

EPHEMERIDES

12 1.9

12 2.0

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>279157</b>	2009 <i>SG</i> <sub>113</sub>	12	1.9 317°32	6°3/ 3.4 18			<b>163861</b>	2003 <i>SK</i> <sub>97</sub>	12	1.9 249°08	6°6/29.5 18		
10 28	5 2.16	+34 4.5	1.281	2.110	19.2	20.2	10 28	4 59.14	+7 5.9	1.819	2.642	14.6	20.0
11 7	4 58.29	+34 46.4	1.196	2.091	15.5	19.9	11 7	4 54.13	+5 58.8	1.744	2.636	11.6	19.8
11 17	4 50.41	+35 13.6	1.130	2.072	11.2	19.6	11 17	4 46.84	+4 57.4	1.693	2.630	8.6	19.6
11 27	4 39.41	+35 19.6	1.086	2.054	7.3	19.4	11 27	4 38.00	+4 7.5	1.668	2.623	6.7	19.5
12 7	4 27.02	+35 0.8	1.067	2.037	6.6	19.3	12 7	4 28.65	+3 33.8	1.670	2.617	7.4	19.5
12 17	4 15.37	+34 18.8	1.072	2.020	10.2	19.4	12 17	4 19.88	+3 19.3	1.699	2.611	10.1	19.7
12 27	4 6.51	+33 21.8	1.100	2.005	14.9	19.6	12 27	4 12.71	+3 24.9	1.753	2.604	13.2	19.9
1 6	4 1.72	+32 20.2	1.148	1.990	19.3	19.9	1 6	4 7.85	+3 48.9	1.828	2.597	16.2	20.1
<b>515621</b>	2014 <i>KB</i> <sub>104</sub>	12	1.9 103°99	0°9/ 2.2 18			<b>308834</b>	2006 <i>RJ</i> <sub>36</sub>	12	1.9 18°11	5°1/ 3.8 17		
10 28	5 5.22	+22 16.1	2.001	2.814	13.8	21.0	10 28	5 1.62	+34 38.5	1.559	2.373	17.0	20.1
11 7	4 58.64	+23 0.3	1.931	2.826	10.5	20.9	11 7	4 56.81	+34 58.9	1.491	2.378	13.5	19.9
11 17	4 49.60	+23 42.7	1.885	2.838	6.6	20.6	11 17	4 48.83	+35 3.7	1.444	2.382	9.6	19.7
11 27	4 38.90	+24 20.9	1.868	2.850	2.4	20.4	11 27	4 38.71	+34 49.5	1.421	2.388	6.1	19.5
12 7	4 27.65	+24 53.4	1.880	2.861	2.3	20.4	12 7	4 27.97	+34 16.0	1.424	2.394	5.3	19.5
12 17	4 17.05	+25 20.1	1.923	2.872	6.3	20.7	12 17	4 18.21	+33 26.7	1.454	2.401	8.2	19.7
12 27	4 8.20	+25 42.5	1.994	2.883	10.1	20.9	12 27	4 10.82	+32 28.7	1.509	2.409	12.0	19.9
1 6	4 1.84	+26 2.9	2.090	2.894	13.2	21.2	1 6	4 6.61	+31 29.7	1.587	2.417	15.5	20.2
<b>454705</b>	2014 <i>SJ</i> <sub>107</sub>	12	1.9 312°72	5°1/ 3.3 18			<b>484418</b>	2007 <i>YZ</i> <sub>65</sub>	12	1.9 343°26	1°0/ 2.3 18		
10 28	5 1.81	+34 31.9	1.999	2.797	14.4	20.8	10 28	5 0.02	+25 40.6	1.721	2.549	15.1	21.2
11 7	4 56.65	+35 19.8	1.908	2.784	11.5	20.6	11 7	4 55.15	+25 29.6	1.644	2.546	11.5	21.0
11 17	4 48.69	+35 57.4	1.840	2.771	8.4	20.4	11 17	4 47.63	+25 10.6	1.588	2.544	7.3	20.8
11 27	4 38.68	+36 20.3	1.797	2.758	5.8	20.2	11 27	4 38.29	+24 43.4	1.559	2.541	2.7	20.5
12 7	4 27.80	+36 26.1	1.783	2.746	5.3	20.2	12 7	4 28.37	+24 9.5	1.557	2.539	2.4	20.5
12 17	4 17.40	+36 15.3	1.796	2.734	7.7	20.3	12 17	4 19.16	+23 32.3	1.584	2.537	7.0	20.7
12 27	4 8.83	+35 51.7	1.835	2.722	10.9	20.5	12 27	4 11.86	+22 56.5	1.637	2.535	11.3	21.0
1 6	4 3.00	+35 21.1	1.898	2.711	14.0	20.7	1 6	4 7.24	+22 26.3	1.713	2.534	14.9	21.2
<b>344962</b>	2004 <i>XR</i> <sub>11</sub>	12	1.9 33°19	0°8/ 2.2 18			<b>337679</b>	2001 <i>TR</i> <sub>203</sub>	12	1.9 141°13	9°1/ 4.5 18		
10 28	5 1.42	+24 37.8	1.458	2.295	16.8	20.1	10 28	5 16.76	+45 4.5	2.040	2.777	16.1	21.1
11 7	4 56.47	+24 32.7	1.394	2.301	12.8	19.9	11 7	5 8.38	+46 37.3	1.972	2.790	13.7	21.0
11 17	4 48.52	+24 20.2	1.350	2.308	8.0	19.6	11 17	4 56.23	+47 52.7	1.926	2.802	11.3	20.9
11 27	4 38.57	+23 59.9	1.332	2.315	2.9	19.3	11 27	4 41.31	+48 41.9	1.905	2.813	9.5	20.8
12 7	4 28.05	+23 33.5	1.340	2.322	2.7	19.3	12 7	4 25.30	+48 59.8	1.910	2.824	9.1	20.8
12 17	4 18.48	+23 4.6	1.376	2.330	7.7	19.7	12 17	4 10.20	+48 47.0	1.944	2.833	10.3	20.9
12 27	4 11.16	+22 37.8	1.437	2.338	12.3	20.0	12 27	3 57.79	+48 9.7	2.003	2.843	12.3	21.0
1 6	4 6.88	+22 17.1	1.519	2.347	16.2	20.2	1 6	3 49.14	+47 17.7	2.084	2.851	14.5	21.2
<b>3327</b>	Campins	12	1.9 107°79	0°0/ 1.8 18			<b>460739</b>	2014 <i>VD</i> <sub>19</sub>	12	1.9 343°81	1°9/ 2.7 17		
10 28	4 58.45	+22 29.3	2.449	3.264	11.5	17.0	10 28	4 57.91	+27 58.7	1.944	2.765	13.9	20.4
11 7	4 53.12	+22 24.4	2.375	3.272	8.7	16.8	11 7	4 53.38	+27 57.5	1.861	2.759	10.6	20.2
11 17	4 45.96	+22 15.9	2.326	3.281	5.4	16.7	11 17	4 46.45	+27 47.7	1.802	2.753	6.9	20.0
11 27	4 37.64	+22 4.1	2.306	3.289	1.8	16.4	11 27	4 37.89	+27 28.5	1.768	2.748	3.1	19.7
12 7	4 28.97	+21 50.0	2.315	3.296	1.8	16.4	12 7	4 28.76	+27 0.7	1.763	2.743	2.7	19.7
12 17	4 20.84	+21 35.3	2.355	3.304	5.3	16.7	12 17	4 20.24	+26 26.9	1.787	2.739	6.4	19.9
12 27	4 14.02	+21 22.1	2.423	3.312	8.5	16.9	12 27	4 13.40	+25 51.4	1.837	2.735	10.2	20.2
1 6	4 9.09	+21 12.5	2.516	3.319	11.3	17.1	1 6	4 8.97	+25 18.4	1.911	2.732	13.6	20.4
<b>376077</b>	2010 <i>UN</i> <sub>52</sub>	12	1.9 116°66	2°0/ 2.4 18			<b>44188</b>	1998 <i>KJ</i> <sub>58</sub>	12	1.9 340°61	0°9/ 1.7 18		
10 28	5 7.18	+25 17.2	1.442	2.269	17.5	20.9	10 28	5 1.10	+22 37.4	1.295	2.141	18.0	18.5
11 7	5 1.01	+25 49.9	1.375	2.276	13.4	20.7	11 7	4 56.62	+22 0.9	1.224	2.137	13.6	18.3
11 17	4 51.48	+26 16.5	1.329	2.283	8.6	20.4	11 17	4 48.83	+21 16.0	1.173	2.134	8.5	18.0
11 27	4 39.62	+26 34.1	1.309	2.289	3.6	20.1	11 27	4 38.75	+20 24.6	1.147	2.131	2.9	17.6
12 7	4 26.98	+26 41.2	1.316	2.296	3.2	20.1	12 7	4 27.94	+19 30.9	1.147	2.128	3.3	17.7
12 17	4 15.31	+26 39.4	1.350	2.302	8.1	20.4	12 17	4 18.06	+18 40.5	1.172	2.125	8.9	18.0
12 27	4 6.13	+26 32.9	1.410	2.308	12.8	20.7	12 27	4 10.62	+17 59.6	1.222	2.123	14.0	18.3
1 6	4 0.34	+26 26.5	1.492	2.314	16.7	21.0	1 6	4 6.48	+17 31.9	1.292	2.122	18.3	18.5
<b>490960</b>	2011 <i>DQ</i> <sub>30</sub>	12	1.9 292°12	4°8/30.9 18			<b>477896</b>	2011 <i>KB</i> <sub>6</sub>	12	2.0 270°70	0°3/ 1.9 18		
10 28	4 59.07	+6 57.5	2.204	3.016	12.7	20.8	10 28	5 2.11	+22 41.0	1.596	2.427	15.9	21.4
11 7	4 53.87	+6 52.4	2.112	2.999	10.1	20.6	11 7	4 56.99	+22 21.5	1.511	2.416	12.1	21.1
11 17	4 46.62	+6 55.3	2.043	2.982	7.2	20.4	11 17	4 48.93	+21 55.6	1.448	2.405	7.6	20.9
11 27	4 37.93	+7 8.6	2.002	2.965	5.0	20.2	11 27	4 38.79	+21 23.7	1.411	2.394	2.6	20.5
12 7	4 28.64	+7 33.8	1.990	2.948	5.4	20.2	12 7	4 27.87	+20 48.1	1.401	2.383	2.7	20.5
12 17	4 19.70	+8 11.3	2.007	2.931	8.0	20.3	12 17	4 17.61	+20 12.5	1.420	2.371	7.8	20.8
12 27	4 12.03	+9 0.3	2.051	2.915	11.0	20.5	12 27	4 9.39	+19 41.7	1.464	2.360	12.5	21.0
1 6	4 6.35	+9 59.2	2.119	2.898	13.9	20.6	1 6	4 4.07	+19 19.5	1.530	2.348	16.5	21.3
<b>329187</b>	2012 <i>DM</i> <sub>29</sub>	12	1.9 334°63	1°0/ 1.7 18			<b>359310</b>	2009 <i>HH</i> <sub>103</sub>	12	2.0 146°70	1°6/ 1.5 18		
10 28	4 58.53	+19 32.3	1.947	2.775	13.5	20.2	10 28	5 0.36	+17 37.8	2.016	2.840	13.3	21.6
11 7	4 53.68	+19 24.7	1.867	2.771	10.2	20.0	11 7	4 54.91	+17 29.8	1.941	2.842	10.1	21.4
11 17	4 46.57	+19 15.1	1.811	2.768	6.4	19.8	11 17	4 47.26	+17 21.4	1.889	2.844	6.3	21.1
11 27	4 37.90	+19 4.6	1.781	2.764	2.3	19.5	11 27	4 38.15	+17 13.7	1.865	2.846	2.5	20.9
12 7	4 28.70	+18 54.3	1.781	2.761	2.6	19.5	12 7	4 28.57	+17 8.0	1.870	2.848	2.9	20.9
12 17	4 20.06	+18 46.2	1.809	2.758	6.7	19.8	12 17	4 19.57	+17 5.9	1.904	2.850	6.7	21.2
12 27	4 12.99	+18 42.5	1.864	2.755	10.5	20.0	12 27	4 12.14	+17 9.1	1.966	2.852	10.3	21.4
1 6	4 8.21	+18 44.9	1.942	2.752	13.8	20.2	1 6	4 6.93	+17 18.8	2.052	2.854	13.5	21.6
<b>264481</b>	2001 <i>OU</i> <sub>15</sub>	12	1.9 197°88	0°1/ 2.0 18			<b>415254</b>	2012 <i>JB</i> <sub>63</sub>	12	2.0 196°77	0°3/ 2.1 18		

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>516086</b>	2015 <i>TV</i> <sub>345</sub>	12	2.0 137°48	1.3/ 1.5	18		<b>45889</b>	2000 <i>WU</i> <sub>130</sub>	12	2.0 57°70	0°1/ 2.0	18	
10 28	5 0.90	+18 45.1	2.230	3.047	12.5	22.2	10 28	5 0.04	+22 23.2	1.986	2.809	13.5	19.2
11 7	4 55.04	+18 28.7	2.159	3.057	9.4	22.0	11 7	4 54.76	+22 25.7	1.913	2.814	10.2	19.0
11 17	4 47.20	+18 10.6	2.112	3.067	5.8	21.8	11 17	4 47.21	+22 24.5	1.864	2.820	6.4	18.8
11 27	4 38.10	+17 52.1	2.094	3.076	2.2	21.6	11 27	4 38.17	+22 19.5	1.843	2.826	2.2	18.5
12 7	4 28.65	+17 34.7	2.106	3.084	2.5	21.6	12 7	4 28.67	+22 11.4	1.850	2.831	2.1	18.5
12 17	4 19.80	+17 20.3	2.148	3.093	6.1	21.9	12 17	4 19.79	+22 2.2	1.886	2.837	6.3	18.8
12 27	4 12.42	+17 11.0	2.218	3.101	9.5	22.1	12 27	4 12.56	+21 54.2	1.950	2.843	10.0	19.1
1 6	4 7.10	+17 8.3	2.313	3.108	12.4	22.3	1 6	4 7.63	+21 49.8	2.038	2.850	13.2	19.3
<b>358767</b>	2008 <i>DB</i> <sub>7</sub>	12	2.0 177°79	0°3/ 2.1	18		<b>513585</b>	2011 <i>AS</i> <sub>60</sub>	12	2.0 342°83	0°7/ 1.9	18	
10 28	5 0.76	+23 52.9	2.331	3.142	12.2	21.7	10 28	5 1.25	+20 32.3	1.211	2.063	18.6	21.1
11 7	4 55.01	+23 44.2	2.249	3.144	9.2	21.5	11 7	4 57.04	+20 35.3	1.141	2.057	14.2	20.9
11 17	4 47.23	+23 30.4	2.192	3.145	5.8	21.3	11 17	4 49.30	+20 35.7	1.091	2.052	8.9	20.6
11 27	4 38.13	+23 11.6	2.163	3.146	2.0	21.0	11 27	4 39.02	+20 33.7	1.064	2.047	3.1	20.2
12 7	4 28.60	+22 48.9	2.164	3.146	1.9	21.0	12 7	4 27.79	+20 30.1	1.062	2.044	3.2	20.2
12 17	4 19.62	+22 24.5	2.196	3.146	5.6	21.3	12 17	4 17.43	+20 27.3	1.085	2.040	9.1	20.5
12 27	4 12.07	+22 1.2	2.256	3.145	9.1	21.5	12 27	4 9.61	+20 28.9	1.132	2.038	14.4	20.8
1 6	4 6.58	+21 41.9	2.342	3.144	12.0	21.7	1 6	4 5.32	+20 37.5	1.198	2.036	19.0	21.1
<b>395675</b>	2011 <i>WF</i> <sub>121</sub>	12	2.0 49°55	2°3/ 1.6	17		<b>81374</b>	2000 <i>GE</i> <sub>67</sub>	12	2.0 165°93	2°9/ 2.9	18	
10 28	5 2.00	+15 0.2	1.640	2.472	15.5	20.7	10 28	5 3.64	+30 23.3	2.299	3.096	12.8	20.0
11 7	4 56.46	+15 11.7	1.579	2.484	11.7	20.5	11 7	4 57.38	+30 48.4	2.219	3.100	9.9	19.8
11 17	4 48.35	+15 26.6	1.541	2.497	7.4	20.3	11 17	4 48.83	+31 5.4	2.162	3.103	6.7	19.6
11 27	4 38.53	+15 45.5	1.529	2.509	3.2	20.0	11 27	4 38.73	+31 12.0	2.133	3.106	3.7	19.5
12 7	4 28.25	+16 8.6	1.545	2.522	3.5	20.1	12 7	4 28.11	+31 7.4	2.134	3.108	3.3	19.4
12 17	4 18.75	+16 36.3	1.589	2.536	7.6	20.4	12 17	4 18.06	+30 52.9	2.166	3.111	6.1	19.6
12 27	4 11.19	+17 8.7	1.659	2.549	11.7	20.6	12 27	4 9.61	+30 32.1	2.225	3.112	9.3	19.8
1 6	4 6.27	+17 46.0	1.752	2.563	15.1	20.9	1 6	4 3.46	+30 8.9	2.310	3.114	12.1	20.0
<b>446036</b>	2013 <i>CK</i> <sub>95</sub>	12	2.0 332°58	1°1/ 2.4	18		<b>223032</b>	2002 <i>TT</i> <sub>15</sub>	12	2.0 53°97	4°4/ 2.9	18	
10 28	5 0.98	+25 31.1	1.751	2.577	15.0	21.7	10 28	5 8.20	+29 35.3	1.219	2.051	19.8	19.5
11 7	4 55.86	+25 27.6	1.673	2.575	11.4	21.5	11 7	5 2.13	+30 28.1	1.173	2.073	15.3	19.3
11 17	4 48.08	+25 16.7	1.618	2.572	7.2	21.2	11 17	4 52.27	+31 8.9	1.146	2.095	10.3	19.1
11 27	4 38.48	+24 58.0	1.589	2.571	2.8	20.9	11 27	4 39.93	+31 32.4	1.143	2.118	5.6	18.9
12 7	4 28.28	+24 32.4	1.587	2.569	2.5	20.9	12 7	4 27.03	+31 36.8	1.166	2.141	5.0	18.9
12 17	4 18.78	+24 2.9	1.615	2.567	6.9	21.2	12 17	4 15.57	+31 24.8	1.214	2.165	9.0	19.2
12 27	4 11.18	+23 33.8	1.668	2.566	11.1	21.4	12 27	4 7.15	+31 3.1	1.287	2.189	13.4	19.5
1 6	4 6.26	+23 9.1	1.745	2.564	14.8	21.7	1 6	4 2.55	+30 39.2	1.381	2.212	17.3	19.8
<b>487205</b>	2014 <i>OK</i> <sub>375</sub>	12	2.0 112°80	2°2/ 1.3	18		<b>25032</b>	Randallray	12	2.0 153°08	2°5/ 1.3	18	
10 28	4 59.89	+15 40.4	2.240	3.059	12.3	22.1	10 28	5 4.21	+16 6.1	1.770	2.593	14.9	19.2
11 7	4 54.24	+15 26.2	2.173	3.071	9.3	21.9	11 7	4 58.01	+15 49.4	1.699	2.600	11.3	19.0
11 17	4 46.69	+15 12.9	2.131	3.083	5.9	21.8	11 17	4 49.28	+15 33.3	1.652	2.606	7.2	18.8
11 27	4 37.94	+15 1.9	2.116	3.095	2.8	21.6	11 27	4 38.88	+15 19.5	1.632	2.612	3.3	18.6
12 7	4 28.87	+14 54.7	2.132	3.107	3.1	21.6	12 7	4 27.99	+15 9.8	1.641	2.617	3.7	18.6
12 17	4 20.38	+14 52.7	2.177	3.118	6.3	21.8	12 17	4 17.83	+15 6.3	1.679	2.622	7.7	18.9
12 27	4 13.31	+14 57.1	2.250	3.129	9.5	22.1	12 27	4 9.54	+15 10.7	1.743	2.626	11.6	19.1
1 6	4 8.22	+15 8.5	2.348	3.140	12.3	22.3	1 6	4 3.83	+15 23.8	1.831	2.630	15.0	19.3
<b>97634</b>	2000 <i>EQ</i> <sub>154</sub>	12	2.0 272°43	2°6/ 1.0	18		<b>517289</b>	2014 <i>HF</i> <sub>2</sub>	12	2.0 171°79	2°8/ 2.6	18	
10 28	4 57.15	+14 25.6	2.406	3.226	11.6	19.9	10 28	5 5.95	+28 3.1	2.126	2.927	13.5	22.3
11 7	4 52.28	+14 4.5	2.315	3.213	8.8	19.7	11 7	4 59.35	+28 51.2	2.044	2.929	10.5	22.1
11 17	4 45.58	+13 44.6	2.248	3.200	5.7	19.4	11 17	4 50.20	+29 33.6	1.987	2.931	7.0	21.8
11 27	4 37.61	+13 27.7	2.210	3.186	3.0	19.2	11 27	4 39.25	+30 7.1	1.958	2.933	3.7	21.6
12 7	4 29.17	+13 15.5	2.201	3.173	3.5	19.3	12 7	4 27.60	+30 29.5	1.959	2.934	3.3	21.6
12 17	4 21.10	+13 9.9	2.222	3.160	6.4	19.4	12 17	4 16.49	+30 41.2	1.990	2.935	6.5	21.8
12 27	4 14.23	+13 12.1	2.270	3.146	9.6	19.6	12 27	4 7.10	+30 44.5	2.049	2.935	10.0	22.0
1 6	4 9.17	+13 22.7	2.343	3.133	12.4	19.8	1 6	4 0.22	+30 43.5	2.133	2.935	13.0	22.2
<b>191119</b>	2002 <i>EY</i> <sub>93</sub>	12	2.0 98°03	0°4/ 2.1	18		<b>78605</b>	2002 <i>SA</i> <sub>38</sub>	12	2.0 42°68	1°8/ 1.3	18	
10 28	5 3.74	+23 38.4	1.749	2.571	15.1	19.9	10 28	4 57.29	+18 4.6	2.085	2.912	12.8	19.2
11 7	4 57.70	+23 35.6	1.685	2.586	11.4	19.7	11 7	4 52.47	+17 37.1	2.018	2.922	9.6	19.0
11 17	4 49.07	+23 27.1	1.645	2.600	7.1	19.5	11 17	4 45.67	+17 8.3	1.976	2.932	6.0	18.8
11 27	4 38.79	+23 12.7	1.631	2.614	2.5	19.2	11 27	4 37.63	+16 40.0	1.961	2.942	2.5	18.6
12 7	4 28.09	+22 53.8	1.646	2.627	2.3	19.2	12 7	4 29.26	+16 14.6	1.975	2.953	2.9	18.6
12 17	4 18.25	+22 32.9	1.689	2.640	6.8	19.6	12 17	4 21.51	+15 54.3	2.019	2.964	6.4	18.9
12 27	4 10.40	+22 13.6	1.760	2.654	10.9	19.8	12 27	4 15.23	+15 41.3	2.089	2.975	9.8	19.1
1 6	4 5.22	+21 59.1	1.854	2.666	14.3	20.1	1 6	4 11.00	+15 36.7	2.183	2.986	12.8	19.3
<b>135152</b>	2001 <i>QO</i> <sub>219</sub>	12	2.0 352°65	19°2/ 9.9	17		<b>405524</b>	2005 <i>EC</i> <sub>65</sub>	12	2.0 323°23	5°2/ 3.5	17	
10 28	5 11.85	+55 41.8	0.972	1.743	27.9	19.4	10 28	5 0.58	+34 53.2	1.968	2.769	14.5	20.8
11 7	5 8.95	+57 26.8	0.917	1.738	25.4	19.2	11 7	4 55.81	+35 35.7	1.876	2.753	11.7	20.6
11 17	4 58.67	+58 32.8	0.873	1.734	22.8	19.0	11 17	4 48.25	+36 7.2	1.807	2.738	8.6	20.4
11 27	4 42.51	+58 40.8	0.844	1.732	20.5	18.8	11 27	4 38.64	+36 23.6	1.762	2.723	5.9	20.2
12 7	4 24.40	+57 39.0	0.831	1.730	19.3	18.8	12 7	4 28.17	+36 22.6	1.745	2.709	5.4	20.1
12 17	4 9.03	+55 30.1	0.835	1.730	19.6	18.8	12 17	4 18.19	+36 5.1	1.756	2.695	7.7	20.2
12 27	3 59.80	+52 33.0	0.857	1.730	21.4	18.9	12 27	4 10.03	+35 35.0	1.793	2.682	11.0	20.4
1 6	3 57.60	+49 13.5	0.896	1.732	24.0	19.1	1 6	4 4.62	+34 58.5	1.853	2.669	14.2	20.6
<b>493063</b>	2014 <i>SP</i> <sub>283</sub>	12	2.0 34°75	7°0/ 28.9	18		<b>118533</b>	2000 <i>EB</i> <sub>69</sub>	12	2.0 163°84	2°4/ 2.7	18	

EPHEMERIDES

12 2.0

12 2.0

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>144504</b>	2004 EA <sub>70</sub>	12 2.0 44°58'	5°7/ 3.8 18				<b>484526</b>	2008 ES <sub>152</sub>	12 2.0 243°70'	0°5/ 1.9 18			
10 28	5 4.39	+35 27.9	1.650	2.454	16.7	19.7	10 28	5 0.13	+20 51.5	2.092	2.913	13.0	22.1
11 7	4 58.81	+36 11.5	1.587	2.466	13.3	19.5	11 7	4 54.82	+20 48.2	2.008	2.908	9.8	21.9
11 17	4 50.07	+36 40.5	1.546	2.478	9.7	19.4	11 17	4 47.30	+20 42.1	1.948	2.903	6.1	21.6
11 27	4 39.21	+36 50.4	1.530	2.491	6.6	19.2	11 27	4 38.27	+20 33.7	1.915	2.898	2.1	21.4
12 7	4 27.73	+36 39.4	1.540	2.504	5.9	19.2	12 7	4 28.69	+20 23.8	1.911	2.892	2.2	21.4
12 17	4 17.24	+36 10.2	1.577	2.517	8.4	19.4	12 17	4 19.63	+20 14.3	1.937	2.887	6.3	21.6
12 27	4 9.13	+35 28.8	1.640	2.531	11.7	19.6	12 27	4 12.07	+20 7.5	1.991	2.881	10.0	21.8
1 6	4 4.21	+34 42.7	1.725	2.545	14.9	19.8	1 6	4 6.72	+20 5.4	2.069	2.876	13.2	22.0
<b>69048</b>	2002 XR <sub>70</sub>	12 2.0 121°26'	0°5/ 2.2 18				<b>220488</b>	2004 CX <sub>81</sub>	12 2.0 162°01'	3°5/ 3.2 18			
10 28	5 5.37	+23 17.5	1.682	2.505	15.6	19.6	10 28	5 6.46	+31 21.0	1.687	2.496	16.2	20.5
11 7	4 59.09	+23 22.2	1.616	2.516	11.8	19.4	11 7	5 0.23	+31 33.8	1.612	2.499	12.6	20.3
11 17	4 50.04	+23 21.7	1.572	2.527	7.4	19.1	11 17	4 50.93	+31 34.4	1.559	2.502	8.6	20.0
11 27	4 39.17	+23 15.4	1.555	2.537	2.6	18.9	11 27	4 39.55	+31 19.9	1.531	2.505	4.7	19.8
12 7	4 27.78	+23 4.0	1.566	2.548	2.4	18.9	12 7	4 27.50	+30 50.0	1.532	2.507	4.0	19.8
12 17	4 17.27	+22 49.8	1.606	2.557	7.1	19.2	12 17	4 16.35	+30 8.0	1.561	2.509	7.6	20.0
12 27	4 8.85	+22 36.4	1.673	2.567	11.4	19.5	12 27	4 7.47	+29 20.1	1.616	2.511	11.6	20.3
1 6	4 3.26	+22 27.0	1.763	2.576	14.9	19.7	1 6	4 1.69	+28 32.8	1.695	2.512	15.2	20.5
<b>106612</b>	2000 WR <sub>120</sub>	12 2.0 335°44'	3°1/ 2.5 18				<b>438707</b>	2008 RB <sub>136</sub>	12 2.0 47°11'	8°6/ 29.5 17			
10 28	5 2.61	+26 15.9	1.177	2.024	19.4	18.3	10 28	5 0.43	+6 40.4	1.285	2.127	18.4	20.7
11 7	4 58.53	+27 1.7	1.104	2.015	15.0	18.0	11 7	4 55.47	+5 6.1	1.247	2.147	14.5	20.6
11 17	4 50.52	+27 41.5	1.050	2.006	9.9	17.7	11 17	4 47.75	+3 42.9	1.229	2.168	10.9	20.4
11 27	4 39.54	+28 10.9	1.018	1.998	4.7	17.3	11 27	4 38.38	+2 38.9	1.235	2.190	8.7	20.4
12 7	4 27.31	+28 26.9	1.012	1.991	4.2	17.3	12 7	4 28.77	+2 0.2	1.266	2.212	9.4	20.5
12 17	4 15.91	+28 30.0	1.030	1.985	9.5	17.6	12 17	4 20.28	+1 49.2	1.321	2.235	12.2	20.7
12 27	4 7.28	+28 25.0	1.071	1.980	14.8	17.9	12 27	4 14.04	+2 4.5	1.399	2.258	15.5	20.9
1 6	4 2.62	+28 18.2	1.131	1.975	19.4	18.1	1 6	4 10.62	+2 41.5	1.496	2.281	18.5	21.2
<b>159848</b>	2003 WS <sub>153</sub>	12 2.0 52°10'	5°7/ 1.8 18				<b>72549</b>	2001 EG <sub>1</sub>	12 2.0 5°42'	6°9/ 3.2 18			
10 28	5 4.47	+2 57.3	1.958	2.757	14.6	18.7	10 28	5 3.48	+33 43.1	1.317	2.143	18.9	18.5
11 7	4 57.69	+3 20.4	1.907	2.784	11.5	18.5	11 7	4 59.06	+35 3.6	1.251	2.143	15.2	18.3
11 17	4 48.83	+3 56.3	1.880	2.810	8.4	18.4	11 17	4 50.78	+36 12.0	1.205	2.144	11.1	18.1
11 27	4 38.70	+4 46.2	1.880	2.836	6.0	18.3	11 27	4 39.64	+37 0.5	1.182	2.145	7.7	17.9
12 7	4 28.32	+5 49.6	1.910	2.863	6.1	18.4	12 7	4 27.37	+37 24.2	1.184	2.148	7.2	17.9
12 17	4 18.73	+7 4.1	1.969	2.890	8.4	18.6	12 17	4 16.04	+37 23.3	1.210	2.152	10.2	18.0
12 27	4 10.82	+8 26.8	2.057	2.917	11.2	18.8	12 27	4 7.51	+37 3.9	1.260	2.157	14.1	18.3
1 6	4 5.17	+9 54.4	2.169	2.944	13.8	19.0	1 6	4 2.87	+36 34.8	1.331	2.163	17.8	18.5
<b>182820</b>	2002 AP <sub>185</sub>	12 2.0 199°37'	0°5/ 1.9 18				<b>354269</b>	2002 RA <sub>21</sub>	12 2.0 15°21'	9°4/ 29.9 18			
10 28	5 0.31	+20 16.1	2.136	2.955	12.8	20.5	10 28	4 55.95	+4 3.5	1.229	2.077	18.7	19.5
11 7	4 54.88	+20 21.3	2.055	2.955	9.7	20.3	11 7	4 52.44	+2 55.6	1.182	2.083	15.1	19.3
11 17	4 47.30	+20 24.6	1.999	2.954	6.0	20.0	11 17	4 46.07	+2 2.2	1.154	2.092	11.6	19.1
11 27	4 38.25	+20 26.3	1.970	2.953	2.1	19.8	11 27	4 37.87	+1 30.8	1.149	2.101	9.5	19.0
12 7	4 28.69	+20 26.9	1.971	2.952	2.2	19.8	12 7	4 29.21	+1 26.6	1.167	2.112	10.1	19.1
12 17	4 19.66	+20 27.6	2.002	2.951	6.1	20.0	12 17	4 21.50	+1 50.4	1.208	2.125	12.8	19.3
12 27	4 12.10	+20 30.3	2.060	2.950	9.8	20.3	12 27	4 15.94	+2 39.7	1.271	2.139	16.1	19.5
1 6	4 6.72	+20 36.6	2.143	2.949	12.9	20.5	1 6	4 13.23	+3 48.7	1.352	2.154	19.2	19.8
<b>262463</b>	2006 UU <sub>139</sub>	12 2.0 178°68'	1°4/ 1.5 18				<b>412305</b>	2013 JU <sub>49</sub>	12 2.0 231°42'	1°3/ 2.4 17			
10 28	4 59.77	+19 5.8	2.073	2.896	13.0	21.5	10 28	5 2.06	+25 13.6	2.287	3.096	12.5	22.0
11 7	4 54.45	+18 43.9	1.995	2.896	9.8	21.2	11 7	4 56.26	+25 34.5	2.196	3.088	9.5	21.8
11 17	4 47.00	+18 19.7	1.941	2.897	6.1	21.0	11 17	4 48.23	+25 50.9	2.128	3.079	6.1	21.6
11 27	4 38.14	+17 54.6	1.915	2.897	2.4	20.8	11 27	4 38.63	+26 1.5	2.089	3.070	2.5	21.3
12 7	4 28.82	+17 30.7	1.918	2.897	2.7	20.8	12 7	4 28.40	+26 5.9	2.080	3.060	2.3	21.3
12 17	4 20.09	+17 10.3	1.950	2.897	6.5	21.1	12 17	4 18.60	+26 4.7	2.101	3.051	5.9	21.5
12 27	4 12.87	+16 55.9	2.010	2.896	10.1	21.3	12 27	4 10.24	+26 0.5	2.151	3.040	9.4	21.7
1 6	4 7.82	+16 49.2	2.094	2.896	13.3	21.5	1 6	4 4.06	+25 56.0	2.225	3.030	12.5	21.9
<b>381106</b>	2007 CH <sub>79</sub>	12 2.0 253°69'	2°2/ 1.5 18				<b>346535</b>	2008 UW <sub>247</sub>	12 2.0 39°43'	0°8/ 1.8 18			
10 28	5 2.97	+16 45.2	1.705	2.533	15.2	20.8	10 28	5 1.35	+22 41.0	1.268	2.115	18.2	19.9
11 7	4 57.47	+16 37.8	1.618	2.521	11.6	20.6	11 7	4 56.51	+22 2.7	1.219	2.133	13.7	19.7
11 17	4 49.22	+16 31.1	1.553	2.508	7.4	20.3	11 17	4 48.55	+21 17.3	1.191	2.151	8.4	19.4
11 27	4 38.98	+16 26.0	1.515	2.496	3.1	20.0	11 27	4 38.69	+20 27.3	1.187	2.171	2.9	19.2
12 7	4 27.93	+16 24.3	1.505	2.483	3.5	20.0	12 7	4 28.49	+19 36.9	1.209	2.190	3.1	19.2
12 17	4 17.42	+16 27.4	1.523	2.469	8.0	20.2	12 17	4 19.51	+18 51.6	1.258	2.211	8.4	19.6
12 27	4 8.72	+16 37.5	1.568	2.456	12.4	20.5	12 27	4 13.00	+18 16.2	1.330	2.232	13.1	19.9
1 6	4 2.73	+16 55.5	1.635	2.442	16.2	20.7	1 6	4 9.63	+17 53.5	1.424	2.254	16.9	20.2
<b>305204</b>	2007 WN <sub>11</sub>	12 2.0 88°34'	2°4/ 1.7 18				<b>420926</b>	2013 NR <sub>17</sub>	12 2.0 26°31'	3°2/ 3.4 17			
10 28	5 5.54	+13 27.5	1.843	2.660	14.7	20.2	10 28	4 59.75	+32 23.0	2.157	2.960	13.3	20.7
11 7	4 58.85	+13 54.9	1.782	2.678	11.1	20.0	11 7	4 54.59	+32 24.8	2.080	2.963	10.4	20.5
11 17	4 49.74	+14 27.3	1.744	2.695	7.1	19.8	11 17	4 47.16	+32 15.6	2.026	2.967	7.1	20.3
11 27	4 39.06	+15 4.2	1.733	2.713	3.2	19.6	11 27	4 38.23	+31 53.8	1.999	2.970	4.1	20.1
12 7	4 27.95	+15 45.1	1.753	2.730	3.4	19.6	12 7	4 28.87	+31 20.1	2.000	2.974	3.5	20.1
12 17	4 17.59	+16 29.1	1.802	2.747	7.2	19.9	12 17	4 20.18	+30 37.2	2.031	2.978	6.2	20.3
12 27	4 9.06	+17 15.9	1.880	2.763	10.9	20.2	12 27	4 13.14	+29 49.5	2.089	2.983	9.4	20.5
1 6	4 3.03	+18 5.1	1.981	2.779	14.1	20.4	1 6	4 8.42	+29 2.1	2.171	2.987	12.4	20.7
<b>479636</b>	2014 DD <sub>45</sub>	12 2.0 347°12'	4°9/ 3.2 18				<b>58268</b>	1993 TQ <sub>19</sub>	12 2.0 40°59'	4°2/ 30.8 18			
10 28	5 3.28	+31 51.4	1.387	2.213	18.1	20.8	10 28						

EPHEMERIDES

12 2.0

12 2.1

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>493068</b>	2014 SE <sub>293</sub>	12 2.0	9°11' 12.3"	1.8	17		<b>297297</b>	1998 RQ <sub>13</sub>	12 2.0	50°90' 6.0"	4.0	18	
10 28	5 14.04	+42 28.0	1.523	2.298	19.1	19.9	10 28	5 5.21	+36 26.5	1.632	2.433	17.0	20.3
11 7	5 8.04	+45 38.1	1.462	2.302	16.5	19.7	11 7	4 59.54	+37 5.5	1.568	2.444	13.6	20.1
11 17	4 57.18	+48 34.4	1.423	2.308	14.0	19.6	11 17	4 50.62	+37 28.7	1.525	2.454	10.0	19.9
11 27	4 42.13	+51 1.5	1.410	2.315	12.5	19.5	11 27	4 39.51	+37 31.5	1.506	2.465	6.9	19.8
12 7	4 24.74	+52 47.1	1.422	2.323	12.5	19.5	12 7	4 27.76	+37 12.2	1.513	2.476	6.2	19.7
12 17	4 7.72	+53 47.0	1.458	2.334	14.0	19.7	12 17	4 17.03	+36 33.8	1.548	2.487	8.5	19.9
12 27	3 53.88	+54 7.2	1.517	2.345	16.2	19.8	12 27	4 8.76	+35 43.0	1.608	2.499	11.9	20.1
1 6	3 45.03	+53 59.9	1.594	2.358	18.4	20.0	1 6	4 3.76	+34 47.9	1.690	2.511	15.1	20.4
<b>515581</b>	2014 HH <sub>202</sub>	12 2.0	177°30' 6.4"	30.1	18		<b>487579</b>	2015 AK <sub>46</sub>	12 2.0	346°95' 0.3"	2.1	17	
10 28	5 0.62	+ 3 35.4	2.140	2.944	13.4	22.1	10 28	5 0.63	+20 54.5	2.038	2.860	13.3	20.9
11 7	4 54.92	+ 2 58.0	2.069	2.946	10.7	21.9	11 7	4 55.36	+21 29.7	1.956	2.856	10.1	20.7
11 17	4 47.24	+ 2 29.8	2.022	2.947	8.2	21.7	11 17	4 47.76	+22 4.4	1.898	2.853	6.3	20.5
11 27	4 38.26	+ 2 14.7	2.001	2.948	6.6	21.7	11 27	4 38.53	+22 37.3	1.868	2.850	2.2	20.2
12 7	4 28.87	+ 2 15.5	2.008	2.948	7.0	21.7	12 7	4 28.65	+23 7.4	1.866	2.848	2.1	20.2
12 17	4 20.01	+ 2 33.2	2.044	2.948	9.1	21.8	12 17	4 19.24	+23 34.5	1.894	2.846	6.2	20.4
12 27	4 12.56	+ 3 7.0	2.106	2.947	11.7	22.0	12 27	4 11.37	+23 59.6	1.951	2.844	10.0	20.7
1 6	4 7.13	+ 3 54.7	2.191	2.946	14.2	22.2	1 6	4 5.79	+24 24.4	2.031	2.842	13.3	20.9
<b>218065</b>	2002 EO <sub>106</sub>	12 2.0	190°94' 1.7"	1.6	18		<b>409070</b>	2003 SL <sub>243</sub>	12 2.1	165°18' 4.4"	3.8	17	
10 28	5 5.77	+17 53.8	1.866	2.684	14.5	21.6	10 28	5 2.54	+36 7.9	2.489	3.269	12.4	21.2
11 7	4 59.26	+17 44.4	1.785	2.683	11.0	21.4	11 7	4 56.60	+36 37.3	2.408	3.271	10.0	21.0
11 17	4 50.17	+17 34.2	1.727	2.681	6.9	21.1	11 17	4 48.42	+36 55.6	2.349	3.273	7.3	20.9
11 27	4 39.32	+17 23.9	1.697	2.678	2.7	20.9	11 27	4 38.73	+37 0.0	2.318	3.274	5.0	20.7
12 7	4 27.84	+17 15.1	1.696	2.674	3.1	20.9	12 7	4 28.51	+36 49.6	2.315	3.276	4.6	20.7
12 17	4 16.99	+17 9.5	1.725	2.670	7.3	21.1	12 17	4 18.86	+36 25.6	2.343	3.277	6.4	20.8
12 27	4 7.93	+17 9.4	1.781	2.665	11.4	21.4	12 27	4 10.76	+35 51.8	2.398	3.278	9.0	21.0
1 6	4 1.44	+17 16.4	1.861	2.659	14.9	21.6	1 6	4 4.91	+35 13.1	2.478	3.279	11.5	21.2
<b>363992</b>	2005 UR <sub>308</sub>	12 2.0	38°05' 2°1'	2.5	18		<b>193340</b>	2000 UU <sub>5</sub>	12 2.1	34°87' 0°9'	1.8	18	
10 28	5 2.28	+26 0.9	1.915	2.732	14.2	20.7	10 28	5 1.61	+20 2.0	1.359	2.203	17.4	18.9
11 7	4 56.73	+26 38.0	1.841	2.737	10.9	20.5	11 7	4 56.75	+20 0.6	1.301	2.212	13.1	18.7
11 17	4 48.65	+27 10.1	1.791	2.741	7.0	20.3	11 17	4 48.84	+19 56.9	1.263	2.223	8.2	18.4
11 27	4 38.81	+27 34.7	1.767	2.746	3.2	20.0	11 27	4 38.90	+19 51.5	1.251	2.234	2.8	18.1
12 7	4 28.35	+27 50.8	1.773	2.752	2.9	20.0	12 7	4 28.41	+19 45.7	1.264	2.246	3.0	18.2
12 17	4 18.52	+27 58.7	1.807	2.757	6.6	20.3	12 17	4 18.90	+19 41.9	1.304	2.258	8.2	18.5
12 27	4 10.47	+28 1.3	1.868	2.763	10.3	20.5	12 27	4 11.70	+19 42.8	1.369	2.270	12.8	18.8
1 6	4 4.98	+28 1.9	1.954	2.768	13.6	20.7	1 6	4 7.59	+19 50.4	1.455	2.284	16.7	19.1
<b>296780</b>	2009 UB <sub>140</sub>	12 2.0	223°50' 1°5'	2.7	18		<b>466004</b>	2011 GZ <sub>1</sub>	12 2.1	279°90' 5°6'	3.5	17	
10 28	5 9.80	+32 13.3	1.198	2.024	20.4	19.6	10 28	5 3.89	+37 37.6	2.422	3.196	12.9	21.6
11 7	5 3.55	+30 44.1	1.122	2.022	15.9	19.3	11 7	4 58.04	+38 34.6	2.323	3.179	10.5	21.4
11 17	4 53.30	+28 47.3	1.066	2.019	10.3	19.0	11 17	4 49.60	+39 21.5	2.247	3.162	8.1	21.2
11 27	4 40.40	+26 24.2	1.035	2.016	4.1	18.7	11 27	4 39.23	+39 53.7	2.198	3.144	6.1	21.1
12 7	4 26.91	+23 43.8	1.031	2.013	3.2	18.6	12 7	4 27.96	+40 8.5	2.177	3.127	5.7	21.0
12 17	4 14.89	+21 1.1	1.055	2.009	9.5	19.0	12 17	4 17.02	+40 5.6	2.185	3.110	7.4	21.1
12 27	4 6.03	+18 32.2	1.105	2.006	15.2	19.3	12 27	4 7.63	+39 48.0	2.221	3.092	10.0	21.2
1 6	4 1.12	+16 28.3	1.176	2.002	20.0	19.6	1 6	4 0.71	+39 20.8	2.280	3.074	12.6	21.4
<b>373084</b>	2011 FL <sub>102</sub>	12 2.0	248°67' 2°9'	3.4	18		<b>11387</b>	1998 UA <sub>37</sub>	12 2.1	109°12' 1°0'	2.4	18	
10 28	5 0.04	+32 27.0	2.408	3.204	12.3	21.5	10 28	5 4.14	+25 24.8	2.088	2.898	13.4	18.4
11 7	4 54.66	+32 26.1	2.321	3.200	9.6	21.3	11 7	4 57.66	+25 25.1	2.025	2.918	10.2	18.2
11 17	4 47.16	+32 14.9	2.257	3.196	6.6	21.1	11 17	4 48.96	+25 19.0	1.986	2.937	6.4	18.0
11 27	4 38.26	+31 51.9	2.221	3.192	3.8	20.9	11 27	4 38.87	+25 6.1	1.975	2.956	2.5	17.8
12 7	4 28.91	+31 17.6	2.213	3.187	3.2	20.9	12 7	4 28.46	+24 47.3	1.994	2.975	2.1	17.8
12 17	4 20.10	+30 34.5	2.236	3.183	5.8	21.0	12 17	4 18.83	+24 24.9	2.043	2.993	5.9	18.1
12 27	4 12.78	+29 46.6	2.287	3.178	8.9	21.2	12 27	4 10.94	+24 2.2	2.120	3.010	9.5	18.4
1 6	4 7.60	+28 58.4	2.364	3.174	11.7	21.4	1 6	4 5.38	+23 42.5	2.222	3.027	12.5	18.6
<b>132456</b>	2002 HT <sub>5</sub>	12 2.0	211°89' 8°4'	29.1	18		<b>422131</b>	2014 QD <sub>423</sub>	12 2.1	86°53' 4°5'	3.7	17	
10 28	4 59.77	+ 0 58.8	1.892	2.698	14.8	20.2	10 28	5 2.86	+35 6.4	2.129	2.920	13.8	21.8
11 7	4 54.55	- 0 8.3	1.823	2.695	12.2	20.0	11 7	4 57.10	+35 32.5	2.054	2.926	11.0	21.6
11 17	4 47.13	- 1 4.2	1.777	2.692	9.8	19.8	11 17	4 48.83	+35 46.5	2.002	2.932	7.9	21.4
11 27	4 38.26	- 1 42.8	1.756	2.689	8.5	19.8	11 27	4 38.88	+35 45.3	1.975	2.937	5.2	21.3
12 7	4 28.92	- 1 59.9	1.762	2.685	9.1	19.8	12 7	4 28.41	+35 28.4	1.978	2.943	4.7	21.2
12 17	4 20.15	- 1 53.4	1.794	2.681	11.1	19.9	12 17	4 18.63	+34 57.5	2.008	2.948	6.9	21.4
12 27	4 12.92	- 1 24.2	1.850	2.677	13.7	20.1	12 27	4 10.66	+34 17.3	2.067	2.954	9.9	21.6
1 6	4 7.91	- 0 35.5	1.927	2.673	16.2	20.2	1 6	4 5.23	+33 33.5	2.149	2.959	12.7	21.8
<b>101372</b>	1998 UD <sub>6</sub>	12 2.0	156°11' 0°8'	1.8	18		<b>118963</b>	2000 WY <sub>132</sub>	12 2.1	331°30' 6°1'	3.9	17	
10 28	5 1.92	+19 47.9	2.009	2.829	13.5	20.0	10 28	5 1.69	+36 42.0	1.767	2.568	15.9	18.4
11 7	4 56.19	+19 47.7	1.933	2.832	10.2	19.7	11 7	4 56.99	+37 24.6	1.683	2.557	12.9	18.2
11 17	4 48.17	+19 45.6	1.881	2.836	6.3	19.5	11 17	4 49.18	+37 53.4	1.619	2.546	9.7	18.0
11 27	4 38.62	+19 42.1	1.856	2.839	2.2	19.3	11 27	4 39.11	+38 3.5	1.579	2.536	6.9	17.8
12 7	4 28.58	+19 38.0	1.861	2.841	2.4	19.3	12 7	4 28.13	+37 52.4	1.566	2.527	6.3	17.8
12 17	4 19.14	+19 34.9	1.895	2.844	6.5	19.6	12 17	4 17.80	+37 21.5	1.580	2.518	8.6	17.9
12 27	4 11.31	+19 34.7	1.957	2.846	10.2	19.8	12 27	4 9.61	+36 36.3	1.619	2.510	11.9	18.1
1 6	4 5.80	+19 39.4	2.043	2.848	13.5	20.0	1 6	4 4.51	+35 44.4	1.681	2.502	15.2	18.3
<b>265560</b>	2005 QT <sub>5</sub>	12 2.0	149°54' 1°3'	2.5	18		<b>40210</b>	1998 SL <sub>56</sub>	12 2.1	112°73' 3°6'	3.5	18	
10 28	5 5.61	+26 38.5	1.761	2.576	1								

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>322675</b>	1999 <i>TP</i> <sub>295</sub>	12	2.1	59°91	3°7/	1.2 18	<b>131486</b>	2001 <i>SZ</i> <sub>78</sub>	12	2.1	124°96	18°9/27.4	17
10 28	5 5.29	+15 27.1	1.207	2.052	19.1	20.4	10 28	5 5.07	-14 15.8	1.194	1.974	23.1	20.1
11 7	4 59.36	+14 53.1	1.166	2.078	14.4	20.2	11 7	4 59.42	-16 35.7	1.160	1.981	21.1	19.9
11 17	4 50.29	+14 21.3	1.146	2.104	9.2	20.0	11 17	4 50.51	-18 21.5	1.142	1.988	19.5	19.9
11 27	4 39.32	+13 55.1	1.151	2.130	4.5	19.8	11 27	4 39.48	-19 19.9	1.143	1.995	18.9	19.9
12 7	4 28.11	+13 38.0	1.181	2.156	5.0	19.9	12 7	4 27.96	-19 23.9	1.161	2.002	19.4	19.9
12 17	4 18.25	+13 32.4	1.236	2.182	9.5	20.3	12 17	4 17.60	-18 34.1	1.198	2.008	20.8	20.0
12 27	4 11.00	+13 39.7	1.316	2.208	14.0	20.6	12 27	4 9.77	-16 58.1	1.252	2.013	22.6	20.2
1 6	4 6.98	+13 59.3	1.417	2.234	17.7	20.9	1 6	4 5.26	-14 48.1	1.319	2.019	24.5	20.4
<b>99872</b>	2002 <i>PL</i> <sub>53</sub>	12	2.1	76°26	2°7/	1.2 18	<b>190244</b>	2007 <i>EZ</i> <sub>67</sub>	12	2.1	195°86	2°6/	1.2 18
10 28	4 58.98	+13 52.2	2.294	3.112	12.1	20.5	10 28	5 2.59	+16 19.3	1.824	2.649	14.5	21.0
11 7	4 53.50	+13 36.3	2.236	3.133	9.1	20.3	11 7	4 56.89	+15 52.1	1.746	2.647	11.0	20.8
11 17	4 46.26	+13 22.7	2.203	3.154	5.9	20.2	11 17	4 48.72	+15 24.5	1.692	2.645	7.0	20.6
11 27	4 37.94	+13 12.9	2.198	3.175	3.1	20.0	11 27	4 38.89	+14 58.7	1.664	2.643	3.3	20.3
12 7	4 29.38	+13 8.5	2.223	3.195	3.5	20.1	12 7	4 28.49	+14 37.3	1.665	2.640	3.8	20.4
12 17	4 21.42	+13 10.7	2.278	3.215	6.3	20.3	12 17	4 18.73	+14 22.8	1.695	2.637	7.7	20.6
12 27	4 14.82	+13 20.2	2.360	3.236	9.3	20.5	12 27	4 10.71	+14 17.5	1.751	2.634	11.6	20.8
1 6	4 10.11	+13 36.9	2.466	3.256	11.9	20.7	1 6	4 5.17	+14 22.4	1.831	2.629	15.0	21.0
<b>348969</b>	2006 <i>UT</i> <sub>80</sub>	12	2.1	98°59	2°4/	2.6 18	<b>332000</b>	2005 <i>JK</i> <sub>69</sub>	12	2.1	179°09	5°7/29.5	18
10 28	5 8.89	+26 35.0	1.519	2.339	17.1	20.8	10 28	4 55.51	+1 41.2	2.866	3.660	10.6	21.4
11 7	5 2.11	+27 10.0	1.460	2.356	13.1	20.5	11 7	4 50.71	+1 2.1	2.794	3.660	8.6	21.2
11 17	4 52.13	+27 37.5	1.423	2.374	8.5	20.3	11 17	4 44.49	+0 30.9	2.746	3.661	6.8	21.1
11 27	4 40.03	+27 54.2	1.412	2.391	3.8	20.1	11 27	4 37.38	+0 10.9	2.727	3.661	5.8	21.1
12 7	4 27.36	+27 58.9	1.429	2.408	3.4	20.1	12 7	4 29.98	+0 4.1	2.736	3.661	6.1	21.1
12 17	4 15.76	+27 53.5	1.473	2.424	7.7	20.4	12 17	4 22.95	+0 11.5	2.773	3.661	7.6	21.2
12 27	4 6.63	+27 42.5	1.544	2.440	12.0	20.7	12 27	4 16.90	+0 33.0	2.837	3.660	9.6	21.3
1 6	4 0.77	+27 31.0	1.638	2.455	15.7	21.0	1 6	4 12.29	+1 6.9	2.925	3.660	11.5	21.5
<b>447169</b>	2005 <i>NC</i> <sub>28</sub>	12	2.1	158°39	4°3/30.4	18	<b>406172</b>	2006 <i>WB</i> <sub>72</sub>	12	2.1	286°89	0°6/	1.8 17
10 28	4 59.36	+10 11.2	2.249	3.064	12.4	21.7	10 28	4 59.60	+22 38.8	1.933	2.758	13.8	21.5
11 7	4 53.91	+9 31.1	2.177	3.068	9.6	21.6	11 7	4 54.72	+22 5.0	1.840	2.742	10.5	21.3
11 17	4 46.60	+8 54.9	2.130	3.073	6.7	21.4	11 17	4 47.44	+21 24.4	1.770	2.726	6.6	21.0
11 27	4 38.09	+8 25.6	2.110	3.077	4.5	21.3	11 27	4 38.48	+20 38.4	1.727	2.710	2.3	20.7
12 7	4 29.22	+8 5.9	2.120	3.080	5.0	21.3	12 7	4 28.88	+19 49.6	1.714	2.695	2.4	20.7
12 17	4 20.88	+7 57.8	2.160	3.083	7.5	21.5	12 17	4 19.81	+19 1.9	1.729	2.679	6.9	20.9
12 27	4 13.90	+8 2.0	2.226	3.086	10.4	21.6	12 27	4 12.35	+18 19.7	1.772	2.663	11.0	21.2
1 6	4 8.83	+8 17.9	2.316	3.089	13.1	21.8	1 6	4 7.27	+17 46.4	1.837	2.647	14.5	21.4
<b>277076</b>	2005 <i>EB</i> <sub>153</sub>	12	2.1	295°27	5°0/30.9	18	<b>493937</b>	2016 <i>AG</i>	12	2.1	344°91	6°0/30.6	17
10 28	4 59.45	+5 51.7	2.279	3.086	12.5	20.5	10 28	4 57.69	+5 38.2	1.926	2.746	14.0	20.2
11 7	4 54.22	+5 47.8	2.181	3.064	10.0	20.3	11 7	4 53.05	+5 15.3	1.852	2.741	11.1	20.0
11 17	4 46.98	+5 52.5	2.107	3.042	7.3	20.1	11 17	4 46.27	+5 1.7	1.801	2.737	8.2	19.8
11 27	4 38.29	+6 8.4	2.060	3.020	5.3	19.9	11 27	4 38.05	+5 0.9	1.775	2.733	6.2	19.7
12 7	4 28.96	+6 36.9	2.042	2.998	5.6	19.9	12 7	4 29.33	+5 15.2	1.777	2.729	6.6	19.7
12 17	4 19.92	+7 18.4	2.054	2.975	8.0	20.0	12 17	4 21.12	+5 45.3	1.806	2.726	9.0	19.9
12 27	4 12.09	+8 12.1	2.093	2.953	11.0	20.1	12 27	4 14.37	+6 30.2	1.861	2.724	12.0	20.1
1 6	4 6.17	+9 15.9	2.156	2.931	13.8	20.3	1 6	4 9.76	+7 27.5	1.938	2.721	14.9	20.2
<b>165571</b>	2001 <i>DE</i> <sub>92</sub>	12	2.1	305°14	6°8/29.8	18	<b>67287</b>	2000 <i>GP</i> <sub>23</sub>	12	2.1	281°96	3°8/	2.9 18
10 28	4 58.56	+7 44.5	1.644	2.475	15.5	19.7	10 28	5 5.28	+29 29.2	1.542	2.362	16.9	19.3
11 7	4 54.08	+6 43.1	1.567	2.464	12.3	19.5	11 7	4 59.85	+30 8.7	1.462	2.356	13.2	19.1
11 17	4 47.08	+5 47.6	1.512	2.453	9.0	19.3	11 17	4 51.07	+30 39.5	1.403	2.350	9.0	18.8
11 27	4 38.34	+5 3.8	1.483	2.442	6.9	19.1	11 27	4 39.81	+30 57.2	1.369	2.344	4.9	18.5
12 7	4 28.96	+4 36.9	1.479	2.432	7.6	19.1	12 7	4 27.57	+30 59.6	1.362	2.338	4.4	18.5
12 17	4 20.14	+4 29.8	1.502	2.422	10.6	19.3	12 17	4 16.05	+30 47.9	1.383	2.332	8.3	18.7
12 27	4 13.05	+4 43.5	1.549	2.412	14.1	19.5	12 27	4 6.85	+30 26.9	1.429	2.326	12.6	19.0
1 6	4 8.46	+5 16.0	1.617	2.402	17.3	19.7	1 6	4 0.99	+30 3.2	1.496	2.320	16.5	19.2
<b>68722</b>	2002 <i>DF</i> <sub>6</sub>	12	2.1	223°68	1°1/	2.5 18	<b>517255</b>	2014 <i>DF</i> <sub>115</sub>	12	2.1	284°51	1°2/	1.7 18
10 28	4 59.95	+25 51.3	2.404	3.214	11.9	20.2	10 28	5 1.62	+20 15.0	1.597	2.431	15.8	22.2
11 7	4 54.53	+25 53.3	2.316	3.208	9.1	20.0	11 7	4 56.73	+19 59.4	1.510	2.417	12.0	21.9
11 17	4 47.10	+25 49.7	2.253	3.203	5.8	19.8	11 17	4 48.94	+19 40.1	1.445	2.403	7.6	21.6
11 27	4 38.30	+25 39.7	2.217	3.198	2.3	19.5	11 27	4 39.06	+19 18.2	1.405	2.388	2.7	21.3
12 7	4 29.01	+25 24.0	2.211	3.192	2.0	19.5	12 7	4 28.32	+18 55.6	1.393	2.374	3.0	21.3
12 17	4 20.19	+25 4.3	2.236	3.186	5.5	19.7	12 17	4 18.16	+18 35.4	1.408	2.359	8.0	21.6
12 27	4 12.73	+24 43.2	2.289	3.180	8.8	19.9	12 27	4 9.93	+18 21.1	1.450	2.345	12.7	21.8
1 6	4 7.29	+24 23.9	2.367	3.174	11.8	20.1	1 6	4 4.57	+18 15.5	1.512	2.331	16.7	22.0
<b>511644</b>	2015 <i>BT</i> <sub>202</sub>	12	2.1	235°43	2°4/	1.6 17	<b>326878</b>	2003 <i>UB</i> <sub>350</sub>	12	2.1	211°41	0°5/	1.9 17
10 28	5 4.79	+16 27.3	1.418	2.254	17.3	21.6	10 28	4 58.86	+20 43.1	2.430	3.246	11.6	21.7
11 7	4 59.27	+16 23.9	1.343	2.250	13.2	21.4	11 7	4 53.62	+20 39.9	2.346	3.243	8.7	21.5
11 17	4 50.57	+16 22.1	1.290	2.246	8.4	21.1	11 17	4 46.49	+20 34.4	2.286	3.241	5.4	21.3
11 27	4 39.58	+16 23.1	1.261	2.242	3.5	20.8	11 27	4 38.11	+20 27.0	2.255	3.238	1.9	21.0
12 7	4 27.75	+16 28.1	1.259	2.238	3.9	20.8	12 7	4 29.29	+20 18.4	2.254	3.235	2.0	21.0
12 17	4 16.67	+16 38.8	1.285	2.233	8.9	21.1	12 17	4 20.91	+20 10.3	2.284	3.232	5.5	21.3
12 27	4 7.83	+16 56.8	1.335	2.228	13.7	21.4	12 27	4 13.81	+20 4.4	2.341	3.229	8.8	21.5
1 6	4 2.16	+17 22.9	1.407	2.224	17.8	21.6	1 6	4 8.60	+20 2.5	2.424	3.226	11.7	21.7
<b>245938</b>	2006 <i>RB</i> <sub>73</sub>	12	2.1	61°95	0°4/	2.2 18	<b>174200</b>	2002 <i>QF</i> <sub>46</sub>	12	2.1	87°92	1°1/	1.8 18
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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>356043</b>	2009 <i>CT</i> <sub>29</sub>	12	2.1 267°86	0°5/ 1.9 15			<b>90684</b>	1981 <i>EY</i> <sub>6</sub>	12	2.1 27°76	5°2/ 4.3 18		
10 28	5 1.28	+21 0.3	1.836	2.662	14.3	22.0	10 28	5 1.83	+36 41.2	1.785	2.585	15.8	18.3
11 7	4 56.07	+20 55.2	1.752	2.654	10.9	21.7	11 7	4 56.71	+36 52.1	1.717	2.592	12.6	18.1
11 17	4 48.32	+20 47.0	1.690	2.646	6.8	21.5	11 17	4 48.75	+36 46.9	1.670	2.601	9.2	17.9
11 27	4 38.80	+20 35.8	1.655	2.638	2.4	21.2	11 27	4 38.95	+36 22.6	1.648	2.610	6.1	17.7
12 7	4 28.60	+20 23.0	1.649	2.630	2.4	21.2	12 7	4 28.66	+35 39.5	1.653	2.619	5.3	17.7
12 17	4 18.97	+20 10.6	1.671	2.622	7.0	21.4	12 17	4 19.30	+34 41.2	1.686	2.629	7.6	17.9
12 27	4 11.06	+20 1.4	1.720	2.614	11.1	21.7	12 27	4 12.09	+33 34.6	1.745	2.640	10.9	18.1
1 6	4 5.66	+19 57.9	1.793	2.605	14.7	21.9	1 6	4 7.75	+32 26.9	1.827	2.651	14.0	18.3
<b>351119</b>	2003 <i>WT</i> <sub>16</sub>	12	2.1 325°48	2°1/ 1.2 17			<b>265908</b>	2006 <i>BM</i> <sub>75</sub>	12	2.1 70°43	4°6/ 30.9 18		
10 28	4 59.90	+20 24.9	1.654	2.489	15.3	20.8	10 28	4 59.70	+ 8 17.0	2.101	2.917	13.2	20.5
11 7	4 55.10	+19 24.1	1.577	2.484	11.5	20.6	11 7	4 54.20	+ 7 59.2	2.045	2.936	10.2	20.3
11 17	4 47.70	+18 16.7	1.522	2.480	7.3	20.3	11 17	4 46.80	+ 7 48.2	2.013	2.954	7.1	20.2
11 27	4 38.56	+17 6.2	1.494	2.476	3.0	20.0	11 27	4 38.22	+ 7 46.4	2.008	2.973	4.9	20.1
12 7	4 28.89	+15 57.3	1.494	2.472	3.6	20.1	12 7	4 29.37	+ 7 55.5	2.031	2.991	5.2	20.1
12 17	4 19.95	+14 55.8	1.522	2.468	8.0	20.3	12 17	4 21.16	+ 8 15.8	2.084	3.010	7.6	20.3
12 27	4 12.89	+14 6.4	1.576	2.465	12.3	20.6	12 27	4 14.41	+ 8 46.9	2.163	3.028	10.5	20.5
1 6	4 8.45	+13 32.1	1.652	2.462	15.9	20.8	1 6	4 9.66	+ 9 27.4	2.266	3.046	13.1	20.8
<b>121819</b>	2000 <i>AH</i> <sub>247</sub>	12	2.1 324°14	5°7/ 3.8 18			<b>517209</b>	2013 <i>YC</i> <sub>43</sub>	12	2.1 343°90	0°5/ 2.2 18		
10 28	5 1.30	+36 27.9	1.922	2.719	14.9	19.1	10 28	4 59.86	+22 28.8	1.177	2.032	18.9	20.8
11 7	4 56.50	+37 8.1	1.833	2.705	12.1	18.9	11 7	4 56.28	+22 43.2	1.105	2.022	14.4	20.5
11 17	4 48.82	+37 35.5	1.765	2.692	9.1	18.7	11 17	4 49.09	+22 53.5	1.053	2.014	9.2	20.1
11 27	4 39.02	+37 45.8	1.722	2.679	6.4	18.5	11 27	4 39.23	+22 58.7	1.024	2.007	3.2	19.8
12 7	4 28.37	+37 36.7	1.706	2.667	5.9	18.5	12 7	4 28.32	+22 58.8	1.019	2.001	3.0	19.8
12 17	4 18.27	+37 9.4	1.718	2.655	8.0	18.6	12 17	4 18.23	+22 55.9	1.038	1.996	9.0	20.1
12 27	4 10.11	+36 28.7	1.755	2.644	11.2	18.7	12 27	4 10.71	+22 54.0	1.081	1.992	14.5	20.4
1 6	4 4.80	+35 41.2	1.816	2.633	14.4	18.9	1 6	4 6.82	+22 56.7	1.143	1.989	19.1	20.7
<b>147810</b>	2005 <i>SL</i> <sub>82</sub>	12	2.1 67°24	0°7/ 2.3 18			<b>144326</b>	2004 <i>DZ</i> <sub>21</sub>	12	2.1 290°60	3°7/ 1.3 18		
10 28	5 0.59	+24 43.4	1.981	2.801	13.7	20.4	10 28	5 2.19	+14 0.4	1.448	2.286	16.9	19.8
11 7	4 55.30	+24 40.4	1.906	2.805	10.4	20.2	11 7	4 57.32	+13 43.4	1.368	2.275	13.0	19.5
11 17	4 47.70	+24 31.4	1.854	2.808	6.5	20.0	11 17	4 49.41	+13 29.6	1.309	2.264	8.5	19.2
11 27	4 38.55	+24 16.2	1.830	2.812	2.4	19.7	11 27	4 39.28	+13 21.7	1.275	2.253	4.4	19.0
12 7	4 28.92	+23 55.8	1.834	2.815	2.1	19.7	12 7	4 28.27	+13 22.1	1.267	2.242	4.9	19.0
12 17	4 19.93	+23 32.6	1.867	2.819	6.2	20.0	12 17	4 17.88	+13 32.8	1.286	2.231	9.3	19.2
12 27	4 12.61	+23 10.0	1.927	2.822	10.0	20.2	12 27	4 9.55	+13 55.0	1.330	2.220	14.0	19.4
1 6	4 7.65	+22 51.1	2.012	2.826	13.3	20.4	1 6	4 4.23	+14 28.5	1.395	2.210	18.0	19.7
<b>157677</b>	2005 <i>YG</i> <sub>131</sub>	12	2.1 118°53	0°8/ 1.8 18			<b>473519</b>	2015 <i>XU</i> <sub>146</sub>	12	2.1 34°56	2°0/ 1.6 18		
10 28	4 59.20	+20 9.3	2.287	3.106	12.1	21.1	10 28	5 0.36	+15 50.8	1.978	2.802	13.5	21.1
11 7	4 53.90	+19 59.9	2.212	3.111	9.1	20.9	11 7	4 55.07	+15 56.4	1.903	2.805	10.2	20.9
11 17	4 46.67	+19 48.3	2.161	3.116	5.7	20.7	11 17	4 47.56	+16 3.9	1.853	2.807	6.5	20.7
11 27	4 38.18	+19 35.2	2.139	3.121	2.0	20.5	11 27	4 38.56	+16 14.1	1.830	2.810	2.8	20.4
12 7	4 29.30	+19 21.7	2.146	3.126	2.1	20.5	12 7	4 29.04	+16 27.6	1.835	2.813	3.0	20.5
12 17	4 20.95	+19 9.7	2.183	3.131	5.8	20.7	12 17	4 20.09	+16 45.1	1.870	2.816	6.8	20.7
12 27	4 13.99	+19 1.1	2.248	3.136	9.1	21.0	12 27	4 12.69	+17 7.3	1.932	2.819	10.4	20.9
1 6	4 9.01	+18 57.8	2.338	3.140	12.0	21.2	1 6	4 7.53	+17 34.7	2.018	2.823	13.6	21.2
<b>328424</b>	2008 <i>SR</i> <sub>255</sub>	12	2.1 140°72	1°7/ 1.4 17			<b>184012</b>	2004 <i>FT</i> <sub>12</sub>	12	2.1 95°13	6°0/ 29.9 18		
10 28	4 57.80	+16 37.3	2.650	3.465	10.8	21.3	10 28	5 3.57	+10 35.1	1.602	2.429	16.0	19.2
11 7	4 52.57	+16 21.6	2.575	3.472	8.1	21.1	11 7	4 57.49	+ 9 12.5	1.552	2.449	12.4	19.0
11 17	4 45.72	+16 6.0	2.525	3.478	5.1	20.9	11 17	4 48.97	+ 7 54.3	1.525	2.469	8.7	18.9
11 27	4 37.84	+15 51.5	2.504	3.484	2.3	20.8	11 27	4 38.97	+ 6 46.7	1.525	2.489	6.2	18.8
12 7	4 29.64	+15 39.7	2.513	3.489	2.6	20.8	12 7	4 28.74	+ 5 55.2	1.552	2.508	6.9	18.9
12 17	4 21.89	+15 31.8	2.553	3.495	5.5	21.0	12 17	4 19.47	+ 5 23.1	1.606	2.526	9.9	19.1
12 27	4 15.29	+15 29.4	2.621	3.500	8.4	21.2	12 27	4 12.19	+ 5 11.6	1.686	2.545	13.3	19.3
1 6	4 10.36	+15 33.1	2.715	3.505	10.9	21.4	1 6	4 7.48	+ 5 19.0	1.787	2.563	16.2	19.6
<b>372850</b>	2010 <i>VA</i> <sub>130</sub>	12	2.1 62°66	4°8/ 3.2 18			<b>266565</b>	2008 <i>GZ</i> <sub>76</sub>	12	2.1 326°14	1°0/ 2.2 18		
10 28	5 9.95	+30 53.4	1.187	2.016	20.4	21.1	10 28	5 3.85	+20 59.4	1.233	2.079	18.7	20.0
11 7	5 3.62	+31 38.2	1.142	2.039	15.8	20.9	11 7	4 59.39	+21 50.8	1.154	2.067	14.4	19.7
11 17	4 53.35	+32 8.9	1.115	2.062	10.8	20.7	11 17	4 51.16	+22 44.1	1.096	2.055	9.2	19.4
11 27	4 40.52	+32 20.2	1.112	2.086	6.1	20.5	11 27	4 40.01	+23 36.0	1.062	2.045	3.4	19.0
12 7	4 27.16	+32 10.6	1.134	2.109	5.3	20.5	12 7	4 27.54	+24 23.1	1.053	2.035	3.2	19.0
12 17	4 15.36	+31 44.1	1.182	2.133	9.2	20.8	12 17	4 15.71	+25 3.7	1.070	2.025	9.1	19.3
12 27	4 6.75	+31 8.7	1.254	2.156	13.7	21.1	12 27	4 6.40	+25 39.1	1.110	2.017	14.6	19.6
1 6	4 2.10	+30 32.5	1.347	2.180	17.6	21.5	1 6	4 0.86	+26 12.3	1.171	2.009	19.3	19.8
<b>410809</b>	2009 <i>KC</i> <sub>14</sub>	12	2.1 143°85	5°4/ 30.0 18			<b>81813</b>	2000 <i>KV</i> <sub>23</sub>	12	2.1 279°43	0°3/ 2.0 18		
10 28	4 59.34	+ 4 53.9	2.531	3.331	11.6	21.8	10 28	5 1.23	+20 53.8	1.908	2.732	14.0	19.5
11 7	4 53.66	+ 4 13.4	2.466	3.342	9.3	21.7	11 7	4 55.97	+21 1.1	1.825	2.726	10.6	19.3
11 17	4 46.37	+ 3 39.9	2.426	3.353	6.9	21.6	11 17	4 48.27	+21 6.1	1.765	2.720	6.6	19.0
11 27	4 38.05	+ 3 16.7	2.414	3.363	5.5	21.5	11 27	4 38.84	+21 8.8	1.731	2.714	2.3	18.7
12 7	4 29.47	+ 3 6.1	2.431	3.372	5.9	21.5	12 7	4 28.77	+21 9.6	1.727	2.708	2.3	18.7
12 17	4 21.39	+ 3 9.3	2.478	3.381	7.7	21.7	12 17	4 19.23	+21 9.7	1.751	2.702	6.7	19.0
12 27	4 14.51	+ 3 26.0	2.552	3.389	10.1	21.8	12 27	4 11.34	+21 11.5	1.803	2.697	10.7	19.2
1 6	4 9.34	+ 3 55.0	2.649	3.397	12.2	22.0	1 6	4 5.88	+21 17.0	1.878	2.691	14.2	19.4
<b>21465</b>	Michelepatt	12	2.1 217°75	3°1/ 1.1 18			<b>280289</b>	2003 <i>HX</i> <sub>44</sub>	12	2.1 147°50	0°0/ 1.9 18		

