7	21.9
3 2	8 29.37	-14 47.5	1.659	2.488	15.4	20.3	3 2	8 26.73	+15 22.1	1.874	2.735	12.4	22.1
<b>273056</b>	2006 <i>DS</i> <sub>173</sub>		1 31.5 291°37	2°4/ 2.2 18			<b>417805</b>	2007 <i>EV</i> <sub>169</sub>		1 31.5 6°04	8°7/27.6 18		
12 23	9 15.79	+ 7 56.4	2.061	2.809	15.3	21.3	12 23	9 24.54	+35 49.5	1.424	2.229	18.2	19.9
1 2	9 12.80	+ 8 13.5	1.960	2.802	12.5	21.0	1 2	9 21.29	+36 42.8	1.357	2.230	15.0	19.7
1 12	9 7.55	+ 8 47.1	1.881	2.795	9.1	20.8	1 12	9 14.17	+37 31.0	1.311	2.231	11.7	19.5
1 22	9 0.48	+ 9 35.8	1.827	2.788	5.4	20.6	1 22	9 3.96	+38 3.5	1.287	2.233	9.2	19.4
2 1	8 52.32	+10 36.2	1.800	2.781	2.4	20.4	2 1	8 52.16	+38 10.5	1.288	2.237	9.0	19.4
2 11	8 44.06	+11 43.1	1.803	2.774	4.5	20.5	2 11	8 40.74	+37 47.3	1.314	2.241	11.3	19.5
2 21	8 36.66	+12 50.7	1.835	2.768	8.3	20.7	2 21	8 31.43	+36 55.4	1.362	2.246	14.5	19.7
3 2	8 31.01	+13 53.9	1.892	2.761	12.0	20.9	3 2	8 25.44	+35 40.8	1.432	2.253	17.8	20.0
<b>70326</b>	1999 <i>RS</i> <sub>158</sub>		1 31.5 158°43	0°1/31.5 18			<b>231555</b>	Christianeurda		1 31.5 117°45	0°6/31.1 18		
12 23	9 21.99	+14 45.8	1.951	2.712	15.6	20.5	12 23	9 19.82	+18 0.6	2.223	2.988	13.8	20.8
1 2	9 17.75	+15 9.9	1.863	2.718	12.4	20.3	1 2	9 15.71	+18 14.8	2.134	2.993	10.9	20.6
1 12	9 10.97	+15 46.0	1.797	2.723	8.6	20.0	1 12	9 9.38	+18 36.3	2.069	2.997	7.5	20.4
1 22	9 2.17	+16 30.4	1.757	2.727	4.3	19.8	1 22	9 1.32	+19 2.0	2.031	3.002	3.7	20.2
2 1	8 52.23	+17 18.4	1.746	2.731	0.2	19.5	2 1	8 52.33	+19 28.0	2.021	3.006	0.7	19.9
2 11	8 42.32	+18 4.3	1.765	2.735	4.7	19.8	2 11	8 43.40	+19 50.3	2.042	3.010	4.4	20.2
2 21	8 33.53	+18 43.8	1.812	2.738	9.0	20.1	2 21	8 35.47	+20 6.3	2.092	3.014	8.1	20.5
3 2	8 26.79	+19 14.1	1.885	2.740	12.6	20.3	3 2	8 29.32	+20 14.4	2.167	3.018	11.4	20.7
<b>109905</b>	2001 <i>SB</i> <sub>22</sub>		1 31.5 80°83	0°8/31.9 18			<b>27927</b>	1997 <i>EQ</i> <sub>32</sub>		1 31.5 165°41	3°3/29.6 18		
12 23	9 21.77	+14 16.9	1.816	2.582	16.4	19.6	12 23	9 27.95	+24 16.4	1.943	2.714	15.3	20.2
1 2	9 17.59	+14 19.9	1.741	2.597	13.1	19.4	1 2	9 22.61	+24 57.0	1.860	2.720	12.1	19.9
1 12	9 10.80	+14 34.3	1.687	2.612	9.1	19.2	1 12	9 14.40	+25 42.5	1.798	2.726	8.4	19.7
1 22	9 2.04	+14 57.3	1.658	2.627	4.7	19.0	1 22	9 3.91	+26 26.6	1.764	2.731	4.8	19.5
2 1	8 52.25	+15 24.9	1.657	2.642	0.8	18.7	2 1	8 52.18	+27 2.5	1.758	2.735	3.5	19.4
2 11	8 42.64	+15 52.4	1.685	2.657	4.7	19.1	2 11	8 40.54	+27 25.1	1.783	2.738	6.5	19.6
2 21	8 34.31	+16 16.1	1.741	2.671	8.9	19.3	2 21	8 30.27	+27 32.1	1.836	2.740	10.2	19.9
3 2	8 28.15	+16 33.5	1.823	2.686	12.6	19.6	3 2	8 22.36	+27 24.0	1.913	2.741	13.7	20.1
<b>47737</b>	2000 <i>DT</i> <sub>66</sub>		1 31.5 130°64	2°2/ 2.4 18			<b>228738</b>	2002 <i>TU</i> <sub>257</sub>		1 31.5 111°35	2°5/30.1 17</		

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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>258099</b>	2001 <i>QC</i> <sub>162</sub>		1 31.5 92°55	0°6/31.1	18		<b>83082</b>	2001 <i>QA</i> <sub>226</sub>		1 31.5 264°58	1°7/	1.3	18
12 23	9 22.44	+16 28.4	1.951	2.717	15.4	21.3	12 23	9 21.65	+13 6.5	1.911	2.669	15.9	19.7
1 2	9 17.91	+17 0.2	1.882	2.740	12.1	21.1	1 2	9 17.69	+12 50.3	1.808	2.658	12.9	19.5
1 12	9 10.92	+17 42.0	1.835	2.763	8.3	20.9	1 12	9 11.10	+12 44.6	1.726	2.647	9.2	19.2
1 22	9 2.07	+18 29.7	1.814	2.785	4.1	20.7	1 22	9 2.36	+12 48.1	1.669	2.636	5.1	18.9
2 1	8 52.30	+19 17.7	1.822	2.807	0.7	20.5	2 1	8 52.33	+12 58.2	1.641	2.624	1.7	18.7
2 11	8 42.74	+20 0.8	1.860	2.828	4.8	20.8	2 11	8 42.16	+13 11.7	1.641	2.612	4.9	18.9
2 21	8 34.43	+20 35.3	1.927	2.849	8.7	21.1	2 21	8 33.04	+13 25.2	1.670	2.601	9.2	19.1
3 2	8 28.18	+20 59.3	2.019	2.870	12.1	21.3	3 2	8 25.99	+13 35.8	1.724	2.589	13.1	19.3
<b>105166</b>	2000 <i>OU</i> <sub>12</sub>		1 31.5 344°63	1°1/31.9	18		<b>248030</b>	2004 <i>FU</i> <sub>165</sub>		1 31.5 116°80	1°7/30.5	18	
12 23	9 24.19	+16 39.0	1.674	2.447	17.3	18.3	12 23	9 23.88	+20 34.4	1.985	2.756	15.0	20.9
1 2	9 19.96	+16 2.9	1.583	2.444	13.9	18.0	1 2	9 19.15	+20 59.8	1.907	2.769	11.8	20.7
1 12	9 12.75	+15 33.8	1.513	2.441	9.8	17.8	1 12	9 11.85	+21 31.9	1.853	2.782	8.1	20.5
1 22	9 3.17	+15 9.9	1.468	2.438	5.1	17.5	1 22	9 2.60	+22 5.8	1.824	2.795	4.1	20.3
2 1	8 52.25	+14 49.3	1.451	2.435	1.1	17.2	2 1	8 52.32	+22 36.5	1.825	2.807	1.8	20.2
2 11	8 41.38	+14 29.6	1.462	2.433	5.3	17.5	2 11	8 42.21	+22 59.3	1.855	2.819	5.3	20.4
2 21	8 31.90	+14 9.2	1.500	2.432	10.0	17.8	2 21	8 33.36	+23 11.8	1.914	2.831	9.1	20.7
3 2	8 24.85	+13 47.1	1.563	2.430	14.1	18.0	3 2	8 26.64	+23 13.2	1.998	2.842	12.5	20.9
<b>243508</b>	2009 <i>WM</i> <sub>71</sub>		1 31.5 156°86	2°7/29.9	18		<b>192103</b>	2006 <i>CL</i> <sub>11</sub>		1 31.5 172°43	0°0/31.5	18	
12 23	9 25.21	+20 19.7	1.597	2.380	17.6	21.2	12 23	9 18.58	+14 34.5	2.334	3.090	13.5	20.7
1 2	9 21.04	+21 10.9	1.517	2.386	13.9	21.0	1 2	9 14.68	+15 5.4	2.240	3.092	10.7	20.5
1 12	9 13.67	+22 13.1	1.459	2.391	9.6	20.7	1 12	9 8.67	+15 47.0	2.169	3.094	7.4	20.3
1 22	9 3.69	+23 19.5	1.425	2.396	5.0	20.5	1 22	9 1.01	+16 36.1	2.125	3.095	3.7	20.0
2 1	8 52.22	+24 21.4	1.419	2.400	2.9	20.4	2 1	8 52.41	+17 28.3	2.111	3.096	0.2	19.7
2 11	8 40.79	+25 11.2	1.442	2.404	6.8	20.6	2 11	8 43.79	+18 19.1	2.127	3.097	4.1	20.1
2 21	8 30.88	+25 44.4	1.491	2.407	11.3	20.9	2 21	8 36.03	+19 4.2	2.173	3.097	7.8	20.3
3 2	8 23.63	+26 0.0	1.564	2.409	15.3	21.1	3 2	8 29.90	+19 41.1	2.245	3.097	11.0	20.5
<b>203039</b>	2000 <i>DG</i> <sub>10</sub>		1 31.5 223°98	0°2/31.7	17		<b>364618</b>	2007 <i>ST</i> <sub>15</sub>		1 31.5 29°24	1°1/31.9	18	
12 23	9 17.61	+14 35.1	2.324	3.082	13.4	21.2	12 23	9 20.78	+14 52.2	1.296	2.091	20.3	20.6
1 2	9 13.95	+14 55.6	2.226	3.079	10.7	21.0	1 2	9 17.90	+14 38.2	1.227	2.100	16.2	20.3
1 12	9 8.19	+15 26.3	2.151	3.075	7.5	20.7	1 12	9 11.62	+14 38.0	1.177	2.110	11.4	20.1
1 22	9 0.76	+16 4.5	2.102	3.072	3.8	20.5	1 22	9 2.68	+14 48.8	1.149	2.120	5.9	19.8
2 1	8 52.39	+16 46.3	2.083	3.068	0.3	20.2	2 1	8 52.32	+15 6.2	1.147	2.131	1.1	19.5
2 11	8 43.96	+17 27.5	2.094	3.064	4.1	20.5	2 11	8 42.20	+15 24.7	1.170	2.143	5.9	19.9
2 21	8 36.38	+18 4.3	2.134	3.060	7.8	20.7	2 21	8 33.82	+15 39.9	1.218	2.156	11.1	20.2
3 2	8 30.43	+18 34.1	2.200	3.056	11.1	20.9	3 2	8 28.30	+15 48.7	1.289	2.169	15.7	20.5
<b>493</b>	Griseldis		1 31.5 60°90	5°8/28.1	18	R	<b>219828</b>	2002 <i>CW</i> <sub>36</sub>		1 31.5 99°35	1°0/30.7	18	
12 23	9 26.01	+33 56.5	2.106	2.883	14.1	15.6	12 23	9 19.30	+16 26.9	2.029	2.798	14.8	20.4
1 2	9 20.83	+34 35.2	2.042	2.900	11.3	15.5	1 2	9 15.53	+17 19.0	1.951	2.811	11.7	20.2
1 12	9 12.94	+35 10.2	2.001	2.917	8.5	15.3	1 12	9 9.38	+18 22.5	1.895	2.824	8.0	20.0
1 22	9 3.06	+35 34.5	1.986	2.934	6.3	15.2	1 22	9 1.39	+19 32.5	1.866	2.837	3.9	19.8
2 1	8 52.27	+35 42.7	2.000	2.951	6.0	15.2	2 1	8 52.40	+20 42.9	1.866	2.850	1.2	19.6
2 11	8 41.83	+35 31.6	2.041	2.968	7.9	15.4	2 11	8 43.47	+21 47.3	1.896	2.863	4.9	19.9
2 21	8 32.87	+35 1.8	2.110	2.986	10.5	15.6	2 21	8 35.63	+22 41.0	1.955	2.875	8.8	20.1
3 2	8 26.24	+34 16.3	2.202	3.003	13.0	15.8	3 2	8 29.70	+23 21.7	2.039	2.887	12.1	20.4
<b>360444</b>	2002 <i>LX</i> <sub>63</sub>		1 31.5 232°31	0°7/30.9	18		<b>30594</b>	2001 <i>QD</i> <sub>30</sub>		1 31.5 82°93	4°6/28.2	18	
12 23	9 21.30	+16 31.4	1.963	2.731	15.3	22.1	12 23	9 23.16	+30 55.6	2.403	3.176	12.6	17.8
1 2	9 17.45	+17 5.5	1.861	2.720	12.2	21.9	1 2	9 18.22	+31 38.9	2.337	3.195	10.0	17.6
1 12	9 10.96	+17 51.6	1.781	2.709	8.5	21.6	1 12	9 10.99	+32 21.0	2.294	3.215	7.3	17.5
1 22	9 2.30	+18 45.6	1.726	2.698	4.2	21.3	1 22	9 2.09	+32 56.1	2.279	3.234	5.1	17.4
2 1	8 52.30	+19 41.9	1.701	2.686	0.9	21.0	2 1	8 52.36	+33 19.1	2.294	3.252	4.8	17.4
2 11	8 42.12	+20 34.5	1.705	2.673	5.2	21.3	2 11	8 42.88	+33 26.9	2.337	3.271	6.6	17.5
2 21	8 32.95	+21 18.3	1.738	2.660	9.5	21.6	2 21	8 34.57	+33 18.8	2.409	3.289	9.2	17.7
3 2	8 25.81	+21 50.4	1.796	2.647	13.4	21.8	3 2	8 28.19	+32 56.3	2.505	3.308	11.6	17.9
<b>391079</b>	2005 <i>UH</i> <sub>177</sub>		1 31.5 154°22	1°9/30.4	18		<b>9810</b>	Elanfiller		1 31.5 100°51	2°1/	1.7	18
12 23	9 26.39	+19 57.9	1.866	2.634	15.9	21.9	12 23	9 23.38	+10 0.1	1.567	2.328	18.8	17.8
1 2	9 21.40	+20 33.6	1.783	2.644	12.6	21.7	1 2	9 19.27	+10 11.0	1.495	2.345	15.2	17.6
1 12	9 13.58	+21 17.8	1.723	2.652	8.6	21.5	1 12	9 12.22	+10 39.8	1.443	2.363	10.8	17.3
1 22	9 3.53	+22 5.2	1.689	2.660	4.4	21.2	1 22	9 2.87	+11 23.7	1.415	2.380	6.0	17.1
2 1	8 52.25	+22 49.3	1.684	2.666	2.0	21.1	2 1	8 52.32	+12 17.8	1.414	2.397	2.1	16.9
2 11	8 41.06	+23 24.4	1.709	2.673	5.7	21.4	2 11	8 41.95	+13 15.5	1.441	2.413	5.3	17.1
2 21	8 31.20	+23 47.2	1.762	2.678	9.9	21.6	2 21	8 33.06	+14 10.2	1.496	2.429	9.9	17.4
3 2	8 23.68	+23 56.7	1.840	2.682	13.5	21.8	3 2	8 26.64	+14 57.4	1.575	2.444	13.9	17.7
<b>385854</b>	2006 <i>QQ</i> <sub>10</sub>		1 31.5 75°89	1°0/30.9	18		<b>75959</b>	2000 <i>CP</i> <sub>94</sub>		1 31.5 267°65	6°2/28.1	18	
12 23	9 27.70	+22 0.2	2.392	3.145	13.2	20.9	12 23	9 27.23	+32 22.3	1.878	2.660	15.3	19.2
1 2	9 21.40	+21 44.0	2.318	3.169	10.4	20.7	1 2	9 22.62	+33 7.1	1.784	2.646	12.5	19.0
1 12	9 12.95	+21 29.9	2.269	3.194	7.1	20.5	1 12	9 14.78	+33 51.1	1.712	2.632	9.4	18.8
1 22	9 2.95	+21 15.2	2.248	3.218	3.5	20.3	1 22	9 4.29	+34 26.3	1.665	2.618	6.8	18.6
2 1	8 52.29	+20 57.4	2.258	3.241	1.1	20.2	2 1	8 52.23	+34 44.6	1.647	2.604	6.5	18.6
2 11	8 41.96	+20 34.8	2.299	3.265	4.2	20.5	2 11	8 40.14	+34 40.7	1.656	2.589	8.9	18.7
2 21	8 32.86	+20 7.1	2.371	3.289	7.6	20.7	2 21	8 29.51	+34 13.8	1.691	2.575	12.2	18.8
3 2	8 25.65	+19 34.8	2.471	3.312	10.5	20.9	3 2	8 21.53	+33 26.7	1.749	2.560	15.5	19.0
<b>378795</b>	2008 <i>SU</i> <sub>99</sub>		1 31.5 207°02	4°8/27.9	18		<b>372604</b>	2009 <i>VD</i> <sub>5</sub>		1 31.5 45°08	1°6/	1.4	18
12 23	9 21.03	+29 11.3	2.236	3.017	13.2	21.2	12 23	9 19					



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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>427330</b>	2014 <i>WL</i> <sub>317</sub>		1 31.5 134°05	5°7/27.1	18		<b>346017</b>	2007 <i>TW</i> <sub>286</sub>		1 31.5 56°85	2°6/29.6	18	
12 23	9 23.66	+29 28.0	2.052	2.834	14.2	21.4	12 23	9 18.74	+22 20.5	2.087	2.869	14.0	20.3
1 2	9 19.30	+30 57.7	1.980	2.844	11.4	21.3	1 2	9 15.03	+23 9.0	2.018	2.886	11.0	20.1
1 12	9 12.18	+32 30.0	1.932	2.854	8.3	21.1	1 12	9 8.98	+24 3.4	1.971	2.903	7.5	19.9
1 22	9 2.87	+33 56.4	1.911	2.864	6.0	21.0	1 22	9 1.17	+24 58.2	1.951	2.921	4.1	19.7
2 1	8 52.33	+35 8.3	1.919	2.873	6.0	21.0	2 1	8 52.46	+25 47.5	1.960	2.938	2.8	19.7
2 11	8 41.83	+35 59.6	1.955	2.881	8.2	21.1	2 11	8 43.90	+26 26.3	1.999	2.956	5.6	19.9
2 21	8 32.60	+36 27.9	2.019	2.890	11.1	21.3	2 21	8 36.47	+26 51.9	2.065	2.974	9.0	20.1
3 2	8 25.60	+36 34.4	2.105	2.897	13.9	21.5	3 2	8 30.95	+27 3.7	2.155	2.992	12.0	20.4
<b>160133</b>	2000 <i>YZ</i> <sub>60</sub>		1 31.5 79°93	3°8/ 2.2	18		<b>493909</b>	2015 <i>XV</i> <sub>310</sub>		1 31.5 300°89	1°4/ 1.2	17	
12 23	9 28.20	+ 9 4.8	1.647	2.390	18.7	19.4	12 23	9 18.33	+12 4.7	1.490	2.272	18.7	21.9
1 2	9 22.65	+ 8 21.9	1.582	2.419	15.2	19.3	1 2	9 15.90	+12 13.8	1.395	2.259	15.2	21.6
1 12	9 14.26	+ 7 53.4	1.538	2.447	11.1	19.1	1 12	9 10.38	+12 40.4	1.318	2.246	10.9	21.3
1 22	9 3.77	+ 7 39.2	1.518	2.475	6.8	18.9	1 22	9 2.22	+13 22.6	1.265	2.234	5.9	21.0
2 1	8 52.30	+ 7 37.8	1.527	2.503	3.8	18.8	2 1	8 52.40	+14 15.4	1.237	2.221	1.4	20.7
2 11	8 41.23	+ 7 45.9	1.564	2.530	5.7	18.9	2 11	8 42.34	+15 12.2	1.236	2.209	5.7	20.9
2 21	8 31.75	+ 7 59.8	1.629	2.557	9.6	19.2	2 21	8 33.54	+16 5.7	1.261	2.198	11.0	21.2
3 2	8 24.74	+ 8 15.5	1.719	2.583	13.2	19.5	3 2	8 27.26	+16 50.7	1.310	2.186	15.7	21.4
<b>497098</b>	2004 <i>BS</i> <sub>65</sub>		1 31.5 358°26	0°3/31.6	17		<b>273014</b>	2006 <i>DB</i> <sub>86</sub>		1 31.5 180°83	1°2/30.7	18	
12 23	9 20.78	+17 32.5	1.889	2.663	15.6	20.9	12 23	9 19.52	+19 3.4	2.224	2.993	13.7	20.9
1 2	9 16.91	+17 12.8	1.799	2.661	12.4	20.6	1 2	9 15.59	+19 30.1	2.132	2.993	10.8	20.7
1 12	9 10.46	+16 59.9	1.731	2.660	8.7	20.4	1 12	9 9.39	+20 4.4	2.064	2.993	7.4	20.5
1 22	9 1.98	+16 51.5	1.688	2.659	4.4	20.1	1 22	9 1.42	+20 42.4	2.022	2.993	3.7	20.3
2 1	8 52.40	+16 44.8	1.673	2.659	0.3	19.8	2 1	8 52.46	+21 19.6	2.010	2.993	1.3	20.1
2 11	8 42.88	+16 37.1	1.688	2.659	4.7	20.2	2 11	8 43.49	+21 51.4	2.027	2.993	4.7	20.3
2 21	8 34.55	+16 26.5	1.730	2.660	9.0	20.4	2 21	8 35.50	+22 14.8	2.073	2.992	8.4	20.5
3 2	8 28.31	+16 11.7	1.797	2.661	12.7	20.6	3 2	8 29.29	+22 28.2	2.145	2.992	11.7	20.7
<b>51901</b>	2001 <i>QF</i> <sub>39</sub>		1 31.5 190°06	0°8/30.9	18		<b>323850</b>	2005 <i>ST</i> <sub>97</sub>		1 31.5 171°02	4°6/ 4.2	18	
12 23	9 20.52	+19 20.4	2.442	3.204	12.8	19.7	12 23	9 18.46	+ 0 36.3	2.403	3.100	14.6	22.2
1 2	9 16.10	+19 28.2	2.347	3.204	10.1	19.5	1 2	9 14.47	+ 0 34.6	2.304	3.103	12.3	22.0
1 12	9 9.59	+19 41.5	2.276	3.203	7.0	19.3	1 12	9 8.48	+ 0 50.4	2.227	3.106	9.6	21.8
1 22	9 1.45	+19 57.3	2.231	3.202	3.4	19.1	1 22	9 0.93	+ 1 23.7	2.174	3.109	6.8	21.7
2 1	8 52.43	+20 12.2	2.217	3.201	0.9	18.9	2 1	8 52.49	+ 2 13.2	2.149	3.111	4.8	21.5
2 11	8 43.44	+20 23.2	2.233	3.200	4.2	19.1	2 11	8 44.00	+ 3 15.2	2.154	3.112	5.3	21.6
2 21	8 35.35	+20 28.1	2.278	3.199	7.7	19.4	2 21	8 36.31	+ 4 24.8	2.189	3.113	7.7	21.7
3 2	8 28.91	+20 25.9	2.350	3.197	10.8	19.6	3 2	8 30.13	+ 5 36.6	2.251	3.113	10.6	21.9
<b>339579</b>	2005 <i>MX</i> <sub>11</sub>		1 31.5 184°77	5°2/ 5.3	17		<b>317137</b>	2001 <i>UR</i> <sub>101</sub>		1 31.5 284°55	8°2/26.1	18	
12 23	9 16.12	- 3 29.5	3.179	3.837	12.0	22.0	12 23	9 25.05	+35 58.7	1.818	2.606	15.5	20.0
1 2	9 12.10	- 3 55.5	3.074	3.837	10.3	21.8	1 2	9 21.24	+37 16.8	1.733	2.594	12.9	19.8
1 12	9 6.57	- 4 7.8	2.989	3.837	8.5	21.7	1 12	9 14.05	+38 33.3	1.670	2.581	10.2	19.6
1 22	8 59.87	- 4 5.4	2.930	3.836	6.6	21.6	1 22	9 4.03	+39 38.2	1.632	2.568	8.4	19.5
2 1	8 52.52	- 3 48.3	2.899	3.834	5.3	21.5	2 1	8 52.31	+40 21.5	1.620	2.556	8.7	19.5
2 11	8 45.12	- 3 17.9	2.898	3.832	5.4	21.5	2 11	8 40.52	+40 36.6	1.634	2.543	10.8	19.6
2 21	8 38.29	- 2 37.0	2.925	3.830	6.8	21.6	2 21	8 30.26	+40 22.6	1.673	2.531	13.7	19.7
3 2	8 32.56	- 1 49.2	2.981	3.827	8.7	21.7	3 2	8 22.81	+39 42.7	1.732	2.518	16.6	19.9
<b>127444</b>	2002 <i>PQ</i> <sub>71</sub>		1 31.5 239°86	3°9/ 3.6	18		<b>343314</b>	2010 <i>BC</i> <sub>57</sub>		1 31.5 183°11	6°2/26.1	18	
12 23	9 16.33	+ 2 56.6	2.452	3.164	14.0	20.4	12 23	9 22.38	+36 32.4	2.627	3.398	11.8	21.1
1 2	9 12.86	+ 2 57.2	2.342	3.154	11.7	20.3	1 2	9 17.83	+37 38.9	2.548	3.398	9.7	20.9
1 12	9 7.43	+ 3 13.8	2.253	3.144	9.0	20.1	1 12	9 10.93	+38 42.3	2.494	3.398	7.6	20.8
1 22	9 0.43	+ 3 46.3	2.189	3.133	6.1	19.9	1 22	9 2.19	+39 36.1	2.466	3.397	6.3	20.7
2 1	8 52.49	+ 4 33.3	2.154	3.122	4.0	19.7	2 1	8 52.43	+40 14.2	2.467	3.397	6.5	20.7
2 11	8 44.42	+ 5 31.3	2.148	3.111	4.8	19.7	2 11	8 42.71	+40 33.0	2.497	3.396	8.0	20.8
2 21	8 37.04	+ 6 35.7	2.171	3.099	7.6	19.9	2 21	8 34.03	+40 31.5	2.553	3.395	10.1	20.9
3 2	8 31.11	+ 7 41.5	2.222	3.087	10.6	20.1	3 2	8 27.23	+40 11.5	2.632	3.394	12.2	21.1
<b>341417</b>	2007 <i>TC</i> <sub>195</sub>		1 31.5 131°05	1°8/30.2	18		<b>371744</b>	2007 <i>EG</i> <sub>195</sub>		1 31.5 181°65	1°8/30.3	18	
12 23	9 18.71	+21 7.5	2.359	3.130	12.9	21.5	12 23	9 21.54	+21 2.8	2.209	2.979	13.7	22.0
1 2	9 14.81	+21 37.7	2.269	3.132	10.2	21.3	1 2	9 17.21	+21 29.6	2.118	2.980	10.8	21.8
1 12	9 8.77	+22 13.6	2.204	3.134	7.0	21.1	1 12	9 10.53	+22 2.4	2.050	2.980	7.5	21.6
1 22	9 1.07	+22 51.2	2.165	3.136	3.6	20.9	1 22	9 2.01	+22 37.1	2.009	2.980	3.8	21.3
2 1	8 52.46	+23 26.1	2.156	3.137	1.9	20.8	2 1	8 52.45	+23 8.8	1.997	2.979	1.9	21.2
2 11	8 43.87	+23 54.1	2.177	3.139	4.8	21.0	2 11	8 42.90	+23 33.3	2.016	2.979	5.0	21.4
2 21	8 36.22	+24 12.6	2.226	3.141	8.2	21.2	2 21	8 34.39	+23 47.7	2.063	2.978	8.7	21.6
3 2	8 30.25	+24 20.6	2.301	3.142	11.2	21.4	3 2	8 27.74	+23 51.3	2.135	2.976	11.9	21.8
<b>461794</b>	2005 <i>VW</i> <sub>131</sub>		1 31.5 221°61	5°5/ 4.5	16		<b>325304</b>	2008 <i>HV</i> <sub>46</sub>		1 31.5 244°95	3°7/28.5	18	
12 23	9 16.74	- 0 8.5	2.030	2.740	16.6	22.2	12 23	9 20.06	+23 11.4	2.112	2.891	14.0	20.9
1 2	9 13.57	- 0 15.5	1.932	2.738	14.1	22.0	1 2	9 16.48	+24 29.7	2.013	2.880	11.1	20.7
1 12	9 8.11	- 0 1.9	1.853	2.735	11.1	21.8	1 12	9 10.34	+25 57.0	1.937	2.868	7.7	20.5
1 22	9 0.83	+ 0 33.4	1.798	2.733	7.9	21.6	1 22	9 2.06	+27 26.9	1.889	2.855	4.6	20.3
2 1	8 52.47	+ 1 29.1	1.769	2.730	5.7	21.5	2 1	8 52.44	+28 51.3	1.870	2.842	4.0	20.2
2 11	8 44.01	+ 2 40.9	1.769	2.727	6.1	21.5	2 11	8 42.59	+30 2.8	1.881	2.829	6.8	20.3
2 21	8 36.45	+ 4 2.7	1.797	2.724	8.9	21.6	2 21	8 33.68	+30 56.7	1.920	2.816	10.3	20.5
3 2	8 30.65	+ 5 27.5	1.851	2.721	12.1	21.8	3 2	8 26.73	+31 31.2	1.983	2.802	13.6	20.7
<b>104755</b>	2000 <i>HF</i> <sub>15</sub>		1 31.5 248°66	4°5/ 4.3	17		<b>130846</b>	2000 <i>UL</i> <sub>63</sub>		1 31.5 62°21	0°1/31.5	18	
12 23	9 15.42	+ 0 41.8	2.562	3.261									

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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>213264</b>	2001 <i>FG</i> <sub>196</sub>		1 31.5 257°65	3°1/29.5	18		<b>40017</b>	1998 <i>HY</i> <sub>127</sub>		1 31.5 141°18	2°7/29.9	18	
12 23	9 20.97	+21 50.3	1.795	2.581	15.8	20.6	12 23	9 24.07	+22 7.4	1.775	2.556	16.1	19.5
1 2	9 17.57	+22 44.5	1.700	2.571	12.6	20.3	1 2	9 19.81	+22 43.3	1.694	2.561	12.8	19.2
1 12	9 11.28	+23 48.3	1.628	2.561	8.7	20.1	1 12	9 12.64	+23 26.3	1.635	2.566	8.8	19.0
1 22	9 2.59	+24 55.6	1.581	2.551	4.8	19.8	1 22	9 3.17	+24 10.6	1.601	2.571	4.7	18.8
2 1	8 52.42	+25 58.5	1.562	2.541	3.3	19.7	2 1	8 52.43	+24 49.4	1.596	2.576	2.8	18.7
2 11	8 42.09	+26 49.7	1.572	2.530	6.8	19.9	2 11	8 41.77	+25 17.0	1.619	2.580	6.3	18.9
2 21	8 32.94	+27 24.5	1.608	2.519	10.9	20.1	2 21	8 32.49	+25 30.4	1.669	2.584	10.4	19.1
3 2	8 26.09	+27 41.5	1.668	2.509	14.8	20.3	3 2	8 25.61	+25 29.4	1.744	2.587	14.1	19.4
<b>209586</b>	2004 <i>XN</i> <sub>108</sub>		1 31.5 21°45	0°3/31.4	18		<b>318768</b>	2005 <i>SQ</i> <sub>72</sub>		1 31.5 181°12	3°5/3.4	18	
12 23	9 19.79	+17 9.6	1.218	2.025	20.6	19.8	12 23	9 18.89	+3 26.4	2.508	3.214	13.8	22.1
1 2	9 17.42	+17 11.0	1.150	2.031	16.4	19.5	1 2	9 14.75	+3 35.3	2.406	3.216	11.5	21.9
1 12	9 11.50	+17 25.4	1.101	2.039	11.4	19.3	1 12	9 8.66	+3 59.9	2.325	3.216	8.7	21.8
1 22	9 2.72	+17 48.8	1.074	2.047	5.7	19.0	1 22	9 1.05	+4 39.6	2.270	3.216	5.8	21.6
2 1	8 52.42	+18 14.8	1.071	2.056	0.5	18.6	2 1	8 52.55	+5 32.5	2.245	3.216	3.6	21.4
2 11	8 42.35	+18 37.0	1.094	2.067	6.3	19.1	2 11	8 43.98	+6 34.6	2.250	3.214	4.5	21.5
2 21	8 34.11	+18 50.9	1.141	2.078	11.8	19.4	2 21	8 36.17	+7 41.2	2.286	3.212	7.3	21.7
3 2	8 28.89	+18 54.3	1.209	2.090	16.5	19.7	3 2	8 29.82	+8 47.6	2.349	3.210	10.3	21.8
<b>18938</b>	Zarabeth		1 31.5 91°96	1°4/30.6	18		<b>138657</b>	2000 <i>RU</i> <sub>81</sub>		1 31.5 187°99	1°4/1.6	17	
12 23	9 22.62	+19 44.5	1.967	2.739	15.1	19.4	12 23	9 19.12	+12 11.3	2.910	3.643	11.6	20.4
1 2	9 18.16	+20 7.8	1.893	2.755	11.9	19.2	1 2	9 14.61	+12 0.5	2.807	3.642	9.3	20.3
1 12	9 11.19	+20 38.3	1.841	2.771	8.1	19.0	1 12	9 8.38	+11 57.2	2.728	3.641	6.6	20.1
1 22	9 2.31	+21 11.5	1.815	2.786	4.0	18.8	1 22	9 0.84	+12 0.4	2.677	3.640	3.7	19.9
2 1	8 52.46	+21 42.3	1.818	2.801	1.5	18.6	2 1	8 52.58	+12 8.3	2.656	3.638	1.4	19.7
2 11	8 42.79	+22 6.4	1.851	2.816	5.1	18.9	2 11	8 44.31	+12 18.8	2.667	3.636	3.4	19.9
2 21	8 34.37	+22 20.9	1.911	2.831	8.9	19.2	2 21	8 36.73	+12 29.8	2.708	3.634	6.3	20.1
3 2	8 28.03	+22 25.1	1.997	2.846	12.3	19.4	3 2	8 30.45	+12 39.4	2.776	3.631	9.1	20.2
<b>390966</b>	2005 <i>QS</i> <sub>71</sub>		1 31.5 119°62	1°0/1.1	17		<b>42560</b>	1996 <i>VL</i> <sub>30</sub>		1 31.5 76°91	4°5/2.7	18	
12 23	9 25.10	+12 25.2	1.688	2.447	17.7	22.0	12 23	9 24.91	+6 47.6	1.344	2.104	21.4	18.7
1 2	9 20.47	+12 43.2	1.613	2.464	14.2	21.8	1 2	9 20.83	+6 20.8	1.281	2.126	17.5	18.5
1 12	9 12.99	+13 16.2	1.559	2.481	9.9	21.6	1 12	9 13.47	+6 14.9	1.236	2.148	13.0	18.3
1 22	9 3.29	+14 0.6	1.529	2.497	5.2	21.3	1 22	9 3.59	+6 29.8	1.213	2.170	8.1	18.1
2 1	8 52.41	+14 51.3	1.529	2.513	1.0	21.1	2 1	8 52.43	+7 2.6	1.216	2.192	4.6	17.9
2 11	8 41.70	+15 42.0	1.557	2.528	5.0	21.4	2 11	8 41.61	+7 47.2	1.245	2.213	6.5	18.1
2 21	8 32.41	+16 27.4	1.613	2.542	9.6	21.7	2 21	8 32.54	+8 36.8	1.300	2.235	10.8	18.4
3 2	8 25.50	+17 4.0	1.694	2.556	13.5	22.0	3 2	8 26.27	+9 24.7	1.378	2.256	15.0	18.7
<b>412804</b>	2014 <i>PT</i> <sub>28</sub>		1 31.5 168°44	0°8/31.1	18		<b>407288</b>	2010 <i>GS</i> <sub>158</sub>		1 31.5 241°76	2°2/1.9	17	
12 23	9 24.60	+18 27.6	1.941	2.707	15.5	21.6	12 23	9 21.61	+9 24.7	1.976	2.720	16.0	22.4
1 2	9 19.91	+18 40.6	1.853	2.711	12.3	21.3	1 2	9 17.73	+9 33.2	1.864	2.704	13.1	22.2
1 12	9 12.54	+19 1.6	1.786	2.714	8.5	21.1	1 12	9 11.24	+9 57.2	1.772	2.686	9.5	21.9
1 22	9 3.07	+19 26.8	1.745	2.716	4.2	20.9	1 22	9 2.57	+10 35.7	1.706	2.668	5.5	21.6
2 1	8 52.42	+19 51.7	1.734	2.718	0.9	20.6	2 1	8 52.48	+11 25.4	1.668	2.649	2.2	21.4
2 11	8 41.82	+20 11.6	1.752	2.720	5.0	20.9	2 11	8 42.10	+12 21.4	1.659	2.630	4.9	21.5
2 21	8 32.44	+20 23.6	1.798	2.720	9.2	21.2	2 21	8 32.61	+13 18.0	1.679	2.610	9.2	21.7
3 2	8 25.22	+20 26.5	1.870	2.721	12.9	21.4	3 2	8 25.06	+14 10.3	1.726	2.589	13.2	21.9
<b>466846</b>	2015 <i>BM</i> <sub>259</sub>		1 31.5 271°97	0°7/30.9	18		<b>142994</b>	2002 <i>VB</i> <sub>04</sub>		1 31.5 336°60	5°2/28.9	18	
12 23	9 17.57	+17 3.1	2.209	2.978	13.7	21.5	12 23	9 17.10	+26 2.1	1.305	2.125	18.8	18.4
1 2	9 14.10	+17 34.3	2.115	2.976	10.9	21.3	1 2	9 15.71	+26 44.9	1.219	2.108	15.1	18.1
1 12	9 8.41	+18 14.9	2.044	2.973	7.5	21.1	1 12	9 10.69	+27 34.5	1.151	2.091	10.8	17.8
1 22	9 0.98	+19 1.5	2.000	2.971	3.7	20.8	1 22	9 2.56	+28 22.8	1.107	2.075	6.6	17.5
2 1	8 52.53	+19 49.3	1.984	2.969	0.8	20.6	2 1	8 52.48	+28 59.9	1.086	2.061	5.5	17.4
2 11	8 44.05	+20 33.5	1.999	2.967	4.5	20.9	2 11	8 42.26	+29 17.4	1.090	2.048	9.2	17.6
2 21	8 36.48	+21 10.2	2.041	2.964	8.3	21.1	2 21	8 33.69	+29 11.8	1.117	2.036	13.9	17.8
3 2	8 30.64	+21 37.1	2.110	2.962	11.6	21.3	3 2	8 28.21	+28 43.9	1.165	2.026	18.4	18.0
<b>95782</b>	Hansgraf		1 31.5 256°18	2°6/2.5	17		<b>367762</b>	2010 <i>WQ</i>		1 31.5 217°65	2°0/1.8	16	
12 23	9 17.87	+6 26.5	2.266	2.996	14.5	20.9	12 23	9 20.25	+10 8.2	2.136	2.880	14.9	21.9
1 2	9 14.38	+6 45.9	2.148	2.977	12.0	20.7	1 2	9 16.29	+10 11.9	2.033	2.873	12.1	21.7
1 12	9 8.70	+7 22.1	2.051	2.957	8.9	20.4	1 12	9 10.00	+10 28.6	1.952	2.866	8.8	21.4
1 22	9 1.20	+8 14.2	1.980	2.937	5.4	20.2	1 22	9 1.83	+10 57.2	1.896	2.859	5.0	21.2
2 1	8 52.52	+9 19.4	1.938	2.917	2.7	19.9	2 1	8 52.53	+11 34.7	1.869	2.851	2.0	21.0
2 11	8 43.58	+10 33.0	1.926	2.896	4.5	20.0	2 11	8 43.13	+12 17.0	1.872	2.843	4.4	21.1
2 21	8 35.35	+11 49.1	1.944	2.874	8.1	20.2	2 21	8 34.62	+12 59.5	1.904	2.834	8.3	21.3
3 2	8 28.71	+13 2.2	1.988	2.852	11.7	20.4	3 2	8 27.89	+13 38.6	1.962	2.824	11.9	21.5
<b>281621</b>	2008 <i>UB</i> <sub>263</sub>		1 31.5 218°81	3°5/2.8	17		<b>368626</b>	2004 <i>TL</i> <sub>228</sub>		1 31.5 97°87	0°8/1.1	18	
12 23	9 18.21	+6 30.9	2.358	3.084	14.1	20.9	12 23	9 19.94	+13 19.9	2.095	2.851	14.8	21.5
1 2	9 14.34	+6 9.3	2.257	3.082	11.7	20.7	1 2	9 15.89	+13 30.5	2.013	2.864	11.8	21.3
1 12	9 8.44	+6 0.2	2.179	3.079	8.7	20.5	1 12	9 9.58	+13 52.3	1.954	2.876	8.3	21.1
1 22	9 0.95	+6 3.6	2.126	3.077	5.7	20.3	1 22	9 1.53	+14 22.6	1.920	2.888	4.3	20.9
2 1	8 52.54	+6 18.4	2.101	3.074	3.5	20.2	2 1	8 52.56	+14 57.8	1.915	2.900	0.8	20.7
2 11	8 44.08	+6 42.0	2.106	3.071	4.7	20.3	2 11	8 43.68	+15 33.4	1.941	2.912	4.2	20.9
2 21	8 36.44	+7 11.1	2.140	3.068	7.7	20.4	2 21	8 35.86	+16 5.7	1.994	2.923	8.0	21.2
3 2	8 30.35	+7 42.1	2.200	3.064	10.7	20.6	3 2	8 29.86	+16 32.1	2.074	2.935	11.4	21.4
<b>85735</b>	1998 <i>SF</i> <sub>95</sub>		1 31.5 230°09	4°1/29.1	18		<b>318046</b>	2004 <i>FT</i> <sub>23</sub>		1 31.5 300°53	5°6/28.8	18	
12 23	9 25.49	+24 23.0	1.740	2.524	16.3	19.5	12 23	9 26.88	+30 35.7	1.744	2.531	16	

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>500956</b>	2013 QR <sub>33</sub>		1 31.5 274°93	3°1/ 2.1 17			<b>390390</b>	2013 WC <sub>84</sub>		1 31.5 125°60	5°9/ 4.8 17		
12 23	9 20.30	+ 9 18.2	1.935	2.682	16.1	22.1	12 23	9 17.93	- 1 21.9	2.476	3.161	14.5	20.9
1 2	9 16.71	+ 8 56.8	1.824	2.664	13.3	21.9	1 2	9 13.97	- 2 2.1	2.383	3.167	12.4	20.7
1 12	9 10.54	+ 8 48.4	1.733	2.646	9.8	21.6	1 12	9 8.11	- 2 26.7	2.310	3.174	10.0	20.6
1 22	9 2.22	+ 8 52.8	1.668	2.627	6.0	21.4	1 22	9 0.79	- 2 34.3	2.262	3.180	7.6	20.4
2 1	8 52.53	+ 9 8.5	1.630	2.609	3.1	21.2	2 1	8 52.65	- 2 24.6	2.242	3.186	6.0	20.3
2 11	8 42.59	+ 9 32.4	1.621	2.590	5.2	21.2	2 11	8 44.51	- 1 59.4	2.249	3.192	6.2	20.4
2 21	8 33.57	+10 0.5	1.639	2.571	9.3	21.4	2 21	8 37.15	- 1 22.1	2.285	3.198	8.1	20.5
3 2	8 26.51	+10 28.7	1.683	2.551	13.2	21.6	3 2	8 31.26	- 0 37.3	2.348	3.203	10.5	20.6
<b>95056</b>	2002 AS <sub>50</sub>		1 31.5 182°27	0°1/31.5 18			<b>461988</b>	2006 WK		1 31.5 290°75	8°5/26.2 18		
12 23	9 18.54	+13 53.9	2.248	3.005	13.9	20.2	12 23	9 25.69	+36 2.1	1.726	2.517	16.1	20.7
1 2	9 14.82	+14 38.1	2.153	3.005	11.1	20.0	1 2	9 21.92	+37 20.4	1.646	2.508	13.4	20.5
1 12	9 8.91	+15 34.8	2.081	3.006	7.7	19.8	1 12	9 14.63	+38 36.6	1.587	2.499	10.6	20.3
1 22	9 1.26	+16 40.5	2.035	3.005	3.8	19.6	1 22	9 4.41	+39 40.4	1.552	2.490	8.7	20.1
2 1	8 52.59	+17 50.2	2.020	3.005	0.2	19.3	2 1	8 52.46	+40 21.3	1.544	2.481	8.9	20.1
2 11	8 43.85	+18 57.9	2.035	3.004	4.3	19.6	2 11	8 40.50	+40 32.8	1.561	2.472	11.1	20.2
2 21	8 35.98	+19 58.9	2.079	3.003	8.1	19.8	2 21	8 30.21	+40 14.3	1.602	2.463	14.1	20.4
3 2	8 29.80	+20 49.7	2.150	3.001	11.5	20.1	3 2	8 22.87	+39 29.5	1.664	2.454	17.0	20.6
<b>138780</b>	2000 SR <sub>338</sub>		1 31.5 78°48	5°4/27.4 18			<b>107132</b>	2001 AA <sub>49</sub>		1 31.5 40°00	22°8/21.7 17		
12 23	9 21.43	+32 57.6	2.424	3.201	12.4	20.0	12 23	9 47.79	+57 58.4	0.996	1.775	26.1	18.8
1 2	9 17.12	+33 51.2	2.347	3.206	10.0	19.8	1 2	9 45.47	+60 37.0	0.973	1.783	24.4	18.7
1 12	9 10.46	+34 43.2	2.294	3.210	7.5	19.7	1 12	9 34.19	+62 44.7	0.963	1.792	23.2	18.7
1 22	9 1.99	+35 27.4	2.268	3.215	5.7	19.6	1 22	9 14.94	+63 58.1	0.968	1.801	22.8	18.7
2 1	8 52.55	+35 58.2	2.271	3.220	5.6	19.6	2 1	8 51.94	+63 58.7	0.987	1.812	23.3	18.8
2 11	8 43.22	+36 11.6	2.302	3.224	7.4	19.7	2 11	8 31.27	+62 44.8	1.022	1.823	24.4	18.9
2 21	8 34.98	+36 6.9	2.360	3.229	9.8	19.8	2 21	8 17.22	+60 30.3	1.070	1.834	25.9	19.0
3 2	8 28.66	+35 45.5	2.442	3.234	12.2	20.0	3 2	8 10.99	+57 35.2	1.131	1.846	27.5	19.2
<b>120219</b>	2004 FZ <sub>15</sub>		1 31.5 103°16	18°2/23.6 17			<b>411453</b>	2010 WZ <sub>72</sub>		1 31.5 110°04	2°2/ 1.9 18		
12 23	9 47.82	+52 12.5	1.195	1.966	23.0	18.9	12 23	9 21.88	+10 9.1	2.002	2.747	15.7	21.2
1 2	9 42.87	+54 27.7	1.157	1.976	20.7	18.8	1 2	9 17.49	+10 3.0	1.921	2.761	12.7	21.0
1 12	9 30.90	+56 22.1	1.135	1.985	19.0	18.7	1 12	9 10.73	+10 10.0	1.861	2.775	9.2	20.8
1 22	9 12.93	+57 34.4	1.132	1.994	18.2	18.7	1 22	9 2.14	+10 28.6	1.827	2.789	5.3	20.6
2 1	8 52.00	+57 47.6	1.149	2.003	18.6	18.8	2 1	8 52.60	+10 55.8	1.821	2.802	2.3	20.4
2 11	8 32.47	+56 57.7	1.184	2.012	20.0	18.9	2 11	8 43.17	+11 27.7	1.845	2.815	4.5	20.6
2 21	8 17.77	+55 14.9	1.236	2.020	22.0	19.0	2 21	8 34.86	+12 0.3	1.898	2.828	8.3	20.8
3 2	8 9.42	+52 55.5	1.304	2.028	24.0	19.2	3 2	8 28.48	+12 30.0	1.976	2.840	11.8	21.1
<b>316604</b>	2011 VG <sub>5</sub>		1 31.5 111°45	5°4/ 5.2 18			<b>446115</b>	2013 EZ <sub>1</sub>		1 31.5 58°65	0°8/31.1 18		
12 23	9 15.82	- 2 29.1	2.987	3.657	12.5	20.4	12 23	9 22.39	+16 18.4	1.348	2.141	19.7	20.9
1 2	9 11.96	- 3 7.8	2.892	3.664	10.7	20.3	1 2	9 19.04	+16 49.2	1.287	2.160	15.6	20.7
1 12	9 6.54	- 3 33.0	2.818	3.671	8.7	20.2	1 12	9 12.37	+17 34.6	1.244	2.178	10.7	20.4
1 22	8 59.94	- 3 43.5	2.769	3.677	6.8	20.0	1 22	9 3.12	+18 28.8	1.225	2.198	5.3	20.2
2 1	8 52.68	- 3 39.0	2.747	3.684	5.5	20.0	2 1	8 52.55	+19 24.2	1.232	2.217	0.9	19.9
2 11	8 45.43	- 3 21.0	2.755	3.691	5.6	20.0	2 11	8 42.29	+20 12.8	1.266	2.237	6.1	20.3
2 21	8 38.80	- 2 52.0	2.791	3.697	7.1	20.1	2 21	8 33.80	+20 49.6	1.326	2.256	11.1	20.7
3 2	8 33.35	- 2 15.5	2.855	3.703	9.0	20.2	3 2	8 28.12	+21 12.2	1.408	2.276	15.4	21.0
<b>339448</b>	2005 EO <sub>187</sub>		1 31.5 292°05	1°8/ 1.7 17			<b>210980</b>	2001 VP <sub>107</sub>		1 31.5 40°73	4°7/28.0 18		
12 23	9 16.69	+10 48.1	2.193	2.945	14.3	21.3	12 23	9 19.66	+29 16.3	2.191	2.976	13.3	20.2
1 2	9 13.48	+10 51.2	2.086	2.931	11.6	21.0	1 2	9 15.92	+30 12.6	2.116	2.982	10.6	20.1
1 12	9 8.07	+11 6.8	2.000	2.918	8.4	20.8	1 12	9 9.74	+31 10.2	2.064	2.989	7.7	19.9
1 22	9 0.89	+11 33.4	1.940	2.904	4.7	20.6	1 22	9 1.69	+32 2.6	2.038	2.996	5.3	19.8
2 1	8 52.63	+12 8.5	1.908	2.890	1.8	20.3	2 1	8 52.62	+32 43.5	2.041	3.002	5.0	19.8
2 11	8 44.23	+12 48.0	1.905	2.877	4.3	20.5	2 11	8 43.65	+33 8.4	2.073	3.010	7.1	19.9
2 21	8 36.64	+13 27.8	1.932	2.863	8.1	20.7	2 21	8 35.81	+33 15.7	2.131	3.017	9.9	20.1
3 2	8 30.70	+14 4.3	1.984	2.850	11.6	20.9	3 2	8 29.94	+33 6.1	2.213	3.024	12.6	20.3
<b>140262</b>	2001 SZ <sub>263</sub>		1 31.5 47°63	5°2/ 3.2 18			<b>427716</b>	2004 GW <sub>2</sub>		1 31.5 321°67	6°5/26.1 15		
12 23	9 21.77	+ 4 23.0	2.242	2.955	15.1	19.1	12 23	9 20.25	+34 18.3	2.250	3.034	13.1	21.3
1 2	9 17.15	+ 3 18.2	2.151	2.962	12.7	19.0	1 2	9 16.62	+35 35.2	2.169	3.029	10.7	21.2
1 12	9 10.38	+ 2 25.2	2.082	2.968	9.8	18.8	1 12	9 10.40	+36 51.1	2.112	3.025	8.3	21.0
1 22	9 1.94	+ 1 45.7	2.038	2.975	7.0	18.6	1 22	9 2.10	+37 58.5	2.081	3.021	6.7	20.9
2 1	8 52.59	+ 1 20.6	2.023	2.982	5.2	18.5	2 1	8 52.60	+38 49.9	2.078	3.017	6.9	20.9
2 11	8 43.28	+ 1 8.9	2.036	2.989	6.0	18.6	2 11	8 43.08	+39 20.3	2.103	3.013	8.7	21.0
2 21	8 34.92	+ 1 8.5	2.079	2.996	8.5	18.8	2 21	8 34.67	+39 28.2	2.153	3.009	11.2	21.2
3 2	8 28.27	+ 1 16.1	2.147	3.003	11.3	18.9	3 2	8 28.34	+39 15.0	2.226	3.006	13.6	21.3
<b>349108</b>	2007 GD <sub>18</sub>		1 31.5 24°41	2°4/ 1.6 18			<b>122302</b>	2000 QO <sub>4</sub>		1 31.5 83°65	0°4/31.8 18		
12 23	9 21.02	+12 0.3	1.277	2.065	20.9	21.0	12 23	9 20.72	+13 40.2	1.951	2.712	15.6	19.6
1 2	9 18.27	+11 40.5	1.202	2.069	16.9	20.8	1 2	9 16.63	+14 4.2	1.878	2.732	12.4	19.4
1 12	9 12.09	+11 37.3	1.145	2.073	12.1	20.5	1 12	9 10.15	+14 40.5	1.828	2.752	8.6	19.2
1 22	9 3.10	+11 49.6	1.110	2.077	6.8	20.2	1 22	9 1.85	+15 25.4	1.803	2.772	4.4	19.0
2 1	8 52.52	+12 13.4	1.099	2.083	2.5	20.0	2 1	8 52.63	+16 14.2	1.807	2.792	0.5	18.7
2 11	8 42.04	+12 43.2	1.115	2.088	6.1	20.2	2 11	8 43.57	+17 1.6	1.841	2.812	4.4	19.1
2 21	8 33.24	+13 13.0	1.155	2.094	11.4	20.5	2 21	8 35.69	+17 43.3	1.903	2.831	8.4	19.3
3 2	8 27.33	+13 38.1	1.217	2.101	16.2	20.8	3 2	8 29.78	+18 16.5	1.991	2.850	11.9	19.6
<b>356269</b>	2009 WR <sub>18</sub>		1 31.5 201°73	0°6/30.9 17			<b>243564</b>	1995 ML <sub>8</sub>		1 31.5 173°51	2°7/ 2.2 18		
12 23	9 13.47	+18 20.7	3.870	4.621	8.6	22.0	12 23	9 21.10	+ 8 31.6	1.939	2.682	16.3	

