

EPHEMERIDES

12 11.9

12 12.0

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>267943</b>	2004 <i>EG</i> <sub>35</sub>		12 11.9 210°92	4.9/11.3	18		<b>484166</b>	2006 <i>UJ</i> <sub>140</sub>		12 12.0 8°14	0°6/11.8	17	
11 7	5 46.26	+10 55.7	1.888	2.697	14.6	20.8	11 7	5 43.44	+24 23.7	1.589	2.422	15.7	21.1
11 17	5 40.43	+10 23.9	1.805	2.691	11.4	20.5	11 17	5 38.71	+23 41.9	1.518	2.423	11.9	20.8
11 27	5 32.20	+9 58.8	1.746	2.685	8.0	20.3	11 27	5 31.24	+22 54.1	1.468	2.424	7.4	20.6
12 7	5 22.29	+9 43.1	1.713	2.678	5.3	20.1	12 7	5 21.98	+22 1.6	1.445	2.426	2.5	20.3
12 17	5 11.73	+9 38.9	1.708	2.670	5.5	20.1	12 17	5 12.18	+21 7.1	1.449	2.429	2.7	20.3
12 27	5 1.72	+9 47.3	1.733	2.662	8.6	20.3	12 27	5 3.24	+20 14.7	1.481	2.432	7.5	20.6
1 6	4 53.35	+10 8.1	1.783	2.653	12.1	20.5	1 6	4 56.34	+19 28.8	1.539	2.436	11.9	20.9
1 16	4 47.36	+10 39.8	1.857	2.644	15.3	20.7	1 16	4 52.21	+18 52.3	1.619	2.441	15.6	21.1
<b>355353</b>	2007 <i>TS</i> <sub>184</sub>		12 11.9 71°02	3°4/12.2	18		<b>402364</b>	2005 <i>WB</i> <sub>28</sub>		12 12.0 80°30	0°7/12.1	17	
11 7	5 48.37	+29 33.1	1.726	2.542	15.4	20.9	11 7	5 44.21	+24 56.4	2.058	2.875	13.3	21.7
11 17	5 42.53	+30 23.7	1.656	2.549	11.9	20.6	11 17	5 38.80	+25 2.9	1.984	2.880	10.0	21.5
11 27	5 33.72	+31 8.9	1.610	2.556	7.9	20.4	11 27	5 31.12	+25 6.4	1.933	2.885	6.3	21.3
12 7	5 22.83	+31 44.2	1.589	2.563	4.2	20.2	12 7	5 21.93	+25 5.9	1.910	2.891	2.3	21.1
12 17	5 11.19	+32 6.6	1.597	2.570	4.1	20.2	12 17	5 12.23	+25 0.8	1.916	2.896	2.2	21.1
12 27	5 0.34	+32 15.6	1.633	2.578	7.6	20.5	12 27	5 3.18	+24 52.4	1.951	2.901	6.1	21.3
1 6	4 51.62	+32 14.2	1.695	2.585	11.5	20.7	1 6	4 55.75	+24 42.6	2.014	2.906	9.8	21.6
1 16	4 45.88	+32 6.6	1.781	2.592	14.9	21.0	1 16	4 50.62	+24 33.6	2.102	2.912	13.0	21.8
<b>390324</b>	2013 <i>BL</i> <sub>14</sub>		12 11.9 109°09	1°5/11.8	18		<b>452544</b>	2004 <i>UX</i> <sub>4</sub>		12 12.0 34°62	0°5/12.2	17	
11 7	5 46.55	+19 4.5	1.797	2.617	14.8	20.7	11 7	5 55.89	+33 10.8	0.968	1.808	22.9	19.5
11 17	5 40.68	+19 3.9	1.729	2.627	11.1	20.5	11 17	5 49.44	+31 8.8	0.904	1.812	17.6	19.2
11 27	5 32.30	+19 5.0	1.685	2.638	7.0	20.3	11 27	5 38.36	+28 36.6	0.860	1.816	11.2	18.9
12 7	5 22.29	+19 7.6	1.668	2.649	2.7	20.0	12 7	5 24.39	+25 37.8	0.839	1.821	4.0	18.5
12 17	5 11.77	+19 11.7	1.680	2.659	2.8	20.0	12 17	5 9.98	+22 25.3	0.845	1.826	3.6	18.5
12 27	5 2.02	+19 18.0	1.721	2.669	7.0	20.3	12 27	4 57.65	+19 19.0	0.877	1.831	10.8	18.9
1 6	4 54.11	+19 27.3	1.789	2.678	11.0	20.6	1 6	4 49.10	+16 36.7	0.933	1.837	17.0	19.3
1 16	4 48.75	+19 40.4	1.880	2.688	14.3	20.8	1 16	4 45.03	+14 28.1	1.008	1.843	22.0	19.6
<b>209729</b>	2005 <i>EF</i> <sub>162</sub>		12 11.9 207°33	4°5/12.9	18		<b>282042</b>	1998 <i>SP</i> <sub>2</sub>		12 12.0 43°57	7°5/11.9	18	
11 7	5 49.66	+37 31.3	2.473	3.251	12.4	20.8	11 7	5 48.30	+6 56.7	1.248	2.073	19.7	19.5
11 17	5 42.91	+37 57.3	2.381	3.244	10.0	20.6	11 17	5 42.03	+6 18.2	1.225	2.115	15.4	19.3
11 27	5 33.70	+38 12.8	2.314	3.237	7.3	20.4	11 27	5 32.99	+5 56.4	1.221	2.157	11.1	19.2
12 7	5 22.79	+38 14.3	2.274	3.230	5.0	20.3	12 7	5 22.45	+5 54.7	1.242	2.200	7.9	19.1
12 17	5 11.25	+37 59.9	2.264	3.222	4.8	20.2	12 17	5 11.89	+6 13.5	1.287	2.243	7.9	19.3
12 27	5 0.29	+37 30.4	2.284	3.213	6.8	20.3	12 27	5 2.74	+6 51.0	1.359	2.286	10.7	19.5
1 6	4 51.00	+36 49.5	2.332	3.204	9.5	20.5	1 6	4 56.04	+7 42.9	1.454	2.329	14.0	19.8
1 16	4 44.16	+36 2.2	2.405	3.194	12.2	20.7	1 16	4 52.29	+8 44.6	1.570	2.372	17.0	20.2
<b>312436</b>	2008 <i>HY</i> <sub>20</sub>		12 11.9 285°34	2°8/12.1	18		<b>274302</b>	Abaházi		12 12.0 122°81	2°6/12.8	17	
11 7	5 47.24	+28 44.4	2.063	2.871	13.5	21.1	11 7	5 45.01	+32 38.8	2.446	3.243	12.0	20.6
11 17	5 41.67	+29 28.1	1.953	2.842	10.5	20.9	11 17	5 39.13	+32 37.9	2.369	3.250	9.3	20.4
11 27	5 33.32	+30 9.3	1.867	2.813	7.0	20.6	11 27	5 31.18	+32 28.6	2.317	3.257	6.2	20.3
12 7	5 22.80	+30 44.0	1.808	2.783	3.6	20.4	12 7	5 21.92	+32 9.3	2.292	3.264	3.4	20.1
12 17	5 11.14	+31 9.1	1.779	2.753	3.5	20.3	12 17	5 12.27	+31 40.0	2.297	3.270	3.1	20.1
12 27	4 59.72	+31 23.3	1.779	2.723	7.2	20.5	12 27	5 3.28	+31 2.6	2.333	3.277	5.7	20.3
1 6	4 49.86	+31 28.0	1.807	2.693	11.1	20.6	1 6	4 55.83	+30 20.3	2.397	3.283	8.7	20.5
1 16	4 42.59	+31 26.5	1.858	2.662	14.7	20.8	1 16	4 50.50	+29 36.9	2.487	3.289	11.4	20.7
<b>101066</b>	1998 <i>RP</i> <sub>13</sub>		12 12.0 117°56	0°2/12.0	18		<b>67070</b>	Rinaldi		12 12.0 21°79	2°3/12.4	17	
11 7	5 46.81	+23 55.9	1.981	2.796	13.8	20.4	11 7	5 43.37	+29 5.5	1.735	2.559	15.0	19.4
11 17	5 40.70	+23 54.4	1.913	2.808	10.4	20.2	11 17	5 38.59	+29 13.9	1.668	2.566	11.4	19.2
11 27	5 32.24	+23 50.2	1.869	2.821	6.5	20.0	11 27	5 31.15	+29 15.4	1.623	2.574	7.4	18.9
12 7	5 22.27	+23 42.4	1.852	2.833	2.2	19.8	12 7	5 21.96	+29 7.9	1.604	2.582	3.4	18.7
12 17	5 11.86	+23 31.2	1.864	2.844	2.2	19.8	12 17	5 12.23	+28 51.1	1.613	2.591	3.1	18.7
12 27	5 2.20	+23 17.9	1.907	2.856	6.3	20.1	12 27	5 3.33	+28 26.9	1.650	2.601	7.0	19.0
1 6	4 54.31	+23 4.8	1.977	2.867	10.1	20.3	1 6	4 56.40	+27 58.7	1.714	2.611	10.9	19.2
1 16	4 48.84	+22 54.1	2.071	2.877	13.3	20.5	1 16	4 52.17	+27 30.6	1.800	2.622	14.3	19.5
<b>284158</b>	2005 <i>YS</i> <sub>42</sub>		12 12.0 216°55	0°7/11.9	18		<b>197746</b>	2004 <i>PN</i> <sub>30</sub>		12 12.0 45°36	4°8/11.4	18	
11 7	5 46.71	+21 41.1	1.963	2.778	13.9	21.6	11 7	5 44.74	+13 37.0	1.382	2.217	17.6	19.9
11 17	5 40.84	+21 32.9	1.876	2.772	10.5	21.3	11 17	5 39.79	+13 0.2	1.325	2.227	13.5	19.6
11 27	5 32.48	+21 23.5	1.813	2.765	6.6	21.1	11 27	5 31.95	+12 30.2	1.288	2.238	9.1	19.4
12 7	5 22.41	+21 12.5	1.777	2.758	2.3	20.8	12 7	5 22.24	+12 10.1	1.277	2.249	5.3	19.2
12 17	5 11.67	+21 0.2	1.770	2.750	2.4	20.8	12 17	5 11.99	+12 2.2	1.291	2.261	5.6	19.3
12 27	5 1.50	+20 48.2	1.793	2.741	6.8	21.1	12 27	5 2.70	+12 7.7	1.331	2.272	9.4	19.5
1 6	4 53.00	+20 38.2	1.844	2.733	10.8	21.3	1 6	4 55.61	+12 26.0	1.396	2.285	13.5	19.8
1 16	4 46.97	+20 32.4	1.919	2.723	14.2	21.5	1 16	4 51.45	+12 55.6	1.482	2.297	17.2	20.1
<b>213141</b>	2000 <i>GF</i> <sub>156</sub>		12 12.0 196°39	1°6/11.7	18		<b>176198</b>	2001 <i>PK</i> <sub>2</sub>		12 12.0 42°68	4°3/13.1	18	
11 7	5 44.26	+19 44.4	2.087	2.903	13.1	20.5	11 7	5 47.63	+34 31.9	1.572	2.388	16.7	19.1
11 17	5 38.75	+19 20.8	2.005	2.901	9.9	20.3	11 17	5 42.03	+34 39.3	1.514	2.403	13.0	18.9
11 27	5 31.05	+18 56.7	1.948	2.900	6.3	20.0	11 27	5 33.33	+34 33.5	1.477	2.419	8.9	18.7
12 7	5 21.89	+18 33.0	1.918	2.898	2.5	19.8	12 7	5 22.69	+34 11.4	1.466	2.436	5.3	18.5
12 17	5 12.23	+18 10.9	1.918	2.896	2.8	19.8	12 17	5 11.59	+33 32.8	1.481	2.452	4.7	18.5
12 27	5 3.15	+17 52.3	1.948	2.893	6.5	20.1	12 27	5 1.67	+32 41.1	1.524	2.470	7.9	18.7
1 6	4 55.60	+17 38.8	2.005	2.891	10.2	20.3	1 6	4 54.19	+31 42.9	1.592	2.487	11.7	19.0
1 16	4 50.25	+17 31.7	2.087	2.888	13.3	20.5	1 16	4 49.85	+30 44.4	1.684	2.506	15.1	19.3
<b>26404</b>	1999 <i>XF</i> <sub>1</sub>		12 12.0 336°88	3°2/11.9	18		<b>351125</b>	2003 <i>WR</i> <sub>82</sub>		12 12.0 24°39	9°2/13.1	18	
11													

EPHEMERIDES

12 12.0

12 12.0

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>474426</b>	2003 <i>AV</i> <sub>80</sub>		12 12.0 304°97	1.6/11.8	16		<b>323292</b>	2003 <i>TT</i> <sub>25</sub>		12 12.0 114°62	4.1/12.7	18	
11 7	5 51.61	+20 1.5	1.424	2.250	17.6	19.7	11 7	5 52.52	+32 34.4	1.490	2.305	17.5	20.9
11 17	5 46.35	+21 37.0	1.315	2.216	13.7	19.3	11 17	5 46.02	+32 58.3	1.425	2.315	13.6	20.7
11 27	5 37.13	+23 27.5	1.228	2.182	8.8	18.9	11 27	5 36.03	+33 11.1	1.382	2.325	9.2	20.5
12 7	5 24.42	+25 27.8	1.167	2.148	3.3	18.5	12 7	5 23.70	+33 8.4	1.363	2.335	5.1	20.2
12 17	5 9.44	+27 29.0	1.135	2.114	3.7	18.4	12 17	5 10.68	+32 48.2	1.372	2.345	4.7	20.2
12 27	4 54.19	+29 22.0	1.131	2.080	9.7	18.7	12 27	4 58.83	+32 13.0	1.408	2.354	8.5	20.5
1 6	4 40.89	+31 1.7	1.154	2.047	15.5	18.9	1 6	4 49.65	+31 29.0	1.470	2.363	12.7	20.8
1 16	4 31.30	+32 27.7	1.199	2.014	20.4	19.1	1 16	4 44.00	+30 43.1	1.555	2.372	16.4	21.0
<b>196004</b>	2002 <i>RN</i> <sub>241</sub>		12 12.0 172°35	1.2/12.3	18		<b>53972</b>	2000 <i>GM</i> <sub>66</sub>		12 12.0 142°63	1.7/12.3	18	
11 7	5 43.21	+27 10.8	2.771	3.573	10.6	21.5	11 7	5 48.28	+27 1.4	1.602	2.425	16.1	19.2
11 17	5 37.57	+27 18.2	2.687	3.575	8.1	21.4	11 17	5 42.58	+27 14.0	1.529	2.427	12.3	19.0
11 27	5 30.17	+27 21.7	2.629	3.577	5.1	21.2	11 27	5 33.82	+27 21.4	1.477	2.429	7.9	18.7
12 7	5 21.60	+27 20.4	2.600	3.579	2.1	21.0	12 7	5 22.97	+27 21.1	1.451	2.431	3.2	18.5
12 17	5 12.62	+27 13.8	2.601	3.580	2.0	21.0	12 17	5 11.36	+27 12.0	1.453	2.433	3.0	18.4
12 27	5 4.10	+27 2.8	2.634	3.581	5.0	21.2	12 27	5 0.61	+26 55.6	1.483	2.434	7.6	18.7
1 6	4 56.80	+26 49.0	2.696	3.581	7.9	21.4	1 6	4 52.07	+26 35.5	1.540	2.436	12.0	19.0
1 16	4 51.28	+26 34.5	2.783	3.582	10.4	21.6	1 16	4 46.59	+26 15.6	1.618	2.437	15.8	19.2
<b>120044</b>	2003 <i>BX</i> <sub>20</sub>		12 12.0 354°62	3.9/12.3	18		<b>78009</b>	2002 <i>JM</i> <sub>52</sub>		12 12.0 79°73	3.3/12.3	18	
11 7	5 41.03	+28 36.1	1.023	1.885	20.3	18.6	11 7	5 48.82	+31 20.0	2.326	3.121	12.6	19.2
11 17	5 38.60	+29 19.7	0.959	1.877	15.8	18.3	11 17	5 42.07	+32 12.7	2.269	3.148	9.7	19.0
11 27	5 32.08	+29 57.2	0.913	1.870	10.4	18.0	11 27	5 33.07	+32 59.0	2.237	3.175	6.6	18.9
12 7	5 22.51	+30 23.4	0.887	1.866	5.2	17.7	12 7	5 22.62	+33 35.3	2.233	3.202	3.8	18.7
12 17	5 11.69	+30 34.0	0.885	1.863	5.0	17.7	12 17	5 11.75	+33 59.4	2.260	3.228	3.7	18.8
12 27	5 1.93	+30 29.3	0.906	1.862	10.2	18.0	12 27	5 1.59	+34 11.4	2.317	3.254	6.2	19.0
1 6	4 55.19	+30 14.0	0.948	1.863	15.6	18.3	1 6	4 53.11	+34 13.5	2.402	3.280	9.0	19.2
1 16	4 52.59	+29 54.3	1.008	1.866	20.2	18.6	1 16	4 46.96	+34 9.2	2.512	3.305	11.6	19.4
<b>142337</b>	2002 <i>RR</i> <sub>195</sub>		12 12.0 285°88	5.6/12.6	18		<b>116025</b>	2003 <i>WS</i> <sub>87</sub>		12 12.0 43°64	2.3/11.9	18	
11 7	5 50.31	+34 13.4	1.467	2.284	17.6	19.8	11 7	5 45.63	+17 15.0	1.395	2.231	17.4	18.6
11 17	5 44.81	+35 1.1	1.391	2.280	14.0	19.6	11 17	5 40.44	+17 17.4	1.344	2.249	13.1	18.4
11 27	5 35.59	+35 38.5	1.336	2.275	9.9	19.4	11 27	5 32.36	+17 24.5	1.314	2.269	8.3	18.1
12 7	5 23.63	+35 59.0	1.305	2.271	6.3	19.1	12 7	5 22.42	+17 36.3	1.309	2.289	3.5	17.9
12 17	5 10.58	+35 58.3	1.300	2.267	6.1	19.1	12 17	5 12.01	+17 52.3	1.331	2.309	3.6	18.0
12 27	4 58.44	+35 37.0	1.322	2.263	9.4	19.3	12 27	5 2.65	+18 12.5	1.380	2.330	8.1	18.3
1 6	4 48.97	+35 1.0	1.368	2.259	13.6	19.5	1 6	4 55.54	+18 36.9	1.454	2.352	12.5	18.6
1 16	4 43.21	+34 17.7	1.435	2.255	17.4	19.8	1 16	4 51.38	+19 5.2	1.550	2.373	16.1	18.9
<b>48887</b>	1998 <i>KM</i> <sub>4</sub>		12 12.0 207°39	0.8/11.9	18		<b>414015</b>	2007 <i>HN</i> <sub>41</sub>		12 12.0 142°78	1.2/12.2	17	
11 7	5 48.72	+20 37.7	1.738	2.557	15.2	19.6	11 7	5 44.43	+25 54.5	2.524	3.329	11.4	21.3
11 17	5 42.68	+20 45.2	1.655	2.553	11.6	19.3	11 17	5 38.66	+26 18.6	2.445	3.335	8.7	21.1
11 27	5 33.81	+20 53.5	1.595	2.548	7.3	19.1	11 27	5 30.95	+26 40.1	2.392	3.341	5.5	21.0
12 7	5 22.95	+21 1.7	1.562	2.543	2.6	18.8	12 7	5 21.93	+26 57.4	2.367	3.347	2.2	20.7
12 17	5 11.28	+21 9.1	1.557	2.537	2.6	18.8	12 17	5 12.45	+27 9.3	2.373	3.352	2.1	20.7
12 27	5 0.24	+21 16.1	1.582	2.531	7.4	19.0	12 27	5 3.45	+27 16.2	2.410	3.357	5.3	21.0
1 6	4 51.12	+21 24.2	1.634	2.524	11.8	19.3	1 6	4 55.79	+27 19.1	2.476	3.362	8.5	21.2
1 16	4 44.80	+21 34.7	1.708	2.517	15.5	19.5	1 16	4 50.09	+27 20.1	2.567	3.367	11.2	21.4
<b>295221</b>	2008 <i>GM</i>		12 12.0 239°06	2.5/12.4	18		<b>278737</b>	2008 <i>SR</i> <sub>86</sub>		12 12.0 134°15	0.8/12.2	17	
11 7	5 50.26	+29 8.7	1.787	2.598	15.2	22.1	11 7	5 43.32	+26 39.4	2.631	3.436	11.0	21.5
11 17	5 44.10	+29 26.7	1.694	2.584	11.8	21.8	11 17	5 37.67	+26 32.6	2.555	3.444	8.3	21.3
11 27	5 34.86	+29 38.5	1.623	2.570	7.7	21.6	11 27	5 30.24	+26 21.5	2.503	3.452	5.2	21.1
12 7	5 23.35	+29 40.7	1.579	2.555	3.6	21.3	12 7	5 21.66	+26 5.6	2.480	3.460	2.0	20.9
12 17	5 10.85	+29 31.2	1.563	2.540	3.4	21.2	12 17	5 12.75	+25 45.3	2.488	3.468	1.8	20.9
12 27	4 58.94	+29 11.0	1.576	2.524	7.6	21.4	12 27	5 4.38	+25 21.9	2.527	3.475	5.1	21.1
1 6	4 49.06	+28 43.9	1.617	2.507	11.9	21.7	1 6	4 57.31	+24 57.4	2.595	3.483	8.1	21.3
1 16	4 42.20	+28 14.7	1.680	2.489	15.7	21.9	1 16	4 52.09	+24 34.2	2.689	3.489	10.7	21.5
<b>494023</b>	2016 <i>AW</i> <sub>167</sub>		12 12.0 128°74	5.4/10.9	17		<b>332644</b>	2008 <i>UV</i> <sub>113</sub>		12 12.0 132°57	1.7/12.4	17	
11 7	5 40.23	+ 6 23.7	2.470	3.266	11.9	21.8	11 7	5 43.67	+28 55.5	2.735	3.535	10.8	21.5
11 17	5 35.32	+ 5 43.5	2.398	3.270	9.6	21.6	11 17	5 37.94	+29 7.1	2.659	3.544	8.2	21.3
11 27	5 28.76	+ 5 11.6	2.350	3.274	7.2	21.5	11 27	5 30.42	+29 13.9	2.608	3.553	5.3	21.2
12 7	5 21.12	+ 4 50.6	2.329	3.277	5.6	21.4	12 7	5 21.74	+29 14.5	2.586	3.562	2.5	21.0
12 17	5 13.14	+ 4 42.3	2.338	3.281	5.8	21.4	12 17	5 12.69	+29 8.5	2.594	3.571	2.3	21.0
12 27	5 5.62	+ 4 47.7	2.374	3.284	7.6	21.5	12 27	5 4.15	+28 56.6	2.634	3.579	5.0	21.2
1 6	4 59.26	+ 5 6.1	2.438	3.288	10.0	21.7	1 6	4 56.89	+28 40.8	2.702	3.587	7.9	21.4
1 16	4 54.59	+ 5 35.8	2.525	3.291	12.3	21.8	1 16	4 51.47	+28 23.5	2.796	3.595	10.4	21.6
<b>225064</b>	2007 <i>HS</i> <sub>27</sub>		12 12.0 117°51	4.0/10.9	18		<b>149907</b>	2005 <i>SB</i> <sub>46</sub>		12 12.0 141°90	0.4/11.9	18	
11 7	5 41.67	+12 53.7	2.351	3.159	12.1	20.7	11 7	5 48.95	+22 52.4	1.833	2.648	14.7	21.1
11 17	5 36.45	+11 59.4	2.278	3.165	9.3	20.5	11 17	5 42.52	+22 42.7	1.762	2.658	11.1	20.8
11 27	5 29.47	+11 8.5	2.231	3.172	6.4	20.3	11 27	5 33.51	+22 30.5	1.715	2.667	6.9	20.6
12 7	5 21.37	+10 23.7	2.212	3.178	4.2	20.2	12 7	5 22.83	+22 15.5	1.695	2.676	2.4	20.3
12 17	5 12.93	+ 9 47.6	2.222	3.183	4.6	20.2	12 17	5 11.64	+21 58.0	1.705	2.685	2.4	20.4
12 27	5 5.03	+ 9 22.3	2.263	3.189	7.0	20.4	12 27	5 1.27	+21 40.0	1.744	2.693	6.8	20.7
1 6	4 58.43	+ 9 8.4	2.330	3.195	9.8	20.6	1 6	4 52.82	+21 23.9	1.810	2.700	10.9	20.9
1 16	4 53.66	+ 9 5.8	2.421	3.200	12.4	20.8	1 16	4 47.00	+21 12.0	1.901	2.706	14.3	21.2
<b>514602</b>	2003 <i>SN</i> <sub>221</sub>		12 12.0 73°41	2.8/12.5	18		<b>59827</b>	1999 <i>RF</i> <sub>32</sub>		12 12.0 17°55			

EPHEMERIDES

12 12.0

12 12.0

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>276001</b>	2001 XJ <sub>228</sub>		12 12.0	51°76	1°4/12.2	18	<b>376694</b>	Kassák		12 12.0	150°82	3°6/11.3	17
11 7	5 48.60	+25 7.9	1.321	2.157	18.2	20.3	11 7	5 40.80	+10 18.8	2.868	3.664	10.4	22.4
11 17	5 43.04	+25 32.5	1.270	2.175	13.7	20.1	11 17	5 35.56	+9 54.6	2.793	3.671	8.1	22.2
11 27	5 34.14	+25 53.6	1.239	2.194	8.6	19.9	11 27	5 28.85	+9 35.6	2.744	3.678	5.7	22.1
12 7	5 23.08	+26 8.4	1.233	2.214	3.2	19.6	12 7	5 21.21	+9 23.4	2.723	3.685	3.9	22.0
12 17	5 11.45	+26 15.2	1.253	2.233	3.0	19.6	12 17	5 13.27	+9 19.1	2.733	3.691	4.0	22.0
12 27	5 1.04	+26 15.1	1.300	2.253	8.1	20.0	12 27	5 5.74	+9 23.3	2.773	3.697	6.0	22.1
1 6	4 53.23	+26 11.2	1.372	2.274	12.8	20.3	1 6	4 59.24	+9 35.8	2.842	3.703	8.4	22.3
1 16	4 48.78	+26 7.0	1.466	2.294	16.6	20.6	1 16	4 54.25	+9 56.0	2.936	3.708	10.6	22.5
<b>300329</b>	2007 QF <sub>9</sub>		12 12.0	110°21	2°7/11.6	11 C	<b>47274</b>	1999 VJ <sub>147</sub>		12 12.0	228°79	1°4/11.8	18
11 7	5 47.49	+15 54.2	2.094	2.901	13.4	22.4	11 7	5 45.12	+20 25.9	1.908	2.727	14.0	20.3
11 17	5 40.89	+15 32.3	2.035	2.925	10.2	22.2	11 17	5 39.69	+20 7.1	1.824	2.723	10.6	20.1
11 27	5 32.24	+15 13.4	2.001	2.948	6.6	22.1	11 27	5 31.84	+19 47.6	1.765	2.718	6.7	19.8
12 7	5 22.34	+14 58.6	1.996	2.971	3.3	21.9	12 7	5 22.31	+19 27.8	1.732	2.713	2.6	19.5
12 17	5 12.17	+14 49.0	2.020	2.993	3.5	21.9	12 17	5 12.17	+19 8.9	1.729	2.707	2.7	19.5
12 27	5 2.76	+14 45.6	2.075	3.014	6.7	22.2	12 27	5 2.64	+18 52.5	1.755	2.702	6.9	19.8
1 6	4 54.98	+14 48.9	2.158	3.035	10.0	22.4	1 6	4 54.78	+18 40.7	1.807	2.696	10.9	20.0
1 16	4 49.40	+14 58.9	2.265	3.055	12.8	22.7	1 16	4 49.35	+18 34.9	1.884	2.691	14.3	20.2
<b>238726</b>	2005 GK <sub>82</sub>		12 12.0	287°82	3°2/12.8	18	<b>441013</b>	2007 EM <sub>69</sub>		12 12.0	206°28	0°8/11.9	18
11 7	5 44.24	+33 32.8	2.333	3.133	12.4	20.3	11 7	5 47.54	+20 57.9	1.992	2.805	13.8	22.5
11 17	5 38.89	+33 39.3	2.241	3.122	9.7	20.1	11 17	5 41.47	+20 54.8	1.906	2.800	10.5	22.3
11 27	5 31.28	+33 36.9	2.172	3.111	6.7	19.9	11 27	5 32.94	+20 51.3	1.843	2.795	6.6	22.1
12 7	5 22.10	+33 23.4	2.131	3.100	3.9	19.7	12 7	5 22.70	+20 47.0	1.808	2.789	2.4	21.8
12 17	5 12.34	+32 58.1	2.119	3.090	3.6	19.6	12 17	5 11.79	+20 42.1	1.803	2.782	2.4	21.8
12 27	5 3.12	+32 22.3	2.136	3.079	6.2	19.8	12 27	5 1.43	+20 37.4	1.827	2.775	6.7	22.0
1 6	4 55.45	+31 39.7	2.181	3.068	9.4	20.0	1 6	4 52.74	+20 34.6	1.879	2.767	10.7	22.3
1 16	4 50.05	+30 54.3	2.252	3.058	12.3	20.1	1 16	4 46.48	+20 35.3	1.956	2.758	14.1	22.5
<b>150474</b>	2000 LV <sub>32</sub>		12 12.0	234°49	3°4/11.4	18	<b>391829</b>	2008 ST <sub>116</sub>		12 12.0	15°33	5°1/12.6	18
11 7	5 46.09	+15 46.4	1.802	2.620	14.8	20.5	11 7	5 47.99	+33 1.3	1.425	2.249	17.7	20.9
11 17	5 40.54	+15 11.4	1.716	2.611	11.4	20.3	11 17	5 42.98	+33 47.9	1.357	2.251	13.9	20.6
11 27	5 32.43	+14 38.8	1.653	2.601	7.5	20.0	11 27	5 34.40	+34 24.7	1.310	2.253	9.7	20.4
12 7	5 22.53	+14 10.5	1.616	2.591	4.0	19.8	12 7	5 23.29	+34 46.0	1.287	2.256	5.9	20.2
12 17	5 11.91	+13 48.8	1.608	2.580	4.4	19.8	12 17	5 11.24	+34 48.0	1.290	2.260	5.6	20.2
12 27	5 1.87	+13 35.9	1.629	2.569	8.1	20.0	12 27	5 0.20	+34 31.8	1.319	2.263	9.1	20.4
1 6	4 53.54	+13 33.0	1.677	2.558	12.1	20.2	1 6	4 51.76	+34 2.5	1.373	2.268	13.2	20.6
1 16	4 47.75	+13 40.5	1.746	2.546	15.6	20.4	1 16	4 46.90	+33 27.0	1.447	2.273	17.0	20.9
<b>458089</b>	2010 AJ <sub>72</sub>		12 12.0	282°83	4°1/12.9	18	<b>394134</b>	2006 JA <sub>2</sub>		12 12.0	211°20	4°6/10.8	18
11 7	5 46.38	+36 57.6	2.676	3.456	11.5	21.6	11 7	5 44.85	+12 4.4	2.177	2.982	13.0	22.0
11 17	5 40.51	+37 15.2	2.559	3.425	9.3	21.4	11 17	5 39.11	+11 8.8	2.092	2.976	10.2	21.8
11 27	5 32.34	+37 23.4	2.467	3.393	6.7	21.2	11 27	5 31.31	+10 16.7	2.031	2.969	7.1	21.6
12 7	5 22.51	+37 19.1	2.403	3.361	4.6	21.0	12 7	5 22.11	+9 31.2	1.998	2.962	4.8	21.5
12 17	5 11.90	+37 0.5	2.368	3.328	4.3	21.0	12 17	5 12.40	+8 55.4	1.994	2.954	5.2	21.5
12 27	5 1.63	+36 28.1	2.363	3.295	6.4	21.0	12 27	5 3.20	+8 31.7	2.021	2.945	7.9	21.6
1 6	4 52.74	+35 44.9	2.387	3.262	9.2	21.2	1 6	4 55.40	+8 21.0	2.074	2.936	11.0	21.8
1 16	4 46.02	+34 55.2	2.436	3.228	11.9	21.3	1 16	4 49.66	+8 23.0	2.151	2.926	13.9	22.0
<b>185370</b>	2006 VJ <sub>120</sub>		12 12.0	227°56	0°6/11.9	18	<b>419317</b>	2009 WN <sub>85</sub>		12 12.0	9°00	3°9/12.5	17
11 7	5 47.98	+23 34.9	1.550	2.377	16.4	20.2	11 7	5 45.74	+32 51.3	2.175	2.977	13.1	21.3
11 17	5 42.37	+23 5.8	1.471	2.373	12.4	20.0	11 17	5 40.21	+33 36.7	2.096	2.977	10.3	21.1
11 27	5 33.72	+22 31.8	1.414	2.369	7.8	19.7	11 27	5 32.21	+34 15.3	2.040	2.978	7.1	20.9
12 7	5 22.98	+21 53.3	1.383	2.365	2.7	19.4	12 7	5 22.47	+34 43.4	2.011	2.978	4.4	20.8
12 17	5 11.50	+21 12.0	1.381	2.361	2.8	19.4	12 17	5 12.05	+34 58.3	2.012	2.979	4.3	20.8
12 27	5 0.86	+20 31.5	1.406	2.356	8.0	19.7	12 27	5 2.19	+35 0.1	2.041	2.980	6.8	20.9
1 6	4 52.40	+19 55.8	1.457	2.351	12.6	19.9	1 6	4 54.01	+34 51.2	2.098	2.980	10.0	21.1
1 16	4 46.98	+19 28.3	1.530	2.346	16.6	20.2	1 16	4 48.28	+34 35.5	2.179	2.981	12.8	21.3
<b>42830</b>	1999 NE <sub>40</sub>		12 12.0	69°19	0°8/11.9	18	<b>69718</b>	1998 HH <sub>116</sub>		12 12.0	141°49	5°0/11.1	18
11 7	5 49.87	+20 41.1	1.297	2.132	18.5	18.8	11 7	5 45.21	+8 41.6	2.304	3.099	12.7	20.4
11 17	5 43.92	+20 52.0	1.245	2.151	13.9	18.5	11 17	5 39.09	+8 0.8	2.238	3.112	10.0	20.3
11 27	5 34.66	+21 4.0	1.214	2.170	8.6	18.3	11 27	5 31.14	+7 27.1	2.196	3.125	7.2	20.1
12 7	5 23.26	+21 15.8	1.207	2.189	3.0	18.0	12 7	5 22.01	+7 3.2	2.182	3.137	5.2	20.0
12 17	5 11.31	+21 26.5	1.227	2.208	3.0	18.1	12 17	5 12.57	+6 51.0	2.197	3.149	5.5	20.0
12 27	5 0.58	+21 36.4	1.275	2.227	8.4	18.4	12 27	5 3.71	+6 51.5	2.242	3.160	7.6	20.2
1 6	4 52.44	+21 47.3	1.347	2.246	13.1	18.8	1 6	4 56.22	+7 4.1	2.315	3.169	10.3	20.4
1 16	4 47.67	+22 0.7	1.440	2.265	17.1	19.1	1 16	4 50.67	+7 27.5	2.412	3.179	12.8	20.6
<b>68342</b>	2001 KF <sub>46</sub>		12 12.0	196°91	3°6/11.7	18	<b>364894</b>	2008 EZ <sub>72</sub>		12 12.0	300°75	3°0/11.6	17
11 7	5 47.02	+14 22.3	1.667	2.487	15.7	19.4	11 7	5 42.85	+15 33.4	1.848	2.671	14.3	21.3
11 17	5 41.35	+14 8.2	1.590	2.486	12.1	19.2	11 17	5 38.08	+15 16.6	1.763	2.661	11.0	21.0
11 27	5 32.98	+13 59.7	1.536	2.484	8.0	19.0	11 27	5 30.91	+15 3.7	1.701	2.651	7.2	20.8
12 7	5 22.72	+13 58.3	1.508	2.482	4.3	18.7	12 7	5 22.04	+14 56.0	1.666	2.641	3.7	20.6
12 17	5 11.75	+14 5.0	1.507	2.480	4.5	18.8	12 17	5 12.49	+14 54.7	1.658	2.632	3.9	20.6
12 27	5 1.45	+14 20.3	1.535	2.477	8.3	19.0	12 27	5 3.45	+15 0.9	1.679	2.622	7.6	20.8
1 6	4 53.04	+14 43.9	1.589	2.474	12.4	19.2	1 6	4 56.01	+15 14.8	1.726	2.613	11.5	21.0
1 16	4 47.33	+15 15.3	1.666	2.471	16.0	19.4	1 16	4 50.95	+15 36.4	1.796	2.604	14.9	21.2
<b>32212</b>	2000 OV <sub>11</sub>		12 12.0	143°93	0°9/12.2	18 R	<b>308471</b>	2005 TZ <sub>10</sub>		12 12.0	51°53	2°0/11.6	18
11 7	5 48.87	+26 33.5	1.881	2.693	14.5	18.2							

EPHEMERIDES

12 12.0

12 12.1

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>478809</b>	2012 VT		12 12.0	20°18'	7.2/11.9	18	<b>295396</b>	2008 JW7		12 12.1	11°26'	3.7/11.4	18
11 7	5 51.34	+34 38.2	1.435	2.251	18.0	20.8	11 7	5 37.86	+10 58.5	2.537	3.346	11.3	19.9
11 17	5 45.87	+36 21.5	1.368	2.254	14.4	20.6	11 17	5 33.63	+10 38.0	2.462	3.349	8.7	19.8
11 27	5 36.48	+37 57.0	1.323	2.257	10.6	20.3	11 27	5 27.80	+10 23.4	2.413	3.352	6.1	19.6
12 7	5 24.10	+39 15.1	1.303	2.261	7.6	20.2	12 7	5 20.94	+10 16.1	2.390	3.355	4.0	19.5
12 17	5 10.43	+40 7.9	1.308	2.265	7.6	20.2	12 17	5 13.72	+10 17.2	2.397	3.359	4.2	19.5
12 27	4 57.62	+40 33.2	1.340	2.270	10.5	20.4	12 27	5 6.93	+10 27.4	2.433	3.364	6.4	19.7
1 6	4 47.58	+40 35.3	1.396	2.275	14.2	20.6	1 6	5 1.23	+10 46.2	2.497	3.368	9.0	19.8
1 16	4 41.48	+40 21.8	1.473	2.281	17.6	20.9	1 16	4 57.15	+11 12.6	2.584	3.374	11.4	20.0
<b>84360</b>	2002 TW <sub>83</sub>		12 12.0	35°68'	5.4/12.2	18 R	<b>414289</b>	2008 PU7		12 12.1	112°38'	1.9/12.6	17
11 7	5 49.24	+32 29.7	1.553	2.371	16.8	18.6	11 7	5 45.19	+30 26.5	2.415	3.216	12.0	21.0
11 17	5 43.71	+33 50.0	1.491	2.380	13.2	18.4	11 17	5 39.27	+30 17.6	2.342	3.227	9.2	20.8
11 27	5 34.78	+35 2.9	1.450	2.390	9.2	18.2	11 27	5 31.34	+30 1.5	2.293	3.237	6.0	20.6
12 7	5 23.43	+36 1.7	1.434	2.400	6.0	18.1	12 7	5 22.14	+29 37.1	2.272	3.248	2.8	20.4
12 17	5 11.15	+36 40.8	1.446	2.411	5.9	18.1	12 17	5 12.60	+29 4.8	2.281	3.258	2.5	20.4
12 27	4 59.77	+36 59.4	1.485	2.422	9.0	18.3	12 27	5 3.73	+28 26.6	2.321	3.268	5.5	20.6
1 6	4 50.83	+37 1.0	1.549	2.434	12.6	18.5	1 6	4 56.38	+27 45.7	2.389	3.277	8.6	20.9
1 16	4 45.30	+36 51.6	1.634	2.446	16.0	18.8	1 16	4 51.12	+27 5.4	2.483	3.287	11.4	21.1
<b>422561</b>	2014 TH <sub>39</sub>		12 12.0	18°68'	5.1/12.5	17 R	<b>302104</b>	2001 FK <sub>156</sub>		12 12.1	282°44'	5.7/10.9	18
11 7	5 45.19	+33 34.4	1.707	2.523	15.6	20.1	11 7	5 43.21	+10 32.0	1.780	2.597	15.0	21.2
11 17	5 40.35	+34 35.5	1.643	2.531	12.2	19.9	11 17	5 38.42	+9 38.9	1.693	2.583	11.9	20.9
11 27	5 32.52	+35 28.0	1.601	2.540	8.6	19.7	11 27	5 31.18	+8 51.7	1.629	2.568	8.5	20.7
12 7	5 22.62	+36 6.7	1.584	2.549	5.7	19.6	12 7	5 22.19	+8 14.4	1.591	2.553	6.0	20.5
12 17	5 11.96	+36 28.1	1.594	2.559	5.5	19.6	12 17	5 12.48	+7 50.6	1.580	2.539	6.4	20.5
12 27	5 2.12	+36 32.1	1.632	2.570	8.2	19.8	12 27	5 3.27	+7 42.7	1.597	2.524	9.4	20.6
1 6	4 54.43	+36 22.2	1.695	2.582	11.6	20.0	1 6	4 55.66	+7 51.2	1.639	2.509	13.0	20.8
1 16	4 49.73	+36 3.5	1.780	2.595	14.7	20.2	1 16	4 50.47	+8 14.5	1.703	2.494	16.3	21.0
<b>220117</b>	2002 TQ <sub>46</sub>		12 12.0	344°40'	8.9/11.7	18	<b>149348</b>	2002 VS <sub>130</sub>		12 12.1	64°12'	0.0/12.1	08 C
11 7	5 47.59	+35 11.2	1.150	1.986	20.3	19.5	11 7	5 20.15	+23 56.1	42.295	43.099	0.8	22.7
11 17	5 44.03	+37 6.7	1.080	1.976	16.4	19.2	11 17	5 19.42	+23 55.4	42.211	43.102	0.6	22.7
11 27	5 35.90	+38 55.4	1.029	1.967	12.4	19.0	11 27	5 18.61	+23 54.6	42.154	43.105	0.4	22.7
12 7	5 24.07	+40 25.1	1.001	1.959	9.3	18.8	12 7	5 17.75	+23 53.7	42.127	43.108	0.1	22.6
12 17	5 10.40	+41 24.8	0.996	1.953	9.5	18.8	12 17	5 16.87	+23 52.7	42.131	43.112	0.1	22.6
12 27	4 57.56	+41 50.5	1.014	1.947	12.7	18.9	12 27	5 16.01	+23 51.6	42.166	43.115	0.3	22.7
1 6	4 47.98	+41 47.0	1.053	1.943	16.8	19.2	1 6	5 15.20	+23 50.6	42.231	43.118	0.6	22.7
1 16	4 43.13	+41 23.9	1.111	1.940	20.8	19.4	1 16	5 14.47	+23 49.6	42.323	43.121	0.8	22.7
<b>179100</b>	2001 SS <sub>202</sub>		12 12.0	67°61'	3.5/12.6	18	<b>520404</b>	2014 JB <sub>84</sub>		12 12.1	295°94'	2.6/11.7	18
11 7	5 47.05	+31 39.1	1.873	2.683	14.6	20.4	11 7	5 44.19	+17 23.1	1.659	2.487	15.4	21.3
11 17	5 41.39	+32 7.3	1.801	2.689	11.3	20.2	11 17	5 39.40	+17 4.9	1.574	2.476	11.8	21.1
11 27	5 33.00	+32 27.5	1.751	2.695	7.6	20.0	11 27	5 31.90	+16 48.9	1.512	2.465	7.6	20.8
12 7	5 22.75	+32 36.5	1.728	2.700	4.3	19.8	12 7	5 22.46	+16 36.7	1.475	2.454	3.5	20.5
12 17	5 11.87	+32 32.5	1.734	2.706	4.0	19.8	12 17	5 12.22	+16 29.3	1.467	2.443	3.7	20.5
12 27	5 1.77	+32 16.5	1.768	2.712	7.2	20.0	12 27	5 2.56	+16 28.2	1.486	2.432	8.0	20.8
1 6	4 53.64	+31 52.2	1.828	2.718	10.8	20.3	1 6	4 54.72	+16 34.5	1.530	2.422	12.4	21.0
1 16	4 48.26	+31 24.0	1.912	2.724	14.0	20.5	1 16	4 49.56	+16 48.6	1.597	2.412	16.1	21.2
<b>508356</b>	2016 EF <sub>84</sub>		12 12.0	43°13'	19.1/6.7	17	<b>456124</b>	2006 DH <sub>76</sub>		12 12.1	189°76'	5.4/11.2	17
11 7	5 45.83	-6 2.9	1.009	1.819	24.3	20.9	11 7	5 41.08	+6 53.9	2.308	3.107	12.6	21.8
11 17	5 41.29	-9 29.5	0.974	1.826	21.7	20.7	11 17	5 36.17	+6 23.2	2.232	3.107	10.0	21.7
11 27	5 33.22	-12 25.3	0.958	1.833	19.8	20.6	11 27	5 29.45	+6 1.2	2.180	3.107	7.5	21.5
12 7	5 22.85	-14 33.1	0.960	1.840	19.1	20.6	12 7	5 21.53	+5 50.5	2.154	3.107	5.6	21.4
12 17	5 11.85	-15 41.8	0.980	1.848	19.8	20.7	12 17	5 13.18	+5 52.8	2.158	3.106	5.8	21.4
12 27	5 2.10	-15 49.8	1.018	1.856	21.6	20.8	12 27	5 5.29	+6 8.6	2.189	3.106	7.8	21.5
1 6	4 55.05	-15 4.8	1.072	1.865	23.7	21.0	1 6	4 58.64	+6 36.9	2.248	3.106	10.4	21.7
1 16	4 51.51	-13 39.0	1.138	1.874	25.8	21.2	1 16	4 53.82	+7 16.0	2.330	3.105	12.9	21.9
<b>369787</b>	2012 GJ <sub>38</sub>		12 12.1	109°60'	1.6/11.9	18	<b>22587</b>	McKennon		12 12.1	162°26'	3.4/11.5	18
11 7	5 43.02	+17 2.1	2.405	3.214	11.8	20.6	11 7	5 47.84	+16 8.2	1.686	2.505	15.6	19.6
11 17	5 37.59	+17 12.5	2.330	3.222	8.9	20.4	11 17	5 41.87	+15 30.6	1.613	2.509	11.9	19.4
11 27	5 30.30	+17 26.0	2.280	3.230	5.7	20.2	11 27	5 33.25	+14 55.6	1.564	2.513	7.8	19.1
12 7	5 21.78	+17 42.3	2.259	3.238	2.4	20.0	12 7	5 22.87	+14 25.2	1.541	2.516	4.1	18.9
12 17	5 12.84	+18 1.1	2.268	3.245	2.5	20.0	12 17	5 11.91	+14 1.8	1.547	2.519	4.4	18.9
12 27	5 4.39	+18 22.3	2.307	3.253	5.7	20.2	12 27	5 1.74	+13 47.4	1.581	2.521	8.2	19.2
1 6	4 57.23	+18 45.8	2.375	3.260	8.9	20.4	1 6	4 53.49	+13 43.5	1.641	2.523	12.2	19.4
1 16	4 51.95	+19 11.6	2.469	3.267	11.6	20.6	1 16	4 47.91	+13 49.9	1.724	2.525	15.7	19.7
<b>95126</b>	2002 AZ <sub>148</sub>		12 12.1	28°25'	5.6/11.9	18 R	<b>72663</b>	2001 FD <sub>49</sub>		12 12.1	213°95'	4.5/13.0	18
11 7	5 43.50	+11 24.1	1.125	1.972	19.9	18.5	11 7	5 46.43	+36 59.4	2.410	3.196	12.5	18.9
11 17	5 39.34	+11 6.5	1.079	1.987	15.4	18.3	11 17	5 40.58	+37 27.0	2.325	3.194	10.0	18.7
11 27	5 31.92	+11 1.4	1.052	2.003	10.5	18.1	11 27	5 32.39	+37 44.6	2.265	3.191	7.2	18.5
12 7	5 22.39	+11 11.6	1.048	2.020	6.4	17.9	12 7	5 22.58	+37 49.1	2.231	3.189	5.0	18.4
12 17	5 12.32	+11 37.7	1.067	2.038	6.4	18.0	12 17	5 12.19	+37 38.5	2.227	3.186	4.7	18.4
12 27	5 3.41	+12 18.2	1.112	2.057	10.3	18.3	12 27	5 2.38	+37 13.8	2.251	3.183	6.7	18.5
1 6	4 57.01	+13 10.2	1.179	2.077	14.7	18.6	1 6	4 54.20	+36 38.4	2.304	3.181	9.4	18.6
1 16	4 53.86	+14 10.1	1.266	2.098	18.5	18.9	1 16	4 48.37	+35 56.8	2.381	3.178	12.0	18.8
<b>108636</b>	2001 NS <sub>3</sub>		12 12.1	51°01'	0.1/12.1	17	<b>447559</b>	2006 SS <sub>396</sub>		12 12.1	290°92'	0.3/12.1	18
11 7	5 42.54	+23 26.5	2.182	2.999	12.6								

