

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>461237</b>	2015 <i>WP</i> <sub>6</sub>		1 6.9 58°97	0°8/ 6.8 16			<b>408764</b>	1998 <i>BC</i> <sub>22</sub>		1 7.0 60°65	1°9/ 6.8 18		
12 3	7 39.10	+22 11.4	1.363	2.193	17.7	21.4	12 3	7 41.55	+28 14.4	1.640	2.459	15.7	20.7
12 13	7 33.69	+22 44.5	1.311	2.213	13.3	21.2	12 13	7 35.03	+28 6.3	1.584	2.480	11.9	20.5
12 23	7 25.11	+23 23.5	1.279	2.233	8.2	21.0	12 23	7 25.69	+27 55.1	1.551	2.501	7.5	20.3
1 2	7 14.38	+24 3.2	1.273	2.253	2.8	20.7	1 2	7 14.58	+27 37.5	1.545	2.523	3.0	20.1
1 12	7 3.09	+24 38.3	1.294	2.273	3.0	20.7	1 12	7 3.14	+27 11.8	1.567	2.544	3.2	20.1
1 22	6 52.87	+25 5.5	1.342	2.294	8.1	21.1	1 22	6 52.81	+26 38.7	1.618	2.566	7.4	20.4
2 1	6 45.09	+25 23.9	1.415	2.315	12.7	21.4	2 1	6 44.75	+26 0.6	1.695	2.588	11.4	20.7
2 11	6 40.58	+25 34.5	1.509	2.335	16.5	21.7	2 11	6 39.68	+25 20.5	1.795	2.609	14.8	21.0
<b>465281</b>	2007 <i>TM</i> <sub>190</sub>		1 6.9 138°78	0°6/ 7.2 16			<b>85904</b>	1999 <i>CH</i> <sub>70</sub>		1 7.0 356°69	2°2/ 7.4 18 R		
12 3	7 34.02	+19 46.3	2.499	3.299	11.5	22.3	12 3	7 35.85	+18 10.6	1.612	2.431	15.9	18.8
12 13	7 28.68	+19 53.6	2.420	3.306	8.7	22.1	12 13	7 30.99	+17 44.0	1.535	2.430	12.2	18.6
12 23	7 21.52	+20 4.9	2.366	3.313	5.4	21.9	12 23	7 23.41	+17 23.4	1.480	2.428	7.9	18.3
1 2	7 13.12	+20 18.6	2.341	3.319	2.0	21.7	1 2	7 13.90	+17 8.4	1.451	2.428	3.5	18.1
1 12	7 4.31	+20 33.0	2.346	3.325	1.8	21.7	1 12	7 3.71	+16 58.3	1.450	2.427	3.2	18.1
1 22	6 55.95	+20 46.6	2.382	3.331	5.3	21.9	1 22	6 54.21	+16 52.3	1.476	2.427	7.6	18.3
2 1	6 48.84	+20 58.6	2.447	3.337	8.5	22.1	2 1	6 46.61	+16 49.8	1.528	2.428	11.9	18.6
2 11	6 43.58	+21 8.5	2.537	3.342	11.2	22.3	2 11	6 41.78	+16 50.0	1.602	2.429	15.7	18.8
<b>81893</b>	2000 <i>LR</i> <sub>29</sub>		1 6.9 141°51	5°6/ 8.7 18			<b>325168</b>	2008 <i>FS</i> <sub>49</sub>		1 7.0 332°13	0°6/ 7.1 18		
12 3	7 35.00	+5 41.3	2.210	2.976	13.9	20.5	12 3	7 33.90	+20 21.5	1.457	2.289	16.7	21.0
12 13	7 29.51	+5 10.6	2.134	2.985	11.3	20.3	12 13	7 30.02	+20 28.5	1.374	2.277	12.7	20.7
12 23	7 22.07	+4 53.3	2.082	2.993	8.5	20.2	12 23	7 23.09	+20 42.6	1.313	2.266	8.1	20.4
1 2	7 13.32	+4 50.9	2.056	3.002	6.2	20.0	1 2	7 13.88	+21 1.4	1.276	2.256	2.9	20.1
1 12	7 4.13	+5 3.3	2.059	3.009	5.8	20.0	1 12	7 3.71	+21 21.6	1.266	2.246	2.7	20.1
1 22	6 55.42	+5 29.0	2.090	3.017	7.6	20.1	1 22	6 54.12	+21 40.4	1.282	2.237	8.1	20.4
2 1	6 48.05	+6 5.3	2.149	3.024	10.2	20.3	2 1	6 46.56	+21 55.9	1.323	2.228	13.0	20.6
2 11	6 42.67	+6 48.4	2.233	3.030	12.8	20.5	2 11	6 42.08	+22 7.8	1.385	2.221	17.2	20.8
<b>453876</b>	2011 <i>UE</i> <sub>127</sub>		1 6.9 91°82	0°3/ 6.9 17			<b>147528</b>	2004 <i>DO</i> <sub>52</sub>		1 7.0 266°68	0°7/ 7.1 18		
12 3	7 40.32	+21 35.8	1.640	2.455	15.9	21.6	12 3	7 38.93	+20 27.7	1.434	2.259	17.3	20.7
12 13	7 34.13	+21 59.3	1.581	2.476	11.9	21.4	12 13	7 33.89	+20 29.5	1.350	2.249	13.2	20.4
12 23	7 25.18	+22 27.8	1.546	2.496	7.4	21.2	12 23	7 25.56	+20 37.9	1.288	2.239	8.4	20.1
1 2	7 14.39	+22 57.4	1.537	2.516	2.5	20.9	1 2	7 14.74	+20 50.3	1.250	2.229	3.0	19.7
1 12	7 3.11	+23 24.1	1.557	2.536	2.5	21.0	1 12	7 2.86	+21 3.4	1.239	2.219	2.9	19.7
1 22	6 52.73	+23 45.4	1.605	2.556	7.2	21.3	1 22	6 51.61	+21 14.7	1.256	2.209	8.4	20.0
2 1	6 44.46	+24 0.5	1.681	2.575	11.4	21.6	2 1	6 42.56	+21 23.1	1.297	2.199	13.5	20.3
2 11	6 39.08	+24 10.0	1.779	2.593	14.9	21.9	2 11	6 36.82	+21 28.8	1.360	2.189	17.9	20.5
<b>221853</b>	2008 <i>GB</i>		1 6.9 179°12	3°2/ 8.2 18			<b>242946</b>	2006 <i>RY</i> <sub>38</sub>		1 7.0 184°25	1°9/ 7.8 18		
12 3	7 34.66	+11 20.4	2.248	3.033	13.1	21.1	12 3	7 31.95	+14 5.7	2.990	3.773	10.2	21.3
12 13	7 29.36	+11 28.5	2.163	3.034	10.3	20.9	12 13	7 26.92	+14 17.7	2.900	3.773	7.9	21.2
12 23	7 22.06	+11 47.7	2.101	3.035	7.0	20.7	12 23	7 20.39	+14 36.5	2.835	3.773	5.2	21.0
1 2	7 13.35	+12 17.4	2.068	3.035	4.0	20.6	1 2	7 12.81	+15 1.3	2.800	3.772	2.6	20.8
1 12	7 4.09	+12 55.7	2.064	3.035	3.5	20.5	1 12	7 4.84	+15 30.7	2.796	3.771	2.3	20.8
1 22	6 55.23	+13 40.0	2.090	3.035	6.3	20.7	1 22	6 57.15	+16 2.9	2.823	3.769	4.8	20.9
2 1	6 47.67	+14 27.4	2.145	3.034	9.5	20.9	2 1	6 50.40	+16 36.1	2.880	3.767	7.5	21.1
2 11	6 42.11	+15 15.1	2.225	3.033	12.5	21.1	2 11	6 45.14	+17 9.0	2.964	3.765	9.9	21.3
<b>127778</b>	2003 <i>FY</i> <sub>53</sub>		1 6.9 172°01	1°1/ 6.6 18			<b>226969</b>	2004 <i>VB</i> <sub>107</sub>		1 7.0 25°63	4°5/ 7.9 18		
12 3	7 36.52	+23 45.1	2.507	3.307	11.5	20.5	12 3	7 33.55	+12 17.3	1.651	2.460	16.1	20.7
12 13	7 30.70	+24 25.5	2.423	3.311	8.6	20.3	12 13	7 29.04	+11 41.7	1.584	2.467	12.6	20.5
12 23	7 22.87	+25 8.7	2.366	3.314	5.4	20.1	12 23	7 22.07	+11 17.5	1.538	2.475	8.7	20.3
1 2	7 13.63	+25 51.5	2.338	3.316	2.0	19.9	1 2	7 13.43	+11 5.8	1.517	2.484	5.3	20.1
1 12	7 3.84	+26 30.2	2.341	3.318	2.3	19.9	1 12	7 4.25	+11 6.4	1.524	2.493	4.9	20.1
1 22	6 54.46	+27 2.6	2.375	3.319	5.7	20.1	1 22	6 55.76	+11 17.8	1.558	2.503	7.9	20.3
2 1	6 46.36	+27 27.5	2.438	3.320	8.9	20.3	2 1	6 49.03	+11 37.6	1.617	2.513	11.6	20.6
2 11	6 40.25	+27 45.3	2.527	3.320	11.6	20.5	2 11	6 44.83	+12 2.8	1.699	2.524	15.0	20.8
<b>31715</b>	1999 <i>JX</i> <sub>56</sub>		1 6.9 184°63	2°1/ 6.1 18			<b>276586</b>	2003 <i>SN</i> <sub>325</sub>		1 7.0 6°62	1°0/ 6.7 18		
12 3	7 34.18	+27 7.4	2.590	3.397	11.0	19.5	12 3	7 35.04	+23 59.4	2.052	2.867	13.2	20.9
12 13	7 28.98	+27 53.4	2.507	3.396	8.3	19.3	12 13	7 29.99	+24 21.9	1.972	2.867	9.9	20.7
12 23	7 21.82	+28 40.3	2.449	3.396	5.3	19.1	12 23	7 22.62	+24 47.0	1.916	2.867	6.2	20.5
1 2	7 13.28	+29 24.5	2.421	3.396	2.5	18.9	1 2	7 13.63	+25 11.6	1.888	2.867	2.2	20.2
1 12	7 4.20	+30 2.3	2.423	3.395	2.9	19.0	1 12	7 4.04	+25 32.4	1.889	2.867	2.4	20.2
1 22	6 55.48	+30 31.6	2.456	3.395	5.8	19.2	1 22	6 54.96	+25 47.4	1.919	2.868	6.4	20.5
2 1	6 48.00	+30 51.5	2.517	3.394	8.8	19.4	2 1	6 47.45	+25 56.0	1.977	2.868	10.1	20.7
2 11	6 42.45	+31 2.8	2.603	3.393	11.4	19.5	2 11	6 42.27	+25 58.8	2.058	2.868	13.3	20.9
<b>319634</b>	2006 <i>SR</i> <sub>366</sub>		1 6.9 61°59	2°0/ 6.7 18			<b>179214</b>	2001 <i>TR</i> <sub>218</sub>		1 7.0 155°94	3°0/ 8.1 18		
12 3	7 41.20	+27 47.6	1.551	2.373	16.3	20.9	12 3	7 35.77	+11 41.4	2.496	3.274	12.2	21.6
12 13	7 34.96	+27 47.8	1.494	2.391	12.3	20.7	12 13	7 29.95	+11 39.1	2.416	3.283	9.5	21.4
12 23	7 25.74	+27 45.8	1.460	2.410	7.7	20.5	12 23	7 22.33	+11 45.9	2.360	3.291	6.5	21.2
1 2	7 14.59	+27 37.7	1.452	2.429	3.1	20.3	1 2	7 13.48	+12 1.3	2.333	3.299	3.8	21.1
1 12	7 3.04	+27 21.0	1.472	2.449	3.3	20.3	1 12	7 4.21	+12 24.2	2.336	3.306	3.3	21.1
1 22	6 52.60	+26 55.8	1.519	2.468	7.8	20.6	1 22	6 55.37	+12 52.8	2.371	3.313	5.8	21.2
2 1	6 44.53	+26 24.5	1.593	2.487	11.9	20.9	2 1	6 47.75	+13 24.8	2.434	3.318	8.8	21.4
2 11	6 39.56	+25 50.0	1.690	2.507	15.5	21.2	2 11	6 41.96	+13 58.4	2.523	3.323	11.4	21.6
<b>87579</b>	2000 <i>RX</i> <sub>15</sub>		1 6.9 231°17	1°3/ 6.7 18			<b>346946</b>	2010 <i>AF</i> <sub>76</sub>		1 7.0 11°45	2°2/ 7.7 18		
12 3	7 38.89	+26 43.4	2.191	2.997	12.7	19.8</							

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>393426</b>	2001 SE <sub>120</sub>		1 7.0 96°75	2°8/ 7.6 17			<b>419834</b>	2010 XW <sub>66</sub>		1 7.0 99°81	2°9/ 7.7 18		
12 3	7 40.09	+15 41.7	1.531	2.340	17.1	21.3	12 3	7 35.45	+14 36.5	1.877	2.680	14.6	21.8
12 13	7 34.08	+15 29.8	1.469	2.358	13.1	21.1	12 13	7 30.30	+14 23.6	1.801	2.685	11.3	21.6
12 23	7 25.23	+15 27.9	1.430	2.375	8.6	20.8	12 23	7 22.82	+14 19.8	1.748	2.689	7.5	21.4
1 2	7 14.50	+15 34.9	1.417	2.391	4.0	20.6	1 2	7 13.71	+14 24.7	1.721	2.693	3.9	21.2
1 12	7 3.24	+15 48.8	1.431	2.408	3.6	20.6	1 12	7 4.05	+14 37.0	1.723	2.698	3.5	21.2
1 22	6 52.90	+16 7.2	1.474	2.424	7.8	20.9	1 22	6 54.96	+14 54.8	1.754	2.702	6.9	21.4
2 1	6 44.69	+16 28.0	1.542	2.439	12.1	21.2	2 1	6 47.49	+15 16.3	1.812	2.706	10.7	21.6
2 11	6 39.41	+16 49.5	1.633	2.454	15.7	21.5	2 11	6 42.38	+15 39.5	1.893	2.711	14.0	21.8
<b>164839</b>	1999 TX <sub>86</sub>		1 7.0 104°31	0°2/ 7.1 18			<b>193752</b>	2001 KR <sub>15</sub>		1 7.0 186°61	1°7/ 6.5 18		
12 3	7 40.10	+20 52.2	1.783	2.592	15.0	21.1	12 3	7 41.77	+24 34.0	1.952	2.757	14.1	21.3
12 13	7 33.80	+21 4.9	1.721	2.612	11.3	20.9	12 13	7 35.30	+25 21.5	1.868	2.757	10.7	21.0
12 23	7 24.94	+21 22.4	1.682	2.631	7.0	20.6	12 23	7 26.10	+26 12.7	1.809	2.757	6.7	20.8
1 2	7 14.38	+21 41.7	1.670	2.649	2.4	20.4	1 2	7 14.89	+27 2.5	1.777	2.755	2.7	20.5
1 12	7 3.36	+21 59.9	1.688	2.667	2.3	20.4	1 12	7 2.85	+27 45.8	1.776	2.753	3.1	20.6
1 22	6 53.16	+22 14.7	1.735	2.685	6.8	20.7	1 22	6 51.33	+28 19.2	1.806	2.749	7.2	20.8
2 1	6 44.89	+22 25.6	1.809	2.702	10.8	21.0	2 1	6 41.59	+28 41.6	1.863	2.745	11.1	21.0
2 11	6 39.29	+22 32.9	1.907	2.718	14.2	21.3	2 11	6 34.55	+28 54.3	1.944	2.740	14.5	21.2
<b>463357</b>	2012 SH <sub>22</sub>		1 7.0 134°58	2°5/ 7.9 18			<b>311035</b>	2004 BN <sub>49</sub>		1 7.0 277°97	0°0/ 6.8 18		
12 3	7 32.57	+13 31.3	2.807	3.591	10.8	21.9	12 3	7 37.39	+22 21.7	1.730	2.548	15.1	20.7
12 13	7 27.37	+13 18.9	2.729	3.601	8.4	21.7	12 13	7 32.20	+22 20.7	1.643	2.539	11.5	20.4
12 23	7 20.64	+13 13.1	2.675	3.610	5.6	21.6	12 23	7 24.24	+22 23.0	1.580	2.531	7.2	20.1
1 2	7 12.89	+13 13.6	2.650	3.619	3.1	21.4	1 2	7 14.26	+22 26.1	1.543	2.522	2.5	19.8
1 12	7 4.81	+13 19.9	2.656	3.628	2.8	21.4	1 12	7 3.48	+22 27.6	1.534	2.514	2.5	19.8
1 22	6 57.12	+13 30.9	2.693	3.636	5.1	21.6	1 22	6 53.27	+22 25.9	1.553	2.505	7.3	20.1
2 1	6 50.49	+13 45.3	2.759	3.644	7.8	21.8	2 1	6 44.91	+22 21.0	1.600	2.497	11.7	20.3
2 11	6 45.43	+14 1.9	2.850	3.652	10.2	21.9	2 11	6 39.33	+22 13.6	1.668	2.488	15.5	20.5
<b>343210</b>	2009 WG <sub>1</sub>		1 7.0 69°58	1°6/ 7.4 17			<b>317552</b>	2002 UD <sub>41</sub>		1 7.0 75°01	7°1/ 9.2 18		
12 3	7 39.76	+17 28.6	1.254	2.082	19.1	21.4	12 3	7 33.29	+ 1 28.5	2.249	2.999	14.2	20.7
12 13	7 34.40	+17 42.4	1.199	2.098	14.5	21.1	12 13	7 28.15	+ 0 36.8	2.186	3.017	11.8	20.6
12 23	7 25.70	+18 7.6	1.164	2.115	9.2	20.9	12 23	7 21.22	+ 0 0.7	2.145	3.035	9.4	20.5
1 2	7 14.71	+18 41.0	1.153	2.131	3.6	20.6	1 2	7 13.12	- 0 17.5	2.130	3.054	7.6	20.4
1 12	7 3.06	+19 18.0	1.168	2.148	3.2	20.6	1 12	7 4.68	- 0 17.0	2.143	3.072	7.2	20.4
1 22	6 52.49	+19 54.4	1.210	2.165	8.5	21.0	1 22	6 56.78	+ 0 1.0	2.183	3.090	8.4	20.5
2 1	6 44.47	+20 27.4	1.277	2.181	13.4	21.3	2 1	6 50.17	+ 0 33.5	2.250	3.108	10.5	20.7
2 11	6 39.87	+20 55.8	1.364	2.198	17.5	21.6	2 11	6 45.43	+ 1 16.3	2.340	3.126	12.6	20.9
<b>192535</b>	1998 SW <sub>85</sub>		1 7.0 117°84	1°3/ 6.7 17			<b>212066</b>	2005 EQ <sub>39</sub>		1 7.0 216°36	1°8/ 6.7 18		
12 3	7 42.96	+24 30.8	1.670	2.482	15.8	21.6	12 3	7 40.23	+26 54.3	1.825	2.639	14.6	20.7
12 13	7 36.21	+24 56.6	1.607	2.500	11.9	21.4	12 13	7 34.26	+27 5.7	1.741	2.634	11.1	20.5
12 23	7 26.56	+25 24.6	1.568	2.518	7.4	21.2	12 23	7 25.47	+27 16.7	1.681	2.630	7.0	20.2
1 2	7 14.96	+25 50.0	1.556	2.534	2.7	21.0	1 2	7 14.68	+27 23.3	1.647	2.625	2.9	20.0
1 12	7 2.81	+26 8.8	1.573	2.550	3.0	21.0	1 12	7 3.13	+27 22.2	1.643	2.620	3.1	20.0
1 22	6 51.59	+26 19.0	1.618	2.566	7.5	21.3	1 22	6 52.23	+27 12.2	1.667	2.614	7.4	20.2
2 1	6 42.56	+26 20.9	1.691	2.581	11.6	21.6	2 1	6 43.26	+26 54.2	1.719	2.608	11.5	20.5
2 11	6 36.54	+26 16.3	1.787	2.595	15.1	21.9	2 11	6 37.12	+26 30.8	1.794	2.602	15.1	20.7
<b>326691</b>	2002 XK <sub>116</sub>		1 7.0 326°95	7°3/ 5.7 18			<b>448236</b>	2008 WS <sub>28</sub>		1 7.0 109°45	2°2/ 7.5 18		
12 3	7 41.50	+39 32.8	1.650	2.462	15.9	20.6	12 3	7 41.38	+16 24.8	1.756	2.556	15.6	22.0
12 13	7 35.94	+40 14.0	1.573	2.454	12.8	20.4	12 13	7 34.69	+16 20.1	1.695	2.579	11.9	21.8
12 23	7 26.83	+40 44.6	1.518	2.446	9.7	20.2	12 23	7 25.47	+16 23.5	1.657	2.601	7.7	21.6
1 2	7 15.16	+40 56.3	1.487	2.438	7.5	20.0	1 2	7 14.59	+16 33.7	1.647	2.622	3.4	21.4
1 12	7 2.57	+40 43.5	1.483	2.431	7.9	20.0	1 12	7 3.30	+16 48.4	1.666	2.643	3.0	21.4
1 22	6 50.92	+40 5.2	1.505	2.424	10.6	20.2	1 22	6 52.87	+17 5.6	1.715	2.663	7.0	21.7
2 1	6 41.84	+39 5.9	1.551	2.418	13.9	20.4	2 1	6 44.38	+17 23.6	1.791	2.683	10.9	22.0
2 11	6 36.33	+37 52.8	1.619	2.412	17.1	20.6	2 11	6 38.56	+17 41.5	1.890	2.701	14.3	22.2
<b>27978</b>	Lubosluka		1 7.0 130°10	0°5/ 6.9 18			<b>314217</b>	2005 NO <sub>61</sub>		1 7.0 181°97	1°8/ 6.7 18		
12 3	7 38.07	+23 11.7	2.049	2.857	13.4	19.3	12 3	7 40.23	+27 55.3	2.037	2.845	13.5	21.0
12 13	7 32.14	+23 26.5	1.976	2.867	10.1	19.1	12 13	7 33.91	+27 57.5	1.955	2.845	10.2	20.8
12 23	7 23.88	+23 43.8	1.928	2.877	6.3	18.9	12 23	7 25.08	+27 57.5	1.898	2.845	6.5	20.6
1 2	7 14.05	+24 0.6	1.907	2.886	2.2	18.7	1 2	7 14.51	+27 52.3	1.868	2.845	2.7	20.3
1 12	7 3.71	+24 14.3	1.916	2.895	2.3	18.7	1 12	7 3.38	+27 39.3	1.869	2.845	2.9	20.3
1 22	6 54.00	+24 23.1	1.955	2.904	6.3	19.0	1 22	6 52.91	+27 18.1	1.899	2.844	6.7	20.6
2 1	6 45.95	+24 26.9	2.023	2.912	10.0	19.2	2 1	6 44.22	+26 50.3	1.957	2.843	10.5	20.8
2 11	6 40.28	+24 26.3	2.114	2.920	13.1	19.4	2 11	6 38.10	+26 18.2	2.039	2.842	13.7	21.0
<b>276860</b>	2004 RD <sub>148</sub>		1 7.0 82°49	1°4/ 7.5 18			<b>494934</b>	2009 BF <sub>38</sub>		1 7.0 295°98	0°5/ 6.9 17		
12 3	7 34.64	+16 51.9	1.957	2.764	14.0	20.5	12 3	7 36.72	+22 1.9	1.526	2.352	16.3	22.2
12 13	7 29.67	+17 10.7	1.881	2.769	10.7	20.3	12 13	7 32.17	+22 24.2	1.439	2.339	12.5	21.9
12 23	7 22.42	+17 38.0	1.828	2.775	6.8	20.0	12 23	7 24.50	+22 52.9	1.373	2.326	7.9	21.6
1 2	7 13.58	+18 11.8	1.803	2.780	2.8	19.8	1 2	7 14.45	+23 24.4	1.333	2.313	2.7	21.2
1 12	7 4.16	+18 49.1	1.807	2.785	2.4	19.8	1 12	7 3.35	+23 54.1	1.321	2.300	2.8	21.2
1 22	6 55.27	+19 26.9	1.840	2.791	6.4	20.0	1 22	6 52.76	+24 18.4	1.335	2.288	8.1	21.5
2 1	6 47.93	+20 3.0	1.900	2.796	10.2	20.3	2 1	6 44.19	+24 35.8	1.375	2.275	13.0	21.7
2 11	6 42.88	+20 35.8	1.985	2.801	13.5	20.5	2 11	6 38.75	+24 46.6	1.437	2.263	17.2	22.0
<b>295637</b>	2008 SE <sub>254</sub>		1 7.0 353°52	1°6/ 7.4 18			<b>495145</b>	2012 DC <sub>34</sub>		1 7.0 49°99	6°5/ 9.6 18		
12 3	7 35.16	+17 46.7	1.251	2.086	18.6	20.1	12 3	7 34.47	+ 4 16.5	1.543	2.329</		

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1 7.0

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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>290061</b>	2005 QX <sub>64</sub>		1 7.0 161°48	1°9/ 6.4 18			<b>355932</b>	2008 YU <sub>51</sub>		1 7.0 188°62	2°1/ 6.6 18		
12 3	7 38.21	+26 36.2	2.152	2.960	12.9	21.6	12 3	7 41.16	+27 27.7	1.822	2.634	14.6	21.2
12 13	7 32.32	+27 9.3	2.074	2.964	9.7	21.4	12 13	7 34.95	+27 41.0	1.742	2.634	11.1	21.0
12 23	7 24.08	+27 43.1	2.020	2.968	6.2	21.2	12 23	7 25.91	+27 53.2	1.685	2.633	7.1	20.8
1 2	7 14.19	+28 13.5	1.995	2.972	2.7	20.9	1 2	7 14.88	+28 0.4	1.655	2.632	3.0	20.5
1 12	7 3.70	+28 37.0	2.000	2.975	3.0	21.0	1 12	7 3.14	+27 59.1	1.654	2.631	3.3	20.5
1 22	6 53.77	+28 51.4	2.035	2.978	6.5	21.2	1 22	6 52.10	+27 48.1	1.683	2.629	7.4	20.8
2 1	6 45.43	+28 56.7	2.097	2.980	10.0	21.4	2 1	6 43.04	+27 28.7	1.738	2.626	11.5	21.0
2 11	6 39.47	+28 54.3	2.184	2.982	13.1	21.6	2 11	6 36.84	+27 3.5	1.817	2.624	15.0	21.2
<b>131860</b>	2002 AN <sub>148</sub>		1 7.0 311°96	5°2/ 5.2 18			<b>245064</b>	2004 GL <sub>7</sub>		1 7.0 229°47	4°1/ 5.6 18		
12 3	7 38.19	+29 13.7	1.413	2.247	17.0	19.7	12 3	7 36.42	+34 8.9	2.452	3.256	11.6	20.8
12 13	7 33.86	+30 45.1	1.335	2.237	13.1	19.4	12 13	7 30.94	+34 51.5	2.371	3.253	9.0	20.6
12 23	7 25.88	+32 21.0	1.278	2.227	8.9	19.2	12 23	7 23.22	+35 30.0	2.314	3.251	6.3	20.5
1 2	7 15.01	+33 51.5	1.247	2.217	5.5	19.0	1 2	7 13.93	+35 59.8	2.286	3.248	4.3	20.3
1 12	7 2.77	+35 6.3	1.243	2.208	6.5	19.0	1 12	7 4.05	+36 17.3	2.287	3.245	4.7	20.4
1 22	6 51.08	+35 58.6	1.264	2.199	10.6	19.2	1 22	6 54.65	+36 20.7	2.318	3.243	7.0	20.5
2 1	6 41.78	+36 27.1	1.310	2.191	15.0	19.4	2 1	6 46.73	+36 11.0	2.376	3.240	9.8	20.7
2 11	6 36.19	+36 35.6	1.375	2.183	18.8	19.6	2 11	6 41.04	+35 50.6	2.458	3.237	12.3	20.8
<b>242858</b>	2006 GJ <sub>9</sub>		1 7.0 182°09	1°3/ 7.4 18			<b>69843</b>	1998 SL <sub>22</sub>		1 7.0 93°95	0°3/ 7.1 18		
12 3	7 38.14	+17 40.5	1.867	2.672	14.6	21.6	12 3	7 35.36	+20 58.4	2.122	2.930	13.0	19.7
12 13	7 32.49	+17 52.6	1.785	2.673	11.2	21.4	12 13	7 30.06	+21 6.2	2.047	2.938	9.8	19.5
12 23	7 24.30	+18 12.7	1.727	2.673	7.2	21.1	12 23	7 22.61	+21 18.1	1.998	2.946	6.1	19.3
1 2	7 14.30	+18 38.6	1.695	2.673	2.8	20.9	1 2	7 13.70	+21 31.8	1.975	2.955	2.1	19.1
1 12	7 3.60	+19 7.5	1.693	2.672	2.5	20.9	1 12	7 4.32	+21 45.2	1.983	2.963	2.0	19.1
1 22	6 53.44	+19 36.6	1.721	2.671	6.8	21.1	1 22	6 55.50	+21 56.6	2.020	2.971	6.0	19.4
2 1	6 44.97	+20 3.9	1.776	2.670	10.9	21.4	2 1	6 48.17	+22 5.2	2.086	2.979	9.6	19.6
2 11	6 39.03	+20 28.4	1.854	2.667	14.4	21.6	2 11	6 43.05	+22 11.0	2.175	2.987	12.6	19.8
<b>138332</b>	2000 GJ <sub>94</sub>		1 7.0 30°78	7°9/ 9.9 18			<b>454205</b>	2013 HL <sub>27</sub>		1 7.0 321°03	2°3/ 6.5 18		
12 3	7 33.17	+ 1 50.8	1.573	2.351	18.1	18.7	12 3	7 37.12	+26 0.3	1.433	2.266	16.8	21.5
12 13	7 28.94	+ 1 36.1	1.504	2.357	15.0	18.5	12 13	7 32.69	+26 28.7	1.353	2.256	12.8	21.2
12 23	7 22.16	+ 1 44.8	1.454	2.363	11.7	18.3	12 23	7 24.93	+26 59.8	1.294	2.247	8.2	20.9
1 2	7 13.57	+ 2 19.2	1.428	2.369	8.8	18.1	1 2	7 14.65	+27 28.2	1.260	2.238	3.4	20.6
1 12	7 4.34	+ 3 18.2	1.427	2.376	8.0	18.1	1 12	7 3.32	+27 48.6	1.253	2.230	3.8	20.6
1 22	6 55.71	+ 4 37.1	1.452	2.384	9.8	18.2	1 22	6 52.67	+27 58.0	1.272	2.222	8.8	20.9
2 1	6 48.84	+ 6 9.1	1.503	2.392	12.9	18.4	2 1	6 44.30	+27 56.2	1.316	2.215	13.6	21.1
2 11	6 44.56	+ 7 46.6	1.577	2.400	16.1	18.7	2 11	6 39.29	+27 45.6	1.381	2.208	17.7	21.3
<b>491604</b>	2012 TY <sub>17</sub>		1 7.0 127°09	2°9/ 7.8 18			<b>432429</b>	2010 BQ <sub>43</sub>		1 7.0 297°31	3°1/ 8.3 15		
12 3	7 33.27	+13 44.1	2.359	3.151	12.4	21.2	12 3	7 32.16	+10 53.7	2.197	2.987	13.2	21.2
12 13	7 28.25	+13 23.0	2.277	3.153	9.6	21.0	12 13	7 27.79	+11 16.7	2.096	2.970	10.4	20.9
12 23	7 21.38	+13 9.2	2.219	3.156	6.5	20.8	12 23	7 21.34	+11 52.8	2.018	2.953	7.2	20.7
1 2	7 13.25	+13 2.9	2.189	3.158	3.6	20.6	1 2	7 13.34	+12 41.5	1.968	2.937	4.0	20.5
1 12	7 4.68	+13 3.6	2.189	3.160	3.3	20.6	1 12	7 4.63	+13 40.4	1.947	2.920	3.4	20.4
1 22	6 56.54	+13 10.3	2.218	3.162	6.0	20.8	1 22	6 56.15	+14 45.8	1.956	2.904	6.4	20.6
2 1	6 49.65	+13 21.8	2.275	3.164	9.1	21.0	2 1	6 48.86	+15 53.9	1.993	2.888	9.9	20.7
2 11	6 44.63	+13 36.4	2.358	3.166	11.9	21.2	2 11	6 43.56	+17 1.2	2.056	2.871	13.1	20.9
<b>138707</b>	2000 SP <sub>95</sub>		1 7.0 128°91	4°5/ 8.5 18			<b>419015</b>	2009 QF <sub>6</sub>		1 7.0 118°36	3°1/ 7.8 18		
12 3	7 31.71	+ 7 18.8	2.656	3.424	11.8	20.3	12 3	7 38.10	+12 59.7	2.479	3.256	12.3	22.3
12 13	7 26.85	+ 6 53.2	2.576	3.430	9.5	20.2	12 13	7 31.57	+12 29.6	2.411	3.278	9.5	22.1
12 23	7 20.41	+ 6 38.0	2.520	3.436	7.0	20.0	12 23	7 23.29	+12 6.7	2.369	3.300	6.5	22.0
1 2	7 12.91	+ 6 34.0	2.491	3.442	5.0	19.9	1 2	7 13.89	+11 51.2	2.356	3.321	3.8	21.8
1 12	7 5.04	+ 6 41.2	2.492	3.447	4.6	19.9	1 12	7 4.21	+11 42.9	2.373	3.342	3.5	21.8
1 22	6 57.54	+ 6 58.4	2.523	3.453	6.3	20.0	1 22	6 55.11	+11 41.1	2.422	3.362	5.9	22.0
2 1	6 51.10	+ 7 23.8	2.582	3.458	8.6	20.1	2 1	6 47.34	+11 44.8	2.500	3.380	8.7	22.2
2 11	6 46.26	+ 7 54.9	2.666	3.463	11.0	20.3	2 11	6 41.46	+11 52.7	2.604	3.399	11.3	22.4
<b>147648</b>	2004 JK <sub>26</sub>		1 7.0 278°15	1°9/ 6.5 18			<b>8069</b>	Benweiss		1 7.0 333°56	4°0/ 8.1 18		
12 3	7 36.79	+25 16.9	1.831	2.650	14.3	19.9	12 3	7 35.23	+12 38.1	1.401	2.219	18.0	17.4
12 13	7 31.82	+25 53.3	1.741	2.637	10.9	19.7	12 13	7 31.00	+12 31.6	1.324	2.214	14.1	17.1
12 23	7 24.10	+26 33.1	1.674	2.625	6.9	19.4	12 23	7 23.73	+12 40.1	1.268	2.210	9.6	16.9
1 2	7 14.31	+27 11.6	1.634	2.612	2.8	19.1	1 2	7 14.22	+13 3.6	1.235	2.206	5.3	16.6
1 12	7 3.61	+27 44.2	1.623	2.600	3.2	19.1	1 12	7 3.80	+13 40.0	1.228	2.203	4.6	16.6
1 22	6 53.35	+28 7.7	1.641	2.587	7.5	19.4	1 22	6 53.99	+14 25.4	1.248	2.200	8.7	16.8
2 1	6 44.83	+28 21.1	1.685	2.575	11.6	19.6	2 1	6 46.22	+15 15.5	1.293	2.197	13.3	17.0
2 11	6 39.04	+28 25.5	1.751	2.562	15.3	19.8	2 11	6 41.51	+16 6.1	1.358	2.194	17.5	17.3
<b>168536</b>	1999 VU <sub>66</sub>		1 7.0 93°70	3°2/ 6.2 18			<b>406539</b>	2007 VF <sub>332</sub>		1 7.0 6°63	1°0/ 6.9 18		
12 3	7 42.63	+28 43.3	1.783	2.595	15.0	20.5	12 3	7 35.03	+25 20.9	1.182	2.030	18.7	20.1
12 13	7 35.89	+29 33.8	1.729	2.620	11.3	20.3	12 13	7 31.33	+25 8.1	1.119	2.030	14.2	19.8
12 23	7 26.35	+30 23.0	1.699	2.645	7.3	20.1	12 23	7 24.07	+24 55.7	1.075	2.032	8.9	19.5
1 2	7 14.96	+31 4.7	1.696	2.670	3.7	19.9	1 2	7 14.32	+24 40.5	1.055	2.035	3.1	19.2
1 12	7 3.09	+31 34.0	1.723	2.693	4.2	20.0	1 12	7 3.78	+24 20.1	1.060	2.040	3.2	19.2
1 22	6 52.17	+31 49.0	1.778	2.717	7.7	20.3	1 22	6 54.31	+23 54.5	1.090	2.046	8.9	19.5
2 1	6 43.39	+31 50.6	1.861	2.740	11.3	20.5	2 1	6 47.45	+23 25.2	1.142	2.053	14.1	19.9
2 11	6 37.53	+31 42.0	1.966	2.762	14.4	20.8	2 11	6 44.17	+22 54.7	1.215	2.062	18.4	20.1
<b>241837</b>	2001 SY <sub>313</sub>		1 7.0 117°16	3°9/ 5.4 18			<b>20652</b>	1999 TY <sub>229</sub>		1 7.0 296°52	5°4/ 8.6 18		
12 3	7 37.40	+34 15.1	2.732	3.529	10.7	20.7	12 3	7 34.54	+ 8 45.4	1.610	2.409	16.9	

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1 7.0

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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>124189</b>	2001 OS <sub>61</sub>		1 7.0 190°72	2°2/ 6.5	18		<b>490379</b>	2009 KF <sub>24</sub>		1 7.1 192°09	6°2/ 9.1	18	
12 3	7 41.90	+26 41.7	1.722	2.536	15.3	20.5	12 3	7 35.21	+ 4 5.4	2.119	2.881	14.6	22.1
12 13	7 35.73	+27 11.4	1.642	2.536	11.6	20.3	12 13	7 29.96	+ 3 42.3	2.034	2.879	12.0	22.0
12 23	7 26.54	+27 42.1	1.585	2.534	7.4	20.1	12 23	7 22.62	+ 3 34.6	1.971	2.878	9.2	21.8
1 2	7 15.15	+28 8.7	1.555	2.532	3.2	19.8	1 2	7 13.80	+ 3 44.1	1.933	2.876	6.8	21.6
1 12	7 2.93	+28 26.5	1.554	2.530	3.5	19.8	1 12	7 4.38	+ 4 10.8	1.924	2.873	6.3	21.6
1 22	6 51.39	+28 33.2	1.582	2.527	7.9	20.1	1 22	6 55.37	+ 4 52.5	1.944	2.870	8.1	21.7
2 1	6 41.92	+28 29.2	1.636	2.524	12.1	20.3	2 1	6 47.70	+ 5 45.9	1.991	2.866	10.8	21.9
2 11	6 35.49	+28 17.1	1.713	2.519	15.7	20.5	2 11	6 42.09	+ 6 46.5	2.062	2.862	13.6	22.0
<b>91107</b>	1998 HY <sub>34</sub>		1 7.0 262°55	5°4/ 5.0	18		<b>427066</b>	2014 UW <sub>14</sub>		1 7.1 123°57	0°6/ 7.2	18	
12 3	7 38.93	+34 44.3	2.045	2.853	13.4	19.4	12 3	7 37.96	+20 14.6	2.159	2.961	13.0	21.7
12 13	7 33.48	+35 54.1	1.959	2.843	10.5	19.2	12 13	7 31.92	+20 17.7	2.089	2.975	9.8	21.5
12 23	7 25.18	+37 0.8	1.898	2.832	7.6	19.0	12 23	7 23.74	+20 24.8	2.042	2.989	6.2	21.3
1 2	7 14.72	+37 57.3	1.864	2.821	5.5	18.9	1 2	7 14.13	+20 34.1	2.024	3.003	2.2	21.1
1 12	7 3.31	+38 37.4	1.858	2.811	6.1	18.9	1 12	7 4.11	+20 43.6	2.036	3.016	2.0	21.1
1 22	6 52.33	+38 58.0	1.881	2.800	8.8	19.0	1 22	6 54.69	+20 51.8	2.079	3.028	5.9	21.4
2 1	6 43.16	+38 59.5	1.930	2.788	11.9	19.2	2 1	6 46.82	+20 58.1	2.150	3.040	9.4	21.6
2 11	6 36.79	+38 45.4	2.001	2.777	14.8	19.4	2 11	6 41.17	+21 2.5	2.245	3.052	12.5	21.8
<b>32922</b>	1995 EM <sub>2</sub>		1 7.1 64°67	0°9/ 7.3	18		<b>289712</b>	2005 HP <sub>10</sub>		1 7.1 290°23	7°7/ 9.1	18	
12 3	7 38.64	+19 32.7	1.413	2.238	17.5	18.8	12 3	7 31.57	+ 0 10.0	2.284	3.031	14.1	20.1
12 13	7 33.40	+19 37.4	1.350	2.249	13.3	18.6	12 13	7 27.16	- 0 40.0	2.193	3.019	11.9	19.9
12 23	7 25.09	+19 49.8	1.309	2.260	8.4	18.3	12 23	7 20.86	- 1 14.8	2.123	3.008	9.8	19.8
1 2	7 14.63	+20 7.0	1.292	2.271	3.1	18.0	1 2	7 13.19	- 1 31.1	2.078	2.996	8.1	19.6
1 12	7 3.52	+20 25.7	1.303	2.283	2.8	18.1	1 12	7 4.96	- 1 27.4	2.060	2.985	7.7	19.6
1 22	6 53.33	+20 43.2	1.340	2.294	7.9	18.4	1 22	6 57.03	- 1 4.3	2.069	2.974	9.0	19.7
2 1	6 45.40	+20 58.2	1.403	2.306	12.6	18.7	2 1	6 50.25	- 0 24.5	2.104	2.962	11.1	19.8
2 11	6 40.63	+21 10.2	1.488	2.317	16.6	19.0	2 11	6 45.30	+ 0 27.8	2.163	2.951	13.5	19.9
<b>452266</b>	2015 TX <sub>142</sub>		1 7.1 194°06	10°7/ 9.9	18		<b>233012</b>	2005 EG <sub>214</sub>		1 7.1 13°19	3°5/ 6.2	18	
12 3	7 36.95	- 5 17.3	1.910	2.631	17.2	22.2	12 3	7 37.44	+32 12.3	2.103	2.914	13.0	20.0
12 13	7 31.48	- 6 21.5	1.830	2.630	15.0	22.0	12 13	7 31.91	+32 34.4	2.026	2.915	10.0	19.8
12 23	7 23.66	- 7 3.9	1.770	2.627	12.8	21.9	12 23	7 23.92	+32 52.4	1.973	2.916	6.7	19.6
1 2	7 14.14	- 7 19.4	1.733	2.625	11.1	21.8	1 2	7 14.24	+33 1.9	1.947	2.917	3.9	19.4
1 12	7 3.94	- 7 5.3	1.721	2.621	10.7	21.7	1 12	7 3.99	+32 59.6	1.950	2.918	4.2	19.5
1 22	6 54.18	- 6 22.9	1.734	2.617	11.7	21.8	1 22	6 54.38	+32 44.8	1.982	2.919	7.2	19.6
2 1	6 45.92	- 5 16.6	1.772	2.612	13.8	21.9	2 1	6 46.51	+32 18.8	2.041	2.920	10.5	19.8
2 11	6 39.99	- 3 53.6	1.832	2.606	16.1	22.1	2 11	6 41.14	+31 44.9	2.124	2.922	13.4	20.0
<b>452964</b>	2007 CT <sub>62</sub>		1 7.1 348°79	1°5/ 7.1	18		<b>360461</b>	2002 RL		1 7.1 152°60	1°2/ 7.4	18	
12 3	7 36.74	+23 0.2	1.335	2.171	17.7	19.7	12 3	7 38.87	+18 51.6	2.226	3.022	12.9	21.5
12 13	7 32.30	+21 57.4	1.257	2.161	13.5	19.5	12 13	7 32.56	+18 42.8	2.148	3.031	9.8	21.3
12 23	7 24.58	+20 52.7	1.199	2.153	8.6	19.2	12 23	7 24.13	+18 38.4	2.095	3.039	6.2	21.1
1 2	7 14.51	+19 46.5	1.167	2.146	3.3	18.8	1 2	7 14.28	+18 37.2	2.070	3.047	2.5	20.9
1 12	7 3.62	+18 40.5	1.161	2.140	3.2	18.8	1 12	7 3.97	+18 37.8	2.076	3.055	2.2	20.9
1 22	6 53.61	+17 37.7	1.181	2.135	8.6	19.1	1 22	6 54.23	+18 39.1	2.113	3.061	5.9	21.1
2 1	6 45.94	+16 41.2	1.225	2.132	13.7	19.4	2 1	6 45.98	+18 40.7	2.178	3.067	9.4	21.3
2 11	6 41.58	+15 52.8	1.291	2.130	18.0	19.6	2 11	6 39.91	+18 42.3	2.269	3.072	12.4	21.6
<b>13199</b>	1997 EW <sub>25</sub>		1 7.1 249°79	5°1/ 5.9	18		<b>349996</b>	2010 FU <sub>92</sub>		1 7.1 236°20	1°7/ 6.3	17	
12 3	7 42.28	+32 8.0	1.503	2.326	16.7	18.2	12 3	7 34.39	+26 3.6	2.792	3.594	10.4	21.2
12 13	7 36.71	+32 59.4	1.425	2.319	13.0	18.0	12 13	7 29.16	+26 46.0	2.695	3.582	7.9	21.0
12 23	7 27.52	+33 48.3	1.368	2.312	8.9	17.7	12 23	7 22.07	+27 30.1	2.624	3.571	5.0	20.8
1 2	7 15.58	+34 26.3	1.337	2.305	5.5	17.5	1 2	7 13.62	+28 12.6	2.582	3.559	2.2	20.6
1 12	7 2.52	+34 46.4	1.333	2.298	6.1	17.5	1 12	7 4.57	+28 50.4	2.572	3.546	2.5	20.6
1 22	6 50.23	+34 45.7	1.355	2.291	9.9	17.7	1 22	6 55.78	+29 21.1	2.592	3.533	5.5	20.8
2 1	6 40.46	+34 26.0	1.402	2.283	14.1	17.9	2 1	6 48.07	+29 43.8	2.642	3.520	8.4	20.9
2 11	6 34.33	+33 52.7	1.470	2.276	17.9	18.2	2 11	6 42.14	+29 58.7	2.717	3.507	11.0	21.1
<b>116227</b>	2003 YX <sub>4</sub>		1 7.1 252°54	1°2/ 6.5	18		<b>256094</b>	2006 UF <sub>229</sub>		1 7.1 74°09	2°6/ 6.3	18	
12 3	7 34.88	+22 47.7	2.280	3.088	12.2	19.6	12 3	7 43.31	+27 6.3	1.757	2.567	15.2	20.7
12 13	7 29.86	+23 44.2	2.190	3.081	9.2	19.4	12 13	7 36.25	+27 55.2	1.713	2.604	11.4	20.5
12 23	7 22.64	+24 46.3	2.126	3.075	5.8	19.1	12 23	7 26.51	+28 43.5	1.693	2.641	7.2	20.4
1 2	7 13.81	+25 49.6	2.090	3.069	2.2	18.9	1 2	7 15.08	+29 25.3	1.701	2.677	3.3	20.2
1 12	7 4.26	+26 49.7	2.085	3.062	2.5	18.9	1 12	7 3.32	+29 56.1	1.739	2.713	3.7	20.3
1 22	6 55.03	+27 42.9	2.111	3.056	6.2	19.1	1 22	6 52.62	+30 14.0	1.806	2.748	7.4	20.6
2 1	6 47.13	+28 27.0	2.165	3.049	9.7	19.3	2 1	6 44.11	+30 20.0	1.900	2.782	11.0	20.9
2 11	6 41.34	+29 1.7	2.243	3.043	12.7	19.5	2 11	6 38.46	+30 16.6	2.017	2.815	14.0	21.2
<b>335930</b>	2007 TW <sub>20</sub>		1 7.1 106°35	0°0/ 7.1	18		<b>415878</b>	2001 SR <sub>323</sub>		1 7.1 157°12	4°3/ 8.2	18	
12 3	7 34.58	+21 28.9	2.549	3.350	11.3	21.6	12 3	7 36.55	+ 9 43.3	2.314	3.088	13.1	21.5
12 13	7 29.12	+21 39.9	2.477	3.365	8.5	21.4	12 13	7 30.71	+ 9 11.3	2.234	3.095	10.4	21.4
12 23	7 21.89	+21 53.8	2.432	3.379	5.3	21.2	12 23	7 22.96	+ 8 49.1	2.178	3.102	7.5	21.2
1 2	7 13.48	+22 8.7	2.415	3.394	1.8	21.0	1 2	7 13.89	+ 8 37.7	2.150	3.108	4.9	21.0
1 12	7 4.72	+22 22.6	2.428	3.408	1.7	21.0	1 12	7 4.39	+ 8 37.0	2.152	3.113	4.6	21.0
1 22	6 56.44	+22 34.2	2.473	3.422	5.1	21.3	1 22	6 55.36	+ 8 46.2	2.183	3.118	6.8	21.2
2 1	6 49.43	+22 42.9	2.546	3.436	8.2	21.5	2 1	6 47.64	+ 9 3.4	2.243	3.122	9.6	21.4
2 11	6 44.26	+22 48.7	2.645	3.449	10.9	21.7	2 11	6 41.88	+ 9 26.4	2.328	3.126	12.3	21.5
<b>444187</b>	2005 SH <sub>25</sub>		1 7.1 128°80	2°1/ 6.5	18		<b>313853</b>	2004 EV <sub>62</sub>		1 7.1 229°72	5°1/ 5.9	18	
12 3	7 43.67	+25 59.5	1.723	2.533	15.4	22.0	12 3	7 42.67	+36 12.1	2.036	2.838		

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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>132363</b>	2002 <i>GL</i> <sub>67</sub>		1 7.1 118°22	0°9/ 7.4 18			<b>237906</b>	2002 <i>PL</i> <sub>43</sub>		1 7.1 215°76	2°3/ 6.9 18		
12 3	7 35.59	+18 21.5	2.366	3.164	12.2	20.3	12 3	7 51.70	+24 9.2	1.184	2.005	20.4	19.7
12 13	7 30.00	+18 34.2	2.294	3.178	9.2	20.1	12 13	7 43.97	+22 30.6	1.107	2.003	15.7	19.4
12 23	7 22.51	+18 52.4	2.247	3.192	5.8	19.9	12 23	7 32.05	+20 44.0	1.051	2.001	10.1	19.1
1 2	7 13.75	+19 14.2	2.229	3.206	2.2	19.7	1 2	7 17.17	+18 50.7	1.021	1.999	4.0	18.7
1 12	7 4.58	+19 37.5	2.241	3.220	2.0	19.7	1 12	7 1.41	+16 55.9	1.018	1.996	4.1	18.7
1 22	6 55.92	+20 0.5	2.283	3.233	5.5	20.0	1 22	6 47.01	+15 7.1	1.044	1.993	10.3	19.0
2 1	6 48.59	+20 21.7	2.355	3.245	8.7	20.2	2 1	6 35.82	+13 31.9	1.094	1.990	15.9	19.4
2 11	6 43.23	+20 40.5	2.451	3.258	11.6	20.4	2 11	6 28.86	+12 13.8	1.165	1.987	20.7	19.6
<b>188527</b>	2004 <i>RG</i> <sub>124</sub>		1 7.1 126°84	0°4/ 7.2 18			<b>373917</b>	2003 <i>UN</i> <sub>158</sub>		1 7.1 16°87	3°9/ 7.9 18		
12 3	7 36.30	+18 20.4	2.253	3.052	12.7	20.4	12 3	7 33.79	+12 18.3	2.047	2.842	13.9	21.1
12 13	7 30.72	+19 3.0	2.178	3.063	9.6	20.3	12 13	7 28.96	+11 46.8	1.967	2.843	10.9	20.9
12 23	7 23.07	+19 52.9	2.128	3.075	6.0	20.0	12 23	7 22.03	+11 24.4	1.910	2.844	7.6	20.7
1 2	7 13.97	+20 46.8	2.107	3.085	2.1	19.8	1 2	7 13.65	+11 12.0	1.880	2.846	4.6	20.5
1 12	7 4.35	+21 41.1	2.116	3.096	1.9	19.8	1 12	7 4.75	+11 9.4	1.879	2.847	4.2	20.5
1 22	6 55.20	+22 32.4	2.157	3.106	5.7	20.1	1 22	6 56.35	+11 15.7	1.906	2.849	6.9	20.7
2 1	6 47.42	+23 18.4	2.226	3.116	9.2	20.3	2 1	6 49.36	+11 29.3	1.960	2.851	10.2	20.9
2 11	6 41.74	+23 58.1	2.320	3.125	12.2	20.5	2 11	6 44.49	+11 48.0	2.039	2.853	13.3	21.1
<b>223763</b>	2004 <i>RW</i> <sub>245</sub>		1 7.1 51°81	3°3/ 6.2 18			<b>374194</b>	2005 <i>CZ</i> <sub>54</sub>		1 7.1 355°11	3°8/ 6.3 18		
12 3	7 37.87	+29 57.1	1.853	2.671	14.2	20.6	12 3	7 36.26	+31 19.7	1.707	2.532	14.9	20.7
12 13	7 32.50	+30 32.1	1.782	2.676	10.8	20.4	12 13	7 31.58	+31 44.0	1.632	2.529	11.5	20.5
12 23	7 24.43	+31 5.2	1.735	2.682	7.1	20.2	12 23	7 24.01	+32 4.6	1.579	2.526	7.6	20.3
1 2	7 14.48	+31 31.1	1.715	2.688	3.8	20.0	1 2	7 14.39	+32 16.5	1.552	2.524	4.3	20.0
1 12	7 3.89	+31 45.8	1.723	2.694	4.2	20.0	1 12	7 4.04	+32 15.5	1.552	2.522	4.6	20.1
1 22	6 54.02	+31 47.4	1.759	2.700	7.6	20.2	1 22	6 54.42	+32 0.6	1.580	2.522	8.2	20.3
2 1	6 46.06	+31 37.0	1.822	2.706	11.3	20.5	2 1	6 46.84	+31 33.3	1.633	2.522	12.0	20.5
2 11	6 40.85	+31 17.4	1.908	2.712	14.4	20.7	2 11	6 42.19	+30 57.3	1.708	2.522	15.4	20.7
<b>289517</b>	2005 <i>ES</i> <sub>175</sub>		1 7.1 58°66	3°9/ 6.1 18			<b>235421</b>	2003 <i>YW</i> <sub>37</sub>		1 7.1 5°35	2°8/ 6.5 18		
12 3	7 37.87	+33 22.3	2.155	2.964	12.8	20.6	12 3	7 37.06	+30 23.7	1.993	2.808	13.5	19.6
12 13	7 32.20	+33 50.5	2.082	2.968	9.9	20.4	12 13	7 31.70	+30 32.7	1.915	2.808	10.3	19.4
12 23	7 24.11	+34 13.9	2.032	2.972	6.8	20.2	12 23	7 23.85	+30 38.2	1.862	2.808	6.7	19.2
1 2	7 14.34	+34 27.8	2.010	2.976	4.2	20.1	1 2	7 14.28	+30 36.4	1.835	2.809	3.4	19.0
1 12	7 4.04	+34 29.0	2.017	2.981	4.6	20.1	1 12	7 4.16	+30 24.7	1.838	2.810	3.6	19.0
1 22	6 54.40	+34 16.5	2.053	2.985	7.3	20.3	1 22	6 54.72	+30 2.6	1.869	2.812	7.0	19.2
2 1	6 46.49	+33 51.9	2.116	2.990	10.4	20.5	2 1	6 47.04	+29 31.8	1.927	2.814	10.6	19.4
2 11	6 41.07	+33 18.5	2.202	2.994	13.2	20.7	2 11	6 41.92	+28 55.1	2.008	2.816	13.7	19.7
<b>419217</b>	2009 <i>UQ</i> <sub>137</sub>		1 7.1 77°00	0°7/ 6.9 18			<b>67113</b>	2000 <i>AC</i> <sub>114</sub>		1 7.1 29°04	3°7/ 8.1 18		
12 3	7 37.57	+24 26.1	1.908	2.722	14.0	20.8	12 3	7 33.17	+12 55.7	1.534	2.350	16.8	17.7
12 13	7 32.01	+24 28.6	1.835	2.729	10.6	20.6	12 13	7 28.98	+12 46.4	1.475	2.364	13.0	17.5
12 23	7 24.00	+24 32.2	1.785	2.735	6.6	20.3	12 23	7 22.22	+12 50.3	1.437	2.379	8.8	17.3
1 2	7 14.31	+24 34.3	1.763	2.742	2.3	20.1	1 2	7 13.73	+13 6.9	1.425	2.396	4.8	17.1
1 12	7 4.09	+24 32.5	1.770	2.749	2.4	20.1	1 12	7 4.73	+13 34.1	1.439	2.413	4.2	17.1
1 22	6 54.56	+24 25.9	1.806	2.756	6.6	20.4	1 22	6 56.50	+14 8.7	1.480	2.430	7.7	17.3
2 1	6 46.80	+24 14.8	1.870	2.763	10.5	20.6	2 1	6 50.14	+14 47.4	1.546	2.449	11.6	17.6
2 11	6 41.55	+24 0.5	1.957	2.770	13.8	20.9	2 11	6 46.42	+15 26.7	1.635	2.468	15.1	17.9
<b>460195</b>	2014 <i>QH</i> <sub>137</sub>		1 7.1 358°51	5°6/ 6.2 18			<b>21313</b>	<i>Xiuyanyu</i>		1 7.1 199°94	0°0/ 6.9 18		
12 3	7 34.64	+32 40.2	1.196	2.045	18.5	20.3	12 3	7 42.24	+22 26.7	1.758	2.567	15.3	18.4
12 13	7 31.44	+33 15.9	1.131	2.040	14.4	20.0	12 13	7 35.87	+22 25.0	1.673	2.564	11.6	18.2
12 23	7 24.42	+33 46.4	1.086	2.036	9.8	19.8	12 23	7 26.62	+22 26.2	1.611	2.560	7.3	17.9
1 2	7 14.60	+34 3.7	1.064	2.034	6.1	19.6	1 2	7 15.30	+22 27.5	1.576	2.555	2.5	17.6
1 12	7 3.79	+34 1.7	1.065	2.034	6.5	19.6	1 12	7 3.17	+22 26.4	1.571	2.550	2.5	17.6
1 22	6 54.03	+33 38.8	1.091	2.036	10.6	19.8	1 22	6 51.68	+22 21.6	1.594	2.544	7.3	17.9
2 1	6 47.08	+32 58.4	1.139	2.039	15.1	20.1	2 1	6 42.14	+22 13.2	1.645	2.538	11.7	18.1
2 11	6 43.98	+32 6.4	1.206	2.043	19.2	20.3	2 11	6 35.49	+22 2.6	1.719	2.530	15.5	18.3
<b>465165</b>	2007 <i>DV</i> <sub>115</sub>		1 7.1 2°60	1°8/ 6.7 18			<b>291030</b>	2005 <i>YR</i> <sub>32</sub>		1 7.1 277°54	1°3/ 7.5 18		
12 3	7 37.09	+26 24.6	1.682	2.506	15.2	21.7	12 3	7 37.02	+17 19.0	1.523	2.342	16.7	21.3
12 13	7 32.10	+26 37.1	1.607	2.505	11.5	21.4	12 13	7 32.41	+17 41.1	1.436	2.331	12.9	21.0
12 23	7 24.28	+26 50.0	1.554	2.505	7.3	21.2	12 23	7 24.74	+18 14.8	1.371	2.320	8.3	20.7
1 2	7 14.46	+26 59.3	1.527	2.505	2.9	20.9	1 2	7 14.74	+18 57.5	1.331	2.309	3.3	20.4
1 12	7 3.94	+27 1.6	1.528	2.506	3.1	20.9	1 12	7 3.67	+19 45.0	1.318	2.298	2.8	20.3
1 22	6 54.14	+26 55.7	1.558	2.507	7.5	21.2	1 22	6 53.07	+20 32.7	1.333	2.287	8.0	20.6
2 1	6 46.32	+26 42.1	1.613	2.508	11.7	21.4	2 1	6 44.41	+21 17.2	1.374	2.276	12.9	20.8
2 11	6 41.36	+26 22.9	1.690	2.510	15.3	21.7	2 11	6 38.79	+21 56.4	1.437	2.265	17.1	21.1
<b>152326</b>	2005 <i>UJ</i> <sub>18</sub>		1 7.1 282°98	4°2/ 6.2 18			<b>203835</b>	2002 <i>VL</i> <sub>32</sub>		1 7.1 114°64	6°5/ 3.9 18		
12 3	7 40.90	+29 58.6	1.426	2.255	17.1	20.0	12 3	7 40.28	+40 22.6	2.467	3.256	12.0	20.1
12 13	7 35.90	+30 37.7	1.341	2.240	13.3	19.8	12 13	7 34.18	+41 53.0	2.402	3.265	9.7	20.0
12 23	7 27.19	+31 16.2	1.277	2.225	8.8	19.5	12 23	7 25.49	+43 16.1	2.362	3.274	7.6	19.9
1 2	7 15.61	+31 46.7	1.237	2.211	4.8	19.2	1 2	7 14.91	+44 25.0	2.351	3.283	6.5	19.8
1 12	7 2.74	+32 2.5	1.224	2.196	5.3	19.2	1 12	7 3.55	+45 14.2	2.369	3.291	7.0	19.9
1 22	6 50.52	+32 0.1	1.238	2.181	9.8	19.4	1 22	6 52.68	+45 41.5	2.415	3.300	8.8	20.0
2 1	6 40.77	+31 41.2	1.276	2.166	14.5	19.6	2 1	6 43.48	+45 48.1	2.487	3.308	10.9	20.2
2 11	6 34.74	+31 10.1	1.334	2.152	18.8	19.8	2 11	6 36.85	+45 37.9	2.581	3.316	12.9	20.3
<b>135235</b>	2001 <i>RU</i> <sub>150</sub>		1 7.1 185°43	0°1/ 7.0 18			<b>502380</b>	2015 <i>BN</i> <sub>243</sub>		1 7.1 200°41	2°7/ 8.2 17		
12 3	7 33.70	+21 18.4	2.618</										

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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>201753</b>	2003 <i>UM</i> <sub>340</sub>		1 7.1 258°78	1°0/ 6.8 18			<b>109612</b>	2001 <i>QF</i> <sub>289</sub>		1 7.1 105°42	1°7/ 7.9 18		
12 3	7 35.47	+24 19.7	2.160	2.971	12.7	20.7	12 3	7 29.52	+13 54.8	3.500	4.281	8.9	20.7
12 13	7 30.35	+24 38.6	2.075	2.967	9.6	20.5	12 13	7 24.95	+14 2.3	3.425	4.297	6.8	20.5
12 23	7 22.99	+24 59.7	2.013	2.963	6.0	20.2	12 23	7 19.19	+14 15.5	3.376	4.312	4.5	20.4
1 2	7 14.02	+25 20.0	1.980	2.959	2.2	20.0	1 2	7 12.64	+14 33.6	3.357	4.327	2.4	20.3
1 12	7 4.44	+25 36.4	1.976	2.954	2.4	20.0	1 12	7 5.85	+14 55.7	3.369	4.342	2.0	20.3
1 22	6 55.32	+25 47.2	2.001	2.950	6.2	20.2	1 22	6 59.35	+15 20.4	3.412	4.357	4.0	20.4
2 1	6 47.67	+25 52.0	2.055	2.945	9.8	20.4	2 1	6 53.66	+15 46.4	3.485	4.372	6.3	20.6
2 11	6 42.26	+25 51.4	2.132	2.941	13.0	20.6	2 11	6 49.18	+16 12.5	3.584	4.386	8.3	20.8
<b>216974</b>	2000 <i>KW</i> <sub>58</sub>		1 7.1 137°61	0°8/ 6.8 18			<b>337544</b>	2001 <i>SD</i> <sub>239</sub>		1 7.1 112°57	2°9/ 8.2 18		
12 3	7 38.28	+23 3.9	2.540	3.336	11.5	21.2	12 3	7 33.09	+11 40.6	2.654	3.434	11.5	22.1
12 13	7 31.98	+23 37.9	2.468	3.352	8.6	21.1	12 13	7 27.93	+11 36.9	2.580	3.449	8.9	21.9
12 23	7 23.76	+24 14.5	2.421	3.368	5.3	20.9	12 23	7 21.17	+11 41.8	2.532	3.463	6.1	21.8
1 2	7 14.24	+24 50.5	2.404	3.382	1.9	20.7	1 2	7 13.35	+11 54.8	2.512	3.478	3.6	21.6
1 12	7 4.28	+25 22.9	2.418	3.396	2.0	20.7	1 12	7 5.19	+12 14.9	2.522	3.492	3.2	21.6
1 22	6 54.80	+25 49.7	2.464	3.409	5.4	21.0	1 22	6 57.45	+12 40.5	2.563	3.506	5.4	21.8
2 1	6 46.66	+25 10.1	2.539	3.422	8.5	21.2	2 1	6 50.82	+13 9.6	2.633	3.519	8.1	22.0
2 11	6 40.50	+26 24.4	2.640	3.433	11.2	21.4	2 11	6 45.84	+13 40.4	2.728	3.533	10.6	22.2
<b>421060</b>	2013 <i>QD</i> <sub>10</sub>		1 7.1 283°13	5°9/ 5.8 18			<b>266703</b>	2009 <i>QG</i> <sub>19</sub>		1 7.1 11°56	0°8/ 6.9 18		
12 3	7 41.56	+37 54.8	1.962	2.766	14.1	21.0	12 3	7 36.09	+24 17.1	1.572	2.400	15.8	20.5
12 13	7 35.59	+38 29.2	1.873	2.752	11.2	20.8	12 13	7 31.43	+24 18.2	1.501	2.402	12.0	20.3
12 23	7 26.57	+38 55.5	1.808	2.737	8.3	20.5	12 23	7 23.91	+24 21.1	1.452	2.405	7.5	20.1
1 2	7 15.32	+39 7.0	1.768	2.723	6.1	20.4	1 2	7 14.38	+24 22.8	1.428	2.408	2.6	19.8
1 12	7 3.19	+38 58.8	1.757	2.709	6.5	20.4	1 12	7 4.19	+24 20.7	1.432	2.412	2.7	19.8
1 22	6 51.72	+38 29.8	1.774	2.695	9.1	20.5	1 22	6 54.76	+24 13.5	1.463	2.416	7.5	20.1
2 1	6 42.33	+37 42.8	1.816	2.680	12.3	20.7	2 1	6 47.39	+24 1.6	1.520	2.421	11.9	20.4
2 11	6 36.00	+36 43.3	1.881	2.666	15.3	20.8	2 11	6 42.91	+23 46.4	1.599	2.427	15.7	20.6
<b>219393</b>	2000 <i>SZ</i> <sub>155</sub>		1 7.1 42°67	5°7/ 5.9 18			<b>243492</b>	2009 <i>UB</i> <sub>26</sub>		1 7.1 128°42	2°2/ 6.4 18		
12 3	7 40.30	+35 17.4	1.610	2.430	15.9	19.2	12 3	7 37.03	+26 52.2	2.030	2.843	13.3	20.6
12 13	7 34.73	+36 3.0	1.554	2.444	12.4	19.0	12 13	7 31.69	+27 31.3	1.953	2.846	10.1	20.4
12 23	7 25.98	+36 41.2	1.520	2.458	8.7	18.9	12 23	7 23.89	+28 11.5	1.900	2.849	6.4	20.2
1 2	7 15.05	+37 4.8	1.511	2.473	6.0	18.7	1 2	7 14.36	+28 48.3	1.875	2.851	2.9	19.9
1 12	7 3.54	+37 9.0	1.529	2.488	6.4	18.8	1 12	7 4.18	+29 17.6	1.879	2.854	3.3	20.0
1 22	6 53.08	+36 52.9	1.574	2.504	9.3	19.0	1 22	6 54.55	+29 36.8	1.913	2.856	6.9	20.2
2 1	6 45.05	+36 19.9	1.644	2.519	12.8	19.2	2 1	6 46.58	+29 45.8	1.974	2.859	10.5	20.4
2 11	6 40.28	+35 35.4	1.736	2.536	15.8	19.5	2 11	6 41.06	+29 46.0	2.058	2.861	13.6	20.6
<b>148654</b>	2001 <i>SK</i> <sub>119</sub>		1 7.1 356°51	9°4/ 9.2 18			<b>296082</b>	2009 <i>BR</i> <sub>13</sub>		1 7.1 218°24	3°4/ 6.2 18		
12 3	7 31.76	+ 2 39.2	1.449	2.239	18.8	19.2	12 3	7 37.10	+33 1.9	2.501	3.304	11.4	20.4
12 13	7 28.20	+ 1 36.4	1.377	2.236	15.8	19.0	12 13	7 31.38	+33 24.1	2.418	3.301	8.8	20.2
12 23	7 21.94	+ 0 54.3	1.324	2.233	12.6	18.8	12 23	7 23.53	+33 42.1	2.359	3.299	6.0	20.0
1 2	7 13.72	+ 0 38.0	1.294	2.231	10.0	18.7	1 2	7 14.20	+33 52.1	2.329	3.296	3.7	19.9
1 12	7 4.75	+ 0 49.5	1.287	2.230	9.5	18.6	1 12	7 4.36	+33 51.2	2.328	3.293	4.0	19.9
1 22	6 56.35	+ 1 27.1	1.305	2.230	11.3	18.7	1 22	6 55.03	+33 38.8	2.358	3.290	6.5	20.0
2 1	6 49.78	+ 2 25.6	1.346	2.231	14.4	18.9	2 1	6 47.15	+33 15.8	2.415	3.287	9.3	20.2
2 11	6 45.95	+ 3 37.7	1.408	2.233	17.6	19.1	2 11	6 41.43	+32 44.8	2.497	3.284	11.9	20.4
<b>132975</b>	2002 <i>TT</i> <sub>172</sub>		1 7.1 62°53	2°8/ 7.5 18			<b>58786</b>	1998 <i>FD</i> <sub>78</sub>		1 7.1 183°22	3°9/ 8.3 18		
12 3	7 36.51	+16 12.3	2.055	2.854	13.7	18.8	12 3	7 39.67	+10 52.7	1.888	2.673	15.3	20.7
12 13	7 30.86	+15 29.4	1.985	2.867	10.5	18.6	12 13	7 33.64	+10 51.1	1.804	2.674	12.0	20.4
12 23	7 23.12	+14 52.1	1.940	2.881	7.0	18.5	12 23	7 25.12	+11 2.5	1.742	2.674	8.4	20.2
1 2	7 14.01	+14 20.9	1.923	2.895	3.6	18.3	1 2	7 14.80	+11 26.5	1.707	2.674	4.9	20.0
1 12	7 4.55	+13 56.2	1.935	2.909	3.4	18.3	1 12	7 3.76	+12 1.5	1.702	2.672	4.3	20.0
1 22	6 55.73	+13 38.0	1.977	2.923	6.5	18.5	1 22	6 53.21	+12 44.4	1.726	2.670	7.4	20.2
2 1	6 48.46	+13 25.9	2.047	2.937	9.9	18.7	2 1	6 44.29	+13 31.9	1.778	2.667	11.2	20.4
2 11	6 43.38	+13 18.9	2.140	2.951	12.8	19.0	2 11	6 37.83	+14 20.7	1.854	2.663	14.6	20.6
<b>36978</b>	2000 <i>SL</i> <sub>323</sub>		1 7.1 302°07	1°4/ 7.4 18			<b>412258</b>	2013 <i>HC</i> <sub>103</sub>		1 7.1 133°48	1°8/ 7.6 18		
12 3	7 35.92	+18 15.6	1.463	2.288	17.0	18.4	12 3	7 37.95	+16 44.1	2.197	2.990	13.1	22.4
12 13	7 31.74	+18 22.0	1.373	2.271	13.1	18.1	12 13	7 31.90	+16 41.5	2.124	3.004	10.0	22.2
12 23	7 24.42	+18 38.0	1.304	2.255	8.5	17.8	12 23	7 23.78	+16 45.4	2.075	3.018	6.5	22.0
1 2	7 14.66	+19 1.7	1.260	2.238	3.3	17.5	1 2	7 14.27	+16 54.6	2.055	3.030	2.9	21.8
1 12	7 3.78	+19 30.0	1.243	2.223	2.9	17.4	1 12	7 4.33	+17 7.3	2.065	3.043	2.5	21.8
1 22	6 53.35	+19 59.3	1.252	2.207	8.3	17.7	1 22	6 54.96	+17 22.1	2.106	3.054	5.9	22.0
2 1	6 44.90	+20 27.0	1.287	2.192	13.3	17.9	2 1	6 47.06	+17 37.6	2.175	3.065	9.4	22.2
2 11	6 39.59	+20 51.8	1.342	2.177	17.7	18.2	2 11	6 41.29	+17 52.9	2.269	3.075	12.4	22.5
<b>420607</b>	2012 <i>HL</i> <sub>53</sub>		1 7.1 223°00	1°0/ 7.4 18			<b>286650</b>	2002 <i>EY</i> <sub>68</sub>		1 7.1 319°68	0°0/ 6.9 18		
12 3	7 35.21	+17 40.5	1.979	2.786	13.9	21.0	12 3	7 35.83	+22 24.8	1.314	2.151	17.8	20.2
12 13	7 30.27	+18 3.4	1.896	2.785	10.6	20.8	12 13	7 32.04	+22 25.2	1.228	2.134	13.7	19.9
12 23	7 23.00	+18 34.5	1.836	2.783	6.7	20.5	12 23	7 24.79	+22 30.5	1.162	2.116	8.7	19.5
1 2	7 14.05	+19 11.7	1.804	2.782	2.6	20.3	1 2	7 14.85	+22 37.8	1.120	2.100	3.0	19.2
1 12	7 4.44	+19 51.6	1.801	2.780	2.3	20.3	1 12	7 3.69	+22 43.6	1.103	2.084	3.0	19.1
1 22	6 55.28	+20 31.2	1.827	2.778	6.4	20.5	1 22	6 53.10	+22 45.5	1.113	2.068	8.9	19.4
2 1	6 47.63	+21 8.0	1.881	2.776	10.3	20.7	2 1	6 44.79	+22 43.0	1.146	2.054	14.3	19.7
2 11	6 42.28	+21 40.7	1.958	2.774	13.7	21.0	2 11	6 39.99	+22 37.0	1.199	2.040	19.0	19.9
<b>169698</b>	2002 <i>LR</i> <sub>17</sub>		1 7.1 244°47	1°4/ 7.4 18			<b>344855</b>	2004 <i>HS</i> <sub>6</sub>		1 7.1 281°55	11°7/ 10.6 18		
12 3	7 37.98	+18 8.1											

EPHEMERIDES

1 7.1

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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>144946</b>	2005 <i>EJ</i> <sub>31</sub>		1 7.1 184°90	2°6/ 6.4 18			<b>407379</b>	2010 <i>RF</i> <sub>165</sub>		1 7.1 115°85	7°7/ 9.8 18		
12 3	7 39.83	+27 52.1	1.826	2.641	14.5	20.4	12 3	7 35.60	+0 40.1	1.978	2.729	15.8	21.2
12 13	7 34.08	+28 23.4	1.748	2.641	11.1	20.2	12 13	7 30.30	+0 4.0	1.909	2.741	13.2	21.1
12 23	7 25.53	+28 54.6	1.693	2.641	7.1	20.0	12 23	7 22.88	-0 13.4	1.861	2.753	10.5	20.9
1 2	7 14.97	+29 20.9	1.665	2.641	3.3	19.7	1 2	7 14.02	-0 9.7	1.838	2.765	8.3	20.8
1 12	7 3.66	+29 37.7	1.666	2.640	3.7	19.8	1 12	7 4.68	+0 15.6	1.842	2.776	7.8	20.8
1 22	6 52.99	+29 43.2	1.696	2.639	7.6	20.0	1 22	6 55.88	+0 59.9	1.873	2.787	9.2	20.9
2 1	6 44.25	+29 37.6	1.752	2.638	11.5	20.2	2 1	6 48.56	+1 59.0	1.931	2.798	11.6	21.1
2 11	6 38.33	+29 23.6	1.831	2.637	14.9	20.4	2 11	6 43.41	+3 7.4	2.012	2.808	14.1	21.3
<b>490083</b>	2008 <i>TV</i> <sub>163</sub>		1 7.1 85°55	1°8/ 6.7 15			<b>71598</b>	2000 <i>DG</i> <sub>84</sub>		1 7.1 63°88	0°6/ 6.9 18		
12 3	7 42.32	+25 17.1	1.474	2.296	17.0	22.2	12 3	7 34.94	+22 10.6	2.075	2.887	13.1	19.4
12 13	7 36.16	+25 43.9	1.417	2.314	12.8	22.0	12 13	7 29.99	+22 43.9	1.999	2.892	9.9	19.2
12 23	7 26.83	+26 12.6	1.382	2.333	8.0	21.8	12 23	7 22.79	+23 21.8	1.947	2.897	6.2	18.9
1 2	7 15.38	+26 37.9	1.373	2.351	3.1	21.6	1 2	7 14.02	+24 0.8	1.923	2.902	2.1	18.7
1 12	7 3.35	+26 55.1	1.391	2.369	3.3	21.6	1 12	7 4.67	+24 37.4	1.929	2.908	2.2	18.7
1 22	6 52.37	+27 2.4	1.438	2.387	8.1	21.9	1 22	6 55.82	+25 8.8	1.963	2.913	6.2	19.0
2 1	6 43.82	+27 0.3	1.510	2.404	12.4	22.2	2 1	6 48.47	+25 33.7	2.026	2.918	9.9	19.2
2 11	6 38.53	+26 51.3	1.604	2.422	16.1	22.5	2 11	6 43.38	+25 52.0	2.113	2.924	13.0	19.4
<b>327435</b>	2005 <i>WO</i> <sub>89</sub>		1 7.1 347°18	4°5/ 5.2 18			<b>262196</b>	2006 <i>SB</i> <sub>166</sub>		1 7.1 142°17	8°2/ 9.4 18		
12 3	7 37.98	+29 52.9	1.857	2.674	14.2	20.1	12 3	7 35.19	+1 25.1	1.855	2.615	16.4	21.4
12 13	7 32.92	+31 23.5	1.781	2.673	10.9	19.9	12 13	7 30.22	+0 36.4	1.779	2.618	13.7	21.2
12 23	7 24.97	+32 56.0	1.728	2.672	7.4	19.7	12 23	7 22.96	+0 6.0	1.725	2.620	11.0	21.1
1 2	7 14.84	+34 22.3	1.704	2.671	4.7	19.5	1 2	7 14.09	-0 2.6	1.694	2.623	8.8	20.9
1 12	7 3.74	+35 34.8	1.709	2.671	5.5	19.5	1 12	7 4.62	+0 11.6	1.690	2.626	8.2	20.9
1 22	6 53.10	+36 28.8	1.742	2.670	8.7	19.7	1 22	6 55.66	+0 46.9	1.713	2.628	9.8	21.0
2 1	6 44.30	+37 3.2	1.801	2.670	12.2	19.9	2 1	6 48.22	+1 39.3	1.761	2.630	12.4	21.2
2 11	6 38.35	+37 20.4	1.882	2.669	15.3	20.1	2 11	6 43.09	+2 43.1	1.832	2.633	15.1	21.4
<b>414474</b>	2009 <i>OJ</i> <sub>11</sub>		1 7.1 130°72	3°3/ 8.5 18			<b>146092</b>	2000 <i>KY</i> <sub>39</sub>		1 7.1 274°85	2°0/ 6.6 18		
12 3	7 36.03	+10 12.5	2.342	3.118	12.9	21.9	12 3	7 37.69	+26 2.9	1.820	2.638	14.4	20.8
12 13	7 30.35	+10 25.1	2.268	3.133	10.1	21.7	12 13	7 32.63	+26 34.5	1.730	2.625	11.0	20.6
12 23	7 22.79	+10 49.2	2.218	3.147	7.0	21.5	12 23	7 24.76	+27 8.4	1.663	2.613	7.0	20.3
1 2	7 13.95	+11 23.8	2.196	3.161	4.1	21.4	1 2	7 14.79	+27 40.1	1.623	2.600	3.0	20.0
1 12	7 4.68	+12 7.0	2.204	3.174	3.5	21.4	1 12	7 3.90	+28 5.0	1.611	2.587	3.3	20.0
1 22	6 55.88	+12 55.8	2.243	3.187	6.0	21.5	1 22	6 53.47	+28 20.2	1.628	2.574	7.5	20.3
2 1	6 48.37	+13 47.3	2.311	3.199	9.0	21.8	2 1	6 44.82	+28 25.3	1.671	2.562	11.7	20.5
2 11	6 42.78	+14 38.8	2.405	3.210	11.8	22.0	2 11	6 38.94	+28 21.9	1.737	2.549	15.3	20.7
<b>258423</b>	2001 <i>XG</i> <sub>187</sub>		1 7.1 35°45	1°0/ 7.3 18			<b>182301</b>	2001 <i>NN</i> <sub>19</sub>		1 7.1 49°61	3°7/ 6.8 17		
12 3	7 36.22	+20 6.4	1.555	2.379	16.2	20.3	12 3	7 44.90	+32 1.6	1.414	2.237	17.6	18.5
12 13	7 31.38	+19 58.4	1.492	2.390	12.3	20.1	12 13	7 38.00	+32 1.7	1.370	2.265	13.4	18.3
12 23	7 23.79	+19 56.1	1.450	2.401	7.7	19.9	12 23	7 27.82	+31 54.8	1.348	2.295	8.7	18.1
1 2	7 14.34	+19 57.6	1.433	2.412	2.9	19.6	1 2	7 15.67	+31 35.9	1.351	2.324	4.5	18.0
1 12	7 4.33	+20 0.8	1.445	2.424	2.6	19.6	1 12	7 3.30	+31 2.8	1.381	2.354	4.6	18.1
1 22	6 55.15	+20 4.3	1.483	2.437	7.3	19.9	1 22	6 52.42	+30 17.5	1.439	2.384	8.5	18.4
2 1	6 47.98	+20 7.1	1.548	2.450	11.7	20.2	2 1	6 44.30	+29 24.1	1.523	2.415	12.5	18.7
2 11	6 43.62	+20 9.1	1.634	2.464	15.3	20.5	2 11	6 39.61	+28 27.9	1.629	2.445	16.0	19.0
<b>31936</b>	Bernardsmitt		1 7.1 199°89	0°0/ 7.0 18			<b>223704</b>	2004 <i>RQ</i> <sub>39</sub>		1 7.1 130°58	1°4/ 7.6 18		
12 3	7 37.79	+21 43.2	2.235	3.037	12.6	19.9	12 3	7 35.71	+17 2.3	2.144	2.944	13.2	21.1
12 13	7 31.99	+21 50.3	2.147	3.034	9.6	19.7	12 13	7 30.38	+17 13.6	2.067	2.952	10.0	20.9
12 23	7 23.98	+22 0.6	2.082	3.030	6.0	19.5	12 23	7 22.95	+17 32.2	2.014	2.959	6.4	20.7
1 2	7 14.41	+22 12.0	2.047	3.026	2.1	19.2	1 2	7 14.06	+17 56.3	1.989	2.966	2.7	20.4
1 12	7 4.23	+22 22.1	2.042	3.021	2.0	19.2	1 12	7 4.66	+18 23.6	1.994	2.973	2.3	20.4
1 22	6 54.51	+22 29.5	2.067	3.016	6.0	19.4	1 22	6 55.76	+18 51.7	2.029	2.979	6.0	20.7
2 1	6 46.22	+22 33.6	2.120	3.010	9.6	19.7	2 1	6 48.29	+19 19.0	2.092	2.985	9.5	20.9
2 11	6 40.12	+22 34.8	2.199	3.004	12.7	19.9	2 11	6 42.95	+19 44.2	2.179	2.991	12.6	21.1
<b>154358</b>	2002 <i>XM</i> <sub>47</sub>		1 7.1 53°33	2°6/ 6.5 17			<b>410447</b>	2008 <i>CU</i> <sub>71</sub>		1 7.1 322°52	1°9/ 7.5 16		
12 3	7 40.23	+25 26.7	1.237	2.074	18.7	19.9	12 3	7 34.61	+18 23.2	1.448	2.276	16.9	20.7
12 13	7 35.23	+26 13.5	1.181	2.086	14.2	19.7	12 13	7 30.73	+18 9.0	1.360	2.260	13.1	20.4
12 23	7 26.59	+27 4.0	1.146	2.099	8.9	19.4	12 23	7 23.78	+18 2.2	1.293	2.244	8.5	20.1
1 2	7 15.38	+27 50.9	1.135	2.113	3.7	19.1	1 2	7 14.50	+18 2.0	1.251	2.229	3.6	19.8
1 12	7 3.37	+28 27.4	1.150	2.126	4.2	19.2	1 12	7 4.18	+18 6.9	1.235	2.214	3.2	19.7
1 22	6 52.48	+28 49.7	1.191	2.140	9.2	19.5	1 22	6 54.38	+18 14.9	1.245	2.200	8.3	20.0
2 1	6 44.32	+28 58.1	1.255	2.155	14.0	19.9	2 1	6 46.56	+18 24.6	1.280	2.187	13.2	20.2
2 11	6 39.85	+28 55.5	1.340	2.169	18.1	20.2	2 11	6 41.81	+18 34.8	1.336	2.174	17.6	20.4
<b>494992</b>	2010 <i>EL</i> <sub>77</sub>		1 7.1 315°52	1°3/ 6.9 17			<b>350632</b>	2001 <i>TU</i> <sub>4</sub>		1 7.1 76°50	2°8/ 6.6 17		
12 3	7 37.09	+24 38.5	1.258	2.098	18.3	21.7	12 3	7 42.46	+27 27.5	1.400	2.227	17.5	21.5
12 13	7 33.23	+24 48.4	1.173	2.080	14.0	21.3	12 13	7 36.52	+27 59.0	1.343	2.243	13.3	21.3
12 23	7 25.67	+25 1.7	1.108	2.063	8.9	21.0	12 23	7 27.20	+28 30.4	1.308	2.259	8.4	21.0
1 2	7 15.20	+25 14.0	1.067	2.047	3.3	20.6	1 2	7 15.57	+28 55.4	1.298	2.275	3.8	20.8
1 12	7 3.41	+25 20.5	1.051	2.030	3.5	20.6	1 12	7 3.31	+29 9.0	1.315	2.291	4.1	20.9
1 22	6 52.24	+25 18.6	1.060	2.015	9.4	20.9	1 22	6 52.16	+29 9.5	1.359	2.307	8.6	21.2
2 1	6 43.54	+25 8.4	1.093	2.000	14.9	21.1	2 1	6 43.60	+28 58.3	1.429	2.322	13.1	21.5
2 11	6 38.60	+24 52.1	1.145	1.986	19.7	21.4	2 11	6 38.49	+28 39.0	1.519	2.338	16.8	21.7
<b>453036</b>	2007 <i>RN</i> <sub>316</sub>		1 7.1 155°86	1°2/ 6.8 18			<b>91116</b>	1998 <i>HD</i> <sub>75</sub>		1 7.1 120°32	0°6/ 7.3 18		
12 3	7 40.83	+24 18.4	2.039	2.843	13.6	22.0	12 3						

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>79965</b>	1999 <i>CD</i> <sub>121</sub>		1 7.1 34°73	8°2/ 4.6	18		<b>292711</b>	2006 <i>UD</i> <sub>128</sub>		1 7.1 160°13	7°0/ 8.9	18	
12 3	7 40.80	+37 55.7	1.496	2.318	16.8	18.4	12 3	7 36.58	+2 53.0	2.190	2.941	14.5	22.1
12 13	7 35.80	+39 33.5	1.441	2.327	13.5	18.2	12 13	7 30.91	+2 0.3	2.111	2.947	12.0	21.9
12 23	7 27.08	+41 3.5	1.407	2.336	10.2	18.0	12 23	7 23.24	+1 22.0	2.056	2.952	9.4	21.7
1 2	7 15.62	+42 14.7	1.398	2.346	8.3	18.0	1 2	7 14.19	+1 0.7	2.026	2.957	7.5	21.6
1 12	7 3.19	+42 58.4	1.415	2.356	9.0	18.0	1 12	7 4.64	+0 57.7	2.025	2.961	7.1	21.6
1 22	6 51.74	+43 12.1	1.458	2.367	11.6	18.2	1 22	6 55.55	+1 12.2	2.052	2.965	8.6	21.7
2 1	6 43.00	+42 58.8	1.523	2.379	14.7	18.4	2 1	6 47.81	+1 41.5	2.106	2.968	11.0	21.9
2 11	6 38.03	+42 25.5	1.608	2.390	17.6	18.6	2 11	6 42.09	+2 21.5	2.184	2.970	13.4	22.0
<b>94120</b>	2000 <i>YF</i> <sub>106</sub>		1 7.1 288°10	5°1/ 5.1	18		<b>97845</b>	2000 <i>PG</i> <sub>28</sub>		1 7.1 178°77	3°1/ 8.5	18	
12 3	7 38.29	+32 54.0	1.977	2.790	13.6	18.6	12 3	7 35.48	+10 11.8	2.391	3.167	12.7	19.4
12 13	7 33.28	+34 5.1	1.880	2.768	10.7	18.4	12 13	7 30.06	+10 32.4	2.303	3.168	10.0	19.3
12 23	7 25.32	+35 15.9	1.807	2.746	7.6	18.1	12 23	7 22.72	+11 4.9	2.239	3.169	6.9	19.1
1 2	7 15.05	+36 19.1	1.761	2.723	5.2	17.9	1 2	7 14.02	+11 48.5	2.204	3.170	4.0	18.9
1 12	7 3.62	+37 7.8	1.743	2.701	5.9	17.9	1 12	7 4.77	+12 40.9	2.199	3.170	3.4	18.8
1 22	6 52.47	+37 37.9	1.754	2.679	8.9	18.1	1 22	6 55.87	+13 38.9	2.225	3.170	6.0	19.0
2 1	6 43.03	+37 48.8	1.791	2.656	12.4	18.2	2 1	6 48.17	+14 39.3	2.280	3.169	9.1	19.2
2 11	6 36.44	+37 43.5	1.850	2.634	15.6	18.4	2 11	6 42.34	+15 39.0	2.362	3.167	12.0	19.4
<b>306031</b>	2010 <i>ET</i> <sub>122</sub>		1 7.1 256°64	5°3/ 5.8	18		<b>441650</b>	2008 <i>WC</i> <sub>66</sub>		1 7.1 85°72	1°4/ 7.5	18	
12 3	7 43.68	+34 4.2	1.748	2.558	15.3	21.2	12 3	7 42.07	+18 5.0	1.527	2.338	17.1	21.4
12 13	7 37.63	+34 49.8	1.654	2.540	12.0	20.9	12 13	7 35.64	+18 13.1	1.474	2.365	12.9	21.2
12 23	7 28.16	+35 31.4	1.584	2.522	8.5	20.7	12 23	7 26.37	+18 29.5	1.443	2.391	8.2	21.0
1 2	7 16.04	+36 1.3	1.539	2.503	5.6	20.5	1 2	7 15.25	+18 51.3	1.439	2.416	3.2	20.7
1 12	7 2.72	+36 13.0	1.523	2.484	6.1	20.5	1 12	7 3.70	+19 15.3	1.462	2.442	2.7	20.8
1 22	6 49.94	+36 3.6	1.534	2.464	9.5	20.6	1 22	6 53.17	+19 38.7	1.515	2.466	7.4	21.1
2 1	6 39.36	+35 35.2	1.572	2.444	13.4	20.8	2 1	6 44.87	+19 59.9	1.593	2.491	11.7	21.4
2 11	6 32.16	+34 53.1	1.631	2.424	17.0	21.0	2 11	6 39.54	+20 18.1	1.695	2.514	15.3	21.7
<b>427104</b>	2014 <i>UO</i> <sub>67</sub>		1 7.1 58°04	0°3/ 7.0	18		<b>89594</b>	2001 <i>XS</i> <sub>147</sub>		1 7.1 105°42	0°2/ 7.1	18	
12 3	7 36.67	+21 11.9	1.696	2.515	15.3	20.7	12 3	7 40.03	+20 42.7	1.579	2.395	16.3	19.9
12 13	7 31.65	+21 43.1	1.630	2.526	11.5	20.5	12 13	7 34.36	+21 16.7	1.512	2.407	12.3	19.6
12 23	7 23.97	+22 20.5	1.587	2.538	7.2	20.3	12 23	7 25.77	+21 58.0	1.469	2.419	7.7	19.4
1 2	7 14.47	+23 0.1	1.570	2.550	2.5	20.0	1 2	7 15.12	+22 42.1	1.451	2.431	2.6	19.1
1 12	7 4.35	+23 37.7	1.582	2.562	2.4	20.0	1 12	7 3.78	+23 24.1	1.463	2.442	2.6	19.1
1 22	6 54.93	+24 10.1	1.622	2.574	7.0	20.3	1 22	6 53.22	+24 0.2	1.502	2.453	7.5	19.5
2 1	6 47.39	+24 35.7	1.688	2.586	11.2	20.6	2 1	6 44.76	+24 28.8	1.568	2.464	11.9	19.8
2 11	6 42.54	+24 54.5	1.778	2.598	14.7	20.8	2 11	6 39.27	+24 49.8	1.656	2.475	15.6	20.0
<b>126513</b>	2002 <i>CY</i> <sub>71</sub>		1 7.1 238°58	1°3/ 6.8	18		<b>521132</b>	2015 <i>EF</i> <sub>62</sub>		1 7.1 29°92	19°5/ 18.1	18	
12 3	7 36.75	+24 47.3	1.980	2.794	13.6	20.2	12 3	7 35.45	-17 48.0	1.015	1.737	29.3	20.6
12 13	7 31.54	+25 10.4	1.898	2.792	10.3	20.0	12 13	7 31.99	-18 34.9	0.962	1.742	26.8	20.4
12 23	7 23.87	+25 35.6	1.841	2.791	6.5	19.7	12 23	7 24.83	-18 28.9	0.918	1.748	24.1	20.3
1 2	7 14.44	+25 59.4	1.810	2.789	2.4	19.5	1 2	7 14.91	-17 17.7	0.888	1.754	21.5	20.1
1 12	7 4.35	+26 18.4	1.809	2.787	2.6	19.5	1 12	7 3.96	-14 57.2	0.875	1.761	19.8	20.0
1 22	6 54.79	+26 30.5	1.837	2.785	6.7	19.7	1 22	6 53.90	-11 35.1	0.881	1.768	19.6	20.0
2 1	6 46.87	+26 35.3	1.892	2.783	10.5	20.0	2 1	6 46.50	-7 30.2	0.907	1.777	21.0	20.2
2 11	6 41.41	+26 33.8	1.971	2.781	13.8	20.2	2 11	6 42.90	-3 7.3	0.954	1.785	23.5	20.4
<b>73584</b>	3228 <i>T</i> <sub>-1</sub>		1 7.1 281°01	0°5/ 6.9	18		<b>522356</b>	2016 <i>CE</i> <sub>299</sub>		1 7.1 299°35	4°1/ 6.1	18	
12 3	7 38.11	+22 58.7	1.654	2.474	15.5	19.7	12 3	7 38.49	+31 46.7	1.867	2.683	14.2	21.5
12 13	7 33.17	+23 10.1	1.561	2.458	11.9	19.4	12 13	7 33.22	+32 25.6	1.786	2.677	11.0	21.3
12 23	7 25.24	+23 25.7	1.490	2.441	7.5	19.1	12 23	7 25.12	+33 1.6	1.728	2.672	7.4	21.1
1 2	7 15.01	+23 42.1	1.445	2.424	2.6	18.8	1 2	7 14.94	+33 29.1	1.697	2.666	4.5	20.9
1 12	7 3.75	+23 55.7	1.428	2.408	2.7	18.8	1 12	7 3.96	+33 43.2	1.694	2.660	4.9	20.9
1 22	6 52.95	+24 4.0	1.439	2.391	7.7	19.0	1 22	6 53.58	+33 42.0	1.719	2.655	8.1	21.1
2 1	6 44.03	+24 6.5	1.476	2.374	12.4	19.3	2 1	6 45.12	+33 26.6	1.770	2.650	11.8	21.3
2 11	6 38.07	+24 4.0	1.535	2.357	16.5	19.5	2 11	6 39.50	+33 0.2	1.844	2.644	15.0	21.5
<b>98705</b>	2000 <i>XT</i> <sub>35</sub>		1 7.1 109°76	4°1/ 6.3	18		<b>490745</b>	2010 <i>SG</i> <sub>39</sub>		1 7.1 101°79	2°3/ 7.9	18	
12 3	7 43.37	+31 36.0	1.704	2.517	15.5	19.5	12 3	7 38.52	+14 41.0	1.998	2.792	14.2	22.0
12 13	7 36.85	+32 11.3	1.641	2.531	11.9	19.3	12 13	7 32.46	+14 48.2	1.936	2.815	10.9	21.9
12 23	7 27.27	+32 42.6	1.600	2.543	7.9	19.1	12 23	7 24.21	+15 4.6	1.898	2.838	7.1	21.7
1 2	7 15.60	+33 3.5	1.586	2.556	4.5	18.9	1 2	7 14.52	+15 28.6	1.887	2.860	3.4	21.5
1 12	7 3.32	+33 9.6	1.600	2.568	4.9	19.0	1 12	7 4.43	+15 57.8	1.906	2.882	2.9	21.5
1 22	6 52.00	+32 59.7	1.643	2.580	8.3	19.2	1 22	6 55.03	+16 29.8	1.955	2.903	6.3	21.8
2 1	6 42.97	+32 36.2	1.712	2.592	12.1	19.5	2 1	6 47.24	+17 2.2	2.032	2.924	9.8	22.0
2 11	6 37.09	+32 3.4	1.803	2.603	15.3	19.7	2 11	6 41.74	+17 33.4	2.133	2.944	12.9	22.2
<b>55016</b>	2001 <i>QE</i> <sub>32</sub>		1 7.1 273°49	0°0/ 6.9	18		<b>105778</b>	2000 <i>SW</i> <sub>114</sub>		1 7.1 27°95	1°8/ 7.5	18	
12 3	7 38.32	+22 55.8	1.857	2.670	14.4	18.6	12 3	7 35.90	+18 8.2	1.164	2.004	19.5	19.2
12 13	7 32.92	+22 45.6	1.763	2.656	11.0	18.3	12 13	7 31.89	+18 4.3	1.109	2.015	14.8	19.0
12 23	7 24.85	+22 37.0	1.692	2.642	6.9	18.1	12 23	7 24.48	+18 11.0	1.073	2.026	9.5	18.7
1 2	7 14.82	+22 28.1	1.648	2.627	2.4	17.8	1 2	7 14.72	+18 26.2	1.061	2.039	3.8	18.4
1 12	7 3.98	+22 17.1	1.633	2.613	2.3	17.7	1 12	7 4.25	+18 46.5	1.073	2.053	3.3	18.4
1 22	6 53.62	+22 3.1	1.647	2.599	7.0	18.0	1 22	6 54.84	+19 8.5	1.110	2.067	8.7	18.8
2 1	6 44.99	+21 46.6	1.689	2.584	11.3	18.2	2 1	6 47.96	+19 29.8	1.171	2.083	13.8	19.1
2 11	6 38.99	+21 28.7	1.753	2.570	15.0	18.4	2 11	6 44.50	+19 49.0	1.252	2.099	18.0	19.4
<b>420794</b>	2013 <i>GE</i> <sub>132</sub>		1 7.1 155°98	1°1/ 6.6	17		<b>85194</b>	1991 <i>TL</i> <sub>2</sub>		1 7.1 106°53	1°3/ 7.4	18	
12 3	7 38.88	+23 7.6	2.754	3.54									



