

EPHEMERIDES

1 18.9

1 19.0

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>285914</b>	2001 <i>QP</i> <sub>161</sub>		1 18.9 136°94	1.4/18.3	18		<b>16269</b>	Merkord		1 19.0 95°99	0.2/19.1	18	
12 13	8 30.96	+23 8.1	2.274	3.059	12.9	21.5	12 13	8 26.54	+18 36.7	2.429	3.211	12.3	19.6
12 23	8 25.27	+23 36.2	2.198	3.072	9.9	21.3	12 23	8 21.68	+18 53.6	2.355	3.227	9.5	19.4
1 2	8 17.33	+24 8.0	2.146	3.085	6.5	21.1	1 2	8 14.90	+19 16.6	2.305	3.243	6.2	19.2
1 12	8 7.81	+24 39.5	2.122	3.098	2.9	20.9	1 12	8 6.79	+19 43.0	2.284	3.259	2.6	19.0
1 22	7 57.60	+25 6.7	2.129	3.109	2.0	20.8	1 22	7 58.12	+20 9.8	2.292	3.275	1.1	18.9
2 1	7 47.76	+25 26.6	2.167	3.120	5.5	21.1	2 1	7 49.77	+20 34.5	2.332	3.291	4.7	19.2
2 11	7 39.27	+25 37.9	2.233	3.130	8.9	21.3	2 11	7 42.58	+20 55.0	2.400	3.306	7.9	19.5
2 21	7 32.85	+25 40.9	2.325	3.140	11.9	21.5	2 21	7 37.15	+21 10.3	2.494	3.321	10.8	19.7
<b>72120</b>	2000 <i>YP</i> <sub>63</sub>		1 19.0 353°88	0°3/18.9	18		<b>239794</b>	6715 <i>P-L</i>		1 19.0 73°87	5°7/17.1	18	
12 13	8 25.68	+18 49.1	1.328	2.149	18.5	18.7	12 13	8 35.43	+31 0.2	1.375	2.191	18.3	20.2
12 23	8 22.76	+19 15.3	1.252	2.146	14.4	18.5	12 23	8 30.29	+31 55.5	1.317	2.204	14.3	20.0
1 2	8 16.52	+19 54.2	1.196	2.143	9.5	18.2	1 2	8 21.36	+32 49.7	1.280	2.218	10.0	19.8
1 12	8 7.71	+20 41.0	1.163	2.140	4.0	17.8	1 12	8 9.68	+33 32.9	1.266	2.232	6.4	19.6
1 22	7 57.62	+21 29.4	1.156	2.139	1.8	17.7	1 22	7 56.90	+33 57.0	1.280	2.246	6.3	19.7
2 1	7 47.89	+22 13.0	1.175	2.138	7.5	18.0	2 1	7 44.96	+33 58.0	1.319	2.260	9.7	19.9
2 11	7 40.13	+22 47.3	1.219	2.138	12.7	18.3	2 11	7 35.57	+33 37.5	1.383	2.274	13.8	20.2
2 21	7 35.44	+23 10.5	1.283	2.139	17.2	18.6	2 21	7 29.70	+33 0.5	1.468	2.287	17.4	20.4
<b>165035</b>	2000 <i>DH</i> <sub>63</sub>		1 19.0 274°88	2°7/17.8	18		<b>110976</b>	2001 <i>UJ</i> <sub>182</sub>		1 19.0 209°94	1°0/19.7	18	
12 13	8 29.42	+27 57.8	2.192	2.987	13.0	20.2	12 13	8 24.37	+14 49.7	2.608	3.380	11.8	20.3
12 23	8 24.39	+28 15.3	2.103	2.982	10.1	20.0	12 23	8 20.06	+15 13.0	2.512	3.377	9.2	20.2
1 2	8 16.92	+28 32.7	2.038	2.977	6.8	19.8	1 2	8 13.91	+15 45.2	2.440	3.373	6.2	20.0
1 12	8 7.70	+28 45.9	2.001	2.973	3.6	19.6	1 12	8 6.43	+16 24.2	2.396	3.369	2.9	19.7
1 22	7 57.65	+28 50.9	1.993	2.968	3.2	19.6	1 22	7 58.27	+17 7.3	2.383	3.365	1.3	19.6
2 1	7 47.92	+28 45.5	2.015	2.964	6.3	19.8	2 1	7 50.25	+17 51.1	2.401	3.360	4.5	19.8
2 11	7 39.58	+28 29.3	2.065	2.959	9.7	20.0	2 11	7 43.16	+18 32.9	2.448	3.356	7.7	20.0
2 21	7 33.43	+28 4.0	2.139	2.954	12.8	20.2	2 21	7 37.64	+19 10.4	2.521	3.351	10.6	20.2
<b>131</b>	<i>Vala</i>		1 19.0 256°81	2°6/17.9	18		<b>280220</b>	2002 <i>TY</i> <sub>358</sub>		1 19.0 169°65	0°4/19.2	18	
12 13	8 29.77	+24 6.0	1.694	2.500	15.8	14.0	12 13	8 25.71	+17 57.0	2.254	3.040	13.0	21.4
12 23	8 25.42	+24 51.1	1.608	2.493	12.3	13.8	12 23	8 21.34	+18 13.0	2.166	3.040	10.1	21.2
1 2	8 18.03	+25 42.8	1.543	2.487	8.1	13.5	1 2	8 14.86	+18 36.5	2.102	3.040	6.7	21.0
1 12	8 8.30	+26 34.9	1.505	2.480	3.9	13.2	1 12	8 6.85	+19 4.8	2.065	3.041	2.9	20.8
1 22	7 57.36	+27 20.8	1.495	2.473	3.3	13.2	1 22	7 58.10	+19 34.9	2.058	3.041	1.2	20.7
2 1	7 46.65	+27 55.1	1.513	2.466	7.4	13.4	2 1	7 49.57	+20 3.5	2.081	3.041	5.0	20.9
2 11	7 37.64	+28 15.0	1.557	2.458	11.8	13.7	2 11	7 42.21	+20 28.2	2.132	3.041	8.6	21.2
2 21	7 31.36	+28 21.2	1.624	2.451	15.6	13.9	2 21	7 36.73	+20 47.6	2.209	3.041	11.8	21.4
<b>135251</b>	2001 <i>SY</i> <sub>37</sub>		1 19.0 215°63	4°3/16.4	18		<b>5580</b>	<i>Sharidake</i>		1 19.0 47°18	5°2/17.4	18	
12 13	8 28.12	+32 23.3	2.491	3.283	11.7	19.9	12 13	8 33.43	+28 56.7	1.180	2.009	19.9	16.7
12 23	8 23.26	+33 14.5	2.407	3.281	9.2	19.7	12 23	8 29.11	+29 46.0	1.127	2.023	15.5	16.4
1 2	8 16.14	+34 4.2	2.348	3.278	6.6	19.5	1 2	8 20.75	+30 36.2	1.093	2.038	10.5	16.2
1 12	8 7.37	+34 47.2	2.316	3.275	4.5	19.4	1 12	8 9.47	+31 17.5	1.083	2.053	6.1	16.0
1 22	7 57.79	+35 18.6	2.314	3.272	4.7	19.4	1 22	7 57.04	+31 41.2	1.097	2.069	5.8	16.0
2 1	7 48.45	+35 35.3	2.342	3.269	6.9	19.5	2 1	7 45.57	+31 43.0	1.137	2.086	9.9	16.3
2 11	7 40.36	+35 36.9	2.397	3.266	9.6	19.7	2 11	7 36.87	+31 24.2	1.199	2.102	14.4	16.6
2 21	7 34.27	+35 24.9	2.476	3.263	12.1	19.9	2 21	7 31.91	+30 49.7	1.282	2.119	18.4	16.9
<b>192295</b>	1991 <i>TN</i> <sub>15</sub>		1 19.0 86°74	2°6/20.1	17		<b>373646</b>	2002 <i>PT</i> <sub>101</sub>		1 19.0 120°80	3°5/20.7	18	
12 13	8 30.57	+12 38.8	1.468	2.259	18.5	21.1	12 13	8 26.23	+9 52.1	2.314	3.073	13.5	20.7
12 23	8 25.88	+12 43.9	1.401	2.275	14.6	20.8	12 23	8 21.55	+9 30.7	2.229	3.080	10.8	20.6
1 2	8 18.16	+13 4.9	1.356	2.290	10.0	20.6	1 2	8 14.89	+9 20.0	2.167	3.086	7.8	20.4
1 12	8 8.26	+13 39.3	1.335	2.305	5.1	20.4	1 12	8 6.84	+9 19.9	2.133	3.092	4.8	20.2
1 22	7 57.44	+14 23.0	1.340	2.321	2.8	20.3	1 22	7 58.16	+9 29.5	2.127	3.098	3.5	20.1
2 1	7 47.16	+15 10.6	1.374	2.335	6.9	20.5	2 1	7 49.72	+9 46.9	2.151	3.104	5.5	20.3
2 11	7 38.79	+15 56.9	1.434	2.350	11.4	20.8	2 11	7 42.41	+10 9.3	2.203	3.110	8.5	20.5
2 21	7 33.23	+16 38.5	1.516	2.365	15.4	21.1	2 21	7 36.87	+10 34.1	2.281	3.115	11.4	20.7
<b>331087</b>	2009 <i>WJ</i> <sub>150</sub>		1 19.0 138°63	1°7/19.9	18		<b>411443</b>	2010 <i>WX</i> <sub>49</sub>		1 19.0 26°99	7°2/15.4	18	
12 13	8 26.46	+13 44.7	2.154	2.930	13.9	21.6	12 13	8 27.73	+31 9.7	1.350	2.179	17.8	19.7
12 23	8 21.94	+13 55.2	2.069	2.935	10.9	21.4	12 23	8 24.60	+33 0.4	1.297	2.190	14.0	19.5
1 2	8 15.24	+14 16.2	2.007	2.939	7.4	21.2	1 2	8 17.82	+34 52.2	1.265	2.203	10.1	19.3
1 12	8 6.98	+14 46.0	1.973	2.944	3.7	21.0	1 12	8 8.30	+36 32.7	1.258	2.217	7.4	19.2
1 22	7 57.99	+15 21.7	1.967	2.948	1.9	20.9	1 22	7 57.52	+37 50.7	1.276	2.232	7.9	19.2
2 1	7 49.24	+15 59.7	1.992	2.952	5.2	21.1	2 1	7 47.35	+38 39.2	1.320	2.248	11.0	19.4
2 11	7 41.71	+16 36.9	2.045	2.956	8.8	21.3	2 11	7 39.51	+38 58.2	1.387	2.264	14.6	19.7
2 21	7 36.12	+17 10.7	2.123	2.960	12.1	21.5	2 21	7 35.05	+38 51.9	1.473	2.282	17.9	20.0
<b>208511</b>	2001 <i>XQ</i> <sub>90</sub>		1 19.0 105°83	0°2/18.9	18		<b>97899</b>	2000 <i>QO</i> <sub>74</sub>		1 19.0 146°36	0°1/19.1	18	
12 13	8 26.41	+20 23.5	2.561	3.343	11.7	21.0	12 13	8 32.64	+18 42.1	2.025	2.805	14.5	20.9
12 23	8 21.52	+20 35.1	2.482	3.355	9.0	20.8	12 23	8 26.80	+18 57.9	1.947	2.817	11.2	20.7
1 2	8 14.77	+20 51.2	2.428	3.367	5.9	20.6	1 2	8 18.48	+19 20.9	1.891	2.829	7.4	20.5
1 12	8 6.73	+21 9.2	2.403	3.379	2.4	20.4	1 12	8 8.39	+19 47.9	1.864	2.839	3.1	20.2
1 22	7 58.14	+21 26.5	2.408	3.391	1.1	20.3	1 22	7 57.51	+20 15.1	1.866	2.849	1.3	20.1
2 1	7 49.85	+21 40.8	2.444	3.402	4.6	20.6	2 1	7 47.02	+20 39.1	1.899	2.857	5.6	20.4
2 11	7 42.65	+21 50.8	2.509	3.413	7.7	20.8	2 11	7 38.01	+20 57.8	1.960	2.865	9.5	20.7
2 21	7 37.16	+21 55.8	2.600	3.424	10.5	21.0	2 21	7 31.27	+21 10.3	2.047	2.873	12.9	20.9
<b>241076</b>	2006 <i>TG</i> <sub>62</sub>		1 19.0 120°05	6°5/14.4	18 R		<b>507618</b>	2013 <i>DM</i> <sub>4</sub>		1 19.0 215°47	0°6/18.5	17	
12 13	8 31.08	+41 15.9	2.709	3.485	11.3	20.2							

EPHEMERIDES

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>6886</b> Grote			1 19.0	13°91	2°5/17.8	18	<b>467331</b> 2001 XR <sub>134</sub>			1 19.0	7°33	7°3/20.6	18
12 13	8 25.06	+21 16.8	1.340	2.166	18.1	15.7	12 13	8 26.49	+ 8 45.7	1.330	2.125	19.9	20.1
12 23	8 22.30	+22 27.4	1.272	2.169	14.0	15.4	12 23	8 23.07	+ 7 11.5	1.259	2.126	16.3	19.8
1 2	8 16.23	+23 50.5	1.225	2.174	9.1	15.1	1 2	8 16.54	+ 5 51.1	1.208	2.128	12.4	19.6
1 12	8 7.64	+25 18.1	1.202	2.179	4.1	14.9	1 12	8 7.72	+ 4 49.1	1.179	2.132	8.7	19.4
1 22	7 57.81	+26 40.5	1.206	2.185	3.4	14.8	1 22	7 57.87	+ 4 8.4	1.175	2.138	7.4	19.3
2 1	7 48.40	+27 49.3	1.235	2.192	8.2	15.1	2 1	7 48.50	+ 3 49.4	1.196	2.144	9.6	19.5
2 11	7 40.99	+28 39.8	1.290	2.200	13.0	15.4	2 11	7 41.04	+ 3 49.1	1.240	2.152	13.3	19.7
2 21	7 36.64	+29 11.3	1.365	2.209	17.1	15.7	2 21	7 36.41	+ 4 2.4	1.306	2.161	17.0	20.0
<b>239635</b> 2008 WW <sub>12</sub>			1 19.0	33°44	1°8/19.9	18	<b>327429</b> 2005 WP <sub>39</sub>			1 19.0	62°98	1°8/18.2	18
12 13	8 24.77	+14 11.6	1.769	2.563	15.7	20.2	12 13	8 29.55	+22 34.1	1.729	2.532	15.6	20.7
12 23	8 21.02	+14 20.9	1.700	2.575	12.3	20.0	12 23	8 24.79	+23 15.2	1.669	2.553	12.0	20.5
1 2	8 14.81	+14 42.4	1.652	2.588	8.3	19.8	1 2	8 17.32	+24 2.2	1.631	2.574	7.8	20.3
1 12	8 6.87	+15 13.8	1.629	2.602	4.1	19.6	1 12	8 7.94	+24 49.4	1.620	2.596	3.4	20.1
1 22	7 58.19	+15 51.5	1.634	2.616	2.0	19.5	1 22	7 57.81	+25 31.2	1.637	2.617	2.5	20.0
2 1	7 49.90	+16 31.4	1.668	2.630	5.8	19.8	2 1	7 48.23	+26 3.3	1.683	2.638	6.5	20.3
2 11	7 43.09	+17 9.6	1.728	2.645	9.8	20.0	2 11	7 40.40	+26 23.8	1.755	2.660	10.5	20.6
2 21	7 38.51	+17 43.3	1.813	2.661	13.3	20.3	2 21	7 35.09	+26 33.1	1.852	2.681	13.9	20.9
<b>81912</b> 2000 NU <sub>10</sub>			1 19.0	149°55	2°0/17.9	18	<b>30351</b> 2000 JK <sub>39</sub>			1 19.0	139°47	4°3/21.1	18
12 13	8 30.05	+24 51.1	2.456	3.240	12.1	20.2	12 13	8 28.97	+ 7 20.4	2.312	3.056	13.9	19.2
12 23	8 24.54	+25 31.5	2.376	3.250	9.3	20.1	12 23	8 23.61	+ 6 51.1	2.230	3.068	11.3	19.1
1 2	8 16.89	+26 14.8	2.321	3.260	6.1	19.9	1 2	8 16.23	+ 6 33.9	2.171	3.079	8.4	18.9
1 12	8 7.71	+26 56.6	2.295	3.269	3.0	19.7	1 12	8 7.44	+ 6 29.2	2.138	3.089	5.6	18.7
1 22	7 57.83	+27 32.7	2.300	3.277	2.5	19.7	1 22	7 58.02	+ 6 36.4	2.135	3.099	4.3	18.7
2 1	7 48.24	+27 59.8	2.336	3.284	5.5	19.9	2 1	7 48.88	+ 6 53.7	2.162	3.109	6.0	18.8
2 11	7 39.88	+28 16.6	2.401	3.291	8.7	20.1	2 11	7 40.92	+ 7 18.4	2.217	3.118	8.8	19.0
2 21	7 33.44	+28 23.5	2.491	3.298	11.4	20.3	2 21	7 34.78	+ 7 47.2	2.299	3.126	11.6	19.2
<b>125543</b> 2001 WW <sub>92</sub>			1 19.0	202°06	5°4/16.1	18	<b>87</b> Sylvia			1 19.0	132°20	2°7/17.1	18 R
12 13	8 33.08	+34 55.6	2.287	3.074	12.8	19.9	12 13	8 25.28	+28 12.7	2.910	3.698	10.3	12.8
12 23	8 27.41	+35 53.3	2.203	3.070	10.2	19.7	12 23	8 20.68	+28 59.6	2.829	3.704	7.9	12.6
1 2	8 19.07	+36 48.0	2.143	3.066	7.5	19.5	1 2	8 14.29	+29 47.2	2.774	3.710	5.4	12.4
1 12	8 8.72	+37 32.9	2.111	3.062	5.6	19.4	1 12	8 6.62	+30 31.6	2.748	3.716	3.1	12.3
1 22	7 57.39	+38 2.2	2.107	3.057	5.9	19.4	1 22	7 58.36	+31 9.1	2.752	3.721	3.1	12.3
2 1	7 46.34	+38 12.4	2.133	3.051	8.0	19.5	2 1	7 50.29	+31 37.0	2.787	3.727	5.3	12.5
2 11	7 36.80	+38 3.8	2.186	3.045	10.8	19.7	2 11	7 43.20	+31 54.1	2.851	3.732	7.8	12.6
2 21	7 29.65	+37 39.0	2.262	3.038	13.4	19.9	2 21	7 37.69	+32 0.8	2.941	3.737	10.1	12.8
<b>380420</b> 2003 BE <sub>68</sub>			1 19.0	337°97	3°6/18.1	18	<b>410007</b> 2006 WZ <sub>44</sub>			1 19.0	37°38	11°8/13.9	18
12 13	8 32.77	+31 41.7	1.989	2.785	14.1	19.9	12 13	8 34.73	+42 56.3	1.353	2.165	18.7	20.1
12 23	8 27.24	+31 34.4	1.899	2.776	11.1	19.7	12 23	8 30.61	+45 0.3	1.315	2.183	15.7	19.9
1 2	8 18.93	+31 22.2	1.832	2.768	7.7	19.5	1 2	8 22.03	+46 50.8	1.298	2.202	13.1	19.8
1 12	8 8.63	+31 0.7	1.792	2.761	4.4	19.3	1 12	8 10.14	+48 13.2	1.303	2.222	11.8	19.8
1 22	7 57.46	+30 26.6	1.781	2.753	4.0	19.2	1 22	7 56.89	+48 57.2	1.332	2.243	12.4	19.9
2 1	7 46.76	+29 39.1	1.800	2.747	7.0	19.4	2 1	7 44.68	+49 0.0	1.383	2.264	14.3	20.1
2 11	7 37.78	+28 40.2	1.846	2.741	10.6	19.6	2 11	7 35.56	+48 26.6	1.455	2.286	16.8	20.3
2 21	7 31.35	+27 33.6	1.916	2.735	13.9	19.8	2 21	7 30.57	+47 26.5	1.546	2.308	19.2	20.5
<b>417428</b> 2006 KY <sub>59</sub>			1 19.0	36°48	5°3/21.8	18	<b>404934</b> 2014 MF <sub>4</sub>			1 19.0	178°86	0°2/19.1	18
12 13	8 24.09	+ 4 58.8	1.998	2.752	15.5	20.9	12 13	8 29.82	+17 10.2	1.912	2.698	15.0	21.6
12 23	8 20.23	+ 4 37.5	1.917	2.758	12.7	20.7	12 23	8 24.96	+17 45.3	1.825	2.699	11.7	21.4
1 2	8 14.21	+ 4 32.6	1.858	2.764	9.6	20.5	1 2	8 17.50	+18 31.2	1.762	2.700	7.7	21.1
1 12	8 6.62	+ 4 44.8	1.823	2.771	6.7	20.3	1 12	8 8.10	+19 24.2	1.725	2.701	3.3	20.9
1 22	7 58.31	+ 5 13.2	1.815	2.777	5.3	20.2	1 22	7 57.71	+20 19.2	1.718	2.701	1.4	20.7
2 1	7 50.26	+ 5 54.9	1.836	2.784	6.8	20.4	2 1	7 47.56	+21 11.1	1.741	2.700	5.9	21.0
2 11	7 43.45	+ 6 45.4	1.884	2.791	9.7	20.5	2 11	7 38.83	+21 56.1	1.791	2.699	10.1	21.3
2 21	7 38.57	+ 7 39.9	1.956	2.799	12.7	20.7	2 21	7 32.41	+22 32.2	1.866	2.698	13.7	21.5
<b>154063</b> 2002 CV <sub>176</sub>			1 19.0	160°60	0°0/19.1	18	<b>243980</b> 2001 RF <sub>49</sub>			1 19.0	74°40	7°2/13.8	18
12 13	8 27.46	+18 25.6	2.078	2.866	13.9	20.5	12 13	8 32.46	+38 44.7	2.301	3.086	12.8	19.8
12 23	8 22.89	+18 49.2	1.993	2.868	10.8	20.3	12 23	8 27.07	+40 42.0	2.250	3.109	10.4	19.7
1 2	8 16.00	+19 21.0	1.931	2.870	7.1	20.0	1 2	8 18.91	+42 33.5	2.225	3.131	8.3	19.6
1 12	8 7.40	+19 57.7	1.896	2.872	3.0	19.8	1 12	8 8.69	+44 10.2	2.228	3.153	7.2	19.6
1 22	7 57.98	+20 35.4	1.891	2.874	1.3	19.7	1 22	7 57.47	+45 25.0	2.260	3.175	7.7	19.6
2 1	7 48.81	+21 10.3	1.915	2.875	5.4	19.9	2 1	7 46.56	+46 14.0	2.320	3.197	9.4	19.8
2 11	7 40.94	+21 39.6	1.968	2.876	9.3	20.2	2 11	7 37.25	+46 37.8	2.405	3.219	11.5	20.0
2 21	7 35.15	+22 1.9	2.045	2.877	12.6	20.4	2 21	7 30.44	+46 39.9	2.512	3.240	13.5	20.1
<b>249837</b> 2001 OE <sub>97</sub>			1 19.0	66°52	3°4/18.0	17	<b>51139</b> 2000 HM <sub>45</sub>			1 19.0	89°80	7°0/23.2	18
12 13	8 37.96	+29 1.8	1.673	2.469	16.4	20.3	12 13	8 23.90	- 1 54.3	2.321	3.031	14.8	19.1
12 23	8 31.09	+29 18.5	1.625	2.504	12.6	20.1	12 23	8 19.80	- 2 26.8	2.238	3.038	12.6	18.9
1 2	8 21.24	+29 33.4	1.600	2.538	8.4	19.9	1 2	8 13.79	- 2 41.3	2.175	3.045	10.2	18.8
1 12	8 9.48	+29 40.3	1.601	2.571	4.5	19.8	1 12	8 6.44	- 2 35.9	2.138	3.052	8.1	18.6
1 22	7 57.20	+29 35.3	1.631	2.605	3.9	19.8	1 22	7 58.46	- 2 10.6	2.126	3.059	7.0	18.6
2 1	7 45.90	+29 16.9	1.690	2.638	7.3	20.1	2 1	7 50.69	- 1 27.4	2.143	3.066	7.7	18.6
2 11	7 36.83	+28 46.9	1.776	2.671	11.0	20.4	2 11	7 43.97	- 0 30.4	2.187	3.073	9.6	18.8
2 21	7 30.67	+28 8.6	1.885	2.703	14.1	20.6	2 21	7 38.92	+ 0 35.1	2.256	3.080	11.9	18.9
<b>394935</b> 2008 WA <sub>133</sub>			1 19.0	130°98	1°2/19.7	18	<b>74241</b> 1998 SM <sub>54</sub>			1 19.0	110°56	5°9/16.9	18
12 13	8 32.18	+14 5.8	2.003	2.773	15.0	21.4	12 13	8 36.60	+35 8.1	1.799			

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1 19.0

1 19.0

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>34510</b>	2000 <i>SJ</i> <sub>175</sub>		1 19.0 355°49	6°4/16.8	18		<b>116828</b>	2004 <i>FD</i> <sub>21</sub>		1 19.0 250°71	7°5/16.1	18	
12 13	8 33.36	+35 50.9	1.734	2.537	15.6	18.1	12 13	8 36.48	+39 5.3	1.874	2.665	15.1	19.9
12 23	8 28.31	+36 28.7	1.659	2.535	12.5	17.9	12 23	8 30.75	+39 58.1	1.795	2.659	12.3	19.7
1 2	8 19.95	+37 0.7	1.606	2.534	9.2	17.7	1 2	8 21.60	+40 43.8	1.738	2.653	9.6	19.5
1 12	8 9.16	+37 19.0	1.578	2.533	6.7	17.5	1 12	8 9.91	+41 13.2	1.706	2.648	7.7	19.4
1 22	7 57.33	+37 17.3	1.577	2.532	6.8	17.5	1 22	7 57.03	+41 19.5	1.702	2.642	7.9	19.4
2 1	7 46.07	+36 53.2	1.603	2.532	9.4	17.7	2 1	7 44.66	+40 59.6	1.725	2.635	10.1	19.5
2 11	7 36.91	+36 8.6	1.655	2.532	12.7	17.9	2 11	7 34.41	+40 15.6	1.773	2.629	13.0	19.7
2 21	7 30.79	+35 8.8	1.729	2.533	15.8	18.1	2 21	7 27.29	+39 13.3	1.843	2.623	15.9	19.9
<b>449095</b>	2012 <i>TL</i> <sub>247</sub>		1 19.0 314°57	1°9/19.5	18		<b>158548</b>	2002 <i>GL</i> <sub>135</sub>		1 19.0 338°42	1°4/19.6	18	
12 13	8 31.20	+17 29.6	1.300	2.111	19.4	21.3	12 13	8 26.69	+16 8.5	1.887	2.677	15.0	20.4
12 23	8 27.14	+17 2.1	1.219	2.105	15.3	21.0	12 23	8 22.53	+16 5.7	1.800	2.675	11.8	20.1
1 2	8 19.51	+16 43.9	1.157	2.099	10.4	20.7	1 2	8 15.89	+16 12.0	1.735	2.672	7.9	19.9
1 12	8 9.11	+16 33.4	1.119	2.093	4.9	20.4	1 12	8 7.43	+16 25.9	1.697	2.670	3.7	19.6
1 22	7 57.31	+16 28.3	1.106	2.088	2.4	20.2	1 22	7 58.07	+16 44.4	1.686	2.668	1.8	19.5
2 1	7 45.90	+16 25.8	1.119	2.082	7.7	20.5	2 1	7 48.98	+17 4.5	1.705	2.666	5.8	19.7
2 11	7 36.62	+16 24.0	1.157	2.077	13.2	20.8	2 11	7 41.28	+17 23.6	1.750	2.665	9.9	20.0
2 21	7 30.60	+16 21.3	1.216	2.073	17.9	21.0	2 21	7 35.80	+17 39.7	1.820	2.663	13.5	20.2
<b>467573</b>	2007 <i>TQ</i> <sub>431</sub>		1 19.0 170°38	4°1/16.4	18		<b>420634</b>	2012 <i>HK</i> <sub>79</sub>		1 19.0 225°22	2°6/17.3	16	
12 13	8 27.56	+31 20.9	2.514	3.307	11.6	21.3	12 13	8 28.24	+23 55.4	2.250	3.042	12.8	21.3
12 23	8 22.84	+32 19.0	2.433	3.308	9.1	21.1	12 23	8 23.63	+25 8.2	2.156	3.035	9.9	21.1
1 2	8 15.91	+33 16.6	2.377	3.309	6.4	21.0	1 2	8 16.62	+26 27.8	2.087	3.027	6.6	20.9
1 12	8 7.38	+34 8.3	2.349	3.309	4.3	20.8	1 12	8 7.77	+27 48.6	2.047	3.019	3.4	20.7
1 22	7 58.07	+34 49.1	2.350	3.310	4.5	20.8	1 22	7 57.91	+29 4.0	2.037	3.011	3.2	20.7
2 1	7 48.97	+35 15.9	2.382	3.310	6.7	21.0	2 1	7 48.11	+30 8.5	2.058	3.003	6.4	20.8
2 11	7 41.07	+35 27.5	2.441	3.311	9.4	21.2	2 11	7 39.48	+30 59.0	2.107	2.994	9.9	21.0
2 21	7 35.12	+35 25.4	2.523	3.311	11.9	21.3	2 21	7 32.90	+31 34.6	2.181	2.985	12.9	21.2
<b>240894</b>	2006 <i>DE</i> <sub>74</sub>		1 19.0 244°94	2°9/17.7	18		<b>208487</b>	2001 <i>VC</i> <sub>58</sub>		1 19.0 33°21	7°4/14.9	18	
12 13	8 30.35	+23 59.1	1.639	2.446	16.2	20.2	12 13	8 30.29	+39 38.9	2.083	2.877	13.7	19.8
12 23	8 26.05	+24 56.4	1.553	2.440	12.6	19.9	12 23	8 25.61	+40 54.9	2.020	2.884	11.2	19.6
1 2	8 18.61	+26 1.6	1.490	2.433	8.4	19.7	1 2	8 18.03	+42 4.0	1.981	2.892	8.9	19.5
1 12	8 8.70	+27 7.9	1.452	2.427	4.1	19.4	1 12	8 8.35	+42 58.1	1.967	2.900	7.5	19.4
1 22	7 57.48	+28 7.5	1.443	2.420	3.6	19.4	1 22	7 57.72	+43 31.0	1.980	2.908	7.9	19.5
2 1	7 46.46	+28 53.9	1.461	2.413	7.8	19.6	2 1	7 47.54	+43 39.6	2.021	2.916	9.7	19.6
2 11	7 37.19	+29 23.9	1.506	2.405	12.2	19.8	2 11	7 39.12	+43 25.0	2.086	2.925	12.0	19.8
2 21	7 30.75	+29 37.9	1.573	2.398	16.1	20.1	2 21	7 33.36	+42 51.3	2.172	2.934	14.3	19.9
<b>210456</b>	1991 <i>TQ</i> <sub>9</sub>		1 19.0 135°65	4°1/17.2	18		<b>76487</b>	2000 <i>FU</i> <sub>73</sub>		1 19.0 198°49	4°4/16.8	18	
12 13	8 32.82	+28 50.8	1.843	2.642	15.0	20.6	12 13	8 30.23	+28 26.0	1.791	2.597	15.1	19.1
12 23	8 27.50	+29 43.1	1.770	2.650	11.6	20.4	12 23	8 25.75	+29 35.5	1.713	2.597	11.7	18.9
1 2	8 19.25	+30 36.4	1.720	2.657	7.9	20.2	1 2	8 18.27	+30 48.3	1.657	2.596	8.1	18.6
1 12	8 8.85	+31 23.9	1.696	2.664	4.7	20.0	1 12	8 8.52	+31 56.6	1.628	2.596	5.0	18.4
1 22	7 57.47	+31 59.2	1.702	2.671	4.6	20.0	1 22	7 57.62	+32 52.6	1.628	2.595	5.1	18.5
2 1	7 46.53	+32 18.0	1.736	2.677	7.7	20.2	2 1	7 47.00	+33 31.0	1.655	2.594	8.3	18.6
2 11	7 37.37	+32 19.9	1.797	2.683	11.3	20.4	2 11	7 38.09	+33 50.0	1.709	2.593	11.9	18.9
2 21	7 30.89	+32 7.3	1.880	2.688	14.6	20.6	2 21	7 31.88	+33 51.3	1.785	2.593	15.2	19.1
<b>367567</b>	2009 <i>SU</i> <sub>106</sub>		1 19.0 100°72	0°9/18.7	18		<b>6829</b>	Charmawidor		1 19.0 120°13	0°8/19.5	18	
12 13	8 29.98	+22 21.8	1.929	2.724	14.5	21.5	12 13	8 26.90	+16 40.4	2.168	2.950	13.6	17.9
12 23	8 24.98	+22 30.6	1.849	2.729	11.2	21.3	12 23	8 22.32	+16 53.4	2.085	2.956	10.5	17.7
1 2	8 17.43	+22 43.7	1.793	2.734	7.4	21.1	1 2	8 15.56	+17 14.8	2.026	2.962	7.0	17.5
1 12	8 8.03	+22 57.6	1.763	2.740	3.1	20.8	1 12	8 7.24	+17 42.1	1.993	2.968	3.2	17.3
1 22	7 57.82	+23 8.5	1.763	2.745	1.7	20.7	1 22	7 58.19	+18 12.4	1.991	2.973	1.3	17.1
2 1	7 48.00	+23 13.8	1.791	2.750	5.9	21.0	2 1	7 49.42	+18 42.2	2.018	2.979	5.1	17.4
2 11	7 39.72	+23 12.3	1.848	2.754	9.9	21.3	2 11	7 41.88	+19 9.1	2.074	2.984	8.8	17.7
2 21	7 33.77	+23 4.3	1.928	2.759	13.3	21.5	2 21	7 36.30	+19 31.2	2.155	2.989	12.0	17.9
<b>375544</b>	2008 <i>UX</i> <sub>219</sub>		1 19.0 44°95	4°3/20.9	18		<b>303335</b>	2004 <i>TF</i> <sub>145</sub>		1 19.0 75°06	2°7/20.2	17	
12 13	8 25.84	+ 8 54.0	1.914	2.683	15.6	20.4	12 13	8 30.69	+12 40.0	1.482	2.272	18.4	20.9
12 23	8 21.61	+ 8 25.2	1.841	2.695	12.5	20.2	12 23	8 25.92	+12 40.3	1.420	2.292	14.5	20.7
1 2	8 15.11	+ 8 9.8	1.789	2.708	9.1	20.0	1 2	8 18.20	+12 55.8	1.378	2.312	9.9	20.5
1 12	8 7.03	+ 8 8.3	1.763	2.721	5.8	19.9	1 12	8 8.39	+13 24.5	1.361	2.331	5.2	20.2
1 22	7 58.26	+ 8 19.6	1.764	2.734	4.3	19.8	1 22	7 57.73	+14 2.2	1.371	2.351	2.9	20.1
2 1	7 49.85	+ 8 41.2	1.793	2.747	6.4	20.0	2 1	7 47.68	+14 44.2	1.409	2.370	6.7	20.4
2 11	7 42.81	+ 9 9.7	1.850	2.761	9.7	20.2	2 11	7 39.53	+15 25.7	1.473	2.389	11.2	20.7
2 21	7 37.83	+ 9 41.4	1.931	2.775	12.8	20.4	2 21	7 34.13	+16 3.3	1.560	2.408	15.0	21.0
<b>90824</b>	1995 <i>SF</i> <sub>53</sub>		1 19.0 189°38	1°1/19.6	18		<b>492939</b>	2014 <i>SK</i>		1 19.0 120°74	7°6/13.5	17	
12 13	8 27.26	+15 50.0	2.157	2.937	13.7	20.4	12 13	8 38.13	+40 6.8	2.353	3.126	12.9	21.3
12 23	8 22.66	+16 0.6	2.068	2.937	10.7	20.2	12 23	8 31.55	+42 9.9	2.299	3.148	10.6	21.2
1 2	8 15.83	+16 20.3	2.001	2.936	7.2	20.0	1 2	8 21.95	+44 6.5	2.271	3.168	8.6	21.1
1 12	8 7.36	+16 46.9	1.962	2.935	3.3	19.7	1 12	8 10.05	+45 47.0	2.271	3.188	7.6	21.0
1 22	7 58.10	+17 17.5	1.952	2.934	1.5	19.6	1 22	7 56.98	+47 3.6	2.301	3.207	8.1	21.1
2 1	7 49.05	+17 48.8	1.972	2.933	5.2	19.8	2 1	7 44.18	+47 52.3	2.360	3.226	9.8	21.2
2 11	7 41.22	+18 17.8	2.021	2.931	9.0	20.1	2 11	7 33.08	+48 13.9	2.444	3.243	11.8	21.4
2 21	7 35.35	+18 42.8	2.095	2.929	12.3	20.3	2 21	7 24.68	+48 12.8	2.550	3.260	13.7	21.6
<b>135280</b>	2001 <i>SB</i> <sub>136</sub>		1 19.0 209°63	2°9/17.4	17		<b>344204</b>	2001 <i>QO</i> <sub>149</sub>		1 19.0 91°57	0°9/18.5	18	
12 13	8 28.29	+29 11.9	2.700	3									

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1 19.0

1 19.1

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>165782</b>	2001 <i>QO</i> <sub>330</sub>		1 19.0	86°42'	4°0'/21.4	18	<b>141197</b>	2001 <i>XV</i> <sub>192</sub>		1 19.1	36°26'	0°6'/19.3	18
12 13	8 24.18	+ 6 56.6	2.338	3.090	13.6	20.3	12 13	8 26.90	+17 7.2	1.793	2.588	15.5	20.4
12 23	8 20.01	+ 6 49.1	2.255	3.098	11.0	20.1	12 23	8 22.81	+17 23.7	1.713	2.592	12.0	20.2
1 2	8 13.95	+ 6 55.0	2.194	3.105	8.1	19.9	1 2	8 16.14	+17 50.3	1.656	2.595	8.0	19.9
1 12	8 6.54	+ 7 14.2	2.159	3.113	5.3	19.8	1 12	8 7.58	+18 23.9	1.624	2.599	3.5	19.7
1 22	7 58.51	+ 7 45.3	2.153	3.120	4.0	19.7	1 22	7 58.13	+19 0.5	1.621	2.603	1.4	19.5
2 1	7 50.71	+ 8 25.4	2.176	3.128	5.6	19.8	2 1	7 48.99	+19 35.9	1.646	2.608	5.9	19.8
2 11	7 43.97	+ 9 10.9	2.228	3.135	8.4	20.0	2 11	7 41.34	+20 6.8	1.698	2.612	10.1	20.1
2 21	7 38.90	+ 9 58.3	2.305	3.142	11.2	20.2	2 21	7 36.03	+20 31.3	1.774	2.617	13.8	20.3
<b>379472</b>	2010 <i>DT</i> <sub>40</sub>		1 19.1	73°87'	3°7'/21.2	18	<b>66290</b>	1999 <i>JX</i> <sub>22</sub>		1 19.1	194°55'	0°3'/19.2	18
12 13	8 24.64	+ 7 44.4	2.163	2.922	14.3	21.1	12 13	8 31.33	+18 14.6	2.046	2.827	14.3	20.5
12 23	8 20.51	+ 7 47.1	2.083	2.932	11.5	20.9	12 23	8 26.00	+18 31.2	1.954	2.825	11.2	20.3
1 2	8 14.34	+ 8 4.3	2.026	2.943	8.4	20.8	1 2	8 18.17	+18 55.8	1.885	2.822	7.4	20.1
1 12	8 6.72	+ 8 35.3	1.995	2.954	5.2	20.6	1 12	8 8.45	+19 25.4	1.843	2.818	3.2	19.8
1 22	7 58.44	+ 9 17.8	1.993	2.964	3.7	20.5	1 22	7 57.79	+19 56.2	1.831	2.814	1.3	19.6
2 1	7 50.44	+10 8.4	2.020	2.975	5.6	20.6	2 1	7 47.34	+20 24.6	1.850	2.809	5.6	19.9
2 11	7 43.59	+11 2.8	2.075	2.986	8.8	20.9	2 11	7 38.25	+20 48.0	1.897	2.804	9.7	20.2
2 21	7 38.56	+11 57.1	2.156	2.997	11.8	21.1	2 21	7 31.38	+21 5.1	1.969	2.797	13.2	20.4
<b>500324</b>	2012 <i>SF</i>		1 19.1	214°28'	4°9'/22.3	17	<b>167026</b>	2003 <i>QA</i> <sub>38</sub>		1 19.1	191°74'	0°9'/19.5	18
12 13	8 23.96	+ 1 52.6	2.768	3.487	12.4	22.5	12 13	8 30.64	+16 14.6	2.090	2.866	14.2	21.6
12 23	8 19.64	+ 1 44.5	2.666	3.480	10.4	22.3	12 23	8 25.40	+16 30.5	1.997	2.865	11.1	21.4
1 2	8 13.64	+ 1 50.7	2.586	3.473	8.1	22.1	1 2	8 17.73	+16 55.7	1.928	2.862	7.5	21.1
1 12	8 6.42	+ 2 11.7	2.532	3.466	6.0	22.0	1 12	8 8.26	+17 27.9	1.886	2.860	3.4	20.9
1 22	7 58.56	+ 2 47.0	2.507	3.458	4.9	21.9	1 22	7 57.88	+18 3.3	1.874	2.856	1.4	20.7
2 1	7 50.79	+ 3 34.5	2.512	3.450	5.9	22.0	2 1	7 47.69	+18 38.4	1.892	2.852	5.5	21.0
2 11	7 43.84	+ 4 30.6	2.546	3.441	8.0	22.1	2 11	7 38.80	+19 10.0	1.939	2.847	9.4	21.2
2 21	7 38.30	+ 5 31.5	2.606	3.432	10.4	22.2	2 21	7 32.03	+19 36.4	2.011	2.841	12.9	21.4
<b>494968</b>	2009 <i>UA</i> <sub>151</sub>		1 19.1	143°23'	5°1'/21.8	18	<b>466851</b>	2015 <i>BR</i> <sub>292</sub>		1 19.1	239°76'	4°0'/21.9	17
12 13	8 27.37	+ 3 37.0	2.520	3.245	13.4	22.5	12 13	8 23.54	+ 4 22.9	2.551	3.287	13.0	21.3
12 23	8 22.26	+ 3 7.3	2.436	3.256	11.1	22.4	12 23	8 19.51	+ 4 38.5	2.449	3.280	10.6	21.1
1 2	8 15.33	+ 2 51.0	2.375	3.267	8.5	22.2	1 2	8 13.67	+ 5 9.6	2.370	3.273	8.0	20.9
1 12	8 7.10	+ 2 49.0	2.340	3.277	6.2	22.1	1 12	8 6.49	+ 5 56.0	2.317	3.266	5.4	20.7
1 22	7 58.30	+ 3 0.9	2.334	3.286	5.1	22.0	1 22	7 58.62	+ 6 55.8	2.294	3.259	4.0	20.6
2 1	7 49.74	+ 3 25.1	2.358	3.295	6.2	22.1	2 1	7 50.82	+ 8 5.4	2.301	3.251	5.4	20.7
2 11	7 42.20	+ 3 58.6	2.410	3.304	8.5	22.3	2 11	7 43.91	+ 9 20.6	2.337	3.244	8.1	20.9
2 21	7 36.30	+ 4 37.7	2.489	3.311	11.0	22.5	2 21	7 38.52	+10 36.6	2.400	3.236	10.9	21.0
<b>427505</b>	2002 <i>CL</i> <sub>159</sub>		1 19.1	326°29'	16°9'/18.2	16	<b>66762</b>	1999 <i>TU</i> <sub>187</sub>		1 19.1	201°66'	4°0'/16.8	18
12 13	8 59.73	+52 0.8	1.001	1.792	25.2	20.4	12 13	8 33.22	+34 2.6	2.820	3.595	10.9	19.9
12 23	8 52.89	+52 54.2	0.939	1.785	22.3	20.2	12 23	8 26.96	+34 36.0	2.727	3.590	8.7	19.7
1 2	8 38.13	+53 20.8	0.891	1.778	19.4	20.0	1 2	8 18.53	+35 6.0	2.660	3.584	6.2	19.6
1 12	8 17.23	+52 56.4	0.861	1.772	17.3	19.8	1 12	8 8.53	+35 28.0	2.622	3.578	4.3	19.4
1 22	7 54.23	+51 24.0	0.851	1.766	17.0	19.8	1 22	7 57.79	+35 38.0	2.615	3.571	4.4	19.4
2 1	7 34.02	+48 44.4	0.862	1.760	18.9	19.9	2 1	7 47.29	+35 34.0	2.638	3.563	6.4	19.6
2 11	7 20.02	+45 17.2	0.894	1.756	22.1	20.0	2 11	7 38.02	+35 16.1	2.690	3.554	8.8	19.7
2 21	7 13.10	+41 28.2	0.944	1.752	25.6	20.3	2 21	7 30.67	+34 46.5	2.768	3.545	11.2	19.9
<b>108203</b>	2001 <i>HT</i> <sub>22</sub>		1 19.1	149°92'	3°7'/16.8	18	<b>29820</b>	1999 <i>CW</i> <sub>149</sub>		1 19.1	138°73'	0°0'/19.0	18
12 13	8 32.00	+28 14.7	2.257	3.046	12.9	19.4	12 13	8 26.24	+19 17.6	2.752	3.529	11.1	19.8
12 23	8 26.42	+29 25.6	2.181	3.056	10.0	19.3	12 23	8 21.36	+19 34.5	2.669	3.538	8.6	19.7
1 2	8 18.37	+30 38.5	2.130	3.065	6.8	19.1	1 2	8 14.74	+19 56.3	2.610	3.547	5.6	19.5
1 12	8 8.49	+31 47.0	2.108	3.074	4.1	18.9	1 12	8 6.89	+20 20.8	2.581	3.556	2.4	19.3
1 22	7 57.73	+32 44.8	2.116	3.082	4.2	18.9	1 22	7 58.49	+20 45.4	2.582	3.565	1.0	19.2
2 1	7 47.24	+33 27.6	2.154	3.089	6.9	19.1	2 1	7 50.32	+21 7.5	2.614	3.573	4.3	19.4
2 11	7 38.14	+33 54.0	2.221	3.096	10.0	19.3	2 11	7 43.14	+21 25.7	2.676	3.580	7.3	19.6
2 21	7 31.25	+34 5.2	2.311	3.102	12.7	19.5	2 21	7 37.53	+21 39.0	2.765	3.588	10.0	19.8
<b>420910</b>	2013 <i>MW</i> <sub>4</sub>		1 19.1	155°39'	1°9'/19.9	18	<b>58507</b>	1996 <i>VX</i> <sub>32</sub>		1 19.1	195°02'	1°1'/18.5	18
12 13	8 28.90	+14 36.4	2.284	3.054	13.3	21.7	12 13	8 31.48	+21 31.9	2.015	2.804	14.3	20.4
12 23	8 23.70	+14 25.7	2.198	3.059	10.5	21.5	12 23	8 26.22	+22 2.2	1.926	2.802	11.1	20.1
1 2	8 16.40	+14 23.1	2.135	3.065	7.2	21.3	1 2	8 18.37	+22 39.0	1.859	2.799	7.3	19.9
1 12	8 7.60	+14 27.4	2.100	3.070	3.6	21.1	1 12	8 8.56	+23 17.9	1.820	2.796	3.1	19.6
1 22	7 58.12	+14 36.8	2.094	3.074	2.1	21.0	1 22	7 57.76	+23 54.1	1.810	2.792	1.9	19.5
2 1	7 48.92	+14 49.2	2.119	3.078	5.1	21.2	2 1	7 47.20	+24 23.6	1.831	2.787	6.0	19.8
2 11	7 40.91	+15 2.4	2.173	3.082	8.5	21.4	2 11	7 38.05	+24 44.1	1.880	2.782	10.0	20.0
2 21	7 34.79	+15 14.9	2.253	3.085	11.6	21.6	2 21	7 31.21	+24 55.2	1.953	2.776	13.5	20.3
<b>148702</b>	2001 <i>SG</i> <sub>316</sub>		1 19.1	56°90'	2°2'/19.7	18	<b>519126</b>	2010 <i>ML</i> <sub>53</sub>		1 19.1	131°80'	0°4'/18.9	18
12 13	8 31.73	+16 49.2	1.747	2.534	16.1	19.4	12 13	8 28.29	+21 53.5	2.616	3.397	11.6	21.3
12 23	8 26.40	+16 7.8	1.671	2.543	12.7	19.2	12 23	8 23.00	+21 53.7	2.533	3.405	8.9	21.1
1 2	8 18.39	+15 33.1	1.617	2.552	8.6	19.0	1 2	8 15.83	+21 56.8	2.474	3.413	5.8	20.9
1 12	8 8.48	+15 4.4	1.589	2.561	4.3	18.7	1 12	8 7.34	+22 0.4	2.445	3.420	2.4	20.7
1 22	7 57.78	+14 40.9	1.590	2.570	2.5	18.6	1 22	7 58.31	+22 2.3	2.445	3.427	1.2	20.6
2 1	7 47.57	+14 21.8	1.619	2.579	6.2	18.9	2 1	7 49.56	+22 0.9	2.477	3.435	4.6	20.8
2 11	7 39.06	+14 6.0	1.676	2.589	10.4	19.1	2 11	7 41.94	+21 55.4	2.538	3.441	7.7	21.1
2 21	7 33.03	+13 52.6	1.757	2.598	14.0	19.4	2 21	7 36.02	+21 45.8	2.626	3.448	10.5	21.3
<b>465438</b>	2008 <i>RZ</i> <sub>105</sub>		1 19.1	67°92'	6°1'/16.2	18	<b>27442</b>	2000 <i>FT</i> <sub>48</sub>		1 19.1	227°62'	3°8'/20.9	18
12 13	8 32.62	+36 17.0											

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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>37722</b>	2004 <i>DN</i> <sub>56</sub>		1 19.1 18°57' 0" / 19.0 18				<b>323992</b>	2005 <i>UA</i> <sub>221</sub>		1 19.1 61°51' 2" / 18.1 18			
12 13	8 25.79	+20 4.5	1.708	2.515	15.6	20.5	12 13	8 30.09	+25 35.7	1.809	2.612	15.1	20.8
12 23	8 22.03	+20 8.5	1.636	2.522	12.1	20.3	12 23	8 25.35	+26 2.8	1.734	2.618	11.6	20.6
1 2	8 15.64	+20 19.4	1.586	2.529	7.9	20.1	1 2	8 17.84	+26 32.8	1.682	2.624	7.7	20.4
1 12	8 7.37	+20 34.0	1.562	2.538	3.3	19.8	1 12	8 8.33	+27 0.3	1.657	2.631	3.7	20.1
1 22	7 58.29	+20 48.8	1.565	2.547	1.4	19.7	1 22	7 57.93	+27 20.5	1.660	2.638	3.1	20.1
2 1	7 49.65	+21 0.7	1.596	2.558	6.0	20.0	2 1	7 47.98	+27 30.1	1.691	2.644	6.8	20.4
2 11	7 42.61	+21 7.7	1.653	2.569	10.3	20.3	2 11	7 39.71	+27 28.0	1.750	2.651	10.7	20.6
2 21	7 37.96	+21 9.0	1.734	2.580	13.9	20.5	2 21	7 33.97	+27 15.6	1.831	2.658	14.1	20.8
<b>265587</b>	2005 <i>QP</i> <sub>154</sub>		1 19.1 125°68' 2" / 20.2 18				<b>233431</b>	2006 <i>HU</i> <sub>44</sub>		1 19.1 170°37' 1" / 18.5 18			
12 13	8 30.88	+12 36.9	2.203	2.965	14.0	21.4	12 13	8 27.48	+22 14.5	2.253	3.043	12.9	21.0
12 23	8 25.18	+12 11.7	2.125	2.980	11.1	21.2	12 23	8 22.84	+22 41.4	2.167	3.044	9.9	20.8
1 2	8 17.34	+11 55.4	2.070	2.994	7.7	21.0	1 2	8 15.98	+23 13.1	2.105	3.045	6.5	20.6
1 12	8 8.00	+11 47.8	2.042	3.007	4.4	20.8	1 12	8 7.51	+23 45.9	2.070	3.046	2.8	20.4
1 22	7 58.04	+11 47.6	2.044	3.020	2.9	20.8	1 22	7 58.27	+24 16.1	2.066	3.047	1.8	20.3
2 1	7 48.45	+11 53.0	2.077	3.033	5.5	20.9	2 1	7 49.27	+24 40.2	2.091	3.047	5.4	20.6
2 11	7 40.17	+12 2.1	2.139	3.045	8.8	21.2	2 11	7 41.51	+24 56.6	2.145	3.048	9.0	20.8
2 21	7 33.86	+12 12.8	2.226	3.056	11.8	21.4	2 21	7 35.71	+25 4.8	2.224	3.048	12.1	21.0
<b>345165</b>	2005 <i>SJ</i> <sub>260</sub>		1 19.1 154°92' 1" / 18.5 18				<b>178960</b>	2001 <i>QH</i> <sub>189</sub>		1 19.1 147°32' 6" / 22.0 18			
12 13	8 33.61	+21 24.3	1.752	2.545	15.9	21.3	12 13	8 28.56	+ 2 25.4	2.273	2.997	14.7	20.0
12 23	8 28.14	+22 3.7	1.674	2.553	12.3	21.1	12 23	8 23.41	+ 1 45.5	2.189	3.007	12.2	19.8
1 2	8 19.74	+22 50.8	1.619	2.560	8.0	20.9	1 2	8 16.22	+ 1 20.6	2.127	3.015	9.6	19.7
1 12	8 9.15	+23 40.1	1.591	2.567	3.5	20.6	1 12	8 7.57	+ 1 12.4	2.091	3.023	7.1	19.5
1 22	7 57.54	+24 25.6	1.591	2.572	2.2	20.5	1 22	7 58.26	+ 1 20.9	2.083	3.031	6.0	19.5
2 1	7 46.31	+25 2.3	1.621	2.577	6.7	20.8	2 1	7 49.19	+ 1 44.7	2.104	3.038	7.1	19.6
2 11	7 36.81	+25 27.7	1.679	2.582	11.0	21.1	2 11	7 41.27	+ 2 20.2	2.153	3.044	9.5	19.7
2 21	7 29.98	+25 41.7	1.760	2.585	14.7	21.3	2 21	7 35.17	+ 3 3.2	2.228	3.050	12.1	19.9
<b>58238</b>	1993 <i>FH</i> <sub>77</sub>		1 19.1 105°92' 0" / 19.4 18				<b>183787</b>	2004 <i>BP</i> <sub>30</sub>		1 19.1 33°16' 2" / 18.4 18			
12 13	8 25.72	+17 33.3	2.470	3.249	12.2	19.7	12 13	8 30.49	+24 50.2	1.291	2.114	18.8	20.1
12 23	8 21.16	+17 45.5	2.388	3.258	9.4	19.5	12 23	8 26.42	+25 5.1	1.233	2.128	14.5	19.9
1 2	8 14.70	+18 4.4	2.330	3.266	6.2	19.3	1 2	8 18.85	+25 23.9	1.196	2.143	9.5	19.7
1 12	8 6.91	+18 27.6	2.300	3.274	2.7	19.1	1 12	8 8.79	+25 40.5	1.183	2.159	4.3	19.4
1 22	7 58.51	+18 52.7	2.300	3.283	1.1	19.0	1 22	7 57.78	+25 49.4	1.195	2.175	3.1	19.4
2 1	7 50.37	+19 16.9	2.331	3.291	4.6	19.2	2 1	7 47.57	+25 47.2	1.233	2.192	7.9	19.7
2 11	7 43.31	+19 38.1	2.390	3.299	7.9	19.4	2 11	7 39.69	+25 33.8	1.296	2.210	12.6	20.0
2 21	7 37.95	+19 55.0	2.476	3.307	10.8	19.6	2 21	7 35.04	+25 11.0	1.381	2.229	16.7	20.3
<b>203854</b>	2002 <i>VX</i> <sub>120</sub>		1 19.1 122°37' 2" / 20.6 18				<b>146723</b>	2001 <i>XN</i> <sub>11</sub>		1 19.1 56°66' 5" / 20.3 18			
12 13	8 27.48	+10 21.1	2.875	3.621	11.4	20.6	12 13	8 32.87	+10 21.1	1.813	2.577	16.5	19.0
12 23	8 22.08	+9 59.8	2.796	3.639	9.1	20.4	12 23	8 27.20	+ 9 0.6	1.731	2.582	13.4	18.8
1 2	8 15.09	+ 9 46.8	2.741	3.656	6.5	20.3	1 2	8 18.91	+ 7 49.2	1.672	2.588	9.9	18.6
1 12	8 7.01	+ 9 42.0	2.714	3.673	4.0	20.2	1 12	8 8.76	+ 6 49.4	1.639	2.593	6.6	18.4
1 22	7 58.49	+ 9 44.3	2.719	3.690	2.9	20.1	1 22	7 57.77	+ 6 3.2	1.634	2.599	5.4	18.4
2 1	7 50.23	+ 9 52.4	2.754	3.706	4.6	20.2	2 1	7 47.20	+ 5 31.0	1.658	2.604	7.6	18.5
2 11	7 42.93	+10 4.6	2.820	3.721	7.1	20.4	2 11	7 38.20	+ 5 11.9	1.710	2.610	11.0	18.7
2 21	7 37.10	+10 19.0	2.912	3.736	9.5	20.6	2 21	7 31.58	+ 5 3.1	1.785	2.616	14.3	19.0
<b>393686</b>	2004 <i>SR</i> <sub>2</sub>		1 19.1 108°37' 7" / 15.9 17				<b>415240</b>	2012 <i>JQ</i> <sub>19</sub>		1 19.1 290°92' 5" / 15.8 18			
12 13	8 40.51	+37 39.7	1.791	2.579	15.8	21.9	12 13	8 29.51	+31 46.4	1.835	2.642	14.7	20.7
12 23	8 33.68	+38 57.2	1.738	2.602	12.7	21.7	12 23	8 25.46	+33 7.4	1.746	2.628	11.7	20.4
1 2	8 23.40	+40 7.5	1.708	2.625	9.7	21.6	1 2	8 18.32	+34 30.4	1.681	2.614	8.5	20.2
1 12	8 10.66	+41 0.7	1.705	2.646	7.6	21.5	1 12	8 8.71	+35 46.8	1.642	2.601	6.1	20.0
1 22	7 56.98	+41 29.2	1.729	2.667	7.9	21.6	1 22	7 57.73	+36 48.1	1.631	2.587	6.5	20.0
2 1	7 44.11	+41 30.4	1.780	2.688	10.1	21.7	2 1	7 46.86	+37 28.0	1.647	2.574	9.3	20.2
2 11	7 33.60	+41 7.0	1.857	2.707	12.8	22.0	2 11	7 37.62	+37 44.8	1.688	2.560	12.8	20.3
2 21	7 26.35	+40 24.8	1.956	2.726	15.4	22.2	2 21	7 31.14	+37 40.7	1.752	2.547	16.0	20.5
<b>428432</b>	2007 <i>TN</i> <sub>231</sub>		1 19.1 354°79' 2" / 17.6 18				<b>7388</b>	Marcomorelli		1 19.1 331°00' 5" / 21.9 18			
12 13	8 26.32	+26 27.3	2.001	2.806	13.7	21.1	12 13	8 22.71	+ 4 3.1	2.115	2.864	14.9	17.3
12 23	8 22.33	+27 6.6	1.919	2.804	10.6	20.9	12 23	8 19.24	+ 3 46.7	2.021	2.857	12.4	17.1
1 2	8 15.83	+27 48.7	1.861	2.802	7.1	20.7	1 2	8 13.68	+ 3 46.8	1.948	2.851	9.5	16.9
1 12	8 7.49	+28 28.6	1.829	2.801	3.7	20.5	1 12	8 6.57	+ 4 4.4	1.899	2.844	6.7	16.8
1 22	7 58.26	+29 1.0	1.825	2.800	3.4	20.5	1 22	7 58.67	+ 4 38.7	1.878	2.838	5.4	16.7
2 1	7 49.30	+29 22.2	1.850	2.799	6.7	20.7	2 1	7 50.90	+ 5 26.9	1.886	2.833	6.7	16.7
2 11	7 41.77	+29 30.7	1.902	2.799	10.2	20.9	2 11	7 44.20	+ 6 24.8	1.920	2.827	9.6	16.9
2 21	7 36.48	+29 27.4	1.978	2.800	13.4	21.1	2 21	7 39.33	+ 7 27.2	1.979	2.822	12.6	17.1
<b>61022</b>	2000 <i>KY</i> <sub>49</sub>		1 19.1 80°55' 4" / 20.9 18				<b>492091</b>	2013 <i>JW</i> <sub>45</sub>		1 19.1 183°16' 5" / 15.9 18			
12 13	8 30.04	+ 9 16.2	1.474	2.256	18.9	19.2	12 13	8 33.76	+34 31.2	2.243	3.030	13.0	21.9
12 23	8 25.53	+ 8 57.6	1.407	2.270	15.2	19.0	12 23	8 28.05	+35 38.2	2.163	3.031	10.4	21.7
1 2	8 18.05	+ 8 56.8	1.359	2.284	10.9	18.7	1 2	8 19.60	+36 42.7	2.107	3.031	7.7	21.6
1 12	8 8.43	+ 9 13.6	1.335	2.297	6.6	18.5	1 12	8 9.11	+37 37.4	2.079	3.030	5.7	21.5
1 22	7 57.89	+ 9 45.4	1.337	2.311	4.6	18.4	1 22	7 57.62	+38 16.2	2.080	3.029	6.0	21.5
2 1	7 47.85	+10 27.9	1.367	2.325	7.4	18.6	2 1	7 46.40	+38 35.3	2.111	3.027	8.2	21.6
2 11	7 39.65	+11 15.5	1.422	2.338	11.6	18.9	2 11	7 36.73	+38 34.5	2.168	3.025	10.9	21.8
2 21	7 34.18	+12 3.3	1.500	2.351	15.4	19.2	2 21	7 29.49	+38 16.8	2.248	3.022	13.6	21.9
<b>289722</b>	2005 <i>JE</i> <sub>16</sub>		1 19.1 243°09' 3" / 17.1 18				<b>320759</b>	2008 <i>EC</i> <sub>75</sub>		1 19.1 40°86' 1" / 19.6 18			
12 13	8 26.91	+27 26											

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>37089</b>	2000 $UQ_{71}$		1 19.1 147°44	3°0/20.5	18		<b>92804</b>	2000 $QA_{163}$		1 19.1 63°81	3°0/20.0	18	
12 13	8 28.01	+10 59.3	2.310	3.069	13.5	19.4	12 13	8 31.12	+14 5.4	1.449	2.244	18.5	19.4
12 23	8 23.00	+10 45.1	2.224	3.077	10.8	19.3	12 23	8 26.47	+13 37.4	1.380	2.255	14.6	19.2
1 2	8 15.96	+10 41.3	2.162	3.084	7.6	19.1	1 2	8 18.73	+13 21.6	1.331	2.265	10.1	18.9
1 12	8 7.47	+10 47.3	2.127	3.090	4.5	18.9	1 12	8 8.77	+13 17.4	1.306	2.277	5.3	18.7
1 22	7 58.33	+11 1.8	2.122	3.096	3.0	18.8	1 22	7 57.85	+13 22.5	1.308	2.288	3.2	18.6
2 1	7 49.44	+11 22.5	2.146	3.102	5.3	19.0	2 1	7 47.49	+13 34.2	1.338	2.299	7.1	18.9
2 11	7 41.70	+11 46.7	2.200	3.107	8.5	19.2	2 11	7 39.07	+13 49.1	1.393	2.310	11.6	19.1
2 21	7 35.77	+12 12.0	2.279	3.112	11.5	19.4	2 21	7 33.49	+14 4.5	1.471	2.322	15.7	19.4
<b>494776</b>	2006 $KS_{32}$		1 19.1 325°64	2°0/18.3	18		<b>358630</b>	2007 $VB_{168}$		1 19.1 150°07	1°5/18.4	18	
12 13	8 26.43	+21 55.2	1.312	2.138	18.4	21.4	12 13	8 31.32	+22 20.5	1.901	2.694	14.8	21.3
12 23	8 23.74	+22 35.0	1.228	2.125	14.4	21.1	12 23	8 26.19	+22 54.4	1.821	2.700	11.4	21.1
1 2	8 17.53	+23 26.0	1.163	2.112	9.5	20.8	1 2	8 18.38	+23 34.2	1.765	2.706	7.5	20.8
1 12	8 8.47	+24 22.0	1.122	2.099	4.2	20.4	1 12	8 8.60	+24 15.2	1.736	2.712	3.3	20.6
1 22	7 57.84	+25 15.1	1.107	2.087	3.0	20.3	1 22	7 57.91	+24 52.1	1.736	2.717	2.2	20.5
2 1	7 47.40	+25 57.8	1.117	2.076	8.4	20.6	2 1	7 47.56	+25 20.8	1.766	2.721	6.3	20.8
2 11	7 38.96	+26 26.1	1.151	2.066	13.7	20.9	2 11	7 38.77	+25 39.2	1.823	2.725	10.3	21.0
2 21	7 33.78	+26 39.1	1.205	2.057	18.3	21.1	2 21	7 32.40	+25 47.5	1.904	2.729	13.7	21.3
<b>58437</b>	1996 $GK_{10}$		1 19.1 340°78	2°1/19.8	18		<b>432241</b>	2009 $PH_8$		1 19.1 162°22	2°9/17.9	18	
12 13	8 23.22	+15 20.6	1.112	1.943	20.7	19.2	12 13	8 33.85	+29 0.6	2.293	3.077	12.9	21.6
12 23	8 21.54	+15 15.8	1.033	1.930	16.4	18.9	12 23	8 27.70	+29 18.8	2.210	3.083	10.0	21.4
1 2	8 16.21	+15 27.4	0.972	1.918	11.3	18.6	1 2	8 19.13	+29 35.9	2.152	3.087	6.8	21.2
1 12	8 7.93	+15 54.0	0.933	1.908	5.5	18.2	1 12	8 8.85	+29 47.3	2.122	3.092	3.7	21.0
1 22	7 58.07	+16 31.3	0.916	1.898	2.6	18.0	1 22	7 57.83	+29 49.4	2.123	3.095	3.3	21.0
2 1	7 48.45	+17 13.1	0.924	1.890	8.2	18.3	2 1	7 47.21	+29 40.1	2.153	3.099	6.2	21.2
2 11	7 40.96	+17 53.3	0.953	1.884	14.1	18.6	2 11	7 38.05	+29 19.7	2.213	3.101	9.4	21.4
2 21	7 36.89	+18 27.4	1.003	1.879	19.2	18.8	2 21	7 31.12	+28 50.2	2.298	3.104	12.3	21.6
<b>334912</b>	2003 $YK_{11}$		1 19.1 85°24	3°1/18.2	17		<b>373948</b>	2003 $WZ$		1 19.1 75°12	4°4/21.2	18	
12 13	8 36.75	+26 19.9	1.312	2.126	19.1	20.5	12 13	8 26.25	+7 35.6	2.130	2.887	14.6	20.7
12 23	8 31.34	+26 42.1	1.251	2.140	14.8	20.3	12 23	8 21.77	+7 8.7	2.052	2.898	11.8	20.5
1 2	8 22.15	+27 6.9	1.209	2.153	9.8	20.0	1 2	8 15.21	+6 54.9	1.996	2.909	8.7	20.3
1 12	8 10.23	+27 26.9	1.192	2.166	4.8	19.8	1 12	8 7.18	+6 54.7	1.967	2.920	5.8	20.2
1 22	7 57.23	+27 35.6	1.202	2.180	3.8	19.7	1 22	7 58.51	+7 7.2	1.965	2.931	4.4	20.1
2 1	7 45.07	+27 29.6	1.238	2.193	8.4	20.0	2 1	7 50.14	+7 30.2	1.992	2.943	6.1	20.2
2 11	7 35.47	+27 9.7	1.299	2.206	13.2	20.4	2 11	7 42.99	+8 0.5	2.047	2.954	9.1	20.4
2 21	7 29.39	+26 39.1	1.382	2.219	17.3	20.6	2 21	7 37.71	+8 34.4	2.127	2.965	12.0	20.6
<b>125652</b>	2001 $XK_{69}$		1 19.1 167°78	3°1/17.6	18		<b>134377</b>	1995 $SF_{40}$		1 19.1 108°25	0°4/18.8	18	
12 13	8 31.19	+24 14.5	1.559	2.368	16.8	20.0	12 13	8 26.41	+20 35.2	2.454	3.240	12.1	20.6
12 23	8 26.82	+25 16.4	1.482	2.369	13.0	19.8	12 23	8 21.76	+20 53.7	2.373	3.248	9.3	20.5
1 2	8 19.19	+26 26.1	1.426	2.370	8.6	19.5	1 2	8 15.14	+21 17.1	2.316	3.256	6.1	20.3
1 12	8 9.05	+27 35.9	1.397	2.371	4.3	19.3	1 12	8 7.14	+21 42.6	2.288	3.263	2.5	20.0
1 22	7 57.65	+28 37.5	1.395	2.371	3.9	19.3	1 22	7 58.53	+22 7.2	2.289	3.271	1.2	19.9
2 1	7 46.58	+29 24.3	1.421	2.372	8.1	19.5	2 1	7 50.18	+22 28.1	2.321	3.279	4.8	20.2
2 11	7 37.40	+29 53.5	1.472	2.372	12.5	19.8	2 11	7 42.95	+22 43.6	2.381	3.286	8.1	20.4
2 21	7 31.19	+30 5.8	1.546	2.372	16.3	20.0	2 21	7 37.47	+22 53.1	2.467	3.293	10.9	20.6
<b>522457</b>	2016 $CU_{320}$		1 19.1 177°27	6°4/14.9	17		<b>469086</b>	2015 $BA_{310}$		1 19.1 327°19	0°8/19.6	18	
12 13	8 33.82	+43 26.5	2.920	3.683	10.9	22.1	12 13	8 24.65	+15 7.6	2.099	2.884	13.9	20.9
12 23	8 27.63	+44 20.6	2.845	3.685	9.1	22.0	12 23	8 20.84	+15 42.7	2.009	2.881	10.8	20.7
1 2	8 19.07	+45 6.8	2.795	3.686	7.4	21.9	1 2	8 14.80	+16 29.5	1.942	2.878	7.2	20.5
1 12	8 8.81	+45 39.0	2.772	3.687	6.5	21.8	1 12	8 7.09	+17 25.1	1.901	2.876	3.3	20.2
1 22	7 57.80	+45 53.2	2.778	3.687	6.8	21.9	1 22	7 58.53	+18 25.2	1.890	2.873	1.3	20.1
2 1	7 47.14	+45 47.4	2.813	3.687	8.1	21.9	2 1	7 50.13	+19 25.0	1.909	2.870	5.3	20.3
2 11	7 37.88	+45 22.6	2.873	3.687	9.8	22.1	2 11	7 42.90	+20 20.4	1.956	2.868	9.1	20.6
2 21	7 30.76	+44 42.2	2.957	3.686	11.6	22.2	2 21	7 37.61	+21 8.6	2.028	2.865	12.5	20.8
<b>264441</b>	2000 $SR_{286}$		1 19.1 63°20	0°0/19.1	18		<b>82222</b>	2001 $HV_{55}$		1 19.1 189°35	1°3/19.8	18	
12 13	8 32.24	+20 6.6	1.724	2.518	16.1	20.6	12 13	8 28.77	+14 19.9	2.258	3.028	13.5	20.9
12 23	8 26.69	+20 6.8	1.668	2.546	12.3	20.4	12 23	8 23.81	+14 40.8	2.164	3.027	10.6	20.7
1 2	8 18.50	+20 13.3	1.633	2.574	8.0	20.2	1 2	8 16.64	+15 12.2	2.094	3.026	7.2	20.4
1 12	8 8.53	+20 22.5	1.626	2.602	3.4	20.0	1 12	8 7.85	+15 51.9	2.051	3.023	3.4	20.2
1 22	7 57.97	+20 31.3	1.647	2.629	1.4	19.9	1 22	7 58.23	+16 36.4	2.039	3.021	1.6	20.1
2 1	7 48.09	+20 36.9	1.697	2.657	5.9	20.2	2 1	7 48.77	+17 22.1	2.057	3.017	5.1	20.3
2 11	7 40.02	+20 38.0	1.774	2.685	10.0	20.5	2 11	7 40.46	+18 5.4	2.105	3.013	8.8	20.5
2 21	7 34.46	+20 34.6	1.875	2.712	13.4	20.8	2 21	7 34.06	+18 44.0	2.178	3.009	12.0	20.7
<b>155400</b>	1995 $UD_1$		1 19.1 79°03	6°2/17.2	17		<b>411918</b>	2012 $FK_{69}$		1 19.1 24°48	13°1/13.2	18	
12 13	8 37.93	+32 24.2	1.368	2.180	18.5	20.6	12 13	8 42.92	+52 25.3	1.737	2.500	17.2	20.2
12 23	8 32.32	+33 16.4	1.312	2.196	14.6	20.4	12 23	8 37.11	+54 2.8	1.684	2.503	15.3	20.1
1 2	8 22.81	+34 5.6	1.277	2.213	10.3	20.2	1 2	8 26.51	+55 22.3	1.651	2.506	13.7	20.0
1 12	8 10.51	+34 41.5	1.266	2.229	6.8	20.1	1 12	8 12.26	+56 11.1	1.641	2.509	13.1	19.9
1 22	7 57.15	+34 56.3	1.282	2.246	6.7	20.1	1 22	7 56.45	+56 20.2	1.653	2.512	13.5	20.0
2 1	7 44.74	+34 46.6	1.324	2.262	10.0	20.3	2 1	7 41.70	+55 47.3	1.687	2.516	14.8	20.1
2 11	7 35.02	+34 15.3	1.390	2.278	13.9	20.6	2 11	7 30.27	+54 38.3	1.742	2.520	16.6	20.2
2 21	7 28.93	+33 28.0	1.477	2.294	17.4	20.9	2 21	7 23.33	+53 2.9	1.815	2.524	18.5	20.4
<b>65876</b>	1997 $WV_{28}$		1 19.1 290°29	2°4/18.1	18		<b>269497</b>	2009 $UR_{37}$		1 19.1 178°27	2°8/20.5	18	
12 13	8 29.48	+25 2.1	1.773	2.578	15.2	19.6	12 13	8 26.63</					

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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>432468</b>	2010 <i>CT</i> <sub>228</sub>		1 19.1 72°97	1.3/19.9	18		<b>519535</b>	2012 <i>KO</i> <sub>52</sub>		1 19.1 242°18	1.3/18.3	17	
12 13	8 24.24	+13 41.8	2.373	3.148	12.8	21.0	12 13	8 27.63	+21 12.1	2.219	3.008	13.1	22.7
12 23	8 20.14	+14 7.7	2.292	3.157	10.0	20.8	12 23	8 23.19	+22 0.6	2.120	2.998	10.1	22.5
1 2	8 14.12	+14 43.9	2.234	3.166	6.7	20.7	1 2	8 16.42	+22 56.8	2.046	2.987	6.7	22.2
1 12	8 6.74	+15 28.2	2.204	3.175	3.3	20.4	1 12	8 7.84	+23 56.4	2.000	2.976	2.9	22.0
1 22	7 58.73	+16 17.4	2.203	3.185	1.6	20.3	1 22	7 58.30	+24 54.1	1.984	2.964	2.0	21.9
2 1	7 50.94	+17 7.8	2.233	3.194	4.7	20.6	2 1	7 48.83	+25 45.3	1.998	2.952	5.8	22.1
2 11	7 44.21	+17 55.9	2.292	3.203	8.0	20.8	2 11	7 40.51	+26 26.7	2.041	2.940	9.5	22.3
2 21	7 39.18	+18 39.2	2.376	3.212	11.0	21.0	2 21	7 34.19	+26 57.2	2.108	2.928	12.8	22.5
<b>382275</b>	2012 <i>TS</i> <sub>204</sub>		1 19.1 345°49	3°6/21.2	18		<b>181261</b>	2005 <i>VY</i> <sub>76</sub>		1 19.1 226°95	0°1/19.1	18	
12 13	8 23.15	+ 8 7.6	2.228	2.990	13.9	21.0	12 13	8 31.80	+20 38.0	2.225	3.005	13.3	20.3
12 23	8 19.47	+ 8 9.7	2.137	2.987	11.2	20.8	12 23	8 26.24	+20 30.1	2.125	2.995	10.4	20.1
1 2	8 13.79	+ 8 25.7	2.067	2.985	8.1	20.6	1 2	8 18.30	+20 26.0	2.048	2.985	6.9	19.8
1 12	8 6.64	+ 8 55.2	2.024	2.983	5.1	20.4	1 12	8 8.60	+20 23.5	2.000	2.975	3.0	19.6
1 22	7 58.77	+ 9 36.3	2.009	2.982	3.6	20.3	1 22	7 58.02	+20 20.1	1.981	2.964	1.2	19.4
2 1	7 51.05	+10 25.7	2.024	2.980	5.5	20.5	2 1	7 47.63	+20 14.0	1.994	2.953	5.3	19.7
2 11	7 44.39	+11 19.4	2.067	2.979	8.7	20.6	2 11	7 38.52	+20 4.3	2.035	2.941	9.2	19.9
2 21	7 39.47	+12 13.4	2.135	2.978	11.8	20.8	2 21	7 31.49	+19 51.1	2.102	2.928	12.6	20.1
<b>404237</b>	2013 <i>EF</i> <sub>7</sub>		1 19.1 179°47	0°5/18.9	18		<b>338161</b>	2002 <i>RH</i> <sub>6</sub>		1 19.1 80°34	2°4/20.0	18	
12 13	8 31.85	+20 36.4	2.018	2.804	14.3	22.2	12 13	8 32.84	+13 9.3	1.356	2.151	19.6	20.9
12 23	8 26.46	+20 54.9	1.931	2.806	11.1	22.0	12 23	8 27.88	+13 20.0	1.299	2.174	15.4	20.7
1 2	8 18.51	+21 19.6	1.868	2.807	7.3	21.7	1 2	8 19.68	+13 47.1	1.261	2.196	10.4	20.5
1 12	8 8.67	+21 46.9	1.831	2.807	3.1	21.5	1 12	8 9.20	+14 27.7	1.247	2.219	5.2	20.2
1 22	7 57.93	+22 12.8	1.825	2.807	1.5	21.3	1 22	7 57.82	+15 16.3	1.259	2.241	2.6	20.1
2 1	7 47.47	+22 33.7	1.848	2.806	5.8	21.6	2 1	7 47.13	+16 7.0	1.300	2.262	7.0	20.5
2 11	7 38.45	+22 47.7	1.900	2.805	9.8	21.9	2 11	7 38.58	+16 54.5	1.366	2.284	11.8	20.8
2 21	7 31.71	+22 54.3	1.976	2.803	13.2	22.1	2 21	7 33.03	+17 35.5	1.455	2.305	15.8	21.1
<b>49250</b>	1998 <i>TD</i> <sub>15</sub>		1 19.1 88°12	8°4/22.9	18		<b>11041</b>	Fechner		1 19.1 73°39	3°5/20.7	18	
12 13	8 27.60	- 0 51.2	1.808	2.536	17.8	19.2	12 13	8 28.57	+10 9.9	1.515	2.301	18.3	18.8
12 23	8 23.19	- 1 45.9	1.733	2.547	15.1	19.1	12 23	8 24.44	+10 15.1	1.445	2.312	14.6	18.5
1 2	8 16.35	- 2 20.0	1.678	2.557	12.2	18.9	1 2	8 17.41	+10 38.3	1.394	2.323	10.3	18.3
1 12	8 7.74	- 2 30.1	1.646	2.567	9.7	18.8	1 12	8 8.27	+11 18.1	1.368	2.335	5.8	18.1
1 22	7 58.33	- 2 15.4	1.640	2.577	8.4	18.7	1 22	7 58.17	+12 10.6	1.369	2.346	3.6	18.0
2 1	7 49.24	- 1 38.1	1.660	2.587	9.3	18.8	2 1	7 48.49	+13 10.1	1.397	2.358	6.8	18.2
2 11	7 41.57	- 0 43.4	1.706	2.597	11.6	18.9	2 11	7 40.56	+14 10.5	1.451	2.370	11.2	18.5
2 21	7 36.09	+ 0 22.1	1.776	2.606	14.3	19.1	2 21	7 35.27	+15 7.2	1.529	2.381	15.1	18.7
<b>205564</b>	2001 <i>SS</i> <sub>299</sub>		1 19.1 331°94	0°9/19.5	18		<b>37418</b>	2001 <i>XD</i> <sub>199</sub>		1 19.1 235°40	0°7/19.4	18	
12 13	8 25.55	+17 16.1	2.117	2.906	13.7	20.4	12 13	8 30.16	+16 47.3	1.816	2.603	15.6	20.3
12 23	8 21.48	+17 15.7	2.026	2.901	10.7	20.2	12 23	8 25.57	+17 6.0	1.719	2.593	12.3	20.1
1 2	8 15.19	+17 22.8	1.958	2.896	7.1	20.0	1 2	8 18.20	+17 35.6	1.645	2.583	8.2	19.8
1 12	8 7.26	+17 35.6	1.917	2.891	3.3	19.7	1 12	8 8.68	+18 13.4	1.597	2.572	3.7	19.5
1 22	7 58.53	+17 51.4	1.904	2.887	1.4	19.6	1 22	7 57.98	+18 54.9	1.577	2.560	1.4	19.3
2 1	7 50.01	+18 7.7	1.921	2.883	5.2	19.8	2 1	7 47.41	+19 35.5	1.587	2.548	6.2	19.6
2 11	7 42.71	+18 22.3	1.966	2.879	9.0	20.1	2 11	7 38.26	+20 11.4	1.624	2.536	10.7	19.8
2 21	7 37.37	+18 33.6	2.036	2.875	12.4	20.3	2 21	7 31.55	+20 40.5	1.686	2.523	14.7	20.1
<b>16383</b>	1981 <i>EV</i> <sub>30</sub>		1 19.1 110°73	0°9/18.7	18		<b>278471</b>	2007 <i>TC</i> <sub>413</sub>		1 19.1 128°13	4°7/16.1	18	
12 13	8 30.35	+21 49.6	2.014	2.805	14.2	19.1	12 13	8 30.38	+34 24.0	2.601	3.386	11.5	20.9
12 23	8 25.18	+22 6.2	1.939	2.816	10.9	18.9	12 23	8 24.99	+35 24.1	2.530	3.397	9.1	20.8
1 2	8 17.58	+22 27.7	1.886	2.827	7.1	18.7	1 2	8 17.37	+36 21.2	2.485	3.409	6.7	20.6
1 12	8 8.24	+22 50.3	1.862	2.837	3.0	18.4	1 12	8 8.17	+37 9.6	2.468	3.419	4.9	20.5
1 22	7 58.15	+23 10.2	1.866	2.848	1.7	18.3	1 22	7 58.25	+37 44.7	2.481	3.430	5.1	20.6
2 1	7 48.46	+23 24.5	1.900	2.858	5.7	18.6	2 1	7 48.64	+38 3.6	2.523	3.440	7.0	20.7
2 11	7 40.25	+23 31.6	1.963	2.868	9.5	18.9	2 11	7 40.31	+38 6.2	2.593	3.449	9.4	20.9
2 21	7 34.27	+23 31.6	2.050	2.878	12.8	19.1	2 21	7 33.99	+37 54.5	2.686	3.459	11.6	21.1
<b>235014</b>	2003 <i>ES</i> <sub>4</sub>		1 19.1 197°99	3°9/17.5	18		<b>344824</b>	2004 <i>ER</i> <sub>60</sub>		1 19.1 255°78	3°1/16.9	18	
12 13	8 34.81	+28 34.2	1.758	2.557	15.6	20.9	12 13	8 26.42	+26 34.1	2.420	3.214	12.0	20.3
12 23	8 29.36	+29 15.3	1.675	2.555	12.2	20.7	12 23	8 22.14	+27 44.2	2.331	3.210	9.3	20.1
1 2	8 20.74	+29 57.9	1.615	2.553	8.3	20.5	1 2	8 15.66	+28 58.3	2.267	3.206	6.3	19.9
1 12	8 9.72	+30 34.9	1.580	2.550	4.8	20.2	1 12	8 7.51	+30 10.8	2.232	3.201	3.6	19.7
1 22	7 57.51	+30 59.9	1.575	2.546	4.5	20.2	1 22	7 58.49	+31 16.2	2.228	3.197	3.6	19.7
2 1	7 45.68	+31 8.6	1.597	2.542	7.9	20.4	2 1	7 49.57	+32 9.8	2.253	3.193	6.3	19.9
2 11	7 35.70	+31 0.6	1.647	2.538	11.9	20.6	2 11	7 41.76	+32 49.2	2.306	3.188	9.4	20.1
2 21	7 28.59	+30 38.6	1.719	2.533	15.5	20.8	2 21	7 35.84	+33 14.4	2.384	3.184	12.1	20.2
<b>469049</b>	2015 <i>AL</i> <sub>263</sub>		1 19.1 31°35	2°1/20.4	18		<b>451722</b>	2013 <i>CA</i> <sub>209</sub>		1 19.1 312°94	1°7/19.7	18	
12 13	8 24.16	+11 32.5	2.104	2.879	14.2	20.7	12 13	8 28.95	+16 12.6	1.467	2.270	17.9	20.8
12 23	8 20.37	+11 58.4	2.019	2.882	11.2	20.5	12 23	8 25.13	+16 4.3	1.382	2.264	14.2	20.6
1 2	8 14.43	+12 37.9	1.956	2.886	7.7	20.3	1 2	8 18.13	+16 7.5	1.317	2.257	9.6	20.3
1 12	8 6.93	+13 29.0	1.921	2.890	4.1	20.1	1 12	8 8.70	+16 20.2	1.277	2.251	4.6	20.0
1 22	7 58.67	+14 28.0	1.914	2.894	2.2	20.0	1 22	7 58.00	+16 39.1	1.262	2.244	2.1	19.8
2 1	7 50.61	+15 30.4	1.936	2.898	5.2	20.2	2 1	7 47.58	+17 0.4	1.275	2.239	7.0	20.1
2 11	7 43.71	+16 31.8	1.988	2.902	8.9	20.4	2 11	7 38.96	+17 20.6	1.314	2.233	12.0	20.4
2 21	7 38.70	+17 28.4	2.064	2.906	12.1	20.6	2 21	7 33.19	+17 37.3	1.374	2.228	16.4	20.6
<b>2835</b>	Ryoma		1 19.1 113°06	0°6/18.8	18		<b>369588</b>	2011 <i>BS</i> <sub>132</sub>		1 19.1 69°45	1°3/19.6	18	
12 13	8 28.98	+20 53.0	2.033	2.825	14								

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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>122705</b>	2000 <i>SU</i> <sub>29</sub>		1 19.1 94°16	2°6/20.4	18		<b>145299</b>	2005 <i>KE</i> <sub>8</sub>		1 19.1 161°58	5°8/21.9	18	
12 13	8 27.31	+11 53.5	1.954	2.729	15.1	20.4	12 13	8 28.94	+3 15.3	2.245	2.973	14.7	20.6
12 23	8 22.87	+11 55.1	1.876	2.738	12.0	20.2	12 23	8 23.82	+2 37.0	2.158	2.979	12.3	20.5
1 2	8 16.11	+12 9.3	1.819	2.747	8.3	20.0	1 2	8 16.62	+2 13.3	2.092	2.984	9.5	20.3
1 12	8 7.68	+12 34.8	1.788	2.756	4.5	19.8	1 12	8 7.90	+2 5.9	2.053	2.989	7.0	20.2
1 22	7 58.47	+13 8.7	1.786	2.765	2.7	19.7	1 22	7 58.46	+2 14.8	2.042	2.993	5.8	20.1
2 1	7 49.58	+13 47.6	1.813	2.773	5.7	19.9	2 1	7 49.24	+2 38.3	2.060	2.996	7.0	20.2
2 11	7 42.03	+14 27.5	1.868	2.782	9.4	20.1	2 11	7 41.18	+3 13.2	2.106	2.999	9.5	20.3
2 21	7 36.58	+15 5.4	1.948	2.790	12.8	20.3	2 21	7 34.95	+3 55.3	2.177	3.002	12.2	20.5
<b>373386</b>	2013 <i>MS</i> <sub>4</sub>		1 19.1 160°53	1°6/19.8	18		<b>208663</b>	2002 <i>GF</i> <sub>11</sub>		1 19.1 211°83	7°1/14.1	18	
12 13	8 30.58	+15 48.1	2.410	3.176	12.8	21.2	12 13	8 35.60	+35 11.2	2.082	2.871	13.9	20.3
12 23	8 24.93	+15 30.1	2.321	3.182	10.1	21.0	12 23	8 30.18	+37 14.3	1.998	2.864	11.2	20.1
1 2	8 17.24	+15 18.4	2.257	3.187	6.8	20.8	1 2	8 21.55	+39 18.2	1.939	2.857	8.6	19.9
1 12	8 8.10	+15 11.9	2.221	3.192	3.4	20.6	1 12	8 10.27	+41 12.4	1.909	2.849	7.1	19.8
1 22	7 58.31	+15 9.2	2.216	3.196	1.8	20.5	1 22	7 57.42	+42 46.7	1.908	2.840	7.8	19.8
2 1	7 48.81	+15 8.9	2.242	3.200	4.9	20.7	2 1	7 44.50	+43 54.2	1.937	2.831	10.1	19.9
2 11	7 40.47	+15 9.4	2.297	3.204	8.2	20.9	2 11	7 33.11	+44 33.2	1.991	2.821	12.9	20.1
2 21	7 33.98	+15 9.7	2.379	3.206	11.2	21.1	2 21	7 24.50	+44 46.8	2.066	2.810	15.5	20.3
<b>494752</b>	2005 <i>WJ</i> <sub>197</sub>		1 19.1 138°98	5°6/16.0	18		<b>87874</b>	2000 <i>SW</i> <sub>269</sub>		1 19.1 71°77	4°8/16.7	18	
12 13	8 32.59	+34 0.8	2.092	2.885	13.6	22.0	12 13	8 31.11	+30 11.7	1.844	2.647	14.8	19.4
12 23	8 27.29	+35 11.5	2.020	2.892	10.8	21.8	12 23	8 26.25	+31 19.1	1.782	2.663	11.5	19.2
1 2	8 19.20	+36 19.8	1.972	2.898	7.9	21.6	1 2	8 18.54	+32 26.6	1.743	2.679	8.0	19.0
1 12	8 9.04	+37 18.2	1.952	2.905	5.9	21.5	1 12	8 8.77	+33 26.4	1.732	2.695	5.2	18.9
1 22	7 57.92	+38 0.0	1.960	2.911	6.1	21.6	1 22	7 58.13	+34 11.9	1.748	2.711	5.3	18.9
2 1	7 47.15	+38 21.6	1.997	2.916	8.4	21.7	2 1	7 47.96	+34 39.0	1.792	2.727	8.1	19.1
2 11	7 38.02	+38 22.7	2.060	2.921	11.3	21.9	2 11	7 39.57	+34 47.1	1.863	2.743	11.3	19.3
2 21	7 31.42	+38 6.5	2.146	2.926	13.9	22.1	2 21	7 33.80	+34 38.9	1.956	2.759	14.3	19.6
<b>261113</b>	1991 <i>PL</i> <sub>18</sub>		1 19.1 163°55	0°1/19.1	18		<b>168002</b>	2005 <i>GS</i> <sub>136</sub>		1 19.1 57°14	5°9/22.6	18	
12 13	8 34.12	+19 48.8	1.803	2.590	15.7	19.8	12 13	8 24.13	+1 55.3	2.152	2.887	15.1	19.9
12 23	8 28.45	+19 58.4	1.721	2.596	12.2	19.6	12 23	8 20.18	+1 37.4	2.075	2.900	12.6	19.7
1 2	8 19.95	+20 15.1	1.662	2.601	8.1	19.3	1 2	8 14.23	+1 37.1	2.020	2.913	9.8	19.6
1 12	8 9.36	+20 35.1	1.630	2.605	3.4	19.1	1 12	8 6.88	+1 55.3	1.989	2.925	7.2	19.4
1 22	7 57.81	+20 54.5	1.626	2.609	1.4	18.9	1 22	7 58.89	+2 31.0	1.986	2.938	5.9	19.4
2 1	7 46.63	+21 9.9	1.652	2.612	6.2	19.3	2 1	7 51.18	+3 21.1	2.011	2.951	6.9	19.5
2 11	7 37.14	+21 19.3	1.706	2.614	10.5	19.5	2 11	7 44.61	+4 21.1	2.063	2.965	9.3	19.7
2 21	7 30.21	+21 22.4	1.784	2.615	14.2	19.8	2 21	7 39.82	+5 25.8	2.140	2.978	11.9	19.8
<b>432575</b>	2010 <i>OV</i> <sub>57</sub>		1 19.1 11°99	9°6/22.9	18		<b>360832</b>	2005 <i>LX</i> <sub>52</sub>		1 19.1 151°73	4°6/16.1	18	
12 13	8 25.57	-3 56.5	2.047	2.753	16.6	20.3	12 13	8 33.06	+32 8.9	2.437	3.221	12.2	21.3
12 23	8 21.46	-5 26.1	1.966	2.755	14.5	20.2	12 23	8 27.25	+33 24.1	2.363	3.231	9.6	21.1
1 2	8 15.18	-6 37.6	1.906	2.758	12.3	20.0	1 2	8 19.00	+34 38.4	2.314	3.241	6.9	21.0
1 12	8 7.30	-7 26.3	1.868	2.761	10.4	19.9	1 12	8 8.95	+35 45.2	2.294	3.250	4.9	20.9
1 22	7 58.65	-7 49.6	1.856	2.764	9.6	19.9	1 22	7 58.04	+36 38.5	2.304	3.258	5.1	20.9
2 1	7 50.21	-7 47.2	1.869	2.768	10.2	19.9	2 1	7 47.37	+37 14.6	2.345	3.266	7.3	21.1
2 11	7 42.95	-7 22.4	1.907	2.772	11.9	20.0	2 11	7 38.07	+37 32.6	2.413	3.272	9.9	21.2
2 21	7 37.61	-6 40.6	1.968	2.777	14.0	20.2	2 21	7 30.92	+37 34.6	2.506	3.279	12.4	21.4
<b>145698</b>	3471 <i>T</i> <sub>-3</sub>		1 19.1 146°28	1°7/18.3	18		<b>176899</b>	2002 <i>VN</i> <sub>53</sub>		1 19.1 89°75	0°0/19.1	18	
12 13	8 30.93	+23 14.4	2.023	2.815	14.1	20.0	12 13	8 29.90	+18 31.4	1.776	2.570	15.7	20.5
12 23	8 25.76	+23 47.6	1.944	2.822	10.9	19.8	12 23	8 25.14	+18 53.0	1.705	2.583	12.1	20.2
1 2	8 18.07	+24 25.5	1.888	2.828	7.1	19.6	1 2	8 17.73	+19 23.5	1.656	2.596	8.0	20.0
1 12	8 8.54	+25 3.5	1.860	2.834	3.2	19.3	1 12	8 8.42	+19 59.1	1.633	2.609	3.4	19.8
1 22	7 58.16	+25 36.8	1.860	2.840	2.3	19.3	1 22	7 58.28	+20 35.3	1.639	2.622	1.4	19.7
2 1	7 48.11	+26 1.7	1.891	2.845	6.1	19.5	2 1	7 48.56	+21 7.8	1.674	2.634	6.0	20.0
2 11	7 39.53	+26 16.4	1.950	2.850	9.8	19.8	2 11	7 40.46	+21 34.0	1.736	2.647	10.1	20.3
2 21	7 33.23	+26 21.2	2.033	2.855	13.1	20.0	2 21	7 34.77	+21 52.5	1.822	2.659	13.7	20.5
<b>245966</b>	2006 <i>SL</i> <sub>84</sub>		1 19.1 209°55	1°8/18.0	17		<b>407607</b>	2011 <i>BD</i> <sub>83</sub>		1 19.1 354°94	1°4/18.5	18	
12 13	8 26.91	+25 26.2	2.798	3.583	10.8	21.8	12 13	8 25.30	+21 2.2	1.526	2.343	16.7	20.7
12 23	8 22.10	+25 54.1	2.704	3.578	8.3	21.6	12 23	8 22.27	+21 40.7	1.447	2.339	13.0	20.4
1 2	8 15.40	+26 24.0	2.635	3.574	5.5	21.4	1 2	8 16.23	+22 28.9	1.390	2.336	8.5	20.1
1 12	8 7.36	+26 52.6	2.595	3.568	2.7	21.2	1 12	8 7.91	+23 21.6	1.357	2.333	3.7	19.8
1 22	7 58.64	+27 16.5	2.586	3.563	2.2	21.2	1 22	7 58.45	+24 12.4	1.351	2.332	2.3	19.8
2 1	7 50.09	+27 33.3	2.608	3.557	4.9	21.4	2 1	7 49.27	+24 55.2	1.371	2.331	7.1	20.0
2 11	7 42.53	+27 41.8	2.658	3.551	7.8	21.5	2 11	7 41.83	+25 26.5	1.418	2.331	11.8	20.3
2 21	7 36.58	+27 42.2	2.735	3.545	10.4	21.7	2 21	7 37.10	+25 45.2	1.486	2.332	15.8	20.6
<b>413573</b>	2005 <i>TT</i> <sub>157</sub>		1 19.1 15°66	7°1/22.1	18		<b>432900</b>	2011 <i>OG</i> <sub>34</sub>		1 19.1 233°64	0°7/18.7	17	
12 13	8 24.90	+3 53.2	1.583	2.350	18.4	20.3	12 13	8 25.90	+20 4.9	2.795	3.573	10.9	22.1
12 23	8 21.53	+3 7.9	1.507	2.353	15.3	20.1	12 23	8 21.38	+20 45.7	2.690	3.562	8.5	21.9
1 2	8 15.50	+2 42.3	1.451	2.357	11.9	19.9	1 2	8 15.01	+21 32.7	2.611	3.549	5.6	21.7
1 12	8 7.51	+2 39.0	1.417	2.361	8.6	19.7	1 12	8 7.25	+22 23.1	2.561	3.536	2.4	21.4
1 22	7 58.59	+2 58.0	1.409	2.367	7.1	19.6	1 22	7 58.75	+23 13.0	2.542	3.523	1.3	21.3
2 1	7 49.98	+3 36.5	1.426	2.372	8.6	19.7	2 1	7 50.29	+23 59.1	2.554	3.510	4.6	21.6
2 11	7 42.91	+4 29.1	1.469	2.379	11.7	19.9	2 11	7 42.69	+24 38.7	2.596	3.496	7.7	21.7
2 21	7 38.24	+5 29.1	1.535	2.386	15.1	20.2	2 21	7 36.62	+25 10.5	2.664	3.481	10.5	21.9
<b>328542</b>	2009 <i>RR</i> <sub>34</sub>		1 19.1 183°69	7°1/22.9	18		<b>283054</b>	2008 <i>HN</i> <sub>19</sub>		1 19.1 170°98	3°3/16.9	18	
12 13	8 25.92	-1 7.8	2.232	2.946									