EPHEMERIDES

12 12.1

12 12.1

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>373961</b>	2003 <i>WJ</i> <sub>144</sub>	12 12.1	69°51	2°5/12.2	18		<b>403495</b>	2009 <i>UM</i> <sub>98</sub>	12 12.1	46°13	1°2/12.2	18	
11 7	5 52.33	+26 17.1	1.284	2.115	18.9	20.7	11 7	5 44.66	+25 16.0	1.894	2.715	14.1	20.6
11 17	5 46.10	+27 6.3	1.233	2.135	14.3	20.5	11 17	5 39.36	+25 38.5	1.831	2.729	10.6	20.4
11 27	5 36.23	+27 51.8	1.202	2.155	9.1	20.3	11 27	5 31.65	+25 58.2	1.791	2.743	6.7	20.2
12 7	5 23.93	+28 28.4	1.196	2.175	4.0	20.0	12 7	5 22.36	+26 13.3	1.777	2.757	2.6	19.9
12 17	5 10.96	+28 52.5	1.216	2.195	3.8	20.1	12 17	5 12.58	+26 22.6	1.792	2.772	2.4	19.9
12 27	4 59.27	+29 4.2	1.264	2.214	8.6	20.4	12 27	5 3.53	+26 26.6	1.837	2.787	6.4	20.2
1 6	4 50.41	+29 7.0	1.336	2.234	13.3	20.7	1 6	4 56.26	+26 27.2	1.908	2.803	10.1	20.5
1 16	4 45.23	+29 5.6	1.429	2.254	17.2	21.0	1 16	4 51.46	+26 26.6	2.003	2.818	13.3	20.7
<b>395059</b>	2009 <i>FD</i> <sub>8</sub>	12 12.1	74°05	3°2/11.7	18		<b>292350</b>	2006 <i>SA</i> <sub>215</sub>	12 12.1	68°10	2°2/11.7	18	
11 7	5 44.40	+14 44.0	1.804	2.624	14.7	20.8	11 7	5 44.91	+18 46.4	1.773	2.596	14.8	20.5
11 17	5 39.16	+14 30.6	1.733	2.629	11.2	20.6	11 17	5 39.49	+18 18.4	1.710	2.610	11.1	20.3
11 27	5 31.54	+14 22.3	1.686	2.634	7.4	20.4	11 27	5 31.68	+17 51.3	1.671	2.624	7.1	20.1
12 7	5 22.31	+14 20.3	1.664	2.639	3.9	20.2	12 7	5 22.36	+17 26.3	1.659	2.638	3.1	19.9
12 17	5 12.55	+14 25.4	1.671	2.644	4.0	20.2	12 17	5 12.62	+17 5.0	1.675	2.651	3.3	20.0
12 27	5 3.45	+14 38.1	1.707	2.649	7.6	20.4	12 27	5 3.70	+16 49.4	1.719	2.665	7.2	20.2
1 6	4 56.05	+14 58.4	1.769	2.654	11.3	20.7	1 6	4 56.59	+16 40.8	1.790	2.679	11.0	20.5
1 16	4 51.07	+15 25.5	1.854	2.659	14.6	20.9	1 16	4 51.94	+16 40.0	1.884	2.693	14.3	20.7
<b>81727</b>	2000 <i>JO</i> <sub>36</sub>	12 12.1	279°69	0°3/12.0	18		<b>302697</b>	2002 <i>TT</i> <sub>118</sub>	12 12.1	121°00	5°3/10.6	18	
11 7	5 44.80	+24 6.6	1.897	2.718	14.1	19.2	11 7	5 44.88	+10 49.3	2.053	2.859	13.7	20.8
11 17	5 39.54	+23 41.1	1.814	2.713	10.7	18.9	11 17	5 39.08	+9 38.2	1.988	2.871	10.7	20.7
11 27	5 31.81	+23 11.2	1.754	2.707	6.7	18.7	11 27	5 31.27	+8 32.4	1.948	2.882	7.7	20.5
12 7	5 22.42	+22 37.1	1.721	2.702	2.3	18.4	12 7	5 22.19	+7 35.7	1.935	2.893	5.5	20.4
12 17	5 12.44	+22 0.1	1.717	2.697	2.3	18.4	12 17	5 12.78	+6 51.8	1.951	2.904	5.9	20.4
12 27	5 3.10	+21 23.0	1.742	2.692	6.7	18.7	12 27	5 4.04	+6 22.9	1.996	2.914	8.4	20.6
1 6	4 55.50	+20 48.9	1.794	2.686	10.8	18.9	1 6	4 56.84	+6 9.7	2.068	2.924	11.3	20.8
1 16	4 50.36	+20 20.7	1.869	2.681	14.2	19.1	1 16	4 51.74	+6 11.2	2.162	2.934	13.9	21.0
<b>458587</b>	2011 <i>FA</i> <sub>22</sub>	12 12.1	83°11	0°6/12.1	17		<b>440083</b>	2002 <i>TL</i> <sub>156</sub>	12 12.1	59°12	7°3/13.9	17	
11 7	5 43.96	+23 43.0	2.333	3.144	12.1	21.0	11 7	5 52.38	+41 38.9	1.653	2.442	17.2	20.7
11 17	5 38.48	+24 8.6	2.259	3.153	9.1	20.8	11 17	5 45.90	+42 12.4	1.597	2.460	14.0	20.6
11 27	5 30.96	+24 33.3	2.210	3.161	5.7	20.6	11 27	5 35.97	+42 27.7	1.562	2.478	10.7	20.4
12 7	5 22.10	+24 55.3	2.189	3.169	2.0	20.3	12 7	5 23.85	+42 19.3	1.551	2.497	8.0	20.3
12 17	5 12.76	+25 13.6	2.198	3.178	1.9	20.4	12 17	5 11.23	+41 45.0	1.566	2.516	7.4	20.3
12 27	5 3.94	+25 28.1	2.237	3.186	5.5	20.6	12 27	4 59.96	+40 48.2	1.608	2.535	9.3	20.5
1 6	4 56.52	+25 39.6	2.305	3.194	8.9	20.8	1 6	4 51.44	+39 36.8	1.676	2.554	12.3	20.7
1 16	4 51.14	+25 49.8	2.397	3.202	11.7	21.0	1 16	4 46.39	+38 19.5	1.766	2.573	15.2	20.9
<b>325849</b>	2010 <i>TC</i> <sub>38</sub>	12 12.1	45°30	4°6/12.6	18		<b>446311</b>	2014 <i>FC</i> <sub>10</sub>	12 12.1	150°17	3°4/12.7	18	
11 7	5 51.00	+30 35.1	1.052	1.896	21.2	19.9	11 7	5 49.96	+32 46.7	2.182	2.977	13.4	22.3
11 17	5 45.75	+31 19.9	1.008	1.915	16.3	19.7	11 17	5 43.25	+33 11.5	2.107	2.986	10.4	22.2
11 27	5 36.27	+31 54.3	0.983	1.934	10.9	19.5	11 27	5 34.06	+33 28.1	2.056	2.994	7.1	22.0
12 7	5 24.00	+32 11.9	0.979	1.954	5.8	19.3	12 7	5 23.20	+33 33.2	2.032	3.001	4.1	21.8
12 17	5 11.04	+32 9.7	1.000	1.975	5.3	19.3	12 17	5 11.79	+33 25.4	2.038	3.009	3.8	21.8
12 27	4 59.74	+31 50.3	1.045	1.997	9.9	19.6	12 27	5 1.11	+33 5.8	2.075	3.015	6.6	22.0
1 6	4 51.81	+31 20.7	1.113	2.019	14.7	20.0	1 6	4 52.23	+32 37.8	2.139	3.021	9.8	22.2
1 16	4 48.06	+30 48.3	1.201	2.041	18.8	20.3	1 16	4 45.89	+32 5.8	2.228	3.026	12.7	22.4
<b>248817</b>	2006 <i>SQ</i> <sub>213</sub>	12 12.1	136°23	5°7/13.1	18		<b>344623</b>	2003 <i>GW</i> <sub>19</sub>	12 12.1	274°67	0°2/12.1	18	
11 7	5 52.07	+39 39.7	2.315	3.087	13.4	21.4	11 7	5 46.89	+23 42.9	1.647	2.472	15.6	21.5
11 17	5 44.95	+40 29.0	2.244	3.099	10.8	21.3	11 17	5 41.72	+23 42.7	1.555	2.456	12.0	21.2
11 27	5 35.16	+41 6.5	2.197	3.111	8.2	21.1	11 27	5 33.55	+23 39.9	1.486	2.440	7.6	20.9
12 7	5 23.57	+41 27.4	2.177	3.122	6.1	21.0	12 7	5 23.16	+23 33.4	1.442	2.424	2.6	20.6
12 17	5 11.36	+41 29.0	2.186	3.133	5.9	21.0	12 17	5 11.79	+23 22.7	1.427	2.407	2.6	20.6
12 27	4 59.91	+41 12.1	2.225	3.143	7.6	21.2	12 27	5 0.97	+23 9.2	1.439	2.391	7.7	20.8
1 6	4 50.40	+40 40.6	2.290	3.153	10.1	21.3	1 6	4 52.12	+22 55.7	1.478	2.374	12.4	21.1
1 16	4 43.60	+40 0.1	2.380	3.162	12.5	21.5	1 16	4 46.20	+22 45.1	1.538	2.357	16.5	21.3
<b>29731</b>	1999 <i>BY</i> <sub>2</sub>	12 12.1	335°98	10°0/11.7	18		<b>324331</b>	2006 <i>OE</i> <sub>12</sub>	12 12.1	84°35	0°4/12.0	17	
11 7	5 41.64	- 0 35.8	1.564	2.365	17.5	18.1	11 7	5 53.33	+22 16.4	1.445	2.267	17.6	21.2
11 17	5 37.49	- 1 12.0	1.489	2.354	14.7	17.8	11 17	5 46.12	+22 17.6	1.399	2.298	13.2	21.0
11 27	5 30.72	- 1 28.4	1.435	2.343	12.0	17.7	11 27	5 35.87	+22 17.2	1.374	2.328	8.1	20.8
12 7	5 22.11	- 1 19.5	1.402	2.333	10.2	17.5	12 7	5 23.78	+22 14.2	1.376	2.357	2.8	20.5
12 17	5 12.73	- 0 42.2	1.394	2.324	10.3	17.5	12 17	5 11.39	+22 8.4	1.405	2.386	2.7	20.6
12 27	5 3.91	+ 0 23.1	1.412	2.316	12.3	17.6	12 27	5 0.30	+22 1.5	1.464	2.414	7.7	21.0
1 6	4 56.83	+ 1 51.6	1.452	2.308	15.2	17.8	1 6	4 51.73	+21 56.0	1.548	2.441	12.1	21.3
1 16	4 52.33	+ 3 37.0	1.513	2.302	18.1	17.9	1 16	4 46.34	+21 54.2	1.654	2.468	15.7	21.6
<b>106861</b>	2000 <i>YV</i> <sub>26</sub>	12 12.1	19°39	3°4/11.6	18		<b>435185</b>	2007 <i>RU</i> <sub>30</sub>	12 12.1	37°92	1°2/11.9	17	
11 7	5 41.59	+18 15.6	1.100	1.958	19.4	17.9	11 7	5 49.77	+22 32.2	1.099	1.945	20.3	20.1
11 17	5 38.11	+17 34.5	1.051	1.968	14.7	17.7	11 17	5 43.73	+22 0.8	1.073	1.985	15.1	19.9
11 27	5 31.27	+16 55.8	1.021	1.980	9.4	17.5	11 27	5 34.37	+21 27.5	1.067	2.025	9.2	19.7
12 7	5 22.27	+16 22.5	1.014	1.993	4.4	17.2	12 7	5 23.22	+20 53.6	1.085	2.067	3.2	19.5
12 17	5 12.70	+15 57.7	1.031	2.008	4.7	17.3	12 17	5 12.06	+20 21.6	1.128	2.108	3.2	19.6
12 27	5 4.32	+15 44.3	1.072	2.024	9.6	17.6	12 27	5 2.63	+19 54.7	1.197	2.151	8.6	20.0
1 6	4 58.50	+15 43.2	1.136	2.041	14.4	17.9	1 6	4 56.08	+19 35.7	1.290	2.193	13.3	20.4
1 16	4 55.97	+15 53.9	1.219	2.060	18.5	18.3	1 16	4 52.90	+19 25.8	1.404	2.236	17.0	20.8
<b>505345</b>	2013 <i>AV</i> <sub>183</sub>	12 12.1	349°66	19°7/17.9	17		<b>311435</b>	2005 <i>UJ</i> <sub>218</sub>	12 1				

EPHEMERIDES

12 12.1

12 12.1

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>388165</b>	2005 <i>YO</i> <sub>239</sub>		12 12.1 257°38	0°3/12.0	18		<b>397299</b>	2006 <i>SP</i> <sub>175</sub>		12 12.1 52°57	1°4/12.3	17	
11 7	5 46.76	+22 51.4	1.761	2.583	14.9	22.0	11 7	5 46.61	+26 39.1	1.628	2.453	15.8	21.3
11 17	5 41.37	+22 45.0	1.672	2.571	11.4	21.8	11 17	5 41.15	+26 45.5	1.568	2.468	12.0	21.1
11 27	5 33.19	+22 36.3	1.605	2.558	7.2	21.5	11 27	5 32.91	+26 46.7	1.531	2.483	7.6	20.8
12 7	5 23.02	+22 24.8	1.565	2.546	2.5	21.2	12 7	5 22.87	+26 41.0	1.519	2.499	3.0	20.6
12 17	5 12.02	+22 10.7	1.553	2.533	2.5	21.1	12 17	5 12.33	+26 28.1	1.535	2.515	2.7	20.6
12 27	5 1.59	+21 55.4	1.570	2.520	7.3	21.4	12 27	5 2.75	+26 10.0	1.579	2.531	7.1	20.9
1 6	4 52.99	+21 41.5	1.613	2.507	11.7	21.6	1 6	4 55.29	+25 49.8	1.649	2.547	11.2	21.2
1 16	4 47.13	+21 31.5	1.680	2.493	15.5	21.9	1 16	4 50.67	+25 31.0	1.743	2.564	14.7	21.5
<b>330781</b>	2008 <i>TW</i> <sub>61</sub>		12 12.1 92°92	3°8/12.7	17		<b>310554</b>	2001 <i>PA</i> <sub>19</sub>		12 12.1 43°04	9°0/14.7	17	
11 7	5 46.05	+34 17.1	2.407	3.200	12.3	20.8	11 7	5 54.65	+44 10.7	1.436	2.225	19.3	20.3
11 17	5 40.19	+34 51.6	2.334	3.210	9.6	20.6	11 17	5 47.97	+44 57.2	1.397	2.256	15.9	20.2
11 27	5 32.12	+35 18.1	2.286	3.220	6.8	20.4	11 27	5 37.36	+45 20.9	1.378	2.287	12.4	20.0
12 7	5 22.57	+35 33.6	2.266	3.230	4.3	20.3	12 7	5 24.36	+45 15.0	1.382	2.319	9.7	20.0
12 17	5 12.51	+35 36.2	2.275	3.240	4.1	20.3	12 17	5 11.03	+44 37.6	1.410	2.352	9.0	20.0
12 27	5 3.07	+35 26.7	2.313	3.249	6.3	20.5	12 27	4 59.51	+43 33.5	1.464	2.384	10.6	20.2
1 6	4 55.20	+35 7.7	2.379	3.259	9.1	20.7	1 6	4 51.27	+42 12.8	1.542	2.417	13.3	20.4
1 16	4 49.58	+34 43.1	2.471	3.269	11.6	20.8	1 16	4 46.95	+40 45.7	1.642	2.451	16.1	20.7
<b>166350</b>	2002 <i>KH</i> <sub>5</sub>		12 12.1 123°76	1°1/11.9	18		<b>43601</b>	2001 <i>SU</i> <sub>148</sub>		12 12.1 252°50	0°9/11.9	18	
11 7	5 47.20	+20 2.0	2.095	2.905	13.3	21.2	11 7	5 45.11	+21 39.3	2.265	3.075	12.4	19.1
11 17	5 40.93	+19 57.2	2.028	2.921	10.0	21.0	11 17	5 39.55	+21 19.8	2.164	3.057	9.4	18.8
11 27	5 32.50	+19 52.7	1.985	2.936	6.3	20.8	11 27	5 31.81	+20 58.2	2.087	3.039	6.0	18.6
12 7	5 22.68	+19 48.4	1.970	2.950	2.3	20.6	12 7	5 22.52	+20 34.8	2.039	3.020	2.2	18.3
12 17	5 12.45	+19 44.5	1.985	2.964	2.4	20.6	12 17	5 12.58	+20 10.4	2.021	3.000	2.3	18.3
12 27	5 2.93	+19 42.0	2.031	2.978	6.2	20.9	12 27	5 3.03	+19 46.8	2.034	2.981	6.2	18.5
1 6	4 55.02	+19 42.1	2.104	2.990	9.7	21.1	1 6	4 54.87	+19 26.2	2.074	2.960	9.9	18.7
1 16	4 49.37	+19 45.8	2.203	3.003	12.8	21.4	1 16	4 48.82	+19 10.4	2.140	2.939	13.1	18.9
<b>311016</b>	2003 <i>YZ</i> <sub>134</sub>		12 12.1 346°84	10°2/14.1	17		<b>126414</b>	2002 <i>BD</i> <sub>20</sub>		12 12.1 284°05	0°3/12.1	18	
11 7	5 45.92	+43 53.3	1.310	2.119	19.8	19.6	11 7	5 45.94	+22 51.9	1.646	2.473	15.6	20.5
11 17	5 42.48	+44 47.8	1.236	2.107	16.7	19.4	11 17	5 40.96	+22 46.6	1.557	2.459	11.9	20.2
11 27	5 34.70	+45 21.1	1.181	2.096	13.4	19.1	11 27	5 33.05	+22 39.3	1.490	2.445	7.5	19.9
12 7	5 23.69	+45 24.1	1.146	2.087	10.9	19.0	12 7	5 23.02	+22 29.1	1.449	2.431	2.6	19.6
12 17	5 11.41	+44 51.2	1.135	2.079	10.3	18.9	12 17	5 12.08	+22 16.3	1.436	2.416	2.6	19.6
12 27	5 0.34	+43 44.2	1.146	2.073	12.3	19.0	12 27	5 1.71	+22 2.3	1.451	2.402	7.6	19.9
1 6	4 52.48	+42 12.5	1.180	2.068	15.5	19.2	1 6	4 53.28	+21 49.7	1.491	2.388	12.3	20.1
1 16	4 48.95	+40 28.6	1.234	2.065	19.0	19.4	1 16	4 47.72	+21 41.2	1.555	2.374	16.3	20.3
<b>136184</b>	2003 <i>UV</i> <sub>209</sub>		12 12.1 94°23	1°6/12.4	18		<b>121700</b>	1999 <i>XX</i> <sub>77</sub>		12 12.1 327°78	1°2/12.2	17	
11 7	5 54.09	+27 39.0	1.513	2.329	17.2	20.0	11 7	5 44.69	+24 26.0	2.019	2.836	13.5	19.6
11 17	5 46.75	+27 37.4	1.461	2.356	13.0	19.8	11 17	5 39.53	+25 3.8	1.935	2.831	10.2	19.3
11 27	5 36.31	+27 28.6	1.431	2.382	8.2	19.6	11 27	5 31.93	+25 41.0	1.874	2.826	6.5	19.1
12 7	5 23.98	+27 10.4	1.428	2.407	3.3	19.4	12 7	5 22.59	+26 15.3	1.841	2.821	2.5	18.9
12 17	5 11.31	+26 43.3	1.452	2.432	2.9	19.4	12 17	5 12.51	+26 44.5	1.837	2.817	2.4	18.8
12 27	4 59.95	+26 10.2	1.506	2.456	7.6	19.8	12 27	5 2.91	+27 7.8	1.863	2.813	6.4	19.1
1 6	4 51.15	+25 36.0	1.585	2.479	11.9	20.1	1 6	4 54.90	+27 26.0	1.916	2.809	10.2	19.3
1 16	4 45.58	+25 5.1	1.688	2.502	15.5	20.4	1 16	4 49.28	+27 40.9	1.993	2.805	13.5	19.5
<b>270638</b>	2002 <i>PP</i> <sub>78</sub>		12 12.1 101°06	3°9/12.8	18		<b>412128</b>	2013 <i>GY</i> <sub>42</sub>		12 12.1 154°38	2°8/12.6	18	
11 7	5 54.23	+32 21.1	1.605	2.412	16.8	20.8	11 7	5 47.14	+31 22.2	2.474	3.269	11.9	22.3
11 17	5 47.03	+32 48.6	1.548	2.434	13.0	20.6	11 17	5 40.92	+31 49.4	2.396	3.276	9.2	22.1
11 27	5 36.61	+33 5.6	1.513	2.455	8.8	20.4	11 27	5 32.55	+32 10.2	2.342	3.282	6.2	21.9
12 7	5 24.12	+33 8.0	1.504	2.476	4.9	20.3	12 7	5 22.74	+32 22.2	2.316	3.288	3.4	21.7
12 17	5 11.14	+32 54.0	1.524	2.496	4.5	20.3	12 17	5 12.42	+32 24.1	2.321	3.293	3.2	21.7
12 27	4 59.36	+32 25.9	1.571	2.515	7.9	20.5	12 27	5 2.66	+32 16.2	2.356	3.298	5.8	21.9
1 6	4 50.15	+31 49.3	1.645	2.534	11.8	20.8	1 6	4 54.39	+32 1.1	2.420	3.302	8.8	22.1
1 16	4 44.25	+31 10.3	1.742	2.553	15.2	21.1	1 16	4 48.28	+31 42.0	2.509	3.306	11.5	22.3
<b>272422</b>	2005 <i>TG</i> <sub>107</sub>		12 12.1 239°82	0°2/12.1	18		<b>215207</b>	2000 <i>SO</i> <sub>269</sub>		12 12.1 48°06	2°3/12.2	18	
11 7	5 48.05	+23 14.9	1.755	2.574	15.1	21.6	11 7	5 50.20	+25 26.4	1.136	1.979	20.0	19.4
11 17	5 42.38	+23 20.4	1.666	2.564	11.5	21.4	11 17	5 44.93	+26 13.1	1.085	1.994	15.2	19.1
11 27	5 33.85	+23 24.2	1.601	2.554	7.3	21.1	11 27	5 35.77	+26 57.1	1.053	2.009	9.7	18.9
12 7	5 23.27	+23 25.0	1.562	2.543	2.5	20.8	12 7	5 23.94	+27 33.5	1.044	2.024	4.0	18.6
12 17	5 11.82	+23 22.1	1.552	2.532	2.4	20.7	12 17	5 11.32	+27 58.3	1.061	2.040	3.7	18.6
12 27	5 0.95	+23 16.4	1.570	2.521	7.3	21.0	12 27	5 0.02	+28 11.4	1.103	2.057	9.1	19.0
1 6	4 51.96	+23 10.1	1.615	2.509	11.7	21.3	1 6	4 51.72	+28 16.4	1.169	2.074	14.2	19.3
1 16	4 45.77	+23 5.8	1.684	2.497	15.5	21.5	1 16	4 47.32	+28 17.7	1.255	2.091	18.4	19.6
<b>341102</b>	2007 <i>JT</i> <sub>36</sub>		12 12.1 209°32	0°7/12.2	18		<b>189871</b>	2003 <i>QV</i> <sub>22</sub>		12 12.1 27°76	0°1/12.1	18	
11 7	5 48.42	+24 54.7	1.933	2.745	14.2	22.3	11 7	5 42.91	+24 3.4	1.781	2.608	14.5	19.4
11 17	5 42.37	+25 0.8	1.846	2.740	10.8	22.1	11 17	5 38.15	+23 48.9	1.715	2.617	11.0	19.1
11 27	5 33.69	+25 3.7	1.784	2.735	6.8	21.9	11 27	5 30.96	+23 31.0	1.673	2.627	6.8	18.9
12 7	5 23.18	+25 2.0	1.748	2.729	2.5	21.6	12 7	5 22.20	+23 9.8	1.656	2.638	2.3	18.7
12 17	5 11.94	+24 54.9	1.742	2.722	2.3	21.5	12 17	5 12.98	+22 46.1	1.668	2.649	2.2	18.7
12 27	5 1.30	+24 43.5	1.766	2.715	6.7	21.8	12 27	5 4.54	+22 22.1	1.708	2.660	6.6	19.0
1 6	4 52.43	+24 30.3	1.817	2.708	10.8	22.0	1 6	4 57.91	+22 0.4	1.775	2.672	10.6	19.3
1 16	4 46.16	+24 18.1	1.892	2.699	14.3	22.2	1 16	4 53.75	+21 43.1	1.865	2.685	14.0	19.5
<b>286823</b>	2002 <i>LC</i> <sub>62</sub>		12 12.1 148°41	0°4/11.9	18		<b>332990</b>	2011 <i>FQ</i> <sub>128</sub>					

EPHEMERIDES

12 12.1

12 12.1

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>396025</b>	2013 <i>CJ</i> <sub>5</sub>		12 12.1 136°01	0°9/11.9	18		<b>203640</b>	2002 <i>GT</i> <sub>77</sub>		12 12.1 192°30	1°6/11.9	18	
11 7	5 46.02	+21 42.9	2.060	2.874	13.3	21.8	11 7	5 46.44	+18 24.3	1.811	2.631	14.7	20.4
11 17	5 40.16	+21 23.2	1.987	2.882	10.1	21.6	11 17	5 40.90	+18 28.0	1.733	2.630	11.2	20.2
11 27	5 32.09	+21 1.7	1.938	2.890	6.3	21.4	11 27	5 32.79	+18 34.4	1.678	2.630	7.1	19.9
12 7	5 22.59	+20 38.9	1.916	2.897	2.3	21.2	12 7	5 22.91	+18 43.2	1.649	2.629	2.8	19.7
12 17	5 12.65	+20 15.7	1.925	2.904	2.3	21.2	12 17	5 12.35	+18 54.2	1.649	2.628	2.9	19.7
12 27	5 3.38	+19 54.1	1.963	2.911	6.3	21.5	12 27	5 2.41	+19 7.6	1.678	2.626	7.1	19.9
1 6	4 55.74	+19 36.0	2.029	2.917	10.0	21.7	1 6	4 54.22	+19 24.1	1.734	2.625	11.2	20.2
1 16	4 50.37	+19 23.1	2.120	2.923	13.1	21.9	1 16	4 48.58	+19 44.0	1.814	2.623	14.7	20.4
<b>514695</b>	2006 <i>CW</i> <sub>45</sub>		12 12.1 220°85	1°0/12.3	18		<b>105072</b>	2000 <i>KY</i> <sub>66</sub>		12 12.1 311°60	6°8/12.1	18	
11 7	5 47.95	+25 50.0	1.941	2.753	14.1	22.5	11 7	5 42.83	+ 1 2.8	2.231	3.011	13.6	19.4
11 17	5 42.06	+25 56.7	1.853	2.747	10.8	22.3	11 17	5 37.69	+ 0 59.8	2.147	3.003	11.2	19.2
11 27	5 33.54	+25 59.6	1.789	2.740	6.8	22.1	11 27	5 30.58	+ 1 11.4	2.086	2.995	8.8	19.1
12 7	5 23.16	+25 56.9	1.752	2.732	2.6	21.8	12 7	5 22.12	+ 1 40.3	2.051	2.988	7.1	19.0
12 17	5 12.05	+25 47.9	1.744	2.724	2.4	21.7	12 17	5 13.12	+ 2 27.2	2.044	2.980	7.1	18.9
12 27	5 1.52	+25 33.8	1.766	2.715	6.7	22.0	12 27	5 4.51	+ 3 31.1	2.066	2.973	8.8	19.0
1 6	4 52.76	+25 17.2	1.815	2.706	10.7	22.2	1 6	4 57.16	+ 4 48.8	2.115	2.966	11.3	19.2
1 16	4 46.59	+25 1.1	1.888	2.697	14.2	22.4	1 16	4 51.73	+ 6 16.7	2.188	2.959	13.8	19.3
<b>453812</b>	2011 <i>SW</i> <sub>84</sub>		12 12.1 44°31	0°5/12.2	17		<b>78366</b>	2002 <i>PP</i> <sub>116</sub>		12 12.1 101°64	0°4/12.0	17	
11 7	5 46.00	+23 25.1	1.613	2.441	15.8	21.3	11 7	5 42.83	+23 6.7	2.399	3.210	11.8	19.7
11 17	5 40.80	+23 41.5	1.548	2.450	11.9	21.1	11 17	5 37.54	+22 49.0	2.323	3.217	8.8	19.6
11 27	5 32.79	+23 56.5	1.504	2.459	7.5	20.9	11 27	5 30.38	+22 29.0	2.272	3.224	5.5	19.4
12 7	5 22.89	+24 8.5	1.487	2.468	2.6	20.6	12 7	5 22.01	+22 6.7	2.249	3.230	1.9	19.1
12 17	5 12.36	+24 16.3	1.497	2.478	2.5	20.6	12 17	5 13.28	+21 43.0	2.257	3.237	1.9	19.1
12 27	5 2.67	+24 20.6	1.535	2.488	7.2	20.9	12 27	5 5.10	+21 19.7	2.295	3.243	5.4	19.4
1 6	4 55.02	+24 23.1	1.600	2.498	11.5	21.2	1 6	4 58.28	+20 58.4	2.361	3.250	8.7	19.6
1 16	4 50.20	+24 26.2	1.687	2.508	15.1	21.5	1 16	4 53.37	+20 41.1	2.452	3.256	11.5	19.8
<b>220183</b>	2002 <i>UO</i> <sub>39</sub>		12 12.1 50°73	0°3/12.1	17		<b>228956</b>	2003 <i>UC</i> <sub>108</sub>		12 12.1 348°38	0°7/12.3	17	
11 7	5 42.99	+23 15.9	2.222	3.037	12.4	19.8	11 7	5 42.10	+27 2.2	1.759	2.587	14.7	19.7
11 17	5 37.85	+23 29.3	2.149	3.045	9.4	19.6	11 17	5 37.78	+26 32.6	1.677	2.579	11.2	19.5
11 27	5 30.66	+23 41.4	2.102	3.054	5.8	19.4	11 27	5 30.89	+25 55.4	1.619	2.573	7.1	19.2
12 7	5 22.11	+23 51.4	2.081	3.062	2.0	19.2	12 7	5 22.26	+25 10.8	1.586	2.567	2.6	18.9
12 17	5 13.10	+23 58.5	2.091	3.071	1.9	19.2	12 17	5 13.03	+24 20.5	1.581	2.562	2.3	18.9
12 27	5 4.66	+24 3.3	2.130	3.080	5.7	19.4	12 27	5 4.50	+23 27.9	1.605	2.558	6.9	19.2
1 6	4 57.66	+24 6.8	2.197	3.089	9.1	19.7	1 6	4 57.80	+22 37.4	1.655	2.554	11.1	19.4
1 16	4 52.74	+24 10.6	2.288	3.098	12.1	19.9	1 16	4 53.68	+21 52.9	1.728	2.552	14.7	19.6
<b>306370</b>	3154 <i>T</i> <sub>-1</sub>		12 12.1 281°36	9°8/12.9	17		<b>128278</b>	2003 <i>UL</i> <sub>134</sub>		12 12.1 150°91	0°3/12.0	18	
11 7	5 54.05	+46 38.3	1.899	2.659	16.3	20.3	11 7	5 43.28	+23 27.9	2.570	3.378	11.2	20.0
11 17	5 48.02	+47 57.3	1.808	2.641	14.0	20.1	11 17	5 37.78	+23 7.7	2.490	3.382	8.4	19.8
11 27	5 38.01	+49 1.0	1.737	2.622	11.7	19.9	11 27	5 30.49	+22 44.6	2.436	3.387	5.2	19.6
12 7	5 24.90	+49 40.2	1.690	2.603	10.1	19.8	12 7	5 22.06	+22 19.1	2.411	3.392	1.8	19.4
12 17	5 10.28	+49 48.0	1.669	2.584	10.0	19.7	12 17	5 13.28	+21 51.8	2.416	3.396	1.8	19.4
12 27	4 56.30	+49 23.1	1.673	2.565	11.4	19.8	12 27	5 5.01	+21 24.7	2.452	3.400	5.2	19.6
1 6	4 44.95	+48 31.0	1.701	2.546	13.9	19.9	1 6	4 58.02	+20 59.4	2.517	3.403	8.3	19.8
1 16	4 37.50	+47 20.8	1.751	2.527	16.5	20.0	1 16	4 52.86	+20 38.0	2.607	3.407	11.0	20.0
<b>513625</b>	2011 <i>KD</i> <sub>15</sub>		12 12.1 195°15	9°3/10.6	18		<b>262446</b>	2006 <i>UP</i> <sub>106</sub>		12 12.1 290°49	2°0/11.9	18	
11 7	5 45.67	- 5 5.3	2.314	3.061	14.1	22.8	11 7	5 46.52	+18 55.3	1.423	2.257	17.2	21.1
11 17	5 39.66	- 6 1.9	2.239	3.058	12.1	22.6	11 17	5 41.72	+18 48.0	1.341	2.247	13.2	20.9
11 27	5 31.72	- 6 42.7	2.187	3.055	10.4	22.5	11 27	5 33.70	+18 42.8	1.282	2.237	8.4	20.6
12 7	5 22.47	- 7 2.9	2.159	3.050	9.4	22.4	12 7	5 23.34	+18 40.1	1.246	2.227	3.4	20.2
12 17	5 12.75	- 6 59.7	2.159	3.045	9.6	22.4	12 17	5 11.98	+18 40.4	1.238	2.217	3.5	20.2
12 27	5 3.49	- 6 32.3	2.185	3.038	10.9	22.5	12 27	5 1.30	+18 44.7	1.256	2.207	8.6	20.5
1 6	4 55.52	- 5 43.1	2.236	3.031	12.8	22.6	1 6	4 52.79	+18 54.2	1.299	2.197	13.6	20.8
1 16	4 49.48	- 4 36.1	2.310	3.024	14.7	22.7	1 16	4 47.44	+19 9.9	1.363	2.188	17.9	21.0
<b>109333</b>	2001 <i>QE</i> <sub>143</sub>		12 12.1 234°54	3°0/11.6	18		<b>350390</b>	2012 <i>VV</i> <sub>12</sub>		12 12.1 275°38	2°8/12.3	18	
11 7	5 46.79	+16 33.6	1.772	2.590	15.0	21.1	11 7	5 48.53	+28 1.1	1.639	2.459	15.9	20.4
11 17	5 41.24	+16 7.9	1.685	2.581	11.5	20.9	11 17	5 43.13	+28 41.9	1.556	2.452	12.3	20.1
11 27	5 33.06	+15 44.5	1.622	2.571	7.5	20.6	11 27	5 34.55	+29 19.0	1.495	2.444	8.1	19.9
12 7	5 23.02	+15 24.9	1.585	2.561	3.7	20.4	12 7	5 23.64	+29 48.3	1.460	2.437	3.9	19.6
12 17	5 12.21	+15 10.9	1.577	2.551	4.0	20.4	12 17	5 11.70	+30 6.5	1.453	2.429	3.7	19.6
12 27	5 1.98	+15 4.0	1.597	2.540	7.9	20.6	12 27	5 0.40	+30 13.2	1.473	2.422	7.9	19.8
1 6	4 53.49	+15 5.5	1.644	2.529	12.1	20.8	1 6	4 51.21	+30 10.8	1.520	2.414	12.2	20.1
1 16	4 47.60	+15 15.8	1.713	2.517	15.7	21.0	1 16	4 45.15	+30 3.6	1.589	2.407	16.1	20.3
<b>147953</b>	1993 <i>FB</i> <sub>75</sub>		12 12.1 302°15	4°2/12.6	18		<b>278980</b>	2008 <i>UM</i> <sub>176</sub>		12 12.1 281°06	4°4/12.6	18	
11 7	5 48.88	+31 36.6	1.466	2.288	17.3	19.9	11 7	5 45.98	+35 25.6	2.392	3.183	12.4	21.0
11 17	5 43.77	+32 11.9	1.386	2.281	13.6	19.7	11 17	5 40.45	+36 11.4	2.303	3.176	9.9	20.9
11 27	5 35.10	+32 38.8	1.328	2.274	9.3	19.4	11 27	5 32.51	+36 49.4	2.238	3.168	7.1	20.7
12 7	5 23.81	+32 52.3	1.295	2.268	5.2	19.2	12 7	5 22.86	+37 15.9	2.200	3.160	4.9	20.5
12 17	5 11.44	+32 48.9	1.288	2.261	4.9	19.1	12 17	5 12.48	+37 28.2	2.192	3.152	4.7	20.5
12 27	4 59.89	+32 29.5	1.307	2.254	8.8	19.3	12 27	5 2.54	+37 26.1	2.212	3.144	6.8	20.6
1 6	4 50.83	+31 58.9	1.351	2.248	13.3	19.6	1 6	4 54.14	+37 12.1	2.260	3.136	9.6	20.8
1 16	4 45.31	+31 23.7	1.417	2.242	17.3	19.8	1 16	4 48.07	+36 50.1	2.332	3.128	12.3	21.0
<b>330741</b>	2008 <i>ST</i> <sub>34</sub>		12 12.1 134°38	1°7/11.7	17		<b>345110</b>	2005 <i>QL</i> <sub>2</sub>		1			

EPHEMERIDES

12 12.1

12 12.1

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>266039</b>	2006 <i>HR</i> <sub>56</sub>		12 12.1 211°90	1.4/12.3	18		<b>52523</b>	1996 <i>JE</i> <sub>16</sub>		12 12.1 118°01	1.4/11.9	18	
11 7	5 44.18	+27 5.4	2.850	3.649	10.4	21.3	11 7	5 46.01	+19 5.0	2.115	2.927	13.1	19.7
11 17	5 38.51	+27 30.2	2.757	3.643	8.0	21.2	11 17	5 40.10	+18 59.9	2.047	2.940	9.9	19.5
11 27	5 31.03	+27 52.2	2.690	3.637	5.1	21.0	11 27	5 32.06	+18 55.9	2.003	2.953	6.2	19.3
12 7	5 22.30	+28 9.8	2.652	3.630	2.2	20.8	12 7	5 22.66	+18 53.1	1.986	2.966	2.5	19.1
12 17	5 13.04	+28 21.8	2.646	3.623	2.1	20.8	12 17	5 12.85	+18 51.8	2.000	2.978	2.5	19.1
12 27	5 4.13	+28 28.2	2.670	3.616	5.0	20.9	12 27	5 3.69	+18 52.8	2.044	2.990	6.2	19.4
1 6	4 56.37	+28 30.1	2.724	3.608	7.9	21.1	1 6	4 56.08	+18 56.8	2.116	3.002	9.7	19.6
1 16	4 50.35	+28 29.4	2.804	3.600	10.4	21.3	1 16	4 50.65	+19 4.8	2.212	3.013	12.7	19.9
<b>30646</b>	6623 <i>P-L</i>		12 12.1 7°25	4.6/12.6	18		<b>112627</b>	2002 <i>PX</i> <sub>75</sub>		12 12.1 90°14	0.3/12.1	18	
11 7	5 48.46	+31 53.3	1.395	2.221	17.9	18.7	11 7	5 46.13	+22 1.5	1.788	2.609	14.7	19.9
11 17	5 43.51	+32 35.0	1.325	2.221	14.0	18.4	11 17	5 40.73	+22 7.5	1.713	2.612	11.2	19.6
11 27	5 34.94	+33 7.8	1.276	2.222	9.6	18.2	11 27	5 32.72	+22 13.0	1.662	2.616	7.0	19.4
12 7	5 23.79	+33 26.3	1.251	2.223	5.5	18.0	12 7	5 22.96	+22 17.1	1.638	2.619	2.4	19.1
12 17	5 11.65	+33 26.9	1.252	2.224	5.2	18.0	12 17	5 12.56	+22 19.3	1.642	2.622	2.3	19.1
12 27	5 0.49	+33 10.7	1.279	2.226	9.0	18.2	12 27	5 2.84	+22 20.4	1.674	2.625	6.9	19.4
1 6	4 51.94	+32 42.6	1.331	2.229	13.4	18.4	1 6	4 54.96	+22 21.9	1.734	2.628	11.0	19.7
1 16	4 46.99	+32 9.3	1.403	2.231	17.3	18.7	1 16	4 49.67	+22 25.6	1.817	2.632	14.5	19.9
<b>128272</b>	2003 <i>UD</i> <sub>38</sub>		12 12.1 107°78	0.5/12.2	18		<b>147975</b>	1995 <i>QK</i> <sub>12</sub>		12 12.1 59°99	2.3/11.7	18	
11 7	5 48.43	+23 38.7	1.937	2.749	14.1	20.1	11 7	5 43.80	+18 9.0	1.896	2.718	14.0	20.1
11 17	5 42.15	+23 55.1	1.871	2.765	10.6	19.9	11 17	5 38.66	+17 40.7	1.827	2.725	10.6	19.9
11 27	5 33.43	+24 9.8	1.830	2.781	6.6	19.7	11 27	5 31.27	+17 13.5	1.781	2.733	6.8	19.6
12 7	5 23.13	+24 21.0	1.816	2.797	2.3	19.5	12 7	5 22.41	+16 48.7	1.762	2.740	3.1	19.4
12 17	5 12.35	+24 28.0	1.832	2.812	2.2	19.5	12 17	5 13.11	+16 28.1	1.772	2.748	3.3	19.5
12 27	5 2.33	+24 31.3	1.877	2.827	6.4	19.8	12 27	5 4.48	+16 13.4	1.811	2.756	7.0	19.7
1 6	4 54.12	+24 32.5	1.950	2.841	10.1	20.1	1 6	4 57.50	+16 5.9	1.876	2.764	10.7	19.9
1 16	4 48.41	+24 33.8	2.047	2.855	13.3	20.3	1 16	4 52.83	+16 6.1	1.965	2.772	13.8	20.2
<b>472584</b>	2015 <i>DN</i> <sub>120</sub>		12 12.1 173°48	2.1/12.3	18		<b>356966</b>	2012 <i>XM</i> <sub>136</sub>		12 12.1 131°92	12.0/14.2	17	
11 7	5 50.86	+26 7.2	1.500	2.323	17.0	20.9	11 7	5 54.89	- 5 47.8	1.262	2.037	22.2	20.2
11 17	5 44.98	+26 45.0	1.425	2.324	13.0	20.7	11 17	5 47.99	- 5 42.3	1.199	2.043	18.9	20.0
11 27	5 35.74	+27 20.1	1.373	2.325	8.4	20.4	11 27	5 37.58	- 5 3.5	1.153	2.049	15.4	19.8
12 7	5 24.07	+27 48.6	1.346	2.325	3.5	20.1	12 7	5 24.70	- 3 45.9	1.128	2.054	12.7	19.7
12 17	5 11.43	+28 7.3	1.347	2.326	3.3	20.1	12 17	5 10.92	- 1 49.4	1.129	2.059	12.1	19.7
12 27	4 59.62	+28 16.0	1.376	2.326	8.1	20.4	12 27	4 58.11	+ 0 39.1	1.156	2.063	14.1	19.8
1 6	4 50.17	+28 17.3	1.430	2.326	12.7	20.7	1 6	4 47.86	+ 3 27.8	1.207	2.067	17.4	20.0
1 16	4 44.06	+28 15.2	1.506	2.326	16.7	20.9	1 16	4 41.13	+ 6 24.3	1.281	2.071	20.7	20.2
<b>237402</b>	1998 <i>QV</i> <sub>28</sub>		12 12.1 65°77	1.2/11.9	18		<b>312862</b>	2011 <i>UP</i> <sub>141</sub>		12 12.1 13°12	2.7/12.4	18	
11 7	5 48.97	+21 21.6	1.618	2.441	16.0	20.5	11 7	5 46.79	+28 53.7	1.741	2.560	15.2	21.0
11 17	5 42.58	+20 58.7	1.572	2.472	12.0	20.3	11 17	5 41.52	+29 23.8	1.666	2.561	11.7	20.8
11 27	5 33.62	+20 34.7	1.549	2.502	7.4	20.1	11 27	5 33.38	+29 48.4	1.613	2.562	7.7	20.5
12 7	5 23.15	+20 10.3	1.552	2.533	2.7	19.9	12 7	5 23.24	+30 4.3	1.586	2.563	3.7	20.3
12 17	5 12.45	+19 46.8	1.584	2.564	2.7	19.9	12 17	5 12.33	+30 9.4	1.588	2.564	3.5	20.3
12 27	5 2.86	+19 26.4	1.645	2.594	7.1	20.3	12 27	5 2.15	+30 4.3	1.617	2.566	7.3	20.5
1 6	4 55.40	+19 11.3	1.732	2.624	11.1	20.6	1 6	4 53.98	+29 51.8	1.673	2.567	11.3	20.8
1 16	4 50.67	+19 2.9	1.842	2.653	14.4	20.9	1 16	4 48.66	+29 36.0	1.751	2.569	14.8	21.0
<b>519218</b>	2010 <i>TM</i> <sub>194</sub>		12 12.1 203°87	1.5/12.3	17		<b>82027</b>	2000 <i>SJ</i> <sub>72</sub>		12 12.1 74°02	2.9/12.5	18	
11 7	5 46.23	+26 4.3	2.210	3.018	12.7	21.8	11 7	5 44.34	+31 35.4	2.568	3.365	11.5	19.2
11 17	5 40.52	+26 34.8	2.125	3.016	9.7	21.6	11 17	5 38.85	+32 12.2	2.491	3.372	8.9	19.0
11 27	5 32.50	+27 2.9	2.065	3.014	6.2	21.4	11 27	5 31.34	+32 43.3	2.439	3.378	6.0	18.9
12 7	5 22.87	+27 26.4	2.033	3.012	2.6	21.1	12 7	5 22.46	+33 6.1	2.416	3.385	3.5	18.7
12 17	5 12.58	+27 43.6	2.031	3.009	2.4	21.1	12 17	5 13.08	+33 19.1	2.422	3.392	3.3	18.7
12 27	5 2.78	+27 54.2	2.059	3.006	6.0	21.3	12 27	5 4.18	+33 22.2	2.458	3.399	5.7	18.9
1 6	4 54.49	+27 59.7	2.115	3.004	9.6	21.5	1 6	4 56.66	+33 17.5	2.523	3.405	8.5	19.1
1 16	4 48.46	+28 2.4	2.195	3.000	12.6	21.7	1 16	4 51.15	+33 7.5	2.613	3.412	11.0	19.2
<b>123660</b>	2000 <i>YM</i> <sub>77</sub>		12 12.1 352°89	0.6/12.2	17		<b>256672</b>	2007 <i>YB</i> <sub>15</sub>		12 12.1 328°67	6.9/13.8	17	
11 7	5 44.00	+24 20.5	1.924	2.745	13.9	19.7	11 7	5 48.79	+40 34.6	1.671	2.467	16.7	20.0
11 17	5 39.05	+24 30.6	1.844	2.743	10.5	19.5	11 17	5 43.60	+40 59.3	1.589	2.458	13.7	19.7
11 27	5 31.65	+24 38.5	1.789	2.742	6.6	19.3	11 27	5 34.93	+41 7.2	1.527	2.450	10.4	19.5
12 7	5 22.58	+24 42.9	1.760	2.741	2.4	19.0	12 7	5 23.82	+40 52.6	1.490	2.442	7.6	19.4
12 17	5 12.88	+24 43.2	1.759	2.740	2.2	19.0	12 17	5 11.82	+40 12.7	1.479	2.434	7.1	19.3
12 27	5 3.77	+24 40.1	1.788	2.739	6.5	19.2	12 27	5 0.76	+39 9.9	1.494	2.427	9.3	19.4
1 6	4 56.34	+24 35.5	1.844	2.739	10.4	19.5	1 6	4 52.22	+37 51.4	1.535	2.421	12.7	19.6
1 16	4 51.34	+24 31.5	1.923	2.739	13.7	19.7	1 16	4 47.12	+36 26.1	1.598	2.415	16.0	19.8
<b>487481</b>	2014 <i>SP</i> <sub>218</sub>		12 12.1 210°51	4.3/11.3	17		<b>100608</b>	1997 <i>SQ</i> <sub>6</sub>		12 12.1 192°02	0.4/12.2	18	
11 7	5 40.74	+ 9 42.3	2.487	3.289	11.7	21.7	11 7	5 46.30	+24 35.5	2.243	3.051	12.6	21.2
11 17	5 35.91	+ 9 13.2	2.407	3.288	9.2	21.5	11 17	5 40.44	+24 36.2	2.158	3.050	9.5	21.0
11 27	5 29.39	+ 8 50.3	2.352	3.286	6.6	21.3	11 27	5 32.39	+24 33.9	2.098	3.048	6.0	20.8
12 7	5 21.74	+ 8 35.7	2.325	3.285	4.6	21.2	12 7	5 22.84	+24 27.9	2.065	3.046	2.1	20.5
12 17	5 13.69	+ 8 30.9	2.327	3.284	4.7	21.2	12 17	5 12.75	+24 17.8	2.063	3.043	2.0	20.5
12 27	5 6.06	+ 8 36.7	2.358	3.282	6.9	21.4	12 27	5 3.19	+24 4.9	2.091	3.040	5.9	20.8
1 6	4 59.57	+ 8 52.9	2.416	3.281	9.5	21.5	1 6	4 55.13	+23 51.0	2.148	3.037	9.4	21.0
1 16	4 54.78	+ 9 18.4	2.499	3.279	12.0	21.7	1 16	4 49.26	+23 38.6	2.229	3.033	12.5	21.2
<b>59984</b>	1999 <i>SZ</i> <sub>10</sub>		12 12.1 92°70	0.3/12.2	18		<b>487315</b>	2014 <i>QB</i> <sub>119</sub>		12 12.1 61°25	6.		