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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>428186</b>	2006 <i>UO</i> <sub>68</sub>		1 31.5 155°38	1.2/	1.5 17		<b>167960</b>	Rudzikas		1 31.5 149°59	0.8/30.8	18	
12 23	9 16.50	+11 33.4	2.787	3.527	11.9	22.2	12 23	9 17.69	+16 51.1	2.438	3.200	12.8	20.2
1 2	9 12.67	+11 45.2	2.691	3.531	9.5	22.0	1 2	9 13.97	+17 34.6	2.348	3.204	10.1	20.0
1 12	9 7.13	+12 6.5	2.618	3.534	6.8	21.8	1 12	9 8.24	+18 27.2	2.281	3.208	6.9	19.8
1 22	9 0.28	+12 35.7	2.573	3.538	3.7	21.6	1 22	9 0.93	+19 25.4	2.241	3.212	3.4	19.6
2 1	8 52.71	+13 10.1	2.558	3.541	1.2	21.5	2 1	8 52.74	+20 24.3	2.231	3.215	0.9	19.4
2 11	8 45.14	+13 46.6	2.573	3.544	3.4	21.6	2 11	8 44.52	+21 19.1	2.252	3.219	4.2	19.7
2 21	8 38.27	+14 22.0	2.619	3.547	6.4	21.8	2 21	8 37.14	+22 5.9	2.302	3.222	7.7	19.9
3 2	8 32.70	+14 53.9	2.692	3.550	9.2	22.0	3 2	8 31.31	+22 42.4	2.379	3.224	10.7	20.1
<b>346121</b>	2007 <i>VS</i> <sub>150</sub>		1 31.5 347°56	3.2/29.3	17		<b>362115</b>	2009 <i>CV</i> <sub>58</sub>		1 31.5 273°90	0.5/31.8	18	
12 23	9 15.46	+22 35.8	1.860	2.655	15.0	20.2	12 23	9 20.52	+14 13.5	1.708	2.481	17.0	21.7
1 2	9 13.06	+23 28.0	1.772	2.648	11.8	20.0	1 2	9 17.33	+14 25.1	1.605	2.465	13.7	21.5
1 12	9 8.07	+24 28.3	1.706	2.642	8.2	19.7	1 12	9 11.25	+14 50.5	1.523	2.450	9.7	21.2
1 22	9 0.99	+25 30.7	1.666	2.636	4.6	19.5	1 22	9 2.72	+15 27.0	1.465	2.435	5.0	20.9
2 1	8 52.67	+26 28.2	1.653	2.630	3.4	19.4	2 1	8 52.64	+16 10.1	1.434	2.419	0.5	20.5
2 11	8 44.30	+27 14.5	1.668	2.626	6.5	19.6	2 11	8 42.31	+16 53.6	1.431	2.403	5.3	20.8
2 21	8 37.04	+27 45.4	1.710	2.622	10.3	19.8	2 21	8 33.09	+17 32.4	1.456	2.387	10.2	21.1
3 2	8 31.85	+27 59.7	1.775	2.620	13.8	20.0	3 2	8 26.15	+18 2.5	1.505	2.371	14.6	21.3
<b>261438</b>	2005 <i>VD</i> <sub>3</sub>		1 31.5 106°39	3.7/29.1	18		<b>180016</b>	2003 <i>AW</i> <sub>1</sub>		1 31.5 87°95	4.0/29.4	18	R
12 23	9 21.24	+24 26.2	1.924	2.709	14.9	20.3	12 23	9 28.07	+26 48.5	1.866	2.643	15.6	20.0
1 2	9 17.46	+25 21.2	1.844	2.713	11.8	20.1	1 2	9 22.63	+27 26.7	1.805	2.668	12.3	19.8
1 12	9 11.00	+26 22.0	1.786	2.717	8.2	19.9	1 12	9 14.34	+28 6.6	1.766	2.693	8.6	19.7
1 22	9 2.40	+27 22.1	1.755	2.721	4.8	19.7	1 22	9 3.96	+28 41.6	1.753	2.717	5.2	19.5
2 1	8 52.61	+28 14.2	1.751	2.725	3.9	19.7	2 1	8 52.60	+29 5.3	1.769	2.741	4.2	19.5
2 11	8 42.87	+28 52.6	1.777	2.729	6.7	19.8	2 11	8 41.62	+29 13.5	1.814	2.764	6.8	19.7
2 21	8 34.34	+29 14.1	1.829	2.733	10.3	20.1	2 21	8 32.21	+29 5.7	1.886	2.787	10.2	20.0
3 2	8 28.01	+29 18.7	1.906	2.737	13.6	20.3	3 2	8 25.26	+28 43.4	1.983	2.810	13.3	20.2
<b>411764</b>	2012 <i>BT</i> <sub>128</sub>		1 31.5 291°17	3.9/29.2	18		<b>502769</b>	2015 <i>DO</i> <sub>81</sub>		1 31.5 188°88	3.5/28.3	17	
12 23	9 21.96	+24 36.5	1.733	2.524	16.1	21.2	12 23	9 21.35	+30 11.7	3.245	4.006	9.9	22.2
1 2	9 18.44	+25 24.8	1.648	2.520	12.8	20.9	1 2	9 16.39	+30 48.2	3.152	4.005	7.9	22.1
1 12	9 11.92	+26 19.4	1.584	2.517	9.0	20.7	1 12	9 9.65	+31 24.2	3.085	4.003	5.7	21.9
1 22	9 2.96	+27 13.6	1.546	2.513	5.2	20.5	1 22	9 1.55	+31 55.7	3.046	4.001	3.9	21.8
2 1	8 52.59	+27 59.5	1.535	2.510	4.1	20.4	2 1	8 52.72	+32 18.8	3.038	3.998	3.6	21.8
2 11	8 42.19	+28 30.6	1.552	2.506	7.3	20.6	2 11	8 43.90	+32 30.9	3.061	3.995	5.2	21.9
2 21	8 33.14	+28 43.7	1.595	2.503	11.2	20.8	2 21	8 35.83	+32 30.8	3.113	3.991	7.4	22.0
3 2	8 26.55	+28 39.1	1.661	2.500	14.9	21.0	3 2	8 29.15	+32 18.8	3.191	3.987	9.5	22.1
<b>460336</b>	2014 <i>RR</i> <sub>6</sub>		1 31.5 125°55	3.8/	3.3 18		<b>39921</b>	1998 <i>FO</i> <sub>54</sub>		1 31.5 22°98	0.9/31.2	18	
12 23	9 20.21	+ 4 21.2	2.120	2.841	15.7	22.3	12 23	9 18.17	+17 55.4	1.012	1.838	22.6	17.8
1 2	9 16.07	+ 4 20.1	2.035	2.854	12.9	22.1	1 2	9 16.65	+17 59.7	0.960	1.851	17.9	17.6
1 12	9 9.72	+ 4 35.9	1.971	2.868	9.7	21.9	1 12	9 11.20	+18 18.2	0.924	1.866	12.3	17.3
1 22	9 1.66	+ 5 8.0	1.932	2.880	6.3	21.7	1 22	9 2.69	+18 45.4	0.909	1.883	6.1	17.0
2 1	8 52.67	+ 5 53.9	1.921	2.893	3.9	21.6	2 1	8 52.66	+19 13.8	0.917	1.901	1.0	16.8
2 11	8 43.74	+ 6 49.5	1.939	2.904	5.0	21.7	2 11	8 43.08	+19 36.0	0.948	1.921	6.9	17.2
2 21	8 35.79	+ 7 49.4	1.987	2.916	8.1	21.9	2 21	8 35.67	+19 47.4	1.002	1.943	12.6	17.6
3 2	8 29.62	+ 8 48.6	2.061	2.926	11.3	22.1	3 2	8 31.56	+19 46.4	1.077	1.965	17.4	17.9
<b>437772</b>	2015 <i>BO</i> <sub>36</sub>		1 31.5 80°67	3.4/	2.8 17		<b>343018</b>	2009 <i>BB</i> <sub>97</sub>		1 31.5 263°41	1.5/30.8	17	
12 23	9 18.35	+ 6 51.2	2.395	3.122	13.9	20.8	12 23	9 24.65	+22 46.4	2.421	3.182	12.9	20.4
1 2	9 14.36	+ 6 25.8	2.304	3.129	11.4	20.6	1 2	9 19.48	+22 38.4	2.318	3.173	10.3	20.2
1 12	9 8.41	+ 6 12.4	2.236	3.137	8.6	20.4	1 12	9 12.05	+22 32.6	2.239	3.165	7.1	20.0
1 22	9 0.97	+ 6 10.7	2.193	3.144	5.5	20.2	1 22	9 2.84	+22 25.7	2.187	3.157	3.7	19.7
2 1	8 52.71	+ 6 19.8	2.179	3.152	3.4	20.1	2 1	8 52.66	+22 14.8	2.166	3.149	1.5	19.6
2 11	8 44.50	+ 6 37.2	2.195	3.159	4.5	20.2	2 11	8 42.50	+21 57.4	2.176	3.140	4.6	19.8
2 21	8 37.14	+ 6 59.9	2.239	3.167	7.4	20.4	2 21	8 33.33	+21 32.8	2.215	3.132	8.1	20.0
3 2	8 31.31	+ 7 24.6	2.310	3.174	10.3	20.6	3 2	8 25.96	+21 1.2	2.281	3.123	11.2	20.2
<b>33112</b>	1998 <i>BL</i> <sub>1</sub>		1 31.5 102°20	0.6/31.9	18		<b>288475</b>	2004 <i>FO</i> <sub>12</sub>		1 31.5 357°19	2.1/30.1	18	
12 23	9 17.98	+11 40.1	1.957	2.717	15.6	18.3	12 23	9 15.53	+19 27.7	1.858	2.648	15.2	20.2
1 2	9 14.68	+12 23.5	1.870	2.723	12.5	18.1	1 2	9 13.04	+20 16.7	1.772	2.645	12.0	20.0
1 12	9 8.98	+13 22.6	1.805	2.728	8.7	17.9	1 12	9 8.02	+21 15.9	1.708	2.643	8.2	19.7
1 22	9 1.38	+14 33.9	1.765	2.734	4.5	17.6	1 22	9 0.97	+22 20.4	1.670	2.642	4.2	19.5
2 1	8 52.70	+15 51.8	1.755	2.740	0.6	17.3	2 1	8 52.75	+23 23.3	1.660	2.641	2.2	19.4
2 11	8 44.00	+17 9.5	1.774	2.746	4.5	17.6	2 11	8 44.50	+24 18.1	1.677	2.641	5.7	19.6
2 21	8 36.32	+18 20.9	1.822	2.751	8.7	17.9	2 21	8 37.34	+25 0.1	1.722	2.642	9.8	19.8
3 2	8 30.53	+19 21.5	1.895	2.756	12.3	18.1	3 2	8 32.19	+25 27.2	1.791	2.643	13.3	20.1
<b>141165</b>	2001 <i>XT</i> <sub>139</sub>		1 31.5 101°64	0.6/31.0	18		<b>161665</b>	2006 <i>DS</i> <sub>48</sub>		1 31.5 240°77	4.2/29.3	18	
12 23	9 17.48	+17 23.7	2.512	3.273	12.5	20.2	12 23	9 25.12	+25 20.1	1.676	2.464	16.7	20.5
1 2	9 13.68	+17 50.9	2.425	3.281	9.8	20.0	1 2	9 21.15	+26 3.5	1.587	2.457	13.3	20.2
1 12	9 7.95	+18 25.8	2.362	3.289	6.7	19.9	1 12	9 13.95	+26 52.8	1.519	2.450	9.4	20.0
1 22	9 0.74	+19 5.0	2.326	3.297	3.3	19.6	1 22	9 4.08	+27 40.7	1.476	2.443	5.6	19.7
2 1	8 52.74	+19 44.6	2.320	3.304	0.7	19.4	2 1	8 52.61	+28 19.0	1.461	2.435	4.4	19.6
2 11	8 44.77	+20 20.9	2.344	3.312	4.0	19.7	2 11	8 41.07	+28 41.2	1.473	2.427	7.6	19.8
2 21	8 37.65	+20 50.7	2.398	3.319	7.3	19.9	2 21	8 30.98	+28 44.5	1.511	2.419	11.8	20.0
3 2	8 32.03	+21 12.2	2.478	3.327	10.2	20.1	3 2	8 23.54	+28 29.5	1.573	2.411	15.6	20.2
<b>253270</b>	2003 <i>AD</i> <sub>72</sub>		1 31.5 347°05	10.7/25.8	18		<b>170975</b>	2005 <i>CW</i> <sub>26</sub>		1 31.5 282°66	1.4/30.8	18	
12 23	9 18.18	+36 2.2	1.239	2.065	19.3	19.0							

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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>272989</b>	2006 <i>DL</i> <sub>35</sub>		1 31.5 226°78	0°8/ 1.1 18			<b>209704</b>	2005 <i>EJ</i> <sub>57</sub>		1 31.6 276°45	1°2/30.9 18		
12 23	9 18.35	+13 20.2	2.205	2.961	14.1	21.3	12 23	9 23.72	+19 37.8	1.660	2.442	17.1	20.7
1 2	9 14.73	+13 34.1	2.108	2.958	11.3	21.1	1 2	9 19.93	+19 44.0	1.566	2.433	13.6	20.5
1 12	9 8.91	+13 59.0	2.033	2.956	8.0	20.9	1 12	9 13.05	+19 58.4	1.492	2.424	9.5	20.2
1 22	9 1.35	+14 32.8	1.984	2.953	4.2	20.6	1 22	9 3.64	+20 16.8	1.443	2.415	4.8	19.9
2 1	8 52.77	+15 11.8	1.965	2.950	0.8	20.3	2 1	8 52.70	+20 34.0	1.422	2.406	1.3	19.7
2 11	8 44.15	+15 51.6	1.975	2.946	4.1	20.6	2 11	8 41.67	+20 45.0	1.428	2.397	5.8	19.9
2 21	8 36.42	+16 28.4	2.014	2.943	8.0	20.8	2 21	8 31.99	+20 46.6	1.462	2.388	10.6	20.2
3 2	8 30.39	+16 59.1	2.079	2.940	11.4	21.0	3 2	8 24.80	+20 37.9	1.519	2.379	14.9	20.4
<b>427342</b>	2014 <i>WQ</i> <sub>349</sub>		1 31.5 160°27	1°4/30.7 18			<b>314265</b>	2005 <i>QP</i> <sub>166</sub>		1 31.6 267°75	7°5/ 4.1 18		
12 23	9 22.39	+19 54.1	1.990	2.762	14.9	21.0	12 23	9 21.37	+ 0 5.2	1.905	2.612	17.6	20.8
1 2	9 18.18	+20 12.6	1.901	2.764	11.8	20.8	1 2	9 17.54	- 1 5.8	1.803	2.602	15.2	20.6
1 12	9 11.41	+20 38.2	1.836	2.765	8.2	20.6	1 12	9 11.15	- 2 1.1	1.719	2.592	12.3	20.4
1 22	9 2.62	+21 6.8	1.796	2.767	4.1	20.4	1 22	9 2.61	- 2 37.1	1.659	2.582	9.5	20.2
2 1	8 52.71	+21 33.6	1.785	2.768	1.5	20.2	2 1	8 52.75	- 2 51.6	1.625	2.572	7.6	20.1
2 11	8 42.84	+21 54.0	1.803	2.770	5.1	20.4	2 11	8 42.69	- 2 45.0	1.618	2.561	8.1	20.1
2 21	8 34.12	+22 5.3	1.850	2.771	9.1	20.7	2 21	8 33.58	- 2 20.7	1.637	2.551	10.6	20.2
3 2	8 27.47	+22 6.3	1.922	2.772	12.7	20.9	3 2	8 26.44	- 1 43.9	1.681	2.540	13.7	20.3
<b>400293</b>	2007 <i>TU</i> <sub>89</sub>		1 31.6 161°78	0°3/31.4 18			<b>132958</b>	2002 <i>TR</i> <sub>108</sub>		1 31.6 161°91	2°0/29.8 18		
12 23	9 22.91	+15 32.0	2.051	2.809	15.0	22.6	12 23	9 18.87	+21 13.7	2.525	3.293	12.3	19.9
1 2	9 18.47	+16 2.9	1.962	2.815	11.9	22.4	1 2	9 14.90	+22 1.7	2.436	3.296	9.6	19.8
1 12	9 11.56	+16 44.9	1.896	2.821	8.3	22.2	1 12	9 8.89	+22 56.0	2.370	3.299	6.6	19.6
1 22	9 2.69	+17 34.4	1.856	2.826	4.1	22.0	1 22	9 1.30	+23 52.1	2.333	3.302	3.5	19.4
2 1	8 52.72	+18 26.1	1.845	2.830	0.4	21.7	2 1	8 52.82	+24 45.1	2.325	3.305	2.2	19.3
2 11	8 42.75	+19 14.6	1.865	2.834	4.7	22.0	2 11	8 44.32	+25 30.3	2.349	3.307	4.8	19.5
2 21	8 33.85	+19 55.6	1.914	2.837	8.7	22.3	2 21	8 36.67	+26 4.8	2.401	3.309	7.9	19.7
3 2	8 26.92	+20 26.5	1.988	2.839	12.3	22.5	3 2	8 30.58	+26 27.2	2.479	3.311	10.8	19.9
<b>195154</b>	2002 <i>CW</i> <sub>215</sub>		1 31.6 270°74	3°1/29.7 17			<b>413486</b>	2005 <i>MW</i> <sub>38</sub>		1 31.6 112°02	0°1/31.5 18		
12 23	9 22.94	+24 53.6	2.093	2.870	14.1	20.6	12 23	9 21.23	+14 28.9	2.096	2.853	14.8	21.8
1 2	9 18.77	+25 20.6	1.990	2.854	11.3	20.4	1 2	9 16.97	+15 5.2	2.018	2.870	11.7	21.6
1 12	9 11.96	+25 51.6	1.910	2.839	7.9	20.1	1 12	9 10.40	+15 53.0	1.962	2.887	8.1	21.4
1 22	9 2.98	+26 21.5	1.855	2.823	4.5	19.9	1 22	9 2.06	+16 48.5	1.934	2.904	4.0	21.2
2 1	8 52.71	+26 44.6	1.830	2.806	3.3	19.8	2 1	8 52.79	+17 46.6	1.934	2.920	0.2	20.9
2 11	8 42.31	+26 56.2	1.834	2.790	6.1	19.9	2 11	8 43.62	+18 41.7	1.966	2.935	4.4	21.3
2 21	8 32.97	+26 54.1	1.865	2.773	9.9	20.1	2 21	8 35.52	+19 29.6	2.026	2.950	8.2	21.6
3 2	8 25.69	+26 38.3	1.921	2.757	13.3	20.3	3 2	8 29.28	+20 7.5	2.112	2.965	11.6	21.8
<b>330691</b>	2008 <i>JT</i> <sub>11</sub>		1 31.6 226°82	3°2/29.4 18			<b>431388</b>	2007 <i>EW</i> <sub>198</sub>		1 31.6 320°41	21°8/15.2 16		
12 23	9 20.60	+22 52.9	1.913	2.697	15.0	21.0	12 23	9 34.63	+53 30.6	1.026	1.824	24.3	20.6
1 2	9 17.05	+23 46.4	1.827	2.696	11.9	20.8	1 2	9 34.64	+56 52.2	0.986	1.816	22.7	20.4
1 12	9 10.81	+24 47.4	1.763	2.695	8.3	20.6	1 12	9 27.17	+59 53.2	0.962	1.809	21.9	20.4
1 22	9 2.40	+25 49.8	1.724	2.693	4.6	20.3	1 22	9 12.21	+62 8.8	0.955	1.802	22.1	20.3
2 1	8 52.74	+26 46.3	1.715	2.692	3.4	20.3	2 1	8 52.27	+63 17.0	0.964	1.795	23.2	20.4
2 11	8 43.04	+27 30.7	1.734	2.690	6.5	20.4	2 11	8 32.52	+63 9.1	0.987	1.789	25.0	20.5
2 21	8 34.50	+27 59.3	1.780	2.688	10.2	20.7	2 21	8 17.87	+61 53.0	1.023	1.783	27.1	20.6
3 2	8 28.12	+28 11.2	1.850	2.687	13.7	20.9	3 2	8 10.84	+59 45.5	1.069	1.779	29.1	20.8
<b>12171</b>	Johannink		1 31.6 270°85	0°0/31.6 18			<b>204305</b>	2004 <i>PM</i> <sub>61</sub>		1 31.6 148°84	0°2/31.4 18		
12 23	9 19.96	+16 5.0	1.996	2.764	15.0	19.5	12 23	9 25.43	+16 8.7	2.017	2.772	15.3	21.6
1 2	9 16.31	+16 15.2	1.900	2.758	12.0	19.3	1 2	9 20.44	+16 29.5	1.932	2.784	12.2	21.4
1 12	9 10.17	+16 35.2	1.825	2.752	8.4	19.1	1 12	9 12.89	+17 0.2	1.870	2.794	8.4	21.2
1 22	9 2.05	+17 2.1	1.776	2.746	4.2	18.8	1 22	9 3.36	+17 37.2	1.834	2.804	4.2	20.9
2 1	8 52.76	+17 32.0	1.755	2.740	0.2	18.5	2 1	8 52.75	+18 15.8	1.827	2.813	0.4	20.6
2 11	8 43.41	+18 0.2	1.764	2.734	4.6	18.8	2 11	8 42.21	+18 50.9	1.852	2.821	4.7	21.0
2 21	8 35.08	+18 23.2	1.800	2.728	8.8	19.1	2 21	8 32.86	+19 19.0	1.905	2.828	8.8	21.3
3 2	8 28.69	+18 38.5	1.862	2.722	12.6	19.3	3 2	8 25.57	+19 38.2	1.984	2.834	12.3	21.5
<b>251665</b>	1994 <i>YZ</i> <sub>3</sub>		1 31.6 133°99	0°4/31.3 18			<b>325225</b>	2008 <i>GO</i> <sub>38</sub>		1 31.6 237°01	5°8/ 4.5 17		
12 23	9 22.23	+16 9.7	2.157	2.915	14.4	21.2	12 23	9 18.23	- 0 18.3	2.173	2.873	15.9	21.0
1 2	9 17.73	+16 37.4	2.074	2.927	11.4	21.0	1 2	9 14.72	- 0 43.5	2.067	2.864	13.6	21.0
1 12	9 10.91	+17 14.8	2.014	2.939	7.8	20.8	1 12	9 8.99	- 0 50.8	1.980	2.855	10.8	20.8
1 22	9 2.32	+17 58.2	1.980	2.950	3.9	20.6	1 22	9 1.46	- 0 38.6	1.917	2.846	8.0	20.6
2 1	8 52.76	+18 43.0	1.976	2.961	0.5	20.3	2 1	8 52.83	- 0 6.8	1.881	2.836	6.0	20.5
2 11	8 43.28	+19 24.2	2.003	2.972	4.4	20.7	2 11	8 44.05	+ 0 41.7	1.873	2.826	6.4	20.5
2 21	8 34.85	+19 58.3	2.059	2.981	8.2	20.9	2 21	8 36.06	+ 1 42.4	1.893	2.816	8.9	20.6
3 2	8 28.29	+20 23.2	2.141	2.991	11.6	21.1	3 2	8 29.73	+ 2 49.2	1.940	2.805	11.9	20.8
<b>24432</b>	Elizamnitt		1 31.6 301°37	3°7/ 2.6 18			<b>239694</b>	2008 <i>YL</i> <sub>139</sub>		1 31.6 345°09	0°1/31.6 18		
12 23	9 17.16	+ 7 14.0	1.663	2.421	18.0	18.1	12 23	9 17.05	+15 16.3	2.111	2.879	14.3	20.6
1 2	9 14.72	+ 7 3.1	1.557	2.403	14.9	17.8	1 2	9 13.84	+15 33.0	2.018	2.876	11.4	20.4
1 12	9 9.50	+ 7 10.4	1.471	2.384	11.2	17.5	1 12	9 8.37	+16 0.1	1.947	2.874	7.9	20.2
1 22	9 1.91	+ 7 36.4	1.407	2.366	7.0	17.2	1 22	9 1.12	+16 34.6	1.901	2.872	4.0	20.0
2 1	8 52.77	+ 8 19.1	1.370	2.348	3.8	17.0	2 1	8 52.86	+17 12.6	1.885	2.870	0.2	19.6
2 11	8 43.33	+ 9 13.6	1.359	2.330	5.8	17.1	2 11	8 44.56	+17 49.6	1.897	2.868	4.3	20.0
2 21	8 34.90	+10 13.6	1.375	2.312	10.2	17.3	2 21	8 37.20	+18 21.7	1.938	2.866	8.3	20.2
3 2	8 28.65	+11 12.6	1.415	2.295	14.6	17.5	3 2	8 31.61	+18 46.1	2.004	2.865	11.7	20.4
<b>404498</b>	2013 <i>HN</i> <sub>30</sub>		1 31.6 290°73	3°0/ 2.0 18			<b>241297</b>	2007 <i>UD</i> <sub>59</sub>		1 31.6 232°55	1°2/30.7 17		
12 23	9 20.57	+10 8.6	1.611	2.375	18.2	21.0							

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>424845</b>	2008 <i>UL</i> <sub>276</sub>		1 31.6 149°14	0°1/31.5 18			<b>343247</b>	2009 <i>WE</i> <sub>241</sub>		1 31.6 85°30	2°0/ 1.6 18		
12 23	9 19.84	+15 59.4	2.612	3.363	12.3	22.4	12 23	9 22.52	+10 33.1	1.377	2.152	20.3	21.4
1 2	9 15.45	+16 19.5	2.522	3.371	9.8	22.2	1 2	9 19.20	+10 42.5	1.304	2.163	16.4	21.1
1 12	9 9.15	+16 47.4	2.456	3.379	6.7	22.0	1 12	9 12.62	+11 11.5	1.251	2.175	11.7	20.9
1 22	9 1.40	+17 20.4	2.417	3.386	3.4	21.8	1 22	9 3.42	+11 57.3	1.220	2.187	6.4	20.6
2 1	8 52.86	+17 54.9	2.408	3.393	0.2	21.5	2 1	8 52.78	+12 54.5	1.215	2.198	2.0	20.4
2 11	8 44.35	+18 27.5	2.431	3.400	3.7	21.8	2 11	8 42.28	+13 55.3	1.237	2.210	5.7	20.6
2 21	8 36.66	+18 55.2	2.483	3.406	7.0	22.1	2 21	8 33.38	+14 52.4	1.285	2.221	10.8	21.0
3 2	8 30.46	+19 16.1	2.563	3.411	9.9	22.3	3 2	8 27.21	+15 40.4	1.356	2.232	15.3	21.2
<b>198879</b>	2005 <i>SC</i> <sub>123</sub>		1 31.6 147°99	2°0/30.6 18			<b>248003</b>	2004 <i>EE</i> <sub>25</sub>		1 31.6 343°94	7°1/27.4 18		
12 23	9 28.09	+20 55.7	1.696	2.470	17.0	21.0	12 23	9 26.42	+37 9.9	2.077	2.854	14.2	20.4
1 2	9 23.13	+21 17.6	1.616	2.479	13.5	20.8	1 2	9 21.69	+37 52.1	1.997	2.850	11.8	20.2
1 12	9 15.08	+21 47.0	1.557	2.486	9.3	20.6	1 12	9 13.99	+38 29.0	1.939	2.846	9.2	20.0
1 22	9 4.57	+22 18.4	1.523	2.494	4.8	20.3	1 22	9 3.98	+38 53.1	1.906	2.843	7.4	19.9
2 1	8 52.72	+22 45.7	1.517	2.500	2.1	20.1	2 1	8 52.76	+38 57.5	1.901	2.840	7.3	19.9
2 11	8 41.01	+23 3.3	1.541	2.506	6.0	20.4	2 11	8 41.73	+38 38.8	1.923	2.838	9.1	20.0
2 21	8 30.82	+23 8.8	1.592	2.511	10.5	20.7	2 21	8 32.20	+37 57.5	1.971	2.835	11.6	20.1
3 2	8 23.22	+23 2.0	1.668	2.516	14.4	20.9	3 2	8 25.13	+36 57.1	2.042	2.834	14.2	20.3
<b>308699</b>	2006 <i>FH</i> <sub>19</sub>		1 31.6 262°59	1°5/ 1.4 17			<b>87899</b>	2000 <i>SH</i> <sub>306</sub>		1 31.6 321°82	1°0/31.2 18		
12 23	9 21.48	+11 53.1	1.816	2.575	16.6	21.7	12 23	9 23.12	+20 24.0	1.703	2.485	16.7	18.6
1 2	9 17.99	+11 59.0	1.704	2.555	13.6	21.5	1 2	9 19.37	+20 12.2	1.607	2.474	13.3	18.4
1 12	9 11.70	+12 19.5	1.614	2.535	9.8	21.2	1 12	9 12.62	+20 5.9	1.531	2.463	9.3	18.1
1 22	9 3.03	+12 52.9	1.548	2.515	5.4	20.9	1 22	9 3.43	+20 1.6	1.481	2.453	4.7	17.8
2 1	8 52.79	+13 35.7	1.510	2.493	1.5	20.6	2 1	8 52.80	+19 55.5	1.458	2.443	1.0	17.5
2 11	8 42.21	+14 22.5	1.500	2.472	5.1	20.8	2 11	8 42.12	+19 43.9	1.463	2.433	5.5	17.8
2 21	8 32.60	+15 7.7	1.518	2.450	9.9	21.0	2 21	8 32.75	+19 25.0	1.496	2.424	10.3	18.1
3 2	8 25.11	+15 47.1	1.562	2.428	14.2	21.2	3 2	8 25.81	+18 58.6	1.552	2.415	14.4	18.3
<b>30468</b>	2000 <i>OW</i> <sub>16</sub>		1 31.6 16°99	1°1/ 1.3 18			<b>148035</b>	1998 <i>QY</i> <sub>44</sub>		1 31.6 97°06	2°4/ 2.1 18		
12 23	9 18.90	+14 4.8	2.097	2.858	14.6	17.9	12 23	9 22.58	+ 9 9.3	1.889	2.633	16.6	20.3
1 2	9 15.20	+13 52.9	2.008	2.861	11.7	17.7	1 2	9 18.18	+ 9 11.0	1.815	2.654	13.4	20.1
1 12	9 9.25	+13 50.3	1.941	2.864	8.3	17.5	1 12	9 11.31	+ 9 27.7	1.762	2.675	9.7	19.9
1 22	9 1.54	+13 55.1	1.899	2.867	4.4	17.3	1 22	9 2.56	+ 9 57.7	1.734	2.695	5.6	19.7
2 1	8 52.87	+14 4.9	1.886	2.870	1.1	17.0	2 1	8 52.85	+10 37.3	1.734	2.715	2.5	19.5
2 11	8 44.24	+14 16.5	1.903	2.874	4.2	17.3	2 11	8 43.31	+11 21.9	1.764	2.734	4.7	19.7
2 21	8 36.62	+14 27.2	1.947	2.878	8.0	17.5	2 21	8 34.98	+12 6.3	1.822	2.753	8.5	20.0
3 2	8 30.80	+14 34.6	2.017	2.883	11.5	17.7	3 2	8 28.70	+12 46.8	1.906	2.772	12.0	20.2
<b>384928</b>	2012 <i>TN</i> <sub>88</sub>		1 31.6 99°91	3°5/28.9 18			<b>53549</b>	2000 <i>BN</i> <sub>14</sub>		1 31.6 64°12	0°9/30.9 18		
12 23	9 20.05	+26 52.1	2.439	3.214	12.4	20.8	12 23	9 18.79	+14 30.0	1.646	2.426	17.3	18.4
1 2	9 15.95	+27 32.8	2.355	3.218	9.8	20.6	1 2	9 15.85	+15 32.8	1.569	2.435	13.7	18.2
1 12	9 9.67	+28 15.6	2.295	3.221	6.9	20.5	1 12	9 10.12	+16 52.4	1.512	2.444	9.4	18.0
1 22	9 1.72	+28 55.5	2.262	3.225	4.3	20.3	1 22	9 2.13	+18 23.1	1.481	2.453	4.6	17.7
2 1	8 52.86	+29 27.4	2.258	3.228	3.7	20.3	2 1	8 52.87	+19 56.7	1.478	2.463	1.0	17.5
2 11	8 44.05	+29 47.5	2.284	3.232	5.8	20.4	2 11	8 43.62	+21 24.3	1.503	2.472	5.6	17.8
2 21	8 36.21	+29 54.1	2.339	3.235	8.7	20.6	2 21	8 35.64	+22 38.7	1.556	2.481	10.2	18.1
3 2	8 30.11	+29 47.2	2.418	3.238	11.4	20.8	3 2	8 29.95	+23 36.1	1.633	2.491	14.1	18.3
<b>246963</b>	1999 <i>TG</i> <sub>45</sub>		1 31.6 220°53	0°1/31.6 18			<b>155606</b>	2000 <i>DW</i> <sub>44</sub>		1 31.6 179°21	1°4/30.8 18		
12 23	9 22.82	+15 33.0	2.015	2.775	15.2	21.7	12 23	9 27.24	+19 39.6	1.900	2.665	15.8	20.4
1 2	9 18.61	+15 47.5	1.913	2.767	12.2	21.5	1 2	9 22.21	+19 58.3	1.810	2.667	12.6	20.2
1 12	9 11.83	+16 12.6	1.834	2.759	8.5	21.2	1 12	9 14.34	+20 24.8	1.741	2.669	8.7	19.9
1 22	9 2.95	+16 45.3	1.780	2.750	4.3	20.9	1 22	9 4.20	+20 54.5	1.699	2.669	4.4	19.7
2 1	8 52.80	+17 21.4	1.755	2.740	0.2	20.6	2 1	8 52.78	+21 22.1	1.686	2.669	1.5	19.5
2 11	8 42.52	+17 55.9	1.760	2.730	4.7	20.9	2 11	8 41.37	+21 42.6	1.702	2.668	5.4	19.7
2 21	8 33.25	+18 24.9	1.794	2.720	9.0	21.1	2 21	8 31.24	+21 53.3	1.747	2.667	9.7	20.0
3 2	8 25.98	+18 45.7	1.853	2.709	12.8	21.4	3 2	8 23.39	+21 53.1	1.818	2.664	13.5	20.2
<b>228875</b>	2003 <i>KX</i> <sub>3</sub>		1 31.6 220°78	1°8/ 1.9 17			<b>301455</b>	2009 <i>DW</i> <sub>112</sub>		1 31.6 259°55	3°2/ 3.5 17		
12 23	9 20.86	+10 34.8	2.656	3.385	12.6	21.2	12 23	9 14.88	+ 3 21.5	2.618	3.330	13.2	21.5
1 2	9 16.33	+10 28.9	2.543	3.374	10.3	21.0	1 2	9 11.69	+ 3 43.4	2.506	3.320	11.0	21.3
1 12	9 9.85	+10 32.6	2.453	3.363	7.4	20.8	1 12	9 6.69	+ 4 21.5	2.416	3.310	8.3	21.1
1 22	9 1.81	+10 44.9	2.390	3.351	4.3	20.6	1 22	9 0.26	+ 5 15.2	2.352	3.300	5.4	20.9
2 1	8 52.86	+11 4.0	2.358	3.339	1.9	20.4	2 1	8 52.96	+ 6 22.2	2.317	3.289	3.3	20.7
2 11	8 43.78	+11 27.0	2.356	3.325	3.8	20.5	2 11	8 45.54	+ 7 38.3	2.312	3.279	4.2	20.8
2 21	8 35.41	+11 51.2	2.385	3.312	7.0	20.7	2 21	8 38.74	+ 8 58.5	2.338	3.268	7.0	20.9
3 2	8 28.46	+12 13.9	2.441	3.297	10.1	20.9	3 2	8 33.25	+10 17.6	2.391	3.257	9.9	21.1
<b>300167</b>	2006 <i>VM</i> <sub>143</sub>		1 31.6 252°79	1°8/ 1.9 17			<b>226866</b>	2004 <i>TH</i> <sub>41</sub>		1 31.6 130°93	1°3/30.6 18		
12 23	9 16.77	+10 14.3	2.559	3.299	12.8	21.0	12 23	9 20.88	+19 0.4	2.351	3.114	13.2	21.0
1 2	9 13.15	+10 13.4	2.456	3.294	10.4	20.8	1 2	9 16.53	+19 37.4	2.268	3.125	10.4	20.8
1 12	9 7.67	+10 22.9	2.375	3.288	7.5	20.6	1 12	9 10.04	+20 21.7	2.209	3.137	7.1	20.6
1 22	9 0.71	+10 42.0	2.321	3.283	4.3	20.4	1 22	9 1.91	+21 9.2	2.177	3.147	3.5	20.4
2 1	8 52.91	+11 8.3	2.296	3.277	1.9	20.2	2 1	8 52.89	+21 55.3	2.175	3.158	1.4	20.3
2 11	8 45.05	+11 38.8	2.301	3.272	3.7	20.3	2 11	8 43.94	+22 35.3	2.204	3.168	4.5	20.5
2 21	8 37.91	+12 10.4	2.336	3.266	7.0	20.5	2 21	8 35.94	+23 6.1	2.261	3.178	8.0	20.7
3 2	8 32.19	+12 40.0	2.397	3.260	10.0	20.7	3 2	8 29.64	+23 26.4	2.346	3.187	11.0	21.0
<b>34977</b>	1167 <i>T-3</i>		1 31.6 313°73	3°9/29.9 18			<b>247527</b>	2002 <i>QX</i> <sub>113</sub>		1 31.6 104°35	3°2/ 2.9 18		
12 23	9 24.58	+26 8.0	1.551	2.347	17.4								

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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>202214</b>	2004 XS <sub>122</sub>		1 31.6	20°41'	1.2°/30.9	18	<b>301598</b>	2010 CH <sub>103</sub>		1 31.6	155°25'	2°0'	1.9 18
12 23	9 18.71	+17 15.9	1.259	2.066	20.1	20.2	12 23	9 22.15	+9 19.5	1.796	2.546	17.1	21.5
1 2	9 16.63	+17 44.0	1.189	2.071	16.0	19.9	1 2	9 18.23	+9 38.3	1.709	2.552	13.9	21.3
1 12	9 11.10	+18 27.1	1.138	2.076	11.0	19.7	1 12	9 11.63	+10 14.4	1.642	2.558	10.0	21.1
1 22	9 2.76	+19 19.5	1.110	2.083	5.5	19.4	1 22	9 2.88	+11 5.6	1.599	2.563	5.6	20.8
2 1	8 52.86	+20 13.2	1.106	2.091	1.4	19.1	2 1	8 52.90	+12 7.4	1.585	2.568	2.0	20.6
2 11	8 43.09	+20 59.9	1.128	2.099	6.6	19.5	2 11	8 42.88	+13 13.5	1.600	2.572	4.9	20.8
2 21	8 35.03	+21 33.7	1.174	2.108	11.9	19.8	2 21	8 34.04	+14 17.5	1.644	2.575	9.2	21.0
3 2	8 29.89	+21 52.1	1.242	2.118	16.5	20.1	3 2	8 27.33	+15 14.3	1.712	2.578	13.2	21.3
<b>454360</b>	2014 MD <sub>21</sub>		1 31.6	175°18'	3°1'/2.4	18	<b>502965</b>	2015 EC <sub>73</sub>		1 31.6	235°55'	0°6'/1.1	17
12 23	9 23.57	+8 9.0	1.916	2.653	16.6	22.2	12 23	9 17.67	+13 46.7	2.516	3.266	12.7	21.8
1 2	9 19.16	+7 57.7	1.823	2.656	13.6	22.0	1 2	9 13.95	+13 58.8	2.413	3.261	10.2	21.6
1 12	9 12.18	+8 1.4	1.750	2.658	10.0	21.8	1 12	9 8.28	+14 20.3	2.334	3.255	7.2	21.4
1 22	9 3.11	+8 19.4	1.702	2.660	6.1	21.6	1 22	9 1.08	+14 49.0	2.281	3.249	3.7	21.2
2 1	8 52.85	+8 49.3	1.682	2.660	3.2	21.4	2 1	8 52.98	+15 22.0	2.258	3.243	0.6	20.9
2 11	8 42.54	+9 27.0	1.692	2.661	5.1	21.5	2 11	8 44.82	+15 55.7	2.265	3.236	3.7	21.2
2 21	8 33.33	+10 7.9	1.730	2.660	9.0	21.7	2 21	8 37.41	+16 26.7	2.302	3.230	7.2	21.4
3 2	8 26.16	+10 47.3	1.794	2.659	12.7	21.9	3 2	8 31.48	+16 52.7	2.366	3.223	10.3	21.6
<b>155555</b>	1999 VM <sub>59</sub>		1 31.6	189°93'	5°3'/4.7	18	<b>208495</b>	2001 VP <sub>91</sub>		1 31.6	36°64'	3°7'/3.6	18
12 23	9 18.54	-0 44.0	2.579	3.263	14.0	20.6	12 23	9 14.94	+3 39.2	2.226	2.951	14.9	19.9
1 2	9 14.50	-1 11.8	2.476	3.262	11.9	20.5	1 2	9 11.95	+3 43.4	2.136	2.957	12.3	19.7
1 12	9 8.58	-1 24.4	2.393	3.260	9.5	20.3	1 12	9 6.97	+4 4.6	2.066	2.963	9.4	19.6
1 22	9 1.19	-1 20.6	2.336	3.258	7.1	20.1	1 22	9 0.42	+4 42.2	2.022	2.970	6.2	19.4
2 1	8 52.94	-1 0.5	2.306	3.256	5.5	20.0	2 1	8 53.01	+5 34.1	2.005	2.976	3.9	19.2
2 11	8 44.62	-0 26.2	2.306	3.253	5.8	20.0	2 11	8 45.59	+6 35.9	2.017	2.983	4.7	19.3
2 21	8 37.00	+0 18.8	2.334	3.250	7.8	20.2	2 21	8 39.01	+7 42.5	2.058	2.990	7.6	19.5
3 2	8 30.79	+1 10.1	2.390	3.246	10.3	20.3	3 2	8 33.99	+8 48.6	2.125	2.997	10.7	19.7
<b>417063</b>	2005 UH <sub>218</sub>		1 31.6	317°97'	3°1'/2.2	17	<b>13954</b>	Born		1 31.6	20°40'	10°4'/6.9	18
12 23	9 18.90	+9 44.1	1.742	2.503	17.2	20.9	12 23	9 16.21	-5 53.7	1.499	2.209	21.6	17.9
1 2	9 15.86	+9 20.2	1.645	2.493	14.1	20.7	1 2	9 14.00	-7 4.4	1.422	2.214	18.9	17.8
1 12	9 10.13	+9 10.3	1.567	2.484	10.4	20.4	1 12	9 8.95	-7 48.3	1.362	2.220	15.9	17.6
1 22	9 2.18	+9 14.0	1.513	2.475	6.3	20.2	1 22	9 1.62	-8 0.4	1.320	2.226	12.9	17.4
2 1	8 52.90	+9 29.6	1.486	2.466	3.2	19.9	2 1	8 52.96	-7 38.2	1.301	2.233	10.8	17.3
2 11	8 43.49	+9 53.6	1.487	2.458	5.3	20.1	2 11	8 44.29	-6 44.1	1.306	2.241	10.6	17.3
2 21	8 35.16	+10 21.6	1.515	2.450	9.6	20.3	2 21	8 36.88	-5 25.4	1.334	2.249	12.4	17.4
3 2	8 28.96	+10 49.2	1.566	2.442	13.6	20.5	3 2	8 31.78	-3 52.1	1.385	2.258	15.2	17.6
<b>238782</b>	2005 JK <sub>147</sub>		1 31.6	135°38'	7°3'/8.3	18	<b>293674</b>	2007 PC <sub>25</sub>		1 31.6	260°04'	0°5'/31.3	17
12 23	9 15.74	-11 28.8	2.942	3.553	13.7	21.2	12 23	9 23.29	+16 10.5	1.811	2.579	16.4	21.5
1 2	9 12.04	-11 55.4	2.849	3.563	12.2	21.1	1 2	9 19.58	+16 36.3	1.697	2.556	13.2	21.3
1 12	9 6.73	-12 3.5	2.774	3.573	10.5	20.9	1 12	9 12.95	+17 15.2	1.605	2.533	9.3	21.0
1 22	9 0.20	-11 51.1	2.722	3.582	8.8	20.8	1 22	9 3.76	+18 3.7	1.538	2.509	4.7	20.6
2 1	8 53.00	-11 17.8	2.695	3.590	7.6	20.8	2 1	8 52.87	+18 56.3	1.500	2.485	0.6	20.3
2 11	8 45.79	-10 25.3	2.696	3.599	7.3	20.8	2 11	8 41.56	+19 46.1	1.490	2.460	5.5	20.6
2 21	8 39.22	-9 17.3	2.724	3.607	8.1	20.8	2 21	8 31.24	+20 27.8	1.509	2.434	10.4	20.8
3 2	8 33.87	-7 58.7	2.779	3.615	9.6	20.9	3 2	8 23.15	+20 57.9	1.551	2.407	14.9	21.0
<b>8978</b>	Barbatus		1 31.6	288°79'	0°1'/31.5	18	<b>465566</b>	2008 WX <sub>103</sub>		1 31.6	85°55'	5°9'/27.5	18
12 23	9 17.13	+16 6.3	2.423	3.184	12.9	18.8	12 23	9 23.96	+33 0.1	2.172	2.951	13.6	21.1
1 2	9 13.65	+16 22.3	2.320	3.175	10.3	18.6	1 2	9 19.44	+33 57.8	2.102	2.962	11.0	21.0
1 12	9 8.14	+16 46.8	2.241	3.167	7.1	18.4	1 12	9 12.29	+34 53.7	2.056	2.972	8.3	20.8
1 22	9 1.02	+17 17.2	2.188	3.158	3.6	18.1	1 22	9 3.12	+35 40.7	2.035	2.982	6.2	20.7
2 1	8 52.97	+17 50.0	2.165	3.150	0.2	17.8	2 1	8 52.91	+36 12.2	2.043	2.993	6.1	20.7
2 11	8 44.84	+18 21.5	2.171	3.141	4.0	18.1	2 11	8 42.86	+36 24.3	2.079	3.003	8.0	20.8
2 21	8 37.50	+18 48.3	2.207	3.133	7.6	18.3	2 21	8 34.12	+36 16.2	2.142	3.013	10.6	21.0
3 2	8 31.69	+19 8.3	2.269	3.125	10.8	18.5	3 2	8 27.55	+35 50.1	2.228	3.023	13.1	21.2
<b>53614</b>	2000 CC <sub>86</sub>		1 31.6	185°97'	1°8'/30.8	18	<b>500300</b>	2012 QY <sub>27</sub>		1 31.6	135°22'	1°5'/1.8	17
12 23	9 26.49	+20 31.5	1.592	2.373	17.7	19.1	12 23	9 17.61	+10 30.2	2.674	3.409	12.4	22.2
1 2	9 22.21	+20 45.9	1.506	2.373	14.1	18.9	1 2	9 13.65	+10 42.1	2.582	3.418	10.0	22.1
1 12	9 14.67	+21 8.4	1.442	2.373	9.8	18.6	1 12	9 7.92	+11 4.6	2.514	3.427	7.1	21.9
1 22	9 4.50	+21 33.9	1.401	2.373	5.0	18.3	1 22	9 0.84	+11 35.9	2.472	3.435	4.0	21.7
2 1	8 52.81	+21 56.3	1.388	2.372	1.9	18.1	2 1	8 53.02	+12 13.3	2.461	3.443	1.5	21.5
2 11	8 41.17	+22 10.1	1.404	2.371	6.2	18.4	2 11	8 45.21	+12 53.5	2.480	3.451	3.5	21.7
2 21	8 31.04	+22 12.2	1.446	2.369	11.0	18.7	2 21	8 38.16	+13 33.1	2.529	3.458	6.6	21.9
3 2	8 23.60	+22 2.4	1.512	2.368	15.2	18.9	3 2	8 32.47	+14 9.1	2.606	3.465	9.4	22.1
<b>185220</b>	2006 TK <sub>62</sub>		1 31.6	131°14'	0°0'/31.6	18	<b>170309</b>	2003 SS <sub>36</sub>		1 31.6	135°56'	2°9'/29.9	18
12 23	9 20.05	+12 59.1	1.922	2.683	15.8	20.9	12 23	9 26.03	+23 10.2	1.893	2.667	15.5	20.3
1 2	9 16.42	+13 50.3	1.836	2.691	12.6	20.7	1 2	9 21.23	+23 45.2	1.814	2.677	12.3	20.1
1 12	9 10.30	+14 57.0	1.773	2.699	8.7	20.5	1 12	9 13.62	+24 25.7	1.758	2.687	8.5	19.9
1 22	9 2.18	+16 14.7	1.736	2.706	4.4	20.2	1 22	9 3.84	+25 5.9	1.727	2.696	4.6	19.6
2 1	8 52.92	+17 37.2	1.728	2.713	0.2	19.9	2 1	8 52.89	+25 39.4	1.726	2.705	3.0	19.6
2 11	8 43.65	+18 57.2	1.750	2.720	4.7	20.3	2 11	8 42.07	+26 1.3	1.754	2.713	6.1	19.8
2 21	8 35.45	+20 8.5	1.800	2.726	9.0	20.6	2 21	8 32.61	+26 9.1	1.810	2.721	10.0	20.0
3 2	8 29.24	+21 7.2	1.876	2.732	12.7	20.8	3 2	8 25.46	+26 3.0	1.891	2.728	13.4	20.2
<b>216020</b>	2005 UD <sub>510</sub>		1 31.6	179°60'	2°4'/1.8	18	<b>407458</b>	2010 UQ <sub>44</sub>		1 31.6	61°89'	0°4'/31.4	18
12 23	9 22.70	+10 55.0	1.533	2.300	18.9	20.9	12 23	9 24.40	+17 10.1	1.610	2.387	17.7	21.0
1 2	9 19.19	+10 43.8	1.447	2.301</									