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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>414857</b>	2010 VO <sub>84</sub>		1 19.1 37°43	1.5/19.7	18		<b>347591</b>	2001 OJ		1 19.1 132°19	2.2/18.3	16	
12 13	8 28.18	+16 28.1	1.515	2.318	17.5	21.2	12 13	8 37.10	+25 5.8	1.911	2.697	15.0	21.8
12 23	8 24.16	+16 23.4	1.448	2.330	13.6	21.0	12 23	8 30.54	+25 32.5	1.841	2.715	11.6	21.6
1 2	8 17.24	+16 29.5	1.402	2.342	9.1	20.8	1 2	8 21.20	+26 1.6	1.793	2.732	7.6	21.4
1 12	8 8.25	+16 44.1	1.380	2.354	4.3	20.5	1 12	8 9.89	+26 27.9	1.774	2.748	3.6	21.2
1 22	7 58.38	+17 3.7	1.386	2.368	1.9	20.4	1 22	7 57.78	+26 46.5	1.784	2.763	2.8	21.2
2 1	7 49.03	+17 24.6	1.418	2.382	6.4	20.7	2 1	7 46.22	+26 54.5	1.825	2.777	6.5	21.4
2 11	7 41.48	+17 43.6	1.477	2.396	11.0	21.0	2 11	7 36.44	+26 51.3	1.894	2.790	10.3	21.7
2 21	7 36.59	+17 58.8	1.558	2.411	14.9	21.3	2 21	7 29.27	+26 38.7	1.987	2.802	13.6	21.9
<b>339585</b>	2005 MY <sub>30</sub>		1 19.1 104°71	1.3/18.3	18		<b>13582</b>	Tominari		1 19.1 214°66	6.9/15.3	18	
12 13	8 26.08	+22 0.2	2.458	3.246	12.0	20.8	12 13	8 34.65	+37 40.1	2.131	2.918	13.6	17.9
12 23	8 21.63	+22 45.6	2.378	3.255	9.2	20.7	12 23	8 29.16	+38 55.8	2.049	2.912	11.1	17.7
1 2	8 15.19	+23 36.2	2.323	3.263	6.0	20.5	1 2	8 20.65	+40 7.3	1.991	2.906	8.6	17.5
1 12	8 7.31	+24 28.2	2.296	3.271	2.7	20.3	1 12	8 9.81	+41 6.3	1.960	2.900	7.0	17.4
1 22	7 58.75	+25 17.1	2.300	3.279	1.9	20.2	1 22	7 57.77	+41 45.5	1.957	2.893	7.4	17.4
2 1	7 50.42	+25 59.4	2.334	3.288	5.1	20.5	2 1	7 45.97	+42 0.8	1.982	2.885	9.4	17.5
2 11	7 43.18	+26 32.8	2.397	3.295	8.3	20.7	2 11	7 35.86	+41 52.5	2.033	2.877	12.1	17.7
2 21	7 37.72	+26 56.6	2.485	3.303	11.1	20.9	2 21	7 28.46	+41 24.4	2.106	2.869	14.7	17.8
<b>492527</b>	2014 OB <sub>65</sub>		1 19.1 191°25	0.5/18.8	18		<b>454691</b>	2014 RE <sub>22</sub>		1 19.1 84°18	0.4/18.9	18	
12 13	8 31.67	+19 35.7	2.260	3.037	13.2	22.7	12 13	8 29.40	+18 21.2	1.786	2.580	15.6	21.1
12 23	8 26.17	+20 10.5	2.166	3.036	10.3	22.4	12 23	8 24.77	+19 4.5	1.717	2.596	12.0	20.9
1 2	8 18.32	+20 52.7	2.096	3.034	6.8	22.2	1 2	8 17.51	+19 57.9	1.672	2.612	7.9	20.7
1 12	8 8.70	+21 38.6	2.055	3.030	2.9	22.0	1 12	8 8.37	+20 56.5	1.652	2.628	3.3	20.4
1 22	7 58.18	+22 23.7	2.044	3.026	1.4	21.8	1 22	7 58.39	+21 54.7	1.662	2.644	1.5	20.3
2 1	7 47.81	+23 4.1	2.064	3.021	5.4	22.1	2 1	7 48.82	+22 47.0	1.701	2.660	6.0	20.6
2 11	7 38.66	+23 36.9	2.114	3.015	9.1	22.3	2 11	7 40.84	+23 30.1	1.767	2.676	10.1	20.9
2 21	7 31.55	+24 1.1	2.189	3.008	12.4	22.5	2 21	7 35.25	+24 2.5	1.857	2.691	13.6	21.2
<b>344562</b>	2002 XZ <sub>33</sub>		1 19.1 109°88	4.2/17.6	17		<b>12373</b>	Lancearmstrong		1 19.1 215°02	0.0/19.1	18	
12 13	8 38.27	+28 37.3	1.595	2.395	16.9	21.2	12 13	8 29.42	+17 38.1	1.918	2.706	14.9	18.6
12 23	8 32.02	+29 24.4	1.535	2.415	13.1	21.0	12 23	8 24.86	+18 12.5	1.826	2.701	11.6	18.4
1 2	8 22.41	+30 11.9	1.496	2.434	8.9	20.8	1 2	8 17.69	+18 57.5	1.757	2.696	7.7	18.1
1 12	8 10.44	+30 52.0	1.484	2.453	5.1	20.6	1 12	8 8.52	+19 49.5	1.714	2.690	3.3	17.8
1 22	7 57.52	+31 17.7	1.500	2.471	4.7	20.7	1 22	7 58.29	+20 43.5	1.701	2.684	1.3	17.7
2 1	7 45.36	+31 25.4	1.544	2.489	8.2	20.9	2 1	7 48.21	+21 34.4	1.717	2.677	5.9	18.0
2 11	7 35.43	+31 15.8	1.615	2.506	12.1	21.2	2 11	7 39.51	+22 18.3	1.761	2.670	10.2	18.2
2 21	7 28.65	+30 52.4	1.708	2.522	15.6	21.4	2 21	7 33.08	+22 53.2	1.830	2.663	13.9	18.4
<b>200888</b>	2002 AJ <sub>12</sub>		1 19.1 8°64	1°1/18.8	18		<b>413217</b>	2003 PW <sub>3</sub>		1 19.1 160°94	3°4/17.8	18	
12 13	8 26.36	+21 55.5	1.066	1.906	20.7	20.4	12 13	8 38.76	+30 35.6	2.277	3.053	13.2	22.5
12 23	8 24.05	+22 1.7	1.003	1.907	16.1	20.1	12 23	8 31.53	+30 54.3	2.195	3.062	10.3	22.3
1 2	8 17.84	+22 16.5	0.959	1.909	10.6	19.8	1 2	8 21.73	+31 10.4	2.138	3.070	7.1	22.1
1 12	8 8.69	+22 34.8	0.936	1.913	4.5	19.5	1 12	8 10.10	+31 18.8	2.110	3.077	4.1	21.9
1 22	7 58.20	+22 50.4	0.936	1.919	2.4	19.3	1 22	7 57.72	+31 15.6	2.113	3.083	3.8	21.9
2 1	7 48.37	+22 58.5	0.961	1.926	8.4	19.7	2 1	7 45.83	+30 58.9	2.147	3.088	6.5	22.1
2 11	7 41.04	+22 56.9	1.008	1.934	14.0	20.0	2 11	7 35.56	+30 29.8	2.210	3.092	9.7	22.3
2 21	7 37.28	+22 46.1	1.075	1.944	18.8	20.4	2 21	7 27.70	+29 50.9	2.298	3.095	12.6	22.5
<b>333622</b>	2007 VZ <sub>4</sub>		1 19.1 79°04	1°4/20.0	18		<b>44573</b>	1999 FZ <sub>51</sub>		1 19.1 5°19	1°1/19.6	18	
12 13	8 26.24	+13 20.0	2.326	3.096	13.1	21.3	12 13	8 24.72	+16 18.8	1.843	2.639	15.1	18.3
12 23	8 21.64	+13 49.7	2.256	3.119	10.2	21.1	12 23	8 21.17	+16 26.9	1.761	2.639	11.8	18.1
1 2	8 15.11	+14 29.9	2.211	3.142	6.9	20.9	1 2	8 15.19	+16 45.0	1.701	2.640	7.9	17.8
1 12	8 7.24	+15 18.1	2.193	3.164	3.4	20.7	1 12	8 7.41	+17 10.9	1.667	2.641	3.6	17.6
1 22	7 58.82	+16 10.7	2.205	3.186	1.6	20.6	1 22	7 58.78	+17 41.3	1.661	2.643	1.5	17.4
2 1	7 50.71	+17 3.8	2.248	3.208	4.7	20.9	2 1	7 50.42	+18 12.3	1.683	2.646	5.7	17.7
2 11	7 43.75	+17 53.9	2.320	3.230	8.0	21.1	2 11	7 43.44	+18 40.7	1.732	2.649	9.8	17.9
2 21	7 38.54	+18 38.7	2.418	3.252	10.9	21.4	2 21	7 38.65	+19 4.4	1.805	2.652	13.4	18.2
<b>467584</b>	2007 UC <sub>88</sub>		1 19.1 81°07	5°9/22.1	18		<b>382875</b>	2004 KE <sub>1</sub>		1 19.1 135°19	5°4/18.0	17	
12 13	8 25.39	+ 2 21.9	2.396	3.123	13.9	20.9	12 13	8 57.79	+23 18.1	0.582	1.429	31.9	22.7
12 23	8 20.97	+ 1 36.9	2.313	3.131	11.7	20.7	12 23	8 51.30	+24 39.2	0.543	1.449	25.0	22.3
1 2	8 14.68	+ 1 5.8	2.252	3.139	9.2	20.6	1 2	8 37.36	+26 18.6	0.516	1.467	16.6	22.0
1 12	8 7.08	+ 0 50.6	2.217	3.147	6.9	20.4	1 12	8 17.37	+27 55.5	0.507	1.483	8.1	21.6
1 22	7 58.88	+ 0 51.4	2.209	3.154	5.9	20.4	1 22	7 54.84	+29 6.0	0.518	1.496	6.6	21.6
2 1	7 50.90	+ 1 7.1	2.230	3.162	6.9	20.5	2 1	7 34.47	+29 37.1	0.549	1.508	14.2	22.1
2 11	7 43.95	+ 1 34.7	2.279	3.170	9.0	20.6	2 11	7 20.01	+29 33.0	0.598	1.518	21.7	22.5
2 21	7 38.65	+ 2 10.4	2.352	3.178	11.4	20.8	2 21	7 12.73	+29 5.7	0.662	1.525	27.8	23.0
<b>330040</b>	2005 UV <sub>280</sub>		1 19.1 310°21	2°0/19.9	18		<b>60694</b>	2000 GG <sub>41</sub>		1 19.1 17°17	4°7/20.9	18	
12 13	8 27.37	+14 43.2	1.854	2.641	15.4	20.7	12 13	8 23.30	+10 45.7	1.119	1.938	21.3	18.0
12 23	8 23.23	+14 35.1	1.765	2.636	12.1	20.5	12 23	8 21.17	+10 17.8	1.062	1.948	17.1	17.8
1 2	8 16.56	+14 37.1	1.697	2.631	8.3	20.2	1 2	8 15.66	+10 10.0	1.022	1.959	12.2	17.5
1 12	8 8.00	+14 48.2	1.655	2.627	4.2	20.0	1 12	8 7.70	+10 22.6	1.004	1.971	7.2	17.3
1 22	7 58.49	+15 5.9	1.642	2.622	2.2	19.8	1 22	7 58.68	+10 52.7	1.009	1.986	4.8	17.2
2 1	7 49.21	+15 27.1	1.657	2.618	5.9	20.1	2 1	7 50.28	+11 34.9	1.038	2.002	8.1	17.5
2 11	7 41.31	+15 49.0	1.699	2.614	10.0	20.3	2 11	7 44.01	+12 22.4	1.090	2.019	12.9	17.8
2 21	7 35.66	+16 9.1	1.765	2.610	13.7	20.5	2 21	7 40.82	+13 9.2	1.163	2.038	17.2	18.1
<b>36709</b>	2000 RO <sub>30</sub>		1 19.1 23°63	5°1/21.0	18		<b>443891</b>	2001 WQ <sub>55</sub>		1 19.1 58°55	7°5/16.0	18	
12 13	8 26.74	+ 8 52.0	1.633	2.412	17.4	18.4	12 13	8 34.13	+33 7.6	1.347	2.167	18.4	

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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>162850</b>	2001 <i>DV</i> <sub>34</sub>		1 19.1 46°93	1.3°/19.7	18		<b>289284</b>	2004 <i>XH</i> <sub>179</sub>		1 19.1 58°11	0.7°/19.4	18	
12 13	8 29.33	+15 16.6	1.282	2.092	19.6	19.0	12 13	8 29.01	+15 57.0	1.430	2.235	18.3	20.3
12 23	8 25.41	+15 37.1	1.228	2.113	15.3	18.8	12 23	8 25.10	+16 29.0	1.362	2.245	14.2	20.0
1 2	8 18.21	+16 12.9	1.194	2.135	10.2	18.6	1 2	8 18.06	+17 15.7	1.315	2.256	9.5	19.8
1 12	8 8.72	+16 59.9	1.183	2.158	4.6	18.3	1 12	8 8.73	+18 12.7	1.292	2.267	4.2	19.5
1 22	7 58.31	+17 51.8	1.198	2.181	1.9	18.2	1 22	7 58.33	+19 13.5	1.296	2.279	1.6	19.4
2 1	7 48.61	+18 42.3	1.240	2.204	7.0	18.6	2 1	7 48.40	+20 11.6	1.327	2.290	6.8	19.7
2 11	7 41.06	+19 26.3	1.307	2.228	11.9	18.9	2 11	7 40.37	+21 1.8	1.384	2.302	11.7	20.0
2 21	7 36.53	+20 1.4	1.396	2.252	16.0	19.3	2 21	7 35.19	+21 41.6	1.464	2.314	15.8	20.3
<b>267453</b>	2002 <i>DY</i> <sub>18</sub>		1 19.1 274°97	7.9°/14.7	18		<b>372133</b>	2008 <i>SE</i> <sub>236</sub>		1 19.2 213°87	18.9°/27.5	18	
12 13	8 33.30	+39 40.7	2.022	2.813	14.1	20.5	12 13	8 29.47	-16 53.0	1.314	1.982	25.9	21.4
12 23	8 28.44	+41 0.5	1.939	2.801	11.7	20.3	12 23	8 25.96	-18 57.6	1.244	1.980	24.0	21.2
1 2	8 20.36	+42 15.0	1.879	2.789	9.3	20.1	1 2	8 19.01	-20 26.8	1.187	1.978	22.0	21.0
1 12	8 9.76	+43 15.1	1.845	2.777	7.9	20.0	1 12	8 9.30	-21 8.9	1.145	1.975	20.2	20.9
1 22	7 57.82	+43 53.0	1.838	2.765	8.4	20.0	1 22	7 58.05	-20 55.7	1.120	1.972	19.1	20.8
2 1	7 46.12	+44 4.2	1.858	2.753	10.4	20.1	2 1	7 46.95	-19 45.4	1.114	1.968	19.1	20.8
2 11	7 36.21	+43 49.3	1.902	2.741	13.1	20.2	2 11	7 37.72	-17 45.4	1.126	1.965	20.1	20.8
2 21	7 29.19	+43 12.6	1.968	2.729	15.6	20.4	2 21	7 31.61	-15 9.9	1.156	1.961	22.0	20.9
<b>429924</b>	2012 <i>TR</i> <sub>223</sub>		1 19.1 175°95	3.8°/16.9	18		<b>26303</b>	1998 <i>SD</i> <sub>144</sub>		1 19.2 0°93	13.9°/26.7	18	
12 13	8 28.50	+31 6.9	2.527	3.317	11.6	21.7	12 13	8 24.44	-13 4.4	1.670	2.344	20.9	18.5
12 23	8 23.64	+31 54.0	2.444	3.318	9.1	21.6	12 23	8 21.24	-14 27.9	1.594	2.343	19.0	18.3
1 2	8 16.60	+32 40.4	2.387	3.319	6.4	21.4	1 2	8 15.42	-15 22.2	1.534	2.342	17.0	18.2
1 12	8 7.97	+33 20.8	2.357	3.319	4.2	21.2	1 12	8 7.60	-15 40.1	1.492	2.342	15.2	18.1
1 22	7 58.59	+33 51.0	2.357	3.319	4.2	21.2	1 22	7 58.77	-15 17.8	1.470	2.343	14.1	18.0
2 1	7 49.44	+34 8.0	2.387	3.320	6.5	21.4	2 1	7 50.13	-14 15.7	1.470	2.344	14.1	18.0
2 11	7 41.50	+34 11.0	2.444	3.320	9.2	21.6	2 11	7 42.91	-12 40.2	1.493	2.345	15.3	18.1
2 21	7 35.48	+34 1.5	2.526	3.319	11.7	21.7	2 21	7 38.03	-10 41.3	1.536	2.347	17.2	18.2
<b>377179</b>	2003 <i>US</i> <sub>135</sub>		1 19.1 67°44	8.6°/15.1	18		<b>334229</b>	2001 <i>TJ</i> <sub>60</sub>		1 19.2 82°19	2°0/20.3	18 R	
12 13	8 36.56	+43 43.3	2.033	2.813	14.4	20.6	12 13	8 25.49	+13 2.2	2.363	3.133	12.9	20.7
12 23	8 30.66	+44 55.3	1.980	2.829	12.1	20.5	12 23	8 21.11	+13 5.9	2.284	3.145	10.2	20.5
1 2	8 21.52	+45 56.2	1.950	2.845	9.9	20.4	1 2	8 14.82	+13 19.3	2.228	3.157	7.0	20.4
1 12	8 10.09	+46 37.3	1.946	2.862	8.7	20.3	1 12	8 7.20	+13 41.0	2.200	3.169	3.7	20.2
1 22	7 57.77	+46 52.7	1.967	2.878	9.0	20.4	1 22	7 58.97	+14 8.6	2.201	3.180	2.1	20.1
2 1	7 46.16	+46 40.2	2.015	2.895	10.6	20.5	2 1	7 51.01	+14 39.4	2.232	3.192	4.8	20.3
2 11	7 36.71	+46 2.9	2.088	2.911	12.7	20.7	2 11	7 44.15	+15 10.7	2.292	3.204	8.0	20.5
2 21	7 30.29	+45 6.6	2.181	2.928	14.7	20.9	2 21	7 38.99	+15 40.1	2.378	3.215	10.9	20.7
<b>221287</b>	2005 <i>UM</i> <sub>379</sub>		1 19.1 177°43	2.7°/20.5	18		<b>294207</b>	2007 <i>TL</i> <sub>435</sub>		1 19.2 15°31	1°7/20.0	18	
12 13	8 27.74	+11 28.6	2.190	2.955	14.0	21.4	12 13	8 23.70	+14 9.0	1.866	2.658	15.1	20.4
12 23	8 23.07	+11 27.9	2.100	2.956	11.1	21.2	12 23	8 20.32	+14 21.6	1.788	2.663	11.8	20.2
1 2	8 16.24	+11 38.6	2.033	2.957	7.8	20.9	1 2	8 14.60	+14 46.2	1.732	2.668	8.0	20.0
1 12	8 7.83	+11 59.8	1.992	2.958	4.4	20.7	1 12	8 7.18	+15 20.7	1.702	2.674	4.0	19.8
1 22	7 58.64	+12 29.4	1.981	2.958	2.7	20.6	1 22	7 58.97	+16 1.7	1.699	2.681	1.9	19.6
2 1	7 49.65	+13 4.2	2.000	2.958	5.4	20.8	2 1	7 51.03	+16 44.9	1.725	2.688	5.6	19.9
2 11	7 41.83	+13 41.0	2.047	2.958	8.9	21.0	2 11	7 44.44	+17 26.5	1.778	2.696	9.5	20.1
2 21	7 35.90	+14 16.9	2.120	2.957	12.1	21.2	2 21	7 39.94	+18 3.5	1.855	2.704	13.0	20.4
<b>500517</b>	2012 <i>TR</i> <sub>298</sub>		1 19.1 143°99	3.2°/21.2	17		<b>188530</b>	2004 <i>RU</i> <sub>155</sub>		1 19.2 145°94	1°6/19.8	18	
12 13	8 24.39	+ 8 10.6	2.741	3.488	11.9	22.1	12 13	8 28.16	+15 48.2	1.980	2.763	14.6	20.3
12 23	8 20.02	+ 8 5.0	2.652	3.494	9.6	22.0	12 23	8 23.65	+15 41.6	1.893	2.763	11.5	20.1
1 2	8 14.00	+ 8 10.3	2.587	3.499	7.0	21.8	1 2	8 16.75	+15 43.8	1.829	2.764	7.8	19.9
1 12	8 6.81	+ 8 26.1	2.549	3.505	4.4	21.6	1 12	8 8.10	+15 53.2	1.791	2.764	3.8	19.6
1 22	7 59.07	+ 8 51.0	2.540	3.510	3.2	21.6	1 22	7 58.61	+16 7.3	1.782	2.764	1.8	19.5
2 1	7 51.51	+ 9 22.9	2.562	3.515	4.8	21.7	2 1	7 49.38	+16 23.5	1.803	2.764	5.5	19.7
2 11	7 44.83	+ 9 59.0	2.613	3.519	7.4	21.9	2 11	7 41.49	+16 39.4	1.851	2.764	9.5	20.0
2 21	7 39.60	+10 36.6	2.691	3.524	9.9	22.0	2 21	7 35.74	+16 53.1	1.924	2.764	13.0	20.2
<b>494727</b>	2005 <i>TL</i> <sub>183</sub>		1 19.1 93°28	1.9°/18.0	18		<b>471176</b>	2010 <i>JW</i> <sub>151</sub>		1 19.2 234°60	6°7/22.9	17	
12 13	8 30.08	+22 0.4	1.970	2.763	14.4	21.0	12 13	8 24.13	- 2 2.3	2.676	3.375	13.2	21.6
12 23	8 25.14	+23 3.3	1.903	2.782	11.0	20.8	12 23	8 19.95	- 2 44.5	2.577	3.369	11.4	21.5
1 2	8 17.70	+24 12.9	1.860	2.801	7.2	20.6	1 2	8 14.05	- 3 11.7	2.500	3.362	9.4	21.3
1 12	8 8.46	+25 23.4	1.844	2.819	3.3	20.4	1 12	8 6.89	- 3 22.0	2.448	3.356	7.6	21.2
1 22	7 58.42	+26 28.5	1.859	2.837	2.6	20.4	1 22	7 59.09	- 3 14.5	2.423	3.349	6.7	21.2
2 1	7 48.76	+27 23.1	1.903	2.855	6.2	20.7	2 1	7 51.37	- 2 50.1	2.427	3.342	7.3	21.2
2 11	7 40.60	+28 4.6	1.975	2.873	9.9	20.9	2 11	7 44.51	- 2 11.7	2.458	3.335	9.0	21.3
2 21	7 34.71	+28 32.6	2.072	2.890	13.0	21.1	2 21	7 39.10	- 1 23.1	2.514	3.328	11.1	21.4
<b>29157</b>	Higashinohon		1 19.1 351°84	5.6°/17.1	18		<b>199941</b>	2007 <i>GD</i> <sub>61</sub>		1 19.2 273°50	1°0/19.5	18	
12 13	8 29.87	+28 55.6	1.231	2.062	19.1	17.4	12 13	8 30.75	+17 32.3	1.482	2.284	17.8	20.5
12 23	8 26.80	+29 56.2	1.160	2.058	15.0	17.1	12 23	8 26.61	+17 31.6	1.394	2.276	14.1	20.2
1 2	8 19.77	+31 0.5	1.110	2.054	10.4	16.9	1 2	8 19.24	+17 41.4	1.327	2.268	9.5	19.9
1 12	8 9.63	+31 58.4	1.082	2.052	6.4	16.6	1 12	8 9.32	+17 59.2	1.285	2.260	4.3	19.6
1 22	7 57.93	+32 39.8	1.080	2.050	6.3	16.6	1 22	7 58.08	+18 21.0	1.269	2.252	1.7	19.4
2 1	7 46.72	+32 57.9	1.102	2.049	10.3	16.8	2 1	7 47.08	+18 42.5	1.281	2.244	7.0	19.7
2 11	7 37.96	+32 52.2	1.146	2.049	15.0	17.1	2 11	7 37.90	+19 0.5	1.319	2.236	12.1	20.0
2 21	7 32.88	+32 26.5	1.211	2.049	19.1	17.3	2 21	7 31.63	+19 13.2	1.378	2.228	16.6	20.2
<b>205351</b>	2000 <i>WP</i> <sub>103</sub>		1 19.1 99°86	3.7°/20.8	18		<b>241578</b>	1995 <i>SH</i> <sub>50</sub>		1 19.2 250°80	7°0/23.4	17	
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1 19.2

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>453343</b>	2008 <i>YL</i> <sub>106</sub>		1 19.2 309°58	1.5/18.5	18		<b>290037</b>	2005 <i>QU</i> <sub>32</sub>		1 19.2 147°06	0.8/19.6	18	
12 13	8 27.63	+20 35.9	1.447	2.262	17.5	21.2	12 13	8 30.10	+16 48.8	2.341	3.113	13.0	22.3
12 23	8 24.47	+21 19.9	1.358	2.249	13.7	20.9	12 23	8 24.72	+17 0.5	2.259	3.124	10.1	22.1
1 2	8 18.00	+22 16.1	1.291	2.237	9.1	20.6	1 2	8 17.24	+17 19.7	2.200	3.134	6.7	21.9
1 12	8 8.88	+23 18.9	1.248	2.224	4.0	20.3	1 12	8 8.28	+17 43.9	2.170	3.143	3.0	21.7
1 22	7 58.27	+24 20.7	1.231	2.212	2.5	20.1	1 22	7 58.64	+18 10.4	2.169	3.152	1.2	21.5
2 1	7 47.79	+25 14.2	1.241	2.201	7.7	20.4	2 1	7 49.28	+18 36.2	2.200	3.160	4.8	21.8
2 11	7 39.10	+25 54.6	1.276	2.189	12.8	20.7	2 11	7 41.12	+18 59.0	2.261	3.168	8.3	22.1
2 21	7 33.40	+26 20.5	1.333	2.179	17.3	20.9	2 21	7 34.83	+19 17.6	2.347	3.174	11.4	22.3
<b>424685</b>	2008 <i>RQ</i> <sub>113</sub>		1 19.2 135°04	0°1/19.2	18		<b>465681</b>	2009 <i>SD</i> <sub>205</sub>		1 19.2 131°62	3°2/17.6	18	
12 13	8 28.05	+19 4.3	2.223	3.008	13.2	21.9	12 13	8 30.77	+27 54.8	2.066	2.862	13.7	21.9
12 23	8 23.32	+19 17.6	2.140	3.013	10.2	21.7	12 23	8 25.76	+28 34.0	1.988	2.867	10.6	21.8
1 2	8 16.40	+19 37.3	2.079	3.018	6.7	21.5	1 2	8 18.18	+29 14.5	1.933	2.871	7.2	21.5
1 12	8 7.92	+20 0.7	2.047	3.022	2.9	21.3	1 12	8 8.75	+29 50.7	1.906	2.876	4.0	21.4
1 22	7 58.72	+20 24.6	2.044	3.027	1.1	21.1	1 22	7 58.45	+30 17.5	1.908	2.880	3.7	21.3
2 1	7 49.78	+20 46.1	2.071	3.031	5.1	21.4	2 1	7 48.50	+30 31.8	1.939	2.885	6.7	21.5
2 11	7 42.08	+21 3.2	2.127	3.035	8.7	21.6	2 11	7 40.04	+30 32.6	1.998	2.889	10.1	21.8
2 21	7 36.32	+21 14.7	2.208	3.039	11.9	21.9	2 21	7 33.90	+30 21.3	2.080	2.893	13.2	22.0
<b>27994</b>	1997 <i>WM</i> <sub>1</sub>		1 19.2 33°64	1°9/19.9	18		<b>194019</b>	2001 <i>SQ</i> <sub>34</sub>		1 19.2 55°32	4°6/17.7	18	
12 13	8 27.33	+15 22.1	2.084	2.865	14.1	17.9	12 13	8 34.28	+28 7.6	1.271	2.092	19.2	20.1
12 23	8 22.83	+15 2.4	2.001	2.869	11.1	17.7	12 23	8 29.69	+28 55.9	1.217	2.109	14.9	19.9
1 2	8 16.11	+14 50.6	1.940	2.873	7.6	17.5	1 2	8 21.29	+29 45.9	1.183	2.126	10.1	19.7
1 12	8 7.80	+14 45.7	1.907	2.877	3.8	17.3	1 12	8 10.15	+30 28.6	1.172	2.143	5.7	19.5
1 22	7 58.78	+14 46.0	1.902	2.882	2.1	17.1	1 22	7 57.93	+30 55.8	1.188	2.161	5.2	19.5
2 1	7 50.05	+14 49.9	1.927	2.887	5.3	17.4	2 1	7 46.57	+31 3.1	1.229	2.178	9.2	19.8
2 11	7 42.61	+14 55.3	1.979	2.892	9.0	17.6	2 11	7 37.78	+30 51.2	1.294	2.197	13.6	20.1
2 21	7 37.16	+15 0.6	2.057	2.897	12.2	17.8	2 21	7 32.51	+30 24.2	1.380	2.215	17.5	20.3
<b>414852</b>	2010 <i>VS</i> <sub>70</sub>		1 19.2 37°90	3°7/17.9	18		<b>250204</b>	2002 <i>UW</i> <sub>77</sub>		1 19.2 108°56	2°0/18.2	18	
12 13	8 31.07	+27 27.1	1.430	2.248	17.6	20.5	12 13	8 33.05	+23 56.2	2.024	2.813	14.2	22.3
12 23	8 26.78	+28 0.8	1.372	2.263	13.6	20.2	12 23	8 27.31	+24 36.8	1.958	2.834	10.9	22.1
1 2	8 19.16	+28 36.1	1.335	2.279	9.1	20.0	1 2	8 19.07	+25 21.2	1.916	2.855	7.1	21.9
1 12	8 9.17	+29 5.8	1.323	2.295	4.8	19.8	1 12	8 9.07	+26 4.2	1.902	2.876	3.3	21.7
1 22	7 58.26	+29 23.8	1.337	2.312	4.3	19.8	1 22	7 58.35	+26 40.9	1.918	2.896	2.6	21.7
2 1	7 48.07	+29 26.6	1.378	2.330	8.1	20.1	2 1	7 48.10	+27 7.5	1.963	2.915	6.1	22.0
2 11	7 40.07	+29 14.2	1.444	2.348	12.3	20.4	2 11	7 39.43	+27 22.8	2.037	2.934	9.7	22.2
2 21	7 35.14	+28 49.5	1.531	2.367	16.0	20.7	2 21	7 33.07	+27 27.5	2.136	2.952	12.8	22.5
<b>156461</b>	2002 <i>BM</i> <sub>29</sub>		1 19.2 71°18	3°9/16.9	18		<b>492932</b>	2014 <i>RQ</i> <sub>46</sub>		1 19.2 125°77	2°3/20.3	18	
12 13	8 30.21	+26 38.5	1.812	2.616	15.0	19.5	12 13	8 29.14	+12 13.0	2.012	2.783	14.9	21.9
12 23	8 25.61	+27 58.6	1.749	2.633	11.6	19.3	12 23	8 24.28	+12 21.6	1.934	2.794	11.8	21.7
1 2	8 18.21	+29 22.7	1.710	2.650	7.8	19.1	1 2	8 17.10	+12 42.5	1.877	2.805	8.1	21.5
1 12	8 8.77	+30 42.8	1.698	2.667	4.5	19.0	1 12	8 8.26	+13 14.1	1.848	2.816	4.3	21.3
1 22	7 58.40	+31 51.3	1.714	2.684	4.5	19.0	1 22	7 58.66	+13 53.1	1.847	2.826	2.4	21.2
2 1	7 48.45	+32 42.7	1.760	2.701	7.7	19.2	2 1	7 49.36	+14 35.8	1.876	2.836	5.5	21.4
2 11	7 40.18	+33 15.3	1.831	2.718	11.2	19.5	2 11	7 41.41	+15 18.5	1.934	2.846	9.2	21.6
2 21	7 34.46	+33 30.3	1.926	2.734	14.3	19.7	2 21	7 35.53	+15 58.1	2.017	2.855	12.5	21.8
<b>183976</b>	2004 <i>ER</i> <sub>19</sub>		1 19.2 324°44	7°7/23.3	18		<b>90029</b>	2002 <i>UY</i> <sub>21</sub>		1 19.2 49°74	0°2/19.1	18	
12 13	8 24.73	- 0 27.8	1.696	2.439	18.3	20.3	12 13	8 26.78	+19 17.9	1.978	2.772	14.3	19.7
12 23	8 21.42	- 0 43.3	1.608	2.433	15.5	20.1	12 23	8 22.52	+19 41.0	1.909	2.788	11.0	19.5
1 2	8 15.55	- 0 34.4	1.538	2.428	12.4	19.9	1 2	8 15.95	+20 11.5	1.863	2.803	7.2	19.3
1 12	8 7.70	+ 0 1.5	1.490	2.424	9.3	19.7	1 12	8 7.76	+20 45.8	1.843	2.819	3.0	19.1
1 22	7 58.81	+ 1 3.7	1.468	2.419	7.7	19.6	1 22	7 58.87	+21 19.9	1.853	2.836	1.3	19.0
2 1	7 50.05	+ 2 28.1	1.472	2.415	8.7	19.6	2 1	7 50.36	+21 50.2	1.892	2.852	5.4	19.3
2 11	7 42.66	+ 4 7.2	1.503	2.411	11.6	19.8	2 11	7 43.26	+22 14.3	1.958	2.869	9.2	19.6
2 21	7 37.53	+ 5 52.2	1.557	2.407	15.0	20.0	2 21	7 38.26	+22 31.1	2.049	2.885	12.4	19.8
<b>278592</b>	2008 <i>NG</i> <sub>5</sub>		1 19.2 114°61	3°6/17.5	18		<b>369306</b>	2009 <i>SS</i> <sub>45</sub>		1 19.2 88°75	0°6/19.4	18	
12 13	8 37.61	+27 7.4	1.829	2.619	15.4	21.2	12 13	8 29.18	+18 10.2	1.965	2.752	14.6	21.8
12 23	8 31.14	+28 8.9	1.768	2.644	11.9	21.1	12 23	8 24.41	+18 12.8	1.887	2.761	11.3	21.6
1 2	8 21.73	+29 12.4	1.731	2.668	8.0	20.9	1 2	8 17.22	+18 22.7	1.832	2.770	7.5	21.4
1 12	8 10.22	+30 10.4	1.722	2.691	4.4	20.7	1 12	8 8.32	+18 37.5	1.804	2.779	3.3	21.1
1 22	7 57.87	+30 56.2	1.742	2.713	4.2	20.7	1 22	7 58.65	+18 54.1	1.805	2.788	1.3	21.0
2 1	7 46.12	+31 25.4	1.792	2.734	7.4	21.0	2 1	7 49.34	+19 9.6	1.835	2.797	5.5	21.3
2 11	7 36.28	+31 37.6	1.869	2.755	11.0	21.2	2 11	7 41.46	+19 22.0	1.894	2.805	9.4	21.5
2 21	7 29.20	+31 35.1	1.970	2.774	14.1	21.5	2 21	7 35.76	+19 30.1	1.976	2.814	12.8	21.8
<b>264047</b>	2009 <i>RO</i> <sub>30</sub>		1 19.2 319°97	0°9/18.8	18		<b>417853</b>	2007 <i>HS</i> <sub>96</sub>		1 19.2 136°15	6°1/15.4	18	
12 13	8 29.12	+22 1.5	1.867	2.665	14.8	21.1	12 13	8 33.34	+37 53.4	2.419	3.201	12.3	21.4
12 23	8 24.68	+22 14.4	1.782	2.663	11.5	20.9	12 23	8 27.67	+39 5.3	2.351	3.211	10.0	21.2
1 2	8 17.58	+22 32.6	1.718	2.660	7.6	20.6	1 2	8 19.41	+40 12.0	2.308	3.220	7.7	21.1
1 12	8 8.52	+22 52.3	1.682	2.658	3.3	20.4	1 12	8 9.27	+41 6.6	2.292	3.230	6.3	21.0
1 22	7 58.51	+23 9.6	1.674	2.655	1.8	20.3	1 22	7 58.27	+41 43.4	2.305	3.239	6.6	21.1
2 1	7 48.79	+23 21.2	1.694	2.653	6.1	20.5	2 1	7 47.61	+41 59.5	2.347	3.247	8.3	21.2
2 11	7 40.57	+23 25.5	1.742	2.651	10.2	20.8	2 11	7 38.46	+41 55.4	2.415	3.255	10.6	21.3
2 21	7 34.73	+23 22.2	1.814	2.649	13.9	21.0	2 21	7 31.64	+41 34.1	2.507	3.263	12.8	21.5
<b>168911</b>	2000 <i>XM</i> <sub>53</sub>		1 19.2 139°69	2°5/20.2	18		<b>496865</b>	2000 <i>DP</i> <sub>66</sub>		1 19.2 258°98	4°5/16.9	17	
12 13	8 31.84	+											

EPHEMERIDES

1 19.2

1 19.2

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>235697</b>	2004 <i>SP</i> <sub>51</sub>		1 19.2 151°19	1.2°/18.6	18		<b>488066</b>	2015 <i>UD</i> <sub>74</sub>		1 19.2 110°75	4°8'/17.4	18	
12 13	8 34.07	+21 52.4	1.987	2.771	14.6	21.6	12 13	8 38.12	+30 51.8	1.661	2.459	16.4	21.2
12 23	8 28.24	+22 21.1	1.908	2.782	11.3	21.4	12 23	8 31.93	+31 37.0	1.598	2.476	12.8	21.0
1 2	8 19.79	+22 55.3	1.852	2.791	7.4	21.2	1 2	8 22.45	+32 20.6	1.558	2.493	8.9	20.8
1 12	8 9.44	+23 30.7	1.825	2.800	3.2	21.0	1 12	8 10.61	+32 54.5	1.544	2.509	5.5	20.7
1 22	7 58.22	+24 2.4	1.827	2.808	1.9	20.9	1 22	7 57.83	+33 12.3	1.557	2.524	5.3	20.7
2 1	7 47.37	+24 26.7	1.859	2.815	6.0	21.2	2 1	7 45.76	+33 10.8	1.600	2.539	8.4	20.9
2 11	7 38.07	+24 41.9	1.920	2.822	9.9	21.4	2 11	7 35.89	+32 51.2	1.668	2.554	12.1	21.2
2 21	7 31.14	+24 48.0	2.006	2.827	13.3	21.6	2 21	7 29.10	+32 17.6	1.759	2.568	15.4	21.4
<b>411348</b>	2010 <i>UA</i> <sub>75</sub>		1 19.2 44°84	1°4'/19.6	18		<b>258354</b>	2001 <i>WQ</i> <sub>8</sub>		1 19.2 264°30	4°7'/16.4	18	
12 13	8 30.82	+17 51.4	1.606	2.403	16.9	20.3	12 13	8 30.42	+29 42.3	2.025	2.824	13.8	20.1
12 23	8 26.12	+17 28.3	1.533	2.412	13.2	20.1	12 23	8 25.99	+30 57.8	1.929	2.808	10.9	19.9
1 2	8 18.55	+17 13.0	1.482	2.421	8.9	19.9	1 2	8 18.71	+32 17.0	1.857	2.792	7.7	19.6
1 12	8 8.93	+17 3.6	1.456	2.430	4.1	19.6	1 12	8 9.16	+33 32.2	1.812	2.775	5.1	19.4
1 22	7 58.43	+16 57.9	1.458	2.440	1.9	19.5	1 22	7 58.31	+34 35.9	1.796	2.758	5.3	19.4
2 1	7 48.44	+16 54.0	1.488	2.450	6.3	19.8	2 1	7 47.47	+35 22.2	1.809	2.741	8.2	19.5
2 11	7 40.23	+16 50.0	1.544	2.460	10.8	20.1	2 11	7 38.03	+35 48.6	1.848	2.724	11.7	19.7
2 21	7 34.65	+16 45.0	1.624	2.471	14.6	20.3	2 21	7 31.04	+35 56.3	1.911	2.706	14.8	19.9
<b>18932</b>	Robinhood		1 19.2 154°58	1°3'/18.5	18		<b>174232</b>	2002 <i>RH</i> <sub>73</sub>		1 19.2 118°51	2°6'/20.4	18	
12 13	8 33.74	+22 17.2	2.060	2.843	14.1	19.3	12 13	8 29.14	+11 51.3	1.869	2.643	15.7	20.9
12 23	8 27.92	+22 48.7	1.980	2.853	10.9	19.1	12 23	8 24.48	+11 58.3	1.790	2.653	12.5	20.7
1 2	8 19.55	+23 25.4	1.923	2.862	7.2	18.9	1 2	8 17.34	+12 18.8	1.734	2.663	8.6	20.5
1 12	8 9.33	+24 2.8	1.895	2.870	3.1	18.7	1 12	8 8.42	+12 51.2	1.704	2.672	4.6	20.3
1 22	7 58.26	+24 36.1	1.897	2.877	2.0	18.6	1 22	7 58.67	+13 32.2	1.702	2.681	2.7	20.2
2 1	7 47.53	+25 1.8	1.929	2.884	5.9	18.9	2 1	7 49.24	+14 17.6	1.730	2.690	5.8	20.4
2 11	7 38.29	+25 17.9	1.989	2.889	9.7	19.1	2 11	7 41.23	+15 3.3	1.785	2.699	9.7	20.7
2 21	7 31.34	+25 24.7	2.075	2.894	13.0	19.4	2 21	7 35.45	+15 46.0	1.865	2.707	13.3	20.9
<b>335909</b>	2007 <i>RH</i> <sub>315</sub>		1 19.2 78°81	4°1'/21.3	18		<b>273011</b>	2006 <i>DL</i> <sub>82</sub>		1 19.2 14°70	0°9'/19.6	18	
12 13	8 25.22	+7 28.9	2.264	3.018	13.9	20.9	12 13	8 26.72	+16 33.8	2.011	2.798	14.3	20.7
12 23	8 21.05	+7 12.2	2.178	3.023	11.3	20.7	12 23	8 22.58	+16 46.5	1.925	2.798	11.2	20.5
1 2	8 14.89	+7 8.4	2.115	3.027	8.3	20.5	1 2	8 16.10	+17 8.5	1.862	2.799	7.5	20.2
1 12	8 7.31	+7 17.7	2.078	3.032	5.4	20.3	1 12	8 7.90	+17 37.5	1.825	2.800	3.4	20.0
1 22	7 59.07	+7 39.1	2.069	3.036	4.1	20.3	1 22	7 58.87	+18 9.9	1.818	2.800	1.4	19.8
2 1	7 51.03	+8 10.1	2.089	3.041	5.8	20.4	2 1	7 50.07	+18 42.3	1.839	2.801	5.4	20.1
2 11	7 44.08	+8 47.4	2.137	3.045	8.7	20.6	2 11	7 42.56	+19 11.5	1.889	2.802	9.3	20.3
2 21	7 38.87	+9 27.5	2.211	3.050	11.6	20.8	2 21	7 37.12	+19 35.7	1.963	2.803	12.8	20.6
<b>317445</b>	2002 <i>QG</i> <sub>112</sub>		1 19.2 66°23	2°6'/20.6	18		<b>48085</b>	2001 <i>FU</i> <sub>41</sub>		1 19.2 218°73	0°6'/18.9	18	
12 13	8 25.98	+11 8.3	2.072	2.844	14.5	20.7	12 13	8 30.55	+20 21.1	1.986	2.775	14.4	19.9
12 23	8 21.75	+11 15.5	1.998	2.858	11.5	20.5	12 23	8 25.71	+20 45.4	1.893	2.769	11.2	19.7
1 2	8 15.39	+11 35.5	1.947	2.873	8.0	20.3	1 2	8 18.29	+21 17.1	1.823	2.762	7.4	19.4
1 12	8 7.52	+12 6.6	1.922	2.888	4.4	20.1	1 12	8 8.89	+21 52.2	1.779	2.755	3.2	19.2
1 22	7 58.99	+12 46.1	1.925	2.903	2.7	20.0	1 22	7 58.47	+22 26.4	1.765	2.748	1.5	19.0
2 1	7 50.78	+13 30.3	1.958	2.918	5.3	20.2	2 1	7 48.22	+22 55.8	1.781	2.740	5.9	19.3
2 11	7 43.81	+14 15.5	2.019	2.933	8.8	20.5	2 11	7 39.34	+23 17.6	1.825	2.731	10.0	19.5
2 21	7 38.77	+14 58.3	2.105	2.948	11.9	20.7	2 21	7 32.73	+23 31.1	1.893	2.722	13.6	19.7
<b>338876</b>	2004 <i>BB</i> <sub>57</sub>		1 19.2 30°29	4°2'/17.9	18		<b>121173</b>	1999 <i>KE</i> <sub>13</sub>		1 19.2 244°96	4°7'/16.3	18	
12 13	8 32.63	+27 0.7	1.158	1.987	20.1	20.1	12 13	8 30.57	+30 20.8	2.121	2.917	13.4	20.2
12 23	8 28.90	+27 39.5	1.095	1.993	15.7	19.9	12 23	8 25.92	+31 36.5	2.029	2.906	10.5	20.0
1 2	8 21.09	+28 22.3	1.052	1.999	10.6	19.6	1 2	8 18.56	+32 54.5	1.962	2.895	7.5	19.8
1 12	8 10.20	+28 59.9	1.032	2.005	5.6	19.3	1 12	8 9.06	+34 7.6	1.923	2.884	5.0	19.6
1 22	7 57.93	+29 23.9	1.036	2.012	4.9	19.3	1 22	7 58.38	+35 8.8	1.912	2.872	5.3	19.6
2 1	7 46.40	+29 28.9	1.065	2.020	9.5	19.6	2 1	7 47.77	+35 52.5	1.931	2.860	8.0	19.8
2 11	7 37.52	+29 15.1	1.118	2.028	14.5	19.9	2 11	7 38.54	+36 16.8	1.977	2.848	11.2	19.9
2 21	7 32.42	+28 46.3	1.190	2.037	18.9	20.2	2 21	7 31.66	+36 23.2	2.045	2.836	14.2	20.1
<b>455779</b>	2005 <i>QX</i> <sub>19</sub>		1 19.2 96°74	1°0'/18.7	18		<b>377072</b>	2002 <i>TA</i> <sub>382</sub>		1 19.2 277°13	6°2'/21.9	17	
12 13	8 31.70	+21 41.6	2.009	2.797	14.3	21.9	12 13	8 25.73	+2 53.5	2.266	2.999	14.5	20.5
12 23	8 26.23	+22 5.6	1.942	2.818	11.0	21.7	12 23	8 21.54	+2 6.4	2.168	2.990	12.2	20.3
1 2	8 18.34	+22 34.7	1.899	2.839	7.2	21.5	1 2	8 15.31	+1 33.3	2.091	2.981	9.6	20.1
1 12	8 8.77	+23 4.7	1.884	2.859	3.1	21.3	1 12	8 7.55	+1 16.3	2.040	2.972	7.2	19.9
1 22	7 58.53	+23 31.6	1.897	2.879	1.7	21.2	1 22	7 59.00	+1 16.1	2.016	2.964	6.2	19.9
2 1	7 48.75	+23 52.0	1.941	2.899	5.6	21.5	2 1	7 50.56	+1 31.8	2.020	2.955	7.3	19.9
2 11	7 40.50	+24 4.6	2.014	2.918	9.3	21.8	2 11	7 43.15	+2 0.5	2.052	2.946	9.7	20.0
2 21	7 34.50	+24 9.2	2.110	2.936	12.5	22.0	2 21	7 37.47	+2 38.3	2.108	2.937	12.4	20.2
<b>279899</b>	2001 <i>QY</i> <sub>186</sub>		1 19.2 87°60	4°4'/21.3	18		<b>131544</b>	2001 <i>UD</i> <sub>177</sub>		1 19.2 147°37	4°8'/22.5	18	
12 13	8 28.19	+7 8.0	2.457	3.198	13.3	20.0	12 13	8 24.68	+1 15.8	3.108	3.814	11.4	21.3
12 23	8 22.99	+6 26.8	2.383	3.217	10.8	19.9	12 23	8 20.05	+0 55.8	3.020	3.824	9.6	21.1
1 2	8 15.97	+5 56.7	2.332	3.237	8.0	19.8	1 2	8 13.97	+0 48.3	2.955	3.833	7.5	21.0
1 12	8 7.71	+5 38.6	2.309	3.256	5.5	19.6	1 12	8 6.87	+0 53.9	2.916	3.842	5.7	20.9
1 22	7 58.94	+5 32.1	2.314	3.275	4.4	19.6	1 22	7 59.31	+1 12.1	2.907	3.851	4.8	20.9
2 1	7 50.50	+5 36.1	2.350	3.294	5.8	19.7	2 1	7 51.90	+1 41.5	2.928	3.859	5.5	20.9
2 11	7 43.17	+5 48.3	2.414	3.313	8.3	19.9	2 11	7 45.28	+2 19.5	2.979	3.867	7.3	21.0
2 21	7 37.51	+6 5.9	2.505	3.332	10.8	20.1	2 21	7 39.92	+3 2.9	3.056	3.874	9.3	21.2
<b>333708</b>	2008 <i>YZ</i> <sub>58</sub>		1 19.2 74°99	1°7'/19.7	18		<b>400998</b>	2011 <i>QE</i> <sub>10</sub>		1 19.2 243°59	1°1'/18.8	18	
12 13	8 32.17	+17 33.7	2.229	3.001	13.6	19.9							

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>441861</b>	2009 <i>WF</i> <sub>219</sub>		1 19.2 72°56'	3°1/18.0	17		<b>406145</b>	2006 <i>VP</i> <sub>130</sub>		1 19.2 102°99'	2°5/17.9	18	
12 13	8 34.73	+23 56.8	1.267	2.084	19.5	21.5	12 13	8 33.50	+25 6.9	2.055	2.843	14.0	21.6
12 23	8 29.95	+24 52.2	1.213	2.104	15.0	21.3	12 23	8 27.66	+25 56.5	1.993	2.868	10.8	21.5
1 2	8 21.45	+25 54.6	1.179	2.124	9.9	21.0	1 2	8 19.33	+26 49.0	1.954	2.893	7.1	21.3
1 12	8 10.27	+26 55.4	1.169	2.144	4.7	20.8	1 12	8 9.26	+27 38.9	1.944	2.916	3.5	21.1
1 22	7 58.00	+27 45.6	1.186	2.164	3.9	20.8	1 22	7 58.48	+28 20.6	1.964	2.940	3.0	21.1
2 1	7 46.53	+28 19.2	1.229	2.183	8.5	21.1	2 1	7 48.19	+28 50.7	2.014	2.962	6.3	21.4
2 11	7 37.54	+28 34.7	1.296	2.203	13.2	21.4	2 11	7 39.48	+29 7.8	2.092	2.984	9.7	21.6
2 21	7 32.01	+28 34.4	1.385	2.223	17.2	21.8	2 21	7 33.09	+29 13.1	2.194	3.005	12.7	21.8
<b>488138</b>	2015 <i>VH</i> <sub>129</sub>		1 19.2 104°62'	1°3/19.7	18		<b>424314</b>	2007 <i>TP</i> <sub>372</sub>		1 19.2 52°27'	5°0/17.4	18	
12 13	8 31.63	+15 33.1	1.577	2.368	17.4	21.7	12 13	8 34.33	+34 32.3	1.996	2.789	14.2	20.4
12 23	8 26.85	+15 46.4	1.505	2.381	13.6	21.5	12 23	8 28.44	+34 57.4	1.939	2.811	11.2	20.3
1 2	8 19.12	+16 12.3	1.455	2.392	9.1	21.2	1 2	8 19.84	+35 17.0	1.905	2.833	8.0	20.1
1 12	8 9.23	+16 47.6	1.430	2.404	4.2	21.0	1 12	8 9.44	+35 25.2	1.898	2.856	5.5	20.0
1 22	7 58.39	+17 27.6	1.433	2.415	1.8	20.8	1 22	7 58.44	+35 17.8	1.919	2.878	5.3	20.0
2 1	7 47.99	+18 7.6	1.464	2.427	6.4	21.1	2 1	7 48.15	+34 53.8	1.969	2.901	7.6	20.2
2 11	7 39.39	+18 43.5	1.522	2.437	11.0	21.4	2 11	7 39.72	+34 14.9	2.045	2.924	10.5	20.5
2 21	7 33.48	+19 13.0	1.603	2.448	14.9	21.7	2 21	7 33.86	+33 25.1	2.146	2.947	13.2	20.7
<b>81020</b>	2000 <i>EJ</i> <sub>41</sub>		1 19.2 310°75'	8°2/15.9	18		<b>15992</b>	<i>Cynthia</i>		1 19.2 261°36'	1°2/18.8	18	
12 13	8 34.89	+38 25.4	1.649	2.452	16.3	18.6	12 13	8 33.33	+23 0.2	1.572	2.375	16.9	18.0
12 23	8 30.21	+39 29.1	1.571	2.443	13.4	18.4	12 23	8 28.54	+23 3.3	1.485	2.368	13.2	17.7
1 2	8 21.81	+40 26.6	1.515	2.435	10.4	18.2	1 2	8 20.50	+23 11.0	1.419	2.361	8.8	17.4
1 12	8 10.53	+41 7.8	1.483	2.426	8.4	18.1	1 12	8 9.96	+23 19.1	1.379	2.354	3.8	17.1
1 22	7 57.84	+41 24.0	1.476	2.418	8.7	18.1	1 22	7 58.16	+23 22.9	1.365	2.347	2.1	17.0
2 1	7 45.61	+41 11.2	1.496	2.410	11.1	18.2	2 1	7 46.69	+23 19.3	1.380	2.340	7.1	17.3
2 11	7 35.64	+40 31.3	1.540	2.403	14.3	18.3	2 11	7 37.09	+23 7.4	1.422	2.333	11.9	17.5
2 21	7 29.07	+39 30.3	1.604	2.396	17.4	18.5	2 21	7 30.44	+22 48.1	1.486	2.326	16.1	17.8
<b>348579</b>	2005 <i>WY</i> <sub>85</sub>		1 19.2 129°05'	1°7/18.5	17		<b>207478</b>	2006 <i>HD</i> <sub>25</sub>		1 19.2 257°17'	1°9/18.4	18	
12 13	8 34.78	+22 10.1	1.744	2.537	16.0	22.0	12 13	8 31.35	+22 49.3	1.726	2.527	15.8	21.0
12 23	8 29.11	+22 51.1	1.674	2.552	12.3	21.8	12 23	8 26.92	+23 25.1	1.631	2.513	12.3	20.7
1 2	8 20.53	+23 38.7	1.626	2.566	8.1	21.6	1 2	8 19.45	+24 8.4	1.557	2.499	8.2	20.4
1 12	8 9.82	+24 27.2	1.605	2.580	3.6	21.3	1 12	8 9.55	+24 53.8	1.509	2.485	3.7	20.1
1 22	7 58.17	+25 10.5	1.613	2.593	2.4	21.3	1 22	7 58.31	+25 35.3	1.490	2.470	2.7	20.0
2 1	7 46.99	+25 44.0	1.650	2.606	6.7	21.6	2 1	7 47.17	+26 7.5	1.499	2.455	7.1	20.3
2 11	7 37.61	+26 5.4	1.715	2.617	10.8	21.8	2 11	7 37.62	+26 27.5	1.535	2.440	11.7	20.5
2 21	7 30.91	+26 15.3	1.804	2.628	14.4	22.1	2 21	7 30.74	+26 35.1	1.593	2.424	15.7	20.7
<b>417605</b>	2006 <i>VH</i> <sub>140</sub>		1 19.2 121°85'	4°8/21.2	18		<b>142098</b>	2002 <i>QU</i> <sub>63</sub>		1 19.2 205°89'	1°0/18.8	18	
12 13	8 29.45	+7 33.2	1.984	2.739	15.6	21.5	12 13	8 31.82	+21 51.5	2.098	2.883	13.9	21.6
12 23	8 24.52	+7 0.6	1.904	2.748	12.7	21.3	12 23	8 26.57	+22 12.3	2.004	2.878	10.8	21.4
1 2	8 17.29	+6 41.8	1.846	2.758	9.4	21.2	1 2	8 18.80	+22 38.4	1.934	2.873	7.1	21.1
1 12	8 8.39	+6 37.6	1.814	2.767	6.2	21.0	1 12	8 9.13	+23 6.1	1.892	2.867	3.1	20.9
1 22	7 58.74	+6 47.1	1.810	2.776	4.8	20.9	1 22	7 58.51	+23 31.2	1.879	2.861	1.7	20.8
2 1	7 49.41	+7 8.3	1.834	2.784	6.6	21.0	2 1	7 48.09	+23 50.3	1.897	2.854	5.8	21.0
2 11	7 41.41	+7 37.6	1.887	2.792	9.8	21.2	2 11	7 39.02	+24 1.5	1.943	2.847	9.7	21.2
2 21	7 35.48	+8 11.4	1.963	2.800	12.9	21.5	2 21	7 32.15	+24 4.7	2.014	2.838	13.1	21.5
<b>2933</b>	<i>Amber</i>		1 19.2 128°69'	0°2/19.3	18		<b>426627</b>	2013 <i>SW</i> <sub>61</sub>		1 19.2 91°38'	1°0/18.7	18	
12 13	8 28.34	+17 1.3	1.889	2.678	15.0	16.2	12 13	8 28.80	+21 59.3	2.093	2.885	13.7	21.1
12 23	8 24.00	+17 35.7	1.807	2.682	11.7	15.9	12 23	8 24.08	+22 22.8	2.016	2.894	10.5	20.9
1 2	8 17.14	+18 21.1	1.747	2.686	7.7	15.7	1 2	8 17.03	+22 51.3	1.963	2.903	6.9	20.7
1 12	8 8.39	+19 13.7	1.715	2.690	3.4	15.4	1 12	8 8.32	+23 21.0	1.937	2.912	3.0	20.5
1 22	7 58.73	+20 8.5	1.711	2.694	1.3	15.3	1 22	7 58.86	+23 48.0	1.940	2.921	1.7	20.4
2 1	7 49.31	+21 0.5	1.736	2.697	5.8	15.6	2 1	7 49.73	+24 8.9	1.973	2.930	5.5	20.7
2 11	7 41.30	+21 45.9	1.789	2.700	9.9	15.9	2 11	7 41.97	+24 22.2	2.034	2.939	9.2	20.9
2 21	7 35.54	+22 22.5	1.867	2.704	13.5	16.1	2 21	7 36.30	+24 27.5	2.119	2.948	12.4	21.1
<b>383653</b>	2007 <i>TK</i> <sub>46</sub>		1 19.2 161°00'	2°6/20.5	18		<b>192263</b>	2008 <i>HZ</i> <sub>16</sub>		1 19.2 226°91'	0°7/18.8	18	
12 13	8 26.94	+11 46.6	2.561	3.320	12.4	20.9	12 13	8 28.91	+19 51.1	2.289	3.072	12.9	20.9
12 23	8 22.15	+11 30.3	2.471	3.323	9.8	20.7	12 23	8 24.19	+20 28.0	2.189	3.062	10.1	20.7
1 2	8 15.53	+11 22.7	2.405	3.326	6.9	20.5	1 2	8 17.19	+21 12.6	2.113	3.051	6.6	20.4
1 12	8 7.61	+11 23.4	2.366	3.329	4.0	20.3	1 12	8 8.45	+22 1.2	2.064	3.040	2.8	20.2
1 22	7 59.08	+11 31.1	2.357	3.332	2.7	20.3	1 22	7 58.77	+22 49.5	2.046	3.029	1.5	20.1
2 1	7 50.74	+11 44.2	2.378	3.334	4.8	20.4	2 1	7 49.17	+23 33.3	2.059	3.016	5.4	20.3
2 11	7 43.41	+12 0.5	2.429	3.336	7.8	20.6	2 11	7 40.68	+24 9.5	2.101	3.004	9.1	20.5
2 21	7 37.68	+12 18.1	2.506	3.338	10.6	20.8	2 21	7 34.12	+24 37.0	2.168	2.991	12.3	20.7
<b>455472</b>	2003 <i>UP</i> <sub>124</sub>		1 19.2 76°70'	0°0/19.2	18		<b>11599</b>	1995 <i>QR</i>		1 19.2 152°32'	1°4/18.5	18	
12 13	8 31.25	+18 19.8	1.580	2.378	17.1	20.8	12 13	8 32.69	+22 32.7	2.025	2.812	14.2	18.9
12 23	8 26.51	+18 45.7	1.515	2.396	13.2	20.6	12 23	8 27.21	+23 3.8	1.945	2.821	11.0	18.7
1 2	8 18.85	+19 21.9	1.473	2.414	8.7	20.3	1 2	8 19.17	+23 40.1	1.889	2.828	7.2	18.5
1 12	8 9.12	+20 3.8	1.456	2.432	3.7	20.1	1 12	8 9.26	+24 17.0	1.860	2.835	3.2	18.2
1 22	7 58.50	+20 46.1	1.466	2.449	1.4	20.0	1 22	7 58.49	+24 49.8	1.861	2.842	2.1	18.2
2 1	7 48.43	+21 23.7	1.506	2.467	6.4	20.3	2 1	7 48.06	+25 14.8	1.892	2.848	6.0	18.4
2 11	7 40.19	+21 53.6	1.571	2.484	10.9	20.6	2 11	7 39.11	+25 30.1	1.952	2.853	9.8	18.7
2 21	7 34.64	+22 14.5	1.660	2.502	14.6	20.9	2 21	7 32.46	+25 35.9	2.036	2.857	13.1	18.9
<b>135310</b>	2001 <i>SS</i> <sub>264</sub>		1 19.2 195°44'	2°3/20.7	17		<b>209196</b>	2003 <i>UP</i> <sub>254</sub>		1 19.2 297°20'	1°5/18.6	18	
12 13	8 24.88	+10 56.5	2.824	3.578	1								

EPHEMERIDES

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>485068</b>	2010 <i>EY</i> <sub>35</sub>		1 19.2 285°12	2°4/18.3	17		<b>475932</b>	2007 <i>ET</i> <sub>87</sub>		1 19.2 281°62	20°9/31.8	18	
12 13	8 31.98	+23 53.7	1.523	2.332	17.1	21.8	12 13	8 26.78	-22 36.8	1.280	1.919	27.6	21.1
12 23	8 28.02	+24 22.4	1.420	2.307	13.5	21.5	12 23	8 24.19	-24 18.0	1.207	1.912	26.1	20.9
1 2	8 20.55	+24 58.3	1.339	2.282	9.1	21.1	1 2	8 18.09	-25 17.6	1.144	1.904	24.4	20.7
1 12	8 10.18	+25 35.7	1.281	2.257	4.3	20.8	1 12	8 9.14	-25 22.6	1.093	1.896	22.7	20.6
1 22	7 58.04	+26 7.9	1.251	2.231	3.2	20.6	1 22	7 58.53	-24 23.4	1.056	1.889	21.4	20.4
2 1	7 45.84	+26 28.8	1.248	2.205	8.1	20.9	2 1	7 47.98	-22 17.5	1.036	1.881	20.9	20.4
2 11	7 35.39	+26 35.6	1.270	2.179	13.3	21.1	2 11	7 39.29	-19 12.8	1.035	1.874	21.5	20.4
2 21	7 28.03	+26 28.9	1.314	2.153	17.9	21.3	2 21	7 33.81	-15 26.4	1.052	1.866	23.1	20.5
<b>461495</b>	2002 <i>XP</i> <sub>117</sub>		1 19.2 358°61	4°9/16.6	18		<b>69083</b>	2003 <i>AX</i> <sub>77</sub>		1 19.2 344°70	7°5/16.3	18	
12 13	8 27.31	+26 26.4	1.462	2.284	17.0	20.7	12 13	8 35.34	+41 47.9	2.101	2.883	13.9	18.5
12 23	8 24.31	+28 0.8	1.388	2.282	13.3	20.5	12 23	8 29.70	+42 25.7	2.023	2.879	11.5	18.3
1 2	8 17.96	+29 43.3	1.337	2.280	9.1	20.2	1 2	8 21.01	+42 54.0	1.969	2.875	9.2	18.2
1 12	8 8.97	+31 24.2	1.310	2.280	5.5	20.0	1 12	8 10.10	+43 5.2	1.939	2.871	7.6	18.1
1 22	7 58.58	+32 52.5	1.311	2.280	5.7	20.0	1 22	7 58.26	+42 54.1	1.937	2.868	7.8	18.1
2 1	7 48.44	+33 59.8	1.338	2.280	9.4	20.2	2 1	7 46.99	+42 18.7	1.962	2.865	9.5	18.2
2 11	7 40.22	+34 42.6	1.389	2.281	13.6	20.5	2 11	7 37.65	+41 21.7	2.013	2.863	12.0	18.3
2 21	7 35.07	+35 2.1	1.462	2.283	17.3	20.7	2 21	7 31.13	+40 8.3	2.087	2.860	14.5	18.5
<b>127919</b>	2003 <i>GR</i> <sub>43</sub>		1 19.2 144°75	2°0/18.2	18		<b>194207</b>	2001 <i>TG</i> <sub>99</sub>		1 19.2 219°72	1°3/18.3	18	
12 13	8 32.69	+22 15.8	1.786	2.581	15.6	20.2	12 13	8 23.92	+24 56.9	3.358	4.140	9.2	20.3
12 23	8 27.60	+23 9.8	1.710	2.590	12.0	20.0	12 23	8 19.58	+25 13.5	3.265	4.138	7.1	20.2
1 2	8 19.64	+24 11.5	1.657	2.597	7.9	19.7	1 2	8 13.75	+25 31.5	3.197	4.135	4.7	20.0
1 12	8 9.54	+25 14.7	1.630	2.605	3.6	19.5	1 12	8 6.88	+25 48.6	3.159	4.133	2.2	19.8
1 22	7 58.40	+26 12.7	1.632	2.612	2.7	19.4	1 22	7 59.51	+26 2.4	3.152	4.130	1.6	19.8
2 1	7 47.59	+26 59.9	1.664	2.618	6.8	19.7	2 1	7 52.30	+26 11.4	3.176	4.128	4.0	20.0
2 11	7 38.45	+27 33.5	1.724	2.624	10.9	20.0	2 11	7 45.87	+26 14.6	3.229	4.125	6.5	20.1
2 21	7 31.88	+27 53.5	1.806	2.629	14.5	20.2	2 21	7 40.71	+26 11.9	3.309	4.122	8.7	20.3
<b>74414</b>	1999 <i>AN</i> <sub>9</sub>		1 19.2 39°22	0°8/18.7	18		<b>360449</b>	2002 <i>OR</i> <sub>24</sub>		1 19.2 198°46	1°0/18.8	18	
12 13	8 25.91	+18 9.0	1.931	2.726	14.5	18.9	12 13	8 32.48	+22 17.3	1.976	2.765	14.5	21.8
12 23	8 22.12	+19 13.0	1.854	2.734	11.2	18.7	12 23	8 27.19	+22 29.8	1.887	2.763	11.3	21.6
1 2	8 15.91	+20 28.2	1.801	2.742	7.3	18.5	1 2	8 19.27	+22 46.8	1.821	2.760	7.4	21.3
1 12	8 7.91	+21 49.5	1.775	2.751	3.1	18.3	1 12	8 9.38	+23 4.8	1.782	2.757	3.2	21.1
1 22	7 59.04	+23 10.4	1.778	2.760	1.7	18.2	1 22	7 58.53	+23 19.8	1.772	2.754	1.7	21.0
2 1	7 50.41	+24 24.8	1.811	2.770	5.8	18.5	2 1	7 47.95	+23 28.6	1.792	2.750	6.0	21.2
2 11	7 43.11	+25 28.2	1.872	2.780	9.8	18.7	2 11	7 38.84	+23 30.0	1.840	2.745	10.0	21.5
2 21	7 37.97	+26 18.6	1.958	2.790	13.1	19.0	2 21	7 32.09	+23 24.1	1.913	2.741	13.6	21.7
<b>4958</b>	Wellnitz		1 19.2 7°80	3°6/20.7	18		<b>335992</b>	2007 <i>TG</i> <sub>320</sub>		1 19.2 138°67	4°6/22.0	18	
12 13	8 26.60	+11 3.9	2.003	2.775	14.9	16.1	12 13	8 25.67	+3 59.8	2.702	3.428	12.5	21.6
12 23	8 22.43	+10 32.6	1.917	2.776	11.9	15.9	12 23	8 21.07	+3 40.2	2.616	3.438	10.3	21.4
1 2	8 15.99	+10 12.2	1.854	2.777	8.6	15.6	1 2	8 14.80	+3 33.3	2.553	3.447	7.9	21.3
1 12	8 7.91	+10 2.9	1.816	2.778	5.2	15.4	1 12	8 7.34	+3 39.7	2.516	3.456	5.6	21.1
1 22	7 59.05	+10 3.9	1.806	2.779	3.7	15.4	1 22	7 59.35	+3 58.7	2.508	3.464	4.6	21.1
2 1	7 50.44	+10 13.5	1.825	2.781	6.0	15.5	2 1	7 51.54	+4 28.4	2.531	3.472	5.6	21.2
2 11	7 43.10	+10 29.0	1.871	2.783	9.5	15.7	2 11	7 44.64	+5 6.0	2.582	3.480	7.8	21.3
2 21	7 37.75	+10 47.7	1.942	2.785	12.7	15.9	2 21	7 39.21	+5 48.0	2.660	3.487	10.2	21.5
<b>130569</b>	2000 <i>RD</i> <sub>44</sub>		1 19.2 91°16	0°2/19.3	18		<b>462637</b>	2009 <i>SL</i> <sub>27</sub>		1 19.2 86°18	2°7/20.6	18	
12 13	8 34.31	+20 1.8	1.593	2.389	17.1	19.1	12 13	8 28.46	+11 38.2	1.983	2.754	15.1	21.5
12 23	8 28.86	+19 55.7	1.525	2.404	13.3	18.9	12 23	8 23.77	+11 39.2	1.911	2.771	11.9	21.3
1 2	8 20.40	+19 56.2	1.478	2.418	8.8	18.7	1 2	8 16.80	+11 52.7	1.862	2.788	8.3	21.2
1 12	8 9.81	+20 0.0	1.457	2.432	3.8	18.4	1 12	8 8.24	+12 17.2	1.839	2.805	4.6	21.0
1 22	7 58.36	+20 3.7	1.463	2.446	1.4	18.3	1 22	7 59.00	+12 50.0	1.844	2.822	2.7	20.9
2 1	7 47.49	+20 4.7	1.499	2.460	6.4	18.6	2 1	7 50.13	+13 27.5	1.880	2.839	5.5	21.1
2 11	7 38.56	+20 1.4	1.561	2.474	10.9	18.9	2 11	7 42.62	+14 6.2	1.943	2.856	9.1	21.3
2 21	7 32.41	+19 54.0	1.647	2.487	14.8	19.2	2 21	7 37.18	+14 42.9	2.031	2.872	12.4	21.6
<b>152881</b>	2000 <i>AY</i> <sub>257</sub>		1 19.2 294°69	2°5/20.3	18		<b>291041</b>	2005 <i>YJ</i> <sub>45</sub>		1 19.2 355°16	0°3/19.3	18	
12 13	8 28.25	+12 27.9	1.410	2.209	18.8	19.9	12 13	8 25.94	+16 39.0	1.207	2.030	19.8	20.6
12 23	8 24.86	+12 41.3	1.325	2.202	15.0	19.7	12 23	8 23.53	+17 11.1	1.133	2.027	15.6	20.4
1 2	8 18.25	+13 12.9	1.259	2.195	10.4	19.4	1 2	8 17.59	+18 0.4	1.078	2.024	10.4	20.1
1 12	8 9.09	+14 1.0	1.216	2.188	5.4	19.1	1 12	8 8.87	+19 2.5	1.045	2.022	4.5	19.7
1 22	7 58.56	+15 1.0	1.200	2.181	2.7	18.9	1 22	7 58.71	+20 9.7	1.038	2.021	1.7	19.5
2 1	7 48.19	+16 6.2	1.211	2.175	7.2	19.1	2 1	7 48.88	+21 13.9	1.056	2.021	7.8	19.9
2 11	7 39.58	+17 9.9	1.247	2.168	12.3	19.4	2 11	7 41.12	+22 8.5	1.097	2.021	13.3	20.2
2 21	7 33.86	+18 7.2	1.305	2.162	16.9	19.6	2 21	7 36.61	+22 50.1	1.159	2.023	18.1	20.5
<b>118302</b>	1998 <i>TX</i> <sub>36</sub>		1 19.2 72°81	4°8/21.2	17		<b>248930</b>	2006 <i>WL</i> <sub>22</sub>		1 19.2 56°64	1°6/18.5	18	
12 13	8 30.83	+8 11.9	1.384	2.166	19.9	19.9	12 13	8 29.86	+21 19.3	1.571	2.378	16.8	20.2
12 23	8 26.41	+8 1.8	1.323	2.185	16.0	19.7	12 23	8 25.57	+22 5.8	1.510	2.396	12.9	19.9
1 2	8 18.92	+8 12.1	1.281	2.204	11.5	19.5	1 2	8 18.33	+23 0.7	1.470	2.414	8.4	19.7
1 12	8 9.22	+8 42.4	1.262	2.223	7.0	19.3	1 12	8 8.98	+23 57.7	1.456	2.432	3.7	19.5
1 22	7 58.59	+9 29.1	1.268	2.242	4.8	19.2	1 22	7 58.73	+24 50.3	1.469	2.450	2.4	19.4
2 1	7 48.53	+10 26.7	1.302	2.261	7.5	19.4	2 1	7 49.01	+25 33.1	1.511	2.469	6.8	19.8
2 11	7 40.43	+11 28.4	1.361	2.280	11.8	19.7	2 11	7 41.13	+26 3.2	1.579	2.487	11.1	20.1
2 21	7 35.16	+12 28.4	1.444	2.298	15.7	20.0	2 21	7 35.95	+26 20.5	1.669	2.506	14.8	20.3
<b>417071</b>	2005 <i>UX</i> <sub>229</sub>		1 19.2 19°76	1°3/19.7	18		<b>275948</b>	2001 <i>UF</i> <sub>186</sub>		1 19.2 157°21	8°2/25.5	18	
12 13	8 25.02	+16 8.1	1.311	2.129									

EPHEMERIDES

1 19.2

1 19.2

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>93376</b>	2000 <i>SF</i> <sub>271</sub>		1 19.2 332°15	7°9/22.9	18		<b>520812</b>	2014 <i>TA</i> <sub>92</sub>		1 19.2 38°80	5°2/16.4	18	
12 13	8 23.40	+ 0 30.7	1.694	2.444	18.1	19.0	12 13	8 29.56	+31 35.8	1.911	2.715	14.3	20.5
12 23	8 20.50	- 0 2.9	1.603	2.433	15.4	18.8	12 23	8 25.26	+32 45.3	1.841	2.721	11.3	20.3
1 2	8 15.06	- 0 14.5	1.531	2.423	12.3	18.6	1 2	8 18.16	+33 54.5	1.794	2.727	8.0	20.1
1 12	8 7.66	- 0 1.0	1.481	2.414	9.4	18.4	1 12	8 8.97	+34 55.8	1.773	2.733	5.5	20.0
1 22	7 59.21	+ 0 38.1	1.455	2.405	7.9	18.3	1 22	7 58.79	+35 42.4	1.781	2.740	5.7	20.0
2 1	7 50.86	+ 1 40.0	1.456	2.397	9.0	18.3	2 1	7 48.96	+36 9.8	1.816	2.747	8.3	20.2
2 11	7 43.81	+ 2 58.5	1.482	2.389	11.8	18.5	2 11	7 40.77	+36 17.5	1.878	2.754	11.5	20.4
2 21	7 39.00	+ 4 25.9	1.531	2.383	15.1	18.6	2 21	7 35.13	+36 7.8	1.962	2.761	14.4	20.6
<b>221126</b>	2005 <i>SW</i> <sub>233</sub>		1 19.2 25°74	1°9/20.0	18		<b>472029</b>	2013 <i>YT</i> <sub>12</sub>		1 19.2 281°40	3°2/17.3	17	
12 13	8 27.43	+14 38.8	1.755	2.545	16.0	21.1	12 13	8 27.29	+27 21.9	2.293	3.089	12.5	21.4
12 23	8 23.45	+14 39.2	1.675	2.548	12.6	20.9	12 23	8 23.07	+28 17.6	2.203	3.082	9.7	21.2
1 2	8 16.87	+14 51.2	1.616	2.551	8.6	20.7	1 2	8 16.54	+29 16.2	2.137	3.075	6.6	21.0
1 12	8 8.37	+15 12.9	1.582	2.554	4.3	20.4	1 12	8 8.25	+30 12.4	2.099	3.068	3.8	20.8
1 22	7 58.96	+15 41.2	1.576	2.557	2.1	20.3	1 22	7 59.05	+31 0.9	2.091	3.061	3.7	20.8
2 1	7 49.85	+16 12.3	1.598	2.561	6.0	20.5	2 1	7 49.98	+31 37.6	2.112	3.054	6.5	20.9
2 11	7 42.22	+16 42.7	1.648	2.565	10.2	20.8	2 11	7 42.11	+32 0.4	2.161	3.047	9.7	21.1
2 21	7 36.91	+17 9.8	1.721	2.569	13.9	21.0	2 21	7 36.24	+32 9.7	2.233	3.041	12.6	21.3
<b>275945</b>	2001 <i>UH</i> <sub>158</sub>		1 19.2 126°81	6°4/13.9	18		<b>363143</b>	2001 <i>RM</i> <sub>3</sub>		1 19.2 136°75	4°4/21.6	18	
12 13	8 35.05	+45 21.5	3.308	4.059	10.0	21.8	12 13	8 29.62	+ 5 58.9	2.394	3.128	13.8	22.0
12 23	8 28.56	+46 36.7	3.252	4.079	8.4	21.7	12 23	8 24.27	+ 5 37.8	2.313	3.143	11.2	21.8
1 2	8 19.85	+47 43.6	3.223	4.098	7.1	21.6	1 2	8 16.98	+ 5 29.7	2.254	3.157	8.4	21.6
1 12	8 9.55	+48 36.5	3.221	4.116	6.4	21.6	1 12	8 8.32	+ 5 34.9	2.223	3.170	5.7	21.5
1 22	7 58.52	+49 11.2	3.248	4.134	6.7	21.6	1 22	7 59.06	+ 5 52.4	2.221	3.183	4.4	21.4
2 1	7 47.78	+49 26.0	3.304	4.151	7.8	21.7	2 1	7 50.06	+ 6 20.3	2.249	3.195	5.9	21.5
2 11	7 38.31	+49 21.7	3.385	4.168	9.2	21.9	2 11	7 42.17	+ 6 55.2	2.306	3.206	8.5	21.7
2 21	7 30.82	+49 1.3	3.490	4.184	10.6	22.0	2 21	7 36.03	+ 7 33.7	2.389	3.217	11.2	21.9
<b>375753</b>	2009 <i>SL</i> <sub>56</sub>		1 19.2 278°57	1°7/18.6	18		<b>14749</b>	2626 <i>P-L</i>		1 19.2 256°75	0°5/19.5	18	
12 13	8 30.70	+24 26.8	1.939	2.735	14.4	21.0	12 13	8 26.40	+17 25.2	2.341	3.122	12.7	19.0
12 23	8 25.90	+24 39.0	1.853	2.733	11.2	20.8	12 23	8 22.14	+17 39.3	2.243	3.114	9.9	18.8
1 2	8 18.45	+24 54.2	1.789	2.730	7.4	20.6	1 2	8 15.80	+18 1.1	2.169	3.106	6.6	18.5
1 12	8 9.05	+25 8.3	1.753	2.727	3.4	20.3	1 12	8 7.90	+18 28.3	2.123	3.098	3.0	18.3
1 22	7 58.72	+25 17.2	1.745	2.725	2.3	20.2	1 22	7 59.20	+18 58.0	2.106	3.089	1.1	18.1
2 1	7 48.70	+25 18.2	1.766	2.722	6.2	20.5	2 1	7 50.63	+19 27.0	2.120	3.081	4.9	18.4
2 11	7 40.19	+25 10.4	1.815	2.720	10.2	20.7	2 11	7 43.12	+19 52.8	2.162	3.072	8.5	18.6
2 21	7 34.04	+24 54.6	1.887	2.717	13.6	20.9	2 21	7 37.40	+20 13.8	2.230	3.064	11.7	18.8
<b>356321</b>	2010 <i>JZ</i> <sub>37</sub>		1 19.2 273°24	2°7/18.0	18		<b>375440</b>	2008 <i>TL</i> <sub>77</sub>		1 19.2 55°95	0°7/18.9	18	
12 13	8 31.06	+23 40.0	1.611	2.418	16.4	21.7	12 13	8 28.07	+20 53.0	1.956	2.751	14.4	21.4
12 23	8 27.06	+24 30.2	1.514	2.400	12.9	21.5	12 23	8 23.69	+21 14.5	1.882	2.761	11.1	21.2
1 2	8 19.80	+25 29.2	1.439	2.382	8.6	21.2	1 2	8 16.89	+21 42.2	1.831	2.772	7.3	21.0
1 12	8 9.85	+26 30.7	1.389	2.363	4.2	20.9	1 12	8 8.35	+22 12.5	1.806	2.782	3.1	20.7
1 22	7 58.34	+27 27.1	1.366	2.344	3.5	20.8	1 22	7 59.05	+22 41.0	1.810	2.793	1.5	20.6
2 1	7 46.84	+28 11.3	1.372	2.325	7.9	21.0	2 1	7 50.10	+23 4.5	1.844	2.803	5.6	20.9
2 11	7 36.98	+28 39.8	1.403	2.306	12.7	21.2	2 11	7 42.59	+23 20.9	1.905	2.814	9.5	21.2
2 21	7 30.03	+28 52.4	1.456	2.287	16.9	21.4	2 21	7 37.26	+23 29.5	1.990	2.825	12.8	21.4
<b>121998</b>	2000 <i>FS</i> <sub>43</sub>		1 19.2 294°06	0°9/18.9	18		<b>370557</b>	2003 <i>UE</i> <sub>83</sub>		1 19.2 44°02	0°6/18.9	18	
12 13	8 28.92	+19 10.8	1.405	2.218	18.1	20.0	12 13	8 28.67	+18 54.6	1.631	2.434	16.5	19.8
12 23	8 25.65	+19 48.8	1.315	2.204	14.2	19.7	12 23	8 24.36	+19 37.2	1.580	2.463	12.6	19.6
1 2	8 18.97	+20 40.5	1.246	2.190	9.5	19.4	1 2	8 17.36	+20 29.2	1.550	2.493	8.2	19.4
1 12	8 9.51	+21 40.8	1.200	2.177	4.1	19.1	1 12	8 8.53	+21 25.3	1.547	2.523	3.4	19.2
1 22	7 58.48	+22 42.7	1.181	2.163	2.0	18.9	1 22	7 59.01	+22 19.4	1.571	2.554	1.6	19.1
2 1	7 47.52	+23 38.5	1.188	2.150	7.7	19.2	2 1	7 50.08	+23 6.6	1.624	2.584	6.1	19.5
2 11	7 38.37	+24 22.8	1.221	2.137	13.0	19.4	2 11	7 42.90	+23 43.8	1.703	2.615	10.2	19.8
2 21	7 32.30	+24 53.7	1.275	2.124	17.7	19.7	2 21	7 38.20	+24 9.9	1.806	2.647	13.7	20.1
<b>439239</b>	2012 <i>TX</i> <sub>166</sub>		1 19.2 144°33	1°8/20.0	17		<b>389635</b>	2011 <i>KQ</i> <sub>29</sub>		1 19.2 190°12	1°4/19.8	18	
12 13	8 34.00	+13 52.2	1.751	2.526	16.6	22.2	12 13	8 33.15	+15 22.2	1.863	2.639	15.7	22.5
12 23	8 28.46	+14 7.1	1.674	2.539	13.1	22.0	12 23	8 27.83	+15 29.5	1.772	2.639	12.4	22.3
1 2	8 20.14	+14 35.1	1.619	2.550	8.9	21.8	1 2	8 19.78	+15 47.5	1.704	2.637	8.4	22.0
1 12	8 9.78	+15 13.4	1.589	2.561	4.3	21.5	1 12	8 9.68	+16 13.9	1.662	2.635	4.0	21.8
1 22	7 58.46	+15 57.8	1.589	2.571	2.0	21.4	1 22	7 58.52	+16 45.3	1.650	2.632	1.8	21.6
2 1	7 47.53	+16 43.6	1.619	2.580	6.1	21.7	2 1	7 47.58	+17 17.7	1.667	2.628	6.0	21.9
2 11	7 38.23	+17 26.5	1.676	2.588	10.4	21.9	2 11	7 38.11	+17 47.8	1.712	2.623	10.3	22.1
2 21	7 31.45	+18 3.9	1.758	2.595	14.2	22.2	2 21	7 31.04	+18 13.5	1.782	2.617	14.1	22.3
<b>244818</b>	2003 <i>ST</i> <sub>399</sub>		1 19.2 45°31	6°0/15.8	18		<b>258919</b>	2002 <i>RD</i> <sub>37</sub>		1 19.2 115°52	1°1/19.7	18	
12 13	8 29.83	+32 34.5	1.830	2.637	14.8	20.2	12 13	8 31.72	+16 5.4	2.020	2.796	14.7	21.7
12 23	8 25.60	+34 4.9	1.770	2.650	11.6	20.1	12 23	8 26.27	+16 16.0	1.948	2.814	11.4	21.5
1 2	8 18.43	+35 34.4	1.732	2.663	8.5	19.9	1 2	8 18.46	+16 35.6	1.898	2.832	7.6	21.3
1 12	8 9.09	+36 53.9	1.722	2.677	6.3	19.8	1 12	8 8.99	+17 1.7	1.876	2.849	3.5	21.1
1 22	7 58.73	+37 55.7	1.739	2.691	6.6	19.9	1 22	7 58.82	+17 30.8	1.884	2.866	1.4	21.0
2 1	7 48.78	+38 34.9	1.783	2.705	9.1	20.0	2 1	7 49.05	+17 59.7	1.922	2.882	5.3	21.3
2 11	7 40.59	+38 51.0	1.853	2.720	12.1	20.2	2 11	7 40.72	+18 25.6	1.988	2.898	9.1	21.5
2 21	7 35.07	+38 46.9	1.945	2.735	14.8	20.5	2 21	7 34.54	+18 46.9	2.079	2.913	12.4	21.8
<b>176929</b>	2002 <i>VW</i> <sub>121</sub>		1 19.2 105°93	0°6/19.0	18		<b>436343</b>	2010 <i>JL</i> <sub>3</sub>		1 19.2 251°41	6°4/22.2	17	
12 13	8 34.13	+21 34.											