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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>343926</b>	2011 <i>KR</i> <sub>7</sub>		1 7.1 165°08	0°1/ 7.1 17			<b>137835</b>	2000 <i>AX</i> <sub>27</sub>		1 7.1 86°48	1°7/ 6.9 18		
12 3	7 34.11	+21 51.7	2.943	3.739	10.1	21.8	12 3	7 42.79	+27 4.5	1.706	2.520	15.4	19.7
12 13	7 28.74	+22 9.6	2.859	3.744	7.6	21.6	12 13	7 36.12	+27 6.3	1.647	2.540	11.6	19.5
12 23	7 21.76	+22 30.2	2.801	3.748	4.7	21.4	12 23	7 26.66	+27 6.5	1.611	2.560	7.3	19.3
1 2	7 13.68	+22 51.5	2.773	3.752	1.6	21.2	1 2	7 15.40	+27 1.6	1.602	2.579	2.9	19.1
1 12	7 5.20	+23 11.5	2.776	3.755	1.6	21.2	1 12	7 3.74	+26 49.2	1.621	2.599	3.0	19.1
1 22	6 57.07	+23 28.8	2.810	3.758	4.7	21.4	1 22	6 53.08	+26 29.0	1.670	2.618	7.2	19.4
2 1	6 49.99	+23 42.7	2.875	3.761	7.5	21.6	2 1	6 44.61	+26 2.9	1.746	2.637	11.2	19.7
2 11	6 44.51	+23 53.0	2.965	3.763	10.0	21.8	2 11	6 39.05	+25 33.5	1.844	2.655	14.6	20.0
<b>377291</b>	2004 <i>FM</i> <sub>40</sub>		1 7.1 9°92	6°7/ 9.8 18			<b>123429</b>	2000 <i>WB</i> <sub>115</sub>		1 7.1 39°38	0°4/ 7.1 18		
12 3	7 31.31	+ 2 11.7	2.043	2.807	15.0	20.2	12 3	7 37.87	+24 9.9	1.719	2.538	15.1	19.5
12 13	7 27.18	+ 1 56.6	1.965	2.809	12.4	20.0	12 13	7 32.50	+23 58.4	1.650	2.547	11.4	19.3
12 23	7 21.03	+ 1 59.6	1.907	2.810	9.7	19.9	12 23	7 24.48	+23 47.8	1.604	2.555	7.1	19.1
1 2	7 13.48	+ 2 22.2	1.874	2.812	7.4	19.7	1 2	7 14.69	+23 35.9	1.585	2.564	2.5	18.8
1 12	7 5.39	+ 3 4.2	1.869	2.814	6.8	19.7	1 12	7 4.38	+23 21.0	1.594	2.574	2.4	18.8
1 22	6 57.72	+ 4 2.5	1.891	2.817	8.3	19.8	1 22	6 54.86	+23 2.7	1.632	2.584	7.0	19.1
2 1	6 51.36	+ 5 12.9	1.940	2.820	10.8	20.0	2 1	6 47.28	+22 41.9	1.696	2.594	11.1	19.4
2 11	6 47.00	+ 6 30.0	2.012	2.823	13.5	20.2	2 11	6 42.42	+22 19.9	1.783	2.604	14.6	19.7
<b>508770</b>	1995 <i>WY</i> <sub>2</sub>		1 7.1 289°28	0°0/ 7.0 17			<b>241306</b>	2007 <i>UM</i> <sub>135</sub>		1 7.1 174°05	2°0/ 6.4 18		
12 3	7 12.07	+23 10.4	44.154	44.953	0.7	23.7	12 3	7 35.65	+28 1.2	2.666	3.468	10.8	21.4
12 13	7 11.38	+23 11.8	44.062	44.949	0.5	23.7	12 13	7 30.17	+28 30.6	2.583	3.470	8.2	21.2
12 23	7 10.60	+23 13.2	43.998	44.946	0.3	23.7	12 23	7 22.79	+28 59.5	2.526	3.471	5.2	21.0
1 2	7 9.78	+23 14.6	43.964	44.943	0.1	23.6	1 2	7 14.09	+29 24.7	2.498	3.472	2.5	20.9
1 12	7 8.94	+23 16.1	43.960	44.940	0.1	23.6	1 12	7 4.90	+29 43.5	2.500	3.473	2.8	20.9
1 22	7 8.12	+23 17.4	43.988	44.936	0.3	23.7	1 22	6 56.12	+29 54.3	2.533	3.474	5.6	21.1
2 1	7 7.34	+23 18.7	44.045	44.933	0.5	23.7	2 1	6 48.58	+29 57.0	2.595	3.474	8.5	21.3
2 11	7 6.64	+23 19.7	44.130	44.930	0.7	23.7	2 11	6 42.94	+29 52.8	2.682	3.474	11.1	21.4
<b>157909</b>	1999 <i>TA</i> <sub>183</sub>		1 7.1 80°86	1°0/ 6.8 18			<b>32303</b>	2000 <i>QT</i> <sub>24</sub>		1 7.1 114°99	5°2/ 5.8 18		
12 3	7 36.53	+23 56.2	1.991	2.805	13.5	20.2	12 3	7 39.62	+39 24.4	2.517	3.308	11.7	18.4
12 13	7 31.27	+24 21.8	1.919	2.813	10.2	20.0	12 13	7 33.41	+39 55.1	2.443	3.312	9.3	18.3
12 23	7 23.64	+24 50.0	1.871	2.821	6.4	19.8	12 23	7 24.89	+40 17.6	2.394	3.316	7.0	18.1
1 2	7 14.39	+25 17.5	1.851	2.830	2.3	19.6	1 2	7 14.81	+40 27.1	2.372	3.319	5.4	18.0
1 12	7 4.58	+25 40.8	1.860	2.838	2.5	19.6	1 12	7 4.25	+40 20.4	2.379	3.323	5.6	18.0
1 22	6 55.37	+25 57.8	1.898	2.846	6.4	19.9	1 22	6 54.35	+39 57.2	2.415	3.326	7.5	18.2
2 1	6 47.80	+26 8.0	1.963	2.855	10.2	20.1	2 1	6 46.11	+39 19.7	2.479	3.330	9.9	18.3
2 11	6 42.63	+26 12.0	2.052	2.863	13.3	20.3	2 11	6 40.24	+38 31.7	2.566	3.333	12.2	18.5
<b>29526</b>	1998 <i>AV</i>		1 7.1 82°76	1°5/ 7.9 18			<b>24204</b>	<i>Trinkle</i>		1 7.1 170°33	0°6/ 6.9 18		
12 3	7 33.86	+13 58.6	2.358	3.149	12.4	18.1	12 3	7 36.29	+23 31.8	2.243	3.050	12.4	19.4
12 13	7 28.97	+14 47.2	2.271	3.149	9.5	17.9	12 13	7 30.89	+23 47.2	2.161	3.051	9.4	19.2
12 23	7 22.13	+15 46.8	2.208	3.150	6.2	17.7	12 23	7 23.35	+24 5.0	2.104	3.053	5.9	19.0
1 2	7 13.88	+16 55.0	2.175	3.150	2.7	17.5	1 2	7 14.31	+24 22.4	2.075	3.054	2.1	18.8
1 12	7 5.04	+18 8.0	2.172	3.150	2.2	17.4	1 12	7 4.73	+24 36.8	2.076	3.055	2.1	18.8
1 22	6 56.52	+19 21.8	2.200	3.151	5.6	17.7	1 22	6 55.62	+24 46.6	2.107	3.055	5.9	19.0
2 1	6 49.18	+20 32.7	2.258	3.151	9.0	17.9	2 1	6 47.95	+24 51.3	2.166	3.056	9.4	19.2
2 11	6 43.74	+21 38.2	2.342	3.151	11.9	18.1	2 11	6 42.42	+24 51.6	2.249	3.056	12.4	19.4
<b>17968</b>	1999 <i>JX</i> <sub>46</sub>		1 7.1 183°40	0°2/ 7.2 18			<b>455127</b>	2015 <i>VY</i> <sub>72</sub>		1 7.1 8°89	2°6/ 6.8 16		
12 3	7 33.43	+20 47.9	2.957	3.752	10.0	19.7	12 3	7 27.15	+26 39.4	0.773	1.657	22.2	20.1
12 13	7 28.24	+20 59.6	2.868	3.752	7.6	19.5	12 13	7 26.65	+26 46.3	0.731	1.661	16.9	19.8
12 23	7 21.47	+21 14.2	2.806	3.752	4.7	19.3	12 23	7 21.81	+26 53.4	0.704	1.667	10.7	19.5
1 2	7 13.61	+21 30.3	2.773	3.752	1.7	19.1	1 2	7 13.92	+26 55.5	0.697	1.677	4.3	19.2
1 12	7 5.34	+21 46.2	2.771	3.751	1.5	19.1	1 12	7 5.18	+26 48.1	0.710	1.690	4.4	19.3
1 22	6 57.39	+22 0.6	2.801	3.749	4.6	19.3	1 22	6 57.88	+26 29.9	0.744	1.706	10.6	19.7
2 1	6 50.45	+22 12.7	2.860	3.748	7.5	19.5	2 1	6 53.81	+26 3.0	0.798	1.725	16.3	20.1
2 11	6 45.08	+22 22.2	2.945	3.746	10.0	19.7	2 11	6 53.85	+25 30.7	0.868	1.747	21.0	20.4
<b>31116</b>	1997 <i>QM</i> <sub>4</sub>		1 7.1 116°19	2°6/ 7.8 18			<b>498</b>	<i>Tokio</i>		1 7.1 103°26	0°7/ 6.9 18		
12 3	7 39.37	+14 51.9	1.643	2.447	16.3	19.8	12 3	7 39.05	+21 58.5	2.035	2.840	13.6	13.5
12 13	7 33.66	+14 53.6	1.575	2.460	12.6	19.6	12 13	7 33.02	+22 41.4	1.971	2.860	10.2	13.4
12 23	7 25.25	+15 6.2	1.529	2.471	8.3	19.4	12 23	7 24.67	+23 28.8	1.932	2.881	6.3	13.2
1 2	7 14.97	+15 28.4	1.509	2.483	4.0	19.1	1 2	7 14.75	+24 16.6	1.921	2.900	2.2	12.9
1 12	7 4.08	+15 57.4	1.517	2.494	3.4	19.1	1 12	7 4.35	+25 0.6	1.941	2.920	2.3	13.0
1 22	6 53.91	+16 30.3	1.554	2.505	7.4	19.4	1 22	6 54.59	+25 37.8	1.991	2.939	6.3	13.3
2 1	6 45.68	+17 4.2	1.618	2.515	11.6	19.7	2 1	6 46.49	+26 7.1	2.069	2.957	9.9	13.5
2 11	6 40.20	+17 37.1	1.705	2.525	15.2	19.9	2 11	6 40.77	+26 28.7	2.171	2.975	12.9	13.8
<b>302913</b>	2003 <i>SE</i> <sub>57</sub>		1 7.1 108°03	1°0/ 7.4 18			<b>447444</b>	2006 <i>EJ</i> <sub>9</sub>		1 7.1 14°16	1°1/ 7.4 18		
12 3	7 40.60	+19 3.7	1.844	2.647	14.9	21.7	12 3	7 35.23	+19 2.5	1.162	2.004	19.3	20.9
12 13	7 34.25	+19 10.3	1.781	2.668	11.2	21.5	12 13	7 31.60	+19 11.1	1.099	2.007	14.8	20.6
12 23	7 25.43	+19 22.9	1.741	2.688	7.1	21.3	12 23	7 24.47	+19 30.2	1.057	2.011	9.4	20.4
1 2	7 14.99	+19 39.2	1.729	2.708	2.7	21.0	1 2	7 14.82	+19 56.9	1.037	2.016	3.5	20.0
1 12	7 4.09	+19 56.6	1.747	2.727	2.3	21.1	1 12	7 4.27	+20 26.7	1.042	2.022	3.1	20.0
1 22	6 53.98	+20 12.9	1.794	2.745	6.6	21.4	1 22	6 54.66	+20 55.6	1.071	2.029	8.8	20.4
2 1	6 45.70	+20 27.2	1.869	2.763	10.5	21.6	2 1	6 47.56	+21 21.1	1.125	2.037	14.1	20.7
2 11	6 39.99	+20 39.2	1.968	2.780	13.8	21.9	2 11	6 44.00	+21 41.9	1.198	2.046	18.5	21.0
<b>405158</b>	2002 <i>TS</i> <sub>244</sub>		1 7.1 131°68	1°8/ 7.7 18			<b>35092</b>	1990 <i>WK</i> <sub>6</sub>		1 7.1 102°38	4°6/ 8.3 18		
12 3	7 38.66	+16 29.5	2.200	2.992	13.2	22.8	12 3						

EPHEMERIDES

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>366979</b>	2005 XS <sub>15</sub>		1 7.1 133°40	1°3/ 7.5 18			<b>445088</b>	2008 TW <sub>121</sub>		1 7.2 49°90	0°6/ 7.2 17		
12 3	7 37.06	+18 14.3	2.238	3.036	12.8	21.8	12 3	7 41.48	+22 7.0	1.207	2.041	19.3	20.8
12 13	7 31.31	+18 11.8	2.163	3.046	9.7	21.6	12 13	7 35.90	+21 46.1	1.157	2.060	14.6	20.6
12 23	7 23.52	+18 14.6	2.112	3.057	6.2	21.4	12 23	7 26.87	+21 29.2	1.127	2.080	9.1	20.4
1 2	7 14.35	+18 21.3	2.090	3.066	2.5	21.2	1 2	7 15.57	+21 14.2	1.120	2.100	3.2	20.1
1 12	7 4.74	+18 30.3	2.097	3.076	2.2	21.2	1 12	7 3.79	+20 59.2	1.140	2.120	2.9	20.1
1 22	6 55.67	+18 40.2	2.135	3.085	5.8	21.5	1 22	6 53.31	+20 43.8	1.186	2.141	8.5	20.5
2 1	6 48.02	+18 50.1	2.202	3.093	9.2	21.7	2 1	6 45.55	+20 28.4	1.256	2.162	13.5	20.8
2 11	6 42.45	+18 59.4	2.293	3.102	12.2	21.9	2 11	6 41.30	+20 14.0	1.347	2.184	17.5	21.2
<b>495532</b>	2014 WB <sub>54</sub>		1 7.1 101°09	1°8/ 7.7 18			<b>424283</b>	2007 TA <sub>131</sub>		1 7.2 161°17	0°3/ 7.0 17		
12 3	7 36.95	+16 34.8	2.080	2.878	13.6	22.0	12 3	7 34.74	+22 50.5	2.749	3.548	10.6	22.2
12 13	7 31.30	+16 33.9	2.012	2.895	10.4	21.8	12 13	7 29.35	+23 4.5	2.666	3.552	8.0	22.0
12 23	7 23.53	+16 40.2	1.968	2.911	6.7	21.6	12 23	7 22.24	+23 20.6	2.609	3.557	5.0	21.9
1 2	7 14.36	+16 52.3	1.952	2.928	3.0	21.4	1 2	7 13.94	+23 36.7	2.581	3.560	1.7	21.6
1 12	7 4.77	+17 8.4	1.966	2.943	2.6	21.4	1 12	7 5.22	+23 51.0	2.585	3.564	1.7	21.6
1 22	6 55.79	+17 26.6	2.009	2.959	6.1	21.6	1 22	6 56.90	+24 1.9	2.619	3.567	4.9	21.9
2 1	6 48.33	+17 45.5	2.081	2.974	9.6	21.9	2 1	6 49.71	+24 9.1	2.682	3.570	7.9	22.1
2 11	6 43.06	+18 3.9	2.177	2.989	12.6	22.1	2 11	6 44.26	+24 12.7	2.772	3.572	10.5	22.2
<b>224359</b>	2005 UX <sub>117</sub>		1 7.1 175°02	0°1/ 7.2 18			<b>104616</b>	2000 GF <sub>108</sub>		1 7.2 160°23	5°7/ 9.2 18		
12 3	7 37.49	+21 24.2	2.345	3.145	12.2	21.9	12 3	7 35.48	+ 2 36.9	2.688	3.427	12.3	20.4
12 13	7 31.67	+21 34.1	2.261	3.147	9.2	21.7	12 13	7 29.79	+ 2 10.0	2.607	3.436	10.2	20.2
12 23	7 23.80	+21 47.4	2.202	3.149	5.8	21.5	12 23	7 22.46	+ 1 55.9	2.550	3.444	7.9	20.1
1 2	7 14.48	+22 1.8	2.171	3.150	2.0	21.2	1 2	7 14.01	+ 1 56.2	2.520	3.451	6.1	20.0
1 12	7 4.64	+22 15.3	2.172	3.151	1.9	21.2	1 12	7 5.17	+ 2 11.0	2.519	3.457	5.7	20.0
1 22	6 55.26	+22 26.2	2.203	3.152	5.7	21.5	1 22	6 56.70	+ 2 38.9	2.548	3.462	7.0	20.0
2 1	6 47.24	+22 33.9	2.262	3.152	9.1	21.7	2 1	6 49.31	+ 3 17.5	2.606	3.467	9.1	20.2
2 11	6 41.30	+22 38.6	2.347	3.151	12.1	21.9	2 11	6 43.57	+ 4 3.4	2.688	3.471	11.3	20.3
<b>118186</b>	1993 XC		1 7.1 272°57	1°9/ 7.9 18			<b>464665</b>	2001 SZ <sub>228</sub>		1 7.2 161°18	5°6/ 4.8 17		
12 3	7 31.51	+15 3.6	2.678	3.471	11.0	20.1	12 3	7 40.62	+42 54.7	3.090	3.863	10.2	21.9
12 13	7 26.98	+15 4.6	2.586	3.464	8.5	19.9	12 13	7 33.97	+43 46.6	3.019	3.869	8.3	21.8
12 23	7 20.79	+15 12.2	2.518	3.458	5.6	19.8	12 23	7 25.21	+44 30.1	2.972	3.875	6.6	21.7
1 2	7 13.43	+15 26.0	2.479	3.452	2.8	19.6	1 2	7 14.99	+45 0.5	2.955	3.880	5.6	21.6
1 12	7 5.62	+15 44.5	2.470	3.446	2.4	19.5	1 12	7 4.25	+45 14.5	2.966	3.885	5.9	21.7
1 22	6 58.10	+16 6.3	2.491	3.439	5.2	19.7	1 22	6 54.01	+45 11.1	3.007	3.889	7.3	21.8
2 1	6 51.60	+16 30.0	2.541	3.433	8.1	19.9	2 1	6 45.20	+44 52.0	3.074	3.893	9.1	21.9
2 11	6 46.74	+16 54.0	2.617	3.427	10.8	20.0	2 11	6 38.51	+44 20.3	3.166	3.897	10.8	22.0
<b>309261</b>	2007 RK <sub>93</sub>		1 7.1 132°15	0°0/ 7.1 18			<b>486683</b>	2013 TD <sub>111</sub>		1 7.2 203°03	14°6/ 8.6 18		
12 3	7 40.56	+21 4.7	1.968	2.770	14.1	21.8	12 3	7 40.74	- 4 52.6	1.389	2.134	21.6	21.0
12 13	7 34.24	+21 28.8	1.898	2.785	10.6	21.6	12 13	7 35.26	- 7 4.1	1.320	2.132	19.1	20.8
12 23	7 25.49	+21 57.6	1.852	2.800	6.6	21.4	12 23	7 26.62	- 8 51.9	1.269	2.130	16.6	20.6
1 2	7 15.07	+22 28.0	1.834	2.813	2.3	21.1	1 2	7 15.62	-10 5.6	1.238	2.127	14.9	20.5
1 12	7 4.12	+22 56.5	1.846	2.826	2.2	21.1	1 12	7 3.62	-10 38.2	1.230	2.123	14.7	20.5
1 22	6 53.82	+23 20.6	1.889	2.838	6.4	21.4	1 22	6 52.23	-10 28.6	1.245	2.119	16.0	20.6
2 1	6 45.26	+23 39.3	1.959	2.850	10.2	21.7	2 1	6 42.94	- 9 41.5	1.280	2.115	18.3	20.7
2 11	6 39.18	+23 52.9	2.054	2.861	13.5	21.9	2 11	6 36.80	- 8 26.6	1.334	2.110	20.9	20.9
<b>90926</b>	Stáhalík		1 7.1 28°25	1°0/ 7.4 18			<b>365244</b>	2009 MB <sub>8</sub>		1 7.2 123°62	5°5/ 9.2 18		
12 3	7 36.36	+18 0.6	1.222	2.057	19.0	18.8	12 3	7 36.06	+ 4 11.8	2.415	3.166	13.3	22.2
12 13	7 32.31	+18 28.4	1.160	2.064	14.5	18.5	12 13	7 30.31	+ 3 49.3	2.345	3.185	10.8	22.0
12 23	7 24.86	+19 8.9	1.118	2.071	9.2	18.2	12 23	7 22.80	+ 3 40.5	2.299	3.203	8.2	21.9
1 2	7 14.97	+19 57.9	1.100	2.080	3.4	17.9	1 2	7 14.13	+ 3 46.4	2.281	3.221	6.1	21.8
1 12	7 4.21	+20 49.9	1.108	2.088	2.9	17.9	1 12	7 5.10	+ 4 6.7	2.291	3.238	5.6	21.8
1 22	6 54.35	+21 39.3	1.141	2.098	8.6	18.3	1 22	6 56.56	+ 4 39.4	2.331	3.254	7.1	21.9
2 1	6 46.92	+22 22.5	1.199	2.108	13.7	18.6	2 1	6 49.26	+ 5 21.8	2.399	3.270	9.4	22.1
2 11	6 42.94	+22 58.1	1.277	2.119	18.0	18.9	2 11	6 43.79	+ 6 10.2	2.492	3.285	11.8	22.3
<b>240911</b>	2006 DO <sub>183</sub>		1 7.2 172°16	0°9/ 6.9 18			<b>267475</b>	2002 FV <sub>31</sub>		1 7.2 302°40	1°1/ 7.5 18		
12 3	7 40.38	+23 28.5	1.994	2.800	13.8	21.4	12 3	7 34.51	+18 0.8	1.827	2.641	14.6	20.9
12 13	7 34.26	+23 56.4	1.914	2.803	10.5	21.2	12 13	7 30.15	+18 17.3	1.734	2.626	11.2	20.7
12 23	7 25.61	+24 27.6	1.858	2.806	6.6	21.0	12 23	7 23.25	+18 42.4	1.663	2.612	7.2	20.4
1 2	7 15.17	+24 58.3	1.829	2.808	2.4	20.7	1 2	7 14.42	+19 14.2	1.619	2.597	2.8	20.1
1 12	7 4.04	+25 24.8	1.831	2.810	2.5	20.7	1 12	7 4.73	+19 49.6	1.604	2.583	2.4	20.1
1 22	6 53.46	+25 44.7	1.863	2.811	6.6	21.0	1 22	6 55.40	+20 25.4	1.616	2.569	6.9	20.3
2 1	6 44.59	+25 57.1	1.923	2.811	10.5	21.2	2 1	6 47.63	+20 59.2	1.656	2.555	11.2	20.5
2 11	6 38.24	+26 3.1	2.007	2.811	13.8	21.4	2 11	6 42.36	+21 29.3	1.718	2.542	14.9	20.7
<b>37913</b>	1998 FO <sub>90</sub>		1 7.2 240°46	1°2/ 6.8 18			<b>80115</b>	1999 RF <sub>95</sub>		1 7.2 33°84	2°6/ 7.6 18		
12 3	7 39.21	+23 44.7	1.833	2.646	14.6	19.5	12 3	7 37.96	+17 10.4	1.137	1.974	20.0	18.8
12 13	7 33.77	+24 15.0	1.743	2.636	11.1	19.3	12 13	7 33.62	+16 57.3	1.078	1.981	15.4	18.5
12 23	7 25.54	+24 49.6	1.675	2.625	7.0	19.0	12 23	7 25.72	+16 55.7	1.038	1.989	10.0	18.2
1 2	7 15.21	+25 24.3	1.635	2.613	2.6	18.7	1 2	7 15.28	+17 4.2	1.021	1.998	4.4	17.9
1 12	7 3.95	+25 54.6	1.623	2.602	2.8	18.7	1 12	7 4.04	+17 20.2	1.028	2.007	3.8	17.9
1 22	6 53.12	+26 17.6	1.641	2.589	7.3	19.0	1 22	6 53.83	+17 40.3	1.061	2.017	9.1	18.3
2 1	6 44.05	+26 32.1	1.686	2.577	11.6	19.2	2 1	6 46.24	+18 2.0	1.117	2.028	14.3	18.6
2 11	6 37.72	+26 39.1	1.753	2.564	15.2	19.4	2 11	6 42.26	+18 23.4	1.192	2.039	18.7	18.9
<b>40647</b>	1999 RD <sub>185</sub>		1 7.2 205°22	0°5/ 6.9 18			<b>136493</b>	2005 GW <sub>141</sub>		1 7.2 189°70	5°3/ 4.4 18		
12 3	7 39.43	+22 3.3	2.103	2.905	13.3	20.3	12 3	7 38.94	+37 29.7	2.660	3.452	11.1	

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1 7.2

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>238328</b>	2004 <i>AB</i> <sub>17</sub>		1 7.2 300°45	0°8/ 7.4	18		<b>402633</b>	2006 <i>TH</i> <sub>59</sub>		1 7.2 103°05	1°5/ 6.8	18	
12 3	7 34.06	+19 25.9	2.204	3.011	12.6	21.1	12 3	7 41.72	+25 51.7	2.021	2.825	13.7	21.7
12 13	7 29.28	+19 29.9	2.117	3.006	9.6	20.9	12 13	7 35.00	+26 13.8	1.961	2.850	10.3	21.5
12 23	7 22.42	+19 39.0	2.054	3.001	6.1	20.6	12 23	7 25.91	+26 36.1	1.926	2.873	6.4	21.3
1 2	7 14.08	+19 51.6	2.019	2.997	2.3	20.4	1 2	7 15.26	+26 54.8	1.919	2.897	2.6	21.1
1 12	7 5.16	+20 5.7	2.013	2.993	2.0	20.3	1 12	7 4.22	+27 6.8	1.942	2.919	2.7	21.2
1 22	6 56.66	+20 19.6	2.037	2.988	5.8	20.6	1 22	6 53.98	+27 11.0	1.995	2.941	6.4	21.4
2 1	6 49.50	+20 32.3	2.089	2.984	9.4	20.8	2 1	6 45.55	+27 7.6	2.077	2.962	10.0	21.7
2 11	6 44.41	+20 43.1	2.165	2.980	12.6	21.0	2 11	6 39.64	+26 58.6	2.182	2.983	13.0	21.9
<b>335221</b>	2005 <i>GP</i> <sub>28</sub>		1 7.2 250°58	3°4/ 8.1	18		<b>60773</b>	2000 <i>GD</i> <sub>158</sub>		1 7.2 131°20	0°0/ 7.1	18	
12 3	7 33.35	+12 7.9	2.353	3.141	12.5	20.7	12 3	7 35.01	+20 56.6	2.572	3.371	11.3	19.8
12 13	7 28.55	+11 48.8	2.264	3.136	9.8	20.5	12 13	7 29.64	+21 16.1	2.495	3.381	8.5	19.6
12 23	7 21.88	+11 38.3	2.199	3.132	6.8	20.3	12 23	7 22.47	+21 39.3	2.444	3.391	5.3	19.4
1 2	7 13.89	+11 36.7	2.162	3.127	4.1	20.1	1 2	7 14.08	+22 4.0	2.421	3.400	1.8	19.2
1 12	7 5.38	+11 43.6	2.154	3.123	3.7	20.1	1 12	7 5.27	+22 27.9	2.430	3.409	1.7	19.2
1 22	6 57.24	+11 57.8	2.175	3.118	6.2	20.2	1 22	6 56.88	+22 49.3	2.469	3.418	5.1	19.5
2 1	6 50.29	+12 17.6	2.224	3.113	9.3	20.4	2 1	6 49.71	+23 7.1	2.537	3.427	8.2	19.7
2 11	6 45.20	+12 41.0	2.299	3.109	12.1	20.6	2 11	6 44.35	+23 21.2	2.631	3.435	10.9	19.9
<b>457817</b>	2009 <i>RB</i> <sub>55</sub>		1 7.2 93°73	4°8/ 8.7	18		<b>457896</b>	2009 <i>TW</i> <sub>30</sub>		1 7.2 42°87	1°6/ 6.7	18	
12 3	7 35.55	+ 8 11.8	2.065	2.844	14.4	21.4	12 3	7 36.63	+24 44.9	1.767	2.587	14.7	21.1
12 13	7 30.24	+ 7 53.9	1.999	2.860	11.4	21.2	12 13	7 31.71	+25 20.4	1.697	2.594	11.1	20.9
12 23	7 22.91	+ 7 49.1	1.954	2.877	8.3	21.0	12 23	7 24.15	+25 58.9	1.651	2.601	7.0	20.7
1 2	7 14.22	+ 7 57.9	1.937	2.893	5.5	20.9	1 2	7 14.73	+26 36.0	1.631	2.609	2.7	20.4
1 12	7 5.12	+ 8 19.6	1.948	2.910	5.0	20.9	1 12	7 4.66	+27 7.1	1.639	2.617	3.0	20.5
1 22	6 56.58	+ 8 51.8	1.988	2.926	7.1	21.0	1 22	6 55.24	+27 29.6	1.676	2.625	7.2	20.7
2 1	6 49.49	+ 9 31.5	2.056	2.941	10.1	21.3	2 1	6 47.67	+27 42.8	1.740	2.633	11.1	21.0
2 11	6 44.48	+10 15.4	2.148	2.957	12.9	21.5	2 11	6 42.76	+27 47.8	1.826	2.641	14.5	21.2
<b>422515</b>	2014 <i>TM</i> <sub>7</sub>		1 7.2 107°90	2°5/ 7.9	18		<b>302920</b>	2003 <i>SX</i> <sub>157</sub>		1 7.2 62°71	3°7/ 8.0	18	
12 3	7 36.79	+14 44.8	1.973	2.771	14.2	21.8	12 3	7 38.22	+13 51.5	1.478	2.290	17.5	20.6
12 13	7 31.35	+14 43.3	1.902	2.783	11.0	21.6	12 13	7 32.96	+13 29.9	1.419	2.306	13.6	20.4
12 23	7 23.69	+14 50.8	1.854	2.795	7.2	21.4	12 23	7 24.90	+13 20.1	1.381	2.323	9.1	20.1
1 2	7 14.51	+15 6.4	1.834	2.807	3.6	21.2	1 2	7 14.96	+13 22.2	1.368	2.339	4.9	19.9
1 12	7 4.84	+15 28.3	1.842	2.818	3.1	21.2	1 12	7 4.50	+13 34.6	1.382	2.356	4.3	19.9
1 22	6 55.75	+15 54.1	1.880	2.829	6.5	21.4	1 22	6 54.90	+13 55.0	1.424	2.373	8.0	20.2
2 1	6 48.23	+16 21.7	1.946	2.840	10.1	21.7	2 1	6 47.39	+14 20.4	1.491	2.391	12.2	20.5
2 11	6 42.97	+16 49.4	2.036	2.851	13.3	21.9	2 11	6 42.75	+14 48.2	1.580	2.408	15.8	20.8
<b>112701</b>	2002 <i>PX</i> <sub>105</sub>		1 7.2 340°32	5°2/ 8.5	18		<b>161754</b>	2006 <i>SJ</i> <sub>354</sub>		1 7.2 235°45	2°4/ 8.1	17	
12 3	7 33.22	+ 8 31.9	2.013	2.799	14.4	19.7	12 3	7 32.77	+12 42.5	2.981	3.759	10.4	21.0
12 13	7 28.72	+ 7 56.5	1.930	2.796	11.6	19.5	12 13	7 27.83	+12 42.1	2.876	3.745	8.1	20.8
12 23	7 22.10	+ 7 33.0	1.870	2.793	8.5	19.3	12 23	7 21.33	+12 49.0	2.797	3.730	5.5	20.6
1 2	7 13.99	+ 7 23.3	1.835	2.790	5.9	19.1	1 2	7 13.71	+13 2.9	2.747	3.715	3.1	20.5
1 12	7 5.30	+ 7 27.5	1.828	2.788	5.4	19.1	1 12	7 5.60	+13 22.8	2.728	3.700	2.7	20.4
1 22	6 57.05	+ 7 44.6	1.850	2.786	7.6	19.2	1 22	6 57.71	+13 47.3	2.740	3.684	5.0	20.5
2 1	6 50.17	+ 8 12.1	1.898	2.784	10.7	19.4	2 1	6 50.71	+14 15.0	2.782	3.668	7.7	20.7
2 11	6 45.39	+ 8 46.6	1.969	2.783	13.7	19.6	2 11	6 45.18	+14 44.1	2.849	3.651	10.2	20.8
<b>157863</b>	1998 <i>WG</i> <sub>26</sub>		1 7.2 219°16	4°2/ 6.0	18		<b>426586</b>	2013 <i>SU</i> <sub>28</sub>		1 7.2 63°00	3°0/ 8.4	18	
12 3	7 42.92	+30 35.2	1.711	2.525	15.4	20.8	12 3	7 33.80	+11 41.8	2.085	2.878	13.8	20.5
12 13	7 36.96	+31 28.4	1.628	2.519	11.9	20.6	12 13	7 29.01	+11 57.7	2.016	2.892	10.7	20.3
12 23	7 27.74	+32 20.9	1.568	2.512	8.0	20.3	12 23	7 22.20	+12 25.3	1.970	2.906	7.3	20.1
1 2	7 16.06	+33 5.4	1.534	2.504	4.7	20.1	1 2	7 14.01	+13 3.6	1.951	2.920	4.0	19.9
1 12	7 3.32	+33 35.6	1.529	2.496	5.2	20.1	1 12	7 5.36	+13 50.1	1.961	2.934	3.3	19.9
1 22	6 51.18	+33 48.0	1.552	2.488	8.9	20.3	1 22	6 57.22	+14 41.3	2.000	2.949	6.2	20.1
2 1	6 41.19	+33 43.5	1.601	2.479	12.9	20.6	2 1	6 50.47	+15 34.1	2.068	2.963	9.5	20.4
2 11	6 34.43	+33 25.9	1.672	2.469	16.4	20.8	2 11	6 45.78	+16 25.7	2.160	2.978	12.5	20.6
<b>160369</b>	2004 <i>FW</i> <sub>34</sub>		1 7.2 251°13	1°5/ 7.6	18		<b>218642</b>	2005 <i>SV</i> <sub>26</sub>		1 7.2 125°23	0°3/ 7.1	18	
12 3	7 39.00	+17 28.3	1.529	2.344	16.8	20.9	12 3	7 37.79	+21 49.2	2.036	2.843	13.5	21.1
12 13	7 34.01	+17 41.0	1.442	2.334	13.0	20.6	12 13	7 32.19	+22 10.8	1.963	2.853	10.2	20.9
12 23	7 25.91	+18 4.1	1.376	2.324	8.4	20.3	12 23	7 24.27	+22 36.5	1.913	2.862	6.4	20.7
1 2	7 15.44	+18 35.4	1.335	2.313	3.4	20.0	1 2	7 14.75	+23 3.4	1.891	2.870	2.2	20.4
1 12	7 3.90	+19 11.4	1.323	2.302	2.9	19.9	1 12	7 4.68	+23 28.2	1.899	2.879	2.1	20.4
1 22	6 52.83	+19 48.2	1.338	2.291	8.0	20.2	1 22	6 55.18	+23 48.8	1.937	2.887	6.2	20.7
2 1	6 43.74	+20 22.8	1.379	2.279	12.9	20.4	2 1	6 47.28	+24 4.3	2.003	2.895	10.0	21.0
2 11	6 37.73	+20 53.9	1.441	2.268	17.2	20.7	2 11	6 41.73	+24 14.8	2.092	2.902	13.1	21.2
<b>64250</b>	2001 <i>TV</i> <sub>167</sub>		1 7.2 122°58	1°9/ 6.8	18		<b>91409</b>	1999 <i>NP</i> <sub>15</sub>		1 7.2 202°78	0°1/ 7.1	18	
12 3	7 43.87	+27 6.3	1.672	2.484	15.7	19.6	12 3	7 37.79	+22 50.6	2.313	3.115	12.3	20.5
12 13	7 37.19	+27 16.8	1.605	2.497	11.9	19.3	12 13	7 32.01	+22 50.5	2.224	3.111	9.3	20.3
12 23	7 27.54	+27 26.4	1.561	2.509	7.6	19.1	12 23	7 24.10	+22 52.3	2.160	3.107	5.8	20.1
1 2	7 15.87	+27 30.6	1.544	2.521	3.1	18.9	1 2	7 14.69	+22 53.9	2.124	3.103	2.0	19.8
1 12	7 3.62	+27 26.2	1.555	2.532	3.2	18.9	1 12	7 4.73	+22 53.5	2.119	3.099	1.9	19.8
1 22	6 52.31	+27 12.4	1.596	2.543	7.6	19.2	1 22	6 55.22	+22 50.1	2.144	3.093	5.8	20.1
2 1	6 43.23	+26 50.8	1.663	2.554	11.7	19.5	2 1	6 47.10	+22 43.7	2.198	3.088	9.3	20.3
2 11	6 37.20	+26 24.4	1.753	2.563	15.3	19.7	2 11	6 41.11	+22 34.8	2.277	3.082	12.4	20.5
<b>417927</b>	2007 <i>RG</i> <sub>278</sub>		1 7.2 105°61	5°9/ 4.8	18		<b>225326</b>	1998 <i>HD</i> <sub>154</sub>		1 7.2 227°61	2°6/ 7.9	18	
12 3	7 40.01	+39 9.1	2.427										

EPHEMERIDES

1 7.2

1 7.2

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>325626</b>	2009 <i>SF</i> <sub>270</sub>		1 7.2 109°97	1.9°/ 7.8	18		<b>289011</b>	2004 <i>TL</i> <sub>102</sub>		1 7.2 55°00	0.7°/ 7.4	17	
12 3	7 36.13	+16 0.1	2.064	2.863	13.6	21.4	12 3	7 39.66	+19 40.5	1.302	2.131	18.5	21.0
12 13	7 30.83	+16 5.1	1.990	2.873	10.4	21.3	12 13	7 34.45	+19 51.5	1.250	2.150	14.0	20.7
12 23	7 23.37	+16 18.1	1.941	2.884	6.8	21.0	12 23	7 26.02	+20 10.7	1.218	2.170	8.8	20.5
1 2	7 14.44	+16 37.8	1.918	2.893	3.1	20.8	1 2	7 15.42	+20 34.7	1.210	2.190	3.2	20.2
1 12	7 5.01	+17 2.0	1.926	2.903	2.6	20.8	1 12	7 4.25	+20 59.3	1.230	2.210	2.7	20.3
1 22	6 56.12	+17 28.5	1.962	2.913	6.1	21.1	1 22	6 54.16	+21 21.6	1.275	2.230	8.1	20.6
2 1	6 48.71	+17 55.4	2.027	2.922	9.7	21.3	2 1	6 46.52	+21 39.8	1.346	2.251	12.8	21.0
2 11	6 43.49	+18 21.1	2.116	2.931	12.8	21.5	2 11	6 42.17	+21 53.9	1.438	2.272	16.8	21.3
<b>360020</b>	2013 <i>AW</i> <sub>15</sub>		1 7.2 319°43	4.2°/ 8.1	18		<b>492128</b>	2013 <i>LH</i> <sub>32</sub>		1 7.2 203°96	4.3°/ 8.4	18	
12 3	7 34.46	+13 17.3	1.310	2.135	18.6	20.9	12 3	7 36.22	+ 9 48.7	2.130	2.910	13.9	22.3
12 13	7 30.95	+13 1.1	1.225	2.120	14.7	20.6	12 13	7 30.93	+ 9 31.9	2.041	2.906	11.1	22.1
12 23	7 24.20	+12 59.4	1.160	2.105	10.1	20.3	12 23	7 23.50	+ 9 26.5	1.976	2.902	7.9	21.9
1 2	7 14.93	+13 12.9	1.118	2.090	5.5	20.0	1 2	7 14.55	+ 9 33.3	1.937	2.898	5.0	21.7
1 12	7 4.49	+13 40.3	1.101	2.076	4.8	19.9	1 12	7 4.97	+ 9 51.4	1.927	2.893	4.5	21.6
1 22	6 54.53	+14 18.4	1.109	2.063	9.2	20.1	1 22	6 55.79	+10 19.3	1.947	2.888	7.0	21.8
2 1	6 46.64	+15 3.1	1.141	2.050	14.3	20.4	2 1	6 47.95	+10 54.3	1.995	2.882	10.3	22.0
2 11	6 42.01	+15 50.1	1.194	2.039	18.8	20.6	2 11	6 42.20	+11 33.5	2.067	2.876	13.3	22.1
<b>238729</b>	2005 <i>GZ</i> <sub>87</sub>		1 7.2 302°30	3.8°/ 6.2	18		<b>376997</b>	2002 <i>PM</i> <sub>178</sub>		1 7.2 123°83	0.8°/ 6.9	18	
12 3	7 37.41	+32 19.1	2.085	2.896	13.1	20.1	12 3	7 36.48	+24 7.8	2.645	3.444	11.0	22.1
12 13	7 32.27	+32 46.8	1.994	2.883	10.1	19.9	12 13	7 30.71	+24 31.3	2.574	3.460	8.2	21.9
12 23	7 24.54	+33 11.0	1.927	2.869	6.9	19.6	12 23	7 23.13	+24 56.3	2.528	3.475	5.1	21.7
1 2	7 14.93	+33 26.9	1.887	2.856	4.2	19.4	1 2	7 14.36	+25 20.1	2.511	3.490	1.9	21.5
1 12	7 4.55	+33 30.6	1.876	2.842	4.5	19.4	1 12	7 5.20	+25 40.3	2.526	3.504	2.0	21.6
1 22	6 54.66	+33 20.7	1.893	2.829	7.5	19.6	1 22	6 56.51	+25 55.4	2.572	3.518	5.1	21.8
2 1	6 46.44	+32 58.1	1.937	2.816	10.9	19.8	2 1	6 49.08	+26 5.0	2.647	3.532	8.1	22.0
2 11	6 40.77	+32 25.9	2.005	2.804	14.0	19.9	2 11	6 43.49	+26 9.6	2.747	3.545	10.7	22.2
<b>362030</b>	2008 <i>YH</i> <sub>100</sub>		1 7.2 355°81	0°/ 6.9	18		<b>61317</b>	2000 <i>OO</i> <sub>51</sub>		1 7.2 117°96	0.7°/ 7.1	18	
12 3	7 34.94	+21 40.3	1.185	2.030	18.9	21.2	12 3	7 41.30	+25 31.2	2.165	2.966	13.0	19.2
12 13	7 31.55	+21 47.9	1.116	2.025	14.4	20.9	12 13	7 34.57	+25 17.3	2.094	2.981	9.8	19.0
12 23	7 24.61	+22 2.5	1.066	2.022	9.1	20.6	12 23	7 25.62	+25 2.4	2.047	2.995	6.1	18.8
1 2	7 15.05	+22 20.7	1.039	2.019	3.2	20.2	1 2	7 15.22	+24 44.4	2.029	3.008	2.2	18.6
1 12	7 4.47	+22 38.3	1.038	2.018	3.0	20.2	1 12	7 4.45	+24 22.3	2.042	3.021	2.1	18.6
1 22	6 54.72	+22 52.1	1.061	2.018	8.9	20.6	1 22	6 54.40	+23 56.1	2.086	3.034	6.0	18.9
2 1	6 47.47	+23 0.8	1.107	2.019	14.3	20.9	2 1	6 46.04	+23 27.0	2.158	3.046	9.5	19.1
2 11	6 43.80	+23 4.7	1.173	2.021	18.8	21.1	2 11	6 40.02	+22 56.8	2.255	3.058	12.5	19.3
<b>86816</b>	2000 <i>GB</i> <sub>135</sub>		1 7.2 174°32	2°1/ 6.5	18		<b>165661</b>	2001 <i>MJ</i> <sub>1</sub>		1 7.2 194°09	1°9/ 6.5	17	
12 3	7 41.49	+24 43.6	1.776	2.587	15.0	19.8	12 3	7 36.43	+28 53.0	3.019	3.814	9.8	21.3
12 13	7 35.55	+25 38.2	1.697	2.590	11.4	19.6	12 13	7 30.64	+29 15.6	2.929	3.812	7.5	21.2
12 23	7 26.71	+26 37.3	1.643	2.592	7.2	19.4	12 23	7 23.11	+29 36.9	2.865	3.809	4.8	21.0
1 2	7 15.71	+27 35.0	1.616	2.593	3.0	19.1	1 2	7 14.37	+29 54.1	2.831	3.805	2.4	20.8
1 12	7 3.84	+28 25.2	1.618	2.594	3.4	19.1	1 12	7 5.18	+30 5.0	2.828	3.801	2.6	20.8
1 22	6 52.54	+29 4.1	1.650	2.594	7.6	19.4	1 22	6 56.33	+30 8.3	2.857	3.796	5.1	21.0
2 1	6 43.17	+29 30.5	1.708	2.594	11.8	19.6	2 1	6 48.59	+30 4.3	2.915	3.791	7.8	21.2
2 11	6 36.68	+29 45.6	1.790	2.593	15.3	19.9	2 11	6 42.55	+29 54.1	2.999	3.785	10.2	21.3
<b>291096</b>	2005 <i>YG</i> <sub>135</sub>		1 7.2 271°75	2°3/ 6.2	18		<b>145658</b>	6596 <i>P-L</i>		1 7.2 88°31	2°1/ 6.7	18	R
12 3	7 36.78	+25 37.2	2.025	2.838	13.3	20.6	12 3	7 40.60	+26 49.0	1.774	2.589	14.9	19.5
12 13	7 31.83	+26 37.3	1.936	2.829	10.2	20.3	12 13	7 34.60	+27 16.3	1.712	2.605	11.2	19.3
12 23	7 24.32	+27 41.6	1.870	2.819	6.5	20.1	12 23	7 25.90	+27 43.7	1.673	2.622	7.1	19.1
1 2	7 14.89	+28 45.0	1.833	2.809	3.0	19.9	1 2	7 15.37	+28 6.7	1.661	2.638	3.1	18.9
1 12	7 4.58	+29 41.9	1.825	2.799	3.4	19.9	1 12	7 4.31	+28 21.3	1.678	2.654	3.3	19.0
1 22	6 54.60	+30 28.2	1.846	2.789	7.2	20.1	1 22	6 54.08	+28 25.9	1.724	2.670	7.2	19.2
2 1	6 46.16	+31 2.2	1.895	2.778	10.9	20.3	2 1	6 45.86	+28 21.2	1.796	2.686	11.1	19.5
2 11	6 40.19	+31 24.4	1.967	2.768	14.2	20.5	2 11	6 40.43	+28 9.4	1.892	2.701	14.4	19.8
<b>455389</b>	2002 <i>VG</i> <sub>147</sub>		1 7.2 22°55	2°2/ 7.4	18		<b>114780</b>	2003 <i>MD</i> <sub>3</sub>		1 7.2 199°61	0°8/ 6.9	18	
12 3	7 37.69	+19 54.7	1.321	2.152	18.1	20.0	12 3	7 40.69	+23 8.3	2.078	2.880	13.5	21.1
12 13	7 32.96	+19 7.2	1.259	2.160	13.8	19.8	12 13	7 34.54	+23 34.6	1.989	2.876	10.2	20.8
12 23	7 25.09	+18 24.2	1.218	2.169	8.9	19.5	12 23	7 25.89	+24 4.4	1.924	2.872	6.4	20.6
1 2	7 15.10	+17 46.0	1.201	2.178	3.8	19.2	1 2	7 15.42	+24 34.3	1.888	2.866	2.3	20.3
1 12	7 4.51	+17 12.8	1.211	2.189	3.4	19.2	1 12	7 4.19	+25 0.5	1.881	2.860	2.3	20.3
1 22	6 54.92	+16 45.3	1.247	2.201	8.3	19.6	1 22	6 53.41	+25 20.7	1.906	2.853	6.5	20.6
2 1	6 47.67	+16 23.7	1.307	2.213	13.0	19.9	2 1	6 44.21	+25 34.0	1.958	2.846	10.4	20.8
2 11	6 43.60	+16 7.8	1.389	2.227	17.0	20.2	2 11	6 37.47	+25 41.1	2.035	2.837	13.7	21.0
<b>459155</b>	2012 <i>CF</i> <sub>54</sub>		1 7.2 318°52	1°1/ 7.5	16		<b>73531</b>	2003 <i>OE</i> <sub>5</sub>		1 7.2 124°42	0°3/ 7.1	18	
12 3	7 34.24	+18 1.7	1.496	2.322	16.6	21.4	12 3	7 41.14	+22 13.9	1.880	2.686	14.5	20.7
12 13	7 30.55	+18 21.0	1.405	2.304	12.8	21.1	12 13	7 34.82	+22 29.5	1.811	2.701	11.0	20.5
12 23	7 23.85	+18 51.4	1.336	2.287	8.3	20.8	12 23	7 25.96	+22 48.7	1.767	2.715	6.8	20.3
1 2	7 14.81	+19 30.5	1.291	2.270	3.2	20.5	1 2	7 15.39	+23 8.3	1.750	2.729	2.4	20.1
1 12	7 4.64	+20 14.4	1.273	2.253	2.7	20.4	1 12	7 4.29	+23 25.2	1.763	2.743	2.2	20.1
1 22	6 54.87	+20 58.6	1.282	2.237	8.0	20.7	1 22	6 53.91	+23 37.4	1.806	2.756	6.6	20.4
2 1	6 46.96	+21 39.8	1.316	2.222	13.0	20.9	2 1	6 45.37	+23 44.5	1.876	2.768	10.5	20.6
2 11	6 42.06	+22 15.9	1.371	2.208	17.3	21.1	2 11	6 39.43	+23 47.2	1.970	2.779	13.9	20.9
<b>416215</b>	2002 <i>VL</i> <sub>61</sub>		1 7.2 15°49	7°4/ 8.5	18		<b>182438</b>	2001 <i>SO</i> <sub>15</sub>		1 7.2 65°99	1°4/ 6.8	18	
12 3	7 33.06	+ 6 14.3	1.722	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>122043</b>	2000 <i>GV</i> <sub>79</sub>		1 7.2 173°08	3°1/ 7.9 18			<b>104172</b>	2000 <i>EE</i> <sub>82</sub>		1 7.2 293°09	5°6/ 5.5 18		
12 3	7 40.01	+13 54.5	1.887	2.679	15.0	19.8	12 3	7 39.00	+36 56.4	2.128	2.932	13.1	19.7
12 13	7 34.00	+13 44.8	1.806	2.683	11.7	19.5	12 13	7 33.58	+37 46.8	2.045	2.924	10.4	19.5
12 23	7 25.51	+13 44.7	1.748	2.686	7.9	19.3	12 23	7 25.44	+38 31.4	1.986	2.916	7.6	19.4
1 2	7 15.27	+13 53.9	1.717	2.688	4.1	19.1	1 2	7 15.31	+39 3.7	1.954	2.908	5.7	19.2
1 12	7 4.36	+14 10.8	1.715	2.689	3.6	19.1	1 12	7 4.38	+39 18.9	1.950	2.900	6.1	19.2
1 22	6 54.00	+14 33.4	1.743	2.690	7.1	19.3	1 22	6 54.00	+39 15.3	1.975	2.892	8.5	19.4
2 1	6 45.30	+14 59.6	1.798	2.690	10.9	19.5	2 1	6 45.41	+38 54.1	2.025	2.885	11.4	19.5
2 11	6 39.08	+15 27.1	1.877	2.689	14.4	19.7	2 11	6 39.52	+38 19.5	2.098	2.877	14.2	19.7
<b>440571</b>	2005 <i>UX</i> <sub>395</sub>		1 7.2 57°21	3°7/ 6.7 15			<b>283765</b>	2003 <i>GP</i> <sub>48</sub>		1 7.2 159°60	1°4/ 7.6 18		
12 3	7 45.66	+29 20.7	1.176	2.010	19.7	21.3	12 3	7 39.83	+17 10.2	1.881	2.681	14.7	21.0
12 13	7 39.29	+29 46.9	1.135	2.037	14.9	21.1	12 13	7 33.92	+17 23.9	1.803	2.687	11.3	20.8
12 23	7 29.09	+30 9.7	1.114	2.065	9.6	20.8	12 23	7 25.50	+17 45.9	1.748	2.693	7.3	20.6
1 2	7 16.46	+30 22.0	1.117	2.093	4.6	20.6	1 2	7 15.30	+18 14.1	1.721	2.698	3.0	20.3
1 12	7 3.43	+30 19.2	1.146	2.121	4.8	20.7	1 12	7 4.44	+18 45.4	1.724	2.703	2.5	20.3
1 22	6 52.01	+30 1.1	1.201	2.149	9.4	21.1	1 22	6 54.15	+19 17.0	1.756	2.706	6.7	20.6
2 1	6 43.71	+29 31.3	1.280	2.177	14.0	21.4	2 1	6 45.55	+19 46.8	1.815	2.709	10.7	20.8
2 11	6 39.29	+28 55.1	1.379	2.205	17.8	21.7	2 11	6 39.47	+20 13.8	1.899	2.712	14.2	21.1
<b>411343</b>	2010 <i>US</i> <sub>64</sub>		1 7.2 5°57	2°4/ 6.6 18			<b>121333</b>	1999 <i>TF</i> <sub>3</sub>		1 7.2 38°95	1°3/ 6.9 18		
12 3	7 38.03	+27 2.5	1.676	2.499	15.3	21.0	12 3	7 36.63	+24 41.8	1.871	2.688	14.1	20.2
12 13	7 33.05	+27 31.5	1.601	2.499	11.6	20.7	12 13	7 31.62	+25 4.1	1.797	2.692	10.7	20.0
12 23	7 25.16	+28 1.2	1.549	2.499	7.4	20.5	12 23	7 24.10	+25 28.6	1.746	2.697	6.7	19.8
1 2	7 15.19	+28 26.9	1.523	2.500	3.3	20.2	1 2	7 14.81	+25 51.7	1.722	2.701	2.5	19.5
1 12	7 4.45	+28 44.1	1.524	2.500	3.6	20.2	1 12	7 4.90	+26 10.0	1.728	2.706	2.6	19.5
1 22	6 54.39	+28 50.6	1.554	2.501	7.8	20.5	1 22	6 55.60	+26 21.3	1.761	2.711	6.8	19.8
2 1	6 46.33	+28 46.6	1.609	2.502	11.9	20.7	2 1	6 48.03	+26 25.4	1.822	2.716	10.7	20.0
2 11	6 41.18	+28 34.4	1.687	2.504	15.5	21.0	2 11	6 43.00	+26 23.2	1.906	2.721	14.0	20.3
<b>335922</b>	2007 <i>SJ</i> <sub>23</sub>		1 7.2 120°74	0°4/ 7.3 18			<b>424755</b>	2008 <i>TO</i> <sub>42</sub>		1 7.2 335°41	0°9/ 7.0 17		
12 3	7 35.64	+20 42.7	2.834	3.626	10.5	21.6	12 3	7 37.44	+25 20.9	2.095	2.905	13.1	21.2
12 13	7 29.89	+20 43.2	2.762	3.644	7.9	21.5	12 13	7 31.97	+25 17.0	2.013	2.904	9.9	21.0
12 23	7 22.54	+20 46.3	2.715	3.661	4.9	21.3	12 23	7 24.20	+25 13.0	1.955	2.904	6.2	20.8
1 2	7 14.15	+20 50.6	2.699	3.677	1.8	21.1	1 2	7 14.83	+25 6.6	1.924	2.903	2.3	20.5
1 12	7 5.46	+20 54.9	2.714	3.693	1.6	21.1	1 12	7 4.91	+24 55.9	1.924	2.903	2.3	20.5
1 22	6 57.22	+20 58.1	2.760	3.709	4.7	21.4	1 22	6 55.56	+24 40.4	1.952	2.902	6.2	20.7
2 1	6 50.12	+21 0.0	2.836	3.724	7.5	21.6	2 1	6 47.79	+24 20.8	2.009	2.902	9.9	21.0
2 11	6 44.70	+21 0.4	2.938	3.739	10.0	21.8	2 11	6 42.35	+23 58.3	2.090	2.901	13.1	21.2
<b>352135</b>	2007 <i>HX</i> <sub>68</sub>		1 7.2 119°74	1°2/ 6.9 18			<b>237639</b>	2001 <i>SA</i> <sub>89</sub>		1 7.2 10°34	8°1/ 9.9 18		
12 3	7 41.86	+24 23.9	1.583	2.400	16.2	21.6	12 3	7 30.22	+ 2 14.8	1.658	2.439	17.2	18.9
12 13	7 35.90	+24 42.1	1.514	2.410	12.3	21.3	12 13	7 26.83	+ 1 37.8	1.590	2.443	14.3	18.8
12 23	7 26.90	+25 2.8	1.468	2.419	7.7	21.1	12 23	7 21.11	+ 1 21.4	1.542	2.448	11.3	18.6
1 2	7 15.77	+25 21.6	1.448	2.427	2.8	20.8	1 2	7 13.78	+ 1 28.5	1.517	2.454	8.8	18.5
1 12	7 3.95	+25 34.8	1.457	2.436	2.9	20.8	1 12	7 5.87	+ 1 59.4	1.517	2.462	8.1	18.4
1 22	6 52.97	+25 40.1	1.494	2.444	7.7	21.2	1 22	6 58.51	+ 2 51.2	1.543	2.470	9.7	18.5
2 1	6 44.19	+25 37.9	1.556	2.451	12.1	21.4	2 1	6 52.73	+ 3 58.7	1.594	2.480	12.4	18.7
2 11	6 38.50	+25 30.0	1.642	2.459	15.8	21.7	2 11	6 49.28	+ 5 15.2	1.666	2.490	15.3	18.9
<b>166883</b>	2002 <i>XJ</i> <sub>90</sub>		1 7.2 4°18	7°1/ 8.8 18			<b>130679</b>	2000 <i>SD</i> <sub>119</sub>		1 7.2 38°60	3°8/ 6.3 18		
12 3	7 30.44	+ 6 43.2	1.570	2.371	17.1	18.8	12 3	7 39.71	+28 26.7	1.301	2.137	18.0	19.6
12 13	7 27.12	+ 5 50.2	1.500	2.371	14.0	18.6	12 13	7 34.96	+29 15.4	1.244	2.147	13.7	19.3
12 23	7 21.35	+ 5 13.5	1.450	2.372	10.6	18.4	12 23	7 26.63	+30 4.4	1.207	2.158	8.9	19.1
1 2	7 13.85	+ 4 56.3	1.424	2.375	7.8	18.2	1 2	7 15.76	+30 46.0	1.194	2.169	4.6	18.9
1 12	7 5.72	+ 4 59.7	1.423	2.379	7.3	18.2	1 12	7 4.08	+31 13.5	1.207	2.181	5.0	18.9
1 22	6 58.17	+ 5 22.1	1.448	2.384	9.4	18.3	1 22	6 53.45	+31 24.1	1.247	2.193	9.4	19.2
2 1	6 52.30	+ 5 59.9	1.497	2.390	12.6	18.5	2 1	6 45.46	+31 19.0	1.310	2.205	13.9	19.5
2 11	6 48.90	+ 6 47.7	1.568	2.397	15.8	18.7	2 11	6 41.08	+31 2.2	1.393	2.218	17.7	19.8
<b>318208</b>	2004 <i>RN</i> <sub>175</sub>		1 7.2 104°80	4°6/ 8.7 18			<b>239723</b>	2009 <i>BR</i> <sub>53</sub>		1 7.2 101°86	0°5/ 7.4 18		
12 3	7 36.31	+ 8 4.6	2.267	3.038	13.5	20.9	12 3	7 34.15	+19 23.1	2.516	3.315	11.5	20.6
12 13	7 30.64	+ 7 42.2	2.202	3.058	10.7	20.7	12 13	7 29.07	+19 43.7	2.441	3.327	8.7	20.4
12 23	7 23.11	+ 7 31.7	2.159	3.079	7.8	20.6	12 23	7 22.19	+20 9.3	2.392	3.338	5.4	20.3
1 2	7 14.37	+ 7 33.6	2.145	3.099	5.3	20.4	1 2	7 14.11	+20 37.6	2.371	3.350	2.0	20.0
1 12	7 5.28	+ 7 47.4	2.159	3.118	4.8	20.4	1 12	7 5.61	+21 6.5	2.381	3.361	1.7	20.0
1 22	6 56.74	+ 8 11.3	2.203	3.138	6.7	20.6	1 22	6 57.54	+21 33.9	2.422	3.372	5.1	20.3
2 1	6 49.53	+ 8 42.9	2.275	3.156	9.4	20.8	2 1	6 50.67	+21 58.4	2.492	3.383	8.3	20.5
2 11	6 44.27	+ 9 19.2	2.372	3.174	12.0	21.0	2 11	6 45.62	+22 19.5	2.586	3.394	11.0	20.7
<b>207508</b>	2006 <i>JA</i> <sub>12</sub>		1 7.2 189°70	1°0/ 7.5 18			<b>379102</b>	2008 <i>YF</i> <sub>13</sub>		1 7.2 43°68	0°5/ 7.3 18		
12 3	7 38.69	+17 56.4	1.977	2.777	14.1	21.2	12 3	7 36.04	+21 44.0	2.088	2.897	13.2	20.5
12 13	7 33.04	+18 15.8	1.891	2.777	10.8	21.0	12 13	7 30.80	+21 28.6	2.013	2.904	10.0	20.3
12 23	7 24.96	+18 42.9	1.830	2.776	6.9	20.7	12 23	7 23.39	+21 15.5	1.962	2.911	6.3	20.1
1 2	7 15.11	+19 15.5	1.796	2.774	2.7	20.5	1 2	7 14.54	+21 3.4	1.940	2.918	2.3	19.8
1 12	7 4.54	+19 50.4	1.792	2.771	2.3	20.4	1 12	7 5.23	+20 51.4	1.946	2.926	2.0	19.8
1 22	6 54.43	+20 24.6	1.818	2.768	6.5	20.7	1 22	6 56.52	+20 38.8	1.982	2.934	6.0	20.1
2 1	6 45.89	+20 56.2	1.871	2.765	10.5	20.9	2 1	6 49.34	+20 25.7	2.046	2.942	9.6	20.3
2 11	6 39.76	+21 24.0	1.949	2.761	13.9	21.1	2 11	6 44.36	+20 12.6	2.134	2.950	12.7	20.5
<b>194298</b>	2001 <i>UA</i> <sub>63</sub>		1 7.2 45°50	1°3/ 7.4 17			<b>412688</b>	2014 <i>OT</i> <sub>240</sub>		1 7.2 210°82	0°8/ 7.0 18		
12 3	7 38.99	+19 16.9	1.217										

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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>445041</b>	2008 <i>RY</i> <sub>128</sub>		1 7.2 310°40	4°6/ 6.4 18			<b>170978</b>	2005 <i>CX</i> <sub>36</sub>		1 7.2 183°70	1°5/ 7.7 18		
12 3	7 42.51	+31 24.6	1.402	2.229	17.5	20.5	12 3	7 38.13	+16 29.3	1.944	2.744	14.3	20.6
12 13	7 37.16	+31 57.9	1.328	2.226	13.5	20.2	12 13	7 32.66	+16 49.3	1.861	2.745	11.0	20.4
12 23	7 28.12	+32 27.7	1.276	2.223	9.1	20.0	12 23	7 24.76	+17 18.6	1.800	2.745	7.1	20.2
1 2	7 16.34	+32 46.7	1.248	2.220	5.2	19.7	1 2	7 15.10	+17 54.9	1.768	2.744	3.0	19.9
1 12	7 3.55	+32 48.8	1.247	2.217	5.5	19.8	1 12	7 4.73	+18 35.2	1.765	2.743	2.5	19.9
1 22	6 51.66	+32 32.3	1.272	2.214	9.7	20.0	1 22	6 54.83	+19 16.3	1.791	2.742	6.5	20.2
2 1	6 42.41	+32 0.0	1.321	2.212	14.1	20.2	2 1	6 46.49	+19 55.4	1.845	2.740	10.5	20.4
2 11	6 36.88	+31 17.2	1.391	2.210	18.1	20.5	2 11	6 40.55	+20 31.1	1.924	2.738	14.0	20.6
<b>234410</b>	2001 <i>RJ</i> <sub>25</sub>		1 7.2 73°01	6°5/ 9.9 18			<b>261662</b>	2005 <i>YA</i> <sub>123</sub>		1 7.2 357°09	4°0/ 6.9 18		
12 3	7 32.11	+ 1 7.1	2.344	3.092	13.7	20.3	12 3	7 40.85	+33 17.0	1.557	2.379	16.2	19.5
12 13	7 27.63	+ 0 46.6	2.262	3.094	11.4	20.1	12 13	7 35.42	+33 9.3	1.482	2.376	12.6	19.3
12 23	7 21.36	+ 0 42.3	2.203	3.096	9.1	20.0	12 23	7 26.74	+32 53.4	1.429	2.374	8.5	19.0
1 2	7 13.85	+ 0 55.8	2.169	3.098	7.1	19.9	1 2	7 15.80	+32 24.4	1.401	2.373	4.7	18.8
1 12	7 5.86	+ 1 27.3	2.163	3.100	6.6	19.8	1 12	7 4.17	+31 39.9	1.400	2.372	4.7	18.8
1 22	6 58.24	+ 2 14.5	2.185	3.102	7.8	19.9	1 22	6 53.52	+30 41.2	1.427	2.372	8.5	19.0
2 1	6 51.76	+ 3 14.0	2.234	3.104	10.1	20.1	2 1	6 45.27	+29 32.7	1.479	2.373	12.7	19.3
2 11	6 47.05	+ 4 21.2	2.307	3.106	12.4	20.2	2 11	6 40.31	+28 20.0	1.554	2.375	16.4	19.5
<b>230528</b>	2002 <i>XZ</i> <sub>26</sub>		1 7.2 14°17	3°1/ 6.7 18			<b>159606</b>	2001 <i>YN</i> <sub>105</sub>		1 7.2 85°85	2°0/ 7.6 18		
12 3	7 38.06	+27 16.4	1.075	1.926	20.0	19.8	12 3	7 42.46	+18 9.5	1.536	2.346	17.0	19.5
12 13	7 34.30	+27 44.0	1.017	1.928	15.2	19.5	12 13	7 36.06	+17 50.9	1.480	2.369	13.0	19.3
12 23	7 26.52	+28 12.7	0.977	1.932	9.8	19.2	12 23	7 26.83	+17 39.3	1.445	2.391	8.3	19.1
1 2	7 15.80	+28 35.5	0.959	1.937	4.3	18.9	1 2	7 15.76	+17 33.5	1.437	2.414	3.5	18.8
1 12	7 4.10	+28 46.2	0.966	1.943	4.6	19.0	1 12	7 4.26	+17 31.9	1.457	2.435	3.0	18.9
1 22	6 53.55	+28 42.4	0.996	1.950	10.0	19.3	1 22	6 53.76	+17 33.0	1.505	2.457	7.5	19.2
2 1	6 45.99	+28 25.6	1.049	1.958	15.3	19.6	2 1	6 45.46	+17 36.1	1.580	2.478	11.8	19.5
2 11	6 42.46	+28 0.0	1.121	1.967	19.7	19.9	2 11	6 40.11	+17 40.5	1.677	2.498	15.4	19.8
<b>48876</b>	1998 <i>HE</i> <sub>103</sub>		1 7.2 197°10	3°6/ 6.2 18			<b>413960</b>	2007 <i>BB</i> <sub>102</sub>		1 7.2 355°39	1°2/ 7.3 18		
12 3	7 44.12	+29 26.6	1.792	2.601	15.0	19.2	12 3	7 38.16	+22 2.6	1.551	2.374	16.3	19.8
12 13	7 37.72	+30 16.7	1.709	2.598	11.5	18.9	12 13	7 33.16	+21 21.2	1.473	2.371	12.4	19.6
12 23	7 28.20	+31 6.8	1.650	2.595	7.6	18.7	12 23	7 25.24	+20 40.8	1.418	2.368	7.9	19.3
1 2	7 16.35	+31 50.0	1.619	2.591	4.2	18.5	1 2	7 15.29	+20 1.1	1.388	2.367	3.0	19.0
1 12	7 3.53	+32 20.5	1.616	2.586	4.6	18.5	1 12	7 4.64	+19 22.0	1.386	2.366	2.7	19.0
1 22	6 51.30	+32 35.1	1.642	2.580	8.3	18.7	1 22	6 54.75	+18 44.4	1.412	2.365	7.6	19.3
2 1	6 41.14	+32 34.4	1.695	2.574	12.3	18.9	2 1	6 46.92	+18 9.9	1.463	2.366	12.2	19.5
2 11	6 34.06	+32 21.7	1.771	2.566	15.7	19.1	2 11	6 42.02	+17 39.4	1.537	2.367	16.1	19.8
<b>159504</b>	2000 <i>WO</i> <sub>67</sub>		1 7.2 44°81	0°2/ 7.3 17			<b>10896</b>	1997 <i>UZ</i> <sub>14</sub>		1 7.2 336°10	3°3/ 6.4 18		
12 3	8 0.69	+17 10.8	1.129	1.928	22.5	19.8	12 3	7 36.91	+26 48.0	1.262	2.104	18.1	17.9
12 13	7 49.22	+18 30.1	1.124	2.008	16.5	19.7	12 13	7 33.23	+27 33.4	1.187	2.094	13.9	17.6
12 23	7 34.44	+19 56.5	1.140	2.087	10.0	19.5	12 23	7 25.87	+28 22.6	1.132	2.085	9.0	17.3
1 2	7 18.11	+21 20.5	1.184	2.163	3.4	19.4	1 2	7 15.66	+29 8.6	1.100	2.077	4.2	17.0
1 12	7 2.37	+22 33.6	1.257	2.237	2.9	19.5	1 12	7 4.22	+29 43.9	1.094	2.070	4.7	17.0
1 22	6 49.02	+23 31.9	1.360	2.310	8.3	20.1	1 22	6 53.49	+30 4.0	1.114	2.064	9.7	17.2
2 1	6 39.21	+24 15.7	1.489	2.380	12.8	20.5	2 1	6 45.29	+30 8.6	1.156	2.058	14.8	17.5
2 11	6 33.33	+24 47.6	1.640	2.449	16.2	20.9	2 11	6 40.83	+30 0.4	1.218	2.053	19.1	17.8
<b>70368</b>	1999 <i>RV</i> <sub>202</sub>		1 7.2 108°35	1°2/ 7.5 18			<b>419125</b>	2009 <i>SP</i> <sub>227</sub>		1 7.2 109°56	0°2/ 7.1 18		
12 3	7 40.57	+19 32.4	1.765	2.572	15.3	20.0	12 3	7 37.16	+21 53.4	2.026	2.834	13.5	21.7
12 13	7 34.47	+19 21.4	1.698	2.586	11.6	19.8	12 13	7 31.79	+22 11.9	1.951	2.842	10.2	21.5
12 23	7 25.81	+19 15.5	1.653	2.600	7.4	19.6	12 23	7 24.12	+22 34.4	1.901	2.850	6.4	21.3
1 2	7 15.40	+19 13.1	1.636	2.614	2.9	19.4	1 2	7 14.85	+22 58.1	1.878	2.857	2.2	21.0
1 12	7 4.50	+19 12.5	1.647	2.627	2.5	19.4	1 12	7 5.03	+23 20.0	1.885	2.865	2.1	21.0
1 22	6 54.36	+19 12.5	1.688	2.639	6.8	19.7	1 22	6 55.77	+23 38.0	1.921	2.872	6.2	21.3
2 1	6 46.12	+19 12.5	1.756	2.652	10.9	19.9	2 1	6 48.09	+23 51.2	1.985	2.879	9.9	21.5
2 11	6 40.53	+19 12.5	1.848	2.664	14.3	20.2	2 11	6 42.74	+23 59.7	2.073	2.886	13.1	21.8
<b>36313</b>	2000 <i>KE</i> <sub>67</sub>		1 7.2 135°88	12°2/12.1 18			<b>465594</b>	2009 <i>BX</i> <sub>26</sub>		1 7.2 175°56	2°3/ 8.4 17		
12 3	7 37.73	-11 0.0	1.925	2.610	18.2	18.8	12 3	7 34.11	+11 22.5	2.516	3.296	12.0	21.3
12 13	7 32.15	-12 3.4	1.860	2.622	16.2	18.7	12 13	7 29.13	+12 5.7	2.427	3.297	9.4	21.1
12 23	7 24.31	-12 40.5	1.813	2.633	14.3	18.6	12 23	7 22.34	+13 0.8	2.363	3.297	6.3	20.9
1 2	7 14.89	-12 45.9	1.788	2.644	12.8	18.5	1 2	7 14.23	+14 5.9	2.327	3.297	3.3	20.7
1 12	7 4.93	-12 17.5	1.786	2.654	12.2	18.5	1 12	7 5.58	+15 18.0	2.322	3.298	2.6	20.7
1 22	6 55.52	-11 17.5	1.808	2.664	12.7	18.6	1 22	6 57.21	+16 33.1	2.349	3.298	5.4	20.9
2 1	6 47.67	- 9 51.4	1.855	2.673	14.2	18.7	2 1	6 49.93	+17 47.6	2.406	3.298	8.5	21.1
2 11	6 42.12	- 8 7.7	1.923	2.681	16.0	18.8	2 11	6 44.41	+18 58.7	2.490	3.298	11.3	21.3
<b>32512</b>	2001 <i>OM</i> <sub>14</sub>		1 7.2 88°85	1°0/ 7.5 18			<b>285569</b>	2000 <i>OC</i> <sub>9</sub>		1 7.2 82°09	4°4/ 6.5 18		
12 3	7 38.94	+18 24.8	1.869	2.674	14.6	19.1	12 3	7 48.21	+32 32.6	1.604	2.413	16.5	20.0
12 13	7 33.08	+18 37.7	1.808	2.695	11.1	18.9	12 13	7 40.48	+33 9.2	1.559	2.445	12.6	19.9
12 23	7 24.85	+18 57.5	1.771	2.717	7.0	18.7	12 23	7 29.58	+33 39.5	1.536	2.477	8.4	19.7
1 2	7 15.06	+19 21.7	1.760	2.738	2.7	18.5	1 2	7 16.70	+33 56.9	1.541	2.509	5.0	19.6
1 12	7 4.82	+19 47.4	1.780	2.759	2.3	18.5	1 12	7 3.48	+33 57.2	1.574	2.540	5.2	19.6
1 22	6 55.32	+20 12.2	1.828	2.780	6.4	18.8	1 22	6 51.59	+33 40.3	1.635	2.570	8.5	19.9
2 1	6 47.56	+20 34.5	1.905	2.800	10.2	19.1	2 1	6 42.33	+33 9.8	1.722	2.600	12.1	20.2
2 11	6 42.26	+20 53.7	2.005	2.820	13.4	19.3	2 11	6 36.41	+32 30.8	1.832	2.629	15.2	20.5
<b>362163</b>	2009 <i>EZ</i> <sub>4</sub>		1 7.2 309°25	1°4/ 6.9 18			<b>448216</b>	2008 <i>UO</i> <sub>276</sub>		1 7.2 57°71	0°6/ 7.3 17		
12 3	7 37.43	+24 1.5	1										

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>27417</b>	Jessjohnson		1 7.2 287°44	2°3/ 7.9 18			<b>445054</b>	2008 SG <sub>99</sub>		1 7.2 70°89	3°1/ 6.5 15		
12 3	7 34.16	+15 9.4	2.218	3.015	12.9	18.9	12 3	7 42.66	+26 48.6	1.370	2.197	17.8	21.7
12 13	7 29.55	+15 5.3	2.111	2.992	10.0	18.7	12 13	7 36.90	+27 39.6	1.317	2.217	13.4	21.5
12 23	7 22.81	+15 9.1	2.028	2.969	6.7	18.4	12 23	7 27.72	+28 32.1	1.286	2.236	8.6	21.3
1 2	7 14.46	+15 20.4	1.973	2.946	3.3	18.1	1 2	7 16.19	+29 18.7	1.280	2.256	4.0	21.1
1 12	7 5.35	+15 37.8	1.947	2.923	2.9	18.1	1 12	7 3.99	+29 53.0	1.301	2.276	4.3	21.1
1 22	6 56.46	+15 59.7	1.950	2.899	6.2	18.2	1 22	6 52.90	+30 12.0	1.349	2.295	8.8	21.5
2 1	6 48.78	+16 24.2	1.981	2.876	9.9	18.4	2 1	6 44.40	+30 16.5	1.422	2.315	13.2	21.8
2 11	6 43.13	+16 49.7	2.037	2.853	13.2	18.6	2 11	6 39.38	+30 9.9	1.516	2.334	16.9	22.0
<b>28500</b>	2000 CW <sub>76</sub>		1 7.2 126°32	3°8/ 6.5 18			<b>268606</b>	2006 BK <sub>256</sub>		1 7.2 126°60	0°1/ 7.2 18		
12 3	7 45.43	+30 54.5	1.649	2.461	16.0	19.3	12 3	7 36.25	+21 32.0	2.176	2.982	12.8	21.1
12 13	7 38.64	+31 26.8	1.584	2.473	12.2	19.1	12 13	7 31.01	+21 52.6	2.098	2.987	9.7	20.9
12 23	7 28.66	+31 55.6	1.541	2.485	8.1	18.9	12 23	7 23.61	+22 17.5	2.044	2.993	6.1	20.7
1 2	7 16.47	+32 14.4	1.525	2.497	4.4	18.7	1 2	7 14.72	+22 43.9	2.019	2.998	2.1	20.5
1 12	7 3.62	+32 18.5	1.538	2.508	4.7	18.7	1 12	7 5.28	+23 8.9	2.023	3.003	2.0	20.5
1 22	6 51.75	+32 7.0	1.579	2.518	8.4	19.0	1 22	6 56.32	+23 30.4	2.057	3.008	5.9	20.7
2 1	6 42.27	+31 42.1	1.646	2.528	12.3	19.2	2 1	6 48.80	+23 47.4	2.120	3.012	9.5	21.0
2 11	6 36.06	+31 8.3	1.735	2.537	15.7	19.5	2 11	6 43.45	+23 59.7	2.206	3.017	12.5	21.2
<b>112652</b>	2002 PB <sub>85</sub>		1 7.2 67°80	1°5/ 7.7 17			<b>414258</b>	2008 GD <sub>78</sub>		1 7.2 247°62	5°6/ 4.9 18		
12 3	7 39.77	+16 54.4	1.576	2.387	16.6	19.7	12 3	7 41.51	+35 46.3	2.163	2.964	13.1	20.9
12 13	7 34.00	+17 12.9	1.524	2.414	12.6	19.5	12 13	7 35.67	+36 59.4	2.071	2.949	10.4	20.7
12 23	7 25.54	+17 41.2	1.495	2.442	8.0	19.3	12 23	7 26.96	+38 9.3	2.004	2.933	7.6	20.5
1 2	7 15.33	+18 16.2	1.492	2.469	3.2	19.1	1 2	7 16.02	+39 8.8	1.964	2.918	5.8	20.3
1 12	7 4.70	+18 54.1	1.517	2.496	2.6	19.1	1 12	7 4.01	+39 51.4	1.954	2.901	6.3	20.4
1 22	6 54.97	+19 31.3	1.570	2.523	7.1	19.4	1 22	6 52.33	+40 13.7	1.972	2.885	8.8	20.5
2 1	6 47.31	+20 5.5	1.651	2.550	11.2	19.7	2 1	6 42.37	+40 16.1	2.016	2.868	11.8	20.6
2 11	6 42.43	+20 35.5	1.754	2.577	14.7	20.0	2 11	6 35.17	+40 2.1	2.083	2.850	14.6	20.8
<b>88455</b>	2001 QN <sub>94</sub>		1 7.2 89°22	0°7/ 7.1 18			<b>242306</b>	2003 WR <sub>78</sub>		1 7.2 130°95	0°1/ 7.3 18		
12 3	7 39.44	+23 26.3	1.843	2.655	14.5	20.3	12 3	7 40.01	+21 56.0	1.777	2.588	15.0	20.7
12 13	7 33.62	+23 41.4	1.779	2.671	10.9	20.1	12 13	7 34.23	+21 57.2	1.703	2.595	11.4	20.5
12 23	7 25.29	+23 59.1	1.738	2.687	6.8	19.9	12 23	7 25.80	+22 2.0	1.652	2.601	7.2	20.3
1 2	7 15.26	+24 16.1	1.724	2.703	2.4	19.6	1 2	7 15.52	+22 7.8	1.628	2.607	2.5	20.0
1 12	7 4.74	+24 29.4	1.740	2.719	2.4	19.6	1 12	7 4.61	+22 12.2	1.633	2.613	2.3	20.0
1 22	6 54.97	+24 37.3	1.784	2.734	6.6	19.9	1 22	6 54.40	+22 13.7	1.666	2.618	6.9	20.3
2 1	6 47.04	+24 39.6	1.856	2.750	10.5	20.2	2 1	6 46.05	+22 12.0	1.727	2.623	11.0	20.6
2 11	6 41.70	+24 37.2	1.951	2.765	13.8	20.5	2 11	6 40.40	+22 7.8	1.811	2.628	14.6	20.8
<b>420561</b>	2012 HR <sub>3</sub>		1 7.2 150°48	1°9/ 6.6 18			<b>39872</b>	1998 DW <sub>33</sub>		1 7.2 319°00	0°9/ 7.4 18		
12 3	7 37.32	+25 38.6	2.003	2.816	13.5	21.6	12 3	7 36.40	+19 18.2	1.419	2.247	17.2	18.7
12 13	7 32.13	+26 20.5	1.924	2.817	10.2	21.4	12 13	7 32.32	+19 27.2	1.336	2.236	13.3	18.4
12 23	7 24.47	+27 4.9	1.869	2.818	6.5	21.2	12 23	7 25.06	+19 45.1	1.274	2.226	8.5	18.1
1 2	7 15.03	+27 47.2	1.842	2.819	2.8	21.0	1 2	7 15.38	+20 9.4	1.237	2.216	3.2	17.8
1 12	7 4.89	+28 23.2	1.844	2.820	3.1	21.0	1 12	7 4.66	+20 36.5	1.227	2.207	2.7	17.8
1 22	6 55.26	+28 49.8	1.876	2.821	6.8	21.2	1 22	6 54.48	+21 2.8	1.242	2.198	8.2	18.1
2 1	6 47.25	+29 6.4	1.934	2.822	10.5	21.5	2 1	6 46.38	+21 26.2	1.283	2.189	13.2	18.3
2 11	6 41.69	+29 14.0	2.017	2.823	13.7	21.7	2 11	6 41.46	+21 45.7	1.345	2.181	17.6	18.6
<b>172771</b>	2004 ER <sub>3</sub>		1 7.2 348°51	1°1/ 6.9 18			<b>170755</b>	2004 CF <sub>17</sub>		1 7.2 187°19	2°0/ 7.9 18		
12 3	7 34.86	+21 19.5	1.403	2.237	17.1	19.4	12 3	7 36.96	+15 23.5	1.965	2.764	14.2	20.3
12 13	7 31.20	+22 11.6	1.327	2.231	13.0	19.1	12 13	7 31.77	+15 37.6	1.881	2.764	11.0	20.1
12 23	7 24.36	+23 13.8	1.272	2.226	8.2	18.8	12 23	7 24.23	+16 1.4	1.821	2.763	7.2	19.8
1 2	7 15.10	+24 20.7	1.242	2.222	2.9	18.5	1 2	7 14.99	+16 33.4	1.788	2.763	3.3	19.6
1 12	7 4.80	+25 25.4	1.239	2.218	3.1	18.5	1 12	7 5.08	+17 10.8	1.784	2.762	2.7	19.5
1 22	6 55.07	+26 22.0	1.262	2.215	8.4	18.8	1 22	6 55.61	+17 50.5	1.809	2.760	6.5	19.8
2 1	6 47.45	+27 7.1	1.310	2.214	13.2	19.1	2 1	6 47.65	+18 30.0	1.863	2.759	10.4	20.0
2 11	6 43.04	+27 40.3	1.379	2.213	17.4	19.3	2 11	6 42.01	+19 7.3	1.940	2.757	13.8	20.2
<b>449235</b>	2013 CR <sub>142</sub>		1 7.2 14°34	3°1/ 6.6 18			<b>282920</b>	2007 OS <sub>5</sub>		1 7.2 118°59	3°4/ 6.5 18		
12 3	7 38.25	+26 49.0	1.231	2.072	18.5	20.3	12 3	7 43.65	+30 5.3	1.725	2.537	15.4	20.5
12 13	7 34.10	+27 27.8	1.167	2.074	14.1	20.0	12 13	7 37.17	+30 34.3	1.659	2.549	11.7	20.2
12 23	7 26.28	+28 8.9	1.124	2.077	9.1	19.7	12 23	7 27.71	+31 0.5	1.616	2.561	7.7	20.0
1 2	7 15.77	+28 45.5	1.104	2.081	4.1	19.5	1 2	7 16.19	+31 18.3	1.599	2.572	4.0	19.8
1 12	7 4.29	+29 11.0	1.109	2.085	4.4	19.5	1 12	7 4.05	+31 23.4	1.612	2.583	4.3	19.9
1 22	6 53.76	+29 22.0	1.140	2.091	9.4	19.8	1 22	6 52.80	+31 14.6	1.652	2.594	7.9	20.1
2 1	6 45.89	+29 19.2	1.194	2.097	14.3	20.1	2 1	6 43.75	+30 53.9	1.720	2.604	11.8	20.4
2 11	6 41.73	+29 5.7	1.268	2.103	18.5	20.4	2 11	6 37.77	+30 24.9	1.810	2.614	15.1	20.6
<b>194330</b>	2001 UN <sub>133</sub>		1 7.2 167°70	7°8/ 8.9 18			<b>357403</b>	2003 UG <sub>291</sub>		1 7.2 140°31	3°9/ 8.4 18		
12 3	7 38.40	+ 4 32.5	1.674	2.448	17.4	21.0	12 3	7 38.99	+10 29.0	2.182	2.957	13.8	22.1
12 13	7 33.04	+ 3 34.8	1.598	2.450	14.3	20.8	12 13	7 32.85	+10 11.8	2.109	2.972	10.8	22.0
12 23	7 25.08	+ 2 53.8	1.543	2.452	11.1	20.6	12 23	7 24.65	+10 5.2	2.058	2.985	7.6	21.8
1 2	7 15.26	+ 2 33.1	1.513	2.454	8.5	20.4	1 2	7 15.08	+10 9.5	2.036	2.998	4.7	21.6
1 12	7 4.75	+ 2 34.4	1.509	2.455	8.0	20.4	1 12	7 5.05	+10 23.7	2.044	3.010	4.2	21.6
1 22	6 54.80	+ 2 56.5	1.532	2.456	10.0	20.5	1 22	6 55.56	+10 46.2	2.081	3.021	6.7	21.8
2 1	6 46.59	+ 3 35.7	1.580	2.457	13.1	20.7	2 1	6 47.50	+11 14.7	2.147	3.032	9.8	22.0
2 11	6 40.98	+ 4 26.5	1.650	2.457	16.2	20.9	2 11	6 41.54	+11 46.6	2.238	3.041	12.6	22.2
<b>363013</b>	1993 TH <sub>17</sub>		1 7.2 84°03	2°6/ 6.5 18			<b>329077</b>	2011 BY <sub>26</sub>		1 7.2 216°68	3°7/ 8.7 18		
12 3	7 42.38	+27 56.1	1.830	2.640	14.7	21.4	12 3	7 34.75	+ 9 25.7	2.178	2.958	13.6	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>10193</b>	Nishimoto		1 7.2 146°98	0°2/ 7.3 18			<b>315574</b>	2008 CX <sub>58</sub>		1 7.2 217°98	1°9/ 7.8 18		
12 3	7 35.08	+20 59.5	3.042	3.833	9.9	19.9	12 3	7 37.07	+16 29.8	1.920	2.723	14.4	21.4
12 13	7 29.50	+21 11.1	2.963	3.844	7.4	19.7	12 13	7 31.93	+16 31.5	1.834	2.719	11.1	21.2
12 23	7 22.40	+21 25.4	2.909	3.855	4.7	19.6	12 23	7 24.38	+16 41.4	1.772	2.716	7.2	20.9
1 2	7 14.26	+21 40.7	2.886	3.865	1.6	19.3	1 2	7 15.07	+16 58.3	1.736	2.712	3.2	20.7
1 12	7 5.79	+21 55.4	2.894	3.874	1.5	19.3	1 12	7 5.06	+17 20.0	1.730	2.708	2.7	20.6
1 22	6 57.67	+22 8.4	2.934	3.883	4.4	19.6	1 22	6 55.51	+17 44.3	1.752	2.703	6.7	20.9
2 1	6 50.59	+22 18.9	3.004	3.891	7.2	19.8	2 1	6 47.51	+18 9.2	1.802	2.699	10.6	21.1
2 11	6 45.05	+22 26.8	3.101	3.899	9.6	19.9	2 11	6 41.90	+18 33.2	1.876	2.694	14.1	21.3
<b>445079</b>	2008 TQ <sub>42</sub>		1 7.2 109°27	0°5/ 7.3 17			<b>144167</b>	2004 BQ <sub>106</sub>		1 7.2 182°04	3°6/ 6.7 18		
12 3	7 43.05	+21 49.3	1.582	2.395	16.5	21.4	12 3	7 43.80	+32 48.1	1.985	2.788	14.0	19.8
12 13	7 36.66	+21 37.4	1.516	2.409	12.5	21.2	12 13	7 37.07	+32 57.6	1.905	2.788	10.8	19.6
12 23	7 27.35	+21 28.7	1.473	2.422	7.9	20.9	12 23	7 27.57	+33 1.4	1.848	2.789	7.3	19.4
1 2	7 16.06	+21 21.1	1.456	2.435	2.8	20.6	1 2	7 16.16	+32 54.6	1.819	2.789	4.1	19.2
1 12	7 4.20	+21 12.5	1.468	2.448	2.5	20.6	1 12	7 4.13	+32 34.3	1.819	2.788	4.3	19.2
1 22	6 53.26	+21 2.3	1.508	2.460	7.4	21.0	1 22	6 52.86	+32 0.5	1.849	2.787	7.5	19.4
2 1	6 44.52	+20 50.7	1.575	2.472	11.8	21.3	2 1	6 43.58	+31 15.7	1.907	2.786	11.1	19.6
2 11	6 38.79	+20 38.8	1.664	2.484	15.5	21.5	2 11	6 37.12	+30 24.2	1.988	2.785	14.2	19.8
<b>476423</b>	2008 DE <sub>55</sub>		1 7.2 220°21	19°0/ 14.7 18			<b>306816</b>	2001 QK <sub>194</sub>		1 7.2 114°47	4°0/ 6.7 17		
12 3	7 40.02	-17 24.6	1.280	1.967	25.8	21.7	12 3	7 49.03	+33 0.4	1.741	2.543	15.7	20.7
12 13	7 35.29	-18 41.5	1.210	1.962	23.8	21.5	12 13	7 41.06	+33 15.2	1.681	2.564	12.0	20.5
12 23	7 27.07	-19 17.4	1.152	1.956	21.7	21.3	12 23	7 30.01	+33 23.2	1.644	2.584	8.1	20.3
1 2	7 16.15	-19 0.3	1.109	1.950	20.0	21.2	1 2	7 16.96	+33 18.7	1.634	2.603	4.6	20.1
1 12	7 3.98	-17 42.9	1.085	1.943	19.0	21.1	1 12	7 3.49	+32 58.4	1.653	2.621	4.7	20.2
1 22	6 52.34	-15 27.4	1.080	1.936	19.3	21.1	1 22	6 51.19	+32 23.1	1.702	2.639	8.1	20.4
2 1	6 42.94	-12 24.2	1.095	1.928	20.9	21.2	2 1	6 41.37	+31 36.3	1.778	2.656	11.8	20.7
2 11	6 37.01	-8 51.2	1.130	1.920	23.2	21.3	2 11	6 34.79	+30 43.5	1.877	2.673	15.0	20.9
<b>446963</b>	2003 TK		1 7.2 215°97	1°0/ 7.5 15			<b>273063</b>	2006 DC <sub>190</sub>		1 7.2 176°48	3°5/ 8.5 18		
12 3	7 44.67	+18 56.7	2.163	2.949	13.5	24.3	12 3	7 34.12	+10 30.2	2.399	3.179	12.5	21.4
12 13	7 37.55	+18 58.8	2.060	2.937	10.4	24.1	12 13	7 29.18	+10 26.3	2.314	3.180	9.9	21.2
12 23	7 27.89	+19 5.9	1.980	2.923	6.7	23.8	12 23	7 22.40	+10 32.7	2.252	3.181	6.9	21.0
1 2	7 16.32	+19 16.2	1.930	2.907	2.6	23.5	1 2	7 14.33	+10 49.5	2.218	3.181	4.2	20.8
1 12	7 3.87	+19 27.4	1.911	2.890	2.3	23.5	1 12	7 5.77	+11 15.5	2.213	3.182	3.7	20.8
1 22	6 51.75	+19 37.8	1.924	2.872	6.5	23.7	1 22	6 57.56	+11 48.7	2.239	3.182	6.1	20.9
2 1	6 41.13	+19 46.6	1.967	2.852	10.5	23.9	2 1	6 50.53	+12 26.7	2.293	3.182	9.0	21.1
2 11	6 32.93	+19 53.6	2.034	2.830	14.0	24.1	2 11	6 45.30	+13 7.1	2.372	3.181	11.8	21.3
<b>185931</b>	2000 UK <sub>27</sub>		1 7.2 82°04	0°2/ 7.3 18			<b>461052</b>	2014 XG <sub>19</sub>		1 7.2 160°33	4°7/ 5.5 18		
12 3	7 38.48	+19 40.5	1.974	2.778	14.0	20.2	12 3	7 40.45	+34 31.5	2.265	3.066	12.5	21.0
12 13	7 32.68	+20 10.5	1.915	2.803	10.5	20.0	12 13	7 34.46	+35 31.9	2.190	3.070	9.8	20.8
12 23	7 24.63	+20 46.4	1.880	2.828	6.6	19.8	12 23	7 25.94	+36 28.3	2.140	3.074	6.9	20.6
1 2	7 15.08	+21 25.0	1.873	2.852	2.3	19.6	1 2	7 15.62	+37 14.6	2.118	3.077	4.9	20.5
1 12	7 5.10	+22 2.8	1.896	2.876	2.0	19.6	1 12	7 4.59	+37 46.1	2.126	3.080	5.3	20.5
1 22	6 55.81	+22 37.0	1.949	2.900	6.1	19.9	1 22	6 54.09	+38 0.6	2.163	3.083	7.7	20.7
2 1	6 48.19	+23 5.9	2.030	2.923	9.8	20.2	2 1	6 45.26	+37 58.9	2.226	3.085	10.6	20.9
2 11	6 42.91	+23 29.3	2.135	2.946	12.8	20.4	2 11	6 38.93	+37 44.2	2.313	3.087	13.2	21.0
<b>413690</b>	2005 XS <sub>58</sub>		1 7.2 29°52	0°7/ 7.4 18			<b>76316</b>	2000 EY <sub>140</sub>		1 7.2 322°40	2°7/ 6.4 18		
12 3	7 36.82	+20 28.8	1.859	2.671	14.4	21.4	12 3	7 37.91	+26 15.4	1.629	2.453	15.6	19.2
12 13	7 31.76	+20 26.1	1.781	2.673	11.0	21.2	12 13	7 33.24	+27 7.2	1.550	2.448	11.9	18.9
12 23	7 24.25	+20 28.1	1.726	2.674	6.9	20.9	12 23	7 25.54	+28 2.5	1.494	2.444	7.6	18.7
1 2	7 15.00	+20 32.9	1.697	2.676	2.6	20.7	1 2	7 15.56	+28 55.5	1.463	2.440	3.5	18.4
1 12	7 5.13	+20 38.4	1.698	2.678	2.2	20.6	1 12	7 4.62	+29 39.8	1.461	2.436	3.9	18.4
1 22	6 55.84	+20 43.2	1.727	2.680	6.6	20.9	1 22	6 54.24	+30 11.5	1.486	2.432	8.2	18.7
2 1	6 48.23	+20 46.4	1.783	2.682	10.6	21.2	2 1	6 45.85	+30 29.6	1.537	2.428	12.5	18.9
2 11	6 43.09	+20 48.1	1.863	2.684	14.1	21.4	2 11	6 40.49	+30 35.7	1.609	2.425	16.2	19.1
<b>265025</b>	2003 JG <sub>17</sub>		1 7.2 200°16	0°1/ 7.3 17			<b>286067</b>	2001 SB <sub>312</sub>		1 7.2 79°52	4°6/ 8.4 18		
12 3	7 36.59	+20 49.4	2.752	3.544	10.8	21.7	12 3	7 36.43	+10 47.4	1.800	2.594	15.6	20.7
12 13	7 30.92	+21 8.9	2.657	3.539	8.2	21.5	12 13	7 31.39	+10 17.4	1.728	2.601	12.3	20.5
12 23	7 23.45	+21 32.1	2.589	3.534	5.1	21.3	12 23	7 23.97	+9 59.4	1.677	2.608	8.7	20.3
1 2	7 14.69	+21 57.0	2.550	3.528	1.8	21.1	1 2	7 14.91	+9 54.3	1.652	2.615	5.5	20.1
1 12	7 5.40	+22 21.3	2.542	3.522	1.6	21.1	1 12	7 5.28	+10 1.9	1.655	2.622	4.9	20.1
1 22	6 56.41	+22 43.2	2.566	3.514	5.0	21.3	1 22	6 56.24	+10 20.4	1.686	2.629	7.7	20.3
2 1	6 48.51	+23 1.7	2.619	3.506	8.1	21.5	2 1	6 48.83	+10 47.2	1.744	2.636	11.2	20.5
2 11	6 42.36	+23 16.5	2.699	3.498	10.8	21.7	2 11	6 43.82	+11 19.2	1.825	2.643	14.4	20.7
<b>193858</b>	2001 QD <sub>127</sub>		1 7.2 141°20	1°9/ 7.7 18			<b>84275</b>	2002 TF <sub>14</sub>		1 7.2 13°95	9°6/ 5.8 18		
12 3	7 42.21	+17 20.2	1.835	2.633	15.2	21.3	12 3	7 48.00	+49 55.6	2.029	2.796	14.9	19.1
12 13	7 35.68	+17 9.3	1.763	2.645	11.6	21.1	12 13	7 40.87	+50 39.0	1.964	2.798	12.8	19.0
12 23	7 26.61	+17 5.1	1.714	2.657	7.5	20.8	12 23	7 30.17	+51 5.0	1.920	2.801	10.9	18.8
1 2	7 15.80	+17 6.4	1.693	2.669	3.3	20.6	1 2	7 17.08	+51 5.5	1.901	2.803	9.7	18.8
1 12	7 4.44	+17 11.7	1.701	2.679	2.8	20.6	1 12	7 3.39	+50 35.7	1.907	2.806	9.9	18.8
1 22	6 53.78	+17 19.3	1.739	2.689	6.9	20.9	1 22	6 50.95	+49 36.5	1.939	2.810	11.3	18.9
2 1	6 44.95	+17 28.2	1.805	2.697	10.8	21.1	2 1	6 41.29	+48 13.3	1.996	2.814	13.3	19.0
2 11	6 38.73	+17 37.5	1.894	2.706	14.3	21.4	2 11	6 35.26	+46 34.5	2.074	2.818	15.4	19.2
<b>45672</b>	2000 EE <sub>109</sub>		1 7.2 103°31	2°2/ 7.7 18 R			<b>194506</b>	2001 WD <sub>90</sub>		1 7.2 101°20	4°8/ 6.2 18		
12 3	7 37.48	+16 40.9	2.384	3.173	12.3	18.6	12 3	7 44.72	+32 2.2	1.557	2.374	16.5</	