EPHEMERIDES

12 12.1

12 12.2

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>308253</b>	2005 <i>GC</i> <sub>74</sub>		12 12.1 194°37'	0°7/12.1	18		<b>113058</b>	2002 <i>RY</i> <sub>55</sub>		12 12.1 77°01'	5°8/11.1	18	
11 7	5 47.23	+19 14.1	2.150	2.959	13.1	20.8	11 7	5 45.58	+9 50.2	1.781	2.592	15.2	19.2
11 17	5 41.24	+19 40.4	2.065	2.957	9.9	20.6	11 17	5 39.87	+8 51.4	1.729	2.614	11.9	19.0
11 27	5 32.96	+20 9.5	2.005	2.955	6.2	20.3	11 27	5 31.95	+8 0.8	1.700	2.636	8.5	18.8
12 7	5 23.07	+20 40.0	1.973	2.953	2.3	20.1	12 7	5 22.66	+7 22.3	1.698	2.657	6.1	18.7
12 17	5 12.52	+21 10.6	1.971	2.951	2.2	20.1	12 17	5 13.09	+6 58.7	1.723	2.678	6.4	18.8
12 27	5 2.44	+21 40.5	1.999	2.948	6.2	20.3	12 27	5 4.35	+6 51.4	1.777	2.699	8.9	19.0
1 6	4 53.83	+22 9.7	2.057	2.944	9.9	20.6	1 6	4 57.36	+6 59.7	1.856	2.720	12.0	19.2
1 16	4 47.47	+22 38.7	2.139	2.940	13.1	20.8	1 16	4 52.70	+7 21.5	1.957	2.741	14.7	19.5
<b>139925</b>	2001 <i>RV</i> <sub>126</sub>		12 12.1 6°51'	0°8/12.2	18		<b>458716</b>	2011 <i>JD</i> <sub>9</sub>		12 12.2 286°64'	1°1/12.1	16	
11 7	5 45.11	+24 2.1	1.689	2.516	15.2	19.7	11 7	5 43.78	+18 15.6	2.392	3.201	11.9	21.8
11 17	5 40.21	+24 24.5	1.614	2.516	11.6	19.5	11 17	5 38.62	+18 34.4	2.285	3.177	9.1	21.6
11 27	5 32.55	+24 45.7	1.563	2.516	7.3	19.2	11 27	5 31.37	+18 56.4	2.202	3.153	5.8	21.4
12 7	5 22.96	+25 3.5	1.537	2.517	2.7	18.9	12 7	5 22.58	+19 21.2	2.148	3.128	2.3	21.1
12 17	5 12.64	+25 16.4	1.538	2.519	2.5	18.9	12 17	5 13.04	+19 47.9	2.125	3.104	2.2	21.0
12 27	5 3.00	+25 24.7	1.568	2.521	7.1	19.2	12 27	5 3.72	+20 16.0	2.131	3.079	5.9	21.3
1 6	4 55.28	+25 30.0	1.625	2.523	11.3	19.5	1 6	4 55.58	+20 45.3	2.167	3.054	9.5	21.4
1 16	4 50.30	+25 34.5	1.704	2.525	15.0	19.7	1 16	4 49.36	+21 16.1	2.227	3.029	12.6	21.6
<b>375159</b>	2008 <i>CX</i> <sub>139</sub>		12 12.1 327°83'	2°9/12.7	18		<b>470253</b>	2006 <i>YW</i> <sub>30</sub>		12 12.2 22°23'	1°8/12.3	18	
11 7	5 47.50	+30 5.8	1.253	2.090	18.8	20.7	11 7	5 44.29	+26 2.8	0.944	1.807	21.4	20.5
11 17	5 43.08	+30 7.3	1.178	2.082	14.6	20.4	11 17	5 40.97	+26 20.2	0.899	1.819	16.3	20.2
11 27	5 34.85	+29 58.1	1.122	2.075	9.7	20.1	11 27	5 33.54	+26 32.0	0.872	1.832	10.3	20.0
12 7	5 23.86	+29 34.8	1.090	2.068	4.5	19.8	12 7	5 23.38	+26 35.3	0.866	1.847	4.0	19.7
12 17	5 11.80	+28 56.7	1.082	2.061	4.0	19.7	12 17	5 12.46	+26 28.9	0.882	1.863	3.6	19.7
12 27	5 0.74	+28 7.3	1.101	2.055	9.1	20.0	12 27	5 3.04	+26 15.3	0.923	1.881	9.5	20.1
1 6	4 52.42	+27 13.5	1.143	2.050	14.3	20.3	1 6	4 56.77	+25 59.1	0.984	1.901	15.0	20.5
1 16	4 47.89	+26 22.4	1.205	2.045	18.8	20.5	1 16	4 54.48	+25 44.9	1.065	1.921	19.5	20.8
<b>198833</b>	2005 <i>EB</i> <sub>315</sub>		12 12.1 96°97'	1°1/11.9	17		<b>394460</b>	2007 <i>RY</i> <sub>229</sub>		12 12.2 38°17'	1°4/12.3	17	
11 7	5 42.58	+19 34.0	2.388	3.201	11.8	20.7	11 7	5 46.81	+25 42.2	1.353	2.190	17.7	21.0
11 17	5 37.42	+19 32.9	2.312	3.206	8.9	20.6	11 17	5 41.82	+25 57.9	1.301	2.207	13.4	20.8
11 27	5 30.39	+19 32.6	2.261	3.212	5.6	20.4	11 27	5 33.62	+26 9.4	1.269	2.224	8.5	20.5
12 7	5 22.14	+19 33.2	2.238	3.218	2.1	20.1	12 7	5 23.33	+26 14.3	1.261	2.242	3.2	20.3
12 17	5 13.46	+19 34.8	2.245	3.224	2.2	20.1	12 17	5 12.49	+26 11.7	1.280	2.260	2.9	20.3
12 27	5 5.28	+19 37.9	2.282	3.229	5.6	20.4	12 27	5 2.77	+26 3.2	1.326	2.280	7.9	20.7
1 6	4 58.40	+19 43.3	2.347	3.235	8.8	20.6	1 6	4 55.51	+25 52.1	1.396	2.299	12.4	21.0
1 16	4 53.40	+19 51.7	2.438	3.241	11.6	20.8	1 16	4 51.47	+25 41.8	1.488	2.320	16.3	21.3
<b>76112</b>	2000 <i>DC</i> <sub>107</sub>		12 12.1 175°62'	3°1/12.6	18		<b>350513</b>	2000 <i>BG</i> <sub>19</sub>		12 12.2 261°96'	4°5/11.1	13 C	
11 7	5 45.52	+32 11.2	2.484	3.280	11.9	19.6	11 7	5 45.87	+8 3.3	2.829	3.609	11.0	23.6
11 17	5 39.86	+32 44.8	2.401	3.281	9.2	19.4	11 17	5 39.82	+7 33.8	2.709	3.575	8.8	23.4
11 27	5 32.04	+33 12.2	2.343	3.281	6.3	19.2	11 27	5 31.95	+7 10.0	2.615	3.540	6.5	23.2
12 7	5 22.74	+33 30.5	2.313	3.282	3.7	19.1	12 7	5 22.76	+6 54.0	2.549	3.503	4.7	23.1
12 17	5 12.87	+33 38.2	2.313	3.282	3.5	19.0	12 17	5 12.90	+6 47.6	2.515	3.466	5.0	23.0
12 27	5 3.48	+33 35.3	2.342	3.282	6.0	19.2	12 27	5 3.18	+6 52.1	2.512	3.427	7.1	23.1
1 6	4 55.53	+33 24.0	2.400	3.282	8.9	19.4	1 6	4 54.41	+7 7.5	2.538	3.387	9.7	23.2
1 16	4 49.71	+33 7.6	2.483	3.282	11.5	19.6	1 16	4 47.23	+7 33.2	2.590	3.346	12.3	23.3
<b>117421</b>	2005 <i>AA</i> <sub>18</sub>		12 12.1 248°19'	2°2/12.6	18		<b>301667</b>	2010 <i>EV</i> <sub>137</sub>		12 12.2 132°03'	3°2/12.7	18	
11 7	5 50.37	+29 16.7	1.487	2.309	17.2	19.8	11 7	5 50.20	+31 35.2	2.116	2.914	13.6	21.2
11 17	5 44.73	+29 12.8	1.404	2.301	13.3	19.5	11 17	5 43.56	+32 4.8	2.045	2.926	10.5	21.1
11 27	5 35.65	+28 59.7	1.343	2.293	8.7	19.2	11 27	5 34.41	+32 27.0	1.998	2.939	7.1	20.9
12 7	5 24.10	+28 34.7	1.306	2.285	3.8	18.9	12 7	5 23.58	+32 38.6	1.979	2.950	3.9	20.7
12 17	5 11.59	+27 57.2	1.297	2.276	3.3	18.9	12 17	5 12.21	+32 38.0	1.989	2.961	3.6	20.7
12 27	4 59.95	+27 10.4	1.315	2.267	8.2	19.1	12 27	5 1.58	+32 26.0	2.029	2.972	6.6	20.9
1 6	4 50.73	+26 20.2	1.359	2.258	13.1	19.4	1 6	4 52.78	+32 5.8	2.098	2.982	9.9	21.1
1 16	4 44.91	+25 32.6	1.425	2.249	17.3	19.6	1 16	4 46.54	+31 41.5	2.190	2.991	12.8	21.3
<b>248494</b>	2005 <i>UJ</i> <sub>360</sub>		12 12.1 246°86'	1°8/11.9	18		<b>167190</b>	2003 <i>SR</i> <sub>302</sub>		12 12.2 261°16'	0°6/12.0	18	
11 7	5 42.71	+17 17.2	2.446	3.255	11.6	20.4	11 7	5 46.24	+22 53.6	1.846	2.665	14.4	20.1
11 17	5 37.59	+17 12.1	2.354	3.246	8.9	20.2	11 17	5 40.90	+22 32.0	1.755	2.653	11.0	19.8
11 27	5 30.57	+17 9.2	2.287	3.236	5.7	20.0	11 27	5 32.94	+22 7.0	1.688	2.641	6.9	19.6
12 7	5 22.24	+17 8.9	2.248	3.226	2.6	19.8	12 7	5 23.14	+21 38.7	1.647	2.628	2.5	19.3
12 17	5 13.37	+17 11.6	2.239	3.215	2.6	19.8	12 17	5 12.58	+21 8.4	1.635	2.615	2.5	19.2
12 27	5 4.88	+17 17.8	2.260	3.205	5.8	20.0	12 27	5 2.59	+20 38.2	1.652	2.602	7.0	19.5
1 6	4 57.60	+17 28.0	2.310	3.194	9.1	20.1	1 6	4 54.35	+20 11.3	1.696	2.588	11.3	19.7
1 16	4 52.15	+17 42.5	2.385	3.183	12.0	20.3	1 16	4 48.68	+19 50.3	1.763	2.575	15.0	19.9
<b>415164</b>	2012 <i>FB</i> <sub>44</sub>		12 12.1 50°41'	4°7/12.9	17		<b>139840</b>	2001 <i>RD</i> <sub>43</sub>		12 12.2 39°82'	8°0/10.5	18	
11 7	5 47.10	+35 32.9	2.099	2.896	13.7	21.1	11 7	5 43.17	+7 16.7	1.522	2.343	16.9	19.7
11 17	5 41.47	+36 15.7	2.026	2.901	10.9	20.9	11 17	5 38.40	+5 48.1	1.474	2.360	13.5	19.5
11 27	5 33.22	+36 49.1	1.976	2.907	7.8	20.8	11 27	5 31.17	+4 31.0	1.448	2.377	10.3	19.3
12 7	5 23.19	+37 9.0	1.952	2.913	5.3	20.6	12 7	5 22.43	+3 31.5	1.447	2.396	8.2	19.3
12 17	5 12.50	+37 13.0	1.957	2.919	5.0	20.6	12 17	5 13.35	+2 54.1	1.471	2.415	8.5	19.3
12 27	5 2.50	+37 1.6	1.990	2.925	7.3	20.8	12 27	5 5.17	+2 40.9	1.522	2.434	10.9	19.5
1 6	4 54.32	+36 38.2	2.050	2.931	10.2	21.0	1 6	4 58.89	+2 50.3	1.595	2.454	13.9	19.8
1 16	4 48.76	+36 7.7	2.134	2.937	13.0	21.1	1 16	4 55.13	+3 18.7	1.690	2.474	16.7	20.0
<b>495801</b>	2017 <i>FM</i> <sub>89</sub>		12 12.1 305°75'	6°7/12.7	17		<b>230706</b>	2003 <i>UQ</i> <sub>130</sub>		12 12.2 348°40'	4°1/13.6		

EPHEMERIDES

12 12.2

12 12.2

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>173785</b>	2001 SQ <sub>82</sub>		12 12.2 190°36	1.8/12.5	18		<b>84959</b>	2003 XF <sub>18</sub>		12 12.2 226°51	0.9/12.2	18	
11 7	5 46.45	+28 33.3	1.948	2.761	14.0	20.0	11 7	5 47.76	+23 57.5	2.155	2.963	13.0	19.2
11 17	5 40.92	+28 35.1	1.869	2.761	10.7	19.7	11 17	5 41.83	+24 31.2	2.064	2.955	9.9	19.0
11 27	5 32.86	+28 30.6	1.812	2.761	6.9	19.5	11 27	5 33.46	+25 4.7	1.997	2.947	6.3	18.7
12 7	5 23.09	+28 17.9	1.783	2.761	3.0	19.3	12 7	5 23.35	+25 35.5	1.958	2.938	2.4	18.5
12 17	5 12.70	+27 56.9	1.782	2.761	2.7	19.2	12 17	5 12.46	+26 1.6	1.949	2.929	2.2	18.4
12 27	5 3.01	+27 29.2	1.811	2.760	6.5	19.5	12 27	5 1.98	+26 22.4	1.971	2.919	6.2	18.7
1 6	4 55.10	+26 58.2	1.866	2.760	10.4	19.7	1 6	4 53.01	+26 38.7	2.021	2.909	10.0	18.9
1 16	4 49.74	+26 27.7	1.946	2.760	13.7	19.9	1 16	4 46.38	+26 52.3	2.096	2.899	13.2	19.1
<b>304178</b>	2006 QH <sub>17</sub>		12 12.2 189°72	2.3/11.9	18		<b>197735</b>	2004 PN <sub>24</sub>		12 12.2 113°79	0.7/12.1	18	
11 7	5 45.78	+15 45.2	2.256	3.062	12.6	21.6	11 7	5 49.29	+21 16.1	1.811	2.626	14.9	20.4
11 17	5 39.97	+15 40.8	2.172	3.061	9.6	21.4	11 17	5 42.91	+21 14.5	1.747	2.642	11.2	20.2
11 27	5 32.08	+15 39.9	2.113	3.059	6.3	21.2	11 27	5 34.00	+21 12.3	1.706	2.658	7.0	20.0
12 7	5 22.80	+15 43.1	2.081	3.057	3.0	21.0	12 7	5 23.46	+21 9.2	1.693	2.674	2.5	19.8
12 17	5 12.97	+15 50.6	2.081	3.055	3.1	21.0	12 17	5 12.45	+21 5.0	1.709	2.689	2.4	19.8
12 27	5 3.61	+16 2.8	2.110	3.052	6.4	21.2	12 27	5 2.29	+21 1.0	1.755	2.704	6.8	20.1
1 6	4 55.64	+16 19.8	2.168	3.048	9.7	21.4	1 6	4 54.03	+20 58.8	1.827	2.718	10.7	20.4
1 16	4 49.70	+16 41.7	2.250	3.044	12.7	21.6	1 16	4 48.38	+20 59.9	1.924	2.731	14.1	20.6
<b>33705</b>	1999 LJ		12 12.2 175°71	2.9/11.6	18		<b>443490</b>	2014 JW <sub>22</sub>		12 12.2 112°69	0.7/12.1	18	
11 7	5 46.39	+16 24.7	1.999	2.811	13.8	18.4	11 7	5 47.16	+19 55.9	2.119	2.928	13.2	21.3
11 17	5 40.58	+15 53.8	1.921	2.813	10.5	18.2	11 17	5 41.05	+20 12.2	2.051	2.943	9.9	21.1
11 27	5 32.52	+15 24.8	1.867	2.815	6.9	18.0	11 27	5 32.75	+20 29.8	2.007	2.958	6.2	20.9
12 7	5 22.95	+14 59.4	1.840	2.816	3.5	17.8	12 7	5 23.02	+20 47.7	1.992	2.973	2.2	20.7
12 17	5 12.86	+14 39.4	1.843	2.816	3.7	17.8	12 17	5 12.84	+21 5.2	2.007	2.987	2.1	20.7
12 27	5 3.37	+14 26.5	1.876	2.816	7.2	18.0	12 27	5 3.30	+21 22.0	2.052	3.000	6.0	21.0
1 6	4 55.48	+14 21.7	1.935	2.816	10.8	18.3	1 6	4 55.33	+21 38.9	2.125	3.013	9.6	21.3
1 16	4 49.87	+14 25.4	2.019	2.815	13.9	18.5	1 16	4 49.59	+21 56.6	2.223	3.026	12.6	21.5
<b>52264</b>	1985 RD <sub>2</sub>		12 12.2 83°61	6.6/13.6	18		<b>436424</b>	2011 BD <sub>10</sub>		12 12.2 270°89	1.1/12.1	18	
11 7	5 55.94	+39 23.4	1.645	2.435	17.2	17.8	11 7	5 48.01	+20 12.7	1.540	2.367	16.4	21.5
11 17	5 48.58	+40 4.6	1.593	2.460	13.8	17.7	11 17	5 42.86	+20 16.7	1.449	2.351	12.6	21.2
11 27	5 37.77	+40 29.5	1.563	2.484	10.2	17.5	11 27	5 34.54	+20 22.2	1.380	2.334	8.0	20.9
12 7	5 24.76	+40 32.1	1.557	2.509	7.3	17.4	12 7	5 23.82	+20 28.6	1.336	2.317	3.0	20.6
12 17	5 11.27	+40 10.2	1.578	2.533	6.8	17.4	12 17	5 11.98	+20 35.4	1.320	2.300	2.9	20.5
12 27	4 59.16	+39 26.8	1.627	2.556	9.0	17.6	12 27	5 0.66	+20 43.0	1.332	2.283	8.2	20.8
1 6	4 49.84	+38 29.1	1.701	2.579	12.1	17.8	1 6	4 51.35	+20 52.8	1.369	2.265	13.2	21.0
1 16	4 44.05	+37 25.5	1.799	2.602	15.1	18.1	1 16	4 45.13	+21 6.3	1.427	2.248	17.4	21.2
<b>155256</b>	2005 WH <sub>76</sub>		12 12.2 227°50	1.1/12.3	18		<b>163286</b>	2002 GT <sub>137</sub>		12 12.2 211°98	2.1/12.5	18	
11 7	5 48.84	+25 50.7	1.906	2.718	14.3	21.1	11 7	5 48.16	+28 45.4	1.839	2.652	14.7	20.3
11 17	5 42.90	+25 59.3	1.815	2.708	11.0	20.8	11 17	5 42.43	+28 54.4	1.757	2.650	11.3	20.0
11 27	5 34.23	+26 4.2	1.749	2.699	7.0	20.6	11 27	5 33.93	+28 56.9	1.699	2.647	7.4	19.8
12 7	5 23.62	+26 3.4	1.709	2.689	2.7	20.3	12 7	5 23.51	+28 50.6	1.666	2.644	3.3	19.5
12 17	5 12.19	+25 56.0	1.698	2.678	2.4	20.3	12 17	5 12.37	+28 34.7	1.663	2.641	3.0	19.5
12 27	5 1.32	+25 43.0	1.717	2.667	6.8	20.5	12 27	5 1.93	+28 10.6	1.688	2.638	7.0	19.8
1 6	4 52.25	+25 27.1	1.763	2.655	11.0	20.7	1 6	4 53.43	+27 41.9	1.741	2.634	11.0	20.0
1 16	4 45.84	+25 11.6	1.834	2.643	14.6	20.9	1 16	4 47.67	+27 12.8	1.817	2.631	14.5	20.2
<b>203035</b>	2000 CJ <sub>65</sub>		12 12.2 331°14	1.9/12.4	18		<b>490463</b>	2009 SD <sub>275</sub>		12 12.2 18°72	4.9/12.5	16	
11 7	5 45.77	+27 41.9	1.649	2.474	15.6	20.0	11 7	5 48.39	+30 58.0	1.215	2.052	19.3	21.6
11 17	5 40.91	+27 53.0	1.569	2.468	12.0	19.8	11 17	5 43.88	+31 52.7	1.154	2.056	15.1	21.3
11 27	5 33.12	+27 58.4	1.511	2.463	7.8	19.5	11 27	5 35.43	+32 39.3	1.112	2.060	10.3	21.1
12 7	5 23.25	+27 55.9	1.479	2.458	3.3	19.2	12 7	5 24.13	+33 11.4	1.093	2.066	5.9	20.8
12 17	5 12.56	+27 44.5	1.474	2.454	3.0	19.2	12 17	5 11.79	+33 24.4	1.098	2.072	5.5	20.8
12 27	5 2.59	+27 25.5	1.497	2.449	7.4	19.5	12 27	5 0.58	+33 18.7	1.129	2.078	9.6	21.1
1 6	4 54.66	+27 2.5	1.546	2.445	11.8	19.7	1 6	4 52.27	+32 59.5	1.183	2.086	14.3	21.4
1 16	4 49.65	+26 39.4	1.618	2.442	15.5	19.9	1 16	4 47.89	+32 33.8	1.258	2.094	18.4	21.6
<b>232095</b>	2001 XV <sub>91</sub>		12 12.2 333°26	1.2/12.3	18		<b>460476</b>	2014 SD <sub>280</sub>		12 12.2 9°43	4.5/11.3	17	
11 7	5 45.18	+24 46.3	1.336	2.177	17.7	20.2	11 7	5 41.25	+11 29.1	2.024	2.839	13.5	21.0
11 17	5 41.09	+25 6.2	1.258	2.167	13.6	20.0	11 17	5 36.69	+10 52.0	1.950	2.840	10.5	21.0
11 27	5 33.56	+25 24.0	1.201	2.157	8.7	19.7	11 27	5 30.08	+10 21.0	1.900	2.841	7.4	20.8
12 7	5 23.48	+25 37.1	1.168	2.149	3.3	19.3	12 7	5 22.13	+9 58.5	1.877	2.842	4.9	20.6
12 17	5 12.31	+25 43.7	1.160	2.141	3.0	19.3	12 17	5 13.70	+9 46.8	1.882	2.844	5.1	20.7
12 27	5 1.88	+25 44.1	1.178	2.133	8.5	19.6	12 27	5 5.82	+9 46.9	1.915	2.846	7.8	20.8
1 6	4 53.81	+25 41.1	1.221	2.127	13.6	19.9	1 6	4 59.35	+9 58.8	1.974	2.849	10.9	21.0
1 16	4 49.17	+25 38.1	1.284	2.121	18.0	20.1	1 16	4 54.94	+10 21.5	2.057	2.851	13.8	21.2
<b>41135</b>	1999 VP <sub>103</sub>		12 12.2 121°14	0.2/12.2	18		<b>97836</b>	2000 PW <sub>8</sub>		12 12.2 33°59	2.5/12.5	18	
11 7	5 44.35	+23 26.5	2.268	3.080	12.4	20.2	11 7	5 48.53	+27 29.9	1.083	1.931	20.4	18.8
11 17	5 38.92	+23 31.7	2.191	3.085	9.3	20.0	11 17	5 43.99	+27 51.3	1.028	1.939	15.6	18.6
11 27	5 31.42	+23 35.2	2.139	3.090	5.8	19.8	11 27	5 35.43	+28 5.9	0.993	1.949	10.1	18.3
12 7	5 22.57	+23 36.1	2.115	3.096	2.0	19.5	12 7	5 24.11	+28 9.9	0.980	1.960	4.3	18.0
12 17	5 13.23	+23 34.4	2.120	3.101	1.9	19.5	12 17	5 11.94	+28 1.5	0.991	1.971	3.8	18.0
12 27	5 4.45	+23 30.6	2.156	3.106	5.7	19.8	12 27	5 1.12	+27 43.0	1.027	1.983	9.3	18.4
1 6	4 57.10	+23 26.4	2.220	3.110	9.1	20.0	1 6	4 53.37	+27 19.7	1.086	1.995	14.6	18.7
1 16	4 51.83	+23 23.3	2.308	3.115	12.1	20.2	1 16	4 49.60	+26 57.2	1.164	2.009	19.0	19.0
<b>265274</b>	2004 FL <sub>45</sub>		12 12.2 180°61	1.2/12.0	18		<b>225100</b>	2008 DE <sub>35</sub>		12 12.2 137°09	2.7/12.6	18	
11 7	5 48.79	+19 48.9	1.875	2.688									

EPHEMERIDES

12 12.2

12 12.2

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>521668</b>	2015 <i>RU</i> <sub>203</sub>		12 12.2	45°76	6°8/12.7	18	<b>523240</b>	2016 <i>YF</i> <sub>14</sub>		12 12.2	209°81	4°0/11.4	18
11 7	5 50.85	+37 54.1	1.778	2.573	15.9	20.9	11 7	5 43.63	+11 39.0	2.307	3.110	12.4	22.2
11 17	5 45.00	+39 7.7	1.708	2.578	12.8	20.7	11 17	5 38.31	+11 9.4	2.222	3.106	9.7	22.0
11 27	5 35.83	+40 10.1	1.660	2.583	9.7	20.5	11 27	5 31.07	+10 44.9	2.162	3.101	6.7	21.8
12 7	5 24.26	+40 54.4	1.638	2.588	7.2	20.4	12 7	5 22.52	+10 27.7	2.130	3.096	4.4	21.7
12 17	5 11.72	+41 15.8	1.643	2.594	7.0	20.4	12 17	5 13.47	+10 19.3	2.127	3.090	4.5	21.7
12 27	4 59.99	+41 14.1	1.675	2.599	9.2	20.5	12 27	5 4.87	+10 20.7	2.154	3.084	7.1	21.8
1 6	4 50.58	+40 53.6	1.732	2.605	12.2	20.7	1 6	4 57.54	+10 32.2	2.208	3.078	10.1	22.0
1 16	4 44.48	+40 21.1	1.812	2.611	15.1	20.9	1 16	4 52.11	+10 52.9	2.287	3.071	12.9	22.2
<b>241269</b>	2007 <i>TM</i> <sub>404</sub>		12 12.2	73°67	5°0/10.8	18	<b>92320</b>	2000 <i>GU</i> <sub>26</sub>		12 12.2	93°83	0°4/12.1	18
11 7	5 45.32	+13 53.0	1.733	2.553	15.2	20.1	11 7	5 52.64	+22 22.5	1.341	2.169	18.3	19.7
11 17	5 39.93	+12 34.1	1.668	2.561	11.8	19.9	11 17	5 46.16	+22 22.3	1.286	2.188	13.9	19.4
11 27	5 32.15	+11 18.1	1.626	2.569	8.1	19.7	11 27	5 36.34	+22 20.6	1.253	2.207	8.6	19.2
12 7	5 22.84	+10 9.5	1.610	2.577	5.3	19.5	12 7	5 24.37	+22 16.2	1.244	2.226	3.0	18.9
12 17	5 13.12	+9 12.9	1.623	2.585	5.8	19.6	12 17	5 11.85	+22 9.1	1.263	2.244	2.8	19.0
12 27	5 4.18	+8 31.8	1.664	2.593	8.9	19.8	12 27	5 0.57	+22 0.9	1.309	2.262	8.2	19.3
1 6	4 57.03	+8 7.8	1.731	2.601	12.4	20.0	1 6	4 51.90	+21 54.4	1.381	2.279	13.0	19.7
1 16	4 52.31	+8 0.2	1.820	2.610	15.5	20.2	1 16	4 46.61	+21 52.0	1.474	2.296	16.9	19.9
<b>126299</b>	2002 <i>AZ</i> <sub>114</sub>		12 12.2	242°94	0°2/12.2	18	<b>407470</b>	2010 <i>UG</i> <sub>80</sub>		12 12.2	1°73	3°8/12.8	17
11 7	5 44.50	+22 28.4	2.255	3.067	12.4	20.4	11 7	5 46.84	+33 13.5	1.986	2.791	14.1	21.5
11 17	5 39.18	+22 32.0	2.164	3.059	9.4	20.2	11 17	5 41.39	+33 38.6	1.907	2.791	11.0	21.3
11 27	5 31.71	+22 34.7	2.099	3.050	5.9	20.0	11 27	5 33.28	+33 54.9	1.851	2.791	7.6	21.1
12 7	5 22.74	+22 35.7	2.061	3.042	2.1	19.7	12 7	5 23.34	+33 59.1	1.822	2.791	4.5	20.9
12 17	5 13.17	+22 34.8	2.052	3.033	2.0	19.7	12 17	5 12.72	+33 49.5	1.821	2.791	4.2	20.9
12 27	5 4.03	+22 32.7	2.074	3.024	5.9	20.0	12 27	5 2.79	+33 27.2	1.848	2.791	7.0	21.1
1 6	4 56.29	+22 30.6	2.124	3.015	9.5	20.2	1 6	4 54.72	+32 55.9	1.902	2.791	10.5	21.3
1 16	4 50.64	+22 30.3	2.199	3.005	12.6	20.3	1 16	4 49.29	+32 20.3	1.981	2.792	13.6	21.5
<b>455670</b>	2005 <i>CD</i> <sub>67</sub>		12 12.2	286°34	11°5/13.1	18	<b>207828</b>	2007 <i>TB</i> <sub>376</sub>		12 12.2	104°40	2°4/11.9	18
11 7	6 5.97	+61 28.3	2.743	3.387	14.2	21.4	11 7	5 47.61	+16 25.4	1.977	2.787	14.0	20.8
11 17	5 57.65	+62 47.3	2.636	3.352	13.2	21.3	11 17	5 41.39	+16 15.5	1.916	2.808	10.6	20.6
11 27	5 44.55	+63 48.2	2.548	3.316	12.2	21.2	11 27	5 32.96	+16 9.0	1.880	2.828	6.8	20.4
12 7	5 27.54	+64 21.9	2.481	3.279	11.6	21.1	12 7	5 23.15	+16 6.2	1.871	2.847	3.2	20.3
12 17	5 8.54	+64 21.1	2.437	3.242	11.6	21.0	12 17	5 12.98	+16 7.8	1.891	2.866	3.2	20.3
12 27	4 50.26	+63 43.8	2.417	3.205	12.1	21.0	12 27	5 3.55	+16 14.4	1.942	2.885	6.7	20.5
1 6	4 35.18	+62 34.5	2.419	3.167	13.2	21.0	1 6	4 55.80	+16 26.2	2.019	2.903	10.2	20.8
1 16	4 24.81	+61 1.9	2.442	3.128	14.6	21.0	1 16	4 50.34	+16 43.2	2.122	2.921	13.2	21.0
<b>70718</b>	HEAF		12 12.2	60°79	5°0/12.2	18	<b>398530</b>	2011 <i>UQ</i> <sub>299</sub>		12 12.2	76°50	0°8/12.3	18
11 7	5 47.96	+9 46.0	1.534	2.350	17.0	18.9	11 7	5 46.86	+24 23.6	1.808	2.627	14.7	20.8
11 17	5 42.03	+9 45.8	1.485	2.375	13.2	18.7	11 17	5 41.36	+24 42.6	1.736	2.633	11.1	20.6
11 27	5 33.49	+9 57.3	1.459	2.400	9.1	18.5	11 27	5 33.23	+24 59.6	1.687	2.640	7.0	20.4
12 7	5 23.32	+10 21.6	1.458	2.425	5.6	18.4	12 7	5 23.32	+25 12.7	1.665	2.646	2.6	20.1
12 17	5 12.77	+10 58.2	1.484	2.451	5.5	18.5	12 17	5 12.78	+25 20.7	1.672	2.652	2.3	20.1
12 27	5 3.19	+11 45.4	1.538	2.476	8.7	18.7	12 27	5 2.95	+25 24.0	1.708	2.659	6.7	20.4
1 6	4 55.66	+12 40.7	1.618	2.501	12.3	19.0	1 6	4 54.97	+25 24.6	1.770	2.665	10.8	20.6
1 16	4 50.84	+13 41.3	1.720	2.526	15.5	19.2	1 16	4 49.62	+25 24.7	1.856	2.672	14.2	20.9
<b>336628</b>	2009 <i>VF</i> <sub>75</sub>		12 12.2	327°18	1°3/11.8	18	<b>120419</b>	2308 <i>T</i> <sub>-1</sub>		12 12.2	215°62	3°8/12.7	18
11 7	5 46.87	+24 13.1	1.377	2.213	17.5	20.1	11 7	5 51.58	+32 13.2	1.927	2.727	14.7	20.7
11 17	5 42.02	+23 11.6	1.300	2.207	13.4	19.9	11 17	5 45.19	+32 47.0	1.839	2.720	11.5	20.5
11 27	5 33.92	+22 1.4	1.244	2.200	8.4	19.6	11 27	5 35.82	+33 13.2	1.773	2.713	7.9	20.3
12 7	5 23.58	+20 44.7	1.213	2.195	3.1	19.2	12 7	5 24.29	+33 27.5	1.735	2.704	4.6	20.1
12 17	5 12.47	+19 26.0	1.210	2.189	3.3	19.2	12 17	5 11.86	+33 27.3	1.725	2.696	4.3	20.0
12 27	5 2.30	+18 11.8	1.233	2.184	8.7	19.5	12 27	5 0.04	+33 12.8	1.744	2.686	7.5	20.2
1 6	4 54.49	+17 8.1	1.281	2.180	13.7	19.8	1 6	4 50.19	+32 47.6	1.791	2.676	11.2	20.4
1 16	4 49.89	+16 19.0	1.350	2.176	18.0	20.1	1 16	4 43.24	+32 17.1	1.862	2.666	14.6	20.6
<b>308958</b>	2006 <i>TK</i> <sub>44</sub>		12 12.2	304°93	3°4/12.4	17	<b>288733</b>	2004 <i>RD</i> <sub>46</sub>		12 12.2	51°44	5°0/13.1	17
11 7	5 47.07	+29 57.6	1.836	2.650	14.7	20.6	11 7	5 47.87	+36 12.0	1.980	2.777	14.4	20.8
11 17	5 41.88	+30 44.6	1.750	2.640	11.5	20.3	11 17	5 42.21	+36 49.2	1.909	2.784	11.5	20.6
11 27	5 33.80	+31 27.1	1.686	2.631	7.7	20.1	11 27	5 33.81	+37 15.6	1.861	2.791	8.3	20.5
12 7	5 23.58	+32 0.7	1.649	2.622	4.2	19.9	12 7	5 23.53	+37 27.0	1.839	2.799	5.6	20.3
12 17	5 12.41	+32 22.1	1.640	2.613	4.0	19.8	12 17	5 12.62	+37 21.4	1.845	2.806	5.2	20.3
12 27	5 1.76	+32 30.8	1.660	2.605	7.5	20.0	12 27	5 2.48	+36 59.6	1.879	2.814	7.6	20.5
1 6	4 52.99	+32 28.9	1.706	2.596	11.4	20.2	1 6	4 54.33	+36 26.0	1.939	2.822	10.6	20.7
1 16	4 47.05	+32 20.5	1.775	2.588	14.8	20.4	1 16	4 48.93	+35 45.8	2.024	2.830	13.5	20.9
<b>148585</b>	2001 <i>RO</i> <sub>4</sub>		12 12.2	160°23	0°2/12.2	18	<b>330790</b>	2008 <i>UV</i> <sub>130</sub>		12 12.2	100°20	0°5/12.1	18
11 7	5 50.12	+24 22.6	2.090	2.895	13.5	21.3	11 7	5 43.18	+22 8.5	2.508	3.317	11.4	21.5
11 17	5 43.39	+24 15.5	2.013	2.903	10.2	21.1	11 17	5 37.78	+21 55.0	2.437	3.330	8.6	21.3
11 27	5 34.29	+24 4.9	1.960	2.910	6.4	20.9	11 27	5 30.62	+21 39.9	2.391	3.343	5.3	21.2
12 7	5 23.63	+23 50.0	1.936	2.917	2.2	20.6	12 7	5 22.35	+21 23.6	2.374	3.355	1.9	20.9
12 17	5 12.47	+23 31.1	1.942	2.923	2.1	20.6	12 17	5 13.74	+21 6.6	2.388	3.367	1.8	21.0
12 27	5 2.01	+23 9.9	1.979	2.927	6.2	20.9	12 27	5 5.69	+20 50.3	2.431	3.380	5.2	21.2
1 6	4 53.28	+22 48.8	2.044	2.931	9.9	21.1	1 6	4 58.92	+20 36.1	2.504	3.392	8.3	21.4
1 16	4 46.95	+22 30.6	2.134	2.935	13.1	21.4	1 16	4 53.99	+20 25.4	2.602	3.404	11.0	21.6
<b>67349</b>	2000 <i>JF</i> <sub>66</sub>		12 12.2	146°00	3°4/11.8	18	<b>294579</b>	2007 <i>YB</i> <sub>57</sub>		12 12.2	135°05		

EPHEMERIDES

12 12.2

12 12.2

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>60886</b>	2000 <i>JB</i> <sub>10</sub>		12 12.2	95°06'	2.4/12.4	18	<b>494506</b>	2016 <i>WH</i> <sub>55</sub>		12 12.2	14°54'	5.3/11.5	17
11 7	5 56.17	+27 28.4	1.441	2.257	17.9	19.8	11 7	5 48.28	+25 36.5	1.065	1.915	20.5	19.6
11 17	5 48.74	+28 2.7	1.390	2.283	13.6	19.6	11 17	5 44.29	+27 55.5	1.011	1.922	15.8	19.3
11 27	5 37.92	+28 31.2	1.360	2.309	8.7	19.4	11 27	5 36.03	+30 18.2	0.977	1.931	10.6	19.0
12 7	5 24.93	+28 49.4	1.357	2.335	3.9	19.2	12 7	5 24.54	+32 32.5	0.967	1.942	6.0	18.8
12 17	5 11.43	+28 55.3	1.381	2.359	3.5	19.2	12 17	5 11.67	+34 26.0	0.983	1.955	6.3	18.9
12 27	4 59.24	+28 50.0	1.434	2.383	8.0	19.5	12 27	4 59.82	+35 52.0	1.023	1.969	10.8	19.2
1 6	4 49.77	+28 37.8	1.513	2.407	12.4	19.8	1 6	4 51.09	+36 51.4	1.086	1.985	15.5	19.5
1 16	4 43.77	+28 23.5	1.614	2.429	16.0	20.1	1 16	4 46.70	+37 29.9	1.168	2.003	19.6	19.8
<b>110458</b>	2001 <i>TM</i> <sub>46</sub>		12 12.2	72°77'	6.3/12.5	18	<b>299024</b>	2005 <i>AU</i> <sub>15</sub>		12 12.2	276°68'	1.5/12.5	18
11 7	5 48.54	+3 39.1	1.921	2.707	15.2	19.3	11 7	5 47.25	+28 0.6	1.767	2.585	15.1	20.3
11 17	5 41.89	+3 36.3	1.876	2.741	12.2	19.2	11 17	5 41.97	+27 51.0	1.676	2.571	11.6	20.1
11 27	5 33.17	+3 47.8	1.854	2.774	9.1	19.1	11 27	5 33.81	+27 34.0	1.607	2.557	7.5	19.8
12 7	5 23.20	+4 15.2	1.859	2.807	6.8	19.0	12 7	5 23.61	+27 8.1	1.564	2.544	3.1	19.5
12 17	5 13.01	+4 58.1	1.892	2.839	6.6	19.1	12 17	5 12.57	+26 33.4	1.550	2.530	2.6	19.5
12 27	5 3.66	+5 54.8	1.955	2.871	8.6	19.2	12 27	5 2.16	+25 52.4	1.565	2.516	7.2	19.7
1 6	4 56.02	+7 1.7	2.044	2.903	11.3	19.5	1 6	4 53.67	+25 9.3	1.606	2.502	11.6	19.9
1 16	4 50.63	+8 15.3	2.158	2.934	13.8	19.7	1 16	4 48.01	+24 28.8	1.670	2.488	15.4	20.1
<b>264349</b>	1999 <i>XH</i> <sub>148</sub>		12 12.2	317°41'	1.4/12.3	18	<b>127725</b>	2003 <i>EE</i> <sub>48</sub>		12 12.2	295°03'	3.5/13.1	18
11 7	5 45.20	+25 5.2	2.048	2.863	13.4	20.3	11 7	5 49.28	+33 10.6	1.530	2.347	17.0	19.5
11 17	5 40.04	+25 41.9	1.963	2.857	10.2	20.1	11 17	5 44.00	+32 57.4	1.443	2.334	13.4	19.2
11 27	5 32.44	+26 17.6	1.901	2.852	6.5	19.9	11 27	5 35.30	+32 30.3	1.377	2.322	9.1	18.9
12 7	5 23.09	+26 49.8	1.867	2.846	2.6	19.6	12 7	5 24.16	+31 46.2	1.335	2.310	4.8	18.7
12 17	5 13.00	+27 16.3	1.862	2.841	2.5	19.6	12 17	5 12.09	+30 44.8	1.321	2.298	4.1	18.6
12 27	5 3.37	+27 36.5	1.886	2.836	6.3	19.8	12 27	5 0.90	+29 30.3	1.335	2.285	8.2	18.8
1 6	4 55.30	+27 51.2	1.938	2.831	10.1	20.0	1 6	4 52.14	+28 10.5	1.374	2.274	12.9	19.0
1 16	4 49.60	+28 2.6	2.015	2.826	13.4	20.3	1 16	4 46.77	+26 53.3	1.435	2.262	17.0	19.3
<b>293138</b>	2006 <i>XG</i> <sub>65</sub>		12 12.2	339°80'	3.2/11.8	18	<b>492755</b>	2014 <i>QP</i> <sub>167</sub>		12 12.2	88°47'	7.8/11.4	18
11 7	5 42.80	+15 22.5	1.682	2.510	15.2	20.2	11 7	5 42.41	- 1 48.2	2.372	3.138	13.2	20.9
11 17	5 38.42	+15 7.3	1.604	2.504	11.7	19.9	11 17	5 37.14	- 2 29.9	2.318	3.156	11.1	20.8
11 27	5 31.49	+14 56.9	1.547	2.498	7.7	19.7	11 27	5 30.19	- 2 57.2	2.286	3.174	9.2	20.7
12 7	5 22.76	+14 52.7	1.517	2.492	4.0	19.5	12 7	5 22.21	- 3 6.9	2.280	3.192	7.9	20.7
12 17	5 13.33	+14 55.9	1.513	2.487	4.1	19.4	12 17	5 13.95	- 2 57.1	2.301	3.209	8.0	20.7
12 27	5 4.47	+15 7.1	1.537	2.483	7.9	19.7	12 27	5 6.23	- 2 28.2	2.350	3.227	9.3	20.8
1 6	4 57.35	+15 26.5	1.587	2.479	12.0	19.9	1 6	4 59.77	- 1 42.5	2.424	3.244	11.1	21.0
1 16	4 52.75	+15 53.5	1.659	2.476	15.6	20.1	1 16	4 55.07	- 0 43.3	2.521	3.261	13.0	21.1
<b>318607</b>	2005 <i>JC</i> <sub>57</sub>		12 12.2	74°30'	2.5/12.5	18	<b>388157</b>	2005 <i>YD</i> <sub>59</sub>		12 12.2	281°27'	3.7/12.9	18
11 7	5 47.74	+28 28.5	1.816	2.630	14.8	21.0	11 7	5 49.03	+32 33.5	1.631	2.445	16.3	21.1
11 17	5 42.16	+28 59.8	1.742	2.635	11.4	20.8	11 17	5 43.64	+32 44.2	1.546	2.436	12.7	20.8
11 27	5 33.82	+29 26.0	1.692	2.640	7.4	20.6	11 27	5 35.01	+32 44.4	1.484	2.428	8.7	20.6
12 7	5 23.56	+29 44.1	1.668	2.644	3.6	20.4	12 7	5 24.06	+32 30.4	1.446	2.419	4.8	20.3
12 17	5 12.61	+29 52.1	1.672	2.649	3.3	20.4	12 17	5 12.19	+32 0.5	1.436	2.410	4.3	20.3
12 27	5 2.37	+29 50.3	1.705	2.654	7.0	20.6	12 27	5 1.12	+31 17.0	1.454	2.402	8.0	20.5
1 6	4 54.07	+29 41.5	1.765	2.658	10.9	20.8	1 6	4 52.32	+30 25.5	1.497	2.393	12.3	20.7
1 16	4 48.53	+29 29.3	1.849	2.663	14.3	21.1	1 16	4 46.72	+29 32.4	1.563	2.385	16.1	20.9
<b>2278</b>	Götz		12 12.2	178°80'	1.0/12.3	18	<b>325625</b>	2009 <i>SN</i> <sub>267</sub>		12 12.2	78°90'	2.2/11.7	18
11 7	5 49.15	+25 27.9	2.007	2.815	13.8	18.1	11 7	5 43.47	+18 11.1	2.153	2.968	12.8	20.1
11 17	5 42.93	+25 42.7	1.925	2.817	10.5	17.8	11 17	5 38.23	+17 36.3	2.084	2.979	9.7	19.9
11 27	5 34.17	+25 54.4	1.868	2.818	6.7	17.6	11 27	5 31.00	+17 2.1	2.040	2.989	6.2	19.7
12 7	5 23.67	+26 1.1	1.839	2.818	2.6	17.3	12 7	5 22.52	+16 30.0	2.023	3.000	2.9	19.5
12 17	5 12.51	+26 1.7	1.839	2.818	2.3	17.3	12 17	5 13.68	+16 1.9	2.036	3.011	3.1	19.5
12 27	5 1.98	+25 57.0	1.869	2.818	6.4	17.6	12 27	5 5.46	+15 39.6	2.078	3.021	6.4	19.8
1 6	4 53.17	+25 49.0	1.927	2.817	10.3	17.8	1 6	4 58.69	+15 24.5	2.148	3.032	9.7	20.0
1 16	4 46.89	+25 40.7	2.009	2.815	13.6	18.0	1 16	4 53.96	+15 17.2	2.242	3.042	12.6	20.2
<b>158588</b>	2002 <i>MY</i> <sub>2</sub>		12 12.2	102°63'	6.8/11.4	18	<b>378050</b>	2006 <i>TJ</i> <sub>39</sub>		12 12.2	84°93'	2.3/11.6	17
11 7	5 42.07	+0 11.6	2.565	3.335	12.2	20.2	11 7	5 40.46	+16 9.4	2.723	3.531	10.6	21.7
11 17	5 36.77	- 0 25.3	2.507	3.353	10.1	20.1	11 17	5 35.61	+15 38.8	2.650	3.540	8.1	21.5
11 27	5 29.92	- 0 50.0	2.473	3.370	8.2	20.0	11 27	5 29.23	+15 10.0	2.603	3.549	5.3	21.4
12 7	5 22.10	- 0 59.8	2.465	3.386	6.9	19.9	12 7	5 21.89	+14 44.3	2.584	3.558	2.8	21.2
12 17	5 14.01	- 0 53.0	2.485	3.403	7.0	20.0	12 17	5 14.25	+14 23.1	2.596	3.567	2.9	21.2
12 27	5 6.42	- 0 29.7	2.534	3.419	8.3	20.1	12 27	5 7.05	+14 7.6	2.637	3.576	5.5	21.4
1 6	4 59.99	+0 8.2	2.609	3.435	10.2	20.2	1 6	5 0.96	+13 58.6	2.708	3.585	8.2	21.6
1 16	4 55.19	+0 58.2	2.707	3.450	12.1	20.4	1 16	4 56.44	+13 56.3	2.803	3.594	10.6	21.8
<b>368477</b>	2003 <i>SX</i> <sub>253</sub>		12 12.2	80°91'	1.6/11.9	18	<b>347586</b>	2001 <i>FK</i> <sub>92</sub>		12 12.2	329°58'	2.3/12.1	18
11 7	5 55.12	+20 34.3	1.426	2.246	17.9	20.5	11 7	5 43.04	+17 8.3	1.368	2.210	17.3	19.4
11 17	5 47.43	+20 12.3	1.385	2.283	13.4	20.3	11 17	5 39.37	+17 14.9	1.284	2.193	13.3	19.1
11 27	5 36.79	+19 49.9	1.367	2.319	8.3	20.1	11 27	5 32.52	+17 27.5	1.221	2.177	8.6	18.8
12 7	5 24.46	+19 27.7	1.374	2.354	3.1	19.9	12 7	5 23.26	+17 46.3	1.181	2.161	3.7	18.5
12 17	5 11.97	+19 6.9	1.410	2.389	3.1	20.0	12 17	5 12.88	+18 11.1	1.168	2.147	3.7	18.4
12 27	5 0.89	+18 49.9	1.474	2.423	7.9	20.3	12 27	5 3.03	+18 41.3	1.180	2.133	8.8	18.7
1 6	4 52.36	+18 38.8	1.565	2.456	12.2	20.7	1 6	4 55.26	+19 16.5	1.216	2.120	13.8	18.9
1 16	4 46.99	+18 35.0	1.678	2.488	15.7	21.0	1 16	4 50.63	+19 56.1	1.273	2.109	18.2	19.2
<b>198245</b>	2004 <i>TB</i> <sub>209</sub>		12 12.2	138°82'	2.2/11.8	18	<b>113581</b>	2002 <i>TU</i> <sub>43</sub>		12 12.2	346°23'	2.3/12.5	