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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>257818</b>	2000 <i>GB</i> <sub>42</sub>		1 19.2 280°28	2°0/20.0	17		<b>188775</b>	2005 <i>UA</i> <sub>497</sub>		1 19.2 50°40	3°7/21.2	18	
12 13	8 28.34	+14 30.1	1.836	2.621	15.6	21.0	12 13	8 26.47	+ 8 46.2	1.731	2.506	16.8	20.6
12 23	8 24.32	+14 28.7	1.732	2.602	12.4	20.7	12 23	8 22.66	+ 8 51.6	1.656	2.515	13.5	20.4
1 2	8 17.63	+14 38.5	1.650	2.583	8.6	20.4	1 2	8 16.34	+ 9 14.2	1.601	2.525	9.6	20.2
1 12	8 8.83	+14 58.4	1.593	2.564	4.3	20.1	1 12	8 8.18	+ 9 53.2	1.572	2.535	5.7	20.0
1 22	7 58.82	+15 25.6	1.564	2.545	2.2	20.0	1 22	7 59.17	+10 45.2	1.569	2.545	3.8	19.9
2 1	7 48.84	+15 56.6	1.564	2.526	6.1	20.2	2 1	7 50.47	+11 45.4	1.595	2.555	6.3	20.0
2 11	7 40.16	+16 27.8	1.591	2.506	10.6	20.4	2 11	7 43.23	+12 48.2	1.648	2.566	10.1	20.3
2 21	7 33.77	+16 56.4	1.642	2.487	14.6	20.6	2 21	7 38.24	+13 48.7	1.725	2.576	13.7	20.5
<b>205289</b>	2000 <i>SZ</i> <sub>208</sub>		1 19.2 95°20	5°2/17.0	18		<b>250214</b>	2002 <i>VF</i> <sub>36</sub>		1 19.2 63°39	2°6/18.1	18	
12 13	8 36.99	+30 44.5	1.664	2.464	16.3	20.0	12 13	8 33.55	+23 52.5	1.562	2.366	17.0	20.2
12 23	8 31.14	+31 52.2	1.608	2.486	12.7	19.9	12 23	8 28.31	+24 44.2	1.512	2.396	13.0	20.1
1 2	8 22.03	+32 59.0	1.574	2.508	8.9	19.7	1 2	8 20.06	+25 40.8	1.484	2.427	8.5	19.9
1 12	8 10.59	+33 56.1	1.567	2.530	5.8	19.6	1 12	8 9.72	+26 35.3	1.483	2.457	4.0	19.7
1 22	7 58.22	+34 35.8	1.588	2.551	5.8	19.6	1 22	7 58.63	+27 20.9	1.509	2.487	3.2	19.7
2 1	7 46.54	+34 54.3	1.637	2.572	8.7	19.8	2 1	7 48.27	+27 53.1	1.563	2.517	7.2	20.0
2 11	7 37.00	+34 52.1	1.712	2.592	12.2	20.1	2 11	7 39.94	+28 10.6	1.644	2.546	11.2	20.3
2 21	7 30.49	+34 33.1	1.809	2.611	15.3	20.3	2 21	7 34.44	+28 14.8	1.748	2.576	14.6	20.6
<b>168065</b>	2006 <i>BM</i> <sub>266</sub>		1 19.2 253°32	0°3/19.1	18		<b>502576</b>	2015 <i>BC</i> <sub>506</sub>		1 19.2 234°69	0°0/19.2	18	
12 13	8 30.16	+18 59.1	1.724	2.520	16.0	20.9	12 13	8 27.45	+19 40.1	2.563	3.342	11.8	21.4
12 23	8 25.92	+19 26.6	1.630	2.510	12.5	20.6	12 23	8 22.78	+19 48.8	2.463	3.333	9.2	21.2
1 2	8 18.76	+20 4.5	1.558	2.499	8.3	20.3	1 2	8 16.14	+20 2.6	2.388	3.324	6.1	21.0
1 12	8 9.33	+20 48.6	1.512	2.488	3.6	20.0	1 12	8 8.05	+20 19.2	2.340	3.315	2.6	20.7
1 22	7 58.64	+21 33.9	1.495	2.477	1.5	19.8	1 22	7 59.23	+20 36.1	2.323	3.306	1.0	20.6
2 1	7 48.08	+22 15.1	1.505	2.466	6.5	20.1	2 1	7 50.54	+20 50.8	2.337	3.297	4.6	20.8
2 11	7 39.03	+22 48.3	1.543	2.454	11.1	20.4	2 11	7 42.86	+21 1.7	2.380	3.287	8.0	21.0
2 21	7 32.55	+23 12.1	1.604	2.443	15.2	20.6	2 21	7 36.85	+21 8.0	2.449	3.277	11.0	21.2
<b>122195</b>	2000 <i>LU</i> <sub>2</sub>		1 19.2 194°02	0°5/19.5	18		<b>345250</b>	2005 <i>UX</i> <sub>440</sub>		1 19.2 109°70	0°1/19.2	18	
12 13	8 33.60	+18 3.5	2.145	2.918	14.0	21.1	12 13	8 36.16	+20 22.1	1.564	2.358	17.4	20.9
12 23	8 27.84	+18 8.8	2.050	2.915	11.0	20.9	12 23	8 30.40	+20 20.1	1.496	2.373	13.5	20.6
1 2	8 19.62	+18 21.2	1.978	2.912	7.3	20.6	1 2	8 21.52	+20 24.6	1.448	2.388	8.9	20.4
1 12	8 9.57	+18 38.0	1.934	2.908	3.3	20.4	1 12	8 10.40	+20 32.0	1.426	2.402	3.8	20.1
1 22	7 58.60	+18 56.2	1.920	2.903	1.2	20.2	1 22	7 58.37	+20 38.5	1.433	2.416	1.5	20.0
2 1	7 47.82	+19 12.9	1.938	2.897	5.4	20.5	2 1	7 46.95	+20 41.1	1.468	2.429	6.6	20.4
2 11	7 38.36	+19 26.2	1.984	2.891	9.3	20.7	2 11	7 37.54	+20 38.5	1.530	2.442	11.2	20.7
2 21	7 31.04	+19 34.9	2.056	2.883	12.8	20.9	2 21	7 31.03	+20 30.8	1.615	2.454	15.1	20.9
<b>151998</b>	2004 <i>JY</i> <sub>13</sub>		1 19.2 213°79	0°2/19.2	18		<b>128631</b>	2004 <i>RN</i> <sub>11</sub>		1 19.2 23°26	2°3/18.6	18	
12 13	8 32.21	+19 9.2	1.556	2.355	17.3	20.7	12 13	8 33.77	+25 23.0	1.359	2.175	18.5	20.1
12 23	8 27.69	+19 26.6	1.472	2.353	13.5	20.5	12 23	8 29.27	+25 29.6	1.287	2.177	14.4	19.8
1 2	8 20.00	+19 53.9	1.409	2.350	9.0	20.2	1 2	8 21.17	+25 39.0	1.235	2.180	9.6	19.6
1 12	8 9.86	+20 27.2	1.371	2.346	3.9	19.9	1 12	8 10.37	+25 45.6	1.207	2.183	4.5	19.3
1 22	7 58.48	+21 1.1	1.360	2.343	1.5	19.7	1 22	7 58.37	+25 44.0	1.206	2.186	3.0	19.2
2 1	7 47.37	+21 30.8	1.378	2.339	6.9	20.1	2 1	7 46.95	+25 31.1	1.231	2.190	7.9	19.5
2 11	7 38.05	+21 53.0	1.421	2.335	11.7	20.3	2 11	7 37.81	+25 7.3	1.281	2.194	12.8	19.8
2 21	7 31.58	+22 6.8	1.488	2.331	16.0	20.6	2 21	7 31.97	+24 34.8	1.353	2.198	17.1	20.1
<b>269062</b>	2007 <i>GW</i> <sub>33</sub>		1 19.2 331°25	5°5/16.5	18		<b>460035</b>	2014 <i>OJ</i> <sub>181</sub>		1 19.2 48°25	3°7/17.7	18	
12 13	8 29.20	+31 13.8	1.749	2.559	15.2	20.6	12 13	8 31.72	+25 34.3	1.399	2.216	17.9	20.9
12 23	8 25.39	+32 20.9	1.668	2.552	12.0	20.4	12 23	8 27.36	+26 38.3	1.350	2.241	13.8	20.7
1 2	8 18.50	+33 29.0	1.609	2.545	8.6	20.1	1 2	8 19.66	+27 46.8	1.323	2.266	9.1	20.5
1 12	8 9.23	+34 30.1	1.577	2.539	5.9	20.0	1 12	8 9.63	+28 51.0	1.320	2.292	4.8	20.3
1 22	7 58.72	+35 16.3	1.571	2.533	6.0	20.0	1 22	7 58.69	+29 42.9	1.344	2.318	4.4	20.4
2 1	7 48.46	+35 42.3	1.593	2.527	9.0	20.1	2 1	7 48.51	+30 17.2	1.395	2.345	8.2	20.6
2 11	7 39.93	+35 47.1	1.640	2.522	12.5	20.3	2 11	7 40.53	+30 32.9	1.470	2.372	12.3	21.0
2 21	7 34.17	+35 33.1	1.709	2.517	15.8	20.5	2 21	7 35.63	+30 32.2	1.568	2.399	15.9	21.2
<b>464592</b>	2016 <i>CY</i> <sub>109</sub>		1 19.2 243°23	3°5/20.9	16		<b>388175</b>	2006 <i>BM</i> <sub>109</sub>		1 19.2 223°34	0°2/19.2	18	
12 13	8 27.83	+ 9 30.2	2.123	2.884	14.5	21.9	12 13	8 30.95	+17 52.3	1.816	2.605	15.6	21.4
12 23	8 23.45	+ 9 21.8	2.021	2.872	11.8	21.6	12 23	8 26.39	+18 29.2	1.722	2.597	12.2	21.2
1 2	8 16.79	+ 9 26.2	1.941	2.860	8.5	21.4	1 2	8 19.02	+19 17.7	1.650	2.589	8.1	20.9
1 12	8 8.39	+ 9 43.6	1.887	2.848	5.2	21.2	1 12	8 9.45	+20 13.7	1.605	2.581	3.5	20.6
1 22	7 59.05	+10 12.1	1.862	2.835	3.6	21.1	1 22	7 58.69	+21 11.6	1.589	2.572	1.4	20.4
2 1	7 49.79	+10 49.1	1.866	2.822	5.9	21.2	2 1	7 48.04	+22 5.8	1.602	2.562	6.2	20.7
2 11	7 41.63	+11 30.9	1.898	2.809	9.4	21.4	2 11	7 38.81	+22 51.9	1.643	2.552	10.7	21.0
2 21	7 35.40	+12 13.9	1.956	2.795	12.8	21.5	2 21	7 32.03	+23 28.0	1.707	2.541	14.7	21.2
<b>186560</b>	2002 <i>YR</i> <sub>6</sub>		1 19.2 51°04	1°2/19.6	18		<b>169351</b>	2001 <i>UT</i> <sub>7</sub>		1 19.2 88°39	3°5/20.9	18	
12 13	8 32.71	+17 29.2	1.440	2.241	18.3	18.9	12 13	8 26.31	+ 9 32.8	2.393	3.149	13.2	20.3
12 23	8 27.66	+17 18.6	1.388	2.268	14.2	18.7	12 23	8 21.82	+ 9 10.5	2.310	3.157	10.6	20.1
1 2	8 19.59	+17 17.9	1.357	2.297	9.4	18.5	1 2	8 15.44	+ 8 58.8	2.250	3.166	7.7	19.9
1 12	8 9.50	+17 24.3	1.351	2.325	4.3	18.3	1 12	8 7.72	+ 8 57.8	2.216	3.174	4.8	19.7
1 22	7 58.71	+17 34.3	1.371	2.354	1.8	18.2	1 22	7 59.41	+ 9 6.3	2.212	3.183	3.5	19.7
2 1	7 48.72	+17 44.7	1.420	2.383	6.5	18.5	2 1	7 51.33	+ 9 22.7	2.238	3.191	5.3	19.8
2 11	7 40.78	+17 53.1	1.494	2.412	11.0	18.9	2 11	7 44.32	+ 9 44.3	2.292	3.200	8.2	20.0
2 21	7 35.67	+17 58.3	1.592	2.441	14.7	19.2	2 21	7 38.98	+10 8.5	2.372	3.208	11.0	20.2
<b>10623</b>	1997 <i>YP</i> <sub>7</sub>		1 19.2 135°81	2°1/17.9	18 R		<b>18605</b>	Jacqueslaskar		1 19.2 248°30	0°7/19.6	18	
12 13	8 28.06												



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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>130473</b>	2000 <i>QJ</i> <sub>86</sub>		1 19.2	70°86	2°8/20.2	18	<b>122991</b>	2000 <i>SE</i> <sub>247</sub>		1 19.3	72°26	3°5/17.6	18
12 13	8 31.77	+13 59.5	1.475	2.267	18.4	19.3	12 13	8 30.69	+27 37.9	1.876	2.677	14.7	20.1
12 23	8 27.12	+13 39.3	1.407	2.280	14.5	19.0	12 23	8 26.07	+28 22.3	1.800	2.682	11.4	19.9
1 2	8 19.43	+13 31.8	1.359	2.293	10.0	18.8	1 2	8 18.68	+29 8.8	1.748	2.687	7.7	19.7
1 12	8 9.55	+13 35.9	1.335	2.305	5.2	18.6	1 12	8 9.26	+29 51.3	1.722	2.692	4.3	19.5
1 22	7 58.72	+13 48.9	1.338	2.318	3.0	18.5	1 22	7 58.89	+30 23.8	1.725	2.697	4.0	19.5
2 1	7 48.42	+14 7.5	1.369	2.331	6.8	18.7	2 1	7 48.89	+30 42.4	1.756	2.703	7.2	19.7
2 11	7 40.01	+14 28.1	1.426	2.344	11.4	19.0	2 11	7 40.51	+30 46.2	1.814	2.708	10.8	19.9
2 21	7 34.39	+14 47.9	1.505	2.357	15.3	19.3	2 21	7 34.63	+30 36.7	1.895	2.713	14.1	20.2
<b>272172</b>	2005 <i>OM</i> <sub>10</sub>		1 19.2	167°34	1°1/18.7	18	<b>256273</b>	2006 <i>WK</i> <sub>90</sub>		1 19.3	35°20	0°5/19.5	18
12 13	8 34.30	+20 20.8	1.845	2.631	15.5	22.0	12 13	8 27.50	+16 47.2	1.592	2.393	16.8	20.5
12 23	8 28.82	+21 6.3	1.763	2.637	12.0	21.8	12 23	8 23.80	+17 11.3	1.519	2.401	13.1	20.3
1 2	8 20.50	+22 0.7	1.703	2.642	7.9	21.5	1 2	8 17.28	+17 47.5	1.468	2.409	8.7	20.0
1 12	8 10.04	+22 58.7	1.671	2.646	3.4	21.3	1 12	8 8.68	+18 32.1	1.442	2.417	3.9	19.8
1 22	7 58.51	+23 54.1	1.668	2.650	2.0	21.2	1 22	7 59.12	+19 20.0	1.443	2.426	1.4	19.6
2 1	7 47.25	+24 41.6	1.695	2.652	6.4	21.5	2 1	7 49.93	+20 5.9	1.472	2.435	6.3	20.0
2 11	7 37.58	+25 17.9	1.751	2.653	10.6	21.7	2 11	7 42.40	+20 45.6	1.527	2.445	10.8	20.2
2 21	7 30.44	+25 42.5	1.830	2.654	14.3	21.9	2 21	7 37.42	+21 16.8	1.606	2.455	14.7	20.5
<b>362050</b>	2009 <i>BB</i> <sub>39</sub>		1 19.2	352°62	1°5/18.7	16	<b>105431</b>	2000 <i>QH</i> <sub>176</sub>		1 19.3	84°74	0°5/19.1	17
12 13	8 27.89	+21 56.7	1.264	2.090	19.0	21.4	12 13	8 35.93	+20 41.3	1.584	2.378	17.2	20.1
12 23	8 25.02	+22 16.8	1.189	2.085	14.8	21.1	12 23	8 30.05	+20 51.9	1.526	2.404	13.3	19.9
1 2	8 18.58	+22 45.7	1.134	2.082	9.8	20.8	1 2	8 21.18	+21 9.1	1.489	2.429	8.7	19.7
1 12	8 9.37	+23 18.1	1.102	2.079	4.3	20.5	1 12	8 10.25	+21 28.7	1.479	2.454	3.7	19.4
1 22	7 58.77	+23 47.5	1.095	2.077	2.4	20.4	1 22	7 58.57	+21 46.0	1.496	2.479	1.6	19.3
2 1	7 48.57	+24 8.4	1.113	2.075	7.9	20.7	2 1	7 47.61	+21 57.8	1.543	2.503	6.4	19.7
2 11	7 40.50	+24 18.0	1.155	2.075	13.2	21.0	2 11	7 38.67	+22 2.6	1.616	2.527	10.8	20.0
2 21	7 35.70	+24 16.3	1.218	2.076	17.8	21.2	2 21	7 32.55	+22 0.7	1.713	2.550	14.5	20.3
<b>236144</b>	2005 <i>UU</i> <sub>103</sub>		1 19.2	321°95	0°5/19.4	18	<b>169200</b>	2001 <i>RB</i> <sub>74</sub>		1 19.3	104°74	5°8/16.3	18
12 13	8 28.70	+17 26.3	1.327	2.141	18.9	20.7	12 13	8 33.57	+38 27.8	2.465	3.245	12.2	20.0
12 23	8 25.50	+17 41.4	1.245	2.133	14.9	20.5	12 23	8 27.77	+39 10.8	2.395	3.254	9.9	19.9
1 2	8 18.87	+18 10.0	1.182	2.126	10.0	20.1	1 2	8 19.51	+39 47.3	2.350	3.263	7.5	19.8
1 12	8 9.51	+18 48.7	1.143	2.119	4.4	19.8	1 12	8 9.53	+40 11.6	2.331	3.272	5.9	19.7
1 22	7 58.71	+19 31.9	1.129	2.113	1.6	19.6	1 22	7 58.83	+40 19.1	2.342	3.281	6.1	19.7
2 1	7 48.14	+20 13.4	1.142	2.107	7.4	19.9	2 1	7 48.58	+40 8.0	2.381	3.290	7.8	19.8
2 11	7 39.51	+20 48.3	1.179	2.101	12.9	20.2	2 11	7 39.86	+39 39.6	2.447	3.298	10.1	20.0
2 21	7 34.01	+21 14.3	1.238	2.096	17.5	20.5	2 21	7 33.40	+38 57.1	2.537	3.307	12.3	20.2
<b>468360</b>	2016 <i>EM</i> <sub>162</sub>		1 19.2	14°21	1°7/20.2	18	<b>119565</b>	2001 <i>VL</i> <sub>72</sub>		1 19.3	203°17	0°7/19.6	18
12 13	8 25.44	+11 22.6	1.524	2.319	17.8	20.2	12 13	8 30.33	+17 20.1	2.460	3.230	12.5	22.0
12 23	8 22.40	+12 16.9	1.446	2.321	14.1	19.9	12 23	8 25.06	+17 27.5	2.361	3.225	9.8	21.8
1 2	8 16.49	+13 32.2	1.388	2.324	9.6	19.7	1 2	8 17.70	+17 41.7	2.286	3.219	6.6	21.6
1 12	8 8.39	+15 4.7	1.355	2.327	4.7	19.4	1 12	8 8.79	+18 0.5	2.239	3.212	3.0	21.4
1 22	7 59.16	+16 47.3	1.349	2.331	1.9	19.2	1 22	7 59.09	+18 21.4	2.223	3.205	1.1	21.2
2 1	7 50.16	+18 31.0	1.371	2.336	6.5	19.5	2 1	7 49.52	+18 41.8	2.238	3.197	4.8	21.5
2 11	7 42.75	+20 7.7	1.421	2.341	11.2	19.8	2 11	7 41.03	+18 59.5	2.282	3.189	8.3	21.7
2 21	7 37.91	+21 31.7	1.493	2.347	15.3	20.1	2 21	7 34.32	+19 13.4	2.353	3.180	11.4	21.9
<b>103939</b>	2000 <i>DJ</i> <sub>69</sub>		1 19.3	357°26	1°0/19.7	18	<b>65230</b>	2002 <i>ER</i> <sub>71</sub>		1 19.3	208°54	1°8/20.1	18
12 13	8 26.57	+16 30.3	2.074	2.860	14.0	19.7	12 13	8 27.81	+14 39.8	2.053	2.832	14.3	20.1
12 23	8 22.48	+16 38.0	1.987	2.860	10.9	19.5	12 23	8 23.45	+14 38.5	1.964	2.831	11.3	19.9
1 2	8 16.13	+16 54.6	1.923	2.859	7.3	19.2	1 2	8 16.79	+14 47.0	1.898	2.831	7.7	19.7
1 12	8 8.12	+17 17.9	1.885	2.859	3.4	19.0	1 12	8 8.43	+15 3.8	1.859	2.830	3.9	19.5
1 22	7 59.30	+17 44.8	1.876	2.859	1.4	18.8	1 22	7 59.23	+15 26.2	1.848	2.829	1.9	19.3
2 1	7 50.70	+18 12.1	1.897	2.859	5.2	19.1	2 1	7 50.26	+15 51.4	1.867	2.828	5.4	19.6
2 11	7 43.33	+18 37.1	1.945	2.859	9.1	19.3	2 11	7 42.53	+16 16.5	1.914	2.827	9.2	19.8
2 21	7 37.95	+18 57.9	2.018	2.859	12.4	19.5	2 21	7 36.83	+16 39.2	1.985	2.826	12.6	20.0
<b>219440</b>	2000 <i>UV</i> <sub>69</sub>		1 19.3	55°65	2°7/18.2	18	<b>492629</b>	2014 <i>OG</i> <sub>292</sub>		1 19.3	104°87	2°6/18.1	18
12 13	8 31.69	+25 57.0	1.695	2.500	15.8	20.6	12 13	8 33.12	+25 12.8	1.860	2.655	15.0	21.8
12 23	8 26.83	+26 26.7	1.634	2.518	12.2	20.4	12 23	8 27.78	+25 56.1	1.792	2.671	11.6	21.6
1 2	8 19.10	+26 58.8	1.596	2.538	8.1	20.2	1 2	8 19.71	+26 43.0	1.748	2.688	7.7	21.4
1 12	8 9.38	+27 27.5	1.584	2.557	4.0	20.0	1 12	8 9.67	+27 27.5	1.730	2.703	3.8	21.2
1 22	7 58.87	+27 47.8	1.599	2.576	3.3	20.0	1 22	7 58.79	+28 3.9	1.742	2.719	3.2	21.2
2 1	7 48.96	+27 56.4	1.643	2.596	6.9	20.3	2 1	7 48.37	+28 28.4	1.783	2.734	6.7	21.4
2 11	7 40.89	+27 52.7	1.713	2.616	10.8	20.5	2 11	7 39.65	+28 39.6	1.851	2.748	10.4	21.7
2 21	7 35.47	+27 38.5	1.807	2.636	14.2	20.8	2 21	7 33.44	+28 38.7	1.943	2.762	13.7	21.9
<b>70190</b>	1999 <i>RW</i> <sub>11</sub>		1 19.3	204°32	0°8/19.6	18	<b>336547</b>	2009 <i>BQ</i> <sub>132</sub>		1 19.3	94°11	2°3/20.4	18
12 13	8 30.82	+16 38.5	1.922	2.704	15.1	20.6	12 13	8 27.17	+13 19.3	2.366	3.134	13.0	20.6
12 23	8 26.02	+16 54.4	1.830	2.700	11.8	20.4	12 23	8 22.54	+13 4.3	2.283	3.142	10.3	20.4
1 2	8 18.63	+17 20.3	1.761	2.696	7.9	20.1	1 2	8 15.96	+12 57.8	2.223	3.149	7.1	20.2
1 12	8 9.26	+17 53.6	1.718	2.692	3.6	19.9	1 12	8 8.00	+12 59.0	2.190	3.157	3.9	20.1
1 22	7 58.87	+18 30.3	1.704	2.687	1.4	19.7	1 22	7 59.42	+13 6.6	2.187	3.165	2.4	20.0
2 1	7 48.65	+19 6.3	1.721	2.682	5.8	20.0	2 1	7 51.10	+13 18.5	2.213	3.172	4.9	20.1
2 11	7 39.82	+19 38.3	1.765	2.676	10.0	20.2	2 11	7 43.88	+13 32.6	2.269	3.180	8.1	20.4
2 21	7 33.27	+20 4.3	1.833	2.670	13.7	20.4	2 21	7 38.39	+13 47.0	2.350	3.187	11.0	20.6
<b>471723</b>	2012 <i>UK</i> <sub>13</sub>		1 19.3	201°35	4°4/16.5	17	<b>200443</b>	2000 <i>VF</i> <sub>14</sub>		1 19.3	60°88	2°1/18.5	18
12 13	8 29.2												

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>430676</b>	2003 <i>VD</i>		1 19.3 317°43	18°7/20.1	18		<b>171892</b>	2001 <i>RT</i> <sub>48</sub>		1 19.3 94°03	4°8/15.6	18	
12 13	8 33.73	- 4 23.7	1.057	1.811	26.5	19.7	12 13	8 31.21	+32 23.7	2.563	3.348	11.6	20.0
12 23	8 30.07	- 7 54.2	0.988	1.802	23.8	19.5	12 23	8 25.89	+33 58.4	2.502	3.370	9.1	19.8
1 2	8 22.33	-11 5.3	0.935	1.795	21.2	19.3	1 2	8 18.32	+35 32.0	2.467	3.391	6.6	19.7
1 12	8 11.20	-13 40.6	0.900	1.787	19.3	19.1	1 12	8 9.10	+36 57.6	2.461	3.413	4.9	19.6
1 22	7 58.11	-15 25.5	0.885	1.780	18.7	19.0	1 22	7 59.08	+38 9.2	2.486	3.433	5.2	19.7
2 1	7 45.11	-16 12.0	0.889	1.774	19.9	19.1	2 1	7 49.30	+39 2.9	2.541	3.454	7.2	19.8
2 11	7 34.35	-16 3.4	0.911	1.768	22.2	19.2	2 11	7 40.76	+39 37.8	2.624	3.474	9.5	20.0
2 21	7 27.34	-15 11.4	0.947	1.763	25.0	19.4	2 21	7 34.20	+39 55.3	2.731	3.494	11.7	20.2
<b>208705</b>	2002 <i>JX</i> <sub>33</sub>		1 19.3 234°68	1°2/18.7	18		<b>163518</b>	2002 <i>TF</i> <sub>18</sub>		1 19.3 169°84	1°0/18.7	18	
12 13	8 31.31	+21 9.5	1.942	2.733	14.6	21.2	12 13	8 28.09	+22 14.2	2.444	3.229	12.1	20.7
12 23	8 26.57	+21 44.1	1.845	2.722	11.4	21.0	12 23	8 23.38	+22 37.4	2.356	3.230	9.4	20.5
1 2	8 19.11	+22 26.5	1.770	2.710	7.6	20.7	1 2	8 16.61	+23 5.0	2.293	3.232	6.2	20.3
1 12	8 9.54	+23 12.4	1.722	2.698	3.3	20.5	1 12	8 8.35	+23 33.5	2.258	3.233	2.7	20.1
1 22	7 58.80	+23 56.4	1.704	2.685	1.9	20.3	1 22	7 59.38	+23 59.6	2.253	3.234	1.6	20.0
2 1	7 48.14	+24 33.9	1.715	2.672	6.2	20.6	2 1	7 50.62	+24 20.4	2.278	3.235	5.0	20.3
2 11	7 38.86	+25 1.7	1.753	2.658	10.5	20.8	2 11	7 42.98	+24 34.2	2.333	3.236	8.3	20.5
2 21	7 31.92	+25 19.1	1.816	2.644	14.2	21.0	2 21	7 37.14	+24 40.7	2.413	3.236	11.2	20.7
<b>111460</b>	2001 <i>XR</i> <sub>258</sub>		1 19.3 65°28	1°5/19.9	18		<b>205823</b>	2002 <i>CP</i> <sub>264</sub>		1 19.3 147°96	1°1/18.9	18	
12 13	8 28.37	+14 25.6	1.740	2.528	16.2	19.9	12 13	8 34.81	+22 35.2	1.822	2.612	15.5	21.1
12 23	8 24.14	+14 45.0	1.670	2.542	12.7	19.7	12 23	8 29.16	+22 45.9	1.743	2.619	12.0	20.9
1 2	8 17.33	+15 17.1	1.621	2.557	8.5	19.5	1 2	8 20.69	+23 1.0	1.687	2.626	7.9	20.7
1 12	8 8.67	+15 59.1	1.598	2.571	4.1	19.2	1 12	8 10.17	+23 16.5	1.657	2.633	3.4	20.4
1 22	7 59.18	+16 46.7	1.603	2.585	1.8	19.1	1 22	7 58.72	+23 28.1	1.657	2.639	1.8	20.3
2 1	7 50.07	+17 34.9	1.637	2.600	5.8	19.4	2 1	7 47.68	+23 33.0	1.686	2.644	6.2	20.6
2 11	7 42.50	+18 19.5	1.698	2.614	10.0	19.7	2 11	7 38.35	+23 30.0	1.743	2.649	10.4	20.9
2 21	7 37.27	+18 58.0	1.783	2.629	13.6	19.9	2 21	7 31.58	+23 19.8	1.823	2.653	14.0	21.1
<b>117101</b>	2004 <i>OC</i> <sub>1</sub>		1 19.3 104°93	2°1/20.4	18		<b>224798</b>	2006 <i>UL</i> <sub>7</sub>		1 19.3 53°59	0°5/19.5	17	
12 13	8 33.11	+11 39.2	1.765	2.534	16.7	19.9	12 13	8 31.09	+16 45.6	1.177	1.994	20.6	20.3
12 23	8 27.64	+12 11.5	1.699	2.559	13.1	19.8	12 23	8 27.44	+17 10.6	1.116	2.005	16.1	20.0
1 2	8 19.54	+12 59.1	1.655	2.584	9.0	19.6	1 2	8 20.12	+17 51.3	1.073	2.017	10.7	19.8
1 12	8 9.59	+13 58.9	1.637	2.607	4.5	19.3	1 12	8 10.06	+18 42.8	1.053	2.029	4.7	19.5
1 22	7 58.84	+15 5.6	1.649	2.630	2.2	19.2	1 22	7 58.75	+19 37.8	1.058	2.042	1.7	19.3
2 1	7 48.56	+16 13.4	1.691	2.652	5.9	19.5	2 1	7 48.06	+20 29.1	1.090	2.054	7.7	19.7
2 11	7 39.92	+17 17.2	1.761	2.673	9.9	19.8	2 11	7 39.69	+21 11.3	1.145	2.067	13.1	20.0
2 21	7 33.69	+18 13.4	1.856	2.694	13.5	20.1	2 21	7 34.70	+21 42.3	1.221	2.080	17.6	20.3
<b>327421</b>	2005 <i>WP</i>		1 19.3 114°29	2°6/20.4	18		<b>242979</b>	2006 <i>SV</i> <sub>188</sub>		1 19.3 194°41	3°4/21.9	18	
12 13	8 28.40	+13 0.5	1.961	2.737	15.0	20.9	12 13	8 24.54	+ 5 28.4	3.000	3.730	11.3	21.3
12 23	8 23.97	+12 47.5	1.876	2.739	11.9	20.7	12 23	8 20.22	+ 5 37.8	2.900	3.727	9.3	21.2
1 2	8 17.16	+12 45.3	1.812	2.741	8.3	20.5	1 2	8 14.35	+ 5 59.4	2.822	3.725	6.9	21.0
1 12	8 8.60	+12 53.0	1.774	2.742	4.5	20.2	1 12	8 7.35	+ 6 32.8	2.772	3.721	4.6	20.9
1 22	7 59.21	+13 8.6	1.765	2.744	2.7	20.1	1 22	7 59.77	+ 7 16.4	2.753	3.718	3.4	20.8
2 1	7 50.06	+13 29.6	1.785	2.745	5.7	20.3	2 1	7 52.29	+ 8 8.0	2.764	3.714	4.7	20.9
2 11	7 42.24	+13 52.9	1.833	2.747	9.5	20.5	2 11	7 45.55	+ 9 4.1	2.805	3.710	7.0	21.0
2 21	7 36.52	+14 15.9	1.905	2.748	13.0	20.8	2 21	7 40.11	+10 1.6	2.874	3.705	9.4	21.2
<b>233617</b>	2007 <i>TS</i> <sub>171</sub>		1 19.3 164°90	0°6/19.6	17		<b>422390</b>	2014 <i>SR</i> <sub>276</sub>		1 19.3 123°97	7°1/23.3	18	
12 13	8 26.59	+16 44.2	2.668	3.440	11.6	21.4	12 13	8 28.08	- 0 38.3	2.028	2.748	16.4	21.7
12 23	8 21.99	+17 1.0	2.578	3.443	9.0	21.2	12 23	8 23.55	- 1 3.3	1.949	2.758	13.8	21.5
1 2	8 15.57	+17 24.7	2.513	3.446	6.0	21.1	1 2	8 16.81	- 1 8.3	1.889	2.769	11.0	21.4
1 12	8 7.86	+17 53.4	2.476	3.449	2.7	20.8	1 12	8 8.46	- 0 51.4	1.854	2.779	8.4	21.2
1 22	7 59.52	+18 24.3	2.469	3.452	1.0	20.7	1 22	7 59.36	- 0 13.2	1.846	2.789	7.1	21.2
2 1	7 51.36	+18 54.7	2.494	3.454	4.3	21.0	2 1	7 50.51	+ 0 43.4	1.865	2.799	7.9	21.2
2 11	7 44.15	+19 22.5	2.548	3.456	7.5	21.2	2 11	7 42.90	+ 1 52.9	1.912	2.808	10.2	21.4
2 21	7 38.51	+19 46.0	2.628	3.457	10.2	21.3	2 21	7 37.26	+ 3 9.2	1.984	2.816	12.9	21.6
<b>245921</b>	2006 <i>RT</i> <sub>8</sub>		1 19.3 148°85	3°5/21.7	18		<b>62464</b>	2000 <i>SF</i> <sub>213</sub>		1 19.3 5°34	3°2/17.6	18	
12 13	8 24.82	+ 5 55.1	2.986	3.717	11.4	21.9	12 13	8 28.48	+25 9.0	1.779	2.586	15.1	19.1
12 23	8 20.35	+ 5 50.1	2.897	3.725	9.3	21.8	12 23	8 24.60	+26 9.4	1.700	2.586	11.7	18.8
1 2	8 14.36	+ 5 56.3	2.831	3.733	6.9	21.6	1 2	8 17.89	+27 15.6	1.644	2.586	7.8	18.6
1 12	8 7.30	+ 6 13.5	2.793	3.741	4.6	21.5	1 12	8 9.05	+28 21.2	1.614	2.587	4.1	18.4
1 22	7 59.75	+ 6 40.6	2.784	3.748	3.5	21.4	1 22	7 59.12	+29 19.0	1.612	2.587	3.8	18.4
2 1	7 52.34	+ 7 15.6	2.806	3.754	4.7	21.5	2 1	7 49.44	+30 3.4	1.639	2.588	7.3	18.6
2 11	7 45.74	+ 7 55.7	2.858	3.760	7.0	21.7	2 11	7 41.33	+30 31.8	1.692	2.590	11.2	18.8
2 21	7 40.45	+ 8 38.1	2.937	3.766	9.3	21.8	2 21	7 35.75	+30 44.7	1.768	2.591	14.7	19.0
<b>207676</b>	2007 <i>PE</i> <sub>33</sub>		1 19.3 149°56	0°4/19.5	18		<b>310208</b>	2011 <i>SB</i> <sub>165</sub>		1 19.3 153°31	1°0/18.8	18	
12 13	8 33.08	+17 51.7	2.024	2.801	14.6	21.2	12 13	8 33.63	+21 7.8	1.973	2.758	14.6	21.8
12 23	8 27.49	+18 5.3	1.943	2.811	11.4	21.0	12 23	8 28.08	+21 38.3	1.893	2.767	11.3	21.6
1 2	8 19.43	+18 26.9	1.885	2.821	7.5	20.8	1 2	8 19.91	+22 15.4	1.836	2.775	7.5	21.4
1 12	8 9.57	+18 53.4	1.855	2.829	3.3	20.5	1 12	8 9.83	+22 54.5	1.807	2.782	3.2	21.1
1 22	7 58.89	+19 21.3	1.855	2.837	1.2	20.4	1 22	7 58.85	+23 30.8	1.807	2.789	1.7	21.0
2 1	7 48.54	+19 47.0	1.885	2.845	5.5	20.7	2 1	7 48.19	+24 0.4	1.838	2.795	5.9	21.3
2 11	7 39.62	+20 8.1	1.943	2.851	9.4	20.9	2 11	7 39.05	+24 21.0	1.897	2.801	9.9	21.6
2 21	7 32.93	+20 23.6	2.027	2.857	12.8	21.2	2 21	7 32.25	+24 32.4	1.981	2.805	13.3	21.8
<b>254655</b>	2005 <i>JL</i> <sub>178</sub>		1 19.3 146°76	2°7/17.7	18		<b>319707</b>	2006 <i>UL</i> <sub>28</sub>		1 19.3 85°41	2°1/18.4	18	
12 13	8 33.42	+27 12.7	2.4										

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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>414524</b>	2009 <i>SE</i> <sub>71</sub>		1 19.3 142°32	0°3/19.1	18		<b>348432</b>	2005 <i>QR</i> <sub>12</sub>		1 19.3 139°47	0°5/19.1	17	
12 13	8 29.79	+20 5.3	2.004	2.793	14.3	21.8	12 13	8 37.05	+20 45.5	1.863	2.644	15.5	22.4
12 23	8 25.09	+20 19.3	1.921	2.796	11.1	21.6	12 23	8 30.73	+20 59.8	1.788	2.659	12.0	22.2
1 2	8 17.93	+20 39.7	1.860	2.799	7.3	21.4	1 2	8 21.65	+21 20.0	1.737	2.674	7.9	22.0
1 12	8 8.98	+21 3.4	1.826	2.802	3.1	21.2	1 12	8 10.58	+21 42.2	1.712	2.687	3.4	21.7
1 22	7 59.18	+21 26.6	1.822	2.805	1.3	21.0	1 22	7 58.65	+22 2.0	1.717	2.700	1.5	21.6
2 1	7 49.66	+21 46.0	1.847	2.807	5.5	21.3	2 1	7 47.20	+22 16.3	1.753	2.712	6.0	22.0
2 11	7 41.53	+21 59.7	1.900	2.809	9.5	21.6	2 11	7 37.46	+22 23.4	1.817	2.722	10.1	22.2
2 21	7 35.57	+22 6.9	1.977	2.812	12.9	21.8	2 21	7 30.27	+22 23.5	1.906	2.732	13.7	22.5
<b>202436</b>	2005 <i>XU</i> <sub>15</sub>		1 19.3 228°22	1°5/19.9	18		<b>225969</b>	2002 <i>CJ</i> <sub>116</sub>		1 19.3 86°82	1°3/18.7	18	
12 13	8 32.95	+15 30.1	1.901	2.677	15.4	21.9	12 13	8 30.40	+22 53.2	1.973	2.767	14.3	20.8
12 23	8 27.84	+15 33.0	1.799	2.665	12.2	21.6	12 23	8 25.58	+23 11.2	1.896	2.775	11.1	20.6
1 2	8 19.98	+15 46.2	1.719	2.652	8.4	21.4	1 2	8 18.25	+23 33.4	1.843	2.783	7.3	20.4
1 12	8 9.97	+16 7.9	1.666	2.638	4.0	21.1	1 12	8 9.12	+23 56.0	1.816	2.792	3.2	20.1
1 22	7 58.78	+16 34.7	1.641	2.623	1.8	20.9	1 22	7 59.20	+24 14.9	1.819	2.800	1.9	20.1
2 1	7 47.64	+17 3.1	1.647	2.608	6.0	21.1	2 1	7 49.64	+24 27.1	1.851	2.808	5.8	20.3
2 11	7 37.86	+17 30.0	1.680	2.591	10.4	21.4	2 11	7 41.56	+24 31.2	1.910	2.817	9.7	20.6
2 21	7 30.43	+17 53.0	1.739	2.574	14.3	21.6	2 21	7 35.75	+24 27.5	1.994	2.825	13.0	20.8
<b>493284</b>	2014 <i>UH</i> <sub>161</sub>		1 19.3 159°29	2°0/18.2	18		<b>129814</b>	1999 <i>NU</i> <sub>5</sub>		1 19.3 82°88	1°0/19.7	18	
12 13	8 32.35	+24 53.8	2.335	3.118	12.7	22.1	12 13	8 32.63	+15 59.2	1.633	2.421	17.1	20.1
12 23	8 26.77	+25 29.1	2.253	3.125	9.8	21.9	12 23	8 27.50	+16 18.4	1.572	2.445	13.3	19.9
1 2	8 18.89	+26 7.3	2.195	3.132	6.5	21.7	1 2	8 19.57	+16 49.2	1.532	2.469	8.8	19.7
1 12	8 9.36	+26 44.0	2.165	3.138	3.2	21.5	1 12	8 9.68	+17 28.0	1.518	2.492	4.0	19.5
1 22	7 59.06	+27 14.8	2.166	3.144	2.5	21.4	1 22	7 59.01	+18 9.8	1.532	2.515	1.5	19.3
2 1	7 49.02	+27 36.5	2.198	3.148	5.6	21.7	2 1	7 48.89	+18 50.1	1.575	2.537	6.1	19.7
2 11	7 40.28	+27 47.9	2.258	3.152	9.0	21.9	2 11	7 40.57	+19 25.2	1.645	2.560	10.4	20.0
2 21	7 33.57	+27 49.4	2.344	3.156	11.9	22.1	2 21	7 34.83	+19 53.2	1.739	2.581	14.1	20.3
<b>168153</b>	2006 <i>HJ</i> <sub>42</sub>		1 19.3 190°01	1°4/18.6	18		<b>372590</b>	2009 <i>UV</i> <sub>124</sub>		1 19.3 320°31	3°6/21.0	18	
12 13	8 33.05	+22 21.2	2.041	2.827	14.2	21.4	12 13	8 26.04	+ 9 44.3	1.867	2.641	15.8	21.3
12 23	8 27.69	+22 52.1	1.952	2.826	11.0	21.2	12 23	8 22.37	+ 9 39.6	1.776	2.636	12.7	21.1
1 2	8 19.73	+23 28.7	1.886	2.824	7.3	21.0	1 2	8 16.28	+ 9 49.6	1.707	2.630	9.1	20.9
1 12	8 9.80	+24 6.5	1.847	2.822	3.2	20.7	1 12	8 8.35	+10 14.1	1.662	2.625	5.5	20.6
1 22	7 58.88	+24 40.8	1.838	2.819	2.0	20.6	1 22	7 59.46	+10 50.9	1.645	2.621	3.6	20.5
2 1	7 48.18	+25 7.4	1.860	2.815	6.0	20.9	2 1	7 50.73	+11 36.4	1.657	2.616	6.2	20.7
2 11	7 38.89	+25 24.5	1.910	2.811	9.9	21.1	2 11	7 43.27	+12 26.0	1.695	2.612	10.0	20.9
2 21	7 31.89	+25 31.8	1.984	2.806	13.4	21.3	2 21	7 37.94	+13 15.4	1.758	2.608	13.6	21.1
<b>417789</b>	2007 <i>EM</i> <sub>79</sub>		1 19.3 303°03	7°7/23.1	18		<b>204219</b>	2004 <i>CY</i> <sub>82</sub>		1 19.3 291°35	1°7/20.1	18	
12 13	8 25.25	- 0 32.4	1.937	2.666	16.7	21.4	12 13	8 26.64	+15 6.4	2.281	3.057	13.2	20.2
12 23	8 21.67	- 1 8.8	1.844	2.659	14.3	21.2	12 23	8 22.42	+14 56.2	2.182	3.047	10.4	20.0
1 2	8 15.76	- 1 25.5	1.770	2.652	11.5	21.0	1 2	8 16.10	+14 53.9	2.107	3.038	7.1	19.8
1 12	8 8.10	- 1 19.3	1.720	2.645	9.0	20.8	1 12	8 8.22	+14 58.4	2.058	3.029	3.6	19.5
1 22	7 59.51	- 0 49.9	1.696	2.638	7.7	20.7	1 22	7 59.54	+15 8.0	2.039	3.019	1.9	19.4
2 1	7 51.02	+ 0 0.8	1.698	2.631	8.6	20.7	2 1	7 50.99	+15 20.5	2.049	3.010	5.0	19.6
2 11	7 43.71	+ 1 7.7	1.727	2.625	11.0	20.9	2 11	7 43.53	+15 33.9	2.088	3.001	8.6	19.8
2 21	7 38.39	+ 2 24.2	1.780	2.619	13.9	21.0	2 21	7 37.86	+15 46.3	2.153	2.992	11.8	20.0
<b>5951</b>	Alicemonet		1 19.3 75°87	2°1/18.4	18		<b>350134</b>	2011 <i>RD</i> <sub>18</sub>		1 19.3 202°46	0°6/19.0	18	
12 13	8 35.82	+21 26.1	1.296	2.106	19.5	16.5	12 13	8 33.51	+20 35.3	1.897	2.683	15.1	21.8
12 23	8 30.71	+22 23.1	1.245	2.132	15.0	16.3	12 23	8 28.24	+20 54.6	1.805	2.679	11.8	21.5
1 2	8 22.03	+23 29.6	1.214	2.158	9.8	16.0	1 2	8 20.21	+21 21.0	1.736	2.675	7.8	21.3
1 12	8 10.79	+24 37.5	1.208	2.184	4.3	15.8	1 12	8 10.07	+21 50.4	1.694	2.670	3.4	21.0
1 22	7 58.57	+25 37.9	1.229	2.209	3.0	15.8	1 22	7 58.84	+22 18.5	1.682	2.664	1.5	20.9
2 1	7 47.15	+26 24.1	1.276	2.234	7.9	16.1	2 1	7 47.81	+22 41.3	1.699	2.658	6.1	21.1
2 11	7 38.14	+26 53.8	1.350	2.259	12.6	16.5	2 11	7 38.29	+22 56.4	1.744	2.651	10.4	21.4
2 21	7 32.46	+27 8.1	1.445	2.283	16.6	16.8	2 21	7 31.19	+23 3.5	1.813	2.643	14.1	21.6
<b>252600</b>	2001 <i>XA</i> <sub>44</sub>		1 19.3 29°54	6°6/16.4	18	R	<b>240532</b>	2004 <i>FP</i> <sub>148</sub>		1 19.3 292°57	4°4/16.1	18	
12 13	8 30.93	+33 0.2	1.528	2.344	16.7	19.7	12 13	8 27.79	+29 55.0	2.308	3.104	12.4	20.2
12 23	8 27.05	+34 14.9	1.467	2.352	13.3	19.5	12 23	8 23.68	+31 17.5	2.218	3.096	9.7	20.0
1 2	8 19.74	+35 27.8	1.428	2.362	9.6	19.3	1 2	8 17.16	+32 42.7	2.154	3.087	6.9	19.8
1 12	8 9.88	+36 29.2	1.414	2.372	7.0	19.1	1 12	8 8.76	+34 4.0	2.118	3.079	4.7	19.7
1 22	7 58.88	+37 10.6	1.426	2.383	7.2	19.2	1 22	7 59.32	+35 14.6	2.112	3.071	5.0	19.7
2 1	7 48.43	+37 27.3	1.464	2.394	10.0	19.4	2 1	7 49.93	+36 9.4	2.135	3.063	7.4	19.8
2 11	7 40.13	+37 19.8	1.526	2.406	13.4	19.6	2 11	7 41.72	+36 46.2	2.185	3.055	10.3	20.0
2 21	7 34.97	+36 52.5	1.609	2.418	16.6	19.8	2 21	7 35.58	+37 5.5	2.259	3.047	13.1	20.2
<b>104252</b>	2000 <i>EJ</i> <sub>138</sub>		1 19.3 93°27	1°0/18.8	18		<b>441859</b>	2009 <i>WU</i> <sub>171</sub>		1 19.3 93°35	0°8/19.5	17	
12 13	8 29.45	+22 17.5	2.243	3.030	13.0	20.4	12 13	8 36.34	+18 19.6	1.401	2.199	18.9	21.8
12 23	8 24.48	+22 36.9	2.169	3.044	10.0	20.2	12 23	8 30.85	+18 15.8	1.338	2.217	14.7	21.6
1 2	8 17.34	+23 0.3	2.120	3.059	6.6	20.1	1 2	8 22.01	+18 21.5	1.295	2.235	9.8	21.3
1 12	8 8.67	+23 24.4	2.097	3.073	2.8	19.8	1 12	8 10.80	+18 33.5	1.278	2.253	4.3	21.1
1 22	7 59.36	+23 45.6	2.105	3.087	1.6	19.8	1 22	7 58.63	+18 47.3	1.287	2.270	1.6	20.9
2 1	7 50.39	+24 1.3	2.143	3.100	5.2	20.0	2 1	7 47.15	+18 59.4	1.324	2.287	6.9	21.3
2 11	7 42.72	+24 9.9	2.209	3.114	8.6	20.3	2 11	7 37.87	+19 7.6	1.388	2.303	11.8	21.6
2 21	7 37.02	+24 11.5	2.301	3.127	11.6	20.5	2 21	7 31.68	+19 10.9	1.473	2.320	15.9	21.9
<b>411218</b>	2010 <i>NS</i> <sub>103</sub>		1 19.3 88°10	3°5/20.5	18		<b>90969</b>	1997 <i>WR</i> <sub>33</sub>		1 19.3 36°50	3°3/18.0	18	
12 13	8 30.48	+12 12.4											

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1 19.3

1 19.3

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>159554</b>	2001 SZ <sub>257</sub>		1 19.3 155°04	0°8/18.7	18		<b>224914</b>	2007 DY <sub>20</sub>		1 19.3 267°94	1°5/20.0	17	
12 13	8 23.29	+22 25.6	3.467	4.245	9.0	20.8	12 13	8 27.38	+14 26.7	2.010	2.791	14.6	21.5
12 23	8 19.13	+22 49.4	3.377	4.248	6.9	20.7	12 23	8 23.37	+14 42.1	1.911	2.779	11.5	21.2
1 2	8 13.57	+23 16.1	3.313	4.251	4.5	20.5	1 2	8 16.95	+15 9.1	1.835	2.768	7.9	21.0
1 12	8 7.03	+23 43.3	3.279	4.254	2.0	20.4	1 12	8 8.68	+15 45.7	1.785	2.757	3.8	20.7
1 22	8 0.02	+24 8.8	3.275	4.256	1.2	20.3	1 22	7 59.40	+16 28.7	1.763	2.745	1.7	20.5
2 1	7 53.15	+24 30.6	3.303	4.259	3.7	20.5	2 1	7 50.21	+17 13.9	1.771	2.734	5.5	20.8
2 11	7 47.00	+24 47.5	3.361	4.261	6.1	20.7	2 11	7 42.21	+17 57.4	1.807	2.722	9.6	21.0
2 21	7 42.04	+24 58.9	3.446	4.263	8.3	20.8	2 21	7 36.27	+18 36.3	1.868	2.710	13.2	21.2
<b>206276</b>	2003 AH <sub>5</sub>		1 19.3 24°09	0°4/19.4	18		<b>278493</b>	2007 VZ <sub>251</sub>		1 19.3 136°15	2°4/17.7	18	
12 13	8 26.11	+18 30.2	1.688	2.492	15.9	20.0	12 13	8 28.33	+26 33.2	2.760	3.544	10.9	21.3
12 23	8 22.53	+18 37.7	1.621	2.505	12.3	19.8	12 23	8 23.40	+27 20.2	2.682	3.555	8.4	21.2
1 2	8 16.36	+18 53.9	1.576	2.518	8.2	19.6	1 2	8 16.56	+28 9.0	2.628	3.565	5.6	21.0
1 12	8 8.34	+19 15.7	1.556	2.532	3.6	19.3	1 12	8 8.37	+28 55.3	2.604	3.574	3.0	20.9
1 22	7 59.54	+19 39.2	1.564	2.547	1.3	19.2	1 22	7 59.55	+29 35.4	2.611	3.584	2.8	20.8
2 1	7 51.18	+20 0.9	1.599	2.563	5.8	19.5	2 1	7 50.94	+30 6.2	2.648	3.592	5.2	21.0
2 11	7 44.39	+20 18.2	1.661	2.579	10.0	19.8	2 11	7 43.36	+30 26.3	2.715	3.601	7.9	21.2
2 21	7 39.96	+20 29.7	1.747	2.597	13.6	20.1	2 21	7 37.45	+30 36.1	2.807	3.609	10.4	21.4
<b>460951</b>	2014 WX <sub>267</sub>		1 19.3 126°34	2°7/20.7	18		<b>56141</b>	1999 CR <sub>76</sub>		1 19.3 237°20	2°6/20.5	18	
12 13	8 27.89	+11 24.8	2.026	2.796	14.8	21.6	12 13	8 27.98	+12 7.8	1.931	2.706	15.3	19.1
12 23	8 23.52	+11 27.6	1.942	2.801	11.8	21.4	12 23	8 23.81	+12 9.1	1.840	2.703	12.2	18.9
1 2	8 16.88	+11 43.2	1.880	2.806	8.3	21.2	1 2	8 17.20	+12 23.1	1.771	2.699	8.5	18.7
1 12	8 8.56	+12 10.2	1.845	2.811	4.6	21.0	1 12	8 8.77	+12 48.8	1.728	2.696	4.6	18.4
1 22	7 59.44	+12 46.0	1.838	2.816	2.7	20.9	1 22	7 59.39	+13 23.5	1.713	2.692	2.7	18.3
2 1	7 50.56	+13 27.2	1.860	2.820	5.5	21.0	2 1	7 50.17	+14 3.5	1.727	2.688	5.8	18.5
2 11	7 42.93	+14 9.8	1.911	2.825	9.2	21.3	2 11	7 42.25	+14 44.9	1.769	2.684	9.7	18.7
2 21	7 37.32	+14 50.6	1.986	2.829	12.5	21.5	2 21	7 36.44	+15 24.3	1.835	2.680	13.3	18.9
<b>417060</b>	2005 UP <sub>205</sub>		1 19.3 335°22	2°9/20.5	16		<b>5644</b>	Maureenbell		1 19.3 39°77	5°2/22.6	18	
12 13	8 26.53	+12 50.6	1.690	2.479	16.5	21.1	12 13	8 24.15	+3 6.5	2.110	2.852	15.1	16.8
12 23	8 23.04	+12 38.7	1.602	2.473	13.2	20.9	12 23	8 20.52	+3 5.5	2.028	2.860	12.5	16.7
1 2	8 16.87	+12 39.7	1.534	2.466	9.2	20.6	1 2	8 14.84	+3 22.7	1.967	2.868	9.6	16.5
1 12	8 8.66	+12 52.9	1.491	2.460	5.1	20.3	1 12	8 7.68	+3 58.2	1.932	2.876	6.7	16.3
1 22	7 59.39	+13 15.9	1.476	2.455	3.0	20.2	1 22	7 59.81	+4 50.4	1.923	2.884	5.2	16.3
2 1	7 50.32	+13 45.5	1.487	2.450	6.4	20.4	2 1	7 52.16	+5 55.4	1.944	2.893	6.4	16.3
2 11	7 42.70	+14 17.6	1.526	2.445	10.6	20.6	2 11	7 45.62	+7 8.0	1.992	2.901	9.1	16.5
2 21	7 37.44	+14 48.9	1.587	2.441	14.6	20.9	2 21	7 40.89	+8 22.8	2.066	2.911	12.0	16.7
<b>392034</b>	2009 BW <sub>49</sub>		1 19.3 291°60	0°2/19.2	17		<b>454124</b>	2013 CM <sub>153</sub>		1 19.3 258°70	0°4/19.1	18	
12 13	8 26.38	+19 50.7	2.308	3.095	12.7	21.2	12 13	8 30.08	+18 33.1	1.671	2.468	16.3	21.9
12 23	8 22.28	+20 7.3	2.211	3.086	9.9	21.0	12 23	8 26.05	+19 7.6	1.578	2.458	12.8	21.6
1 2	8 16.04	+20 30.1	2.137	3.076	6.5	20.8	1 2	8 19.05	+19 53.7	1.507	2.448	8.5	21.3
1 12	8 8.22	+20 56.4	2.091	3.067	2.8	20.5	1 12	8 9.70	+20 47.4	1.461	2.437	3.7	21.0
1 22	7 59.57	+21 22.9	2.075	3.058	1.1	20.4	1 22	7 59.04	+21 42.7	1.444	2.426	1.5	20.8
2 1	7 51.05	+21 46.6	2.088	3.048	5.0	20.6	2 1	7 48.48	+22 33.7	1.454	2.415	6.6	21.1
2 11	7 43.62	+22 5.2	2.130	3.039	8.6	20.8	2 11	7 39.46	+23 15.9	1.492	2.404	11.4	21.4
2 21	7 38.02	+22 17.8	2.197	3.030	11.8	21.0	2 21	7 33.05	+23 47.4	1.553	2.393	15.5	21.6
<b>6619</b>	Kolya		1 19.3 347°58	10°9/13.8	18		<b>51484</b>	2001 FU <sub>72</sub>		1 19.3 287°96	1°4/19.8	18	
12 13	8 34.55	+47 25.2	1.840	2.622	15.6	15.8	12 13	8 29.61	+15 13.4	1.371	2.176	18.9	19.3
12 23	8 30.24	+48 47.4	1.772	2.615	13.6	15.6	12 23	8 26.21	+15 28.8	1.284	2.166	15.0	19.1
1 2	8 22.10	+49 56.9	1.726	2.608	11.8	15.5	1 2	8 19.43	+16 0.0	1.217	2.157	10.2	18.8
1 12	8 11.01	+50 43.2	1.703	2.602	10.9	15.4	1 12	8 9.94	+16 44.6	1.173	2.148	4.8	18.4
1 22	7 58.53	+50 58.1	1.704	2.596	11.3	15.4	1 22	7 58.95	+17 37.0	1.156	2.138	1.9	18.2
2 1	7 46.61	+50 38.6	1.729	2.592	12.9	15.5	2 1	7 48.09	+18 31.0	1.165	2.129	7.3	18.5
2 11	7 37.09	+49 47.5	1.776	2.588	15.0	15.6	2 11	7 39.06	+19 20.4	1.199	2.120	12.7	18.8
2 21	7 31.08	+48 31.8	1.842	2.585	17.2	15.8	2 21	7 33.08	+20 1.8	1.255	2.111	17.4	19.0
<b>412511</b>	2014 LO <sub>15</sub>		1 19.3 134°94	0°5/19.6	18		<b>522282</b>	2016 BE <sub>96</sub>		1 19.3 328°93	5°1/17.9	18	
12 13	8 32.16	+17 16.4	2.030	2.808	14.5	21.7	12 13	8 34.43	+32 56.8	1.611	2.418	16.4	20.4
12 23	8 26.78	+17 33.2	1.953	2.821	11.3	21.5	12 23	8 29.73	+33 8.9	1.524	2.405	13.1	20.2
1 2	8 18.98	+17 58.5	1.898	2.833	7.5	21.3	1 2	8 21.56	+33 16.4	1.459	2.394	9.3	19.9
1 12	8 9.45	+18 29.3	1.871	2.845	3.3	21.1	1 12	8 10.75	+33 12.2	1.418	2.383	5.9	19.7
1 22	7 59.14	+19 1.9	1.873	2.856	1.2	20.9	1 22	7 58.69	+32 50.7	1.404	2.372	5.5	19.7
2 1	7 49.17	+19 32.8	1.906	2.867	5.4	21.2	2 1	7 47.07	+32 9.7	1.417	2.363	8.7	19.8
2 11	7 40.60	+19 59.1	1.968	2.877	9.2	21.5	2 11	7 37.54	+31 11.4	1.456	2.353	12.8	20.0
2 21	7 34.22	+20 19.6	2.054	2.886	12.6	21.7	2 21	7 31.16	+30 0.9	1.518	2.345	16.5	20.2
<b>203855</b>	2002 VW <sub>122</sub>		1 19.3 62°20	6°6/15.9	18		<b>154792</b>	2004 PL <sub>67</sub>		1 19.3 184°55	3°0/20.6	18	
12 13	8 33.12	+38 5.9	2.102	2.892	13.7	20.1	12 13	8 31.79	+11 20.2	1.898	2.664	15.8	20.9
12 23	8 27.89	+39 9.9	2.043	2.908	11.0	20.0	12 23	8 26.77	+11 17.1	1.809	2.665	12.6	20.7
1 2	8 19.87	+40 7.5	2.008	2.924	8.5	19.8	1 2	8 19.17	+11 27.2	1.741	2.665	8.9	20.4
1 12	8 9.85	+40 51.2	2.000	2.940	6.8	19.8	1 12	8 9.63	+11 49.6	1.699	2.664	5.0	20.2
1 22	7 59.01	+41 15.3	2.018	2.956	7.0	19.8	1 22	7 59.10	+12 21.8	1.685	2.663	3.1	20.1
2 1	7 48.68	+41 17.3	2.065	2.972	8.9	19.9	2 1	7 48.78	+13 0.1	1.702	2.661	6.1	20.3
2 11	7 40.12	+40 58.5	2.137	2.988	11.3	20.1	2 11	7 39.83	+13 40.7	1.746	2.658	10.0	20.5
2 21	7 34.13	+40 22.9	2.231	3.004	13.7	20.3	2 21	7 33.14	+14 20.0	1.815	2.654	13.7	20.7
<b>322400</b>	2011 QZ <sub>96</sub>		1 19.3 245°23	1°5/19.9	18		<b>239915</b>	2000 SA <sub>334</sub>		1 19.3 130°61	3°1/17.3	18	
12 13	8 31.37	+15 5.1	1.742	2.526	16.3	21.9	12 13	8 29.13	+30 11.0	2.907	3.689	10.5</	

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>119723</b>	2001 <i>XO</i> <sub>244</sub>		1 19.3 235°61	1°6/18.6	18		<b>227328</b>	2005 <i>TJ</i> <sub>170</sub>		1 19.3 69°33	1°4/18.6	18	
12 13	8 30.01	+22 51.7	1.921	2.717	14.6	20.2	12 13	8 28.31	+21 16.7	1.947	2.743	14.4	20.5
12 23	8 25.54	+23 21.1	1.834	2.714	11.3	20.0	12 23	8 24.13	+22 1.9	1.867	2.747	11.1	20.2
1 2	8 18.42	+23 56.1	1.770	2.711	7.5	19.7	1 2	8 17.44	+22 54.7	1.811	2.752	7.3	20.0
1 12	8 9.32	+24 32.3	1.733	2.708	3.4	19.5	1 12	8 8.89	+23 50.2	1.781	2.757	3.2	19.8
1 22	7 59.23	+25 4.6	1.725	2.705	2.2	19.4	1 22	7 59.44	+24 43.0	1.781	2.762	2.1	19.7
2 1	7 49.37	+25 29.2	1.746	2.702	6.2	19.7	2 1	7 50.24	+25 28.3	1.810	2.766	6.0	20.0
2 11	7 40.95	+25 43.8	1.794	2.699	10.2	19.9	2 11	7 42.42	+26 3.0	1.866	2.771	9.9	20.2
2 21	7 34.87	+25 48.4	1.866	2.696	13.8	20.1	2 21	7 36.83	+26 26.4	1.946	2.776	13.3	20.4
<b>216629</b>	2003 <i>AT</i> <sub>6</sub>		1 19.3 154°55	1°3/18.6	18		<b>126380</b>	2002 <i>AE</i> <sub>199</sub>		1 19.3 150°58	2°4/17.7	18	
12 13	8 31.12	+21 48.4	2.094	2.881	13.8	20.3	12 13	8 30.81	+24 30.0	2.400	3.184	12.4	20.3
12 23	8 26.09	+22 26.5	2.012	2.887	10.7	20.1	12 23	8 25.63	+25 34.4	2.320	3.193	9.5	20.1
1 2	8 18.62	+23 10.8	1.953	2.893	7.0	19.9	1 2	8 18.24	+26 43.3	2.264	3.201	6.3	19.9
1 12	8 9.36	+23 56.8	1.923	2.898	3.1	19.6	1 12	8 9.19	+27 51.4	2.238	3.209	3.2	19.7
1 22	7 59.23	+24 39.5	1.922	2.903	2.0	19.6	1 22	7 59.33	+28 53.3	2.242	3.217	2.9	19.7
2 1	7 49.35	+25 15.0	1.951	2.907	5.7	19.8	2 1	7 49.66	+29 44.6	2.277	3.223	5.8	19.9
2 11	7 40.84	+25 40.7	2.009	2.911	9.5	20.1	2 11	7 41.17	+30 22.9	2.342	3.229	9.0	20.1
2 21	7 34.49	+25 56.5	2.091	2.914	12.7	20.3	2 21	7 34.62	+30 48.2	2.431	3.235	11.8	20.3
<b>492758</b>	2014 <i>QC</i> <sub>170</sub>		1 19.3 87°24	7°3/23.2	18		<b>157972</b>	2000 <i>GY</i> <sub>78</sub>		1 19.3 209°39	0°9/18.9	18	
12 13	8 27.12	+0 16.9	1.764	2.502	17.9	21.5	12 13	8 33.54	+20 54.8	1.942	2.727	14.8	21.4
12 23	8 23.25	-0 4.0	1.683	2.506	15.1	21.3	12 23	8 28.30	+21 23.7	1.847	2.721	11.6	21.2
1 2	8 16.87	+0 2.5	1.621	2.511	11.9	21.1	1 2	8 20.31	+22 0.0	1.776	2.714	7.7	21.0
1 12	8 8.65	+0 23.6	1.583	2.516	8.9	20.9	1 12	8 10.19	+22 39.5	1.731	2.706	3.3	20.7
1 22	7 59.50	+1 13.3	1.570	2.521	7.3	20.8	1 22	7 58.95	+23 17.0	1.716	2.698	1.7	20.5
2 1	7 50.59	+2 22.8	1.584	2.526	8.3	20.9	2 1	7 47.85	+23 48.3	1.731	2.689	6.1	20.8
2 11	7 43.04	+3 45.6	1.625	2.531	11.1	21.1	2 11	7 38.18	+24 10.6	1.774	2.679	10.4	21.0
2 21	7 37.70	+5 14.0	1.690	2.535	14.2	21.3	2 21	7 30.91	+24 23.4	1.842	2.668	14.1	21.3
<b>124488</b>	2001 <i>RU</i> <sub>35</sub>		1 19.3 94°55	0°2/19.4	18		<b>58592</b>	1997 <i>SB</i> <sub>35</sub>		1 19.3 31°86	3°7/21.0	18	
12 13	8 35.15	+19 20.5	1.517	2.313	17.8	20.3	12 13	8 26.92	+9 35.1	2.191	2.952	14.1	19.5
12 23	8 29.77	+19 24.0	1.451	2.330	13.8	20.0	12 23	8 22.63	+9 11.5	2.102	2.952	11.4	19.3
1 2	8 21.26	+19 35.7	1.406	2.346	9.1	19.8	1 2	8 16.24	+8 59.4	2.035	2.953	8.3	19.1
1 12	8 10.52	+19 52.0	1.387	2.363	4.0	19.5	1 12	8 8.33	+8 58.8	1.994	2.953	5.2	18.9
1 22	7 58.85	+20 8.4	1.396	2.379	1.4	19.4	1 22	7 59.67	+9 8.9	1.982	2.953	3.7	18.8
2 1	7 47.79	+20 21.4	1.432	2.394	6.6	19.8	2 1	7 51.21	+9 27.7	1.999	2.954	5.7	18.9
2 11	7 38.74	+20 29.0	1.496	2.410	11.2	20.1	2 11	7 43.87	+9 52.4	2.044	2.954	8.9	19.1
2 21	7 32.58	+20 30.8	1.582	2.425	15.2	20.4	2 21	7 38.36	+10 19.9	2.114	2.954	12.0	19.3
<b>268170</b>	2004 <i>WK</i> <sub>4</sub>		1 19.3 122°67	1°1/18.7	18		<b>400535</b>	2008 <i>UV</i> <sub>93</sub>		1 19.3 43°03	16°2/10.3	17	
12 13	8 29.52	+21 48.4	2.247	3.033	13.0	21.1	12 13	8 40.09	+46 26.2	1.144	1.956	21.4	19.7
12 23	8 24.63	+22 18.0	2.169	3.044	10.1	20.9	12 23	8 36.95	+50 7.1	1.122	1.978	18.7	19.6
1 2	8 17.53	+22 52.7	2.115	3.053	6.6	20.7	1 2	8 27.95	+53 27.0	1.120	2.001	16.8	19.5
1 12	8 8.85	+23 28.7	2.088	3.063	2.9	20.5	1 12	8 14.00	+56 3.9	1.140	2.025	16.3	19.6
1 22	7 59.45	+24 1.9	2.091	3.072	1.7	20.5	1 22	7 57.53	+57 42.6	1.182	2.049	17.2	19.7
2 1	7 50.32	+24 29.1	2.125	3.081	5.3	20.7	2 1	7 42.07	+58 20.0	1.243	2.075	18.9	19.9
2 11	7 42.46	+24 48.4	2.187	3.090	8.8	20.9	2 11	7 30.79	+58 4.9	1.321	2.100	20.9	20.1
2 21	7 36.57	+24 59.4	2.274	3.099	11.8	21.2	2 21	7 25.23	+57 11.9	1.413	2.126	22.8	20.4
<b>68968</b>	2002 <i>RS</i> <sub>101</sub>		1 19.3 48°23	3°5/18.1	18		<b>4786</b>	Tatianina		1 19.3 263°39	0°2/19.2	18	
12 13	8 33.92	+25 54.4	1.348	2.164	18.5	19.1	12 13	8 30.35	+17 47.9	1.758	2.550	15.9	17.4
12 23	8 29.11	+26 40.4	1.303	2.193	14.2	18.9	12 23	8 26.26	+18 25.8	1.655	2.532	12.5	17.2
1 2	8 20.89	+27 29.6	1.279	2.222	9.4	18.7	1 2	8 19.24	+19 16.6	1.573	2.513	8.4	16.9
1 12	8 10.32	+28 14.0	1.279	2.252	4.8	18.5	1 12	8 9.85	+20 16.2	1.518	2.493	3.6	16.5
1 22	7 58.95	+28 46.5	1.306	2.283	4.1	18.5	1 22	7 59.05	+21 19.1	1.491	2.473	1.4	16.3
2 1	7 48.48	+29 3.0	1.360	2.313	8.0	18.9	2 1	7 48.19	+22 18.8	1.492	2.453	6.5	16.6
2 11	7 40.37	+29 3.5	1.439	2.344	12.3	19.2	2 11	7 38.70	+23 10.3	1.522	2.433	11.3	16.8
2 21	7 35.42	+28 50.5	1.539	2.375	15.9	19.5	2 21	7 31.71	+23 51.1	1.574	2.412	15.5	17.0
<b>39174</b>	2000 <i>WG</i> <sub>152</sub>		1 19.3 148°14	2°8/20.7	18		<b>13925</b>	1986 <i>QS</i> <sub>3</sub>		1 19.3 185°40	1°8/20.5	18	
12 13	8 30.65	+10 42.3	1.948	2.712	15.5	19.6	12 13	8 25.84	+12 4.6	2.432	3.197	12.8	18.1
12 23	8 25.74	+10 51.7	1.865	2.721	12.4	19.4	12 23	8 21.66	+12 26.9	2.339	3.197	10.1	17.9
1 2	8 18.40	+11 15.4	1.805	2.729	8.7	19.2	1 2	8 15.56	+13 0.5	2.270	3.197	7.0	17.7
1 12	8 9.27	+11 51.7	1.770	2.736	4.8	18.9	1 12	8 8.03	+13 43.8	2.228	3.196	3.7	17.5
1 22	7 59.29	+12 37.5	1.765	2.743	2.9	18.8	1 22	7 59.79	+14 33.8	2.216	3.196	1.9	17.4
2 1	7 49.55	+13 28.6	1.789	2.749	5.8	19.0	2 1	7 51.67	+15 26.9	2.234	3.195	4.7	17.6
2 11	7 41.18	+14 20.6	1.842	2.755	9.6	19.3	2 11	7 44.54	+16 19.3	2.282	3.194	8.0	17.8
2 21	7 34.96	+15 9.7	1.920	2.760	13.0	19.5	2 21	7 39.06	+17 8.3	2.356	3.193	11.0	18.0
<b>224457</b>	2005 <i>VU</i> <sub>30</sub>		1 19.3 67°70	2°5/18.1	18		<b>408762</b>	1997 <i>TZ</i> <sub>22</sub>		1 19.3 99°65	2°5/18.2	18	
12 13	8 29.58	+24 11.1	1.848	2.649	14.9	20.5	12 13	8 33.86	+25 50.3	1.982	2.773	14.4	21.5
12 23	8 25.26	+25 0.1	1.774	2.656	11.5	20.3	12 23	8 28.20	+26 25.3	1.917	2.793	11.1	21.3
1 2	8 18.24	+25 54.5	1.722	2.664	7.6	20.1	1 2	8 19.96	+27 2.3	1.876	2.814	7.3	21.1
1 12	8 9.24	+26 48.5	1.697	2.671	3.7	19.8	1 12	8 9.92	+27 36.3	1.861	2.834	3.7	21.0
1 22	7 59.30	+27 36.0	1.701	2.678	3.1	19.8	1 22	7 59.14	+28 2.3	1.877	2.853	3.0	21.0
2 1	7 49.69	+28 12.3	1.733	2.686	6.7	20.0	2 1	7 48.87	+28 17.1	1.922	2.872	6.3	21.2
2 11	7 41.63	+28 35.3	1.793	2.693	10.5	20.3	2 11	7 40.22	+28 20.1	1.995	2.891	9.9	21.4
2 21	7 35.98	+28 45.2	1.876	2.701	13.9	20.5	2 21	7 33.95	+28 12.5	2.092	2.909	13.0	21.7
<b>42121</b>	2001 <i>BW</i> <sub>7</sub>		1 19.3 156°85	2°0/18.3	18		<b>255818</b>	2006 <i>SZ</i> <sub>54</sub>		1 19.3 67°96	2°3/18.3	18	
12 13	8 32.07	+22 38.3	1.925	2.716									

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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>6173</b>	Jimwestphal		1 19.3 341°18	5°3/16.7	18	R	<b>68049</b>	2000 YK <sub>49</sub>		1 19.3 90°76	1°0/19.7	18	
12 13	8 28.25	+27 59.2	1.469	2.290	17.0	16.1	12 13	8 34.76	+17 56.0	1.671	2.458	16.8	19.3
12 23	8 25.26	+29 21.1	1.391	2.283	13.3	15.9	12 23	8 29.14	+17 46.5	1.605	2.478	13.1	19.1
1 2	8 18.86	+30 49.2	1.335	2.277	9.3	15.6	1 2	8 20.69	+17 45.1	1.561	2.497	8.7	18.8
1 12	8 9.73	+32 14.0	1.304	2.271	5.8	15.4	1 12	8 10.28	+17 49.2	1.542	2.516	3.9	18.6
1 22	7 59.14	+33 25.5	1.298	2.266	6.0	15.4	1 22	7 59.08	+17 55.7	1.553	2.535	1.5	18.5
2 1	7 48.76	+34 15.8	1.320	2.262	9.6	15.6	2 1	7 48.47	+18 2.0	1.592	2.554	6.1	18.8
2 11	7 40.31	+34 42.1	1.365	2.258	13.7	15.8	2 11	7 39.67	+18 6.2	1.659	2.572	10.4	19.1
2 21	7 34.97	+34 46.3	1.431	2.255	17.5	16.1	2 21	7 33.51	+18 7.4	1.750	2.590	14.0	19.4
<b>494027</b>	2016 AE <sub>174</sub>		1 19.3 142°35	5°5/22.7	18		<b>255765</b>	2006 RK <sub>55</sub>		1 19.3 3°71	4°4/17.7	18	
12 13	8 28.47	+ 1 41.8	2.258	2.980	14.8	21.6	12 13	8 29.51	+28 1.0	1.392	2.215	17.7	20.5
12 23	8 23.70	+ 1 35.6	2.174	2.990	12.4	21.4	12 23	8 26.19	+28 45.0	1.321	2.214	13.8	20.2
1 2	8 16.88	+ 1 46.9	2.111	3.001	9.6	21.2	1 2	8 19.38	+29 31.8	1.271	2.214	9.5	20.0
1 12	8 8.60	+ 2 16.5	2.074	3.010	6.9	21.1	1 12	8 9.91	+30 13.6	1.244	2.215	5.4	19.7
1 22	7 59.62	+ 3 2.9	2.065	3.020	5.5	21.0	1 22	7 59.17	+30 42.6	1.243	2.217	5.0	19.7
2 1	7 50.85	+ 4 2.9	2.086	3.028	6.6	21.1	2 1	7 48.89	+30 53.9	1.268	2.219	8.8	19.9
2 11	7 43.19	+ 5 11.6	2.135	3.036	9.1	21.3	2 11	7 40.73	+30 46.7	1.318	2.223	13.2	20.2
2 21	7 37.32	+ 6 23.9	2.211	3.044	11.8	21.5	2 21	7 35.75	+30 23.7	1.388	2.227	17.1	20.5
<b>85474</b>	1997 LN <sub>15</sub>		1 19.3 154°65	2°5/20.5	18		<b>372068</b>	2008 RJ <sub>141</sub>		1 19.3 66°87	0°8/19.7	18	
12 13	8 33.10	+12 19.9	1.951	2.716	15.5	20.4	12 13	8 29.04	+16 27.7	1.956	2.740	14.8	20.8
12 23	8 27.63	+12 19.9	1.868	2.725	12.3	20.2	12 23	8 24.38	+16 44.5	1.891	2.762	11.5	20.6
1 2	8 19.65	+12 32.0	1.808	2.734	8.5	20.0	1 2	8 17.41	+17 10.8	1.848	2.784	7.6	20.4
1 12	8 9.84	+12 54.8	1.774	2.741	4.6	19.7	1 12	8 8.84	+17 43.4	1.833	2.807	3.4	20.2
1 22	7 59.17	+13 25.5	1.769	2.748	2.6	19.6	1 22	7 59.60	+18 18.6	1.846	2.829	1.3	20.1
2 1	7 48.79	+14 0.5	1.795	2.754	5.8	19.8	2 1	7 50.79	+18 52.7	1.889	2.851	5.2	20.4
2 11	7 39.82	+14 36.3	1.849	2.760	9.6	20.1	2 11	7 43.40	+19 22.8	1.960	2.873	9.0	20.7
2 21	7 33.09	+15 10.0	1.928	2.764	13.1	20.3	2 21	7 38.12	+19 47.3	2.055	2.895	12.3	20.9
<b>42810</b>	1999 JP <sub>72</sub>		1 19.3 240°36	5°0/16.8	18		<b>66222</b>	1999 CV <sub>75</sub>		1 19.3 72°72	0°4/19.5	18	
12 13	8 33.58	+29 19.1	1.784	2.585	15.3	18.8	12 13	8 29.38	+19 26.4	2.188	2.971	13.4	18.8
12 23	8 28.95	+30 33.5	1.695	2.574	12.1	18.5	12 23	8 24.51	+19 19.9	2.109	2.981	10.4	18.7
1 2	8 21.10	+31 51.8	1.628	2.563	8.5	18.3	1 2	8 17.45	+19 18.4	2.053	2.990	6.9	18.5
1 12	8 10.68	+33 5.8	1.587	2.552	5.5	18.1	1 12	8 8.85	+19 20.0	2.025	2.999	3.0	18.2
1 22	7 58.81	+34 6.8	1.575	2.540	5.6	18.1	1 22	7 59.59	+19 22.3	2.026	3.009	1.1	18.1
2 1	7 47.02	+34 48.1	1.591	2.527	8.8	18.2	2 1	7 50.66	+19 23.4	2.057	3.018	5.0	18.4
2 11	7 36.90	+35 7.7	1.634	2.515	12.6	18.4	2 11	7 43.02	+19 22.0	2.117	3.028	8.6	18.6
2 21	7 29.61	+35 7.6	1.698	2.501	16.1	18.6	2 21	7 37.35	+19 17.6	2.202	3.037	11.7	18.8
<b>427007</b>	2014 RP <sub>18</sub>		1 19.3 141°48	5°9/14.9	17		<b>382286</b>	2012 TE <sub>317</sub>		1 19.3 137°72	0°9/20.0	18	
12 13	8 36.49	+35 32.7	2.515	3.291	12.1	21.9	12 13	8 25.56	+14 25.6	2.802	3.567	11.3	20.5
12 23	8 30.30	+37 18.3	2.447	3.305	9.7	21.8	12 23	8 21.17	+14 56.9	2.715	3.575	8.8	20.3
1 2	8 21.49	+39 1.3	2.406	3.320	7.4	21.6	1 2	8 15.09	+15 36.7	2.652	3.583	5.9	20.2
1 12	8 10.69	+40 33.7	2.394	3.333	6.0	21.6	1 12	8 7.82	+16 23.1	2.619	3.590	2.8	20.0
1 22	7 58.85	+41 48.6	2.413	3.346	6.4	21.6	1 22	7 59.97	+17 12.9	2.615	3.598	1.1	19.8
2 1	7 47.17	+42 41.5	2.462	3.357	8.2	21.6	2 1	7 52.27	+18 2.9	2.644	3.605	4.0	20.1
2 11	7 36.85	+43 11.9	2.539	3.368	10.5	21.9	2 11	7 45.44	+18 50.3	2.703	3.612	7.0	20.3
2 21	7 28.79	+43 22.3	2.639	3.379	12.6	22.1	2 21	7 40.06	+19 33.0	2.788	3.618	9.7	20.5
<b>339553</b>	2005 JE <sub>106</sub>		1 19.3 104°50	4°2/21.8	18		<b>87771</b>	2000 SB <sub>96</sub>		1 19.3 142°77	2°2/20.4	18	
12 13	8 25.86	+ 6 0.3	2.492	3.232	13.1	21.2	12 13	8 29.26	+13 1.5	2.211	2.977	13.8	20.4
12 23	8 21.50	+ 5 42.6	2.409	3.242	10.7	21.0	12 23	8 24.40	+12 57.9	2.126	2.985	10.9	20.2
1 2	8 15.34	+ 5 37.7	2.348	3.252	8.0	20.9	1 2	8 17.40	+13 4.2	2.065	2.992	7.6	20.0
1 12	8 7.92	+ 5 45.7	2.314	3.262	5.5	20.7	1 12	8 8.85	+13 19.4	2.031	2.998	4.1	19.8
1 22	7 59.91	+ 6 5.7	2.309	3.272	4.2	20.7	1 22	7 59.59	+13 41.1	2.026	3.005	2.3	19.7
2 1	7 52.12	+ 6 35.6	2.334	3.282	5.5	20.8	2 1	7 50.57	+14 6.8	2.051	3.011	5.1	19.9
2 11	7 45.31	+ 7 12.2	2.387	3.291	8.1	20.9	2 11	7 42.74	+14 33.6	2.105	3.016	8.6	20.1
2 21	7 40.08	+ 7 52.3	2.466	3.301	10.7	21.1	2 21	7 36.81	+14 59.2	2.184	3.021	11.8	20.3
<b>493901</b>	2015 XD <sub>235</sub>		1 19.3 81°05	2°4/18.2	18		<b>175754</b>	1998 RH <sub>48</sub>		1 19.3 81°95	1°1/19.8	18	
12 13	8 32.55	+22 31.5	1.541	2.346	17.1	21.3	12 13	8 33.22	+16 18.7	1.750	2.533	16.3	21.0
12 23	8 27.94	+23 30.7	1.478	2.362	13.2	21.1	12 23	8 27.77	+16 25.4	1.690	2.560	12.7	20.8
1 2	8 20.20	+24 38.0	1.436	2.379	8.7	20.9	1 2	8 19.70	+16 42.1	1.651	2.586	8.4	20.6
1 12	8 10.16	+25 46.1	1.420	2.395	4.0	20.6	1 12	8 9.83	+17 5.7	1.639	2.612	3.9	20.4
1 22	7 59.09	+26 47.4	1.432	2.411	3.1	20.6	1 22	7 59.27	+17 32.6	1.655	2.638	1.5	20.3
2 1	7 48.52	+27 35.5	1.472	2.427	7.4	20.9	2 1	7 49.28	+17 58.9	1.701	2.663	5.7	20.6
2 11	7 39.88	+28 7.8	1.538	2.442	11.7	21.2	2 11	7 40.99	+18 22.0	1.774	2.687	9.8	20.9
2 21	7 34.11	+28 24.9	1.626	2.458	15.4	21.5	2 21	7 35.14	+18 40.3	1.872	2.712	13.3	21.2
<b>423379</b>	2005 JX <sub>84</sub>		1 19.3 239°10	6°7/23.2	17		<b>59154</b>	1998 XP <sub>98</sub>		1 19.3 229°75	0°7/19.7	18	
12 13	8 24.98	- 2 24.9	2.668	3.364	13.4	21.8	12 13	8 27.40	+17 6.7	2.264	3.044	13.1	20.4
12 23	8 20.85	- 3 2.7	2.566	3.355	11.5	21.7	12 23	8 23.06	+17 18.0	2.171	3.041	10.3	20.2
1 2	8 14.98	- 3 25.3	2.485	3.345	9.5	21.5	1 2	8 16.59	+17 37.1	2.103	3.038	6.9	19.9
1 12	8 7.80	- 3 30.3	2.429	3.336	7.7	21.4	1 12	8 8.54	+18 1.8	2.061	3.035	3.1	19.7
1 22	7 59.94	- 3 17.2	2.400	3.326	6.8	21.3	1 22	7 59.70	+18 29.3	2.049	3.032	1.1	19.5
2 1	7 52.14	- 2 46.8	2.399	3.316	7.3	21.3	2 1	7 51.03	+18 56.4	2.067	3.028	4.9	19.8
2 11	7 45.16	- 2 2.3	2.426	3.305	9.1	21.4	2 11	7 43.48	+19 20.6	2.113	3.025	8.6	20.0
2 21	7 39.63	- 1 7.7	2.478	3.295	11.2	21.6	2 21	7 37.78	+19 40.4	2.185	3.021	11.8	20.2
<b>15744</b>	1991 PU		1 19.3 90°64	0°4/19.5	18		<b>58758</b>	1998 FO <sub>18</sub>		1 19.3 26°13	1°3/19.8	18	
12 13	8 31.08	+18 48.6	1.933	2.719	14.8	18.0	12 13	8 28.23	+16 31.4	1.197	2.017	20.2</	

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>108676</b>	2001 <i>OQ</i> <sub>5</sub>		1 19.3	7°39	5°1/21.8	18	<b>425157</b>	2009 <i>SP</i> <sub>354</sub>		1 19.3	139°01	2°4/18.1	18
12 13	8 25.80	+ 5 44.6	2.181	2.929	14.5	18.8	12 13	8 32.31	+26 18.6	2.375	3.158	12.5	22.1
12 23	8 21.79	+ 5 10.6	2.093	2.930	12.0	18.7	12 23	8 26.74	+26 54.4	2.298	3.170	9.7	21.9
1 2	8 15.73	+ 4 50.1	2.026	2.930	9.1	18.5	1 2	8 18.94	+27 31.9	2.245	3.182	6.4	21.8
1 12	8 8.16	+ 4 44.4	1.985	2.931	6.4	18.3	1 12	8 9.54	+28 6.6	2.222	3.193	3.3	21.6
1 22	7 59.86	+ 4 53.2	1.971	2.931	5.1	18.2	1 22	7 59.43	+28 34.2	2.228	3.203	2.8	21.6
2 1	7 51.74	+ 5 14.9	1.986	2.932	6.5	18.3	2 1	7 49.63	+28 51.8	2.265	3.213	5.7	21.8
2 11	7 44.71	+ 5 46.2	2.028	2.934	9.2	18.5	2 11	7 41.13	+28 58.6	2.331	3.222	8.8	22.0
2 21	7 39.47	+ 6 23.3	2.096	2.935	12.1	18.7	2 21	7 34.65	+28 55.2	2.422	3.231	11.7	22.2
<b>432435</b>	2010 <i>BC</i> <sub>79</sub>		1 19.3	213°65	3°3/17.7	17	<b>324421</b>	2006 <i>SM</i> <sub>320</sub>		1 19.3	18°47	6°3/22.3	18
12 13	8 31.93	+31 35.5	2.633	3.415	11.4	21.6	12 13	8 24.61	+ 5 0.3	1.360	2.144	20.1	20.5
12 23	8 26.36	+31 52.6	2.542	3.411	9.0	21.4	12 23	8 21.98	+ 4 41.6	1.291	2.150	16.5	20.3
1 2	8 18.64	+32 7.2	2.477	3.407	6.3	21.2	1 2	8 16.39	+ 4 46.7	1.240	2.157	12.5	20.1
1 12	8 9.38	+32 15.2	2.440	3.404	3.9	21.1	1 12	8 8.60	+ 5 16.8	1.211	2.165	8.5	19.9
1 22	7 59.43	+32 13.2	2.433	3.400	3.7	21.0	1 22	7 59.76	+ 6 9.8	1.206	2.174	6.3	19.8
2 1	7 49.74	+31 59.6	2.456	3.395	5.9	21.2	2 1	7 51.28	+ 7 20.1	1.227	2.184	8.2	19.9
2 11	7 41.28	+31 34.5	2.508	3.391	8.7	21.3	2 11	7 44.53	+ 8 39.6	1.272	2.194	12.1	20.2
2 21	7 34.74	+30 59.9	2.586	3.387	11.3	21.5	2 21	7 40.45	+10 0.4	1.340	2.206	15.9	20.4
<b>16262</b>	Rikurtz		1 19.3	252°06	1°3/18.7	18	<b>508618</b>	2017 <i>SQ</i> <sub>38</sub>		1 19.3	222°93	5°8/22.8	17
12 13	8 27.88	+22 51.0	2.306	3.095	12.6	19.4	12 13	8 25.21	- 0 33.1	2.943	3.641	12.2	21.9
12 23	8 23.47	+23 15.5	2.216	3.093	9.8	19.2	12 23	8 20.86	- 1 8.6	2.839	3.633	10.4	21.7
1 2	8 16.87	+23 44.3	2.150	3.090	6.4	19.0	1 2	8 14.92	- 1 31.0	2.757	3.624	8.4	21.6
1 12	8 8.67	+24 13.9	2.112	3.087	2.9	18.8	1 12	8 7.80	- 1 38.8	2.701	3.616	6.6	21.5
1 22	7 59.67	+24 40.5	2.104	3.084	1.8	18.7	1 22	8 0.08	- 1 31.5	2.673	3.606	5.8	21.4
2 1	7 50.87	+25 1.1	2.125	3.082	5.3	18.9	2 1	7 52.41	- 1 9.9	2.675	3.597	6.4	21.4
2 11	7 43.23	+25 13.9	2.175	3.079	8.8	19.1	2 11	7 45.49	- 0 36.5	2.705	3.587	8.1	21.5
2 21	7 37.49	+25 18.5	2.250	3.076	11.9	19.3	2 21	7 39.88	+ 0 5.4	2.761	3.576	10.2	21.6
<b>354970</b>	2006 <i>HP</i> <sub>56</sub>		1 19.3	278°67	2°9/20.5	18	<b>433019</b>	2012 <i>RW</i> <sub>34</sub>		1 19.3	115°83	3°6/21.5	18
12 13	8 28.82	+11 52.9	1.632	2.417	17.2	20.9	12 13	8 25.55	+ 7 45.7	2.558	3.304	12.7	21.4
12 23	8 25.18	+11 56.4	1.531	2.399	13.9	20.6	12 23	8 21.27	+ 7 35.1	2.471	3.312	10.3	21.2
1 2	8 18.60	+12 16.0	1.450	2.380	9.8	20.3	1 2	8 15.23	+ 7 36.2	2.408	3.319	7.5	21.1
1 12	8 9.63	+12 50.7	1.393	2.362	5.3	20.0	1 12	8 7.93	+ 7 48.8	2.372	3.326	4.9	20.9
1 22	7 59.28	+13 37.5	1.363	2.343	3.0	19.8	1 22	8 0.05	+ 8 11.5	2.364	3.333	3.6	20.8
2 1	7 48.88	+14 31.7	1.361	2.324	6.8	20.0	2 1	7 52.35	+ 8 42.3	2.387	3.339	5.1	20.9
2 11	7 39.89	+15 27.6	1.386	2.305	11.5	20.2	2 11	7 45.60	+ 9 18.2	2.438	3.346	7.8	21.1
2 21	7 33.44	+16 20.6	1.434	2.286	15.9	20.4	2 21	7 40.39	+ 9 56.1	2.516	3.353	10.4	21.3
<b>52772</b>	1998 <i>PT</i> <sub>1</sub>		1 19.3	187°42	0°9/19.7	18	<b>104100</b>	2000 <i>ER</i> <sub>39</sub>		1 19.3	295°37	1°1/18.9	18
12 13	8 33.46	+16 30.1	1.771	2.553	16.2	20.0	12 13	8 29.41	+21 12.4	1.689	2.492	16.0	20.3
12 23	8 28.36	+16 42.5	1.683	2.553	12.7	19.8	12 23	8 25.72	+21 35.4	1.586	2.470	12.5	20.0
1 2	8 20.41	+17 5.6	1.617	2.552	8.6	19.6	1 2	8 19.01	+22 6.8	1.505	2.447	8.4	19.7
1 12	8 10.30	+17 36.6	1.577	2.551	3.9	19.3	1 12	8 9.86	+22 42.7	1.449	2.425	3.7	19.4
1 22	7 59.08	+18 11.2	1.566	2.549	1.5	19.1	1 22	7 59.29	+23 17.5	1.421	2.403	1.9	19.2
2 1	7 48.09	+18 45.2	1.585	2.546	6.1	19.4	2 1	7 48.69	+23 46.4	1.420	2.381	6.9	19.5
2 11	7 38.66	+19 15.2	1.631	2.543	10.6	19.7	2 11	7 39.57	+24 6.1	1.446	2.359	11.7	19.7
2 21	7 31.73	+19 39.2	1.701	2.539	14.5	19.9	2 21	7 33.07	+24 15.5	1.495	2.337	15.9	19.9
<b>244065</b>	2001 <i>TZ</i> <sub>118</sub>		1 19.3	84°18	8°0/23.9	18	<b>331597</b>	2001 <i>VG</i> <sub>12</sub>		1 19.3	107°62	5°7/23.3	18
12 13	8 27.71	- 5 10.7	2.516	3.193	14.5	19.7	12 13	8 27.97	- 2 17.6	3.226	3.901	11.6	21.6
12 23	8 22.83	- 6 15.3	2.445	3.214	12.6	19.6	12 23	8 22.59	- 2 58.3	3.153	3.929	9.9	21.5
1 2	8 16.17	- 7 2.5	2.396	3.235	10.6	19.5	1 2	8 15.82	- 3 26.0	3.104	3.956	8.0	21.4
1 12	8 8.29	- 7 29.6	2.371	3.256	8.9	19.4	1 12	8 8.11	- 3 39.3	3.082	3.983	6.5	21.3
1 22	7 59.87	- 7 35.5	2.373	3.276	8.0	19.4	1 22	8 0.03	- 3 38.0	3.088	4.008	5.7	21.3
2 1	7 51.72	- 7 21.1	2.402	3.297	8.4	19.5	2 1	7 52.17	- 3 23.3	3.124	4.033	6.1	21.4
2 11	7 44.59	- 6 49.6	2.457	3.317	9.7	19.6	2 11	7 45.13	- 2 57.5	3.190	4.058	7.5	21.5
2 21	7 39.06	- 6 5.6	2.537	3.337	11.5	19.7	2 21	7 39.36	- 2 23.7	3.281	4.082	9.1	21.6
<b>380410</b>	2003 <i>AD</i> <sub>54</sub>		1 19.3	306°71	1°7/19.2	17	<b>162005</b>	1992 <i>SV</i> <sub>9</sub>		1 19.4	61°67	0°6/19.6	18
12 13	8 43.11	+27 58.3	1.692	2.478	16.7	19.5	12 13	8 32.22	+17 26.5	1.421	2.224	18.5	19.9
12 23	8 36.77	+27 16.2	1.564	2.436	13.4	19.2	12 23	8 27.68	+17 39.6	1.362	2.244	14.3	19.7
1 2	8 26.62	+26 27.0	1.457	2.394	9.2	18.8	1 2	8 20.01	+18 4.1	1.323	2.264	9.5	19.5
1 12	8 13.26	+25 25.8	1.378	2.352	4.3	18.4	1 12	8 10.11	+18 36.2	1.309	2.284	4.2	19.3
1 22	7 57.95	+24 9.1	1.328	2.309	2.4	18.2	1 22	7 59.31	+19 10.5	1.321	2.304	1.5	19.1
2 1	7 42.50	+22 37.0	1.309	2.267	7.6	18.4	2 1	7 49.14	+19 42.4	1.361	2.325	6.6	19.5
2 11	7 28.87	+20 53.9	1.318	2.224	13.1	18.6	2 11	7 40.98	+20 8.2	1.427	2.346	11.3	19.8
2 21	7 18.49	+19 6.6	1.352	2.182	18.0	18.8	2 21	7 35.71	+20 26.8	1.516	2.366	15.3	20.1
<b>233598</b>	2007 <i>RR</i> <sub>137</sub>		1 19.3	75°73	1°2/18.8	18	<b>148348</b>	2000 <i>RL</i> <sub>24</sub>		1 19.4	180°58	2°3/18.4	18
12 13	8 29.43	+22 58.0	2.210	2.999	13.1	20.8	12 13	8 34.26	+27 16.2	2.236	3.020	13.2	20.3
12 23	8 24.56	+23 15.4	2.137	3.014	10.1	20.6	12 23	8 28.44	+27 27.2	2.148	3.020	10.2	20.1
1 2	8 17.50	+23 36.3	2.089	3.029	6.6	20.4	1 2	8 20.18	+27 38.3	2.085	3.021	6.9	19.9
1 12	8 8.90	+23 57.3	2.069	3.044	2.9	20.2	1 12	8 10.14	+27 45.3	2.049	3.021	3.5	19.7
1 22	7 59.66	+24 15.0	2.077	3.059	1.7	20.1	1 22	7 59.30	+27 44.7	2.044	3.021	2.8	19.6
2 1	7 50.78	+24 26.6	2.116	3.074	5.2	20.4	2 1	7 48.78	+27 34.3	2.069	3.020	5.9	19.8
2 11	7 43.22	+24 31.1	2.184	3.088	8.7	20.6	2 11	7 39.68	+27 14.3	2.123	3.019	9.4	20.1
2 21	7 37.66	+24 28.5	2.276	3.103	11.7	20.9	2 21	7 32.78	+26 46.2	2.202	3.018	12.4	20.3
<b>197354</b>	2003 <i>XM</i> <sub>10</sub>		1 19.3	45°53	13°4/10.8	18	<b>113802</b>	2002 <i>TD</i> <sub>206</sub>		1 19.4	140°69	4°0/17.2	18
12 13	8 42.35	+53 8.4	1.811										

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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>213650</b>	2002 <i>RF</i> <sub>135</sub>		1 19.4 220°85	1.1/19.9	18		<b>295733</b>	2008 <i>UW</i> <sub>65</sub>		1 19.4 151°76	3.1/18.2	18	
12 13	8 29.77	+14 45.3	2.032	2.808	14.6	20.7	12 13	8 35.09	+26 15.8	1.636	2.437	16.5	20.8
12 23	8 25.25	+15 11.1	1.934	2.800	11.5	20.5	12 23	8 30.00	+26 52.1	1.560	2.441	12.8	20.6
1 2	8 18.28	+15 49.0	1.860	2.793	7.8	20.2	1 2	8 21.69	+27 31.7	1.505	2.445	8.6	20.3
1 12	8 9.42	+16 36.3	1.812	2.784	3.7	20.0	1 12	8 10.96	+28 8.2	1.476	2.448	4.4	20.1
1 22	7 59.53	+17 29.0	1.793	2.776	1.4	19.8	1 22	7 59.07	+28 35.0	1.475	2.452	3.7	20.0
2 1	7 49.72	+18 22.5	1.805	2.766	5.5	20.0	2 1	7 47.61	+28 47.9	1.502	2.454	7.6	20.3
2 11	7 41.13	+19 12.6	1.845	2.757	9.6	20.3	2 11	7 38.06	+28 45.9	1.556	2.457	11.8	20.5
2 21	7 34.63	+19 56.3	1.910	2.747	13.2	20.5	2 21	7 31.43	+28 31.0	1.632	2.459	15.6	20.8
<b>178982</b>	2001 <i>QY</i> <sub>268</sub>		1 19.4 141°49	0°6/18.9	18		<b>199407</b>	2006 <i>CF</i> <sub>21</sub>		1 19.4 0°70	2°1/20.8	18	
12 13	8 31.49	+20 5.0	2.531	3.303	12.1	20.9	12 13	8 25.84	+ 5 57.2	1.217	2.011	21.4	18.6
12 23	8 25.91	+20 40.2	2.451	3.318	9.4	20.8	12 23	8 23.65	+ 7 46.7	1.136	2.009	17.2	18.3
1 2	8 18.33	+21 21.1	2.396	3.332	6.1	20.6	1 2	8 18.03	+10 15.9	1.074	2.008	12.1	18.0
1 12	8 9.31	+22 4.2	2.371	3.346	2.6	20.4	1 12	8 9.59	+13 19.8	1.036	2.008	6.1	17.7
1 22	7 59.63	+22 45.7	2.376	3.358	1.3	20.3	1 22	7 59.51	+16 44.5	1.026	2.008	2.2	17.4
2 1	7 50.21	+23 22.2	2.413	3.370	4.7	20.6	2 1	7 49.49	+20 10.9	1.044	2.010	7.6	17.8
2 11	7 41.91	+23 51.7	2.480	3.381	8.0	20.8	2 11	7 41.32	+23 20.5	1.089	2.013	13.5	18.1
2 21	7 35.40	+24 13.4	2.574	3.392	10.8	21.0	2 21	7 36.33	+26 1.8	1.158	2.017	18.4	18.4
<b>64803</b>	2001 <i>XV</i> <sub>211</sub>		1 19.4 265°69	0°3/19.2	18		<b>158550</b>	2002 <i>GH</i> <sub>169</sub>		1 19.4 236°28	0°1/19.3	18	
12 13	8 29.93	+17 33.1	1.552	2.352	17.2	19.6	12 13	8 29.13	+19 43.6	2.071	2.859	13.9	20.7
12 23	8 26.17	+18 14.9	1.465	2.346	13.5	19.4	12 23	8 24.65	+19 54.1	1.983	2.857	10.8	20.4
1 2	8 19.31	+19 10.8	1.399	2.340	9.0	19.1	1 2	8 17.80	+20 11.1	1.917	2.856	7.2	20.2
1 12	8 9.99	+20 16.2	1.358	2.334	3.9	18.8	1 12	8 9.20	+20 31.6	1.879	2.854	3.1	20.0
1 22	7 59.34	+21 24.3	1.345	2.328	1.5	18.6	1 22	7 59.73	+20 52.3	1.869	2.852	1.2	19.8
2 1	7 48.82	+22 28.0	1.360	2.322	6.9	18.9	2 1	7 50.48	+21 10.2	1.890	2.851	5.4	20.1
2 11	7 39.96	+23 22.0	1.401	2.316	11.8	19.2	2 11	7 42.52	+21 23.1	1.938	2.849	9.3	20.3
2 21	7 33.85	+24 3.7	1.465	2.309	16.1	19.4	2 21	7 36.65	+21 30.2	2.011	2.847	12.7	20.5
<b>272116</b>	2005 <i>KF</i> <sub>6</sub>		1 19.4 177°12	3°7/17.8	18		<b>111544</b>	2001 <i>YT</i> <sub>134</sub>		1 19.4 34°87	0°2/19.3	18	
12 13	8 36.33	+26 18.5	1.627	2.426	16.6	21.4	12 13	8 27.96	+18 1.0	1.684	2.483	16.1	19.6
12 23	8 31.09	+27 13.0	1.548	2.428	13.0	21.1	12 23	8 24.23	+18 37.0	1.608	2.489	12.6	19.4
1 2	8 22.51	+28 12.5	1.491	2.430	8.8	20.9	1 2	8 17.76	+19 24.2	1.553	2.494	8.3	19.1
1 12	8 11.34	+29 9.1	1.460	2.431	4.7	20.7	1 12	8 9.24	+20 18.3	1.525	2.500	3.6	18.8
1 22	7 58.87	+29 55.1	1.457	2.431	4.2	20.6	1 22	7 59.73	+21 13.7	1.524	2.507	1.4	18.7
2 1	7 46.73	+30 24.6	1.482	2.431	8.1	20.8	2 1	7 50.51	+22 4.9	1.551	2.513	6.2	19.0
2 11	7 36.52	+30 36.2	1.534	2.430	12.3	21.1	2 11	7 42.86	+22 47.7	1.605	2.520	10.6	19.3
2 21	7 29.33	+30 31.8	1.608	2.428	16.1	21.3	2 21	7 37.65	+23 20.2	1.683	2.527	14.3	19.6
<b>163570</b>	2002 <i>TJ</i> <sub>143</sub>		1 19.4 23°64	6°3/23.1	18		<b>291159</b>	2005 <i>YT</i> <sub>291</sub>		1 19.4 148°78	0°2/19.3	18	
12 13	8 23.59	+ 2 1.1	1.757	2.510	17.4	19.2	12 13	8 30.03	+20 0.0	2.166	2.950	13.5	21.7
12 23	8 20.53	+ 1 50.8	1.684	2.520	14.5	19.1	12 23	8 25.19	+20 9.8	2.081	2.954	10.5	21.5
1 2	8 15.12	+ 2 2.3	1.630	2.530	11.2	18.9	1 2	8 18.07	+20 25.3	2.020	2.957	6.9	21.3
1 12	8 8.01	+ 2 36.6	1.600	2.541	8.1	18.7	1 12	8 9.29	+20 43.6	1.986	2.961	3.0	21.1
1 22	8 0.10	+ 3 31.8	1.595	2.554	6.4	18.6	1 22	7 59.73	+21 1.8	1.981	2.964	1.1	20.9
2 1	7 52.48	+ 4 43.4	1.618	2.566	7.5	18.7	2 1	7 50.43	+21 16.8	2.006	2.967	5.2	21.2
2 11	7 46.20	+ 6 4.7	1.667	2.580	10.4	18.9	2 11	7 42.41	+21 27.0	2.060	2.969	8.9	21.4
2 21	7 42.00	+ 7 29.0	1.740	2.594	13.5	19.2	2 21	7 36.40	+21 31.6	2.139	2.972	12.1	21.6
<b>245222</b>	2004 <i>XW</i> <sub>37</sub>		1 19.4 51°51	7°5/23.8	18		<b>400159</b>	2006 <i>VX</i> <sub>74</sub>		1 19.4 67°63	4°6/21.7	16	
12 13	8 25.70	- 1 21.0	1.882	2.609	17.2	20.2	12 13	8 31.62	+ 6 58.0	1.681	2.442	17.8	20.9
12 23	8 21.98	- 1 45.5	1.808	2.621	14.6	20.0	12 23	8 26.55	+ 6 52.9	1.627	2.475	14.3	20.7
1 2	8 15.98	- 1 47.9	1.754	2.634	11.7	19.8	1 2	8 18.94	+ 7 6.1	1.593	2.507	10.3	20.6
1 12	8 8.36	- 1 26.1	1.723	2.647	9.0	19.7	1 12	8 9.61	+ 7 36.6	1.583	2.540	6.5	20.4
1 22	7 59.98	- 0 41.1	1.717	2.660	7.6	19.6	1 22	7 59.65	+ 8 21.5	1.601	2.572	4.6	20.4
2 1	7 51.89	+ 0 23.8	1.739	2.674	8.3	19.7	2 1	7 50.27	+ 9 15.7	1.648	2.604	6.6	20.6
2 11	7 45.09	+ 1 42.3	1.787	2.688	10.6	19.9	2 11	7 42.54	+10 13.9	1.722	2.636	10.1	20.8
2 21	7 40.30	+ 3 7.5	1.860	2.701	13.3	20.1	2 21	7 37.18	+11 11.1	1.821	2.667	13.3	21.1
<b>461938</b>	2006 <i>ST</i> <sub>252</sub>		1 19.4 164°32	5°0/23.1	17		<b>240346</b>	2003 <i>QT</i> <sub>87</sub>		1 19.4 171°80	2°3/20.6	18	
12 13	8 24.65	- 0 19.0	3.152	3.848	11.5	22.5	12 13	8 31.47	+11 56.9	2.198	2.957	14.1	22.0
12 23	8 20.27	- 0 35.0	3.058	3.853	9.7	22.4	12 23	8 26.23	+12 4.8	2.108	2.961	11.2	21.8
1 2	8 14.45	- 0 37.8	2.988	3.858	7.7	22.3	1 2	8 18.74	+12 24.3	2.041	2.965	7.8	21.6
1 12	8 7.61	- 0 26.7	2.943	3.862	5.9	22.1	1 12	8 9.59	+12 54.0	2.001	2.968	4.2	21.3
1 22	8 0.27	- 0 2.0	2.927	3.866	5.0	22.1	1 22	7 59.62	+13 31.1	1.991	2.970	2.4	21.2
2 1	7 53.05	+ 0 34.6	2.942	3.869	5.6	22.1	2 1	7 49.84	+14 12.2	2.011	2.971	5.2	21.4
2 11	7 46.56	+ 1 20.5	2.985	3.872	7.3	22.2	2 11	7 41.24	+14 53.8	2.061	2.971	8.8	21.6
2 21	7 41.29	+ 2 12.3	3.055	3.874	9.2	22.4	2 21	7 34.60	+15 32.9	2.137	2.971	12.1	21.8
<b>148765</b>	2001 <i>TQ</i> <sub>228</sub>		1 19.4 81°15	0°0/19.4	18		<b>406502</b>	2007 <i>VK</i> <sub>103</sub>		1 19.4 36°32	4°6/17.5	18	
12 13	8 34.83	+21 38.5	1.816	2.605	15.6	19.6	12 13	8 31.65	+27 38.7	1.403	2.221	17.8	20.5
12 23	8 29.12	+21 18.4	1.742	2.617	12.1	19.4	12 23	8 27.84	+28 39.2	1.338	2.228	13.9	20.3
1 2	8 20.70	+21 1.6	1.691	2.630	8.0	19.2	1 2	8 20.50	+29 43.6	1.294	2.236	9.5	20.0
1 12	8 10.38	+20 45.8	1.667	2.642	3.5	19.0	1 12	8 10.51	+30 42.9	1.274	2.244	5.5	19.8
1 22	7 59.30	+20 28.7	1.671	2.654	1.2	18.8	1 22	7 59.29	+31 28.6	1.280	2.252	5.2	19.8
2 1	7 48.73	+20 8.9	1.705	2.667	5.8	19.2	2 1	7 48.59	+31 54.8	1.313	2.261	8.9	20.1
2 11	7 39.89	+19 46.3	1.768	2.679	10.0	19.4	2 11	7 40.05	+32 0.5	1.370	2.270	13.2	20.3
2 21	7 33.55	+19 21.5	1.854	2.691	13.5	19.7	2 21	7 34.72	+31 48.6	1.449	2.280	17.0	20.6
<b>41093</b>	1999 <i>VR</i> <sub>60</sub>		1 19.4 160°17	1°1/18.8	18		<b>328374</b>	2008 <i>QG</i> <sub>26</sub>		1 19.4 173°65	1°5/20.3	18	
12 13	8 29.												