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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>359077</b>	2008 YX <sub>141</sub>		1 7.2 39°13	1.3°/ 6.9	17		<b>34554</b>	2000 ST <sub>251</sub>		1 7.3 175°17	0.4°/ 7.4	18	
12 3	7 38.53	+22 42.2	1.199	2.039	19.0	20.7	12 3	7 33.84	+20 12.4	2.902	3.697	10.2	19.9
12 13	7 34.09	+23 20.2	1.147	2.054	14.4	20.5	12 13	7 28.73	+20 22.2	2.816	3.698	7.7	19.7
12 23	7 26.13	+24 4.7	1.115	2.070	9.0	20.2	12 23	7 22.02	+20 35.4	2.754	3.700	4.9	19.6
1 2	7 15.73	+24 50.0	1.107	2.086	3.2	19.9	1 2	7 14.21	+20 50.6	2.723	3.701	1.8	19.3
1 12	7 4.61	+25 29.6	1.124	2.104	3.3	20.0	1 12	7 5.99	+21 6.0	2.722	3.702	1.5	19.3
1 22	6 54.57	+25 59.4	1.167	2.122	8.7	20.4	1 22	6 58.10	+21 20.3	2.752	3.702	4.6	19.5
2 1	6 47.17	+26 18.3	1.234	2.140	13.7	20.7	2 1	6 51.23	+21 32.8	2.812	3.702	7.5	19.7
2 11	6 43.31	+26 27.8	1.321	2.159	17.8	21.0	2 11	6 45.94	+21 43.0	2.898	3.702	10.0	19.9
<b>479179</b>	2013 CR <sub>53</sub>		1 7.2 228°42	0.7°/ 7.6	17		<b>400870</b>	2010 OP <sub>40</sub>		1 7.3 102°47	6°3/ 9.5	18	
12 3	7 29.85	+18 35.9	3.718	4.507	8.3	21.8	12 3	7 38.05	+3 30.9	2.105	2.859	14.9	21.8
12 13	7 25.46	+18 43.1	3.620	4.500	6.3	21.6	12 13	7 32.11	+3 4.3	2.045	2.884	12.2	21.7
12 23	7 19.86	+18 53.6	3.548	4.492	4.0	21.5	12 23	7 24.19	+2 53.7	2.006	2.909	9.3	21.5
1 2	7 13.42	+19 6.6	3.507	4.484	1.6	21.3	1 2	7 14.97	+3 0.5	1.994	2.933	6.9	21.5
1 12	7 6.65	+19 21.0	3.496	4.475	1.3	21.3	1 12	7 5.40	+3 24.3	2.011	2.957	6.3	21.5
1 22	7 0.08	+19 35.7	3.518	4.467	3.7	21.4	1 22	6 56.44	+4 2.4	2.056	2.980	7.9	21.6
2 1	6 54.23	+19 49.9	3.569	4.458	6.1	21.6	2 1	6 48.95	+4 51.3	2.129	3.002	10.4	21.8
2 11	6 49.55	+20 3.1	3.647	4.449	8.2	21.7	2 11	6 43.53	+5 46.7	2.226	3.023	12.9	22.0
<b>405632</b>	2005 TZ <sub>9</sub>		1 7.2 51°06	7.1°/ 6.5	18		<b>472722</b>	2015 FN <sub>71</sub>		1 7.3 248°00	4.7°/ 5.3	17	
12 3	7 46.00	+39 36.1	1.573	2.382	16.8	20.5	12 3	7 37.33	+38 38.4	2.958	3.746	10.2	21.5
12 13	7 39.27	+40 9.7	1.525	2.403	13.3	20.3	12 13	7 31.73	+39 20.8	2.868	3.735	8.2	21.3
12 23	7 29.08	+40 30.7	1.497	2.425	9.9	20.1	12 23	7 24.09	+39 57.5	2.803	3.724	6.1	21.2
1 2	7 16.67	+40 31.4	1.495	2.447	7.4	20.1	1 2	7 15.00	+40 23.9	2.767	3.713	4.8	21.1
1 12	7 3.85	+40 7.8	1.519	2.469	7.5	20.1	1 12	7 5.31	+40 36.9	2.760	3.701	5.1	21.1
1 22	6 52.43	+39 21.4	1.570	2.492	10.0	20.3	1 22	6 55.98	+40 35.2	2.783	3.690	6.8	21.2
2 1	6 43.81	+38 17.7	1.646	2.515	13.1	20.6	2 1	6 47.92	+40 19.4	2.833	3.678	9.0	21.3
2 11	6 38.73	+37 4.1	1.744	2.538	16.0	20.8	2 11	6 41.83	+39 52.3	2.907	3.666	11.1	21.4
<b>151567</b>	2002 TW <sub>184</sub>		1 7.2 105°32	0°2/ 7.3	17		<b>233183</b>	2005 WW <sub>55</sub>		1 7.3 121°01	0°2/ 7.3	18	
12 3	7 42.73	+21 22.4	1.452	2.270	17.4	20.8	12 3	7 44.30	+21 43.9	1.784	2.586	15.3	20.8
12 13	7 36.73	+21 27.8	1.388	2.283	13.2	20.6	12 13	7 37.30	+21 45.7	1.720	2.607	11.6	20.6
12 23	7 27.56	+21 38.5	1.346	2.296	8.3	20.3	12 23	7 27.64	+21 50.9	1.679	2.626	7.3	20.4
1 2	7 16.21	+21 51.3	1.329	2.308	2.9	20.0	1 2	7 16.21	+21 56.7	1.665	2.644	2.6	20.1
1 12	7 4.18	+22 2.6	1.340	2.321	2.6	20.0	1 12	7 4.31	+22 0.7	1.682	2.662	2.2	20.1
1 22	6 53.09	+22 10.5	1.379	2.332	7.8	20.4	1 22	6 53.26	+22 1.6	1.728	2.679	6.8	20.4
2 1	6 44.34	+22 14.3	1.444	2.344	12.5	20.7	2 1	6 44.23	+21 59.3	1.803	2.695	10.9	20.7
2 11	6 38.82	+22 14.9	1.531	2.355	16.4	21.0	2 11	6 37.98	+21 54.7	1.900	2.710	14.3	21.0
<b>410777</b>	2009 FD		1 7.3 162°87	4°1/ 6.8	15		<b>117104</b>	2004 OB <sub>4</sub>		1 7.3 152°95	3°7/ 8.4	18	
12 3	8 23.99	+25 27.5	0.876	1.672	27.8	24.2	12 3	7 39.66	+11 8.6	1.894	2.679	15.2	20.8
12 13	8 11.11	+26 42.6	0.814	1.695	21.5	23.8	12 13	7 33.77	+11 9.7	1.817	2.687	11.9	20.6
12 23	7 50.90	+28 5.6	0.770	1.713	13.9	23.5	12 23	7 25.48	+11 23.6	1.763	2.696	8.2	20.4
1 2	7 24.76	+29 16.6	0.750	1.726	6.0	23.1	1 2	7 15.50	+11 49.7	1.736	2.703	4.7	20.2
1 12	6 56.48	+29 56.1	0.759	1.734	6.3	23.2	1 12	7 4.89	+12 26.0	1.738	2.710	4.0	20.1
1 22	6 30.79	+29 58.6	0.796	1.738	14.0	23.6	1 22	6 54.83	+13 9.3	1.770	2.715	7.1	20.3
2 1	6 11.26	+29 34.3	0.857	1.736	21.0	24.0	2 1	6 46.39	+13 56.5	1.829	2.721	10.8	20.6
2 11	5 59.20	+28 58.3	0.936	1.730	26.6	24.3	2 11	6 40.37	+14 44.2	1.913	2.725	14.1	20.8
<b>265790</b>	2005 WD <sub>155</sub>		1 7.3 96°81	1°4/ 6.8	18		<b>155195</b>	2005 UG <sub>396</sub>		1 7.3 330°69	1°6/ 7.7	18	
12 3	7 38.07	+24 36.8	1.979	2.790	13.7	21.1	12 3	7 35.80	+17 30.7	1.810	2.621	14.8	20.2
12 13	7 32.61	+25 7.4	1.908	2.800	10.3	20.9	12 13	7 31.13	+17 35.1	1.728	2.618	11.4	20.0
12 23	7 24.74	+25 40.4	1.862	2.811	6.5	20.7	12 23	7 23.97	+17 47.5	1.669	2.615	7.3	19.7
1 2	7 15.20	+26 11.8	1.843	2.821	2.5	20.5	1 2	7 15.01	+18 6.4	1.636	2.613	3.1	19.5
1 12	7 5.08	+26 37.9	1.853	2.831	2.6	20.5	1 12	7 5.33	+18 29.3	1.631	2.610	2.6	19.4
1 22	6 55.57	+26 56.6	1.893	2.841	6.5	20.7	1 22	6 56.16	+18 53.8	1.655	2.608	6.8	19.7
2 1	6 47.74	+27 7.3	1.960	2.851	10.2	21.0	2 1	6 48.61	+19 17.9	1.706	2.606	10.9	19.9
2 11	6 42.36	+27 10.9	2.051	2.860	13.4	21.2	2 11	6 43.55	+19 40.2	1.780	2.605	14.5	20.1
<b>240226</b>	2002 TO <sub>66</sub>		1 7.3 84°51	2°5/ 7.5	18		<b>282977</b>	2007 TW <sub>39</sub>		1 7.3 80°81	4°5/ 8.8	18	
12 3	7 39.32	+17 33.7	2.250	3.042	12.9	19.9	12 3	7 33.47	+8 20.6	2.334	3.109	13.0	21.0
12 13	7 33.02	+16 38.5	2.174	3.052	9.9	19.8	12 13	7 28.66	+7 58.5	2.260	3.120	10.4	20.8
12 23	7 24.73	+15 46.5	2.124	3.063	6.5	19.6	12 23	7 22.07	+7 47.7	2.210	3.131	7.5	20.6
1 2	7 15.13	+14 58.5	2.102	3.074	3.3	19.4	1 2	7 14.26	+7 48.9	2.186	3.141	5.1	20.5
1 12	7 5.18	+14 15.4	2.110	3.084	3.1	19.4	1 12	7 6.05	+8 1.8	2.191	3.152	4.6	20.5
1 22	6 55.84	+13 38.2	2.150	3.095	6.1	19.6	1 22	6 58.28	+8 24.8	2.226	3.162	6.6	20.6
2 1	6 47.97	+13 7.2	2.218	3.105	9.4	19.8	2 1	6 51.72	+8 55.5	2.288	3.172	9.2	20.8
2 11	6 42.19	+12 42.4	2.312	3.116	12.2	20.0	2 11	6 46.98	+9 31.2	2.375	3.183	11.8	21.0
<b>337236</b>	2000 HM <sub>59</sub>		1 7.3 227°17	1°0/ 7.6	17		<b>310954</b>	2003 UY <sub>54</sub>		1 7.3 47°03	2°3/ 7.6	17	
12 3	7 34.66	+18 39.4	2.759	3.551	10.8	21.6	12 3	7 40.11	+18 25.1	1.311	2.136	18.5	20.4
12 13	7 29.48	+18 40.1	2.660	3.541	8.2	21.4	12 13	7 34.73	+17 54.5	1.260	2.157	14.1	20.2
12 23	7 22.56	+18 45.1	2.587	3.531	5.3	21.2	12 23	7 26.25	+17 31.5	1.230	2.179	9.1	19.9
1 2	7 14.42	+18 53.1	2.543	3.520	2.1	21.0	1 2	7 15.75	+17 15.6	1.224	2.201	4.0	19.7
1 12	7 5.76	+19 2.9	2.530	3.509	1.8	21.0	1 12	7 4.80	+17 5.6	1.245	2.223	3.4	19.7
1 22	6 57.39	+19 13.2	2.548	3.498	5.0	21.2	1 22	6 54.97	+17 0.4	1.292	2.246	8.1	20.1
2 1	6 50.07	+19 23.2	2.596	3.486	8.0	21.3	2 1	6 47.55	+16 59.0	1.364	2.269	12.7	20.4
2 11	6 44.41	+19 32.3	2.669	3.474	10.8	21.5	2 11	6 43.30	+17 0.4	1.458	2.293	16.5	20.7
<b>475807</b>	2006 YZ <sub>15</sub>		1 7.3 125°59	8°4/ 3.6	18		<b>489138</b>	2006 DO <sub>123</sub>		1 7.3 269°35	1°8/ 6.9	17	
12 3	7 50.29	+28 43.6	1.127	1.956	20.7	21.1	12 3	7 40.90	+25 57.8	1.655	2.473	15.6	22.4

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>21695</b>	Hannahwolf		1 7.3 121°87	0°2/ 7.3 18			<b>202438</b>	2005 XU <sub>79</sub>		1 7.3 314°12	3°4/ 6.6 18		
12 3	7 40.89	+20 19.2	1.935	2.737	14.3	19.4	12 3	7 38.77	+28 26.0	1.328	2.164	17.7	20.2
12 13	7 34.66	+20 41.2	1.868	2.754	10.8	19.2	12 13	7 34.72	+28 52.3	1.243	2.147	13.7	19.9
12 23	7 25.99	+21 8.6	1.824	2.771	6.8	19.0	12 23	7 26.96	+29 18.9	1.177	2.129	9.0	19.6
1 2	7 15.67	+21 38.3	1.808	2.787	2.4	18.8	1 2	7 16.26	+29 39.5	1.136	2.112	4.3	19.3
1 12	7 4.82	+22 7.0	1.822	2.802	2.1	18.8	1 12	7 4.23	+29 47.9	1.121	2.096	4.6	19.3
1 22	6 54.64	+22 32.1	1.866	2.817	6.4	19.1	1 22	6 52.81	+29 41.2	1.130	2.080	9.6	19.5
2 1	6 46.21	+22 52.5	1.939	2.831	10.2	19.4	2 1	6 43.84	+29 20.4	1.164	2.065	14.7	19.7
2 11	6 40.26	+23 8.1	2.035	2.844	13.5	19.6	2 11	6 38.62	+28 49.6	1.217	2.051	19.2	20.0
<b>409435</b>	2005 NC <sub>107</sub>		1 7.3 295°42	1°2/ 7.6 18			<b>451736</b>	2013 ES <sub>24</sub>		1 7.3 320°46	4°3/ 6.2 18		
12 3	7 38.53	+17 45.8	1.324	2.150	18.3	21.1	12 3	7 38.53	+29 28.5	1.365	2.200	17.4	21.1
12 13	7 34.15	+18 6.9	1.245	2.144	14.1	20.8	12 13	7 34.45	+30 17.4	1.285	2.188	13.5	20.8
12 23	7 26.37	+18 40.4	1.187	2.138	9.1	20.5	12 23	7 26.73	+31 7.3	1.226	2.176	9.0	20.5
1 2	7 15.98	+19 23.4	1.153	2.132	3.5	20.2	1 2	7 16.17	+31 50.4	1.190	2.164	5.0	20.3
1 12	7 4.45	+20 10.7	1.145	2.126	2.9	20.1	1 12	7 4.33	+32 19.4	1.181	2.153	5.5	20.3
1 22	6 53.51	+20 57.5	1.164	2.120	8.6	20.4	1 22	6 53.14	+32 30.1	1.197	2.142	9.9	20.5
2 1	6 44.82	+21 39.9	1.207	2.114	13.9	20.7	2 1	6 44.38	+32 23.0	1.237	2.132	14.6	20.7
2 11	6 39.55	+22 16.2	1.272	2.109	18.4	21.0	2 11	6 39.31	+32 2.2	1.297	2.123	18.7	21.0
<b>252228</b>	2001 ON <sub>63</sub>		1 7.3 74°52	0°9/ 7.1 17			<b>395794</b>	2012 WO <sub>18</sub>		1 7.3 234°25	3°0/ 7.7 18		
12 3	7 44.34	+25 52.6	1.749	2.558	15.3	20.5	12 3	7 40.69	+17 2.5	1.462	2.276	17.5	21.1
12 13	7 37.22	+25 40.4	1.697	2.587	11.5	20.3	12 13	7 35.32	+16 27.0	1.383	2.274	13.6	20.9
12 23	7 27.48	+25 27.1	1.668	2.616	7.2	20.1	12 23	7 26.83	+15 58.6	1.327	2.272	9.0	20.6
1 2	7 16.13	+25 10.3	1.666	2.645	2.6	19.9	1 2	7 16.09	+15 37.5	1.295	2.269	4.4	20.3
1 12	7 4.51	+24 48.4	1.694	2.673	2.5	20.0	1 12	7 4.48	+15 23.4	1.290	2.267	3.9	20.3
1 22	6 53.98	+24 21.7	1.752	2.701	6.8	20.3	1 22	6 53.58	+15 15.7	1.313	2.264	8.4	20.5
2 1	6 45.59	+23 52.1	1.836	2.729	10.7	20.6	2 1	6 44.82	+15 13.6	1.361	2.262	13.1	20.8
2 11	6 40.00	+23 21.5	1.945	2.756	13.9	20.8	2 11	6 39.17	+15 16.0	1.431	2.259	17.2	21.1
<b>175532</b>	2006 SK <sub>122</sub>		1 7.3 137°69	2°1/ 6.9 18			<b>336611</b>	2009 UK <sub>87</sub>		1 7.3 48°00	2°1/ 7.5 17		
12 3	7 43.49	+29 4.1	2.083	2.884	13.5	20.5	12 3	7 41.42	+19 31.6	1.128	1.963	20.3	20.4
12 13	7 36.54	+29 5.0	2.009	2.894	10.2	20.3	12 13	7 36.28	+18 59.8	1.074	1.977	15.5	20.2
12 23	7 27.12	+29 2.8	1.960	2.905	6.6	20.1	12 23	7 27.51	+18 35.2	1.040	1.992	9.9	19.9
1 2	7 16.05	+28 53.9	1.939	2.915	3.0	19.9	1 2	7 16.28	+18 16.9	1.029	2.007	4.1	19.6
1 12	7 4.52	+28 36.4	1.949	2.924	3.0	19.9	1 12	7 4.41	+18 3.5	1.044	2.023	3.5	19.7
1 22	6 53.75	+28 10.0	1.989	2.933	6.6	20.1	1 22	6 53.78	+17 54.1	1.084	2.040	9.0	20.0
2 1	6 44.82	+27 36.7	2.057	2.942	10.1	20.4	2 1	6 45.93	+17 48.3	1.147	2.056	14.2	20.4
2 11	6 38.46	+26 59.3	2.150	2.949	13.2	20.6	2 11	6 41.74	+17 45.4	1.230	2.073	18.5	20.7
<b>151944</b>	2004 FL <sub>97</sub>		1 7.3 301°71	3°7/ 8.3 18			<b>159596</b>	2001 XT <sub>212</sub>		1 7.3 57°92	1°7/ 7.8 17		
12 3	7 37.24	+12 21.2	1.353	2.168	18.6	20.4	12 3	7 38.90	+16 14.6	1.323	2.146	18.5	19.8
12 13	7 33.02	+12 30.3	1.273	2.162	14.6	20.1	12 13	7 34.03	+16 38.8	1.265	2.161	14.2	19.6
12 23	7 25.59	+12 56.9	1.214	2.156	10.0	19.8	12 23	7 26.00	+17 16.2	1.228	2.177	9.1	19.3
1 2	7 15.70	+13 40.2	1.178	2.150	5.3	19.6	1 2	7 15.76	+18 3.4	1.215	2.193	3.8	19.1
1 12	7 4.72	+14 36.9	1.168	2.144	4.3	19.5	1 12	7 4.82	+18 55.2	1.229	2.209	3.0	19.1
1 22	6 54.28	+15 41.5	1.185	2.139	8.7	19.7	1 22	6 54.78	+19 46.5	1.270	2.225	8.1	19.4
2 1	6 45.93	+16 48.3	1.227	2.133	13.7	20.0	2 1	6 47.06	+20 33.7	1.336	2.242	12.8	19.7
2 11	6 40.79	+17 52.8	1.290	2.128	18.1	20.2	2 11	6 42.55	+21 14.7	1.423	2.258	16.8	20.0
<b>284875</b>	2009 DG <sub>41</sub>		1 7.3 350°70	2°1/ 8.1 18			<b>164795</b>	1999 GW <sub>10</sub>		1 7.3 328°88	0°7/ 7.5 18		
12 3	7 32.91	+14 24.1	2.206	3.004	12.9	20.3	12 3	7 34.06	+19 32.8	2.082	2.891	13.2	20.4
12 13	7 28.54	+14 41.8	2.121	3.002	10.0	20.1	12 13	7 29.58	+19 40.0	1.995	2.885	10.0	20.1
12 23	7 22.16	+15 9.1	2.060	3.001	6.6	19.9	12 23	7 22.90	+19 52.8	1.932	2.880	6.4	19.9
1 2	7 14.35	+15 44.7	2.026	3.000	3.2	19.6	1 2	7 14.65	+20 9.3	1.896	2.874	2.4	19.6
1 12	7 5.98	+16 26.4	2.022	2.999	2.6	19.6	1 12	7 5.77	+20 27.3	1.889	2.869	2.0	19.6
1 22	6 57.96	+17 11.1	2.047	2.998	5.8	19.8	1 22	6 57.30	+20 45.0	1.911	2.864	6.0	19.9
2 1	6 51.21	+17 56.1	2.100	2.997	9.3	20.0	2 1	6 50.22	+21 0.9	1.961	2.859	9.8	20.1
2 11	6 46.42	+18 39.3	2.178	2.997	12.4	20.2	2 11	6 45.31	+21 14.4	2.035	2.855	13.1	20.3
<b>179913</b>	2002 VU <sub>29</sub>		1 7.3 44°28	1°8/ 7.6 18			<b>519850</b>	2013 MZ <sub>12</sub>		1 7.3 133°01	0°5/ 7.1 18		
12 3	7 37.62	+18 17.0	1.549	2.367	16.5	19.4	12 3	7 38.06	+20 34.8	2.238	3.037	12.7	22.1
12 13	7 32.69	+18 5.0	1.482	2.376	12.6	19.2	12 13	7 32.40	+21 27.2	2.162	3.048	9.6	21.9
12 23	7 24.99	+18 0.3	1.438	2.386	8.1	18.9	12 23	7 24.58	+22 25.8	2.111	3.058	6.0	21.7
1 2	7 15.36	+18 1.6	1.419	2.396	3.4	18.7	1 2	7 15.22	+23 26.5	2.089	3.068	2.1	21.5
1 12	7 5.13	+18 7.2	1.428	2.407	2.9	18.7	1 12	7 5.27	+24 25.2	2.098	3.077	2.0	21.5
1 22	6 55.67	+18 15.1	1.464	2.417	7.4	19.0	1 22	6 55.75	+25 18.1	2.138	3.086	5.9	21.8
2 1	6 48.20	+18 24.1	1.525	2.428	11.8	19.3	2 1	6 47.65	+26 3.3	2.207	3.095	9.4	22.0
2 11	6 43.55	+18 33.3	1.610	2.439	15.5	19.5	2 11	6 41.69	+26 40.1	2.301	3.103	12.3	22.2
<b>33182</b>	1998 FT <sub>26</sub>		1 7.3 266°33	7°2/ 5.3 18			<b>454345</b>	2014 LE <sub>18</sub>		1 7.3 152°70	3°2/ 8.1 18		
12 3	7 43.49	+41 7.0	2.009	2.804	14.1	19.4	12 3	7 39.86	+13 46.5	1.845	2.639	15.2	22.1
12 13	7 37.41	+42 0.9	1.927	2.794	11.5	19.2	12 13	7 34.01	+13 32.5	1.769	2.646	11.9	21.9
12 23	7 28.15	+42 45.5	1.868	2.784	9.0	19.0	12 23	7 25.67	+13 28.3	1.715	2.652	8.0	21.7
1 2	7 16.55	+43 12.9	1.835	2.775	7.3	18.9	1 2	7 15.61	+13 33.7	1.688	2.659	4.3	21.4
1 12	7 4.01	+43 17.3	1.829	2.765	7.7	18.9	1 12	7 4.94	+13 47.3	1.690	2.664	3.7	21.4
1 22	6 52.16	+42 57.3	1.851	2.755	9.9	19.0	1 22	6 54.85	+14 7.2	1.722	2.669	7.1	21.6
2 1	6 42.47	+42 15.7	1.898	2.745	12.6	19.1	2 1	6 46.46	+14 31.1	1.780	2.673	10.9	21.9
2 11	6 35.94	+41 18.5	1.966	2.735	15.3	19.3	2 11	6 40.55	+14 57.1	1.863	2.677	14.3	22.1
<b>395808</b>	2012 XO <sub>21</sub>		1 7.3 341°86	1°6/ 7.6 18			<b>141173</b>	2001 XQ <sub>151</sub>		1 7.3 30°96	0°7/ 7.4 18		
12 3	7 38.57	+18 37.6	1.326	2.154	18.2	21.3	12 3	7 36.78	+20 11.4	1.719	2.535	15.	

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>249860</b>	2001 <i>QL</i> <sub>124</sub>		1 7.3 89°11	5°3/ 6.4	18		<b>359318</b>	2009 <i>JS</i> <sub>12</sub>		1 7.3 207°20	1°1/ 6.9	18	
12 3	7 45.80	+36 26.8	1.862	2.663	14.8	20.4	12 3	7 39.31	+23 43.8	2.202	3.004	12.8	21.8
12 13	7 38.66	+36 56.7	1.805	2.683	11.6	20.2	12 13	7 33.55	+24 18.0	2.112	2.999	9.7	21.5
12 23	7 28.58	+37 18.0	1.771	2.704	8.2	20.1	12 23	7 25.44	+24 55.8	2.046	2.993	6.1	21.3
1 2	7 16.59	+37 24.5	1.764	2.724	5.6	20.0	1 2	7 15.60	+25 33.4	2.008	2.987	2.3	21.1
1 12	7 4.17	+37 12.5	1.786	2.743	5.8	20.0	1 12	7 5.02	+26 7.0	2.001	2.979	2.4	21.0
1 22	6 52.82	+36 42.4	1.836	2.763	8.4	20.2	1 22	6 54.82	+26 34.0	2.025	2.972	6.3	21.3
2 1	6 43.79	+35 57.8	1.913	2.782	11.6	20.4	2 1	6 46.06	+26 53.2	2.076	2.963	9.9	21.5
2 11	6 37.82	+35 4.0	2.012	2.800	14.4	20.7	2 11	6 39.58	+27 5.1	2.153	2.954	13.1	21.7
<b>425980</b>	2011 <i>HP</i> <sub>73</sub>		1 7.3 341°34	7°2/10.2	18		<b>447194</b>	2005 <i>SH</i> <sub>186</sub>		1 7.3 63°44	6°2/ 6.2	17	
12 3	7 31.62	+ 2 40.3	1.627	2.409	17.5	20.5	12 3	7 45.98	+33 38.2	1.256	2.084	19.0	21.1
12 13	7 28.23	+ 2 39.8	1.541	2.398	14.5	20.3	12 13	7 39.94	+34 36.2	1.209	2.104	14.7	20.9
12 23	7 22.32	+ 3 2.6	1.475	2.389	11.2	20.0	12 23	7 29.91	+35 27.6	1.182	2.125	10.2	20.7
1 2	7 14.52	+ 3 50.9	1.433	2.380	8.2	19.8	1 2	7 17.18	+36 2.5	1.179	2.145	6.6	20.5
1 12	7 5.87	+ 5 3.5	1.416	2.372	7.3	19.8	1 12	7 3.76	+36 14.1	1.203	2.166	7.0	20.6
1 22	6 57.60	+ 6 35.8	1.426	2.364	9.2	19.9	1 22	6 51.79	+36 1.5	1.251	2.187	10.6	20.9
2 1	6 50.89	+ 8 20.6	1.461	2.358	12.6	20.0	2 1	6 42.94	+35 29.3	1.324	2.208	14.6	21.1
2 11	6 46.67	+10 9.9	1.520	2.353	16.1	20.2	2 11	6 38.11	+34 44.5	1.416	2.228	18.1	21.4
<b>459136</b>	2012 <i>CO</i> <sub>13</sub>		1 7.3 339°55	9°4/ 6.3	18		<b>27686</b>	1981 <i>ES</i> <sub>21</sub>		1 7.3 5°46	9°2/ 5.8	18	
12 3	7 47.72	+44 45.6	1.564	2.363	17.3	20.9	12 3	7 42.44	+42 11.1	1.430	2.247	17.7	17.5
12 13	7 41.39	+45 23.1	1.492	2.357	14.4	20.6	12 13	7 37.54	+43 7.0	1.368	2.247	14.6	17.3
12 23	7 30.95	+45 44.1	1.440	2.352	11.5	20.5	12 23	7 28.62	+43 49.1	1.326	2.248	11.5	17.1
1 2	7 17.56	+45 38.7	1.412	2.347	9.6	20.3	1 2	7 16.80	+44 7.2	1.308	2.250	9.4	17.0
1 12	7 3.28	+45 0.6	1.409	2.342	9.8	20.3	1 12	7 4.05	+43 54.4	1.313	2.252	9.7	17.0
1 22	6 50.30	+43 50.7	1.432	2.339	12.0	20.4	1 22	6 52.52	+43 10.6	1.343	2.256	12.1	17.1
2 1	6 40.46	+42 15.9	1.478	2.335	15.0	20.6	2 1	6 44.01	+42 1.7	1.396	2.261	15.3	17.3
2 11	6 34.73	+40 26.5	1.546	2.332	18.0	20.8	2 11	6 39.51	+40 36.8	1.469	2.266	18.3	17.6
<b>285292</b>	1998 <i>SL</i> <sub>157</sub>		1 7.3 49°83	2°3/ 6.8	17		<b>21882</b>	1999 <i>UL</i> <sub>16</sub>		1 7.3 152°57	0°8/ 7.1	18	
12 3	7 41.04	+25 51.8	1.367	2.196	17.7	20.6	12 3	7 41.10	+23 42.8	2.094	2.895	13.4	19.9
12 13	7 35.56	+26 27.3	1.321	2.222	13.3	20.4	12 13	7 34.80	+24 0.6	2.018	2.904	10.1	19.7
12 23	7 26.85	+27 4.4	1.296	2.248	8.4	20.2	12 23	7 26.12	+24 20.5	1.965	2.913	6.4	19.5
1 2	7 16.02	+27 36.9	1.296	2.274	3.5	20.0	1 2	7 15.80	+24 39.5	1.942	2.920	2.3	19.2
1 12	7 4.70	+27 59.9	1.323	2.300	3.6	20.1	1 12	7 4.91	+24 54.5	1.948	2.927	2.2	19.2
1 22	6 54.55	+28 11.2	1.377	2.327	8.2	20.4	1 22	6 54.61	+25 3.7	1.985	2.934	6.2	19.5
2 1	6 46.89	+28 11.4	1.456	2.354	12.6	20.7	2 1	6 45.94	+25 7.0	2.050	2.939	9.9	19.7
2 11	6 42.52	+28 3.3	1.557	2.381	16.2	21.0	2 11	6 39.68	+25 5.3	2.140	2.944	13.1	20.0
<b>154026</b>	2002 <i>CW</i> <sub>38</sub>		1 7.3 250°12	0°7/ 7.1	18		<b>188309</b>	2003 <i>FX</i> <sub>9</sub>		1 7.3 188°37	4°2/ 8.9	18	
12 3	7 36.93	+23 0.4	2.026	2.837	13.4	20.1	12 3	7 35.34	+ 7 31.6	2.612	3.374	12.1	21.3
12 13	7 31.87	+23 23.5	1.940	2.832	10.2	19.9	12 13	7 30.01	+ 7 20.5	2.522	3.373	9.7	21.1
12 23	7 24.42	+23 50.4	1.878	2.827	6.4	19.6	12 23	7 22.95	+ 7 20.4	2.455	3.372	7.1	20.9
1 2	7 15.23	+24 17.9	1.844	2.822	2.3	19.3	1 2	7 14.67	+ 7 31.8	2.416	3.369	4.9	20.8
1 12	7 5.33	+24 42.6	1.838	2.818	2.3	19.3	1 12	7 5.90	+ 7 54.2	2.408	3.367	4.4	20.7
1 22	6 55.87	+25 2.2	1.862	2.813	6.4	19.6	1 22	6 57.44	+ 8 25.9	2.429	3.364	6.2	20.8
2 1	6 47.94	+25 15.6	1.914	2.807	10.3	19.8	2 1	6 50.05	+ 9 4.7	2.480	3.360	8.8	21.0
2 11	6 42.38	+25 23.2	1.989	2.802	13.6	20.0	2 11	6 44.34	+ 9 47.7	2.556	3.355	11.3	21.2
<b>100320</b>	1995 <i>MF</i> <sub>5</sub>		1 7.3 255°86	2°9/ 8.2	18		<b>237277</b>	Nevaruth		1 7.3 340°47	0°6/ 7.4	18	
12 3	7 33.71	+12 50.2	2.516	3.301	11.9	21.2	12 3	7 33.94	+20 41.9	1.773	2.594	14.6	20.2
12 13	7 28.95	+12 41.2	2.416	3.288	9.3	21.0	12 13	7 29.89	+20 41.9	1.688	2.584	11.2	20.0
12 23	7 22.37	+12 40.2	2.341	3.275	6.4	20.8	12 23	7 23.31	+20 46.9	1.625	2.576	7.1	19.7
1 2	7 14.47	+12 47.3	2.294	3.262	3.6	20.6	1 2	7 14.88	+20 55.0	1.588	2.567	2.6	19.4
1 12	7 6.01	+13 1.7	2.277	3.249	3.2	20.6	1 12	7 5.70	+21 4.2	1.580	2.560	2.2	19.4
1 22	6 57.81	+13 21.9	2.290	3.236	5.8	20.7	1 22	6 57.00	+21 12.4	1.599	2.553	6.8	19.7
2 1	6 50.69	+13 46.3	2.332	3.222	8.8	20.9	2 1	6 49.94	+21 18.8	1.644	2.547	11.1	19.9
2 11	6 45.31	+14 13.0	2.398	3.208	11.7	21.0	2 11	6 45.40	+21 22.9	1.712	2.541	14.7	20.1
<b>439958</b>	2001 <i>TD</i> <sub>186</sub>		1 7.3 91°47	1°0/ 7.1	18		<b>140497</b>	2001 <i>TX</i> <sub>153</sub>		1 7.3 69°71	0°7/ 7.1	18	
12 3	7 45.51	+23 43.6	1.600	2.410	16.5	22.3	12 3	7 36.81	+24 50.8	2.281	3.087	12.3	19.7
12 13	7 38.42	+24 3.5	1.548	2.439	12.4	22.1	12 13	7 31.36	+24 46.5	2.206	3.095	9.3	19.5
12 23	7 28.43	+24 25.9	1.519	2.468	7.7	21.9	12 23	7 23.86	+24 42.5	2.154	3.103	5.8	19.3
1 2	7 16.56	+24 46.3	1.517	2.496	2.8	21.7	1 2	7 14.98	+24 36.8	2.132	3.110	2.1	19.1
1 12	7 4.29	+25 1.1	1.545	2.524	2.7	21.7	1 12	7 5.67	+24 27.7	2.139	3.118	2.0	19.1
1 22	6 53.10	+25 8.4	1.601	2.550	7.3	22.1	1 22	6 56.92	+24 14.7	2.176	3.126	5.7	19.3
2 1	6 44.21	+25 8.7	1.684	2.576	11.5	22.4	2 1	6 49.61	+23 58.4	2.242	3.134	9.0	19.5
2 11	6 38.37	+25 3.8	1.790	2.602	14.9	22.7	2 11	6 44.41	+23 39.7	2.332	3.142	12.0	19.7
<b>110863</b>	2001 <i>UN</i> <sub>85</sub>		1 7.3 207°20	1°5/ 7.7	18		<b>321547</b>	2009 <i>SJ</i> <sub>281</sub>		1 7.3 132°10	2°4/ 6.5	18	
12 3	7 37.46	+17 22.1	2.188	2.984	13.1	21.2	12 3	7 39.10	+27 42.1	2.144	2.951	12.9	21.3
12 13	7 32.03	+17 25.8	2.097	2.979	10.0	21.0	12 13	7 33.36	+28 19.3	2.070	2.959	9.8	21.1
12 23	7 24.41	+17 36.0	2.031	2.975	6.5	20.8	12 23	7 25.26	+28 56.6	2.021	2.967	6.3	20.9
1 2	7 15.21	+17 51.4	1.993	2.969	2.8	20.6	1 2	7 15.51	+29 29.6	2.000	2.975	3.0	20.7
1 12	7 5.38	+18 10.2	1.985	2.963	2.3	20.5	1 12	7 5.18	+29 54.3	2.009	2.982	3.3	20.7
1 22	6 55.94	+18 30.3	2.007	2.957	6.0	20.7	1 22	6 55.40	+30 8.9	2.047	2.989	6.6	20.9
2 1	6 47.86	+18 50.2	2.057	2.950	9.7	20.9	2 1	6 47.23	+30 13.3	2.113	2.996	10.0	21.2
2 11	6 41.92	+19 9.0	2.132	2.943	12.9	21.1	2 11	6 41.43	+30 9.1	2.203	3.002	12.9	21.4
<b>276075</b>	2002 <i>CK</i> <sub>216</sub>		1 7.3 319°75	3°8/ 6.4	18		<b>33894</b>	2000 <i>KM</i> <sub>30</sub>		1 7.3 139°05	2°6/ 6.1	18	
12 3	7 39.57	+31 55.8	1.866	2.680	14.3								

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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>79346</b>	1996 VY <sub>33</sub>		1 7.3 322°27	0°0/ 7.1 18			<b>332887</b>	2011 AJ <sub>55</sub>		1 7.3 280°00	0°0/ 7.1 17		
12 3	7 34.01	+21 42.3	1.995	2.810	13.4	19.6	12 3	7 36.34	+20 49.1	1.955	2.766	13.8	21.8
12 13	7 29.76	+21 50.0	1.901	2.795	10.3	19.4	12 13	7 31.61	+21 12.2	1.861	2.753	10.6	21.5
12 23	7 23.16	+22 1.9	1.831	2.781	6.5	19.1	12 23	7 24.39	+21 41.4	1.790	2.739	6.7	21.3
1 2	7 14.83	+22 15.8	1.788	2.767	2.3	18.8	1 2	7 15.31	+22 14.0	1.747	2.726	2.4	21.0
1 12	7 5.76	+22 29.2	1.774	2.754	2.1	18.8	1 12	7 5.38	+22 46.5	1.732	2.712	2.1	20.9
1 22	6 57.05	+22 40.3	1.788	2.741	6.4	19.0	1 22	6 55.79	+23 15.9	1.747	2.698	6.6	21.2
2 1	6 49.81	+22 48.0	1.829	2.728	10.3	19.3	2 1	6 47.71	+23 40.5	1.788	2.685	10.7	21.4
2 11	6 44.86	+22 52.3	1.894	2.716	13.8	19.4	2 11	6 42.03	+23 59.7	1.854	2.671	14.3	21.6
<b>452558</b>	2004 YL <sub>12</sub>		1 7.3 1°40	0°8/ 7.1 18			<b>267474</b>	2002 FC <sub>26</sub>		1 7.3 276°00	1°1/ 6.9 18		
12 3	7 35.96	+22 11.1	1.249	2.090	18.4	21.2	12 3	7 36.71	+21 56.9	2.047	2.856	13.4	20.4
12 13	7 32.34	+22 37.3	1.181	2.088	14.0	21.0	12 13	7 31.91	+22 51.4	1.950	2.841	10.2	20.2
12 23	7 25.28	+23 11.1	1.132	2.087	8.8	20.7	12 23	7 24.61	+23 53.4	1.877	2.826	6.4	19.9
1 2	7 15.66	+23 47.7	1.107	2.087	3.1	20.3	1 2	7 15.41	+24 58.6	1.831	2.810	2.4	19.6
1 12	7 5.04	+24 21.6	1.108	2.088	3.0	20.3	1 12	7 5.27	+26 1.8	1.816	2.794	2.5	19.6
1 22	6 55.21	+24 48.8	1.134	2.090	8.7	20.7	1 22	6 55.37	+26 58.5	1.830	2.778	6.7	19.8
2 1	6 47.77	+25 7.3	1.183	2.093	13.8	21.0	2 1	6 46.88	+27 46.1	1.872	2.762	10.7	20.0
2 11	6 43.81	+25 17.8	1.253	2.096	18.2	21.2	2 11	6 40.74	+28 23.8	1.939	2.746	14.1	20.2
<b>402545</b>	2006 JN <sub>4</sub>		1 7.3 251°92	3°9/ 8.2 18			<b>298945</b>	2004 TY <sub>286</sub>		1 7.3 131°96	1°8/ 7.8 18		
12 3	7 37.72	+13 0.7	1.646	2.449	16.4	21.0	12 3	7 40.55	+16 36.2	1.771	2.572	15.5	21.7
12 13	7 32.82	+12 41.8	1.563	2.444	12.9	20.8	12 13	7 34.65	+16 41.7	1.699	2.583	11.9	21.5
12 23	7 25.20	+12 34.4	1.501	2.439	8.9	20.5	12 23	7 26.16	+16 56.0	1.651	2.594	7.7	21.3
1 2	7 15.57	+12 38.9	1.465	2.434	5.0	20.3	1 2	7 15.87	+17 17.3	1.629	2.605	3.3	21.1
1 12	7 5.12	+12 54.3	1.456	2.429	4.3	20.2	1 12	7 4.97	+17 42.7	1.636	2.615	2.7	21.0
1 22	6 55.17	+13 18.5	1.475	2.424	7.9	20.4	1 22	6 54.72	+18 9.8	1.673	2.624	6.9	21.3
2 1	6 46.99	+13 48.6	1.520	2.419	12.1	20.7	2 1	6 46.29	+18 36.4	1.737	2.633	11.0	21.6
2 11	6 41.51	+14 21.9	1.588	2.413	15.9	20.9	2 11	6 40.48	+19 1.2	1.824	2.642	14.5	21.8
<b>136067</b>	2002 XK <sub>88</sub>		1 7.3 14°98	24°6/ 19.4 16			<b>335879</b>	2007 RX <sub>130</sub>		1 7.3 56°96	5°5/ 9.2 18		
12 3	8 26.95	+73 48.6	1.042	1.754	29.2	17.1	12 3	7 33.06	+ 5 35.9	2.222	2.991	13.7	21.1
12 13	8 20.30	+75 0.5	1.026	1.767	27.8	17.0	12 13	7 28.52	+ 5 11.4	2.146	2.998	11.2	20.9
12 23	7 57.99	+75 25.7	1.018	1.783	26.5	17.0	12 23	7 22.11	+ 5 0.6	2.092	3.004	8.4	20.8
1 2	7 26.38	+74 40.6	1.022	1.803	25.4	17.0	1 2	7 14.41	+ 5 4.8	2.065	3.011	6.1	20.6
1 12	6 57.39	+72 35.3	1.038	1.824	24.8	17.0	1 12	7 6.26	+ 5 23.8	2.065	3.018	5.6	20.6
1 22	6 38.72	+69 21.7	1.068	1.849	24.6	17.1	1 22	6 58.52	+ 5 55.8	2.094	3.025	7.3	20.7
2 1	6 31.05	+65 22.7	1.115	1.875	25.0	17.3	2 1	6 52.03	+ 6 37.9	2.151	3.032	9.9	20.9
2 11	6 31.88	+61 1.6	1.178	1.904	25.8	17.4	2 11	6 47.40	+ 7 26.3	2.231	3.039	12.5	21.1
<b>182971</b>	2002 NQ <sub>15</sub>		1 7.3 87°63	2°7/ 6.6 18			<b>485406</b>	2011 OL <sub>3</sub>		1 7.3 205°81	1°8/ 7.1 18		
12 3	7 45.68	+25 42.6	1.388	2.209	17.9	20.4	12 3	7 44.44	+27 19.1	1.668	2.480	15.8	21.6
12 13	7 39.16	+26 38.2	1.338	2.234	13.5	20.2	12 13	7 38.05	+27 16.7	1.585	2.477	12.1	21.4
12 23	7 29.21	+27 36.2	1.309	2.259	8.6	19.9	12 23	7 28.53	+27 12.6	1.526	2.474	7.7	21.1
1 2	7 16.93	+28 29.2	1.306	2.283	3.7	19.7	1 2	7 16.76	+27 2.6	1.492	2.470	3.1	20.8
1 12	7 4.03	+29 10.2	1.331	2.307	4.0	19.8	1 12	7 4.17	+26 44.0	1.488	2.466	3.1	20.8
1 22	6 52.28	+29 36.2	1.384	2.330	8.6	20.1	1 22	6 52.34	+26 16.4	1.512	2.461	7.7	21.1
2 1	6 43.17	+29 47.6	1.462	2.353	13.0	20.4	2 1	6 42.68	+25 41.7	1.563	2.456	12.2	21.4
2 11	6 37.57	+29 47.6	1.561	2.375	16.7	20.7	2 11	6 36.15	+25 3.5	1.637	2.450	16.0	21.6
<b>408145</b>	2013 CM <sub>107</sub>		1 7.3 281°73	5°6/ 6.4 18			<b>26522</b>	Juliapoje		1 7.3 192°26	0°0/ 7.3 18		
12 3	7 44.83	+35 15.5	1.596	2.409	16.3	21.4	12 3	7 35.61	+21 11.0	2.530	3.329	11.4	19.2
12 13	7 39.03	+35 42.1	1.503	2.390	12.9	21.1	12 13	7 30.39	+21 25.1	2.442	3.327	8.7	19.0
12 23	7 29.54	+36 1.6	1.433	2.371	9.2	20.9	12 23	7 23.28	+21 42.8	2.379	3.326	5.4	18.8
1 2	7 17.21	+36 6.3	1.387	2.352	6.1	20.6	1 2	7 14.83	+22 2.1	2.345	3.324	1.9	18.6
1 12	7 3.64	+35 50.0	1.369	2.332	6.4	20.6	1 12	7 5.88	+22 20.8	2.342	3.322	1.7	18.6
1 22	6 50.75	+35 11.5	1.378	2.312	9.9	20.8	1 22	6 57.28	+22 37.2	2.369	3.320	5.2	18.8
2 1	6 40.32	+34 14.2	1.412	2.293	14.1	21.0	2 1	6 49.88	+22 50.4	2.426	3.317	8.5	19.0
2 11	6 33.55	+33 5.0	1.467	2.273	17.9	21.1	2 11	6 44.33	+23 0.2	2.507	3.314	11.3	19.2
<b>400259</b>	2007 RR <sub>65</sub>		1 7.3 118°27	0°5/ 7.4 18			<b>156582</b>	2002 FK <sub>20</sub>		1 7.3 236°09	0°3/ 7.4 18		
12 3	7 41.50	+20 7.3	1.846	2.649	14.8	22.5	12 3	7 36.21	+19 24.6	2.318	3.117	12.3	20.3
12 13	7 35.23	+20 19.2	1.779	2.667	11.2	22.3	12 13	7 31.10	+19 51.3	2.222	3.107	9.4	20.1
12 23	7 26.43	+20 36.4	1.736	2.683	7.1	22.1	12 23	7 23.88	+20 24.3	2.151	3.097	6.0	19.9
1 2	7 15.93	+20 56.4	1.721	2.699	2.6	21.8	1 2	7 15.09	+21 1.2	2.108	3.086	2.2	19.6
1 12	7 4.90	+21 16.0	1.735	2.715	2.2	21.8	1 12	7 5.62	+21 39.0	2.095	3.075	1.9	19.6
1 22	6 54.60	+21 33.2	1.778	2.730	6.6	22.1	1 22	6 56.43	+22 14.9	2.113	3.064	5.7	19.8
2 1	6 46.13	+21 46.9	1.850	2.744	10.5	22.4	2 1	6 48.50	+22 47.2	2.160	3.052	9.3	20.0
2 11	6 40.25	+21 57.2	1.945	2.758	13.9	22.6	2 11	6 42.58	+23 14.8	2.232	3.040	12.5	20.2
<b>289439</b>	2005 EM <sub>33</sub>		1 7.3 0°09	23°2/ 7.4 16			<b>443853</b>	2001 RE <sub>41</sub>		1 7.3 96°82	2°7/ 7.8 17		
12 3	8 1.46	+60 15.8	0.836	1.636	28.5	19.9	12 3	7 42.30	+16 22.7	1.540	2.347	17.1	21.4
12 13	7 57.94	+62 12.6	0.797	1.633	26.4	19.8	12 13	7 36.12	+16 2.8	1.480	2.366	13.2	21.2
12 23	7 44.35	+63 30.4	0.770	1.630	24.5	19.6	12 23	7 27.11	+15 51.6	1.441	2.384	8.6	21.0
1 2	7 22.73	+63 42.5	0.755	1.630	23.4	19.6	1 2	7 16.20	+15 48.6	1.427	2.402	4.1	20.7
1 12	6 59.25	+62 31.6	0.756	1.631	23.3	19.6	1 12	7 4.76	+15 52.0	1.443	2.419	3.5	20.7
1 22	6 40.62	+60 1.9	0.771	1.633	24.5	19.6	1 22	6 54.23	+16 0.1	1.486	2.437	7.6	21.0
2 1	6 30.48	+56 35.4	0.801	1.636	26.4	19.8	2 1	6 45.83	+16 11.4	1.555	2.453	11.9	21.3
2 11	6 28.88	+52 39.7	0.846	1.641	28.7	20.0	2 11	6 40.36	+16 24.4	1.647	2.470	15.5	21.6
<b>337806</b>	2001 UV <sub>222</sub>		1 7.3 25°34	4°0/ 8.2 18			<b>245005</b>	2004 CK <sub>53</sub>		1 7.3 11°53	1°0/ 7.5 18		
12 3	7 33.99	+11 21.9	2.295	3.080	12.9	20.6	12 3	7 35.50	+20 17.7	1.993	2.804		

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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>163066</b>	2001 <i>YH</i> <sub>143</sub>		1 7.3 271°34	0°2/ 7.4 18			<b>500191</b>	2012 <i>GC</i> <sub>22</sub>		1 7.3 260°95	4°2/ 5.9 17		
12 3	7 39.50	+20 56.2	1.615	2.432	16.0	20.8	12 3	7 40.30	+32 25.3	2.083	2.890	13.3	21.8
12 13	7 34.56	+21 6.1	1.521	2.415	12.3	20.6	12 13	7 34.76	+33 11.1	1.989	2.874	10.3	21.5
12 23	7 26.56	+21 22.2	1.448	2.398	7.9	20.3	12 23	7 26.47	+33 54.6	1.918	2.858	7.1	21.3
1 2	7 16.17	+21 41.9	1.401	2.380	2.9	19.9	1 2	7 16.10	+34 30.1	1.875	2.841	4.5	21.1
1 12	7 4.66	+22 1.5	1.382	2.362	2.5	19.8	1 12	7 4.79	+34 52.4	1.861	2.824	4.9	21.1
1 22	6 53.54	+22 18.2	1.391	2.344	7.8	20.1	1 22	6 53.86	+34 59.1	1.876	2.807	7.9	21.3
2 1	6 44.30	+22 30.7	1.426	2.326	12.6	20.4	2 1	6 44.62	+34 50.5	1.917	2.790	11.3	21.4
2 11	6 38.05	+22 38.9	1.484	2.308	16.8	20.6	2 11	6 38.03	+34 29.6	1.982	2.773	14.5	21.6
<b>405543</b>	2005 <i>GN</i> <sub>97</sub>		1 7.3 319°89	2°5/ 7.9 18			<b>319103</b>	2005 <i>WE</i> <sub>183</sub>		1 7.3 82°61	0°6/ 7.2 17		
12 3	7 36.21	+15 12.8	1.570	2.384	16.5	21.0	12 3	7 43.61	+23 57.7	1.408	2.230	17.7	20.6
12 13	7 31.88	+15 17.1	1.488	2.378	12.8	20.7	12 13	7 37.52	+23 54.5	1.348	2.245	13.4	20.4
12 23	7 24.73	+15 33.2	1.427	2.372	8.5	20.4	12 23	7 28.18	+23 53.4	1.309	2.260	8.4	20.1
1 2	7 15.47	+16 0.0	1.392	2.367	4.0	20.2	1 2	7 16.63	+23 50.8	1.295	2.274	3.0	19.9
1 12	7 5.33	+16 34.6	1.384	2.362	3.3	20.1	1 12	7 4.47	+23 44.0	1.309	2.289	2.7	19.9
1 22	6 55.69	+17 13.6	1.403	2.357	7.7	20.3	1 22	6 53.38	+23 32.0	1.351	2.304	8.0	20.2
2 1	6 47.87	+17 53.8	1.448	2.352	12.2	20.6	2 1	6 44.77	+23 15.9	1.418	2.318	12.7	20.5
2 11	6 42.86	+18 32.4	1.515	2.347	16.2	20.8	2 11	6 39.47	+22 57.6	1.507	2.333	16.6	20.8
<b>36894</b>	2000 <i>SK</i> <sub>170</sub>		1 7.3 126°25	2°2/ 6.6 18			<b>227956</b>	2007 <i>GG</i> <sub>69</sub>		1 7.3 149°49	0°4/ 7.2 18		
12 3	7 40.03	+28 2.1	2.312	3.113	12.3	19.7	12 3	7 37.41	+22 29.6	2.112	2.919	13.1	21.1
12 13	7 33.84	+28 30.8	2.242	3.128	9.3	19.5	12 13	7 32.09	+22 45.9	2.032	2.922	9.9	20.9
12 23	7 25.46	+28 58.6	2.197	3.142	6.0	19.4	12 23	7 24.50	+23 5.5	1.976	2.925	6.2	20.7
1 2	7 15.61	+29 21.6	2.181	3.156	2.8	19.2	1 2	7 15.33	+23 25.8	1.948	2.927	2.2	20.4
1 12	7 5.28	+29 36.9	2.195	3.169	3.0	19.2	1 12	7 5.57	+23 43.9	1.950	2.930	2.0	20.4
1 22	6 55.54	+29 42.9	2.239	3.181	6.1	19.4	1 22	6 56.30	+23 58.0	1.982	2.933	6.1	20.7
2 1	6 47.35	+29 40.1	2.312	3.193	9.3	19.7	2 1	6 48.54	+24 7.3	2.042	2.935	9.7	20.9
2 11	6 41.39	+29 30.1	2.410	3.205	12.1	19.9	2 11	6 43.04	+24 12.0	2.125	2.937	12.9	21.1
<b>379087</b>	2008 <i>XR</i> <sub>15</sub>		1 7.3 355°15	1°1/ 7.6 18			<b>406175</b>	2006 <i>WB</i> <sub>78</sub>		1 7.3 3°32	1°9/ 7.6 18		
12 3	7 34.48	+19 22.2	1.883	2.698	14.2	21.0	12 3	7 32.97	+19 9.1	1.184	2.028	18.9	20.5
12 13	7 30.09	+19 15.8	1.803	2.695	10.8	20.8	12 13	7 30.06	+18 50.1	1.118	2.027	14.5	20.2
12 23	7 23.33	+19 14.8	1.745	2.693	6.9	20.6	12 23	7 23.83	+18 39.1	1.073	2.026	9.4	19.9
1 2	7 14.91	+19 17.8	1.714	2.691	2.7	20.3	1 2	7 15.20	+18 35.3	1.050	2.028	3.9	19.6
1 12	7 5.86	+19 23.2	1.711	2.690	2.3	20.3	1 12	7 5.70	+18 36.8	1.051	2.031	3.2	19.6
1 22	6 57.32	+19 29.5	1.736	2.690	6.5	20.5	1 22	6 57.04	+18 41.5	1.077	2.036	8.6	19.9
2 1	6 50.34	+19 35.7	1.789	2.690	10.4	20.8	2 1	6 50.74	+18 48.0	1.127	2.042	13.8	20.2
2 11	6 45.72	+19 41.2	1.865	2.690	13.9	21.0	2 11	6 47.76	+18 54.9	1.196	2.050	18.1	20.5
<b>475504</b>	2006 <i>SZ</i> <sub>315</sub>		1 7.3 204°14	19°4/ 1.8 18			<b>163772</b>	2003 <i>PU</i> <sub>12</sub>		1 7.3 124°10	1°0/ 7.0 18		
12 3	8 5.90	+56 57.3	1.177	1.948	23.4	20.9	12 3	7 42.15	+23 35.0	1.952	2.756	14.1	20.5
12 13	7 59.89	+59 40.5	1.131	1.947	21.4	20.8	12 13	7 35.72	+24 3.3	1.885	2.773	10.7	20.3
12 23	7 45.45	+61 58.2	1.101	1.945	19.9	20.6	12 23	7 26.78	+24 34.5	1.842	2.790	6.7	20.1
1 2	7 23.48	+63 26.2	1.089	1.942	19.4	20.6	1 2	7 16.14	+25 4.6	1.827	2.806	2.5	19.8
1 12	6 58.19	+63 46.4	1.096	1.940	20.0	20.6	1 12	7 4.95	+25 29.8	1.842	2.821	2.4	19.8
1 22	6 35.56	+62 57.5	1.120	1.937	21.5	20.7	1 22	6 54.47	+25 48.1	1.888	2.836	6.5	20.1
2 1	6 20.17	+61 14.0	1.161	1.933	23.6	20.9	2 1	6 45.77	+25 58.8	1.961	2.850	10.3	20.4
2 11	6 13.46	+58 57.1	1.215	1.929	25.7	21.0	2 11	6 39.64	+26 3.3	2.058	2.863	13.5	20.6
<b>276226</b>	2002 <i>QQ</i> <sub>130</sub>		1 7.3 135°03	2°5/ 8.3 18			<b>125841</b>	2001 <i>XO</i> <sub>182</sub>		1 7.3 97°48	1°5/ 7.5 18		
12 3	7 34.58	+12 49.5	2.379	3.165	12.4	20.8	12 3	7 44.75	+20 2.2	1.645	2.449	16.3	19.4
12 13	7 29.63	+13 3.6	2.298	3.171	9.7	20.6	12 13	7 37.77	+19 31.9	1.584	2.471	12.4	19.2
12 23	7 22.81	+13 27.5	2.241	3.177	6.5	20.5	12 23	7 28.05	+19 5.6	1.547	2.493	7.9	19.0
1 2	7 14.69	+14 0.1	2.212	3.182	3.4	20.3	1 2	7 16.55	+18 42.4	1.537	2.514	3.2	18.8
1 12	7 6.08	+14 39.2	2.213	3.188	2.8	20.2	1 12	7 4.66	+18 21.4	1.556	2.535	2.7	18.8
1 22	6 57.85	+15 22.4	2.244	3.193	5.6	20.4	1 22	6 53.75	+18 2.7	1.604	2.555	7.2	19.1
2 1	6 50.81	+16 7.0	2.305	3.198	8.8	20.6	2 1	6 44.99	+17 46.5	1.680	2.575	11.3	19.4
2 11	6 45.63	+16 50.7	2.390	3.202	11.6	20.8	2 11	6 39.12	+17 33.1	1.779	2.594	14.9	19.6
<b>197578</b>	2004 <i>GX</i> <sub>79</sub>		1 7.3 161°99	2°1/ 7.8 18			<b>131418</b>	2001 <i>OO</i> <sub>5</sub>		1 7.3 190°11	2°7/ 6.9 18		
12 3	7 41.76	+16 40.0	1.847	2.643	15.1	21.8	12 3	7 41.57	+32 26.8	2.542	3.335	11.5	19.4
12 13	7 35.52	+16 32.5	1.768	2.650	11.6	21.6	12 13	7 34.89	+32 19.6	2.455	3.335	8.9	19.3
12 23	7 26.71	+16 32.6	1.713	2.656	7.6	21.3	12 23	7 26.09	+32 6.8	2.394	3.334	5.9	19.1
1 2	7 16.10	+16 39.1	1.686	2.661	3.4	21.1	1 2	7 15.87	+31 45.7	2.362	3.333	3.2	18.9
1 12	7 4.84	+16 50.1	1.688	2.665	2.9	21.1	1 12	7 5.23	+31 14.6	2.361	3.331	3.2	18.9
1 22	6 54.18	+17 3.9	1.719	2.669	6.9	21.3	1 22	6 55.18	+30 34.0	2.391	3.330	6.0	19.1
2 1	6 45.29	+17 19.0	1.778	2.672	10.9	21.6	2 1	6 46.65	+29 45.8	2.450	3.328	9.0	19.3
2 11	6 38.97	+17 34.3	1.861	2.674	14.4	21.8	2 11	6 40.30	+28 53.1	2.535	3.326	11.6	19.4
<b>124654</b>	2001 <i>SV</i> <sub>73</sub>		1 7.3 91°55	2°1/ 6.7 18			<b>379798</b>	2011 <i>HL</i> <sub>87</sub>		1 7.3 72°09	1°4/ 7.9 18		
12 3	7 45.58	+25 3.1	1.570	2.383	16.6	20.1	12 3	7 35.16	+15 55.4	2.118	2.918	13.3	21.0
12 13	7 38.69	+25 51.3	1.519	2.411	12.5	19.9	12 13	7 30.30	+16 25.1	2.045	2.928	10.2	20.8
12 23	7 28.75	+26 41.8	1.491	2.440	7.8	19.7	12 23	7 23.35	+17 3.9	1.996	2.939	6.6	20.6
1 2	7 16.78	+27 28.3	1.490	2.467	3.2	19.4	1 2	7 14.95	+17 49.5	1.974	2.950	2.8	20.4
1 12	7 4.31	+28 5.1	1.518	2.494	3.4	19.5	1 12	7 6.02	+18 38.8	1.982	2.961	2.2	20.4
1 22	6 52.88	+28 29.6	1.574	2.520	7.8	19.8	1 22	6 57.56	+19 28.3	2.020	2.972	5.8	20.7
2 1	6 43.82	+28 41.9	1.657	2.546	11.9	20.1	2 1	6 50.48	+20 15.2	2.086	2.983	9.4	20.9
2 11	6 37.92	+28 44.6	1.763	2.571	15.3	20.4	2 11	6 45.50	+20 58.0	2.177	2.994	12.5	21.1
<b>197289</b>	2003 <i>WK</i> <sub>119</sub>		1 7.3 72°53	0°4/ 7.2 18			<b>135830</b>	2002 <i>RE</i> <sub>241</sub>		1 7.3 67°39	0°8/ 7.5 18		
12 3	7 38.90	+23 21.3	2.0										

EPHEMERIDES

1 7.3

1 7.3

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>304874</b>	2007 <i>RV</i> <sub>148</sub>		1 7.3 127°53	1°5/ 6.9 18			<b>6745</b>	Nishiyama		1 7.3 266°16	1°6/ 7.8 18		
12 3	7 42.39	+24 50.5	1.916	2.722	14.3	21.4	12 3	7 39.11	+16 40.8	1.520	2.334	17.0	18.3
12 13	7 36.01	+25 24.7	1.849	2.737	10.8	21.2	12 13	7 34.43	+16 59.9	1.428	2.320	13.2	18.0
12 23	7 27.04	+26 1.1	1.805	2.752	6.8	21.0	12 23	7 26.61	+17 31.4	1.358	2.305	8.6	17.7
1 2	7 16.27	+26 35.1	1.788	2.766	2.7	20.8	1 2	7 16.31	+18 12.9	1.312	2.290	3.6	17.3
1 12	7 4.92	+27 2.7	1.802	2.780	2.8	20.8	1 12	7 4.82	+19 0.5	1.295	2.274	2.9	17.2
1 22	6 54.26	+27 21.4	1.846	2.793	6.8	21.1	1 22	6 53.68	+19 49.5	1.305	2.259	8.0	17.5
2 1	6 45.44	+27 31.1	1.917	2.805	10.6	21.3	2 1	6 44.45	+20 36.2	1.340	2.243	13.1	17.8
2 11	6 39.27	+27 33.2	2.012	2.816	13.8	21.6	2 11	6 38.29	+21 18.3	1.398	2.227	17.4	18.0
<b>450967</b>	2008 <i>PW</i> <sub>8</sub>		1 7.3 130°57	1°5/ 6.9 15			<b>387793</b>	2003 <i>WL</i> <sub>25</sub>		1 7.3 164°24	2°7/ 8.2 14 C		
12 3	7 45.25	+25 33.6	1.856	2.659	14.8	22.8	12 3	7 41.04	+11 42.4	3.373	4.123	9.8	22.9
12 13	7 38.17	+25 53.7	1.790	2.677	11.2	22.6	12 13	7 33.84	+11 24.9	3.283	4.134	7.7	22.7
12 23	7 28.36	+26 14.5	1.747	2.694	7.1	22.4	12 23	7 25.18	+11 13.3	3.220	4.143	5.4	22.6
1 2	7 16.73	+26 31.8	1.732	2.710	2.8	22.1	1 2	7 15.56	+11 7.6	3.189	4.151	3.2	22.4
1 12	7 4.55	+26 42.0	1.747	2.725	2.8	22.2	1 12	7 5.62	+11 7.3	3.192	4.158	2.9	22.4
1 22	6 53.19	+26 43.7	1.793	2.739	6.9	22.5	1 22	6 56.00	+11 11.8	3.228	4.164	4.8	22.5
2 1	6 43.84	+26 37.6	1.865	2.753	10.8	22.7	2 1	6 47.34	+11 20.2	3.296	4.168	7.1	22.7
2 11	6 37.29	+26 25.7	1.962	2.766	14.1	23.0	2 11	6 40.15	+11 31.5	3.392	4.171	9.2	22.9
<b>127545</b>	Crisman		1 7.3 352°78	2°4/ 7.7 18			<b>402584</b>	2006 <i>RJ</i> <sub>100</sub>		1 7.3 93°88	5°6/ 6.7 18		
12 3	7 38.12	+18 20.8	1.225	2.058	19.1	19.2	12 3	7 49.83	+38 15.2	1.878	2.670	15.0	21.5
12 13	7 33.97	+17 55.2	1.154	2.055	14.8	18.9	12 13	7 41.68	+38 35.0	1.823	2.694	11.8	21.4
12 23	7 26.35	+17 37.7	1.102	2.053	9.6	18.6	12 23	7 30.51	+38 43.8	1.791	2.718	8.5	21.2
1 2	7 16.16	+17 27.7	1.074	2.051	4.2	18.3	1 2	7 17.45	+38 35.7	1.786	2.741	6.0	21.1
1 12	7 4.99	+17 23.9	1.070	2.049	3.6	18.2	1 12	7 4.08	+38 7.4	1.810	2.764	6.1	21.2
1 22	6 54.63	+17 24.7	1.093	2.049	8.9	18.6	1 22	6 51.95	+37 20.4	1.863	2.786	8.5	21.4
2 1	6 46.68	+17 28.8	1.138	2.049	14.2	18.8	2 1	6 42.32	+36 19.4	1.943	2.808	11.6	21.6
2 11	6 42.22	+17 35.1	1.204	2.049	18.7	19.1	2 11	6 35.88	+35 10.5	2.046	2.829	14.3	21.8
<b>203847</b>	2002 <i>VR</i> <sub>88</sub>		1 7.3 40°65	2°1/ 6.8 18			<b>404191</b>	2013 <i>CC</i> <sub>118</sub>		1 7.3 326°45	0°7/ 7.2 18		
12 3	7 36.91	+27 29.0	1.968	2.783	13.6	19.7	12 3	7 36.70	+21 49.6	1.335	2.169	17.7	20.8
12 13	7 31.87	+27 51.3	1.900	2.794	10.3	19.5	12 13	7 32.97	+22 19.5	1.254	2.158	13.6	20.5
12 23	7 24.43	+28 13.2	1.856	2.804	6.6	19.3	12 23	7 25.84	+22 57.7	1.194	2.148	8.6	20.2
1 2	7 15.35	+28 30.9	1.839	2.815	2.9	19.1	1 2	7 16.07	+23 40.0	1.158	2.138	3.1	19.9
1 12	7 5.75	+28 41.2	1.851	2.827	3.1	19.1	1 12	7 5.12	+24 20.6	1.148	2.128	2.9	19.8
1 22	6 56.79	+28 42.7	1.892	2.838	6.7	19.4	1 22	6 54.73	+24 54.9	1.164	2.120	8.6	20.2
2 1	6 49.54	+28 35.7	1.959	2.850	10.2	19.6	2 1	6 46.56	+25 20.3	1.205	2.112	13.8	20.4
2 11	6 44.72	+28 22.0	2.050	2.862	13.3	19.8	2 11	6 41.80	+25 37.0	1.265	2.104	18.3	20.7
<b>116836</b>	2004 <i>FL</i> <sub>38</sub>		1 7.3 288°60	1°2/ 7.6 18			<b>415201</b>	2012 <i>HW</i>		1 7.3 326°18	0°7/ 7.5 16		
12 3	7 37.75	+19 35.6	1.744	2.557	15.2	20.1	12 3	7 36.13	+20 38.7	1.552	2.377	16.2	21.1
12 13	7 32.87	+19 26.3	1.656	2.548	11.7	19.8	12 13	7 32.00	+20 34.5	1.467	2.365	12.4	20.8
12 23	7 25.30	+19 22.4	1.590	2.538	7.5	19.6	12 23	7 24.94	+20 35.9	1.402	2.353	7.9	20.6
1 2	7 15.74	+19 22.4	1.550	2.528	3.0	19.3	1 2	7 15.69	+20 40.9	1.363	2.342	3.0	20.2
1 12	7 5.35	+19 24.6	1.539	2.519	2.5	19.2	1 12	7 5.49	+20 47.1	1.351	2.331	2.5	20.2
1 22	6 55.44	+19 27.4	1.556	2.509	7.1	19.5	1 22	6 55.81	+20 52.5	1.366	2.321	7.6	20.5
2 1	6 47.26	+19 30.0	1.599	2.500	11.5	19.7	2 1	6 48.02	+20 56.2	1.407	2.312	12.4	20.7
2 11	6 41.73	+19 32.1	1.666	2.490	15.3	19.9	2 11	6 43.15	+20 58.1	1.469	2.303	16.5	20.9
<b>444031</b>	2004 <i>PQ</i> <sub>16</sub>		1 7.3 107°17	1°6/ 6.9 18			<b>58612</b>	1997 <i>UA</i> <sub>5</sub>		1 7.3 99°71	4°0/ 6.3 18		
12 3	7 44.82	+24 21.0	1.810	2.614	15.1	21.3	12 3	7 45.97	+30 20.4	1.657	2.468	16.0	19.3
12 13	7 37.84	+25 3.8	1.753	2.640	11.3	21.1	12 13	7 39.12	+31 13.5	1.602	2.491	12.2	19.1
12 23	7 28.15	+25 49.2	1.719	2.666	7.1	20.9	12 23	7 29.16	+32 3.9	1.571	2.514	8.1	18.9
1 2	7 16.66	+26 31.9	1.713	2.691	2.8	20.7	1 2	7 17.07	+32 44.6	1.566	2.536	4.6	18.8
1 12	7 4.65	+27 7.2	1.738	2.715	2.9	20.8	1 12	7 4.40	+33 10.1	1.589	2.558	4.9	18.9
1 22	6 53.51	+27 32.4	1.792	2.738	7.0	21.1	1 22	6 52.74	+33 18.3	1.641	2.579	8.4	19.1
2 1	6 44.40	+27 47.5	1.874	2.761	10.8	21.3	2 1	6 43.44	+33 11.3	1.720	2.599	12.1	19.4
2 11	6 38.09	+27 54.0	1.980	2.782	14.1	21.6	2 11	6 37.35	+32 52.9	1.821	2.619	15.3	19.6
<b>417086</b>	2005 <i>UE</i> <sub>291</sub>		1 7.3 127°10	0°8/ 7.5 18			<b>218632</b>	2005 <i>RM</i> <sub>24</sub>		1 7.3 68°93	7°2/ 6.0 18		
12 3	7 39.03	+20 4.9	2.205	3.003	12.9	21.6	12 3	7 46.16	+40 14.8	1.770	2.570	15.5	19.5
12 13	7 33.07	+20 0.5	2.132	3.016	9.8	21.4	12 13	7 39.37	+41 5.4	1.719	2.591	12.4	19.4
12 23	7 25.01	+20 0.0	2.083	3.028	6.2	21.2	12 23	7 29.33	+41 44.5	1.690	2.612	9.4	19.2
1 2	7 15.53	+20 1.7	2.062	3.040	2.4	20.9	1 2	7 17.12	+42 4.3	1.687	2.633	7.4	19.2
1 12	7 5.62	+20 4.2	2.072	3.051	2.0	20.9	1 12	7 4.41	+42 0.1	1.712	2.654	7.6	19.2
1 22	6 56.27	+20 6.1	2.112	3.062	5.7	21.2	1 22	6 52.86	+41 32.2	1.763	2.674	9.8	19.4
2 1	6 48.40	+20 7.2	2.180	3.073	9.2	21.4	2 1	6 43.87	+40 45.0	1.840	2.695	12.6	19.6
2 11	6 42.69	+20 7.2	2.274	3.083	12.2	21.7	2 11	6 38.21	+39 45.1	1.938	2.716	15.2	19.8
<b>492621</b>	2014 <i>OJ</i> <sub>259</sub>		1 7.3 188°99	1°8/ 6.8 18			<b>110081</b>	2001 <i>SK</i> <sub>115</sub>		1 7.3 77°99	7°0/ 5.5 18		
12 3	7 41.80	+26 0.6	2.028	2.832	13.7	22.4	12 3	7 45.21	+38 47.2	1.812	2.614	15.1	19.3
12 13	7 35.65	+26 31.1	1.943	2.831	10.4	22.2	12 13	7 38.68	+40 0.4	1.762	2.636	12.1	19.2
12 23	7 26.91	+27 3.0	1.883	2.830	6.6	21.9	12 23	7 28.95	+41 4.1	1.735	2.658	9.1	19.0
1 2	7 16.29	+27 32.0	1.851	2.828	2.8	21.7	1 2	7 17.02	+41 50.1	1.734	2.679	7.2	19.0
1 12	7 4.91	+27 54.2	1.849	2.825	2.9	21.7	1 12	7 4.46	+42 12.6	1.760	2.701	7.5	19.0
1 22	6 54.04	+28 7.3	1.877	2.822	6.8	21.9	1 22	6 52.90	+42 10.5	1.813	2.722	9.8	19.2
2 1	6 44.87	+28 11.0	1.932	2.818	10.6	22.2	2 1	6 43.75	+41 47.1	1.892	2.743	12.5	19.4
2 11	6 38.25	+28 7.0	2.012	2.813	13.9	22.4	2 11	6 37.86	+41 8.5	1.993	2.764	15.1	19.6
<b>413955</b>	2007 <i>BZ</i> <sub>45</sub>		1 7.3 326°43	4°8/ 6.9 18			<b>459366</b>	2012 <i>JN</i> <sub>18</sub>		1 7.3 248°45	3°3/ 5.5 16		
12 3	7 41.03	+34 21.4	1.475	2.300	16.8	19.4	12 3						

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>405926</b>	2006 <i>KQ</i> <sub>109</sub>		1 7.3 183°75	0°0/ 7.2 18			<b>322425</b>	2011 <i>SB</i> <sub>170</sub>		1 7.4 131°71	0°1/ 7.4 18		
12 3	7 40.72	+21 29.4	2.040	2.841	13.7	22.5	12 3	7 41.75	+20 57.2	1.854	2.658	14.8	21.8
12 13	7 34.71	+21 39.6	1.956	2.842	10.4	22.3	12 13	7 35.57	+21 11.7	1.783	2.671	11.2	21.6
12 23	7 26.27	+21 53.8	1.895	2.842	6.6	22.1	12 23	7 26.82	+21 30.9	1.736	2.683	7.1	21.4
1 2	7 16.08	+22 9.4	1.863	2.842	2.4	21.8	1 2	7 16.29	+21 52.1	1.717	2.695	2.5	21.1
1 12	7 5.22	+22 23.7	1.860	2.840	2.0	21.8	1 12	7 5.18	+22 12.1	1.727	2.707	2.1	21.1
1 22	6 54.86	+22 34.7	1.888	2.838	6.3	22.0	1 22	6 54.74	+22 28.6	1.766	2.717	6.6	21.4
2 1	6 46.10	+22 41.9	1.944	2.836	10.2	22.3	2 1	6 46.12	+22 40.8	1.833	2.727	10.6	21.7
2 11	6 39.75	+22 45.5	2.024	2.833	13.6	22.5	2 11	6 40.11	+22 48.9	1.924	2.737	14.0	21.9
<b>365623</b>	2010 <i>UM</i> <sub>52</sub>		1 7.3 172°31	3°4/ 6.2 18			<b>322882</b>	2001 <i>WQ</i> <sub>103</sub>		1 7.4 304°47	1°1/ 7.8 18		
12 3	7 41.10	+30 32.4	2.149	2.953	13.0	21.4	12 3	7 36.53	+15 45.5	1.833	2.638	14.9	20.2
12 13	7 35.09	+31 18.8	2.070	2.955	10.0	21.2	12 13	7 31.89	+16 36.0	1.747	2.634	11.4	19.9
12 23	7 26.55	+32 3.6	2.016	2.957	6.7	21.0	12 23	7 24.72	+17 39.5	1.684	2.630	7.4	19.7
1 2	7 16.19	+32 41.5	1.990	2.959	3.9	20.8	1 2	7 15.63	+18 52.6	1.648	2.626	2.9	19.4
1 12	7 5.13	+33 8.1	1.993	2.960	4.2	20.8	1 12	7 5.69	+20 10.3	1.642	2.622	2.3	19.3
1 22	6 54.58	+33 21.2	2.026	2.961	7.2	21.0	1 22	6 56.11	+21 26.9	1.665	2.619	6.7	19.6
2 1	6 45.71	+33 21.0	2.087	2.962	10.5	21.2	2 1	6 48.08	+22 38.2	1.716	2.615	10.9	19.8
2 11	6 39.34	+33 10.2	2.171	2.962	13.4	21.4	2 11	6 42.52	+23 41.3	1.791	2.612	14.6	20.1
<b>417005</b>	2005 <i>UL</i> <sub>4</sub>		1 7.3 44°20	6°7/ 8.8 18			<b>293697</b>	2007 <i>PJ</i> <sub>40</sub>		1 7.4 115°64	0°8/ 7.2 18		
12 3	7 36.01	+ 6 57.6	1.691	2.477	16.7	20.4	12 3	7 43.03	+24 14.5	1.749	2.558	15.3	20.5
12 13	7 31.27	+ 6 3.5	1.624	2.487	13.5	20.2	12 13	7 36.65	+24 19.1	1.681	2.572	11.6	20.3
12 23	7 24.11	+ 5 24.5	1.579	2.497	10.2	20.0	12 23	7 27.53	+24 25.2	1.637	2.586	7.3	20.1
1 2	7 15.30	+ 5 3.3	1.558	2.507	7.4	19.9	1 2	7 16.54	+24 29.5	1.620	2.599	2.6	19.8
1 12	7 5.94	+ 5 0.9	1.564	2.518	6.9	19.9	1 12	7 5.00	+24 29.3	1.632	2.612	2.4	19.8
1 22	6 57.21	+ 5 15.9	1.597	2.529	9.0	20.0	1 22	6 54.28	+24 23.4	1.674	2.624	7.0	20.1
2 1	6 50.17	+ 5 45.1	1.655	2.540	12.1	20.2	2 1	6 45.57	+24 12.5	1.742	2.636	11.1	20.4
2 11	6 45.57	+ 6 24.0	1.735	2.552	15.1	20.5	2 11	6 39.68	+23 58.2	1.834	2.648	14.5	20.6
<b>424914</b>	2008 <i>WC</i> <sub>94</sub>		1 7.3 200°19	2°9/ 6.1 18			<b>28758</b>	2000 <i>HE</i> <sub>10</sub>		1 7.4 120°31	0°5/ 7.6 18		
12 3	7 37.40	+29 10.7	2.456	3.260	11.6	21.4	12 3	7 35.54	+19 39.3	2.611	3.407	11.2	19.2
12 13	7 32.07	+30 3.6	2.372	3.258	8.9	21.2	12 13	7 30.24	+19 50.9	2.536	3.419	8.5	19.1
12 23	7 24.56	+30 56.5	2.313	3.256	5.8	21.0	12 23	7 23.19	+20 6.7	2.486	3.431	5.4	18.9
1 2	7 15.49	+31 45.0	2.282	3.253	3.3	20.9	1 2	7 14.96	+20 24.9	2.465	3.443	2.0	18.7
1 12	7 5.75	+32 24.9	2.282	3.251	3.6	20.9	1 12	7 6.35	+20 43.7	2.475	3.455	1.6	18.7
1 22	6 56.36	+32 53.6	2.312	3.248	6.4	21.1	1 22	6 58.15	+21 1.4	2.516	3.466	4.9	18.9
2 1	6 48.30	+33 10.5	2.370	3.245	9.4	21.3	2 1	6 51.13	+21 17.0	2.585	3.477	8.0	19.1
2 11	6 42.34	+33 17.0	2.453	3.241	12.1	21.4	2 11	6 45.87	+21 30.2	2.681	3.488	10.7	19.3
<b>138316</b>	2000 <i>GG</i> <sub>73</sub>		1 7.4 280°75	1°1/ 7.6 18			<b>8516</b>	Hyakkai		1 7.4 49°40	3°0/ 6.5 18		
12 3	7 37.65	+19 9.3	1.808	2.618	14.8	20.5	12 3	7 39.10	+27 48.7	1.647	2.469	15.5	17.2
12 13	7 32.85	+19 8.0	1.711	2.601	11.4	20.2	12 13	7 34.00	+28 34.3	1.587	2.484	11.8	17.0
12 23	7 25.38	+19 12.8	1.637	2.584	7.4	20.0	12 23	7 26.02	+29 20.2	1.550	2.499	7.6	16.8
1 2	7 15.87	+19 22.4	1.589	2.567	2.9	19.7	1 2	7 16.05	+30 0.6	1.539	2.514	3.7	16.6
1 12	7 5.43	+19 34.4	1.570	2.550	2.4	19.6	1 12	7 5.43	+30 30.3	1.556	2.530	4.0	16.6
1 22	6 55.34	+19 46.8	1.579	2.532	7.0	19.8	1 22	6 55.63	+30 46.8	1.601	2.546	7.8	16.9
2 1	6 46.86	+19 58.4	1.615	2.515	11.4	20.0	2 1	6 47.90	+30 50.4	1.671	2.562	11.7	17.2
2 11	6 40.98	+20 8.5	1.675	2.498	15.3	20.3	2 11	6 43.08	+30 43.8	1.764	2.578	15.0	17.4
<b>23727</b>	Akihasan		1 7.4 163°51	1°4/ 6.9 18			<b>19908</b>	4324 <i>T</i> <sub>-3</sub>		1 7.4 79°92	0°6/ 7.2 18		
12 3	7 43.64	+23 54.6	1.774	2.581	15.2	19.1	12 3	7 37.39	+21 52.6	1.909	2.721	14.1	18.7
12 13	7 37.31	+24 30.4	1.698	2.587	11.6	18.9	12 13	7 32.36	+22 25.8	1.835	2.727	10.7	18.5
12 23	7 28.09	+25 10.1	1.645	2.593	7.3	18.7	12 23	7 24.87	+23 4.2	1.784	2.733	6.7	18.2
1 2	7 16.79	+25 48.7	1.619	2.598	2.8	18.4	1 2	7 15.64	+23 44.2	1.761	2.740	2.4	18.0
1 12	7 4.69	+26 21.5	1.623	2.602	2.8	18.4	1 12	7 5.76	+24 21.9	1.766	2.746	2.2	18.0
1 22	6 53.22	+26 45.5	1.657	2.605	7.3	18.7	1 22	6 56.41	+24 54.1	1.801	2.752	6.5	18.3
2 1	6 43.72	+26 59.8	1.717	2.607	11.5	19.0	2 1	6 48.71	+25 19.4	1.863	2.758	10.4	18.5
2 11	6 37.08	+27 6.0	1.801	2.609	15.0	19.2	2 11	6 43.45	+25 37.7	1.949	2.764	13.7	18.7
<b>157214</b>	2004 <i>RV</i> <sub>28</sub>		1 7.4 124°92	4°2/ 6.3 18			<b>432090</b>	2008 <i>YN</i> <sub>154</sub>		1 7.4 19°97	1°0/ 7.2 18		
12 3	7 41.20	+33 23.7	2.042	2.847	13.5	20.3	12 3	7 37.11	+25 39.7	2.081	2.892	13.1	21.2
12 13	7 35.27	+33 56.8	1.968	2.852	10.5	20.1	12 13	7 31.93	+25 36.4	2.003	2.895	9.9	21.0
12 23	7 26.68	+34 25.2	1.918	2.857	7.2	19.9	12 23	7 24.48	+25 32.9	1.949	2.897	6.3	20.7
1 2	7 16.26	+34 43.6	1.896	2.861	4.6	19.8	1 2	7 15.47	+25 26.9	1.922	2.900	2.4	20.5
1 12	7 5.20	+34 48.0	1.902	2.866	4.8	19.8	1 12	7 5.93	+25 16.5	1.924	2.903	2.2	20.5
1 22	6 54.81	+34 37.4	1.937	2.870	7.6	20.0	1 22	6 56.97	+25 1.2	1.956	2.907	6.1	20.8
2 1	6 46.28	+34 13.3	1.999	2.874	10.8	20.2	2 1	6 49.58	+24 41.5	2.016	2.911	9.8	21.0
2 11	6 40.41	+33 39.5	2.084	2.878	13.8	20.4	2 11	6 44.49	+24 19.0	2.100	2.915	12.9	21.2
<b>426071</b>	2012 <i>CD</i> <sub>29</sub>		1 7.4 136°29	16°3/11.9 18			<b>111019</b>	2001 <i>VD</i> <sub>10</sub>		1 7.4 122°06	2°5/ 7.8 18		
12 3	8 37.88	-10 13.5	0.806	1.491	37.8	21.8	12 3	7 39.96	+16 53.4	2.031	2.826	14.0	19.9
12 13	8 20.52	-10 29.8	0.755	1.541	31.9	21.6	12 13	7 33.92	+16 18.1	1.957	2.836	10.8	19.7
12 23	7 56.22	- 9 48.6	0.717	1.583	25.2	21.3	12 23	7 25.64	+15 48.0	1.905	2.846	7.1	19.5
1 2	7 26.82	- 7 55.7	0.700	1.619	19.0	21.1	1 2	7 15.87	+15 23.3	1.882	2.855	3.5	19.3
1 12	6 56.35	- 4 55.4	0.712	1.647	16.3	21.1	1 12	7 5.62	+15 3.8	1.889	2.864	3.1	19.3
1 22	6 29.35	- 1 14.7	0.755	1.668	18.8	21.4	1 22	6 55.99	+14 49.4	1.925	2.873	6.4	19.5
2 1	6 8.85	+ 2 33.4	0.824	1.682	23.7	21.7	2 1	6 47.95	+14 39.7	1.990	2.882	10.0	19.7
2 11	5 55.74	+ 6 5.4	0.913	1.689	28.4	22.1	2 11	6 42.19	+14 34.0	2.079	2.890	13.2	20.0
<b>171144</b>	2005 <i>GA</i> <sub>66</sub>		1 7.4 136°32	0°6/ 7.5 18			<b>296096</b>	2009 <i>BL</i> <sub>34</sub>		1 7.4 128°33	1°3/ 6.9 18		
12 3	7 35.30	+19 48.2	2.469	3.268	11.7								

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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>426197</b>	2012 <i>KV</i> <sub>1</sub>		1 7.4 215°21	2°1/ 8.0	16		<b>121069</b>	1999 <i>CK</i> <sub>149</sub>		1 7.4 350°09	1°6/ 7.1	18	
12 3	7 36.30	+15 13.9	2.180	2.974	13.2	22.4	12 3	7 35.44	+25 1.3	1.083	1.936	19.7	19.4
12 13	7 31.26	+15 17.9	2.091	2.970	10.2	22.2	12 13	7 32.62	+25 10.9	1.014	1.927	15.1	19.1
12 23	7 24.08	+15 30.3	2.026	2.966	6.8	22.0	12 23	7 25.90	+25 23.8	0.963	1.920	9.6	18.8
1 2	7 15.38	+15 50.1	1.988	2.961	3.3	21.8	1 2	7 16.22	+25 35.2	0.934	1.914	3.7	18.4
1 12	7 6.04	+16 15.4	1.979	2.956	2.7	21.7	1 12	7 5.34	+25 40.1	0.930	1.909	3.6	18.4
1 22	6 57.07	+16 43.9	2.001	2.951	6.0	21.9	1 22	6 55.33	+25 36.0	0.948	1.906	9.6	18.7
2 1	6 49.42	+17 13.8	2.051	2.946	9.6	22.1	2 1	6 48.06	+25 23.4	0.989	1.905	15.2	19.0
2 11	6 43.83	+17 43.1	2.125	2.940	12.8	22.3	2 11	6 44.70	+25 4.5	1.049	1.905	20.0	19.3
<b>233524</b>	2007 <i>HK</i> <sub>11</sub>		1 7.4 201°35	1°5/ 7.8	18		<b>445608</b>	2011 <i>SD</i> <sub>118</sub>		1 7.4 40°63	3°1/ 8.0	17	
12 3	7 40.93	+17 9.5	2.042	2.834	14.0	22.2	12 3	7 38.35	+15 49.8	1.248	2.075	19.2	20.7
12 13	7 34.93	+17 16.3	1.950	2.830	10.8	22.0	12 13	7 33.80	+15 33.3	1.193	2.090	14.8	20.5
12 23	7 26.49	+17 30.6	1.882	2.825	7.0	21.7	12 23	7 26.04	+15 28.8	1.159	2.106	9.7	20.3
1 2	7 16.26	+17 50.7	1.843	2.819	3.0	21.5	1 2	7 16.11	+15 35.5	1.148	2.123	4.7	20.0
1 12	7 5.27	+18 14.2	1.833	2.812	2.4	21.4	1 12	7 5.54	+15 51.0	1.163	2.140	3.8	20.0
1 22	6 54.68	+18 38.8	1.854	2.804	6.4	21.7	1 22	6 55.98	+16 12.4	1.203	2.158	8.4	20.4
2 1	6 45.60	+19 2.7	1.903	2.795	10.4	21.9	2 1	6 48.79	+16 36.7	1.268	2.177	13.1	20.7
2 11	6 38.88	+19 24.8	1.976	2.786	13.8	22.1	2 11	6 44.83	+17 1.6	1.354	2.196	17.2	21.0
<b>102393</b>	1999 <i>TA</i> <sub>160</sub>		1 7.4 43°94	2°0/ 7.0	18		<b>172294</b>	2002 <i>TQ</i> <sub>179</sub>		1 7.4 132°82	1°2/ 7.2	18	
12 3	7 40.79	+26 29.4	1.382	2.211	17.5	19.4	12 3	7 43.24	+26 25.5	2.109	2.909	13.4	20.4
12 13	7 35.66	+26 43.3	1.322	2.223	13.3	19.2	12 13	7 36.41	+26 20.9	2.037	2.922	10.1	20.2
12 23	7 27.23	+26 57.7	1.284	2.235	8.4	19.0	12 23	7 27.22	+26 15.2	1.988	2.934	6.4	20.0
1 2	7 16.52	+27 7.7	1.270	2.248	3.4	18.7	1 2	7 16.45	+26 5.4	1.968	2.946	2.5	19.8
1 12	7 5.13	+27 9.2	1.283	2.261	3.4	18.7	1 12	7 5.23	+25 50.0	1.979	2.958	2.3	19.8
1 22	6 54.77	+27 1.1	1.323	2.275	8.2	19.1	1 22	6 54.74	+25 28.5	2.020	2.968	6.2	20.1
2 1	6 46.86	+26 44.5	1.387	2.289	12.8	19.4	2 1	6 45.99	+25 2.3	2.090	2.979	9.8	20.3
2 11	6 42.27	+26 22.3	1.474	2.303	16.7	19.6	2 11	6 39.69	+24 33.5	2.185	2.988	12.9	20.5
<b>228668</b>	2002 <i>JF</i> <sub>5</sub>		1 7.4 281°78	6°0/ 5.2	18		<b>413503</b>	2005 <i>QM</i> <sub>84</sub>		1 7.4 121°56	1°5/ 7.0	18	
12 3	7 40.36	+36 27.3	2.029	2.834	13.6	20.2	12 3	7 39.88	+25 56.3	1.894	2.706	14.2	21.2
12 13	7 35.02	+37 38.2	1.951	2.830	10.8	20.0	12 13	7 34.29	+26 7.9	1.818	2.709	10.8	20.9
12 23	7 26.79	+38 44.3	1.897	2.826	8.0	19.8	12 23	7 26.11	+26 20.0	1.765	2.713	6.8	20.7
1 2	7 16.41	+39 38.3	1.870	2.822	6.1	19.7	1 2	7 16.12	+26 29.1	1.739	2.717	2.7	20.5
1 12	7 5.12	+40 14.1	1.871	2.819	6.6	19.7	1 12	7 5.49	+26 32.2	1.742	2.720	2.7	20.5
1 22	6 54.34	+40 29.0	1.900	2.815	9.0	19.8	1 22	6 55.50	+26 28.0	1.774	2.724	6.8	20.7
2 1	6 45.42	+40 23.9	1.955	2.811	11.9	20.0	2 1	6 47.29	+26 17.0	1.834	2.727	10.7	21.0
2 11	6 39.34	+40 2.9	2.031	2.807	14.7	20.2	2 11	6 41.68	+26 0.8	1.917	2.730	14.0	21.2
<b>239033</b>	2006 <i>DY</i> <sub>138</sub>		1 7.4 162°45	0°9/ 7.1	18		<b>399114</b>	2014 <i>DD</i> <sub>97</sub>		1 7.4 306°76	2°0/ 7.8	18	
12 3	7 41.70	+23 20.4	2.032	2.834	13.7	22.0	12 3	7 39.34	+17 10.4	1.308	2.132	18.6	21.5
12 13	7 35.50	+23 49.6	1.954	2.841	10.4	21.8	12 13	7 34.87	+17 11.9	1.232	2.128	14.4	21.2
12 23	7 26.81	+24 22.3	1.899	2.846	6.6	21.6	12 23	7 27.00	+17 24.8	1.176	2.125	9.4	20.9
1 2	7 16.35	+24 54.5	1.873	2.852	2.4	21.3	1 2	7 16.57	+17 47.3	1.144	2.121	4.0	20.6
1 12	7 5.22	+25 22.6	1.877	2.856	2.3	21.3	1 12	7 5.06	+18 15.9	1.138	2.117	3.2	20.5
1 22	6 54.64	+25 44.0	1.911	2.860	6.4	21.6	1 22	6 54.21	+18 47.0	1.158	2.114	8.6	20.8
2 1	6 45.72	+25 58.0	1.974	2.863	10.3	21.8	2 1	6 45.64	+19 17.4	1.203	2.110	13.8	21.1
2 11	6 39.27	+26 5.4	2.060	2.865	13.5	22.0	2 11	6 40.46	+19 45.4	1.268	2.107	18.3	21.4
<b>220088</b>	2002 <i>SB</i> <sub>16</sub>		1 7.4 31°81	0°1/ 7.4	18		<b>108603</b>	2001 <i>MG</i> <sub>19</sub>		1 7.4 100°08	4°3/ 8.5	18	
12 3	7 39.78	+24 20.9	1.906	2.716	14.2	19.6	12 3	7 39.88	+10 25.0	2.076	2.853	14.3	20.0
12 13	7 33.97	+23 43.3	1.833	2.724	10.8	19.4	12 13	7 33.66	+9 54.2	2.015	2.878	11.3	19.8
12 23	7 25.75	+23 4.7	1.784	2.732	6.8	19.1	12 23	7 25.39	+9 34.2	1.977	2.903	8.0	19.7
1 2	7 15.92	+22 24.3	1.762	2.741	2.4	18.9	1 2	7 15.79	+9 25.7	1.967	2.927	5.1	19.5
1 12	7 5.66	+21 42.0	1.770	2.750	2.1	18.9	1 12	7 5.85	+9 28.1	1.986	2.950	4.5	19.5
1 22	6 56.14	+20 58.8	1.807	2.759	6.4	19.2	1 22	6 56.56	+9 40.2	2.034	2.973	6.9	19.7
2 1	6 48.41	+20 16.4	1.872	2.769	10.3	19.4	2 1	6 48.81	+9 59.7	2.111	2.996	9.9	19.9
2 11	6 43.16	+19 36.4	1.961	2.779	13.6	19.7	2 11	6 43.21	+10 24.1	2.212	3.017	12.7	20.2
<b>470390</b>	2007 <i>TX</i> <sub>377</sub>		1 7.4 141°96	5°3/ 5.3	18		<b>425521</b>	2010 <i>LD</i> <sub>85</sub>		1 7.4 195°54	3°0/ 6.0	18	
12 3	7 39.93	+37 55.1	2.533	3.326	11.6	20.8	12 3	7 37.09	+31 38.0	2.905	3.701	10.2	21.8
12 13	7 34.07	+38 55.0	2.461	3.331	9.2	20.7	12 13	7 31.56	+32 22.1	2.819	3.699	7.8	21.6
12 23	7 25.87	+39 48.8	2.414	3.336	6.9	20.5	12 23	7 24.16	+33 4.2	2.758	3.696	5.3	21.5
1 2	7 16.01	+40 31.1	2.394	3.341	5.4	20.5	1 2	7 15.41	+33 40.7	2.727	3.693	3.3	21.3
1 12	7 5.52	+40 57.6	2.405	3.346	5.7	20.5	1 12	7 6.10	+34 8.2	2.726	3.689	3.6	21.4
1 22	6 55.51	+41 6.6	2.443	3.351	7.6	20.6	1 22	6 57.12	+34 25.1	2.756	3.686	5.8	21.5
2 1	6 47.05	+40 59.3	2.509	3.355	10.0	20.8	2 1	6 49.28	+34 31.2	2.815	3.681	8.3	21.7
2 11	6 40.89	+40 38.7	2.599	3.359	12.2	20.9	2 11	6 43.25	+34 28.0	2.898	3.677	10.7	21.8
<b>404863</b>	2014 <i>KV</i> <sub>25</sub>		1 7.4 183°33	2°3/ 8.0	18		<b>54352</b>	2000 <i>KK</i> <sub>31</sub>		1 7.4 262°02	0°8/ 7.5	18	
12 3	7 40.46	+15 5.4	2.082	2.870	13.9	22.0	12 3	7 40.79	+20 24.6	1.633	2.446	16.0	18.9
12 13	7 34.44	+15 7.2	1.995	2.871	10.8	21.8	12 13	7 35.57	+20 20.8	1.538	2.430	12.4	18.6
12 23	7 26.11	+15 17.6	1.932	2.871	7.2	21.5	12 23	7 27.30	+20 22.4	1.465	2.413	8.0	18.3
1 2	7 16.11	+15 35.5	1.897	2.870	3.5	21.3	1 2	7 16.67	+20 27.4	1.418	2.397	3.0	18.0
1 12	7 5.44	+15 58.9	1.893	2.869	2.8	21.3	1 12	7 4.96	+20 33.1	1.399	2.379	2.5	17.9
1 22	6 55.21	+16 25.6	1.918	2.867	6.4	21.5	1 22	6 53.66	+20 37.6	1.409	2.362	7.7	18.2
2 1	6 46.46	+16 53.5	1.972	2.864	10.1	21.7	2 1	6 44.23	+20 40.3	1.444	2.344	12.5	18.4
2 11	6 39.98	+17 21.1	2.051	2.860	13.4	21.9	2 11	6 37.77	+20 41.1	1.502	2.326	16.7	18.6
<b>463941</b>	2014 <i>UK</i> <sub>198</sub>		1 7.4 21°22	2°4/ 7.9	18		<b>171134</b>	2005 <i>GC</i> <sub>41</sub>		1 7.4 261°22	0°0/ 7.3	18	
12 3	7 35.70	+17 7.1	1.517										