EPHEMERIDES

12 2.1

12 2.1

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>158703</b>	2003 <i>FX</i> <sub>130</sub>		12	2.1 105°28	3°0/ 1.3 18		<b>521533</b>	2015 <i>OC</i> <sub>100</sub>		12	2.1 43°14	1°8/ 2.7 17	
10 28	5 4.68	+13 55.1	1.869	2.687	14.4	20.6	10 28	5 1.85	+27 25.7	1.571	2.399	16.3	21.3
11 7	4 58.14	+13 41.9	1.812	2.709	10.9	20.4	11 7	4 56.70	+27 21.1	1.511	2.412	12.4	21.0
11 17	4 49.33	+13 31.4	1.779	2.730	7.1	20.3	11 17	4 48.74	+27 6.7	1.473	2.426	8.0	20.8
11 27	4 39.12	+13 25.4	1.773	2.750	3.6	20.1	11 27	4 38.98	+26 41.9	1.461	2.441	3.4	20.6
12 7	4 28.60	+13 25.4	1.797	2.770	3.9	20.1	12 7	4 28.78	+26 8.4	1.475	2.456	2.8	20.6
12 17	4 18.89	+13 32.5	1.850	2.789	7.4	20.4	12 17	4 19.56	+25 29.9	1.518	2.472	7.2	20.9
12 27	4 10.97	+13 47.6	1.930	2.808	10.9	20.7	12 27	4 12.50	+24 51.6	1.586	2.488	11.4	21.2
1 6	4 5.46	+14 10.6	2.034	2.826	13.9	20.9	1 6	4 8.31	+24 18.2	1.677	2.504	14.9	21.4
<b>472325</b>	2015 <i>AU</i> <sub>56</sub>		12	2.1 239°48	1°6/ 2.6 18		<b>112166</b>	2002 <i>JT</i> <sub>80</sub>		12	2.1 240°98	0°6/ 1.9 18	
10 28	5 6.34	+26 52.3	1.516	2.340	17.0	21.9	10 28	5 1.94	+22 3.1	1.890	2.713	14.1	20.6
11 7	5 0.61	+26 47.1	1.430	2.330	13.1	21.6	11 7	4 56.52	+21 38.9	1.803	2.704	10.7	20.3
11 17	4 51.54	+26 31.9	1.366	2.319	8.5	21.3	11 17	4 48.61	+21 9.2	1.739	2.695	6.7	20.1
11 27	4 40.04	+26 4.9	1.326	2.307	3.5	21.0	11 27	4 38.98	+20 35.0	1.703	2.686	2.3	19.8
12 7	4 27.61	+25 27.1	1.314	2.296	3.0	20.9	12 7	4 28.72	+19 58.4	1.695	2.676	2.5	19.8
12 17	4 15.91	+24 42.3	1.330	2.283	8.1	21.2	12 17	4 19.05	+19 22.7	1.716	2.666	6.9	20.0
12 27	4 6.53	+23 56.7	1.372	2.270	13.0	21.4	12 27	4 11.08	+18 51.9	1.765	2.656	11.0	20.2
1 6	4 0.46	+23 16.7	1.436	2.257	17.3	21.7	1 6	4 5.58	+18 29.0	1.837	2.645	14.6	20.5
<b>115092</b>	2003 <i>SH</i> <sub>15</sub>		12	2.1 305°24	3°0/30.9 18		<b>311095</b>	2004 <i>FC</i> <sub>136</sub>		12	2.1 193°51	3°5/30.7 18	
10 28	4 57.50	+14 40.1	2.113	2.939	12.7	19.5	10 28	4 59.41	+11 1.8	2.648	3.456	11.0	21.7
11 7	4 52.84	+14 10.0	2.030	2.931	9.7	19.3	11 7	4 53.81	+10 33.4	2.565	3.454	8.5	21.5
11 17	4 46.15	+13 40.6	1.971	2.923	6.3	19.1	11 17	4 46.56	+10 7.9	2.508	3.451	5.8	21.3
11 27	4 38.09	+13 14.5	1.939	2.916	3.4	18.9	11 27	4 38.21	+9 47.5	2.479	3.447	3.7	21.2
12 7	4 29.54	+12 54.0	1.936	2.908	3.9	18.9	12 7	4 29.49	+9 34.1	2.480	3.443	4.1	21.2
12 17	4 21.45	+12 41.4	1.961	2.900	7.1	19.1	12 17	4 21.17	+9 29.3	2.512	3.439	6.5	21.4
12 27	4 14.73	+12 38.5	2.014	2.893	10.5	19.3	12 27	4 13.98	+9 34.0	2.573	3.433	9.2	21.5
1 6	4 10.05	+12 45.6	2.090	2.886	13.5	19.5	1 6	4 8.46	+9 48.1	2.658	3.427	11.6	21.7
<b>396501</b>	2014 <i>FG</i> <sub>54</sub>		12	2.1 196°90	2°1/ 1.4 18		<b>212859</b>	2007 <i>VQ</i> <sub>91</sub>		12	2.1 0°22	1°8/ 2.6 18	
10 28	5 2.03	+16 40.0	2.097	2.915	13.1	22.0	10 28	5 1.44	+26 47.2	1.614	2.442	15.9	20.8
11 7	4 56.24	+16 24.6	2.015	2.913	9.9	21.8	11 7	4 56.58	+26 54.5	1.540	2.441	12.2	20.6
11 17	4 48.27	+16 9.1	1.957	2.910	6.3	21.6	11 17	4 48.82	+26 53.6	1.487	2.441	7.9	20.4
11 27	4 38.82	+15 54.9	1.927	2.907	2.8	21.3	11 27	4 39.08	+26 43.1	1.460	2.441	3.4	20.1
12 7	4 28.85	+15 43.6	1.927	2.903	3.1	21.4	12 7	4 28.66	+26 23.4	1.460	2.441	2.9	20.1
12 17	4 19.40	+15 37.1	1.956	2.899	6.8	21.6	12 17	4 19.00	+25 57.2	1.488	2.441	7.3	20.3
12 27	4 11.46	+15 37.1	2.013	2.894	10.4	21.8	12 27	4 11.41	+25 29.3	1.541	2.442	11.6	20.6
1 6	4 5.71	+15 44.7	2.094	2.889	13.5	22.0	1 6	4 6.71	+25 4.2	1.617	2.444	15.4	20.8
<b>447567</b>	2006 <i>TU</i> <sub>29</sub>		12	2.1 44°44	2°6/ 1.2 18		<b>442522</b>	2011 <i>WZ</i> <sub>91</sub>		12	2.1 23°34	1°6/ 1.9 17	
10 28	4 59.58	+17 18.5	1.725	2.558	14.8	21.0	10 28	5 1.33	+16 14.1	1.202	2.055	18.7	20.2
11 7	4 54.66	+16 41.5	1.659	2.566	11.2	20.8	11 7	4 56.81	+16 49.7	1.154	2.070	14.1	20.0
11 17	4 47.35	+16 3.3	1.617	2.573	7.1	20.6	11 17	4 49.05	+17 29.4	1.126	2.087	8.8	19.8
11 27	4 38.49	+15 26.6	1.601	2.581	3.2	20.4	11 27	4 39.14	+18 12.4	1.122	2.105	3.3	19.5
12 7	4 29.21	+14 54.5	1.613	2.589	3.7	20.5	12 7	4 28.67	+18 57.1	1.143	2.124	3.3	19.6
12 17	4 20.68	+14 30.3	1.653	2.598	7.6	20.7	12 17	4 19.30	+19 42.4	1.190	2.145	8.5	19.9
12 27	4 13.93	+14 16.2	1.719	2.606	11.5	21.0	12 27	4 12.40	+20 28.4	1.261	2.167	13.3	20.3
1 6	4 9.62	+14 13.5	1.808	2.615	14.8	21.2	1 6	4 8.78	+21 15.3	1.353	2.190	17.3	20.6
<b>23756</b>	Daniellozano		12	2.1 166°12	0°7/ 1.9 18		<b>173611</b>	2001 <i>FJ</i> <sub>9</sub>		12	2.1 192°23	0°9/ 2.4 18	
10 28	5 4.98	+21 41.5	1.777	2.598	15.0	19.4	10 28	5 6.33	+25 2.8	2.053	2.860	13.7	21.3
11 7	4 58.78	+21 18.7	1.703	2.603	11.3	19.1	11 7	4 59.67	+25 4.9	1.967	2.858	10.5	21.1
11 17	4 49.96	+20 50.9	1.651	2.606	7.1	18.9	11 17	4 50.52	+25 1.0	1.905	2.856	6.7	20.9
11 27	4 39.40	+20 18.9	1.627	2.610	2.4	18.6	11 27	4 39.64	+24 49.9	1.871	2.852	2.6	20.6
12 7	4 28.32	+19 45.0	1.632	2.612	2.6	18.6	12 7	4 28.14	+24 32.2	1.867	2.848	2.2	20.6
12 17	4 18.01	+19 12.6	1.665	2.614	7.2	18.9	12 17	4 17.25	+24 9.9	1.893	2.843	6.4	20.8
12 27	4 9.62	+18 45.5	1.726	2.616	11.3	19.2	12 27	4 8.09	+23 46.6	1.948	2.837	10.3	21.1
1 6	4 3.90	+18 26.6	1.811	2.617	14.9	19.4	1 6	4 1.43	+23 26.2	2.027	2.830	13.6	21.3
<b>246272</b>	2007 <i>TO</i> <sub>41</sub>		12	2.1 231°20	2°5/ 1.3 18		<b>328097</b>	2008 <i>AD</i> <sub>14</sub>		12	2.1 134°30	1°3/ 2.6 18	
10 28	5 3.97	+18 31.2	1.471	2.306	16.8	20.6	10 28	5 6.48	+26 59.6	1.578	2.399	16.6	21.2
11 7	4 58.57	+17 52.6	1.393	2.300	12.8	20.4	11 7	5 0.24	+26 43.6	1.509	2.407	12.6	21.0
11 17	4 50.12	+17 10.3	1.337	2.294	8.1	20.1	11 17	4 51.00	+26 17.2	1.463	2.415	8.1	20.7
11 27	4 39.52	+16 27.1	1.307	2.288	3.5	19.8	11 27	4 39.79	+25 40.1	1.442	2.423	3.2	20.4
12 7	4 28.18	+15 46.7	1.304	2.282	4.0	19.8	12 7	4 28.05	+24 54.1	1.449	2.430	2.7	20.4
12 17	4 17.60	+15 13.6	1.328	2.275	8.9	20.1	12 17	4 17.31	+24 3.8	1.485	2.437	7.4	20.7
12 27	4 9.19	+14 51.7	1.378	2.268	13.6	20.4	12 27	4 8.86	+23 15.2	1.547	2.443	11.9	21.0
1 6	4 3.82	+14 43.3	1.448	2.260	17.6	20.6	1 6	4 3.47	+22 33.6	1.631	2.449	15.7	21.3
<b>357310</b>	2003 <i>CM</i> <sub>10</sub>		12	2.1 302°99	5°7/30.5 18		<b>217159</b>	2002 <i>PV</i> <sub>71</sub>		12	2.1 102°39	0°3/ 1.9 18	
10 28	4 58.84	+7 45.1	1.846	2.670	14.4	20.4	10 28	5 6.41	+23 21.2	1.568	2.393	16.4	21.1
11 7	4 54.09	+7 10.8	1.767	2.660	11.3	20.2	11 7	4 59.93	+22 51.5	1.510	2.412	12.4	20.8
11 17	4 47.05	+6 43.4	1.710	2.651	8.2	20.0	11 17	4 50.65	+22 14.6	1.474	2.430	7.7	20.6
11 27	4 38.43	+6 27.0	1.679	2.641	5.9	19.8	11 27	4 39.62	+21 31.9	1.465	2.448	2.6	20.4
12 7	4 29.22	+6 24.6	1.675	2.632	6.4	19.8	12 7	4 28.26	+20 46.4	1.484	2.465	2.6	20.4
12 17	4 20.50	+6 37.9	1.699	2.623	9.2	20.0	12 17	4 17.97	+20 2.5	1.531	2.482	7.5	20.7
12 27	4 13.33	+7 6.9	1.748	2.614	12.5	20.1	12 27	4 9.94	+19 25.0	1.606	2.499	11.8	21.0
1 6	4 8.43	+7 49.9	1.819	2.605	15.6	20.3	1 6	4 4.82	+18 57.2	1.702	2.515	15.4	21.3
<b>442413</b>	2011 <i>UJ</i> <sub>104</sub>		12	2.1 100°60	3°8/ 3.4 18		<b>335348</b>	2005 <i>SQ</i> <sub>49</sub>		12	2.1 58°82	1°0/ 1.9 18	

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>42896</b>	1999 <i>RX</i> <sub>182</sub>	12 2.1	4°79	2°1/ 1.5	18		<b>227365</b>	2005 <i>UK</i> <sub>164</sub>	12 2.1	243°99	0°1/ 2.1	18	
10 28	4 58.49	+19 3.3	1.312	2.164	17.5	18.1	10 28	5 3.18	+23 11.2	1.711	2.537	15.3	20.7
11 7	4 54.63	+18 35.5	1.248	2.163	13.2	17.8	11 7	4 57.74	+22 52.5	1.626	2.528	11.6	20.5
11 17	4 47.71	+18 4.8	1.203	2.164	8.3	17.6	11 17	4 49.52	+22 27.2	1.564	2.519	7.3	20.2
11 27	4 38.71	+17 33.8	1.183	2.165	3.3	17.3	11 27	4 39.34	+21 55.8	1.527	2.510	2.5	19.9
12 7	4 29.06	+17 5.8	1.188	2.168	3.7	17.3	12 7	4 28.45	+21 20.1	1.519	2.501	2.5	19.9
12 17	4 20.28	+16 44.7	1.219	2.171	8.8	17.6	12 17	4 18.21	+20 43.8	1.540	2.491	7.4	20.2
12 27	4 13.74	+16 33.7	1.274	2.176	13.5	17.9	12 27	4 9.88	+20 11.3	1.587	2.481	11.8	20.4
1 6	4 10.25	+16 34.5	1.349	2.181	17.6	18.2	1 6	4 4.32	+19 46.4	1.657	2.471	15.6	20.6
<b>521654</b>	2015 <i>RS</i> <sub>16</sub>	12 2.1	112°01	0°4/ 1.9	18		<b>223543</b>	2004 <i>EV</i> <sub>42</sub>	12 2.1	152°68	0°3/ 2.2	18	R
10 28	5 2.49	+22 34.9	2.027	2.844	13.5	21.5	10 28	5 5.81	+23 11.0	1.921	2.735	14.3	21.0
11 7	4 56.51	+22 9.8	1.961	2.859	10.2	21.3	11 7	4 59.27	+23 12.8	1.848	2.743	10.8	20.8
11 17	4 48.35	+21 39.6	1.919	2.873	6.3	21.1	11 17	4 50.23	+23 9.8	1.798	2.751	6.8	20.6
11 27	4 38.83	+21 5.3	1.904	2.887	2.1	20.8	11 27	4 39.53	+23 1.5	1.776	2.759	2.4	20.3
12 7	4 28.99	+20 29.1	1.920	2.901	2.2	20.9	12 7	4 28.32	+22 48.6	1.784	2.765	2.2	20.3
12 17	4 19.89	+19 54.1	1.965	2.914	6.2	21.2	12 17	4 17.84	+22 33.2	1.821	2.771	6.5	20.6
12 27	4 12.48	+19 23.6	2.038	2.927	9.9	21.4	12 27	4 9.19	+22 18.5	1.886	2.776	10.5	20.9
1 6	4 7.36	+19 0.4	2.136	2.940	13.0	21.6	1 6	4 3.11	+22 7.5	1.976	2.781	13.8	21.1
<b>210348</b>	2007 <i>UY</i> <sub>3</sub>	12 2.1	250°73	3°6/30.7	18		<b>43966</b>	1997 <i>EM</i> <sub>36</sub>	12 2.1	331°85	6°1/30.7	18	
10 28	5 0.00	+15 0.8	1.821	2.651	14.3	20.4	10 28	4 57.53	+11 55.1	1.124	1.985	19.1	17.9
11 7	4 54.95	+14 9.2	1.744	2.647	10.9	20.2	11 7	4 54.49	+11 9.7	1.051	1.968	15.0	17.6
11 17	4 47.57	+13 17.0	1.691	2.644	7.2	20.0	11 17	4 47.99	+10 28.5	0.996	1.953	10.3	17.3
11 27	4 38.61	+12 27.9	1.665	2.640	4.0	19.8	11 27	4 38.94	+9 57.7	0.964	1.938	6.5	17.1
12 7	4 29.15	+11 45.9	1.666	2.637	4.6	19.8	12 7	4 28.82	+9 42.9	0.955	1.925	7.3	17.1
12 17	4 20.31	+11 14.6	1.696	2.633	8.2	20.0	12 17	4 19.40	+9 48.0	0.969	1.913	11.8	17.3
12 27	4 13.13	+10 56.6	1.753	2.630	11.9	20.2	12 27	4 12.37	+10 14.2	1.005	1.902	16.8	17.5
1 6	4 8.31	+10 52.6	1.831	2.626	15.2	20.4	1 6	4 8.79	+10 59.3	1.058	1.892	21.2	17.7
<b>510211</b>	2011 <i>DP</i> <sub>11</sub>	12 2.1	192°74	1°4/ 1.6	18		<b>22390</b>	1994 <i>PA</i> <sub>23</sub>	12 2.1	246°73	0°2/ 2.2	18	
10 28	5 4.24	+19 25.2	1.982	2.799	13.8	22.9	10 28	5 2.03	+23 5.3	1.881	2.702	14.2	19.2
11 7	4 58.05	+19 3.6	1.900	2.798	10.4	22.7	11 7	4 56.65	+23 2.7	1.796	2.696	10.8	19.0
11 17	4 49.47	+18 39.1	1.841	2.795	6.6	22.5	11 17	4 48.74	+22 55.4	1.735	2.690	6.8	18.8
11 27	4 39.27	+18 12.9	1.810	2.792	2.5	22.2	11 27	4 39.07	+22 43.0	1.700	2.683	2.4	18.5
12 7	4 28.52	+17 47.0	1.809	2.788	2.8	22.2	12 7	4 28.74	+22 26.5	1.694	2.676	2.2	18.4
12 17	4 18.38	+17 24.0	1.838	2.784	6.9	22.5	12 17	4 18.99	+22 8.1	1.718	2.669	6.7	18.7
12 27	4 9.91	+17 6.9	1.894	2.778	10.8	22.7	12 27	4 10.97	+21 51.1	1.768	2.662	10.8	18.9
1 6	4 3.83	+16 57.8	1.975	2.772	14.1	22.9	1 6	4 5.46	+21 38.6	1.842	2.655	14.4	19.2
<b>231150</b>	2005 <i>UJ</i> <sub>29</sub>	12 2.1	9°08	1°7/ 2.4	18		<b>507870</b>	2014 <i>JM</i> <sub>55</sub>	12 2.1	314°45	21°5/21.3	17	
10 28	4 58.03	+24 20.8	1.004	1.870	20.5	19.6	10 28	5 0.78	-12 2.0	1.008	1.820	24.4	21.1
11 7	4 55.20	+24 44.4	0.949	1.871	15.7	19.3	11 7	4 56.89	-15 39.3	0.972	1.814	22.7	20.9
11 17	4 48.48	+25 1.1	0.913	1.875	10.0	19.0	11 17	4 49.38	-18 44.5	0.952	1.809	21.7	20.8
11 27	4 39.05	+25 9.0	0.898	1.880	3.9	18.7	11 27	4 39.35	-20 57.9	0.950	1.804	21.7	20.8
12 7	4 28.76	+25 7.9	0.906	1.888	3.4	18.7	12 7	4 28.51	-22 7.0	0.964	1.800	22.8	20.9
12 17	4 19.62	+25 0.5	0.937	1.897	9.3	19.1	12 17	4 18.72	-22 9.1	0.993	1.795	24.6	21.0
12 27	4 13.39	+24 51.7	0.990	1.907	14.8	19.4	12 27	4 11.58	-21 10.7	1.035	1.791	26.7	21.1
1 6	4 11.00	+24 46.4	1.062	1.920	19.4	19.7	1 6	4 8.02	-19 24.8	1.087	1.788	28.7	21.3
<b>264480</b>	2001 <i>ND</i> <sub>14</sub>	12 2.1	166°23	0°4/ 1.9	18		<b>483258</b>	2015 <i>TH</i> <sub>62</sub>	12 2.1	180°31	3°9/ 3.3	18	
10 28	5 5.50	+20 58.8	1.957	2.771	14.0	21.9	10 28	5 5.37	+32 53.4	2.391	3.176	12.7	21.5
11 7	4 59.01	+20 59.5	1.880	2.777	10.6	21.7	11 7	4 58.89	+33 34.8	2.306	3.177	10.0	21.3
11 17	4 50.07	+20 57.3	1.828	2.781	6.6	21.4	11 17	4 50.02	+34 7.3	2.246	3.178	7.1	21.1
11 27	4 39.47	+20 52.1	1.803	2.785	2.3	21.2	11 27	4 39.50	+34 27.8	2.214	3.178	4.5	20.9
12 7	4 28.34	+20 44.7	1.807	2.789	2.3	21.2	12 7	4 28.34	+34 34.7	2.211	3.178	4.1	20.9
12 17	4 17.88	+20 36.7	1.842	2.791	6.6	21.5	12 17	4 17.69	+34 28.6	2.239	3.177	6.4	21.0
12 27	4 9.16	+20 30.8	1.905	2.793	10.5	21.7	12 27	4 8.62	+34 12.7	2.294	3.176	9.3	21.2
1 6	4 2.93	+20 29.4	1.992	2.794	13.8	21.9	1 6	4 1.89	+33 51.5	2.375	3.174	12.0	21.4
<b>299653</b>	2006 <i>KG</i> <sub>121</sub>	12 2.1	194°81	5°9/ 3.9	18		<b>328801</b>	2009 <i>VR</i> <sub>32</sub>	12 2.1	192°06	2°3/ 2.8	17	
10 28	5 7.63	+37 59.2	2.103	2.878	14.5	21.0	10 28	5 1.66	+28 12.9	2.392	3.194	12.2	20.5
11 7	5 1.07	+38 44.9	2.019	2.877	11.8	20.8	11 7	4 55.98	+28 45.6	2.308	3.194	9.4	20.4
11 17	4 51.60	+39 17.5	1.958	2.874	9.0	20.7	11 17	4 48.15	+29 12.6	2.249	3.193	6.2	20.2
11 27	4 40.06	+39 31.9	1.922	2.872	6.5	20.5	11 27	4 38.84	+29 31.6	2.217	3.193	3.2	20.0
12 7	4 27.74	+39 25.8	1.915	2.869	6.0	20.5	12 7	4 28.97	+29 41.9	2.216	3.192	2.8	19.9
12 17	4 16.07	+39 0.4	1.936	2.866	7.9	20.6	12 17	4 19.56	+29 43.9	2.245	3.192	5.7	20.1
12 27	4 6.40	+38 20.4	1.985	2.862	10.7	20.7	12 27	4 11.56	+29 40.0	2.302	3.191	8.9	20.3
1 6	3 59.61	+37 32.9	2.057	2.857	13.5	20.9	1 6	4 5.68	+29 33.5	2.384	3.190	11.7	20.5
<b>219494</b>	2001 <i>FJ</i> <sub>58</sub>	12 2.1	120°22	0°5/ 1.9	18		<b>512105</b>	2015 <i>OE</i> <sub>47</sub>	12 2.1	138°91	5°0/ 1.1	18	
10 28	5 7.31	+20 37.4	1.818	2.634	14.9	20.4	10 28	5 3.06	+7 29.9	1.995	2.806	14.0	21.1
11 7	5 0.32	+20 38.4	1.757	2.653	11.2	20.2	11 7	4 56.95	+7 18.8	1.927	2.814	10.9	21.0
11 17	4 50.81	+20 36.6	1.719	2.673	7.0	20.0	11 17	4 48.68	+7 15.6	1.882	2.822	7.7	20.8
11 27	4 39.69	+20 31.9	1.708	2.691	2.4	19.8	11 27	4 38.99	+7 22.9	1.865	2.829	5.3	20.6
12 7	4 28.19	+20 25.3	1.727	2.708	2.4	19.8	12 7	4 28.88	+7 42.0	1.877	2.836	5.6	20.7
12 17	4 17.57	+20 18.5	1.776	2.725	6.8	20.1	12 17	4 19.38	+8 13.3	1.917	2.843	8.2	20.9
12 27	4 8.91	+20 14.3	1.853	2.741	10.8	20.4	12 27	4 11.44	+8 55.8	1.985	2.849	11.3	21.1
1 6	4 2.90	+20 14.8	1.954	2.756	14.1	20.7	1 6	4 5.73	+9 47.7	2.076	2.855	14.2	21.3
<b>138453</b>	2000 <i>JO</i> <sub>11</sub>	12 2.1	120°98	0°0/ 2.1	18		<b>100216</b>	1994 <i>PQ</i> <sub>6</sub>	12 2.1	112°34	0°2/ 2.2	18	



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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>239543</b>	2008 SZ <sub>92</sub>	12 2.1	1°65	0°1/ 2.2	17		<b>338135</b>	2002 QP <sub>100</sub>	12 2.1	90°48	5°3/30.6	18	
10 28	4 57.49	+24 2.8	1.926	2.754	13.7	20.1	10 28	4 58.85	+4 45.4	2.409	3.212	12.1	21.0
11 7	4 53.09	+23 42.4	1.850	2.753	10.4	19.9	11 7	4 53.42	+4 24.4	2.349	3.227	9.6	20.8
11 17	4 46.42	+23 15.6	1.797	2.753	6.5	19.7	11 17	4 46.33	+4 11.6	2.313	3.242	7.1	20.7
11 27	4 38.25	+22 43.3	1.770	2.753	2.3	19.4	11 27	4 38.20	+4 9.7	2.305	3.257	5.4	20.6
12 7	4 29.61	+22 7.4	1.772	2.754	2.1	19.4	12 7	4 29.81	+4 20.2	2.326	3.272	5.7	20.7
12 17	4 21.59	+21 31.1	1.803	2.755	6.3	19.7	12 17	4 21.94	+4 43.4	2.375	3.286	7.6	20.8
12 27	4 15.19	+20 58.2	1.860	2.757	10.2	19.9	12 27	4 15.32	+5 18.7	2.452	3.301	10.0	21.0
1 6	4 11.08	+20 31.8	1.941	2.760	13.5	20.1	1 6	4 10.46	+6 4.1	2.553	3.315	12.3	21.2
<b>307705</b>	2003 UR <sub>78</sub>	12 2.1	125°02	7°9/ 6.1	18		<b>97000</b>	1999 TB <sub>233</sub>	12 2.1	356°85	8°0/30.9	18	
10 28	5 12.00	+50 47.8	2.936	3.626	12.6	20.8	10 28	5 1.03	+2 29.7	1.556	2.376	16.8	18.5
11 7	5 4.05	+51 53.2	2.869	3.643	11.0	20.7	11 7	4 56.05	+2 6.4	1.489	2.374	13.6	18.3
11 17	4 53.31	+52 41.9	2.824	3.659	9.5	20.6	11 17	4 48.44	+1 57.8	1.443	2.373	10.4	18.1
11 27	4 40.65	+53 9.0	2.804	3.674	8.3	20.5	11 27	4 39.03	+2 8.5	1.421	2.372	8.2	18.0
12 7	4 27.31	+53 11.8	2.810	3.689	7.9	20.5	12 7	4 29.01	+2 41.3	1.425	2.372	8.5	18.0
12 17	4 14.68	+52 51.1	2.844	3.704	8.5	20.6	12 17	4 19.66	+3 35.6	1.455	2.372	11.1	18.2
12 27	4 4.02	+52 11.2	2.904	3.718	9.6	20.7	12 27	4 12.17	+4 48.7	1.510	2.372	14.3	18.4
1 6	3 56.15	+51 18.4	2.988	3.732	11.0	20.8	1 6	4 7.32	+6 15.8	1.586	2.373	17.4	18.6
<b>388507</b>	2007 EW <sub>159</sub>	12 2.1	315°79	0°9/ 1.9	18 R		<b>176121</b>	2001 DM <sub>83</sub>	12 2.1	124°15	3°5/ 1.2	18	
10 28	5 1.71	+20 7.2	1.385	2.227	17.2	20.9	10 28	5 5.12	+14 20.4	1.680	2.504	15.6	20.7
11 7	4 57.24	+20 8.1	1.305	2.216	13.2	20.6	11 7	4 58.82	+13 49.4	1.618	2.518	11.8	20.5
11 17	4 49.53	+20 6.9	1.247	2.206	8.3	20.3	11 17	4 49.97	+13 20.3	1.580	2.531	7.7	20.3
11 27	4 39.45	+20 3.8	1.212	2.195	2.9	19.9	11 27	4 39.50	+12 55.9	1.568	2.544	4.1	20.1
12 7	4 28.41	+19 59.8	1.204	2.185	3.0	19.9	12 7	4 28.62	+12 38.8	1.584	2.557	4.5	20.1
12 17	4 18.04	+19 57.1	1.222	2.176	8.5	20.2	12 17	4 18.60	+12 31.3	1.630	2.569	8.2	20.4
12 27	4 9.88	+19 58.7	1.265	2.167	13.6	20.5	12 27	4 10.53	+12 35.0	1.701	2.580	12.1	20.6
1 6	4 4.94	+20 7.2	1.328	2.158	17.9	20.7	1 6	4 5.10	+12 49.7	1.795	2.591	15.4	20.9
<b>396273</b>	2014 CV <sub>19</sub>	12 2.1	270°66	1°4/ 1.7	18		<b>265453</b>	2004 XV <sub>121</sub>	12 2.1	352°96	1°4/ 2.6	17	
10 28	5 2.41	+19 31.6	1.677	2.507	15.3	21.7	10 28	4 59.74	+25 51.8	2.016	2.835	13.5	20.5
11 7	4 57.28	+19 16.2	1.587	2.492	11.7	21.4	11 7	4 54.82	+26 2.0	1.936	2.833	10.3	20.3
11 17	4 49.33	+18 57.8	1.519	2.476	7.4	21.1	11 17	4 47.57	+26 6.2	1.880	2.832	6.6	20.0
11 27	4 39.35	+18 37.7	1.478	2.460	2.8	20.8	11 27	4 38.72	+26 3.4	1.850	2.831	2.7	19.8
12 7	4 28.52	+18 17.7	1.464	2.444	3.0	20.8	12 7	4 29.32	+25 54.0	1.849	2.830	2.3	19.8
12 17	4 18.21	+18 0.5	1.479	2.428	7.8	21.0	12 17	4 20.47	+25 39.6	1.877	2.829	6.2	20.0
12 27	4 9.74	+17 49.4	1.519	2.412	12.4	21.3	12 27	4 13.24	+25 23.3	1.932	2.829	9.9	20.2
1 6	4 4.03	+17 47.0	1.582	2.395	16.3	21.5	1 6	4 8.34	+25 8.5	2.011	2.829	13.2	20.4
<b>29644</b>	1998 VA <sub>33</sub>	12 2.1	255°62	0°2/ 2.1	18		<b>510196</b>	2011 CS <sub>44</sub>	12 2.1	242°68	1°3/ 2.6	18	
10 28	5 3.48	+22 33.8	1.735	2.560	15.1	19.3	10 28	5 4.45	+26 56.3	1.587	2.411	16.3	22.0
11 7	4 58.04	+22 20.6	1.644	2.545	11.6	19.0	11 7	4 58.98	+26 38.9	1.505	2.404	12.6	21.7
11 17	4 49.79	+22 1.8	1.575	2.531	7.3	18.7	11 17	4 50.45	+26 10.9	1.444	2.398	8.1	21.5
11 27	4 39.50	+21 37.5	1.532	2.515	2.5	18.4	11 27	4 39.77	+25 31.6	1.409	2.391	3.2	21.2
12 7	4 28.39	+21 9.3	1.518	2.500	2.5	18.4	12 7	4 28.35	+24 42.9	1.402	2.384	2.7	21.1
12 17	4 17.83	+20 40.3	1.533	2.484	7.4	18.6	12 17	4 17.71	+23 49.3	1.423	2.376	7.6	21.4
12 27	4 9.12	+20 14.5	1.574	2.468	11.9	18.9	12 27	4 9.25	+22 57.0	1.470	2.369	12.3	21.6
1 6	4 3.18	+19 55.6	1.637	2.451	15.8	19.1	1 6	4 3.83	+22 11.8	1.540	2.361	16.3	21.9
<b>477311</b>	2009 SR <sub>302</sub>	12 2.1	99°81	0°0/ 2.0	18		<b>372750</b>	2010 BT	12 2.1	312°50	2°7/ 3.2	18	
10 28	5 6.68	+22 59.8	1.607	2.430	16.2	22.0	10 28	4 59.47	+30 48.0	2.253	3.057	12.8	21.0
11 7	5 0.11	+22 44.6	1.550	2.451	12.2	21.8	11 7	4 54.52	+30 52.8	2.164	3.049	9.9	20.8
11 17	4 50.78	+22 23.4	1.516	2.471	7.6	21.6	11 17	4 47.35	+30 48.3	2.099	3.042	6.7	20.6
11 27	4 39.72	+21 56.8	1.508	2.491	2.6	21.4	11 27	4 38.67	+30 33.0	2.061	3.035	3.6	20.4
12 7	4 28.33	+21 26.8	1.528	2.510	2.5	21.4	12 7	4 29.45	+30 7.2	2.051	3.027	3.1	20.4
12 17	4 17.98	+20 57.0	1.578	2.529	7.3	21.7	12 17	4 20.74	+29 32.9	2.071	3.020	6.0	20.6
12 27	4 9.83	+20 31.3	1.654	2.547	11.5	22.0	12 27	4 13.54	+28 54.2	2.119	3.013	9.3	20.7
1 6	4 4.56	+20 13.0	1.752	2.565	15.0	22.3	1 6	4 8.55	+28 15.2	2.192	3.007	12.3	20.9
<b>344146</b>	2000 NP <sub>11</sub>	12 2.1	228°23	8°3/28.6	18 R		<b>152142</b>	2005 JT	12 2.1	184°11	1°6/ 1.5	18	
10 28	5 1.22	-9 51.2	3.015	3.750	11.4	21.0	10 28	5 1.30	+17 24.8	2.547	3.357	11.3	22.0
11 7	4 55.05	-10 31.0	2.929	3.733	10.0	20.8	11 7	4 55.38	+17 9.5	2.463	3.357	8.5	21.8
11 17	4 47.32	-10 57.4	2.867	3.716	8.9	20.7	11 17	4 47.65	+16 53.4	2.405	3.357	5.4	21.6
11 27	4 38.54	-11 6.2	2.830	3.698	8.3	20.7	11 27	4 38.73	+16 37.7	2.376	3.356	2.3	21.4
12 7	4 29.36	-10 54.9	2.821	3.679	8.6	20.7	12 7	4 29.41	+16 23.7	2.377	3.354	2.5	21.4
12 17	4 20.48	-10 22.8	2.840	3.659	9.7	20.7	12 17	4 20.54	+16 13.0	2.410	3.352	5.7	21.6
12 27	4 12.59	-9 31.0	2.884	3.638	11.2	20.8	12 27	4 12.91	+16 7.4	2.471	3.349	8.8	21.8
1 6	4 6.20	-8 22.7	2.951	3.617	12.7	20.9	1 6	4 7.10	+16 8.0	2.558	3.346	11.5	22.0
<b>302762</b>	2002 VO <sub>96</sub>	12 2.1	30°82	0°6/ 2.4	18		<b>280425</b>	2003 YR <sub>52</sub>	12 2.1	47°77	0°8/ 2.4	18	
10 28	5 0.84	+26 37.8	1.569	2.400	16.1	19.7	10 28	5 2.59	+25 47.2	1.474	2.307	16.9	20.2
11 7	4 55.96	+25 56.1	1.503	2.408	12.2	19.4	11 7	4 57.33	+25 25.3	1.420	2.325	12.8	19.9
11 17	4 48.33	+25 3.2	1.459	2.415	7.7	19.2	11 17	4 49.20	+24 54.1	1.387	2.343	8.0	19.7
11 27	4 38.93	+24 0.6	1.441	2.424	2.8	18.9	11 27	4 39.27	+24 14.4	1.379	2.362	2.9	19.5
12 7	4 29.12	+22 52.2	1.450	2.432	2.4	18.9	12 7	4 28.99	+23 28.9	1.399	2.381	2.5	19.5
12 17	4 20.24	+21 43.7	1.488	2.442	7.3	19.2	12 17	4 19.79	+22 42.4	1.446	2.400	7.4	19.8
12 27	4 13.47	+20 41.4	1.551	2.451	11.6	19.5	12 27	4 12.86	+22 0.2	1.518	2.420	11.8	20.1
1 6	4 9.50	+19 49.9	1.637	2.461	15.3	19.8	1 6	4 8.86	+21 26.5	1.613	2.440	15.4	20.4
<b>517317</b>	2014 JO <sub>8</sub>	12 2.1	211°19	0°0/ 2.0	18		<b>79733</b>	1998 SU <sub>134</sub>	12 2.1	148°92	3°2/ 3.1	18 R	
10 28	5 3.44	+21 3.5	2.060	2.875	13.4	21.5	10 28	5 8.73					

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>158615</b>	2003 <i>AT</i> <sub>53</sub>		12 2.1 9°06'	1.6°/ 1.9	18		<b>322115</b>	2001 <i>YU</i> <sub>56</sub>		12 2.1 323°72'	0°1'/ 2.2	18	
10 28	5 2.23	+17 22.4	1.228	2.078	18.6	19.6	10 28	5 0.34	+23 13.9	1.366	2.210	17.4	20.4
11 7	4 57.78	+17 40.4	1.164	2.078	14.1	19.3	11 7	4 56.34	+23 6.7	1.285	2.197	13.3	20.1
11 17	4 49.92	+18 0.8	1.120	2.080	8.9	19.0	11 17	4 49.08	+22 53.0	1.224	2.183	8.4	19.8
11 27	4 39.66	+18 23.7	1.100	2.082	3.3	18.7	11 27	4 39.42	+22 32.7	1.188	2.171	3.0	19.5
12 7	4 28.54	+18 49.0	1.105	2.086	3.4	18.7	12 7	4 28.79	+22 7.5	1.177	2.159	2.8	19.4
12 17	4 18.32	+19 16.7	1.135	2.090	8.9	19.1	12 17	4 18.84	+21 40.6	1.192	2.148	8.4	19.7
12 27	4 10.57	+19 47.9	1.190	2.095	14.0	19.4	12 27	4 11.15	+21 17.1	1.231	2.137	13.6	20.0
1 6	4 6.22	+20 23.5	1.265	2.100	18.3	19.7	1 6	4 6.70	+21 1.2	1.291	2.127	18.0	20.2
<b>391215</b>	2006 <i>HN</i> <sub>89</sub>		12 2.1 218°05'	1°2'/ 2.4	18		<b>484428</b>	2008 <i>AJ</i> <sub>23</sub>		12 2.1 270°90'	1°0'/ 1.8	17	
10 28	5 5.36	+24 19.7	2.221	3.025	12.9	21.1	10 28	5 0.88	+19 23.5	2.000	2.823	13.5	22.1
11 7	4 58.98	+24 47.9	2.127	3.017	9.9	20.9	11 7	4 55.73	+19 19.3	1.909	2.810	10.2	21.9
11 17	4 50.21	+25 12.7	2.058	3.008	6.3	20.6	11 17	4 48.21	+19 13.5	1.841	2.797	6.4	21.7
11 27	4 39.70	+25 32.2	2.017	2.998	2.6	20.4	11 27	4 39.03	+19 6.7	1.801	2.783	2.4	21.4
12 7	4 28.48	+25 45.5	2.007	2.988	2.3	20.3	12 7	4 29.17	+18 59.9	1.790	2.770	2.5	21.3
12 17	4 17.65	+25 53.0	2.028	2.977	6.1	20.6	12 17	4 19.75	+18 54.8	1.808	2.757	6.7	21.6
12 27	4 8.34	+25 56.7	2.077	2.965	9.8	20.8	12 27	4 11.85	+18 53.6	1.853	2.743	10.6	21.8
1 6	4 1.34	+25 59.6	2.151	2.953	13.0	21.0	1 6	4 6.25	+18 58.0	1.922	2.730	14.1	22.0
<b>30103</b>	2000 <i>FY</i> <sub>2</sub>		12 2.1 191°18'	0°3'/ 2.0	18		<b>338485</b>	2003 <i>HU</i> <sub>38</sub>		12 2.1 157°68'	0°6'/ 2.3	18	
10 28	5 4.27	+22 19.0	1.850	2.669	14.5	20.5	10 28	5 4.81	+23 57.4	2.056	2.867	13.6	21.9
11 7	4 58.32	+22 2.2	1.769	2.668	11.0	20.3	11 7	4 58.47	+23 58.5	1.980	2.874	10.3	21.7
11 17	4 49.80	+21 40.1	1.712	2.667	6.9	20.0	11 17	4 49.78	+23 54.4	1.928	2.880	6.5	21.5
11 27	4 39.54	+21 13.4	1.682	2.665	2.4	19.7	11 27	4 39.52	+23 44.6	1.904	2.886	2.4	21.3
12 7	4 28.69	+20 43.7	1.681	2.662	2.4	19.7	12 7	4 28.78	+23 29.8	1.910	2.891	2.1	21.3
12 17	4 18.51	+20 14.2	1.710	2.659	6.9	20.0	12 17	4 18.69	+23 12.1	1.945	2.896	6.2	21.5
12 27	4 10.15	+19 48.4	1.765	2.656	11.0	20.2	12 27	4 10.30	+22 54.5	2.009	2.900	9.9	21.8
1 6	4 4.36	+19 29.6	1.844	2.652	14.6	20.5	1 6	4 4.30	+22 40.1	2.098	2.903	13.1	22.0
<b>12852</b>	<i>Teply</i>		12 2.1 139°10'	4°1'/30.9	18		<b>442901</b>	2013 <i>CJ</i> <sub>9</sub>		12 2.1 203°37'	6°9'/29.4	18	
10 28	5 4.70	+13 22.0	1.684	2.508	15.5	18.4	10 28	4 59.30	+ 3 14.5	2.193	2.997	13.1	21.3
11 7	4 58.55	+12 42.6	1.620	2.518	11.9	18.2	11 7	4 54.07	+ 2 14.2	2.120	2.994	10.6	21.1
11 17	4 49.87	+12 5.4	1.578	2.528	7.9	18.0	11 17	4 46.93	+ 1 22.1	2.070	2.991	8.3	20.9
11 27	4 39.53	+11 33.9	1.563	2.537	4.5	17.8	11 27	4 38.53	+ 0 43.0	2.047	2.987	6.9	20.8
12 7	4 28.74	+11 11.3	1.576	2.545	5.0	17.8	12 7	4 29.71	+ 0 20.5	2.052	2.983	7.4	20.9
12 17	4 18.77	+11 0.3	1.617	2.553	8.6	18.1	12 17	4 21.36	+ 0 16.7	2.085	2.979	9.5	21.0
12 27	4 10.71	+11 2.2	1.685	2.561	12.4	18.3	12 27	4 14.34	+ 0 31.6	2.143	2.974	11.9	21.1
1 6	4 5.27	+11 16.8	1.775	2.567	15.7	18.5	1 6	4 9.25	+ 1 3.1	2.223	2.969	14.3	21.3
<b>57435</b>	2001 <i>SQ</i> <sub>47</sub>		12 2.1 350°59'	2°1'/ 2.5	18		<b>520799</b>	2014 <i>SH</i> <sub>362</sub>		12 2.2 19°27'	3°7'/ 1.3	18	
10 28	5 3.39	+24 41.1	1.338	2.177	17.9	18.8	10 28	4 58.90	+11 9.1	2.029	2.851	13.3	20.8
11 7	4 58.74	+25 20.9	1.266	2.174	13.8	18.5	11 7	4 53.95	+11 2.5	1.957	2.854	10.2	20.6
11 17	4 50.61	+25 56.4	1.214	2.170	8.9	18.2	11 17	4 46.94	+11 1.0	1.909	2.857	6.9	20.4
11 27	4 39.94	+26 24.2	1.187	2.168	3.8	17.9	11 27	4 38.55	+11 6.6	1.888	2.860	4.1	20.2
12 7	4 28.27	+26 42.4	1.185	2.166	3.3	17.9	12 7	4 29.70	+11 20.6	1.895	2.864	4.4	20.3
12 17	4 17.38	+26 51.5	1.210	2.165	8.4	18.2	12 17	4 21.39	+11 43.5	1.931	2.868	7.3	20.5
12 27	4 8.94	+26 55.1	1.259	2.164	13.4	18.5	12 27	4 14.52	+12 15.2	1.994	2.872	10.6	20.7
1 6	4 3.96	+26 57.6	1.329	2.164	17.6	18.7	1 6	4 9.75	+12 55.0	2.081	2.877	13.6	20.9
<b>81014</b>	2000 <i>ED</i> <sub>38</sub>		12 2.1 259°82'	0°9'/ 1.8	18		<b>284043</b>	2005 <i>AU</i> <sub>46</sub>		12 2.2 12°38'	3°3'/ 3.2	18	
10 28	5 0.97	+20 23.7	1.995	2.817	13.5	20.1	10 28	5 2.26	+30 27.3	1.461	2.288	17.3	20.3
11 7	4 55.77	+20 7.7	1.904	2.805	10.3	19.9	11 7	4 57.57	+30 32.2	1.391	2.289	13.5	20.1
11 17	4 48.21	+19 48.4	1.837	2.793	6.4	19.6	11 17	4 49.67	+30 24.1	1.342	2.291	9.1	19.8
11 27	4 39.01	+19 26.7	1.798	2.780	2.3	19.4	11 27	4 39.58	+30 9.9	1.317	2.294	4.7	19.6
12 7	4 29.17	+19 4.2	1.787	2.767	2.5	19.3	12 7	4 28.79	+29 23.2	1.319	2.297	3.8	19.6
12 17	4 19.80	+18 43.4	1.806	2.755	6.7	19.6	12 17	4 18.95	+28 35.1	1.347	2.301	7.9	19.8
12 27	4 11.99	+18 27.3	1.852	2.741	10.7	19.8	12 27	4 11.48	+27 43.4	1.401	2.305	12.3	20.1
1 6	4 6.49	+18 18.1	1.921	2.728	14.1	20.0	1 6	4 7.21	+26 54.8	1.476	2.310	16.2	20.3
<b>165146</b>	2000 <i>QN</i> <sub>13</sub>		12 2.1 351°46'	1°6'/ 1.7	18		<b>230128</b>	2001 <i>OX</i> <sub>19</sub>		12 2.2 145°37'	2°9'/ 2.9	18	
10 28	5 3.00	+19 48.2	1.235	2.083	18.6	19.4	10 28	5 7.61	+29 20.3	1.832	2.637	15.2	21.0
11 7	4 58.37	+19 28.5	1.167	2.081	14.1	19.1	11 7	5 1.00	+29 44.4	1.759	2.646	11.8	20.8
11 17	4 50.29	+19 5.1	1.119	2.079	8.9	18.8	11 17	4 51.56	+29 59.3	1.709	2.654	7.9	20.5
11 27	4 39.79	+18 39.9	1.095	2.078	3.3	18.5	11 27	4 40.20	+30 2.3	1.686	2.661	4.0	20.3
12 7	4 28.47	+18 15.6	1.097	2.077	3.6	18.5	12 7	4 28.22	+29 52.6	1.692	2.668	3.5	20.3
12 17	4 18.08	+17 56.1	1.124	2.077	9.2	18.9	12 17	4 17.05	+29 32.2	1.727	2.675	7.0	20.5
12 27	4 10.20	+17 45.2	1.175	2.077	14.4	19.1	12 27	4 7.94	+29 5.8	1.789	2.681	10.8	20.8
1 6	4 5.75	+17 45.5	1.245	2.077	18.8	19.4	1 6	4 1.70	+28 38.5	1.875	2.686	14.2	21.0
<b>400035</b>	2006 <i>QF</i> <sub>119</sub>		12 2.1 69°67'	5°8'/30.7	18		<b>31389</b>	<i>Alexkaplan</i>		12 2.2 269°42'	1°1'/ 1.9	18	
10 28	5 1.80	+ 7 35.0	1.752	2.573	15.2	20.5	10 28	5 2.96	+19 39.9	1.660	2.489	15.5	19.1
11 7	4 56.09	+ 6 57.7	1.704	2.595	11.8	20.3	11 7	4 57.77	+19 34.1	1.572	2.476	11.8	18.9
11 17	4 48.17	+ 6 28.8	1.679	2.618	8.4	20.2	11 17	4 49.74	+19 26.1	1.507	2.463	7.5	18.6
11 27	4 38.90	+ 6 12.0	1.680	2.641	6.0	20.1	11 27	4 39.64	+19 16.5	1.467	2.450	2.7	18.3
12 7	4 29.38	+ 6 9.8	1.708	2.664	6.4	20.2	12 7	4 28.69	+19 6.7	1.456	2.436	2.9	18.2
12 17	4 20.70	+ 6 23.0	1.764	2.687	9.0	20.4	12 17	4 18.27	+18 58.6	1.472	2.423	7.7	18.5
12 27	4 13.77	+ 6 50.9	1.846	2.709	12.1	20.6	12 27	4 9.73	+18 55.3	1.515	2.409	12.3	18.7
1 6	4 9.20	+ 7 31.3	1.950	2.732	14.9	20.9	1 6	4 3.98	+18 58.9	1.580	2.396	16.2	19.0
<b>186415</b>	2002 <i>QB</i> <sub>91</sub>		12 2.1 40°81'	2°9'/ 2.7	18		<b>422271</b>	2014 <i>SQ</i> <sub>151</sub>		12 2.2 42°66'	3°0'/30.9	18	
10													

EPHEMERIDES

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12 2.2

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>450669</b>	2006 <i>UM</i> <sub>273</sub>	12 2.2 17°87'	2.3/ 2.9	18			<b>36462</b>	2000 <i>QV</i> <sub>11</sub>	12 2.2 8°37'	11°6'/30.4	18		
10 28	5 1.82	+28 3.9	1.781	2.600	15.0	21.1	10 28	4 56.30	- 2 52.6	1.327	2.153	18.8	17.5
11 7	4 56.72	+28 17.2	1.707	2.602	11.6	20.8	11 7	4 52.77	- 3 49.1	1.277	2.155	15.9	17.4
11 17	4 48.94	+28 22.1	1.654	2.604	7.6	20.6	11 17	4 46.52	- 4 24.2	1.246	2.159	13.3	17.2
11 27	4 39.32	+28 16.8	1.628	2.606	3.6	20.4	11 27	4 38.48	- 4 30.3	1.236	2.165	11.7	17.2
12 7	4 29.08	+28 1.4	1.630	2.609	3.0	20.3	12 7	4 29.94	- 4 3.5	1.249	2.172	12.0	17.2
12 17	4 19.56	+27 38.2	1.659	2.612	6.8	20.6	12 17	4 22.21	- 3 4.4	1.285	2.181	14.0	17.3
12 27	4 11.94	+27 11.3	1.716	2.615	10.8	20.8	12 27	4 16.48	- 1 37.8	1.342	2.191	16.7	17.5
1 6	4 7.02	+26 45.5	1.795	2.618	14.3	21.1	1 6	4 13.46	+ 0 8.7	1.419	2.202	19.3	17.8
<b>381387</b>	2008 <i>GW</i> <sub>31</sub>	12 2.2 330°22'	5°0/ 1.1	18			<b>390582</b>	2001 <i>QG</i> <sub>206</sub>	12 2.2 59°67'	5°9'/30.5	18		
10 28	5 2.19	+11 50.5	1.368	2.209	17.5	20.7	10 28	5 0.38	+ 8 12.9	1.715	2.541	15.2	20.3
11 7	4 57.41	+11 22.7	1.298	2.205	13.6	20.5	11 7	4 55.17	+ 7 26.9	1.664	2.558	11.9	20.2
11 17	4 49.57	+11 0.1	1.249	2.202	9.2	20.2	11 17	4 47.70	+ 6 48.4	1.634	2.576	8.4	20.0
11 27	4 39.58	+10 46.8	1.224	2.198	5.5	20.0	11 27	4 38.83	+ 6 21.7	1.631	2.593	6.1	19.9
12 7	4 28.83	+10 45.9	1.225	2.195	6.0	20.0	12 7	4 29.65	+ 6 10.0	1.655	2.611	6.5	20.0
12 17	4 18.84	+10 59.3	1.252	2.193	10.0	20.2	12 17	4 21.26	+ 6 14.6	1.706	2.629	9.2	20.2
12 27	4 11.00	+11 27.5	1.303	2.190	14.4	20.5	12 27	4 14.62	+ 6 35.3	1.782	2.647	12.4	20.4
1 6	4 6.21	+12 9.0	1.374	2.188	18.3	20.7	1 6	4 10.33	+ 7 9.9	1.880	2.665	15.2	20.6
<b>124084</b>	2001 <i>HP</i> <sub>7</sub>	12 2.2 167°47'	0°1/ 2.1	18			<b>216918</b>	1995 <i>UT</i> <sub>23</sub>	12 2.2 83°57'	0°8'/ 1.9	18		
10 28	4 59.09	+21 52.2	2.738	3.547	10.6	20.4	10 28	5 7.32	+22 12.3	1.482	2.309	17.1	20.0
11 7	4 53.68	+21 47.5	2.656	3.550	8.0	20.2	11 7	5 0.68	+21 39.1	1.433	2.336	12.8	19.8
11 17	4 46.61	+21 39.8	2.600	3.553	5.0	20.0	11 17	4 51.20	+21 0.0	1.406	2.362	7.9	19.6
11 27	4 38.44	+21 29.4	2.573	3.555	1.7	19.8	11 27	4 40.02	+20 16.8	1.405	2.387	2.7	19.3
12 7	4 29.92	+21 17.2	2.576	3.557	1.7	19.8	12 7	4 28.61	+19 32.9	1.432	2.413	2.8	19.4
12 17	4 21.82	+21 4.7	2.610	3.559	4.9	20.1	12 17	4 18.40	+18 52.7	1.487	2.437	7.7	19.7
12 27	4 14.87	+20 53.6	2.674	3.561	7.9	20.3	12 27	4 10.54	+18 20.4	1.568	2.462	12.0	20.1
1 6	4 9.62	+20 45.8	2.763	3.562	10.5	20.4	1 6	4 5.67	+17 58.8	1.672	2.485	15.6	20.3
<b>133785</b>	2003 <i>WM</i> <sub>104</sub>	12 2.2 3°10'	1°1/ 1.7	17			<b>411967</b>	2012 <i>HW</i> <sub>47</sub>	12 2.2 135°19'	6°8'/28.1	18		
10 28	4 57.61	+21 20.7	1.978	2.807	13.4	19.9	10 28	4 57.41	+ 3 14.6	2.451	3.254	11.9	21.0
11 7	4 53.12	+20 41.4	1.902	2.806	10.1	19.7	11 7	4 52.43	+ 1 38.8	2.386	3.257	9.7	20.9
11 17	4 46.47	+19 57.1	1.850	2.807	6.3	19.5	11 17	4 45.81	+ 0 9.5	2.346	3.261	7.8	20.8
11 27	4 38.42	+19 9.9	1.825	2.807	2.3	19.2	11 27	4 38.17	- 1 7.8	2.334	3.264	6.8	20.7
12 7	4 29.95	+18 22.7	1.828	2.808	2.5	19.2	12 7	4 30.23	- 2 8.6	2.350	3.267	7.5	20.8
12 17	4 22.08	+17 39.0	1.860	2.810	6.5	19.5	12 17	4 22.77	- 2 49.9	2.395	3.270	9.2	20.9
12 27	4 15.75	+17 2.6	1.920	2.811	10.2	19.7	12 27	4 16.48	- 3 11.0	2.465	3.274	11.3	21.0
1 6	4 11.60	+16 35.8	2.003	2.814	13.5	19.9	1 6	4 11.87	- 3 13.1	2.557	3.276	13.3	21.2
<b>509595</b>	2008 <i>DC</i> <sub>66</sub>	12 2.2 203°29'	3°5/ 3.3	18			<b>282697</b>	2006 <i>AS</i> <sub>86</sub>	12 2.2 251°13'	0°5'/ 1.9	18		
10 28	5 7.27	+31 27.7	1.782	2.585	15.6	22.1	10 28	4 59.61	+20 27.6	2.521	3.334	11.3	21.2
11 7	5 1.00	+31 39.7	1.698	2.582	12.3	21.8	11 7	4 54.35	+20 24.7	2.424	3.320	8.6	21.0
11 17	4 51.72	+31 39.9	1.636	2.578	8.4	21.6	11 17	4 47.19	+20 19.6	2.352	3.306	5.4	20.8
11 27	4 40.31	+31 25.3	1.601	2.574	4.6	21.4	11 27	4 38.70	+20 12.7	2.309	3.291	1.9	20.5
12 7	4 28.15	+30 55.4	1.594	2.569	3.9	21.3	12 7	4 29.69	+20 4.8	2.295	3.276	1.9	20.5
12 17	4 16.74	+30 13.2	1.615	2.563	7.4	21.5	12 17	4 21.01	+19 57.3	2.313	3.261	5.5	20.7
12 27	4 7.46	+29 24.4	1.664	2.557	11.4	21.7	12 27	4 13.53	+19 52.0	2.359	3.246	8.8	20.9
1 6	4 1.19	+28 35.7	1.736	2.551	15.0	22.0	1 6	4 7.88	+19 50.6	2.430	3.230	11.7	21.1
<b>400914</b>	2010 <i>TM</i> <sub>104</sub>	12 2.2 161°58'	5°7'/29.7	18			<b>518437</b>	2003 <i>TP</i> <sub>46</sub>	12 2.2 339°26'	4°9'/30.2	18		
10 28	4 59.06	+ 6 30.5	2.305	3.113	12.4	21.7	10 28	4 57.50	+15 29.1	1.395	2.244	16.8	20.7
11 7	4 53.77	+ 5 29.1	2.235	3.118	9.8	21.6	11 7	4 53.82	+14 6.1	1.321	2.234	12.9	20.4
11 17	4 46.69	+ 4 33.3	2.190	3.121	7.3	21.4	11 17	4 47.30	+12 39.7	1.268	2.224	8.6	20.1
11 27	4 38.47	+ 3 47.4	2.173	3.125	5.7	21.3	11 27	4 38.80	+11 16.1	1.241	2.216	5.2	19.9
12 7	4 29.91	+ 3 14.9	2.185	3.128	6.3	21.4	12 7	4 29.62	+10 2.8	1.239	2.208	6.2	20.0
12 17	4 21.86	+ 2 57.9	2.225	3.131	8.4	21.5	12 17	4 21.18	+ 9 6.4	1.263	2.201	10.3	20.2
12 27	4 15.10	+ 2 57.1	2.292	3.133	10.9	21.7	12 27	4 14.74	+ 8 31.0	1.311	2.195	14.6	20.4
1 6	4 10.17	+ 3 11.4	2.382	3.135	13.3	21.8	1 6	4 11.15	+ 8 17.5	1.379	2.190	18.4	20.6
<b>12724</b>	1991 <i>PZ</i> <sub>14</sub>	12 2.2 153°14'	2°7'/ 1.2	18			<b>16344</b>	2370 <i>T</i> <sub>-3</sub>	12 2.2 99°40'	2°0'/ 1.4	18		
10 28	5 2.38	+15 59.9	2.059	2.877	13.3	18.0	10 28	5 0.87	+18 24.2	2.079	2.900	13.1	18.7
11 7	4 56.49	+15 22.7	1.987	2.884	10.1	17.8	11 7	4 55.28	+17 43.8	2.015	2.914	9.8	18.5
11 17	4 48.48	+14 45.1	1.939	2.891	6.5	17.6	11 17	4 47.67	+17 1.1	1.975	2.929	6.2	18.3
11 27	4 39.10	+14 9.4	1.919	2.897	3.2	17.4	11 27	4 38.81	+16 18.7	1.963	2.943	2.7	18.1
12 7	4 29.33	+13 38.6	1.929	2.903	3.7	17.5	12 7	4 29.66	+15 39.3	1.980	2.957	3.0	18.1
12 17	4 20.20	+13 15.1	1.969	2.908	7.0	17.7	12 17	4 21.20	+15 5.8	2.027	2.971	6.5	18.4
12 27	4 12.63	+13 1.2	2.036	2.913	10.5	17.9	12 27	4 14.28	+14 41.0	2.102	2.984	10.0	18.6
1 6	4 7.23	+12 57.8	2.127	2.917	13.5	18.1	1 6	4 9.49	+14 26.1	2.201	2.997	12.9	18.9
<b>112628</b>	2002 <i>PF</i> <sub>76</sub>	12 2.2 343°98'	0°9'/ 1.9	18			<b>29523</b>	1997 <i>YO</i> <sub>21</sub>	12 2.2 28°42'	1°4'/ 1.8	18		
10 28	5 1.55	+19 58.7	1.701	2.532	15.1	19.8	10 28	5 0.58	+18 31.4	1.710	2.542	15.0	18.7
11 7	4 56.50	+19 56.3	1.625	2.530	11.4	19.6	11 7	4 55.65	+18 28.4	1.642	2.547	11.3	18.5
11 17	4 48.81	+19 51.9	1.572	2.529	7.2	19.3	11 17	4 48.21	+18 24.8	1.596	2.553	7.1	18.3
11 27	4 39.29	+19 45.9	1.545	2.527	2.6	19.0	11 27	4 39.07	+18 21.3	1.576	2.558	2.7	18.0
12 7	4 29.13	+19 39.4	1.545	2.526	2.6	19.0	12 7	4 29.41	+18 19.2	1.584	2.564	2.8	18.0
12 17	4 19.62	+19 34.3	1.574	2.525	7.2	19.3	12 17	4 20.43	+18 20.1	1.620	2.570	7.2	18.3
12 27	4 11.96	+19 33.2	1.629	2.525	11.5	19.6	12 27	4 13.26	+18 25.9	1.683	2.577	11.3	18.6
1 6	4 6.93	+19 37.9	1.707	2.524	15.1	19.8	1 6	4 8.63	+18 37.8	1.768	2.584	14.7	18.8
<b>435059</b>	2006 <i>XE</i> <sub>28</sub>	12 2.2 23°62'	1°6'/ 1.9	18			<b>302559</b>	2002 <i>OQ</i> <sub>36</sub>	12 2.2 173°12'	0°3'/ 2.3</			

EPHEMERIDES

12 2.2

12 2.2

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>265621</b>	2005 <i>SR</i> <sub>134</sub>	12	2.2 117°57'	1.5°/ 1.7 18			<b>303570</b>	2005 <i>GB</i> <sub>105</sub>	12	2.2 102°19'	1.8°/ 2.7 18		
10 28	5 6.08	+18 41.2	1.784	2.603	15.0	21.7	10 28	5 5.31	+26 41.5	2.055	2.862	13.7	21.0
11 7	4 59.50	+18 28.0	1.723	2.621	11.3	21.5	11 7	4 58.86	+27 3.8	1.991	2.881	10.5	20.9
11 17	4 50.44	+18 13.2	1.685	2.639	7.0	21.3	11 17	4 50.05	+27 19.5	1.951	2.899	6.8	20.7
11 27	4 39.80	+17 57.9	1.674	2.656	2.7	21.0	11 27	4 39.72	+27 27.0	1.938	2.917	3.0	20.5
12 7	4 28.78	+17 43.8	1.692	2.672	2.9	21.1	12 7	4 28.97	+27 26.1	1.955	2.935	2.6	20.5
12 17	4 18.62	+17 33.0	1.740	2.687	7.1	21.4	12 17	4 18.97	+27 18.2	2.002	2.952	6.1	20.7
12 27	4 10.39	+17 27.9	1.816	2.702	11.0	21.6	12 27	4 10.73	+27 6.6	2.077	2.969	9.6	21.0
1 6	4 4.74	+17 30.1	1.914	2.716	14.3	21.9	1 6	4 4.93	+26 54.7	2.177	2.985	12.6	21.2
<b>49216</b>	1998 <i>SH</i> <sub>124</sub>	12	2.2 10°55'	4.1°/ 2.9 18			<b>53936</b>	2000 <i>GO</i> <sub>45</sub>	12	2.2 23°92'	1.7°/ 1.8 18		
10 28	5 2.62	+28 7.3	1.136	1.983	19.9	18.0	10 28	5 0.63	+19 25.2	1.106	1.964	19.5	18.6
11 7	4 58.69	+28 59.4	1.076	1.985	15.5	17.7	11 7	4 56.69	+19 11.2	1.054	1.973	14.8	18.3
11 17	4 50.83	+29 42.5	1.034	1.988	10.4	17.4	11 17	4 49.26	+18 54.9	1.022	1.984	9.2	18.0
11 27	4 40.13	+30 11.5	1.014	1.992	5.5	17.2	11 27	4 39.52	+18 38.2	1.012	1.995	3.4	17.8
12 7	4 28.42	+30 23.6	1.019	1.997	4.8	17.2	12 7	4 29.17	+18 23.6	1.027	2.008	3.6	17.8
12 17	4 17.78	+30 20.0	1.048	2.003	9.4	17.4	12 17	4 19.98	+18 14.4	1.066	2.021	9.2	18.2
12 27	4 10.03	+30 6.7	1.100	2.011	14.4	17.7	12 27	4 13.43	+18 13.6	1.128	2.036	14.3	18.5
1 6	4 6.20	+29 50.4	1.172	2.019	18.7	18.0	1 6	4 10.32	+18 22.8	1.210	2.052	18.6	18.8
<b>258584</b>	2002 <i>CX</i> <sub>167</sub>	12	2.2 323°27'	5.8°/ 3.5 17			<b>475745</b>	2006 <i>WM</i> <sub>99</sub>	12	2.2 53°03'	0.3°/ 2.2 18		
10 28	5 1.57	+34 27.4	1.668	2.479	16.2	20.8	10 28	5 6.72	+21 21.5	1.208	2.051	19.3	21.3
11 7	4 57.32	+35 15.8	1.575	2.458	13.1	20.5	11 7	5 1.05	+21 47.8	1.159	2.069	14.5	21.1
11 17	4 49.81	+35 52.9	1.502	2.437	9.7	20.3	11 17	4 51.87	+22 11.3	1.130	2.088	9.1	20.9
11 27	4 39.80	+36 13.3	1.454	2.417	6.6	20.0	11 27	4 40.41	+22 30.2	1.125	2.108	3.2	20.6
12 7	4 28.63	+36 13.8	1.432	2.397	6.0	20.0	12 7	4 28.39	+22 44.1	1.146	2.128	2.8	20.6
12 17	4 17.93	+35 54.9	1.436	2.379	8.8	20.1	12 17	4 17.62	+22 54.1	1.193	2.149	8.5	21.0
12 27	4 9.34	+35 21.2	1.465	2.361	12.5	20.2	12 27	4 9.58	+23 3.5	1.265	2.169	13.4	21.4
1 6	4 3.97	+34 40.2	1.516	2.344	16.2	20.4	1 6	4 5.08	+23 15.4	1.357	2.190	17.4	21.7
<b>5215</b>	<i>Tsurui</i>	12	2.2 141°59'	5.7°/30.6 18			<b>97268</b>	<i>Serafinozani</i>	12	2.2 46°62'	3.5°/ 3.1 18		
10 28	5 1.39	+ 5 14.8	2.192	2.997	13.1	16.5	10 28	5 7.27	+29 20.9	1.317	2.145	18.8	18.5
11 7	4 55.58	+ 4 45.6	2.126	3.006	10.4	16.3	11 7	5 1.22	+29 52.1	1.277	2.175	14.4	18.3
11 17	4 47.87	+ 4 24.7	2.084	3.014	7.7	16.1	11 17	4 51.81	+30 11.4	1.257	2.206	9.5	18.1
11 27	4 38.92	+ 4 15.2	2.069	3.022	5.8	16.0	11 27	4 40.33	+30 15.3	1.261	2.237	4.9	18.0
12 7	4 29.62	+ 4 19.4	2.082	3.030	6.2	16.1	12 7	4 28.52	+30 4.0	1.292	2.269	4.1	18.0
12 17	4 20.88	+ 4 37.9	2.125	3.037	8.3	16.2	12 17	4 18.12	+29 40.9	1.349	2.301	8.1	18.3
12 27	4 13.53	+ 5 10.2	2.194	3.044	11.0	16.4	12 27	4 10.45	+29 12.3	1.431	2.333	12.3	18.7
1 6	4 8.15	+ 5 54.3	2.287	3.050	13.5	16.6	1 6	4 6.20	+28 44.5	1.534	2.365	15.9	19.0
<b>157479</b>	2005 <i>QQ</i> <sub>70</sub>	12	2.2 25°61'	5.9°/30.9 18			<b>186630</b>	2003 <i>GB</i> <sub>37</sub>	12	2.2 308°16'	1.9°/ 1.8 17		
10 28	4 59.00	+12 44.2	1.012	1.878	20.4	18.8	10 28	5 1.08	+16 15.6	1.761	2.590	14.7	20.4
11 7	4 55.39	+11 50.6	0.971	1.891	15.6	18.6	11 7	4 56.32	+16 27.8	1.666	2.570	11.3	20.2
11 17	4 48.35	+11 2.7	0.949	1.906	10.5	18.4	11 17	4 48.89	+16 42.8	1.594	2.550	7.2	19.9
11 27	4 39.15	+10 26.9	0.948	1.923	6.4	18.2	11 27	4 39.46	+17 1.2	1.549	2.530	3.0	19.6
12 7	4 29.50	+10 8.1	0.970	1.941	7.0	18.3	12 7	4 29.12	+17 23.1	1.531	2.510	3.1	19.5
12 17	4 21.10	+10 9.0	1.015	1.960	11.2	18.6	12 17	4 19.13	+17 49.1	1.541	2.491	7.6	19.8
12 27	4 15.34	+10 29.5	1.082	1.980	15.7	18.9	12 27	4 10.78	+18 19.9	1.579	2.472	11.9	20.0
1 6	4 12.93	+11 6.6	1.168	2.002	19.6	19.2	1 6	4 5.00	+18 55.9	1.638	2.453	15.8	20.2
<b>456229</b>	2006 <i>KT</i> <sub>66</sub>	12	2.2 260°92'	0.4°/ 2.3 18			<b>365806</b>	2011 <i>EU</i> <sub>42</sub>	12	2.2 4°96'	6.7°/30.3 18		
10 28	5 0.31	+22 29.0	2.438	3.249	11.7	21.6	10 28	4 57.94	+ 2 17.4	2.167	2.973	13.2	20.2
11 7	4 54.97	+22 47.9	2.347	3.242	8.9	21.4	11 7	4 53.12	+ 1 46.6	2.097	2.973	10.7	20.0
11 17	4 47.63	+23 4.6	2.281	3.234	5.6	21.2	11 17	4 46.42	+ 1 26.3	2.051	2.973	8.3	19.9
11 27	4 38.90	+23 18.1	2.244	3.226	2.0	20.9	11 27	4 38.47	+ 1 20.2	2.030	2.973	6.8	19.8
12 7	4 29.61	+23 28.4	2.237	3.218	1.8	20.9	12 7	4 30.13	+ 1 30.7	2.037	2.974	7.1	19.8
12 17	4 20.69	+23 36.0	2.260	3.210	5.4	21.1	12 17	4 22.27	+ 1 58.2	2.072	2.975	9.0	20.0
12 27	4 13.04	+23 42.6	2.311	3.202	8.8	21.3	12 27	4 15.72	+ 2 41.9	2.133	2.976	11.5	20.1
1 6	4 7.33	+23 49.9	2.389	3.194	11.7	21.5	1 6	4 11.07	+ 3 38.9	2.216	2.977	13.9	20.3
<b>205987</b>	2002 <i>NX</i> <sub>64</sub>	12	2.2 111°25'	0.5°/ 2.3 18			<b>107682</b>	2001 <i>FB</i> <sub>12</sub>	12	2.2 252°74'	1.7°/ 2.6 18		
10 28	5 3.34	+23 40.9	1.859	2.679	14.5	21.1	10 28	5 3.62	+25 57.1	1.891	2.706	14.4	20.2
11 7	4 57.62	+23 43.0	1.788	2.686	11.0	20.9	11 7	4 58.09	+26 17.1	1.804	2.698	11.1	19.9
11 17	4 49.39	+23 39.9	1.740	2.694	6.9	20.7	11 17	4 49.89	+26 31.4	1.740	2.690	7.2	19.7
11 27	4 39.51	+23 31.4	1.719	2.702	2.5	20.4	11 27	4 39.77	+26 38.1	1.702	2.682	3.1	19.4
12 7	4 29.13	+23 18.0	1.727	2.709	2.2	20.4	12 7	4 28.89	+26 36.6	1.694	2.674	2.6	19.4
12 17	4 19.46	+23 2.0	1.764	2.716	6.5	20.7	12 17	4 18.53	+26 28.3	1.714	2.665	6.7	19.6
12 27	4 11.60	+22 46.7	1.829	2.723	10.5	21.0	12 27	4 9.95	+26 16.4	1.761	2.657	10.8	19.8
1 6	4 6.28	+22 35.1	1.917	2.730	13.9	21.2	1 6	4 3.99	+26 4.7	1.833	2.648	14.3	20.0
<b>207680</b>	2007 <i>PY</i> <sub>46</sub>	12	2.2 352°60'	6.7°/30.2 18			<b>437886</b>	2001 <i>SS</i> <sub>35</sub>	12	2.2 76°15'	4.9°/ 3.6 18		
10 28	4 57.80	+ 9 38.9	1.374	2.220	17.2	20.2	10 28	5 7.38	+34 8.6	1.900	2.693	15.2	20.9
11 7	4 54.01	+ 8 35.1	1.308	2.215	13.5	20.0	11 7	5 0.85	+34 58.8	1.841	2.714	12.0	20.7
11 17	4 47.41	+ 7 36.7	1.263	2.211	9.6	19.8	11 17	4 51.49	+35 37.0	1.804	2.734	8.6	20.6
11 27	4 38.88	+ 6 50.4	1.242	2.208	6.9	19.6	11 27	4 40.26	+35 58.9	1.793	2.754	5.7	20.4
12 7	4 29.70	+ 6 21.6	1.246	2.206	7.7	19.6	12 7	4 28.51	+36 2.9	1.810	2.775	5.1	20.4
12 17	4 21.27	+ 6 13.9	1.275	2.204	11.0	19.8	12 17	4 17.63	+35 50.4	1.856	2.795	7.4	20.6
12 27	4 14.84	+ 6 27.9	1.326	2.204	14.9	20.1	12 27	4 8.87	+35 26.3	1.929	2.815	10.5	20.8
1 6	4 11.21	+ 7 1.4	1.398	2.204	18.4	20.3	1 6	4 2.99	+34 56.6	2.026	2.834	13.4	21.1
<b>194595</b>	2001 <i>XB</i> <sub>119</sub>	12	2.2 303°86'	1.1°/ 2.4 18			<b>365937</b>	2012 <i>AB</i> <sub>1</sub>	12	2.2 326°38'	1.2°/ 2		