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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>19629</b>	Serra		1 19.4 212°14	1.2°/18.8	18		<b>449654</b>	2014 <i>KS</i> <sub>57</sub>		1 19.4 161°47	2°5°/20.6	18	
12 13	8 29.69	+22 25.9	2.058	2.850	13.9	18.4	12 13	8 31.31	+11 48.5	1.785	2.558	16.4	22.0
12 23	8 25.16	+22 49.1	1.972	2.849	10.8	18.2	12 23	8 26.63	+12 0.7	1.701	2.562	13.1	21.8
1 2	8 18.18	+23 17.5	1.908	2.848	7.1	18.0	1 2	8 19.29	+12 27.6	1.638	2.566	9.1	21.5
1 12	8 9.38	+23 47.1	1.872	2.847	3.2	17.7	1 12	8 9.94	+13 7.5	1.602	2.570	4.9	21.3
1 22	7 59.70	+24 13.7	1.864	2.845	1.9	17.6	1 22	7 59.58	+13 56.7	1.593	2.573	2.6	21.1
2 1	7 50.24	+24 33.9	1.886	2.844	5.7	17.9	2 1	7 49.46	+14 50.3	1.614	2.576	6.0	21.4
2 11	7 42.11	+24 45.8	1.936	2.843	9.5	18.1	2 11	7 40.80	+15 43.4	1.663	2.578	10.2	21.6
2 21	7 36.14	+24 49.2	2.011	2.841	12.9	18.3	2 21	7 34.49	+16 32.4	1.736	2.579	14.0	21.9
<b>270631</b>	2002 <i>PC</i> <sub>61</sub>		1 19.4 132°51	5°3°/22.9	18		<b>212550</b>	2006 <i>SR</i> <sub>25</sub>		1 19.4 134°38	2°0°/20.6	18	
12 13	8 26.47	+0 44.7	2.739	3.446	12.8	21.6	12 13	8 26.05	+12 15.3	2.704	3.463	11.8	21.1
12 23	8 21.85	+0 27.9	2.655	3.460	10.7	21.5	12 23	8 21.63	+12 18.9	2.617	3.470	9.3	20.9
1 2	8 15.57	+0 25.7	2.594	3.472	8.4	21.4	1 2	8 15.50	+12 31.5	2.554	3.477	6.5	20.7
1 12	8 8.14	+0 38.7	2.559	3.485	6.3	21.2	1 12	8 8.15	+12 52.0	2.518	3.485	3.5	20.6
1 22	8 0.17	+1 6.4	2.552	3.497	5.3	21.2	1 22	8 0.24	+13 18.3	2.513	3.491	2.1	20.5
2 1	7 52.39	+1 46.7	2.575	3.508	6.0	21.3	2 1	7 52.50	+13 48.3	2.539	3.498	4.3	20.6
2 11	7 45.50	+2 36.3	2.626	3.519	7.9	21.4	2 11	7 45.68	+14 19.3	2.594	3.504	7.2	20.8
2 21	7 40.05	+3 31.2	2.705	3.529	10.1	21.6	2 21	7 40.34	+14 49.2	2.675	3.511	9.9	21.0
<b>86934</b>	2000 <i>HY</i> <sub>66</sub>		1 19.4 150°03	0°5°/19.1	18		<b>238418</b>	2004 <i>FM</i> <sub>36</sub>		1 19.4 340°26	2°5°/18.1	18	
12 13	8 34.43	+19 33.4	2.005	2.784	14.6	21.0	12 13	8 26.82	+25 4.9	1.998	2.801	13.8	19.7
12 23	8 28.74	+20 3.7	1.926	2.796	11.4	20.8	12 23	8 23.16	+25 45.4	1.911	2.795	10.7	19.5
1 2	8 20.49	+20 41.7	1.870	2.806	7.5	20.5	1 2	8 16.99	+26 30.3	1.848	2.789	7.2	19.3
1 12	8 10.37	+21 23.2	1.841	2.816	3.2	20.3	1 12	8 8.94	+27 14.7	1.810	2.783	3.6	19.1
1 22	7 59.37	+22 3.5	1.842	2.825	1.4	20.2	1 22	7 59.93	+27 53.3	1.801	2.778	3.0	19.0
2 1	7 48.68	+22 38.4	1.874	2.833	5.6	20.5	2 1	7 51.11	+28 22.0	1.821	2.774	6.4	19.2
2 11	7 39.46	+23 5.5	1.934	2.840	9.6	20.7	2 11	7 43.61	+28 38.6	1.868	2.770	10.1	19.4
2 21	7 32.54	+23 24.0	2.020	2.846	13.0	21.0	2 21	7 38.31	+28 43.2	1.938	2.766	13.4	19.6
<b>102182</b>	1999 <i>RN</i> <sub>241</sub>		1 19.4 147°12	2°7°/20.8	18		<b>384595</b>	2010 <i>OV</i> <sub>13</sub>		1 19.4 202°56	0°6°/19.6	18	
12 13	8 27.79	+11 9.5	2.203	2.967	14.0	20.3	12 13	8 30.65	+19 41.8	2.506	3.279	12.2	20.9
12 23	8 23.37	+11 10.1	2.116	2.971	11.1	20.1	12 23	8 25.33	+19 20.5	2.412	3.278	9.5	20.7
1 2	8 16.84	+11 22.5	2.051	2.975	7.8	19.9	1 2	8 18.01	+19 2.5	2.343	3.277	6.3	20.5
1 12	8 8.77	+11 45.7	2.014	2.979	4.4	19.7	1 12	8 9.26	+18 46.3	2.302	3.276	2.9	20.3
1 22	7 59.95	+12 17.3	2.005	2.982	2.7	19.6	1 22	7 59.85	+18 30.7	2.292	3.274	1.0	20.1
2 1	7 51.33	+12 54.4	2.026	2.985	5.2	19.7	2 1	7 50.68	+18 14.6	2.312	3.273	4.6	20.4
2 11	7 43.84	+13 33.5	2.076	2.988	8.6	20.0	2 11	7 42.62	+17 57.4	2.363	3.271	7.9	20.6
2 21	7 38.19	+14 11.6	2.151	2.991	11.8	20.2	2 21	7 36.33	+17 38.9	2.440	3.270	10.9	20.8
<b>10327</b>	Batens		1 19.4 114°20	2°3°/20.4	18		<b>156610</b>	2002 <i>GK</i> <sub>114</sub>		1 19.4 150°41	2°5°/17.7	18	
12 13	8 32.09	+12 53.7	1.680	2.459	17.0	19.0	12 13	8 30.87	+27 39.9	2.902	3.679	10.6	21.1
12 23	8 27.26	+13 0.5	1.606	2.472	13.5	18.8	12 23	8 25.35	+28 22.1	2.822	3.690	8.2	21.0
1 2	8 19.66	+13 21.4	1.554	2.484	9.3	18.5	1 2	8 17.96	+29 5.0	2.767	3.701	5.5	20.8
1 12	8 10.05	+13 54.0	1.527	2.496	4.8	18.3	1 12	8 9.23	+29 44.7	2.742	3.710	3.1	20.6
1 22	7 59.51	+14 34.8	1.527	2.508	2.5	18.2	1 22	7 59.88	+30 17.4	2.748	3.720	2.8	20.6
2 1	7 49.35	+15 18.9	1.557	2.519	6.1	18.4	2 1	7 50.75	+30 40.6	2.786	3.728	5.1	20.8
2 11	7 40.82	+16 2.1	1.614	2.530	10.4	18.7	2 11	7 42.64	+30 53.2	2.853	3.736	7.7	21.0
2 21	7 34.80	+16 41.1	1.695	2.541	14.2	19.0	2 21	7 36.18	+30 55.8	2.946	3.743	10.1	21.2
<b>233556</b>	2007 <i>NX</i> <sub>3</sub>		1 19.4 195°66	1°8°/18.3	18		<b>219330</b>	2000 <i>KO</i> <sub>1</sub>		1 19.4 177°39	9°4°/27.2	18	
12 13	8 33.41	+21 35.7	2.103	2.885	14.0	21.4	12 13	8 28.20	-17 30.1	3.103	3.674	13.6	21.9
12 23	8 28.15	+22 39.6	2.010	2.883	10.8	21.2	12 23	8 23.14	-18 14.0	3.012	3.677	12.5	21.8
1 2	8 20.28	+23 52.0	1.941	2.879	7.2	21.0	1 2	8 16.45	-18 38.2	2.939	3.680	11.3	21.7
1 12	8 10.38	+25 7.4	1.900	2.875	3.3	20.7	1 12	8 8.57	-18 39.4	2.887	3.681	10.2	21.6
1 22	7 59.36	+26 19.3	1.890	2.869	2.5	20.6	1 22	8 0.11	-18 16.2	2.859	3.682	9.5	21.5
2 1	7 48.42	+27 21.9	1.911	2.863	6.2	20.9	2 1	7 51.74	-17 29.1	2.856	3.681	9.5	21.5
2 11	7 38.76	+28 11.5	1.961	2.856	10.1	21.1	2 11	7 44.18	-16 21.2	2.880	3.680	10.2	21.6
2 21	7 31.32	+28 47.2	2.035	2.848	13.4	21.3	2 21	7 37.97	-14 57.4	2.928	3.678	11.3	21.7
<b>259042</b>	2002 <i>TE</i> <sub>278</sub>		1 19.4 61°08	2°5°/18.6	18		<b>174932</b>	2004 <i>CC</i> <sub>59</sub>		1 19.4 307°31	1°9°/18.4	18	
12 13	8 36.13	+26 7.1	1.537	2.341	17.2	21.0	12 13	8 27.49	+20 31.1	1.564	2.374	16.7	20.4
12 23	8 30.56	+26 17.8	1.481	2.364	13.3	20.8	12 23	8 24.53	+21 30.4	1.467	2.355	13.1	20.2
1 2	8 21.83	+26 29.8	1.445	2.386	8.8	20.6	1 2	8 18.45	+22 43.3	1.392	2.336	8.7	19.9
1 12	8 10.93	+26 37.9	1.436	2.409	4.2	20.4	1 12	8 9.80	+24 4.1	1.342	2.317	3.9	19.5
1 22	7 59.26	+26 37.3	1.453	2.433	3.0	20.3	1 22	7 59.61	+25 24.6	1.318	2.299	2.7	19.4
2 1	7 48.38	+26 26.0	1.499	2.456	7.1	20.7	2 1	7 49.35	+26 36.7	1.323	2.281	7.6	19.6
2 11	7 39.65	+26 4.4	1.572	2.479	11.3	21.0	2 11	7 40.62	+27 34.4	1.353	2.263	12.5	19.9
2 21	7 33.86	+25 34.8	1.667	2.502	14.9	21.2	2 21	7 34.66	+28 15.5	1.405	2.246	16.8	20.1
<b>16652</b>	1993 <i>TT</i> <sub>12</sub>		1 19.4 163°82	1°8°/18.5	18		<b>45265</b>	2000 <i>AY</i> <sub>5</sub>		1 19.4 146°23	0°1°/19.5	18	
12 13	8 34.08	+22 52.2	1.946	2.733	14.7	19.0	12 13	8 28.02	+18 19.3	2.311	3.091	12.9	19.3
12 23	8 28.69	+23 31.9	1.864	2.739	11.4	18.7	12 23	8 23.54	+18 40.4	2.224	3.095	10.0	19.1
1 2	8 20.60	+24 17.5	1.806	2.744	7.5	18.5	1 2	8 16.96	+19 8.7	2.162	3.098	6.6	18.9
1 12	8 10.48	+25 3.8	1.774	2.749	3.5	18.3	1 12	8 8.86	+19 41.5	2.127	3.102	2.9	18.7
1 22	7 59.37	+25 45.2	1.773	2.752	2.4	18.2	1 22	8 0.02	+20 15.3	2.122	3.105	1.0	18.5
2 1	7 48.54	+26 17.4	1.801	2.755	6.3	18.5	2 1	7 51.37	+20 47.0	2.147	3.108	4.8	18.8
2 11	7 39.24	+26 38.1	1.857	2.758	10.2	18.7	2 11	7 43.86	+21 14.0	2.201	3.111	8.4	19.1
2 21	7 32.34	+26 47.6	1.938	2.759	13.7	18.9	2 21	7 38.17	+21 35.0	2.280	3.113	11.5	19.3
<b>461784</b>	2005 <i>VH</i> <sub>19</sub>		1 19.4 339°83	11°8°/23.6	18		<b>179874</b>	2002 <i>TS</i> <sub>315</sub>		1 19.4 71°93	4°3°/21.8	18	
12 13	8 23.47	-3 57.1	1.515										

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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>419328</b>	2009 WZ <sub>131</sub>		1 19.4 96°18	1.1/18.8	18		<b>250178</b>	2002 TK <sub>232</sub>		1 19.4 8°11	0°5/19.3	18	
12 13	8 30.78	+21 46.2	2.177	2.962	13.4	21.3	12 13	8 32.24	+25 19.3	1.103	1.936	20.7	18.8
12 23	8 25.68	+22 15.6	2.107	2.981	10.3	21.2	12 23	8 28.77	+24 22.6	1.039	1.938	16.2	18.5
1 2	8 18.35	+22 50.0	2.062	3.000	6.8	21.0	1 2	8 21.31	+23 24.2	0.993	1.941	10.8	18.2
1 12	8 9.43	+23 25.4	2.044	3.019	3.0	20.8	1 12	8 10.95	+22 21.8	0.970	1.947	4.7	17.9
1 22	7 59.85	+23 57.8	2.055	3.037	1.7	20.7	1 22	7 59.42	+21 14.8	0.971	1.954	1.8	17.7
2 1	7 50.64	+24 23.8	2.097	3.055	5.3	21.0	2 1	7 48.74	+20 5.0	0.998	1.964	7.9	18.1
2 11	7 42.77	+24 41.7	2.168	3.072	8.8	21.2	2 11	7 40.68	+18 55.4	1.047	1.975	13.5	18.5
2 21	7 36.93	+24 51.3	2.264	3.089	11.8	21.4	2 21	7 36.21	+17 49.2	1.118	1.987	18.2	18.8
<b>200783</b>	2001 XK <sub>60</sub>		1 19.4 353°13	1°1/19.8	18		<b>413926</b>	2006 WU <sub>181</sub>		1 19.4 348°42	6°5/21.7	18	
12 13	8 25.60	+16 12.0	1.163	1.989	20.3	19.5	12 13	8 29.46	+ 5 32.7	1.779	2.534	17.1	20.6
12 23	8 23.59	+16 23.2	1.089	1.983	16.0	19.2	12 23	8 25.18	+ 4 34.7	1.694	2.533	14.2	20.4
1 2	8 18.01	+16 50.6	1.033	1.978	10.9	18.9	1 2	8 18.34	+ 3 51.7	1.629	2.532	10.9	20.2
1 12	8 9.61	+17 31.4	0.999	1.975	5.0	18.6	1 12	8 9.58	+ 3 26.2	1.588	2.532	7.9	20.0
1 22	7 59.74	+18 19.6	0.989	1.973	1.8	18.4	1 22	7 59.86	+ 3 19.3	1.574	2.531	6.5	19.9
2 1	7 50.17	+19 8.4	1.004	1.971	7.7	18.7	2 1	7 50.35	+ 3 29.8	1.587	2.531	8.0	20.0
2 11	7 42.69	+19 51.6	1.042	1.971	13.3	19.0	2 11	7 42.23	+ 3 54.3	1.626	2.531	11.2	20.2
2 21	7 38.48	+20 25.7	1.101	1.973	18.2	19.3	2 21	7 36.36	+ 4 28.1	1.689	2.531	14.4	20.4
<b>450442</b>	2005 UH <sub>368</sub>		1 19.4 56°19	0°7/19.7	18		<b>430308</b>	2013 XU <sub>2</sub>		1 19.4 76°03	4°5/17.2	18	
12 13	8 31.25	+16 52.6	1.358	2.164	19.0	21.3	12 13	8 32.16	+33 37.2	2.332	3.120	12.6	20.7
12 23	8 27.37	+17 8.4	1.287	2.171	14.9	21.1	12 23	8 26.86	+34 12.7	2.262	3.131	9.9	20.5
1 2	8 20.15	+17 37.7	1.236	2.178	10.0	20.8	1 2	8 19.18	+34 44.6	2.216	3.143	7.1	20.3
1 12	8 10.42	+18 16.6	1.209	2.185	4.5	20.5	1 12	8 9.84	+35 7.7	2.197	3.154	4.9	20.2
1 22	7 59.49	+18 59.4	1.209	2.192	1.5	20.3	1 22	7 59.80	+35 17.8	2.207	3.166	4.8	20.2
2 1	7 49.00	+19 40.4	1.235	2.199	7.0	20.7	2 1	7 50.17	+35 12.7	2.247	3.178	6.9	20.4
2 11	7 40.50	+20 15.1	1.286	2.207	12.1	21.0	2 11	7 41.99	+34 53.0	2.314	3.189	9.6	20.6
2 21	7 35.04	+20 41.3	1.360	2.214	16.5	21.3	2 21	7 35.98	+34 21.2	2.405	3.200	12.2	20.8
<b>176785</b>	2002 SR <sub>10</sub>		1 19.4 47°40	1°1/19.9	18		<b>239222</b>	2006 RC <sub>99</sub>		1 19.4 150°12	3°4/21.6	18	
12 13	8 30.11	+15 35.9	1.398	2.202	18.7	20.0	12 13	8 25.36	+ 7 38.1	2.639	3.383	12.4	21.0
12 23	8 26.12	+15 54.8	1.342	2.223	14.5	19.8	12 23	8 21.18	+ 7 35.9	2.548	3.387	10.0	20.8
1 2	8 19.06	+16 27.6	1.306	2.246	9.7	19.6	1 2	8 15.28	+ 7 45.4	2.480	3.390	7.3	20.7
1 12	8 9.84	+17 10.5	1.294	2.269	4.5	19.3	1 12	8 8.14	+ 8 6.4	2.439	3.394	4.7	20.5
1 22	7 59.74	+17 57.7	1.309	2.292	1.6	19.2	1 22	8 0.39	+ 8 37.3	2.428	3.397	3.4	20.4
2 1	7 50.26	+18 43.7	1.351	2.315	6.5	19.6	2 1	7 52.79	+ 9 15.9	2.446	3.400	4.9	20.5
2 11	7 42.72	+19 23.9	1.419	2.339	11.2	19.9	2 11	7 46.07	+ 9 58.8	2.494	3.403	7.6	20.7
2 21	7 37.98	+19 56.0	1.509	2.363	15.1	20.2	2 21	7 40.84	+10 43.1	2.568	3.405	10.2	20.9
<b>383698</b>	2007 TU <sub>407</sub>		1 19.4 24°06	3°9/21.6	18		<b>60646</b>	2000 FJ <sub>39</sub>		1 19.4 247°83	0°1/19.3	18	R
12 13	8 24.82	+ 7 29.8	2.168	2.925	14.3	21.2	12 13	8 27.36	+18 59.9	2.292	3.076	12.9	19.2
12 23	8 21.15	+ 7 26.5	2.081	2.928	11.6	21.0	12 23	8 23.15	+19 22.2	2.200	3.072	10.0	19.0
1 2	8 15.43	+ 7 37.6	2.017	2.932	8.5	20.8	1 2	8 16.80	+19 51.6	2.131	3.069	6.6	18.8
1 12	8 8.22	+ 8 2.9	1.979	2.935	5.5	20.7	1 12	8 8.86	+20 25.3	2.090	3.065	2.9	18.5
1 22	8 0.29	+ 8 40.5	1.968	2.939	3.9	20.6	1 22	8 0.13	+20 59.7	2.079	3.062	1.1	18.4
2 1	7 52.54	+ 9 27.3	1.987	2.943	5.7	20.7	2 1	7 51.54	+21 31.5	2.097	3.058	4.9	18.7
2 11	7 45.87	+10 19.2	2.034	2.947	8.7	20.9	2 11	7 44.05	+21 58.1	2.144	3.054	8.6	18.9
2 21	7 40.97	+11 12.0	2.106	2.952	11.8	21.1	2 21	7 38.40	+22 18.1	2.217	3.050	11.7	19.1
<b>304118</b>	2006 JM <sub>37</sub>		1 19.4 186°19	2°2/18.3	18		<b>222289</b>	2000 SZ <sub>136</sub>		1 19.4 155°91	5°8/22.7	18	
12 13	8 33.28	+23 44.9	1.986	2.775	14.4	21.7	12 13	8 28.31	+ 1 17.5	2.445	3.159	14.0	20.7
12 23	8 28.14	+24 28.9	1.899	2.775	11.2	21.5	12 23	8 23.55	+ 0 49.7	2.357	3.166	11.8	20.6
1 2	8 20.31	+25 18.6	1.836	2.774	7.4	21.3	1 2	8 16.88	+ 0 37.3	2.291	3.172	9.3	20.4
1 12	8 10.42	+26 8.4	1.800	2.773	3.6	21.0	1 12	8 8.85	+ 0 41.5	2.250	3.178	7.0	20.3
1 22	7 59.50	+26 52.7	1.793	2.771	2.7	21.0	1 22	8 0.15	+ 1 2.0	2.238	3.184	5.8	20.2
2 1	7 48.77	+27 26.9	1.816	2.769	6.4	21.2	2 1	7 51.63	+ 1 37.1	2.255	3.189	6.7	20.3
2 11	7 39.50	+27 48.7	1.868	2.766	10.3	21.4	2 11	7 44.10	+ 2 23.1	2.300	3.193	8.9	20.4
2 21	7 32.59	+27 58.4	1.943	2.763	13.7	21.6	2 21	7 38.22	+ 3 15.8	2.371	3.197	11.3	20.6
<b>284389</b>	2006 TT <sub>14</sub>		1 19.4 146°51	3°2/17.6	18		<b>254622</b>	2005 JN <sub>17</sub>		1 19.4 156°08	3°5/17.2	18	
12 13	8 29.37	+29 45.8	2.560	3.347	11.6	20.9	12 13	8 33.99	+28 54.1	2.513	3.292	12.0	21.5
12 23	8 24.54	+30 19.0	2.476	3.349	9.0	20.7	12 23	8 28.17	+29 56.8	2.434	3.303	9.3	21.3
1 2	8 17.60	+30 51.7	2.418	3.351	6.2	20.5	1 2	8 20.06	+31 0.5	2.381	3.312	6.4	21.2
1 12	8 9.14	+31 19.5	2.387	3.353	3.7	20.4	1 12	8 10.28	+31 59.6	2.356	3.321	4.0	21.0
1 22	7 59.98	+31 38.6	2.387	3.355	3.5	20.4	1 22	7 59.67	+32 48.7	2.363	3.328	3.9	21.0
2 1	7 51.06	+31 46.6	2.416	3.357	5.9	20.5	2 1	7 49.27	+33 24.2	2.400	3.335	6.3	21.2
2 11	7 43.31	+31 42.8	2.473	3.359	8.7	20.7	2 11	7 40.11	+33 44.9	2.467	3.341	9.1	21.4
2 21	7 37.41	+31 28.5	2.556	3.360	11.3	20.9	2 21	7 32.94	+33 51.8	2.558	3.347	11.7	21.6
<b>31045</b>	1996 NP <sub>4</sub>		1 19.4 234°05	1°2/18.9	18		<b>8082</b>	Haynes		1 19.4 119°39	4°7/21.3	18	
12 13	8 32.76	+23 23.8	2.207	2.990	13.3	19.6	12 13	8 31.93	+ 8 11.8	2.065	2.814	15.2	17.9
12 23	8 27.50	+23 34.4	2.106	2.979	10.4	19.4	12 23	8 26.59	+ 7 29.0	1.986	2.826	12.4	17.7
1 2	8 19.77	+23 48.3	2.029	2.967	6.9	19.1	1 2	8 18.99	+ 6 58.2	1.929	2.839	9.2	17.5
1 12	8 10.18	+24 2.0	1.980	2.955	3.1	18.8	1 12	8 9.78	+ 6 40.6	1.898	2.850	6.1	17.3
1 22	7 59.61	+24 11.9	1.960	2.942	1.8	18.7	1 22	7 59.86	+ 6 35.9	1.896	2.862	4.7	17.3
2 1	7 49.19	+24 15.4	1.971	2.928	5.6	19.0	2 1	7 50.25	+ 6 42.6	1.924	2.873	6.4	17.4
2 11	7 40.03	+24 11.3	2.011	2.915	9.4	19.2	2 11	7 41.96	+ 6 58.0	1.980	2.884	9.5	17.6
2 21	7 32.98	+24 0.0	2.076	2.900	12.8	19.4	2 21	7 35.70	+ 7 18.9	2.061	2.894	12.5	17.8
<b>327843</b>	2006 WS <sub>189</sub>		1 19.4 340°98	11°1/22.7	18		<b>30432</b>	2000 LM <sub>20</sub>		1 19.4 312°85	6°3/21.3	18	R
12 13	8 21.48	+ 0 39.5	1.277	2.055	21.5	19.3	12 13	8 28.51	+ 7 10.0</				

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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>313466</b>	2002 TC <sub>55</sub>		1 19.4 53°45'	3°3'/18.2	17		<b>253227</b>	2002 YF <sub>11</sub>		1 19.4 358°21'	0°1'/19.4	18	
12 13	8 34.19	+25 31.9	1.437	2.248	17.9	20.0	12 13	8 23.00	+13 48.8	1.294	2.111	19.1	18.9
12 23	8 29.32	+26 19.2	1.389	2.276	13.7	19.8	12 23	8 21.30	+15 5.9	1.217	2.107	15.0	18.6
1 2	8 21.18	+27 10.2	1.362	2.304	9.1	19.6	1 2	8 16.41	+16 47.1	1.160	2.104	10.1	18.3
1 12	8 10.78	+27 57.2	1.360	2.333	4.6	19.4	1 12	8 8.97	+18 46.5	1.126	2.102	4.4	18.0
1 22	7 59.55	+28 33.3	1.385	2.361	3.8	19.4	1 22	8 0.13	+20 53.6	1.119	2.102	1.5	17.8
2 1	7 49.11	+28 54.1	1.437	2.390	7.7	19.7	2 1	7 51.45	+22 56.4	1.138	2.103	7.4	18.1
2 11	7 40.86	+28 59.3	1.515	2.419	11.8	20.0	2 11	7 44.55	+24 44.6	1.182	2.105	12.7	18.4
2 21	7 35.64	+28 50.9	1.615	2.448	15.4	20.3	2 21	7 40.57	+26 12.5	1.248	2.109	17.3	18.7
<b>70034</b>	1999 CY <sub>35</sub>		1 19.4 44°40'	3°6'/17.3	18 R		<b>341314</b>	2007 SC <sub>20</sub>		1 19.4 130°00'	4°8'/16.6	18	
12 13	8 28.61	+26 34.7	1.914	2.717	14.3	18.1	12 13	8 34.19	+36 59.1	2.808	3.581	11.0	21.6
12 23	8 24.60	+27 45.9	1.846	2.729	11.1	17.9	12 23	8 28.10	+37 39.9	2.738	3.594	8.8	21.5
1 2	8 17.98	+29 0.8	1.802	2.742	7.5	17.7	1 2	8 19.87	+38 15.5	2.693	3.608	6.6	21.3
1 12	8 9.43	+30 12.8	1.785	2.754	4.3	17.5	1 12	8 10.15	+38 41.0	2.676	3.621	5.0	21.3
1 22	7 59.98	+31 14.9	1.796	2.767	4.1	17.6	1 22	7 59.80	+38 52.6	2.689	3.633	5.1	21.3
2 1	7 50.84	+32 2.1	1.837	2.780	7.2	17.8	2 1	7 49.83	+38 48.5	2.732	3.645	6.7	21.4
2 11	7 43.20	+32 32.4	1.904	2.794	10.6	18.0	2 11	7 41.15	+38 29.3	2.803	3.657	8.9	21.6
2 21	7 37.89	+32 46.6	1.994	2.808	13.6	18.2	2 21	7 34.44	+37 57.6	2.899	3.668	10.9	21.7
<b>503643</b>	2016 GQ <sub>182</sub>		1 19.4 146°69'	2°3'/20.9	18		<b>149501</b>	2003 FV <sub>34</sub>		1 19.4 317°69'	1°4'/18.8	18	
12 13	8 26.08	+10 47.9	2.504	3.262	12.6	21.4	12 13	8 30.06	+22 28.7	1.841	2.639	15.0	20.4
12 23	8 21.87	+11 2.8	2.414	3.266	10.0	21.2	12 23	8 25.82	+22 53.7	1.756	2.637	11.7	20.1
1 2	8 15.80	+11 29.0	2.348	3.270	7.1	21.0	1 2	8 18.86	+23 24.6	1.694	2.635	7.7	19.9
1 12	8 8.40	+12 5.2	2.309	3.274	4.0	20.9	1 12	8 9.87	+23 57.1	1.657	2.633	3.5	19.6
1 22	8 0.34	+12 49.0	2.300	3.278	2.3	20.7	1 22	7 59.87	+24 26.4	1.649	2.631	2.1	19.5
2 1	7 52.43	+13 37.1	2.321	3.281	4.6	20.9	2 1	7 50.10	+24 48.4	1.670	2.629	6.2	19.8
2 11	7 45.47	+14 26.0	2.372	3.284	7.7	21.1	2 11	7 41.83	+25 0.9	1.718	2.627	10.4	20.0
2 21	7 40.10	+15 12.9	2.449	3.287	10.6	21.3	2 21	7 35.95	+25 3.9	1.790	2.625	14.0	20.3
<b>241600</b>	1999 JV <sub>39</sub>		1 19.4 221°97'	3°6'/17.7	18		<b>16750</b>	Marisandoz		1 19.4 308°09'	1°0'/19.1	18	
12 13	8 34.73	+27 37.4	1.978	2.769	14.4	21.0	12 13	8 30.20	+22 15.0	1.659	2.463	16.1	17.7
12 23	8 29.51	+28 28.1	1.884	2.760	11.3	20.8	12 23	8 26.38	+22 19.5	1.562	2.446	12.7	17.5
1 2	8 21.40	+29 22.1	1.814	2.750	7.7	20.5	1 2	8 19.52	+22 29.6	1.486	2.428	8.5	17.2
1 12	8 11.01	+30 12.9	1.771	2.739	4.4	20.3	1 12	8 10.27	+22 41.5	1.435	2.411	3.7	16.8
1 22	7 59.40	+30 53.9	1.757	2.728	4.1	20.3	1 22	7 59.70	+22 51.0	1.412	2.394	1.8	16.7
2 1	7 47.89	+31 20.4	1.772	2.716	7.3	20.4	2 1	7 49.24	+22 54.6	1.416	2.377	6.7	16.9
2 11	7 37.89	+31 30.6	1.815	2.704	11.1	20.6	2 11	7 40.36	+22 50.4	1.447	2.361	11.5	17.2
2 21	7 30.39	+31 26.0	1.881	2.690	14.5	20.8	2 21	7 34.15	+22 38.6	1.500	2.346	15.7	17.4
<b>333189</b>	2012 FL <sub>55</sub>		1 19.4 99°63'	5°8'/16.5	18		<b>41107</b>	Ropakov		1 19.4 119°79'	2°8'/18.1	18	
12 13	8 35.23	+34 49.3	2.062	2.852	13.9	20.6	12 13	8 35.94	+26 21.8	2.047	2.832	14.2	20.2
12 23	8 29.64	+35 55.2	2.001	2.869	11.1	20.5	12 23	8 29.91	+27 2.2	1.979	2.852	11.0	20.0
1 2	8 21.24	+36 57.3	1.963	2.886	8.2	20.3	1 2	8 21.29	+27 44.7	1.935	2.871	7.3	19.9
1 12	8 10.81	+37 48.0	1.952	2.902	6.1	20.2	1 12	8 10.82	+28 23.4	1.919	2.890	3.8	19.7
1 22	7 59.52	+38 21.2	1.969	2.919	6.2	20.3	1 22	7 59.58	+28 53.4	1.933	2.908	3.2	19.7
2 1	7 48.70	+38 33.7	2.015	2.935	8.4	20.4	2 1	7 48.80	+29 11.3	1.977	2.925	6.4	19.9
2 11	7 39.62	+38 26.2	2.088	2.950	11.1	20.6	2 11	7 39.62	+29 16.3	2.049	2.941	9.8	20.1
2 21	7 33.10	+38 2.2	2.183	2.966	13.6	20.8	2 21	7 32.83	+29 10.0	2.145	2.957	12.9	20.4
<b>227613</b>	2006 AF <sub>100</sub>		1 19.4 29°19'	0°6'/19.2	18		<b>199870</b>	2007 EP <sub>165</sub>		1 19.4 351°68'	22°9'/8.2	17	
12 13	8 29.01	+20 52.2	1.818	2.616	15.2	20.6	12 13	8 53.75	+59 36.9	1.036	1.814	25.4	19.9
12 23	8 24.89	+21 6.6	1.740	2.620	11.8	20.4	12 23	8 51.94	+62 39.0	1.002	1.812	23.9	19.8
1 2	8 18.16	+21 27.5	1.684	2.625	7.8	20.2	1 2	8 40.77	+65 11.7	0.983	1.809	23.0	19.7
1 12	8 9.51	+21 51.3	1.655	2.630	3.4	19.9	1 12	8 20.74	+66 50.2	0.979	1.808	22.9	19.7
1 22	7 59.97	+22 13.9	1.653	2.636	1.5	19.8	1 22	7 56.04	+67 14.9	0.989	1.807	23.6	19.8
2 1	7 50.76	+22 31.8	1.681	2.642	5.9	20.1	2 1	7 33.65	+66 22.2	1.014	1.806	25.0	19.9
2 11	7 43.05	+22 42.9	1.735	2.648	10.0	20.4	2 11	7 19.11	+64 26.1	1.052	1.807	26.7	20.0
2 21	7 37.68	+22 46.7	1.813	2.654	13.6	20.6	2 21	7 13.77	+61 47.7	1.101	1.807	28.4	20.1
<b>382070</b>	2011 EL <sub>73</sub>		1 19.4 234°65'	1°2'/18.8	17		<b>153444</b>	2001 QU <sub>259</sub>		1 19.4 152°67'	2°9'/18.1	18	
12 13	8 28.79	+22 2.4	2.374	3.159	12.5	21.7	12 13	8 37.19	+26 19.5	1.982	2.767	14.6	21.3
12 23	8 24.28	+22 33.4	2.276	3.150	9.7	21.5	12 23	8 31.10	+27 2.6	1.905	2.778	11.3	21.1
1 2	8 17.58	+23 9.8	2.203	3.142	6.4	21.3	1 2	8 22.22	+27 48.3	1.852	2.788	7.6	20.9
1 12	8 9.25	+23 48.0	2.158	3.133	2.9	21.0	1 12	8 11.29	+28 30.7	1.826	2.797	4.0	20.7
1 22	8 0.05	+24 24.0	2.143	3.124	1.7	20.9	1 22	7 59.41	+29 4.0	1.830	2.805	3.4	20.7
2 1	7 50.95	+24 54.3	2.158	3.115	5.2	21.2	2 1	7 47.90	+29 24.3	1.864	2.812	6.7	20.9
2 11	7 42.94	+25 16.6	2.202	3.105	8.7	21.4	2 11	7 38.02	+29 30.7	1.926	2.818	10.4	21.1
2 21	7 36.78	+25 30.4	2.271	3.095	11.8	21.6	2 21	7 30.67	+29 24.6	2.013	2.824	13.6	21.4
<b>426322</b>	2012 UY <sub>34</sub>		1 19.4 146°71'	2°1'/20.8	17		<b>456287</b>	2006 SS <sub>76</sub>		1 19.4 63°08'	9°6'/24.6	18	
12 13	8 25.70	+11 28.8	2.824	3.578	11.4	21.9	12 13	8 27.98	- 4 0.2	1.650	2.371	19.5	21.1
12 23	8 21.34	+11 34.3	2.734	3.584	9.1	21.8	12 23	8 24.10	- 4 47.7	1.582	2.385	16.8	21.0
1 2	8 15.34	+11 49.1	2.669	3.590	6.4	21.6	1 2	8 17.64	- 5 9.6	1.532	2.399	13.9	20.8
1 12	8 8.17	+12 11.9	2.631	3.596	3.6	21.4	1 12	8 9.30	- 5 1.9	1.503	2.414	11.2	20.7
1 22	8 0.45	+12 41.0	2.624	3.601	2.1	21.3	1 22	8 0.10	- 4 24.4	1.498	2.428	9.7	20.6
2 1	7 52.88	+13 14.0	2.648	3.606	4.2	21.5	2 1	7 51.25	- 3 20.2	1.519	2.443	10.2	20.7
2 11	7 46.17	+13 48.4	2.701	3.611	7.0	21.7	2 11	7 43.89	- 1 56.7	1.565	2.458	12.3	20.9
2 21	7 40.87	+14 21.9	2.781	3.616	9.6	21.8	2 21	7 38.86	- 0 22.4	1.634	2.473	15.0	21.1
<b>425363</b>	2010 BS <sub>87</sub>		1 19.4 199°05'	3°3'/17.8	17		<b>179859</b>	2002 TP <sub>267</sub>		1 19.4 152°73'	0°4'/19.6	18	
12 13	8 32.03	+31 11.5	2.597	3.380	11.6	21.2	12 13	8 32.16	+18 12.7				

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>316373</b>	2010 <i>SL</i> <sub>37</sub>		1 19.4 106°39	1.7/18.8	18		<b>473836</b>	2016 <i>EU</i> <sub>124</sub>		1 19.4 127°71	1.4/20.1	18	
12 13	8 35.45	+24 53.4	1.903	2.692	14.9	20.5	12 13	8 29.34	+15 47.4	2.134	2.910	14.0	21.8
12 23	8 29.65	+25 2.3	1.832	2.707	11.6	20.3	12 23	8 24.71	+15 45.4	2.049	2.915	11.0	21.6
1 2	8 21.16	+25 13.3	1.783	2.721	7.7	20.1	1 2	8 17.86	+15 51.9	1.987	2.919	7.4	21.4
1 12	8 10.78	+25 22.0	1.761	2.735	3.5	19.9	1 12	8 9.39	+16 5.0	1.952	2.924	3.6	21.1
1 22	7 59.62	+25 24.7	1.769	2.749	2.3	19.8	1 22	8 0.14	+16 22.3	1.946	2.928	1.6	21.0
2 1	7 48.96	+25 19.0	1.806	2.762	6.1	20.1	2 1	7 51.15	+16 41.3	1.970	2.932	5.1	21.2
2 11	7 39.99	+25 4.8	1.871	2.775	10.0	20.3	2 11	7 43.38	+16 59.4	2.023	2.936	8.8	21.5
2 21	7 33.50	+24 43.5	1.961	2.788	13.3	20.6	2 21	7 37.58	+17 14.9	2.100	2.940	12.1	21.7
<b>132150</b>	2002 <i>CB</i> <sub>288</sub>		1 19.4 45°07	1.2/19.9	18		<b>340794</b>	2006 <i>TG</i> <sub>16</sub>		1 19.4 179°39	3.7/21.7	18	
12 13	8 30.64	+15 46.5	1.232	2.044	20.2	19.8	12 13	8 25.28	+ 6 55.7	2.664	3.405	12.4	21.4
12 23	8 26.97	+16 2.7	1.177	2.063	15.8	19.6	12 23	8 21.15	+ 6 44.1	2.570	3.406	10.1	21.3
1 2	8 19.89	+16 34.3	1.140	2.082	10.5	19.3	1 2	8 15.31	+ 6 44.2	2.499	3.406	7.5	21.1
1 12	8 10.35	+17 17.0	1.127	2.102	4.8	19.1	1 12	8 8.24	+ 6 56.0	2.455	3.406	5.0	20.9
1 22	7 59.79	+18 4.7	1.139	2.122	1.7	18.9	1 22	8 0.55	+ 7 18.5	2.440	3.406	3.7	20.8
2 1	7 49.89	+18 51.1	1.178	2.143	7.1	19.3	2 1	7 52.98	+ 7 49.6	2.455	3.406	5.1	20.9
2 11	7 42.19	+19 31.1	1.241	2.165	12.1	19.7	2 11	7 46.29	+ 8 26.4	2.499	3.405	7.6	21.1
2 21	7 37.60	+20 2.3	1.326	2.186	16.4	20.0	2 21	7 41.05	+ 9 6.0	2.569	3.405	10.2	21.3
<b>226753</b>	2004 <i>RA</i> <sub>46</sub>		1 19.4 76°66	2.4/18.4	18		<b>406479</b>	2007 <i>UL</i> <sub>94</sub>		1 19.4 175°19	2.8/20.6	18	
12 13	8 31.94	+25 27.2	1.915	2.711	14.6	21.0	12 13	8 31.52	+12 48.7	1.817	2.591	16.1	21.9
12 23	8 27.02	+25 56.0	1.846	2.725	11.3	20.8	12 23	8 26.81	+12 35.4	1.730	2.592	12.8	21.7
1 2	8 19.49	+26 27.6	1.799	2.739	7.5	20.6	1 2	8 19.47	+12 33.8	1.666	2.593	9.0	21.5
1 12	8 10.09	+26 56.8	1.779	2.752	3.7	20.4	1 12	8 10.16	+12 43.1	1.627	2.594	4.9	21.2
1 22	7 59.88	+27 19.1	1.788	2.766	2.9	20.4	1 22	7 59.87	+13 1.2	1.616	2.594	2.9	21.1
2 1	7 50.11	+27 31.1	1.826	2.780	6.3	20.6	2 1	7 49.82	+13 25.1	1.634	2.594	6.1	21.3
2 11	7 41.93	+27 31.9	1.891	2.793	10.0	20.9	2 11	7 41.21	+13 51.4	1.679	2.594	10.2	21.5
2 21	7 36.12	+27 22.7	1.981	2.807	13.2	21.1	2 21	7 34.93	+14 17.2	1.749	2.594	13.9	21.8
<b>488104</b>	2015 <i>VP</i> <sub>67</sub>		1 19.4 46°48	5.8/17.1	18		<b>467964</b>	2012 <i>JT</i> <sub>24</sub>		1 19.4 269°49	4.4/16.9	17	
12 13	8 33.40	+28 56.4	1.281	2.104	19.0	20.3	12 13	8 31.63	+29 18.1	2.054	2.850	13.8	21.9
12 23	8 29.62	+30 12.6	1.222	2.114	14.8	20.1	12 23	8 27.23	+30 24.7	1.953	2.830	10.9	21.7
1 2	8 21.97	+31 32.2	1.182	2.124	10.3	19.9	1 2	8 20.02	+31 34.9	1.876	2.810	7.6	21.5
1 12	8 11.38	+32 44.1	1.167	2.134	6.5	19.7	1 12	8 10.53	+32 41.8	1.825	2.790	4.9	21.2
1 22	7 59.42	+33 38.1	1.177	2.145	6.4	19.7	1 22	7 59.71	+33 38.1	1.804	2.769	5.0	21.2
2 1	7 48.07	+34 7.5	1.213	2.156	10.1	19.9	2 1	7 48.84	+34 18.3	1.811	2.748	7.9	21.3
2 11	7 39.17	+34 12.0	1.272	2.168	14.3	20.2	2 11	7 39.30	+34 39.8	1.846	2.726	11.4	21.5
2 21	7 33.82	+33 55.6	1.351	2.179	18.1	20.5	2 21	7 32.15	+34 43.8	1.903	2.705	14.7	21.7
<b>403832</b>	2011 <i>UL</i> <sub>237</sub>		1 19.4 178°47	1.1/18.9	18		<b>205359</b>	2000 <i>XS</i> <sub>31</sub>		1 19.4 45°08	3.2/18.6	18	
12 13	8 34.24	+21 52.3	2.070	2.852	14.2	22.5	12 13	8 35.50	+26 36.3	1.251	2.071	19.5	19.9
12 23	8 28.72	+22 18.9	1.982	2.854	11.0	22.2	12 23	8 30.84	+26 53.5	1.199	2.090	15.1	19.6
1 2	8 20.63	+22 51.2	1.918	2.855	7.3	22.0	1 2	8 22.45	+27 12.6	1.166	2.110	10.1	19.4
1 12	8 10.63	+23 24.9	1.882	2.856	3.2	21.8	1 12	8 11.46	+27 26.7	1.158	2.131	5.0	19.2
1 22	7 59.68	+23 55.5	1.875	2.856	1.8	21.7	1 22	7 59.50	+27 29.9	1.174	2.153	3.8	19.2
2 1	7 48.96	+24 19.4	1.899	2.856	5.8	21.9	2 1	7 48.47	+27 19.2	1.217	2.175	8.2	19.5
2 11	7 39.64	+24 34.5	1.951	2.854	9.7	22.2	2 11	7 39.97	+26 55.6	1.285	2.197	12.8	19.8
2 21	7 32.57	+24 40.7	2.028	2.852	13.1	22.4	2 21	7 34.87	+26 22.3	1.374	2.220	16.8	20.1
<b>398220</b>	2010 <i>OZ</i> <sub>71</sub>		1 19.4 107°63	0.5/19.2	18		<b>219406</b>	2000 <i>SO</i> <sub>220</sub>		1 19.4 103°63	3.3/21.5	18	
12 13	8 35.84	+22 5.6	2.004	2.785	14.6	21.4	12 13	8 29.50	+ 7 52.9	2.253	2.999	14.2	21.2
12 23	8 29.71	+22 2.1	1.933	2.804	11.3	21.2	12 23	8 24.55	+ 8 3.0	2.180	3.022	11.4	21.0
1 2	8 21.09	+22 2.0	1.885	2.822	7.4	21.0	1 2	8 17.59	+ 8 27.2	2.130	3.044	8.2	20.8
1 12	8 10.73	+22 2.2	1.865	2.840	3.2	20.7	1 12	8 9.22	+ 9 4.2	2.107	3.065	5.0	20.7
1 22	7 59.69	+21 59.9	1.875	2.858	1.3	20.6	1 22	8 0.24	+ 9 51.4	2.114	3.086	3.3	20.6
2 1	7 49.16	+21 53.2	1.915	2.875	5.5	20.9	2 1	7 51.57	+10 45.1	2.150	3.107	5.2	20.8
2 11	7 40.22	+21 41.5	1.984	2.891	9.3	21.2	2 11	7 44.07	+11 41.0	2.217	3.127	8.3	21.0
2 21	7 33.60	+21 25.4	2.078	2.907	12.6	21.5	2 21	7 38.38	+12 35.7	2.309	3.146	11.2	21.2
<b>298940</b>	2004 <i>TQ</i> <sub>237</sub>		1 19.4 158°76	2.3/18.4	18		<b>44185</b>	1998 <i>KH</i> <sub>54</sub>		1 19.4 218°50	2.6/20.8	18	
12 13	8 34.96	+24 7.7	1.930	2.718	14.8	21.2	12 13	8 30.00	+10 46.4	2.066	2.828	14.8	19.2
12 23	8 29.48	+24 49.9	1.851	2.726	11.5	21.0	12 23	8 25.46	+11 0.9	1.967	2.821	11.9	18.9
1 2	8 21.22	+25 37.1	1.794	2.732	7.6	20.8	1 2	8 18.54	+11 29.4	1.889	2.813	8.4	18.7
1 12	8 10.91	+26 23.6	1.765	2.738	3.7	20.6	1 12	8 9.78	+12 10.9	1.838	2.804	4.7	18.5
1 22	7 59.60	+27 3.7	1.765	2.743	2.8	20.5	1 22	8 0.01	+13 2.2	1.816	2.794	2.7	18.3
2 1	7 48.59	+27 32.9	1.795	2.747	6.5	20.8	2 1	7 50.29	+13 59.2	1.824	2.784	5.6	18.5
2 11	7 39.15	+27 49.4	1.852	2.751	10.4	21.0	2 11	7 41.72	+14 57.1	1.861	2.774	9.4	18.7
2 21	7 32.18	+27 54.0	1.935	2.754	13.8	21.2	2 21	7 35.17	+15 52.2	1.923	2.763	13.0	18.9
<b>462930</b>	2011 <i>BP</i> <sub>30</sub>		1 19.4 81°95	0.8/18.9	18		<b>289731</b>	2005 <i>JC</i> <sub>27</sub>		1 19.4 130°10	4.4/21.9	18	
12 13	8 29.82	+18 34.8	1.920	2.708	14.8	20.9	12 13	8 30.46	+ 5 52.6	2.274	3.010	14.4	22.1
12 23	8 25.35	+19 34.2	1.849	2.725	11.5	20.7	12 23	8 25.30	+ 5 41.1	2.195	3.026	11.7	21.9
1 2	8 18.40	+20 43.8	1.802	2.742	7.5	20.5	1 2	8 18.10	+ 5 43.9	2.138	3.042	8.7	21.8
1 12	8 9.64	+21 58.3	1.783	2.758	3.2	20.3	1 12	8 9.46	+ 6 1.0	2.107	3.056	5.8	21.6
1 22	8 0.04	+23 11.4	1.793	2.775	1.6	20.2	1 22	8 0.17	+ 6 30.9	2.106	3.071	4.4	21.5
2 1	7 50.75	+24 17.3	1.832	2.791	5.8	20.5	2 1	7 51.13	+ 7 10.8	2.135	3.084	5.9	21.7
2 11	7 42.88	+25 12.2	1.900	2.807	9.7	20.8	2 11	7 43.25	+ 7 57.0	2.192	3.097	8.7	21.9
2 21	7 37.23	+25 54.5	1.993	2.823	13.0	21.0	2 21	7 37.19	+ 8 45.6	2.276	3.109	11.5	22.1
<b>297725</b>	2001 <i>WG</i> <sub>30</sub>		1 19.4 259°85	3.5/20.8	18		<b>389615</b>	2011 <i>HM</i> <sub>49</sub>		1 19.4 205°11	1.6/20.2	18	
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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>30798</b>	Graubünden		1 19.4 326°77	2°3/18.7	18		<b>410813</b>	2009 KN <sub>23</sub>		1 19.5 337°86	0°3/19.3	18	
12 13	8 31.43	+25 56.7	1.649	2.456	16.1	17.8	12 13	8 27.66	+17 34.9	1.485	2.293	17.5	20.5
12 23	8 27.33	+26 3.4	1.561	2.446	12.6	17.6	12 23	8 24.62	+18 18.3	1.402	2.287	13.7	20.2
1 2	8 20.12	+26 12.0	1.494	2.436	8.5	17.3	1 2	8 18.49	+19 16.3	1.339	2.282	9.2	19.9
1 12	8 10.55	+26 17.9	1.452	2.426	4.1	17.0	1 12	8 9.93	+20 24.2	1.301	2.277	4.0	19.6
1 22	7 59.77	+26 16.3	1.437	2.417	2.9	16.9	1 22	8 0.04	+21 35.1	1.290	2.273	1.5	19.4
2 1	7 49.27	+26 4.4	1.451	2.408	7.1	17.1	2 1	7 50.32	+22 41.4	1.306	2.269	6.9	19.8
2 11	7 40.52	+25 41.7	1.490	2.400	11.6	17.4	2 11	7 42.27	+23 37.5	1.348	2.266	11.9	20.0
2 21	7 34.53	+25 10.1	1.552	2.393	15.5	17.6	2 21	7 36.99	+24 20.6	1.412	2.263	16.2	20.3
<b>354545</b>	2004 RE <sub>356</sub>		1 19.4 84°94	3°2/18.0	18		<b>180554</b>	2004 EH <sub>24</sub>		1 19.5 323°92	1°3/18.9	18	
12 13	8 33.49	+24 15.6	1.504	2.312	17.4	20.5	12 13	8 26.77	+20 4.0	1.464	2.279	17.4	20.2
12 23	8 29.01	+25 18.2	1.439	2.325	13.4	20.3	12 23	8 24.14	+20 46.4	1.374	2.264	13.6	19.9
1 2	8 21.24	+26 27.9	1.395	2.337	8.9	20.1	1 2	8 18.32	+21 41.6	1.304	2.249	9.1	19.6
1 12	8 11.01	+27 36.7	1.376	2.349	4.5	19.8	1 12	8 9.92	+22 44.4	1.258	2.234	4.0	19.3
1 22	7 59.64	+28 36.2	1.385	2.362	3.8	19.8	1 22	8 0.03	+23 47.7	1.238	2.220	2.2	19.1
2 1	7 48.73	+29 20.1	1.422	2.374	7.9	20.1	2 1	7 50.19	+24 44.0	1.246	2.207	7.4	19.4
2 11	7 39.81	+29 46.2	1.484	2.386	12.2	20.4	2 11	7 42.01	+25 28.3	1.278	2.195	12.5	19.7
2 21	7 33.89	+29 55.6	1.568	2.398	15.9	20.6	2 21	7 36.69	+25 58.4	1.332	2.183	16.9	19.9
<b>393638</b>	2004 NJ <sub>27</sub>		1 19.4 101°47	1°6/20.2	18		<b>56088</b>	Wuheng		1 19.5 351°19	9°7/14.8	18	
12 13	8 34.69	+13 54.8	1.731	2.505	16.8	22.0	12 13	8 31.12	+38 7.0	1.411	2.230	17.7	17.3
12 23	8 29.13	+14 15.5	1.667	2.531	13.1	21.8	12 23	8 28.26	+39 48.4	1.344	2.224	14.6	17.1
1 2	8 20.88	+14 49.1	1.625	2.556	8.9	21.6	1 2	8 21.40	+41 25.5	1.298	2.219	11.6	16.9
1 12	8 10.72	+15 32.5	1.609	2.580	4.3	21.4	1 12	8 11.32	+42 45.5	1.275	2.215	9.8	16.8
1 22	7 59.77	+16 21.0	1.622	2.603	1.8	21.3	1 22	7 59.57	+43 36.9	1.276	2.212	10.4	16.8
2 1	7 49.33	+17 9.6	1.664	2.626	5.8	21.6	2 1	7 48.20	+43 53.4	1.301	2.210	12.9	17.0
2 11	7 40.58	+17 54.3	1.735	2.648	10.0	21.9	2 11	7 39.26	+43 36.2	1.348	2.209	16.1	17.1
2 21	7 34.32	+18 32.5	1.830	2.670	13.6	22.1	2 21	7 34.02	+42 51.5	1.414	2.208	19.2	17.3
<b>292041</b>	2006 QL <sub>183</sub>		1 19.4 72°15	1°3/20.0	18		<b>241536</b>	2010 EX <sub>39</sub>		1 19.5 205°03	7°3/13.8	17	
12 13	8 31.03	+15 34.1	1.653	2.442	16.8	21.5	12 13	8 39.01	+49 51.8	3.322	4.055	10.3	21.6
12 23	8 26.54	+15 43.2	1.584	2.458	13.2	21.3	12 23	8 32.16	+50 50.3	3.244	4.049	8.9	21.5
1 2	8 19.30	+16 4.1	1.537	2.473	8.9	21.1	1 2	8 22.81	+51 38.8	3.191	4.043	7.8	21.4
1 12	8 10.07	+16 33.8	1.516	2.489	4.2	20.9	1 12	8 11.60	+52 11.5	3.164	4.036	7.3	21.4
1 22	7 59.98	+17 8.3	1.522	2.504	1.7	20.7	1 22	7 59.52	+52 24.0	3.165	4.029	7.6	21.4
2 1	7 50.33	+17 43.2	1.557	2.520	6.0	21.0	2 1	7 47.72	+52 14.6	3.192	4.021	8.5	21.4
2 11	7 42.35	+18 14.9	1.618	2.536	10.3	21.3	2 11	7 37.35	+51 44.4	3.245	4.012	9.9	21.5
2 21	7 36.86	+18 41.2	1.704	2.551	14.0	21.6	2 21	7 29.20	+50 56.9	3.321	4.003	11.3	21.6
<b>198648</b>	2005 AK <sub>80</sub>		1 19.4 204°17	1°2/18.8	18		<b>52975</b>	Cyllarus		1 19.5 82°18	0°4/17.1	08 C	
12 13	8 28.61	+21 58.7	2.215	3.004	13.1	21.0	12 13	8 7.45	+32 12.3	27.536	28.314	1.2	24.0
12 23	8 24.25	+22 28.0	2.128	3.004	10.2	20.8	12 23	8 6.33	+32 18.1	27.459	28.326	1.0	24.0
1 2	8 17.63	+23 2.7	2.064	3.003	6.7	20.6	1 2	8 5.06	+32 23.5	27.410	28.337	0.7	24.0
1 12	8 9.34	+23 39.2	2.027	3.002	3.0	20.3	1 12	8 3.69	+32 28.4	27.390	28.349	0.4	23.9
1 22	8 0.23	+24 13.2	2.020	3.001	1.7	20.2	1 22	8 2.28	+32 32.6	27.400	28.360	0.4	23.9
2 1	7 51.29	+24 41.3	2.043	3.000	5.4	20.5	2 1	8 0.88	+32 35.9	27.441	28.372	0.7	24.0
2 11	7 43.56	+25 1.3	2.094	3.000	9.0	20.7	2 11	7 59.56	+32 38.1	27.512	28.383	0.9	24.0
2 21	7 37.79	+25 12.7	2.170	2.999	12.1	20.9	2 21	7 58.35	+32 39.3	27.609	28.395	1.2	24.0
<b>494761</b>	2006 DE <sub>23</sub>		1 19.4 267°37	0°1/19.5	17		<b>155673</b>	2000 HL <sub>60</sub>		1 19.5 144°74	4°8/17.4	18	
12 13	8 31.07	+17 56.7	1.669	2.463	16.5	22.4	12 13	8 37.34	+30 5.4	1.765	2.560	15.7	20.6
12 23	8 27.08	+18 20.0	1.570	2.447	13.0	22.1	12 23	8 31.75	+31 4.2	1.693	2.569	12.3	20.4
1 2	8 20.07	+18 54.9	1.492	2.431	8.8	21.8	1 2	8 22.96	+32 3.6	1.644	2.577	8.6	20.2
1 12	8 10.62	+19 38.0	1.439	2.414	3.9	21.5	1 12	8 11.78	+32 55.5	1.621	2.585	5.4	20.1
1 22	7 59.75	+20 24.3	1.414	2.397	1.3	21.2	1 22	7 59.48	+33 32.7	1.626	2.592	5.3	20.1
2 1	7 48.88	+21 8.2	1.417	2.380	6.6	21.5	2 1	7 47.61	+33 50.6	1.660	2.599	8.3	20.3
2 11	7 39.49	+21 45.4	1.447	2.362	11.5	21.8	2 11	7 37.65	+33 49.0	1.721	2.605	11.9	20.5
2 21	7 32.71	+22 13.7	1.500	2.344	15.8	22.0	2 21	7 30.59	+33 31.0	1.804	2.610	15.2	20.7
<b>204860</b>	2007 RX <sub>193</sub>		1 19.4 226°41	1°5/18.6	17		<b>400530</b>	2008 TA <sub>60</sub>		1 19.5 176°73	2°3/20.4	18	
12 13	8 29.00	+23 45.2	2.465	3.250	12.1	21.4	12 13	8 32.06	+13 6.3	1.674	2.454	17.0	22.0
12 23	8 24.37	+24 11.4	2.371	3.244	9.3	21.3	12 23	8 27.52	+13 11.4	1.589	2.456	13.6	21.7
1 2	8 17.64	+24 41.1	2.300	3.238	6.2	21.0	1 2	8 20.13	+13 30.5	1.526	2.457	9.4	21.5
1 12	8 9.34	+25 10.8	2.258	3.232	2.9	20.8	1 12	8 10.56	+14 1.9	1.487	2.457	4.9	21.2
1 22	8 0.25	+25 36.9	2.246	3.226	2.0	20.7	1 22	7 59.88	+14 41.9	1.477	2.457	2.4	21.1
2 1	7 51.29	+25 56.5	2.264	3.219	5.2	20.9	2 1	7 49.43	+15 26.0	1.495	2.457	6.3	21.3
2 11	7 43.42	+26 7.8	2.312	3.212	8.5	21.1	2 11	7 40.54	+16 9.5	1.540	2.457	10.8	21.6
2 21	7 37.36	+26 10.8	2.384	3.205	11.4	21.3	2 21	7 34.17	+16 49.0	1.609	2.456	14.7	21.8
<b>232761</b>	2004 PQ <sub>23</sub>		1 19.5 154°66	0°6/19.2	18		<b>496278</b>	2012 TV <sub>205</sub>		1 19.5 121°15	2°3/18.0	18	
12 13	8 35.23	+20 21.8	1.994	2.773	14.7	21.8	12 13	8 29.09	+26 39.4	2.691	3.475	11.2	21.9
12 23	8 29.49	+20 46.2	1.913	2.783	11.4	21.6	12 23	8 24.20	+27 16.6	2.614	3.486	8.6	21.8
1 2	8 21.15	+21 17.3	1.855	2.792	7.5	21.4	1 2	8 17.38	+27 55.2	2.562	3.498	5.8	21.6
1 12	8 10.90	+21 51.1	1.825	2.800	3.3	21.2	1 12	8 9.19	+28 31.2	2.538	3.509	3.1	21.5
1 22	7 59.74	+22 23.1	1.824	2.807	1.4	21.0	1 22	8 0.39	+29 1.1	2.545	3.519	2.7	21.4
2 1	7 48.90	+22 49.5	1.854	2.813	5.7	21.3	2 1	7 51.82	+29 22.1	2.583	3.530	5.2	21.6
2 11	7 39.54	+23 8.2	1.913	2.819	9.7	21.6	2 11	7 44.33	+29 33.1	2.649	3.540	7.9	21.8
2 21	7 32.52	+23 18.7	1.997	2.823	13.1	21.8	2 21	7 38.53	+29 34.6	2.742	3.550	10.5	22.0
<b>95752</b>	2003 ER <sub>28</sub>		1 19.5 238°36	1°4/18.9	18		<b>463478</b>	2013 PE <sub>65</sub>		1 19.5 141°53	2°7/21.2	18	
12 13	8 33.09	+21 36.8	1.731	2.526	16.0	20.0	12 13	8 28.64	+ 9 27.8	2.459			

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1 19.5

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>36185</b>	1999 <i>TG</i> <sub>25</sub>		1 19.5 209°17	3°1/17.7	18		<b>197398</b>	2003 <i>YU</i> <sub>29</sub>		1 19.5 42°99	3°4/17.8	18	
12 13	8 32.08	+28 50.4	2.529	3.312	11.8	19.1	12 13	8 30.44	+25 52.6	1.691	2.498	15.8	18.8
12 23	8 26.81	+29 27.6	2.435	3.306	9.3	18.9	12 23	8 26.16	+26 56.8	1.640	2.525	12.1	18.6
1 2	8 19.29	+30 5.4	2.366	3.300	6.4	18.8	1 2	8 19.08	+28 4.4	1.612	2.553	8.1	18.4
1 12	8 10.11	+30 39.1	2.326	3.293	3.7	18.6	1 12	8 10.03	+29 8.1	1.609	2.580	4.4	18.3
1 22	8 0.08	+31 4.4	2.315	3.285	3.4	18.5	1 22	8 0.20	+30 1.2	1.635	2.609	4.0	18.3
2 1	7 50.20	+31 18.3	2.335	3.278	6.0	18.7	2 1	7 50.92	+30 38.9	1.689	2.637	7.2	18.6
2 11	7 41.48	+31 19.9	2.384	3.269	9.0	18.9	2 11	7 43.42	+31 0.1	1.769	2.666	10.8	18.8
2 21	7 34.68	+31 10.1	2.458	3.260	11.7	19.0	2 21	7 38.48	+31 6.0	1.872	2.695	14.0	19.1
<b>314683</b>	2006 <i>QY</i> <sub>145</sub>		1 19.5 52°54	4°1/18.1	18		<b>127809</b>	2003 <i>FQ</i> <sub>83</sub>		1 19.5 262°40	2°2/18.5	18	
12 13	8 35.25	+29 0.6	1.491	2.300	17.4	20.7	12 13	8 33.22	+22 58.9	1.741	2.537	15.8	20.2
12 23	8 30.32	+29 30.3	1.431	2.316	13.6	20.5	12 23	8 28.86	+23 42.2	1.637	2.517	12.4	19.9
1 2	8 22.03	+29 59.7	1.393	2.333	9.2	20.3	1 2	8 21.37	+24 34.1	1.556	2.496	8.4	19.6
1 12	8 11.34	+30 21.8	1.380	2.350	5.2	20.1	1 12	8 11.29	+25 29.0	1.500	2.474	4.0	19.3
1 22	7 59.71	+30 30.4	1.393	2.367	4.6	20.1	1 22	7 59.68	+26 20.1	1.473	2.452	2.9	19.2
2 1	7 48.80	+30 22.7	1.434	2.384	8.1	20.3	2 1	7 47.98	+27 1.1	1.475	2.430	7.3	19.4
2 11	7 40.10	+29 59.7	1.500	2.402	12.1	20.6	2 11	7 37.75	+27 28.4	1.503	2.407	11.9	19.6
2 21	7 34.49	+29 24.7	1.589	2.420	15.7	20.9	2 21	7 30.21	+27 41.7	1.554	2.384	16.1	19.8
<b>135731</b>	2002 <i>PF</i> <sub>124</sub>		1 19.5 108°14	1°0/19.9	18		<b>494005</b>	2016 <i>AZ</i> <sub>112</sub>		1 19.5 93°70	0°2/19.6	18	
12 13	8 31.88	+15 59.1	1.860	2.640	15.6	20.7	12 13	8 29.85	+16 17.1	1.790	2.578	15.8	20.9
12 23	8 26.96	+16 13.6	1.786	2.655	12.2	20.5	12 23	8 25.64	+17 3.1	1.714	2.588	12.3	20.7
1 2	8 19.50	+16 38.5	1.735	2.669	8.2	20.3	1 2	8 18.79	+18 1.8	1.659	2.597	8.2	20.4
1 12	8 10.20	+17 10.9	1.710	2.683	3.8	20.1	1 12	8 9.97	+19 8.9	1.631	2.606	3.6	20.2
1 22	8 0.08	+17 46.9	1.714	2.696	1.4	19.9	1 22	8 0.19	+20 18.5	1.632	2.615	1.2	20.0
2 1	7 50.32	+18 22.3	1.747	2.710	5.5	20.2	2 1	7 50.68	+21 24.5	1.662	2.624	5.8	20.4
2 11	7 42.06	+18 54.1	1.809	2.722	9.6	20.5	2 11	7 42.63	+22 22.1	1.720	2.633	10.1	20.6
2 21	7 36.08	+19 20.2	1.894	2.735	13.1	20.7	2 21	7 36.92	+23 8.9	1.802	2.641	13.7	20.9
<b>159055</b>	2004 <i>TU</i> <sub>143</sub>		1 19.5 141°98	2°1/20.5	18		<b>233616</b>	2007 <i>TA</i> <sub>168</sub>		1 19.5 148°57	1°9/18.5	18	
12 13	8 28.75	+13 25.7	2.128	2.899	14.2	20.6	12 13	8 29.59	+25 16.5	2.387	3.174	12.3	20.6
12 23	8 24.31	+13 22.6	2.041	2.902	11.2	20.4	12 23	8 24.86	+25 39.7	2.302	3.176	9.5	20.4
1 2	8 17.67	+13 29.7	1.976	2.905	7.8	20.1	1 2	8 17.98	+26 5.1	2.240	3.178	6.3	20.3
1 12	8 9.40	+13 45.8	1.939	2.907	4.1	19.9	1 12	8 9.54	+26 29.0	2.207	3.180	3.1	20.0
1 22	8 0.35	+14 8.6	1.930	2.910	2.2	19.8	1 22	8 0.35	+26 47.8	2.203	3.182	2.3	20.0
2 1	7 51.50	+14 35.2	1.951	2.912	5.2	20.0	2 1	7 51.40	+26 58.7	2.230	3.183	5.4	20.2
2 11	7 43.85	+15 2.7	2.000	2.915	8.8	20.2	2 11	7 43.63	+27 0.8	2.285	3.185	8.6	20.4
2 21	7 38.12	+15 28.7	2.075	2.917	12.1	20.4	2 21	7 37.75	+26 54.4	2.365	3.186	11.5	20.6
<b>443860</b>	2001 <i>SP</i> <sub>89</sub>		1 19.5 58°74	3°2/20.7	17		<b>326997</b>	2004 <i>QE</i> <sub>18</sub>		1 19.5 113°66	2°5/20.9	18	
12 13	8 33.53	+12 26.9	1.263	2.060	20.6	21.5	12 13	8 28.67	+10 49.6	2.144	2.907	14.3	21.1
12 23	8 29.00	+12 17.6	1.210	2.085	16.3	21.3	12 23	8 24.18	+11 5.6	2.064	2.919	11.4	20.9
1 2	8 21.14	+12 25.6	1.177	2.110	11.3	21.1	1 2	8 17.54	+11 34.7	2.007	2.930	8.0	20.7
1 12	8 10.95	+12 49.0	1.166	2.136	6.0	20.9	1 12	8 9.35	+12 15.2	1.976	2.942	4.4	20.5
1 22	7 59.86	+13 23.4	1.182	2.162	3.3	20.8	1 22	8 0.42	+13 4.0	1.974	2.953	2.5	20.4
2 1	7 49.53	+14 3.4	1.224	2.187	7.2	21.1	2 1	7 51.74	+13 57.1	2.003	2.964	5.1	20.6
2 11	7 41.39	+14 43.7	1.291	2.213	11.9	21.4	2 11	7 44.23	+14 50.3	2.060	2.974	8.6	20.8
2 21	7 36.32	+15 20.3	1.380	2.239	16.0	21.7	2 21	7 38.62	+15 40.3	2.143	2.984	11.8	21.0
<b>463054</b>	2011 <i>HN</i> <sub>54</sub>		1 19.5 228°01	1°1/18.7	17		<b>99912</b>	1995 <i>UY</i> <sub>44</sub>		1 19.5 83°12	6°1/16.9	18	
12 13	8 28.26	+21 40.7	2.579	3.360	11.7	21.9	12 13	8 37.89	+33 13.8	1.667	2.465	16.3	18.9
12 23	8 23.78	+22 19.3	2.479	3.351	9.1	21.7	12 23	8 32.24	+34 23.1	1.613	2.488	12.9	18.8
1 2	8 17.27	+23 3.5	2.404	3.342	6.0	21.5	1 2	8 23.26	+35 29.3	1.581	2.510	9.3	18.6
1 12	8 9.24	+23 49.9	2.358	3.333	2.7	21.3	1 12	8 11.90	+36 23.1	1.576	2.532	6.6	18.5
1 22	8 0.40	+24 34.4	2.342	3.323	1.6	21.2	1 22	7 59.58	+36 57.1	1.597	2.554	6.6	18.6
2 1	7 51.63	+25 13.6	2.357	3.313	4.9	21.4	2 1	7 47.96	+37 7.6	1.647	2.575	9.2	18.8
2 11	7 43.81	+25 45.0	2.401	3.302	8.2	21.6	2 11	7 38.51	+36 56.0	1.722	2.596	12.4	19.0
2 21	7 37.67	+26 7.5	2.471	3.292	11.1	21.7	2 21	7 32.13	+36 26.8	1.818	2.617	15.4	19.2
<b>83473</b>	2001 <i>SA</i> <sub>79</sub>		1 19.5 140°74	3°4/21.7	18 R		<b>231652</b>	2009 <i>WE</i> <sub>24</sub>		1 19.5 94°09	2°6/20.4	18	
12 13	8 26.09	+ 7 13.4	2.549	3.293	12.8	19.9	12 13	8 36.44	+13 34.9	1.458	2.241	19.0	20.3
12 23	8 21.88	+ 7 18.1	2.460	3.298	10.4	19.7	12 23	8 30.95	+13 25.2	1.396	2.264	15.0	20.1
1 2	8 15.88	+ 7 35.6	2.394	3.304	7.6	19.5	1 2	8 22.32	+13 29.4	1.355	2.286	10.3	19.9
1 12	8 8.58	+ 8 5.5	2.355	3.309	4.8	19.4	1 12	8 11.48	+13 45.6	1.338	2.308	5.3	19.7
1 22	8 0.65	+ 8 45.9	2.344	3.314	3.4	19.3	1 22	7 59.73	+14 10.2	1.349	2.329	2.8	19.6
2 1	7 52.88	+ 9 33.8	2.365	3.319	5.0	19.4	2 1	7 48.62	+14 39.0	1.388	2.350	6.7	19.9
2 11	7 46.03	+10 25.8	2.414	3.324	7.7	19.6	2 11	7 39.54	+15 8.0	1.453	2.370	11.3	20.2
2 21	7 40.71	+11 18.3	2.490	3.328	10.4	19.8	2 21	7 33.35	+15 34.2	1.542	2.390	15.2	20.5
<b>453040</b>	2007 <i>SL</i> <sub>3</sub>		1 19.5 121°45	0°8/19.1	18		<b>414555</b>	2009 <i>SX</i> <sub>262</sub>		1 19.5 19°44	3°9/17.9	18	
12 13	8 34.83	+20 48.7	1.891	2.675	15.2	22.0	12 13	8 28.76	+26 57.2	1.421	2.243	17.5	20.4
12 23	8 29.24	+21 12.4	1.819	2.692	11.8	21.8	12 23	8 25.57	+27 43.5	1.358	2.251	13.6	20.2
1 2	8 21.00	+21 42.5	1.770	2.708	7.8	21.6	1 2	8 19.09	+28 33.3	1.316	2.260	9.2	20.0
1 12	8 10.86	+22 14.8	1.748	2.723	3.4	21.3	1 12	8 10.17	+29 19.0	1.298	2.270	5.0	19.8
1 22	7 59.89	+22 44.6	1.755	2.738	1.5	21.2	1 22	8 0.16	+29 53.5	1.306	2.281	4.5	19.8
2 1	7 49.34	+23 8.4	1.793	2.752	5.8	21.5	2 1	7 50.67	+30 11.8	1.341	2.293	8.2	20.0
2 11	7 40.39	+23 24.0	1.859	2.766	9.8	21.8	2 11	7 43.21	+30 12.9	1.400	2.306	12.4	20.3
2 21	7 33.85	+23 31.4	1.949	2.779	13.3	22.0	2 21	7 38.72	+29 59.0	1.480	2.320	16.2	20.6
<b>68929</b>	2002 <i>OB</i> <sub>4</sub>		1 19.5 47°11	0°0/19.5	18		<b>178516</b>	1999 <i>TT</i> <sub>200</sub>		1 19.5 127°22	0°6/19.3	18	
12 13	8 35.52	+21 58.1</											

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>75966</b>	2000 <i>CL</i> <sub>103</sub>		1 19.5 311°31'	1°1/19.1	18		<b>90435</b>	2004 <i>BD</i> <sub>74</sub>		1 19.5 21°18'	0°4/19.7	18	
12 13	8 31.58	+22 23.4	1.658	2.460	16.3	19.2	12 13	8 27.24	+18 8.3	1.931	2.723	14.6	19.5
12 23	8 27.38	+22 31.2	1.571	2.453	12.7	19.0	12 23	8 23.43	+18 19.4	1.851	2.728	11.4	19.3
1 2	8 20.18	+22 44.5	1.505	2.447	8.5	18.7	1 2	8 17.23	+18 38.7	1.794	2.733	7.6	19.1
1 12	8 10.67	+22 59.2	1.465	2.440	3.7	18.4	1 12	8 9.29	+19 3.5	1.763	2.738	3.4	18.8
1 22	7 59.99	+23 11.1	1.452	2.434	1.8	18.3	1 22	8 0.52	+19 30.3	1.760	2.743	1.1	18.7
2 1	7 49.56	+23 16.5	1.467	2.428	6.6	18.6	2 1	7 52.02	+19 55.7	1.786	2.750	5.4	19.0
2 11	7 40.80	+23 13.9	1.509	2.423	11.2	18.8	2 11	7 44.86	+20 17.0	1.840	2.756	9.3	19.2
2 21	7 34.70	+23 3.6	1.574	2.417	15.2	19.0	2 21	7 39.81	+20 32.7	1.918	2.763	12.8	19.5
<b>271016</b>	2003 <i>AF</i> <sub>2</sub>		1 19.5 320°40'	1°8/19.8	18		<b>498223</b>	2007 <i>TY</i> <sub>449</sub>		1 19.5 117°15'	3°7/21.7	18	
12 13	8 34.27	+19 30.3	1.607	2.401	17.0	19.5	12 13	8 26.20	+7 24.9	2.482	3.228	13.0	21.8
12 23	8 29.53	+18 34.5	1.511	2.387	13.5	19.3	12 23	8 22.02	+7 13.7	2.394	3.233	10.6	21.6
1 2	8 21.64	+17 41.1	1.436	2.373	9.3	19.0	1 2	8 16.01	+7 14.7	2.329	3.238	7.8	21.4
1 12	8 11.33	+16 49.3	1.386	2.360	4.5	18.7	1 12	8 8.69	+7 27.9	2.291	3.244	5.1	21.3
1 22	7 59.77	+15 59.1	1.365	2.347	2.1	18.5	1 22	8 0.73	+7 52.0	2.281	3.249	3.7	21.2
2 1	7 48.44	+15 11.0	1.372	2.334	6.7	18.7	2 1	7 52.95	+8 24.7	2.301	3.254	5.2	21.3
2 11	7 38.83	+14 25.8	1.406	2.323	11.6	19.0	2 11	7 46.12	+9 2.9	2.350	3.259	8.0	21.5
2 21	7 31.99	+13 44.3	1.463	2.311	15.8	19.2	2 21	7 40.87	+9 43.3	2.425	3.264	10.7	21.7
<b>307213</b>	2002 <i>GV</i> <sub>43</sub>		1 19.5 274°17'	1°0/19.1	18		<b>78414</b>	2002 <i>QS</i> <sub>34</sub>		1 19.5 69°20'	1°5/20.2	18	
12 13	8 31.79	+21 10.4	1.653	2.453	16.4	21.2	12 13	8 30.03	+14 20.4	1.635	2.424	17.0	19.7
12 23	8 27.72	+21 31.7	1.557	2.439	12.9	21.0	12 23	8 25.92	+14 39.1	1.563	2.435	13.4	19.5
1 2	8 20.55	+22 1.1	1.483	2.424	8.6	20.7	1 2	8 19.04	+15 11.6	1.512	2.447	9.1	19.2
1 12	8 10.91	+22 34.5	1.434	2.410	3.8	20.3	1 12	8 10.12	+15 54.9	1.486	2.459	4.4	19.0
1 22	7 59.89	+23 6.5	1.413	2.395	1.8	20.2	1 22	8 0.25	+16 44.4	1.488	2.471	1.8	18.8
2 1	7 48.95	+23 32.2	1.419	2.380	6.8	20.5	2 1	7 50.74	+17 34.8	1.519	2.482	6.0	19.2
2 11	7 39.59	+23 48.6	1.453	2.365	11.6	20.7	2 11	7 42.85	+18 21.5	1.576	2.494	10.4	19.4
2 21	7 32.93	+23 55.1	1.509	2.350	15.8	20.9	2 21	7 37.45	+19 1.4	1.657	2.506	14.3	19.7
<b>42676</b>	1998 <i>HS</i> <sub>121</sub>		1 19.5 237°02'	1°7/18.5	18		<b>125251</b>	2001 <i>UD</i> <sub>204</sub>		1 19.5 186°41'	0°7/19.2	18	
12 13	8 29.39	+22 6.4	2.182	2.970	13.3	19.8	12 13	8 34.13	+20 42.4	1.697	2.490	16.3	20.9
12 23	8 25.07	+22 57.4	2.087	2.963	10.3	19.6	12 23	8 29.25	+21 2.0	1.613	2.490	12.8	20.7
1 2	8 18.37	+23 55.5	2.016	2.955	6.8	19.4	1 2	8 21.37	+21 29.3	1.550	2.489	8.5	20.4
1 12	8 9.82	+24 56.3	1.972	2.947	3.2	19.1	1 12	8 11.20	+22 0.1	1.513	2.489	3.7	20.1
1 22	8 0.28	+25 54.2	1.959	2.938	2.2	19.1	1 22	7 59.88	+22 29.3	1.505	2.488	1.6	20.0
2 1	7 50.80	+26 44.4	1.975	2.930	5.8	19.3	2 1	7 48.82	+22 52.5	1.526	2.486	6.4	20.3
2 11	7 42.49	+27 23.8	2.020	2.921	9.5	19.5	2 11	7 39.44	+23 7.2	1.573	2.484	11.0	20.5
2 21	7 36.20	+27 51.4	2.090	2.912	12.8	19.7	2 21	7 32.72	+23 13.2	1.644	2.482	14.9	20.8
<b>399521</b>	2002 <i>WR</i> <sub>18</sub>		1 19.5 82°30'	3°3/17.6	18		<b>25673</b>	Di Mascio		1 19.5 104°75'	0°7/19.8	18	
12 13	8 34.18	+23 58.5	1.772	2.567	15.7	20.5	12 13	8 28.87	+16 54.4	2.101	2.882	14.0	19.0
12 23	8 29.04	+25 28.1	1.714	2.593	12.0	20.4	12 23	8 24.49	+17 9.5	2.019	2.888	10.9	18.8
1 2	8 21.03	+27 4.0	1.680	2.619	8.0	20.2	1 2	8 17.84	+17 33.4	1.959	2.894	7.3	18.6
1 12	8 10.95	+28 37.7	1.674	2.645	4.2	20.0	1 12	8 9.55	+18 3.4	1.926	2.900	3.3	18.4
1 22	7 59.95	+30 1.0	1.696	2.670	3.9	20.0	1 22	8 0.46	+18 36.1	1.923	2.906	1.1	18.2
2 1	7 49.39	+31 7.5	1.749	2.695	7.3	20.3	2 1	7 51.61	+19 8.2	1.949	2.911	5.1	18.5
2 11	7 40.57	+31 54.8	1.829	2.719	10.9	20.6	2 11	7 44.01	+19 36.6	2.003	2.917	8.9	18.7
2 21	7 34.34	+32 23.7	1.932	2.744	14.1	20.8	2 21	7 38.38	+19 59.7	2.083	2.922	12.2	19.0
<b>258019</b>	2001 <i>FY</i> <sub>138</sub>		1 19.5 289°72'	15°4/16.3	17		<b>26627</b>	2000 <i>GC</i> <sub>99</sub>		1 19.5 109°59'	7°0/23.3	18	
12 13	8 54.58	+49 51.3	1.174	1.960	22.5	20.1	12 13	8 29.73	-0 13.5	2.053	2.770	16.3	19.0
12 23	8 48.61	+51 13.2	1.112	1.955	19.8	19.9	12 23	8 25.01	-0 48.0	1.978	2.786	13.7	18.8
1 2	8 35.95	+52 15.6	1.066	1.950	17.2	19.7	1 2	8 18.11	-1 3.5	1.924	2.801	10.9	18.6
1 12	8 17.94	+52 38.5	1.040	1.945	15.6	19.6	1 12	8 9.64	-0 58.1	1.893	2.817	8.4	18.5
1 22	7 57.62	+52 6.5	1.035	1.940	15.8	19.6	1 22	8 0.46	-0 32.0	1.889	2.832	7.1	18.5
2 1	7 38.97	+50 36.7	1.052	1.935	17.6	19.7	2 1	7 51.56	+0 12.3	1.914	2.846	7.8	18.5
2 11	7 25.22	+48 20.6	1.089	1.930	20.5	19.8	2 11	7 43.91	+1 9.8	1.966	2.860	10.1	18.7
2 21	7 17.64	+45 36.7	1.143	1.925	23.6	20.0	2 21	7 38.19	+2 15.0	2.042	2.874	12.7	18.9
<b>124267</b>	2001 <i>QO</i> <sub>15</sub>		1 19.5 102°20'	3°1/18.3	18		<b>11034</b>	1988 <i>TG</i>		1 19.5 48°85'	17°5/2.3	18	
12 13	8 36.44	+25 27.0	1.544	2.345	17.3	19.9	12 13	8 29.91	-20 17.8	1.409	2.045	25.6	17.7
12 23	8 31.20	+26 12.2	1.479	2.361	13.4	19.7	12 23	8 26.02	-22 6.5	1.372	2.075	23.5	17.6
1 2	8 22.67	+27 1.9	1.436	2.376	8.9	19.5	1 2	8 19.13	-23 14.3	1.347	2.105	21.4	17.5
1 12	8 11.71	+27 48.7	1.418	2.391	4.5	19.2	1 12	8 10.14	-23 33.5	1.336	2.136	19.5	17.5
1 22	7 59.70	+28 25.5	1.428	2.405	3.7	19.2	1 22	8 0.31	-23 0.9	1.342	2.168	18.0	17.5
2 1	7 48.25	+28 47.6	1.467	2.419	7.7	19.5	2 1	7 51.10	-21 39.6	1.367	2.199	17.5	17.5
2 11	7 38.87	+28 53.9	1.531	2.433	11.9	19.8	2 11	7 43.81	-19 39.2	1.411	2.231	17.8	17.6
2 21	7 32.50	+28 46.4	1.618	2.446	15.6	20.0	2 21	7 39.26	-17 13.3	1.474	2.263	18.8	17.8
<b>290496</b>	2005 <i>UE</i> <sub>19</sub>		1 19.5 86°40'	1°6/18.7	18		<b>246042</b>	2006 <i>UD</i> <sub>189</sub>		1 19.5 162°90'	8°0/13.7	18	
12 13	8 31.17	+22 1.0	1.887	2.680	14.9	20.9	12 13	8 41.37	+52 9.0	3.168	3.893	10.9	21.6
12 23	8 26.52	+22 42.2	1.816	2.695	11.5	20.8	12 23	8 34.17	+53 10.0	3.105	3.899	9.6	21.5
1 2	8 19.29	+23 29.8	1.769	2.709	7.6	20.5	1 2	8 24.23	+53 59.1	3.065	3.904	8.5	21.5
1 12	8 10.18	+24 18.8	1.748	2.723	3.4	20.3	1 12	8 12.33	+54 30.2	3.051	3.908	8.0	21.4
1 22	8 0.22	+25 3.7	1.756	2.736	2.2	20.3	1 22	7 59.57	+54 38.8	3.064	3.912	8.3	21.5
2 1	7 50.61	+25 40.2	1.793	2.750	6.0	20.5	2 1	7 47.27	+54 23.5	3.103	3.915	9.2	21.5
2 11	7 42.53	+26 5.8	1.858	2.764	9.9	20.8	2 11	7 36.65	+53 46.2	3.166	3.919	10.4	21.6
2 21	7 36.77	+26 20.4	1.947	2.777	13.3	21.0	2 21	7 28.53	+52 51.1	3.251	3.921	11.7	21.7
<b>465761</b>	2009 <i>WM</i> <sub>108</sub>		1 19.5 66°31'	1°9/20.4	18		<b>456159</b>	2006 <i>GO</i> <sub>2</sub>		1 19.5 236°12'	1°1/18.8	17	
12 13	8 28.64	+13 53.2	1.918	2.698									

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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>428150</b>	2006 SY <sub>222</sub>		1 19.5 207°01	8°4/13.2	17		<b>464947</b>	2005 VS <sub>27</sub>		1 19.5 128°65	2°9/18.1	18	
12 13	8 40.93	+51 49.9	3.014	3.744	11.3	21.9	12 13	8 32.58	+26 49.9	2.020	2.813	14.1	21.9
12 23	8 34.11	+52 56.8	2.941	3.739	10.0	21.8	12 23	8 27.63	+27 27.8	1.942	2.819	10.9	21.7
1 2	8 24.38	+53 52.3	2.892	3.733	8.9	21.7	1 2	8 20.07	+28 7.8	1.887	2.825	7.4	21.5
1 12	8 12.47	+54 29.3	2.869	3.728	8.4	21.6	1 12	8 10.59	+28 44.6	1.860	2.830	3.9	21.3
1 22	7 59.53	+54 43.0	2.871	3.721	8.7	21.6	1 22	8 0.22	+29 13.0	1.861	2.836	3.4	21.2
2 1	7 46.94	+54 31.2	2.900	3.715	9.7	21.7	2 1	7 50.16	+29 29.5	1.892	2.841	6.5	21.4
2 11	7 36.04	+53 55.7	2.953	3.708	11.0	21.8	2 11	7 41.59	+29 33.1	1.951	2.847	10.1	21.7
2 21	7 27.76	+53 0.9	3.027	3.700	12.4	21.9	2 21	7 35.34	+29 24.9	2.033	2.852	13.2	21.9
<b>473261</b>	2015 MA <sub>28</sub>		1 19.5 150°89	2°5/17.4	17		<b>283645</b>	2002 GJ <sub>182</sub>		1 19.5 4°03	8°8/23.9	18	
12 13	8 25.79	+30 56.9	3.859	4.635	8.2	22.2	12 13	8 22.91	- 0 13.0	1.447	2.208	20.1	20.2
12 23	8 21.21	+31 28.5	3.776	4.642	6.4	22.1	12 23	8 20.76	- 0 54.0	1.372	2.207	17.2	20.0
1 2	8 15.24	+31 58.9	3.719	4.648	4.4	22.0	1 2	8 15.85	- 1 9.2	1.314	2.207	13.8	19.8
1 12	8 8.32	+32 25.3	3.692	4.654	2.8	21.9	1 12	8 8.85	- 0 55.0	1.276	2.209	10.7	19.6
1 22	8 0.94	+32 45.5	3.696	4.660	2.8	21.9	1 22	8 0.78	- 0 10.9	1.263	2.212	8.9	19.5
2 1	7 53.71	+32 57.6	3.731	4.665	4.3	22.0	2 1	7 52.94	+ 0 59.1	1.273	2.216	9.8	19.6
2 11	7 47.21	+33 1.2	3.796	4.670	6.2	22.1	2 11	7 46.63	+ 2 27.2	1.308	2.222	12.6	19.8
2 21	7 41.89	+32 56.7	3.887	4.675	8.0	22.3	2 21	7 42.77	+ 4 4.0	1.365	2.228	15.9	20.0
<b>166717</b>	2002 TF <sub>210</sub>		1 19.5 78°73	4°2/21.8	18		<b>158676</b>	2003 FY <sub>16</sub>		1 19.5 178°26	0°5/19.7	18	
12 13	8 26.79	+ 6 46.2	2.259	3.006	14.1	20.2	12 13	8 33.36	+16 59.1	1.915	2.693	15.3	21.3
12 23	8 22.63	+ 6 30.0	2.177	3.016	11.5	20.0	12 23	8 28.29	+17 21.9	1.827	2.695	12.0	21.1
1 2	8 16.50	+ 6 27.5	2.117	3.025	8.5	19.8	1 2	8 20.57	+17 54.9	1.762	2.696	8.0	20.8
1 12	8 8.95	+ 6 38.7	2.083	3.034	5.7	19.7	1 12	8 10.86	+18 34.9	1.723	2.697	3.6	20.6
1 22	8 0.74	+ 7 2.4	2.077	3.043	4.2	19.6	1 22	8 0.12	+19 17.4	1.714	2.697	1.2	20.4
2 1	7 52.74	+ 7 36.2	2.100	3.052	5.7	19.7	2 1	7 49.58	+19 58.0	1.735	2.697	5.7	20.7
2 11	7 45.82	+ 8 16.5	2.152	3.062	8.6	19.9	2 11	7 40.45	+20 33.1	1.784	2.695	9.9	21.0
2 21	7 40.63	+ 8 59.6	2.229	3.071	11.4	20.1	2 21	7 33.63	+21 1.1	1.858	2.693	13.6	21.2
<b>236671</b>	2006 PQ <sub>32</sub>		1 19.5 120°22	9°3/13.9	18		<b>459351</b>	2012 HL <sub>60</sub>		1 19.5 271°52	1°3/18.9	17	
12 13	8 45.92	+54 45.5	2.818	3.536	12.3	20.4	12 13	8 30.09	+21 53.1	1.969	2.762	14.4	21.8
12 23	8 38.09	+55 50.6	2.767	3.549	10.9	20.3	12 23	8 25.93	+22 24.0	1.870	2.748	11.2	21.5
1 2	8 26.98	+56 41.0	2.738	3.562	9.9	20.3	1 2	8 19.13	+23 2.0	1.794	2.733	7.5	21.3
1 12	8 13.55	+57 9.2	2.734	3.575	9.4	20.3	1 12	8 10.28	+23 42.8	1.744	2.719	3.4	21.0
1 22	7 59.23	+57 10.6	2.756	3.588	9.6	20.3	1 22	8 0.29	+24 21.5	1.723	2.705	2.0	20.9
2 1	7 45.67	+56 43.9	2.802	3.600	10.4	20.4	2 1	7 50.36	+24 53.5	1.732	2.690	6.1	21.1
2 11	7 34.31	+55 52.5	2.872	3.612	11.6	20.5	2 11	7 41.72	+25 16.2	1.768	2.675	10.2	21.3
2 21	7 26.05	+54 41.9	2.963	3.623	12.9	20.6	2 21	7 35.32	+25 28.7	1.828	2.661	13.9	21.5
<b>15156</b>	2000 FK <sub>38</sub>		1 19.5 107°33	0°9/18.9	18		<b>281459</b>	Kyrylenko		1 19.5 153°99	0°7/19.9	18	
12 13	8 29.43	+21 32.0	2.505	3.284	12.0	19.0	12 13	8 34.83	+16 25.0	1.938	2.711	15.3	22.2
12 23	8 24.53	+22 0.9	2.430	3.301	9.3	18.8	12 23	8 29.28	+16 44.3	1.856	2.721	12.0	22.0
1 2	8 17.67	+22 34.4	2.380	3.317	6.1	18.7	1 2	8 21.13	+17 13.5	1.797	2.730	8.0	21.8
1 12	8 9.44	+23 9.0	2.358	3.333	2.7	18.5	1 12	8 11.06	+17 49.7	1.765	2.738	3.7	21.6
1 22	8 0.60	+23 41.3	2.367	3.348	1.4	18.4	1 22	8 0.07	+18 28.6	1.762	2.745	1.2	21.4
2 1	7 52.02	+24 8.3	2.406	3.363	4.7	18.6	2 1	7 49.36	+19 6.1	1.791	2.752	5.6	21.7
2 11	7 44.56	+24 28.4	2.475	3.378	7.9	18.9	2 11	7 40.11	+19 39.0	1.847	2.758	9.7	22.0
2 21	7 38.84	+24 41.1	2.569	3.393	10.6	19.1	2 21	7 33.18	+20 5.5	1.929	2.762	13.2	22.2
<b>459174</b>	2012 DJ <sub>35</sub>		1 19.5 36°62	0°5/19.7	18		<b>502609</b>	2015 CF <sub>17</sub>		1 19.5 262°38	8°1/15.4	17	
12 13	8 28.95	+16 54.1	1.714	2.508	16.1	21.3	12 13	8 42.10	+47 9.2	2.576	3.326	12.5	21.5
12 23	8 25.12	+17 18.5	1.634	2.511	12.6	21.1	12 23	8 35.13	+47 53.4	2.487	3.311	10.7	21.4
1 2	8 18.57	+17 54.4	1.577	2.515	8.4	20.9	1 2	8 25.11	+48 26.6	2.421	3.296	9.1	21.2
1 12	8 9.98	+18 38.4	1.545	2.519	3.8	20.6	1 12	8 12.82	+48 41.4	2.380	3.280	8.1	21.1
1 22	8 0.40	+19 25.6	1.540	2.523	1.2	20.4	1 22	7 59.49	+48 32.2	2.367	3.264	8.3	21.1
2 1	7 51.07	+20 10.9	1.564	2.528	5.9	20.8	2 1	7 46.59	+47 56.9	2.382	3.248	9.7	21.2
2 11	7 43.25	+20 50.4	1.615	2.532	10.3	21.0	2 11	7 35.53	+46 57.7	2.422	3.232	11.6	21.3
2 21	7 37.84	+21 21.8	1.690	2.537	14.2	21.3	2 21	7 27.25	+45 39.9	2.486	3.216	13.6	21.4
<b>463306</b>	2012 JF <sub>11</sub>		1 19.5 191°21	4°1/21.8	16		<b>244192</b>	2001 YR <sub>22</sub>		1 19.5 54°62	4°8/17.6	18	
12 13	8 28.10	+ 6 22.3	2.506	3.242	13.2	22.1	12 13	8 33.83	+27 42.4	1.375	2.191	18.2	20.1
12 23	8 23.53	+ 6 7.5	2.409	3.241	10.8	21.9	12 23	8 29.78	+28 45.5	1.311	2.200	14.2	19.9
1 2	8 17.07	+ 6 5.3	2.335	3.239	8.1	21.8	1 2	8 22.09	+29 52.7	1.267	2.208	9.8	19.7
1 12	8 9.22	+ 6 15.9	2.288	3.237	5.4	21.6	1 12	8 11.63	+30 54.6	1.248	2.217	5.7	19.5
1 22	8 0.66	+ 6 38.3	2.270	3.234	4.1	21.5	1 22	7 59.88	+31 42.0	1.255	2.226	5.4	19.5
2 1	7 52.21	+ 7 10.6	2.281	3.231	5.5	21.6	2 1	7 48.65	+32 9.0	1.288	2.236	9.1	19.7
2 11	7 44.70	+ 7 49.6	2.322	3.228	8.2	21.7	2 11	7 39.67	+32 14.7	1.346	2.245	13.4	20.0
2 21	7 38.79	+ 8 31.8	2.390	3.224	11.0	21.9	2 21	7 34.00	+32 2.0	1.424	2.255	17.2	20.2
<b>241693</b>	2000 SK <sub>99</sub>		1 19.5 92°64	4°1/21.2	18		<b>309830</b>	2009 BY <sub>172</sub>		1 19.5 274°28	1°8/18.7	18	
12 13	8 32.03	+ 9 38.5	1.614	2.386	17.9	20.7	12 13	8 31.38	+22 0.4	1.677	2.478	16.1	21.1
12 23	8 27.41	+ 9 21.2	1.543	2.400	14.4	20.5	12 23	8 27.45	+22 38.3	1.580	2.463	12.7	20.8
1 2	8 20.00	+ 9 19.9	1.492	2.414	10.3	20.2	1 2	8 20.45	+23 25.2	1.506	2.447	8.5	20.5
1 12	8 10.57	+ 9 34.3	1.465	2.427	6.2	20.0	1 12	8 10.96	+24 15.9	1.457	2.432	3.9	20.2
1 22	8 0.22	+10 2.2	1.466	2.441	4.2	19.9	1 22	8 0.07	+25 3.9	1.436	2.417	2.4	20.1
2 1	7 50.27	+10 39.7	1.495	2.454	6.8	20.1	2 1	7 49.20	+25 43.3	1.443	2.401	7.0	20.3
2 11	7 41.98	+11 22.0	1.550	2.467	10.7	20.4	2 11	7 39.86	+26 10.6	1.476	2.385	11.7	20.5
2 21	7 36.19	+12 4.7	1.629	2.479	14.4	20.6	2 21	7 33.21	+26 25.2	1.532	2.370	15.9	20.8
<b>317588</b>	2002 XO <sub>13</sub>		1 19.5 69°68	2°1/20.5	18		<b>38580</b>	1999 XM <sub>17</sub>		1 19.5 176°75	6°1/16.4	18	
12 13	8 30.26	+12 38.6	1.668	2.451	17.0	21.0	12 13	8 37.73	+35 10.7	2.063			