EPHEMERIDES

12 12.2

12 12.2

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>240626</b>	2004 <i>XG</i> <sub>133</sub>		12 12.2 61°77'	2°1/12.4	18		<b>380759</b>	2005 <i>TL</i> <sub>5</sub>		12 12.2 27°54'	2°1/12.6	18	
11 7	5 48.42	+27 14.2	1.589	2.412	16.2	20.1	11 7	5 47.73	+28 56.5	1.296	2.132	18.4	20.1
11 17	5 42.91	+27 39.3	1.522	2.420	12.4	19.9	11 17	5 42.92	+28 48.9	1.233	2.137	14.1	19.8
11 27	5 34.39	+27 59.6	1.477	2.428	8.0	19.6	11 27	5 34.60	+28 31.8	1.190	2.144	9.1	19.5
12 7	5 23.80	+28 12.2	1.458	2.437	3.5	19.4	12 7	5 23.93	+28 3.2	1.171	2.150	3.9	19.3
12 17	5 12.50	+28 15.4	1.466	2.445	3.1	19.4	12 17	5 12.54	+27 23.6	1.178	2.158	3.3	19.3
12 27	5 2.08	+28 9.9	1.503	2.454	7.5	19.7	12 27	5 2.30	+26 37.0	1.211	2.166	8.4	19.6
1 6	4 53.86	+27 58.8	1.565	2.462	11.7	19.9	1 6	4 54.70	+25 49.3	1.269	2.174	13.2	19.9
1 16	4 48.66	+27 46.1	1.650	2.471	15.4	20.2	1 16	4 50.57	+25 6.0	1.347	2.183	17.4	20.2
<b>99085</b>	2001 <i>FO</i> <sub>26</sub>		12 12.2 299°23'	3°2/11.4	18		<b>513388</b>	2008 <i>HZ</i> <sub>5</sub>		12 12.2 236°67'	3°1/11.7	18	
11 7	5 42.35	+16 6.6	2.055	2.873	13.2	19.3	11 7	5 48.30	+16 43.3	1.801	2.615	14.9	23.0
11 17	5 37.79	+15 25.5	1.956	2.851	10.2	19.1	11 17	5 42.55	+16 11.5	1.709	2.602	11.5	22.7
11 27	5 31.00	+14 45.3	1.880	2.828	6.8	18.8	11 27	5 34.13	+15 41.2	1.640	2.589	7.6	22.5
12 7	5 22.62	+14 8.2	1.832	2.806	3.7	18.6	12 7	5 23.77	+15 14.1	1.598	2.574	3.8	22.2
12 17	5 13.54	+13 36.7	1.812	2.784	4.0	18.6	12 17	5 12.60	+14 52.1	1.585	2.559	4.0	22.2
12 27	5 4.84	+13 13.2	1.822	2.762	7.4	18.7	12 27	5 1.93	+14 37.5	1.601	2.543	8.0	22.4
1 6	4 57.52	+12 59.5	1.858	2.739	11.1	18.9	1 6	4 52.99	+14 31.8	1.644	2.527	12.2	22.6
1 16	4 52.33	+12 56.2	1.917	2.718	14.4	19.1	1 16	4 46.64	+14 35.9	1.709	2.510	15.9	22.8
<b>477480</b>	2010 <i>AX</i> <sub>43</sub>		12 12.2 349°80'	0°2/12.2	16		<b>22184</b>	Rudolfveltman		12 12.2 121°78'	2°3/12.1	18	
11 7	5 42.60	+21 10.0	1.107	1.964	19.4	21.0	11 7	5 51.44	+16 7.7	1.660	2.474	16.1	18.3
11 17	5 39.65	+21 40.3	1.037	1.954	14.9	20.7	11 17	5 44.80	+16 21.0	1.596	2.489	12.2	18.1
11 27	5 32.97	+22 14.4	0.986	1.946	9.4	20.3	11 27	5 35.40	+16 39.8	1.555	2.504	7.8	17.9
12 7	5 23.48	+22 50.0	0.958	1.940	3.3	20.0	12 7	5 24.16	+17 3.3	1.540	2.519	3.4	17.7
12 17	5 12.76	+23 24.2	0.953	1.934	3.1	19.9	12 17	5 12.34	+17 30.6	1.555	2.532	3.3	17.7
12 27	5 2.86	+23 55.5	0.973	1.931	9.3	20.3	12 27	5 1.36	+18 0.9	1.599	2.545	7.6	18.0
1 6	4 55.57	+24 24.2	1.015	1.929	14.9	20.6	1 6	4 52.41	+18 33.9	1.669	2.558	11.7	18.3
1 16	4 52.05	+24 51.9	1.076	1.928	19.6	20.9	1 16	4 46.28	+19 9.3	1.764	2.570	15.2	18.5
<b>491985</b>	2013 <i>EX</i> <sub>44</sub>		12 12.2 331°57'	4°1/11.5	18		<b>227717</b>	2006 <i>DL</i> <sub>189</sub>		12 12.2 183°29'	0°9/12.4	17	
11 7	5 42.67	+15 18.6	1.527	2.361	16.2	21.0	11 7	5 44.16	+25 55.8	2.408	3.216	11.8	21.5
11 17	5 38.59	+14 40.3	1.447	2.350	12.5	20.7	11 17	5 38.83	+26 4.2	2.325	3.216	9.0	21.3
11 27	5 31.74	+14 5.4	1.389	2.340	8.4	20.4	11 27	5 31.48	+26 9.5	2.267	3.216	5.7	21.1
12 7	5 22.93	+13 36.8	1.356	2.331	4.7	20.2	12 7	5 22.78	+26 10.5	2.236	3.216	2.2	20.8
12 17	5 13.32	+13 17.3	1.350	2.322	5.0	20.2	12 17	5 13.57	+26 6.6	2.236	3.216	2.0	20.8
12 27	5 4.34	+13 9.3	1.370	2.314	8.9	20.4	12 27	5 4.85	+25 58.7	2.266	3.215	5.4	21.1
1 6	4 57.23	+13 13.6	1.414	2.306	13.2	20.6	1 6	4 57.48	+25 48.5	2.324	3.215	8.7	21.3
1 16	4 52.86	+13 29.9	1.480	2.299	17.0	20.9	1 16	4 52.12	+25 38.0	2.408	3.214	11.6	21.5
<b>226064</b>	2002 <i>GU</i> <sub>184</sub>		12 12.2 109°82'	2°5/11.6	18		<b>160021</b>	1995 <i>FE</i> <sub>7</sub>		12 12.2 171°34'	0°4/12.2	18	
11 7	5 43.07	+17 32.1	2.186	3.001	12.6	20.7	11 7	5 46.00	+21 37.9	2.357	3.164	12.1	21.1
11 17	5 37.99	+16 54.7	2.108	3.002	9.6	20.5	11 17	5 40.16	+21 42.1	2.275	3.167	9.2	20.9
11 27	5 30.92	+16 18.0	2.054	3.003	6.2	20.3	11 27	5 32.29	+21 45.8	2.219	3.169	5.7	20.7
12 7	5 22.55	+15 43.7	2.028	3.004	3.1	20.1	12 7	5 23.06	+21 48.5	2.190	3.171	2.0	20.4
12 17	5 13.74	+15 13.8	2.032	3.005	3.3	20.2	12 17	5 13.32	+21 49.9	2.193	3.173	1.9	20.4
12 27	5 5.47	+14 50.3	2.065	3.006	6.5	20.4	12 27	5 4.09	+21 50.5	2.226	3.174	5.6	20.7
1 6	4 58.60	+14 34.5	2.125	3.008	9.8	20.6	1 6	4 56.23	+21 51.6	2.287	3.175	9.0	20.9
1 16	4 53.74	+14 27.2	2.210	3.009	12.8	20.8	1 16	4 50.40	+21 54.4	2.374	3.175	11.9	21.1
<b>342116</b>	2008 <i>SD</i> <sub>96</sub>		12 12.2 357°00'	2°1/12.5	18		<b>17923</b>	1999 <i>GY</i> <sub>16</sub>		12 12.2 289°79'	4°1/11.8	18	
11 7	5 44.17	+27 36.6	1.233	2.078	18.6	20.7	11 7	5 45.66	+13 43.5	1.578	2.403	16.2	17.7
11 17	5 40.54	+27 45.3	1.164	2.074	14.3	20.4	11 17	5 40.80	+13 25.9	1.498	2.395	12.6	17.4
11 27	5 33.32	+27 47.1	1.115	2.071	9.2	20.1	11 27	5 33.13	+13 14.8	1.439	2.387	8.5	17.2
12 7	5 23.54	+27 39.4	1.089	2.069	3.9	19.8	12 7	5 23.45	+13 12.2	1.406	2.379	4.8	16.9
12 17	5 12.81	+27 21.4	1.088	2.069	3.4	19.8	12 17	5 12.93	+13 19.5	1.399	2.371	4.9	16.9
12 27	5 3.05	+26 55.4	1.113	2.069	8.7	20.1	12 27	5 3.00	+13 37.2	1.420	2.363	8.7	17.1
1 6	4 55.87	+26 26.1	1.160	2.070	13.8	20.4	1 6	4 54.95	+14 4.9	1.467	2.356	13.0	17.4
1 16	4 52.24	+25 58.6	1.228	2.073	18.2	20.7	1 16	4 49.65	+14 41.5	1.535	2.348	16.8	17.6
<b>455930</b>	2005 <i>UW</i> <sub>317</sub>		12 12.2 124°01'	2°9/12.6	18		<b>422300</b>	2014 <i>SX</i> <sub>159</sub>		12 12.2 78°90'	0°4/12.3	14 C	
11 7	5 47.37	+30 33.7	2.178	2.981	13.1	21.9	11 7	5 45.46	+23 59.0	2.230	3.040	12.6	21.7
11 17	5 41.52	+31 5.8	2.102	2.987	10.1	21.7	11 17	5 39.71	+24 5.4	2.168	3.061	9.5	21.5
11 27	5 33.28	+31 31.9	2.050	2.993	6.8	21.5	11 27	5 31.95	+24 9.6	2.130	3.081	5.9	21.4
12 7	5 23.41	+31 49.2	2.026	2.998	3.6	21.4	12 7	5 22.90	+24 10.7	2.121	3.102	2.1	21.1
12 17	5 12.95	+31 55.7	2.031	3.004	3.4	21.4	12 17	5 13.51	+24 8.5	2.141	3.122	1.9	21.2
12 27	5 3.09	+31 52.0	2.065	3.009	6.3	21.6	12 27	5 4.78	+24 3.9	2.192	3.142	5.6	21.4
1 6	4 54.88	+31 40.5	2.128	3.015	9.6	21.8	1 6	4 57.58	+23 58.4	2.271	3.162	8.9	21.7
1 16	4 49.06	+31 24.7	2.215	3.020	12.5	22.0	1 16	4 52.48	+23 53.9	2.374	3.181	11.8	21.9
<b>448013</b>	2008 <i>DT</i> <sub>45</sub>		12 12.2 354°49'	2°3/12.5	17		<b>228231</b>	1998 <i>QT</i> <sub>101</sub>		12 12.2 55°06'	1°0/12.1	18	
11 7	5 45.73	+27 51.6	1.724	2.546	15.2	21.4	11 7	5 52.84	+20 42.8	1.186	2.023	19.8	20.3
11 17	5 40.85	+28 18.7	1.647	2.544	11.7	21.1	11 17	5 46.26	+20 46.0	1.152	2.058	14.8	20.1
11 27	5 33.13	+28 41.3	1.593	2.543	7.6	20.9	11 27	5 36.33	+20 50.0	1.138	2.093	9.1	19.9
12 7	5 23.42	+28 56.5	1.564	2.541	3.5	20.6	12 7	5 24.41	+20 53.5	1.148	2.129	3.2	19.7
12 17	5 12.93	+29 2.3	1.563	2.541	3.2	20.6	12 17	5 12.27	+20 56.3	1.184	2.164	3.0	19.8
12 27	5 3.11	+28 59.2	1.590	2.540	7.2	20.9	12 27	5 1.68	+20 59.7	1.247	2.200	8.4	20.2
1 6	4 55.23	+28 49.9	1.643	2.540	11.3	21.1	1 6	4 53.93	+21 5.3	1.334	2.235	13.1	20.5
1 16	4 50.17	+28 37.9	1.719	2.541	14.9	21.3	1 16	4 49.62	+21 14.6	1.443	2.271	16.9	20.9
<b>338436</b>	2003 <i>DR</i> <sub>9</sub>		12 12.2 233°60'	4°1/11.6	18		<b>460630</b>	2014 <i>UB</i> <sub>97</sub>		12 12.2 327°86'	4°1/11		

EPHEMERIDES

12 12.2

12 12.2

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>321182</b>	2008 <i>WX</i> <sub>70</sub>		12 12.2	29°23	0°7/12.2	18	<b>409149</b>	2003 <i>UV</i> <sub>115</sub>		12 12.2	38°27	3°7/11.3	16
11 7	5 46.76	+22 41.1	1.339	2.177	17.8	19.5	11 7	5 43.70	+16 27.5	1.708	2.534	15.1	19.7
11 17	5 42.03	+23 13.9	1.278	2.186	13.5	19.2	11 17	5 38.69	+15 25.1	1.658	2.557	11.5	19.5
11 27	5 34.03	+23 47.2	1.239	2.195	8.5	19.0	11 27	5 31.40	+14 25.1	1.631	2.580	7.5	19.4
12 7	5 23.77	+24 18.1	1.224	2.206	3.0	18.7	12 7	5 22.75	+13 31.0	1.630	2.604	4.2	19.2
12 17	5 12.74	+24 44.3	1.236	2.217	2.7	18.7	12 17	5 13.83	+12 46.2	1.658	2.628	4.5	19.3
12 27	5 2.66	+25 5.1	1.274	2.229	8.1	19.0	12 27	5 5.80	+12 13.2	1.713	2.653	7.8	19.5
1 6	4 54.98	+25 21.9	1.337	2.241	12.8	19.3	1 6	4 59.57	+11 53.4	1.794	2.678	11.3	19.8
1 16	4 50.57	+25 37.1	1.421	2.254	16.8	19.6	1 16	4 55.69	+11 46.4	1.898	2.703	14.3	20.1
<b>220092</b>	2002 <i>SM</i> <sub>37</sub>		12 12.2	91°70	3°1/11.8	18	<b>441040</b>	2007 <i>GG</i> <sub>59</sub>		12 12.2	202°42	0°7/12.4	18
11 7	5 51.39	+16 24.5	1.582	2.399	16.6	21.2	11 7	5 49.06	+25 18.1	1.966	2.776	14.0	22.3
11 17	5 44.58	+15 58.9	1.532	2.426	12.6	21.0	11 17	5 42.99	+25 21.3	1.880	2.772	10.7	22.1
11 27	5 35.11	+15 37.0	1.504	2.453	8.1	20.8	11 27	5 34.33	+25 20.8	1.818	2.768	6.8	21.8
12 7	5 24.02	+15 20.1	1.503	2.480	3.9	20.6	12 7	5 23.88	+25 15.3	1.783	2.763	2.5	21.5
12 17	5 12.62	+15 9.6	1.531	2.505	4.0	20.7	12 17	5 12.72	+25 4.2	1.778	2.758	2.2	21.5
12 27	5 2.30	+15 6.7	1.587	2.531	7.9	21.0	12 27	5 2.16	+24 48.7	1.803	2.753	6.5	21.8
1 6	4 54.14	+15 12.1	1.670	2.555	11.9	21.3	1 6	4 53.35	+24 31.5	1.855	2.746	10.6	22.0
1 16	4 48.77	+15 25.4	1.775	2.579	15.2	21.5	1 16	4 47.09	+24 15.6	1.932	2.740	14.0	22.2
<b>237904</b>	2002 <i>PU</i> <sub>17</sub>		12 12.2	66°40	6°5/11.9	18	<b>387653</b>	2002 <i>RO</i> <sub>135</sub>		12 12.2	136°66	9°9/14.8	18
11 7	5 45.48	+6 12.2	1.700	2.507	16.0	20.1	11 7	5 6 7.36	+56 46.2	2.690	3.359	14.0	21.7
11 17	5 40.17	+5 51.5	1.640	2.519	12.8	19.9	11 17	5 57.65	+58 10.9	2.630	3.377	12.5	21.6
11 27	5 32.44	+5 44.0	1.601	2.531	9.4	19.8	11 27	5 43.93	+59 16.3	2.592	3.394	11.1	21.5
12 7	5 23.15	+5 52.5	1.587	2.543	6.9	19.6	12 7	5 27.31	+59 54.4	2.577	3.410	10.2	21.5
12 17	5 13.36	+6 18.0	1.601	2.555	6.9	19.7	12 17	5 9.60	+60 0.6	2.587	3.425	10.0	21.5
12 27	5 4.31	+6 59.9	1.642	2.567	9.3	19.8	12 27	4 52.98	+59 35.2	2.624	3.439	10.5	21.5
1 6	4 57.01	+7 55.2	1.708	2.579	12.5	20.1	1 6	4 39.30	+58 44.1	2.684	3.453	11.6	21.6
1 16	4 52.15	+9 0.4	1.797	2.591	15.5	20.3	1 16	4 29.60	+57 35.8	2.767	3.465	12.8	21.8
<b>8663</b>	Davidjohnston		12 12.2	308°61	1°6/12.1	18	<b>232452</b>	2003 <i>GQ</i> <sub>10</sub>		12 12.2	277°06	9°1/10.9	18
11 7	5 46.80	+18 37.1	1.306	2.145	18.1	17.0	11 7	5 44.69	+2 36.2	1.644	2.445	16.7	20.3
11 17	5 42.42	+18 48.2	1.225	2.133	13.9	16.7	11 17	5 39.91	+1 37.4	1.566	2.434	13.9	20.1
11 27	5 34.56	+19 4.0	1.165	2.121	8.9	16.4	11 27	5 32.52	+0 52.8	1.508	2.423	11.1	19.9
12 7	5 24.08	+19 24.0	1.128	2.109	3.5	16.0	12 7	5 23.28	+0 28.1	1.474	2.411	9.3	19.8
12 17	5 12.40	+19 47.1	1.117	2.097	3.4	16.0	12 17	5 13.25	+0 27.6	1.466	2.400	9.5	19.8
12 27	5 1.34	+20 12.8	1.133	2.086	9.0	16.3	12 27	5 3.75	+0 52.8	1.484	2.388	11.7	19.9
1 6	4 52.59	+20 41.2	1.172	2.076	14.3	16.5	1 6	4 55.96	+1 41.3	1.525	2.377	14.8	20.0
1 16	4 47.27	+21 12.8	1.232	2.066	18.8	16.8	1 16	4 50.71	+2 48.8	1.587	2.365	17.8	20.2
<b>227113</b>	2005 <i>NM</i> <sub>55</sub>		12 12.2	81°67	4°5/13.2	17	<b>230254</b>	2001 <i>VA</i> <sub>64</sub>		12 12.2	71°79	0°8/12.1	18
11 7	5 56.56	+34 31.8	1.535	2.338	17.6	20.8	11 7	5 49.28	+22 59.9	1.477	2.305	17.0	19.8
11 17	5 48.93	+34 49.8	1.487	2.369	13.7	20.6	11 17	5 43.39	+22 31.2	1.421	2.323	12.8	19.5
11 27	5 37.99	+34 54.2	1.461	2.399	9.4	20.4	11 27	5 34.56	+21 59.3	1.387	2.341	8.0	19.3
12 7	5 25.03	+34 40.9	1.460	2.428	5.5	20.3	12 7	5 23.90	+21 24.6	1.378	2.359	2.8	19.1
12 17	5 11.77	+34 9.2	1.487	2.458	4.9	20.3	12 17	5 12.81	+20 49.2	1.397	2.377	2.7	19.1
12 27	4 59.97	+33 22.9	1.543	2.486	8.1	20.6	12 27	5 2.82	+20 16.2	1.444	2.395	7.7	19.4
1 6	4 50.95	+32 28.8	1.624	2.514	11.9	20.9	1 6	4 55.13	+19 48.9	1.516	2.413	12.1	19.7
1 16	4 45.36	+31 33.9	1.729	2.541	15.2	21.2	1 16	4 50.43	+19 29.5	1.611	2.431	15.8	20.0
<b>386052</b>	2007 <i>FY</i> <sub>23</sub>		12 12.2	285°68	0°7/12.3	18	<b>450182</b>	2001 <i>VY</i> <sub>73</sub>		12 12.2	81°95	3°4/13.3	17
11 7	5 47.54	+24 25.5	1.546	2.373	16.4	21.5	11 7	5 50.77	+34 23.7	1.975	2.771	14.5	20.4
11 17	5 42.63	+24 35.7	1.457	2.359	12.6	21.2	11 17	5 44.02	+34 17.2	1.915	2.793	11.3	20.2
11 27	5 34.52	+24 43.5	1.390	2.344	8.0	20.9	11 27	5 34.73	+33 59.0	1.878	2.816	7.7	20.1
12 7	5 24.03	+24 46.9	1.348	2.329	2.9	20.6	12 7	5 23.91	+33 27.1	1.868	2.838	4.3	19.9
12 17	5 12.46	+24 44.9	1.334	2.315	2.7	20.5	12 17	5 12.81	+32 42.1	1.888	2.860	3.8	19.9
12 27	5 1.47	+24 38.1	1.347	2.300	7.9	20.8	12 27	5 2.73	+31 47.0	1.937	2.881	6.6	20.1
1 6	4 52.55	+24 29.3	1.386	2.285	12.8	21.1	1 6	4 54.70	+30 47.2	2.014	2.903	10.0	20.4
1 16	4 46.76	+24 21.8	1.446	2.271	17.0	21.3	1 16	4 49.35	+29 48.1	2.115	2.924	12.9	20.6
<b>243943</b>	2001 <i>PO</i> <sub>49</sub>		12 12.2	93°04	13°1/10.8	18	<b>43965</b>	1997 <i>EO</i> <sub>32</sub>		12 12.2	137°64	0°5/12.2	18
11 7	5 44.29	-14 41.3	2.080	2.789	16.5	20.5	11 7	5 47.52	+22 8.9	2.118	2.928	13.2	20.6
11 17	5 38.83	-16 10.3	2.040	2.806	15.0	20.4	11 17	5 41.44	+22 3.8	2.046	2.938	10.0	20.4
11 27	5 31.40	-17 14.8	2.020	2.823	13.8	20.4	11 27	5 33.14	+21 57.3	1.998	2.948	6.2	20.2
12 7	5 22.75	-17 48.9	2.021	2.839	13.2	20.4	12 7	5 23.40	+21 49.1	1.977	2.958	2.2	20.0
12 17	5 13.78	-17 49.6	2.045	2.856	13.2	20.4	12 17	5 13.21	+21 39.4	1.987	2.967	2.1	20.0
12 27	5 5.48	-17 17.1	2.090	2.872	14.0	20.5	12 27	5 3.66	+21 29.4	2.027	2.976	6.0	20.3
1 6	4 58.68	-16 15.7	2.156	2.888	15.1	20.6	1 6	4 55.72	+21 20.7	2.095	2.984	9.6	20.5
1 16	4 53.92	-14 51.4	2.241	2.904	16.4	20.7	1 16	4 50.02	+21 15.1	2.188	2.992	12.7	20.7
<b>101823</b>	1999 <i>JC</i> <sub>20</sub>		12 12.2	165°35	0°6/12.3	18	<b>16605</b>	1993 <i>FR</i> <sub>10</sub>		12 12.2	145°29	2°8/12.6	18
11 7	5 49.01	+25 18.1	2.053	2.861	13.6	20.5	11 7	5 51.51	+29 8.6	1.754	2.564	15.5	18.4
11 17	5 42.72	+25 15.3	1.974	2.865	10.3	20.3	11 17	5 45.15	+29 38.9	1.681	2.571	11.9	18.2
11 27	5 34.03	+25 8.6	1.920	2.870	6.5	20.1	11 27	5 35.81	+30 3.1	1.632	2.578	7.8	18.0
12 7	5 23.72	+24 56.9	1.893	2.873	2.4	19.8	12 7	5 24.42	+30 17.8	1.608	2.584	3.8	17.7
12 17	5 12.87	+24 40.1	1.896	2.877	2.1	19.8	12 17	5 12.29	+30 20.7	1.613	2.589	3.5	17.7
12 27	5 2.68	+24 20.0	1.930	2.879	6.2	20.1	12 27	5 0.97	+30 12.5	1.647	2.595	7.3	18.0
1 6	4 54.20	+23 58.9	1.991	2.881	10.0	20.3	1 6	4 51.77	+29 56.6	1.708	2.600	11.3	18.2
1 16	4 48.15	+23 39.9	2.077	2.882	13.3	20.6	1 16	4 45.55	+29 37.5	1.793	2.604	14.8	18.5
<b>406748</b>	2008 <i>JA</i> <sub>4</sub>		12 12.2	225°73	5°5/11.4	18	<b>297203</b>	2011 <i>CM</i> <sub>88</sub>		12 12.2	344°40		

EPHEMERIDES

12 12.2

12 12.2

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>132990</b>	2002 TV <sub>226</sub>		12 12.2	68°32	1°1/12.1	17	<b>196140</b>	2002 TO <sub>264</sub>		12 12.2	23°01	1°1/12.4	17
11 7	5 43.03	+19 18.1	2.309	3.122	12.1	19.6	11 7	5 43.38	+26 22.4	2.015	2.833	13.4	20.0
11 17	5 37.92	+19 19.5	2.238	3.132	9.1	19.4	11 17	5 38.57	+26 24.5	1.942	2.839	10.2	19.8
11 27	5 30.90	+19 22.2	2.191	3.142	5.8	19.2	11 27	5 31.49	+26 22.3	1.893	2.845	6.5	19.5
12 7	5 22.63	+19 26.0	2.172	3.152	2.2	19.0	12 7	5 22.89	+26 14.9	1.871	2.851	2.5	19.3
12 17	5 13.96	+19 31.0	2.183	3.162	2.2	19.0	12 17	5 13.79	+26 2.1	1.877	2.857	2.2	19.3
12 27	5 5.81	+19 37.5	2.224	3.172	5.6	19.3	12 27	5 5.33	+25 45.3	1.913	2.864	6.1	19.6
1 6	4 59.00	+19 46.3	2.293	3.182	8.9	19.5	1 6	4 58.49	+25 26.9	1.975	2.872	9.7	19.8
1 16	4 54.12	+19 57.9	2.387	3.193	11.7	19.7	1 16	4 53.95	+25 9.4	2.062	2.880	12.9	20.0
<b>115413</b>	2003 SA <sub>299</sub>		12 12.2	16°15	6°6/14.2	17	<b>326525</b>	2002 NF <sub>76</sub>		12 12.2	103°25	3°0/11.6	18
11 7	5 48.81	+42 20.6	2.000	2.779	14.9	19.4	11 7	5 42.60	+14 44.4	2.419	3.226	11.8	21.5
11 17	5 43.11	+42 40.1	1.925	2.781	12.3	19.2	11 17	5 37.43	+14 12.2	2.348	3.237	9.0	21.3
11 27	5 34.49	+42 43.3	1.872	2.784	9.5	19.0	11 27	5 30.53	+13 42.9	2.303	3.247	6.0	21.1
12 7	5 23.94	+42 26.0	1.844	2.788	7.2	18.9	12 7	5 22.51	+13 18.3	2.286	3.257	3.4	21.0
12 17	5 12.80	+41 46.4	1.843	2.791	6.7	18.9	12 17	5 14.16	+12 59.8	2.298	3.268	3.6	21.0
12 27	5 2.59	+40 46.9	1.870	2.795	8.3	19.0	12 27	5 6.33	+12 48.7	2.341	3.277	6.2	21.2
1 6	4 54.57	+39 33.6	1.923	2.800	11.0	19.1	1 6	4 59.75	+12 45.6	2.411	3.287	9.1	21.4
1 16	4 49.49	+38 13.8	2.000	2.805	13.7	19.3	1 16	4 54.96	+12 50.5	2.506	3.297	11.7	21.6
<b>376338</b>	2011 GW <sub>85</sub>		12 12.2	244°30	0°6/12.1	17	<b>216179</b>	2006 TC <sub>24</sub>		12 12.2	128°32	2°4/12.6	18
11 7	5 42.53	+21 45.2	2.563	3.372	11.2	22.0	11 7	5 48.02	+29 11.5	1.989	2.797	14.0	21.0
11 17	5 37.50	+21 35.6	2.473	3.365	8.4	21.8	11 17	5 42.21	+29 33.2	1.914	2.802	10.7	20.8
11 27	5 30.65	+21 24.7	2.408	3.359	5.3	21.6	11 27	5 33.85	+29 49.2	1.862	2.807	7.0	20.6
12 7	5 22.56	+21 12.8	2.371	3.352	1.9	21.3	12 7	5 23.75	+29 56.8	1.836	2.812	3.4	20.4
12 17	5 14.00	+21 0.2	2.365	3.344	1.8	21.3	12 17	5 13.03	+29 54.7	1.840	2.817	3.1	20.4
12 27	5 5.85	+20 48.1	2.389	3.337	5.3	21.5	12 27	5 2.98	+29 43.6	1.874	2.822	6.5	20.6
1 6	4 58.88	+20 37.7	2.441	3.330	8.5	21.7	1 6	4 54.73	+29 26.4	1.935	2.826	10.2	20.8
1 16	4 53.70	+20 30.4	2.520	3.322	11.3	21.9	1 16	4 49.03	+29 6.7	2.019	2.830	13.4	21.1
<b>414355</b>	2008 TO <sub>56</sub>		12 12.2	61°55	3°7/11.4	17	<b>281347</b>	2007 UP <sub>113</sub>		12 12.2	224°94	4°0/11.2	18
11 7	5 41.84	+13 11.9	2.257	3.068	12.4	21.7	11 7	5 45.43	+14 26.3	2.079	2.889	13.4	21.2
11 17	5 36.99	+12 32.8	2.186	3.075	9.6	21.6	11 17	5 39.96	+13 30.8	1.993	2.882	10.4	21.0
11 27	5 30.30	+11 57.7	2.139	3.081	6.6	21.4	11 27	5 32.31	+12 37.1	1.931	2.874	7.1	20.7
12 7	5 22.42	+11 29.0	2.119	3.087	4.1	21.2	12 7	5 23.20	+11 48.1	1.897	2.866	4.3	20.6
12 17	5 14.16	+11 8.5	2.129	3.094	4.3	21.3	12 17	5 13.52	+11 6.9	1.892	2.858	4.7	20.6
12 27	5 6.43	+10 57.6	2.168	3.101	6.9	21.4	12 27	5 4.36	+10 36.3	1.917	2.849	7.7	20.7
1 6	5 0.00	+10 56.8	2.234	3.108	9.8	21.6	1 6	4 56.66	+10 17.8	1.968	2.840	11.0	20.9
1 16	4 55.44	+11 5.6	2.324	3.114	12.5	21.8	1 16	4 51.10	+10 11.6	2.044	2.831	14.1	21.1
<b>301698</b>	2010 GY <sub>24</sub>		12 12.2	113°98	3°5/12.1	18	<b>478529</b>	2012 TG <sub>1</sub>		12 12.2	59°47	1°6/12.0	16
11 7	5 48.11	+11 27.3	2.183	2.980	13.3	20.0	11 7	5 49.26	+20 4.2	1.368	2.201	17.8	21.2
11 17	5 41.65	+11 32.8	2.119	3.000	10.2	19.9	11 17	5 43.47	+19 49.4	1.320	2.224	13.4	21.0
11 27	5 33.18	+11 45.6	2.080	3.020	6.9	19.7	11 27	5 34.66	+19 35.3	1.294	2.248	8.4	20.8
12 7	5 23.42	+12 6.1	2.070	3.039	4.0	19.6	12 7	5 23.99	+19 22.4	1.292	2.272	3.2	20.6
12 17	5 13.29	+12 34.0	2.089	3.057	4.0	19.6	12 17	5 12.91	+19 11.6	1.317	2.297	3.2	20.6
12 27	5 3.78	+11 8.7	2.139	3.075	6.7	19.8	12 27	5 3.02	+19 4.5	1.370	2.321	8.0	21.0
1 6	4 55.77	+13 48.9	2.218	3.093	9.8	20.0	1 6	4 55.52	+19 2.7	1.447	2.345	12.5	21.3
1 16	4 49.85	+14 33.4	2.321	3.110	12.6	20.2	1 16	4 51.09	+19 7.3	1.547	2.370	16.2	21.6
<b>424947</b>	2008 YQ <sub>118</sub>		12 12.2	8°73	1°9/12.0	17	<b>79</b>	Eurynome		12 12.2	20°49	3°5/11.7	18
11 7	5 41.48	+16 54.3	2.265	3.081	12.2	20.8	11 7	5 43.63	+18 9.6	1.145	1.998	19.2	10.6
11 17	5 36.85	+16 53.0	2.187	3.082	9.3	20.6	11 17	5 39.85	+17 26.2	1.091	2.005	14.7	10.4
11 27	5 30.29	+16 54.8	2.133	3.083	6.0	20.4	11 27	5 32.72	+16 44.8	1.057	2.014	9.5	10.1
12 7	5 22.45	+16 59.8	2.107	3.085	2.7	20.2	12 7	5 23.39	+16 8.5	1.046	2.024	4.5	9.9
12 17	5 14.13	+17 8.5	2.110	3.086	2.7	20.2	12 17	5 13.41	+15 40.5	1.059	2.035	4.7	10.0
12 27	5 6.27	+17 21.1	2.142	3.089	6.0	20.4	12 27	5 4.55	+15 23.9	1.097	2.048	9.6	10.3
1 6	4 59.71	+17 37.7	2.202	3.091	9.3	20.6	1 6	4 58.19	+15 20.0	1.157	2.061	14.4	10.6
1 16	4 55.05	+17 58.3	2.287	3.094	12.2	20.8	1 16	4 55.12	+15 28.4	1.238	2.076	18.5	10.8
<b>92690</b>	2000 QN <sub>74</sub>		12 12.2	35°99	8°5/11.5	18	<b>493939</b>	2016 AZ <sub>3</sub>		12 12.2	42°95	0°2/12.2	18
11 7	5 44.30	+ 6 20.8	1.284	2.113	19.0	18.8	11 7	5 44.73	+22 30.5	1.881	2.702	14.1	21.0
11 17	5 39.83	+ 5 20.6	1.236	2.126	15.3	18.6	11 17	5 39.67	+22 36.7	1.811	2.710	10.7	20.8
11 27	5 32.46	+ 4 35.6	1.207	2.140	11.5	18.5	11 27	5 32.21	+22 42.0	1.765	2.719	6.7	20.6
12 7	5 23.23	+ 4 11.5	1.202	2.155	8.8	18.4	12 7	5 23.16	+22 45.5	1.746	2.727	2.3	20.4
12 17	5 13.50	+ 4 11.8	1.220	2.171	9.0	18.4	12 17	5 13.58	+22 46.9	1.755	2.736	2.1	20.4
12 27	5 4.77	+ 4 36.4	1.263	2.187	11.6	18.6	12 27	5 4.67	+22 47.1	1.794	2.745	6.4	20.7
1 6	4 58.23	+ 5 21.9	1.329	2.204	15.1	18.9	1 6	4 57.46	+22 47.4	1.859	2.755	10.3	20.9
1 16	4 54.60	+ 6 23.3	1.415	2.222	18.3	19.1	1 16	4 52.66	+22 49.4	1.948	2.764	13.6	21.1
<b>52886</b>	1998 SF <sub>56</sub>		12 12.2	70°42	2°6/11.9	18	<b>443165</b>	2014 CY <sub>21</sub>		12 12.2	262°10	5°4/11.7	18
11 7	5 49.82	+18 18.7	1.383	2.213	17.8	19.2	11 7	5 45.98	+10 19.1	1.672	2.487	15.9	21.3
11 17	5 43.83	+17 53.5	1.333	2.235	13.5	19.0	11 17	5 40.92	+ 9 51.3	1.590	2.478	12.5	21.0
11 27	5 34.86	+17 30.5	1.305	2.258	8.6	18.7	11 27	5 33.20	+ 9 32.1	1.529	2.469	8.9	20.8
12 7	5 24.04	+17 11.0	1.302	2.280	3.7	18.5	12 7	5 23.58	+ 9 24.5	1.494	2.460	5.9	20.6
12 17	5 12.81	+16 56.6	1.326	2.303	3.8	18.6	12 17	5 13.16	+ 9 30.8	1.487	2.450	6.0	20.6
12 27	5 2.74	+16 48.9	1.377	2.325	8.3	18.9	12 27	5 3.27	+ 9 51.5	1.506	2.440	9.2	20.7
1 6	4 55.04	+16 49.2	1.453	2.348	12.7	19.2	1 6	4 55.13	+10 25.8	1.552	2.431	13.0	20.9
1 16	4 50.39	+16 57.6	1.551	2.370	16.4	19.5	1 16	4 49.59	+11 11.5	1.619	2.421	16.6	21.2
<b>317327</b>	2002 JV <sub>26</sub>		12 12.2	205°14	0°8/12.1	18 R	<b>349492</b>	2008 GB <sub>30</sub>		12 12.2	246°46	6°1/11.2	17
11 7	5 43.85	+19 59.3	2.805	3.607	10.5								

EPHEMERIDES

12 12.2

12 12.3

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	
<b>475340</b>	2006 <i>BR</i> <sub>28</sub>		12 12.2	4°87	0°8/12.4	16	<b>158129</b>	2001 <i>FA</i> <sub>2</sub>		12 12.3	128°96	7°7/10.8	18	
11 7	5 43.53	+25 11.8	1.148	2.000	19.2	21.2	11 7	5 41.46	- 5 34.5	2.959	3.698	11.5	20.3	
11 17	5 40.15	+25 9.2	1.085	1.999	14.6	20.9	11 17	5 36.24	- 6 26.1	2.902	3.712	9.9	20.2	
11 27	5 33.15	+25 1.7	1.041	2.000	9.3	20.6	11 27	5 29.65	- 7 4.4	2.868	3.726	8.5	20.1	
12 7	5 23.62	+24 48.0	1.020	2.002	3.4	20.3	12 7	5 22.21	- 7 26.2	2.859	3.740	7.7	20.1	
12 17	5 13.18	+24 28.3	1.024	2.005	3.0	20.3	12 17	5 14.52	- 7 29.7	2.878	3.753	7.9	20.1	
12 27	5 3.79	+24 5.3	1.052	2.009	8.8	20.6	12 27	5 7.25	- 7 14.6	2.925	3.766	8.8	20.2	
1 6	4 57.05	+23 43.2	1.103	2.015	14.1	20.9	1 6	5 0.96	- 6 42.4	2.996	3.779	10.1	20.3	
1 16	4 53.88	+23 25.7	1.174	2.022	18.6	21.2	1 16	4 56.11	- 5 56.0	3.090	3.791	11.6	20.5	
<b>63705</b>	2001 <i>QJ</i> <sub>195</sub>		12 12.2	342°91	0°7/12.2	17	<b>47664</b>	2000 <i>CE</i> <sub>54</sub>		12 12.3	140°56	1°7/12.7	18	
11 7	5 43.99	+21 4.1	1.382	2.222	17.2	18.4	11 7	5 44.90	+29 16.6	2.604	3.403	11.3	18.9	
11 17	5 40.28	+22 0.6	1.300	2.209	13.2	18.2	11 17	5 39.27	+29 19.2	2.524	3.409	8.6	18.8	
11 27	5 33.27	+23 3.1	1.240	2.196	8.4	17.9	11 27	5 31.74	+29 16.3	2.470	3.415	5.6	18.6	
12 7	5 23.73	+24 8.0	1.204	2.185	3.0	17.5	12 7	5 22.98	+29 6.6	2.445	3.421	2.6	18.4	
12 17	5 12.96	+25 10.9	1.194	2.175	2.8	17.5	12 17	5 13.82	+28 50.0	2.449	3.427	2.3	18.4	
12 27	5 2.71	+26 8.4	1.211	2.166	8.3	17.8	12 27	5 5.18	+28 27.6	2.485	3.432	5.2	18.6	
1 6	4 54.59	+26 59.2	1.253	2.159	13.3	18.0	1 6	4 57.88	+28 1.9	2.549	3.437	8.2	18.8	
1 16	4 49.75	+27 44.2	1.316	2.153	17.7	18.3	1 16	4 52.50	+27 35.5	2.639	3.442	10.8	19.0	
<b>394941</b>	2008 <i>XK</i> <sub>43</sub>		12 12.2	180°10	1°5/12.5	18	<b>83958</b>	2001 <i>XA</i> <sub>36</sub>		12 12.3	123°46	3°4/13.2	18	R
11 7	5 48.47	+27 27.6	1.982	2.791	14.0	21.9	11 7	5 49.96	+34 44.8	2.467	3.251	12.3	19.9	
11 17	5 42.53	+27 32.6	1.901	2.792	10.7	21.7	11 17	5 43.14	+34 55.0	2.398	3.269	9.6	19.7	
11 27	5 34.05	+27 32.3	1.844	2.793	6.9	21.5	11 27	5 34.15	+34 55.7	2.353	3.286	6.7	19.5	
12 7	5 23.83	+27 24.9	1.814	2.793	2.8	21.2	12 7	5 23.81	+34 44.6	2.336	3.302	4.0	19.4	
12 17	5 12.98	+27 10.0	1.813	2.793	2.5	21.2	12 17	5 13.11	+34 21.2	2.350	3.318	3.6	19.4	
12 27	5 2.79	+26 48.9	1.842	2.792	6.4	21.4	12 27	5 3.14	+33 47.1	2.394	3.333	5.9	19.6	
1 6	4 54.37	+26 24.6	1.899	2.791	10.3	21.7	1 6	4 54.83	+33 6.0	2.467	3.348	8.7	19.8	
1 16	4 48.49	+26 0.7	1.980	2.790	13.6	21.9	1 16	4 48.79	+32 22.0	2.565	3.362	11.3	20.0	
<b>358727</b>	2008 <i>CD</i> <sub>16</sub>		12 12.2	326°56	1°5/12.4	18	<b>69445</b>	1996 <i>RZ</i> <sub>20</sub>		12 12.3	80°40	6°1/13.2	18	
11 7	5 46.28	+25 46.6	1.772	2.593	14.9	20.6	11 7	5 53.44	+35 40.5	1.390	2.203	18.6	18.9	
11 17	5 41.25	+26 12.5	1.691	2.588	11.4	20.4	11 17	5 47.53	+36 23.2	1.326	2.211	14.8	18.7	
11 27	5 33.45	+26 36.0	1.632	2.584	7.3	20.2	11 27	5 37.73	+36 52.5	1.283	2.219	10.6	18.4	
12 7	5 23.68	+26 54.4	1.600	2.580	3.0	19.9	12 7	5 25.23	+37 1.7	1.263	2.227	6.9	18.3	
12 17	5 13.09	+27 6.0	1.597	2.576	2.7	19.9	12 17	5 11.83	+36 47.3	1.269	2.235	6.4	18.3	
12 27	5 3.10	+27 10.8	1.621	2.573	7.0	20.1	12 27	4 59.64	+36 11.5	1.301	2.243	9.5	18.5	
1 6	4 54.97	+27 10.8	1.672	2.569	11.2	20.4	1 6	4 50.37	+35 21.3	1.358	2.251	13.6	18.7	
1 16	4 49.55	+27 8.9	1.747	2.566	14.8	20.6	1 16	4 44.95	+34 25.6	1.437	2.259	17.3	19.0	
<b>288236</b>	2003 <i>YS</i> <sub>79</sub>		12 12.2	345°24	0°4/12.3	18	<b>113870</b>	2002 <i>TC</i> <sub>259</sub>		12 12.3	44°52	5°5/11.6	18	
11 7	5 43.91	+23 0.2	1.413	2.253	17.0	20.4	11 7	5 46.22	+12 55.2	1.296	2.131	18.4	19.3	
11 17	5 40.01	+23 18.7	1.336	2.245	13.0	20.1	11 17	5 41.43	+12 7.0	1.239	2.141	14.3	19.0	
11 27	5 32.94	+23 37.0	1.281	2.237	8.2	19.9	11 27	5 33.57	+11 26.3	1.203	2.151	9.8	18.8	
12 7	5 23.55	+23 53.4	1.249	2.231	2.9	19.5	12 7	5 23.70	+10 57.2	1.191	2.161	6.1	18.6	
12 17	5 13.19	+24 6.4	1.244	2.225	2.6	19.5	12 17	5 13.23	+10 42.7	1.204	2.172	6.3	18.7	
12 27	5 3.52	+24 15.9	1.265	2.220	8.0	19.8	12 27	5 3.75	+10 44.6	1.243	2.183	10.1	18.9	
1 6	4 56.00	+24 23.7	1.310	2.216	12.9	20.1	1 6	4 56.56	+11 2.1	1.306	2.195	14.2	19.2	
1 16	4 51.62	+24 31.9	1.377	2.213	17.1	20.3	1 16	4 52.43	+11 33.0	1.389	2.207	18.0	19.5	
<b>437921</b>	2002 <i>LH</i> <sub>47</sub>		12 12.3	124°73	7°0/11.1	18	<b>376671</b>	2013 <i>QM</i> <sub>15</sub>		12 12.3	116°06	1°3/12.6	17	
11 7	5 46.10	+ 1 47.9	2.376	3.148	13.1	22.1	11 7	5 44.25	+27 57.6	2.615	3.417	11.2	21.9	
11 17	5 39.92	+ 0 54.5	2.320	3.169	10.7	22.0	11 17	5 38.74	+28 1.1	2.540	3.426	8.5	21.8	
11 27	5 32.01	+ 0 12.7	2.287	3.189	8.5	21.9	11 27	5 31.40	+28 0.1	2.489	3.436	5.5	21.6	
12 7	5 23.02	- 0 13.9	2.282	3.208	7.1	21.8	12 7	5 22.87	+27 53.4	2.467	3.445	2.3	21.4	
12 17	5 13.77	- 0 23.3	2.305	3.226	7.3	21.9	12 17	5 13.96	+27 40.9	2.475	3.454	2.0	21.4	
12 27	5 5.11	- 0 14.9	2.357	3.244	8.8	22.0	12 27	5 5.57	+27 23.7	2.514	3.462	5.0	21.6	
1 6	4 57.78	+ 0 9.8	2.435	3.261	10.9	22.2	1 6	4 58.49	+27 3.8	2.582	3.471	8.0	21.8	
1 16	4 52.29	+ 0 48.0	2.536	3.277	12.9	22.4	1 16	4 53.27	+26 43.5	2.675	3.479	10.7	22.0	
<b>281815</b>	2009 <i>WR</i> <sub>206</sub>		12 12.3	302°03	0°7/12.4	18	<b>27996</b>	1997 <i>WJ</i> <sub>5</sub>		12 12.3	201°77	0°6/12.1	18	
11 7	5 46.97	+25 53.1	1.445	2.278	17.1	21.0	11 7	5 42.78	+21 16.6	2.882	3.685	10.2	20.3	
11 17	5 42.37	+25 42.0	1.360	2.264	13.1	20.7	11 17	5 37.50	+21 10.9	2.792	3.682	7.7	20.1	
11 27	5 34.46	+25 24.7	1.295	2.250	8.4	20.4	11 27	5 30.59	+21 4.4	2.728	3.678	4.8	19.9	
12 7	5 24.11	+25 0.0	1.255	2.236	3.1	20.1	12 7	5 22.60	+20 57.3	2.693	3.673	1.8	19.7	
12 17	5 12.72	+24 28.3	1.242	2.223	2.7	20.0	12 17	5 14.19	+20 49.8	2.689	3.669	1.7	19.7	
12 27	5 2.03	+23 52.2	1.256	2.210	8.2	20.3	12 27	5 6.14	+20 42.6	2.716	3.664	4.8	19.9	
1 6	4 53.59	+23 16.5	1.294	2.197	13.3	20.5	1 6	4 59.16	+20 36.8	2.773	3.658	7.7	20.1	
1 16	4 48.41	+22 45.6	1.354	2.185	17.6	20.8	1 16	4 53.77	+20 33.4	2.855	3.652	10.2	20.2	
<b>362495</b>	2010 <i>TZ</i> <sub>27</sub>		12 12.3	131°78	0°2/12.3	18	<b>377237</b>	2004 <i>BW</i> <sub>39</sub>		12 12.3	334°53	2°5/12.0	18	
11 7	5 45.98	+24 14.1	2.058	2.871	13.4	21.6	11 7	5 44.35	+18 28.1	1.182	2.031	19.0	20.7	
11 17	5 40.45	+24 4.6	1.981	2.875	10.1	21.4	11 17	5 40.77	+18 15.4	1.108	2.020	14.6	20.4	
11 27	5 32.64	+23 51.8	1.928	2.880	6.4	21.2	11 27	5 33.64	+18 5.8	1.053	2.010	9.4	20.1	
12 7	5 23.32	+23 35.4	1.903	2.884	2.2	21.0	12 7	5 23.88	+18 0.3	1.021	2.001	4.0	19.7	
12 17	5 13.49	+23 15.8	1.907	2.888	2.0	20.9	12 17	5 12.99	+17 59.9	1.014	1.993	4.0	19.7	
12 27	5 4.30	+22 54.6	1.941	2.891	6.1	21.2	12 27	5 2.86	+18 6.0	1.031	1.985	9.5	20.0	
1 6	4 56.73	+22 34.3	2.002	2.895	9.8	21.5	1 6	4 55.18	+18 19.6	1.071	1.979	14.9	20.3	
1 16	4 51.45	+22 17.1	2.088	2.898	13.0	21.7	1 16	4 51.03	+18 41.0	1.131	1.973	19.6	20.5	
<b>267899</b>	2004 <i>BS</i> <sub>59</sub>		12 12.3	70°77	3°5/12.9	18	<b>451345</b>	2010 <i>VY</i> <sub>210</sub>		12 12.3	170°			