EPHEMERIDES

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>81766</b>	2000 <i>JH</i> <sub>63</sub>		12 2.2 62°87'	1.8°/ 2.9 18			<b>261583</b>	2005 <i>XV</i> <sub>10</sub>		12 2.2 310°74'	3.2°/ 2.8 17		
10 28	5 2.44	+28 29.3	1.801	2.618	15.0	18.5	10 28	5 3.83	+28 29.5	1.960	2.769	14.2	20.5
11 7	4 57.01	+28 14.3	1.733	2.628	11.5	18.3	11 7	4 58.31	+29 19.5	1.875	2.763	11.1	20.3
11 17	4 49.03	+27 48.9	1.688	2.638	7.4	18.1	11 17	4 50.09	+30 3.8	1.813	2.758	7.5	20.0
11 27	4 39.40	+27 12.9	1.669	2.649	3.3	17.8	11 27	4 39.90	+30 38.9	1.778	2.752	4.1	19.8
12 7	4 29.36	+26 28.0	1.679	2.659	2.6	17.8	12 7	4 28.88	+31 2.5	1.771	2.746	3.7	19.8
12 17	4 20.16	+25 38.2	1.717	2.670	6.6	18.1	12 17	4 18.33	+31 14.5	1.794	2.741	6.9	20.0
12 27	4 12.89	+24 48.8	1.783	2.681	10.5	18.4	12 27	4 9.52	+31 17.6	1.843	2.736	10.6	20.2
1 6	4 8.24	+24 4.4	1.872	2.692	13.9	18.6	1 6	4 3.34	+31 15.7	1.917	2.730	13.9	20.4
<b>167404</b>	2003 <i>WL</i> <sub>116</sub>		12 2.2 61°52'	1.9°/ 2.7 18			<b>447464</b>	2006 <i>NU</i>		12 2.2 158°79'	1.7°/ 1.4 18		
10 28	5 6.58	+26 21.1	1.552	2.374	16.7	19.9	10 28	5 2.16	+18 20.0	2.439	3.249	11.7	22.7
11 7	5 0.27	+26 40.6	1.503	2.401	12.7	19.7	11 7	4 56.08	+17 44.1	2.363	3.257	8.8	22.5
11 17	4 51.08	+26 52.1	1.477	2.429	8.1	19.5	11 17	4 48.17	+17 6.1	2.313	3.265	5.6	22.3
11 27	4 40.09	+26 53.8	1.477	2.456	3.5	19.3	11 27	4 39.10	+16 27.7	2.291	3.272	2.4	22.1
12 7	4 28.77	+26 45.9	1.504	2.484	2.9	19.4	12 7	4 29.71	+15 51.2	2.301	3.278	2.7	22.2
12 17	4 18.56	+26 31.0	1.559	2.512	7.1	19.7	12 17	4 20.87	+15 19.2	2.341	3.283	5.9	22.4
12 27	4 10.67	+26 13.6	1.641	2.539	11.2	20.0	12 27	4 13.37	+14 54.2	2.411	3.288	9.1	22.6
1 6	4 5.77	+25 57.8	1.745	2.567	14.7	20.3	1 6	4 7.78	+14 37.5	2.505	3.292	11.8	22.8
<b>478458</b>	2012 <i>PB</i> <sub>14</sub>		12 2.2 116°38'	2.2°/ 2.9 18			<b>42373</b>	2002 <i>CM</i> <sub>174</sub>		12 2.2 154°99'	0.5°/ 2.4 18		
10 28	5 6.21	+28 37.6	1.694	2.508	15.9	21.7	10 28	5 4.81	+23 29.6	2.189	2.997	13.0	19.7
11 7	5 0.04	+28 37.3	1.626	2.519	12.2	21.5	11 7	4 58.41	+23 36.5	2.113	3.005	9.8	19.6
11 17	4 51.02	+28 26.6	1.580	2.529	8.0	21.3	11 17	4 49.79	+23 39.1	2.061	3.013	6.2	19.3
11 27	4 40.12	+28 4.2	1.561	2.539	3.7	21.0	11 27	4 39.70	+23 36.7	2.038	3.019	2.3	19.1
12 7	4 28.71	+27 30.9	1.570	2.549	3.0	21.0	12 7	4 29.14	+23 29.8	2.044	3.026	2.0	19.1
12 17	4 18.22	+26 50.2	1.607	2.559	7.1	21.3	12 17	4 19.18	+23 19.9	2.081	3.031	5.9	19.4
12 27	4 9.89	+26 7.7	1.671	2.568	11.2	21.6	12 27	4 10.81	+23 9.5	2.147	3.036	9.4	19.6
1 6	4 4.48	+25 28.7	1.759	2.577	14.7	21.8	1 6	4 4.68	+23 1.5	2.238	3.041	12.5	19.8
<b>223127</b>	2002 <i>VT</i> <sub>61</sub>		12 2.2 31°19'	0.4°/ 2.3 18			<b>327618</b>	2006 <i>GP</i> <sub>4</sub>		12 2.2 207°87'	3.3°/ 30.9 17		
10 28	5 2.39	+25 12.9	1.205	2.052	19.0	19.9	10 28	4 57.95	+12 32.0	2.350	3.168	11.9	21.2
11 7	4 57.92	+24 46.9	1.148	2.060	14.4	19.7	11 7	4 53.06	+12 3.8	2.272	3.168	9.1	21.0
11 17	4 49.99	+24 10.4	1.110	2.069	9.1	19.4	11 17	4 46.38	+11 37.9	2.219	3.167	6.1	20.8
11 27	4 39.80	+23 24.5	1.096	2.079	3.2	19.1	11 27	4 38.51	+11 16.8	2.194	3.166	3.6	20.7
12 7	4 29.03	+22 32.7	1.107	2.090	2.8	19.1	12 7	4 30.25	+11 2.6	2.198	3.166	4.0	20.7
12 17	4 19.43	+21 40.9	1.144	2.101	8.5	19.5	12 17	4 22.43	+10 57.0	2.231	3.165	6.7	20.8
12 27	4 12.47	+20 55.8	1.205	2.112	13.6	19.8	12 27	4 15.86	+11 1.0	2.292	3.164	9.7	21.0
1 6	4 8.93	+20 21.9	1.286	2.125	17.9	20.1	1 6	4 11.09	+11 14.5	2.377	3.163	12.4	21.2
<b>139846</b>	2001 <i>RC</i> <sub>51</sub>		12 2.2 324°00'	5.1°/ 30.5 18			<b>187797</b>	1999 <i>CS</i> <sub>133</sub>		12 2.2 59°04'	0.0°/ 1.9 18		
10 28	4 58.94	+10 29.1	1.785	2.615	14.6	20.0	10 28	5 0.29	+24 29.4	2.038	2.857	13.4	19.2
11 7	4 54.33	+9 43.9	1.710	2.609	11.3	19.7	11 7	4 54.98	+23 52.0	1.975	2.873	10.1	19.0
11 17	4 47.39	+9 2.8	1.658	2.604	7.9	19.5	11 17	4 47.58	+23 7.7	1.936	2.890	6.3	18.8
11 27	4 38.87	+8 30.0	1.632	2.600	5.3	19.4	11 27	4 38.89	+22 18.0	1.924	2.907	2.2	18.6
12 7	4 29.81	+8 9.2	1.633	2.595	5.9	19.4	12 7	4 29.95	+21 25.8	1.942	2.923	2.0	18.6
12 17	4 21.31	+8 2.9	1.661	2.591	8.9	19.6	12 17	4 21.75	+20 34.8	1.989	2.940	6.0	18.9
12 27	4 14.42	+8 12.1	1.715	2.587	12.4	19.8	12 27	4 15.18	+19 49.0	2.064	2.957	9.6	19.2
1 6	4 9.85	+8 35.9	1.791	2.583	15.6	20.0	1 6	4 10.80	+19 11.3	2.164	2.974	12.6	19.4
<b>127160</b>	2002 <i>GS</i> <sub>140</sub>		12 2.2 263°74'	2.1°/ 2.7 17			<b>40580</b>	1999 <i>RN</i> <sub>135</sub>		12 2.2 65°52'	1.0°/ 2.5 18		
10 28	5 2.32	+26 51.2	2.195	3.003	12.9	20.0	10 28	5 4.28	+24 38.8	1.578	2.405	16.3	19.1
11 7	4 56.77	+27 23.1	2.110	3.000	9.9	19.8	11 7	4 58.65	+24 44.4	1.518	2.419	12.3	18.9
11 17	4 48.91	+27 49.8	2.049	2.997	6.5	19.5	11 17	4 50.19	+24 43.6	1.480	2.434	7.8	18.6
11 27	4 39.42	+28 9.3	2.016	2.994	3.1	19.3	11 27	4 39.86	+24 35.4	1.467	2.449	2.9	18.4
12 7	4 29.30	+28 20.7	2.012	2.990	2.7	19.3	12 7	4 29.06	+24 20.8	1.482	2.464	2.5	18.4
12 17	4 19.63	+28 24.4	2.038	2.987	6.0	19.5	12 17	4 19.18	+24 2.3	1.526	2.479	7.2	18.7
12 27	4 11.48	+28 22.8	2.092	2.984	9.5	19.7	12 27	4 11.47	+23 43.9	1.595	2.494	11.4	19.0
1 6	4 5.61	+28 19.2	2.170	2.980	12.6	19.9	1 6	4 6.65	+23 29.5	1.687	2.509	15.0	19.3
<b>455951</b>	2005 <i>UQ</i> <sub>504</sub>		12 2.2 252°83'	3.1°/ 30.9 18			<b>203200</b>	2001 <i>DP</i> <sub>17</sub>		12 2.2 211°37'	1.4°/ 1.8 18		
10 28	4 58.39	+12 20.5	2.631	3.442	10.9	21.5	10 28	5 2.66	+18 5.6	2.304	3.116	12.3	21.4
11 7	4 53.32	+11 56.9	2.534	3.426	8.4	21.3	11 7	4 56.76	+17 58.8	2.215	3.109	9.3	21.2
11 17	4 46.54	+11 35.5	2.463	3.409	5.7	21.1	11 17	4 48.79	+17 51.3	2.149	3.102	5.9	21.0
11 27	4 38.57	+11 18.2	2.420	3.392	3.4	20.9	11 27	4 39.38	+17 43.7	2.113	3.094	2.3	20.7
12 7	4 30.12	+11 6.8	2.407	3.375	3.7	20.9	12 7	4 29.43	+17 37.0	2.106	3.085	2.5	20.7
12 17	4 21.97	+11 3.0	2.425	3.357	6.3	21.0	12 17	4 19.90	+17 32.8	2.130	3.076	6.1	21.0
12 27	4 14.89	+11 7.9	2.470	3.339	9.2	21.2	12 27	4 11.73	+17 32.8	2.183	3.066	9.6	21.2
1 6	4 9.47	+11 21.6	2.541	3.320	11.8	21.3	1 6	4 5.59	+17 38.3	2.261	3.056	12.6	21.3
<b>293792</b>	2007 <i>RS</i> <sub>139</sub>		12 2.2 20°79'	6.7°/ 4.1 18			<b>9738</b>	1987 <i>DF</i> <sub>6</sub>		12 2.2 218°89'	6.1°/ 4.5 18		
10 28	5 4.63	+36 17.3	1.453	2.263	18.2	20.4	10 28	5 6.81	+39 54.3	2.185	2.952	14.3	17.9
11 7	4 59.77	+37 6.4	1.388	2.268	14.7	20.2	11 7	5 0.52	+40 25.6	2.096	2.946	11.8	17.7
11 17	4 51.31	+37 39.3	1.342	2.274	10.9	20.0	11 17	4 51.43	+40 42.0	2.030	2.940	9.0	17.5
11 27	4 40.34	+37 50.3	1.320	2.280	7.6	19.8	11 27	4 40.35	+40 39.2	1.989	2.934	6.7	17.3
12 7	4 28.53	+37 36.8	1.323	2.286	6.8	19.8	12 7	4 28.54	+40 15.4	1.976	2.927	6.1	17.3
12 17	4 17.73	+37 1.4	1.352	2.294	9.3	20.0	12 17	4 17.40	+39 32.2	1.992	2.920	7.8	17.4
12 27	4 9.59	+36 11.5	1.406	2.302	12.9	20.2	12 27	4 8.19	+38 34.9	2.035	2.912	10.5	17.5
1 6	4 5.02	+35 16.0	1.481	2.310	16.4	20.5	1 6	4 1.78	+37 30.9	2.102	2.904	13.2	17.7
<b>407482</b>	2010 <i>UU</i> <sub>104</sub>		12 2.2 99°17'	1.2°/ 1.8 17			<b>514775</b>	2007 <i>FL</i> <sub>45</sub>		12 2.2 233°86'	3.1°/ 3.1 18		

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>367805</b>	2011 <i>AP</i> <sub>40</sub>	12	2.2 165°35	5°3/ 4.8	17		<b>322326</b>	2011 <i>GZ</i> <sub>71</sub>	12	2.2 283°07	4°2/29.9	18	
10 28	5 3.98	+40 5.7	2.423	3.188	13.1	21.1	10 28	4 57.52	+11 52.0	2.401	3.218	11.7	20.8
11 7	4 57.97	+40 18.7	2.341	3.190	10.7	20.9	11 7	4 52.84	+10 48.2	2.303	3.197	9.1	20.5
11 17	4 49.59	+40 17.1	2.280	3.191	8.2	20.8	11 17	4 46.33	+9 44.4	2.231	3.175	6.3	20.3
11 27	4 39.65	+39 57.9	2.246	3.192	6.0	20.6	11 27	4 38.55	+8 44.5	2.186	3.153	4.3	20.2
12 7	4 29.24	+39 20.6	2.240	3.193	5.4	20.6	12 7	4 30.27	+7 52.4	2.172	3.131	4.9	20.2
12 17	4 19.51	+38 27.7	2.264	3.194	6.8	20.7	12 17	4 22.32	+7 11.4	2.187	3.109	7.5	20.3
12 27	4 11.51	+37 24.0	2.315	3.195	9.3	20.9	12 27	4 15.53	+6 44.1	2.229	3.086	10.5	20.5
1 6	4 5.92	+36 15.7	2.392	3.196	11.8	21.0	1 6	4 10.51	+6 31.1	2.294	3.064	13.2	20.6
<b>405591</b>	2005 <i>SK</i> <sub>46</sub>	12	2.2 45°52	5°1/ 3.7	18		<b>163537</b>	2002 <i>TU</i> <sub>55</sub>	12	2.2 353°02	1°2/ 1.7	17	
10 28	5 4.34	+34 32.7	1.867	2.666	15.2	20.7	10 28	4 57.92	+19 21.6	2.238	3.061	12.2	19.8
11 7	4 58.77	+35 15.3	1.797	2.673	12.1	20.5	11 7	4 53.21	+19 3.0	2.159	3.060	9.2	19.6
11 17	4 50.35	+35 45.8	1.749	2.681	8.8	20.4	11 17	4 46.57	+18 42.2	2.104	3.059	5.8	19.4
11 27	4 39.97	+36 0.2	1.726	2.688	5.8	20.2	11 27	4 38.63	+18 20.6	2.076	3.058	2.2	19.2
12 7	4 28.94	+35 56.7	1.731	2.696	5.2	20.2	12 7	4 30.27	+17 59.9	2.078	3.057	2.4	19.2
12 17	4 18.66	+35 36.9	1.764	2.705	7.6	20.3	12 17	4 22.39	+17 42.1	2.109	3.057	6.0	19.4
12 27	4 10.43	+35 5.6	1.823	2.713	10.8	20.6	12 27	4 15.85	+17 29.4	2.167	3.056	9.4	19.6
1 6	4 5.05	+34 29.2	1.906	2.722	13.8	20.8	1 6	4 11.27	+17 23.5	2.251	3.056	12.3	19.8
<b>123852</b>	Janboda	12	2.2 265°28	2°3/ 1.2	18		<b>240143</b>	2002 <i>JS</i> <sub>110</sub>	12	2.2 252°39	1°3/ 2.5	18	
10 28	4 59.00	+15 40.2	2.533	3.347	11.2	20.6	10 28	5 4.41	+24 25.2	1.837	2.654	14.7	20.5
11 7	4 53.91	+15 13.0	2.430	3.325	8.6	20.4	11 7	4 58.80	+24 50.3	1.750	2.646	11.3	20.2
11 17	4 46.99	+14 45.4	2.352	3.303	5.6	20.2	11 17	4 50.43	+25 11.4	1.686	2.638	7.2	20.0
11 27	4 38.77	+14 19.1	2.302	3.280	2.8	20.0	11 27	4 40.08	+25 26.4	1.648	2.629	2.9	19.7
12 7	4 30.01	+13 56.2	2.283	3.256	3.2	20.0	12 7	4 28.89	+25 34.6	1.639	2.620	2.5	19.6
12 17	4 21.54	+13 38.7	2.294	3.233	6.2	20.1	12 17	4 18.22	+25 36.7	1.660	2.611	6.9	19.9
12 27	4 14.19	+13 28.7	2.333	3.209	9.4	20.3	12 27	4 9.35	+25 35.4	1.707	2.602	11.1	20.1
1 6	4 8.59	+13 27.1	2.397	3.184	12.2	20.4	1 6	4 3.16	+25 34.3	1.778	2.593	14.7	20.3
<b>410560</b>	2008 <i>GL</i> <sub>34</sub>	12	2.2 105°40	0°9/ 2.5	18		<b>56612</b>	2000 <i>JY</i> <sub>61</sub>	12	2.2 194°74	0°2/ 2.3	18	
10 28	5 2.13	+25 14.7	2.217	3.027	12.7	21.9	10 28	5 4.75	+24 29.4	1.999	2.811	13.9	19.0
11 7	4 56.34	+25 14.8	2.148	3.041	9.7	21.7	11 7	4 58.64	+24 6.7	1.914	2.809	10.6	18.8
11 17	4 48.46	+25 9.2	2.103	3.054	6.1	21.5	11 17	4 50.08	+23 36.8	1.854	2.806	6.7	18.6
11 27	4 39.24	+24 57.4	2.086	3.067	2.4	21.3	11 27	4 39.88	+23 0.1	1.821	2.803	2.4	18.3
12 7	4 29.66	+24 40.4	2.099	3.080	2.0	21.3	12 7	4 29.14	+22 18.4	1.817	2.799	2.1	18.3
12 17	4 20.71	+24 20.0	2.142	3.093	5.6	21.6	12 17	4 19.03	+21 35.1	1.844	2.794	6.4	18.6
12 27	4 13.32	+23 59.4	2.213	3.105	9.0	21.8	12 27	4 10.65	+20 54.5	1.899	2.789	10.4	18.8
1 6	4 8.07	+23 41.4	2.309	3.117	12.0	22.0	1 6	4 4.71	+20 20.4	1.978	2.783	13.8	19.0
<b>10311</b>	Fantin-Latour	12	2.2 215°54	0°4/ 2.4	18		<b>174629</b>	2003 <i>SD</i> <sub>92</sub>	12	2.2 320°69	3°2/ 1.4	18	
10 28	5 1.16	+23 30.1	2.071	2.888	13.3	18.3	10 28	5 1.59	+17 17.9	1.245	2.095	18.3	19.9
11 7	4 55.87	+23 32.3	1.990	2.888	10.1	18.0	11 7	4 57.44	+16 43.5	1.171	2.086	14.1	19.6
11 17	4 48.33	+23 30.1	1.934	2.887	6.3	17.8	11 17	4 49.91	+16 7.2	1.118	2.077	9.0	19.3
11 27	4 39.24	+23 23.1	1.904	2.886	2.3	17.6	11 27	4 39.94	+15 32.3	1.088	2.069	4.1	19.0
12 7	4 29.62	+23 11.9	1.904	2.886	2.0	17.5	12 7	4 29.05	+15 2.9	1.083	2.061	4.6	19.0
12 17	4 20.55	+22 58.4	1.933	2.885	6.1	17.8	12 17	4 18.95	+14 43.4	1.104	2.054	9.8	19.3
12 27	4 13.04	+22 45.3	1.990	2.884	9.8	18.0	12 27	4 11.20	+14 37.0	1.147	2.047	14.9	19.6
1 6	4 7.78	+22 35.3	2.071	2.883	13.0	18.2	1 6	4 6.81	+14 45.2	1.211	2.040	19.3	19.8
<b>38473</b>	1999 <i>TA</i> <sub>85</sub>	12	2.2 122°60	0°6/ 2.4	18		<b>99138</b>	2001 <i>FV</i> <sub>101</sub>	12	2.2 265°49	2°4/ 3.3	18	
10 28	5 4.41	+24 30.1	1.881	2.697	14.5	19.9	10 28	5 1.04	+30 46.0	2.354	3.154	12.4	19.5
11 7	4 58.38	+24 23.8	1.812	2.708	11.0	19.7	11 7	4 55.74	+30 41.7	2.257	3.140	9.7	19.3
11 17	4 49.88	+24 11.4	1.766	2.719	6.9	19.5	11 17	4 48.26	+30 27.8	2.185	3.127	6.5	19.1
11 27	4 39.76	+23 52.4	1.747	2.729	2.5	19.3	11 27	4 39.26	+30 3.1	2.139	3.114	3.4	18.8
12 7	4 29.19	+23 28.2	1.757	2.739	2.2	19.3	12 7	4 29.70	+29 28.0	2.123	3.100	2.8	18.8
12 17	4 19.39	+23 1.5	1.797	2.748	6.5	19.6	12 17	4 20.60	+28 44.8	2.137	3.086	5.8	19.0
12 27	4 11.43	+22 36.0	1.864	2.757	10.4	19.8	12 27	4 12.96	+27 57.6	2.179	3.072	9.1	19.1
1 6	4 6.00	+22 15.1	1.955	2.766	13.7	20.1	1 6	4 7.48	+27 11.1	2.247	3.058	12.2	19.3
<b>210005</b>	2006 <i>JH</i> <sub>44</sub>	12	2.2 243°44	2°6/ 1.5	18		<b>267529</b>	2002 <i>PK</i> <sub>27</sub>	12	2.2 162°49	0°6/ 2.5	17	
10 28	5 4.34	+18 0.9	1.389	2.228	17.4	20.8	10 28	4 59.64	+25 4.9	2.663	3.469	11.0	21.4
11 7	4 59.16	+17 28.2	1.315	2.223	13.3	20.5	11 7	4 54.23	+24 54.1	2.581	3.472	8.3	21.2
11 17	4 50.80	+16 53.1	1.261	2.218	8.5	20.2	11 17	4 47.08	+24 38.0	2.525	3.476	5.3	21.1
11 27	4 40.18	+16 18.0	1.233	2.214	3.7	19.9	11 27	4 38.79	+24 16.7	2.497	3.479	2.0	20.8
12 7	4 28.77	+15 46.5	1.230	2.209	4.1	19.9	12 7	4 30.15	+23 51.3	2.500	3.481	1.7	20.8
12 17	4 18.14	+15 22.6	1.255	2.203	9.1	20.2	12 17	4 21.98	+23 23.8	2.533	3.484	4.9	21.0
12 27	4 9.77	+15 9.9	1.304	2.198	13.9	20.5	12 27	4 15.04	+22 56.8	2.596	3.486	8.0	21.2
1 6	4 4.56	+15 10.1	1.375	2.193	18.1	20.7	1 6	4 9.88	+22 32.7	2.684	3.488	10.6	21.4
<b>76921</b>	2001 <i>AA</i> <sub>15</sub>	12	2.2 215°43	0°7/ 2.5	18		<b>108131</b>	2001 <i>GT</i> <sub>8</sub>	12	2.2 275°41	8°3/29.7	18	
10 28	5 5.93	+25 31.0	1.770	2.586	15.2	20.1	10 28	4 59.99	+1 48.4	1.802	2.613	15.2	19.5
11 7	4 59.91	+25 13.8	1.683	2.579	11.7	19.9	11 7	4 55.05	+0 48.6	1.734	2.611	12.5	19.3
11 17	4 51.06	+24 48.1	1.620	2.572	7.4	19.6	11 17	4 47.84	+0 0.2	1.688	2.608	9.9	19.2
11 27	4 40.24	+24 13.5	1.583	2.564	2.8	19.3	11 27	4 39.11	+0 31.0	1.667	2.606	8.4	19.1
12 7	4 28.72	+23 31.6	1.574	2.556	2.4	19.3	12 7	4 29.86	+0 40.7	1.672	2.603	8.9	19.1
12 17	4 17.86	+22 46.2	1.595	2.547	7.1	19.6	12 17	4 21.19	+0 27.3	1.704	2.601	11.0	19.2
12 27	4 8.97	+22 2.4	1.644	2.538	11.5	19.8	12 27	4 14.12	+0 8.3	1.759	2.598	13.8	19.4
1 6	4 2.88	+21 25.0	1.715	2.528	15.3	20.0	1 6	4 9.32	+1 2.5	1.836	2.595	16.4	19.6
<b>336783</b>	2011 <i>CS</i> <sub>16</sub>	12	2.2 181°82	0°2/ 2.1	18	R	<b>148354</b>	2000 <i>RV</i> <sub>101</sub>	12	2.2 6°19	4°0/ 3.9	17	
10 28	5 5.47												

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>371189</b>	2005 YV <sub>126</sub>	12	2.2 230°33	0°5/ 2.4	18		<b>268736</b>	2006 KC <sub>63</sub>	12	2.2 345°47	4°8/30.7	17	
10 28	5 0.34	+23 56.1	2.673	3.478	10.9	22.3	10 28	4 57.76	+ 8 30.2	2.173	2.991	12.7	20.2
11 7	4 54.87	+23 55.5	2.576	3.467	8.3	22.1	11 7	4 53.07	+ 8 0.8	2.098	2.989	9.9	20.0
11 17	4 47.57	+23 50.7	2.505	3.456	5.3	21.9	11 17	4 46.49	+ 7 37.2	2.046	2.987	7.1	19.9
11 27	4 39.00	+23 41.4	2.463	3.445	1.9	21.7	11 27	4 38.63	+ 7 22.4	2.022	2.985	5.0	19.7
12 7	4 29.94	+23 28.4	2.451	3.433	1.7	21.6	12 7	4 30.35	+ 7 18.8	2.026	2.984	5.3	19.7
12 17	4 21.23	+23 12.9	2.470	3.420	5.1	21.9	12 17	4 22.52	+ 7 27.5	2.058	2.983	7.8	19.9
12 27	4 13.70	+22 57.3	2.519	3.407	8.2	22.0	12 27	4 16.00	+ 7 48.9	2.117	2.982	10.7	20.1
1 6	4 7.96	+22 43.9	2.593	3.394	11.0	22.2	1 6	4 11.40	+ 8 21.7	2.199	2.981	13.4	20.3
<b>189228</b>	2004 JB <sub>31</sub>	12	2.2 162°24	0°9/ 1.9	18		<b>51409</b>	2001 EU <sub>6</sub>	12	2.2 110°91	0°9/ 2.5	18	
10 28	5 4.96	+20 33.2	1.921	2.737	14.2	21.6	10 28	5 5.38	+24 43.5	2.130	2.937	13.3	19.6
11 7	4 58.76	+20 18.7	1.845	2.743	10.7	21.4	11 7	4 58.81	+24 53.5	2.067	2.958	10.1	19.4
11 17	4 50.14	+20 0.9	1.794	2.748	6.7	21.2	11 17	4 50.03	+24 58.2	2.027	2.977	6.4	19.2
11 27	4 39.90	+19 40.4	1.770	2.752	2.4	20.9	11 27	4 39.84	+24 56.7	2.016	2.997	2.5	19.0
12 7	4 29.16	+19 19.0	1.776	2.756	2.5	20.9	12 7	4 29.29	+24 49.4	2.034	3.016	2.1	19.0
12 17	4 19.09	+18 59.2	1.811	2.759	6.7	21.2	12 17	4 19.47	+24 38.1	2.083	3.034	5.8	19.3
12 27	4 10.78	+18 43.7	1.874	2.762	10.6	21.4	12 27	4 11.34	+24 25.4	2.161	3.051	9.3	19.5
1 6	4 4.93	+18 35.1	1.960	2.764	14.0	21.7	1 6	4 5.52	+24 14.5	2.263	3.068	12.3	19.7
<b>79920</b>	1999 CU <sub>28</sub>	12	2.2 333°98	6°6/ 3.9	18		<b>359324</b>	2009 KP <sub>15</sub>	12	2.2 345°93	2°6/ 1.6	18	
10 28	5 0.21	+35 43.0	1.413	2.234	18.1	17.7	10 28	5 0.73	+15 28.1	1.753	2.583	14.7	20.8
11 7	4 56.83	+36 24.6	1.327	2.215	14.8	17.5	11 7	4 55.83	+15 18.9	1.677	2.581	11.2	20.6
11 17	4 49.81	+36 51.1	1.260	2.196	11.0	17.2	11 17	4 48.45	+15 11.4	1.624	2.579	7.2	20.3
11 27	4 40.00	+36 56.5	1.216	2.179	7.6	17.0	11 27	4 39.36	+15 7.4	1.598	2.577	3.4	20.1
12 7	4 28.97	+36 37.4	1.196	2.162	6.8	16.9	12 7	4 29.67	+15 8.3	1.599	2.575	3.6	20.1
12 17	4 18.60	+35 55.7	1.201	2.147	9.7	17.0	12 17	4 20.57	+15 15.8	1.628	2.574	7.6	20.4
12 27	4 10.72	+34 58.2	1.230	2.133	13.8	17.2	12 27	4 13.18	+15 30.9	1.684	2.573	11.6	20.6
1 6	4 6.48	+33 54.6	1.279	2.121	17.8	17.4	1 6	4 8.25	+15 54.0	1.762	2.572	15.0	20.8
<b>175222</b>	2005 GZ <sub>80</sub>	12	2.2 164°53	0°1/ 2.2	18		<b>373498</b>	2000 YC <sub>8</sub>	12	2.2 310°98	2°3/ 1.8	18	
10 28	5 2.00	+22 49.2	1.968	2.787	13.8	21.3	10 28	5 3.71	+16 32.3	1.310	2.153	18.0	20.3
11 7	4 56.56	+22 33.1	1.890	2.789	10.4	21.1	11 7	4 59.01	+16 36.0	1.234	2.144	13.8	20.0
11 17	4 48.78	+22 11.7	1.836	2.790	6.5	20.8	11 17	4 50.92	+16 42.3	1.178	2.136	8.9	19.7
11 27	4 39.43	+21 45.8	1.809	2.792	2.3	20.6	11 27	4 40.34	+16 51.9	1.146	2.128	3.7	19.4
12 7	4 29.59	+21 17.0	1.811	2.793	2.1	20.6	12 7	4 28.74	+17 5.9	1.140	2.120	3.8	19.4
12 17	4 20.38	+20 48.0	1.843	2.794	6.4	20.8	12 17	4 17.83	+17 25.3	1.160	2.112	9.1	19.7
12 27	4 12.83	+20 22.3	1.902	2.794	10.3	21.1	12 27	4 9.22	+17 51.4	1.205	2.105	14.3	19.9
1 6	4 7.63	+20 2.7	1.985	2.795	13.6	21.3	1 6	4 3.96	+18 24.8	1.270	2.098	18.7	20.2
<b>131386</b>	2001 KR <sub>42</sub>	12	2.2 195°86	2°8/ 1.3	18		<b>520174</b>	2014 CN <sub>27</sub>	12	2.2 154°40	3°3/ 1.2	18	
10 28	4 59.24	+12 3.9	2.631	3.441	11.0	20.2	10 28	5 2.89	+12 45.6	2.149	2.962	13.0	21.7
11 7	4 53.90	+11 57.2	2.549	3.439	8.4	20.0	11 7	4 56.88	+12 24.7	2.077	2.970	9.9	21.5
11 17	4 46.88	+11 53.9	2.491	3.437	5.6	19.8	11 17	4 48.83	+12 6.5	2.029	2.977	6.6	21.3
11 27	4 38.75	+11 55.2	2.462	3.435	3.2	19.7	11 27	4 39.44	+11 53.3	2.009	2.983	3.7	21.1
12 7	4 30.22	+12 2.2	2.463	3.433	3.5	19.7	12 7	4 29.65	+11 46.8	2.019	2.989	4.1	21.2
12 17	4 22.06	+12 15.8	2.495	3.430	6.0	19.8	12 17	4 20.42	+11 48.5	2.059	2.994	7.1	21.4
12 27	4 15.01	+12 36.2	2.555	3.427	8.8	20.0	12 27	4 12.66	+11 59.3	2.127	2.999	10.3	21.6
1 6	4 9.63	+13 3.4	2.641	3.424	11.3	20.2	1 6	4 7.00	+12 19.0	2.218	3.003	13.2	21.8
<b>277134</b>	2005 JE <sub>5</sub>	12	2.2 37°45	6°7/29.4	17		<b>406660</b>	2008 EQ <sub>17</sub>	12	2.2 165°29	6°1/ 4.7	18	
10 28	4 56.02	+ 2 30.6	2.315	3.122	12.4	20.2	10 28	5 6.76	+41 17.9	2.468	3.222	13.2	21.1
11 7	4 51.56	+ 1 32.2	2.254	3.128	10.1	20.1	11 7	5 0.22	+41 58.0	2.387	3.226	10.9	20.9
11 17	4 45.43	+ 0 42.6	2.216	3.134	8.0	20.0	11 17	4 51.13	+42 24.1	2.329	3.229	8.6	20.8
11 27	4 38.23	+ 0 6.3	2.204	3.141	6.7	19.9	11 27	4 40.29	+42 32.2	2.297	3.232	6.6	20.7
12 7	4 30.72	- 0 13.6	2.220	3.148	7.2	19.9	12 7	4 28.85	+42 20.5	2.293	3.234	6.1	20.6
12 17	4 23.70	- 0 15.7	2.264	3.155	8.9	20.1	12 17	4 18.03	+41 50.2	2.318	3.236	7.4	20.7
12 27	4 17.88	- 0 0.1	2.332	3.163	11.1	20.2	12 27	4 8.99	+41 5.7	2.371	3.238	9.6	20.9
1 6	4 13.79	+ 0 31.0	2.423	3.170	13.2	20.4	1 6	4 2.49	+40 13.2	2.448	3.240	11.9	21.0
<b>156593</b>	2002 GS <sub>63</sub>	12	2.2 122°30	1°8/ 1.4	18		<b>404099</b>	2012 FE <sub>46</sub>	12	2.2 52°41	5°7/30.2	18	
10 28	4 59.42	+17 12.7	2.517	3.331	11.3	20.8	10 28	4 58.17	+ 7 24.1	2.037	2.856	13.4	20.8
11 7	4 54.00	+16 45.1	2.447	3.343	8.5	20.6	11 7	4 53.40	+ 6 33.0	1.973	2.862	10.5	20.6
11 17	4 46.89	+16 16.7	2.403	3.355	5.4	20.5	11 17	4 46.67	+ 5 48.4	1.932	2.869	7.7	20.5
11 27	4 38.72	+15 49.2	2.387	3.367	2.4	20.3	11 27	4 38.69	+ 5 14.2	1.918	2.875	5.8	20.4
12 7	4 30.28	+15 24.5	2.402	3.378	2.7	20.3	12 7	4 30.35	+ 4 53.8	1.931	2.882	6.3	20.4
12 17	4 22.35	+15 4.5	2.447	3.389	5.7	20.5	12 17	4 22.57	+ 4 49.1	1.973	2.889	8.6	20.6
12 27	4 15.66	+14 51.0	2.521	3.400	8.6	20.8	12 27	4 16.22	+ 5 0.3	2.040	2.896	11.4	20.8
1 6	4 10.73	+14 45.1	2.620	3.410	11.2	21.0	1 6	4 11.85	+ 5 25.9	2.130	2.903	14.0	21.0
<b>247554</b>	2002 RE <sub>242</sub>	12	2.2 8°73	0°0/ 2.1	17		<b>482509</b>	2012 TT <sub>115</sub>	12	2.2 127°18	4°1/ 3.6	18	
10 28	4 58.22	+23 35.2	1.894	2.722	13.9	20.3	10 28	5 7.37	+33 1.4	1.785	2.585	15.8	21.6
11 7	4 53.80	+23 17.8	1.820	2.724	10.5	20.0	11 7	5 1.04	+33 20.1	1.714	2.594	12.4	21.4
11 17	4 47.09	+22 54.7	1.770	2.726	6.6	19.8	11 17	4 51.77	+33 26.0	1.665	2.603	8.6	21.2
11 27	4 38.85	+22 26.6	1.745	2.728	2.3	19.5	11 27	4 40.52	+33 15.9	1.642	2.611	5.1	21.0
12 7	4 30.15	+21 55.3	1.750	2.731	2.1	19.5	12 7	4 28.69	+32 49.3	1.647	2.619	4.4	21.0
12 17	4 22.07	+21 23.8	1.782	2.735	6.4	19.8	12 17	4 17.76	+32 9.3	1.681	2.627	7.4	21.2
12 27	4 15.63	+20 55.6	1.841	2.740	10.2	20.1	12 27	4 9.01	+31 21.6	1.741	2.635	11.0	21.4
1 6	4 11.50	+20 33.6	1.924	2.744	13.6	20.3	1 6	4 3.24	+30 33.0	1.826	2.642	14.3	21.6
<b>88684</b>	2001 RC <sub>104</sub>	12	2.2 154°60	2°2/ 1.6	18		<b>187668</b>	2008 BB <sub>39</sub>	12	2.2 253°60	1°7/ 1.7	18	
10 28	5 4.77	+16 37.3	1.827	2.647									

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12 2.2

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>124064</b>	2001 <i>FQ</i> <sub>171</sub>	12	2.2 173°82	5°4/30.0	18		<b>117294</b>	2004 <i>TY</i> <sub>338</sub>	12	2.2 345°05	5°9/30.7	18	
10 28	4 57.91	+ 2 3.1	2.941	3.729	10.5	20.4	10 28	4 58.68	+ 5 43.1	2.004	2.820	13.7	19.3
11 7	4 52.67	+ 1 31.0	2.867	3.732	8.5	20.2	11 7	4 53.93	+ 5 15.1	1.931	2.817	10.9	19.2
11 17	4 46.01	+ 1 6.7	2.819	3.734	6.6	20.1	11 17	4 47.12	+ 4 55.8	1.880	2.815	8.1	19.0
11 27	4 38.45	+ 0 52.9	2.799	3.736	5.5	20.0	11 27	4 38.92	+ 4 48.6	1.856	2.812	6.1	18.9
12 7	4 30.60	+ 0 51.6	2.808	3.737	5.8	20.1	12 7	4 30.24	+ 4 56.0	1.859	2.810	6.4	18.9
12 17	4 23.10	+ 1 3.6	2.846	3.738	7.3	20.2	12 17	4 22.06	+ 5 18.9	1.890	2.809	8.8	19.0
12 27	4 16.59	+ 1 28.6	2.912	3.738	9.3	20.3	12 27	4 15.28	+ 5 56.7	1.947	2.807	11.7	19.2
1 6	4 11.51	+ 2 5.1	3.001	3.738	11.2	20.4	1 6	4 10.57	+ 6 47.2	2.027	2.806	14.5	19.4
<b>277442</b>	2005 <i>US</i> <sub>454</sub>	12	2.2 22°59	5°2/30.9	18		<b>356678</b>	2011 <i>UB</i> <sub>94</sub>	12	2.2 117°20	1°3/1.8	18	
10 28	5 0.82	+12 32.2	1.288	2.136	18.0	20.2	10 28	5 1.89	+19 58.0	1.871	2.696	14.2	21.6
11 7	4 56.45	+11 46.6	1.230	2.140	13.9	20.0	11 7	4 56.52	+19 33.7	1.799	2.700	10.7	21.4
11 17	4 49.04	+11 5.0	1.191	2.145	9.4	19.8	11 17	4 48.79	+19 6.3	1.750	2.705	6.7	21.2
11 27	4 39.60	+10 32.5	1.176	2.150	5.7	19.6	11 27	4 39.50	+18 37.2	1.728	2.710	2.5	20.9
12 7	4 29.57	+10 13.4	1.187	2.157	6.3	19.6	12 7	4 29.74	+18 8.6	1.734	2.714	2.7	20.9
12 17	4 20.44	+10 10.6	1.223	2.163	10.2	19.9	12 17	4 20.65	+17 43.5	1.770	2.719	6.8	21.2
12 27	4 13.55	+10 24.9	1.282	2.171	14.5	20.1	12 27	4 13.27	+17 24.7	1.833	2.723	10.7	21.5
1 6	4 9.70	+10 54.8	1.361	2.179	18.3	20.4	1 6	4 8.28	+17 14.3	1.919	2.727	14.1	21.7
<b>210891</b>	2001 <i>SV</i> <sub>128</sub>	12	2.2 19°79	9°0/28.9	18		<b>249723</b>	2000 <i>SK</i> <sub>10</sub>	12	2.2 36°22	1°4/1.6	17	
10 28	4 56.88	+ 5 51.0	1.383	2.225	17.3	19.0	10 28	5 1.98	+23 58.9	1.416	2.255	17.2	19.2
11 7	4 53.11	+ 4 5.3	1.335	2.233	13.9	18.8	11 7	4 56.80	+22 33.2	1.371	2.280	12.8	19.0
11 17	4 46.76	+ 2 29.1	1.308	2.243	10.7	18.6	11 17	4 48.91	+20 58.2	1.347	2.306	7.9	18.8
11 27	4 38.76	+ 1 11.4	1.305	2.254	9.0	18.5	11 27	4 39.46	+19 19.0	1.350	2.332	2.8	18.6
12 7	4 30.37	+ 0 19.3	1.326	2.266	9.8	18.6	12 7	4 29.89	+17 42.7	1.380	2.360	3.2	18.7
12 17	4 22.84	- 0 3.9	1.372	2.279	12.4	18.8	12 17	4 21.51	+16 16.7	1.438	2.388	7.9	19.0
12 27	4 17.25	+ 0 1.5	1.440	2.292	15.5	19.0	12 27	4 15.38	+15 6.6	1.522	2.417	12.2	19.4
1 6	4 14.26	+ 0 31.3	1.526	2.307	18.3	19.3	1 6	4 12.03	+14 15.2	1.628	2.446	15.7	19.7
<b>321472</b>	2009 <i>RJ</i> <sub>53</sub>	12	2.2 49°70	4°2/30.5	18		<b>72559</b>	2001 <i>EZ</i> <sub>5</sub>	12	2.2 282°80	4°4/3.5	18	
10 28	4 58.15	+12 10.9	2.081	2.905	13.0	20.2	10 28	5 3.35	+33 56.4	2.224	3.015	13.3	19.2
11 7	4 53.38	+11 18.2	2.013	2.910	10.0	20.0	11 7	4 57.80	+34 38.3	2.136	3.009	10.7	19.0
11 17	4 46.68	+10 27.8	1.968	2.915	6.8	19.8	11 17	4 49.75	+35 10.5	2.072	3.003	7.7	18.8
11 27	4 38.71	+ 9 43.1	1.950	2.920	4.4	19.7	11 27	4 39.90	+35 29.7	2.035	2.997	5.1	18.7
12 7	4 30.39	+ 9 7.8	1.962	2.925	4.9	19.7	12 7	4 29.32	+35 34.0	2.026	2.991	4.6	18.6
12 17	4 22.62	+ 8 44.4	2.001	2.931	7.7	19.9	12 17	4 19.22	+35 24.1	2.046	2.985	6.8	18.7
12 27	4 16.27	+ 8 34.4	2.068	2.936	10.7	20.1	12 27	4 10.75	+35 3.3	2.094	2.979	9.8	18.9
1 6	4 11.90	+ 8 37.7	2.157	2.942	13.5	20.3	1 6	4 4.73	+34 36.6	2.165	2.974	12.7	19.1
<b>337760</b>	2001 <i>UJ</i> <sub>129</sub>	12	2.2 143°33	4°2/3.3	18		<b>287901</b>	2003 <i>SO</i> <sub>423</sub>	12	2.2 92°31	1°6/1.9	18	
10 28	5 8.69	+31 26.8	1.785	2.586	15.7	21.0	10 28	5 6.31	+16 9.5	1.808	2.626	14.9	20.2
11 7	5 2.17	+32 11.8	1.712	2.593	12.4	20.8	11 7	4 59.78	+16 29.1	1.748	2.645	11.2	20.0
11 17	4 52.59	+32 47.0	1.661	2.600	8.6	20.6	11 17	4 50.79	+16 50.8	1.711	2.664	7.1	19.8
11 27	4 40.87	+33 8.0	1.636	2.606	5.1	20.4	11 27	4 40.18	+17 14.6	1.702	2.683	2.8	19.6
12 7	4 28.39	+33 12.6	1.640	2.611	4.5	20.4	12 7	4 29.15	+17 40.0	1.722	2.701	2.8	19.6
12 17	4 16.68	+33 2.1	1.672	2.617	7.6	20.5	12 17	4 18.89	+18 7.3	1.771	2.719	6.9	19.9
12 27	4 7.14	+32 41.0	1.731	2.622	11.3	20.8	12 27	4 10.50	+18 36.9	1.849	2.737	10.8	20.2
1 6	4 0.64	+32 15.4	1.814	2.626	14.6	21.0	1 6	4 4.65	+19 9.5	1.950	2.754	14.0	20.4
<b>47270</b>	1999 <i>VE</i> <sub>138</sub>	12	2.2 5°51	0°1/2.3	18		<b>128616</b>	2004 <i>QA</i> <sub>25</sub>	12	2.2 49°62	8°8/2.8	18	
10 28	4 59.79	+22 46.2	1.939	2.763	13.8	19.7	10 28	5 15.11	+36 1.4	1.471	2.266	18.8	19.3
11 7	4 54.99	+22 45.9	1.862	2.763	10.4	19.5	11 7	5 8.34	+38 19.2	1.408	2.275	15.4	19.1
11 17	4 47.87	+22 41.5	1.809	2.764	6.6	19.3	11 17	4 57.24	+40 26.2	1.366	2.284	11.9	18.9
11 27	4 39.18	+22 32.9	1.782	2.765	2.3	19.0	11 27	4 42.73	+42 10.5	1.349	2.294	9.3	18.8
12 7	4 29.94	+22 21.1	1.784	2.766	2.1	19.0	12 7	4 26.68	+43 22.8	1.359	2.304	9.1	18.8
12 17	4 21.29	+22 8.0	1.815	2.767	6.3	19.3	12 17	4 11.39	+44 0.5	1.396	2.314	11.3	18.9
12 27	4 14.26	+21 56.4	1.872	2.769	10.2	19.5	12 27	3 59.08	+44 9.3	1.457	2.325	14.4	19.2
1 6	4 9.55	+21 48.8	1.954	2.771	13.5	19.7	1 6	3 51.09	+43 59.3	1.539	2.336	17.5	19.4
<b>294030</b>	2007 <i>TF</i> <sub>127</sub>	12	2.2 153°20	0°5/2.4	18		<b>457466</b>	2008 <i>UZ</i> <sub>213</sub>	12	2.2 139°14	5°3/4.0	18	
10 28	5 3.87	+23 32.5	2.042	2.855	13.6	21.3	10 28	5 8.70	+36 6.5	1.906	2.692	15.4	20.8
11 7	4 57.93	+23 38.5	1.966	2.861	10.3	21.1	11 7	5 2.08	+36 42.3	1.833	2.700	12.4	20.6
11 17	4 49.65	+23 40.0	1.913	2.866	6.5	20.9	11 17	4 52.47	+37 4.3	1.783	2.708	9.1	20.4
11 27	4 39.79	+23 36.5	1.888	2.870	2.4	20.6	11 27	4 40.83	+37 8.2	1.758	2.716	6.2	20.3
12 7	4 29.42	+23 28.3	1.893	2.874	2.0	20.6	12 7	4 28.54	+36 52.4	1.761	2.723	5.5	20.3
12 17	4 19.65	+23 17.2	1.927	2.878	6.1	20.9	12 17	4 17.09	+36 18.9	1.792	2.730	7.7	20.4
12 27	4 11.54	+23 5.9	1.989	2.881	9.9	21.1	12 27	4 7.81	+35 33.5	1.851	2.736	10.9	20.6
1 6	4 5.79	+22 57.4	2.076	2.884	13.1	21.4	1 6	4 1.53	+34 43.4	1.934	2.742	13.9	20.8
<b>410139</b>	2007 <i>HQ</i> <sub>24</sub>	12	2.2 94°96	2°1/1.4	18		<b>205967</b>	2002 <i>LX</i> <sub>39</sub>	12	2.2 110°75	4°9/1.3	18	
10 28	4 59.16	+16 37.2	2.334	3.152	11.9	21.2	10 28	5 4.32	+ 7 41.7	1.960	2.770	14.2	20.6
11 7	4 53.96	+16 12.6	2.266	3.164	9.0	21.0	11 7	4 58.04	+ 7 33.3	1.899	2.785	11.1	20.4
11 17	4 46.95	+15 47.9	2.223	3.175	5.7	20.8	11 17	4 49.60	+ 7 33.0	1.861	2.800	7.8	20.2
11 27	4 38.81	+15 24.8	2.207	3.187	2.6	20.6	11 27	4 39.76	+ 7 43.0	1.850	2.815	5.2	20.1
12 7	4 30.35	+15 5.1	2.222	3.198	2.9	20.7	12 7	4 29.56	+ 8 4.5	1.869	2.829	5.4	20.2
12 17	4 22.44	+14 50.7	2.267	3.209	6.0	20.9	12 17	4 20.03	+ 8 37.5	1.916	2.843	8.1	20.3
12 27	4 15.85	+14 43.2	2.339	3.220	9.1	21.1	12 27	4 12.13	+ 9 21.0	1.991	2.857	11.2	20.6
1 6	4 11.12	+14 43.5	2.436	3.231	11.8	21.3	1 6	4 6.47	+10 13.2	2.089	2.870	14.0	20.8
<b>108341</b>	2001 <i>KQ</i> <sub>5</sub>	12	2.2 79°77	0°0/2.0	18		<b>272449</b>	2005 <i>UW</i> <sub>21</sub>	12	2.2 190°12	1°0/1.9	1	



EPHEMERIDES

12 2.2

12 2.3

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>454666</b>	2014 <i>QB</i> <sub>370</sub>	12	2.2 350°92	4.4/ 1.1	17		<b>460437</b>	2014 <i>SC</i> <sub>166</sub>	12	2.3 44°30	11°6/ 7.8	17	
10 28	4 56.99	+11 58.7	1.645	2.484	15.1	20.6	10 28	5 13.26	+54 35.3	2.063	2.759	17.1	20.5
11 7	4 53.16	+11 32.5	1.571	2.477	11.7	20.4	11 7	5 6.61	+55 56.7	2.004	2.771	15.3	20.4
11 17	4 46.88	+11 10.7	1.519	2.471	7.9	20.1	11 17	4 55.85	+56 54.7	1.963	2.784	13.5	20.3
11 27	4 38.90	+10 56.6	1.492	2.466	4.8	19.9	11 27	4 42.15	+57 21.2	1.944	2.798	12.2	20.2
12 7	4 30.31	+10 53.1	1.492	2.462	5.2	20.0	12 7	4 27.48	+57 12.1	1.947	2.812	11.6	20.2
12 17	4 22.28	+11 1.9	1.518	2.458	8.6	20.2	12 17	4 14.02	+56 28.7	1.974	2.826	12.0	20.3
12 27	4 15.93	+11 23.6	1.570	2.456	12.5	20.4	12 27	4 3.65	+55 18.1	2.024	2.840	13.1	20.4
1 6	4 12.02	+11 57.3	1.643	2.455	15.9	20.6	1 6	3 57.37	+53 50.8	2.096	2.855	14.7	20.5
<b>117542</b>	2005 <i>EV</i>	12	2.2 170°00	0°3/ 2.2	18		<b>194558</b>	2001 <i>XZ</i> <sub>80</sub>	12	2.3 282°33	1°0/ 1.9	18	
10 28	5 2.70	+21 44.8	1.897	2.718	14.2	20.5	10 28	5 2.92	+19 48.6	1.634	2.464	15.6	20.4
11 7	4 57.22	+21 39.0	1.819	2.719	10.7	20.2	11 7	4 57.97	+19 44.1	1.544	2.448	12.0	20.1
11 17	4 49.30	+21 29.4	1.765	2.720	6.7	20.0	11 17	4 50.13	+19 37.4	1.476	2.433	7.6	19.8
11 27	4 39.72	+21 16.3	1.738	2.721	2.4	19.7	11 27	4 40.14	+19 29.0	1.434	2.417	2.8	19.5
12 7	4 29.59	+21 0.9	1.740	2.721	2.2	19.7	12 7	4 29.24	+19 20.2	1.420	2.401	2.8	19.5
12 17	4 20.07	+20 45.2	1.770	2.722	6.6	20.0	12 17	4 18.83	+19 13.0	1.434	2.385	7.8	19.7
12 27	4 12.26	+20 32.3	1.828	2.722	10.6	20.3	12 27	4 10.29	+19 10.2	1.473	2.370	12.4	20.0
1 6	4 6.89	+20 24.7	1.910	2.722	14.0	20.5	1 6	4 4.58	+19 14.4	1.535	2.354	16.5	20.2
<b>348743</b>	2006 <i>HG</i> <sub>5</sub>	12	2.2 114°52	1°5/ 2.6	18		<b>194868</b>	2002 <i>AH</i> <sub>45</sub>	12	2.3 231°63	1°7/ 1.7	18	
10 28	5 7.48	+24 25.2	1.957	2.765	14.3	20.8	10 28	5 3.07	+18 42.7	1.913	2.734	14.1	20.5
11 7	5 0.75	+25 4.3	1.889	2.780	10.9	20.6	11 7	4 57.55	+18 21.5	1.826	2.725	10.7	20.3
11 17	4 51.48	+25 39.3	1.845	2.794	7.0	20.4	11 17	4 49.57	+17 58.0	1.762	2.716	6.8	20.0
11 27	4 40.48	+26 7.8	1.828	2.809	2.9	20.2	11 27	4 39.88	+17 33.6	1.725	2.706	2.7	19.7
12 7	4 28.92	+26 28.6	1.842	2.822	2.5	20.2	12 7	4 29.54	+17 10.4	1.717	2.696	2.9	19.7
12 17	4 18.07	+26 42.1	1.886	2.835	6.4	20.4	12 17	4 19.71	+16 51.0	1.739	2.686	7.1	20.0
12 27	4 9.05	+26 50.5	1.957	2.848	10.1	20.7	12 27	4 11.51	+16 38.2	1.787	2.675	11.1	20.2
1 6	4 2.61	+26 57.2	2.053	2.861	13.3	20.9	1 6	4 5.72	+16 33.8	1.860	2.664	14.6	20.4
<b>205437</b>	2001 <i>MU</i> <sub>11</sub>	12	2.2 156°93	2°6/ 1.5	18		<b>222017</b>	1998 <i>SN</i> <sub>39</sub>	12	2.3 102°68	1°2/ 1.8	18	
10 28	5 3.06	+13 4.1	2.498	3.303	11.6	20.7	10 28	4 59.72	+19 9.1	2.265	3.083	12.2	20.9
11 7	4 56.80	+13 2.3	2.423	3.312	8.9	20.5	11 7	4 54.53	+18 51.7	2.192	3.090	9.2	20.7
11 17	4 48.74	+13 3.4	2.372	3.319	5.8	20.3	11 17	4 47.42	+18 32.5	2.143	3.097	5.8	20.5
11 27	4 39.48	+13 8.4	2.351	3.326	3.1	20.2	11 27	4 39.06	+18 12.6	2.122	3.104	2.2	20.2
12 7	4 29.84	+13 18.2	2.360	3.333	3.3	20.2	12 7	4 30.32	+17 53.8	2.131	3.111	2.4	20.3
12 17	4 20.68	+13 33.3	2.401	3.338	6.1	20.4	12 17	4 22.12	+17 37.8	2.170	3.117	5.9	20.5
12 27	4 12.78	+13 54.4	2.471	3.343	9.0	20.6	12 27	4 15.30	+17 26.8	2.237	3.124	9.2	20.7
1 6	4 6.73	+14 21.2	2.566	3.348	11.7	20.8	1 6	4 10.44	+17 22.3	2.328	3.131	12.1	20.9
<b>218412</b>	2004 <i>RO</i> <sub>81</sub>	12	2.2 23°75	2°2/ 3.0	18		<b>44283</b>	1998 <i>QP</i> <sub>78</sub>	12	2.3 21°91	9°1/ 28.9	18	
10 28	5 1.18	+28 24.8	1.902	2.717	14.3	20.4	10 28	4 58.91	+ 3 29.7	1.556	2.383	16.5	17.6
11 7	4 56.18	+28 32.9	1.827	2.721	11.0	20.2	11 7	4 54.50	+ 1 55.0	1.499	2.386	13.4	17.4
11 17	4 48.69	+28 32.3	1.776	2.725	7.3	20.0	11 17	4 47.64	+ 0 30.7	1.464	2.390	10.7	17.3
11 27	4 39.52	+28 21.9	1.751	2.729	3.5	19.7	11 27	4 39.17	- 0 35.2	1.453	2.394	9.2	17.2
12 7	4 29.81	+28 2.0	1.754	2.733	2.8	19.7	12 7	4 30.24	- 1 16.5	1.467	2.398	9.9	17.3
12 17	4 20.77	+27 34.9	1.785	2.738	6.4	19.9	12 17	4 22.03	- 1 30.2	1.507	2.403	12.2	17.4
12 27	4 13.51	+27 4.7	1.844	2.742	10.2	20.2	12 27	4 15.63	- 1 16.7	1.568	2.409	15.1	17.6
1 6	4 8.74	+26 35.9	1.926	2.748	13.5	20.4	1 6	4 11.71	- 0 40.0	1.650	2.415	17.8	17.8
<b>107836</b>	2001 <i>FC</i> <sub>72</sub>	12	2.3 198°48	1°0/ 2.5	18		<b>462970</b>	2011 <i>EK</i> <sub>43</sub>	12	2.3 229°98	8°7/ 6.7	18	
10 28	5 4.05	+24 9.7	2.020	2.833	13.7	20.2	10 28	5 12.69	+55 31.3	3.119	3.776	12.5	21.8
11 7	4 58.24	+24 26.1	1.937	2.832	10.5	20.0	11 7	5 5.12	+56 27.7	3.026	3.765	11.2	21.7
11 17	4 49.97	+24 38.1	1.878	2.830	6.7	19.7	11 17	4 54.50	+57 7.3	2.952	3.753	10.0	21.6
11 27	4 39.99	+24 44.6	1.846	2.827	2.6	19.5	11 27	4 41.66	+57 24.5	2.902	3.740	9.1	21.5
12 7	4 29.37	+24 45.3	1.843	2.825	2.2	19.4	12 7	4 27.91	+57 16.1	2.877	3.727	8.7	21.4
12 17	4 19.28	+24 41.3	1.871	2.822	6.3	19.7	12 17	4 14.77	+56 42.0	2.878	3.714	9.1	21.5
12 27	4 10.85	+24 35.5	1.925	2.819	10.1	19.9	12 27	4 3.65	+55 46.2	2.904	3.700	10.1	21.5
1 6	4 4.83	+24 30.8	2.005	2.815	13.5	20.1	1 6	3 55.50	+54 35.1	2.954	3.685	11.4	21.6
<b>367451</b>	2008 <i>TL</i> <sub>188</sub>	12	2.3 85°40	0°8/ 1.8	18		<b>121026</b>	1999 <i>BH</i> <sub>27</sub>	12	2.3 296°47	1°7/ 1.8	18	
10 28	4 59.19	+22 12.0	2.356	3.172	11.9	20.5	10 28	5 2.26	+18 39.2	1.500	2.337	16.4	20.3
11 7	4 54.01	+21 27.0	2.282	3.180	8.9	20.3	11 7	4 57.67	+18 27.8	1.414	2.322	12.6	20.0
11 17	4 47.01	+20 36.9	2.233	3.187	5.6	20.1	11 17	4 50.04	+18 14.8	1.348	2.306	8.0	19.7
11 27	4 38.87	+19 43.5	2.212	3.195	2.0	19.9	11 27	4 40.14	+18 1.5	1.308	2.290	3.2	19.4
12 7	4 30.43	+18 49.6	2.222	3.202	2.1	19.9	12 7	4 29.27	+17 49.7	1.295	2.275	3.3	19.4
12 17	4 22.57	+17 58.5	2.262	3.210	5.6	20.2	12 17	4 18.94	+17 41.9	1.308	2.260	8.4	19.6
12 27	4 16.07	+17 13.7	2.331	3.218	8.9	20.4	12 27	4 10.61	+17 41.1	1.347	2.245	13.3	19.9
1 6	4 11.46	+16 37.5	2.425	3.225	11.7	20.6	1 6	4 5.26	+17 49.3	1.407	2.230	17.5	20.1
<b>34171</b>	2000 <i>QZ</i> <sub>34</sub>	12	2.3 300°02	3°8/ 1.0	18		<b>263856</b>	2009 <i>BX</i> <sub>146</sub>	12	2.3 263°32	0°5/ 2.5	18	
10 28	5 0.89	+14 58.2	1.564	2.401	15.9	18.2	10 28	5 2.37	+24 40.2	1.916	2.735	14.1	21.5
11 7	4 56.29	+14 15.1	1.485	2.391	12.2	18.0	11 7	4 57.16	+24 29.0	1.825	2.723	10.8	21.3
11 17	4 48.95	+13 32.0	1.427	2.382	8.1	17.7	11 17	4 49.40	+24 10.9	1.757	2.711	6.9	21.0
11 27	4 39.67	+12 52.6	1.395	2.372	4.4	17.5	11 27	4 39.84	+23 45.9	1.716	2.698	2.5	20.7
12 7	4 29.66	+12 20.8	1.390	2.363	4.9	17.5	12 7	4 29.58	+23 15.2	1.704	2.686	2.2	20.7
12 17	4 20.26	+12 0.3	1.412	2.354	9.0	17.7	12 17	4 19.85	+22 41.7	1.720	2.673	6.6	20.9
12 27	4 12.74	+11 53.8	1.459	2.345	13.2	17.9	12 27	4 11.80	+22 9.3	1.764	2.660	10.8	21.1
1 6	4 7.93	+12 1.8	1.527	2.336	17.0	18.2	1 6	4 6.24	+21 42.0	1.832	2.647	14.4	21.3
<b>396943</b>	2005 <i>JD</i> <sub>73</sub>	12	2.3 59°77	0°0/ 2.1	18		<b>435475</b>	2008 <i>FN</i> <sub>102</sub>	12	2.3 216°74			

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>277623</b>	2006 <i>BW</i> <sub>30</sub>	12	2.3 312°00	3°4/ 3.4	18		<b>366495</b>	2002 <i>OH</i> <sub>2</sub>	12	2.3 69°47	1°0/ 2.8	18	
10 28	5 1.21	+31 22.7	1.985	2.793	14.1	20.3	10 28	5 0.34	+27 23.7	2.253	3.063	12.6	19.7
11 7	4 56.40	+31 40.2	1.894	2.780	11.1	20.1	11 7	4 55.04	+26 56.9	2.182	3.074	9.6	19.6
11 17	4 48.99	+31 47.8	1.826	2.768	7.7	19.9	11 17	4 47.74	+26 21.8	2.134	3.084	6.1	19.4
11 27	4 39.72	+31 43.1	1.783	2.755	4.4	19.6	11 27	4 39.18	+25 38.9	2.114	3.095	2.5	19.1
12 7	4 29.70	+31 25.3	1.769	2.743	3.7	19.6	12 7	4 30.32	+24 50.3	2.125	3.106	1.9	19.1
12 17	4 20.19	+30 56.3	1.782	2.731	6.8	19.7	12 17	4 22.11	+23 59.3	2.165	3.117	5.5	19.4
12 27	4 12.40	+30 20.3	1.823	2.720	10.4	19.9	12 27	4 15.40	+23 9.9	2.233	3.128	8.9	19.6
1 6	4 7.15	+29 42.5	1.888	2.709	13.7	20.1	1 6	4 10.77	+22 25.7	2.327	3.139	11.8	19.8
<b>157171</b>	2004 <i>PX</i> <sub>49</sub>	12	2.3 109°74	0°5/ 2.4	18		<b>129519</b>	1995 <i>VG</i> <sub>16</sub>	12	2.3 202°74	1°5/ 2.7	18	
10 28	5 6.89	+23 34.8	1.833	2.647	14.9	20.6	10 28	5 6.02	+25 45.3	2.406	3.203	12.3	20.5
11 7	5 0.28	+23 38.0	1.772	2.667	11.2	20.4	11 7	4 59.48	+26 13.3	2.313	3.198	9.4	20.3
11 17	4 51.14	+23 36.0	1.733	2.686	7.1	20.2	11 17	4 50.69	+26 36.9	2.246	3.192	6.1	20.1
11 27	4 40.38	+23 28.2	1.722	2.704	2.6	19.9	11 27	4 40.30	+26 54.3	2.207	3.186	2.7	19.8
12 7	4 29.22	+23 15.5	1.740	2.722	2.2	19.9	12 7	4 29.27	+27 4.5	2.199	3.179	2.3	19.8
12 17	4 18.91	+23 0.0	1.788	2.739	6.5	20.2	12 17	4 18.63	+27 8.1	2.223	3.171	5.7	20.0
12 27	4 10.56	+22 45.1	1.863	2.756	10.4	20.5	12 27	4 9.41	+27 7.2	2.275	3.162	9.1	20.2
1 6	4 4.83	+22 33.9	1.962	2.772	13.7	20.8	1 6	4 2.36	+27 4.8	2.354	3.153	12.1	20.4
<b>393731</b>	2004 <i>YJ</i> <sub>20</sub>	12	2.3 249°22	2°3/ 1.6	18		<b>411904</b>	2012 <i>FU</i> <sub>56</sub>	12	2.3 100°55	4°0/ 3.7	17	
10 28	5 2.28	+16 18.9	1.891	2.715	14.1	21.5	10 28	5 3.90	+34 0.7	2.324	3.111	13.0	21.3
11 7	4 56.98	+16 5.2	1.805	2.705	10.8	21.2	11 7	4 57.95	+34 32.4	2.252	3.122	10.3	21.1
11 17	4 49.24	+15 52.0	1.743	2.696	6.9	21.0	11 17	4 49.71	+34 53.8	2.202	3.132	7.3	20.9
11 27	4 39.79	+15 40.8	1.707	2.686	3.1	20.7	11 27	4 39.93	+35 2.1	2.180	3.143	4.7	20.8
12 7	4 29.66	+15 33.2	1.700	2.677	3.4	20.7	12 7	4 29.65	+34 56.6	2.187	3.153	4.2	20.8
12 17	4 20.03	+15 31.2	1.721	2.667	7.3	20.9	12 17	4 19.99	+34 38.5	2.223	3.163	6.3	20.9
12 27	4 11.99	+15 36.5	1.770	2.656	11.3	21.2	12 27	4 11.96	+34 11.4	2.287	3.173	9.1	21.1
1 6	4 6.34	+15 50.1	1.842	2.646	14.7	21.4	1 6	4 6.24	+33 40.3	2.376	3.182	11.7	21.3
<b>345414</b>	2006 <i>CZ</i> <sub>66</sub>	12	2.3 10°62	4°7/30.7	15		<b>518716</b>	2009 <i>DA</i> <sub>8</sub>	12	2.3 313°69	7°2/29.8	18	
10 28	4 54.83	+ 8 44.4	2.189	3.013	12.4	20.1	10 28	4 58.97	+ 7 15.4	1.627	2.457	15.7	20.4
11 7	4 50.88	+ 8 12.3	2.123	3.017	9.7	20.0	11 7	4 54.70	+ 6 7.1	1.550	2.446	12.5	20.1
11 17	4 45.15	+ 7 45.9	2.081	3.023	6.9	19.8	11 17	4 47.91	+ 5 4.8	1.496	2.435	9.3	19.9
11 27	4 38.28	+ 7 28.2	2.065	3.029	4.9	19.7	11 27	4 39.36	+ 4 14.8	1.467	2.424	7.3	19.8
12 7	4 31.07	+ 7 21.5	2.078	3.036	5.2	19.7	12 7	4 30.16	+ 3 42.7	1.464	2.414	8.0	19.8
12 17	4 24.33	+ 7 27.0	2.118	3.043	7.6	19.9	12 17	4 21.50	+ 3 31.8	1.486	2.404	10.8	19.9
12 27	4 18.85	+ 7 45.1	2.185	3.052	10.3	20.1	12 27	4 14.55	+ 3 43.0	1.533	2.394	14.2	20.1
1 6	4 15.15	+ 8 14.4	2.274	3.061	12.8	20.3	1 6	4 10.08	+ 4 14.3	1.600	2.385	17.4	20.3
<b>256574</b>	2007 <i>TV</i> <sub>79</sub>	12	2.3 24°68	4°6/ 3.4	18		<b>365360</b>	2009 <i>SE</i> <sub>340</sub>	12	2.3 61°19	5°5/30.9	18	
10 28	5 3.94	+30 29.1	1.003	1.853	21.7	19.9	10 28	5 0.58	+ 6 35.3	1.974	2.788	13.9	20.4
11 7	5 0.08	+30 58.8	0.951	1.861	17.0	19.6	11 7	4 55.17	+ 6 5.9	1.924	2.811	10.9	20.2
11 17	4 51.94	+31 13.3	0.916	1.869	11.5	19.4	11 17	4 47.79	+ 5 44.9	1.898	2.834	7.9	20.1
11 27	4 40.82	+31 8.0	0.903	1.879	6.2	19.1	11 27	4 39.22	+ 5 35.4	1.898	2.857	5.8	20.0
12 7	4 28.84	+30 42.2	0.912	1.890	5.2	19.1	12 7	4 30.39	+ 5 39.6	1.926	2.880	6.1	20.1
12 17	4 18.28	+30 0.9	0.945	1.902	9.8	19.4	12 17	4 22.26	+ 5 57.8	1.983	2.903	8.4	20.3
12 27	4 11.00	+29 13.1	1.000	1.915	15.0	19.7	12 27	4 15.66	+ 6 29.4	2.065	2.925	11.1	20.5
1 6	4 7.90	+28 27.8	1.075	1.929	19.4	20.1	1 6	4 11.14	+ 7 12.2	2.171	2.948	13.7	20.7
<b>397971</b>	2009 <i>AW</i> <sub>17</sub>	12	2.3 241°86	0°6/ 2.1	18		<b>111412</b>	2001 <i>XQ</i> <sub>187</sub>	12	2.3 166°40	1°3/ 2.8	18	
10 28	5 2.91	+20 49.8	1.956	2.776	13.8	21.2	10 28	5 1.57	+27 0.6	2.090	2.902	13.4	19.9
11 7	4 57.46	+20 44.6	1.868	2.766	10.5	20.9	11 7	4 56.28	+26 52.6	2.009	2.902	10.2	19.7
11 17	4 49.55	+20 36.4	1.802	2.757	6.6	20.7	11 17	4 48.70	+26 36.9	1.953	2.903	6.6	19.5
11 27	4 39.90	+20 25.5	1.764	2.746	2.4	20.4	11 27	4 39.60	+26 12.9	1.923	2.903	2.8	19.2
12 7	4 29.57	+20 13.0	1.755	2.736	2.3	20.4	12 7	4 30.01	+25 41.9	1.922	2.903	2.2	19.2
12 17	4 19.73	+20 0.8	1.775	2.725	6.7	20.6	12 17	4 21.01	+25 6.4	1.951	2.904	6.0	19.4
12 27	4 11.50	+19 51.7	1.822	2.714	10.7	20.8	12 27	4 13.62	+24 30.3	2.008	2.904	9.6	19.7
1 6	4 5.66	+19 47.9	1.894	2.703	14.2	21.1	1 6	4 8.52	+23 57.6	2.089	2.904	12.8	19.9
<b>516026</b>	2015 <i>SQ</i> <sub>23</sub>	12	2.3 181°82	3°8/ 3.2	18		<b>487343</b>	2014 <i>QA</i> <sub>201</sub>	12	2.3 233°27	6°4/ 4.9	17	
10 28	5 7.01	+31 21.8	2.171	2.963	13.6	21.7	10 28	5 6.29	+41 45.1	2.274	3.033	14.0	21.2
11 7	5 0.56	+32 10.3	2.088	2.963	10.7	21.5	11 7	5 0.19	+42 14.9	2.185	3.027	11.7	21.0
11 17	4 51.51	+32 50.9	2.028	2.964	7.5	21.3	11 17	4 51.35	+42 29.3	2.118	3.020	9.2	20.8
11 27	4 40.60	+33 19.9	1.996	2.963	4.5	21.2	11 27	4 40.58	+42 23.8	2.077	3.014	7.1	20.7
12 7	4 28.94	+33 35.1	1.993	2.963	4.1	21.1	12 7	4 29.12	+41 56.6	2.062	3.007	6.5	20.7
12 17	4 17.80	+33 36.8	2.020	2.962	6.7	21.3	12 17	4 18.31	+41 9.5	2.077	3.000	7.8	20.7
12 27	4 8.36	+33 28.2	2.076	2.961	9.9	21.5	12 27	4 9.41	+40 7.7	2.118	2.992	10.3	20.9
1 6	4 1.46	+33 14.0	2.156	2.959	12.9	21.7	1 6	4 3.22	+38 58.3	2.184	2.985	12.8	21.0
<b>255155</b>	2005 <i>UD</i> <sub>181</sub>	12	2.3 98°70	1°1/ 1.9	18		<b>79908</b>	1999 <i>BP</i> <sub>27</sub>	12	2.3 57°30	3°1/ 3.4	18	
10 28	5 0.60	+19 51.4	2.111	2.931	12.9	21.0	10 28	5 3.44	+30 49.5	1.847	2.656	15.0	19.5
11 7	4 55.34	+19 35.1	2.038	2.938	9.8	20.8	11 7	4 58.04	+31 0.3	1.773	2.661	11.6	19.3
11 17	4 47.99	+19 16.3	1.990	2.944	6.1	20.6	11 17	4 49.96	+31 0.3	1.722	2.666	7.9	19.1
11 27	4 39.29	+18 56.3	1.969	2.951	2.3	20.4	11 27	4 40.07	+30 47.5	1.696	2.670	4.2	18.9
12 7	4 30.18	+18 36.5	1.977	2.957	2.3	20.4	12 7	4 29.61	+30 21.9	1.699	2.675	3.5	18.8
12 17	4 21.65	+18 19.2	2.015	2.964	6.1	20.7	12 17	4 19.90	+29 46.4	1.730	2.680	6.8	19.0
12 27	4 14.62	+18 6.7	2.081	2.970	9.7	20.9	12 27	4 12.12	+29 5.8	1.788	2.685	10.5	19.3
1 6	4 9.70	+18 0.7	2.171	2.977	12.7	21.1	1 6	4 7.03	+28 25.5	1.870	2.690	13.9	19.5
<b>243915</b>	2001 <i>HE</i> <sub>57</sub>	12	2.3 125°59	7°1/28.5	18		<b>330801</b>	2008 <i>UZ</i> <sub>312</sub>	12	2.3 135°06	2°4/ 3.0	1	