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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>449173</b>	2013 <i>BK</i> <sub>56</sub>		1 19.5	30°59	1°5/19.9	18	<b>146499</b>	2001 <i>SP</i> <sub>36</sub>		1 19.5	19°59	10°9/16.3	18
12 13	8 32.33	+17 50.5	1.241	2.055	20.0	21.2	12 13	8 34.60	+41 26.3	1.222	2.043	19.8	18.5
12 23	8 28.54	+17 28.7	1.175	2.062	15.7	21.0	12 23	8 31.27	+42 42.5	1.176	2.054	16.4	18.3
1 2	8 21.20	+17 17.3	1.127	2.069	10.6	20.7	1 2	8 23.41	+43 46.0	1.149	2.066	13.2	18.1
1 12	8 11.22	+17 13.9	1.103	2.077	5.0	20.4	1 12	8 12.25	+44 23.6	1.144	2.080	11.2	18.1
1 22	8 0.06	+17 15.6	1.104	2.086	1.9	20.2	1 22	7 59.79	+44 26.2	1.161	2.095	11.3	18.1
2 1	7 49.46	+17 18.9	1.130	2.096	7.3	20.6	2 1	7 48.42	+43 51.7	1.200	2.112	13.5	18.3
2 11	7 41.07	+17 21.4	1.181	2.106	12.5	20.9	2 11	7 40.13	+42 45.7	1.262	2.130	16.4	18.5
2 21	7 35.90	+17 21.5	1.254	2.117	17.0	21.2	2 21	7 35.88	+41 17.9	1.342	2.149	19.4	18.8
<b>287684</b>	2003 <i>QQ</i> <sub>17</sub>		1 19.5	213°90	2°1/20.7	18	<b>483536</b>	2003 <i>UD</i> <sub>148</sub>		1 19.5	119°79	1°3/19.0	18
12 13	8 31.31	+11 46.1	2.077	2.839	14.7	21.7	12 13	8 37.69	+20 51.4	1.525	2.319	17.8	22.0
12 23	8 26.58	+12 6.6	1.976	2.831	11.8	21.5	12 23	8 32.15	+21 27.9	1.458	2.336	13.8	21.8
1 2	8 19.43	+12 40.9	1.898	2.823	8.2	21.2	1 2	8 23.34	+22 13.3	1.412	2.352	9.1	21.5
1 12	8 10.39	+13 27.3	1.846	2.814	4.4	21.0	1 12	8 12.12	+23 1.4	1.393	2.368	4.0	21.3
1 22	8 0.30	+14 22.4	1.824	2.804	2.2	20.8	1 22	7 59.83	+23 45.6	1.401	2.383	2.1	21.2
2 1	7 50.25	+15 21.6	1.832	2.794	5.5	21.0	2 1	7 48.07	+24 20.5	1.438	2.397	6.9	21.5
2 11	7 41.36	+16 20.2	1.870	2.782	9.4	21.2	2 11	7 38.34	+24 43.5	1.501	2.411	11.6	21.8
2 21	7 34.49	+17 14.7	1.933	2.770	13.0	21.4	2 21	7 31.60	+24 54.9	1.588	2.423	15.5	22.1
<b>20749</b>	2000 <i>AD</i> <sub>199</sub>		1 19.5	297°54	5°6/22.4	18	<b>384117</b>	2008 <i>WK</i> <sub>137</sub>		1 19.5	352°47	2°0/20.4	18
12 13	8 26.70	+ 4 13.5	1.616	2.379	18.3	17.7	12 13	8 27.80	+14 18.1	2.143	2.918	13.9	20.7
12 23	8 23.72	+ 4 20.1	1.515	2.362	15.2	17.4	12 23	8 23.66	+14 6.8	2.053	2.917	11.0	20.5
1 2	8 17.93	+ 4 50.6	1.434	2.345	11.6	17.1	1 2	8 17.34	+14 4.5	1.986	2.916	7.6	20.3
1 12	8 9.87	+ 5 46.3	1.375	2.328	7.8	16.9	1 12	8 9.42	+14 10.3	1.946	2.915	4.0	20.0
1 22	8 0.45	+ 7 5.3	1.343	2.312	5.6	16.7	1 22	8 0.71	+14 22.1	1.934	2.915	2.1	19.9
2 1	7 50.96	+ 8 41.9	1.338	2.296	7.6	16.8	2 1	7 52.19	+14 37.8	1.952	2.914	5.1	20.1
2 11	7 42.77	+10 27.6	1.360	2.280	11.6	17.0	2 11	7 44.83	+14 54.9	1.998	2.914	8.8	20.3
2 21	7 37.00	+12 13.8	1.405	2.264	15.8	17.2	2 21	7 39.36	+15 11.2	2.070	2.914	12.0	20.5
<b>285441</b>	1999 <i>VT</i> <sub>183</sub>		1 19.5	86°65	4°7/21.5	18	<b>380488</b>	2004 <i>BX</i> <sub>98</sub>		1 19.5	16°54	8°2/16.2	18
12 13	8 33.20	+ 8 12.5	1.743	2.502	17.3	20.4	12 13	8 36.53	+42 20.0	1.952	2.737	14.8	20.4
12 23	8 27.97	+ 7 44.2	1.678	2.525	13.9	20.2	12 23	8 31.25	+43 10.1	1.886	2.740	12.3	20.2
1 2	8 20.18	+ 7 31.5	1.634	2.549	10.2	20.1	1 2	8 22.72	+43 50.1	1.841	2.744	9.9	20.1
1 12	8 10.60	+ 7 34.6	1.616	2.572	6.5	19.9	1 12	8 11.82	+44 11.8	1.821	2.749	8.4	20.0
1 22	8 0.29	+ 7 51.8	1.625	2.594	4.7	19.8	1 22	7 59.94	+44 9.1	1.827	2.754	8.5	20.0
2 1	7 50.46	+ 8 20.2	1.662	2.616	6.7	20.0	2 1	7 48.67	+43 40.1	1.860	2.759	10.2	20.1
2 11	7 42.23	+ 8 55.5	1.727	2.638	10.2	20.2	2 11	7 39.48	+42 47.5	1.918	2.765	12.6	20.3
2 21	7 36.34	+ 9 33.4	1.816	2.660	13.5	20.5	2 21	7 33.27	+41 37.0	1.997	2.771	15.0	20.5
<b>367839</b>	2011 <i>BO</i> <sub>94</sub>		1 19.5	148°44	0°9/19.0	18	<b>48262</b>	2001 <i>XL</i> <sub>87</sub>		1 19.5	266°60	3°0/18.4	18
12 13	8 30.27	+20 26.7	2.171	2.955	13.5	21.4	12 13	8 34.96	+28 42.3	2.043	2.832	14.1	19.3
12 23	8 25.61	+21 3.8	2.087	2.960	10.5	21.2	12 23	8 29.63	+28 52.3	1.945	2.819	11.1	19.1
1 2	8 18.65	+21 47.8	2.027	2.965	6.9	21.0	1 2	8 21.53	+29 1.6	1.871	2.807	7.6	18.8
1 12	8 9.98	+22 35.0	1.995	2.970	3.0	20.8	1 12	8 11.34	+29 5.3	1.824	2.794	4.1	18.6
1 22	8 0.47	+23 20.5	1.993	2.975	1.5	20.7	1 22	8 0.07	+28 59.3	1.805	2.780	3.4	18.5
2 1	7 51.17	+24 0.5	2.020	2.979	5.3	20.9	2 1	7 49.03	+28 41.2	1.817	2.767	6.6	18.7
2 11	7 43.11	+24 32.2	2.077	2.983	9.0	21.2	2 11	7 39.48	+28 11.1	1.856	2.754	10.4	18.9
2 21	7 37.06	+24 54.6	2.158	2.986	12.2	21.4	2 21	7 32.36	+27 31.4	1.919	2.740	13.8	19.1
<b>279939</b>	2001 <i>SF</i> <sub>79</sub>		1 19.5	113°20	3°0/21.5	18	<b>351741</b>	2006 <i>DO</i> <sub>51</sub>		1 19.5	51°38	1°7/20.3	17
12 13	8 26.91	+ 8 16.7	2.620	3.364	12.5	21.2	12 13	8 30.71	+13 14.2	1.251	2.056	20.4	20.9
12 23	8 22.45	+ 8 22.7	2.538	3.378	10.0	21.0	12 23	8 27.13	+13 44.8	1.193	2.074	16.0	20.6
1 2	8 16.25	+ 8 40.5	2.480	3.393	7.2	20.9	1 2	8 20.18	+14 34.6	1.155	2.093	10.8	20.4
1 12	8 8.84	+ 9 9.2	2.450	3.407	4.5	20.7	1 12	8 10.77	+15 39.3	1.139	2.112	5.2	20.1
1 22	8 0.87	+ 9 46.9	2.449	3.421	3.0	20.6	1 22	8 0.28	+16 51.7	1.150	2.132	2.0	20.0
2 1	7 53.10	+10 30.8	2.478	3.434	4.7	20.8	2 1	7 50.38	+18 3.6	1.187	2.152	7.0	20.4
2 11	7 46.27	+11 17.6	2.538	3.448	7.4	20.9	2 11	7 42.57	+19 8.4	1.248	2.173	12.0	20.7
2 21	7 40.95	+12 4.2	2.624	3.461	10.0	21.1	2 21	7 37.82	+20 2.0	1.332	2.193	16.4	21.0
<b>30580</b>	2001 <i>PG</i> <sub>2</sub>		1 19.5	49°14	1°7/20.6	18	<b>113214</b>	Vinkó		1 19.5	150°71	4°2/17.1	18
12 13	8 26.23	+12 35.9	2.219	2.991	13.6	18.6	12 13	8 32.13	+32 34.9	2.463	3.248	12.1	20.5
12 23	8 22.39	+13 2.8	2.132	2.994	10.8	18.4	12 23	8 26.97	+33 19.2	2.383	3.252	9.5	20.4
1 2	8 16.47	+13 42.1	2.068	2.997	7.4	18.2	1 2	8 19.49	+34 1.5	2.329	3.256	6.8	20.2
1 12	8 9.02	+14 31.4	2.030	3.000	3.8	18.0	1 12	8 10.35	+34 36.5	2.302	3.260	4.6	20.1
1 22	8 0.80	+15 27.4	2.022	3.003	1.8	17.8	1 22	8 0.42	+34 59.7	2.304	3.264	4.6	20.1
2 1	7 52.74	+16 25.8	2.044	3.007	4.8	18.1	2 1	7 50.75	+35 8.2	2.336	3.267	6.7	20.2
2 11	7 45.74	+17 22.4	2.095	3.010	8.4	18.3	2 11	7 42.38	+35 2.0	2.396	3.270	9.4	20.4
2 21	7 40.53	+18 14.1	2.171	3.014	11.6	18.5	2 21	7 36.04	+34 42.7	2.480	3.273	11.9	20.6
<b>87784</b>	2000 <i>SC</i> <sub>115</sub>		1 19.5	162°09	2°3/18.3	18	<b>89976</b>	2002 <i>SQ</i> <sub>21</sub>		1 19.5	54°12	0°8/19.1	18
12 13	8 32.33	+25 51.3	2.319	3.103	12.7	20.5	12 13	8 28.44	+20 41.3	2.078	2.868	13.8	19.7
12 23	8 27.11	+26 25.1	2.235	3.108	9.9	20.4	12 23	8 24.26	+21 8.0	2.000	2.876	10.7	19.5
1 2	8 19.58	+27 1.3	2.176	3.112	6.6	20.2	1 2	8 17.77	+21 41.2	1.945	2.884	7.0	19.3
1 12	8 10.37	+27 35.3	2.144	3.116	3.4	20.0	1 12	8 9.62	+22 17.1	1.917	2.892	3.1	19.0
1 22	8 0.36	+28 2.9	2.143	3.120	2.7	19.9	1 22	8 0.68	+22 51.6	1.918	2.901	1.4	18.9
2 1	7 50.59	+28 20.9	2.172	3.123	5.7	20.1	2 1	7 52.00	+23 21.1	1.949	2.909	5.3	19.2
2 11	7 42.08	+28 28.1	2.230	3.125	9.0	20.3	2 11	7 44.62	+23 43.3	2.008	2.918	9.0	19.4
2 21	7 35.60	+28 25.2	2.313	3.127	12.0	20.5	2 21	7 39.27	+23 57.4	2.091	2.926	12.3	19.7
<b>365712</b>	2010 <i>VF</i> <sub>168</sub>		1 19.5	144°45	1°3/18.9	18	<b>95017</b>	2002 <i>AX</i> <sub>9</sub>		1 19.5	8°46	0°5/19.7	18
12 13	8 32.60	+22 20.1	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>420690</b>	2012 <i>KE</i> <sub>31</sub>		1 19.5 204°15	6°3/22.6	18		<b>96962</b>	1999 <i>TK</i> <sub>185</sub>		1 19.5 185°58	1°2/20.2	18	
12 13	8 27.98	+ 2 9.2	2.129	2.859	15.4	21.3	12 13	8 30.29	+15 48.5	2.586	3.349	12.1	20.1
12 23	8 23.80	+ 1 33.6	2.038	2.857	13.0	21.1	12 23	8 25.21	+15 45.6	2.491	3.349	9.6	19.9
1 2	8 17.46	+ 1 14.4	1.967	2.855	10.2	20.9	1 2	8 18.19	+15 49.5	2.419	3.348	6.5	19.7
1 12	8 9.50	+ 1 13.5	1.921	2.854	7.6	20.7	1 12	8 9.77	+15 58.7	2.376	3.347	3.2	19.5
1 22	8 0.71	+ 1 30.9	1.902	2.852	6.3	20.7	1 22	8 0.67	+16 11.3	2.364	3.345	1.4	19.4
2 1	7 52.04	+ 2 5.0	1.911	2.849	7.4	20.7	2 1	7 51.71	+16 25.3	2.382	3.343	4.4	19.6
2 11	7 44.48	+ 2 51.8	1.947	2.847	9.9	20.9	2 11	7 43.75	+16 38.8	2.431	3.341	7.7	19.8
2 21	7 38.75	+ 3 46.3	2.009	2.845	12.7	21.0	2 21	7 37.43	+16 50.4	2.506	3.337	10.6	20.0
<b>388700</b>	2007 <i>VF</i> <sub>35</sub>		1 19.5 70°93	0°5/19.2	18		<b>399531</b>	2003 <i>HH</i> <sub>39</sub>		1 19.5 251°19	6°0/21.7	18	
12 13	8 27.95	+20 4.8	2.277	3.062	12.9	21.0	12 13	8 31.52	+ 5 48.3	1.809	2.559	17.0	21.6
12 23	8 23.64	+20 32.7	2.200	3.074	10.0	20.8	12 23	8 27.14	+ 5 7.6	1.706	2.544	14.2	21.4
1 2	8 17.24	+21 6.8	2.148	3.086	6.6	20.6	1 2	8 20.05	+ 4 42.1	1.623	2.528	10.9	21.1
1 12	8 9.35	+21 43.8	2.123	3.098	2.8	20.4	1 12	8 10.79	+ 4 34.2	1.564	2.512	7.6	20.9
1 22	8 0.77	+22 20.0	2.127	3.110	1.2	20.3	1 22	8 0.29	+ 4 44.3	1.532	2.495	6.1	20.8
2 1	7 52.46	+22 51.9	2.162	3.122	4.9	20.6	2 1	7 49.76	+ 5 11.0	1.529	2.477	7.9	20.8
2 11	7 45.31	+23 17.2	2.225	3.134	8.3	20.8	2 11	7 40.48	+ 5 50.3	1.552	2.459	11.4	21.0
2 21	7 40.00	+23 35.2	2.314	3.146	11.4	21.0	2 21	7 33.49	+ 6 37.1	1.599	2.441	15.1	21.2
<b>206902</b>	2004 <i>HC</i> <sub>45</sub>		1 19.5 333°44	2°4/20.6	18		<b>306856</b>	2001 <i>SA</i> <sub>163</sub>		1 19.5 87°67	7°0/23.5	18	
12 13	8 24.47	+13 38.1	1.761	2.553	15.8	20.0	12 13	8 29.27	+ 0 1.0	1.934	2.658	16.9	20.4
12 23	8 21.75	+13 30.9	1.661	2.534	12.7	19.8	12 23	8 24.82	- 0 26.7	1.863	2.676	14.2	20.2
1 2	8 16.48	+13 35.8	1.582	2.516	8.9	19.5	1 2	8 18.09	- 0 34.0	1.812	2.694	11.3	20.0
1 12	8 9.19	+13 52.2	1.528	2.498	4.7	19.2	1 12	8 9.75	- 0 19.2	1.785	2.712	8.5	19.9
1 22	8 0.78	+14 17.7	1.501	2.481	2.5	19.0	1 22	8 0.69	+ 0 16.9	1.784	2.730	7.0	19.9
2 1	7 52.41	+14 49.0	1.501	2.466	6.0	19.2	2 1	7 51.94	+ 1 11.0	1.811	2.747	7.9	19.9
2 11	7 45.30	+15 22.2	1.528	2.451	10.4	19.4	2 11	7 44.50	+ 2 17.6	1.865	2.765	10.2	20.1
2 21	7 40.41	+15 53.9	1.578	2.437	14.4	19.6	2 21	7 39.09	+ 3 30.5	1.944	2.782	13.0	20.3
<b>372607</b>	2009 <i>VJ</i> <sub>9</sub>		1 19.5 79°06	0°5/19.3	18		<b>435370</b>	2007 <i>VS</i> <sub>308</sub>		1 19.5 27°61	2°5/20.6	18	
12 13	8 31.07	+20 39.1	1.947	2.736	14.6	21.5	12 13	8 28.29	+13 23.9	2.280	3.047	13.4	20.9
12 23	8 26.37	+20 52.0	1.872	2.747	11.3	21.3	12 23	8 23.86	+12 57.5	2.192	3.050	10.7	20.7
1 2	8 19.20	+21 10.8	1.820	2.758	7.5	21.0	1 2	8 17.38	+12 39.3	2.127	3.052	7.5	20.5
1 12	8 10.24	+21 32.2	1.794	2.769	3.3	20.8	1 12	8 9.43	+12 28.9	2.089	3.055	4.2	20.3
1 22	8 0.49	+21 52.5	1.797	2.780	1.3	20.7	1 22	8 0.79	+12 25.3	2.081	3.058	2.6	20.2
2 1	7 51.09	+22 8.4	1.830	2.791	5.5	21.0	2 1	7 52.36	+12 27.1	2.102	3.061	5.1	20.4
2 11	7 43.15	+22 18.2	1.891	2.802	9.4	21.2	2 11	7 45.05	+12 32.3	2.151	3.064	8.4	20.6
2 21	7 37.42	+22 21.5	1.976	2.813	12.8	21.5	2 21	7 39.51	+12 39.2	2.227	3.068	11.4	20.8
<b>212400</b>	2006 <i>JZ</i> <sub>38</sub>		1 19.5 193°91	0°7/19.8	18		<b>284848</b>	2009 <i>BQ</i> <sub>93</sub>		1 19.5 222°52	0°5/19.8	17	
12 13	8 32.52	+16 47.4	2.149	2.921	14.0	21.9	12 13	8 27.43	+17 48.2	2.614	3.387	11.7	21.5
12 23	8 27.41	+17 4.2	2.054	2.919	11.0	21.7	12 23	8 23.05	+17 56.9	2.517	3.383	9.2	21.3
1 2	8 19.91	+17 30.0	1.983	2.916	7.4	21.4	1 2	8 16.80	+18 11.8	2.445	3.379	6.1	21.1
1 12	8 10.60	+18 2.0	1.939	2.912	3.4	21.2	1 12	8 9.18	+18 30.9	2.401	3.375	2.8	20.8
1 22	8 0.36	+18 36.9	1.925	2.908	1.1	21.0	1 22	8 0.87	+18 51.9	2.387	3.370	0.9	20.7
2 1	7 50.24	+19 10.8	1.942	2.903	5.2	21.3	2 1	7 52.68	+19 12.3	2.404	3.365	4.3	20.9
2 11	7 41.35	+19 40.9	1.988	2.898	9.1	21.5	2 11	7 45.44	+19 30.2	2.450	3.360	7.6	21.1
2 21	7 34.50	+20 5.4	2.059	2.891	12.5	21.7	2 21	7 39.78	+19 44.2	2.522	3.355	10.5	21.3
<b>458956</b>	2011 <i>UX</i> <sub>398</sub>		1 19.5 168°70	8°9/16.3	18		<b>198413</b>	2004 <i>VP</i> <sub>63</sub>		1 19.5 48°16	1°5/18.9	17	
12 13	8 41.36	+40 42.4	1.665	2.454	16.7	21.1	12 13	8 32.50	+20 52.9	1.251	2.068	19.6	20.0
12 23	8 35.66	+41 46.8	1.595	2.455	13.8	21.0	12 23	8 28.62	+21 32.1	1.197	2.088	15.2	19.7
1 2	8 26.03	+42 42.6	1.546	2.456	11.0	20.8	1 2	8 21.21	+22 21.7	1.163	2.108	10.0	19.5
1 12	8 13.42	+43 18.7	1.522	2.456	9.1	20.7	1 12	8 11.24	+23 14.6	1.152	2.128	4.4	19.2
1 22	7 59.44	+43 26.7	1.524	2.457	9.3	20.7	1 22	8 0.22	+24 3.1	1.167	2.149	2.4	19.2
2 1	7 46.10	+43 3.3	1.552	2.457	11.4	20.8	2 1	7 49.89	+24 41.1	1.209	2.171	7.6	19.5
2 11	7 35.25	+42 11.8	1.603	2.457	14.3	21.0	2 11	7 41.84	+25 5.5	1.275	2.193	12.5	19.9
2 21	7 28.01	+40 59.4	1.676	2.457	17.2	21.2	2 21	7 37.01	+25 16.7	1.363	2.215	16.6	20.2
<b>337208</b>	1999 <i>XN</i> <sub>250</sub>		1 19.5 67°78	0°2/19.6	17		<b>465544</b>	2008 <i>UE</i> <sub>353</sub>		1 19.5 96°64	2°1/20.6	18	
12 13	8 38.47	+19 19.5	1.257	2.061	20.3	20.7	12 13	8 28.81	+13 1.2	2.314	3.078	13.4	21.8
12 23	8 32.94	+19 21.3	1.207	2.090	15.7	20.5	12 23	8 24.15	+12 58.8	2.236	3.093	10.5	21.7
1 2	8 23.84	+19 32.8	1.177	2.118	10.4	20.2	1 2	8 17.51	+13 6.1	2.182	3.107	7.3	21.5
1 12	8 12.29	+19 49.4	1.171	2.147	4.5	20.0	1 12	8 9.46	+13 21.7	2.154	3.122	3.9	21.3
1 22	7 59.88	+20 6.0	1.192	2.175	1.4	19.9	1 22	8 0.80	+13 43.5	2.157	3.136	2.2	21.2
2 1	7 48.41	+20 18.6	1.239	2.203	7.1	20.3	2 1	7 52.40	+14 8.9	2.189	3.150	4.8	21.4
2 11	7 39.40	+20 25.1	1.312	2.231	12.1	20.7	2 11	7 45.12	+14 35.2	2.250	3.164	8.0	21.6
2 21	7 33.71	+20 25.5	1.407	2.258	16.2	21.0	2 21	7 39.62	+15 0.2	2.338	3.177	11.0	21.8
<b>331184</b>	2011 <i>AS</i> <sub>46</sub>		1 19.5 91°68	2°4/20.9	18		<b>154708</b>	2004 <i>JW</i> <sub>33</sub>		1 19.5 194°42	0°8/19.9	18	
12 13	8 28.35	+10 45.2	2.003	2.770	15.0	20.9	12 13	8 34.16	+16 9.9	2.067	2.836	14.6	22.2
12 23	8 24.18	+11 6.3	1.923	2.781	12.0	20.7	12 23	8 28.80	+16 30.6	1.971	2.834	11.5	21.9
1 2	8 17.73	+11 41.9	1.866	2.791	8.4	20.5	1 2	8 20.91	+17 1.3	1.899	2.831	7.8	21.7
1 12	8 9.62	+12 30.0	1.835	2.801	4.6	20.3	1 12	8 11.09	+17 39.4	1.854	2.826	3.6	21.4
1 22	8 0.71	+13 27.0	1.833	2.812	2.5	20.1	1 22	8 0.23	+18 20.9	1.838	2.821	1.2	21.2
2 1	7 52.03	+14 28.2	1.860	2.822	5.3	20.3	2 1	7 49.50	+19 1.6	1.854	2.815	5.4	21.5
2 11	7 44.60	+15 28.8	1.916	2.832	9.0	20.6	2 11	7 40.03	+19 38.1	1.898	2.808	9.5	21.8
2 21	7 39.16	+16 25.1	1.997	2.842	12.4	20.8	2 21	7 32.73	+20 8.5	1.968	2.800	13.1	22.0
<b>153186</b>	2000 <i>UX</i> <sub>76</sub>		1 19.5 97°16	2°3/20.7	18		<b>258470</b>	2001 <i>YG</i> <sub>145</sub>		1 19.5 84°53	0°6/19.8	18	
12 13	8 29.62	+12 50.3											

EPHEMERIDES

1 19.5

1 19.6

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>256920</b>	2008 <i>EH</i> <sub>7</sub>		1 19.5 356°67	0°0/19.5 18			<b>372565</b>	2009 <i>UL</i> <sub>39</sub>		1 19.5 164°61	4°3/17.0 18		
12 13	8 29.85	+19 5.4	1.592	2.394	16.8	21.3	12 13	8 32.47	+30 35.5	2.244	3.033	12.9	21.1
12 23	8 26.13	+19 18.8	1.511	2.393	13.2	21.1	12 23	8 27.53	+31 36.8	2.164	3.036	10.2	20.9
1 2	8 19.44	+19 41.6	1.451	2.392	8.8	20.8	1 2	8 20.08	+32 38.6	2.108	3.039	7.2	20.8
1 12	8 10.51	+20 10.4	1.416	2.391	3.9	20.5	1 12	8 10.74	+33 34.5	2.080	3.041	4.7	20.6
1 22	8 0.45	+20 40.3	1.408	2.391	1.3	20.3	1 22	8 0.47	+34 18.7	2.081	3.044	4.7	20.6
2 1	7 50.66	+21 7.1	1.428	2.391	6.4	20.7	2 1	7 50.40	+34 47.2	2.112	3.045	7.1	20.8
2 11	7 42.52	+21 27.5	1.473	2.392	11.1	20.9	2 11	7 41.68	+34 58.9	2.170	3.047	10.1	21.0
2 21	7 37.00	+21 40.2	1.542	2.392	15.1	21.2	2 21	7 35.16	+34 55.4	2.252	3.048	12.9	21.1
<b>84344</b>	2002 <i>TM</i> <sub>65</sub>		1 19.5 29°15	0°1/19.5 18			<b>172789</b>	2004 <i>FQ</i> <sub>31</sub>		1 19.5 277°89	4°2/16.2 17		
12 13	8 31.06	+21 29.3	1.744	2.543	15.7	18.6	12 13	8 29.31	+28 42.3	2.409	3.200	12.1	19.8
12 23	8 26.53	+21 10.9	1.676	2.556	12.2	18.4	12 23	8 25.10	+30 18.0	2.319	3.194	9.5	19.6
1 2	8 19.36	+20 56.6	1.630	2.570	8.1	18.2	1 2	8 18.53	+31 57.9	2.255	3.188	6.7	19.4
1 12	8 10.33	+20 44.0	1.610	2.585	3.5	17.9	1 12	8 10.12	+33 35.1	2.220	3.182	4.5	19.2
1 22	8 0.56	+20 30.9	1.617	2.601	1.2	17.8	1 22	8 0.64	+35 2.6	2.216	3.176	4.7	19.2
2 1	7 51.29	+20 15.6	1.654	2.617	5.7	18.1	2 1	7 51.14	+36 14.7	2.242	3.169	7.1	19.4
2 11	7 43.67	+19 57.5	1.717	2.634	9.9	18.4	2 11	7 42.70	+37 8.5	2.296	3.163	10.0	19.6
2 21	7 38.47	+19 36.9	1.804	2.651	13.4	18.7	2 21	7 36.20	+37 44.1	2.374	3.157	12.6	19.7
<b>237980</b>	2002 <i>RV</i> <sub>257</sub>		1 19.5 34°88	0°3/19.7 18			<b>421418</b>	2013 <i>WG</i> <sub>51</sub>		1 19.5 88°04	2°0/20.3 18		
12 13	8 28.12	+18 14.4	1.858	2.652	15.1	20.8	12 13	8 31.06	+15 33.8	2.274	3.042	13.4	20.7
12 23	8 24.22	+18 27.3	1.784	2.661	11.7	20.6	12 23	8 25.97	+15 3.4	2.189	3.049	10.6	20.5
1 2	8 17.85	+18 48.6	1.733	2.671	7.8	20.4	1 2	8 18.77	+14 39.4	2.127	3.055	7.3	20.3
1 12	8 9.71	+19 15.4	1.707	2.682	3.5	20.1	1 12	8 10.08	+14 21.1	2.092	3.061	3.8	20.1
1 22	8 0.75	+19 43.9	1.709	2.693	1.1	20.0	1 22	8 0.71	+14 7.6	2.088	3.067	2.1	20.0
2 1	7 52.12	+20 10.5	1.741	2.704	5.5	20.3	2 1	7 51.61	+13 57.9	2.113	3.074	5.0	20.2
2 11	7 44.90	+20 32.4	1.799	2.715	9.5	20.6	2 11	7 43.71	+13 50.5	2.168	3.080	8.4	20.4
2 21	7 39.88	+20 48.3	1.882	2.727	13.0	20.8	2 21	7 37.68	+13 44.5	2.249	3.086	11.5	20.6
<b>185752</b>	1999 <i>RC</i> <sub>165</sub>		1 19.5 97°49	3°0/20.7 18			<b>430237</b>	2013 <i>WS</i> <sub>3</sub>		1 19.5 47°71	0°2/19.4 18		
12 13	8 33.80	+12 39.1	1.408	2.197	19.3	20.0	12 13	8 28.98	+17 48.4	1.870	2.660	15.1	20.9
12 23	8 29.29	+12 32.8	1.339	2.209	15.3	19.8	12 23	8 24.73	+18 30.6	1.813	2.688	11.6	20.8
1 2	8 21.55	+12 42.3	1.289	2.220	10.7	19.6	1 2	8 18.09	+19 22.3	1.778	2.717	7.6	20.6
1 12	8 11.42	+13 6.0	1.263	2.232	5.7	19.3	1 12	8 9.79	+20 19.0	1.770	2.746	3.3	20.4
1 22	8 0.19	+13 40.3	1.263	2.243	3.1	19.2	1 22	8 0.82	+21 15.4	1.792	2.775	1.1	20.3
2 1	7 49.40	+14 20.2	1.291	2.254	6.9	19.4	2 1	7 52.28	+22 6.6	1.842	2.804	5.4	20.6
2 11	7 40.56	+15 0.6	1.345	2.265	11.7	19.7	2 11	7 45.22	+22 49.5	1.920	2.833	9.2	20.9
2 21	7 34.62	+15 37.8	1.421	2.276	15.9	20.0	2 21	7 40.31	+23 22.6	2.023	2.862	12.5	21.2
<b>223670</b>	2004 <i>PL</i> <sub>59</sub>		1 19.5 171°51	2°7/20.9 18			<b>12670</b>	Passargea		1 19.6 93°37	0°2/19.5 18		
12 13	8 28.67	+11 16.0	2.086	2.851	14.6	20.7	12 13	8 39.25	+20 16.9	1.471	2.264	18.4	18.5
12 23	8 24.42	+11 18.0	1.996	2.853	11.7	20.5	12 23	8 33.25	+20 18.4	1.411	2.287	14.3	18.3
1 2	8 17.92	+11 32.5	1.930	2.853	8.2	20.3	1 2	8 23.99	+20 27.3	1.372	2.310	9.4	18.0
1 12	8 9.74	+11 58.5	1.889	2.854	4.6	20.1	1 12	8 12.43	+20 39.3	1.358	2.333	4.1	17.8
1 22	8 0.73	+12 33.5	1.877	2.855	2.7	19.9	1 22	7 59.99	+20 50.0	1.372	2.355	1.4	17.6
2 1	7 51.88	+13 14.1	1.895	2.855	5.4	20.1	2 1	7 48.28	+20 56.2	1.414	2.376	6.6	18.0
2 11	7 44.20	+13 56.6	1.940	2.855	9.0	20.3	2 11	7 38.74	+20 56.3	1.483	2.397	11.3	18.4
2 21	7 38.46	+14 37.6	2.012	2.856	12.3	20.5	2 21	7 32.24	+20 50.7	1.576	2.418	15.3	18.6
<b>405427</b>	2004 <i>ST</i> <sub>9</sub>		1 19.5 268°93	6°9/22.2 17 8			<b>326426</b>	2001 <i>TO</i> <sub>156</sub>		1 19.6 50°78	2°8/18.4 18		
12 13	8 33.34	+ 1 47.5	2.038	2.757	16.3	22.6	12 13	8 31.93	+25 22.9	1.663	2.468	16.1	21.2
12 23	8 28.55	+ 1 15.0	1.908	2.722	13.9	22.4	12 23	8 27.63	+26 0.2	1.593	2.477	12.5	21.0
1 2	8 21.09	+ 0 59.4	1.798	2.685	11.1	22.1	1 2	8 20.36	+26 41.6	1.545	2.486	8.3	20.8
1 12	8 11.36	+ 1 3.8	1.713	2.646	8.3	21.9	1 12	8 10.90	+27 21.0	1.523	2.496	4.2	20.6
1 22	8 0.13	+ 1 29.7	1.655	2.607	6.9	21.7	1 22	8 0.45	+27 52.4	1.529	2.507	3.3	20.5
2 1	7 48.51	+ 2 16.1	1.627	2.566	8.4	21.7	2 1	7 50.43	+28 11.5	1.563	2.517	7.1	20.8
2 11	7 37.78	+ 3 18.9	1.626	2.524	11.6	21.8	2 11	7 42.18	+28 16.9	1.622	2.527	11.1	21.1
2 21	7 29.05	+ 4 32.2	1.650	2.480	15.3	21.9	2 21	7 36.60	+28 10.0	1.705	2.538	14.7	21.3
<b>323788</b>	2005 <i>QY</i> <sub>112</sub>		1 19.5 125°07	4°7/17.2 18			<b>104964</b>	2000 <i>JP</i> <sub>54</sub>		1 19.6 219°12	1°5/18.6 18		
12 13	8 36.67	+33 6.4	2.290	3.071	13.0	21.5	12 13	8 28.68	+23 34.5	2.708	3.488	11.2	20.2
12 23	8 30.55	+33 57.2	2.223	3.088	10.2	21.3	12 23	8 24.10	+24 10.4	2.610	3.481	8.7	20.0
1 2	8 21.90	+34 45.2	2.180	3.105	7.3	21.2	1 2	8 17.57	+24 50.2	2.537	3.474	5.8	19.8
1 12	8 11.45	+35 24.2	2.165	3.121	5.1	21.1	1 12	8 9.60	+25 30.5	2.493	3.466	2.7	19.6
1 22	8 0.22	+35 49.0	2.179	3.136	5.0	21.1	1 22	8 0.86	+26 7.5	2.479	3.458	1.9	19.5
2 1	7 49.41	+35 56.9	2.224	3.151	7.2	21.3	2 1	7 52.21	+26 38.0	2.497	3.450	4.9	19.7
2 11	7 40.14	+35 48.3	2.295	3.165	9.9	21.4	2 11	7 44.49	+27 0.2	2.543	3.441	7.9	19.9
2 21	7 33.18	+35 25.8	2.392	3.179	12.5	21.6	2 21	7 38.39	+27 13.6	2.616	3.432	10.7	20.0
<b>486063</b>	2012 <i>TF</i> <sub>255</sub>		1 19.5 57°31	5°2/21.2 17			<b>377048</b>	2002 <i>TG</i> <sub>119</sub>		1 19.6 101°13	3°0/21.2 18		
12 13	8 32.73	+10 0.1	1.276	2.067	20.8	21.2	12 13	8 29.16	+10 0.7	2.522	3.270	12.8	21.3
12 23	8 28.66	+ 9 17.8	1.211	2.078	16.8	21.0	12 23	8 24.21	+ 9 47.3	2.446	3.290	10.2	21.2
1 2	8 21.23	+ 8 53.2	1.164	2.090	12.2	20.8	1 2	8 17.46	+ 9 44.1	2.394	3.310	7.3	21.0
1 12	8 11.31	+ 8 47.4	1.140	2.102	7.5	20.5	1 12	8 9.47	+ 9 50.6	2.370	3.329	4.4	20.9
1 22	8 0.26	+ 8 59.0	1.141	2.115	5.3	20.4	1 22	8 0.94	+10 5.4	2.375	3.348	3.0	20.8
2 1	7 49.74	+ 9 24.6	1.168	2.127	8.1	20.6	2 1	7 52.68	+10 26.4	2.411	3.367	4.8	21.0
2 11	7 41.29	+ 9 58.9	1.219	2.140	12.6	20.9	2 11	7 45.47	+10 51.1	2.477	3.385	7.6	21.2
2 21	7 35.88	+10 36.3	1.292	2.153	16.7	21.2	2 21	7 39.87	+11 17.1	2.568	3.404	10.3	21.4
<b>491760</b>	2012 <i>VO</i> <sub>90</sub>		1 19.5 46°39	2°0/18.8 18			<b>143497</b>	2003 <i>DB</i> <sub>11</sub>		1 19.6 174°34	2°8/18.1 18		
12 13	8 32.52	+21 40.5	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>26122</b>	Antonyusutton		1 19.6 252°34	1.8°/20.2	18		<b>278816</b>	2008 SQ <sub>255</sub>		1 19.6 335°56	5.6°/22.6	18	
12 13	8 31.28	+15 34.7	1.819	2.601	15.8	18.5	12 13	8 25.85	+3 39.5	2.025	2.770	15.6	20.7
12 23	8 26.89	+15 25.6	1.726	2.595	12.5	18.3	12 23	8 22.35	+3 22.6	1.934	2.766	13.0	20.5
1 2	8 19.82	+15 26.2	1.655	2.588	8.6	18.0	1 2	8 16.63	+3 23.1	1.863	2.763	10.0	20.3
1 12	8 10.70	+15 34.9	1.610	2.582	4.3	17.8	1 12	8 9.26	+3 42.3	1.817	2.760	7.1	20.1
1 22	8 0.50	+15 49.4	1.593	2.575	2.0	17.6	1 22	8 1.03	+4 19.2	1.797	2.757	5.6	20.0
2 1	7 50.46	+16 6.6	1.605	2.568	5.9	17.8	2 1	7 52.91	+5 10.9	1.806	2.754	6.9	20.1
2 11	7 41.83	+16 23.7	1.645	2.561	10.2	18.1	2 11	7 45.91	+6 12.7	1.842	2.752	9.7	20.3
2 21	7 35.52	+16 38.6	1.708	2.554	14.1	18.3	2 21	7 40.78	+7 19.0	1.902	2.749	12.8	20.4
<b>467003</b>	2016 CV <sub>72</sub>		1 19.6 343°99	1°1/19.1	16		<b>242869</b>	2006 HM <sub>45</sub>		1 19.6 205°87	2°4/20.7	18	
12 13	8 27.83	+20 55.3	1.472	2.287	17.3	20.9	12 13	8 32.16	+12 24.8	2.078	2.840	14.7	21.7
12 23	8 24.93	+21 20.2	1.390	2.279	13.6	20.7	12 23	8 27.24	+12 26.9	1.980	2.835	11.8	21.5
1 2	8 18.88	+21 54.5	1.328	2.272	9.0	20.4	1 2	8 19.91	+12 40.6	1.905	2.829	8.3	21.2
1 12	8 10.39	+22 33.7	1.290	2.266	4.0	20.1	1 12	8 10.73	+13 4.9	1.856	2.823	4.5	21.0
1 22	8 0.59	+23 11.9	1.278	2.260	1.9	19.9	1 22	8 0.55	+13 37.1	1.836	2.816	2.4	20.8
2 1	7 51.02	+23 43.5	1.293	2.256	7.0	20.2	2 1	7 50.47	+14 14.0	1.847	2.808	5.5	21.0
2 11	7 43.17	+24 5.1	1.333	2.252	11.9	20.5	2 11	7 41.59	+14 51.9	1.886	2.799	9.4	21.2
2 21	7 38.13	+24 15.7	1.395	2.249	16.2	20.8	2 21	7 34.75	+15 27.9	1.951	2.790	12.9	21.4
<b>251995</b>	2000 EQ <sub>98</sub>		1 19.6 254°55	2°2/18.7	18		<b>209902</b>	2005 MW <sub>47</sub>		1 19.6 178°31	0°7/20.0	17	
12 13	8 33.94	+25 13.9	1.969	2.759	14.5	21.2	12 13	8 27.20	+16 46.6	2.794	3.562	11.2	21.3
12 23	8 29.01	+25 33.1	1.869	2.744	11.4	20.9	12 23	8 22.75	+16 55.3	2.700	3.563	8.8	21.1
1 2	8 21.28	+25 55.5	1.791	2.730	7.6	20.7	1 2	8 16.57	+17 10.2	2.632	3.563	5.9	20.9
1 12	8 11.37	+26 16.5	1.741	2.714	3.7	20.4	1 12	8 9.14	+17 29.8	2.591	3.564	2.8	20.7
1 22	8 0.28	+26 31.2	1.720	2.699	2.6	20.3	1 22	8 1.09	+17 51.7	2.581	3.564	1.0	20.6
2 1	7 49.29	+26 36.3	1.728	2.683	6.4	20.5	2 1	7 53.19	+18 13.8	2.602	3.564	4.0	20.8
2 11	7 39.73	+26 30.4	1.763	2.667	10.5	20.7	2 11	7 46.16	+18 34.1	2.653	3.563	7.1	21.0
2 21	7 32.57	+26 14.6	1.823	2.650	14.2	20.9	2 21	7 40.60	+18 51.1	2.730	3.563	9.8	21.2
<b>414947</b>	2011 BH <sub>70</sub>		1 19.6 53°04	0°8/19.1	18		<b>455785</b>	2005 QW <sub>115</sub>		1 19.6 170°74	3°6/21.6	18	
12 13	8 29.29	+18 33.9	1.701	2.498	16.1	20.8	12 13	8 28.83	+7 51.1	2.052	2.806	15.1	22.1
12 23	8 25.42	+19 27.8	1.632	2.512	12.5	20.6	12 23	8 24.60	+7 59.7	1.962	2.808	12.3	21.9
1 2	8 18.83	+20 32.9	1.585	2.526	8.2	20.4	1 2	8 18.11	+8 24.3	1.894	2.810	8.9	21.7
1 12	8 10.23	+21 43.9	1.564	2.540	3.6	20.1	1 12	8 9.91	+9 4.0	1.852	2.811	5.5	21.5
1 22	8 0.69	+22 54.1	1.572	2.554	1.6	20.0	1 22	8 0.83	+9 56.2	1.838	2.812	3.6	21.4
2 1	7 51.48	+23 57.1	1.608	2.569	6.2	20.4	2 1	7 51.90	+10 56.9	1.854	2.813	5.7	21.5
2 11	7 43.83	+24 48.8	1.672	2.584	10.4	20.6	2 11	7 44.13	+12 1.1	1.899	2.813	9.2	21.8
2 21	7 38.62	+25 27.5	1.759	2.599	14.0	20.9	2 21	7 38.31	+13 4.2	1.968	2.813	12.5	22.0
<b>466395</b>	2013 SC <sub>51</sub>		1 19.6 145°66	5°7/15.9	18		<b>309215</b>	2007 LN <sub>18</sub>		1 19.6 163°40	5°5/21.6	18	
12 13	8 36.31	+39 1.9	2.770	3.539	11.3	22.3	12 13	8 36.80	+5 17.9	2.332	3.049	14.5	21.0
12 23	8 30.10	+40 0.5	2.701	3.550	9.2	22.1	12 23	8 30.32	+4 19.2	2.242	3.058	12.0	20.8
1 2	8 21.56	+40 53.4	2.656	3.562	7.1	22.0	1 2	8 21.65	+3 32.0	2.174	3.065	9.3	20.6
1 12	8 11.33	+41 34.6	2.639	3.572	5.8	21.9	1 12	8 11.39	+2 58.1	2.134	3.071	6.7	20.5
1 22	8 0.34	+41 59.5	2.652	3.582	6.0	22.0	1 22	8 0.37	+2 38.4	2.124	3.077	5.5	20.4
2 1	7 49.67	+42 5.8	2.694	3.592	7.5	22.1	2 1	7 49.57	+2 32.5	2.145	3.081	6.8	20.5
2 11	7 40.34	+41 54.2	2.764	3.601	9.5	22.2	2 11	7 39.96	+2 38.4	2.195	3.085	9.4	20.7
2 21	7 33.10	+41 27.3	2.858	3.609	11.5	22.4	2 21	7 32.26	+2 52.9	2.271	3.087	12.1	20.9
<b>451024</b>	2008 VF <sub>54</sub>		1 19.6 275°63	15°1/23.2	18		<b>82543</b>	2001 OQ <sub>67</sub>		1 19.6 349°99	8°6/23.9	18	
12 13	8 31.89	-10 25.7	1.642	2.319	21.1	21.4	12 13	8 26.86	-1 37.7	1.723	2.453	18.5	19.4
12 23	8 27.74	-12 46.4	1.558	2.309	19.3	21.3	12 23	8 23.50	-2 18.1	1.638	2.452	15.8	19.2
1 2	8 20.65	-14 45.0	1.490	2.300	17.3	21.1	1 2	8 17.59	-2 35.6	1.572	2.450	12.9	19.0
1 12	8 11.18	-16 12.0	1.443	2.290	15.8	21.0	1 12	8 9.74	-2 26.6	1.527	2.449	10.2	18.8
1 22	8 0.33	-17 0.2	1.417	2.281	15.1	20.9	1 22	8 0.88	-1 50.5	1.508	2.448	8.6	18.7
2 1	7 49.44	-17 6.2	1.413	2.271	15.5	20.9	2 1	7 52.15	-0 49.8	1.514	2.447	9.4	18.8
2 11	7 39.94	-16 32.9	1.430	2.261	17.0	20.9	2 11	7 44.75	+0 29.1	1.546	2.447	11.9	18.9
2 21	7 32.96	-15 28.5	1.466	2.252	19.0	21.1	2 21	7 39.56	+1 58.4	1.601	2.447	14.9	19.1
<b>96182</b>	1989 RT <sub>1</sub>		1 19.6 94°96	6°8/17.2	17		<b>256138</b>	2006 VQ <sub>15</sub>		1 19.6 188°72	1°6/18.8	18	R
12 13	8 45.07	+36 56.6	1.761	2.543	16.2	19.8	12 13	8 32.62	+23 5.7	1.986	2.775	14.4	21.1
12 23	8 37.66	+37 51.9	1.711	2.572	13.0	19.7	12 23	8 27.79	+23 33.0	1.899	2.775	11.2	20.9
1 2	8 26.82	+38 39.6	1.683	2.601	9.7	19.5	1 2	8 20.34	+24 5.3	1.836	2.774	7.4	20.7
1 12	8 13.63	+39 10.7	1.682	2.629	7.2	19.5	1 12	8 10.93	+24 38.3	1.799	2.773	3.4	20.4
1 22	7 59.65	+39 18.6	1.709	2.656	7.1	19.5	1 22	8 0.53	+25 7.2	1.791	2.772	2.1	20.3
2 1	7 46.60	+39 1.8	1.764	2.683	9.4	19.7	2 1	7 50.35	+25 28.3	1.813	2.770	6.0	20.6
2 11	7 35.98	+38 23.5	1.845	2.709	12.3	19.9	2 11	7 41.59	+25 39.6	1.863	2.769	9.9	20.8
2 21	7 28.62	+37 29.7	1.949	2.734	15.0	20.2	2 21	7 35.11	+25 41.3	1.938	2.766	13.4	21.0
<b>351617</b>	2005 WT <sub>103</sub>		1 19.6 84°84	1°8/20.1	18		<b>189276</b>	2005 SC <sub>39</sub>		1 19.6 327°32	6°4/22.6	18	
12 13	8 36.15	+16 37.9	1.443	2.235	18.7	20.5	12 13	8 26.93	+3 31.7	1.770	2.522	17.3	20.4
12 23	8 30.98	+16 17.5	1.377	2.251	14.7	20.3	12 23	8 23.52	+3 4.1	1.680	2.517	14.5	20.1
1 2	8 22.59	+16 7.2	1.331	2.266	10.0	20.0	1 2	8 17.60	+2 55.6	1.611	2.512	11.2	19.9
1 12	8 11.88	+16 5.2	1.309	2.282	4.8	19.8	1 12	8 9.76	+3 8.2	1.564	2.507	8.1	19.7
1 22	8 0.20	+16 8.6	1.315	2.297	2.1	19.6	1 22	8 0.90	+3 41.4	1.544	2.503	6.4	19.6
2 1	7 49.10	+16 14.4	1.349	2.312	6.7	20.0	2 1	7 52.15	+4 32.5	1.551	2.499	7.8	19.7
2 11	7 40.03	+16 20.2	1.408	2.327	11.4	20.3	2 11	7 44.69	+5 35.8	1.584	2.495	10.9	19.9
2 21	7 33.90	+16 24.4	1.491	2.342	15.5	20.6	2 21	7 39.39	+6 45.1	1.640	2.492	14.3	20.1
<b>451438</b>	2011 SA <sub>80</sub>		1 19.6 49°23	4°5/18.1	18		<b>453800</b>	2011 SN <sub>13</sub>		1 19.6 202°56	2°5/20.5	18	
12 13	8 35.60	+28 52.5	1.365	2.180	18.4	20.7	12 13	8 33.59	+14 8.5	1.714	2.492	16.8	21.7

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>186837</b>	2004 <i>FY</i> <sub>108</sub>		1 19.6 226°37	4.1/21.6	18		<b>187123</b>	Schorderet		1 19.6 140°06	1.1/19.0	18	
12 13	8 29.42	+ 7 32.7	2.182	2.930	14.6	21.3	12 13	8 32.32	+22 5.3	2.078	2.864	14.0	21.3
12 23	8 25.01	+ 7 20.3	2.081	2.921	11.9	21.1	12 23	8 27.35	+22 28.7	1.997	2.871	10.8	21.1
1 2	8 18.38	+ 7 21.6	2.002	2.912	8.8	20.9	1 2	8 19.94	+22 57.3	1.939	2.877	7.2	20.9
1 12	8 10.07	+ 7 37.0	1.948	2.903	5.7	20.7	1 12	8 10.74	+23 27.1	1.909	2.884	3.2	20.6
1 22	8 0.83	+ 8 5.2	1.924	2.893	4.1	20.6	1 22	8 0.70	+23 53.9	1.908	2.890	1.7	20.5
2 1	7 51.65	+ 8 43.7	1.929	2.883	6.0	20.7	2 1	7 50.93	+24 14.3	1.937	2.895	5.5	20.8
2 11	7 43.52	+ 9 28.7	1.962	2.872	9.2	20.9	2 11	7 42.53	+24 26.7	1.994	2.901	9.3	21.0
2 21	7 37.25	+10 16.2	2.021	2.861	12.4	21.1	2 21	7 36.28	+24 30.8	2.076	2.906	12.6	21.2
<b>390578</b>	2001 <i>PF</i> <sub>16</sub>		1 19.6 108°83	1°8/18.8	16		<b>278650</b>	2008 <i>RX</i> <sub>41</sub>		1 19.6 122°89	1°0/19.1	18	
12 13	8 38.99	+23 14.7	1.768	2.552	16.1	22.1	12 13	8 30.41	+21 49.1	2.237	3.022	13.1	21.4
12 23	8 32.69	+23 47.0	1.705	2.578	12.4	22.0	12 23	8 25.70	+22 12.2	2.156	3.029	10.2	21.2
1 2	8 23.49	+24 24.0	1.665	2.603	8.2	21.8	1 2	8 18.75	+22 40.1	2.098	3.036	6.7	21.0
1 12	8 12.25	+25 0.1	1.653	2.626	3.8	21.5	1 12	8 10.20	+23 9.5	2.068	3.043	3.0	20.8
1 22	8 0.19	+25 29.8	1.669	2.649	2.4	21.5	1 22	8 0.88	+23 36.5	2.067	3.049	1.5	20.7
2 1	7 48.72	+25 49.3	1.716	2.672	6.4	21.8	2 1	7 51.81	+23 58.0	2.097	3.055	5.2	21.0
2 11	7 39.12	+25 57.6	1.790	2.693	10.4	22.1	2 11	7 43.97	+24 12.2	2.155	3.062	8.7	21.2
2 21	7 32.21	+25 55.7	1.889	2.713	13.8	22.3	2 21	7 38.09	+24 18.8	2.238	3.068	11.8	21.4
<b>322154</b>	2010 <i>WY</i> <sub>51</sub>		1 19.6 30°59	0°4/19.4	18		<b>480100</b>	2015 <i>FF</i> <sub>33</sub>		1 19.6 135°85	16°8/27.4	18	
12 13	8 31.11	+20 9.7	1.840	2.632	15.3	21.3	12 13	8 33.70	-14 8.0	1.361	2.034	24.9	21.3
12 23	8 26.75	+20 23.0	1.756	2.632	11.9	21.0	12 23	8 29.51	-16 1.5	1.296	2.042	22.7	21.1
1 2	8 19.71	+20 43.5	1.693	2.632	7.9	20.8	1 2	8 21.96	-17 21.1	1.246	2.050	20.4	20.9
1 12	8 10.68	+21 7.7	1.657	2.633	3.5	20.5	1 12	8 11.82	-17 56.5	1.212	2.057	18.3	20.8
1 22	8 0.66	+21 31.5	1.650	2.633	1.3	20.4	1 22	8 0.33	-17 41.7	1.196	2.064	17.0	20.8
2 1	7 50.88	+21 51.3	1.671	2.633	5.8	20.7	2 1	7 49.10	-16 36.7	1.201	2.071	16.9	20.8
2 11	7 42.57	+22 4.8	1.720	2.633	10.1	20.9	2 11	7 39.75	-14 49.9	1.227	2.076	18.1	20.9
2 21	7 36.60	+22 11.2	1.792	2.633	13.8	21.2	2 21	7 33.41	-12 34.6	1.272	2.082	20.1	21.0
<b>140988</b>	2001 <i>WU</i> <sub>16</sub>		1 19.6 285°63	7°2/14.9	18		<b>112568</b>	2002 <i>PR</i> <sub>50</sub>		1 19.6 118°01	2°3/18.5	18	
12 13	8 33.54	+40 33.0	2.363	3.143	12.7	19.2	12 13	8 34.74	+24 45.4	2.023	2.810	14.3	20.4
12 23	8 28.79	+41 44.0	2.271	3.125	10.5	19.0	12 23	8 29.24	+25 25.9	1.953	2.827	11.0	20.2
1 2	8 21.21	+42 50.0	2.204	3.108	8.5	18.9	1 2	8 21.18	+26 10.1	1.906	2.843	7.3	20.0
1 12	8 11.41	+43 43.1	2.163	3.090	7.3	18.8	1 12	8 11.27	+26 52.4	1.887	2.859	3.6	19.8
1 22	8 0.39	+44 17.0	2.150	3.072	7.6	18.7	1 22	8 0.55	+27 27.9	1.897	2.874	2.8	19.8
2 1	7 49.46	+44 27.5	2.164	3.055	9.4	18.8	2 1	7 50.20	+27 52.7	1.937	2.889	6.1	20.0
2 11	7 39.97	+44 14.8	2.203	3.037	11.7	18.9	2 11	7 41.38	+28 5.5	2.005	2.904	9.7	20.3
2 21	7 32.91	+43 42.0	2.264	3.019	14.0	19.1	2 21	7 34.88	+28 7.0	2.098	2.917	12.9	20.5
<b>5756</b>	Wassenbergh		1 19.6 116°59	3°7/21.5	18		<b>372982</b>	2011 <i>CB</i> <sub>54</sub>		1 19.6 58°18	0°2/19.7	18	
12 13	8 31.44	+ 8 19.6	2.131	2.879	14.8	18.9	12 13	8 29.87	+18 27.8	1.924	2.712	14.8	21.7
12 23	8 26.35	+ 8 13.2	2.056	2.897	12.0	18.7	12 23	8 25.62	+18 40.2	1.842	2.716	11.6	21.5
1 2	8 19.09	+ 8 20.5	2.002	2.915	8.7	18.5	1 2	8 18.89	+19 0.6	1.781	2.719	7.7	21.3
1 12	8 10.29	+ 8 41.0	1.975	2.932	5.4	18.4	1 12	8 10.31	+19 26.3	1.748	2.722	3.5	21.0
1 22	8 0.81	+ 9 12.6	1.977	2.949	3.7	18.3	1 22	8 0.84	+19 53.5	1.742	2.726	1.1	20.8
2 1	7 51.63	+ 9 52.1	2.010	2.965	5.6	18.4	2 1	7 51.62	+20 18.6	1.766	2.729	5.5	21.2
2 11	7 43.70	+10 35.7	2.070	2.981	8.8	18.6	2 11	7 43.77	+20 39.1	1.818	2.733	9.5	21.4
2 21	7 37.70	+11 19.8	2.157	2.996	11.8	18.9	2 21	7 38.10	+20 53.5	1.894	2.736	13.1	21.6
<b>231937</b>	2001 <i>FO</i> <sub>32</sub>		1 19.6 148°16	13°5/30.2	14 C		<b>90946</b>	1997 <i>UX</i> <sub>16</sub>		1 19.6 70°45	2°2/18.8	17	
12 13	8 48.75	-26 34.8	2.506	2.974	18.3	23.0	12 13	8 36.34	+23 22.7	1.407	2.213	18.4	20.6
12 23	8 39.55	-27 39.9	2.429	2.999	17.1	22.9	12 23	8 31.32	+23 55.5	1.351	2.235	14.2	20.4
1 2	8 27.77	-28 16.5	2.368	3.021	15.8	22.8	1 2	8 22.91	+24 34.4	1.315	2.257	9.4	20.2
1 12	8 14.12	-28 17.9	2.327	3.041	14.6	22.8	1 12	8 12.09	+25 12.6	1.305	2.280	4.3	20.0
1 22	7 59.60	-27 40.7	2.308	3.058	13.8	22.7	1 22	8 0.32	+25 43.7	1.322	2.302	2.8	19.9
2 1	7 45.43	-26 25.4	2.315	3.073	13.6	22.7	2 1	7 49.26	+26 2.9	1.366	2.324	7.3	20.2
2 11	7 32.77	-24 37.6	2.347	3.085	14.0	22.8	2 11	7 40.41	+26 9.2	1.436	2.346	11.9	20.6
2 21	7 22.45	-22 26.7	2.404	3.094	14.9	22.9	2 21	7 34.66	+26 3.9	1.528	2.368	15.7	20.9
<b>493141</b>	2014 <i>TZ</i> <sub>46</sub>		1 19.6 143°94	5°6/16.6	18		<b>122532</b>	2000 <i>QB</i> <sub>215</sub>		1 19.6 39°83	2°5/20.9	18	
12 13	8 37.36	+35 12.5	2.254	3.034	13.2	21.9	12 13	8 27.62	+11 11.4	1.619	2.404	17.3	19.3
12 23	8 31.35	+36 14.1	2.183	3.045	10.5	21.8	12 23	8 24.17	+11 35.1	1.548	2.416	13.7	19.1
1 2	8 22.63	+37 12.0	2.136	3.056	7.8	21.6	1 2	8 18.06	+12 16.0	1.498	2.429	9.6	18.8
1 12	8 11.92	+37 59.2	2.117	3.066	5.8	21.5	1 12	8 9.98	+13 11.7	1.473	2.442	5.1	18.6
1 22	8 0.30	+38 29.8	2.127	3.075	5.9	21.5	1 22	8 0.97	+14 17.3	1.475	2.455	2.5	18.5
2 1	7 49.04	+38 40.7	2.166	3.084	8.0	21.7	2 1	7 52.28	+15 26.7	1.505	2.469	6.0	18.7
2 11	7 39.36	+38 32.3	2.233	3.092	10.6	21.9	2 11	7 45.13	+16 34.0	1.562	2.484	10.2	19.0
2 21	7 32.12	+38 7.8	2.322	3.099	13.1	22.1	2 21	7 40.36	+17 34.5	1.643	2.498	14.0	19.3
<b>245117</b>	2004 <i>QN</i> <sub>14</sub>		1 19.6 136°22	4°5/21.8	18		<b>338167</b>	2002 <i>RR</i> <sub>69</sub>		1 19.6 115°93	1°3/19.1	17	
12 13	8 33.13	+ 6 48.9	1.922	2.668	16.3	21.0	12 13	8 37.44	+21 31.8	1.568	2.361	17.4	21.7
12 23	8 27.94	+ 6 39.1	1.843	2.682	13.3	20.8	12 23	8 31.95	+22 0.8	1.500	2.378	13.5	21.4
1 2	8 20.31	+ 6 45.6	1.786	2.695	9.8	20.7	1 2	8 23.28	+22 37.2	1.454	2.393	8.9	21.2
1 12	8 10.89	+ 7 8.3	1.754	2.708	6.3	20.5	1 12	8 12.28	+23 15.5	1.434	2.409	4.0	21.0
1 22	8 0.64	+ 7 45.1	1.750	2.719	4.5	20.4	1 22	8 0.24	+23 49.6	1.441	2.423	2.0	20.9
2 1	7 50.67	+ 8 32.5	1.776	2.731	6.4	20.5	2 1	7 48.73	+24 15.0	1.478	2.437	6.8	21.2
2 11	7 42.08	+ 9 25.7	1.831	2.741	9.8	20.7	2 11	7 39.19	+24 29.5	1.541	2.451	11.3	21.5
2 21	7 35.66	+10 19.9	1.910	2.750	13.1	21.0	2 21	7 32.55	+24 33.7	1.628	2.463	15.2	21.8
<b>260453</b>	2005 <i>AJ</i> <sub>25</sub>		1 19.6 271°65	3°0/20.7	18		<b>15037</b>	Chassagne		1 19.6 238°68	3°9/21.9	18	
12 13	8 30.75	+12 46.0	1.667	2.44									

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>310881</b>	2003 <i>PU</i> <sub>5</sub>		1 19.6 118°51	3°4/21.4	18		<b>421921</b>	2014 <i>QF</i> <sub>233</sub>		1 19.6 103°56	1°1/19.1	18	
12 13	8 32.51	+ 8 46.5	1.955	2.709	15.8	21.3	12 13	8 33.23	+21 31.8	1.809	2.600	15.5	21.7
12 23	8 27.40	+ 8 54.5	1.881	2.727	12.7	21.1	12 23	8 28.36	+21 57.2	1.735	2.612	12.0	21.5
1 2	8 19.92	+ 9 17.9	1.828	2.745	9.1	20.9	1 2	8 20.76	+22 28.9	1.684	2.623	7.9	21.3
1 12	8 10.72	+ 9 55.4	1.802	2.763	5.4	20.7	1 12	8 11.17	+23 2.7	1.660	2.635	3.5	21.0
1 22	8 0.75	+10 43.8	1.804	2.779	3.4	20.6	1 22	8 0.67	+23 33.5	1.664	2.646	1.7	20.9
2 1	7 51.09	+11 39.0	1.837	2.795	5.7	20.8	2 1	7 50.54	+23 57.4	1.697	2.656	6.0	21.2
2 11	7 42.81	+12 36.1	1.898	2.811	9.3	21.1	2 11	7 42.01	+24 12.3	1.758	2.667	10.1	21.5
2 21	7 36.65	+13 31.0	1.984	2.825	12.6	21.3	2 21	7 35.93	+24 18.2	1.842	2.677	13.7	21.8
<b>237150</b>	2008 <i>UB</i> <sub>86</sub>		1 19.6 44°41	0°6/19.9	18		<b>112720</b>	2002 <i>PY</i> <sub>116</sub>		1 19.6 118°27	3°4/18.2	18	
12 13	8 28.19	+16 40.1	1.846	2.636	15.3	20.4	12 13	8 34.66	+30 51.8	2.309	3.092	12.8	19.7
12 23	8 24.33	+17 3.5	1.774	2.649	11.9	20.2	12 23	8 29.00	+31 6.6	2.228	3.098	10.0	19.5
1 2	8 18.01	+17 37.3	1.725	2.662	8.0	20.0	1 2	8 20.93	+31 19.1	2.172	3.103	7.0	19.4
1 12	8 9.92	+18 18.3	1.701	2.675	3.6	19.7	1 12	8 11.17	+31 24.7	2.143	3.109	4.1	19.2
1 22	8 1.02	+19 2.2	1.706	2.689	1.1	19.6	1 22	8 0.68	+31 19.8	2.144	3.114	3.7	19.2
2 1	7 52.44	+19 44.4	1.740	2.704	5.4	19.9	2 1	7 50.56	+31 2.7	2.175	3.119	6.2	19.3
2 11	7 45.26	+20 21.6	1.801	2.718	9.4	20.2	2 11	7 41.86	+30 34.0	2.234	3.124	9.3	19.5
2 21	7 40.27	+20 51.6	1.887	2.733	12.9	20.4	2 21	7 35.34	+29 55.9	2.319	3.129	12.1	19.7
<b>178386</b>	1997 <i>TE</i> <sub>16</sub>		1 19.6 120°41	5°5/17.3	18		<b>252340</b>	2001 <i>SJ</i> <sub>127</sub>		1 19.6 43°17	2°3/20.6	18	
12 13	8 38.05	+34 36.2	1.992	2.779	14.5	21.0	12 13	8 29.77	+13 46.9	1.513	2.306	17.9	20.3
12 23	8 32.11	+35 21.9	1.923	2.791	11.5	20.9	12 23	8 25.96	+13 45.8	1.448	2.322	14.2	20.1
1 2	8 23.23	+36 3.4	1.878	2.802	8.4	20.7	1 2	8 19.28	+13 58.6	1.403	2.337	9.7	19.9
1 12	8 12.22	+36 33.5	1.858	2.813	6.0	20.6	1 12	8 10.53	+14 23.4	1.383	2.354	5.0	19.7
1 22	8 0.29	+36 46.5	1.868	2.823	5.9	20.6	1 22	8 0.88	+14 56.3	1.389	2.371	2.4	19.6
2 1	7 48.87	+36 39.7	1.906	2.833	8.2	20.7	2 1	7 51.68	+15 32.8	1.423	2.388	6.2	19.8
2 11	7 39.28	+36 14.3	1.970	2.843	11.2	20.9	2 11	7 44.22	+16 8.6	1.483	2.405	10.7	20.1
2 21	7 32.38	+35 34.1	2.058	2.852	14.0	21.1	2 21	7 39.33	+16 40.5	1.566	2.423	14.5	20.4
<b>113929</b>	2002 <i>TK</i> <sub>289</sub>		1 19.6 180°93	6°4/16.3	18		<b>104689</b>	2000 <i>GO</i> <sub>155</sub>		1 19.6 161°10	4°3/17.1	18	
12 13	8 38.79	+37 52.0	2.235	3.012	13.4	19.0	12 13	8 32.04	+32 30.8	2.501	3.286	11.9	20.2
12 23	8 32.69	+38 52.0	2.156	3.013	10.9	18.8	12 23	8 26.99	+33 19.3	2.421	3.289	9.4	20.0
1 2	8 23.68	+39 46.9	2.101	3.013	8.4	18.7	1 2	8 19.65	+34 6.2	2.365	3.292	6.7	19.9
1 12	8 12.47	+40 28.9	2.073	3.014	6.6	18.6	1 12	8 10.65	+34 46.0	2.337	3.294	4.6	19.7
1 22	8 0.21	+40 51.9	2.074	3.013	6.8	18.6	1 22	8 0.83	+35 14.2	2.338	3.297	4.6	19.7
2 1	7 48.27	+40 52.7	2.104	3.012	8.7	18.7	2 1	7 51.24	+35 27.8	2.369	3.299	6.7	19.9
2 11	7 38.00	+40 32.2	2.160	3.010	11.3	18.9	2 11	7 42.90	+35 26.2	2.428	3.301	9.3	20.0
2 21	7 30.33	+39 54.1	2.239	3.008	13.8	19.0	2 21	7 36.55	+35 11.3	2.511	3.303	11.8	20.2
<b>264118</b>	2009 <i>SX</i> <sub>363</sub>		1 19.6 14°63	0°5/19.4	18		<b>50367</b>	2000 <i>CB</i> <sub>80</sub>		1 19.6 190°26	0°2/19.5	18	
12 13	8 30.85	+21 9.1	1.772	2.569	15.6	20.5	12 13	8 29.11	+19 45.7	2.689	3.462	11.5	20.1
12 23	8 26.64	+21 13.7	1.691	2.570	12.1	20.3	12 23	8 24.37	+20 2.4	2.595	3.461	8.9	20.0
1 2	8 19.69	+21 24.3	1.632	2.572	8.1	20.1	1 2	8 17.76	+20 24.2	2.525	3.460	5.9	19.8
1 12	8 10.72	+21 37.3	1.598	2.574	3.5	19.8	1 12	8 9.78	+20 48.8	2.483	3.458	2.6	19.5
1 22	8 0.77	+21 49.2	1.593	2.576	1.3	19.7	1 22	8 1.11	+21 13.3	2.472	3.455	0.9	19.4
2 1	7 51.14	+21 56.8	1.616	2.579	5.9	20.0	2 1	7 52.57	+21 35.2	2.493	3.453	4.3	19.7
2 11	7 43.05	+21 58.5	1.666	2.581	10.2	20.2	2 11	7 44.98	+21 52.6	2.543	3.450	7.5	19.9
2 21	7 37.38	+21 53.8	1.740	2.584	13.9	20.5	2 21	7 38.98	+22 4.6	2.619	3.446	10.3	20.0
<b>285551</b>	2000 <i>JJ</i> <sub>68</sub>		1 19.6 200°77	2°4/20.6	18		<b>77963</b>	2002 <i>JP</i> <sub>1</sub>		1 19.6 194°96	0°6/19.3	18	
12 13	8 33.21	+12 59.9	1.853	2.624	16.0	22.2	12 13	8 33.49	+20 17.0	2.141	2.919	13.9	21.3
12 23	8 28.37	+12 59.2	1.761	2.620	12.8	22.0	12 23	8 28.31	+20 42.1	2.047	2.917	10.8	21.1
1 2	8 20.85	+13 10.9	1.689	2.617	8.9	21.7	1 2	8 20.66	+21 14.1	1.978	2.914	7.2	20.8
1 12	8 11.26	+13 33.6	1.644	2.612	4.8	21.5	1 12	8 11.15	+21 49.2	1.935	2.910	3.2	20.6
1 22	8 0.58	+14 4.6	1.627	2.607	2.5	21.3	1 22	8 0.66	+22 23.3	1.923	2.906	1.3	20.4
2 1	7 50.04	+14 40.1	1.640	2.602	5.9	21.5	2 1	7 50.32	+22 52.7	1.941	2.901	5.4	20.7
2 11	7 40.87	+15 16.3	1.681	2.595	10.2	21.8	2 11	7 41.24	+23 14.7	1.988	2.895	9.3	20.9
2 21	7 34.01	+15 50.1	1.746	2.589	14.0	22.0	2 21	7 34.26	+23 28.8	2.061	2.888	12.7	21.1
<b>424743</b>	2008 <i>SC</i> <sub>299</sub>		1 19.6 156°71	0°3/19.4	18		<b>255927</b>	2006 <i>SO</i> <sub>391</sub>		1 19.6 51°68	7°6/23.6	18	
12 13	8 28.98	+18 44.4	2.303	3.083	13.0	20.6	12 13	8 28.20	+ 0 26.3	1.601	2.346	19.1	19.9
12 23	8 24.58	+19 17.3	2.216	3.086	10.1	20.4	12 23	8 24.55	- 0 2.0	1.534	2.361	16.1	19.8
1 2	8 18.05	+19 58.1	2.153	3.089	6.7	20.2	1 2	8 18.27	- 0 6.4	1.485	2.377	12.7	19.6
1 12	8 9.94	+20 43.3	2.117	3.092	2.9	20.0	1 12	8 10.08	+ 0 15.1	1.459	2.393	9.5	19.4
1 22	8 1.03	+21 28.9	2.111	3.094	1.0	19.8	1 22	8 1.03	+ 1 1.6	1.458	2.409	7.7	19.4
2 1	7 52.28	+22 11.1	2.136	3.096	4.9	20.1	2 1	7 52.33	+ 2 8.7	1.483	2.426	8.6	19.5
2 11	7 44.64	+22 47.0	2.189	3.098	8.5	20.3	2 11	7 45.15	+ 3 29.0	1.534	2.443	11.4	19.7
2 21	7 38.83	+23 15.2	2.268	3.100	11.6	20.5	2 21	7 40.32	+ 4 54.7	1.608	2.460	14.5	19.9
<b>359652</b>	2011 <i>SM</i> <sub>11</sub>		1 19.6 103°83	1°9/18.9	18		<b>231966</b>	2001 <i>QZ</i> <sub>45</sub>		1 19.6 125°42	1°7/20.3	18	
12 13	8 37.06	+24 21.4	1.648	2.443	16.6	21.2	12 13	8 34.22	+14 12.3	1.690	2.468	17.0	21.3
12 23	8 31.55	+24 37.1	1.579	2.457	12.9	21.0	12 23	8 29.21	+14 26.3	1.615	2.481	13.4	21.1
1 2	8 22.95	+24 56.3	1.531	2.470	8.6	20.8	1 2	8 21.38	+14 53.5	1.562	2.494	9.1	20.9
1 12	8 12.13	+25 14.0	1.510	2.484	4.0	20.5	1 12	8 11.47	+15 31.1	1.535	2.506	4.5	20.6
1 22	8 0.36	+25 25.1	1.516	2.497	2.5	20.5	1 22	8 0.59	+16 14.8	1.536	2.518	1.9	20.5
2 1	7 49.12	+25 26.6	1.552	2.510	6.7	20.8	2 1	7 50.06	+16 59.7	1.566	2.529	6.0	20.8
2 11	7 39.81	+25 17.8	1.614	2.522	11.0	21.0	2 11	7 41.16	+17 41.6	1.623	2.539	10.4	21.0
2 21	7 33.31	+25 0.4	1.700	2.534	14.7	21.3	2 21	7 34.80	+18 17.7	1.705	2.549	14.2	21.3
<b>67955</b>	2000 <i>WT</i> <sub>167</sub>		1 19.6 227°51	3°5/21.2	18		<b>36007</b>	1999 <i>NJ</i> <sub>31</sub>		1 19.6 199°54	1°1/19.1	18	
12 13	8 30.90												

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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>43103</b>	1999 <i>XC</i> <sub>21</sub>		1 19.6 76°54	3°9/21.3	18		<b>357405</b>	2003 <i>UM</i> <sub>382</sub>		1 19.6 241°63	0°2/19.5	18	
12 13	8 33.08	+10 3.6	1.618	2.389	17.9	19.4	12 13	8 32.05	+18 29.7	1.861	2.648	15.3	21.9
12 23	8 28.20	+9 47.8	1.555	2.412	14.3	19.2	12 23	8 27.68	+18 58.4	1.763	2.636	12.1	21.7
1 2	8 20.60	+9 47.6	1.513	2.435	10.2	19.0	1 2	8 20.55	+19 37.4	1.687	2.625	8.1	21.4
1 12	8 11.06	+10 2.5	1.496	2.458	6.0	18.8	1 12	8 11.24	+20 23.0	1.638	2.612	3.6	21.1
1 22	8 0.74	+10 29.7	1.505	2.481	3.9	18.7	1 22	8 0.69	+21 10.2	1.617	2.600	1.2	20.9
2 1	7 50.92	+11 5.4	1.543	2.503	6.5	18.9	2 1	7 50.18	+21 54.1	1.625	2.587	6.0	21.2
2 11	7 42.79	+11 44.9	1.608	2.525	10.4	19.2	2 11	7 41.00	+22 30.8	1.661	2.573	10.5	21.4
2 21	7 37.15	+12 24.2	1.697	2.547	14.0	19.5	2 21	7 34.18	+22 58.5	1.722	2.559	14.4	21.6
<b>523655</b>	2011 <i>VJ</i> <sub>24</sub>		1 19.6 348°12	0°3/17.7	18		<b>354868</b>	2006 <i>AO</i> <sub>105</sub>		1 19.6 63°63	0°9/19.9	17	
12 13	8 7.25	+29 56.6	31.438	32.217	1.1	21.1	12 13	8 36.38	+18 31.8	1.325	2.128	19.6	21.4
12 23	8 6.32	+30 0.8	31.346	32.215	0.8	21.1	12 23	8 31.39	+18 20.2	1.268	2.149	15.2	21.2
1 2	8 5.27	+30 4.8	31.282	32.214	0.6	21.0	1 2	8 23.00	+18 18.3	1.230	2.170	10.2	21.0
1 12	8 4.13	+30 8.4	31.247	32.212	0.3	21.0	1 12	8 12.20	+18 22.8	1.217	2.191	4.6	20.7
1 22	8 2.95	+30 11.5	31.243	32.211	0.3	21.0	1 22	8 0.46	+18 29.7	1.229	2.212	1.5	20.6
2 1	8 1.78	+30 14.0	31.269	32.209	0.5	21.0	2 1	7 49.47	+18 35.8	1.269	2.234	6.8	21.0
2 11	8 0.67	+30 15.8	31.325	32.207	0.8	21.1	2 11	7 40.71	+18 38.9	1.335	2.255	11.8	21.3
2 21	7 59.67	+30 16.7	31.408	32.206	1.1	21.1	2 21	7 35.07	+18 38.3	1.423	2.277	15.9	21.6
<b>239339</b>	2007 <i>RG</i> <sub>103</sub>		1 19.6 46°31	2°1/18.6	18		<b>502944</b>	2015 <i>EC</i> <sub>54</sub>		1 19.6 213°70	3°1/21.2	18	
12 13	8 30.24	+25 4.7	2.013	2.809	14.0	20.6	12 13	8 27.45	+10 11.7	2.419	3.174	13.1	21.7
12 23	8 25.81	+25 28.9	1.942	2.821	10.8	20.4	12 23	8 23.24	+9 56.0	2.325	3.173	10.5	21.5
1 2	8 18.94	+25 55.9	1.893	2.833	7.2	20.2	1 2	8 17.10	+9 50.7	2.255	3.172	7.6	21.3
1 12	8 10.34	+26 21.3	1.872	2.845	3.5	20.0	1 12	8 9.54	+9 55.6	2.211	3.170	4.6	21.1
1 22	8 0.97	+26 40.9	1.879	2.857	2.5	19.9	1 22	8 1.28	+10 9.5	2.196	3.169	3.1	21.0
2 1	7 51.96	+26 51.7	1.915	2.870	5.9	20.2	2 1	7 53.16	+10 30.6	2.211	3.168	5.1	21.2
2 11	7 44.38	+26 52.7	1.978	2.883	9.5	20.4	2 11	7 46.01	+10 56.0	2.254	3.166	8.1	21.3
2 21	7 38.99	+26 44.4	2.066	2.896	12.6	20.6	2 21	7 40.50	+11 23.2	2.324	3.165	11.0	21.5
<b>272208</b>	2005 <i>QF</i> <sub>26</sub>		1 19.6 162°38	2°2/20.7	18		<b>181076</b>	2005 <i>QG</i> <sub>23</sub>		1 19.6 160°44	5°4/16.9	18	
12 13	8 34.27	+11 57.8	1.893	2.656	15.9	21.5	12 13	8 37.71	+35 34.5	2.307	3.085	13.0	20.8
12 23	8 29.04	+12 15.7	1.808	2.664	12.7	21.3	12 23	8 31.61	+36 22.4	2.230	3.091	10.4	20.7
1 2	8 21.21	+12 47.8	1.745	2.670	8.8	21.0	1 2	8 22.83	+37 6.1	2.177	3.097	7.7	20.5
1 12	8 11.40	+13 31.9	1.708	2.676	4.7	20.8	1 12	8 12.11	+37 39.0	2.152	3.102	5.7	20.4
1 22	8 0.61	+14 24.2	1.700	2.681	2.3	20.7	1 22	8 0.48	+37 55.9	2.156	3.106	5.7	20.4
2 1	7 50.02	+15 19.8	1.723	2.685	5.7	20.9	2 1	7 49.22	+37 54.1	2.189	3.110	7.7	20.5
2 11	7 40.84	+16 14.1	1.774	2.688	9.8	21.1	2 11	7 39.52	+37 34.2	2.250	3.113	10.4	20.7
2 21	7 33.94	+17 3.6	1.851	2.690	13.5	21.4	2 21	7 32.21	+36 59.6	2.335	3.116	12.9	20.9
<b>458431</b>	2011 <i>AF</i> <sub>43</sub>		1 19.6 294°36	0°5/19.3	18		<b>238809</b>	2005 <i>MT</i> <sub>13</sub>		1 19.6 247°26	1°6/20.7	18	
12 13	8 29.14	+19 48.7	1.883	2.677	14.9	21.4	12 13	8 26.55	+12 43.2	2.482	3.246	12.6	21.0
12 23	8 25.38	+20 13.3	1.786	2.663	11.7	21.2	12 23	8 22.60	+13 4.7	2.383	3.240	10.0	20.8
1 2	8 18.97	+20 46.5	1.711	2.650	7.8	20.9	1 2	8 16.73	+13 37.0	2.306	3.233	6.9	20.6
1 12	8 10.50	+21 24.8	1.662	2.637	3.4	20.6	1 12	8 9.41	+14 18.6	2.258	3.226	3.6	20.4
1 22	8 0.88	+22 3.6	1.641	2.624	1.4	20.5	1 22	8 1.32	+15 6.5	2.238	3.219	1.7	20.2
2 1	7 51.32	+22 38.4	1.649	2.611	5.9	20.7	2 1	7 53.30	+15 57.4	2.250	3.212	4.5	20.4
2 11	7 43.07	+23 5.8	1.685	2.598	10.2	21.0	2 11	7 46.18	+16 47.6	2.291	3.205	7.9	20.6
2 21	7 37.08	+23 24.6	1.744	2.586	14.0	21.2	2 21	7 40.66	+17 34.3	2.358	3.198	10.9	20.8
<b>329248</b>	1995 <i>QQ</i> <sub>6</sub>		1 19.6 71°79	2°5/18.9	17		<b>380671</b>	2005 <i>GZ</i> <sub>19</sub>		1 19.6 268°12	3°7/21.6	18	
12 13	8 40.64	+25 3.6	1.314	2.120	19.5	21.0	12 13	8 26.85	+8 18.9	2.324	3.076	13.7	21.3
12 23	8 34.74	+25 23.1	1.264	2.147	15.1	20.8	12 23	8 22.87	+8 6.1	2.230	3.073	11.1	21.1
1 2	8 25.18	+25 46.2	1.234	2.175	10.0	20.6	1 2	8 16.91	+8 5.7	2.158	3.071	8.1	20.9
1 12	8 13.10	+26 5.9	1.229	2.203	4.7	20.4	1 12	8 9.48	+8 17.6	2.113	3.068	5.2	20.7
1 22	8 0.15	+26 16.1	1.250	2.230	3.1	20.3	1 22	8 1.31	+8 40.8	2.096	3.066	3.7	20.6
2 1	7 48.16	+26 13.7	1.299	2.257	7.7	20.7	2 1	7 53.25	+9 12.7	2.108	3.063	5.4	20.7
2 11	7 38.72	+25 59.2	1.373	2.284	12.3	21.0	2 11	7 46.18	+9 50.2	2.149	3.061	8.4	20.9
2 21	7 32.68	+25 35.3	1.469	2.310	16.3	21.3	2 21	7 40.79	+10 29.8	2.216	3.059	11.4	21.1
<b>294274</b>	2007 <i>UX</i> <sub>102</sub>		1 19.6 320°59	5°7/16.2	18		<b>422684</b>	1999 <i>XB</i> <sub>146</sub>		1 19.6 88°88	1°1/19.0	18	
12 13	8 31.51	+35 32.4	2.316	3.105	12.6	20.7	12 13	8 30.25	+21 36.0	2.066	2.855	13.9	21.6
12 23	8 26.94	+36 36.5	2.237	3.104	10.1	20.6	12 23	8 25.80	+22 6.1	1.988	2.863	10.8	21.5
1 2	8 19.82	+37 37.8	2.182	3.103	7.6	20.4	1 2	8 18.97	+22 42.1	1.933	2.872	7.1	21.2
1 12	8 10.80	+38 29.4	2.154	3.101	5.9	20.3	1 12	8 10.41	+23 20.0	1.905	2.880	3.2	21.0
1 22	8 0.81	+39 5.8	2.154	3.100	6.0	20.3	1 22	8 1.02	+23 55.4	1.906	2.888	1.7	20.9
2 1	7 51.03	+39 23.2	2.183	3.099	8.0	20.4	2 1	7 51.91	+24 24.5	1.937	2.896	5.5	21.2
2 11	7 42.61	+39 21.6	2.238	3.097	10.6	20.6	2 11	7 44.11	+24 45.2	1.996	2.904	9.2	21.4
2 21	7 36.42	+39 3.1	2.316	3.096	13.0	20.7	2 21	7 38.41	+24 57.0	2.080	2.912	12.5	21.7
<b>241379</b>	2008 <i>SW</i> <sub>77</sub>		1 19.6 299°28	1°2/19.2	18		<b>46968</b>	1998 <i>SJ</i> <sub>135</sub>		1 19.6 160°04	1°8/20.6	18	
12 13	8 32.70	+21 40.8	1.390	2.201	18.4	21.2	12 13	8 31.50	+13 17.1	2.165	2.929	14.2	19.4
12 23	8 29.07	+21 55.4	1.304	2.191	14.5	20.9	12 23	8 26.59	+13 29.2	2.078	2.935	11.2	19.2
1 2	8 21.92	+22 18.5	1.237	2.181	9.7	20.6	1 2	8 19.43	+13 52.3	2.014	2.941	7.7	19.0
1 12	8 11.95	+22 45.1	1.195	2.171	4.3	20.3	1 12	8 10.61	+14 24.6	1.977	2.946	4.0	18.8
1 22	8 0.43	+23 9.5	1.179	2.161	2.0	20.1	1 22	8 0.96	+15 3.1	1.969	2.950	1.9	18.7
2 1	7 49.08	+23 26.4	1.189	2.152	7.5	20.4	2 1	7 51.51	+15 44.1	1.992	2.954	5.1	18.9
2 11	7 39.67	+23 33.2	1.224	2.142	12.8	20.6	2 11	7 43.24	+16 24.2	2.044	2.957	8.7	19.1
2 21	7 33.41	+23 29.9	1.281	2.133	17.4	20.9	2 21	7 36.92	+17 0.7	2.122	2.960	12.0	19.3
<b>387167</b>	2012 <i>TD</i> <sub>251</sub>		1 19.6 155°23	2°5/21.1	17		<b>39713</b>	1996 <i>TE</i> <sub>57</sub>		1 19.6 127°59	2°8/20.8	18	
12 13	8 27.64	+10 44.6											