EPHEMERIDES

12 12.3

12 12.3

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>267959</b>	2004 <i>FK</i> <sub>35</sub>		12 12.3 231°45	1°1/12.4 18			<b>407235</b>	2009 <i>WO</i> <sub>53</sub>		12 12.3 14°63	0°8/12.5 18		
11 7	5 49.97	+25 26.1	1.802	2.616	15.0	21.5	11 7	5 44.07	+27 37.7	1.692	2.518	15.2	19.6
11 17	5 44.07	+25 39.0	1.712	2.606	11.5	21.3	11 17	5 39.43	+27 3.4	1.622	2.522	11.6	19.4
11 27	5 35.28	+25 48.7	1.645	2.595	7.4	21.0	11 27	5 32.17	+26 20.9	1.575	2.528	7.3	19.1
12 7	5 24.38	+25 53.2	1.604	2.584	2.8	20.7	12 7	5 23.21	+25 30.6	1.553	2.534	2.7	18.9
12 17	5 12.56	+25 51.0	1.593	2.573	2.5	20.6	12 17	5 13.77	+24 34.7	1.560	2.541	2.3	18.8
12 27	5 1.30	+25 43.0	1.610	2.561	7.1	20.9	12 27	5 5.17	+23 37.0	1.595	2.549	6.8	19.2
1 6	4 51.92	+25 31.6	1.655	2.548	11.5	21.1	1 6	4 58.52	+22 42.4	1.656	2.557	11.0	19.4
1 16	4 45.35	+25 20.2	1.723	2.535	15.3	21.3	1 16	4 54.50	+21 54.5	1.741	2.566	14.6	19.7
<b>449245</b>	2013 <i>CQ</i> <sub>180</sub>		12 12.3 250°28	1°1/12.5 17			<b>9184</b>	Vasilij		12 12.3 344°56	4°2/12.8 18		
11 7	5 46.86	+26 48.9	1.873	2.689	14.4	21.7	11 7	5 48.09	+31 13.6	1.277	2.111	18.8	17.2
11 17	5 41.46	+26 42.4	1.792	2.686	11.0	21.5	11 17	5 43.74	+31 43.9	1.205	2.106	14.7	16.9
11 27	5 33.46	+26 30.3	1.733	2.684	7.0	21.3	11 27	5 35.56	+32 5.0	1.152	2.101	10.0	16.7
12 7	5 23.68	+26 11.5	1.701	2.681	2.7	21.0	12 7	5 24.58	+32 11.7	1.123	2.097	5.4	16.4
12 17	5 13.25	+25 46.1	1.698	2.678	2.3	21.0	12 17	5 12.47	+32 1.0	1.119	2.094	4.9	16.4
12 27	5 3.49	+25 16.2	1.724	2.675	6.6	21.2	12 27	5 1.33	+31 34.3	1.140	2.091	9.2	16.6
1 6	4 55.54	+24 45.1	1.777	2.673	10.7	21.5	1 6	4 52.92	+30 57.5	1.185	2.089	14.1	16.9
1 16	4 50.17	+24 16.3	1.854	2.670	14.2	21.7	1 16	4 48.31	+30 17.6	1.250	2.088	18.4	17.1
<b>415209</b>	2012 <i>HC</i> <sub>35</sub>		12 12.3 172°97	0°5/12.3 17			<b>360197</b>	1996 <i>TS</i> <sub>47</sub>		12 12.3 116°34	2°2/11.9 18		
11 7	5 45.16	+23 22.9	2.284	3.093	12.3	21.2	11 7	5 44.95	+16 59.3	2.049	2.863	13.4	21.4
11 17	5 39.76	+23 47.3	2.201	3.094	9.4	21.0	11 17	5 39.62	+16 48.8	1.975	2.869	10.2	21.2
11 27	5 32.23	+24 11.0	2.144	3.094	5.9	20.8	11 27	5 32.12	+16 41.0	1.925	2.874	6.6	21.0
12 7	5 23.23	+24 32.5	2.114	3.094	2.1	20.5	12 7	5 23.19	+16 36.6	1.902	2.879	3.0	20.8
12 17	5 13.65	+24 50.7	2.114	3.095	1.9	20.5	12 17	5 13.76	+16 36.1	1.908	2.885	3.1	20.8
12 27	5 4.52	+25 5.4	2.145	3.095	5.7	20.8	12 27	5 4.90	+16 40.4	1.944	2.890	6.6	21.0
1 6	4 56.80	+25 17.3	2.204	3.095	9.1	21.0	1 6	4 57.55	+16 49.9	2.007	2.894	10.1	21.3
1 16	4 51.16	+25 28.0	2.288	3.095	12.1	21.2	1 16	4 52.38	+17 4.8	2.095	2.899	13.2	21.5
<b>12571</b>	1999 <i>NM</i> <sub>2</sub>		12 12.3 90°31	3°9/11.4 18			<b>142324</b>	2002 <i>RC</i> <sub>173</sub>		12 12.3 6°05	5°2/12.1 18		
11 7	5 47.89	+15 30.1	1.762	2.577	15.2	18.4	11 7	5 47.90	+28 35.0	1.103	1.950	20.2	18.2
11 17	5 41.84	+14 34.5	1.705	2.598	11.6	18.2	11 17	5 44.10	+30 5.9	1.041	1.950	15.8	17.9
11 27	5 33.43	+13 41.9	1.671	2.617	7.7	18.1	11 27	5 36.08	+31 34.9	0.999	1.950	10.7	17.6
12 7	5 23.59	+12 55.2	1.665	2.637	4.4	17.9	12 7	5 24.84	+32 52.9	0.978	1.952	6.1	17.4
12 17	5 13.41	+12 17.4	1.687	2.656	4.6	18.0	12 17	5 12.20	+33 51.8	0.982	1.956	6.0	17.4
12 27	5 4.12	+11 51.1	1.738	2.675	7.9	18.2	12 27	5 0.55	+34 28.2	1.011	1.960	10.5	17.7
1 6	4 56.67	+11 37.2	1.816	2.694	11.5	18.5	1 6	4 51.93	+34 45.0	1.062	1.966	15.4	17.9
1 16	4 51.69	+11 35.5	1.916	2.712	14.6	18.7	1 16	4 47.58	+34 48.8	1.131	1.973	19.7	18.2
<b>397234</b>	2006 <i>KW</i> <sub>97</sub>		12 12.3 32°76	1°4/12.4 18			<b>272886</b>	2006 <i>BC</i> <sub>110</sub>		12 12.3 220°96	1°9/11.9 18		
11 7	5 48.62	+16 6.2	1.481	2.307	17.0	20.1	11 7	5 43.05	+16 12.5	2.882	3.682	10.3	21.8
11 17	5 43.23	+16 58.2	1.414	2.314	13.0	19.8	11 17	5 37.72	+16 6.0	2.786	3.672	7.9	21.6
11 27	5 34.80	+17 59.2	1.369	2.322	8.3	19.6	11 27	5 30.77	+16 1.8	2.716	3.662	5.1	21.4
12 7	5 24.21	+19 6.4	1.350	2.330	3.2	19.3	12 7	5 22.71	+16 0.4	2.676	3.651	2.5	21.2
12 17	5 12.78	+20 16.2	1.359	2.339	2.9	19.3	12 17	5 14.19	+16 2.2	2.666	3.640	2.5	21.2
12 27	5 2.10	+21 25.0	1.396	2.348	7.8	19.6	12 27	5 5.97	+16 7.8	2.687	3.629	5.2	21.4
1 6	4 53.54	+22 30.7	1.460	2.358	12.4	19.9	1 6	4 58.76	+16 17.4	2.738	3.617	8.0	21.5
1 16	4 48.02	+23 32.6	1.546	2.368	16.2	20.2	1 16	4 53.10	+16 31.3	2.815	3.604	10.6	21.7
<b>501585</b>	2014 <i>QA</i> <sub>43</sub>		12 12.3 21°44	4°9/11.9 18			<b>116073</b>	2003 <i>WH</i> <sub>121</sub>		12 12.3 71°10	1°8/12.6 18		
11 7	5 33.81	- 8 11.3	5.117	5.832	7.2	19.2	11 7	5 54.58	+27 52.7	1.304	2.129	18.9	18.9
11 17	5 30.09	- 8 18.6	5.072	5.861	6.3	19.1	11 17	5 47.70	+27 50.5	1.259	2.158	14.3	18.7
11 27	5 25.66	- 8 16.8	5.051	5.891	5.4	19.1	11 27	5 37.39	+27 40.3	1.235	2.187	9.1	18.5
12 7	5 20.82	- 8 4.9	5.056	5.920	5.0	19.1	12 7	5 25.00	+27 19.9	1.236	2.216	3.7	18.2
12 17	5 15.88	- 7 42.5	5.089	5.950	5.0	19.1	12 17	5 12.30	+26 49.8	1.264	2.244	3.1	18.3
12 27	5 11.16	- 7 9.8	5.149	5.980	5.4	19.2	12 27	5 1.10	+26 13.8	1.320	2.272	8.1	18.7
1 6	5 6.98	- 6 27.9	5.236	6.010	6.2	19.3	1 6	4 52.74	+25 37.3	1.400	2.300	12.7	19.0
1 16	5 3.56	- 5 38.3	5.348	6.040	7.1	19.4	1 16	4 47.89	+25 4.9	1.503	2.327	16.5	19.3
<b>311327</b>	2005 <i>NK</i> <sub>30</sub>		12 12.3 61°48	1°7/12.6 18			<b>286898</b>	2002 <i>PP</i> <sub>48</sub>		12 12.3 115°01	6°2/14.2 18		
11 7	5 47.65	+28 12.6	1.774	2.591	15.0	20.5	11 7	5 54.99	+42 24.2	2.146	2.910	14.5	20.5
11 17	5 41.97	+28 14.2	1.714	2.608	11.4	20.4	11 17	5 47.45	+42 45.1	2.080	2.927	11.9	20.3
11 27	5 33.68	+28 9.3	1.676	2.625	7.3	20.2	11 27	5 37.08	+42 50.0	2.036	2.944	9.1	20.2
12 7	5 23.72	+27 56.3	1.664	2.643	3.1	19.9	12 7	5 24.91	+42 34.7	2.019	2.960	6.8	20.1
12 17	5 13.31	+27 35.2	1.681	2.661	2.7	19.9	12 17	5 12.32	+41 57.6	2.030	2.976	6.3	20.1
12 27	5 3.82	+27 8.2	1.727	2.678	6.7	20.2	12 27	5 0.81	+41 1.4	2.070	2.991	7.9	20.2
1 6	4 56.32	+26 38.9	1.800	2.696	10.5	20.5	1 6	4 51.55	+39 52.1	2.137	3.006	10.4	20.4
1 16	4 51.49	+26 10.8	1.896	2.714	13.8	20.7	1 16	4 45.25	+38 36.8	2.230	3.021	12.9	20.6
<b>132316</b>	2002 <i>GZ</i> <sub>17</sub>		12 12.3 217°71	1°0/12.4 18			<b>411984</b>	2012 <i>JN</i> <sub>8</sub>		12 12.3 113°68	2°4/11.7 18		
11 7	5 48.16	+25 22.0	1.940	2.752	14.1	20.2	11 7	5 42.77	+17 8.6	2.373	3.184	11.9	21.1
11 17	5 42.44	+25 35.7	1.854	2.748	10.8	20.0	11 17	5 37.69	+16 34.1	2.297	3.188	9.1	20.9
11 27	5 34.12	+25 46.6	1.792	2.743	6.9	19.8	11 27	5 30.79	+16 0.7	2.245	3.193	5.9	20.7
12 7	5 23.95	+25 52.6	1.757	2.737	2.6	19.5	12 7	5 22.71	+15 29.9	2.222	3.197	3.0	20.6
12 17	5 13.03	+25 52.8	1.751	2.732	2.3	19.5	12 17	5 14.24	+15 3.3	2.228	3.201	3.1	20.6
12 27	5 2.67	+25 47.8	1.775	2.726	6.6	19.7	12 27	5 6.29	+14 42.8	2.265	3.206	6.1	20.8
1 6	4 54.04	+25 39.7	1.826	2.719	10.6	20.0	1 6	4 59.61	+14 29.4	2.329	3.210	9.2	21.0
1 16	4 47.97	+25 31.4	1.901	2.713	14.1	20.2	1 16	4 54.78	+14 23.7	2.418	3.214	11.9	21.2
<b>143171</b>	2002 <i>XH</i> <sub>65</sub>		12 12.3 88°90	12°2/12.6 18			<b>193762</b>	2001 <i>KO</i> <sub>74</sub>		12 12.3 222°57	1°0/11.9 18		

EPHEMERIDES

12 12.3

12 12.3

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>389496</b>	2010 <i>FP</i> <sub>17</sub>		12 12.3 294°17	2°7/11.9	18		<b>63372</b>	2001 <i>HG</i> <sub>29</sub>		12 12.3 161°30	0°3/12.3	17	
11 7	5 45.83	+16 57.6	1.587	2.415	16.0	21.3	11 7	5 44.00	+23 53.4	2.663	3.467	10.9	20.1
11 17	5 41.08	+16 45.4	1.503	2.404	12.3	21.0	11 17	5 38.57	+23 57.2	2.581	3.471	8.3	19.9
11 27	5 33.47	+16 36.8	1.441	2.393	8.0	20.8	11 27	5 31.35	+23 59.1	2.525	3.474	5.2	19.7
12 7	5 23.79	+16 32.8	1.405	2.383	3.7	20.5	12 7	5 22.95	+23 58.5	2.497	3.477	1.9	19.5
12 17	5 13.22	+16 34.3	1.396	2.372	3.8	20.5	12 17	5 14.13	+23 55.1	2.500	3.480	1.6	19.5
12 27	5 3.21	+16 42.1	1.414	2.362	8.2	20.7	12 27	5 5.75	+23 49.7	2.533	3.483	5.0	19.7
1 6	4 55.08	+16 56.9	1.458	2.352	12.7	20.9	1 6	4 58.58	+23 43.5	2.596	3.485	8.0	19.9
1 16	4 49.75	+17 18.7	1.523	2.342	16.6	21.2	1 16	4 53.18	+23 38.2	2.685	3.487	10.7	20.1
<b>19364</b>	Semafor		12 12.3 243°88	6°1/10.7	18		<b>517927</b>	2015 <i>TV</i> <sub>182</sub>		12 12.3 47°33	2°2/12.0	18	
11 7	5 43.98	+ 8 13.9	2.055	2.858	13.8	17.3	11 7	5 45.08	+17 35.6	1.742	2.566	15.0	21.0
11 17	5 38.91	+ 7 11.3	1.972	2.849	11.0	17.1	11 17	5 40.06	+17 26.6	1.675	2.574	11.4	20.8
11 27	5 31.73	+ 6 15.4	1.912	2.841	8.2	16.9	11 27	5 32.56	+17 20.6	1.631	2.582	7.3	20.6
12 7	5 23.09	+ 5 30.3	1.880	2.832	6.3	16.8	12 7	5 23.42	+17 18.1	1.613	2.591	3.2	20.3
12 17	5 13.89	+ 4 59.4	1.875	2.822	6.6	16.8	12 17	5 13.74	+17 19.6	1.623	2.600	3.2	20.3
12 27	5 5.15	+ 4 45.1	1.898	2.813	9.0	16.9	12 27	5 4.76	+17 25.8	1.661	2.609	7.2	20.6
1 6	4 57.81	+ 4 47.6	1.948	2.803	11.9	17.1	1 6	4 57.56	+17 37.4	1.725	2.618	11.1	20.9
1 16	4 52.54	+ 5 5.5	2.020	2.793	14.7	17.3	1 16	4 52.84	+17 54.3	1.813	2.628	14.5	21.1
<b>327506</b>	2006 <i>AE</i> <sub>79</sub>		12 12.3 353°90	3°6/13.2	17		<b>490629</b>	2010 <i>BO</i> <sub>81</sub>		12 12.3 36°09	8°9/10.9	18	
11 7	5 46.69	+34 18.8	2.044	2.846	13.9	20.6	11 7	5 41.61	+ 0 4.0	1.940	2.728	15.0	20.8
11 17	5 41.29	+34 23.3	1.964	2.845	10.9	20.4	11 17	5 37.08	- 1 1.6	1.882	2.736	12.6	20.6
11 27	5 33.34	+34 17.2	1.906	2.844	7.6	20.2	11 27	5 30.53	- 1 52.3	1.846	2.745	10.3	20.5
12 7	5 23.67	+33 58.1	1.875	2.843	4.5	20.0	12 7	5 22.68	- 2 23.1	1.834	2.754	9.0	20.4
12 17	5 13.41	+33 25.2	1.872	2.843	4.0	20.0	12 17	5 14.43	- 2 30.9	1.848	2.763	9.2	20.5
12 27	5 3.88	+32 40.6	1.898	2.842	6.8	20.2	12 27	5 6.77	- 2 15.2	1.888	2.773	10.7	20.6
1 6	4 56.16	+31 48.9	1.951	2.842	10.1	20.4	1 6	5 0.56	- 1 38.2	1.952	2.783	12.9	20.7
1 16	4 50.99	+30 55.2	2.029	2.842	13.2	20.6	1 16	4 56.39	- 0 43.9	2.037	2.794	15.1	20.9
<b>121962</b>	2000 <i>EJ</i> <sub>81</sub>		12 12.3 227°02	0°1/12.3	18		<b>232072</b>	2001 <i>VE</i> <sub>19</sub>		12 12.3 6°64	0°4/12.2	18	
11 7	5 49.21	+22 41.1	1.812	2.627	14.8	20.9	11 7	5 44.23	+23 32.1	1.179	2.030	18.9	20.0
11 17	5 43.41	+22 46.7	1.724	2.619	11.3	20.7	11 17	5 40.59	+23 17.0	1.116	2.030	14.4	19.7
11 27	5 34.84	+22 51.1	1.659	2.610	7.2	20.4	11 27	5 33.44	+22 58.3	1.072	2.031	9.1	19.4
12 7	5 24.26	+22 53.3	1.620	2.601	2.5	20.1	12 7	5 23.84	+22 35.9	1.052	2.033	3.2	19.1
12 17	5 12.84	+22 52.5	1.611	2.591	2.3	20.1	12 17	5 13.40	+22 11.0	1.056	2.037	2.9	19.1
12 27	5 1.96	+22 49.4	1.630	2.581	7.0	20.3	12 27	5 3.98	+21 46.6	1.085	2.042	8.8	19.4
1 6	4 52.89	+22 46.0	1.677	2.570	11.4	20.6	1 6	4 57.12	+21 26.4	1.137	2.047	14.0	19.7
1 16	4 46.53	+22 44.6	1.747	2.559	15.1	20.8	1 16	4 53.72	+21 13.1	1.209	2.054	18.4	20.0
<b>42793</b>	1999 <i>BN</i> <sub>5</sub>		12 12.3 49°68	3°7/12.1	18		<b>81853</b>	2000 <i>KW</i> <sub>60</sub>		12 12.3 162°05	1°3/12.1	18	
11 7	5 49.61	+14 23.9	1.387	2.214	17.9	17.8	11 7	5 46.01	+18 51.4	2.121	2.932	13.1	19.5
11 17	5 43.43	+14 9.5	1.353	2.251	13.6	17.6	11 17	5 40.45	+18 52.9	2.042	2.935	9.9	19.3
11 27	5 34.51	+14 2.4	1.340	2.289	8.8	17.4	11 27	5 32.71	+18 56.2	1.987	2.938	6.3	19.1
12 7	5 23.99	+14 3.7	1.351	2.326	4.6	17.3	12 7	5 23.49	+19 1.0	1.960	2.940	2.5	18.9
12 17	5 13.27	+14 13.5	1.390	2.364	4.5	17.4	12 17	5 13.72	+19 7.3	1.963	2.942	2.4	18.9
12 27	5 3.79	+14 31.9	1.456	2.401	8.4	17.7	12 27	5 4.48	+19 15.6	1.996	2.944	6.2	19.1
1 6	4 56.62	+14 57.8	1.548	2.439	12.3	18.0	1 6	4 56.72	+19 26.3	2.056	2.945	9.8	19.4
1 16	4 52.33	+15 30.0	1.661	2.476	15.6	18.3	1 16	4 51.13	+19 40.3	2.142	2.947	12.9	19.6
<b>474362</b>	2002 <i>QN</i> <sub>127</sub>		12 12.3 157°13	1°4/12.5	16		<b>397513</b>	2007 <i>TV</i> <sub>35</sub>		12 12.3 52°35	7°4/10.9	14 C	
11 7	5 52.32	+26 39.0	1.895	2.701	14.7	22.7	11 7	5 46.37	+ 9 1.3	1.468	2.289	17.4	20.0
11 17	5 45.51	+26 53.0	1.820	2.709	11.2	22.5	11 17	5 40.96	+ 7 34.7	1.426	2.314	13.8	19.9
11 27	5 35.98	+27 2.4	1.769	2.717	7.2	22.2	11 27	5 33.01	+ 6 18.7	1.405	2.339	10.1	19.7
12 7	5 24.61	+27 5.1	1.745	2.724	2.9	22.0	12 7	5 23.53	+ 5 19.2	1.410	2.364	7.6	19.7
12 17	5 12.60	+26 59.9	1.750	2.730	2.5	22.0	12 17	5 13.78	+ 4 40.6	1.440	2.390	8.0	19.7
12 27	5 1.35	+26 47.9	1.786	2.735	6.7	22.2	12 27	5 5.06	+ 4 24.7	1.497	2.416	10.6	20.0
1 6	4 52.05	+26 31.9	1.849	2.739	10.7	22.5	1 6	4 58.38	+ 4 30.2	1.577	2.442	13.7	20.2
1 16	4 45.48	+26 15.6	1.937	2.743	14.1	22.7	1 16	4 54.35	+ 4 53.7	1.679	2.468	16.6	20.5
<b>493970</b>	2016 <i>AP</i> <sub>67</sub>		12 12.3 41°29	4°1/12.1	18		<b>227863</b>	2007 <i>DQ</i> <sub>93</sub>		12 12.3 299°10	0°9/12.4	18	
11 7	5 43.80	+11 3.5	1.877	2.691	14.5	20.7	11 7	5 47.45	+24 14.1	1.446	2.278	17.1	20.8
11 17	5 38.84	+11 1.0	1.814	2.703	11.2	20.5	11 17	5 42.90	+24 32.1	1.358	2.262	13.1	20.5
11 27	5 31.68	+11 7.1	1.773	2.715	7.7	20.4	11 27	5 34.98	+24 48.8	1.291	2.245	8.4	20.2
12 7	5 23.07	+11 23.0	1.759	2.728	4.7	20.2	12 7	5 24.48	+25 1.8	1.249	2.229	3.2	19.8
12 17	5 14.00	+11 48.9	1.773	2.741	4.6	20.2	12 17	5 12.76	+25 9.2	1.233	2.214	2.8	19.8
12 27	5 5.56	+12 24.1	1.815	2.754	7.5	20.4	12 27	5 1.59	+25 11.0	1.244	2.198	8.3	20.1
1 6	4 58.70	+13 7.0	1.884	2.768	10.9	20.7	1 6	4 52.61	+25 9.7	1.280	2.183	13.4	20.3
1 16	4 54.07	+13 55.9	1.977	2.782	13.9	20.9	1 16	4 46.93	+25 8.6	1.337	2.168	17.8	20.5
<b>392623</b>	2011 <i>UF</i> <sub>30</sub>		12 12.3 87°63	3°1/12.5	18		<b>421001</b>	2013 <i>PH</i> <sub>45</sub>		12 12.3 111°41	3°5/13.4	17	
11 7	5 51.47	+29 12.4	1.888	2.693	14.7	20.7	11 7	5 47.30	+35 45.1	2.581	3.365	11.8	22.0
11 17	5 44.91	+30 5.1	1.827	2.713	11.3	20.5	11 17	5 41.17	+35 49.1	2.508	3.377	9.3	21.9
11 27	5 35.61	+30 52.6	1.790	2.733	7.5	20.3	11 27	5 33.00	+35 43.4	2.459	3.389	6.5	21.7
12 7	5 24.48	+31 30.6	1.780	2.753	3.9	20.1	12 7	5 23.55	+35 25.9	2.438	3.401	4.1	21.6
12 17	5 12.75	+31 56.2	1.799	2.772	3.7	20.1	12 17	5 13.73	+34 56.4	2.446	3.413	3.7	21.6
12 27	5 1.83	+32 9.3	1.847	2.792	6.9	20.4	12 27	5 4.58	+34 16.5	2.485	3.424	5.7	21.7
1 6	4 52.91	+32 12.3	1.923	2.811	10.5	20.6	1 6	4 56.96	+33 29.9	2.553	3.435	8.4	21.9
1 16	4 46.76	+32 9.2	2.023	2.829	13.5	20.9	1 16	4 51.45	+32 40.5	2.646	3.446	10.9	22.1
<b>442467</b>	2011 <i>UY</i> <sub>290</sub>		12 12.3 10°47	3°6/11.9	17		<b>403126</b>	2008 <i>DO</i> <sub>76</sub>		12 12.3 170°57	2°0/12.7</		

EPHEMERIDES

12 12.3

12 12.3

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>77972</b>	2002 <i>JF</i> <sub>11</sub>		12 12.3 145°00	3°2/11.7 18			<b>98973</b>	2001 <i>DB</i> <sub>15</sub>		12 12.3 323°70	3°2/12.8 18		
11 7	5 49.75	+16 56.9	1.632	2.451	16.1	19.7	11 7	5 46.27	+30 24.0	1.484	2.312	16.9	19.4
11 17	5 43.69	+16 18.8	1.563	2.458	12.3	19.5	11 17	5 41.98	+30 38.3	1.400	2.299	13.2	19.1
11 27	5 34.89	+15 42.6	1.517	2.466	8.0	19.2	11 27	5 34.35	+30 44.1	1.337	2.286	8.8	18.8
12 7	5 24.28	+15 10.4	1.497	2.472	4.0	19.0	12 7	5 24.24	+30 38.0	1.298	2.274	4.5	18.5
12 17	5 13.09	+14 44.4	1.505	2.479	4.2	19.0	12 17	5 13.08	+30 18.1	1.285	2.262	3.9	18.5
12 27	5 2.72	+14 27.1	1.541	2.484	8.2	19.3	12 27	5 2.63	+29 46.2	1.299	2.251	8.2	18.7
1 6	4 54.37	+14 19.7	1.604	2.490	12.3	19.5	1 6	4 54.45	+29 7.1	1.337	2.240	12.9	18.9
1 16	4 48.77	+14 22.8	1.689	2.494	15.8	19.8	1 16	4 49.58	+28 26.7	1.397	2.230	17.0	19.2
<b>518980</b>	2010 <i>HD</i> <sub>94</sub>		12 12.3 333°08	6°5/10.5 17			<b>115210</b>	2003 <i>SY</i> <sub>124</sub>		12 12.3 2°79	9°5/14.2 18		
11 7	5 40.75	+ 6 19.7	2.171	2.972	13.2	21.3	11 7	5 49.48	+43 3.3	1.373	2.176	19.3	18.2
11 17	5 36.37	+ 5 11.4	2.093	2.967	10.7	21.1	11 17	5 45.14	+43 58.1	1.307	2.175	16.1	17.9
11 27	5 30.11	+ 4 10.8	2.040	2.961	8.2	21.0	11 27	5 36.60	+44 33.0	1.260	2.175	12.8	17.7
12 7	5 22.57	+ 3 22.3	2.012	2.956	6.7	20.9	12 7	5 25.05	+44 39.5	1.234	2.175	10.2	17.6
12 17	5 14.57	+ 2 49.3	2.013	2.951	7.0	20.9	12 17	5 12.42	+44 12.8	1.232	2.177	9.6	17.6
12 27	5 7.02	+ 2 34.0	2.041	2.946	9.0	21.0	12 27	5 1.04	+43 15.0	1.254	2.180	11.5	17.7
1 6	5 0.73	+ 2 36.3	2.094	2.942	11.5	21.2	1 6	4 52.78	+41 55.2	1.299	2.183	14.6	17.9
1 16	4 56.31	+ 2 54.6	2.170	2.938	14.0	21.3	1 16	4 48.63	+40 24.6	1.364	2.188	17.9	18.1
<b>76796</b>	2000 <i>LT</i> <sub>32</sub>		12 12.3 237°25	3°0/12.1 18			<b>340916</b>	2007 <i>DM</i> <sub>80</sub>		12 12.3 213°84	2°2/12.0 18		
11 7	5 45.91	+13 32.9	2.180	2.985	13.0	19.7	11 7	5 48.17	+17 53.5	1.822	2.637	14.8	21.6
11 17	5 40.42	+13 36.4	2.088	2.975	10.1	19.5	11 17	5 42.49	+17 41.1	1.738	2.632	11.3	21.4
11 27	5 32.76	+13 45.9	2.021	2.965	6.7	19.3	11 27	5 34.21	+17 30.7	1.677	2.627	7.3	21.2
12 7	5 23.55	+14 1.9	1.981	2.954	3.6	19.1	12 7	5 24.10	+17 22.9	1.643	2.621	3.2	20.9
12 17	5 13.67	+14 24.6	1.971	2.944	3.6	19.1	12 17	5 13.25	+17 18.4	1.637	2.615	3.2	20.9
12 27	5 4.17	+14 53.7	1.991	2.933	6.8	19.2	12 27	5 2.96	+17 18.3	1.661	2.608	7.3	21.1
1 6	4 56.01	+15 28.5	2.040	2.921	10.2	19.4	1 6	4 54.40	+17 23.7	1.712	2.601	11.4	21.3
1 16	4 49.92	+16 8.2	2.112	2.910	13.3	19.6	1 16	4 48.39	+17 35.2	1.786	2.593	15.0	21.6
<b>202435</b>	2005 <i>XH</i> <sub>8</sub>		12 12.3 254°65	0°5/12.3 18			<b>178435</b>	1998 <i>UD</i> <sub>30</sub>		12 12.3 38°22	0°4/12.3 18		
11 7	6 25.13	+18 28.5	1.319	2.086	21.8	21.2	11 7	5 48.42	+20 52.0	1.490	2.318	16.8	19.5
11 17	6 14.60	+19 42.5	1.181	2.048	17.6	20.7	11 17	5 43.12	+21 44.9	1.429	2.331	12.7	19.3
11 27	5 57.46	+21 15.4	1.065	2.005	11.8	20.3	11 27	5 34.77	+22 41.2	1.389	2.344	8.0	19.0
12 7	5 33.46	+23 0.6	0.977	1.957	4.4	19.7	12 7	5 24.31	+23 37.2	1.376	2.357	2.8	18.8
12 17	5 3.93	+24 43.4	0.925	1.904	4.2	19.5	12 17	5 13.09	+24 29.3	1.390	2.371	2.5	18.8
12 27	4 32.39	+26 8.0	0.908	1.846	13.2	19.8	12 27	5 2.71	+25 15.4	1.433	2.386	7.5	19.1
1 6	4 3.31	+27 8.7	0.925	1.782	21.6	20.0	1 6	4 54.52	+25 55.4	1.501	2.401	12.0	19.4
1 16	3 40.06	+27 52.3	0.965	1.713	28.8	20.3	1 16	4 49.37	+26 30.6	1.591	2.416	15.7	19.7
<b>118641</b>	2000 <i>HU</i> <sub>95</sub>		12 12.3 236°73	1°3/12.5 18			<b>289040</b>	2004 <i>TH</i> <sub>145</sub>		12 12.3 342°12	6°8/13.3 17		
11 7	5 49.74	+26 30.9	1.823	2.635	14.9	20.5	11 7	5 48.31	+39 41.4	1.885	2.676	15.3	20.3
11 17	5 43.93	+26 38.2	1.732	2.625	11.4	20.3	11 17	5 43.19	+40 34.4	1.805	2.671	12.5	20.1
11 27	5 35.25	+26 40.9	1.664	2.613	7.4	20.0	11 27	5 34.93	+41 14.8	1.748	2.666	9.6	19.9
12 7	5 24.49	+26 37.0	1.622	2.602	2.9	19.7	12 7	5 24.41	+41 37.0	1.715	2.662	7.3	19.7
12 17	5 12.84	+26 25.5	1.610	2.589	2.5	19.7	12 17	5 12.96	+41 37.0	1.708	2.658	6.9	19.7
12 27	5 1.75	+26 7.5	1.626	2.577	7.0	19.9	12 27	5 2.21	+41 15.2	1.729	2.654	8.9	19.8
1 6	4 52.53	+25 46.3	1.670	2.564	11.4	20.2	1 6	4 53.60	+40 36.1	1.775	2.651	11.8	20.0
1 16	4 46.10	+25 25.4	1.737	2.550	15.1	20.4	1 16	4 48.08	+39 46.4	1.844	2.649	14.7	20.2
<b>170507</b>	2003 <i>WO</i> <sub>21</sub>		12 12.3 107°74	0°6/12.4 18			<b>448903</b>	2011 <i>UH</i> <sub>315</sub>		12 12.3 279°78	5°7/10.8 18		
11 7	5 49.28	+25 11.7	1.980	2.789	14.0	21.0	11 7	5 44.09	+10 57.6	1.874	2.687	14.5	20.9
11 17	5 42.94	+25 9.5	1.916	2.808	10.6	20.8	11 17	5 39.28	+ 9 50.5	1.788	2.675	11.5	20.7
11 27	5 34.23	+25 3.5	1.875	2.825	6.6	20.6	11 27	5 32.13	+ 8 47.9	1.725	2.662	8.3	20.5
12 7	5 24.00	+24 52.7	1.862	2.843	2.4	20.4	12 7	5 23.36	+ 7 53.9	1.689	2.650	6.0	20.3
12 17	5 13.37	+24 37.3	1.879	2.860	2.1	20.4	12 17	5 13.92	+ 7 12.7	1.681	2.637	6.3	20.3
12 27	5 3.53	+24 18.7	1.926	2.876	6.2	20.7	12 27	5 4.98	+ 6 47.4	1.701	2.625	9.1	20.5
1 6	4 55.49	+23 59.7	2.000	2.892	9.9	21.0	1 6	4 57.56	+ 6 39.1	1.746	2.612	12.5	20.6
1 16	4 49.91	+23 42.8	2.099	2.908	13.0	21.2	1 16	4 52.42	+ 6 46.9	1.813	2.600	15.6	20.8
<b>151561</b>	2002 <i>TE</i> <sub>88</sub>		12 12.3 20°19	5°1/11.2 18			<b>209066</b>	2003 <i>QU</i> <sub>69</sub>		12 12.3 17°46	13°0/11.3 18		
11 7	5 43.81	+17 16.9	1.057	1.914	20.2	18.8	11 7	5 41.61	- 2 33.4	1.274	2.084	20.2	19.6
11 17	5 40.19	+15 56.4	1.006	1.921	15.5	18.6	11 17	5 37.97	- 4 2.3	1.227	2.090	17.3	19.5
11 27	5 33.07	+14 37.1	0.974	1.930	10.2	18.3	11 27	5 31.49	- 5 7.1	1.199	2.098	14.7	19.3
12 7	5 23.68	+13 25.2	0.964	1.940	5.8	18.1	12 7	5 23.14	- 5 39.4	1.190	2.106	13.1	19.3
12 17	5 13.68	+12 27.2	0.979	1.951	6.2	18.2	12 17	5 14.22	- 5 34.2	1.204	2.116	13.3	19.3
12 27	5 4.88	+11 48.2	1.017	1.964	10.8	18.5	12 27	5 6.18	- 4 52.0	1.240	2.128	15.0	19.4
1 6	4 58.71	+11 29.9	1.077	1.978	15.6	18.8	1 6	5 0.21	- 3 38.4	1.296	2.140	17.4	19.6
1 16	4 55.95	+11 31.1	1.156	1.992	19.7	19.1	1 16	4 57.06	- 2 1.9	1.370	2.153	20.0	19.8
<b>477315</b>	2009 <i>SO</i> <sub>333</sub>		12 12.3 331°89	4°8/12.5 18			<b>421070</b>	2013 <i>QO</i> <sub>25</sub>		12 12.3 240°02	3°2/11.7 18		
11 7	5 48.05	+30 16.3	1.242	2.079	19.0	21.0	11 7	5 42.07	+13 5.9	2.564	3.367	11.3	21.7
11 17	5 44.04	+31 15.2	1.167	2.069	14.9	20.7	11 17	5 37.17	+12 43.2	2.475	3.360	8.8	21.5
11 27	5 36.03	+32 9.0	1.111	2.060	10.2	20.5	11 27	5 30.55	+12 24.4	2.411	3.352	6.0	21.3
12 7	5 24.94	+32 50.9	1.077	2.051	5.8	20.2	12 7	5 22.76	+12 11.1	2.375	3.344	3.6	21.1
12 17	5 12.41	+33 15.0	1.069	2.043	5.5	20.1	12 17	5 14.51	+12 4.4	2.369	3.336	3.7	21.1
12 27	5 0.66	+33 20.0	1.086	2.035	9.9	20.4	12 27	5 6.61	+12 5.4	2.393	3.328	6.2	21.3
1 6	4 51.65	+33 10.0	1.125	2.029	14.8	20.6	1 6	4 59.82	+12 14.2	2.445	3.319	9.1	21.5
1 16	4 46.64	+32 51.5	1.185	2.023	19.2	20.9	1 16	4 54.71	+12 30.5	2.522	3.311	11.7	21.6
<b>311345</b>	2005 <i>QU</i> <sub>128</sub>		12 12.3 138°33	1°7/12.1 18			<b>319486</b>	2006 <i>QF</i> <sub>20</sub>					

EPHEMERIDES

12 12.3

12 12.3

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>327702</b>	2006 SA <sub>36</sub>		12 12.3 103°35	0°4/12.3 18			<b>50688</b>	2000 EX <sub>118</sub>		12 12.3 97°78	1°5/12.3 18		
11 7	5 52.79	+21 19.7	1.543	2.362	16.8	21.2	11 7	5 47.59	+17 36.1	1.877	2.692	14.4	19.1
11 17	5 46.15	+21 36.3	1.484	2.381	12.7	21.0	11 17	5 41.89	+17 55.0	1.806	2.701	11.0	18.9
11 27	5 36.50	+21 53.4	1.448	2.400	8.0	20.8	11 27	5 33.76	+18 17.9	1.759	2.709	7.0	18.7
12 7	5 24.89	+22 9.1	1.438	2.419	2.8	20.5	12 7	5 23.97	+18 44.0	1.738	2.718	2.8	18.5
12 17	5 12.70	+22 22.1	1.456	2.437	2.5	20.5	12 17	5 13.59	+19 12.1	1.747	2.726	2.6	18.5
12 27	5 1.52	+22 32.8	1.503	2.454	7.4	20.9	12 27	5 3.83	+19 41.7	1.786	2.735	6.7	18.7
1 6	4 52.62	+22 42.7	1.577	2.471	11.9	21.2	1 6	4 55.76	+20 12.4	1.851	2.743	10.6	19.0
1 16	4 46.77	+22 53.6	1.673	2.488	15.5	21.4	1 16	4 50.13	+20 44.4	1.941	2.751	13.9	19.2
<b>135808</b>	2002 RT <sub>135</sub>		12 12.3 189°67	4°5/12.5 18			<b>257417</b>	2009 WT		12 12.3 216°52	0°1/12.3 18		
11 7	5 51.47	+32 46.1	2.033	2.829	14.1	19.5	11 7	5 45.09	+22 22.3	2.376	3.184	12.0	20.7
11 17	5 45.21	+33 52.2	1.951	2.828	11.1	19.3	11 17	5 39.72	+22 38.7	2.289	3.181	9.1	20.5
11 27	5 36.08	+34 52.5	1.893	2.827	7.9	19.1	11 27	5 32.29	+22 54.9	2.227	3.177	5.7	20.3
12 7	5 24.83	+35 41.5	1.862	2.826	5.0	18.9	12 7	5 23.45	+23 9.8	2.193	3.173	2.0	20.1
12 17	5 12.64	+36 15.1	1.861	2.825	4.9	18.9	12 17	5 14.03	+23 22.6	2.189	3.170	1.8	20.0
12 27	5 0.97	+36 32.2	1.889	2.824	7.5	19.1	12 27	5 5.02	+23 33.4	2.216	3.166	5.5	20.3
1 6	4 51.14	+36 35.0	1.944	2.822	10.8	19.3	1 6	4 57.32	+23 42.9	2.271	3.161	8.9	20.5
1 16	4 44.10	+36 28.0	2.023	2.820	13.8	19.5	1 16	4 51.61	+23 52.4	2.351	3.157	11.9	20.7
<b>263929</b>	2009 HK <sub>37</sub>		12 12.3 201°40	1°4/12.5 18			<b>388155</b>	2005 YX <sub>13</sub>		12 12.3 324°06	0°9/12.2 18		
11 7	5 47.47	+26 8.5	2.008	2.820	13.7	20.8	11 7	5 45.07	+21 4.1	1.363	2.203	17.5	21.1
11 17	5 41.89	+26 30.3	1.926	2.818	10.5	20.5	11 17	5 41.12	+21 5.7	1.281	2.189	13.4	20.8
11 27	5 33.81	+26 49.1	1.868	2.817	6.7	20.3	11 27	5 33.87	+21 8.1	1.220	2.176	8.5	20.5
12 7	5 23.98	+27 2.7	1.836	2.815	2.8	20.1	12 7	5 24.17	+21 10.7	1.182	2.164	3.1	20.2
12 17	5 13.45	+27 9.8	1.834	2.814	2.4	20.0	12 17	5 13.35	+21 13.3	1.171	2.152	2.9	20.1
12 27	5 3.47	+27 10.5	1.862	2.812	6.4	20.3	12 27	5 3.16	+21 16.5	1.185	2.140	8.5	20.4
1 6	4 55.16	+27 6.8	1.917	2.810	10.2	20.5	1 6	4 55.16	+21 22.1	1.224	2.130	13.6	20.7
1 16	4 49.32	+27 1.4	1.996	2.808	13.5	20.7	1 16	4 50.40	+21 31.9	1.284	2.120	18.1	20.9
<b>174595</b>	2003 QK <sub>59</sub>		12 12.3 101°31	4°4/12.9 18			<b>243399</b>	2008 YV <sub>172</sub>		12 12.3 167°31	0°3/12.3 18		
11 7	5 56.66	+32 43.4	1.526	2.332	17.6	20.2	11 7	5 47.65	+22 58.1	1.993	2.805	13.8	21.7
11 17	5 49.40	+33 22.6	1.470	2.354	13.7	20.0	11 17	5 41.89	+22 51.0	1.914	2.808	10.5	21.5
11 27	5 38.67	+33 51.2	1.436	2.375	9.3	19.8	11 27	5 33.73	+22 41.7	1.859	2.810	6.6	21.3
12 7	5 25.67	+34 3.9	1.427	2.396	5.4	19.6	12 7	5 23.96	+22 29.9	1.832	2.812	2.3	21.0
12 17	5 12.06	+33 58.1	1.446	2.417	4.9	19.6	12 17	5 13.61	+22 15.8	1.834	2.814	2.1	21.0
12 27	4 59.70	+33 35.7	1.493	2.437	8.3	19.9	12 27	5 3.89	+22 0.8	1.865	2.815	6.3	21.3
1 6	4 50.06	+33 2.5	1.566	2.456	12.3	20.2	1 6	4 55.83	+21 47.0	1.924	2.816	10.2	21.5
1 16	4 43.93	+32 25.2	1.662	2.475	15.7	20.4	1 16	4 50.16	+21 36.5	2.008	2.817	13.5	21.7
<b>23368</b>	1196 T <sub>-2</sub>		12 12.3 200°53	2°5/12.7 18			<b>177527</b>	2004 FK <sub>19</sub>		12 12.3 307°73	2°8/12.9 17		
11 7	5 49.18	+30 2.8	2.188	2.988	13.2	19.5	11 7	5 46.82	+30 51.7	1.731	2.548	15.4	19.8
11 17	5 43.07	+30 20.8	2.101	2.985	10.2	19.3	11 17	5 41.96	+30 53.9	1.642	2.534	12.0	19.5
11 27	5 34.50	+30 32.7	2.038	2.981	6.8	19.1	11 27	5 34.14	+30 47.0	1.575	2.521	8.0	19.3
12 7	5 24.22	+30 35.8	2.002	2.977	3.4	18.9	12 7	5 24.19	+30 28.6	1.533	2.509	4.0	19.0
12 17	5 13.26	+30 28.9	1.997	2.972	3.0	18.9	12 17	5 13.37	+29 57.7	1.519	2.496	3.4	18.9
12 27	5 2.84	+30 12.8	2.021	2.967	6.3	19.1	12 27	5 3.20	+29 16.5	1.533	2.484	7.4	19.1
1 6	4 54.08	+29 50.2	2.073	2.961	9.8	19.3	1 6	4 55.02	+28 29.7	1.573	2.472	11.6	19.4
1 16	4 47.72	+29 25.0	2.151	2.955	12.9	19.5	1 16	4 49.74	+27 42.5	1.637	2.461	15.4	19.6
<b>276680</b>	2003 XR <sub>24</sub>		12 12.3 317°77	4°9/12.8 16			<b>413337</b>	2003 WG <sub>149</sub>		12 12.3 40°75	0°6/12.2 18		
11 7	5 46.47	+35 2.6	2.086	2.885	13.7	21.1	11 7	5 44.55	+23 29.3	1.872	2.694	14.2	20.5
11 17	5 41.46	+35 52.5	1.996	2.873	11.0	20.9	11 17	5 39.47	+22 55.9	1.811	2.710	10.7	20.3
11 27	5 33.74	+36 34.7	1.930	2.861	7.9	20.7	11 27	5 32.12	+22 19.1	1.773	2.726	6.7	20.1
12 7	5 24.02	+37 4.5	1.889	2.850	5.4	20.5	12 7	5 23.34	+21 39.8	1.762	2.743	2.4	19.9
12 17	5 13.39	+37 18.8	1.877	2.838	5.2	20.5	12 17	5 14.22	+20 59.8	1.779	2.760	2.2	19.9
12 27	5 3.22	+37 17.0	1.892	2.828	7.5	20.6	12 27	5 5.89	+20 22.0	1.826	2.777	6.4	20.2
1 6	4 54.76	+37 1.8	1.935	2.817	10.7	20.8	1 6	4 59.29	+19 49.1	1.900	2.795	10.1	20.5
1 16	4 48.93	+36 37.8	2.001	2.807	13.7	20.9	1 16	4 55.02	+19 23.2	1.998	2.813	13.3	20.7
<b>76977</b>	2001 BB <sub>60</sub>		12 12.3 206°42	1°1/12.5 18			<b>56886</b>	2000 QG <sub>131</sub>		12 12.3 150°77	1°1/12.5 18		
11 7	5 51.24	+26 16.1	1.891	2.699	14.6	20.2	11 7	5 46.74	+26 46.6	2.164	2.972	13.0	19.9
11 17	5 44.90	+26 19.5	1.804	2.694	11.2	19.9	11 17	5 41.09	+26 48.2	2.085	2.976	9.9	19.7
11 27	5 35.79	+26 18.3	1.739	2.688	7.2	19.7	11 27	5 33.18	+26 45.3	2.030	2.979	6.3	19.5
12 7	5 24.72	+26 10.7	1.702	2.681	2.8	19.4	12 7	5 23.76	+26 36.6	2.003	2.982	2.5	19.3
12 17	5 12.85	+25 56.0	1.694	2.674	2.4	19.3	12 17	5 13.81	+26 22.0	2.006	2.985	2.1	19.2
12 27	5 1.60	+25 35.4	1.716	2.666	6.8	19.6	12 27	5 4.46	+26 2.8	2.038	2.988	5.9	19.5
1 6	4 52.21	+25 12.3	1.766	2.657	11.0	19.8	1 6	4 56.69	+25 41.4	2.099	2.991	9.5	19.7
1 16	4 45.55	+24 50.1	1.839	2.648	14.6	20.1	1 16	4 51.17	+25 20.7	2.184	2.993	12.5	19.9
<b>69411</b>	1995 UR <sub>8</sub>		12 12.3 93°80	2°0/12.6 18			<b>217712</b>	1999 TV <sub>255</sub>		12 12.3 41°90	1°0/12.2 18		
11 7	5 51.66	+27 50.6	1.856	2.663	14.9	20.3	11 7	5 44.44	+20 57.9	1.938	2.758	13.8	20.1
11 17	5 44.94	+28 11.5	1.798	2.687	11.3	20.1	11 17	5 39.46	+20 47.3	1.865	2.763	10.5	19.9
11 27	5 35.59	+28 26.9	1.763	2.710	7.3	19.9	11 27	5 32.20	+20 36.2	1.817	2.769	6.6	19.7
12 7	5 24.57	+28 34.3	1.756	2.734	3.2	19.7	12 7	5 23.42	+20 24.9	1.795	2.775	2.5	19.5
12 17	5 13.11	+28 32.6	1.778	2.756	2.8	19.7	12 17	5 14.12	+20 14.0	1.802	2.782	2.3	19.5
12 27	5 2.58	+28 22.8	1.830	2.779	6.6	20.0	12 27	5 5.45	+20 4.7	1.838	2.788	6.4	19.7
1 6	4 54.06	+28 8.1	1.909	2.800	10.3	20.3	1 6	4 58.41	+19 58.6	1.901	2.795	10.2	20.0
1 16	4 48.26	+27 52.1	2.012	2.821	13.5	20.5	1 16	4 53.65	+19 56.9	1.988	2.802	13.4	20.2
<b>373096</b>	2011 FU <sub>148</sub>		12 12.3 296°66	0°8/12.2 18			<b>147374</b>	2003 EE <sub>3</sub>		12 12.3 358°24	0°6/12.3 18		
11 7	5 43.12	+21 3.1	2.221	3									