EPHEMERIDES

1 31.6

1 31.6

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>493513</b>	2015 <i>CW</i> <sub>6</sub>		1 31.6 37°37'	1.0°/1.3	18		<b>190789</b>	2001 <i>RE</i> <sub>19</sub>		1 31.6 88°33'	1.3°/1.3	18	
12 23	9 17.55	+12 38.2	1.996	2.758	15.2	21.5	12 23	9 23.94	+12 11.2	1.502	2.272	19.1	20.2
1 2	9 14.31	+12 51.6	1.910	2.764	12.2	21.3	1 2	9 20.00	+12 22.5	1.432	2.289	15.3	20.0
1 12	9 8.75	+13 17.5	1.846	2.769	8.6	21.1	1 12	9 12.98	+12 50.1	1.382	2.306	10.8	19.8
1 22	9 1.38	+13 53.6	1.807	2.775	4.6	20.9	1 22	9 3.58	+13 30.8	1.356	2.324	5.7	19.5
2 1	8 53.00	+14 35.8	1.796	2.781	1.0	20.6	2 1	8 52.92	+14 19.1	1.356	2.341	1.3	19.3
2 11	8 44.65	+15 19.4	1.815	2.787	4.3	20.9	2 11	8 42.47	+15 8.4	1.385	2.357	5.3	19.6
2 21	8 37.31	+15 59.8	1.861	2.793	8.3	21.2	2 21	8 33.57	+15 52.8	1.440	2.374	10.1	19.9
3 2	8 31.82	+16 33.8	1.933	2.800	11.9	21.4	3 2	8 27.24	+16 28.5	1.519	2.390	14.3	20.2
<b>284099</b>	2005 <i>OG</i> <sub>31</sub>		1 31.6 191°47'	3°6'/4.3	18		<b>83146</b>	2001 <i>QJ</i> <sub>265</sub>		1 31.6 356°94'	3°7'/29.7	18	
12 23	9 15.06	+1 0.4	3.062	3.752	11.9	21.4	12 23	9 21.09	+26 37.5	1.806	2.598	15.5	18.6
1 2	9 11.48	+1 8.2	2.955	3.750	10.0	21.3	1 2	9 17.60	+26 55.0	1.723	2.595	12.3	18.4
1 12	9 6.35	+1 30.0	2.870	3.748	7.7	21.1	1 12	9 11.28	+27 14.5	1.661	2.592	8.7	18.2
1 22	9 0.05	+2 5.7	2.812	3.746	5.4	21.0	1 22	9 2.73	+27 30.3	1.624	2.591	5.1	17.9
2 1	8 53.06	+2 53.7	2.782	3.744	3.8	20.8	2 1	8 52.96	+27 36.8	1.614	2.590	3.9	17.9
2 11	8 46.02	+3 51.3	2.783	3.741	4.2	20.9	2 11	8 43.30	+27 29.9	1.633	2.590	6.7	18.0
2 21	8 39.53	+4 54.7	2.814	3.738	6.2	21.0	2 21	8 34.98	+27 8.5	1.677	2.590	10.5	18.3
3 2	8 34.17	+5 59.9	2.874	3.735	8.6	21.1	3 2	8 29.00	+26 33.9	1.746	2.592	14.0	18.5
<b>76597</b>	2000 <i>GP</i> <sub>157</sub>		1 31.6 23°22'	0°1'/31.6	18		<b>238666</b>	2005 <i>ED</i> <sub>148</sub>		1 31.6 158°26'	4°0'/28.6	18	
12 23	9 26.65	+20 13.5	1.297	2.094	20.2	17.9	12 23	9 21.58	+28 20.3	2.430	3.205	12.5	20.9
1 2	9 22.66	+19 30.0	1.228	2.102	16.1	17.6	1 2	9 17.25	+29 5.2	2.346	3.207	9.9	20.7
1 12	9 15.06	+18 51.6	1.178	2.112	11.2	17.4	1 12	9 10.65	+29 51.5	2.285	3.209	7.1	20.6
1 22	9 4.66	+18 15.6	1.151	2.123	5.6	17.1	1 22	9 2.30	+30 33.7	2.252	3.211	4.6	20.4
2 1	8 52.86	+17 39.4	1.150	2.135	0.3	16.7	2 1	8 52.98	+31 6.5	2.248	3.213	4.2	20.4
2 11	8 41.46	+17 0.9	1.176	2.148	6.0	17.2	2 11	8 43.72	+31 25.9	2.273	3.215	6.2	20.5
2 21	8 32.04	+16 20.0	1.227	2.162	11.3	17.5	2 21	8 35.45	+31 30.2	2.327	3.217	9.0	20.7
3 2	8 25.70	+15 37.1	1.301	2.177	15.8	17.8	3 2	8 28.99	+31 20.0	2.405	3.218	11.7	20.9
<b>144963</b>	2005 <i>EZ</i> <sub>79</sub>		1 31.6 273°72'	1°6'/30.7	18		<b>17809</b>	1998 <i>FR</i> <sub>78</sub>		1 31.6 90°57'	4°6'/4.9	18	
12 23	9 21.88	+19 7.1	1.780	2.559	16.2	20.5	12 23	9 15.47	-0 29.1	2.539	3.232	14.0	18.1
1 2	9 18.47	+19 34.6	1.674	2.541	13.0	20.2	1 2	9 12.07	-0 28.5	2.449	3.243	11.8	17.9
1 12	9 12.14	+20 12.4	1.590	2.522	9.0	19.9	1 12	9 6.88	-0 10.8	2.380	3.255	9.3	17.8
1 22	9 3.32	+20 56.4	1.531	2.503	4.6	19.6	1 22	9 0.35	+0 24.0	2.336	3.266	6.7	17.6
2 1	8 52.91	+21 40.2	1.500	2.483	1.7	19.4	2 1	8 53.07	+1 14.5	2.319	3.277	4.8	17.5
2 11	8 42.22	+22 17.7	1.497	2.464	5.9	19.6	2 11	8 45.81	+2 17.0	2.332	3.288	5.1	17.5
2 21	8 32.62	+22 44.0	1.521	2.444	10.6	19.8	2 21	8 39.29	+3 26.9	2.375	3.299	7.2	17.7
3 2	8 25.30	+22 57.1	1.570	2.424	14.8	20.0	3 2	8 34.15	+4 39.1	2.444	3.310	9.7	17.9
<b>74602</b>	1999 <i>RJ</i> <sub>4</sub>		1 31.6 101°21'	1°6'/1.3	18		<b>415236</b>	2012 <i>JF</i> <sub>9</sub>		1 31.6 336°54'	2°1'/30.4	16	
12 23	9 25.86	+13 10.0	1.419	2.193	19.8	19.6	12 23	9 18.85	+20 2.3	1.661	2.453	16.6	21.4
1 2	9 21.78	+12 59.5	1.345	2.204	16.0	19.3	1 2	9 16.10	+20 36.4	1.573	2.446	13.2	21.2
1 12	9 14.39	+13 3.7	1.289	2.215	11.3	19.1	1 12	9 10.44	+21 20.5	1.506	2.441	9.1	20.9
1 22	9 4.35	+13 20.1	1.257	2.225	6.1	18.8	1 22	9 2.41	+22 9.6	1.463	2.435	4.7	20.7
2 1	8 52.88	+13 44.5	1.252	2.236	1.6	18.5	2 1	8 52.98	+22 56.7	1.448	2.430	2.3	20.5
2 11	8 41.57	+14 11.4	1.273	2.246	5.7	18.8	2 11	8 43.47	+23 35.3	1.460	2.426	6.2	20.7
2 21	8 31.93	+14 35.9	1.321	2.256	10.8	19.1	2 21	8 35.23	+24 1.1	1.498	2.422	10.7	21.0
3 2	8 25.08	+14 54.5	1.393	2.265	15.2	19.4	3 2	8 29.35	+24 12.2	1.560	2.418	14.7	21.2
<b>318765</b>	2005 <i>SP</i> <sub>62</sub>		1 31.6 280°18'	0°7'/31.2	18		<b>52104</b>	2660 <i>P-L</i>		1 31.6 176°15'	0°8'/1.3	18	
12 23	9 20.20	+17 16.1	1.873	2.648	15.6	20.8	12 23	9 18.12	+12 49.9	2.661	3.405	12.3	20.0
1 2	9 16.85	+17 35.9	1.772	2.635	12.5	20.6	1 2	9 14.14	+13 5.1	2.563	3.406	9.8	19.8
1 12	9 10.82	+18 6.3	1.691	2.621	8.7	20.3	1 12	9 8.32	+13 29.8	2.489	3.407	6.9	19.7
1 22	9 2.57	+18 43.7	1.636	2.607	4.4	20.0	1 22	9 1.08	+14 1.8	2.442	3.408	3.7	19.4
2 1	8 52.95	+19 23.2	1.609	2.594	0.8	19.7	2 1	8 53.04	+14 38.4	2.424	3.409	0.8	19.2
2 11	8 43.15	+19 59.2	1.611	2.580	5.2	20.0	2 11	8 44.98	+15 16.0	2.438	3.409	3.5	19.4
2 21	8 34.39	+20 27.3	1.640	2.566	9.7	20.3	2 21	8 37.64	+15 51.4	2.482	3.409	6.8	19.6
3 2	8 27.73	+20 45.1	1.693	2.552	13.6	20.5	3 2	8 31.70	+16 21.9	2.552	3.408	9.7	19.8
<b>489654</b>	2007 <i>UA</i> <sub>38</sub>		1 31.6 13°38'	14°2'/11.9	18		<b>284690</b>	2008 <i>SR</i> <sub>64</sub>		1 31.6 246°83'	2°7'/30.2	18	
12 23	9 14.80	-19 4.4	1.908	2.509	20.5	20.4	12 23	9 25.44	+21 37.9	1.606	2.391	17.4	21.8
1 2	9 12.42	-20 55.0	1.833	2.514	19.0	20.3	1 2	9 21.63	+22 9.4	1.510	2.379	13.9	21.6
1 12	9 7.64	-22 18.6	1.773	2.520	17.4	20.2	1 12	9 14.50	+22 49.9	1.435	2.368	9.7	21.3
1 22	9 0.90	-23 8.6	1.730	2.527	15.9	20.1	1 22	9 4.57	+23 33.6	1.385	2.356	5.2	21.0
2 1	8 53.02	-23 20.2	1.705	2.535	14.7	20.0	2 1	8 52.90	+24 13.0	1.362	2.343	2.9	20.8
2 11	8 45.08	-22 52.7	1.701	2.544	14.2	20.0	2 11	8 41.03	+24 41.0	1.367	2.330	6.9	21.0
2 21	8 38.13	-21 50.2	1.718	2.553	14.5	20.0	2 21	8 30.54	+24 53.6	1.398	2.317	11.7	21.3
3 2	8 33.09	-20 20.3	1.755	2.564	15.5	20.1	3 2	8 22.73	+24 50.3	1.453	2.303	16.0	21.5
<b>237711</b>	2001 <i>UB</i> <sub>196</sub>		1 31.6 158°25'	3°9'/28.5	18		<b>176828</b>	2002 <i>TY</i> <sub>162</sub>		1 31.6 70°41'	1°6'/30.4	18	
12 23	9 20.73	+28 32.2	2.554	3.328	12.0	21.1	12 23	9 20.00	+15 37.8	1.654	2.434	17.2	19.7
1 2	9 16.46	+29 18.5	2.469	3.330	9.5	20.9	1 2	9 16.77	+16 56.4	1.584	2.451	13.5	19.5
1 12	9 10.05	+30 6.0	2.409	3.332	6.8	20.7	1 12	9 10.73	+18 30.9	1.536	2.469	9.2	19.3
1 22	9 1.97	+30 49.5	2.376	3.335	4.5	20.6	1 22	9 2.47	+20 14.2	1.514	2.486	4.5	19.1
2 1	8 52.98	+31 23.9	2.372	3.337	4.1	20.6	2 1	8 53.00	+21 57.2	1.520	2.503	1.8	18.9
2 11	8 44.03	+31 45.3	2.398	3.338	6.1	20.7	2 11	8 43.61	+23 30.3	1.555	2.520	5.9	19.2
2 21	8 36.02	+31 52.2	2.452	3.340	8.7	20.9	2 21	8 35.55	+24 47.1	1.617	2.537	10.3	19.5
3 2	8 29.71	+31 44.7	2.532	3.341	11.3	21.0	3 2	8 29.80	+25 44.4	1.704	2.554	14.0	19.8
<b>146457</b>	2001 <i>RH</i> <sub>37</sub>		1 31.6 33°95'	7°0'/5.9	18		<b>122575</b>	2000 <i>RM</i> <sub>16</sub>		1 31.6 152°76'	1°1'/1.2	18	
12 23	9 15.48	-3 39.0	1.656	2.369	19.7	19.6	12 23	9 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>453273</b>	2008 <i>SB</i> <sub>305</sub>		1 31.6 205°89	3°1/29.7	18		<b>417202</b>	2005 <i>XL</i> <sub>5</sub>		1 31.6 82°48	0°8/ 1.1	18	
12 23	9 26.77	+22 50.3	1.988	2.757	15.1	22.7	12 23	9 22.23	+13 57.4	1.931	2.690	15.8	22.1
1 2	9 21.97	+23 38.6	1.891	2.751	12.0	22.5	1 2	9 17.95	+14 0.3	1.856	2.707	12.6	22.0
1 12	9 14.33	+24 34.3	1.816	2.744	8.4	22.3	1 12	9 11.21	+14 14.2	1.802	2.725	8.8	21.8
1 22	9 4.34	+25 31.4	1.769	2.737	4.6	22.0	1 22	9 2.61	+14 36.4	1.774	2.742	4.6	21.5
2 1	8 52.92	+26 22.6	1.750	2.728	3.2	21.9	2 1	8 53.06	+15 3.2	1.775	2.760	0.8	21.3
2 11	8 41.36	+27 1.7	1.762	2.718	6.4	22.1	2 11	8 43.68	+15 30.2	1.805	2.777	4.4	21.6
2 21	8 30.95	+27 25.1	1.802	2.708	10.3	22.3	2 21	8 35.50	+15 54.0	1.864	2.794	8.4	21.9
3 2	8 22.78	+27 32.4	1.867	2.696	13.9	22.5	3 2	8 29.35	+16 12.1	1.948	2.811	12.0	22.1
<b>279892</b>	2001 <i>QH</i> <sub>134</sub>		1 31.6 141°06	6°4/ 6.4	18		<b>335192</b>	2005 <i>EC</i> <sub>24</sub>		1 31.6 163°90	3°2/29.6	18	
12 23	9 17.25	- 6 24.4	2.862	3.507	13.5	21.5	12 23	9 22.55	+25 53.5	2.221	2.996	13.5	21.2
1 2	9 13.26	- 6 59.3	2.768	3.516	11.7	21.4	1 2	9 18.18	+26 19.1	2.133	2.996	10.7	21.0
1 12	9 7.61	- 7 18.1	2.695	3.525	9.8	21.2	1 12	9 11.40	+26 47.1	2.068	2.996	7.5	20.8
1 22	9 0.70	- 7 19.0	2.645	3.534	7.9	21.1	1 22	9 2.74	+27 12.6	2.031	2.996	4.4	20.6
2 1	8 53.08	- 7 1.6	2.621	3.542	6.6	21.0	2 1	8 53.06	+27 30.5	2.022	2.996	3.3	20.5
2 11	8 45.46	- 6 27.5	2.627	3.550	6.5	21.0	2 11	8 43.44	+27 37.2	2.042	2.997	5.8	20.7
2 21	8 38.50	- 5 40.1	2.660	3.557	7.8	21.1	2 21	8 34.91	+27 31.0	2.091	2.997	9.1	20.9
3 2	8 32.79	- 4 43.6	2.720	3.564	9.6	21.3	3 2	8 28.33	+27 12.3	2.165	2.997	12.1	21.1
<b>510655</b>	2012 <i>TF</i> <sub>266</sub>		1 31.6 210°44	4°0/ 3.9	17		<b>119771</b>	2001 <i>YV</i> <sub>151</sub>		1 31.6 65°89	3°3/29.8	18	
12 23	9 15.96	+ 2 36.7	2.530	3.239	13.7	21.7	12 23	9 23.82	+24 27.4	1.781	2.566	15.9	20.1
1 2	9 12.55	+ 2 29.2	2.428	3.237	11.5	21.5	1 2	9 19.64	+24 59.5	1.709	2.578	12.6	19.9
1 12	9 7.30	+ 2 36.7	2.348	3.235	8.8	21.3	1 12	9 12.62	+25 36.1	1.659	2.590	8.8	19.7
1 22	9 0.61	+ 2 59.3	2.293	3.233	6.1	21.1	1 22	9 3.39	+26 10.9	1.634	2.602	4.9	19.5
2 1	8 53.09	+ 3 35.6	2.266	3.231	4.2	21.0	2 1	8 53.03	+26 37.7	1.638	2.615	3.5	19.4
2 11	8 45.50	+ 4 22.8	2.269	3.229	4.8	21.0	2 11	8 42.88	+26 51.6	1.669	2.627	6.5	19.6
2 21	8 38.62	+ 5 16.7	2.300	3.227	7.2	21.2	2 21	8 34.16	+26 50.9	1.728	2.639	10.3	19.9
3 2	8 33.13	+ 6 12.9	2.359	3.225	10.0	21.4	3 2	8 27.83	+26 36.1	1.810	2.652	13.7	20.1
<b>122782</b>	2000 <i>SU</i> <sub>84</sub>		1 31.6 75°40	2°5/30.1	18		<b>49293</b>	1998 <i>VK</i> <sub>1</sub>		1 31.6 97°29	8°0/26.5	18	
12 23	9 25.35	+22 1.2	1.932	2.705	15.3	20.0	12 23	9 29.14	+36 15.0	1.854	2.634	15.6	18.9
1 2	9 20.33	+22 41.6	1.875	2.737	12.0	19.9	1 2	9 24.15	+37 39.9	1.797	2.652	12.8	18.7
1 12	9 12.75	+23 27.5	1.840	2.769	8.2	19.7	1 12	9 15.88	+39 0.5	1.763	2.670	10.1	18.6
1 22	9 3.30	+24 13.1	1.831	2.800	4.3	19.5	1 22	9 5.07	+40 6.8	1.754	2.688	8.2	18.5
2 1	8 52.98	+24 52.5	1.852	2.831	2.6	19.5	2 1	8 52.97	+40 49.9	1.773	2.705	8.3	18.6
2 11	8 43.01	+25 20.9	1.902	2.862	5.6	19.7	2 11	8 41.18	+41 5.1	1.818	2.722	10.2	18.7
2 21	8 34.43	+25 36.4	1.980	2.892	9.2	20.0	2 21	8 31.14	+40 53.1	1.888	2.739	12.7	18.9
3 2	8 28.05	+25 38.9	2.083	2.922	12.3	20.3	3 2	8 23.89	+40 17.8	1.980	2.755	15.2	19.1
<b>451077</b>	2009 <i>BC</i> <sub>63</sub>		1 31.6 63°58	1°0/31.2	18		<b>231054</b>	2005 <i>GN</i> <sub>220</sub>		1 31.6 206°03	5°0/28.2	18	
12 23	9 26.20	+18 22.8	1.396	2.183	19.4	20.8	12 23	9 25.17	+32 50.3	2.479	3.248	12.4	20.3
1 2	9 21.95	+18 34.2	1.336	2.206	15.4	20.6	1 2	9 20.13	+33 26.9	2.392	3.245	10.0	20.1
1 12	9 14.37	+18 56.3	1.296	2.228	10.5	20.4	1 12	9 12.68	+34 1.5	2.328	3.243	7.5	19.9
1 22	9 4.27	+19 23.7	1.279	2.251	5.2	20.1	1 22	9 3.36	+34 28.3	2.291	3.240	5.5	19.8
2 1	8 52.95	+19 50.1	1.289	2.274	1.1	19.9	2 1	8 53.05	+34 42.0	2.284	3.238	5.2	19.8
2 11	8 42.05	+20 9.9	1.327	2.297	5.9	20.3	2 11	8 42.82	+34 39.2	2.306	3.235	7.0	19.9
2 21	8 32.99	+20 19.9	1.391	2.320	10.8	20.6	2 21	8 33.70	+34 19.4	2.355	3.231	9.5	20.0
3 2	8 26.78	+20 19.3	1.477	2.343	14.9	20.9	3 2	8 26.53	+33 44.3	2.430	3.228	12.0	20.2
<b>256828</b>	2008 <i>CA</i> <sub>144</sub>		1 31.6 98°27	0°9/31.0	18		<b>94958</b>	2001 <i>YP</i> <sub>95</sub>		1 31.6 110°07	4°0/29.4	18	
12 23	9 25.66	+18 25.0	2.062	2.822	14.9	20.6	12 23	9 26.22	+24 14.7	1.651	2.436	17.0	20.0
1 2	9 20.42	+18 47.0	1.994	2.848	11.7	20.4	1 2	9 21.84	+25 9.7	1.581	2.450	13.4	19.8
1 12	9 12.76	+19 16.6	1.948	2.874	8.0	20.2	1 12	9 14.32	+26 11.0	1.532	2.463	9.4	19.6
1 22	9 3.32	+19 49.4	1.929	2.900	4.0	20.0	1 22	9 4.33	+27 10.8	1.509	2.476	5.4	19.4
2 1	8 53.01	+20 20.8	1.940	2.925	1.0	19.8	2 1	8 53.01	+28 0.9	1.514	2.489	4.2	19.4
2 11	8 42.96	+20 46.6	1.982	2.949	4.6	20.1	2 11	8 41.89	+28 34.6	1.546	2.501	7.3	19.6
2 21	8 34.17	+21 4.0	2.052	2.972	8.4	20.4	2 21	8 32.35	+28 49.4	1.606	2.513	11.3	19.8
3 2	8 27.42	+21 12.2	2.148	2.995	11.7	20.7	3 2	8 25.44	+28 46.1	1.688	2.524	14.8	20.1
<b>519529</b>	2012 <i>JT</i> <sub>67</sub>		1 31.6 207°28	0°4/31.3	17		<b>297193</b>	2010 <i>XZ</i> <sub>66</sub>		1 31.6 137°12	2°4/29.9	18	
12 23	9 19.29	+15 31.1	2.534	3.286	12.6	22.8	12 23	9 21.81	+20 40.0	2.089	2.861	14.3	21.4
1 2	9 15.30	+16 9.0	2.431	3.281	10.0	22.6	1 2	9 17.70	+21 35.6	2.008	2.870	11.3	21.2
1 12	9 9.28	+16 56.9	2.351	3.275	6.9	22.3	1 12	9 11.14	+22 39.5	1.949	2.879	7.8	21.0
1 22	9 1.66	+17 51.6	2.298	3.268	3.5	22.1	1 22	9 2.65	+23 46.0	1.917	2.887	4.1	20.8
2 1	8 53.08	+18 48.6	2.277	3.262	0.5	21.8	2 1	8 53.09	+24 48.6	1.915	2.895	2.5	20.7
2 11	8 44.39	+19 43.4	2.286	3.254	4.0	22.1	2 11	8 43.54	+25 41.4	1.943	2.902	5.6	20.9
2 21	8 36.44	+20 31.8	2.325	3.246	7.5	22.3	2 21	8 35.08	+26 20.7	1.999	2.909	9.2	21.1
3 2	8 29.99	+21 11.3	2.391	3.238	10.6	22.5	3 2	8 28.57	+26 45.2	2.080	2.916	12.4	21.4
<b>396853</b>	2004 <i>SG</i>		1 31.6 121°59	11°3/ 9.9	16		<b>194286</b>	2001 <i>UF</i> <sub>49</sub>		1 31.6 97°05	0°8/ 1.1	17	
12 23	9 24.33	-16 27.2	2.171	2.755	18.6	22.5	12 23	9 25.58	+12 35.2	1.663	2.422	17.9	21.2
1 2	9 19.41	-17 40.6	2.097	2.778	16.9	22.4	1 2	9 20.93	+12 57.8	1.596	2.447	14.3	21.0
1 12	9 12.15	-18 28.8	2.038	2.800	15.0	22.3	1 12	9 13.44	+13 35.3	1.549	2.472	10.0	20.8
1 22	9 3.08	-18 47.1	1.999	2.821	13.1	22.2	1 22	9 3.79	+14 23.9	1.528	2.496	5.2	20.5
2 1	8 53.03	-18 32.8	1.983	2.840	11.7	22.2	2 1	8 53.04	+15 17.9	1.534	2.519	0.8	20.3
2 11	8 43.04	-17 46.9	1.992	2.859	11.3	22.2	2 11	8 42.55	+16 10.9	1.570	2.542	4.9	20.6
2 21	8 34.11	-16 34.4	2.025	2.877	11.9	22.2	2 21	8 33.53	+16 57.5	1.634	2.564	9.4	20.9
3 2	8 27.06	-15 3.1	2.083	2.894	13.3	22.4	3 2	8 26.91	+17 34.5	1.723	2.585	13.3	21.2
<b>250459</b>	2004 <i>BT</i> <sub>55</sub>		1 31.6 354°14	0°8/31.2	18		<b>90075</b>	2002 <i>VU</i> <sub>94</sub>		1 31.6 301°49	7°8/ 3.0	18	R
12 23	9 20.32	+17 36.8	1.581	2.368									

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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>170986</b>	2005 <i>CF</i> <sub>58</sub>		1 31.6 253°53	2°2/ 1.7	18		<b>462845</b>	2010 <i>UE</i> <sub>26</sub>		1 31.6 27°01	9°3/26.4	18	
12 23	9 22.32	+11 34.3	1.767	2.525	17.1	20.3	12 23	9 23.71	+35 32.3	1.435	2.241	18.1	20.3
1 2	9 18.60	+11 19.0	1.668	2.517	13.9	20.0	1 2	9 20.82	+37 2.3	1.378	2.250	14.8	20.1
1 12	9 12.10	+11 16.5	1.589	2.508	10.1	19.8	1 12	9 14.12	+38 28.9	1.343	2.260	11.7	19.9
1 22	9 3.28	+11 25.9	1.535	2.499	5.7	19.5	1 22	9 4.39	+39 39.8	1.330	2.270	9.6	19.8
2 1	8 53.06	+11 44.6	1.508	2.490	2.2	19.2	2 1	8 53.06	+40 24.0	1.342	2.281	9.7	19.9
2 11	8 42.70	+12 8.5	1.509	2.481	5.1	19.4	2 11	8 42.05	+40 35.3	1.378	2.293	11.9	20.0
2 21	8 33.45	+12 33.4	1.538	2.471	9.6	19.6	2 21	8 33.07	+40 14.5	1.437	2.306	14.9	20.2
3 2	8 26.40	+12 55.7	1.592	2.462	13.8	19.9	3 2	8 27.33	+39 26.7	1.516	2.319	17.8	20.5
<b>246322</b>	2007 <i>TH</i> <sub>183</sub>		1 31.6 29°66	4°5/28.6	18		<b>130057</b>	1999 <i>VA</i> <sub>179</sub>		1 31.6 137°76	4°5/28.1	18	
12 23	9 21.23	+28 42.9	2.134	2.917	13.7	20.4	12 23	9 25.72	+26 49.6	2.164	2.936	13.9	21.0
1 2	9 17.31	+29 26.9	2.054	2.920	10.9	20.2	1 2	9 20.81	+28 9.5	2.091	2.951	11.0	20.8
1 12	9 10.89	+30 12.1	1.998	2.924	7.9	20.0	1 12	9 13.31	+29 33.3	2.041	2.965	7.9	20.7
1 22	9 2.52	+30 52.5	1.968	2.928	5.2	19.8	1 22	9 3.77	+30 53.6	2.019	2.978	5.2	20.5
2 1	8 53.10	+31 22.1	1.966	2.932	4.7	19.8	2 1	8 53.09	+32 2.5	2.028	2.991	4.8	20.5
2 11	8 43.77	+31 36.5	1.993	2.936	6.9	19.9	2 11	8 42.47	+32 54.2	2.066	3.003	7.1	20.7
2 21	8 35.60	+31 34.3	2.047	2.940	9.9	20.1	2 21	8 33.03	+33 26.1	2.132	3.014	10.1	20.9
3 2	8 29.47	+31 16.4	2.125	2.945	12.8	20.3	3 2	8 25.69	+33 38.8	2.222	3.024	12.9	21.1
<b>300324</b>	2007 <i>QZ</i> <sub>2</sub>		1 31.6 95°13	4°3/29.2	18		<b>248557</b>	2005 <i>YA</i> <sub>107</sub>		1 31.6 121°01	1°8/30.2	18	
12 23	9 27.29	+25 31.8	1.705	2.488	16.6	20.6	12 23	9 21.54	+19 47.6	2.338	3.102	13.2	21.5
1 2	9 22.49	+26 29.0	1.642	2.509	13.1	20.4	1 2	9 17.12	+20 38.7	2.260	3.118	10.4	21.3
1 12	9 14.63	+27 30.6	1.601	2.530	9.2	20.3	1 12	9 10.53	+21 37.1	2.206	3.134	7.1	21.1
1 22	9 4.42	+28 28.6	1.586	2.551	5.5	20.1	1 22	9 2.29	+22 38.0	2.180	3.150	3.6	20.9
2 1	8 53.04	+29 15.0	1.599	2.571	4.5	20.1	2 1	8 53.15	+23 36.0	2.183	3.165	1.9	20.8
2 11	8 41.95	+29 44.0	1.640	2.591	7.4	20.3	2 11	8 44.09	+24 26.1	2.218	3.179	4.8	21.1
2 21	8 32.48	+29 53.8	1.709	2.610	11.0	20.5	2 21	8 36.01	+25 4.9	2.282	3.193	8.1	21.3
3 2	8 25.62	+29 45.7	1.800	2.629	14.3	20.8	3 2	8 29.66	+25 31.2	2.371	3.207	11.1	21.5
<b>105017</b>	2000 <i>KT</i> <sub>13</sub>		1 31.6 203°65	4°7/27.7	18		<b>228265</b>	1999 <i>TF</i> <sub>174</sub>		1 31.6 88°22	0°4/31.9	17	
12 23	9 20.64	+29 43.0	2.445	3.222	12.3	20.2	12 23	9 25.13	+13 23.2	1.418	2.194	19.7	20.9
1 2	9 16.65	+30 45.8	2.358	3.220	9.9	20.0	1 2	9 21.15	+13 49.8	1.353	2.214	15.7	20.6
1 12	9 10.37	+31 50.2	2.296	3.218	7.2	19.9	1 12	9 13.91	+14 33.3	1.307	2.235	10.9	20.4
1 22	9 2.27	+32 50.0	2.262	3.216	5.1	19.7	1 22	9 4.15	+15 29.0	1.285	2.255	5.6	20.2
2 1	8 53.12	+33 39.1	2.256	3.214	4.9	19.7	2 1	8 53.08	+16 29.8	1.290	2.275	0.4	19.8
2 11	8 43.95	+34 12.7	2.280	3.212	6.9	19.8	2 11	8 42.27	+17 27.9	1.322	2.294	5.6	20.3
2 21	8 35.73	+34 28.9	2.331	3.209	9.5	20.0	2 21	8 33.15	+18 17.2	1.381	2.313	10.6	20.6
3 2	8 29.30	+34 28.0	2.407	3.207	12.1	20.2	3 2	8 26.78	+18 54.1	1.464	2.332	14.9	20.9
<b>343077</b>	2009 <i>CG</i> <sub>62</sub>		1 31.6 71°42	0°1/31.7	18		<b>492507</b>	2014 <i>OM</i> <sub>25</sub>		1 31.6 243°13	0°6/31.3	17	
12 23	9 19.03	+16 16.6	2.365	3.124	13.2	20.9	12 23	9 21.90	+15 44.7	1.721	2.494	16.9	23.0
1 2	9 15.09	+16 22.7	2.277	3.130	10.5	20.7	1 2	9 18.52	+16 19.0	1.622	2.484	13.5	22.7
1 12	9 9.11	+16 36.4	2.211	3.136	7.3	20.5	1 12	9 12.21	+17 7.5	1.544	2.474	9.4	22.4
1 22	9 1.55	+16 55.3	2.173	3.142	3.7	20.3	1 22	9 3.44	+18 6.3	1.491	2.462	4.7	22.1
2 1	8 53.16	+17 16.2	2.163	3.149	0.1	20.0	2 1	8 53.12	+19 9.1	1.466	2.451	0.7	21.8
2 11	8 44.81	+17 35.7	2.184	3.155	3.9	20.4	2 11	8 42.57	+20 8.4	1.470	2.439	5.6	22.1
2 21	8 37.36	+17 51.3	2.234	3.161	7.4	20.6	2 21	8 33.15	+20 58.4	1.501	2.427	10.4	22.4
3 2	8 31.54	+18 1.0	2.311	3.167	10.6	20.8	3 2	8 26.03	+21 35.4	1.556	2.415	14.6	22.6
<b>446836</b>	2001 <i>SW</i> <sub>88</sub>		1 31.6 106°95	0°5/31.9	15		<b>461393</b>	2001 <i>SJ</i> <sub>23</sub>		1 31.6 101°33	1°2/30.9	18	
12 23	9 26.91	+14 17.6	1.724	2.483	17.4	22.8	12 23	9 23.77	+18 49.4	2.002	2.768	15.0	21.9
1 2	9 21.91	+14 32.9	1.654	2.506	13.8	22.6	1 2	9 19.16	+19 16.2	1.928	2.787	11.9	21.7
1 12	9 14.09	+15 0.8	1.605	2.529	9.6	22.4	1 12	9 12.06	+19 50.8	1.877	2.805	8.1	21.5
1 22	9 4.12	+15 37.4	1.581	2.550	4.9	22.1	1 22	9 3.08	+20 29.1	1.853	2.823	4.0	21.3
2 1	8 53.06	+16 17.7	1.586	2.571	0.5	21.8	2 1	8 53.14	+21 5.7	1.857	2.841	1.3	21.1
2 11	8 42.25	+16 56.1	1.621	2.592	4.9	22.2	2 11	8 43.38	+21 35.9	1.892	2.858	4.9	21.4
2 21	8 32.89	+17 28.3	1.683	2.611	9.3	22.5	2 21	8 34.84	+21 56.9	1.955	2.875	8.7	21.6
3 2	8 25.91	+17 51.8	1.771	2.630	13.2	22.8	3 2	8 28.35	+22 7.4	2.043	2.892	12.1	21.9
<b>381980</b>	2010 <i>GA</i> <sub>75</sub>		1 31.6 308°70	7°9/ 4.1	17		<b>268500</b>	2005 <i>YF</i> <sub>86</sub>		1 31.6 144°47	0°6/ 1.0	18	
12 23	9 20.63	- 1 9.1	2.102	2.795	16.5	19.7	12 23	9 20.97	+14 38.1	2.114	2.872	14.6	21.1
1 2	9 16.85	- 2 36.3	1.991	2.778	14.4	19.5	1 2	9 16.92	+14 42.6	2.024	2.875	11.7	20.9
1 12	9 10.69	- 3 50.3	1.899	2.760	11.9	19.3	1 12	9 10.55	+14 56.9	1.955	2.878	8.2	20.7
1 22	9 2.54	- 4 47.3	1.831	2.742	9.5	19.1	1 22	9 2.37	+15 18.7	1.913	2.881	4.2	20.5
2 1	8 53.12	- 5 24.0	1.790	2.725	8.1	19.0	2 1	8 53.17	+15 44.3	1.899	2.884	0.6	20.2
2 11	8 43.43	- 5 39.5	1.776	2.708	8.5	19.0	2 11	8 43.99	+16 10.0	1.916	2.887	4.2	20.5
2 21	8 34.52	- 5 35.8	1.788	2.691	10.5	19.1	2 21	8 35.81	+16 32.3	1.961	2.889	8.2	20.7
3 2	8 27.36	- 5 16.7	1.825	2.675	13.2	19.2	3 2	8 29.47	+16 48.9	2.031	2.892	11.7	21.0
<b>265671</b>	2005 <i>UD</i> <sub>53</sub>		1 31.6 93°70	1°2/30.9	18		<b>278366</b>	2007 <i>KJ</i> <sub>8</sub>		1 31.6 281°87	8°4/ 6.6	17	
12 23	9 21.96	+18 1.4	1.980	2.749	15.1	21.1	12 23	9 16.70	- 7 46.4	2.197	2.857	16.7	20.9
1 2	9 17.78	+18 36.9	1.906	2.767	11.9	20.9	1 2	9 13.76	- 8 20.8	2.074	2.831	14.9	20.7
1 12	9 11.14	+19 21.6	1.855	2.784	8.1	20.7	1 12	9 8.59	- 8 33.7	1.970	2.806	12.7	20.5
1 22	9 2.62	+20 10.8	1.830	2.801	4.0	20.5	1 22	9 1.52	- 8 21.3	1.887	2.780	10.4	20.3
2 1	8 53.12	+20 59.1	1.834	2.818	1.3	20.3	2 1	8 53.20	- 7 41.6	1.829	2.754	8.7	20.1
2 11	8 43.76	+21 41.0	1.867	2.834	4.9	20.6	2 11	8 44.53	- 6 35.7	1.798	2.727	8.6	20.0
2 21	8 35.59	+22 13.1	1.929	2.850	8.8	20.9	2 21	8 36.52	- 5 8.5	1.793	2.700	10.3	20.1
3 2	8 29.42	+22 33.7	2.016	2.866	12.2	21.1	3 2	8 30.09	- 3 27.0	1.815	2.673	12.9	20.2
<b>66883</b>	1999 <i>VC</i> <sub>70</sub>		1 31.6 90°88	0°8/ 1.2	18		<b>285202</b>	1996 <i>XY</i> <sub>9</sub>		1 31.6 61°69	0°8/31.3	18	
12 23	9 19.41	+13 21.9	2.082	2.84									

EPHEMERIDES

1 31.6

1 31.6

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>238896</b>	2005 <i>YH</i> <sub>138</sub>		1 31.6 267°73	2°0/30.5	18		<b>348545</b>	2005 <i>UK</i> <sub>286</sub>		1 31.6 26°21	2°1/1.7	18	
12 23	9 22.18	+19 8.5	1.589	2.376	17.5	21.5	12 23	9 18.69	+10 31.2	1.236	2.027	21.3	20.8
1 2	9 19.09	+19 47.0	1.492	2.363	14.0	21.2	1 2	9 16.67	+10 38.8	1.163	2.032	17.3	20.6
1 12	9 12.81	+20 38.0	1.416	2.350	9.7	20.9	1 12	9 11.24	+11 7.9	1.108	2.037	12.4	20.3
1 22	9 3.82	+21 36.3	1.365	2.336	5.0	20.6	1 22	9 3.01	+11 56.2	1.075	2.043	6.8	20.0
2 1	8 53.11	+22 34.1	1.340	2.323	2.2	20.4	2 1	8 53.17	+12 57.9	1.066	2.050	2.1	19.7
2 11	8 42.14	+23 23.5	1.343	2.309	6.5	20.7	2 11	8 43.39	+14 4.3	1.083	2.058	6.0	20.0
2 21	8 32.44	+23 59.0	1.373	2.296	11.5	20.9	2 21	8 35.25	+15 7.0	1.124	2.066	11.4	20.3
3 2	8 25.30	+24 18.3	1.425	2.282	15.9	21.1	3 2	8 29.97	+15 59.7	1.188	2.074	16.2	20.6
<b>429928</b>	2012 <i>TP</i> <sub>240</sub>		1 31.6 175°78	3°0/3.3	17		<b>456830</b>	2007 <i>TF</i> <sub>428</sub>		1 31.6 71°74	2°7/30.1	18	
12 23	9 16.37	+4 57.0	2.681	3.396	12.9	21.9	12 23	9 22.79	+20 45.0	1.568	2.358	17.5	21.5
1 2	9 12.78	+5 1.1	2.581	3.397	10.6	21.7	1 2	9 19.25	+21 30.8	1.497	2.369	13.8	21.2
1 12	9 7.43	+5 18.6	2.503	3.398	8.0	21.5	1 12	9 12.63	+22 26.3	1.446	2.380	9.5	21.0
1 22	9 0.72	+5 48.9	2.450	3.399	5.2	21.3	1 22	9 3.56	+23 25.0	1.420	2.391	5.0	20.8
2 1	8 53.24	+6 30.2	2.427	3.400	3.1	21.2	2 1	8 53.16	+24 18.8	1.422	2.403	2.8	20.7
2 11	8 45.71	+7 19.3	2.434	3.400	4.0	21.3	2 11	8 42.91	+25 0.8	1.451	2.414	6.6	20.9
2 21	8 38.86	+8 12.3	2.471	3.400	6.7	21.4	2 21	8 34.18	+25 27.0	1.506	2.425	10.9	21.2
3 2	8 33.32	+9 5.1	2.535	3.399	9.5	21.6	3 2	8 28.02	+25 36.7	1.585	2.437	14.8	21.5
<b>242940</b>	2006 <i>QT</i> <sub>165</sub>		1 31.6 222°55	1°7/2.0	17		<b>369714</b>	2012 <i>DF</i> <sub>50</sub>		1 31.6 189°19	2°5/2.6	17	
12 23	9 18.23	+10 14.9	2.853	3.583	11.8	21.7	12 23	9 19.48	+7 16.5	2.408	3.133	13.9	22.2
1 2	9 14.17	+10 13.5	2.743	3.574	9.6	21.5	1 2	9 15.48	+7 24.8	2.306	3.133	11.4	22.0
1 12	9 8.37	+10 21.5	2.655	3.565	7.0	21.3	1 12	9 9.45	+7 47.0	2.227	3.131	8.4	21.8
1 22	9 1.20	+10 37.9	2.595	3.556	4.0	21.1	1 22	9 1.81	+8 21.9	2.173	3.129	5.1	21.6
2 1	8 53.22	+11 0.9	2.565	3.546	1.8	20.9	2 1	8 53.23	+9 7.1	2.149	3.127	2.6	21.4
2 11	8 45.16	+11 27.7	2.566	3.535	3.5	21.0	2 11	8 44.57	+9 58.6	2.155	3.124	4.1	21.5
2 21	8 37.73	+11 55.5	2.597	3.525	6.5	21.2	2 21	8 36.69	+10 52.1	2.191	3.120	7.4	21.7
3 2	8 31.57	+12 21.9	2.655	3.514	9.3	21.4	3 2	8 30.34	+11 43.5	2.254	3.116	10.6	21.9
<b>233505</b>	2007 <i>EK</i> <sub>82</sub>		1 31.6 286°22	6°5/28.2	18		<b>206274</b>	2002 <i>YZ</i> <sub>28</sub>		1 31.6 30°48	2°7/29.7	18	
12 23	9 25.01	+28 31.4	1.454	2.255	18.1	20.4	12 23	9 16.59	+19 49.2	1.715	2.509	16.1	19.5
1 2	9 22.07	+29 34.3	1.360	2.236	14.7	20.1	1 2	9 14.03	+20 58.1	1.650	2.525	12.6	19.3
1 12	9 15.36	+30 43.6	1.286	2.216	10.8	19.9	1 12	9 8.83	+22 17.5	1.607	2.543	8.6	19.1
1 22	9 5.30	+31 49.5	1.236	2.197	7.4	19.6	1 22	9 1.58	+23 40.5	1.590	2.561	4.5	18.9
2 1	8 53.06	+32 40.4	1.211	2.177	6.9	19.5	2 1	8 53.24	+24 58.8	1.601	2.580	2.9	18.9
2 11	8 40.47	+33 7.0	1.212	2.157	10.1	19.6	2 11	8 45.04	+26 5.1	1.639	2.600	6.2	19.1
2 21	8 29.47	+33 5.7	1.238	2.138	14.5	19.8	2 21	8 38.11	+26 54.7	1.704	2.621	10.1	19.4
3 2	8 21.63	+32 38.2	1.284	2.118	18.7	20.0	3 2	8 33.35	+27 26.3	1.793	2.641	13.5	19.7
<b>55211</b>	2001 <i>RL</i> <sub>43</sub>		1 31.6 100°22	0°8/1.3	18		<b>67849</b>	2000 <i>WH</i> <sub>7</sub>		1 31.6 188°81	0°7/31.2	18	
12 23	9 17.83	+12 25.7	2.517	3.263	12.8	19.5	12 23	9 22.96	+15 50.0	2.101	2.859	14.7	20.5
1 2	9 13.98	+12 48.3	2.433	3.278	10.2	19.4	1 2	9 18.67	+16 31.8	2.005	2.858	11.7	20.3
1 12	9 8.26	+13 21.3	2.373	3.292	7.2	19.2	1 12	9 11.91	+17 25.5	1.931	2.857	8.1	20.1
1 22	9 1.12	+14 2.3	2.339	3.306	3.8	19.0	1 22	9 3.14	+18 27.0	1.884	2.855	4.1	19.8
2 1	8 53.23	+14 47.7	2.336	3.320	0.8	18.8	2 1	8 53.19	+19 30.6	1.867	2.852	0.7	19.6
2 11	8 45.40	+15 33.6	2.363	3.334	3.6	19.0	2 11	8 43.12	+20 30.3	1.880	2.848	4.8	19.9
2 21	8 38.39	+16 16.4	2.419	3.347	6.9	19.3	2 21	8 34.04	+21 21.2	1.923	2.844	8.8	20.1
3 2	8 32.84	+16 53.3	2.503	3.361	9.8	19.5	3 2	8 26.86	+22 0.5	1.991	2.839	12.4	20.3
<b>89065</b>	2001 <i>TK</i> <sub>147</sub>		1 31.6 190°16	1°5/30.7	18		<b>70421</b>	1999 <i>SY</i> <sub>14</sub>		1 31.6 270°48	4°1/2.7	18	
12 23	9 23.32	+17 48.8	1.717	2.493	16.8	20.9	12 23	9 21.47	+7 36.8	1.700	2.450	18.0	19.3
1 2	9 19.56	+18 32.8	1.628	2.492	13.4	20.6	1 2	9 18.00	+7 4.4	1.605	2.444	14.9	19.1
1 12	9 12.84	+19 29.3	1.561	2.491	9.2	20.4	1 12	9 11.72	+6 47.4	1.530	2.439	11.1	18.9
1 22	9 3.71	+20 33.2	1.519	2.490	4.6	20.1	1 22	9 3.15	+6 46.3	1.478	2.434	7.1	18.6
2 1	8 53.13	+21 37.2	1.505	2.488	1.7	19.9	2 1	8 53.18	+7 0.0	1.453	2.428	4.2	18.4
2 11	8 42.46	+22 33.8	1.520	2.486	5.9	20.2	2 11	8 43.10	+7 25.2	1.455	2.423	5.9	18.5
2 21	8 33.05	+23 17.7	1.562	2.483	10.4	20.4	2 21	8 34.15	+7 57.1	1.484	2.417	9.9	18.7
3 2	8 26.01	+23 46.6	1.628	2.480	14.5	20.6	3 2	8 27.42	+8 31.0	1.538	2.412	13.9	18.9
<b>384203</b>	2009 <i>BN</i> <sub>168</sub>		1 31.6 16°00	1°4/1.5	18		<b>456699</b>	2007 <i>RL</i> <sub>234</sub>		1 31.6 152°51	0°1/31.6	18	
12 23	9 19.31	+13 7.1	2.255	3.007	14.0	21.0	12 23	9 23.56	+14 28.0	2.144	2.894	14.7	22.4
1 2	9 15.45	+12 54.1	2.161	3.008	11.3	20.8	1 2	9 18.94	+15 3.8	2.056	2.905	11.7	22.2
1 12	9 9.45	+12 50.2	2.090	3.009	8.0	20.6	1 12	9 11.94	+15 51.3	1.992	2.914	8.1	22.0
1 22	9 1.80	+12 54.1	2.045	3.010	4.4	20.3	1 22	9 3.09	+16 46.7	1.954	2.923	4.1	21.8
2 1	8 53.22	+13 3.4	2.029	3.012	1.4	20.1	2 1	8 53.20	+17 45.0	1.946	2.931	0.2	21.4
2 11	8 44.66	+13 15.4	2.042	3.014	4.0	20.3	2 11	8 43.31	+18 40.7	1.969	2.938	4.4	21.8
2 21	8 37.01	+13 27.3	2.085	3.015	7.6	20.5	2 21	8 34.45	+19 29.2	2.021	2.945	8.3	22.1
3 2	8 31.03	+13 36.8	2.153	3.017	10.9	20.7	3 2	8 27.47	+20 7.8	2.100	2.950	11.7	22.3
<b>31107</b>	1997 <i>PS</i> <sub>3</sub>		1 31.6 265°74	1°8/30.8	18		<b>424221</b>	2007 <i>RN</i> <sub>103</sub>		1 31.6 109°11	3°3/29.2	18	
12 23	9 23.25	+19 22.9	1.533	2.321	18.0	19.6	12 23	9 23.50	+27 26.9	2.562	3.329	12.1	21.3
1 2	9 19.88	+19 48.7	1.447	2.318	14.3	19.3	1 2	9 18.49	+28 0.4	2.488	3.345	9.6	21.1
1 12	9 13.28	+20 25.3	1.381	2.314	9.9	19.1	1 12	9 11.37	+28 34.8	2.438	3.362	6.8	21.0
1 22	9 4.00	+21 7.5	1.338	2.310	5.0	18.8	1 22	9 2.68	+29 5.2	2.416	3.378	4.2	20.8
2 1	8 53.13	+21 48.3	1.323	2.307	1.9	18.6	2 1	8 53.21	+29 27.3	2.424	3.393	3.5	20.8
2 11	8 42.20	+22 21.0	1.335	2.303	6.3	18.8	2 11	8 43.91	+29 37.7	2.462	3.409	5.5	21.0
2 21	8 32.72	+22 41.0	1.373	2.299	11.2	19.1	2 21	8 35.64	+29 35.6	2.529	3.424	8.2	21.2
3 2	8 25.89	+22 47.1	1.435	2.295	15.6	19.3	3 2	8 29.10	+29 21.4	2.622	3.438	10.7	21.4
<b>245024</b>	2004 <i>EV</i> <sub>3</sub>		1 31.6 26°25	1°9/2.5	18		<b>396870</b>	2004 <i>TL</i> <sub>61</sub>		1 31.6 149°67	4°2/29.2	18	
12 23	9 15.66	+4 31.0	1.972	2.709	16.2	19.4	12 23	9 27.72</					

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1 31.6

1 31.7

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>174496</b>	2003 <i>BW</i> <sub>19</sub>		1 31.6	32°60	1°3/30.5	18	<b>228270</b>	1999 <i>TT</i> <sub>260</sub>		1 31.7	185°84	1°1/ 1.2	18
12 23	9 16.12	+15 59.0	2.177	2.947	13.9	19.6	12 23	9 25.39	+13 2.0	1.715	2.474	17.5	21.2
1 2	9 13.16	+17 12.6	2.090	2.952	10.9	19.4	1 2	9 21.11	+13 10.1	1.624	2.475	14.1	20.9
1 12	9 8.02	+18 38.9	2.027	2.957	7.5	19.2	1 12	9 13.89	+13 32.1	1.552	2.474	10.0	20.7
1 22	9 1.15	+20 12.9	1.991	2.962	3.7	19.0	1 22	9 4.26	+14 5.6	1.506	2.474	5.3	20.4
2 1	8 53.27	+21 47.9	1.984	2.968	1.5	18.8	2 1	8 53.19	+14 46.0	1.487	2.472	1.1	20.1
2 11	8 45.33	+23 16.7	2.009	2.974	4.9	19.1	2 11	8 42.05	+15 27.5	1.498	2.469	5.1	20.4
2 21	8 38.27	+24 33.7	2.062	2.980	8.5	19.3	2 21	8 32.17	+16 5.1	1.536	2.466	9.9	20.6
3 2	8 32.90	+25 35.7	2.141	2.986	11.8	19.5	3 2	8 24.64	+16 35.2	1.599	2.463	14.1	20.9
<b>427453</b>	2001 <i>SS</i> <sub>103</sub>		1 31.6	111°33	2°8/29.7	18	<b>183296</b>	2002 <i>UX</i> <sub>2</sub>		1 31.7	45°68	8°7/29.0	18
12 23	9 21.63	+25 8.6	2.430	3.201	12.6	21.1	12 23	9 38.86	+39 6.9	1.550	2.326	18.3	19.3
1 2	9 17.20	+25 36.5	2.347	3.208	9.9	20.9	1 2	9 32.32	+39 30.5	1.487	2.338	15.2	19.1
1 12	9 10.60	+26 6.9	2.287	3.214	6.9	20.7	1 12	9 21.69	+39 43.9	1.444	2.350	11.9	19.0
1 22	9 2.36	+26 35.4	2.254	3.221	4.0	20.6	1 22	9 8.02	+39 36.8	1.425	2.362	9.3	18.9
2 1	8 53.23	+26 57.6	2.252	3.227	2.9	20.5	2 1	8 53.07	+39 1.1	1.432	2.375	8.8	18.9
2 11	8 44.20	+27 9.9	2.279	3.234	5.3	20.7	2 11	8 38.94	+37 55.3	1.466	2.389	10.7	19.0
2 21	8 36.16	+27 10.8	2.335	3.240	8.3	20.9	2 21	8 27.36	+36 24.3	1.525	2.403	13.7	19.2
3 2	8 29.85	+27 0.3	2.416	3.246	11.1	21.1	3 2	8 19.39	+34 36.3	1.608	2.416	16.7	19.4
<b>370483</b>	2003 <i>QS</i> <sub>38</sub>		1 31.6	99°45	1°9/30.4	18	<b>492654</b>	2014 <i>OM</i> <sub>380</sub>		1 31.7	235°48	1°5/ 1.6	17
12 23	9 23.69	+22 13.4	2.250	3.016	13.6	21.1	12 23	9 22.47	+10 50.1	1.909	2.658	16.3	23.1
1 2	9 18.84	+22 34.2	2.175	3.033	10.7	21.0	1 2	9 18.66	+11 6.6	1.800	2.645	13.3	22.9
1 12	9 11.72	+22 59.3	2.122	3.050	7.4	20.8	1 12	9 12.18	+11 38.7	1.712	2.630	9.5	22.6
1 22	9 2.90	+23 24.5	2.097	3.067	3.8	20.6	1 22	9 3.43	+12 24.6	1.650	2.615	5.3	22.3
2 1	8 53.22	+23 45.3	2.102	3.083	2.0	20.5	2 1	8 53.22	+13 20.4	1.616	2.599	1.5	22.0
2 11	8 43.72	+23 58.3	2.137	3.099	4.9	20.7	2 11	8 42.74	+14 20.2	1.611	2.583	4.8	22.2
2 21	8 35.34	+24 1.6	2.201	3.115	8.3	21.0	2 21	8 33.19	+15 18.1	1.635	2.566	9.4	22.4
3 2	8 28.84	+23 55.1	2.290	3.130	11.3	21.2	3 2	8 25.66	+16 9.4	1.685	2.548	13.5	22.6
<b>78708</b>	2002 <i>TC</i> <sub>183</sub>		1 31.6	14°75	3°6/30.2	18	<b>413046</b>	2001 <i>QL</i> <sub>161</sub>		1 31.7	174°43	0°9/30.9	18
12 23	9 21.22	+25 53.2	1.417	2.225	18.2	17.7	12 23	9 22.98	+18 18.9	2.362	3.118	13.3	22.2
1 2	9 18.28	+25 58.7	1.353	2.234	14.4	17.5	1 2	9 18.33	+18 45.3	2.268	3.121	10.6	22.0
1 12	9 12.03	+26 6.4	1.308	2.245	10.1	17.3	1 12	9 11.45	+19 19.1	2.198	3.123	7.3	21.8
1 22	9 3.24	+26 10.3	1.287	2.257	5.7	17.1	1 22	9 2.85	+19 57.0	2.155	3.125	3.6	21.6
2 1	8 53.21	+26 4.6	1.292	2.271	3.8	17.0	2 1	8 53.26	+20 34.3	2.142	3.126	1.0	21.4
2 11	8 43.54	+25 45.6	1.323	2.286	7.1	17.2	2 11	8 43.65	+21 7.0	2.160	3.127	4.4	21.6
2 21	8 35.64	+25 12.9	1.379	2.302	11.4	17.5	2 21	8 34.98	+21 31.9	2.208	3.127	8.0	21.9
3 2	8 30.52	+24 28.5	1.458	2.320	15.2	17.8	3 2	8 28.03	+21 47.6	2.282	3.126	11.2	22.1
<b>417613</b>	2006 <i>WY</i> <sub>35</sub>		1 31.6	145°59	2°5/29.7	18	<b>355868</b>	2008 <i>UO</i> <sub>316</sub>		1 31.7	56°60	2°0/30.6	18
12 23	9 22.81	+21 22.1	2.176	2.945	13.9	22.2	12 23	9 23.56	+18 35.2	1.302	2.100	20.0	20.7
1 2	9 18.42	+22 19.5	2.094	2.954	11.0	22.0	1 2	9 20.27	+19 16.6	1.243	2.120	15.8	20.5
1 12	9 11.63	+23 24.4	2.035	2.964	7.6	21.8	1 12	9 13.50	+20 11.0	1.204	2.140	10.8	20.2
1 22	9 2.96	+24 31.1	2.003	2.972	4.1	21.6	1 22	9 4.04	+21 11.2	1.188	2.161	5.4	20.0
2 1	8 53.22	+25 33.2	2.002	2.980	2.7	21.6	2 1	8 53.22	+22 8.4	1.198	2.182	2.2	19.8
2 11	8 43.50	+26 25.0	2.030	2.988	5.6	21.8	2 11	8 42.74	+22 54.4	1.235	2.203	6.7	20.2
2 21	8 34.83	+27 3.0	2.088	2.995	9.0	22.0	2 21	8 34.12	+23 24.8	1.297	2.224	11.6	20.5
3 2	8 28.07	+27 26.1	2.170	3.001	12.2	22.2	3 2	8 28.44	+23 38.5	1.381	2.246	15.8	20.8
<b>85840</b>	1998 <i>YR</i> <sub>4</sub>		1 31.6	335°35	5°5/27.6	18	<b>263124</b>	2007 <i>VP</i> <sub>44</sub>		1 31.7	233°21	0°2/31.7	18
12 23	9 21.43	+30 48.2	2.139	2.923	13.6	19.6	12 23	9 23.87	+16 7.4	1.824	2.590	16.3	21.4
1 2	9 17.67	+31 50.0	2.057	2.922	11.0	19.4	1 2	9 19.81	+16 9.8	1.726	2.583	13.1	21.1
1 12	9 11.29	+32 52.6	1.998	2.920	8.1	19.2	1 12	9 12.94	+16 22.4	1.650	2.576	9.2	20.9
1 22	9 2.84	+33 49.1	1.966	2.919	5.9	19.1	1 22	9 3.77	+16 42.2	1.598	2.568	4.7	20.6
2 1	8 53.22	+34 32.5	1.962	2.917	5.7	19.0	2 1	8 53.22	+17 5.1	1.575	2.560	0.2	20.2
2 11	8 43.61	+34 57.6	1.985	2.916	7.8	19.2	2 11	8 42.56	+17 26.5	1.581	2.552	5.0	20.5
2 21	8 35.14	+35 2.7	2.036	2.915	10.6	19.3	2 21	8 33.05	+17 42.7	1.614	2.543	9.6	20.8
3 2	8 28.77	+34 49.0	2.109	2.914	13.4	19.5	3 2	8 25.76	+17 51.5	1.673	2.534	13.7	21.0
<b>522665</b>	2016 <i>GY</i> <sub>264</sub>		1 31.6	149°70	4°6/ 4.3	17	<b>271938</b>	2004 <i>XG</i> <sub>169</sub>		1 31.7	258°28	0°5/31.9	18
12 23	9 17.33	+ 1 15.0	2.483	3.183	14.1	22.4	12 23	9 20.66	+15 13.5	2.096	2.857	14.6	20.6
1 2	9 13.67	+ 1 1.0	2.387	3.188	11.9	22.2	1 2	9 16.76	+15 13.1	2.003	2.856	11.7	20.4
1 12	9 8.13	+ 1 2.6	2.312	3.192	9.3	22.1	1 12	9 10.52	+15 22.0	1.931	2.855	8.2	20.2
1 22	9 1.13	+ 1 20.2	2.261	3.196	6.6	21.9	1 22	9 2.42	+15 37.6	1.886	2.855	4.3	19.9
2 1	8 53.30	+ 1 52.9	2.239	3.199	4.7	21.8	2 1	8 53.28	+15 56.9	1.869	2.854	0.5	19.6
2 11	8 45.45	+ 2 37.7	2.246	3.202	5.2	21.8	2 11	8 44.13	+16 16.1	1.882	2.853	4.3	19.9
2 21	8 38.34	+ 3 30.5	2.282	3.206	7.5	22.0	2 21	8 35.98	+16 32.0	1.923	2.853	8.3	20.2
3 2	8 32.66	+ 4 26.8	2.344	3.208	10.1	22.1	3 2	8 29.67	+16 42.6	1.991	2.852	11.8	20.4
<b>426435</b>	2013 <i>QV</i> <sub>35</sub>		1 31.7	85°88	0°7/31.2	18	<b>465978</b>	2011 <i>CA</i> <sub>42</sub>		1 31.7	321°20	0°6/ 1.0	18
12 23	9 21.77	+18 20.5	2.018	2.787	14.9	21.9	12 23	9 19.86	+14 28.2	1.944	2.709	15.5	21.7
1 2	9 17.69	+18 31.2	1.933	2.793	11.8	21.7	1 2	9 16.36	+14 33.7	1.851	2.707	12.4	21.4
1 12	9 11.16	+18 49.5	1.871	2.799	8.1	21.5	1 12	9 10.37	+14 50.2	1.780	2.705	8.7	21.2
1 22	9 2.72	+19 12.0	1.834	2.805	4.1	21.2	1 22	9 2.40	+15 15.2	1.734	2.703	4.5	21.0
2 1	8 53.25	+19 34.6	1.826	2.811	0.8	21.0	2 1	8 53.28	+15 45.0	1.716	2.701	0.6	20.6
2 11	8 43.85	+19 53.0	1.848	2.817	4.7	21.3	2 11	8 44.13	+16 15.1	1.728	2.700	4.5	20.9
2 21	8 35.57	+20 4.5	1.898	2.823	8.6	21.5	2 21	8 36.02	+16 41.6	1.767	2.698	8.7	21.2
3 2	8 29.27	+20 7.8	1.973	2.829	12.1	21.8	3 2	8 29.87	+17 1.6	1.831	2.696	12.5	21.4
<b>381693</b>	2009 <i>CH</i> <sub>50</sub>		1 31.7	19°52	1°8/30.8	18	<b>112732</b>	2002 <i>PH</i> <sub>126</sub>		1 31.7	64°73	0°1/31.7	18
12 23	9 21.63	+22 8.9	1.763	2.549	16								