EPHEMERIDES

1 19.6

1 19.6

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>198488</b>	2004 <i>XT</i> <sub>57</sub>		1 19.6	66°89	0°8/20.0	18	<b>176737</b>	2002 <i>RO</i> <sub>61</sub>		1 19.6	80°43	6°3/23.3	18
12 13	8 29.46	+16 43.5	1.989	2.772	14.6	20.8	12 13	8 31.30	+1 18.1	1.801	2.533	17.7	20.1
12 23	8 25.17	+16 53.5	1.912	2.782	11.4	20.6	12 23	8 26.58	+1 12.7	1.738	2.560	14.7	20.0
1 2	8 18.53	+17 12.5	1.858	2.793	7.7	20.4	1 2	8 19.44	+1 29.2	1.694	2.587	11.3	19.8
1 12	8 10.21	+17 38.0	1.831	2.804	3.6	20.2	1 12	8 10.62	+2 8.1	1.675	2.613	8.1	19.7
1 22	8 1.11	+18 6.6	1.832	2.815	1.2	20.0	1 22	8 1.08	+3 6.8	1.683	2.639	6.3	19.6
2 1	7 52.29	+18 35.0	1.862	2.825	5.2	20.3	2 1	7 51.95	+4 20.6	1.719	2.665	7.3	19.7
2 11	7 44.80	+19 0.2	1.921	2.836	9.0	20.6	2 11	7 44.28	+5 42.5	1.782	2.690	10.1	20.0
2 21	7 39.38	+19 20.6	2.004	2.847	12.4	20.8	2 21	7 38.80	+7 6.1	1.871	2.715	13.1	20.2
<b>478389</b>	2012 <i>BH</i> <sub>27</sub>		1 19.6	45°87	1°9/19.6	16	<b>117422</b>	2005 <i>AG</i> <sub>18</sub>		1 19.6	19°05	0°4/19.5	18
12 13	8 51.37	+29 48.3	0.958	1.776	24.2	20.1	12 13	8 30.76	+20 27.8	1.257	2.076	19.4	19.6
12 23	8 44.49	+28 31.6	0.897	1.786	19.2	19.8	12 23	8 27.55	+20 30.4	1.190	2.081	15.2	19.3
1 2	8 32.34	+27 4.4	0.853	1.795	13.0	19.5	1 2	8 20.81	+20 41.9	1.142	2.087	10.1	19.0
1 12	8 16.43	+25 21.8	0.831	1.806	6.0	19.2	1 12	8 11.43	+20 58.4	1.117	2.094	4.5	18.7
1 22	7 59.24	+23 24.2	0.834	1.817	2.6	19.0	1 22	8 0.81	+21 14.7	1.118	2.101	1.5	18.6
2 1	7 43.61	+21 18.7	0.864	1.828	9.2	19.4	2 1	7 50.70	+21 26.3	1.144	2.110	7.3	18.9
2 11	7 31.81	+19 15.7	0.918	1.840	15.5	19.8	2 11	7 42.73	+21 31.0	1.195	2.119	12.5	19.3
2 21	7 24.84	+17 23.2	0.992	1.852	20.7	20.1	2 21	7 37.94	+21 28.2	1.267	2.129	16.9	19.6
<b>402590</b>	2006 <i>SB</i> <sub>52</sub>		1 19.6	92°56	1°1/20.2	18	<b>233597</b>	2007 <i>RJ</i> <sub>135</sub>		1 19.6	180°73	1°1/19.1	18
12 13	8 33.32	+15 20.9	1.875	2.651	15.6	22.2	12 13	8 30.37	+23 0.8	2.474	3.255	12.1	20.8
12 23	8 28.13	+15 37.9	1.810	2.675	12.2	22.1	12 23	8 25.56	+23 16.5	2.384	3.255	9.4	20.6
1 2	8 20.46	+16 5.7	1.766	2.698	8.2	21.9	1 2	8 18.68	+23 35.5	2.319	3.256	6.2	20.4
1 12	8 11.03	+16 41.1	1.749	2.721	3.9	21.6	1 12	8 10.30	+23 54.7	2.281	3.256	2.8	20.1
1 22	8 0.87	+17 20.2	1.762	2.744	1.4	21.5	1 22	8 1.18	+24 11.1	2.274	3.255	1.6	20.0
2 1	7 51.14	+17 58.8	1.804	2.766	5.4	21.8	2 1	7 52.25	+24 22.1	2.297	3.255	4.9	20.3
2 11	7 42.92	+18 33.7	1.874	2.788	9.3	22.1	2 11	7 44.41	+24 26.4	2.350	3.254	8.2	20.5
2 21	7 36.97	+19 2.7	1.969	2.809	12.7	22.4	2 21	7 38.37	+24 23.9	2.428	3.254	11.1	20.7
<b>319653</b>	2006 <i>TG</i> <sub>14</sub>		1 19.6	37°25	6°7/23.4	18	<b>85360</b>	1995 <i>WM</i> <sub>16</sub>		1 19.6	104°57	0°8/20.1	18
12 13	8 27.26	+1 55.8	1.324	2.093	21.3	20.3	12 13	8 28.04	+16 56.5	2.464	3.238	12.4	20.2
12 23	8 24.26	+1 59.2	1.268	2.115	17.6	20.1	12 23	8 23.68	+17 1.0	2.377	3.242	9.7	20.1
1 2	8 18.28	+2 31.3	1.230	2.138	13.4	19.9	1 2	8 17.40	+17 12.3	2.314	3.247	6.5	19.9
1 12	8 10.17	+3 32.4	1.213	2.161	9.2	19.7	1 12	8 9.72	+17 28.6	2.278	3.251	3.1	19.7
1 22	8 1.15	+4 58.0	1.221	2.186	6.8	19.6	1 22	8 1.38	+17 47.6	2.272	3.255	1.1	19.5
2 1	7 52.62	+6 39.9	1.255	2.211	8.2	19.8	2 1	7 53.23	+18 6.8	2.297	3.259	4.4	19.8
2 11	7 45.92	+8 28.0	1.314	2.237	11.7	20.1	2 11	7 46.10	+18 24.2	2.351	3.264	7.7	20.0
2 21	7 41.88	+10 12.9	1.397	2.263	15.4	20.3	2 21	7 40.63	+18 38.3	2.430	3.268	10.7	20.2
<b>291676</b>	2006 <i>HF</i> <sub>83</sub>		1 19.6	252°60	2°2/21.2	17	<b>217766</b>	2000 <i>QF</i> <sub>172</sub>		1 19.6	62°17	4°5/22.1	18
12 13	8 23.52	+10 20.8	3.620	4.362	9.3	21.3	12 13	8 31.34	+6 18.7	1.736	2.492	17.4	20.3
12 23	8 19.63	+10 15.3	3.508	4.349	7.5	21.2	12 23	8 26.62	+6 19.2	1.680	2.524	14.1	20.1
1 2	8 14.45	+10 17.0	3.421	4.335	5.4	21.0	1 2	8 19.46	+6 38.3	1.645	2.557	10.3	20.0
1 12	8 8.33	+10 25.5	3.363	4.322	3.3	20.8	1 12	8 10.62	+7 15.1	1.634	2.589	6.5	19.8
1 22	8 1.72	+10 40.0	3.335	4.308	2.2	20.7	1 22	8 1.13	+8 6.1	1.651	2.621	4.5	19.8
2 1	7 55.14	+10 59.1	3.338	4.294	3.6	20.8	2 1	7 52.13	+9 6.6	1.697	2.653	6.4	20.0
2 11	7 49.15	+11 21.1	3.371	4.280	5.8	21.0	2 11	7 44.69	+10 10.7	1.770	2.685	9.7	20.2
2 21	7 44.17	+11 44.3	3.432	4.265	8.0	21.1	2 21	7 39.49	+11 13.4	1.867	2.716	12.9	20.5
<b>369283</b>	2009 <i>RT</i> <sub>25</sub>		1 19.6	144°46	6°0/23.2	18	<b>56578</b>	2000 <i>JJ</i> <sub>26</sub>		1 19.6	122°51	5°4/17.5	18
12 13	8 28.38	+0 55.4	2.263	2.981	14.9	21.3	12 13	8 40.05	+32 2.7	1.719	2.512	16.2	18.6
12 23	8 24.04	+0 35.8	2.176	2.987	12.5	21.1	12 23	8 34.10	+32 57.0	1.654	2.526	12.8	18.4
1 2	8 17.67	+0 33.4	2.111	2.994	9.9	20.9	1 2	8 24.82	+33 49.4	1.610	2.540	9.1	18.2
1 12	8 9.82	+0 49.6	2.070	3.000	7.4	20.8	1 12	8 13.12	+34 31.5	1.593	2.553	6.0	18.0
1 22	8 1.25	+1 23.7	2.057	3.005	6.0	20.7	1 22	8 0.34	+34 56.3	1.604	2.566	5.8	18.0
2 1	7 52.83	+2 13.3	2.072	3.010	6.9	20.8	2 1	7 48.13	+35 0.0	1.643	2.578	8.6	18.2
2 11	7 45.47	+3 13.7	2.116	3.015	9.2	20.9	2 11	7 38.00	+34 43.5	1.708	2.590	12.1	18.5
2 21	7 39.83	+4 20.1	2.185	3.020	11.8	21.1	2 21	7 30.90	+34 11.1	1.796	2.601	15.3	18.7
<b>19486</b>	1998 <i>HW</i> <sub>122</sub>		1 19.6	351°58	2°7/18.2	18	<b>103228</b>	1999 <i>YT</i> <sub>13</sub>		1 19.6	305°76	0°8/19.4	18
12 13	8 29.55	+23 44.6	1.842	2.643	14.9	17.6	12 13	8 34.02	+21 23.6	1.387	2.195	18.5	19.2
12 23	8 25.78	+24 44.7	1.759	2.641	11.6	17.3	12 23	8 30.03	+21 30.4	1.305	2.191	14.6	18.9
1 2	8 19.28	+25 52.0	1.700	2.640	7.7	17.1	1 2	8 22.52	+21 44.9	1.244	2.186	9.8	18.6
1 12	8 10.68	+27 0.5	1.667	2.640	3.9	16.9	1 12	8 12.26	+22 2.8	1.206	2.182	4.3	18.3
1 22	8 0.97	+28 3.2	1.662	2.639	3.2	16.8	1 22	8 0.57	+22 18.7	1.195	2.178	1.7	18.1
2 1	7 51.43	+28 54.4	1.686	2.638	6.8	17.1	2 1	7 49.17	+22 28.3	1.211	2.174	7.3	18.4
2 11	7 43.33	+29 30.9	1.737	2.638	10.8	17.3	2 11	7 39.77	+22 29.3	1.252	2.170	12.5	18.7
2 21	7 37.61	+29 52.4	1.811	2.638	14.2	17.5	2 21	7 33.52	+22 22.1	1.314	2.167	17.1	19.0
<b>31725</b>	Anushazaman		1 19.6	217°59	0°3/19.5	18	<b>341465</b>	2007 <i>TN</i> <sub>315</sub>		1 19.6	125°13	0°2/19.8	15
12 13	8 30.38	+19 10.6	2.021	2.806	14.3	19.1	12 13	8 28.89	+18 17.3	2.637	3.408	11.7	22.6
12 23	8 26.06	+19 36.9	1.930	2.804	11.2	18.9	12 23	8 24.18	+18 31.8	2.554	3.419	9.1	22.4
1 2	8 19.28	+20 11.4	1.863	2.801	7.4	18.6	1 2	8 17.64	+18 52.2	2.496	3.430	6.1	22.2
1 12	8 10.63	+20 50.7	1.823	2.797	3.3	18.4	1 12	8 9.81	+19 16.3	2.466	3.440	2.7	22.0
1 22	8 1.00	+21 30.6	1.811	2.794	1.2	18.2	1 22	8 1.37	+19 41.2	2.467	3.450	0.8	21.9
2 1	7 51.52	+22 6.8	1.829	2.791	5.5	18.5	2 1	7 53.14	+20 4.6	2.499	3.460	4.2	22.2
2 11	7 43.32	+22 36.3	1.875	2.787	9.5	18.7	2 11	7 45.91	+20 24.5	2.560	3.470	7.4	22.4
2 21	7 37.23	+22 57.8	1.946	2.783	13.0	18.9	2 21	7 40.27	+20 39.8	2.648	3.479	10.1	22.6
<b>293677</b>	2007 <i>PX</i> <sub>26</sub>		1 19.6	49°44	0°7/19.9	18	<b>227554</b>	2005 <i>YK</i> <sub>170</sub>		1 19.6	170°21	1°2/20.3	18
12 13	8 32.88	+17 56.3	1.341	2.148	19.1	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>246155</b>	2007 <i>PR</i> <sub>33</sub>		1 19.6 143°69	2°0/20.5	18		<b>463772</b>	2014 <i>SK</i> <sub>183</sub>		1 19.6 350°88	2°1/18.7	18	
12 13	8 33.93	+14 25.1	1.830	2.604	16.0	21.2	12 13	8 26.32	+21 9.7	1.320	2.145	18.4	20.2
12 23	8 28.86	+14 19.2	1.749	2.612	12.7	21.0	12 23	8 24.25	+21 59.7	1.242	2.138	14.4	19.9
1 2	8 21.14	+14 24.0	1.690	2.620	8.7	20.7	1 2	8 18.80	+23 2.2	1.185	2.132	9.6	19.6
1 12	8 11.47	+14 38.0	1.657	2.627	4.5	20.5	1 12	8 10.68	+24 10.9	1.151	2.127	4.4	19.3
1 22	8 0.87	+14 58.4	1.652	2.633	2.2	20.3	1 22	8 1.12	+25 17.2	1.142	2.123	2.8	19.2
2 1	7 50.56	+15 21.9	1.677	2.639	5.8	20.6	2 1	7 51.74	+26 13.2	1.159	2.120	7.9	19.5
2 11	7 41.74	+15 45.4	1.730	2.645	9.9	20.8	2 11	7 44.25	+26 53.9	1.199	2.118	12.9	19.8
2 21	7 35.25	+16 6.6	1.807	2.650	13.6	21.1	2 21	7 39.79	+27 18.0	1.261	2.118	17.4	20.0
<b>90816</b>	1995 <i>OZ</i> <sub>3</sub>		1 19.6 45°36	1°6/19.1	18		<b>138901</b>	2000 <i>YU</i> <sub>98</sub>		1 19.6 310°97	0°2/19.7	18	
12 13	8 32.82	+23 53.5	1.712	2.511	15.9	19.1	12 13	8 31.66	+19 52.1	1.482	2.288	17.7	20.0
12 23	8 28.24	+24 1.8	1.640	2.521	12.4	18.9	12 23	8 28.07	+19 43.7	1.390	2.273	14.0	19.7
1 2	8 20.81	+24 13.7	1.591	2.531	8.2	18.7	1 2	8 21.21	+19 42.8	1.318	2.259	9.5	19.4
1 12	8 11.32	+24 24.9	1.567	2.542	3.7	18.5	1 12	8 11.73	+19 46.7	1.270	2.246	4.3	19.1
1 22	8 0.93	+24 31.3	1.571	2.553	2.1	18.4	1 22	8 0.80	+19 51.6	1.249	2.232	1.3	18.8
2 1	7 51.00	+24 30.2	1.604	2.564	6.3	18.7	2 1	7 50.00	+19 54.3	1.255	2.219	6.9	19.1
2 11	7 42.79	+24 20.6	1.663	2.575	10.5	18.9	2 11	7 40.93	+19 52.5	1.286	2.207	12.0	19.4
2 21	7 37.13	+24 3.6	1.746	2.587	14.1	19.2	2 21	7 34.75	+19 45.6	1.339	2.195	16.6	19.6
<b>136285</b>	2003 <i>YF</i> <sub>140</sub>		1 19.6 268°01	0°2/19.5	18		<b>451416</b>	2011 <i>QR</i> <sub>53</sub>		1 19.6 219°96	1°4/19.1	18	
12 13	8 27.53	+17 47.9	2.299	3.080	12.9	20.2	12 13	8 35.65	+22 22.5	1.723	2.514	16.2	22.4
12 23	8 23.62	+18 30.5	2.203	3.074	10.1	20.0	12 23	8 30.74	+22 43.4	1.632	2.508	12.7	22.1
1 2	8 17.58	+19 22.6	2.131	3.068	6.7	19.8	1 2	8 22.74	+23 10.7	1.562	2.501	8.5	21.8
1 12	8 9.90	+20 20.8	2.087	3.062	3.0	19.5	1 12	8 12.33	+23 39.8	1.519	2.494	3.8	21.5
1 22	8 1.35	+21 20.7	2.072	3.055	1.0	19.4	1 22	8 0.63	+24 5.2	1.504	2.486	2.0	21.4
2 1	7 52.85	+22 17.8	2.088	3.049	4.9	19.6	2 1	7 49.10	+24 22.7	1.518	2.477	6.6	21.7
2 11	7 45.38	+23 8.4	2.133	3.043	8.6	19.8	2 11	7 39.21	+24 30.2	1.559	2.469	11.2	21.9
2 21	7 39.70	+23 50.3	2.203	3.037	11.8	20.0	2 21	7 32.01	+24 27.9	1.624	2.459	15.2	22.1
<b>316441</b>	2010 <i>UY</i> <sub>21</sub>		1 19.6 254°73	1°4/18.9	18		<b>55402</b>	2001 <i>SS</i> <sub>322</sub>		1 19.6 27°94	1°8/18.7	18	
12 13	8 31.76	+21 49.4	1.888	2.681	14.9	21.0	12 13	8 27.80	+22 28.7	1.937	2.737	14.3	18.8
12 23	8 27.48	+22 21.3	1.793	2.670	11.7	20.7	12 23	8 24.14	+23 12.2	1.863	2.745	11.1	18.6
1 2	8 20.45	+23 0.5	1.720	2.659	7.8	20.5	1 2	8 18.03	+24 2.0	1.812	2.753	7.3	18.4
1 12	8 11.28	+23 42.6	1.674	2.649	3.5	20.2	1 12	8 10.12	+24 53.4	1.787	2.762	3.4	18.2
1 22	8 0.92	+24 22.3	1.656	2.637	2.0	20.0	1 22	8 1.34	+25 40.8	1.791	2.771	2.3	18.1
2 1	7 50.63	+24 55.0	1.667	2.626	6.2	20.3	2 1	7 52.84	+26 20.0	1.824	2.781	5.9	18.4
2 11	7 41.72	+25 17.7	1.706	2.614	10.5	20.5	2 11	7 45.69	+26 48.2	1.884	2.792	9.7	18.6
2 21	7 35.17	+25 29.9	1.769	2.603	14.2	20.7	2 21	7 40.71	+27 5.0	1.968	2.802	13.0	18.9
<b>314899</b>	2006 <i>VZ</i> <sub>83</sub>		1 19.6 59°26	1°2/19.2	18		<b>419550</b>	2010 <i>OM</i> <sub>90</sub>		1 19.6 68°36	0°1/19.7	18	
12 13	8 32.43	+21 24.1	1.599	2.400	16.8	21.2	12 13	8 33.65	+18 29.6	1.672	2.463	16.6	21.4
12 23	8 28.09	+21 49.3	1.531	2.413	13.0	21.0	12 23	8 28.70	+18 45.7	1.613	2.487	12.9	21.2
1 2	8 20.80	+22 22.0	1.486	2.427	8.6	20.8	1 2	8 21.01	+19 10.7	1.575	2.512	8.5	21.0
1 12	8 11.35	+22 57.1	1.466	2.441	3.8	20.5	1 12	8 11.39	+19 40.7	1.562	2.537	3.8	20.7
1 22	8 0.94	+23 29.2	1.473	2.455	1.8	20.4	1 22	8 1.00	+20 11.2	1.578	2.562	1.1	20.6
2 1	7 50.98	+23 53.9	1.508	2.469	6.4	20.7	2 1	7 51.14	+20 38.2	1.623	2.586	5.8	21.0
2 11	7 42.81	+24 9.1	1.570	2.484	10.8	21.0	2 11	7 43.03	+20 59.0	1.695	2.611	10.0	21.3
2 21	7 37.30	+24 14.5	1.655	2.498	14.6	21.3	2 21	7 37.44	+21 12.9	1.791	2.635	13.6	21.6
<b>287135</b>	2002 <i>RG</i> <sub>198</sub>		1 19.6 105°35	2°3/18.6	18		<b>214332</b>	2005 <i>JZ</i> <sub>78</sub>		1 19.6 124°89	3°7/17.8	18	
12 13	8 35.99	+24 58.4	1.953	2.739	14.7	21.7	12 13	8 35.53	+28 36.2	2.051	2.839	14.1	21.2
12 23	8 30.31	+25 34.1	1.887	2.761	11.4	21.5	12 23	8 30.05	+29 28.9	1.980	2.853	11.0	21.0
1 2	8 21.98	+26 12.9	1.844	2.781	7.6	21.3	1 2	8 21.91	+30 22.7	1.933	2.867	7.5	20.9
1 12	8 11.79	+26 49.5	1.829	2.801	3.7	21.1	1 12	8 11.82	+31 11.3	1.914	2.880	4.5	20.7
1 22	8 0.81	+27 18.8	1.843	2.821	2.8	21.1	1 22	8 0.84	+31 48.7	1.923	2.893	4.1	20.7
2 1	7 50.30	+27 37.3	1.887	2.840	6.2	21.3	2 1	7 50.23	+32 11.3	1.963	2.905	6.9	20.9
2 11	7 41.40	+27 44.0	1.959	2.859	9.8	21.6	2 11	7 41.16	+32 18.3	2.030	2.916	10.2	21.1
2 21	7 34.91	+27 40.1	2.056	2.877	13.0	21.8	2 21	7 34.48	+32 11.4	2.121	2.928	13.2	21.3
<b>523742</b>	2014 <i>TZ</i> <sub>85</sub>		1 19.6 156°35	0°2/17.6	18		<b>164463</b>	2006 <i>DE</i> <sub>152</sub>		1 19.7 218°21	2°5/20.7	18	
12 13	8 6.05	+30 27.6	53.332	54.112	0.6	22.2	12 13	8 32.01	+12 39.3	1.831	2.603	16.1	20.7
12 23	8 5.43	+30 30.1	53.245	54.114	0.5	22.2	12 23	8 27.58	+12 40.8	1.737	2.598	12.9	20.4
1 2	8 4.74	+30 32.5	53.184	54.115	0.3	22.2	1 2	8 20.47	+12 55.4	1.664	2.592	9.0	20.2
1 12	8 4.00	+30 34.6	53.153	54.117	0.2	22.2	1 12	8 11.29	+13 21.9	1.617	2.585	4.9	19.9
1 22	8 3.24	+30 36.5	53.152	54.119	0.2	22.2	1 22	8 0.99	+13 57.4	1.599	2.579	2.5	19.8
2 1	8 2.48	+30 38.0	53.182	54.121	0.3	22.2	2 1	7 50.79	+14 37.8	1.609	2.571	5.9	20.0
2 11	8 1.76	+30 39.0	53.241	54.122	0.5	22.2	2 11	7 41.93	+15 19.1	1.647	2.564	10.2	20.2
2 21	8 1.10	+30 39.5	53.327	54.124	0.6	22.2	2 21	7 35.35	+15 57.7	1.709	2.556	14.1	20.4
<b>396868</b>	2004 <i>TA</i> <sub>44</sub>		1 19.6 57°41	1°1/19.3	16		<b>394361</b>	2007 <i>CO</i> <sub>14</sub>		1 19.7 19°21	2°0/20.4	18	
12 13	8 36.00	+21 15.2	1.300	2.110	19.5	21.5	12 13	8 28.36	+14 18.4	1.077	1.900	21.8	20.4
12 23	8 31.22	+21 34.5	1.249	2.135	15.1	21.3	12 23	8 26.14	+14 28.7	1.014	1.905	17.2	20.1
1 2	8 22.97	+22 1.9	1.217	2.160	9.9	21.0	1 2	8 20.16	+14 58.5	0.968	1.910	11.8	19.9
1 12	8 12.29	+22 31.8	1.210	2.186	4.3	20.8	1 12	8 11.30	+15 44.8	0.943	1.917	5.8	19.5
1 22	8 0.68	+22 58.0	1.229	2.211	1.9	20.7	1 22	8 1.00	+16 41.3	0.942	1.925	2.2	19.3
2 1	7 49.88	+23 16.0	1.275	2.237	7.1	21.1	2 1	7 51.17	+17 40.0	0.965	1.933	7.7	19.7
2 11	7 41.39	+23 24.1	1.346	2.263	11.9	21.4	2 11	7 43.59	+18 33.8	1.012	1.943	13.4	20.0
2 21	7 36.07	+23 22.9	1.439	2.289	16.0	21.8	2 21	7 39.42	+19 18.2	1.078	1.954	18.2	20.4
<b>221878</b>	2008 <i>HY</i> <sub>16</sub>		1 19.6 203°52	0°2/19.6	18		<b>345535</b>	2006 <i>QX</i> <sub>69</sub>		1 19.7 81°86	1°5/18.9	18	
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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>244341</b>	2002 <i>JW</i> <sub>109</sub>		1 19.7 188°79	0°4/19.8	18		<b>416264</b>	2003 <i>FF</i> <sub>29</sub>		1 19.7 340°83	3°3/18.1	18	
12 13	8 33.67	+18 3.5	2.146	2.918	14.0	21.7	12 13	8 32.38	+27 0.9	1.849	2.648	14.9	21.0
12 23	8 28.45	+18 14.2	2.053	2.918	11.0	21.5	12 23	8 28.03	+27 43.1	1.768	2.648	11.7	20.8
1 2	8 20.81	+18 32.4	1.983	2.916	7.4	21.2	1 2	8 20.83	+28 28.4	1.709	2.647	7.9	20.5
1 12	8 11.37	+18 55.4	1.941	2.914	3.4	21.0	1 12	8 11.49	+29 10.6	1.677	2.647	4.4	20.3
1 22	8 1.00	+19 20.0	1.929	2.912	1.0	20.8	1 22	8 1.06	+29 43.8	1.672	2.646	3.8	20.3
2 1	7 50.80	+19 42.8	1.947	2.908	5.2	21.1	2 1	7 50.89	+30 3.7	1.696	2.646	7.1	20.5
2 11	7 41.84	+20 1.7	1.994	2.905	9.1	21.3	2 11	7 42.28	+30 8.8	1.747	2.646	10.9	20.7
2 21	7 34.95	+20 15.3	2.067	2.900	12.5	21.5	2 21	7 36.16	+30 0.5	1.821	2.646	14.3	20.9
<b>176319</b>	2001 <i>SW</i> <sub>206</sub>		1 19.7 295°42	4°2/21.6	18		<b>331206</b>	2011 <i>BU</i> <sub>33</sub>		1 19.7 278°15	0°4/19.9	18	
12 13	8 28.02	+8 42.1	1.758	2.528	16.7	19.9	12 13	8 29.23	+17 11.4	1.976	2.761	14.6	21.3
12 23	8 24.66	+8 33.8	1.658	2.513	13.7	19.7	12 23	8 25.27	+17 34.5	1.885	2.757	11.5	21.1
1 2	8 18.66	+8 42.1	1.579	2.499	10.0	19.4	1 2	8 18.85	+18 7.6	1.818	2.754	7.7	20.8
1 12	8 10.56	+9 7.2	1.523	2.484	6.2	19.2	1 12	8 10.58	+18 47.6	1.776	2.750	3.5	20.6
1 22	8 1.26	+9 47.6	1.495	2.469	4.2	19.0	1 22	8 1.34	+19 30.6	1.764	2.747	1.0	20.4
2 1	7 51.94	+10 39.3	1.494	2.454	6.6	19.1	2 1	7 52.22	+20 12.1	1.781	2.744	5.4	20.7
2 11	7 43.88	+11 37.2	1.521	2.440	10.7	19.3	2 11	7 44.36	+20 48.7	1.825	2.740	9.5	20.9
2 21	7 38.06	+12 36.1	1.571	2.426	14.6	19.5	2 21	7 38.59	+21 18.3	1.895	2.737	13.0	21.1
<b>217119</b>	2002 <i>AK</i> <sub>12</sub>		1 19.7 77°36	0°6/19.4	18		<b>516373</b>	2017 <i>FA</i> <sub>42</sub>		1 19.7 291°72	2°7/20.7	17	
12 13	8 34.76	+21 47.4	1.862	2.649	15.3	20.4	12 13	8 30.10	+12 45.6	1.400	2.196	19.0	21.9
12 23	8 29.37	+21 48.0	1.795	2.669	11.8	20.2	12 23	8 27.09	+12 47.5	1.304	2.179	15.3	21.6
1 2	8 21.37	+21 52.9	1.751	2.688	7.8	20.0	1 2	8 20.77	+13 6.7	1.227	2.161	10.8	21.3
1 12	8 11.56	+21 59.0	1.733	2.708	3.4	19.8	1 12	8 11.69	+13 42.4	1.174	2.144	5.8	21.0
1 22	8 1.02	+22 2.9	1.744	2.727	1.3	19.7	1 22	8 0.95	+14 31.0	1.146	2.127	2.8	20.7
2 1	7 50.98	+22 2.3	1.785	2.746	5.6	20.0	2 1	7 50.13	+15 26.8	1.144	2.109	7.3	20.9
2 11	7 42.57	+21 56.2	1.854	2.765	9.6	20.3	2 11	7 40.92	+16 23.5	1.167	2.092	12.6	21.2
2 21	7 36.54	+21 44.9	1.947	2.784	13.0	20.5	2 21	7 34.62	+17 15.7	1.212	2.075	17.5	21.4
<b>160421</b>	2005 <i>BG</i> <sub>13</sub>		1 19.7 101°89	0°4/19.5	18		<b>308717</b>	2006 <i>GQ</i> <sub>42</sub>		1 19.7 292°97	0°7/19.9	18	
12 13	8 36.13	+19 50.2	1.778	2.562	16.0	20.2	12 13	8 31.25	+17 34.7	1.510	2.310	17.7	21.0
12 23	8 30.56	+20 9.7	1.712	2.584	12.4	20.0	12 23	8 27.75	+17 40.0	1.415	2.295	14.0	20.8
1 2	8 22.25	+20 36.5	1.668	2.605	8.2	19.8	1 2	8 21.05	+17 56.5	1.341	2.280	9.5	20.5
1 12	8 11.98	+21 6.6	1.651	2.626	3.6	19.5	1 12	8 11.74	+18 21.8	1.290	2.265	4.4	20.1
1 22	8 0.90	+21 35.3	1.663	2.646	1.3	19.4	1 22	8 0.95	+18 51.3	1.267	2.250	1.4	19.9
2 1	7 50.31	+21 58.9	1.705	2.666	5.8	19.7	2 1	7 50.18	+19 20.5	1.270	2.235	6.8	20.2
2 11	7 41.42	+22 15.2	1.774	2.685	10.0	20.0	2 11	7 41.04	+19 45.3	1.299	2.220	12.0	20.4
2 21	7 35.03	+22 23.8	1.868	2.703	13.5	20.3	2 21	7 34.70	+20 3.5	1.351	2.206	16.5	20.7
<b>130861</b>	2000 <i>UH</i> <sub>85</sub>		1 19.7 33°43	5°1/17.5	18		<b>105297</b>	2000 <i>QA</i> <sub>53</sub>		1 19.7 44°32	0°8/19.4	18	
12 13	8 32.93	+28 1.6	1.378	2.196	18.1	19.7	12 13	8 35.20	+22 20.8	1.386	2.194	18.6	19.7
12 23	8 29.35	+29 11.1	1.312	2.202	14.2	19.5	12 23	8 30.75	+22 16.4	1.316	2.201	14.5	19.4
1 2	8 22.15	+30 24.9	1.267	2.208	9.8	19.3	1 2	8 22.86	+22 17.5	1.266	2.208	9.7	19.2
1 12	8 12.17	+31 33.5	1.246	2.215	5.9	19.1	1 12	8 12.41	+22 19.9	1.240	2.216	4.3	18.9
1 22	8 0.81	+32 27.4	1.251	2.222	5.7	19.1	1 22	8 0.81	+22 19.3	1.241	2.224	1.7	18.7
2 1	7 49.90	+32 59.9	1.283	2.229	9.3	19.3	2 1	7 49.75	+22 12.6	1.269	2.232	7.0	19.1
2 11	7 41.15	+33 9.8	1.338	2.237	13.5	19.6	2 11	7 40.80	+21 59.1	1.322	2.241	12.0	19.4
2 21	7 35.67	+32 59.9	1.414	2.245	17.3	19.8	2 21	7 34.97	+21 39.6	1.398	2.250	16.3	19.7
<b>453295</b>	2008 <i>UT</i> <sub>69</sub>		1 19.7 127°57	0°0/19.7	18		<b>254745</b>	2005 <i>OT</i> <sub>22</sub>		1 19.7 87°86	1°3/19.1	18	
12 13	8 35.29	+17 57.2	1.739	2.522	16.4	22.1	12 13	8 33.93	+22 38.0	1.819	2.611	15.4	20.7
12 23	8 30.11	+18 26.9	1.665	2.536	12.8	21.9	12 23	8 28.94	+22 57.4	1.749	2.626	12.0	20.5
1 2	8 22.10	+19 6.9	1.613	2.549	8.5	21.7	1 2	8 21.23	+23 21.8	1.701	2.640	7.9	20.3
1 12	8 11.99	+19 53.0	1.588	2.562	3.8	21.4	1 12	8 11.58	+23 46.9	1.680	2.654	3.6	20.1
1 22	8 0.89	+20 39.7	1.591	2.574	1.2	21.2	1 22	8 1.07	+24 7.9	1.687	2.668	1.9	20.0
2 1	7 50.16	+21 22.0	1.624	2.586	6.0	21.6	2 1	7 50.99	+24 21.7	1.723	2.682	6.0	20.3
2 11	7 41.07	+21 56.7	1.685	2.597	10.3	21.9	2 11	7 42.53	+24 26.8	1.787	2.696	10.0	20.6
2 21	7 34.51	+22 22.2	1.769	2.607	14.0	22.1	2 21	7 36.51	+24 23.4	1.874	2.710	13.5	20.8
<b>165768</b>	2001 <i>QO</i> <sub>243</sub>		1 19.7 75°28	2°5/18.4	18		<b>81402</b>	2000 <i>GC</i> <sub>85</sub>		1 19.7 136°35	0°4/19.9	18	
12 13	8 31.91	+27 15.1	2.279	3.067	12.8	20.5	12 13	8 31.04	+14 56.4	2.063	2.835	14.5	19.6
12 23	8 26.88	+27 39.9	2.210	3.083	9.9	20.3	12 23	8 26.49	+15 49.0	1.980	2.844	11.3	19.4
1 2	8 19.61	+28 5.4	2.164	3.100	6.7	20.1	1 2	8 19.57	+16 54.4	1.920	2.853	7.6	19.1
1 12	8 10.78	+28 27.3	2.146	3.116	3.5	20.0	1 12	8 10.87	+18 8.6	1.887	2.861	3.5	18.9
1 22	8 1.28	+28 41.8	2.157	3.132	2.9	19.9	1 22	8 1.27	+19 26.2	1.885	2.868	1.0	18.7
2 1	7 52.16	+28 46.6	2.198	3.149	5.7	20.2	2 1	7 51.82	+20 41.4	1.914	2.876	5.2	19.0
2 11	7 44.37	+28 41.1	2.268	3.165	8.8	20.4	2 11	7 43.61	+21 49.3	1.971	2.882	9.1	19.3
2 21	7 38.59	+28 26.6	2.362	3.181	11.6	20.6	2 21	7 37.44	+22 47.1	2.054	2.889	12.5	19.5
<b>400540</b>	2008 <i>UJ</i> <sub>213</sub>		1 19.7 10°70	2°4/20.4	18		<b>192533</b>	1998 <i>SB</i> <sub>70</sub>		1 19.7 108°00	1°6/18.9	18	
12 13	8 33.12	+15 48.5	1.371	2.170	19.2	20.6	12 13	8 37.24	+21 31.3	1.619	2.411	17.0	20.8
12 23	8 29.17	+15 20.9	1.293	2.171	15.2	20.4	12 23	8 31.81	+22 15.0	1.554	2.431	13.2	20.6
1 2	8 21.87	+15 4.3	1.235	2.172	10.5	20.1	1 2	8 23.29	+23 6.6	1.511	2.450	8.7	20.3
1 12	8 12.01	+14 57.7	1.201	2.173	5.4	19.8	1 12	8 12.53	+24 0.0	1.495	2.469	3.9	20.1
1 22	8 0.88	+14 58.8	1.193	2.174	2.6	19.6	1 22	8 0.78	+24 48.3	1.506	2.488	2.3	20.0
2 1	7 50.10	+15 4.8	1.211	2.176	7.1	19.9	2 1	7 49.53	+25 26.4	1.547	2.505	6.7	20.3
2 11	7 41.25	+15 12.7	1.255	2.178	12.1	20.2	2 11	7 40.18	+25 51.8	1.615	2.522	11.0	20.6
2 21	7 35.40	+15 20.2	1.320	2.180	16.5	20.5	2 21	7 33.62	+26 4.8	1.706	2.539	14.7	20.9
<b>148327</b>	2000 <i>QD</i> <sub>99</sub>		1 19.7 167°11	0°5/19.9	18		<b>421905</b>	2014 <i>QX</i> <sub>215</sub>		1 19.7 157°17	0°3/19.5	18	
12 13	8 30.61	+											

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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>73707</b>	1991 VS <sub>10</sub>		1 19.7	20°08	0°5/19.4	18	<b>42837</b>	1999 PR <sub>1</sub>		1 19.7	103°83	1°3/19.1	18
12 13	8 27.73	+19 43.1	1.866	2.663	14.9	19.1	12 13	8 34.07	+22 0.6	1.675	2.471	16.4	18.6
12 23	8 24.16	+20 7.0	1.789	2.668	11.6	18.9	12 23	8 29.39	+22 25.4	1.600	2.479	12.7	18.3
1 2	8 18.11	+20 39.0	1.734	2.674	7.7	18.7	1 2	8 21.76	+22 56.9	1.547	2.487	8.5	18.1
1 12	8 10.23	+21 15.2	1.705	2.681	3.4	18.4	1 12	8 11.92	+23 30.1	1.520	2.495	3.8	17.8
1 22	8 1.48	+21 51.5	1.705	2.688	1.2	18.3	1 22	8 1.04	+23 59.9	1.520	2.502	2.0	17.7
2 1	7 52.99	+22 23.5	1.733	2.695	5.6	18.6	2 1	7 50.52	+24 21.8	1.550	2.510	6.4	18.0
2 11	7 45.87	+22 48.6	1.788	2.703	9.6	18.9	2 11	7 41.73	+24 33.8	1.606	2.517	10.8	18.3
2 21	7 40.94	+23 5.5	1.867	2.711	13.1	19.1	2 21	7 35.57	+24 36.0	1.685	2.524	14.6	18.6
<b>82338</b>	2001 LX <sub>12</sub>		1 19.7	225°47	3°4/21.1	18	<b>73155</b>	2002 GU <sub>110</sub>		1 19.7	267°02	6°7/22.8	18
12 13	8 31.45	+10 39.2	2.089	2.847	14.8	20.3	12 13	8 29.33	+ 3 12.4	1.668	2.419	18.2	20.1
12 23	8 26.81	+10 19.8	1.990	2.839	12.0	20.1	12 23	8 25.70	+ 2 46.0	1.580	2.415	15.3	19.9
1 2	8 19.81	+10 11.9	1.912	2.831	8.6	19.9	1 2	8 19.35	+ 2 40.3	1.511	2.412	11.9	19.6
1 12	8 11.01	+10 15.3	1.861	2.822	5.2	19.6	1 12	8 10.91	+ 2 57.4	1.465	2.408	8.5	19.4
1 22	8 1.24	+10 29.0	1.838	2.813	3.4	19.5	1 22	8 1.33	+ 3 36.8	1.445	2.405	6.7	19.3
2 1	7 51.54	+10 50.5	1.845	2.803	5.8	19.6	2 1	7 51.86	+ 4 35.1	1.452	2.401	8.1	19.4
2 11	7 43.00	+11 17.0	1.880	2.793	9.4	19.8	2 11	7 43.77	+ 5 46.2	1.484	2.397	11.4	19.6
2 21	7 36.43	+11 45.4	1.941	2.783	12.8	20.0	2 21	7 38.01	+ 7 2.9	1.541	2.393	15.0	19.8
<b>428095</b>	2006 QE <sub>59</sub>		1 19.7	175°23	2°2/21.3	17	<b>58953</b>	1998 QC <sub>75</sub>		1 19.7	175°22	2°8/21.5	18
12 13	8 26.95	+ 9 59.2	3.037	3.779	11.0	22.2	12 13	8 26.30	+ 9 21.4	3.055	3.796	10.9	19.6
12 23	8 22.53	+10 12.1	2.940	3.781	8.8	22.0	12 23	8 22.01	+ 9 9.2	2.959	3.797	8.8	19.5
1 2	8 16.55	+10 34.7	2.868	3.783	6.2	21.9	1 2	8 16.20	+ 9 5.8	2.887	3.798	6.4	19.3
1 12	8 9.44	+11 6.1	2.824	3.785	3.6	21.7	1 12	8 9.30	+ 9 11.0	2.843	3.799	4.0	19.1
1 22	8 1.75	+11 44.3	2.810	3.786	2.2	21.6	1 22	8 1.86	+ 9 23.7	2.829	3.800	2.8	19.0
2 1	7 54.16	+12 26.9	2.828	3.786	4.0	21.7	2 1	7 54.53	+ 9 42.5	2.845	3.800	4.2	19.1
2 11	7 47.32	+13 11.1	2.876	3.786	6.6	21.9	2 11	7 47.95	+10 5.3	2.892	3.800	6.7	19.3
2 21	7 41.76	+13 54.4	2.952	3.786	9.1	22.1	2 21	7 42.64	+10 30.0	2.965	3.800	9.1	19.5
<b>321196</b>	2008 YD <sub>8</sub>		1 19.7	36°33	1°5/18.7	18	<b>96312</b>	1996 XS <sub>35</sub>		1 19.7	354°45	0°6/19.9	18
12 13	8 31.54	+ 8 41.2	0.943	1.758	24.8	19.2	12 13	8 29.02	+18 17.4	1.278	2.095	19.3	19.7
12 23	8 29.45	+11 43.6	0.877	1.766	19.5	18.9	12 23	8 26.34	+18 16.0	1.201	2.091	15.2	19.4
1 2	8 23.01	+15 35.3	0.831	1.775	12.9	18.6	1 2	8 20.22	+18 25.9	1.144	2.087	10.3	19.1
1 12	8 12.90	+20 1.7	0.809	1.786	5.5	18.2	1 12	8 11.41	+18 44.3	1.109	2.085	4.7	18.8
1 22	8 0.62	+24 34.8	0.814	1.796	3.0	18.1	1 22	8 1.21	+19 6.5	1.100	2.083	1.4	18.6
2 1	7 48.46	+28 43.4	0.848	1.808	10.2	18.6	2 1	7 51.31	+19 27.8	1.116	2.082	7.1	19.0
2 11	7 38.85	+32 6.4	0.906	1.820	16.7	19.0	2 11	7 43.38	+19 44.4	1.156	2.083	12.5	19.3
2 21	7 33.39	+34 38.2	0.985	1.833	21.8	19.3	2 21	7 38.53	+19 54.6	1.217	2.084	17.2	19.5
<b>419978</b>	2011 CN <sub>9</sub>		1 19.7	47°75	1°9/20.7	18	<b>8209</b>	Toscanelli		1 19.7	226°46	3°5/17.6	18
12 13	8 28.28	+12 25.2	1.822	2.601	15.9	20.7	12 13	8 33.13	+27 30.5	2.176	2.964	13.3	18.1
12 23	8 24.60	+12 52.4	1.742	2.608	12.6	20.5	12 23	8 28.38	+28 30.2	2.082	2.955	10.5	17.9
1 2	8 18.43	+13 34.6	1.684	2.615	8.7	20.3	1 2	8 21.04	+29 33.5	2.011	2.946	7.2	17.7
1 12	8 10.40	+14 29.1	1.652	2.622	4.5	20.1	1 12	8 11.65	+30 34.6	1.969	2.936	4.2	17.5
1 22	8 1.46	+15 31.6	1.648	2.629	2.0	19.9	1 22	8 1.14	+31 27.0	1.956	2.926	4.0	17.5
2 1	7 52.73	+16 36.6	1.673	2.637	5.5	20.2	2 1	7 50.67	+32 6.0	1.972	2.915	6.9	17.6
2 11	7 45.34	+17 38.8	1.725	2.645	9.6	20.4	2 11	7 41.46	+32 29.2	2.017	2.904	10.3	17.8
2 21	7 40.12	+18 34.6	1.802	2.653	13.3	20.7	2 21	7 34.44	+32 37.4	2.086	2.892	13.4	18.0
<b>502517</b>	2015 BQ <sub>430</sub>		1 19.7	152°78	0°7/20.2	18	<b>89887</b>	2002 CD <sub>238</sub>		1 19.7	77°66	0°5/19.5	18
12 13	8 27.58	+15 11.1	2.881	3.642	11.1	21.7	12 13	8 34.80	+21 9.6	1.948	2.731	14.9	19.2
12 23	8 23.13	+15 44.1	2.791	3.649	8.7	21.5	12 23	8 29.27	+21 14.4	1.885	2.756	11.5	19.0
1 2	8 17.00	+16 25.4	2.726	3.656	5.8	21.4	1 2	8 21.27	+21 24.1	1.844	2.781	7.6	18.8
1 12	8 9.66	+17 12.5	2.690	3.662	2.7	21.2	1 12	8 11.57	+21 35.4	1.831	2.806	3.3	18.6
1 22	8 1.71	+18 2.4	2.685	3.667	0.9	21.0	1 22	8 1.23	+21 44.9	1.848	2.830	1.2	18.5
2 1	7 53.87	+18 52.0	2.711	3.673	3.9	21.2	2 1	7 51.39	+21 50.2	1.894	2.855	5.3	18.8
2 11	7 46.86	+19 38.5	2.768	3.678	6.9	21.5	2 11	7 43.12	+21 50.1	1.968	2.879	9.1	19.1
2 21	7 41.26	+20 19.9	2.852	3.682	9.5	21.6	2 21	7 37.11	+21 44.6	2.067	2.903	12.4	19.3
<b>43859</b>	Naoyayano		1 19.7	76°02	0°5/19.5	18	<b>280776</b>	2005 SP <sub>69</sub>		1 19.7	79°19	4°7/18.1	17
12 13	8 32.63	+21 45.6	2.131	2.914	13.8	18.4	12 13	8 39.66	+28 30.4	1.381	2.188	18.7	20.1
12 23	8 27.47	+21 47.5	2.060	2.932	10.6	18.2	12 23	8 34.29	+29 21.9	1.327	2.210	14.6	19.9
1 2	8 20.03	+21 53.2	2.013	2.950	7.0	18.0	1 2	8 25.21	+30 14.7	1.293	2.231	10.0	19.6
1 12	8 11.01	+22 0.0	1.993	2.968	3.1	17.8	1 12	8 13.47	+30 59.7	1.284	2.253	5.8	19.5
1 22	8 1.34	+22 4.9	2.003	2.985	1.2	17.7	1 22	8 0.66	+31 29.0	1.302	2.274	5.1	19.5
2 1	7 52.06	+22 5.9	2.042	3.003	5.0	18.0	2 1	7 48.64	+31 38.2	1.347	2.295	8.7	19.7
2 11	7 44.16	+22 1.8	2.110	3.021	8.7	18.2	2 11	7 39.07	+31 28.0	1.417	2.316	12.9	20.0
2 21	7 38.32	+21 52.8	2.204	3.038	11.8	18.4	2 21	7 32.89	+31 2.5	1.509	2.337	16.6	20.3
<b>318003</b>	2004 CM <sub>49</sub>		1 19.7	270°47	8°6/24.9	18	<b>416605</b>	2004 PV <sub>116</sub>		1 19.7	93°09	0°8/20.1	18
12 13	8 31.36	- 4 48.7	1.248	1.986	23.9	20.7	12 13	8 30.95	+15 50.8	2.049	2.824	14.5	22.1
12 23	8 28.49	- 4 9.7	1.152	1.974	20.7	20.4	12 23	8 26.30	+16 11.5	1.976	2.841	11.3	21.9
1 2	8 22.01	- 2 45.5	1.071	1.961	16.6	20.1	1 2	8 19.36	+16 42.1	1.925	2.858	7.6	21.7
1 12	8 12.41	- 0 30.0	1.010	1.948	12.1	19.8	1 12	8 10.77	+17 19.7	1.902	2.875	3.6	21.5
1 22	8 0.79	+ 2 34.4	0.974	1.935	8.8	19.6	1 22	8 1.45	+18 0.4	1.908	2.891	1.2	21.4
2 1	7 48.87	+ 6 15.2	0.965	1.922	9.9	19.6	2 1	7 52.43	+18 40.4	1.944	2.907	5.0	21.7
2 11	7 38.62	+10 11.1	0.984	1.909	14.4	19.8	2 11	7 44.72	+19 16.5	2.009	2.923	8.8	21.9
2 21	7 31.56	+14 0.1	1.027	1.896	19.5	20.0	2 21	7 39.04	+19 46.7	2.098	2.939	12.0	22.2
<b>399051</b>	2013 LA <sub>28</sub>		1 19.7	41°90	7°1/23.5	18	<b>202410</b>	2005 NP <sub>56</sub>		1 19.7	235°07	0°2/19.6	18
12 13	8 28.08	+ 0 42.9	1.726	2.465	18.1	20.6	12 13	8 31.65	+19 7.1	1.963	2.748	14.7	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>78458</b>	2002 <i>RM</i> <sub>35</sub>		1 19.7 204°09	6°7/23.3	18		<b>432139</b>	2009 <i>BL</i> <sub>84</sub>		1 19.7	4°98	0°0/19.7	18
12 13	8 29.93	- 0 21.7	2.291	2.998	15.0	19.2	12 13	8 29.00	+20 18.5	1.823	2.620	15.2	20.4
12 23	8 25.41	- 0 52.5	2.192	2.993	12.8	19.0	12 23	8 25.24	+20 12.1	1.741	2.620	11.9	20.2
1 2	8 18.79	- 1 6.2	2.115	2.988	10.3	18.9	1 2	8 18.90	+20 11.4	1.682	2.621	7.9	20.0
1 12	8 10.58	- 1 0.7	2.061	2.983	8.0	18.7	1 12	8 10.68	+20 13.9	1.648	2.623	3.5	19.7
1 22	8 1.52	- 0 35.8	2.036	2.977	6.7	18.6	1 22	8 1.55	+20 16.9	1.642	2.625	1.1	19.5
2 1	7 52.51	+ 0 6.9	2.039	2.970	7.5	18.7	2 1	7 52.70	+20 17.8	1.664	2.628	5.6	19.9
2 11	7 44.49	+ 1 3.4	2.069	2.963	9.7	18.8	2 11	7 45.29	+20 15.0	1.714	2.632	9.8	20.1
2 21	7 38.20	+ 2 8.4	2.125	2.955	12.3	18.9	2 21	7 40.14	+20 8.0	1.787	2.636	13.4	20.3
<b>350643</b>	2001 <i>TX</i> <sub>123</sub>		1 19.7 101°73	2°8/20.7	17		<b>174884</b>	2004 <i>BC</i> <sub>74</sub>		1 19.7 138°61	1°8/19.1	18	
12 13	8 36.88	+13 20.3	1.639	2.412	17.6	21.1	12 13	8 38.20	+25 47.8	1.941	2.725	14.9	19.9
12 23	8 31.29	+13 0.7	1.572	2.433	14.0	20.9	12 23	8 32.19	+25 44.4	1.860	2.731	11.6	19.7
1 2	8 22.84	+12 53.4	1.526	2.453	9.7	20.7	1 2	8 23.40	+25 41.6	1.802	2.738	7.8	19.5
1 12	8 12.36	+12 57.0	1.506	2.473	5.3	20.5	1 12	8 12.63	+25 35.4	1.771	2.744	3.7	19.3
1 22	8 1.03	+13 9.1	1.513	2.492	2.9	20.4	1 22	8 0.98	+25 22.6	1.770	2.750	2.2	19.2
2 1	7 50.21	+13 26.6	1.550	2.511	6.2	20.6	2 1	7 49.76	+25 1.4	1.798	2.756	6.0	19.4
2 11	7 41.16	+13 46.3	1.614	2.529	10.4	20.9	2 11	7 40.20	+24 32.2	1.855	2.761	9.9	19.7
2 21	7 34.72	+14 5.6	1.702	2.547	14.1	21.2	2 21	7 33.14	+23 57.0	1.937	2.766	13.4	19.9
<b>36134</b>	1999 <i>RS</i> <sub>162</sub>		1 19.7 173°75	1°5/18.9	18		<b>49697</b>	1999 <i>UK</i> <sub>52</sub>		1 19.7 13°82	1°6/20.4	18	
12 13	8 33.41	+24 35.9	2.613	3.387	11.7	19.8	12 13	8 29.07	+13 15.4	1.199	2.010	20.7	18.3
12 23	8 27.86	+24 51.4	2.523	3.390	9.1	19.7	12 23	8 26.54	+13 48.9	1.127	2.011	16.4	18.1
1 2	8 20.26	+25 8.8	2.458	3.392	6.1	19.5	1 2	8 20.46	+14 44.0	1.073	2.013	11.3	17.8
1 12	8 11.17	+25 24.9	2.421	3.394	2.9	19.3	1 12	8 11.60	+15 57.2	1.042	2.016	5.5	17.5
1 22	8 1.37	+25 36.6	2.416	3.396	1.8	19.2	1 22	8 1.25	+17 20.8	1.036	2.019	1.9	17.2
2 1	7 51.78	+25 41.7	2.442	3.397	4.8	19.4	2 1	7 51.17	+18 45.4	1.056	2.023	7.3	17.6
2 11	7 43.29	+25 39.2	2.497	3.397	8.0	19.6	2 11	7 43.11	+20 2.5	1.100	2.027	12.9	17.9
2 21	7 36.58	+25 29.7	2.579	3.396	10.8	19.8	2 21	7 38.25	+21 6.7	1.165	2.032	17.7	18.2
<b>458187</b>	2010 <i>NA</i> <sub>77</sub>		1 19.7 107°14	6°0/23.2	18		<b>410106</b>	2007 <i>EM</i> <sub>148</sub>		1 19.7 20°14	1°5/19.1	18	
12 13	8 32.05	+ 1 21.0	2.159	2.874	15.6	22.1	12 13	8 27.58	+20 44.2	1.283	2.107	18.9	19.9
12 23	8 26.88	+ 0 57.3	2.088	2.898	13.0	22.0	12 23	8 25.08	+21 21.8	1.223	2.117	14.6	19.7
1 2	8 19.61	+ 0 51.2	2.038	2.922	10.2	21.8	1 2	8 19.24	+22 10.1	1.183	2.129	9.7	19.4
1 12	8 10.86	+ 1 3.8	2.014	2.944	7.5	21.7	1 12	8 10.93	+23 2.9	1.166	2.142	4.3	19.2
1 22	8 1.48	+ 1 34.2	2.017	2.966	6.1	21.7	1 22	8 1.49	+23 53.0	1.174	2.156	2.2	19.1
2 1	7 52.41	+ 2 19.4	2.049	2.988	6.9	21.8	2 1	7 52.55	+24 34.0	1.208	2.172	7.3	19.4
2 11	7 44.55	+ 3 14.9	2.110	3.008	9.3	21.9	2 11	7 45.61	+25 2.1	1.267	2.188	12.2	19.7
2 21	7 38.58	+ 4 15.6	2.196	3.028	11.9	22.1	2 21	7 41.65	+25 16.9	1.347	2.206	16.3	20.0
<b>81782</b>	2000 <i>JB</i> <sub>75</sub>		1 19.7 236°80	4°6/21.4	18		<b>519078</b>	2010 <i>LB</i> <sub>26</sub>		1 19.7 308°41	3°7/17.1	18	
12 13	8 32.17	+ 8 47.4	2.049	2.800	15.3	19.4	12 13	8 29.65	+26 58.2	2.202	2.995	13.0	21.3
12 23	8 27.43	+ 8 4.7	1.949	2.791	12.5	19.2	12 23	8 25.66	+28 21.3	2.116	2.993	10.2	21.1
1 2	8 20.28	+ 7 33.1	1.871	2.782	9.3	19.0	1 2	8 19.22	+29 49.5	2.054	2.990	7.0	20.9
1 12	8 11.30	+ 7 14.0	1.819	2.772	6.1	18.8	1 12	8 10.88	+31 16.0	2.021	2.987	4.3	20.7
1 22	8 1.32	+ 7 7.4	1.795	2.763	4.6	18.7	1 22	8 1.48	+32 34.0	2.017	2.985	4.2	20.7
2 1	7 51.43	+ 7 12.3	1.801	2.753	6.5	18.8	2 1	7 52.13	+33 37.7	2.043	2.982	7.0	20.8
2 11	7 42.70	+ 7 26.2	1.834	2.742	9.9	18.9	2 11	7 43.96	+34 24.2	2.097	2.979	10.1	21.0
2 21	7 35.99	+ 7 46.1	1.892	2.732	13.2	19.1	2 21	7 37.85	+34 53.5	2.175	2.977	13.0	21.2
<b>461865</b>	2006 <i>HM</i> <sub>83</sub>		1 19.7 203°19	1°3/20.5	17		<b>169260</b>	2001 <i>SM</i> <sub>169</sub>		1 19.7 192°45	1°5/18.7	18	
12 13	8 28.45	+14 34.4	2.626	3.388	12.0	22.4	12 13	8 29.24	+23 32.9	2.700	3.479	11.3	20.9
12 23	8 24.03	+14 46.6	2.528	3.385	9.5	22.2	12 23	8 24.69	+24 8.3	2.607	3.478	8.7	20.7
1 2	8 17.75	+15 7.4	2.453	3.381	6.5	22.0	1 2	8 18.21	+24 47.4	2.540	3.476	5.8	20.5
1 12	8 10.09	+15 34.9	2.407	3.377	3.3	21.8	1 12	8 10.31	+25 26.9	2.501	3.474	2.8	20.3
1 22	8 1.71	+16 6.9	2.391	3.372	1.4	21.6	1 22	8 1.68	+26 2.9	2.493	3.472	1.9	20.2
2 1	7 53.41	+16 40.5	2.405	3.367	4.3	21.8	2 1	7 53.16	+26 32.6	2.515	3.469	4.8	20.4
2 11	7 46.02	+17 13.1	2.450	3.362	7.5	22.0	2 11	7 45.59	+26 54.0	2.567	3.466	7.8	20.6
2 21	7 40.16	+17 42.8	2.521	3.357	10.4	22.2	2 21	7 39.64	+27 6.7	2.645	3.463	10.5	20.8
<b>237737</b>	2001 <i>XB</i> <sub>53</sub>		1 19.7 355°73	1°9/18.9	18		<b>133695</b>	2003 <i>UF</i> <sub>223</sub>		1 19.7 98°94	4°7/17.2	18	R
12 13	8 29.76	+21 18.9	1.259	2.081	19.3	20.0	12 13	8 33.22	+32 41.3	2.232	3.020	13.0	19.9
12 23	8 27.12	+21 59.8	1.185	2.078	15.1	19.7	12 23	8 28.27	+33 33.8	2.159	3.029	10.3	19.7
1 2	8 20.88	+22 52.5	1.130	2.076	10.1	19.4	1 2	8 20.80	+34 24.3	2.111	3.038	7.4	19.6
1 12	8 11.78	+23 50.5	1.098	2.074	4.6	19.1	1 12	8 11.49	+35 6.8	2.090	3.047	5.1	19.4
1 22	8 1.18	+24 45.7	1.092	2.074	2.7	19.0	1 22	8 1.33	+35 36.0	2.097	3.056	5.1	19.5
2 1	7 50.85	+25 30.4	1.111	2.074	8.0	19.3	2 1	7 51.48	+35 48.7	2.134	3.064	7.3	19.6
2 11	7 42.59	+26 0.4	1.154	2.074	13.2	19.6	2 11	7 43.07	+35 44.7	2.198	3.073	10.1	19.8
2 21	7 37.58	+26 15.1	1.218	2.076	17.8	19.8	2 21	7 36.87	+35 26.2	2.285	3.081	12.7	20.0
<b>296956</b>	2010 <i>ES</i> <sub>34</sub>		1 19.7 229°52	6°1/15.4	17		<b>432073</b>	2008 <i>YS</i> <sub>108</sub>		1 19.7 26°81	0°2/19.6	18	
12 13	8 34.82	+40 39.6	2.822	3.590	11.1	21.0	12 13	8 27.29	+17 37.7	2.135	2.920	13.7	21.1
12 23	8 29.38	+41 40.2	2.734	3.580	9.2	20.9	12 23	8 23.60	+18 20.6	2.051	2.923	10.6	20.9
1 2	8 21.52	+42 35.4	2.670	3.570	7.4	20.7	1 2	8 17.69	+19 13.4	1.990	2.927	7.1	20.6
1 12	8 11.83	+43 19.0	2.633	3.559	6.2	20.6	1 12	8 10.13	+20 12.3	1.956	2.930	3.1	20.4
1 22	8 1.18	+43 46.1	2.626	3.547	6.5	20.6	1 22	8 1.73	+21 12.8	1.951	2.934	1.0	20.2
2 1	7 50.65	+43 53.7	2.647	3.536	8.0	20.7	2 1	7 53.47	+22 10.0	1.977	2.939	5.1	20.5
2 11	7 41.35	+43 41.9	2.694	3.524	9.9	20.8	2 11	7 46.36	+23 0.1	2.030	2.943	8.8	20.8
2 21	7 34.09	+43 13.4	2.765	3.511	12.0	21.0	2 21	7 41.14	+23 41.0	2.109	2.947	12.1	21.0
<b>415442</b>	2013 <i>SD</i> <sub>53</sub>		1 19.7 96°08	2°3/20.9	18		<b>63</b>	Ausonina		1 19.7 208°59	2°2/18.8	18	R
12 13	8 28.87	+11 52.2	2.138	2.9									

EPHEMERIDES

1 19.7

1 19.7

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>322816</b>	2001 <i>SM</i> <sub>84</sub>		1 19.7	13°24'	11°0'/26.7	18	<b>289660</b>	2005 <i>GO</i> <sub>123</sub>		1 19.7	224°71'	5°2'/15.9	17
12 13	8 26.84	- 9 40.2	1.783	2.466	19.5	20.6	12 13	8 33.50	+37 37.5	2.898	3.670	10.7	21.5
12 23	8 23.60	-10 17.9	1.701	2.467	17.3	20.4	12 23	8 28.21	+38 34.3	2.806	3.660	8.7	21.4
1 2	8 17.88	-10 27.1	1.634	2.468	14.9	20.3	1 2	8 20.69	+39 27.5	2.739	3.650	6.7	21.2
1 12	8 10.28	-10 3.1	1.588	2.470	12.6	20.1	1 12	8 11.48	+40 11.4	2.701	3.639	5.4	21.1
1 22	8 1.69	- 9 4.3	1.565	2.471	11.2	20.0	1 22	8 1.38	+40 41.4	2.692	3.628	5.6	21.1
2 1	7 53.24	- 7 33.6	1.566	2.473	11.2	20.0	2 1	7 51.37	+40 54.6	2.712	3.616	7.2	21.2
2 11	7 46.05	- 5 38.3	1.593	2.475	12.8	20.1	2 11	7 42.45	+40 50.6	2.760	3.604	9.3	21.3
2 21	7 41.01	- 3 28.5	1.643	2.478	15.1	20.3	2 21	7 35.39	+40 31.5	2.832	3.592	11.4	21.4
<b>89719</b>	2001 <i>YZ</i> <sub>121</sub>		1 19.7	5°37'	2°2'/20.3	18	<b>375539</b>	2008 <i>UK</i> <sub>201</sub>		1 19.7	48°01'	6°8'/16.4	18
12 13	8 32.19	+17 24.8	1.506	2.304	17.8	18.3	12 13	8 34.16	+36 24.0	1.886	2.682	14.8	19.9
12 23	8 28.17	+16 39.0	1.427	2.304	14.1	18.1	12 23	8 29.54	+37 34.7	1.827	2.697	11.9	19.8
1 2	8 21.08	+15 59.9	1.368	2.305	9.7	17.8	1 2	8 21.90	+38 40.6	1.792	2.712	9.0	19.6
1 12	8 11.72	+15 27.2	1.334	2.306	4.9	17.6	1 12	8 12.05	+39 33.1	1.782	2.727	7.0	19.6
1 22	8 1.28	+15 0.2	1.327	2.309	2.4	17.4	1 22	8 1.23	+40 5.7	1.799	2.743	7.2	19.6
2 1	7 51.21	+14 38.0	1.347	2.312	6.6	17.7	2 1	7 50.89	+40 14.9	1.843	2.759	9.2	19.7
2 11	7 42.92	+14 19.4	1.394	2.316	11.2	17.9	2 11	7 42.39	+40 1.8	1.913	2.775	11.9	19.9
2 21	7 37.35	+14 3.4	1.462	2.320	15.3	18.2	2 21	7 36.61	+39 30.3	2.004	2.792	14.5	20.2
<b>136950</b>	1998 <i>RT</i> <sub>1</sub>		1 19.7	250°09'	4°0'/18.5	18	<b>285435</b>	1999 <i>VL</i> <sub>141</sub>		1 19.7	87°28'	0°3'/19.8	18
12 13	8 38.49	+30 41.5	1.756	2.550	15.8	19.2	12 13	8 34.96	+18 15.4	1.698	2.484	16.6	21.1
12 23	8 32.98	+30 54.2	1.673	2.548	12.5	19.0	12 23	8 29.83	+18 28.3	1.633	2.505	12.9	20.9
1 2	8 24.25	+31 4.7	1.612	2.546	8.7	18.8	1 2	8 21.91	+18 50.1	1.589	2.526	8.6	20.7
1 12	8 13.12	+31 6.6	1.576	2.543	5.1	18.5	1 12	8 12.01	+19 17.3	1.572	2.546	3.9	20.5
1 22	8 0.87	+30 54.9	1.569	2.541	4.4	18.5	1 22	8 1.27	+19 45.5	1.583	2.566	1.1	20.3
2 1	7 49.04	+30 27.3	1.590	2.539	7.6	18.7	2 1	7 51.02	+20 10.7	1.623	2.586	5.8	20.7
2 11	7 39.12	+29 45.2	1.639	2.537	11.5	18.9	2 11	7 42.48	+20 30.4	1.690	2.606	10.1	21.0
2 21	7 32.08	+28 52.3	1.711	2.535	15.1	19.1	2 21	7 36.47	+20 43.6	1.782	2.625	13.7	21.2
<b>409844</b>	2006 <i>RZ</i> <sub>57</sub>		1 19.7	94°44'	8°3'/24.8	18	<b>58622</b>	<i>Setoguchi</i>		1 19.7	23°18'	9°1'/23.8	18
12 13	8 30.10	- 3 54.3	1.893	2.597	17.9	21.5	12 13	8 28.02	- 1 19.6	1.672	2.405	18.9	18.9
12 23	8 25.77	- 4 18.8	1.821	2.614	15.3	21.3	12 23	8 24.59	- 2 19.7	1.595	2.408	16.2	18.7
1 2	8 19.10	- 4 19.5	1.768	2.632	12.5	21.2	1 2	8 18.57	- 2 57.8	1.536	2.412	13.3	18.5
1 12	8 10.74	- 3 53.9	1.737	2.648	9.9	21.1	1 12	8 10.61	- 3 9.8	1.498	2.417	10.6	18.4
1 22	8 1.59	- 3 2.7	1.732	2.665	8.3	21.0	1 22	8 1.67	- 2 54.3	1.485	2.422	9.1	18.3
2 1	7 52.72	- 1 49.5	1.754	2.681	8.8	21.1	2 1	7 52.93	- 2 13.1	1.497	2.427	9.8	18.3
2 11	7 45.17	- 0 20.9	1.803	2.697	10.8	21.2	2 11	7 45.58	- 1 11.9	1.535	2.433	12.2	18.5
2 21	7 39.68	+ 1 15.1	1.877	2.713	13.4	21.4	2 21	7 40.48	+ 0 1.8	1.595	2.439	15.0	18.7
<b>134430</b>	1998 <i>RK</i> <sub>30</sub>		1 19.7	114°95'	2°7'/21.1	18	<b>282764</b>	2006 <i>HT</i> <sub>71</sub>		1 19.7	243°34'	5°5'/22.8	18
12 13	8 32.13	+10 53.2	1.972	2.733	15.5	20.6	12 13	8 27.22	+ 3 6.8	2.255	2.986	14.6	20.9
12 23	8 27.29	+11 2.2	1.896	2.749	12.3	20.4	12 23	8 23.35	+ 2 44.8	2.161	2.984	12.2	20.7
1 2	8 20.09	+11 24.8	1.843	2.765	8.7	20.2	1 2	8 17.45	+ 2 38.6	2.089	2.982	9.5	20.5
1 12	8 11.17	+11 59.6	1.815	2.780	4.8	20.0	1 12	8 10.04	+ 2 49.2	2.042	2.980	6.9	20.3
1 22	8 1.47	+12 43.2	1.816	2.795	2.7	19.9	1 22	8 1.85	+ 3 16.2	2.023	2.978	5.5	20.2
2 1	7 52.05	+13 31.6	1.847	2.809	5.4	20.1	2 1	7 53.76	+ 3 57.4	2.032	2.977	6.5	20.3
2 11	7 43.97	+14 20.6	1.907	2.822	9.1	20.4	2 11	7 46.67	+ 4 48.8	2.069	2.975	9.1	20.5
2 21	7 37.97	+15 6.6	1.992	2.836	12.5	20.6	2 21	7 41.28	+ 5 45.9	2.132	2.973	11.9	20.6
<b>138573</b>	2000 <i>QB</i> <sub>107</sub>		1 19.7	129°90'	0°3'/19.9	18	<b>484963</b>	2009 <i>TY</i> <sub>7</sub>		1 19.7	34°65'	6°4'/17.8	17
12 13	8 29.10	+18 26.3	2.725	3.494	11.4	20.4	12 13	8 34.45	+29 13.0	0.944	1.787	22.6	20.4
12 23	8 24.37	+18 32.3	2.640	3.503	8.9	20.2	12 23	8 31.61	+30 18.5	0.902	1.805	17.7	20.2
1 2	8 17.88	+18 43.6	2.579	3.512	5.9	20.1	1 2	8 24.11	+31 25.4	0.878	1.824	12.2	20.0
1 12	8 10.12	+18 58.1	2.547	3.520	2.7	19.8	1 12	8 13.21	+32 21.3	0.875	1.844	7.5	19.8
1 22	8 1.79	+19 13.7	2.545	3.529	0.8	19.7	1 22	8 0.96	+32 55.0	0.894	1.866	7.0	19.8
2 1	7 53.64	+19 28.3	2.575	3.536	4.1	20.0	2 1	7 49.81	+33 1.0	0.936	1.888	11.0	20.1
2 11	7 46.45	+19 40.2	2.634	3.544	7.1	20.2	2 11	7 41.79	+32 41.5	1.000	1.912	15.7	20.5
2 21	7 40.80	+19 48.5	2.719	3.552	9.9	20.4	2 21	7 37.91	+32 2.7	1.082	1.936	19.9	20.8
<b>279169</b>	2009 <i>ST</i> <sub>166</sub>		1 19.7	39°17'	5°3'/22.3	18	<b>284236</b>	2006 <i>DZ</i> <sub>122</sub>		1 19.7	127°47'	1°0'/19.2	18
12 13	8 27.92	+ 5 56.0	1.697	2.460	17.5	20.8	12 13	8 31.13	+21 54.6	2.205	2.989	13.3	21.4
12 23	8 24.39	+ 5 38.0	1.624	2.471	14.3	20.6	12 23	8 26.48	+22 17.9	2.122	2.994	10.3	21.2
1 2	8 18.34	+ 5 38.7	1.571	2.483	10.7	20.4	1 2	8 19.56	+22 46.2	2.063	3.000	6.9	21.0
1 12	8 10.45	+ 5 58.7	1.542	2.495	7.2	20.3	1 12	8 10.97	+23 16.0	2.031	3.006	3.1	20.7
1 22	8 1.69	+ 6 36.0	1.540	2.507	5.3	20.2	1 22	8 1.59	+23 43.4	2.029	3.011	1.5	20.6
2 1	7 53.22	+ 7 26.8	1.564	2.520	7.0	20.3	2 1	7 52.43	+24 5.1	2.057	3.016	5.2	20.9
2 11	7 46.17	+ 8 25.4	1.616	2.533	10.3	20.5	2 11	7 44.51	+24 19.3	2.114	3.021	8.8	21.1
2 21	7 41.34	+ 9 26.3	1.691	2.546	13.7	20.8	2 21	7 38.57	+24 25.6	2.195	3.026	11.9	21.3
<b>102501</b>	1999 <i>TZ</i> <sub>283</sub>		1 19.7	44°15'	3°4'/21.2	18	<b>490649</b>	2010 <i>EU</i> <sub>135</sub>		1 19.7	324°85'	4°1'/21.2	18
12 13	8 29.79	+10 39.2	1.478	2.265	18.6	19.5	12 13	8 28.74	+11 13.8	1.318	2.117	19.8	21.3
12 23	8 26.28	+10 39.2	1.407	2.274	14.9	19.3	12 23	8 26.10	+10 55.4	1.232	2.107	16.1	21.0
1 2	8 19.82	+10 57.0	1.355	2.283	10.6	19.0	1 2	8 20.15	+10 54.6	1.165	2.096	11.6	20.7
1 12	8 11.17	+11 31.4	1.327	2.293	6.0	18.8	1 12	8 11.52	+11 11.9	1.120	2.087	6.7	20.4
1 22	8 1.47	+12 18.6	1.325	2.304	3.5	18.7	1 22	8 1.39	+11 44.9	1.099	2.078	4.1	20.3
2 1	7 52.10	+13 13.3	1.351	2.314	6.6	18.9	2 1	7 51.34	+12 29.2	1.104	2.069	7.6	20.4
2 11	7 44.41	+14 9.5	1.402	2.325	11.0	19.2	2 11	7 43.03	+13 18.6	1.134	2.061	12.7	20.7
2 21	7 39.34	+15 2.3	1.476	2.336	15.1	19.4	2 21	7 37.66	+14 7.5	1.184	2.054	17.4	20.9
<b>329406</b>	2002 <i>CB</i> <sub>292</sub>		1 19.7	8°43'	7°0'/16.3	18	<b>205046</b>	1998 <i>UE</i> <sub>10</sub>		1 19.7	74°95'	2°4'/20.9	18
12 13	8 28.92	+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>315342</b>	2007 <i>TF</i> <sub>451</sub>		1 19.7 181°05	3°9/17.7	18		<b>500156</b>	2012 <i>DG</i> <sub>89</sub>		1 19.7 282°31	1°0/20.1	17	
12 13	8 36.06	+28 13.0	2.005	2.793	14.3	21.7	12 13	8 31.86	+17 19.4	1.923	2.705	15.1	21.3
12 23	8 30.82	+29 12.5	1.922	2.795	11.2	21.4	12 23	8 27.69	+17 16.8	1.811	2.680	12.0	21.1
1 2	8 22.75	+30 14.7	1.862	2.795	7.8	21.2	1 2	8 20.81	+17 22.7	1.721	2.655	8.2	20.8
1 12	8 12.50	+31 12.9	1.829	2.795	4.6	21.0	1 12	8 11.74	+17 35.1	1.656	2.629	3.9	20.5
1 22	8 1.13	+32 0.4	1.826	2.795	4.3	21.0	1 22	8 1.38	+17 51.3	1.621	2.603	1.3	20.2
2 1	7 49.93	+32 32.1	1.852	2.794	7.3	21.2	2 1	7 50.91	+18 8.0	1.614	2.577	5.8	20.5
2 11	7 40.24	+32 46.8	1.905	2.792	10.8	21.4	2 11	7 41.63	+18 22.5	1.635	2.551	10.3	20.7
2 21	7 33.01	+32 45.7	1.983	2.789	14.0	21.6	2 21	7 34.58	+18 33.3	1.680	2.525	14.3	20.8
<b>268764</b>	2006 <i>SU</i> <sub>95</sub>		1 19.7 144°96	1°2/20.2	17		<b>327881</b>	2007 <i>AP</i> <sub>30</sub>		1 19.7 19°27	0°4/19.9	18	
12 13	8 36.02	+15 43.5	1.536	2.322	18.1	22.1	12 13	8 32.47	+19 17.8	1.872	2.659	15.2	20.7
12 23	8 31.16	+15 57.1	1.459	2.330	14.3	21.9	12 23	8 27.91	+19 12.4	1.787	2.659	12.0	20.5
1 2	8 23.13	+16 23.8	1.403	2.337	9.7	21.6	1 2	8 20.72	+19 13.6	1.723	2.660	8.0	20.3
1 12	8 12.70	+17 0.4	1.371	2.344	4.6	21.3	1 12	8 11.58	+19 18.7	1.686	2.660	3.6	20.0
1 22	8 1.08	+17 41.9	1.368	2.351	1.5	21.1	1 22	8 1.47	+19 24.9	1.677	2.660	1.1	19.8
2 1	7 49.79	+18 23.0	1.392	2.356	6.4	21.5	2 1	7 51.62	+19 29.6	1.697	2.661	5.6	20.1
2 11	7 40.29	+18 59.6	1.444	2.362	11.3	21.8	2 11	7 43.21	+19 31.0	1.745	2.661	9.8	20.4
2 21	7 33.61	+19 29.1	1.519	2.366	15.4	22.0	2 21	7 37.10	+19 28.5	1.817	2.661	13.5	20.6
<b>493104</b>	2014 <i>SF</i> <sub>345</sub>		1 19.7 76°46	12°1/26.7	18		<b>57553</b>	2001 <i>TP</i> <sub>34</sub>		1 19.7 131°05	1°2/19.2	18	
12 13	8 28.60	-11 51.9	1.902	2.561	19.1	20.9	12 13	8 37.17	+21 55.1	1.784	2.569	15.9	20.3
12 23	8 24.79	-13 6.6	1.826	2.567	17.2	20.8	12 23	8 31.62	+22 18.7	1.710	2.583	12.4	20.1
1 2	8 18.59	-13 55.3	1.767	2.573	15.2	20.6	1 2	8 23.20	+22 48.3	1.658	2.595	8.2	19.8
1 12	8 10.60	-14 12.6	1.728	2.579	13.4	20.5	1 12	8 12.67	+23 19.3	1.633	2.608	3.7	19.6
1 22	8 1.70	-13 55.5	1.710	2.586	12.3	20.5	1 22	8 1.17	+23 46.4	1.637	2.619	1.8	19.5
2 1	7 52.97	-13 4.9	1.717	2.592	12.3	20.5	2 1	7 50.07	+24 6.0	1.671	2.630	6.1	19.8
2 11	7 45.50	-11 46.3	1.747	2.598	13.4	20.6	2 11	7 40.67	+24 16.2	1.732	2.640	10.3	20.1
2 21	7 40.08	-10 7.8	1.799	2.605	15.2	20.7	2 21	7 33.85	+24 17.3	1.817	2.650	14.0	20.3
<b>51839</b>	2001 <i>OF</i> <sub>65</sub>		1 19.7 85°39	5°1/17.0	18		<b>143665</b>	2003 <i>SP</i> <sub>98</sub>		1 19.7 197°78	0°1/19.8	18	
12 13	8 33.79	+34 45.3	2.298	3.084	12.8	18.9	12 13	8 34.95	+19 40.2	1.855	2.638	15.5	20.3
12 23	8 28.66	+35 33.7	2.228	3.094	10.2	18.7	12 23	8 29.92	+19 40.5	1.765	2.636	12.2	20.1
1 2	8 21.05	+36 18.5	2.182	3.105	7.5	18.6	1 2	8 22.12	+19 47.4	1.698	2.634	8.2	19.8
1 12	8 11.64	+36 53.6	2.163	3.115	5.5	18.5	1 12	8 12.23	+19 58.0	1.657	2.632	3.7	19.5
1 22	8 1.42	+37 14.1	2.173	3.125	5.4	18.5	1 22	8 1.28	+20 8.8	1.645	2.629	1.1	19.3
2 1	7 51.56	+37 17.3	2.212	3.136	7.4	18.6	2 1	7 50.54	+20 16.9	1.663	2.626	5.8	19.7
2 11	7 43.15	+37 3.6	2.277	3.146	10.0	18.8	2 11	7 41.29	+20 20.5	1.708	2.622	10.1	19.9
2 21	7 36.97	+36 35.7	2.367	3.156	12.5	19.0	2 21	7 34.46	+20 18.9	1.778	2.618	13.9	20.1
<b>213896</b>	2003 <i>TL</i> <sub>55</sub>		1 19.7 40°61	4°4/17.8	18		<b>449148</b>	2013 <i>AZ</i> <sub>91</sub>		1 19.7 1°57	3°3/18.3	18	
12 13	8 32.63	+26 29.6	1.413	2.229	17.9	21.0	12 13	8 32.31	+23 26.7	1.325	2.142	18.7	20.7
12 23	8 29.02	+27 36.7	1.349	2.238	13.9	20.8	12 23	8 29.09	+24 29.7	1.251	2.142	14.7	20.5
1 2	8 21.94	+28 49.2	1.305	2.247	9.5	20.6	1 2	8 22.23	+25 43.2	1.197	2.141	9.9	20.2
1 12	8 12.22	+29 58.5	1.286	2.257	5.4	20.4	1 12	8 12.48	+26 59.1	1.167	2.141	5.0	19.9
1 22	8 1.23	+30 55.4	1.294	2.267	4.9	20.4	1 22	8 1.19	+28 7.4	1.164	2.142	4.0	19.8
2 1	7 50.68	+31 33.4	1.328	2.277	8.6	20.6	2 1	7 50.16	+28 59.9	1.186	2.142	8.5	20.1
2 11	7 42.20	+31 50.6	1.386	2.288	12.9	20.9	2 11	7 41.19	+29 32.7	1.233	2.143	13.5	20.4
2 21	7 36.84	+31 49.3	1.466	2.300	16.7	21.1	2 21	7 35.50	+29 46.4	1.301	2.144	17.8	20.7
<b>488585</b>	2002 <i>PM</i> <sub>5</sub>		1 19.7 135°10	2°9/21.8	18		<b>166835</b>	2002 <i>VQ</i> <sub>118</sub>		1 19.7 37°10	4°4/17.9	18	
12 13	8 28.61	+ 7 57.5	2.986	3.717	11.4	22.4	12 13	8 33.84	+32 2.3	1.985	2.780	14.2	19.5
12 23	8 23.78	+ 7 58.1	2.901	3.733	9.2	22.3	12 23	8 28.96	+32 28.9	1.914	2.788	11.2	19.3
1 2	8 17.40	+ 8 9.0	2.841	3.748	6.7	22.1	1 2	8 21.36	+32 52.9	1.865	2.797	7.9	19.1
1 12	8 9.92	+ 8 29.6	2.808	3.762	4.2	22.0	1 12	8 11.82	+33 8.4	1.843	2.806	5.1	19.0
1 22	8 1.94	+ 8 58.3	2.806	3.776	2.9	21.9	1 22	8 1.43	+33 10.9	1.849	2.815	4.7	19.0
2 1	7 54.12	+ 9 33.1	2.835	3.789	4.3	22.0	2 1	7 51.50	+32 58.0	1.883	2.825	7.2	19.2
2 11	7 47.13	+10 11.3	2.894	3.802	6.7	22.2	2 11	7 43.20	+32 30.5	1.945	2.834	10.4	19.4
2 21	7 41.47	+10 50.2	2.981	3.814	9.1	22.2	2 21	7 37.33	+31 51.3	2.030	2.845	13.4	19.6
<b>488600</b>	2002 <i>RM</i> <sub>44</sub>		1 19.7 65°60	1°0/19.0	18		<b>339590</b>	2005 <i>MA</i> <sub>43</sub>		1 19.7 201°56	0°5/19.9	18	
12 13	8 27.90	+22 46.6	2.955	3.732	10.5	21.3	12 13	8 29.88	+18 47.2	2.815	3.582	11.2	21.2
12 23	8 23.27	+23 13.4	2.892	3.761	8.0	21.1	12 23	8 25.01	+18 40.7	2.718	3.579	8.7	21.0
1 2	8 17.05	+23 43.0	2.855	3.790	5.3	21.0	1 2	8 18.35	+18 38.3	2.645	3.576	5.9	20.8
1 12	8 9.75	+24 12.5	2.846	3.819	2.4	20.8	1 12	8 10.41	+18 38.7	2.600	3.573	2.7	20.6
1 22	8 2.01	+24 39.1	2.867	3.848	1.4	20.8	1 22	8 1.84	+18 40.2	2.587	3.570	0.8	20.5
2 1	7 54.54	+25 0.8	2.921	3.877	4.0	21.0	2 1	7 53.40	+18 41.0	2.604	3.566	4.0	20.7
2 11	7 48.01	+25 16.2	3.003	3.906	6.7	21.2	2 11	7 45.87	+18 40.1	2.652	3.562	7.1	20.9
2 21	7 42.91	+25 25.1	3.112	3.934	9.0	21.4	2 21	7 39.85	+18 36.9	2.727	3.558	9.9	21.1
<b>119012</b>	2000 <i>YK</i> <sub>105</sub>		1 19.7 350°99	4°8/22.8	18		<b>378685</b>	2008 <i>JJ</i> <sub>22</sub>		1 19.7 257°68	0°3/19.9	18	
12 13	8 29.67	- 0 12.6	1.052	1.831	25.1	18.7	12 13	8 34.61	+19 52.6	2.114	2.890	14.1	21.2
12 23	8 27.65	+ 1 26.1	0.970	1.828	20.9	18.4	12 23	8 29.48	+19 40.3	2.005	2.872	11.1	21.0
1 2	8 21.72	+ 3 57.8	0.905	1.825	15.5	18.0	1 2	8 21.78	+19 32.4	1.920	2.854	7.5	20.7
1 12	8 12.45	+ 7 22.6	0.862	1.823	9.4	17.7	1 12	8 12.10	+19 27.0	1.861	2.835	3.5	20.4
1 22	8 1.11	+11 27.8	0.844	1.822	4.8	17.4	1 22	8 1.31	+19 21.7	1.833	2.816	1.0	20.2
2 1	7 49.66	+15 49.0	0.853	1.821	8.4	17.6	2 1	7 50.56	+19 14.4	1.834	2.796	5.4	20.5
2 11	7 40.26	+19 58.3	0.890	1.821	14.7	18.0	2 11	7 41.04	+19 4.1	1.865	2.776	9.5	20.7
2 21	7 34.49	+23 35.7	0.950	1.822	20.4	18.3	2 21	7 33.64	+18 50.6	1.920	2.756	13.2	20.9
<b>92616</b>	2000 <i>QU</i> <sub>1</sub>		1 19.7 109°99	7°7/16.5	18		<b>78136</b>	2002 <i>NF</i> <sub>14</sub>		1 19.7 106°72	0°4/19.9	18	
12 13	8 43.88	+											

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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>162177</b>	1999 <i>JU</i> <sub>102</sub>		1 19.7 164°20	1.5/18.9	18		<b>239507</b>	2007 <i>VL</i> <sub>214</sub>		1 19.7 196°77	2.9/17.8	18	
12 13	8 35.04	+21 59.0	2.060	2.840	14.3	20.6	12 13	8 29.80	+27 22.1	2.595	3.380	11.5	20.7
12 23	8 29.76	+22 41.7	1.976	2.846	11.1	20.4	12 23	8 25.35	+28 15.7	2.507	3.379	9.0	20.5
1 2	8 21.90	+23 30.9	1.915	2.852	7.4	20.2	1 2	8 18.81	+29 11.8	2.443	3.377	6.1	20.4
1 12	8 12.10	+24 21.9	1.883	2.856	3.4	20.0	1 12	8 10.71	+30 5.6	2.408	3.375	3.5	20.2
1 22	8 1.33	+25 9.1	1.880	2.860	2.0	19.9	1 22	8 1.80	+30 52.4	2.403	3.373	3.3	20.2
2 1	7 50.76	+25 48.1	1.907	2.864	5.8	20.1	2 1	7 52.99	+31 28.5	2.428	3.371	5.7	20.3
2 11	7 41.56	+26 16.3	1.963	2.866	9.6	20.4	2 11	7 45.19	+31 52.3	2.482	3.369	8.6	20.5
2 21	7 34.59	+26 33.4	2.045	2.868	13.0	20.6	2 21	7 39.15	+32 3.8	2.561	3.366	11.2	20.7
<b>416877</b>	2005 <i>QR</i> <sub>21</sub>		1 19.7 148°51	4.9/16.9	18		<b>216748</b>	2005 <i>NT</i> <sub>12</sub>		1 19.7 181°78	3.5/21.6	18	
12 13	8 38.20	+35 29.1	2.615	3.385	11.8	22.2	12 13	8 30.72	+ 8 45.3	2.124	2.876	14.8	20.8
12 23	8 31.80	+36 21.7	2.542	3.398	9.5	22.0	12 23	8 26.22	+ 8 44.9	2.032	2.876	12.0	20.6
1 2	8 23.02	+37 10.4	2.493	3.410	7.0	21.9	1 2	8 19.47	+ 8 58.5	1.962	2.877	8.7	20.4
1 12	8 12.52	+37 49.2	2.474	3.421	5.2	21.8	1 12	8 11.03	+ 9 25.6	1.918	2.877	5.3	20.1
1 22	8 1.23	+38 13.5	2.484	3.431	5.2	21.8	1 22	8 1.71	+10 4.2	1.902	2.876	3.5	20.0
2 1	7 50.26	+38 20.7	2.524	3.441	7.0	21.9	2 1	7 52.51	+10 50.9	1.917	2.875	5.6	20.2
2 11	7 40.65	+38 11.1	2.593	3.450	9.4	22.1	2 11	7 44.44	+11 41.4	1.960	2.874	9.0	20.4
2 21	7 33.17	+37 47.3	2.686	3.458	11.6	22.3	2 21	7 38.27	+12 31.9	2.029	2.872	12.3	20.6
<b>82966</b>	2001 <i>QD</i> <sub>132</sub>		1 19.7 261°45	0.3/19.8	18		<b>58720</b>	1998 <i>DD</i> <sub>11</sub>		1 19.7 271°68	2.2/20.9	18	
12 13	8 33.58	+19 39.0	1.935	2.718	15.0	19.4	12 13	8 28.90	+11 43.8	2.069	2.836	14.6	19.5
12 23	8 28.88	+19 32.9	1.833	2.704	11.8	19.2	12 23	8 25.10	+12 1.4	1.961	2.819	11.8	19.2
1 2	8 21.49	+19 32.7	1.754	2.690	8.0	18.9	1 2	8 18.94	+12 33.1	1.876	2.801	8.3	19.0
1 12	8 11.99	+19 36.0	1.701	2.676	3.6	18.6	1 12	8 10.89	+13 17.4	1.816	2.784	4.5	18.7
1 22	8 1.35	+19 39.9	1.678	2.661	1.1	18.4	1 22	8 1.75	+14 11.3	1.785	2.766	2.3	18.5
2 1	7 50.79	+19 41.8	1.683	2.646	5.7	18.7	2 1	7 52.54	+15 10.4	1.784	2.748	5.4	18.7
2 11	7 41.56	+19 40.1	1.717	2.631	10.0	18.9	2 11	7 44.38	+16 10.1	1.812	2.729	9.4	18.9
2 21	7 34.62	+19 34.1	1.775	2.615	13.9	19.1	2 21	7 38.16	+17 6.3	1.865	2.711	13.1	19.1
<b>126243</b>	2002 <i>AB</i> <sub>64</sub>		1 19.7 350°31	5.8/22.9	18		<b>22333</b>	1992 <i>DG</i> <sub>10</sub>		1 19.7 63°28	0.9/20.0	17	
12 13	8 22.71	+ 4 6.8	1.401	2.182	19.7	18.6	12 13	8 36.61	+17 56.8	1.179	1.989	21.0	18.6
12 23	8 21.13	+ 4 15.2	1.315	2.173	16.4	18.4	12 23	8 32.22	+17 52.1	1.122	2.006	16.5	18.3
1 2	8 16.68	+ 4 50.5	1.248	2.165	12.4	18.1	1 2	8 24.07	+17 59.4	1.083	2.023	11.1	18.1
1 12	8 9.95	+ 5 54.0	1.203	2.158	8.3	17.8	1 12	8 13.18	+18 15.1	1.066	2.041	5.1	17.8
1 22	8 1.95	+ 7 22.9	1.182	2.152	5.8	17.7	1 22	8 1.13	+18 34.1	1.075	2.059	1.5	17.6
2 1	7 54.01	+ 9 9.8	1.187	2.148	7.7	17.8	2 1	7 49.81	+18 51.7	1.110	2.076	7.3	18.0
2 11	7 47.57	+11 4.6	1.216	2.145	11.8	18.0	2 11	7 40.89	+19 4.9	1.170	2.094	12.7	18.4
2 21	7 43.67	+12 57.3	1.269	2.144	16.1	18.2	2 21	7 35.39	+19 12.3	1.251	2.112	17.2	18.7
<b>175922</b>	2000 <i>DY</i> <sub>12</sub>		1 19.7 306°57	2.2/20.7	18		<b>427101</b>	2014 <i>UK</i> <sub>62</sub>		1 19.7 356°80	3.0/20.9	18	
12 13	8 29.31	+13 13.7	1.691	2.476	16.7	20.8	12 13	8 28.38	+12 44.8	1.644	2.431	17.0	20.7
12 23	8 25.82	+13 19.6	1.600	2.468	13.3	20.6	12 23	8 25.07	+12 30.4	1.560	2.429	13.6	20.5
1 2	8 19.58	+13 39.6	1.529	2.461	9.3	20.3	1 2	8 19.03	+12 29.1	1.497	2.427	9.6	20.2
1 12	8 11.18	+14 12.3	1.484	2.454	4.9	20.0	1 12	8 10.93	+12 40.4	1.458	2.426	5.3	20.0
1 22	8 1.61	+14 54.1	1.466	2.447	2.3	19.8	1 22	8 1.77	+13 1.8	1.446	2.425	3.0	19.8
2 1	7 52.12	+15 40.6	1.475	2.440	6.1	20.1	2 1	7 52.81	+13 30.2	1.462	2.425	6.2	20.0
2 11	7 44.04	+16 26.8	1.512	2.433	10.6	20.3	2 11	7 45.30	+14 1.3	1.503	2.426	10.5	20.3
2 21	7 38.33	+17 9.1	1.572	2.427	14.6	20.5	2 21	7 40.18	+14 31.8	1.568	2.427	14.4	20.5
<b>356548</b>	2011 <i>ST</i> <sub>178</sub>		1 19.7 191°27	0.7/20.1	18		<b>43786</b>	1990 <i>QA</i> <sub>8</sub>		1 19.7 82°96	0.9/20.2	18	
12 13	8 35.20	+17 6.4	2.079	2.849	14.5	22.2	12 13	8 34.57	+15 47.5	1.757	2.536	16.4	19.8
12 23	8 29.83	+17 16.7	1.985	2.847	11.4	22.0	12 23	8 29.40	+16 8.0	1.695	2.563	12.8	19.6
1 2	8 21.94	+17 35.6	1.914	2.845	7.7	21.7	1 2	8 21.59	+16 39.5	1.656	2.589	8.6	19.4
1 12	8 12.14	+18 0.5	1.870	2.842	3.6	21.5	1 12	8 11.93	+17 18.7	1.643	2.616	4.0	19.2
1 22	8 1.34	+18 27.9	1.855	2.838	1.1	21.3	1 22	8 1.51	+18 0.8	1.659	2.642	1.3	19.1
2 1	7 50.67	+18 54.4	1.872	2.834	5.3	21.6	2 1	7 51.58	+18 41.5	1.704	2.667	5.5	19.4
2 11	7 41.29	+19 17.3	1.917	2.828	9.3	21.8	2 11	7 43.28	+19 17.2	1.777	2.692	9.6	19.7
2 21	7 34.05	+19 35.1	1.988	2.822	12.9	22.0	2 21	7 37.38	+19 46.2	1.874	2.717	13.2	20.0
<b>101784</b>	1999 <i>GQ</i> <sub>14</sub>		1 19.7 154°21	2.0/18.5	18		<b>317495</b>	2002 <i>SO</i> <sub>51</sub>		1 19.7 157°48	0.4/19.9	18	
12 13	8 30.28	+26 12.0	2.876	3.654	10.7	20.5	12 13	8 37.53	+18 27.5	1.701	2.483	16.8	21.6
12 23	8 25.36	+26 42.4	2.791	3.660	8.3	20.3	12 23	8 32.08	+18 31.8	1.620	2.489	13.2	21.4
1 2	8 18.60	+27 14.2	2.732	3.666	5.6	20.2	1 2	8 23.64	+18 44.5	1.561	2.496	8.9	21.2
1 12	8 10.54	+27 44.0	2.701	3.671	2.9	20.0	1 12	8 12.96	+19 2.6	1.527	2.501	4.0	20.9
1 22	8 1.84	+28 8.6	2.701	3.677	2.3	19.9	1 22	8 1.19	+19 22.1	1.523	2.506	1.1	20.7
2 1	7 53.32	+28 25.5	2.732	3.682	4.7	20.1	2 1	7 49.74	+19 39.1	1.547	2.510	6.1	21.0
2 11	7 45.76	+28 33.7	2.792	3.686	7.5	20.3	2 11	7 39.99	+19 51.5	1.600	2.514	10.6	21.3
2 21	7 39.77	+28 33.3	2.879	3.690	9.9	20.5	2 21	7 32.90	+19 58.2	1.676	2.516	14.6	21.5
<b>468348</b>	2016 <i>ER</i> <sub>108</sub>		1 19.7 268°99	4.6/22.5	18		<b>102034</b>	1999 <i>RW</i> <sub>107</sub>		1 19.7 74°73	1.9/20.7	18	
12 13	8 28.14	+ 4 55.5	1.922	2.671	16.2	20.8	12 13	8 28.25	+13 59.9	2.505	3.269	12.5	19.7
12 23	8 24.52	+ 5 6.5	1.828	2.667	13.4	20.6	12 23	8 23.87	+13 50.4	2.422	3.279	9.8	19.5
1 2	8 18.51	+ 5 37.2	1.754	2.662	10.0	20.4	1 2	8 17.66	+13 48.9	2.364	3.289	6.8	19.4
1 12	8 10.65	+ 6 27.7	1.705	2.657	6.6	20.2	1 12	8 10.15	+13 54.4	2.332	3.300	3.6	19.2
1 22	8 1.79	+ 7 35.4	1.684	2.653	4.7	20.1	1 22	8 2.03	+14 5.2	2.330	3.310	1.9	19.1
2 1	7 52.99	+ 8 55.6	1.691	2.648	6.3	20.1	2 1	7 54.13	+14 19.2	2.359	3.321	4.4	19.3
2 11	7 45.34	+10 21.9	1.727	2.643	9.8	20.3	2 11	7 47.22	+14 34.5	2.417	3.331	7.5	19.5
2 21	7 39.71	+11 48.0	1.787	2.639	13.3	20.5	2 21	7 41.92	+14 49.3	2.500	3.341	10.3	19.7
<b>269103</b>	2007 <i>HM</i> <sub>83</sub>		1 19.7 286°17	3.9/21.3	18		<b>116647</b>	2004 <i>CY</i> <sub>13</sub>		1 19.7 257°05	1.2/20.4	18	
12 13	8 29.45	+10 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>50963</b>	2000 <i>GT</i> <sub>84</sub>		1 19.8 170°68	4.8/16.1	18		<b>309446</b>	2007 <i>UK</i> <sub>71</sub>		1 19.8 299°77	1.1/20.2	18	
12 13	8 32.71	+34 55.0	2.862	3.638	10.8	19.7	12 13	8 30.90	+16 46.1	1.559	2.356	17.4	21.1
12 23	8 27.56	+36 3.9	2.781	3.641	8.6	19.5	12 23	8 27.44	+16 48.1	1.465	2.343	13.8	20.9
1 2	8 20.27	+37 10.7	2.727	3.644	6.4	19.4	1 2	8 20.90	+17 1.5	1.392	2.330	9.4	20.6
1 12	8 11.38	+38 9.8	2.701	3.646	4.9	19.3	1 12	8 11.90	+17 24.1	1.343	2.317	4.5	20.3
1 22	8 1.67	+38 56.2	2.705	3.648	5.1	19.3	1 22	8 1.51	+17 52.0	1.321	2.304	1.5	20.0
2 1	7 52.06	+39 26.9	2.738	3.650	6.8	19.4	2 1	7 51.18	+18 20.9	1.326	2.291	6.5	20.3
2 11	7 43.51	+39 40.9	2.800	3.651	9.0	19.6	2 11	7 42.39	+18 46.8	1.357	2.279	11.5	20.6
2 21	7 36.76	+39 39.8	2.886	3.652	11.1	19.7	2 21	7 36.27	+19 7.4	1.411	2.267	15.9	20.8
<b>419668</b>	2010 <i>TN</i> <sub>142</sub>		1 19.8 156°27	1°0/20.2	18		<b>107521</b>	2001 <i>DV</i> <sub>60</sub>		1 19.8 304°22	1°6/20.4	18	
12 13	8 33.49	+16 45.1	2.110	2.881	14.3	22.0	12 13	8 30.08	+15 31.7	1.542	2.338	17.5	20.0
12 23	8 28.36	+16 45.5	2.025	2.887	11.2	21.8	12 23	8 26.84	+15 32.4	1.447	2.323	14.0	19.7
1 2	8 20.87	+16 53.9	1.962	2.893	7.6	21.6	1 2	8 20.53	+15 45.9	1.372	2.309	9.7	19.4
1 12	8 11.65	+17 8.1	1.926	2.898	3.6	21.4	1 12	8 11.75	+16 10.3	1.322	2.294	4.8	19.1
1 22	8 1.60	+17 25.4	1.920	2.903	1.3	21.2	1 22	8 1.56	+16 42.0	1.297	2.280	1.8	18.9
2 1	7 51.77	+17 43.0	1.944	2.907	5.1	21.5	2 1	7 51.38	+17 16.6	1.301	2.266	6.5	19.1
2 11	7 43.23	+17 58.6	1.997	2.911	8.9	21.7	2 11	7 42.73	+17 49.7	1.330	2.253	11.6	19.4
2 21	7 36.74	+18 10.8	2.076	2.914	12.3	21.9	2 21	7 36.74	+18 18.0	1.381	2.240	16.0	19.6
<b>325471</b>	2009 <i>QR</i> <sub>59</sub>		1 19.8 173°52	3°2/21.3	18		<b>236039</b>	2005 <i>GJ</i> <sub>181</sub>		1 19.8 238°98	3°8/22.1	17	
12 13	8 32.36	+10 0.8	2.527	3.268	13.0	21.6	12 13	8 27.12	+6 46.0	2.493	3.233	13.1	21.2
12 23	8 27.06	+9 38.2	2.433	3.271	10.5	21.5	12 23	8 23.17	+6 40.8	2.392	3.227	10.7	21.0
1 2	8 19.80	+9 25.2	2.362	3.274	7.6	21.3	1 2	8 17.33	+6 48.5	2.313	3.220	8.0	20.8
1 12	8 11.13	+9 21.7	2.319	3.276	4.7	21.1	1 12	8 10.08	+7 9.3	2.261	3.213	5.3	20.6
1 22	8 1.75	+9 26.9	2.306	3.278	3.2	21.0	1 22	8 2.08	+7 41.9	2.238	3.206	3.8	20.5
2 1	7 52.52	+9 39.2	2.324	3.279	5.0	21.1	2 1	7 54.14	+8 23.8	2.244	3.198	5.3	20.6
2 11	7 44.29	+9 56.4	2.372	3.279	8.0	21.3	2 11	7 47.07	+9 11.6	2.280	3.191	8.1	20.8
2 21	7 37.71	+10 16.0	2.446	3.279	10.8	21.5	2 21	7 41.55	+10 1.5	2.342	3.183	10.9	20.9
<b>392247</b>	2009 <i>WA</i> <sub>123</sub>		1 19.8 57°10	1°0/19.4	17		<b>171068</b>	2005 <i>EQ</i> <sub>151</sub>		1 19.8 148°69	2°6/18.1	18	
12 13	8 34.15	+20 7.0	1.265	2.078	19.7	21.9	12 13	8 31.18	+27 45.2	2.686	3.467	11.3	20.7
12 23	8 30.38	+20 34.5	1.199	2.086	15.4	21.6	12 23	8 26.24	+28 22.5	2.604	3.473	8.8	20.6
1 2	8 22.97	+21 13.3	1.151	2.094	10.3	21.4	1 2	8 19.30	+29 0.8	2.547	3.480	6.0	20.4
1 12	8 12.79	+21 57.8	1.127	2.103	4.6	21.1	1 12	8 10.92	+29 35.8	2.518	3.486	3.4	20.2
1 22	8 1.26	+22 40.8	1.129	2.112	1.8	20.9	1 22	8 1.85	+30 3.9	2.519	3.491	2.9	20.2
2 1	7 50.21	+23 15.8	1.157	2.121	7.5	21.3	2 1	7 52.97	+30 22.3	2.551	3.497	5.3	20.4
2 11	7 41.35	+23 39.4	1.209	2.130	12.7	21.6	2 11	7 45.15	+30 29.9	2.612	3.502	8.1	20.6
2 21	7 35.77	+23 51.0	1.283	2.139	17.2	21.9	2 21	7 39.05	+30 27.4	2.699	3.506	10.6	20.8
<b>458425</b>	2011 <i>AV</i> <sub>31</sub>		1 19.8 7°82	2°1/18.9	18		<b>27277</b>	<i>Pattybrown</i>		1 19.8 207°11	0°7/19.5	18	
12 13	8 31.52	+24 27.6	1.580	2.388	16.6	21.2	12 13	8 36.09	+20 47.9	1.650	2.442	16.8	19.5
12 23	8 27.77	+24 43.4	1.504	2.389	13.0	20.9	12 23	8 31.26	+21 1.7	1.563	2.438	13.2	19.3
1 2	8 20.94	+25 3.3	1.448	2.390	8.7	20.7	1 2	8 23.31	+21 23.1	1.497	2.435	8.8	19.0
1 12	8 11.81	+25 22.6	1.418	2.392	4.1	20.4	1 12	8 12.92	+21 48.0	1.456	2.431	4.0	18.7
1 22	8 1.56	+25 36.1	1.414	2.395	2.6	20.3	1 22	8 1.25	+22 11.4	1.443	2.426	1.5	18.5
2 1	7 51.67	+25 40.1	1.438	2.398	6.9	20.6	2 1	7 49.78	+22 29.0	1.459	2.421	6.5	18.8
2 11	7 43.55	+25 33.5	1.488	2.402	11.3	20.9	2 11	7 40.00	+22 38.6	1.502	2.416	11.2	19.1
2 21	7 38.15	+25 17.2	1.560	2.406	15.2	21.1	2 21	7 32.96	+22 39.8	1.569	2.410	15.4	19.3
<b>409458</b>	2005 <i>QH</i> <sub>181</sub>		1 19.8 24°44	15°9/1.8	18		<b>455486</b>	2003 <i>UH</i> <sub>300</sub>		1 19.8 59°82	2°7/18.7	16	
12 13	8 24.04	-18 0.3	1.366	2.032	25.1	19.8	12 13	8 35.90	+24 10.2	1.421	2.228	18.2	22.0
12 23	8 22.01	-19 6.5	1.315	2.049	23.0	19.6	12 23	8 31.19	+24 52.4	1.368	2.253	14.1	21.8
1 2	8 17.08	-19 31.6	1.276	2.068	20.7	19.5	1 2	8 23.14	+25 40.1	1.336	2.277	9.3	21.6
1 12	8 10.06	-19 8.2	1.252	2.089	18.4	19.4	1 12	8 12.73	+26 26.1	1.328	2.302	4.5	21.4
1 22	8 2.08	-17 54.3	1.245	2.110	16.7	19.4	1 22	8 1.36	+27 3.3	1.348	2.327	3.2	21.4
2 1	7 54.53	-15 53.6	1.259	2.133	15.9	19.4	2 1	7 50.69	+27 27.0	1.395	2.352	7.4	21.7
2 11	7 48.67	-13 17.3	1.294	2.157	16.4	19.5	2 11	7 42.17	+27 36.0	1.467	2.376	11.8	22.0
2 21	7 45.38	-10 20.7	1.350	2.182	17.9	19.7	2 21	7 36.68	+27 31.9	1.562	2.401	15.5	22.3
<b>277964</b>	2006 <i>SY</i> <sub>303</sub>		1 19.8 322°61	1°6/19.0	18		<b>298922</b>	2004 <i>TR</i> <sub>126</sub>		1 19.8 165°76	0°4/19.5	18	
12 13	8 31.92	+22 13.1	1.685	2.485	16.1	20.3	12 13	8 35.33	+18 55.4	2.061	2.835	14.5	22.0
12 23	8 27.97	+22 44.4	1.601	2.482	12.6	20.0	12 23	8 29.96	+19 30.7	1.975	2.841	11.3	21.8
1 2	8 21.06	+23 23.1	1.539	2.480	8.4	19.8	1 2	8 22.06	+20 14.6	1.913	2.847	7.5	21.6
1 12	8 11.89	+24 4.2	1.503	2.477	3.9	19.5	1 12	8 12.25	+21 3.1	1.878	2.852	3.3	21.4
1 22	8 1.53	+24 42.0	1.494	2.475	2.2	19.4	1 22	8 1.47	+21 51.3	1.873	2.856	1.2	21.2
2 1	7 51.38	+25 11.6	1.514	2.473	6.6	19.7	2 1	7 50.88	+22 34.6	1.899	2.859	5.4	21.5
2 11	7 42.82	+25 30.1	1.560	2.471	11.0	19.9	2 11	7 41.62	+23 9.9	1.954	2.861	9.4	21.8
2 21	7 36.84	+25 37.5	1.629	2.470	14.9	20.2	2 21	7 34.54	+23 36.2	2.034	2.863	12.8	22.0
<b>218993</b>	2008 <i>HO</i> <sub>28</sub>		1 19.8 253°61	1°7/20.5	17		<b>312867</b>	2011 <i>UP</i> <sub>154</sub>		1 19.8 271°20	1°9/20.5	18	
12 13	8 31.27	+14 57.2	1.996	2.770	14.9	21.3	12 13	8 32.18	+15 7.3	1.693	2.477	16.7	21.2
12 23	8 26.96	+14 52.7	1.896	2.760	11.8	21.1	12 23	8 28.17	+14 59.5	1.595	2.465	13.3	20.9
1 2	8 20.16	+14 58.0	1.819	2.749	8.2	20.9	1 2	8 21.25	+15 2.8	1.519	2.452	9.3	20.7
1 12	8 11.44	+15 11.7	1.767	2.738	4.2	20.6	1 12	8 12.03	+15 15.9	1.467	2.438	4.7	20.4
1 22	8 1.66	+15 31.3	1.745	2.726	1.9	20.4	1 22	8 1.51	+15 35.9	1.443	2.425	2.1	20.2
2 1	7 51.95	+15 53.9	1.752	2.715	5.5	20.6	2 1	7 51.03	+15 59.5	1.448	2.412	6.2	20.4
2 11	7 43.44	+16 16.5	1.787	2.703	9.5	20.8	2 11	7 41.97	+16 23.1	1.479	2.398	10.9	20.6
2 21	7 37.03	+16 36.9	1.846	2.691	13.2	21.1	2 21	7 35.40	+16 44.2	1.533	2.385	15.1	20.9
<b>57773</b>	2001 <i>VG</i> <sub>50</sub>		1 19.8 246°73	1°6/19.2	18		<b>96921</b>	1999 <i>TN</i> <sub>117</sub>		1 19.8 358°90	1°0/20.1	18	
12 13	8 36.56	+23 30.7	1.653										



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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>396814</b>	2004 QX <sub>11</sub>		1 19.8 57°23	3°6/18.2	17		<b>178302</b>	1993 TR <sub>10</sub>		1 19.8 221°17	4°0/21.7	18	
12 13	8 35.05	+23 45.5	1.283	2.099	19.3	20.4	12 13	8 31.06	+ 8 19.8	2.183	2.930	14.6	21.2
12 23	8 30.97	+25 1.3	1.232	2.122	14.9	20.2	12 23	8 26.52	+ 8 0.3	2.083	2.923	11.9	21.0
1 2	8 23.25	+26 25.3	1.202	2.145	9.9	20.0	1 2	8 19.73	+ 7 53.5	2.004	2.915	8.8	20.8
1 12	8 12.86	+27 47.8	1.195	2.168	5.1	19.8	1 12	8 11.24	+ 7 59.7	1.951	2.906	5.7	20.6
1 22	8 1.33	+28 58.5	1.215	2.192	4.2	19.8	1 22	8 1.82	+ 8 17.9	1.928	2.897	4.0	20.5
2 1	7 50.46	+29 50.3	1.262	2.216	8.4	20.1	2 1	7 52.45	+ 8 46.1	1.933	2.888	5.9	20.6
2 11	7 41.91	+30 20.8	1.333	2.240	12.9	20.4	2 11	7 44.14	+ 9 20.8	1.967	2.878	9.1	20.8
2 21	7 36.64	+30 32.1	1.425	2.263	16.8	20.7	2 21	7 37.69	+ 9 58.5	2.027	2.868	12.4	21.0
<b>24121</b>	Achandran		1 19.8 219°15	0°8/20.2	18		<b>472357</b>	2015 BT <sub>28</sub>		1 19.8 273°85	0°9/19.4	16	
12 13	8 29.74	+16 48.8	2.090	2.870	14.1	19.2	12 13	8 33.40	+23 42.0	2.565	3.338	11.9	21.7
12 23	8 25.57	+16 58.2	2.002	2.870	11.1	19.0	12 23	8 28.19	+23 37.8	2.448	3.314	9.4	21.5
1 2	8 19.10	+17 16.2	1.936	2.870	7.5	18.8	1 2	8 20.79	+23 35.3	2.355	3.289	6.3	21.2
1 12	8 10.92	+17 40.6	1.897	2.870	3.5	18.5	1 12	8 11.70	+23 31.7	2.291	3.264	2.9	21.0
1 22	8 1.87	+18 8.4	1.886	2.869	1.1	18.3	1 22	8 1.69	+23 24.7	2.257	3.239	1.3	20.8
2 1	7 52.98	+18 36.1	1.906	2.869	5.0	18.6	2 1	7 51.69	+23 12.4	2.254	3.213	4.8	21.0
2 11	7 45.29	+19 0.9	1.953	2.869	8.9	18.8	2 11	7 42.68	+22 54.2	2.282	3.187	8.3	21.2
2 21	7 39.57	+19 21.2	2.026	2.869	12.3	19.1	2 21	7 35.46	+22 30.7	2.335	3.161	11.5	21.3
<b>140876</b>	2001 VM <sub>19</sub>		1 19.8 49°35	4°7/17.0	18		<b>239006</b>	2006 DH <sub>8</sub>		1 19.8 335°93	15°4/30.0	18	
12 13	8 31.42	+32 47.0	2.311	3.101	12.6	19.7	12 13	8 26.31	-16 41.8	1.499	2.158	23.5	19.8
12 23	8 26.93	+33 41.5	2.234	3.105	10.0	19.6	12 23	8 23.89	-17 37.4	1.417	2.151	21.6	19.6
1 2	8 20.03	+34 34.6	2.181	3.108	7.2	19.4	1 2	8 18.55	-17 56.3	1.347	2.145	19.5	19.4
1 12	8 11.33	+35 20.1	2.155	3.111	5.1	19.3	1 12	8 10.89	-17 29.6	1.294	2.139	17.4	19.2
1 22	8 1.76	+35 53.0	2.158	3.115	5.1	19.3	1 22	8 1.91	-16 12.6	1.259	2.134	15.8	19.1
2 1	7 52.42	+36 9.9	2.190	3.119	7.2	19.4	2 1	7 52.97	-14 6.3	1.246	2.129	15.4	19.1
2 11	7 44.39	+36 10.2	2.248	3.123	9.9	19.6	2 11	7 45.52	-11 20.1	1.255	2.125	16.4	19.1
2 21	7 38.47	+35 55.8	2.331	3.126	12.5	19.8	2 21	7 40.62	- 8 8.6	1.287	2.122	18.4	19.2
<b>74447</b>	1999 CH <sub>21</sub>		1 19.8 59°41	1°2/19.3	18		<b>248861</b>	2006 UO <sub>7</sub>		1 19.8 108°74	6°0/23.3	18	
12 13	8 32.37	+23 40.6	2.110	2.897	13.7	18.7	12 13	8 32.85	+ 1 5.2	2.230	2.940	15.3	22.0
12 23	8 27.53	+23 43.8	2.031	2.905	10.7	18.5	12 23	8 27.51	+ 0 40.9	2.160	2.966	12.8	21.9
1 2	8 20.33	+23 49.7	1.975	2.913	7.1	18.3	1 2	8 20.12	+ 0 33.8	2.111	2.991	10.0	21.7
1 12	8 11.43	+23 55.0	1.946	2.921	3.2	18.1	1 12	8 11.30	+ 0 45.0	2.087	3.015	7.4	21.6
1 22	8 1.77	+23 56.7	1.947	2.928	1.6	18.0	1 22	8 1.86	+ 1 13.6	2.091	3.039	6.0	21.6
2 1	7 52.43	+23 52.7	1.977	2.937	5.3	18.3	2 1	7 52.73	+ 1 56.8	2.124	3.061	6.8	21.7
2 11	7 44.45	+23 42.2	2.035	2.945	9.0	18.5	2 11	7 44.79	+ 2 50.4	2.187	3.083	9.1	21.9
2 21	7 38.57	+23 25.7	2.119	2.953	12.2	18.7	2 21	7 38.69	+ 3 49.3	2.275	3.105	11.6	22.1
<b>28864</b>	2000 JG <sub>70</sub>		1 19.8 190°45	4°9/17.9	18		<b>14303</b>	1144 T <sub>-3</sub>		1 19.8 52°36	2°8/18.6	18	
12 13	8 39.15	+33 38.1	2.055	2.837	14.2	17.9	12 13	8 33.18	+27 49.2	2.062	2.853	13.9	18.6
12 23	8 33.20	+34 7.5	1.971	2.837	11.3	17.7	12 23	8 28.35	+28 8.5	1.983	2.858	10.8	18.4
1 2	8 24.33	+34 33.3	1.910	2.836	8.2	17.5	1 2	8 20.99	+28 28.2	1.927	2.863	7.3	18.2
1 12	8 13.29	+34 48.9	1.876	2.834	5.5	17.4	1 12	8 11.78	+28 43.7	1.898	2.869	4.0	18.0
1 22	8 1.22	+34 49.2	1.871	2.833	5.2	17.4	1 22	8 1.72	+28 50.9	1.898	2.874	3.2	18.0
2 1	7 49.53	+34 31.6	1.895	2.830	7.7	17.5	2 1	7 52.00	+28 47.1	1.928	2.879	6.2	18.2
2 11	7 39.54	+33 57.0	1.947	2.828	10.9	17.7	2 11	7 43.73	+28 32.3	1.985	2.885	9.7	18.4
2 21	7 32.15	+33 9.3	2.023	2.825	13.9	17.9	2 21	7 37.71	+28 7.8	2.066	2.891	12.8	18.6
<b>456273</b>	2006 RU <sub>68</sub>		1 19.8 68°50	3°3/18.5	18		<b>3357</b>	Tolstikov		1 19.8 279°26	2°4/21.2	18	
12 13	8 36.08	+26 37.7	1.611	2.412	16.7	21.4	12 13	8 27.23	+10 43.2	2.259	3.021	13.7	16.8
12 23	8 31.09	+27 14.9	1.551	2.432	13.0	21.2	12 23	8 23.51	+11 1.7	2.162	3.015	11.0	16.6
1 2	8 22.99	+27 54.5	1.513	2.452	8.7	21.0	1 2	8 17.71	+11 33.6	2.087	3.010	7.8	16.3
1 12	8 12.67	+28 30.0	1.501	2.472	4.6	20.8	1 12	8 10.34	+12 17.3	2.039	3.004	4.4	16.1
1 22	8 1.43	+28 55.1	1.516	2.492	3.7	20.8	1 22	8 2.12	+13 10.0	2.020	2.999	2.4	16.0
2 1	7 50.77	+29 6.2	1.559	2.512	7.3	21.1	2 1	7 53.96	+14 7.8	2.031	2.993	4.9	16.1
2 11	7 42.08	+29 2.8	1.629	2.532	11.2	21.4	2 11	7 46.79	+15 6.5	2.071	2.988	8.4	16.3
2 21	7 36.20	+28 47.1	1.722	2.552	14.7	21.6	2 21	7 41.34	+16 2.3	2.136	2.983	11.6	16.5
<b>430415</b>	1996 TW <sub>19</sub>		1 19.8 121°69	5°7/17.0	18		<b>284742</b>	2008 UT <sub>203</sub>		1 19.8 123°11	2°5/20.7	18	
12 13	8 37.28	+38 27.6	2.489	3.262	12.3	21.5	12 13	8 35.65	+13 38.9	1.683	2.457	17.2	21.1
12 23	8 31.27	+39 5.2	2.417	3.271	10.0	21.3	12 23	8 30.53	+13 25.7	1.607	2.469	13.7	20.9
1 2	8 22.77	+39 36.4	2.368	3.279	7.6	21.2	1 2	8 22.57	+13 24.6	1.553	2.480	9.5	20.7
1 12	8 12.50	+39 55.4	2.347	3.288	5.9	21.1	1 12	8 12.53	+13 34.0	1.523	2.492	5.1	20.4
1 22	8 1.48	+39 57.8	2.355	3.296	5.9	21.1	1 22	8 1.52	+13 51.4	1.522	2.502	2.6	20.3
2 1	7 50.87	+39 41.8	2.391	3.303	7.6	21.2	2 1	7 50.87	+14 13.6	1.550	2.513	6.1	20.5
2 11	7 41.77	+39 8.6	2.455	3.311	9.9	21.4	2 11	7 41.86	+14 37.0	1.605	2.522	10.4	20.8
2 21	7 34.92	+38 21.7	2.543	3.318	12.1	21.6	2 21	7 35.38	+14 59.0	1.685	2.532	14.2	21.1
<b>113531</b>	2002 TQ <sub>20</sub>		1 19.8 303°45	2°5/20.7	18		<b>56699</b>	2000 LJ <sub>28</sub>		1 19.8 167°17	0°8/20.2	18	
12 13	8 31.29	+13 44.9	1.338	2.138	19.5	20.0	12 13	8 32.89	+17 8.6	2.467	3.230	12.6	20.1
12 23	8 28.15	+13 41.4	1.253	2.130	15.7	19.7	12 23	8 27.59	+17 8.7	2.376	3.235	9.9	19.9
1 2	8 21.60	+13 54.0	1.186	2.122	11.0	19.4	1 2	8 20.24	+17 15.1	2.310	3.239	6.7	19.7
1 12	8 12.31	+14 21.4	1.142	2.113	5.7	19.1	1 12	8 11.40	+17 26.2	2.271	3.243	3.2	19.5
1 22	8 1.48	+14 59.8	1.124	2.106	2.6	18.9	1 22	8 1.84	+17 39.4	2.263	3.246	1.1	19.3
2 1	7 50.74	+15 43.9	1.132	2.098	7.2	19.1	2 1	7 52.47	+17 52.7	2.287	3.249	4.5	19.5
2 11	7 41.81	+16 27.8	1.164	2.090	12.5	19.4	2 11	7 44.17	+18 4.1	2.340	3.250	7.9	19.8
2 21	7 35.89	+17 7.4	1.219	2.083	17.3	19.6	2 21	7 37.63	+18 12.6	2.419	3.252	10.9	20.0
<b>107335</b>	2001 CL <sub>19</sub>		1 19.8 318°26	0°3/19.7	18		<b>371714</b>	2007 EZ <sub>48</sub>		1 19.8 330°61	4°3/21.6	18	
12 13	8 29.84	+18 47.4	1.464	2.272	17.8	20.3	12 13	8 24.89	+ 9 43.1	1.467	2.261	18.	