EPHEMERIDES

12 12.3

12 12.3

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>96873</b>	1999 <i>TH</i> <sub>4</sub>		12 12.3 323°03	7°9/14.3	18		<b>327558</b>	2006 <i>CE</i> <sub>52</sub>		12 12.3 219°59	0°1/12.3	18	
11 7	5 51.80	+42 38.8	1.596	2.385	17.7	18.1	11 7	5 44.25	+23 22.1	2.791	3.592	10.6	22.2
11 17	5 46.41	+43 6.0	1.515	2.377	14.7	17.9	11 17	5 38.81	+23 18.3	2.696	3.584	8.0	22.0
11 27	5 37.22	+43 14.1	1.454	2.369	11.4	17.7	11 27	5 31.62	+23 12.6	2.626	3.575	5.0	21.8
12 7	5 25.32	+42 56.3	1.417	2.362	8.7	17.5	12 7	5 23.23	+23 4.6	2.585	3.566	1.8	21.5
12 17	5 12.44	+42 9.2	1.405	2.355	8.1	17.5	12 17	5 14.37	+22 54.5	2.575	3.556	1.6	21.5
12 27	5 0.64	+40 55.3	1.419	2.348	10.1	17.6	12 27	5 5.85	+22 43.0	2.597	3.546	4.9	21.7
1 6	4 51.60	+39 23.2	1.458	2.342	13.4	17.7	1 6	4 58.45	+22 31.5	2.648	3.535	7.9	21.9
1 16	4 46.31	+37 43.3	1.519	2.336	16.7	17.9	1 16	4 52.75	+22 21.7	2.725	3.524	10.6	22.1
<b>220217</b>	2002 <i>VS</i> <sub>89</sub>		12 12.3 65°48	2°7/12.2	18		<b>136106</b>	2003 <i>EW</i> <sub>33</sub>		12 12.3 320°02	0°2/12.3	18	
11 7	5 51.28	+16 12.2	1.319	2.148	18.6	19.7	11 7	5 45.68	+23 44.7	1.350	2.189	17.6	19.8
11 17	5 45.18	+16 18.9	1.272	2.173	14.1	19.5	11 17	5 41.67	+23 35.6	1.267	2.175	13.5	19.5
11 27	5 35.95	+16 31.9	1.246	2.198	9.0	19.3	11 27	5 34.27	+23 22.9	1.205	2.162	8.6	19.2
12 7	5 24.74	+16 50.6	1.245	2.224	4.0	19.1	12 7	5 24.36	+23 6.0	1.167	2.149	3.1	18.8
12 17	5 13.06	+17 14.3	1.271	2.249	3.8	19.1	12 17	5 13.35	+22 45.3	1.155	2.136	2.7	18.8
12 27	5 2.56	+17 42.3	1.324	2.274	8.4	19.5	12 27	5 3.02	+22 22.9	1.169	2.124	8.5	19.1
1 6	4 54.53	+18 14.0	1.402	2.299	12.9	19.8	1 6	4 54.97	+22 2.6	1.207	2.113	13.7	19.3
1 16	4 49.70	+18 49.0	1.502	2.324	16.6	20.1	1 16	4 50.26	+21 47.6	1.265	2.102	18.2	19.6
<b>360036</b>	2013 <i>AT</i> <sub>40</sub>		12 12.3 46°04	8°9/12.7	18		<b>296851</b>	2009 <i>WJ</i> <sub>182</sub>		12 12.3 198°10	1°3/12.8	18	
11 7	5 46.20	+1 6.2	1.493	2.294	18.2	20.2	11 7	5 45.50	+29 12.4	2.784	3.578	10.8	20.9
11 17	5 41.05	+0 43.9	1.442	2.309	14.9	20.0	11 17	5 39.72	+28 55.0	2.693	3.576	8.2	20.7
11 27	5 33.27	+0 41.8	1.410	2.326	11.7	19.9	11 27	5 32.15	+28 31.4	2.628	3.573	5.3	20.5
12 7	5 23.80	+1 3.5	1.402	2.342	9.3	19.8	12 7	5 23.41	+28 1.0	2.592	3.569	2.3	20.3
12 17	5 13.84	+1 49.9	1.419	2.359	9.1	19.8	12 17	5 14.27	+27 24.3	2.587	3.566	1.9	20.3
12 27	5 4.75	+2 58.7	1.463	2.377	11.2	20.0	12 27	5 5.61	+26 43.1	2.613	3.562	4.9	20.5
1 6	4 57.61	+4 24.5	1.530	2.395	14.1	20.2	1 6	4 58.20	+26 0.1	2.669	3.557	7.9	20.6
1 16	4 53.14	+6 1.3	1.619	2.413	16.9	20.5	1 16	4 52.60	+25 18.3	2.752	3.553	10.5	20.8
<b>203195</b>	2001 <i>CH</i> <sub>42</sub>		12 12.3 49°42	5°2/12.3	18		<b>124074</b>	2001 <i>GR</i> <sub>1</sub>		12 12.3 208°03	4°1/11.8	18	
11 7	5 47.42	+10 15.9	1.409	2.233	17.9	19.5	11 7	5 42.86	+8 50.9	2.668	3.460	11.3	20.2
11 17	5 42.12	+10 10.9	1.358	2.252	13.9	19.3	11 17	5 37.71	+8 37.5	2.582	3.456	8.9	20.1
11 27	5 34.00	+10 17.9	1.329	2.272	9.6	19.1	11 27	5 30.91	+8 31.0	2.521	3.452	6.4	19.9
12 7	5 24.07	+10 38.5	1.324	2.292	5.9	19.0	12 7	5 22.99	+8 33.0	2.488	3.447	4.4	19.8
12 17	5 13.64	+11 12.5	1.345	2.313	5.7	19.0	12 17	5 14.63	+8 44.4	2.485	3.442	4.4	19.8
12 27	5 4.18	+11 58.3	1.393	2.334	9.1	19.3	12 27	5 6.61	+9 5.4	2.511	3.437	6.5	19.9
1 6	4 56.87	+12 53.2	1.467	2.356	13.0	19.6	1 6	4 59.64	+9 35.2	2.566	3.431	9.0	20.0
1 16	4 52.42	+13 54.1	1.562	2.377	16.4	19.8	1 16	4 54.29	+10 12.7	2.647	3.425	11.5	20.2
<b>361934</b>	2008 <i>HD</i> <sub>16</sub>		12 12.3 120°00	4°4/11.3	18		<b>131345</b>	2001 <i>HY</i> <sub>55</sub>		12 12.3 233°17	1°3/12.2	18	
11 7	5 43.76	+9 7.4	2.670	3.460	11.3	22.1	11 7	5 43.98	+18 5.8	2.570	3.375	11.3	20.4
11 17	5 38.17	+8 23.9	2.606	3.479	8.9	22.0	11 17	5 38.74	+18 13.0	2.477	3.367	8.6	20.2
11 27	5 31.04	+7 46.5	2.568	3.496	6.4	21.9	11 27	5 31.65	+18 22.4	2.410	3.359	5.5	20.0
12 7	5 22.95	+7 17.3	2.558	3.513	4.6	21.8	12 7	5 23.28	+18 33.8	2.371	3.350	2.3	19.8
12 17	5 14.61	+6 58.1	2.579	3.530	4.8	21.8	12 17	5 14.37	+18 47.1	2.363	3.342	2.2	19.7
12 27	5 6.76	+6 50.0	2.629	3.546	6.7	22.0	12 27	5 5.79	+19 2.3	2.386	3.333	5.4	19.9
1 6	5 0.05	+6 52.9	2.707	3.562	9.0	22.1	1 6	4 58.35	+19 19.5	2.437	3.323	8.6	20.1
1 16	4 54.97	+7 5.8	2.810	3.577	11.2	22.3	1 16	4 52.68	+19 39.2	2.514	3.314	11.4	20.3
<b>362513</b>	2010 <i>TY</i> <sub>84</sub>		12 12.3 89°13	0°7/12.4	18		<b>486647</b>	2013 <i>PF</i> <sub>25</sub>		12 12.3 135°16	4°5/13.8	17	
11 7	5 46.76	+24 44.5	1.973	2.787	13.8	21.4	11 7	5 48.68	+40 25.0	2.969	3.730	10.9	22.0
11 17	5 41.26	+24 53.7	1.901	2.795	10.5	21.2	11 17	5 42.17	+40 43.6	2.894	3.742	8.9	21.9
11 27	5 33.35	+25 0.1	1.853	2.804	6.6	21.0	11 27	5 33.69	+40 51.5	2.843	3.754	6.7	21.7
12 7	5 23.85	+25 2.5	1.831	2.812	2.5	20.7	12 7	5 23.95	+40 46.0	2.820	3.765	4.9	21.6
12 17	5 13.81	+25 0.4	1.839	2.820	2.1	20.7	12 17	5 13.84	+40 26.1	2.827	3.775	4.6	21.6
12 27	5 4.42	+24 54.6	1.877	2.828	6.2	21.0	12 27	5 4.33	+39 53.0	2.864	3.786	6.0	21.7
1 6	4 56.73	+24 47.0	1.942	2.836	10.0	21.3	1 6	4 56.27	+39 9.9	2.929	3.796	8.0	21.9
1 16	4 51.44	+24 40.1	2.031	2.844	13.2	21.5	1 16	4 50.24	+38 20.7	3.021	3.805	10.0	22.1
<b>57772</b>	2001 <i>VM</i> <sub>49</sub>		12 12.3 272°12	2°0/12.8	18		<b>35682</b>	1999 <i>BP</i> <sub>2</sub>		12 12.3 29°16	3°2/12.5	18	
11 7	5 49.77	+30 9.7	1.630	2.446	16.2	18.9	11 7	5 48.95	+27 55.0	1.285	2.120	18.6	17.7
11 17	5 44.27	+29 49.0	1.542	2.435	12.5	18.6	11 17	5 44.21	+28 42.5	1.224	2.127	14.3	17.5
11 27	5 35.62	+29 17.4	1.476	2.425	8.2	18.3	11 27	5 35.84	+29 25.4	1.184	2.135	9.4	17.2
12 7	5 24.74	+28 33.2	1.436	2.414	3.6	18.0	12 7	5 24.89	+29 58.6	1.167	2.144	4.6	17.0
12 17	5 13.00	+27 36.9	1.423	2.403	3.0	18.0	12 17	5 13.01	+30 18.2	1.176	2.153	4.1	17.0
12 27	5 2.05	+26 32.4	1.439	2.392	7.6	18.2	12 27	5 2.15	+30 24.3	1.211	2.163	8.7	17.3
1 6	4 53.29	+25 26.0	1.482	2.381	12.2	18.5	1 6	4 53.95	+30 20.4	1.270	2.174	13.4	17.6
1 16	4 47.62	+24 23.8	1.547	2.369	16.2	18.7	1 16	4 49.37	+30 11.5	1.350	2.185	17.4	17.9
<b>84462</b>	2002 <i>TW</i> <sub>255</sub>		12 12.3 168°35	1°4/12.4	18		<b>326832</b>	2003 <i>UY</i> <sub>46</sub>		12 12.3 50°45	0°7/12.3	18	
11 7	5 51.23	+25 10.8	1.694	2.509	15.7	19.4	11 7	5 50.28	+20 42.7	1.139	1.982	20.0	20.3
11 17	5 45.17	+25 42.3	1.617	2.512	12.0	19.2	11 17	5 45.07	+20 57.3	1.091	2.000	15.1	20.0
11 27	5 36.11	+26 11.8	1.564	2.514	7.7	18.9	11 27	5 36.21	+21 13.7	1.062	2.018	9.5	19.8
12 7	5 24.91	+26 36.3	1.536	2.516	3.1	18.6	12 7	5 24.95	+21 30.1	1.056	2.037	3.4	19.5
12 17	5 12.87	+26 53.4	1.537	2.517	2.7	18.6	12 17	5 13.03	+21 45.3	1.075	2.056	3.0	19.5
12 27	5 1.52	+27 2.8	1.567	2.518	7.3	18.9	12 27	5 2.40	+21 59.3	1.121	2.076	8.8	19.9
1 6	4 52.23	+27 6.7	1.624	2.519	11.6	19.2	1 6	4 54.58	+22 13.6	1.190	2.096	13.9	20.3
1 16	4 45.90	+27 8.1	1.704	2.519	15.3	19.4	1 16	4 50.37	+22 29.9	1.279	2.116	18.1	20.6
<b>125123</b>	2001 <i>UW</i> <sub>51</sub>		12 12.3 241°86	5°4/12.5	18		<b>304128</b>	2006 <i>KD</i> <sub>15</sub>		12 12.3 131°03	1°1/12.2	18	

EPHEMERIDES

12 12.3

12 12.4

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>128105</b>	2003 <i>QK</i> <sub>6</sub>		12 12.3	90°76	1°8/12.7	18	<b>138976</b>	2001 <i>CJ</i> <sub>26</sub>		12 12.3	230°19	2°2/12.1	18
11 7	5 46.59	+28 40.0	2.308	3.111	12.4	20.3	11 7	5 49.18	+17 33.6	1.647	2.466	15.9	20.1
11 17	5 40.82	+28 52.2	2.240	3.127	9.5	20.2	11 17	5 43.64	+17 30.0	1.562	2.459	12.2	19.9
11 27	5 32.94	+28 59.0	2.197	3.143	6.1	20.0	11 27	5 35.20	+17 29.9	1.501	2.451	7.9	19.6
12 7	5 23.72	+28 59.0	2.181	3.158	2.8	19.8	12 7	5 24.67	+17 33.4	1.465	2.444	3.4	19.3
12 17	5 14.08	+28 51.5	2.196	3.174	2.4	19.8	12 17	5 13.24	+17 40.7	1.457	2.435	3.3	19.3
12 27	5 5.08	+28 37.6	2.240	3.189	5.6	20.0	12 27	5 2.38	+17 52.3	1.478	2.427	7.9	19.5
1 6	4 57.61	+28 19.6	2.313	3.204	8.8	20.2	1 6	4 53.42	+18 8.8	1.525	2.418	12.3	19.8
1 16	4 52.29	+28 0.4	2.411	3.218	11.6	20.5	1 16	4 47.27	+18 30.6	1.595	2.408	16.2	20.0
<b>336588</b>	2009 <i>SK</i> <sub>355</sub>		12 12.3	105°64	3°4/12.7	18	<b>250674</b>	2005 <i>OV</i> <sub>22</sub>		12 12.3	97°99	3°5/13.1	18
11 7	5 53.16	+29 53.1	1.628	2.439	16.4	21.3	11 7	5 50.58	+33 37.6	2.146	2.939	13.6	20.2
11 17	5 46.71	+30 34.6	1.565	2.454	12.7	21.1	11 17	5 44.00	+33 54.3	2.083	2.960	10.6	20.0
11 27	5 37.07	+31 9.4	1.523	2.467	8.4	20.9	11 27	5 35.00	+34 1.6	2.044	2.980	7.3	19.9
12 7	5 25.27	+31 33.1	1.507	2.481	4.4	20.7	12 7	5 24.46	+33 56.7	2.032	3.000	4.3	19.7
12 17	5 12.74	+31 42.6	1.520	2.494	4.0	20.7	12 17	5 13.52	+33 38.9	2.049	3.019	3.8	19.7
12 27	5 1.16	+31 38.7	1.561	2.507	7.7	20.9	12 27	5 3.41	+33 9.9	2.096	3.038	6.4	19.9
1 6	4 51.92	+31 25.2	1.628	2.520	11.7	21.2	1 6	4 55.15	+32 33.5	2.171	3.057	9.5	20.1
1 16	4 45.86	+31 7.0	1.718	2.532	15.2	21.4	1 16	4 49.40	+31 54.3	2.271	3.075	12.3	20.4
<b>20260</b>	1998 <i>FL</i> <sub>11</sub>		12 12.3	80°23	1°1/12.4	18	<b>26759</b>	2001 <i>KS</i> <sub>22</sub>		12 12.3	227°55	0°8/12.2	18
11 7	5 51.68	+23 37.4	1.681	2.497	15.8	17.6	11 7	5 46.75	+21 38.8	2.060	2.873	13.4	19.8
11 17	5 45.26	+24 21.2	1.623	2.518	12.0	17.4	11 17	5 41.27	+21 28.3	1.972	2.866	10.2	19.6
11 27	5 36.00	+25 4.4	1.589	2.539	7.5	17.2	11 27	5 33.44	+21 16.5	1.907	2.859	6.5	19.4
12 7	5 24.85	+25 43.4	1.581	2.561	2.9	16.9	12 7	5 23.98	+21 3.4	1.870	2.851	2.4	19.1
12 17	5 13.12	+26 15.6	1.602	2.582	2.5	17.0	12 17	5 13.87	+20 49.4	1.863	2.843	2.2	19.1
12 27	5 2.28	+26 40.2	1.652	2.602	7.0	17.3	12 27	5 4.25	+20 35.9	1.885	2.835	6.3	19.3
1 6	4 53.55	+26 58.8	1.729	2.623	11.0	17.6	1 6	4 56.18	+20 24.7	1.935	2.826	10.2	19.5
1 16	4 47.70	+27 13.8	1.829	2.643	14.4	17.8	1 16	4 50.39	+20 17.6	2.009	2.817	13.5	19.7
<b>493893</b>	2015 <i>XZ</i> <sub>201</sub>		12 12.3	43°17	1°3/12.3	18	<b>458441</b>	2011 <i>AY</i> <sub>65</sub>		12 12.4	14°43	1°9/12.2	17
11 7	5 48.76	+23 0.0	1.739	2.558	15.2	20.8	11 7	5 43.57	+17 37.8	1.762	2.588	14.7	21.0
11 17	5 43.15	+24 0.5	1.673	2.569	11.5	20.6	11 17	5 39.07	+17 40.5	1.691	2.591	11.2	20.8
11 27	5 34.77	+25 2.4	1.630	2.581	7.3	20.4	11 27	5 32.12	+17 46.6	1.643	2.595	7.2	20.6
12 7	5 24.46	+26 1.7	1.614	2.594	2.8	20.1	12 7	5 23.51	+17 56.5	1.620	2.599	3.1	20.3
12 17	5 13.41	+26 54.7	1.626	2.606	2.6	20.1	12 17	5 14.29	+18 10.0	1.626	2.605	2.9	20.3
12 27	5 3.04	+27 39.4	1.668	2.619	6.9	20.4	12 27	5 5.69	+18 27.1	1.660	2.610	7.0	20.6
1 6	4 54.59	+28 16.1	1.738	2.632	10.9	20.7	1 6	4 58.78	+18 48.0	1.720	2.616	10.9	20.9
1 16	4 48.88	+28 46.7	1.830	2.646	14.3	20.9	1 16	4 54.29	+19 12.7	1.803	2.623	14.4	21.1
<b>85253</b>	1993 <i>TD</i> <sub>5</sub>		12 12.3	117°30	1°1/12.6	18	<b>12066</b>	1998 <i>FX</i> <sub>39</sub>		12 12.4	122°70	1°5/12.1	18
11 7	5 51.19	+26 43.7	1.844	2.653	14.9	20.7	11 7	5 49.09	+19 34.0	2.175	2.979	13.1	19.3
11 17	5 44.66	+26 41.6	1.778	2.669	11.3	20.5	11 17	5 42.57	+19 15.0	2.110	2.999	9.9	19.1
11 27	5 35.50	+26 34.1	1.735	2.684	7.2	20.3	11 27	5 33.98	+18 56.0	2.069	3.018	6.2	19.0
12 7	5 24.65	+26 19.7	1.720	2.699	2.8	20.0	12 7	5 24.08	+18 37.5	2.057	3.036	2.5	18.8
12 17	5 13.33	+25 58.6	1.734	2.714	2.3	20.0	12 17	5 13.85	+18 20.6	2.076	3.054	2.5	18.8
12 27	5 2.88	+25 32.8	1.777	2.728	6.6	20.3	12 27	5 4.31	+18 6.6	2.125	3.071	6.1	19.0
1 6	4 54.41	+25 5.5	1.848	2.741	10.5	20.6	1 6	4 56.35	+17 57.0	2.203	3.087	9.5	19.3
1 16	4 48.64	+24 40.4	1.943	2.754	13.8	20.8	1 16	4 50.56	+17 52.7	2.305	3.102	12.4	19.5
<b>456549</b>	2007 <i>BS</i> <sub>47</sub>		12 12.3	221°75	5°2/11.7	18	<b>168188</b>	2006 <i>HN</i> <sub>115</sub>		12 12.4	161°64	0°2/12.4	18
11 7	5 43.71	+ 6 10.4	2.468	3.255	12.2	21.5	11 7	5 48.46	+23 27.9	2.065	2.874	13.5	21.5
11 17	5 38.50	+ 5 49.9	2.381	3.249	9.8	21.3	11 17	5 42.48	+23 30.5	1.987	2.879	10.2	21.3
11 27	5 31.48	+ 5 38.3	2.319	3.241	7.3	21.1	11 27	5 34.14	+23 31.2	1.932	2.883	6.5	21.1
12 7	5 23.24	+ 5 38.0	2.284	3.234	5.5	21.0	12 7	5 24.22	+23 28.8	1.906	2.887	2.3	20.9
12 17	5 14.49	+ 5 50.1	2.278	3.226	5.6	21.0	12 17	5 13.72	+23 23.3	1.909	2.890	2.0	20.8
12 27	5 6.10	+ 6 15.1	2.301	3.218	7.5	21.1	12 27	5 3.83	+23 15.5	1.943	2.893	6.1	21.1
1 6	4 58.85	+ 6 51.8	2.352	3.210	10.1	21.2	1 6	4 55.56	+23 7.3	2.004	2.895	9.9	21.4
1 16	4 53.34	+ 7 38.4	2.428	3.201	12.5	21.4	1 16	4 49.65	+23 0.8	2.090	2.897	13.1	21.6
<b>422414</b>	2014 <i>SL</i> <sub>282</sub>		12 12.3	337°76	2°9/11.9	16	<b>223533</b>	2004 <i>EH</i> <sub>8</sub>		12 12.4	194°52	2°2/12.0	18
11 7	5 42.19	+15 30.2	1.975	2.795	13.6	21.1	11 7	5 48.85	+18 19.3	1.767	2.583	15.1	20.6
11 17	5 37.83	+15 12.3	1.892	2.788	10.5	20.9	11 17	5 43.09	+17 58.4	1.687	2.582	11.6	20.4
11 27	5 31.28	+14 58.1	1.833	2.782	6.9	20.7	11 27	5 34.68	+17 38.7	1.630	2.580	7.5	20.2
12 7	5 23.20	+14 49.0	1.801	2.776	3.6	20.4	12 7	5 24.45	+17 21.1	1.599	2.578	3.3	19.9
12 17	5 14.52	+14 46.2	1.797	2.770	3.7	20.4	12 17	5 13.51	+17 6.8	1.598	2.575	3.3	19.9
12 27	5 6.32	+14 50.6	1.821	2.765	7.0	20.6	12 27	5 3.21	+16 57.4	1.625	2.572	7.5	20.1
1 6	4 59.57	+15 2.4	1.872	2.760	10.6	20.8	1 6	4 54.72	+16 54.4	1.679	2.568	11.6	20.4
1 16	4 54.96	+15 21.6	1.946	2.756	13.8	21.0	1 16	4 48.85	+16 58.7	1.756	2.564	15.2	20.6
<b>139950</b>	2001 <i>RP</i> <sub>141</sub>		12 12.3	16°09	4°0/12.5	18	<b>275375</b>	2011 <i>AM</i> <sub>61</sub>		12 12.4	224°16	3°1/12.1	18
11 7	5 47.61	+29 55.2	1.550	2.373	16.5	19.3	11 7	5 49.37	+15 5.3	1.729	2.543	15.5	20.9
11 17	5 42.84	+30 56.2	1.482	2.377	12.8	19.1	11 17	5 43.64	+15 1.1	1.643	2.535	12.0	20.6
11 27	5 34.85	+31 52.1	1.435	2.382	8.7	18.9	11 27	5 35.15	+15 2.4	1.580	2.527	7.9	20.4
12 7	5 24.56	+32 37.6	1.414	2.387	4.9	18.7	12 7	5 24.65	+15 10.1	1.543	2.519	4.0	20.1
12 17	5 13.34	+33 8.5	1.420	2.393	4.6	18.7	12 17	5 13.29	+15 24.3	1.534	2.509	3.9	20.1
12 27	5 2.89	+33 23.9	1.453	2.400	8.2	18.9	12 27	5 2.44	+15 45.3	1.555	2.500	7.9	20.3
1 6	4 54.68	+33 26.5	1.511	2.407	12.2	19.1	1 6	4 53.37	+16 12.7	1.602	2.489	12.2	20.5
1 16	4 49.65	+33 21.1	1.592	2.415	15.8	19.4	1 16	4 46.98	+16 46.2	1.672	2.479	15.9	20.8
<b>83358</b>	2001 <i>RJ</i> <sub>154</sub>		12 12.3	55°50	7°6/12.2	18	<b>86889</b>	2000 <i>HF</i> <sub>30</sub>		12 12.4	113°		

EPHEMERIDES

12 12.4

12 12.4

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>171327</b>	2006 <i>JF</i> <sub>10</sub>		12 12.4 43°00'	1.6/12.5	18		<b>684</b>	Hildburg		12 12.4 172°01'	3.4/12.9	18	
11 7	5 50.07	+25 55.9	1.112	1.957	20.2	20.0	11 7	5 50.72	+31 32.6	1.704	2.514	15.8	14.8
11 17	5 45.26	+26 10.2	1.058	1.968	15.4	19.7	11 17	5 44.92	+31 51.7	1.627	2.515	12.3	14.6
11 27	5 36.54	+26 19.6	1.024	1.980	9.8	19.5	11 27	5 36.03	+32 2.1	1.573	2.516	8.3	14.4
12 7	5 25.17	+26 21.0	1.011	1.992	3.9	19.2	12 7	5 24.99	+32 0.1	1.543	2.517	4.5	14.1
12 17	5 12.98	+26 13.3	1.024	2.005	3.2	19.2	12 17	5 13.15	+31 44.0	1.542	2.517	4.0	14.1
12 27	5 2.09	+25 58.4	1.062	2.018	9.0	19.6	12 27	5 2.12	+31 15.4	1.569	2.517	7.6	14.3
1 6	4 54.17	+25 40.9	1.123	2.032	14.2	19.9	1 6	4 53.26	+30 38.9	1.623	2.517	11.6	14.6
1 16	4 50.10	+25 25.3	1.204	2.047	18.6	20.2	1 16	4 47.47	+30 0.0	1.700	2.517	15.2	14.8
<b>459741</b>	2013 <i>QA</i> <sub>12</sub>		12 12.4 46°62'	1.4/12.0	17		<b>53646</b>	2000 <i>DS</i> <sub>23</sub>		12 12.4 83°61'	3.9/12.1	18	
11 7	5 43.12	+20 21.0	2.262	3.076	12.3	22.0	11 7	5 49.83	+14 6.0	1.496	2.317	17.1	18.7
11 17	5 38.19	+19 53.1	2.185	3.080	9.3	21.9	11 17	5 43.88	+13 48.4	1.441	2.336	13.1	18.5
11 27	5 31.32	+19 24.3	2.133	3.084	5.9	21.7	11 27	5 35.14	+13 37.5	1.408	2.355	8.7	18.3
12 7	5 23.19	+18 55.6	2.109	3.089	2.4	21.4	12 7	5 24.60	+13 34.9	1.401	2.374	4.7	18.1
12 17	5 14.65	+18 28.4	2.115	3.093	2.4	21.4	12 17	5 13.57	+13 41.4	1.420	2.393	4.7	18.2
12 27	5 6.63	+18 4.5	2.150	3.098	5.8	21.7	12 27	5 3.50	+13 57.2	1.468	2.412	8.4	18.4
1 6	4 59.99	+17 45.6	2.214	3.103	9.2	21.9	1 6	4 55.58	+14 21.8	1.541	2.430	12.5	18.7
1 16	4 55.29	+17 32.8	2.302	3.108	12.1	22.1	1 16	4 50.50	+14 53.8	1.636	2.448	16.0	19.0
<b>517210</b>	2013 <i>YS</i> <sub>115</sub>		12 12.4 322°86'	2.5/12.2	18		<b>382037</b>	2011 <i>CD</i> <sub>48</sub>		12 12.4 321°73'	5.9/12.9	18	
11 7	5 44.35	+17 51.2	1.246	2.092	18.4	21.2	11 7	5 48.30	+33 22.9	1.226	2.060	19.4	20.9
11 17	5 40.91	+17 46.6	1.163	2.074	14.3	20.9	11 17	5 44.54	+34 10.3	1.146	2.045	15.5	20.6
11 27	5 33.99	+17 46.4	1.099	2.056	9.3	20.6	11 27	5 36.61	+34 47.9	1.085	2.030	11.0	20.3
12 7	5 24.39	+17 51.5	1.059	2.038	4.0	20.2	12 7	5 25.42	+35 8.5	1.046	2.016	6.9	20.0
12 17	5 13.50	+18 2.4	1.043	2.022	3.9	20.2	12 17	5 12.70	+35 6.6	1.032	2.003	6.4	20.0
12 27	5 3.16	+18 19.4	1.052	2.006	9.4	20.4	12 27	5 0.75	+34 42.2	1.042	1.990	10.3	20.1
1 6	4 55.08	+18 43.2	1.084	1.992	14.8	20.7	1 6	4 51.68	+34 1.4	1.074	1.979	15.2	20.4
1 16	4 50.44	+19 13.6	1.137	1.978	19.6	20.9	1 16	4 46.78	+33 13.0	1.126	1.968	19.7	20.6
<b>354023</b>	2001 <i>QP</i> <sub>176</sub>		12 12.4 137°46'	2.2/12.8	18		<b>343799</b>	2011 <i>GE</i> <sub>65</sub>		12 12.4 140°18'	3.1/12.1	18	
11 7	5 48.54	+29 48.1	2.096	2.899	13.5	21.5	11 7	5 48.88	+14 44.8	1.839	2.649	14.8	21.2
11 17	5 42.60	+29 57.1	2.020	2.906	10.4	21.3	11 17	5 42.89	+14 34.6	1.768	2.658	11.4	21.0
11 27	5 34.24	+29 59.5	1.967	2.912	6.8	21.1	11 27	5 34.45	+14 29.6	1.721	2.667	7.5	20.8
12 7	5 24.26	+29 53.1	1.942	2.918	3.3	20.9	12 7	5 24.37	+14 30.5	1.700	2.675	3.9	20.5
12 17	5 13.74	+29 37.2	1.947	2.923	2.8	20.9	12 17	5 13.73	+14 38.0	1.709	2.682	3.9	20.6
12 27	5 3.89	+29 13.4	1.981	2.929	6.2	21.1	12 27	5 3.77	+14 52.4	1.746	2.689	7.4	20.8
1 6	4 55.76	+28 44.8	2.043	2.934	9.7	21.3	1 6	4 55.53	+15 13.5	1.811	2.696	11.2	21.0
1 16	4 50.07	+28 15.1	2.129	2.939	12.8	21.5	1 16	4 49.76	+15 40.8	1.900	2.702	14.4	21.3
<b>511022</b>	2013 <i>QB</i> <sub>26</sub>		12 12.4 41°92'	6.9/12.3	18		<b>271499</b>	2004 <i>FA</i> <sub>111</sub>		12 12.4 141°25'	4.7/12.9	18	
11 7	5 48.45	+10 7.3	0.985	1.832	22.1	20.4	11 7	5 53.88	+33 50.8	1.764	2.563	15.8	20.5
11 17	5 43.63	+9 35.8	0.950	1.856	17.2	20.2	11 17	5 47.31	+34 35.4	1.692	2.571	12.5	20.3
11 27	5 35.23	+9 20.0	0.933	1.880	12.0	20.0	11 27	5 37.54	+35 10.6	1.643	2.579	8.8	20.1
12 7	5 24.61	+9 23.4	0.937	1.906	7.7	19.9	12 7	5 25.54	+35 31.1	1.620	2.586	5.5	20.0
12 17	5 13.55	+9 46.8	0.965	1.932	7.5	20.0	12 17	5 12.72	+35 33.7	1.625	2.593	5.1	19.9
12 27	5 3.95	+10 28.5	1.016	1.959	11.3	20.3	12 27	5 0.76	+35 19.2	1.659	2.599	8.0	20.1
1 6	4 57.20	+11 24.1	1.089	1.987	15.6	20.6	1 6	4 51.07	+34 51.9	1.719	2.605	11.6	20.4
1 16	4 53.99	+12 29.0	1.182	2.015	19.5	21.0	1 16	4 44.56	+34 18.1	1.803	2.610	14.9	20.6
<b>305930</b>	2009 <i>FO</i> <sub>72</sub>		12 12.4 219°91'	1.9/12.5	18		<b>513336</b>	2007 <i>HJ</i> <sub>94</sub>		12 12.4 181°53'	0.7/12.5	18	
11 7	5 49.23	+26 45.9	2.179	2.982	13.1	21.0	11 7	5 50.08	+25 3.1	1.979	2.787	14.0	22.5
11 17	5 43.25	+27 25.3	2.088	2.975	10.1	20.8	11 17	5 43.89	+25 8.9	1.897	2.788	10.7	22.3
11 27	5 34.79	+28 2.5	2.022	2.968	6.5	20.6	11 27	5 35.15	+25 11.4	1.839	2.789	6.8	22.1
12 7	5 24.53	+28 34.7	1.983	2.961	3.0	20.3	12 7	5 24.65	+25 9.1	1.809	2.789	2.5	21.8
12 17	5 13.45	+28 59.2	1.975	2.953	2.7	20.3	12 17	5 13.48	+25 1.5	1.808	2.788	2.1	21.8
12 27	5 2.79	+29 15.6	1.997	2.945	6.2	20.5	12 27	5 2.93	+24 49.7	1.837	2.787	6.4	22.0
1 6	4 53.66	+29 24.9	2.048	2.936	9.9	20.7	1 6	4 54.12	+24 36.0	1.893	2.785	10.4	22.3
1 16	4 46.90	+29 29.8	2.123	2.927	13.1	20.9	1 16	4 47.84	+24 23.2	1.974	2.783	13.7	22.5
<b>333085</b>	2011 <i>UM</i> <sub>131</sub>		12 12.4 158°12'	0.4/12.3	15		<b>337091</b>	1998 <i>US</i> <sub>1</sub>		12 12.4 143°72'	3.0/11.8	16	
11 7	5 47.83	+22 47.7	1.935	2.749	14.1	22.2	11 7	5 50.36	+15 19.3	2.278	3.073	12.8	22.7
11 17	5 42.12	+22 36.9	1.858	2.752	10.7	22.0	11 17	5 43.43	+14 45.1	2.208	3.090	9.8	22.5
11 27	5 33.97	+22 23.9	1.804	2.755	6.7	21.8	11 27	5 34.52	+14 13.3	2.164	3.106	6.5	22.3
12 7	5 24.18	+22 8.4	1.777	2.758	2.4	21.5	12 7	5 24.34	+13 45.5	2.149	3.121	3.5	22.2
12 17	5 13.82	+21 51.0	1.780	2.761	2.1	21.5	12 17	5 13.82	+13 23.3	2.164	3.135	3.6	22.2
12 27	5 4.10	+21 33.2	1.813	2.763	6.5	21.8	12 27	5 3.94	+13 8.3	2.211	3.147	6.6	22.4
1 6	4 56.10	+21 17.3	1.872	2.765	10.4	22.0	1 6	4 55.56	+13 1.3	2.287	3.159	9.7	22.6
1 16	4 50.53	+21 5.5	1.956	2.767	13.8	22.3	1 16	4 49.26	+13 2.6	2.387	3.169	12.5	22.8
<b>293242</b>	2007 <i>BK</i> <sub>75</sub>		12 12.4 285°58'	0.8/12.2	17		<b>301371</b>	2009 <i>CC</i> <sub>54</sub>		12 12.4 331°54'	5.8/11.6	18	
11 7	5 44.68	+21 35.8	2.033	2.850	13.4	21.4	11 7	5 43.79	+10 44.1	1.556	2.381	16.4	20.3
11 17	5 39.78	+21 22.8	1.943	2.840	10.2	21.2	11 17	5 39.56	+10 2.1	1.479	2.373	13.0	20.1
11 27	5 32.56	+21 8.5	1.877	2.829	6.5	20.9	11 27	5 32.63	+9 28.1	1.424	2.366	9.2	19.9
12 7	5 23.71	+20 53.1	1.838	2.818	2.4	20.6	12 7	5 23.81	+9 6.0	1.394	2.359	6.3	19.7
12 17	5 14.20	+20 37.1	1.828	2.808	2.2	20.6	12 17	5 14.22	+8 58.8	1.389	2.352	6.4	19.7
12 27	5 5.16	+20 22.0	1.847	2.797	6.4	20.9	12 27	5 5.23	+9 8.0	1.412	2.346	9.6	19.8
1 6	4 57.63	+20 9.8	1.894	2.787	10.3	21.1	1 6	4 58.03	+9 32.9	1.458	2.341	13.5	20.0
1 16	4 52.34	+20 2.0	1.964	2.777	13.6	21.3	1 16	4 53.48	+10 11.4	1.526	2.336	17.0	20.3
<b>139972</b>	2001 <i>SQ</i> <sub>15</sub>		12 12.4 83°85'	1.2/12.2	18		<b>329534</b>	2002 <i>TM</i> <sub>56</sub>		12 12.4 82°57'	6.1/10.8	18	