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>181612</b>	2006 <i>WM</i> <sub>105</sub>	12	2.3 291°06	0°7/ 2.0 18			<b>415632</b>	2014 <i>QX</i> <sub>377</sub>	12	2.3 71°28	2°6/ 1.3 17		
10 28	5 0.65	+21 33.2	1.942	2.766	13.8	20.4	10 28	4 59.56	+16 5.5	2.114	2.936	12.9	21.1
11 7	4 55.70	+21 12.3	1.860	2.761	10.4	20.2	11 7	4 54.45	+15 27.4	2.051	2.950	9.7	20.9
11 17	4 48.41	+20 47.0	1.801	2.756	6.6	20.0	11 17	4 47.39	+14 49.3	2.012	2.965	6.2	20.8
11 27	4 39.54	+20 18.2	1.769	2.752	2.3	19.7	11 27	4 39.13	+14 13.6	2.002	2.979	3.1	20.6
12 7	4 30.10	+19 47.9	1.766	2.747	2.3	19.7	12 7	4 30.57	+13 43.0	2.020	2.994	3.5	20.6
12 17	4 21.22	+19 19.2	1.792	2.743	6.6	20.0	12 17	4 22.63	+13 19.8	2.067	3.008	6.6	20.9
12 27	4 13.95	+18 55.1	1.845	2.738	10.5	20.2	12 27	4 16.14	+13 6.1	2.142	3.022	9.9	21.1
1 6	4 9.00	+18 38.3	1.921	2.734	13.9	20.4	1 6	4 11.67	+13 2.4	2.241	3.037	12.7	21.3
<b>197099</b>	2003 <i>UZ</i> <sub>190</sub>	12	2.3 345°66	2°3/ 1.5 17			<b>120691</b>	1997 <i>EZ</i> <sub>28</sub>	12	2.3 253°91	0°7/ 2.5 17		
10 28	4 57.76	+17 10.5	1.927	2.758	13.6	20.0	10 28	5 0.96	+24 31.3	2.170	2.984	12.8	20.8
11 7	4 53.49	+16 42.0	1.848	2.753	10.3	19.8	11 7	4 55.79	+24 31.3	2.085	2.981	9.8	20.6
11 17	4 47.01	+16 12.5	1.792	2.748	6.6	19.6	11 17	4 48.42	+24 26.0	2.025	2.977	6.2	20.4
11 27	4 39.05	+15 44.2	1.763	2.743	3.0	19.3	11 27	4 39.56	+24 15.3	1.992	2.974	2.4	20.1
12 7	4 30.56	+15 19.6	1.763	2.739	3.3	19.3	12 7	4 30.15	+23 59.7	1.988	2.970	2.0	20.1
12 17	4 22.60	+15 1.4	1.790	2.736	7.0	19.6	12 17	4 21.25	+23 41.1	2.014	2.967	5.8	20.3
12 27	4 16.14	+14 51.8	1.844	2.733	10.7	19.8	12 27	4 13.83	+23 22.3	2.068	2.963	9.5	20.6
1 6	4 11.86	+14 51.8	1.921	2.731	14.0	20.0	1 6	4 8.58	+23 6.5	2.147	2.959	12.6	20.8
<b>19468</b>	1998 <i>HO</i> <sub>45</sub>	12	2.3 124°62	2°3/ 3.1 18			<b>361851</b>	2008 <i>DG</i> <sub>71</sub>	12	2.3 97°30	2°5/ 1.5 18		
10 28	5 5.70	+29 2.3	1.927	2.733	14.5	18.3	10 28	5 1.05	+15 47.1	1.996	2.818	13.5	21.3
11 7	4 59.53	+29 8.7	1.857	2.744	11.2	18.1	11 7	4 55.78	+15 28.5	1.925	2.824	10.2	21.1
11 17	4 50.79	+29 5.9	1.809	2.755	7.4	17.9	11 17	4 48.35	+15 10.6	1.878	2.831	6.6	20.9
11 27	4 40.35	+28 52.1	1.788	2.765	3.6	17.7	11 27	4 39.51	+14 55.3	1.858	2.837	3.1	20.7
12 7	4 29.44	+28 27.8	1.796	2.774	2.9	17.7	12 7	4 30.23	+14 44.5	1.867	2.843	3.4	20.8
12 17	4 19.29	+27 55.7	1.833	2.784	6.5	17.9	12 17	4 21.55	+14 39.8	1.906	2.849	6.9	21.0
12 27	4 11.04	+27 20.2	1.898	2.793	10.2	18.2	12 27	4 14.40	+14 42.8	1.971	2.855	10.4	21.2
1 6	4 5.41	+26 46.2	1.987	2.801	13.4	18.4	1 6	4 9.43	+14 54.1	2.060	2.861	13.5	21.4
<b>144015</b>	2004 <i>BG</i> <sub>6</sub>	12	2.3 254°38	1°5/ 1.8 18			<b>70612</b>	1999 <i>TH</i> <sub>200</sub>	12	2.3 346°49	7°4/ 3.5 18		
10 28	5 1.57	+18 49.2	1.876	2.701	14.1	20.6	10 28	5 6.35	+35 43.2	1.502	2.309	17.9	19.0
11 7	4 56.43	+18 34.4	1.797	2.698	10.7	20.4	11 7	5 1.47	+37 7.5	1.426	2.304	14.6	18.8
11 17	4 48.89	+18 17.8	1.741	2.696	6.8	20.2	11 17	4 52.83	+38 20.1	1.371	2.299	11.0	18.6
11 27	4 39.72	+18 0.7	1.712	2.694	2.7	19.9	11 27	4 41.32	+39 13.0	1.340	2.295	8.1	18.4
12 7	4 29.97	+17 44.8	1.712	2.691	2.8	19.9	12 7	4 28.52	+39 40.7	1.334	2.291	7.6	18.4
12 17	4 20.79	+17 32.4	1.740	2.689	6.9	20.2	12 17	4 16.41	+39 42.4	1.354	2.289	10.0	18.5
12 27	4 13.26	+17 25.8	1.796	2.687	10.9	20.4	12 27	4 6.84	+39 23.5	1.398	2.287	13.6	18.7
1 6	4 8.11	+17 26.8	1.874	2.684	14.3	20.6	1 6	4 1.02	+38 52.6	1.464	2.285	17.0	18.9
<b>223836</b>	2004 <i>TS</i> <sub>143</sub>	12	2.3 108°79	2°3/ 1.3 18			<b>397579</b>	2007 <i>UU</i> <sub>126</sub>	12	2.3 28°80	0°4/ 2.2 18		
10 28	4 59.69	+17 4.9	2.288	3.106	12.1	20.2	10 28	5 1.70	+22 2.9	1.629	2.461	15.6	21.1
11 7	4 54.44	+16 23.6	2.218	3.116	9.2	20.0	11 7	4 56.82	+21 48.3	1.560	2.465	11.8	20.8
11 17	4 47.35	+15 41.1	2.173	3.126	5.8	19.8	11 17	4 49.25	+21 28.7	1.512	2.469	7.4	20.6
11 27	4 39.11	+14 59.8	2.157	3.135	2.8	19.6	11 27	4 39.87	+21 5.2	1.490	2.473	2.6	20.3
12 7	4 30.55	+14 22.2	2.170	3.145	3.1	19.7	12 7	4 29.92	+20 39.5	1.496	2.477	2.4	20.3
12 17	4 22.56	+13 51.2	2.213	3.154	6.3	19.9	12 17	4 20.73	+20 14.8	1.529	2.482	7.2	20.6
12 27	4 15.92	+13 28.8	2.284	3.163	9.4	20.1	12 27	4 13.48	+19 54.6	1.589	2.488	11.5	20.9
1 6	4 11.18	+13 16.2	2.379	3.172	12.2	20.3	1 6	4 8.93	+19 41.9	1.671	2.493	15.2	21.1
<b>80296</b>	1999 <i>XM</i> <sub>58</sub>	12	2.3 350°47	0°7/ 2.1 18			<b>187054</b>	2005 <i>MP</i> <sub>6</sub>	12	2.3 103°77	1°0/ 2.0 18		
10 28	5 0.53	+21 10.1	1.145	2.001	19.2	19.8	10 28	5 7.57	+19 58.9	1.662	2.483	15.8	20.8
11 7	4 57.03	+21 4.1	1.077	1.995	14.7	19.5	11 7	5 0.93	+19 50.1	1.605	2.504	11.9	20.6
11 17	4 49.92	+20 53.9	1.028	1.990	9.3	19.2	11 17	4 51.63	+19 38.7	1.571	2.525	7.4	20.4
11 27	4 40.21	+20 40.1	1.002	1.985	3.3	18.8	11 27	4 40.65	+19 25.3	1.563	2.545	2.7	20.2
12 7	4 29.52	+20 24.6	1.000	1.982	3.1	18.8	12 7	4 29.29	+19 11.6	1.584	2.565	2.7	20.2
12 17	4 19.72	+20 10.8	1.023	1.980	9.2	19.1	12 17	4 18.88	+18 59.7	1.635	2.584	7.2	20.6
12 27	4 12.49	+20 2.7	1.068	1.979	14.6	19.4	12 27	4 10.56	+18 52.5	1.712	2.603	11.3	20.8
1 6	4 8.83	+20 3.6	1.133	1.980	19.2	19.7	1 6	4 5.00	+18 52.0	1.812	2.621	14.7	21.1
<b>275331</b>	2010 <i>VK</i> <sub>129</sub>	12	2.3 94°31	1°9/ 1.8 18			<b>45020</b>	1999 <i>WC</i> <sub>5</sub>	12	2.3 210°54	2°1/ 1.7 18		
10 28	5 6.81	+18 40.2	1.380	2.215	17.7	21.2	10 28	5 0.55	+14 58.6	2.388	3.201	11.8	18.0
11 7	5 0.88	+18 24.1	1.322	2.228	13.4	20.9	11 7	4 55.18	+15 0.6	2.304	3.199	9.0	17.8
11 17	4 51.84	+18 6.3	1.285	2.242	8.4	20.7	11 17	4 47.92	+15 4.6	2.246	3.196	5.8	17.6
11 27	4 40.75	+17 48.4	1.273	2.255	3.3	20.4	11 27	4 39.37	+15 11.5	2.215	3.194	2.7	17.4
12 7	4 29.13	+17 32.6	1.289	2.268	3.4	20.5	12 7	4 30.34	+15 21.9	2.215	3.191	2.9	17.4
12 17	4 18.55	+17 21.6	1.331	2.281	8.4	20.8	12 17	4 21.72	+15 36.7	2.245	3.188	6.0	17.6
12 27	4 10.35	+17 18.3	1.399	2.294	13.0	21.1	12 27	4 14.34	+15 56.4	2.303	3.185	9.2	17.8
1 6	4 5.30	+17 24.3	1.488	2.306	16.9	21.4	1 6	4 8.83	+16 21.4	2.387	3.182	12.0	18.0
<b>266493</b>	2008 <i>DG</i> <sub>44</sub>	12	2.3 156°48	4°5/ 1.1 18			<b>175544</b>	2006 <i>SS</i> <sub>243</sub>	12	2.3 251°70	2°0/ 2.8 18		
10 28	5 4.65	+11 50.1	1.681	2.504	15.6	20.8	10 28	5 3.51	+26 52.4	1.906	2.720	14.4	20.5
11 7	4 58.81	+11 17.5	1.612	2.509	12.0	20.6	11 7	4 58.06	+27 12.9	1.827	2.720	11.1	20.3
11 17	4 50.39	+10 48.9	1.566	2.514	8.1	20.3	11 17	4 50.02	+27 26.8	1.770	2.719	7.2	20.0
11 27	4 40.24	+10 27.7	1.546	2.518	4.9	20.2	11 27	4 40.16	+27 32.3	1.739	2.718	3.3	19.8
12 7	4 29.55	+10 16.7	1.553	2.521	5.3	20.2	12 7	4 29.64	+27 29.0	1.738	2.718	2.7	19.8
12 17	4 19.56	+10 18.1	1.589	2.524	8.8	20.4	12 17	4 19.71	+27 18.2	1.765	2.717	6.6	20.0
12 27	4 11.44	+10 32.6	1.651	2.527	12.6	20.6	12 27	4 11.55	+27 3.3	1.820	2.716	10.4	20.2
1 6	4 5.92	+10 59.5	1.735	2.529	15.9	20.9	1 6	4 5.97	+26 48.5	1.898	2.715	13.8	20.5
<b>457307</b>	2008 <i>SV</i> <sub>34</sub>	12	2.3 355°50	5°4/ 29.9 17			<b>391230</b>	2006 <i>KY</i>	12	2.3 158°60	1°9/ 1.9 18		

EPHEMERIDES

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>188808</b>	2005 <i>WS</i> <sub>169</sub>	12 2.3 40°46'	0°1'	2.3 18			<b>141856</b>	2002 <i>PW</i> <sub>11</sub>	12 2.3 347°53'	0°3'	2.2 18		
10 28	5 1.33	+22 28.5	1.861	2.685	14.3	20.6	10 28	5 3.02	+23 8.8	1.304	2.146	18.1	20.1
11 7	4 56.26	+22 31.2	1.791	2.691	10.8	20.4	11 7	4 58.52	+22 47.0	1.233	2.143	13.8	19.8
11 17	4 48.78	+22 29.9	1.743	2.698	6.8	20.2	11 17	4 50.67	+22 17.5	1.183	2.141	8.7	19.5
11 27	4 39.69	+22 24.7	1.722	2.704	2.4	19.9	11 27	4 40.47	+21 41.3	1.156	2.139	3.1	19.2
12 7	4 30.09	+22 16.3	1.729	2.711	2.1	19.9	12 7	4 29.46	+21 1.0	1.156	2.138	2.8	19.2
12 17	4 21.13	+22 6.6	1.765	2.718	6.4	20.2	12 17	4 19.34	+20 21.5	1.181	2.136	8.5	19.5
12 27	4 13.90	+21 58.2	1.828	2.725	10.4	20.4	12 27	4 11.63	+19 48.3	1.231	2.136	13.6	19.8
1 6	4 9.08	+21 53.7	1.915	2.733	13.7	20.7	1 6	4 7.25	+19 25.5	1.301	2.135	18.0	20.1
<b>232938</b>	2005 <i>BL</i> <sub>28</sub>	12 2.3 289°73'	2°6'	3.4 18			<b>306735</b>	2000 <i>WY</i> <sub>185</sub>	12 2.3 20°14'	3°9'	1.9 18		
10 28	5 0.63	+31 10.3	2.299	3.100	12.7	20.3	10 28	5 0.61	+12 55.2	1.066	1.926	20.0	18.5
11 7	4 55.55	+31 7.1	2.209	3.092	9.9	20.1	11 7	4 56.82	+13 6.1	1.019	1.937	15.3	18.2
11 17	4 48.28	+30 53.9	2.142	3.084	6.7	19.9	11 17	4 49.59	+13 25.2	0.991	1.950	9.9	18.0
11 27	4 39.52	+30 29.6	2.102	3.076	3.6	19.7	11 27	4 40.05	+13 54.0	0.985	1.965	4.9	17.8
12 7	4 30.22	+29 54.6	2.092	3.068	2.9	19.6	12 7	4 29.89	+14 32.5	1.004	1.981	5.0	17.8
12 17	4 21.44	+29 11.6	2.111	3.060	5.8	19.8	12 17	4 20.85	+15 19.7	1.046	1.999	9.7	18.1
12 27	4 14.15	+28 24.5	2.158	3.053	9.1	20.0	12 27	4 14.41	+16 14.1	1.111	2.018	14.6	18.5
1 6	4 9.04	+27 37.9	2.230	3.045	12.1	20.2	1 6	4 11.39	+17 14.0	1.197	2.039	18.7	18.8
<b>185965</b>	2001 <i>FK</i> <sub>142</sub>	12 2.3 264°42'	2°4'	1.5 18			<b>265035</b>	2003 <i>OZ</i> <sub>19</sub>	12 2.3 20°03'	3°0'	1.4 18		
10 28	5 3.35	+19 10.5	1.493	2.329	16.6	20.5	10 28	4 59.28	+14 16.5	1.906	2.734	13.8	19.8
11 7	4 58.35	+18 26.8	1.415	2.322	12.7	20.2	11 7	4 54.58	+13 59.2	1.836	2.737	10.5	19.6
11 17	4 50.38	+17 38.5	1.358	2.315	8.1	20.0	11 17	4 47.68	+13 44.3	1.788	2.741	6.9	19.4
11 27	4 40.32	+16 48.4	1.327	2.308	3.4	19.7	11 27	4 39.32	+13 33.7	1.767	2.745	3.6	19.2
12 7	4 29.51	+16 0.5	1.323	2.301	3.8	19.7	12 7	4 30.50	+13 29.4	1.775	2.749	3.9	19.2
12 17	4 19.42	+15 19.7	1.346	2.294	8.6	19.9	12 17	4 22.24	+13 32.9	1.811	2.754	7.2	19.4
12 27	4 11.41	+14 50.4	1.394	2.287	13.3	20.2	12 27	4 15.52	+13 45.2	1.873	2.759	10.8	19.6
1 6	4 6.35	+14 35.0	1.464	2.280	17.3	20.4	1 6	4 11.01	+14 6.2	1.959	2.764	13.9	19.9
<b>413804</b>	2006 <i>JW</i> <sub>33</sub>	12 2.3 302°82'	1°2'	2.6 18			<b>135859</b>	2002 <i>TS</i>	12 2.3 128°99'	4°9'	30.6 18		
10 28	5 0.96	+24 40.7	2.199	3.012	12.7	21.1	10 28	5 1.72	+ 8 54.3	2.173	2.984	13.0	20.6
11 7	4 55.89	+25 4.1	2.108	3.002	9.7	20.8	11 7	4 55.98	+ 8 8.9	2.110	2.997	10.1	20.5
11 17	4 48.58	+25 23.8	2.042	2.993	6.3	20.6	11 17	4 48.35	+ 7 28.6	2.071	3.010	7.1	20.3
11 27	4 39.66	+25 38.4	2.002	2.983	2.6	20.4	11 27	4 39.51	+ 6 56.8	2.060	3.022	5.1	20.2
12 7	4 30.08	+25 47.3	1.993	2.973	2.2	20.3	12 7	4 30.37	+ 6 36.4	2.078	3.034	5.5	20.2
12 17	4 20.90	+25 51.3	2.012	2.964	5.9	20.5	12 17	4 21.81	+ 6 29.1	2.125	3.045	7.9	20.4
12 27	4 13.13	+25 52.2	2.060	2.955	9.5	20.7	12 27	4 14.68	+ 6 35.4	2.199	3.056	10.7	20.6
1 6	4 7.54	+25 53.0	2.132	2.946	12.7	20.9	1 6	4 9.52	+ 6 54.4	2.296	3.066	13.2	20.8
<b>225783</b>	2001 <i>TP</i> <sub>180</sub>	12 2.3 342°65'	0°9'	2.6 18			<b>228461</b>	2001 <i>RN</i> <sub>24</sub>	12 2.3 352°58'	2°0'	1.8 18		
10 28	5 1.48	+26 3.3	1.340	2.180	17.8	19.6	10 28	4 58.12	+19 33.2	1.114	1.976	19.2	19.4
11 7	4 57.37	+25 41.0	1.266	2.174	13.7	19.3	11 7	4 55.22	+19 10.5	1.047	1.968	14.6	19.1
11 17	4 49.95	+25 7.6	1.212	2.169	8.8	19.0	11 17	4 48.80	+18 44.1	1.000	1.962	9.3	18.8
11 27	4 40.20	+24 23.3	1.182	2.164	3.3	18.7	11 27	4 39.86	+18 16.6	0.975	1.958	3.6	18.4
12 7	4 29.64	+23 30.8	1.177	2.160	2.7	18.6	12 7	4 30.01	+17 51.5	0.974	1.954	3.8	18.5
12 17	4 19.94	+22 35.6	1.199	2.156	8.2	18.9	12 17	4 21.02	+17 32.9	0.996	1.953	9.5	18.8
12 27	4 12.60	+21 44.3	1.246	2.153	13.3	19.2	12 27	4 14.54	+17 24.7	1.041	1.952	14.9	19.1
1 6	4 8.54	+21 2.7	1.313	2.151	17.6	19.5	1 6	4 11.53	+17 28.9	1.105	1.953	19.5	19.4
<b>259013</b>	2002 <i>TJ</i> <sub>122</sub>	12 2.3 140°95'	1°3'	1.9 18			<b>229527</b>	2005 <i>XN</i> <sub>24</sub>	12 2.3 160°49'	2°5'	1.7 18		
10 28	5 7.18	+18 21.1	1.807	2.624	14.9	20.9	10 28	5 4.92	+14 58.9	1.937	2.753	14.1	21.0
11 7	5 0.62	+18 22.6	1.738	2.635	11.3	20.7	11 7	4 58.81	+14 55.0	1.862	2.758	10.7	20.8
11 17	4 51.49	+18 23.6	1.693	2.646	7.1	20.5	11 17	4 50.34	+14 53.2	1.811	2.763	6.9	20.6
11 27	4 40.65	+18 24.3	1.674	2.656	2.7	20.2	11 27	4 40.28	+14 54.7	1.788	2.767	3.3	20.4
12 7	4 29.28	+18 25.5	1.685	2.665	2.7	20.2	12 7	4 29.68	+15 0.6	1.794	2.770	3.4	20.4
12 17	4 18.65	+18 28.6	1.726	2.674	7.0	20.5	12 17	4 19.68	+15 11.9	1.830	2.773	7.1	20.7
12 27	4 9.90	+18 35.4	1.794	2.682	11.0	20.8	12 27	4 11.33	+15 29.5	1.893	2.776	10.8	20.9
1 6	4 3.76	+18 47.5	1.885	2.689	14.4	21.0	1 6	4 5.35	+15 53.9	1.980	2.778	14.1	21.1
<b>282466</b>	2004 <i>FK</i> <sub>30</sub>	12 2.3 333°99'	0°0'	2.2 18			<b>309035</b>	2006 <i>UV</i> <sub>187</sub>	12 2.3 31°15'	5°0'	4.2 17		
10 28	5 1.82	+29 23.1	1.436	2.267	17.4	18.7	10 28	5 4.15	+35 40.8	1.705	2.507	16.3	20.3
11 7	4 57.41	+27 39.0	1.347	2.251	13.4	18.4	11 7	4 58.93	+35 54.9	1.634	2.512	13.0	20.1
11 17	4 49.85	+25 31.5	1.279	2.236	8.5	18.1	11 17	4 50.70	+35 53.3	1.584	2.517	9.4	19.9
11 27	4 40.13	+23 3.9	1.238	2.221	3.0	17.7	11 27	4 40.44	+35 32.8	1.559	2.523	6.1	19.7
12 7	4 29.74	+20 25.1	1.226	2.208	2.8	17.7	12 7	4 29.57	+34 53.2	1.561	2.529	5.2	19.7
12 17	4 20.27	+17 47.7	1.242	2.195	8.5	18.0	12 17	4 19.61	+33 58.1	1.590	2.536	7.8	19.9
12 27	4 13.09	+15 24.7	1.285	2.184	13.7	18.2	12 27	4 11.88	+32 54.2	1.646	2.543	11.3	20.1
1 6	4 9.02	+13 25.2	1.351	2.174	18.1	18.5	1 6	4 7.16	+31 49.3	1.724	2.550	14.6	20.3
<b>195149</b>	2002 <i>CW</i> <sub>206</sub>	12 2.3 5°25'	0°8'	2.1 18			<b>518558</b>	2007 <i>EF</i> <sub>172</sub>	12 2.3 155°53'	3°7'	30.7 18		
10 28	5 0.71	+20 0.4	1.227	2.079	18.4	19.1	10 28	4 58.88	+12 22.7	2.357	3.173	11.9	21.7
11 7	4 56.88	+20 7.0	1.163	2.079	14.0	18.8	11 7	4 53.84	+11 37.4	2.282	3.176	9.1	21.5
11 17	4 49.69	+20 12.2	1.119	2.079	8.8	18.5	11 17	4 47.03	+10 53.9	2.233	3.179	6.2	21.3
11 27	4 40.12	+20 15.9	1.098	2.081	3.2	18.2	11 27	4 39.07	+10 15.2	2.211	3.181	3.9	21.2
12 7	4 29.73	+20 19.0	1.102	2.084	3.0	18.2	12 7	4 30.76	+ 9 44.2	2.219	3.183	4.3	21.2
12 17	4 20.21	+20 23.4	1.131	2.088	8.6	18.6	12 17	4 22.92	+ 9 23.1	2.256	3.186	6.9	21.4
12 27	4 13.11	+20 31.6	1.184	2.093	13.7	18.9	12 27	4 16.33	+ 9 13.3	2.321	3.188	9.8	21.6
1 6	4 9.34	+20 45.9	1.257	2.099	18.0	19.1	1 6	4 11.55	+ 9 15.1	2.410	3.189	12.4	21.8
<b>223859</b>	2004 <i>TJ</i> <sub>275</sub>	12 2.3 12°88'	0°2'	2.2 18									

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>505354</b>	2013 <i>CJ</i> <sub>82</sub>		12 2.3 61°55' 26°1'	4.8	17		<b>406958</b>	2009 <i>OJ</i> <sub>14</sub>		12 2.3 24°13' 24°2'/26.3	17		
10 28	5 7.83	-34 20.3	1.224	1.889	28.1	21.0	10 28	5 1.60	-19 37.8	0.973	1.756	27.0	20.1
11 7	5 1.99	-36 23.7	1.214	1.900	27.2	20.9	11 7	4 57.77	-22 30.8	0.950	1.760	25.5	20.0
11 17	4 52.61	-37 35.1	1.213	1.912	26.6	20.9	11 17	4 50.28	-24 37.7	0.940	1.764	24.5	19.9
11 27	4 41.06	-37 44.0	1.222	1.923	26.2	20.9	11 27	4 40.37	-25 42.9	0.944	1.769	24.2	19.9
12 7	4 29.19	-36 46.6	1.241	1.935	26.1	21.0	12 7	4 29.85	-25 39.1	0.962	1.774	24.6	20.0
12 17	4 18.79	-34 46.6	1.271	1.947	26.3	21.1	12 17	4 20.57	-24 28.3	0.993	1.781	25.6	20.1
12 27	4 11.25	-31 53.7	1.313	1.959	26.7	21.2	12 27	4 14.06	-22 20.4	1.036	1.788	26.9	20.3
1 6	4 7.26	-28 22.2	1.366	1.971	27.3	21.3	1 6	4 11.13	-19 30.7	1.091	1.795	28.4	20.4
<b>481776</b>	2008 <i>SB</i> <sub>32</sub>		12 2.3 154°50' 3°0'	3.4	18		<b>226456</b>	2003 <i>SH</i> <sub>107</sub>		12 2.3 208°12' 1°3'	1.7	18	
10 28	5 7.14	+31 2.3	1.971	2.769	14.5	21.7	10 28	4 59.17	+19 51.1	2.496	3.310	11.4	20.6
11 7	5 0.70	+31 10.8	1.895	2.776	11.3	21.5	11 7	4 54.09	+19 16.5	2.411	3.308	8.6	20.4
11 17	4 51.61	+31 8.5	1.842	2.783	7.7	21.3	11 17	4 47.24	+18 38.7	2.351	3.305	5.4	20.2
11 27	4 40.75	+30 53.3	1.815	2.789	4.1	21.1	11 27	4 39.22	+17 59.3	2.320	3.302	2.1	20.0
12 7	4 29.35	+30 25.3	1.818	2.794	3.4	21.1	12 7	4 30.81	+17 20.6	2.320	3.299	2.3	20.0
12 17	4 18.70	+29 47.1	1.850	2.799	6.6	21.3	12 17	4 22.85	+16 45.1	2.349	3.295	5.6	20.2
12 27	4 9.97	+29 3.7	1.910	2.803	10.2	21.5	12 27	4 16.12	+16 15.4	2.408	3.292	8.8	20.4
1 6	4 3.92	+28 20.7	1.994	2.806	13.5	21.7	1 6	4 11.17	+15 53.5	2.491	3.288	11.6	20.6
<b>391155</b>	2005 <i>YT</i> <sub>109</sub>		12 2.3 284°09' 1°9'	1.8	18		<b>154822</b>	2004 <i>QC</i> <sub>21</sub>		12 2.3 115°58' 0°3'	2.2	18	
10 28	5 2.43	+18 30.9	1.623	2.455	15.6	22.0	10 28	5 1.07	+21 51.8	2.183	2.999	12.7	20.4
11 7	4 57.63	+18 10.6	1.534	2.440	12.0	21.7	11 7	4 55.75	+21 39.3	2.108	3.005	9.6	20.2
11 17	4 49.99	+17 48.1	1.468	2.424	7.6	21.4	11 17	4 48.36	+21 23.1	2.057	3.011	6.0	20.0
11 27	4 40.28	+17 25.0	1.427	2.409	3.1	21.1	11 27	4 39.63	+21 3.8	2.034	3.017	2.1	19.8
12 7	4 29.69	+17 3.6	1.414	2.393	3.3	21.1	12 7	4 30.47	+20 42.7	2.041	3.022	2.0	19.8
12 17	4 19.62	+16 47.0	1.428	2.378	8.0	21.3	12 17	4 21.88	+20 22.0	2.077	3.028	5.8	20.1
12 27	4 11.40	+16 38.1	1.469	2.363	12.6	21.5	12 27	4 14.75	+20 4.4	2.141	3.033	9.3	20.3
1 6	4 5.95	+16 39.1	1.531	2.347	16.6	21.8	1 6	4 9.71	+19 51.9	2.230	3.038	12.4	20.5
<b>485643</b>	2011 <i>WT</i> <sub>14</sub>		12 2.3 14°76' 4°2'	1.9	18		<b>216276</b>	2006 <i>WO</i> <sub>171</sub>		12 2.3 119°56' 0°4'	2.2	18	
10 28	5 2.77	+10 18.0	1.453	2.288	17.0	20.3	10 28	5 2.37	+21 20.3	2.100	2.916	13.1	21.1
11 7	4 57.85	+10 35.3	1.388	2.291	13.2	20.1	11 7	4 56.79	+21 14.6	2.028	2.925	9.9	20.9
11 17	4 50.06	+11 2.3	1.344	2.295	8.8	19.8	11 17	4 49.04	+21 5.9	1.979	2.933	6.2	20.7
11 27	4 40.27	+11 40.4	1.325	2.300	5.0	19.6	11 27	4 39.88	+20 54.3	1.958	2.941	2.2	20.5
12 7	4 29.79	+12 29.4	1.333	2.306	5.0	19.7	12 7	4 30.27	+20 41.2	1.967	2.948	2.0	20.5
12 17	4 20.04	+13 27.8	1.368	2.313	8.8	19.9	12 17	4 21.27	+20 28.2	2.005	2.956	6.0	20.7
12 27	4 12.32	+14 33.9	1.428	2.320	13.0	20.2	12 27	4 13.81	+20 17.8	2.072	2.963	9.6	21.0
1 6	4 7.46	+15 45.2	1.510	2.328	16.7	20.4	1 6	4 8.54	+20 12.1	2.162	2.970	12.7	21.2
<b>415238</b>	2012 <i>JE</i> <sub>13</sub>		12 2.3 260°88' 0°8'	2.5	18		<b>216797</b>	2006 <i>SM</i> <sub>135</sub>		12 2.3 343°43' 1°8'	1.6	18	
10 28	5 1.41	+23 28.0	2.333	3.144	12.2	21.1	10 28	4 59.95	+20 28.9	1.658	2.492	15.2	20.3
11 7	4 56.06	+23 49.1	2.246	3.140	9.3	20.9	11 7	4 55.52	+19 39.5	1.581	2.488	11.6	20.1
11 17	4 48.62	+24 7.1	2.184	3.135	5.9	20.6	11 17	4 48.50	+18 44.4	1.527	2.484	7.3	19.8
11 27	4 39.72	+24 21.2	2.150	3.131	2.3	20.4	11 27	4 39.73	+17 46.4	1.498	2.480	2.9	19.6
12 7	4 30.25	+24 31.0	2.145	3.127	1.9	20.4	12 7	4 30.39	+16 49.7	1.498	2.477	3.2	19.6
12 17	4 21.18	+24 37.0	2.171	3.122	5.5	20.6	12 17	4 21.73	+15 59.0	1.525	2.474	7.7	19.8
12 27	4 13.46	+24 41.1	2.225	3.118	9.0	20.8	12 27	4 14.89	+15 18.8	1.578	2.472	11.9	20.1
1 6	4 7.78	+24 45.5	2.304	3.113	12.0	21.0	1 6	4 10.62	+14 51.7	1.654	2.470	15.6	20.3
<b>436148</b>	2009 <i>UZ</i> <sub>141</sub>		12 2.3 81°91' 1°3'	2.7	16		<b>89911</b>	2001 <i>TN</i> <sub>8</sub>		12 2.3 142°25' 2°8'	3.3	18	
10 28	5 8.55	+25 43.6	1.515	2.336	17.1	21.5	10 28	5 6.90	+30 14.2	1.816	2.621	15.3	19.1
11 7	5 1.98	+25 45.9	1.463	2.361	13.0	21.4	11 7	5 0.71	+30 20.1	1.742	2.628	11.9	18.9
11 17	4 52.43	+25 40.0	1.433	2.385	8.2	21.1	11 17	4 51.72	+30 15.1	1.691	2.635	8.0	18.7
11 27	4 41.02	+25 25.0	1.428	2.409	3.3	20.9	11 27	4 40.86	+29 57.2	1.666	2.642	4.1	18.5
12 7	4 29.24	+25 2.1	1.451	2.433	2.6	20.9	12 7	4 29.43	+29 26.8	1.670	2.648	3.3	18.5
12 17	4 18.60	+24 34.6	1.503	2.456	7.3	21.3	12 17	4 18.81	+28 46.7	1.703	2.653	6.9	18.7
12 27	4 10.35	+24 7.3	1.581	2.479	11.6	21.6	12 27	4 10.24	+28 2.5	1.763	2.658	10.8	18.9
1 6	4 5.17	+23 44.7	1.681	2.502	15.2	21.9	1 6	4 4.49	+27 19.8	1.847	2.663	14.2	19.2
<b>66018</b>	1998 <i>QA</i> <sub>31</sub>		12 2.3 347°14' 4°8'	4.1	18		<b>140843</b>	2001 <i>UP</i> <sub>203</sub>		12 2.3 123°55' 1°6'	2.9	18	
10 28	5 2.45	+35 29.6	1.966	2.761	14.7	17.7	10 28	5 3.30	+26 43.2	2.078	2.888	13.5	20.7
11 7	4 57.45	+35 52.6	1.884	2.758	11.8	17.5	11 7	4 57.65	+26 52.2	2.003	2.894	10.3	20.5
11 17	4 49.74	+36 2.6	1.825	2.755	8.6	17.3	11 17	4 49.67	+26 54.5	1.951	2.900	6.7	20.3
11 27	4 40.15	+35 56.3	1.791	2.753	5.7	17.1	11 27	4 40.12	+26 49.0	1.926	2.906	2.9	20.0
12 7	4 29.90	+35 32.8	1.784	2.751	5.0	17.1	12 7	4 30.07	+26 35.9	1.931	2.911	2.3	20.0
12 17	4 20.30	+34 54.2	1.806	2.749	7.3	17.2	12 17	4 20.63	+26 17.1	1.965	2.917	6.0	20.3
12 27	4 12.58	+34 5.6	1.854	2.747	10.5	17.4	12 27	4 12.84	+25 56.0	2.027	2.922	9.6	20.5
1 6	4 7.54	+33 13.4	1.926	2.746	13.6	17.6	1 6	4 7.39	+25 36.1	2.114	2.927	12.8	20.7
<b>93340</b>	2000 <i>SJ</i> <sub>243</sub>		12 2.3 177°97' 0°2'	2.3	18		<b>48564</b>	1994 <i>BL</i> <sub>3</sub>		12 2.3 9°71' 4°0'	1.3	18	
10 28	5 4.81	+22 33.4	2.049	2.861	13.6	20.6	10 28	4 58.44	+14 29.9	1.394	2.242	16.9	17.9
11 7	4 58.73	+22 19.7	1.968	2.863	10.3	20.4	11 7	4 54.65	+13 53.2	1.332	2.244	12.9	17.6
11 17	4 50.30	+22 1.1	1.911	2.864	6.5	20.2	11 17	4 48.06	+13 18.5	1.291	2.247	8.5	17.4
11 27	4 40.31	+21 38.0	1.882	2.865	2.3	19.9	11 27	4 39.60	+12 49.8	1.274	2.251	4.6	17.2
12 7	4 29.79	+21 11.9	1.883	2.865	2.1	19.9	12 7	4 30.55	+12 30.6	1.283	2.257	5.1	17.2
12 17	4 19.88	+20 45.3	1.914	2.865	6.3	20.2	12 17	4 22.28	+12 23.7	1.318	2.263	9.1	17.5
12 27	4 11.61	+20 21.5	1.974	2.864	10.1	20.4	12 27	4 16.03	+12 30.8	1.376	2.270	13.3	17.7
1 6	4 5.69	+20 3.4	2.057	2.862	13.4	20.6	1 6	4 12.56	+12 51.2	1.456	2.279	17.0	18.0
<b>478449</b>	2012 <i>KN</i> <sub>44</sub>		12 2.3 130°58' 0°5'	2.1	16		<b>45026</b>	1999 <i>WE</i> <sub>8</sub>		12 2.3 26°96' 1°0			

EPHEMERIDES

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>287646</b>	2003 <i>KD</i> <sub>7</sub>		12 2.3	87°18'	5°8'	1.1 16							
10 28	5 8.98	+10 7.9	1.412	2.237	17.9	21.3							
11 7	5 2.05	+9 19.8	1.371	2.267	13.8	21.2							
11 17	4 52.34	+8 38.9	1.351	2.296	9.5	21.0							
11 27	4 40.99	+8 9.9	1.357	2.325	6.2	20.9							
12 7	4 29.44	+7 56.1	1.391	2.354	6.6	21.0							
12 17	4 19.09	+7 59.0	1.451	2.381	9.9	21.2							
12 27	4 11.06	+8 18.3	1.536	2.408	13.6	21.5							
1 6	4 5.97	+8 51.6	1.643	2.434	16.8	21.8							
<b>237890</b>	2002 <i>LJ</i> <sub>60</sub>		12 2.3	179°00'	5°6'	30.2 18							
10 28	5 1.59	+7 20.6	2.144	2.953	13.2	21.1							
11 7	4 56.05	+6 25.8	2.071	2.955	10.4	20.9							
11 17	4 48.53	+5 36.5	2.022	2.956	7.6	20.7							
11 27	4 39.70	+4 56.9	2.000	2.956	5.8	20.6							
12 7	4 30.46	+4 30.5	2.007	2.956	6.2	20.6							
12 17	4 21.72	+4 19.5	2.043	2.956	8.6	20.8							
12 27	4 14.38	+4 24.6	2.105	2.955	11.4	21.0							
1 6	4 9.04	+4 44.6	2.190	2.953	14.0	21.2							
<b>224887</b>	2007 <i>CW</i> <sub>2</sub>		12 2.3	34°07'	1°3'	2.0 18							
10 28	5 2.77	+20 56.4	1.057	1.915	20.3	19.4							
11 7	4 58.48	+20 33.9	1.014	1.932	15.3	19.2							
11 17	4 50.62	+20 6.8	0.989	1.951	9.5	19.0							
11 27	4 40.48	+19 37.3	0.987	1.971	3.4	18.7							
12 7	4 29.89	+19 8.8	1.010	1.991	3.4	18.7							
12 17	4 20.63	+18 45.6	1.056	2.013	9.1	19.1							
12 27	4 14.17	+18 31.6	1.126	2.036	14.2	19.5							
1 6	4 11.20	+18 28.8	1.216	2.059	18.4	19.8							
<b>194470</b>	2001 <i>WF</i> <sub>15</sub>		12 2.3	351°04'	10°8'	4.5 18							
10 28	5 7.23	+41 47.7	1.327	2.125	20.3	19.7							
11 7	5 3.02	+43 26.6	1.257	2.119	17.2	19.4							
11 17	4 54.31	+44 47.3	1.206	2.115	14.0	19.2							
11 27	4 42.08	+45 38.6	1.176	2.111	11.5	19.1							
12 7	4 28.28	+45 53.3	1.170	2.108	10.9	19.0							
12 17	4 15.42	+45 31.0	1.186	2.106	12.6	19.1							
12 27	4 5.78	+44 40.0	1.224	2.106	15.6	19.3							
1 6	4 0.67	+43 32.6	1.282	2.106	18.8	19.5							
<b>367627</b>	2009 <i>VE</i> <sub>4</sub>		12 2.3	217°74'	0°8'	1.9 18							
10 28	4 59.86	+22 6.7	2.479	3.291	11.5	20.8							
11 7	4 54.65	+21 24.7	2.391	3.287	8.7	20.6							
11 17	4 47.62	+20 37.5	2.329	3.282	5.4	20.4							
11 27	4 39.39	+19 46.6	2.296	3.278	2.0	20.1							
12 7	4 30.78	+18 54.6	2.293	3.273	2.0	20.1							
12 17	4 22.65	+18 4.6	2.321	3.269	5.5	20.3							
12 27	4 15.78	+17 20.0	2.378	3.264	8.8	20.5							
1 6	4 10.75	+16 43.2	2.460	3.258	11.6	20.7							
<b>73959</b>	1997 <i>WV</i> <sub>11</sub>		12 2.3	347°45'	0°7'	2.1 17							
10 28	4 58.54	+20 28.8	1.873	2.703	13.9	18.6							
11 7	4 54.30	+20 26.0	1.792	2.697	10.6	18.4							
11 17	4 47.72	+20 20.8	1.735	2.691	6.7	18.1							
11 27	4 39.50	+20 13.9	1.703	2.686	2.4	17.9							
12 7	4 30.67	+20 6.3	1.700	2.682	2.3	17.9							
12 17	4 22.35	+19 59.9	1.725	2.678	6.6	18.1							
12 27	4 15.61	+19 56.8	1.777	2.675	10.5	18.4							
1 6	4 11.19	+19 59.1	1.851	2.672	14.0	18.6							
<b>469899</b>	2005 <i>WY</i> <sub>54</sub>		12 2.3	47°59'	2°8'	2.9 16							
10 28	5 8.28	+26 33.3	1.179	2.017	19.9	20.8							
11 7	5 2.55	+27 10.7	1.137	2.042	15.2	20.6							
11 17	4 53.14	+27 39.0	1.114	2.068	9.9	20.4							
11 27	4 41.39	+27 54.6	1.115	2.095	4.5	20.1							
12 7	4 29.15	+27 56.6	1.142	2.122	3.7	20.2							
12 17	4 18.34	+27 47.9	1.194	2.149	8.5	20.5							
12 27	4 10.45	+27 34.0	1.270	2.177	13.2	20.9							
1 6	4 6.22	+27 20.6	1.367	2.205	17.1	21.2							
<b>153201</b>	2000 <i>WO</i> <sub>107</sub>		12 2.3	50°30'	16°8'	4.8 18							
10 28	14 17.65	-18 14.8	0.533	0.465	168.3	31.6							
11 7	14 4.64	-18 9.7	0.337	0.663	163.7	28.5							
11 17	13 42.19	-16 44.2	0.180	0.830	148.9	23.4							
11 27	11 36.44	-4 3.4	0.043	0.972	108.8	16.5							
12 7	3 16.37	+22 46.0	0.117	1.094	20.4	15.8							
12 17	2 46.49	+21 11.2	0.265	1.199	31.7	18.2							
12 27	2 43.32	+20 56.6	0.419	1.290	36.2	19.4							
1 6	2 47.28	+21 8.0	0.579	1.368	38.5	20.3							
<b>523410</b>	2017 <i>DD</i> <sub>122</sub>		12 2.3	330°06'	0°7'	2.1 17							
10 28	4 59.79	+21 13.4	1.960	2.785	13.6	21.2							
11 7	4 55.11	+20 55.7	1.879	2.780	10.3	20.9							
11 17	4 48.15	+20 34.0	1.820	2.776	6.5	20.7							
11 27	4 39.64	+20 9.5	1.789	2.771	2.3	20.4							
12 7	4 30.57	+19 44.0	1.786	2.767	2.3	20.4							
12 17	4 22.03	+19 20.0	1.812	2.763	6.4	20.7							
12 27	4 15.05	+19 0.5	1.865	2.760	10.3	20.9							
1 6	4 10.33	+18 47.9	1.942	2.756	13.7	21.1							
<b>108493</b>	2001 <i>KU</i> <sub>63</sub>		12 2.3	111°23'	3°4'	1.6 18							
10 28	5 4.38	+11 39.4	2.024	2.836	13.7	19.6							
11 7	4 58.22	+11 39.0	1.959	2.851	10.5	19.4							
11 17	4 49.92	+11 43.5	1.918	2.865	7.0	19.2							
11 27	4 40.22	+11 54.3	1.905	2.879	3.9	19.1							
12 7	4 30.11	+12 12.2	1.922	2.893	4.1	19.1							
12 17	4 20.64	+12 37.5	1.968	2.906	7.1	19.3							
12 27	4 12.75	+13 10.0	2.041	2.919	10.5	19.5							
1 6	4 7.06	+13 49.2	2.139	2.931	13.4	19.8							
<b>8778</b>	1931 <i>TD</i> <sub>3</sub>		12 2.3	86°03'	2°8'	2.9 18 R							
10 28	5 12.78	+27 34.8	1.559	2.369	17.2	17.1							
11 7	5 5.22	+28 12.8	1.510	2.399	13.2	17.0							
11 17	4 54.52	+28 41.9	1.483	2.430	8.6	16.8							
11 27	4 41.85	+28 58.7	1.482	2.459	4.1	16.6							
12 7	4 28.77	+29 2.2	1.510	2.489	3.4	16.6							
12 17	4 16.90	+28 54.3	1.567	2.517	7.4	16.9							
12 27	4 7.56	+28 40.0	1.650	2.545	11.4	17.2							
1 6	4 1.45	+28 24.8	1.757	2.572	14.9								

EPHEMERIDES

12 2.3

12 2.4

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>112249</b>	2002 <i>LM</i> <sub>9</sub>		12 2.3 220°72	2°6/ 1.7	18		<b>305079</b>	2007 <i>UD</i> <sub>116</sub>		12 2.4 154°78	2°6/ 2.6	18	
10 28	5 5.66	+16 10.8	1.580	2.407	16.2	20.0	10 28	5 9.58	+24 58.6	1.871	2.678	14.9	20.2
11 7	5 0.06	+15 57.9	1.501	2.402	12.4	19.7	11 7	5 2.96	+26 13.2	1.790	2.679	11.5	20.0
11 17	4 51.53	+15 46.0	1.443	2.397	8.0	19.5	11 17	4 53.40	+27 26.2	1.733	2.679	7.6	19.8
11 27	4 40.93	+15 36.7	1.412	2.392	3.6	19.2	11 27	4 41.66	+28 33.0	1.703	2.680	3.7	19.5
12 7	4 29.52	+15 31.8	1.408	2.386	3.8	19.2	12 7	4 28.95	+29 29.4	1.704	2.681	3.3	19.5
12 17	4 18.75	+15 33.3	1.433	2.380	8.3	19.4	12 17	4 16.71	+30 13.8	1.734	2.682	7.1	19.8
12 27	4 9.96	+15 43.1	1.483	2.373	12.8	19.7	12 27	4 6.33	+30 47.4	1.793	2.682	11.0	20.0
1 6	4 4.04	+16 2.0	1.555	2.366	16.7	19.9	1 6	3 58.79	+31 13.7	1.876	2.683	14.4	20.2
<b>8581</b>	Johnen		12 2.3 325°00	0°1/ 2.3	18		<b>204474</b>	2005 <i>AV</i> <sub>38</sub>		12 2.4 77°90	4°7/ 4.5	18	
10 28	5 1.44	+21 46.2	1.926	2.749	13.9	17.9	10 28	5 7.90	+36 43.5	1.709	2.501	16.7	20.2
11 7	4 56.44	+21 47.1	1.846	2.746	10.6	17.7	11 7	5 1.59	+36 30.6	1.644	2.517	13.3	20.1
11 17	4 49.05	+21 44.9	1.788	2.743	6.7	17.5	11 17	4 52.29	+35 59.6	1.601	2.532	9.5	19.9
11 27	4 40.00	+21 39.4	1.758	2.740	2.4	17.2	11 27	4 41.12	+35 8.0	1.583	2.548	5.9	19.7
12 7	4 30.34	+21 31.4	1.756	2.738	2.1	17.2	12 7	4 29.59	+33 57.6	1.593	2.563	4.8	19.7
12 17	4 21.23	+21 22.7	1.783	2.735	6.4	17.4	12 17	4 19.21	+32 33.9	1.631	2.578	7.5	19.9
12 27	4 13.73	+21 15.9	1.837	2.733	10.4	17.7	12 27	4 11.21	+31 5.3	1.696	2.593	11.0	20.1
1 6	4 8.60	+21 13.2	1.915	2.731	13.8	17.9	1 6	4 6.26	+29 40.0	1.786	2.608	14.3	20.4
<b>189174</b>	2002 <i>XW</i> <sub>27</sub>		12 2.4 24°68	0°3/ 2.3	18		<b>266660</b>	2008 <i>UF</i> <sub>82</sub>		12 2.4 151°36	2°0/ 1.7	17	
10 28	5 3.91	+20 29.0	1.216	2.063	18.9	19.5	10 28	4 59.24	+16 1.1	2.439	3.254	11.6	20.8
11 7	4 59.36	+20 46.5	1.156	2.069	14.3	19.2	11 7	4 54.21	+15 49.5	2.360	3.256	8.8	20.6
11 17	4 51.34	+21 2.4	1.116	2.075	9.0	18.9	11 17	4 47.40	+15 38.6	2.305	3.257	5.6	20.4
11 27	4 40.89	+21 16.0	1.099	2.083	3.2	18.6	11 27	4 39.40	+15 29.6	2.279	3.258	2.6	20.2
12 7	4 29.64	+21 27.1	1.108	2.091	2.8	18.6	12 7	4 30.99	+15 23.8	2.283	3.259	2.8	20.2
12 17	4 19.37	+21 37.0	1.143	2.099	8.6	19.0	12 17	4 23.01	+15 22.5	2.317	3.261	5.8	20.5
12 27	4 11.65	+21 48.4	1.201	2.109	13.7	19.3	12 27	4 16.24	+15 26.9	2.379	3.262	8.9	20.7
1 6	4 7.39	+22 3.7	1.280	2.119	17.9	19.6	1 6	4 11.26	+15 37.6	2.466	3.263	11.7	20.8
<b>455253</b>	2001 <i>TH</i> <sub>103</sub>		12 2.4 240°23	15°8/ 3.4	17		<b>346938</b>	2010 <i>AA</i> <sub>51</sub>		12 2.4 298°98	4°2/ 1.0	18	
10 28	5 22.45	+46 45.3	1.201	1.971	23.5	20.9	10 28	5 1.53	+14 22.5	1.547	2.383	16.1	20.8
11 7	5 16.71	+49 38.4	1.136	1.968	20.8	20.7	11 7	4 56.94	+13 34.2	1.469	2.374	12.4	20.6
11 17	5 4.43	+52 13.0	1.089	1.965	18.1	20.5	11 17	4 49.57	+12 46.3	1.413	2.366	8.3	20.3
11 27	4 46.21	+54 9.1	1.062	1.961	16.2	20.4	11 27	4 40.27	+12 2.7	1.382	2.358	4.7	20.1
12 7	4 24.68	+55 10.1	1.057	1.957	15.9	20.3	12 7	4 30.23	+11 28.0	1.378	2.350	5.3	20.1
12 17	4 3.98	+55 11.5	1.072	1.954	17.4	20.4	12 17	4 20.82	+11 5.9	1.401	2.342	9.2	20.3
12 27	3 48.14	+54 24.3	1.108	1.950	19.9	20.6	12 27	4 13.30	+10 58.9	1.449	2.334	13.4	20.5
1 6	3 39.26	+53 8.4	1.159	1.946	22.7	20.7	1 6	4 8.51	+11 7.5	1.518	2.327	17.1	20.7
<b>329212</b>	2012 <i>DN</i> <sub>61</sub>		12 2.4 109°40	8°5/ 28.2	18		<b>246062</b>	2006 <i>VV</i> <sub>65</sub>		12 2.4 282°78	0°8/ 2.0	17	
10 28	4 58.07	- 2 16.2	2.307	3.095	13.0	20.6	10 28	5 0.95	+21 54.2	1.983	2.805	13.6	20.6
11 7	4 53.27	- 3 41.3	2.248	3.101	11.0	20.5	11 7	4 56.11	+21 23.8	1.888	2.788	10.4	20.4
11 17	4 46.75	- 4 55.0	2.213	3.106	9.3	20.4	11 17	4 48.89	+20 47.6	1.817	2.772	6.6	20.1
11 27	4 39.13	- 5 51.5	2.204	3.111	8.5	20.4	11 27	4 40.00	+20 7.0	1.773	2.755	2.4	19.8
12 7	4 31.19	- 6 26.8	2.222	3.117	9.0	20.4	12 7	4 30.45	+19 24.2	1.758	2.739	2.4	19.8
12 17	4 23.73	- 6 39.1	2.266	3.122	10.5	20.5	12 17	4 21.35	+18 42.9	1.772	2.722	6.7	20.0
12 27	4 17.51	- 6 29.0	2.334	3.127	12.3	20.7	12 27	4 13.78	+18 6.9	1.813	2.705	10.7	20.2
1 6	4 13.04	- 5 59.1	2.422	3.132	14.2	20.8	1 6	4 8.52	+17 39.3	1.878	2.689	14.2	20.4
<b>79922</b>	1999 <i>CP</i> <sub>34</sub>		12 2.4 188°22	3°8/ 1.1	18		<b>304967</b>	2007 <i>TC</i> <sub>130</sub>		12 2.4 357°35	9°2/ 2.8	18	
10 28	5 1.17	+11 10.1	2.207	3.021	12.7	19.8	10 28	5 12.59	+37 31.3	1.554	2.344	18.2	19.6
11 7	4 55.80	+10 45.1	2.129	3.020	9.8	19.6	11 7	5 6.68	+39 47.8	1.481	2.342	15.1	19.4
11 17	4 48.44	+10 23.9	2.075	3.020	6.7	19.4	11 17	4 56.58	+41 54.6	1.428	2.341	12.0	19.2
11 27	4 39.76	+10 8.9	2.049	3.019	4.2	19.2	11 27	4 43.02	+43 40.1	1.401	2.340	9.7	19.1
12 7	4 30.63	+10 2.1	2.051	3.017	4.5	19.3	12 7	4 27.69	+44 54.9	1.401	2.339	9.5	19.1
12 17	4 21.96	+10 5.2	2.084	3.016	7.2	19.4	12 17	4 12.81	+45 35.5	1.426	2.340	11.5	19.2
12 27	4 14.64	+10 18.7	2.143	3.014	10.3	19.6	12 27	4 0.61	+45 46.2	1.476	2.340	14.5	19.4
1 6	4 9.28	+10 42.3	2.227	3.011	13.1	19.8	1 6	3 52.57	+45 36.7	1.546	2.342	17.5	19.6
<b>403607</b>	2010 <i>RM</i> <sub>49</sub>		12 2.4 81°13	2°8/ 3.3	18		<b>471042</b>	2009 <i>UN</i> <sub>16</sub>		12 2.4 70°88	2°0/ 1.6	16	
10 28	5 3.57	+29 43.0	1.979	2.786	14.2	21.4	10 28	5 7.14	+21 45.7	1.372	2.205	17.9	20.7
11 7	4 58.09	+29 59.2	1.903	2.790	11.0	21.2	11 7	5 0.94	+20 35.7	1.324	2.230	13.4	20.5
11 17	4 50.09	+30 6.4	1.850	2.795	7.4	21.0	11 17	4 51.79	+19 18.7	1.298	2.255	8.4	20.3
11 27	4 40.38	+30 2.7	1.824	2.799	3.9	20.8	11 27	4 40.92	+17 59.2	1.298	2.280	3.2	20.1
12 7	4 30.10	+29 47.9	1.826	2.804	3.2	20.8	12 7	4 29.84	+16 43.1	1.326	2.305	3.6	20.2
12 17	4 20.47	+29 24.0	1.858	2.808	6.4	21.0	12 17	4 20.02	+15 36.9	1.381	2.329	8.4	20.5
12 27	4 12.62	+28 54.9	1.917	2.813	10.0	21.2	12 27	4 12.64	+14 45.6	1.461	2.354	12.8	20.8
1 6	4 7.28	+28 25.4	1.999	2.817	13.2	21.4	1 6	4 8.29	+14 11.3	1.564	2.378	16.4	21.1
<b>74748</b>	1999 <i>RW</i> <sub>193</sub>		12 2.4 129°68	4°6/ 3.9	18		<b>431765</b>	2008 <i>HB</i> <sub>28</sub>		12 2.4 187°36	1°2/ 1.9	18	
10 28	5 10.64	+34 8.3	1.680	2.476	16.8	19.3	10 28	5 5.18	+20 59.4	1.648	2.473	15.7	21.6
11 7	5 3.85	+34 26.9	1.612	2.488	13.3	19.1	11 7	4 59.55	+20 31.0	1.571	2.473	12.0	21.4
11 17	4 53.86	+34 30.9	1.565	2.500	9.4	18.9	11 17	4 51.13	+19 57.6	1.517	2.473	7.5	21.1
11 27	4 41.73	+34 16.6	1.544	2.511	5.7	18.7	11 27	4 40.79	+19 20.7	1.490	2.472	2.8	20.8
12 7	4 28.99	+33 43.4	1.551	2.522	4.9	18.7	12 7	4 29.82	+18 42.9	1.490	2.471	2.8	20.8
12 17	4 17.29	+32 54.8	1.586	2.532	7.8	18.9	12 17	4 19.58	+18 8.1	1.519	2.469	7.6	21.1
12 27	4 8.02	+31 57.7	1.648	2.541	11.5	19.1	12 27	4 11.32	+17 40.4	1.574	2.468	12.0	21.4
1 6	4 1.98	+31 0.1	1.733	2.550	15.0	19.4	1 6	4 5.85	+17 22.5	1.652	2.465	15.7	21.6
<b>516570</b>	2007 <i>DH</i> <sub>112</sub>		12 2.4 299°46	0°5/ 2.2	18		<b>477274</b>	2009 <i>SO</i> <sub>117</sub>		12 2.4 47°37	2°7/ 3.1	1	

EPHEMERIDES

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>347035</b>	2010 <i>EE</i> <sub>94</sub>		12 2.4 67°19	0°3/ 2.5 18			<b>523822</b>	2012 <i>DG</i> <sub>61</sub>		12 2.4 153°46	0°0/ 2.2 18	C	
10 28	5 4.98	+22 57.0	1.568	2.396	16.3	20.6	10 28	4 58.55	+22 22.8	4.744	5.532	6.8	25.8
11 7	4 59.43	+23 2.5	1.507	2.409	12.4	20.3	11 7	4 52.86	+22 21.1	4.662	5.544	5.1	25.7
11 17	4 51.03	+23 3.2	1.467	2.422	7.8	20.1	11 17	4 46.21	+22 17.3	4.608	5.556	3.2	25.6
11 27	4 40.74	+22 58.6	1.453	2.435	2.8	19.8	11 27	4 38.96	+22 11.4	4.586	5.567	1.1	25.4
12 7	4 29.92	+22 49.5	1.467	2.449	2.3	19.8	12 7	4 31.52	+22 3.9	4.596	5.578	1.0	25.4
12 17	4 19.98	+22 38.1	1.508	2.462	7.2	20.2	12 17	4 24.34	+21 55.5	4.641	5.588	3.0	25.6
12 27	4 12.16	+22 27.8	1.576	2.476	11.5	20.5	12 27	4 17.82	+21 47.3	4.716	5.597	4.9	25.7
1 6	4 7.22	+22 21.7	1.667	2.490	15.2	20.7	1 6	4 12.30	+21 40.2	4.821	5.605	6.5	25.9
<b>177587</b>	2004 <i>GH</i> <sub>16</sub>		12 2.4 157°83	7°3/29.7 18			<b>265254</b>	2004 <i>ES</i> <sub>66</sub>		12 2.4 242°14	3°4/ 1.3 18		
10 28	5 0.20	+0 35.5	2.283	3.076	13.0	20.2	10 28	5 3.67	+15 44.1	1.664	2.491	15.5	20.6
11 7	4 54.91	-0 19.1	2.218	3.081	10.7	20.0	11 7	4 58.44	+15 1.3	1.581	2.483	11.9	20.4
11 17	4 47.82	-1 3.4	2.175	3.085	8.6	19.9	11 17	4 50.49	+14 17.6	1.521	2.474	7.8	20.1
11 27	4 39.55	-1 32.9	2.160	3.089	7.4	19.9	11 27	4 40.63	+13 36.1	1.487	2.464	4.1	19.9
12 7	4 30.93	-1 44.4	2.172	3.093	7.7	19.9	12 7	4 30.05	+13 0.6	1.481	2.455	4.5	19.9
12 17	4 22.80	-1 36.7	2.211	3.096	9.5	20.0	12 17	4 20.05	+12 34.9	1.503	2.445	8.5	20.1
12 27	4 15.94	-1 10.5	2.276	3.099	11.7	20.2	12 27	4 11.88	+12 21.7	1.551	2.435	12.7	20.3
1 6	4 10.92	-0 28.3	2.363	3.101	13.8	20.3	1 6	4 6.36	+12 22.3	1.620	2.424	16.4	20.6
<b>105408</b>	2000 <i>QO</i> <sub>153</sub>		12 2.4 111°67	0°1/ 2.3 18			<b>514980</b>	2009 <i>DA</i> <sub>60</sub>		12 2.4 155°25	5°4/ 4.3 18		
10 28	5 3.09	+23 56.2	1.133	1.984	19.7	18.8	10 28	5 8.33	+37 57.9	2.309	3.077	13.6	22.2
11 7	4 59.01	+23 28.3	1.071	1.985	15.0	18.6	11 7	5 1.65	+38 40.2	2.231	3.083	11.1	22.1
11 17	4 51.23	+22 50.6	1.027	1.987	9.5	18.3	11 17	4 52.36	+39 9.9	2.175	3.089	8.3	21.9
11 27	4 40.91	+22 4.5	1.006	1.989	3.4	17.9	11 27	4 41.26	+39 23.0	2.147	3.095	6.1	21.8
12 7	4 29.78	+21 13.8	1.010	1.992	3.0	17.9	12 7	4 29.52	+39 17.6	2.147	3.100	5.5	21.8
12 17	4 19.74	+20 24.4	1.039	1.996	9.1	18.3	12 17	4 18.41	+38 54.8	2.176	3.105	7.2	21.9
12 27	4 12.42	+19 43.2	1.091	2.000	14.5	18.6	12 27	4 9.11	+38 19.1	2.233	3.109	9.7	22.0
1 6	4 8.71	+19 14.6	1.162	2.005	19.1	18.9	1 6	4 2.40	+37 36.4	2.315	3.113	12.3	22.2
<b>12968</b>	3261 <i>T</i> <sub>-3</sub>		12 2.4 161°42	0°0/ 2.2 18			<b>383084</b>	2005 <i>SH</i> <sub>80</sub>		12 2.4 9°23	1°7/ 2.0 18		
10 28	5 0.71	+22 31.1	2.417	3.229	11.8	19.2	10 28	4 59.99	+19 30.3	1.104	1.964	19.5	20.6
11 7	4 55.41	+22 25.9	2.337	3.231	8.9	19.0	11 7	4 56.64	+19 15.9	1.046	1.965	14.8	20.3
11 17	4 48.19	+22 17.0	2.281	3.233	5.6	18.8	11 17	4 49.76	+18 58.9	1.006	1.968	9.4	20.0
11 27	4 39.71	+22 4.7	2.253	3.235	2.0	18.6	11 27	4 40.42	+18 41.3	0.989	1.972	3.6	19.7
12 7	4 30.80	+21 49.9	2.255	3.237	1.7	18.5	12 7	4 30.29	+18 25.8	0.996	1.977	3.6	19.7
12 17	4 22.35	+21 34.3	2.288	3.239	5.3	18.8	12 17	4 21.16	+18 15.6	1.027	1.983	9.2	20.1
12 27	4 15.22	+21 20.2	2.349	3.240	8.6	19.0	12 27	4 14.60	+18 14.0	1.080	1.991	14.5	20.4
1 6	4 10.00	+21 9.7	2.435	3.241	11.5	19.2	1 6	4 11.52	+18 22.8	1.153	2.000	18.9	20.7
<b>71532</b>	2000 <i>CB</i> <sub>91</sub>		12 2.4 246°86	0°0/ 2.4 18			<b>216774</b>	2006 <i>HK</i> <sub>31</sub>		12 2.4 172°41	2°0/ 1.7 16		
10 28	4 59.93	+22 58.8	2.545	3.354	11.3	19.6	10 28	5 7.17	+19 10.1	1.667	2.488	15.8	21.1
11 7	4 54.83	+22 51.9	2.451	3.345	8.6	19.4	11 7	5 0.96	+18 34.9	1.592	2.492	12.0	20.9
11 17	4 47.86	+22 41.1	2.382	3.335	5.4	19.1	11 17	4 51.98	+17 56.2	1.541	2.495	7.6	20.7
11 27	4 39.61	+22 26.5	2.342	3.324	1.9	18.9	11 27	4 41.13	+17 16.0	1.516	2.497	3.1	20.4
12 7	4 30.87	+22 9.0	2.332	3.314	1.7	18.9	12 7	4 29.69	+16 37.3	1.519	2.498	3.3	20.4
12 17	4 22.49	+21 50.3	2.352	3.303	5.2	19.1	12 17	4 19.01	+16 4.0	1.552	2.499	7.8	20.7
12 27	4 15.31	+21 32.8	2.401	3.292	8.5	19.3	12 27	4 10.34	+15 39.8	1.611	2.499	12.1	21.0
1 6	4 9.96	+21 18.7	2.476	3.281	11.4	19.4	1 6	4 4.44	+15 26.8	1.693	2.498	15.8	21.2
<b>511531</b>	2014 <i>SY</i> <sub>282</sub>		12 2.4 295°45	6°4/29.2 18			<b>472366</b>	2015 <i>BJ</i> <sub>34</sub>		12 2.4 158°08	2°4/ 1.8 16		
10 28	4 57.52	+4 35.8	2.321	3.129	12.3	20.6	10 28	5 6.78	+17 12.2	1.538	2.366	16.6	22.0
11 7	4 52.93	+3 21.9	2.250	3.128	9.9	20.5	11 7	5 0.86	+16 51.7	1.468	2.370	12.6	21.8
11 17	4 46.60	+2 14.4	2.203	3.126	7.7	20.3	11 17	4 52.01	+16 30.8	1.420	2.374	8.1	21.5
11 27	4 39.14	+1 18.1	2.183	3.125	6.5	20.3	11 27	4 41.16	+16 11.1	1.398	2.378	3.5	21.2
12 7	4 31.30	+0 37.1	2.191	3.123	7.0	20.3	12 7	4 29.66	+15 55.1	1.403	2.381	3.7	21.3
12 17	4 23.90	+0 13.8	2.227	3.122	8.9	20.4	12 17	4 18.95	+15 45.4	1.437	2.384	8.2	21.5
12 27	4 17.71	+0 8.9	2.289	3.120	11.3	20.6	12 27	4 10.35	+15 44.3	1.496	2.386	12.7	21.8
1 6	4 13.26	+0 21.2	2.372	3.119	13.5	20.7	1 6	4 4.68	+15 53.2	1.577	2.388	16.5	22.1
<b>40667</b>	1999 <i>RB</i> <sub>200</sub>		12 2.4 145°74	5°5/ 4.8 18			<b>18945</b>	2000 <i>QH</i> <sub>71</sub>		12 2.4 221°25	0°8/ 2.1 18		
10 28	5 8.53	+38 46.9	1.975	2.750	15.3	18.4	10 28	5 4.69	+21 12.0	2.046	2.859	13.6	19.4
11 7	5 2.01	+38 53.9	1.898	2.756	12.4	18.2	11 7	4 58.83	+20 53.1	1.955	2.850	10.3	19.2
11 17	4 52.61	+38 44.0	1.843	2.762	9.3	18.0	11 17	4 50.58	+20 30.0	1.887	2.840	6.5	18.9
11 27	4 41.31	+38 13.6	1.813	2.767	6.4	17.9	11 27	4 40.65	+20 3.5	1.848	2.830	2.4	18.7
12 7	4 29.49	+37 22.6	1.811	2.772	5.5	17.9	12 7	4 30.07	+19 35.1	1.837	2.818	2.3	18.6
12 17	4 18.58	+36 14.5	1.839	2.777	7.5	18.0	12 17	4 19.98	+19 7.5	1.857	2.807	6.5	18.9
12 27	4 9.84	+34 56.4	1.893	2.781	10.6	18.2	12 27	4 11.46	+18 44.1	1.905	2.794	10.5	19.1
1 6	4 4.01	+33 36.2	1.973	2.785	13.6	18.4	1 6	4 5.27	+18 27.5	1.977	2.781	13.9	19.3
<b>244447</b>	2002 <i>RE</i> <sub>72</sub>		12 2.4 78°23	1°7/ 1.8 18			<b>65793</b>	1995 <i>WS</i> <sub>3</sub>		12 2.4 40°17	1°7/ 2.9 18		
10 28	5 3.40	+18 28.1	1.765	2.590	14.9	20.6	10 28	5 4.62	+26 56.1	1.266	2.104	18.8	18.5
11 7	4 57.81	+18 7.9	1.705	2.607	11.2	20.4	11 7	4 59.57	+26 50.9	1.220	2.127	14.3	18.3
11 17	4 49.81	+17 46.4	1.668	2.623	7.1	20.2	11 17	4 51.22	+26 35.1	1.195	2.150	9.1	18.1
11 27	4 40.29	+17 25.0	1.658	2.639	2.9	20.0	11 27	4 40.83	+26 8.3	1.194	2.175	3.8	17.8
12 7	4 30.38	+17 6.0	1.677	2.656	3.0	20.0	12 7	4 30.06	+25 32.6	1.218	2.200	2.9	17.8
12 17	4 21.26	+16 51.6	1.724	2.672	7.0	20.3	12 17	4 20.58	+24 52.8	1.269	2.226	7.8	18.2
12 27	4 13.96	+16 44.1	1.797	2.688	10.9	20.6	12 27	4 13.70	+24 14.8	1.345	2.252	12.5	18.5
1 6	4 9.13	+16 44.9	1.894	2.704	14.2	20.9	1 6	4 10.09	+23 43.6	1.441	2.279	16.3	18.9
<b>494543</b>	2017 <i>AX</i> <sub>17</sub>		12 2.4 24°63	2°7/ 3.4 17			<b>70525</b>	1999 <i>TW</i> <sub>112</sub>		12 2.4 97°51	4°7/30.4 18		