EPHEMERIDES

1 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>400010</b>	2006 <i>JC</i> <sub>29</sub>		1 19.8 168°33	0°7/20.1	18		<b>364255</b>	2006 <i>SC</i> <sub>327</sub>		1 19.8 124°52	1°6/20.6	18	
12 13	8 33.79	+16 28.9	2.101	2.871	14.4	22.2	12 13	8 32.94	+13 55.5	2.067	2.833	14.7	22.6
12 23	8 28.71	+16 49.1	2.013	2.875	11.3	22.0	12 23	8 27.94	+14 6.8	1.989	2.848	11.6	22.4
1 2	8 21.22	+17 18.8	1.948	2.879	7.6	21.8	1 2	8 20.63	+14 29.0	1.934	2.862	8.0	22.2
1 12	8 11.93	+17 55.2	1.910	2.883	3.6	21.5	1 12	8 11.64	+14 59.9	1.906	2.875	4.0	22.0
1 22	8 1.72	+18 34.4	1.902	2.886	1.0	21.4	1 22	8 1.87	+15 36.2	1.907	2.888	1.7	21.8
2 1	7 51.69	+19 12.6	1.925	2.888	5.1	21.7	2 1	7 52.36	+16 14.3	1.938	2.901	5.1	22.1
2 11	7 42.91	+19 46.5	1.977	2.889	9.0	21.9	2 11	7 44.15	+16 50.9	1.998	2.913	8.8	22.3
2 21	7 36.19	+20 14.4	2.054	2.890	12.5	22.1	2 21	7 37.97	+17 23.4	2.084	2.924	12.1	22.6
<b>321394</b>	2009 <i>PQ</i> <sub>15</sub>		1 19.8 165°77	4°6/22.7	18		<b>285239</b>	1997 <i>WC</i> <sub>14</sub>		1 19.8 189°90	1°0/20.2	18	
12 13	8 29.77	+4 0.5	2.395	3.120	14.0	21.7	12 13	8 35.69	+16 43.9	2.060	2.828	14.7	21.4
12 23	8 25.23	+3 55.4	2.303	3.125	11.6	21.5	12 23	8 30.28	+16 47.7	1.966	2.827	11.6	21.2
1 2	8 18.72	+4 5.7	2.233	3.129	8.8	21.3	1 2	8 22.34	+16 59.8	1.895	2.825	7.9	21.0
1 12	8 10.76	+4 31.5	2.190	3.132	6.1	21.2	1 12	8 12.48	+17 18.1	1.851	2.823	3.8	20.7
1 22	8 2.07	+5 11.5	2.174	3.135	4.7	21.1	1 22	8 1.62	+17 39.6	1.837	2.819	1.3	20.5
2 1	7 53.49	+6 3.0	2.189	3.138	5.8	21.1	2 1	7 50.90	+18 0.9	1.853	2.815	5.3	20.8
2 11	7 45.88	+7 1.7	2.233	3.140	8.4	21.3	2 11	7 41.48	+18 19.7	1.898	2.810	9.3	21.1
2 21	7 39.93	+8 3.2	2.304	3.142	11.2	21.5	2 21	7 34.22	+18 34.3	1.969	2.804	12.9	21.3
<b>327465</b>	2005 <i>XT</i> <sub>76</sub>		1 19.8 119°20	2°9/18.4	18		<b>442790</b>	2012 <i>XA</i> <sub>152</sub>		1 19.8 35°22	0°3/19.7	17	
12 13	8 33.42	+26 23.8	2.008	2.799	14.2	21.6	12 13	8 30.37	+17 7.5	1.088	1.913	21.5	20.3
12 23	8 28.66	+27 3.2	1.930	2.805	11.1	21.4	12 23	8 27.75	+17 52.1	1.035	1.928	16.7	20.1
1 2	8 21.28	+27 45.3	1.875	2.812	7.5	21.1	1 2	8 21.37	+18 54.0	0.999	1.945	11.1	19.8
1 12	8 11.97	+28 24.9	1.847	2.818	4.0	20.9	1 12	8 12.18	+20 6.6	0.986	1.962	4.9	19.6
1 22	8 1.73	+28 56.5	1.849	2.824	3.3	20.9	1 22	8 1.72	+21 20.5	0.998	1.981	1.5	19.4
2 1	7 51.76	+29 16.4	1.879	2.830	6.4	21.1	2 1	7 51.88	+22 26.6	1.034	2.000	7.6	19.8
2 11	7 43.25	+29 23.3	1.937	2.835	10.0	21.3	2 11	7 44.39	+23 18.9	1.094	2.020	13.1	20.2
2 21	7 37.03	+29 18.3	2.019	2.841	13.2	21.6	2 21	7 40.27	+23 55.4	1.174	2.041	17.7	20.5
<b>154886</b>	2004 <i>RH</i> <sub>156</sub>		1 19.8 182°09	1°9/18.9	18		<b>56580</b>	2000 <i>JG</i> <sub>27</sub>		1 19.8 179°35	1°8/20.5	18	
12 13	8 34.29	+25 33.4	2.340	3.120	12.8	20.7	12 13	8 35.73	+15 23.4	1.832	2.604	16.1	19.4
12 23	8 28.94	+25 50.8	2.251	3.120	10.0	20.5	12 23	8 30.56	+15 13.1	1.744	2.606	12.8	19.1
1 2	8 21.29	+26 10.0	2.186	3.121	6.7	20.3	1 2	8 22.64	+15 12.6	1.677	2.607	8.8	18.9
1 12	8 11.94	+26 27.2	2.148	3.120	3.3	20.1	1 12	8 12.64	+15 20.1	1.637	2.607	4.5	18.6
1 22	8 1.76	+26 38.7	2.141	3.120	2.3	20.0	1 22	8 1.59	+15 33.0	1.626	2.607	2.0	18.5
2 1	7 51.79	+26 42.0	2.164	3.119	5.4	20.2	2 1	7 50.75	+15 48.6	1.644	2.607	5.8	18.7
2 11	7 43.07	+26 36.2	2.217	3.117	8.8	20.4	2 11	7 41.38	+16 3.9	1.690	2.605	10.1	19.0
2 21	7 36.34	+26 22.2	2.294	3.115	11.8	20.6	2 21	7 34.40	+16 17.3	1.760	2.603	13.9	19.2
<b>266409</b>	2007 <i>FE</i> <sub>17</sub>		1 19.8 205°76	3°8/17.9	18		<b>316862</b>	2000 <i>QV</i> <sub>56</sub>		1 19.8 190°23	4°5/17.9	18	
12 13	8 32.92	+28 19.7	1.948	2.744	14.4	20.8	12 13	8 38.49	+33 26.6	2.303	3.080	13.0	21.3
12 23	8 28.51	+29 9.7	1.866	2.744	11.3	20.5	12 23	8 32.40	+33 55.0	2.217	3.079	10.4	21.1
1 2	8 21.33	+30 2.1	1.808	2.743	7.8	20.3	1 2	8 23.69	+34 20.0	2.154	3.078	7.5	20.9
1 12	8 12.06	+30 50.3	1.776	2.743	4.6	20.1	1 12	8 13.05	+34 36.0	2.118	3.076	5.0	20.8
1 22	8 1.72	+31 28.3	1.772	2.743	4.2	20.1	1 22	8 1.49	+34 38.4	2.112	3.074	4.7	20.8
2 1	7 51.59	+31 51.7	1.797	2.742	7.2	20.3	2 1	7 50.23	+34 24.7	2.137	3.071	7.0	20.9
2 11	7 42.94	+31 59.2	1.849	2.742	10.7	20.5	2 11	7 40.47	+33 55.6	2.189	3.068	9.9	21.1
2 21	7 36.71	+31 52.0	1.925	2.741	13.9	20.7	2 21	7 33.02	+33 14.1	2.266	3.064	12.7	21.3
<b>206207</b>	2002 <i>UY</i> <sub>72</sub>		1 19.8 36°48	4°1/18.6	18		<b>491290</b>	2011 <i>VG</i> <sub>18</sub>		1 19.8 150°63	0°3/19.6	18	
12 13	8 36.61	+31 31.3	1.732	2.530	15.8	20.0	12 13	8 33.80	+18 2.8	1.855	2.637	15.5	21.5
12 23	8 31.28	+31 39.2	1.673	2.550	12.4	19.8	12 23	8 29.09	+18 43.0	1.773	2.644	12.1	21.3
1 2	8 22.98	+31 43.5	1.636	2.570	8.6	19.6	1 2	8 21.67	+19 33.9	1.714	2.650	8.1	21.1
1 12	8 12.66	+31 38.5	1.624	2.590	5.1	19.4	1 12	8 12.22	+20 31.1	1.682	2.656	3.6	20.8
1 22	8 1.61	+31 20.4	1.641	2.612	4.4	19.4	1 22	8 1.72	+21 29.0	1.678	2.661	1.2	20.6
2 1	7 51.26	+30 48.1	1.685	2.634	7.3	19.7	2 1	7 51.43	+22 22.2	1.705	2.666	5.8	20.9
2 11	7 42.88	+30 3.4	1.757	2.656	10.8	19.9	2 11	7 42.58	+23 6.8	1.759	2.671	10.0	21.2
2 21	7 37.22	+29 10.0	1.852	2.679	14.0	20.2	2 21	7 36.07	+23 40.9	1.838	2.675	13.7	21.4
<b>85389</b>	Rosenauer		1 19.8 134°30	0°9/20.3	18		<b>68034</b>	2000 <i>YV</i> <sub>33</sub>		1 19.8 59°51	3°2/21.1	18	
12 13	8 31.65	+15 51.3	2.112	2.885	14.2	20.6	12 13	8 32.80	+11 42.5	1.435	2.221	19.1	19.1
12 23	8 26.99	+16 8.3	2.030	2.894	11.2	20.4	12 23	8 28.64	+11 35.3	1.373	2.241	15.2	18.9
1 2	8 20.03	+16 34.9	1.970	2.902	7.6	20.2	1 2	8 21.46	+11 44.5	1.331	2.260	10.7	18.7
1 12	8 11.39	+17 8.5	1.938	2.910	3.6	20.0	1 12	8 12.10	+12 8.7	1.313	2.280	5.9	18.4
1 22	8 1.93	+17 45.7	1.935	2.918	1.2	19.8	1 22	8 1.79	+12 44.2	1.321	2.300	3.3	18.3
2 1	7 52.69	+18 22.8	1.962	2.925	5.0	20.1	2 1	7 51.98	+13 26.1	1.356	2.320	6.6	18.6
2 11	7 44.67	+18 56.6	2.017	2.932	8.7	20.4	2 11	7 44.02	+14 9.2	1.418	2.340	11.0	18.9
2 21	7 38.64	+19 25.1	2.099	2.938	12.1	20.6	2 21	7 38.77	+14 49.5	1.502	2.361	15.0	19.2
<b>28648</b>	2000 <i>GY</i>		1 19.8 25°16	3°1/21.1	18		<b>255939</b>	2006 <i>TT</i> <sub>9</sub>		1 19.8 47°55	9°1/24.3	18	
12 13	8 30.18	+11 36.8	1.718	2.495	16.8	19.0	12 13	8 29.64	- 1 13.8	1.521	2.260	20.2	20.6
12 23	8 26.38	+11 29.4	1.634	2.497	13.5	18.7	12 23	8 26.00	- 2 7.4	1.459	2.278	17.2	20.4
1 2	8 19.91	+11 36.1	1.572	2.498	9.5	18.5	1 2	8 19.63	- 2 36.0	1.415	2.296	13.9	20.3
1 12	8 11.42	+11 56.2	1.534	2.500	5.4	18.3	1 12	8 11.27	- 2 35.9	1.392	2.315	10.9	20.1
1 22	8 1.91	+12 27.1	1.523	2.502	3.1	18.1	1 22	8 2.03	- 2 7.1	1.393	2.334	9.2	20.1
2 1	7 52.60	+13 4.9	1.541	2.504	6.1	18.3	2 1	7 53.17	- 1 13.0	1.420	2.354	9.8	20.2
2 11	7 44.70	+13 45.4	1.585	2.506	10.2	18.6	2 11	7 45.92	- 0 0.6	1.471	2.374	12.2	20.3
2 21	7 39.12	+14 24.6	1.654	2.508	14.0	18.8	2 21	7 41.10	+ 1 21.3	1.545	2.394	15.1	20.6
<b>32830</b>	1992 <i>DL</i> <sub>11</sub>		1 19.8 91°52	1°5/20.5	18		<b>219924</b>	2002 <i>GY</i> <sub>71</sub>		1 19.8 352°06	3°5/21.4	18	
12 13	8 33.33	+13 27.2	1.547	2.331									

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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>424194</b>	2007 <i>LJ</i> <sub>2</sub>		1 19.8 178°87	3°7/17.2	18		<b>94121</b>	2000 <i>YR</i> <sub>107</sub>		1 19.8 27°32	2°8/18.3	18	
12 13	8 32.27	+28 36.2	2.429	3.214	12.2	21.2	12 13	8 29.86	+23 32.4	1.703	2.508	15.8	18.9
12 23	8 27.54	+29 47.9	2.344	3.215	9.6	21.0	12 23	8 26.38	+24 34.8	1.630	2.514	12.2	18.7
1 2	8 20.49	+31 2.2	2.284	3.215	6.7	20.8	1 2	8 20.05	+25 44.7	1.579	2.520	8.2	18.5
1 12	8 11.67	+32 13.0	2.252	3.216	4.2	20.7	1 12	8 11.56	+26 55.6	1.554	2.527	4.1	18.2
1 22	8 1.90	+33 14.5	2.251	3.216	4.1	20.7	1 22	8 1.98	+28 0.1	1.556	2.534	3.3	18.2
2 1	7 52.20	+34 2.2	2.280	3.215	6.5	20.8	2 1	7 52.64	+28 52.2	1.587	2.541	7.0	18.4
2 11	7 43.64	+34 34.0	2.337	3.215	9.4	21.0	2 11	7 44.87	+29 28.6	1.644	2.549	11.0	18.7
2 21	7 37.02	+34 50.5	2.419	3.214	12.1	21.2	2 21	7 39.61	+29 49.1	1.724	2.558	14.6	18.9
<b>460255</b>	2014 <i>QL</i> <sub>279</sub>		1 19.8 79°98	0°6/19.5	18		<b>91309</b>	1999 <i>FB</i> <sub>55</sub>		1 19.8 134°73	3°3/18.5	18	
12 13	8 33.43	+19 36.2	1.669	2.462	16.5	21.8	12 13	8 40.70	+28 36.3	1.938	2.720	15.0	19.7
12 23	8 28.94	+20 6.5	1.600	2.477	12.9	21.5	12 23	8 34.31	+29 3.2	1.866	2.734	11.7	19.6
1 2	8 21.60	+20 46.0	1.553	2.492	8.5	21.3	1 2	8 25.03	+29 30.0	1.816	2.748	8.0	19.4
1 12	8 12.17	+21 29.9	1.532	2.507	3.8	21.1	1 12	8 13.67	+29 50.7	1.793	2.761	4.4	19.2
1 22	8 1.78	+22 12.7	1.538	2.521	1.4	20.9	1 22	8 1.41	+30 0.3	1.800	2.774	3.7	19.1
2 1	7 51.77	+22 49.6	1.574	2.536	6.1	21.3	2 1	7 49.63	+29 56.1	1.837	2.785	6.8	19.4
2 11	7 43.45	+23 17.4	1.636	2.551	10.4	21.6	2 11	7 39.62	+29 38.5	1.902	2.796	10.4	19.6
2 21	7 37.66	+23 35.4	1.722	2.565	14.1	21.8	2 21	7 32.23	+29 10.0	1.991	2.806	13.6	19.8
<b>137025</b>	1998 <i>TT</i> <sub>15</sub>		1 19.8 3°77	1°8/20.5	18		<b>395304</b>	2011 <i>MO</i> <sub>8</sub>		1 19.8 169°54	0°6/19.5	18	
12 13	8 31.58	+15 17.7	1.680	2.466	16.7	20.0	12 13	8 35.41	+19 6.3	1.864	2.645	15.5	21.8
12 23	8 27.58	+15 9.9	1.596	2.466	13.3	19.7	12 23	8 30.39	+19 45.0	1.779	2.649	12.1	21.6
1 2	8 20.78	+15 13.0	1.533	2.466	9.1	19.5	1 2	8 22.60	+20 33.4	1.717	2.653	8.1	21.4
1 12	8 11.85	+15 25.5	1.495	2.466	4.6	19.2	1 12	8 12.68	+21 27.1	1.681	2.655	3.6	21.1
1 22	8 1.85	+15 44.4	1.485	2.467	2.0	19.1	1 22	8 1.66	+22 20.3	1.675	2.658	1.4	20.9
2 1	7 52.07	+16 6.4	1.503	2.467	6.0	19.3	2 1	7 50.82	+23 7.9	1.699	2.659	5.9	21.2
2 11	7 43.81	+16 28.1	1.547	2.468	10.4	19.6	2 11	7 41.44	+23 46.1	1.750	2.660	10.2	21.5
2 21	7 37.98	+16 47.2	1.615	2.468	14.4	19.8	2 21	7 34.46	+24 13.8	1.827	2.660	13.9	21.7
<b>202011</b>	2004 <i>RW</i> <sub>16</sub>		1 19.8 53°40	7°1/17.7	18		<b>12991</b>	1981 <i>EN</i> <sub>21</sub>		1 19.8 256°45	0°9/20.2	18	
12 13	8 39.92	+33 31.5	1.262	2.077	19.6	20.1	12 13	8 29.62	+16 33.1	2.141	2.918	13.9	18.9
12 23	8 35.12	+34 31.9	1.214	2.098	15.6	19.9	12 23	8 25.49	+16 42.7	2.050	2.917	10.9	18.7
1 2	8 26.18	+35 28.3	1.186	2.119	11.3	19.7	1 2	8 19.12	+17 1.1	1.983	2.916	7.4	18.4
1 12	8 14.28	+36 9.4	1.181	2.140	7.8	19.6	1 12	8 11.06	+17 26.0	1.942	2.915	3.5	18.2
1 22	8 1.22	+36 26.4	1.201	2.162	7.5	19.6	1 22	8 2.15	+17 54.4	1.931	2.914	1.1	18.0
2 1	7 49.14	+36 16.1	1.247	2.184	10.5	19.8	2 1	7 53.37	+18 23.1	1.949	2.913	4.9	18.3
2 11	7 39.84	+35 41.5	1.316	2.207	14.3	20.1	2 11	7 45.75	+18 49.2	1.995	2.911	8.7	18.5
2 21	7 34.28	+34 49.5	1.405	2.229	17.8	20.4	2 21	7 40.04	+19 10.9	2.067	2.910	12.1	18.7
<b>486748</b>	2014 <i>FH</i> <sub>10</sub>		1 19.8 175°53	3°5/18.5	18		<b>161782</b>	2006 <i>UJ</i> <sub>112</sub>		1 19.8 137°90	3°3/21.7	18	
12 13	8 38.70	+26 46.6	1.604	2.400	17.0	21.6	12 13	8 27.44	+ 8 56.3	2.495	3.244	12.9	20.6
12 23	8 33.55	+27 25.2	1.524	2.402	13.3	21.4	12 23	8 23.40	+ 8 46.4	2.403	3.245	10.4	20.4
1 2	8 24.99	+28 7.3	1.466	2.404	9.1	21.1	1 2	8 17.52	+ 8 47.7	2.334	3.247	7.6	20.2
1 12	8 13.81	+28 45.9	1.434	2.405	4.9	20.9	1 12	8 10.28	+ 9 0.1	2.291	3.248	4.8	20.1
1 22	8 1.30	+29 13.8	1.429	2.405	4.0	20.8	1 22	8 2.37	+ 9 22.1	2.278	3.250	3.3	20.0
2 1	7 49.13	+29 26.3	1.453	2.405	7.8	21.1	2 1	7 54.58	+ 9 51.7	2.294	3.251	4.9	20.1
2 11	7 38.89	+29 22.5	1.503	2.405	12.1	21.3	2 11	7 47.71	+10 25.8	2.339	3.252	7.8	20.3
2 21	7 31.68	+29 4.6	1.576	2.404	16.0	21.6	2 21	7 42.40	+11 1.5	2.411	3.253	10.6	20.4
<b>343221</b>	2009 <i>WN</i> <sub>45</sub>		1 19.8 109°90	1°7/20.5	17		<b>419548</b>	2010 <i>OR</i> <sub>81</sub>		1 19.8 85°95	6°4/16.8	18	
12 13	8 36.85	+14 37.7	1.518	2.301	18.4	21.7	12 13	8 37.31	+34 24.4	1.785	2.580	15.5	21.5
12 23	8 31.76	+14 45.9	1.450	2.318	14.5	21.4	12 23	8 32.24	+35 35.2	1.723	2.594	12.4	21.3
1 2	8 23.56	+15 7.8	1.403	2.335	9.9	21.2	1 2	8 23.95	+36 42.9	1.684	2.608	9.2	21.1
1 12	8 13.08	+15 40.4	1.380	2.351	4.9	21.0	1 12	8 13.29	+37 38.7	1.670	2.622	6.8	21.0
1 22	8 1.56	+16 19.2	1.384	2.367	1.9	20.8	1 22	8 1.54	+38 15.0	1.684	2.635	6.8	21.0
2 1	7 50.50	+16 59.0	1.418	2.382	6.3	21.1	2 1	7 50.27	+38 27.8	1.725	2.649	9.2	21.2
2 11	7 41.30	+17 35.7	1.478	2.396	11.0	21.4	2 11	7 40.93	+38 18.0	1.792	2.662	12.2	21.4
2 21	7 34.89	+18 6.6	1.561	2.410	15.0	21.7	2 21	7 34.49	+37 49.6	1.881	2.676	15.1	21.6
<b>372974</b>	2011 <i>CE</i> <sub>32</sub>		1 19.8 4°70	0°7/20.1	18		<b>67540</b>	2000 <i>SX</i> <sub>10</sub>		1 19.8 139°12	2°9/18.4	18	
12 13	8 30.60	+17 32.5	1.859	2.646	15.3	21.4	12 13	8 35.76	+24 38.3	1.796	2.588	15.6	19.8
12 23	8 26.58	+17 35.1	1.774	2.646	12.0	21.2	12 23	8 30.83	+25 35.1	1.720	2.597	12.1	19.6
1 2	8 19.99	+17 46.4	1.710	2.646	8.2	20.9	1 2	8 22.96	+26 37.8	1.668	2.605	8.2	19.4
1 12	8 11.48	+18 4.0	1.673	2.646	3.8	20.7	1 12	8 12.86	+27 39.6	1.641	2.613	4.2	19.1
1 22	8 2.00	+18 24.7	1.664	2.647	1.1	20.5	1 22	8 1.65	+28 33.5	1.644	2.620	3.4	19.1
2 1	7 52.73	+18 45.1	1.683	2.648	5.5	20.8	2 1	7 50.72	+29 14.0	1.676	2.627	7.0	19.3
2 11	7 44.83	+19 2.5	1.730	2.649	9.7	21.0	2 11	7 41.42	+29 39.0	1.735	2.634	10.9	19.6
2 21	7 39.15	+19 15.4	1.801	2.650	13.4	21.3	2 21	7 34.71	+29 49.1	1.818	2.640	14.4	19.8
<b>244284</b>	2002 <i>EK</i> <sub>93</sub>		1 19.8 244°76	0°7/20.1	18		<b>108247</b>	2001 <i>HM</i> <sub>45</sub>		1 19.8 149°95	1°0/20.5	18	
12 13	8 33.11	+16 34.0	1.885	2.664	15.4	21.7	12 13	8 29.55	+15 13.6	2.742	3.501	11.6	21.0
12 23	8 28.73	+16 52.3	1.782	2.650	12.2	21.4	12 23	8 24.85	+15 25.9	2.654	3.510	9.1	20.9
1 2	8 21.61	+17 21.7	1.701	2.635	8.4	21.1	1 2	8 18.38	+15 45.7	2.590	3.517	6.2	20.7
1 12	8 12.30	+17 59.5	1.647	2.620	3.9	20.8	1 12	8 10.64	+16 11.2	2.554	3.525	3.1	20.5
1 22	8 1.73	+18 41.5	1.621	2.604	1.1	20.6	1 22	8 2.29	+16 40.1	2.549	3.532	1.2	20.3
2 1	7 51.13	+19 23.3	1.625	2.588	5.8	20.9	2 1	7 54.09	+17 9.7	2.576	3.538	4.0	20.6
2 11	7 41.79	+20 0.8	1.656	2.571	10.3	21.1	2 11	7 46.79	+17 37.9	2.632	3.544	7.1	20.8
2 21	7 34.73	+20 31.5	1.712	2.554	14.2	21.3	2 21	7 41.00	+18 2.9	2.715	3.550	9.8	21.0
<b>426240</b>	2012 <i>PL</i> <sub>14</sub>		1 19.8 155°49	3°4/22.2	17		<b>11839</b>	1986 <i>QX</i> <sub>1</sub>		1 19.8 193°89	2°2/18.9	18	
12 13	8 27.70	+ 6 25.5</											

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>402670</b>	2006 <i>UX</i> <sub>221</sub>		1 19.8 87°69	2°2/18.7	18		<b>433852</b>	2015 <i>BO</i> <sub>274</sub>		1 19.8 156°31	1°2/20.7	18	
12 13	8 35.50	+23 23.7	1.805	2.596	15.6	21.9	12 13	8 28.13	+13 31.5	2.611	3.371	12.1	21.3
12 23	8 30.35	+24 11.7	1.743	2.619	12.0	21.7	12 23	8 23.92	+13 59.7	2.519	3.375	9.5	21.1
1 2	8 22.43	+25 5.3	1.704	2.642	8.0	21.5	1 2	8 17.87	+14 38.0	2.452	3.379	6.6	20.9
1 12	8 12.53	+25 58.2	1.692	2.665	3.8	21.3	1 12	8 10.48	+15 24.1	2.413	3.382	3.3	20.7
1 22	8 1.78	+26 44.4	1.708	2.687	2.7	21.3	1 22	8 2.40	+16 15.0	2.404	3.385	1.3	20.5
2 1	7 51.48	+27 19.3	1.754	2.709	6.4	21.6	2 1	7 54.42	+17 7.3	2.426	3.388	4.2	20.7
2 11	7 42.85	+27 41.2	1.827	2.730	10.2	21.8	2 11	7 47.33	+17 57.5	2.477	3.391	7.4	21.0
2 21	7 36.72	+27 50.6	1.924	2.752	13.5	22.1	2 21	7 41.77	+18 43.2	2.556	3.394	10.2	21.1
<b>244929</b>	2003 <i>XB</i> <sub>20</sub>		1 19.8 358°83	0°8/19.6	18		<b>295510</b>	2008 <i>RE</i> <sub>74</sub>		1 19.8 161°63	0°8/19.5	18	
12 13	8 31.56	+23 5.4	1.766	2.565	15.5	19.6	12 13	8 36.87	+20 25.7	1.814	2.596	15.8	22.1
12 23	8 27.50	+22 53.5	1.683	2.563	12.2	19.4	12 23	8 31.57	+20 51.7	1.732	2.603	12.4	21.9
1 2	8 20.67	+22 44.6	1.621	2.561	8.1	19.2	1 2	8 23.41	+21 25.5	1.672	2.608	8.3	21.7
1 12	8 11.81	+22 35.8	1.585	2.560	3.7	18.9	1 12	8 13.08	+22 2.7	1.639	2.613	3.7	21.4
1 22	8 1.96	+22 24.2	1.577	2.560	1.4	18.7	1 22	8 1.66	+22 38.2	1.635	2.617	1.5	21.3
2 1	7 52.43	+22 7.8	1.598	2.561	5.9	19.0	2 1	7 50.51	+23 7.4	1.660	2.621	6.0	21.6
2 11	7 44.45	+21 46.2	1.645	2.562	10.2	19.3	2 11	7 40.93	+23 27.9	1.714	2.624	10.3	21.8
2 21	7 38.90	+21 20.1	1.716	2.564	13.9	19.5	2 21	7 33.87	+23 39.1	1.791	2.626	14.1	22.1
<b>181421</b>	2006 <i>SM</i> <sub>262</sub>		1 19.8 142°98	0°7/19.5	18		<b>440419</b>	2005 <i>QE</i> <sub>114</sub>		1 19.8 119°90	2°9/18.7	17	
12 13	8 33.23	+20 12.4	1.945	2.730	14.8	21.0	12 13	8 39.19	+25 12.0	1.630	2.422	16.9	21.8
12 23	8 28.53	+20 38.1	1.863	2.735	11.6	20.7	12 23	8 33.65	+25 54.1	1.562	2.438	13.1	21.6
1 2	8 21.25	+21 11.1	1.804	2.741	7.7	20.5	1 2	8 24.88	+26 40.7	1.516	2.453	8.8	21.4
1 12	8 12.05	+21 47.7	1.772	2.746	3.4	20.3	1 12	8 13.74	+27 24.8	1.496	2.468	4.5	21.1
1 22	8 1.90	+22 23.2	1.768	2.751	1.3	20.1	1 22	8 1.52	+27 59.7	1.504	2.482	3.4	21.1
2 1	7 51.98	+22 53.6	1.795	2.756	5.6	20.4	2 1	7 49.78	+28 20.9	1.542	2.495	7.2	21.4
2 11	7 43.46	+23 16.2	1.849	2.760	9.6	20.7	2 11	7 39.99	+28 27.1	1.605	2.508	11.4	21.6
2 21	7 37.18	+23 30.3	1.928	2.764	13.1	20.9	2 21	7 33.10	+28 20.1	1.693	2.520	15.1	21.9
<b>185429</b>	2006 <i>XS</i> <sub>16</sub>		1 19.8 304°45	1°7/18.9	18		<b>87905</b>	2000 <i>SH</i> <sub>310</sub>		1 19.8 91°66	4°8/21.7	18	
12 13	8 31.37	+22 12.7	1.815	2.611	15.3	20.6	12 13	8 34.57	+ 8 1.7	2.082	2.823	15.3	18.9
12 23	8 27.43	+22 52.0	1.729	2.608	11.9	20.4	12 23	8 29.03	+ 7 12.4	2.010	2.845	12.5	18.7
1 2	8 20.72	+23 38.7	1.666	2.606	8.0	20.1	1 2	8 21.28	+ 6 35.2	1.960	2.866	9.3	18.6
1 12	8 11.89	+24 28.0	1.629	2.603	3.7	19.9	1 12	8 11.98	+ 6 11.2	1.937	2.887	6.2	18.4
1 22	8 1.93	+25 14.0	1.620	2.601	2.2	19.8	1 22	8 2.02	+ 6 0.3	1.943	2.907	4.8	18.4
2 1	7 52.13	+25 51.7	1.640	2.598	6.3	20.0	2 1	7 52.43	+ 6 1.3	1.978	2.927	6.3	18.5
2 11	7 43.77	+26 18.1	1.686	2.596	10.5	20.3	2 11	7 44.16	+ 6 11.6	2.042	2.947	9.2	18.7
2 21	7 37.80	+26 32.6	1.757	2.593	14.2	20.5	2 21	7 37.89	+ 6 28.0	2.131	2.967	12.1	18.9
<b>463935</b>	2014 <i>UZ</i> <sub>189</sub>		1 19.8 39°36	3°1/18.2	18		<b>158180</b>	2001 <i>RX</i> <sub>1</sub>		1 19.8 46°86	2°8/20.9	17	
12 13	8 31.86	+25 24.3	1.859	2.657	14.9	21.8	12 13	8 32.42	+12 33.4	1.185	1.989	21.3	20.0
12 23	8 27.79	+26 19.7	1.778	2.658	11.6	21.6	12 23	8 28.94	+12 36.2	1.130	2.009	16.9	19.8
1 2	8 20.95	+27 20.3	1.720	2.659	7.9	21.4	1 2	8 21.98	+12 58.1	1.093	2.029	11.7	19.5
1 12	8 11.99	+28 20.0	1.689	2.660	4.2	21.1	1 12	8 12.47	+13 36.5	1.079	2.049	6.2	19.3
1 22	8 1.93	+29 12.1	1.686	2.662	3.6	21.1	1 22	8 1.88	+14 26.0	1.089	2.071	2.9	19.2
2 1	7 52.06	+29 51.4	1.712	2.663	6.9	21.3	2 1	7 51.91	+15 19.9	1.126	2.092	7.1	19.5
2 11	7 43.66	+30 15.5	1.765	2.664	10.7	21.5	2 11	7 44.11	+16 11.6	1.187	2.114	12.2	19.8
2 21	7 37.68	+30 24.9	1.841	2.666	14.1	21.8	2 21	7 39.45	+16 56.7	1.269	2.137	16.5	20.2
<b>456481</b>	2006 <i>WJ</i> <sub>97</sub>		1 19.8 52°27	0°5/19.6	18		<b>109794</b>	2001 <i>RL</i> <sub>92</sub>		1 19.8 66°66	1°6/20.6	18	
12 13	8 32.93	+19 55.7	1.542	2.342	17.4	21.9	12 13	8 31.07	+14 34.5	1.745	2.528	16.3	19.7
12 23	8 28.73	+20 13.5	1.478	2.359	13.5	21.7	12 23	8 27.01	+14 44.1	1.669	2.538	12.9	19.5
1 2	8 21.54	+20 39.8	1.436	2.376	9.0	21.5	1 2	8 20.32	+15 6.1	1.615	2.547	8.8	19.3
1 12	8 12.20	+21 10.5	1.418	2.393	4.0	21.2	1 12	8 11.67	+15 38.0	1.586	2.557	4.4	19.0
1 22	8 1.91	+21 40.3	1.427	2.411	1.3	21.1	1 22	8 2.09	+16 16.0	1.585	2.567	1.7	18.9
2 1	7 52.10	+22 4.9	1.465	2.428	6.2	21.4	2 1	7 52.79	+16 55.8	1.612	2.577	5.6	19.1
2 11	7 44.10	+22 21.8	1.528	2.446	10.7	21.7	2 11	7 44.97	+17 33.4	1.667	2.586	9.9	19.4
2 21	7 38.78	+22 30.2	1.615	2.465	14.6	22.0	2 21	7 39.45	+18 6.0	1.745	2.596	13.6	19.7
<b>458171</b>	2010 <i>MK</i> <sub>11</sub>		1 19.8 85°64	3°8/18.5	18		<b>184429</b>	2005 <i>ND</i> <sub>14</sub>		1 19.8 116°26	1°1/20.4	18	
12 13	8 40.31	+30 4.9	1.794	2.582	15.7	21.3	12 13	8 32.49	+15 32.6	2.066	2.837	14.5	21.8
12 23	8 34.10	+30 25.9	1.732	2.604	12.3	21.1	12 23	8 27.67	+15 43.7	1.988	2.851	11.4	21.6
1 2	8 24.90	+30 45.1	1.693	2.626	8.5	20.9	1 2	8 20.52	+16 4.3	1.933	2.864	7.7	21.4
1 12	8 13.61	+30 56.2	1.680	2.647	4.9	20.8	1 12	8 11.70	+16 32.3	1.905	2.876	3.8	21.1
1 22	8 1.54	+30 54.6	1.696	2.668	4.2	20.8	1 22	8 2.10	+17 4.1	1.906	2.889	1.3	21.0
2 1	7 50.13	+30 38.3	1.742	2.689	7.1	21.0	2 1	7 52.76	+17 36.4	1.937	2.901	5.0	21.3
2 11	7 40.69	+30 8.5	1.814	2.710	10.7	21.2	2 11	7 44.71	+18 6.1	1.997	2.912	8.8	21.5
2 21	7 34.02	+29 28.5	1.910	2.730	13.9	21.5	2 21	7 38.69	+18 31.4	2.082	2.923	12.1	21.8
<b>146419</b>	2001 <i>QP</i> <sub>219</sub>		1 19.8 37°26	4°0/20.9	18		<b>277934</b>	2006 <i>KU</i> <sub>129</sub>		1 19.8 184°51	1°4/19.0	18	
12 13	8 34.43	+13 10.6	1.657	2.433	17.3	19.3	12 13	8 30.60	+23 11.5	2.525	3.305	11.9	21.1
12 23	8 29.64	+12 10.3	1.579	2.440	13.9	19.1	12 23	8 26.00	+23 40.6	2.435	3.305	9.3	20.9
1 2	8 22.06	+11 19.3	1.523	2.447	10.0	18.9	1 2	8 19.35	+24 13.8	2.369	3.304	6.2	20.7
1 12	8 12.42	+10 38.6	1.492	2.455	6.0	18.7	1 12	8 11.18	+24 47.4	2.331	3.304	2.9	20.5
1 22	8 1.85	+10 8.7	1.488	2.463	4.0	18.6	1 22	8 2.25	+25 17.8	2.323	3.303	1.8	20.4
2 1	7 51.64	+ 9 49.0	1.513	2.471	6.7	18.8	2 1	7 53.45	+25 42.0	2.346	3.302	4.9	20.7
2 11	7 43.06	+ 9 37.9	1.564	2.480	10.7	19.0	2 11	7 45.68	+25 58.2	2.398	3.301	8.1	20.9
2 21	7 36.98	+ 9 33.2	1.639	2.489	14.4	19.3	2 21	7 39.65	+26 6.0	2.475	3.299	11.0	21.0
<b>473741</b>	2016 <i>ES</i> <sub>4</sub>		1 19.8 233°28	0°9/20.3	17		<b>52952</b>	1998 <i>SU</i> <sub>154</sub>		1 19.8 16°44	1°9/20.4	18	
12 13	8 31.39												

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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>239216</b>	2006 <i>QK</i> <sub>105</sub>		1 19.8 98°96	3°7/22.1	18		<b>521134</b>	2015 <i>EN</i> <sub>75</sub>		1 19.8 221°71	3°3/22.1	17	
12 13	8 27.35	+ 6 59.9	2.464	3.205	13.2	20.8	12 13	8 26.89	+ 7 16.0	2.546	3.288	12.8	22.3
12 23	8 23.34	+ 6 56.1	2.377	3.213	10.8	20.6	12 23	8 23.03	+ 7 24.7	2.448	3.285	10.5	22.1
1 2	8 17.50	+ 7 5.3	2.313	3.220	8.0	20.4	1 2	8 17.34	+ 7 46.6	2.373	3.282	7.7	21.9
1 12	8 10.33	+ 7 27.2	2.275	3.227	5.2	20.3	1 12	8 10.29	+ 8 21.3	2.324	3.279	4.9	21.7
1 22	8 2.50	+ 8 0.2	2.266	3.234	3.7	20.2	1 22	8 2.53	+ 9 6.9	2.305	3.276	3.3	21.6
2 1	7 54.82	+ 8 41.8	2.287	3.242	5.1	20.3	2 1	7 54.83	+10 0.3	2.315	3.272	4.9	21.7
2 11	7 48.08	+ 9 28.4	2.336	3.249	7.8	20.5	2 11	7 47.99	+10 57.8	2.355	3.269	7.7	21.9
2 21	7 42.89	+10 16.5	2.412	3.255	10.6	20.6	2 21	7 42.64	+11 55.5	2.422	3.265	10.5	22.1
<b>34921</b>	4801 <i>P-L</i>		1 19.8 190°99	0°3/19.6	18		<b>322257</b>	2011 <i>DH</i> <sub>29</sub>		1 19.8 106°94	1°9/20.9	18	
12 13	8 28.68	+19 47.5	2.830	3.601	11.0	20.2	12 13	8 29.71	+12 48.7	2.052	2.822	14.7	20.8
12 23	8 24.25	+20 8.2	2.735	3.600	8.6	20.1	12 23	8 25.63	+13 3.8	1.968	2.827	11.6	20.6
1 2	8 18.06	+20 34.0	2.665	3.598	5.7	19.9	1 2	8 19.26	+13 31.2	1.905	2.833	8.1	20.4
1 12	8 10.57	+21 2.6	2.623	3.597	2.5	19.6	1 12	8 11.20	+14 9.1	1.869	2.838	4.2	20.2
1 22	8 2.43	+21 31.1	2.612	3.595	0.8	19.5	1 22	8 2.29	+14 54.1	1.862	2.843	2.0	20.1
2 1	7 54.39	+21 57.0	2.632	3.593	4.1	19.7	2 1	7 53.55	+15 42.1	1.884	2.848	5.1	20.3
2 11	7 47.20	+22 18.4	2.682	3.590	7.1	19.9	2 11	7 46.00	+16 29.2	1.935	2.853	8.8	20.5
2 21	7 41.48	+22 34.2	2.758	3.587	9.8	20.1	2 21	7 40.40	+17 12.2	2.011	2.858	12.2	20.7
<b>90574</b>	2004 <i>GS</i> <sub>21</sub>		1 19.8 136°15	4°3/22.5	18		<b>334245</b>	2001 <i>TZ</i> <sub>122</sub>		1 19.8 171°36	2°9/21.4	18	
12 13	8 30.49	+ 5 0.3	2.333	3.063	14.2	20.3	12 13	8 32.34	+10 24.3	2.501	3.244	13.0	22.0
12 23	8 25.83	+ 4 59.3	2.249	3.075	11.7	20.1	12 23	8 27.19	+10 13.2	2.408	3.249	10.5	21.8
1 2	8 19.19	+ 5 13.4	2.187	3.087	8.7	19.9	1 2	8 20.07	+10 12.2	2.338	3.252	7.5	21.6
1 12	8 11.09	+ 5 42.6	2.151	3.098	5.9	19.8	1 12	8 11.51	+10 20.8	2.295	3.255	4.5	21.5
1 22	8 2.29	+ 6 25.1	2.144	3.108	4.3	19.7	1 22	8 2.22	+10 37.7	2.283	3.257	2.9	21.4
2 1	7 53.67	+ 7 17.7	2.167	3.118	5.6	19.8	2 1	7 53.08	+11 0.8	2.301	3.259	4.9	21.5
2 11	7 46.09	+ 8 16.1	2.219	3.128	8.4	20.0	2 11	7 44.92	+11 27.3	2.350	3.260	7.9	21.7
2 21	7 40.22	+ 9 16.1	2.297	3.137	11.2	20.2	2 21	7 38.43	+11 54.9	2.425	3.260	10.8	21.9
<b>126925</b>	2002 <i>EV</i> <sub>136</sub>		1 19.8 150°16	1°6/19.0	18		<b>222302</b>	2000 <i>SP</i> <sub>281</sub>		1 19.8 131°99	4°2/22.1	18	
12 13	8 32.68	+23 32.5	2.226	3.009	13.2	20.8	12 13	8 30.53	+ 7 1.5	2.190	2.933	14.6	21.1
12 23	8 27.84	+23 57.4	2.142	3.014	10.3	20.6	12 23	8 26.02	+ 6 48.9	2.106	2.942	11.9	20.9
1 2	8 20.67	+24 26.3	2.082	3.018	6.9	20.4	1 2	8 19.40	+ 6 50.3	2.044	2.951	8.9	20.7
1 12	8 11.80	+24 55.1	2.049	3.022	3.2	20.2	1 12	8 11.23	+ 7 5.8	2.007	2.959	5.8	20.5
1 22	8 2.10	+25 19.8	2.046	3.026	2.0	20.1	1 22	8 2.30	+ 7 33.9	1.999	2.967	4.2	20.4
2 1	7 52.61	+25 37.4	2.073	3.030	5.4	20.3	2 1	7 53.56	+ 8 11.9	2.021	2.975	5.7	20.6
2 11	7 44.37	+25 46.2	2.128	3.033	8.9	20.6	2 11	7 45.93	+ 8 56.0	2.071	2.982	8.7	20.7
2 21	7 38.14	+25 46.4	2.209	3.036	12.0	20.8	2 21	7 40.12	+ 9 42.2	2.147	2.989	11.7	21.0
<b>163585</b>	2002 <i>TO</i> <sub>188</sub>		1 19.8 115°55	4°6/17.2	18		<b>251746</b>	1998 <i>WL</i> <sub>43</sub>		1 19.8 138°29	2°3/18.7	18	
12 13	8 34.15	+33 50.6	2.506	3.286	12.0	20.3	12 13	8 33.86	+24 5.9	1.894	2.685	14.9	21.1
12 23	8 28.86	+34 39.9	2.435	3.299	9.5	20.2	12 23	8 29.22	+24 48.2	1.814	2.691	11.6	20.9
1 2	8 21.27	+35 26.5	2.388	3.311	6.9	20.0	1 2	8 21.85	+25 35.9	1.758	2.696	7.8	20.6
1 12	8 12.03	+36 4.7	2.369	3.323	4.9	19.9	1 12	8 12.42	+26 23.4	1.728	2.700	3.8	20.4
1 22	8 2.04	+36 29.9	2.380	3.334	4.9	19.9	1 22	8 1.96	+27 4.9	1.726	2.705	2.8	20.3
2 1	7 52.34	+36 39.6	2.420	3.346	6.8	20.1	2 1	7 51.75	+27 35.9	1.754	2.709	6.4	20.6
2 11	7 43.94	+36 33.7	2.488	3.357	9.3	20.2	2 11	7 43.02	+27 54.3	1.810	2.713	10.3	20.8
2 21	7 37.57	+36 14.3	2.580	3.367	11.6	20.4	2 21	7 36.69	+28 0.3	1.889	2.717	13.7	21.0
<b>114232</b>	2002 <i>VV</i> <sub>123</sub>		1 19.8 173°41	0°7/20.2	18		<b>422013</b>	2014 <i>QD</i> <sub>333</sub>		1 19.8 109°06	2°9/21.5	18	
12 13	8 32.98	+16 53.9	2.098	2.871	14.3	20.5	12 13	8 32.27	+ 9 30.5	2.072	2.825	15.1	21.8
12 23	8 28.15	+17 5.3	2.009	2.873	11.2	20.3	12 23	8 27.42	+ 9 43.5	1.998	2.845	12.1	21.6
1 2	8 20.94	+17 25.4	1.943	2.875	7.6	20.1	1 2	8 20.33	+10 10.7	1.946	2.864	8.6	21.4
1 12	8 11.95	+17 51.6	1.904	2.876	3.6	19.8	1 12	8 11.64	+10 50.7	1.920	2.882	5.0	21.2
1 22	8 2.05	+18 20.7	1.894	2.877	1.1	19.6	1 22	8 2.21	+11 40.2	1.924	2.900	2.9	21.1
2 1	7 52.32	+18 49.2	1.915	2.878	5.1	19.9	2 1	7 53.05	+12 35.0	1.957	2.918	5.2	21.3
2 11	7 43.83	+19 14.3	1.964	2.878	9.0	20.2	2 11	7 45.14	+13 30.8	2.020	2.935	8.7	21.6
2 21	7 37.39	+19 34.5	2.039	2.878	12.4	20.4	2 21	7 39.21	+14 23.9	2.108	2.951	11.9	21.8
<b>428357</b>	2007 <i>RK</i> <sub>30</sub>		1 19.8 43°25	3°7/19.0	18		<b>270409</b>	2002 <i>CF</i> <sub>2</sub>		1 19.8 99°22	1°4/18.9	18	
12 13	8 41.49	+32 13.4	1.822	2.608	15.6	20.2	12 13	8 30.81	+19 36.0	1.961	2.749	14.6	20.2
12 23	8 34.82	+31 59.4	1.761	2.631	12.3	20.1	12 23	8 26.78	+20 44.9	1.879	2.753	11.4	20.0
1 2	8 25.24	+31 40.0	1.722	2.654	8.5	19.9	1 2	8 20.21	+22 4.6	1.820	2.758	7.5	19.7
1 12	8 13.73	+31 10.3	1.711	2.677	4.9	19.7	1 12	8 11.70	+23 29.4	1.788	2.763	3.4	19.5
1 22	8 1.63	+30 27.9	1.728	2.701	3.9	19.7	1 22	8 2.16	+24 52.6	1.786	2.767	2.0	19.4
2 1	7 50.35	+29 32.9	1.775	2.725	6.8	19.9	2 1	7 52.73	+26 7.6	1.814	2.772	5.9	19.7
2 11	7 41.12	+28 28.4	1.850	2.749	10.3	20.2	2 11	7 44.59	+27 10.0	1.870	2.776	9.8	19.9
2 21	7 34.66	+27 18.4	1.950	2.774	13.5	20.4	2 21	7 38.61	+27 57.9	1.951	2.781	13.3	20.1
<b>266449</b>	2007 <i>JE</i>		1 19.8 349°59	2°6/20.8	18		<b>212049</b>	2005 <i>CD</i> <sub>79</sub>		1 19.8 298°22	3°3/21.2	18	
12 13	8 28.76	+13 52.8	1.635	2.425	17.0	19.8	12 13	8 30.09	+11 19.5	1.594	2.376	17.7	20.6
12 23	8 25.52	+13 35.6	1.549	2.420	13.6	19.6	12 23	8 26.74	+11 14.8	1.501	2.366	14.3	20.4
1 2	8 19.52	+13 30.4	1.484	2.416	9.5	19.3	1 2	8 20.49	+11 26.0	1.429	2.357	10.2	20.1
1 12	8 11.41	+13 36.4	1.443	2.412	5.1	19.0	1 12	8 11.93	+11 52.6	1.381	2.347	5.8	19.8
1 22	8 2.20	+13 51.4	1.429	2.409	2.7	18.9	1 22	8 2.08	+12 32.0	1.359	2.338	3.3	19.6
2 1	7 53.16	+14 12.3	1.442	2.407	6.2	19.1	2 1	7 52.27	+13 19.7	1.365	2.328	6.6	19.8
2 11	7 45.58	+14 35.6	1.482	2.405	10.6	19.3	2 11	7 43.90	+14 10.4	1.396	2.319	11.1	20.0
2 21	7 40.40	+14 58.2	1.544	2.404	14.5	19.6	2 21	7 38.03	+14 59.2	1.451	2.311	15.4	20.3
<b>67498</b>	2000 <i>RW</i> <sub>39</sub>		1 19.8 339°58	5°5/17.7	18		<b>391778</b>	2008 <i>PF</i> <sub>7</sub>		1 19.8 178°93	3°1/18.6	18	
12 13	8 34.04	+29 44.6	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>402504</b>	2006 <i>DK</i> <sub>52</sub>		1 19.8 208 <sup>o</sup> .74	0 <sup>o</sup> .8/19.5 18			<b>457622</b>	2009 <i>BK</i> <sub>94</sub>		1 19.8 332 <sup>o</sup> .17	0 <sup>o</sup> .7/20.1 18		
12 13	8 34.80	+20 9.8	1.980	2.760	14.8	22.1	12 13	8 29.45	+17 5.5	1.358	2.168	18.8	21.3
12 23	8 29.92	+20 41.1	1.885	2.755	11.6	21.9	12 23	8 26.81	+17 18.0	1.273	2.158	14.9	21.0
1 2	8 22.35	+21 20.6	1.813	2.749	7.8	21.6	1 2	8 20.83	+17 44.3	1.208	2.149	10.1	20.7
1 12	8 12.70	+22 4.4	1.767	2.742	3.5	21.4	1 12	8 12.19	+18 21.2	1.166	2.141	4.7	20.4
1 22	8 1.90	+22 47.3	1.752	2.734	1.4	21.2	1 22	8 2.05	+19 3.6	1.149	2.133	1.3	20.1
2 1	7 51.18	+23 24.7	1.766	2.726	5.8	21.5	2 1	7 52.02	+19 45.5	1.159	2.126	6.9	20.5
2 11	7 41.76	+23 53.6	1.808	2.717	9.9	21.7	2 11	7 43.76	+20 21.7	1.193	2.119	12.3	20.8
2 21	7 34.62	+24 12.9	1.875	2.708	13.6	21.9	2 21	7 38.44	+20 49.5	1.249	2.113	17.0	21.0
<b>520057</b>	2013 <i>VR</i> <sub>30</sub>		1 19.8 195 <sup>o</sup> .77	3 <sup>o</sup> .2/21.4 18			<b>30434</b>	2000 <i>LQ</i> <sub>21</sub>		1 19.8 135 <sup>o</sup> .09	4 <sup>o</sup> .1/21.9 18		
12 13	8 29.29	+10 33.0	2.401	3.154	13.2	21.3	12 13	8 29.26	+ 7 14.2	2.599	3.334	12.8	18.4
12 23	8 24.95	+10 10.7	2.308	3.154	10.7	21.1	12 23	8 24.71	+ 6 42.4	2.509	3.340	10.5	18.3
1 2	8 18.65	+ 9 58.2	2.237	3.153	7.7	20.9	1 2	8 18.37	+ 6 21.3	2.443	3.345	7.8	18.1
1 12	8 10.90	+ 9 55.6	2.193	3.153	4.7	20.7	1 12	8 10.75	+ 6 11.4	2.403	3.350	5.3	18.0
1 22	8 2.43	+10 1.9	2.179	3.152	3.2	20.6	1 22	8 2.49	+ 6 12.4	2.392	3.355	4.1	17.9
2 1	7 54.08	+10 15.3	2.194	3.151	5.1	20.7	2 1	7 54.39	+ 6 22.9	2.411	3.360	5.3	18.0
2 11	7 46.72	+10 33.6	2.238	3.150	8.1	20.9	2 11	7 47.20	+ 6 40.9	2.460	3.365	7.8	18.1
2 21	7 41.01	+10 54.2	2.307	3.149	11.0	21.1	2 21	7 41.53	+ 7 3.4	2.534	3.370	10.4	18.3
<b>363818</b>	2005 <i>NA</i> <sub>43</sub>		1 19.8 154 <sup>o</sup> .13	1 <sup>o</sup> .5/20.7 18			<b>10164</b>	Akusekijima		1 19.8 58 <sup>o</sup> .33	2 <sup>o</sup> .5/21.3 18		
12 13	8 32.92	+14 23.0	2.380	3.138	13.2	22.3	12 13	8 30.27	+ 9 23.8	1.612	2.387	17.8	16.7
12 23	8 27.74	+14 26.4	2.293	3.147	10.4	22.2	12 23	8 26.56	+10 8.3	1.543	2.403	14.2	16.5
1 2	8 20.48	+14 38.6	2.229	3.155	7.2	22.0	1 2	8 20.13	+11 13.2	1.494	2.420	9.9	16.2
1 12	8 11.71	+14 57.8	2.194	3.162	3.7	21.8	1 12	8 11.67	+12 35.1	1.470	2.437	5.4	16.0
1 22	8 2.21	+15 21.8	2.188	3.169	1.6	21.6	1 22	8 2.23	+14 7.9	1.474	2.454	2.5	15.9
2 1	7 52.90	+15 47.8	2.214	3.176	4.6	21.8	2 1	7 53.10	+15 43.7	1.506	2.471	5.9	16.1
2 11	7 44.68	+16 13.2	2.269	3.181	8.0	22.1	2 11	7 45.50	+17 15.0	1.567	2.489	10.2	16.4
2 21	7 38.25	+16 36.1	2.350	3.186	11.1	22.3	2 21	7 40.30	+18 36.5	1.651	2.506	14.0	16.7
<b>472468</b>	2015 <i>BZ</i> <sub>440</sub>		1 19.8 225 <sup>o</sup> .41	2 <sup>o</sup> .5/21.7 17			<b>292876</b>	2006 <i>VH</i> <sub>18</sub>		1 19.8 133 <sup>o</sup> .26	1 <sup>o</sup> .5/19.1 18		
12 13	8 27.30	+ 8 36.9	2.852	3.591	11.7	22.5	12 13	8 35.27	+22 59.1	2.197	2.974	13.6	22.8
12 23	8 23.20	+ 8 56.9	2.745	3.582	9.4	22.3	12 23	8 29.80	+23 30.5	2.120	2.989	10.5	22.6
1 2	8 17.40	+ 9 28.9	2.661	3.573	6.8	22.1	1 2	8 21.96	+24 6.4	2.067	3.003	7.0	22.4
1 12	8 10.34	+10 11.8	2.605	3.564	4.1	21.9	1 12	8 12.40	+24 42.3	2.043	3.016	3.3	22.2
1 22	8 2.58	+11 3.4	2.580	3.554	2.5	21.8	1 22	8 2.04	+25 13.8	2.048	3.028	1.9	22.1
2 1	7 54.83	+12 0.9	2.585	3.544	4.3	21.9	2 1	7 51.98	+25 37.7	2.084	3.040	5.4	22.3
2 11	7 47.81	+13 0.7	2.621	3.534	7.1	22.1	2 11	7 43.25	+25 52.2	2.149	3.052	8.9	22.6
2 21	7 42.13	+13 59.4	2.685	3.523	9.8	22.2	2 21	7 36.61	+25 57.6	2.239	3.062	12.0	22.8
<b>416777</b>	2005 <i>EM</i> <sub>312</sub>		1 19.8 2 <sup>o</sup> .92	4 <sup>o</sup> .3/22.1 18			<b>155791</b>	2000 <i>TC</i> <sub>15</sub>		1 19.8 15 <sup>o</sup> .27	2 <sup>o</sup> .6/18.8 18		
12 13	8 24.96	+ 7 36.3	1.606	2.385	17.7	20.6	12 13	8 31.19	+24 44.2	1.606	2.414	16.4	19.4
12 23	8 22.56	+ 7 39.0	1.524	2.384	14.4	20.4	12 23	8 27.60	+25 15.6	1.532	2.417	12.8	19.2
1 2	8 17.55	+ 8 1.4	1.463	2.384	10.6	20.2	1 2	8 20.99	+25 51.9	1.479	2.421	8.6	19.0
1 12	8 10.55	+ 8 43.4	1.425	2.385	6.6	20.0	1 12	8 12.11	+26 27.5	1.451	2.425	4.3	18.7
1 22	8 2.52	+ 9 42.1	1.413	2.387	4.3	19.8	1 22	8 2.12	+26 56.4	1.450	2.430	3.0	18.6
2 1	7 54.64	+10 52.2	1.428	2.390	6.5	20.0	2 1	7 52.45	+27 14.3	1.477	2.435	7.0	18.9
2 11	7 48.14	+12 6.8	1.469	2.394	10.5	20.2	2 11	7 44.50	+27 19.2	1.530	2.441	11.2	19.2
2 21	7 43.91	+13 19.8	1.533	2.399	14.3	20.4	2 21	7 39.22	+27 12.2	1.605	2.447	15.0	19.4
<b>268080</b>	2004 <i>RB</i> <sub>130</sub>		1 19.8 101 <sup>o</sup> .64	0 <sup>o</sup> .2/19.8 18			<b>356605</b>	2011 <i>TU</i> <sub>12</sub>		1 19.8 110 <sup>o</sup> .33	0 <sup>o</sup> .8/20.2 18		
12 13	8 31.82	+19 16.7	2.029	2.811	14.4	21.5	12 13	8 35.22	+15 46.9	1.785	2.561	16.3	21.4
12 23	8 27.31	+19 35.1	1.949	2.820	11.2	21.3	12 23	8 30.14	+16 12.9	1.714	2.580	12.8	21.2
1 2	8 20.40	+20 0.9	1.892	2.828	7.5	21.1	1 2	8 22.36	+16 50.4	1.666	2.598	8.6	21.0
1 12	8 11.73	+20 30.8	1.863	2.837	3.3	20.8	1 12	8 12.62	+17 36.0	1.644	2.616	4.0	20.7
1 22	8 2.21	+21 0.8	1.862	2.845	1.0	20.7	1 22	8 1.99	+18 24.8	1.650	2.634	1.2	20.6
2 1	7 52.95	+21 27.5	1.891	2.853	5.2	21.0	2 1	7 51.72	+19 11.7	1.687	2.650	5.6	20.9
2 11	7 45.00	+21 48.4	1.948	2.861	9.1	21.2	2 11	7 43.01	+19 53.1	1.751	2.666	9.8	21.2
2 21	7 39.15	+22 2.4	2.030	2.869	12.4	21.5	2 21	7 36.70	+20 26.7	1.840	2.682	13.4	21.4
<b>256291</b>	2006 <i>WZ</i> <sub>129</sub>		1 19.8 192 <sup>o</sup> .77	2 <sup>o</sup> .0/18.7 18			<b>360203</b>	1998 <i>DT</i> <sub>8</sub>		1 19.8 305 <sup>o</sup> .08	2 <sup>o</sup> .2/20.8 18		
12 13	8 34.21	+24 3.4	2.206	2.987	13.4	21.7	12 13	8 28.87	+13 14.8	1.458	2.255	18.4	21.2
12 23	8 29.19	+24 43.2	2.115	2.986	10.5	21.5	12 23	8 26.34	+13 27.1	1.354	2.229	14.8	20.9
1 2	8 21.71	+25 27.6	2.048	2.984	7.0	21.2	1 2	8 20.62	+13 57.2	1.269	2.204	10.4	20.6
1 12	8 12.36	+26 12.1	2.008	2.981	3.4	21.0	1 12	8 12.19	+14 44.0	1.208	2.179	5.4	20.2
1 22	8 2.03	+26 51.6	1.999	2.977	2.4	20.9	1 22	8 2.03	+15 43.5	1.172	2.154	2.3	20.0
2 1	7 51.81	+27 22.0	2.020	2.974	5.8	21.2	2 1	7 51.62	+16 49.5	1.163	2.130	6.9	20.2
2 11	7 42.84	+27 41.4	2.069	2.969	9.4	21.4	2 11	7 42.64	+17 55.0	1.179	2.105	12.4	20.4
2 21	7 35.94	+27 49.7	2.144	2.964	12.6	21.6	2 21	7 36.41	+18 54.4	1.217	2.082	17.3	20.6
<b>362197</b>	2009 <i>HD</i> <sub>15</sub>		1 19.8 253 <sup>o</sup> .45	2 <sup>o</sup> .4/20.9 18			<b>117393</b>	2004 <i>YO</i> <sub>32</sub>		1 19.8 323 <sup>o</sup> .52	2 <sup>o</sup> .0/19.1 18		
12 13	8 30.90	+12 12.7	1.751	2.527	16.5	21.4	12 13	8 30.95	+23 3.5	1.359	2.177	18.4	19.6
12 23	8 27.10	+12 23.7	1.658	2.521	13.3	21.2	12 23	8 28.19	+23 25.2	1.271	2.162	14.5	19.3
1 2	8 20.59	+12 49.7	1.587	2.515	9.3	20.9	1 2	8 21.89	+23 54.8	1.203	2.147	9.8	19.0
1 12	8 11.94	+13 29.3	1.540	2.508	5.0	20.7	1 12	8 12.72	+24 27.0	1.158	2.134	4.6	18.7
1 22	8 2.13	+14 18.8	1.521	2.502	2.4	20.5	1 22	8 1.91	+24 55.2	1.139	2.121	2.6	18.5
2 1	7 52.37	+15 13.5	1.531	2.495	5.9	20.7	2 1	7 51.19	+25 13.7	1.146	2.108	7.8	18.8
2 11	7 43.96	+16 8.0	1.568	2.489	10.3	20.9	2 11	7 42.34	+25 19.5	1.177	2.097	13.0	19.0
2 21	7 37.87	+16 58.4	1.630	2.482	14.3	21.1	2 21	7 36.64	+25 12.9	1.229	2.086	17.7	19.3
<b>349094</b>	2007 <i>EM</i> <sub>7</sub>												

EPHEMERIDES

1 19.8

1 19.9

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>498937</b>	2009 <i>BV</i> <sub>43</sub>		1 19.8	14°78'	1°5/19.2	17	<b>502489</b>	2015 <i>BR</i> <sub>356</sub>		1 19.9	256°17'	2°4/21.5	17
12 13	8 31.82	+24 41.5	2.229	3.015	13.1	21.5	12 13	8 27.32	+9 54.7	2.454	3.207	13.0	22.0
12 23	8 27.17	+24 46.1	2.143	3.016	10.2	21.3	12 23	8 23.52	+10 15.0	2.352	3.200	10.4	21.8
1 2	8 20.24	+24 52.6	2.081	3.017	6.8	21.1	1 2	8 17.79	+10 48.1	2.273	3.192	7.5	21.6
1 12	8 11.65	+24 57.8	2.045	3.019	3.2	20.9	1 12	8 10.58	+11 33.1	2.221	3.184	4.3	21.4
1 22	8 2.27	+24 58.6	2.040	3.020	1.9	20.8	1 22	8 2.58	+12 27.1	2.199	3.176	2.4	21.3
2 1	7 53.13	+24 53.0	2.064	3.022	5.2	21.0	2 1	7 54.60	+13 26.6	2.206	3.168	4.6	21.4
2 11	7 45.25	+24 40.3	2.116	3.024	8.8	21.2	2 11	7 47.50	+14 27.6	2.244	3.160	7.9	21.6
2 21	7 39.36	+24 21.1	2.194	3.026	11.9	21.4	2 21	7 41.97	+15 26.3	2.308	3.152	11.0	21.8
<b>210115</b>	2006 <i>RB</i> <sub>5</sub>		1 19.9	142°73'	0°3/20.0	18	<b>341426</b>	2007 <i>TV</i> <sub>205</sub>		1 19.9	270°43'	7°1/16.0	18
12 13	8 30.49	+18 44.6	2.942	3.705	10.8	21.0	12 13	8 36.69	+40 59.1	2.316	3.092	13.0	20.5
12 23	8 25.46	+18 45.5	2.855	3.715	8.4	20.8	12 23	8 31.43	+41 56.2	2.239	3.089	10.8	20.4
1 2	8 18.77	+18 50.9	2.794	3.724	5.6	20.6	1 2	8 23.34	+42 46.2	2.185	3.087	8.6	20.2
1 12	8 10.90	+18 59.0	2.761	3.733	2.6	20.4	1 12	8 13.13	+43 22.0	2.157	3.085	7.2	20.1
1 22	8 2.48	+19 7.8	2.758	3.742	0.7	20.3	1 22	8 1.90	+43 37.7	2.156	3.082	7.4	20.2
2 1	7 54.25	+19 15.6	2.788	3.750	3.8	20.6	2 1	7 50.97	+43 30.6	2.183	3.080	9.0	20.2
2 11	7 46.91	+19 21.2	2.848	3.758	6.7	20.8	2 11	7 41.63	+43 1.6	2.236	3.077	11.3	20.4
2 21	7 41.01	+19 23.9	2.935	3.765	9.3	20.9	2 21	7 34.79	+42 14.7	2.312	3.075	13.5	20.5
<b>319614</b>	2006 <i>SW</i> <sub>273</sub>		1 19.9	60°82'	2°2/20.8	18	<b>260128</b>	2004 <i>PF</i> <sub>80</sub>		1 19.9	151°88'	1°7/19.1	18
12 13	8 31.68	+13 50.3	1.670	2.453	17.0	21.1	12 13	8 35.33	+25 4.3	2.337	3.114	12.9	20.6
12 23	8 27.59	+13 47.1	1.596	2.464	13.4	20.9	12 23	8 29.75	+25 15.2	2.253	3.121	10.0	20.4
1 2	8 20.77	+13 56.7	1.544	2.474	9.3	20.6	1 2	8 21.89	+25 27.8	2.193	3.127	6.7	20.2
1 12	8 11.95	+14 17.1	1.516	2.485	4.9	20.4	1 12	8 12.38	+25 38.6	2.160	3.133	3.2	20.0
1 22	8 2.18	+14 45.3	1.515	2.496	2.3	20.2	1 22	8 2.12	+25 44.1	2.159	3.138	2.0	19.9
2 1	7 52.74	+15 17.3	1.543	2.508	5.9	20.5	2 1	7 52.13	+25 42.3	2.188	3.144	5.2	20.1
2 11	7 44.84	+15 49.2	1.598	2.519	10.1	20.8	2 11	7 43.41	+25 32.5	2.246	3.148	8.6	20.3
2 21	7 39.34	+16 18.1	1.676	2.530	13.9	21.0	2 21	7 36.70	+25 15.6	2.329	3.152	11.6	20.5
<b>469430</b>	2002 <i>CK</i> <sub>10</sub>		1 19.9	19°97'	20°9/21.3	16	<b>187714</b>	2008 <i>EU</i> <sub>76</sub>		1 19.9	328°93'	0°6/20.1	18
12 13	9 5.90	+57 13.5	0.801	1.600	29.4	20.0	12 13	8 29.45	+16 48.2	1.581	2.379	17.1	20.8
12 23	9 0.58	+58 15.2	0.764	1.605	26.6	19.8	12 23	8 26.33	+17 5.7	1.493	2.371	13.5	20.5
1 2	8 45.44	+58 40.6	0.737	1.611	23.8	19.7	1 2	8 20.27	+17 35.8	1.425	2.364	9.2	20.3
1 12	8 23.19	+58 2.5	0.725	1.620	21.7	19.6	1 12	8 11.88	+18 15.5	1.382	2.356	4.3	19.9
1 22	7 59.38	+56 4.5	0.728	1.629	20.9	19.6	1 22	8 2.23	+19 0.0	1.366	2.350	1.2	19.7
2 1	7 39.88	+52 52.0	0.750	1.640	21.9	19.7	2 1	7 52.67	+19 44.0	1.377	2.343	6.2	20.0
2 11	7 27.90	+48 50.8	0.789	1.653	24.1	19.9	2 11	7 44.63	+20 22.9	1.415	2.337	11.1	20.3
2 21	7 23.52	+44 30.5	0.846	1.666	26.9	20.2	2 21	7 39.14	+20 53.9	1.475	2.332	15.3	20.5
<b>343337</b>	2010 <i>CY</i> <sub>35</sub>		1 19.9	213°14'	2°1/21.2	18	<b>491563</b>	2012 <i>QD</i> <sub>26</sub>		1 19.9	121°38'	0°5/20.1	17
12 13	8 27.93	+11 6.9	2.532	3.286	12.6	21.0	12 13	8 29.62	+17 41.5	2.524	3.294	12.2	21.9
12 23	8 23.90	+11 27.1	2.433	3.282	10.1	20.9	12 23	8 25.13	+17 51.1	2.438	3.302	9.5	21.8
1 2	8 17.97	+11 59.0	2.358	3.279	7.1	20.7	1 2	8 18.73	+18 7.1	2.377	3.309	6.4	21.6
1 12	8 10.63	+12 41.1	2.309	3.275	3.9	20.5	1 12	8 10.95	+18 27.5	2.344	3.316	3.0	21.4
1 22	8 2.54	+13 30.7	2.291	3.270	2.1	20.3	1 22	8 2.52	+18 49.7	2.340	3.323	0.8	21.2
2 1	7 54.50	+14 24.4	2.304	3.266	4.4	20.5	2 1	7 54.27	+19 11.1	2.368	3.330	4.3	21.5
2 11	7 47.34	+15 18.6	2.346	3.261	7.6	20.7	2 11	7 47.02	+19 29.6	2.424	3.337	7.5	21.7
2 21	7 41.72	+16 10.1	2.415	3.256	10.6	20.8	2 21	7 41.41	+19 44.2	2.507	3.344	10.4	21.9
<b>289673</b>	2005 <i>GO</i> <sub>143</sub>		1 19.9	216°53'	5°0/23.3	17	<b>325221</b>	2008 <i>GT</i> <sub>30</sub>		1 19.9	45°58'	2°3/18.8	18
12 13	8 27.13	+0 34.7	3.037	3.735	11.8	22.2	12 13	8 32.76	+23 51.9	1.751	2.549	15.7	21.2
12 23	8 22.92	+0 18.6	2.930	3.727	10.0	22.0	12 23	8 28.62	+24 28.4	1.672	2.552	12.2	21.0
1 2	8 17.15	+0 15.8	2.845	3.718	8.0	21.9	1 2	8 21.61	+25 10.7	1.614	2.554	8.2	20.7
1 12	8 10.22	+0 27.1	2.786	3.709	6.1	21.7	1 12	8 12.41	+25 53.3	1.583	2.556	4.0	20.5
1 22	8 2.66	+0 52.3	2.756	3.699	5.0	21.7	1 22	8 2.11	+26 30.4	1.579	2.559	2.7	20.4
2 1	7 55.13	+1 29.9	2.756	3.689	5.7	21.7	2 1	7 52.06	+26 57.2	1.604	2.561	6.6	20.7
2 11	7 48.28	+2 17.2	2.785	3.679	7.5	21.8	2 11	7 43.58	+27 11.7	1.656	2.564	10.7	20.9
2 21	7 42.67	+3 10.5	2.841	3.668	9.6	21.9	2 21	7 37.63	+27 14.0	1.731	2.567	14.4	21.2
<b>331018</b>	2009 <i>UO</i> <sub>136</sub>		1 19.9	63°29'	2°0/18.8	18	<b>175291</b>	2005 <i>LF</i> <sub>22</sub>		1 19.9	143°70'	0°9/20.3	18
12 13	8 31.54	+23 3.0	1.876	2.671	14.9	20.5	12 13	8 32.89	+15 39.7	2.077	2.848	14.5	21.4
12 23	8 27.40	+23 47.0	1.802	2.681	11.6	20.3	12 23	8 28.08	+15 58.3	1.994	2.857	11.4	21.2
1 2	8 20.62	+24 37.1	1.751	2.690	7.7	20.1	1 2	8 20.91	+16 26.8	1.934	2.865	7.7	21.0
1 12	8 11.89	+25 28.1	1.726	2.699	3.7	19.9	1 12	8 12.00	+17 2.8	1.901	2.873	3.7	20.7
1 22	8 2.22	+26 14.3	1.729	2.709	2.5	19.8	1 22	8 2.23	+17 42.5	1.897	2.880	1.2	20.6
2 1	7 52.82	+26 51.0	1.762	2.719	6.2	20.1	2 1	7 52.67	+18 22.1	1.924	2.887	5.0	20.8
2 11	7 44.87	+27 15.7	1.822	2.728	10.0	20.3	2 11	7 44.36	+18 58.1	1.979	2.893	8.9	21.1
2 21	7 39.23	+27 28.4	1.905	2.738	13.4	20.6	2 21	7 38.09	+19 28.6	2.059	2.899	12.3	21.3
<b>456702</b>	2007 <i>RL</i> <sub>244</sub>		1 19.9	61°88'	1°3/19.4	18	<b>113959</b>	2002 <i>UY</i> <sub>6</sub>		1 19.9	154°69'	3°1/18.1	18
12 13	8 35.28	+21 3.9	1.435	2.238	18.3	21.9	12 13	8 33.93	+25 14.0	1.941	2.732	14.6	20.2
12 23	8 30.78	+21 34.4	1.377	2.259	14.2	21.7	12 23	8 29.35	+26 18.6	1.860	2.736	11.4	20.0
1 2	8 23.04	+22 13.4	1.340	2.281	9.4	21.4	1 2	8 22.02	+27 28.9	1.803	2.740	7.7	19.8
1 12	8 12.98	+22 55.2	1.328	2.303	4.2	21.2	1 12	8 12.59	+28 38.2	1.773	2.744	4.2	19.6
1 22	8 1.95	+23 33.3	1.342	2.325	1.9	21.1	1 22	8 2.06	+29 39.7	1.773	2.747	3.6	19.6
2 1	7 51.50	+24 2.8	1.385	2.347	6.8	21.5	2 1	7 51.69	+30 27.8	1.801	2.750	6.9	19.8
2 11	7 43.08	+24 21.1	1.453	2.369	11.4	21.8	2 11	7 42.76	+30 59.9	1.858	2.753	10.5	20.0
2 21	7 37.58	+24 28.5	1.544	2.391	15.3	22.1	2 21	7 36.21	+31 16.5	1.938	2.755	13.8	20.2
<b>407904</b>	2012 <i>BK</i> <sub>144</sub>		1 19.9	42°58'	1°0/19.5	18	<b>56282</b>	1999 <i>KU</i> <sub>13</sub>		1 19.9	319°87'	7°7/22.4	18
12 13	8 32.39	+											

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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>522421</b>	2016 <i>CG</i> <sub>313</sub>		1 19.9 176°91	0°9/20.3	16		<b>489650</b>	2007 <i>UX</i> <sub>19</sub>		1 19.9 197°94	1°5/20.6	18	
12 13	8 31.44	+16 47.8	2.315	3.084	13.2	22.0	12 13	8 34.22	+14 49.1	2.065	2.830	14.7	22.8
12 23	8 26.76	+16 50.6	2.223	3.085	10.4	21.8	12 23	8 29.26	+14 56.6	1.969	2.827	11.7	22.5
1 2	8 19.95	+17 0.8	2.156	3.086	7.0	21.6	1 2	8 21.82	+15 14.4	1.896	2.824	8.1	22.3
1 12	8 11.56	+17 16.4	2.115	3.087	3.4	21.4	1 12	8 12.50	+15 40.6	1.849	2.819	4.0	22.1
1 22	8 2.37	+17 35.0	2.104	3.087	1.1	21.2	1 22	8 2.15	+16 12.0	1.832	2.814	1.6	21.9
2 1	7 53.34	+17 53.9	2.124	3.087	4.6	21.5	2 1	7 51.90	+16 45.3	1.845	2.808	5.2	22.1
2 11	7 45.41	+18 11.0	2.173	3.087	8.2	21.7	2 11	7 42.87	+17 17.0	1.888	2.802	9.3	22.3
2 21	7 39.29	+18 24.7	2.248	3.086	11.4	21.9	2 21	7 35.91	+17 44.9	1.955	2.795	12.8	22.5
<b>170025</b>	2002 <i>VO</i>		1 19.9 324°72	5°3/22.4	18		<b>60823</b>	2000 <i>HB</i> <sub>43</sub>		1 19.9 146°22	1°6/19.0	18	
12 13	8 27.74	+ 5 5.1	2.167	2.908	14.8	20.4	12 13	8 33.83	+22 49.2	2.112	2.895	13.9	20.2
12 23	8 24.03	+ 4 32.5	2.072	2.903	12.3	20.2	12 23	8 28.90	+23 24.2	2.031	2.902	10.8	20.0
1 2	8 18.21	+ 4 14.0	1.999	2.899	9.5	20.0	1 2	8 21.52	+24 4.5	1.973	2.909	7.2	19.8
1 12	8 10.81	+ 4 11.1	1.951	2.894	6.7	19.9	1 12	8 12.32	+24 45.5	1.942	2.916	3.4	19.6
1 22	8 2.58	+ 4 23.7	1.931	2.890	5.3	19.8	1 22	8 2.22	+25 22.5	1.942	2.922	2.0	19.5
2 1	7 54.43	+ 4 49.9	1.938	2.886	6.5	19.8	2 1	7 52.34	+25 51.7	1.971	2.928	5.6	19.8
2 11	7 47.30	+ 5 26.4	1.974	2.882	9.3	20.0	2 11	7 43.79	+26 10.8	2.028	2.933	9.3	20.0
2 21	7 41.94	+ 6 9.0	2.034	2.879	12.2	20.2	2 21	7 37.36	+26 20.0	2.111	2.938	12.5	20.2
<b>402720</b>	2006 <i>WK</i> <sub>42</sub>		1 19.9 91°95	3°7/21.7	18		<b>205474</b>	2001 <i>QE</i> <sub>158</sub>		1 19.9 47°42	1°7/19.2	18	
12 13	8 33.53	+ 8 55.7	1.940	2.692	16.0	21.2	12 13	8 33.32	+24 41.3	1.915	2.708	14.7	20.0
12 23	8 28.47	+ 8 47.9	1.872	2.717	12.8	21.0	12 23	8 28.50	+24 52.0	1.853	2.730	11.4	19.8
1 2	8 21.07	+ 8 54.5	1.827	2.741	9.2	20.8	1 2	8 21.16	+25 5.1	1.814	2.752	7.6	19.6
1 12	8 12.03	+ 9 14.9	1.807	2.765	5.6	20.6	1 12	8 12.08	+25 16.6	1.801	2.775	3.6	19.4
1 22	8 2.28	+ 9 46.5	1.815	2.789	3.7	20.6	1 22	8 2.31	+25 22.9	1.817	2.798	2.1	19.4
2 1	7 52.90	+10 25.9	1.853	2.812	5.7	20.7	2 1	7 53.03	+25 21.6	1.862	2.821	5.7	19.7
2 11	7 44.90	+11 9.0	1.920	2.834	9.1	21.0	2 11	7 45.32	+25 12.2	1.935	2.845	9.4	19.9
2 21	7 39.01	+11 51.9	2.011	2.856	12.3	21.2	2 21	7 39.88	+24 55.6	2.032	2.868	12.6	20.2
<b>350687</b>	2001 <i>VB</i> <sub>12</sub>		1 19.9 43°62	15°2/23.7	17		<b>32970</b>	1996 <i>QX</i>		1 19.9 231°36	1°4/20.5	18	
12 13	8 38.33	- 4 17.1	1.233	1.962	24.6	19.6	12 13	8 32.95	+14 32.8	1.818	2.594	16.0	20.0
12 23	8 33.33	- 7 19.1	1.184	1.982	21.6	19.4	12 23	8 28.71	+14 51.4	1.720	2.585	12.8	19.8
1 2	8 24.86	- 9 54.3	1.153	2.003	18.7	19.3	1 2	8 21.72	+15 23.1	1.645	2.576	8.8	19.5
1 12	8 13.87	-11 51.2	1.142	2.026	16.3	19.2	1 12	8 12.54	+16 5.6	1.595	2.566	4.4	19.2
1 22	8 1.78	-13 2.2	1.152	2.048	15.2	19.2	1 22	8 2.13	+16 54.9	1.574	2.556	1.5	19.0
2 1	7 50.30	-13 25.8	1.184	2.072	15.7	19.3	2 1	7 51.73	+17 46.0	1.582	2.546	5.8	19.3
2 11	7 41.01	-13 8.3	1.238	2.096	17.4	19.5	2 11	7 42.64	+18 34.1	1.617	2.535	10.3	19.5
2 21	7 34.87	-12 20.8	1.309	2.120	19.6	19.7	2 21	7 35.88	+19 16.1	1.677	2.523	14.3	19.7
<b>212705</b>	Frül		1 19.9 36°89	1°3/19.4	18		<b>402575</b>	2006 <i>RH</i> <sub>53</sub>		1 19.9 103°77	1°8/19.0	18	
12 13	8 32.70	+21 17.4	1.290	2.106	19.3	20.5	12 13	8 36.85	+23 27.6	2.031	2.811	14.4	22.0
12 23	8 29.24	+21 42.4	1.229	2.118	15.0	20.3	12 23	8 31.12	+24 1.4	1.966	2.836	11.2	21.8
1 2	8 22.30	+22 16.6	1.188	2.131	10.0	20.1	1 2	8 22.88	+24 39.3	1.924	2.860	7.4	21.6
1 12	8 12.77	+22 54.4	1.169	2.145	4.5	19.8	1 12	8 12.86	+25 16.4	1.910	2.883	3.5	21.4
1 22	8 2.07	+23 29.0	1.177	2.159	2.0	19.7	1 22	8 2.10	+25 48.0	1.926	2.906	2.2	21.4
2 1	7 51.92	+23 55.1	1.211	2.174	7.2	20.0	2 1	7 51.76	+26 10.5	1.971	2.927	5.7	21.7
2 11	7 43.88	+24 9.8	1.269	2.190	12.2	20.4	2 11	7 42.94	+26 22.7	2.046	2.949	9.3	21.9
2 21	7 38.96	+24 13.4	1.349	2.206	16.4	20.7	2 21	7 36.40	+26 25.1	2.145	2.969	12.4	22.2
<b>268566</b>	2006 <i>BT</i> <sub>59</sub>		1 19.9 104°80	1°3/19.3	18		<b>205246</b>	2000 <i>QA</i> <sub>201</sub>		1 19.9 127°29	1°5/19.2	18	
12 13	8 32.92	+23 5.9	2.064	2.850	14.0	20.5	12 13	8 37.43	+22 22.1	1.907	2.689	15.2	21.2
12 23	8 28.21	+23 21.5	1.982	2.855	10.9	20.3	12 23	8 31.83	+22 56.1	1.835	2.705	11.8	21.0
1 2	8 21.05	+23 41.2	1.924	2.861	7.3	20.1	1 2	8 23.51	+23 35.8	1.785	2.721	7.8	20.8
1 12	8 12.08	+24 1.3	1.892	2.866	3.4	19.9	1 12	8 13.21	+24 16.2	1.763	2.736	3.6	20.6
1 22	8 2.26	+24 17.8	1.890	2.871	1.7	19.8	1 22	8 1.99	+24 52.1	1.770	2.751	2.0	20.5
2 1	7 52.70	+24 27.8	1.917	2.876	5.5	20.1	2 1	7 51.14	+25 19.4	1.807	2.765	5.9	20.8
2 11	7 44.49	+24 29.9	1.972	2.881	9.2	20.3	2 11	7 41.87	+25 36.1	1.872	2.778	9.9	21.0
2 21	7 38.43	+24 24.3	2.052	2.886	12.5	20.5	2 21	7 35.02	+25 42.6	1.962	2.790	13.3	21.3
<b>160122</b>	2000 <i>UT</i> <sub>60</sub>		1 19.9 84°66	0°7/20.1	17		<b>253237</b>	2003 <i>AT</i> <sub>14</sub>		1 19.9 14°05	3°3/20.4	18	
12 13	8 36.51	+17 31.7	1.586	2.373	17.6	20.2	12 13	8 33.11	+17 48.6	1.185	2.000	20.7	18.7
12 23	8 31.38	+17 37.0	1.523	2.394	13.7	20.0	12 23	8 29.63	+16 30.0	1.121	2.007	16.4	18.4
1 2	8 23.30	+17 52.3	1.480	2.415	9.2	19.8	1 2	8 22.57	+15 17.8	1.076	2.015	11.4	18.2
1 12	8 13.10	+18 14.1	1.463	2.436	4.3	19.5	1 12	8 12.89	+14 13.5	1.054	2.025	6.1	17.9
1 22	8 2.01	+18 38.3	1.473	2.457	1.2	19.4	1 22	8 2.09	+13 18.1	1.056	2.037	3.4	17.8
2 1	7 51.43	+19 0.9	1.513	2.477	6.0	19.7	2 1	7 51.93	+12 32.7	1.085	2.050	7.6	18.1
2 11	7 42.69	+19 19.1	1.579	2.497	10.5	20.0	2 11	7 44.00	+11 57.0	1.137	2.064	12.6	18.4
2 21	7 36.62	+19 31.7	1.669	2.516	14.3	20.3	2 21	7 39.27	+11 29.3	1.210	2.081	17.0	18.7
<b>20331</b>	Bijemarks		1 19.9 76°20	0°2/19.9	18		<b>175089</b>	2004 <i>HY</i> <sub>47</sub>		1 19.9 336°27	2°7/19.1	18	
12 13	8 32.15	+19 1.2	1.941	2.725	14.9	18.2	12 13	8 33.22	+26 16.0	1.470	2.282	17.5	19.7
12 23	8 27.72	+19 4.7	1.858	2.729	11.6	18.0	12 23	8 29.67	+26 24.0	1.385	2.272	13.8	19.5
1 2	8 20.79	+19 15.3	1.797	2.733	7.8	17.8	1 2	8 22.70	+26 34.3	1.321	2.263	9.4	19.2
1 12	8 11.99	+19 30.2	1.763	2.737	3.6	17.6	1 12	8 13.05	+26 41.4	1.281	2.255	4.7	18.9
1 22	8 2.30	+19 46.3	1.757	2.741	0.9	17.4	1 22	8 2.01	+26 40.1	1.267	2.247	3.2	18.8
2 1	7 52.84	+20 0.4	1.781	2.744	5.3	17.7	2 1	7 51.24	+26 26.9	1.280	2.240	7.5	19.0
2 11	7 44.75	+20 10.6	1.832	2.748	9.4	17.9	2 11	7 42.37	+26 1.5	1.318	2.233	12.3	19.3
2 21	7 38.84	+20 15.7	1.908	2.752	12.9	18.2	2 21	7 36.52	+25 26.0	1.378	2.228	16.6	19.5
<b>212026</b>	2005 <i>CY</i> <sub>22</sub>		1 19.9 344°47	4°0/18.4	18		<b>98192</b>	2000 <i>SM</i> <sub>114</sub>		1 19.9 24°42	1°2/19.4	18	
12 13	8 31.66	+26 17.0	1.344	2.165	18.4								