EPHEMERIDES

12 12.4

12 12.4

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>102557</b>	1999 <i>UY</i> <sub>23</sub>	12 12.4	97°20	0°1/12.4	18		<b>82287</b>	2001 <i>KM</i> <sub>35</sub>	12 12.4	90°00	1°3/12.3	18	
11 7	5 52.80	+25 2.7	1.523	2.342	17.0	19.6	11 7	5 48.47	+19 1.3	1.937	2.749	14.2	19.3
11 17	5 46.20	+24 38.5	1.465	2.362	12.8	19.4	11 17	5 42.42	+19 6.7	1.877	2.770	10.7	19.2
11 27	5 36.61	+24 8.9	1.429	2.381	8.1	19.1	11 27	5 34.07	+19 13.8	1.840	2.790	6.7	19.0
12 7	5 25.13	+23 33.7	1.419	2.400	2.9	18.9	12 7	5 24.25	+19 22.3	1.831	2.811	2.6	18.7
12 17	5 13.22	+22 54.5	1.437	2.418	2.4	18.9	12 17	5 14.01	+19 31.8	1.851	2.831	2.4	18.8
12 27	5 2.45	+22 14.7	1.484	2.436	7.4	19.2	12 27	5 4.51	+19 42.6	1.902	2.850	6.4	19.1
1 6	4 54.03	+21 38.6	1.557	2.454	11.9	19.5	1 6	4 56.73	+19 55.4	1.979	2.870	10.0	19.3
1 16	4 48.69	+21 9.3	1.653	2.471	15.6	19.8	1 16	4 51.31	+20 10.7	2.081	2.889	13.2	19.6
<b>515780</b>	2015 <i>KZ</i> <sub>88</sub>	12 12.4	179°00	2°6/12.1	18		<b>275160</b>	2009 <i>VN</i> <sub>116</sub>	12 12.4	339°00	8°9/10.3	18	
11 7	5 49.08	+16 44.7	1.769	2.584	15.2	22.5	11 7	5 39.34	+ 4 35.2	1.627	2.445	16.2	19.9
11 17	5 43.26	+16 31.3	1.692	2.585	11.6	22.3	11 17	5 36.13	+ 3 16.4	1.547	2.427	13.4	19.6
11 27	5 34.82	+16 21.2	1.637	2.586	7.6	22.1	11 27	5 30.47	+ 2 8.3	1.489	2.410	10.7	19.4
12 7	5 24.57	+16 15.1	1.610	2.587	3.6	21.8	12 7	5 23.08	+ 1 17.5	1.454	2.394	9.0	19.3
12 17	5 13.63	+16 13.7	1.610	2.586	3.5	21.8	12 17	5 14.94	+ 0 49.5	1.444	2.380	9.4	19.3
12 27	5 3.33	+16 18.1	1.640	2.586	7.5	22.1	12 27	5 7.26	+ 0 47.2	1.458	2.366	11.7	19.4
1 6	4 54.83	+16 28.7	1.697	2.585	11.6	22.3	1 6	5 1.16	+ 1 9.8	1.496	2.354	14.7	19.6
1 16	4 48.92	+16 45.9	1.777	2.583	15.1	22.5	1 16	4 57.44	+ 1 54.1	1.553	2.342	17.7	19.7
<b>292356</b>	2006 <i>SX</i> <sub>226</sub>	12 12.4	318°81	2°0/11.9	18		<b>186482</b>	2002 <i>TX</i> <sub>107</sub>	12 12.4	32°18	3°4/12.3	18	
11 7	5 44.92	+20 4.6	1.733	2.558	15.0	21.0	11 7	5 47.38	+15 0.6	1.166	2.009	19.6	19.7
11 17	5 40.26	+19 30.5	1.650	2.551	11.4	20.7	11 17	5 42.90	+15 7.9	1.111	2.019	15.0	19.5
11 27	5 33.00	+18 55.1	1.591	2.543	7.3	20.5	11 27	5 34.98	+15 24.2	1.076	2.030	9.8	19.2
12 7	5 23.94	+18 19.8	1.557	2.537	3.1	20.2	12 7	5 24.71	+15 49.9	1.063	2.041	4.7	19.0
12 17	5 14.19	+17 46.7	1.552	2.530	3.1	20.2	12 17	5 13.64	+16 24.0	1.076	2.053	4.4	19.0
12 27	5 5.04	+17 18.5	1.575	2.524	7.4	20.4	12 27	5 3.62	+17 4.9	1.114	2.066	9.2	19.3
1 6	4 57.65	+16 57.6	1.623	2.518	11.6	20.7	1 6	4 56.14	+17 50.9	1.175	2.080	14.2	19.6
1 16	4 52.80	+16 45.6	1.695	2.512	15.3	20.9	1 16	4 52.06	+18 40.4	1.257	2.094	18.3	19.9
<b>32923</b>	1995 <i>GF</i> <sub>3</sub>	12 12.4	285°41	7°5/11.2	18		<b>129551</b>	1996 <i>TQ</i> <sub>19</sub>	12 12.4	111°98	0°5/12.3	17	
11 7	5 45.21	+ 6 58.4	1.630	2.442	16.4	19.2	11 7	5 43.85	+22 30.8	2.482	3.290	11.5	20.4
11 17	5 40.62	+ 6 3.7	1.544	2.426	13.3	18.9	11 17	5 38.63	+22 12.3	2.405	3.297	8.7	20.2
11 27	5 33.35	+ 5 18.8	1.480	2.410	10.1	18.7	11 27	5 31.59	+21 51.8	2.353	3.304	5.5	20.0
12 7	5 24.12	+ 4 48.9	1.441	2.393	7.7	18.5	12 7	5 23.38	+21 29.7	2.330	3.310	2.0	19.8
12 17	5 14.00	+ 4 38.2	1.427	2.377	8.0	18.5	12 17	5 14.78	+21 6.8	2.336	3.316	1.8	19.8
12 27	5 4.35	+ 4 48.8	1.440	2.361	10.7	18.6	12 27	5 6.69	+20 44.5	2.373	3.323	5.2	20.0
1 6	4 56.40	+ 5 19.8	1.477	2.345	14.3	18.8	1 6	4 59.88	+20 24.7	2.439	3.329	8.4	20.2
1 16	4 51.03	+ 6 8.1	1.536	2.329	17.7	19.0	1 16	4 54.91	+20 8.8	2.530	3.335	11.2	20.4
<b>29775</b>	1999 <i>CO</i> <sub>45</sub>	12 12.4	58°77	2°5/12.7	18		<b>144466</b>	2004 <i>EO</i> <sub>49</sub>	12 12.4	43°61	1°6/12.6	18	
11 7	5 49.97	+28 31.6	1.479	2.303	17.2	17.4	11 7	5 47.29	+26 43.8	1.750	2.570	15.1	20.0
11 17	5 44.57	+28 51.5	1.413	2.311	13.2	17.1	11 17	5 42.09	+26 59.1	1.679	2.575	11.5	19.8
11 27	5 35.90	+29 4.9	1.369	2.319	8.6	16.9	11 27	5 34.17	+27 10.2	1.630	2.581	7.4	19.6
12 7	5 24.99	+29 8.5	1.350	2.327	4.0	16.6	12 7	5 24.38	+27 14.8	1.608	2.587	3.1	19.3
12 17	5 13.33	+29 0.7	1.358	2.336	3.4	16.6	12 17	5 13.93	+27 12.0	1.613	2.593	2.6	19.3
12 27	5 2.63	+28 43.1	1.393	2.345	7.8	16.9	12 27	5 4.21	+27 2.6	1.647	2.599	6.8	19.6
1 6	4 54.32	+28 19.7	1.453	2.354	12.3	17.2	1 6	4 56.42	+26 49.5	1.707	2.606	10.9	19.8
1 16	4 49.25	+27 55.4	1.536	2.363	16.1	17.5	1 16	4 51.33	+26 35.9	1.791	2.612	14.4	20.1
<b>271549</b>	2004 <i>JD</i> <sub>19</sub>	12 12.4	242°65	0°3/12.4	18		<b>197830</b>	2004 <i>PC</i> <sub>92</sub>	12 12.4	79°66	2°4/12.9	18	
11 7	5 49.84	+24 47.1	1.784	2.599	15.1	21.7	11 7	5 51.12	+29 53.2	1.582	2.398	16.6	20.7
11 17	5 44.14	+24 38.3	1.691	2.586	11.6	21.4	11 17	5 45.12	+29 53.1	1.520	2.413	12.7	20.5
11 27	5 35.56	+24 25.2	1.622	2.573	7.4	21.1	11 27	5 36.06	+29 44.2	1.479	2.427	8.3	20.3
12 7	5 24.90	+24 6.9	1.579	2.559	2.7	20.8	12 7	5 25.02	+29 24.1	1.464	2.441	3.8	20.0
12 17	5 13.35	+23 43.3	1.564	2.545	2.3	20.8	12 17	5 13.44	+28 52.8	1.477	2.455	3.2	20.0
12 27	5 2.35	+23 16.4	1.579	2.531	7.1	21.0	12 27	5 2.90	+28 13.2	1.518	2.470	7.4	20.3
1 6	4 53.22	+22 49.6	1.621	2.516	11.6	21.3	1 6	4 54.69	+27 30.5	1.585	2.484	11.6	20.6
1 16	4 46.86	+22 26.2	1.686	2.500	15.5	21.5	1 16	4 49.56	+26 49.5	1.676	2.497	15.2	20.8
<b>328886</b>	2010 <i>OK</i> <sub>35</sub>	12 12.4	345°37	2°1/12.8	17		<b>5305</b>	Bernievolz	12 12.4	197°15	0°5/12.3	18	
11 7	5 46.83	+29 22.1	1.925	2.737	14.2	20.7	11 7	5 49.02	+22 28.4	2.001	2.811	13.8	18.0
11 17	5 41.60	+29 26.6	1.845	2.736	10.9	20.5	11 17	5 43.07	+22 19.1	1.916	2.808	10.5	17.8
11 27	5 33.79	+29 24.4	1.788	2.735	7.2	20.3	11 27	5 34.65	+22 7.8	1.855	2.805	6.7	17.6
12 7	5 24.21	+29 13.3	1.757	2.734	3.3	20.0	12 7	5 24.54	+21 54.2	1.821	2.802	2.4	17.3
12 17	5 13.99	+28 52.9	1.755	2.733	2.8	20.0	12 17	5 13.78	+21 38.7	1.817	2.798	2.1	17.3
12 27	5 4.42	+28 24.9	1.782	2.733	6.6	20.2	12 27	5 3.59	+21 22.6	1.843	2.793	6.4	17.6
1 6	4 56.64	+27 52.6	1.836	2.732	10.4	20.5	1 6	4 55.05	+21 8.1	1.897	2.788	10.4	17.8
1 16	4 51.41	+27 20.2	1.914	2.732	13.7	20.7	1 16	4 48.92	+20 57.4	1.975	2.782	13.8	18.0
<b>3081</b>	Martinūboh	12 12.4	96°34	2°0/12.6	18		<b>339668</b>	2005 <i>QJ</i> <sub>106</sub>	12 12.4	111°89	0°7/12.5	18	
11 7	5 52.56	+27 11.9	1.665	2.478	16.0	17.6	11 7	5 52.89	+24 37.5	1.762	2.572	15.4	21.6
11 17	5 46.04	+27 38.8	1.606	2.498	12.2	17.4	11 17	5 46.06	+24 49.7	1.701	2.592	11.7	21.4
11 27	5 36.58	+28 0.8	1.568	2.517	7.9	17.2	11 27	5 36.49	+24 58.8	1.662	2.612	7.4	21.2
12 7	5 25.18	+28 14.8	1.557	2.535	3.4	17.0	12 7	5 25.16	+25 2.9	1.651	2.631	2.7	21.0
12 17	5 13.21	+28 19.0	1.575	2.554	2.9	17.0	12 17	5 13.33	+25 1.3	1.669	2.650	2.3	21.0
12 27	5 2.20	+28 14.5	1.621	2.571	7.1	17.3	12 27	5 2.41	+24 55.1	1.717	2.668	6.7	21.3
1 6	4 53.41	+28 4.3	1.695	2.589	11.2	17.6	1 6	4 53.57	+24 46.7	1.793	2.685	10.8	21.6
1 16	4 47.60	+27 52.3	1.791	2.606	14.7	17.9	1 16	4 47.52	+24 39.1	1.892	2.702	14.2	21.8
<b>195774</b>	2002 <i>PL</i> <sub>137</sub>	12 12.4	91°95	2°2/12.1	18		<b>298455</b>	2003 <i>UC</i> <sub>89</sub>	12 12.4	290°24	6°7/10.2	18	



EPHEMERIDES

12 12.4

12 12.4

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>139653</b>	2001 <i>QE</i> <sub>177</sub>		12 12.4 212°21	1°5/12.1	18		<b>171005</b>	2005 <i>EQ</i> <sub>24</sub>		12 12.4 195°66	2°3/12.1	18	
11 7	5 46.03	+19 17.5	2.210	3.019	12.7	21.2	11 7	5 46.52	+17 5.0	1.821	2.639	14.7	20.2
11 17	5 40.58	+19 5.6	2.123	3.015	9.7	21.0	11 17	5 41.31	+16 58.0	1.744	2.639	11.2	20.0
11 27	5 32.99	+18 54.1	2.060	3.010	6.2	20.7	11 27	5 33.62	+16 54.2	1.689	2.639	7.3	19.8
12 7	5 23.94	+18 43.5	2.025	3.004	2.5	20.5	12 7	5 24.21	+16 54.2	1.661	2.638	3.3	19.5
12 17	5 14.31	+18 34.4	2.020	2.999	2.5	20.5	12 17	5 14.13	+16 58.5	1.661	2.638	3.2	19.5
12 27	5 5.14	+18 27.9	2.045	2.993	6.1	20.7	12 27	5 4.64	+17 7.7	1.690	2.638	7.1	19.8
1 6	4 57.36	+18 25.1	2.098	2.986	9.7	20.9	1 6	4 56.82	+17 22.1	1.746	2.637	11.1	20.0
1 16	4 51.67	+18 27.0	2.176	2.980	12.8	21.1	1 16	4 51.46	+17 41.9	1.825	2.637	14.6	20.2
<b>22921</b>	Siyuanliu		12 12.4 84°85	3°2/12.3	18		<b>32028</b>	2000 <i>JU</i> <sub>12</sub>		12 12.4 93°19	0°2/12.4	18	
11 7	5 50.63	+14 54.4	1.420	2.244	17.7	18.7	11 7	5 51.47	+23 5.9	1.666	2.482	15.9	20.0
11 17	5 44.77	+14 55.3	1.362	2.259	13.6	18.5	11 17	5 45.01	+23 0.2	1.609	2.504	12.0	19.9
11 27	5 35.89	+15 3.4	1.325	2.275	8.9	18.3	11 27	5 35.84	+22 52.2	1.574	2.526	7.5	19.6
12 7	5 24.99	+15 19.0	1.313	2.290	4.3	18.1	12 7	5 24.94	+22 41.2	1.566	2.547	2.7	19.4
12 17	5 13.47	+15 41.7	1.329	2.305	4.1	18.1	12 17	5 13.60	+22 27.5	1.587	2.568	2.3	19.4
12 27	5 2.90	+16 11.0	1.372	2.320	8.4	18.4	12 27	5 3.25	+22 12.8	1.637	2.588	6.9	19.8
1 6	4 54.58	+16 45.9	1.440	2.334	12.8	18.7	1 6	4 55.01	+21 59.6	1.714	2.608	11.1	20.0
1 16	4 49.32	+17 25.4	1.531	2.349	16.6	19.0	1 16	4 49.57	+21 50.2	1.814	2.628	14.5	20.3
<b>489967</b>	2008 <i>SA</i> <sub>46</sub>		12 12.4 215°51	8°8/13.2	17		<b>446839</b>	2001 <i>SK</i> <sub>120</sub>		12 12.4 51°74	0°9/12.2	17	
11 7	5 58.56	+53 18.2	2.899	3.593	12.6	21.6	11 7	5 46.65	+21 47.6	1.663	2.488	15.5	21.4
11 17	5 51.00	+54 43.4	2.815	3.587	11.2	21.5	11 17	5 41.43	+21 30.5	1.603	2.504	11.7	21.2
11 27	5 40.11	+55 54.0	2.754	3.580	9.9	21.4	11 27	5 33.63	+21 12.1	1.567	2.520	7.3	21.0
12 7	5 26.64	+56 43.3	2.717	3.572	9.0	21.3	12 7	5 24.17	+20 52.6	1.556	2.536	2.7	20.8
12 17	5 11.90	+57 6.4	2.707	3.564	8.9	21.3	12 17	5 14.25	+20 33.2	1.573	2.553	2.5	20.8
12 27	4 57.56	+57 2.4	2.722	3.556	9.6	21.4	12 27	5 5.19	+20 15.8	1.618	2.570	6.9	21.1
1 6	4 45.24	+56 34.6	2.763	3.547	10.9	21.4	1 6	4 58.07	+20 2.5	1.690	2.587	11.0	21.4
1 16	4 36.05	+55 49.2	2.826	3.538	12.3	21.5	1 16	4 53.57	+19 54.8	1.784	2.604	14.5	21.7
<b>484488</b>	2008 <i>CZ</i> <sub>191</sub>		12 12.4 249°46	4°3/11.6	17		<b>26559</b>	Chengcheng		12 12.4 117°78	3°5/12.1	18	
11 7	5 44.58	+11 36.4	2.164	2.969	13.1	22.0	11 7	5 49.62	+14 10.4	1.681	2.495	15.9	19.0
11 17	5 39.51	+11 5.4	2.074	2.958	10.3	21.8	11 17	5 43.64	+14 0.1	1.616	2.507	12.2	18.8
11 27	5 32.35	+10 39.8	2.008	2.946	7.2	21.6	11 27	5 35.04	+13 55.9	1.573	2.519	8.1	18.6
12 7	5 23.73	+10 21.8	1.968	2.934	4.7	21.4	12 7	5 24.69	+13 59.0	1.557	2.531	4.3	18.4
12 17	5 14.49	+10 13.4	1.958	2.922	4.8	21.4	12 17	5 13.78	+14 9.8	1.569	2.542	4.2	18.4
12 27	5 5.64	+10 15.7	1.977	2.909	7.5	21.5	12 27	5 3.63	+14 28.5	1.609	2.552	7.9	18.6
1 6	4 58.10	+10 28.9	2.023	2.896	10.7	21.7	1 6	4 55.38	+14 54.6	1.676	2.563	11.8	18.9
1 16	4 52.58	+10 52.2	2.093	2.883	13.7	21.9	1 16	4 49.78	+15 27.2	1.766	2.573	15.2	19.1
<b>314786</b>	2006 <i>TU</i> <sub>17</sub>		12 12.4 51°92	1°3/12.5	18		<b>362824</b>	2011 <i>YB</i> <sub>79</sub>		12 12.4 50°34	1°5/12.3	18	
11 7	5 47.68	+25 30.4	1.701	2.522	15.4	21.1	11 7	5 45.80	+18 24.5	1.891	2.708	14.2	20.7
11 17	5 42.37	+25 51.7	1.636	2.534	11.7	20.9	11 17	5 40.68	+18 31.2	1.817	2.713	10.8	20.4
11 27	5 34.33	+26 9.8	1.594	2.546	7.4	20.7	11 27	5 33.17	+18 40.8	1.766	2.717	6.9	20.2
12 7	5 24.44	+26 22.7	1.578	2.558	2.9	20.4	12 7	5 24.04	+18 52.8	1.743	2.722	2.8	20.0
12 17	5 13.93	+26 29.0	1.590	2.570	2.5	20.4	12 17	5 14.31	+19 6.9	1.748	2.727	2.6	20.0
12 27	5 4.22	+26 29.3	1.630	2.583	6.8	20.7	12 27	5 5.16	+19 23.3	1.782	2.732	6.6	20.2
1 6	4 56.49	+26 25.9	1.697	2.595	10.9	21.0	1 6	4 57.64	+19 42.0	1.843	2.737	10.5	20.5
1 16	4 51.49	+26 21.6	1.787	2.608	14.4	21.3	1 16	4 52.48	+20 3.6	1.928	2.742	13.8	20.7
<b>319063</b>	2005 <i>WT</i> <sub>26</sub>		12 12.4 60°93	0°6/12.5	18		<b>488871</b>	2005 <i>SM</i> <sub>127</sub>		12 12.4 63°55	0°4/12.4	16	
11 7	5 46.08	+24 34.8	1.982	2.797	13.7	21.0	11 7	5 51.33	+22 33.8	1.348	2.178	18.2	21.4
11 17	5 40.83	+24 44.4	1.909	2.804	10.4	20.8	11 17	5 45.37	+22 30.3	1.299	2.202	13.7	21.2
11 27	5 33.22	+24 51.7	1.860	2.811	6.6	20.6	11 27	5 36.24	+22 25.2	1.272	2.226	8.6	20.9
12 7	5 24.03	+24 55.2	1.838	2.818	2.4	20.3	12 7	5 25.11	+22 17.6	1.269	2.250	3.0	20.7
12 17	5 14.27	+24 54.4	1.845	2.826	2.0	20.3	12 17	5 13.52	+22 7.9	1.294	2.275	2.6	20.7
12 27	5 5.15	+24 50.1	1.881	2.833	6.1	20.6	12 27	5 3.16	+21 57.7	1.345	2.299	7.8	21.1
1 6	4 57.68	+24 44.2	1.945	2.841	9.9	20.9	1 6	4 55.30	+21 49.7	1.422	2.323	12.4	21.4
1 16	4 52.56	+24 38.8	2.033	2.848	13.1	21.1	1 16	4 50.65	+21 46.0	1.521	2.347	16.2	21.7
<b>523437</b>	2017 <i>EF</i> <sub>25</sub>		12 12.4 231°92	4°4/11.7	18		<b>176629</b>	2002 <i>JA</i> <sub>145</sub>		12 12.4 163°68	5°3/12.0	18	
11 7	5 42.55	+ 9 16.5	2.468	3.266	11.9	21.8	11 7	5 49.76	+ 9 53.9	1.662	2.470	16.3	20.5
11 17	5 37.68	+ 8 53.7	2.384	3.261	9.4	21.6	11 17	5 43.85	+ 9 33.3	1.590	2.474	12.8	20.3
11 27	5 31.05	+ 8 37.8	2.325	3.257	6.7	21.4	11 27	5 35.26	+ 9 22.5	1.540	2.478	9.0	20.1
12 7	5 23.23	+ 8 30.6	2.293	3.252	4.7	21.3	12 7	5 24.81	+ 9 23.9	1.516	2.481	5.9	19.9
12 17	5 14.94	+ 8 33.5	2.290	3.248	4.8	21.3	12 17	5 13.69	+ 9 38.8	1.520	2.483	5.9	19.9
12 27	5 7.03	+ 8 47.0	2.317	3.243	6.9	21.4	12 27	5 3.24	+10 7.3	1.552	2.486	9.0	20.1
1 6	5 0.25	+ 9 10.7	2.371	3.238	9.6	21.6	1 6	4 54.65	+10 47.7	1.609	2.487	12.7	20.4
1 16	4 55.19	+ 9 43.2	2.450	3.233	12.1	21.7	1 16	4 48.71	+11 37.7	1.690	2.488	16.1	20.6
<b>220788</b>	2004 <i>TA</i> <sub>174</sub>		12 12.4 22°01	0°4/12.5	18		<b>401389</b>	2013 <i>CB</i> <sub>34</sub>		12 12.4 212°98	4°7/13.5	15	
11 7	5 44.74	+24 26.8	1.762	2.587	14.8	20.2	11 7	5 51.73	+38 15.5	2.439	3.212	12.7	22.3
11 17	5 40.07	+24 23.7	1.692	2.592	11.2	20.0	11 17	5 45.09	+38 34.3	2.346	3.205	10.2	22.1
11 27	5 32.84	+24 17.4	1.645	2.598	7.1	19.8	11 27	5 35.94	+38 41.8	2.276	3.197	7.6	22.0
12 7	5 23.91	+24 7.3	1.623	2.604	2.6	19.5	12 7	5 25.05	+38 34.6	2.234	3.188	5.2	21.8
12 17	5 14.40	+23 53.6	1.630	2.611	2.1	19.5	12 17	5 13.48	+38 10.7	2.221	3.179	4.8	21.8
12 27	5 5.60	+23 37.8	1.665	2.618	6.6	19.8	12 27	5 2.50	+37 31.3	2.238	3.169	6.8	21.9
1 6	4 58.60	+23 22.3	1.726	2.626	10.7	20.1	1 6	4 53.22	+36 40.5	2.283	3.159	9.6	22.0
1 16	4 54.15	+23 9.5	1.811	2.634	14.1	20.3	1 16	4 46.41	+35 43.5	2.354	3.148	12.3	22.2
<b>212805</b>	2007 <i>TU</i> <sub>361</sub>		12 12.4 268°34	0°7/12.3	18		<b>260786</b>	2005 <i>NP</i> <sub>40</sub>		12 12.4 85°22	2°7/12.1	1	

EPHEMERIDES

12 12.4

12 12.4

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>403941</b>	2012 <i>BY</i> <sub>25</sub>	12 12.4 356°29		1.3/12.6 17			<b>105331</b>	2000 <i>QK</i> <sub>84</sub>	12 12.4 149°22		4°4/13.6 18		
11 7	5 46.56	+27 7.0	1.861	2.678	14.4	21.2	11 7	5 50.69	+37 29.3	2.357	3.135	12.9	20.0
11 17	5 41.46	+27 7.3	1.782	2.677	11.1	21.0	11 17	5 44.21	+37 44.3	2.279	3.142	10.3	19.8
11 27	5 33.77	+27 2.3	1.726	2.677	7.1	20.7	11 27	5 35.30	+37 48.1	2.224	3.148	7.5	19.7
12 7	5 24.30	+26 50.7	1.697	2.676	2.9	20.5	12 7	5 24.81	+37 37.5	2.197	3.154	5.0	19.5
12 17	5 14.17	+26 32.1	1.696	2.676	2.4	20.4	12 17	5 13.81	+37 11.4	2.199	3.160	4.6	19.5
12 27	5 4.70	+26 8.3	1.724	2.676	6.6	20.7	12 27	5 3.52	+36 31.3	2.231	3.165	6.6	19.6
1 6	4 57.03	+25 42.2	1.778	2.676	10.6	21.0	1 6	4 54.98	+35 41.5	2.291	3.170	9.4	19.8
1 16	4 51.91	+25 17.5	1.857	2.676	14.0	21.2	1 16	4 48.88	+34 47.1	2.376	3.175	12.0	20.0
<b>85246</b>	1993 <i>RL</i> <sub>4</sub>	12 12.4 127°68		0°3/12.4 18			<b>70452</b>	1999 <i>TH</i> <sub>19</sub>	12 12.4 71°80		7°3/13.1 18		
11 7	5 50.00	+23 1.9	1.788	2.602	15.0	19.6	11 7	5 56.20	+38 30.9	1.660	2.451	17.0	19.2
11 17	5 43.92	+22 51.7	1.718	2.613	11.4	19.4	11 17	5 49.46	+39 55.1	1.607	2.472	13.8	19.0
11 27	5 35.22	+22 39.1	1.671	2.623	7.2	19.1	11 27	5 39.12	+41 5.9	1.575	2.494	10.4	18.8
12 7	5 24.78	+22 23.7	1.652	2.632	2.6	18.9	12 7	5 26.27	+41 55.6	1.568	2.515	7.8	18.7
12 17	5 13.80	+22 5.8	1.661	2.642	2.2	18.9	12 17	5 12.57	+42 18.9	1.589	2.537	7.5	18.8
12 27	5 3.60	+21 47.4	1.699	2.650	6.8	19.2	12 27	4 59.96	+42 16.4	1.636	2.558	9.6	18.9
1 6	4 55.31	+21 30.8	1.765	2.659	10.9	19.4	1 6	4 50.02	+41 53.6	1.709	2.579	12.5	19.2
1 16	4 49.67	+21 18.5	1.854	2.667	14.3	19.7	1 16	4 43.66	+41 18.5	1.803	2.600	15.3	19.4
<b>198743</b>	2005 <i>EX</i> <sub>36</sub>	12 12.4 252°59		2°0/12.7 18			<b>199859</b>	2007 <i>EB</i> <sub>101</sub>	12 12.4 151°88		1°3/12.3 18		
11 7	5 45.16	+29 6.7	2.608	3.407	11.3	20.5	11 7	5 49.44	+19 36.1	1.827	2.641	14.8	21.0
11 17	5 39.87	+29 27.3	2.513	3.397	8.7	20.3	11 17	5 43.51	+19 35.2	1.753	2.647	11.3	20.8
11 27	5 32.57	+29 43.6	2.443	3.387	5.8	20.1	11 27	5 35.00	+19 35.5	1.702	2.652	7.1	20.6
12 7	5 23.85	+29 53.7	2.401	3.376	2.8	19.9	12 7	5 24.74	+19 36.8	1.677	2.657	2.8	20.3
12 17	5 14.53	+29 56.4	2.389	3.365	2.5	19.9	12 17	5 13.85	+19 38.9	1.682	2.662	2.6	20.3
12 27	5 5.56	+29 52.0	2.408	3.354	5.4	20.1	12 27	5 3.63	+19 42.6	1.717	2.666	6.9	20.6
1 6	4 57.84	+29 42.1	2.455	3.343	8.4	20.3	1 6	4 55.19	+19 48.9	1.778	2.670	10.9	20.9
1 16	4 52.04	+29 29.2	2.528	3.332	11.2	20.4	1 16	4 49.31	+19 58.8	1.863	2.673	14.4	21.1
<b>351095</b>	2003 <i>UO</i> <sub>241</sub>	12 12.4 49°88		2°1/12.1 15			<b>27345</b>	2000 <i>DC</i> <sub>8</sub>	12 12.4 142°48		3°6/12.0 18		
11 7	5 47.33	+19 1.5	1.467	2.298	16.9	21.3	11 7	5 49.29	+14 17.0	1.768	2.580	15.3	19.3
11 17	5 42.18	+18 40.4	1.413	2.315	12.8	21.1	11 17	5 43.34	+13 58.3	1.698	2.588	11.8	19.1
11 27	5 34.21	+18 20.8	1.380	2.333	8.1	20.9	11 27	5 34.86	+13 45.0	1.651	2.596	7.9	19.9
12 7	5 24.42	+18 3.8	1.372	2.351	3.4	20.7	12 7	5 24.68	+13 38.3	1.631	2.604	4.3	18.7
12 17	5 14.15	+17 50.6	1.391	2.369	3.3	20.7	12 17	5 13.93	+13 39.4	1.639	2.611	4.3	18.7
12 27	5 4.85	+17 42.9	1.437	2.388	7.8	21.0	12 27	5 3.87	+13 49.0	1.676	2.617	7.8	19.0
1 6	4 57.70	+17 41.9	1.509	2.407	12.1	21.3	1 6	4 55.60	+14 6.9	1.739	2.623	11.6	19.2
1 16	4 53.38	+17 48.2	1.603	2.426	15.7	21.6	1 16	4 49.87	+14 32.5	1.826	2.628	14.9	19.4
<b>521482</b>	2015 <i>OA</i> <sub>94</sub>	12 12.4 300°27		4°9/11.8 18			<b>439407</b>	2013 <i>BG</i> <sub>76</sub>	12 12.4 17°27		4°0/12.2 18		
11 7	5 45.77	+11 35.3	1.706	2.523	15.5	21.2	11 7	5 45.53	+13 11.2	1.514	2.341	16.7	20.3
11 17	5 40.85	+11 5.2	1.631	2.521	12.2	21.0	11 17	5 40.94	+13 4.0	1.446	2.344	12.9	20.1
11 27	5 33.39	+10 42.6	1.577	2.519	8.5	20.8	11 27	5 33.56	+13 5.0	1.399	2.347	8.7	19.9
12 7	5 24.18	+10 30.0	1.550	2.517	5.4	20.6	12 7	5 24.27	+13 15.8	1.377	2.350	4.8	19.7
12 17	5 14.29	+10 29.4	1.549	2.515	5.5	20.6	12 17	5 14.26	+13 36.8	1.382	2.355	4.7	19.7
12 27	5 4.99	+10 41.7	1.577	2.513	8.6	20.8	12 27	5 4.95	+14 7.6	1.414	2.359	8.5	19.9
1 6	4 57.40	+11 6.5	1.630	2.511	12.3	21.0	1 6	4 57.58	+14 46.9	1.471	2.364	12.6	20.2
1 16	4 52.31	+11 41.9	1.705	2.510	15.7	21.2	1 16	4 52.95	+15 33.0	1.550	2.370	16.3	20.4
<b>149317</b>	2002 <i>UO</i> <sub>49</sub>	12 12.4 348°64		7°8/12.9 17			<b>515264</b>	2012 <i>RC</i> <sub>30</sub>	12 12.4 76°59		4°7/12.1 18		
11 7	5 46.90	+37 28.3	1.399	2.218	18.2	19.2	11 7	5 49.91	+11 50.9	1.519	2.336	17.1	21.3
11 17	5 43.22	+38 42.6	1.325	2.209	14.9	19.0	11 17	5 43.88	+11 30.2	1.469	2.359	13.2	21.1
11 27	5 35.68	+39 45.3	1.270	2.201	11.3	18.7	11 27	5 35.16	+11 18.5	1.440	2.383	9.0	20.9
12 7	5 25.19	+40 28.3	1.239	2.194	8.4	18.6	12 7	5 24.75	+11 17.6	1.437	2.407	5.4	20.7
12 17	5 13.36	+40 45.1	1.232	2.188	8.1	18.5	12 17	5 13.93	+11 28.4	1.462	2.430	5.3	20.8
12 27	5 2.32	+40 35.1	1.250	2.184	10.7	18.7	12 27	5 4.09	+11 50.7	1.514	2.453	8.7	21.0
1 6	4 53.95	+40 3.4	1.290	2.181	14.3	18.9	1 6	4 56.34	+12 23.2	1.592	2.476	12.4	21.3
1 16	4 49.42	+39 18.4	1.352	2.179	17.9	19.1	1 16	4 51.36	+13 3.8	1.692	2.498	15.7	21.6
<b>97629</b>	2000 <i>EW</i> <sub>135</sub>	12 12.4 133°30		6°3/11.4 18			<b>265486</b>	2005 <i>EV</i> <sub>120</sub>	12 12.4 321°13		12°9/ 8.2 17		
11 7	5 42.10	+ 2 49.1	2.512	3.292	12.2	19.6	11 7	5 40.86	-12 39.0	2.127	2.853	15.7	20.0
11 17	5 37.24	+ 2 12.6	2.440	3.296	10.0	19.5	11 17	5 36.76	-14 19.1	2.060	2.841	14.4	19.8
11 27	5 30.74	+ 1 46.7	2.392	3.300	7.9	19.3	11 27	5 30.67	-15 39.0	2.013	2.829	13.4	19.8
12 7	5 23.15	+ 1 34.1	2.370	3.304	6.4	19.3	12 7	5 23.20	-16 31.7	1.988	2.817	12.9	19.7
12 17	5 15.18	+ 1 36.7	2.377	3.307	6.5	19.3	12 17	5 15.17	-16 52.4	1.985	2.806	13.2	19.7
12 27	5 7.63	+ 1 54.8	2.412	3.311	8.1	19.4	12 27	5 7.54	-16 39.5	2.003	2.795	14.2	19.7
1 6	5 1.19	+ 2 27.3	2.473	3.314	10.2	19.5	1 6	5 1.18	-15 55.3	2.042	2.784	15.5	19.8
1 16	4 56.40	+ 3 11.7	2.558	3.318	12.3	19.7	1 16	4 56.74	-14 44.7	2.099	2.774	17.0	19.9
<b>183123</b>	2002 <i>RN</i> <sub>178</sub>	12 12.4 87°03		1°0/12.3 18			<b>82091</b>	2001 <i>DE</i> <sub>81</sub>	12 12.4 126°18		3°6/12.8 18		
11 7	5 51.24	+21 16.3	1.455	2.281	17.3	21.0	11 7	5 55.21	+31 2.0	1.809	2.608	15.5	19.0
11 17	5 45.23	+21 7.9	1.398	2.298	13.1	20.8	11 17	5 48.10	+31 43.4	1.743	2.625	12.0	18.8
11 27	5 36.18	+20 59.0	1.361	2.315	8.2	20.6	11 27	5 37.99	+32 17.4	1.701	2.641	8.1	18.6
12 7	5 25.14	+20 49.3	1.351	2.331	3.0	20.3	12 7	5 25.83	+32 39.5	1.685	2.656	4.5	18.4
12 17	5 13.55	+20 39.2	1.368	2.348	2.7	20.3	12 17	5 13.00	+32 47.1	1.698	2.670	4.1	18.5
12 27	5 3.00	+20 30.4	1.412	2.364	7.7	20.7	12 27	5 1.07	+32 40.7	1.740	2.684	7.3	18.7
1 6	4 54.77	+20 25.0	1.483	2.380	12.3	21.0	1 6	4 51.33	+32 24.2	1.810	2.697	11.0	18.9
1 16	4 49.61	+20 24.7	1.575	2.396	16.0	21.3	1 16	4 44.62	+32 2.5	1.904	2.709	14.3	19.2
<b>324043</b>	2005 <i>UZ</i> <sub>511</sub>	12 12.4 330°60		0°6/12.5 17			<b>476537</b>	2008 <i>HE</i> <sub>6</sub>	12 12.4 185°54		2°2/12.7 18		
11 7	5 45.07</												

EPHEMERIDES

12 12.4

12 12.4

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>335431</b>	2005 <i>UT</i> <sub>99</sub>		12 12.4 70°40	1.7/12.3	16		<b>15818</b>	DeVený		12 12.4 298°52	0.2/12.4	18	
11 7	5 51.09	+19 2.5	1.427	2.253	17.6	21.1	11 7	5 48.15	+23 55.1	1.485	2.314	16.8	20.2
11 17	5 45.03	+18 59.4	1.377	2.277	13.3	20.9	11 17	5 43.33	+23 51.6	1.404	2.306	12.9	19.9
11 27	5 36.00	+18 58.6	1.349	2.301	8.4	20.6	11 27	5 35.32	+23 45.0	1.345	2.299	8.2	19.6
12 7	5 25.08	+18 59.9	1.345	2.325	3.3	20.4	12 7	5 25.00	+23 34.4	1.310	2.291	3.0	19.3
12 17	5 13.71	+19 3.2	1.370	2.349	3.1	20.4	12 17	5 13.72	+23 19.5	1.303	2.284	2.5	19.2
12 27	5 3.44	+19 9.3	1.421	2.373	7.8	20.8	12 27	5 3.14	+23 2.1	1.323	2.277	7.9	19.6
1 6	4 55.49	+19 19.2	1.499	2.396	12.2	21.1	1 6	4 54.71	+22 45.3	1.368	2.270	12.7	19.8
1 16	4 50.57	+19 33.6	1.599	2.419	15.9	21.4	1 16	4 49.42	+22 32.4	1.435	2.263	16.9	20.1
<b>97654</b>	2000 <i>FR</i> <sub>17</sub>		12 12.4 168°17	3.0/12.0	18		<b>252064</b>	2000 <i>SX</i> <sub>127</sub>		12 12.4 35°72	3.0/12.6	18	
11 7	5 43.16	+12 51.4	2.528	3.329	11.5	19.5	11 7	5 50.11	+27 2.6	1.038	1.887	21.1	19.8
11 17	5 38.12	+12 42.6	2.447	3.331	8.9	19.4	11 17	5 45.67	+27 45.2	0.989	1.900	16.1	19.5
11 27	5 31.35	+12 38.8	2.391	3.332	6.0	19.2	11 27	5 37.08	+28 22.9	0.959	1.915	10.5	19.3
12 7	5 23.41	+12 40.9	2.363	3.333	3.5	19.0	12 7	5 25.63	+28 50.2	0.951	1.930	4.7	19.0
12 17	5 15.04	+12 49.6	2.365	3.334	3.5	19.0	12 17	5 13.29	+29 3.5	0.967	1.946	4.1	19.0
12 27	5 7.05	+13 5.0	2.397	3.334	6.0	19.2	12 27	5 2.35	+29 3.6	1.007	1.963	9.4	19.4
1 6	5 0.21	+13 27.0	2.457	3.335	8.9	19.4	1 6	4 54.56	+28 55.3	1.070	1.981	14.6	19.8
1 16	4 55.08	+13 54.8	2.543	3.336	11.5	19.5	1 16	4 50.83	+28 43.9	1.152	1.999	19.0	20.1
<b>24049</b>	1999 <i>TZ</i> <sub>18</sub>		12 12.4 15°08	2.4/12.2	18		<b>392565</b>	2011 <i>SA</i> <sub>94</sub>		12 12.4 129°59	1.8/12.8	18	
11 7	5 45.89	+19 7.5	1.132	1.982	19.6	17.6	11 7	5 50.44	+28 48.9	2.200	2.998	13.1	22.1
11 17	5 42.03	+18 49.6	1.072	1.985	15.0	17.4	11 17	5 43.90	+28 55.2	2.130	3.013	10.0	21.9
11 27	5 34.62	+18 33.9	1.031	1.988	9.6	17.1	11 27	5 35.07	+28 55.4	2.083	3.028	6.5	21.7
12 7	5 24.72	+18 21.5	1.013	1.993	4.0	16.8	12 7	5 24.76	+28 48.0	2.065	3.042	2.9	21.5
12 17	5 13.95	+18 13.6	1.019	1.999	3.8	16.8	12 17	5 14.00	+28 32.3	2.077	3.055	2.5	21.5
12 27	5 4.22	+18 12.1	1.051	2.006	9.3	17.1	12 27	5 3.95	+28 9.9	2.119	3.068	5.8	21.7
1 6	4 57.07	+18 18.2	1.105	2.013	14.5	17.5	1 6	4 55.59	+27 43.7	2.190	3.080	9.3	22.0
1 16	4 53.41	+18 32.4	1.178	2.021	18.9	17.7	1 16	4 49.57	+27 17.1	2.286	3.091	12.2	22.2
<b>366534</b>	2002 <i>QO</i> <sub>71</sub>		12 12.4 58°81	2.7/12.0	18		<b>407774</b>	2011 <i>WE</i> <sub>115</sub>		12 12.4 15°74	5.6/12.9	18	
11 7	5 43.63	+15 22.1	2.150	2.963	12.9	21.1	11 7	5 45.75	+ 7 50.8	1.391	2.215	18.1	19.8
11 17	5 38.67	+15 6.9	2.083	2.975	9.9	20.9	11 17	5 41.28	+ 8 11.9	1.328	2.220	14.3	19.6
11 27	5 31.75	+14 55.6	2.040	2.987	6.5	20.7	11 27	5 33.88	+ 8 49.8	1.285	2.226	10.1	19.3
12 7	5 23.55	+14 49.0	2.024	2.999	3.4	20.5	12 7	5 24.44	+ 9 45.5	1.266	2.233	6.4	19.1
12 17	5 14.95	+14 48.0	2.038	3.011	3.3	20.6	12 17	5 14.23	+10 57.3	1.274	2.242	6.0	19.1
12 27	5 6.91	+14 53.3	2.081	3.024	6.4	20.8	12 27	5 4.77	+12 21.6	1.308	2.251	9.3	19.4
1 6	5 0.26	+15 4.9	2.151	3.036	9.6	21.0	1 6	4 57.36	+13 53.3	1.367	2.262	13.3	19.6
1 16	4 55.60	+15 22.7	2.245	3.049	12.4	21.2	1 16	4 52.84	+15 27.9	1.449	2.273	17.0	19.9
<b>401181</b>	2011 <i>WL</i> <sub>102</sub>		12 12.4 154°94	0.4/12.4	18		<b>170651</b>	2003 <i>YT</i> <sub>114</sub>		12 12.4 15°34	1.2/12.3	18	
11 7	5 47.94	+21 1.0	2.265	3.070	12.6	21.7	11 7	5 45.55	+19 37.8	1.449	2.284	16.9	19.4
11 17	5 41.97	+21 13.1	2.187	3.077	9.5	21.5	11 17	5 41.19	+19 46.3	1.382	2.287	12.8	19.2
11 27	5 33.87	+21 25.6	2.133	3.083	6.0	21.0	11 27	5 33.85	+19 57.4	1.336	2.291	8.1	18.9
12 7	5 24.34	+21 37.5	2.108	3.088	2.2	21.0	12 7	5 24.44	+20 10.6	1.315	2.296	3.1	18.6
12 17	5 14.27	+21 48.3	2.113	3.094	1.9	21.0	12 17	5 14.26	+20 25.0	1.321	2.301	2.8	18.6
12 27	5 4.71	+21 58.2	2.149	3.098	5.7	21.3	12 27	5 4.86	+20 40.9	1.354	2.308	7.7	18.9
1 6	4 56.60	+22 7.9	2.213	3.103	9.2	21.5	1 6	4 57.54	+20 58.7	1.411	2.315	12.3	19.2
1 16	4 50.59	+22 18.5	2.303	3.106	12.2	21.7	1 16	4 53.17	+21 19.2	1.491	2.322	16.2	19.5
<b>511737</b>	2015 <i>DU</i> <sub>81</sub>		12 12.4 168°82	4.6/12.9	18		<b>434485</b>	2005 <i>RK</i> <sub>19</sub>		12 12.4 161°98	0.7/12.5	18	
11 7	5 54.84	+33 9.8	1.649	2.452	16.6	22.3	11 7	5 51.46	+24 50.6	1.871	2.680	14.7	22.4
11 17	5 48.36	+33 52.3	1.574	2.455	13.1	22.1	11 17	5 45.11	+24 58.1	1.794	2.685	11.2	22.2
11 27	5 38.46	+34 25.7	1.520	2.458	9.1	21.9	11 27	5 36.07	+25 2.5	1.741	2.690	7.1	22.0
12 7	5 26.09	+34 44.5	1.492	2.460	5.5	21.7	12 7	5 25.19	+25 2.0	1.715	2.695	2.7	21.7
12 17	5 12.77	+34 45.0	1.492	2.462	5.1	21.6	12 17	5 13.66	+24 56.2	1.718	2.699	2.2	21.7
12 27	5 0.30	+34 27.9	1.521	2.463	8.3	21.8	12 27	5 2.82	+24 45.9	1.751	2.702	6.6	22.0
1 6	4 50.23	+33 58.0	1.575	2.464	12.3	22.1	1 6	4 53.86	+24 33.7	1.812	2.705	10.7	22.2
1 16	4 43.55	+33 21.9	1.652	2.464	15.8	22.3	1 16	4 47.56	+24 22.4	1.897	2.707	14.2	22.5
<b>519269</b>	2011 <i>AX</i> <sub>82</sub>		12 12.4 302°61	1.7/12.7	18		<b>139459</b>	2001 <i>OY</i> <sub>74</sub>		12 12.4 84°21	2.5/13.1	18	
11 7	5 49.25	+27 33.7	1.380	2.211	17.8	21.8	11 7	5 50.50	+31 18.0	1.928	2.731	14.5	19.6
11 17	5 44.47	+27 31.5	1.301	2.203	13.8	21.5	11 17	5 44.17	+31 13.0	1.866	2.751	11.2	19.4
11 27	5 36.17	+27 22.1	1.242	2.195	8.9	21.2	11 27	5 35.30	+30 58.7	1.827	2.770	7.4	19.3
12 7	5 25.32	+27 3.1	1.207	2.187	3.7	20.9	12 7	5 24.85	+30 33.8	1.815	2.790	3.6	19.1
12 17	5 13.42	+26 34.1	1.199	2.179	3.0	20.8	12 17	5 14.02	+29 58.2	1.832	2.809	3.0	19.1
12 27	5 2.33	+25 57.6	1.217	2.172	8.3	21.1	12 27	5 4.11	+29 14.9	1.879	2.828	6.4	19.3
1 6	4 53.68	+25 19.0	1.260	2.165	13.4	21.4	1 6	4 56.18	+28 28.2	1.954	2.847	10.0	19.6
1 16	4 48.48	+24 43.4	1.325	2.158	17.8	21.6	1 16	4 50.86	+27 42.7	2.052	2.865	13.1	19.8
<b>341932</b>	2008 <i>OU</i>		12 12.4 94°76	1.7/12.8	18		<b>243880</b>	2000 <i>YH</i> <sub>23</sub>		12 12.4 248°37	3.1/12.2	18	
11 7	5 52.16	+28 18.5	1.638	2.451	16.2	21.1	11 7	5 48.18	+13 23.1	2.154	2.955	13.3	21.0
11 17	5 45.77	+28 15.6	1.577	2.469	12.4	20.9	11 17	5 42.45	+13 25.9	2.053	2.937	10.4	20.8
11 27	5 36.46	+28 5.3	1.538	2.486	8.0	20.7	11 27	5 34.40	+13 34.9	1.976	2.918	7.0	20.5
12 7	5 25.27	+27 46.0	1.525	2.503	3.4	20.4	12 7	5 24.65	+13 50.8	1.926	2.899	3.8	20.3
12 17	5 13.58	+27 17.5	1.541	2.520	2.7	20.4	12 17	5 14.06	+14 13.8	1.906	2.878	3.7	20.2
12 27	5 2.93	+26 42.8	1.585	2.537	7.1	20.7	12 27	5 3.75	+14 43.6	1.917	2.858	7.0	20.4
1 6	4 54.53	+26 6.3	1.656	2.553	11.3	21.0	1 6	4 54.78	+15 19.6	1.955	2.837	10.6	20.6
1 16	4 49.10	+25 32.1	1.751	2.569	14.8	21.3	1 16	4 47.94	+16 0.9	2.019	2.815	13.9	20.8
<b>104921</b>	2000 <i>JW</i> <sub>18</sub>		12 12.4 214°57	4.1/11.9	18		<b>175452</b>	Chenggong		12 12.4 99°77	2.6/12.3	18	