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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>20828</b>	Linchen		1 7.4 186°95	1.8/ 7.9	18		<b>218730</b>	2005 <i>UH</i> <sub>255</sub>		1 7.4 287°44	2.6/ 8.1	18	
12 3	7 39.25	+15 47.4	1.883	2.681	14.8	18.5	12 3	7 36.54	+14 52.5	1.886	2.687	14.7	20.9
12 13	7 33.81	+16 2.6	1.799	2.681	11.4	18.3	12 13	7 31.71	+14 47.5	1.804	2.687	11.4	20.7
12 23	7 25.86	+16 27.6	1.738	2.680	7.5	18.1	12 23	7 24.50	+14 51.9	1.746	2.687	7.6	20.5
1 2	7 16.07	+17 0.7	1.704	2.679	3.3	17.8	1 2	7 15.60	+15 4.9	1.713	2.686	3.8	20.3
1 12	7 5.53	+17 38.9	1.699	2.678	2.6	17.8	1 12	7 6.03	+15 25.0	1.710	2.686	3.2	20.2
1 22	6 55.45	+18 19.0	1.724	2.676	6.7	18.0	1 22	6 56.94	+15 49.8	1.735	2.686	6.7	20.4
2 1	6 46.96	+18 58.1	1.777	2.673	10.8	18.3	2 1	6 49.39	+16 17.2	1.787	2.686	10.6	20.7
2 11	6 40.94	+19 34.5	1.853	2.670	14.3	18.5	2 11	6 44.18	+16 45.1	1.863	2.686	14.0	20.9
<b>95811</b>	2003 <i>FB</i> <sub>57</sub>		1 7.4 220°90	3.2/ 8.4	18		<b>405155</b>	2002 <i>TY</i> <sub>97</sub>		1 7.4 172°76	4.3/ 6.8	18	
12 3	7 36.38	+12 6.1	2.293	3.076	13.0	20.7	12 3	7 45.66	+34 32.5	1.913	2.715	14.5	20.9
12 13	7 31.23	+11 58.5	2.199	3.068	10.2	20.5	12 13	7 38.81	+34 45.0	1.835	2.716	11.3	20.7
12 23	7 24.05	+12 0.3	2.128	3.060	7.1	20.3	12 23	7 29.02	+34 50.3	1.781	2.718	7.8	20.5
1 2	7 15.40	+12 11.7	2.085	3.052	4.1	20.1	1 2	7 17.19	+34 42.9	1.753	2.719	4.8	20.3
1 12	7 6.12	+12 31.5	2.072	3.043	3.5	20.0	1 12	7 4.71	+34 19.6	1.754	2.720	4.9	20.3
1 22	6 57.15	+12 58.0	2.088	3.034	6.2	20.2	1 22	6 53.07	+33 40.3	1.785	2.720	8.0	20.5
2 1	6 49.40	+13 29.0	2.133	3.024	9.5	20.4	2 1	6 43.56	+32 48.5	1.842	2.720	11.5	20.7
2 11	6 43.60	+14 2.4	2.203	3.014	12.5	20.6	2 11	6 37.04	+31 49.0	1.924	2.720	14.6	20.9
<b>98260</b>	2000 <i>SL</i> <sub>182</sub>		1 7.4 155°29	0.4/ 7.5	18		<b>497104</b>	2004 <i>CX</i>		1 7.4 356°83	0.2/ 7.3	18	
12 3	7 41.27	+19 4.1	2.016	2.813	14.0	20.1	12 3	7 34.75	+22 13.3	1.821	2.641	14.4	20.6
12 13	7 35.14	+19 34.5	1.938	2.822	10.7	19.9	12 13	7 30.55	+22 24.9	1.742	2.638	10.9	20.4
12 23	7 26.58	+20 12.0	1.884	2.830	6.8	19.6	12 23	7 23.85	+22 40.7	1.686	2.636	6.9	20.2
1 2	7 16.31	+20 53.4	1.859	2.837	2.5	19.4	1 2	7 15.38	+22 58.1	1.656	2.635	2.5	19.9
1 12	7 5.37	+21 34.9	1.864	2.844	2.0	19.4	1 12	7 6.22	+23 14.1	1.654	2.634	2.2	19.8
1 22	6 54.96	+22 13.3	1.899	2.850	6.3	19.7	1 22	6 57.58	+23 26.7	1.680	2.634	6.6	20.1
2 1	6 46.14	+22 46.7	1.963	2.855	10.1	19.9	2 1	6 50.59	+23 35.0	1.733	2.634	10.7	20.4
2 11	6 39.74	+23 14.4	2.052	2.859	13.4	20.1	2 11	6 46.06	+23 38.9	1.809	2.635	14.2	20.6
<b>221749</b>	2007 <i>EQ</i> <sub>196</sub>		1 7.4 317°39	5°5/ 5.8	18		<b>389631</b>	2011 <i>KR</i> <sub>5</sub>		1 7.4 135°01	3°1/ 6.5	18	
12 3	7 39.76	+34 30.4	1.798	2.612	14.7	20.0	12 3	7 43.81	+26 59.7	1.563	2.380	16.5	21.1
12 13	7 34.81	+35 24.4	1.717	2.604	11.6	19.8	12 13	7 37.90	+27 53.6	1.494	2.388	12.5	20.9
12 23	7 26.79	+36 14.2	1.659	2.597	8.2	19.5	12 23	7 28.72	+28 49.8	1.448	2.396	8.1	20.7
1 2	7 16.48	+36 52.7	1.628	2.589	5.7	19.4	1 2	7 17.17	+29 41.2	1.428	2.404	3.9	20.4
1 12	7 5.21	+37 14.0	1.623	2.582	6.2	19.4	1 12	7 4.72	+30 21.3	1.437	2.411	4.2	20.5
1 22	6 54.52	+37 15.5	1.647	2.575	9.1	19.5	1 22	6 53.04	+30 46.4	1.473	2.417	8.4	20.7
2 1	6 45.86	+36 58.5	1.695	2.568	12.5	19.7	2 1	6 43.65	+30 56.6	1.535	2.423	12.7	21.0
2 11	6 40.24	+36 27.3	1.765	2.562	15.7	19.9	2 11	6 37.53	+30 54.8	1.620	2.429	16.4	21.3
<b>51656</b>	2001 <i>JD</i>		1 7.4 67°52	0°3/ 7.3	18 R		<b>468108</b>	2013 <i>WO</i> <sub>97</sub>		1 7.4 64°99	3°1/ 6.2	18	
12 3	7 40.00	+18 52.5	1.596	2.409	16.3	17.8	12 3	7 37.08	+29 4.9	2.217	3.026	12.5	20.9
12 13	7 34.62	+19 58.0	1.538	2.430	12.3	17.6	12 13	7 31.98	+29 59.6	2.146	3.035	9.5	20.7
12 23	7 26.43	+21 13.5	1.502	2.452	7.7	17.4	12 23	7 24.61	+30 54.1	2.100	3.044	6.3	20.5
1 2	7 16.27	+22 33.4	1.494	2.473	2.7	17.1	1 2	7 15.63	+31 43.5	2.082	3.053	3.5	20.4
1 12	7 5.46	+23 50.8	1.514	2.494	2.4	17.2	1 12	7 6.04	+32 23.3	2.094	3.063	3.8	20.4
1 22	6 55.39	+25 0.1	1.563	2.515	7.2	17.5	1 22	6 56.95	+32 51.0	2.135	3.072	6.7	20.6
2 1	6 47.33	+25 58.1	1.640	2.537	11.5	17.8	2 1	6 49.36	+33 6.3	2.203	3.081	9.8	20.8
2 11	6 42.12	+26 44.2	1.739	2.558	15.0	18.1	2 11	6 44.04	+33 10.7	2.296	3.091	12.6	21.0
<b>117018</b>	2004 <i>JB</i> <sub>9</sub>		1 7.4 201°74	1°1/ 7.1	18		<b>433908</b>	2015 <i>BW</i> <sub>467</sub>		1 7.4 244°25	11°7/ 7.0	16	
12 3	7 39.37	+24 46.9	2.368	3.167	12.1	20.8	12 3	8 0.89	+46 7.8	1.213	2.011	21.4	21.0
12 13	7 33.53	+25 5.7	2.277	3.163	9.2	20.6	12 13	7 53.06	+46 50.2	1.140	2.003	18.0	20.7
12 23	7 25.51	+25 25.9	2.212	3.158	5.8	20.4	12 23	7 39.33	+47 12.0	1.084	1.994	14.6	20.5
1 2	7 15.93	+25 44.7	2.175	3.153	2.2	20.1	1 2	7 21.11	+46 56.6	1.050	1.985	12.0	20.3
1 12	7 5.71	+25 59.1	2.169	3.147	2.2	20.1	1 12	7 1.43	+45 53.0	1.039	1.976	12.1	20.3
1 22	6 55.90	+26 7.7	2.193	3.141	5.8	20.4	1 22	6 43.75	+44 3.3	1.053	1.966	14.7	20.4
2 1	6 47.45	+26 9.9	2.247	3.134	9.3	20.6	2 1	6 30.72	+41 40.7	1.090	1.955	18.6	20.6
2 11	6 41.12	+26 6.8	2.325	3.126	12.3	20.7	2 11	6 23.51	+39 3.4	1.147	1.945	22.4	20.8
<b>318893</b>	2005 <i>TK</i> <sub>164</sub>		1 7.4 238°47	0°5/ 7.5	18		<b>14978</b>	1997 <i>SD</i> <sub>25</sub>		1 7.4 15°86	5°5/ 9.0	18	
12 3	7 37.92	+20 36.9	1.960	2.767	14.0	20.8	12 3	7 33.65	+ 7 5.0	2.028	2.807	14.5	17.9
12 13	7 32.75	+20 37.5	1.874	2.764	10.7	20.5	12 13	7 29.30	+ 6 36.1	1.949	2.809	11.8	17.7
12 23	7 25.16	+20 42.7	1.812	2.760	6.8	20.3	12 23	7 22.87	+ 6 20.7	1.892	2.811	8.8	17.5
1 2	7 15.83	+20 50.3	1.778	2.756	2.5	20.0	1 2	7 15.00	+ 6 20.5	1.861	2.813	6.2	17.4
1 12	7 5.82	+20 58.3	1.772	2.752	2.1	20.0	1 12	7 6.58	+ 6 35.3	1.858	2.815	5.6	17.3
1 22	6 56.28	+21 5.1	1.796	2.748	6.4	20.3	1 22	6 58.59	+ 7 3.4	1.883	2.818	7.6	17.5
2 1	6 48.31	+21 9.9	1.847	2.744	10.4	20.5	2 1	6 51.94	+ 7 41.9	1.934	2.821	10.5	17.7
2 11	6 42.73	+21 12.6	1.922	2.740	13.8	20.7	2 11	6 47.33	+ 8 27.0	2.009	2.825	13.4	17.8
<b>130841</b>	2000 <i>UG</i> <sub>52</sub>		1 7.4 47°08	0°6/ 7.3	18		<b>248906</b>	2006 <i>VX</i> <sub>14</sub>		1 7.4 240°36	3°5/ 6.4	18	
12 3	7 39.74	+22 13.5	1.329	2.159	18.1	19.6	12 3	7 40.61	+30 4.9	1.899	2.711	14.2	21.0
12 13	7 34.92	+22 34.6	1.271	2.173	13.7	19.4	12 13	7 35.16	+30 47.0	1.815	2.705	10.9	20.7
12 23	7 26.82	+23 1.6	1.234	2.187	8.6	19.1	12 23	7 26.88	+31 28.2	1.754	2.698	7.3	20.5
1 2	7 16.44	+23 30.1	1.222	2.201	3.0	18.9	1 2	7 16.51	+32 2.8	1.721	2.692	4.1	20.3
1 12	7 5.36	+23 55.4	1.236	2.216	2.7	18.9	1 12	7 5.26	+32 25.8	1.716	2.685	4.4	20.3
1 22	6 55.24	+24 14.3	1.276	2.231	8.1	19.2	1 22	6 54.52	+32 34.6	1.739	2.678	7.8	20.5
2 1	6 47.51	+24 26.0	1.342	2.247	12.9	19.6	2 1	6 45.61	+32 29.6	1.789	2.671	11.5	20.7
2 11	6 43.09	+24 31.3	1.428	2.262	16.9	19.8	2 11	6 39.48	+32 13.7	1.862	2.664	14.8	20.9
<b>332834</b>	2010 <i>AP</i> <sub>60</sub>		1 7.4 350°85	2°3/ 7.8	18		<b>193211</b>	2000 <i>QC</i> <sub>212</sub>		1 7.4 74°05	0°4/ 7.3	17	
12 3	7 36.68	+17 11.8	2.046	2.847	13.7	20.5							

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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>36915</b>	2000 <i>SP</i> <sub>195</sub>		1 7.4 192°64	1.8°/ 6.9	18		<b>461733</b>	2005 <i>TY</i> <sub>159</sub>		1 7.4 359°37	1°6/ 7.7	18	
12 3	7 42.27	+25 50.5	1.808	2.618	14.8	20.5	12 3	7 37.01	+18 41.6	1.680	2.495	15.6	21.2
12 13	7 36.35	+26 13.6	1.726	2.617	11.3	20.3	12 13	7 32.36	+18 26.8	1.602	2.494	11.9	20.9
12 23	7 27.59	+26 38.2	1.668	2.616	7.2	20.0	12 23	7 25.05	+18 18.1	1.546	2.494	7.7	20.7
1 2	7 16.75	+26 59.8	1.636	2.614	3.0	19.8	1 2	7 15.85	+18 14.5	1.516	2.493	3.3	20.4
1 12	7 5.09	+27 14.5	1.634	2.611	3.0	19.8	1 12	7 5.94	+18 14.7	1.514	2.493	2.7	20.4
1 22	6 54.02	+27 20.0	1.660	2.608	7.3	20.0	1 22	6 56.62	+18 17.1	1.540	2.494	7.1	20.6
2 1	6 44.85	+27 16.6	1.714	2.605	11.4	20.3	2 1	6 49.08	+18 20.8	1.592	2.495	11.4	20.9
2 11	6 38.50	+27 6.2	1.791	2.601	15.0	20.5	2 11	6 44.19	+18 25.1	1.667	2.496	15.1	21.1
<b>222427</b>	2001 <i>OK</i> <sub>38</sub>		1 7.4 121°51	1°4/ 6.7	18		<b>484143</b>	2006 <i>TY</i> <sub>29</sub>		1 7.4 48°45	4°8/ 8.4	17	
12 3	7 32.58	+27 12.0	3.602	4.398	8.4	20.8	12 3	7 40.19	+12 58.6	1.064	1.894	21.6	20.7
12 13	7 27.72	+27 41.5	3.526	4.410	6.3	20.6	12 13	7 35.55	+12 31.6	1.016	1.912	16.9	20.4
12 23	7 21.54	+28 10.9	3.477	4.421	4.0	20.5	12 23	7 27.32	+12 21.7	0.987	1.931	11.5	20.2
1 2	7 14.46	+28 37.9	3.458	4.433	1.9	20.4	1 2	7 16.65	+12 29.4	0.979	1.950	6.4	20.0
1 12	7 7.07	+29 0.7	3.470	4.444	2.0	20.4	1 12	7 5.34	+12 52.2	0.996	1.971	5.4	20.0
1 22	6 59.96	+29 18.0	3.514	4.455	4.1	20.5	1 22	6 55.23	+13 25.9	1.037	1.991	9.6	20.3
2 1	6 53.71	+29 29.5	3.587	4.466	6.4	20.7	2 1	6 47.85	+14 5.9	1.102	2.012	14.5	20.6
2 11	6 48.77	+29 35.5	3.687	4.477	8.4	20.9	2 11	6 44.07	+14 47.5	1.186	2.034	18.7	21.0
<b>411444</b>	2010 <i>WF</i> <sub>50</sub>		1 7.4 32°29	1°4/ 7.0	18		<b>469264</b>	2016 <i>JR</i> <sub>30</sub>		1 7.4 281°79	1°8/ 6.6	18	
12 3	7 37.89	+24 3.2	1.656	2.478	15.5	20.9	12 3	7 36.21	+25 2.1	2.223	3.032	12.5	20.6
12 13	7 33.15	+24 33.9	1.585	2.482	11.7	20.7	12 13	7 31.40	+25 52.4	2.136	3.027	9.5	20.4
12 23	7 25.60	+25 8.4	1.536	2.487	7.4	20.4	12 23	7 24.33	+26 46.2	2.074	3.022	6.0	20.2
1 2	7 16.03	+25 42.4	1.514	2.492	2.8	20.2	1 2	7 15.60	+27 39.3	2.040	3.017	2.6	19.9
1 12	7 5.73	+26 11.3	1.519	2.498	2.8	20.2	1 12	7 6.14	+28 27.2	2.036	3.012	2.8	19.9
1 22	6 56.07	+26 32.3	1.553	2.504	7.3	20.5	1 22	6 57.01	+29 6.7	2.061	3.006	6.3	20.1
2 1	6 48.35	+26 44.5	1.612	2.510	11.6	20.7	2 1	6 49.25	+29 36.4	2.115	3.001	9.8	20.4
2 11	6 43.43	+26 49.0	1.694	2.516	15.2	21.0	2 11	6 43.67	+29 56.5	2.193	2.996	12.8	20.5
<b>97974</b>	2000 <i>QD</i> <sub>167</sub>		1 7.4 167°55	1°7/ 7.8	18		<b>341519</b>	2007 <i>TD</i> <sub>429</sub>		1 7.4 172°05	0°9/ 7.7	18	
12 3	7 40.83	+17 37.2	1.852	2.652	14.9	20.7	12 3	7 35.24	+18 42.9	2.751	3.542	10.8	22.0
12 13	7 34.98	+17 34.4	1.772	2.656	11.5	20.5	12 13	7 30.03	+18 44.1	2.665	3.545	8.2	21.8
12 23	7 26.58	+17 38.8	1.715	2.659	7.4	20.2	12 23	7 23.14	+18 49.5	2.604	3.547	5.3	21.7
1 2	7 16.36	+17 48.7	1.686	2.662	3.2	20.0	1 2	7 15.09	+18 57.8	2.572	3.548	2.1	21.4
1 12	7 5.45	+18 2.2	1.685	2.664	2.6	19.9	1 12	7 6.61	+19 7.8	2.570	3.550	1.7	21.4
1 22	6 55.11	+18 17.1	1.714	2.666	6.7	20.2	1 22	6 58.48	+19 18.1	2.600	3.551	4.8	21.6
2 1	6 46.48	+18 32.2	1.771	2.667	10.8	20.5	2 1	6 51.42	+19 28.1	2.660	3.551	7.8	21.8
2 11	6 40.40	+18 46.6	1.852	2.668	14.3	20.7	2 11	6 46.02	+19 37.0	2.745	3.552	10.4	22.0
<b>362156</b>	2009 <i>DJ</i> <sub>133</sub>		1 7.4 204°56	4°1/ 6.3	18		<b>131720</b>	2001 <i>YG</i> <sub>78</sub>		1 7.4 23°99	1°6/ 7.0	18	
12 3	7 42.98	+32 16.3	2.011	2.815	13.8	21.7	12 3	7 36.65	+22 57.4	1.039	1.890	20.4	18.9
12 13	7 36.84	+32 58.2	1.927	2.811	10.7	21.4	12 13	7 33.36	+23 38.5	0.988	1.901	15.5	18.6
12 23	7 27.88	+33 37.1	1.868	2.807	7.3	21.2	12 23	7 26.23	+24 27.4	0.956	1.913	9.7	18.3
1 2	7 16.86	+34 7.1	1.835	2.802	4.5	21.0	1 2	7 16.35	+25 17.2	0.947	1.927	3.6	18.1
1 12	7 5.01	+34 23.3	1.832	2.797	4.8	21.1	1 12	7 5.60	+26 0.7	0.962	1.941	3.6	18.1
1 22	6 53.71	+34 23.7	1.858	2.791	7.9	21.2	1 22	6 55.98	+26 32.7	1.001	1.957	9.4	18.5
2 1	6 44.25	+34 9.3	1.911	2.785	11.3	21.4	2 1	6 49.21	+26 52.1	1.062	1.975	14.7	18.8
2 11	6 37.57	+33 43.7	1.987	2.778	14.4	21.6	2 11	6 46.26	+27 0.3	1.142	1.993	19.1	19.2
<b>495490</b>	2014 <i>UZ</i> <sub>102</sub>		1 7.4 43°18	0°9/ 7.7	18		<b>379959</b>	2012 <i>QD</i> <sub>2</sub>		1 7.4 176°69	1°0/ 7.7	16	
12 3	7 36.73	+18 26.6	1.739	2.552	15.2	21.4	12 3	7 36.04	+18 52.2	2.579	3.373	11.4	22.0
12 13	7 32.05	+18 44.5	1.666	2.558	11.6	21.2	12 13	7 30.74	+18 49.3	2.493	3.374	8.7	21.8
12 23	7 24.80	+19 10.6	1.616	2.564	7.4	20.9	12 23	7 23.64	+18 50.6	2.431	3.375	5.6	21.6
1 2	7 15.73	+19 42.4	1.592	2.570	2.9	20.7	1 2	7 15.29	+18 54.9	2.399	3.376	2.3	21.4
1 12	7 6.00	+20 16.5	1.597	2.577	2.3	20.6	1 12	7 6.47	+19 0.9	2.397	3.376	1.8	21.4
1 22	6 56.84	+20 49.6	1.630	2.584	6.7	20.9	1 22	6 58.03	+19 7.5	2.426	3.376	5.1	21.6
2 1	6 49.42	+21 19.6	1.689	2.591	10.9	21.2	2 1	6 50.75	+19 13.9	2.483	3.376	8.3	21.8
2 11	6 44.55	+21 45.3	1.772	2.598	14.5	21.4	2 11	6 45.25	+19 19.6	2.567	3.375	11.0	22.0
<b>372159</b>	2008 <i>SF</i> <sub>310</sub>		1 7.4 35°62	4°2/ 6.4	18		<b>11558</b>	1993 <i>FY</i> <sub>8</sub>		1 7.4 148°03	1°6/ 6.9	18	
12 3	7 39.67	+33 24.0	1.961	2.772	13.8	20.5	12 3	7 38.50	+25 34.5	2.176	2.982	12.8	19.1
12 13	7 34.24	+33 53.6	1.890	2.777	10.7	20.3	12 13	7 33.03	+26 4.8	2.098	2.987	9.7	18.9
12 23	7 26.14	+34 18.2	1.842	2.782	7.4	20.1	12 23	7 25.27	+26 36.7	2.044	2.991	6.1	18.7
1 2	7 16.20	+34 32.7	1.821	2.787	4.6	19.9	1 2	7 15.91	+27 6.4	2.018	2.995	2.5	18.5
1 12	7 5.64	+34 33.3	1.829	2.793	4.8	20.0	1 12	7 5.94	+27 30.5	2.022	2.999	2.6	18.5
1 22	6 55.79	+34 19.1	1.864	2.799	7.7	20.1	1 22	6 56.46	+27 46.9	2.056	3.003	6.2	18.7
2 1	6 47.82	+33 51.8	1.927	2.805	11.0	20.3	2 1	6 48.48	+27 55.2	2.118	3.006	9.7	19.0
2 11	6 42.52	+33 15.1	2.012	2.812	13.9	20.6	2 11	6 42.77	+27 56.3	2.204	3.009	12.7	19.2
<b>85091</b>	4112 <i>T</i> <sub>-2</sub>		1 7.4 56°61	1°9/ 8.1	18		<b>323123</b>	2003 <i>AJ</i> <sub>68</sub>		1 7.4 42°87	5°4/ 5.6	18	
12 3	7 34.74	+15 33.0	2.123	2.922	13.3	19.5	12 3	7 40.42	+30 50.3	1.469	2.297	16.8	19.6
12 13	7 30.02	+15 41.2	2.053	2.935	10.2	19.4	12 13	7 35.59	+32 20.2	1.415	2.311	12.9	19.4
12 23	7 23.27	+15 57.8	2.006	2.948	6.7	19.2	12 23	7 27.38	+33 49.2	1.383	2.327	8.8	19.2
1 2	7 15.14	+16 21.3	1.986	2.960	3.1	19.0	1 2	7 16.74	+35 7.7	1.376	2.343	5.7	19.1
1 12	7 6.55	+16 49.7	1.996	2.973	2.5	18.9	1 12	7 5.24	+36 7.2	1.397	2.360	6.3	19.2
1 22	6 58.45	+17 20.5	2.035	2.987	5.8	19.2	1 22	6 54.62	+36 43.9	1.444	2.377	9.7	19.4
2 1	6 51.73	+17 51.6	2.102	3.000	9.3	19.4	2 1	6 46.41	+36 58.5	1.515	2.394	13.4	19.7
2 11	6 47.05	+18 21.4	2.194	3.013	12.3	19.6	2 11	6 41.60	+36 55.3	1.608	2.412	16.7	19.9
<b>163794</b>	2003 <i>QE</i> <sub>54</sub>		1 7.4 117°10	3°0/ 6.6	18		<b>494684</b>	2003 <i>WO</i> <sub>163</sub>		1 7.4 101°51	2°7/ 6.4	18	
12 3	7 43.82	+28 43.6	1.845	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>417200</b>	2005 <i>XA</i> <sub>4</sub>		1 7.4 71°38'	2°5'	7.8	18	<b>181409</b>	2006 <i>SD</i> <sub>141</sub>		1 7.4 114°96'	1°6'	7.9	18
12 3	7 40.96	+17 21.9	1.814	2.614	15.2	21.1	12 3	7 39.37	+16 23.4	1.969	2.766	14.3	21.2
12 13	7 34.79	+16 44.1	1.754	2.637	11.6	20.9	12 13	7 33.66	+16 37.1	1.900	2.781	10.9	21.0
12 23	7 26.25	+16 12.2	1.718	2.660	7.6	20.7	12 23	7 25.65	+16 59.2	1.854	2.797	7.1	20.8
1 2	7 16.20	+15 46.2	1.710	2.683	3.7	20.6	1 2	7 16.07	+17 27.7	1.836	2.811	3.1	20.6
1 12	7 5.79	+15 26.0	1.730	2.706	3.1	20.6	1 12	7 5.96	+18 0.0	1.847	2.826	2.4	20.6
1 22	6 56.20	+15 11.3	1.780	2.729	6.7	20.8	1 22	6 56.43	+18 33.1	1.888	2.839	6.2	20.8
2 1	6 48.44	+15 1.5	1.857	2.752	10.5	21.1	2 1	6 48.50	+19 4.9	1.957	2.853	10.0	21.1
2 11	6 43.16	+14 55.9	1.957	2.774	13.7	21.4	2 11	6 42.90	+19 34.2	2.050	2.866	13.2	21.3
<b>87732</b>	2000 <i>SQ</i> <sub>55</sub>		1 7.4 51°63'	2°5'	8.1	18	<b>150662</b>	2001 <i>HG</i> <sub>37</sub>		1 7.4 195°29'	3°4'	6.4	18
12 3	7 36.71	+15 29.0	1.784	2.590	15.2	19.6	12 3	7 44.93	+29 11.7	1.904	2.708	14.5	20.3
12 13	7 31.90	+15 20.6	1.712	2.597	11.7	19.4	12 13	7 38.46	+30 0.1	1.820	2.705	11.1	20.1
12 23	7 24.65	+15 21.4	1.661	2.604	7.8	19.1	12 23	7 29.03	+30 48.6	1.759	2.702	7.4	19.8
1 2	7 15.70	+15 30.6	1.638	2.611	3.8	18.9	1 2	7 17.38	+31 30.9	1.726	2.698	3.9	19.6
1 12	7 6.16	+15 46.4	1.642	2.619	3.1	18.9	1 12	7 4.79	+32 1.4	1.723	2.693	4.3	19.6
1 22	6 57.20	+16 6.8	1.675	2.626	6.8	19.1	1 22	6 52.72	+32 17.1	1.749	2.687	7.8	19.8
2 1	6 49.90	+16 29.5	1.734	2.634	10.7	19.4	2 1	6 42.56	+32 18.4	1.802	2.681	11.7	20.0
2 11	6 45.04	+16 52.8	1.817	2.642	14.2	19.6	2 11	6 35.31	+32 8.2	1.879	2.673	15.0	20.2
<b>81935</b>	2000 <i>OT</i> <sub>29</sub>		1 7.4 180°01'	0°7'	7.6	18	<b>517194</b>	2013 <i>TX</i> <sub>163</sub>		1 7.4 145°20'	1°4'	7.9	18
12 3	7 35.91	+20 21.9	2.507	3.305	11.6	19.2	12 3	7 35.99	+17 24.6	2.579	3.369	11.5	22.2
12 13	7 30.70	+20 12.2	2.421	3.305	8.8	19.0	12 13	7 30.67	+17 21.7	2.498	3.376	8.8	22.0
12 23	7 23.64	+20 5.4	2.360	3.305	5.6	18.8	12 23	7 23.59	+17 23.9	2.442	3.383	5.7	21.8
1 2	7 15.30	+20 0.4	2.327	3.305	2.2	18.6	1 2	7 15.31	+17 30.3	2.414	3.390	2.5	21.6
1 12	7 6.51	+19 56.2	2.325	3.305	1.8	18.5	1 12	7 6.60	+17 39.5	2.418	3.396	2.0	21.6
1 22	6 58.11	+19 52.1	2.354	3.305	5.2	18.8	1 22	6 58.30	+17 50.3	2.452	3.402	5.1	21.8
2 1	6 50.93	+19 47.6	2.411	3.305	8.4	19.0	2 1	6 51.15	+18 1.6	2.515	3.408	8.2	22.0
2 11	6 45.58	+19 42.7	2.494	3.304	11.3	19.2	2 11	6 45.77	+18 12.8	2.604	3.413	10.9	22.2
<b>84166</b>	2002 <i>RP</i> <sub>95</sub>		1 7.4 69°29'	1°5'	7.1	17	<b>340995</b>	2007 <i>EK</i> <sub>212</sub>		1 7.4 329°87'	0°4'	7.3	18
12 3	7 44.16	+24 40.6	1.265	2.094	18.9	19.8	12 3	7 38.99	+20 23.9	1.316	2.146	18.2	20.4
12 13	7 38.38	+25 0.1	1.212	2.113	14.3	19.6	12 13	7 34.77	+21 2.8	1.241	2.142	14.0	20.1
12 23	7 29.04	+25 22.4	1.180	2.132	9.0	19.3	12 23	7 27.10	+21 52.4	1.186	2.139	8.9	19.8
1 2	7 17.29	+25 42.0	1.172	2.151	3.4	19.0	1 2	7 16.77	+22 47.9	1.156	2.135	3.2	19.5
1 12	7 4.90	+25 54.3	1.191	2.170	3.2	19.1	1 12	7 5.29	+23 42.7	1.152	2.132	2.8	19.4
1 22	6 53.71	+25 57.2	1.237	2.190	8.5	19.4	1 22	6 54.44	+24 31.3	1.174	2.130	8.6	19.8
2 1	6 45.24	+25 51.5	1.307	2.209	13.4	19.8	2 1	6 45.88	+25 10.3	1.221	2.127	13.8	20.1
2 11	6 40.36	+25 39.8	1.398	2.228	17.4	20.1	2 11	6 40.79	+25 39.4	1.289	2.125	18.2	20.3
<b>401897</b>	2001 <i>SM</i> <sub>224</sub>		1 7.4 41°68'	3°7'	8.5	18	<b>427260</b>	2014 <i>WE</i> <sub>145</sub>		1 7.4 97°08'	8°3'	8.5	18
12 3	7 36.20	+12 21.9	1.580	2.387	16.8	20.7	12 3	7 40.04	+ 2 25.6	2.019	2.767	15.6	21.2
12 13	7 31.74	+12 17.5	1.514	2.397	13.1	20.5	12 13	7 33.98	+ 0 48.8	1.951	2.780	13.1	21.0
12 23	7 24.64	+12 26.9	1.469	2.408	8.9	20.2	12 23	7 25.76	+ 0 33.8	1.906	2.793	10.6	20.9
1 2	7 15.72	+12 49.5	1.450	2.419	5.0	20.0	1 2	7 16.10	+ 1 37.6	1.887	2.805	8.7	20.8
1 12	7 6.17	+13 23.0	1.457	2.431	4.1	20.0	1 12	7 5.97	+ 2 19.4	1.895	2.818	8.4	20.8
1 22	6 57.28	+14 4.0	1.492	2.443	7.6	20.3	1 22	6 56.41	+ 2 38.9	1.932	2.830	9.8	20.9
2 1	6 50.21	+14 48.8	1.553	2.455	11.6	20.5	2 1	6 48.36	+ 2 37.9	1.994	2.842	12.1	21.1
2 11	6 45.78	+15 33.9	1.636	2.468	15.2	20.8	2 11	6 42.51	+ 2 20.7	2.078	2.854	14.4	21.3
<b>256058</b>	2006 <i>UA</i> <sub>132</sub>		1 7.4 35°02'	4°9'	6.8	18	<b>287951</b>	2003 <i>UY</i> <sub>94</sub>		1 7.4 128°77'	3°4'	6.7	17
12 3	7 42.16	+32 47.9	1.326	2.157	18.1	19.8	12 3	7 45.88	+28 14.1	1.437	2.256	17.5	21.8
12 13	7 36.94	+33 12.3	1.275	2.173	13.9	19.6	12 13	7 39.72	+28 57.4	1.371	2.266	13.4	21.5
12 23	7 28.15	+33 30.1	1.244	2.190	9.4	19.4	12 23	7 30.01	+29 40.9	1.327	2.275	8.7	21.3
1 2	7 16.97	+33 34.7	1.237	2.208	5.5	19.2	1 2	7 17.74	+30 17.4	1.309	2.284	4.3	21.1
1 12	7 5.20	+33 21.6	1.257	2.226	5.6	19.3	1 12	7 4.58	+30 40.5	1.318	2.292	4.5	21.1
1 22	6 54.70	+32 51.0	1.302	2.246	9.4	19.6	1 22	6 52.37	+30 47.5	1.355	2.300	8.9	21.4
2 1	6 46.95	+32 7.0	1.371	2.266	13.5	19.8	2 1	6 42.72	+30 39.9	1.417	2.308	13.4	21.6
2 11	6 42.78	+31 15.1	1.462	2.286	17.1	20.1	2 11	6 36.65	+30 21.6	1.500	2.314	17.2	21.9
<b>9934</b>	Caccioppoli		1 7.4 145°38'	7°4'	5.2	18	<b>83207</b>	2001 <i>RB</i> <sub>15</sub>		1 7.4 334°53'	2°0'	7.9	18
12 3	7 48.57	+43 56.3	2.298	3.071	13.2	18.7	12 3	7 35.62	+16 59.1	2.252	3.050	12.7	19.9
12 13	7 41.02	+45 0.5	2.234	3.083	10.9	18.6	12 13	7 30.68	+16 37.8	2.167	3.048	9.8	19.7
12 23	7 30.47	+45 53.5	2.194	3.094	8.8	18.5	12 23	7 23.74	+16 21.8	2.106	3.047	6.4	19.5
1 2	7 17.81	+46 27.7	2.181	3.104	7.5	18.4	1 2	7 15.41	+16 10.9	2.072	3.046	3.1	19.3
1 12	7 4.45	+46 38.2	2.196	3.113	7.8	18.4	1 12	7 6.55	+16 4.3	2.068	3.045	2.6	19.3
1 22	6 51.90	+46 24.1	2.239	3.122	9.4	18.5	1 22	6 58.12	+16 1.4	2.094	3.044	5.8	19.5
2 1	6 41.51	+45 48.7	2.308	3.130	11.6	18.7	2 1	6 51.00	+16 1.5	2.148	3.043	9.2	19.7
2 11	6 34.17	+44 57.9	2.399	3.137	13.7	18.9	2 11	6 45.85	+16 3.7	2.226	3.042	12.2	19.9
<b>373819</b>	2002 <i>WH</i> <sub>27</sub>		1 7.4 56°91'	0°7'	7.1	18	<b>282473</b>	2004 <i>GZ</i> <sub>23</sub>		1 7.4 196°55'	0°0'	7.5	18
12 3	7 37.23	+21 59.1	1.983	2.793	13.7	20.3	12 3	7 42.04	+19 49.2	1.912	2.711	14.5	21.5
12 13	7 32.06	+22 40.5	1.925	2.816	10.3	20.1	12 13	7 36.08	+20 22.4	1.823	2.709	11.1	21.3
12 23	7 24.63	+23 26.4	1.891	2.840	6.4	19.9	12 23	7 27.45	+21 3.2	1.759	2.705	7.1	21.0
1 2	7 15.68	+24 12.9	1.884	2.863	2.3	19.7	1 2	7 16.83	+21 48.0	1.722	2.701	2.6	20.7
1 12	7 6.27	+24 56.0	1.907	2.887	2.2	19.8	1 12	7 5.33	+22 32.5	1.716	2.696	2.1	20.7
1 22	6 57.50	+25 32.7	1.960	2.910	6.1	20.1	1 22	6 54.25	+23 13.1	1.739	2.690	6.7	21.0
2 1	6 50.33	+26 1.7	2.040	2.934	9.7	20.3	2 1	6 44.81	+23 47.5	1.791	2.683	10.9	21.2
2 11	6 45.47	+26 23.1	2.144	2.958	12.7	20.6	2 11	6 37.96	+24 15.2	1.866	2.676	14.5	21.4
<b>516476</b>	2005 <i>TS</i> <sub>86</sub>		1 7.4 10°78'	17°7'	11.5	18	<b>273995</b>	2007 <i>OB</i>		1 7.4 51°24'	5°5'	9.2	18
12 3	7 25.99	+ 0 41.2	0.535	1.407	30.7	20.4	12 3						

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>393430</b>	2001 <i>SX</i> <sub>167</sub>		1 7.4 84°59	6°2/ 6.2	17		<b>7291</b>	Hyakutake		1 7.4 53°18	1°7/ 6.8	18	
12 3	7 48.08	+34 56.1	1.477	2.290	17.4	21.0	12 3	7 37.64	+24 33.4	1.943	2.756	13.8	16.4
12 13	7 41.31	+35 54.8	1.426	2.312	13.6	20.8	12 13	7 32.50	+25 19.8	1.885	2.778	10.4	16.3
12 23	7 30.89	+36 46.0	1.398	2.334	9.6	20.6	12 23	7 25.00	+26 8.9	1.851	2.800	6.5	16.1
1 2	7 18.00	+37 20.9	1.395	2.356	6.5	20.5	1 2	7 15.91	+26 56.0	1.845	2.823	2.7	15.9
1 12	7 4.47	+37 33.1	1.419	2.377	6.8	20.6	1 12	7 6.32	+27 36.9	1.868	2.845	2.8	15.9
1 22	6 52.20	+37 21.8	1.469	2.398	9.9	20.8	1 22	6 57.38	+28 8.7	1.921	2.868	6.5	16.2
2 1	6 42.75	+36 51.1	1.545	2.419	13.5	21.0	2 1	6 50.14	+28 30.8	2.000	2.891	10.0	16.5
2 11	6 37.00	+36 7.7	1.642	2.439	16.7	21.3	2 11	6 45.29	+28 43.8	2.104	2.914	13.0	16.7
<b>420871</b>	2013 <i>KS</i> <sub>7</sub>		1 7.4 147°29	3°7/ 8.5	18		<b>206340</b>	2003 <i>PW</i> <sub>2</sub>		1 7.4 123°14	2°3/ 8.2	18	
12 3	7 38.36	+10 44.8	2.489	3.258	12.4	22.3	12 3	7 40.01	+14 42.8	1.790	2.588	15.5	20.7
12 13	7 32.42	+10 16.6	2.410	3.270	9.8	22.1	12 13	7 34.41	+14 54.0	1.719	2.600	11.9	20.5
12 23	7 24.68	+9 57.0	2.356	3.280	7.0	22.0	12 23	7 26.29	+15 16.0	1.671	2.611	7.9	20.3
1 2	7 15.72	+9 46.6	2.331	3.291	4.4	21.8	1 2	7 16.41	+15 47.1	1.649	2.623	3.7	20.0
1 12	7 6.35	+9 45.2	2.335	3.300	4.0	21.8	1 12	7 5.89	+16 24.3	1.656	2.633	3.0	20.0
1 22	6 57.42	+9 52.0	2.371	3.309	6.1	21.9	1 22	6 55.99	+17 4.4	1.692	2.644	6.8	20.3
2 1	6 49.71	+10 5.4	2.435	3.317	8.9	22.1	2 1	6 47.81	+17 44.4	1.756	2.653	10.8	20.5
2 11	6 43.83	+10 23.6	2.525	3.324	11.5	22.3	2 11	6 42.16	+18 22.3	1.843	2.663	14.2	20.8
<b>58278</b>	1993 <i>TA</i> <sub>34</sub>		1 7.4 16°51	2°5/ 6.8	18		<b>406658</b>	2008 <i>DD</i> <sub>89</sub>		1 7.4 355°34	5°6/ 8.4	18	
12 3	7 35.91	+24 9.5	1.066	1.918	20.0	18.4	12 3	7 35.82	+11 14.9	1.459	2.269	17.8	20.6
12 13	7 32.91	+25 0.6	1.011	1.924	15.2	18.1	12 13	7 31.79	+10 25.8	1.384	2.266	14.2	20.4
12 23	7 26.08	+25 58.7	0.974	1.931	9.6	17.8	12 23	7 24.92	+9 49.4	1.329	2.264	10.2	20.1
1 2	7 16.43	+26 56.2	0.961	1.940	3.9	17.5	1 2	7 15.98	+9 28.0	1.299	2.262	6.6	19.9
1 12	7 5.77	+27 45.1	0.971	1.950	4.1	17.6	1 12	7 6.23	+9 22.7	1.294	2.261	5.9	19.9
1 22	6 56.15	+28 20.0	1.006	1.961	9.6	17.9	1 22	6 57.08	+9 32.2	1.315	2.261	9.0	20.1
2 1	6 49.30	+28 39.5	1.062	1.974	14.9	18.2	2 1	6 49.84	+9 54.0	1.361	2.261	13.1	20.3
2 11	6 46.29	+28 45.8	1.138	1.988	19.2	18.5	2 11	6 45.42	+10 24.0	1.428	2.262	16.8	20.5
<b>108335</b>	2001 <i>KQ</i> <sub>3</sub>		1 7.4 138°77	3°5/ 6.2	18		<b>248583</b>	2006 <i>BX</i> <sub>211</sub>		1 7.4 219°98	1°6/ 7.0	18	
12 3	7 42.68	+30 27.8	2.235	3.034	12.7	20.3	12 3	7 42.49	+25 34.3	2.078	2.879	13.5	21.9
12 13	7 36.24	+31 23.9	2.165	3.047	9.8	20.1	12 13	7 36.37	+25 58.9	1.983	2.869	10.3	21.6
12 23	7 27.35	+32 18.4	2.120	3.060	6.5	20.0	12 23	7 27.64	+26 25.2	1.912	2.858	6.6	21.4
1 2	7 16.74	+33 5.8	2.103	3.072	3.8	19.8	1 2	7 16.95	+26 49.3	1.870	2.847	2.7	21.1
1 12	7 5.51	+33 41.5	2.118	3.083	4.1	19.8	1 12	7 5.39	+27 7.3	1.857	2.834	2.7	21.1
1 22	6 54.83	+34 3.1	2.162	3.094	7.0	20.0	1 22	6 54.23	+27 17.1	1.875	2.821	6.7	21.3
2 1	6 45.80	+34 11.0	2.234	3.104	10.1	20.3	2 1	6 44.65	+27 18.3	1.920	2.807	10.6	21.5
2 11	6 39.22	+34 7.6	2.330	3.114	12.8	20.5	2 11	6 37.59	+27 12.4	1.990	2.792	14.0	21.7
<b>137751</b>	1999 <i>XB</i> <sub>159</sub>		1 7.4 316°85	2°7/ 7.9	18		<b>410029</b>	2006 <i>XB</i> <sub>30</sub>		1 7.4 8°54	1°9/ 7.7	18	
12 3	7 38.62	+17 7.6	1.292	2.119	18.7	19.4	12 3	7 37.40	+19 6.3	1.493	2.316	16.8	20.1
12 13	7 34.46	+16 48.7	1.213	2.110	14.5	19.2	12 13	7 32.95	+18 38.8	1.421	2.317	12.9	19.8
12 23	7 26.90	+16 39.3	1.154	2.102	9.6	18.9	12 23	7 25.61	+18 17.1	1.370	2.318	8.4	19.6
1 2	7 16.74	+16 39.2	1.118	2.094	4.4	18.5	1 2	7 16.21	+18 0.5	1.344	2.321	3.6	19.3
1 12	7 5.47	+16 46.5	1.108	2.087	3.7	18.5	1 12	7 6.08	+17 48.1	1.345	2.324	3.0	19.3
1 22	6 54.83	+16 59.0	1.124	2.080	8.8	18.7	1 22	6 56.66	+17 39.3	1.372	2.327	7.6	19.6
2 1	6 46.43	+17 14.7	1.164	2.073	14.0	19.0	2 1	6 49.25	+17 33.4	1.426	2.332	12.2	19.8
2 11	6 41.42	+17 31.8	1.224	2.067	18.6	19.3	2 11	6 44.74	+17 29.9	1.501	2.337	16.1	20.1
<b>424996</b>	2009 <i>CZ</i> <sub>40</sub>		1 7.4 42°11	2°6/ 8.4	18		<b>403539</b>	2010 <i>GN</i> <sub>140</sub>		1 7.4 236°50	0°0/ 7.3	18	
12 3	7 34.04	+13 1.0	2.112	2.907	13.5	20.5	12 3	7 41.28	+21 42.9	1.793	2.601	15.0	22.2
12 13	7 29.60	+13 13.1	2.037	2.914	10.5	20.3	12 13	7 35.76	+21 54.0	1.701	2.590	11.5	21.9
12 23	7 23.12	+13 35.8	1.985	2.922	7.1	20.1	12 23	7 27.40	+22 9.8	1.631	2.579	7.4	21.7
1 2	7 15.23	+14 8.1	1.960	2.931	3.7	19.9	1 2	7 16.90	+22 27.6	1.588	2.567	2.7	21.3
1 12	7 6.82	+14 47.8	1.964	2.939	3.0	19.9	1 12	7 5.44	+22 43.9	1.574	2.554	2.3	21.3
1 22	6 58.85	+15 31.8	1.997	2.948	6.0	20.1	1 22	6 54.40	+22 56.4	1.589	2.541	7.1	21.6
2 1	6 52.21	+16 17.4	2.058	2.957	9.4	20.3	2 1	6 45.12	+23 4.2	1.632	2.528	11.6	21.8
2 11	6 47.58	+17 1.9	2.144	2.966	12.4	20.6	2 11	6 38.58	+23 7.7	1.697	2.514	15.4	22.0
<b>256170</b>	2006 <i>VO</i> <sub>61</sub>		1 7.4 81°30	1°9/ 6.9	17		<b>460348</b>	2014 <i>RH</i> <sub>32</sub>		1 7.4 61°76	6°9/ 10.2	18	
12 3	7 41.42	+25 32.9	1.757	2.570	15.1	20.7	12 3	7 37.02	+3 8.9	1.625	2.399	17.8	20.8
12 13	7 35.56	+26 6.6	1.698	2.590	11.4	20.5	12 13	7 32.19	+3 4.4	1.565	2.418	14.6	20.6
12 23	7 27.01	+26 41.9	1.661	2.610	7.2	20.3	12 23	7 24.89	+3 21.8	1.526	2.437	11.0	20.4
1 2	7 16.62	+27 14.1	1.652	2.630	3.0	20.1	1 2	7 15.90	+4 2.1	1.510	2.456	8.0	20.3
1 12	7 5.70	+27 38.8	1.672	2.649	3.0	20.1	1 12	7 6.37	+5 3.2	1.521	2.476	7.0	20.3
1 22	6 55.58	+27 53.8	1.721	2.669	7.1	20.4	1 22	6 57.51	+6 20.0	1.559	2.495	8.8	20.4
2 1	6 47.43	+27 59.4	1.796	2.688	10.9	20.7	2 1	6 50.41	+7 46.2	1.624	2.515	11.9	20.7
2 11	6 42.04	+27 57.1	1.895	2.707	14.2	21.0	2 11	6 45.83	+9 15.0	1.711	2.534	15.0	20.9
<b>247017</b>	1999 <i>XQ</i> <sub>9</sub>		1 7.4 147°94	2°6/ 8.1	18		<b>59602</b>	1999 <i>JW</i> <sub>63</sub>		1 7.4 172°65	5°2/ 8.9	18	
12 3	7 39.84	+15 17.2	1.974	2.767	14.4	21.0	12 3	7 36.57	+6 40.1	2.356	3.118	13.3	19.4
12 13	7 34.07	+15 4.5	1.897	2.775	11.1	20.8	12 13	7 31.28	+6 7.0	2.272	3.121	10.7	19.2
12 23	7 25.98	+14 59.7	1.843	2.782	7.4	20.6	12 23	7 24.10	+5 45.5	2.211	3.123	8.1	19.1
1 2	7 16.27	+15 2.4	1.816	2.789	3.7	20.4	1 2	7 15.60	+5 37.2	2.178	3.125	5.8	18.9
1 12	7 5.98	+15 11.3	1.819	2.795	3.1	20.3	1 12	7 6.60	+5 42.2	2.173	3.126	5.3	18.9
1 22	6 56.24	+15 24.6	1.851	2.801	6.5	20.6	1 22	6 57.97	+5 59.4	2.197	3.127	7.1	19.0
2 1	6 48.08	+15 40.8	1.912	2.806	10.2	20.8	2 1	6 50.54	+6 26.8	2.250	3.127	9.7	19.2
2 11	6 42.24	+15 58.5	1.996	2.811	13.5	21.0	2 11	6 44.97	+7 1.3	2.327	3.127	12.3	19.3
<b>238465</b>	2004 <i>RW</i> <sub>62</sub>		1 7.4 61°63	4°7/ 6.7	18		<b>327904</b>	2007 <i>CZ</i> <sub>50</sub>		1 7.4 289°19	1°2/ 7.2	18	
12 3	7 44.78	+32 5.3	1.377	2.201	17.9	20.0	12 3	7 38.90</					

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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>452495</b>	2004 <i>PO</i> <sub>22</sub>		1 7.4 176°26	0°6/ 7.3 18			<b>381654</b>	2009 <i>AE</i> <sub>35</sub>		1 7.5 297°28	1°4/ 6.9 18		
12 3	7 43.56	+24 0.7	1.731	2.539	15.5	21.3	12 3	7 35.81	+24 40.4	2.234	3.043	12.4	21.1
12 13	7 37.39	+24 0.7	1.651	2.541	11.8	21.0	12 13	7 31.13	+25 15.6	2.145	3.036	9.4	20.9
12 23	7 28.32	+24 2.3	1.595	2.543	7.5	20.8	12 23	7 24.25	+25 53.8	2.081	3.029	6.0	20.7
1 2	7 17.18	+24 2.5	1.565	2.544	2.7	20.5	1 2	7 15.75	+26 31.5	2.044	3.022	2.4	20.4
1 12	7 5.29	+23 58.4	1.564	2.544	2.4	20.5	1 12	7 6.56	+27 5.0	2.037	3.015	2.5	20.4
1 22	6 54.08	+23 49.0	1.593	2.544	7.2	20.8	1 22	6 57.71	+27 31.6	2.060	3.008	6.1	20.6
2 1	6 44.86	+23 34.8	1.648	2.543	11.5	21.0	2 1	6 50.20	+27 50.4	2.111	3.001	9.6	20.8
2 11	6 38.53	+23 17.6	1.727	2.542	15.2	21.3	2 11	6 44.83	+28 1.5	2.185	2.994	12.7	21.0
<b>214236</b>	2005 <i>EQ</i> <sub>176</sub>		1 7.4 347°22	1°9/ 7.1 18			<b>323859</b>	2005 <i>SG</i> <sub>126</sub>		1 7.5 133°99	2°1/ 8.1 18		
12 3	7 36.59	+25 14.8	1.262	2.103	18.2	20.3	12 3	7 38.10	+15 35.7	2.103	2.897	13.6	21.5
12 13	7 33.17	+25 35.8	1.188	2.095	13.9	20.0	12 13	7 32.67	+15 34.9	2.027	2.905	10.5	21.3
12 23	7 26.20	+26 0.4	1.134	2.088	8.9	19.7	12 23	7 25.08	+15 42.0	1.974	2.914	6.9	21.1
1 2	7 16.54	+26 23.4	1.103	2.082	3.6	19.3	1 2	7 16.00	+15 56.0	1.948	2.922	3.3	20.9
1 12	7 5.78	+26 39.7	1.098	2.077	3.5	19.3	1 12	7 6.39	+16 15.1	1.953	2.930	2.7	20.9
1 22	6 55.75	+26 46.0	1.118	2.073	8.9	19.6	1 22	6 57.27	+16 37.3	1.987	2.937	6.1	21.1
2 1	6 48.13	+26 42.3	1.162	2.070	14.1	19.9	2 1	6 49.60	+17 0.8	2.049	2.944	9.6	21.3
2 11	6 44.06	+26 30.5	1.225	2.069	18.5	20.2	2 11	6 44.07	+17 24.0	2.136	2.951	12.7	21.5
<b>60520</b>	2000 <i>ET</i> <sub>32</sub>		1 7.4 56°05	5°4/ 6.1 18			<b>74569</b>	1999 <i>NR</i> <sub>7</sub>		1 7.5 86°98	1°2/ 7.7 18		
12 3	7 41.31	+36 37.1	2.003	2.807	13.8	18.6	12 3	7 43.94	+18 53.4	1.346	2.164	18.6	18.6
12 13	7 35.56	+37 18.3	1.937	2.816	10.9	18.5	12 13	7 38.00	+18 56.5	1.290	2.183	14.1	18.4
12 23	7 27.08	+37 52.3	1.895	2.826	7.9	18.3	12 23	7 28.80	+19 8.2	1.254	2.202	9.0	18.1
1 2	7 16.71	+38 13.2	1.879	2.836	5.7	18.2	1 2	7 17.37	+19 25.4	1.243	2.221	3.5	17.8
1 12	7 5.73	+38 16.8	1.892	2.845	5.9	18.2	1 12	7 5.31	+19 44.8	1.260	2.240	2.7	17.8
1 22	6 55.52	+38 2.2	1.932	2.855	8.3	18.4	1 22	6 54.29	+20 3.2	1.304	2.258	8.0	18.2
2 1	6 47.28	+37 31.7	1.999	2.866	11.2	18.6	2 1	6 45.71	+20 19.4	1.373	2.276	12.8	18.5
2 11	6 41.81	+36 49.8	2.088	2.876	13.9	18.8	2 11	6 40.45	+20 32.8	1.463	2.294	16.7	18.8
<b>377064</b>	2002 <i>TC</i> <sub>317</sub>		1 7.4 77°95	0°9/ 7.3 18			<b>122538</b>	2000 <i>QM</i> <sub>220</sub>		1 7.5 86°23	3°3/ 8.4 18		
12 3	7 39.12	+25 36.4	2.151	2.956	12.9	21.0	12 3	7 39.71	+13 7.8	1.537	2.341	17.3	20.2
12 13	7 33.40	+25 31.9	2.079	2.968	9.8	20.8	12 13	7 34.51	+13 12.9	1.472	2.355	13.4	20.0
12 23	7 25.48	+25 27.2	2.032	2.979	6.2	20.6	12 23	7 26.52	+13 31.7	1.428	2.368	9.0	19.8
1 2	7 16.09	+25 19.8	2.013	2.991	2.3	20.4	1 2	7 16.56	+14 3.1	1.409	2.381	4.7	19.5
1 12	7 6.26	+25 8.2	2.023	3.002	2.1	20.4	1 12	7 5.94	+14 43.8	1.419	2.394	3.8	19.5
1 22	6 57.07	+24 51.9	2.063	3.014	5.9	20.6	1 22	6 56.04	+15 29.9	1.455	2.407	7.6	19.8
2 1	6 49.45	+24 31.7	2.132	3.025	9.4	20.9	2 1	6 48.10	+16 17.5	1.518	2.420	11.9	20.0
2 11	6 44.09	+24 8.9	2.225	3.036	12.4	21.1	2 11	6 42.99	+17 3.6	1.604	2.433	15.6	20.3
<b>204883</b>	2007 <i>TR</i> <sub>128</sub>		1 7.4 220°71	0°3/ 7.3 18			<b>280718</b>	2005 <i>GQ</i> <sub>124</sub>		1 7.5 329°95	0°5/ 7.2 18		
12 3	7 35.79	+22 37.5	2.647	3.445	11.0	21.4	12 3	7 35.73	+21 4.4	2.100	2.908	13.1	20.0
12 13	7 30.69	+22 51.6	2.555	3.440	8.3	21.2	12 13	7 31.14	+21 47.8	2.015	2.905	10.0	19.8
12 23	7 23.75	+23 8.2	2.487	3.434	5.3	21.0	12 23	7 24.29	+22 37.7	1.954	2.903	6.3	19.6
1 2	7 15.50	+23 25.4	2.449	3.427	1.9	20.7	1 2	7 15.78	+23 30.4	1.921	2.900	2.3	19.3
1 12	7 6.72	+23 40.9	2.441	3.421	1.7	20.7	1 12	7 6.55	+24 22.0	1.918	2.898	2.1	19.3
1 22	6 58.25	+23 53.3	2.464	3.414	5.1	20.9	1 22	6 57.69	+25 8.7	1.944	2.895	6.1	19.5
2 1	6 50.90	+24 1.8	2.516	3.407	8.2	21.1	2 1	6 50.21	+25 48.4	1.999	2.893	9.8	19.8
2 11	6 45.33	+24 6.5	2.593	3.399	11.0	21.3	2 11	6 44.93	+26 20.4	2.077	2.891	13.1	20.0
<b>404281</b>	2013 <i>EQ</i> <sub>91</sub>		1 7.4 331°09	6°3/ 8.9 18			<b>304040</b>	2006 <i>DH</i> <sub>134</sub>		1 7.5 239°37	1°9/ 6.9 18		
12 3	7 34.70	+ 9 2.7	1.330	2.143	19.0	20.5	12 3	7 41.48	+25 29.0	1.682	2.497	15.5	21.6
12 13	7 31.35	+ 8 34.2	1.249	2.131	15.4	20.3	12 13	7 36.16	+25 58.9	1.596	2.490	11.9	21.3
12 23	7 24.90	+ 8 23.7	1.187	2.121	11.2	20.0	12 23	7 27.78	+26 31.8	1.534	2.482	7.6	21.0
1 2	7 16.08	+ 8 33.7	1.148	2.111	7.4	19.8	1 2	7 17.11	+27 2.6	1.497	2.475	3.2	20.8
1 12	7 6.18	+ 9 4.2	1.134	2.102	6.5	19.7	1 12	7 5.44	+27 26.6	1.489	2.466	3.2	20.7
1 22	6 56.76	+ 9 52.0	1.145	2.093	9.7	19.8	1 22	6 54.28	+27 40.7	1.509	2.458	7.7	21.0
2 1	6 49.31	+10 51.8	1.179	2.086	14.1	20.1	2 1	6 45.08	+27 44.6	1.555	2.449	12.2	21.2
2 11	6 44.94	+11 57.4	1.234	2.079	18.3	20.3	2 11	6 38.88	+27 39.9	1.624	2.441	16.0	21.5
<b>33069</b>	1997 <i>WQ</i> <sub>2</sub>		1 7.4 59°41	1°8/ 6.9 18			<b>18005</b>	1999 <i>JD</i> <sub>91</sub>		1 7.5 44°40	8°3/ 10.5 18		
12 3	7 40.44	+23 19.7	1.417	2.243	17.4	18.2	12 3	7 38.03	+ 3 11.0	1.178	1.976	21.9	17.1
12 13	7 35.58	+24 11.4	1.352	2.252	13.2	18.0	12 13	7 33.56	+ 2 54.8	1.135	2.002	17.8	16.9
12 23	7 27.45	+25 9.7	1.309	2.261	8.3	17.7	12 23	7 25.98	+ 3 6.8	1.110	2.029	13.4	16.7
1 2	7 16.94	+26 8.1	1.292	2.270	3.3	17.5	1 2	7 16.35	+ 3 48.2	1.106	2.056	9.6	16.6
1 12	7 5.54	+27 0.0	1.301	2.279	3.3	17.5	1 12	7 6.20	+ 4 56.0	1.127	2.085	8.3	16.6
1 22	6 54.93	+27 40.6	1.338	2.289	8.3	17.8	1 22	6 57.10	+ 6 22.7	1.172	2.114	10.5	16.8
2 1	6 46.60	+28 8.5	1.400	2.299	12.9	18.1	2 1	6 50.36	+ 7 59.2	1.241	2.143	14.0	17.1
2 11	6 41.55	+28 24.7	1.483	2.308	16.8	18.4	2 11	6 46.76	+ 9 36.7	1.332	2.172	17.5	17.4
<b>133245</b>	2003 <i>RL</i> <sub>2</sub>		1 7.4 65°94	3°2/ 8.3 17			<b>99361</b>	2001 <i>XO</i> <sub>194</sub>		1 7.5 89°56	1°1/ 7.8 18		
12 3	7 40.02	+13 58.0	1.462	2.271	17.8	19.5	12 3	7 40.79	+17 21.0	1.541	2.352	16.9	19.9
12 13	7 34.73	+13 56.3	1.406	2.292	13.7	19.3	12 13	7 35.40	+17 49.4	1.477	2.367	12.9	19.7
12 23	7 26.59	+14 7.5	1.371	2.313	9.1	19.1	12 23	7 27.11	+18 28.6	1.435	2.382	8.3	19.4
1 2	7 16.54	+14 30.3	1.362	2.334	4.6	18.9	1 2	7 16.79	+19 14.9	1.419	2.396	3.2	19.2
1 12	7 5.94	+15 1.9	1.379	2.355	3.7	18.9	1 12	7 5.77	+20 3.6	1.431	2.411	2.5	19.2
1 22	6 56.22	+15 38.6	1.424	2.377	7.7	19.2	1 22	6 55.50	+20 50.5	1.471	2.425	7.3	19.5
2 1	6 48.59	+16 16.9	1.495	2.398	11.9	19.5	2 1	6 47.28	+21 32.4	1.537	2.439	11.8	19.8
2 11	6 43.86	+16 54.3	1.588	2.419	15.6	19.8	2 11	6 41.97	+22 8.2	1.627	2.453	15.5	20.1
<b>379868</b>	2012 <i>HV</i> <sub>22</sub>		1 7.4 11°61	21°2/ 12.3 18			<b>468518</b>	2005 <i>TM</i> <sub>122</sub>		1 7.5 103°06	3°6/ 8.8 18		
12 3	7 36.36	-13 47.3	1.086	1.820									

EPHEMERIDES

1 7.5

1 7.5

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>72062</b>	2000 YR <sub>17</sub>		1 7.5 237°71	1.3/ 7.7	18		<b>357074</b>	2001 RA <sub>43</sub>		1 7.5 142°54	4.3/ 8.8	18	
12 3	7 40.36	+19 30.7	1.717	2.526	15.5	19.4	12 3	7 38.42	+8 59.2	2.364	3.130	13.1	21.6
12 13	7 35.02	+19 17.5	1.632	2.521	12.0	19.2	12 13	7 32.61	+8 35.0	2.287	3.143	10.4	21.4
12 23	7 26.90	+19 9.5	1.569	2.516	7.7	18.9	12 23	7 24.92	+8 21.4	2.235	3.155	7.5	21.3
1 2	7 16.75	+19 5.4	1.532	2.510	3.1	18.6	1 2	7 15.95	+8 19.0	2.210	3.166	5.0	21.1
1 12	7 5.78	+19 3.4	1.524	2.504	2.5	18.6	1 12	7 6.55	+8 27.5	2.215	3.176	4.5	21.1
1 22	6 55.34	+19 2.3	1.545	2.498	7.1	18.9	1 22	6 57.60	+8 45.4	2.250	3.186	6.5	21.3
2 1	6 46.71	+19 1.5	1.592	2.492	11.6	19.1	2 1	6 49.92	+9 10.9	2.313	3.195	9.3	21.5
2 11	6 40.82	+19 0.8	1.662	2.485	15.4	19.3	2 11	6 44.13	+9 41.2	2.402	3.204	11.9	21.7
<b>113160</b>	2002 RC <sub>98</sub>		1 7.5 79°42	4.3/ 6.2	18		<b>72946</b>	2002 CY <sub>16</sub>		1 7.5 237°09	3.1/ 6.8	18	
12 3	7 39.81	+34 15.6	2.210	3.013	12.7	19.8	12 3	7 44.07	+29 44.9	1.848	2.655	14.7	20.0
12 13	7 34.19	+34 54.5	2.139	3.020	9.9	19.6	12 13	7 37.99	+30 7.4	1.756	2.644	11.4	19.7
12 23	7 26.14	+35 28.5	2.092	3.028	6.9	19.4	12 23	7 28.90	+30 28.1	1.687	2.631	7.5	19.5
1 2	7 16.41	+35 52.7	2.073	3.035	4.6	19.3	1 2	7 17.53	+30 41.6	1.645	2.618	3.8	19.2
1 12	7 6.10	+36 3.1	2.083	3.043	4.9	19.3	1 12	7 5.19	+30 43.6	1.632	2.605	4.0	19.2
1 22	6 56.39	+35 58.7	2.121	3.050	7.3	19.5	1 22	6 53.36	+30 32.2	1.648	2.591	7.8	19.4
2 1	6 48.37	+35 40.6	2.187	3.058	10.2	19.7	2 1	6 43.46	+30 8.8	1.691	2.577	11.9	19.6
2 11	6 42.79	+35 12.1	2.276	3.065	12.9	19.9	2 11	6 36.50	+29 36.7	1.757	2.562	15.5	19.8
<b>34415</b>	2000 RV <sub>103</sub>		1 7.5 7°11	1.1/ 7.7	18		<b>304912</b>	2007 RS <sub>287</sub>		1 7.5 12°62	3.3/ 8.4	18	
12 3	7 38.25	+20 10.5	1.815	2.626	14.8	18.2	12 3	7 36.50	+13 50.0	1.347	2.168	18.4	20.5
12 13	7 33.19	+19 53.0	1.736	2.626	11.3	18.0	12 13	7 32.60	+13 52.0	1.277	2.170	14.3	20.2
12 23	7 25.61	+19 39.6	1.679	2.626	7.2	17.8	12 23	7 25.61	+14 8.9	1.227	2.172	9.7	20.0
1 2	7 16.24	+19 29.1	1.649	2.627	2.9	17.5	1 2	7 16.35	+14 39.8	1.201	2.175	4.9	19.7
1 12	7 6.23	+19 20.3	1.648	2.627	2.3	17.4	1 12	7 6.20	+15 21.5	1.201	2.178	3.9	19.6
1 22	6 56.80	+19 12.4	1.675	2.628	6.7	17.7	1 22	6 56.72	+16 9.5	1.227	2.182	8.3	19.9
2 1	6 49.07	+19 5.1	1.729	2.629	10.8	18.0	2 1	6 49.32	+16 59.4	1.277	2.187	13.0	20.2
2 11	6 43.85	+18 58.4	1.807	2.631	14.3	18.2	2 11	6 45.01	+17 47.5	1.349	2.192	17.2	20.5
<b>381890</b>	2010 AT <sub>107</sub>		1 7.5 98°19	7.1/ 4.9	18		<b>393641</b>	2004 PG <sub>18</sub>		1 7.5 142°72	1.1/ 7.8	18	
12 3	7 43.11	+44 22.8	2.483	3.259	12.3	20.5	12 3	7 43.02	+18 34.4	2.053	2.844	14.0	22.7
12 13	7 36.80	+45 24.9	2.421	3.270	10.2	20.3	12 13	7 36.41	+18 40.3	1.980	2.859	10.7	22.5
12 23	7 27.84	+46 16.5	2.382	3.280	8.3	20.2	12 23	7 27.45	+18 52.1	1.930	2.873	6.8	22.3
1 2	7 17.03	+46 51.1	2.370	3.290	7.2	20.2	1 2	7 16.89	+19 7.6	1.909	2.886	2.7	22.1
1 12	7 5.59	+47 4.5	2.387	3.300	7.4	20.2	1 12	7 5.80	+19 24.5	1.919	2.898	2.1	22.1
1 22	6 54.82	+46 55.9	2.430	3.310	8.9	20.3	1 22	6 55.32	+19 40.9	1.959	2.910	6.1	22.4
2 1	6 45.90	+46 27.6	2.499	3.320	10.9	20.5	2 1	6 46.46	+19 55.6	2.028	2.920	9.9	22.6
2 11	6 39.64	+45 44.3	2.591	3.329	12.8	20.6	2 11	6 39.99	+20 8.2	2.122	2.929	13.1	22.8
<b>152280</b>	2005 TE <sub>1</sub>		1 7.5 18°35	3.3/ 7.2	18		<b>24735</b>	1992 EU <sub>6</sub>		1 7.5 233°29	1.6/ 7.9	18	
12 3	7 43.63	+32 0.6	1.680	2.493	15.6	19.3	12 3	7 39.41	+16 16.8	1.645	2.453	16.2	19.2
12 13	7 37.60	+31 52.7	1.605	2.495	12.1	19.0	12 13	7 34.49	+16 38.9	1.560	2.448	12.5	19.0
12 23	7 28.49	+31 38.2	1.553	2.497	8.0	18.8	12 23	7 26.70	+17 12.6	1.497	2.442	8.2	18.7
1 2	7 17.28	+31 12.8	1.527	2.500	4.2	18.6	1 2	7 16.76	+17 55.7	1.460	2.436	3.5	18.4
1 12	7 5.43	+30 34.2	1.529	2.503	4.1	18.6	1 12	7 5.85	+18 44.1	1.451	2.430	2.7	18.3
1 22	6 54.49	+29 43.4	1.560	2.506	7.9	18.8	1 22	6 55.37	+19 33.7	1.470	2.424	7.3	18.6
2 1	6 45.80	+28 43.9	1.617	2.510	11.9	19.1	2 1	6 46.69	+20 20.7	1.516	2.417	11.9	18.8
2 11	6 40.21	+27 40.6	1.698	2.513	15.4	19.3	2 11	6 40.79	+21 3.2	1.585	2.410	15.9	19.1
<b>92699</b>	2000 QD <sub>80</sub>		1 7.5 109°67	4.2/ 8.6	18		<b>421803</b>	2014 QY <sub>35</sub>		1 7.5 238°88	3.1/ 8.2	18	
12 3	7 39.94	+11 11.9	1.677	2.470	16.6	19.7	12 3	7 40.01	+14 4.4	1.869	2.662	15.1	22.5
12 13	7 34.46	+11 0.2	1.609	2.483	13.0	19.5	12 13	7 34.65	+13 55.1	1.772	2.649	11.8	22.3
12 23	7 26.39	+11 2.1	1.562	2.495	9.1	19.3	12 23	7 26.68	+13 55.7	1.697	2.635	8.1	22.0
1 2	7 16.52	+11 17.5	1.541	2.508	5.3	19.1	1 2	7 16.73	+14 5.9	1.649	2.620	4.2	21.8
1 12	7 6.03	+11 44.7	1.549	2.519	4.5	19.1	1 12	7 5.86	+14 24.3	1.630	2.605	3.6	21.7
1 22	6 56.21	+12 20.8	1.584	2.531	7.6	19.3	1 22	6 55.30	+14 48.9	1.640	2.589	7.2	21.9
2 1	6 48.19	+13 2.3	1.646	2.542	11.5	19.5	2 1	6 46.27	+15 17.4	1.677	2.572	11.4	22.1
2 11	6 42.78	+13 45.7	1.731	2.553	14.9	19.8	2 11	6 39.72	+15 47.5	1.738	2.555	15.1	22.3
<b>49869</b>	1999 XG <sub>115</sub>		1 7.5 96°20	2.5/ 7.9	18		<b>134400</b>	1997 LK <sub>17</sub>		1 7.5 144°09	2.2/ 8.2	18	
12 3	7 43.67	+17 26.3	1.418	2.230	18.1	19.4	12 3	7 38.98	+15 9.8	2.030	2.823	14.1	20.4
12 13	7 37.67	+17 3.7	1.356	2.245	13.9	19.2	12 13	7 33.44	+15 12.1	1.953	2.831	10.9	20.2
12 23	7 28.55	+16 49.3	1.315	2.260	9.1	19.0	12 23	7 25.65	+15 23.2	1.899	2.839	7.2	20.0
1 2	7 17.30	+16 42.3	1.300	2.275	4.1	18.7	1 2	7 16.28	+15 41.9	1.873	2.846	3.5	19.8
1 12	7 5.43	+16 41.1	1.312	2.290	3.4	18.7	1 12	7 6.33	+16 6.1	1.876	2.853	2.8	19.7
1 22	6 54.51	+16 44.2	1.351	2.304	8.0	19.0	1 22	6 56.88	+16 33.5	1.909	2.859	6.3	20.0
2 1	6 45.88	+16 50.2	1.417	2.318	12.6	19.3	2 1	6 48.93	+17 2.1	1.970	2.865	9.9	20.2
2 11	6 40.42	+16 58.1	1.504	2.332	16.5	19.6	2 11	6 43.22	+17 30.1	2.055	2.870	13.1	20.4
<b>458788</b>	2011 SE <sub>135</sub>		1 7.5 121°14	0.2/ 7.5	18		<b>500904</b>	2013 ND		1 7.5 200°63	3.9/ 8.1	18	
12 3	7 42.65	+20 45.3	1.830	2.632	15.0	22.0	12 3	7 39.84	+13 17.6	2.035	2.821	14.3	20.9
12 13	7 36.38	+20 57.3	1.762	2.649	11.4	21.8	12 13	7 34.11	+12 31.2	1.948	2.819	11.2	20.7
12 23	7 27.53	+21 14.3	1.718	2.665	7.2	21.6	12 23	7 26.09	+11 51.9	1.885	2.817	7.8	20.5
1 2	7 16.92	+21 33.3	1.701	2.680	2.6	21.4	1 2	7 16.45	+11 21.1	1.848	2.814	4.7	20.3
1 12	7 5.74	+21 51.3	1.714	2.695	2.1	21.4	1 12	7 6.19	+10 59.3	1.842	2.810	4.3	20.3
1 22	6 55.28	+22 6.3	1.757	2.709	6.6	21.7	1 22	6 56.39	+10 46.7	1.864	2.807	7.1	20.4
2 1	6 46.67	+22 17.3	1.827	2.722	10.6	22.0	2 1	6 48.08	+10 42.4	1.915	2.803	10.6	20.6
2 11	6 40.69	+22 24.6	1.921	2.735	14.0	22.2	2 11	6 42.01	+10 44.9	1.989	2.799	13.7	20.8
<b>117519</b>	2005 CM <sub>51</sub>		1 7.5 302°72	0.2/ 7.5	18		<b>11424</b>	1999 LZ <sub>24</sub>		1 7.5 47°30	6.4/ 5.4	18	
12 3	7 38.02	+20 58.9	1.516	2.339	16.6	20.4	12 3	7 42.46	+31 17.8	1.312	2.143	18.2	15.5

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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>153384</b>	2001 QW <sub>37</sub>		1 7.5 148°27'	1°2/ 7.9 18			<b>612</b>	Veronika		1 7.5 122°50'	7°1/10.7 18		
12 3	7 42.29	+17 16.1	1.827	2.624	15.2	20.8	12 3	7 34.08	- 4 36.0	2.969	3.667	12.1	16.7
12 13	7 36.22	+17 37.0	1.752	2.634	11.7	20.6	12 13	7 29.02	- 5 16.8	2.899	3.683	10.4	16.6
12 23	7 27.53	+18 6.8	1.700	2.644	7.5	20.4	12 23	7 22.54	- 5 42.6	2.851	3.699	8.8	16.5
1 2	7 16.99	+18 42.7	1.676	2.653	3.1	20.1	1 2	7 15.12	- 5 51.1	2.829	3.715	7.5	16.5
1 12	7 5.76	+19 21.3	1.681	2.661	2.3	20.1	1 12	7 7.38	- 5 41.7	2.834	3.730	7.1	16.4
1 22	6 55.11	+19 59.1	1.716	2.668	6.7	20.4	1 22	6 59.98	- 5 15.6	2.867	3.745	7.8	16.5
2 1	6 46.22	+20 33.9	1.779	2.675	10.8	20.7	2 1	6 53.52	- 4 35.2	2.927	3.760	9.1	16.6
2 11	6 39.93	+21 4.4	1.866	2.680	14.3	20.9	2 11	6 48.49	- 3 44.2	3.012	3.773	10.7	16.8
<b>311575</b>	2006 GX <sub>26</sub>		1 7.5 160°08'	2°1/ 6.8 18			<b>278472</b>	2007 TX <sub>251</sub>		1 7.5 160°37'	2°8/ 8.3 18		
12 3	7 42.61	+26 35.7	2.038	2.841	13.7	22.1	12 3	7 35.47	+13 0.0	2.731	3.509	11.2	20.7
12 13	7 36.40	+27 13.2	1.961	2.848	10.4	21.9	12 13	7 30.26	+12 41.2	2.646	3.513	8.8	20.5
12 23	7 27.63	+27 51.7	1.908	2.854	6.7	21.7	12 23	7 23.42	+12 29.3	2.587	3.518	6.0	20.4
1 2	7 17.03	+28 26.7	1.883	2.859	3.0	21.5	1 2	7 15.46	+12 24.4	2.555	3.522	3.5	20.2
1 12	7 5.73	+28 53.8	1.888	2.864	3.1	21.5	1 12	7 7.10	+12 25.8	2.555	3.525	3.0	20.2
1 22	6 54.98	+29 10.8	1.923	2.868	6.8	21.7	1 22	6 59.08	+12 32.9	2.585	3.528	5.3	20.3
2 1	6 45.95	+29 17.4	1.986	2.871	10.4	21.9	2 1	6 52.11	+12 44.3	2.644	3.531	8.0	20.5
2 11	6 39.46	+29 15.4	2.074	2.874	13.6	22.2	2 11	6 46.76	+12 58.8	2.729	3.534	10.5	20.7
<b>414003</b>	2007 FC <sub>49</sub>		1 7.5 350°00'	5°1/ 6.1 18			<b>316888</b>	2000 SG <sub>48</sub>		1 7.5 42°03'	5°9/ 8.7 18		
12 3	7 38.37	+32 27.2	1.570	2.397	15.9	20.6	12 3	7 36.91	+ 9 1.1	1.712	2.503	16.4	19.5
12 13	7 34.15	+33 18.9	1.496	2.391	12.4	20.4	12 13	7 32.15	+ 8 9.7	1.642	2.511	13.1	19.3
12 23	7 26.68	+34 8.0	1.443	2.387	8.6	20.2	12 23	7 24.95	+ 7 31.3	1.595	2.519	9.6	19.2
1 2	7 16.78	+34 46.9	1.416	2.383	5.5	20.0	1 2	7 16.07	+ 7 8.3	1.572	2.527	6.7	19.0
1 12	7 5.91	+35 9.6	1.415	2.380	5.9	20.0	1 12	7 6.61	+ 7 1.6	1.576	2.536	6.1	19.0
1 22	6 55.70	+35 13.0	1.440	2.378	9.3	20.2	1 22	6 57.76	+ 7 10.0	1.608	2.546	8.4	19.1
2 1	6 47.69	+34 58.5	1.490	2.376	13.2	20.4	2 1	6 50.58	+ 7 31.0	1.665	2.555	11.8	19.4
2 11	6 42.92	+34 30.2	1.562	2.375	16.7	20.6	2 11	6 45.85	+ 8 0.6	1.745	2.565	14.9	19.6
<b>257355</b>	2009 KT <sub>22</sub>		1 7.5 130°56'	3°6/ 8.6 18			<b>124883</b>	2001 TX <sub>39</sub>		1 7.5 337°33'	5°9/ 6.3 18		
12 3	7 38.97	+11 14.9	2.182	2.960	13.7	21.4	12 3	7 39.04	+32 8.8	1.196	2.038	18.9	18.8
12 13	7 33.18	+11 0.5	2.109	2.974	10.8	21.3	12 13	7 35.64	+32 58.6	1.122	2.026	14.8	18.5
12 23	7 25.36	+10 56.4	2.060	2.988	7.5	21.1	12 23	7 28.15	+33 46.0	1.068	2.016	10.3	18.2
1 2	7 16.15	+11 2.5	2.038	3.002	4.5	20.9	1 2	7 17.46	+34 21.8	1.036	2.006	6.4	18.0
1 12	7 6.49	+11 18.0	2.045	3.014	3.9	20.9	1 12	7 5.38	+34 37.5	1.029	1.997	6.8	18.0
1 22	6 57.33	+11 40.8	2.083	3.027	6.4	21.1	1 22	6 54.11	+34 29.8	1.046	1.990	11.1	18.2
2 1	6 49.57	+12 8.9	2.149	3.038	9.5	21.3	2 1	6 45.67	+34 0.7	1.085	1.983	15.8	18.4
2 11	6 43.87	+12 39.9	2.240	3.049	12.4	21.5	2 11	6 41.34	+33 16.5	1.142	1.977	20.1	18.7
<b>358049</b>	2006 HZ <sub>12</sub>		1 7.5 273°29'	1°8/ 6.9 18			<b>456940</b>	2007 YH <sub>72</sub>		1 7.5 313°02'	3°0/ 6.7 18		
12 3	7 40.15	+24 15.4	1.616	2.435	15.9	21.3	12 3	7 38.16	+27 4.8	1.521	2.349	16.3	21.0
12 13	7 35.38	+24 57.0	1.526	2.421	12.2	21.1	12 13	7 34.14	+27 47.4	1.432	2.332	12.5	20.8
12 23	7 27.48	+25 44.3	1.458	2.408	7.8	20.8	12 23	7 26.82	+28 33.3	1.365	2.315	8.2	20.5
1 2	7 17.12	+26 32.1	1.416	2.394	3.2	20.5	1 2	7 16.93	+29 16.5	1.323	2.299	3.9	20.2
1 12	7 5.59	+27 14.6	1.402	2.380	3.2	20.4	1 12	7 5.80	+29 50.7	1.307	2.283	4.2	20.2
1 22	6 54.44	+27 47.3	1.416	2.366	8.0	20.7	1 22	6 55.09	+30 11.5	1.319	2.267	8.7	20.4
2 1	6 45.22	+28 8.6	1.456	2.352	12.7	20.9	2 1	6 46.43	+30 18.2	1.355	2.252	13.4	20.6
2 11	6 39.06	+28 19.5	1.518	2.338	16.7	21.1	2 11	6 41.01	+30 12.9	1.412	2.237	17.5	20.8
<b>377176</b>	2003 UN <sub>100</sub>		1 7.5 82°98'	1°2/ 6.9 18			<b>460158</b>	2014 QF <sub>20</sub>		1 7.5 89°52'	0°4/ 7.4 18		
12 3	7 37.91	+23 17.5	2.141	2.947	13.0	20.5	12 3	7 41.91	+23 44.6	1.789	2.599	15.0	21.5
12 13	7 32.63	+24 5.4	2.074	2.963	9.8	20.3	12 13	7 35.90	+23 38.9	1.723	2.613	11.4	21.3
12 23	7 25.14	+24 57.1	2.031	2.978	6.1	20.1	12 23	7 27.27	+23 34.7	1.679	2.627	7.2	21.0
1 2	7 16.11	+25 48.5	2.016	2.994	2.4	19.9	1 2	7 16.88	+23 29.5	1.663	2.641	2.6	20.8
1 12	7 6.52	+26 35.3	2.031	3.009	2.4	19.9	1 12	7 5.98	+23 21.2	1.675	2.655	2.2	20.8
1 22	6 57.46	+27 14.6	2.076	3.024	6.0	20.2	1 22	6 55.87	+23 9.2	1.717	2.669	6.7	21.1
2 1	6 49.88	+27 45.0	2.149	3.039	9.5	20.4	2 1	6 47.67	+22 54.0	1.786	2.683	10.7	21.4
2 11	6 44.52	+28 6.9	2.247	3.054	12.4	20.6	2 11	6 42.14	+22 36.9	1.879	2.696	14.1	21.6
<b>422914</b>	2002 RJ <sub>273</sub>		1 7.5 67°62'	3°0/ 6.7 18			<b>421028</b>	2013 PS <sub>64</sub>		1 7.5 68°04'	2°3/ 8.0 18		
12 3	7 39.49	+30 30.3	2.093	2.901	13.2	21.6	12 3	7 37.44	+16 14.9	1.906	2.708	14.5	21.6
12 13	7 33.95	+30 53.0	2.023	2.910	10.1	21.4	12 13	7 32.43	+15 59.8	1.830	2.714	11.2	21.4
12 23	7 26.00	+31 12.9	1.977	2.920	6.6	21.2	12 23	7 25.08	+15 52.1	1.777	2.719	7.4	21.2
1 2	7 16.41	+31 25.8	1.958	2.930	3.6	21.0	1 2	7 16.12	+15 51.4	1.751	2.725	3.6	20.9
1 12	7 6.30	+31 28.6	1.969	2.940	3.7	21.1	1 12	7 6.58	+15 56.4	1.753	2.730	2.9	20.9
1 22	6 56.83	+31 20.2	2.009	2.950	6.8	21.3	1 22	6 57.58	+16 5.6	1.784	2.736	6.5	21.1
2 1	6 49.05	+31 1.9	2.076	2.961	10.1	21.5	2 1	6 50.15	+16 17.6	1.843	2.742	10.3	21.4
2 11	6 43.70	+30 36.0	2.168	2.971	13.0	21.7	2 11	6 45.04	+16 31.0	1.925	2.747	13.6	21.6
<b>495508</b>	2014 UW <sub>187</sub>		1 7.5 94°39'	6°1/ 8.9 18			<b>5563</b>	1991 VZ <sub>1</sub>		1 7.5 349°85'	3°9/ 6.1 18		
12 3	7 37.40	+ 7 11.3	1.926	2.701	15.3	21.2	12 3	7 38.58	+29 5.5	1.776	2.595	14.7	16.1
12 13	7 32.27	+ 6 21.6	1.852	2.709	12.4	21.0	12 13	7 33.93	+30 11.6	1.699	2.593	11.3	15.9
12 23	7 24.92	+ 5 45.0	1.801	2.716	9.3	20.9	12 23	7 26.39	+31 19.1	1.646	2.591	7.5	15.7
1 2	7 16.03	+ 5 23.8	1.775	2.724	6.7	20.7	1 2	7 16.69	+32 21.2	1.619	2.590	4.3	15.5
1 12	7 6.60	+ 5 18.9	1.777	2.731	6.2	20.7	1 12	7 6.06	+33 11.6	1.620	2.588	4.8	15.5
1 22	6 57.69	+ 5 29.3	1.807	2.738	8.2	20.8	1 22	6 55.93	+33 46.1	1.649	2.588	8.2	15.7
2 1	6 50.28	+ 5 52.4	1.864	2.745	11.1	21.0	2 1	6 47.66	+34 4.2	1.704	2.587	12.0	15.9
2 11	6 45.08	+ 6 24.6	1.943	2.753	14.0	21.2	2 11	6 42.23	+34 8.1	1.782	2.587	15.3	16.2
<b>276692</b>	2003 YC <sub>113</sub>		1 7.5 71°96'	3°4/ 6.1 18			<b>503604</b>	2016 GQ <sub>95</sub>		1 7.5 172°38'	3°6/ 8.9 17		
12 3	7 40.28	+29 8.8	2.118	2.924	13.1	19.8	12 3	7 34.33	+ 9 17.0	2.613	3.384	11.9	

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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>456898</b>	2007 VG <sub>184</sub>		1 7.5 120°36	3°7/ 9.2 18			<b>282820</b>	2006 SH <sub>59</sub>		1 7.5 163°85	8°4/11.2 18		
12 3	7 42.62	+ 7 12.7	2.836	3.576	11.8	23.1	12 3	7 33.36	-10 7.9	3.103	3.764	12.3	22.0
12 13	7 35.33	+ 7 17.1	2.769	3.608	9.3	23.0	12 13	7 28.53	-10 59.8	3.024	3.768	11.0	21.9
12 23	7 26.44	+ 7 32.1	2.728	3.639	6.7	22.9	12 23	7 22.29	-11 35.3	2.967	3.773	9.7	21.8
1 2	7 16.52	+ 7 57.2	2.716	3.669	4.4	22.8	1 2	7 15.08	-11 51.5	2.933	3.777	8.7	21.7
1 12	7 6.31	+ 8 31.2	2.737	3.697	3.8	22.8	1 12	7 7.49	-11 47.1	2.925	3.780	8.4	21.7
1 22	6 56.58	+ 9 11.8	2.791	3.724	5.5	22.9	1 22	7 0.16	-11 22.8	2.943	3.783	8.8	21.7
2 1	6 48.03	+ 9 56.6	2.876	3.750	7.9	23.1	2 1	6 53.71	-10 40.7	2.987	3.786	9.8	21.8
2 11	6 41.19	+10 43.1	2.988	3.774	10.2	23.3	2 11	6 48.62	- 9 44.7	3.054	3.788	11.1	21.9
<b>196884</b>	2003 SE <sub>312</sub>		1 7.5 332°09	0°2/ 7.5 18			<b>459030</b>	2011 YH <sub>46</sub>		1 7.5 38°61	3°7/ 6.6 18		
12 3	7 36.09	+20 29.0	1.960	2.770	13.8	19.8	12 3	7 40.63	+28 7.1	1.278	2.113	18.3	20.5
12 13	7 31.55	+20 46.9	1.875	2.766	10.5	19.5	12 13	7 35.96	+28 56.0	1.228	2.131	13.9	20.3
12 23	7 24.63	+21 10.6	1.815	2.763	6.7	19.3	12 23	7 27.77	+29 44.9	1.200	2.150	9.0	20.1
1 2	7 16.00	+21 37.6	1.781	2.760	2.5	19.0	1 2	7 17.16	+30 26.4	1.195	2.170	4.5	19.9
1 12	7 6.66	+22 4.8	1.776	2.756	2.0	19.0	1 12	7 5.85	+30 54.1	1.217	2.191	4.8	19.9
1 22	6 57.75	+22 29.7	1.800	2.753	6.3	19.3	1 22	6 55.67	+31 5.4	1.264	2.212	9.1	20.2
2 1	6 50.34	+22 50.7	1.851	2.751	10.2	19.5	2 1	6 48.12	+31 1.5	1.335	2.234	13.5	20.6
2 11	6 45.25	+23 7.3	1.926	2.748	13.6	19.7	2 11	6 44.08	+30 46.3	1.427	2.256	17.2	20.8
<b>43824</b>	1992 SY <sub>24</sub>		1 7.5 86°34	4°5/ 6.4 18			<b>49439</b>	1998 YC <sub>5</sub>		1 7.5 39°81	1°4/ 8.1 18 R		
12 3	7 41.31	+35 2.9	2.182	2.982	12.9	18.1	12 3	7 35.24	+15 53.5	1.995	2.798	13.9	18.7
12 13	7 35.34	+35 35.7	2.114	2.993	10.1	18.0	12 13	7 30.75	+16 24.3	1.920	2.805	10.7	18.5
12 23	7 26.89	+36 2.6	2.070	3.004	7.1	17.8	12 23	7 24.05	+17 5.1	1.869	2.813	6.9	18.3
1 2	7 16.76	+36 18.6	2.053	3.014	4.8	17.7	1 2	7 15.78	+17 53.5	1.844	2.820	3.0	18.1
1 12	7 6.09	+36 20.2	2.066	3.025	5.0	17.7	1 12	7 6.91	+18 45.9	1.849	2.828	2.2	18.0
1 22	6 56.11	+36 6.5	2.107	3.035	7.4	17.9	1 22	6 58.49	+19 38.7	1.883	2.836	6.0	18.3
2 1	6 47.90	+35 39.4	2.176	3.046	10.3	18.1	2 1	6 51.51	+20 28.9	1.944	2.845	9.8	18.6
2 11	6 42.21	+35 2.6	2.268	3.056	12.9	18.3	2 11	6 46.70	+21 14.3	2.031	2.853	13.0	18.8
<b>364277</b>	2006 TL <sub>53</sub>		1 7.5 176°05	4°9/ 5.7 18			<b>133866</b>	2004 BW <sub>80</sub>		1 7.5 93°73	4°4/ 9.7 18		
12 3	7 43.21	+34 11.2	2.137	2.936	13.2	21.2	12 3	7 35.24	+ 5 36.4	2.419	3.178	13.0	19.9
12 13	7 37.08	+35 16.7	2.060	2.938	10.4	21.0	12 13	7 30.24	+ 5 51.2	2.347	3.195	10.5	19.7
12 23	7 28.21	+36 18.8	2.007	2.940	7.4	20.8	12 23	7 23.47	+ 6 20.3	2.298	3.211	7.7	19.6
1 2	7 17.31	+37 10.8	1.982	2.941	5.2	20.7	1 2	7 15.52	+ 7 3.4	2.276	3.227	5.2	19.5
1 12	7 5.58	+37 47.0	1.987	2.942	5.6	20.7	1 12	7 7.15	+ 7 58.5	2.283	3.243	4.5	19.4
1 22	6 54.36	+38 4.9	2.020	2.942	8.1	20.8	1 22	6 59.18	+ 9 2.4	2.321	3.259	6.2	19.6
2 1	6 44.89	+38 5.1	2.081	2.941	11.1	21.0	2 1	6 52.38	+10 11.4	2.388	3.275	8.8	19.8
2 11	6 38.12	+37 51.1	2.164	2.940	13.9	21.2	2 11	6 47.33	+11 21.7	2.481	3.290	11.3	20.0
<b>85513</b>	1997 UE <sub>11</sub>		1 7.5 85°71	1°1/ 7.7 18			<b>278056</b>	2006 XP <sub>26</sub>		1 7.5 40°22	1°1/ 7.7 17		
12 3	7 43.55	+18 52.8	1.542	2.351	17.0	20.0	12 3	7 39.99	+18 46.8	1.134	1.970	20.1	20.6
12 13	7 37.32	+18 59.5	1.487	2.376	12.9	19.8	12 13	7 35.73	+18 58.0	1.075	1.979	15.4	20.4
12 23	7 28.23	+19 13.7	1.454	2.401	8.2	19.6	12 23	7 27.80	+19 20.3	1.036	1.988	9.9	20.1
1 2	7 17.24	+19 32.6	1.447	2.425	3.2	19.3	1 2	7 17.24	+19 50.5	1.020	1.998	3.8	19.8
1 12	7 5.75	+19 52.9	1.468	2.448	2.5	19.3	1 12	7 5.77	+20 23.5	1.028	2.009	2.9	19.8
1 22	6 55.21	+20 12.1	1.518	2.472	7.2	19.7	1 22	6 55.29	+20 54.9	1.062	2.020	8.8	20.2
2 1	6 46.84	+20 28.7	1.595	2.495	11.5	20.0	2 1	6 47.47	+21 22.2	1.120	2.032	14.2	20.5
2 11	6 41.42	+20 42.5	1.694	2.517	15.1	20.3	2 11	6 43.30	+21 44.3	1.197	2.044	18.6	20.8
<b>402761</b>	2007 AL <sub>31</sub>		1 7.5 35°82	9°1/11.4 18			<b>253206</b>	2002 XL <sub>80</sub>		1 7.5 3°49	1°5/ 7.4 18		
12 3	7 34.80	- 1 17.2	1.533	2.297	19.1	20.4	12 3	7 42.35	+28 10.0	1.497	2.319	16.8	19.5
12 13	7 30.78	- 1 33.9	1.472	2.310	16.1	20.2	12 13	7 36.90	+27 41.1	1.422	2.319	12.8	19.2
12 23	7 24.19	- 1 23.9	1.429	2.324	12.9	20.1	12 23	7 28.24	+27 7.8	1.369	2.319	8.2	19.0
1 2	7 15.83	- 0 44.6	1.408	2.338	10.2	19.9	1 2	7 17.34	+26 27.2	1.341	2.319	3.3	18.7
1 12	7 6.86	+ 0 23.0	1.413	2.353	9.1	19.9	1 12	7 5.71	+25 38.4	1.341	2.321	2.9	18.7
1 22	6 58.51	+ 1 53.5	1.442	2.368	10.4	20.0	1 22	6 55.01	+24 42.9	1.369	2.323	7.8	19.0
2 1	6 51.93	+ 3 39.0	1.497	2.384	13.1	20.2	2 1	6 46.62	+23 44.2	1.423	2.325	12.5	19.2
2 11	6 47.91	+ 5 30.7	1.575	2.400	16.0	20.5	2 11	6 41.46	+22 46.1	1.499	2.328	16.4	19.5
<b>376044</b>	2010 CK <sub>149</sub>		1 7.5 81°72	1°2/ 7.2 18			<b>421927</b>	2014 QY <sub>238</sub>		1 7.5 115°53	1°2/ 7.9 18		
12 3	7 38.47	+25 44.6	2.138	2.945	13.0	20.9	12 3	7 39.34	+17 18.7	1.887	2.689	14.7	21.5
12 13	7 33.07	+25 53.0	2.062	2.952	9.8	20.7	12 13	7 33.91	+17 36.9	1.815	2.700	11.2	21.3
12 23	7 25.43	+26 1.6	2.011	2.959	6.2	20.5	12 23	7 26.06	+18 3.6	1.766	2.711	7.2	21.1
1 2	7 16.24	+26 7.7	1.988	2.966	2.4	20.2	1 2	7 16.52	+18 36.3	1.745	2.721	3.0	20.9
1 12	7 6.54	+26 9.0	1.994	2.972	2.3	20.2	1 12	7 6.36	+19 11.8	1.752	2.732	2.2	20.9
1 22	6 57.39	+26 4.3	2.030	2.979	6.0	20.5	1 22	6 56.77	+19 47.1	1.789	2.742	6.4	21.1
2 1	6 49.78	+25 53.9	2.093	2.986	9.6	20.7	2 1	6 48.82	+20 20.0	1.854	2.752	10.3	21.4
2 11	6 44.44	+25 39.2	2.182	2.993	12.6	20.9	2 11	6 43.28	+20 49.2	1.942	2.761	13.7	21.6
<b>305512</b>	2008 EU <sub>158</sub>		1 7.5 106°35	0°6/ 7.2 17			<b>418871</b>	2008 XB <sub>5</sub>		1 7.5 46°98	2°4/ 7.8 18		
12 3	7 34.04	+23 18.9	2.901	3.699	10.1	21.4	12 3	7 39.01	+18 6.7	1.953	2.754	14.2	20.1
12 13	7 29.22	+23 41.0	2.822	3.707	7.6	21.2	12 13	7 33.44	+17 20.2	1.882	2.765	10.9	19.9
12 23	7 22.79	+24 5.2	2.769	3.715	4.8	21.1	12 23	7 25.62	+16 37.7	1.834	2.777	7.2	19.7
1 2	7 15.26	+24 29.3	2.745	3.723	1.8	20.9	1 2	7 16.31	+15 59.8	1.815	2.788	3.5	19.5
1 12	7 7.34	+24 51.2	2.752	3.731	1.6	20.9	1 12	7 6.56	+15 26.9	1.824	2.800	3.0	19.4
1 22	6 59.75	+25 9.4	2.789	3.739	4.6	21.1	1 22	6 57.47	+14 59.4	1.863	2.813	6.5	19.7
2 1	6 53.19	+25 23.1	2.857	3.746	7.4	21.3	2 1	6 50.01	+14 37.5	1.930	2.825	10.1	19.9
2 11	6 48.23	+25 32.3	2.949	3.754	9.9	21.5	2 11	6 44.84	+14 20.8	2.020	2.838	13.2	20.2
<b>413589</b>	2005 UE <sub>87</sub>		1 7.5 329°48	2°3/ 6.8 18			<b>13669</b>	Swammerdam		1 7.5 110°52	1°3/ 7.8 18		
12 3	7 38.15	+26 7.3	1.743	2.563	14.9	21.0	12 3	7 39.42	+18 7.4	1.795	2.601	15.1	19.2