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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>342065</b>	2008 <i>SG</i> <sub>22</sub>	12	2.4	136°50	0°0/ 2.2	18	<b>233229</b>	2005 <i>YD</i> <sub>39</sub>	12	2.4	24°21	7°1/30.5	18 R
10 28	5 6.10	+22 58.7	1.893	2.707	14.5	22.3	10 28	4 58.92	+11 27.8	1.040	1.903	20.1	18.7
11 7	4 59.85	+22 44.7	1.823	2.718	11.0	22.1	11 7	4 55.52	+10 8.5	0.999	1.917	15.6	18.5
11 17	4 51.13	+22 25.4	1.776	2.729	6.9	21.8	11 17	4 48.82	+8 55.7	0.977	1.931	10.9	18.3
11 27	4 40.80	+22 1.1	1.757	2.739	2.4	21.6	11 27	4 40.03	+7 57.4	0.977	1.947	7.4	18.1
12 7	4 30.02	+21 33.4	1.767	2.749	2.1	21.6	12 7	4 30.80	+7 20.5	1.000	1.965	8.1	18.2
12 17	4 19.99	+21 5.2	1.807	2.758	6.5	21.9	12 17	4 22.74	+7 8.4	1.046	1.984	11.9	18.5
12 27	4 11.79	+20 40.0	1.874	2.767	10.4	22.1	12 27	4 17.19	+7 20.9	1.113	2.004	16.0	18.8
1 6	4 6.09	+20 20.8	1.966	2.775	13.8	22.4	1 6	4 14.84	+7 54.1	1.199	2.025	19.7	19.1
<b>515836</b>	2015 <i>NO</i> <sub>16</sub>	12	2.4	98°29	6°9/30.8	18	<b>487494</b>	2014 <i>SU</i> <sub>283</sub>	12	2.4	242°04	0°6/ 2.1	17
10 28	5 4.12	+2 27.9	2.011	2.809	14.3	21.4	10 28	5 0.25	+22 19.5	2.223	3.040	12.5	20.6
11 7	4 57.88	+1 51.5	1.962	2.833	11.5	21.2	11 7	4 55.22	+21 46.5	2.140	3.038	9.5	20.4
11 17	4 49.66	+1 26.4	1.936	2.856	8.8	21.1	11 17	4 48.17	+21 8.2	2.082	3.036	5.9	20.2
11 27	4 40.22	+1 16.5	1.936	2.879	7.1	21.1	11 27	4 39.78	+20 26.0	2.051	3.033	2.1	19.9
12 7	4 30.54	+1 23.8	1.964	2.901	7.3	21.1	12 7	4 30.95	+19 42.3	2.050	3.031	2.1	19.9
12 17	4 21.58	+1 48.7	2.021	2.923	9.3	21.3	12 17	4 22.64	+19 0.2	2.079	3.029	5.9	20.2
12 27	4 14.19	+2 29.5	2.104	2.944	11.8	21.5	12 27	4 15.73	+18 23.0	2.136	3.027	9.4	20.4
1 6	4 8.93	+3 23.2	2.209	2.965	14.1	21.7	1 6	4 10.86	+17 53.4	2.218	3.025	12.5	20.6
<b>465342</b>	2007 <i>VF</i> <sub>205</sub>	12	2.4	88°56	0°2/ 2.4	16	<b>360648</b>	2004 <i>NE</i> <sub>4</sub>	12	2.4	54°34	2°8/ 2.9	18
10 28	5 13.50	+23 9.0	1.440	2.259	18.0	22.0	10 28	5 6.44	+26 50.8	1.867	2.677	14.8	19.4
11 7	5 5.68	+23 7.6	1.396	2.293	13.5	21.8	11 7	5 0.39	+27 48.9	1.803	2.692	11.4	19.2
11 17	4 54.78	+23 0.2	1.374	2.327	8.4	21.6	11 17	4 51.64	+28 41.8	1.762	2.708	7.5	19.0
11 27	4 42.04	+22 46.2	1.378	2.360	3.0	21.4	11 27	4 41.06	+29 25.8	1.748	2.724	3.8	18.8
12 7	4 29.08	+22 27.1	1.410	2.392	2.5	21.4	12 7	4 29.85	+29 58.4	1.763	2.740	3.3	18.8
12 17	4 17.48	+22 6.0	1.471	2.423	7.5	21.8	12 17	4 19.32	+30 19.8	1.807	2.756	6.7	19.1
12 27	4 8.49	+21 47.4	1.558	2.453	12.0	22.1	12 27	4 10.70	+30 32.3	1.879	2.773	10.3	19.3
1 6	4 2.75	+21 34.8	1.669	2.483	15.6	22.4	1 6	4 4.75	+30 39.8	1.975	2.789	13.5	19.6
<b>329646</b>	2003 <i>SG</i> <sub>191</sub>	12	2.4	85°00	4°0/ 3.7	17	<b>388022</b>	2005 <i>SY</i> <sub>40</sub>	12	2.4	356°26	1°2/ 2.1	18
10 28	5 4.15	+33 23.5	2.275	3.064	13.1	20.3	10 28	4 59.46	+20 36.1	1.129	1.988	19.2	20.8
11 7	4 58.35	+33 58.6	2.202	3.074	10.4	20.1	11 7	4 56.32	+20 21.0	1.064	1.983	14.7	20.5
11 17	4 50.21	+34 23.9	2.153	3.084	7.4	19.9	11 17	4 49.65	+20 1.8	1.018	1.979	9.3	20.2
11 27	4 40.50	+34 36.5	2.130	3.094	4.7	19.8	11 27	4 40.46	+19 39.8	0.994	1.977	3.4	19.9
12 7	4 30.26	+34 35.4	2.137	3.104	4.1	19.8	12 7	4 30.35	+19 18.0	0.994	1.976	3.3	19.9
12 17	4 20.60	+34 21.7	2.173	3.114	6.3	19.9	12 17	4 21.13	+19 0.1	1.018	1.976	9.2	20.2
12 27	4 12.58	+33 59.0	2.236	3.124	9.2	20.1	12 27	4 14.43	+18 50.2	1.066	1.977	14.6	20.5
1 6	4 6.90	+33 31.9	2.325	3.134	11.9	20.3	1 6	4 11.22	+18 50.9	1.132	1.980	19.1	20.8
<b>227736</b>	2006 <i>FP</i> <sub>19</sub>	12	2.4	301°41	0°6/ 2.6	18	<b>40128</b>	1998 <i>QL</i> <sub>43</sub>	12	2.4	63°61	4°0/ 3.7	18
10 28	5 0.19	+24 0.7	2.147	2.964	12.9	21.0	10 28	5 3.64	+33 15.2	2.181	2.974	13.5	18.3
11 7	4 55.44	+24 1.7	2.054	2.951	9.8	20.8	11 7	4 58.13	+33 46.3	2.102	2.977	10.7	18.2
11 17	4 48.46	+23 57.9	1.986	2.939	6.3	20.5	11 17	4 50.17	+34 7.3	2.046	2.979	7.6	18.0
11 27	4 39.91	+23 49.1	1.945	2.927	2.4	20.2	11 27	4 40.53	+34 15.4	2.017	2.982	4.8	17.8
12 7	4 30.73	+23 35.9	1.933	2.915	1.9	20.2	12 7	4 30.29	+34 9.5	2.016	2.985	4.2	17.8
12 17	4 21.96	+23 19.9	1.950	2.903	5.9	20.4	12 17	4 20.61	+33 50.9	2.044	2.987	6.5	17.9
12 27	4 14.61	+23 4.0	1.995	2.891	9.7	20.6	12 27	4 12.60	+33 23.4	2.100	2.990	9.6	18.1
1 6	4 9.43	+22 50.9	2.064	2.879	12.9	20.8	1 6	4 7.00	+32 51.9	2.180	2.993	12.4	18.3
<b>336811</b>	2011 <i>DL</i> <sub>21</sub>	12	2.4	154°99	4°6/ 4.0	18	<b>256924</b>	2008 <i>EF</i> <sub>13</sub>	12	2.4	238°11	0°6/ 2.6	18
10 28	5 10.21	+35 11.0	2.024	2.805	14.8	21.7	10 28	5 2.65	+23 37.9	2.042	2.857	13.5	21.0
11 7	5 3.21	+35 35.7	1.948	2.814	11.8	21.5	11 7	4 57.33	+23 46.2	1.959	2.855	10.3	20.8
11 17	4 53.38	+35 47.3	1.894	2.822	8.5	21.3	11 17	4 49.66	+23 50.3	1.900	2.852	6.5	20.6
11 27	4 41.65	+35 42.2	1.867	2.829	5.5	21.2	11 27	4 40.36	+23 49.5	1.867	2.849	2.5	20.3
12 7	4 29.31	+35 19.4	1.869	2.836	4.8	21.1	12 7	4 30.45	+23 44.1	1.864	2.846	2.0	20.3
12 17	4 17.77	+34 41.2	1.901	2.841	7.1	21.3	12 17	4 21.05	+23 35.5	1.891	2.843	6.1	20.5
12 27	4 8.28	+33 52.9	1.960	2.846	10.4	21.5	12 27	4 13.22	+23 26.5	1.945	2.840	9.9	20.8
1 6	4 1.62	+33 1.5	2.044	2.851	13.4	21.7	1 6	4 7.70	+23 19.7	2.023	2.837	13.2	21.0
<b>78946</b>	2003 <i>SY</i> <sub>191</sub>	12	2.4	161°85	4°4/ 4.3	18	<b>324329</b>	2006 <i>KU</i> <sub>71</sub>	12	2.4	37°59	6°2/30.9	18
10 28	5 8.54	+37 2.8	2.468	3.234	12.9	19.7	10 28	5 2.69	+12 32.1	1.068	1.924	20.2	20.2
11 7	5 1.51	+37 20.5	2.387	3.242	10.3	19.5	11 7	4 58.40	+11 27.4	1.021	1.935	15.6	19.9
11 17	4 52.12	+37 25.7	2.330	3.249	7.6	19.3	11 17	4 50.68	+10 27.5	0.993	1.948	10.6	19.7
11 27	4 41.17	+37 15.3	2.300	3.255	5.2	19.2	11 27	4 40.73	+9 39.2	0.988	1.961	6.7	19.5
12 7	4 29.73	+36 48.8	2.300	3.261	4.6	19.2	12 7	4 30.24	+9 8.4	1.006	1.975	7.3	19.6
12 17	4 18.96	+36 8.3	2.330	3.265	6.3	19.3	12 17	4 20.95	+8 58.8	1.049	1.990	11.4	19.9
12 27	4 9.89	+35 18.1	2.389	3.269	9.0	19.5	12 27	4 14.29	+9 10.8	1.113	2.005	15.9	20.2
1 6	4 3.22	+34 24.1	2.474	3.272	11.6	19.6	1 6	4 11.00	+9 41.6	1.196	2.021	19.8	20.5
<b>408723</b>	2014 <i>OY</i> <sub>32</sub>	12	2.4	225°18	1°4/ 2.8	18	<b>439679</b>	2014 <i>JX</i> <sub>10</sub>	12	2.4	65°48	2°1/ 1.8	15
10 28	5 3.04	+26 1.9	2.048	2.860	13.6	21.8	10 28	5 3.09	+17 10.1	1.744	2.571	15.0	21.6
11 7	4 57.65	+26 12.1	1.965	2.858	10.4	21.6	11 7	4 57.61	+16 55.8	1.687	2.589	11.3	21.4
11 17	4 49.86	+26 16.3	1.905	2.855	6.7	21.4	11 17	4 49.73	+16 41.7	1.652	2.607	7.1	21.2
11 27	4 40.41	+26 13.3	1.873	2.853	2.9	21.1	11 27	4 40.33	+16 29.2	1.645	2.625	3.1	21.0
12 7	4 30.35	+26 3.2	1.869	2.850	2.3	21.1	12 7	4 30.55	+16 20.0	1.665	2.643	3.2	21.0
12 17	4 20.81	+25 47.6	1.895	2.847	6.1	21.3	12 17	4 21.57	+16 16.1	1.714	2.662	7.1	21.3
12 27	4 12.89	+25 29.8	1.949	2.845	9.9	21.6	12 27	4 14.39	+16 19.1	1.789	2.680	10.9	21.6
1 6	4 7.34	+25 13.2	2.027	2.842	13.2	21.8	1 6	4 9.67	+16 29.7	1.888	2.698	14.2	21.8
<b>119964</b>	2002 <i>TU</i> <sub>226</sub>	12	2.4	84°43	3°9/ 1.5	18	<b>186432</b>	2002 <i>RJ</i> <sub>104</sub>	12	2.4	46°21	2°2/ 2.9	18

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>224058</b>	2005 <i>MP</i> <sub>54</sub>	12 2.4 50°27'	0°0'	2.3	18		<b>233262</b>	2005 <i>YD</i> <sub>193</sub>	12 2.4 253°48'	0°5'	2.5	18	
10 28	5 5.64	+23 6.7	1.226	2.069	19.0	20.3	10 28	5 4.46	+24 2.7	1.817	2.636	14.8	21.6
11 7	5 0.39	+22 50.9	1.178	2.088	14.4	20.1	11 7	4 59.08	+23 57.7	1.726	2.624	11.3	21.4
11 17	4 51.80	+22 28.4	1.151	2.109	9.0	19.8	11 17	4 50.98	+23 46.8	1.658	2.611	7.3	21.1
11 27	4 41.09	+22 0.0	1.147	2.130	3.2	19.6	11 27	4 40.91	+23 29.3	1.616	2.598	2.7	20.8
12 7	4 29.96	+21 28.4	1.169	2.151	2.7	19.6	12 7	4 30.02	+23 6.3	1.603	2.585	2.2	20.7
12 17	4 20.08	+20 57.8	1.217	2.173	8.2	20.0	12 17	4 19.65	+22 40.2	1.618	2.571	6.9	21.0
12 27	4 12.83	+20 33.1	1.289	2.195	13.1	20.3	12 27	4 11.06	+22 14.9	1.661	2.557	11.2	21.2
1 6	4 8.91	+20 17.5	1.383	2.217	17.1	20.6	1 6	4 5.11	+21 54.4	1.727	2.543	15.0	21.4
<b>453429</b>	2009 <i>KW</i> <sub>25</sub>	12 2.4 167°40'	1°9'	1.9	18		<b>265203</b>	2004 <i>BB</i> <sub>105</sub>	12 2.4 265°20'	5°2'	30.9	18	
10 28	5 3.94	+15 12.1	2.289	3.098	12.4	21.6	10 28	5 3.80	+11 14.8	1.598	2.425	16.1	20.9
11 7	4 57.92	+15 24.3	2.209	3.101	9.5	21.4	11 7	4 58.75	+10 35.5	1.511	2.410	12.6	20.7
11 17	4 49.86	+15 39.0	2.153	3.104	6.1	21.2	11 17	4 50.86	+10 0.0	1.446	2.393	8.7	20.4
11 27	4 40.41	+15 56.3	2.127	3.106	2.7	21.0	11 27	4 40.89	+9 32.3	1.406	2.377	5.6	20.2
12 7	4 30.45	+16 16.6	2.130	3.108	2.7	21.0	12 7	4 30.03	+9 16.4	1.394	2.360	6.0	20.2
12 17	4 20.94	+16 40.1	2.165	3.110	6.1	21.2	12 17	4 19.65	+9 15.2	1.408	2.343	9.7	20.3
12 27	4 12.79	+17 7.2	2.228	3.111	9.4	21.4	12 27	4 11.07	+9 30.2	1.448	2.326	13.9	20.5
1 6	4 6.66	+17 38.2	2.316	3.112	12.4	21.6	1 6	4 5.23	+10 0.4	1.509	2.308	17.6	20.7
<b>434041</b>	2001 <i>SB</i> <sub>329</sub>	12 2.4 75°13'	1°5'	2.8	18		<b>446915</b>	2002 <i>RR</i> <sub>271</sub>	12 2.4 131°46'	6°1'	4.9	18	
10 28	5 8.31	+26 13.0	1.475	2.297	17.4	21.3	10 28	5 9.62	+40 19.4	2.187	2.948	14.4	21.8
11 7	5 2.03	+26 17.1	1.422	2.321	13.2	21.1	11 7	5 2.72	+40 51.3	2.115	2.960	11.9	21.6
11 17	4 52.68	+26 12.7	1.392	2.344	8.5	20.9	11 17	4 53.07	+41 7.8	2.065	2.972	9.1	21.5
11 27	4 41.39	+25 58.4	1.386	2.367	3.5	20.6	11 27	4 41.58	+41 4.6	2.041	2.984	6.8	21.3
12 7	4 29.71	+25 35.4	1.408	2.390	2.7	20.6	12 7	4 29.54	+40 40.4	2.045	2.994	6.1	21.3
12 17	4 19.16	+25 7.0	1.458	2.412	7.4	21.0	12 17	4 18.34	+39 57.4	2.078	3.005	7.6	21.4
12 27	4 11.03	+24 38.5	1.534	2.435	11.7	21.3	12 27	4 9.17	+39 1.2	2.138	3.015	10.1	21.6
1 6	4 6.03	+24 14.3	1.633	2.457	15.4	21.6	1 6	4 2.80	+37 58.9	2.223	3.024	12.6	21.8
<b>428604</b>	2008 <i>ED</i> <sub>124</sub>	12 2.4 141°91'	3°1'	3.4	18		<b>230627</b>	2003 <i>HF</i> <sub>45</sub>	12 2.4 212°26'	0°4'	2.3	18	
10 28	5 9.29	+30 22.9	1.793	2.594	15.6	21.8	10 28	5 4.98	+21 24.4	1.958	2.773	14.0	21.5
11 7	5 2.65	+30 39.0	1.721	2.605	12.2	21.6	11 7	4 59.17	+21 19.6	1.872	2.768	10.7	21.2
11 17	4 53.10	+30 44.5	1.672	2.614	8.2	21.4	11 17	4 50.88	+21 11.4	1.809	2.762	6.7	21.0
11 27	4 41.59	+30 36.7	1.649	2.623	4.3	21.2	11 27	4 40.84	+20 59.9	1.773	2.756	2.4	20.7
12 7	4 29.48	+30 15.3	1.655	2.632	3.6	21.1	12 7	4 30.13	+20 45.9	1.767	2.749	2.2	20.7
12 17	4 18.21	+29 42.8	1.690	2.640	7.0	21.4	12 17	4 19.94	+20 31.6	1.791	2.741	6.6	21.0
12 27	4 9.08	+29 4.6	1.753	2.647	10.9	21.6	12 27	4 11.40	+20 19.8	1.842	2.733	10.6	21.2
1 6	4 2.88	+28 26.5	1.839	2.653	14.3	21.9	1 6	4 5.29	+20 13.1	1.917	2.725	14.1	21.4
<b>219100</b>	1998 <i>SZ</i> <sub>8</sub>	12 2.4 18°91'	7°8'	4.5	17		<b>297340</b>	1999 <i>XY</i> <sub>39</sub>	12 2.4 336°55'	3°3'	1.8	18	
10 28	5 6.89	+41 4.0	1.942	2.713	15.7	19.6	10 28	4 57.76	+15 10.3	1.231	2.088	18.1	19.4
11 7	5 1.34	+42 19.6	1.870	2.717	13.1	19.4	11 7	4 54.99	+15 4.6	1.149	2.066	14.0	19.1
11 17	4 52.59	+43 20.4	1.819	2.721	10.5	19.2	11 17	4 48.92	+15 2.6	1.086	2.046	9.2	18.7
11 27	4 41.51	+43 59.9	1.793	2.726	8.4	19.1	11 27	4 40.30	+15 6.8	1.047	2.027	4.4	18.4
12 7	4 29.48	+44 14.5	1.793	2.731	7.9	19.1	12 7	4 30.51	+15 19.2	1.031	2.009	4.5	18.4
12 17	4 18.13	+44 4.4	1.820	2.736	9.3	19.2	12 17	4 21.21	+15 41.6	1.040	1.993	9.7	18.6
12 27	4 8.95	+43 34.6	1.872	2.742	11.6	19.4	12 27	4 14.07	+16 14.7	1.071	1.979	14.9	18.9
1 6	4 2.92	+42 52.5	1.947	2.748	14.2	19.5	1 6	4 10.22	+16 58.1	1.122	1.966	19.5	19.1
<b>480258</b>	2015 <i>HL</i> <sub>62</sub>	12 2.4 163°55'	0°9'	2.1	18		<b>189822</b>	2002 <i>PR</i> <sub>57</sub>	12 2.4 34°35'	2°5'	3.4	18	
10 28	5 6.06	+20 23.3	1.920	2.734	14.3	22.4	10 28	5 1.36	+30 14.1	1.815	2.630	14.9	18.6
11 7	4 59.85	+20 9.2	1.844	2.740	10.8	22.2	11 7	4 56.47	+30 4.6	1.755	2.647	11.5	18.4
11 17	4 51.20	+19 51.9	1.792	2.745	6.8	22.0	11 17	4 49.08	+29 44.0	1.717	2.664	7.6	18.2
11 27	4 40.90	+19 32.2	1.767	2.749	2.5	21.7	11 27	4 40.14	+29 11.7	1.705	2.682	3.8	18.1
12 7	4 30.07	+19 11.8	1.772	2.753	2.4	21.7	12 7	4 30.83	+28 29.2	1.721	2.700	2.9	18.0
12 17	4 19.90	+18 52.8	1.807	2.756	6.7	22.0	12 17	4 22.37	+27 40.4	1.765	2.719	6.4	18.3
12 27	4 11.47	+18 38.3	1.869	2.758	10.6	22.2	12 27	4 15.80	+26 50.4	1.837	2.738	10.0	18.6
1 6	4 5.50	+18 30.5	1.955	2.760	14.0	22.5	1 6	4 11.74	+26 4.1	1.932	2.758	13.3	18.8
<b>112196</b>	2002 <i>JC</i> <sub>111</sub>	12 2.4 242°68'	2°0'	3.1	18		<b>48129</b>	2001 <i>FF</i> <sub>112</sub>	12 2.4 50°55'	3°1'	1.7	18	
10 28	5 5.18	+28 5.9	2.020	2.826	14.0	20.1	10 28	5 4.81	+17 3.6	1.206	2.052	19.0	17.8
11 7	4 59.47	+28 12.2	1.925	2.813	10.9	19.8	11 7	4 59.70	+16 30.7	1.159	2.071	14.4	17.6
11 17	4 51.15	+28 10.4	1.853	2.800	7.2	19.6	11 17	4 51.36	+15 57.9	1.132	2.090	9.2	17.4
11 27	4 40.95	+27 58.9	1.808	2.786	3.4	19.3	11 27	4 40.98	+15 28.4	1.129	2.109	4.2	17.2
12 7	4 29.98	+27 37.4	1.793	2.772	2.7	19.3	12 7	4 30.16	+15 5.6	1.152	2.129	4.4	17.2
12 17	4 19.48	+27 8.1	1.806	2.758	6.5	19.5	12 17	4 20.54	+14 52.8	1.200	2.150	9.2	17.6
12 27	4 10.66	+26 34.9	1.848	2.743	10.4	19.7	12 27	4 13.43	+14 52.2	1.272	2.170	13.8	17.9
1 6	4 4.37	+26 2.8	1.913	2.727	13.9	19.9	1 6	4 9.56	+15 4.0	1.364	2.191	17.7	18.2
<b>452682</b>	2005 <i>XF</i> <sub>44</sub>	12 2.4 354°50'	0°7'	2.6	17		<b>263900</b>	2009 <i>FY</i> <sub>23</sub>	12 2.4 243°97'	0°8'	2.6	15	
10 28	5 1.26	+23 58.1	1.890	2.712	14.2	21.7	10 28	5 4.35	+24 11.6	2.237	3.044	12.8	21.7
11 7	4 56.44	+24 2.8	1.812	2.711	10.8	21.4	11 7	4 58.60	+24 20.7	2.138	3.028	9.8	21.5
11 17	4 49.17	+24 2.6	1.756	2.710	6.9	21.2	11 17	4 50.52	+24 25.6	2.062	3.012	6.3	21.3
11 27	4 40.21	+23 57.0	1.727	2.709	2.6	20.9	11 27	4 40.75	+24 25.2	2.014	2.995	2.4	21.0
12 7	4 30.64	+23 46.6	1.726	2.708	2.1	20.9	12 7	4 30.24	+24 19.4	1.997	2.978	2.0	20.9
12 17	4 21.64	+23 33.1	1.754	2.708	6.4	21.2	12 17	4 20.09	+24 9.6	2.009	2.960	5.9	21.1
12 27	4 14.31	+23 19.7	1.809	2.708	10.3	21.4	12 27	4 11.35	+23 58.3	2.050	2.942	9.7	21.3
1 6	4 9.41	+23 9.4	1.887	2.708	13.8	21.6	1 6	4 4.82	+23 48.6	2.116	2.923	13.0	21.5
<b>51615</b>	2001 <i>HE</i> <sub>35</sub>	12 2.4 176°26'	1°7'	2.8	18		<b>367446</b>	2008 <i>SC</i> <sub>274</sub>	12 2.4 95°86'	9°1'	27.8	18	
10													

EPHEMERIDES

12 2.4

12 2.4

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>145228</b>	2005 <i>JF</i> <sub>68</sub>		12 2.4 82°50	8°0/29.7	18		<b>457073</b>	2008 <i>EO</i> <sub>68</sub>		12 2.4 162°78	14°6/4.3	17	
10 28	5 1.14	+ 2 30.3	1.861	2.669	14.9	19.8	10 28	5 24.25	+46 57.0	1.289	2.049	22.7	21.1
11 7	4 55.92	+ 1 17.0	1.809	2.684	12.1	19.7	11 7	5 17.57	+49 32.7	1.226	2.052	19.9	20.9
11 17	4 48.60	+ 0 14.7	1.780	2.699	9.5	19.5	11 17	5 4.66	+51 48.0	1.182	2.055	17.1	20.7
11 27	4 39.97	- 0 30.8	1.777	2.714	8.1	19.5	11 27	4 46.38	+53 24.9	1.158	2.057	15.1	20.6
12 7	4 31.03	- 0 55.4	1.801	2.729	8.5	19.5	12 7	4 25.39	+54 9.6	1.156	2.059	14.7	20.6
12 17	4 22.77	- 0 57.6	1.850	2.744	10.5	19.7	12 17	4 5.50	+53 59.5	1.177	2.060	16.0	20.7
12 27	4 16.10	- 0 38.2	1.925	2.758	13.0	19.9	12 27	3 50.23	+53 6.1	1.219	2.061	18.4	20.8
1 6	4 11.60	- 0 0.4	2.020	2.773	15.4	20.1	1 6	3 41.36	+51 47.8	1.278	2.062	21.1	21.0
<b>391151</b>	2005 <i>YY</i> <sub>93</sub>		12 2.4 193°10	4°3/5.2	14 C		<b>356085</b>	2009 <i>DK</i> <sub>120</sub>		12 2.4 269°09	7°5/4.5	17	
10 28	5 11.88	+43 43.4	4.151	4.856	8.9	24.2	10 28	5 9.01	+41 19.1	2.006	2.771	15.5	21.2
11 7	5 3.29	+43 59.9	4.048	4.852	7.5	24.1	11 7	5 3.11	+42 13.3	1.908	2.753	13.0	21.0
11 17	4 52.97	+44 5.0	3.970	4.848	5.9	24.0	11 17	4 53.88	+42 52.9	1.832	2.734	10.3	20.8
11 27	4 41.51	+43 56.3	3.922	4.842	4.7	23.9	11 27	4 42.10	+43 11.4	1.779	2.715	8.2	20.6
12 7	4 29.69	+43 32.9	3.906	4.836	4.3	23.9	12 7	4 29.14	+43 4.8	1.754	2.696	7.6	20.5
12 17	4 18.30	+42 55.7	3.923	4.828	5.1	23.9	12 17	4 16.66	+42 33.0	1.756	2.677	9.2	20.6
12 27	4 8.10	+42 7.5	3.971	4.819	6.5	24.0	12 27	4 6.28	+41 41.4	1.784	2.657	11.9	20.7
1 6	3 59.65	+41 12.5	4.047	4.809	8.1	24.1	1 6	3 59.11	+40 38.3	1.835	2.637	14.8	20.9
<b>197734</b>	2004 <i>PR</i> <sub>23</sub>		12 2.4 102°03	0°6/2.6	18		<b>348609</b>	2005 <i>XL</i> <sub>111</sub>		12 2.4 104°02	3°0/3.3	18	
10 28	5 7.20	+24 8.1	1.740	2.556	15.4	21.0	10 28	5 6.43	+29 53.9	1.764	2.573	15.6	20.7
11 7	5 0.86	+24 7.1	1.679	2.575	11.7	20.8	11 7	5 0.55	+30 8.5	1.694	2.582	12.1	20.5
11 17	4 51.86	+24 0.1	1.640	2.593	7.4	20.6	11 17	4 51.84	+30 12.9	1.646	2.591	8.1	20.3
11 27	4 41.16	+23 46.7	1.629	2.610	2.7	20.3	11 27	4 41.22	+30 4.8	1.625	2.600	4.2	20.1
12 7	4 30.03	+23 27.9	1.646	2.628	2.2	20.3	12 7	4 30.01	+29 44.1	1.631	2.609	3.4	20.1
12 17	4 19.79	+23 6.3	1.692	2.645	6.7	20.7	12 17	4 19.62	+29 13.4	1.666	2.617	6.9	20.3
12 27	4 11.57	+22 45.7	1.765	2.661	10.7	20.9	12 27	4 11.29	+28 37.7	1.728	2.626	10.8	20.6
1 6	4 6.06	+22 29.5	1.862	2.677	14.2	21.2	1 6	4 5.80	+28 2.5	1.814	2.634	14.2	20.8
<b>158664</b>	2003 <i>EJ</i> <sub>28</sub>		12 2.4 232°77	4°2/1.2	18		<b>102527</b>	1999 <i>UH</i> <sub>2</sub>		12 2.4 55°53	3°7/1.3	18	
10 28	5 3.27	+12 34.4	1.716	2.541	15.2	20.0	10 28	5 4.31	+17 11.2	1.255	2.100	18.5	19.0
11 7	4 58.04	+12 1.6	1.638	2.536	11.8	19.8	11 7	4 59.28	+16 11.3	1.203	2.114	14.1	18.7
11 17	4 50.24	+11 31.8	1.582	2.531	8.0	19.6	11 17	4 51.10	+15 9.6	1.172	2.129	9.0	18.5
11 27	4 40.65	+11 8.3	1.553	2.526	4.7	19.4	11 27	4 40.93	+14 11.1	1.165	2.144	4.5	18.3
12 7	4 30.40	+10 54.1	1.551	2.520	5.1	19.4	12 7	4 30.32	+13 21.3	1.184	2.159	5.0	18.4
12 17	4 20.72	+10 51.6	1.577	2.515	8.6	19.6	12 17	4 20.82	+12 45.0	1.228	2.175	9.5	18.7
12 27	4 12.78	+11 2.0	1.629	2.509	12.5	19.8	12 27	4 13.74	+12 25.4	1.297	2.190	14.0	19.0
1 6	4 7.37	+11 25.0	1.703	2.503	15.9	20.0	1 6	4 9.79	+12 22.7	1.386	2.206	17.8	19.3
<b>485015</b>	2009 <i>WO</i> <sub>32</sub>		12 2.4 12°42	0°3/2.5	17		<b>252051</b>	2000 <i>SA</i> <sub>13</sub>		12 2.4 74°02	4°6/3.7	18	
10 28	5 3.25	+20 29.9	1.916	2.736	14.1	20.7	10 28	5 12.46	+32 13.5	1.279	2.096	19.9	20.6
11 7	4 57.94	+21 11.1	1.840	2.738	10.7	20.5	11 7	5 5.78	+32 40.0	1.231	2.121	15.5	20.4
11 17	4 50.15	+21 52.4	1.787	2.741	6.8	20.3	11 17	4 55.32	+32 51.0	1.203	2.146	10.6	20.2
11 27	4 40.62	+22 32.2	1.761	2.743	2.4	20.0	11 27	4 42.44	+32 42.0	1.199	2.171	6.1	20.1
12 7	4 30.42	+23 9.0	1.765	2.747	2.0	20.0	12 7	4 29.10	+32 13.0	1.221	2.196	5.0	20.1
12 17	4 20.72	+23 42.3	1.797	2.750	6.3	20.3	12 17	4 17.26	+31 28.7	1.269	2.220	8.7	20.3
12 27	4 12.65	+24 12.9	1.858	2.754	10.2	20.5	12 27	4 8.46	+30 37.6	1.343	2.244	13.0	20.7
1 6	4 7.01	+24 42.4	1.942	2.759	13.6	20.7	1 6	4 3.45	+29 47.9	1.437	2.268	16.8	21.0
<b>227007</b>	2004 <i>XO</i> <sub>114</sub>		12 2.4 269°31	3°4/1.4	17		<b>246893</b>	1997 <i>OB</i> <sub>1</sub>		12 2.4 96°30	2°7/1.7	18	
10 28	4 59.93	+11 17.9	2.331	3.145	12.1	20.2	10 28	5 9.00	+17 17.0	1.409	2.238	17.7	20.7
11 7	4 54.91	+11 8.4	2.248	3.139	9.3	20.0	11 7	5 2.47	+16 46.8	1.358	2.261	13.4	20.5
11 17	4 48.01	+11 3.2	2.188	3.134	6.3	19.8	11 17	4 52.96	+16 16.1	1.328	2.282	8.5	20.3
11 27	4 39.81	+11 3.9	2.157	3.128	3.8	19.6	11 27	4 41.57	+15 47.3	1.323	2.303	3.8	20.1
12 7	4 31.13	+11 12.0	2.154	3.123	4.0	19.6	12 7	4 29.81	+15 23.5	1.346	2.324	4.0	20.1
12 17	4 22.82	+11 28.4	2.182	3.117	6.7	19.8	12 17	4 19.17	+15 7.5	1.397	2.344	8.5	20.5
12 27	4 15.74	+11 53.2	2.237	3.112	9.8	20.0	12 27	4 10.90	+15 2.0	1.473	2.363	12.9	20.8
1 6	4 10.51	+12 26.0	2.316	3.106	12.5	20.1	1 6	4 5.70	+15 7.6	1.571	2.382	16.5	21.1
<b>57512</b>	2001 <i>SL</i> <sub>281</sub>		12 2.4 199°88	1°7/1.8	18		<b>196418</b>	2003 <i>HX</i> <sub>5</sub>		12 2.4 260°86	4°3/1.1	18	
10 28	5 4.43	+20 11.8	1.847	2.667	14.5	18.6	10 28	5 2.68	+13 7.0	1.672	2.500	15.4	20.5
11 7	4 58.77	+19 30.3	1.766	2.665	11.0	18.4	11 7	4 57.71	+12 25.5	1.591	2.491	11.9	20.9
11 17	4 50.61	+18 44.0	1.708	2.662	7.0	18.1	11 17	4 50.10	+11 46.0	1.533	2.483	8.1	20.0
11 27	4 40.76	+17 54.9	1.677	2.659	2.8	17.8	11 27	4 40.65	+11 11.9	1.501	2.474	4.8	19.8
12 7	4 30.34	+17 6.4	1.676	2.655	3.0	17.8	12 7	4 30.48	+10 47.2	1.496	2.465	5.2	19.8
12 17	4 20.56	+16 22.3	1.704	2.651	7.2	18.1	12 17	4 20.88	+10 34.7	1.519	2.456	8.9	20.0
12 27	4 12.52	+15 46.7	1.759	2.646	11.3	18.3	12 27	4 13.03	+10 36.5	1.567	2.447	12.8	20.2
1 6	4 6.97	+15 22.2	1.837	2.641	14.8	18.6	1 6	4 7.76	+10 52.3	1.637	2.438	16.4	20.4
<b>191352</b>	2003 <i>QS</i> <sub>66</sub>		12 2.4 79°59	2°0/3.2	18		<b>146708</b>	2001 <i>WT</i> <sub>6</sub>		12 2.4 5°14	0°9/2.7	18	
10 28	5 2.71	+28 36.3	2.226	3.029	12.9	19.8	10 28	5 2.06	+25 10.2	1.842	2.662	14.5	20.4
11 7	4 57.11	+28 43.4	2.158	3.045	9.9	19.6	11 7	4 57.12	+25 8.9	1.764	2.662	11.1	20.1
11 17	4 49.38	+28 42.7	2.114	3.060	6.5	19.5	11 17	4 49.65	+25 1.0	1.710	2.663	7.1	19.9
11 27	4 40.28	+28 33.2	2.098	3.075	3.1	19.3	11 27	4 40.46	+24 46.2	1.682	2.663	2.8	19.6
12 7	4 30.79	+28 15.4	2.111	3.090	2.5	19.2	12 7	4 30.66	+24 25.3	1.682	2.664	2.2	19.6
12 17	4 21.94	+27 51.1	2.154	3.105	5.6	19.5	12 17	4 21.49	+24 0.8	1.710	2.665	6.5	19.9
12 27	4 14.67	+27 24.0	2.225	3.120	8.9	19.7	12 27	4 14.07	+23 36.5	1.766	2.666	10.5	20.1
1 6	4 9.57	+26 57.5	2.321	3.135	11.7	19.9	1 6	4 9.17	+23 15.8	1.845	2.667	14.0	20.4
<b>355299</b>	2007 <i>RH</i> <sub>200</sub>		12 2.4 349°51	5°3/3.6	17		<b>446548</b>	2014 <i>NR</i> <sub>11</sub>		12 2.4 254°76	1°5/1.9	18	

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>192129</b>	2006 <i>DN</i> <sub>98</sub>		12 2.4 116°78	3°9/30.9	18		<b>473592</b>	2015 <i>XO</i> <sub>245</sub>		12 2.4 336°31	1°1/1.9	17	
10 28	4 59.32	+ 9 55.9	2.532	3.341	11.4	21.0	10 28	4 59.05	+22 20.7	2.001	2.826	13.4	20.4
11 7	4 54.15	+ 9 21.5	2.465	3.352	8.8	20.9	11 7	4 54.61	+21 30.0	1.917	2.819	10.2	20.2
11 17	4 47.37	+ 8 51.0	2.424	3.364	6.1	20.7	11 17	4 47.98	+20 32.5	1.856	2.812	6.4	20.0
11 27	4 39.56	+ 8 27.0	2.410	3.375	4.1	20.6	11 27	4 39.88	+19 30.4	1.823	2.806	2.4	19.7
12 7	4 31.46	+ 8 11.6	2.426	3.386	4.5	20.7	12 7	4 31.30	+18 27.2	1.819	2.800	2.4	19.7
12 17	4 23.83	+ 8 6.4	2.472	3.397	6.7	20.8	12 17	4 23.26	+17 27.4	1.844	2.794	6.5	20.0
12 27	4 17.37	+ 8 11.8	2.546	3.407	9.2	21.0	12 27	4 16.73	+16 35.3	1.897	2.789	10.3	20.2
1 6	4 12.57	+ 8 27.4	2.644	3.418	11.6	21.2	1 6	4 12.39	+15 54.0	1.973	2.784	13.6	20.4
<b>368063</b>	2012 <i>HE</i> <sub>69</sub>		12 2.4 175°12	4°8/30.7	17		<b>393692</b>	2004 <i>TB</i> <sub>9</sub>		12 2.4 74°01	16°7/24.7	17	
10 28	4 58.93	+ 6 46.6	2.490	3.295	11.7	21.5	10 28	5 4.74	- 2 12.2	1.057	1.888	22.2	20.4
11 7	4 53.97	+ 6 17.5	2.414	3.296	9.2	21.3	11 7	5 0.05	- 5 45.2	1.015	1.890	19.3	20.2
11 17	4 47.33	+ 5 54.4	2.364	3.297	6.7	21.2	11 17	4 51.86	- 8 59.7	0.994	1.893	17.2	20.1
11 27	4 39.57	+ 5 40.3	2.340	3.297	5.0	21.1	11 27	4 41.33	-11 36.3	0.993	1.896	16.7	20.1
12 7	4 31.45	+ 5 37.3	2.346	3.297	5.3	21.1	12 7	4 30.15	-13 20.7	1.014	1.898	18.0	20.2
12 17	4 23.72	+ 5 46.3	2.381	3.298	7.3	21.2	12 17	4 20.07	-14 7.5	1.053	1.901	20.3	20.3
12 27	4 17.14	+ 6 7.6	2.443	3.298	9.8	21.4	12 27	4 12.59	-14 0.7	1.110	1.904	23.0	20.5
1 6	4 12.23	+ 6 39.8	2.529	3.297	12.2	21.5	1 6	4 8.54	-13 10.4	1.179	1.907	25.5	20.7
<b>405498</b>	2004 <i>XQ</i> <sub>192</sub>		12 2.4 351°05	4°5/1.8	16		<b>413266</b>	2003 <i>TS</i> <sub>41</sub>		12 2.4 18°36	6°1/4.5	17	
10 28	5 0.11	+ 9 35.2	1.658	2.488	15.4	20.4	10 28	5 5.04	+38 47.5	2.150	2.925	14.2	21.0
11 7	4 55.79	+ 9 41.9	1.581	2.481	12.0	20.2	11 7	4 59.52	+39 35.1	2.071	2.927	11.7	20.8
11 17	4 48.92	+ 9 57.6	1.527	2.475	8.3	20.0	11 17	4 51.29	+40 9.4	2.015	2.928	9.0	20.7
11 27	4 40.25	+10 24.2	1.498	2.470	5.0	19.8	11 27	4 41.13	+40 26.1	1.985	2.930	6.7	20.5
12 7	4 30.86	+11 2.7	1.495	2.466	5.1	19.8	12 7	4 30.25	+40 23.1	1.981	2.932	6.1	20.5
12 17	4 21.98	+11 52.5	1.521	2.462	8.5	20.0	12 17	4 19.98	+40 1.3	2.006	2.935	7.7	20.6
12 27	4 14.78	+12 52.2	1.572	2.460	12.3	20.2	12 27	4 11.55	+39 25.2	2.058	2.937	10.3	20.8
1 6	4 10.07	+13 59.5	1.645	2.459	15.8	20.4	1 6	4 5.79	+38 41.0	2.133	2.940	12.9	20.9
<b>266465</b>	Andalucia		12 2.4 187°26	2°0/3.5	18		<b>492595</b>	2014 <i>OY</i> <sub>195</sub>		12 2.4 37°51	7°9/29.4	18	
10 28	5 1.74	+31 13.3	2.845	3.632	10.8	20.6	10 28	4 58.34	+ 1 30.0	2.020	2.827	13.9	20.8
11 7	4 56.05	+30 55.4	2.756	3.632	8.4	20.4	11 7	4 53.82	+ 0 19.7	1.960	2.832	11.5	20.6
11 17	4 48.60	+30 28.5	2.691	3.631	5.7	20.2	11 17	4 47.36	- 0 40.1	1.923	2.838	9.2	20.5
11 27	4 40.02	+29 52.1	2.656	3.630	2.9	20.0	11 27	4 39.64	- 1 23.8	1.912	2.844	8.0	20.4
12 7	4 31.10	+29 7.2	2.651	3.628	2.3	20.0	12 7	4 31.56	- 1 47.5	1.928	2.851	8.4	20.5
12 17	4 22.65	+28 16.3	2.677	3.626	4.8	20.1	12 17	4 24.03	- 1 49.5	1.969	2.857	10.3	20.6
12 27	4 15.45	+27 23.0	2.733	3.624	7.6	20.3	12 27	4 17.87	- 1 30.3	2.035	2.864	12.6	20.8
1 6	4 10.03	+26 31.1	2.816	3.621	10.1	20.5	1 6	4 13.67	- 0 52.7	2.123	2.871	14.8	21.0
<b>461127</b>	2015 <i>RD</i> <sub>151</sub>		12 2.4 178°88	1°7/2.9	18		<b>3891</b>	Werner		12 2.4 170°66	0°3/2.5	18	
10 28	5 4.63	+27 6.6	1.908	2.720	14.5	21.9	10 28	5 6.23	+23 50.3	2.009	2.819	13.9	19.0
11 7	4 59.04	+27 10.1	1.829	2.720	11.1	21.7	11 7	5 0.02	+23 40.2	1.930	2.823	10.6	18.8
11 17	4 50.86	+27 5.9	1.772	2.721	7.2	21.4	11 17	4 51.38	+23 24.4	1.875	2.826	6.7	18.5
11 27	4 40.91	+26 52.7	1.742	2.721	3.2	21.2	11 27	4 41.12	+23 2.8	1.847	2.829	2.5	18.3
12 7	4 30.34	+26 31.0	1.740	2.721	2.5	21.1	12 7	4 30.32	+22 36.6	1.849	2.831	2.0	18.2
12 17	4 20.40	+26 3.0	1.768	2.721	6.4	21.4	12 17	4 20.15	+22 8.4	1.881	2.832	6.2	18.5
12 27	4 12.26	+25 33.1	1.823	2.720	10.4	21.6	12 27	4 11.69	+21 41.8	1.941	2.833	10.1	18.8
1 6	4 6.68	+25 5.3	1.902	2.720	13.8	21.9	1 6	4 5.65	+21 20.1	2.025	2.833	13.4	19.0
<b>352344</b>	2007 <i>VL</i> <sub>85</sub>		12 2.4 35°41	0°5/2.6	17		<b>268619</b>	2006 <i>CW</i> <sub>67</sub>		12 2.4 319°56	0°3/2.3	17	
10 28	5 2.71	+26 0.1	1.354	2.192	17.8	20.3	10 28	4 59.82	+21 58.2	1.989	2.812	13.5	20.9
11 7	4 58.06	+25 24.5	1.300	2.207	13.5	20.1	11 7	4 55.33	+21 47.5	1.901	2.802	10.3	20.7
11 17	4 50.34	+24 38.3	1.267	2.223	8.5	19.8	11 17	4 48.54	+21 32.7	1.837	2.792	6.5	20.4
11 27	4 40.69	+23 42.9	1.258	2.240	3.1	19.6	11 27	4 40.14	+21 14.4	1.800	2.782	2.3	20.2
12 7	4 30.62	+22 42.5	1.276	2.258	2.5	19.6	12 7	4 31.11	+20 53.9	1.791	2.772	2.1	20.1
12 17	4 21.67	+21 42.9	1.320	2.276	7.7	19.9	12 17	4 22.54	+20 33.6	1.810	2.763	6.3	20.4
12 27	4 15.07	+20 50.1	1.389	2.295	12.3	20.3	12 27	4 15.47	+20 16.4	1.857	2.754	10.2	20.6
1 6	4 11.52	+20 8.6	1.481	2.315	16.2	20.5	1 6	4 10.65	+20 4.7	1.928	2.746	13.6	20.8
<b>203697</b>	2002 <i>OV</i> <sub>12</sub>		12 2.4 132°47	4°3/4.5	18		<b>131141</b>	2001 <i>BX</i> <sub>53</sub>		12 2.4 213°01	4°0/1.0	18	
10 28	5 8.25	+36 52.1	2.254	3.027	13.7	20.4	10 28	5 2.42	+12 6.0	2.104	2.918	13.2	20.4
11 7	5 1.41	+36 55.2	2.181	3.040	11.0	20.2	11 7	4 56.99	+11 27.7	2.020	2.913	10.2	20.2
11 17	4 52.13	+36 44.2	2.130	3.054	8.0	20.0	11 17	4 49.44	+10 51.6	1.961	2.907	7.0	20.0
11 27	4 41.30	+36 16.7	2.107	3.066	5.2	19.9	11 27	4 40.43	+10 20.9	1.930	2.900	4.3	19.8
12 7	4 30.08	+35 32.9	2.113	3.078	4.5	19.9	12 7	4 30.89	+ 9 58.4	1.927	2.893	4.7	19.8
12 17	4 19.69	+34 36.0	2.149	3.090	6.4	20.0	12 17	4 21.81	+ 9 46.5	1.954	2.886	7.6	20.0
12 27	4 11.16	+33 31.5	2.214	3.101	9.3	20.2	12 27	4 14.14	+ 9 46.5	2.008	2.878	10.9	20.2
1 6	4 5.14	+32 25.7	2.304	3.111	12.1	20.4	1 6	4 8.56	+ 9 58.6	2.085	2.869	13.9	20.4
<b>484520</b>	2008 <i>EP</i> <sub>105</sub>		12 2.4 325°08	2°4/1.8	18		<b>12707</b>	1990 <i>UK</i>		12 2.4 33°00	4°0/2.9	18	
10 28	5 1.28	+15 52.8	1.791	2.619	14.6	21.3	10 28	5 8.41	+27 41.7	1.555	2.372	16.9	17.2
11 7	4 56.54	+15 43.4	1.711	2.613	11.1	21.0	11 7	5 2.66	+29 1.0	1.487	2.379	13.2	17.0
11 17	4 49.32	+15 35.3	1.654	2.608	7.2	20.8	11 17	4 53.57	+30 15.4	1.440	2.386	9.0	16.8
11 27	4 40.38	+15 30.2	1.623	2.603	3.3	20.6	11 27	4 42.04	+31 19.0	1.420	2.393	5.0	16.6
12 7	4 30.78	+15 29.6	1.621	2.598	3.4	20.6	12 7	4 29.52	+32 7.2	1.427	2.401	4.5	16.6
12 17	4 21.71	+15 35.0	1.646	2.593	7.4	20.8	12 17	4 17.70	+32 39.0	1.461	2.409	8.1	16.8
12 27	4 14.27	+15 47.8	1.698	2.589	11.4	21.0	12 27	4 8.17	+32 57.0	1.522	2.418	12.2	17.1
1 6	4 9.25	+16 8.5	1.772	2.585	14.9	21.2	1 6	4 1.92	+33 6.7	1.605	2.427	15.7	17.3
<b>359194</b>	2009 <i>DP</i> <sub>11</sub>		12 2.4 289°42	7°5/4.6	18		<b>513621</b>	2011 <i>JH</i> <sub>16</sub>		12 2.4 194°91	2°2/1.7	18	
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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>14822</b>	1984 SR <sub>5</sub>		12 2.4 51°23	2.1/ 3.2	18		<b>267944</b>	2004 ED <sub>42</sub>		12 2.5 300°87	5°0/ 3.6	18	
10 28	5 1.58	+28 13.5	2.225	3.031	12.8	17.8	10 28	5 6.21	+32 9.2	1.416	2.236	18.2	19.9
11 7	4 56.39	+28 28.7	2.152	3.040	9.9	17.6	11 7	5 1.60	+32 47.3	1.331	2.222	14.5	19.7
11 17	4 49.06	+28 36.9	2.102	3.048	6.5	17.4	11 17	4 53.26	+33 13.6	1.266	2.209	10.3	19.4
11 27	4 40.29	+28 36.8	2.080	3.057	3.2	17.2	11 27	4 42.07	+33 22.8	1.225	2.195	6.2	19.1
12 7	4 31.05	+28 28.3	2.087	3.065	2.6	17.2	12 7	4 29.59	+33 11.8	1.209	2.182	5.4	19.0
12 17	4 22.37	+28 13.1	2.123	3.074	5.7	17.4	12 17	4 17.77	+32 42.3	1.219	2.170	9.0	19.2
12 27	4 15.20	+27 54.0	2.188	3.084	9.0	17.6	12 27	4 8.44	+32 0.5	1.254	2.157	13.6	19.4
1 6	4 10.19	+27 34.7	2.277	3.093	11.9	17.9	1 6	4 2.78	+31 15.0	1.310	2.145	17.8	19.7
<b>274270</b>	2008 PP <sub>11</sub>		12 2.4 79°97	5°2/ 1.2	18		<b>116931</b>	2004 GS <sub>29</sub>		12 2.5 224°03	1°2/ 2.0	18	
10 28	5 5.26	+10 19.9	1.551	2.376	16.6	20.0	10 28	5 1.98	+19 45.7	2.114	2.931	13.0	20.6
11 7	4 59.42	+9 43.7	1.500	2.396	12.8	19.8	11 7	4 56.75	+19 27.8	2.029	2.927	9.9	20.4
11 17	4 51.00	+9 13.9	1.470	2.416	8.8	19.6	11 17	4 49.35	+19 7.3	1.969	2.922	6.3	20.2
11 27	4 40.96	+8 54.4	1.467	2.436	5.7	19.5	11 27	4 40.46	+18 45.2	1.936	2.917	2.4	19.9
12 7	4 30.55	+8 48.0	1.491	2.455	6.0	19.6	12 7	4 31.02	+18 23.3	1.932	2.912	2.4	19.9
12 17	4 21.05	+8 56.0	1.541	2.475	9.2	19.8	12 17	4 22.06	+18 3.9	1.958	2.907	6.3	20.2
12 27	4 13.56	+9 18.4	1.618	2.494	12.8	20.1	12 27	4 14.56	+17 49.3	2.012	2.901	9.9	20.4
1 6	4 8.73	+9 53.4	1.716	2.513	15.9	20.3	1 6	4 9.20	+17 41.6	2.090	2.896	13.1	20.6
<b>435536</b>	2008 LN <sub>17</sub>		12 2.4 134°29	1°2/ 2.9	18		<b>444635</b>	2006 WU <sub>133</sub>		12 2.5 28°78	3°9/ 3.4	17	
10 28	5 7.84	+26 46.6	1.938	2.743	14.5	22.0	10 28	5 4.79	+30 27.7	1.662	2.477	16.1	20.9
11 7	4 59.42	+26 36.7	1.868	2.757	11.1	21.8	11 7	4 59.67	+31 8.9	1.593	2.482	12.6	20.7
11 17	4 52.11	+26 18.4	1.822	2.770	7.1	21.6	11 17	4 51.55	+31 40.7	1.546	2.489	8.7	20.5
11 27	4 41.37	+25 51.3	1.803	2.783	2.9	21.4	11 27	4 41.32	+31 59.3	1.524	2.496	5.0	20.3
12 7	4 30.20	+25 16.7	1.814	2.795	2.2	21.4	12 7	4 30.35	+32 3.0	1.529	2.503	4.3	20.3
12 17	4 19.84	+24 37.7	1.855	2.807	6.3	21.7	12 17	4 20.13	+31 53.2	1.561	2.511	7.5	20.5
12 27	4 11.36	+23 58.8	1.924	2.817	10.1	21.9	12 27	4 12.02	+31 34.2	1.620	2.519	11.3	20.8
1 6	4 5.45	+23 24.3	2.017	2.827	13.4	22.2	1 6	4 6.89	+31 11.7	1.701	2.527	14.8	21.0
<b>399009</b>	2013 GT <sub>12</sub>		12 2.4 186°20	5°6/30.9	18		<b>217392</b>	2005 EL <sub>61</sub>		12 2.5 192°09	2°7/ 3.4	18	
10 28	5 1.46	+5 24.9	2.213	3.017	13.0	21.2	10 28	5 9.33	+30 6.2	1.872	2.671	15.2	20.9
11 7	4 56.10	+4 57.4	2.138	3.017	10.3	21.0	11 7	5 2.79	+30 8.5	1.787	2.670	11.8	20.7
11 17	4 48.80	+4 37.9	2.087	3.017	7.7	20.8	11 17	4 53.39	+29 59.9	1.725	2.668	8.0	20.5
11 27	4 40.20	+4 29.6	2.062	3.016	5.8	20.7	11 27	4 41.98	+29 38.3	1.690	2.665	4.0	20.2
12 7	4 31.14	+4 34.8	2.067	3.015	6.1	20.7	12 7	4 29.85	+29 3.7	1.683	2.661	3.2	20.2
12 17	4 22.55	+4 54.3	2.099	3.014	8.3	20.9	12 17	4 18.44	+28 19.3	1.706	2.657	6.9	20.4
12 27	4 15.26	+5 27.7	2.159	3.013	11.0	21.1	12 27	4 9.02	+27 30.4	1.758	2.652	10.9	20.6
1 6	4 9.90	+6 13.2	2.242	3.011	13.5	21.2	1 6	4 2.44	+26 43.1	1.833	2.646	14.4	20.8
<b>385281</b>	2001 SA <sub>247</sub>		12 2.4 36°35	2°5/ 1.9	18		<b>482943</b>	2014 JJ <sub>62</sub>		12 2.5 20°78	0°6/ 2.5	18	
10 28	5 3.18	+17 50.7	1.212	2.061	18.8	20.1	10 28	5 9.67	+19 2.4	1.685	2.501	15.9	20.8
11 7	4 58.65	+17 28.5	1.161	2.075	14.2	19.9	11 7	5 3.30	+20 15.4	1.607	2.503	12.1	20.6
11 17	4 50.88	+17 5.7	1.130	2.089	9.0	19.7	11 17	4 53.89	+21 32.4	1.552	2.505	7.7	20.3
11 27	4 41.00	+16 44.9	1.123	2.104	3.8	19.4	11 27	4 42.24	+22 49.5	1.525	2.507	2.8	20.0
12 7	4 30.58	+16 28.8	1.141	2.120	3.9	19.5	12 7	4 29.60	+24 2.7	1.527	2.509	2.4	20.0
12 17	4 21.24	+16 20.4	1.184	2.137	8.9	19.8	12 17	4 17.48	+25 9.2	1.560	2.512	7.2	20.3
12 27	4 14.35	+16 22.0	1.251	2.154	13.6	20.1	12 27	4 7.32	+26 8.4	1.620	2.514	11.6	20.6
1 6	4 10.68	+16 34.4	1.339	2.172	17.6	20.4	1 6	4 0.09	+27 1.8	1.704	2.517	15.3	20.8
<b>432914</b>	2011 QP <sub>92</sub>		12 2.4 6°91	1°7/ 3.3	18		<b>324693</b>	2007 EN <sub>38</sub>		12 2.5 154°47	4°4/30.3	18	
10 28	4 57.63	+29 16.1	2.494	3.300	11.6	20.7	10 28	4 58.88	+6 29.5	3.002	3.798	10.1	22.6
11 7	4 53.23	+29 2.8	2.414	3.301	9.0	20.5	11 7	4 53.66	+5 47.1	2.932	3.807	8.0	22.5
11 17	4 46.99	+28 41.4	2.357	3.303	5.9	20.3	11 17	4 47.07	+5 9.5	2.887	3.815	5.9	22.4
11 27	4 39.55	+28 11.6	2.328	3.306	2.8	20.1	11 27	4 39.60	+4 39.6	2.871	3.822	4.5	22.3
12 7	4 31.73	+27 34.7	2.329	3.308	2.2	20.1	12 7	4 31.88	+4 19.4	2.885	3.829	4.8	22.3
12 17	4 24.40	+26 53.0	2.359	3.312	5.1	20.3	12 17	4 24.53	+4 10.3	2.929	3.836	6.5	22.4
12 27	4 18.36	+26 10.1	2.418	3.315	8.1	20.5	12 27	4 18.14	+4 12.8	3.000	3.841	8.6	22.6
1 6	4 14.17	+25 29.3	2.502	3.320	10.9	20.7	1 6	4 13.17	+4 26.2	3.097	3.847	10.6	22.7
<b>325541</b>	2009 SG <sub>58</sub>		12 2.5 102°19	1°7/ 1.7	18		<b>251629</b>	2010 JR <sub>125</sub>		12 2.5 90°88	3°5/ 1.4	18	
10 28	5 0.53	+19 10.7	2.256	3.073	12.3	20.8	10 28	5 2.69	+13 15.7	1.980	2.799	13.7	20.7
11 7	4 55.35	+18 31.0	2.184	3.082	9.3	20.7	11 7	4 57.12	+12 43.6	1.921	2.816	10.5	20.5
11 17	4 48.28	+17 48.5	2.137	3.090	5.9	20.5	11 17	4 49.46	+12 14.0	1.885	2.833	7.0	20.4
11 27	4 40.00	+17 5.3	2.118	3.099	2.5	20.3	11 27	4 40.49	+11 49.7	1.877	2.850	4.0	20.2
12 7	4 31.38	+16 24.1	2.129	3.107	2.6	20.3	12 7	4 31.19	+11 33.0	1.897	2.867	4.2	20.3
12 17	4 23.31	+15 47.7	2.169	3.115	6.0	20.5	12 17	4 22.56	+11 25.8	1.947	2.884	7.3	20.5
12 27	4 16.63	+15 18.8	2.238	3.123	9.3	20.7	12 27	4 15.50	+11 29.1	2.023	2.900	10.5	20.7
1 6	4 11.88	+14 59.0	2.331	3.131	12.2	20.9	1 6	4 10.59	+11 42.7	2.124	2.916	13.4	20.9
<b>243987</b>	2001 RE <sub>64</sub>		12 2.5 58°74	1°7/ 1.8	18		<b>142176</b>	2002 RE <sub>40</sub>		12 2.5 86°68	0°1/ 2.4	18	
10 28	5 2.52	+20 32.7	1.722	2.550	15.1	19.7	10 28	5 1.61	+22 6.6	2.421	3.230	11.8	20.2
11 7	4 57.28	+19 45.6	1.664	2.567	11.3	19.6	11 7	4 56.07	+22 1.4	2.357	3.250	8.9	20.0
11 17	4 49.64	+18 54.2	1.628	2.584	7.1	19.3	11 17	4 48.71	+21 53.0	2.317	3.269	5.6	19.8
11 27	4 40.50	+18 1.0	1.619	2.601	2.8	19.1	11 27	4 40.21	+21 41.6	2.306	3.288	2.0	19.6
12 7	4 31.03	+17 10.0	1.639	2.618	2.9	19.2	12 7	4 31.41	+21 28.3	2.326	3.307	1.7	19.6
12 17	4 22.40	+16 25.1	1.686	2.635	7.1	19.5	12 17	4 23.18	+21 14.6	2.375	3.326	5.2	19.9
12 27	4 15.61	+15 50.0	1.761	2.653	11.0	19.7	12 27	4 16.29	+21 2.8	2.454	3.345	8.3	20.1
1 6	4 11.28	+15 26.6	1.859	2.670	14.3	20.0	1 6	4 11.29	+20 54.6	2.557	3.363	11.0	20.4
<b>491279</b>	2011 UU <sub>385</sub>		12 2.5 76°76	4°9/ 3.9	18		<b>490845</b>	2010 XS		12 2.5 294°74	11°9/26.9	17	
10 28	5 8.35	+33 55.1	1.822	2.617	15.7	21.2	10 28	4 58.39					

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>19930</b>	1981 <i>EV</i> <sub>2</sub>		12 2.5 108°31	0°0/ 2.3 18			<b>148624</b>	2001 <i>RE</i> <sub>131</sub>		12 2.5 72°52	1°3/ 2.2 18		
10 28	5 1.22	+24 4.0	2.195	3.008	12.7	18.7	10 28	5 6.76	+19 35.3	1.454	2.285	17.2	19.3
11 7	4 56.07	+23 33.5	2.116	3.011	9.7	18.5	11 7	5 0.91	+19 23.8	1.401	2.305	13.0	19.1
11 17	4 48.86	+22 56.8	2.061	3.014	6.1	18.2	11 17	4 52.15	+19 10.1	1.369	2.325	8.1	18.9
11 27	4 40.31	+22 14.7	2.034	3.016	2.2	18.0	11 27	4 41.52	+18 55.2	1.363	2.345	3.1	18.6
12 7	4 31.34	+21 29.6	2.037	3.019	1.8	18.0	12 7	4 30.45	+18 41.1	1.385	2.365	2.9	18.7
12 17	4 22.93	+20 44.5	2.070	3.022	5.7	18.2	12 17	4 20.42	+18 30.1	1.433	2.385	7.7	19.0
12 27	4 15.99	+20 3.2	2.131	3.024	9.3	18.5	12 27	4 12.63	+18 25.1	1.508	2.405	12.1	19.3
1 6	4 11.13	+19 28.7	2.216	3.027	12.3	18.7	1 6	4 7.80	+18 27.9	1.605	2.425	15.8	19.6
<b>333541</b>	2005 <i>TT</i> <sub>14</sub>		12 2.5 107°32	0°3/ 2.5 18			<b>454245</b>	2013 <i>LK</i> <sub>10</sub>		12 2.5 87°67	0°3/ 2.4 18		
10 28	5 8.32	+21 50.1	1.620	2.440	16.2	20.7	10 28	5 1.89	+21 26.6	2.155	2.971	12.9	21.2
11 7	5 2.08	+22 9.8	1.555	2.453	12.3	20.4	11 7	4 56.61	+21 24.7	2.082	2.979	9.7	21.0
11 17	4 52.93	+22 26.6	1.513	2.466	7.8	20.2	11 17	4 49.23	+21 20.0	2.033	2.987	6.1	20.8
11 27	4 41.82	+22 39.2	1.496	2.479	2.8	19.9	11 27	4 40.47	+21 12.6	2.012	2.994	2.2	20.6
12 7	4 30.09	+22 47.3	1.509	2.491	2.3	19.9	12 7	4 31.26	+21 3.4	2.020	3.002	1.9	20.5
12 17	4 19.19	+22 52.1	1.549	2.503	7.1	20.3	12 17	4 22.60	+20 54.1	2.058	3.010	5.8	20.8
12 27	4 10.41	+22 56.2	1.617	2.514	11.5	20.5	12 27	4 15.41	+20 46.8	2.124	3.018	9.3	21.1
1 6	4 4.54	+23 2.4	1.707	2.525	15.1	20.8	1 6	4 10.33	+20 43.5	2.215	3.025	12.3	21.3
<b>209783</b>	2005 <i>GV</i> <sub>7</sub>		12 2.5 186°08	5°8/30.3 18			<b>9372</b>	Vamlingbo		12 2.5 32°20	0°7/ 2.7 18		
10 28	5 1.48	+ 5 48.3	2.260	3.064	12.7	20.7	10 28	5 2.30	+24 4.3	1.864	2.685	14.4	18.3
11 7	4 56.10	+ 4 57.7	2.185	3.064	10.2	20.5	11 7	4 57.31	+24 9.1	1.791	2.689	10.9	18.1
11 17	4 48.82	+ 4 13.6	2.135	3.063	7.6	20.3	11 17	4 49.86	+24 9.0	1.740	2.693	7.0	17.9
11 27	4 40.29	+ 3 39.9	2.111	3.062	6.0	20.2	11 27	4 40.74	+24 3.2	1.716	2.698	2.7	17.6
12 7	4 31.34	+ 3 20.0	2.117	3.061	6.4	20.2	12 7	4 31.05	+23 52.5	1.721	2.703	2.1	17.6
12 17	4 22.84	+ 3 15.5	2.151	3.059	8.5	20.4	12 17	4 21.99	+23 38.6	1.754	2.708	6.3	17.9
12 27	4 15.63	+ 3 27.0	2.211	3.056	11.1	20.5	12 27	4 14.64	+23 24.8	1.814	2.714	10.3	18.1
1 6	4 10.31	+ 3 52.9	2.294	3.053	13.6	20.7	1 6	4 9.74	+23 14.1	1.898	2.719	13.7	18.4
<b>79436</b>	1997 <i>TD</i> <sub>6</sub>		12 2.5 36°61	8°4/ 4.2 18			<b>363447</b>	2003 <i>SQ</i> <sub>158</sub>		12 2.5 59°18	11°1/28.2 18		
10 28	5 10.17	+38 37.3	1.544	2.335	18.2	18.3	10 28	4 59.13	- 9 6.1	2.087	2.854	14.9	20.3
11 7	5 4.47	+40 15.1	1.486	2.349	15.0	18.1	11 7	4 54.31	-10 39.5	2.049	2.872	13.1	20.2
11 17	4 54.96	+41 37.5	1.449	2.363	11.7	18.0	11 17	4 47.66	-11 54.2	2.033	2.890	11.7	20.2
11 27	4 42.68	+42 35.8	1.435	2.377	9.1	17.9	11 27	4 39.87	-12 44.0	2.041	2.908	11.1	20.2
12 7	4 29.34	+43 4.8	1.448	2.393	8.5	17.9	12 7	4 31.83	-13 5.1	2.072	2.926	11.5	20.2
12 17	4 16.96	+43 4.7	1.485	2.409	10.3	18.0	12 17	4 24.40	-12 57.1	2.127	2.944	12.6	20.3
12 27	4 7.30	+42 42.0	1.548	2.425	13.2	18.2	12 27	4 18.37	-12 22.3	2.204	2.963	14.1	20.5
1 6	4 1.43	+42 6.0	1.631	2.442	16.0	18.5	1 6	4 14.24	-11 25.4	2.299	2.981	15.6	20.6
<b>408171</b>	2013 <i>CD</i> <sub>183</sub>		12 2.5 212°93	5°9/30.2 18			<b>279306</b>	2009 <i>WQ</i> <sub>203</sub>		12 2.5 290°29	1°0/ 2.0 17		
10 28	5 1.03	+ 5 0.5	2.323	3.125	12.5	22.2	10 28	5 0.21	+21 38.2	2.291	3.106	12.2	21.1
11 7	4 55.76	+ 4 12.2	2.243	3.119	10.1	22.1	11 7	4 55.46	+20 59.9	2.185	3.082	9.3	20.9
11 17	4 48.63	+ 3 30.8	2.186	3.112	7.6	21.9	11 17	4 48.63	+20 16.0	2.104	3.057	5.9	20.6
11 27	4 40.24	+ 3 0.0	2.157	3.105	6.1	21.8	11 27	4 40.33	+19 27.8	2.050	3.032	2.2	20.3
12 7	4 31.38	+ 2 43.2	2.157	3.098	6.5	21.8	12 7	4 31.40	+18 37.8	2.027	3.007	2.2	20.3
12 17	4 22.92	+ 2 42.0	2.185	3.090	8.5	21.9	12 17	4 22.80	+17 49.2	2.033	2.982	6.1	20.5
12 27	4 15.69	+ 2 56.8	2.240	3.082	11.1	22.1	12 27	4 15.48	+17 6.0	2.068	2.957	9.7	20.7
1 6	4 10.29	+ 3 26.2	2.317	3.073	13.5	22.2	1 6	4 10.14	+16 31.0	2.128	2.932	13.0	20.8
<b>301971</b>	2000 <i>GS</i> <sub>29</sub>		12 2.5 293°12	5°7/30.1 18			<b>246597</b>	2008 <i>UK</i> <sub>379</sub>		12 2.5 244°12	1°2/ 2.9 18		
10 28	5 0.21	+10 39.0	1.800	2.626	14.6	20.5	10 28	5 1.31	+25 51.5	2.740	3.540	10.9	20.7
11 7	4 55.72	+ 9 25.3	1.717	2.614	11.4	20.3	11 7	4 56.00	+26 3.8	2.642	3.528	8.3	20.5
11 17	4 48.87	+ 8 13.4	1.658	2.601	8.2	20.0	11 17	4 48.84	+26 11.6	2.569	3.516	5.4	20.3
11 27	4 40.38	+ 7 8.5	1.625	2.589	5.9	19.9	11 27	4 40.37	+26 14.1	2.524	3.503	2.3	20.1
12 7	4 31.25	+ 6 16.2	1.619	2.576	6.5	19.9	12 7	4 31.37	+26 11.2	2.510	3.491	1.8	20.0
12 17	4 22.62	+ 5 40.7	1.641	2.564	9.5	20.0	12 17	4 22.67	+26 3.8	2.527	3.478	4.9	20.2
12 27	4 15.54	+ 5 24.4	1.688	2.552	13.0	20.2	12 27	4 15.10	+25 53.8	2.573	3.465	8.0	20.4
1 6	4 10.77	+ 5 27.0	1.756	2.540	16.2	20.4	1 6	4 9.28	+25 43.9	2.645	3.451	10.7	20.6
<b>143733</b>	2003 <i>UB</i> <sub>220</sub>		12 2.5 8°11	3°3/ 1.6 18			<b>269917</b>	2000 <i>JN</i> <sub>48</sub>		12 2.5 168°87	0°6/ 2.3 18		
10 28	5 18.25	+11 35.1	0.832	1.681	25.1	17.2	10 28	5 5.58	+22 25.7	1.813	2.631	14.8	20.8
11 7	5 12.70	+15 33.6	0.769	1.682	19.5	16.8	11 7	4 59.79	+21 59.1	1.736	2.634	11.3	20.6
11 17	5 1.54	+20 12.0	0.727	1.686	12.5	16.5	11 17	4 51.42	+21 26.7	1.683	2.636	7.1	20.4
11 27	4 45.49	+25 10.0	0.710	1.692	5.1	16.1	11 27	4 41.31	+20 49.5	1.656	2.638	2.6	20.1
12 7	4 26.79	+29 55.0	0.721	1.701	5.6	16.2	12 7	4 30.65	+20 9.9	1.658	2.640	2.3	20.1
12 17	4 8.73	+33 57.9	0.761	1.712	12.7	16.6	12 17	4 20.69	+19 31.4	1.690	2.641	6.8	20.4
12 27	3 54.60	+37 8.2	0.824	1.725	18.9	17.0	12 27	4 12.55	+18 58.1	1.748	2.642	11.0	20.6
1 6	3 46.38	+39 32.4	0.906	1.741	23.8	17.4	1 6	4 6.98	+18 33.1	1.831	2.642	14.5	20.8
<b>168763</b>	2000 <i>QM</i> <sub>215</sub>		12 2.5 126°36	0°7/ 2.7 18			<b>500764</b>	2013 <i>CJ</i> <sub>1</sub>		12 2.5 81°85	11°9/ 7.8 17		
10 28	5 9.27	+24 9.7	1.525	2.346	17.0	20.7	10 28	5 18.24	+48 23.7	1.173	1.946	23.9	21.2
11 7	5 2.99	+24 13.0	1.459	2.357	13.0	20.4	11 7	5 11.90	+48 56.9	1.114	1.955	20.5	21.0
11 17	4 53.58	+24 10.0	1.415	2.368	8.3	20.2	11 17	5 0.07	+48 56.6	1.071	1.964	16.8	20.8
11 27	4 42.07	+23 59.6	1.396	2.378	3.1	19.9	11 27	4 44.52	+48 11.2	1.046	1.973	13.5	20.7
12 7	4 29.92	+23 42.6	1.406	2.388	2.4	19.9	12 7	4 28.17	+46 37.2	1.044	1.983	12.0	20.6
12 17	4 18.71	+23 21.7	1.443	2.397	7.5	20.2	12 17	4 14.04	+44 22.6	1.065	1.992	13.1	20.7
12 27	4 9.80	+23 1.3	1.507	2.406	12.0	20.5	12 27	4 4.30	+41 45.3	1.110	2.001	16.1	20.9
1 6	4 4.00	+22 45.6	1.594	2.414	15.9	20.8	1 6	3 59.71	+39 4.9	1.176	2.010	19.5	21.2
<b>463689</b>	2014 <i>OS</i> <sub>244</sub>		12 2.5 339°34	2°5/ 2.0 18			<b>518070</b>	2015 <i>XH</i> <sub>399</sub>		12 2.5 283°53	0°6/ 2.2 17		