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>281361</b>	2007 <i>WQ</i> <sub>17</sub>		1 31.7 143°48	7.5/23.3	18		<b>344286</b>	2001 <i>TG</i> <sub>215</sub>		1 31.7 115°61	5.1/ 5.5	18	
12 23	9 25.52	+43 2.9	2.912	3.665	11.1	21.3	12 23	9 18.37	- 2 58.6	3.050	3.709	12.5	22.1
1 2	9 20.56	+44 39.3	2.850	3.675	9.5	21.2	1 2	9 13.98	- 3 23.8	2.965	3.730	10.7	22.0
1 12	9 13.14	+46 9.2	2.813	3.684	8.1	21.1	1 12	9 8.06	- 3 34.8	2.901	3.750	8.6	21.9
1 22	9 3.75	+47 25.7	2.804	3.693	7.5	21.1	1 22	9 1.01	- 3 30.8	2.862	3.770	6.6	21.8
2 1	8 53.23	+48 22.4	2.822	3.702	7.9	21.2	2 1	8 53.37	- 3 12.2	2.852	3.790	5.2	21.7
2 11	8 42.68	+48 55.8	2.868	3.710	9.0	21.2	2 11	8 45.78	- 2 40.8	2.871	3.809	5.3	21.7
2 21	8 33.18	+49 5.7	2.938	3.717	10.6	21.4	2 21	8 38.86	- 1 59.8	2.920	3.827	6.7	21.8
3 2	8 25.61	+48 54.3	3.030	3.725	12.1	21.5	3 2	8 33.13	- 1 12.9	2.996	3.845	8.6	22.0
<b>196156</b>	2002 <i>UM</i> <sub>61</sub>		1 31.7 98°81	4.0/ 3.5	18		<b>29634</b>	1998 <i>VB</i> <sub>3</sub>		1 31.7 158°56	0.1/31.6	18	
12 23	9 18.47	+ 4 34.3	2.277	2.997	14.7	20.5	12 23	9 19.96	+16 11.1	2.455	3.210	12.9	19.4
1 2	9 14.73	+ 4 13.2	2.186	3.004	12.2	20.3	1 2	9 15.82	+16 28.8	2.363	3.214	10.3	19.3
1 12	9 8.94	+ 4 6.5	2.116	3.010	9.3	20.1	1 12	9 9.67	+16 54.7	2.294	3.218	7.1	19.1
1 22	9 1.58	+ 4 14.3	2.071	3.017	6.3	20.0	1 22	9 1.94	+17 25.9	2.252	3.221	3.6	18.8
2 1	8 53.33	+ 4 35.5	2.054	3.023	4.1	19.8	2 1	8 53.34	+17 58.9	2.239	3.224	0.2	18.6
2 11	8 45.08	+ 5 7.2	2.067	3.029	5.0	19.9	2 11	8 44.74	+18 29.9	2.258	3.227	3.9	18.9
2 21	8 37.70	+ 5 45.4	2.108	3.036	7.7	20.1	2 21	8 37.00	+18 55.9	2.305	3.230	7.4	19.1
3 2	8 31.90	+ 6 26.1	2.175	3.042	10.7	20.3	3 2	8 30.82	+19 14.9	2.380	3.232	10.5	19.3
<b>344472</b>	2002 <i>PR</i> <sub>93</sub>		1 31.7 146°45	4.2/28.4	18		<b>360529</b>	2003 <i>SG</i> <sub>34</sub>		1 31.7 72°74	0.9/ 1.2	18	
12 23	9 25.05	+31 4.3	2.715	3.478	11.6	21.5	12 23	9 23.48	+12 33.2	1.563	2.332	18.5	21.1
1 2	9 19.72	+31 42.6	2.635	3.488	9.3	21.3	1 2	9 19.50	+12 53.8	1.500	2.357	14.7	20.9
1 12	9 12.26	+32 19.8	2.580	3.497	6.8	21.2	1 12	9 12.60	+13 30.2	1.456	2.381	10.3	20.7
1 22	9 3.19	+32 50.8	2.552	3.505	4.7	21.1	1 22	9 3.50	+14 18.3	1.437	2.406	5.4	20.4
2 1	8 53.28	+33 10.8	2.555	3.513	4.4	21.1	2 1	8 53.29	+15 12.4	1.445	2.430	0.9	20.2
2 11	8 43.49	+33 16.9	2.587	3.520	6.1	21.2	2 11	8 43.36	+16 5.6	1.481	2.454	5.0	20.5
2 21	8 34.71	+33 8.4	2.649	3.527	8.5	21.3	2 21	8 34.93	+16 52.5	1.545	2.478	9.6	20.8
3 2	8 27.66	+32 46.2	2.736	3.534	10.8	21.5	3 2	8 28.94	+17 29.6	1.633	2.501	13.6	21.1
<b>61404</b>	Očenašek		1 31.7 135°92	2.7/ 2.8	18		<b>322821</b>	2001 <i>SY</i> <sub>200</sub>		1 31.7 52°32	2.2/ 2.0	18	
12 23	9 20.39	+ 6 51.2	2.487	3.207	13.6	20.0	12 23	9 19.17	+ 9 47.6	1.673	2.436	17.7	20.8
1 2	9 16.00	+ 6 54.3	2.399	3.220	11.2	19.8	1 2	9 16.06	+ 9 54.5	1.595	2.446	14.3	20.6
1 12	9 9.69	+ 7 10.5	2.332	3.233	8.2	19.7	1 12	9 10.27	+10 18.3	1.538	2.457	10.3	20.3
1 22	9 1.90	+ 7 38.7	2.292	3.246	5.1	19.5	1 22	9 2.38	+10 57.0	1.504	2.468	5.8	20.1
2 1	8 53.32	+ 8 16.6	2.281	3.258	2.7	19.3	2 1	8 53.33	+11 46.3	1.497	2.479	2.2	19.9
2 11	8 44.78	+ 9 0.7	2.302	3.269	4.0	19.4	2 11	8 44.35	+12 40.5	1.518	2.491	4.9	20.1
2 21	8 37.07	+ 9 46.9	2.352	3.280	7.0	19.7	2 21	8 36.62	+13 33.4	1.567	2.502	9.2	20.4
3 2	8 30.86	+10 31.7	2.429	3.290	10.0	19.9	3 2	8 31.06	+14 20.2	1.639	2.514	13.2	20.6
<b>433058</b>	2012 <i>TN</i> <sub>11</sub>		1 31.7 132°44	4.9/ 4.9	17		<b>309263</b>	2007 <i>RZ</i> <sub>94</sub>		1 31.7 212°38	1.6/30.7	17	
12 23	9 16.20	- 0 28.2	2.659	3.347	13.5	21.7	12 23	9 24.21	+19 10.7	1.990	2.756	15.1	22.5
1 2	9 12.65	- 0 45.7	2.563	3.352	11.5	21.6	1 2	9 19.92	+19 45.5	1.891	2.750	12.0	22.3
1 12	9 7.36	- 0 47.8	2.487	3.357	9.1	21.4	1 12	9 12.95	+20 29.7	1.815	2.743	8.3	22.1
1 22	9 0.74	- 0 33.9	2.436	3.362	6.7	21.3	1 22	9 3.78	+21 18.6	1.765	2.735	4.2	21.8
2 1	8 53.36	- 0 4.8	2.414	3.366	5.0	21.2	2 1	8 53.28	+22 6.5	1.744	2.727	1.7	21.6
2 11	8 45.96	+ 0 37.1	2.420	3.371	5.3	21.2	2 11	8 42.63	+22 47.5	1.753	2.718	5.4	21.8
2 21	8 39.25	+ 1 28.2	2.455	3.375	7.2	21.3	2 21	8 33.05	+23 17.4	1.790	2.708	9.6	22.1
3 2	8 33.85	+ 2 23.9	2.517	3.379	9.6	21.5	3 2	8 25.56	+23 34.6	1.852	2.698	13.3	22.3
<b>448189</b>	2008 <i>US</i> <sub>41</sub>		1 31.7 22°38	4.5/ 2.7	18		<b>246801</b>	2009 <i>ER</i> <sub>22</sub>		1 31.7 45°17	2.8/ 2.9	18	
12 23	9 17.87	+ 8 16.0	1.131	1.925	22.7	20.7	12 23	9 15.57	+ 6 8.2	2.375	3.106	13.9	20.4
1 2	9 16.18	+ 7 42.5	1.066	1.932	18.7	20.4	1 2	9 12.42	+ 6 18.6	2.281	3.109	11.4	20.3
1 12	9 10.96	+ 7 30.9	1.018	1.942	13.8	20.2	1 12	9 7.36	+ 6 43.8	2.209	3.112	8.5	20.1
1 22	9 2.90	+ 7 41.7	0.990	1.952	8.5	19.9	1 22	9 0.80	+ 7 22.8	2.161	3.116	5.3	19.9
2 1	8 53.28	+ 8 12.2	0.985	1.964	4.6	19.7	2 1	8 53.39	+ 8 12.9	2.143	3.119	2.9	19.7
2 11	8 43.83	+ 8 55.9	1.004	1.977	6.8	19.9	2 11	8 45.95	+ 9 10.2	2.154	3.123	4.1	19.8
2 21	8 36.16	+ 9 44.8	1.047	1.991	11.7	20.2	2 21	8 39.28	+10 10.0	2.194	3.127	7.2	20.0
3 2	8 31.45	+10 31.6	1.111	2.006	16.4	20.5	3 2	8 34.09	+11 7.8	2.261	3.131	10.3	20.2
<b>70115</b>	1999 <i>LP</i> <sub>20</sub>		1 31.7 205°98	3.0/29.7	18		<b>142955</b>	2002 <i>VQ</i> <sub>77</sub>		1 31.7 92°50	1.9/30.4	18	
12 23	9 23.89	+21 57.7	1.939	2.714	15.2	20.1	12 23	9 22.61	+19 2.4	1.820	2.596	16.0	19.9
1 2	9 19.79	+22 52.2	1.846	2.710	12.0	19.9	1 2	9 18.62	+19 50.8	1.749	2.613	12.6	19.7
1 12	9 12.93	+23 55.4	1.776	2.705	8.4	19.7	1 12	9 11.94	+20 49.1	1.699	2.630	8.6	19.5
1 22	9 3.78	+25 1.2	1.731	2.700	4.6	19.4	1 22	9 3.18	+21 51.6	1.675	2.646	4.4	19.3
2 1	8 53.25	+26 2.2	1.716	2.694	3.2	19.3	2 1	8 53.31	+22 51.3	1.680	2.662	2.0	19.2
2 11	8 42.60	+26 51.6	1.730	2.687	6.3	19.5	2 11	8 43.57	+23 41.9	1.713	2.678	5.6	19.5
2 21	8 33.08	+27 25.5	1.772	2.680	10.3	19.7	2 21	8 35.14	+24 19.4	1.775	2.693	9.6	19.7
3 2	8 25.74	+27 42.5	1.838	2.673	13.9	19.9	3 2	8 28.90	+24 42.2	1.861	2.708	13.1	20.0
<b>459598</b>	2013 <i>HY</i> <sub>20</sub>		1 31.7 269°99	0.1/31.7	16		<b>369292</b>	2009 <i>RC</i> <sub>61</sub>		1 31.7 220°70	5.6/ 3.7	18	
12 23	9 20.54	+14 35.4	1.756	2.527	16.7	21.9	12 23	9 21.38	+ 2 55.0	2.050	2.764	16.3	20.8
1 2	9 17.43	+14 59.8	1.651	2.512	13.4	21.7	1 2	9 17.38	+ 2 5.9	1.952	2.761	13.8	20.6
1 12	9 11.49	+15 38.6	1.568	2.496	9.5	21.4	1 12	9 11.01	+ 1 31.5	1.873	2.758	10.8	20.4
1 22	9 3.16	+16 28.6	1.509	2.480	4.8	21.1	1 22	9 2.73	+ 1 13.8	1.819	2.755	7.8	20.3
2 1	8 53.28	+17 24.6	1.478	2.464	0.2	20.7	2 1	8 53.32	+ 1 13.0	1.792	2.752	5.7	20.1
2 11	8 43.12	+18 19.9	1.476	2.447	5.3	21.0	2 11	8 43.81	+ 1 27.6	1.793	2.748	6.4	20.2
2 21	8 34.00	+19 8.6	1.501	2.431	10.1	21.3	2 21	8 35.24	+ 1 54.0	1.822	2.745	9.1	20.3
3 2	8 27.08	+19 46.7	1.550	2.414	14.4	21.5	3 2	8 28.48	+ 2 27.5	1.877	2.741	12.3	20.5
<b>460695</b>	2014 <i>UL</i> <sub>197</sub>		1 31.7 122°59	5.8/27.5	18		<b>460116</b>	2014 <i>PY</i> <sub>28</sub>		1 31.7 77°85	0.7/ 1.2	18	
12 23	9 25.04	+30 28.2	2.037	2.817	14.4	21.8	12						

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>461939</b>	2006 <i>SM</i> <sub>275</sub>		1 31.7	19°06'	11°8'	25.9 18	<b>304853</b>	2007 <i>RO</i> <sub>68</sub>		1 31.7	93°88'	0°5'	31.9 17
12 23	9 23.15	+38 59.8	1.206	2.024	20.1	20.5	12 23	9 24.25	+13 15.7	1.730	2.491	17.3	21.4
1 2	9 21.24	+40 39.5	1.160	2.034	16.9	20.4	1 2	9 19.88	+13 42.8	1.661	2.514	13.7	21.2
1 12	9 14.88	+42 10.6	1.133	2.045	13.8	20.2	1 12	9 12.78	+14 24.0	1.613	2.537	9.6	21.0
1 22	9 4.96	+43 18.8	1.127	2.058	12.0	20.2	1 22	9 3.60	+15 15.4	1.590	2.559	4.9	20.8
2 1	8 53.25	+43 51.3	1.143	2.072	12.2	20.2	2 1	8 53.34	+16 11.1	1.596	2.581	0.5	20.5
2 11	8 42.08	+43 42.9	1.181	2.087	14.3	20.4	2 11	8 43.30	+17 4.9	1.631	2.602	4.8	20.8
2 21	8 33.45	+42 56.6	1.240	2.104	17.1	20.6	2 21	8 34.62	+17 51.7	1.694	2.623	9.2	21.2
3 2	8 28.59	+41 40.6	1.317	2.122	19.9	20.8	3 2	8 28.22	+18 28.5	1.782	2.643	13.0	21.4
<b>387023</b>	2012 <i>SM</i> <sub>3</sub>		1 31.7	97°46'	0°1'	31.8 18	<b>82506</b>	2001 <i>OC</i> <sub>48</sub>		1 31.7	102°98'	1°8'	2.2 18
12 23	9 18.53	+15 4.2	2.593	3.344	12.4	21.7	12 23	9 17.01	+ 8 35.9	2.411	3.147	13.6	19.4
1 2	9 14.49	+15 26.0	2.512	3.360	9.8	21.6	1 2	9 13.50	+ 8 58.4	2.322	3.157	11.0	19.2
1 12	9 8.61	+15 56.0	2.454	3.377	6.8	21.4	1 12	9 8.07	+ 9 34.5	2.255	3.166	7.9	19.0
1 22	9 1.36	+16 31.7	2.424	3.393	3.4	21.2	1 22	9 1.16	+10 22.2	2.214	3.175	4.6	18.8
2 1	8 53.39	+17 9.5	2.423	3.409	0.1	20.9	2 1	8 53.43	+11 18.3	2.203	3.184	1.9	18.7
2 11	8 45.49	+17 45.9	2.454	3.424	3.6	21.3	2 11	8 45.70	+12 18.2	2.222	3.193	3.8	18.8
2 21	8 38.41	+18 17.8	2.514	3.440	6.8	21.5	2 21	8 38.77	+13 17.4	2.270	3.202	7.1	19.0
3 2	8 32.79	+18 43.1	2.602	3.455	9.6	21.7	3 2	8 33.33	+14 12.1	2.346	3.210	10.1	19.2
<b>209081</b>	2003 <i>SN</i> <sub>14</sub>		1 31.7	195°48'	0°7'	31.2 18	<b>469067</b>	2015 <i>BU</i> <sub>25</sub>		1 31.7	265°32'	1°7'	2.1 17
12 23	9 23.89	+17 13.9	1.992	2.755	15.2	21.6	12 23	9 16.43	+ 9 10.9	2.338	3.080	13.8	21.6
1 2	9 19.57	+17 37.9	1.897	2.753	12.2	21.4	1 2	9 13.27	+ 9 34.2	2.234	3.073	11.2	21.4
1 12	9 12.64	+18 11.8	1.823	2.750	8.4	21.2	1 12	9 8.07	+10 11.8	2.151	3.065	8.1	21.2
1 22	9 3.59	+18 51.9	1.776	2.747	4.2	20.9	1 22	9 1.24	+11 1.9	2.095	3.057	4.6	20.9
2 1	8 53.30	+19 33.1	1.758	2.743	0.8	20.6	2 1	8 53.43	+12 1.2	2.067	3.050	1.7	20.7
2 11	8 42.94	+20 10.0	1.770	2.739	4.9	20.9	2 11	8 45.50	+13 4.8	2.070	3.042	3.9	20.9
2 21	8 33.65	+20 38.7	1.811	2.734	9.1	21.2	2 21	8 38.31	+14 7.9	2.102	3.034	7.5	21.1
3 2	8 26.41	+20 57.3	1.877	2.728	12.9	21.4	3 2	8 32.64	+15 6.1	2.161	3.026	10.8	21.3
<b>217360</b>	2004 <i>SN</i> <sub>50</sub>		1 31.7	36°73'	2°6'	30.2 18	<b>356655</b>	2011 <i>UT</i> <sub>65</sub>		1 31.7	195°65'	2°6'	29.9 18
12 23	9 21.13	+22 11.4	1.815	2.600	15.7	20.2	12 23	9 24.57	+21 8.1	1.905	2.678	15.5	21.4
1 2	9 17.60	+22 43.3	1.736	2.605	12.4	20.0	1 2	9 20.36	+21 58.7	1.813	2.676	12.3	21.2
1 12	9 11.33	+23 21.9	1.679	2.611	8.6	19.8	1 12	9 13.34	+22 58.5	1.744	2.674	8.5	20.9
1 22	9 2.92	+24 1.6	1.647	2.617	4.6	19.6	1 22	9 4.03	+24 1.5	1.701	2.671	4.5	20.7
2 1	8 53.34	+24 36.5	1.643	2.623	2.7	19.5	2 1	8 53.34	+25 0.4	1.687	2.667	2.8	20.6
2 11	8 43.85	+25 1.2	1.667	2.629	6.0	19.7	2 11	8 42.54	+25 48.7	1.702	2.662	6.2	20.8
2 21	8 35.63	+25 12.9	1.718	2.636	9.9	19.9	2 21	8 32.91	+26 22.1	1.745	2.657	10.2	21.0
3 2	8 29.63	+25 11.1	1.794	2.643	13.5	20.2	3 2	8 25.50	+26 39.4	1.813	2.651	13.9	21.2
<b>170763</b>	2004 <i>CB</i> <sub>43</sub>		1 31.7	39°00'	5°0'	28.8 18	<b>426942</b>	2013 <i>YF</i> <sub>8</sub>		1 31.7	349°19'	6°9'	4.4 18
12 23	9 25.74	+31 43.8	2.159	2.935	13.8	19.7	12 23	9 17.05	+ 0 52.2	1.895	2.616	17.3	20.1
1 2	9 20.88	+32 11.6	2.080	2.939	11.1	19.5	1 2	9 14.20	+ 0 11.8	1.800	2.610	14.8	19.9
1 12	9 13.38	+32 37.5	2.023	2.942	8.2	19.3	1 12	9 8.95	+ 0 59.5	1.725	2.604	11.9	19.7
1 22	9 3.86	+32 55.3	1.992	2.947	5.7	19.2	1 22	9 1.77	+ 1 28.0	1.672	2.600	9.0	19.5
2 1	8 53.31	+32 59.6	1.990	2.951	5.2	19.2	2 1	8 53.43	+ 1 35.8	1.644	2.596	7.1	19.4
2 11	8 42.95	+32 47.1	2.017	2.955	7.2	19.3	2 11	8 44.99	+ 1 24.1	1.643	2.592	7.5	19.4
2 21	8 33.89	+32 17.7	2.071	2.960	10.0	19.5	2 21	8 37.49	+ 0 56.4	1.669	2.590	9.9	19.5
3 2	8 27.02	+31 33.6	2.150	2.964	12.8	19.7	3 2	8 31.85	+ 0 18.2	1.718	2.588	12.9	19.7
<b>38673</b>	2000 <i>PC</i> <sub>8</sub>		1 31.7	64°92'	1°6'	30.8 18	<b>421051</b>	2013 <i>QB</i> <sub>1</sub>		1 31.7	71°85'	3°5'	2.9 18
12 23	9 24.24	+18 17.3	1.416	2.206	19.1	18.9	12 23	9 19.36	+ 6 32.9	1.966	2.704	16.2	21.5
1 2	9 20.53	+18 53.7	1.355	2.227	15.1	18.7	1 2	9 15.75	+ 6 22.3	1.885	2.717	13.3	21.3
1 12	9 13.56	+19 42.3	1.314	2.248	10.3	18.5	1 12	9 9.81	+ 6 27.6	1.825	2.730	9.9	21.1
1 22	9 4.07	+20 36.5	1.297	2.269	5.1	18.3	1 22	9 2.10	+ 6 48.0	1.789	2.744	6.2	20.9
2 1	8 53.31	+21 28.6	1.307	2.290	1.8	18.1	2 1	8 53.42	+ 7 21.4	1.781	2.757	3.6	20.8
2 11	8 42.86	+22 11.2	1.344	2.312	6.2	18.4	2 11	8 44.82	+ 8 3.5	1.802	2.770	4.9	20.9
2 21	8 34.15	+22 40.2	1.407	2.333	10.9	18.8	2 21	8 37.26	+ 8 49.5	1.851	2.784	8.3	21.1
3 2	8 28.19	+22 54.3	1.492	2.354	15.0	19.1	3 2	8 31.57	+ 9 34.8	1.925	2.797	11.7	21.4
<b>72902</b>	2001 <i>KE</i> <sub>71</sub>		1 31.7	93°93'	4°7'	28.1 18	<b>224390</b>	2005 <i>UL</i> <sub>205</sub>		1 31.7	115°53'	3°7'	29.2 18
12 23	9 22.84	+29 10.2	2.290	3.066	13.1	19.3	12 23	9 22.20	+24 43.5	1.969	2.751	14.7	20.3
1 2	9 18.39	+30 13.9	2.223	3.084	10.4	19.1	1 2	9 18.34	+25 37.1	1.889	2.756	11.7	20.1
1 12	9 11.56	+31 18.5	2.180	3.102	7.5	19.0	1 12	9 11.81	+26 36.0	1.831	2.761	8.2	19.9
1 22	9 2.93	+32 17.5	2.164	3.120	5.2	18.9	1 22	9 3.19	+27 33.9	1.800	2.766	4.8	19.7
2 1	8 53.35	+33 4.7	2.177	3.137	4.9	18.9	2 1	8 53.39	+28 23.8	1.797	2.770	3.9	19.6
2 11	8 43.92	+33 35.7	2.220	3.154	6.9	19.0	2 11	8 43.63	+28 59.9	1.823	2.775	6.6	19.8
2 21	8 35.63	+33 48.9	2.290	3.171	9.5	19.2	2 21	8 35.06	+29 19.4	1.876	2.779	10.1	20.0
3 2	8 29.27	+33 45.3	2.384	3.188	12.1	19.4	3 2	8 28.63	+29 22.4	1.953	2.784	13.3	20.3
<b>36759</b>	2000 <i>RO</i> <sub>75</sub>		1 31.7	171°65'	2°2'	30.5 18	<b>373108</b>	2011 <i>GE</i> <sub>45</sub>		1 31.7	70°48'	4°9'	4.4 18
12 23	9 28.69	+22 38.8	2.016	2.780	15.0	18.9	12 23	9 17.36	+ 1 19.4	2.034	2.750	16.4	20.8
1 2	9 23.28	+22 56.7	1.927	2.784	12.0	18.7	1 2	9 14.14	+ 1 12.0	1.949	2.760	13.8	20.6
1 12	9 15.13	+23 19.4	1.860	2.787	8.3	18.4	1 12	9 8.70	+ 1 24.1	1.883	2.770	10.7	20.5
1 22	9 4.81	+23 41.9	1.821	2.789	4.4	18.2	1 22	9 1.55	+ 1 55.7	1.842	2.781	7.4	20.3
2 1	8 53.29	+23 59.0	1.810	2.791	2.3	18.1	2 1	8 53.45	+ 2 45.3	1.827	2.791	5.1	20.2
2 11	8 41.84	+24 6.5	1.830	2.792	5.6	18.3	2 11	8 45.36	+ 3 48.3	1.840	2.801	5.6	20.2
2 21	8 31.67	+24 2.6	1.879	2.793	9.5	18.5	2 21	8 38.23	+ 4 59.1	1.882	2.812	8.4	20.4
3 2	8 23.73	+23 47.4	1.953	2.792	13.0	18.7	3 2	8 32.83	+ 6 11.3	1.950	2.822	11.5	20.6
<b>378305</b>	2007 <i>FC</i> <sub>1</sub>		1 31.7	236°04'	17°6'	15.5 16	<b>110654</b>	2001 <i>TL</i> <sub>172</sub>		1 31.7	44°61'	2°4'	30.1 18
12 23	9 51.96	+56 18.2	1.616	2.346	19.5	21.							

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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>46702</b>	2016 <i>DE</i> <sub>20</sub>		1 31.7 250°42	0°0/31.7 18			<b>54235</b>	2000 <i>JO</i> <sub>16</sub>		1 31.7 265°38	1°6/ 1.7 18		
12 23	9 20.93	+15 45.9	1.896	2.664	15.7	21.6	12 23	9 19.35	+10 52.0	1.844	2.602	16.4	19.6
1 2	9 17.32	+15 58.6	1.804	2.663	12.6	21.4	1 2	9 16.16	+11 3.1	1.749	2.599	13.3	19.4
1 12	9 11.14	+16 21.9	1.734	2.661	8.8	21.1	1 12	9 10.41	+11 29.4	1.675	2.595	9.6	19.1
1 22	9 2.87	+16 52.9	1.689	2.660	4.5	20.9	1 22	9 2.56	+12 9.1	1.626	2.591	5.3	18.9
2 1	8 53.41	+17 27.2	1.673	2.658	0.1	20.5	2 1	8 53.46	+12 58.1	1.604	2.587	1.7	18.6
2 11	8 43.91	+17 59.7	1.685	2.656	4.7	20.9	2 11	8 44.26	+13 51.1	1.611	2.584	4.7	18.8
2 21	8 35.50	+18 26.6	1.725	2.654	9.1	21.1	2 21	8 36.09	+14 42.5	1.646	2.580	9.0	19.0
3 2	8 29.13	+18 45.2	1.790	2.653	12.9	21.3	3 2	8 29.94	+15 27.7	1.706	2.576	13.0	19.3
<b>110113</b>	2001 <i>SM</i> <sub>136</sub>		1 31.7 125°19	0°1/31.8 18			<b>331856</b>	2003 <i>WC</i> <sub>4</sub>		1 31.7 89°26	4°2/ 3.7 18		
12 23	9 22.69	+15 37.9	2.024	2.784	15.1	21.4	12 23	9 18.66	+ 4 5.0	2.227	2.946	15.1	21.0
1 2	9 18.40	+15 49.6	1.940	2.794	12.0	21.2	1 2	9 14.95	+ 3 44.4	2.139	2.955	12.5	20.8
1 12	9 11.68	+16 11.1	1.878	2.803	8.4	21.0	1 12	9 9.16	+ 3 38.9	2.072	2.964	9.6	20.7
1 22	9 3.06	+16 39.4	1.842	2.811	4.2	20.8	1 22	9 1.76	+ 3 48.6	2.029	2.973	6.5	20.5
2 1	8 53.42	+17 10.3	1.835	2.820	0.2	20.4	2 1	8 53.49	+ 4 12.4	2.015	2.982	4.3	20.4
2 11	8 43.83	+17 39.4	1.857	2.828	4.4	20.8	2 11	8 45.24	+ 4 47.1	2.029	2.991	5.1	20.4
2 21	8 35.36	+18 3.3	1.908	2.836	8.5	21.0	2 21	8 37.87	+ 5 28.6	2.072	3.000	7.8	20.6
3 2	8 28.84	+18 19.8	1.985	2.843	12.0	21.3	3 2	8 32.13	+ 6 12.6	2.141	3.009	10.8	20.8
<b>184165</b>	2004 <i>LC</i> <sub>9</sub>		1 31.7 205°59	4°7/ 4.3 18			<b>378797</b>	2008 <i>SQ</i> <sub>110</sub>		1 31.7 59°25	1°2/30.9 18		
12 23	9 18.49	+ 1 6.9	2.226	2.931	15.4	20.8	12 23	9 19.64	+18 23.9	1.993	2.767	14.8	21.0
1 2	9 14.96	+ 1 6.1	2.123	2.928	13.0	20.6	1 2	9 16.10	+18 55.2	1.913	2.776	11.7	20.8
1 12	9 9.29	+ 1 23.9	2.040	2.924	10.1	20.4	1 12	9 10.15	+19 35.4	1.856	2.786	8.0	20.6
1 22	9 1.89	+ 2 0.7	1.982	2.920	7.1	20.2	1 22	9 2.32	+20 20.3	1.824	2.795	4.0	20.4
2 1	8 53.45	+ 2 55.0	1.951	2.915	4.8	20.1	2 1	8 53.48	+21 4.5	1.821	2.805	1.3	20.2
2 11	8 44.90	+ 4 2.9	1.949	2.910	5.4	20.1	2 11	8 44.70	+21 43.0	1.847	2.815	4.9	20.5
2 21	8 37.14	+ 5 18.6	1.977	2.905	8.2	20.3	2 21	8 37.02	+22 12.1	1.902	2.825	8.8	20.7
3 2	8 30.98	+ 6 36.3	2.031	2.899	11.3	20.4	3 2	8 31.28	+22 30.0	1.981	2.835	12.2	21.0
<b>398342</b>	2011 <i>QP</i> <sub>70</sub>		1 31.7 140°93	2°7/ 2.4 18			<b>183565</b>	2003 <i>NL</i> <sub>2</sub>		1 31.7 149°43	1°7/30.5 18		
12 23	9 24.09	+ 8 17.9	1.897	2.634	16.7	22.5	12 23	9 25.24	+19 34.1	2.119	2.881	14.5	21.5
1 2	9 19.63	+ 8 18.5	1.812	2.646	13.7	22.3	1 2	9 20.39	+20 15.9	2.036	2.892	11.4	21.4
1 12	9 12.60	+ 8 34.9	1.748	2.657	10.0	22.1	1 12	9 13.05	+21 5.8	1.975	2.902	7.9	21.1
1 22	9 3.56	+ 9 5.7	1.708	2.667	5.9	21.9	1 22	9 3.78	+21 58.9	1.942	2.912	4.0	20.9
2 1	8 53.40	+ 9 47.7	1.697	2.677	2.8	21.7	2 1	8 53.43	+22 49.4	1.938	2.921	1.8	20.8
2 11	8 43.29	+10 36.1	1.716	2.686	4.8	21.8	2 11	8 43.13	+23 32.0	1.965	2.929	5.1	21.0
2 21	8 34.32	+11 25.5	1.763	2.695	8.8	22.1	2 21	8 33.94	+24 3.2	2.021	2.936	8.9	21.3
3 2	8 27.40	+12 11.4	1.837	2.702	12.4	22.3	3 2	8 26.74	+24 21.7	2.103	2.942	12.2	21.5
<b>284332</b>	2006 <i>RQ</i> <sub>15</sub>		1 31.7 148°34	0°7/ 1.2 17			<b>78189</b>	2002 <i>NO</i> <sub>40</sub>		1 31.7 168°03	1°0/30.9 18		
12 23	9 20.07	+14 31.4	2.594	3.340	12.5	20.7	12 23	9 19.62	+18 22.1	2.321	3.086	13.3	20.1
1 2	9 15.78	+14 26.9	2.499	3.344	10.0	20.6	1 2	9 15.79	+18 52.4	2.229	3.087	10.5	20.0
1 12	9 9.58	+14 30.0	2.428	3.347	7.0	20.4	1 12	9 9.81	+19 30.5	2.161	3.089	7.2	19.8
1 22	9 1.93	+14 38.8	2.383	3.350	3.7	20.2	1 22	9 2.13	+20 13.0	2.119	3.090	3.6	19.5
2 1	8 53.48	+14 50.9	2.369	3.353	0.8	19.9	2 1	8 53.49	+20 55.3	2.107	3.091	1.1	19.3
2 11	8 45.05	+15 3.8	2.385	3.356	3.6	20.2	2 11	8 44.83	+21 32.8	2.125	3.092	4.4	19.6
2 21	8 37.42	+15 15.0	2.431	3.359	6.9	20.4	2 21	8 37.07	+22 2.3	2.172	3.092	8.0	19.8
3 2	8 31.26	+15 22.8	2.505	3.362	9.8	20.6	3 2	8 30.97	+22 22.0	2.244	3.093	11.2	20.0
<b>114256</b>	2002 <i>WO</i> <sub>16</sub>		1 31.7 136°62	1°0/30.8 18			<b>358016</b>	2006 <i>DV</i> <sub>164</sub>		1 31.7 291°17	2°1/30.6 18		
12 23	9 17.31	+16 55.0	2.356	3.121	13.1	19.4	12 23	9 21.39	+19 21.4	1.513	2.306	18.0	21.2
1 2	9 13.97	+17 45.2	2.263	3.122	10.4	19.2	1 2	9 18.74	+19 54.0	1.415	2.289	14.4	21.0
1 12	9 8.55	+18 45.5	2.195	3.123	7.1	19.0	1 12	9 12.81	+20 39.2	1.337	2.271	10.1	20.7
1 22	9 1.50	+19 51.9	2.153	3.124	3.5	18.8	1 22	9 4.04	+21 31.7	1.282	2.254	5.2	20.3
2 1	8 53.49	+20 59.1	2.141	3.125	1.1	18.6	2 1	8 53.42	+22 24.0	1.254	2.237	2.2	20.1
2 11	8 45.42	+22 1.8	2.159	3.126	4.4	18.8	2 11	8 42.49	+23 8.1	1.253	2.220	6.7	20.3
2 21	8 38.18	+22 55.5	2.207	3.127	7.9	19.1	2 21	8 32.84	+23 38.3	1.278	2.204	11.9	20.6
3 2	8 32.51	+23 37.7	2.281	3.128	11.1	19.3	3 2	8 25.84	+23 52.3	1.325	2.187	16.5	20.8
<b>161143</b>	2002 <i>RR</i> <sub>161</sub>		1 31.7 97°04	2°2/ 2.5 18 R			<b>176315</b>	2001 <i>SE</i> <sub>195</sub>		1 31.7 237°58	2°3/30.3 18		
12 23	9 17.86	+ 8 9.4	2.306	3.042	14.2	20.5	12 23	9 23.23	+21 39.8	2.049	2.821	14.6	21.2
1 2	9 14.26	+ 8 21.1	2.220	3.053	11.5	20.4	1 2	9 19.14	+22 10.8	1.950	2.812	11.6	21.0
1 12	9 8.65	+ 8 46.6	2.155	3.064	8.4	20.2	1 12	9 12.43	+22 48.8	1.873	2.802	8.1	20.8
1 22	9 1.49	+ 9 24.3	2.115	3.075	5.0	20.0	1 22	9 3.58	+23 28.9	1.822	2.791	4.3	20.5
2 1	8 53.49	+10 11.3	2.105	3.085	2.3	19.8	2 1	8 53.45	+24 5.4	1.800	2.781	2.4	20.4
2 11	8 45.52	+11 3.3	2.125	3.096	4.0	20.0	2 11	8 43.18	+24 33.2	1.807	2.770	5.6	20.5
2 21	8 38.41	+11 55.8	2.174	3.106	7.3	20.2	2 21	8 33.96	+24 49.1	1.843	2.758	9.5	20.8
3 2	8 32.86	+12 45.0	2.250	3.116	10.4	20.4	3 2	8 26.77	+24 52.1	1.904	2.746	13.1	21.0
<b>199368</b>	2006 <i>BE</i> <sub>201</sub>		1 31.7 266°07	1°3/ 1.6 17			<b>426273</b>	2012 <i>SL</i> <sub>4</sub>		1 31.7 182°62	1°7/30.2 18		
12 23	9 18.77	+11 45.4	2.068	2.823	15.0	21.4	12 23	9 19.64	+21 21.8	2.773	3.533	11.4	22.0
1 2	9 15.43	+11 55.8	1.968	2.816	12.1	21.1	1 2	9 15.45	+21 56.1	2.678	3.534	9.0	21.8
1 12	9 9.75	+12 19.1	1.888	2.808	8.7	20.9	1 12	9 9.38	+22 35.3	2.607	3.534	6.2	21.6
1 22	9 2.18	+12 53.4	1.834	2.800	4.7	20.7	1 22	9 1.86	+23 16.0	2.564	3.533	3.3	21.4
2 1	8 53.47	+13 35.4	1.809	2.793	1.3	20.4	2 1	8 53.51	+23 54.0	2.552	3.533	1.8	21.3
2 11	8 44.64	+14 20.3	1.813	2.785	4.3	20.6	2 11	8 45.13	+24 25.7	2.571	3.532	4.3	21.5
2 21	8 36.71	+15 3.6	1.845	2.777	8.4	20.8	2 21	8 37.51	+24 48.6	2.619	3.530	7.3	21.7
3 2	8 30.57	+15 41.5	1.903	2.770	12.0	21.0	3 2	8 31.31	+25 1.6	2.695	3.528	10.0	21.8
<b>463920</b>	2014 <i>UU</i> <sub>147</sub>		1 31.7 7°72	1°2/ 1.4 18			<b>282817</b>	2006 <i>RT</i> <sub>90</sub>		1 31.7 173°87	2°7/ 3.4 17		
12 23	9 16.74	+11 45.9	1.514	2.296	18.4	21.							

EPHEMERIDES

1 31.7

1 31.7

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>495734</b>	2016 <i>DX</i> <sub>14</sub>		1 31.7 210°55	1°0/30.9	17		<b>244070</b>	2001 <i>TK</i> <sub>158</sub>		1 31.7 47°59	10°9/27.1	18	
12 23	9 21.22	+17 56.0	2.363	3.122	13.2	22.0	12 23	9 42.43	+49 23.9	1.970	2.710	16.1	19.7
1 2	9 17.09	+18 28.5	2.261	3.116	10.5	21.8	1 2	9 34.73	+50 13.4	1.925	2.733	14.0	19.6
1 12	9 10.75	+19 9.7	2.183	3.110	7.3	21.6	1 12	9 23.11	+50 47.0	1.901	2.756	12.2	19.5
1 22	9 2.65	+19 55.8	2.132	3.103	3.6	21.3	1 22	9 8.73	+50 54.5	1.901	2.779	11.1	19.5
2 1	8 53.48	+20 42.2	2.111	3.095	1.1	21.1	2 1	8 53.37	+50 29.1	1.925	2.803	11.1	19.5
2 11	8 44.21	+21 24.3	2.121	3.088	4.4	21.4	2 11	8 39.08	+49 30.0	1.975	2.826	12.1	19.7
2 21	8 35.78	+21 58.4	2.160	3.079	8.1	21.6	2 21	8 27.43	+48 2.3	2.049	2.850	13.8	19.8
3 2	8 29.02	+22 22.5	2.225	3.070	11.4	21.8	3 2	8 19.33	+46 14.1	2.145	2.875	15.5	20.0
<b>366975</b>	2005 <i>WJ</i> <sub>152</sub>		1 31.7 154°48	3°7/ 3.5	18		<b>334943</b>	2004 <i>BX</i> <sub>111</sub>		1 31.7 11°67	0°5/31.5	18	
12 23	9 21.95	+ 4 14.5	2.654	3.353	13.3	22.0	12 23	9 25.51	+20 45.7	1.772	2.547	16.4	19.4
1 2	9 17.15	+ 3 53.9	2.558	3.362	11.1	21.9	1 2	9 21.01	+20 11.9	1.688	2.551	13.1	19.1
1 12	9 10.49	+ 3 45.9	2.485	3.372	8.4	21.7	1 12	9 13.68	+19 41.4	1.625	2.554	9.1	18.9
1 22	9 2.40	+ 3 50.4	2.438	3.380	5.7	21.5	1 22	9 4.16	+19 11.7	1.588	2.559	4.6	18.6
2 1	8 53.52	+ 4 6.4	2.421	3.388	3.8	21.4	2 1	8 53.51	+18 40.3	1.580	2.565	0.5	18.3
2 11	8 44.65	+ 4 31.8	2.435	3.394	4.6	21.5	2 11	8 43.04	+18 5.5	1.600	2.571	5.0	18.7
2 21	8 36.54	+ 5 3.2	2.478	3.401	7.0	21.6	2 21	8 33.98	+17 27.0	1.648	2.578	9.4	19.0
3 2	8 29.87	+ 5 37.3	2.549	3.406	9.7	21.8	3 2	8 27.26	+16 45.2	1.721	2.585	13.2	19.2
<b>117928</b>	4741 <i>P-L</i>		1 31.7 102°01	1°0/31.2	18		<b>485606</b>	2011 <i>UB</i> <sub>291</sub>		1 31.7 164°77	1°4/30.8	18	
12 23	9 24.69	+17 53.3	1.625	2.403	17.5	19.9	12 23	9 24.69	+17 50.0	2.047	2.807	15.0	22.0
1 2	9 20.65	+18 14.4	1.549	2.413	13.9	19.7	1 2	9 20.13	+18 36.5	1.958	2.814	11.9	21.8
1 12	9 13.61	+18 46.2	1.494	2.424	9.6	19.4	1 12	9 13.02	+19 33.5	1.893	2.819	8.2	21.6
1 22	9 4.18	+19 23.9	1.463	2.434	4.8	19.2	1 22	9 3.86	+20 36.1	1.854	2.824	4.1	21.4
2 1	8 53.46	+20 1.6	1.459	2.444	1.1	18.9	2 1	8 53.53	+21 38.0	1.845	2.828	1.5	21.2
2 11	8 42.87	+20 33.3	1.485	2.454	5.6	19.3	2 11	8 43.16	+22 33.1	1.866	2.832	5.1	21.4
2 21	8 33.74	+20 55.1	1.537	2.463	10.2	19.5	2 21	8 33.88	+23 17.1	1.917	2.834	9.1	21.7
3 2	8 27.09	+21 5.4	1.613	2.473	14.2	19.8	3 2	8 26.61	+23 47.8	1.993	2.836	12.6	21.9
<b>284973</b>	2010 <i>GJ</i> <sub>25</sub>		1 31.7 275°65	2°7/ 2.9	18		<b>179174</b>	2001 <i>TR</i> <sub>108</sub>		1 31.7 226°60	0°3/31.5	18	
12 23	9 16.06	+ 6 28.3	2.398	3.128	13.8	21.2	12 23	9 23.06	+16 35.1	2.395	3.145	13.3	21.4
1 2	9 12.92	+ 6 36.9	2.293	3.121	11.4	21.0	1 2	9 18.55	+16 51.3	2.284	3.133	10.7	21.1
1 12	9 7.82	+ 7 0.1	2.209	3.113	8.5	20.8	1 12	9 11.81	+17 16.0	2.197	3.120	7.4	20.9
1 22	9 1.16	+ 7 37.0	2.151	3.106	5.3	20.6	1 22	9 3.24	+17 46.3	2.137	3.106	3.8	20.7
2 1	8 53.56	+ 8 25.4	2.121	3.098	2.8	20.4	2 1	8 53.55	+18 18.4	2.107	3.092	0.3	20.3
2 11	8 45.86	+ 9 21.3	2.121	3.091	4.1	20.5	2 11	8 43.70	+18 48.2	2.107	3.076	4.2	20.6
2 21	8 38.87	+10 20.1	2.151	3.083	7.3	20.6	2 21	8 34.66	+19 12.6	2.138	3.061	8.0	20.8
3 2	8 33.33	+11 17.4	2.207	3.076	10.5	20.8	3 2	8 27.27	+19 29.5	2.195	3.044	11.4	21.0
<b>207097</b>	2005 <i>AG</i> <sub>7</sub>		1 31.7 54°38	2°9/30.4	18		<b>58291</b>	1994 <i>GA</i>		1 31.7 37°55	16°4/14.2	18	
12 23	9 25.93	+23 10.2	1.519	2.309	18.0	20.1	12 23	9 18.88	-23 8.5	1.806	2.374	22.4	18.8
1 2	9 21.98	+23 28.9	1.444	2.315	14.3	19.8	1 2	9 16.03	-25 18.4	1.738	2.383	21.0	18.7
1 12	9 14.71	+23 53.5	1.388	2.321	9.9	19.6	1 12	9 10.46	-26 58.4	1.683	2.393	19.5	18.6
1 22	9 4.80	+24 17.9	1.357	2.327	5.3	19.3	1 22	9 2.68	-28 0.8	1.643	2.403	18.1	18.5
2 1	8 53.46	+24 35.5	1.353	2.334	3.0	19.2	2 1	8 53.56	-28 19.5	1.621	2.414	17.0	18.5
2 11	8 42.30	+24 40.8	1.376	2.340	6.7	19.4	2 11	8 44.35	-27 52.9	1.616	2.425	16.4	18.4
2 21	8 32.80	+24 31.9	1.426	2.347	11.3	19.7	2 21	8 36.27	-26 45.3	1.631	2.436	16.5	18.5
3 2	8 26.08	+24 9.6	1.498	2.354	15.3	20.0	3 2	8 30.35	-25 4.9	1.665	2.448	17.3	18.6
<b>381220</b>	2007 <i>RN</i> <sub>232</sub>		1 31.7 57°70	3°6/ 3.6	18		<b>46342</b>	2001 <i>SC</i> <sub>53</sub>		1 31.7 183°46	0°2/31.5	18	
12 23	9 16.70	+ 4 12.9	2.113	2.841	15.5	20.5	12 23	9 18.40	+16 11.3	2.815	3.565	11.5	19.6
1 2	9 13.52	+ 4 20.7	2.032	2.856	12.8	20.4	1 2	9 14.42	+16 36.0	2.717	3.565	9.2	19.4
1 12	9 8.23	+ 4 46.0	1.972	2.871	9.6	20.2	1 12	9 8.66	+17 8.2	2.642	3.565	6.3	19.3
1 22	9 1.34	+ 5 27.9	1.936	2.886	6.2	20.0	1 22	9 1.53	+17 45.3	2.595	3.565	3.2	19.0
2 1	8 53.58	+ 6 23.6	1.928	2.901	3.7	19.9	2 1	8 53.61	+18 24.0	2.579	3.564	0.3	18.8
2 11	8 45.87	+ 7 28.3	1.949	2.916	4.7	20.0	2 11	8 45.66	+19 0.8	2.594	3.563	3.5	19.1
2 21	8 39.08	+ 8 36.4	1.998	2.931	7.7	20.2	2 21	8 38.39	+19 32.8	2.638	3.561	6.6	19.3
3 2	8 33.96	+ 9 42.6	2.074	2.947	10.9	20.4	3 2	8 32.46	+19 57.9	2.711	3.559	9.5	19.4
<b>224953</b>	2007 <i>ER</i> <sub>5</sub>		1 31.7 160°43	0°7/ 1.2	18		<b>523666</b>	2012 <i>RS</i> <sub>16</sub>		1 31.7 162°67	2°4/ 2.4	18 C	
12 23	9 20.76	+13 34.5	2.168	2.921	14.4	21.4	12 23	9 27.76	+ 7 59.4	2.252	2.966	15.0	26.2
1 2	9 16.80	+13 48.5	2.076	2.924	11.6	21.2	1 2	9 22.14	+ 8 6.4	2.157	2.977	12.3	26.0
1 12	9 10.57	+14 13.5	2.006	2.927	8.1	21.0	1 12	9 14.18	+ 8 27.4	2.084	2.987	9.0	25.8
1 22	9 2.56	+14 47.0	1.962	2.930	4.3	20.8	1 22	9 4.38	+ 9 1.0	2.038	2.995	5.3	25.6
2 1	8 53.54	+15 25.2	1.948	2.932	0.7	20.5	2 1	8 53.53	+ 9 44.1	2.023	3.002	2.5	25.4
2 11	8 44.51	+16 3.8	1.963	2.935	4.1	20.8	2 11	8 42.67	+10 32.5	2.039	3.008	4.4	25.5
2 21	8 36.42	+16 38.9	2.008	2.937	8.0	21.0	2 21	8 32.80	+11 21.6	2.086	3.012	7.9	25.8
3 2	8 30.09	+17 7.5	2.078	2.938	11.4	21.2	3 2	8 24.75	+12 7.5	2.160	3.014	11.3	26.0
<b>100435</b>	1996 <i>LK</i> <sub>2</sub>		1 31.7 179°47	2°9/ 2.9	18		<b>401540</b>	2013 <i>EE</i> <sub>110</sub>		1 31.7 270°76	1°1/30.6	17	
12 23	9 20.19	+ 6 25.2	2.306	3.030	14.5	21.1	12 23	9 15.20	+20 7.6	3.329	4.087	9.7	21.3
1 2	9 16.19	+ 6 30.7	2.207	3.031	11.9	20.9	1 2	9 11.70	+20 33.8	3.220	4.075	7.7	21.1
1 12	9 10.09	+ 6 51.0	2.130	3.032	8.8	20.7	1 12	9 6.70	+21 4.6	3.136	4.063	5.3	21.0
1 22	9 2.31	+ 7 25.2	2.078	3.032	5.5	20.5	1 22	9 0.51	+21 37.4	3.081	4.051	2.7	20.8
2 1	8 53.55	+ 8 10.9	2.056	3.032	3.0	20.4	2 1	8 53.65	+22 9.4	3.056	4.039	1.2	20.6
2 11	8 44.73	+ 9 4.0	2.063	3.032	4.3	20.5	2 11	8 46.71	+22 37.7	3.062	4.026	3.4	20.8
2 21	8 36.73	+ 9 59.8	2.100	3.030	7.6	20.7	2 21	8 40.31	+23 0.1	3.099	4.014	6.1	20.9
3 2	8 30.33	+10 54.0	2.164	3.029	10.9	20.9	3 2	8 35.01	+23 15.3	3.162	4.002	8.5	21.1
<b>464906</b>	2005 <i>SF</i> <sub>189</sub>		1 31.7 23°84	5°2/ 3.9	18		<b>318068</b>	2004 <i>FS</i> <sub>143</sub>		1 31.7 257°40	7°0/26.8	18	
12 23	9 16.37	+ 3 45.1	1.519	2.273	19.6	21.2							



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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>147763</b>	2005 <i>QS</i> <sub>21</sub>		1 31.7 171°09	2°9/29.3	18		<b>450527</b>	2006 <i>BX</i> <sub>81</sub>		1 31.7 5°83	1°1/31.1	17	
12 23	9 22.08	+21 55.7	2.285	3.053	13.4	20.6	12 23	9 18.53	+16 7.4	1.281	2.084	20.0	21.4
1 2	9 17.92	+23 5.8	2.197	3.057	10.5	20.4	1 2	9 16.71	+16 45.4	1.205	2.084	16.0	21.2
1 12	9 11.42	+24 23.8	2.132	3.060	7.3	20.2	1 12	9 11.47	+17 40.9	1.147	2.084	11.1	20.9
1 22	9 3.05	+25 43.8	2.095	3.062	4.1	20.0	1 22	9 3.38	+18 48.4	1.112	2.085	5.6	20.6
2 1	8 53.57	+26 58.9	2.088	3.064	3.1	19.9	2 1	8 53.60	+19 59.4	1.102	2.087	1.2	20.3
2 11	8 44.01	+28 3.0	2.112	3.065	5.8	20.1	2 11	8 43.79	+21 4.1	1.118	2.090	6.5	20.6
2 21	8 35.38	+28 52.1	2.165	3.066	9.1	20.3	2 21	8 35.56	+21 55.2	1.159	2.093	12.0	20.9
3 2	8 28.55	+29 24.9	2.243	3.066	12.1	20.5	3 2	8 30.20	+22 29.1	1.221	2.097	16.7	21.2
<b>465182</b>	2007 <i>EV</i> <sub>193</sub>		1 31.7 283°99	3°9/29.4	17		<b>363822</b>	2005 <i>NG</i> <sub>68</sub>		1 31.7 143°21	1°0/30.9	18	
12 23	9 23.47	+26 2.3	2.004	2.784	14.6	22.0	12 23	9 21.70	+16 26.0	2.295	3.050	13.7	21.8
1 2	9 19.66	+26 39.1	1.896	2.762	11.7	21.7	1 2	9 17.44	+17 20.9	2.209	3.062	10.8	21.6
1 12	9 13.04	+27 20.4	1.810	2.739	8.4	21.5	1 12	9 10.98	+18 26.3	2.147	3.072	7.4	21.4
1 22	9 4.04	+28 0.3	1.751	2.716	5.1	21.2	1 22	9 2.79	+19 37.8	2.112	3.082	3.7	21.2
2 1	8 53.54	+28 32.1	1.719	2.692	4.1	21.1	2 1	8 53.62	+20 49.6	2.108	3.092	1.1	21.0
2 11	8 42.79	+28 50.2	1.716	2.669	6.9	21.2	2 11	8 44.45	+21 56.0	2.134	3.100	4.5	21.3
2 21	8 33.08	+28 51.7	1.740	2.645	10.7	21.4	2 21	8 36.20	+22 52.5	2.191	3.109	8.1	21.5
3 2	8 25.53	+28 36.7	1.789	2.622	14.2	21.6	3 2	8 29.66	+23 36.7	2.274	3.116	11.3	21.7
<b>406062</b>	2006 <i>UH</i> <sub>63</sub>		1 31.7 53°90	2°2/30.6	18		<b>413075</b>	2001 <i>SW</i> <sub>306</sub>		1 31.7 120°78	4°7/28.6	18	
12 23	9 24.18	+21 0.6	1.535	2.324	17.9	21.3	12 23	9 29.23	+30 47.8	2.359	3.122	13.1	21.6
1 2	9 20.34	+21 24.4	1.470	2.341	14.1	21.1	1 2	9 23.32	+31 33.9	2.290	3.142	10.5	21.5
1 12	9 13.40	+21 56.1	1.426	2.359	9.7	20.9	1 12	9 14.93	+32 18.8	2.246	3.162	7.7	21.3
1 22	9 4.08	+22 30.0	1.406	2.378	5.0	20.6	1 22	9 4.71	+32 56.4	2.229	3.182	5.3	21.2
2 1	8 53.56	+22 59.3	1.414	2.396	2.3	20.5	2 1	8 53.58	+33 20.9	2.242	3.200	4.9	21.2
2 11	8 43.33	+23 18.7	1.449	2.415	6.1	20.8	2 11	8 42.68	+33 29.1	2.285	3.218	6.7	21.3
2 21	8 34.74	+23 25.5	1.510	2.434	10.5	21.1	2 21	8 33.07	+33 20.3	2.356	3.236	9.4	21.5
3 2	8 28.74	+23 19.5	1.595	2.453	14.4	21.4	3 2	8 25.53	+32 56.4	2.453	3.252	11.9	21.7
<b>77726</b>	2001 <i>OW</i> <sub>63</sub>		1 31.7 118°74	1°6/30.4	18		<b>256955</b>	2008 <i>ER</i> <sub>75</sub>		1 31.7 252°57	2°1/30.4	18	
12 23	9 18.73	+19 6.6	2.489	3.253	12.5	19.8	12 23	9 21.45	+20 4.1	1.812	2.593	15.9	21.2
1 2	9 14.94	+19 57.1	2.405	3.263	9.8	19.6	1 2	9 17.99	+20 42.5	1.726	2.593	12.6	21.0
1 12	9 9.15	+20 55.3	2.344	3.272	6.7	19.4	1 12	9 11.78	+21 30.2	1.661	2.592	8.7	20.8
1 22	9 1.82	+21 56.9	2.311	3.281	3.4	19.2	1 22	9 3.34	+22 22.1	1.621	2.592	4.5	20.5
2 1	8 53.62	+22 56.9	2.308	3.290	1.7	19.1	2 1	8 53.61	+23 11.7	1.609	2.591	2.2	20.4
2 11	8 45.44	+23 50.5	2.336	3.299	4.5	19.3	2 11	8 43.84	+23 52.6	1.626	2.591	5.8	20.6
2 21	8 38.08	+24 34.1	2.393	3.307	7.7	19.5	2 21	8 35.26	+24 20.9	1.671	2.590	10.0	20.8
3 2	8 32.27	+25 6.0	2.477	3.316	10.6	19.7	3 2	8 28.89	+24 35.1	1.739	2.590	13.7	21.1
<b>258351</b>	2001 <i>VH</i> <sub>114</sub>		1 31.7 103°75	4°5/3.8	18		<b>339499</b>	2005 <i>GA</i> <sub>49</sub>		1 31.7 228°46	3°9/3.9	17	
12 23	9 23.48	+3 23.1	2.223	2.928	15.5	20.4	12 23	9 16.91	+3 10.8	2.529	3.238	13.7	21.4
1 2	9 18.60	+2 55.4	2.146	2.952	12.8	20.3	1 2	9 13.46	+3 3.9	2.423	3.233	11.4	21.2
1 12	9 11.60	+2 43.0	2.089	2.975	9.8	20.1	1 12	9 8.15	+3 11.6	2.339	3.228	8.8	21.0
1 22	9 3.01	+2 46.1	2.059	2.998	6.7	20.0	1 22	9 1.35	+3 34.1	2.280	3.222	6.0	20.8
2 1	8 53.60	+3 3.6	2.056	3.020	4.6	19.9	2 1	8 53.68	+4 10.1	2.250	3.217	4.0	20.7
2 11	8 44.32	+3 32.5	2.083	3.042	5.3	19.9	2 11	8 45.91	+4 56.6	2.249	3.211	4.7	20.7
2 21	8 36.06	+4 8.9	2.140	3.063	7.9	20.1	2 21	8 38.82	+5 49.6	2.277	3.205	7.2	20.8
3 2	8 29.54	+4 48.3	2.223	3.084	10.8	20.4	3 2	8 33.12	+6 44.6	2.332	3.199	10.1	21.0
<b>429283</b>	2010 <i>CT</i> <sub>142</sub>		1 31.7 56°83	1°4/1.8	18		<b>155236</b>	2005 <i>WO</i> <sub>18</sub>		1 31.7 213°93	1°4/30.8	18	
12 23	9 17.04	+9 52.6	2.067	2.819	15.1	21.0	12 23	9 20.89	+19 0.2	2.060	2.831	14.5	20.5
1 2	9 13.96	+10 24.3	1.981	2.827	12.2	20.8	1 2	9 17.19	+19 33.0	1.967	2.829	11.5	20.3
1 12	9 8.66	+11 11.5	1.916	2.834	8.7	20.6	1 12	9 11.03	+20 14.7	1.897	2.826	8.0	20.1
1 22	9 1.64	+12 11.5	1.877	2.842	4.8	20.3	1 22	9 2.91	+21 0.9	1.853	2.824	4.0	19.9
2 1	8 53.63	+13 19.9	1.867	2.851	1.4	20.1	2 1	8 53.64	+21 46.3	1.838	2.821	1.5	19.7
2 11	8 45.62	+14 30.7	1.886	2.859	4.1	20.3	2 11	8 44.31	+22 25.6	1.852	2.818	5.0	19.9
2 21	8 38.54	+15 38.3	1.934	2.867	8.0	20.6	2 21	8 35.99	+22 55.0	1.895	2.816	9.0	20.1
3 2	8 33.19	+16 38.2	2.008	2.876	11.5	20.8	3 2	8 29.59	+23 12.8	1.963	2.813	12.5	20.4
<b>405820</b>	2006 <i>BV</i> <sub>113</sub>		1 31.7 299°28	0°7/31.4	17		<b>97702</b>	2000 <i>GG</i> <sub>67</sub>		1 31.7 301°87	3°5/2.9	17	
12 23	9 23.13	+18 18.1	1.451	2.241	18.7	21.6	12 23	9 16.84	+6 36.0	2.093	2.831	15.3	19.2
1 2	9 20.18	+18 19.8	1.356	2.227	15.1	21.3	1 2	9 14.00	+6 24.6	1.979	2.811	12.7	19.0
1 12	9 13.84	+18 32.0	1.281	2.214	10.6	21.0	1 12	9 8.88	+6 28.0	1.886	2.791	9.6	18.7
1 22	9 4.60	+18 50.9	1.229	2.200	5.4	20.7	1 22	9 1.88	+6 46.6	1.818	2.771	6.2	18.5
2 1	8 53.54	+19 11.1	1.202	2.187	0.8	20.3	2 1	8 53.67	+7 18.8	1.776	2.752	3.6	18.3
2 11	8 42.25	+19 26.5	1.203	2.174	6.1	20.7	2 11	8 45.22	+8 1.3	1.764	2.732	4.9	18.3
2 21	8 32.38	+19 33.3	1.229	2.162	11.6	20.9	2 21	8 37.53	+8 49.5	1.779	2.713	8.5	18.5
3 2	8 25.27	+19 29.5	1.278	2.149	16.4	21.2	3 2	8 31.52	+9 38.4	1.820	2.694	12.1	18.7
<b>338128</b>	2002 <i>QU</i> <sub>89</sub>		1 31.7 216°41	3°6/29.9	18		<b>10145</b>	1994 <i>CK</i> <sub>1</sub>		1 31.7 57°86	1°3/31.3	18	
12 23	9 28.25	+23 41.6	1.690	2.469	16.9	21.9	12 23	10 3.01	+16 7.6	0.998	1.744	28.1	19.2
1 2	9 23.83	+24 21.7	1.597	2.462	13.5	21.7	1 2	9 50.28	+17 2.5	0.984	1.828	21.7	19.1
1 12	9 16.13	+25 9.2	1.525	2.455	9.5	21.4	1 12	9 33.12	+18 10.4	0.987	1.908	14.5	19.0
1 22	9 5.67	+25 57.1	1.479	2.447	5.4	21.1	1 22	9 13.32	+19 18.8	1.016	1.985	6.9	18.8
2 1	8 53.53	+26 37.5	1.460	2.438	3.7	21.0	2 1	8 53.38	+20 15.8	1.074	2.059	1.4	18.7
2 11	8 41.25	+27 3.4	1.470	2.428	7.2	21.2	2 11	8 35.85	+20 54.5	1.163	2.130	7.2	19.3
2 21	8 30.37	+27 11.7	1.507	2.418	11.6	21.4	2 21	8 22.31	+21 14.8	1.278	2.197	12.5	19.8
3 2	8 22.16	+27 2.7	1.568	2.408	15.6	21.6	3 2	8 13.37	+21 19.7	1.417	2.262	16.6	20.2
<b>476560</b>	2008 <i>OP</i> <sub>12</sub>		1 31.7 152°23	0°2/31.9	17		<b>383815</b>	2008 <i>BX</i> <sub>52</sub>		1 31.7 270°91	3°0/29.6	17	
12 23	9 14.19	+14 44.9	4.001	4.738	8.6	22.5	12 23						