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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>244021</b>	2001 <i>SN</i> <sub>146</sub>		1 7.5 82°85	9.7/11.9	18		<b>219443</b>	2000 <i>UG</i> <sub>97</sub>		1 7.5 27°44	0.2/ 7.5	18	
12 3	7 33.66	- 9 26.4	2.444	3.127	14.8	20.9	12 3	7 37.98	+22 24.1	1.422	2.251	17.1	19.0
12 13	7 29.06	-10 17.7	2.377	3.140	13.1	20.8	12 13	7 33.48	+22 13.6	1.364	2.264	13.0	18.8
12 23	7 22.75	-10 48.4	2.330	3.152	11.4	20.7	12 23	7 26.02	+22 6.7	1.326	2.278	8.2	18.6
1 2	7 15.28	-10 55.0	2.305	3.164	10.2	20.7	1 2	7 16.53	+22 1.3	1.314	2.293	3.0	18.3
1 12	7 7.40	-10 36.4	2.305	3.176	9.7	20.7	1 12	7 6.47	+21 55.2	1.328	2.309	2.4	18.3
1 22	6 59.90	- 9 54.0	2.331	3.188	10.2	20.7	1 22	6 57.32	+21 47.3	1.369	2.326	7.5	18.7
2 1	6 53.54	- 8 51.5	2.381	3.200	11.4	20.8	2 1	6 50.35	+21 37.6	1.436	2.343	12.0	19.0
2 11	6 48.88	- 7 34.4	2.454	3.212	12.9	20.9	2 11	6 46.36	+21 26.8	1.524	2.361	15.8	19.2
<b>473711</b>	2015 <i>YR</i> <sub>16</sub>		1 7.5 168°11	5.6/ 5.5	18		<b>303407</b>	2004 <i>XM</i> <sub>159</sub>		1 7.5 314°69	1.7/ 7.7	18	
12 3	7 42.60	+33 52.3	1.835	2.645	14.7	21.2	12 3	7 38.20	+20 7.6	1.372	2.200	17.7	19.9
12 13	7 37.07	+35 9.4	1.762	2.646	11.5	20.9	12 13	7 34.27	+19 38.8	1.280	2.179	13.8	19.6
12 23	7 28.44	+36 23.9	1.711	2.647	8.2	20.8	12 23	7 26.99	+19 14.2	1.208	2.158	9.0	19.3
1 2	7 17.48	+37 27.6	1.688	2.647	5.8	20.6	1 2	7 17.07	+18 53.2	1.160	2.138	3.8	18.9
1 12	7 5.54	+38 13.3	1.693	2.648	6.3	20.6	1 12	7 5.89	+18 34.8	1.139	2.119	3.1	18.8
1 22	6 54.16	+38 37.8	1.726	2.649	9.2	20.8	1 22	6 55.16	+18 18.5	1.143	2.100	8.6	19.1
2 1	6 44.80	+38 41.6	1.784	2.649	12.5	21.0	2 1	6 46.52	+18 4.5	1.172	2.081	13.9	19.3
2 11	6 38.50	+38 28.8	1.865	2.649	15.5	21.2	2 11	6 41.20	+17 53.0	1.221	2.064	18.6	19.6
<b>135743</b>	2002 <i>PU</i> <sub>175</sub>		1 7.5 231°36	1.3/ 7.8	18		<b>177772</b>	2005 <i>JJ</i> <sub>168</sub>		1 7.5 135°16	1.6/ 7.0	18	
12 3	7 39.89	+18 17.8	1.997	2.796	14.1	20.7	12 3	7 41.09	+25 2.0	2.021	2.826	13.7	20.8
12 13	7 34.44	+18 17.7	1.902	2.785	10.8	20.5	12 13	7 35.24	+25 35.4	1.948	2.836	10.4	20.6
12 23	7 26.51	+18 23.9	1.830	2.774	7.0	20.2	12 23	7 26.91	+26 10.9	1.898	2.845	6.6	20.4
1 2	7 16.74	+18 35.0	1.786	2.763	2.9	20.0	1 2	7 16.85	+26 44.3	1.877	2.854	2.7	20.1
1 12	7 6.15	+18 48.8	1.772	2.751	2.3	19.9	1 12	7 6.17	+27 11.9	1.886	2.863	2.7	20.1
1 22	6 55.93	+19 3.5	1.787	2.738	6.5	20.1	1 22	6 56.05	+27 31.2	1.924	2.871	6.5	20.4
2 1	6 47.19	+19 17.7	1.829	2.725	10.5	20.4	2 1	6 47.61	+27 41.7	1.990	2.879	10.2	20.6
2 11	6 40.83	+19 30.7	1.896	2.712	14.1	20.6	2 11	6 41.62	+27 44.7	2.080	2.887	13.3	20.9
<b>89761</b>	2002 <i>AA</i> <sub>59</sub>		1 7.5 64°06	1.5/ 7.9	18		<b>178955</b>	2001 <i>QH</i> <sub>180</sub>		1 7.5 81°40	7.0/ 5.9	18	
12 3	7 42.16	+17 31.6	1.350	2.169	18.5	18.5	12 3	7 46.88	+39 25.2	1.817	2.615	15.3	19.7
12 13	7 36.60	+17 43.8	1.300	2.194	14.1	18.3	12 13	7 40.14	+40 28.3	1.766	2.637	12.2	19.6
12 23	7 27.93	+18 6.4	1.271	2.219	9.0	18.1	12 23	7 30.18	+41 21.2	1.737	2.658	9.2	19.4
1 2	7 17.19	+18 36.3	1.267	2.244	3.6	17.8	1 2	7 18.03	+41 56.0	1.734	2.679	7.2	19.4
1 12	7 5.92	+19 9.3	1.290	2.269	2.7	17.8	1 12	7 5.27	+42 7.1	1.759	2.700	7.5	19.4
1 22	6 55.68	+19 41.6	1.339	2.295	7.7	18.2	1 22	6 53.55	+41 54.2	1.811	2.721	9.7	19.6
2 1	6 47.81	+20 11.0	1.415	2.320	12.3	18.5	2 1	6 44.28	+41 20.8	1.889	2.742	12.4	19.8
2 11	6 43.09	+20 36.2	1.512	2.345	16.2	18.8	2 11	6 38.28	+40 33.1	1.988	2.762	15.0	20.0
<b>51618</b>	2001 <i>HV</i> <sub>35</sub>		1 7.5 127°32	2.6/ 6.7	18		<b>7872</b>	1990 <i>UC</i>		1 7.5 67°89	5.9/ 9.2	18	
12 3	7 42.46	+27 51.7	2.121	2.923	13.2	19.6	12 3	7 40.90	+ 8 23.8	1.382	2.179	19.2	17.5
12 13	7 36.17	+28 36.1	2.053	2.938	10.1	19.5	12 13	7 35.48	+ 8 2.4	1.331	2.204	15.3	17.3
12 23	7 27.44	+29 20.6	2.009	2.953	6.5	19.3	12 23	7 27.17	+ 7 59.8	1.300	2.228	11.0	17.1
1 2	7 17.02	+30 0.0	1.994	2.967	3.2	19.1	1 2	7 16.93	+ 8 16.8	1.292	2.253	7.1	16.9
1 12	7 6.01	+30 30.3	2.008	2.981	3.4	19.1	1 12	7 6.18	+ 8 51.3	1.311	2.277	6.1	17.0
1 22	6 55.60	+30 49.1	2.053	2.994	6.7	19.3	1 22	6 56.37	+ 9 39.1	1.356	2.302	8.9	17.2
2 1	6 46.88	+30 56.7	2.126	3.007	10.0	19.6	2 1	6 48.72	+10 35.0	1.427	2.326	12.7	17.5
2 11	6 40.62	+30 54.8	2.223	3.019	12.9	19.8	2 11	6 44.03	+11 33.5	1.520	2.350	16.2	17.7
<b>363794</b>	2005 <i>JV</i> <sub>132</sub>		1 7.5 244°02	6.6/ 8.9	18		<b>317497</b>	2002 <i>SD</i> <sub>69</sub>		1 7.5 18°40	0.0/ 7.3	18	
12 3	7 37.51	+ 5 51.5	1.916	2.686	15.6	21.9	12 3	7 38.60	+21 44.1	1.527	2.349	16.5	21.2
12 13	7 32.60	+ 5 6.8	1.825	2.677	12.8	21.7	12 13	7 34.01	+21 52.8	1.454	2.351	12.6	20.9
12 23	7 25.33	+ 4 36.0	1.757	2.668	9.8	21.5	12 23	7 26.45	+22 6.7	1.403	2.354	8.0	20.7
1 2	7 16.32	+ 4 21.9	1.713	2.659	7.3	21.3	1 2	7 16.75	+22 23.0	1.378	2.357	2.9	20.4
1 12	7 6.54	+ 4 25.6	1.697	2.649	6.7	21.3	1 12	7 6.26	+22 38.1	1.380	2.360	2.4	20.3
1 22	6 57.11	+ 4 46.3	1.709	2.639	8.7	21.4	1 22	6 56.45	+22 49.7	1.409	2.364	7.4	20.7
2 1	6 49.10	+ 5 21.1	1.748	2.629	11.8	21.5	2 1	6 48.67	+22 56.8	1.464	2.368	12.0	20.9
2 11	6 43.36	+ 6 5.9	1.809	2.618	14.9	21.7	2 11	6 43.83	+22 59.7	1.541	2.373	15.9	21.2
<b>361563</b>	2007 <i>RZ</i> <sub>50</sub>		1 7.5 314°22	2.4/ 7.9	18		<b>371779</b>	2007 <i>HH</i> <sub>76</sub>		1 7.5 244°05	2.9/ 6.5	18	
12 3	7 39.35	+17 45.8	1.521	2.337	16.9	20.9	12 3	7 38.89	+28 39.9	2.073	2.882	13.2	20.9
12 13	7 34.59	+17 21.8	1.440	2.332	13.1	20.6	12 13	7 33.75	+29 23.4	1.990	2.879	10.1	20.6
12 23	7 26.84	+17 4.8	1.381	2.327	8.6	20.3	12 23	7 26.10	+30 7.1	1.932	2.877	6.6	20.4
1 2	7 16.90	+16 54.5	1.346	2.322	3.9	20.0	1 2	7 16.61	+30 46.1	1.901	2.874	3.5	20.2
1 12	7 6.08	+16 49.7	1.339	2.317	3.2	20.0	1 12	7 6.37	+31 16.1	1.899	2.871	3.7	20.2
1 22	6 55.85	+16 49.2	1.359	2.313	7.8	20.2	1 22	6 56.57	+31 34.3	1.926	2.867	7.0	20.4
2 1	6 47.58	+16 52.0	1.405	2.309	12.5	20.5	2 1	6 48.36	+31 40.5	1.981	2.864	10.5	20.6
2 11	6 42.27	+16 57.1	1.473	2.305	16.5	20.7	2 11	6 42.60	+31 36.6	2.059	2.861	13.6	20.8
<b>240335</b>	2003 <i>PC</i> <sub>2</sub>		1 7.5 136°48	1.4/ 7.9	18		<b>168802</b>	2000 <i>ST</i> <sub>110</sub>		1 7.5 43°82	4.4/ 8.6	18	
12 3	7 40.64	+16 40.2	1.848	2.646	15.0	20.8	12 3	7 38.49	+12 32.7	1.275	2.093	19.4	19.2
12 13	7 34.97	+17 2.4	1.773	2.656	11.5	20.6	12 13	7 34.03	+12 15.3	1.220	2.109	15.1	19.0
12 23	7 26.79	+17 34.0	1.722	2.666	7.5	20.3	12 23	7 26.46	+12 13.6	1.184	2.125	10.4	18.8
1 2	7 16.82	+18 12.6	1.699	2.675	3.1	20.1	1 2	7 16.74	+12 27.5	1.171	2.141	5.8	18.6
1 12	7 6.18	+18 54.4	1.704	2.684	2.3	20.1	1 12	7 6.36	+12 54.8	1.184	2.158	4.8	18.5
1 22	6 56.09	+19 36.2	1.739	2.692	6.6	20.3	1 22	6 56.89	+13 31.6	1.223	2.176	8.6	18.8
2 1	6 47.70	+20 15.3	1.802	2.700	10.6	20.6	2 1	6 49.68	+14 13.6	1.286	2.194	13.1	19.1
2 11	6 41.81	+20 50.1	1.889	2.707	14.0	20.8	2 11	6 45.60	+14 56.8	1.371	2.212	17.0	19.4
<b>499406</b>	2010 <i>BU</i> <sub>98</sub>		1 7.5 339°57	10.1/13.0	18		<b>205559</b>	2001 <i>SK</i> <sub>274</sub>		1 7.5 16°86	1.4/ 7.9	18	
12 3	7 33.29	- 9 31.3											

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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>302412</b>	2002 CS <sub>182</sub>		1 7.5 244°20	1.4/ 7.9	18		<b>330121</b>	2005 YT <sub>24</sub>		1 7.5 215°00	0°0/ 7.4	18	
12 3	7 39.18	+16 40.2	1.647	2.456	16.1	20.5	12 3	7 37.50	+20 13.4	2.270	3.069	12.6	21.1
12 13	7 34.38	+17 4.6	1.562	2.450	12.5	20.3	12 13	7 32.40	+20 47.9	2.179	3.065	9.6	20.9
12 23	7 26.72	+17 40.5	1.499	2.445	8.1	20.0	12 23	7 25.13	+21 28.5	2.114	3.060	6.1	20.6
1 2	7 16.91	+18 25.3	1.462	2.439	3.4	19.7	1 2	7 16.28	+22 12.4	2.076	3.054	2.2	20.4
1 12	7 6.13	+19 15.0	1.453	2.433	2.5	19.6	1 12	7 6.73	+22 56.1	2.069	3.049	1.8	20.3
1 22	6 55.79	+20 5.2	1.473	2.427	7.3	19.9	1 22	6 57.50	+23 36.5	2.092	3.043	5.7	20.6
2 1	6 47.21	+20 52.3	1.519	2.421	11.9	20.1	2 1	6 49.55	+24 11.7	2.144	3.037	9.3	20.8
2 11	6 41.42	+21 34.3	1.588	2.414	15.8	20.4	2 11	6 43.67	+24 40.9	2.221	3.031	12.5	21.0
<b>126305</b>	2002 AQ <sub>120</sub>		1 7.5 267°95	1°2/ 7.2	18		<b>149588</b>	2004 CC <sub>29</sub>		1 7.5 192°30	1°1/ 7.8	18	
12 3	7 38.96	+25 9.7	2.023	2.832	13.5	20.2	12 3	7 38.70	+18 10.1	1.813	2.619	15.0	20.5
12 13	7 33.81	+25 22.3	1.931	2.821	10.3	19.9	12 13	7 33.70	+18 24.1	1.731	2.619	11.5	20.3
12 23	7 26.16	+25 36.4	1.862	2.810	6.6	19.7	12 23	7 26.12	+18 46.2	1.673	2.618	7.4	20.0
1 2	7 16.66	+25 48.7	1.821	2.799	2.6	19.4	1 2	7 16.66	+19 14.1	1.640	2.618	3.0	19.8
1 12	7 6.37	+25 56.2	1.809	2.787	2.4	19.4	1 12	7 6.44	+19 44.8	1.637	2.617	2.3	19.7
1 22	6 56.50	+25 57.4	1.826	2.776	6.5	19.6	1 22	6 56.71	+20 15.2	1.663	2.616	6.7	20.0
2 1	6 48.18	+25 51.9	1.871	2.765	10.4	19.8	2 1	6 48.62	+20 43.3	1.715	2.615	10.9	20.2
2 11	6 42.29	+25 41.1	1.939	2.753	13.9	20.0	2 11	6 43.06	+21 7.9	1.791	2.614	14.5	20.5
<b>147726</b>	2005 MU <sub>20</sub>		1 7.5 38°68	0°4/ 7.6	18		<b>343183</b>	2009 UU <sub>88</sub>		1 7.5 69°09	2°6/ 7.1	17	
12 3	7 37.95	+19 58.4	1.572	2.392	16.2	20.2	12 3	7 46.88	+26 49.2	1.221	2.049	19.5	21.1
12 13	7 33.37	+20 17.2	1.504	2.399	12.4	19.9	12 13	7 40.66	+27 14.6	1.174	2.074	14.7	20.9
12 23	7 25.98	+20 43.6	1.458	2.408	7.8	19.7	12 23	7 30.71	+27 40.2	1.147	2.098	9.4	20.6
1 2	7 16.59	+21 14.2	1.438	2.416	2.9	19.4	1 2	7 18.28	+27 59.5	1.145	2.122	4.0	20.4
1 12	7 6.48	+21 45.3	1.445	2.425	2.3	19.4	1 12	7 5.27	+28 7.5	1.169	2.146	3.9	20.5
1 22	6 57.05	+22 13.5	1.480	2.435	7.2	19.7	1 22	6 53.64	+28 2.5	1.219	2.170	8.9	20.8
2 1	6 49.56	+22 37.1	1.541	2.445	11.6	20.0	2 1	6 44.94	+27 47.0	1.293	2.194	13.6	21.1
2 11	6 44.87	+22 55.5	1.624	2.455	15.3	20.2	2 11	6 40.00	+27 24.5	1.389	2.217	17.6	21.5
<b>332556</b>	2008 RB <sub>29</sub>		1 7.5 190°72	3°9/ 8.9	16		<b>501916</b>	2014 WN <sub>479</sub>		1 7.5 258°38	2°0/ 7.9	18	
12 3	7 35.73	+9 29.0	2.372	3.146	12.8	22.2	12 3	7 36.31	+16 46.3	2.395	3.187	12.2	20.7
12 13	7 30.79	+9 17.3	2.284	3.145	10.2	22.0	12 13	7 31.28	+16 24.3	2.301	3.179	9.4	20.5
12 23	7 23.97	+9 16.3	2.220	3.144	7.3	21.9	12 23	7 24.31	+16 7.1	2.231	3.171	6.3	20.3
1 2	7 15.80	+9 26.6	2.183	3.142	4.7	21.7	1 2	7 15.95	+15 54.7	2.189	3.162	3.1	20.1
1 12	7 7.10	+9 47.4	2.175	3.141	4.1	21.6	1 12	7 7.04	+15 46.5	2.178	3.154	2.6	20.1
1 22	6 58.73	+10 16.9	2.198	3.139	6.3	21.8	1 22	6 58.46	+15 42.0	2.196	3.145	5.6	20.2
2 1	6 51.52	+10 52.7	2.248	3.136	9.2	22.0	2 1	6 51.08	+15 40.4	2.243	3.137	9.0	20.4
2 11	6 46.14	+11 32.1	2.324	3.134	12.0	22.1	2 11	6 45.58	+15 41.2	2.315	3.128	11.9	20.6
<b>344806</b>	2004 BK <sub>41</sub>		1 7.5 104°97	7°1/ 6.3	18		<b>429037</b>	2009 CW <sub>40</sub>		1 7.5 40°38	2°9/ 8.7	18	
12 3	8 3.98	+21 41.2	0.936	1.753	24.9	19.3	12 3	7 34.32	+11 49.1	2.113	2.904	13.7	21.0
12 13	7 54.39	+18 24.3	0.869	1.760	19.5	19.0	12 13	7 29.93	+12 5.5	2.037	2.911	10.7	20.8
12 23	7 39.73	+14 52.5	0.823	1.766	13.3	18.7	12 23	7 23.51	+12 33.8	1.984	2.919	7.3	20.6
1 2	7 21.57	+11 17.2	0.803	1.773	7.9	18.4	1 2	7 15.67	+13 12.8	1.957	2.926	4.0	20.5
1 12	7 2.62	+7 56.5	0.812	1.779	8.5	18.5	1 12	7 7.28	+14 0.2	1.960	2.935	3.2	20.4
1 22	6 45.70	+5 8.1	0.847	1.785	14.0	18.8	1 22	6 59.31	+14 52.7	1.993	2.943	6.0	20.6
2 1	6 32.93	+3 1.4	0.907	1.791	19.7	19.1	2 1	6 52.65	+15 46.9	2.053	2.952	9.4	20.8
2 11	6 25.27	+1 34.7	0.984	1.796	24.3	19.5	2 11	6 47.99	+16 39.8	2.138	2.960	12.4	21.0
<b>325621</b>	2009 SM <sub>250</sub>		1 7.5 183°57	1°6/ 7.0	18		<b>82009</b>	2000 RF <sub>68</sub>		1 7.5 49°70	8°3/ 6.6	18	
12 3	7 38.98	+25 25.7	2.118	2.925	13.1	21.5	12 3	7 48.91	+47 22.8	2.094	2.865	14.4	18.3
12 13	7 33.65	+25 55.5	2.036	2.925	9.9	21.3	12 13	7 41.44	+47 55.9	2.041	2.884	12.1	18.2
12 23	7 25.96	+26 27.3	1.978	2.925	6.3	21.1	12 23	7 30.83	+48 13.1	2.011	2.902	9.9	18.1
1 2	7 16.57	+26 57.2	1.947	2.925	2.6	20.9	1 2	7 18.25	+48 7.6	2.005	2.921	8.5	18.0
1 12	7 6.50	+27 21.6	1.947	2.924	2.6	20.9	1 12	7 5.31	+47 35.9	2.027	2.941	8.5	18.1
1 22	6 56.88	+27 38.3	1.976	2.923	6.3	21.1	1 22	6 53.63	+46 39.6	2.075	2.960	10.0	18.2
2 1	6 48.09	+27 46.8	2.033	2.923	9.9	21.3	2 1	6 44.48	+45 23.8	2.149	2.980	12.0	18.4
2 11	6 43.01	+27 47.9	2.114	2.922	13.1	21.5	2 11	6 38.57	+43 55.6	2.246	3.000	14.1	18.5
<b>69100</b>	2003 BM <sub>68</sub>		1 7.5 330°36	9°1/10.9	18		<b>186175</b>	2001 UY <sub>166</sub>		1 7.5 85°57	1°4/ 7.1	18	
12 3	7 34.92	- 2 21.3	1.845	2.588	17.0	19.3	12 3	7 39.72	+24 29.6	1.832	2.645	14.6	20.9
12 13	7 30.69	- 2 52.1	1.764	2.586	14.6	19.1	12 13	7 34.43	+25 0.7	1.762	2.654	11.0	20.7
12 23	7 24.15	- 3 0.4	1.703	2.583	12.0	18.9	12 23	7 26.53	+25 34.8	1.715	2.664	7.0	20.5
1 2	7 15.93	- 2 42.7	1.664	2.581	9.8	18.8	1 2	7 16.79	+26 7.5	1.695	2.673	2.8	20.3
1 12	7 7.01	- 1 58.2	1.651	2.579	9.1	18.8	1 12	7 6.39	+26 34.8	1.704	2.682	2.7	20.3
1 22	6 58.47	+ 0 49.6	1.664	2.577	10.2	18.8	1 22	6 56.62	+26 54.1	1.741	2.691	6.8	20.6
2 1	6 51.37	+ 0 37.5	1.703	2.575	12.6	19.0	2 1	6 48.63	+27 4.9	1.806	2.700	10.7	20.8
2 11	6 46.50	+ 2 15.9	1.765	2.573	15.3	19.1	2 11	6 43.25	+27 8.1	1.894	2.709	14.1	21.1
<b>420050</b>	2011 DZ <sub>20</sub>		1 7.5 30°85	1°7/ 7.1	18		<b>70287</b>	1999 RH <sub>118</sub>		1 7.5 136°65	1°6/ 7.9	18	
12 3	7 38.85	+26 6.5	1.747	2.566	14.9	21.7	12 3	7 41.20	+17 10.2	1.982	2.777	14.3	20.6
12 13	7 33.91	+26 22.8	1.676	2.570	11.3	21.5	12 13	7 35.20	+17 14.9	1.909	2.789	11.0	20.4
12 23	7 26.25	+26 39.9	1.626	2.576	7.2	21.2	12 23	7 26.86	+17 26.8	1.859	2.801	7.1	20.2
1 2	7 16.68	+26 54.1	1.604	2.581	3.0	21.0	1 2	7 16.88	+17 44.4	1.837	2.812	3.1	20.0
1 12	7 6.44	+27 1.8	1.609	2.587	2.9	21.0	1 12	7 6.35	+18 5.2	1.844	2.823	2.4	19.9
1 22	6 56.87	+27 1.4	1.643	2.593	7.1	21.3	1 22	6 56.38	+18 27.0	1.882	2.833	6.2	20.2
2 1	6 49.18	+26 53.2	1.703	2.600	11.1	21.5	2 1	6 48.03	+18 48.2	1.948	2.843	10.0	20.5
2 11	6 44.19	+26 39.1	1.786	2.607	14.6	21.8	2 11	6 42.04	+19 7.9	2.038	2.852	13.3	20.7
<b>247975</b>	2004 BZ <sub>101</sub>		1 7.5 290°88	5°8/ 6.7	17		<b>36377</b>	2000 OL <sub>18</sub>		1 7.5 181°85	1°7/ 8.1	18	
12 3	7 47.24	+41 9.1	2.302	3.083	13.0	20.2	12 3	7 40.69	+15 57.6	1.870	2.667	15.	

EPHEMERIDES

1 7.5

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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>314703</b>	2006 <i>RN</i> <sub>107</sub>		1 7.5 323°32	10°0/ 5.0	18		<b>169248</b>	2001 <i>ST</i> <sub>98</sub>		1 7.5 94°84	4°2/ 9.1	18	
12 3	7 45.12	+43 37.5	1.538	2.344	17.2	20.6	12 3	7 34.48	+ 8 31.4	2.393	3.165	12.8	20.8
12 13	7 40.15	+44 53.0	1.464	2.333	14.4	20.4	12 13	7 29.78	+ 8 16.8	2.315	3.174	10.2	20.6
12 23	7 31.00	+45 56.3	1.411	2.322	11.8	20.2	12 23	7 23.30	+ 8 13.4	2.261	3.182	7.4	20.4
1 2	7 18.62	+46 36.1	1.381	2.312	10.1	20.1	1 2	7 15.60	+ 8 21.8	2.233	3.190	4.9	20.3
1 12	7 4.88	+46 43.4	1.375	2.302	10.6	20.1	1 12	7 7.45	+ 8 41.3	2.235	3.198	4.3	20.3
1 22	6 52.04	+46 16.0	1.394	2.293	12.8	20.2	1 22	6 59.68	+ 9 10.0	2.266	3.205	6.3	20.4
2 1	6 42.12	+45 18.5	1.435	2.284	15.9	20.3	2 1	6 53.07	+ 9 45.6	2.325	3.213	9.0	20.6
2 11	6 36.38	+44 0.0	1.496	2.276	18.8	20.5	2 11	6 48.23	+10 25.3	2.410	3.221	11.6	20.8
<b>424721</b>	2008 <i>SB</i> <sub>184</sub>		1 7.5 12°25	1°5/ 7.0	18		<b>112064</b>	2002 <i>JL</i> <sub>16</sub>		1 7.5 142°98	0°6/ 7.4	18	
12 3	7 37.24	+24 56.8	2.045	2.857	13.3	21.1	12 3	7 44.97	+21 50.2	1.633	2.440	16.3	20.2
12 13	7 32.41	+25 27.5	1.966	2.857	10.1	20.9	12 13	7 38.68	+22 22.5	1.562	2.452	12.4	20.0
12 23	7 25.22	+26 0.6	1.910	2.858	6.4	20.7	12 23	7 29.37	+23 0.8	1.514	2.462	7.8	19.7
1 2	7 16.33	+26 32.5	1.881	2.859	2.6	20.4	1 2	7 17.89	+23 40.4	1.493	2.472	2.8	19.4
1 12	7 6.77	+26 59.5	1.882	2.859	2.6	20.4	1 12	7 5.62	+24 16.4	1.501	2.481	2.5	19.4
1 22	6 57.68	+27 19.2	1.911	2.860	6.4	20.7	1 22	6 54.07	+24 45.3	1.538	2.489	7.4	19.8
2 1	6 50.11	+27 30.8	1.969	2.862	10.1	20.9	2 1	6 44.61	+25 6.0	1.602	2.497	11.8	20.0
2 11	6 44.86	+27 35.0	2.050	2.863	13.2	21.1	2 11	6 38.17	+25 19.1	1.688	2.503	15.5	20.3
<b>425435</b>	2010 <i>DU</i> <sub>56</sub>		1 7.5 248°68	4°4/ 9.8	16		<b>239300</b>	2007 <i>PQ</i> <sub>37</sub>		1 7.5 179°12	1°2/ 7.9	18	
12 3	7 34.12	+ 3 17.3	3.240	3.974	10.5	22.3	12 3	7 41.76	+18 24.3	2.047	2.841	13.9	21.6
12 13	7 29.23	+ 3 22.3	3.124	3.953	8.7	22.2	12 13	7 35.70	+18 25.8	1.962	2.843	10.7	21.4
12 23	7 22.87	+ 3 39.3	3.033	3.931	6.7	22.0	12 23	7 27.25	+18 33.3	1.901	2.844	6.9	21.2
1 2	7 15.44	+ 4 8.8	2.970	3.908	5.0	21.8	1 2	7 17.09	+18 45.1	1.868	2.845	2.8	20.9
1 12	7 7.49	+ 4 50.4	2.938	3.885	4.5	21.8	1 12	7 6.26	+18 59.0	1.865	2.845	2.2	20.9
1 22	6 59.64	+ 5 42.4	2.936	3.862	5.7	21.8	1 22	6 55.90	+19 13.2	1.893	2.844	6.2	21.1
2 1	6 52.53	+ 6 42.2	2.964	3.837	7.8	21.9	2 1	6 47.09	+19 26.4	1.948	2.842	10.1	21.4
2 11	6 46.72	+ 7 46.9	3.020	3.813	9.9	22.1	2 11	6 40.62	+19 38.3	2.029	2.840	13.4	21.6
<b>1320</b>	<i>Impala</i>		1 7.5 192°66	4°0/ 5.5	18 R		<b>522242</b>	2016 <i>AF</i> <sub>272</sub>		1 7.5 10°29	1°6/ 8.3	18	
12 3	7 40.03	+34 13.5	2.886	3.675	10.4	16.7	12 3	7 38.29	+12 53.8	1.790	2.586	15.5	20.9
12 13	7 34.13	+35 18.6	2.800	3.673	8.1	16.5	12 13	7 33.50	+14 3.4	1.706	2.586	12.0	20.6
12 23	7 26.16	+36 21.0	2.741	3.670	5.8	16.4	12 23	7 26.12	+15 30.1	1.645	2.587	7.9	20.4
1 2	7 16.67	+37 16.0	2.711	3.667	4.1	16.3	1 2	7 16.76	+17 10.2	1.612	2.588	3.5	20.1
1 12	7 6.49	+37 59.2	2.712	3.664	4.5	16.3	1 12	7 6.50	+18 57.2	1.609	2.588	2.4	20.1
1 22	6 56.58	+38 28.5	2.744	3.660	6.5	16.4	1 22	6 56.58	+20 43.7	1.636	2.589	6.8	20.3
2 1	6 47.86	+38 43.6	2.804	3.655	8.9	16.6	2 1	6 48.23	+22 23.5	1.691	2.590	11.0	20.6
2 11	6 41.07	+38 46.3	2.888	3.650	11.1	16.7	2 11	6 42.40	+23 52.7	1.771	2.592	14.7	20.8
<b>495754</b>	2016 <i>GZ</i> <sub>34</sub>		1 7.5 149°77	4°1/ 9.3	17		<b>17510</b>	1992 <i>PD</i> <sub>6</sub>		1 7.5 140°40	1°0/ 7.3	18	
12 3	7 33.68	+ 5 48.6	3.227	3.974	10.3	22.6	12 3	7 41.51	+22 57.2	1.699	2.511	15.5	18.3
12 13	7 28.71	+ 5 31.3	3.145	3.984	8.4	22.5	12 13	7 36.04	+23 27.6	1.624	2.516	11.8	18.1
12 23	7 22.42	+ 5 23.6	3.088	3.993	6.3	22.3	12 23	7 27.71	+24 2.8	1.572	2.521	7.5	17.8
1 2	7 15.23	+ 5 26.0	3.058	4.002	4.6	22.2	1 2	7 17.31	+24 38.5	1.547	2.526	2.8	17.6
1 12	7 7.72	+ 5 38.3	3.059	4.010	4.1	22.2	1 12	7 6.10	+25 10.1	1.551	2.530	2.5	17.5
1 22	6 54.09	+ 5 59.4	3.091	4.017	5.4	22.3	1 22	6 55.52	+25 34.6	1.583	2.534	7.2	17.8
2 1	6 47.86	+ 6 27.7	3.151	4.025	7.3	22.5	2 1	6 46.86	+25 50.9	1.642	2.538	11.5	18.1
2 11	6 49.01	+ 7 1.0	3.238	4.031	9.3	22.6	2 11	6 41.03	+25 59.7	1.723	2.542	15.1	18.3
<b>425383</b>	2010 <i>CR</i> <sub>47</sub>		1 7.5 309°84	3°0/ 8.7	18		<b>440728</b>	2006 <i>AO</i> <sub>58</sub>		1 7.5 39°68	1°1/ 7.4	17	
12 3	7 33.77	+11 56.9	2.123	2.915	13.6	21.2	12 3	7 42.44	+25 10.1	1.150	1.988	19.8	21.3
12 13	7 29.71	+12 9.0	2.024	2.899	10.7	21.0	12 13	7 37.54	+25 5.4	1.097	2.003	15.0	21.0
12 23	7 23.53	+12 33.1	1.949	2.885	7.4	20.8	12 23	7 28.91	+25 2.1	1.064	2.018	9.5	20.8
1 2	7 15.75	+13 8.8	1.901	2.870	4.1	20.6	1 2	7 17.73	+24 56.1	1.055	2.034	3.5	20.5
1 12	7 7.23	+13 54.0	1.881	2.855	3.3	20.5	1 12	7 5.87	+24 44.1	1.071	2.051	3.1	20.5
1 22	6 58.94	+14 45.8	1.891	2.841	6.3	20.6	1 22	6 55.27	+24 25.7	1.112	2.068	8.7	20.9
2 1	6 51.87	+15 40.7	1.928	2.827	9.9	20.8	2 1	6 47.50	+24 2.4	1.176	2.086	13.9	21.2
2 11	6 46.82	+16 35.5	1.990	2.814	13.2	21.0	2 11	6 43.43	+23 36.8	1.262	2.105	18.1	21.6
<b>361165</b>	2006 <i>KD</i> <sub>41</sub>		1 7.5 252°59	3°7/ 8.2	18		<b>127973</b>	2003 <i>HO</i> <sub>38</sub>		1 7.5 194°48	1°6/ 7.1	18	
12 3	7 39.37	+14 4.1	1.671	2.473	16.2	21.5	12 3	7 43.09	+25 27.9	1.899	2.704	14.4	21.1
12 13	7 34.38	+13 36.1	1.586	2.467	12.8	21.2	12 13	7 37.09	+25 53.3	1.814	2.702	11.0	20.8
12 23	7 26.65	+13 17.6	1.523	2.461	8.7	21.0	12 23	7 28.33	+26 20.7	1.753	2.700	7.0	20.6
1 2	7 16.91	+13 9.3	1.485	2.455	4.8	20.7	1 2	7 17.55	+26 45.7	1.720	2.697	2.9	20.3
1 12	7 6.32	+13 10.8	1.475	2.448	4.2	20.7	1 12	7 5.94	+27 4.3	1.716	2.693	2.8	20.3
1 22	6 56.21	+13 20.6	1.493	2.442	7.8	20.9	1 22	6 54.85	+27 14.1	1.741	2.689	7.0	20.6
2 1	6 47.85	+13 36.8	1.537	2.436	12.0	21.1	2 1	6 45.53	+27 15.1	1.794	2.684	11.0	20.8
2 11	6 42.16	+13 57.3	1.603	2.429	15.7	21.3	2 11	6 38.92	+27 8.9	1.871	2.679	14.5	21.0
<b>451674</b>	2013 <i>AQ</i> <sub>104</sub>		1 7.5 288°95	0°1/ 7.6	18		<b>429323</b>	2010 <i>EA</i> <sub>88</sub>		1 7.5 269°44	10°8/ 12.3	18	
12 3	7 41.60	+22 44.7	1.465	2.287	17.1	20.9	12 3	7 33.38	-14 3.3	2.560	3.208	14.9	20.8
12 13	7 36.61	+22 30.8	1.380	2.277	13.2	20.7	12 13	7 29.05	-14 52.0	2.469	3.196	13.6	20.7
12 23	7 28.34	+22 19.6	1.317	2.267	8.5	20.4	12 23	7 22.94	-15 19.2	2.397	3.184	12.3	20.5
1 2	7 17.58	+22 8.5	1.278	2.257	3.1	20.0	1 2	7 15.53	-15 20.4	2.346	3.171	11.2	20.5
1 12	7 5.77	+21 55.4	1.266	2.247	2.5	19.9	1 12	7 7.56	-14 53.6	2.318	3.159	10.8	20.4
1 22	6 54.58	+21 39.4	1.282	2.237	8.0	20.3	1 22	6 59.80	-13 59.2	2.315	3.146	11.2	20.4
2 1	6 45.55	+21 21.0	1.323	2.228	13.1	20.5	2 1	6 53.05	-12 40.6	2.336	3.133	12.3	20.5
2 11	6 39.75	+21 1.8	1.386	2.218	17.4	20.8	2 11	6 47.97	-11 3.5	2.379	3.120	13.7	20.5
<b>456614</b>	2007 <i>GP</i> <sub>39</sub>		1 7.5 158°53	2°9/ 6.5	18		<b>302410</b>	2002 <i>CG</i> <sub>162</sub>		1 7.5 280°82	2°0/ 7.0	18	
12 3	7 39.55	+29 14.0	2.186										

EPHEMERIDES

1 7.5

1 7.6

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>422495</b>	2014 <i>SB</i> <sub>345</sub>		1 7.5	1 <sup>57</sup> 2 <sup>4</sup> / 6.9 18			<b>417094</b>	2005 <i>UV</i> <sub>318</sub>		1 7.5	48 <sup>17</sup> 0 <sup>0</sup> / 7.4 18		
12 3	7 38.58	+26 56.8	1.572	2.397	16.0	20.5	12 3	7 38.71	+21 51.9	1.748	2.562	15.1	21.6
12 13	7 34.13	+27 22.0	1.498	2.396	12.2	20.3	12 13	7 33.74	+21 58.4	1.676	2.569	11.5	21.4
12 23	7 26.65	+27 48.2	1.446	2.396	7.9	20.1	12 23	7 26.16	+22 9.3	1.627	2.576	7.3	21.1
1 2	7 16.96	+28 10.6	1.419	2.396	3.5	19.8	1 2	7 16.75	+22 21.7	1.604	2.583	2.6	20.9
1 12	7 6.43	+28 24.5	1.420	2.397	3.5	19.8	1 12	7 6.70	+22 32.9	1.610	2.591	2.1	20.8
1 22	6 56.57	+28 27.8	1.448	2.398	7.9	20.1	1 22	6 57.28	+22 41.0	1.644	2.598	6.7	21.2
2 1	6 48.76	+28 20.8	1.501	2.400	12.2	20.3	2 1	6 49.65	+22 45.3	1.705	2.606	10.8	21.4
2 11	6 43.96	+28 5.6	1.576	2.402	15.9	20.6	2 11	6 44.64	+22 46.2	1.789	2.614	14.4	21.7
<b>26466</b>	Zarrin		1 7.5	325 <sup>51</sup> 3 <sup>5</sup> / 8.2 18			<b>325146</b>	2008 <i>EZ</i> <sub>158</sub>		1 7.5	320 <sup>49</sup> 4 <sup>3</sup> / 8.5 16		
12 3	7 39.24	+14 58.1	1.353	2.172	18.5	18.2	12 3	7 36.42	+12 11.9	1.659	2.462	16.3	21.4
12 13	7 34.86	+14 38.3	1.277	2.168	14.5	17.9	12 13	7 32.20	+11 46.2	1.574	2.454	12.9	21.2
12 23	7 27.25	+14 30.2	1.220	2.164	9.8	17.6	12 23	7 25.33	+11 32.3	1.511	2.446	9.0	20.9
1 2	7 17.23	+14 33.9	1.188	2.161	5.0	17.4	1 2	7 16.51	+11 31.1	1.472	2.439	5.4	20.7
1 12	7 6.20	+14 47.9	1.181	2.158	4.1	17.3	1 12	7 6.85	+11 42.2	1.460	2.432	4.7	20.7
1 22	6 55.79	+15 9.6	1.201	2.155	8.6	17.6	1 22	6 57.62	+12 3.8	1.476	2.425	7.9	20.8
2 1	6 47.52	+15 36.2	1.245	2.152	13.5	17.8	2 1	6 50.05	+12 33.2	1.517	2.418	11.9	21.0
2 11	6 42.44	+16 4.9	1.310	2.150	17.8	18.1	2 11	6 45.05	+13 7.1	1.581	2.412	15.7	21.3
<b>356560</b>	2011 <i>SK</i> <sub>204</sub>		1 7.5	151 <sup>97</sup> 0 <sup>9</sup> / 7.8 18			<b>50524</b>	2000 <i>DY</i> <sub>117</sub>		1 7.5	188 <sup>47</sup> 0 <sup>3</sup> / 7.4 18		
12 3	7 42.16	+18 47.4	1.975	2.770	14.3	22.0	12 3	7 40.21	+22 9.6	2.142	2.942	13.2	20.0
12 13	7 36.04	+19 0.8	1.898	2.780	10.9	21.8	12 13	7 34.56	+22 28.8	2.056	2.942	10.0	19.8
12 23	7 27.47	+19 20.6	1.845	2.789	7.0	21.6	12 23	7 26.57	+22 51.9	1.994	2.941	6.4	19.5
1 2	7 17.19	+19 44.6	1.819	2.797	2.7	21.3	1 2	7 16.90	+23 16.0	1.960	2.939	2.3	19.3
1 12	7 6.27	+20 9.7	1.824	2.804	2.1	21.3	1 12	7 6.55	+23 38.1	1.957	2.937	2.0	19.2
1 22	6 55.91	+20 33.5	1.859	2.811	6.3	21.6	1 22	6 56.63	+23 55.9	1.984	2.934	6.0	19.5
2 1	6 47.18	+20 54.6	1.922	2.817	10.2	21.8	2 1	6 48.17	+24 8.6	2.038	2.931	9.8	19.7
2 11	6 40.88	+21 12.5	2.010	2.822	13.5	22.0	2 11	6 41.99	+24 16.3	2.118	2.928	13.0	19.9
<b>317191</b>	2001 <i>YE</i> <sub>55</sub>		1 7.5	85 <sup>85</sup> 0 <sup>2</sup> / 7.6 18			<b>259324</b>	2003 <i>FV</i> <sub>71</sub>		1 7.5	341 <sup>49</sup> 4 <sup>5</sup> / 8.6 18		
12 3	7 39.83	+22 18.1	1.879	2.688	14.4	20.4	12 3	7 32.52	+12 49.3	1.328	2.154	18.3	19.8
12 13	7 34.43	+22 9.2	1.801	2.690	11.0	20.2	12 13	7 29.89	+12 29.4	1.245	2.139	14.5	19.5
12 23	7 26.52	+22 2.8	1.746	2.693	7.0	20.0	12 23	7 24.21	+12 24.0	1.181	2.125	10.1	19.3
1 2	7 16.86	+21 57.0	1.718	2.696	2.6	19.7	1 2	7 16.18	+12 34.4	1.141	2.112	5.8	19.0
1 12	7 6.56	+21 50.1	1.719	2.699	2.0	19.7	1 12	7 7.08	+12 59.5	1.125	2.100	4.9	18.9
1 22	6 56.86	+21 41.2	1.749	2.702	6.5	20.0	1 22	6 58.42	+13 36.4	1.135	2.090	8.8	19.1
2 1	6 48.87	+21 30.3	1.806	2.705	10.5	20.2	2 1	6 51.70	+14 20.8	1.168	2.081	13.6	19.3
2 11	6 43.38	+21 18.2	1.888	2.708	13.9	20.4	2 11	6 48.00	+15 8.3	1.221	2.074	18.0	19.6
<b>433833</b>	2015 <i>BB</i> <sub>245</sub>		1 7.5	164 <sup>51</sup> 2 <sup>2</sup> / 8.4 18			<b>495623</b>	2015 <i>TD</i> <sub>233</sub>		1 7.5	90 <sup>29</sup> 1 <sup>6</sup> / 7.9 17		
12 3	7 35.13	+13 57.1	2.308	3.098	12.7	20.5	12 3	7 42.48	+17 47.7	1.524	2.334	17.1	21.6
12 13	7 30.47	+14 8.6	2.223	3.098	9.8	20.3	12 13	7 36.74	+17 48.0	1.463	2.351	13.1	21.3
12 23	7 23.87	+14 29.3	2.161	3.099	6.6	20.1	12 23	7 28.09	+17 56.9	1.423	2.368	8.5	21.1
1 2	7 15.88	+14 58.2	2.128	3.099	3.3	19.9	1 2	7 17.45	+18 12.2	1.409	2.385	3.5	20.9
1 12	7 7.33	+15 33.3	2.124	3.100	2.6	19.9	1 12	7 6.20	+18 31.2	1.422	2.402	2.7	20.9
1 22	6 59.13	+16 12.1	2.149	3.100	5.6	20.1	1 22	6 55.79	+18 51.1	1.464	2.418	7.4	21.2
2 1	6 52.13	+16 52.0	2.204	3.100	9.0	20.3	2 1	6 47.49	+19 10.1	1.532	2.434	11.8	21.5
2 11	6 47.01	+17 31.1	2.283	3.101	11.9	20.5	2 11	6 42.14	+19 27.4	1.623	2.450	15.5	21.7
<b>173209</b>	1998 <i>SP</i> <sub>29</sub>		1 7.5	66 <sup>9</sup> 19 0 <sup>4</sup> / 7.4 18			<b>24881</b>	1996 <i>PQ</i> <sub>2</sub>		1 7.6	167 <sup>78</sup> 8 <sup>6</sup> / 7.2 18		
12 3	7 41.10	+21 51.8	1.570	2.387	16.4	20.3	12 3	7 58.34	+41 26.6	1.312	2.113	19.9	18.8
12 13	7 35.67	+22 16.4	1.513	2.407	12.4	20.0	12 13	7 50.26	+41 51.4	1.243	2.116	16.2	18.6
12 23	7 27.39	+22 46.2	1.478	2.427	7.8	19.8	12 23	7 37.32	+41 59.8	1.195	2.118	12.2	18.3
1 2	7 17.16	+23 17.4	1.469	2.448	2.8	19.6	1 2	7 20.90	+41 39.9	1.169	2.120	9.1	18.2
1 12	7 6.37	+23 45.5	1.488	2.468	2.4	19.6	1 12	7 3.51	+40 44.9	1.170	2.121	9.0	18.2
1 22	6 56.42	+24 7.9	1.535	2.488	7.1	19.9	1 22	6 47.86	+39 17.1	1.197	2.122	12.0	18.4
2 1	6 48.56	+24 23.5	1.608	2.509	11.4	20.2	2 1	6 36.02	+37 26.8	1.248	2.123	16.0	18.6
2 11	6 43.58	+24 32.9	1.705	2.529	15.0	20.5	2 11	6 29.03	+35 27.1	1.320	2.123	19.8	18.8
<b>325657</b>	2009 <i>SA</i> <sub>342</sub>		1 7.5	239 <sup>91</sup> 6 <sup>2</sup> / 9.1 18			<b>201351</b>	2002 <i>TA</i> <sub>213</sub>		1 7.6	40 <sup>83</sup> 6 <sup>9</sup> / 4.9 18		
12 3	7 36.50	+ 5 6.2	2.172	2.933	14.3	21.0	12 3	7 42.72	+35 11.5	1.643	2.459	15.9	19.0
12 13	7 31.62	+ 4 24.5	2.080	2.925	11.8	20.8	12 13	7 37.31	+37 5.6	1.604	2.488	12.4	18.8
12 23	7 24.67	+ 3 55.9	2.009	2.916	9.1	20.6	12 23	7 28.65	+38 53.4	1.587	2.518	9.1	18.7
1 2	7 16.20	+ 3 42.6	1.965	2.906	6.8	20.5	1 2	7 17.70	+40 24.6	1.597	2.548	7.1	18.7
1 12	7 7.07	+ 3 45.8	1.949	2.897	6.3	20.4	1 12	7 6.00	+41 31.1	1.635	2.579	7.6	18.8
1 22	6 58.24	+ 4 4.5	1.961	2.887	8.0	20.5	1 22	6 55.22	+42 10.3	1.699	2.611	10.1	19.0
2 1	6 50.65	+ 4 36.4	2.000	2.877	10.8	20.7	2 1	6 46.79	+42 24.1	1.788	2.642	13.0	19.2
2 11	6 45.03	+ 5 17.7	2.063	2.866	13.5	20.8	2 11	6 41.63	+42 18.2	1.898	2.674	15.5	19.5
<b>267003</b>	Burkert		1 7.5	112 <sup>30</sup> 8 <sup>5</sup> / 3.9 18			<b>206742</b>	2004 <i>BY</i> <sub>124</sub>		1 7.6	306 <sup>58</sup> 8 <sup>3</sup> / 9.4 18		
12 3	7 50.57	+53 30.4	2.940	3.668	11.6	21.5	12 3	7 33.81	- 0 2.1	2.155	2.900	14.8	19.8
12 13	7 42.66	+54 48.6	2.894	3.689	10.2	21.4	12 13	7 29.67	- 1 4.0	2.061	2.885	12.7	19.6
12 23	7 31.78	+55 52.2	2.871	3.709	9.0	21.3	12 23	7 23.49	- 1 50.6	1.987	2.869	10.5	19.4
1 2	7 18.78	+56 34.8	2.874	3.729	8.5	21.3	1 2	7 15.81	- 2 18.0	1.939	2.854	8.8	19.3
1 12	7 5.04	+56 52.1	2.903	3.749	8.7	21.4	1 12	7 7.45	- 2 23.7	1.916	2.838	8.4	19.3
1 22	6 52.08	+56 43.8	2.958	3.767	9.6	21.5	1 22	6 59.32	- 2 8.0	1.920	2.824	9.6	19.3
2 1	6 41.22	+56 13.1	3.037	3.786	10.8	21.6	2 1	6 52.36	- 1 33.1	1.949	2.809	11.8	19.4
2 11	6 33.37	+55 25.2	3.137	3.804	12.1	21.7	2 11	6 47.32	- 0 43.5	2.001	2.794	14.3	19.5
<b>232345</b>	2002 <i>UX</i> <sub>72</sub>		1 7.5	66 <sup>91</sup> 6 <sup>2</sup> / 6.4 18			<b>309</b>						

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>419329</b>	2009 <i>WX</i> <sub>133</sub>		1 7.6 24°44'	1.3°/ 7.8 18			<b>587</b>	Hypsipyle		1 7.6 320°83'	14.4°/ 7.7 18		
12 3	7 37.18	+19 17.7	1.694	2.510	15.4	20.9	12 3	8 3.59	+54 14.6	1.345	2.113	21.1	15.2
12 13	7 32.62	+19 8.2	1.623	2.515	11.8	20.7	12 13	7 55.70	+54 51.4	1.267	2.097	18.7	15.0
12 23	7 25.48	+19 4.6	1.574	2.521	7.6	20.4	12 23	7 41.46	+55 0.6	1.206	2.080	16.3	14.8
1 2	7 16.53	+19 5.7	1.550	2.528	3.1	20.2	1 2	7 22.54	+54 25.1	1.165	2.065	14.7	14.6
1 12	7 6.94	+19 9.4	1.555	2.535	2.4	20.1	1 12	7 2.36	+52 53.5	1.146	2.050	14.5	14.6
1 22	6 57.99	+19 14.3	1.588	2.542	6.8	20.4	1 22	6 44.66	+50 28.2	1.151	2.036	16.2	14.6
2 1	6 50.81	+19 19.4	1.646	2.550	11.0	20.7	2 1	6 32.07	+47 23.5	1.179	2.022	19.0	14.8
2 11	6 46.20	+19 24.0	1.728	2.559	14.6	20.9	2 11	6 25.54	+43 59.6	1.227	2.010	22.1	14.9
<b>262687</b>	2006 <i>WA</i> <sub>173</sub>		1 7.6 158°81'	2.9°/ 8.2 18			<b>85626</b>	1998 <i>HM</i> <sub>141</sub>		1 7.6 23°44'	10.5°/ 10.8 18		
12 3	7 39.81	+14 20.4	2.260	3.042	13.1	21.6	12 3	7 35.87	- 1 15.6	1.456	2.222	19.9	18.6
12 13	7 33.93	+13 55.7	2.178	3.049	10.2	21.4	12 13	7 31.91	- 2 11.6	1.388	2.225	17.0	18.4
12 23	7 26.01	+13 37.9	2.121	3.055	6.9	21.2	12 23	7 25.20	- 2 42.5	1.339	2.229	13.9	18.3
1 2	7 16.67	+13 27.2	2.091	3.060	3.8	21.0	1 2	7 16.49	- 2 42.9	1.311	2.234	11.4	18.1
1 12	7 6.83	+13 23.1	2.092	3.065	3.2	21.0	1 12	7 7.01	- 2 11.2	1.307	2.239	10.6	18.1
1 22	6 57.45	+13 24.8	2.123	3.069	6.1	21.1	1 22	6 58.11	- 1 10.4	1.327	2.244	11.9	18.2
2 1	6 49.42	+13 31.1	2.183	3.073	9.4	21.4	2 1	6 51.03	+ 0 12.8	1.371	2.250	14.5	18.4
2 11	6 43.43	+13 40.8	2.268	3.076	12.3	21.6	2 11	6 46.69	+ 1 49.5	1.436	2.256	17.5	18.6
<b>28929</b>	2000 <i>RU</i> <sub>13</sub>		1 7.6 249°64'	5.2°/ 9.2 18			<b>203600</b>	2002 <i>CN</i> <sub>314</sub>		1 7.6 204°24'	1.0°/ 7.9 18		
12 3	7 33.86	+ 5 21.3	2.563	3.320	12.4	18.9	12 3	7 40.40	+17 38.9	1.876	2.676	14.8	20.8
12 13	7 29.32	+ 4 50.7	2.470	3.314	10.2	18.7	12 13	7 35.04	+18 3.6	1.789	2.673	11.4	20.6
12 23	7 23.08	+ 4 31.6	2.401	3.307	7.8	18.6	12 23	7 27.08	+18 37.5	1.724	2.669	7.3	20.3
1 2	7 15.62	+ 4 25.6	2.358	3.300	5.8	18.4	1 2	7 17.18	+19 17.9	1.687	2.664	2.9	20.1
1 12	7 7.65	+ 4 33.0	2.344	3.293	5.3	18.4	1 12	7 6.44	+20 1.1	1.679	2.660	2.2	20.0
1 22	6 59.94	+ 4 53.0	2.359	3.286	6.8	18.5	1 22	6 56.08	+20 43.6	1.701	2.654	6.6	20.3
2 1	6 53.25	+ 5 23.4	2.402	3.278	9.2	18.6	2 1	6 47.32	+21 22.7	1.751	2.648	10.8	20.5
2 11	6 48.18	+ 6 1.3	2.469	3.271	11.6	18.7	2 11	6 41.07	+21 56.9	1.824	2.642	14.5	20.7
<b>79878</b>	1998 <i>YU</i> <sub>18</sub>		1 7.6 40°49'	0.5°/ 7.4 18			<b>338987</b>	2004 <i>FZ</i> <sub>136</sub>		1 7.6 139°70'	3.7°/ 9.1 18		
12 3	7 38.76	+20 58.1	1.387	2.215	17.6	18.6	12 3	7 34.15	+ 9 2.2	2.577	3.347	12.0	20.8
12 13	7 34.31	+21 35.8	1.330	2.230	13.3	18.3	12 13	7 29.50	+ 8 58.8	2.493	3.351	9.6	20.6
12 23	7 26.75	+22 21.5	1.295	2.246	8.4	18.1	12 23	7 23.17	+ 9 6.1	2.433	3.355	6.9	20.5
1 2	7 17.02	+23 10.3	1.284	2.263	3.0	17.8	1 2	7 15.66	+ 9 24.1	2.401	3.359	4.4	20.3
1 12	7 6.58	+23 56.5	1.300	2.280	2.6	17.8	1 12	7 7.70	+ 9 51.8	2.398	3.363	3.8	20.3
1 22	6 56.99	+24 35.7	1.343	2.298	7.7	18.2	1 22	7 0.06	+10 27.3	2.425	3.366	5.7	20.4
2 1	6 49.62	+25 6.0	1.411	2.317	12.3	18.5	2 1	6 53.47	+11 8.2	2.481	3.370	8.4	20.6
2 11	6 45.35	+25 27.4	1.501	2.335	16.2	18.8	2 11	6 48.51	+11 51.8	2.562	3.373	11.0	20.8
<b>154051</b>	2002 <i>CQ</i> <sub>121</sub>		1 7.6 158°26'	0.8°/ 7.4 18			<b>162928</b>	2001 <i>ON</i> <sub>76</sub>		1 7.6 186°48'	2.1°/ 6.9 18		
12 3	7 40.55	+24 57.4	2.297	3.095	12.4	20.4	12 3	7 38.29	+28 15.0	2.426	3.228	11.8	20.3
12 13	7 34.58	+24 58.4	2.215	3.100	9.4	20.2	12 13	7 32.93	+28 36.5	2.342	3.228	9.0	20.1
12 23	7 26.46	+24 59.7	2.159	3.105	6.0	20.0	12 23	7 25.47	+28 57.3	2.283	3.227	5.8	19.9
1 2	7 16.84	+24 59.0	2.131	3.109	2.3	19.8	1 2	7 16.53	+29 13.9	2.252	3.227	2.8	19.7
1 12	7 6.70	+24 54.3	2.133	3.113	2.0	19.7	1 12	7 7.02	+29 23.6	2.252	3.226	2.8	19.7
1 22	6 57.08	+24 44.8	2.166	3.116	5.7	20.0	1 22	6 57.94	+29 24.9	2.281	3.225	5.9	19.9
2 1	6 48.92	+24 31.0	2.228	3.119	9.1	20.2	2 1	6 50.21	+29 18.2	2.339	3.224	9.0	20.1
2 11	6 42.92	+24 14.0	2.315	3.122	12.1	20.4	2 11	6 44.55	+29 4.8	2.422	3.223	11.8	20.3
<b>374205</b>	2005 <i>EU</i> <sub>120</sub>		1 7.6 340°40'	0.4°/ 7.5 18			<b>97474</b>	2000 <i>CX</i> <sub>47</sub>		1 7.6 309°00'	1.6°/ 7.3 18		
12 3	7 37.25	+23 53.7	1.835	2.652	14.4	20.4	12 3	7 39.55	+27 31.9	2.056	2.864	13.4	18.9
12 13	7 32.69	+23 47.4	1.751	2.645	11.0	20.2	12 13	7 34.22	+27 29.2	1.968	2.858	10.2	18.7
12 23	7 25.56	+23 42.6	1.689	2.638	7.0	20.0	12 23	7 26.43	+27 24.8	1.905	2.852	6.6	18.5
1 2	7 16.59	+23 37.0	1.654	2.633	2.6	19.7	1 2	7 16.91	+27 16.0	1.869	2.845	2.8	18.2
1 12	7 6.89	+23 28.8	1.647	2.627	2.1	19.6	1 12	7 6.73	+27 0.5	1.862	2.840	2.6	18.2
1 22	6 57.71	+23 16.8	1.668	2.622	6.6	19.9	1 22	6 57.06	+26 37.8	1.884	2.834	6.4	18.4
2 1	6 50.20	+23 1.5	1.717	2.618	10.8	20.1	2 1	6 49.01	+26 9.1	1.934	2.828	10.2	18.6
2 11	6 45.22	+22 43.8	1.788	2.614	14.3	20.4	2 11	6 43.37	+25 36.4	2.009	2.823	13.5	18.8
<b>325580</b>	2009 <i>SE</i> <sub>137</sub>		1 7.6 204°64'	5.3°/ 5.6 18			<b>222073</b>	1999 <i>HY</i> <sub>1</sub>		1 7.6 160°67'	36.2°/ 12.2 17		
12 3	7 43.95	+38 9.7	2.552	3.336	11.7	21.5	12 3	7 55.18	-34 12.9	0.936	1.538	38.0	20.3
12 13	7 37.45	+39 2.8	2.465	3.331	9.4	21.3	12 13	7 49.01	-39 24.1	0.923	1.547	37.2	20.3
12 23	7 28.45	+39 50.0	2.404	3.325	7.0	21.1	12 23	7 37.47	-43 34.1	0.918	1.554	36.6	20.3
1 2	7 17.63	+40 25.4	2.371	3.318	5.4	21.0	1 2	7 21.38	-46 24.9	0.918	1.560	36.3	20.3
1 12	7 6.04	+40 44.5	2.368	3.311	5.7	21.0	1 12	7 3.00	-47 45.7	0.923	1.564	36.2	20.3
1 22	6 54.86	+40 45.6	2.394	3.303	7.7	21.1	1 22	6 45.40	-47 36.4	0.932	1.567	36.3	20.3
2 1	6 45.24	+40 29.9	2.447	3.294	10.2	21.3	2 1	6 31.52	-46 5.8	0.944	1.568	36.5	20.3
2 11	6 38.03	+40 0.7	2.525	3.285	12.6	21.4	2 11	6 23.21	-43 30.9	0.957	1.567	36.9	20.4
<b>379022</b>	2008 <i>VP</i> <sub>35</sub>		1 7.6 52°29'	1.7°/ 7.9 18			<b>415498</b>	2014 <i>OG</i> <sub>375</sub>		1 7.6 183°22'	0.3°/ 7.7 18		
12 3	7 37.74	+18 33.7	2.032	2.835	13.7	20.7	12 3	7 41.40	+20 12.8	2.038	2.836	13.8	22.7
12 13	7 32.58	+18 10.2	1.958	2.843	10.5	20.5	12 13	7 35.56	+20 29.6	1.953	2.837	10.6	22.5
12 23	7 25.23	+17 51.4	1.907	2.851	6.8	20.3	12 23	7 27.28	+20 51.9	1.892	2.837	6.7	22.3
1 2	7 16.40	+17 36.7	1.884	2.860	3.0	20.1	1 2	7 17.24	+21 17.2	1.859	2.837	2.5	22.0
1 12	7 7.08	+17 25.4	1.890	2.869	2.4	20.0	1 12	7 6.48	+21 42.3	1.855	2.836	1.9	21.9
1 22	6 58.31	+17 17.0	1.925	2.877	6.1	20.3	1 22	6 56.16	+22 4.7	1.882	2.834	6.2	22.2
2 1	6 51.06	+17 10.9	1.988	2.887	9.7	20.5	2 1	6 47.39	+22 23.3	1.937	2.831	10.1	22.4
2 11	6 46.00	+17 6.6	2.076	2.896	12.9	20.8	2 11	6 41.00	+22 37.7	2.017	2.828	13.5	22.7
<b>16426</b>	1988 <i>EC</i>		1 7.6 75°75'	15.9°/ 8.1 18			<b>329409</b>	2002 <i>ED</i> <sub>95</sub>		1 7.6 352°01'	8.7°/ 11.1 18		
12 3	8 8.93	+53 32.1											

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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>46640</b>	1995 <i>DU</i>		1 7.6 10°32	4.9/ 6.4	18		<b>460888</b>	2014 <i>WU</i> <sub>163</sub>		1 7.6 90°34	1.9/ 8.0	18	
12 3	7 41.01	+35 15.8	2.028	2.834	13.6	18.4	12 3	7 39.31	+17 14.3	1.884	2.685	14.7	21.7
12 13	7 35.54	+35 50.7	1.953	2.834	10.7	18.2	12 13	7 33.94	+17 4.0	1.813	2.697	11.3	21.5
12 23	7 27.37	+36 19.8	1.900	2.835	7.6	18.0	12 23	7 26.19	+17 0.7	1.766	2.708	7.4	21.3
1 2	7 17.28	+36 37.5	1.875	2.836	5.2	17.9	1 2	7 16.83	+17 3.3	1.745	2.720	3.3	21.1
1 12	7 6.49	+36 39.5	1.878	2.837	5.4	17.9	1 12	7 6.92	+17 10.3	1.753	2.732	2.6	21.1
1 22	6 56.35	+36 24.8	1.909	2.838	8.0	18.0	1 22	6 57.63	+17 20.0	1.791	2.743	6.4	21.3
2 1	6 48.05	+35 55.2	1.966	2.839	11.1	18.2	2 1	6 49.97	+17 31.0	1.856	2.754	10.2	21.6
2 11	6 42.44	+35 14.7	2.047	2.841	14.0	18.4	2 11	6 44.69	+17 42.5	1.944	2.766	13.5	21.8
<b>165118</b>	2000 <i>JB</i> <sub>68</sub>		1 7.6 92°10	3.7/ 8.7	18		<b>461499</b>	2003 <i>BL</i> <sub>81</sub>		1 7.6 332°24	0.5/ 7.5	18	
12 3	7 35.73	+11 6.2	2.283	3.064	13.1	20.2	12 3	7 36.46	+23 5.3	1.438	2.269	16.9	20.8
12 13	7 30.85	+10 47.5	2.207	3.073	10.3	20.0	12 13	7 32.90	+23 11.2	1.352	2.254	13.0	20.5
12 23	7 24.08	+10 38.5	2.154	3.082	7.2	19.8	12 23	7 26.17	+23 21.5	1.287	2.239	8.3	20.2
1 2	7 16.02	+10 39.6	2.129	3.091	4.5	19.7	1 2	7 16.99	+23 33.0	1.247	2.226	3.1	19.8
1 12	7 7.51	+10 50.2	2.132	3.100	3.9	19.7	1 12	7 6.71	+23 42.2	1.232	2.213	2.6	19.8
1 22	6 59.41	+11 8.7	2.165	3.109	6.2	19.8	1 22	6 56.93	+23 46.6	1.245	2.201	8.0	20.1
2 1	6 52.57	+11 33.1	2.227	3.118	9.1	20.0	2 1	6 49.18	+23 45.5	1.281	2.190	13.0	20.3
2 11	6 47.60	+12 1.1	2.313	3.126	11.9	20.2	2 11	6 44.58	+23 39.8	1.339	2.180	17.4	20.5
<b>63422</b>	2001 <i>KL</i> <sub>70</sub>		1 7.6 104°94	5.0/ 8.5	18		<b>490712</b>	2010 <i>RS</i> <sub>25</sub>		1 7.6 114°50	6.3/ 9.9	18	
12 3	7 40.27	+10 25.2	1.928	2.708	15.2	19.0	12 3	7 37.30	+ 4 33.3	1.803	2.573	16.4	21.6
12 13	7 34.49	+ 9 33.5	1.857	2.721	12.1	18.8	12 13	7 32.56	+ 4 24.0	1.726	2.578	13.4	21.4
12 23	7 26.46	+ 8 52.2	1.810	2.734	8.7	18.7	12 23	7 25.44	+ 4 33.4	1.669	2.582	10.1	21.2
1 2	7 16.89	+ 8 23.2	1.789	2.747	5.8	18.5	1 2	7 16.60	+ 5 2.9	1.638	2.586	7.2	21.1
1 12	7 6.84	+ 8 7.1	1.798	2.760	5.2	18.5	1 12	7 7.07	+ 5 51.2	1.634	2.590	6.3	21.0
1 22	6 57.39	+ 8 3.5	1.834	2.772	7.6	18.7	1 22	6 58.00	+ 6 54.9	1.658	2.595	8.3	21.1
2 1	6 49.52	+ 8 10.7	1.898	2.784	10.8	18.9	2 1	6 50.47	+ 8 8.6	1.708	2.599	11.5	21.3
2 11	6 43.94	+ 8 26.0	1.986	2.796	13.8	19.1	2 11	6 45.28	+ 9 26.9	1.782	2.602	14.6	21.6
<b>119957</b>	2002 <i>RB</i> <sub>106</sub>		1 7.6 64°68	4.7/ 8.6	18		<b>414257</b>	2008 <i>GZ</i> <sub>77</sub>		1 7.6 40°55	1.6/ 7.1	18	
12 3	7 42.19	+12 33.3	1.257	2.070	19.9	19.3	12 3	7 38.97	+24 3.2	1.776	2.592	14.8	20.8
12 13	7 36.87	+12 4.2	1.205	2.091	15.6	19.1	12 13	7 34.14	+24 44.7	1.700	2.594	11.3	20.6
12 23	7 28.33	+11 50.3	1.172	2.111	10.7	18.8	12 23	7 26.59	+25 30.5	1.647	2.596	7.2	20.4
1 2	7 17.62	+11 52.0	1.163	2.132	6.1	18.6	1 2	7 17.05	+26 16.1	1.621	2.599	2.9	20.1
1 12	7 6.31	+12 7.8	1.180	2.153	5.1	18.7	1 12	7 6.72	+26 56.6	1.623	2.601	2.8	20.1
1 22	6 56.04	+12 34.3	1.223	2.174	8.9	18.9	1 22	6 56.91	+27 28.3	1.654	2.604	7.1	20.4
2 1	6 48.17	+13 7.7	1.291	2.195	13.3	19.2	2 1	6 48.87	+27 50.1	1.711	2.606	11.2	20.6
2 11	6 43.55	+13 44.2	1.379	2.216	17.2	19.5	2 11	6 43.50	+28 2.6	1.792	2.609	14.7	20.9
<b>146595</b>	2001 <i>TB</i> <sub>157</sub>		1 7.6 300°83	0.8/ 7.8	18		<b>347275</b>	2011 <i>LJ</i>		1 7.6 244°00	0.9/ 7.3	18	
12 3	7 37.56	+19 27.6	1.733	2.546	15.2	20.4	12 3	7 42.26	+21 30.9	1.575	2.389	16.5	21.4
12 13	7 33.17	+19 35.6	1.642	2.534	11.7	20.1	12 13	7 37.18	+22 14.6	1.485	2.378	12.7	21.1
12 23	7 26.05	+19 50.8	1.573	2.521	7.6	19.8	12 23	7 28.87	+23 7.3	1.417	2.366	8.1	20.8
1 2	7 16.88	+20 11.1	1.531	2.509	2.9	19.5	1 2	7 18.01	+24 4.2	1.375	2.354	3.0	20.5
1 12	7 6.78	+20 33.4	1.516	2.496	2.2	19.4	1 12	7 5.89	+24 59.0	1.362	2.341	2.7	20.4
1 22	6 57.05	+20 55.2	1.530	2.485	7.0	19.7	1 22	6 54.13	+25 46.5	1.376	2.328	8.0	20.7
2 1	6 48.99	+21 14.6	1.570	2.473	11.5	19.9	2 1	6 44.31	+26 23.8	1.417	2.315	12.9	20.9
2 11	6 43.56	+21 30.8	1.632	2.461	15.4	20.2	2 11	6 37.61	+26 50.9	1.480	2.301	17.1	21.2
<b>96628</b>	1999 <i>FW</i> <sub>27</sub>		1 7.6 219°97	2.4/ 6.9	18		<b>280077</b>	2002 <i>CU</i> <sub>38</sub>		1 7.6 297°50	1.6/ 7.2	18	
12 3	7 43.10	+27 12.2	1.790	2.600	15.0	19.4	12 3	7 38.75	+25 54.0	1.867	2.682	14.3	20.9
12 13	7 37.40	+27 42.8	1.704	2.594	11.5	19.1	12 13	7 34.01	+26 10.1	1.774	2.667	10.9	20.7
12 23	7 28.74	+28 14.5	1.641	2.588	7.5	18.9	12 23	7 26.56	+26 27.7	1.704	2.652	7.0	20.4
1 2	7 17.86	+28 42.1	1.605	2.581	3.4	18.6	1 2	7 17.07	+26 43.0	1.660	2.637	2.9	20.1
1 12	7 6.02	+29 1.0	1.598	2.573	3.5	18.6	1 12	7 6.68	+26 52.4	1.645	2.623	2.8	20.1
1 22	6 54.69	+29 8.5	1.619	2.566	7.6	18.8	1 22	6 56.68	+26 54.0	1.658	2.609	7.0	20.3
2 1	6 45.26	+29 4.8	1.667	2.557	11.7	19.1	2 1	6 48.34	+26 47.6	1.698	2.594	11.2	20.5
2 11	6 38.72	+28 52.2	1.739	2.549	15.4	19.3	2 11	6 42.63	+26 34.7	1.761	2.580	14.8	20.7
<b>101711</b>	1999 <i>DT</i> <sub>1</sub>		1 7.6 11°86	8.1/ 6.8	18		<b>218637</b>	2005 <i>SP</i> <sub>15</sub>		1 7.6 171°38	0.7/ 7.8	18	
12 3	7 47.13	+41 35.3	1.508	2.316	17.4	18.7	12 3	7 39.48	+19 39.3	2.246	3.041	12.8	21.7
12 13	7 41.18	+42 3.9	1.442	2.317	14.2	18.5	12 13	7 33.85	+19 44.2	2.162	3.044	9.8	21.5
12 23	7 31.33	+42 18.2	1.397	2.320	10.9	18.3	12 23	7 26.08	+19 53.8	2.102	3.046	6.3	21.3
1 2	7 18.76	+42 9.4	1.375	2.323	8.4	18.2	1 2	7 16.80	+20 6.3	2.071	3.048	2.4	21.1
1 12	7 5.41	+41 32.3	1.379	2.326	8.5	18.2	1 12	7 6.94	+20 19.7	2.070	3.050	1.8	21.0
1 22	6 53.32	+40 27.9	1.409	2.330	11.0	18.4	1 22	6 57.52	+20 32.2	2.099	3.051	5.7	21.3
2 1	6 44.16	+39 2.8	1.463	2.335	14.3	18.6	2 1	6 49.47	+20 42.9	2.157	3.052	9.2	21.5
2 11	6 38.86	+37 26.0	1.539	2.341	17.4	18.8	2 11	6 43.52	+20 51.6	2.240	3.052	12.3	21.7
<b>178176</b>	2006 <i>UQ</i> <sub>84</sub>		1 7.6 163°14	1.3/ 7.9	18		<b>17920</b>	Zarnecki		1 7.6 228°91	4.0/ 8.6	18	
12 3	7 39.83	+18 8.5	2.124	2.919	13.5	20.9	12 3	7 39.43	+12 2.1	1.741	2.535	16.0	19.1
12 13	7 34.19	+18 8.9	2.042	2.923	10.3	20.7	12 13	7 34.42	+11 47.9	1.654	2.529	12.7	18.9
12 23	7 26.32	+18 15.3	1.984	2.927	6.7	20.5	12 23	7 26.77	+11 45.8	1.588	2.523	8.8	18.6
1 2	7 16.87	+18 26.1	1.955	2.931	2.8	20.3	1 2	7 17.14	+11 56.3	1.549	2.516	5.1	18.4
1 12	7 6.84	+18 39.5	1.955	2.934	2.1	20.2	1 12	7 6.64	+12 18.3	1.537	2.509	4.3	18.3
1 22	6 57.27	+18 53.6	1.985	2.937	5.9	20.5	1 22	6 56.56	+12 49.2	1.553	2.501	7.6	18.5
2 1	6 49.16	+19 7.2	2.044	2.939	9.6	20.7	2 1	6 48.11	+13 26.2	1.596	2.494	11.7	18.7
2 11	6 43.24	+19 19.8	2.127	2.941	12.8	20.9	2 11	6 42.22	+14 6.0	1.662	2.486	15.4	18.9
<b>195658</b>	2002 <i>NV</i> <sub>61</sub>		1 7.6 112°18	5.2/ 9.6	18		<b>26328</b>	Litomyšl		1 7.6 124°80	3.5/ 8.5	18	
12 3	7 35.53	+ 5 2.3	2.388	3.145	13.2	20.2	12 3	7 42					

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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>147960</b>	1994 <i>CM</i> <sub>4</sub>		1 7.6 163°78	2°7/ 8.4	18		<b>286903</b>	2002 <i>PY</i> <sub>67</sub>		1 7.6 217°21	0°9/ 7.8	18	
12 3	7 42.35	+13 48.1	1.814	2.604	15.6	21.0	12 3	7 40.48	+19 18.0	1.999	2.798	14.0	22.1
12 13	7 36.44	+13 57.5	1.735	2.610	12.2	20.8	12 13	7 34.97	+19 21.0	1.908	2.792	10.8	21.9
12 23	7 27.92	+14 18.3	1.678	2.616	8.2	20.6	12 23	7 27.00	+19 29.7	1.840	2.785	7.0	21.7
1 2	7 17.52	+14 49.3	1.648	2.620	4.1	20.3	1 2	7 17.22	+19 42.2	1.800	2.777	2.8	21.4
1 12	7 6.37	+15 27.8	1.648	2.624	3.2	20.3	1 12	7 6.65	+19 56.2	1.789	2.769	2.1	21.3
1 22	6 55.73	+16 10.2	1.677	2.628	6.9	20.5	1 22	6 56.48	+20 9.9	1.808	2.761	6.3	21.6
2 1	6 46.79	+16 53.4	1.734	2.630	11.0	20.8	2 1	6 47.83	+20 21.9	1.856	2.752	10.4	21.8
2 11	6 40.42	+17 35.1	1.814	2.631	14.5	21.0	2 11	6 41.56	+20 31.9	1.927	2.743	13.9	22.0
<b>294131</b>	2007 <i>TF</i> <sub>274</sub>		1 7.6 1°65	1°3/ 7.9	18		<b>354985</b>	2006 <i>KR</i> <sub>42</sub>		1 7.6 248°64	1°3/ 7.9	18	
12 3	7 36.78	+18 33.4	1.254	2.088	18.7	20.3	12 3	7 40.28	+18 24.3	1.759	2.565	15.4	21.7
12 13	7 33.27	+18 39.2	1.184	2.086	14.4	20.1	12 13	7 35.18	+18 25.5	1.668	2.554	11.9	21.5
12 23	7 26.42	+18 55.4	1.134	2.086	9.3	19.8	12 23	7 27.33	+18 34.0	1.598	2.543	7.7	21.2
1 2	7 17.07	+19 19.7	1.107	2.086	3.7	19.5	1 2	7 17.39	+18 48.2	1.555	2.532	3.2	20.9
1 12	7 6.72	+19 48.3	1.106	2.087	2.8	19.4	1 12	7 6.50	+19 5.6	1.541	2.520	2.4	20.8
1 22	6 57.08	+20 17.2	1.130	2.089	8.3	19.7	1 22	6 56.00	+19 23.8	1.555	2.508	7.0	21.1
2 1	6 49.72	+20 43.8	1.178	2.091	13.5	20.0	2 1	6 47.19	+19 41.1	1.596	2.496	11.5	21.3
2 11	6 45.69	+21 6.6	1.247	2.095	17.9	20.3	2 11	6 41.04	+19 56.7	1.660	2.484	15.4	21.5
<b>422251</b>	2014 <i>SU</i> <sub>102</sub>		1 7.6 136°95	5°9/ 9.6	18		<b>382292</b>	2012 <i>UQ</i> <sub>104</sub>		1 7.6 221°70	2°8/ 8.3	17	
12 3	7 38.20	+ 5 7.4	2.046	2.808	15.0	22.0	12 3	7 36.44	+13 28.8	2.885	3.659	10.8	20.7
12 13	7 32.92	+ 4 46.3	1.970	2.817	12.2	21.9	12 13	7 31.12	+12 57.5	2.786	3.650	8.5	20.5
12 23	7 25.50	+ 4 40.5	1.917	2.826	9.2	21.7	12 23	7 24.18	+12 31.5	2.712	3.642	5.9	20.3
1 2	7 16.60	+ 4 51.6	1.889	2.835	6.7	21.5	1 2	7 16.10	+12 11.3	2.667	3.633	3.5	20.2
1 12	7 7.15	+ 5 18.9	1.889	2.843	5.9	21.5	1 12	7 7.56	+11 57.1	2.654	3.623	3.0	20.1
1 22	6 58.15	+ 6 0.2	1.919	2.851	7.7	21.6	1 22	6 59.29	+11 48.6	2.671	3.613	5.2	20.3
2 1	6 50.55	+ 6 51.8	1.975	2.858	10.6	21.8	2 1	6 51.98	+11 45.3	2.718	3.603	7.9	20.4
2 11	6 45.06	+ 7 49.2	2.056	2.865	13.4	22.0	2 11	6 46.22	+11 46.1	2.791	3.592	10.4	20.6
<b>132868</b>	2002 <i>RO</i> <sub>95</sub>		1 7.6 77°89	0°5/ 7.4	18 R		<b>55753</b>	Raman		1 7.6 158°40	3°8/ 6.5	18	
12 3	7 34.23	+23 45.5	3.138	3.933	9.5	20.4	12 3	7 42.85	+33 19.7	2.391	3.185	12.2	19.8
12 13	7 29.27	+23 57.5	3.070	3.954	7.2	20.2	12 13	7 36.49	+33 54.2	2.314	3.192	9.4	19.7
12 23	7 22.89	+24 10.7	3.029	3.975	4.5	20.1	12 23	7 27.79	+34 24.4	2.262	3.198	6.5	19.5
1 2	7 15.58	+24 23.3	3.017	3.996	1.7	19.9	1 2	7 17.46	+34 45.8	2.239	3.203	4.1	19.4
1 12	7 7.98	+24 33.7	3.037	4.016	1.4	19.9	1 12	7 6.54	+34 54.9	2.245	3.208	4.3	19.4
1 22	7 0.76	+24 41.0	3.087	4.037	4.2	20.2	1 22	6 56.17	+34 50.4	2.282	3.212	6.8	19.5
2 1	6 54.52	+24 44.9	3.168	4.057	6.8	20.4	2 1	6 47.38	+34 33.4	2.346	3.216	9.7	19.7
2 11	6 49.76	+24 45.4	3.274	4.078	9.0	20.5	2 11	6 40.91	+34 6.8	2.435	3.219	12.3	19.9
<b>187687</b>	2008 <i>DV</i> <sub>31</sub>		1 7.6 148°55	1°1/ 7.2	18		<b>273064</b>	2006 <i>DM</i> <sub>190</sub>		1 7.6 211°75	0°0/ 7.4	18	
12 3	7 40.20	+23 45.8	1.977	2.783	13.9	20.7	12 3	7 37.26	+21 11.9	2.306	3.106	12.3	20.9
12 13	7 34.76	+24 14.5	1.899	2.788	10.5	20.5	12 13	7 32.24	+21 30.6	2.218	3.103	9.4	20.7
12 23	7 26.83	+24 46.5	1.845	2.792	6.7	20.3	12 23	7 25.13	+21 53.6	2.154	3.100	6.0	20.5
1 2	7 17.13	+25 18.1	1.818	2.796	2.6	20.0	1 2	7 16.51	+22 18.7	2.119	3.097	2.2	20.2
1 12	7 6.73	+25 45.4	1.821	2.800	2.4	20.0	1 12	7 7.27	+22 43.0	2.113	3.094	1.7	20.2
1 22	6 56.84	+26 6.1	1.853	2.803	6.4	20.3	1 22	6 58.38	+23 4.6	2.138	3.090	5.6	20.4
2 1	6 48.59	+26 19.2	1.913	2.806	10.3	20.5	2 1	6 50.78	+23 22.2	2.192	3.086	9.1	20.7
2 11	6 42.78	+26 25.5	1.997	2.809	13.6	20.7	2 11	6 45.20	+23 35.5	2.270	3.082	12.1	20.9
<b>221375</b>	2005 <i>XF</i> <sub>55</sub>		1 7.6 48°83	2°7/ 6.8	18		<b>401147</b>	2011 <i>VY</i> <sub>10</sub>		1 7.6 142°19	0°9/ 7.4	18	
12 3	7 39.70	+27 31.1	1.735	2.553	15.0	20.3	12 3	7 43.34	+23 31.8	1.935	2.737	14.3	22.2
12 13	7 34.71	+28 10.1	1.668	2.562	11.4	20.1	12 13	7 37.09	+23 53.1	1.862	2.748	10.9	22.0
12 23	7 26.92	+28 49.8	1.624	2.572	7.4	19.8	12 23	7 28.27	+24 17.3	1.812	2.759	6.9	21.8
1 2	7 17.17	+29 24.9	1.607	2.582	3.5	19.6	1 2	7 17.66	+24 40.7	1.790	2.769	2.6	21.6
1 12	7 6.72	+29 50.6	1.617	2.592	3.7	19.7	1 12	7 6.40	+24 59.9	1.799	2.778	2.3	21.5
1 22	6 56.95	+30 4.5	1.656	2.602	7.4	19.9	1 22	6 55.77	+25 12.7	1.836	2.787	6.5	21.8
2 1	6 49.10	+30 6.7	1.721	2.613	11.3	20.2	2 1	6 46.90	+25 18.8	1.902	2.795	10.4	22.1
2 11	6 44.04	+29 59.4	1.808	2.624	14.7	20.4	2 11	6 40.60	+25 19.2	1.992	2.802	13.7	22.3
<b>92406</b>	2000 <i>JN</i> <sub>32</sub>		1 7.6 266°77	2°8/ 8.1	18		<b>286196</b>	2001 <i>UD</i> <sub>67</sub>		1 7.6 62°04	4°0/ 6.2	18	
12 3	7 40.65	+16 30.5	1.547	2.356	16.9	19.9	12 3	7 38.79	+33 10.9	2.301	3.105	12.3	20.9
12 13	7 35.76	+16 8.2	1.458	2.345	13.2	19.6	12 13	7 33.57	+33 57.2	2.227	3.109	9.5	20.7
12 23	7 27.84	+15 54.0	1.390	2.334	8.9	19.4	12 23	7 26.03	+34 40.2	2.177	3.114	6.6	20.6
1 2	7 17.59	+15 47.9	1.348	2.322	4.3	19.1	1 2	7 16.84	+35 14.8	2.155	3.118	4.3	20.4
1 12	7 6.31	+15 48.8	1.333	2.311	3.5	19.0	1 12	7 7.03	+35 37.1	2.162	3.123	4.6	20.4
1 22	6 55.49	+15 55.2	1.346	2.299	8.0	19.2	1 22	6 57.70	+35 45.3	2.198	3.128	7.1	20.6
2 1	6 46.56	+16 5.6	1.384	2.287	12.7	19.5	2 1	6 49.90	+35 39.9	2.261	3.132	9.9	20.8
2 11	6 40.59	+16 18.6	1.445	2.275	16.9	19.7	2 11	6 44.39	+35 23.5	2.348	3.137	12.5	21.0
<b>431211</b>	2006 <i>SB</i> <sub>204</sub>		1 7.6 159°62	8°3/11.8	17		<b>3858</b>	Dorchester		1 7.6 120°68	4°3/ 6.8	18	
12 3	7 33.38	-10 8.2	3.061	3.722	12.4	22.1	12 3	7 50.30	+31 58.8	1.679	2.481	16.1	17.7
12 13	7 28.69	-10 49.8	2.982	3.728	11.1	22.0	12 13	7 42.77	+32 36.4	1.619	2.501	12.4	17.5
12 23	7 22.58	-11 14.4	2.923	3.732	9.7	21.9	12 23	7 32.00	+33 9.4	1.581	2.521	8.4	17.3
1 2	7 15.50	-11 19.3	2.889	3.737	8.7	21.9	1 2	7 19.01	+33 30.8	1.571	2.540	4.9	17.1
1 12	7 8.04	-11 3.5	2.880	3.741	8.3	21.8	1 12	7 5.40	+33 35.7	1.590	2.558	5.0	17.2
1 22	7 0.84	-10 27.9	2.897	3.744	8.7	21.9	1 22	6 52.84	+33 23.3	1.637	2.575	8.4	17.4
2 1	6 54.51	- 9 35.1	2.940	3.748	9.8	21.9	2 1	6 42.74	+32 56.3	1.712	2.591	12.1	17.7
2 11	6 49.56	- 8 29.1	3.008	3.751	11.1	22.1	2 11	6 35.97	+32 19.8	1.809	2.606	15.4	17.9
<b>29965</b>	1999 <i>JX</i> <sub>102</sub>		1 7.6 345°33	0°7/ 7.3	18		<b>334247</b>	2001 <i>TT</i> <sub>141</sub>		1 7.6 70°64	0°6/ 7.8	18	
12 3	7 35.41	+22 15.9	1.996	2.809	13.5	18.4							

EPHEMERIDES

1 7.6

1 7.6

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>101721</b>	Emanuelfritsch		1 7.6 260°85	5°8/ 9.7 18			<b>169300</b>	2001 <i>SL</i> <sub>353</sub>		1 7.6 143°48	4°8/ 9.3 18		
12 3	7 33.91	+ 3 22.3	2.499	3.249	12.9	20.0	12 3	7 34.44	+ 6 32.9	2.527	3.288	12.5	20.9
12 13	7 29.50	+ 3 0.1	2.403	3.239	10.7	19.8	12 13	7 29.79	+ 6 10.6	2.443	3.292	10.1	20.8
12 23	7 23.32	+ 2 51.4	2.329	3.229	8.3	19.7	12 23	7 23.44	+ 5 59.8	2.383	3.295	7.6	20.6
1 2	7 15.86	+ 2 58.0	2.282	3.218	6.4	19.5	1 2	7 15.90	+ 6 1.5	2.350	3.298	5.4	20.5
1 12	7 7.84	+ 3 20.0	2.263	3.207	5.8	19.5	1 12	7 7.90	+ 6 15.6	2.346	3.300	4.8	20.5
1 22	7 0.04	+ 3 56.0	2.272	3.196	7.2	19.5	1 22	7 0.23	+ 6 40.7	2.371	3.303	6.4	20.6
2 1	6 53.25	+ 4 43.4	2.309	3.185	9.5	19.7	2 1	6 53.62	+ 7 14.5	2.424	3.305	8.9	20.7
2 11	6 48.13	+ 5 38.4	2.372	3.174	12.0	19.8	2 11	6 48.67	+ 7 54.0	2.502	3.308	11.4	20.9
<b>49160</b>	1998 <i>SW</i> <sub>55</sub>		1 7.6 18°20	5°8/ 6.7 18			<b>378872</b>	2008 <i>TB</i> <sub>120</sub>		1 7.6 145°46	4°6/ 9.0 18		
12 3	7 43.44	+32 56.7	1.201	2.036	19.3	18.1	12 3	7 36.30	+ 8 1.7	2.387	3.154	13.0	21.4
12 13	7 38.89	+33 37.6	1.139	2.039	15.0	17.9	12 13	7 31.26	+ 7 33.8	2.306	3.160	10.4	21.3
12 23	7 30.23	+34 13.3	1.097	2.042	10.4	17.6	12 23	7 24.39	+ 7 16.7	2.249	3.165	7.7	21.1
1 2	7 18.53	+34 34.9	1.077	2.046	6.4	17.4	1 2	7 16.25	+ 7 11.6	2.218	3.170	5.3	21.0
1 12	7 5.78	+34 35.2	1.083	2.051	6.6	17.4	1 12	7 7.64	+ 7 18.5	2.217	3.175	4.8	20.9
1 22	6 54.16	+34 12.8	1.113	2.057	10.6	17.7	1 22	6 59.40	+ 7 36.0	2.245	3.180	6.6	21.1
2 1	6 45.54	+33 31.7	1.166	2.063	15.2	17.9	2 1	6 52.33	+ 8 2.1	2.301	3.184	9.2	21.2
2 11	6 40.99	+32 38.7	1.239	2.069	19.2	18.2	2 11	6 47.06	+ 8 34.1	2.382	3.188	11.8	21.4
<b>343752</b>	2011 <i>FQ</i> <sub>48</sub>		1 7.6 190°65	4°2/ 9.4 17			<b>157975</b>	2000 <i>GQ</i> <sub>138</sub>		1 7.6 315°44	4°4/ 6.3 18		
12 3	7 34.39	+ 5 29.7	3.145	3.890	10.6	22.7	12 3	7 40.54	+28 5.4	1.312	2.146	18.0	20.1
12 13	7 29.45	+ 5 15.4	3.051	3.888	8.6	22.6	12 13	7 36.63	+29 12.9	1.233	2.135	14.0	19.8
12 23	7 23.08	+ 5 11.2	2.982	3.886	6.5	22.4	12 23	7 28.92	+30 24.9	1.176	2.125	9.3	19.5
1 2	7 15.73	+ 5 17.7	2.940	3.883	4.7	22.3	1 2	7 18.19	+31 32.9	1.142	2.116	5.1	19.2
1 12	7 7.97	+ 5 34.8	2.929	3.880	4.3	22.3	1 12	7 6.02	+32 27.3	1.134	2.106	5.6	19.2
1 22	7 0.44	+ 6 1.2	2.949	3.876	5.6	22.3	1 22	6 54.39	+33 2.3	1.152	2.098	10.1	19.5
2 1	6 53.74	+ 6 35.1	2.997	3.872	7.6	22.5	2 1	6 45.22	+33 16.8	1.194	2.089	14.9	19.7
2 11	6 48.38	+ 7 14.2	3.072	3.867	9.7	22.6	2 11	6 39.85	+33 14.2	1.255	2.081	19.2	20.0
<b>298379</b>	2003 <i>SP</i> <sub>51</sub>		1 7.6 39°29	1°8/ 8.1 18			<b>59680</b>	1999 <i>JW</i> <sub>102</sub>		1 7.6 333°81	6°4/ 9.4 18		
12 3	7 38.37	+16 21.2	1.393	2.213	17.9	20.1	12 3	7 33.75	+ 4 34.5	2.090	2.858	14.5	19.0
12 13	7 34.06	+16 39.7	1.328	2.222	13.8	19.8	12 13	7 29.68	+ 3 55.3	2.004	2.851	12.0	18.8
12 23	7 26.71	+17 10.8	1.285	2.232	9.0	19.6	12 23	7 23.58	+ 3 30.4	1.939	2.845	9.3	18.6
1 2	7 17.18	+17 51.7	1.265	2.242	3.8	19.3	1 2	7 16.01	+ 3 22.2	1.899	2.839	7.1	18.5
1 12	7 6.85	+18 38.0	1.273	2.253	2.8	19.3	1 12	7 7.82	+ 3 31.5	1.886	2.834	6.5	18.4
1 22	6 57.25	+19 25.1	1.307	2.264	7.7	19.6	1 22	6 59.96	+ 3 57.0	1.901	2.829	8.1	18.5
2 1	6 49.75	+20 9.3	1.367	2.276	12.4	19.9	2 1	6 53.34	+ 4 36.0	1.942	2.824	10.8	18.7
2 11	6 45.29	+20 48.4	1.449	2.288	16.4	20.2	2 11	6 48.67	+ 5 24.4	2.007	2.820	13.5	18.8
<b>14787</b>	5038 <i>T</i> <sub>-3</sub>		1 7.6 176°04	1°6/ 8.3 18 R			<b>151743</b>	2003 <i>CE</i> <sub>21</sub>		1 7.6 291°62	4°4/ 9.3 18		
12 3	7 36.07	+15 22.7	2.268	3.060	12.8	18.4	12 3	7 36.20	+ 8 34.3	1.845	2.631	15.5	20.0
12 13	7 31.32	+15 44.3	2.182	3.061	9.9	18.2	12 13	7 31.96	+ 8 47.8	1.750	2.618	12.5	19.7
12 23	7 24.55	+16 14.7	2.121	3.061	6.5	18.0	12 23	7 25.27	+ 9 18.2	1.677	2.606	8.9	19.5
1 2	7 16.33	+16 52.5	2.087	3.062	3.0	17.7	1 2	7 16.70	+10 5.7	1.630	2.593	5.5	19.3
1 12	7 7.51	+17 34.9	2.083	3.062	2.2	17.7	1 12	7 7.25	+11 8.1	1.611	2.581	4.6	19.2
1 22	6 59.02	+18 19.0	2.109	3.062	5.6	17.9	1 22	6 58.05	+12 21.1	1.620	2.569	7.4	19.3
2 1	6 51.77	+19 2.3	2.164	3.062	9.1	18.1	2 1	6 50.25	+13 39.7	1.657	2.556	11.2	19.5
2 11	6 46.47	+19 42.9	2.244	3.062	12.1	18.3	2 11	6 44.78	+14 58.7	1.717	2.544	14.8	19.7
<b>149924</b>	2005 <i>SS</i> <sub>116</sub>		1 7.6 102°71	2°8/ 8.5 18			<b>461368</b>	2000 <i>RL</i> <sub>107</sub>		1 7.6 81°75	0°6/ 7.4 18		
12 3	7 37.73	+13 42.9	1.916	2.711	14.7	20.5	12 3	7 39.30	+22 28.1	1.875	2.685	14.4	21.6
12 13	7 32.82	+13 45.9	1.839	2.717	11.4	20.3	12 13	7 34.14	+22 54.7	1.805	2.695	10.9	21.4
12 23	7 25.59	+13 59.7	1.785	2.723	7.7	20.1	12 23	7 26.49	+23 25.8	1.757	2.705	6.9	21.2
1 2	7 16.72	+14 23.1	1.757	2.729	4.0	19.9	1 2	7 17.08	+23 57.7	1.736	2.715	2.5	20.9
1 12	7 7.22	+14 54.3	1.759	2.735	3.2	19.8	1 12	7 7.03	+24 26.7	1.745	2.725	2.2	20.9
1 22	6 58.20	+15 30.2	1.789	2.740	6.5	20.0	1 22	6 57.56	+24 50.2	1.782	2.735	6.5	21.2
2 1	6 50.70	+16 8.2	1.847	2.746	10.3	20.3	2 1	6 49.78	+25 7.0	1.847	2.744	10.4	21.5
2 11	6 45.48	+16 45.9	1.929	2.752	13.6	20.5	2 11	6 44.48	+25 17.6	1.936	2.754	13.7	21.7
<b>290268</b>	2005 <i>SX</i> <sub>138</sub>		1 7.6 345°45	0°0/ 7.5 18			<b>203608</b>	2002 <i>EV</i> <sub>58</sub>		1 7.6 210°95	1°9/ 7.2 18		
12 3	7 39.85	+21 12.1	1.276	2.107	18.6	21.0	12 3	7 43.29	+26 38.1	1.766	2.576	15.1	20.7
12 13	7 35.73	+21 29.0	1.202	2.104	14.3	20.7	12 13	7 37.53	+26 52.3	1.683	2.573	11.6	20.5
12 23	7 28.09	+21 53.9	1.149	2.101	9.1	20.4	12 23	7 28.83	+27 6.8	1.622	2.569	7.5	20.2
1 2	7 17.78	+22 23.1	1.120	2.099	3.4	20.1	1 2	7 17.99	+27 17.4	1.588	2.565	3.2	20.0
1 12	7 6.36	+22 51.5	1.116	2.097	2.7	20.0	1 12	7 6.29	+27 20.4	1.583	2.561	3.0	19.9
1 22	6 55.63	+23 15.3	1.138	2.095	8.5	20.4	1 22	6 55.18	+27 14.1	1.607	2.556	7.3	20.2
2 1	6 47.27	+23 32.6	1.185	2.094	13.8	20.7	2 1	6 45.99	+26 59.2	1.658	2.551	11.6	20.4
2 11	6 42.41	+23 43.6	1.252	2.094	18.3	20.9	2 11	6 39.69	+26 38.2	1.731	2.546	15.2	20.7
<b>169372</b>	2001 <i>UF</i> <sub>137</sub>		1 7.6 125°42	3°4/ 8.8 18			<b>86438</b>	2000 <i>CN</i> <sub>16</sub>		1 7.6 248°40	1°4/ 7.9 18		
12 3	7 35.00	+10 48.9	2.508	3.284	12.2	20.8	12 3	7 41.94	+19 13.9	1.534	2.347	16.9	19.8
12 13	7 30.22	+10 34.7	2.426	3.290	9.6	20.6	12 13	7 36.81	+19 3.9	1.449	2.340	13.1	19.5
12 23	7 23.70	+10 29.7	2.369	3.295	6.8	20.5	12 23	7 28.55	+19 0.4	1.385	2.332	8.5	19.2
1 2	7 15.98	+10 34.2	2.339	3.300	4.2	20.3	1 2	7 17.94	+19 1.9	1.346	2.324	3.5	18.9
1 12	7 7.82	+10 47.5	2.338	3.306	3.6	20.3	1 12	7 6.31	+19 6.1	1.335	2.315	2.7	18.8
1 22	7 0.01	+11 8.1	2.368	3.311	5.8	20.4	1 22	6 55.20	+19 11.1	1.352	2.307	7.8	19.1
2 1	6 53.30	+11 34.1	2.426	3.316	8.5	20.6	2 1	6 46.08	+19 16.1	1.394	2.298	12.6	19.4
2 11	6 48.30	+12 3.5	2.509	3.321	11.2	20.8	2 11	6 40.02	+19 20.5	1.459	2.289	16.8	19.6
<b>373295</b>	2012 <i>HA</i> <sub>60</sub>		1 7.6 143°62	0°6/ 7.4 18			<b>54485</b>	2000 <i>OR</i> <sub>27</sub>		1 7.6 213°77	5°0/ 9.6 18		
12 3	7 39.05	+23 20.3	2.471	3.267	11.7	21.8	12 3	7 36.84	+ 5 58.6	2.142	2.90		