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>189786</b>	2002 <i>DX</i> <sub>3</sub>		12 2.5 255°52	5°6/ 1.2 17			<b>44092</b>	1998 <i>FJ</i> <sub>106</sub>		12 2.5 164°30	0°2/ 2.4 18		
10 28	5 3.50	+ 2 49.8	2.520	3.307	12.1	20.2	10 28	5 7.49	+23 10.1	1.772	2.588	15.2	19.8
11 7	4 57.64	+ 2 42.3	2.422	3.287	9.8	20.0	11 7	5 1.30	+22 47.5	1.697	2.593	11.6	19.6
11 17	4 49.89	+ 2 44.4	2.347	3.268	7.5	19.9	11 17	4 52.42	+22 18.5	1.644	2.597	7.3	19.4
11 27	4 40.78	+ 2 58.8	2.300	3.248	5.8	19.7	11 27	4 41.73	+21 43.7	1.619	2.601	2.6	19.1
12 7	4 31.07	+ 3 27.1	2.284	3.227	6.0	19.7	12 7	4 30.48	+21 5.2	1.622	2.604	2.2	19.1
12 17	4 21.60	+ 4 9.6	2.297	3.206	8.0	19.8	12 17	4 19.97	+20 26.6	1.655	2.607	6.9	19.4
12 27	4 13.23	+ 5 5.2	2.338	3.184	10.5	19.9	12 27	4 11.39	+19 52.3	1.715	2.609	11.1	19.6
1 6	4 6.62	+ 6 11.8	2.405	3.162	13.0	20.1	1 6	4 5.50	+19 25.8	1.799	2.610	14.7	19.9
<b>60193</b>	1999 <i>VJ</i> <sub>43</sub>		12 2.5 318°15	4°0/ 3.2 18			<b>511881</b>	2015 <i>GR</i> <sub>39</sub>		12 2.5 175°95	2°4/ 1.9 18		
10 28	5 5.73	+28 56.6	1.307	2.138	18.7	18.7	10 28	5 6.74	+16 6.0	1.818	2.635	14.8	22.3
11 7	5 1.41	+29 40.1	1.227	2.127	14.7	18.4	11 7	5 0.66	+15 55.9	1.741	2.637	11.3	22.1
11 17	4 53.28	+30 15.1	1.167	2.117	10.1	18.1	11 17	4 52.01	+15 46.8	1.688	2.639	7.3	21.9
11 27	4 42.21	+30 36.8	1.131	2.107	5.4	17.8	11 27	4 41.60	+15 39.9	1.661	2.640	3.3	21.6
12 7	4 29.84	+30 42.0	1.120	2.097	4.6	17.8	12 7	4 30.56	+15 36.7	1.663	2.641	3.4	21.6
12 17	4 18.14	+30 31.6	1.134	2.088	9.0	18.0	12 17	4 20.13	+15 38.8	1.695	2.641	7.4	21.9
12 27	4 9.01	+30 10.9	1.172	2.079	14.0	18.2	12 27	4 11.45	+15 47.7	1.754	2.640	11.4	22.1
1 6	4 3.63	+29 47.1	1.231	2.071	18.4	18.5	1 6	4 5.31	+16 4.3	1.836	2.639	14.8	22.4
<b>276574</b>	2003 <i>SD</i> <sub>245</sub>		12 2.5 61°73	4°0/ 3.8 17			<b>380347</b>	2002 <i>QZ</i> <sub>137</sub>		12 2.5 46°46	1°8/ 2.1 18		
10 28	5 4.15	+33 9.3	2.165	2.958	13.6	20.4	10 28	5 5.47	+19 11.5	1.172	2.019	19.4	21.3
11 7	4 58.62	+33 42.2	2.091	2.965	10.7	20.2	11 7	5 0.54	+18 55.3	1.124	2.036	14.7	21.0
11 17	4 50.67	+34 5.1	2.040	2.973	7.6	20.1	11 17	4 52.21	+18 37.3	1.095	2.054	9.2	20.8
11 27	4 41.07	+34 15.1	2.016	2.981	4.8	19.9	11 27	4 41.67	+18 19.0	1.089	2.072	3.6	20.5
12 7	4 30.89	+34 11.2	2.020	2.989	4.2	19.9	12 7	4 30.60	+18 3.0	1.109	2.090	3.4	20.6
12 17	4 21.31	+33 54.7	2.053	2.997	6.5	20.0	12 17	4 20.73	+17 52.4	1.155	2.109	8.8	20.9
12 27	4 13.41	+33 29.2	2.114	3.005	9.5	20.2	12 27	4 13.46	+17 50.1	1.224	2.129	13.7	21.3
1 6	4 7.92	+32 59.7	2.200	3.013	12.3	20.4	1 6	4 9.57	+17 57.5	1.313	2.148	17.8	21.6
<b>262997</b>	2007 <i>EK</i> <sub>106</sub>		12 2.5 89°05	0°5/ 2.6 18			<b>157928</b>	1999 <i>VR</i> <sub>123</sub>		12 2.5 323°79	2°4/ 1.5 17		
10 28	5 2.50	+23 17.8	2.182	2.994	12.8	20.6	10 28	4 59.53	+18 9.2	1.980	2.806	13.5	19.8
11 7	4 57.12	+23 26.7	2.108	3.002	9.8	20.4	11 7	4 55.06	+17 20.8	1.897	2.799	10.2	19.6
11 17	4 49.60	+23 31.8	2.058	3.009	6.2	20.2	11 17	4 48.42	+16 29.3	1.838	2.792	6.6	19.3
11 27	4 40.66	+23 32.7	2.035	3.017	2.3	20.0	11 27	4 40.29	+15 37.4	1.806	2.785	3.1	19.1
12 7	4 31.25	+23 29.7	2.043	3.025	1.8	20.0	12 7	4 31.64	+14 48.7	1.803	2.779	3.4	19.1
12 17	4 22.37	+23 24.0	2.079	3.032	5.6	20.3	12 17	4 23.50	+14 6.9	1.828	2.773	7.0	19.3
12 27	4 14.97	+23 18.0	2.145	3.040	9.2	20.5	12 27	4 16.83	+13 35.2	1.881	2.767	10.7	19.6
1 6	4 9.70	+23 14.0	2.234	3.047	12.2	20.7	1 6	4 12.31	+13 15.5	1.956	2.762	13.9	19.8
<b>7953</b>	Kawaguchi		12 2.5 158°65	1°8/ 1.9 18			<b>301345</b>	2009 <i>CU</i> <sub>3</sub>		12 2.5 324°17	6°0/ 30.5 18		
10 28	5 5.95	+18 29.7	1.976	2.789	14.0	18.3	10 28	5 0.20	+10 43.4	1.535	2.371	16.2	20.8
11 7	4 59.79	+18 4.6	1.901	2.797	10.6	18.1	11 7	4 56.12	+ 9 41.8	1.459	2.361	12.7	20.5
11 17	4 51.30	+17 37.6	1.851	2.803	6.7	17.9	11 17	4 49.36	+ 8 43.5	1.404	2.351	9.0	20.3
11 27	4 41.28	+17 10.1	1.828	2.809	2.8	17.6	11 27	4 40.70	+ 7 54.2	1.375	2.342	6.2	20.1
12 7	4 30.77	+16 44.2	1.835	2.814	2.9	17.7	12 7	4 31.33	+ 7 19.0	1.371	2.333	6.8	20.1
12 17	4 20.91	+16 22.7	1.872	2.818	6.7	17.9	12 17	4 22.53	+ 7 1.9	1.394	2.325	10.1	20.3
12 27	4 12.70	+16 7.9	1.937	2.822	10.5	18.2	12 27	4 15.53	+ 7 4.6	1.441	2.317	14.0	20.5
1 6	4 6.84	+16 1.6	2.026	2.825	13.7	18.4	1 6	4 11.16	+ 7 25.8	1.508	2.310	17.5	20.7
<b>291565</b>	2006 <i>FF</i> <sub>29</sub>		12 2.5 333°59	0°8/ 2.7 17			<b>318997</b>	2005 <i>UA</i> <sub>417</sub>		12 2.5 349°92	0°8/ 2.3 18		
10 28	5 0.30	+24 21.9	1.847	2.672	14.3	20.9	10 28	5 1.43	+20 3.6	1.852	2.678	14.3	20.9
11 7	4 56.02	+24 25.2	1.761	2.661	11.0	20.6	11 7	4 56.71	+20 1.5	1.774	2.675	10.8	20.7
11 17	4 49.21	+24 23.2	1.698	2.652	7.0	20.4	11 17	4 49.57	+19 57.6	1.718	2.673	6.9	20.4
11 27	4 40.61	+24 15.3	1.661	2.642	2.7	20.1	11 27	4 40.75	+19 52.2	1.689	2.672	2.5	20.1
12 7	4 31.30	+24 2.1	1.651	2.633	2.1	20.0	12 7	4 31.30	+19 46.3	1.689	2.670	2.3	20.1
12 17	4 22.47	+23 45.6	1.670	2.625	6.5	20.3	12 17	4 22.40	+19 41.8	1.717	2.669	6.6	20.4
12 27	4 15.28	+23 29.0	1.716	2.618	10.6	20.5	12 27	4 15.12	+19 40.7	1.771	2.668	10.6	20.6
1 6	4 10.56	+23 15.5	1.784	2.610	14.2	20.7	1 6	4 10.23	+19 44.9	1.849	2.668	14.1	20.9
<b>389507</b>	2010 <i>GO</i> <sub>27</sub>		12 2.5 137°43	0°6/ 2.3 18			<b>496004</b>	2007 <i>X5</i>		12 2.5 71°30	1°5/ 3.2 17		
10 28	5 5.17	+20 12.7	2.282	3.089	12.5	21.8	10 28	5 14.09	+34 2.7	0.971	1.805	23.6	20.1
11 7	4 58.93	+20 11.7	2.210	3.102	9.5	21.6	11 7	5 7.78	+32 10.2	0.914	1.816	18.3	19.8
11 17	4 50.64	+20 8.6	2.163	3.115	6.0	21.4	11 17	4 56.94	+29 44.8	0.875	1.828	12.0	19.5
11 27	4 41.03	+20 3.8	2.145	3.127	2.2	21.2	11 27	4 43.34	+26 50.1	0.860	1.840	4.9	19.2
12 7	4 31.01	+19 57.8	2.157	3.138	1.9	21.2	12 7	4 29.44	+23 39.7	0.870	1.853	3.2	19.2
12 17	4 21.57	+19 52.3	2.200	3.149	5.6	21.5	12 17	4 17.59	+20 33.8	0.907	1.865	9.9	19.6
12 27	4 13.57	+19 48.9	2.271	3.159	9.0	21.7	12 27	4 9.43	+17 51.1	0.968	1.877	16.0	20.0
1 6	4 7.66	+19 49.6	2.368	3.169	12.0	21.9	1 6	4 5.59	+15 42.1	1.050	1.890	20.9	20.3
<b>489973</b>	2008 <i>SJ</i> <sub>77</sub>		12 2.5 30°57	4°4/ 30.7 18			<b>328806</b>	2009 <i>VQ</i> <sub>45</sub>		12 2.5 52°05	4°8/ 3.5 17		
10 28	4 58.58	+11 21.4	2.093	2.915	13.0	21.0	10 28	5 7.24	+33 12.6	2.086	2.875	14.1	20.5
11 7	4 54.07	+10 28.9	2.025	2.920	10.0	20.8	11 7	5 1.23	+34 21.2	2.013	2.884	11.3	20.3
11 17	4 47.64	+ 9 39.2	1.980	2.925	7.0	20.6	11 17	4 52.51	+35 21.1	1.963	2.892	8.2	20.1
11 27	4 39.96	+ 8 56.1	1.962	2.930	4.7	20.5	11 27	4 41.85	+36 7.5	1.941	2.901	5.5	20.0
12 7	4 31.89	+ 8 23.0	1.973	2.935	5.1	20.5	12 7	4 30.41	+36 37.5	1.947	2.910	5.0	20.0
12 17	4 24.35	+ 8 2.4	2.013	2.941	7.7	20.7	12 17	4 19.52	+36 50.8	1.982	2.919	7.2	20.1
12 27	4 18.16	+ 7 55.7	2.078	2.947	10.7	20.9	12 27	4 10.40	+36 50.6	2.044	2.928	10.1	20.3
1 6	4 13.92	+ 8 2.4	2.167	2.953	13.4	21.1	1 6	4 3.93	+36 41.7	2.131	2.937	12.9	20.5
<b>343165</b>	2009 <i>SK</i> <sub>102</sub>		12 2.5 195°46	6°4/ 29.5 18			<b>514617</b>	2004 <i>CU</i> <sub>53</sub>		12 2.5 180°51	7°3/ 29.6 18		

EPHEMERIDES

12 2.5

12 2.5

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>278219</b>	2007 <i>EM</i> <sub>68</sub>	12	2.5 242°57	3°8/ 1.6 18			<b>341985</b>	2008 <i>QT</i> <sub>45</sub>	12	2.5 72°81	4°9/ 1.2 18		
10 28	5 4.48	+13 20.1	1.660	2.486	15.6	20.7	10 28	5 4.72	+12 6.2	1.508	2.338	16.7	20.5
11 7	4 59.24	+12 58.3	1.581	2.480	12.1	20.5	11 7	4 59.23	+11 19.3	1.456	2.356	12.9	20.3
11 17	4 51.28	+12 39.6	1.523	2.473	8.1	20.2	11 17	4 51.08	+10 36.7	1.426	2.374	8.7	20.1
11 27	4 41.41	+12 26.7	1.492	2.467	4.4	20.0	11 27	4 41.27	+10 2.7	1.421	2.392	5.4	20.0
12 7	4 30.79	+12 22.1	1.488	2.460	4.7	20.0	12 7	4 31.07	+9 41.0	1.443	2.410	5.7	20.1
12 17	4 20.72	+12 27.5	1.512	2.454	8.5	20.2	12 17	4 21.78	+9 33.9	1.492	2.428	9.1	20.3
12 27	4 12.45	+12 44.2	1.561	2.447	12.6	20.5	12 27	4 14.52	+9 42.1	1.566	2.446	12.9	20.6
1 6	4 6.82	+13 12.0	1.633	2.439	16.2	20.7	1 6	4 9.95	+10 4.4	1.662	2.464	16.2	20.8
<b>507879</b>	2014 <i>MD</i> <sub>38</sub>	12	2.5 184°23	15°3/ 1.9 18			<b>285270</b>	1998 <i>QO</i> <sub>97</sub>	12	2.5 23°97	1°0/ 2.9 17		
10 28	5 12.00	-12 16.9	1.354	2.118	21.6	20.7	10 28	5 1.01	+29 1.9	1.015	1.871	21.1	19.2
11 7	5 5.24	-13 6.5	1.296	2.118	19.2	20.6	11 7	4 57.49	+27 57.5	0.977	1.893	16.0	19.0
11 17	4 55.17	-13 25.5	1.254	2.119	16.9	20.4	11 17	4 50.32	+26 35.9	0.958	1.917	10.2	18.8
11 27	4 42.82	-13 4.1	1.233	2.118	15.5	20.3	11 27	4 40.99	+25 1.1	0.961	1.943	3.9	18.5
12 7	4 29.69	-11 57.5	1.234	2.117	15.5	20.3	12 7	4 31.40	+23 21.2	0.988	1.971	2.7	18.5
12 17	4 17.47	-10 8.0	1.259	2.116	17.0	20.4	12 17	4 23.35	+21 46.0	1.040	2.001	8.5	19.0
12 27	4 7.62	-7 43.8	1.305	2.114	19.4	20.6	12 27	4 18.12	+20 24.5	1.115	2.031	13.7	19.4
1 6	4 1.06	-4 56.8	1.371	2.112	21.9	20.8	1 6	4 16.30	+19 21.8	1.211	2.063	17.8	19.7
<b>225309</b>	1996 <i>HV</i> <sub>14</sub>	12	2.5 120°53	4°4/ 3.8 17			<b>141054</b>	2001 <i>XW</i> <sub>2</sub>	12	2.5 316°50	16°0/ 1.3 18		
10 28	5 6.65	+34 32.2	2.457	3.234	12.6	20.2	10 28	5 20.87	+42 5.5	1.077	1.874	24.1	18.9
11 7	5 0.41	+35 26.4	2.379	3.241	10.1	20.1	11 7	5 16.27	+45 39.7	1.010	1.865	21.0	18.6
11 17	4 51.82	+36 11.5	2.325	3.249	7.4	19.9	11 17	5 5.05	+49 4.9	0.962	1.857	18.1	18.4
11 27	4 41.57	+36 43.8	2.299	3.256	5.1	19.8	11 27	4 47.39	+51 58.0	0.934	1.848	16.3	18.3
12 7	4 30.67	+37 1.4	2.303	3.263	4.6	19.8	12 7	4 25.50	+53 56.7	0.929	1.841	16.4	18.2
12 17	4 20.24	+37 4.4	2.336	3.270	6.4	19.9	12 17	4 3.58	+54 50.8	0.944	1.833	18.5	18.3
12 27	4 11.35	+36 55.7	2.397	3.277	9.0	20.1	12 27	3 46.27	+54 48.9	0.979	1.826	21.5	18.5
1 6	4 4.74	+36 39.6	2.484	3.283	11.5	20.3	1 6	3 36.34	+54 11.2	1.028	1.820	24.6	18.7
<b>51413</b>	2001 <i>EO</i> <sub>11</sub>	12	2.5 146°21	5°6/30.7 18			<b>8283</b>	Edinburgh	12	2.5 37°30	0°0/ 2.3 18		
10 28	5 2.72	+5 50.2	2.210	3.012	13.0	20.0	10 28	5 4.14	+20 26.3	1.786	2.609	14.8	17.0
11 7	4 57.05	+5 11.6	2.142	3.020	10.4	19.8	11 7	4 58.85	+20 51.7	1.715	2.614	11.3	16.8
11 17	4 49.48	+4 40.4	2.099	3.029	7.7	19.7	11 17	4 50.97	+21 16.3	1.666	2.620	7.1	16.5
11 27	4 40.67	+4 20.0	2.083	3.036	5.8	19.6	11 27	4 41.30	+21 39.2	1.644	2.626	2.6	16.3
12 7	4 31.48	+4 13.1	2.096	3.044	6.1	19.6	12 7	4 30.99	+21 59.6	1.650	2.632	2.1	16.2
12 17	4 22.81	+4 20.9	2.138	3.050	8.3	19.7	12 17	4 21.28	+22 18.0	1.685	2.639	6.6	16.5
12 27	4 15.50	+4 43.2	2.206	3.056	10.9	19.9	12 27	4 13.34	+22 35.8	1.747	2.646	10.7	16.8
1 6	4 10.13	+5 18.2	2.298	3.062	13.4	20.1	1 6	4 7.96	+22 54.9	1.833	2.653	14.2	17.0
<b>78433</b>	Gertrudolf	12	2.5 239°29	0°4/ 2.6 18			<b>72830</b>	2001 <i>HL</i> <sub>13</sub>	12	2.5 65°40	1°6/ 1.9 18		
10 28	5 4.00	+23 21.0	1.860	2.679	14.5	20.1	10 28	5 0.74	+18 30.9	2.157	2.976	12.7	18.8
11 7	4 58.73	+23 24.4	1.779	2.676	11.1	19.9	11 7	4 55.64	+18 4.2	2.094	2.992	9.6	18.6
11 17	4 50.90	+23 23.2	1.721	2.674	7.1	19.6	11 17	4 48.61	+17 36.1	2.055	3.008	6.1	18.4
11 27	4 41.26	+23 16.9	1.690	2.672	2.6	19.4	11 27	4 40.36	+17 8.1	2.044	3.025	2.5	18.2
12 7	4 30.96	+23 6.2	1.687	2.669	2.1	19.3	12 7	4 31.80	+16 42.4	2.063	3.041	2.6	18.3
12 17	4 21.22	+22 52.7	1.713	2.666	6.5	19.6	12 17	4 23.83	+16 21.3	2.111	3.058	6.0	18.5
12 27	4 13.21	+22 39.7	1.766	2.664	10.6	19.8	12 27	4 17.31	+16 6.8	2.187	3.075	9.3	18.8
1 6	4 7.71	+22 30.2	1.843	2.661	14.1	20.1	1 6	4 12.77	+16 0.1	2.287	3.091	12.2	19.0
<b>286712</b>	2002 <i>GW</i> <sub>72</sub>	12	2.5 159°44	1°7/ 2.1 17			<b>25845</b>	2000 <i>EO</i> <sub>86</sub>	12	2.5 39°79	7°6/30.1 18		
10 28	5 7.85	+18 31.1	1.725	2.543	15.5	21.3	10 28	5 0.88	+7 29.3	1.455	2.289	17.0	17.3
11 7	5 1.60	+18 16.3	1.652	2.550	11.8	21.0	11 7	4 56.35	+6 4.5	1.409	2.305	13.5	17.1
11 17	4 52.66	+18 0.1	1.602	2.555	7.5	20.8	11 17	4 49.29	+4 48.3	1.384	2.322	10.0	17.0
11 27	4 41.88	+17 43.4	1.579	2.560	3.0	20.5	11 27	4 40.63	+3 47.6	1.383	2.340	7.8	16.9
12 7	4 30.50	+17 28.0	1.585	2.565	3.0	20.5	12 7	4 31.62	+3 8.0	1.409	2.358	8.3	17.0
12 17	4 19.84	+17 16.2	1.620	2.569	7.4	20.8	12 17	4 23.49	+2 52.3	1.459	2.376	11.0	17.2
12 27	4 11.09	+17 10.7	1.682	2.572	11.6	21.1	12 27	4 17.29	+3 0.2	1.533	2.395	14.2	17.4
1 6	4 5.04	+17 13.0	1.767	2.574	15.1	21.3	1 6	4 13.66	+3 28.4	1.627	2.415	17.1	17.7
<b>397547</b>	2007 <i>TP</i> <sub>327</sub>	12	2.5 151°71	0°2/ 2.6 18			<b>410987</b>	2009 <i>UT</i> <sub>21</sub>	12	2.5 55°79	4°3/ 1.1 18		
10 28	5 4.53	+24 34.8	2.044	2.855	13.6	21.5	10 28	4 59.98	+10 52.7	2.082	2.901	13.1	21.6
11 7	4 58.77	+24 9.4	1.967	2.861	10.4	21.3	11 7	4 55.18	+10 17.3	2.013	2.907	10.2	21.4
11 17	4 50.70	+23 37.2	1.914	2.866	6.6	21.1	11 17	4 48.40	+9 46.0	1.968	2.913	7.0	21.2
11 27	4 41.14	+22 58.6	1.889	2.871	2.4	20.8	11 27	4 40.32	+9 21.7	1.950	2.919	4.6	21.1
12 7	4 31.11	+22 15.7	1.893	2.875	1.9	20.8	12 7	4 31.84	+9 7.0	1.961	2.925	4.9	21.1
12 17	4 21.74	+21 32.0	1.927	2.879	6.1	21.1	12 17	4 23.88	+9 3.8	2.000	2.931	7.5	21.3
12 27	4 14.01	+20 51.4	1.989	2.883	9.8	21.3	12 27	4 17.31	+9 12.6	2.066	2.938	10.6	21.5
1 6	4 8.59	+20 17.3	2.076	2.886	13.1	21.6	1 6	4 12.72	+9 32.9	2.155	2.944	13.4	21.7
<b>175171</b>	2005 <i>EN</i> <sub>136</sub>	12	2.5 156°80	1°4/ 2.9 18			<b>366001</b>	2012 <i>BT</i> <sub>100</sub>	12	2.5 212°91	0°9/ 2.2 18		
10 28	5 9.06	+25 41.5	1.691	2.503	16.0	21.0	10 28	5 2.02	+19 45.6	2.074	2.892	13.2	21.5
11 7	5 2.76	+25 51.7	1.617	2.509	12.3	20.8	11 7	4 56.91	+19 38.4	1.994	2.892	10.0	21.3
11 17	4 53.51	+25 55.1	1.565	2.515	7.9	20.5	11 17	4 49.60	+19 29.3	1.938	2.891	6.3	21.0
11 27	4 42.22	+25 49.9	1.540	2.520	3.3	20.3	11 27	4 40.79	+19 18.9	1.909	2.891	2.4	20.8
12 7	4 30.22	+25 36.1	1.543	2.524	2.5	20.2	12 7	4 31.45	+19 8.4	1.909	2.890	2.2	20.8
12 17	4 19.00	+25 16.1	1.575	2.528	7.0	20.5	12 17	4 22.60	+18 59.7	1.939	2.890	6.2	21.0
12 27	4 9.86	+24 54.1	1.634	2.531	11.4	20.8	12 27	4 15.23	+18 54.7	1.996	2.889	9.9	21.2
1 6	4 3.67	+24 34.5	1.716	2.534	15.1	21.0	1 6	4 10.03	+18 55.2	2.078	2.888	13.0	21.5
<b>331141</b>	2010 <i>VS</i> <sub>165</sub>	12	2.5 284°69	1°1/ 2.2 18			<b>47090</b>	1999 <i>AJ</i> <sub>7</sub>	12	2.5 170°91	5°0/ 4.6 18		
10 28	5 4.66	+22											



EPHEMERIDES

12 2.5

12 2.5

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>345491</b>	2006 <i>JF</i> <sub>1</sub>	12	2.5 355°61	1°5/ 2.2 18			<b>202</b>	Chryseis	12	2.5 301°92	4°1/ 1.2 18		
10 28	5 1.97	+19 16.1	1.390	2.232	17.2	20.4	10 28	4 59.58	+10 48.5	2.138	2.956	12.9	12.2
11 7	4 57.84	+19 5.3	1.319	2.229	13.1	20.1	11 7	4 55.00	+10 21.1	2.053	2.946	10.0	12.0
11 17	4 50.63	+18 52.6	1.269	2.227	8.4	19.8	11 17	4 48.40	+9 57.8	1.992	2.937	6.9	11.8
11 27	4 41.26	+18 39.3	1.243	2.225	3.2	19.5	11 27	4 40.40	+9 41.1	1.958	2.927	4.5	11.6
12 7	4 31.08	+18 27.3	1.243	2.224	3.1	19.5	12 7	4 31.85	+9 33.7	1.952	2.918	4.7	11.6
12 17	4 21.63	+18 19.2	1.270	2.224	8.2	19.8	12 17	4 23.68	+9 37.0	1.975	2.908	7.5	11.8
12 27	4 14.31	+18 17.8	1.321	2.225	13.0	20.1	12 27	4 16.81	+9 51.9	2.025	2.899	10.7	11.9
1 6	4 10.01	+18 24.9	1.393	2.226	17.1	20.4	1 6	4 11.90	+10 17.8	2.098	2.890	13.6	12.1
<b>67555</b>	2000 <i>SG</i> <sub>69</sub>	12	2.5 46°74	1°4/ 2.3 18			<b>343281</b>	2010 <i>AF</i> <sub>38</sub>	12	2.5 316°67	1°9/ 2.9 18		
10 28	5 6.61	+19 31.7	1.082	1.933	20.4	18.8	10 28	5 3.11	+26 1.6	1.381	2.217	17.7	20.6
11 7	5 1.67	+19 25.3	1.036	1.950	15.5	18.6	11 7	4 59.20	+26 16.1	1.294	2.199	13.7	20.3
11 17	4 53.07	+19 17.0	1.009	1.968	9.7	18.3	11 17	4 51.84	+26 23.3	1.228	2.182	9.0	19.9
11 27	4 42.08	+19 7.9	1.005	1.987	3.7	18.0	11 27	4 41.83	+26 20.8	1.185	2.166	3.9	19.6
12 7	4 30.53	+18 59.7	1.025	2.007	3.3	18.1	12 7	4 30.62	+26 8.3	1.168	2.150	3.0	19.5
12 17	4 20.27	+18 55.1	1.070	2.026	9.0	18.5	12 17	4 19.96	+25 47.6	1.177	2.134	8.3	19.8
12 27	4 12.84	+18 57.3	1.139	2.047	14.2	18.8	12 27	4 11.53	+25 24.0	1.210	2.119	13.4	20.0
1 6	4 9.02	+19 8.0	1.227	2.067	18.5	19.2	1 6	4 6.49	+25 2.9	1.264	2.105	18.0	20.3
<b>105336</b>	2000 <i>QC</i> <sub>86</sub>	12	2.5 202°20	2°9/ 1.2 18			<b>7422</b>	1992 <i>LP</i>	12	2.5 62°43	1°3/ 2.3 18 R		
10 28	5 1.39	+13 33.8	2.668	3.474	11.0	20.6	10 28	5 8.16	+19 31.0	1.231	2.071	19.2	16.7
11 7	4 55.92	+12 58.9	2.581	3.469	8.4	20.4	11 7	5 2.47	+19 26.7	1.183	2.091	14.5	16.5
11 17	4 48.75	+12 24.9	2.518	3.464	5.6	20.3	11 17	4 53.43	+19 20.7	1.155	2.112	9.1	16.2
11 27	4 40.45	+11 53.9	2.485	3.457	3.3	20.1	11 27	4 42.21	+19 13.6	1.151	2.133	3.4	16.0
12 7	4 31.75	+11 28.1	2.482	3.451	3.5	20.1	12 7	4 30.50	+19 6.7	1.173	2.154	3.1	16.0
12 17	4 23.40	+11 9.5	2.510	3.443	6.1	20.3	12 17	4 20.00	+19 2.7	1.221	2.175	8.4	16.4
12 27	4 16.16	+10 59.6	2.567	3.435	8.9	20.4	12 27	4 12.11	+19 4.2	1.294	2.197	13.3	16.7
1 6	4 10.57	+10 59.0	2.648	3.427	11.4	20.6	1 6	4 7.58	+19 13.2	1.388	2.218	17.3	17.1
<b>13923</b>	Peterhof	12	2.5 21°43	2°7/ 2.7 18			<b>411106</b>	2009 <i>WG</i> <sub>49</sub>	12	2.5 313°57	4°6/ 1.2 17		
10 28	5 7.41	+23 10.9	1.317	2.151	18.4	15.9	10 28	4 59.70	+8 34.6	2.186	3.000	12.8	20.9
11 7	5 2.32	+24 38.8	1.256	2.160	14.2	15.7	11 7	4 55.01	+8 11.4	2.106	2.995	10.0	20.7
11 17	4 53.67	+26 6.5	1.217	2.171	9.2	15.4	11 17	4 48.35	+7 54.1	2.050	2.989	7.1	20.6
11 27	4 42.42	+27 27.8	1.202	2.182	4.2	15.2	11 27	4 40.37	+7 45.4	2.020	2.984	4.9	20.4
12 7	4 30.17	+28 37.4	1.215	2.194	3.7	15.2	12 7	4 31.89	+7 47.6	2.019	2.979	5.2	20.4
12 17	4 18.75	+29 32.5	1.254	2.207	8.3	15.5	12 17	4 23.81	+8 1.8	2.047	2.974	7.6	20.6
12 27	4 9.83	+30 14.7	1.318	2.222	13.0	15.8	12 27	4 16.99	+8 27.9	2.101	2.969	10.6	20.7
1 6	4 4.45	+30 48.0	1.403	2.237	16.9	16.1	1 6	4 12.09	+9 5.0	2.179	2.965	13.4	20.9
<b>328702</b>	2009 <i>SE</i> <sub>364</sub>	12	2.5 15°80	1°8/ 2.9 17			<b>11964</b>	Prigogine	12	2.5 106°50	0°5/ 2.3 18		
10 28	5 3.22	+25 20.4	1.905	2.721	14.3	20.7	10 28	5 2.06	+21 26.6	2.173	2.988	12.8	19.2
11 7	4 58.16	+25 54.1	1.829	2.724	11.0	20.5	11 7	4 56.79	+21 12.3	2.099	2.995	9.7	19.0
11 17	4 50.57	+26 23.5	1.777	2.727	7.1	20.3	11 17	4 49.45	+20 54.7	2.049	3.002	6.1	18.8
11 27	4 41.20	+26 46.4	1.751	2.730	3.2	20.0	11 27	4 40.76	+20 34.3	2.027	3.009	2.2	18.6
12 7	4 31.16	+27 1.8	1.753	2.734	2.5	20.0	12 7	4 31.64	+20 12.6	2.035	3.016	1.9	18.6
12 17	4 21.67	+27 10.1	1.784	2.738	6.3	20.2	12 17	4 23.07	+19 51.9	2.072	3.023	5.8	18.8
12 27	4 13.86	+27 13.8	1.843	2.742	10.2	20.5	12 27	4 15.96	+19 34.6	2.137	3.030	9.3	19.1
1 6	4 8.54	+27 16.0	1.925	2.747	13.5	20.7	1 6	4 10.92	+19 22.9	2.227	3.037	12.3	19.3
<b>101029</b>	1998 <i>QJ</i> <sub>75</sub>	12	2.5 180°12	3°0/ 3.7 18			<b>75782</b>	2000 <i>AG</i> <sub>203</sub>	12	2.5 259°62	6°0/ 29.9 18		
10 28	5 9.22	+31 39.4	1.935	2.730	14.9	19.8	10 28	5 1.39	+7 34.8	2.112	2.923	13.3	19.8
11 7	5 2.68	+31 34.2	1.853	2.731	11.7	19.6	11 7	4 56.42	+6 28.4	2.021	2.905	10.6	19.6
11 17	4 53.38	+31 16.7	1.793	2.732	8.0	19.4	11 17	4 49.34	+5 25.7	1.953	2.886	7.9	19.4
11 27	4 42.20	+30 45.0	1.759	2.733	4.2	19.2	11 27	4 40.77	+4 31.5	1.913	2.868	6.1	19.3
12 7	4 30.41	+29 59.6	1.755	2.732	3.3	19.1	12 7	4 31.58	+3 50.6	1.901	2.849	6.7	19.3
12 17	4 19.36	+29 3.9	1.781	2.731	6.7	19.3	12 17	4 22.74	+3 26.1	1.918	2.829	9.1	19.4
12 27	4 10.29	+28 4.0	1.835	2.729	10.5	19.6	12 27	4 15.21	+3 19.8	1.960	2.809	12.1	19.5
1 6	4 3.97	+27 6.1	1.913	2.727	13.9	19.8	1 6	4 9.69	+3 30.9	2.025	2.789	15.0	19.7
<b>445695</b>	2011 <i>UG</i> <sub>173</sub>	12	2.5 334°02	3°8/ 1.6 18			<b>484200</b>	2006 <i>WD</i> <sub>16</sub>	12	2.5 13°86	2°8/ 3.3 18		
10 28	5 0.26	+14 8.1	1.497	2.337	16.3	20.9	10 28	5 4.25	+28 41.0	1.800	2.613	15.1	21.4
11 7	4 56.38	+13 45.4	1.418	2.325	12.6	20.6	11 7	4 59.16	+29 6.4	1.724	2.614	11.7	21.2
11 17	4 49.68	+13 25.3	1.360	2.314	8.4	20.4	11 17	4 51.30	+29 23.8	1.669	2.616	7.9	21.0
11 27	4 40.94	+13 10.9	1.327	2.304	4.5	20.1	11 27	4 41.51	+29 30.7	1.641	2.617	4.0	20.7
12 7	4 31.37	+13 4.9	1.319	2.294	4.7	20.1	12 7	4 31.01	+29 26.3	1.641	2.619	3.3	20.7
12 17	4 22.34	+13 9.7	1.339	2.285	8.8	20.3	12 17	4 21.13	+29 12.2	1.669	2.621	6.8	20.9
12 27	4 15.16	+13 26.6	1.382	2.277	13.2	20.6	12 27	4 13.13	+28 52.1	1.723	2.623	10.7	21.2
1 6	4 10.73	+13 55.3	1.447	2.270	17.1	20.8	1 6	4 7.84	+28 30.9	1.801	2.626	14.2	21.4
<b>417966</b>	2007 <i>TX</i> <sub>119</sub>	12	2.5 69°59	1°5/ 2.8 18			<b>112096</b>	2002 <i>JA</i> <sub>33</sub>	12	2.5 130°20	1°7/ 1.9 17		
10 28	5 13.80	+24 2.2	1.201	2.031	20.1	20.5	10 28	5 8.38	+19 57.0	1.785	2.600	15.2	20.4
11 7	5 6.81	+24 34.4	1.160	2.062	15.3	20.3	11 7	5 1.76	+19 16.0	1.721	2.616	11.5	20.2
11 17	4 56.15	+25 0.2	1.139	2.092	9.7	20.1	11 17	4 52.63	+18 30.9	1.680	2.632	7.2	20.0
11 27	4 43.16	+25 16.6	1.142	2.123	3.9	19.9	11 27	4 41.89	+17 44.1	1.666	2.647	2.9	19.7
12 7	4 29.77	+25 22.8	1.171	2.153	2.9	19.9	12 7	4 30.78	+16 58.7	1.682	2.661	3.0	19.8
12 17	4 17.86	+25 21.0	1.227	2.183	8.3	20.3	12 17	4 20.52	+16 18.5	1.727	2.674	7.1	20.0
12 27	4 8.94	+25 16.1	1.309	2.212	13.1	20.7	12 27	4 12.19	+15 47.1	1.800	2.687	11.1	20.3
1 6	4 3.73	+25 12.8	1.411	2.241	17.0	21.0	1 6	4 6.44	+15 26.7	1.897	2.698	14.5	20.6
<b>330797</b>	2008 <i>UA</i> <sub>255</sub>	12	2.5 90°64	0°0/ 2.5 18			<b>6671</b>	Concari	12	2.5 140°65	5°8/ 30.1 18		
10 28	5 3.17	+20 29.4	2.409	3.217	11.9								

EPHEMERIDES

12 2.5

12 2.6

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>329885</b>	2005 <i>EL</i> <sub>149</sub>		12 2.5 142°99	1.2/ 2.8	17		<b>487048</b>	2014 <i>OW</i> <sub>51</sub>		12 2.6 7°90	4.7/ 1.5	18	
10 28	5 9.51	+24 42.8	1.709	2.522	15.8	21.6	10 28	5 1.19	+9 47.3	1.826	2.649	14.6	21.1
11 7	5 3.06	+24 56.8	1.638	2.531	12.1	21.4	11 7	4 56.46	+9 28.2	1.754	2.649	11.3	20.9
11 17	4 53.70	+25 5.0	1.590	2.540	7.8	21.2	11 17	4 49.42	+9 15.4	1.705	2.650	7.9	20.7
11 27	4 42.36	+25 5.9	1.568	2.548	3.1	20.9	11 27	4 40.82	+9 11.9	1.682	2.651	5.1	20.6
12 7	4 30.37	+24 59.2	1.574	2.556	2.4	20.9	12 7	4 31.66	+9 19.7	1.687	2.652	5.3	20.6
12 17	4 19.15	+24 47.0	1.610	2.563	6.9	21.2	12 17	4 23.05	+9 39.7	1.719	2.654	8.2	20.8
12 27	4 10.01	+24 32.8	1.673	2.570	11.2	21.5	12 27	4 16.00	+10 11.8	1.778	2.656	11.7	21.0
1 6	4 3.75	+24 20.8	1.760	2.576	14.8	21.7	1 6	4 11.21	+10 54.6	1.859	2.659	14.8	21.2
<b>479355</b>	2013 <i>WL</i> <sub>106</sub>		12 2.5 342°10	6°5/ 1.2	18		<b>298601</b>	2003 <i>YM</i> <sub>131</sub>		12 2.6 56°64	3°3/ 3.1	18	
10 28	4 58.59	+11 12.9	1.069	1.931	19.8	20.1	10 28	5 8.67	+27 14.8	1.645	2.458	16.3	19.9
11 7	4 55.99	+10 29.9	1.001	1.918	15.6	19.8	11 7	5 2.71	+28 18.2	1.579	2.470	12.6	19.7
11 17	4 49.87	+9 53.0	0.951	1.906	10.9	19.5	11 17	4 53.66	+29 16.0	1.536	2.482	8.5	19.5
11 27	4 41.13	+9 28.6	0.922	1.895	7.0	19.2	11 27	4 42.42	+30 3.7	1.519	2.494	4.4	19.3
12 7	4 31.30	+9 22.1	0.916	1.886	7.5	19.2	12 7	4 30.37	+30 38.1	1.530	2.506	3.8	19.3
12 17	4 22.18	+9 36.8	0.933	1.878	11.8	19.4	12 17	4 19.07	+30 58.9	1.569	2.519	7.4	19.5
12 27	4 15.46	+10 12.8	0.970	1.872	16.7	19.7	12 27	4 9.92	+31 9.1	1.635	2.531	11.4	19.8
1 6	4 12.21	+11 7.2	1.026	1.868	21.2	19.9	1 6	4 3.84	+31 13.6	1.723	2.544	14.9	20.0
<b>42002</b>	2000 <i>YU</i> <sub>47</sub>		12 2.5 338°79	1°5/ 2.9	18	18	<b>480041</b>	2015 <i>BQ</i> <sub>302</sub>		12 2.6 148°33	1°0/ 2.4	18	
10 28	5 1.99	+25 54.7	1.393	2.230	17.5	18.3	10 28	5 8.24	+19 2.8	1.673	2.492	15.8	21.1
11 7	4 58.13	+25 57.5	1.314	2.221	13.5	18.0	11 7	5 2.10	+19 12.1	1.600	2.498	12.0	20.8
11 17	4 51.00	+25 51.9	1.257	2.212	8.8	17.7	11 17	4 53.13	+19 20.9	1.551	2.504	7.6	20.6
11 27	4 41.49	+25 36.7	1.223	2.204	3.6	17.4	11 27	4 42.20	+19 28.9	1.528	2.510	2.9	20.3
12 7	4 31.03	+25 12.5	1.215	2.197	2.7	17.3	12 7	4 30.58	+19 36.4	1.533	2.515	2.5	20.3
12 17	4 21.26	+24 42.6	1.233	2.191	7.9	17.6	12 17	4 19.66	+19 44.5	1.568	2.519	7.2	20.6
12 27	4 13.71	+24 12.2	1.276	2.186	12.9	17.9	12 27	4 10.72	+19 55.0	1.629	2.523	11.6	20.9
1 6	4 9.37	+23 46.5	1.340	2.181	17.1	18.1	1 6	4 4.57	+20 9.9	1.714	2.527	15.3	21.1
<b>483069</b>	2015 <i>LT</i> <sub>14</sub>		12 2.5 96°34	0°7/ 2.4	16		<b>421951</b>	2014 <i>QW</i> <sub>262</sub>		12 2.6 47°20	1°4/ 2.9	18	
10 28	5 7.68	+20 4.3	1.846	2.660	14.8	21.5	10 28	5 3.92	+24 37.3	1.968	2.783	14.0	20.5
11 7	5 1.18	+20 7.5	1.788	2.683	11.1	21.3	11 7	4 58.55	+25 8.1	1.898	2.792	10.7	20.3
11 17	4 52.25	+20 8.8	1.754	2.706	7.0	21.1	11 17	4 50.76	+25 34.9	1.851	2.801	6.9	20.1
11 27	4 41.77	+20 8.2	1.747	2.728	2.5	20.9	11 27	4 41.31	+25 55.8	1.831	2.811	2.9	19.9
12 7	4 30.91	+20 6.3	1.769	2.750	2.2	20.9	12 7	4 31.29	+26 10.1	1.840	2.821	2.3	19.8
12 17	4 20.86	+20 4.6	1.821	2.772	6.5	21.2	12 17	4 21.86	+26 18.4	1.878	2.831	6.1	20.1
12 27	4 12.67	+20 5.3	1.901	2.793	10.3	21.5	12 27	4 14.08	+26 22.9	1.943	2.841	9.8	20.3
1 6	4 6.99	+20 10.4	2.004	2.813	13.5	21.7	1 6	4 8.71	+26 26.5	2.033	2.851	13.0	20.6
<b>109158</b>	2001 <i>QW</i> <sub>61</sub>		12 2.5 91°46	2°3/ 1.8	18		<b>485577</b>	2011 <i>UV</i> <sub>196</sub>		12 2.6 21°16	0°0/ 2.4	17	
10 28	5 4.42	+16 22.2	2.032	2.847	13.6	20.6	10 28	5 1.97	+25 36.6	1.480	2.314	16.8	21.1
11 7	4 58.45	+16 0.6	1.975	2.870	10.2	20.4	11 7	4 57.58	+24 50.5	1.415	2.320	12.8	20.8
11 17	4 50.41	+15 39.4	1.942	2.893	6.6	20.2	11 17	4 50.31	+23 53.7	1.370	2.326	8.1	20.6
11 27	4 41.08	+15 20.2	1.937	2.916	3.0	20.1	11 27	4 41.15	+22 48.0	1.351	2.334	3.0	20.3
12 7	4 31.46	+15 5.0	1.962	2.938	3.1	20.1	12 7	4 31.47	+21 37.9	1.359	2.341	2.3	20.3
12 17	4 22.54	+14 55.6	2.015	2.960	6.5	20.4	12 17	4 22.69	+20 29.3	1.394	2.350	7.4	20.6
12 27	4 15.22	+14 53.4	2.097	2.981	9.9	20.6	12 27	4 16.04	+19 28.5	1.455	2.359	12.0	20.9
1 6	4 10.07	+14 59.2	2.203	3.002	12.8	20.9	1 6	4 12.24	+18 40.0	1.538	2.369	15.8	21.2
<b>378205</b>	2006 <i>YP</i> <sub>49</sub>		12 2.6 51°76	0°0/ 2.3	18		<b>306144</b>	2010 <i>KY</i> <sub>35</sub>		12 2.6 166°58	2°0/ 1.4	17	
10 28	5 8.51	+26 6.6	1.138	1.978	20.3	20.1	10 28	5 7.30	+21 47.1	2.190	2.994	13.1	20.3
11 7	5 2.75	+25 10.7	1.098	2.006	15.3	19.9	11 7	5 0.56	+20 14.6	2.107	2.998	9.9	20.1
11 17	4 53.49	+24 2.7	1.077	2.034	9.6	19.6	11 17	4 51.73	+18 33.7	2.051	3.001	6.3	19.9
11 27	4 42.19	+22 45.6	1.080	2.063	3.4	19.4	11 27	4 41.59	+16 48.2	2.025	3.004	2.7	19.7
12 7	4 30.70	+21 25.7	1.110	2.092	2.7	19.4	12 7	4 31.13	+15 3.5	2.031	3.007	3.1	19.7
12 17	4 20.78	+20 10.9	1.165	2.122	8.4	19.8	12 17	4 21.37	+13 25.9	2.069	3.009	6.7	20.0
12 27	4 13.73	+19 8.4	1.245	2.151	13.4	20.2	12 27	4 13.21	+12 0.8	2.138	3.011	10.2	20.2
1 6	4 10.13	+18 22.1	1.346	2.181	17.4	20.6	1 6	4 7.24	+10 51.5	2.231	3.012	13.2	20.4
<b>96561</b>	1998 <i>SB</i> <sub>135</sub>		12 2.6 19°28	1°8/ 2.0	18		<b>251678</b>	1995 <i>SV</i> <sub>60</sub>		12 2.6 190°00	1°9/ 3.2	17	
10 28	5 0.05	+18 3.3	1.763	2.594	14.6	18.8	10 28	5 4.13	+27 26.7	2.303	3.105	12.6	21.5
11 7	4 55.69	+17 48.0	1.696	2.600	11.1	18.6	11 7	4 58.50	+27 43.7	2.219	3.104	9.7	21.3
11 17	4 48.95	+17 32.1	1.651	2.606	7.0	18.4	11 17	4 50.65	+27 54.6	2.158	3.103	6.4	21.1
11 27	4 40.63	+17 16.9	1.633	2.614	2.9	18.2	11 27	4 41.28	+27 57.8	2.125	3.102	3.0	20.9
12 7	4 31.80	+17 4.5	1.642	2.621	2.9	18.2	12 7	4 31.32	+27 53.0	2.121	3.100	2.4	20.9
12 17	4 23.60	+16 56.8	1.679	2.630	6.9	18.4	12 17	4 21.83	+27 41.5	2.148	3.099	5.6	21.1
12 27	4 17.07	+16 55.8	1.742	2.638	10.8	18.7	12 27	4 13.78	+27 26.0	2.203	3.097	9.0	21.3
1 6	4 12.90	+17 2.6	1.829	2.648	14.2	18.9	1 6	4 7.89	+27 10.0	2.283	3.095	12.0	21.5
<b>331846</b>	2003 <i>UJ</i> <sub>232</sub>		12 2.6 15°33	4°3/ 3.9	17		<b>213449</b>	2002 <i>AD</i> <sub>176</sub>		12 2.6 221°55	3°5/ 1.8	18	
10 28	5 4.23	+33 37.6	2.190	2.981	13.5	20.6	10 28	5 6.96	+14 16.9	1.505	2.333	16.9	20.5
11 7	4 58.86	+34 17.2	2.110	2.982	10.8	20.4	11 7	5 1.45	+14 1.9	1.428	2.329	13.0	20.3
11 17	4 51.01	+34 47.2	2.052	2.983	7.7	20.2	11 17	4 52.91	+13 49.9	1.372	2.324	8.6	20.0
11 27	4 41.41	+35 4.2	2.021	2.984	5.0	20.0	11 27	4 42.18	+13 43.2	1.341	2.319	4.4	19.8
12 7	4 31.14	+35 6.7	2.019	2.986	4.4	20.0	12 7	4 30.59	+13 43.8	1.338	2.313	4.5	19.7
12 17	4 21.38	+34 55.6	2.045	2.987	6.6	20.1	12 17	4 19.63	+13 53.4	1.362	2.307	8.8	20.0
12 27	4 13.26	+34 34.2	2.099	2.989	9.6	20.3	12 27	4 10.71	+14 13.2	1.411	2.301	13.3	20.2
1 6	4 7.55	+34 7.5	2.177	2.990	12.4	20.5	1 6	4 4.74	+14 43.3	1.482	2.295	17.3	20.5
<b>383210</b>	2005 <i>YS</i> <sub>106</sub>		12 2.6 185°08	0°8/ 2.8	18		<b>277330</b>	2005 <i>SM</i> <sub>290</sub>		12 2.6 128°18	3°1/ 1.5	18</	

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>189113</b>	2001 <i>UA</i> <sub>153</sub>		12 2.6 45°86	0.4/ 2.4	18		<b>217709</b>	1999 <i>TY</i> <sub>213</sub>		12 2.6 51°78	2.5/ 1.7	18	
10 28	5 5.47	+22 8.2	1.257	2.099	18.7	19.6	10 28	5 2.08	+16 45.5	1.799	2.625	14.6	20.4
11 7	5 0.46	+21 54.9	1.208	2.117	14.1	19.3	11 7	4 56.97	+16 14.2	1.745	2.646	11.0	20.2
11 17	4 52.20	+21 36.4	1.179	2.137	8.9	19.1	11 17	4 49.62	+15 42.8	1.715	2.668	7.0	20.0
11 27	4 41.84	+21 13.5	1.174	2.157	3.2	18.8	11 27	4 40.87	+15 13.9	1.711	2.690	3.3	19.8
12 7	4 31.00	+20 48.5	1.195	2.177	2.7	18.9	12 7	4 31.81	+14 50.0	1.735	2.712	3.4	19.9
12 17	4 21.32	+20 25.1	1.242	2.198	8.1	19.2	12 17	4 23.52	+14 33.5	1.788	2.734	7.0	20.2
12 27	4 14.15	+20 7.4	1.313	2.219	12.9	19.6	12 27	4 16.93	+14 26.2	1.867	2.756	10.6	20.4
1 6	4 10.20	+19 58.4	1.406	2.241	16.8	19.9	1 6	4 12.64	+14 28.7	1.970	2.778	13.7	20.7
<b>357480</b>	2004 <i>GL</i> <sub>40</sub>		12 2.6 205°89	2.3/ 1.6	18		<b>241007</b>	2006 <i>MP</i> <sub>2</sub>		12 2.6 114°35	6.9/ 1.1	18	
10 28	5 2.05	+16 3.5	2.469	3.278	11.6	21.9	10 28	5 3.90	+3 33.5	1.887	2.691	14.9	20.5
11 7	4 56.61	+15 35.2	2.381	3.273	8.9	21.7	11 7	4 58.31	+3 2.8	1.823	2.699	12.0	20.3
11 17	4 49.32	+15 6.5	2.318	3.268	5.8	21.5	11 17	4 50.51	+2 43.1	1.782	2.708	9.1	20.1
11 27	4 40.77	+14 39.2	2.284	3.262	2.8	21.3	11 27	4 41.24	+2 38.4	1.767	2.716	7.1	20.0
12 7	4 31.77	+14 15.2	2.280	3.255	3.0	21.3	12 7	4 31.53	+2 51.1	1.779	2.723	7.3	20.1
12 17	4 23.15	+13 56.7	2.307	3.248	6.0	21.4	12 17	4 22.42	+3 21.6	1.819	2.731	9.5	20.2
12 27	4 15.75	+13 45.5	2.362	3.240	9.2	21.6	12 27	4 14.88	+4 8.5	1.885	2.738	12.3	20.4
1 6	4 10.15	+13 42.6	2.442	3.232	12.0	21.8	1 6	4 9.58	+5 8.7	1.973	2.745	15.0	20.6
<b>159532</b>	2001 <i>HJ</i> <sub>18</sub>		12 2.6 209°93	7.5/29.5	18		<b>177691</b>	2005 <i>GV</i> <sub>3</sub>		12 2.6 330°58	3.4/ 2.9	18	
10 28	4 59.94	- 7 15.5	3.074	3.823	10.9	21.1	10 28	5 6.53	+26 9.6	1.219	2.058	19.4	20.0
11 7	4 54.63	- 7 52.9	2.998	3.816	9.5	21.0	11 7	5 2.29	+27 5.9	1.143	2.049	15.1	19.7
11 17	4 47.90	- 8 18.2	2.944	3.809	8.2	20.9	11 17	4 54.10	+27 58.1	1.087	2.041	10.1	19.4
11 27	4 40.23	- 8 28.0	2.917	3.801	7.5	20.9	11 27	4 42.83	+28 40.9	1.054	2.033	5.0	19.1
12 7	4 32.23	- 8 19.9	2.917	3.793	7.8	20.9	12 7	4 30.15	+29 10.2	1.047	2.026	4.2	19.0
12 17	4 24.51	- 7 53.6	2.945	3.784	8.8	20.9	12 17	4 18.14	+29 25.2	1.064	2.020	9.2	19.3
12 27	4 17.72	- 7 9.8	2.999	3.775	10.3	21.0	12 27	4 8.79	+29 29.7	1.105	2.014	14.4	19.5
1 6	4 12.31	- 6 11.2	3.075	3.766	11.8	21.1	1 6	4 3.35	+29 29.9	1.165	2.009	19.0	19.8
<b>359922</b>	2011 <i>WN</i> <sub>137</sub>		12 2.6 258°79	1.3/ 3.1	18		<b>515824</b>	2015 <i>MD</i> <sub>115</sub>		12 2.6 116°76	8.1/30.4	18	
10 28	5 3.39	+26 55.0	1.972	2.784	14.0	20.5	10 28	5 3.31	+1 16.1	1.869	2.670	15.1	21.3
11 7	4 58.23	+26 47.4	1.889	2.781	10.8	20.3	11 7	4 57.84	+0 20.7	1.810	2.680	12.4	21.2
11 17	4 50.60	+26 31.9	1.829	2.778	7.0	20.0	11 17	4 50.19	- 0 22.7	1.774	2.689	9.8	21.0
11 27	4 41.29	+26 7.8	1.796	2.775	3.0	19.8	11 27	4 41.12	- 0 48.6	1.763	2.699	8.2	21.0
12 7	4 31.38	+25 36.2	1.791	2.773	2.2	19.7	12 7	4 31.64	- 0 53.5	1.779	2.708	8.6	21.0
12 17	4 22.04	+24 59.7	1.816	2.770	6.2	20.0	12 17	4 22.79	- 0 36.5	1.821	2.717	10.5	21.1
12 27	4 14.38	+24 22.6	1.868	2.767	10.1	20.2	12 27	4 15.53	+0 1.1	1.888	2.725	13.1	21.3
1 6	4 9.13	+23 49.0	1.945	2.764	13.5	20.4	1 6	4 10.49	+0 55.6	1.977	2.733	15.5	21.5
<b>230943</b>	2004 <i>XM</i> <sub>33</sub>		12 2.6 35°69	0.0/ 2.5	17		<b>511009</b>	2013 <i>PM</i> <sub>14</sub>		12 2.6 30°56	4.1/ 3.7	18	
10 28	5 1.55	+22 34.8	1.760	2.587	14.8	20.1	10 28	5 6.03	+30 54.4	1.100	1.941	20.9	20.7
11 7	4 56.82	+22 25.7	1.699	2.601	11.2	19.9	11 7	5 1.80	+31 6.7	1.045	1.949	16.4	20.4
11 17	4 49.65	+22 12.1	1.660	2.615	7.1	19.7	11 17	4 53.53	+31 3.3	1.008	1.958	11.1	20.2
11 27	4 40.91	+21 54.5	1.648	2.630	2.5	19.5	11 27	4 42.47	+30 40.7	0.992	1.969	5.9	19.9
12 7	4 31.73	+21 34.5	1.663	2.645	2.0	19.5	12 7	4 30.61	+29 59.5	1.001	1.980	4.6	19.9
12 17	4 23.28	+21 14.6	1.707	2.661	6.4	19.8	12 17	4 20.04	+29 5.2	1.034	1.991	9.1	20.2
12 27	4 16.61	+20 57.8	1.777	2.677	10.4	20.0	12 27	4 12.52	+28 7.0	1.090	2.004	14.1	20.5
1 6	4 12.39	+20 46.7	1.871	2.694	13.7	20.3	1 6	4 8.92	+27 13.4	1.166	2.017	18.5	20.8
<b>487574</b>	2014 <i>WF</i> <sub>397</sub>		12 2.6 62°42	2.4/ 1.9	18		<b>333283</b>	1998 <i>YQ</i> <sub>31</sub>		12 2.6 19°91	2.4/ 2.1	18	
10 28	5 1.77	+13 55.8	2.203	3.018	12.7	20.7	10 28	5 2.07	+17 39.1	1.120	1.975	19.5	19.9
11 7	4 56.53	+13 59.6	2.131	3.025	9.7	20.5	11 7	4 58.35	+17 29.0	1.066	1.982	14.9	19.7
11 17	4 49.31	+14 6.4	2.084	3.033	6.3	20.3	11 17	4 51.15	+17 19.4	1.031	1.990	9.5	19.4
11 27	4 40.78	+14 17.3	2.064	3.041	3.1	20.1	11 27	4 41.59	+17 12.1	1.018	2.000	4.0	19.1
12 7	4 31.81	+14 32.9	2.074	3.049	3.1	20.1	12 7	4 31.29	+17 9.4	1.030	2.010	3.8	19.1
12 17	4 23.32	+14 53.7	2.113	3.058	6.3	20.3	12 17	4 22.01	+17 13.3	1.066	2.022	9.2	19.5
12 27	4 16.18	+15 19.9	2.181	3.066	9.5	20.6	12 27	4 15.28	+17 25.8	1.126	2.035	14.2	19.8
1 6	4 11.01	+15 51.5	2.273	3.074	12.4	20.8	1 6	4 11.93	+17 47.6	1.205	2.049	18.5	20.1
<b>51630</b>	2001 <i>HL</i> <sub>44</sub>		12 2.6 76°58	2.5/ 2.0	18		<b>173222</b>	1998 <i>UQ</i> <sub>8</sub>		12 2.6 12°85	0.0/ 2.3	18	
10 28	5 7.48	+16 50.3	1.413	2.245	17.6	19.0	10 28	4 58.21	+20 39.1	0.984	1.854	20.5	18.7
11 7	5 1.63	+16 36.5	1.360	2.264	13.3	18.8	11 7	4 55.83	+21 5.8	0.938	1.862	15.6	18.5
11 17	4 52.81	+16 23.4	1.328	2.283	8.5	18.6	11 17	4 49.74	+21 31.1	0.910	1.873	9.8	18.2
11 27	4 42.06	+16 12.8	1.321	2.301	3.7	18.4	11 27	4 41.10	+21 53.7	0.903	1.886	3.6	17.9
12 7	4 30.85	+16 6.5	1.341	2.320	3.7	18.4	12 7	4 31.69	+22 13.3	0.919	1.902	2.8	17.9
12 17	4 20.64	+16 6.4	1.389	2.339	8.2	18.7	12 17	4 23.40	+22 30.7	0.958	1.920	8.8	18.3
12 27	4 12.70	+16 14.3	1.462	2.357	12.6	19.0	12 27	4 17.83	+22 48.4	1.020	1.940	14.2	18.7
1 6	4 7.76	+16 30.9	1.557	2.375	16.3	19.3	1 6	4 15.84	+23 8.5	1.100	1.962	18.6	19.0
<b>359229</b>	2009 <i>DY</i> <sub>138</sub>		12 2.6 203°97	0.4/ 2.8	18		<b>292519</b>	2006 <i>TU</i> <sub>32</sub>		12 2.6 84°67	0.2/ 2.5	18	
10 28	5 4.25	+25 28.8	2.653	3.449	11.3	21.4	10 28	5 8.01	+22 22.1	1.417	2.246	17.6	21.3
11 7	4 58.22	+25 4.4	2.558	3.443	8.6	21.2	11 7	5 2.21	+22 13.4	1.358	2.261	13.4	21.1
11 17	4 50.31	+24 33.5	2.489	3.437	5.5	21.0	11 17	4 53.29	+21 59.6	1.321	2.276	8.4	20.9
11 27	4 41.14	+23 56.3	2.448	3.429	2.1	20.8	11 27	4 42.30	+21 40.8	1.308	2.291	3.1	20.6
12 7	4 31.53	+23 14.3	2.439	3.421	1.6	20.7	12 7	4 30.75	+21 18.7	1.323	2.306	2.5	20.6
12 17	4 22.35	+22 30.0	2.462	3.412	5.0	20.9	12 17	4 20.23	+20 56.6	1.365	2.320	7.7	21.0
12 27	4 14.42	+21 46.8	2.514	3.403	8.3	21.1	12 27	4 12.05	+20 38.5	1.433	2.334	12.4	21.3
1 6	4 8.35	+21 7.8	2.593	3.393	11.1	21.3	1 6	4 7.01	+20 27.6	1.523	2.349	16.2	21.5
<b>53573</b>	2000 <i>CW</i> <sub>38</sub>		12 2.6 336°64	4.5/ 1.3	18	</							

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>299093</b>	2005 <i>EJ</i> <sub>77</sub>	12	2.6 322°50	1.4/ 2.9	18		<b>268270</b>	2005 <i>OC</i> <sub>22</sub>	12	2.6 46°56	5.3/ 1.5	18	
10 28	5 3.59	+26 2.2	1.643	2.467	15.8	21.5	10 28	5 4.35	+11 22.1	1.316	2.155	18.2	20.1
11 7	4 58.90	+26 3.9	1.562	2.460	12.2	21.3	11 7	4 59.50	+10 48.2	1.260	2.165	14.1	19.9
11 17	4 51.31	+25 58.0	1.502	2.454	7.9	21.0	11 17	4 51.63	+10 20.7	1.225	2.175	9.6	19.7
11 27	4 41.65	+25 43.4	1.468	2.449	3.3	20.7	11 27	4 41.75	+10 3.6	1.214	2.186	5.9	19.5
12 7	4 31.20	+25 20.6	1.461	2.443	2.5	20.6	12 7	4 31.29	+10 0.3	1.228	2.198	6.1	19.5
12 17	4 21.36	+24 52.4	1.483	2.438	7.1	20.9	12 17	4 21.74	+10 12.4	1.269	2.210	9.9	19.8
12 27	4 13.48	+24 23.3	1.530	2.433	11.5	21.2	12 27	4 14.41	+10 39.8	1.333	2.222	14.0	20.1
1 6	4 8.43	+23 57.8	1.600	2.429	15.4	21.4	1 6	4 10.09	+11 20.5	1.418	2.234	17.7	20.3
<b>158710</b>	2003 <i>GA</i> <sub>19</sub>	12	2.6 349°02	3.0/ 3.2	18		<b>336580</b>	2009 <i>SY</i> <sub>185</sub>	12	2.6 268°79	3.7/ 1.5	18	
10 28	5 3.96	+27 40.5	1.307	2.143	18.4	20.1	10 28	5 4.37	+15 4.4	1.584	2.413	16.1	21.5
11 7	4 59.94	+28 7.2	1.235	2.138	14.4	19.8	11 7	4 59.49	+14 28.9	1.497	2.399	12.4	21.2
11 17	4 52.34	+28 25.0	1.181	2.134	9.6	19.5	11 17	4 51.73	+13 53.6	1.433	2.385	8.3	20.9
11 27	4 42.11	+28 30.9	1.152	2.130	4.7	19.3	11 27	4 41.87	+13 21.6	1.394	2.371	4.4	20.7
12 7	4 30.84	+28 23.6	1.147	2.127	3.7	19.2	12 7	4 31.12	+12 56.3	1.382	2.356	4.7	20.7
12 17	4 20.35	+28 5.1	1.169	2.125	8.4	19.5	12 17	4 20.86	+12 41.3	1.398	2.342	8.8	20.9
12 27	4 12.32	+27 41.0	1.214	2.124	13.3	19.7	12 27	4 12.45	+12 38.9	1.439	2.327	13.3	21.1
1 6	4 7.80	+27 17.3	1.280	2.123	17.6	20.0	1 6	4 6.82	+12 50.0	1.501	2.312	17.2	21.3
<b>483977</b>	2006 <i>BG</i> <sub>263</sub>	12	2.6 201°38	5.4/30.1	18		<b>17229</b>	2000 <i>CR</i> <sub>97</sub>	12	2.6 216°97	0.1/ 2.5	18	
10 28	4 58.91	+ 2 12.1	3.063	3.848	10.2	22.6	10 28	5 6.42	+22 19.0	1.805	2.621	14.9	19.8
11 7	4 53.88	+ 1 32.5	2.982	3.843	8.3	22.5	11 7	5 0.75	+22 12.0	1.719	2.616	11.4	19.6
11 17	4 47.46	+ 0 59.8	2.926	3.838	6.5	22.3	11 17	4 52.37	+22 0.4	1.657	2.610	7.3	19.3
11 27	4 40.12	+ 0 37.1	2.898	3.833	5.4	22.3	11 27	4 42.06	+21 44.3	1.621	2.603	2.7	19.0
12 7	4 32.45	+ 0 26.5	2.900	3.827	5.7	22.3	12 7	4 30.99	+21 24.6	1.614	2.596	2.2	19.0
12 17	4 25.07	+ 0 29.1	2.930	3.820	7.2	22.4	12 17	4 20.48	+21 3.9	1.636	2.589	6.9	19.2
12 27	4 18.59	+ 0 45.2	2.988	3.813	9.1	22.5	12 27	4 11.76	+20 45.6	1.685	2.581	11.2	19.5
1 6	4 13.47	+ 1 13.3	3.071	3.806	11.0	22.6	1 6	4 5.69	+20 32.9	1.758	2.573	14.9	19.7
<b>367840</b>	2011 <i>BW</i> <sub>97</sub>	12	2.6 157°46	2°5/ 1.9	17		<b>115854</b>	2003 <i>UT</i> <sub>272</sub>	12	2.6 323°01	2°2/ 2.9	17	
10 28	5 1.44	+13 54.9	2.347	3.159	12.1	21.3	10 28	5 4.41	+24 46.0	1.936	2.750	14.2	19.2
11 7	4 56.24	+13 51.8	2.268	3.160	9.2	21.1	11 7	4 59.41	+25 43.9	1.840	2.733	11.0	19.0
11 17	4 49.15	+13 51.4	2.213	3.162	6.0	20.9	11 17	4 51.70	+26 40.6	1.768	2.717	7.3	18.7
11 27	4 40.77	+13 54.8	2.186	3.163	3.1	20.7	11 27	4 41.89	+27 32.9	1.722	2.701	3.4	18.5
12 7	4 31.94	+14 2.9	2.189	3.164	3.1	20.7	12 7	4 31.06	+28 17.9	1.706	2.685	2.9	18.4
12 17	4 23.51	+14 16.6	2.222	3.165	6.1	20.9	12 17	4 20.47	+28 54.3	1.719	2.670	6.7	18.6
12 27	4 16.33	+14 36.4	2.283	3.166	9.3	21.1	12 27	4 11.44	+29 22.9	1.759	2.656	10.7	18.8
1 6	4 11.01	+15 2.3	2.369	3.166	12.1	21.3	1 6	4 4.96	+29 46.5	1.823	2.642	14.2	19.0
<b>8023</b>	Josephwalker	12	2.6 313°08	1°1/ 2.8	18		<b>356055</b>	2009 <i>DX</i> <sub>9</sub>	12	2.6 284°71	6°9/ 4.3	18	
10 28	5 3.86	+24 27.5	1.446	2.279	17.1	17.8	10 28	5 8.28	+38 12.2	1.827	2.610	16.1	20.7
11 7	4 59.59	+24 38.6	1.361	2.265	13.3	17.5	11 7	5 2.90	+39 9.3	1.736	2.597	13.3	20.4
11 17	4 52.04	+24 44.0	1.297	2.252	8.6	17.2	11 17	4 54.15	+39 53.3	1.666	2.583	10.2	20.2
11 27	4 42.03	+24 42.2	1.257	2.239	3.4	16.9	11 27	4 42.83	+40 17.7	1.621	2.570	7.6	20.0
12 7	4 30.92	+24 32.9	1.244	2.226	2.6	16.8	12 7	4 30.33	+40 18.8	1.603	2.556	7.0	20.0
12 17	4 20.37	+24 18.2	1.257	2.214	7.9	17.1	12 17	4 18.32	+39 56.5	1.611	2.543	9.0	20.1
12 27	4 11.96	+24 2.4	1.295	2.202	12.9	17.3	12 27	4 8.46	+39 16.0	1.645	2.529	12.1	20.2
1 6	4 6.75	+23 50.0	1.354	2.191	17.3	17.6	1 6	4 1.84	+38 25.3	1.702	2.516	15.3	20.4
<b>517366</b>	2014 <i>KZ</i> <sub>25</sub>	12	2.6 255°08	2°8/ 1.6	18		<b>262404</b>	2006 <i>UV</i> <sub>19</sub>	12	2.6 109°18	0°4/ 2.4	18	
10 28	5 2.95	+16 16.7	1.873	2.695	14.3	21.6	10 28	5 3.05	+22 37.3	1.941	2.760	14.0	20.7
11 7	4 57.93	+15 42.5	1.787	2.686	10.9	21.4	11 7	4 57.87	+22 13.3	1.865	2.763	10.6	20.5
11 17	4 50.49	+15 7.4	1.724	2.676	7.1	21.1	11 17	4 50.34	+21 44.0	1.812	2.766	6.7	20.3
11 27	4 41.34	+14 34.0	1.688	2.666	3.5	20.9	11 27	4 41.26	+21 10.3	1.787	2.769	2.4	20.0
12 7	4 31.52	+14 5.0	1.680	2.655	3.8	20.9	12 7	4 31.67	+20 34.4	1.790	2.772	2.1	20.0
12 17	4 22.18	+13 43.5	1.701	2.645	7.5	21.1	12 17	4 22.69	+19 59.4	1.822	2.775	6.3	20.3
12 27	4 14.42	+13 32.0	1.748	2.634	11.4	21.3	12 27	4 15.36	+19 28.7	1.882	2.778	10.2	20.5
1 6	4 9.00	+13 31.8	1.819	2.623	14.9	21.5	1 6	4 10.35	+19 5.4	1.966	2.780	13.5	20.8
<b>368547</b>	2003 <i>YP</i> <sub>57</sub>	12	2.6 346°69	0°2/ 2.5	17		<b>57293</b>	2001 <i>QY</i> <sub>178</sub>	12	2.6 3°95	4°7/ 1.5	18	
10 28	4 59.59	+25 35.4	1.801	2.627	14.6	19.8	10 28	5 2.59	+12 49.5	1.354	2.195	17.6	18.4
11 7	4 55.49	+24 37.1	1.717	2.619	11.1	19.6	11 7	4 58.30	+12 16.9	1.288	2.195	13.7	18.1
11 17	4 48.95	+23 27.9	1.657	2.611	7.1	19.3	11 17	4 50.99	+11 48.4	1.242	2.195	9.2	17.9
11 27	4 40.75	+22 9.9	1.622	2.605	2.6	19.0	11 27	4 41.57	+11 28.0	1.220	2.195	5.4	17.7
12 7	4 32.02	+20 47.4	1.617	2.599	2.1	19.0	12 7	4 31.42	+11 19.1	1.224	2.196	5.6	17.7
12 17	4 23.91	+19 26.2	1.640	2.594	6.7	19.2	12 17	4 22.01	+11 24.2	1.254	2.198	9.6	17.9
12 27	4 17.50	+18 12.5	1.690	2.589	10.9	19.5	12 27	4 14.71	+11 43.9	1.308	2.200	14.0	18.2
1 6	4 13.51	+17 10.8	1.763	2.586	14.5	19.7	1 6	4 10.37	+12 17.3	1.382	2.203	17.8	18.4
<b>278584</b>	2008 <i>JQ</i> <sub>27</sub>	12	2.6 132°87	3°6/ 1.5	18		<b>420553</b>	2012 <i>GR</i> <sub>24</sub>	12	2.6 267°20	1°7/ 1.9	17	
10 28	5 6.38	+14 22.1	1.828	2.644	14.8	22.2	10 28	5 0.85	+18 30.6	2.243	3.060	12.4	22.0
11 7	5 0.26	+13 41.9	1.763	2.657	11.3	22.1	11 7	4 56.01	+18 3.5	2.152	3.049	9.4	21.8
11 17	4 51.77	+13 3.0	1.722	2.670	7.5	21.9	11 17	4 49.13	+17 34.3	2.084	3.037	6.0	21.6
11 27	4 41.74	+12 28.3	1.707	2.682	4.1	21.7	11 27	4 40.83	+17 4.5	2.045	3.025	2.6	21.3
12 7	4 31.28	+12 0.9	1.722	2.693	4.4	21.7	12 7	4 31.98	+16 36.2	2.035	3.013	2.6	21.3
12 17	4 21.55	+11 43.5	1.765	2.704	7.8	21.9	12 17	4 23.52	+16 11.8	2.054	3.001	6.2	21.5
12 27	4 13.57	+11 37.7	1.836	2.714	11.4	22.2	12 27	4 16.35	+15 53.8	2.102	2.989	9.7	21.7
1 6	4 8.02	+11 43.8	1.930	2.723	14.5	22.4	1 6	4 11.16	+15 44.0	2.173	2.977	12.8	21.9
<b>252073</b>	2000 <i>SR</i> <sub>236</sub>	12	2.6 105°98	2°7/ 3.3	17		<b>997</b>	Priska	12	2.6 113°90	0°3/ 2.5	18	R