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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>332342</b>	2007 <i>CS</i> <sub>62</sub>		1 31.7 321°17	5°6/ 3.5 18			<b>166956</b>	2003 <i>MK</i> <sub>6</sub>		1 31.7 245°53	3°5/ 2.8 18		
12 23	9 16.99	+ 4 50.7	1.613	2.365	18.7	20.2	12 23	9 21.46	+ 6 38.2	1.875	2.613	16.9	20.9
1 2	9 14.83	+ 4 8.9	1.510	2.347	15.8	19.9	1 2	9 17.97	+ 6 33.1	1.767	2.599	14.0	20.7
1 12	9 9.87	+ 3 44.6	1.426	2.329	12.2	19.6	1 12	9 11.84	+ 6 45.4	1.678	2.584	10.5	20.5
1 22	9 2.53	+ 3 39.8	1.364	2.312	8.4	19.4	1 22	9 3.49	+ 7 14.9	1.614	2.569	6.6	20.2
2 1	8 53.66	+ 3 55.0	1.326	2.296	5.7	19.2	2 1	8 53.70	+ 7 59.6	1.577	2.554	3.6	20.0
2 11	8 44.48	+ 4 27.4	1.315	2.280	6.8	19.2	2 11	8 43.62	+ 8 54.8	1.568	2.538	5.3	20.0
2 21	8 36.33	+ 5 11.8	1.329	2.265	10.6	19.4	2 21	8 34.45	+ 9 54.9	1.588	2.521	9.4	20.2
3 2	8 30.37	+ 6 1.8	1.367	2.251	14.7	19.6	3 2	8 27.28	+10 53.9	1.633	2.504	13.4	20.4
<b>302882</b>	2003 <i>LZ</i>		1 31.7 209°94	0°1/31.7 18			<b>160254</b>	2002 <i>PF</i> <sub>69</sub>		1 31.7 109°79	0°7/ 1.2 18		
12 23	9 22.31	+13 51.9	1.896	2.656	16.0	21.6	12 23	9 25.96	+15 45.1	2.560	3.297	12.9	20.2
1 2	9 18.59	+14 31.9	1.798	2.651	12.8	21.3	1 2	9 20.30	+15 25.7	2.476	3.315	10.3	20.0
1 12	9 12.20	+15 26.8	1.721	2.645	9.0	21.1	1 12	9 12.65	+15 12.1	2.416	3.333	7.2	19.9
1 22	9 3.60	+16 32.9	1.670	2.639	4.6	20.8	1 22	9 3.54	+15 2.7	2.384	3.351	3.8	19.7
2 1	8 53.63	+17 44.4	1.647	2.632	0.2	20.4	2 1	8 53.71	+14 55.7	2.383	3.368	0.7	19.4
2 11	8 43.49	+18 54.1	1.655	2.625	4.9	20.8	2 11	8 44.03	+14 49.0	2.414	3.384	3.6	19.7
2 21	8 34.36	+19 56.1	1.691	2.617	9.4	21.1	2 21	8 35.33	+14 41.1	2.476	3.401	6.9	19.9
3 2	8 27.28	+20 46.4	1.752	2.609	13.4	21.3	3 2	8 28.26	+14 31.0	2.565	3.417	9.8	20.2
<b>44878</b>	1999 <i>UD</i> <sub>49</sub>		1 31.7 204°84	1°8/ 1.8 18			<b>156522</b>	2002 <i>CO</i> <sub>230</sub>		1 31.7 105°63	2°2/30.4 18		
12 23	9 23.39	+11 40.7	1.996	2.743	15.7	19.1	12 23	9 22.58	+21 49.3	2.033	2.807	14.6	20.3
1 2	9 19.17	+11 35.5	1.897	2.740	12.8	18.8	1 2	9 18.50	+22 17.5	1.949	2.813	11.5	20.1
1 12	9 12.43	+11 42.4	1.819	2.736	9.2	18.6	1 12	9 11.90	+22 51.7	1.889	2.818	8.0	19.9
1 22	9 3.65	+11 59.9	1.767	2.731	5.1	18.3	1 22	9 3.35	+23 27.2	1.854	2.824	4.2	19.7
2 1	8 53.64	+12 25.2	1.743	2.726	1.8	18.1	2 1	8 53.71	+23 58.5	1.848	2.829	2.3	19.6
2 11	8 43.53	+12 54.3	1.749	2.720	4.6	18.3	2 11	8 44.14	+24 21.2	1.872	2.834	5.4	19.8
2 21	8 34.43	+13 23.0	1.783	2.714	8.7	18.5	2 21	8 35.70	+24 32.6	1.923	2.840	9.1	20.0
3 2	8 27.29	+13 48.3	1.844	2.708	12.5	18.7	3 2	8 29.29	+24 32.0	2.000	2.845	12.5	20.2
<b>366097</b>	2012 <i>CX</i> <sub>56</sub>		1 31.7 38°94	10°4/25.1 17			<b>362070</b>	2009 <i>BY</i> <sub>72</sub>		1 31.7 38°10	0°3/31.6 18		
12 23	9 26.33	+38 26.4	1.537	2.334	17.5	19.8	12 23	9 19.20	+13 59.1	1.268	2.066	20.5	20.4
1 2	9 23.10	+40 15.6	1.480	2.340	14.7	19.6	1 2	9 17.05	+14 38.6	1.204	2.079	16.3	20.2
1 12	9 15.98	+41 59.8	1.443	2.347	12.1	19.5	1 12	9 11.54	+15 37.1	1.158	2.093	11.3	19.9
1 22	9 5.67	+43 26.1	1.430	2.355	10.5	19.4	1 22	9 3.35	+16 49.3	1.135	2.107	5.7	19.6
2 1	8 53.59	+44 22.5	1.442	2.362	10.9	19.4	2 1	8 53.71	+18 6.3	1.138	2.123	0.4	19.3
2 11	8 41.69	+44 42.6	1.478	2.370	12.9	19.6	2 11	8 44.24	+19 18.4	1.166	2.139	6.0	19.8
2 21	8 31.81	+44 27.2	1.535	2.379	15.5	19.8	2 21	8 36.45	+20 18.3	1.220	2.155	11.3	20.1
3 2	8 25.25	+43 41.9	1.613	2.387	18.1	20.0	3 2	8 31.45	+21 1.7	1.295	2.172	15.8	20.4
<b>369048</b>	2008 <i>CJ</i> <sub>91</sub>		1 31.7 271°13	1°5/ 1.8 17			<b>435904</b>	2009 <i>BK</i> <sub>9</sub>		1 31.7 8°26	2°1/30.2 17		
12 23	9 19.38	+10 2.9	1.969	2.720	15.8	21.7	12 23	9 18.03	+ 7 18.9	1.050	1.846	23.9	20.1
1 2	9 16.28	+10 26.2	1.854	2.699	12.9	21.5	1 2	9 17.23	+ 9 59.2	0.971	1.846	19.2	19.7
1 12	9 10.66	+11 6.3	1.760	2.677	9.3	21.2	1 12	9 12.54	+13 29.1	0.910	1.847	13.3	19.4
1 22	9 2.89	+12 1.6	1.690	2.655	5.2	20.9	1 22	9 4.31	+17 38.5	0.874	1.848	6.5	19.0
2 1	8 53.68	+13 8.2	1.650	2.633	1.6	20.6	2 1	8 53.68	+22 4.0	0.865	1.849	2.5	18.8
2 11	8 44.13	+14 20.1	1.638	2.610	4.6	20.8	2 11	8 42.58	+26 15.4	0.885	1.851	9.0	19.2
2 21	8 35.38	+15 30.8	1.655	2.587	9.1	21.0	2 21	8 33.15	+29 47.9	0.930	1.853	15.5	19.5
3 2	8 28.49	+16 34.9	1.697	2.564	13.2	21.2	3 2	8 27.17	+32 30.4	0.998	1.856	21.0	19.9
<b>421497</b>	2014 <i>OO</i> <sub>69</sub>		1 31.7 74°22	2°7/30.3 18			<b>521031</b>	2015 <i>CO</i> <sub>70</sub>		1 31.8 215°31	1°0/ 1.7 18		
12 23	9 24.99	+21 43.8	1.631	2.416	17.2	21.2	12 23	9 16.76	+10 53.4	2.474	3.218	13.1	21.4
1 2	9 20.88	+22 19.6	1.564	2.433	13.6	21.0	1 2	9 13.45	+11 22.6	2.375	3.217	10.5	21.2
1 12	9 13.76	+23 2.9	1.519	2.450	9.3	20.8	1 12	9 8.21	+12 4.3	2.298	3.215	7.5	21.0
1 22	9 4.30	+23 47.4	1.498	2.468	4.9	20.6	1 22	9 1.45	+12 56.2	2.247	3.213	4.1	20.8
2 1	8 53.66	+24 26.1	1.505	2.485	2.8	20.5	2 1	8 53.80	+13 54.9	2.227	3.211	1.1	20.5
2 11	8 43.26	+24 53.2	1.540	2.503	6.3	20.7	2 11	8 46.07	+14 55.7	2.237	3.209	3.6	20.7
2 21	8 34.40	+25 5.9	1.601	2.520	10.5	21.0	2 21	8 39.07	+15 54.1	2.276	3.206	7.1	20.9
3 2	8 28.07	+25 4.2	1.687	2.537	14.1	21.3	3 2	8 33.51	+16 46.4	2.342	3.204	10.3	21.1
<b>242063</b>	2002 <i>TN</i> <sub>17</sub>		1 31.7 86°77	1°1/ 1.4 18			<b>131430</b>	2001 <i>OX</i> <sub>102</sub>		1 31.8 96°97	2°8/ 3.0 18		
12 23	9 23.78	+12 39.4	1.802	2.559	16.8	21.2	12 23	9 19.53	+ 6 39.2	2.625	3.342	13.1	19.3
1 2	9 19.45	+12 51.0	1.732	2.581	13.4	21.0	1 2	9 15.25	+ 6 30.6	2.544	3.363	10.7	19.1
1 12	9 12.51	+13 16.0	1.682	2.604	9.4	20.8	1 12	9 9.20	+ 6 33.8	2.485	3.383	7.9	19.0
1 22	9 3.60	+13 51.2	1.658	2.625	5.0	20.6	1 22	9 1.84	+ 6 48.1	2.453	3.404	5.0	18.8
2 1	8 53.68	+14 32.1	1.662	2.647	1.1	20.4	2 1	8 53.80	+ 7 11.7	2.450	3.424	2.9	18.7
2 11	8 43.96	+15 13.5	1.696	2.668	4.6	20.7	2 11	8 45.84	+ 7 41.9	2.477	3.444	3.9	18.8
2 21	8 35.53	+15 50.8	1.757	2.689	8.8	21.0	2 21	8 38.69	+ 8 15.3	2.535	3.463	6.6	19.0
3 2	8 29.26	+16 20.9	1.844	2.709	12.4	21.2	3 2	8 32.94	+ 8 48.9	2.619	3.482	9.3	19.2
<b>297656</b>	2001 <i>TU</i> <sub>253</sub>		1 31.7 44°31	6°0/28.6 18			<b>64767</b>	2001 <i>XP</i> <sub>177</sub>		1 31.8 222°01	1°2/30.9 18		
12 23	9 24.61	+27 3.3	1.369	2.174	18.8	20.6	12 23	9 22.47	+16 36.6	1.804	2.575	16.3	20.1
1 2	9 21.58	+28 11.9	1.300	2.179	15.1	20.4	1 2	9 18.95	+17 24.1	1.707	2.568	13.0	19.9
1 12	9 14.86	+29 26.5	1.252	2.185	10.8	20.2	1 12	9 12.60	+18 25.6	1.632	2.561	9.0	19.6
1 22	9 5.10	+30 36.9	1.227	2.190	7.0	20.0	1 22	9 3.91	+19 36.3	1.583	2.554	4.5	19.3
2 1	8 53.63	+31 32.0	1.227	2.196	6.3	19.9	2 1	8 53.74	+20 49.1	1.562	2.546	1.3	19.1
2 11	8 42.30	+32 3.5	1.254	2.202	9.4	20.1	2 11	8 43.37	+21 56.3	1.570	2.537	5.6	19.4
2 21	8 32.82	+32 9.0	1.304	2.208	13.6	20.4	2 21	8 34.09	+22 52.1	1.606	2.529	10.1	19.6
3 2	8 26.46	+31 50.8	1.376	2.215	17.4	20.6	3 2	8 27.01	+23 33.1	1.666	2.519	14.2	19.8
<b>168029</b>	2005 <i>JF</i> <sub>98</sub>		1 31.7 133°16	4°1/28.2 18			<b>151257</b>	2002 <i>AT</i> <sub>59</sub>		1 31.8 319°78	0°6/ 1.0 18		
12 23	9 20.74	+28 19.3	2.539	3.312	12								

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>45560</b>	2000 CW <sub>53</sub>		1 31.8 102°99	0°9/ 1.2 18			<b>496568</b>	2014 YZ <sub>12</sub>		1 31.8 33°37	2°2/30.1 18		
12 23	9 27.74	+15 1.5	1.941	2.691	16.0	19.1	12 23	9 18.54	+19 12.5	1.948	2.728	14.9	20.6
1 2	9 22.37	+14 46.4	1.865	2.711	12.8	18.9	1 2	9 15.52	+20 12.1	1.864	2.731	11.8	20.4
1 12	9 14.44	+14 40.3	1.810	2.730	9.0	18.7	1 12	9 10.00	+21 22.4	1.802	2.734	8.1	20.1
1 22	9 4.57	+14 40.8	1.782	2.749	4.7	18.5	1 22	9 2.49	+22 37.8	1.767	2.738	4.2	19.9
2 1	8 53.73	+14 45.1	1.783	2.768	0.9	18.2	2 1	8 53.82	+23 51.2	1.760	2.741	2.3	19.8
2 11	8 43.11	+14 50.0	1.814	2.786	4.4	18.5	2 11	8 45.11	+24 55.8	1.782	2.745	5.6	20.0
2 21	8 33.80	+14 53.0	1.875	2.803	8.5	18.8	2 21	8 37.45	+25 46.9	1.832	2.749	9.5	20.2
3 2	8 26.63	+14 52.4	1.961	2.820	12.1	19.0	3 2	8 31.75	+26 22.1	1.907	2.753	12.9	20.5
<b>377030</b>	2002 RQ <sub>243</sub>		1 31.8 83°90	3°3/ 3.1 18			<b>458315</b>	2010 VV <sub>84</sub>		1 31.8 91°40	1°1/ 1.4 18		
12 23	9 20.56	+ 6 32.5	2.273	2.997	14.7	20.8	12 23	9 22.02	+12 50.5	1.855	2.614	16.3	21.9
1 2	9 16.36	+ 6 14.3	2.193	3.016	12.0	20.6	1 2	9 18.14	+12 58.8	1.775	2.626	13.1	21.7
1 12	9 10.13	+ 6 9.3	2.136	3.035	8.9	20.5	1 12	9 11.71	+13 20.0	1.717	2.639	9.2	21.5
1 22	9 2.36	+ 6 17.2	2.103	3.054	5.7	20.3	1 22	9 3.30	+13 51.4	1.683	2.651	4.9	21.3
2 1	8 53.80	+ 6 36.3	2.100	3.073	3.4	20.2	2 1	8 53.81	+14 28.9	1.678	2.663	1.1	21.0
2 11	8 45.34	+ 7 3.5	2.126	3.092	4.5	20.3	2 11	8 44.41	+15 7.5	1.702	2.674	4.5	21.3
2 21	8 37.82	+ 7 35.1	2.181	3.110	7.4	20.5	2 21	8 36.18	+15 42.7	1.754	2.686	8.7	21.6
3 2	8 31.93	+ 8 7.6	2.262	3.128	10.4	20.7	3 2	8 30.01	+16 11.5	1.831	2.697	12.4	21.8
<b>129403</b>	4185 T-2		1 31.8 116°02	6°0/ 5.8 18			<b>110383</b>	2001 SO <sub>350</sub>		1 31.8 65°56	0°5/ 1.1 18		
12 23	9 20.68	- 3 34.3	2.176	2.853	16.5	20.7	12 23	9 18.58	+10 53.2	1.781	2.544	16.8	19.5
1 2	9 16.61	- 3 39.0	2.093	2.872	14.1	20.6	1 2	9 15.64	+11 50.1	1.700	2.554	13.4	19.3
1 12	9 10.40	- 3 22.3	2.030	2.890	11.3	20.4	1 12	9 10.13	+13 5.7	1.640	2.564	9.4	19.0
1 22	9 2.54	- 2 43.3	1.989	2.908	8.4	20.3	1 22	9 2.57	+14 35.5	1.605	2.574	4.9	18.8
2 1	8 53.79	- 1 43.4	1.976	2.925	6.3	20.2	2 1	8 53.84	+16 12.7	1.599	2.584	0.5	18.5
2 11	8 45.09	- 0 27.0	1.992	2.942	6.4	20.2	2 11	8 45.09	+17 48.7	1.623	2.595	4.7	18.8
2 21	8 37.34	+ 0 59.8	2.037	2.957	8.4	20.4	2 21	8 37.45	+19 16.1	1.674	2.605	9.1	19.1
3 2	8 31.28	+ 2 30.0	2.109	2.973	11.1	20.6	3 2	8 31.87	+20 29.6	1.751	2.616	13.0	19.4
<b>82764</b>	2001 QD <sub>11</sub>		1 31.8 48°69	0°9/31.3 18			<b>211461</b>	2003 BB <sub>89</sub>		1 31.8 353°05	3°4/ 3.3 18		
12 23	9 23.03	+19 59.0	2.066	2.834	14.6	19.0	12 23	9 14.00	+ 5 45.4	1.897	2.645	16.4	20.0
1 2	9 18.65	+19 55.5	1.987	2.846	11.5	18.8	1 2	9 11.90	+ 5 49.5	1.802	2.641	13.5	19.8
1 12	9 11.88	+19 57.4	1.930	2.858	8.0	18.6	1 12	9 7.49	+ 6 12.1	1.728	2.636	10.1	19.5
1 22	9 3.29	+20 1.4	1.899	2.870	4.0	18.3	1 22	9 1.23	+ 6 52.5	1.678	2.633	6.4	19.3
2 1	8 53.78	+20 4.1	1.898	2.882	0.9	18.1	2 1	8 53.87	+ 7 48.1	1.654	2.630	3.6	19.1
2 11	8 44.43	+20 2.4	1.926	2.895	4.5	18.4	2 11	8 46.42	+ 8 53.8	1.658	2.628	4.9	19.2
2 21	8 36.25	+19 54.6	1.983	2.908	8.3	18.7	2 21	8 39.88	+10 3.4	1.689	2.627	8.5	19.4
3 2	8 30.02	+19 40.2	2.065	2.921	11.7	18.9	3 2	8 35.13	+11 10.8	1.746	2.627	12.2	19.6
<b>22656</b>	Aaronburrows		1 31.8 205°69	0°4/ 1.0 18			<b>8401</b>	Assirelli		1 31.8 282°44	2°7/ 2.6 18		
12 23	9 22.26	+13 47.5	2.113	2.865	14.8	18.7	12 23	9 17.87	+ 7 18.8	1.912	2.658	16.3	19.0
1 2	9 18.22	+14 10.2	2.013	2.861	11.9	18.5	1 2	9 15.00	+ 7 32.5	1.812	2.651	13.4	18.8
1 12	9 11.77	+14 44.9	1.934	2.856	8.4	18.3	1 12	9 9.69	+ 8 4.2	1.732	2.644	9.9	18.5
1 22	9 3.37	+15 28.9	1.882	2.850	4.3	18.0	1 22	9 2.39	+ 8 52.9	1.677	2.637	6.0	18.3
2 1	8 53.78	+16 17.8	1.859	2.844	0.4	17.7	2 1	8 53.85	+ 9 55.1	1.650	2.630	2.8	18.1
2 11	8 44.06	+17 6.4	1.866	2.837	4.4	18.0	2 11	8 45.15	+11 5.2	1.651	2.623	4.7	18.2
2 21	8 35.27	+17 50.3	1.902	2.830	8.5	18.2	2 21	8 37.37	+12 16.8	1.680	2.616	8.8	18.4
3 2	8 28.31	+18 26.1	1.964	2.822	12.1	18.4	3 2	8 31.46	+13 24.1	1.735	2.609	12.6	18.6
<b>157996</b>	2000 LW <sub>26</sub>		1 31.8 210°07	2°8/29.9 18			<b>143162</b>	2002 XQ <sub>57</sub>		1 31.8 329°48	5°4/ 3.8 17		
12 23	9 25.67	+21 42.2	2.015	2.784	14.9	21.3	12 23	9 21.69	+ 2 43.3	2.383	3.083	14.6	19.4
1 2	9 21.25	+22 35.4	1.917	2.777	11.9	21.1	1 2	9 17.34	+ 1 40.3	2.282	3.081	12.4	19.2
1 12	9 14.08	+23 37.4	1.841	2.769	8.3	20.8	1 12	9 10.91	+ 0 49.2	2.203	3.080	9.8	19.0
1 22	9 4.62	+24 42.2	1.792	2.760	4.5	20.6	1 22	9 2.85	+ 0 11.7	2.149	3.078	7.2	18.8
2 1	8 53.75	+25 42.8	1.773	2.751	3.0	20.4	2 1	8 53.85	- 0 11.0	2.123	3.077	5.5	18.7
2 11	8 42.68	+26 32.5	1.783	2.741	6.1	20.6	2 11	8 44.77	- 0 19.6	2.126	3.075	6.1	18.8
2 21	8 32.68	+27 7.2	1.822	2.730	10.1	20.8	2 21	8 36.49	- 0 16.2	2.158	3.074	8.3	18.9
3 2	8 24.80	+27 25.5	1.885	2.718	13.6	21.0	3 2	8 29.77	- 0 4.1	2.217	3.072	11.0	19.1
<b>270659</b>	2002 PU <sub>178</sub>		1 31.8 172°18	2°7/29.9 18			<b>189027</b>	1999 SS <sub>25</sub>		1 31.8 228°73	2°9/ 2.5 17		
12 23	9 27.74	+21 16.0	1.924	2.690	15.6	22.4	12 23	9 23.80	+ 8 57.1	2.475	3.195	13.7	20.8
1 2	9 22.88	+22 10.8	1.837	2.695	12.4	22.2	1 2	9 19.01	+ 8 25.7	2.362	3.184	11.3	20.6
1 12	9 15.16	+23 14.4	1.772	2.699	8.6	22.0	1 12	9 12.10	+ 8 3.6	2.271	3.173	8.4	20.4
1 22	9 5.13	+24 20.6	1.734	2.702	4.6	21.8	1 22	9 3.48	+ 7 51.0	2.207	3.161	5.3	20.2
2 1	8 53.74	+25 21.8	1.725	2.704	2.9	21.6	2 1	8 53.83	+ 7 47.0	2.173	3.149	3.0	20.0
2 11	8 42.30	+26 11.4	1.747	2.706	6.2	21.9	2 11	8 44.04	+ 7 49.9	2.169	3.136	4.4	20.1
2 21	8 32.09	+26 45.3	1.797	2.706	10.1	22.1	2 21	8 35.00	+ 7 57.3	2.196	3.122	7.6	20.2
3 2	8 24.15	+27 2.8	1.871	2.705	13.7	22.3	3 2	8 27.52	+ 8 6.8	2.250	3.108	10.8	20.4
<b>423291</b>	2005 EE <sub>19</sub>		1 31.8 78°05	3°8/29.3 18			<b>423465</b>	2005 SL <sub>165</sub>		1 31.8 143°45	4°3/ 4.3 18		
12 23	9 23.47	+27 24.0	2.178	2.954	13.7	20.7	12 23	9 19.97	+ 1 22.1	2.347	3.046	14.9	22.2
1 2	9 19.10	+27 57.4	2.099	2.961	10.9	20.5	1 2	9 15.96	+ 1 26.1	2.255	3.057	12.5	22.0
1 12	9 12.26	+28 32.3	2.042	2.968	7.7	20.4	1 12	9 9.94	+ 1 47.6	2.184	3.066	9.6	21.9
1 22	9 3.52	+29 3.2	2.012	2.975	4.8	20.2	1 22	9 2.34	+ 2 26.5	2.138	3.076	6.6	21.7
2 1	8 53.78	+29 24.9	2.012	2.982	3.9	20.2	2 1	8 53.86	+ 3 20.8	2.120	3.085	4.4	21.6
2 11	8 44.16	+29 33.3	2.040	2.989	6.2	20.3	2 11	8 45.37	+ 4 26.5	2.132	3.093	5.0	21.6
2 21	8 35.70	+29 27.1	2.096	2.996	9.4	20.5	2 21	8 37.70	+ 5 38.3	2.173	3.101	7.6	21.8
3 2	8 29.24	+29 7.2	2.177	3.003	12.3	20.7	3 2	8 31.59	+ 6 50.8	2.243	3.108	10.5	22.0
<b>368008</b>	2012 FT <sub>58</sub>		1 31.8 353°91	0°8/31.3 18			<b>193739</b>	2001 FQ <sub>187</sub>		1 31.8 178°52	0°6/ 1.2 18		
12 23	9 19.54	+16 40.9	1.663	2.446	17.0	21.0	12 23	9 19.45	+13 32.2	2.355	3.106	13.5	21.4
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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>78322</b>	2002 <i>PD</i> <sub>79</sub>		1 31.8 74°52	2°0/30.2	18		<b>207137</b>	2005 <i>BC</i> <sub>16</sub>		1 31.8 17°42	2°7/30.4	18	
12 23	9 19.05	+19 18.2	2.120	2.894	14.1	19.3	12 23	9 18.97	+19 47.2	1.208	2.022	20.3	19.5
1 2	9 15.63	+20 17.0	2.041	2.904	11.1	19.2	1 2	9 17.29	+20 28.4	1.141	2.027	16.1	19.3
1 12	9 9.91	+21 25.1	1.985	2.915	7.6	19.0	1 12	9 11.99	+21 22.9	1.093	2.033	11.1	19.0
1 22	9 2.39	+22 37.1	1.955	2.926	3.9	18.7	1 22	9 3.76	+22 23.6	1.067	2.040	5.8	18.7
2 1	8 53.86	+23 46.7	1.955	2.936	2.1	18.6	2 1	8 53.87	+23 21.0	1.065	2.047	2.9	18.6
2 11	8 45.36	+24 47.8	1.985	2.947	5.2	18.9	2 11	8 44.11	+24 6.0	1.089	2.056	7.4	18.9
2 21	8 37.84	+25 36.3	2.043	2.958	8.8	19.1	2 21	8 36.14	+24 33.4	1.136	2.066	12.5	19.2
3 2	8 32.15	+26 10.4	2.126	2.968	11.9	19.3	3 2	8 31.18	+24 42.0	1.204	2.077	17.1	19.5
<b>500977</b>	2013 <i>QH</i> <sub>82</sub>		1 31.8 276°87	2°9/30.3	17		<b>428922</b>	2008 <i>WC</i> <sub>43</sub>		1 31.8 114°56	1°7/30.5	18	
12 23	9 25.64	+24 19.8	1.901	2.677	15.4	21.6	12 23	9 21.02	+20 47.7	2.360	3.126	13.0	21.9
1 2	9 21.42	+24 34.6	1.799	2.663	12.3	21.3	1 2	9 16.89	+21 20.8	2.278	3.136	10.3	21.7
1 12	9 14.29	+24 53.3	1.720	2.649	8.7	21.1	1 12	9 10.62	+21 59.9	2.218	3.146	7.1	21.5
1 22	9 4.77	+25 10.9	1.666	2.635	4.8	20.8	1 22	9 2.71	+22 40.8	2.186	3.156	3.7	21.3
2 1	8 53.81	+25 21.6	1.641	2.620	3.0	20.7	2 1	8 53.90	+23 18.8	2.184	3.165	1.8	21.2
2 11	8 42.72	+25 21.0	1.644	2.606	6.2	20.8	2 11	8 45.15	+23 49.9	2.212	3.175	4.7	21.4
2 21	8 32.82	+25 7.1	1.675	2.591	10.3	21.0	2 21	8 37.35	+24 11.2	2.268	3.184	8.0	21.7
3 2	8 25.22	+24 40.4	1.731	2.576	14.1	21.2	3 2	8 31.24	+24 21.9	2.351	3.193	11.0	21.9
<b>7894</b>	Rogers		1 31.8 287°10	5°4/27.7	18		<b>411192</b>	2010 <i>JE</i> <sub>116</sub>		1 31.8 293°43	4°9/ 3.2	18	
12 23	9 20.54	+25 37.6	1.763	2.557	15.7	17.7	12 23	9 19.44	+ 5 52.7	1.514	2.271	19.5	21.1
1 2	9 17.84	+27 10.0	1.669	2.543	12.6	17.5	1 2	9 17.15	+ 5 25.7	1.408	2.250	16.4	20.8
1 12	9 12.13	+28 52.4	1.598	2.529	9.1	17.2	1 12	9 11.79	+ 5 18.0	1.319	2.228	12.6	20.5
1 22	9 3.83	+30 36.0	1.553	2.515	6.0	17.0	1 22	9 3.74	+ 5 31.3	1.253	2.207	8.3	20.2
2 1	8 53.83	+32 10.2	1.536	2.501	5.8	17.0	2 1	8 53.87	+ 6 5.1	1.212	2.186	5.1	19.9
2 11	8 43.52	+33 25.6	1.546	2.487	8.7	17.1	2 11	8 43.54	+ 6 55.3	1.196	2.165	6.6	20.0
2 21	8 34.34	+34 16.6	1.582	2.473	12.4	17.3	2 21	8 34.26	+ 7 55.3	1.207	2.145	11.2	20.2
3 2	8 27.55	+34 42.3	1.641	2.460	16.0	17.5	3 2	8 27.37	+ 8 57.6	1.240	2.124	15.9	20.4
<b>98295</b>	2000 <i>SE</i> <sub>231</sub>		1 31.8 51°63	4°2/29.8	18		<b>57338</b>	2001 <i>QT</i> <sub>259</sub>		1 31.8 114°85	4°9/ 4.6	18	
12 23	9 25.82	+24 57.1	1.422	2.220	18.6	18.9	12 23	9 21.39	+ 0 32.7	2.257	2.951	15.5	20.1
1 2	9 22.20	+25 34.0	1.354	2.229	14.8	18.6	1 2	9 17.08	+ 0 22.1	2.175	2.971	13.0	19.9
1 12	9 15.08	+26 16.5	1.306	2.240	10.4	18.4	1 12	9 10.69	+ 0 29.3	2.114	2.991	10.1	19.8
1 22	9 5.18	+26 56.7	1.282	2.250	6.0	18.2	1 22	9 2.72	+ 0 54.5	2.077	3.009	7.2	19.6
2 1	8 53.81	+27 26.3	1.284	2.261	4.4	18.1	2 1	8 53.91	+ 1 36.2	2.068	3.028	5.1	19.5
2 11	8 42.69	+27 39.0	1.313	2.272	7.7	18.3	2 11	8 45.16	+ 2 30.6	2.088	3.045	5.5	19.6
2 21	8 33.37	+27 33.0	1.367	2.283	12.1	18.6	2 21	8 37.34	+ 3 32.8	2.138	3.062	7.9	19.7
3 2	8 27.00	+27 9.9	1.443	2.294	16.0	18.9	3 2	8 31.17	+ 4 37.3	2.215	3.078	10.7	19.9
<b>76798</b>	2000 <i>NT</i> <sub>4</sub>		1 31.8 251°77	0°3/31.6	18		<b>453355</b>	2009 <i>AA</i> <sub>7</sub>		1 31.8 342°96	1°8/ 1.7	17	
12 23	9 21.82	+18 1.1	2.751	3.499	11.8	19.8	12 23	9 18.29	+11 57.3	1.335	2.124	20.1	21.4
1 2	9 17.33	+18 3.7	2.634	3.482	9.4	19.6	1 2	9 16.44	+11 56.7	1.250	2.118	16.3	21.1
1 12	9 10.87	+18 11.8	2.542	3.464	6.6	19.4	1 12	9 11.32	+12 14.2	1.183	2.112	11.7	20.8
1 22	9 2.84	+18 23.0	2.477	3.446	3.3	19.2	1 22	9 3.45	+12 48.1	1.138	2.107	6.5	20.5
2 1	8 53.87	+18 34.7	2.442	3.427	0.4	18.9	2 1	8 53.88	+13 33.7	1.119	2.103	1.8	20.2
2 11	8 44.77	+18 44.0	2.439	3.408	3.7	19.1	2 11	8 44.18	+14 24.0	1.124	2.099	5.8	20.4
2 21	8 36.35	+18 48.9	2.466	3.389	7.1	19.3	2 21	8 35.90	+15 11.9	1.155	2.096	11.2	20.7
3 2	8 29.35	+18 48.1	2.521	3.369	10.1	19.5	3 2	8 30.30	+15 51.8	1.208	2.094	16.0	21.0
<b>433101</b>	2012 <i>TY</i> <sub>103</sub>		1 31.8 309°56	4°0/ 3.5	17		<b>464352</b>	2016 <i>AH</i> <sub>122</sub>		1 31.8 124°97	0°5/ 1.1	18	
12 23	9 16.89	+ 4 59.7	2.202	2.930	15.0	21.2	12 23	9 22.76	+14 57.6	1.888	2.651	16.0	21.6
1 2	9 13.86	+ 4 40.6	2.097	2.920	12.5	21.0	1 2	9 18.80	+15 2.0	1.801	2.655	12.8	21.4
1 12	9 8.70	+ 4 36.2	2.013	2.910	9.5	20.8	1 12	9 12.25	+15 17.1	1.735	2.659	9.0	21.1
1 22	9 1.82	+ 4 46.7	1.953	2.900	6.4	20.6	1 22	9 3.65	+15 40.2	1.695	2.663	4.7	20.9
2 1	8 53.90	+ 5 11.4	1.920	2.890	4.1	20.4	2 1	8 53.89	+16 7.4	1.683	2.668	0.5	20.6
2 11	8 45.85	+ 5 47.1	1.916	2.881	5.0	20.4	2 11	8 44.14	+16 34.0	1.700	2.671	4.6	20.9
2 21	8 38.57	+ 6 29.9	1.940	2.872	8.1	20.6	2 21	8 35.55	+16 56.5	1.745	2.675	8.9	21.1
3 2	8 32.88	+ 7 15.2	1.990	2.863	11.3	20.8	3 2	8 29.02	+17 12.3	1.815	2.679	12.6	21.4
<b>234246</b>	2000 <i>TJ</i> <sub>12</sub>		1 31.8 197°78	2°7/30.0	18		<b>328827</b>	2009 <i>WV</i> <sub>8</sub>		1 31.8 130°72	5°0/27.9	18	
12 23	9 26.76	+22 40.5	2.139	2.902	14.3	21.4	12 23	9 25.11	+30 17.2	2.301	3.073	13.2	21.4
1 2	9 21.89	+23 20.7	2.042	2.899	11.4	21.2	1 2	9 20.39	+31 23.4	2.228	3.085	10.5	21.3
1 12	9 14.38	+24 7.1	1.969	2.895	7.9	20.9	1 12	9 13.19	+32 30.2	2.179	3.097	7.7	21.1
1 22	9 4.74	+24 54.5	1.922	2.890	4.3	20.7	1 22	9 4.06	+33 30.8	2.157	3.109	5.5	21.0
2 1	8 53.84	+25 36.8	1.905	2.884	2.8	20.6	2 1	8 53.89	+34 18.6	2.164	3.120	5.3	21.0
2 11	8 42.83	+26 8.5	1.919	2.877	5.8	20.8	2 11	8 43.80	+34 48.9	2.201	3.130	7.2	21.1
2 21	8 32.89	+26 26.7	1.961	2.869	9.5	21.0	2 21	8 34.85	+35 0.2	2.265	3.140	9.9	21.3
3 2	8 25.00	+26 30.8	2.029	2.861	12.8	21.2	3 2	8 27.90	+34 53.6	2.353	3.150	12.4	21.5
<b>225526</b>	2000 <i>RH</i> <sub>76</sub>		1 31.8 131°56	1°9/ 2.2	18		<b>273983</b>	2007 <i>LK</i> <sub>23</sub>		1 31.8 119°83	2°6/ 2.9	18	
12 23	9 21.41	+ 9 24.4	2.373	3.104	13.9	21.9	12 23	9 17.94	+ 6 19.5	2.203	2.934	14.9	20.8
1 2	9 17.05	+ 9 31.7	2.286	3.117	11.3	21.8	1 2	9 14.59	+ 6 41.1	2.111	2.940	12.2	20.6
1 12	9 10.65	+ 9 51.2	2.221	3.131	8.1	21.6	1 12	9 9.13	+ 7 19.2	2.040	2.946	9.0	20.4
1 22	9 2.69	+10 21.4	2.183	3.143	4.7	21.4	1 22	9 2.01	+ 8 12.4	1.995	2.951	5.5	20.2
2 1	8 53.89	+10 59.4	2.175	3.156	2.0	21.2	2 1	8 53.94	+ 9 17.2	1.978	2.957	2.7	20.0
2 11	8 45.13	+11 41.4	2.197	3.167	3.9	21.4	2 11	8 45.83	+10 28.6	1.991	2.962	4.2	20.1
2 21	8 37.25	+12 23.3	2.249	3.178	7.2	21.6	2 21	8 38.57	+11 40.8	2.034	2.967	7.6	20.3
3 2	8 30.97	+13 2.0	2.328	3.189	10.3	21.8	3 2	8 32.93	+12 49.0	2.103	2.972	10.9	20.6
<b>420850</b>	2013 <i>JH</i> <sub>55</sub>		1 31.8 177°92	3°1/ 3.0	18		<b>240569</b>	2004 <i>TO</i> <sub>4</sub>		1 31.8 223°57	1°9/ 1.8	18	
12 23	9 21.64	+ 6 10.4	2.379	3.096	14.3								

EPHEMERIDES

1 31.8

1 31.8

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>82663</b>	2001 <i>PW</i> <sub>17</sub>		1 31.8 67°38'	4.4/28.2	18		<b>466488</b>	2013 <i>WB</i> <sub>3</sub>		1 31.8 116°79'	0.8/31.2	18	
12 23	9 21.56	+26 25.0	2.168	2.947	13.6	18.4	12 23	9 22.44	+18 27.7	2.635	3.385	12.2	22.0
1 2	9 17.58	+27 47.8	2.108	2.972	10.7	18.3	1 2	9 17.64	+18 49.3	2.555	3.405	9.6	21.8
1 12	9 11.22	+29 13.9	2.072	2.998	7.6	18.1	1 12	9 10.94	+19 16.9	2.500	3.424	6.6	21.7
1 22	9 3.05	+30 36.2	2.064	3.023	5.0	18.0	1 22	9 2.82	+19 47.4	2.473	3.442	3.3	21.5
2 1	8 53.92	+31 47.3	2.085	3.049	4.6	18.0	2 1	8 53.97	+20 17.0	2.476	3.460	0.8	21.3
2 11	8 44.93	+32 41.9	2.135	3.074	6.8	18.2	2 11	8 45.22	+20 42.4	2.510	3.477	3.8	21.6
2 21	8 37.08	+33 17.6	2.213	3.099	9.6	18.4	2 21	8 37.36	+21 1.4	2.575	3.494	7.0	21.8
3 2	8 31.16	+33 34.6	2.315	3.124	12.2	18.6	3 2	8 31.02	+21 12.7	2.667	3.511	9.7	22.0
<b>468545</b>	2006 <i>SS</i> <sub>71</sub>		1 31.8 171°75'	0°3/1.0	17		<b>251649</b>	1208 <i>T</i> <sub>-2</sub>		1 31.8 138°65'	1.4/30.9	18	
12 23	9 18.13	+14 26.6	2.936	3.679	11.3	22.3	12 23	9 25.04	+19 32.5	2.286	3.043	13.7	21.9
1 2	9 14.17	+14 45.8	2.838	3.681	9.0	22.1	1 2	9 20.08	+20 1.9	2.203	3.056	10.8	21.7
1 12	9 8.53	+15 12.7	2.764	3.683	6.3	21.9	1 12	9 12.85	+20 38.0	2.144	3.070	7.4	21.5
1 22	9 1.61	+15 45.4	2.717	3.685	3.2	21.7	1 22	9 3.87	+21 16.7	2.112	3.082	3.8	21.3
2 1	8 53.96	+16 20.9	2.702	3.687	0.3	21.5	2 1	8 53.95	+21 53.2	2.111	3.094	1.4	21.2
2 11	8 46.28	+16 56.1	2.717	3.688	3.2	21.7	2 11	8 44.11	+22 23.4	2.140	3.105	4.6	21.4
2 21	8 39.26	+17 28.0	2.763	3.688	6.2	21.9	2 21	8 35.30	+22 44.5	2.198	3.115	8.1	21.6
3 2	8 33.48	+17 54.7	2.836	3.689	9.0	22.1	3 2	8 28.32	+22 55.3	2.283	3.125	11.2	21.9
<b>85697</b>	1998 <i>RG</i> <sub>68</sub>		1 31.8 178°78'	1°9/30.7	18		<b>127836</b>	2003 <i>FW</i> <sub>106</sub>		1 31.8 257°54'	3.5/2.8	18	
12 23	9 28.00	+20 24.1	1.901	2.666	15.8	20.2	12 23	9 20.53	+6 56.8	1.633	2.385	18.5	19.7
1 2	9 23.09	+20 52.2	1.811	2.668	12.6	20.0	1 2	9 17.63	+6 54.5	1.536	2.377	15.3	19.5
1 12	9 15.33	+21 28.3	1.743	2.670	8.7	19.7	1 12	9 11.86	+7 11.7	1.458	2.369	11.4	19.2
1 22	9 5.27	+22 7.3	1.701	2.670	4.5	19.5	1 22	9 3.67	+7 48.5	1.402	2.361	7.1	18.9
2 1	8 53.87	+22 43.1	1.688	2.670	2.0	19.3	2 1	8 53.96	+8 41.9	1.373	2.352	3.6	18.7
2 11	8 42.46	+23 10.4	1.705	2.669	5.6	19.5	2 11	8 44.02	+9 46.1	1.372	2.343	5.6	18.8
2 21	8 32.29	+23 25.9	1.750	2.668	9.8	19.8	2 21	8 35.18	+10 54.0	1.398	2.334	10.0	19.0
3 2	8 24.40	+23 28.9	1.821	2.665	13.5	20.0	3 2	8 28.60	+11 58.9	1.447	2.326	14.4	19.2
<b>6087</b>	Lupo		1 31.8 290°09'	7°8/6.4	18 R		<b>277569</b>	2005 <i>YW</i> <sub>175</sub>		1 31.8 172°45'	0°5/1.1	18	
12 23	9 17.16	-6 33.8	1.188	1.918	25.2	17.7	12 23	9 21.94	+14 57.9	2.171	2.926	14.4	21.3
1 2	9 16.08	-6 0.5	1.094	1.909	22.0	17.5	1 2	9 17.83	+15 0.2	2.077	2.927	11.5	21.1
1 12	9 11.51	-4 39.8	1.015	1.899	17.8	17.2	1 12	9 11.43	+15 11.6	2.006	2.928	8.1	20.9
1 22	9 3.79	-2 25.7	0.954	1.890	13.0	16.8	1 22	9 3.22	+15 29.9	1.961	2.929	4.2	20.7
2 1	8 53.90	+0 40.6	0.916	1.881	8.7	16.6	2 1	8 53.98	+15 51.8	1.944	2.929	0.5	20.4
2 11	8 43.49	+4 25.6	0.904	1.872	8.4	16.5	2 11	8 44.73	+16 13.6	1.958	2.930	4.1	20.7
2 21	8 34.40	+8 26.4	0.918	1.863	12.8	16.7	2 21	8 36.44	+16 32.1	2.001	2.930	8.0	20.9
3 2	8 28.25	+12 18.4	0.958	1.854	18.2	17.0	3 2	8 29.93	+16 45.2	2.069	2.930	11.5	21.1
<b>505739</b>	2015 <i>BQ</i> <sub>38</sub>		1 31.8 95°54'	4°7/28.1	18		<b>468198</b>	2015 <i>AK</i> <sub>279</sub>		1 31.8 269°07'	0°7/31.2	18	
12 23	9 21.17	+26 58.9	2.095	2.878	13.9	20.9	12 23	9 17.99	+16 21.0	2.264	3.028	13.6	21.0
1 2	9 17.57	+28 16.7	2.018	2.884	11.1	20.7	1 2	9 14.74	+17 1.6	2.167	3.024	10.8	20.8
1 12	9 11.43	+29 38.9	1.964	2.890	7.9	20.5	1 12	9 9.33	+17 52.7	2.093	3.020	7.5	20.5
1 22	9 3.26	+30 58.3	1.937	2.896	5.3	20.4	1 22	9 2.18	+18 50.8	2.046	3.016	3.7	20.3
2 1	8 53.92	+32 7.1	1.939	2.902	5.0	20.4	2 1	8 54.00	+19 50.8	2.028	3.013	0.8	20.1
2 11	8 44.57	+32 59.2	1.969	2.908	7.3	20.5	2 11	8 45.73	+20 47.4	2.040	3.009	4.4	20.3
2 21	8 36.31	+33 31.6	2.027	2.914	10.3	20.7	2 21	8 38.29	+21 36.2	2.081	3.005	8.1	20.5
3 2	8 30.07	+33 44.5	2.108	2.920	13.2	20.9	3 2	8 32.49	+22 14.5	2.148	3.001	11.4	20.7
<b>132061</b>	2002 <i>CX</i> <sub>143</sub>		1 31.8 296°09'	2°0/1.9	18		<b>338319</b>	2002 <i>VO</i> <sub>77</sub>		1 31.8 83°71'	6°0/5.6	18	
12 23	9 19.00	+9 32.8	1.550	2.319	18.6	20.1	12 23	9 17.66	-2 21.9	2.356	3.040	15.2	20.6
1 2	9 16.58	+9 50.3	1.456	2.311	15.2	19.9	1 2	9 14.17	-2 52.6	2.267	3.049	13.0	20.5
1 12	9 11.21	+10 28.0	1.381	2.303	11.0	19.6	1 12	9 8.73	-3 5.8	2.198	3.059	10.5	20.3
1 22	9 3.35	+11 24.1	1.330	2.295	6.3	19.3	1 22	9 1.80	-2 59.9	2.152	3.068	8.0	20.2
2 1	8 53.92	+12 33.9	1.304	2.288	2.1	19.0	2 1	8 54.02	-2 35.2	2.133	3.078	6.3	20.1
2 11	8 44.27	+13 49.8	1.306	2.280	5.3	19.2	2 11	8 46.23	-1 54.0	2.142	3.087	6.4	20.1
2 21	8 35.79	+15 3.8	1.335	2.273	10.3	19.5	2 21	8 39.25	-1 0.8	2.180	3.096	8.2	20.2
3 2	8 29.66	+16 9.3	1.387	2.266	14.9	19.7	3 2	8 33.76	-0 0.6	2.243	3.106	10.6	20.4
<b>401991</b>	2002 <i>YZ</i> <sub>11</sub>		1 31.8 53°05'	0°6/31.7	17		<b>145628</b>	2135 <i>P-L</i>		1 31.8 133°94'	0°5/31.5	17	
12 23	9 45.34	+23 7.3	1.474	2.230	20.0	18.5	12 23	9 29.09	+16 36.0	1.614	2.381	18.1	21.6
1 2	9 36.48	+22 4.1	1.419	2.268	15.9	18.3	1 2	9 24.24	+16 56.7	1.538	2.395	14.4	21.3
1 12	9 24.11	+21 1.5	1.384	2.307	10.9	18.1	1 12	9 16.25	+17 29.4	1.482	2.408	10.0	21.1
1 22	9 9.34	+19 56.6	1.377	2.346	5.5	17.9	1 22	9 5.77	+18 9.3	1.451	2.421	5.0	20.9
2 1	8 53.81	+18 48.2	1.399	2.384	0.6	17.6	2 1	8 53.94	+18 50.4	1.448	2.433	0.6	20.5
2 11	8 39.34	+17 37.4	1.453	2.423	5.6	18.1	2 11	8 42.24	+19 26.3	1.474	2.444	5.5	20.9
2 21	8 27.36	+16 26.8	1.537	2.461	10.3	18.4	2 21	8 32.07	+19 52.9	1.528	2.454	10.2	21.2
3 2	8 18.70	+15 18.7	1.646	2.499	14.3	18.8	3 2	8 24.51	+20 8.3	1.606	2.464	14.3	21.5
<b>315634</b>	2008 <i>DL</i> <sub>18</sub>		1 31.8 276°45'	0°5/1.1	17		<b>363762</b>	2005 <i>CQ</i> <sub>76</sub>		1 31.8 42°28'	7°2/4.3	18	
12 23	9 19.64	+13 9.6	1.855	2.620	16.1	21.6	12 23	9 21.77	+2 34.6	1.420	2.165	21.1	20.0
1 2	9 16.69	+13 36.0	1.748	2.604	13.0	21.4	1 2	9 18.68	+1 30.3	1.348	2.176	17.8	19.8
1 12	9 11.08	+14 17.7	1.662	2.587	9.2	21.1	1 12	9 12.53	+0 47.1	1.293	2.187	14.0	19.6
1 22	9 3.23	+15 11.8	1.601	2.570	4.9	20.8	1 22	9 3.93	+0 27.9	1.259	2.199	10.1	19.4
2 1	8 53.93	+16 13.5	1.568	2.553	0.5	20.4	2 1	8 53.97	+0 33.4	1.250	2.211	7.4	19.2
2 11	8 44.34	+17 16.4	1.563	2.535	4.9	20.7	2 11	8 44.11	+1 0.7	1.266	2.224	8.0	19.3
2 21	8 35.68	+18 14.3	1.586	2.518	9.5	20.9	2 21	8 35.69	+1 43.4	1.307	2.237	11.2	19.5
3 2	8 29.03	+19 2.6	1.635	2.500	13.7	21.1	3 2	8 29.80	+2 34.2	1.371	2.251	14.9	19.8
<b>327489</b>	2005 <i>YE</i> <sub>179</sub>		1 31.8 184°25'	2°1/29.9	18		<b>66494</b>	1999 <i>RM</i> <sub>57</sub>		1 31.8 168°88'	0°7/1.4	18	
12 23	9 20.77	+20 3.4	2.484	3.246	12.6	21.2	12 23	9 19.73	+12 1.6	2.443			