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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>495723</b>	2016 <i>CF</i> <sub>201</sub>		1 7.6 131°77	2.4/ 6.9	18		<b>236968</b>	2007 <i>VD</i> <sub>180</sub>		1 7.6 272°68	0.2/ 7.5	18	
12 3	7 41.43	+28 34.5	2.100	2.904	13.3	21.8	12 3	7 36.08	+21 45.4	2.365	3.167	12.0	21.1
12 13	7 35.60	+28 56.0	2.024	2.911	10.1	21.6	12 13	7 31.38	+22 4.4	2.274	3.160	9.2	20.9
12 23	7 27.34	+29 16.2	1.973	2.918	6.6	21.4	12 23	7 24.64	+22 27.3	2.207	3.154	5.8	20.7
1 2	7 17.38	+29 31.2	1.950	2.924	3.2	21.2	1 2	7 16.42	+22 51.9	2.169	3.147	2.1	20.4
1 12	7 6.82	+29 37.6	1.956	2.931	3.2	21.2	1 12	7 7.59	+23 15.6	2.160	3.140	1.7	20.4
1 22	6 56.86	+29 34.2	1.992	2.937	6.5	21.4	1 22	6 59.07	+23 36.2	2.182	3.134	5.5	20.6
2 1	6 48.55	+29 21.7	2.056	2.943	10.0	21.7	2 1	6 51.78	+23 52.7	2.232	3.127	8.9	20.8
2 11	6 42.67	+29 2.2	2.144	2.948	13.0	21.9	2 11	6 46.43	+24 4.7	2.306	3.120	11.9	21.0
<b>166902</b>	2003 <i>AQ</i> <sub>22</sub>		1 7.6 32°25	0.2/ 7.7	18		<b>462359</b>	2008 <i>RG</i> <sub>114</sub>		1 7.6 172°75	2.5/ 6.9	18	
12 3	7 36.46	+17 15.7	2.155	2.953	13.2	19.4	12 3	7 39.54	+28 36.0	2.188	2.993	12.8	22.2
12 13	7 31.79	+18 20.7	2.074	2.958	10.0	19.2	12 13	7 34.18	+29 3.3	2.107	2.994	9.8	22.0
12 23	7 24.96	+19 35.9	2.018	2.963	6.4	19.0	12 23	7 26.47	+29 29.9	2.050	2.994	6.4	21.8
1 2	7 16.54	+20 57.4	1.991	2.969	2.4	18.7	1 2	7 17.10	+29 51.7	2.021	2.995	3.2	21.6
1 12	7 7.44	+22 20.2	1.994	2.974	1.8	18.7	1 12	7 7.08	+30 5.3	2.021	2.995	3.2	21.6
1 22	6 58.66	+23 39.2	2.028	2.980	5.8	19.0	1 22	6 57.54	+30 9.1	2.051	2.995	6.4	21.8
2 1	6 51.20	+24 50.9	2.091	2.986	9.4	19.2	2 1	6 49.52	+30 3.3	2.109	2.995	9.8	22.0
2 11	6 45.81	+25 53.2	2.179	2.993	12.5	19.4	2 11	6 43.81	+29 49.6	2.191	2.995	12.8	22.2
<b>293690</b>	2007 <i>PB</i> <sub>35</sub>		1 7.6 169°77	0.3/ 7.5	18		<b>14506</b>	1996 <i>BL</i> <sub>2</sub>		1 7.6 59°98	2.8/ 8.2	18	
12 3	7 43.34	+22 35.1	2.111	2.906	13.5	21.7	12 3	7 42.41	+16 40.0	1.269	2.089	19.3	17.7
12 13	7 36.97	+22 47.4	2.029	2.912	10.3	21.5	12 13	7 37.16	+16 21.2	1.215	2.108	14.9	17.5
12 23	7 28.19	+23 2.7	1.971	2.916	6.5	21.3	12 23	7 28.64	+16 13.1	1.181	2.127	9.8	17.2
1 2	7 17.71	+23 18.0	1.941	2.919	2.4	21.0	1 2	7 17.90	+16 14.6	1.171	2.146	4.5	17.0
1 12	7 6.57	+23 30.7	1.942	2.922	1.9	21.0	1 12	7 6.53	+16 23.6	1.187	2.165	3.6	17.0
1 22	6 55.95	+23 39.0	1.974	2.924	6.1	21.3	1 22	6 56.20	+16 37.4	1.229	2.185	8.3	17.3
2 1	6 46.91	+23 42.4	2.034	2.925	9.9	21.5	2 1	6 48.30	+16 54.0	1.297	2.204	13.0	17.6
2 11	6 40.24	+23 41.7	2.118	2.925	13.1	21.7	2 11	6 43.69	+17 11.5	1.385	2.224	17.0	17.9
<b>276566</b>	2003 <i>SG</i> <sub>210</sub>		1 7.6 87°82	2.6/ 8.5	18		<b>422168</b>	2014 <i>RN</i> <sub>16</sub>		1 7.6 100°52	2.4/ 8.3	18	
12 3	7 37.08	+13 47.6	2.148	2.937	13.5	20.7	12 3	7 40.54	+14 53.4	2.016	2.805	14.3	21.4
12 13	7 32.02	+13 45.2	2.076	2.951	10.5	20.5	12 13	7 34.67	+14 49.5	1.952	2.827	11.0	21.2
12 23	7 24.94	+13 52.0	2.029	2.965	7.1	20.3	12 23	7 26.62	+14 54.1	1.911	2.849	7.3	21.0
1 2	7 16.49	+14 7.1	2.008	2.979	3.7	20.1	1 2	7 17.10	+15 6.3	1.898	2.870	3.6	20.8
1 12	7 7.56	+14 29.0	2.018	2.993	3.0	20.1	1 12	7 7.15	+15 24.3	1.914	2.890	2.9	20.8
1 22	6 59.12	+14 55.5	2.056	3.006	5.9	20.3	1 22	6 57.82	+15 45.9	1.960	2.910	6.1	21.1
2 1	6 52.04	+15 24.5	2.123	3.019	9.3	20.6	2 1	6 50.04	+16 9.4	2.034	2.930	9.7	21.3
2 11	6 46.99	+15 54.0	2.215	3.033	12.2	20.8	2 11	6 44.51	+16 33.0	2.133	2.949	12.7	21.5
<b>363889</b>	2005 <i>SE</i> <sub>103</sub>		1 7.6 112°97	5.6/ 9.6	18		<b>287757</b>	2003 <i>SS</i> <sub>48</sub>		1 7.6 61°41	3.0/ 8.2	17	
12 3	7 38.77	+ 4 41.5	2.303	3.054	13.8	22.1	12 3	7 41.96	+15 51.8	1.434	2.246	18.0	20.6
12 13	7 33.05	+ 4 15.5	2.236	3.076	11.3	22.0	12 13	7 36.42	+15 28.4	1.381	2.268	13.8	20.4
12 23	7 25.46	+ 4 3.3	2.193	3.097	8.5	21.8	12 23	7 27.99	+15 15.1	1.348	2.291	9.1	20.2
1 2	7 16.65	+ 4 6.2	2.176	3.117	6.3	21.7	1 2	7 17.63	+15 11.4	1.341	2.314	4.5	20.0
1 12	7 7.45	+ 4 23.8	2.188	3.137	5.6	21.7	1 12	7 6.77	+15 15.6	1.360	2.337	3.6	20.0
1 22	6 58.74	+ 4 54.2	2.230	3.156	7.2	21.9	1 22	6 56.87	+15 25.9	1.407	2.361	7.7	20.3
2 1	6 51.33	+ 5 34.4	2.299	3.175	9.6	22.0	2 1	6 49.15	+15 40.1	1.480	2.384	12.0	20.6
2 11	6 45.81	+ 6 20.8	2.394	3.193	12.0	22.2	2 11	6 44.38	+15 56.4	1.575	2.407	15.7	20.9
<b>490394</b>	2009 <i>QN</i> <sub>21</sub>		1 7.6 183°10	0.8/ 7.9	18		<b>55347</b>	2001 <i>SH</i> <sub>142</sub>		1 7.6 168°84	2.4/ 8.7	18	
12 3	7 39.18	+18 27.8	2.491	3.279	11.9	22.4	12 3	7 31.46	+11 51.4	3.428	4.199	9.3	20.2
12 13	7 33.52	+18 44.5	2.402	3.280	9.1	22.2	12 13	7 27.19	+11 42.7	3.338	4.200	7.3	20.1
12 23	7 25.89	+19 6.9	2.338	3.280	5.9	22.0	12 23	7 21.66	+11 40.3	3.274	4.201	5.1	19.9
1 2	7 16.86	+19 33.0	2.302	3.279	2.3	21.8	1 2	7 15.28	+11 44.3	3.239	4.202	3.1	19.8
1 12	7 7.25	+20 0.6	2.298	3.278	1.7	21.7	1 12	7 8.57	+11 54.1	3.234	4.203	2.6	19.7
1 22	6 57.97	+20 27.5	2.325	3.276	5.2	21.9	1 22	7 2.08	+12 8.7	3.260	4.204	4.3	19.9
2 1	6 49.88	+20 52.2	2.381	3.273	8.6	22.1	2 1	6 56.36	+12 26.9	3.316	4.205	6.5	20.0
2 11	6 43.69	+21 14.0	2.463	3.270	11.5	22.3	2 11	6 51.84	+12 47.5	3.398	4.205	8.6	20.2
<b>281597</b>	2008 <i>UF</i> <sub>167</sub>		1 7.6 302°98	0.5/ 7.8	18		<b>233554</b>	2007 <i>MF</i> <sub>24</sub>		1 7.6 69°21	3.7/ 6.5	18	
12 3	7 36.49	+20 4.7	2.095	2.901	13.2	21.3	12 3	7 40.01	+31 23.6	2.087	2.895	13.2	20.3
12 13	7 31.90	+20 14.7	2.006	2.894	10.1	21.1	12 13	7 34.63	+32 6.9	2.021	2.907	10.2	20.1
12 23	7 25.06	+20 30.1	1.941	2.888	6.5	20.8	12 23	7 26.78	+32 47.7	1.978	2.919	6.9	19.9
1 2	7 16.60	+20 48.8	1.903	2.881	2.5	20.6	1 2	7 17.22	+33 20.6	1.963	2.931	4.1	19.8
1 12	7 7.44	+21 8.5	1.894	2.875	1.9	20.5	1 12	7 7.07	+33 41.7	1.976	2.943	4.3	19.8
1 22	6 58.65	+21 26.9	1.915	2.869	5.9	20.8	1 22	6 57.52	+33 49.2	2.019	2.955	7.1	20.0
2 1	6 51.24	+21 42.8	1.963	2.863	9.7	21.0	2 1	6 49.67	+33 43.8	2.089	2.968	10.3	20.2
2 11	6 45.99	+21 55.7	2.036	2.857	13.0	21.2	2 11	6 44.27	+33 28.0	2.182	2.980	13.1	20.4
<b>31651</b>	1999 <i>HH</i> <sub>2</sub>		1 7.6 266°82	4.4/ 6.2	18		<b>408283</b>	2013 <i>GE</i> <sub>4</sub>		1 7.6 217°04	0.8/ 7.4	18	
12 3	7 42.45	+29 27.0	1.583	2.402	16.2	18.3	12 3	7 41.64	+23 26.8	1.985	2.788	14.0	22.0
12 13	7 37.55	+30 32.5	1.500	2.393	12.5	18.0	12 13	7 36.02	+23 46.4	1.895	2.782	10.7	21.8
12 23	7 29.24	+31 40.1	1.439	2.384	8.5	17.8	12 23	7 27.80	+24 9.4	1.828	2.775	6.8	21.5
1 2	7 18.28	+32 41.9	1.404	2.375	4.9	17.5	1 2	7 17.66	+24 32.3	1.789	2.767	2.6	21.2
1 12	7 6.07	+33 30.1	1.397	2.366	5.3	17.5	1 12	7 6.68	+24 51.8	1.779	2.759	2.2	21.2
1 22	6 54.32	+33 59.9	1.417	2.356	9.2	17.7	1 22	6 56.11	+25 5.4	1.799	2.750	6.5	21.5
2 1	6 44.70	+34 10.7	1.462	2.347	13.4	18.0	2 1	6 47.14	+25 12.5	1.847	2.741	10.6	21.7
2 11	6 38.41	+34 6.0	1.528	2.337	17.2	18.2	2 11	6 40.67	+25 13.8	1.919	2.731	14.1	21.9
<b>473886</b>	2016 <i>EK</i> <sub>143</sub>		1 7.6 318°80	1.3/ 7.2	18		<b>238388</b>	2004 <i>DZ</i> <sub>51</sub>		1 7.6 244°17	5.9/ 10.3	17	
12 3	7 38.26	+24 44.7	2.046	2.856									

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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>185743</b>	1999 <i>FP</i> <sub>74</sub>		1 7.6 138°44	6°4/ 9.9 18			<b>316576</b>	2011 <i>SS</i> <sub>116</sub>		1 7.6 112°00	1°0/ 7.4 18		
12 3	7 37.07	+ 3 5.7	2.129	2.882	14.8	20.8	12 3	7 44.73	+23 58.4	1.788	2.592	15.2	21.3
12 13	7 32.08	+ 2 42.9	2.051	2.889	12.2	20.6	12 13	7 38.28	+24 16.8	1.724	2.611	11.5	21.1
12 23	7 25.05	+ 2 36.3	1.995	2.895	9.4	20.4	12 23	7 29.12	+24 37.6	1.683	2.630	7.3	20.9
1 2	7 16.60	+ 2 47.7	1.964	2.902	7.1	20.3	1 2	7 18.12	+24 56.8	1.670	2.648	2.7	20.6
1 12	7 7.60	+ 3 16.7	1.962	2.908	6.4	20.3	1 12	7 6.55	+25 11.0	1.686	2.666	2.4	20.6
1 22	6 59.00	+ 4 1.3	1.987	2.914	7.9	20.4	1 22	6 55.77	+25 18.4	1.732	2.682	6.8	20.9
2 1	6 51.70	+ 4 57.5	2.041	2.919	10.5	20.5	2 1	6 46.95	+25 18.9	1.805	2.699	10.8	21.2
2 11	6 46.40	+ 6 0.8	2.118	2.924	13.1	20.7	2 11	6 40.89	+25 14.1	1.901	2.714	14.1	21.5
<b>210490</b>	1997 <i>CN</i> <sub>11</sub>		1 7.6 281°49	0°4/ 7.5 18			<b>423839</b>	2006 <i>QS</i> <sub>16</sub>		1 7.6 118°17	2°9/ 9.1 18		
12 3	7 40.11	+22 25.5	1.662	2.477	15.7	21.3	12 3	7 35.41	+ 9 57.0	2.848	3.614	11.1	21.2
12 13	7 35.38	+22 37.6	1.570	2.464	12.1	21.1	12 13	7 30.33	+10 11.8	2.773	3.630	8.7	21.0
12 23	7 27.68	+22 54.6	1.501	2.450	7.7	20.8	12 23	7 23.73	+10 36.2	2.721	3.646	6.1	20.9
1 2	7 17.71	+23 13.3	1.458	2.436	2.9	20.4	1 2	7 16.09	+11 9.6	2.699	3.662	3.7	20.7
1 12	7 6.68	+23 30.0	1.442	2.423	2.3	20.4	1 12	7 8.09	+11 50.2	2.707	3.677	3.0	20.7
1 22	6 56.06	+23 42.0	1.455	2.409	7.4	20.7	1 22	7 0.41	+12 35.8	2.747	3.691	5.0	20.8
2 1	6 47.26	+23 48.5	1.494	2.395	12.1	20.9	2 1	6 53.72	+13 24.0	2.816	3.706	7.5	21.0
2 11	6 41.34	+23 50.0	1.555	2.382	16.1	21.1	2 11	6 48.54	+14 12.5	2.912	3.720	9.9	21.2
<b>232786</b>	2004 <i>QT</i> <sub>13</sub>		1 7.6 177°62	1°0/ 7.6 18			<b>174376</b>	2002 <i>UU</i> <sub>44</sub>		1 7.6 77°54	2°1/ 8.4 18		
12 3	7 51.06	+27 48.8	1.894	2.686	15.0	19.8	12 3	7 40.63	+14 41.6	1.700	2.500	16.1	20.2
12 13	7 43.01	+27 12.2	1.808	2.688	11.5	19.5	12 13	7 35.17	+15 4.4	1.641	2.523	12.4	20.0
12 23	7 32.08	+26 30.5	1.746	2.690	7.4	19.3	12 23	7 27.15	+15 38.9	1.605	2.546	8.1	19.8
1 2	7 19.17	+25 41.3	1.713	2.691	2.9	19.0	1 2	7 17.40	+16 22.5	1.594	2.569	3.7	19.6
1 12	7 5.66	+24 44.1	1.711	2.691	2.3	19.0	1 12	7 7.12	+17 11.3	1.613	2.591	2.7	19.6
1 22	6 52.98	+23 40.8	1.741	2.690	6.9	19.3	1 22	6 57.54	+18 1.3	1.660	2.613	6.7	19.9
2 1	6 42.41	+22 35.1	1.800	2.689	11.0	19.5	2 1	6 49.78	+18 49.2	1.734	2.635	10.7	20.2
2 11	6 34.79	+21 30.8	1.883	2.688	14.6	19.7	2 11	6 44.60	+19 32.8	1.833	2.657	14.1	20.4
<b>85659</b>	1998 <i>QU</i> <sub>29</sub>		1 7.6 34°31	3°7/ 8.2 18			<b>333725</b>	2009 <i>TX</i> <sub>39</sub>		1 7.6 93°48	4°0/ 6.6 18		
12 3	7 41.33	+15 30.2	1.385	2.199	18.3	19.7	12 3	7 49.21	+28 16.5	1.430	2.245	17.8	20.6
12 13	7 36.41	+14 54.4	1.311	2.200	14.3	19.4	12 13	7 42.40	+29 28.0	1.381	2.271	13.6	20.4
12 23	7 28.31	+14 28.2	1.259	2.201	9.7	19.1	12 23	7 32.05	+30 39.7	1.353	2.298	8.9	20.2
1 2	7 17.90	+14 12.2	1.230	2.203	5.1	18.9	1 2	7 19.25	+31 42.6	1.351	2.323	4.8	20.0
1 12	7 6.60	+14 6.0	1.229	2.204	4.3	18.8	1 12	7 5.72	+32 29.0	1.378	2.348	5.0	20.1
1 22	6 56.01	+14 8.3	1.253	2.206	8.5	19.1	1 22	6 53.32	+32 55.6	1.432	2.373	9.0	20.4
2 1	6 47.58	+14 17.5	1.303	2.208	13.2	19.4	2 1	6 43.59	+33 3.8	1.512	2.396	13.1	20.7
2 11	6 42.30	+14 31.4	1.374	2.210	17.3	19.6	2 11	6 37.45	+32 57.9	1.613	2.419	16.6	20.9
<b>74519</b>	1999 <i>FA</i> <sub>34</sub>		1 7.6 347°74	10°0/ 3.7 18			<b>457771</b>	2009 <i>KD</i> <sub>11</sub>		1 7.6 114°94	0°3/ 7.8 18		
12 3	7 48.39	+52 8.4	2.316	3.068	13.8	18.4	12 3	7 40.85	+18 16.5	2.047	2.842	13.9	21.5
12 13	7 41.95	+53 32.1	2.253	3.067	12.1	18.3	12 13	7 35.12	+19 4.7	1.976	2.858	10.6	21.3
12 23	7 31.95	+54 40.8	2.211	3.066	10.7	18.2	12 23	7 27.07	+20 1.1	1.930	2.874	6.7	21.1
1 2	7 19.27	+55 25.8	2.194	3.066	10.1	18.2	1 2	7 17.39	+21 2.0	1.912	2.890	2.5	20.9
1 12	7 5.52	+55 41.3	2.202	3.066	10.4	18.2	1 12	7 7.10	+22 2.9	1.925	2.905	1.8	20.9
1 22	6 52.55	+55 26.1	2.234	3.065	11.6	18.3	1 22	6 57.31	+22 59.6	1.968	2.920	6.0	21.2
2 1	6 42.04	+54 43.5	2.290	3.065	13.2	18.4	2 1	6 49.05	+23 49.6	2.040	2.934	9.7	21.4
2 11	6 35.05	+53 40.6	2.365	3.065	14.9	18.5	2 11	6 43.08	+24 31.9	2.136	2.947	12.9	21.7
<b>444089</b>	2004 <i>SH</i> <sub>58</sub>		1 7.6 81°74	5°0/ 6.5 17			<b>121006</b>	1999 <i>AG</i> <sub>1</sub>		1 7.6 240°52	0°1/ 7.7 18		
12 3	7 48.18	+32 18.4	1.528	2.340	17.0	21.0	12 3	7 42.37	+21 34.8	1.733	2.541	15.5	21.1
12 13	7 41.45	+33 14.1	1.479	2.366	13.1	20.8	12 13	7 36.95	+21 39.1	1.641	2.530	11.9	20.8
12 23	7 31.33	+34 5.0	1.452	2.392	8.9	20.6	12 23	7 28.61	+21 48.0	1.572	2.519	7.6	20.5
1 2	7 18.92	+34 43.1	1.451	2.418	5.5	20.5	1 2	7 18.07	+21 58.9	1.529	2.508	2.9	20.2
1 12	7 5.92	+35 2.6	1.478	2.443	5.7	20.5	1 12	7 6.53	+22 8.7	1.515	2.496	2.2	20.1
1 22	6 54.07	+35 1.9	1.533	2.468	9.0	20.8	1 22	6 55.41	+22 15.3	1.530	2.483	7.2	20.4
2 1	6 44.83	+34 44.0	1.613	2.493	12.7	21.1	2 1	6 46.09	+22 18.1	1.571	2.470	11.7	20.7
2 11	6 39.02	+34 14.3	1.715	2.517	15.9	21.3	2 11	6 39.58	+22 17.5	1.636	2.457	15.7	20.9
<b>82370</b>	2001 <i>MD</i> <sub>14</sub>		1 7.6 146°35	0°2/ 7.6 18			<b>288961</b>	<i>Stasygirėnas</i>		1 7.6 146°40	4°9/ 5.9 18		
12 3	7 44.96	+22 4.0	1.906	2.703	14.7	21.1	12 3	7 43.35	+36 28.2	2.437	3.227	12.1	21.0
12 13	7 38.38	+22 19.4	1.832	2.716	11.2	20.9	12 13	7 37.02	+37 18.7	2.365	3.236	9.5	20.8
12 23	7 29.17	+22 38.7	1.782	2.727	7.1	20.7	12 23	7 28.28	+38 3.5	2.318	3.244	6.9	20.7
1 2	7 18.14	+22 58.5	1.760	2.738	2.6	20.4	1 2	7 17.85	+38 37.2	2.299	3.252	5.1	20.6
1 12	7 6.47	+23 15.7	1.768	2.748	2.1	20.4	1 12	7 6.79	+38 55.6	2.309	3.259	5.3	20.6
1 22	6 55.43	+23 28.0	1.806	2.757	6.5	20.7	1 22	6 56.27	+38 57.3	2.349	3.266	7.4	20.8
2 1	6 46.21	+23 35.2	1.872	2.765	10.5	20.9	2 1	6 47.36	+38 43.6	2.417	3.273	9.9	20.9
2 11	6 39.60	+23 37.8	1.963	2.772	13.9	21.2	2 11	6 40.84	+38 17.8	2.508	3.279	12.3	21.1
<b>249850</b>	2001 <i>QC</i> <sub>17</sub>		1 7.6 44°24	3°2/ 8.8 18			<b>111823</b>	2002 <i>DE</i> <sub>3</sub>		1 7.6 114°44	16°9/ 1.2 18		
12 3	7 42.42	+11 41.1	1.295	2.103	19.7	19.4	12 3	8 0.61	+49 7.0	1.155	1.952	22.3	19.4
12 13	7 36.76	+12 14.5	1.261	2.146	15.1	19.2	12 13	7 55.11	+52 35.6	1.116	1.962	19.6	19.3
12 23	7 28.15	+13 5.2	1.248	2.188	10.0	19.0	12 23	7 42.64	+55 45.3	1.096	1.972	17.6	19.2
1 2	7 17.69	+14 9.4	1.260	2.232	5.0	18.9	1 2	7 23.88	+58 11.5	1.098	1.981	16.9	19.2
1 12	7 6.92	+15 20.9	1.298	2.275	3.7	18.9	1 12	7 1.92	+59 35.7	1.121	1.990	17.8	19.3
1 22	6 57.33	+16 33.3	1.364	2.319	7.7	19.2	1 22	6 41.35	+59 54.5	1.164	1.998	19.7	19.4
2 1	6 50.09	+17 41.5	1.455	2.362	11.9	19.6	2 1	6 26.29	+59 19.2	1.225	2.007	22.0	19.6
2 11	6 45.89	+18 42.5	1.570	2.405	15.5	19.9	2 11	6 18.66	+58 8.3	1.299	2.014	24.2	19.8
<b>101181</b>	1998 <i>SZ</i> <sub>9</sub>		1 7.6 18°74	16°9/ 6.0 18			<b>218655</b>	2005 <i>SS</i> <sub>151</sub>		1 7.6 109°44	4°1/ 8.9 18		
12 3	7 43.98	+ 0 37.3	1.063	1.85									

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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>490654</b>	2010 <i>FD</i> <sub>101</sub>		1 7.6	0°59	4.8/ 8.3	18	<b>413056</b>	2001 <i>RA</i> <sub>87</sub>		1 7.7	133°30	0°5/ 7.5	18
12 3	7 33.10	+15 40.6	0.946	1.800	21.8	20.2	12 3	7 42.03	+23 13.9	2.480	3.269	11.9	22.2
12 13	7 31.24	+14 49.0	0.885	1.795	17.1	19.9	12 13	7 35.59	+23 27.9	2.407	3.287	9.0	22.0
12 23	7 25.57	+14 9.5	0.841	1.793	11.7	19.6	12 23	7 27.17	+23 43.6	2.360	3.305	5.7	21.8
1 2	7 17.05	+13 44.9	0.818	1.792	6.4	19.3	1 2	7 17.43	+23 58.7	2.343	3.321	2.1	21.6
1 12	7 7.43	+13 35.6	0.817	1.793	5.4	19.3	1 12	7 7.25	+24 10.7	2.357	3.336	1.7	21.6
1 22	6 58.69	+13 40.4	0.837	1.797	10.2	19.5	1 22	6 57.58	+24 18.4	2.402	3.351	5.2	21.9
2 1	6 52.61	+13 56.0	0.879	1.802	15.7	19.9	2 1	6 49.29	+24 21.5	2.477	3.365	8.4	22.1
2 11	6 50.31	+14 18.3	0.938	1.810	20.5	20.2	2 11	6 43.02	+24 20.6	2.577	3.378	11.2	22.3
<b>58378</b>	1995 <i>SO</i> <sub>27</sub>		1 7.7	124°72	3°1/ 8.8	18	<b>178641</b>	2000 <i>JZ</i> <sub>69</sub>		1 7.7	166°32	3°3/ 9.1	18
12 3	7 38.50	+11 32.9	2.484	3.256	12.4	20.4	12 3	7 38.32	+ 9 50.4	2.511	3.277	12.4	20.9
12 13	7 32.83	+11 25.6	2.411	3.273	9.7	20.2	12 13	7 32.82	+10 1.6	2.425	3.283	9.8	20.7
12 23	7 25.38	+11 27.4	2.363	3.291	6.7	20.1	12 23	7 25.48	+10 23.9	2.363	3.288	6.9	20.6
1 2	7 16.74	+11 38.0	2.343	3.307	4.0	19.9	1 2	7 16.84	+10 56.7	2.330	3.292	4.2	20.4
1 12	7 7.70	+11 56.2	2.353	3.323	3.3	19.9	1 12	7 7.67	+11 38.3	2.327	3.296	3.4	20.4
1 22	6 59.10	+12 20.3	2.394	3.339	5.6	20.1	1 22	6 58.82	+12 26.1	2.355	3.299	5.7	20.5
2 1	6 51.71	+12 48.4	2.464	3.353	8.5	20.3	2 1	6 51.10	+13 17.2	2.412	3.301	8.6	20.7
2 11	6 46.11	+13 18.5	2.560	3.368	11.1	20.5	2 11	6 45.15	+14 9.0	2.496	3.303	11.3	20.9
<b>143461</b>	2003 <i>BK</i> <sub>89</sub>		1 7.7	23°13	7°1/11.1	18	<b>108287</b>	2001 <i>HT</i> <sub>61</sub>		1 7.7	175°82	4°8/ 8.6	18
12 3	7 33.62	+ 0 6.9	1.971	2.724	15.8	19.5	12 3	7 41.29	+11 59.8	1.483	2.284	18.0	20.3
12 13	7 29.67	+ 0 5.0	1.897	2.731	13.2	19.3	12 13	7 36.24	+11 26.7	1.406	2.285	14.3	20.0
12 23	7 23.65	+ 0 24.1	1.844	2.738	10.4	19.2	12 23	7 28.20	+11 6.4	1.351	2.285	10.0	19.8
1 2	7 16.17	+ 1 5.7	1.814	2.746	8.1	19.1	1 2	7 17.95	+11 0.2	1.319	2.286	6.0	19.6
1 12	7 8.13	+ 2 8.5	1.812	2.755	7.1	19.0	1 12	7 6.81	+11 7.8	1.315	2.286	5.2	19.5
1 22	7 0.50	+ 3 28.7	1.837	2.764	8.4	19.1	1 22	6 56.28	+11 27.2	1.337	2.286	8.6	19.7
2 1	6 54.20	+ 5 0.7	1.889	2.774	10.9	19.3	2 1	6 47.72	+11 55.5	1.385	2.285	12.9	20.0
2 11	6 49.93	+ 6 37.9	1.965	2.784	13.5	19.5	2 11	6 42.10	+12 29.1	1.455	2.285	16.8	20.2
<b>381648</b>	2008 <i>YL</i> <sub>162</sub>		1 7.7	86°45	0°1/ 7.6	18	<b>492175</b>	2013 <i>PG</i> <sub>74</sub>		1 7.7	167°60	6°6/10.8	17
12 3	7 38.88	+23 23.0	2.288	3.089	12.4	20.7	12 3	7 36.46	- 1 45.4	2.701	3.416	12.8	22.5
12 13	7 33.41	+23 12.0	2.210	3.096	9.4	20.5	12 13	7 31.27	- 2 1.6	2.616	3.421	10.9	22.3
12 23	7 25.88	+23 2.0	2.156	3.102	6.0	20.3	12 23	7 24.43	- 2 1.9	2.553	3.425	8.8	22.2
1 2	7 16.95	+22 51.5	2.131	3.109	2.2	20.1	1 2	7 16.44	- 1 44.7	2.517	3.429	7.2	22.1
1 12	7 7.55	+22 39.2	2.135	3.116	1.7	20.0	1 12	7 7.99	- 1 10.0	2.508	3.432	6.6	22.1
1 22	6 58.67	+22 24.5	2.170	3.122	5.5	20.3	1 22	6 59.84	- 0 19.5	2.529	3.435	7.5	22.1
2 1	6 51.19	+22 7.9	2.233	3.129	8.9	20.5	2 1	6 52.68	+ 0 43.3	2.578	3.437	9.3	22.3
2 11	6 45.77	+21 50.0	2.322	3.136	11.9	20.7	2 11	6 47.12	+ 1 54.3	2.653	3.438	11.4	22.4
<b>280799</b>	2005 <i>TB</i> <sub>56</sub>		1 7.7	76°80	1°9/ 8.1	18	<b>353266</b>	2010 <i>EX</i> <sub>112</sub>		1 7.7	256°13	1°0/ 7.9	18
12 3	7 43.54	+16 47.3	1.367	2.181	18.6	21.0	12 3	7 41.12	+19 5.7	1.667	2.476	15.9	21.9
12 13	7 37.89	+16 55.1	1.312	2.202	14.2	20.8	12 13	7 36.15	+19 12.9	1.574	2.463	12.3	21.7
12 23	7 29.11	+17 14.0	1.279	2.224	9.2	20.6	12 23	7 28.22	+19 27.9	1.503	2.449	8.0	21.4
1 2	7 18.19	+17 41.4	1.270	2.246	4.0	20.3	1 2	7 18.01	+19 48.3	1.458	2.435	3.2	21.1
1 12	7 6.65	+18 13.2	1.288	2.267	2.9	20.3	1 12	7 6.72	+20 11.2	1.441	2.421	2.4	21.0
1 22	6 56.08	+18 45.8	1.333	2.289	7.7	20.7	1 22	6 55.80	+20 33.6	1.452	2.407	7.3	21.3
2 1	6 47.83	+19 16.6	1.405	2.310	12.4	21.0	2 1	6 46.64	+20 53.5	1.490	2.392	12.1	21.5
2 11	6 42.75	+19 44.0	1.498	2.331	16.3	21.3	2 11	6 40.32	+21 10.3	1.551	2.377	16.1	21.7
<b>521004</b>	2015 <i>BT</i> <sub>547</sub>		1 7.7	95°63	3°6/ 6.5	18	<b>284007</b>	2004 <i>TT</i> <sub>128</sub>		1 7.7	70°08	1°2/ 7.4	17
12 3	7 43.50	+32 37.2	2.384	3.177	12.2	21.0	12 3	7 44.17	+23 24.1	1.407	2.227	17.8	20.9
12 13	7 36.87	+33 18.5	2.328	3.205	9.4	20.9	12 13	7 38.43	+23 52.4	1.354	2.250	13.4	20.7
12 23	7 28.03	+33 55.7	2.296	3.232	6.4	20.7	12 23	7 29.48	+24 24.9	1.323	2.273	8.5	20.5
1 2	7 17.72	+34 24.1	2.294	3.259	4.0	20.6	1 2	7 18.35	+24 56.5	1.317	2.295	3.2	20.2
1 12	7 7.01	+34 40.3	2.322	3.285	4.1	20.7	1 12	7 6.60	+25 22.3	1.338	2.318	2.8	20.2
1 22	6 56.96	+34 43.3	2.379	3.310	6.5	20.9	1 22	6 55.87	+25 39.6	1.387	2.340	7.8	20.6
2 1	6 48.55	+34 34.2	2.466	3.335	9.3	21.1	2 1	6 47.55	+25 48.0	1.461	2.363	12.3	20.9
2 11	6 42.42	+34 15.8	2.576	3.360	11.7	21.3	2 11	6 42.46	+25 49.1	1.558	2.385	16.1	21.2
<b>306418</b>	1998 <i>KK</i> <sub>56</sub>		1 7.7	289°19	0°4/ 7.4	15	<b>142023</b>	2002 <i>QY</i> <sub>2</sub>		1 7.7	81°90	0°6/ 7.8	18
12 3	7 39.42	+20 21.2	2.791	3.576	10.8	21.9	12 3	7 42.37	+20 26.9	1.692	2.500	15.8	20.3
12 13	7 34.01	+21 14.3	2.656	3.534	8.4	21.6	12 13	7 36.55	+20 27.4	1.631	2.520	12.0	20.1
12 23	7 26.52	+22 15.1	2.548	3.491	5.4	21.4	12 23	7 28.07	+20 33.2	1.593	2.540	7.6	19.9
1 2	7 17.33	+23 20.7	2.470	3.448	2.0	21.1	1 2	7 17.80	+20 41.7	1.581	2.559	2.9	19.6
1 12	7 7.15	+24 27.2	2.424	3.403	1.7	21.0	1 12	7 7.01	+20 50.5	1.598	2.579	2.1	19.6
1 22	6 56.83	+25 30.9	2.411	3.359	5.3	21.2	1 22	6 57.02	+20 57.7	1.644	2.598	6.7	20.0
2 1	6 47.32	+26 28.7	2.429	3.313	8.8	21.3	2 1	6 48.96	+21 2.7	1.716	2.617	10.8	20.2
2 11	6 39.47	+27 19.2	2.473	3.267	11.8	21.5	2 11	6 43.61	+21 5.6	1.812	2.635	14.3	20.5
<b>322168</b>	2010 <i>XB</i> <sub>13</sub>		1 7.7	102°06	0°5/ 7.5	18	<b>186849</b>	2004 <i>GK</i> <sub>22</sub>		1 7.7	322°84	11°2/10.3	18
12 3	7 40.35	+21 56.0	1.884	2.691	14.5	21.0	12 3	7 35.62	- 3 10.0	1.681	2.427	18.4	20.2
12 13	7 34.99	+22 25.1	1.813	2.702	11.0	20.8	12 13	7 31.67	- 4 27.7	1.601	2.419	16.0	20.0
12 23	7 27.11	+22 59.2	1.765	2.713	6.9	20.6	12 23	7 25.20	- 5 23.9	1.540	2.411	13.6	19.8
1 2	7 17.46	+23 34.5	1.745	2.724	2.5	20.4	1 2	7 16.85	- 5 52.4	1.500	2.404	11.7	19.7
1 12	7 7.18	+24 7.4	1.755	2.735	2.1	20.4	1 12	7 7.66	- 5 49.7	1.484	2.397	11.2	19.6
1 22	6 57.46	+24 34.8	1.793	2.745	6.4	20.7	1 22	6 58.84	- 5 16.2	1.493	2.390	12.3	19.7
2 1	6 49.44	+24 55.5	1.859	2.755	10.3	20.9	2 1	6 51.56	- 4 16.2	1.525	2.384	14.5	19.8
2 11	6 43.91	+25 9.7	1.949	2.766	13.7	21.1	2 11	6 46.70	- 2 57.1	1.577	2.378	17.1	20.0
<b>368006</b>	2012 <i>FQ</i> <sub>56</sub>		1 7.7	175°36	1°2/ 7.3	18	<b>496866</b>	2000 <i>JO</i> <sub>5</sub>		1 7.7	262°81	3°5/ 6.2	17
12 3	7 40.14	+24 36.7	1.966										

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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>364381</b>	2006 <i>VT</i> <sub>28</sub>		1 7.7 117°98	1.5°/ 7.2	18		<b>89402</b>	2001 <i>WG</i> <sub>4</sub>		1 7.7 87°91	4.3°/ 8.9	18	
12 3	7 42.48	+25 38.7	2.025	2.828	13.7	21.5	12 3	7 39.99	+10 43.2	1.953	2.734	15.0	19.1
12 13	7 36.43	+26 2.5	1.956	2.843	10.4	21.3	12 13	7 34.34	+10 15.6	1.890	2.756	11.8	18.9
12 23	7 27.95	+26 27.3	1.911	2.857	6.6	21.1	12 23	7 26.51	+9 59.5	1.850	2.777	8.3	18.7
1 2	7 17.78	+26 49.3	1.894	2.871	2.7	20.9	1 2	7 17.24	+9 55.3	1.837	2.799	5.2	18.6
1 12	7 7.05	+27 5.2	1.907	2.884	2.6	20.9	1 12	7 7.55	+10 2.4	1.853	2.820	4.5	18.6
1 22	6 56.96	+27 13.2	1.949	2.898	6.3	21.1	1 22	6 58.48	+10 19.2	1.898	2.840	6.9	18.8
2 1	6 48.56	+27 13.3	2.020	2.910	10.0	21.4	2 1	6 50.97	+10 43.2	1.970	2.861	10.1	19.0
2 11	6 42.62	+27 7.0	2.114	2.922	13.1	21.6	2 11	6 45.69	+11 11.6	2.066	2.881	13.1	19.2
<b>399489</b>	2002 <i>TO</i> <sub>55</sub>		1 7.7 72°76	6.0°/ 9.7	16		<b>459217</b>	2012 <i>DN</i> <sub>87</sub>		1 7.7 315°78	9.6°/ 9.9	18	
12 3	7 39.37	+6 14.6	1.670	2.449	17.2	21.1	12 3	7 35.55	+0 26.6	1.658	2.422	17.9	21.3
12 13	7 34.20	+5 58.4	1.612	2.470	13.9	20.9	12 13	7 31.70	+0 35.9	1.573	2.410	15.3	21.0
12 23	7 26.56	+6 0.2	1.574	2.492	10.2	20.7	12 23	7 25.29	+1 18.8	1.507	2.399	12.5	20.8
1 2	7 17.27	+6 21.0	1.561	2.514	7.0	20.6	1 2	7 16.94	+1 37.0	1.464	2.388	10.3	20.7
1 12	7 7.46	+6 59.0	1.576	2.536	6.1	20.6	1 12	7 7.70	+1 27.7	1.445	2.377	9.7	20.6
1 22	6 58.35	+7 50.7	1.618	2.558	8.2	20.8	1 22	6 58.79	+0 51.7	1.451	2.367	11.1	20.7
2 1	6 50.99	+8 51.0	1.686	2.579	11.5	21.0	2 1	6 51.41	+0 6.7	1.481	2.357	13.9	20.8
2 11	6 46.11	+9 55.0	1.778	2.600	14.6	21.2	2 11	6 46.51	+1 20.8	1.533	2.348	16.9	21.0
<b>75441</b>	1999 <i>XB</i> <sub>129</sub>		1 7.7 193°74	3.9°/ 6.8	18		<b>399296</b>	2014 <i>HE</i> <sub>160</sub>		1 7.7 191°00	2.7°/ 8.5	18	
12 3	7 46.78	+30 32.0	1.694	2.502	15.8	18.6	12 3	7 41.94	+13 35.7	2.076	2.857	14.2	22.7
12 13	7 40.55	+31 11.6	1.614	2.500	12.2	18.4	12 13	7 36.04	+13 40.6	1.985	2.856	11.1	22.5
12 23	7 31.02	+31 49.6	1.556	2.499	8.2	18.1	12 23	7 27.79	+13 55.5	1.919	2.853	7.5	22.2
1 2	7 19.04	+32 19.1	1.525	2.496	4.6	17.9	1 2	7 17.80	+14 19.7	1.880	2.850	3.9	22.0
1 12	7 6.05	+32 34.4	1.523	2.493	4.7	17.9	1 12	7 7.07	+14 51.0	1.871	2.846	3.1	21.9
1 22	6 53.71	+32 33.0	1.548	2.489	8.5	18.1	1 22	6 56.69	+15 26.8	1.892	2.842	6.4	22.1
2 1	6 43.56	+32 16.5	1.601	2.485	12.5	18.3	2 1	6 47.75	+16 4.5	1.942	2.836	10.1	22.4
2 11	6 36.65	+31 48.8	1.675	2.480	16.1	18.6	2 11	6 41.05	+16 41.9	2.017	2.829	13.5	22.6
<b>135288</b>	2001 <i>SF</i> <sub>154</sub>		1 7.7 117°51	0.3°/ 7.6	18		<b>31704</b>	1999 <i>JZ</i> <sub>44</sub>		1 7.7 291°36	6.7°/ 9.0	18	
12 3	7 37.44	+22 36.1	2.639	3.434	11.1	21.2	12 3	7 35.30	+3 42.4	2.316	3.070	13.7	18.7
12 13	7 32.10	+22 49.9	2.564	3.447	8.4	21.0	12 13	7 30.82	+2 44.0	2.218	3.054	11.5	18.6
12 23	7 24.98	+23 6.0	2.515	3.460	5.3	20.8	12 23	7 24.39	+1 57.5	2.142	3.038	9.1	18.4
1 2	7 16.66	+23 22.4	2.494	3.472	1.9	20.6	1 2	7 16.54	+1 25.9	2.092	3.023	7.2	18.2
1 12	7 7.92	+23 36.9	2.504	3.484	1.6	20.6	1 12	7 8.04	+1 11.1	2.070	3.007	6.8	18.2
1 22	6 59.59	+23 48.3	2.545	3.496	4.9	20.9	1 22	6 59.77	+1 13.3	2.076	2.992	8.3	18.2
2 1	6 52.44	+23 55.8	2.615	3.507	7.9	21.1	2 1	6 52.59	+1 30.8	2.108	2.976	10.7	18.4
2 11	6 47.07	+23 59.7	2.711	3.518	10.5	21.3	2 11	6 47.22	+2 0.3	2.164	2.961	13.2	18.5
<b>323133</b>	2003 <i>BB</i> <sub>72</sub>		1 7.7 279°79	0.1°/ 7.6	18		<b>350629</b>	2001 <i>SK</i> <sub>317</sub>		1 7.7 41°55	1.2°/ 7.9	17	
12 3	7 41.99	+23 59.9	1.939	2.744	14.2	20.3	12 3	7 40.52	+18 22.6	1.131	1.966	20.3	20.8
12 13	7 36.49	+23 42.1	1.835	2.722	10.9	20.1	12 13	7 36.22	+18 35.1	1.081	1.984	15.5	20.6
12 23	7 28.28	+23 24.2	1.753	2.700	7.0	19.8	12 23	7 28.36	+18 59.0	1.051	2.002	9.9	20.4
1 2	7 18.02	+23 4.3	1.699	2.678	2.6	19.5	1 2	7 18.05	+19 30.8	1.043	2.021	3.9	20.1
1 12	7 6.81	+22 40.9	1.675	2.655	2.1	19.4	1 12	7 7.00	+20 5.6	1.061	2.042	2.8	20.1
1 22	6 55.94	+22 13.5	1.680	2.633	6.7	19.6	1 22	6 57.05	+20 38.8	1.104	2.062	8.4	20.5
2 1	6 46.68	+21 43.2	1.713	2.610	11.0	19.8	2 1	6 49.71	+21 7.8	1.170	2.083	13.6	20.8
2 11	6 39.99	+21 11.9	1.769	2.587	14.8	20.0	2 11	6 45.89	+21 31.5	1.257	2.105	17.8	21.1
<b>149395</b>	2003 <i>AM</i> <sub>37</sub>		1 7.7 31°08	1.5°/ 7.9	18		<b>407394</b>	2010 <i>SO</i> <sub>35</sub>		1 7.7 28°19	4.1°/ 7.1	18	
12 3	7 39.93	+19 46.7	1.561	2.377	16.5	19.7	12 3	7 41.25	+30 38.5	1.235	2.073	18.7	20.5
12 13	7 35.04	+19 21.6	1.490	2.383	12.7	19.5	12 13	7 36.80	+31 1.6	1.186	2.088	14.4	20.3
12 23	7 27.31	+19 1.4	1.442	2.389	8.2	19.3	12 23	7 28.72	+31 20.7	1.156	2.105	9.5	20.1
1 2	7 17.60	+18 45.4	1.419	2.396	3.4	19.0	1 2	7 18.16	+31 29.2	1.150	2.124	5.1	19.9
1 12	7 7.21	+18 32.3	1.423	2.403	2.6	19.0	1 12	7 6.94	+31 22.6	1.170	2.143	5.0	19.9
1 22	6 57.55	+18 21.6	1.456	2.411	7.2	19.3	1 22	6 56.94	+31 0.5	1.214	2.164	9.2	20.2
2 1	6 49.86	+18 12.8	1.514	2.419	11.7	19.5	2 1	6 49.67	+30 25.9	1.283	2.185	13.6	20.5
2 11	6 44.98	+18 5.8	1.594	2.427	15.5	19.8	2 11	6 45.97	+29 43.7	1.372	2.207	17.4	20.8
<b>334179</b>	2001 <i>SO</i> <sub>142</sub>		1 7.7 106°18	0.7°/ 7.9	18		<b>503128</b>	2015 <i>FS</i> <sub>366</sub>		1 7.7 307°07	5.6°/ 7.0	17	
12 3	7 37.38	+19 47.8	2.527	3.320	11.6	20.8	12 3	7 46.55	+40 1.5	2.185	2.972	13.4	20.8
12 13	7 32.07	+19 49.0	2.453	3.334	8.8	20.7	12 13	7 39.81	+40 5.2	2.094	2.960	10.8	20.6
12 23	7 24.97	+19 54.1	2.404	3.348	5.6	20.5	12 23	7 30.24	+39 58.0	2.026	2.948	8.0	20.4
1 2	7 16.65	+20 1.5	2.384	3.361	2.2	20.3	1 2	7 18.69	+39 34.3	1.985	2.936	5.9	20.3
1 12	7 7.94	+20 9.8	2.395	3.375	1.6	20.2	1 12	7 6.48	+38 51.1	1.973	2.925	5.9	20.3
1 22	6 59.66	+20 17.7	2.436	3.388	5.0	20.5	1 22	6 55.01	+37 48.8	1.990	2.913	8.1	20.4
2 1	6 52.60	+20 24.3	2.506	3.400	8.1	20.7	2 1	6 45.52	+36 31.4	2.035	2.902	11.0	20.5
2 11	6 47.34	+20 29.6	2.601	3.413	10.8	20.9	2 11	6 38.86	+35 4.7	2.104	2.891	13.9	20.7
<b>334440</b>	2002 <i>JL</i> <sub>19</sub>		1 7.7 262°58	2.1°/ 6.9	18		<b>61365</b>	2000 <i>PW</i> <sub>20</sub>		1 7.7 165°11	0.9°/ 7.9	18	
12 3	7 38.96	+26 8.6	2.169	2.975	12.8	20.7	12 3	7 42.46	+18 32.9	2.044	2.836	14.0	19.8
12 13	7 34.00	+26 52.5	2.074	2.962	9.8	20.5	12 13	7 36.43	+18 46.3	1.963	2.843	10.7	19.6
12 23	7 26.62	+27 39.3	2.003	2.949	6.4	20.2	12 23	7 28.01	+19 6.2	1.905	2.848	6.9	19.4
1 2	7 17.39	+28 24.5	1.960	2.936	2.9	20.0	1 2	7 17.88	+19 30.4	1.876	2.853	2.8	19.1
1 12	7 7.30	+29 3.8	1.947	2.922	3.0	20.0	1 12	7 7.08	+19 56.1	1.876	2.856	2.0	19.1
1 22	6 57.48	+29 33.9	1.963	2.909	6.6	20.2	1 22	6 56.75	+20 20.9	1.907	2.859	6.1	19.4
2 1	6 49.05	+29 53.6	2.007	2.895	10.2	20.4	2 1	6 47.97	+20 43.2	1.967	2.862	10.0	19.6
2 11	6 42.91	+30 3.7	2.076	2.881	13.4	20.6	2 11	6 41.53	+21 2.3	2.051	2.863	13.3	19.8
<b>309242</b>	2007 <i>RN</i> <sub>24</sub>		1 7.7 70°06	3.6°/ 8.5	18		<b>76801</b>	2000 <i>PF</i> <sub>24</sub>		1 7.7 210°54	5.7°/ 5.7	18	
12 3	7 41.15	+14 15.4	1.507	2.313									

EPHEMERIDES

1 7.7

1 7.7

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>15238</b>	Hisaohori		1 7.7 291°85	2°7/ 7.0	18		<b>503735</b>	2016 LG <sub>24</sub>		1 7.7 234°97	4°9/ 9.2	17	
12 3	7 41.84	+26 16.4	1.431	2.257	17.2	18.4	12 3	7 34.83	+6 31.5	2.594	3.353	12.2	22.1
12 13	7 37.29	+26 55.3	1.350	2.248	13.3	18.1	12 13	7 30.21	+6 0.2	2.502	3.348	10.0	22.0
12 23	7 29.26	+27 38.0	1.290	2.240	8.6	17.8	12 23	7 23.89	+5 39.6	2.433	3.342	7.5	21.8
1 2	7 18.52	+28 18.1	1.254	2.231	3.9	17.5	1 2	7 16.36	+5 31.0	2.391	3.337	5.5	21.7
1 12	7 6.55	+28 49.3	1.246	2.223	3.9	17.5	1 12	7 8.33	+5 34.8	2.378	3.331	5.0	21.6
1 22	6 55.13	+29 7.4	1.264	2.214	8.7	17.7	1 22	7 0.56	+5 50.1	2.395	3.325	6.5	21.7
2 1	6 45.95	+29 12.0	1.307	2.206	13.6	18.0	2 1	6 53.79	+6 15.1	2.439	3.318	9.0	21.8
2 11	6 40.21	+29 5.4	1.370	2.198	17.8	18.2	2 11	6 48.64	+6 47.1	2.509	3.312	11.4	22.0
<b>340637</b>	2006 QB <sub>155</sub>		1 7.7 159°91	2°6/ 8.7	18		<b>110386</b>	2001 TG <sub>3</sub>		1 7.7 72°53	0°7/ 7.9	18	
12 3	7 35.49	+12 23.2	3.014	3.785	10.4	22.0	12 3	7 42.16	+20 4.6	1.748	2.553	15.5	20.0
12 13	7 30.41	+12 11.2	2.929	3.791	8.2	21.8	12 13	7 36.29	+20 6.9	1.692	2.579	11.7	19.8
12 23	7 23.85	+12 6.0	2.868	3.796	5.7	21.6	12 23	7 27.88	+20 14.5	1.658	2.604	7.4	19.6
1 2	7 16.28	+12 7.5	2.837	3.801	3.3	21.5	1 2	7 17.82	+20 25.2	1.652	2.630	2.9	19.4
1 12	7 8.33	+12 15.1	2.836	3.806	2.8	21.5	1 12	7 7.32	+20 36.3	1.675	2.655	2.1	19.4
1 22	7 0.68	+12 27.8	2.866	3.810	4.8	21.6	1 22	6 57.62	+20 46.1	1.726	2.680	6.4	19.7
2 1	6 53.94	+12 44.4	2.926	3.814	7.3	21.8	2 1	6 49.81	+20 53.8	1.805	2.705	10.4	20.0
2 11	6 48.65	+13 3.4	3.012	3.817	9.7	21.9	2 11	6 44.59	+20 59.2	1.907	2.729	13.7	20.3
<b>424689</b>	2008 RW <sub>130</sub>		1 7.7 85°50	1°5/ 7.2	18		<b>302938</b>	2003 SX <sub>391</sub>		1 7.7 102°70	3°4/ 6.7	18	
12 3	7 39.10	+25 15.2	2.099	2.906	13.2	21.4	12 3	7 43.72	+28 22.1	1.697	2.510	15.5	21.2
12 13	7 33.90	+25 44.2	2.027	2.916	10.0	21.2	12 13	7 38.02	+29 15.7	1.632	2.522	11.9	21.0
12 23	7 26.39	+26 15.1	1.979	2.926	6.4	21.0	12 23	7 29.31	+30 9.8	1.589	2.534	7.8	20.8
1 2	7 17.27	+26 44.0	1.959	2.936	2.6	20.8	1 2	7 18.45	+30 57.8	1.573	2.546	4.1	20.6
1 12	7 7.58	+27 7.7	1.968	2.945	2.5	20.8	1 12	7 6.80	+31 33.8	1.586	2.558	4.2	20.6
1 22	6 58.41	+27 23.8	2.006	2.955	6.1	21.0	1 22	6 55.86	+31 54.9	1.626	2.569	7.9	20.9
2 1	6 50.77	+27 32.1	2.073	2.965	9.7	21.3	2 1	6 47.01	+32 1.3	1.693	2.580	11.8	21.1
2 11	6 45.41	+27 33.4	2.163	2.975	12.7	21.5	2 11	6 41.14	+31 55.9	1.783	2.591	15.2	21.4
<b>55766</b>	1992 EL <sub>6</sub>		1 7.7 297°47	2°6/ 8.8	18		<b>313816</b>	2004 BN <sub>99</sub>		1 7.7 24°37	0°4/ 7.8	18	
12 3	7 34.63	+12 29.5	2.339	3.125	12.6	19.6	12 3	7 37.99	+19 5.8	1.444	2.267	17.2	20.1
12 13	7 30.33	+12 45.5	2.245	3.117	9.9	19.4	12 13	7 33.93	+19 35.9	1.376	2.273	13.2	19.8
12 23	7 24.10	+13 12.2	2.175	3.109	6.8	19.2	12 23	7 26.85	+20 16.0	1.329	2.279	8.4	19.6
1 2	7 16.45	+13 48.6	2.132	3.102	3.6	18.9	1 2	7 17.58	+21 2.5	1.307	2.286	3.2	19.3
1 12	7 8.18	+14 32.8	2.119	3.094	2.8	18.9	1 12	7 7.45	+21 50.1	1.312	2.293	2.3	19.3
1 22	7 0.15	+15 21.9	2.136	3.087	5.7	19.0	1 22	6 57.97	+22 34.4	1.344	2.301	7.5	19.6
2 1	6 53.24	+16 12.9	2.181	3.080	9.0	19.2	2 1	6 50.52	+23 12.4	1.401	2.309	12.2	19.9
2 11	6 48.15	+17 3.3	2.252	3.072	12.0	19.4	2 11	6 46.06	+23 43.0	1.481	2.318	16.2	20.2
<b>426931</b>	2013 XE <sub>11</sub>		1 7.7 128°51	2°3/ 6.7	18		<b>467464</b>	2006 KF <sub>60</sub>		1 7.7 327°20	1°7/ 8.3	16	
12 3	7 37.67	+26 52.6	2.343	3.147	12.0	20.3	12 3	7 35.05	+16 8.2	1.767	2.578	15.1	21.3
12 13	7 32.78	+27 45.0	2.260	3.148	9.2	20.1	12 13	7 31.37	+16 27.6	1.675	2.564	11.7	21.1
12 23	7 25.71	+28 39.2	2.203	3.148	6.0	19.9	12 23	7 25.14	+16 58.3	1.606	2.551	7.7	20.8
1 2	7 17.06	+29 30.9	2.174	3.148	2.9	19.7	1 2	7 16.96	+17 38.5	1.562	2.538	3.4	20.5
1 12	7 7.73	+30 15.8	2.175	3.149	3.1	19.7	1 12	7 7.87	+18 24.9	1.545	2.525	2.5	20.4
1 22	6 58.74	+30 51.1	2.207	3.149	6.2	19.9	1 22	6 59.07	+19 13.6	1.557	2.513	6.8	20.7
2 1	6 51.06	+31 15.6	2.266	3.149	9.4	20.1	2 1	6 51.77	+20 1.3	1.596	2.502	11.1	20.9
2 11	6 45.47	+31 30.0	2.350	3.150	12.2	20.3	2 11	6 46.93	+20 45.3	1.657	2.491	14.9	21.1
<b>45989</b>	2001 BA <sub>67</sub>		1 7.7 235°62	1°4/ 7.4	18		<b>331815</b>	2003 SF <sub>249</sub>		1 7.7 47°84	1°5/ 8.1	18	
12 3	7 41.46	+27 34.8	2.679	3.470	11.1	19.6	12 3	7 38.40	+17 25.8	1.738	2.547	15.4	20.1
12 13	7 35.35	+27 33.5	2.576	3.456	8.5	19.4	12 13	7 33.49	+17 30.3	1.682	2.569	11.8	19.9
12 23	7 27.19	+27 30.5	2.498	3.441	5.5	19.2	12 23	7 26.16	+17 43.0	1.647	2.592	7.6	19.7
1 2	7 17.58	+27 23.5	2.449	3.425	2.4	19.0	1 2	7 17.21	+18 1.9	1.639	2.616	3.3	19.5
1 12	7 7.36	+27 10.5	2.432	3.409	2.2	18.9	1 12	7 7.79	+18 24.4	1.660	2.639	2.4	19.5
1 22	6 57.46	+26 51.0	2.446	3.393	5.3	19.1	1 22	6 59.09	+18 47.9	1.708	2.663	6.4	19.8
2 1	6 48.79	+26 25.7	2.490	3.376	8.5	19.3	2 1	6 52.13	+19 10.5	1.784	2.687	10.3	20.1
2 11	6 42.06	+25 56.2	2.560	3.358	11.4	19.5	2 11	6 47.62	+19 31.1	1.883	2.712	13.6	20.3
<b>257810</b>	2000 FX <sub>12</sub>		1 7.7 296°40	6°5/ 5.0	18		<b>126279</b>	2002 AU <sub>97</sub>		1 7.7 328°34	2°4/ 7.3	18	
12 3	7 42.02	+33 42.4	1.674	2.490	15.6	19.7	12 3	7 41.30	+26 53.6	1.367	2.197	17.7	19.3
12 13	7 37.46	+35 18.9	1.590	2.477	12.3	19.4	12 13	7 36.94	+27 10.4	1.289	2.189	13.6	19.0
12 23	7 29.46	+36 55.8	1.528	2.464	9.0	19.2	12 23	7 29.05	+27 28.1	1.232	2.182	8.8	18.7
1 2	7 18.67	+38 23.3	1.493	2.451	6.7	19.0	1 2	7 18.47	+27 41.6	1.198	2.176	3.9	18.4
1 12	7 6.44	+39 31.9	1.485	2.438	7.3	19.0	1 12	7 6.76	+27 45.9	1.191	2.170	3.6	18.4
1 22	6 54.53	+40 15.7	1.504	2.425	10.4	19.2	1 22	6 55.73	+27 38.8	1.211	2.164	8.7	18.7
2 1	6 44.67	+40 34.2	1.548	2.413	14.0	19.4	2 1	6 47.06	+27 21.1	1.254	2.159	13.6	18.9
2 11	6 38.18	+40 31.5	1.612	2.400	17.3	19.6	2 11	6 41.89	+26 56.0	1.319	2.154	17.9	19.2
<b>302887</b>	2003 NN <sub>4</sub>		1 7.7 129°59	0°8/ 7.5	18		<b>116196</b>	2003 XD <sub>13</sub>		1 7.7 50°50	0°9/ 7.9	18	
12 3	7 44.66	+24 19.7	1.900	2.701	14.6	21.3	12 3	7 37.77	+18 40.9	1.867	2.675	14.5	19.9
12 13	7 38.21	+24 25.4	1.829	2.715	11.1	21.1	12 13	7 32.96	+18 51.5	1.803	2.691	11.1	19.7
12 23	7 29.15	+24 32.4	1.782	2.728	7.0	20.9	12 23	7 25.83	+19 8.9	1.762	2.708	7.1	19.5
1 2	7 18.31	+24 37.7	1.762	2.740	2.6	20.6	1 2	7 17.10	+19 31.0	1.748	2.726	2.8	19.3
1 12	7 6.90	+24 38.5	1.773	2.752	2.2	20.6	1 12	7 7.86	+19 55.1	1.763	2.743	2.0	19.3
1 22	6 56.19	+24 33.7	1.813	2.764	6.5	20.9	1 22	6 59.23	+20 18.6	1.806	2.761	6.1	19.6
2 1	6 47.32	+24 23.7	1.881	2.775	10.4	21.2	2 1	6 52.22	+20 39.9	1.877	2.779	9.9	19.8
2 11	6 41.08	+24 10.0	1.973	2.785	13.7	21.4	2 11	6 47.54	+20 58.3	1.971	2.797	13.2	20.1
<b>485001</b>	2009 VG <sub>37</sub>		1 7.7 37°12	6°1/ 8.7	17		<b>431440</b>	2007 RN <sub>29</sub>		1 7.7 108°08	4°6/ 9.5	18	
12 3	7 40.17	+12 2.9	1.096	1.921	21.4	20.7	12 3	7 36.57	+6 2.7	2.680	3.432	12.1	21.6

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>467810</b>	2010 <i>CB</i> <sub>110</sub>		1 7.7 32°43	1.9°/ 8.3	18		<b>260809</b>	2005 <i>OT</i> <sub>1</sub>		1 7.7 89°00	3.5°/ 6.0	18	
12 3	7 36.16	+15 42.4	1.771	2.579	15.2	20.7	12 3	7 45.25	+26 39.6	1.940	2.741	14.3	20.3
12 13	7 31.92	+15 56.6	1.702	2.589	11.7	20.5	12 13	7 38.90	+28 25.3	1.881	2.766	10.9	20.2
12 23	7 25.28	+16 21.1	1.656	2.600	7.7	20.3	12 23	7 29.79	+30 13.9	1.848	2.790	7.1	20.0
1 2	7 16.94	+16 54.1	1.636	2.611	3.5	20.1	1 2	7 18.67	+31 57.2	1.843	2.814	4.0	19.8
1 12	7 7.99	+17 32.5	1.644	2.623	2.5	20.0	1 12	7 6.77	+33 27.2	1.870	2.837	4.4	19.9
1 22	6 59.59	+18 12.9	1.680	2.635	6.5	20.3	1 22	6 55.43	+34 38.9	1.927	2.860	7.6	20.2
2 1	6 52.79	+18 52.6	1.743	2.648	10.4	20.6	2 1	6 45.91	+35 31.2	2.012	2.883	11.0	20.4
2 11	6 48.38	+19 29.2	1.830	2.661	13.8	20.8	2 11	6 39.10	+36 5.9	2.121	2.905	13.9	20.6
<b>117173</b>	2004 <i>RK</i> <sub>51</sub>		1 7.7 68°67	0.9°/ 7.9	18		<b>56777</b>	2000 <i>OC</i> <sub>39</sub>		1 7.7 125°90	5.3°/ 9.9	18	
12 3	7 38.42	+18 18.0	1.879	2.685	14.6	19.6	12 3	7 38.47	+ 3 56.1	2.517	3.259	13.0	19.5
12 13	7 33.53	+18 37.5	1.809	2.696	11.1	19.4	12 13	7 32.84	+ 3 38.9	2.446	3.279	10.6	19.4
12 23	7 26.25	+19 4.6	1.762	2.707	7.1	19.2	12 23	7 25.49	+ 3 35.2	2.397	3.297	8.1	19.3
1 2	7 17.29	+19 37.0	1.742	2.719	2.8	19.0	1 2	7 16.99	+ 3 45.8	2.376	3.315	6.0	19.2
1 12	7 7.74	+20 11.4	1.750	2.731	2.0	18.9	1 12	7 8.09	+ 4 10.4	2.384	3.332	5.4	19.1
1 22	6 58.72	+20 44.7	1.788	2.742	6.2	19.2	1 22	6 59.60	+ 4 46.9	2.422	3.348	6.7	19.3
2 1	6 51.30	+21 14.8	1.853	2.754	10.1	19.5	2 1	6 52.27	+ 5 32.4	2.489	3.364	9.0	19.4
2 11	6 46.25	+21 40.8	1.942	2.766	13.5	19.7	2 11	6 46.68	+ 6 23.4	2.581	3.378	11.3	19.6
<b>283991</b>	2004 <i>SL</i> <sub>30</sub>		1 7.7 102°20	0.6°/ 7.5	17		<b>194199</b>	2001 <i>TE</i> <sub>88</sub>		1 7.7 56°79	2.2°/ 7.4	17	
12 3	7 44.21	+22 34.6	1.627	2.437	16.2	20.8	12 3	7 44.93	+26 28.1	1.268	2.096	18.9	20.8
12 13	7 38.23	+22 56.0	1.564	2.454	12.3	20.6	12 13	7 39.46	+26 43.0	1.215	2.114	14.3	20.6
12 23	7 29.35	+23 21.9	1.523	2.470	7.8	20.3	12 23	7 30.40	+26 58.4	1.182	2.133	9.2	20.3
1 2	7 18.45	+23 48.2	1.508	2.487	2.9	20.1	1 2	7 18.90	+27 9.1	1.174	2.151	3.8	20.1
1 12	7 6.90	+24 10.7	1.523	2.503	2.3	20.1	1 12	7 6.71	+27 10.4	1.192	2.170	3.5	20.1
1 22	6 56.15	+24 26.9	1.566	2.518	7.1	20.4	1 22	6 55.71	+27 1.2	1.236	2.190	8.5	20.4
2 1	6 47.47	+24 36.3	1.635	2.534	11.4	20.7	2 1	6 47.40	+26 43.1	1.305	2.209	13.2	20.8
2 11	6 41.72	+24 39.9	1.728	2.548	15.0	21.0	2 11	6 42.66	+26 19.4	1.395	2.228	17.2	21.1
<b>156619</b>	2002 <i>GL</i> <sub>144</sub>		1 7.7 174°22	3°3/ 6.2	18		<b>179928</b>	2002 <i>VJ</i> <sub>69</sub>		1 7.7 29°94	1°0/ 7.6	17	
12 3	7 40.66	+29 34.1	2.387	3.186	12.0	20.1	12 3	7 40.26	+24 15.9	1.141	1.982	19.7	19.1
12 13	7 35.11	+30 39.6	2.305	3.188	9.2	19.9	12 13	7 36.02	+24 17.8	1.097	2.003	14.9	18.8
12 23	7 27.26	+31 45.6	2.249	3.189	6.2	19.8	12 23	7 28.22	+24 22.8	1.072	2.026	9.4	18.6
1 2	7 17.71	+32 46.6	2.222	3.190	3.6	19.6	1 2	7 18.08	+24 26.8	1.070	2.049	3.5	18.3
1 12	7 7.40	+33 37.8	2.225	3.191	3.9	19.6	1 12	7 7.37	+24 26.2	1.094	2.074	2.8	18.4
1 22	6 57.43	+34 15.9	2.258	3.192	6.7	19.8	1 22	6 57.90	+24 19.5	1.142	2.100	8.3	18.8
2 1	6 48.83	+34 40.3	2.320	3.192	9.7	20.0	2 1	6 51.10	+24 7.6	1.214	2.127	13.3	19.1
2 11	6 42.41	+34 52.3	2.406	3.191	12.4	20.2	2 11	6 47.78	+23 52.2	1.307	2.155	17.3	19.5
<b>339618</b>	2005 <i>OB</i> <sub>24</sub>		1 7.7 248°33	5°3/ 8.9	18		<b>42822</b>	1999 <i>NT</i> <sub>13</sub>		1 7.7 123°99	0°3/ 7.8	18	
12 3	7 40.56	+10 47.3	1.442	2.243	18.4	20.8	12 3	7 47.15	+21 13.9	1.626	2.428	16.6	19.9
12 13	7 35.90	+10 17.9	1.362	2.239	14.7	20.5	12 13	7 40.41	+21 15.2	1.560	2.446	12.6	19.7
12 23	7 28.18	+10 3.2	1.303	2.236	10.5	20.3	12 23	7 30.72	+21 21.1	1.517	2.463	8.0	19.4
1 2	7 18.14	+10 4.9	1.267	2.231	6.5	20.1	1 2	7 18.99	+21 28.6	1.501	2.479	3.0	19.2
1 12	7 7.10	+10 22.6	1.258	2.227	5.6	20.0	1 12	7 6.63	+21 34.8	1.514	2.494	2.2	19.1
1 22	6 56.57	+10 53.8	1.275	2.223	8.9	20.2	1 22	6 55.13	+21 38.1	1.556	2.509	7.1	19.5
2 1	6 48.00	+11 34.5	1.317	2.219	13.3	20.4	2 1	6 45.78	+21 38.1	1.625	2.522	11.5	19.8
2 11	6 42.44	+12 20.5	1.381	2.214	17.4	20.6	2 11	6 39.41	+21 35.7	1.717	2.535	15.2	20.0
<b>186181</b>	2001 <i>UK</i> <sub>204</sub>		1 7.7 166°52	3°2/ 6.8	18		<b>360315</b>	2001 <i>SO</i> <sub>141</sub>		1 7.7 171°26	1°8/ 8.3	18	
12 3	7 41.64	+29 30.7	1.892	2.702	14.3	20.7	12 3	7 39.91	+15 58.9	2.424	3.207	12.4	22.5
12 13	7 36.29	+30 5.8	1.814	2.702	11.0	20.4	12 13	7 34.18	+15 57.9	2.338	3.211	9.5	22.3
12 23	7 28.18	+30 39.8	1.759	2.703	7.3	20.2	12 23	7 26.48	+16 3.6	2.277	3.215	6.3	22.1
1 2	7 18.07	+31 7.6	1.731	2.703	3.9	20.0	1 2	7 17.40	+16 14.8	2.244	3.217	3.0	21.9
1 12	7 7.17	+31 24.8	1.732	2.704	4.0	20.0	1 12	7 7.78	+16 30.1	2.242	3.220	2.3	21.9
1 22	6 56.83	+31 29.1	1.761	2.704	7.4	20.2	1 22	6 58.53	+16 47.8	2.271	3.221	5.4	22.1
2 1	6 48.30	+31 21.0	1.817	2.704	11.1	20.4	2 1	6 50.51	+17 6.6	2.329	3.222	8.7	22.3
2 11	6 42.48	+31 3.4	1.896	2.704	14.4	20.7	2 11	6 44.40	+17 25.3	2.413	3.222	11.6	22.5
<b>296741</b>	2009 <i>TO</i> <sub>34</sub>		1 7.7 104°42	0.9°/ 8.0	18		<b>104291</b>	2000 <i>EU</i> <sub>164</sub>		1 7.7 186°30	3°2/ 8.8	18	
12 3	7 38.73	+18 22.1	2.053	2.852	13.7	21.1	12 3	7 39.03	+11 50.5	2.297	3.073	13.1	21.0
12 13	7 33.60	+18 38.0	1.978	2.862	10.5	20.9	12 13	7 33.64	+11 44.9	2.208	3.073	10.4	20.8
12 23	7 26.23	+19 0.7	1.927	2.872	6.7	20.7	12 23	7 26.21	+11 49.1	2.143	3.072	7.2	20.6
1 2	7 17.29	+19 28.0	1.904	2.881	2.7	20.5	1 2	7 17.33	+12 3.0	2.105	3.071	4.2	20.4
1 12	7 7.78	+19 57.3	1.910	2.890	1.9	20.4	1 12	7 7.84	+12 25.3	2.098	3.069	3.5	20.4
1 22	6 58.75	+20 25.8	1.946	2.900	5.9	20.7	1 22	6 58.69	+12 54.1	2.120	3.067	6.1	20.5
2 1	6 51.19	+20 51.9	2.010	2.909	9.6	21.0	2 1	6 50.77	+13 27.1	2.172	3.064	9.3	20.7
2 11	6 45.84	+21 14.6	2.098	2.918	12.8	21.2	2 11	6 44.79	+14 2.0	2.248	3.060	12.3	20.9
<b>161182</b>	2002 <i>TO</i> <sub>120</sub>		1 7.7 122°46	3°0/ 6.9	18		<b>165749</b>	2001 <i>QT</i> <sub>187</sub>		1 7.7 17°71	5°1/ 8.3	18	
12 3	7 40.81	+31 34.6	2.433	3.230	11.9	20.2	12 3	7 37.56	+12 2.1	1.802	2.597	15.5	18.4
12 13	7 34.98	+31 56.2	2.358	3.238	9.1	20.0	12 13	7 32.85	+10 50.5	1.731	2.603	12.3	18.2
12 23	7 27.01	+32 14.4	2.307	3.247	6.1	19.8	12 23	7 25.81	+ 9 47.5	1.682	2.610	8.9	18.0
1 2	7 17.56	+32 25.6	2.285	3.254	3.5	19.7	1 2	7 17.17	+ 8 55.9	1.659	2.618	5.9	17.9
1 12	7 7.61	+32 26.9	2.293	3.262	3.5	19.7	1 12	7 8.00	+ 8 17.4	1.663	2.627	5.4	17.8
1 22	6 58.19	+32 17.5	2.332	3.270	6.2	19.9	1 22	6 59.41	+ 7 52.8	1.696	2.636	7.9	18.0
2 1	6 50.23	+31 58.4	2.398	3.277	9.1	20.1	2 1	6 52.42	+ 7 41.2	1.755	2.646	11.2	18.2
2 11	6 44.43	+31 31.8	2.489	3.284	11.7	20.3	2 11	6 47.74	+ 7 40.2	1.837	2.657	14.3	18.4
<b>54443</b>	2000 <i>MT</i> <sub>5</sub>		1 7.7 172°18	7°4/11.2	18		<b>454003</b>	2012 <i>DH</i> <sub>7</sub>		1 7.7 197°94	6°1/ 6.2	18	
12 3	7 40.85	- 1 21.9											

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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>426024</b>	2011 <i>LC</i> <sub>23</sub>		1 7.7 215°63	3°5/ 8.9	18		<b>286465</b>	2002 <i>AO</i> <sub>136</sub>		1 7.7 93°42	1°3/ 8.2	18	
12 3	7 35.59	+10 33.2	2.445	3.220	12.4	21.4	12 3	7 41.96	+15 49.1	1.560	2.366	17.0	20.1
12 13	7 30.94	+10 24.6	2.355	3.218	9.9	21.2	12 13	7 36.68	+16 29.1	1.495	2.380	13.1	19.9
12 23	7 24.46	+10 25.9	2.288	3.215	7.0	21.1	12 23	7 28.50	+17 22.1	1.451	2.395	8.5	19.7
1 2	7 16.68	+10 37.4	2.249	3.211	4.3	20.9	1 2	7 18.26	+18 24.3	1.433	2.409	3.5	19.4
1 12	7 8.35	+10 58.2	2.240	3.208	3.7	20.8	1 12	7 7.25	+19 30.1	1.443	2.423	2.4	19.4
1 22	7 0.31	+11 26.6	2.260	3.205	5.9	21.0	1 22	6 56.89	+20 34.2	1.482	2.437	7.1	19.7
2 1	6 53.37	+12 0.3	2.309	3.201	8.8	21.1	2 1	6 48.51	+21 32.6	1.548	2.451	11.6	20.0
2 11	6 48.17	+12 37.0	2.383	3.197	11.6	21.3	2 11	6 42.98	+22 23.2	1.637	2.464	15.4	20.3
<b>454579</b>	2014 <i>PW</i> <sub>19</sub>		1 7.7 249°41	0°8/ 7.5	18		<b>329147</b>	2011 <i>YF</i> <sub>31</sub>		1 7.7 27°51	1°2/ 8.0	16	
12 3	7 42.23	+23 10.1	1.764	2.573	15.2	22.1	12 3	7 38.21	+18 35.4	1.336	2.164	18.1	20.9
12 13	7 36.98	+23 27.3	1.671	2.561	11.7	21.9	12 13	7 34.23	+18 44.0	1.275	2.173	13.9	20.7
12 23	7 28.82	+23 48.7	1.601	2.548	7.5	21.6	12 23	7 27.11	+19 2.3	1.233	2.183	8.9	20.5
1 2	7 18.43	+24 10.7	1.557	2.535	2.8	21.3	1 2	7 17.77	+19 27.8	1.216	2.194	3.6	20.2
1 12	7 7.00	+24 29.5	1.541	2.521	2.4	21.2	1 12	7 7.64	+19 56.4	1.225	2.205	2.5	20.1
1 22	6 55.95	+24 42.4	1.555	2.507	7.2	21.5	1 22	6 58.30	+20 24.7	1.260	2.218	7.7	20.5
2 1	6 46.65	+24 48.5	1.595	2.493	11.7	21.7	2 1	6 51.13	+20 50.2	1.320	2.231	12.5	20.8
2 11	6 40.14	+24 48.6	1.658	2.478	15.6	21.9	2 11	6 47.07	+21 11.6	1.401	2.245	16.6	21.1
<b>166894</b>	2002 <i>YO</i> <sub>32</sub>		1 7.7 54°42	1°0/ 7.4	18		<b>256562</b>	2007 <i>RS</i> <sub>283</sub>		1 7.7 168°19	0°2/ 7.7	18	
12 3	7 38.57	+24 32.8	2.047	2.856	13.4	19.9	12 3	7 43.85	+23 10.5	1.834	2.638	14.9	20.6
12 13	7 33.51	+24 46.7	1.980	2.870	10.1	19.7	12 13	7 37.84	+23 7.7	1.754	2.641	11.4	20.3
12 23	7 26.18	+25 2.4	1.936	2.884	6.4	19.5	12 23	7 29.13	+23 7.1	1.697	2.644	7.3	20.1
1 2	7 17.31	+25 16.7	1.920	2.898	2.5	19.3	1 2	7 18.48	+23 6.0	1.668	2.646	2.7	19.8
1 12	7 7.93	+25 27.0	1.933	2.912	2.1	19.3	1 12	7 7.12	+23 2.1	1.667	2.648	2.1	19.8
1 22	6 59.14	+25 31.9	1.975	2.927	6.0	19.6	1 22	6 56.36	+22 54.3	1.696	2.649	6.7	20.1
2 1	6 51.91	+25 31.0	2.045	2.941	9.6	19.8	2 1	6 47.41	+22 42.8	1.753	2.650	10.8	20.3
2 11	6 46.95	+25 25.4	2.139	2.956	12.6	20.1	2 11	6 41.14	+22 28.8	1.833	2.650	14.4	20.5
<b>217789</b>	2000 <i>SE</i> <sub>281</sub>		1 7.7 71°00	5°1/ 9.1	18		<b>140051</b>	2001 <i>SJ</i> <sub>90</sub>		1 7.7 215°27	3°2/ 9.0	17	
12 3	7 38.82	+ 9 26.3	1.827	2.611	15.7	20.2	12 3	7 35.48	+ 9 59.9	2.928	3.692	10.9	21.5
12 13	7 33.72	+ 8 50.9	1.762	2.627	12.5	20.0	12 13	7 30.60	+ 9 52.0	2.829	3.684	8.7	21.3
12 23	7 26.32	+ 8 28.4	1.718	2.642	9.1	19.8	12 23	7 24.15	+ 9 52.7	2.754	3.676	6.2	21.1
1 2	7 17.36	+ 8 20.0	1.701	2.658	6.0	19.6	1 2	7 16.58	+10 2.2	2.708	3.667	3.9	20.9
1 12	7 7.90	+ 8 25.6	1.711	2.674	5.3	19.6	1 12	7 8.52	+10 19.8	2.692	3.658	3.4	20.9
1 22	6 59.03	+ 8 43.5	1.749	2.690	7.6	19.8	1 22	7 0.67	+10 44.3	2.707	3.648	5.2	21.0
2 1	6 51.76	+ 9 10.8	1.814	2.706	10.8	20.0	2 1	6 53.70	+11 13.8	2.751	3.638	7.8	21.2
2 11	6 46.80	+ 9 44.1	1.902	2.722	13.9	20.3	2 11	6 48.20	+11 46.5	2.822	3.627	10.2	21.3
<b>166771</b>	2002 <i>VJ</i> <sub>10</sub>		1 7.7 349°42	1°6/ 7.3	18		<b>345755</b>	2007 <i>EU</i> <sub>64</sub>		1 7.7 14°84	3°5/ 7.1	17	
12 3	7 37.70	+26 18.6	1.922	2.737	13.9	19.5	12 3	7 34.30	+25 59.2	0.803	1.676	22.7	19.7
12 13	7 33.19	+26 30.1	1.840	2.733	10.6	19.3	12 13	7 32.94	+26 41.6	0.759	1.683	17.4	19.4
12 23	7 26.18	+26 42.1	1.781	2.729	6.8	19.0	12 23	7 27.07	+27 28.3	0.732	1.692	11.2	19.2
1 2	7 17.37	+26 51.3	1.749	2.726	2.9	18.8	1 2	7 17.89	+28 10.7	0.725	1.703	5.0	18.9
1 12	7 7.85	+26 54.8	1.745	2.724	2.6	18.8	1 12	7 7.63	+28 40.4	0.738	1.717	4.9	18.9
1 22	6 58.83	+26 51.2	1.770	2.721	6.6	19.0	1 22	6 58.72	+28 52.8	0.773	1.733	10.8	19.3
2 1	6 51.42	+26 40.5	1.822	2.720	10.4	19.2	2 1	6 53.11	+28 48.8	0.828	1.751	16.4	19.7
2 11	6 46.47	+26 24.2	1.897	2.718	13.8	19.5	2 11	6 51.85	+28 32.1	0.900	1.771	21.1	20.0
<b>116590</b>	2004 <i>BK</i> <sub>100</sub>		1 7.7 172°68	1°9/ 8.3	18		<b>149992</b>	2005 <i>UC</i> <sub>71</sub>		1 7.7 175°14	5°1/ 6.5	18	
12 3	7 39.76	+15 56.6	1.983	2.778	14.3	20.5	12 3	7 44.68	+35 52.5	2.037	2.836	13.8	20.1
12 13	7 34.52	+16 1.4	1.900	2.780	11.1	20.3	12 13	7 38.58	+36 29.0	1.960	2.837	10.9	19.9
12 23	7 26.93	+16 14.9	1.841	2.781	7.3	20.1	12 23	7 29.65	+36 59.2	1.906	2.837	7.8	19.7
1 2	7 17.64	+16 35.7	1.808	2.782	3.4	19.8	1 2	7 18.70	+37 17.2	1.879	2.838	5.4	19.6
1 12	7 7.66	+17 1.6	1.805	2.783	2.5	19.8	1 12	7 7.99	+37 18.3	1.881	2.838	5.6	19.6
1 22	6 58.11	+17 30.0	1.831	2.784	6.3	20.0	1 22	6 55.93	+37 1.5	1.911	2.838	8.1	19.7
2 1	6 50.04	+17 58.8	1.885	2.784	10.1	20.3	2 1	6 46.79	+36 28.9	1.968	2.838	11.2	19.9
2 11	6 44.26	+18 26.4	1.964	2.784	13.5	20.5	2 11	6 40.45	+35 44.9	2.049	2.838	14.1	20.1
<b>360786</b>	2005 <i>GJ</i> <sub>6</sub>		1 7.7 313°86	0°8/ 7.5	18		<b>429050</b>	2009 <i>DW</i> <sub>21</sub>		1 7.7 314°72	0°2/ 7.7	18	
12 3	7 38.71	+22 12.1	1.495	2.319	16.7	21.0	12 3	7 36.39	+21 57.6	2.220	3.026	12.6	21.6
12 13	7 34.76	+22 42.0	1.408	2.306	12.8	20.7	12 13	7 31.89	+22 13.8	2.131	3.019	9.6	21.4
12 23	7 27.64	+23 19.4	1.343	2.294	8.2	20.4	12 23	7 25.25	+22 33.9	2.066	3.013	6.1	21.1
1 2	7 18.06	+24 0.1	1.303	2.282	3.1	20.1	1 2	7 17.05	+22 55.7	2.028	3.006	2.3	20.9
1 12	7 7.30	+24 38.8	1.289	2.270	2.6	20.0	1 12	7 8.20	+23 16.5	2.020	3.000	1.8	20.8
1 22	6 56.94	+25 11.3	1.303	2.258	7.9	20.3	1 22	6 59.67	+23 34.1	2.041	2.994	5.7	21.1
2 1	6 48.54	+25 35.3	1.342	2.247	12.8	20.6	2 1	6 52.45	+23 47.5	2.090	2.988	9.3	21.3
2 11	6 43.24	+25 50.8	1.402	2.237	17.1	20.8	2 11	6 47.28	+23 56.6	2.164	2.982	12.4	21.5
<b>170504</b>	2003 <i>WF</i> <sub>14</sub>		1 7.7 222°00	1°0/ 7.9	18		<b>295838</b>	2008 <i>VS</i> <sub>6</sub>		1 7.7 316°80	4°9/ 8.8	18	
12 3	7 41.31	+18 56.4	1.993	2.791	14.1	21.4	12 3	7 39.47	+11 31.0	1.476	2.279	17.9	20.8
12 13	7 35.82	+18 58.2	1.900	2.783	10.9	21.2	12 13	7 35.03	+11 2.8	1.397	2.276	14.3	20.5
12 23	7 27.85	+19 6.0	1.830	2.774	7.1	21.0	12 23	7 27.62	+10 48.4	1.339	2.273	10.1	20.3
1 2	7 18.02	+19 18.0	1.788	2.765	2.9	20.7	1 2	7 18.02	+10 49.1	1.305	2.271	6.1	20.0
1 12	7 7.37	+19 32.1	1.775	2.755	2.1	20.6	1 12	7 7.48	+11 4.4	1.297	2.268	5.2	20.0
1 22	6 57.08	+19 46.1	1.792	2.745	6.3	20.8	1 22	6 57.46	+11 31.9	1.316	2.266	8.6	20.2
2 1	6 48.28	+19 58.9	1.837	2.734	10.4	21.1	2 1	6 49.34	+12 8.2	1.360	2.264	12.9	20.4
2 11	6 41.87	+20 9.8	1.906	2.723	13.9	21.3	2 11	6 44.12	+12 49.2	1.426	2.262	16.8	20.6
<b>445127</b>	2008 <i>UC</i> <sub>323</sub>		1 7.7 75°04	0°8/ 7.6	17		<b>17401</b>	1985 <i>RP</i> <sub>3</sub>		1 7.7 178°03	1°1/ 7.4	18	
12 3	7 47.89	+24 7.8	1.440										

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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>323487</b>	2004 <i>PV</i> <sub>37</sub>		1 7.7 206°71	4°1/ 9.3	18		<b>486763</b>	2014 <i>GR</i> <sub>31</sub>		1 7.7 227°79	3°8/ 8.8	18	
12 3	7 37.51	+ 8 14.8	2.437	3.201	12.8	21.3	12 3	7 41.76	+11 57.9	1.772	2.560	16.0	22.3
12 13	7 32.44	+ 8 12.9	2.342	3.196	10.3	21.1	12 13	7 36.47	+11 49.3	1.678	2.550	12.7	22.0
12 23	7 25.48	+ 8 22.9	2.271	3.190	7.5	20.9	12 23	7 28.45	+11 53.1	1.606	2.539	8.9	21.8
1 2	7 17.13	+ 8 45.1	2.227	3.184	4.9	20.8	1 2	7 18.35	+12 9.7	1.560	2.527	5.1	21.5
1 12	7 8.17	+ 9 18.6	2.213	3.177	4.2	20.7	1 12	7 7.27	+12 37.6	1.542	2.515	4.2	21.4
1 22	6 59.46	+10 1.1	2.229	3.170	6.2	20.8	1 22	6 56.49	+13 14.1	1.553	2.502	7.6	21.6
2 1	6 51.85	+10 49.8	2.274	3.162	9.1	21.0	2 1	6 47.29	+13 56.0	1.591	2.489	11.7	21.8
2 11	6 46.02	+11 41.6	2.345	3.154	11.9	21.2	2 11	6 40.68	+14 40.0	1.653	2.474	15.5	22.0
<b>428388</b>	2007 <i>RR</i> <sub>301</sub>		1 7.7 351°82	5°1/ 9.0	18		<b>383736</b>	2007 <i>VR</i> <sub>13</sub>		1 7.7 31°43	1°8/ 7.2	18	
12 3	7 33.96	+ 9 35.8	1.859	2.651	15.2	20.7	12 3	7 37.79	+26 20.6	1.991	2.804	13.6	21.2
12 13	7 30.26	+ 9 2.8	1.776	2.646	12.2	20.5	12 13	7 33.11	+26 43.4	1.921	2.812	10.3	21.0
12 23	7 24.31	+ 8 42.2	1.715	2.641	8.9	20.3	12 23	7 26.06	+27 7.0	1.874	2.821	6.6	20.8
1 2	7 16.73	+ 8 35.5	1.678	2.637	5.9	20.1	1 2	7 17.36	+27 27.8	1.854	2.830	2.8	20.6
1 12	7 8.47	+ 8 43.0	1.670	2.634	5.2	20.0	1 12	7 8.08	+27 42.5	1.863	2.840	2.7	20.6
1 22	7 0.60	+ 9 3.1	1.688	2.632	7.6	20.2	1 22	6 59.35	+27 49.4	1.900	2.850	6.3	20.9
2 1	6 54.13	+ 9 33.2	1.732	2.630	10.9	20.4	2 1	6 52.22	+27 48.4	1.965	2.860	9.9	21.1
2 11	6 49.85	+10 9.8	1.800	2.629	14.1	20.6	2 11	6 47.44	+27 40.7	2.054	2.871	13.1	21.3
<b>27367</b>	2000 <i>ER</i> <sub>35</sub>		1 7.7 118°03	0°9/ 8.0	18		<b>459336</b>	2012 <i>HF</i> <sub>39</sub>		1 7.7 235°97	1°8/ 8.1	18	
12 3	7 43.55	+17 59.7	1.665	2.467	16.2	18.0	12 3	7 39.90	+17 41.8	2.187	2.979	13.2	20.9
12 13	7 37.73	+18 24.2	1.597	2.482	12.4	17.8	12 13	7 34.52	+17 21.9	2.092	2.970	10.2	20.7
12 23	7 29.10	+18 57.9	1.552	2.497	8.0	17.6	12 23	7 26.92	+17 6.8	2.020	2.960	6.8	20.5
1 2	7 18.50	+19 37.4	1.534	2.511	3.2	17.3	1 2	7 17.70	+16 56.1	1.976	2.950	3.1	20.2
1 12	7 7.19	+20 18.6	1.544	2.524	2.2	17.3	1 12	7 7.80	+16 48.9	1.962	2.940	2.4	20.2
1 22	6 56.56	+20 57.7	1.583	2.537	6.9	17.6	1 22	6 58.23	+16 44.6	1.978	2.929	6.0	20.4
2 1	6 47.84	+21 32.4	1.650	2.550	11.2	17.9	2 1	6 50.01	+16 42.4	2.022	2.918	9.7	20.6
2 11	6 41.92	+22 1.6	1.740	2.562	14.9	18.2	2 11	6 43.90	+16 41.9	2.091	2.907	12.9	20.8
<b>82710</b>	2001 <i>PU</i> <sub>44</sub>		1 7.7 122°24	1°7/ 8.4	18		<b>54115</b>	2000 <i>HX</i> <sub>15</sub>		1 7.7 42°74	5°5/ 6.4	18	
12 3	7 36.37	+15 32.6	2.547	3.333	11.7	19.5	12 3	7 43.80	+30 56.9	1.271	2.103	18.6	18.9
12 13	7 31.44	+15 43.5	2.468	3.343	9.0	19.3	12 13	7 39.15	+32 4.0	1.212	2.111	14.5	18.7
12 23	7 24.74	+16 1.4	2.414	3.352	6.0	19.1	12 23	7 30.62	+33 10.1	1.173	2.119	9.9	18.4
1 2	7 16.82	+16 25.3	2.387	3.361	2.8	18.9	1 2	7 19.21	+34 5.3	1.159	2.128	6.0	18.2
1 12	7 8.44	+16 53.2	2.391	3.369	2.1	18.9	1 12	7 6.72	+34 41.1	1.170	2.137	6.3	18.3
1 22	7 0.41	+17 23.1	2.426	3.378	5.0	19.1	1 22	6 55.21	+34 54.0	1.206	2.147	10.3	18.5
2 1	6 53.50	+17 53.1	2.490	3.386	8.1	19.3	2 1	6 46.47	+34 45.8	1.266	2.157	14.6	18.8
2 11	6 48.32	+18 22.0	2.580	3.394	10.8	19.5	2 11	6 41.59	+34 21.9	1.345	2.167	18.4	19.1
<b>263973</b>	2009 <i>KL</i> <sub>1</sub>		1 7.7 98°58	8°8/ 3.9	18		<b>489186</b>	2006 <i>HZ</i> <sub>21</sub>		1 7.7 273°94	0°3/ 7.7	17	
12 3	7 52.32	+44 0.4	2.084	2.857	14.4	20.1	12 3	7 41.05	+21 9.7	1.665	2.477	15.8	21.5
12 13	7 44.93	+46 4.5	2.038	2.883	12.0	20.0	12 13	7 36.38	+21 36.3	1.567	2.458	12.2	21.3
12 23	7 34.01	+47 57.0	2.017	2.908	9.9	19.9	12 23	7 28.66	+22 10.8	1.490	2.438	7.9	21.0
1 2	7 20.42	+49 27.4	2.023	2.932	8.8	19.9	1 2	7 18.51	+22 49.5	1.440	2.419	3.0	20.6
1 12	7 5.73	+50 28.1	2.058	2.956	9.3	19.9	1 12	7 7.13	+23 27.9	1.418	2.398	2.3	20.5
1 22	6 51.76	+50 56.9	2.119	2.979	10.9	20.1	1 22	6 55.98	+24 1.8	1.424	2.378	7.5	20.8
2 1	6 40.18	+50 57.1	2.205	3.002	12.9	20.3	2 1	6 46.55	+24 28.9	1.456	2.357	12.3	21.0
2 11	6 32.08	+50 35.6	2.311	3.024	14.8	20.4	2 11	6 40.02	+24 48.8	1.511	2.337	16.5	21.2
<b>350785</b>	2002 <i>CF</i> <sub>71</sub>		1 7.7 265°73	0°2/ 7.7	18		<b>381647</b>	2008 <i>YX</i> <sub>152</sub>		1 7.7 88°95	2°8/ 9.1	18	
12 3	7 41.40	+21 29.6	1.692	2.503	15.7	21.4	12 3	7 36.14	+10 59.8	2.408	3.185	12.6	21.3
12 13	7 36.53	+21 48.1	1.596	2.487	12.1	21.1	12 13	7 31.32	+11 19.3	2.334	3.199	9.9	21.1
12 23	7 28.66	+22 13.0	1.523	2.471	7.8	20.8	12 23	7 24.70	+11 49.8	2.283	3.213	6.8	20.9
1 2	7 18.47	+22 41.0	1.476	2.454	2.9	20.5	1 2	7 16.83	+12 30.3	2.260	3.227	3.8	20.8
1 12	7 7.14	+23 8.1	1.457	2.437	2.2	20.4	1 12	7 8.49	+13 18.3	2.268	3.240	3.0	20.7
1 22	6 56.11	+23 31.0	1.466	2.420	7.3	20.7	1 22	7 0.54	+14 11.1	2.305	3.254	5.5	20.9
2 1	6 46.84	+23 48.1	1.502	2.403	12.0	20.9	2 1	6 53.73	+15 5.5	2.372	3.267	8.5	21.1
2 11	6 40.41	+23 59.3	1.561	2.386	16.1	21.1	2 11	6 48.71	+15 58.8	2.464	3.281	11.2	21.3
<b>250179</b>	2002 <i>TU</i> <sub>236</sub>		1 7.7 17°57	2°2/ 7.9	18		<b>459974</b>	2014 <i>OB</i> <sub>13</sub>		1 7.7 83°07	1°5/ 7.5	18	
12 3	7 41.90	+20 56.9	1.372	2.195	18.0	18.9	12 3	7 45.03	+26 24.6	1.673	2.483	15.8	21.3
12 13	7 36.92	+19 56.3	1.304	2.199	13.9	18.7	12 13	7 38.81	+26 25.3	1.611	2.500	12.0	21.1
12 23	7 28.76	+18 57.6	1.257	2.205	9.0	18.4	12 23	7 29.72	+26 25.5	1.571	2.518	7.7	20.8
1 2	7 18.39	+18 1.5	1.234	2.211	4.0	18.1	1 2	7 18.71	+26 21.6	1.558	2.535	3.1	20.6
1 12	7 7.32	+17 9.3	1.239	2.218	3.2	18.1	1 12	7 7.15	+26 10.9	1.573	2.552	2.7	20.6
1 22	6 57.14	+16 22.7	1.271	2.226	8.0	18.4	1 22	6 56.50	+25 52.9	1.618	2.569	7.0	20.9
2 1	6 49.24	+15 43.3	1.327	2.235	12.8	18.7	2 1	6 47.96	+25 29.1	1.689	2.586	11.2	21.2
2 11	6 44.49	+15 11.6	1.406	2.244	16.8	19.0	2 11	6 42.34	+25 1.9	1.783	2.603	14.7	21.5
<b>283886</b>	2004 <i>BN</i> <sub>54</sub>		1 7.7 279°21	0°9/ 8.1	18		<b>154879</b>	2004 <i>RD</i> <sub>140</sub>		1 7.7 82°69	2°0/ 7.2	18	
12 3	7 36.52	+17 3.1	2.418	3.209	12.1	20.0	12 3	7 40.58	+26 20.5	1.956	2.765	13.9	20.3
12 13	7 31.95	+17 34.4	2.309	3.188	9.4	19.8	12 13	7 35.27	+26 51.8	1.886	2.775	10.6	20.1
12 23	7 25.33	+18 14.2	2.224	3.166	6.1	19.5	12 23	7 27.46	+27 24.2	1.840	2.786	6.8	19.9
1 2	7 17.14	+19 0.7	2.168	3.144	2.5	19.2	1 2	7 17.90	+27 53.5	1.821	2.797	3.0	19.6
1 12	7 8.15	+19 50.9	2.142	3.122	1.8	19.1	1 12	7 7.71	+28 15.8	1.831	2.808	2.9	19.7
1 22	6 59.27	+20 41.5	2.147	3.100	5.4	19.4	1 22	6 58.11	+28 29.0	1.870	2.819	6.6	19.9
2 1	6 51.45	+21 29.9	2.181	3.078	9.0	19.5	2 1	6 50.20	+28 32.9	1.937	2.829	10.2	20.2
2 11	6 45.49	+22 14.3	2.240	3.055	12.2	19.7	2 11	6 44.77	+28 29.0	2.027	2.840	13.4	20.4
<b>448740</b>	2011 <i>HX</i> <sub>83</sub>		1 7.7 191°94	3°6/ 8.5	18		<b>144196</b>	2004 <i>BX</i> <sub>135</sub>		1 7.7 130°47	1°5/ 7.3	18	
12 3	7 43.30	+13 18.9	1.781	2.5									