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12 2.6

12 2.6

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>173099</b>	2007 <i>TR</i> <sub>149</sub>	12 2.6 65°15'	3°4'	1.1	18		<b>328812</b>	2009 <i>VQ</i> <sub>76</sub>	12 2.6 52°81'	1°2'	2.0	18	
10 28	5 4.58	+18 12.8	1.638	2.466	15.7	19.5	10 28	5 1.29	+21 52.1	2.101	2.919	13.1	19.8
11 7	4 58.98	+16 48.4	1.584	2.486	11.9	19.3	11 7	4 56.30	+21 0.5	2.027	2.925	9.9	19.6
11 17	4 50.94	+15 20.5	1.553	2.506	7.6	19.1	11 17	4 49.24	+20 3.1	1.977	2.930	6.2	19.4
11 27	4 41.42	+13 54.4	1.549	2.527	3.9	18.9	11 27	4 40.86	+19 2.4	1.954	2.936	2.4	19.2
12 7	4 31.63	+12 36.0	1.574	2.547	4.4	19.0	12 7	4 32.10	+18 1.7	1.962	2.942	2.4	19.2
12 17	4 22.78	+11 30.6	1.628	2.568	8.1	19.3	12 17	4 23.94	+17 5.1	1.999	2.948	6.1	19.4
12 27	4 15.87	+10 42.2	1.707	2.588	11.9	19.5	12 27	4 17.28	+16 16.3	2.064	2.954	9.7	19.7
1 6	4 11.48	+10 11.5	1.809	2.609	15.1	19.8	1 6	4 12.70	+15 38.0	2.153	2.960	12.8	19.9
<b>460659</b>	2014 <i>UE</i> <sub>144</sub>	12 2.6 158°29'	3°4'	3.6	17		<b>305618</b>	2009 <i>AN</i> <sub>19</sub>	12 2.6 232°86'	0°2'	2.5	18	
10 28	5 4.56	+31 46.9	2.460	3.248	12.3	21.6	10 28	5 4.51	+22 43.5	2.085	2.896	13.4	21.5
11 7	4 58.88	+32 27.4	2.377	3.250	9.7	21.5	11 7	4 59.01	+22 29.1	1.992	2.886	10.2	21.3
11 17	4 50.98	+33 0.3	2.317	3.251	6.8	21.3	11 17	4 51.15	+22 9.8	1.924	2.876	6.5	21.0
11 27	4 41.52	+33 22.9	2.285	3.252	4.2	21.1	11 27	4 41.63	+21 45.7	1.883	2.865	2.4	20.7
12 7	4 31.44	+33 33.7	2.283	3.253	3.7	21.1	12 7	4 31.45	+21 18.4	1.871	2.853	1.9	20.7
12 17	4 21.78	+33 33.3	2.310	3.254	5.9	21.2	12 17	4 21.72	+20 50.2	1.889	2.841	6.2	20.9
12 27	4 13.52	+33 24.0	2.366	3.254	8.7	21.4	12 27	4 13.50	+20 24.4	1.936	2.829	10.1	21.1
1 6	4 7.41	+33 9.8	2.448	3.255	11.4	21.6	1 6	4 7.55	+20 4.2	2.007	2.816	13.5	21.3
<b>345845</b>	2007 <i>MJ</i> <sub>27</sub>	12 2.6 92°11'	3°4'	1.9	18		<b>450908</b>	2008 <i>CX</i> <sub>144</sub>	12 2.6 127°21'	2°3'	3.5	18	
10 28	5 5.92	+13 15.1	1.746	2.566	15.3	20.4	10 28	5 4.76	+29 47.8	2.102	2.903	13.7	21.6
11 7	5 0.02	+13 4.3	1.686	2.582	11.7	20.2	11 7	4 59.14	+29 48.5	2.025	2.909	10.6	21.4
11 17	4 51.67	+12 57.4	1.649	2.599	7.7	20.0	11 17	4 51.16	+29 39.8	1.971	2.915	7.1	21.2
11 27	4 41.73	+12 56.2	1.639	2.615	4.1	19.8	11 27	4 41.60	+29 20.5	1.945	2.920	3.6	21.0
12 7	4 31.36	+13 2.1	1.657	2.631	4.1	19.9	12 7	4 31.52	+28 51.1	1.947	2.925	2.8	21.0
12 17	4 21.73	+13 16.0	1.704	2.646	7.6	20.1	12 17	4 22.08	+28 14.1	1.979	2.930	6.0	21.2
12 27	4 13.91	+13 38.4	1.777	2.662	11.3	20.4	12 27	4 14.31	+27 33.9	2.039	2.935	9.5	21.4
1 6	4 8.57	+14 8.9	1.874	2.677	14.5	20.6	1 6	4 8.90	+26 54.8	2.123	2.940	12.6	21.6
<b>450434</b>	2005 <i>UM</i> <sub>213</sub>	12 2.6 40°08'	6°1'	30.9	18		<b>417545</b>	2006 <i>UK</i> <sub>35</sub>	12 2.6 35°60'	13°7'	26.0	17	
10 28	5 1.04	+ 8 41.1	1.601	2.430	15.9	20.6	10 28	5 4.97	+ 5 35.8	1.013	1.862	21.7	20.4
11 7	4 56.40	+ 7 47.2	1.552	2.448	12.5	20.4	11 7	5 0.51	+ 1 59.4	0.968	1.866	17.9	20.2
11 17	4 49.39	+ 7 0.8	1.525	2.466	8.9	20.3	11 17	4 52.50	- 1 30.0	0.943	1.871	14.8	20.1
11 27	4 40.89	+ 6 26.8	1.523	2.485	6.4	20.2	11 27	4 42.13	- 4 32.3	0.941	1.876	13.7	20.0
12 7	4 32.04	+ 6 8.7	1.547	2.505	6.7	20.2	12 7	4 31.16	- 6 50.3	0.962	1.881	15.2	20.1
12 17	4 23.98	+ 6 8.4	1.598	2.525	9.5	20.5	12 17	4 21.36	- 8 15.1	1.005	1.886	18.2	20.3
12 27	4 17.70	+ 6 25.6	1.674	2.545	12.7	20.7	12 27	4 14.23	- 8 47.4	1.065	1.892	21.6	20.6
1 6	4 13.83	+ 6 57.9	1.771	2.566	15.6	20.9	1 6	4 10.56	- 8 35.3	1.140	1.899	24.6	20.8
<b>410144</b>	2007 <i>HN</i> <sub>34</sub>	12 2.6 121°71'	1°9'	1.7	18		<b>436877</b>	2012 <i>TK</i> <sub>23</sub>	12 2.6 112°54'	0°1'	2.7	18	
10 28	5 0.57	+18 11.0	2.295	3.111	12.2	21.3	10 28	5 6.61	+24 6.9	1.702	2.520	15.6	21.1
11 7	4 55.60	+17 31.5	2.218	3.115	9.2	21.1	11 7	5 0.81	+23 47.0	1.634	2.531	11.9	20.9
11 17	4 48.74	+16 49.9	2.166	3.118	5.9	20.9	11 17	4 52.30	+23 20.2	1.589	2.542	7.5	20.7
11 27	4 40.66	+16 8.4	2.142	3.122	2.7	20.7	11 27	4 42.02	+22 46.8	1.570	2.552	2.8	20.4
12 7	4 32.18	+15 29.4	2.148	3.125	2.8	20.7	12 7	4 31.22	+22 9.1	1.579	2.562	2.1	20.4
12 17	4 24.20	+14 55.8	2.183	3.128	6.1	20.9	12 17	4 21.24	+21 30.6	1.618	2.571	6.8	20.7
12 27	4 17.53	+14 30.0	2.247	3.131	9.3	21.2	12 27	4 13.25	+20 55.8	1.683	2.581	11.1	21.0
1 6	4 12.76	+14 13.6	2.335	3.134	12.2	21.4	1 6	4 7.98	+20 28.2	1.771	2.590	14.6	21.2
<b>186281</b>	2002 <i>AZ</i> <sub>129</sub>	12 2.6 336°04'	7°0'	1.8	18		<b>24382</b>	2000 <i>AG</i> <sub>169</sub>	12 2.6 52°93'	8°1'	1.5	18	
10 28	5 20.11	+24 33.9	1.034	1.865	22.6	19.5	10 28	5 5.82	+ 5 19.7	1.233	2.066	19.5	17.7
11 7	5 14.15	+27 32.0	0.962	1.861	17.9	19.2	11 7	5 0.60	+ 4 41.1	1.188	2.083	15.5	17.5
11 17	5 2.71	+30 41.6	0.910	1.857	12.5	18.9	11 17	4 52.30	+ 4 16.7	1.162	2.101	11.4	17.3
11 27	4 46.43	+33 46.0	0.883	1.854	7.8	18.6	11 27	4 42.02	+ 4 12.1	1.160	2.119	8.5	17.2
12 7	4 27.32	+36 25.4	0.882	1.851	8.0	18.6	12 7	4 31.26	+ 4 30.1	1.182	2.138	8.6	17.3
12 17	4 8.48	+38 26.3	0.907	1.848	12.8	18.9	12 17	4 21.58	+ 5 10.3	1.229	2.156	11.6	17.5
12 27	3 53.18	+39 48.6	0.956	1.846	18.1	19.2	12 27	4 14.24	+ 6 9.8	1.299	2.176	15.2	17.8
1 6	3 43.45	+40 42.7	1.023	1.845	22.7	19.5	1 6	4 9.99	+ 7 23.4	1.389	2.195	18.6	18.1
<b>446194</b>	2013 <i>FC</i> <sub>27</sub>	12 2.6 327°01'	4°5'	1.9	18		<b>170498</b>	2003 <i>WW</i> <sub>5</sub>	12 2.6 342°24'	2°3'	1.9	18	
10 28	5 2.66	+10 29.5	1.591	2.420	16.0	20.8	10 28	4 59.23	+19 38.1	1.344	2.193	17.3	19.1
11 7	4 58.14	+10 28.4	1.510	2.409	12.5	20.5	11 7	4 56.00	+18 56.4	1.268	2.181	13.3	18.8
11 17	4 50.87	+10 35.2	1.450	2.398	8.6	20.3	11 17	4 49.69	+18 9.6	1.212	2.171	8.5	18.5
11 27	4 41.58	+10 52.3	1.415	2.388	5.1	20.1	11 27	4 41.19	+17 20.7	1.180	2.161	3.6	18.2
12 7	4 31.42	+11 21.1	1.407	2.378	5.2	20.1	12 7	4 31.82	+16 34.2	1.173	2.153	3.7	18.2
12 17	4 21.73	+12 1.8	1.426	2.369	8.8	20.2	12 17	4 23.12	+15 55.0	1.192	2.145	8.7	18.4
12 27	4 13.80	+12 53.4	1.471	2.360	12.9	20.5	12 27	4 16.50	+15 27.9	1.235	2.139	13.7	18.7
1 6	4 8.53	+13 54.1	1.537	2.352	16.6	20.7	1 6	4 12.88	+15 15.2	1.298	2.134	17.9	18.9
<b>335190</b>	2005 <i>CQ</i> <sub>80</sub>	12 2.6 277°79'	7°5'	6.7	18		<b>268697</b>	2006 <i>GP</i> <sub>51</sub>	12 2.6 180°62'	1°4'	3.2	18	
10 28	5 9.56	+48 16.2	2.529	3.246	13.8	20.8	10 28	5 1.95	+27 23.2	2.831	3.625	10.7	21.3
11 7	5 3.12	+48 30.4	2.425	3.228	11.9	20.6	11 7	4 56.49	+27 29.1	2.744	3.626	8.2	21.2
11 17	4 53.84	+48 25.9	2.341	3.209	9.9	20.4	11 17	4 49.28	+27 29.3	2.682	3.626	5.4	21.0
11 27	4 42.60	+47 57.8	2.282	3.190	8.2	20.3	11 27	4 40.89	+27 23.1	2.649	3.627	2.5	20.8
12 7	4 30.67	+47 4.2	2.250	3.171	7.5	20.2	12 7	4 32.08	+27 10.9	2.646	3.626	1.9	20.7
12 17	4 19.45	+45 46.8	2.247	3.152	8.3	20.2	12 17	4 23.64	+26 53.7	2.675	3.626	4.7	20.9
12 27	4 10.19	+44 11.3	2.270	3.132	10.2	20.3	12 27	4 16.36	+26 34.1	2.733	3.625	7.5	21.1
1 6	4 3.72	+42 25.8	2.320	3.113	12.4	20.4	1 6	4 10.79	+26 14.5	2.817	3.623	10.1	21.3
<b>190500</b>	2000 <i>GX</i> <sub>111</sub>	12 2.6 288°93'	4°5'	30.6	18		<b>508929</b>	2004 <i>GP</i> <sub>2</sub>	12 2.6 280°11'	16°1'	26.6		

EPHEMERIDES

12 2.6

12 2.6

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>520719</b>	2014 <i>QD</i> <sub>469</sub>	12	2.6	100°10	5°1/30.6	18	<b>91653</b>	1999 <i>TG</i> <sub>101</sub>	12	2.6	18°44	0°0/	2.4 18
10 28	5 0.08	+ 7 38.5	2.298	3.107	12.4	21.3	10 28	5 3.72	+20 13.0	1.825	2.647	14.6	18.5
11 7	4 55.13	+ 6 51.7	2.232	3.116	9.8	21.1	11 7	4 58.64	+20 44.5	1.752	2.651	11.1	18.3
11 17	4 48.42	+ 6 10.5	2.191	3.125	7.1	21.0	11 17	4 51.03	+21 15.8	1.701	2.655	7.0	18.1
11 27	4 40.56	+ 5 38.5	2.177	3.135	5.3	20.9	11 27	4 41.64	+21 45.9	1.677	2.659	2.6	17.8
12 7	4 32.37	+ 5 18.3	2.192	3.144	5.6	20.9	12 7	4 31.57	+22 13.6	1.682	2.664	2.0	17.8
12 17	4 24.67	+ 5 11.8	2.236	3.152	7.7	21.1	12 17	4 22.05	+22 39.0	1.715	2.669	6.5	18.1
12 27	4 18.22	+ 5 19.2	2.306	3.161	10.3	21.3	12 27	4 14.22	+23 3.1	1.776	2.675	10.5	18.3
1 6	4 13.56	+ 5 39.6	2.400	3.170	12.7	21.5	1 6	4 8.87	+23 27.7	1.860	2.681	13.9	18.6
<b>305134</b>	2007 <i>VV</i> <sub>152</sub>	12	2.6	10°73	0°8/	2.7 18	<b>266037</b>	2006 <i>HW</i> <sub>18</sub>	12	2.6	324°50	0°9/	2.4 17
10 28	5 4.37	+21 34.0	1.425	2.261	17.2	20.2	10 28	5 0.23	+20 16.0	1.880	2.707	14.0	20.7
11 7	4 59.81	+22 15.7	1.357	2.263	13.2	19.9	11 7	4 56.04	+20 8.6	1.790	2.693	10.7	20.5
11 17	4 52.08	+22 56.7	1.310	2.266	8.4	19.6	11 17	4 49.43	+19 58.9	1.724	2.679	6.8	20.2
11 27	4 42.06	+23 34.6	1.287	2.269	3.2	19.3	11 27	4 41.08	+19 47.4	1.683	2.665	2.6	19.9
12 7	4 31.15	+24 7.5	1.291	2.274	2.5	19.3	12 7	4 32.00	+19 35.5	1.671	2.652	2.3	19.9
12 17	4 20.95	+24 35.0	1.322	2.279	7.6	19.6	12 17	4 23.33	+19 25.1	1.686	2.640	6.6	20.1
12 27	4 12.92	+24 58.9	1.379	2.285	12.3	19.9	12 27	4 16.19	+19 18.7	1.729	2.628	10.7	20.4
1 6	4 8.01	+25 21.6	1.457	2.292	16.3	20.2	1 6	4 11.38	+19 18.4	1.795	2.616	14.3	20.6
<b>191469</b>	2003 <i>SL</i> <sub>286</sub>	12	2.6	44°91	0°9/	3.0 18	<b>263785</b>	2008 <i>LB</i> <sub>11</sub>	12	2.6	310°30	2°5/	2.0 18
10 28	5 1.93	+26 56.3	2.011	2.825	13.7	19.4	10 28	5 3.40	+17 59.4	1.339	2.182	17.7	20.4
11 7	4 56.94	+26 27.6	1.942	2.835	10.5	19.2	11 7	4 59.30	+17 37.2	1.259	2.169	13.7	20.1
11 17	4 49.72	+25 50.3	1.895	2.846	6.7	19.0	11 17	4 51.92	+17 13.2	1.199	2.156	8.8	19.8
11 27	4 41.06	+25 4.9	1.876	2.856	2.7	18.7	11 27	4 42.09	+16 49.8	1.162	2.144	3.8	19.4
12 7	4 32.03	+24 13.9	1.885	2.867	1.9	18.7	12 7	4 31.22	+16 29.8	1.152	2.131	3.8	19.4
12 17	4 23.68	+23 20.9	1.924	2.878	5.8	19.0	12 17	4 20.95	+16 16.4	1.167	2.120	9.0	19.7
12 27	4 16.97	+22 30.4	1.991	2.890	9.5	19.2	12 27	4 12.84	+16 13.1	1.207	2.109	14.1	19.9
1 6	4 12.51	+21 46.3	2.082	2.901	12.7	19.5	1 6	4 7.92	+16 21.5	1.266	2.098	18.5	20.2
<b>54419</b>	2000 <i>LA</i> <sub>20</sub>	12	2.6	238°60	6°5/30.9	18	<b>179256</b>	2001 <i>US</i> <sub>136</sub>	12	2.6	41°41	22°8/	6.3 17
10 28	5 4.91	+ 5 24.8	1.928	2.733	14.6	18.5	10 28	5 32.33	+57 32.9	1.064	1.796	28.1	19.5
11 7	4 59.36	+ 4 47.9	1.841	2.720	11.7	18.3	11 7	5 28.61	+61 21.6	1.024	1.802	26.1	19.3
11 17	4 51.42	+ 4 19.2	1.777	2.706	8.8	18.1	11 17	5 15.34	+64 38.9	0.998	1.808	24.4	19.2
11 27	4 41.77	+ 4 3.2	1.738	2.692	6.7	18.0	11 27	4 52.13	+66 59.3	0.987	1.815	23.2	19.2
12 7	4 31.40	+ 4 3.0	1.728	2.678	7.0	17.9	12 7	4 22.87	+68 2.1	0.992	1.822	22.8	19.2
12 17	4 21.43	+ 4 20.5	1.746	2.662	9.6	18.1	12 17	3 55.38	+67 43.4	1.013	1.830	23.2	19.2
12 27	4 12.93	+ 4 55.3	1.790	2.647	12.8	18.2	12 27	3 36.82	+66 21.5	1.048	1.838	24.3	19.4
1 6	4 6.70	+ 5 45.3	1.857	2.630	15.8	18.4	1 6	3 29.41	+64 23.7	1.096	1.847	25.8	19.5
<b>173434</b>	2000 <i>HD</i> <sub>43</sub>	12	2.6	199°44	0°3/	2.7 18	<b>350074</b>	2011 <i>HM</i> <sub>80</sub>	12	2.6	61°77	6°4/	1.6 18
10 28	5 4.48	+22 43.1	2.189	2.998	12.9	20.7	10 28	5 7.04	+ 6 49.5	1.471	2.292	17.5	20.2
11 7	4 58.86	+22 50.5	2.104	2.996	9.9	20.5	11 7	5 0.96	+ 6 21.4	1.431	2.321	13.7	20.0
11 17	4 51.00	+22 54.6	2.043	2.994	6.3	20.3	11 17	4 52.27	+ 6 4.5	1.412	2.351	9.8	19.8
11 27	4 41.59	+22 54.8	2.009	2.991	2.3	20.1	11 27	4 42.00	+ 6 2.5	1.418	2.380	6.9	19.8
12 7	4 31.57	+22 51.4	2.005	2.988	1.8	20.0	12 7	4 31.46	+ 6 17.1	1.451	2.410	7.0	19.8
12 17	4 22.01	+22 45.6	2.032	2.984	5.8	20.3	12 17	4 21.95	+ 6 48.2	1.511	2.439	9.8	20.1
12 27	4 13.90	+22 39.8	2.087	2.980	9.4	20.5	12 27	4 14.54	+ 7 33.9	1.596	2.468	13.1	20.3
1 6	4 7.96	+22 36.3	2.166	2.976	12.6	20.7	1 6	4 9.85	+ 8 30.9	1.702	2.497	16.1	20.6
<b>3692</b>	Rickman	12	2.6	206°88	2°7/	1.4 18	<b>387668</b>	2002 <i>SZ</i>	12	2.6	155°61	22°2/	9.3 14 C
10 28	5 2.39	+16 18.8	2.300	3.112	12.3	18.4	10 28	6 20.87	+60 25.4	1.116	1.777	30.5	23.2
11 7	4 57.03	+15 31.0	2.215	3.108	9.4	18.2	11 7	6 8.60	+63 33.3	1.069	1.800	27.9	23.1
11 17	4 49.71	+14 41.5	2.154	3.103	6.1	18.0	11 17	5 42.29	+66 9.9	1.034	1.819	25.3	22.9
11 27	4 41.08	+13 53.1	2.122	3.098	3.2	17.8	11 27	5 2.01	+67 35.4	1.015	1.835	23.2	22.8
12 7	4 31.99	+13 8.7	2.119	3.092	3.5	17.8	12 7	4 15.97	+67 16.9	1.014	1.846	22.2	22.8
12 17	4 23.34	+12 31.5	2.147	3.086	6.6	18.0	12 17	3 36.91	+65 16.2	1.033	1.854	22.6	22.9
12 27	4 16.01	+12 4.0	2.203	3.080	9.8	18.2	12 27	3 11.98	+62 10.6	1.070	1.859	24.1	23.0
1 6	4 10.59	+11 47.6	2.283	3.073	12.7	18.4	1 6	3 0.51	+58 42.8	1.124	1.859	26.1	23.2
<b>265147</b>	2003 <i>VA</i> <sub>2</sub>	12	2.6	83°69	3°3/	4.4 18	<b>124065</b>	2001 <i>FO</i> <sub>172</sub>	12	2.6	173°94	4°3/30.9	17
10 28	5 5.15	+34 43.2	2.341	3.123	13.0	19.9	10 28	5 0.20	+ 5 53.9	3.016	3.807	10.2	21.2
11 7	4 59.11	+34 28.6	2.273	3.142	10.2	19.7	11 7	4 54.90	+ 5 32.9	2.938	3.810	8.1	21.0
11 17	4 50.95	+34 1.5	2.229	3.160	7.2	19.6	11 17	4 48.17	+ 5 17.6	2.885	3.812	5.9	20.9
11 27	4 41.48	+33 20.8	2.212	3.178	4.3	19.4	11 27	4 40.52	+ 5 10.2	2.861	3.814	4.4	20.8
12 7	4 31.74	+32 27.9	2.224	3.196	3.4	19.4	12 7	4 32.54	+ 5 12.3	2.867	3.815	4.6	20.8
12 17	4 22.75	+31 26.1	2.267	3.214	5.6	19.6	12 17	4 24.88	+ 5 24.6	2.903	3.816	6.3	20.9
12 27	4 15.40	+30 20.5	2.338	3.232	8.6	19.8	12 27	4 18.17	+ 5 47.0	2.968	3.817	8.5	21.1
1 6	4 10.28	+29 16.2	2.436	3.249	11.3	20.0	1 6	4 12.86	+ 6 18.6	3.058	3.816	10.5	21.2
<b>313296</b>	2002 <i>CO</i> <sub>161</sub>	12	2.6	235°64	2°5/	1.7 18	<b>223028</b>	2002 <i>SL</i> <sub>52</sub>	12	2.6	26°13	1°2/	2.5 18
10 28	5 1.80	+13 57.9	2.602	3.408	11.2	21.2	10 28	5 6.48	+17 43.0	1.271	2.111	18.6	19.9
11 7	4 56.47	+13 43.3	2.506	3.395	8.6	21.0	11 7	5 1.61	+18 7.6	1.207	2.115	14.2	19.6
11 17	4 49.35	+13 30.3	2.435	3.381	5.7	20.8	11 17	4 53.31	+18 34.7	1.163	2.120	9.1	19.4
11 27	4 40.97	+13 20.4	2.392	3.367	3.0	20.6	11 27	4 42.57	+19 3.6	1.143	2.125	3.5	19.1
12 7	4 32.07	+13 14.9	2.380	3.352	3.2	20.6	12 7	4 30.93	+19 33.6	1.149	2.131	3.0	19.0
12 17	4 23.45	+13 15.3	2.398	3.337	5.9	20.8	12 17	4 20.13	+20 4.2	1.182	2.138	8.5	19.4
12 27	4 15.92	+13 22.6	2.445	3.322	9.0	21.0	12 27	4 11.75	+20 36.7	1.239	2.144	13.5	19.7
1 6	4 10.09	+13 37.2	2.518	3.306	11.7	21.1	1 6	4 6.74	+21 11.9	1.317	2.152	17.7	20.0
<b>33381</b>	1999 <i>CD</i> <sub>33</sub>	12	2.6	131°25	3°8/	3.9 18	<b>349696</b>	2008 <i>XS</i> <sub>4</sub>	12	2.6	16°90	0°8/	2.6

EPHEMERIDES

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>220948</b>	2005 <i>KU</i> <sub>2</sub>	12	2.6 146°10	2°9/ 1.7 18			<b>261886</b>	2006 <i>HP</i> <sub>15</sub>	12	2.6 326°63	1°5/ 2.2 17		
10 28	5 6.68	+17 12.0	1.671	2.494	15.7	21.2	10 28	5 0.68	+18 52.2	1.952	2.776	13.7	20.8
11 7	5 0.85	+16 28.9	1.602	2.501	12.0	20.9	11 7	4 56.21	+18 36.8	1.868	2.769	10.4	20.5
11 17	4 52.37	+15 44.0	1.556	2.508	7.7	20.7	11 17	4 49.46	+18 19.9	1.807	2.762	6.6	20.3
11 27	4 42.12	+15 0.3	1.536	2.514	3.7	20.5	11 27	4 41.10	+18 2.5	1.774	2.755	2.7	20.0
12 7	4 31.34	+14 21.4	1.544	2.520	3.9	20.5	12 7	4 32.13	+17 46.4	1.768	2.748	2.6	20.0
12 17	4 21.31	+13 50.8	1.581	2.525	7.9	20.8	12 17	4 23.63	+17 33.7	1.791	2.742	6.6	20.3
12 27	4 13.20	+13 31.6	1.644	2.530	12.0	21.0	12 27	4 16.61	+17 26.8	1.841	2.736	10.4	20.5
1 6	4 7.74	+13 25.0	1.730	2.535	15.5	21.3	1 6	4 11.81	+17 27.1	1.915	2.731	13.8	20.7
<b>321199</b>	2008 <i>YT</i> <sub>18</sub>	12	2.6 335°83	3°1/ 1.9 18			<b>495797</b>	2017 <i>FG</i> <sub>80</sub>	12	2.6 183°08	4°6/ 30.8 18		
10 28	5 2.07	+15 24.5	1.516	2.352	16.3	20.1	10 28	4 59.71	+ 4 25.3	3.037	3.826	10.2	21.8
11 7	4 57.82	+15 8.8	1.439	2.345	12.6	19.9	11 7	4 54.55	+ 4 1.6	2.958	3.826	8.1	21.6
11 17	4 50.74	+14 55.0	1.384	2.338	8.2	19.6	11 17	4 47.97	+ 3 44.4	2.904	3.826	6.1	21.5
11 27	4 41.61	+14 45.3	1.353	2.332	4.0	19.4	11 27	4 40.48	+ 3 35.9	2.878	3.825	4.8	21.4
12 7	4 31.68	+14 41.9	1.349	2.326	4.1	19.4	12 7	4 32.66	+ 3 37.9	2.883	3.824	5.0	21.4
12 17	4 22.33	+14 46.8	1.372	2.321	8.4	19.6	12 17	4 25.14	+ 3 51.0	2.917	3.823	6.6	21.5
12 27	4 14.86	+15 1.5	1.419	2.316	12.8	19.8	12 27	4 18.54	+ 4 15.2	2.979	3.821	8.6	21.7
1 6	4 10.15	+15 26.1	1.489	2.312	16.7	20.1	1 6	4 13.33	+ 4 49.3	3.067	3.819	10.6	21.8
<b>158842</b>	2004 <i>LF</i> <sub>31</sub>	12	2.6 34°89	4°7/ 1.0 18			<b>415612</b>	2014 <i>QN</i> <sub>355</sub>	12	2.6 227°92	1°3/ 2.2 17		
10 28	5 2.67	+17 7.7	1.156	2.009	19.3	18.8	10 28	5 1.31	+19 0.1	2.216	3.032	12.5	21.0
11 7	4 58.41	+15 37.5	1.112	2.026	14.6	18.6	11 7	4 56.36	+18 43.6	2.135	3.031	9.5	20.8
11 17	4 50.98	+14 5.4	1.088	2.046	9.5	18.4	11 17	4 49.39	+18 25.3	2.078	3.030	6.0	20.6
11 27	4 41.59	+12 38.6	1.089	2.066	5.3	18.2	11 27	4 41.04	+18 6.5	2.048	3.029	2.4	20.3
12 7	4 31.84	+11 25.0	1.114	2.087	5.9	18.3	12 7	4 32.21	+17 48.6	2.048	3.028	2.3	20.3
12 17	4 23.29	+10 30.7	1.164	2.109	10.1	18.6	12 17	4 23.83	+17 33.7	2.078	3.027	5.9	20.6
12 27	4 17.18	+ 9 58.9	1.238	2.131	14.5	18.9	12 27	4 16.80	+17 23.8	2.135	3.026	9.4	20.8
1 6	4 14.16	+ 9 48.9	1.331	2.154	18.3	19.2	1 6	4 11.76	+17 20.5	2.217	3.025	12.4	21.0
<b>149908</b>	2005 <i>SO</i> <sub>50</sub>	12	2.6 353°45	0°9/ 2.3 18			<b>485156</b>	2010 <i>RM</i> <sub>26</sub>	12	2.6 77°07	1°8/ 3.2 18		
10 28	5 1.87	+20 31.9	1.923	2.745	13.9	20.6	10 28	5 4.48	+27 40.2	1.915	2.726	14.4	21.6
11 7	4 57.09	+20 16.1	1.844	2.744	10.6	20.4	11 7	4 59.11	+27 40.4	1.843	2.734	11.1	21.4
11 17	4 49.98	+19 57.2	1.789	2.743	6.7	20.2	11 17	4 51.26	+27 32.3	1.794	2.742	7.3	21.2
11 27	4 41.27	+19 36.3	1.761	2.743	2.5	19.9	11 27	4 41.74	+27 14.9	1.771	2.750	3.3	21.0
12 7	4 31.99	+19 14.9	1.761	2.742	2.3	19.9	12 7	4 31.70	+26 49.2	1.777	2.758	2.4	20.9
12 17	4 23.25	+18 55.6	1.790	2.742	6.4	20.1	12 17	4 22.33	+26 17.5	1.812	2.766	6.2	21.2
12 27	4 16.09	+18 41.0	1.846	2.742	10.3	20.4	12 27	4 14.74	+25 44.2	1.875	2.774	10.0	21.4
1 6	4 11.23	+18 33.2	1.926	2.742	13.7	20.6	1 6	4 9.64	+25 13.4	1.961	2.782	13.3	21.7
<b>290936</b>	2005 <i>WQ</i> <sub>143</sub>	12	2.6 280°13	0°3/ 2.5 18			<b>472958</b>	2015 <i>GF</i> <sub>34</sub>	12	2.6 334°78	1°3/ 2.8 18		
10 28	5 4.99	+21 37.2	1.624	2.450	15.9	21.4	10 28	5 8.98	+22 6.7	1.381	2.210	18.0	20.6
11 7	5 0.13	+21 34.2	1.533	2.435	12.2	21.1	11 7	5 3.64	+22 58.4	1.306	2.208	13.9	20.3
11 17	4 52.29	+21 27.5	1.465	2.419	7.8	20.8	11 17	4 54.75	+23 50.1	1.252	2.206	9.0	20.0
11 27	4 42.23	+21 17.0	1.421	2.404	2.9	20.5	11 27	4 43.20	+24 38.1	1.222	2.204	3.6	19.7
12 7	4 31.18	+21 3.5	1.406	2.388	2.4	20.4	12 7	4 30.49	+25 19.2	1.220	2.202	2.8	19.6
12 17	4 20.59	+20 49.4	1.418	2.372	7.5	20.7	12 17	4 18.42	+25 52.1	1.245	2.201	8.2	20.0
12 27	4 11.88	+20 38.0	1.456	2.357	12.3	20.9	12 27	4 8.71	+26 18.8	1.295	2.199	13.2	20.2
1 6	4 6.03	+20 32.5	1.517	2.341	16.4	21.1	1 6	4 2.46	+26 42.7	1.367	2.198	17.4	20.5
<b>484834</b>	2009 <i>HC</i> <sub>24</sub>	12	2.6 12°58	3°0/ 1.9 18			<b>192200</b>	2007 <i>HN</i> <sub>52</sub>	12	2.6 74°88	4°0/ 1.1 18		
10 28	5 3.03	+14 14.4	1.750	2.575	15.0	21.2	10 28	5 0.82	+11 25.5	2.259	3.072	12.4	20.1
11 7	4 58.10	+14 7.5	1.677	2.576	11.5	21.0	11 7	4 55.66	+10 40.1	2.203	3.093	9.6	20.0
11 17	4 50.68	+14 3.7	1.626	2.577	7.5	20.8	11 17	4 48.75	+ 9 58.1	2.171	3.114	6.6	19.8
11 27	4 41.54	+14 4.7	1.601	2.578	3.8	20.5	11 27	4 40.75	+ 9 22.5	2.167	3.135	4.3	19.7
12 7	4 31.77	+14 12.0	1.604	2.580	3.8	20.5	12 7	4 32.49	+ 8 56.0	2.192	3.155	4.5	19.8
12 17	4 22.57	+14 26.7	1.635	2.581	7.5	20.8	12 17	4 24.81	+ 8 40.5	2.247	3.176	7.0	20.0
12 27	4 15.05	+14 49.3	1.693	2.583	11.5	21.0	12 27	4 18.45	+ 8 36.8	2.329	3.196	9.7	20.2
1 6	4 9.97	+15 19.8	1.774	2.585	14.9	21.2	1 6	4 13.93	+ 8 44.6	2.434	3.216	12.2	20.4
<b>440777</b>	2006 <i>HH</i> <sub>97</sub>	12	2.6 309°62	1°5/ 3.0 18			<b>209999</b>	2006 <i>JS</i> <sub>19</sub>	12	2.6 283°34	3°1/ 1.8 18		
10 28	5 4.67	+25 32.3	1.613	2.437	16.1	21.2	10 28	5 5.20	+17 29.1	1.317	2.157	18.1	20.5
11 7	4 59.90	+25 45.9	1.530	2.429	12.4	21.0	11 7	5 0.72	+16 53.3	1.237	2.145	14.0	20.2
11 17	4 52.12	+25 53.1	1.469	2.421	8.1	20.7	11 17	4 52.85	+16 15.1	1.177	2.133	9.1	19.9
11 27	4 42.15	+25 52.4	1.433	2.414	3.4	20.4	11 27	4 42.48	+15 37.4	1.141	2.121	4.2	19.6
12 7	4 31.27	+25 43.4	1.425	2.406	2.6	20.4	12 7	4 31.06	+15 4.3	1.131	2.109	4.4	19.6
12 17	4 20.97	+25 28.1	1.444	2.399	7.2	20.6	12 17	4 20.27	+14 40.1	1.147	2.097	9.5	19.8
12 27	4 12.65	+25 10.3	1.489	2.393	11.8	20.9	12 27	4 11.72	+14 28.6	1.187	2.085	14.6	20.1
1 6	4 7.26	+24 54.6	1.556	2.386	15.7	21.1	1 6	4 6.45	+14 31.7	1.247	2.074	19.1	20.3
<b>195984</b>	2002 <i>RR</i> <sub>204</sub>	12	2.6 155°34	2°4/ 3.6 17			<b>101662</b>	1999 <i>CU</i> <sub>84</sub>	12	2.6 352°04	1°1/ 2.6 18		
10 28	5 2.93	+30 27.3	2.665	3.455	11.4	20.9	10 28	5 1.70	+15 29.9	1.008	1.871	20.7	18.3
11 7	4 57.39	+30 37.7	2.583	3.459	8.9	20.8	11 7	4 58.94	+16 30.5	0.940	1.861	16.0	18.0
11 17	4 49.94	+30 40.6	2.525	3.463	6.0	20.6	11 17	4 52.22	+17 42.5	0.890	1.852	10.3	17.6
11 27	4 41.21	+30 34.5	2.494	3.467	3.3	20.4	11 27	4 42.38	+19 3.7	0.862	1.845	4.0	17.3
12 7	4 32.05	+30 19.6	2.495	3.470	2.6	20.4	12 7	4 31.10	+20 29.9	0.857	1.840	3.2	17.2
12 17	4 23.32	+29 57.1	2.525	3.474	5.1	20.5	12 17	4 20.46	+21 55.8	0.876	1.837	9.6	17.6
12 27	4 15.89	+29 30.1	2.585	3.477	7.9	20.7	12 27	4 12.51	+23 18.6	0.917	1.836	15.5	17.9
1 6	4 10.34	+29 1.9	2.670	3.479	10.5	20.9	1 6	4 8.54	+24 37.3	0.977	1.837	20.5	18.2
<b>4795</b>	Kihara	12	2.6 156°67	2°9/ 1.9 18			<b>105841</b>	2000 <i>ST</i> <sub>155</sub>	12	2.6 38°56	3°6/ 3.4 18 R		





2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>158648</b>	2003 $DA_8$	12	2.6 277°53	4.4/	1.5	18							
10 28	5 3.86	+12 55.9	1.582	2.412	16.1	20.3							
11 7	4 59.06	+12 19.6	1.504	2.405	12.5	20.0							
11 17	4 51.49	+11 45.9	1.448	2.398	8.5	19.8							
11 27	4 41.95	+11 18.6	1.417	2.391	5.0	19.6							
12 7	4 31.66	+11 1.2	1.413	2.384	5.3	19.6							
12 17	4 21.93	+10 56.3	1.436	2.377	9.0	19.8							
12 27	4 14.03	+11 5.6	1.485	2.370	13.1	20.0							
1 6	4 8.81	+11 28.6	1.555	2.363	16.8	20.2							
<b>520602</b>	2014 $OV_{406}$	12	2.6 175°37	0°7/	2.9	17							
10 28	5 3.38	+24 27.3	2.105	2.917	13.3	22.2							
11 7	4 58.15	+24 30.4	2.024	2.917	10.2	22.0							
11 17	4 50.65	+24 28.4	1.967	2.917	6.5	21.8							
11 27	4 41.59	+24 21.0	1.936	2.917	2.6	21.5							
12 7	4 31.96	+24 8.5	1.935	2.918	1.9	21.5							
12 17	4 22.83	+23 52.8	1.964	2.918	5.8	21.8							
12 27	4 15.22	+23 36.6	2.020	2.918	9.5	22.0							
1 6	4 9.84	+23 22.9	2.101	2.918	12.7	22.2							
<b>149457</b>	2003 $DS_{13}$	12	2.7 332°72	5°1/	4.9	17							
10 28	5 3.87	+37 13.5	1.600	2.402	17.2	19.5							
11 7	4 59.59	+36 56.9	1.512	2.389	13.9	19.3							
11 17	4 52.04	+36 20.0	1.444	2.376	10.1	19.0							
11 27	4 42.18	+35 19.4	1.399	2.365	6.5	18.8							
12 7	4 31.50	+33 56.1	1.382	2.353	5.2	18.7							
12 17	4 21.65	+32 15.5	1.391	2.343	8.0	18.8							
12 27	4 14.08	+30 27.2	1.427	2.333	12.0	19.0							
1 6	4 9.69	+28 41.5	1.486	2.325	15.9	19.3							
<b>256704</b>	2008 $AA_{10}$	12	2.7 207°40	0°7/	2.4	18							
10 28	5 3.34	+20 50.7	2.367	3.175	12.1	21.7							
11 7	4 57.85	+20 34.6	2.278	3.171	9.2	21.5							
11 17	4 50.35	+20 15.3	2.214	3.165	5.8	21.3							
11 27	4 41.47	+19 53.6	2.178	3.160	2.2	21.0							
12 7	4 32.08	+19 30.8	2.172	3.153	1.9	21.0							
12 17	4 23.10	+19 9.0	2.197	3.147	5.6	21.2							
12 27	4 15.42	+18 50.6	2.250	3.140	9.1	21.5							
1 6	4 9.70	+18 37.8	2.329	3.132	12.1	21.6							
<b>45127</b>	1999 $Xs_{89}$	12	2.7 264°32	3°1/	1.8	18							
10 28	5 1.48	+12 19.7	2.332	3.143	12.2	19.3							
11 7	4 56.46	+12 12.6	2.243	3.134	9.4	19.1							
11 17	4 49.49	+12 9.1	2.179	3.125	6.3	18.9							
11 27	4 41.17	+12 10.7	2.143	3.116	3.6	18.7							
12 7	4 32.30	+12 18.8	2.136	3.107	3.7	18.7							
12 17	4 23.76	+12 34.2	2.159	3.098	6.5	18.8							
12 27	4 16.43	+12 57.3	2.209	3.089	9.7	19.0							
1 6	4 10.95	+13 27.9	2.285	3.079	12.5	19.2							
<b>442182</b>	2011 $AL_{75}$	12	2.7 279°89	14°1/	28.9	18							
10 28	5 5.93	-10 29.1	1.615	2.382	18.5	20.8							
11 7	5 0.75	-11 42.0	1.534	2.358	16.6	20.6							
11 17	4 52.70	-12 33.2	1.471	2.334	15.0	20.4							
11 27	4 42.48	-12 52.5	1.429	2.309	14.1	20.3							
12 7	4 31.25	-12 33.2	1.410	2.284	14.6	20.3							
12 17	4 20.39	-11 32.9	1.414	2.259	16.2	20.3							
12 27	4 11.24	-9 54.8	1.439	2.233	18.6	20.4							
1 6	4 4.80	-7 46.9	1.482	2.208	21.1	20.5							
<b>103883</b>	2000 $DP_{50}$	12	2.7 352°42	1°8/	2.2	18							
10 28	4 59.45	+20 15.2	1.063	1.926	19.8	18.7							
11 7	4 56.90	+19 50.6	0.997	1.918	15.2	18.3							
11 17	4 50.68	+19 21.3	0.950	1.912	9.7	18.0							
11 27	4 41.78	+18 49.7	0.924	1.907	3.8	17.7							
12 7	4 31.85	+18 19.5	0.922	1.904	3.6	17.7							
12 17	4 22.77	+17 55.3	0.943	1.902	9.5	18.0							
12 27	4 16.26	+17 41.7	0.986	1.901	15.1	18.3							
1 6	4 13.33	+17 41.1	1.048	1.903	19.8	18.6							
<b>416782</b>	2005 $GG_{19}$	12	2.7 315°31	10°6/	25.6	16							
10 28	4 58.22	-3 35.1	2.046	2.837	14.3	20.9							
11 7	4 54.24	-5 43.5	1.968	2.816	12.5	20.8							
11 17	4 48.22	-7 42.1	1.913	2.795	11.1	20.6							
11 27	4 40.74	-9 22.2	1.883	2.774	10.6	20.6							
12 7	4 32.65	-10 36.7	1.879	2.754	11.4	20.6							
12 17	4 24.89	-11 21.2	1.899	2.734	13.1	20.6							
12 27	4 18.39	-11 34.7	1.941	2.714	15.2	20.8							
1 6	4 13.84	-11 20.0	2.002	2.695	17.3	20.9							
<b>486635</b>	2013 $NM_{20}$	12	2.7 105°31	8°8/	29.0	18							
10 28	4 59.26	-6 31.8	2.522	3.287	12.6	21.3							
11 7	4 54.42	-7 37.5	2.468	3.296	10.9	21.2							
11 17	4 48.00	-8 29.5	2.437	3.306	9.5	21.2							
11 27	4 40.57	-9 9.9	2.430	3.315	8.8	21.1							
12 7	4 32.84	-9 14.7	2.450	3.325	9.1	21.2							
12 17	4 25.55	-9 4.3	2.496	3.334	10.3	21.3							
12 27	4 19.39	-8 32.7	2.565	3.343	11.8	21.4							
1 6	4 14.85	-7 43.3	2.656	3.352	13.4	21.5							
<b>430644</b>	2003 $SZ_{132}$	12	2.7 78°81	3°6/	3.5	18							
10 28	5 10.12	+29 7.8	1.364	2.185	18.6	21.3							
11 7	5 4.47	+29 42.1	1.301	2.195	14.5	21.1							
11 17	4 55.20	+30 6.3	1.258	2.205	9.8	20.9							
11 27	4 43.38	+30 16.2	1.239	2.215	5.1	20.6							
12 7	4 30.72	+30 10.1	1.247	2.225	4.1	20.6							
12 17	4 19.07	+29 50.5	1.281	2.235	8.2	20.9							
12 27	4 10.05	+29 23.2	1.341	2.245	12.8	21.1							
1 6	4 4.60	+28 55.0	1.422	2.255	16.8	21.4							
<b>4654</b>	Gor'kavyj	12	2.7 153°65	2°6/	3.3	18							
10 28	5 11.60	+28 9.4	1.712	2.517	16.2	18.0							
11 7	5 4.95	+28 32.1	1.639	2.525	12.5	17.8							
11 17	4 55.22	+28 46.4	1.587	2.532	8.3	17.6							
11 27	4 43.35	+28 49.3	1.562	2.539	4.1	17.4							
12 7	4 30.73	+28 40.0	1.566	2.545	3.2	17.3							
12 17	4 18.90	+28 20.5	1.599	2.550	7.1	17.6							
12 27	4 9.23	+27 55.4	1.658	2.555	11.3	17.8							
1 6	4 2.60	+27 30.1	1.742	2.559	14.9	18.1							
<b>516770</b>	2009 $VU_{106}$	12	2.7 349°64	3°8/	3.1	18							
10 28	5 0.80	+26 19.6	1.031	1.889	20.7	20.2							
11 7	4 58.51	+27 18.3	0.962	1.878	16.2	19.9							
11 17	4 52.09	+28 12.0	0.911	1.868	10.9	19.5							
11 27	4 42.44	+28 55.5	0.882	1.861	5.5	19.2							
12 7	4 31.33	+29 24.6	0.875	1.854	4.6	19.1							
12 17	4 20.95	+29 38.4	0.891	1.850	9.7	19.4							
12 27	4 13.43	+29 41.2	0.928	1.848	15.3	19.7							
1 6	4 10.05	+29 39.4	0.984	1.847	20.1	20.0							
<b>19228</b>	Uemuraikuo	12	2.7 56°39	5°2/	1.6	18							
10 28	5 6.97	+13 5.8	1.157	2.001	19.8	17.8							
11 7	5 1.71	+12 21.0	1.114	2.022	15.2	17.6							
11 17	4 53.16	+11 41.2	1.090	2.043	10.1	17.4							
11 27	4 42.53	+11 11.1	1.090	2.065	5.9	17.2							

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$		
<b>389469</b>	2010 <i>EG</i> <sub>45</sub>		12	2.7	139°19'	7.1/ 4.5	18	<b>114454</b>	2003 <i>AR</i> <sub>27</sub>		12	2.7	230°05'	3.0/ 3.9	18
10 28	5 18.79	+42 43.7	2.532	3.258	13.6	21.1	10 28	5 5.14	+31 41.0	2.064	2.862	14.0	20.0		
11 7	5 10.22	+44 13.1	2.459	3.274	11.4	20.9	11 7	4 59.72	+31 44.4	1.979	2.859	11.0	19.8		
11 17	4 58.59	+45 29.2	2.410	3.288	9.2	20.8	11 17	4 51.79	+31 37.1	1.916	2.856	7.6	19.5		
11 27	4 44.66	+46 25.3	2.388	3.302	7.6	20.7	11 27	4 42.12	+31 17.0	1.880	2.852	4.2	19.3		
12 7	4 29.74	+46 57.2	2.396	3.315	7.2	20.7	12 7	4 31.81	+30 44.5	1.873	2.849	3.3	19.3		
12 17	4 15.31	+47 4.3	2.433	3.328	8.3	20.8	12 17	4 22.08	+30 1.8	1.895	2.845	6.3	19.4		
12 27	4 2.83	+46 50.7	2.498	3.339	10.1	21.0	12 27	4 14.06	+29 13.9	1.944	2.842	9.8	19.7		
1 6	3 53.27	+46 23.2	2.588	3.350	12.1	21.1	1 6	4 8.50	+28 26.0	2.019	2.838	13.0	19.9		
<b>225760</b>	2001 <i>SK</i> <sub>195</sub>		12	2.7	356°14'	1.9/ 3.0	18	<b>328435</b>	2008 <i>TZ</i> <sub>16</sub>		12	2.7	92°49'	2.8/ 1.3	18
10 28	5 2.81	+25 12.7	1.187	2.034	19.2	20.0	10 28	5 0.64	+15 13.4	2.493	3.304	11.5	21.0		
11 7	4 59.37	+25 35.7	1.118	2.029	14.9	19.7	11 7	4 55.49	+14 20.3	2.428	3.321	8.7	20.8		
11 17	4 52.25	+25 52.1	1.069	2.026	9.7	19.4	11 17	4 48.69	+13 27.2	2.389	3.337	5.7	20.7		
11 27	4 42.42	+25 59.5	1.043	2.024	4.1	19.1	11 27	4 40.87	+12 36.8	2.379	3.352	3.2	20.5		
12 7	4 31.51	+25 57.2	1.041	2.023	3.1	19.0	12 7	4 32.80	+11 52.0	2.398	3.368	3.5	20.6		
12 17	4 21.43	+25 47.1	1.063	2.023	8.6	19.4	12 17	4 25.24	+11 15.5	2.448	3.384	6.1	20.8		
12 27	4 13.90	+25 34.0	1.109	2.024	13.8	19.6	12 27	4 18.89	+10 49.1	2.526	3.399	8.9	21.0		
1 6	4 9.98	+25 23.2	1.175	2.026	18.4	19.9	1 6	4 14.26	+10 33.5	2.629	3.414	11.3	21.2		
<b>166927</b>	2003 <i>GQ</i> <sub>8</sub>		12	2.7	101°40'	0.6/ 2.8	17	<b>375130</b>	2007 <i>VH</i> <sub>266</sub>		12	2.7	278°68'	1.5/ 2.2	17
10 28	5 12.77	+23 12.0	1.483	2.301	17.6	20.2	10 28	5 5.68	+21 53.5	1.376	2.212	17.7	21.0		
11 7	5 5.81	+23 25.8	1.428	2.324	13.4	20.0	11 7	5 1.00	+21 7.5	1.296	2.203	13.6	20.8		
11 17	4 55.69	+23 34.7	1.395	2.346	8.5	19.8	11 17	4 53.01	+20 13.0	1.238	2.194	8.7	20.5		
11 27	4 43.50	+23 36.9	1.387	2.368	3.2	19.5	11 27	4 42.66	+19 12.5	1.203	2.185	3.4	20.1		
12 7	4 30.80	+23 32.8	1.407	2.390	2.3	19.5	12 7	4 31.39	+18 10.3	1.196	2.177	3.2	20.1		
12 17	4 19.18	+23 24.3	1.456	2.410	7.4	19.9	12 17	4 20.86	+17 12.4	1.215	2.168	8.6	20.4		
12 27	4 10.00	+23 15.5	1.531	2.430	11.9	20.2	12 27	4 12.58	+16 25.2	1.259	2.159	13.8	20.7		
1 6	4 4.01	+23 9.9	1.630	2.449	15.6	20.5	1 6	4 7.50	+15 52.7	1.324	2.151	18.1	20.9		
<b>451270</b>	2010 <i>PL</i> <sub>65</sub>		12	2.7	46°61'	2.2/ 3.4	18	<b>19422</b>	1998 <i>FV</i> <sub>56</sub>		12	2.7	53°01'	3.1/ 3.4	18
10 28	5 4.69	+27 58.2	1.758	2.574	15.3	21.1	10 28	5 8.99	+28 31.2	1.402	2.224	18.2	17.4		
11 7	4 59.57	+28 10.9	1.690	2.583	11.8	20.9	11 7	5 3.22	+29 1.4	1.353	2.248	14.0	17.2		
11 17	4 51.74	+28 15.3	1.644	2.592	7.8	20.7	11 17	4 54.17	+29 21.5	1.324	2.272	9.3	17.0		
11 27	4 42.08	+28 9.7	1.624	2.602	3.7	20.5	11 27	4 42.97	+29 28.4	1.320	2.297	4.7	16.8		
12 7	4 31.83	+27 54.2	1.632	2.611	2.8	20.4	12 7	4 31.25	+29 21.5	1.343	2.322	3.6	16.8		
12 17	4 22.32	+27 31.1	1.667	2.622	6.6	20.7	12 17	4 20.68	+29 3.6	1.393	2.347	7.6	17.1		
12 27	4 14.72	+27 4.6	1.730	2.632	10.5	21.0	12 27	4 12.64	+28 40.0	1.468	2.373	11.9	17.4		
1 6	4 9.79	+26 39.2	1.816	2.643	14.0	21.2	1 6	4 7.88	+28 16.5	1.566	2.398	15.5	17.7		
<b>261723</b>	2006 <i>AF</i> <sub>40</sub>		12	2.7	232°25'	0.8/ 2.4	17	<b>260466</b>	2005 <i>BM</i> <sub>8</sub>		12	2.7	213°57'	5.4/ 5.2	18
10 28	5 1.86	+19 59.5	2.218	3.033	12.6	21.1	10 28	5 5.76	+40 28.0	2.568	3.324	12.7	20.5		
11 7	4 56.86	+19 52.5	2.136	3.032	9.6	20.9	11 7	4 59.97	+40 50.7	2.479	3.322	10.4	20.3		
11 17	4 49.80	+19 43.5	2.079	3.031	6.1	20.7	11 17	4 51.85	+41 0.1	2.414	3.319	8.1	20.2		
11 27	4 41.34	+19 33.1	2.049	3.031	2.3	20.4	11 27	4 42.12	+40 52.8	2.374	3.316	6.1	20.1		
12 7	4 32.37	+19 22.5	2.049	3.030	2.0	20.4	12 7	4 31.81	+40 27.9	2.363	3.312	5.4	20.0		
12 17	4 23.84	+19 13.3	2.078	3.029	5.8	20.7	12 17	4 22.03	+39 46.8	2.381	3.309	6.7	20.1		
12 27	4 16.68	+19 7.4	2.135	3.028	9.3	20.9	12 27	4 13.83	+38 53.7	2.427	3.305	9.0	20.2		
1 6	4 11.52	+19 6.5	2.217	3.028	12.3	21.1	1 6	4 7.91	+37 54.2	2.499	3.302	11.3	20.4		
<b>86168</b>	1999 <i>RQ</i> <sub>209</sub>		12	2.7	34°91'	2.3/ 3.7	18	<b>407149</b>	2009 <i>TE</i> <sub>36</sub>		12	2.7	15°39'	2.8/ 3.2	17
10 28	5 3.32	+30 27.9	1.901	2.710	14.6	17.6	10 28	5 4.21	+27 28.0	1.796	2.612	15.1	20.1		
11 7	4 58.33	+30 12.5	1.829	2.716	11.3	17.4	11 7	4 59.32	+28 14.6	1.724	2.615	11.7	19.9		
11 17	4 50.85	+29 45.7	1.778	2.723	7.6	17.2	11 17	4 51.70	+28 55.5	1.673	2.620	7.8	19.7		
11 27	4 41.73	+29 6.8	1.754	2.730	3.8	17.0	11 27	4 42.13	+29 27.6	1.649	2.625	4.0	19.4		
12 7	4 32.12	+28 17.4	1.758	2.737	2.8	16.9	12 7	4 31.80	+29 48.9	1.653	2.631	3.3	19.4		
12 17	4 23.24	+27 21.3	1.791	2.745	6.2	17.1	12 17	4 22.05	+29 59.7	1.685	2.637	6.8	19.6		
12 27	4 16.16	+26 23.8	1.851	2.753	10.0	17.4	12 27	4 14.12	+30 2.6	1.744	2.644	10.6	19.9		
1 6	4 11.57	+25 30.2	1.936	2.761	13.3	17.6	1 6	4 8.87	+30 1.6	1.826	2.651	13.9	20.1		
<b>345120</b>	2005 <i>QR</i> <sub>73</sub>		12	2.7	58°53'	1.9/ 3.2	18	<b>229410</b>	2005 <i>SD</i> <sub>238</sub>		12	2.7	208°82'	1.0/ 2.9	18
10 28	5 8.80	+27 36.4	1.311	2.139	18.9	20.1	10 28	5 7.05	+25 25.2	1.745	2.560	15.5	21.3		
11 7	5 3.12	+27 30.4	1.262	2.162	14.4	19.9	11 7	5 1.47	+25 22.6	1.663	2.557	11.9	21.1		
11 17	4 54.08	+27 13.2	1.233	2.185	9.3	19.7	11 17	4 53.05	+25 12.8	1.603	2.554	7.7	20.8		
11 27	4 42.91	+26 44.0	1.228	2.208	4.0	19.4	11 27	4 42.62	+24 54.9	1.569	2.550	3.1	20.5		
12 7	4 31.30	+26 4.7	1.250	2.231	2.8	19.4	12 7	4 31.44	+24 29.7	1.564	2.546	2.2	20.5		
12 17	4 20.95	+25 20.1	1.298	2.255	7.7	19.8	12 17	4 20.87	+24 0.0	1.588	2.542	6.8	20.7		
12 27	4 13.23	+24 36.7	1.372	2.278	12.4	20.1	12 27	4 12.22	+23 30.0	1.638	2.537	11.2	21.0		
1 6	4 8.84	+23 59.9	1.467	2.302	16.2	20.4	1 6	4 6.34	+23 4.2	1.712	2.532	14.9	21.2		
<b>209333</b>	2004 <i>BY</i> <sub>136</sub>		12	2.7	119°23'	3.9/ 4.4	18	<b>231147</b>	2005 <i>UH</i> <sub>15</sub>		12	2.7	296°49'	1.0/ 2.4	18
10 28	5 8.64	+34 58.9	2.269	3.046	13.5	20.8	10 28	5 4.27	+20 53.9	1.496	2.330	16.7	21.5		
11 7	5 2.02	+35 10.7	2.200	3.064	10.7	20.6	11 7	4 59.82	+20 39.4	1.411	2.316	12.8	21.2		
11 17	4 53.02	+35 10.4	2.154	3.081	7.7	20.5	11 17	4 52.26	+20 20.9	1.346	2.302	8.2	20.9		
11 27	4 42.50	+34 55.5	2.134	3.097	4.8	20.3	11 27	4 42.41	+19 58.9	1.306	2.288	3.1	20.6		
12 7	4 31.56	+34 26.1	2.145	3.113	4.1	20.3	12 7	4 31.57	+19 35.5	1.293	2.275	2.7	20.5		
12 17	4 21.36	+33 44.6	2.185	3.128	6.2	20.5	12 17	4 21.25	+19 13.7	1.307	2.262	8.0	20.8		
12 27	4 12.93	+32 55.8	2.254	3.143	9.1	20.7	12 27	4 12.94	+18 57.4	1.346	2.249	12.9	21.1		
1 6	4 6.92	+32 5.0	2.348	3.157	11.8	20.9	1 6	4 7.63	+18 49.7	1.407	2.236	17.2	21.3		
<b>266065</b>	2006 <i>QM</i> <sub>158</sub>		12	2.7	16°98'	1.8/ 2.2									

EPHEMERIDES

12 2.7

12 2.7

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>211722</b>	2003 <i>YB</i> <sub>44</sub>		12 2.7 152°82	4 <sup>3</sup> / 1.7 18			<b>508928</b>	2004 <i>FL</i> <sub>130</sub>		12 2.7 274°85	5 <sup>3</sup> / 1.5 18		
10 28	5 4.25	+ 9 43.0	1.973	2.785	14.0	20.3	10 28	5 4.93	+10 41.5	1.555	2.381	16.5	20.9
11 7	4 58.78	+ 9 31.5	1.898	2.787	10.9	20.1	11 7	5 0.09	+10 10.3	1.470	2.367	13.0	20.7
11 17	4 51.07	+ 9 26.2	1.847	2.789	7.6	19.9	11 17	4 52.35	+ 9 44.4	1.406	2.352	9.1	20.4
11 27	4 41.84	+ 9 29.5	1.823	2.792	4.8	19.7	11 27	4 42.45	+ 9 27.6	1.367	2.337	5.8	20.2
12 7	4 32.06	+ 9 43.0	1.828	2.794	4.9	19.8	12 7	4 31.61	+ 9 23.5	1.354	2.322	6.0	20.2
12 17	4 22.79	+10 7.1	1.861	2.796	7.7	19.9	12 17	4 21.22	+ 9 34.4	1.369	2.306	9.7	20.3
12 27	4 15.02	+10 41.7	1.921	2.797	11.1	20.1	12 27	4 12.64	+10 0.9	1.408	2.291	13.9	20.5
1 6	4 9.43	+11 25.6	2.006	2.799	14.1	20.3	1 6	4 6.84	+10 41.8	1.469	2.276	17.7	20.7
<b>222641</b>	2001 <i>XJ</i> <sub>131</sub>		12 2.7 312°18	0 <sup>8</sup> / 2.4 18			<b>277776</b>	2006 <i>DQ</i> <sub>200</sub>		12 2.7 221°79	5 <sup>3</sup> / 29.8 18		
10 28	5 3.83	+22 38.1	1.506	2.339	16.6	20.0	10 28	4 59.08	+ 4 10.9	2.965	3.757	10.3	21.2
11 7	4 59.34	+22 5.2	1.426	2.331	12.7	19.8	11 7	4 54.23	+ 3 14.6	2.880	3.747	8.4	21.0
11 17	4 51.84	+21 25.0	1.368	2.324	8.1	19.5	11 17	4 47.93	+ 2 23.6	2.819	3.737	6.5	20.9
11 27	4 42.21	+20 38.7	1.334	2.317	3.0	19.2	11 27	4 40.67	+ 1 41.3	2.787	3.727	5.4	20.8
12 7	4 31.77	+19 49.8	1.328	2.310	2.6	19.1	12 7	4 33.04	+ 1 10.6	2.785	3.716	5.7	20.8
12 17	4 22.00	+19 2.7	1.348	2.303	7.8	19.4	12 17	4 25.68	+ 0 53.4	2.811	3.705	7.3	20.9
12 27	4 14.28	+18 22.8	1.395	2.297	12.6	19.7	12 27	4 19.23	+ 0 50.4	2.865	3.693	9.4	21.0
1 6	4 9.47	+17 53.9	1.463	2.291	16.7	19.9	1 6	4 14.17	+ 1 0.9	2.943	3.681	11.3	21.2
<b>450680</b>	2006 <i>VO</i> <sub>53</sub>		12 2.7 60°20	0 <sup>7</sup> / 2.9 17			<b>286248</b>	2001 <i>UK</i> <sub>216</sub>		12 2.7 23°89	1 <sup>0</sup> / 2.4 18		
10 28	5 4.63	+26 26.5	1.756	2.573	15.3	21.1	10 28	5 2.95	+19 48.3	1.760	2.586	14.9	20.5
11 7	4 59.29	+25 55.0	1.693	2.589	11.6	20.9	11 7	4 58.16	+19 42.4	1.688	2.589	11.3	20.3
11 17	4 51.41	+25 14.4	1.652	2.604	7.4	20.7	11 17	4 50.85	+19 34.7	1.638	2.592	7.2	20.1
11 27	4 41.93	+24 25.5	1.638	2.620	2.9	20.5	11 27	4 41.82	+19 25.8	1.614	2.596	2.7	19.8
12 7	4 32.06	+23 31.1	1.653	2.635	2.0	20.4	12 7	4 32.17	+19 16.9	1.618	2.600	2.4	19.8
12 17	4 23.04	+22 35.5	1.696	2.651	6.4	20.8	12 17	4 23.14	+19 10.0	1.651	2.604	6.8	20.1
12 27	4 15.92	+21 43.9	1.767	2.667	10.4	21.0	12 27	4 15.83	+19 7.3	1.710	2.608	10.9	20.3
1 6	4 11.36	+21 0.4	1.861	2.683	13.9	21.3	1 6	4 10.99	+19 10.7	1.792	2.613	14.4	20.6
<b>272338</b>	2005 <i>SX</i> <sub>118</sub>		12 2.7 88°93	2°9/ 3.3 18			<b>326085</b>	2011 <i>BC</i> <sub>34</sub>		12 2.7 225°53	1°5/ 2.2 17		
10 28	5 10.42	+27 47.3	1.549	2.363	17.1	21.0	10 28	5 1.57	+17 26.5	2.470	3.281	11.6	20.9
11 7	5 4.25	+28 23.9	1.487	2.378	13.3	20.8	11 7	4 56.48	+17 20.5	2.383	3.276	8.8	20.7
11 17	4 54.87	+28 52.4	1.446	2.393	8.8	20.6	11 17	4 49.53	+17 14.4	2.320	3.271	5.7	20.5
11 27	4 43.29	+29 9.4	1.431	2.408	4.4	20.4	11 27	4 41.29	+17 9.0	2.286	3.266	2.4	20.2
12 7	4 31.01	+29 13.4	1.444	2.423	3.5	20.4	12 7	4 32.56	+17 5.4	2.281	3.260	2.3	20.2
12 17	4 19.64	+29 5.9	1.485	2.437	7.4	20.6	12 17	4 24.18	+17 4.8	2.307	3.255	5.5	20.4
12 27	4 10.62	+28 51.6	1.551	2.452	11.7	20.9	12 27	4 16.98	+17 8.4	2.361	3.249	8.8	20.6
1 6	4 4.77	+28 35.7	1.641	2.466	15.3	21.2	1 6	4 11.58	+17 17.3	2.441	3.243	11.6	20.8
<b>138366</b>	2000 <i>GH</i> <sub>139</sub>		12 2.7 118°86	1°1/ 2.9 18			<b>354396</b>	2003 <i>TM</i> <sub>36</sub>		12 2.7 331°77	6°6/ 29.8 18		
10 28	5 7.57	+23 15.0	2.023	2.830	13.9	20.0	10 28	4 58.42	+13 28.5	1.328	2.178	17.4	20.0
11 7	5 1.46	+23 54.0	1.948	2.838	10.6	19.8	11 7	4 55.48	+11 45.5	1.248	2.159	13.7	19.7
11 17	4 52.87	+24 30.6	1.896	2.845	6.8	19.6	11 17	4 49.54	+ 9 58.5	1.189	2.140	9.6	19.5
11 27	4 42.54	+25 2.7	1.872	2.853	2.8	19.3	11 27	4 41.44	+ 8 15.7	1.154	2.123	6.8	19.3
12 7	4 31.54	+25 28.7	1.878	2.860	2.1	19.3	12 7	4 32.43	+ 6 46.5	1.144	2.107	7.7	19.3
12 17	4 21.08	+25 48.7	1.914	2.867	6.1	19.6	12 17	4 24.00	+ 5 39.2	1.159	2.091	11.6	19.4
12 27	4 12.26	+26 4.4	1.978	2.873	9.8	19.8	12 27	4 17.52	+ 4 58.8	1.196	2.077	15.9	19.6
1 6	4 5.86	+26 18.3	2.067	2.880	13.0	20.0	1 6	4 13.94	+ 4 45.7	1.253	2.064	19.9	19.9
<b>221744</b>	2007 <i>EQ</i> <sub>141</sub>		12 2.7 211°72	0°5/ 2.9 17			<b>225085</b>	2007 <i>LB</i> <sub>1</sub>		12 2.7 288°78	3°0/ 1.4 18		
10 28	5 2.55	+24 25.9	2.331	3.139	12.3	21.5	10 28	5 0.36	+15 25.6	2.163	2.982	12.7	20.6
11 7	4 57.36	+24 18.4	2.245	3.136	9.4	21.3	11 7	4 55.77	+14 40.0	2.077	2.974	9.7	20.4
11 17	4 50.13	+24 5.7	2.183	3.134	6.0	21.0	11 17	4 49.16	+13 53.8	2.016	2.966	6.4	20.2
11 27	4 41.49	+23 47.7	2.149	3.131	2.3	20.8	11 27	4 41.17	+13 9.6	1.982	2.958	3.5	20.0
12 7	4 32.35	+23 25.5	2.145	3.128	1.7	20.7	12 7	4 32.67	+12 30.7	1.978	2.950	3.8	20.0
12 17	4 23.64	+23 1.0	2.171	3.124	5.4	21.0	12 17	4 24.59	+12 0.1	2.002	2.942	6.9	20.2
12 27	4 16.29	+22 37.0	2.226	3.121	8.9	21.2	12 27	4 17.82	+11 40.1	2.054	2.934	10.2	20.4
1 6	4 10.94	+22 16.5	2.305	3.117	11.9	21.4	1 6	4 13.02	+11 31.7	2.129	2.926	13.2	20.5
<b>443801</b>	1996 <i>LG</i> <sub>3</sub>		12 2.7 269°80	4°2/ 30.8 15			<b>254085</b>	2004 <i>JJ</i> <sub>8</sub>		12 2.7 104°16	3°4/ 1.7 18		
10 28	5 2.47	+13 58.2	2.000	2.819	13.6	21.5	10 28	5 3.48	+12 12.3	2.169	2.980	13.0	20.7
11 7	4 57.58	+12 53.1	1.906	2.801	10.6	21.3	11 7	4 57.90	+11 53.3	2.105	2.995	10.0	20.5
11 17	4 50.43	+11 46.6	1.835	2.782	7.2	21.1	11 17	4 50.37	+11 37.9	2.065	3.010	6.7	20.4
11 27	4 41.65	+10 42.5	1.791	2.763	4.5	20.9	11 27	4 41.58	+11 28.0	2.053	3.025	3.9	20.2
12 7	4 32.20	+ 9 45.5	1.777	2.743	5.0	20.9	12 7	4 32.42	+11 25.3	2.070	3.039	4.0	20.3
12 17	4 23.13	+ 9 0.0	1.791	2.723	8.2	21.0	12 17	4 23.82	+11 31.0	2.116	3.053	6.8	20.5
12 27	4 15.47	+ 8 29.1	1.832	2.703	11.8	21.2	12 27	4 16.63	+11 45.6	2.191	3.067	9.9	20.7
1 6	4 9.98	+ 8 14.0	1.896	2.683	15.0	21.4	1 6	4 11.42	+12 8.7	2.289	3.081	12.6	20.9
<b>295962</b>	2008 <i>YD</i> <sub>20</sub>		12 2.7 89°97	2°2/ 3.4 18			<b>485345</b>	2011 <i>CY</i> <sub>29</sub>		12 2.7 214°92	7°5/ 28.3 18		
10 28	5 5.67	+28 47.7	1.770	2.582	15.4	20.9	10 28	4 58.96	- 9 55.6	3.475	4.207	10.1	22.4
11 7	5 0.38	+28 46.2	1.693	2.584	11.9	20.7	11 7	4 53.95	-10 46.6	3.398	4.197	8.9	22.3
11 17	4 52.32	+28 34.8	1.639	2.585	7.9	20.5	11 17	4 47.68	-11 26.3	3.345	4.186	8.0	22.2
11 27	4 42.34	+28 12.1	1.610	2.587	3.8	20.2	11 27	4 40.57	-11 50.9	3.318	4.175	7.5	22.2
12 7	4 31.71	+27 38.7	1.609	2.589	2.8	20.2	12 7	4 33.15	-11 58.3	3.318	4.164	7.8	22.2
12 17	4 21.78	+26 57.9	1.636	2.590	6.7	20.4	12 17	4 25.97	-11 47.5	3.344	4.152	8.7	22.2
12 27	4 13.79	+26 14.6	1.691	2.592	10.8	20.7	12 27	4 19.57	-11 19.0	3.395	4.139	9.8	22.3
1 6	4 8.52	+25 34.2	1.769	2.594	14.3	20.9	1 6	4 14.38	-10 35.0	3.468	4.126	11.1	22.4
<b>510260</b>	2011 <i>HJ</i> <sub>48</sub>		12 2.7 120°90	4°2/ 1.5 18			<b>334333</b>	2001 <i>XP</i> <sub>126</sub>					

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>185717</b>	1998 <i>SB</i> <sub>52</sub>		12 2.7 161°09	1°6/	3.2	18	<b>380343</b>	2002 <i>QO</i> <sub>102</sub>		12 2.7 57°24	0°3/	2.8	18
10 28	5 9.40	+26 50.2	1.918	2.721	14.7	21.4	10 28	5 9.55	+24 21.3	1.214	2.050	19.6	21.1
11 7	5 2.96	+26 55.5	1.841	2.728	11.3	21.2	11 7	5 3.72	+24 3.5	1.171	2.077	14.8	20.9
11 17	4 53.86	+26 53.2	1.787	2.734	7.4	21.0	11 17	4 54.47	+23 37.5	1.149	2.104	9.4	20.6
11 27	4 42.94	+26 42.0	1.760	2.739	3.2	20.7	11 27	4 43.12	+23 4.0	1.150	2.132	3.5	20.4
12 7	4 31.40	+26 22.0	1.762	2.743	2.4	20.7	12 7	4 31.42	+22 25.8	1.177	2.160	2.5	20.4
12 17	4 20.53	+25 55.6	1.794	2.747	6.4	21.0	12 17	4 21.11	+21 47.7	1.231	2.188	8.0	20.8
12 27	4 11.52	+25 26.9	1.854	2.750	10.3	21.2	12 27	4 13.52	+21 15.2	1.309	2.216	12.9	21.2
1 6	4 5.15	+25 0.2	1.939	2.752	13.7	21.4	1 6	4 9.33	+20 52.0	1.409	2.244	16.8	21.5
<b>224653</b>	2005 <i>YO</i> <sub>266</sub>		12 2.7 89°31	2°9/	2.0	18	<b>477434</b>	2009 <i>WJ</i> <sub>136</sub>		12 2.7 338°79	1°7/	2.9	18
10 28	5 2.96	+13 0.3	2.175	2.987	12.9	19.8	10 28	5 1.93	+23 54.6	1.142	1.994	19.5	20.9
11 7	4 57.62	+12 58.4	2.104	2.995	9.9	19.6	11 7	4 59.04	+24 25.9	1.066	1.980	15.1	20.6
11 17	4 50.27	+13 0.1	2.056	3.004	6.5	19.5	11 17	4 52.33	+24 53.4	1.008	1.966	9.9	20.2
11 27	4 41.58	+13 6.7	2.037	3.012	3.5	19.3	11 27	4 42.64	+25 14.6	0.973	1.954	4.1	19.9
12 7	4 32.43	+13 19.1	2.046	3.020	3.5	19.3	12 7	4 31.58	+25 27.6	0.961	1.944	3.1	19.8
12 17	4 23.78	+13 37.8	2.086	3.028	6.5	19.5	12 17	4 21.13	+25 33.1	0.974	1.934	9.0	20.1
12 27	4 16.49	+14 3.3	2.153	3.036	9.7	19.7	12 27	4 13.23	+25 34.8	1.009	1.926	14.6	20.4
1 6	4 11.20	+14 35.1	2.245	3.044	12.6	19.9	1 6	4 9.12	+25 37.5	1.064	1.919	19.5	20.6
<b>188664</b>	2005 <i>SD</i> <sub>109</sub>		12 2.7 116°70	0°2/	2.6	18	<b>383470</b>	2006 <i>YC</i> <sub>40</sub>		12 2.7 257°94	2°0/	2.3	18
10 28	5 8.66	+22 31.4	1.759	2.573	15.4	21.4	10 28	5 6.40	+17 11.7	1.551	2.378	16.5	20.6
11 7	5 2.34	+22 19.9	1.695	2.589	11.7	21.2	11 7	5 1.24	+17 9.1	1.471	2.372	12.6	20.4
11 17	4 53.39	+22 3.5	1.654	2.605	7.4	21.0	11 17	4 53.09	+17 7.3	1.413	2.366	8.2	20.1
11 27	4 42.73	+21 42.5	1.639	2.621	2.7	20.8	11 27	4 42.77	+17 7.3	1.380	2.360	3.5	19.8
12 7	4 31.60	+21 18.4	1.654	2.636	2.1	20.7	12 7	4 31.55	+17 10.2	1.374	2.354	3.2	19.8
12 17	4 21.29	+20 54.0	1.697	2.650	6.7	21.1	12 17	4 20.89	+17 17.5	1.396	2.348	8.0	20.0
12 27	4 12.94	+20 32.9	1.768	2.664	10.7	21.3	12 27	4 12.20	+17 31.0	1.444	2.341	12.6	20.3
1 6	4 7.24	+20 17.9	1.863	2.677	14.2	21.6	1 6	4 6.39	+17 51.7	1.514	2.335	16.6	20.5
<b>376392</b>	2012 <i>EX</i> <sub>10</sub>		12 2.7 159°39	1°0/	2.4	16	<b>22890</b>	<i>Ruthaellis</i>		12 2.7 100°53	1°0/	2.9	18
10 28	5 9.28	+20 33.2	1.802	2.614	15.1	22.0	10 28	5 11.55	+23 26.7	1.529	2.347	17.2	18.4
11 7	5 2.86	+20 18.0	1.728	2.622	11.5	21.8	11 7	5 4.98	+23 51.5	1.470	2.365	13.1	18.2
11 17	4 53.78	+19 59.4	1.677	2.629	7.3	21.6	11 17	4 55.29	+24 11.8	1.432	2.384	8.4	17.9
11 27	4 42.91	+19 38.0	1.653	2.635	2.8	21.3	11 27	4 43.50	+24 25.6	1.420	2.401	3.3	17.7
12 7	4 31.45	+19 15.5	1.659	2.640	2.4	21.3	12 7	4 31.09	+24 32.1	1.437	2.419	2.4	17.7
12 17	4 20.70	+18 54.5	1.694	2.645	6.9	21.6	12 17	4 19.63	+24 32.8	1.481	2.436	7.2	18.0
12 27	4 11.81	+18 38.2	1.757	2.648	11.0	21.8	12 27	4 10.49	+24 31.0	1.553	2.452	11.7	18.3
1 6	4 5.56	+18 29.0	1.843	2.651	14.6	22.1	1 6	4 4.47	+24 30.6	1.647	2.468	15.4	18.6
<b>191546</b>	2003 <i>UV</i> <sub>268</sub>		12 2.7 344°86	0°4/	2.5	17	<b>115838</b>	2003 <i>UX</i> <sub>260</sub>		12 2.7 42°67	1°6/	2.6	18
10 28	5 0.65	+21 41.5	1.992	2.814	13.5	20.3	10 28	5 8.06	+15 21.3	1.486	2.313	17.1	19.4
11 7	4 56.25	+21 29.6	1.910	2.809	10.3	20.1	11 7	5 2.40	+16 3.3	1.423	2.324	13.0	19.2
11 17	4 49.59	+21 14.0	1.851	2.805	6.5	19.9	11 17	4 53.73	+16 50.8	1.382	2.336	8.4	18.9
11 27	4 41.38	+20 55.3	1.819	2.802	2.4	19.6	11 27	4 42.96	+17 42.4	1.367	2.348	3.4	18.7
12 7	4 32.58	+20 35.0	1.816	2.798	2.0	19.6	12 7	4 31.45	+18 36.1	1.379	2.360	2.8	18.7
12 17	4 24.27	+20 15.3	1.842	2.795	6.1	19.8	12 17	4 20.69	+19 30.3	1.420	2.373	7.6	19.0
12 27	4 17.44	+19 59.1	1.894	2.793	10.0	20.1	12 27	4 12.05	+20 24.2	1.487	2.386	12.1	19.3
1 6	4 12.81	+19 48.5	1.971	2.791	13.3	20.3	1 6	4 6.39	+21 18.0	1.576	2.400	15.9	19.6
<b>448795</b>	2011 <i>SM</i> <sub>227</sub>		12 2.7 2°08	1°5/	3.2	18	<b>71505</b>	2000 <i>CD</i> <sub>30</sub>		12 2.7 228°89	2°3/	1.8	18
10 28	5 4.22	+27 10.8	1.684	2.504	15.7	21.3	10 28	5 0.49	+15 30.6	2.576	3.387	11.2	19.3
11 7	4 59.40	+27 2.7	1.608	2.504	12.1	21.1	11 7	4 55.58	+15 7.1	2.488	3.380	8.5	19.1
11 17	4 51.78	+26 45.5	1.553	2.504	7.9	20.8	11 17	4 48.94	+14 43.9	2.425	3.373	5.6	18.9
11 27	4 42.21	+26 18.4	1.524	2.504	3.4	20.5	11 27	4 41.12	+14 22.6	2.390	3.367	2.8	18.7
12 7	4 31.97	+25 42.6	1.522	2.504	2.4	20.5	12 7	4 32.84	+14 5.1	2.385	3.359	2.9	18.7
12 17	4 22.42	+25 1.6	1.549	2.505	6.8	20.8	12 17	4 24.91	+13 52.9	2.410	3.352	5.7	18.9
12 27	4 14.81	+24 20.3	1.602	2.505	11.1	21.0	12 27	4 18.08	+13 47.7	2.464	3.344	8.7	19.1
1 6	4 9.95	+23 43.7	1.678	2.507	14.8	21.2	1 6	4 12.92	+13 50.1	2.543	3.337	11.4	19.2
<b>112534</b>	2002 <i>PG</i> <sub>38</sub>		12 2.7 116°74	4°2/	1.7	18	<b>376389</b>	2012 <i>DD</i> <sub>88</sub>		12 2.7 172°43	0°6/	2.9	18
10 28	5 7.83	+12 40.0	1.608	2.429	16.3	20.2	10 28	5 9.67	+23 30.8	1.652	2.468	16.2	21.5
11 7	5 1.81	+12 12.1	1.547	2.443	12.5	20.0	11 7	5 3.57	+23 37.7	1.576	2.471	12.4	21.3
11 17	4 53.11	+11 48.1	1.508	2.456	8.4	19.8	11 17	4 54.47	+23 39.5	1.522	2.473	8.0	21.0
11 27	4 42.65	+11 31.1	1.495	2.469	4.8	19.6	11 27	4 43.25	+23 35.3	1.493	2.475	3.0	20.7
12 7	4 31.68	+11 23.5	1.510	2.481	4.9	19.7	12 7	4 31.25	+23 25.1	1.493	2.476	2.2	20.7
12 17	4 21.51	+11 27.0	1.553	2.493	8.5	19.9	12 17	4 19.95	+23 11.1	1.522	2.476	7.1	21.0
12 27	4 13.30	+11 42.5	1.622	2.505	12.4	20.2	12 27	4 10.70	+22 56.9	1.578	2.476	11.6	21.3
1 6	4 7.78	+12 9.1	1.714	2.516	15.8	20.4	1 6	4 4.39	+22 46.4	1.657	2.476	15.4	21.5
<b>52056</b>	2002 <i>PO</i> <sub>130</sub>		12 2.7 98°21	2°0/	3.3	18	<b>10544</b>	<i>Hörsnebara</i>		12 2.7 103°87	4°8/	3.9	18
10 28	5 12.16	+27 53.0	1.625	2.432	16.7	20.1	10 28	5 13.98	+32 31.1	1.526	2.327	18.0	18.0
11 7	5 5.17	+27 56.9	1.569	2.458	12.8	19.9	11 7	5 7.15	+33 12.3	1.466	2.345	14.2	17.8
11 17	4 55.22	+27 51.0	1.536	2.482	8.4	19.7	11 17	4 56.82	+33 40.6	1.427	2.364	9.9	17.6
11 27	4 43.40	+27 33.7	1.528	2.507	3.8	19.5	11 27	4 44.10	+33 51.1	1.414	2.382	6.0	17.4
12 7	4 31.16	+27 6.0	1.550	2.530	2.7	19.5	12 7	4 30.69	+33 41.8	1.427	2.399	5.0	17.4
12 17	4 20.00	+26 31.2	1.600	2.553	6.9	19.8	12 17	4 18.36	+33 15.4	1.468	2.416	8.1	17.6
12 27	4 11.17	+25 54.7	1.677	2.575	11.0	20.1	12 27	4 8.66	+32 38.4	1.536	2.432	12.0	17.9
1 6	4 5.36	+25 21.7	1.777	2.596	14.5	20.3	1 6	4 2.43	+31 58.4	1.626	2.447	15.6	18.2
<b>349689</b>	2008 <i>WP</i> <sub>118</sub>		12 2.7 100°09	0°8/	3.0	18							