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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>64069</b>	2001 SV <sub>271</sub>		1 31.8 342°58	0°0/31.8 18			<b>133331</b>	2003 SQ <sub>95</sub>		1 31.8 154°51	1°5/ 1.8 18		
12 23	9 17.59	+15 55.2	1.997	2.769	14.9	19.1	12 23	9 24.32	+11 26.1	2.096	2.836	15.3	21.5
1 2	9 14.71	+16 7.5	1.902	2.763	11.9	18.9	1 2	9 19.73	+11 31.1	2.006	2.845	12.3	21.3
1 12	9 9.45	+16 29.9	1.829	2.757	8.3	18.7	1 12	9 12.76	+11 48.5	1.938	2.853	8.8	21.1
1 22	9 2.29	+16 59.6	1.782	2.752	4.2	18.4	1 22	9 3.91	+12 16.2	1.896	2.860	4.9	20.9
2 1	8 54.01	+17 32.7	1.762	2.747	0.1	18.1	2 1	8 54.01	+12 50.9	1.883	2.866	1.6	20.7
2 11	8 45.67	+18 4.4	1.771	2.743	4.5	18.4	2 11	8 44.12	+13 28.2	1.900	2.872	4.2	20.9
2 21	8 38.28	+18 31.0	1.808	2.739	8.6	18.7	2 21	8 35.24	+14 4.2	1.947	2.877	8.1	21.1
3 2	8 32.74	+18 49.8	1.870	2.736	12.2	18.9	3 2	8 28.25	+14 35.4	2.020	2.881	11.7	21.3
<b>410926</b>	2009 SQ <sub>233</sub>		1 31.8 64°62	6°1/ 5.2 18			<b>522112</b>	2016 AK <sub>239</sub>		1 31.8 9°51	4°8/29.1 18		
12 23	9 19.40	- 0 41.2	1.830	2.541	18.1	20.8	12 23	9 22.27	+25 1.9	1.508	2.308	17.6	21.0
1 2	9 16.03	- 1 3.0	1.756	2.560	15.3	20.6	1 2	9 19.45	+26 2.8	1.431	2.308	14.0	20.8
1 12	9 10.26	- 1 2.8	1.701	2.580	12.1	20.4	1 12	9 13.31	+27 11.2	1.376	2.309	9.9	20.6
1 22	9 2.63	- 0 39.7	1.668	2.599	8.8	20.3	1 22	9 4.45	+28 18.8	1.344	2.310	6.1	20.3
2 1	8 54.01	+ 0 5.0	1.662	2.619	6.4	20.2	2 1	8 54.00	+29 16.0	1.339	2.312	5.0	20.3
2 11	8 45.50	+ 1 6.8	1.683	2.639	6.7	20.2	2 11	8 43.56	+29 54.7	1.360	2.314	8.2	20.5
2 21	8 38.10	+ 2 19.1	1.731	2.658	9.2	20.4	2 21	8 34.66	+30 11.6	1.407	2.316	12.4	20.7
3 2	8 32.65	+ 3 34.9	1.804	2.678	12.2	20.7	3 2	8 28.50	+30 7.1	1.475	2.319	16.2	20.9
<b>414796</b>	2010 RU <sub>166</sub>		1 31.8 202°22	0°4/31.5 18			<b>458180</b>	2010 NW <sub>22</sub>		1 31.8 71°88	5°0/ 4.1 18		
12 23	9 23.20	+15 58.9	2.111	2.868	14.7	22.3	12 23	9 20.44	+ 2 36.9	1.728	2.457	18.4	22.0
1 2	9 19.04	+16 27.6	2.012	2.864	11.7	22.1	1 2	9 17.03	+ 2 24.5	1.653	2.474	15.4	21.8
1 12	9 12.42	+17 7.1	1.935	2.859	8.2	21.9	1 12	9 11.06	+ 2 33.1	1.597	2.492	11.8	21.6
1 22	9 3.80	+17 53.9	1.884	2.854	4.1	21.6	1 22	9 3.09	+ 3 2.9	1.565	2.509	8.0	21.4
2 1	8 53.99	+18 43.1	1.863	2.848	0.5	21.3	2 1	8 54.04	+ 3 51.8	1.558	2.527	5.2	21.3
2 11	8 44.05	+19 29.5	1.873	2.842	4.6	21.6	2 11	8 45.08	+ 4 54.3	1.580	2.544	6.0	21.4
2 21	8 35.06	+20 8.6	1.911	2.835	8.7	21.9	2 21	8 37.33	+ 6 3.8	1.628	2.561	9.2	21.6
3 2	8 27.94	+20 37.8	1.975	2.828	12.3	22.1	3 2	8 31.66	+ 7 13.4	1.702	2.579	12.7	21.9
<b>168275</b>	2007 PZ <sub>16</sub>		1 31.8 135°30	1°0/31.2 18			<b>35447</b>	1998 CW <sub>2</sub>		1 31.8 261°95	0°1/31.9 18		
12 23	9 25.00	+17 8.4	1.993	2.753	15.3	20.9	12 23	9 21.24	+14 20.0	1.662	2.436	17.4	18.7
1 2	9 20.43	+17 45.6	1.912	2.767	12.1	20.7	1 2	9 18.19	+14 44.7	1.569	2.430	14.0	18.4
1 12	9 13.31	+18 33.1	1.854	2.780	8.4	20.5	1 12	9 12.25	+15 24.3	1.496	2.424	9.8	18.1
1 22	9 4.20	+19 26.4	1.822	2.792	4.2	20.3	1 22	9 3.88	+16 15.5	1.447	2.417	5.1	17.8
2 1	8 53.99	+20 19.6	1.819	2.804	1.0	20.1	2 1	8 54.03	+17 12.5	1.426	2.411	0.1	17.4
2 11	8 43.85	+21 7.1	1.847	2.815	4.9	20.4	2 11	8 44.02	+18 8.5	1.433	2.405	5.2	17.8
2 21	8 34.86	+21 44.8	1.903	2.825	8.9	20.7	2 21	8 35.17	+18 57.4	1.467	2.399	10.1	18.1
3 2	8 27.92	+22 10.8	1.985	2.834	12.4	20.9	3 2	8 28.62	+19 35.1	1.525	2.392	14.4	18.3
<b>386167</b>	2007 UL <sub>3</sub>		1 31.8 67°91	1°1/31.2 18			<b>139</b>	Juewa		1 31.8 330°06	6°2/28.7 18		
12 23	9 23.70	+20 25.1	2.199	2.963	13.9	20.6	12 23	9 23.85	+30 50.3	1.631	2.428	16.7	11.7
1 2	9 19.01	+20 28.8	2.124	2.981	11.0	20.4	1 2	9 20.72	+31 29.2	1.542	2.414	13.5	11.4
1 12	9 12.07	+20 37.3	2.073	2.999	7.6	20.2	1 12	9 14.23	+32 8.6	1.474	2.400	10.1	11.2
1 22	9 3.46	+20 47.4	2.048	3.018	3.8	20.0	1 22	9 4.95	+32 40.2	1.430	2.388	7.0	11.0
2 1	8 54.01	+20 55.5	2.052	3.036	1.1	19.8	2 1	8 54.01	+32 55.8	1.412	2.376	6.4	10.9
2 11	8 44.76	+20 58.5	2.087	3.055	4.4	20.1	2 11	8 43.02	+32 49.5	1.421	2.365	9.0	11.0
2 21	8 36.63	+20 54.8	2.151	3.073	7.9	20.4	2 21	8 33.56	+32 20.3	1.454	2.354	12.7	11.2
3 2	8 30.37	+20 43.9	2.240	3.091	11.1	20.6	3 2	8 26.85	+31 30.7	1.510	2.345	16.3	11.4
<b>457789</b>	2009 QC <sub>4</sub>		1 31.8 212°42	2°2/30.6 18			<b>147304</b>	2003 AN <sub>68</sub>		1 31.8 44°14	1°8/ 1.8 18		
12 23	9 27.30	+23 27.9	2.242	3.004	13.8	21.2	12 23	9 21.80	+12 12.7	1.488	2.263	19.0	20.3
1 2	9 22.14	+23 39.0	2.143	2.998	11.0	21.0	1 2	9 18.53	+12 4.3	1.421	2.280	15.3	20.1
1 12	9 14.47	+23 53.3	2.066	2.992	7.7	20.8	1 12	9 12.29	+12 11.0	1.374	2.298	10.9	19.9
1 22	9 4.80	+24 6.8	2.017	2.985	4.1	20.6	1 22	9 3.76	+12 30.6	1.350	2.316	6.0	19.6
2 1	8 53.99	+24 14.9	1.997	2.978	2.3	20.4	2 1	8 54.04	+12 59.0	1.352	2.335	1.9	19.4
2 11	8 43.14	+24 14.1	2.008	2.970	5.2	20.6	2 11	8 44.54	+13 30.7	1.381	2.354	5.1	19.7
2 21	8 33.56	+24 2.9	2.048	2.962	8.8	20.8	2 21	8 36.54	+14 0.9	1.436	2.374	9.8	20.0
3 2	8 25.34	+23 41.4	2.115	2.953	12.1	21.0	3 2	8 30.99	+14 25.6	1.516	2.394	13.9	20.3
<b>178187</b>	2006 UD <sub>177</sub>		1 31.8 219°58	3°6/29.3 18			<b>167601</b>	2004 BJ <sub>124</sub>		1 31.8 296°41	3°4/29.4 18		
12 23	9 22.08	+22 49.0	1.822	2.606	15.7	20.6	12 23	9 20.54	+25 21.0	2.215	2.994	13.4	20.0
1 2	9 18.71	+23 53.2	1.735	2.604	12.4	20.4	1 2	9 16.97	+26 2.0	2.120	2.985	10.7	19.8
1 12	9 12.50	+25 6.4	1.670	2.602	8.7	20.2	1 12	9 11.00	+26 47.2	2.048	2.976	7.5	19.6
1 22	9 3.95	+26 21.6	1.632	2.599	5.0	20.0	1 22	9 3.10	+27 31.4	2.002	2.968	4.5	19.4
2 1	8 54.00	+27 30.5	1.621	2.597	3.8	19.9	2 1	8 54.06	+28 8.8	1.986	2.959	3.6	19.3
2 11	8 43.95	+28 25.9	1.639	2.594	6.9	20.1	2 11	8 44.94	+28 34.6	1.998	2.951	6.1	19.4
2 21	8 35.08	+29 3.2	1.684	2.592	10.8	20.3	2 21	8 36.79	+28 46.2	2.038	2.943	9.4	19.6
3 2	8 28.47	+29 21.6	1.753	2.589	14.4	20.5	3 2	8 30.49	+28 43.3	2.103	2.935	12.5	19.8
<b>337570</b>	2001 SA <sub>298</sub>		1 31.8 197°78	2°8/29.9 17			<b>169681</b>	2002 JM <sub>112</sub>		1 31.8 266°66	2°0/30.6 18		
12 23	9 22.84	+25 27.1	2.540	3.306	12.2	21.4	12 23	9 23.16	+19 43.8	1.773	2.551	16.3	21.3
1 2	9 18.31	+25 51.2	2.446	3.304	9.7	21.2	1 2	9 19.77	+20 18.2	1.669	2.534	13.0	21.0
1 12	9 11.63	+26 17.5	2.377	3.303	6.8	21.0	1 12	9 13.42	+21 3.3	1.586	2.517	9.1	20.7
1 22	9 3.29	+26 41.8	2.335	3.301	3.9	20.8	1 22	9 4.54	+21 54.1	1.528	2.499	4.7	20.4
2 1	8 54.02	+27 0.0	2.323	3.299	2.9	20.7	2 1	8 54.03	+22 44.0	1.498	2.481	2.1	20.2
2 11	8 44.77	+27 8.5	2.341	3.296	5.1	20.9	2 11	8 43.22	+23 26.2	1.497	2.463	6.1	20.4
2 21	8 36.43	+27 5.8	2.389	3.294	8.1	21.0	2 21	8 33.49	+23 55.7	1.523	2.444	10.7	20.6
3 2	8 29.76	+26 52.1	2.462	3.291	10.9	21.2	3 2	8 26.05	+24 10.5	1.572	2.425	14.9	20.8
<b>109634</b>	2001 QQ <sub>328</sub>		1 31.8 116°40	4°5/27.9 18			<b>304911</b>	2007 RX <sub>284</sub>		1 31.8 19°68	1°1/ 1.4 18		
12 23	9 22.07	+30 2.3	2.555	3.326	12.0	20.2	12 23	9 18.14	+12 45.8	1.257	2.054	20.7	20.6
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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>165935</b>	2001 <i>UU</i> <sub>22</sub>		1 31.8 154°01	4.3/ 4.5	17		<b>56067</b>	1998 <i>YH</i> <sub>2</sub>		1 31.8 244°88	0.1/31.9	18	
12 23	9 18.54	+ 0 54.8	2.913	3.597	12.5	21.0	12 23	9 25.68	+17 15.1	2.079	2.835	14.9	18.8
1 2	9 14.46	+ 0 32.2	2.815	3.603	10.6	20.9	1 2	9 21.08	+17 4.2	1.973	2.824	12.0	18.6
1 12	9 8.75	+ 0 22.5	2.738	3.609	8.3	20.8	1 12	9 13.89	+17 0.1	1.889	2.812	8.4	18.3
1 22	9 1.78	+ 0 26.4	2.688	3.615	6.1	20.6	1 22	9 4.61	+17 0.5	1.832	2.801	4.4	18.0
2 1	8 54.10	+ 0 43.1	2.665	3.620	4.5	20.5	2 1	8 54.07	+17 2.2	1.803	2.789	0.1	17.7
2 11	8 46.40	+ 1 10.9	2.673	3.625	4.8	20.5	2 11	8 43.40	+17 2.2	1.805	2.776	4.5	18.0
2 21	8 39.34	+ 1 46.8	2.711	3.630	6.7	20.7	2 21	8 33.74	+16 58.3	1.836	2.764	8.7	18.2
3 2	8 33.50	+ 2 27.2	2.776	3.634	9.0	20.8	3 2	8 26.05	+16 49.0	1.893	2.751	12.5	18.4
<b>456860</b>	2007 <i>UG</i> <sub>141</sub>		1 31.8 114°06	4.5/28.8	18		<b>66039</b>	1998 <i>QS</i> <sub>74</sub>		1 31.8 162°24	1.2/ 1.5	18	
12 23	9 27.02	+26 1.7	1.896	2.673	15.4	21.7	12 23	9 24.48	+14 11.8	2.356	3.098	13.7	19.0
1 2	9 22.32	+27 10.8	1.828	2.691	12.2	21.5	1 2	9 19.59	+13 50.2	2.260	3.100	11.1	18.8
1 12	9 14.77	+28 24.2	1.783	2.709	8.6	21.3	1 12	9 12.52	+13 35.9	2.187	3.103	7.9	18.6
1 22	9 4.99	+29 34.2	1.765	2.727	5.4	21.2	1 22	9 3.78	+13 27.7	2.140	3.105	4.3	18.4
2 1	8 54.04	+30 32.8	1.775	2.744	4.7	21.1	2 1	8 54.10	+13 23.5	2.124	3.108	1.3	18.2
2 11	8 43.24	+31 13.9	1.814	2.760	7.2	21.3	2 11	8 44.44	+13 21.3	2.138	3.109	3.9	18.4
2 21	8 33.82	+31 35.1	1.881	2.775	10.6	21.6	2 21	8 35.71	+13 18.9	2.183	3.111	7.5	18.6
3 2	8 26.76	+31 37.4	1.972	2.790	13.7	21.8	3 2	8 28.68	+13 14.9	2.254	3.112	10.7	18.8
<b>462957</b>	2011 <i>CA</i> <sub>101</sub>		1 31.8 196°42	3.0/ 2.8	18		<b>301797</b>	2010 <i>OL</i> <sub>83</sub>		1 31.8 214°68	2.5/ 3.2	17	
12 23	9 19.30	+ 7 27.6	2.105	2.842	15.3	21.8	12 23	9 16.85	+ 5 44.7	2.980	3.691	11.8	21.9
1 2	9 15.84	+ 7 23.1	2.009	2.841	12.6	21.6	1 2	9 13.22	+ 5 54.1	2.869	3.684	9.7	21.8
1 12	9 10.14	+ 7 33.3	1.934	2.841	9.3	21.4	1 12	9 7.96	+ 6 15.7	2.781	3.677	7.3	21.6
1 22	9 2.64	+ 7 57.5	1.884	2.840	5.8	21.2	1 22	9 1.43	+ 6 48.7	2.719	3.669	4.6	21.4
2 1	8 54.09	+ 8 33.4	1.862	2.839	3.1	21.0	2 1	8 54.14	+ 7 31.2	2.687	3.662	2.6	21.2
2 11	8 45.47	+ 9 17.0	1.869	2.838	4.5	21.1	2 11	8 46.76	+ 8 20.3	2.686	3.654	3.6	21.3
2 21	8 37.74	+10 3.9	1.904	2.837	8.1	21.3	2 21	8 39.94	+ 9 12.5	2.716	3.645	6.2	21.5
3 2	8 31.73	+10 49.4	1.966	2.836	11.5	21.5	3 2	8 34.27	+10 4.2	2.773	3.636	8.8	21.6
<b>135436</b>	2001 <i>UF</i> <sub>154</sub>		1 31.8 92°67	0.5/ 1.2	18		<b>141000</b>	2001 <i>WO</i> <sub>29</sub>		1 31.8 103°93	2.0/ 2.5	18	
12 23	9 19.44	+14 1.8	2.549	3.296	12.7	20.3	12 23	9 18.22	+ 8 34.6	2.655	3.382	12.7	20.2
1 2	9 15.38	+14 18.3	2.469	3.314	10.1	20.1	1 2	9 14.35	+ 8 43.4	2.570	3.398	10.3	20.1
1 12	9 9.46	+14 43.7	2.412	3.332	7.0	19.9	1 12	9 8.73	+ 9 3.7	2.506	3.413	7.5	19.9
1 22	9 2.15	+15 15.5	2.382	3.349	3.6	19.8	1 22	9 1.79	+ 9 34.1	2.470	3.428	4.4	19.7
2 1	8 54.11	+15 50.5	2.382	3.367	0.5	19.5	2 1	8 54.14	+10 12.1	2.463	3.443	2.1	19.6
2 11	8 46.14	+16 25.0	2.413	3.384	3.5	19.8	2 11	8 46.53	+10 54.3	2.487	3.457	3.5	19.7
2 21	8 39.01	+16 56.1	2.473	3.401	6.8	20.0	2 21	8 39.67	+11 37.1	2.541	3.472	6.4	19.9
3 2	8 33.35	+17 21.4	2.561	3.418	9.6	20.2	3 2	8 34.17	+12 17.4	2.622	3.486	9.2	20.1
<b>340761</b>	2006 <i>SL</i> <sub>310</sub>		1 31.8 178°07	7.7/24.8	18		<b>389872</b>	2012 <i>SH</i> <sub>11</sub>		1 31.8 120°59	1.1/ 1.4	18	
12 23	9 30.20	+45 28.2	2.899	3.640	11.4	21.2	12 23	9 26.24	+13 28.2	1.476	2.246	19.3	21.6
1 2	9 24.37	+46 29.4	2.827	3.641	9.9	21.1	1 2	9 22.31	+13 27.9	1.397	2.255	15.6	21.3
1 12	9 15.94	+47 22.2	2.779	3.642	8.5	21.0	1 12	9 15.13	+13 42.4	1.339	2.263	11.0	21.1
1 22	9 5.52	+48 0.1	2.757	3.643	7.8	21.0	1 22	9 5.34	+14 8.9	1.303	2.271	5.9	20.8
2 1	8 54.05	+48 17.4	2.762	3.643	8.0	21.0	2 1	8 54.07	+14 42.4	1.295	2.279	1.2	20.5
2 11	8 42.71	+48 11.4	2.794	3.643	9.1	21.0	2 11	8 42.87	+15 17.1	1.314	2.287	5.4	20.8
2 21	8 32.63	+47 42.7	2.852	3.642	10.6	21.2	2 21	8 33.21	+15 47.7	1.359	2.294	10.5	21.1
3 2	8 24.68	+46 54.4	2.932	3.641	12.1	21.3	3 2	8 26.22	+16 10.7	1.429	2.300	14.9	21.4
<b>197784</b>	2004 <i>PA</i> <sub>50</sub>		1 31.8 162°42	2.2/30.6	18		<b>465667</b>	2009 <i>SE</i> <sub>69</sub>		1 31.8 111°54	3.1/29.6	18	
12 23	9 27.69	+21 9.1	1.828	2.597	16.2	20.9	12 23	9 24.72	+24 26.3	2.272	3.039	13.5	21.7
1 2	9 22.96	+21 36.9	1.743	2.603	12.8	20.6	1 2	9 19.92	+25 13.3	2.200	3.058	10.6	21.5
1 12	9 15.32	+22 12.0	1.679	2.608	8.9	20.4	1 12	9 12.80	+26 4.0	2.151	3.077	7.4	21.3
1 22	9 5.34	+22 49.2	1.642	2.612	4.7	20.2	1 22	9 3.91	+26 53.1	2.130	3.095	4.3	21.2
2 1	8 54.05	+23 22.3	1.633	2.615	2.3	20.0	2 1	8 54.10	+27 34.9	2.139	3.113	3.2	21.1
2 11	8 42.80	+23 45.9	1.654	2.618	5.8	20.2	2 11	8 44.43	+28 5.1	2.178	3.131	5.6	21.3
2 21	8 32.87	+23 57.0	1.703	2.620	10.0	20.5	2 21	8 35.87	+28 21.4	2.245	3.147	8.7	21.5
3 2	8 25.31	+23 55.1	1.776	2.622	13.7	20.7	3 2	8 29.21	+28 24.0	2.338	3.164	11.6	21.8
<b>427133</b>	2014 <i>UW</i> <sub>113</sub>		1 31.8 47°64	2.6/ 2.4	18		<b>5730</b>	Yonosuke		1 31.8 120°07	0.6/31.4	18	
12 23	9 21.78	+ 9 4.6	1.545	2.307	19.0	21.3	12 23	9 20.57	+16 57.9	2.298	3.058	13.5	17.5
1 2	9 18.23	+ 9 4.0	1.488	2.337	15.3	21.1	1 2	9 16.63	+17 23.7	2.212	3.066	10.7	17.3
1 12	9 11.90	+ 9 21.2	1.449	2.367	11.0	21.0	1 12	9 10.54	+17 58.0	2.149	3.074	7.4	17.1
1 22	9 3.49	+ 9 54.0	1.435	2.397	6.4	20.8	1 22	9 2.79	+18 37.5	2.112	3.082	3.7	16.9
2 1	8 54.09	+10 38.1	1.446	2.427	2.7	20.6	2 1	8 54.13	+19 17.8	2.105	3.090	0.6	16.7
2 11	8 45.00	+11 27.3	1.486	2.458	5.0	20.8	2 11	8 45.49	+19 54.8	2.129	3.098	4.1	17.0
2 21	8 37.37	+12 15.8	1.552	2.489	9.2	21.1	2 21	8 37.77	+20 25.0	2.181	3.105	7.7	17.2
3 2	8 32.05	+12 58.8	1.643	2.520	13.0	21.4	3 2	8 31.73	+20 46.4	2.259	3.112	10.9	17.4
<b>478356</b>	2011 <i>XW</i> <sub>2</sub>		1 31.8 128°46	18.1/11.9	18		<b>182802</b>	2002 <i>AW</i> <sub>97</sub>		1 31.8 99°20	3.1/29.5	18	
12 23	9 24.29	-18 26.2	1.318	1.953	27.1	22.0	12 23	9 22.79	+22 23.2	2.034	2.809	14.6	20.2
1 2	9 21.37	-20 38.9	1.251	1.962	25.1	21.8	1 2	9 18.74	+23 27.7	1.962	2.826	11.5	20.0
1 12	9 14.91	-22 17.1	1.195	1.969	22.8	21.6	1 12	9 12.18	+24 39.0	1.913	2.842	7.9	19.8
1 22	9 5.42	-23 9.8	1.154	1.977	20.6	21.5	1 22	9 3.68	+25 51.0	1.891	2.859	4.4	19.7
2 1	8 54.05	-23 7.9	1.129	1.984	18.8	21.4	2 1	8 54.12	+26 56.5	1.898	2.875	3.3	19.6
2 11	8 42.49	-22 9.7	1.122	1.990	18.1	21.4	2 11	8 44.64	+27 49.5	1.935	2.890	6.0	19.8
2 21	8 32.47	-20 22.2	1.135	1.996	18.6	21.4	2 21	8 36.31	+28 26.7	2.000	2.905	9.4	20.0
3 2	8 25.39	-17 59.1	1.168	2.002	20.2	21.5	3 2	8 30.01	+28 47.3	2.089	2.920	12.5	20.3
<b>338190</b>	2002 <i>RV</i> <sub>210</sub>		1 31.8 199°70	3.6/ 3.9	17		<b>428393</b>	2007 <i>RH</i> <sub>324</sub>		1 31.8 300°59	5.5/27.4	18	
12 23	9 17.60	+ 3 20.2	2.591	3.298	13.4	22.2							

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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>110278</b>	2001 <i>SW</i> <sub>253</sub>		1 31.8 264°80	2°4/30.2	18		<b>127512</b>	2002 <i>TE</i> <sub>240</sub>		1 31.8 14°74	7°4/ 6.5	18	
12 23	9 22.20	+21 1.0	2.028	2.802	14.6	19.7	12 23	9 16.23	- 5 3.5	2.140	2.820	16.6	19.6
1 2	9 18.65	+21 45.1	1.920	2.783	11.7	19.5	1 2	9 13.39	- 5 39.4	2.047	2.822	14.5	19.4
1 12	9 12.44	+22 38.4	1.834	2.764	8.2	19.2	1 12	9 8.43	- 5 54.7	1.973	2.823	12.0	19.3
1 22	9 4.00	+23 35.8	1.775	2.744	4.4	18.9	1 22	9 1.80	- 5 47.0	1.920	2.825	9.5	19.1
2 1	8 54.11	+24 31.1	1.744	2.724	2.6	18.8	2 1	8 54.19	- 5 15.7	1.893	2.828	7.7	19.0
2 11	8 43.94	+25 17.7	1.743	2.704	5.9	18.9	2 11	8 46.50	- 4 23.2	1.892	2.830	7.6	19.0
2 21	8 34.68	+25 51.2	1.769	2.683	9.9	19.1	2 21	8 39.64	- 3 14.6	1.919	2.833	9.3	19.1
3 2	8 27.41	+26 9.8	1.820	2.662	13.6	19.3	3 2	8 34.40	- 1 56.4	1.971	2.836	11.7	19.3
<b>469592</b>	2004 <i>DO</i> <sub>57</sub>		1 31.8 305°13	2°6/ 2.9	16		<b>295829</b>	2008 <i>UR</i> <sub>355</sub>		1 31.8 94°37	2°2/30.5	18	
12 23	9 15.58	+ 5 32.9	2.129	2.865	15.2	21.5	12 23	9 24.05	+18 16.3	1.546	2.329	18.0	20.5
1 2	9 13.16	+ 6 6.5	2.007	2.839	12.6	21.2	1 2	9 20.51	+19 13.5	1.475	2.343	14.3	20.3
1 12	9 8.52	+ 7 0.3	1.905	2.812	9.4	21.0	1 12	9 13.84	+20 24.0	1.424	2.356	9.8	20.1
1 22	9 1.97	+ 8 13.7	1.828	2.786	5.8	20.7	1 22	9 4.69	+21 40.8	1.399	2.370	5.0	19.8
2 1	8 54.15	+ 9 43.3	1.780	2.759	2.7	20.4	2 1	8 54.14	+22 55.2	1.400	2.383	2.3	19.7
2 11	8 45.98	+11 23.2	1.761	2.733	4.4	20.5	2 11	8 43.70	+23 58.8	1.430	2.396	6.3	20.0
2 21	8 38.46	+13 5.9	1.772	2.707	8.4	20.7	2 21	8 34.74	+24 46.3	1.487	2.408	10.9	20.3
3 2	8 32.53	+14 44.2	1.809	2.681	12.2	20.9	3 2	8 28.35	+25 15.8	1.567	2.421	14.8	20.5
<b>314679</b>	2006 <i>QF</i> <sub>126</sub>		1 31.8 93°24	2°9/29.7	18		<b>431616</b>	2007 <i>VR</i> <sub>291</sub>		1 31.8 162°23	3°3/ 3.6	17	
12 23	9 23.56	+19 44.9	1.826	2.601	16.0	20.9	12 23	9 18.42	+ 4 53.6	2.774	3.482	12.6	21.8
1 2	9 19.60	+21 7.6	1.758	2.622	12.5	20.7	1 2	9 14.51	+ 4 40.2	2.675	3.485	10.5	21.6
1 12	9 12.92	+22 41.0	1.712	2.643	8.6	20.5	1 12	9 8.87	+ 4 38.7	2.598	3.489	7.9	21.4
1 22	9 4.10	+24 17.7	1.694	2.663	4.6	20.3	1 22	9 1.91	+ 4 49.1	2.547	3.492	5.3	21.3
2 1	8 54.12	+25 48.8	1.705	2.683	3.1	20.2	2 1	8 54.20	+ 5 10.1	2.525	3.494	3.4	21.2
2 11	8 44.23	+27 6.3	1.745	2.702	6.3	20.5	2 11	8 46.46	+ 5 39.4	2.534	3.497	4.1	21.2
2 21	8 35.61	+28 5.6	1.813	2.722	10.1	20.7	2 21	8 39.39	+ 6 13.9	2.572	3.499	6.6	21.4
3 2	8 29.21	+28 45.2	1.906	2.740	13.4	21.0	3 2	8 33.59	+ 6 50.3	2.638	3.501	9.2	21.5
<b>220361</b>	2003 <i>NL</i> <sub>5</sub>		1 31.8 7°54	1°0/ 1.4	18		<b>384843</b>	2012 <i>SG</i> <sub>5</sub>		1 31.8 99°93	3°6/29.1	18	
12 23	9 20.27	+13 36.0	1.784	2.552	16.6	20.8	12 23	9 23.08	+28 4.0	2.542	3.310	12.2	21.1
1 2	9 17.08	+13 36.4	1.696	2.553	13.3	20.6	1 2	9 18.45	+28 41.4	2.466	3.324	9.6	20.9
1 12	9 11.25	+13 49.1	1.629	2.553	9.4	20.3	1 12	9 11.70	+29 19.5	2.415	3.338	6.9	20.7
1 22	9 3.30	+14 11.8	1.586	2.554	5.1	20.1	1 22	9 3.35	+29 53.5	2.392	3.352	4.4	20.6
2 1	8 54.14	+14 41.0	1.571	2.555	1.0	19.8	2 1	8 54.18	+30 18.7	2.398	3.365	3.8	20.6
2 11	8 44.94	+15 11.6	1.584	2.557	4.7	20.0	2 11	8 45.13	+30 31.6	2.434	3.379	5.7	20.7
2 21	8 36.89	+15 39.6	1.624	2.558	9.1	20.3	2 21	8 37.08	+30 31.2	2.498	3.392	8.3	20.9
3 2	8 30.92	+16 1.6	1.689	2.560	13.0	20.5	3 2	8 30.75	+30 18.0	2.588	3.405	10.9	21.1
<b>111026</b>	2001 <i>VR</i> <sub>17</sub>		1 31.8 181°61	1°3/ 1.8	18		<b>467093</b>	2016 <i>ES</i> <sub>10</sub>		1 31.8 346°00	12°5/25.2	16	
12 23	9 22.35	+11 32.2	2.588	3.319	12.9	21.3	12 23	9 24.62	+41 29.2	1.313	2.122	19.3	20.8
1 2	9 17.78	+11 41.4	2.487	3.320	10.4	21.1	1 2	9 22.87	+42 59.7	1.246	2.110	16.6	20.6
1 12	9 11.23	+12 0.8	2.409	3.321	7.4	21.0	1 12	9 16.60	+44 22.2	1.197	2.100	14.1	20.4
1 22	9 3.14	+12 28.7	2.357	3.321	4.1	20.7	1 22	9 6.48	+45 22.5	1.169	2.091	12.7	20.3
2 1	8 54.15	+13 2.4	2.337	3.320	1.3	20.5	2 1	8 54.12	+45 47.0	1.163	2.083	13.0	20.3
2 11	8 45.10	+13 38.3	2.347	3.318	3.6	20.7	2 11	8 41.88	+45 28.6	1.178	2.076	15.0	20.4
2 21	8 36.81	+14 13.0	2.388	3.316	7.0	20.9	2 21	8 32.02	+44 29.0	1.214	2.071	17.9	20.5
3 2	8 30.00	+14 43.9	2.457	3.313	10.0	21.1	3 2	8 26.05	+42 56.2	1.269	2.067	20.9	20.7
<b>371238</b>	2006 <i>BC</i> <sub>97</sub>		1 31.8 79°41	3°6/29.9	18		<b>240308</b>	2003 <i>FP</i> <sub>100</sub>		1 31.8 291°22	4°1/29.6	18	
12 23	9 28.52	+27 15.8	2.040	2.810	14.7	20.3	12 23	9 22.80	+22 58.2	1.464	2.263	18.2	20.6
1 2	9 23.09	+27 37.6	1.974	2.832	11.6	20.1	1 2	9 20.16	+23 53.8	1.376	2.253	14.5	20.4
1 12	9 15.02	+28 0.1	1.930	2.854	8.2	20.0	1 12	9 14.08	+25 0.2	1.308	2.243	10.2	20.1
1 22	9 5.03	+28 17.7	1.913	2.876	4.9	19.8	1 22	9 5.04	+26 9.8	1.264	2.233	5.9	19.8
2 1	8 54.12	+28 25.4	1.925	2.898	3.7	19.8	2 1	8 54.15	+27 12.7	1.245	2.223	4.3	19.7
2 11	8 43.54	+28 19.9	1.967	2.919	6.1	20.0	2 11	8 43.03	+27 59.8	1.254	2.213	8.0	19.9
2 21	8 34.37	+28 0.8	2.036	2.941	9.4	20.2	2 21	8 33.36	+28 26.0	1.287	2.203	12.7	20.1
3 2	8 27.43	+27 29.8	2.131	2.962	12.4	20.4	3 2	8 26.51	+28 30.6	1.343	2.194	17.0	20.3
<b>32025</b>	Karanjerath		1 31.8 68°13	3°6/29.9	18		<b>110170</b>	2001 <i>SP</i> <sub>171</sub>		1 31.8 166°73	4°1/28.8	18	
12 23	9 25.46	+21 44.9	1.370	2.166	19.3	18.5	12 23	9 22.49	+28 45.3	2.450	3.222	12.4	19.6
1 2	9 21.97	+22 41.6	1.309	2.184	15.2	18.3	1 2	9 18.24	+29 28.1	2.364	3.223	9.9	19.5
1 12	9 15.00	+23 48.5	1.268	2.202	10.5	18.1	1 12	9 11.72	+30 12.0	2.302	3.224	7.2	19.3
1 22	9 5.28	+24 57.0	1.250	2.220	5.7	17.9	1 22	9 3.44	+30 51.7	2.267	3.225	4.7	19.1
2 1	8 54.12	+25 57.4	1.259	2.238	3.8	17.8	2 1	8 54.19	+31 21.8	2.261	3.226	4.2	19.1
2 11	8 43.22	+26 41.5	1.295	2.257	7.5	18.1	2 11	8 44.95	+31 38.4	2.285	3.227	6.2	19.2
2 21	8 34.15	+27 5.7	1.356	2.275	12.0	18.4	2 21	8 36.70	+31 39.9	2.337	3.227	9.0	19.4
3 2	8 28.00	+27 10.3	1.440	2.293	16.0	18.7	3 2	8 30.22	+31 26.9	2.413	3.228	11.6	19.6
<b>142282</b>	2002 <i>RT</i> <sub>128</sub>		1 31.8 321°01	6°9/ 3.3	18		<b>503422</b>	2016 <i>DP</i> <sub>30</sub>		1 31.8 248°23	1°0/31.1	17	
12 23	9 23.09	+ 5 0.0	1.564	2.307	19.5	19.1	12 23	9 19.84	+15 49.9	2.265	3.023	13.7	21.5
1 2	9 19.81	+ 3 38.4	1.467	2.296	16.6	18.8	1 2	9 16.39	+16 45.0	2.155	3.009	11.0	21.2
1 12	9 13.49	+ 2 30.5	1.390	2.287	13.0	18.6	1 12	9 10.66	+17 52.9	2.069	2.995	7.6	21.0
1 22	9 4.61	+ 1 39.8	1.335	2.277	9.4	18.3	1 22	9 3.03	+19 9.6	2.009	2.980	3.8	20.7
2 1	8 54.13	+ 1 8.9	1.306	2.268	7.0	18.2	2 1	8 54.19	+20 29.4	1.980	2.964	1.0	20.5
2 11	8 43.42	+ 0 57.6	1.303	2.260	8.0	18.2	2 11	8 45.10	+21 45.8	1.981	2.949	4.7	20.7
2 21	8 33.90	+ 1 3.0	1.325	2.252	11.4	18.4	2 21	8 36.75	+22 53.3	2.012	2.932	8.5	20.9
3 2	8 26.77	+ 1 20.2	1.370	2.244	15.3	18.6	3 2	8 30.06	+23 48.3	2.069	2.916	12.0	21.1
<b>412617</b>	2014 <i>OP</i> <sub>101</sub>		1 31.8 83°06	3°8/30.2	18		<b>358570</b>	2007 <i>TM</i> <sub>353</sub>		1 31.8 202°29	4°3/29.3	18	
12 23	9 33.88	+27 47.4	1.816	2.584	16.3								



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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>320695</b>	2008 <i>DY</i> <sub>11</sub>		1 31.8 193°83	0°8/ 1.5	18		<b>141201</b>	2001 <i>XD</i> <sub>206</sub>		1 31.8 94°53	3°6/28.5	18	
12 23	9 20.69	+10 33.2	2.169	2.912	14.7	21.3	12 23	9 19.81	+25 26.7	2.495	3.268	12.2	19.9
1 2	9 16.99	+11 19.6	2.069	2.911	11.9	21.1	1 2	9 16.04	+26 38.9	2.419	3.281	9.6	19.7
1 12	9 11.01	+12 22.0	1.991	2.909	8.4	20.9	1 12	9 10.16	+27 55.2	2.368	3.294	6.8	19.6
1 22	9 3.17	+13 37.3	1.940	2.906	4.5	20.7	1 22	9 2.65	+29 9.8	2.344	3.306	4.3	19.4
2 1	8 54.19	+15 0.5	1.918	2.903	0.8	20.4	2 1	8 54.24	+30 16.7	2.351	3.318	3.8	19.4
2 11	8 45.06	+16 25.0	1.927	2.899	4.1	20.6	2 11	8 45.82	+31 10.8	2.387	3.331	5.9	19.6
2 21	8 36.77	+17 44.7	1.966	2.895	8.2	20.8	2 21	8 38.29	+31 49.5	2.452	3.343	8.6	19.8
3 2	8 30.19	+18 54.7	2.032	2.890	11.7	21.1	3 2	8 32.39	+32 12.0	2.543	3.355	11.2	19.9
<b>107353</b>	2001 <i>CR</i> <sub>26</sub>		1 31.8 314°48	0°8/31.4	18		<b>343649</b>	2010 <i>JD</i> <sub>84</sub>		1 31.8 181°89	4°5/27.9	16	
12 23	9 20.62	+17 21.2	1.490	2.281	18.3	20.1	12 23	9 21.45	+30 1.1	2.600	3.372	11.8	21.2
1 2	9 18.19	+17 36.0	1.396	2.268	14.7	19.8	1 2	9 17.37	+30 58.7	2.514	3.372	9.5	21.1
1 12	9 12.57	+18 3.5	1.322	2.255	10.3	19.5	1 12	9 11.11	+31 57.2	2.453	3.372	7.0	20.9
1 22	9 4.23	+18 39.7	1.271	2.243	5.3	19.2	1 22	9 3.16	+32 51.0	2.419	3.372	4.9	20.8
2 1	8 54.18	+19 18.7	1.246	2.231	0.9	18.9	2 1	8 54.23	+33 34.5	2.414	3.372	4.7	20.8
2 11	8 43.90	+19 53.7	1.248	2.220	5.9	19.2	2 11	8 45.28	+34 3.6	2.439	3.371	6.5	20.9
2 21	8 34.93	+20 19.4	1.276	2.209	11.2	19.4	2 21	8 37.21	+34 16.4	2.492	3.371	9.0	21.0
3 2	8 28.53	+20 32.9	1.326	2.199	15.8	19.7	3 2	8 30.82	+34 13.3	2.570	3.370	11.4	21.2
<b>288612</b>	2004 <i>NE</i> <sub>5</sub>		1 31.8 271°46	1°2/31.4	17		<b>306129</b>	2010 <i>JT</i> <sub>110</sub>		1 31.8 197°44	3°9/29.3	18	
12 23	9 34.25	+22 22.7	2.200	2.945	14.5	20.3	12 23	9 25.15	+23 53.5	1.844	2.623	15.7	21.4
1 2	9 28.01	+22 1.7	2.072	2.917	11.7	20.0	1 2	9 21.19	+24 54.3	1.756	2.621	12.5	21.2
1 12	9 18.87	+21 41.8	1.967	2.887	8.3	19.7	1 12	9 14.30	+26 2.8	1.690	2.619	8.8	20.9
1 22	9 7.29	+21 19.6	1.889	2.858	4.3	19.4	1 22	9 4.98	+27 11.9	1.650	2.616	5.2	20.7
2 1	8 54.14	+20 51.5	1.843	2.827	1.2	19.2	2 1	8 54.21	+28 13.5	1.638	2.612	4.1	20.6
2 11	8 40.67	+20 15.3	1.829	2.796	5.0	19.4	2 11	8 43.33	+29 0.3	1.656	2.609	7.1	20.8
2 21	8 28.21	+19 30.5	1.846	2.764	9.3	19.6	2 21	8 33.67	+29 28.7	1.700	2.604	10.9	21.0
3 2	8 17.89	+18 38.5	1.891	2.732	13.2	19.7	3 2	8 26.34	+29 38.2	1.768	2.600	14.5	21.2
<b>472778</b>	2015 <i>FS</i> <sub>147</sub>		1 31.8 262°73	3°5/ 3.9	17		<b>429036</b>	2009 <i>CZ</i> <sub>37</sub>		1 31.8 4°61	2°1/ 2.1	18	
12 23	9 16.39	+ 2 54.0	2.792	3.494	12.7	21.6	12 23	9 20.34	+11 23.6	2.227	2.971	14.3	20.6
1 2	9 13.08	+ 2 58.5	2.671	3.476	10.6	21.4	1 2	9 16.53	+11 2.8	2.131	2.972	11.6	20.4
1 12	9 8.03	+ 3 17.3	2.572	3.458	8.2	21.2	1 12	9 10.55	+10 51.9	2.058	2.972	8.4	20.2
1 22	9 1.57	+ 3 50.5	2.498	3.440	5.6	21.0	1 22	9 2.89	+10 50.1	2.010	2.972	4.9	20.0
2 1	8 54.24	+ 4 36.7	2.453	3.421	3.7	20.9	2 1	8 54.26	+10 55.6	1.992	2.973	2.1	19.8
2 11	8 46.73	+ 5 33.0	2.439	3.402	4.3	20.9	2 11	8 45.61	+11 6.0	2.002	2.973	4.1	19.9
2 21	8 39.76	+ 6 35.4	2.454	3.382	6.8	21.0	2 21	8 37.85	+11 18.2	2.042	2.974	7.7	20.2
3 2	8 33.99	+ 7 39.5	2.497	3.363	9.5	21.1	3 2	8 31.76	+11 29.8	2.107	2.975	11.0	20.4
<b>459858</b>	2013 <i>TO</i> <sub>121</sub>		1 31.8 151°75	1°9/ 2.3	16		<b>318645</b>	2005 <i>MW</i> <sub>15</sub>		1 31.8 163°31	1°1/ 1.8	18	
12 23	9 20.52	+ 9 20.9	2.441	3.171	13.6	22.5	12 23	9 21.23	+ 9 42.6	2.285	3.020	14.3	21.7
1 2	9 16.43	+ 9 28.9	2.347	3.179	11.0	22.4	1 2	9 17.22	+10 25.5	2.190	3.026	11.5	21.5
1 12	9 10.34	+ 9 48.9	2.277	3.186	8.0	22.2	1 12	9 11.05	+11 23.7	2.117	3.031	8.2	21.3
1 22	9 2.72	+10 19.6	2.232	3.192	4.7	22.0	1 22	9 3.16	+12 34.2	2.071	3.035	4.5	21.1
2 1	8 54.22	+10 58.3	2.217	3.198	2.0	21.8	2 1	8 54.26	+13 52.3	2.056	3.039	1.1	20.8
2 11	8 45.71	+11 41.0	2.232	3.203	3.8	21.9	2 11	8 45.27	+15 12.3	2.071	3.043	3.9	21.1
2 21	8 38.01	+12 24.1	2.278	3.208	7.1	22.1	2 21	8 37.13	+16 28.3	2.117	3.046	7.6	21.3
3 2	8 31.83	+13 4.1	2.350	3.213	10.2	22.3	3 2	8 30.62	+17 35.9	2.190	3.048	11.0	21.5
<b>74024</b>	Hrabě		1 31.8 271°15	1°2/31.2	18		<b>466011</b>	2011 <i>GT</i> <sub>45</sub>		1 31.8 5°74	10°0/ 8.0	16	
12 23	9 22.69	+18 3.0	1.719	2.497	16.7	20.3	12 23	9 3.96	- 4 43.8	1.033	1.809	25.5	20.1
1 2	9 19.44	+18 27.7	1.618	2.483	13.4	20.0	1 2	9 5.57	- 5 21.9	0.970	1.810	22.3	19.9
1 12	9 13.23	+19 3.9	1.538	2.469	9.4	19.7	1 12	9 4.04	- 5 20.5	0.921	1.814	18.4	19.7
1 22	9 4.51	+19 47.3	1.483	2.454	4.8	19.4	1 22	8 59.92	- 4 34.5	0.888	1.821	14.2	19.4
2 1	8 54.19	+20 32.0	1.455	2.439	1.3	19.1	2 1	8 54.30	- 3 4.1	0.875	1.830	10.8	19.3
2 11	8 43.62	+21 11.4	1.455	2.424	5.7	19.4	2 11	8 48.71	- 0 58.2	0.883	1.843	10.1	19.3
2 21	8 34.17	+21 40.7	1.483	2.409	10.5	19.6	2 21	8 44.60	+ 1 28.1	0.912	1.859	12.6	19.5
3 2	8 27.03	+21 57.4	1.534	2.394	14.7	19.8	3 2	8 43.11	+ 3 57.5	0.963	1.877	16.4	19.8
<b>33106</b>	1997 <i>YG</i> <sub>16</sub>		1 31.8 19°97	0°1/31.9	18		<b>523529</b>	2017 <i>OR</i> <sub>65</sub>		1 31.9 254°87	4°6/28.7	17	
12 23	9 18.37	+14 2.8	1.228	2.030	20.8	18.2	12 23	9 25.44	+31 40.1	2.496	3.263	12.4	21.7
1 2	9 16.72	+14 29.1	1.158	2.034	16.7	18.0	1 2	9 20.61	+32 10.2	2.402	3.256	10.0	21.5
1 12	9 11.63	+15 14.6	1.106	2.040	11.7	17.7	1 12	9 13.40	+32 38.9	2.333	3.249	7.4	21.3
1 22	9 3.73	+16 14.6	1.075	2.047	6.0	17.4	1 22	9 4.35	+33 0.9	2.290	3.242	5.2	21.2
2 1	8 54.21	+17 21.5	1.070	2.055	0.1	16.9	2 1	8 54.26	+33 11.0	2.276	3.235	4.8	21.1
2 11	8 44.75	+18 25.8	1.090	2.064	6.1	17.4	2 11	8 44.19	+33 6.0	2.292	3.228	6.6	21.2
2 21	8 36.93	+19 19.9	1.134	2.073	11.6	17.8	2 21	8 35.16	+32 45.2	2.336	3.220	9.2	21.4
3 2	8 31.96	+19 59.2	1.200	2.083	16.3	18.1	3 2	8 28.00	+32 9.8	2.405	3.213	11.9	21.6
<b>518901</b>	2010 <i>FW</i> <sub>73</sub>		1 31.8 257°43	0°5/31.5	17		<b>522638</b>	2016 <i>FF</i> <sub>68</sub>		1 31.9 193°35	2°6/ 3.2	17	
12 23	9 19.43	+17 42.9	2.717	3.471	11.8	22.0	12 23	9 17.68	+ 5 48.9	2.743	3.457	12.6	22.3
1 2	9 15.55	+17 58.0	2.605	3.456	9.4	21.8	1 2	9 14.04	+ 6 0.7	2.638	3.456	10.4	22.2
1 12	9 9.76	+18 19.8	2.517	3.441	6.5	21.6	1 12	9 8.64	+ 6 25.7	2.556	3.454	7.7	22.0
1 22	9 2.46	+18 45.7	2.457	3.426	3.3	21.4	1 22	9 1.87	+ 7 3.0	2.500	3.451	4.9	21.8
2 1	8 54.24	+19 12.5	2.426	3.411	0.5	21.1	2 1	8 54.30	+ 7 50.5	2.473	3.448	2.7	21.6
2 11	8 45.89	+19 36.8	2.427	3.396	3.7	21.3	2 11	8 46.65	+ 8 44.7	2.477	3.445	3.7	21.7
2 21	8 38.21	+19 56.1	2.457	3.380	7.0	21.5	2 21	8 39.62	+ 9 41.6	2.511	3.442	6.5	21.9
3 2	8 31.92	+20 8.6	2.514	3.364	10.0	21.7	3 2	8 33.87	+10 37.4	2.574	3.438	9.3	22.1
<b>44810</b>	1999 <i>TR</i> <sub>221</sub>		1 31.8 107°84	1°1/ 1.5	18		<b>465260</b>	2007 <i>TS</i> <sub>11</sub>		1 31.9 128°89	2°0/30.2	18	
12 23	9 24.09	+10 40.7	1.515	2.279	19.2	18.5	1						