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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>309387</b>	2007 <i>TH</i> <sub>150</sub>		1 19.9 128°75	1°3/19.4	18		<b>304804</b>	2007 <i>PY</i> <sub>20</sub>		1 19.9 91°42	1°4/19.4	17	
12 13	8 37.56	+22 54.3	1.838	2.623	15.6	21.5	12 13	8 38.29	+22 26.5	1.684	2.472	16.6	21.2
12 23	8 32.03	+23 8.9	1.762	2.634	12.1	21.3	12 23	8 32.68	+22 46.9	1.622	2.496	12.9	21.0
1 2	8 23.70	+23 28.0	1.709	2.646	8.1	21.0	1 2	8 24.14	+23 12.8	1.581	2.518	8.5	20.8
1 12	8 13.31	+23 47.3	1.683	2.657	3.7	20.8	1 12	8 13.51	+23 39.0	1.567	2.541	3.9	20.6
1 22	8 1.98	+24 2.4	1.685	2.667	1.8	20.7	1 22	8 2.02	+24 0.8	1.581	2.563	1.9	20.5
2 1	7 51.04	+24 10.0	1.717	2.677	6.0	21.0	2 1	7 51.09	+24 14.4	1.624	2.584	6.2	20.8
2 11	7 41.75	+24 9.0	1.777	2.686	10.1	21.2	2 11	7 42.00	+24 18.7	1.695	2.605	10.4	21.1
2 21	7 34.96	+24 0.1	1.862	2.695	13.6	21.5	2 21	7 35.60	+24 14.2	1.790	2.626	14.0	21.4
<b>359575</b>	2010 <i>TF</i> <sub>162</sub>		1 19.9 150°45	0°9/20.4	18		<b>219381</b>	2000 <i>SQ</i> <sub>78</sub>		1 19.9 105°22	3°0/21.5	18	
12 13	8 33.25	+15 18.4	2.387	3.147	13.1	21.9	12 13	8 29.96	+9 59.2	2.000	2.762	15.3	20.4
12 23	8 28.05	+15 41.3	2.302	3.158	10.3	21.8	12 23	8 25.91	+10 5.3	1.916	2.768	12.3	20.2
1 2	8 20.76	+16 13.4	2.240	3.168	7.0	21.6	1 2	8 19.55	+10 25.8	1.854	2.774	8.8	20.0
1 12	8 11.94	+16 52.1	2.207	3.178	3.4	21.4	1 12	8 11.48	+10 59.5	1.817	2.780	5.1	19.7
1 22	8 2.37	+17 34.0	2.204	3.187	1.1	21.2	1 22	8 2.54	+11 43.6	1.809	2.786	3.0	19.6
2 1	7 52.97	+18 15.7	2.233	3.195	4.5	21.5	2 1	7 53.78	+12 34.3	1.830	2.791	5.4	19.8
2 11	7 44.67	+18 54.1	2.291	3.202	8.0	21.7	2 11	7 46.22	+13 27.0	1.879	2.797	9.0	20.0
2 21	7 38.15	+19 27.2	2.376	3.209	11.1	21.9	2 21	7 40.63	+14 17.8	1.953	2.803	12.4	20.2
<b>132768</b>	2002 <i>PQ</i> <sub>90</sub>		1 19.9 72°78	1°6/20.8	18		<b>357231</b>	2002 <i>JE</i> <sub>126</sub>		1 19.9 273°93	6°5/16.4	18	
12 13	8 29.32	+13 26.8	2.127	2.897	14.2	19.9	12 13	8 35.78	+31 54.1	1.709	2.509	15.9	21.0
12 23	8 25.22	+13 45.3	2.050	2.910	11.2	19.7	12 23	8 31.83	+33 21.1	1.613	2.489	12.8	20.8
1 2	8 18.96	+14 15.1	1.996	2.924	7.7	19.5	1 2	8 24.40	+34 52.0	1.540	2.469	9.4	20.5
1 12	8 11.14	+14 54.2	1.968	2.938	3.9	19.3	1 12	8 14.01	+36 17.3	1.493	2.449	6.9	20.3
1 22	8 2.59	+15 39.0	1.970	2.951	1.7	19.1	1 22	8 1.80	+37 26.4	1.472	2.428	7.1	20.3
2 1	7 54.26	+16 25.6	2.001	2.965	4.8	19.4	2 1	7 49.42	+38 11.4	1.480	2.408	10.1	20.4
2 11	7 47.10	+17 10.4	2.061	2.979	8.4	19.6	2 11	7 38.69	+38 29.7	1.512	2.386	13.8	20.6
2 21	7 41.82	+17 50.6	2.147	2.992	11.6	19.8	2 21	7 30.98	+38 23.8	1.565	2.365	17.4	20.8
<b>161000</b>	2002 <i>CZ</i> <sub>302</sub>		1 19.9 157°66	1°0/19.4	18		<b>278016</b>	2006 <i>VS</i>		1 19.9 353°05	0°4/20.0	18	
12 13	8 36.52	+21 26.7	2.038	2.815	14.5	21.1	12 13	8 33.79	+18 22.0	1.241	2.053	20.1	21.0
12 23	8 31.04	+21 51.7	1.955	2.823	11.3	20.9	12 23	8 30.46	+18 25.5	1.165	2.051	15.9	20.8
1 2	8 22.98	+22 22.5	1.895	2.830	7.5	20.7	1 2	8 23.43	+18 41.2	1.108	2.050	10.8	20.5
1 12	8 13.00	+22 55.2	1.863	2.837	3.4	20.4	1 12	8 13.48	+19 5.5	1.074	2.049	5.0	20.1
1 22	8 2.08	+23 25.1	1.860	2.842	1.5	20.3	1 22	8 1.99	+19 33.0	1.065	2.048	1.3	19.9
2 1	7 51.41	+23 48.7	1.888	2.847	5.5	20.6	2 1	7 50.79	+19 58.3	1.082	2.048	7.3	20.3
2 11	7 42.15	+24 3.9	1.945	2.852	9.5	20.8	2 11	7 41.70	+20 17.4	1.123	2.048	12.9	20.6
2 21	7 35.13	+24 10.5	2.026	2.855	12.9	21.1	2 21	7 35.91	+20 28.8	1.185	2.049	17.7	20.9
<b>404739</b>	2014 <i>JG</i> <sub>26</sub>		1 19.9 116°93	1°0/19.3	18		<b>98079</b>	2000 <i>RY</i> <sub>66</sub>		1 19.9 71°88	0°4/20.1	17	
12 13	8 36.19	+18 29.1	1.976	2.750	15.0	21.4	12 13	8 36.80	+17 52.9	1.478	2.270	18.4	19.8
12 23	8 30.77	+19 35.2	1.905	2.772	11.6	21.2	12 23	8 31.77	+18 4.0	1.421	2.296	14.3	19.6
1 2	8 22.78	+20 51.5	1.858	2.793	7.7	21.0	1 2	8 23.64	+18 25.6	1.384	2.321	9.6	19.4
1 12	8 12.90	+22 12.3	1.839	2.813	3.4	20.8	1 12	8 13.31	+18 53.7	1.372	2.346	4.4	19.1
1 22	8 2.11	+23 31.0	1.851	2.833	1.5	20.7	1 22	8 2.09	+19 23.3	1.388	2.371	1.1	19.0
2 1	7 51.61	+24 41.4	1.893	2.852	5.6	21.0	2 1	7 51.49	+19 50.0	1.431	2.396	6.2	19.4
2 11	7 42.54	+25 39.7	1.965	2.870	9.5	21.3	2 11	7 42.87	+20 10.7	1.502	2.420	10.8	19.7
2 21	7 35.73	+26 24.6	2.062	2.887	12.8	21.5	2 21	7 37.06	+20 24.6	1.595	2.445	14.7	20.0
<b>376449</b>	2012 <i>HH</i> <sub>57</sub>		1 19.9 204°81	2°5/21.1	18		<b>384102</b>	2008 <i>WT</i> <sub>47</sub>		1 19.9 6°41	4°5/17.4	18	
12 13	8 30.46	+11 59.1	2.111	2.875	14.5	21.8	12 13	8 29.91	+28 43.2	1.843	2.648	14.7	20.5
12 23	8 26.25	+11 59.9	2.018	2.873	11.6	21.6	12 23	8 26.49	+29 52.4	1.767	2.648	11.6	20.3
1 2	8 19.76	+12 12.5	1.947	2.870	8.2	21.4	1 2	8 20.27	+31 4.8	1.713	2.649	8.1	20.1
1 12	8 11.56	+12 35.9	1.902	2.868	4.6	21.2	1 12	8 11.91	+32 13.0	1.686	2.651	5.1	19.9
1 22	8 2.47	+13 7.6	1.887	2.865	2.5	21.0	1 22	8 2.43	+33 9.7	1.686	2.653	5.0	19.9
2 1	7 53.47	+13 44.5	1.900	2.863	5.2	21.2	2 1	7 53.13	+33 49.6	1.715	2.656	7.8	20.0
2 11	7 45.60	+14 22.9	1.943	2.860	8.9	21.4	2 11	7 45.33	+34 10.6	1.769	2.659	11.3	20.3
2 21	7 39.64	+14 59.9	2.010	2.856	12.3	21.6	2 21	7 39.97	+34 14.0	1.846	2.663	14.4	20.5
<b>27469</b>	2000 <i>GN</i> <sub>72</sub>		1 19.9 86°74	4°3/22.3	18 R		<b>319456</b>	2006 <i>KB</i> <sub>145</sub>		1 19.9 138°12	0°6/20.2	18	
12 13	8 28.11	+6 25.0	2.287	3.029	14.1	18.8	12 13	8 34.53	+16 34.8	2.040	2.811	14.7	21.4
12 23	8 24.16	+6 9.6	2.198	3.033	11.6	18.6	12 23	8 29.40	+16 54.8	1.961	2.823	11.5	21.2
1 2	8 18.23	+6 7.9	2.131	3.036	8.7	18.4	1 2	8 21.84	+17 24.2	1.903	2.835	7.8	21.0
1 12	8 10.82	+6 20.3	2.089	3.039	5.8	18.3	1 12	8 12.50	+18 0.2	1.873	2.846	3.6	20.8
1 22	8 2.68	+6 45.6	2.076	3.042	4.3	18.2	1 22	8 2.30	+18 38.7	1.873	2.856	1.0	20.6
2 1	7 54.67	+7 21.4	2.092	3.045	5.7	18.3	2 1	7 52.34	+19 15.8	1.903	2.866	5.1	20.9
2 11	7 47.67	+8 4.2	2.136	3.048	8.5	18.5	2 11	7 43.71	+19 48.4	1.962	2.875	9.0	21.2
2 21	7 42.34	+8 50.1	2.206	3.051	11.4	18.6	2 21	7 37.20	+20 14.8	2.046	2.884	12.4	21.4
<b>458495</b>	2011 <i>CL</i> <sub>6</sub>		1 19.9 323°39	7°8/16.7	18		<b>111146</b>	2001 <i>VT</i> <sub>99</sub>		1 19.9 38°83	2°2/21.2	18	
12 13	8 36.59	+38 16.8	1.727	2.524	15.9	20.5	12 13	8 29.41	+9 55.0	1.390	2.180	19.4	18.7
12 23	8 32.31	+39 12.0	1.645	2.513	13.1	20.2	12 23	8 26.25	+10 47.8	1.332	2.202	15.4	18.5
1 2	8 24.49	+40 1.4	1.584	2.502	10.2	20.0	1 2	8 20.10	+12 2.8	1.295	2.226	10.7	18.3
1 12	8 13.89	+40 35.8	1.548	2.491	8.1	19.9	1 12	8 11.79	+13 35.5	1.281	2.251	5.5	18.0
1 22	8 1.85	+40 47.1	1.537	2.481	8.2	19.9	1 22	8 2.50	+15 17.9	1.295	2.276	2.3	17.9
2 1	7 50.12	+40 31.2	1.553	2.472	10.4	20.0	2 1	7 53.66	+17 0.6	1.336	2.302	6.2	18.2
2 11	7 40.40	+39 49.6	1.593	2.462	13.5	20.2	2 11	7 46.59	+18 35.4	1.403	2.329	10.8	18.6
2 21	7 33.84	+38 47.7	1.655	2.454	16.6	20.3	2 21	7 42.17	+19 56.9	1.494	2.356	14.9	18.9
<b>419814</b>	2010 <i>WT</i> <sub>74</sub>		1 19.9 131°11	2°3/18.6	18		<b>426934</b>	2013 <i>XW</i> <sub>13</sub>		1 19.9 155°55	2°5/21.2	18	
12 13	8 34.02	+23 32.2											

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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>405130</b>	2002 <i>JO</i> <sub>9</sub>		1 19.9 239°47	3°1/21.2	18		<b>132161</b>	2002 <i>EZ</i> <sub>6</sub>		1 19.9 173°04	1°1/19.3	18	
12 13	8 32.43	+11 58.5	1.737	2.510	16.8	21.8	12 13	8 36.18	+22 3.0	2.245	3.018	13.5	21.7
12 23	8 28.32	+11 45.0	1.646	2.506	13.5	21.6	12 23	8 30.61	+22 28.9	2.157	3.023	10.5	21.5
1 2	8 21.45	+11 44.7	1.576	2.501	9.6	21.3	1 2	8 22.65	+22 59.7	2.092	3.026	7.0	21.3
1 12	8 12.45	+11 57.0	1.530	2.496	5.5	21.1	1 12	8 12.90	+23 31.8	2.055	3.028	3.2	21.1
1 22	8 2.30	+12 20.0	1.512	2.490	3.2	20.9	1 22	8 2.24	+24 0.8	2.049	3.030	1.6	21.0
2 1	7 52.25	+12 50.3	1.523	2.485	6.2	21.1	2 1	7 51.77	+24 23.4	2.073	3.031	5.2	21.2
2 11	7 43.59	+13 23.8	1.560	2.479	10.4	21.3	2 11	7 42.54	+24 37.7	2.127	3.031	8.9	21.4
2 21	7 37.29	+13 57.1	1.621	2.474	14.4	21.5	2 21	7 35.38	+24 43.6	2.206	3.031	12.1	21.7
<b>363828</b>	2005 <i>OV</i> <sub>27</sub>		1 19.9 129°22	4°3/17.2	18		<b>258111</b>	2001 <i>QO</i> <sub>222</sub>		1 19.9 147°32	0°2/20.0	18	
12 13	8 36.79	+31 13.9	2.380	3.158	12.6	21.9	12 13	8 35.00	+19 5.3	2.261	3.030	13.5	21.1
12 23	8 31.07	+32 20.5	2.311	3.175	9.9	21.8	12 23	8 29.53	+19 8.6	2.177	3.040	10.5	20.9
1 2	8 22.91	+33 26.5	2.266	3.192	7.1	21.6	1 2	8 21.82	+19 17.6	2.117	3.049	7.1	20.7
1 12	8 12.97	+34 25.5	2.250	3.208	4.8	21.5	1 12	8 12.48	+19 29.9	2.084	3.057	3.2	20.4
1 22	8 2.18	+35 11.8	2.265	3.224	4.7	21.5	1 22	8 2.37	+19 42.6	2.082	3.065	0.8	20.3
2 1	7 51.66	+35 42.0	2.309	3.238	6.9	21.7	2 1	7 52.51	+19 53.3	2.111	3.073	4.8	20.6
2 11	7 42.49	+35 55.1	2.381	3.252	9.6	21.9	2 11	7 43.89	+20 0.3	2.168	3.080	8.4	20.8
2 21	7 35.46	+35 53.2	2.478	3.266	12.1	22.1	2 21	7 37.23	+20 3.0	2.252	3.086	11.6	21.0
<b>254531</b>	2005 <i>EK</i> <sub>128</sub>		1 19.9 152°07	1°0/20.5	18		<b>432873</b>	2011 <i>JG</i> <sub>22</sub>		1 19.9 99°03	4°2/17.0	18	
12 13	8 29.91	+15 45.6	2.575	3.338	12.2	21.3	12 13	8 32.38	+29 41.6	2.344	3.130	12.5	21.2
12 23	8 25.36	+15 52.3	2.485	3.344	9.6	21.1	12 23	8 27.76	+30 59.2	2.272	3.143	9.8	21.0
1 2	8 18.93	+16 6.4	2.420	3.348	6.5	20.9	1 2	8 20.79	+32 18.2	2.226	3.155	6.9	20.8
1 12	8 11.14	+16 26.3	2.383	3.353	3.2	20.7	1 12	8 12.07	+33 31.9	2.207	3.168	4.6	20.7
1 22	8 2.68	+16 49.6	2.375	3.357	1.2	20.6	1 22	8 2.46	+34 34.5	2.219	3.180	4.6	20.7
2 1	7 54.36	+17 13.7	2.399	3.362	4.2	20.8	2 1	7 53.03	+35 21.5	2.260	3.192	6.8	20.9
2 11	7 47.01	+17 36.5	2.452	3.365	7.4	21.0	2 11	7 44.83	+35 51.3	2.329	3.204	9.6	21.1
2 21	7 41.24	+17 56.4	2.531	3.369	10.3	21.2	2 21	7 38.65	+36 5.0	2.422	3.215	12.1	21.3
<b>24949</b>	Klačka		1 19.9 93°19	0°8/20.3	18		<b>50641</b>	2000 <i>EM</i> <sub>84</sub>		1 19.9 163°24	0°5/20.2	18	
12 13	8 30.16	+16 13.4	2.212	2.986	13.6	19.2	12 13	8 32.54	+16 32.7	2.118	2.891	14.2	18.7
12 23	8 25.84	+16 28.1	2.132	2.996	10.7	19.0	12 23	8 27.89	+16 57.9	2.031	2.895	11.1	18.5
1 2	8 19.39	+16 51.6	2.074	3.006	7.2	18.8	1 2	8 20.88	+17 32.9	1.967	2.899	7.5	18.3
1 12	8 11.38	+17 21.4	2.043	3.016	3.4	18.6	1 12	8 12.12	+18 14.6	1.930	2.902	3.5	18.1
1 22	8 2.62	+17 54.5	2.042	3.025	1.1	18.4	1 22	8 2.46	+18 59.2	1.922	2.905	0.9	17.9
2 1	7 54.08	+18 27.4	2.071	3.035	4.7	18.7	2 1	7 52.94	+19 42.4	1.945	2.908	5.0	18.2
2 11	7 46.68	+18 57.4	2.129	3.044	8.3	18.9	2 11	7 44.63	+20 21.0	1.996	2.910	8.9	18.4
2 21	7 41.13	+19 22.6	2.212	3.054	11.4	19.2	2 21	7 38.31	+20 52.8	2.073	2.911	12.3	18.6
<b>129618</b>	1998 <i>DS</i> <sub>11</sub>		1 19.9 345°77	3°5/21.5	18		<b>62568</b>	2000 <i>SM</i> <sub>274</sub>		1 19.9 135°91	1°1/20.5	18	
12 13	8 27.18	+10 4.7	1.310	2.109	19.9	18.9	12 13	8 31.69	+15 46.9	2.156	2.927	14.0	20.3
12 23	8 25.07	+10 15.5	1.228	2.102	16.1	18.6	12 23	8 27.11	+15 55.8	2.072	2.934	11.0	20.1
1 2	8 19.73	+10 48.5	1.165	2.096	11.6	18.3	1 2	8 20.29	+16 13.7	2.010	2.940	7.5	19.9
1 12	8 11.82	+11 42.7	1.123	2.091	6.6	18.1	1 12	8 11.82	+16 38.5	1.976	2.947	3.7	19.7
1 22	8 2.46	+12 53.9	1.107	2.087	3.5	17.9	1 22	8 2.55	+17 7.2	1.970	2.953	1.3	19.5
2 1	7 53.20	+14 14.7	1.116	2.083	7.1	18.1	2 1	7 53.46	+17 36.5	1.995	2.959	4.8	19.8
2 11	7 45.62	+15 36.4	1.150	2.081	12.2	18.3	2 11	7 45.56	+18 3.8	2.048	2.964	8.6	20.0
2 21	7 40.90	+16 51.9	1.206	2.079	16.9	18.6	2 21	7 39.59	+18 26.9	2.127	2.969	11.8	20.2
<b>13398</b>	1999 <i>RF</i> <sub>62</sub>		1 19.9 352°59	5°3/18.0	18		<b>81996</b>	2000 <i>QJ</i> <sub>106</sub>		1 19.9 188°76	1°8/21.2	18	
12 13	8 33.66	+29 42.1	1.340	2.160	18.4	16.6	12 13	8 27.66	+11 33.2	3.034	3.780	10.9	20.9
12 23	8 30.46	+30 27.9	1.267	2.156	14.6	16.3	12 23	8 23.39	+11 48.6	2.935	3.779	8.7	20.7
1 2	8 23.48	+31 15.3	1.213	2.153	10.3	16.0	1 2	8 17.53	+12 13.1	2.859	3.778	6.1	20.5
1 12	8 13.52	+31 55.7	1.183	2.150	6.3	15.8	1 12	8 10.51	+12 45.5	2.812	3.776	3.4	20.4
1 22	8 2.04	+32 20.5	1.178	2.149	5.8	15.8	1 22	8 2.90	+13 23.8	2.795	3.774	1.8	20.2
2 1	7 50.92	+32 24.2	1.198	2.148	9.4	16.0	2 1	7 55.33	+14 5.4	2.810	3.771	3.8	20.4
2 11	7 42.01	+32 6.5	1.242	2.147	13.8	16.2	2 11	7 48.50	+14 47.7	2.856	3.769	6.5	20.6
2 21	7 36.49	+31 31.4	1.307	2.148	17.9	16.5	2 21	7 42.95	+15 28.3	2.929	3.765	9.1	20.7
<b>433088</b>	2012 <i>TB</i> <sub>85</sub>		1 19.9 307°88	3°9/22.0	18		<b>230948</b>	2004 <i>XG</i> <sub>58</sub>		1 19.9 65°41	0°6/19.7	18	
12 13	8 27.52	+ 7 40.1	2.375	3.122	13.5	21.3	12 13	8 34.66	+22 35.6	2.000	2.784	14.5	20.1
12 23	8 23.71	+ 7 23.2	2.280	3.119	11.1	21.1	12 23	8 29.55	+22 26.1	1.921	2.793	11.3	19.9
1 2	8 17.95	+ 7 18.6	2.207	3.115	8.2	21.0	1 2	8 21.94	+22 19.6	1.866	2.802	7.5	19.7
1 12	8 10.75	+ 7 26.6	2.159	3.112	5.4	20.8	1 12	8 12.55	+22 13.3	1.838	2.812	3.4	19.5
1 22	8 2.80	+ 7 46.1	2.140	3.109	3.9	20.7	1 22	8 2.37	+22 4.7	1.838	2.821	1.2	19.3
2 1	7 54.94	+ 8 15.2	2.151	3.106	5.4	20.8	2 1	7 52.55	+21 52.0	1.869	2.831	5.3	19.7
2 11	7 48.01	+ 8 50.6	2.190	3.102	8.2	20.9	2 11	7 44.19	+21 34.6	1.928	2.841	9.2	19.9
2 21	7 42.69	+ 9 29.0	2.254	3.099	11.1	21.1	2 21	7 38.05	+21 13.1	2.012	2.851	12.5	20.1
<b>181973</b>	1999 <i>VS</i> <sub>26</sub>		1 19.9 80°64	1°8/19.1	18		<b>281299</b>	2007 <i>RS</i> <sub>258</sub>		1 19.9 127°06	1°2/20.6	18	
12 13	8 34.94	+22 39.4	1.636	2.433	16.7	19.3	12 13	8 29.93	+15 15.3	2.525	3.288	12.4	21.3
12 23	8 30.37	+23 14.3	1.568	2.447	12.9	19.1	12 23	8 25.39	+15 20.7	2.439	3.297	9.7	21.2
1 2	8 22.79	+23 55.8	1.522	2.461	8.6	18.9	1 2	8 18.96	+15 34.0	2.378	3.306	6.7	21.0
1 12	8 13.01	+24 38.3	1.501	2.475	4.0	18.6	1 12	8 11.17	+15 53.4	2.344	3.314	3.3	20.8
1 22	8 2.21	+25 15.7	1.508	2.489	2.3	18.5	1 22	8 2.74	+16 16.7	2.341	3.323	1.3	20.6
2 1	7 51.82	+25 43.4	1.543	2.502	6.6	18.8	2 1	7 54.47	+16 41.3	2.368	3.331	4.2	20.9
2 11	7 43.19	+25 59.3	1.605	2.516	10.8	19.1	2 11	7 47.20	+17 4.8	2.424	3.338	7.5	21.1
2 21	7 37.24	+26 3.7	1.691	2.530	14.5	19.4	2 21	7 41.54	+17 25.7	2.507	3.346	10.4	21.3
<b>297404</b>	2000 <i>QN</i> <sub>227</sub>		1 19.9 122°00	0°2/19.8	18		<b>363856</b>	2005 <i>QF</i> <sub>146</sub>		1 19.9 174°18	0°2/19.8	18	
12 13	8 37.84	+19 19.8	1.97										

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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>522363</b>	2016 <i>CU</i> <sub>300</sub>		1 19.9 199°26	0°9/19.4	17		<b>426419</b>	2013 <i>QY</i> <sub>13</sub>		1 19.9 209°92	6°0/23.3	18	
12 13	8 33.25	+22 15.1	2.498	3.271	12.2	22.4	12 13	8 29.26	+1 48.5	2.157	2.880	15.4	22.1
12 23	8 28.15	+22 30.1	2.402	3.268	9.6	22.2	12 23	8 25.29	+1 28.2	2.062	2.878	13.0	21.9
1 2	8 20.92	+22 48.9	2.330	3.264	6.4	22.0	1 2	8 19.16	+1 25.3	1.988	2.875	10.2	21.7
1 12	8 12.10	+23 8.7	2.286	3.260	2.9	21.8	1 12	8 11.40	+1 41.3	1.938	2.872	7.5	21.6
1 22	8 2.48	+23 26.1	2.273	3.255	1.3	21.6	1 22	8 2.76	+2 15.9	1.916	2.869	6.0	21.5
2 1	7 52.97	+23 38.6	2.291	3.250	4.7	21.9	2 1	7 54.19	+3 6.4	1.922	2.865	7.0	21.5
2 11	7 44.53	+23 44.7	2.338	3.244	8.1	22.1	2 11	7 46.65	+4 8.5	1.956	2.862	9.5	21.7
2 21	7 37.87	+23 44.1	2.411	3.237	11.2	22.3	2 21	7 40.89	+5 16.6	2.015	2.858	12.4	21.8
<b>260525</b>	2005 <i>EK</i> <sub>116</sub>		1 19.9 299°67	2°3/20.9	18		<b>369589</b>	2011 <i>BH</i> <sub>134</sub>		1 19.9 95°48	1°7/20.9	18	
12 13	8 31.06	+13 4.3	1.651	2.434	17.1	21.0	12 13	8 31.47	+12 44.9	2.097	2.861	14.6	21.4
12 23	8 27.42	+13 10.6	1.564	2.431	13.7	20.8	12 23	8 26.92	+13 10.0	2.023	2.880	11.5	21.2
1 2	8 20.94	+13 31.5	1.497	2.427	9.6	20.5	1 2	8 20.15	+13 47.4	1.972	2.898	7.9	21.0
1 12	8 12.27	+14 5.3	1.455	2.424	5.1	20.3	1 12	8 11.79	+14 34.5	1.948	2.917	4.1	20.8
1 22	8 2.42	+14 48.5	1.440	2.421	2.3	20.1	1 22	8 2.69	+15 27.5	1.953	2.934	1.7	20.7
2 1	7 52.68	+15 36.2	1.453	2.418	6.1	20.3	2 1	7 53.84	+16 22.1	1.988	2.952	4.8	21.0
2 11	7 44.39	+16 23.4	1.493	2.415	10.6	20.6	2 11	7 46.21	+17 14.2	2.053	2.969	8.5	21.2
2 21	7 38.54	+17 6.4	1.556	2.412	14.7	20.8	2 21	7 40.52	+18 0.9	2.143	2.986	11.7	21.4
<b>473803</b>	2016 <i>EB</i> <sub>106</sub>		1 19.9 56°05	1°7/20.9	18		<b>298824</b>	2004 <i>RB</i> <sub>80</sub>		1 19.9 236°31	0°5/19.7	18	
12 13	8 30.48	+11 11.2	1.660	2.438	17.2	20.7	12 13	8 37.58	+20 2.3	2.176	2.944	14.0	22.2
12 23	8 26.72	+12 2.1	1.593	2.457	13.6	20.5	12 23	8 32.10	+20 23.7	2.062	2.925	11.1	22.0
1 2	8 20.29	+13 11.4	1.546	2.476	9.4	20.3	1 2	8 23.96	+20 52.4	1.972	2.904	7.5	21.7
1 12	8 11.89	+14 35.0	1.525	2.495	4.8	20.1	1 12	8 13.69	+21 24.9	1.909	2.882	3.4	21.4
1 22	8 2.55	+16 6.4	1.532	2.514	1.8	19.9	1 22	8 2.14	+21 57.0	1.876	2.859	1.1	21.2
2 1	7 53.52	+17 38.1	1.568	2.533	5.6	20.2	2 1	7 50.47	+22 24.8	1.875	2.835	5.5	21.5
2 11	7 45.99	+19 3.2	1.632	2.553	9.9	20.5	2 11	7 39.92	+22 45.5	1.903	2.810	9.7	21.7
2 21	7 40.81	+20 17.4	1.720	2.572	13.7	20.8	2 21	7 31.49	+22 58.1	1.957	2.783	13.4	21.9
<b>315498</b>	2008 <i>AO</i> <sub>14</sub>		1 19.9 237°47	1°4/20.7	18		<b>29491</b>	Pfaff		1 19.9 49°23	1°3/19.4	18	
12 13	8 30.81	+13 20.2	1.851	2.627	15.8	21.5	12 13	8 33.12	+22 8.9	1.687	2.484	16.2	19.2
12 23	8 26.98	+13 52.7	1.759	2.623	12.6	21.3	12 23	8 28.95	+22 29.6	1.612	2.491	12.6	19.0
1 2	8 20.55	+14 40.2	1.688	2.618	8.7	21.0	1 2	8 21.89	+22 56.6	1.558	2.498	8.4	18.7
1 12	8 12.08	+15 40.1	1.643	2.613	4.3	20.7	1 12	8 12.69	+23 25.4	1.530	2.505	3.9	18.5
1 22	8 2.48	+16 47.6	1.626	2.609	1.5	20.5	1 22	8 2.45	+23 51.1	1.530	2.512	1.8	18.3
2 1	7 52.92	+17 56.9	1.639	2.603	5.5	20.8	2 1	7 52.53	+24 9.6	1.558	2.520	6.2	18.7
2 11	7 44.63	+19 2.5	1.679	2.598	9.9	21.0	2 11	7 44.25	+24 18.9	1.613	2.527	10.5	18.9
2 21	7 38.53	+20 0.6	1.745	2.593	13.7	21.3	2 21	7 38.52	+24 18.8	1.691	2.535	14.3	19.2
<b>63948</b>	2001 <i>SL</i> <sub>59</sub>		1 19.9 285°61	2°0/20.7	18		<b>463974</b>	2014 <i>WY</i> <sub>9</sub>		1 19.9 230°82	1°8/19.0	16	
12 13	8 31.90	+14 10.3	1.489	2.281	18.3	19.4	12 13	8 34.23	+23 28.5	2.100	2.884	13.9	21.9
12 23	8 28.52	+14 13.8	1.398	2.270	14.6	19.1	12 23	8 29.50	+24 0.7	2.002	2.874	10.9	21.7
1 2	8 21.97	+14 32.3	1.326	2.259	10.2	18.8	1 2	8 22.18	+24 38.2	1.927	2.863	7.3	21.4
1 12	8 12.86	+15 4.0	1.277	2.249	5.2	18.5	1 12	8 12.84	+25 16.6	1.879	2.852	3.5	21.2
1 22	8 2.28	+15 45.1	1.256	2.238	2.2	18.3	1 22	8 2.38	+25 50.9	1.861	2.841	2.2	21.1
2 1	7 51.71	+16 30.4	1.261	2.227	6.6	18.5	2 1	7 51.98	+26 17.1	1.872	2.829	5.9	21.3
2 11	7 42.72	+17 14.6	1.292	2.216	11.7	18.8	2 11	7 42.81	+26 32.7	1.912	2.817	9.8	21.5
2 21	7 36.48	+17 53.7	1.346	2.206	16.3	19.0	2 21	7 35.81	+26 37.9	1.977	2.804	13.2	21.7
<b>500631</b>	2012 <i>UT</i> <sub>164</sub>		1 19.9 218°78	10°6/25.4	18		<b>7103</b>	Wichmann		1 19.9 202°93	3°9/22.3	18	
12 13	8 29.74	-13 54.2	2.681	3.290	15.0	21.3	12 13	8 28.17	+6 23.8	2.501	3.238	13.2	18.1
12 23	8 25.28	-15 28.7	2.592	3.288	13.7	21.1	12 23	8 24.13	+6 17.2	2.404	3.236	10.8	17.9
1 2	8 18.97	-16 45.1	2.523	3.286	12.4	21.0	1 2	8 18.22	+6 23.7	2.329	3.233	8.1	17.8
1 12	8 11.24	-17 38.5	2.475	3.284	11.3	20.9	1 12	8 10.93	+6 43.3	2.281	3.231	5.4	17.6
1 22	8 2.75	-18 6.2	2.450	3.281	10.7	20.9	1 22	8 2.91	+7 14.9	2.261	3.228	3.9	17.5
2 1	7 54.27	-18 7.0	2.450	3.279	10.8	20.9	2 1	7 54.96	+7 55.9	2.272	3.225	5.2	17.6
2 11	7 46.63	-17 43.1	2.474	3.277	11.6	21.0	2 11	7 47.89	+8 43.0	2.311	3.222	8.0	17.7
2 21	7 40.47	-16 59.0	2.520	3.274	12.8	21.0	2 21	7 42.35	+9 32.4	2.377	3.219	10.7	17.9
<b>87259</b>	2000 <i>OW</i> <sub>53</sub>		1 19.9 140°56	2°1/19.1	18		<b>314278</b>	2005 <i>SC</i> <sub>30</sub>		1 19.9 168°65	15°9/15.3	17	
12 13	8 36.52	+26 21.7	2.136	2.917	13.8	20.1	12 13	8 59.95	+51 42.8	1.291	2.060	21.8	20.2
12 23	8 30.97	+26 30.9	2.053	2.923	10.8	19.9	12 23	8 53.44	+53 31.9	1.238	2.062	19.3	20.0
1 2	8 22.91	+26 41.1	1.995	2.929	7.2	19.7	1 2	8 40.19	+55 2.1	1.201	2.064	17.2	19.9
1 12	8 13.03	+26 48.0	1.963	2.935	3.6	19.4	1 12	8 21.43	+55 53.2	1.184	2.066	16.0	19.8
1 22	8 2.31	+26 48.2	1.962	2.940	2.5	19.4	1 22	8 0.17	+55 50.0	1.189	2.067	16.3	19.8
2 1	7 51.92	+26 39.3	1.990	2.945	5.7	19.6	2 1	7 40.46	+54 49.0	1.215	2.068	17.9	19.9
2 11	7 42.96	+26 21.3	2.047	2.950	9.3	19.8	2 11	7 25.64	+53 0.5	1.260	2.068	20.2	20.1
2 21	7 36.22	+25 55.5	2.129	2.955	12.5	20.0	2 21	7 17.09	+50 41.3	1.323	2.068	22.7	20.3
<b>331403</b>	2012 <i>FH</i> <sub>41</sub>		1 19.9 341°07	4°3/21.7	18		<b>51949</b>	2001 <i>QF</i> <sub>219</sub>		1 19.9 21°20	2°0/19.1	18	
12 13	8 22.41	+10 12.7	1.211	2.024	20.4	20.0	12 13	8 32.76	+25 55.8	2.142	2.931	13.5	19.1
12 23	8 21.69	+10 3.9	1.122	2.004	16.7	19.7	12 23	8 28.11	+26 5.9	2.058	2.932	10.5	18.9
1 2	8 17.72	+10 16.5	1.051	1.986	12.2	19.3	1 2	8 21.05	+26 17.4	1.998	2.934	7.1	18.7
1 12	8 11.05	+10 51.8	1.001	1.969	7.2	19.0	1 12	8 12.23	+26 26.5	1.964	2.936	3.5	18.4
1 22	8 2.77	+11 47.3	0.975	1.953	4.3	18.8	1 22	8 2.58	+26 29.8	1.959	2.938	2.4	18.4
2 1	7 54.44	+12 56.8	0.972	1.940	7.7	18.9	2 1	7 53.19	+26 24.9	1.984	2.941	5.6	18.6
2 11	7 47.77	+14 12.1	0.992	1.928	13.0	19.2	2 11	7 45.13	+26 11.2	2.037	2.943	9.2	18.8
2 21	7 44.06	+15 24.9	1.033	1.919	18.0	19.4	2 21	7 39.16	+25 49.7	2.115	2.946	12.3	19.0
<b>20415</b>	Amandalu		1 19.9 225°41	2°2/19.1	18		<b>93082</b>	2000 <i>SL</i> <sub>32</sub>		1 19.9 17°13	7°0/17.8	18	
12 13	8 38.05	+24 18.0	1.698	2.489	16.4	18.8							

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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>199034</b>	2005 <i>WU</i> <sub>141</sub>		1 19.9 263°82	1°1/20.3	18		<b>84387</b>	2002 <i>TA</i> <sub>158</sub>		1 19.9 6°91	5°1/16.5	18	
12 13	8 34.53	+18 10.6	2.203	2.972	13.8	20.2	12 13	8 28.65	+26 56.6	1.703	2.514	15.5	18.4
12 23	8 29.49	+17 46.7	2.094	2.956	10.9	19.9	12 23	8 25.87	+28 47.6	1.629	2.515	12.1	18.2
1 2	8 22.05	+17 27.6	2.009	2.940	7.5	19.7	1 2	8 20.14	+30 46.3	1.579	2.517	8.5	18.0
1 12	8 12.75	+17 11.9	1.951	2.923	3.7	19.4	1 12	8 12.06	+32 43.1	1.555	2.520	5.5	17.8
1 22	8 2.44	+16 58.1	1.923	2.906	1.3	19.2	1 22	8 2.69	+34 27.5	1.559	2.524	5.7	17.8
2 1	7 52.17	+16 44.9	1.926	2.888	5.1	19.5	2 1	7 53.39	+35 51.4	1.592	2.528	8.7	18.0
2 11	7 43.04	+16 31.3	1.957	2.871	9.0	19.7	2 11	7 45.61	+36 50.8	1.650	2.534	12.3	18.2
2 21	7 35.89	+16 16.9	2.014	2.853	12.5	19.8	2 21	7 40.40	+37 26.3	1.729	2.540	15.5	18.5
<b>172895</b>	2005 <i>GQ</i> <sub>27</sub>		1 19.9 286°72	2°5/20.8	18		<b>87829</b>	2000 <i>SA</i> <sub>173</sub>		1 19.9 342°34	9°5/22.7	18	
12 13	8 32.11	+14 6.8	1.671	2.454	17.0	20.6	12 13	8 32.84	- 0 48.2	1.877	2.592	17.7	18.7
12 23	8 28.34	+13 51.4	1.574	2.441	13.6	20.3	12 23	8 28.39	- 2 29.0	1.790	2.590	15.3	18.5
1 2	8 21.67	+13 47.5	1.499	2.429	9.6	20.0	1 2	8 21.42	- 3 54.0	1.723	2.588	12.7	18.3
1 12	8 12.70	+13 54.3	1.448	2.417	5.2	19.7	1 12	8 12.52	- 4 57.8	1.680	2.586	10.5	18.2
1 22	8 2.45	+14 9.7	1.424	2.404	2.6	19.6	1 22	8 2.59	- 5 36.7	1.662	2.585	9.5	18.1
2 1	7 52.23	+14 30.6	1.428	2.392	6.3	19.8	2 1	7 52.77	- 5 49.7	1.671	2.584	10.3	18.1
2 11	7 43.42	+14 53.5	1.459	2.380	10.9	20.0	2 11	7 44.20	- 5 39.1	1.705	2.582	12.3	18.3
2 21	7 37.07	+15 15.4	1.513	2.368	15.1	20.2	2 21	7 37.75	- 5 10.3	1.762	2.582	14.9	18.4
<b>11032</b>	1988 <i>RE</i> <sub>5</sub>		1 19.9 175°50	0°1/19.9	18		<b>411868</b>	2012 <i>EE</i>		1 19.9 328°68	0°3/20.0	18	
12 13	8 34.73	+17 55.0	2.080	2.852	14.4	19.2	12 13	8 33.56	+20 19.7	1.576	2.374	17.1	20.6
12 23	8 29.70	+18 20.6	1.991	2.855	11.3	19.0	12 23	8 29.63	+20 1.6	1.487	2.366	13.5	20.3
1 2	8 22.20	+18 55.2	1.925	2.857	7.6	18.7	1 2	8 22.59	+19 49.1	1.419	2.358	9.2	20.0
1 12	8 12.82	+19 35.3	1.886	2.859	3.5	18.5	1 12	8 13.15	+19 40.0	1.376	2.351	4.2	19.7
1 22	8 2.46	+20 16.8	1.876	2.860	0.9	18.3	1 22	8 2.44	+19 31.4	1.360	2.344	1.1	19.5
2 1	7 52.25	+20 55.5	1.898	2.860	5.2	18.6	2 1	7 51.93	+19 20.9	1.372	2.337	6.3	19.8
2 11	7 43.29	+21 28.3	1.948	2.859	9.2	18.8	2 11	7 43.09	+19 7.4	1.410	2.331	11.2	20.1
2 21	7 36.44	+21 53.6	2.023	2.858	12.6	19.1	2 21	7 36.96	+18 50.7	1.471	2.326	15.4	20.3
<b>148067</b>	1998 <i>VN</i> <sub>20</sub>		1 19.9 42°86	3°2/18.5	18		<b>462937</b>	2011 <i>BN</i> <sub>86</sub>		1 19.9 33°65	0°0/19.9	18	
12 13	8 33.29	+25 8.6	1.504	2.313	17.3	19.5	12 13	8 30.70	+18 11.0	1.807	2.597	15.6	21.6
12 23	8 29.50	+25 57.2	1.438	2.323	13.5	19.3	12 23	8 26.92	+18 36.4	1.726	2.601	12.2	21.4
1 2	8 22.48	+26 51.4	1.393	2.334	9.1	19.1	1 2	8 20.51	+19 11.7	1.667	2.604	8.2	21.2
1 12	8 13.03	+27 44.0	1.373	2.345	4.7	18.8	1 12	8 12.12	+19 53.4	1.634	2.608	3.7	20.9
1 22	8 2.43	+28 27.7	1.379	2.356	3.7	18.8	1 22	8 2.72	+20 36.8	1.628	2.612	1.0	20.7
2 1	7 52.23	+28 57.0	1.413	2.368	7.6	19.1	2 1	7 53.52	+21 17.1	1.652	2.616	5.6	21.0
2 11	7 43.94	+29 10.1	1.472	2.380	11.8	19.3	2 11	7 45.72	+21 50.8	1.702	2.620	9.9	21.3
2 21	7 38.52	+29 8.2	1.554	2.393	15.6	19.6	2 21	7 40.18	+22 16.2	1.777	2.624	13.6	21.5
<b>300361</b>	2007 <i>RO</i> <sub>87</sub>		1 19.9 124°73	0°3/19.8	18		<b>232034</b>	2001 <i>TL</i> <sub>148</sub>		1 19.9 264°13	4°8/16.9	18	
12 13	8 36.57	+19 28.3	1.909	2.686	15.3	21.7	12 13	8 31.95	+32 39.9	2.377	3.164	12.4	20.2
12 23	8 31.18	+19 48.6	1.834	2.702	11.9	21.5	12 23	8 27.60	+33 43.4	2.294	3.162	9.8	20.0
1 2	8 23.15	+20 16.4	1.783	2.717	8.0	21.0	1 2	8 20.84	+34 46.3	2.235	3.160	7.2	19.9
1 12	8 13.21	+20 47.9	1.758	2.732	3.6	21.3	1 12	8 12.25	+35 42.5	2.204	3.158	5.1	19.7
1 22	8 2.39	+21 18.8	1.762	2.746	1.1	20.9	1 22	8 2.69	+36 26.2	2.201	3.156	5.1	19.7
2 1	7 51.90	+21 45.1	1.797	2.759	5.5	21.2	2 1	7 53.26	+36 53.8	2.228	3.154	7.2	19.9
2 11	7 42.93	+22 4.6	1.860	2.772	9.5	21.5	2 11	7 45.04	+37 4.0	2.282	3.153	9.9	20.0
2 21	7 36.29	+22 16.6	1.948	2.784	13.0	21.7	2 21	7 38.86	+36 58.4	2.359	3.151	12.5	20.2
<b>64301</b>	2001 <i>UN</i> <sub>19</sub>		1 19.9 328°06	0°2/19.9	18		<b>167137</b>	2003 <i>SS</i> <sub>184</sub>		1 19.9 195°43	5°6/17.2	18	
12 13	8 28.23	+17 52.7	1.201	2.024	20.0	18.9	12 13	8 40.08	+34 10.5	2.081	2.861	14.1	21.2
12 23	8 26.50	+18 19.3	1.115	2.008	15.9	18.6	12 23	8 34.32	+35 7.4	1.996	2.859	11.3	21.0
1 2	8 21.12	+19 2.3	1.048	1.993	10.8	18.3	1 2	8 25.54	+36 2.1	1.934	2.856	8.4	20.8
1 12	8 12.70	+19 57.7	1.003	1.979	5.0	17.9	1 12	8 14.44	+36 47.0	1.900	2.852	6.0	20.6
1 22	8 2.46	+20 58.4	0.983	1.966	1.4	17.6	1 22	8 2.13	+37 15.5	1.894	2.848	6.0	20.6
2 1	7 52.20	+21 56.1	0.987	1.954	7.7	18.0	2 1	7 50.03	+37 23.3	1.917	2.843	8.3	20.8
2 11	7 43.83	+22 44.1	1.014	1.943	13.6	18.3	2 11	7 39.54	+37 10.7	1.967	2.837	11.3	20.9
2 21	7 38.76	+23 19.0	1.062	1.933	18.8	18.5	2 21	7 31.68	+36 40.8	2.041	2.831	14.2	21.1
<b>188481</b>	2004 <i>OG</i> <sub>5</sub>		1 19.9 185°73	0°8/19.5	18		<b>248707</b>	2006 <i>OH</i> <sub>3</sub>		1 19.9 179°72	0°7/19.6	18	
12 13	8 32.47	+20 28.3	2.407	3.181	12.6	21.3	12 13	8 36.48	+21 43.9	2.058	2.836	14.4	21.0
12 23	8 27.66	+21 0.1	2.315	3.181	9.9	21.1	12 23	8 31.10	+21 52.9	1.969	2.837	11.2	20.8
1 2	8 20.70	+21 38.2	2.246	3.180	6.6	20.9	1 2	8 23.16	+22 6.6	1.903	2.838	7.5	20.6
1 12	8 12.11	+22 19.2	2.205	3.179	3.0	20.6	1 12	8 13.28	+22 21.7	1.865	2.838	3.4	20.3
1 22	8 2.67	+22 59.1	2.195	3.177	1.2	20.5	1 22	8 2.44	+22 34.5	1.855	2.838	1.3	20.2
2 1	7 53.33	+23 34.3	2.216	3.175	4.8	20.7	2 1	7 51.81	+22 42.1	1.876	2.837	5.4	20.5
2 11	7 45.05	+24 2.3	2.266	3.173	8.3	21.0	2 11	7 42.55	+22 43.0	1.926	2.836	9.4	20.7
2 21	7 38.57	+24 22.2	2.342	3.170	11.4	21.2	2 21	7 35.52	+22 37.4	2.001	2.834	12.8	20.9
<b>197510</b>	2004 <i>CE</i> <sub>3</sub>		1 19.9 333°68	21°5/ 7.9	16		<b>53281</b>	1999 <i>FS</i> <sub>33</sub>		1 19.9 71°98	3°9/22.1	18	
12 13	8 47.83	+54 58.6	1.017	1.814	24.6	20.0	12 13	8 30.93	+ 7 49.8	1.794	2.554	16.8	18.3
12 23	8 46.94	+58 13.9	0.976	1.808	22.8	19.8	12 23	8 26.86	+ 7 55.9	1.723	2.571	13.6	18.1
1 2	8 38.06	+61 6.6	0.951	1.802	21.7	19.7	1 2	8 20.31	+ 8 19.5	1.673	2.589	9.9	17.9
1 12	8 21.43	+63 11.6	0.942	1.796	21.6	19.7	1 12	8 11.98	+ 8 59.6	1.647	2.606	6.1	17.7
1 22	8 0.11	+64 8.1	0.950	1.792	22.6	19.7	1 22	8 2.80	+ 9 52.9	1.649	2.623	3.9	17.6
2 1	7 39.71	+63 48.9	0.973	1.788	24.3	19.8	2 1	7 53.92	+10 54.6	1.680	2.641	6.0	17.8
2 11	7 25.49	+62 24.6	1.009	1.784	26.3	20.0	2 11	7 46.42	+11 59.1	1.739	2.658	9.6	18.1
2 21	7 19.54	+60 14.1	1.056	1.782	28.4	20.1	2 21	7 41.09	+13 1.5	1.822	2.675	13.0	18.3
<b>408649</b>	2014 <i>MB</i> <sub>15</sub>		1 19.9 162°27	1°1/20.4	18		<b>250104</b>	2002 <i>HO</i> <sub>8</sub>		1 19.9 229°44	1°4/20.6	18	
12 13	8 35.05	+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>35009</b>	1980 <i>US</i> <sub>1</sub>		1 19.9	74°47'	3°1'/18.9	17	<b>334646</b>	2002 <i>WH</i> <sub>21</sub>		1 19.9	48°25'	1°6'/19.1	18
12 13	8 39.95	+25 25.4	1.404	2.207	18.6	19.0	12 13	8 30.32	+22 51.4	2.102	2.892	13.7	20.9
12 23	8 34.64	+26 1.3	1.350	2.231	14.5	18.8	12 23	8 26.28	+23 26.3	2.025	2.900	10.6	20.7
1 2	8 25.83	+26 41.2	1.316	2.255	9.7	18.6	1 2	8 19.91	+24 6.5	1.970	2.908	7.1	20.5
1 12	8 14.51	+27 17.7	1.307	2.279	4.9	18.4	1 12	8 11.82	+24 47.7	1.943	2.917	3.3	20.3
1 22	8 2.19	+27 43.8	1.325	2.304	3.5	18.4	1 22	8 2.90	+25 25.2	1.945	2.925	2.0	20.2
2 1	7 50.61	+27 55.4	1.371	2.327	7.6	18.7	2 1	7 54.20	+25 55.2	1.976	2.934	5.5	20.5
2 11	7 41.31	+27 52.2	1.442	2.351	12.0	19.0	2 11	7 46.75	+26 15.7	2.035	2.943	9.1	20.7
2 21	7 35.21	+27 36.5	1.536	2.374	15.8	19.3	2 21	7 41.33	+26 26.2	2.118	2.952	12.2	20.9
<b>56172</b>	1999 <i>FD</i> <sub>7</sub>		1 19.9	96°28'	2°1'/20.9	18	<b>320669</b>	2008 <i>CZ</i> <sub>179</sub>		1 19.9	316°42'	8°2'/15.8	18
12 13	8 31.84	+13 13.1	1.942	2.712	15.4	18.9	12 13	8 34.50	+35 45.5	1.577	2.385	16.7	20.7
12 23	8 27.47	+13 16.2	1.864	2.723	12.2	18.7	12 23	8 31.17	+37 16.1	1.497	2.373	13.6	20.4
1 2	8 20.69	+13 31.0	1.807	2.734	8.5	18.5	1 2	8 24.15	+38 46.0	1.438	2.361	10.5	20.2
1 12	8 12.16	+13 56.0	1.777	2.745	4.5	18.2	1 12	8 14.08	+40 4.1	1.403	2.350	8.4	20.1
1 22	8 2.77	+14 28.0	1.774	2.755	2.1	18.1	1 22	8 2.26	+40 59.7	1.394	2.339	8.8	20.1
2 1	7 53.63	+15 3.6	1.802	2.765	5.3	18.3	2 1	7 50.53	+41 25.8	1.410	2.328	11.4	20.2
2 11	7 45.81	+15 39.1	1.857	2.776	9.1	18.6	2 11	7 40.78	+41 21.7	1.450	2.318	14.7	20.4
2 21	7 40.06	+16 11.7	1.937	2.786	12.6	18.8	2 21	7 34.34	+40 51.9	1.510	2.308	18.0	20.5
<b>248106</b>	2004 <i>RP</i> <sub>105</sub>		1 19.9	47°68'	4°4'/21.7	17	<b>296599</b>	2009 <i>RH</i> <sub>55</sub>		1 19.9	60°48'	2°1'/21.0	18
12 13	8 33.53	+10 3.6	1.218	2.011	21.5	20.0	12 13	8 30.32	+12 56.6	1.887	2.662	15.6	21.5
12 23	8 29.75	+9 44.6	1.166	2.035	17.2	19.8	12 23	8 26.42	+13 3.3	1.806	2.668	12.4	21.3
1 2	8 22.62	+9 45.8	1.131	2.059	12.3	19.6	1 2	8 20.08	+13 22.7	1.747	2.675	8.6	21.0
1 12	8 13.08	+10 6.6	1.119	2.084	7.3	19.4	1 12	8 11.92	+13 53.1	1.714	2.682	4.6	20.8
1 22	8 2.56	+10 43.1	1.132	2.109	4.4	19.3	1 22	8 2.87	+14 31.2	1.708	2.689	2.2	20.7
2 1	7 52.68	+11 29.8	1.171	2.135	7.4	19.5	2 1	7 54.02	+15 13.2	1.731	2.696	5.4	20.9
2 11	7 44.92	+12 20.0	1.234	2.161	11.9	19.9	2 11	7 46.46	+15 54.8	1.783	2.703	9.3	21.1
2 21	7 40.17	+13 8.2	1.319	2.187	16.0	20.2	2 21	7 41.01	+16 33.1	1.858	2.710	12.9	21.4
<b>489140</b>	2006 <i>DV</i> <sub>139</sub>		1 19.9	288°17'	4°7'/18.1	18	<b>187336</b>	2005 <i>UP</i> <sub>107</sub>		1 19.9	132°19'	5°0'/22.9	18
12 13	8 36.04	+28 49.9	1.521	2.328	17.3	21.6	12 13	8 30.64	+3 42.2	2.190	2.918	15.1	20.9
12 23	8 32.04	+29 38.9	1.439	2.321	13.7	21.3	12 23	8 26.25	+3 36.5	2.105	2.928	12.5	20.7
1 2	8 24.49	+30 31.0	1.377	2.315	9.6	21.0	1 2	8 19.76	+3 47.6	2.042	2.938	9.5	20.5
1 12	8 14.13	+31 17.9	1.341	2.308	5.7	20.8	1 12	8 11.73	+4 15.9	2.004	2.947	6.6	20.4
1 22	8 2.23	+31 51.6	1.330	2.302	5.2	20.8	1 22	8 2.92	+4 59.7	1.995	2.956	5.0	20.3
2 1	7 50.55	+32 6.2	1.347	2.295	8.7	20.9	2 1	7 54.28	+5 55.9	2.015	2.964	6.1	20.4
2 11	7 40.80	+32 0.5	1.389	2.289	13.0	21.2	2 11	7 46.72	+6 59.6	2.063	2.972	8.9	20.5
2 21	7 34.18	+31 37.6	1.453	2.283	16.9	21.4	2 21	7 40.94	+8 5.9	2.137	2.980	11.8	20.7
<b>445916</b>	2012 <i>XE</i> <sub>50</sub>		1 19.9	69°07'	0°9'/20.3	17	<b>460521</b>	2014 <i>TU</i> <sub>9</sub>		1 19.9	32°92'	4°6'/18.7	18
12 13	8 36.56	+16 48.0	1.312	2.111	19.9	21.9	12 13	8 37.82	+31 9.7	1.532	2.336	17.3	20.9
12 23	8 32.10	+16 56.4	1.253	2.131	15.6	21.7	12 23	8 33.03	+31 25.4	1.465	2.345	13.6	20.7
1 2	8 24.21	+17 17.9	1.213	2.151	10.5	21.5	1 2	8 24.81	+31 38.5	1.419	2.354	9.5	20.4
1 12	8 13.83	+17 48.5	1.198	2.171	4.9	21.2	1 12	8 14.10	+31 41.9	1.398	2.364	5.7	20.3
1 22	8 2.37	+18 22.9	1.208	2.191	1.4	21.0	1 22	8 2.33	+31 30.4	1.403	2.375	4.9	20.2
2 1	7 51.51	+18 55.6	1.245	2.211	6.7	21.4	2 1	7 51.18	+31 1.9	1.436	2.386	8.1	20.4
2 11	7 42.79	+19 22.9	1.308	2.231	11.7	21.7	2 11	7 42.18	+30 18.1	1.494	2.397	12.1	20.7
2 21	7 37.15	+19 42.8	1.394	2.251	16.0	22.0	2 21	7 36.26	+29 23.3	1.575	2.409	15.7	21.0
<b>138220</b>	2000 <i>ET</i> <sub>196</sub>		1 19.9	132°95'	6°5'/17.4	18	<b>88286</b>	2001 <i>MM</i> <sub>24</sub>		1 19.9	155°29'	0°2'/20.0	18
12 13	8 42.12	+37 35.7	1.987	2.765	14.8	19.7	12 13	8 37.92	+18 44.0	1.845	2.620	15.9	20.0
12 23	8 35.90	+38 19.4	1.915	2.773	12.0	19.6	12 23	8 32.43	+18 53.1	1.763	2.629	12.4	19.8
1 2	8 26.51	+38 56.6	1.867	2.781	9.1	19.4	1 2	8 24.15	+19 10.3	1.703	2.636	8.4	19.5
1 12	8 14.82	+39 19.6	1.844	2.789	6.9	19.3	1 12	8 13.78	+19 32.2	1.670	2.643	3.8	19.3
1 22	8 2.11	+39 22.3	1.850	2.796	6.8	19.3	1 22	8 2.39	+19 54.8	1.666	2.649	1.0	19.1
2 1	7 49.92	+39 2.3	1.884	2.803	8.8	19.4	2 1	7 51.28	+20 14.5	1.691	2.654	5.6	19.4
2 11	7 39.67	+38 21.6	1.944	2.810	11.6	19.6	2 11	7 41.72	+20 29.0	1.745	2.659	9.9	19.7
2 21	7 32.28	+37 25.1	2.028	2.816	14.4	19.8	2 21	7 34.59	+20 37.3	1.824	2.663	13.7	19.9
<b>340630</b>	2006 <i>QG</i> <sub>125</sub>		1 19.9	145°79'	5°0'/17.7	18	<b>203648</b>	2002 <i>GQ</i> <sub>123</sub>		1 19.9	342°65'	0°2'/19.9	18
12 13	8 40.74	+38 36.2	2.792	3.552	11.4	20.9	12 13	8 29.74	+18 13.1	1.321	2.135	19.0	19.8
12 23	8 33.82	+38 54.6	2.713	3.559	9.2	20.7	12 23	8 27.25	+18 39.6	1.241	2.128	15.0	19.5
1 2	8 24.61	+39 6.2	2.658	3.566	7.0	20.6	1 2	8 21.37	+19 20.1	1.179	2.122	10.1	19.2
1 12	8 13.82	+39 6.0	2.631	3.572	5.3	20.5	1 12	8 12.75	+20 10.4	1.141	2.117	4.6	18.9
1 22	8 2.39	+38 50.8	2.634	3.579	5.2	20.5	1 22	8 2.63	+21 3.8	1.128	2.112	1.3	18.7
2 1	7 51.38	+38 19.2	2.668	3.584	6.7	20.6	2 1	7 52.64	+21 53.5	1.142	2.108	7.1	19.0
2 11	7 41.79	+37 32.9	2.731	3.590	8.9	20.8	2 11	7 44.48	+22 33.8	1.179	2.105	12.5	19.3
2 21	7 34.30	+36 35.2	2.820	3.595	11.1	20.9	2 21	7 39.34	+23 2.5	1.239	2.102	17.1	19.6
<b>267544</b>	2002 <i>PY</i> <sub>127</sub>		1 19.9	208°66'	3°0'/18.8	18	<b>188661</b>	2005 <i>SY</i> <sub>96</sub>		1 19.9	37°54'	3°9'/21.7	18
12 13	8 39.71	+25 57.0	1.726	2.514	16.3	21.4	12 13	8 29.93	+9 39.6	1.668	2.442	17.3	20.3
12 23	8 34.42	+26 32.1	1.635	2.509	12.8	21.1	12 23	8 26.38	+9 29.0	1.592	2.449	14.0	20.1
1 2	8 25.85	+27 11.5	1.567	2.503	8.7	20.9	1 2	8 20.18	+9 34.5	1.535	2.457	10.1	19.8
1 12	8 14.69	+27 48.9	1.525	2.496	4.6	20.6	1 12	8 12.00	+9 55.7	1.503	2.465	6.1	19.6
1 22	8 2.11	+28 17.4	1.512	2.489	3.5	20.5	1 22	8 2.85	+10 30.2	1.498	2.473	3.9	19.5
2 1	7 49.69	+28 32.3	1.527	2.480	7.3	20.7	2 1	7 53.95	+11 14.0	1.520	2.482	6.3	19.7
2 11	7 38.98	+28 32.1	1.569	2.471	11.7	21.0	2 11	7 46.48	+12 2.0	1.569	2.491	10.2	19.9
2 21	7 31.12	+28 18.5	1.635	2.462	15.6	21.2	2 21	7 41.32	+12 49.8	1.641	2.500	13.9	20.2
<b>152339</b>	2005 <i>UU</i> <sub>61</sub>		1 19.9	116°66'	2°7'/18.5	18	<b>373938</b>	2003 <i>UM</i> <sub>323</sub>		1 19.9	50°01'	1°2'/19.4	18
12 13	8 34.40	+25 47.2											

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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>339526</b>	2005 <i>GA</i> <sub>216</sub>		1 19.9 205°28	3°5/22.3	17		<b>249420</b>	2009 <i>DV</i> <sub>109</sub>		1 19.9 200°14	3°6/21.8	18	
12 13	8 28.16	+ 6 31.4	2.804	3.533	12.1	22.0	12 13	8 32.53	+ 8 40.4	2.077	2.826	15.2	21.2
12 23	8 23.97	+ 6 28.4	2.702	3.529	9.9	21.8	12 23	8 28.01	+ 8 38.8	1.980	2.823	12.3	21.0
1 2	8 18.09	+ 6 37.2	2.623	3.525	7.4	21.7	1 2	8 21.14	+ 8 51.5	1.905	2.819	9.0	20.8
1 12	8 10.95	+ 6 57.7	2.570	3.520	4.9	21.5	1 12	8 12.45	+ 9 18.4	1.856	2.815	5.5	20.5
1 22	8 3.15	+ 7 28.8	2.548	3.514	3.5	21.4	1 22	8 2.79	+ 9 57.2	1.836	2.810	3.6	20.4
2 1	7 55.39	+ 8 8.2	2.555	3.509	4.8	21.5	2 1	7 53.17	+10 44.8	1.845	2.804	5.7	20.5
2 11	7 48.39	+ 8 52.9	2.593	3.503	7.3	21.6	2 11	7 44.67	+11 36.6	1.883	2.798	9.2	20.7
2 21	7 42.76	+ 9 39.7	2.657	3.496	9.9	21.8	2 21	7 38.13	+12 28.6	1.947	2.792	12.7	20.9
<b>12296</b>	1991 <i>PL</i> <sub>13</sub>		1 19.9 156°54	0°4/20.2	18		<b>89090</b>	2001 <i>TK</i> <sub>182</sub>		1 19.9 187°68	0°9/19.6	18	R
12 13	8 35.21	+17 42.1	2.073	2.843	14.5	19.4	12 13	8 37.56	+21 34.0	1.822	2.605	15.8	20.6
12 23	8 30.03	+17 54.0	1.988	2.851	11.4	19.2	12 23	8 32.36	+21 49.7	1.734	2.605	12.4	20.4
1 2	8 22.41	+18 14.0	1.926	2.857	7.7	19.0	1 2	8 24.25	+22 11.6	1.668	2.604	8.3	20.2
1 12	8 12.97	+18 39.2	1.891	2.863	3.6	18.7	1 12	8 13.91	+22 35.7	1.629	2.603	3.8	19.9
1 22	8 2.63	+19 6.2	1.885	2.869	0.9	18.5	1 22	8 2.41	+22 57.2	1.618	2.601	1.5	19.7
2 1	7 52.51	+19 31.6	1.911	2.874	5.1	18.8	2 1	7 51.11	+23 12.4	1.637	2.598	6.0	20.0
2 11	7 43.69	+19 52.8	1.965	2.878	9.0	19.1	2 11	7 41.36	+23 19.3	1.684	2.595	10.4	20.3
2 21	7 36.98	+20 8.6	2.044	2.881	12.4	19.3	2 21	7 34.12	+23 18.0	1.755	2.591	14.2	20.5
<b>169587</b>	2002 <i>GT</i> <sub>48</sub>		1 19.9 146°90	3°7/21.7	18		<b>453007</b>	2007 <i>JB</i> <sub>41</sub>		1 19.9 241°13	4°6/21.9	18	
12 13	8 33.48	+ 9 21.8	1.905	2.661	16.1	20.9	12 13	8 33.38	+ 7 34.9	1.836	2.588	16.8	22.3
12 23	8 28.82	+ 9 12.2	1.821	2.668	13.0	20.7	12 23	8 29.14	+ 7 22.8	1.732	2.574	13.8	22.0
1 2	8 21.67	+ 9 17.0	1.759	2.675	9.4	20.5	1 2	8 22.19	+ 7 27.2	1.648	2.560	10.3	21.8
1 12	8 12.66	+ 9 35.8	1.722	2.681	5.7	20.3	1 12	8 13.05	+ 7 48.6	1.588	2.544	6.6	21.5
1 22	8 2.71	+10 6.6	1.713	2.687	3.7	20.2	1 22	8 2.62	+ 8 25.9	1.557	2.528	4.6	21.4
2 1	7 52.96	+10 45.9	1.733	2.693	5.9	20.3	2 1	7 52.10	+ 9 15.7	1.553	2.511	6.7	21.5
2 11	7 44.51	+11 29.6	1.782	2.698	9.6	20.5	2 11	7 42.77	+10 12.9	1.578	2.494	10.6	21.6
2 21	7 38.22	+12 13.5	1.855	2.702	13.1	20.8	2 21	7 35.66	+11 12.3	1.627	2.476	14.5	21.8
<b>207385</b>	Maxou		1 19.9 290°05	4°2/21.2	17		<b>199099</b>	2005 <i>YH</i> <sub>31</sub>		1 19.9 0°58	0°0/19.9	18	
12 13	8 33.53	+10 24.0	2.414	3.157	13.4	19.5	12 13	8 29.37	+18 45.3	1.128	1.954	20.7	20.3
12 23	8 28.50	+ 9 22.8	2.299	3.136	11.0	19.3	12 23	8 27.39	+18 55.9	1.057	1.952	16.4	20.1
1 2	8 21.33	+ 8 28.0	2.207	3.116	8.2	19.1	1 2	8 21.65	+19 20.0	1.005	1.950	11.1	19.8
1 12	8 12.50	+ 7 41.0	2.143	3.096	5.4	18.9	1 12	8 12.94	+19 53.3	0.974	1.950	5.1	19.4
1 22	8 2.74	+ 7 2.9	2.109	3.075	4.2	18.7	1 22	8 2.67	+20 29.7	0.967	1.951	1.3	19.2
2 1	7 52.97	+ 6 34.1	2.105	3.055	5.9	18.8	2 1	7 52.71	+21 2.6	0.985	1.953	7.6	19.6
2 11	7 44.13	+ 6 14.0	2.131	3.035	8.9	19.0	2 11	7 44.91	+21 27.4	1.025	1.956	13.3	19.9
2 21	7 37.00	+ 6 1.2	2.182	3.014	12.0	19.1	2 21	7 40.48	+21 42.1	1.086	1.960	18.2	20.2
<b>464822</b>	2004 <i>TF</i> <sub>112</sub>		1 19.9 130°22	2°6/21.3	18		<b>66370</b>	1999 <i>JJ</i> <sub>113</sub>		1 19.9 172°70	0°7/20.3	18	
12 13	8 30.77	+11 25.7	2.195	2.954	14.2	22.1	12 13	8 35.55	+17 6.5	2.025	2.796	14.8	20.5
12 23	8 26.40	+11 24.7	2.109	2.960	11.3	21.9	12 23	8 30.41	+17 16.6	1.937	2.799	11.7	20.3
1 2	8 19.89	+11 35.2	2.046	2.967	8.0	21.7	1 2	8 22.74	+17 35.4	1.871	2.802	7.9	20.1
1 12	8 11.81	+11 56.3	2.009	2.973	4.6	21.5	1 12	8 13.17	+18 0.3	1.832	2.804	3.7	19.8
1 22	8 2.94	+12 25.6	2.002	2.979	2.6	21.4	1 22	8 2.63	+18 27.8	1.822	2.806	1.0	19.6
2 1	7 54.24	+13 0.3	2.024	2.985	5.0	21.5	2 1	7 52.26	+18 54.4	1.843	2.806	5.2	19.9
2 11	7 46.65	+13 36.8	2.074	2.991	8.4	21.7	2 11	7 43.21	+19 17.3	1.893	2.806	9.3	20.1
2 21	7 40.89	+14 12.3	2.151	2.996	11.6	22.0	2 21	7 36.31	+19 35.1	1.967	2.806	12.8	20.4
<b>368986</b>	2007 <i>EB</i> <sub>147</sub>		1 19.9 217°37	1°3/20.7	18		<b>465057</b>	2006 <i>SU</i> <sub>31</sub>		1 19.9 193°82	6°1/24.4	17	
12 13	8 30.45	+14 29.6	2.025	2.799	14.7	21.6	12 13	8 27.19	- 3 2.3	2.949	3.629	12.5	22.2
12 23	8 26.47	+14 47.0	1.934	2.797	11.6	21.4	12 23	8 23.13	- 3 24.8	2.850	3.627	10.8	22.0
1 2	8 20.13	+15 16.0	1.866	2.796	8.0	21.2	1 2	8 17.49	- 3 32.2	2.772	3.625	8.9	21.9
1 12	8 11.98	+15 54.3	1.824	2.794	4.0	20.9	1 12	8 10.69	- 3 23.1	2.718	3.622	7.1	21.8
1 22	8 2.89	+16 38.4	1.810	2.793	1.4	20.7	1 22	8 3.29	- 2 57.3	2.693	3.619	6.1	21.7
2 1	7 53.89	+17 24.2	1.826	2.791	5.1	21.0	2 1	7 55.93	- 2 16.4	2.696	3.616	6.5	21.7
2 11	7 46.07	+18 7.6	1.871	2.789	9.1	21.2	2 11	7 49.29	- 1 23.2	2.728	3.613	8.0	21.8
2 21	7 40.24	+18 46.0	1.941	2.787	12.6	21.4	2 21	7 43.91	- 0 21.9	2.787	3.609	9.9	22.0
<b>455822</b>	2005 <i>SV</i> <sub>240</sub>		1 19.9 118°08	0°0/19.9	18		<b>205220</b>	2000 <i>PP</i> <sub>27</sub>		1 19.9 148°47	1°1/20.7	18	
12 13	8 33.80	+19 32.7	1.977	2.758	14.8	21.5	12 13	8 28.76	+14 42.6	2.800	3.559	11.4	20.8
12 23	8 29.05	+19 37.6	1.895	2.764	11.5	21.3	12 23	8 24.42	+14 57.6	2.710	3.565	9.0	20.6
1 2	8 21.80	+19 49.0	1.836	2.771	7.7	21.1	1 2	8 18.37	+15 20.4	2.645	3.571	6.2	20.5
1 12	8 12.70	+20 4.0	1.803	2.777	3.5	20.8	1 12	8 11.09	+15 49.4	2.607	3.577	3.1	20.3
1 22	8 2.72	+20 19.4	1.799	2.783	0.9	20.6	1 22	8 3.19	+16 22.1	2.600	3.582	1.2	20.1
2 1	7 53.00	+20 32.3	1.825	2.789	5.2	21.0	2 1	7 55.41	+16 56.0	2.624	3.587	3.9	20.3
2 11	7 44.64	+20 40.5	1.880	2.795	9.2	21.2	2 11	7 48.48	+17 28.6	2.678	3.592	6.9	20.5
2 21	7 38.47	+20 43.5	1.959	2.800	12.7	21.4	2 21	7 42.97	+17 58.0	2.759	3.596	9.6	20.7
<b>227593</b>	2006 <i>AG</i> <sub>29</sub>		1 19.9 55°27	0°4/20.2	18		<b>62555</b>	2000 <i>SE</i> <sub>265</sub>		1 19.9 238°00	1°9/18.9	18	
12 13	8 30.62	+15 28.7	1.760	2.546	16.1	20.0	12 13	8 32.95	+23 39.7	2.166	2.950	13.5	20.1
12 23	8 26.81	+16 12.0	1.691	2.562	12.6	19.8	12 23	8 28.49	+24 16.8	2.068	2.941	10.6	19.9
1 2	8 20.40	+17 8.5	1.644	2.579	8.5	19.6	1 2	8 21.55	+24 59.2	1.995	2.931	7.1	19.7
1 12	8 12.10	+18 14.0	1.623	2.596	3.9	19.4	1 12	8 12.69	+25 42.4	1.948	2.921	3.5	19.4
1 22	8 2.89	+19 22.5	1.630	2.613	1.0	19.2	1 22	8 2.77	+26 21.7	1.931	2.910	2.3	19.3
2 1	7 53.97	+20 28.3	1.666	2.630	5.5	19.6	2 1	7 52.89	+26 52.6	1.944	2.900	5.8	19.5
2 11	7 46.49	+21 26.4	1.729	2.648	9.7	19.8	2 11	7 44.18	+27 12.9	1.985	2.888	9.5	19.7
2 21	7 41.28	+22 14.2	1.818	2.665	13.3	20.1	2 21	7 37.54	+27 22.2	2.051	2.877	12.8	19.9
<b>419114</b>	2009 <i>SA</i> <sub>193</sub>		1 19.9 50°55	1°5/19.4	18		<b>486836</b>	2014 <i>JC</i> <sub>44</sub>		1 19.9 287°58	2°3/20.8	18	
12 13	8 33.27	+23 5.7											

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1 19.9

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>247643</b>	2002 VQ <sub>114</sub>		1 19.9	19°12	5°4/22.2	18	<b>399681</b>	2004 TR <sub>24</sub>		1 19.9	160°61	2°1/20.9	18
12 13	8 28.37	+ 7 29.5	1.743	2.509	17.0	19.7	12 13	8 35.43	+13 24.5	1.907	2.672	15.8	22.7
12 23	8 25.01	+ 6 44.2	1.669	2.517	13.9	19.5	12 23	8 30.42	+13 26.6	1.822	2.678	12.6	22.5
1 2	8 19.19	+ 6 14.0	1.614	2.526	10.5	19.3	1 2	8 22.81	+13 40.5	1.758	2.684	8.8	22.3
1 12	8 11.57	+ 6 0.3	1.584	2.536	7.1	19.1	1 12	8 13.25	+14 4.6	1.721	2.689	4.6	22.0
1 22	8 3.09	+ 6 3.0	1.580	2.546	5.4	19.1	1 22	8 2.70	+14 35.8	1.713	2.693	2.1	21.9
2 1	7 54.88	+ 6 19.9	1.603	2.557	7.0	19.2	2 1	7 52.35	+15 10.4	1.734	2.697	5.5	22.1
2 11	7 48.02	+ 6 47.4	1.653	2.569	10.2	19.4	2 11	7 43.36	+15 44.7	1.783	2.700	9.6	22.3
2 21	7 43.29	+ 7 20.8	1.726	2.582	13.4	19.6	2 21	7 36.60	+16 16.1	1.858	2.702	13.2	22.6
<b>172320</b>	2002 TZ <sub>377</sub>		1 19.9	80°98	1°0/19.5	18	<b>57240</b>	2001 QB <sub>83</sub>		1 19.9	121°54	1°5/20.6	18
12 13	8 31.43	+21 53.2	2.237	3.020	13.2	20.6	12 13	8 37.48	+15 32.9	1.750	2.523	16.7	19.3
12 23	8 26.95	+22 14.5	2.160	3.031	10.2	20.4	12 23	8 32.10	+15 32.4	1.677	2.539	13.2	19.1
1 2	8 20.27	+22 40.6	2.105	3.042	6.8	20.2	1 2	8 23.93	+15 42.4	1.625	2.554	9.0	18.9
1 12	8 12.01	+23 8.1	2.079	3.052	3.1	20.0	1 12	8 13.73	+16 0.7	1.599	2.569	4.5	18.7
1 22	8 3.00	+23 33.2	2.081	3.063	1.4	19.9	1 22	8 2.60	+16 23.8	1.601	2.584	1.7	18.5
2 1	7 54.23	+23 53.1	2.114	3.074	5.0	20.2	2 1	7 51.84	+16 48.0	1.633	2.597	5.7	18.8
2 11	7 46.66	+24 5.9	2.175	3.085	8.5	20.4	2 11	7 42.69	+17 10.4	1.693	2.610	10.0	19.1
2 21	7 41.00	+24 11.1	2.261	3.095	11.5	20.6	2 21	7 36.02	+17 28.9	1.778	2.622	13.7	19.3
<b>467531</b>	2007 RX <sub>45</sub>		1 19.9	239°97	4°8/22.7	17	<b>223709</b>	2004 RO <sub>61</sub>		1 19.9	126°92	0°7/19.7	18
12 13	8 28.46	+ 4 44.9	2.406	3.137	13.8	21.7	12 13	8 33.64	+21 7.6	2.207	2.984	13.5	20.9
12 23	8 24.52	+ 4 25.7	2.307	3.132	11.4	21.5	12 23	8 28.69	+21 23.6	2.126	2.994	10.5	20.7
1 2	8 18.64	+ 4 20.4	2.229	3.126	8.8	21.3	1 2	8 21.46	+21 44.8	2.069	3.004	7.0	20.5
1 12	8 11.29	+ 4 29.7	2.177	3.120	6.2	21.1	1 12	8 12.58	+22 7.9	2.039	3.013	3.2	20.3
1 22	8 3.17	+ 4 53.0	2.154	3.114	4.8	21.0	1 22	8 2.91	+22 29.3	2.039	3.022	1.2	20.1
2 1	7 55.08	+ 5 28.5	2.159	3.108	5.9	21.1	2 1	7 53.48	+22 46.2	2.069	3.031	5.0	20.4
2 11	7 47.91	+ 6 12.6	2.193	3.102	8.5	21.2	2 11	7 45.29	+22 56.7	2.128	3.039	8.6	20.6
2 21	7 42.31	+ 7 1.3	2.253	3.095	11.3	21.4	2 21	7 39.09	+23 0.6	2.213	3.047	11.7	20.9
<b>74654</b>	1999 RU <sub>85</sub>		1 19.9	89°03	1°7/19.2	18	<b>284823</b>	2009 AQ <sub>35</sub>		1 19.9	253°47	1°1/20.5	17
12 13	8 35.93	+22 19.1	1.659	2.453	16.6	19.7	12 13	8 32.52	+17 38.1	2.451	3.217	12.6	21.3
12 23	8 31.18	+22 53.1	1.591	2.468	12.9	19.5	12 23	8 27.65	+17 15.9	2.351	3.211	10.0	21.1
1 2	8 23.45	+23 34.0	1.545	2.484	8.6	19.3	1 2	8 20.71	+16 58.4	2.276	3.205	6.8	20.9
1 12	8 13.54	+24 16.1	1.525	2.499	4.0	19.1	1 12	8 12.24	+16 44.7	2.227	3.198	3.4	20.7
1 22	8 2.62	+24 53.5	1.533	2.514	2.2	19.0	1 22	8 3.00	+16 33.4	2.209	3.192	1.3	20.5
2 1	7 52.11	+25 21.7	1.569	2.529	6.4	19.3	2 1	7 53.89	+16 23.2	2.222	3.185	4.5	20.7
2 11	7 43.35	+25 38.3	1.633	2.544	10.7	19.6	2 11	7 45.80	+16 13.2	2.264	3.178	7.9	20.9
2 21	7 37.24	+25 43.8	1.720	2.558	14.3	19.8	2 21	7 39.45	+16 2.7	2.333	3.172	11.0	21.1
<b>376594</b>	2013 PG <sub>28</sub>		1 19.9	73°75	2°8/18.9	18	<b>25004</b>	1998 OF <sub>10</sub>		1 19.9	215°72	1°9/20.9	18
12 13	8 35.94	+27 56.1	1.997	2.785	14.4	21.3	12 13	8 34.66	+13 12.7	1.738	2.510	16.8	19.3
12 23	8 30.78	+28 9.8	1.921	2.794	11.2	21.1	12 23	8 30.29	+13 28.0	1.643	2.504	13.5	19.0
1 2	8 22.97	+28 23.5	1.868	2.803	7.6	20.9	1 2	8 23.04	+13 58.0	1.569	2.497	9.4	18.8
1 12	8 13.26	+28 32.6	1.842	2.812	4.1	20.7	1 12	8 13.50	+14 40.7	1.520	2.490	4.9	18.5
1 22	8 2.70	+28 33.0	1.844	2.821	3.1	20.7	1 22	8 2.66	+15 32.0	1.500	2.482	2.0	18.3
2 1	7 52.51	+28 22.5	1.876	2.829	6.2	20.9	2 1	7 51.84	+16 26.8	1.509	2.473	6.0	18.5
2 11	7 43.88	+28 1.0	1.936	2.838	9.8	21.1	2 11	7 42.40	+17 19.9	1.545	2.464	10.6	18.8
2 21	7 37.59	+27 30.6	2.020	2.847	13.0	21.4	2 21	7 35.38	+18 7.4	1.606	2.454	14.7	19.0
<b>170833</b>	2004 EP <sub>84</sub>		1 19.9	284°03	1°4/20.5	18	<b>249407</b>	2009 CY <sub>56</sub>		1 19.9	317°57	3°2/18.4	18
12 13	8 32.31	+16 1.3	1.752	2.536	16.2	20.5	12 13	8 32.99	+29 27.4	2.312	3.098	12.7	20.2
12 23	8 28.36	+15 59.1	1.661	2.530	12.9	20.3	12 23	8 28.33	+29 52.1	2.225	3.096	10.0	20.0
1 2	8 21.65	+16 7.3	1.591	2.524	8.9	20.0	1 2	8 21.31	+30 16.4	2.161	3.093	6.9	19.8
1 12	8 12.80	+16 24.1	1.547	2.518	4.4	19.7	1 12	8 12.55	+30 35.9	2.125	3.091	4.1	19.7
1 22	8 2.79	+16 46.2	1.530	2.512	1.6	19.5	1 22	8 2.94	+30 46.4	2.117	3.089	3.5	19.6
2 1	7 52.89	+17 10.2	1.541	2.506	5.8	19.8	2 1	7 53.52	+30 45.3	2.140	3.087	6.1	19.8
2 11	7 44.39	+17 32.7	1.580	2.500	10.3	20.0	2 11	7 45.36	+30 32.1	2.190	3.085	9.2	20.0
2 21	7 38.26	+17 51.5	1.642	2.495	14.2	20.3	2 21	7 39.23	+30 8.4	2.265	3.083	12.1	20.1
<b>362083</b>	2009 BL <sub>127</sub>		1 19.9	348°62	0°7/20.3	17	<b>30073</b>	Erichen		1 19.9	178°46	2°4/21.0	18
12 13	8 30.00	+17 1.2	1.316	2.127	19.2	21.5	12 13	8 35.98	+13 5.0	1.896	2.659	15.9	19.2
12 23	8 27.43	+17 11.4	1.236	2.122	15.2	21.2	12 23	8 30.92	+12 58.9	1.806	2.661	12.7	19.0
1 2	8 21.48	+17 35.4	1.176	2.117	10.4	20.9	1 2	8 23.21	+13 4.3	1.739	2.663	9.0	18.7
1 12	8 12.85	+18 10.2	1.139	2.113	4.9	20.6	1 12	8 13.49	+13 20.2	1.697	2.663	4.9	18.5
1 22	8 2.77	+18 50.4	1.127	2.110	1.3	20.4	1 22	8 2.72	+13 44.0	1.684	2.663	2.5	18.3
2 1	7 52.87	+19 30.1	1.141	2.108	6.9	20.7	2 1	7 52.10	+14 12.3	1.700	2.663	5.7	18.5
2 11	7 44.80	+20 4.5	1.179	2.107	12.3	21.0	2 11	7 42.84	+14 41.7	1.745	2.661	9.8	18.8
2 21	7 39.71	+20 30.5	1.239	2.106	16.9	21.3	2 21	7 35.83	+15 9.5	1.815	2.659	13.5	19.0
<b>466213</b>	2012 RJ <sub>43</sub>		1 19.9	89°38	5°7/23.8	18	<b>296026</b>	2008 YS <sub>155</sub>		1 19.9	135°06	1°2/20.6	18
12 13	8 28.92	+ 0 18.2	2.575	3.278	13.6	21.4	12 13	8 34.16	+14 23.6	1.820	2.594	16.1	21.4
12 23	8 24.54	+ 0 6.9	2.500	3.299	11.5	21.3	12 23	8 29.57	+14 48.3	1.740	2.603	12.7	21.2
1 2	8 18.43	+ 0 16.7	2.446	3.320	9.1	21.2	1 2	8 22.33	+15 26.1	1.682	2.612	8.7	21.0
1 12	8 11.12	+ 0 10.1	2.418	3.340	6.9	21.0	1 12	8 13.08	+16 13.9	1.650	2.621	4.3	20.8
1 22	8 3.26	+ 0 12.4	2.418	3.360	5.7	21.0	1 22	8 2.83	+17 7.2	1.646	2.629	1.4	20.6
2 1	7 55.60	+ 0 48.8	2.447	3.380	6.3	21.1	2 1	7 52.79	+18 0.8	1.672	2.636	5.5	20.9
2 11	7 48.87	+ 1 35.4	2.504	3.399	8.1	21.2	2 11	7 44.17	+18 50.3	1.726	2.644	9.7	21.1
2 21	7 43.64	+ 2 28.3	2.587	3.419	10.3	21.4	2 21	7 37.85	+19 32.8	1.805	2.650	13.5	21.4
<b>321888</b>	2010 SO <sub>32</sub>		1 19.9	83°25	0°7/20.3	18	<b>269701</b>	1997 TA <sub>11</sub>		1 19.9	173°17	3°5/22.2	18
12 13	8 32.11	+15 49.4	1.737	2.522	16.3	21.6	12 13	8 29.00	+ 7 16.6	2.527	3.2		

EPHEMERIDES

1 19.9

1 20.0

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>122232</b>	2000 <i>OW</i> <sub>5</sub>		1 19.9 154°06	0°5/20.2	18		<b>268237</b>	2005 <i>GQ</i> <sub>50</sub>		1 20.0 173°78	0°7/19.7	18	
12 13	8 35.31	+18 37.9	2.476	3.238	12.6	20.0	12 13	8 38.53	+19 47.5	1.822	2.599	16.0	21.6
12 23	8 29.69	+18 31.9	2.388	3.246	9.9	19.8	12 23	8 33.14	+20 17.2	1.736	2.603	12.5	21.4
1 2	8 21.99	+18 30.9	2.325	3.254	6.7	19.6	1 2	8 24.84	+20 55.7	1.672	2.606	8.4	21.2
1 12	8 12.81	+18 33.0	2.290	3.262	3.1	19.4	1 12	8 14.30	+21 38.5	1.635	2.609	3.8	20.9
1 22	8 2.93	+18 36.1	2.285	3.268	0.8	19.2	1 22	8 2.58	+22 20.3	1.627	2.610	1.3	20.7
2 1	7 53.27	+18 38.3	2.312	3.274	4.4	19.5	2 1	7 51.04	+22 56.0	1.649	2.611	6.0	21.0
2 11	7 44.72	+18 38.3	2.369	3.280	7.8	19.7	2 11	7 41.04	+23 22.8	1.700	2.610	10.4	21.3
2 21	7 37.97	+18 35.6	2.453	3.285	10.8	19.9	2 21	7 33.55	+23 39.8	1.775	2.609	14.2	21.5
<b>61988</b>	2000 <i>RN</i> <sub>32</sub>		1 19.9 147°95	3°3/18.6	18		<b>44721</b>	1999 <i>TG</i> <sub>10</sub>		1 20.0 333°51	1°5/19.5	18	
12 13	8 36.73	+28 57.9	2.049	2.835	14.1	19.1	12 13	8 31.69	+22 11.7	1.390	2.204	18.2	18.1
12 23	8 31.47	+29 19.8	1.967	2.838	11.1	18.9	12 23	8 28.78	+22 27.7	1.306	2.194	14.4	17.8
1 2	8 23.53	+29 41.5	1.908	2.841	7.7	18.7	1 2	8 22.44	+22 51.7	1.241	2.184	9.7	17.5
1 12	8 13.60	+29 57.7	1.876	2.844	4.3	18.5	1 12	8 13.38	+23 18.9	1.200	2.176	4.5	17.2
1 22	8 2.73	+30 4.1	1.873	2.846	3.6	18.5	1 22	8 2.80	+23 43.4	1.185	2.168	2.1	17.0
2 1	7 52.16	+29 57.7	1.899	2.848	6.5	18.7	2 1	7 52.38	+24 0.2	1.196	2.160	7.2	17.3
2 11	7 43.10	+29 38.7	1.953	2.851	10.0	18.9	2 11	7 43.78	+24 6.3	1.232	2.154	12.4	17.6
2 21	7 36.40	+29 9.1	2.032	2.853	13.1	19.1	2 21	7 38.21	+24 1.8	1.289	2.148	16.9	17.8
<b>484283</b>	2007 <i>PP</i> <sub>3</sub>		1 19.9 181°43	0°0/19.9	18		<b>7242</b>	Oknyudo		1 20.0 79°48	0°1/19.9	18	
12 13	8 35.62	+17 48.4	2.148	2.916	14.1	22.1	12 13	8 36.52	+17 10.6	1.302	2.103	19.9	18.1
12 23	8 30.43	+18 19.0	2.056	2.917	11.1	21.9	12 23	8 32.30	+17 47.6	1.240	2.120	15.6	17.9
1 2	8 22.80	+18 58.7	1.987	2.918	7.5	21.7	1 2	8 24.58	+18 39.4	1.199	2.138	10.5	17.6
1 12	8 13.29	+19 44.0	1.945	2.918	3.4	21.4	1 12	8 14.22	+19 40.2	1.181	2.155	4.7	17.3
1 22	8 2.80	+20 30.7	1.934	2.917	0.9	21.2	1 22	8 2.64	+20 42.4	1.189	2.173	1.2	17.1
2 1	7 52.39	+21 14.3	1.954	2.916	5.1	21.5	2 1	7 51.57	+21 38.7	1.225	2.190	6.9	17.6
2 11	7 43.20	+21 51.6	2.003	2.913	9.0	21.7	2 11	7 42.62	+22 24.0	1.286	2.207	12.1	17.9
2 21	7 36.06	+22 20.9	2.077	2.910	12.5	21.9	2 21	7 36.82	+22 56.7	1.369	2.224	16.4	18.2
<b>14926</b>	Hoshide		1 20.0 102°38	2°4/21.1	18		<b>507751</b>	2013 <i>YP</i> <sub>20</sub>		1 20.0 169°24	1°1/19.3	18	
12 13	8 37.02	+12 39.3	1.691	2.459	17.4	18.9	12 13	8 28.59	+21 11.5	2.682	3.459	11.4	20.9
12 23	8 31.75	+12 44.3	1.624	2.482	13.8	18.7	12 23	8 24.56	+21 53.5	2.591	3.460	8.8	20.8
1 2	8 23.71	+13 3.1	1.579	2.504	9.6	18.5	1 2	8 18.66	+22 41.2	2.525	3.460	5.9	20.6
1 12	8 13.67	+13 33.6	1.559	2.526	5.1	18.3	1 12	8 11.37	+23 31.2	2.487	3.461	2.7	20.4
1 22	8 2.75	+14 11.9	1.567	2.547	2.4	18.2	1 22	8 3.36	+24 19.8	2.480	3.461	1.4	20.3
2 1	7 52.26	+14 53.6	1.604	2.568	5.8	18.4	2 1	7 55.42	+25 3.3	2.504	3.462	4.5	20.5
2 11	7 43.42	+15 34.3	1.669	2.588	10.0	18.7	2 11	7 48.37	+25 39.3	2.557	3.462	7.6	20.7
2 21	7 37.06	+16 11.0	1.759	2.607	13.7	19.0	2 21	7 42.85	+26 6.7	2.636	3.462	10.3	20.9
<b>31880</b>	2000 <i>FW</i> <sub>12</sub>		1 20.0 195°89	1°1/20.6	18		<b>108744</b>	2001 <i>OM</i> <sub>40</sub>		1 20.0 137°17	0°6/20.4	18	
12 13	8 35.62	+15 9.9	1.971	2.738	15.3	20.2	12 13	8 29.47	+15 30.3	2.695	3.457	11.7	20.4
12 23	8 30.67	+15 26.8	1.876	2.735	12.1	20.0	12 23	8 25.10	+16 1.3	2.608	3.466	9.2	20.2
1 2	8 23.09	+15 55.1	1.803	2.732	8.3	19.7	1 2	8 18.94	+16 40.8	2.546	3.474	6.2	20.0
1 12	8 13.49	+16 32.2	1.757	2.728	4.1	19.5	1 12	8 11.47	+17 26.2	2.511	3.483	3.0	19.8
1 22	8 2.77	+17 14.3	1.740	2.723	1.3	19.3	1 22	8 3.34	+18 14.5	2.507	3.491	0.8	19.6
2 1	7 52.11	+17 57.1	1.754	2.717	5.4	19.5	2 1	7 55.33	+19 2.3	2.535	3.498	4.0	19.9
2 11	7 42.73	+18 36.7	1.796	2.711	9.6	19.8	2 11	7 48.21	+19 46.6	2.593	3.506	7.1	20.1
2 21	7 35.54	+19 10.6	1.863	2.704	13.3	20.0	2 21	7 42.58	+20 25.5	2.677	3.513	9.9	20.3
<b>451707</b>	2013 <i>CL</i> <sub>106</sub>		1 20.0 91°04	1°0/19.6	18		<b>131468</b>	2001 <i>RM</i> <sub>7</sub>		1 20.0 136°50	1°2/19.0	17	
12 13	8 37.27	+21 14.8	1.567	2.361	17.4	21.8	12 13	8 27.62	+25 4.8	3.787	4.556	8.5	21.3
12 23	8 32.37	+21 32.4	1.499	2.376	13.6	21.5	12 23	8 23.17	+25 22.9	3.702	4.566	6.6	21.1
1 2	8 24.34	+21 57.2	1.453	2.391	9.1	21.3	1 2	8 17.39	+25 42.1	3.643	4.575	4.4	21.0
1 12	8 14.02	+22 24.7	1.431	2.406	4.1	21.1	1 12	8 10.69	+26 0.3	3.613	4.585	2.2	20.8
1 22	8 2.66	+22 49.3	1.437	2.420	1.6	20.9	1 22	8 3.56	+26 15.4	3.615	4.594	1.4	20.8
2 1	7 51.77	+23 7.2	1.472	2.435	6.4	21.3	2 1	7 56.56	+26 26.0	3.648	4.602	3.4	21.0
2 11	7 42.74	+23 16.1	1.533	2.449	10.9	21.6	2 11	7 50.23	+26 31.2	3.712	4.611	5.6	21.1
2 21	7 36.49	+23 16.3	1.618	2.463	14.8	21.8	2 21	7 45.01	+26 30.8	3.803	4.619	7.6	21.3
<b>417835</b>	2007 <i>GK</i> <sub>32</sub>		1 20.0 296°76	4°7/22.4	18		<b>238469</b>	2004 <i>RD</i> <sub>64</sub>		1 20.0 200°51	3°1/21.5	18	
12 13	8 29.00	+ 6 34.9	1.954	2.707	15.9	21.3	12 13	8 34.60	+10 17.3	2.011	2.763	15.5	21.4
12 23	8 25.48	+ 6 21.6	1.858	2.699	13.1	21.1	12 23	8 29.80	+10 19.2	1.913	2.759	12.5	21.2
1 2	8 19.59	+ 6 24.5	1.783	2.692	9.8	20.8	1 2	8 22.49	+10 35.1	1.837	2.755	9.0	20.9
1 12	8 11.88	+ 6 44.1	1.733	2.685	6.5	20.6	1 12	8 13.23	+11 4.1	1.787	2.749	5.2	20.7
1 22	8 3.17	+ 7 19.3	1.710	2.678	4.7	20.5	1 22	8 2.90	+11 43.8	1.766	2.743	3.1	20.5
2 1	7 54.50	+ 8 6.9	1.715	2.671	6.3	20.6	2 1	7 52.61	+12 30.4	1.775	2.736	5.6	20.7
2 11	7 46.95	+ 9 2.3	1.748	2.665	9.7	20.8	2 11	7 43.49	+13 19.5	1.813	2.728	9.5	20.9
2 21	7 41.36	+10 0.4	1.805	2.658	13.1	21.0	2 21	7 36.45	+14 7.5	1.876	2.720	13.1	21.1
<b>522490</b>	2016 <i>EN</i> <sub>230</sub>		1 20.0 250°47	1°4/20.8	17		<b>350745</b>	2001 <i>YC</i> <sub>124</sub>		1 20.0 46°68	4°2/18.8	17	
12 13	8 30.35	+14 22.6	2.190	2.959	13.9	21.8	12 13	8 39.16	+26 42.0	1.116	1.938	21.2	20.4
12 23	8 26.34	+14 37.1	2.090	2.950	11.0	21.5	12 23	8 34.76	+27 24.2	1.075	1.966	16.5	20.2
1 2	8 20.08	+15 2.4	2.012	2.940	7.6	21.3	1 2	8 26.27	+28 9.5	1.052	1.995	11.1	20.0
1 12	8 12.09	+15 36.6	1.960	2.930	3.9	21.1	1 12	8 14.93	+28 48.7	1.053	2.024	5.9	19.8
1 22	8 3.13	+16 16.7	1.938	2.920	1.5	20.9	1 22	8 2.55	+29 13.3	1.077	2.054	4.6	19.8
2 1	7 54.19	+16 59.0	1.946	2.910	4.9	21.1	2 1	7 51.22	+29 19.2	1.128	2.085	8.8	20.2
2 11	7 46.29	+17 39.8	1.983	2.900	8.7	21.3	2 11	7 42.65	+29 7.1	1.202	2.115	13.4	20.5
2 21	7 40.23	+18 16.6	2.045	2.889	12.1	21.5	2 21	7 37.73	+28 41.0	1.297	2.146	17.4	20.8
<b>140074</b>	2001 <i>SM</i> <sub>117</sub>		1 20.0 43°96	1°3/20.4	18		<b>164532</b>	2006 <i>HD</i> <sub>97</sub>		1 20.0 76°41	0°9/19.6	18	
12 13	8 34.12	+17 28.3	1.482	2.278	18.1								