EPHEMERIDES

12 2.7

12 2.7

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
181452	2006 <i>TJ</i> <sub>23</sub>	12 2.7 264°33'	1.8°/ 3.1 18				318864	2005 <i>TC</i> <sub>63</sub>	12 2.7 164°43'	0.2°/ 2.8 18			
10 28	5 8.14	+25 28.7	1.503	2.325	17.1	21.0	10 28	5 3.57	+22 48.0	2.111	2.923	13.2	21.7
11 7	5 2.97	+25 51.7	1.418	2.316	13.3	20.8	11 7	4 58.36	+22 49.6	2.030	2.924	10.1	21.5
11 17	4 54.42	+26 9.1	1.355	2.306	8.7	20.5	11 17	4 50.91	+22 47.5	1.973	2.925	6.4	21.3
11 27	4 43.35	+26 18.1	1.317	2.297	3.8	20.2	11 27	4 41.91	+22 41.4	1.944	2.926	2.4	21.0
12 7	4 31.15	+26 17.6	1.306	2.287	2.8	20.1	12 7	4 32.36	+22 32.0	1.944	2.926	1.8	21.0
12 17	4 19.52	+26 8.8	1.322	2.277	7.8	20.3	12 17	4 23.29	+22 20.8	1.973	2.927	5.8	21.3
12 27	4 10.07	+25 55.8	1.364	2.267	12.7	20.6	12 27	4 15.70	+22 10.4	2.030	2.927	9.5	21.5
1 6	4 3.87	+25 43.7	1.427	2.257	16.9	20.8	1 6	4 10.31	+22 3.2	2.112	2.927	12.7	21.7
249693	2000 <i>DE</i> <sub>30</sub>	12 2.7 219°64'	4.8°/ 4.6 18				491483	2012 <i>HY</i> <sub>43</sub>	12 2.7 286°51'	2°5'/ 3.4 17			
10 28	5 8.51	+37 26.7	2.425	3.191	13.1	21.1	10 28	5 4.50	+28 30.6	2.229	3.030	13.0	21.5
11 7	5 2.22	+37 48.1	2.329	3.182	10.6	20.9	11 7	4 59.17	+29 3.4	2.143	3.026	10.1	21.3
11 17	4 53.43	+37 57.2	2.255	3.172	7.9	20.7	11 17	4 51.50	+29 30.2	2.080	3.023	6.8	21.1
11 27	4 42.86	+37 50.6	2.209	3.162	5.5	20.6	11 27	4 42.17	+29 48.7	2.045	3.020	3.6	20.9
12 7	4 31.57	+37 26.9	2.191	3.151	4.8	20.5	12 7	4 32.14	+29 57.6	2.039	3.016	2.9	20.8
12 17	4 20.76	+36 47.7	2.204	3.140	6.6	20.6	12 17	4 22.53	+29 57.6	2.063	3.013	5.9	21.0
12 27	4 11.57	+35 57.2	2.244	3.128	9.4	20.8	12 27	4 14.38	+29 51.0	2.115	3.010	9.3	21.2
1 6	4 4.79	+35 1.3	2.310	3.115	12.1	20.9	1 6	4 8.47	+29 41.5	2.191	3.007	12.3	21.4
27752	1991 <i>GL</i> <sub>8</sub>	12 2.7 128°08'	1.4°/ 3.2 18				178825	2001 <i>GB</i> <sub>1</sub>	12 2.7 249°26'	11.7°/ 29.9 18			
10 28	5 5.84	+26 40.8	2.167	2.970	13.3	19.6	10 28	5 7.22	- 7 38.1	1.797	2.564	16.9	20.3
11 7	4 59.97	+26 46.0	2.094	2.980	10.2	19.4	11 7	5 1.44	- 8 34.7	1.717	2.548	14.8	20.1
11 17	4 51.84	+26 44.6	2.044	2.990	6.6	19.2	11 17	4 53.06	- 9 12.4	1.656	2.531	12.9	20.0
11 27	4 42.21	+26 35.6	2.021	3.000	2.9	19.0	11 27	4 42.78	- 9 23.4	1.619	2.514	11.8	19.9
12 7	4 32.10	+26 19.5	2.028	3.009	2.1	19.0	12 7	4 31.68	- 9 2.8	1.606	2.496	12.1	19.8
12 17	4 22.59	+25 58.1	2.066	3.018	5.6	19.2	12 17	4 20.99	- 8 9.3	1.618	2.477	13.8	19.9
12 27	4 14.65	+25 34.8	2.131	3.027	9.2	19.5	12 27	4 11.90	- 6 45.7	1.654	2.458	16.1	20.0
1 6	4 8.97	+25 13.0	2.222	3.035	12.2	19.7	1 6	4 5.27	- 4 58.5	1.710	2.438	18.6	20.2
110128	2001 <i>SP</i> <sub>145</sub>	12 2.7 188°39'	1°1'/ 3.1 18				506115	2016 <i>AB</i> <sub>200</sub>	12 2.7 133°56'	18°0'/ 26.9 17			
10 28	5 4.52	+26 17.3	2.130	2.937	13.3	20.1	10 28	5 7.02	-11 30.0	1.232	2.017	22.3	21.3
11 7	4 59.09	+26 10.6	2.047	2.936	10.2	19.9	11 7	5 1.84	-14 7.8	1.194	2.023	20.2	21.2
11 17	4 51.36	+25 56.9	1.987	2.936	6.6	19.6	11 17	4 53.44	-16 16.5	1.174	2.028	18.6	21.1
11 27	4 42.06	+25 35.7	1.955	2.935	2.8	19.4	11 27	4 42.89	-17 41.9	1.173	2.033	18.0	21.1
12 7	4 32.20	+25 8.0	1.952	2.934	1.9	19.3	12 7	4 31.70	-18 15.7	1.191	2.038	18.6	21.2
12 17	4 22.88	+24 36.2	1.979	2.933	5.8	19.6	12 17	4 21.47	-17 56.5	1.227	2.042	20.1	21.3
12 27	4 15.10	+24 3.9	2.034	2.931	9.5	19.8	12 27	4 13.60	-16 50.3	1.281	2.046	22.0	21.5
1 6	4 9.57	+23 34.6	2.114	2.929	12.7	20.0	1 6	4 8.90	-15 7.7	1.349	2.050	23.9	21.6
238566	2004 <i>XD</i> <sub>75</sub>	12 2.7 27°54'	0°3'/ 2.6 18				183622	2003 <i>UO</i> <sub>245</sub>	12 2.7 21°88'	1°4'/ 2.5 18			
10 28	5 3.85	+22 39.8	1.402	2.238	17.4	19.8	10 28	5 4.45	+19 26.9	1.085	1.940	20.2	19.9
11 7	4 59.41	+22 24.8	1.338	2.245	13.2	19.6	11 7	5 0.57	+19 25.8	1.029	1.945	15.4	19.7
11 17	4 51.90	+22 4.0	1.295	2.252	8.4	19.3	11 17	4 52.98	+19 23.4	0.992	1.952	9.8	19.4
11 27	4 42.30	+21 38.1	1.277	2.259	3.1	19.0	11 27	4 42.79	+19 20.4	0.977	1.959	3.8	19.1
12 7	4 32.05	+21 9.4	1.285	2.268	2.4	19.0	12 7	4 31.75	+19 18.3	0.986	1.968	3.2	19.1
12 17	4 22.66	+20 41.5	1.320	2.276	7.6	19.3	12 17	4 21.75	+19 19.2	1.019	1.978	9.1	19.4
12 27	4 15.47	+20 18.5	1.380	2.286	12.4	19.6	12 27	4 14.42	+19 26.1	1.076	1.988	14.4	19.8
1 6	4 11.28	+20 3.8	1.461	2.296	16.3	19.9	1 6	4 10.70	+19 40.8	1.152	1.999	18.9	20.1
35472	1998 <i>EJ</i> <sub>8</sub>	12 2.7 114°36'	3°6'/ 1.6 18				156658	2002 <i>JM</i> <sub>71</sub>	12 2.7 253°63'	3°2'/ 1.6 18			
10 28	5 5.28	+13 42.0	1.886	2.703	14.4	18.8	10 28	5 1.54	+12 35.2	2.330	3.141	12.2	19.8
11 7	4 59.54	+13 4.8	1.823	2.717	11.0	18.7	11 7	4 56.59	+12 15.3	2.241	3.131	9.4	19.6
11 17	4 51.54	+12 29.6	1.783	2.731	7.3	18.5	11 17	4 49.71	+11 58.0	2.175	3.121	6.4	19.3
11 27	4 42.09	+11 59.3	1.770	2.744	4.2	18.3	11 27	4 41.48	+11 45.4	2.138	3.110	3.7	19.2
12 7	4 32.23	+11 36.8	1.786	2.757	4.4	18.3	12 7	4 32.70	+11 39.3	2.129	3.099	3.8	19.2
12 17	4 23.04	+11 24.2	1.831	2.770	7.5	18.6	12 17	4 24.25	+11 41.3	2.151	3.088	6.6	19.3
12 27	4 15.51	+11 23.0	1.903	2.782	11.0	18.8	12 27	4 17.00	+11 52.2	2.200	3.077	9.8	19.5
1 6	4 10.26	+11 33.2	1.998	2.794	14.1	19.0	1 6	4 11.59	+12 12.2	2.273	3.066	12.7	19.7
474234	2001 <i>QM</i> <sub>123</sub>	12 2.7 56°05'	2°5'/ 3.3 18				486636	2013 <i>NW</i> <sub>22</sub>	12 2.7 132°01'	8°7'/ 8.4 17			
10 28	5 9.91	+27 20.5	1.293	2.121	19.1	20.6	10 28	5 14.82	+54 41.6	2.813	3.480	13.5	21.9
11 7	5 4.11	+27 41.4	1.246	2.146	14.6	20.4	11 7	5 7.19	+55 18.2	2.738	3.489	12.0	21.8
11 17	4 54.85	+27 52.6	1.220	2.170	9.6	20.1	11 17	4 56.58	+55 35.5	2.684	3.498	10.5	21.7
11 27	4 43.35	+27 51.4	1.217	2.196	4.4	19.9	11 27	4 44.00	+55 28.4	2.652	3.507	9.3	21.7
12 7	4 31.34	+27 37.9	1.240	2.221	3.3	19.9	12 7	4 30.88	+54 54.6	2.646	3.516	8.7	21.6
12 17	4 20.60	+27 15.5	1.290	2.246	7.8	20.3	12 17	4 18.73	+53 55.8	2.666	3.524	9.0	21.7
12 27	4 12.54	+26 49.8	1.365	2.272	12.4	20.6	12 27	4 8.83	+52 37.1	2.712	3.532	10.1	21.8
1 6	4 7.92	+26 26.4	1.462	2.298	16.3	20.9	1 6	4 1.93	+51 6.0	2.782	3.539	11.5	21.9
194943	2002 <i>AF</i> <sub>152</sub>	12 2.7 294°62'	0°3'/ 2.8 18				523201	2016 <i>VC</i> <sub>20</sub>	12 2.7 82°96'	3°1'/ 1.7 18			
10 28	5 4.90	+22 52.2	1.589	2.416	16.2	20.6	10 28	5 4.01	+16 33.8	1.680	2.507	15.4	21.4
11 7	5 0.33	+22 58.0	1.497	2.398	12.5	20.3	11 7	4 58.97	+15 48.3	1.611	2.512	11.8	21.2
11 17	4 52.68	+22 59.7	1.427	2.381	8.1	20.0	11 17	4 51.39	+15 1.7	1.565	2.517	7.7	20.9
11 27	4 42.71	+22 56.5	1.381	2.363	3.1	19.7	11 27	4 42.10	+14 17.2	1.544	2.522	3.9	20.7
12 7	4 31.66	+22 48.4	1.363	2.346	2.3	19.6	12 7	4 32.28	+13 38.6	1.552	2.527	4.1	20.7
12 17	4 21.03	+22 37.3	1.373	2.329	7.5	19.9	12 17	4 23.14	+13 9.4	1.587	2.532	7.9	21.0
12 27	4 12.30	+22 26.7	1.408	2.312	12.3	20.1	12 27	4 15.80	+12 52.2	1.649	2.537	11.9	21.2
1 6	4 6.51	+22 20.3	1.465	2.295	16.6	20.3	1 6	4 10.98	+12 48.0	1.733	2.542	15.3	21.5
20084	Buckmaster	12 2.7 173°83'	11°0'/ 30.8 18				56600	2000 <i>JK</i> <sub>50</sub>	12 2.7 92°25'	4°3'/ 3.9 18			
10 28	5 7.53	- 6 48.3	1.803	2.573	16.8	17.7	10 28	5 12.88	+31 54.8	1.706	2.501	16.6	19.0
11 7	5 1.40	- 7 37.6	1.740	2.575	14.5	17.6	11 7	5 5.94	+32 38.5	1.648	2.525	13.0	18.9
11 17	4 52.83	- 8 7.6	1.697	2.577	12.4	17.4	11 17	4 55.89	+33 10.9	1.613	2.548	9.0	18.7
11 27	4 42.61	- 8 11.6	1.678	2.579	11.1	17.4	11 27	4 43.77	+33 27.6	1.603	2.571	5.4	18.5
12 7	4 31.84	- 7 46.2	1.684	2.580	11.3	17.4	12 7	4 31.07	+33 27.0	1.622	2.594	4.6	18.5
12 17	4 21.69	- 6 51.4	1.716	2.580	12.8	17.5	12 17	4 19.35	+33 10.9	1.669	2.616	7.4	18.7
12 27	4 13.24	- 5 30.7	1.771	2.580	15.0	17.6	12 27	4 9.96	+32 44.8	1.744	2.637	11.0	19.0
1 6	4 7.20	- 3 50.5	1.848	2.579	17.3	17.8	1 6	4 3.70	+32 15.0	1.842	2.658	14.2	19.3

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12 2.7

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>416400</b>	2003 <i>UZ</i> <sub>117</sub>	12 2.7 345 <sup>o</sup> :23	0 <sup>o</sup> :5/29.9 16				<b>213607</b>	2002 <i>PL</i> <sub>103</sub>	12 2.7 31 <sup>o</sup> :47	9 <sup>o</sup> :1/30.4 18			
10 28	4 39.36	+ 2 2.0	37.848	38.629	0.9	21.1	10 28	5 1.22	+ 3 55.0	1.380	2.211	17.9	19.5
11 7	4 38.64	+ 1 57.0	37.771	38.628	0.7	21.0	11 7	4 57.06	+ 2 38.5	1.334	2.224	14.5	19.3
11 17	4 37.84	+ 1 52.6	37.721	38.627	0.6	21.0	11 17	4 50.23	+ 1 34.9	1.308	2.238	11.3	19.1
11 27	4 36.98	+ 1 49.1	37.698	38.626	0.5	21.0	11 27	4 41.68	+ 0 51.9	1.306	2.253	9.2	19.1
12 7	4 36.11	+ 1 46.4	37.705	38.625	0.5	21.0	12 7	4 32.70	+ 0 34.2	1.328	2.269	9.6	19.1
12 17	4 35.25	+ 1 44.8	37.741	38.624	0.7	21.0	12 17	4 24.56	+ 0 43.6	1.374	2.285	12.0	19.3
12 27	4 34.44	+ 1 44.1	37.804	38.622	0.8	21.1	12 27	4 18.40	+ 1 17.9	1.443	2.303	15.1	19.5
1 6	4 33.71	+ 1 44.5	37.893	38.621	1.0	21.1	1 6	4 14.87	+ 2 12.5	1.532	2.320	17.9	19.8
<b>67017</b>	1999 <i>XV</i> <sub>132</sub>	12 2.7 24 <sup>o</sup> :33	4 <sup>o</sup> :5/ 4.5 18				<b>446161</b>	2013 <i>EH</i> <sub>118</sub>	12 2.7 322 <sup>o</sup> :21	7 <sup>o</sup> :0/30.3 18			
10 28	5 4.82	+35 46.1	2.108	2.895	14.1	17.9	10 28	5 0.79	+ 6 35.1	1.736	2.558	15.2	20.3
11 7	4 59.58	+36 2.5	2.029	2.897	11.3	17.7	11 7	4 56.53	+ 5 30.8	1.661	2.550	12.2	20.1
11 17	4 51.80	+36 6.1	1.972	2.899	8.2	17.6	11 17	4 49.90	+ 4 33.4	1.609	2.543	9.2	19.9
11 27	4 42.28	+35 54.1	1.940	2.901	5.4	17.4	11 27	4 41.60	+ 3 48.4	1.581	2.536	7.2	19.7
12 7	4 32.16	+35 25.9	1.937	2.903	4.6	17.4	12 7	4 32.69	+ 3 20.8	1.581	2.529	7.7	19.8
12 17	4 22.66	+34 43.8	1.962	2.906	6.7	17.5	12 17	4 24.27	+ 3 13.5	1.606	2.523	10.2	19.9
12 27	4 14.92	+33 52.7	2.015	2.908	9.7	17.7	12 27	4 17.42	+ 3 27.1	1.656	2.517	13.4	20.1
1 6	4 9.68	+32 58.5	2.092	2.911	12.7	17.9	1 6	4 12.87	+ 3 59.4	1.727	2.511	16.4	20.3
<b>128656</b>	2004 <i>RG</i> <sub>49</sub>	12 2.7 267 <sup>o</sup> :25	3 <sup>o</sup> :6/ 3.6 18				<b>269216</b>	2008 <i>LG</i> <sub>15</sub>	12 2.7 113 <sup>o</sup> :65	8 <sup>o</sup> :0/ 2.2 18			
10 28	5 7.77	+30 3.8	1.684	2.493	16.2	19.8	10 28	5 10.47	- 0 14.8	1.730	2.517	16.7	20.4
11 7	4 59.58	+30 35.4	1.598	2.485	12.8	19.5	11 7	5 3.61	- 0 19.8	1.670	2.532	13.6	20.2
11 17	4 54.04	+30 58.0	1.533	2.476	8.8	19.3	11 17	4 54.21	- 0 8.3	1.631	2.546	10.6	20.1
11 27	4 43.23	+31 8.0	1.494	2.467	4.9	19.0	11 27	4 43.15	+ 0 23.5	1.619	2.560	8.3	20.0
12 7	4 31.39	+31 3.5	1.482	2.458	4.0	19.0	12 7	4 31.59	+ 1 16.4	1.634	2.573	8.3	20.0
12 17	4 20.10	+30 45.6	1.498	2.449	7.5	19.2	12 17	4 20.79	+ 2 28.7	1.677	2.586	10.4	20.1
12 27	4 10.85	+30 18.9	1.540	2.440	11.7	19.4	12 27	4 11.84	+ 3 56.4	1.747	2.599	13.2	20.4
1 6	4 4.66	+29 49.6	1.605	2.431	15.5	19.6	1 6	4 5.46	+ 5 34.5	1.840	2.611	16.0	20.6
<b>486960</b>	2014 <i>NJ</i> <sub>2</sub>	12 2.7 135 <sup>o</sup> :14	0 <sup>o</sup> :9/ 3.2 17				<b>494264</b>	2016 <i>QC</i> <sub>54</sub>	12 2.7 323 <sup>o</sup> :84	1 <sup>o</sup> :0/ 3.1 18			
10 28	5 4.67	+27 35.8	2.293	3.094	12.7	22.0	10 28	5 2.76	+27 1.3	1.191	2.036	19.3	20.9
11 7	4 58.92	+27 4.0	2.216	3.101	9.7	21.8	11 7	4 59.54	+26 31.8	1.110	2.020	15.0	20.6
11 17	4 51.10	+26 23.5	2.162	3.109	6.3	21.6	11 17	4 52.57	+25 47.9	1.048	2.005	9.8	20.3
11 27	4 41.96	+25 34.7	2.136	3.116	2.6	21.4	11 27	4 42.77	+24 49.2	1.008	1.990	4.0	19.9
12 7	4 32.44	+24 39.8	2.141	3.123	1.8	21.3	12 7	4 31.80	+23 38.9	0.993	1.976	2.7	19.8
12 17	4 23.54	+23 42.1	2.177	3.130	5.4	21.6	12 17	4 21.56	+22 24.0	1.003	1.963	8.9	20.1
12 27	4 16.14	+22 46.1	2.241	3.136	8.8	21.8	12 27	4 13.86	+21 13.7	1.036	1.951	14.6	20.3
1 6	4 10.84	+21 55.7	2.331	3.142	11.8	22.0	1 6	4 9.82	+20 15.6	1.089	1.940	19.5	20.6
<b>441288</b>	2007 <i>XP</i> <sub>39</sub>	12 2.7 1 <sup>o</sup> :86	7 <sup>o</sup> :1/ 5.8 17				<b>358598</b>	2007 <i>UE</i> <sub>105</sub>	12 2.7 325 <sup>o</sup> :93	1 <sup>o</sup> :8/ 2.4 17			
10 28	5 1.77	+39 31.3	1.240	2.057	20.3	20.4	10 28	5 2.36	+17 41.2	1.528	2.363	16.3	21.3
11 7	4 58.86	+39 32.9	1.172	2.055	16.7	20.2	11 7	4 58.34	+17 40.1	1.443	2.349	12.5	21.0
11 17	4 52.04	+39 9.3	1.122	2.054	12.6	20.0	11 17	4 51.39	+17 39.6	1.380	2.336	8.1	20.7
11 27	4 42.48	+38 15.7	1.094	2.054	8.7	19.8	11 27	4 42.27	+17 40.8	1.341	2.323	3.4	20.4
12 7	4 32.06	+36 52.8	1.089	2.056	7.2	19.7	12 7	4 32.18	+17 44.8	1.330	2.310	3.1	20.3
12 17	4 22.81	+35 7.3	1.109	2.060	9.6	19.8	12 17	4 22.56	+17 53.0	1.345	2.298	7.9	20.6
12 27	4 16.40	+33 11.6	1.152	2.065	13.6	20.1	12 27	4 14.78	+18 7.2	1.385	2.287	12.6	20.9
1 6	4 13.72	+31 18.3	1.217	2.072	17.6	20.3	1 6	4 9.83	+18 28.6	1.447	2.277	16.7	21.1
<b>104089</b>	2000 <i>EJ</i> <sub>33</sub>	12 2.7 193 <sup>o</sup> :23	0 <sup>o</sup> :6/ 2.6 18				<b>506120</b>	2016 <i>BM</i> <sub>67</sub>	12 2.7 282 <sup>o</sup> :50	3 <sup>o</sup> :5/ 1.9 17			
10 28	5 7.30	+20 22.0	1.641	2.463	16.0	20.3	10 28	5 2.59	+ 9 48.4	2.413	3.217	12.0	21.0
11 7	5 1.79	+20 27.1	1.563	2.462	12.2	20.1	11 7	4 57.39	+ 9 54.1	2.319	3.204	9.4	20.8
11 17	4 53.39	+20 30.4	1.508	2.461	7.8	19.8	11 17	4 50.25	+10 5.8	2.249	3.190	6.5	20.6
11 27	4 42.93	+20 31.5	1.479	2.460	2.9	19.5	11 27	4 41.74	+10 24.9	2.207	3.176	4.0	20.4
12 7	4 31.67	+20 31.0	1.477	2.459	2.3	19.5	12 7	4 32.62	+10 52.2	2.195	3.162	4.0	20.4
12 17	4 21.03	+20 30.4	1.504	2.458	7.2	19.8	12 17	4 23.76	+11 27.8	2.213	3.149	6.6	20.5
12 27	4 12.32	+20 32.1	1.558	2.456	11.7	20.0	12 27	4 16.04	+12 11.2	2.259	3.135	9.6	20.7
1 6	4 6.42	+20 38.6	1.634	2.455	15.6	20.3	1 6	4 10.11	+13 1.4	2.331	3.121	12.4	20.9
<b>304163</b>	2006 <i>PQ</i> <sub>7</sub>	12 2.7 18 <sup>o</sup> :50	7 <sup>o</sup> :0/ 1.3 18				<b>332733</b>	Drolshagen	12 2.7 93 <sup>o</sup> :88	1 <sup>o</sup> :6/ 2.2 18			
10 28	5 1.45	+ 6 52.4	1.441	2.274	17.2	20.0	10 28	5 6.08	+21 38.4	1.496	2.325	16.9	20.4
11 7	4 57.31	+ 6 13.0	1.383	2.279	13.7	19.8	11 7	5 0.92	+20 47.4	1.426	2.329	12.8	20.2
11 17	4 50.47	+ 5 43.9	1.345	2.285	10.0	19.6	11 17	4 52.80	+19 49.4	1.377	2.333	8.2	19.9
11 27	4 41.80	+ 5 30.2	1.331	2.292	7.3	19.5	11 27	4 42.70	+18 46.9	1.354	2.336	3.2	19.6
12 7	4 32.56	+ 5 35.2	1.342	2.300	7.5	19.5	12 7	4 31.97	+17 44.5	1.359	2.340	3.1	19.6
12 17	4 24.03	+ 5 59.9	1.379	2.309	10.4	19.7	12 17	4 22.09	+16 47.7	1.392	2.343	7.9	19.9
12 27	4 17.42	+ 6 43.0	1.440	2.318	13.9	19.9	12 27	4 14.32	+16 1.8	1.450	2.347	12.5	20.2
1 6	4 13.46	+ 7 41.1	1.522	2.328	17.2	20.2	1 6	4 9.46	+15 29.9	1.530	2.350	16.4	20.5
<b>54138</b>	2000 <i>HC</i> <sub>36</sub>	12 2.7 248 <sup>o</sup> :83	2 <sup>o</sup> :5/ 2.2 18				<b>35767</b>	1999 <i>JM</i>	12 2.7 124 <sup>o</sup> :73	6 <sup>o</sup> :1/30.4 18			
10 28	5 4.44	+14 31.0	2.029	2.843	13.6	19.0	10 28	5 4.18	+ 9 18.4	1.792	2.610	15.0	18.3
11 7	4 59.12	+14 31.1	1.941	2.835	10.5	18.8	11 7	4 58.85	+ 8 3.4	1.728	2.618	11.8	18.1
11 17	4 51.48	+14 34.2	1.877	2.827	6.9	18.5	11 17	4 51.21	+ 6 52.8	1.687	2.625	8.5	17.9
11 27	4 42.19	+14 41.2	1.840	2.818	3.4	18.3	11 27	4 42.05	+ 5 52.1	1.673	2.633	6.3	17.8
12 7	4 32.21	+14 53.1	1.833	2.809	3.3	18.3	12 7	4 32.46	+ 5 6.2	1.687	2.640	6.7	17.8
12 17	4 22.61	+15 10.5	1.855	2.800	6.8	18.5	12 17	4 23.52	+ 4 38.5	1.728	2.647	9.4	18.0
12 27	4 14.45	+15 34.3	1.904	2.791	10.6	18.7	12 27	4 16.24	+ 4 30.1	1.795	2.654	12.6	18.2
1 6	4 8.49	+16 4.6	1.9										

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>286846</b>	2002 <i>NL</i> <sub>61</sub>		12 2.7 229°10	3:7/ 4.2	18		<b>145553</b>	2006 <i>LN</i> <sub>5</sub>		12 2.7 52°68	3:3/ 1.9	18	R
10 28	5 8.34	+34 12.2	2.244	3.024	13.6	20.8	10 28	5 8.68	+18 11.3	1.104	1.951	20.4	19.2
11 7	5 2.20	+34 15.8	2.145	3.012	10.8	20.6	11 7	5 3.10	+17 16.6	1.068	1.979	15.4	19.0
11 17	4 53.50	+34 7.4	2.070	3.000	7.7	20.4	11 17	4 54.12	+16 20.5	1.052	2.009	9.8	18.8
11 27	4 42.97	+33 44.3	2.021	2.987	4.7	20.2	11 27	4 43.12	+15 27.7	1.059	2.039	4.5	18.6
12 7	4 31.73	+33 6.0	2.002	2.973	3.9	20.1	12 7	4 31.86	+14 43.2	1.091	2.069	4.6	18.7
12 17	4 20.99	+32 15.0	2.013	2.959	6.3	20.3	12 17	4 22.05	+14 11.7	1.148	2.099	9.4	19.0
12 27	4 11.90	+31 16.1	2.052	2.944	9.7	20.4	12 27	4 14.98	+13 55.9	1.229	2.129	14.1	19.4
1 6	4 5.29	+30 15.5	2.117	2.929	12.8	20.6	1 6	4 11.28	+13 55.7	1.331	2.159	18.0	19.7
<b>445948</b>	2013 <i>AU</i> <sub>70</sub>		12 2.7 270°63	1°9/ 2.2	18		<b>355348</b>	2007 <i>TC</i> <sub>153</sub>		12 2.7 18°33	1°0/ 3.0	17	
10 28	5 3.83	+17 50.1	1.869	2.690	14.3	21.6	10 28	4 59.31	+25 49.2	0.970	1.835	21.1	19.7
11 7	4 58.90	+17 35.5	1.780	2.679	11.0	21.4	11 7	4 56.85	+25 32.3	0.929	1.850	16.1	19.4
11 17	4 51.47	+17 20.0	1.715	2.667	7.1	21.1	11 17	4 50.61	+25 4.1	0.906	1.867	10.3	19.2
11 27	4 42.25	+17 5.0	1.675	2.656	3.0	20.9	11 27	4 41.93	+24 25.6	0.905	1.887	4.0	18.9
12 7	4 32.28	+16 52.1	1.665	2.644	2.9	20.8	12 7	4 32.69	+23 40.9	0.926	1.909	2.7	18.9
12 17	4 22.73	+16 43.5	1.683	2.632	7.0	21.1	12 17	4 24.75	+22 55.8	0.971	1.933	8.6	19.4
12 27	4 14.75	+16 41.3	1.728	2.620	11.1	21.3	12 27	4 19.61	+22 16.9	1.038	1.959	13.9	19.7
1 6	4 9.15	+16 47.1	1.796	2.609	14.7	21.5	1 6	4 17.98	+21 48.6	1.124	1.986	18.2	20.1
<b>166327</b>	2002 <i>JU</i> <sub>88</sub>		12 2.7 145°11	0°0/ 2.8	18		<b>253399</b>	2003 <i>OD</i> <sub>27</sub>		12 2.7 83°02	0°0/ 2.7	18	
10 28	5 6.02	+23 49.9	1.971	2.782	14.1	20.7	10 28	5 9.57	+23 17.3	1.340	2.170	18.4	20.6
11 7	5 0.28	+23 31.8	1.896	2.789	10.7	20.5	11 7	5 3.75	+22 59.8	1.284	2.187	14.0	20.3
11 17	4 52.15	+23 7.8	1.844	2.795	6.8	20.3	11 17	4 54.65	+22 35.5	1.249	2.203	8.9	20.1
11 27	4 42.43	+22 38.1	1.820	2.801	2.5	20.0	11 27	4 43.39	+22 4.9	1.238	2.220	3.3	19.8
12 7	4 32.20	+22 4.6	1.824	2.807	1.9	20.0	12 7	4 31.59	+21 30.4	1.254	2.236	2.4	19.8
12 17	4 22.61	+21 30.1	1.859	2.812	6.1	20.3	12 17	4 20.89	+20 56.2	1.297	2.253	7.9	20.2
12 27	4 14.70	+20 58.3	1.921	2.817	10.0	20.5	12 27	4 12.69	+20 27.2	1.366	2.269	12.7	20.5
1 6	4 9.17	+20 32.5	2.008	2.821	13.3	20.7	1 6	4 7.75	+20 7.2	1.456	2.285	16.7	20.8
<b>432952</b>	2012 <i>HZ</i> <sub>60</sub>		12 2.7 76°14	2°8/ 3.3	18		<b>279619</b>	2011 <i>ED</i> <sub>39</sub>		12 2.7 166°27	0°5/ 2.6	18	
10 28	5 11.24	+26 45.5	1.367	2.189	18.5	20.9	10 28	5 7.66	+21 12.8	1.948	2.759	14.2	22.2
11 7	5 5.30	+27 27.7	1.308	2.204	14.3	20.7	11 7	5 1.59	+21 7.2	1.870	2.763	10.9	21.9
11 17	4 55.82	+28 2.7	1.270	2.219	9.5	20.5	11 17	4 53.04	+20 58.3	1.816	2.767	6.9	21.7
11 27	4 43.88	+28 26.4	1.256	2.234	4.5	20.2	11 27	4 42.80	+20 46.3	1.789	2.771	2.6	21.5
12 7	4 31.14	+28 36.8	1.269	2.249	3.5	20.2	12 7	4 31.96	+20 32.3	1.792	2.774	2.0	21.4
12 17	4 19.42	+28 35.1	1.309	2.264	8.0	20.5	12 17	4 21.71	+20 18.2	1.824	2.776	6.4	21.7
12 27	4 10.29	+28 26.1	1.375	2.279	12.6	20.8	12 27	4 13.15	+20 6.7	1.884	2.777	10.3	22.0
1 6	4 4.66	+28 15.6	1.462	2.293	16.5	21.1	1 6	4 7.02	+20 0.4	1.969	2.778	13.7	22.2
<b>78933</b>	2003 <i>SB</i> <sub>145</sub>		12 2.7 105°32	1°4/ 2.1	18		<b>332524</b>	2008 <i>LP</i> <sub>4</sub>		12 2.7 355°77	6°2/ 1.2	18	
10 28	5 1.68	+20 22.6	2.360	3.172	12.0	19.3	10 28	5 3.01	+10 55.7	1.294	2.136	18.3	20.2
11 7	4 56.55	+19 36.7	2.285	3.180	9.1	19.1	11 7	4 58.94	+10 2.7	1.228	2.134	14.3	19.9
11 17	4 49.59	+18 47.1	2.235	3.187	5.8	18.9	11 17	4 51.76	+9 14.8	1.183	2.132	10.0	19.7
11 27	4 41.44	+17 55.6	2.214	3.195	2.4	18.7	11 27	4 42.40	+8 37.9	1.161	2.131	6.7	19.5
12 7	4 32.95	+17 5.3	2.223	3.202	2.3	18.7	12 7	4 32.25	+8 16.9	1.164	2.130	7.0	19.5
12 17	4 24.98	+16 19.0	2.262	3.209	5.7	19.0	12 17	4 22.85	+8 15.1	1.192	2.130	10.7	19.7
12 27	4 18.32	+15 40.0	2.329	3.216	8.9	19.2	12 27	4 15.59	+8 33.2	1.243	2.131	15.0	19.9
1 6	4 13.52	+15 10.0	2.422	3.223	11.7	19.4	1 6	4 11.36	+9 9.1	1.314	2.132	18.8	20.2
<b>199916</b>	2007 <i>GN</i> <sub>23</sub>		12 2.7 151°77	0°5/ 2.6	18		<b>210521</b>	1998 <i>SG</i> <sub>115</sub>		12 2.7 31°82	9°1/ 4.9	18	
10 28	5 6.95	+21 32.4	1.978	2.789	14.0	21.6	10 28	5 10.36	+40 10.2	1.457	2.248	19.1	19.2
11 7	5 0.95	+21 19.6	1.904	2.797	10.7	21.4	11 7	5 5.25	+41 38.3	1.400	2.260	15.9	19.1
11 17	4 52.57	+21 3.0	1.852	2.804	6.8	21.2	11 17	4 56.14	+42 48.5	1.362	2.272	12.6	18.9
11 27	4 42.59	+20 43.0	1.828	2.810	2.5	20.9	11 27	4 44.11	+43 32.3	1.346	2.286	9.9	18.8
12 7	4 32.09	+20 21.1	1.834	2.816	2.0	20.9	12 7	4 30.99	+43 44.7	1.355	2.299	9.1	18.8
12 17	4 22.20	+19 59.6	1.870	2.821	6.2	21.2	12 17	4 18.90	+43 26.7	1.389	2.314	10.8	18.9
12 27	4 13.98	+19 41.5	1.933	2.826	10.1	21.4	12 27	4 9.68	+42 45.8	1.447	2.329	13.6	19.1
1 6	4 8.14	+19 29.3	2.021	2.831	13.4	21.7	1 6	4 4.38	+41 52.4	1.525	2.345	16.5	19.4
<b>432390</b>	2009 <i>WW</i> <sub>253</sub>		12 2.7 62°41	1°0/ 2.9	18		<b>277367</b>	2005 <i>TE</i> <sub>193</sub>		12 2.7 233°29	3°2/ 3.4	18	
10 28	5 9.02	+23 5.7	1.393	2.221	18.0	20.7	10 28	5 9.01	+28 41.3	1.667	2.477	16.3	21.6
11 7	5 3.42	+23 35.6	1.334	2.236	13.7	20.5	11 7	5 3.43	+29 17.1	1.585	2.473	12.8	21.3
11 17	4 54.53	+24 1.6	1.297	2.250	8.8	20.2	11 17	4 54.66	+29 45.4	1.524	2.468	8.7	21.1
11 27	4 43.39	+24 21.6	1.284	2.265	3.5	20.0	11 27	4 43.52	+30 2.5	1.488	2.463	4.6	20.8
12 7	4 31.53	+24 34.4	1.298	2.280	2.5	19.9	12 7	4 31.39	+30 6.3	1.480	2.458	3.7	20.8
12 17	4 20.61	+24 41.2	1.339	2.295	7.6	20.3	12 17	4 19.82	+29 57.7	1.501	2.453	7.5	21.0
12 27	4 12.09	+24 45.1	1.406	2.311	12.3	20.6	12 27	4 10.33	+29 40.8	1.548	2.447	11.7	21.2
1 6	4 6.82	+24 49.9	1.495	2.326	16.2	20.9	1 6	4 3.92	+29 21.2	1.617	2.441	15.5	21.4
<b>361815</b>	2008 <i>CB</i> <sub>77</sub>		12 2.7 290°89	4°8/ 4.1	17		<b>111271</b>	2001 <i>XM</i> <sub>33</sub>		12 2.7 234°14	1°4/ 2.2	18	
10 28	5 6.43	+33 59.3	1.891	2.686	15.2	21.0	10 28	5 2.80	+20 7.7	2.177	2.991	12.8	20.0
11 7	5 1.35	+34 36.0	1.798	2.673	12.2	20.7	11 7	4 57.71	+19 31.4	2.090	2.985	9.8	19.8
11 17	4 53.29	+35 1.8	1.728	2.660	8.9	20.5	11 17	4 50.50	+18 51.2	2.026	2.978	6.2	19.6
11 27	4 43.01	+35 12.7	1.683	2.646	5.8	20.3	11 27	4 41.85	+18 8.7	1.991	2.971	2.5	19.3
12 7	4 31.73	+35 6.1	1.665	2.633	5.0	20.2	12 7	4 32.67	+17 26.6	1.985	2.964	2.4	19.3
12 17	4 20.90	+34 43.1	1.676	2.620	7.5	20.4	12 17	4 23.94	+16 47.9	2.008	2.957	6.2	19.5
12 27	4 11.94	+34 8.1	1.713	2.608	11.1	20.5	12 27	4 16.60	+16 15.8	2.060	2.950	9.8	19.8
1 6	4 5.83	+33 27.4	1.773	2.595	14.5	20.7	1 6	4 11.31	+15 52.5	2.137	2.942	12.9	20.0
<b>51203</b>	2000 <i>JW</i> <sub>7</sub>		12 2.7 29°93	1°7/ 2.3	18		<b>431637</b>	2007 <i>YS</i> <sub>69</sub>		12 2.7 142°30	2°3/ 3.5	18	

EPHEMERIDES

12 2.8

12 2.8

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>487415</b>	2014 QG <sub>383</sub>	12	2.8 123°21	4.3/ 4.5 17			<b>520483</b>	2014 KD <sub>111</sub>	12	2.8 114°69	1.4/ 3.2 18		
10 28	5 6.11	+35 44.1	2.396	3.173	12.9	21.7	10 28	5 6.41	+26 23.0	2.227	3.027	13.0	21.9
11 7	5 0.28	+36 8.4	2.319	3.180	10.4	21.5	11 7	5 0.35	+26 31.7	2.158	3.043	10.0	21.7
11 17	4 52.15	+36 21.4	2.264	3.188	7.6	21.3	11 17	4 52.11	+26 34.2	2.112	3.058	6.5	21.5
11 27	4 42.46	+36 20.5	2.237	3.195	5.1	21.2	11 27	4 42.45	+26 29.6	2.095	3.073	2.8	21.3
12 7	4 32.24	+36 4.9	2.238	3.202	4.4	21.2	12 7	4 32.35	+26 18.1	2.107	3.088	2.0	21.3
12 17	4 22.59	+35 36.1	2.269	3.209	6.2	21.3	12 17	4 22.85	+26 1.5	2.150	3.102	5.5	21.6
12 27	4 14.51	+34 58.0	2.328	3.215	8.9	21.5	12 27	4 14.91	+25 42.7	2.221	3.116	8.9	21.8
1 6	4 8.70	+34 15.6	2.412	3.222	11.5	21.7	1 6	4 9.17	+25 25.0	2.317	3.129	11.8	22.0
<b>40185</b>	1998 RL <sub>60</sub>	12	2.8 140°51	3.0/ 1.4 18			<b>392307</b>	2010 CD <sub>185</sub>	12	2.8 292°96	0.2/ 2.8 18		
10 28	5 1.02	+14 30.1	2.377	3.190	11.9	19.1	10 28	5 5.60	+22 11.6	1.581	2.408	16.2	21.1
11 7	4 56.06	+13 47.6	2.302	3.194	9.1	18.9	11 7	5 0.96	+22 23.7	1.488	2.389	12.6	20.8
11 17	4 49.30	+13 5.5	2.251	3.198	6.1	18.8	11 17	4 53.21	+22 32.9	1.417	2.371	8.1	20.5
11 27	4 41.37	+12 26.5	2.228	3.202	3.4	18.6	11 27	4 43.07	+22 38.3	1.371	2.353	3.1	20.2
12 7	4 33.07	+11 53.1	2.235	3.206	3.6	18.6	12 7	4 31.80	+22 39.6	1.352	2.334	2.3	20.1
12 17	4 25.21	+11 27.9	2.272	3.209	6.4	18.8	12 17	4 20.90	+22 38.0	1.360	2.316	7.5	20.3
12 27	4 18.57	+11 12.6	2.337	3.212	9.4	19.0	12 27	4 11.90	+22 36.5	1.395	2.298	12.4	20.6
1 6	4 13.73	+11 7.6	2.426	3.216	12.0	19.2	1 6	4 5.86	+22 38.4	1.451	2.281	16.7	20.8
<b>325890</b>	2010 UP <sub>14</sub>	12	2.8 64°86	0.2/ 2.8 18			<b>264848</b>	2002 QE <sub>132</sub>	12	2.8 253°86	1.7/ 2.2 18		
10 28	5 10.43	+23 19.1	1.210	2.045	19.7	20.8	10 28	5 1.48	+16 55.2	2.460	3.271	11.6	21.0
11 7	4 56.06	+23 15.7	1.163	2.068	14.9	20.5	11 7	4 56.54	+16 44.0	2.368	3.260	8.9	20.8
11 17	4 55.23	+23 6.0	1.136	2.092	9.5	20.3	11 17	4 49.73	+16 32.8	2.300	3.250	5.7	20.6
11 27	4 43.61	+22 49.6	1.133	2.115	3.5	20.0	11 27	4 41.61	+16 22.6	2.260	3.239	2.6	20.4
12 7	4 31.51	+22 28.0	1.156	2.138	2.5	20.0	12 7	4 32.94	+16 14.8	2.250	3.228	2.5	20.4
12 17	4 20.70	+22 5.1	1.205	2.162	8.1	20.4	12 17	4 24.60	+16 10.7	2.270	3.217	5.7	20.6
12 27	4 12.64	+21 45.6	1.278	2.185	13.1	20.8	12 27	4 17.40	+16 11.8	2.319	3.206	8.9	20.8
1 6	4 8.06	+21 33.3	1.373	2.208	17.1	21.1	1 6	4 11.99	+16 19.0	2.393	3.194	11.8	20.9
<b>354618</b>	2005 EM <sub>125</sub>	12	2.8 191°93	1.0/ 2.4 18			<b>260581</b>	2005 EY <sub>275</sub>	12	2.8 173°04	1.7/ 3.3 18		
10 28	5 4.61	+20 2.0	2.231	3.041	12.7	22.2	10 28	5 9.96	+27 9.2	1.731	2.539	15.9	21.1
11 7	4 59.02	+19 45.2	2.147	3.039	9.7	22.0	11 7	5 3.79	+27 10.6	1.653	2.542	12.3	20.9
11 17	4 51.32	+19 25.7	2.086	3.037	6.2	21.8	11 17	4 54.67	+27 3.4	1.597	2.544	8.0	20.6
11 27	4 42.17	+19 4.4	2.054	3.035	2.4	21.5	11 27	4 43.49	+26 46.0	1.567	2.546	3.5	20.3
12 7	4 32.49	+18 42.8	2.052	3.032	2.1	21.5	12 7	4 31.58	+26 18.8	1.566	2.547	2.5	20.3
12 17	4 23.26	+18 23.1	2.080	3.029	5.9	21.8	12 17	4 20.39	+25 44.7	1.594	2.548	6.9	20.6
12 27	4 15.43	+18 7.6	2.136	3.026	9.4	22.0	12 27	4 11.25	+25 8.7	1.649	2.548	11.2	20.8
1 6	4 9.66	+17 58.3	2.217	3.021	12.5	22.2	1 6	4 4.99	+24 35.8	1.728	2.547	14.9	21.0
<b>125383</b>	2001 VJ <sub>80</sub>	12	2.8 162°09	3.3/ 3.7 18			<b>329432</b>	2002 NE <sub>78</sub>	12	2.8 61°00	6.1/ 1.5 18		
10 28	5 9.21	+30 26.3	1.790	2.592	15.7	19.7	10 28	5 6.24	+10 23.5	1.295	2.131	18.6	20.8
11 7	5 3.25	+30 47.7	1.712	2.595	12.3	19.5	11 7	5 1.11	+9 37.1	1.245	2.146	14.5	20.5
11 17	4 54.35	+30 59.1	1.657	2.598	8.4	19.3	11 17	4 52.94	+8 57.9	1.215	2.162	10.1	20.3
11 27	4 43.36	+30 57.6	1.628	2.601	4.6	19.0	11 27	4 42.80	+8 31.0	1.209	2.178	6.6	20.2
12 7	4 31.61	+30 42.2	1.626	2.603	3.6	19.0	12 7	4 32.15	+8 20.2	1.228	2.194	6.8	20.3
12 17	4 20.56	+30 15.0	1.654	2.605	7.0	19.2	12 17	4 22.49	+8 27.4	1.273	2.210	10.3	20.5
12 27	4 11.53	+29 41.0	1.708	2.606	10.9	19.4	12 27	4 15.09	+8 52.2	1.342	2.226	14.3	20.8
1 6	4 5.38	+29 5.8	1.787	2.608	14.4	19.7	1 6	4 10.71	+9 32.1	1.431	2.243	17.8	21.1
<b>267836</b>	2003 UV <sub>147</sub>	12	2.8 5°97	2.9/ 1.9 17			<b>484546</b>	2008 GR <sub>39</sub>	12	2.8 285°79	6.0/ 4.3 17		
10 28	5 0.21	+15 9.3	1.858	2.686	14.1	19.8	10 28	5 8.26	+37 1.5	1.999	2.779	15.0	22.0
11 7	4 56.00	+14 48.1	1.786	2.687	10.8	19.6	11 7	5 2.70	+37 57.1	1.914	2.774	12.3	21.8
11 17	4 49.53	+14 28.4	1.736	2.688	7.1	19.4	11 17	4 54.14	+38 41.0	1.851	2.769	9.3	21.6
11 27	4 41.52	+14 12.3	1.712	2.689	3.6	19.2	11 27	4 43.37	+39 7.9	1.814	2.765	6.8	21.4
12 7	4 32.98	+14 2.1	1.716	2.692	3.7	19.2	12 7	4 31.63	+39 14.7	1.804	2.760	6.1	21.4
12 17	4 24.95	+13 59.5	1.748	2.695	7.1	19.4	12 17	4 20.39	+39 1.6	1.822	2.755	8.0	21.5
12 27	4 18.44	+14 5.9	1.807	2.698	10.8	19.6	12 27	4 11.06	+38 33.0	1.867	2.750	10.9	21.6
1 6	4 14.13	+14 21.5	1.888	2.702	14.0	19.8	1 6	4 4.60	+37 55.4	1.935	2.746	13.8	21.8
<b>438097</b>	2005 CY <sub>27</sub>	12	2.8 353°82	8.9/ 1.4 18			<b>496177</b>	2011 CA <sub>66</sub>	12	2.8 260°18	4.1/ 5.0 18		
10 28	5 1.59	+3 2.9	1.339	2.169	18.4	20.3	10 28	5 7.29	+39 40.7	3.265	4.008	10.5	21.9
11 7	4 57.77	+2 25.3	1.274	2.164	15.0	20.0	11 7	5 0.86	+39 44.4	3.143	3.979	8.6	21.8
11 17	4 51.01	+2 2.8	1.228	2.160	11.6	19.8	11 17	4 52.44	+39 36.5	3.044	3.949	6.6	21.6
11 27	4 42.15	+2 1.7	1.205	2.157	9.2	19.7	11 27	4 42.63	+39 14.6	2.974	3.919	4.8	21.4
12 7	4 32.51	+2 26.0	1.206	2.155	9.4	19.7	12 7	4 32.23	+38 37.9	2.934	3.888	4.2	21.4
12 17	4 23.51	+3 15.9	1.231	2.154	12.0	19.8	12 17	4 22.12	+37 47.5	2.926	3.856	5.5	21.4
12 27	4 16.49	+4 28.5	1.279	2.154	15.6	20.1	12 27	4 13.20	+36 46.9	2.947	3.824	7.6	21.5
1 6	4 12.34	+5 58.2	1.347	2.155	18.9	20.3	1 6	4 6.12	+35 40.7	2.996	3.790	9.9	21.6
<b>284223</b>	2006 DE <sub>10</sub>	12	2.8 149°05	6.0/ 4.8 18			<b>90529</b>	2004 FN <sub>19</sub>	12	2.8 164°49	0.2/ 2.9 18		
10 28	5 12.22	+38 44.8	2.123	2.887	14.7	21.1	10 28	5 8.01	+24 4.8	1.729	2.544	15.6	20.3
11 7	5 5.40	+39 31.6	2.047	2.896	12.1	20.9	11 7	5 2.19	+23 50.9	1.653	2.547	11.9	20.0
11 17	4 55.65	+40 4.7	1.994	2.904	9.2	20.7	11 17	4 53.60	+23 30.3	1.599	2.551	7.6	19.8
11 27	4 43.84	+40 19.1	1.966	2.911	6.8	20.6	11 27	4 43.09	+23 3.1	1.572	2.553	2.9	19.5
12 7	4 31.28	+40 12.5	1.966	2.918	6.1	20.6	12 7	4 31.93	+22 30.8	1.573	2.555	2.1	19.5
12 17	4 19.42	+39 46.1	1.996	2.924	7.7	20.7	12 17	4 21.47	+21 56.5	1.603	2.557	6.8	19.8
12 27	4 9.56	+39 5.0	2.052	2.930	10.4	20.9	12 27	4 12.95	+21 24.8	1.660	2.559	11.1	20.0
1 6	4 2.58	+38 15.9	2.133	2.935	13.1	21.0	1 6	4 7.17	+20 59.3	1.741	2.560	14.8	20.3
<b>404838</b>	2014 JB <sub>78</sub>	12	2.8 170°38	5.3/30.6 18			<b>354631</b>	2005 GD <sub>24</sub>	12	2.8 289°89	0.8/ 2.9 18		
10 28	5 2.91	+5 57.8	2.541	3.336	11.8	22.4	10 28						











EPHEMERIDES

12 2.8

12 2.9

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>340029</b>	2005 <i>UU</i> <sub>427</sub>	12	2.8 162 <sup>o</sup> 07	1 <sup>o</sup> 8/ 3.3 18			<b>381089</b>	2007 <i>BD</i> <sub>57</sub>	12	2.8 290 <sup>o</sup> 74	1 <sup>o</sup> 7/ 3.2 18		
10 28	5 8.38	+26 28.5	1.697	2.510	15.9	21.5	10 28	5 6.79	+25 50.9	1.497	2.321	17.1	21.1
11 7	5 2.78	+26 40.7	1.621	2.512	12.3	21.3	11 7	5 2.26	+26 5.1	1.404	2.303	13.3	20.8
<b>168316</b>	1982 <i>WD</i>	12	2.8 340 <sup>o</sup> 90	1 <sup>o</sup> 5/ 1.9 18			<b>353407</b>	2011 <i>QZ</i>	12	2.8 80 <sup>o</sup> 19	7 <sup>o</sup> 1/ 5.9 18		
10 28	5 6.44	+30 14.4	1.277	2.107	19.2	18.0	10 28	5 11.46	+41 42.6	1.762	2.531	17.1	21.3
11 7	5 1.97	+27 38.5	1.187	2.091	14.8	17.7	11 7	5 5.35	+42 2.9	1.693	2.542	14.2	21.1
<b>261095</b>	2005 <i>SD</i> <sub>255</sub>	12	2.8 138 <sup>o</sup> 09	1 <sup>o</sup> 6/ 3.3 18			<b>472838</b>	2015 <i>FT</i> <sub>237</sub>	12	2.8 203 <sup>o</sup> 27	3 <sup>o</sup> 6/ 2.1 18		
10 28	5 10.03	+27 2.3	1.816	2.621	15.3	21.1	10 28	5 7.03	+14 44.8	1.440	2.270	17.3	20.9
11 7	5 3.71	+27 3.0	1.744	2.631	11.8	20.9	11 7	5 1.95	+14 24.2	1.368	2.270	13.4	20.6
<b>381143</b>	2007 <i>EO</i> <sub>198</sub>	12	2.8 126 <sup>o</sup> 66	7 <sup>o</sup> 0/ 7.1 18			<b>113801</b>	2002 <i>TM</i> <sub>205</sub>	12	2.8 67 <sup>o</sup> 14	2 <sup>o</sup> 6/ 3.6 18		
10 28	5 14.71	+51 29.7	3.391	4.064	11.3	21.5	10 28	5 13.08	+28 35.6	1.334	2.153	19.1	19.3
11 7	5 6.73	+52 18.7	3.324	4.084	9.9	21.4	11 7	5 6.50	+28 44.1	1.290	2.183	14.7	19.1
<b>184331</b>	2005 <i>GV</i> <sub>101</sub>	12	2.8 220 <sup>o</sup> 10	1 <sup>o</sup> 3/ 2.5 18			<b>80621</b>	2000 <i>AQ</i> <sub>181</sub>	12	2.8 269 <sup>o</sup> 47	2 <sup>o</sup> 4/ 2.1 18		
10 28	5 8.21	+19 55.3	1.656	2.476	15.9	21.2	10 28	5 5.58	+19 9.2	1.534	2.364	16.5	19.0
11 7	5 2.66	+19 40.4	1.572	2.470	12.2	21.0	11 7	5 0.80	+18 26.2	1.453	2.356	12.7	18.7
<b>507268</b>	2011 <i>DO</i> <sub>42</sub>	12	2.8 276 <sup>o</sup> 41	20 <sup>o</sup> 6/26.9 17			<b>280976</b>	2006 <i>DQ</i> <sub>46</sub>	12	2.8 264 <sup>o</sup> 71	7 <sup>o</sup> 5/29.2 17		
10 28	5 6.59	-15 22.4	1.132	1.910	24.3	21.0	10 28	4 59.91	+ 0 38.4	2.367	3.159	12.6	20.4
11 7	5 2.21	-17 45.8	1.085	1.903	22.5	20.9	11 7	4 55.42	- 0 33.7	2.289	3.150	10.5	20.3
<b>102499</b>	1999 <i>TD</i> <sub>282</sub>	12	2.8 351 <sup>o</sup> 68	18 <sup>o</sup> 8/22.3 18			<b>24109</b>	1999 <i>VO</i> <sub>20</sub>	12	2.9 357 <sup>o</sup> 75	5 <sup>o</sup> 2/ 5.1 18		
10 28	4 58.24	-15 29.1	1.375	2.148	20.9	18.4	10 28	5 7.00	+37 16.3	1.530	2.330	17.9	17.2
11 7	4 55.29	-18 22.7	1.335	2.141	19.6	18.3	11 7	5 2.24	+37 1.7	1.452	2.329	14.5	17.0
<b>270289</b>	2001 <i>VG</i> <sub>88</sub>	12	2.8 49 <sup>o</sup> 70	1 <sup>o</sup> 0/ 2.7 18			<b>4822</b>	<i>Karge</i>	12	2.9 14 <sup>o</sup> 80	4 <sup>o</sup> 3/ 2.1 18		
10 28	5 7.52	+19 18.5	1.320	2.156	18.3	19.8	10 28	5 1.97	+15 5.2	0.975	1.840	21.1	16.0
11 7	5 2.38	+19 26.2	1.266	2.172	13.9	19.6	11 7	4 59.03	+14 37.6	0.924	1.844	16.2	15.7
<b>168191</b>	2006 <i>HQ</i> <sub>152</sub>	12	2.8 177 <sup>o</sup> 84	3 <sup>o</sup> 7/ 1.6 18			<b>520314</b>	2014 <i>FO</i> <sub>76</sub>	12	2.9 350 <sup>o</sup> 40	10 <sup>o</sup> 4/29.0 18		
10 28	5 4.68	+12 36.8	2.165	2.974	13.1	20.5	10 28	5 1.27	+ 1 41.9	1.477	2.298	17.4	20.4
11 7	4 59.14	+12 2.6	2.087	2.976	10.1	20.3	11 7	4 57.33	- 0 1.7	1.415	2.295	14.5	20.2









EPHEMERIDES

12 2.9

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2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>50087</b>	2000 <i>AH</i> <sub>91</sub>	12	2.9 263°65	3°5/ 1.9	18		<b>406267</b>	2007 <i>EK</i> <sub>51</sub>	12	2.9 193°64	4°1/ 4.6	17	
10 28	5 5.98	+15 18.4	1.601	2.427	16.1	19.0	10 28	5 6.37	+35 20.7	2.406	3.182	12.9	20.5
11 7	5 1.11	+14 44.4	1.515	2.414	12.5	18.8	11 7	5 0.74	+35 38.6	2.319	3.181	10.3	20.3
11 17	4 53.38	+14 10.5	1.451	2.402	8.3	18.5	11 17	4 52.80	+35 45.4	2.256	3.180	7.5	20.1
11 27	4 43.53	+13 39.6	1.412	2.389	4.4	18.2	11 27	4 43.25	+35 38.6	2.219	3.179	4.9	20.0
12 7	4 32.78	+13 15.2	1.401	2.376	4.4	18.2	12 7	4 33.10	+35 17.5	2.211	3.177	4.2	19.9
12 17	4 22.50	+13 0.3	1.417	2.362	8.5	18.4	12 17	4 23.43	+34 43.5	2.233	3.176	6.1	20.0
12 27	4 14.03	+12 57.6	1.459	2.349	13.0	18.6	12 27	4 15.30	+34 0.7	2.283	3.174	8.9	20.2
1 6	4 8.28	+13 7.9	1.522	2.335	16.9	18.9	1 6	4 9.40	+33 14.1	2.359	3.171	11.6	20.4
<b>57493</b>	2001 <i>SR</i> <sub>185</sub>	12	2.9 347°02	1°3/ 3.1	18		<b>103433</b>	2000 <i>AY</i> <sub>165</sub>	12	2.9 234°18	1°0/ 3.5	18	
10 28	5 3.41	+23 58.2	1.194	2.041	19.2	18.5	10 28	5 10.22	+29 56.1	2.269	3.055	13.3	19.9
11 7	5 0.18	+24 18.2	1.121	2.033	14.8	18.2	11 7	5 3.52	+28 52.6	2.165	3.042	10.3	19.7
11 17	4 53.27	+24 33.2	1.068	2.025	9.7	17.9	11 17	4 54.47	+27 35.1	2.086	3.029	6.8	19.4
11 27	4 43.60	+24 41.2	1.037	2.019	4.0	17.6	11 27	4 43.85	+26 4.0	2.037	3.016	2.9	19.1
12 7	4 32.74	+24 41.7	1.031	2.014	2.7	17.5	12 7	4 32.71	+24 22.7	2.019	3.001	1.8	19.0
12 17	4 22.57	+24 36.4	1.050	2.010	8.5	17.8	12 17	4 22.17	+22 36.9	2.034	2.987	5.8	19.3
12 27	4 14.86	+24 29.3	1.091	2.007	13.9	18.1	12 27	4 13.25	+20 53.6	2.080	2.972	9.6	19.5
1 6	4 10.73	+24 25.1	1.153	2.005	18.5	18.4	1 6	4 6.64	+19 19.2	2.153	2.956	12.9	19.7
<b>206423</b>	2003 <i>SG</i> <sub>148</sub>	12	2.9 30°53	6°4/ 3.7	18		<b>511858</b>	2015 <i>FW</i> <sub>390</sub>	12	2.9 228°85	2°1/ 3.6	18	
10 28	5 11.45	+32 56.4	1.513	2.318	17.9	19.4	10 28	5 9.58	+28 25.3	1.636	2.447	16.5	21.9
11 7	5 6.01	+34 27.8	1.446	2.324	14.4	19.1	11 7	5 4.04	+28 23.3	1.551	2.440	12.9	21.6
11 17	4 56.87	+35 50.0	1.399	2.331	10.5	18.9	11 17	4 55.33	+28 11.0	1.486	2.433	8.6	21.4
11 27	4 44.95	+36 55.1	1.377	2.338	7.2	18.8	11 27	4 44.31	+27 46.3	1.447	2.425	4.0	21.1
12 7	4 31.82	+37 37.7	1.382	2.345	6.6	18.8	12 7	4 32.35	+27 9.7	1.436	2.417	2.8	21.0
12 17	4 19.37	+37 56.4	1.413	2.353	9.2	18.9	12 17	4 21.03	+26 24.3	1.453	2.408	7.2	21.2
12 27	4 9.38	+37 55.7	1.470	2.362	12.8	19.2	12 27	4 11.81	+25 36.2	1.497	2.399	11.8	21.5
1 6	4 2.98	+37 43.0	1.548	2.370	16.2	19.4	1 6	4 5.64	+24 51.5	1.563	2.390	15.8	21.7
<b>331979</b>	2005 <i>CB</i> <sub>81</sub>	12	2.9 336°94	6°0/ 1.7	17		<b>355445</b>	2007 <i>VX</i> <sub>110</sub>	12	2.9 31°52	0°2/ 2.9	17	
10 28	5 1.73	+ 5 5.7	1.944	2.754	14.3	20.0	10 28	5 4.71	+23 30.3	1.245	2.088	18.8	20.9
11 7	4 57.29	+ 4 50.7	1.863	2.745	11.5	19.7	11 7	5 0.45	+23 22.2	1.198	2.107	14.3	20.7
11 17	4 50.64	+ 4 45.7	1.805	2.737	8.5	19.6	11 17	4 52.93	+23 7.6	1.170	2.127	9.1	20.5
11 27	4 42.44	+ 4 54.2	1.773	2.729	6.4	19.4	11 27	4 43.30	+22 46.9	1.166	2.148	3.4	20.2
12 7	4 33.59	+ 5 18.2	1.768	2.722	6.4	19.4	12 7	4 33.15	+22 22.3	1.187	2.170	2.3	20.2
12 17	4 25.13	+ 5 58.0	1.790	2.715	8.8	19.5	12 17	4 24.08	+21 57.3	1.234	2.193	7.7	20.6
12 27	4 18.05	+ 6 52.5	1.839	2.708	11.8	19.7	12 27	4 17.45	+21 36.4	1.306	2.217	12.5	21.0
1 6	4 13.06	+ 7 58.8	1.911	2.703	14.7	19.9	1 6	4 13.97	+21 22.9	1.399	2.242	16.4	21.3
<b>411515</b>	2011 <i>BA</i> <sub>38</sub>	12	2.9 307°93	4°5/ 1.2	17		<b>340194</b>	2005 <i>YE</i> <sub>271</sub>	12	2.9 334°13	3°6/ 2.1	18	
10 28	5 0.60	+ 9 39.7	2.257	3.069	12.5	21.2	10 28	5 4.29	+14 51.8	1.460	2.295	16.9	21.0
11 7	4 56.09	+ 9 0.9	2.178	3.065	9.8	21.1	11 7	4 59.97	+14 27.3	1.386	2.290	13.1	20.8
11 17	4 49.71	+ 8 26.1	2.122	3.061	7.0	20.9	11 17	4 52.70	+14 4.8	1.332	2.285	8.7	20.5
11 27	4 42.05	+ 7 58.7	2.094	3.057	4.8	20.7	11 27	4 43.30	+13 47.1	1.303	2.280	4.5	20.3
12 7	4 33.91	+ 7 41.4	2.094	3.054	5.0	20.8	12 7	4 33.06	+13 37.1	1.300	2.276	4.5	20.2
12 17	4 26.14	+ 7 35.9	2.122	3.050	7.4	20.9	12 17	4 23.42	+13 37.1	1.324	2.272	8.7	20.5
12 27	4 19.59	+ 7 43.2	2.178	3.046	10.3	21.1	12 27	4 15.72	+13 48.7	1.373	2.269	13.1	20.7
1 6	4 14.85	+ 8 2.7	2.257	3.043	13.0	21.2	1 6	4 10.87	+14 12.0	1.442	2.266	17.1	21.0
<b>244200</b>	2001 <i>YU</i> <sub>99</sub>	12	2.9 21°61	0°2/ 2.8	17		<b>20338</b>	Elainepappas	12	2.9 117°04	0°5/ 3.1	18	
10 28	5 0.78	+23 30.9	2.137	2.954	12.9	20.2	10 28	5 4.47	+24 10.4	2.189	2.996	13.0	19.4
11 7	4 56.37	+23 3.6	2.064	2.960	9.8	20.0	11 7	4 59.17	+24 6.1	2.112	3.003	9.9	19.3
11 17	4 49.92	+22 30.9	2.014	2.966	6.2	19.8	11 17	4 51.72	+23 57.0	2.059	3.009	6.4	19.0
11 27	4 42.11	+21 53.7	1.991	2.972	2.3	19.5	11 27	4 42.82	+23 42.7	2.034	3.015	2.5	18.8
12 7	4 33.88	+21 14.2	1.997	2.980	1.7	19.5	12 7	4 33.42	+23 24.2	2.038	3.021	1.6	18.8
12 17	4 26.18	+20 35.4	2.032	2.987	5.6	19.8	12 17	4 24.55	+23 3.4	2.073	3.027	5.5	19.0
12 27	4 19.89	+20 0.4	2.096	2.995	9.1	20.0	12 27	4 17.13	+22 43.2	2.135	3.033	9.1	19.3
1 6	4 15.63	+19 32.1	2.184	3.003	12.2	20.2	1 6	4 11.82	+22 26.3	2.222	3.038	12.1	19.5
<b>501620</b>	2014 <i>SF</i> <sub>143</sub>	12	2.9 275°47	8°7/ 6.6	18		<b>6506</b>	Klausheide	12	2.9 213°67	4°2/ 4.0	18	
10 28	5 15.65	+43 24.1	1.210	2.000	22.4	20.7	10 28	5 9.96	+32 1.1	1.678	2.480	16.5	17.9
11 7	5 10.29	+43 20.1	1.131	1.993	18.8	20.4	11 7	5 4.39	+32 29.2	1.597	2.477	13.1	17.7
11 17	5 0.01	+42 45.1	1.069	1.986	14.6	20.2	11 17	4 55.58	+32 46.1	1.537	2.475	9.2	17.4
11 27	4 46.15	+41 29.9	1.028	1.979	10.6	19.9	11 27	4 44.41	+32 47.8	1.502	2.472	5.4	17.2
12 7	4 31.12	+39 32.7	1.010	1.971	8.7	19.8	12 7	4 32.29	+32 32.6	1.495	2.469	4.4	17.1
12 17	4 17.57	+37 1.6	1.018	1.964	10.9	19.9	12 17	4 20.82	+32 2.4	1.516	2.466	7.6	17.3
12 27	4 7.70	+34 14.5	1.050	1.957	15.2	20.1	12 27	4 11.51	+31 22.7	1.563	2.462	11.6	17.5
1 6	4 2.50	+31 30.4	1.104	1.950	19.7	20.4	1 6	4 5.33	+30 40.4	1.633	2.459	15.3	17.8
<b>435163</b>	2007 <i>OJ</i>	12	2.9 79°38	8°0/ 1.1	17		<b>118653</b>	2000 <i>JU</i> <sub>36</sub>	12	2.9 245°19	0°9/ 3.2	18	
10 28	5 7.57	+ 1 58.2	1.764	2.562	16.0	21.7	10 28	5 8.26	+24 38.1	1.797	2.608	15.2	20.0
11 7	5 1.35	+ 1 0.8	1.726	2.594	13.0	21.6	11 7	5 2.80	+24 44.9	1.704	2.596	11.8	19.7
11 17	4 52.92	+ 0 16.6	1.709	2.625	10.1	21.5	11 17	4 54.46	+24 46.3	1.634	2.584	7.7	19.5
11 27	4 43.18	+ 0 9.5	1.718	2.656	8.2	21.5	11 27	4 43.99	+24 41.0	1.590	2.571	3.1	19.2
12 7	4 33.22	+ 0 14.4	1.754	2.686	8.4	21.5	12 7	4 32.56	+24 28.8	1.575	2.557	2.1	19.1
12 17	4 24.11	+ 0 2.1	1.817	2.716	10.3	21.7	12 17	4 21.55	+24 11.5	1.588	2.543	6.8	19.3
12 27	4 16.76	+ 0 38.1	1.905	2.745	12.8	21.9	12 27	4 12.33	+23 52.7	1.629	2.529	11.2	19.6
1 6	4 11.73	+ 1 29.8	2.014	2.774	15.2	22.2	1 6	4 5.82	+23 36.5	1.693	2.514	15.1	19.8
<b>218781</b>	2005 <i>XF</i> <sub>32</sub>	12	2.9 346°25	0°4/ 2.8	17		<b>162327</b>	1999 <i>XA</i> <sub>55</sub>	12	2.9 38°92	0°6/ 2.6	18	
10													











Table with columns for date (2020/21), right ascension (α2000), declination (δ2000), magnitude (Δ), magnitude (r), magnitude (β), and magnitude (V). It lists various astronomical objects such as Leonardcohen, 466003, 13949, 23125, 268716, 291267, 78218, 249907, 404037, 404964, 211676, 297119, 334967, 27962, 113246, 451349, 359447, and 401407.