EPHEMERIDES

1 31.9

1 31.9

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>81770</b>	2000 <i>JG</i> <sub>68</sub>		1 31.9	42°79	10°6/	8.3 18	<b>106246</b>	2000 <i>UF</i> <sub>50</sub>		1 31.9	85°50	3°6/29.8	18
12 23	9 18.06	- 8 38.7	1.580	2.265	21.5	19.4	12 23	9 29.49	+23 3.4	1.684	2.460	17.1	19.5
1 2	9 15.55	- 9 40.1	1.508	2.278	19.0	19.2	1 2	9 24.37	+24 4.6	1.628	2.492	13.4	19.3
1 12	9 10.31	-10 12.9	1.452	2.292	16.1	19.1	1 12	9 16.22	+25 12.0	1.595	2.523	9.3	19.1
1 22	9 2.91	-10 12.4	1.415	2.306	13.2	18.9	1 22	9 5.80	+26 17.9	1.587	2.554	5.2	19.0
2 1	8 54.29	- 9 36.6	1.400	2.321	11.1	18.8	2 1	8 54.30	+27 14.0	1.609	2.585	3.7	18.9
2 11	8 45.71	- 8 28.7	1.409	2.336	10.6	18.9	2 11	8 43.16	+27 54.0	1.659	2.614	6.8	19.2
2 21	8 38.36	- 6 56.7	1.442	2.352	12.1	19.0	2 21	8 33.66	+28 15.8	1.736	2.643	10.5	19.5
3 2	8 33.20	- 5 10.7	1.499	2.368	14.5	19.2	3 2	8 26.75	+28 20.1	1.837	2.671	13.9	19.7
<b>298780</b>	2004 <i>PP</i> <sub>38</sub>		1 31.9	182°32	0°6/	1.3 18	<b>117534</b>	2005 <i>CA</i> <sub>64</sub>		1 31.9	105°50	3°9/29.4	18
12 23	9 24.16	+12 37.3	1.939	2.690	16.0	22.1	12 23	9 24.85	+28 4.0	2.224	2.997	13.5	20.1
1 2	9 20.03	+13 4.2	1.844	2.691	12.9	21.8	1 2	9 20.28	+28 35.4	2.142	3.002	10.8	19.9
1 12	9 13.28	+13 45.5	1.771	2.691	9.1	21.6	1 12	9 13.24	+29 7.7	2.083	3.007	7.7	19.7
1 22	9 4.41	+14 38.1	1.724	2.691	4.8	21.3	1 22	9 4.29	+29 35.6	2.051	3.012	4.9	19.6
2 1	8 54.27	+15 37.0	1.705	2.690	0.7	21.0	2 1	8 54.32	+29 53.7	2.047	3.017	4.1	19.5
2 11	8 44.02	+16 36.1	1.717	2.688	4.6	21.3	2 11	8 44.45	+29 58.2	2.074	3.022	6.3	19.7
2 21	8 34.81	+17 29.9	1.757	2.686	8.9	21.6	2 21	8 35.73	+29 48.0	2.128	3.026	9.3	19.9
3 2	8 27.62	+18 14.7	1.823	2.683	12.8	21.8	3 2	8 28.99	+29 24.2	2.207	3.031	12.2	20.1
<b>130254</b>	2000 <i>DJ</i> <sub>14</sub>		1 31.9	200°14	0°1/31.9	18 R	<b>308190</b>	2005 <i>CN</i> <sub>60</sub>		1 31.9	337°21	0°5/31.6	18
12 23	9 19.75	+15 5.9	2.773	3.517	11.8	20.9	12 23	9 20.27	+17 3.4	1.379	2.175	19.2	20.9
1 2	9 15.68	+15 25.5	2.669	3.514	9.4	20.7	1 2	9 18.11	+17 12.2	1.292	2.167	15.4	20.6
1 12	9 9.79	+15 53.3	2.589	3.510	6.6	20.5	1 12	9 12.63	+17 34.1	1.225	2.159	10.8	20.3
1 22	9 2.47	+16 26.8	2.537	3.505	3.4	20.3	1 22	9 4.33	+18 5.2	1.180	2.152	5.5	20.0
2 1	8 54.31	+17 2.9	2.515	3.500	0.1	20.0	2 1	8 54.32	+18 39.6	1.161	2.146	0.6	19.6
2 11	8 46.08	+17 38.2	2.525	3.495	3.4	20.3	2 11	8 44.17	+19 10.5	1.168	2.141	6.0	20.0
2 21	8 38.52	+18 9.7	2.564	3.489	6.7	20.5	2 21	8 35.47	+19 32.7	1.200	2.136	11.4	20.2
3 2	8 32.30	+18 35.2	2.631	3.483	9.6	20.6	3 2	8 29.50	+19 43.3	1.253	2.132	16.2	20.5
<b>148595</b>	2001 <i>RR</i> <sub>32</sub>		1 31.9	101°94	2°7/	2.5 18	<b>164611</b>	4066 <i>T</i> <sub>-3</sub>		1 31.9	94°42	5°5/28.6	18
12 23	9 22.58	+ 9 3.8	1.917	2.660	16.4	20.3	12 23	9 26.81	+27 32.7	1.645	2.434	16.9	19.9
1 2	9 18.58	+ 8 52.7	1.835	2.672	13.4	20.1	1 2	9 22.74	+28 41.8	1.578	2.447	13.5	19.7
1 12	9 12.12	+ 8 55.8	1.773	2.683	9.8	19.9	1 12	9 15.44	+29 54.8	1.533	2.460	9.7	19.5
1 22	9 3.74	+ 9 12.1	1.735	2.694	5.8	19.7	1 22	9 5.57	+31 2.8	1.513	2.473	6.4	19.4
2 1	8 54.30	+ 9 39.0	1.726	2.705	2.8	19.5	2 1	8 54.31	+31 56.5	1.520	2.486	5.7	19.3
2 11	8 44.91	+10 12.4	1.746	2.716	4.7	19.7	2 11	8 43.22	+32 29.2	1.555	2.499	8.4	19.5
2 21	8 36.63	+10 47.9	1.794	2.727	8.5	19.9	2 21	8 33.73	+32 38.9	1.616	2.512	11.9	19.8
3 2	8 30.32	+11 21.5	1.867	2.737	12.0	20.2	3 2	8 26.94	+32 27.6	1.699	2.524	15.3	20.0
<b>177513</b>	2004 <i>EH</i> <sub>65</sub>		1 31.9	274°69	3°4/29.3	18	<b>459958</b>	2014 <i>NS</i> <sub>57</sub>		1 31.9	130°56	4°3/28.9	18
12 23	9 20.36	+20 44.1	1.831	2.615	15.6	20.2	12 23	9 27.67	+27 10.5	2.082	2.852	14.4	21.9
1 2	9 17.55	+22 4.4	1.732	2.601	12.4	19.9	1 2	9 22.66	+28 8.1	2.008	2.867	11.5	21.7
1 12	9 11.93	+23 38.0	1.655	2.587	8.7	19.7	1 12	9 14.97	+29 8.5	1.958	2.882	8.2	21.5
1 22	9 3.90	+25 18.1	1.604	2.573	4.9	19.4	1 22	9 5.20	+30 4.7	1.935	2.895	5.2	21.4
2 1	8 54.29	+26 55.6	1.582	2.559	3.7	19.3	2 1	8 54.32	+30 49.9	1.941	2.909	4.5	21.4
2 11	8 44.36	+28 21.1	1.589	2.545	7.0	19.5	2 11	8 43.56	+31 19.0	1.977	2.921	6.9	21.5
2 21	8 35.42	+29 28.2	1.623	2.531	11.1	19.7	2 21	8 34.07	+31 30.0	2.041	2.933	10.0	21.7
3 2	8 28.65	+30 14.0	1.681	2.516	14.9	19.9	3 2	8 26.76	+31 24.0	2.129	2.944	12.9	21.9
<b>202944</b>	1999 <i>FM</i> <sub>2</sub>		1 31.9	22°88	0°8/	1.4 18	<b>30469</b>	2000 <i>OZ</i> <sub>16</sub>		1 31.9	92°37	0°3/	1.1 18
12 23	9 18.26	+13 5.5	2.126	2.885	14.5	20.4	12 23	9 19.73	+14 25.2	2.547	3.294	12.7	19.4
1 2	9 15.05	+13 19.5	2.036	2.887	11.7	20.2	1 2	9 15.67	+14 42.7	2.467	3.312	10.1	19.2
1 12	9 9.64	+13 45.1	1.967	2.889	8.2	19.9	1 12	9 9.75	+15 8.8	2.410	3.330	7.0	19.0
1 22	9 2.48	+14 19.9	1.924	2.892	4.4	19.7	1 22	9 2.42	+15 41.1	2.380	3.348	3.6	18.9
2 1	8 54.33	+15 0.3	1.910	2.894	0.8	19.4	2 1	8 54.36	+16 16.1	2.380	3.365	0.3	18.6
2 11	8 46.15	+15 41.7	1.925	2.897	4.0	19.7	2 11	8 46.38	+16 50.4	2.411	3.383	3.5	18.9
2 21	8 38.88	+16 20.0	1.968	2.900	7.9	19.9	2 21	8 39.23	+17 21.0	2.472	3.400	6.8	19.1
3 2	8 33.32	+16 52.0	2.037	2.904	11.3	20.2	3 2	8 33.55	+17 45.5	2.560	3.416	9.7	19.3
<b>426219</b>	2012 <i>LL</i> <sub>6</sub>		1 31.9	178°50	2°1/30.1	18	<b>323474</b>	2004 <i>LU</i> <sub>4</sub>		1 31.9	129°34	0°3/31.6	18
12 23	9 21.05	+20 38.2	2.442	3.205	12.7	21.7	12 23	9 19.94	+13 11.6	1.978	2.738	15.4	20.6
1 2	9 17.08	+21 31.5	2.349	3.206	10.1	21.5	1 2	9 16.64	+14 11.2	1.890	2.743	12.3	20.4
1 12	9 10.96	+22 32.3	2.280	3.207	6.9	21.3	1 12	9 10.91	+15 26.4	1.823	2.748	8.6	20.2
1 22	9 3.14	+23 35.9	2.239	3.208	3.7	21.1	1 22	9 3.21	+16 52.8	1.783	2.753	4.3	19.9
2 1	8 54.32	+24 36.7	2.228	3.208	2.2	21.0	2 1	8 54.36	+18 23.7	1.772	2.757	0.4	19.6
2 11	8 45.43	+25 29.7	2.248	3.208	4.9	21.2	2 11	8 45.42	+19 51.7	1.792	2.762	4.6	20.0
2 21	8 37.36	+26 11.2	2.297	3.207	8.2	21.4	2 21	8 37.46	+21 10.3	1.840	2.766	8.8	20.2
3 2	8 30.92	+26 39.6	2.372	3.206	11.2	21.6	3 2	8 31.38	+22 15.2	1.914	2.770	12.4	20.5
<b>390380</b>	2013 <i>VZ</i> <sub>18</sub>		1 31.9	57°55	1°5/30.8	18	<b>52836</b>	1998 <i>RK</i> <sub>55</sub>		1 31.9	231°93	0°7/31.5	18
12 23	9 19.65	+18 52.7	2.063	2.836	14.4	20.7	12 23	9 26.99	+17 49.0	1.727	2.495	17.0	19.6
1 2	9 16.23	+19 31.2	1.983	2.846	11.4	20.6	1 2	9 22.83	+17 59.4	1.627	2.485	13.7	19.3
1 12	9 10.48	+20 18.5	1.927	2.856	7.8	20.4	1 12	9 15.59	+18 19.8	1.548	2.475	9.6	19.0
1 22	9 2.90	+21 9.9	1.896	2.867	4.0	20.1	1 22	9 5.77	+18 46.6	1.493	2.464	4.9	18.7
2 1	8 54.33	+22 0.0	1.894	2.877	1.6	20.0	2 1	8 54.33	+19 14.3	1.467	2.452	0.7	18.4
2 11	8 45.80	+22 43.6	1.922	2.888	4.9	20.2	2 11	8 42.67	+19 37.6	1.469	2.440	5.5	18.7
2 21	8 38.31	+23 17.0	1.977	2.899	8.6	20.5	2 21	8 32.23	+19 52.5	1.500	2.427	10.3	19.0
3 2	8 32.67	+23 38.4	2.058	2.910	11.9	20.7	3 2	8 24.19	+19 57.2	1.554	2.413	14.6	19.2
<b>49435</b>	1998 <i>YH</i> <sub>1</sub>		1 31.9	76°74	4°9/27.9	18	<b>486780</b>	2014 <i>HW</i> <sub>28</sub>		1 31.9	278°79	4°9/29.2	18
12 23	9 21.42	+28 46.6	2.190	2.971	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>245070</b>	2004 GA <sub>57</sub>		1 31.9 346°07	0°3/31.7	18		<b>459143</b>	2012 CF <sub>33</sub>		1 31.9 68°37	3°1/2.9	16	
12 23	9 17.95	+16 31.2	1.934	2.709	15.2	20.8	12 23	9 23.61	+6 44.6	1.627	2.373	18.8	21.2
1 2	9 15.17	+16 45.1	1.841	2.704	12.1	20.6	1 2	9 19.62	+6 55.3	1.566	2.403	15.3	21.0
1 12	9 9.94	+17 9.0	1.769	2.698	8.5	20.4	1 12	9 12.91	+7 25.8	1.524	2.434	11.1	20.8
1 22	9 2.74	+17 40.1	1.723	2.694	4.3	20.1	1 22	9 4.16	+8 13.8	1.506	2.464	6.7	20.7
2 1	8 54.39	+18 13.9	1.704	2.689	0.3	19.8	2 1	8 54.40	+9 14.7	1.516	2.495	3.2	20.5
2 11	8 45.97	+18 45.5	1.714	2.686	4.6	20.1	2 11	8 44.90	+10 21.7	1.553	2.525	5.0	20.7
2 21	8 38.54	+19 11.2	1.751	2.683	8.8	20.4	2 21	8 36.80	+11 28.0	1.619	2.554	9.0	21.0
3 2	8 33.02	+19 28.4	1.814	2.680	12.5	20.6	3 2	8 30.97	+12 28.2	1.709	2.584	12.8	21.3
<b>18826</b>	Leifer		1 31.9 33°78	2°0/30.9	18		<b>490825</b>	2010 VC <sub>176</sub>		1 31.9 128°66	0°4/31.6	18	
12 23	9 21.15	+18 41.5	1.249	2.054	20.3	17.7	12 23	9 25.98	+17 6.7	2.281	3.029	13.9	22.3
1 2	9 18.87	+19 17.9	1.186	2.067	16.1	17.4	1 2	9 20.85	+17 22.0	2.199	3.047	11.1	22.1
1 12	9 13.08	+20 7.8	1.143	2.080	11.1	17.2	1 12	9 13.47	+17 45.0	2.141	3.063	7.7	21.9
1 22	9 4.48	+21 4.5	1.122	2.094	5.6	16.9	1 22	9 4.39	+18 12.4	2.111	3.080	3.9	21.7
2 1	8 54.37	+21 59.1	1.126	2.109	2.1	16.7	2 1	8 54.41	+18 40.2	2.110	3.095	0.4	21.5
2 11	8 44.48	+22 43.3	1.155	2.125	6.7	17.1	2 11	8 44.54	+19 4.5	2.140	3.110	4.1	21.8
2 21	8 36.39	+23 12.1	1.209	2.141	11.8	17.4	2 21	8 35.72	+19 22.8	2.200	3.123	7.7	22.0
3 2	8 31.22	+23 24.0	1.285	2.158	16.2	17.7	3 2	8 28.71	+19 33.4	2.287	3.137	10.9	22.3
<b>221050</b>	2005 QT <sub>111</sub>		1 31.9 233°62	2°1/2.3	18		<b>113970</b>	2002 UF <sub>15</sub>		1 31.9 101°68	1°8/2.5	18	
12 23	9 19.84	+9 13.6	1.945	2.693	16.0	21.0	12 23	9 18.17	+8 20.0	2.388	3.121	13.8	20.2
1 2	9 16.60	+9 24.8	1.848	2.690	13.1	20.7	1 2	9 14.66	+8 44.9	2.300	3.133	11.2	20.0
1 12	9 10.93	+9 51.8	1.772	2.687	9.5	20.5	1 12	9 9.20	+9 23.7	2.234	3.144	8.1	19.8
1 22	9 3.26	+10 33.2	1.721	2.683	5.5	20.3	1 22	9 2.24	+10 14.6	2.195	3.155	4.7	19.6
2 1	8 54.39	+11 25.3	1.697	2.679	2.2	20.0	2 1	8 54.44	+11 13.9	2.184	3.166	1.9	19.4
2 11	8 45.39	+12 23.1	1.703	2.675	4.5	20.2	2 11	8 46.64	+12 17.2	2.205	3.177	3.7	19.6
2 21	8 37.34	+13 20.7	1.737	2.671	8.6	20.4	2 21	8 39.64	+13 19.6	2.255	3.187	7.0	19.8
3 2	8 31.17	+14 13.5	1.796	2.667	12.4	20.6	3 2	8 34.14	+14 17.1	2.332	3.197	10.1	20.0
<b>37156</b>	2000 VB <sub>60</sub>		1 31.9 194°00	1°7/30.2	18		<b>151777</b>	2003 EW <sub>46</sub>		1 31.9 139°27	1°5/30.9	18	
12 23	9 19.36	+22 7.7	3.170	3.926	10.2	20.2	12 23	9 24.06	+20 8.5	2.122	2.887	14.4	20.5
1 2	9 15.21	+22 42.5	3.070	3.923	8.1	20.1	1 2	9 19.68	+20 32.6	2.037	2.895	11.4	20.4
1 12	9 9.38	+23 21.3	2.996	3.920	5.6	19.9	1 12	9 12.87	+21 3.5	1.974	2.901	7.9	20.1
1 22	9 2.26	+24 1.0	2.949	3.917	3.0	19.7	1 22	9 4.17	+21 36.9	1.938	2.908	4.0	19.9
2 1	8 54.41	+24 37.8	2.934	3.914	1.8	19.6	2 1	8 54.42	+22 8.1	1.931	2.914	1.6	19.8
2 11	8 46.50	+25 8.8	2.951	3.910	3.9	19.8	2 11	8 44.72	+22 32.6	1.954	2.920	4.9	20.0
2 21	8 39.21	+25 31.5	2.997	3.905	6.6	19.9	2 21	8 36.08	+22 47.7	2.006	2.926	8.6	20.2
3 2	8 33.14	+25 45.1	3.071	3.900	9.0	20.1	3 2	8 29.38	+22 52.2	2.083	2.931	11.9	20.5
<b>177000</b>	2003 AV <sub>39</sub>		1 31.9 47°40	0°2/31.7	18		<b>45671</b>	2000 EA <sub>104</sub>		1 31.9 31°45	4°3/3.5	18	
12 23	9 17.30	+12 31.4	2.057	2.817	14.9	19.5	12 23	9 19.55	+5 22.8	2.065	2.794	15.8	17.7
1 2	9 14.36	+13 38.5	1.978	2.832	11.8	19.4	1 2	9 16.09	+4 49.9	1.975	2.798	13.1	17.5
1 12	9 9.20	+15 0.9	1.921	2.846	8.2	19.2	1 12	9 10.38	+4 31.4	1.905	2.802	10.0	17.3
1 22	9 2.29	+16 33.9	1.892	2.861	4.1	18.9	1 22	9 2.91	+4 27.8	1.860	2.806	6.8	17.1
2 1	8 54.41	+18 10.8	1.891	2.877	0.3	18.6	2 1	8 54.44	+4 38.5	1.842	2.811	4.4	17.0
2 11	8 46.52	+19 44.2	1.922	2.892	4.3	19.0	2 11	8 45.95	+5 0.7	1.852	2.816	5.3	17.0
2 21	8 39.59	+21 8.0	1.981	2.908	8.2	19.3	2 21	8 38.38	+5 30.6	1.890	2.821	8.3	17.2
3 2	8 34.39	+22 17.9	2.066	2.924	11.6	19.5	3 2	8 32.56	+6 3.9	1.954	2.826	11.5	17.4
<b>421866</b>	2014 QV <sub>148</sub>		1 31.9 189°98	1°4/30.9	18		<b>110612</b>	2001 TA <sub>142</sub>		1 31.9 351°00	0°0/31.9	18	
12 23	9 24.66	+18 35.7	2.080	2.842	14.7	22.4	12 23	9 19.90	+13 56.8	1.831	2.599	16.2	20.1
1 2	9 20.33	+19 11.0	1.986	2.841	11.7	22.2	1 2	9 16.85	+14 30.6	1.741	2.599	13.0	19.8
1 12	9 13.46	+19 55.7	1.913	2.840	8.1	21.9	1 12	9 11.21	+15 18.9	1.672	2.598	9.1	19.6
1 22	9 4.53	+20 45.2	1.867	2.837	4.1	21.7	1 22	9 3.45	+16 18.0	1.629	2.598	4.7	19.3
2 1	8 54.38	+21 34.1	1.851	2.835	1.5	21.5	2 1	8 54.44	+17 22.3	1.613	2.598	0.1	18.9
2 11	8 44.13	+22 16.8	1.865	2.831	5.0	21.7	2 11	8 45.33	+18 25.1	1.626	2.598	4.8	19.3
2 21	8 34.90	+22 49.4	1.908	2.827	9.0	22.0	2 21	8 37.29	+19 20.8	1.667	2.598	9.2	19.6
3 2	8 27.63	+23 9.9	1.976	2.822	12.5	22.2	3 2	8 31.28	+20 5.3	1.733	2.598	13.1	19.8
<b>430923</b>	2005 TS <sub>59</sub>		1 31.9 120°34	5°4/27.2	17		<b>38760</b>	2000 RG <sub>3</sub>		1 31.9 88°52	3°3/2.9	18	
12 23	9 23.40	+35 26.8	2.811	3.577	11.2	21.5	12 23	9 22.51	+6 34.6	1.622	2.369	18.8	19.1
1 2	9 18.77	+36 17.9	2.736	3.584	9.1	21.4	1 2	9 18.99	+6 40.5	1.547	2.385	15.4	18.9
1 12	9 12.01	+37 6.0	2.685	3.591	7.1	21.2	1 12	9 12.67	+7 6.5	1.491	2.401	11.3	18.7
1 22	9 3.63	+37 45.5	2.661	3.597	5.6	21.2	1 22	9 4.15	+7 51.3	1.459	2.417	6.9	18.5
2 1	8 54.39	+38 11.5	2.666	3.604	5.6	21.2	2 1	8 54.43	+8 50.8	1.454	2.433	3.4	18.3
2 11	8 45.23	+38 21.0	2.700	3.611	7.0	21.3	2 11	8 44.80	+9 58.5	1.477	2.448	5.2	18.4
2 21	8 37.04	+38 13.3	2.762	3.617	9.0	21.4	2 21	8 36.47	+11 7.1	1.527	2.463	9.4	18.7
3 2	8 30.54	+37 49.9	2.847	3.623	11.0	21.6	3 2	8 30.40	+12 10.7	1.602	2.478	13.3	19.0
<b>249568</b>	1985 RX		1 31.9 65°18	1°4/31.3	18		<b>346862</b>	2009 EY <sub>26</sub>		1 31.9 339°36	0°5/1.2	18	
12 23	9 32.16	+21 31.4	1.620	2.390	17.9	20.4	12 23	9 18.87	+14 58.8	2.238	2.997	13.9	21.0
1 2	9 26.39	+21 20.6	1.559	2.419	14.1	20.2	1 2	9 15.48	+15 1.6	2.141	2.993	11.1	20.8
1 12	9 17.54	+21 14.6	1.520	2.447	9.7	20.0	1 12	9 9.94	+15 13.4	2.067	2.990	7.8	20.6
1 22	9 6.45	+21 9.2	1.506	2.476	4.9	19.8	1 22	9 2.69	+15 32.1	2.018	2.987	4.1	20.4
2 1	8 54.37	+21 0.0	1.520	2.504	1.4	19.6	2 1	8 54.46	+15 54.6	1.999	2.984	0.5	20.1
2 11	8 42.79	+20 44.2	1.564	2.532	5.4	19.9	2 11	8 46.17	+16 17.3	2.009	2.981	3.9	20.3
2 21	8 33.00	+20 21.0	1.635	2.560	9.8	20.2	2 21	8 38.75	+16 37.0	2.047	2.978	7.7	20.6
3 2	8 25.89	+19 51.2	1.731	2.588	13.5	20.5	3 2	8 32.98	+16 51.5	2.112	2.976	11.1	20.8
<b>207852</b>	2007 UU <sub>123</sub>		1 31.9 104°81	0°1/31.8	18		<b>2395</b>	Aho		1 31.9 230°43	0°1/31.8	18	
12 23	9 18.74	+14 21.3	2.514	3.265	12.7	20.4	12 23	9 19.25	+15 48.0	2.426	3.182	13.0	17.7
1 2	9 15.02	+15 1.9	2.430	3.278									

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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>439465</b>	2013 <i>YW</i> <sub>47</sub>		1 31.9 283°40	1°6/30.6	17		<b>450337</b>	2004 <i>TX</i> <sub>155</sub>		1 31.9 62°57	0°5/1.2	16	
12 23	9 17.75	+19 4.2	2.471	3.238	12.5	21.5	12 23	9 24.05	+13 44.6	1.387	2.167	19.9	22.0
1 2	9 14.57	+19 50.0	2.364	3.223	9.9	21.3	1 2	9 20.66	+14 2.8	1.323	2.187	15.9	21.8
1 12	9 9.34	+20 44.5	2.280	3.208	6.9	21.0	1 12	9 14.04	+14 37.4	1.279	2.207	11.1	21.5
1 22	9 2.42	+21 43.9	2.223	3.193	3.6	20.8	1 22	9 4.91	+15 23.9	1.258	2.227	5.7	21.3
2 1	8 54.46	+22 43.2	2.196	3.178	1.7	20.6	2 1	8 54.46	+16 16.0	1.263	2.248	0.5	21.0
2 11	8 46.33	+23 37.2	2.199	3.163	4.6	20.8	2 11	8 44.25	+17 6.1	1.295	2.268	5.4	21.4
2 21	8 38.89	+24 22.1	2.231	3.148	8.0	21.0	2 21	8 35.70	+17 48.4	1.353	2.289	10.4	21.7
3 2	8 32.96	+24 55.5	2.289	3.133	11.1	21.2	3 2	8 29.84	+18 19.5	1.435	2.309	14.7	22.0
<b>409975</b>	2006 <i>VL</i> <sub>81</sub>		1 31.9 32°72	9°9/6.6	18		<b>55416</b>	2001 <i>TF</i> <sub>16</sub>		1 31.9 356°55	5°6/27.9	18	
12 23	9 19.87	- 5 7.4	1.634	2.332	20.5	20.4	12 23	9 17.59	+24 8.0	1.463	2.273	17.6	18.2
1 2	9 16.98	- 6 28.8	1.555	2.339	17.9	20.2	1 2	9 16.02	+25 46.7	1.386	2.269	14.0	18.0
1 12	9 11.36	- 7 27.0	1.494	2.346	15.1	20.1	1 12	9 11.22	+27 37.2	1.331	2.267	10.0	17.7
1 22	9 3.55	- 9 57.2	1.453	2.354	12.2	19.9	1 22	9 3.69	+29 29.5	1.300	2.265	6.4	17.5
2 1	8 54.45	- 7 56.4	1.434	2.363	10.3	19.8	2 1	8 54.47	+31 11.4	1.295	2.264	6.0	17.5
2 11	8 45.32	- 7 26.2	1.441	2.372	10.2	19.8	2 11	8 45.11	+32 32.0	1.317	2.264	9.2	17.7
2 21	8 37.36	- 6 31.9	1.472	2.381	11.9	19.9	2 21	8 37.15	+33 25.6	1.363	2.265	13.2	17.9
3 2	8 31.58	- 5 21.9	1.525	2.391	14.5	20.1	3 2	8 31.87	+33 51.2	1.430	2.267	17.0	18.2
<b>340703</b>	2006 <i>SJ</i> <sub>33</sub>		1 31.9 86°85	1°7/2.2	18		<b>68645</b>	2002 <i>CQ</i> <sub>52</sub>		1 31.9 324°91	11°1/10.1	18	
12 23	9 19.45	+10 43.5	2.489	3.226	13.2	21.0	12 23	9 14.07	-13 29.9	1.458	2.131	23.5	18.2
1 2	9 15.53	+10 41.5	2.403	3.239	10.7	20.8	1 2	9 13.08	-13 32.8	1.356	2.116	21.2	17.9
1 12	9 9.72	+10 49.9	2.341	3.253	7.7	20.7	1 12	9 9.16	-12 54.7	1.267	2.101	18.4	17.7
1 22	9 2.48	+11 7.2	2.305	3.266	4.4	20.5	1 22	9 2.69	-11 27.8	1.195	2.087	15.1	17.4
2 1	8 54.47	+11 31.1	2.298	3.279	1.8	20.3	2 1	8 54.48	- 9 8.5	1.145	2.074	12.3	17.2
2 11	8 46.52	+11 58.4	2.321	3.292	3.6	20.5	2 11	8 45.89	- 6 1.8	1.119	2.061	11.1	17.1
2 21	8 39.38	+12 26.1	2.374	3.306	6.8	20.7	2 21	8 38.33	- 2 21.9	1.120	2.050	12.8	17.2
3 2	8 33.72	+12 51.5	2.454	3.319	9.7	20.9	3 2	8 33.13	+ 1 31.3	1.147	2.039	16.2	17.3
<b>310032</b>	2010 <i>FP</i> <sub>94</sub>		1 31.9 227°24	1°1/1.5	18		<b>233527</b>	2007 <i>HU</i> <sub>31</sub>		1 31.9 188°52	1°4/1.8	18	
12 23	9 24.23	+12 37.2	1.911	2.662	16.2	22.0	12 23	9 20.99	+12 7.3	2.167	2.915	14.6	21.3
1 2	9 20.28	+12 45.9	1.806	2.652	13.1	21.8	1 2	9 17.21	+12 8.6	2.071	2.915	11.8	21.1
1 12	9 13.64	+13 7.9	1.723	2.642	9.4	21.5	1 12	9 11.17	+12 21.3	1.997	2.914	8.4	20.9
1 22	9 4.75	+13 41.1	1.664	2.630	5.1	21.2	1 22	9 3.35	+12 43.5	1.949	2.914	4.7	20.7
2 1	8 54.44	+14 21.6	1.634	2.619	1.1	20.9	2 1	8 54.49	+13 12.4	1.930	2.913	1.4	20.4
2 11	8 43.91	+15 4.3	1.634	2.606	4.7	21.1	2 11	8 45.57	+13 44.0	1.940	2.912	4.1	20.6
2 21	8 34.35	+15 44.3	1.662	2.593	9.2	21.4	2 21	8 37.55	+14 14.5	1.979	2.911	7.9	20.9
3 2	8 26.84	+16 17.9	1.715	2.579	13.3	21.6	3 2	8 31.26	+14 40.9	2.044	2.910	11.4	21.1
<b>104637</b>	2000 <i>GU</i> <sub>117</sub>		1 31.9 230°60	0°3/1.1	18		<b>66403</b>	1999 <i>LM</i> <sub>13</sub>		1 31.9 184°10	1°5/1.9	18	
12 23	9 19.71	+14 38.0	2.577	3.325	12.5	21.0	12 23	9 23.58	+10 32.0	2.208	2.943	14.7	20.3
1 2	9 15.89	+14 53.6	2.470	3.316	10.1	20.8	1 2	9 19.23	+10 49.3	2.109	2.944	11.9	20.1
1 12	9 10.10	+15 18.2	2.387	3.307	7.1	20.6	1 12	9 12.59	+11 20.0	2.031	2.944	8.6	19.9
1 22	9 2.75	+15 49.5	2.330	3.298	3.7	20.4	1 22	9 4.09	+12 2.1	1.980	2.943	4.8	19.6
2 1	8 54.47	+16 24.3	2.304	3.289	0.3	20.1	2 1	8 54.48	+12 52.0	1.959	2.942	1.5	19.4
2 11	8 46.07	+16 58.9	2.308	3.279	3.6	20.3	2 11	8 44.77	+13 44.9	1.968	2.939	4.1	19.6
2 21	8 38.38	+17 30.1	2.342	3.269	7.1	20.5	2 21	8 35.94	+14 36.0	2.006	2.936	7.9	19.8
3 2	8 32.13	+17 55.4	2.402	3.259	10.2	20.7	3 2	8 28.85	+15 21.7	2.072	2.932	11.5	20.0
<b>415628</b>	2014 <i>QV</i> <sub>371</sub>		1 31.9 266°07	2°1/30.7	18		<b>327912</b>	2007 <i>DQ</i> <sub>12</sub>		1 31.9 54°75	1°2/30.9	18	
12 23	9 22.98	+19 24.7	1.721	2.501	16.6	21.3	12 23	9 19.10	+15 1.5	1.816	2.589	16.1	20.2
1 2	9 19.77	+20 3.2	1.621	2.487	13.3	21.0	1 2	9 16.26	+16 9.7	1.732	2.595	12.8	20.0
1 12	9 13.58	+20 53.3	1.541	2.472	9.3	20.7	1 12	9 10.82	+17 33.7	1.671	2.601	8.8	19.8
1 22	9 4.83	+21 49.8	1.487	2.458	4.8	20.4	1 22	9 3.28	+19 8.0	1.635	2.606	4.4	19.5
2 1	8 54.45	+22 45.7	1.460	2.443	2.2	20.2	2 1	8 54.49	+20 44.6	1.628	2.613	1.3	19.3
2 11	8 43.78	+23 33.6	1.462	2.428	6.1	20.4	2 11	8 45.64	+22 15.1	1.651	2.619	5.3	19.6
2 21	8 34.23	+24 8.4	1.490	2.412	10.8	20.7	2 21	8 37.86	+23 32.7	1.701	2.625	9.6	19.9
3 2	8 27.01	+24 27.7	1.542	2.397	15.0	20.9	3 2	8 32.12	+24 33.5	1.777	2.632	13.3	20.1
<b>6799</b>	Citfiftythree		1 31.9 272°35	4°9/5.4	18		<b>62292</b>	2000 <i>SO</i> <sub>113</sub>		1 31.9 200°57	1°5/1.9	18	
12 23	9 17.21	- 2 23.5	2.880	3.549	12.9	19.8	12 23	9 20.68	+10 40.1	2.333	3.071	13.9	20.3
1 2	9 13.80	- 2 24.8	2.746	3.521	11.2	19.6	1 2	9 16.83	+10 54.2	2.231	3.068	11.3	20.1
1 12	9 8.64	- 2 9.7	2.633	3.493	9.0	19.4	1 12	9 10.86	+11 20.6	2.151	3.065	8.1	19.9
1 22	9 2.03	- 1 37.2	2.545	3.464	6.8	19.2	1 22	9 3.19	+11 57.8	2.098	3.061	4.6	19.6
2 1	8 54.49	- 0 47.5	2.484	3.434	5.1	19.1	2 1	8 54.50	+12 42.4	2.073	3.056	1.5	19.4
2 11	8 46.69	+ 0 17.1	2.454	3.404	5.3	19.0	2 11	8 45.70	+13 30.3	2.080	3.052	3.9	19.6
2 21	8 39.34	+ 1 32.5	2.453	3.374	7.2	19.1	2 21	8 37.70	+14 17.1	2.115	3.046	7.5	19.8
3 2	8 33.14	+ 2 53.8	2.481	3.343	9.8	19.2	3 2	8 31.28	+14 59.4	2.178	3.041	10.9	20.0
<b>415894</b>	2001 <i>TH</i> <sub>140</sub>		1 31.9 173°63	2°0/30.3	18		<b>370807</b>	2004 <i>TS</i> <sub>233</sub>		1 31.9 141°91	2°8/30.0	18	
12 23	9 24.20	+21 23.8	2.521	3.277	12.6	22.1	12 23	9 23.23	+23 26.6	2.181	2.952	13.8	21.3
1 2	9 19.47	+22 5.9	2.428	3.281	9.9	22.0	1 2	9 19.06	+24 4.1	2.096	2.957	10.9	21.1
1 12	9 12.59	+22 53.9	2.359	3.284	6.9	21.8	1 12	9 12.49	+24 46.6	2.034	2.962	7.6	20.9
1 22	9 4.02	+23 43.5	2.318	3.287	3.7	21.6	1 22	9 4.02	+25 28.9	1.999	2.966	4.3	20.7
2 1	8 54.47	+24 29.6	2.308	3.288	2.1	21.4	2 1	8 54.49	+26 5.7	1.993	2.970	2.9	20.7
2 11	8 44.88	+25 7.8	2.329	3.289	4.7	21.6	2 11	8 44.99	+26 32.2	2.016	2.974	5.5	20.8
2 21	8 36.15	+25 35.3	2.380	3.289	8.0	21.8	2 21	8 36.53	+26 46.0	2.068	2.978	8.9	21.1
3 2	8 29.07	+25 51.0	2.457	3.289	10.9	22.0	3 2	8 29.98	+26 46.5	2.145	2.981	12.1	21.3
<b>171482</b>	1995 <i>SN</i> <sub>34</sub>		1 31.9 174°09	3°6/29.2	18		<b>166152</b>	2002 <i>EQ</i> <sub>23</sub>		1 31.9 218°15	2°1/30.7	18	
12 23	9 23.25	+28 8.5	2.532	3.300	12.2	20.6	12						

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>239975</b>	2001 <i>QS</i> <sub>269</sub>		1 31.9 124°71	2°1/ 2.1 18			<b>193987</b>	2001 <i>RZ</i> <sub>135</sub>		1 31.9 65°89	4°3/29.8 18		
12 23	9 25.86	+10 16.7	1.748	2.496	17.6	21.0	12 23	9 26.71	+23 57.7	1.365	2.163	19.3	20.2
1 2	9 21.48	+10 18.9	1.669	2.510	14.3	20.8	1 2	9 23.17	+24 47.2	1.301	2.177	15.3	20.0
1 12	9 14.34	+10 36.6	1.610	2.524	10.3	20.6	1 12	9 16.03	+25 44.3	1.258	2.191	10.7	19.8
1 22	9 5.02	+11 7.6	1.575	2.538	5.8	20.4	1 22	9 6.03	+26 40.3	1.238	2.206	6.1	19.6
2 1	8 54.50	+11 48.2	1.568	2.550	2.2	20.2	2 1	8 54.51	+27 25.7	1.244	2.220	4.4	19.5
2 11	8 44.05	+12 33.0	1.590	2.562	4.8	20.4	2 11	8 43.25	+27 53.2	1.276	2.235	7.9	19.7
2 21	8 34.88	+13 16.7	1.641	2.574	9.1	20.6	2 21	8 33.86	+28 0.2	1.334	2.250	12.3	20.0
3 2	8 27.95	+13 55.1	1.717	2.585	13.0	20.9	3 2	8 27.50	+27 48.1	1.413	2.265	16.3	20.3
<b>428196</b>	2006 <i>UM</i> <sub>156</sub>		1 31.9 174°83	3°6/28.5 18			<b>320777</b>	2008 <i>EZ</i> <sub>120</sub>		1 31.9 203°56	2°9/ 3.1 18		
12 23	9 21.83	+29 22.1	3.134	3.895	10.2	22.2	12 23	9 20.53	+ 6 3.6	2.326	3.047	14.5	22.1
1 2	9 17.26	+30 8.4	3.045	3.897	8.2	22.0	1 2	9 16.73	+ 6 11.4	2.221	3.043	11.9	21.9
1 12	9 10.87	+30 55.2	2.981	3.899	5.9	21.9	1 12	9 10.82	+ 6 34.4	2.138	3.038	8.9	21.7
1 22	9 3.09	+31 38.2	2.946	3.901	4.0	21.8	1 22	9 3.20	+ 7 11.9	2.080	3.033	5.6	21.5
2 1	8 54.52	+32 13.0	2.942	3.902	3.7	21.7	2 1	8 54.55	+ 8 1.4	2.051	3.027	3.0	21.3
2 11	8 45.94	+32 36.6	2.968	3.903	5.3	21.9	2 11	8 45.76	+ 8 58.9	2.052	3.021	4.3	21.3
2 21	8 38.08	+32 47.3	3.023	3.903	7.5	22.0	2 21	8 37.73	+ 9 59.5	2.083	3.014	7.6	21.5
3 2	8 31.60	+32 45.3	3.104	3.903	9.7	22.1	3 2	8 31.26	+10 58.5	2.140	3.007	10.9	21.7
<b>412225</b>	2013 <i>GZ</i> <sub>135</sub>		1 31.9 176°88	1°1/31.2 18			<b>171410</b>	2006 <i>QZ</i> <sub>167</sub>		1 31.9 197°66	0°7/31.3 18		
12 23	9 23.33	+17 47.6	2.103	2.865	14.6	21.6	12 23	9 18.54	+16 46.2	2.542	3.299	12.4	20.7
1 2	9 19.22	+18 22.0	2.011	2.867	11.6	21.4	1 2	9 15.00	+17 22.1	2.445	3.298	9.9	20.5
1 12	9 12.67	+19 6.1	1.942	2.868	8.0	21.2	1 12	9 9.51	+18 6.7	2.371	3.297	6.8	20.3
1 22	9 4.16	+19 55.6	1.899	2.869	4.1	21.0	1 22	9 2.48	+18 56.8	2.325	3.295	3.4	20.1
2 1	8 54.51	+20 45.3	1.885	2.869	1.2	20.7	2 1	8 54.56	+19 48.1	2.309	3.293	0.7	19.8
2 11	8 44.79	+21 29.8	1.902	2.869	4.8	21.0	2 11	8 46.56	+20 36.4	2.323	3.292	3.9	20.1
2 21	8 36.07	+22 5.0	1.947	2.869	8.7	21.2	2 21	8 39.30	+21 17.9	2.367	3.290	7.3	20.3
3 2	8 29.24	+22 29.0	2.018	2.868	12.2	21.4	3 2	8 33.50	+21 50.3	2.438	3.288	10.3	20.5
<b>192309</b>	1993 <i>TK</i> <sub>26</sub>		1 31.9 96°58	6°5/27.2 18 R			<b>23186</b>	2000 <i>PO</i> <sub>8</sub>		1 31.9 301°52	2°4/29.4 18		
12 23	9 27.93	+35 42.6	2.285	3.053	13.4	20.7	12 23	9 15.71	+23 26.8	3.058	3.826	10.3	17.5
1 2	9 22.80	+36 46.7	2.224	3.072	10.9	20.6	1 2	9 12.55	+24 17.1	2.955	3.815	8.1	17.3
1 12	9 15.04	+37 47.0	2.186	3.091	8.5	20.4	1 12	9 7.71	+25 12.0	2.878	3.805	5.7	17.2
1 22	9 5.28	+38 36.0	2.174	3.110	6.7	20.4	1 22	9 1.54	+26 7.7	2.828	3.795	3.3	17.0
2 1	8 54.51	+39 7.3	2.191	3.128	6.7	20.4	2 1	8 54.57	+27 0.0	2.809	3.784	2.5	16.9
2 11	8 43.95	+39 17.4	2.237	3.146	8.3	20.5	2 11	8 47.50	+27 45.0	2.821	3.774	4.5	17.0
2 21	8 34.74	+39 6.2	2.308	3.163	10.5	20.7	2 21	8 41.01	+28 20.0	2.862	3.764	7.1	17.2
3 2	8 27.72	+38 36.3	2.403	3.181	12.8	20.9	3 2	8 35.73	+28 43.7	2.929	3.754	9.5	17.3
<b>211499</b>	2003 <i>PM</i> <sub>7</sub>		1 31.9 152°97	1°5/ 1.9 18			<b>189858</b>	2003 <i>HX</i> <sub>1</sub>		1 31.9 253°83	2°3/ 2.4 17		
12 23	9 23.95	+10 23.7	2.155	2.891	15.0	21.4	12 23	9 20.83	+ 9 31.0	2.187	2.925	14.8	20.7
1 2	9 19.49	+10 43.5	2.065	2.901	12.2	21.2	1 2	9 17.21	+ 9 27.1	2.076	2.911	12.1	20.4
1 12	9 12.73	+11 17.0	1.997	2.910	8.7	21.0	1 12	9 11.31	+ 9 36.0	1.987	2.897	8.9	20.2
1 22	9 4.14	+12 1.9	1.955	2.919	4.8	20.8	1 22	9 3.53	+ 9 56.9	1.923	2.883	5.3	20.0
2 1	8 54.52	+12 54.3	1.943	2.926	1.5	20.6	2 1	8 54.57	+10 27.5	1.888	2.868	2.4	19.7
2 11	8 44.88	+13 49.2	1.961	2.933	4.1	20.8	2 11	8 45.40	+11 4.3	1.882	2.853	4.3	19.8
2 21	8 36.20	+14 41.9	2.009	2.939	7.9	21.0	2 21	8 37.02	+11 43.0	1.905	2.838	8.1	20.0
3 2	8 29.32	+15 28.4	2.084	2.944	11.4	21.2	3 2	8 30.30	+12 19.7	1.955	2.822	11.7	20.2
<b>307632</b>	2003 <i>SU</i> <sub>107</sub>		1 31.9 180°46	1°3/ 1.7 18			<b>14032</b>	Mego		1 31.9 84°08	4°3/ 3.7 18		
12 23	9 24.44	+12 23.8	2.021	2.768	15.6	21.1	12 23	9 23.43	+ 4 41.8	1.820	2.548	17.7	17.7
1 2	9 20.14	+12 27.4	1.926	2.769	12.6	20.9	1 2	9 19.31	+ 4 24.6	1.748	2.570	14.6	17.5
1 12	9 13.33	+12 43.1	1.853	2.770	9.0	20.7	1 12	9 12.68	+ 4 25.5	1.695	2.593	11.0	17.3
1 22	9 4.51	+13 8.8	1.805	2.770	4.9	20.4	1 22	9 4.12	+ 4 44.2	1.667	2.615	7.2	17.1
2 1	8 54.52	+13 41.0	1.786	2.770	1.3	20.2	2 1	8 54.57	+ 5 18.6	1.665	2.637	4.5	17.0
2 11	8 44.45	+14 15.5	1.796	2.769	4.4	20.4	2 11	8 45.16	+ 6 4.1	1.692	2.658	5.5	17.1
2 21	8 35.40	+14 48.0	1.836	2.767	8.5	20.6	2 21	8 36.96	+ 6 55.3	1.748	2.680	8.7	17.3
3 2	8 28.29	+15 15.4	1.902	2.765	12.2	20.8	3 2	8 30.80	+ 7 46.6	1.828	2.701	12.2	17.6
<b>91301</b>	1999 <i>FM</i> <sub>36</sub>		1 31.9 327°04	3°2/30.4 18			<b>511623</b>	2015 <i>BE</i> <sub>72</sub>		1 31.9 101°99	0°9/ 1.5 18		
12 23	9 19.91	+21 31.8	1.249	2.062	19.9	18.5	12 23	9 22.20	+14 16.8	2.294	3.043	13.9	21.4
1 2	9 18.47	+22 2.7	1.162	2.047	16.0	18.1	1 2	9 17.94	+14 10.5	2.206	3.051	11.1	21.2
1 12	9 13.34	+22 45.2	1.093	2.032	11.2	17.8	1 12	9 11.54	+14 12.7	2.141	3.060	7.8	21.0
1 22	9 4.97	+23 32.9	1.046	2.018	6.1	17.5	1 22	9 3.50	+14 21.7	2.102	3.068	4.2	20.8
2 1	8 54.51	+24 16.9	1.023	2.004	3.4	17.3	2 1	8 54.57	+14 34.6	2.092	3.077	0.9	20.6
2 11	8 43.78	+24 48.2	1.025	1.992	7.8	17.5	2 11	8 45.69	+14 48.6	2.113	3.085	3.8	20.8
2 21	8 34.62	+25 1.3	1.050	1.981	13.3	17.8	2 21	8 37.75	+15 0.9	2.163	3.093	7.4	21.1
3 2	8 28.57	+24 55.1	1.096	1.970	18.3	18.0	3 2	8 31.48	+15 9.5	2.239	3.101	10.7	21.3
<b>387676</b>	2002 <i>TG</i> <sub>63</sub>		1 31.9 166°85	2°0/ 2.0 18			<b>357521</b>	2004 <i>RA</i> <sub>105</sub>		1 31.9 178°98	3°0/ 2.6 18		
12 23	9 26.38	+10 34.1	1.816	2.560	17.2	22.2	12 23	9 25.21	+ 8 47.7	1.876	2.614	16.9	21.8
1 2	9 21.94	+10 37.0	1.726	2.566	14.0	22.0	1 2	9 20.93	+ 8 32.6	1.782	2.616	13.9	21.5
1 12	9 14.72	+10 54.8	1.656	2.570	10.1	21.8	1 12	9 14.00	+ 8 31.8	1.709	2.617	10.2	21.3
1 22	9 5.28	+11 25.6	1.611	2.574	5.7	21.5	1 22	9 4.92	+ 8 44.9	1.659	2.617	6.2	21.1
2 1	8 54.52	+12 5.7	1.595	2.577	2.0	21.3	2 1	8 54.56	+ 9 9.7	1.638	2.617	3.1	20.9
2 11	8 43.70	+12 50.1	1.607	2.579	4.8	21.5	2 11	8 44.11	+ 9 42.0	1.647	2.617	5.0	21.0
2 21	8 34.05	+13 33.4	1.649	2.581	9.2	21.8	2 21	8 34.75	+10 17.4	1.683	2.615	9.0	21.2
3 2	8 26.59	+14 11.6	1.716	2.582	13.2	22.0	3 2	8 27.46	+10 51.7	1.745	2.614	12.8	21.5
<b>152786</b>	1999 <i>TS</i>		1 31.9 147°08	3°5/ 3.7 18			<b>439769</b>	2015 <i>GB</i> <sub>8</sub>		1 31.9 276°30	3°4/28.8 17		
12 23	9 20.08	+ 4 22.8	2.486	3.195	13.9	20.4	12 23						

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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>306994</b>	2001 <i>WO</i> <sub>31</sub>		1 31.9 264°07	5°9/4.5	18		<b>81933</b>	2000 <i>OW</i> <sub>13</sub>		1 31.9 114°92	0°4/31.6	18	
12 23	9 20.07	+ 0 50.7	2.066	2.772	16.4	20.2	12 23	9 19.96	+16 32.2	2.757	3.506	11.8	20.4
1 2	9 16.77	+ 0 16.3	1.955	2.758	14.1	20.0	1 2	9 15.81	+16 57.5	2.673	3.521	9.3	20.3
1 12	9 11.10	- 0 1.1	1.864	2.743	11.2	19.7	1 12	9 9.88	+17 29.9	2.614	3.536	6.4	20.1
1 22	9 3.48	+ 0 0.7	1.796	2.728	8.2	19.5	1 22	9 2.62	+18 6.6	2.582	3.551	3.2	19.9
2 1	8 54.59	+ 0 22.0	1.755	2.713	6.1	19.4	2 1	8 54.64	+18 44.1	2.581	3.566	0.4	19.7
2 11	8 45.44	+ 1 0.6	1.742	2.697	6.5	19.4	2 11	8 46.71	+19 19.1	2.610	3.580	3.5	20.0
2 21	8 37.08	+ 1 52.2	1.756	2.681	9.2	19.5	2 21	8 39.53	+19 48.8	2.670	3.594	6.5	20.2
3 2	8 30.43	+ 2 50.9	1.796	2.665	12.5	19.6	3 2	8 33.74	+20 11.3	2.757	3.607	9.3	20.4
<b>258181</b>	2001 <i>SQ</i> <sub>178</sub>		1 31.9 113°81	6°9/26.9	18		<b>464002</b>	2014 <i>WQ</i> <sub>72</sub>		1 31.9 217°54	4°7/28.2	18	
12 23	9 28.33	+34 33.6	2.091	2.865	14.3	20.4	12 23	9 22.76	+25 7.7	1.981	2.762	14.7	20.6
1 2	9 23.49	+35 54.4	2.028	2.880	11.6	20.2	1 2	9 19.30	+26 37.5	1.892	2.758	11.7	20.4
1 12	9 15.76	+37 12.9	1.987	2.896	9.0	20.1	1 12	9 13.09	+28 15.5	1.826	2.753	8.4	20.2
1 22	9 5.77	+38 20.4	1.974	2.911	7.2	20.0	1 22	9 4.58	+29 53.8	1.787	2.748	5.4	20.0
2 1	8 54.58	+39 9.1	1.988	2.926	7.2	20.0	2 1	8 54.62	+31 23.4	1.777	2.743	5.0	20.0
2 11	8 43.53	+39 34.2	2.030	2.940	9.0	20.2	2 11	8 44.46	+32 36.0	1.796	2.737	7.6	20.1
2 21	8 33.89	+39 35.0	2.098	2.954	11.4	20.4	2 21	8 35.33	+33 27.3	1.842	2.732	11.0	20.3
3 2	8 26.62	+39 14.2	2.189	2.967	13.8	20.6	3 2	8 28.33	+33 56.2	1.912	2.726	14.2	20.5
<b>151125</b>	2001 <i>WF</i> <sub>101</sub>		1 31.9 316°89	2°3/30.6	18		<b>453242</b>	2008 <i>RG</i> <sub>106</sub>		1 31.9 162°54	2°2/2.4	18	
12 23	9 19.83	+20 14.3	1.634	2.425	16.9	20.0	12 23	9 25.44	+ 8 22.9	2.065	2.793	15.8	23.7
1 2	9 17.45	+20 46.8	1.536	2.409	13.5	19.7	1 2	9 20.83	+ 8 39.4	1.973	2.802	12.9	23.5
1 12	9 12.07	+21 29.8	1.459	2.393	9.5	19.4	1 12	9 13.78	+ 9 11.7	1.901	2.809	9.4	23.3
1 22	9 4.14	+22 18.5	1.407	2.378	5.0	19.1	1 22	9 4.77	+ 9 57.8	1.856	2.815	5.5	23.0
2 1	8 54.60	+23 5.7	1.381	2.363	2.4	18.9	2 1	8 54.63	+10 54.2	1.840	2.821	2.3	22.8
2 11	8 44.81	+23 44.6	1.382	2.349	6.3	19.1	2 11	8 44.43	+11 55.5	1.854	2.825	4.4	23.0
2 21	8 36.18	+24 10.2	1.409	2.335	11.0	19.4	2 21	8 35.23	+12 56.1	1.898	2.828	8.3	23.2
3 2	8 29.93	+24 20.4	1.460	2.322	15.3	19.6	3 2	8 27.92	+13 51.5	1.969	2.831	11.9	23.5
<b>457540</b>	2008 <i>WA</i> <sub>141</sub>		1 31.9 70°41	0°9/31.4	18		<b>78714</b>	2002 <i>TX</i> <sub>199</sub>		1 31.9 8°70	8°7/3.8	18 R	
12 23	9 24.62	+15 49.7	1.412	2.196	19.4	21.6	12 23	9 24.27	+ 3 4.2	1.437	2.177	21.1	18.3
1 2	9 21.16	+16 28.5	1.349	2.216	15.4	21.4	1 2	9 20.94	+ 1 13.2	1.355	2.178	18.0	18.1
1 12	9 14.44	+17 22.5	1.305	2.236	10.6	21.2	1 12	9 14.42	- 0 22.5	1.292	2.180	14.5	17.9
1 22	9 5.19	+18 25.7	1.285	2.256	5.3	20.9	1 22	9 5.30	- 1 37.6	1.251	2.183	11.0	17.7
2 1	8 54.59	+19 30.1	1.291	2.276	0.9	20.7	2 1	8 54.64	- 2 27.6	1.234	2.186	8.8	17.6
2 11	8 44.22	+20 27.7	1.326	2.296	5.8	21.1	2 11	8 43.92	- 2 51.8	1.242	2.191	9.5	17.6
2 21	8 35.50	+21 12.6	1.386	2.316	10.7	21.4	2 21	8 34.59	- 2 53.1	1.275	2.196	12.4	17.8
3 2	8 29.48	+21 42.5	1.469	2.336	14.9	21.7	3 2	8 27.84	- 2 37.3	1.330	2.202	15.8	18.0
<b>462925</b>	2011 <i>BK</i> <sub>14</sub>		1 31.9 296°31	2°8/3.4	16		<b>123107</b>	2000 <i>SF</i> <sub>350</sub>		1 31.9 134°32	1°2/30.9	18 R	
12 23	9 18.68	+ 1 56.8	1.972	2.691	16.8	20.5	12 23	9 22.48	+17 42.9	2.440	3.193	13.0	20.4
1 2	9 16.02	+ 3 4.0	1.845	2.664	14.1	20.3	1 2	9 18.12	+18 32.5	2.356	3.208	10.3	20.2
1 12	9 10.87	+ 4 40.4	1.738	2.637	10.7	20.0	1 12	9 11.67	+19 30.7	2.297	3.221	7.1	20.1
1 22	9 3.52	+ 6 45.6	1.656	2.610	6.7	19.7	1 22	9 3.61	+20 33.3	2.265	3.234	3.6	19.9
2 1	8 54.61	+ 9 14.9	1.604	2.583	3.1	19.4	2 1	8 54.66	+21 35.1	2.264	3.247	1.3	19.7
2 11	8 45.17	+11 59.0	1.584	2.556	4.8	19.4	2 11	8 45.70	+22 31.1	2.294	3.259	4.3	20.0
2 21	8 36.36	+14 45.8	1.595	2.529	9.2	19.6	2 21	8 37.63	+23 17.5	2.353	3.270	7.6	20.2
3 2	8 29.30	+17 23.9	1.634	2.503	13.5	19.8	3 2	8 31.17	+23 52.5	2.440	3.281	10.6	20.4
<b>333581</b>	2006 <i>WT</i> <sub>34</sub>		1 31.9 238°55	0°3/1.1	18		<b>322139</b>	2010 <i>VV</i> <sub>199</sub>		1 31.9 110°01	2°8/3.0	18	
12 23	9 20.95	+13 53.3	1.820	2.586	16.4	21.5	12 23	9 22.55	+ 6 31.9	2.106	2.831	15.6	21.4
1 2	9 17.73	+14 15.6	1.729	2.585	13.1	21.3	1 2	9 18.34	+ 6 43.1	2.026	2.851	12.8	21.3
1 12	9 11.87	+14 51.5	1.659	2.584	9.2	21.1	1 12	9 11.90	+ 7 10.3	1.968	2.871	9.4	21.1
1 22	9 3.88	+15 38.0	1.615	2.584	4.8	20.8	1 22	9 3.74	+ 7 52.1	1.934	2.889	5.8	20.9
2 1	8 54.61	+16 30.1	1.598	2.583	0.3	20.5	2 1	8 54.66	+ 8 45.1	1.930	2.908	2.9	20.7
2 11	8 45.25	+17 21.6	1.610	2.582	4.7	20.8	2 11	8 45.65	+ 9 44.5	1.956	2.926	4.3	20.9
2 21	8 36.98	+18 7.4	1.650	2.582	9.2	21.1	2 21	8 37.64	+10 44.8	2.011	2.943	7.8	21.1
3 2	8 30.76	+18 43.8	1.714	2.581	13.1	21.3	3 2	8 31.41	+11 41.6	2.092	2.960	11.1	21.3
<b>56060</b>	1998 <i>XT</i> <sub>70</sub>		1 31.9 341°92	6°0/28.8	18		<b>463805</b>	2014 <i>SY</i> <sub>335</sub>		1 31.9 51°08	2°4/2.4	18	
12 23	9 19.87	+25 13.1	1.197	2.018	20.1	18.3	12 23	9 20.10	+ 9 16.1	1.717	2.474	17.5	21.4
1 2	9 18.67	+26 21.6	1.121	2.010	16.1	18.0	1 2	9 17.09	+ 9 21.0	1.634	2.481	14.3	21.1
1 12	9 13.58	+27 40.7	1.064	2.002	11.6	17.7	1 12	9 11.43	+ 9 42.9	1.571	2.488	10.4	20.9
1 22	9 5.14	+29 0.4	1.028	1.995	7.3	17.5	1 22	9 3.65	+10 20.1	1.532	2.494	6.0	20.7
2 1	8 54.60	+30 7.9	1.017	1.989	6.3	17.4	2 1	8 54.66	+11 8.8	1.520	2.502	2.5	20.5
2 11	8 43.92	+30 52.3	1.029	1.985	9.9	17.6	2 11	8 45.66	+12 3.2	1.536	2.509	4.8	20.6
2 21	8 35.02	+31 8.8	1.064	1.981	14.7	17.8	2 21	8 37.81	+12 57.5	1.579	2.516	9.1	20.9
3 2	8 29.43	+30 58.2	1.119	1.978	19.2	18.1	3 2	8 32.07	+13 46.6	1.647	2.524	13.0	21.2
<b>113128</b>	2002 <i>RR</i> <sub>83</sub>		1 31.9 202°11	1°1/31.1	18		<b>294099</b>	2007 <i>TO</i> <sub>226</sub>		1 31.9 179°91	1°0/31.3	18	
12 23	9 20.62	+18 48.9	2.362	3.125	13.1	20.2	12 23	9 25.31	+17 37.6	2.096	2.853	14.8	22.5
1 2	9 16.82	+19 14.6	2.267	3.123	10.4	20.0	1 2	9 20.84	+18 8.8	2.002	2.855	11.8	22.3
1 12	9 10.88	+19 47.8	2.195	3.122	7.2	19.8	1 12	9 13.85	+18 49.7	1.931	2.856	8.2	22.1
1 22	9 3.25	+20 24.7	2.150	3.120	3.7	19.6	1 22	9 4.85	+19 36.1	1.886	2.856	4.1	21.8
2 1	8 54.63	+21 1.3	2.135	3.118	1.1	19.4	2 1	8 54.66	+20 22.7	1.871	2.856	1.0	21.6
2 11	8 45.96	+21 33.2	2.149	3.116	4.3	19.6	2 11	8 44.40	+21 4.3	1.887	2.855	4.7	21.9
2 21	8 38.15	+21 57.4	2.193	3.114	7.9	19.8	2 21	8 35.15	+21 37.0	1.931	2.853	8.7	22.1
3 2	8 31.96	+22 12.3	2.262	3.112	11.0	20.0	3 2	8 27.85	+21 58.8	2.001	2.850	12.3	22.3
<b>78560</b>	2002 <i>RL</i> <sub>154</sub>		1 31.9 38°42	0°7/31.5	18		<b>100339</b>	1995 <i>SP</i> <sub>40</sub>		1 31.9 106°65	0°4/1.3	18	
12 23	9 23.50	+19 20.8	1.993	2.761									