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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>407374</b>	2010 <i>RN</i> <sub>147</sub>		1 7.7 54°58	3°7/ 6.8 18			<b>78787</b>	2002 <i>VA</i> <sub>111</sub>		1 7.8 23°44	5°6/ 6.2 18		
12 3	7 42.38	+30 8.5	1.712	2.527	15.3	21.6	12 3	7 41.91	+37 36.3	2.099	2.898	13.4	19.6
12 13	7 37.17	+30 47.8	1.639	2.530	11.8	21.4	12 13	7 36.48	+38 19.0	2.026	2.901	10.7	19.4
12 23	7 28.94	+31 25.6	1.589	2.533	7.9	21.2	12 23	7 28.33	+38 54.6	1.977	2.904	7.9	19.3
1 2	7 18.51	+31 55.9	1.564	2.536	4.4	21.0	1 2	7 18.27	+39 17.1	1.954	2.906	5.9	19.1
1 12	7 7.25	+32 13.7	1.568	2.539	4.5	21.0	1 12	7 7.50	+39 22.1	1.959	2.910	6.1	19.2
1 22	6 56.64	+32 16.6	1.599	2.542	8.0	21.2	1 22	6 57.37	+39 8.5	1.992	2.913	8.3	19.3
2 1	6 48.05	+32 5.6	1.657	2.545	11.9	21.4	2 1	6 49.07	+38 38.2	2.052	2.916	11.1	19.5
2 11	6 42.44	+31 43.8	1.736	2.548	15.3	21.7	2 11	6 43.45	+37 55.4	2.134	2.920	13.7	19.7
<b>125219</b>	2001 <i>UZ</i> <sub>153</sub>		1 7.7 169°26	2°9/ 6.8 18			<b>392203</b>	2009 <i>SZ</i> <sub>292</sub>		1 7.8 246°62	2°5/ 8.9 17		
12 3	7 44.48	+27 7.5	1.756	2.564	15.3	20.0	12 3	7 31.73	+11 8.5	3.545	4.312	9.1	21.3
12 13	7 38.72	+28 0.3	1.679	2.568	11.7	19.8	12 13	7 27.57	+11 2.9	3.444	4.302	7.2	21.2
12 23	7 29.93	+28 55.4	1.625	2.570	7.6	19.6	12 23	7 22.17	+11 4.0	3.368	4.293	5.1	21.0
1 2	7 18.91	+29 46.5	1.598	2.572	3.8	19.3	1 2	7 15.90	+11 11.7	3.321	4.283	3.1	20.9
1 12	7 6.93	+30 27.6	1.600	2.574	3.9	19.3	1 12	7 9.26	+11 25.5	3.304	4.272	2.6	20.8
1 22	6 55.51	+30 55.1	1.631	2.575	7.8	19.6	1 22	7 2.78	+11 44.4	3.319	4.262	4.3	20.9
2 1	6 46.04	+31 8.4	1.689	2.576	11.8	19.8	2 1	6 57.00	+12 7.1	3.363	4.252	6.4	21.1
2 11	6 39.51	+31 9.9	1.769	2.576	15.3	20.0	2 11	6 52.36	+12 32.3	3.434	4.241	8.5	21.2
<b>461086</b>	2015 <i>AU</i> <sub>175</sub>		1 7.7 152°10	0°1/ 7.7 18			<b>404532</b>	2013 <i>HN</i> <sub>135</sub>		1 7.8 64°63	2°6/ 7.1 18		
12 3	7 37.41	+20 22.3	2.484	3.279	11.7	21.6	12 3	7 43.13	+27 5.5	1.561	2.379	16.4	21.2
12 13	7 32.40	+20 57.3	2.400	3.283	8.9	21.4	12 13	7 37.70	+27 40.2	1.502	2.396	12.5	21.0
12 23	7 25.46	+21 37.6	2.342	3.287	5.7	21.2	12 23	7 29.21	+28 15.6	1.466	2.413	8.0	20.8
1 2	7 17.14	+22 20.5	2.312	3.290	2.1	21.0	1 2	7 18.60	+28 46.0	1.455	2.431	3.7	20.6
1 12	7 8.26	+23 2.8	2.313	3.294	1.6	20.9	1 12	7 7.32	+29 6.5	1.472	2.448	3.6	20.6
1 22	6 59.69	+23 41.9	2.345	3.297	5.2	21.2	1 22	6 56.91	+29 14.9	1.517	2.466	7.7	20.9
2 1	6 52.29	+24 16.0	2.406	3.300	8.4	21.4	2 1	6 48.70	+29 11.9	1.588	2.484	11.9	21.2
2 11	6 46.74	+24 44.4	2.493	3.303	11.3	21.6	2 11	6 43.55	+29 0.1	1.681	2.501	15.4	21.5
<b>253240</b>	2003 <i>AZ</i> <sub>17</sub>		1 7.7 339°77	4°7/ 5.7 18			<b>190163</b>	2005 <i>UY</i> <sub>54</sub>		1 7.8 78°00	2°1/ 8.1 17		
12 3	7 39.63	+27 53.0	1.555	2.380	16.1	19.8	12 3	7 44.24	+18 22.8	1.385	2.199	18.3	20.2
12 13	7 35.63	+29 33.0	1.477	2.373	12.5	19.6	12 13	7 38.61	+18 1.0	1.324	2.215	14.1	19.9
12 23	7 28.34	+31 19.2	1.421	2.367	8.4	19.3	12 23	7 29.81	+17 46.7	1.284	2.230	9.2	19.7
1 2	7 18.43	+33 2.3	1.392	2.362	5.1	19.1	1 2	7 18.82	+17 38.9	1.269	2.245	4.0	19.4
1 12	7 7.22	+34 32.5	1.390	2.357	5.7	19.1	1 12	7 7.17	+17 35.8	1.281	2.261	3.0	19.4
1 22	6 56.37	+35 42.4	1.416	2.353	9.5	19.3	1 22	6 56.45	+17 36.0	1.321	2.276	7.8	19.7
2 1	6 47.53	+36 29.8	1.467	2.349	13.6	19.6	2 1	6 48.03	+17 38.4	1.385	2.291	12.5	20.1
2 11	6 41.93	+36 56.5	1.539	2.346	17.2	19.8	2 11	6 42.79	+17 42.2	1.472	2.306	16.5	20.3
<b>164324</b>	2005 <i>AU</i> <sub>47</sub>		1 7.7 65°39	0°8/ 7.9 17			<b>230801</b>	2004 <i>ES</i> <sub>79</sub>		1 7.8 274°01	3°1/ 8.2 18		
12 3	7 42.64	+19 14.5	1.430	2.246	17.7	20.7	12 3	7 41.80	+16 25.2	1.452	2.264	17.7	20.1
12 13	7 37.29	+19 28.8	1.375	2.268	13.5	20.4	12 13	7 37.09	+15 56.4	1.364	2.252	13.9	19.8
12 23	7 28.90	+19 51.4	1.341	2.289	8.6	20.2	12 23	7 29.15	+15 35.9	1.297	2.240	9.4	19.5
1 2	7 18.44	+20 18.9	1.332	2.310	3.3	20.0	1 2	7 18.72	+15 23.9	1.254	2.227	4.7	19.2
1 12	7 7.36	+20 47.4	1.351	2.331	2.3	20.0	1 12	7 7.14	+15 19.7	1.238	2.215	3.8	19.1
1 22	6 57.19	+21 13.5	1.397	2.353	7.4	20.3	1 22	6 56.01	+15 22.0	1.249	2.202	8.4	19.4
2 1	6 49.24	+21 35.4	1.469	2.374	11.9	20.6	2 1	6 46.87	+15 29.5	1.285	2.190	13.3	19.6
2 11	6 44.34	+21 52.8	1.563	2.395	15.7	20.9	2 11	6 40.86	+15 40.6	1.342	2.177	17.7	19.9
<b>493092</b>	2014 <i>SL</i> <sub>320</sub>		1 7.7 111°73	2°2/ 7.1 18			<b>336929</b>	2011 <i>HA</i> <sub>57</sub>		1 7.8 157°90	2°7/ 8.9 18		
12 3	7 42.23	+27 13.8	1.944	2.750	14.1	21.6	12 3	7 36.03	+11 38.6	2.633	3.407	11.7	21.3
12 13	7 36.55	+27 43.2	1.873	2.761	10.7	21.4	12 13	7 31.17	+11 47.0	2.548	3.412	9.2	21.1
12 23	7 28.29	+28 12.8	1.825	2.771	6.9	21.2	12 23	7 24.60	+12 4.8	2.487	3.416	6.3	20.9
1 2	7 18.22	+28 38.2	1.805	2.780	3.2	21.0	1 2	7 16.83	+12 31.4	2.453	3.420	3.6	20.8
1 12	7 7.49	+28 55.6	1.814	2.790	3.1	21.0	1 12	7 8.59	+13 5.1	2.451	3.423	2.9	20.7
1 22	6 57.39	+29 2.9	1.853	2.799	6.7	21.3	1 22	7 0.64	+13 43.8	2.479	3.426	5.2	20.9
2 1	6 49.03	+29 0.6	1.918	2.809	10.4	21.5	2 1	6 53.72	+14 25.2	2.536	3.429	8.1	21.1
2 11	6 43.25	+28 50.4	2.008	2.817	13.6	21.7	2 11	6 48.44	+15 7.0	2.619	3.432	10.7	21.2
<b>15574</b>	<i>Stephanichass</i>		1 7.8 48°19	3°2/ 7.1 18			<b>432198</b>	2009 <i>DS</i> <sub>75</sub>		1 7.8 12°55	6°8/ 7.3 18		
12 3	7 43.52	+27 14.2	1.245	2.078	18.9	18.2	12 3	7 44.09	+40 3.7	1.615	2.425	16.4	20.3
12 13	7 38.71	+27 51.5	1.188	2.090	14.4	18.0	12 13	7 38.69	+40 15.1	1.552	2.430	13.1	20.1
12 23	7 30.19	+28 30.0	1.152	2.102	9.4	17.7	12 23	7 29.91	+40 13.5	1.509	2.437	9.8	20.0
1 2	7 19.01	+29 2.9	1.139	2.115	4.4	17.5	1 2	7 18.85	+39 52.3	1.491	2.445	7.2	19.8
1 12	7 6.96	+29 23.7	1.152	2.129	4.3	17.5	1 12	7 7.19	+39 8.2	1.500	2.454	7.1	19.9
1 22	6 55.95	+29 29.6	1.191	2.142	9.0	17.8	1 22	6 56.66	+38 2.7	1.535	2.464	9.6	20.0
2 1	6 47.64	+29 22.0	1.254	2.157	13.8	18.2	2 1	6 48.66	+36 41.2	1.595	2.475	12.8	20.2
2 11	6 43.00	+29 4.3	1.337	2.171	17.8	18.4	2 11	6 44.00	+35 11.0	1.678	2.487	15.9	20.5
<b>190168</b>	2005 <i>UE</i> <sub>170</sub>		1 7.8 123°75	0°3/ 7.8 17			<b>111671</b>	2002 <i>BK</i> <sub>13</sub>		1 7.8 348°03	5°7/ 6.3 18		
12 3	7 45.25	+20 59.3	1.656	2.461	16.2	21.3	12 3	7 42.91	+32 6.7	1.405	2.231	17.5	19.4
12 13	7 39.04	+21 6.0	1.589	2.475	12.4	21.1	12 13	7 38.42	+33 11.6	1.334	2.229	13.7	19.2
12 23	7 29.95	+21 17.8	1.543	2.489	7.9	20.9	12 23	7 30.21	+34 15.1	1.284	2.227	9.5	18.9
1 2	7 18.85	+21 31.8	1.524	2.502	3.0	20.6	1 2	7 19.15	+35 8.1	1.258	2.225	6.2	18.7
1 12	7 7.08	+21 44.8	1.534	2.515	2.1	20.6	1 12	7 6.88	+35 42.2	1.259	2.224	6.5	18.7
1 22	6 56.06	+21 54.7	1.573	2.527	7.0	20.9	1 22	6 55.33	+35 53.6	1.285	2.222	10.1	18.9
2 1	6 47.07	+22 0.8	1.639	2.538	11.3	21.2	2 1	6 46.28	+35 43.6	1.335	2.222	14.3	19.2
2 11	6 40.97	+22 3.6	1.729	2.549	15.0	21.5	2 11	6 40.90	+35 17.3	1.405	2.221	18.1	19.4
<b>444313</b>	2005 <i>VP</i> <sub>110</sub>		1 7.8 15°95	2°2/ 8.2 17			<b>121953</b>	2000 <i>EP</i> <sub>50</sub>		1 7.8 134°33	2°7/ 7.2 18		
12 3	7 35.90	+18 11.6	0.944	1.798	21.8								

EPHEMERIDES

1 7.8

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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>318662</b>	2005 <i>NC</i> <sub>49</sub>		1 7.8 113°28	0°8/ 7.4 18			<b>299513</b>	2006 <i>CY</i> <sub>25</sub>		1 7.8 247°96	0°0/ 7.6 18		
12 3	7 41.24	+20 39.9	1.982	2.782	14.1	20.6	12 3	7 41.71	+20 48.3	1.650	2.461	16.0	21.1
12 13	7 35.77	+21 40.3	1.909	2.795	10.7	20.4	12 13	7 36.77	+21 10.5	1.561	2.452	12.3	20.9
12 23	7 27.83	+22 48.0	1.861	2.807	6.8	20.2	12 23	7 28.84	+21 40.0	1.495	2.443	7.9	20.6
1 2	7 18.12	+23 58.3	1.841	2.819	2.5	19.9	1 2	7 18.62	+22 13.4	1.455	2.434	3.0	20.3
1 12	7 7.69	+25 5.8	1.851	2.830	2.1	19.9	1 12	7 7.33	+22 46.4	1.443	2.424	2.2	20.2
1 22	6 57.71	+26 5.9	1.891	2.842	6.3	20.2	1 22	6 56.44	+23 15.5	1.460	2.414	7.3	20.5
2 1	6 49.31	+26 56.2	1.960	2.852	10.1	20.5	2 1	6 47.37	+23 38.6	1.502	2.404	12.0	20.7
2 11	6 43.31	+27 36.2	2.053	2.863	13.3	20.7	2 11	6 41.19	+23 55.6	1.568	2.394	16.0	20.9
<b>127800</b>	2003 <i>FL</i> <sub>76</sub>		1 7.8 181°52	1°2/ 8.1 18			<b>164462</b>	2006 <i>DW</i> <sub>148</sub>		1 7.8 179°50	0°7/ 7.6 18		
12 3	7 42.50	+17 49.1	1.896	2.692	14.8	21.0	12 3	7 43.61	+23 25.5	2.014	2.812	14.0	21.6
12 13	7 36.82	+18 3.5	1.812	2.693	11.4	20.7	12 13	7 37.58	+23 41.8	1.930	2.814	10.7	21.3
12 23	7 28.56	+18 26.1	1.751	2.694	7.4	20.5	12 23	7 29.00	+24 0.9	1.870	2.815	6.8	21.1
1 2	7 18.41	+18 54.4	1.717	2.694	3.1	20.2	1 2	7 18.58	+24 19.6	1.838	2.816	2.6	20.8
1 12	7 7.47	+19 25.4	1.713	2.693	2.2	20.2	1 12	7 7.41	+24 34.7	1.836	2.815	2.1	20.8
1 22	6 56.96	+19 56.1	1.739	2.692	6.5	20.4	1 22	6 56.74	+24 44.1	1.863	2.815	6.3	21.1
2 1	6 48.07	+20 24.5	1.792	2.690	10.6	20.7	2 1	6 47.69	+24 47.5	1.920	2.813	10.2	21.3
2 11	6 41.67	+20 49.6	1.870	2.687	14.2	20.9	2 11	6 41.12	+24 45.7	2.000	2.811	13.6	21.5
<b>144602</b>	2004 <i>FV</i> <sub>47</sub>		1 7.8 240°46	1°5/ 8.1 18			<b>432154</b>	2009 <i>BO</i> <sub>143</sub>		1 7.8 2°24	0°4/ 7.9 15		
12 3	7 40.03	+18 3.3	1.902	2.703	14.6	20.8	12 3	7 34.91	+20 6.5	1.692	2.513	15.2	21.3
12 13	7 34.98	+17 59.0	1.813	2.696	11.3	20.5	12 13	7 31.34	+20 19.9	1.616	2.512	11.6	21.1
12 23	7 27.41	+18 1.5	1.746	2.689	7.4	20.3	12 23	7 25.20	+20 40.2	1.562	2.512	7.5	20.8
1 2	7 17.99	+18 9.3	1.706	2.682	3.2	20.0	1 2	7 17.19	+21 4.9	1.534	2.512	2.9	20.5
1 12	7 7.77	+18 20.5	1.695	2.675	2.3	19.9	1 12	7 8.43	+21 30.9	1.533	2.514	2.0	20.5
1 22	6 57.93	+18 33.3	1.713	2.667	6.5	20.2	1 22	7 0.18	+21 55.2	1.560	2.517	6.6	20.8
2 1	6 49.64	+18 46.4	1.759	2.659	10.6	20.4	2 1	6 53.58	+22 16.1	1.613	2.520	10.9	21.0
2 11	6 43.76	+18 58.7	1.828	2.651	14.2	20.6	2 11	6 49.50	+22 32.6	1.688	2.525	14.6	21.3
<b>273176</b>	2006 <i>HX</i> <sub>79</sub>		1 7.8 170°97	0°6/ 7.9 18			<b>403078</b>	2008 <i>CP</i> <sub>13</sub>		1 7.8 36°58	8°6/ 6.8 18		
12 3	7 37.46	+19 23.4	2.757	3.545	10.9	21.8	12 3	7 50.11	+43 8.6	1.590	2.387	17.1	20.7
12 13	7 32.22	+19 31.3	2.670	3.548	8.3	21.7	12 13	7 43.65	+43 47.5	1.526	2.392	14.1	20.5
12 23	7 25.26	+19 43.2	2.608	3.550	5.3	21.5	12 23	7 33.29	+44 11.7	1.484	2.398	11.1	20.3
1 2	7 17.09	+19 57.8	2.576	3.553	2.1	21.3	1 2	7 20.20	+44 12.0	1.465	2.404	8.9	20.2
1 12	7 8.46	+20 13.3	2.574	3.554	1.5	21.2	1 12	7 6.32	+43 42.6	1.472	2.411	9.0	20.3
1 22	7 0.14	+20 28.3	2.604	3.556	4.7	21.4	1 22	6 53.70	+42 44.5	1.506	2.417	11.1	20.4
2 1	6 52.88	+20 41.7	2.663	3.557	7.7	21.6	2 1	6 44.02	+41 23.8	1.563	2.425	14.1	20.6
2 11	6 47.28	+20 53.2	2.748	3.557	10.4	21.8	2 11	6 38.22	+39 49.8	1.643	2.432	17.0	20.8
<b>466483</b>	2013 <i>VO</i> <sub>2</sub>		1 7.8 65°58	4°9/ 6.3 18			<b>82915</b>	2001 <i>QA</i> <sub>104</sub>		1 7.8 84°62	3°3/ 9.2 18		
12 3	7 42.44	+35 3.3	2.069	2.871	13.5	20.7	12 3	7 36.63	+10 19.8	2.395	3.169	12.7	19.4
12 13	7 36.71	+35 52.8	2.011	2.889	10.6	20.6	12 13	7 31.66	+10 21.6	2.327	3.189	10.0	19.2
12 23	7 28.38	+36 36.5	1.976	2.908	7.5	20.4	12 23	7 24.91	+10 34.1	2.283	3.209	7.0	19.0
1 2	7 18.29	+37 8.8	1.968	2.927	5.2	20.3	1 2	7 16.97	+10 56.8	2.266	3.228	4.2	18.9
1 12	7 7.63	+37 25.3	1.990	2.946	5.4	20.4	1 12	7 8.63	+11 28.2	2.279	3.248	3.5	18.9
1 22	6 57.68	+37 24.8	2.039	2.965	7.8	20.6	1 22	7 0.73	+12 5.8	2.321	3.267	5.7	19.1
2 1	6 49.57	+37 8.9	2.115	2.984	10.6	20.8	2 1	6 54.01	+12 47.2	2.393	3.286	8.5	19.3
2 11	6 44.07	+36 41.3	2.215	3.003	13.2	21.0	2 11	6 49.07	+13 29.8	2.490	3.305	11.1	19.5
<b>118767</b>	2000 <i>QG</i> <sub>230</sub>		1 7.8 121°87	4°1/ 6.4 18			<b>281720</b>	2008 <i>WJ</i> <sub>117</sub>		1 7.8 223°92	3°7/ 8.5 18		
12 3	7 43.32	+32 28.0	2.175	2.974	13.0	19.9	12 3	7 38.18	+12 30.8	2.372	3.150	12.7	20.4
12 13	7 37.29	+33 19.4	2.107	2.987	10.1	19.7	12 13	7 32.97	+11 45.8	2.282	3.147	10.1	20.2
12 23	7 28.76	+34 7.7	2.063	2.999	7.0	19.6	12 23	7 25.83	+11 7.6	2.217	3.145	7.1	20.0
1 2	7 18.45	+34 47.3	2.046	3.011	4.4	19.4	1 2	7 17.35	+10 37.3	2.180	3.142	4.5	19.9
1 12	7 7.49	+35 13.6	2.060	3.022	4.6	19.5	1 12	7 8.34	+10 15.6	2.172	3.139	4.0	19.8
1 22	6 57.11	+35 24.8	2.103	3.034	7.2	19.7	1 22	6 59.68	+10 2.4	2.195	3.136	6.3	20.0
2 1	6 48.41	+35 21.5	2.173	3.044	10.2	19.9	2 1	6 52.22	+9 57.1	2.245	3.133	9.2	20.2
2 11	6 42.21	+35 6.7	2.267	3.055	13.0	20.1	2 11	6 46.61	+9 58.2	2.321	3.130	12.0	20.3
<b>13939</b>	1989 <i>SJ</i> <sub>2</sub>		1 7.8 172°37	5°8/ 9.9 18 R			<b>252224</b>	2001 <i>NX</i> <sub>16</sub>		1 7.8 84°75	1°9/ 6.9 18		
12 3	7 38.44	+4 19.9	2.206	2.958	14.3	19.0	12 3	7 35.91	+29 17.0	3.282	4.075	9.2	20.7
12 13	7 33.29	+4 2.3	2.121	2.961	11.8	18.8	12 13	7 30.80	+29 37.8	3.215	4.095	7.0	20.6
12 23	7 26.10	+3 59.7	2.059	2.964	9.0	18.6	12 23	7 24.23	+29 57.1	3.174	4.115	4.5	20.5
1 2	7 17.45	+4 13.6	2.023	2.966	6.6	18.5	1 2	7 16.69	+30 12.5	3.163	4.135	2.3	20.3
1 12	7 8.21	+4 43.5	2.016	2.967	5.9	18.4	1 12	7 8.85	+30 22.2	3.182	4.155	2.3	20.4
1 22	6 59.31	+5 27.3	2.037	2.968	7.5	18.5	1 22	7 1.37	+30 25.3	3.233	4.174	4.5	20.5
2 1	6 51.66	+6 21.6	2.087	2.968	10.1	18.7	2 1	6 54.89	+30 22.0	3.313	4.193	6.8	20.7
2 11	6 45.96	+7 22.0	2.161	2.968	12.9	18.9	2 11	6 49.89	+30 13.1	3.419	4.212	8.9	20.9
<b>311013</b>	2003 <i>YM</i> <sub>82</sub>		1 7.8 59°12	2°2/ 7.4 18			<b>16088</b>	1999 <i>TJ</i> <sub>121</sub>		1 7.8 93°55	2°1/ 7.2 18		
12 3	7 43.91	+27 3.4	1.497	2.316	16.9	20.2	12 3	7 42.14	+25 33.0	1.643	2.459	15.8	17.9
12 13	7 38.34	+27 17.2	1.439	2.333	12.9	20.0	12 13	7 37.02	+26 9.0	1.569	2.462	12.1	17.7
12 23	7 29.62	+27 30.7	1.402	2.350	8.3	19.8	12 23	7 28.91	+26 47.9	1.518	2.466	7.8	17.4
1 2	7 18.78	+27 39.2	1.391	2.368	3.6	19.5	1 2	7 18.60	+27 24.6	1.493	2.470	3.3	17.2
1 12	7 7.31	+27 38.9	1.408	2.386	3.2	19.6	1 12	7 7.42	+27 53.9	1.497	2.474	3.2	17.2
1 22	6 56.81	+27 28.9	1.452	2.403	7.7	19.9	1 22	6 56.87	+28 12.7	1.528	2.478	7.5	17.4
2 1	6 48.61	+27 10.3	1.522	2.421	12.0	20.2	2 1	6 48.30	+28 20.6	1.585	2.482	11.8	17.7
2 11	6 43.56	+26 46.2	1.614	2.439	15.7	20.4	2 11	6 42.68	+28 19.3	1.665	2.486	15.5	17.9
<b>131466</b>	2001 <i>QU</i> <sub>326</sub>		1 7.8 66°20	3°4/ 9.6 18			<b>14410</b>	1991 <i>RR</i> <sub>1</sub>		1 7.8 127°29	3°3/ 8.8 18		
12 3	7 36.47	+8 14.9	2.258	3.029	13.5								

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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>215557</b>	2003 <i>BJ</i> <sub>10</sub>		1 7.8	2°32'	10°6'	7.5 18	<b>2090</b>	Mizuho		1 7.8	132°76'	3°9'	6.7 18
12 3	7 43.16	+46 25.5	1.338	2.150	19.0	18.8	12 3	7 42.29	+35 1.6	2.564	3.354	11.5	16.4
12 13	7 39.09	+46 51.6	1.277	2.147	16.0	18.6	12 13	7 36.18	+35 28.5	2.490	3.363	9.0	16.2
12 23	7 30.69	+46 57.0	1.235	2.147	13.0	18.4	12 23	7 27.91	+35 50.0	2.440	3.371	6.3	16.1
1 2	7 19.27	+46 32.0	1.215	2.149	10.9	18.3	1 2	7 18.16	+36 2.1	2.419	3.379	4.2	15.9
1 12	7 7.05	+45 31.3	1.218	2.153	10.8	18.3	1 12	7 7.91	+36 1.8	2.428	3.387	4.3	15.9
1 22	6 56.32	+43 57.6	1.244	2.159	12.7	18.4	1 22	6 58.20	+35 48.4	2.467	3.395	6.5	16.1
2 1	6 48.82	+41 59.3	1.294	2.167	15.7	18.6	2 1	6 49.96	+35 23.2	2.534	3.402	9.1	16.3
2 11	6 45.44	+39 48.1	1.364	2.177	18.7	18.8	2 11	6 43.89	+34 49.1	2.626	3.409	11.5	16.5
<b>411270</b>	2010 <i>RR</i> <sub>155</sub>		1 7.8	160°01'	3°4'	8.9 18	<b>290748</b>	2005 <i>UY</i> <sub>479</sub>		1 7.8	359°42'	16°4'	27.0 17
12 3	7 39.40	+11 46.6	1.984	2.768	14.6	22.0	12 3	7 43.62	+36 21.4	0.917	1.769	22.4	18.4
12 13	7 34.27	+11 44.8	1.903	2.772	11.5	21.8	12 13	7 42.49	+42 10.0	0.867	1.763	18.9	18.2
12 23	7 26.85	+11 54.8	1.844	2.775	8.0	21.6	12 23	7 35.46	+48 8.1	0.841	1.760	16.6	18.0
1 2	7 17.78	+12 16.0	1.812	2.779	4.6	21.4	1 2	7 22.19	+53 35.6	0.842	1.758	16.9	18.1
1 12	7 8.05	+12 46.9	1.809	2.781	3.7	21.4	1 12	7 4.30	+57 55.4	0.868	1.759	19.4	18.2
1 22	6 58.73	+13 24.7	1.835	2.784	6.6	21.5	1 22	6 45.57	+60 49.9	0.914	1.762	22.7	18.4
2 1	6 50.85	+14 6.5	1.889	2.786	10.2	21.8	2 1	6 30.96	+62 24.5	0.976	1.767	25.9	18.7
2 11	6 45.19	+14 49.4	1.967	2.787	13.5	22.0	2 11	6 24.14	+62 58.8	1.050	1.774	28.4	18.9
<b>134431</b>	1998 <i>RU</i> <sub>34</sub>		1 7.8	94°94'	0°9'	8.0 18	<b>10383</b>	1996 <i>SR</i> <sub>7</sub>		1 7.8	187°67'	0°0'	7.8 18
12 3	7 42.43	+18 35.8	1.830	2.630	15.1	20.5	12 3	7 40.69	+21 30.8	2.366	3.159	12.3	19.1
12 13	7 36.60	+18 52.0	1.767	2.651	11.5	20.4	12 13	7 35.01	+21 38.4	2.277	3.158	9.4	18.9
12 23	7 28.29	+19 15.3	1.728	2.672	7.4	20.2	12 23	7 27.23	+21 49.3	2.213	3.157	6.0	18.7
1 2	7 18.29	+19 43.1	1.716	2.693	2.9	19.9	1 2	7 17.94	+22 1.4	2.178	3.156	2.3	18.4
1 12	7 7.76	+20 12.1	1.733	2.713	2.0	19.9	1 12	7 8.05	+22 12.5	2.173	3.154	1.6	18.4
1 22	6 57.90	+20 39.5	1.779	2.733	6.3	20.2	1 22	6 58.53	+22 21.1	2.199	3.151	5.4	18.6
2 1	6 49.80	+21 3.7	1.853	2.752	10.2	20.5	2 1	6 50.31	+22 26.6	2.254	3.148	8.9	18.9
2 11	6 44.20	+21 24.0	1.952	2.771	13.6	20.7	2 11	6 44.11	+22 29.0	2.334	3.144	11.9	19.1
<b>496250</b>	2012 <i>HG</i> <sub>82</sub>		1 7.8	215°19'	2°8'	6.7 18	<b>118570</b>	2000 <i>GP</i> <sub>1</sub>		1 7.8	307°61'	6°3'	6.2 18
12 3	7 40.94	+28 30.5	2.366	3.165	12.1	21.7	12 3	7 42.45	+32 22.3	1.307	2.138	18.2	19.3
12 13	7 35.46	+29 20.8	2.276	3.158	9.3	21.5	12 13	7 38.67	+33 28.0	1.223	2.120	14.4	19.0
12 23	7 27.66	+30 12.0	2.210	3.152	6.2	21.3	12 23	7 30.82	+34 33.8	1.159	2.102	10.2	18.7
1 2	7 18.12	+30 59.3	2.173	3.144	3.3	21.1	1 2	7 19.62	+35 29.8	1.118	2.085	6.7	18.4
1 12	7 7.80	+31 38.4	2.166	3.137	3.5	21.1	1 12	7 6.72	+36 6.1	1.103	2.068	7.2	18.4
1 22	6 57.77	+32 6.4	2.189	3.129	6.4	21.3	1 22	6 54.28	+36 17.0	1.112	2.051	11.2	18.6
2 1	6 49.08	+32 22.6	2.241	3.120	9.7	21.5	2 1	6 44.44	+36 3.3	1.144	2.035	15.9	18.8
2 11	6 42.57	+32 28.1	2.318	3.111	12.5	21.6	2 11	6 38.66	+35 30.8	1.196	2.020	20.1	19.0
<b>402698</b>	2006 <i>VC</i> <sub>65</sub>		1 7.8	84°48'	0°5'	7.9 18	<b>370383</b>	2002 <i>TG</i> <sub>123</sub>		1 7.8	86°20'	18°6'	13.5 18
12 3	7 42.65	+19 56.2	1.818	2.620	15.1	21.7	12 3	7 41.79	-13 11.2	1.224	1.938	25.5	20.7
12 13	7 36.75	+20 9.0	1.759	2.644	11.5	21.5	12 13	7 37.17	-15 24.5	1.175	1.948	23.2	20.6
12 23	7 28.36	+20 27.6	1.723	2.669	7.3	21.3	12 23	7 29.20	-17 0.9	1.141	1.959	21.0	20.5
1 2	7 18.31	+20 49.0	1.715	2.692	2.8	21.1	1 2	7 18.79	-17 48.7	1.122	1.969	19.3	20.4
1 12	7 7.78	+21 10.5	1.735	2.716	1.9	21.1	1 12	7 7.46	-17 41.6	1.122	1.980	18.6	20.4
1 22	6 57.98	+21 29.5	1.785	2.739	6.3	21.4	1 22	6 56.89	-16 41.4	1.141	1.990	19.0	20.4
2 1	6 49.98	+21 45.0	1.863	2.762	10.2	21.7	2 1	6 48.62	-14 56.9	1.178	2.000	20.3	20.6
2 11	6 44.50	+21 56.9	1.964	2.784	13.5	22.0	2 11	6 43.67	-12 42.1	1.232	2.010	22.2	20.7
<b>288532</b>	2004 <i>GK</i> <sub>9</sub>		1 7.8	169°32'	2°6'	8.8 17	<b>2883</b>	Barabashov		1 7.8	274°69'	0°9'	7.6 18
12 3	7 35.28	+12 15.7	2.964	3.736	10.6	22.2	12 3	7 42.35	+23 0.7	1.453	2.274	17.3	16.6
12 13	7 30.43	+12 6.1	2.876	3.739	8.3	22.0	12 13	7 37.70	+23 21.9	1.369	2.265	13.3	16.3
12 23	7 24.09	+12 3.6	2.813	3.741	5.8	21.9	12 23	7 29.68	+23 49.0	1.306	2.255	8.6	16.0
1 2	7 16.70	+12 8.2	2.779	3.743	3.4	21.7	1 2	7 19.05	+24 17.5	1.267	2.246	3.3	15.7
1 12	7 8.91	+12 19.1	2.775	3.745	2.8	21.7	1 12	7 7.21	+24 42.6	1.256	2.237	2.7	15.6
1 22	7 1.39	+12 35.3	2.801	3.747	4.8	21.8	1 22	6 55.87	+25 0.5	1.272	2.227	8.1	15.9
2 1	6 54.78	+12 55.2	2.858	3.748	7.4	22.0	2 1	6 46.66	+25 10.3	1.314	2.218	13.2	16.2
2 11	6 49.61	+13 17.4	2.940	3.749	9.8	22.1	2 11	6 40.73	+25 12.7	1.376	2.208	17.5	16.4
<b>80030</b>	1999 <i>JJ</i> <sub>15</sub>		1 7.8	228°99'	7°9'	10.9 18	<b>222279</b>	2000 <i>SL</i> <sub>41</sub>		1 7.8	89°15'	3°4'	6.7 18
12 3	7 34.38	- 5 57.6	2.868	3.559	12.6	20.0	12 3	7 41.76	+29 38.9	1.922	2.731	14.1	20.1
12 13	7 29.87	- 6 40.1	2.774	3.550	11.1	19.9	12 13	7 36.41	+30 26.0	1.852	2.739	10.9	19.9
12 23	7 23.81	- 7 6.8	2.702	3.542	9.5	19.7	12 23	7 28.38	+31 12.2	1.805	2.748	7.2	19.7
1 2	7 16.63	- 7 15.0	2.654	3.533	8.3	19.6	1 2	7 18.42	+31 52.1	1.785	2.756	4.0	19.5
1 12	7 8.96	- 7 3.3	2.633	3.523	7.9	19.6	1 12	7 7.74	+32 20.7	1.794	2.764	4.1	19.6
1 22	7 1.47	- 6 32.4	2.639	3.514	8.5	19.6	1 22	6 57.63	+32 35.6	1.832	2.772	7.4	19.8
2 1	6 54.86	- 5 44.6	2.671	3.504	9.9	19.7	2 1	6 49.32	+32 37.1	1.896	2.780	10.9	20.0
2 11	6 49.69	- 4 43.9	2.728	3.493	11.6	19.8	2 11	6 43.65	+32 27.6	1.984	2.788	14.0	20.2
<b>299405</b>	2005 <i>YK</i> <sub>23</sub>		1 7.8	198°44'	0°4'	7.9 18	<b>492123</b>	2013 <i>LO</i> <sub>18</sub>		1 7.8	175°00'	1°3'	7.3 18
12 3	7 44.07	+21 36.3	1.710	2.516	15.7	21.5	12 3	7 41.89	+24 53.3	2.388	3.182	12.2	22.3
12 13	7 38.32	+21 28.3	1.627	2.514	12.1	21.3	12 13	7 35.97	+25 25.4	2.303	3.185	9.3	22.1
12 23	7 29.67	+21 24.0	1.566	2.512	7.8	21.0	12 23	7 27.87	+25 59.6	2.243	3.187	5.9	21.9
1 2	7 18.91	+21 21.1	1.531	2.509	3.0	20.7	1 2	7 18.20	+26 32.2	2.212	3.189	2.4	21.7
1 12	7 7.30	+21 17.3	1.526	2.506	2.1	20.7	1 12	7 7.89	+27 0.1	2.212	3.190	2.3	21.7
1 22	6 56.25	+21 11.5	1.549	2.503	7.0	21.0	1 22	6 57.95	+27 20.8	2.243	3.190	5.7	21.9
2 1	6 47.09	+21 3.5	1.599	2.499	11.5	21.2	2 1	6 49.37	+27 33.8	2.303	3.190	9.1	22.1
2 11	6 40.75	+20 54.1	1.672	2.495	15.3	21.4	2 11	6 42.88	+27 39.7	2.388	3.189	12.0	22.3
<b>235096</b>	2003 <i>JT</i> <sub>11</sub>		1 7.8	272°91'	2°6'	8.5 18	<b>335875</b>	2007 <i>RL</i> <sub>118</sub>		1 7.8	19°48'	1°4'	7.4 18
12 3	7 39.91	+14 32.9	1.538	2.345	17.1	20.4	12 3						

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>467397</b>	2005 <i>GD</i> <sub>52</sub>		1 7.8 214°25	0°4/ 7.9 17			<b>468102</b>	2013 <i>WX</i> <sub>5</sub>		1 7.8 55°75	1°7/ 7.0 18		
12 3	7 36.97	+20 8.7	2.859	3.647	10.5	22.8	12 3	7 39.41	+23 27.6	2.020	2.826	13.6	20.3
12 13	7 31.90	+20 17.3	2.762	3.641	8.0	22.6	12 13	7 34.35	+24 35.3	1.959	2.848	10.3	20.1
12 23	7 25.14	+20 29.5	2.691	3.634	5.2	22.4	12 23	7 26.94	+25 47.3	1.923	2.869	6.5	19.9
1 2	7 17.17	+20 43.9	2.649	3.626	2.0	22.2	1 2	7 17.89	+26 58.6	1.914	2.891	2.7	19.7
1 12	7 8.68	+20 58.7	2.638	3.618	1.4	22.1	1 12	7 8.25	+28 3.6	1.936	2.913	2.7	19.7
1 22	7 0.43	+21 12.5	2.658	3.610	4.6	22.3	1 22	6 59.14	+28 58.5	1.988	2.935	6.3	20.0
2 1	6 53.17	+21 24.5	2.708	3.602	7.6	22.5	2 1	6 51.58	+29 41.4	2.067	2.958	9.8	20.3
2 11	6 47.50	+21 34.2	2.784	3.593	10.3	22.7	2 11	6 46.34	+30 12.9	2.171	2.980	12.8	20.5
<b>302928</b>	2003 <i>SE</i> <sub>245</sub>		1 7.8 74°49	1°8/ 7.4 17			<b>231142</b>	2005 <i>TC</i> <sub>151</sub>		1 7.8 278°42	0°8/ 8.0 18		
12 3	7 44.76	+25 22.4	1.543	2.358	16.7	21.0	12 3	7 41.18	+18 50.9	1.432	2.251	17.6	21.0
12 13	7 38.89	+25 49.4	1.487	2.380	12.7	20.8	12 13	7 36.80	+19 9.1	1.348	2.241	13.6	20.7
12 23	7 29.98	+26 18.2	1.454	2.402	8.1	20.6	12 23	7 29.13	+19 37.6	1.284	2.232	8.9	20.4
1 2	7 19.00	+26 43.8	1.446	2.424	3.3	20.3	1 2	7 18.90	+20 13.7	1.245	2.223	3.5	20.0
1 12	7 7.42	+27 1.8	1.467	2.445	3.0	20.4	1 12	7 7.45	+20 52.6	1.232	2.213	2.4	19.9
1 22	6 56.78	+27 10.0	1.515	2.467	7.5	20.7	1 22	6 56.44	+21 30.2	1.247	2.204	8.0	20.3
2 1	6 48.37	+27 8.9	1.590	2.488	11.7	21.0	2 1	6 47.46	+22 3.3	1.287	2.194	13.1	20.5
2 11	6 43.02	+27 0.6	1.688	2.509	15.3	21.3	2 11	6 41.67	+22 30.7	1.348	2.185	17.5	20.8
<b>354379</b>	2003 <i>SZ</i> <sub>71</sub>		1 7.8 141°70	1°9/ 7.4 18			<b>249517</b>	2010 <i>CM</i> <sub>62</sub>		1 7.8 273°95	1°2/ 8.3 18		
12 3	7 45.12	+27 3.3	1.861	2.665	14.7	21.4	12 3	7 36.70	+16 21.8	2.231	3.026	12.9	20.2
12 13	7 38.89	+27 17.4	1.787	2.673	11.3	21.2	12 13	7 32.18	+16 48.1	2.141	3.021	10.0	20.0
12 23	7 29.92	+27 31.1	1.736	2.681	7.3	21.0	12 23	7 25.56	+17 23.2	2.074	3.016	6.5	19.8
1 2	7 19.01	+27 40.4	1.713	2.689	3.2	20.7	1 2	7 17.41	+18 5.2	2.035	3.011	2.8	19.5
1 12	7 7.41	+27 41.8	1.718	2.696	2.9	20.7	1 12	7 8.57	+18 51.3	2.026	3.006	1.9	19.5
1 22	6 56.49	+27 34.1	1.753	2.702	6.9	21.0	1 22	7 0.01	+19 38.1	2.047	3.001	5.6	19.7
2 1	6 47.47	+27 18.2	1.816	2.708	10.8	21.2	2 1	6 52.67	+20 23.1	2.097	2.996	9.2	19.9
2 11	6 41.19	+26 56.4	1.902	2.714	14.2	21.5	2 11	6 47.30	+21 4.4	2.171	2.992	12.4	20.1
<b>485391</b>	2011 <i>KZ</i> <sub>30</sub>		1 7.8 199°03	0°4/ 7.7 18			<b>58074</b>	1612 <i>T-2</i>		1 7.8 74°24	5°5/ 6.8 18		
12 3	7 44.45	+21 30.9	1.814	2.615	15.2	22.5	12 3	7 48.09	+35 20.5	1.663	2.468	16.1	19.6
12 13	7 38.61	+21 58.3	1.727	2.612	11.6	22.3	12 13	7 41.47	+35 58.5	1.610	2.491	12.6	19.5
12 23	7 29.92	+22 31.7	1.663	2.608	7.5	22.0	12 23	7 31.63	+36 28.8	1.579	2.513	8.9	19.3
1 2	7 19.09	+23 7.5	1.626	2.604	2.8	21.7	1 2	7 19.64	+36 44.4	1.574	2.536	5.9	19.2
1 12	7 7.30	+23 41.3	1.618	2.599	2.2	21.7	1 12	7 7.09	+36 40.8	1.597	2.558	6.0	19.2
1 22	6 55.92	+24 9.7	1.640	2.592	6.9	22.0	1 22	6 55.63	+36 17.7	1.648	2.580	8.8	19.4
2 1	6 46.30	+24 31.2	1.690	2.586	11.3	22.2	2 1	6 46.63	+35 38.7	1.724	2.602	12.2	19.7
2 11	6 39.40	+24 46.0	1.763	2.578	15.0	22.4	2 11	6 40.89	+34 49.5	1.824	2.623	15.2	19.9
<b>229774</b>	2008 <i>LY</i> <sub>14</sub>		1 7.8 99°46	2°6/ 8.4 18			<b>317715</b>	Guydetienne		1 7.8 107°69	4°4/ 9.3 18		
12 3	7 40.53	+15 52.4	2.149	2.937	13.6	20.4	12 3	7 37.44	+ 8 45.0	2.201	2.973	13.8	20.9
12 13	7 34.82	+15 22.4	2.077	2.952	10.5	20.2	12 13	7 32.53	+ 8 26.7	2.125	2.983	11.0	20.7
12 23	7 27.04	+14 58.5	2.030	2.966	7.0	20.0	12 23	7 25.65	+ 8 20.2	2.072	2.993	8.0	20.5
1 2	7 17.87	+14 40.9	2.010	2.981	3.6	19.8	1 2	7 17.40	+ 8 26.3	2.046	3.002	5.3	20.4
1 12	7 8.25	+14 29.1	2.020	2.995	3.0	19.8	1 12	7 8.65	+ 8 44.3	2.048	3.011	4.6	20.3
1 22	6 59.18	+14 22.5	2.060	3.009	6.0	20.0	1 22	7 0.31	+ 9 12.2	2.080	3.020	6.6	20.5
2 1	6 51.55	+14 20.4	2.128	3.023	9.3	20.3	2 1	6 53.24	+ 9 47.6	2.139	3.029	9.5	20.7
2 11	6 46.02	+14 21.6	2.221	3.036	12.3	20.5	2 11	6 48.10	+10 27.2	2.223	3.038	12.3	20.9
<b>461028</b>	2014 <i>WA</i> <sub>457</sub>		1 7.8 349°94	2°5/ 7.0 18			<b>292405</b>	2006 <i>SZ</i> <sub>285</sub>		1 7.8 36°48	1°0/ 8.1 18		
12 3	7 40.37	+27 14.4	1.931	2.741	14.0	21.4	12 3	7 38.90	+17 46.1	1.389	2.211	17.8	20.6
12 13	7 35.39	+27 53.7	1.851	2.741	10.7	21.2	12 13	7 34.75	+18 12.4	1.328	2.224	13.7	20.3
12 23	7 27.79	+28 34.3	1.795	2.741	7.0	21.0	12 23	7 27.56	+18 50.0	1.289	2.237	8.8	20.1
1 2	7 18.26	+29 11.4	1.766	2.741	3.4	20.8	1 2	7 18.21	+19 35.3	1.274	2.251	3.5	19.8
1 12	7 7.93	+29 40.5	1.766	2.741	3.4	20.8	1 12	7 8.08	+20 23.6	1.285	2.266	2.4	19.8
1 22	6 58.07	+29 58.7	1.794	2.741	7.0	21.0	1 22	6 58.71	+21 9.8	1.324	2.281	7.5	20.1
2 1	6 49.88	+30 5.8	1.850	2.741	10.7	21.2	2 1	6 51.43	+21 51.0	1.387	2.297	12.2	20.4
2 11	6 44.25	+30 3.3	1.929	2.741	14.0	21.4	2 11	6 47.17	+22 25.4	1.473	2.313	16.1	20.7
<b>202572</b>	2006 <i>FP</i> <sub>11</sub>		1 7.8 35°09	0°7/ 8.0 18			<b>351567</b>	2005 <i>UR</i> <sub>178</sub>		1 7.8 95°10	0°9/ 7.6 18		
12 3	7 37.83	+19 11.9	1.968	2.773	14.0	20.0	12 3	7 46.32	+22 34.1	1.527	2.337	17.1	21.2
12 13	7 33.21	+19 24.6	1.889	2.776	10.7	19.8	12 13	7 40.10	+23 6.4	1.470	2.360	13.0	21.0
12 23	7 26.26	+19 43.7	1.834	2.779	6.9	19.5	12 23	7 30.79	+23 43.8	1.435	2.382	8.2	20.7
1 2	7 17.65	+20 7.2	1.805	2.782	2.7	19.3	1 2	7 19.37	+24 21.3	1.426	2.404	3.1	20.5
1 12	7 8.39	+20 32.4	1.805	2.786	1.9	19.2	1 12	7 7.29	+24 53.7	1.445	2.425	2.5	20.5
1 22	6 59.57	+20 56.6	1.835	2.790	6.0	19.5	1 22	6 56.11	+25 18.0	1.493	2.446	7.4	20.8
2 1	6 52.23	+21 18.3	1.892	2.793	9.9	19.8	2 1	6 47.19	+25 33.4	1.568	2.466	11.8	21.2
2 11	6 47.16	+21 36.7	1.973	2.797	13.2	20.0	2 11	6 41.36	+25 41.2	1.665	2.486	15.5	21.4
<b>419112</b>	2009 <i>SQ</i> <sub>192</sub>		1 7.8 52°31	1°8/ 7.4 18			<b>112034</b>	2002 <i>HT</i> <sub>9</sub>		1 7.8 155°12	3°2/ 8.7 18		
12 3	7 40.87	+26 31.2	1.855	2.667	14.5	21.5	12 3	7 41.26	+13 24.6	1.902	2.690	15.1	20.3
12 13	7 35.73	+26 48.4	1.780	2.671	11.0	21.3	12 13	7 35.79	+13 15.0	1.823	2.696	11.8	20.1
12 23	7 27.95	+27 6.1	1.728	2.675	7.1	21.0	12 23	7 27.91	+13 15.6	1.767	2.701	8.1	19.9
1 2	7 18.29	+27 20.4	1.703	2.680	3.1	20.8	1 2	7 18.30	+13 26.1	1.737	2.706	4.4	19.6
1 12	7 7.94	+27 28.1	1.707	2.685	2.8	20.8	1 12	7 8.02	+13 45.0	1.736	2.711	3.5	19.6
1 22	6 58.18	+27 27.4	1.739	2.689	6.8	21.1	1 22	6 58.21	+14 10.0	1.764	2.714	6.7	19.8
2 1	6 50.19	+27 18.6	1.798	2.694	10.7	21.3	2 1	6 49.96	+14 38.8	1.820	2.718	10.5	20.0
2 11	6 44.79	+27 3.6	1.881	2.699	14.0	21.5	2 11	6 44.07	+15 9.1	1.901	2.721	13.9	20.3
<b>265662</b>	2005 <i>UG</i> <sub>9</sub>		1 7.8 80°66	2°2/ 7.1 18			<b>340045</b>	2005 <i>UP</i> <sub>509</sub>		1 7.8 16°59	1°0/ 7.9 17		
12 3	7 40.66	+25 52.3	1.856	2.667	14.5	20							

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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>150059</b>	2006 <i>QA</i> <sub>169</sub>		1 7.8 349°80	12°1/ 5.2	18		<b>188507</b>	2004 <i>RF</i> <sub>6</sub>		1 7.8 127°95	1°9/ 7.0	18	
12 3	7 45.19	+46 13.7	1.348	2.157	19.0	18.6	12 3	7 41.90	+26 33.2	2.534	3.326	11.6	21.2
12 13	7 41.26	+47 38.2	1.284	2.149	16.2	18.4	12 13	7 35.83	+27 17.7	2.463	3.343	8.8	21.1
12 23	7 32.62	+48 46.7	1.238	2.143	13.7	18.2	12 23	7 27.74	+28 2.9	2.418	3.360	5.7	20.9
1 2	7 20.33	+49 26.1	1.215	2.137	12.2	18.1	1 2	7 18.24	+28 45.0	2.402	3.376	2.6	20.7
1 12	7 6.56	+49 26.5	1.214	2.132	12.5	18.1	1 12	7 8.22	+29 20.4	2.417	3.392	2.6	20.7
1 22	6 53.95	+48 46.2	1.235	2.129	14.6	18.2	1 22	6 58.63	+29 46.9	2.464	3.407	5.6	21.0
2 1	6 44.73	+47 31.4	1.277	2.127	17.4	18.4	2 1	6 50.38	+30 4.0	2.539	3.421	8.5	21.2
2 11	6 40.16	+45 53.2	1.338	2.126	20.3	18.6	2 11	6 44.12	+30 12.7	2.641	3.435	11.2	21.4
<b>283953</b>	2004 <i>QT</i> <sub>3</sub>		1 7.8 152°78	2°3/ 8.4	18		<b>428988</b>	2009 <i>AY</i> <sub>13</sub>		1 7.8 334°47	1°5/ 8.4	18	
12 3	7 43.86	+15 28.7	2.037	2.820	14.3	22.4	12 3	7 35.95	+15 50.2	2.161	2.958	13.2	21.1
12 13	7 37.58	+15 21.8	1.959	2.831	11.1	22.2	12 13	7 31.68	+16 15.1	2.074	2.954	10.2	20.9
12 23	7 28.95	+15 22.9	1.904	2.841	7.4	22.0	12 23	7 25.31	+16 49.4	2.009	2.951	6.7	20.7
1 2	7 18.68	+15 30.8	1.878	2.850	3.6	21.8	1 2	7 17.39	+17 31.3	1.972	2.948	3.0	20.4
1 12	7 7.80	+15 44.1	1.881	2.858	2.8	21.7	1 12	7 8.79	+18 17.9	1.965	2.945	2.1	20.4
1 22	6 57.44	+16 0.8	1.915	2.865	6.2	22.0	1 22	7 0.49	+19 5.9	1.987	2.942	5.7	20.6
2 1	6 48.63	+16 19.3	1.977	2.872	9.9	22.2	2 1	6 53.44	+19 52.5	2.038	2.939	9.3	20.8
2 11	6 42.14	+16 38.3	2.065	2.877	13.2	22.4	2 11	6 48.39	+20 35.7	2.113	2.937	12.5	21.0
<b>131394</b>	2001 <i>KC</i> <sub>60</sub>		1 7.8 154°02	3°0/ 9.2	18	R	<b>265807</b>	2005 <i>XS</i> <sub>26</sub>		1 7.8 199°74	0°1/ 7.9	18	
12 3	7 36.04	+10 6.6	3.065	3.826	10.5	20.6	12 3	7 41.27	+22 28.9	2.496	3.286	11.8	21.1
12 13	7 30.98	+10 4.7	2.981	3.835	8.3	20.5	12 13	7 35.38	+22 19.6	2.403	3.283	9.0	20.9
12 23	7 24.46	+10 11.1	2.921	3.843	5.9	20.3	12 23	7 27.48	+22 11.7	2.336	3.279	5.8	20.7
1 2	7 16.96	+10 25.7	2.890	3.850	3.7	20.2	1 2	7 18.15	+22 3.7	2.297	3.275	2.2	20.4
1 12	7 9.07	+10 47.6	2.890	3.857	3.1	20.1	1 12	7 8.27	+21 54.3	2.289	3.270	1.6	20.4
1 22	7 1.45	+11 15.3	2.922	3.864	4.8	20.3	1 22	6 58.75	+21 42.8	2.312	3.264	5.2	20.6
2 1	6 54.72	+11 47.0	2.983	3.870	7.2	20.4	2 1	6 50.49	+21 29.4	2.365	3.258	8.6	20.8
2 11	6 49.39	+12 20.9	3.070	3.875	9.5	20.6	2 11	6 44.18	+21 14.7	2.444	3.252	11.5	21.0
<b>459337</b>	2012 <i>HO</i> <sub>39</sub>		1 7.8 229°74	2°0/ 7.2	17		<b>322867</b>	2001 <i>UM</i> <sub>157</sub>		1 7.8 74°08	7°1/ 9.8	18	
12 3	7 42.35	+28 34.4	2.695	3.484	11.1	22.6	12 3	7 40.41	+ 4 29.0	1.816	2.579	16.6	20.7
12 13	7 36.27	+28 50.3	2.591	3.469	8.5	22.4	12 13	7 34.97	+ 3 34.8	1.758	2.603	13.6	20.6
12 23	7 28.10	+29 5.0	2.513	3.454	5.6	22.1	12 23	7 27.26	+ 2 57.1	1.722	2.626	10.5	20.4
1 2	7 18.39	+29 15.3	2.464	3.438	2.7	21.9	1 2	7 18.05	+ 2 38.8	1.710	2.649	7.9	20.3
1 12	7 8.01	+29 18.7	2.446	3.421	2.6	21.9	1 12	7 8.39	+ 2 40.2	1.726	2.672	7.2	20.3
1 22	6 57.89	+29 13.8	2.460	3.403	5.5	22.1	1 22	6 59.39	+ 2 59.8	1.769	2.695	8.8	20.5
2 1	6 48.98	+29 0.9	2.503	3.385	8.6	22.2	2 1	6 52.00	+ 3 33.9	1.839	2.717	11.4	20.7
2 11	6 42.01	+28 41.5	2.572	3.366	11.4	22.4	2 11	6 46.92	+ 4 17.8	1.931	2.740	14.1	20.9
<b>455022</b>	2015 <i>TD</i> <sub>322</sub>		1 7.8 83°30	4°3/ 6.7	18		<b>352117</b>	2007 <i>EB</i> <sub>39</sub>		1 7.8 211°28	0°9/ 8.1	18	
12 3	7 45.98	+29 37.2	1.508	2.325	17.0	20.8	12 3	7 43.05	+18 19.3	1.774	2.574	15.5	21.3
12 13	7 40.21	+30 38.3	1.451	2.342	13.0	20.6	12 13	7 37.61	+18 36.9	1.685	2.568	12.0	21.1
12 23	7 31.08	+31 38.6	1.416	2.360	8.7	20.4	12 23	7 29.36	+19 3.1	1.618	2.562	7.8	20.8
1 2	7 19.56	+32 30.2	1.406	2.377	4.9	20.2	1 2	7 18.99	+19 35.5	1.579	2.556	3.2	20.5
1 12	7 7.22	+33 6.3	1.424	2.394	5.1	20.3	1 12	7 7.64	+20 10.3	1.568	2.548	2.2	20.5
1 22	6 55.79	+33 23.9	1.470	2.411	8.8	20.5	1 22	6 56.67	+20 44.2	1.586	2.541	6.9	20.7
2 1	6 46.77	+33 24.2	1.541	2.428	12.7	20.8	2 1	6 47.39	+21 14.8	1.632	2.532	11.3	21.0
2 11	6 41.09	+33 11.2	1.633	2.444	16.2	21.1	2 11	6 40.79	+21 41.1	1.702	2.523	15.2	21.2
<b>205313</b>	2000 <i>TM</i> <sub>18</sub>		1 7.8 37°67	2°6/ 8.3	17		<b>311008</b>	2003 <i>YK</i> <sub>17</sub>		1 7.8 57°42	1°5/ 7.5	17	
12 3	7 40.51	+16 58.8	1.175	2.005	20.0	20.1	12 3	7 44.68	+25 6.9	1.427	2.247	17.6	19.8
12 13	7 36.24	+16 44.6	1.124	2.022	15.4	19.8	12 13	7 38.96	+25 23.7	1.377	2.272	13.3	19.6
12 23	7 28.59	+16 42.0	1.093	2.041	10.1	19.6	12 23	7 30.10	+25 42.3	1.349	2.298	8.4	19.3
1 2	7 18.61	+16 49.5	1.084	2.060	4.6	19.3	1 2	7 19.14	+25 58.0	1.346	2.324	3.3	19.1
1 12	7 7.95	+17 4.4	1.100	2.080	3.4	19.3	1 12	7 7.66	+26 6.9	1.371	2.350	2.8	19.1
1 22	6 58.32	+17 23.5	1.142	2.101	8.3	19.7	1 22	6 57.24	+26 7.2	1.422	2.376	7.6	19.5
2 1	6 51.17	+17 44.2	1.208	2.122	13.2	20.0	2 1	6 49.20	+25 59.9	1.500	2.402	12.0	19.8
2 11	6 47.35	+18 4.5	1.295	2.144	17.4	20.3	2 11	6 44.33	+25 46.9	1.600	2.428	15.6	20.1
<b>177421</b>	2004 <i>CC</i> <sub>13</sub>		1 7.8 121°24	4°8/ 7.1	18		<b>496698</b>	2016 <i>EP</i> <sub>126</sub>		1 7.8 29°12	0°8/ 8.0	18	
12 3	7 48.49	+35 44.2	1.934	2.729	14.6	19.9	12 3	7 38.64	+19 39.1	1.906	2.712	14.3	21.5
12 13	7 41.51	+36 2.3	1.864	2.739	11.4	19.7	12 13	7 33.93	+19 43.4	1.827	2.714	11.0	21.3
12 23	7 31.60	+36 12.5	1.817	2.749	8.1	19.6	12 23	7 26.81	+19 53.6	1.771	2.717	7.1	21.0
1 2	7 19.70	+36 9.3	1.798	2.759	5.3	19.4	1 2	7 17.96	+20 7.7	1.742	2.719	2.8	20.8
1 12	7 7.19	+35 49.1	1.807	2.769	5.2	19.4	1 12	7 8.43	+20 23.2	1.741	2.722	1.9	20.7
1 22	6 55.57	+35 11.9	1.845	2.778	7.9	19.6	1 22	6 59.37	+20 38.2	1.769	2.724	6.2	21.0
2 1	6 46.10	+34 21.2	1.911	2.787	11.2	19.8	2 1	6 51.87	+20 51.2	1.825	2.727	10.2	21.2
2 11	6 39.60	+33 22.2	2.000	2.796	14.2	20.0	2 11	6 46.71	+21 1.9	1.904	2.730	13.6	21.5
<b>336043</b>	2007 <i>WZ</i>		1 7.8 67°00	3°4/ 6.8	18		<b>253043</b>	2002 <i>SE</i> <sub>37</sub>		1 7.8 69°64	0°3/ 7.7	18	
12 3	7 39.98	+31 58.1	2.338	3.139	12.2	20.9	12 3	7 34.43	+22 23.0	3.016	3.811	9.9	20.7
12 13	7 34.72	+32 28.1	2.259	3.141	9.4	20.7	12 13	7 29.88	+22 42.2	2.942	3.824	7.5	20.6
12 23	7 27.19	+32 55.1	2.203	3.142	6.4	20.5	12 23	7 23.82	+23 3.8	2.893	3.838	4.7	20.4
1 2	7 18.06	+33 14.9	2.176	3.143	3.8	20.3	1 2	7 16.75	+23 25.9	2.874	3.851	1.8	20.2
1 12	7 8.31	+33 24.1	2.178	3.145	3.9	20.3	1 12	7 9.31	+23 46.7	2.885	3.865	1.3	20.2
1 22	6 59.03	+33 21.3	2.209	3.146	6.5	20.5	1 22	7 2.19	+24 4.7	2.927	3.879	4.3	20.5
2 1	6 51.21	+33 7.3	2.268	3.148	9.5	20.7	2 1	6 56.03	+24 19.0	2.999	3.892	7.0	20.7
2 11	6 45.60	+32 44.3	2.352	3.149	12.3	20.9	2 11	6 51.35	+24 29.6	3.096	3.906	9.3	20.8
<b>302441</b>	2002 <i>EB</i> <sub>41</sub>		1 7.8 293°47	0°0/ 7.7	18		<b>145251</b>	2005 <i>JP</i> <sub>112</sub>		1 7.8 129°48	1°4/ 8.3	18	
12 3	7 41.22	+22 0.9	1.514	2.333									

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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>450750</b>	2007 <i>HC</i> <sub>85</sub>		1 7.8 206°45	4.9/ 6.2	18		<b>376380</b>	2012 <i>DP</i> <sub>25</sub>		1 7.8 202°77	4.6/ 6.2	18	
12 3	7 46.53	+32 0.8	1.799	2.604	15.1	22.1	12 3	7 44.08	+35 18.1	2.407	3.198	12.2	21.8
12 13	7 40.63	+33 8.2	1.716	2.599	11.8	21.9	12 13	7 37.97	+36 5.0	2.321	3.193	9.6	21.6
12 23	7 31.49	+34 14.7	1.657	2.594	8.2	21.6	12 23	7 29.38	+36 47.5	2.260	3.189	6.9	21.4
1 2	7 19.84	+35 12.6	1.625	2.589	5.3	21.5	1 2	7 18.96	+37 20.1	2.227	3.184	4.9	21.3
1 12	7 7.03	+35 54.4	1.621	2.583	5.7	21.5	1 12	7 7.76	+37 38.4	2.223	3.178	5.1	21.3
1 22	6 54.69	+36 16.3	1.645	2.576	8.9	21.6	1 22	6 56.96	+37 40.5	2.249	3.172	7.3	21.4
2 1	6 44.35	+36 18.7	1.696	2.569	12.5	21.8	2 1	6 47.71	+37 27.3	2.303	3.165	10.1	21.6
2 11	6 37.14	+36 5.6	1.769	2.561	15.9	22.0	2 11	6 40.84	+37 1.9	2.381	3.158	12.7	21.7
<b>123129</b>	2000 <i>TX</i> <sub>11</sub>		1 7.8 54°98	3.4/ 8.9	18		<b>417165</b>	2005 <i>WG</i> <sub>51</sub>		1 7.8 10°29	1.8/ 7.3	18	
12 3	7 37.98	+12 31.8	1.903	2.695	14.9	20.2	12 3	7 39.51	+24 59.0	1.774	2.589	14.9	21.5
12 13	7 33.36	+12 23.2	1.823	2.697	11.7	20.0	12 13	7 34.93	+25 33.6	1.697	2.590	11.3	21.3
12 23	7 26.43	+12 25.6	1.765	2.699	8.1	19.8	12 23	7 27.63	+26 11.7	1.643	2.591	7.3	21.1
1 2	7 17.82	+12 39.2	1.734	2.702	4.6	19.6	1 2	7 18.33	+26 48.5	1.615	2.592	3.1	20.8
1 12	7 8.53	+13 2.3	1.730	2.704	3.7	19.5	1 12	7 8.22	+27 19.7	1.615	2.594	2.8	20.8
1 22	6 59.68	+13 32.7	1.756	2.706	6.7	19.7	1 22	6 58.60	+27 42.0	1.644	2.595	7.0	21.1
2 1	6 52.28	+14 7.6	1.808	2.708	10.4	19.9	2 1	6 50.74	+27 54.6	1.699	2.597	11.1	21.3
2 11	6 47.14	+14 44.2	1.885	2.711	13.7	20.1	2 11	6 45.52	+27 58.6	1.778	2.599	14.6	21.5
<b>147845</b>	2005 <i>UY</i> <sub>14</sub>		1 7.8 33°71	0.8/ 7.6	18		<b>154093</b>	2002 <i>CB</i> <sub>289</sub>		1 7.8 135°88	0.3/ 7.9	18	
12 3	7 39.69	+22 55.8	1.755	2.569	15.1	20.3	12 3	7 40.20	+20 15.1	2.462	3.251	12.0	20.8
12 13	7 34.99	+23 18.3	1.680	2.572	11.5	20.1	12 13	7 34.53	+20 32.1	2.385	3.264	9.1	20.7
12 23	7 27.60	+23 45.3	1.628	2.576	7.3	19.8	12 23	7 26.91	+20 53.4	2.334	3.277	5.8	20.5
1 2	7 18.28	+24 13.1	1.602	2.580	2.8	19.6	1 2	7 17.96	+21 16.8	2.311	3.289	2.2	20.3
1 12	7 8.20	+24 37.9	1.604	2.584	2.2	19.5	1 12	7 8.52	+21 39.9	2.320	3.300	1.5	20.2
1 22	6 58.67	+24 56.9	1.634	2.588	6.7	19.8	1 22	6 59.50	+22 0.8	2.359	3.311	5.1	20.5
2 1	6 50.88	+25 9.2	1.692	2.593	10.9	20.1	2 1	6 51.74	+22 18.4	2.428	3.322	8.4	20.7
2 11	6 45.71	+25 15.2	1.772	2.598	14.5	20.3	2 11	6 45.89	+22 32.5	2.522	3.331	11.2	20.9
<b>105384</b>	2000 <i>QO</i> <sub>136</sub>		1 7.8 104°20	1°0/ 8.1	17		<b>353239</b>	2010 <i>CN</i> <sub>107</sub>		1 7.8 95°58	6°8/ 10.1	18	
12 3	7 44.99	+18 42.3	1.755	2.553	15.7	21.6	12 3	7 40.03	+ 5 8.1	1.533	2.313	18.4	21.1
12 13	7 38.67	+18 49.8	1.694	2.576	12.0	21.4	12 13	7 35.36	+ 4 51.5	1.461	2.319	15.1	20.9
12 23	7 29.73	+19 4.1	1.655	2.598	7.7	21.2	12 23	7 27.91	+ 4 55.4	1.410	2.326	11.3	20.7
1 2	7 19.01	+19 22.9	1.643	2.620	3.1	21.0	1 2	7 18.44	+ 5 21.9	1.382	2.333	8.0	20.5
1 12	7 7.76	+19 43.0	1.661	2.641	2.1	21.0	1 12	7 8.16	+ 6 9.7	1.380	2.340	6.9	20.5
1 22	6 57.26	+20 2.2	1.708	2.662	6.5	21.3	1 22	6 58.43	+ 7 14.7	1.405	2.346	9.1	20.6
2 1	6 48.66	+20 19.0	1.783	2.682	10.6	21.6	2 1	6 50.52	+ 8 30.7	1.456	2.353	12.7	20.8
2 11	6 42.72	+20 33.1	1.881	2.701	14.0	21.8	2 11	6 45.32	+ 9 51.2	1.529	2.359	16.2	21.1
<b>53567</b>	2000 <i>CB</i> <sub>33</sub>		1 7.8 180°71	2°8/ 8.7	18		<b>135433</b>	2001 <i>UA</i> <sub>142</sub>		1 7.8 333°12	0°3/ 7.8	18	
12 3	7 42.42	+13 54.7	1.746	2.539	16.0	19.3	12 3	7 38.03	+21 37.8	1.576	2.398	16.1	19.9
12 13	7 37.02	+14 0.4	1.664	2.540	12.5	19.1	12 13	7 34.16	+21 58.1	1.492	2.389	12.4	19.6
12 23	7 28.91	+14 18.0	1.603	2.541	8.5	18.8	12 23	7 27.35	+22 25.0	1.430	2.380	8.0	19.3
1 2	7 18.80	+14 46.4	1.569	2.541	4.3	18.6	1 2	7 18.31	+22 55.2	1.393	2.372	3.0	19.0
1 12	7 7.84	+15 22.8	1.564	2.541	3.2	18.5	1 12	7 8.26	+23 24.6	1.383	2.364	2.2	18.9
1 22	6 57.33	+16 3.9	1.587	2.540	7.1	18.7	1 22	6 58.65	+23 49.7	1.401	2.357	7.3	19.2
2 1	6 48.50	+16 46.5	1.638	2.538	11.3	19.0	2 1	6 50.87	+24 8.7	1.444	2.351	12.0	19.5
2 11	6 42.28	+17 28.0	1.712	2.536	15.0	19.2	2 11	6 45.94	+24 21.4	1.509	2.345	16.0	19.7
<b>165879</b>	2001 <i>SQ</i> <sub>140</sub>		1 7.8 74°19	4°0/ 6.6	18		<b>343978</b>	2011 <i>LK</i> <sub>25</sub>		1 7.8 285°92	0°3/ 7.9	18	
12 3	7 40.96	+33 51.5	2.295	3.094	12.4	19.9	12 3	7 42.96	+21 23.9	1.359	2.182	18.2	21.4
12 13	7 35.49	+34 26.6	2.224	3.103	9.7	19.7	12 13	7 38.32	+21 21.5	1.279	2.175	14.0	21.1
12 23	7 27.69	+34 57.3	2.176	3.111	6.7	19.6	12 23	7 30.21	+21 24.9	1.219	2.168	9.1	20.8
1 2	7 18.27	+35 18.9	2.157	3.119	4.4	19.4	1 2	7 19.43	+21 31.3	1.183	2.161	3.5	20.5
1 12	7 8.27	+35 27.8	2.166	3.128	4.5	19.4	1 12	7 7.49	+21 37.4	1.173	2.154	2.4	20.4
1 22	6 58.81	+35 23.0	2.205	3.136	6.9	19.6	1 22	6 56.13	+21 40.8	1.191	2.148	8.2	20.7
2 1	6 50.92	+35 5.4	2.271	3.145	9.8	19.8	2 1	6 47.02	+21 40.8	1.233	2.141	13.5	21.0
2 11	6 45.35	+34 37.9	2.361	3.153	12.4	20.0	2 11	6 41.31	+21 38.1	1.296	2.135	18.0	21.2
<b>197923</b>	2004 <i>RO</i> <sub>54</sub>		1 7.8 161°78	2°9/ 7.0	18		<b>396527</b>	2014 <i>GR</i> <sub>28</sub>		1 7.8 223°39	0°8/ 7.6	18	
12 3	7 46.99	+29 6.1	2.080	2.874	13.7	21.8	12 3	7 43.94	+22 42.6	1.657	2.467	16.0	22.1
12 13	7 40.22	+29 41.7	2.002	2.883	10.5	21.6	12 13	7 38.59	+23 8.1	1.571	2.460	12.3	21.9
12 23	7 30.80	+30 16.3	1.949	2.890	6.9	21.4	12 23	7 30.17	+23 39.3	1.506	2.453	7.9	21.6
1 2	7 19.46	+30 44.6	1.924	2.896	3.6	21.2	1 2	7 19.38	+24 11.8	1.467	2.445	3.0	21.3
1 12	7 7.40	+31 2.5	1.929	2.902	3.6	21.2	1 12	7 7.52	+24 41.1	1.457	2.437	2.4	21.2
1 22	6 55.92	+31 8.0	1.965	2.906	6.9	21.4	1 22	6 56.10	+25 3.7	1.476	2.429	7.4	21.5
2 1	6 46.19	+31 1.7	2.029	2.910	10.4	21.6	2 1	6 46.56	+25 18.3	1.521	2.420	12.1	21.8
2 11	6 39.09	+30 46.2	2.117	2.913	13.5	21.8	2 11	6 39.99	+25 25.6	1.589	2.411	16.0	22.0
<b>422014</b>	2014 <i>QH</i> <sub>333</sub>		1 7.8 98°20	1°0/ 8.2	18		<b>88936</b>	2001 <i>TN</i> <sub>32</sub>		1 7.8 181°45	1°8/ 7.5	18	
12 3	7 41.81	+17 55.0	1.992	2.786	14.2	21.8	12 3	7 46.22	+26 45.9	1.837	2.639	15.0	20.4
12 13	7 36.03	+18 13.6	1.928	2.808	10.9	21.6	12 13	7 39.95	+26 59.2	1.755	2.640	11.5	20.1
12 23	7 27.97	+18 39.4	1.887	2.830	7.0	21.5	12 23	7 30.79	+27 12.5	1.696	2.641	7.4	19.9
1 2	7 18.35	+19 9.9	1.875	2.851	2.9	21.2	1 2	7 19.54	+27 21.6	1.664	2.641	3.2	19.6
1 12	7 8.23	+19 42.0	1.892	2.872	1.9	21.2	1 12	7 7.47	+27 22.8	1.662	2.640	2.8	19.6
1 22	6 58.71	+20 13.1	1.939	2.892	5.9	21.5	1 22	6 56.00	+27 14.8	1.690	2.639	7.0	19.9
2 1	6 50.77	+20 41.4	2.014	2.912	9.6	21.8	2 1	6 46.43	+26 58.4	1.744	2.637	11.1	20.1
2 11	6 45.14	+21 5.9	2.114	2.931	12.7	22.0	2 11	6 39.68	+26 36.0	1.823	2.635	14.7	20.3
<b>452882</b>	2006 <i>TM</i> <sub>53</sub>		1 7.8 5°69	11°1/ 9.9	18		<b>314866</b>	2006 <i>UD</i> <sub>265</sub>		1 7.8 127°94	4°7/ 6.6	18	
12 3	7 36.91	- 0 19.8	1.518										

EPHEMERIDES

1 7.8

1 7.9

2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>438266</b>	2005 XG <sub>55</sub>		1 7.8 56°48	1.1°/ 7.7	17		<b>11719</b>	Hicklen		1 7.9 286°28	0.7°/ 7.7	18	
12 3	7 45.72	+24 1.2	1.209	2.038	19.6	20.5	12 3	7 39.53	+23 2.0	1.950	2.758	14.0	18.5
12 13	7 40.24	+24 13.2	1.162	2.061	14.9	20.3	12 13	7 34.74	+23 22.2	1.865	2.754	10.7	18.2
12 23	7 31.16	+24 28.8	1.133	2.084	9.4	20.1	12 23	7 27.46	+23 46.2	1.803	2.750	6.8	18.0
1 2	7 19.65	+24 43.0	1.129	2.108	3.6	19.8	1 2	7 18.33	+24 11.1	1.768	2.746	2.6	17.7
1 12	7 7.51	+24 51.4	1.151	2.132	2.8	19.8	1 12	7 8.42	+24 33.2	1.762	2.742	2.1	17.7
1 22	6 56.60	+24 52.0	1.199	2.156	8.3	20.2	1 22	6 58.93	+24 50.3	1.785	2.738	6.3	17.9
2 1	6 48.42	+24 45.6	1.272	2.180	13.2	20.6	2 1	6 50.97	+25 1.3	1.836	2.735	10.3	18.2
2 11	6 43.82	+24 34.2	1.366	2.204	17.3	20.9	2 11	6 45.42	+25 6.4	1.910	2.731	13.8	18.4
<b>35299</b>	1996 VK <sub>8</sub>		1 7.8 60°00	0.3°/ 7.8	18		<b>261072</b>	2005 SX <sub>207</sub>		1 7.9 43°16	2.0°/ 7.7	18	
12 3	7 45.33	+22 52.0	1.642	2.450	16.2	18.6	12 3	7 45.79	+29 9.2	1.571	2.385	16.5	19.5
12 13	7 38.91	+22 57.3	1.597	2.486	12.2	18.4	12 13	7 39.73	+28 46.2	1.507	2.398	12.6	19.2
12 23	7 29.82	+23 5.6	1.575	2.522	7.7	18.2	12 23	7 30.61	+28 18.7	1.465	2.411	8.2	19.0
1 2	7 19.04	+23 13.6	1.580	2.558	2.8	18.0	1 2	7 19.44	+27 43.6	1.449	2.425	3.5	18.8
1 12	7 7.95	+23 18.5	1.613	2.594	2.1	18.1	1 12	7 7.74	+26 59.7	1.461	2.439	3.0	18.8
1 22	6 57.86	+23 19.2	1.675	2.629	6.6	18.4	1 22	6 57.05	+26 8.3	1.501	2.454	7.4	19.1
2 1	6 49.89	+23 15.7	1.765	2.665	10.6	18.7	2 1	6 48.65	+25 12.7	1.568	2.469	11.6	19.4
2 11	6 44.69	+23 9.1	1.877	2.700	13.9	19.0	2 11	6 43.34	+24 16.8	1.658	2.484	15.3	19.6
<b>330148</b>	2006 AQ <sub>69</sub>		1 7.9 212°60	1.2°/ 7.4	18		<b>201856</b>	2003 YF <sub>118</sub>		1 7.9 228°42	6.6°/ 7.9	17	
12 3	7 39.65	+23 29.3	2.282	3.081	12.5	20.9	12 3	7 59.28	+37 52.3	1.234	2.042	20.5	19.6
12 13	7 34.54	+24 11.6	2.192	3.077	9.5	20.7	12 13	7 51.67	+37 47.2	1.156	2.037	16.5	19.3
12 23	7 27.19	+24 58.1	2.127	3.073	6.1	20.5	12 23	7 39.10	+37 26.9	1.096	2.031	11.8	19.1
1 2	7 18.19	+25 45.2	2.091	3.068	2.4	20.2	1 2	7 22.84	+36 40.9	1.061	2.025	7.6	18.8
1 12	7 8.44	+26 28.8	2.084	3.063	2.2	20.2	1 12	7 5.32	+35 23.4	1.052	2.019	7.1	18.8
1 22	6 58.97	+27 5.8	2.108	3.058	5.9	20.4	1 22	6 49.27	+33 37.8	1.069	2.012	11.1	19.0
2 1	6 50.81	+27 34.6	2.161	3.052	9.4	20.6	2 1	6 36.95	+31 35.1	1.112	2.005	16.1	19.2
2 11	6 44.75	+27 55.3	2.238	3.046	12.5	20.8	2 11	6 29.49	+29 28.4	1.176	1.997	20.6	19.5
<b>407548</b>	2010 WD <sub>55</sub>		1 7.9 80°86	1°0/ 7.5	18		<b>309924</b>	2009 FU <sub>34</sub>		1 7.9 36°48	4.1°/ 6.7	18	
12 3	7 40.12	+22 37.7	1.873	2.682	14.5	20.3	12 3	7 42.94	+29 34.2	1.578	2.397	16.2	21.0
12 13	7 35.21	+23 17.2	1.798	2.688	11.0	20.1	12 13	7 38.05	+30 26.9	1.506	2.399	12.5	20.7
12 23	7 27.74	+24 1.9	1.747	2.694	7.0	19.9	12 23	7 29.89	+31 19.9	1.456	2.401	8.4	20.5
1 2	7 18.42	+24 47.7	1.722	2.700	2.7	19.6	1 2	7 19.32	+32 5.9	1.432	2.404	4.7	20.3
1 12	7 8.35	+25 30.1	1.727	2.706	2.3	19.6	1 12	7 7.75	+32 38.5	1.435	2.406	4.9	20.3
1 22	6 58.76	+26 5.7	1.760	2.712	6.5	19.9	1 22	6 56.83	+32 54.3	1.466	2.409	8.6	20.5
2 1	6 50.81	+26 32.7	1.821	2.719	10.5	20.1	2 1	6 48.06	+32 53.7	1.522	2.412	12.7	20.8
2 11	6 45.35	+26 51.3	1.906	2.725	13.9	20.4	2 11	6 42.49	+32 40.1	1.599	2.415	16.3	21.0
<b>197305</b>	2003 WJ <sub>133</sub>		1 7.9 353°69	3°5/ 8.6	18		<b>81377</b>	2000 GG <sub>69</sub>		1 7.9 178°08	5°8/ 9.7	18	
12 3	7 37.57	+13 36.5	2.010	2.802	14.2	20.1	12 3	7 39.01	+4 56.6	2.289	3.040	13.9	19.3
12 13	7 32.97	+13 2.4	1.926	2.801	11.2	19.9	12 13	7 33.78	+4 24.1	2.203	3.042	11.4	19.1
12 23	7 26.17	+12 36.5	1.866	2.799	7.8	19.6	12 23	7 26.56	+4 4.7	2.140	3.043	8.7	19.0
1 2	7 17.79	+12 19.4	1.832	2.798	4.5	19.4	1 2	7 17.94	+4 0.3	2.103	3.044	6.5	18.8
1 12	7 8.80	+12 11.1	1.826	2.798	3.8	19.4	1 12	7 8.75	+4 11.3	2.095	3.044	5.9	18.8
1 22	7 0.21	+12 11.0	1.849	2.797	6.6	19.6	1 22	6 59.88	+4 36.2	2.116	3.044	7.4	18.9
2 1	6 53.01	+12 17.7	1.899	2.797	10.1	19.8	2 1	6 52.20	+5 12.6	2.165	3.043	10.0	19.0
2 11	6 47.95	+12 29.4	1.974	2.797	13.3	20.0	2 11	6 46.42	+5 56.7	2.239	3.042	12.6	19.2
<b>296325</b>	2009 EG <sub>16</sub>		1 7.9 203°41	0°0/ 7.7	18		<b>60979</b>	2000 KW <sub>7</sub>		1 7.9 107°58	0°4/ 7.7	18	
12 3	7 42.65	+21 49.3	2.062	2.859	13.7	21.9	12 3	7 44.04	+20 18.0	1.622	2.429	16.4	18.8
12 13	7 36.95	+21 58.2	1.972	2.855	10.5	21.7	12 13	7 38.44	+21 2.2	1.556	2.444	12.5	18.5
12 23	7 28.79	+22 10.8	1.906	2.850	6.8	21.5	12 23	7 29.90	+21 54.6	1.512	2.459	7.9	18.3
1 2	7 18.81	+22 24.7	1.867	2.845	2.6	21.2	1 2	7 19.26	+22 50.4	1.495	2.473	3.0	18.0
1 12	7 8.07	+22 37.2	1.859	2.840	1.8	21.1	1 12	7 7.84	+23 44.0	1.506	2.487	2.2	18.0
1 22	6 57.71	+22 46.3	1.881	2.833	6.1	21.4	1 22	6 57.08	+24 30.8	1.547	2.500	7.1	18.4
2 1	6 48.87	+22 51.4	1.930	2.827	10.1	21.6	2 1	6 48.30	+25 8.6	1.614	2.514	11.5	18.6
2 11	6 42.39	+22 52.8	2.005	2.819	13.5	21.8	2 11	6 42.41	+25 37.4	1.705	2.526	15.1	18.9
<b>200864</b>	2001 YC <sub>75</sub>		1 7.9 21°14	1°5/ 7.7	18		<b>313695</b>	2003 TT <sub>13</sub>		1 7.9 103°64	18°2/ 10.9	18	
12 3	7 43.69	+26 10.6	1.330	2.157	18.2	19.7	12 3	7 44.93	-9 15.7	1.180	1.913	25.4	20.6
12 13	7 38.83	+26 5.7	1.261	2.160	14.0	19.5	12 13	7 39.77	-12 0.0	1.130	1.922	22.9	20.5
12 23	7 30.44	+26 0.8	1.212	2.163	9.0	19.2	12 23	7 31.08	-14 11.9	1.095	1.932	20.5	20.3
1 2	7 19.49	+25 51.8	1.188	2.166	3.6	18.9	1 2	7 19.79	-15 38.1	1.078	1.941	18.8	20.3
1 12	7 7.63	+25 35.6	1.191	2.170	2.9	18.9	1 12	7 7.49	-16 10.6	1.081	1.950	18.3	20.3
1 22	6 56.66	+25 11.5	1.219	2.175	8.2	19.2	1 22	6 55.98	-15 49.1	1.103	1.958	19.0	20.3
2 1	6 48.17	+24 41.4	1.273	2.180	13.2	19.5	2 1	6 46.89	-14 41.3	1.143	1.967	20.8	20.5
2 11	6 43.14	+24 8.3	1.347	2.186	17.4	19.8	2 11	6 41.29	-13 0.5	1.199	1.975	22.9	20.7
<b>184047</b>	2004 FX <sub>92</sub>		1 7.9 220°33	0°3/ 7.9	18		<b>349577</b>	2008 SJ <sub>263</sub>		1 7.9 330°86	4°5/ 6.8	18	
12 3	7 40.27	+19 38.3	2.067	2.865	13.7	21.3	12 3	7 40.91	+29 7.2	1.251	2.088	18.6	20.9
12 13	7 35.18	+20 3.1	1.976	2.859	10.5	21.1	12 13	7 37.41	+29 58.8	1.175	2.077	14.4	20.7
12 23	7 27.69	+20 34.7	1.908	2.853	6.8	20.9	12 23	7 30.02	+30 52.5	1.118	2.067	9.7	20.4
1 2	7 18.42	+21 10.4	1.869	2.846	2.6	20.6	1 2	7 19.53	+31 39.9	1.085	2.058	5.4	20.1
1 12	7 8.35	+21 46.9	1.859	2.840	1.8	20.5	1 12	7 7.61	+32 12.8	1.077	2.050	5.5	20.1
1 22	6 58.59	+22 21.1	1.879	2.832	6.0	20.8	1 22	6 56.31	+32 26.2	1.094	2.042	10.1	20.3
2 1	6 50.23	+22 51.0	1.927	2.825	10.0	21.0	2 1	6 47.55	+32 20.5	1.133	2.035	15.0	20.5
2 11	6 44.13	+23 15.8	1.999	2.817	13.4	21.2	2 11	6 42.66	+31 59.8	1.193	2.029	19.4	20.8
<b>131603</b>	2001 XD <sub>18</sub>		1 7.9 315°24	3°9/ 7.1	18		<b>521102</b>	2015 DH <sub>244</sub>		1 7.9 266°02	6°9/ 10.3	17	
12 3	7 41.81	+29 20.0	1.331	2.162	18.0	19.8	12 3	7 34.63	-0 13.7	2.554	3.284		

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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>28506</b>	2000 <i>CR</i> <sub>83</sub>		1 7.9 186°89	1°9/ 7.4 18			<b>84060</b>	2002 <i>PV</i> <sub>112</sub>		1 7.9 61°97	8°4/11.5 18		
12 3	7 46.02	+26 5.7	1.920	2.719	14.5	19.0	12 3	7 39.27	- 0 21.9	1.581	2.338	18.9	19.8
12 13	7 39.79	+26 35.1	1.835	2.719	11.1	18.8	12 13	7 34.57	- 0 34.8	1.522	2.358	15.8	19.6
12 23	7 30.74	+27 6.1	1.774	2.719	7.2	18.5	12 23	7 27.31	- 0 22.5	1.483	2.378	12.5	19.5
1 2	7 19.62	+27 34.1	1.741	2.717	3.1	18.3	1 2	7 18.29	+ 0 17.2	1.466	2.398	9.6	19.4
1 12	7 7.63	+27 54.7	1.738	2.715	2.9	18.3	1 12	7 8.68	+ 1 22.6	1.475	2.419	8.4	19.3
1 22	6 56.12	+28 5.5	1.764	2.712	6.9	18.5	1 22	6 59.72	+ 2 48.5	1.511	2.440	9.7	19.5
2 1	6 46.39	+28 6.3	1.818	2.708	10.9	18.7	2 1	6 52.52	+ 4 27.4	1.573	2.460	12.5	19.7
2 11	6 39.37	+27 59.1	1.896	2.703	14.4	19.0	2 11	6 47.86	+ 6 11.2	1.657	2.481	15.4	19.9
<b>319759</b>	2006 <i>UX</i> <sub>191</sub>		1 7.9 38°93	5°8/ 8.8 18			<b>445286</b>	2009 <i>WT</i> <sub>163</sub>		1 7.9 98°87	0°0/ 7.7 17		
12 3	7 40.33	+11 9.8	1.483	2.284	18.0	20.3	12 3	7 46.47	+22 8.4	1.425	2.239	17.9	21.7
12 13	7 35.57	+10 5.7	1.420	2.295	14.3	20.1	12 13	7 40.54	+22 11.6	1.363	2.254	13.7	21.4
12 23	7 28.03	+ 9 13.8	1.377	2.307	10.3	19.9	12 23	7 31.34	+22 19.5	1.321	2.269	8.7	21.2
1 2	7 18.56	+ 8 37.0	1.359	2.320	6.8	19.7	1 2	7 19.85	+22 28.5	1.305	2.284	3.3	20.9
1 12	7 8.46	+ 8 16.8	1.368	2.333	6.1	19.7	1 12	7 7.61	+22 35.3	1.317	2.298	2.3	20.9
1 22	6 59.08	+ 8 12.5	1.402	2.346	8.8	19.9	1 22	6 56.29	+22 37.8	1.356	2.312	7.6	21.2
2 1	6 51.65	+ 8 21.8	1.462	2.360	12.5	20.1	2 1	6 47.32	+22 35.9	1.421	2.325	12.4	21.5
2 11	6 46.98	+ 8 41.0	1.544	2.374	16.0	20.4	2 11	6 41.61	+22 30.7	1.508	2.338	16.3	21.8
<b>406880</b>	2009 <i>CF</i> <sub>55</sub>		1 7.9 304°39	1°2/ 7.6 17			<b>422022</b>	2014 <i>QL</i> <sub>337</sub>		1 7.9 35°97	2°2/ 8.4 18		
12 3	7 41.28	+24 16.1	1.490	2.312	16.8	21.6	12 3	7 39.85	+16 59.5	1.439	2.256	17.6	20.8
12 13	7 36.96	+24 28.9	1.403	2.299	13.0	21.3	12 13	7 35.47	+16 51.0	1.373	2.265	13.6	20.5
12 23	7 29.36	+24 45.4	1.337	2.286	8.4	21.0	12 23	7 28.11	+16 52.4	1.328	2.274	9.0	20.3
1 2	7 19.22	+25 1.4	1.296	2.274	3.3	20.7	1 2	7 18.65	+17 2.3	1.308	2.284	4.1	20.0
1 12	7 7.90	+25 12.9	1.282	2.262	2.7	20.6	1 12	7 8.43	+17 18.3	1.314	2.294	2.9	20.0
1 22	6 57.05	+25 17.0	1.295	2.250	7.9	20.9	1 22	6 58.91	+17 37.8	1.348	2.304	7.5	20.3
2 1	6 48.23	+25 13.3	1.333	2.238	12.9	21.1	2 1	6 51.43	+17 58.4	1.406	2.315	12.1	20.6
2 11	6 42.60	+25 3.4	1.392	2.227	17.2	21.4	2 11	6 46.86	+18 18.5	1.487	2.327	16.0	20.9
<b>517586</b>	2014 <i>WF</i> <sub>62</sub>		1 7.9 158°96	7°2/ 5.2 18			<b>439927</b>	2001 <i>QM</i> <sub>290</sub>		1 7.9 77°88	1°6/ 8.3 18		
12 3	7 45.37	+38 42.3	1.920	2.718	14.6	21.4	12 3	7 45.60	+17 30.8	1.419	2.228	18.2	21.8
12 13	7 39.82	+40 5.9	1.848	2.719	11.8	21.2	12 13	7 39.63	+17 38.6	1.367	2.254	14.0	21.6
12 23	7 31.04	+41 23.1	1.800	2.720	9.0	21.1	12 23	7 30.61	+17 56.2	1.335	2.280	9.0	21.4
1 2	7 19.81	+42 25.3	1.778	2.721	7.3	21.0	1 2	7 19.52	+18 20.8	1.330	2.306	3.8	21.2
1 12	7 7.52	+43 5.2	1.784	2.722	7.7	21.0	1 12	7 7.87	+18 48.6	1.351	2.332	2.6	21.2
1 22	6 55.76	+43 19.8	1.817	2.722	9.9	21.1	1 22	6 57.19	+19 16.3	1.401	2.357	7.4	21.5
2 1	6 46.08	+43 10.8	1.875	2.723	12.7	21.3	2 1	6 48.80	+19 41.7	1.477	2.382	11.9	21.9
2 11	6 39.53	+42 43.2	1.954	2.724	15.4	21.5	2 11	6 43.49	+20 3.8	1.575	2.406	15.7	22.2
<b>286656</b>	2002 <i>ES</i> <sub>93</sub>		1 7.9 254°56	4°9/ 9.3 18			<b>130815</b>	2000 <i>UD</i> <sub>9</sub>		1 7.9 83°35	5°1/ 6.4 18		
12 3	7 40.35	+ 8 38.1	1.898	2.674	15.5	21.8	12 3	7 45.67	+31 23.9	1.552	2.368	16.6	19.2
12 13	7 35.49	+ 8 26.8	1.795	2.655	12.6	21.5	12 13	7 40.15	+32 32.4	1.492	2.381	12.9	19.0
12 23	7 28.08	+ 8 29.9	1.713	2.636	9.2	21.3	12 23	7 31.24	+33 39.1	1.453	2.394	8.8	18.8
1 2	7 18.69	+ 8 48.6	1.658	2.617	6.0	21.1	1 2	7 19.86	+34 35.5	1.440	2.407	5.5	18.6
1 12	7 8.28	+ 9 22.2	1.630	2.597	5.1	21.0	1 12	7 7.58	+35 14.5	1.455	2.420	5.8	18.7
1 22	6 58.02	+10 8.4	1.632	2.576	7.7	21.1	1 22	6 56.10	+35 32.7	1.496	2.432	9.1	18.9
2 1	6 49.13	+11 3.4	1.660	2.555	11.5	21.2	2 1	6 46.98	+35 31.4	1.563	2.445	12.9	19.2
2 11	6 42.56	+12 2.9	1.713	2.533	15.1	21.4	2 11	6 41.21	+35 15.3	1.652	2.458	16.3	19.4
<b>236479</b>	2006 <i>FU</i> <sub>32</sub>		1 7.9 194°86	2°0/ 8.5 18			<b>301314</b>	2009 <i>BO</i> <sub>149</sub>		1 7.9 30°06	0°8/ 8.0 18		
12 3	7 41.98	+15 38.0	2.143	2.928	13.7	22.1	12 3	7 40.29	+20 11.7	1.245	2.077	19.0	20.5
12 13	7 36.30	+15 39.7	2.052	2.925	10.7	21.9	12 13	7 36.22	+20 10.2	1.186	2.087	14.5	20.3
12 23	7 28.34	+15 49.4	1.985	2.922	7.1	21.6	12 23	7 28.77	+20 16.5	1.147	2.098	9.3	20.0
1 2	7 18.70	+16 6.1	1.946	2.919	3.4	21.4	1 2	7 18.92	+20 27.9	1.131	2.109	3.7	19.7
1 12	7 8.34	+16 27.8	1.936	2.914	2.5	21.3	1 12	7 8.26	+20 41.0	1.141	2.122	2.5	19.7
1 22	6 58.31	+16 52.4	1.957	2.909	6.0	21.5	1 22	6 58.49	+20 53.1	1.176	2.135	8.0	20.1
2 1	6 49.65	+17 18.0	2.007	2.903	9.7	21.8	2 1	6 51.10	+21 2.8	1.236	2.149	13.0	20.4
2 11	6 43.15	+17 43.0	2.081	2.896	13.0	22.0	2 11	6 47.01	+21 9.6	1.317	2.164	17.2	20.7
<b>218896</b>	2007 <i>DX</i> <sub>70</sub>		1 7.9 26°30	7°0/ 6.4 18			<b>432573</b>	2010 <i>OJ</i> <sub>48</sub>		1 7.9 50°07	0°0/ 7.7 18		
12 3	7 46.03	+39 42.1	1.817	2.616	15.2	19.9	12 3	7 39.74	+23 30.1	2.242	3.042	12.7	20.5
12 13	7 40.28	+40 29.2	1.747	2.618	12.3	19.7	12 13	7 34.41	+23 13.3	2.164	3.048	9.6	20.3
12 23	7 31.24	+41 6.8	1.699	2.620	9.3	19.6	12 23	7 26.99	+22 57.4	2.110	3.055	6.1	20.1
1 2	7 19.84	+41 27.1	1.676	2.623	7.3	19.4	1 2	7 18.14	+22 40.8	2.084	3.062	2.3	19.9
1 12	7 7.58	+41 24.7	1.680	2.625	7.4	19.5	1 12	7 8.81	+22 22.5	2.089	3.070	1.6	19.8
1 22	6 56.13	+40 58.5	1.711	2.628	9.7	19.6	1 22	6 59.99	+22 2.3	2.123	3.077	5.4	20.1
2 1	6 46.96	+40 12.0	1.768	2.631	12.7	19.8	2 1	6 52.59	+21 40.7	2.186	3.084	8.9	20.3
2 11	6 41.04	+39 11.3	1.846	2.634	15.5	20.0	2 11	6 47.26	+21 18.4	2.274	3.092	12.0	20.6
<b>204276</b>	2004 <i>FU</i> <sub>145</sub>		1 7.9 307°78	0°8/ 7.6 18			<b>17474</b>	1991 <i>GK</i> <sub>5</sub>		1 7.9 17°32	2°5/ 7.4 18		
12 3	7 38.28	+24 21.8	2.323	3.125	12.2	20.8	12 3	7 39.85	+25 50.2	1.152	1.995	19.4	17.6
12 13	7 33.40	+24 32.6	2.237	3.124	9.3	20.6	12 13	7 36.38	+26 19.0	1.093	2.000	14.9	17.3
12 23	7 26.42	+24 45.0	2.176	3.122	5.9	20.4	12 23	7 29.14	+26 51.0	1.053	2.006	9.6	17.1
1 2	7 17.95	+24 56.5	2.143	3.120	2.3	20.2	1 2	7 19.13	+27 20.0	1.035	2.013	4.1	16.8
1 12	7 8.89	+25 4.9	2.139	3.119	1.9	20.1	1 12	7 8.12	+27 40.0	1.043	2.022	3.8	16.8
1 22	7 0.20	+25 8.6	2.165	3.117	5.5	20.4	1 22	6 58.04	+27 47.7	1.075	2.031	9.0	17.1
2 1	6 52.82	+25 7.3	2.220	3.116	8.9	20.6	2 1	6 50.62	+27 43.4	1.130	2.042	14.1	17.4
2 11	6 47.46	+25 1.6	2.299	3.114	11.9	20.8	2 11	6 46.88	+27 29.8	1.206	2.054	18.5	17.7
<b>373285</b>	2012 <i>HP</i> <sub>48</sub>		1 7.9 196°55	1°8/ 8.6 18			<b>162161</b>	1999 <i>DK</i> <sub>3</sub>		1 7.9 241°71	14°4/14.1 14 C		
12 3	7 38.43	+15 14.8	2.107	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>228656</b>	2002 <i>FE</i> <sub>31</sub>		1 7.9 249°66	2°0/ 7.0 18			<b>7747</b>	Michałowski		1 7.9 127°55	0°1/ 7.9 18	R	
12 3	7 40.54	+24 47.1	2.284	3.082	12.5	20.5	12 3	7 47.31	+22 20.6	1.914	2.707	14.8	18.1
12 13	7 35.44	+25 46.3	2.184	3.068	9.6	20.3	12 13	7 40.40	+22 25.4	1.846	2.726	11.3	17.9
12 23	7 27.97	+26 50.4	2.110	3.054	6.2	20.0	12 23	7 30.92	+22 33.2	1.801	2.745	7.2	17.7
1 2	7 18.66	+27 54.8	2.064	3.039	2.8	19.8	1 2	7 19.68	+22 41.1	1.785	2.763	2.7	17.5
1 12	7 8.42	+28 54.4	2.049	3.024	2.8	19.8	1 12	7 7.89	+22 46.3	1.799	2.780	1.9	17.4
1 22	6 58.33	+29 45.3	2.064	3.009	6.3	20.0	1 22	6 56.82	+22 47.6	1.843	2.796	6.3	17.7
2 1	6 49.49	+30 25.1	2.108	2.993	9.9	20.1	2 1	6 47.59	+22 44.9	1.916	2.811	10.2	18.0
2 11	6 42.82	+30 54.1	2.177	2.977	13.0	20.3	2 11	6 40.97	+22 39.1	2.013	2.825	13.5	18.3
<b>369913</b>	2013 <i>CG</i> <sub>174</sub>		1 7.9 12°10	1°3/ 7.7 18			<b>517160</b>	2013 <i>MX</i>		1 7.9 167°35	0°9/ 7.5 18		
12 3	7 40.68	+25 21.9	1.154	1.995	19.5	20.6	12 3	7 48.65	+14 14.9	1.154	1.967	21.4	21.0
12 13	7 36.97	+25 19.3	1.091	1.997	15.0	20.3	12 13	7 43.58	+16 31.5	1.078	1.969	16.6	20.7
12 23	7 29.50	+25 18.2	1.047	2.001	9.6	20.0	12 23	7 34.25	+19 19.4	1.023	1.971	10.7	20.4
1 2	7 19.29	+25 14.7	1.027	2.005	3.8	19.7	1 2	7 21.35	+22 27.7	0.994	1.972	4.0	20.0
1 12	7 8.09	+25 4.9	1.030	2.011	3.0	19.7	1 12	7 6.52	+25 38.5	0.994	1.974	3.3	20.0
1 22	6 57.86	+24 47.8	1.059	2.018	8.7	20.0	1 22	6 52.00	+28 32.7	1.022	1.974	10.0	20.4
2 1	6 50.26	+24 24.7	1.111	2.026	14.0	20.4	2 1	6 40.07	+30 58.4	1.077	1.975	16.0	20.7
2 11	6 46.35	+23 58.1	1.183	2.035	18.5	20.7	2 11	6 32.37	+32 52.8	1.152	1.975	20.8	21.0
<b>317608</b>	2003 <i>AS</i> <sub>7</sub>		1 7.9 42°92	1°4/ 7.5 17			<b>335646</b>	2006 <i>KC</i> <sub>64</sub>		1 7.9 109°29	1°0/ 7.5 18		
12 3	7 41.59	+22 41.1	1.348	2.175	18.0	20.2	12 3	7 39.02	+22 59.1	2.351	3.149	12.2	21.4
12 13	7 36.94	+23 27.0	1.300	2.198	13.6	20.0	12 13	7 33.92	+23 39.2	2.275	3.160	9.3	21.2
12 23	7 29.09	+24 19.0	1.272	2.222	8.6	19.7	12 23	7 26.75	+24 23.2	2.224	3.169	5.9	21.0
1 2	7 19.03	+25 11.1	1.269	2.247	3.4	19.5	1 2	7 18.13	+25 7.4	2.202	3.179	2.3	20.8
1 12	7 8.31	+25 57.1	1.292	2.272	2.8	19.5	1 12	7 8.93	+25 48.4	2.210	3.189	2.0	20.8
1 22	6 58.54	+26 32.9	1.343	2.298	7.8	19.9	1 22	7 0.11	+26 23.4	2.248	3.198	5.5	21.0
2 1	6 51.08	+26 57.3	1.418	2.324	12.3	20.2	2 1	6 52.58	+26 51.1	2.315	3.207	8.8	21.3
2 11	6 46.81	+27 11.4	1.516	2.350	16.1	20.5	2 11	6 47.05	+27 11.4	2.407	3.217	11.6	21.5
<b>127304</b>	2002 <i>JA</i> <sub>87</sub>		1 7.9 221°53	0°4/ 7.8 18			<b>424597</b>	2008 <i>GO</i> <sub>136</sub>		1 7.9 162°37	3°2/ 8.9 18		
12 3	7 43.00	+22 27.3	1.947	2.748	14.3	21.1	12 3	7 38.90	+12 32.0	1.991	2.779	14.5	21.8
12 13	7 37.47	+22 40.0	1.856	2.740	11.0	20.8	12 13	7 34.08	+12 29.0	1.909	2.780	11.4	21.6
12 23	7 29.30	+22 56.6	1.787	2.732	7.1	20.6	12 23	7 26.98	+12 37.0	1.849	2.782	7.9	21.4
1 2	7 19.16	+23 14.2	1.746	2.724	2.7	20.3	1 2	7 18.25	+12 55.7	1.815	2.783	4.4	21.2
1 12	7 8.13	+23 29.5	1.734	2.715	2.0	20.2	1 12	7 8.83	+13 23.3	1.810	2.784	3.5	21.1
1 22	6 57.48	+23 40.4	1.752	2.705	6.5	20.5	1 22	6 59.80	+13 57.4	1.835	2.785	6.5	21.3
2 1	6 48.42	+23 46.2	1.798	2.695	10.6	20.7	2 1	6 52.18	+14 35.3	1.887	2.786	10.1	21.6
2 11	6 41.86	+23 47.2	1.867	2.684	14.2	20.9	2 11	6 46.73	+15 14.2	1.963	2.787	13.3	21.8
<b>224321</b>	2005 <i>UQ</i> <sub>39</sub>		1 7.9 232°53	1°7/ 8.4 18			<b>208730</b>	2002 <i>LJ</i> <sub>26</sub>		1 7.9 215°89	0°5/ 8.1 18		
12 3	7 39.45	+17 12.1	2.044	2.840	13.9	21.3	12 3	7 42.20	+19 26.4	2.101	2.894	13.6	21.6
12 13	7 34.52	+17 6.4	1.956	2.836	10.7	21.1	12 13	7 36.67	+19 42.3	2.006	2.886	10.5	21.4
12 23	7 27.27	+17 7.6	1.890	2.831	7.1	20.9	12 23	7 28.71	+20 4.4	1.934	2.877	6.8	21.1
1 2	7 18.35	+17 14.5	1.852	2.827	3.3	20.6	1 2	7 18.94	+20 30.5	1.891	2.868	2.7	20.9
1 12	7 8.72	+17 25.6	1.843	2.822	2.3	20.5	1 12	7 8.34	+20 57.5	1.878	2.858	1.8	20.8
1 22	6 59.45	+17 39.2	1.864	2.817	6.1	20.8	1 22	6 58.03	+21 23.0	1.894	2.848	6.0	21.0
2 1	6 51.59	+17 53.7	1.912	2.812	9.9	21.0	2 1	6 49.12	+21 45.3	1.940	2.837	10.0	21.2
2 11	6 45.93	+18 8.1	1.985	2.807	13.3	21.2	2 11	6 42.48	+22 3.8	2.010	2.825	13.4	21.4
<b>120314</b>	2004 <i>LQ</i> <sub>4</sub>		1 7.9 214°60	5°7/ 9.9 18			<b>353277</b>	2010 <i>FP</i> <sub>84</sub>		1 7.9 209°49	1°1/ 7.6 18		
12 3	7 38.22	+ 4 38.3	2.233	2.986	14.1	20.2	12 3	7 44.08	+23 41.0	1.943	2.744	14.3	22.4
12 13	7 33.35	+ 4 19.0	2.140	2.981	11.6	20.0	12 13	7 38.35	+24 9.0	1.853	2.738	11.0	22.2
12 23	7 26.44	+ 4 14.2	2.070	2.975	8.9	19.8	12 23	7 29.91	+24 40.9	1.786	2.732	7.1	22.0
1 2	7 18.03	+ 4 25.4	2.026	2.968	6.5	19.7	1 2	7 19.42	+25 12.8	1.747	2.725	2.8	21.7
1 12	7 8.95	+ 4 52.7	2.010	2.962	5.8	19.6	1 12	7 8.01	+25 40.5	1.737	2.717	2.3	21.6
1 22	7 0.13	+ 5 34.2	2.023	2.954	7.4	19.7	1 22	6 56.96	+26 1.1	1.758	2.708	6.7	21.9
2 1	6 52.48	+ 6 26.4	2.064	2.947	10.2	19.9	2 1	6 47.55	+26 13.7	1.806	2.699	10.8	22.1
2 11	6 46.74	+ 7 25.4	2.129	2.939	13.0	20.0	2 11	6 40.71	+26 19.0	1.878	2.690	14.3	22.3
<b>398341</b>	2011 <i>QN</i> <sub>65</sub>		1 7.9 87°09	0°5/ 7.7 16			<b>171659</b>	2000 <i>HR</i> <sub>94</sub>		1 7.9 141°63	5°3/ 9.8 18		
12 3	7 44.89	+21 47.0	1.585	2.395	16.6	21.4	12 3	7 36.77	+ 3 24.6	2.940	3.674	11.5	20.7
12 13	7 39.03	+22 15.8	1.527	2.416	12.6	21.2	12 13	7 31.65	+ 2 44.6	2.860	3.684	9.5	20.5
12 23	7 30.25	+22 50.3	1.491	2.438	8.0	21.0	12 23	7 25.04	+ 2 15.5	2.804	3.694	7.4	20.4
1 2	7 19.46	+23 26.0	1.481	2.459	3.0	20.7	1 2	7 17.43	+ 1 59.0	2.775	3.704	5.8	20.3
1 12	7 8.02	+23 58.2	1.499	2.480	2.2	20.7	1 12	7 9.45	+ 1 55.4	2.776	3.713	5.3	20.3
1 22	6 57.40	+24 23.9	1.547	2.501	7.0	21.1	1 22	7 1.76	+ 2 4.2	2.806	3.722	6.4	20.4
2 1	6 48.88	+24 42.0	1.620	2.521	11.4	21.4	2 1	6 55.00	+ 2 23.7	2.865	3.730	8.3	20.5
2 11	6 43.29	+24 53.3	1.717	2.540	15.0	21.6	2 11	6 49.68	+ 2 51.3	2.950	3.738	10.3	20.7
<b>276385</b>	2002 <i>WG</i> <sub>4</sub>		1 7.9 66°95	3°5/ 8.8 18			<b>384150</b>	2008 <i>YF</i> <sub>171</sub>		1 7.9 329°19	2°5/ 8.0 18		
12 3	7 39.84	+12 47.6	2.144	2.925	13.8	20.4	12 3	7 40.29	+19 13.3	1.906	2.708	14.5	19.6
12 13	7 34.32	+12 12.7	2.083	2.950	10.8	20.2	12 13	7 35.34	+18 12.9	1.809	2.693	11.3	19.3
12 23	7 26.85	+11 46.5	2.046	2.976	7.5	20.1	12 23	7 27.89	+17 13.5	1.736	2.678	7.5	19.1
1 2	7 18.09	+11 29.5	2.037	3.001	4.5	19.9	1 2	7 18.62	+16 16.1	1.691	2.664	3.7	18.8
1 12	7 8.98	+11 21.5	2.056	3.026	3.8	19.9	1 12	7 8.59	+15 22.0	1.674	2.651	3.1	18.7
1 22	7 0.46	+11 21.5	2.106	3.051	6.2	20.1	1 22	6 58.97	+14 32.8	1.686	2.638	6.8	19.0
2 1	6 53.36	+11 28.1	2.183	3.076	9.2	20.4	2 1	6 50.88	+13 50.0	1.726	2.626	10.8	19.2
2 11	6 48.27	+11 39.5	2.285	3.101	12.0	20.6	2 11	6 45.19	+13 14.2	1.790	2.614	14.4	19.4
<b>80989</b>	2000 <i>EC</i> <sub>23</sub>		1 7.9 187°92	1°0/ 7.6 18			<b>364290</b>	2006 <i>TE</i> <sub>93</sub>		1 7.9 122°35	18°1/ 11.3 18		
12 3	7 42.54	+24 47.2	2.544	3.333									

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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>410571</b>	2008 <i>GQ</i> <sub>77</sub>		1 7.9 355°65	1°0/ 8.2	18		<b>502917</b>	2015 <i>ED</i> <sub>20</sub>		1 7.9 239°55	8°5/12.5	17	
12 3	7 33.90	+17 17.8	1.208	2.047	18.9	20.1	12 3	7 35.34	- 7 50.0	2.584	3.269	14.0	22.0
12 13	7 31.72	+17 51.5	1.136	2.040	14.7	19.8	12 13	7 30.92	- 8 8.0	2.494	3.265	12.3	21.9
12 23	7 26.22	+18 40.5	1.083	2.035	9.6	19.5	12 23	7 24.79	- 8 6.2	2.424	3.260	10.6	21.8
1 2	7 18.14	+19 41.4	1.053	2.031	3.9	19.2	1 2	7 17.42	- 7 41.7	2.377	3.256	9.1	21.7
1 12	7 8.91	+20 48.2	1.047	2.029	2.5	19.1	1 12	7 9.52	- 6 54.0	2.357	3.251	8.5	21.6
1 22	7 0.21	+21 54.0	1.067	2.028	8.3	19.5	1 22	7 1.84	- 5 44.8	2.363	3.246	9.0	21.6
2 1	6 53.65	+22 53.3	1.110	2.029	13.6	19.7	2 1	6 55.14	- 4 18.3	2.397	3.241	10.5	21.7
2 11	6 50.41	+23 43.2	1.174	2.032	18.2	20.0	2 11	6 50.05	- 2 39.9	2.456	3.236	12.3	21.8
<b>219399</b>	2000 <i>SX</i> <sub>182</sub>		1 7.9 102°91	6°0/10.0	18		<b>5577</b>	Priestley		1 7.9 136°41	3°8/ 6.2	18	A
12 3	7 39.36	+ 4 32.9	2.130	2.884	14.7	21.1	12 3	7 49.57	+18 49.5	1.068	1.893	21.9	16.8
12 13	7 34.07	+ 4 3.9	2.062	2.902	12.0	20.9	12 13	7 44.75	+21 35.8	0.999	1.898	16.8	16.5
12 23	7 26.78	+ 3 49.9	2.016	2.920	9.2	20.8	12 23	7 35.29	+24 50.0	0.951	1.902	10.8	16.2
1 2	7 18.12	+ 3 52.2	1.997	2.938	6.8	20.6	1 2	7 21.87	+28 16.2	0.929	1.905	4.9	15.9
1 12	7 9.00	+ 4 10.8	2.005	2.955	6.0	20.6	1 12	7 6.28	+31 31.8	0.935	1.909	5.7	15.9
1 22	7 0.36	+ 4 43.6	2.043	2.972	7.6	20.8	1 22	6 51.07	+34 17.2	0.968	1.912	11.7	16.3
2 1	6 53.07	+ 5 27.2	2.107	2.988	10.1	20.9	2 1	6 38.80	+36 23.3	1.026	1.915	17.4	16.6
2 11	6 47.77	+ 6 17.6	2.196	3.004	12.7	21.1	2 11	6 31.26	+37 52.3	1.103	1.918	22.1	16.9
<b>179723</b>	2002 <i>RS</i> <sub>87</sub>		1 7.9 13°37	22°9/27.8	17		<b>318709</b>	2005 <i>QD</i> <sub>119</sub>		1 7.9 75°92	3°1/ 6.9	18	
12 3	7 29.20	-25 6.9	1.104	1.780	29.7	18.5	12 3	7 39.75	+31 56.0	2.514	3.312	11.5	21.1
12 13	7 28.06	-26 57.7	1.071	1.789	28.2	18.4	12 13	7 34.45	+32 19.4	2.438	3.318	8.9	20.9
12 23	7 23.72	-27 56.2	1.046	1.801	26.6	18.3	12 23	7 27.08	+32 39.6	2.386	3.324	6.0	20.8
1 2	7 17.11	-27 51.7	1.031	1.816	25.0	18.2	1 2	7 18.28	+32 53.0	2.363	3.330	3.5	20.6
1 12	7 9.71	-26 39.5	1.029	1.833	23.8	18.2	1 12	7 8.96	+32 56.8	2.369	3.337	3.5	20.6
1 22	7 3.10	-24 23.1	1.040	1.853	23.0	18.2	1 22	7 0.10	+32 49.9	2.405	3.343	6.0	20.8
2 1	6 58.68	-21 13.7	1.066	1.874	23.0	18.3	2 1	6 52.60	+32 33.2	2.469	3.349	8.8	21.0
2 11	6 57.36	-17 29.2	1.110	1.898	23.6	18.4	2 11	6 47.14	+32 8.7	2.558	3.355	11.4	21.2
<b>374038</b>	2004 <i>HW</i>		1 7.9 193°05	0°2/ 8.0	17		<b>138173</b>	2000 <i>ET</i> <sub>103</sub>		1 7.9 20°54	1°0/ 8.3	18	
12 3	7 40.14	+20 31.4	3.630	4.401	8.8	23.7	12 3	7 38.49	+15 19.7	1.427	2.244	17.8	18.7
12 13	7 34.05	+20 43.7	3.529	4.398	6.7	23.6	12 13	7 34.70	+16 18.9	1.356	2.248	13.7	18.4
12 23	7 26.54	+20 58.6	3.455	4.394	4.3	23.4	12 23	7 27.86	+17 34.9	1.307	2.253	8.9	18.1
1 2	7 18.02	+21 14.4	3.412	4.389	1.7	23.2	1 2	7 18.73	+19 3.2	1.282	2.259	3.7	17.9
1 12	7 9.07	+21 29.9	3.402	4.383	1.1	23.1	1 12	7 8.60	+20 36.4	1.285	2.266	2.3	17.8
1 22	7 0.31	+21 43.7	3.426	4.375	3.8	23.3	1 22	6 59.00	+22 6.9	1.315	2.273	7.5	18.1
2 1	6 52.36	+21 55.2	3.481	4.367	6.3	23.5	2 1	6 51.34	+23 28.6	1.372	2.281	12.3	18.4
2 11	6 45.71	+22 4.3	3.564	4.358	8.5	23.6	2 11	6 46.66	+24 38.3	1.450	2.289	16.4	18.7
<b>296037</b>	2008 <i>YB</i> <sub>172</sub>		1 7.9 241°39	0°6/ 8.1	18		<b>19988</b>	1990 <i>QW</i> <sub>3</sub>		1 7.9 160°78	0°6/ 7.8	18	
12 3	7 41.31	+18 58.4	1.780	2.584	15.3	21.3	12 3	7 47.11	+22 52.9	1.636	2.440	16.4	19.4
12 13	7 36.42	+19 20.2	1.690	2.576	11.8	21.0	12 13	7 40.92	+23 7.7	1.560	2.447	12.6	19.2
12 23	7 28.77	+19 50.5	1.622	2.568	7.7	20.7	12 23	7 31.64	+23 26.8	1.506	2.452	8.1	18.9
1 2	7 19.03	+20 26.4	1.581	2.559	3.0	20.4	1 2	7 20.10	+23 45.9	1.479	2.457	3.1	18.6
1 12	7 8.32	+21 4.4	1.569	2.550	2.0	20.4	1 12	7 7.69	+24 1.3	1.481	2.461	2.3	18.6
1 22	6 57.94	+21 40.7	1.586	2.541	6.8	20.6	1 22	6 55.93	+24 10.5	1.512	2.465	7.3	18.9
2 1	6 49.19	+22 12.8	1.630	2.532	11.2	20.9	2 1	6 46.24	+24 13.1	1.569	2.468	11.8	19.2
2 11	6 43.05	+22 39.8	1.697	2.522	15.0	21.1	2 11	6 39.58	+24 10.4	1.650	2.470	15.6	19.4
<b>125116</b>	2001 <i>UO</i> <sub>49</sub>		1 7.9 29°91	2°4/ 7.2	18		<b>122316</b>	2000 <i>QQ</i> <sub>12</sub>		1 7.9 152°47	2°6/ 8.7	18	
12 3	7 41.77	+23 31.4	1.343	2.171	18.1	19.6	12 3	7 41.93	+14 21.6	1.711	2.507	16.1	20.2
12 13	7 37.56	+24 35.6	1.275	2.174	13.8	19.3	12 13	7 36.76	+14 30.1	1.633	2.512	12.6	20.0
12 23	7 29.86	+25 48.2	1.228	2.178	8.9	19.0	12 23	7 28.90	+14 50.4	1.577	2.516	8.5	19.8
1 2	7 19.51	+27 1.9	1.205	2.182	3.8	18.8	1 2	7 19.06	+15 21.1	1.547	2.520	4.2	19.5
1 12	7 8.02	+28 8.3	1.209	2.187	3.6	18.8	1 12	7 8.40	+15 59.3	1.546	2.523	3.0	19.5
1 22	6 57.17	+29 1.1	1.240	2.192	8.6	19.1	1 22	6 58.23	+16 41.5	1.573	2.527	7.0	19.7
2 1	6 48.63	+29 38.1	1.295	2.198	13.5	19.4	2 1	6 49.78	+17 24.3	1.627	2.529	11.2	20.0
2 11	6 43.51	+30 0.3	1.372	2.203	17.6	19.6	2 11	6 43.93	+18 5.3	1.705	2.532	14.9	20.2
<b>238507</b>	2004 <i>TW</i> <sub>12</sub>		1 7.9 124°34	4°2/ 6.7	18		<b>78356</b>	2002 <i>PX</i> <sub>102</sub>		1 7.9 337°84	0°4/ 7.8	18	
12 3	7 46.86	+30 33.1	1.718	2.525	15.6	20.7	12 3	7 41.33	+24 56.1	1.976	2.782	13.9	19.4
12 13	7 40.78	+31 31.4	1.651	2.537	12.1	20.5	12 13	7 36.05	+24 35.7	1.890	2.778	10.7	19.2
12 23	7 31.56	+32 28.4	1.608	2.548	8.2	20.3	12 23	7 28.29	+24 14.9	1.828	2.774	6.8	18.9
1 2	7 20.06	+33 16.8	1.591	2.560	4.8	20.2	1 2	7 18.79	+23 51.6	1.793	2.771	2.6	18.7
1 12	7 7.70	+33 50.3	1.603	2.570	5.0	20.2	1 12	7 8.61	+23 24.9	1.788	2.768	1.9	18.6
1 22	6 56.06	+34 6.1	1.643	2.581	8.3	20.4	1 22	6 58.97	+22 54.6	1.811	2.765	6.2	18.9
2 1	6 46.55	+34 5.2	1.709	2.590	12.0	20.7	2 1	6 50.94	+22 21.9	1.863	2.763	10.1	19.1
2 11	6 40.15	+33 51.1	1.798	2.600	15.3	20.9	2 11	6 45.33	+21 48.6	1.939	2.761	13.5	19.3
<b>297290</b>	1997 <i>WU</i> <sub>18</sub>		1 7.9 346°53	0°7/ 8.1	18		<b>323956</b>	2005 <i>UU</i> <sub>50</sub>		1 7.9 77°02	3°6/ 6.9	18	
12 3	7 38.29	+19 34.3	1.237	2.071	18.9	20.8	12 3	7 42.84	+30 36.1	1.865	2.674	14.5	20.6
12 13	7 35.07	+19 43.8	1.163	2.065	14.6	20.5	12 13	7 37.49	+31 12.3	1.793	2.680	11.2	20.4
12 23	7 28.36	+20 3.2	1.107	2.059	9.5	20.2	12 23	7 29.35	+31 46.5	1.744	2.686	7.5	20.2
1 2	7 18.97	+20 29.8	1.075	2.054	3.8	19.9	1 2	7 19.21	+32 13.1	1.721	2.692	4.2	20.0
1 12	7 8.40	+20 59.3	1.068	2.049	2.5	19.8	1 12	7 8.32	+32 27.7	1.727	2.698	4.3	20.0
1 22	6 58.41	+21 27.6	1.086	2.046	8.4	20.1	1 22	6 58.05	+32 28.4	1.762	2.703	7.5	20.2
2 1	6 50.68	+21 51.9	1.128	2.044	13.8	20.4	2 1	6 49.64	+32 16.0	1.823	2.709	11.1	20.5
2 11	6 46.38	+22 11.1	1.190	2.042	18.4	20.7	2 11	6 43.97	+31 53.7	1.907	2.715	14.3	20.7
<b>301190</b>	2008 <i>YS</i> <sub>159</sub>		1 7.9 74°74	0°7/ 8.1	17		<b>164250</b>	2004 <i>TW</i> <sub>148</sub>		1 7.9 242°37	0°9/ 7.7	18	
12 3	7 43.99	+19 25.1	1.493	2.305									

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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>34822</b>	2001 SO <sub>133</sub>		1 7.9 280°34	0°8/ 8.1	18		<b>350614</b>	2001 SS <sub>113</sub>		1 7.9 73°92	0°7/ 8.1	18	
12 3	7 40.58	+20 8.4	1.840	2.646	14.8	18.8	12 3	7 47.22	+20 8.6	1.396	2.207	18.4	21.1
12 13	7 35.85	+20 5.0	1.742	2.629	11.5	18.5	12 13	7 40.92	+20 9.8	1.347	2.236	14.0	20.9
12 23	7 28.42	+20 6.7	1.666	2.612	7.5	18.2	12 23	7 31.47	+20 17.7	1.319	2.265	8.9	20.7
1 2	7 18.94	+20 12.0	1.617	2.594	3.0	17.9	1 2	7 19.96	+20 29.1	1.316	2.294	3.5	20.4
1 12	7 8.47	+20 18.5	1.596	2.577	2.0	17.8	1 12	7 7.95	+20 40.8	1.341	2.322	2.3	20.4
1 22	6 58.29	+20 24.5	1.604	2.560	6.7	18.1	1 22	6 57.03	+20 50.5	1.394	2.350	7.4	20.8
2 1	6 49.66	+20 29.0	1.639	2.542	11.1	18.3	2 1	6 48.51	+20 57.6	1.473	2.377	12.0	21.1
2 11	6 43.56	+20 31.8	1.698	2.525	14.9	18.5	2 11	6 43.17	+21 2.1	1.574	2.404	15.7	21.4
<b>257886</b>	2000 SC <sub>263</sub>		1 7.9 80°29	1°6/ 7.4	18		<b>62615</b>	2000 SA <sub>340</sub>		1 7.9 174°25	3°9/ 9.3	18	
12 3	7 41.24	+24 41.6	1.883	2.692	14.4	20.4	12 3	7 38.72	+9 29.5	2.408	3.174	12.9	19.8
12 13	7 36.09	+25 18.5	1.814	2.703	11.0	20.2	12 13	7 33.55	+9 14.4	2.321	3.176	10.3	19.6
12 23	7 28.37	+25 58.5	1.768	2.714	7.0	20.0	12 23	7 26.49	+9 9.8	2.258	3.178	7.4	19.4
1 2	7 18.83	+26 37.1	1.749	2.726	2.9	19.8	1 2	7 18.09	+9 16.1	2.222	3.180	4.8	19.3
1 12	7 8.61	+27 9.9	1.759	2.737	2.6	19.8	1 12	7 9.14	+9 32.7	2.216	3.181	4.1	19.2
1 22	6 58.95	+27 34.2	1.798	2.748	6.6	20.1	1 22	7 0.51	+9 58.0	2.239	3.181	6.1	19.3
2 1	6 50.99	+27 49.1	1.864	2.760	10.4	20.3	2 1	6 53.02	+10 29.8	2.292	3.181	9.0	19.5
2 11	6 45.55	+27 55.7	1.954	2.771	13.7	20.6	2 11	6 47.33	+11 5.5	2.370	3.181	11.7	19.7
<b>43770</b>	1988 EX <sub>1</sub>		1 7.9 266°13	2°3/ 7.1	18		<b>321128</b>	2008 UN <sub>79</sub>		1 7.9 107°13	2°1/ 7.3	18	
12 3	7 39.13	+28 14.3	2.387	3.188	11.9	19.1	12 3	7 41.09	+27 59.4	2.234	3.035	12.7	21.0
12 13	7 34.21	+28 45.8	2.294	3.179	9.2	18.9	12 13	7 35.63	+28 20.2	2.159	3.044	9.7	20.8
12 23	7 27.09	+29 17.4	2.227	3.170	6.0	18.7	12 23	7 27.92	+28 40.2	2.108	3.052	6.3	20.6
1 2	7 18.36	+29 45.5	2.187	3.160	3.0	18.5	1 2	7 18.64	+28 56.0	2.085	3.060	3.0	20.4
1 12	7 8.91	+30 6.5	2.177	3.151	3.0	18.5	1 12	7 8.79	+29 4.5	2.092	3.068	2.8	20.4
1 22	6 59.75	+30 18.4	2.197	3.142	6.0	18.7	1 22	6 59.44	+29 4.4	2.129	3.075	6.0	20.7
2 1	6 51.89	+30 20.8	2.245	3.132	9.3	18.9	2 1	6 51.58	+28 56.0	2.193	3.083	9.3	20.9
2 11	6 46.10	+30 15.0	2.318	3.123	12.2	19.0	2 11	6 45.94	+28 40.9	2.283	3.090	12.2	21.1
<b>152029</b>	2004 ND <sub>21</sub>		1 7.9 150°07	2°3/ 8.7	18		<b>409542</b>	2005 UP <sub>22</sub>		1 7.9 31°30	4°6/ 8.9	18	
12 3	7 39.41	+14 32.0	2.187	2.973	13.4	20.7	12 3	7 38.66	+12 26.3	1.559	2.363	17.1	20.2
12 13	7 34.27	+14 32.5	2.106	2.979	10.4	20.6	12 13	7 34.32	+11 48.7	1.493	2.372	13.5	20.0
12 23	7 27.03	+14 41.7	2.048	2.984	7.0	20.3	12 23	7 27.32	+11 23.0	1.448	2.382	9.5	19.8
1 2	7 18.30	+14 58.7	2.017	2.989	3.6	20.1	1 2	7 18.45	+11 10.4	1.427	2.393	5.7	19.6
1 12	7 8.97	+15 21.7	2.016	2.993	2.7	20.1	1 12	7 8.93	+11 10.7	1.433	2.404	4.8	19.6
1 22	7 0.04	+15 48.6	2.046	2.997	5.8	20.3	1 22	7 0.05	+11 22.3	1.466	2.416	7.9	19.8
2 1	6 52.42	+16 17.3	2.103	3.001	9.3	20.5	2 1	6 52.97	+11 42.6	1.524	2.428	11.7	20.1
2 11	6 46.82	+16 46.0	2.186	3.005	12.3	20.7	2 11	6 48.51	+12 8.2	1.605	2.441	15.2	20.3
<b>300316</b>	2007 PA <sub>36</sub>		1 7.9 130°61	0°3/ 7.9	18		<b>492666</b>	2014 PJ <sub>10</sub>		1 7.9 237°13	0°2/ 7.9	18	
12 3	7 44.92	+21 40.1	1.782	2.583	15.4	21.3	12 3	7 42.75	+21 29.5	1.812	2.616	15.1	22.3
12 13	7 38.88	+21 34.9	1.709	2.594	11.8	21.0	12 13	7 37.56	+21 49.9	1.719	2.606	11.6	22.1
12 23	7 30.13	+21 33.2	1.659	2.603	7.5	20.8	12 23	7 29.55	+22 16.3	1.650	2.596	7.5	21.8
1 2	7 19.49	+21 32.8	1.635	2.613	2.9	20.6	1 2	7 19.40	+22 45.3	1.607	2.585	2.9	21.5
1 12	7 8.18	+21 31.4	1.641	2.622	2.0	20.5	1 12	7 8.23	+23 13.2	1.593	2.573	2.0	21.4
1 22	6 57.54	+21 27.7	1.676	2.631	6.6	20.8	1 22	6 57.40	+23 36.7	1.608	2.562	6.8	21.7
2 1	6 48.75	+21 21.7	1.739	2.639	10.8	21.1	2 1	6 48.22	+23 54.4	1.650	2.549	11.2	21.9
2 11	6 42.64	+21 14.1	1.826	2.646	14.3	21.3	2 11	6 41.70	+24 6.4	1.716	2.537	15.1	22.1
<b>411455</b>	2010 WN <sub>74</sub>		1 7.9 113°52	6°6/ 10.3	18		<b>240754</b>	2005 JZ <sub>163</sub>		1 7.9 141°52	1°5/ 7.1	18	
12 3	7 39.78	+3 6.3	2.053	2.803	15.3	21.2	12 3	7 39.39	+23 48.5	2.619	3.412	11.2	20.3
12 13	7 34.51	+2 38.3	1.983	2.818	12.6	21.1	12 13	7 34.15	+24 53.5	2.537	3.418	8.5	20.1
12 23	7 27.14	+2 26.8	1.934	2.833	9.8	20.9	12 23	7 26.94	+26 2.6	2.480	3.424	5.5	19.9
1 2	7 18.32	+2 33.8	1.912	2.848	7.4	20.8	1 2	7 18.30	+27 11.6	2.454	3.430	2.4	19.7
1 12	7 8.99	+2 59.0	1.917	2.862	6.6	20.8	1 12	7 9.02	+28 16.2	2.458	3.435	2.3	19.7
1 22	7 0.13	+3 40.0	1.950	2.876	8.0	20.9	1 22	6 59.98	+29 12.9	2.495	3.440	5.4	19.9
2 1	6 52.64	+4 33.0	2.010	2.890	10.6	21.1	2 1	6 52.07	+29 59.8	2.561	3.445	8.4	20.1
2 11	6 47.23	+5 33.2	2.095	2.902	13.2	21.3	2 11	6 45.99	+30 36.8	2.652	3.449	11.0	20.3
<b>260018</b>	2004 FV <sub>151</sub>		1 7.9 233°56	1°1/ 8.3	18		<b>9304</b>	1986 RA <sub>5</sub>		1 7.9 108°17	1°1/ 8.3	18	
12 3	7 40.16	+17 43.1	1.861	2.662	14.8	21.1	12 3	7 42.74	+17 17.3	1.935	2.728	14.6	18.5
12 13	7 35.36	+17 59.3	1.774	2.658	11.5	20.9	12 13	7 36.97	+17 39.5	1.869	2.748	11.2	18.3
12 23	7 28.01	+18 24.2	1.711	2.654	7.5	20.6	12 23	7 28.80	+18 10.0	1.825	2.767	7.3	18.1
1 2	7 18.75	+18 55.7	1.673	2.650	3.1	20.3	1 2	7 18.99	+18 46.1	1.809	2.785	3.0	17.9
1 12	7 8.65	+19 30.5	1.665	2.645	2.1	20.3	1 12	7 8.60	+19 24.4	1.823	2.803	2.0	17.9
1 22	6 58.92	+20 5.4	1.686	2.641	6.4	20.5	1 22	6 58.79	+20 1.8	1.867	2.821	6.0	18.2
2 1	6 50.72	+20 38.1	1.734	2.636	10.6	20.8	2 1	6 50.60	+20 36.1	1.939	2.838	9.9	18.4
2 11	6 44.96	+21 7.2	1.806	2.631	14.2	21.0	2 11	6 44.78	+21 6.1	2.035	2.854	13.1	18.7
<b>406342</b>	2007 RR <sub>87</sub>		1 7.9 111°51	0°2/ 7.9	18		<b>206260</b>	2002 XX <sub>83</sub>		1 7.9 26°09	3°6/ 9.4	18	
12 3	7 44.48	+21 47.7	1.773	2.576	15.4	22.0	12 3	7 35.77	+10 40.2	1.830	2.624	15.3	19.7
12 13	7 38.54	+22 2.9	1.706	2.592	11.7	21.8	12 13	7 31.85	+10 52.8	1.759	2.633	12.1	19.5
12 23	7 29.91	+22 22.7	1.662	2.607	7.5	21.6	12 23	7 25.65	+11 19.9	1.710	2.643	8.4	19.3
1 2	7 19.40	+22 43.6	1.644	2.622	2.8	21.4	1 2	7 17.83	+12 0.6	1.686	2.653	4.9	19.1
1 12	7 8.26	+23 2.4	1.656	2.637	2.0	21.3	1 12	7 9.39	+12 52.2	1.691	2.664	3.8	19.0
1 22	6 57.80	+23 16.8	1.697	2.651	6.5	21.7	1 22	7 1.40	+13 50.8	1.723	2.676	6.6	19.2
2 1	6 49.21	+23 26.0	1.766	2.665	10.7	21.9	2 1	6 54.88	+14 52.1	1.783	2.688	10.2	19.5
2 11	6 43.29	+23 30.5	1.858	2.678	14.1	22.2	2 11	6 50.58	+15 52.2	1.867	2.701	13.5	19.7
<b>221965</b>	1995 SA <sub>39</sub>		1 7.9 353°89	3°5/ 6.9	18		<b>318142</b>	2004 PO <sub>52</sub>		1 7.9 110°54	1°7/ 7.5	17	
12 3	7 41.95	+30 28.6	1.932	2.741	14.1	20.8	12 3	7 47.02	+25 17.2	1.735	2.539	15.6	21.5

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>293706</b>	2007 QK <sub>1</sub>		1 7.9 120°33	0°6/ 8.1 18			<b>369311</b>	2009 SS <sub>75</sub>		1 7.9 117°42	2°0/ 8.6 18		
12 3	7 45.20	+20 2.4	1.940	2.733	14.6	21.4	12 3	7 39.18	+15 23.0	2.074	2.865	13.8	22.0
12 13	7 38.80	+20 7.8	1.872	2.752	11.2	21.3	12 13	7 34.23	+15 31.5	1.996	2.873	10.7	21.8
12 23	7 29.94	+20 18.1	1.828	2.771	7.1	21.0	12 23	7 27.08	+15 48.9	1.941	2.879	7.1	21.6
1 2	7 19.41	+20 31.1	1.812	2.789	2.8	20.8	1 2	7 18.37	+16 13.9	1.913	2.886	3.4	21.3
1 12	7 8.34	+20 44.1	1.826	2.806	1.9	20.8	1 12	7 9.06	+16 44.1	1.915	2.893	2.4	21.3
1 22	6 57.92	+20 55.3	1.870	2.823	6.1	21.1	1 22	7 0.15	+17 16.9	1.946	2.899	5.9	21.5
2 1	6 49.22	+21 3.9	1.942	2.839	10.0	21.4	2 1	6 52.64	+17 50.0	2.005	2.906	9.5	21.8
2 11	6 42.98	+21 9.9	2.039	2.854	13.2	21.6	2 11	6 47.25	+18 21.7	2.089	2.912	12.7	22.0
<b>92586</b>	2000 PS <sub>8</sub>		1 7.9 95°35	2°3/ 8.4 18			<b>165862</b>	2001 SF <sub>78</sub>		1 7.9 326°74	6°8/ 5.9 18		
12 3	7 44.28	+17 18.6	1.602	2.404	16.8	19.5	12 3	7 42.95	+40 15.3	2.053	2.849	13.8	19.6
12 13	7 38.52	+16 59.3	1.537	2.420	13.0	19.3	12 13	7 37.83	+41 4.7	1.971	2.840	11.3	19.4
12 23	7 29.95	+16 47.6	1.493	2.435	8.5	19.1	12 23	7 29.75	+41 45.8	1.913	2.831	8.7	19.3
1 2	7 19.45	+16 42.8	1.476	2.450	4.0	18.9	1 2	7 19.47	+42 11.5	1.880	2.822	7.0	19.1
1 12	7 8.31	+16 43.2	1.486	2.465	2.9	18.8	1 12	7 8.28	+42 16.7	1.874	2.814	7.2	19.1
1 22	6 57.93	+16 47.3	1.525	2.480	7.1	19.1	1 22	6 57.63	+41 59.7	1.895	2.806	9.3	19.2
2 1	6 49.53	+16 53.9	1.591	2.494	11.4	19.4	2 1	6 48.90	+41 22.5	1.942	2.799	12.0	19.4
2 11	6 43.93	+17 1.9	1.680	2.508	15.0	19.7	2 11	6 43.05	+40 30.2	2.011	2.792	14.6	19.6
<b>110867</b>	2001 UE <sub>93</sub>		1 7.9 42°76	6°8/ 10.6 18			<b>79493</b>	1998 FD <sub>63</sub>		1 7.9 264°44	6°7/ 5.4 18		
12 3	7 37.56	+2 49.1	1.821	2.583	16.6	19.8	12 3	7 44.06	+43 9.1	2.555	3.331	12.0	19.7
12 13	7 33.25	+2 38.8	1.742	2.586	13.7	19.7	12 13	7 38.27	+44 4.4	2.469	3.320	9.9	19.5
12 23	7 26.59	+2 48.4	1.683	2.588	10.6	19.5	12 23	7 29.85	+44 51.1	2.407	3.309	8.0	19.4
1 2	7 18.21	+3 19.8	1.649	2.591	7.8	19.3	1 2	7 19.48	+45 23.0	2.372	3.298	6.8	19.3
1 12	7 9.11	+4 12.1	1.642	2.594	6.9	19.3	1 12	7 8.27	+45 35.4	2.366	3.287	7.0	19.3
1 22	7 0.41	+5 21.6	1.662	2.597	8.5	19.4	1 22	6 57.46	+45 26.8	2.387	3.276	8.6	19.4
2 1	6 53.15	+6 42.8	1.709	2.600	11.4	19.5	2 1	6 48.28	+44 58.5	2.434	3.265	10.8	19.5
2 11	6 48.15	+8 9.6	1.780	2.604	14.5	19.7	2 11	6 41.62	+44 14.9	2.504	3.254	12.9	19.6
<b>400880</b>	2010 PW <sub>53</sub>		1 7.9 81°79	3°5/ 9.2 18			<b>489035</b>	2005 WG <sub>166</sub>		1 7.9 326°12	2°3/ 7.2 18		
12 3	7 42.89	+11 14.7	1.906	2.684	15.4	21.2	12 3	7 37.85	+23 24.9	1.188	2.030	19.0	21.1
12 13	7 36.86	+11 16.4	1.851	2.717	12.0	21.0	12 13	7 35.28	+24 18.2	1.105	2.012	14.7	20.8
12 23	7 28.59	+11 30.5	1.820	2.749	8.3	20.9	12 23	7 28.92	+25 22.5	1.041	1.994	9.6	20.4
1 2	7 18.86	+11 55.8	1.815	2.781	4.7	20.7	1 2	7 19.41	+26 31.3	1.000	1.978	4.1	20.0
1 12	7 8.74	+12 30.2	1.840	2.812	3.7	20.7	1 12	7 8.26	+27 35.8	0.983	1.962	3.8	20.0
1 22	6 59.31	+13 10.4	1.894	2.843	6.5	20.9	1 22	6 57.43	+28 28.5	0.991	1.948	9.6	20.3
2 1	6 51.52	+13 53.4	1.977	2.873	9.8	21.2	2 1	6 48.94	+29 5.5	1.022	1.934	15.3	20.5
2 11	6 46.02	+14 36.2	2.084	2.903	12.9	21.5	2 11	6 44.27	+29 27.1	1.072	1.922	20.2	20.8
<b>460751</b>	2014 VQ <sub>26</sub>		1 7.9 86°55	0°7/ 8.1 18			<b>208972</b>	2002 XB <sub>95</sub>		1 7.9 330°92	12°4/ 7.9 18		
12 3	7 41.82	+20 8.7	1.959	2.758	14.3	21.5	12 3	7 36.70	-3 54.0	1.813	2.546	17.6	18.8
12 13	7 36.22	+20 6.4	1.893	2.776	10.9	21.3	12 13	7 32.83	-6 6.7	1.722	2.525	15.7	18.6
12 23	7 28.29	+20 8.7	1.850	2.794	7.0	21.1	12 23	7 26.50	-8 4.1	1.652	2.504	13.9	18.5
1 2	7 18.79	+20 13.9	1.834	2.811	2.8	20.9	1 2	7 18.28	-9 38.0	1.605	2.485	12.6	18.4
1 12	7 8.78	+20 19.8	1.848	2.829	1.8	20.8	1 12	7 9.10	-10 41.7	1.582	2.466	12.5	18.3
1 22	6 59.40	+20 25.0	1.892	2.846	5.9	21.1	1 22	7 0.11	-11 12.2	1.582	2.448	13.7	18.3
2 1	6 51.63	+20 28.8	1.963	2.863	9.7	21.4	2 1	6 52.45	-11 10.2	1.604	2.431	15.6	18.4
2 11	6 46.20	+20 31.1	2.059	2.880	12.9	21.6	2 11	6 47.07	-10 41.1	1.646	2.415	17.9	18.5
<b>428427</b>	2007 TD <sub>203</sub>		1 7.9 65°75	4°6/ 6.2 18			<b>23054</b>	Thomaslynch		1 7.9 87°76	1°1/ 7.6 18		
12 3	7 41.10	+34 5.9	2.235	3.036	12.7	21.5	12 3	7 40.51	+24 26.5	2.051	2.855	13.5	19.7
12 13	7 35.87	+35 4.4	2.168	3.047	9.9	21.3	12 13	7 35.36	+24 47.6	1.976	2.864	10.3	19.5
12 23	7 28.20	+35 59.0	2.126	3.058	7.0	21.2	12 23	7 27.85	+25 11.0	1.926	2.872	6.6	19.3
1 2	7 18.80	+36 44.2	2.111	3.070	4.9	21.1	1 2	7 18.69	+25 33.4	1.903	2.880	2.6	19.1
1 12	7 8.74	+37 15.3	2.125	3.082	5.1	21.1	1 12	7 8.90	+25 51.5	1.909	2.889	2.2	19.1
1 22	6 59.19	+37 30.3	2.168	3.093	7.4	21.3	1 22	6 59.62	+26 3.3	1.945	2.897	6.0	19.3
2 1	6 51.23	+37 29.8	2.237	3.105	10.2	21.5	2 1	6 51.88	+26 8.4	2.009	2.905	9.7	19.6
2 11	6 45.64	+37 16.5	2.330	3.117	12.7	21.7	2 11	6 46.45	+26 7.6	2.096	2.913	12.9	19.8
<b>232497</b>	2003 PW <sub>7</sub>		1 7.9 241°29	2°4/ 8.5 18			<b>39153</b>	2000 WX <sub>102</sub>		1 7.9 205°77	3°4/ 8.9 18		
12 3	7 42.54	+16 0.1	1.887	2.679	15.0	21.1	12 3	7 41.06	+12 18.4	1.851	2.638	15.4	19.3
12 13	7 37.23	+15 48.5	1.788	2.665	11.8	20.8	12 13	7 36.01	+12 18.5	1.763	2.634	12.2	19.1
12 23	7 29.27	+15 44.8	1.712	2.651	7.9	20.5	12 23	7 28.44	+12 31.1	1.698	2.631	8.4	18.8
1 2	7 19.30	+15 48.5	1.662	2.635	3.9	20.3	1 2	7 18.98	+12 55.5	1.659	2.627	4.7	18.6
1 12	7 8.35	+15 58.2	1.642	2.620	2.9	20.2	1 12	7 8.67	+13 30.0	1.648	2.622	3.7	18.5
1 22	6 57.68	+16 12.1	1.651	2.603	6.8	20.4	1 22	6 58.71	+14 11.4	1.667	2.618	6.9	18.7
2 1	6 48.51	+16 28.5	1.687	2.586	11.1	20.6	2 1	6 50.27	+14 56.5	1.712	2.612	10.9	18.9
2 11	6 41.80	+16 46.1	1.748	2.569	14.8	20.8	2 11	6 44.23	+15 42.1	1.782	2.607	14.5	19.1
<b>6079</b>	Gerokurat		1 7.9 243°81	4°3/ 6.8 18			<b>38723</b>	2000 QT <sub>129</sub>		1 7.9 18°79	4°7/ 9.1 18		
12 3	7 42.89	+36 37.9	2.557	3.345	11.6	17.6	12 3	7 39.32	+11 26.3	1.423	2.229	18.3	17.8
12 13	7 36.98	+36 58.8	2.469	3.339	9.2	17.4	12 13	7 35.23	+11 7.6	1.351	2.231	14.6	17.5
12 23	7 28.80	+37 13.3	2.406	3.333	6.6	17.2	12 23	7 28.16	+11 4.2	1.298	2.234	10.3	17.3
1 2	7 19.01	+37 17.3	2.371	3.327	4.6	17.1	1 2	7 18.91	+11 16.8	1.270	2.237	6.1	17.0
1 12	7 8.61	+37 7.7	2.365	3.321	4.7	17.1	1 12	7 8.75	+11 44.1	1.267	2.240	5.0	17.0
1 22	6 58.68	+36 43.7	2.389	3.315	6.8	17.2	1 22	6 59.17	+12 22.7	1.291	2.243	8.4	17.2
2 1	6 50.21	+36 6.9	2.441	3.309	9.4	17.4	2 1	6 51.51	+13 8.4	1.340	2.247	12.7	17.4
2 11	6 43.97	+35 20.7	2.518	3.302	11.9	17.5	2 11	6 46.76	+13 56.7	1.410	2.252	16.6	17.7
<b>199353</b>	2006 BP <sub>168</sub>		1 7.9 38°13	0°9/ 7.7 18			<b>463976</b>	2014 WN <sub>17</sub>		1 7.9 93°30	1°7/ 7.4 18		
12 3	7 39.84	+23 53.5	1.927	2.735	14.1	20.5	12 3	7 41.67	+25 36.5	2.001	2.806	13.8	21.6
12 13													

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2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2019/20	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>428935</b>	2008 <i>WP</i> <sub>125</sub>		1 7.9 267°05	1°9/ 7.5 16			<b>37760</b>	1997 <i>EG</i> <sub>41</sub>		1 7.9 32°47	2°2/ 7.6 18		
12 3	7 43.73	+30 7.2	2.846	3.630	10.7	21.4	12 3	7 42.68	+28 22.2	1.602	2.420	16.1	17.5
12 13	7 37.39	+29 59.9	2.731	3.605	8.3	21.2	12 13	7 37.57	+28 21.9	1.537	2.430	12.3	17.3
12 23	7 29.01	+29 49.0	2.640	3.579	5.5	21.0	12 23	7 29.49	+28 19.5	1.493	2.440	8.0	17.1
1 2	7 19.14	+29 31.9	2.580	3.553	2.7	20.8	1 2	7 19.35	+28 11.0	1.476	2.452	3.6	16.8
1 12	7 8.61	+29 6.8	2.551	3.526	2.5	20.7	1 12	7 8.58	+27 53.8	1.485	2.463	3.1	16.8
1 22	6 58.33	+28 33.4	2.554	3.498	5.3	20.9	1 22	6 58.63	+27 27.6	1.523	2.475	7.3	17.1
2 1	6 49.22	+27 52.9	2.587	3.470	8.3	21.0	2 1	6 50.79	+26 54.3	1.587	2.488	11.5	17.4
2 11	6 42.00	+27 7.5	2.647	3.442	11.1	21.2	2 11	6 45.88	+26 16.8	1.673	2.501	15.1	17.6
<b>240343</b>	2003 <i>QY</i> <sub>66</sub>		1 7.9 179°52	1°0/ 8.2 18			<b>119960</b>	2002 <i>TO</i> <sub>25</sub>		1 7.9 38°11	4°2/ 8.8 18		
12 3	7 43.19	+18 38.4	2.067	2.857	13.9	21.8	12 3	7 41.56	+14 3.4	1.247	2.065	19.7	19.5
12 13	7 37.37	+18 44.1	1.981	2.859	10.7	21.5	12 13	7 37.26	+13 35.1	1.182	2.071	15.5	19.3
12 23	7 29.17	+18 55.9	1.919	2.860	7.0	21.3	12 23	7 29.60	+13 20.1	1.135	2.077	10.6	19.0
1 2	7 19.23	+19 11.9	1.884	2.861	2.9	21.1	1 2	7 19.49	+13 19.1	1.112	2.083	5.8	18.8
1 12	7 8.56	+19 29.8	1.880	2.860	1.9	21.0	1 12	7 8.45	+13 30.7	1.115	2.090	4.6	18.7
1 22	6 58.32	+19 47.4	1.906	2.859	6.0	21.3	1 22	6 58.17	+13 52.2	1.143	2.098	8.8	19.0
2 1	6 49.55	+20 3.4	1.961	2.858	9.9	21.5	2 1	6 50.18	+14 20.4	1.195	2.105	13.6	19.3
2 11	6 43.08	+20 17.3	2.040	2.856	13.2	21.7	2 11	6 45.48	+14 51.6	1.267	2.113	17.8	19.6
<b>323845</b>	2005 <i>SJ</i> <sub>85</sub>		1 7.9 177°44	7°7/ 5.3 18			<b>167150</b>	2003 <i>SR</i> <sub>211</sub>		1 7.9 148°33	0°6/ 8.2 18		
12 3	7 50.13	+44 50.7	2.348	3.116	13.1	21.3	12 3	7 43.02	+18 28.4	1.961	2.755	14.4	20.7
12 13	7 43.14	+45 57.2	2.276	3.118	11.0	21.1	12 13	7 37.34	+18 57.6	1.884	2.764	11.1	20.5
12 23	7 33.07	+46 53.0	2.226	3.119	9.0	21.0	12 23	7 29.19	+19 34.7	1.830	2.772	7.1	20.3
1 2	7 20.75	+47 30.5	2.203	3.120	7.8	20.9	1 2	7 19.26	+20 16.8	1.803	2.780	2.8	20.0
1 12	7 7.52	+47 44.2	2.209	3.121	8.0	21.0	1 12	7 8.60	+20 59.9	1.806	2.787	1.8	19.9
1 22	6 54.92	+47 32.6	2.241	3.120	9.6	21.1	1 22	6 58.40	+21 40.6	1.840	2.794	6.1	20.2
2 1	6 44.35	+46 58.4	2.300	3.120	11.7	21.2	2 1	6 49.76	+22 16.7	1.902	2.800	10.1	20.5
2 11	6 36.78	+46 7.2	2.380	3.118	13.8	21.3	2 11	6 43.53	+22 47.2	1.988	2.805	13.5	20.7
<b>471320</b>	2011 <i>KQ</i> <sub>2</sub>		1 7.9 259°69	3°8/ 6.3 16			<b>154328</b>	2002 <i>VM</i> <sub>80</sub>		1 7.9 63°98	0°5/ 7.8 17		
12 3	7 40.55	+31 0.7	2.295	3.096	12.4	21.7	12 3	7 43.00	+20 6.8	1.314	2.137	18.6	20.0
12 13	7 35.57	+32 2.3	2.206	3.088	9.6	21.5	12 13	7 38.42	+20 54.8	1.250	2.146	14.3	19.8
12 23	7 28.15	+33 3.7	2.141	3.079	6.6	21.3	12 23	7 30.39	+21 53.7	1.206	2.156	9.1	19.5
1 2	7 18.89	+33 59.7	2.104	3.070	4.1	21.1	1 2	7 19.81	+22 57.9	1.188	2.166	3.4	19.2
1 12	7 8.76	+34 44.8	2.097	3.061	4.4	21.1	1 12	7 8.22	+24 0.1	1.196	2.176	2.5	19.2
1 22	6 58.88	+35 16.1	2.119	3.052	7.1	21.3	1 22	6 57.37	+24 54.3	1.230	2.187	8.1	19.5
2 1	6 50.39	+35 32.6	2.169	3.043	10.2	21.5	2 1	6 48.85	+25 37.4	1.290	2.197	13.1	19.8
2 11	6 44.16	+35 36.2	2.243	3.034	13.0	21.6	2 11	6 43.71	+26 9.2	1.371	2.208	17.3	20.1
<b>412030</b>	2013 <i>CK</i> <sub>109</sub>		1 7.9 274°04	0°0/ 7.9 18			<b>328341</b>	2008 <i>KP</i> <sub>2</sub>		1 7.9 127°50	0°5/ 7.8 18		
12 3	7 41.60	+19 30.8	1.671	2.480	15.9	21.6	12 3	7 40.58	+21 43.7	2.002	2.805	13.9	21.1
12 13	7 37.08	+20 4.5	1.571	2.460	12.4	21.3	12 13	7 35.53	+22 16.0	1.924	2.810	10.6	20.9
12 23	7 29.54	+20 48.4	1.493	2.440	8.0	21.0	12 23	7 28.05	+22 53.6	1.869	2.815	6.8	20.7
1 2	7 19.55	+21 39.2	1.441	2.419	3.1	20.6	1 2	7 18.83	+23 33.2	1.841	2.819	2.6	20.5
1 12	7 8.26	+22 32.0	1.418	2.399	2.1	20.5	1 12	7 8.89	+24 10.7	1.844	2.824	1.9	20.4
1 22	6 57.12	+23 21.8	1.422	2.378	7.4	20.8	1 22	6 59.38	+24 43.1	1.875	2.828	6.1	20.7
2 1	6 47.63	+24 5.2	1.454	2.356	12.2	21.0	2 1	6 51.39	+25 8.8	1.935	2.833	9.9	20.9
2 11	6 40.97	+24 40.9	1.507	2.335	16.5	21.2	2 11	6 45.72	+25 27.7	2.019	2.837	13.2	21.2
<b>281653</b>	2008 <i>US</i> <sub>350</sub>		1 7.9 307°84	4°1/ 8.9 18			<b>81458</b>	2000 <i>GL</i> <sub>131</sub>		1 7.9 116°30	2°8/ 7.1 18		
12 3	7 37.62	+11 31.0	2.127	2.909	13.8	21.0	12 3	7 44.81	+29 8.8	2.174	2.970	13.1	20.7
12 13	7 33.03	+10 58.3	2.039	2.905	11.0	20.8	12 13	7 38.51	+29 46.4	2.108	2.989	10.0	20.5
12 23	7 26.35	+10 34.9	1.974	2.901	7.9	20.5	12 23	7 29.80	+30 22.7	2.067	3.007	6.6	20.4
1 2	7 18.15	+10 21.8	1.935	2.897	4.9	20.4	1 2	7 19.45	+30 53.0	2.053	3.025	3.5	20.2
1 12	7 9.31	+10 19.0	1.926	2.893	4.2	20.3	1 12	7 8.53	+31 13.5	2.070	3.042	3.4	20.2
1 22	7 0.82	+10 25.7	1.945	2.890	6.7	20.5	1 22	6 58.21	+31 22.4	2.117	3.059	6.4	20.4
2 1	6 53.59	+10 40.2	1.991	2.886	9.9	20.6	2 1	6 49.55	+31 20.3	2.192	3.075	9.7	20.7
2 11	6 48.37	+11 0.3	2.062	2.882	12.9	20.8	2 11	6 43.28	+31 9.4	2.292	3.090	12.5	20.9
<b>60709</b>	2000 <i>GN</i> <sub>57</sub>		1 7.9 123°87	4°4/ 6.8 18			<b>163710</b>	2003 <i>GK</i> <sub>5</sub>		1 7.9 231°89	1°5/ 8.3 18		
12 3	7 48.13	+31 23.5	1.682	2.488	16.0	19.7	12 3	7 43.22	+17 41.9	1.866	2.661	15.0	21.3
12 13	7 41.84	+32 14.5	1.616	2.501	12.4	19.5	12 13	7 37.82	+17 42.0	1.770	2.650	11.7	21.1
12 23	7 32.31	+33 3.1	1.573	2.513	8.4	19.3	12 23	7 29.71	+17 49.5	1.696	2.638	7.7	20.8
1 2	7 20.46	+33 41.7	1.557	2.525	5.0	19.1	1 2	7 19.54	+18 3.2	1.650	2.625	3.4	20.5
1 12	7 7.76	+34 4.6	1.569	2.536	5.1	19.1	1 12	7 8.39	+18 20.5	1.632	2.612	2.4	20.4
1 22	6 55.86	+34 9.4	1.609	2.547	8.4	19.3	1 22	6 57.53	+18 39.2	1.644	2.598	6.7	20.7
2 1	6 46.21	+33 57.6	1.676	2.557	12.2	19.6	2 1	6 48.23	+18 57.7	1.683	2.583	11.0	20.9
2 11	6 39.76	+33 33.6	1.764	2.567	15.5	19.8	2 11	6 41.46	+19 14.8	1.746	2.568	14.8	21.1
<b>411346</b>	2010 <i>UY</i> <sub>70</sub>		1 7.9 124°81	3°5/ 7.3 18			<b>404519</b>	2013 <i>HP</i> <sub>96</sub>		1 7.9 71°18	1°5/ 7.6 18		
12 3	7 46.38	+32 1.1	1.920	2.720	14.5	21.0	12 3	7 43.18	+24 38.0	1.599	2.414	16.2	21.2
12 13	7 40.07	+32 15.2	1.846	2.728	11.2	20.8	12 13	7 37.97	+25 3.7	1.534	2.426	12.4	21.0
12 23	7 30.96	+32 24.7	1.796	2.735	7.6	20.6	12 23	7 29.79	+25 32.4	1.491	2.439	7.9	20.8
1 2	7 19.89	+32 24.7	1.772	2.742	4.2	20.4	1 2	7 19.51	+25 59.5	1.474	2.451	3.2	20.5
1 12	7 8.17	+32 12.0	1.778	2.749	4.1	20.4	1 12	7 8.49	+26 20.7	1.484	2.464	2.7	20.5
1 22	6 57.18	+31 45.9	1.813	2.755	7.3	20.6	1 22	6 58.19	+26 33.2	1.523	2.476	7.2	20.8
2 1	6 48.14	+31 8.8	1.875	2.761	10.9	20.9	2 1	6 49.94	+26 37.0	1.588	2.489	11.5	21.1
2 11	6 41.90	+30 24.5	1.961	2.767	14.0	21.1	2 11	6 44.61	+26 33.5	1.676	2.501	15.2	21.4
<b>449543</b>	2014 <i>HN</i> <sub>128</sub>		1 7.9 157°13	1°5/ 7.5 18			<b>351519</b>	2005 <i>SF</i> <sub>103</sub>		1 7.9 80°20	1°4/ 8.2 17		
12 3	7 45.65	+24 22.4	1.824	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>265698</b>	2005 <i>UR</i> <sub>152</sub>		1 7.9 86°09	4.4/ 6.6	18		<b>448744</b>	2011 <i>JG</i> <sub>16</sub>		1 7.9 211°93	4.5/ 8.9	18	
12 3	7 44.41	+32 5.4	1.920	2.724	14.3	20.8	12 3	7 43.16	+11 39.0	1.626	2.416	17.1	22.0
12 13	7 38.64	+33 3.4	1.859	2.741	11.1	20.6	12 13	7 37.98	+11 14.5	1.540	2.412	13.6	21.7
12 23	7 30.10	+33 58.5	1.821	2.758	7.6	20.5	12 23	7 29.91	+11 2.5	1.476	2.407	9.7	21.5
1 2	7 19.61	+34 44.3	1.810	2.775	4.8	20.3	1 2	7 19.67	+11 4.0	1.436	2.402	5.8	21.2
1 12	7 8.43	+35 15.3	1.829	2.792	5.0	20.4	1 12	7 8.45	+11 18.5	1.425	2.396	4.8	21.2
1 22	6 57.92	+35 29.4	1.875	2.809	7.8	20.6	1 22	6 57.65	+11 43.8	1.441	2.389	8.1	21.4
2 1	6 49.31	+35 27.6	1.949	2.825	11.0	20.8	2 1	6 48.60	+12 16.8	1.483	2.382	12.3	21.6
2 11	6 43.44	+35 13.1	2.045	2.841	13.9	21.0	2 11	6 42.30	+12 54.3	1.548	2.375	16.1	21.8
<b>354039</b>	2001 <i>RN</i> <sub>145</sub>		1 7.9 136°42	1.4/ 8.7	17		<b>453111</b>	2007 <i>XD</i> <sub>55</sub>		1 7.9 56°26	1.9/ 7.7	16	
12 3	7 33.08	+15 13.7	4.056	4.827	8.0	22.2	12 3	7 46.84	+26 35.9	1.411	2.230	17.8	20.4
12 13	7 28.61	+15 13.1	3.974	4.839	6.1	22.1	12 13	7 40.78	+26 43.2	1.364	2.257	13.5	20.2
12 23	7 23.08	+15 16.8	3.918	4.850	4.1	22.0	12 23	7 31.50	+26 50.3	1.338	2.286	8.6	20.0
1 2	7 16.83	+15 24.1	3.891	4.862	2.1	21.8	1 2	7 20.13	+26 52.6	1.337	2.314	3.6	19.8
1 12	7 10.32	+15 34.4	3.897	4.873	1.6	21.8	1 12	7 8.28	+26 46.9	1.364	2.343	3.0	19.8
1 22	7 4.03	+15 46.8	3.934	4.883	3.4	21.9	1 22	6 57.60	+26 32.4	1.418	2.371	7.6	20.2
2 1	6 58.38	+16 0.4	4.001	4.894	5.4	22.1	2 1	6 49.40	+26 11.0	1.498	2.400	12.0	20.5
2 11	6 53.77	+16 14.5	4.097	4.904	7.3	22.2	2 11	6 44.43	+25 45.3	1.600	2.428	15.6	20.8
<b>1142</b>	<i>Aetolia</i>		1 7.9 237°07	0.5/ 8.1	18		<b>241657</b>	2000 <i>JC</i> <sub>7</sub>		1 7.9 257°66	5.4/ 9.6	17	
12 3	7 37.27	+19 50.1	2.564	3.356	11.5	15.7	12 3	7 36.62	+ 5 29.9	2.482	3.236	12.9	21.3
12 13	7 32.54	+20 1.0	2.471	3.351	8.8	15.5	12 13	7 32.06	+ 4 54.3	2.383	3.224	10.6	21.1
12 23	7 25.95	+20 16.4	2.402	3.345	5.7	15.3	12 23	7 25.68	+ 4 30.0	2.308	3.212	8.2	20.9
1 2	7 18.02	+20 34.6	2.362	3.339	2.2	15.0	1 2	7 17.96	+ 4 19.1	2.259	3.200	6.1	20.8
1 12	7 9.51	+20 53.7	2.352	3.333	1.5	15.0	1 12	7 9.63	+ 4 22.1	2.238	3.187	5.5	20.7
1 22	7 1.26	+21 12.0	2.373	3.327	4.9	15.2	1 22	7 1.50	+ 4 38.3	2.246	3.174	7.0	20.8
2 1	6 54.09	+21 28.2	2.423	3.321	8.2	15.4	2 1	6 54.38	+ 5 5.9	2.282	3.162	9.5	20.9
2 11	6 48.68	+21 41.7	2.498	3.314	11.1	15.6	2 11	6 48.95	+ 5 41.7	2.343	3.148	12.1	21.1
<b>119828</b>	2002 <i>BW</i> <sub>19</sub>		1 7.9 24°52	4.4/ 9.7	18		<b>64013</b>	2001 <i>SF</i> <sub>140</sub>		1 7.9 310°05	4.6/ 8.9	18	
12 3	7 37.58	+ 8 40.5	1.782	2.567	16.0	19.6	12 3	7 39.30	+12 34.9	1.358	2.170	18.7	19.3
12 13	7 33.39	+ 8 49.5	1.703	2.570	12.8	19.4	12 13	7 35.63	+12 10.6	1.272	2.157	14.9	19.0
12 23	7 26.77	+ 9 15.1	1.646	2.573	9.2	19.1	12 23	7 28.74	+12 0.3	1.207	2.145	10.5	18.7
1 2	7 18.39	+ 9 57.2	1.614	2.576	5.7	19.0	1 2	7 19.31	+12 5.4	1.164	2.133	6.1	18.5
1 12	7 9.26	+10 53.4	1.610	2.579	4.6	18.9	1 12	7 8.67	+12 25.1	1.147	2.121	5.0	18.3
1 22	7 0.52	+11 59.4	1.633	2.583	7.2	19.1	1 22	6 58.39	+12 56.8	1.155	2.109	8.9	18.5
2 1	6 53.28	+13 10.4	1.684	2.587	10.9	19.3	2 1	6 50.07	+13 36.7	1.188	2.099	13.7	18.8
2 11	6 48.37	+14 21.5	1.759	2.591	14.3	19.5	2 11	6 44.86	+14 20.6	1.242	2.088	18.1	19.0
<b>421229</b>	2013 <i>SY</i> <sub>40</sub>		1 7.9 153°74	1.9/ 8.6	18		<b>215493</b>	2002 <i>TR</i> <sub>143</sub>		1 7.9 59°00	0.0/ 7.9	18	
12 3	7 39.86	+16 0.8	2.374	3.158	12.5	21.6	12 3	7 41.19	+19 39.5	1.575	2.388	16.5	19.9
12 13	7 34.50	+15 57.0	2.291	3.164	9.7	21.4	12 13	7 36.45	+20 12.6	1.510	2.401	12.6	19.6
12 23	7 27.17	+15 59.9	2.233	3.170	6.5	21.2	12 23	7 28.86	+20 54.4	1.467	2.414	8.1	19.4
1 2	7 18.47	+16 8.5	2.203	3.176	3.1	21.0	1 2	7 19.22	+21 40.7	1.450	2.428	3.1	19.1
1 12	7 9.24	+16 21.4	2.203	3.181	2.3	21.0	1 12	7 8.81	+22 26.8	1.460	2.441	2.0	19.1
1 22	7 0.39	+16 37.1	2.234	3.186	5.4	21.2	1 22	6 59.06	+23 8.4	1.499	2.455	7.0	19.4
2 1	6 52.76	+16 54.1	2.294	3.190	8.7	21.4	2 1	6 51.23	+23 43.2	1.564	2.469	11.4	19.7
2 11	6 47.04	+17 11.3	2.379	3.194	11.6	21.6	2 11	6 46.21	+24 10.4	1.652	2.483	15.1	20.0
<b>196283</b>	2003 <i>ES</i> <sub>33</sub>		1 7.9 262°99	3.6/ 8.8	18		<b>434102</b>	2002 <i>JY</i> <sub>100</sub>		1 7.9 245°76	11°0/ 2.1	16	
12 3	7 41.22	+13 27.5	1.590	2.390	17.0	20.4	12 3	7 53.43	+32 31.0	1.174	1.996	20.5	20.6
12 13	7 36.67	+13 15.8	1.499	2.379	13.5	20.1	12 13	7 48.85	+36 17.9	1.101	1.989	16.5	20.3
12 23	7 29.17	+13 16.3	1.430	2.367	9.3	19.9	12 23	7 38.91	+40 19.3	1.052	1.982	12.7	20.0
1 2	7 19.41	+13 29.1	1.385	2.355	5.1	19.6	1 2	7 23.82	+44 10.7	1.030	1.974	11.0	19.9
1 12	7 8.55	+13 52.8	1.368	2.344	4.0	19.5	1 12	7 5.27	+47 25.0	1.035	1.967	12.7	20.0
1 22	6 58.01	+14 24.7	1.378	2.331	7.8	19.7	1 22	6 46.29	+49 44.4	1.067	1.959	16.5	20.2
2 1	6 49.20	+15 1.5	1.414	2.319	12.4	19.9	2 1	6 30.39	+51 7.2	1.119	1.950	20.6	20.4
2 11	6 43.19	+15 40.1	1.473	2.307	16.5	20.1	2 11	6 20.18	+51 44.6	1.189	1.942	24.2	20.6
<b>255875</b>	2006 <i>SJ</i> <sub>223</sub>		1 7.9 207°73	2.4/ 7.3	18		<b>214265</b>	2005 <i>GU</i> <sub>31</sub>		1 7.9 143°81	3.1/ 6.9	18 R	
12 3	7 43.39	+27 23.3	1.949	2.753	14.1	21.6	12 3	7 46.05	+31 5.8	2.479	3.265	12.0	21.4
12 13	7 37.92	+27 53.6	1.864	2.750	10.9	21.3	12 13	7 39.26	+31 41.2	2.406	3.280	9.2	21.2
12 23	7 29.74	+28 24.6	1.802	2.747	7.1	21.1	12 23	7 30.24	+32 14.0	2.358	3.294	6.2	21.0
1 2	7 19.55	+28 51.9	1.768	2.743	3.4	20.9	1 2	7 19.66	+32 39.7	2.339	3.307	3.6	20.9
1 12	7 8.51	+29 11.0	1.763	2.739	3.2	20.8	1 12	7 8.53	+32 54.8	2.351	3.319	3.6	20.9
1 22	6 57.91	+29 19.6	1.787	2.735	6.9	21.1	1 22	6 57.92	+32 58.1	2.395	3.331	6.2	21.1
2 1	6 48.99	+29 17.6	1.839	2.730	10.8	21.3	2 1	6 48.80	+32 50.0	2.467	3.341	9.1	21.3
2 11	6 42.68	+29 7.1	1.914	2.725	14.1	21.5	2 11	6 41.91	+32 33.2	2.564	3.351	11.7	21.5
<b>109070</b>	2001 <i>QD</i> <sub>22</sub>		1 7.9 356°79	8.0/ 6.5	18		<b>502094</b>	2015 <i>AB</i> <sub>252</sub>		1 7.9 226°48	0.5/ 7.7	18	
12 3	7 46.20	+40 23.1	1.556	2.364	16.9	17.9	12 3	7 38.65	+21 19.7	2.338	3.136	12.3	22.0
12 13	7 41.11	+41 11.6	1.486	2.362	13.8	17.7	12 13	7 33.86	+21 59.9	2.248	3.132	9.4	21.8
12 23	7 32.23	+41 49.2	1.437	2.360	10.6	17.5	12 23	7 26.95	+22 45.8	2.183	3.128	6.0	21.5
1 2	7 20.57	+42 6.6	1.412	2.359	8.3	17.4	1 2	7 18.47	+23 34.2	2.146	3.124	2.3	21.3
1 12	7 7.86	+41 57.3	1.413	2.358	8.5	17.4	1 12	7 9.29	+24 21.4	2.139	3.119	1.7	21.2
1 22	6 56.08	+41 20.3	1.439	2.358	10.9	17.5	1 22	7 0.36	+25 4.1	2.163	3.115	5.5	21.5
2 1	6 46.95	+40 20.1	1.489	2.359	14.2	17.7	2 1	6 52.64	+25 40.5	2.215	3.110	9.0	21.7
2 11	6 41.52	+39 4.5	1.560	2.360	17.3	17.9	2 11	6 46.89	+26 9.8	2.293	3.105	12.0	21.9
<b>396574</b>	2000 <i>HK</i> <sub>89</sub>		1 7.9 169°81	1.8/ 7.4	18		<b>162816</b>	2001 <i>BL</i> <sub>23</sub>		1 7.9 28°06	0.0/ 7.9	18	
12 3	7 46.07	+25 35.4	2.036	2.831									

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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>430240</b>	2013 <i>WT</i> <sub>6</sub>		1 7.9 89°03	4.3/ 6.4	18		<b>419084</b>	2009 <i>SK</i> <sub>125</sub>		1 7.9 128°02	4.8/ 9.4	18	
12 3	7 41.73	+33 45.1	2.285	3.083	12.5	21.0	12 3	7 39.52	+ 8 11.8	2.213	2.978	13.9	21.4
12 13	7 36.33	+34 37.0	2.215	3.093	9.8	20.8	12 13	7 34.30	+ 7 41.6	2.136	2.989	11.2	21.2
12 23	7 28.55	+35 25.3	2.169	3.102	6.9	20.7	12 23	7 27.09	+ 7 23.1	2.083	2.998	8.2	21.1
1 2	7 19.06	+36 4.6	2.151	3.112	4.6	20.5	1 2	7 18.50	+ 7 17.3	2.056	3.008	5.6	20.9
1 12	7 8.92	+36 30.6	2.162	3.121	4.8	20.6	1 12	7 9.39	+ 7 24.2	2.057	3.017	4.9	20.9
1 22	6 59.27	+36 41.5	2.202	3.130	7.2	20.7	1 22	7 0.69	+ 7 42.3	2.089	3.026	6.8	21.0
2 1	6 51.17	+36 37.7	2.270	3.140	9.9	20.9	2 1	6 53.27	+ 8 9.4	2.148	3.035	9.6	21.2
2 11	6 45.41	+36 22.1	2.361	3.149	12.5	21.1	2 11	6 47.79	+ 8 42.6	2.231	3.043	12.4	21.4
<b>340655</b>	2006 <i>RC</i> <sub>12</sub>		1 7.9 184°30	5.0/ 6.0	18		<b>258554</b>	2002 <i>CK</i> <sub>57</sub>		1 7.9 4°64	4.9/ 9.2	18	
12 3	7 43.47	+40 32.7	3.056	3.829	10.3	21.2	12 3	7 30.88	+12 45.1	1.063	1.907	20.6	18.9
12 13	7 37.24	+41 13.0	2.975	3.829	8.3	21.1	12 13	7 29.57	+12 19.9	1.003	1.906	16.3	18.6
12 23	7 28.94	+41 46.3	2.919	3.829	6.4	20.9	12 23	7 24.94	+12 12.2	0.962	1.908	11.4	18.3
1 2	7 19.18	+42 8.1	2.890	3.828	5.1	20.8	1 2	7 17.85	+12 23.4	0.941	1.912	6.6	18.1
1 12	7 8.85	+42 15.4	2.892	3.827	5.3	20.9	1 12	7 9.81	+12 52.0	0.943	1.918	5.2	18.0
1 22	6 58.91	+42 7.0	2.923	3.825	6.8	20.9	1 22	7 2.49	+13 33.6	0.967	1.927	9.1	18.3
2 1	6 50.28	+41 44.2	2.983	3.823	8.7	21.1	2 1	6 57.40	+14 22.5	1.014	1.938	14.0	18.6
2 11	6 43.64	+41 9.9	3.066	3.821	10.7	21.2	2 11	6 55.55	+15 13.1	1.081	1.952	18.4	18.9
<b>116922</b>	2004 <i>GS</i> <sub>24</sub>		1 7.9 205°74	1.3/ 7.5	18		<b>454341</b>	2014 <i>LS</i> <sub>13</sub>		1 7.9 170°85	0.1/ 7.9	18	
12 3	7 41.48	+23 52.3	1.964	2.769	14.0	20.3	12 3	7 42.81	+19 56.3	1.868	2.668	14.8	21.3
12 13	7 36.40	+24 26.7	1.880	2.767	10.7	20.1	12 13	7 37.46	+20 34.0	1.786	2.671	11.4	21.1
12 23	7 28.75	+25 5.2	1.819	2.765	6.9	19.8	12 23	7 29.47	+21 19.6	1.728	2.673	7.3	20.9
1 2	7 19.20	+25 43.7	1.785	2.762	2.8	19.6	1 2	7 19.50	+22 9.4	1.697	2.675	2.8	20.6
1 12	7 8.81	+26 17.9	1.781	2.760	2.4	19.5	1 12	7 8.68	+22 58.7	1.695	2.676	1.9	20.5
1 22	6 58.81	+26 44.9	1.806	2.757	6.5	19.8	1 22	6 58.27	+23 43.5	1.723	2.677	6.5	20.8
2 1	6 50.38	+27 3.3	1.858	2.754	10.4	20.0	2 1	6 49.48	+24 21.4	1.779	2.677	10.6	21.1
2 11	6 44.39	+27 13.7	1.935	2.751	13.8	20.2	2 11	6 43.22	+24 51.8	1.859	2.677	14.2	21.3
<b>380399</b>	2002 <i>XZ</i> <sub>115</sub>		1 7.9 34°50	0.4/ 7.8	18		<b>79370</b>	1997 <i>EJ</i> <sub>33</sub>		1 7.9 319°79	3.0/ 7.3	18	
12 3	7 37.85	+20 16.3	2.031	2.836	13.6	20.4	12 3	7 42.42	+26 31.0	1.260	2.093	18.7	19.0
12 13	7 33.45	+21 7.0	1.956	2.843	10.4	20.2	12 13	7 38.59	+27 7.2	1.182	2.083	14.5	18.7
12 23	7 26.76	+22 5.1	1.904	2.850	6.6	20.0	12 23	7 30.93	+27 47.2	1.124	2.074	9.5	18.4
1 2	7 18.41	+23 6.7	1.880	2.858	2.5	19.7	1 2	7 20.24	+28 24.4	1.089	2.066	4.4	18.0
1 12	7 9.37	+24 7.3	1.885	2.866	1.9	19.7	1 12	7 8.15	+28 51.7	1.080	2.058	4.1	18.0
1 22	7 0.71	+25 2.6	1.920	2.874	5.9	20.0	1 22	6 56.65	+29 4.7	1.097	2.050	9.3	18.3
2 1	6 53.46	+25 50.1	1.983	2.882	9.7	20.2	2 1	6 47.61	+29 3.2	1.136	2.043	14.5	18.5
2 11	6 48.40	+26 28.8	2.071	2.891	12.9	20.4	2 11	6 42.34	+28 50.1	1.196	2.036	19.1	18.8
<b>163614</b>	2002 <i>TQ</i> <sub>280</sub>		1 7.9 105°73	0.0/ 7.8	18		<b>193142</b>	2000 <i>HK</i> <sub>72</sub>		1 7.9 213°27	1.5/ 7.5	18	
12 3	7 40.23	+22 26.6	2.388	3.182	12.2	19.8	12 3	7 45.20	+24 26.6	1.900	2.701	14.6	21.7
12 13	7 34.77	+22 22.1	2.312	3.193	9.3	19.7	12 13	7 39.42	+24 58.5	1.809	2.694	11.2	21.4
12 23	7 27.34	+22 19.6	2.260	3.204	5.9	19.5	12 23	7 30.82	+25 34.1	1.741	2.686	7.3	21.2
1 2	7 18.56	+22 17.4	2.237	3.215	2.2	19.2	1 2	7 20.06	+26 9.0	1.701	2.678	3.0	20.9
1 12	7 9.32	+22 14.1	2.245	3.226	1.5	19.2	1 12	7 8.30	+26 38.7	1.690	2.668	2.6	20.8
1 22	7 0.55	+22 8.8	2.283	3.236	5.1	19.5	1 22	6 56.89	+26 59.9	1.708	2.659	6.9	21.1
2 1	6 53.09	+22 1.2	2.349	3.246	8.5	19.7	2 1	6 47.16	+27 11.7	1.755	2.648	11.1	21.3
2 11	6 47.59	+21 52.0	2.442	3.256	11.3	19.9	2 11	6 40.09	+27 15.3	1.825	2.637	14.7	21.5
<b>81871</b>	2000 <i>LP</i> <sub>3</sub>		1 7.9 160°51	6.3/ 9.6	18		<b>33355</b>	1998 <i>YJ</i> <sub>19</sub>		1 7.9 106°22	0.4/ 7.9	18	
12 3	7 39.72	+ 5 9.3	2.128	2.884	14.7	19.2	12 3	7 46.72	+21 47.2	1.686	2.488	16.1	20.4
12 13	7 34.57	+ 4 23.0	2.046	2.887	12.1	19.0	12 13	7 40.40	+22 10.7	1.625	2.510	12.3	20.2
12 23	7 27.33	+ 3 50.0	1.987	2.891	9.3	18.8	12 23	7 31.24	+22 39.3	1.586	2.531	7.8	20.0
1 2	7 18.60	+ 3 32.7	1.954	2.894	7.0	18.7	1 2	7 20.13	+23 8.8	1.574	2.552	2.9	19.7
1 12	7 9.27	+ 3 32.0	1.949	2.897	6.3	18.6	1 12	7 8.39	+23 35.3	1.591	2.572	2.1	19.7
1 22	7 0.32	+ 3 46.9	1.972	2.899	7.9	18.7	1 22	6 57.44	+23 55.9	1.638	2.591	6.8	20.0
2 1	6 52.66	+ 4 15.0	2.023	2.901	10.6	18.9	2 1	6 48.49	+24 9.8	1.712	2.610	11.0	20.3
2 11	6 47.01	+ 4 52.6	2.097	2.903	13.3	19.1	2 11	6 42.38	+24 17.9	1.809	2.628	14.5	20.6
<b>193456</b>	2000 <i>XZ</i> <sub>1</sub>		1 7.9 344°99	11.9/ 6.7	18		<b>124570</b>	2001 <i>SS</i> <sub>4</sub>		1 7.9 317°76	5.6/ 6.6	18	
12 3	7 47.38	+11 5.8	0.952	1.775	24.1	19.0	12 3	7 43.93	+31 53.7	1.340	2.168	18.1	18.9
12 13	7 42.62	+ 7 56.1	0.886	1.770	19.9	18.7	12 13	7 39.77	+32 49.8	1.263	2.159	14.2	18.6
12 23	7 33.56	+ 4 49.7	0.838	1.765	15.6	18.4	12 23	7 31.71	+33 44.8	1.207	2.150	9.9	18.3
1 2	7 21.21	+ 2 0.5	0.812	1.761	12.4	18.2	1 2	7 20.56	+34 29.6	1.174	2.142	6.2	18.1
1 12	7 7.51	+ 0 16.6	0.810	1.758	12.5	18.2	1 12	7 8.00	+34 55.9	1.167	2.134	6.4	18.1
1 22	6 54.74	+ 1 51.7	0.829	1.756	15.8	18.4	1 22	6 56.05	+34 59.5	1.185	2.126	10.3	18.3
2 1	6 44.91	+ 2 43.3	0.869	1.754	20.2	18.6	2 1	6 46.66	+34 41.7	1.226	2.119	14.8	18.5
2 11	6 39.30	+ 2 58.1	0.925	1.754	24.3	18.9	2 11	6 41.11	+34 7.9	1.288	2.112	18.9	18.7
<b>256308</b>	2006 <i>WO</i> <sub>185</sub>		1 7.9 129°80	2.9/ 6.8	18		<b>86897</b>	2000 <i>HK</i> <sub>39</sub>		1 7.9 107°16	2.4/ 7.2	18	
12 3	7 45.49	+28 29.6	2.278	3.070	12.7	21.6	12 3	7 45.92	+25 11.4	1.607	2.417	16.4	19.6
12 13	7 39.05	+29 29.9	2.209	3.088	9.8	21.4	12 13	7 40.18	+26 7.5	1.542	2.432	12.5	19.4
12 23	7 30.23	+30 30.4	2.166	3.105	6.4	21.2	12 23	7 31.34	+27 7.6	1.500	2.447	8.1	19.2
1 2	7 19.72	+31 25.5	2.151	3.122	3.5	21.1	1 2	7 20.24	+28 5.2	1.485	2.461	3.6	19.0
1 12	7 8.55	+32 10.5	2.168	3.138	3.6	21.1	1 12	7 8.29	+28 53.6	1.498	2.475	3.4	19.0
1 22	6 57.87	+32 42.6	2.215	3.153	6.5	21.3	1 22	6 57.04	+29 29.0	1.540	2.488	7.7	19.3
2 1	6 48.73	+33 1.5	2.291	3.167	9.6	21.5	2 1	6 47.91	+29 50.5	1.608	2.502	11.9	19.5
2 11	6 41.92	+33 9.0	2.391	3.181	12.3	21.7	2 11	6 41.84	+30 0.0	1.699	2.514	15.5	19.8
<b>179807</b>	2002 <i>TO</i> <sub>68</sub>		1 7.9 34°16	10.1/12.1	18		<b>377029</b>	2002 <i>RT</i> <sub>240</sub>		1 7.9 22°45	2.9/ 7.4	18	
12 3	7 37.05	+ 2 20.3	1.458	2.217	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>450314</b>	2004 <i>RE</i> <sub>250</sub>		1 7.9 87°33' 0.8/ 8.2 17				<b>372443</b>	2009 <i>SV</i> <sub>73</sub>		1 7.9 27°49' 1.7/ 8.5 18			
12 3	7 45.65	+19 45.7	1.550	2.356	17.1	21.8	12 3	7 38.70	+16 22.6	1.845	2.646	14.9	21.4
12 13	7 39.71	+19 50.1	1.491	2.378	13.0	21.6	12 13	7 34.27	+16 33.3	1.766	2.649	11.5	21.2
12 23	7 30.85	+20 1.3	1.454	2.399	8.4	21.4	12 23	7 27.39	+16 53.4	1.709	2.651	7.6	20.9
1 2	7 19.99	+20 16.3	1.443	2.420	3.3	21.1	1 2	7 18.74	+17 21.3	1.679	2.654	3.5	20.7
1 12	7 8.52	+20 32.0	1.460	2.440	2.1	21.1	1 12	7 9.36	+17 54.2	1.677	2.657	2.3	20.6
1 22	6 57.90	+20 46.0	1.505	2.461	7.0	21.5	1 22	7 0.40	+18 29.0	1.704	2.660	6.3	20.9
2 1	6 49.38	+20 57.3	1.577	2.480	11.4	21.8	2 1	6 52.97	+19 3.2	1.758	2.663	10.3	21.1
2 11	6 43.80	+21 5.7	1.672	2.500	15.1	22.0	2 11	6 47.90	+19 34.9	1.836	2.667	13.8	21.3
<b>285764</b>	2000 <i>UJ</i> <sub>32</sub>		1 7.9 77°34' 2.3/ 7.2 18				<b>26854</b>	1992 <i>WB</i>		1 7.9 86°98' 5.5/ 6.5 18			
12 3	7 41.65	+26 38.2	1.897	2.706	14.3	20.9	12 3	7 45.45	+35 11.0	1.861	2.664	14.8	17.3
12 13	7 36.56	+27 18.8	1.826	2.715	10.9	20.7	12 13	7 39.73	+36 6.3	1.795	2.674	11.6	17.1
12 23	7 28.86	+28 1.1	1.778	2.724	7.1	20.4	12 23	7 31.00	+36 56.3	1.753	2.685	8.3	16.9
1 2	7 19.28	+28 40.1	1.757	2.732	3.3	20.2	1 2	7 20.13	+37 33.8	1.738	2.696	5.8	16.8
1 12	7 8.97	+29 11.3	1.765	2.741	3.2	20.2	1 12	7 8.46	+37 53.2	1.750	2.706	6.0	16.8
1 22	6 59.20	+29 32.0	1.802	2.750	6.8	20.5	1 22	6 57.51	+37 52.9	1.790	2.717	8.6	17.0
2 1	6 51.13	+29 41.6	1.866	2.759	10.5	20.7	2 1	6 48.60	+37 34.5	1.856	2.728	11.7	17.2
2 11	6 45.62	+29 41.8	1.954	2.768	13.8	21.0	2 11	6 42.65	+37 2.7	1.945	2.738	14.6	17.5
<b>99887</b>	2002 <i>PC</i> <sub>159</sub>		1 7.9 24°59' 1.0/ 7.7 18				<b>220579</b>	2004 <i>JX</i> <sub>5</sub>		1 7.9 184°92' 9.6/ 12.8 18			
12 3	7 38.97	+23 35.2	1.914	2.724	14.1	19.7	12 3	7 38.70	-11 29.9	2.629	3.281	14.5	21.5
12 13	7 34.47	+24 0.3	1.838	2.728	10.8	19.5	12 13	7 33.53	-12 5.7	2.544	3.282	12.9	21.4
12 23	7 27.50	+24 29.0	1.785	2.732	6.9	19.3	12 23	7 26.59	-12 20.8	2.477	3.281	11.4	21.3
1 2	7 18.76	+24 57.9	1.759	2.736	2.7	19.0	1 2	7 18.38	-12 11.9	2.434	3.280	10.2	21.2
1 12	7 9.31	+25 23.4	1.761	2.741	2.2	19.0	1 12	7 9.63	-11 37.4	2.415	3.278	9.6	21.1
1 22	7 0.33	+25 42.9	1.793	2.746	6.3	19.2	1 22	7 1.13	-10 38.8	2.424	3.276	10.0	21.1
2 1	6 52.93	+25 55.3	1.851	2.751	10.2	19.5	2 1	6 53.65	-9 19.5	2.458	3.273	11.2	21.2
2 11	6 47.91	+26 1.2	1.933	2.757	13.5	19.7	2 11	6 47.82	-7 45.5	2.516	3.269	12.8	21.3
<b>114106</b>	2002 <i>VW</i> <sub>43</sub>		1 7.9 279°41' 0.7/ 7.8 18				<b>349979</b>	2010 <i>EO</i> <sub>108</sub>		1 7.9 336°61' 1.2/ 8.2 18			
12 3	7 38.50	+23 12.9	2.274	3.075	12.5	20.1	12 3	7 38.42	+19 13.8	1.192	2.028	19.4	20.5
12 13	7 33.83	+23 32.4	2.182	3.068	9.5	19.9	12 13	7 35.46	+19 13.4	1.114	2.017	15.1	20.2
12 23	7 26.99	+23 55.1	2.115	3.060	6.1	19.6	12 23	7 28.90	+19 22.9	1.055	2.006	9.9	19.9
1 2	7 18.56	+24 18.3	2.075	3.053	2.4	19.4	1 2	7 19.52	+19 40.3	1.019	1.997	4.1	19.5
1 12	7 9.44	+24 39.2	2.065	3.045	1.8	19.3	1 12	7 8.81	+20 2.1	1.007	1.988	2.7	19.4
1 22	7 0.61	+24 55.7	2.085	3.038	5.6	19.6	1 22	6 58.63	+20 24.4	1.020	1.981	8.6	19.7
2 1	6 53.05	+25 6.8	2.133	3.031	9.2	19.8	2 1	6 50.74	+20 44.7	1.056	1.974	14.2	20.0
2 11	6 47.54	+25 12.6	2.206	3.023	12.3	20.0	2 11	6 46.38	+21 1.6	1.112	1.969	19.1	20.3
<b>135401</b>	2001 <i>TQ</i> <sub>213</sub>		1 7.9 13°55' 6.4/ 6.5 18 R				<b>473840</b>	2016 <i>EM</i> <sub>126</sub>		1 7.9 193°65' 0.3/ 7.9 16			
12 3	7 44.85	+41 2.1	2.163	2.951	13.5	19.6	12 3	7 40.09	+22 32.8	2.108	2.909	13.3	21.9
12 13	7 39.04	+41 37.4	2.089	2.952	10.9	19.4	12 13	7 35.12	+22 44.6	2.024	2.909	10.2	21.7
12 23	7 30.44	+42 2.8	2.039	2.954	8.4	19.3	12 23	7 27.84	+22 59.8	1.963	2.909	6.5	21.5
1 2	7 19.87	+42 12.4	2.014	2.956	6.7	19.2	1 2	7 18.90	+23 15.9	1.931	2.908	2.5	21.2
1 12	7 8.61	+42 2.0	2.018	2.958	6.8	19.2	1 12	7 9.29	+23 30.1	1.927	2.908	1.8	21.2
1 22	6 58.05	+41 31.0	2.049	2.961	8.6	19.3	1 22	7 0.08	+23 40.6	1.954	2.907	5.8	21.4
2 1	6 49.40	+40 42.3	2.107	2.963	11.2	19.5	2 1	6 52.29	+23 46.6	2.008	2.907	9.6	21.7
2 11	6 43.52	+39 41.0	2.187	2.966	13.7	19.6	2 11	6 46.71	+23 48.4	2.087	2.906	12.8	21.9
<b>275197</b>	2009 <i>WT</i> <sub>133</sub>		1 7.9 135°03' 3.2/ 7.4 18				<b>221193</b>	2005 <i>UQ</i> <sub>49</sub>		1 7.9 110°32' 1.6/ 7.5 18			
12 3	7 48.51	+28 32.7	1.506	2.318	17.2	20.8	12 3	7 41.95	+25 18.9	1.981	2.786	13.9	20.7
12 13	7 42.44	+29 1.7	1.436	2.326	13.3	20.6	12 13	7 36.66	+25 45.6	1.906	2.793	10.6	20.5
12 23	7 32.92	+29 30.0	1.389	2.334	8.7	20.3	12 23	7 28.87	+26 14.3	1.855	2.800	6.8	20.8
1 2	7 20.89	+29 51.4	1.367	2.341	4.3	20.1	1 2	7 19.30	+26 41.0	1.831	2.807	2.9	20.1
1 12	7 7.92	+30 0.4	1.373	2.348	4.0	20.1	1 12	7 9.04	+27 2.2	1.836	2.814	2.5	20.0
1 22	6 55.79	+29 55.2	1.406	2.354	8.3	20.4	1 22	6 59.30	+27 15.4	1.870	2.821	6.3	20.3
2 1	6 46.06	+29 37.2	1.465	2.360	12.7	20.6	2 1	6 51.18	+27 20.5	1.932	2.828	10.1	20.5
2 11	6 39.73	+29 10.3	1.547	2.366	16.5	20.9	2 11	6 45.49	+27 18.4	2.019	2.834	13.3	20.8
<b>516562</b>	2007 <i>BF</i> <sub>61</sub>		1 7.9 146°54' 3.3/ 9.5 18				<b>378945</b>	2008 <i>UO</i> <sub>157</sub>		1 7.9 328°71' 4.4/ 8.9 18			
12 3	7 47.75	+7 4.4	1.193	1.986	22.0	21.1	12 3	7 36.81	+11 59.1	1.879	2.673	15.0	20.6
12 13	7 42.59	+8 40.7	1.117	1.991	17.5	20.9	12 13	7 32.84	+11 21.0	1.788	2.661	12.0	20.4
12 23	7 33.54	+10 52.4	1.060	1.995	12.1	20.6	12 23	7 26.51	+10 52.4	1.718	2.649	8.6	20.2
1 2	7 21.32	+13 34.7	1.028	1.999	6.1	20.2	1 2	7 18.44	+10 34.9	1.674	2.638	5.4	20.0
1 12	7 7.52	+16 35.3	1.024	2.003	3.7	20.1	1 12	7 9.59	+10 28.9	1.658	2.627	4.6	19.9
1 22	6 54.14	+19 37.0	1.049	2.007	9.0	20.4	1 22	7 1.04	+10 33.7	1.669	2.617	7.3	20.0
2 1	6 43.16	+22 24.9	1.102	2.009	14.8	20.8	2 1	6 53.88	+10 47.5	1.707	2.607	10.9	20.2
2 11	6 36.01	+24 50.6	1.177	2.012	19.7	21.1	2 11	6 48.95	+11 8.0	1.768	2.598	14.3	20.4
<b>230808</b>	2004 <i>GH</i> <sub>21</sub>		1 7.9 4°79' 1.0/ 8.3 18				<b>183088</b>	2002 <i>RO</i> <sub>79</sub>		1 8.0 97°16' 0.9/ 7.8 18			
12 3	7 40.24	+17 15.4	1.221	2.049	19.5	19.7	12 3	7 44.19	+23 44.5	1.795	2.600	15.1	21.1
12 13	7 36.66	+17 48.1	1.151	2.049	15.1	19.4	12 13	7 38.43	+23 59.8	1.729	2.616	11.5	20.9
12 23	7 29.55	+18 35.8	1.100	2.049	9.8	19.1	12 23	7 30.00	+24 17.8	1.686	2.631	7.3	20.7
1 2	7 19.71	+19 34.7	1.072	2.050	4.0	18.8	1 2	7 19.71	+24 35.0	1.669	2.647	2.9	20.4
1 12	7 8.67	+20 38.4	1.070	2.051	2.5	18.7	1 12	7 8.81	+24 48.0	1.682	2.662	2.1	20.4
1 22	6 58.23	+21 40.3	1.093	2.053	8.4	19.0	1 22	6 58.59	+24 55.0	1.723	2.677	6.5	20.7
2 1	6 50.09	+22 35.5	1.140	2.055	13.8	19.3	2 1	6 50.21	+24 55.8	1.793	2.691	10.5	21.0
2 11	6 45.42	+23 21.5	1.209	2.058	18.3	19.6	2 11	6 44.49	+24 51.4	1.885	2.705	14.0	21.2
<b>134417</b>	1998 <i>HR</i> <sub>60</sub>		1 7.9 261°67' 4.7/ 6.6 18				<b>99961</b>	1979 <i>MT</i> <sub>2</sub>		1 8.0 266°04' 0.1/ 8.0 18			
12 3	7 46.20	+32 35.9											