EPHEMERIDES

1 31.9

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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>15349</b>	1994 <i>UX</i> <sub>1</sub>		1 31.9 68°31'	2.4/30.7	18		<b>9264</b>	1978 <i>OQ</i>		1 31.9 127°88'	1.5/30.8	18	
12 23	9 27.26	+19 27.8	1.363	2.153	19.7	17.7	12 23	9 23.64	+20 57.6	2.506	3.263	12.6	18.3
1 2	9 23.34	+20 12.8	1.307	2.178	15.5	17.5	1 2	9 18.95	+21 21.7	2.423	3.276	10.0	18.1
1 12	9 15.98	+21 9.4	1.271	2.204	10.7	17.3	1 12	9 12.20	+21 50.6	2.364	3.289	6.9	18.0
1 22	9 5.98	+22 9.9	1.258	2.229	5.5	17.1	1 22	9 3.87	+22 20.9	2.333	3.301	3.6	17.8
2 1	8 54.67	+23 5.5	1.272	2.254	2.5	17.0	2 1	8 54.72	+22 48.3	2.331	3.313	1.6	17.6
2 11	8 43.72	+23 48.7	1.313	2.279	6.6	17.3	2 11	8 45.63	+23 9.3	2.361	3.325	4.3	17.9
2 21	8 34.63	+24 15.4	1.380	2.304	11.3	17.6	2 21	8 37.47	+23 21.8	2.420	3.336	7.5	18.1
3 2	8 28.44	+24 25.4	1.470	2.329	15.3	17.9	3 2	8 30.94	+23 25.1	2.506	3.347	10.4	18.3
<b>328642</b>	2009 <i>SD</i> <sub>216</sub>		1 31.9 135°76'	1.2/31.2	18		<b>193176</b>	2000 <i>OV</i> <sub>10</sub>		1 31.9 106°12'	1.7/1.9	18	
12 23	9 23.10	+18 45.0	2.117	2.881	14.4	21.6	12 23	9 28.29	+12 1.7	1.792	2.539	17.3	20.1
1 2	9 18.99	+19 11.5	2.031	2.888	11.4	21.4	1 2	9 23.25	+11 54.3	1.719	2.561	13.9	19.9
1 12	9 12.49	+19 46.0	1.968	2.894	7.9	21.2	1 12	9 15.48	+11 59.8	1.667	2.582	9.9	19.7
1 22	9 4.11	+20 24.6	1.931	2.901	4.0	21.0	1 22	9 5.63	+12 16.0	1.640	2.604	5.5	19.5
2 1	8 54.68	+21 2.3	1.923	2.907	1.2	20.8	2 1	8 54.71	+12 39.3	1.641	2.624	1.8	19.3
2 11	8 45.27	+21 34.5	1.945	2.912	4.7	21.1	2 11	8 43.98	+13 5.3	1.672	2.644	4.6	19.5
2 21	8 36.89	+21 57.9	1.996	2.918	8.5	21.3	2 21	8 34.62	+13 30.2	1.731	2.663	8.8	19.8
3 2	8 30.40	+22 11.0	2.072	2.923	11.8	21.5	3 2	8 27.50	+13 50.9	1.816	2.681	12.6	20.1
<b>455509</b>	2003 <i>WP</i> <sub>36</sub>		1 31.9 44°67'	4.8/3.1	18		<b>184588</b>	2005 <i>QF</i> <sub>119</sub>		1 31.9 328°76'	1.0/31.4	18	
12 23	9 24.56	+7 58.7	1.355	2.119	21.1	20.9	12 23	9 20.98	+18 22.0	1.572	2.361	17.6	20.0
1 2	9 21.06	+7 6.9	1.292	2.138	17.3	20.7	1 2	9 18.36	+18 34.4	1.481	2.351	14.1	19.7
1 12	9 14.34	+6 32.9	1.247	2.158	12.9	20.5	1 12	9 12.70	+18 57.4	1.409	2.342	9.9	19.4
1 22	9 5.15	+6 17.8	1.223	2.179	8.2	20.3	1 22	9 4.49	+19 26.9	1.361	2.333	5.0	19.1
2 1	8 54.68	+6 20.2	1.225	2.200	4.9	20.2	2 1	8 54.72	+19 57.5	1.340	2.325	1.1	18.8
2 11	8 44.48	+6 36.3	1.253	2.221	6.5	20.3	2 11	8 44.80	+20 23.2	1.346	2.317	5.7	19.1
2 21	8 35.93	+7 0.8	1.306	2.243	10.6	20.6	2 21	8 36.15	+20 39.5	1.378	2.310	10.6	19.4
3 2	8 30.05	+7 28.1	1.382	2.265	14.6	20.9	3 2	8 29.94	+20 44.5	1.433	2.303	15.0	19.6
<b>156478</b>	2002 <i>CV</i> <sub>53</sub>		1 31.9 340°13'	3.9/3.7	18		<b>29221</b>	1992 <i>BW</i> <sub>3</sub>		1 31.9 121°74'	3.9/29.7	18	
12 23	9 15.27	+4 4.5	1.663	2.412	18.3	19.6	12 23	9 28.94	+23 57.0	1.734	2.510	16.7	19.4
1 2	9 13.51	+4 19.7	1.567	2.404	15.3	19.3	1 2	9 24.23	+24 54.7	1.663	2.526	13.2	19.2
1 12	9 9.14	+4 58.5	1.490	2.397	11.5	19.1	1 12	9 16.44	+25 59.0	1.614	2.542	9.2	19.0
1 22	9 2.60	+6 0.9	1.436	2.390	7.4	18.8	1 22	9 6.23	+27 2.1	1.591	2.557	5.4	18.8
2 1	8 54.70	+7 23.3	1.408	2.384	4.1	18.6	2 1	8 54.72	+27 55.8	1.597	2.572	4.0	18.7
2 11	8 46.60	+8 58.9	1.407	2.379	5.4	18.7	2 11	8 43.35	+28 33.6	1.631	2.586	7.0	18.9
2 21	8 39.50	+10 38.7	1.433	2.374	9.5	18.9	2 21	8 33.47	+28 52.7	1.693	2.599	10.8	19.2
3 2	8 34.43	+12 14.3	1.484	2.370	13.6	19.1	3 2	8 26.14	+28 53.8	1.778	2.611	14.3	19.4
<b>51707</b>	2001 <i>KR</i> <sub>28</sub>		1 31.9 265°30'	2.2/2.4	18		<b>461577</b>	2004 <i>PN</i> <sub>12</sub>		1 31.9 153°69'	0.7/31.5	18	
12 23	9 20.33	+9 58.1	2.319	3.056	14.1	19.8	12 23	9 24.86	+18 31.6	2.518	3.266	12.8	22.1
1 2	9 16.70	+9 49.1	2.207	3.041	11.5	19.5	1 2	9 19.91	+18 43.6	2.427	3.275	10.1	22.0
1 12	9 10.90	+9 51.4	2.116	3.026	8.4	19.3	1 12	9 12.87	+19 1.5	2.360	3.282	7.0	21.8
1 22	9 3.35	+10 4.3	2.051	3.011	5.0	19.1	1 22	9 4.24	+19 22.5	2.321	3.290	3.6	21.6
2 1	8 54.70	+10 25.9	2.015	2.995	2.3	18.9	2 1	8 54.74	+19 42.9	2.312	3.297	0.7	21.3
2 11	8 45.85	+10 53.1	2.008	2.979	4.1	19.0	2 11	8 45.27	+19 59.6	2.334	3.303	3.9	21.6
2 21	8 37.75	+11 22.4	2.031	2.963	7.7	19.1	2 21	8 36.69	+20 10.2	2.387	3.308	7.3	21.8
3 2	8 31.20	+11 50.5	2.080	2.947	11.1	19.3	3 2	8 29.74	+20 13.7	2.467	3.313	10.3	22.0
<b>213698</b>	2002 <i>TA</i> <sub>275</sub>		1 31.9 147°49'	0.8/31.4	18		<b>344563</b>	2002 <i>XS</i> <sub>35</sub>		1 31.9 40°65'	5.2/3.2	18	
12 23	9 25.10	+17 46.7	2.152	2.908	14.4	20.9	12 23	9 23.53	+7 17.2	1.281	2.050	21.8	20.1
1 2	9 20.49	+18 9.4	2.066	2.917	11.5	20.7	1 2	9 20.67	+6 28.4	1.208	2.058	18.1	19.8
1 12	9 13.49	+18 40.4	2.002	2.926	8.0	20.5	1 12	9 14.40	+5 58.9	1.153	2.066	13.6	19.6
1 22	9 4.61	+19 16.0	1.965	2.934	4.0	20.3	1 22	9 5.36	+5 50.2	1.118	2.074	8.8	19.3
2 1	8 54.70	+19 51.6	1.957	2.942	0.8	20.0	2 1	8 54.73	+6 1.2	1.108	2.083	5.3	19.2
2 11	8 44.81	+20 22.7	1.980	2.949	4.5	20.3	2 11	8 44.17	+6 27.8	1.123	2.092	6.9	19.3
2 21	8 35.97	+20 46.0	2.032	2.955	8.3	20.6	2 21	8 35.22	+7 3.7	1.163	2.102	11.4	19.5
3 2	8 29.01	+21 0.0	2.110	2.961	11.7	20.8	3 2	8 29.09	+7 42.2	1.225	2.112	15.8	19.8
<b>481847</b>	2008 <i>WN</i> <sub>133</sub>		1 31.9 124°90'	12.7/5.3	17		<b>203487</b>	2002 <i>AH</i> <sub>65</sub>		1 31.9 48°88'	0.7/1.3	17	
12 23	9 34.44	-4 16.9	1.356	2.048	24.2	20.8	12 23	9 22.63	+11 48.0	1.209	1.998	21.8	20.1
1 2	9 29.22	-6 37.7	1.283	2.062	21.3	20.7	1 2	9 19.92	+12 23.5	1.156	2.024	17.3	19.9
1 12	9 20.33	-8 37.0	1.228	2.075	18.0	20.5	1 12	9 13.76	+13 20.2	1.121	2.050	12.1	19.6
1 22	9 8.40	-10 5.9	1.192	2.088	14.8	20.3	1 22	9 4.92	+14 32.6	1.108	2.077	6.3	19.4
2 1	8 54.67	-10 56.9	1.180	2.100	12.9	20.2	2 1	8 54.75	+15 52.1	1.120	2.105	0.7	19.1
2 11	8 40.93	-11 8.4	1.192	2.111	13.0	20.3	2 11	8 44.93	+17 8.5	1.158	2.132	5.7	19.5
2 21	8 28.90	-10 45.1	1.228	2.121	15.1	20.4	2 21	8 36.93	+18 13.9	1.222	2.160	11.0	19.9
3 2	8 19.92	-9 56.6	1.285	2.131	18.0	20.6	3 2	8 31.82	+19 3.8	1.308	2.189	15.5	20.2
<b>347058</b>	2010 <i>EE</i> <sub>140</sub>		1 31.9 211°51'	1.8/30.1	17		<b>427357</b>	2014 <i>WX</i> <sub>407</sub>		1 31.9 49°37'	5.2/28.4	18	
12 23	9 19.48	+21 21.7	3.050	3.806	10.6	21.6	12 23	9 22.33	+27 4.2	1.803	2.593	15.6	20.3
1 2	9 15.50	+22 7.8	2.946	3.799	8.4	21.4	1 2	9 19.09	+28 17.9	1.730	2.600	12.4	20.1
1 12	9 9.77	+22 59.5	2.866	3.791	5.8	21.2	1 12	9 12.96	+29 36.3	1.679	2.607	8.9	19.9
1 22	9 2.66	+23 52.9	2.816	3.784	3.1	21.1	1 22	9 4.51	+30 51.4	1.654	2.614	5.9	19.7
2 1	8 54.72	+24 44.1	2.796	3.775	1.9	20.9	2 1	8 54.75	+31 54.4	1.656	2.622	5.4	19.7
2 11	8 46.67	+25 29.2	2.808	3.766	4.1	21.1	2 11	8 45.02	+32 38.6	1.687	2.629	7.9	19.9
2 21	8 39.22	+26 5.3	2.850	3.757	6.9	21.3	2 21	8 36.59	+33 1.3	1.743	2.637	11.3	20.1
3 2	8 33.02	+26 31.0	2.919	3.748	9.4	21.4	3 2	8 30.50	+33 3.0	1.822	2.645	14.4	20.3
<b>160778</b>	2000 <i>SA</i> <sub>250</sub>		1 31.9 191°55'	0.1/1.0	18		<b>464112</b>	2014 <i>WW</i> <sub>454</sub>		1 31.9 86°90'	0.7/31.4	18	
12 23	9 24.43	+14 20.5	1.992	2.745	15.5	21.3	12 23	9 21.06					

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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>402027</b>	2003 SG <sub>155</sub>		1 31.9 164°89	0°7/	1.4 18		<b>122569</b>	2000 RR <sub>11</sub>		1 31.9 64°99	5°8/28.1 18		
12 23	9 25.03	+13 19.9	2.163	2.906	14.8	22.2	12 23	9 24.22	+29 21.7	1.834	2.621	15.5	19.3
1 2	9 20.44	+13 34.3	2.071	2.913	11.9	22.0	1 2	9 20.49	+30 37.0	1.769	2.636	12.3	19.1
1 12	9 13.49	+13 59.9	2.000	2.918	8.4	21.8	1 12	9 13.85	+31 54.3	1.728	2.651	9.0	18.9
1 22	9 4.66	+14 34.1	1.956	2.923	4.5	21.6	1 22	9 4.93	+33 4.9	1.712	2.667	6.4	18.8
2 1	8 54.77	+15 13.2	1.942	2.927	0.7	21.3	2 1	8 54.79	+34 0.7	1.723	2.682	6.0	18.8
2 11	8 44.83	+15 52.4	1.958	2.930	4.1	21.6	2 11	8 44.78	+34 35.5	1.763	2.698	8.3	19.0
2 21	8 35.87	+16 28.0	2.004	2.932	8.0	21.8	2 21	8 36.17	+34 47.9	1.828	2.713	11.3	19.2
3 2	8 28.74	+16 57.0	2.076	2.934	11.5	22.0	3 2	8 29.95	+34 39.3	1.916	2.729	14.2	19.4
<b>466883</b>	2015 DG <sub>46</sub>		1 31.9 205°00	0°6/	1.5 17		<b>365750</b>	2010 WY <sub>49</sub>		1 31.9 95°02	7°5/26.2 18		
12 23	9 17.77	+12 7.1	2.822	3.560	11.8	21.7	12 23	9 28.39	+34 17.8	1.963	2.740	14.9	20.4
1 2	9 14.22	+12 41.3	2.717	3.556	9.5	21.5	1 2	9 23.80	+36 4.0	1.908	2.763	12.2	20.2
1 12	9 8.93	+13 26.2	2.636	3.552	6.7	21.4	1 12	9 16.16	+37 48.3	1.877	2.785	9.5	20.1
1 22	9 2.26	+14 19.5	2.582	3.548	3.6	21.2	1 22	9 6.12	+39 20.5	1.872	2.807	7.7	20.1
2 1	8 54.78	+15 17.7	2.559	3.544	0.6	20.9	2 1	8 54.78	+40 31.3	1.895	2.828	7.9	20.1
2 11	8 47.20	+16 16.7	2.567	3.539	3.3	21.1	2 11	8 43.58	+41 15.1	1.946	2.849	9.7	20.3
2 21	8 40.23	+17 12.6	2.606	3.534	6.4	21.3	2 21	8 33.87	+41 31.3	2.023	2.869	12.2	20.4
3 2	8 34.50	+18 2.4	2.672	3.528	9.3	21.5	3 2	8 26.67	+41 22.8	2.121	2.890	14.5	20.7
<b>495572</b>	2014 WQ <sub>417</sub>		1 31.9 119°32	0°3/	1.2 18		<b>211667</b>	2003 VU <sub>9</sub>		1 31.9 46°26	2°8/30.6 18		
12 23	9 21.45	+13 9.8	2.139	2.890	14.7	21.9	12 23	9 25.42	+22 22.2	1.509	2.300	18.1	20.4
1 2	9 17.60	+13 42.9	2.055	2.902	11.7	21.7	1 2	9 21.88	+22 45.7	1.435	2.307	14.4	20.2
1 12	9 11.50	+14 28.4	1.993	2.914	8.2	21.5	1 12	9 15.06	+23 16.5	1.382	2.315	10.0	20.0
1 22	9 3.63	+15 23.1	1.957	2.925	4.3	21.3	1 22	9 5.64	+23 48.3	1.353	2.323	5.4	19.7
2 1	8 54.78	+16 22.3	1.951	2.936	0.3	21.0	2 1	8 54.79	+24 14.2	1.350	2.331	2.9	19.6
2 11	8 45.93	+17 20.3	1.975	2.947	4.1	21.3	2 11	8 44.08	+24 28.4	1.375	2.340	6.6	19.8
2 21	8 38.05	+18 12.7	2.028	2.957	7.9	21.5	2 21	8 34.97	+24 28.4	1.425	2.349	11.1	20.1
3 2	8 31.92	+18 56.1	2.107	2.967	11.3	21.8	3 2	8 28.56	+24 14.3	1.499	2.358	15.1	20.4
<b>66186</b>	1998 XS <sub>49</sub>		1 31.9 123°34	2°9/30.3 18			<b>408897</b>	2001 UD <sub>165</sub>		1 31.9 165°33	1°8/30.5 18		
12 23	9 29.67	+25 2.1	2.075	2.838	14.7	18.9	12 23	9 22.95	+19 9.9	2.304	3.063	13.5	21.3
1 2	9 24.19	+25 22.2	1.997	2.853	11.6	18.7	1 2	9 18.78	+20 2.9	2.213	3.068	10.7	21.1
1 12	9 16.07	+25 44.9	1.942	2.866	8.2	18.5	1 12	9 12.34	+21 4.7	2.147	3.073	7.4	20.9
1 22	9 5.94	+26 5.0	1.914	2.880	4.6	18.3	1 22	9 4.10	+22 10.6	2.107	3.077	3.8	20.7
2 1	8 54.77	+26 17.3	1.915	2.893	3.0	18.2	2 1	8 54.81	+23 14.7	2.098	3.080	1.9	20.6
2 11	8 43.79	+26 18.3	1.947	2.905	5.7	18.4	2 11	8 45.45	+24 11.5	2.120	3.083	4.8	20.8
2 21	8 34.11	+26 6.7	2.007	2.917	9.2	18.7	2 21	8 36.98	+24 57.0	2.171	3.085	8.4	21.0
3 2	8 26.62	+25 43.6	2.093	2.928	12.4	18.9	3 2	8 30.24	+25 29.4	2.248	3.086	11.5	21.2
<b>228197</b>	2149 T <sub>-3</sub>		1 31.9 200°32	5°0/	4.7 18		<b>108386</b>	2001 KZ <sub>24</sub>		1 31.9 168°81	3°9/4.0 18		
12 23	9 20.13	+0 41.6	2.396	3.090	14.7	20.6	12 23	9 19.31	+3 32.2	2.510	3.216	13.8	20.3
1 2	9 16.37	+0 20.0	2.292	3.087	12.5	20.4	1 2	9 15.57	+3 17.4	2.411	3.218	11.6	20.2
1 12	9 10.58	+0 14.4	2.209	3.084	9.9	20.2	1 12	9 9.93	+3 16.5	2.333	3.220	8.9	20.0
1 22	9 3.17	+0 25.7	2.150	3.080	7.2	20.0	1 22	9 2.81	+3 29.9	2.281	3.222	6.1	19.8
2 1	8 54.79	+0 53.5	2.119	3.076	5.2	19.9	2 1	8 54.82	+3 56.3	2.257	3.223	4.1	19.7
2 11	8 46.28	+1 35.2	2.117	3.072	5.6	19.9	2 11	8 46.77	+4 33.0	2.263	3.224	4.7	19.7
2 21	8 38.51	+2 26.7	2.143	3.067	7.9	20.0	2 21	8 39.44	+5 16.4	2.297	3.225	7.2	19.9
3 2	8 32.22	+3 23.1	2.197	3.062	10.7	20.2	3 2	8 33.52	+6 2.2	2.359	3.226	10.0	20.1
<b>416943</b>	2005 SM <sub>135</sub>		1 31.9 128°44	0°4/	1.2 18		<b>522070</b>	2015 XR <sub>418</sub>		1 31.9 1°19	4°5/3.9 18		
12 23	9 23.17	+14 0.3	2.236	2.983	14.2	22.2	12 23	9 19.58	+4 1.0	1.848	2.580	17.3	21.6
1 2	9 18.81	+14 20.6	2.152	2.997	11.4	22.0	1 2	9 16.57	+3 46.9	1.756	2.580	14.5	21.4
1 12	9 12.25	+14 51.4	2.090	3.010	8.0	21.9	1 12	9 11.06	+3 51.4	1.683	2.580	11.1	21.2
1 22	9 3.98	+15 29.8	2.055	3.023	4.1	21.6	1 22	9 3.54	+4 15.1	1.633	2.580	7.4	21.0
2 1	8 54.78	+16 11.8	2.050	3.035	0.4	21.4	2 1	8 54.81	+4 56.3	1.609	2.580	4.7	20.8
2 11	8 45.62	+16 52.9	2.075	3.047	3.9	21.7	2 11	8 45.98	+5 50.7	1.614	2.580	5.6	20.8
2 21	8 37.42	+17 29.4	2.130	3.058	7.7	21.9	2 21	8 38.13	+6 52.4	1.646	2.580	9.0	21.0
3 2	8 30.96	+17 58.6	2.211	3.069	10.9	22.1	3 2	8 32.21	+7 55.2	1.703	2.581	12.6	21.3
<b>99687</b>	2002 JY <sub>23</sub>		1 31.9 255°58	0°7/	1.4 18		<b>64626</b>	2001 XQ <sub>42</sub>		1 31.9 207°90	2°3/30.8 18		
12 23	9 22.80	+13 10.5	1.881	2.639	16.2	20.4	12 23	9 28.10	+21 42.3	1.754	2.528	16.6	19.8
1 2	9 19.36	+13 27.1	1.772	2.622	13.1	20.1	1 2	9 23.71	+22 2.0	1.663	2.524	13.3	19.6
1 12	9 13.21	+13 57.8	1.683	2.605	9.4	19.8	1 12	9 16.25	+22 28.7	1.592	2.520	9.3	19.3
1 22	9 4.75	+14 40.2	1.620	2.587	5.0	19.5	1 22	9 6.28	+22 57.2	1.547	2.516	4.9	19.1
2 1	8 54.78	+15 29.9	1.584	2.569	0.7	19.2	2 1	8 54.81	+23 21.2	1.530	2.511	2.3	18.9
2 11	8 44.48	+16 21.3	1.578	2.551	4.8	19.4	2 11	8 43.26	+23 35.6	1.541	2.506	6.0	19.1
2 21	8 35.10	+17 8.7	1.600	2.532	9.4	19.7	2 21	8 33.03	+23 37.4	1.580	2.501	10.4	19.3
3 2	8 27.74	+17 48.0	1.647	2.512	13.6	19.9	3 2	8 25.26	+23 26.4	1.644	2.495	14.4	19.6
<b>369001</b>	2007 HP <sub>16</sub>		1 31.9 26°00	5°4/	4.8 18		<b>173419</b>	2000 FX <sub>5</sub>		1 31.9 349°36	11°1/27.2 18		
12 23	9 16.85	+1 3.4	1.653	2.387	19.0	20.8	12 23	9 25.80	+38 31.3	1.256	2.068	19.8	19.5
1 2	9 14.64	+1 0.9	1.570	2.393	16.0	20.6	1 2	9 23.84	+39 38.8	1.187	2.058	16.7	19.2
1 12	9 9.82	+1 22.6	1.506	2.399	12.4	20.4	1 12	9 17.40	+40 39.8	1.136	2.050	13.6	19.0
1 22	9 2.91	+2 9.3	1.463	2.406	8.6	20.2	1 22	9 7.19	+41 21.2	1.106	2.043	11.4	18.9
2 1	8 54.79	+3 18.4	1.446	2.413	5.7	20.1	2 1	8 54.81	+41 30.2	1.098	2.037	11.4	18.9
2 11	8 46.62	+4 43.9	1.456	2.421	6.2	20.1	2 11	8 42.62	+41 0.1	1.113	2.033	13.6	19.0
2 21	8 39.55	+6 17.5	1.492	2.430	9.5	20.3	2 21	8 32.78	+39 53.0	1.149	2.030	16.9	19.1
3 2	8 34.54	+7 50.5	1.554	2.438	13.2	20.6	3 2	8 26.75	+38 16.6	1.205	2.029	20.3	19.3
<b>329581</b>	2002 XV <sub>43</sub>		1 31.9 72°00	1°9/30.9 18			<b>160874</b>	2001 NQ <sub>18</sub>		1 31.9 86°17	0°8/1.5 18		
12 23	9 27.38	+20 5.8	1.688	2.462	17.1	21.3	12 23	9 23.41	+14 16.9	2.435	3.177	13.3	19.4
1 2	9 22.73</												



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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>250129</b>	2002 <i>QE</i> <sub>11</sub>		1 31.9 206°05	0°2/ 1.1 18			<b>185151</b>	2006 <i>SC</i> <sub>189</sub>		1 31.9 304°66	0°3/31.7 18		
12 23	9 25.24	+15 48.8	1.992	2.748	15.5	20.9	12 23	9 18.44	+16 3.2	2.357	3.117	13.2	20.9
1 2	9 20.95	+15 52.5	1.894	2.745	12.4	20.7	1 2	9 15.16	+16 28.2	2.259	3.113	10.6	20.7
1 12	9 14.07	+16 5.9	1.818	2.741	8.8	20.5	1 12	9 9.82	+17 2.5	2.184	3.109	7.3	20.5
1 22	9 5.08	+16 26.2	1.768	2.736	4.6	20.2	1 22	9 2.83	+17 43.2	2.135	3.105	3.7	20.3
2 1	8 54.83	+16 49.5	1.746	2.731	0.2	19.8	2 1	8 54.88	+18 26.4	2.116	3.101	0.3	20.0
2 11	8 44.48	+17 11.6	1.754	2.726	4.5	20.2	2 11	8 46.83	+19 7.5	2.127	3.097	4.0	20.3
2 21	8 35.17	+17 29.0	1.791	2.720	8.8	20.4	2 21	8 39.58	+19 43.0	2.166	3.094	7.6	20.5
3 2	8 27.87	+17 39.6	1.853	2.714	12.6	20.7	3 2	8 33.88	+20 10.4	2.232	3.090	10.8	20.7
<b>279140</b>	2009 <i>RA</i> <sub>44</sub>		1 31.9 45°40	3°7/29.9 18			<b>360825</b>	2005 <i>LV</i> <sub>1</sub>		1 31.9 178°98	2°7/29.7 18		
12 23	9 24.97	+25 34.5	1.843	2.625	15.6	20.7	12 23	9 24.05	+21 56.5	2.362	3.124	13.2	22.1
1 2	9 21.02	+26 5.4	1.763	2.629	12.4	20.5	1 2	9 19.70	+22 59.3	2.270	3.126	10.4	21.9
1 12	9 14.21	+26 39.9	1.704	2.633	8.8	20.3	1 12	9 13.04	+24 9.4	2.202	3.127	7.3	21.7
1 22	9 5.14	+27 12.1	1.671	2.637	5.1	20.0	1 22	9 4.52	+25 21.5	2.161	3.128	4.1	21.5
2 1	8 54.84	+27 35.6	1.666	2.641	3.8	20.0	2 1	8 54.89	+26 29.1	2.151	3.128	2.9	21.4
2 11	8 44.61	+27 45.6	1.689	2.646	6.6	20.1	2 11	8 45.14	+27 26.6	2.172	3.127	5.5	21.6
2 21	8 35.70	+27 40.3	1.739	2.650	10.3	20.4	2 21	8 36.28	+28 10.2	2.222	3.126	8.7	21.8
3 2	8 29.10	+27 20.3	1.813	2.655	13.7	20.6	3 2	8 29.16	+28 38.5	2.298	3.124	11.7	22.0
<b>46906</b>	1998 <i>RG</i> <sub>66</sub>		1 31.9 29°78	7°5/ 5.9 18			<b>198300</b>	2004 <i>TQ</i> <sub>323</sub>		1 31.9 134°89	1°8/30.9 18		
12 23	9 17.48	- 2 2.1	1.516	2.242	20.7	18.3	12 23	9 27.13	+19 23.4	1.899	2.664	15.8	21.1
1 2	9 15.37	- 2 29.9	1.438	2.250	17.8	18.1	1 2	9 22.49	+20 1.4	1.820	2.677	12.5	20.9
1 12	9 10.47	- 2 31.0	1.377	2.257	14.3	17.9	1 12	9 15.12	+20 48.4	1.763	2.690	8.7	20.7
1 22	9 3.31	- 2 2.8	1.336	2.266	10.6	17.7	1 22	9 5.59	+21 39.1	1.732	2.702	4.5	20.4
2 1	8 54.84	- 1 5.8	1.319	2.275	7.9	17.5	2 1	8 54.89	+22 27.2	1.731	2.713	1.8	20.3
2 11	8 46.35	+ 0 14.5	1.327	2.284	7.9	17.6	2 11	8 44.25	+23 7.0	1.759	2.724	5.3	20.5
2 21	8 39.06	+ 1 49.4	1.361	2.294	10.6	17.7	2 21	8 34.86	+23 34.8	1.815	2.734	9.4	20.8
3 2	8 34.01	+ 3 29.1	1.419	2.305	14.1	18.0	3 2	8 27.67	+23 49.5	1.897	2.743	13.0	21.0
<b>400803</b>	2010 <i>GB</i> <sub>98</sub>		1 31.9 245°34	1°2/ 1.6 18			<b>283463</b>	2001 <i>QZ</i> <sub>37</sub>		1 31.9 198°65	0°2/ 1.1 18		
12 23	9 23.54	+12 36.5	1.722	2.483	17.3	22.2	12 23	9 25.36	+13 38.5	1.967	2.717	15.8	22.1
1 2	9 20.14	+12 42.8	1.622	2.473	14.1	21.9	1 2	9 21.16	+14 8.9	1.867	2.714	12.7	21.9
1 12	9 13.85	+13 3.6	1.542	2.463	10.1	21.6	1 12	9 14.31	+14 53.1	1.789	2.709	9.0	21.6
1 22	9 5.12	+13 36.9	1.486	2.452	5.5	21.4	1 22	9 5.28	+15 47.8	1.736	2.704	4.7	21.4
2 1	8 54.85	+14 18.5	1.457	2.441	1.2	21.0	2 1	8 54.89	+16 47.8	1.713	2.699	0.2	21.0
2 11	8 44.33	+15 2.8	1.457	2.430	5.0	21.3	2 11	8 44.31	+17 47.0	1.720	2.692	4.6	21.3
2 21	8 34.89	+15 44.3	1.484	2.418	9.8	21.5	2 21	8 34.72	+18 39.9	1.756	2.684	9.0	21.6
3 2	8 27.69	+16 18.8	1.536	2.407	14.2	21.7	3 2	8 27.14	+19 22.7	1.818	2.676	12.9	21.8
<b>368997</b>	2007 <i>FG</i> <sub>26</sub>		1 31.9 104°93	2°5/30.5 18			<b>85629</b>	1998 <i>KW</i> <sub>5</sub>		1 31.9 201°98	4°9/ 5.5 18		
12 23	9 25.31	+23 1.5	2.007	2.779	14.8	20.9	12 23	9 17.68	- 2 19.5	3.139	3.801	12.1	20.8
1 2	9 20.92	+23 26.9	1.927	2.788	11.8	20.7	1 2	9 13.92	- 2 43.2	3.029	3.797	10.4	20.7
1 12	9 13.94	+23 57.1	1.870	2.797	8.2	20.5	1 12	9 8.62	- 2 53.5	2.941	3.793	8.4	20.5
1 22	9 4.94	+24 27.3	1.838	2.806	4.4	20.3	1 22	9 2.12	- 2 49.4	2.877	3.788	6.5	20.4
2 1	8 54.86	+24 52.0	1.835	2.815	2.6	20.1	2 1	8 54.90	- 2 31.1	2.842	3.783	5.1	20.3
2 11	8 44.86	+25 6.8	1.862	2.823	5.5	20.4	2 11	8 47.60	- 2 0.0	2.836	3.778	5.2	20.3
2 21	8 36.07	+25 9.6	1.916	2.832	9.2	20.6	2 21	8 40.82	- 1 19.0	2.860	3.772	6.7	20.4
3 2	8 29.37	+25 0.4	1.996	2.840	12.5	20.8	3 2	8 35.13	- 0 31.5	2.911	3.766	8.7	20.5
<b>422267</b>	2014 <i>ST</i> <sub>148</sub>		1 31.9 108°94	4°0/ 4.2 18			<b>159877</b>	2004 <i>RY</i> <sub>74</sub>		1 31.9 183°93	1°9/30.8 18		
12 23	9 22.34	+ 2 31.2	2.160	2.866	15.8	21.5	12 23	9 26.52	+19 39.8	1.924	2.690	15.6	21.2
1 2	9 18.14	+ 2 38.3	2.080	2.888	13.1	21.4	1 2	9 22.15	+20 18.3	1.833	2.690	12.4	21.0
1 12	9 11.78	+ 3 3.7	2.021	2.909	10.0	21.2	1 12	9 15.02	+21 6.1	1.764	2.690	8.6	20.8
1 22	9 3.76	+ 3 46.7	1.987	2.930	6.7	21.0	1 22	9 5.63	+21 58.2	1.720	2.690	4.5	20.5
2 1	8 54.86	+ 4 44.4	1.981	2.950	4.2	20.9	2 1	8 54.89	+22 48.2	1.706	2.689	2.0	20.3
2 11	8 46.03	+ 5 52.2	2.005	2.969	4.9	21.0	2 11	8 44.06	+23 29.9	1.722	2.687	5.5	20.6
2 21	8 38.15	+ 7 4.2	2.058	2.988	7.7	21.2	2 21	8 34.38	+23 59.4	1.766	2.684	9.7	20.8
3 2	8 32.00	+ 8 15.1	2.138	3.007	10.8	21.4	3 2	8 26.85	+24 15.2	1.834	2.681	13.4	21.0
<b>335925</b>	2007 <i>TF</i> <sub>13</sub>		1 31.9 134°64	0°8/31.3 17			<b>145648</b>	4223 <i>P-L</i>		1 31.9 170°95	0°4/31.7 18		
12 23	9 20.83	+18 0.4	2.673	3.425	12.0	21.7	12 23	9 25.37	+16 38.7	2.154	2.907	14.5	21.3
1 2	9 16.66	+18 26.8	2.585	3.435	9.5	21.6	1 2	9 20.80	+16 57.8	2.061	2.911	11.6	21.1
1 12	9 10.61	+18 59.8	2.521	3.445	6.6	21.4	1 12	9 13.81	+17 26.1	1.991	2.914	8.1	20.9
1 22	9 3.13	+19 36.4	2.485	3.454	3.3	21.2	1 22	9 4.91	+18 0.2	1.948	2.917	4.1	20.6
2 1	8 54.87	+20 12.9	2.479	3.463	0.8	21.0	2 1	8 54.90	+18 35.7	1.933	2.918	0.4	20.3
2 11	8 46.61	+20 45.7	2.504	3.472	3.7	21.2	2 11	8 44.85	+19 8.0	1.950	2.920	4.4	20.7
2 21	8 39.14	+21 11.9	2.559	3.480	6.9	21.5	2 21	8 35.80	+19 33.7	1.995	2.920	8.3	20.9
3 2	8 33.11	+21 30.2	2.641	3.488	9.7	21.7	3 2	8 28.62	+19 50.9	2.067	2.921	11.8	21.1
<b>268820</b>	2006 <i>VP</i> <sub>98</sub>		1 31.9 154°74	1°8/30.4 17			<b>224279</b>	2005 <i>TL</i> <sub>56</sub>		1 31.9 244°70	4°2/29.3 18		
12 23	9 20.46	+22 7.6	2.791	3.552	11.4	21.7	12 23	9 25.19	+26 39.0	2.019	2.796	14.6	21.0
1 2	9 16.36	+22 37.4	2.701	3.556	9.0	21.5	1 2	9 21.17	+27 24.2	1.924	2.787	11.7	20.8
1 12	9 10.41	+23 11.4	2.634	3.560	6.2	21.3	1 12	9 14.39	+28 13.4	1.852	2.778	8.4	20.5
1 22	9 3.04	+23 46.2	2.595	3.563	3.3	21.2	1 22	9 5.33	+29 0.3	1.806	2.769	5.2	20.3
2 1	8 54.87	+24 17.8	2.587	3.567	1.9	21.1	2 1	8 54.90	+29 38.1	1.788	2.759	4.3	20.3
2 11	8 46.70	+24 42.8	2.609	3.570	4.2	21.2	2 11	8 44.34	+30 1.0	1.800	2.749	6.9	20.4
2 21	8 39.28	+24 59.2	2.661	3.573	7.1	21.4	2 21	8 34.90	+30 6.7	1.838	2.739	10.4	20.6
3 2	8 33.26	+25 5.9	2.739	3.576	9.7	21.6	3 2	8 27.62	+29 55.3	1.901	2.729	13.7	20.8
<b>79607</b>	1998 <i>RD</i> <sub>48</sub>		1 31.9 38°05	0°1/31.9 18			<b>393848</b>	2005 <i>SK</i> <sub>154</sub>		1 31.9 270°44	3°8/ 2.9 18		
12 23	9 23.71	+16 47.2	1.342	2.134	19.9	18.9	12						

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>408237</b>	2013 <i>EJ</i> <sub>103</sub>		1 31.9 277°80		0°7/31.6 17		<b>209009</b>	2003 <i>BB</i> <sub>58</sub>		1 31.9 51°20		0°4/ 1.4 18	
12 23	9 21.97	+16 0.3	1.632	2.410	17.5	22.0	12 23	9 18.82	+10 48.9	1.992	2.746	15.5	20.0
1 2	9 19.21	+16 30.2	1.530	2.394	14.1	21.7	1 2	9 15.62	+11 48.3	1.923	2.771	12.4	19.9
1 12	9 13.42	+17 14.9	1.449	2.379	9.9	21.4	1 12	9 10.17	+13 3.4	1.876	2.797	8.6	19.7
1 22	9 5.01	+18 10.5	1.392	2.363	5.1	21.1	1 22	9 3.01	+14 29.9	1.856	2.823	4.5	19.5
2 1	8 54.90	+19 10.6	1.362	2.347	0.8	20.8	2 1	8 54.94	+16 1.4	1.864	2.849	0.5	19.2
2 11	8 44.44	+20 7.7	1.360	2.331	5.6	21.1	2 11	8 46.96	+17 30.8	1.903	2.876	4.1	19.6
2 21	8 35.08	+20 55.5	1.384	2.315	10.7	21.3	2 21	8 40.01	+18 51.9	1.971	2.902	8.0	19.8
3 2	8 28.08	+21 29.9	1.432	2.299	15.2	21.5	3 2	8 34.86	+20 0.5	2.065	2.928	11.4	20.1
<b>371658</b>	2007 <i>CA</i> <sub>2</sub>		1 31.9 309°93		0°7/31.6 18		<b>101850</b>	1999 <i>JT</i> <sub>91</sub>		1 31.9 18°59		6°3/27.7 18	
12 23	9 24.62	+19 2.6	1.818	2.590	16.1	20.7	12 23	9 19.75	+26 31.5	1.491	2.298	17.5	18.0
1 2	9 20.77	+18 58.6	1.724	2.584	12.9	20.5	1 2	9 17.76	+28 11.6	1.422	2.302	13.9	17.8
1 12	9 14.11	+19 1.7	1.651	2.579	9.1	20.3	1 12	9 12.49	+29 59.5	1.375	2.308	10.1	17.6
1 22	9 5.18	+19 8.6	1.603	2.573	4.6	20.0	1 22	9 4.51	+31 44.8	1.353	2.314	6.9	17.4
2 1	8 54.91	+19 15.2	1.583	2.568	0.7	19.7	2 1	8 54.93	+33 15.4	1.357	2.320	6.7	17.4
2 11	8 44.58	+19 17.6	1.592	2.563	5.0	20.0	2 11	8 45.33	+34 22.0	1.387	2.328	9.5	17.6
2 21	8 35.43	+19 13.4	1.629	2.558	9.5	20.2	2 21	8 37.23	+35 0.5	1.442	2.336	13.2	17.8
3 2	8 28.50	+19 1.5	1.690	2.554	13.4	20.5	3 2	8 31.83	+35 11.6	1.517	2.345	16.6	18.0
<b>375023</b>	2007 <i>GJ</i> <sub>63</sub>		1 31.9 167°39		2°0/30.5 18		<b>30534</b>	2001 <i>OA</i> <sub>5</sub>		1 31.9 58°64		4°8/ 4.1 18	
12 23	9 22.92	+21 31.7	2.304	3.069	13.4	21.8	12 23	9 20.53	+ 3 32.4	2.192	2.906	15.4	17.5
1 2	9 18.77	+22 5.0	2.213	3.071	10.6	21.6	1 2	9 16.75	+ 2 53.3	2.107	2.918	12.9	17.3
1 12	9 12.35	+22 44.2	2.147	3.073	7.3	21.4	1 12	9 10.86	+ 2 28.8	2.043	2.930	10.0	17.1
1 22	9 4.14	+23 25.1	2.107	3.075	3.9	21.2	1 22	9 3.35	+ 2 19.6	2.004	2.942	7.0	17.0
2 1	8 54.92	+24 2.5	2.096	3.077	2.1	21.1	2 1	8 54.95	+ 2 25.4	1.992	2.954	4.9	16.9
2 11	8 45.66	+24 32.2	2.116	3.078	4.9	21.3	2 11	8 46.57	+ 2 44.0	2.008	2.967	5.5	16.9
2 21	8 37.35	+24 51.3	2.165	3.079	8.3	21.5	2 21	8 39.10	+ 3 11.6	2.053	2.979	8.0	17.1
3 2	8 30.79	+24 58.8	2.239	3.080	11.5	21.7	3 2	8 33.27	+ 3 44.3	2.124	2.992	10.9	17.3
<b>197571</b>	2004 <i>GQ</i> <sub>30</sub>		1 31.9 277°45		0°1/31.9 18		<b>341687</b>	2007 <i>VM</i> <sub>118</sub>		1 31.9 100°35		0°2/ 1.1 18	
12 23	9 22.30	+14 36.4	1.466	2.248	18.9	20.5	12 23	9 19.42	+14 22.0	2.424	3.175	13.1	21.2
1 2	9 19.79	+15 0.5	1.370	2.236	15.3	20.2	1 2	9 15.76	+14 46.2	2.337	3.185	10.5	21.0
1 12	9 14.01	+15 41.6	1.293	2.223	10.9	19.9	1 12	9 10.12	+15 20.2	2.273	3.194	7.3	20.8
1 22	9 5.39	+16 36.2	1.239	2.210	5.6	19.5	1 22	9 2.96	+16 1.2	2.236	3.204	3.8	20.6
2 1	8 54.91	+17 38.0	1.211	2.196	0.1	19.1	2 1	8 54.95	+16 45.5	2.228	3.213	0.2	20.3
2 11	8 44.08	+18 38.6	1.210	2.183	5.8	19.5	2 11	8 46.95	+17 28.7	2.251	3.222	3.7	20.6
2 21	8 34.50	+19 30.9	1.235	2.170	11.3	19.7	2 21	8 39.76	+18 7.4	2.303	3.232	7.1	20.9
3 2	8 27.52	+20 10.2	1.283	2.157	16.2	20.0	3 2	8 34.10	+18 38.9	2.382	3.241	10.2	21.1
<b>83069</b>	2001 <i>QJ</i> <sub>213</sub>		1 31.9 1°73		5°6/ 5.2 18		<b>281302</b>	2007 <i>RA</i> <sub>299</sub>		1 31.9 143°42		1°0/ 1.9 18	
12 23	9 17.59	- 0 30.4	1.765	2.484	18.5	19.1	12 23	9 18.81	+10 53.0	2.583	3.320	12.8	21.0
1 2	9 15.16	- 0 28.4	1.673	2.484	15.7	18.8	1 2	9 15.17	+11 22.1	2.489	3.326	10.3	20.8
1 12	9 10.21	- 0 1.9	1.598	2.484	12.3	18.6	1 12	9 9.67	+12 3.0	2.418	3.333	7.3	20.7
1 22	9 3.19	+ 0 50.5	1.546	2.484	8.8	18.4	1 22	9 2.73	+12 53.4	2.374	3.339	4.0	20.5
2 1	8 54.92	+ 2 6.7	1.520	2.484	6.0	18.3	2 1	8 54.96	+13 49.7	2.360	3.344	1.0	20.2
2 11	8 46.52	+ 3 40.9	1.521	2.484	6.3	18.3	2 11	8 47.15	+14 47.8	2.377	3.350	3.4	20.4
2 21	8 39.09	+ 5 24.8	1.550	2.485	9.4	18.4	2 21	8 40.05	+15 43.3	2.424	3.355	6.7	20.7
3 2	8 33.62	+ 7 9.5	1.604	2.486	13.0	18.7	3 2	8 34.35	+16 32.9	2.499	3.360	9.7	20.9
<b>160107</b>	2000 <i>SD</i> <sub>98</sub>		1 31.9 113°19		2°3/ 2.5 18		<b>323837</b>	2005 <i>ST</i> <sub>62</sub>		1 31.9 228°98		4°7/ 4.2 18	
12 23	9 26.15	+ 9 1.2	1.909	2.644	16.7	20.3	12 23	9 19.68	+ 2 38.6	2.022	2.740	16.4	21.4
1 2	9 21.46	+ 9 5.6	1.833	2.666	13.6	20.1	1 2	9 16.49	+ 2 26.4	1.923	2.736	13.8	21.2
1 12	9 14.25	+ 9 25.2	1.778	2.687	9.8	19.9	1 12	9 10.96	+ 2 32.4	1.843	2.733	10.7	21.0
1 22	9 5.10	+ 9 58.1	1.748	2.707	5.7	19.7	1 22	9 3.53	+ 2 57.3	1.787	2.729	7.4	20.8
2 1	8 54.92	+10 40.8	1.746	2.727	2.4	19.6	2 1	8 54.96	+ 3 39.9	1.758	2.725	4.9	20.6
2 11	8 44.86	+11 28.0	1.774	2.746	4.5	19.7	2 11	8 46.24	+ 4 36.3	1.757	2.721	5.6	20.6
2 21	8 35.99	+12 14.9	1.832	2.764	8.4	20.0	2 21	8 38.38	+ 5 41.1	1.785	2.717	8.6	20.8
3 2	8 29.17	+12 57.4	1.915	2.781	12.0	20.3	3 2	8 32.28	+ 6 48.0	1.838	2.712	12.0	21.0
<b>340795</b>	2006 <i>TT</i> <sub>44</sub>		1 31.9 148°91		0°5/ 1.3 17		<b>435434</b>	2008 <i>CA</i> <sub>129</sub>		1 31.9 242°25		1°9/ 2.7 17	
12 23	9 28.72	+13 40.7	1.778	2.529	17.2	22.5	12 23	9 16.59	+ 8 13.7	2.713	3.442	12.4	22.0
1 2	9 23.90	+13 59.4	1.695	2.541	13.8	22.3	1 2	9 13.38	+ 8 31.4	2.609	3.438	10.1	21.8
1 12	9 16.21	+14 31.7	1.632	2.552	9.8	22.0	1 12	9 8.42	+ 9 1.4	2.527	3.434	7.4	21.6
1 22	9 6.22	+15 14.0	1.595	2.563	5.1	21.8	1 22	9 2.10	+ 9 42.4	2.472	3.430	4.4	21.4
2 1	8 54.92	+16 1.2	1.587	2.572	0.5	21.5	2 1	8 54.97	+10 31.9	2.446	3.427	2.0	21.3
2 11	8 43.65	+16 47.2	1.608	2.580	4.8	21.8	2 11	8 47.75	+11 26.1	2.451	3.423	3.4	21.4
2 21	8 33.67	+17 27.1	1.658	2.587	9.4	22.1	2 21	8 41.14	+12 21.1	2.486	3.419	6.4	21.5
3 2	8 26.00	+17 58.0	1.733	2.593	13.3	22.3	3 2	8 35.80	+13 13.3	2.548	3.415	9.3	21.7
<b>110547</b>	2001 <i>TX</i> <sub>100</sub>		1 31.9 349°72		8°2/ 5.9 18		<b>284431</b>	2007 <i>DB</i> <sub>30</sub>		1 31.9 254°39		1°4/ 1.8 18	
12 23	9 16.57	- 2 22.4	1.606	2.327	19.9	19.1	12 23	9 22.39	+10 54.0	1.594	2.358	18.4	21.1
1 2	9 14.64	- 3 11.2	1.516	2.322	17.3	18.8	1 2	9 19.55	+11 14.1	1.494	2.346	15.0	20.9
1 12	9 10.02	- 3 36.5	1.443	2.318	14.1	18.6	1 12	9 13.67	+11 53.1	1.413	2.334	10.8	20.6
1 22	9 3.17	- 3 34.5	1.391	2.314	10.9	18.4	1 22	9 5.17	+12 49.1	1.355	2.322	6.0	20.3
2 1	8 54.93	- 3 3.8	1.362	2.311	8.6	18.3	2 1	8 54.97	+13 56.9	1.325	2.309	1.5	19.9
2 11	8 46.52	- 2 7.5	1.358	2.309	8.6	18.3	2 11	8 44.42	+15 9.1	1.322	2.296	5.3	20.1
2 21	8 39.17	- 0 52.0	1.379	2.307	11.0	18.4	2 21	8 34.96	+16 18.0	1.346	2.282	10.4	20.4
3 2	8 33.93	+ 0 33.8	1.424	2.307	14.3	18.6	3 2	8 27.87	+17 17.5	1.395	2.269	15.1	20.6
<b>463239</b>	2012 <i>ED</i> <sub>17</sub>		1 31.9 309°25		2°5/ 2.7 17		<b>32643</b>	2609 <i>P-L</i>		1 31.9 206°35		2°1/30.8 18	
12 23	9 16.30	+ 6 33.4	1.627	2.387	18.3								

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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>246230</b>	2007 <i>RU</i> <sub>239</sub>		1 31.9 103°48	3°6/29.7	18		<b>422511</b>	2014 <i>TT</i> <sub>5</sub>		1 31.9 129°47	2°9/29.9	18	R
12 23	9 25.60	+22 36.9	1.688	2.471	16.8	20.7	12 23	9 27.20	+23 58.4	2.327	3.087	13.4	22.0
1 2	9 21.74	+23 40.0	1.617	2.484	13.3	20.5	1 2	9 22.03	+24 43.2	2.251	3.105	10.6	21.8
1 12	9 14.87	+24 51.6	1.567	2.497	9.3	20.3	1 12	9 14.53	+25 32.0	2.199	3.123	7.4	21.6
1 22	9 5.59	+26 4.1	1.542	2.509	5.2	20.1	1 22	9 5.25	+26 19.5	2.174	3.139	4.2	21.4
2 1	8 54.97	+27 8.9	1.545	2.522	3.8	20.0	2 1	8 55.02	+27 0.3	2.180	3.155	3.0	21.4
2 11	8 44.43	+27 58.7	1.577	2.534	6.9	20.2	2 11	8 44.88	+27 29.9	2.216	3.171	5.4	21.6
2 21	8 35.30	+28 29.8	1.636	2.546	10.9	20.5	2 21	8 35.83	+27 46.2	2.281	3.185	8.5	21.8
3 2	8 28.63	+28 41.9	1.718	2.557	14.4	20.7	3 2	8 28.66	+27 49.2	2.373	3.199	11.4	22.0
<b>409922</b>	2006 <i>TB</i> <sub>97</sub>		1 31.9 111°55	0°6/31.6	18		<b>101695</b>	1999 <i>CC</i> <sub>132</sub>		1 31.9 103°57	0°5/1.3	18	
12 23	9 23.88	+16 30.5	1.948	2.711	15.5	22.0	12 23	9 21.76	+13 7.9	1.893	2.652	16.0	19.8
1 2	9 19.81	+17 0.7	1.869	2.724	12.3	21.8	1 2	9 18.24	+13 34.5	1.810	2.661	12.9	19.6
1 12	9 13.21	+17 41.5	1.812	2.737	8.6	21.6	1 12	9 12.21	+14 14.9	1.747	2.670	9.0	19.4
1 22	9 4.64	+18 28.8	1.780	2.750	4.3	21.3	1 22	9 4.18	+15 5.7	1.711	2.679	4.7	19.1
2 1	8 54.98	+19 17.2	1.778	2.763	0.7	21.1	2 1	8 55.02	+16 1.9	1.702	2.687	0.5	18.8
2 11	8 45.38	+20 1.2	1.805	2.775	4.7	21.4	2 11	8 45.85	+16 57.6	1.723	2.695	4.4	19.1
2 21	8 36.92	+20 36.7	1.861	2.787	8.7	21.7	2 21	8 37.76	+17 47.6	1.772	2.704	8.7	19.4
3 2	8 30.48	+21 1.5	1.942	2.798	12.3	21.9	3 2	8 31.65	+18 28.4	1.846	2.712	12.4	19.6
<b>461155</b>	2015 <i>TH</i> <sub>116</sub>		1 31.9 78°64	0°2/31.9	16		<b>180954</b>	2005 <i>MU</i> <sub>22</sub>		2 1.0 252°05	0°1/1.1	18	
12 23	9 24.46	+12 0.4	1.536	2.302	18.9	21.5	1 2	9 19.49	+15 39.1	1.873	2.725	12.4	21.2
1 2	9 20.80	+13 5.2	1.472	2.328	15.0	21.3	1 12	9 13.22	+16 1.7	1.790	2.714	8.8	20.9
1 12	9 14.15	+14 29.2	1.429	2.354	10.4	21.1	1 12	9 4.79	+16 32.5	1.733	2.702	4.6	20.6
1 22	9 5.18	+16 6.2	1.411	2.380	5.3	20.9	1 22	9 55.03	+17 7.2	1.704	2.689	0.1	20.2
2 1	8 54.98	+17 47.3	1.420	2.405	0.2	20.5	2 11	8 45.06	+17 40.9	1.705	2.677	4.6	20.6
2 11	8 44.96	+19 22.5	1.459	2.430	5.3	21.0	2 21	8 36.04	+18 9.4	1.734	2.664	9.0	20.8
2 21	8 36.40	+20 44.5	1.525	2.455	10.0	21.3	3 2	8 28.97	+18 29.9	1.788	2.650	12.9	21.0
3 2	8 30.29	+21 49.0	1.616	2.479	14.0	21.6	3 12	8 24.53	+18 41.2	1.863	2.637	16.2	21.2
<b>84672</b>	2002 <i>VG</i> <sub>84</sub>		1 31.9 93°77	7°1/5.5	18		<b>182071</b>	2000 <i>GJ</i> <sub>67</sub>		2 1.0 267°17	6°9/27.6	18	
12 23	9 23.09	- 1 47.0	1.929	2.621	17.9	19.2	1 2	9 23.54	+34 12.5	1.813	2.672	12.5	20.1
1 2	9 19.08	- 2 37.5	1.849	2.637	15.3	19.1	1 12	9 16.37	+35 17.9	1.744	2.659	9.6	19.9
1 12	9 12.65	- 3 8.2	1.789	2.653	12.4	18.9	1 22	9 6.52	+36 15.0	1.700	2.646	7.3	19.7
1 22	9 4.34	- 3 16.9	1.751	2.669	9.4	18.8	2 1	8 55.03	+36 54.8	1.684	2.633	7.2	19.7
2 1	8 54.99	- 3 2.9	1.739	2.685	7.4	18.7	2 11	8 43.38	+37 10.9	1.695	2.619	9.4	19.8
2 11	8 45.68	- 2 29.0	1.755	2.700	7.5	18.7	2 21	8 33.05	+37 1.6	1.731	2.606	12.5	19.9
2 21	8 37.44	- 1 40.0	1.797	2.715	9.6	18.9	3 2	8 25.26	+36 29.2	1.790	2.592	15.5	20.1
3 2	8 31.10	- 0 42.4	1.865	2.730	12.3	19.1	3 12	8 20.73	+35 38.6	1.867	2.578	18.2	20.3
<b>299448</b>	2006 <i>BE</i> <sub>45</sub>		1 31.9 177°77	1°3/31.3	18		<b>437376</b>	2013 <i>WV</i> <sub>1</sub>		2 1.0 38°38	7°6/25.8	16	
12 23	9 28.23	+19 37.1	1.853	2.617	16.2	21.2	1 2	9 18.57	+34 39.9	1.784	2.650	12.3	19.9
1 2	9 23.57	+19 49.8	1.763	2.619	12.9	21.0	1 12	9 12.77	+36 34.8	1.749	2.665	9.5	19.8
1 12	9 16.03	+20 10.3	1.694	2.620	9.0	20.7	1 22	9 4.58	+38 19.6	1.740	2.680	7.7	19.7
1 22	9 6.18	+20 34.2	1.651	2.621	4.6	20.5	2 1	8 55.04	+39 44.2	1.758	2.695	8.0	19.7
2 1	8 54.99	+20 56.3	1.637	2.621	1.3	20.2	2 11	8 45.52	+40 42.0	1.803	2.711	10.0	19.9
2 11	8 43.78	+21 12.0	1.652	2.621	5.2	20.5	2 21	8 37.36	+41 11.2	1.872	2.727	12.6	20.1
2 21	8 33.83	+21 18.3	1.696	2.620	9.6	20.8	3 2	8 31.60	+41 13.8	1.962	2.744	15.1	20.3
3 2	8 26.15	+21 14.3	1.765	2.618	13.4	21.0	3 12	8 28.82	+40 54.7	2.071	2.761	17.2	20.5
<b>490851</b>	2010 <i>XY</i> <sub>57</sub>		1 31.9 118°71	5°3/28.0	18		<b>376295</b>	2011 <i>FE</i> <sub>108</sub>		2 1.0 357°67	1°7/1.9	18	
12 23	9 25.66	+28 42.4	2.034	2.811	14.5	21.5	1 2	9 17.21	+12 17.2	1.654	2.508	13.7	20.4
1 2	9 21.44	+30 2.3	1.963	2.824	11.6	21.3	1 12	9 11.68	+12 20.5	1.584	2.506	9.9	20.1
1 12	9 14.48	+31 25.0	1.915	2.836	8.4	21.2	1 22	9 3.99	+12 35.1	1.539	2.505	5.5	19.9
1 22	9 5.36	+32 42.6	1.894	2.848	5.9	21.0	2 1	8 55.04	+12 58.0	1.521	2.504	1.7	19.6
2 1	8 55.01	+33 46.9	1.901	2.860	5.6	21.0	2 11	8 46.03	+13 24.8	1.530	2.504	4.7	19.8
2 11	8 44.70	+34 31.8	1.938	2.871	7.8	21.2	2 21	8 38.12	+13 51.1	1.566	2.504	9.1	20.1
2 21	8 35.62	+34 55.2	2.001	2.882	10.7	21.4	3 2	8 32.30	+14 13.3	1.627	2.505	13.1	20.3
3 2	8 28.74	+34 58.1	2.088	2.893	13.5	21.6	3 12	8 29.18	+14 28.9	1.709	2.506	16.5	20.5
<b>468605</b>	2007 <i>VB</i> <sub>261</sub>		1 31.9 216°20	3°5/3.6	17		<b>308156</b>	2005 <i>AP</i> <sub>51</sub>		2 1.0 61°77	2°2/31.0	18	
12 23	9 19.69	+ 5 25.5	2.595	3.306	13.3	21.9	1 2	9 22.96	+21 30.4	1.421	2.290	14.6	20.2
1 2	9 15.88	+ 5 4.4	2.490	3.303	11.1	21.8	1 12	9 15.87	+21 53.4	1.368	2.300	10.2	19.9
1 12	9 10.20	+ 4 55.3	2.407	3.299	8.4	21.6	1 22	9 6.17	+22 18.6	1.339	2.310	5.3	19.7
1 22	9 3.04	+ 4 58.3	2.349	3.295	5.6	21.4	2 1	8 55.06	+22 39.5	1.337	2.320	2.2	19.5
2 1	8 55.02	+ 5 12.5	2.321	3.290	3.6	21.3	2 11	8 44.11	+22 50.7	1.363	2.331	6.2	19.8
2 11	8 46.89	+ 5 35.7	2.322	3.286	4.4	21.3	2 21	8 34.79	+22 49.6	1.414	2.341	10.9	20.1
2 21	8 39.45	+ 6 4.9	2.353	3.281	7.0	21.5	3 2	8 28.19	+22 36.1	1.489	2.352	15.0	20.4
3 2	8 33.37	+ 6 36.7	2.410	3.276	9.8	21.6	3 12	8 24.87	+22 11.8	1.583	2.363	18.3	20.6
<b>428381</b>	2007 <i>RX</i> <sub>283</sub>		1 31.9 80°30	1°7/30.9	18		<b>206731</b>	2004 <i>BP</i> <sub>99</sub>		2 1.0 332°46	0°8/1.6	18	
12 23	9 23.56	+21 44.3	2.248	3.013	13.6	21.0	1 2	9 14.33	+12 13.7	2.053	2.902	11.7	20.1
1 2	9 19.22	+21 58.7	2.166	3.024	10.8	20.9	1 12	9 9.43	+13 0.2	1.976	2.897	8.3	19.9
1 12	9 12.61	+22 17.7	2.107	3.034	7.5	20.7	1 22	9 2.77	+13 58.3	1.925	2.892	4.5	19.6
1 22	9 4.27	+22 37.4	2.076	3.045	3.9	20.5	2 1	8 55.05	+15 3.5	1.903	2.888	0.8	19.3
2 1	8 55.02	+22 53.8	2.073	3.055	1.8	20.3	2 11	8 47.20	+16 10.4	1.911	2.884	4.0	19.6
2 11	8 45.85	+23 3.4	2.101	3.066	4.6	20.5	2 21	8 40.16	+17 13.5	1.947	2.880	7.9	19.8
2 21	8 37.73	+23 4.2	2.157	3.076	8.1	20.8	3 2	8 34.75	+18 8.6	2.009	2.876	11.4	20.0
3 2	8 31.41	+22 55.9	2.239	3.087	11.2	21.0	3 12	8 31.54	+18 53.0	2.093	2.873	14.4	20.2
<b>142959</b>	2002 <i>VP</i> <sub>78</sub>		1 31.9 13°74	3°5/29.9	18		<b>430412</b>	1995 <i>WL</i> <sub>40</sub>		2 1.0 103°29	1°8/2.5	17	
12 23	9 19.74	+21 10.3	1.450	2.252	18.1	19.4	1						