EPHEMERIDES

12 12.4

12 12.4

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>377527</b>	2005 GA <sub>89</sub>		12 12.4 197°89	1°5/12.2 18			<b>84779</b>	2002 XQ <sub>59</sub>		12 12.4 312°50	1°8/12.4 18		
11 7	5 50.71	+20 41.6	1.809	2.621	15.0	22.1	11 7	5 46.33	+16 55.8	1.839	2.657	14.6	19.4
11 17	5 44.59	+20 17.6	1.725	2.618	11.4	21.9	11 17	5 41.32	+17 12.2	1.756	2.651	11.2	19.1
11 27	5 35.79	+19 52.2	1.665	2.615	7.3	21.6	11 27	5 33.79	+17 33.7	1.696	2.646	7.2	18.9
12 7	5 25.12	+19 25.9	1.631	2.611	2.9	21.3	12 7	5 24.44	+17 59.7	1.662	2.641	3.1	18.6
12 17	5 13.73	+18 59.9	1.627	2.606	2.8	21.3	12 17	5 14.32	+18 29.4	1.658	2.636	2.8	18.6
12 27	5 2.97	+18 36.5	1.653	2.601	7.2	21.6	12 27	5 4.68	+19 1.9	1.682	2.632	6.9	18.8
1 6	4 54.05	+18 18.2	1.705	2.595	11.4	21.8	1 6	4 56.66	+19 36.8	1.733	2.627	11.0	19.1
1 16	4 47.77	+18 6.7	1.781	2.588	15.1	22.1	1 16	4 51.07	+20 13.8	1.808	2.623	14.5	19.3
<b>299630</b>	2006 JF <sub>68</sub>		12 12.4 149°04	2°0/11.9 18			<b>187354</b>	2005 UM <sub>229</sub>		12 12.4 350°46	1°0/12.3 18		
11 7	5 47.80	+20 21.6	1.878	2.694	14.4	20.9	11 7	5 45.10	+20 44.7	1.986	2.804	13.6	21.0
11 17	5 42.16	+19 36.6	1.802	2.697	10.9	20.7	11 17	5 40.15	+20 35.2	1.907	2.803	10.4	20.8
11 27	5 34.11	+18 49.6	1.750	2.701	7.0	20.5	11 27	5 32.90	+20 25.6	1.851	2.802	6.6	20.6
12 7	5 24.47	+18 2.3	1.725	2.704	3.0	20.2	12 7	5 24.08	+20 15.8	1.821	2.802	2.5	20.3
12 17	5 14.31	+17 17.2	1.729	2.707	3.0	20.3	12 17	5 14.67	+20 6.5	1.821	2.801	2.3	20.3
12 27	5 4.84	+16 37.4	1.763	2.709	7.0	20.5	12 27	5 5.80	+19 58.7	1.850	2.801	6.3	20.6
1 6	4 57.10	+16 5.6	1.824	2.712	10.9	20.8	1 6	4 58.49	+19 53.9	1.907	2.801	10.2	20.8
1 16	4 51.78	+15 43.4	1.908	2.714	14.2	21.0	1 16	4 53.45	+19 53.5	1.987	2.801	13.5	21.0
<b>78384</b>	2002 PD <sub>139</sub>		12 12.4 103°77	0°1/12.4 18			<b>249887</b>	2001 RR <sub>29</sub>		12 12.4 108°69	4°5/11.8 18		
11 7	5 45.20	+23 32.1	2.600	3.403	11.2	20.1	11 7	5 46.56	+10 7.0	2.218	3.015	13.1	21.8
11 17	5 39.56	+23 21.1	2.531	3.420	8.4	20.0	11 17	5 40.69	+9 34.4	2.158	3.035	10.2	21.6
11 27	5 32.19	+23 7.8	2.488	3.438	5.3	19.8	11 27	5 32.94	+9 8.7	2.122	3.055	7.2	21.5
12 7	5 23.73	+22 52.2	2.474	3.455	1.9	19.6	12 7	5 24.02	+8 52.0	2.113	3.074	4.9	21.4
12 17	5 14.96	+22 34.8	2.491	3.472	1.6	19.6	12 17	5 14.77	+8 45.9	2.134	3.093	4.9	21.4
12 27	5 6.73	+22 16.8	2.538	3.488	4.9	19.9	12 27	5 6.14	+8 50.9	2.185	3.112	7.2	21.6
1 6	4 59.79	+21 59.8	2.615	3.504	7.9	20.1	1 6	4 58.92	+9 6.7	2.263	3.129	10.0	21.8
1 16	4 54.64	+21 45.5	2.717	3.520	10.6	20.3	1 16	4 53.65	+9 31.7	2.365	3.147	12.6	22.0
<b>487500</b>	2014 SQ <sub>300</sub>		12 12.4 121°98	4°0/13.1 17			<b>182222</b>	2000 YU <sub>1</sub>		12 12.4 286°54	0°1/12.1 16		
11 7	5 48.23	+35 2.7	2.416	3.203	12.4	21.4	11 7	5 21.77	+18 12.3	41.842	42.643	0.8	23.2
11 17	5 42.38	+35 38.4	2.339	3.210	9.8	21.2	11 17	5 21.07	+18 10.9	41.752	42.641	0.6	23.2
11 27	5 34.24	+36 5.9	2.286	3.216	7.0	21.1	11 27	5 20.28	+18 9.5	41.691	42.638	0.4	23.1
12 7	5 24.54	+36 21.7	2.261	3.222	4.6	20.9	12 7	5 19.44	+18 8.3	41.658	42.636	0.2	23.1
12 17	5 14.24	+36 24.1	2.264	3.228	4.3	20.9	12 17	5 18.59	+18 7.3	41.657	42.633	0.2	23.1
12 27	5 4.51	+36 13.5	2.298	3.233	6.4	21.0	12 27	5 17.75	+18 6.6	41.686	42.631	0.4	23.1
1 6	4 56.34	+35 52.6	2.359	3.239	9.1	21.2	1 6	4 56.96	+18 6.0	41.745	42.628	0.6	23.2
1 16	4 50.43	+35 25.4	2.445	3.244	11.7	21.4	1 16	4 56.24	+18 5.7	41.831	42.626	0.8	23.2
<b>189888</b>	2003 SQ <sub>17</sub>		12 12.4 13°50	3°7/11.7 17			<b>357445</b>	2004 CX <sub>16</sub>		12 12.4 356°38	1°6/12.7 17		
11 7	5 42.64	+15 3.5	1.843	2.665	14.3	19.4	11 7	5 46.02	+26 49.8	1.523	2.353	16.4	21.1
11 17	5 38.29	+14 22.7	1.772	2.668	11.0	19.2	11 17	5 41.66	+27 0.8	1.449	2.350	12.6	20.8
11 27	5 31.70	+13 45.2	1.724	2.672	7.4	19.0	11 27	5 34.23	+27 6.8	1.396	2.348	8.1	20.5
12 7	5 23.62	+13 13.7	1.703	2.676	4.2	18.8	12 7	5 24.64	+27 5.7	1.367	2.347	3.4	20.3
12 17	5 15.03	+12 50.3	1.710	2.680	4.4	18.8	12 17	5 14.20	+26 56.6	1.366	2.346	2.8	20.2
12 27	5 7.05	+12 37.0	1.744	2.685	7.6	19.0	12 27	5 4.52	+26 40.8	1.392	2.346	7.5	20.5
1 6	5 0.63	+12 34.6	1.805	2.691	11.1	19.2	1 6	4 56.95	+26 21.7	1.443	2.347	12.1	20.8
1 16	4 56.45	+12 42.7	1.888	2.697	14.3	19.4	1 16	4 52.40	+26 3.0	1.516	2.348	16.0	21.0
<b>262048</b>	2006 QS <sub>182</sub>		12 12.4 351°68	1°7/12.3 18			<b>193112</b>	2000 GU <sub>155</sub>		12 12.4 252°93	6°3/13.1 18		
11 7	5 42.45	+20 25.8	1.003	1.866	20.5	20.0	11 7	5 50.29	+41 22.8	2.468	3.234	12.8	20.3
11 17	5 40.03	+20 14.4	0.937	1.858	15.7	19.7	11 17	5 44.33	+42 24.8	2.383	3.229	10.6	20.1
11 27	5 33.73	+20 4.1	0.890	1.851	10.1	19.3	11 27	5 35.72	+43 16.2	2.320	3.223	8.3	19.9
12 7	5 24.56	+19 55.5	0.864	1.845	3.9	19.0	12 7	5 25.16	+43 51.9	2.284	3.218	6.6	19.8
12 17	5 14.20	+19 49.6	0.860	1.841	3.6	18.9	12 17	5 13.72	+44 8.4	2.276	3.212	6.4	19.8
12 27	5 4.77	+19 48.2	0.880	1.839	9.8	19.3	12 27	5 2.73	+44 5.0	2.297	3.207	7.9	19.9
1 6	4 58.08	+19 53.2	0.921	1.838	15.6	19.6	1 6	4 53.41	+43 44.8	2.344	3.201	10.1	20.0
1 16	4 55.23	+20 5.8	0.980	1.840	20.6	19.9	1 16	4 46.63	+43 12.7	2.415	3.195	12.4	20.2
<b>285458</b>	1999 XQ <sub>246</sub>		12 12.4 49°26	0°6/12.5 18			<b>163468</b>	2002 RZ <sub>177</sub>		12 12.4 207°91	4°0/11.4 18		
11 7	5 48.66	+25 14.6	1.459	2.288	17.1	21.0	11 7	5 42.35	+9 56.9	2.845	3.637	10.6	20.6
11 17	5 43.36	+25 7.7	1.404	2.306	12.9	20.8	11 17	5 37.36	+9 18.9	2.758	3.632	8.4	20.5
11 27	5 35.06	+24 56.2	1.370	2.323	8.2	20.6	11 27	5 30.83	+8 45.6	2.696	3.627	6.0	20.3
12 7	5 24.83	+24 39.3	1.361	2.342	3.0	20.3	12 7	5 23.29	+8 19.2	2.663	3.621	4.2	20.2
12 17	5 14.09	+24 17.5	1.379	2.360	2.4	20.3	12 17	5 15.35	+8 1.4	2.660	3.615	4.4	20.2
12 27	5 4.40	+23 53.2	1.425	2.379	7.4	20.7	12 27	5 7.74	+7 53.3	2.687	3.609	6.3	20.3
1 6	4 57.01	+23 29.9	1.496	2.399	11.8	21.0	1 6	5 1.12	+7 55.3	2.742	3.602	8.7	20.5
1 16	4 52.62	+23 10.7	1.590	2.418	15.6	21.3	1 16	4 55.99	+8 6.7	2.823	3.595	11.0	20.6
<b>370549</b>	2003 TU <sub>26</sub>		12 12.4 223°44	4°8/13.5 18			<b>70814</b>	1999 VT <sub>71</sub>		12 12.4 62°55	1°2/12.3 18		
11 7	5 48.73	+38 39.2	2.509	3.284	12.3	21.3	11 7	5 47.81	+21 0.9	1.609	2.434	16.0	19.4
11 17	5 42.84	+39 6.4	2.420	3.279	10.0	21.1	11 17	5 42.49	+20 47.2	1.547	2.447	12.1	19.2
11 27	5 34.58	+39 23.1	2.356	3.274	7.4	21.0	11 27	5 34.45	+20 33.1	1.507	2.460	7.6	19.0
12 7	5 24.68	+39 25.8	2.318	3.269	5.3	20.8	12 7	5 24.63	+20 18.7	1.492	2.473	2.9	18.7
12 17	5 14.14	+39 12.6	2.309	3.264	5.0	20.8	12 17	5 14.27	+20 4.8	1.506	2.486	2.6	18.7
12 27	5 4.14	+38 44.3	2.330	3.259	6.7	20.9	12 27	5 4.76	+19 53.2	1.547	2.499	7.2	19.1
1 6	4 55.72	+38 4.2	2.378	3.253	9.3	21.1	1 6	4 57.26	+19 45.7	1.615	2.513	11.4	19.3
1 16	4 49.62	+37 17.1	2.452	3.247	11.8	21.2	1 16	4 52.49	+19 43.7	1.706	2.526	15.0	19.6
<b>422096</b>	2014 QM <sub>400</sub>		12 12.4 96°52	0°9/12.6 18			<b>129440</b>	1981 DC <sub>1</sub>		12 12.4 176°87	4°2/11.4 18		
11 7	5 46.35	+25 41.0	2.097	2.909</									

EPHEMERIDES

12 12.4

12 12.5

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>116800</b>	2004 <i>ED</i> <sub>60</sub>		12 12.4 230°63	7.9/13.5	18		<b>129733</b>	1998 <i>XM</i> <sub>13</sub>		12 12.4 106°14	1.5/12.1	18	
11 7	5 56.33	+41 54.8	1.784	2.561	16.6	20.3	11 7	5 44.49	+19 38.1	2.362	3.171	12.0	19.7
11 17	5 49.91	+42 52.9	1.699	2.553	13.8	20.1	11 17	5 39.22	+19 11.2	2.289	3.180	9.1	19.5
11 27	5 39.72	+43 36.4	1.636	2.544	10.8	19.9	11 27	5 32.09	+18 44.1	2.240	3.189	5.8	19.3
12 7	5 26.70	+43 57.6	1.596	2.535	8.5	19.7	12 7	5 23.76	+18 17.6	2.220	3.198	2.5	19.1
12 17	5 12.44	+43 51.1	1.583	2.526	8.1	19.7	12 17	5 15.06	+17 53.0	2.229	3.207	2.4	19.1
12 27	4 58.98	+43 16.8	1.598	2.516	10.0	19.8	12 27	5 6.89	+17 32.0	2.269	3.215	5.7	19.4
1 6	4 48.08	+42 21.0	1.637	2.506	13.0	19.9	1 6	5 0.04	+17 16.0	2.337	3.224	8.9	19.6
1 16	4 40.86	+41 12.5	1.699	2.496	16.1	20.1	1 16	4 55.08	+17 6.0	2.430	3.232	11.7	19.8
<b>185582</b>	2008 <i>BZ</i> <sub>20</sub>		12 12.4 224°00	0.4/12.5	17		<b>52193</b>	5209 <i>T</i> <sub>-2</sub>		12 12.4 141°59	1.2/12.1	17	
11 7	5 46.90	+24 39.2	2.355	3.159	12.2	21.3	11 7	5 43.69	+20 33.9	2.599	3.405	11.1	20.0
11 17	5 41.30	+24 38.4	2.262	3.151	9.3	21.1	11 17	5 38.50	+20 7.9	2.519	3.410	8.4	19.9
11 27	5 33.55	+24 34.8	2.193	3.142	5.9	20.9	11 27	5 31.60	+19 40.8	2.465	3.414	5.3	19.7
12 7	5 24.32	+24 27.4	2.153	3.133	2.2	20.6	12 7	5 23.59	+19 13.5	2.439	3.418	2.1	19.5
12 17	5 14.48	+24 16.2	2.142	3.123	1.8	20.5	12 17	5 15.20	+18 47.2	2.444	3.422	2.1	19.5
12 27	5 5.06	+24 2.2	2.163	3.113	5.6	20.8	12 27	5 7.27	+18 23.3	2.479	3.426	5.2	19.7
1 6	4 57.01	+23 47.2	2.212	3.103	9.1	21.0	1 6	5 0.54	+18 3.4	2.544	3.430	8.3	19.9
1 16	4 51.01	+23 33.4	2.286	3.092	12.2	21.2	1 16	4 55.53	+17 48.7	2.633	3.434	10.9	20.1
<b>494784</b>	2006 <i>TN</i> <sub>37</sub>		12 12.4 77°09	2.9/12.8	18		<b>493213</b>	2014 <i>UK</i> <sub>48</sub>		12 12.4 100°99	3.3/11.7	17	
11 7	5 48.91	+29 46.6	1.892	2.701	14.6	21.3	11 7	5 43.29	+14 48.0	2.287	3.097	12.3	20.9
11 17	5 43.32	+30 19.5	1.819	2.707	11.2	21.1	11 17	5 38.40	+14 8.1	2.209	3.098	9.5	20.7
11 27	5 35.03	+30 46.6	1.769	2.714	7.5	20.8	11 27	5 31.63	+13 30.9	2.155	3.099	6.4	20.5
12 7	5 24.88	+31 4.5	1.746	2.720	3.9	20.6	12 7	5 23.62	+12 58.3	2.129	3.100	3.7	20.3
12 17	5 14.04	+31 11.2	1.752	2.727	3.5	20.6	12 17	5 15.17	+12 32.3	2.132	3.101	3.9	20.4
12 27	5 3.88	+31 7.2	1.786	2.734	6.8	20.9	12 27	5 7.19	+12 14.7	2.164	3.102	6.6	20.5
1 6	4 55.59	+30 55.2	1.848	2.740	10.5	21.1	1 6	5 0.50	+12 6.4	2.225	3.102	9.7	20.7
1 16	4 49.98	+30 39.1	1.933	2.747	13.8	21.3	1 16	4 55.69	+12 7.4	2.309	3.103	12.4	20.9
<b>1167</b>	Dubiago		12 12.4 139°02	1.3/12.1	18		<b>282360</b>	2003 <i>HR</i> <sub>22</sub>		12 12.4 208°33	18.2/8.2	18	
11 7	5 42.35	+19 26.6	2.781	3.587	10.5	15.5	11 7	5 49.28	-10 18.3	1.257	2.025	22.6	20.4
11 17	5 37.40	+19 7.3	2.701	3.591	7.9	15.3	11 17	5 44.24	-12 55.1	1.207	2.023	20.6	20.3
11 27	5 30.86	+18 48.1	2.646	3.595	5.0	15.2	11 27	5 35.91	-15 3.6	1.174	2.020	18.9	20.1
12 7	5 23.30	+18 29.5	2.620	3.599	2.1	15.0	12 7	5 25.28	-16 30.2	1.160	2.018	18.2	20.1
12 17	5 15.38	+18 12.4	2.625	3.602	2.1	15.0	12 17	5 13.77	-17 5.6	1.165	2.015	18.7	20.1
12 27	5 7.86	+17 58.0	2.660	3.606	5.0	15.2	12 27	5 3.08	-16 47.3	1.189	2.011	20.1	20.2
1 6	5 1.42	+17 47.3	2.724	3.609	7.8	15.4	1 6	4 54.69	-15 41.2	1.231	2.008	22.1	20.3
1 16	4 56.58	+17 41.1	2.814	3.613	10.3	15.5	1 16	4 49.53	-13 57.8	1.286	2.003	24.2	20.5
<b>460926</b>	2014 <i>WY</i> <sub>226</sub>		12 12.4 226°96	0.4/12.3	17		<b>411525</b>	2011 <i>BV</i> <sub>81</sub>		12 12.4 350°27	2.5/13.1	17	
11 7	5 44.10	+23 23.9	2.473	3.281	11.6	21.0	11 7	5 46.13	+31 15.7	2.017	2.825	13.8	20.8
11 17	5 38.97	+22 59.1	2.387	3.279	8.8	20.8	11 17	5 41.08	+31 12.9	1.935	2.823	10.7	20.6
11 27	5 31.97	+22 31.2	2.326	3.276	5.5	20.6	11 27	5 33.56	+31 1.6	1.877	2.821	7.1	20.3
12 7	5 23.72	+22 0.8	2.293	3.274	2.0	20.3	12 7	5 24.36	+30 40.1	1.845	2.819	3.6	20.1
12 17	5 15.04	+21 28.8	2.291	3.271	1.8	20.3	12 17	5 14.56	+30 8.0	1.841	2.818	3.0	20.1
12 27	5 6.82	+20 57.0	2.319	3.269	5.3	20.5	12 27	5 5.40	+29 27.6	1.867	2.817	6.4	20.3
1 6	4 59.88	+20 27.8	2.376	3.266	8.6	20.7	1 6	4 57.97	+28 42.8	1.920	2.816	10.0	20.5
1 16	4 54.80	+20 2.9	2.458	3.264	11.4	20.9	1 16	4 53.00	+27 57.8	1.998	2.816	13.2	20.7
<b>145460</b>	2005 <i>SZ</i> <sub>31</sub>		12 12.4 28°99	1.4/12.3	18		<b>470241</b>	2006 <i>XS</i> <sub>5</sub>		12 12.4 43°93	0.3/12.4	18	
11 7	5 45.18	+19 44.4	1.835	2.657	14.4	20.3	11 7	5 50.96	+20 52.4	1.072	1.918	20.7	20.2
11 17	5 40.33	+19 37.0	1.762	2.660	11.0	20.0	11 17	5 45.82	+21 20.1	1.030	1.941	15.6	20.0
11 27	5 33.06	+19 30.5	1.712	2.664	7.0	19.8	11 27	5 36.93	+21 50.0	1.007	1.964	9.8	19.7
12 7	5 24.16	+19 25.1	1.689	2.668	2.8	19.6	12 7	5 25.58	+22 19.3	1.007	1.989	3.5	19.4
12 17	5 14.68	+19 21.3	1.694	2.673	2.6	19.6	12 17	5 13.63	+22 45.4	1.032	2.014	2.9	19.5
12 27	5 5.81	+19 20.0	1.727	2.678	6.7	19.8	12 27	5 3.10	+23 7.9	1.083	2.040	8.8	19.9
1 6	4 58.62	+19 22.3	1.787	2.683	10.6	20.1	1 6	4 55.50	+23 28.2	1.157	2.066	13.9	20.3
1 16	4 53.83	+19 29.1	1.871	2.688	14.0	20.3	1 16	4 51.61	+23 48.2	1.251	2.092	18.1	20.6
<b>330211</b>	2006 <i>GC</i> <sub>19</sub>		12 12.4 4°09	4.7/11.4	18		<b>332642</b>	2008 <i>UZ</i> <sub>98</sub>		12 12.4 72°46	0.2/12.4	18	
11 7	5 42.50	+10 11.0	2.287	3.090	12.5	20.6	11 7	5 45.02	+24 11.6	2.277	3.087	12.4	20.2
11 17	5 37.79	+9 29.0	2.209	3.090	9.9	20.4	11 17	5 39.70	+23 47.0	2.206	3.099	9.3	20.0
11 27	5 31.24	+8 52.9	2.156	3.090	7.1	20.2	11 27	5 32.41	+23 18.9	2.160	3.111	5.9	19.8
12 7	5 23.47	+8 25.4	2.130	3.090	5.0	20.1	12 7	5 23.88	+22 47.7	2.142	3.123	2.1	19.6
12 17	5 15.26	+8 8.6	2.133	3.090	5.1	20.1	12 17	5 14.99	+22 14.5	2.154	3.135	1.8	19.6
12 27	5 7.49	+8 3.8	2.165	3.091	7.4	20.3	12 27	5 6.71	+21 41.6	2.196	3.147	5.5	19.8
1 6	5 0.96	+8 11.1	2.224	3.091	10.1	20.4	1 6	4 59.87	+21 11.1	2.267	3.159	8.9	20.1
1 16	4 56.25	+8 29.4	2.306	3.091	12.7	20.6	1 16	4 55.05	+20 45.2	2.362	3.171	11.7	20.3
<b>493036</b>	2014 <i>SG</i> <sub>234</sub>		12 12.4 117°36	2.7/12.8	17		<b>441157</b>	2007 <i>TY</i> <sub>232</sub>		12 12.5 39°67	1.2/12.3	18	
11 7	5 47.60	+30 3.2	2.331	3.130	12.5	21.8	11 7	5 46.62	+20 51.0	1.589	2.417	16.0	21.3
11 17	5 41.90	+30 38.8	2.254	3.136	9.6	21.6	11 17	5 41.71	+20 37.1	1.522	2.424	12.1	21.1
11 27	5 33.96	+31 9.5	2.201	3.142	6.4	21.4	11 27	5 34.05	+20 22.8	1.478	2.431	7.7	20.8
12 7	5 24.48	+31 32.3	2.176	3.148	3.4	21.2	12 7	5 24.55	+20 8.6	1.459	2.439	2.9	20.6
12 17	5 14.40	+31 45.5	2.180	3.154	3.1	21.2	12 17	5 14.43	+19 55.2	1.467	2.447	2.7	20.6
12 27	5 4.84	+31 49.1	2.215	3.160	5.9	21.4	12 27	5 5.10	+19 44.3	1.504	2.456	7.3	20.9
1 6	4 56.77	+31 45.0	2.278	3.165	9.0	21.6	1 6	4 57.75	+19 37.7	1.566	2.465	11.6	21.1
1 16	4 50.91	+31 36.1	2.366	3.170	11.9	21.8	1 16	4 53.14	+19 36.9	1.650	2.474	15.3	21.4
<b>156925</b>	2003 <i>FJ</i> <sub>60</sub>		12 12.4 200°62	3.3/12.1	18		<b>441035</b>	2007 <i>FF</i> <sub>25</sub>		12 12.5 192°44	0.6/12.5	18	

EPHEMERIDES

12 12.5

12 12.5

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>454549</b>	2014 <i>ON</i> <sub>377</sub>		12 12.5 91°62	1°3/12.3 18			<b>228826</b>	2003 <i>BC</i> <sub>80</sub>		12 12.5 348°32	0°7/12.5 18		
11 7	5 46.42	+19 20.9	2.117	2.928	13.1	21.7	11 7	5 49.40	+22 30.4	1.457	2.285	17.1	19.8
11 17	5 40.85	+19 14.1	2.051	2.944	9.9	21.5	11 17	5 44.39	+23 6.0	1.382	2.284	13.1	19.6
11 27	5 33.19	+19 8.2	2.009	2.959	6.3	21.4	11 27	5 36.10	+23 43.3	1.329	2.282	8.3	19.3
12 7	5 24.18	+19 3.5	1.995	2.974	2.5	21.1	12 7	5 25.42	+24 19.1	1.300	2.281	3.1	19.0
12 17	5 14.77	+19 0.2	2.011	2.990	2.3	21.2	12 17	5 13.71	+24 50.7	1.299	2.280	2.6	18.9
12 27	5 5.98	+18 59.2	2.056	3.005	6.0	21.4	12 27	5 2.70	+25 16.7	1.326	2.280	7.9	19.3
1 6	4 58.70	+19 1.4	2.129	3.019	9.5	21.7	1 6	4 53.89	+25 38.2	1.377	2.279	12.7	19.5
1 16	4 53.55	+19 7.6	2.227	3.034	12.4	21.9	1 16	4 48.29	+25 57.3	1.451	2.279	16.8	19.8
<b>395014</b>	2009 <i>BW</i> <sub>185</sub>		12 12.5 185°84	1°2/12.4 18			<b>233662</b>	2008 <i>QB</i> <sub>44</sub>		12 12.5 128°15	1°6/12.3 18		
11 7	5 49.18	+17 40.3	2.083	2.888	13.5	20.9	11 7	5 45.08	+16 53.0	2.590	3.391	11.3	20.8
11 17	5 43.20	+18 8.0	1.999	2.888	10.3	20.7	11 17	5 39.55	+16 58.5	2.515	3.402	8.6	20.6
11 27	5 34.87	+18 40.0	1.939	2.887	6.6	20.4	11 27	5 32.28	+17 6.7	2.466	3.413	5.5	20.5
12 7	5 24.86	+19 15.0	1.907	2.887	2.6	20.2	12 7	5 23.87	+17 17.5	2.445	3.423	2.5	20.3
12 17	5 14.15	+19 51.6	1.906	2.886	2.3	20.2	12 17	5 15.06	+17 31.0	2.456	3.433	2.3	20.3
12 27	5 3.88	+20 28.7	1.935	2.884	6.3	20.4	12 27	5 6.68	+17 47.1	2.497	3.442	5.3	20.5
1 6	4 55.12	+21 5.8	1.993	2.882	10.0	20.6	1 6	4 59.49	+18 5.8	2.567	3.451	8.3	20.7
1 16	4 48.63	+21 42.9	2.075	2.880	13.3	20.9	1 16	4 54.05	+18 27.2	2.662	3.460	10.9	20.9
<b>269469</b>	2009 <i>TB</i> <sub>18</sub>		12 12.5 72°73	5°1/13.7 18			<b>3309</b>	Brorfelde		12 12.5 195°12	16°5/11.0 18		
11 7	5 50.06	+38 21.1	2.141	2.925	13.9	20.2	11 7	6 10.39	+47 1.9	1.133	1.914	23.9	16.4
11 17	5 43.97	+38 43.6	2.075	2.940	11.1	20.0	11 17	6 4.58	+50 19.4	1.074	1.914	21.0	16.2
11 27	5 35.30	+38 53.6	2.032	2.955	8.2	19.9	11 27	5 51.57	+53 21.5	1.033	1.913	18.3	16.0
12 7	5 24.96	+38 47.8	2.015	2.970	5.7	19.7	12 7	5 31.81	+55 44.7	1.013	1.911	16.7	15.9
12 17	5 14.14	+38 24.6	2.026	2.985	5.2	19.7	12 17	5 8.02	+57 8.1	1.014	1.910	16.9	15.9
12 27	5 4.15	+37 46.1	2.066	3.000	7.1	19.9	12 27	4 45.09	+57 25.2	1.037	1.907	18.7	16.0
1 6	4 56.09	+36 56.8	2.134	3.014	9.9	20.1	1 6	4 27.63	+56 48.3	1.078	1.905	21.4	16.2
1 16	4 50.65	+36 2.3	2.226	3.029	12.5	20.3	1 16	4 17.99	+55 38.4	1.134	1.902	24.2	16.4
<b>384670</b>	2011 <i>FM</i> <sub>55</sub>		12 12.5 224°19	1°5/12.5 18			<b>209709</b>	2005 <i>ET</i> <sub>75</sub>		12 12.5 133°13	1°3/12.7 18		
11 7	5 51.31	+25 15.0	1.768	2.580	15.3	21.4	11 7	5 48.52	+26 39.7	1.843	2.657	14.7	20.6
11 17	5 45.45	+25 47.2	1.681	2.573	11.7	21.2	11 17	5 43.03	+26 47.7	1.766	2.659	11.2	20.4
11 27	5 36.61	+26 17.9	1.617	2.566	7.6	20.9	11 27	5 34.88	+26 51.3	1.712	2.662	7.2	20.1
12 7	5 25.57	+26 44.1	1.579	2.558	3.1	20.6	12 7	5 24.89	+26 48.6	1.684	2.664	2.9	19.9
12 17	5 13.54	+27 3.2	1.571	2.551	2.6	20.6	12 17	5 14.23	+26 38.8	1.686	2.666	2.4	19.8
12 27	5 2.03	+27 14.6	1.591	2.542	7.2	20.9	12 27	5 4.23	+26 23.3	1.716	2.668	6.6	20.1
1 6	4 52.43	+27 20.2	1.639	2.533	11.5	21.1	1 6	4 56.08	+26 4.8	1.773	2.669	10.6	20.3
1 16	4 45.69	+27 22.8	1.710	2.524	15.3	21.3	1 16	4 50.56	+25 46.6	1.854	2.671	14.1	20.6
<b>258034</b>	2001 <i>HC</i> <sub>66</sub>		12 12.5 251°21	7°8/12.6 18			<b>232870</b>	2004 <i>UQ</i> <sub>3</sub>		12 12.5 184°14	7°8/ 9.4 18		
11 7	5 51.37	+1 122.7	1.830	2.606	16.2	21.0	11 7	5 56.63	+17 0.5	1.179	2.008	20.4	19.3
11 17	5 45.24	+1 16.9	1.733	2.588	13.5	20.7	11 17	5 49.90	+14 4.7	1.110	2.008	15.9	19.0
11 27	5 36.40	+1 28.7	1.658	2.568	10.5	20.5	11 27	5 39.47	+10 59.5	1.064	2.009	11.2	18.7
12 7	5 25.50	+2 1.9	1.608	2.549	8.3	20.3	12 7	5 26.57	+7 57.5	1.044	2.008	8.0	18.6
12 17	5 13.58	+2 58.1	1.586	2.528	8.1	20.3	12 17	5 12.93	+5 14.0	1.052	2.008	9.3	18.6
12 27	5 1.95	+4 15.9	1.593	2.507	10.4	20.4	12 27	5 0.56	+3 2.6	1.087	2.007	13.5	18.9
1 6	4 51.87	+5 51.2	1.627	2.485	13.7	20.5	1 6	4 51.00	+1 29.7	1.146	2.006	18.1	19.1
1 16	4 44.30	+7 38.6	1.684	2.463	17.0	20.7	1 16	4 45.11	+0 34.5	1.222	2.004	22.0	19.4
<b>477807</b>	2011 <i>DC</i> <sub>9</sub>		12 12.5 237°08	1°5/12.4 18			<b>73817</b>	1995 <i>VN</i> <sub>16</sub>		12 12.5 154°25	1°6/12.7 18		
11 7	5 50.56	+18 2.4	1.798	2.609	15.1	21.0	11 7	5 50.79	+27 49.5	2.460	3.252	12.1	21.8
11 17	5 44.75	+18 18.7	1.705	2.598	11.6	20.7	11 17	5 44.08	+28 8.6	2.382	3.263	9.2	21.7
11 27	5 36.12	+18 39.3	1.636	2.585	7.5	20.5	11 27	5 35.24	+28 23.2	2.329	3.273	6.0	21.5
12 7	5 25.40	+19 3.3	1.593	2.572	3.0	20.2	12 7	5 24.97	+28 31.6	2.305	3.282	2.7	21.3
12 17	5 13.68	+19 29.5	1.579	2.559	2.7	20.1	12 17	5 14.20	+28 32.5	2.312	3.290	2.3	21.3
12 27	5 2.37	+19 57.3	1.595	2.545	7.3	20.4	12 27	5 3.98	+28 26.7	2.350	3.297	5.5	21.5
1 6	4 52.78	+20 26.5	1.639	2.530	11.7	20.6	1 6	4 55.23	+28 16.0	2.418	3.304	8.7	21.7
1 16	4 45.85	+20 57.7	1.705	2.515	15.5	20.8	1 16	4 48.61	+28 3.2	2.511	3.310	11.4	21.9
<b>313248</b>	2001 <i>UR</i> <sub>144</sub>		12 12.5 357°60	2°1/12.2 18			<b>77658</b>	2001 <i>LH</i> <sub>5</sub>		12 12.5 206°74	0°3/12.4 18		
11 7	5 43.13	+18 53.3	1.479	2.317	16.4	19.9	11 7	5 51.13	+21 32.7	1.969	2.775	14.2	19.8
11 17	5 39.36	+18 36.9	1.407	2.313	12.6	19.6	11 17	5 44.92	+21 47.8	1.879	2.770	10.8	19.6
11 27	5 32.75	+18 22.1	1.356	2.311	8.1	19.3	11 27	5 36.09	+22 3.3	1.814	2.763	6.9	19.3
12 7	5 24.15	+18 10.1	1.330	2.309	3.5	19.1	12 7	5 25.37	+22 17.9	1.776	2.757	2.5	19.0
12 17	5 14.78	+18 2.0	1.330	2.308	3.3	19.1	12 17	5 13.83	+22 30.4	1.768	2.749	2.1	19.0
12 27	5 6.11	+17 59.2	1.356	2.309	7.9	19.3	12 27	5 2.76	+22 40.8	1.791	2.741	6.6	19.3
1 6	4 59.39	+18 3.0	1.408	2.310	12.4	19.6	1 6	4 53.36	+22 50.2	1.841	2.732	10.7	19.5
1 16	4 55.46	+18 13.8	1.481	2.312	16.3	19.9	1 16	4 46.47	+23 0.3	1.916	2.722	14.2	19.7
<b>216310</b>	2007 <i>TJ</i> <sub>125</sub>		12 12.5 330°84	1°2/12.5 18			<b>62661</b>	2000 <i>SK</i> <sub>366</sub>		12 12.5 153°16	3°6/11.9 18		
11 7	5 49.83	+23 59.9	1.230	2.069	19.0	20.9	11 7	5 48.68	+12 40.1	2.235	3.031	13.0	21.1
11 17	5 45.29	+24 29.1	1.158	2.064	14.6	20.6	11 17	5 42.43	+12 17.0	2.162	3.042	10.1	20.9
11 27	5 36.95	+24 58.0	1.105	2.060	9.4	20.3	11 27	5 34.17	+11 58.9	2.113	3.052	6.9	20.8
12 7	5 25.78	+25 23.1	1.076	2.056	3.6	20.0	12 7	5 24.58	+11 47.4	2.092	3.060	4.1	20.6
12 17	5 13.38	+25 41.4	1.072	2.053	3.0	19.9	12 17	5 14.55	+11 43.6	2.102	3.069	4.1	20.6
12 27	5 1.80	+25 52.5	1.094	2.050	8.9	20.3	12 27	5 5.07	+11 48.3	2.142	3.076	6.9	20.8
1 6	4 52.84	+25 58.8	1.140	2.047	14.3	20.5	1 6	4 57.02	+12 1.4	2.209	3.082	10.0	21.0
1 16	4 47.62	+26 3.8	1.206	2.045	18.8	20.8	1 16	4 51.00	+12 22.3	2.302	3.088	12.7	21.2
<b>107304</b>	2001 <i>CF</i> <sub>7</sub>		12 12.5 333°67	3°8/12.2 18			<b>164340</b>	2005 <i>BF</i> <sub>43</sub>		12 12.5 32°20	1°7/12.3 18		

EPHEMERIDES

12 12.5

12 12.5

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>414720</b>	2009 <i>WJ</i> <sub>252</sub>		12 12.5	47°09	1°5/12.6	17	<b>337582</b>	2001 <i>SK</i> <sub>332</sub>		12 12.5	69°06	3°9/12.9	18
11 7	5 46.72	+25 39.5	2.106	2.916	13.2	20.7	11 7	5 53.32	+30 28.5	1.440	2.259	17.8	20.7
11 17	5 41.40	+26 17.8	2.031	2.923	10.1	20.5	11 17	5 47.29	+31 12.4	1.385	2.277	13.8	20.5
11 27	5 33.75	+26 54.4	1.981	2.930	6.5	20.3	11 27	5 37.81	+31 48.3	1.350	2.295	9.2	20.3
12 7	5 24.49	+27 26.6	1.958	2.937	2.8	20.1	12 7	5 26.00	+32 11.3	1.341	2.314	5.0	20.1
12 17	5 14.60	+27 52.4	1.965	2.944	2.4	20.1	12 17	5 13.48	+32 18.3	1.358	2.333	4.4	20.1
12 27	5 5.23	+28 11.4	2.001	2.951	6.0	20.3	12 27	5 2.09	+32 10.2	1.403	2.351	8.2	20.4
1 6	4 57.43	+28 24.5	2.065	2.959	9.5	20.6	1 6	4 53.30	+31 51.8	1.473	2.370	12.4	20.7
1 16	4 51.91	+28 34.0	2.154	2.966	12.6	20.8	1 16	4 47.95	+31 28.8	1.565	2.388	16.0	20.9
<b>323309</b>	2003 <i>UK</i> <sub>95</sub>		12 12.5	82°76	3°6/12.1	18	<b>442785</b>	2012 <i>XM</i> <sub>144</sub>		12 12.5	6°07	2°1/12.4	18
11 7	5 53.39	+15 52.5	1.399	2.220	18.1	20.4	11 7	5 43.14	+17 49.0	1.175	2.027	18.9	19.4
11 17	5 46.69	+15 23.4	1.353	2.249	13.8	20.2	11 17	5 39.98	+17 57.9	1.113	2.027	14.5	19.2
11 27	5 37.05	+14 59.3	1.329	2.277	9.0	20.0	11 27	5 33.44	+18 12.6	1.071	2.028	9.3	18.9
12 7	5 25.60	+14 41.7	1.330	2.305	4.6	19.8	12 7	5 24.51	+18 32.9	1.051	2.032	3.9	18.6
12 17	5 13.80	+14 32.2	1.358	2.332	4.5	19.9	12 17	5 14.66	+18 58.2	1.056	2.036	3.5	18.6
12 27	5 3.20	+14 32.0	1.414	2.359	8.6	20.2	12 27	5 5.67	+19 27.7	1.086	2.043	8.8	18.9
1 6	4 55.00	+14 41.4	1.496	2.385	12.7	20.5	1 6	4 59.07	+20 0.7	1.139	2.050	13.9	19.2
1 16	4 49.84	+14 59.5	1.599	2.411	16.3	20.8	1 16	4 55.79	+20 36.8	1.212	2.059	18.2	19.5
<b>229382</b>	2005 <i>SE</i> <sub>50</sub>		12 12.5	39°27	1°7/12.7	18	<b>365516</b>	2010 <i>RS</i> <sub>117</sub>		12 12.5	126°13	2°8/12.1	18
11 7	5 49.44	+26 23.4	1.368	2.200	17.9	21.1	11 7	5 45.43	+15 42.1	2.011	2.824	13.7	21.4
11 17	5 44.47	+26 39.4	1.304	2.206	13.7	20.9	11 17	5 40.34	+15 26.2	1.934	2.826	10.5	21.2
11 27	5 36.11	+26 50.8	1.260	2.213	8.8	20.6	11 27	5 33.04	+15 14.0	1.881	2.828	6.9	20.9
12 7	5 25.40	+26 54.8	1.241	2.220	3.6	20.3	12 7	5 24.24	+15 6.4	1.854	2.829	3.5	20.7
12 17	5 13.88	+26 50.1	1.247	2.228	3.0	20.3	12 17	5 14.89	+15 4.5	1.857	2.831	3.5	20.7
12 27	5 3.31	+26 38.0	1.281	2.236	8.0	20.6	12 27	5 6.07	+15 9.0	1.888	2.832	6.8	21.0
1 6	4 55.20	+26 22.2	1.339	2.244	12.8	20.9	1 6	4 58.74	+15 20.3	1.947	2.834	10.4	21.2
1 16	4 50.44	+26 6.8	1.419	2.252	16.8	21.2	1 16	4 53.58	+15 38.2	2.030	2.835	13.5	21.4
<b>320741</b>	2008 <i>ED</i> <sub>41</sub>		12 12.5	79°23	0°9/12.7	18	<b>398575</b>	2011 <i>WP</i> <sub>43</sub>		12 12.5	96°54	0°4/12.5	18
11 7	5 46.89	+26 31.0	1.993	2.806	13.8	21.0	11 7	5 48.47	+20 22.0	1.910	2.723	14.3	21.0
11 17	5 41.59	+26 22.4	1.913	2.806	10.5	20.8	11 17	5 42.81	+20 47.0	1.838	2.732	10.8	20.8
11 27	5 33.87	+26 8.8	1.857	2.807	6.7	20.6	11 27	5 34.67	+21 13.9	1.790	2.741	6.8	20.6
12 7	5 24.53	+25 49.2	1.828	2.808	2.6	20.3	12 7	5 24.85	+21 41.1	1.769	2.749	2.5	20.3
12 17	5 14.60	+25 24.0	1.828	2.809	2.1	20.3	12 17	5 14.40	+22 7.3	1.777	2.758	2.1	20.3
12 27	5 5.30	+24 55.1	1.857	2.809	6.2	20.6	12 27	5 4.55	+22 31.7	1.815	2.766	6.4	20.6
1 6	4 57.67	+24 25.5	1.914	2.810	10.0	20.8	1 6	4 56.39	+22 54.9	1.880	2.775	10.3	20.8
1 16	4 52.44	+23 58.2	1.995	2.811	13.3	21.0	1 16	4 50.67	+23 17.7	1.970	2.783	13.6	21.1
<b>484022</b>	2006 <i>DD</i> <sub>131</sub>		12 12.5	276°09	4°2/11.9	17	<b>115699</b>	2003 <i>UG</i> <sub>163</sub>		12 12.5	81°62	2°2/12.7	18
11 7	5 43.51	+10 28.2	2.253	3.056	12.7	21.5	11 7	5 47.05	+28 13.3	2.277	3.080	12.6	19.2
11 17	5 38.68	+10 12.0	2.170	3.052	10.0	21.4	11 17	5 41.55	+28 50.0	2.200	3.086	9.7	19.0
11 27	5 31.90	+10 2.9	2.111	3.048	7.0	21.0	11 27	5 33.81	+29 23.0	2.147	3.092	6.3	18.8
12 7	5 23.81	+10 2.4	2.080	3.044	4.6	21.0	12 7	5 24.54	+29 49.8	2.123	3.098	3.1	18.6
12 17	5 15.18	+10 11.8	2.077	3.040	4.6	21.0	12 17	5 14.66	+30 8.3	2.128	3.104	2.8	18.6
12 27	5 6.95	+10 31.3	2.104	3.036	7.1	21.1	12 27	5 5.28	+30 18.5	2.163	3.110	5.8	18.8
1 6	4 59.98	+11 0.2	2.157	3.033	10.1	21.3	1 6	4 57.38	+30 21.8	2.226	3.116	9.1	19.0
1 16	4 54.89	+11 37.3	2.235	3.029	12.8	21.5	1 16	4 51.68	+30 20.8	2.314	3.122	12.0	19.2
<b>480364</b>	2015 <i>KF</i> <sub>27</sub>		12 12.5	322°80	1°9/12.9	18	<b>42956</b>	1999 <i>TH</i> <sub>122</sub>		12 12.5	110°39	3°1/12.1	18
11 7	5 49.73	+29 11.1	1.338	2.169	18.3	20.9	11 7	5 52.47	+16 7.6	1.697	2.507	15.9	20.0
11 17	5 44.94	+28 52.8	1.262	2.163	14.1	20.6	11 17	5 45.71	+15 42.6	1.640	2.530	12.1	19.8
11 27	5 36.56	+28 23.7	1.205	2.157	9.2	20.3	11 27	5 36.37	+15 21.2	1.606	2.552	7.9	19.6
12 7	5 25.62	+27 42.0	1.173	2.152	3.9	20.0	12 7	5 25.41	+15 4.7	1.599	2.574	4.0	19.4
12 17	5 13.72	+26 48.4	1.167	2.147	3.1	19.9	12 17	5 14.03	+14 54.4	1.620	2.594	3.9	19.5
12 27	5 2.77	+25 47.4	1.187	2.143	8.4	20.2	12 27	5 3.58	+14 51.4	1.671	2.614	7.6	19.7
1 6	4 54.38	+24 45.9	1.232	2.138	13.5	20.5	1 6	4 55.13	+14 56.5	1.749	2.633	11.5	20.0
1 16	4 49.50	+23 50.3	1.298	2.134	17.9	20.7	1 16	4 49.35	+15 9.3	1.850	2.652	14.8	20.3
<b>438699</b>	2008 <i>RK</i> <sub>32</sub>		12 12.5	119°09	0°9/12.3	18	<b>327738</b>	2006 <i>SC</i> <sub>351</sub>		12 12.5	114°07	4°3/12.0	18
11 7	5 50.65	+21 6.3	1.839	2.651	14.8	22.2	11 7	5 50.63	+13 37.8	1.551	2.367	16.9	21.2
11 17	5 44.36	+20 59.1	1.773	2.666	11.2	22.0	11 17	5 44.65	+13 8.3	1.489	2.381	13.0	21.0
11 27	5 35.56	+20 51.4	1.731	2.681	7.1	21.8	11 27	5 35.89	+12 45.2	1.449	2.394	8.8	20.8
12 7	5 25.12	+20 43.0	1.716	2.696	2.6	21.5	12 7	5 25.28	+12 30.6	1.435	2.406	5.0	20.6
12 17	5 14.19	+20 34.1	1.730	2.710	2.3	21.5	12 17	5 14.11	+12 26.2	1.448	2.419	5.0	20.6
12 27	5 4.04	+20 25.9	1.773	2.723	6.6	21.8	12 27	5 3.81	+12 33.0	1.490	2.430	8.6	20.9
1 6	4 55.74	+20 20.3	1.845	2.736	10.6	22.1	1 6	4 55.57	+12 50.6	1.557	2.442	12.6	21.1
1 16	4 49.99	+20 18.8	1.940	2.749	13.9	22.3	1 16	4 50.12	+13 17.9	1.646	2.453	16.1	21.4
<b>71528</b>	2000 <i>CY</i> <sub>84</sub>		12 12.5	302°40	5°7/13.4	18	<b>217146</b>	2002 <i>NJ</i>		12 12.5	77°29	2°2/12.2	18
11 7	5 48.38	+38 45.8	2.126	2.912	13.9	18.6	11 7	5 53.28	+19 8.2	1.406	2.229	17.9	20.7
11 17	5 43.22	+39 23.1	2.029	2.893	11.4	18.3	11 17	5 46.67	+18 46.0	1.359	2.258	13.5	20.5
11 27	5 35.23	+39 49.3	1.954	2.874	8.6	18.1	11 27	5 37.07	+18 25.3	1.335	2.286	8.6	20.3
12 7	5 25.13	+39 59.8	1.905	2.856	6.3	18.0	12 7	5 25.65	+18 6.8	1.336	2.315	3.6	20.1
12 17	5 14.07	+39 51.3	1.883	2.838	5.9	17.9	12 17	5 13.88	+17 51.8	1.364	2.343	3.4	20.2
12 27	5 3.50	+39 24.0	1.890	2.820	7.9	18.0	12 27	5 3.34	+17 42.1	1.421	2.370	8.0	20.5
1 6	4 54.71	+38 41.7	1.923	2.802	10.9	18.1	1 6	4 55.21	+17 39.2	1.502	2.397	12.3	20.8
1 16	4 48.66	+37 50.2	1.979	2.784	13.8	18.3	1 16	4 50.16	+17 43.7	1.607	2.424	16.0	21.1
<b>395149</b>	2010 <i>CX</i> <sub>44</sub>		12 12.5	224°61	0°9/12.3	18	<b>479332</b>	2013 <i>TU</i> <sub>124</sub>		12 12.5			

EPHEMERIDES

12 12.5

12 12.5

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>337957</b>	2002 AY <sub>93</sub>	12 12.5 344°40		0°4/12.5 18			<b>346898</b>	2009 SC <sub>126</sub>	12 12.5 164°49		1°8/12.8 18		
11 7	5 48.17	+20 51.1	1.493	2.322	16.8	20.2	11 7	5 52.46	+27 56.2	1.756	2.565	15.5	21.7
11 17	5 43.35	+21 13.8	1.417	2.319	12.8	19.9	11 17	5 46.19	+28 3.1	1.679	2.569	11.9	21.5
11 27	5 35.43	+21 38.9	1.363	2.317	8.2	19.7	11 27	5 36.99	+28 3.9	1.625	2.573	7.7	21.3
12 7	5 25.24	+22 4.6	1.334	2.315	3.0	19.4	12 7	5 25.78	+27 56.2	1.598	2.576	3.3	21.0
12 17	5 14.11	+22 29.2	1.332	2.313	2.5	19.3	12 17	5 13.84	+27 39.3	1.599	2.579	2.7	21.0
12 27	5 3.63	+22 51.9	1.358	2.312	7.7	19.6	12 27	5 2.68	+27 14.7	1.630	2.581	7.0	21.2
1 6	4 55.24	+23 13.4	1.408	2.311	12.5	19.9	1 6	4 53.58	+26 46.2	1.688	2.583	11.2	21.5
1 16	4 49.89	+23 35.0	1.481	2.310	16.5	20.2	1 16	4 47.37	+26 18.2	1.769	2.584	14.8	21.7
<b>316557</b>	2011 CD <sub>3</sub>	12 12.5 299°11		3°2/12.1 18			<b>462349</b>	2008 RZ <sub>2</sub>	12 12.5 26°29		4°9/11.5 17		
11 7	5 43.68	+14 0.9	2.113	2.924	13.1	20.4	11 7	5 42.68	+10 25.3	2.078	2.887	13.4	21.3
11 17	5 39.09	+13 51.0	2.019	2.909	10.2	20.2	11 17	5 38.13	+9 40.2	2.007	2.891	10.6	21.1
11 27	5 32.35	+13 46.0	1.950	2.895	6.9	20.0	11 27	5 31.61	+9 1.5	1.959	2.895	7.6	20.9
12 7	5 24.06	+13 47.3	1.907	2.880	3.8	19.8	12 7	5 23.78	+8 32.2	1.938	2.899	5.3	20.8
12 17	5 15.08	+13 55.7	1.893	2.865	3.8	19.7	12 17	5 15.49	+8 14.6	1.945	2.904	5.4	20.8
12 27	5 6.45	+14 11.6	1.908	2.850	6.9	19.9	12 27	5 7.73	+8 10.1	1.981	2.908	7.8	21.0
1 6	4 59.12	+14 34.9	1.950	2.836	10.4	20.1	1 6	5 1.32	+8 18.6	2.043	2.914	10.7	21.1
1 16	4 53.85	+15 5.0	2.016	2.822	13.6	20.3	1 16	4 56.89	+8 38.8	2.128	2.919	13.5	21.3
<b>297994</b>	2002 NA <sub>59</sub>	12 12.5 69°61		0°2/12.5 18			<b>268181</b>	2004 XU <sub>99</sub>	12 12.5 278°42		5°0/12.6 17		
11 7	5 49.97	+23 2.2	1.678	2.496	15.7	21.2	11 7	5 46.55	+5 29.4	2.361	3.143	12.8	20.2
11 17	5 44.04	+23 12.8	1.622	2.519	11.8	21.0	11 17	5 41.04	+5 44.7	2.264	3.129	10.3	20.0
11 27	5 35.43	+23 21.9	1.589	2.541	7.4	20.8	11 27	5 33.50	+6 12.0	2.191	3.114	7.6	19.8
12 7	5 25.11	+23 28.2	1.583	2.564	2.7	20.5	12 7	5 24.51	+6 52.8	2.145	3.100	5.4	19.7
12 17	5 14.33	+23 31.0	1.605	2.586	2.2	20.5	12 17	5 14.84	+7 47.0	2.129	3.085	5.2	19.6
12 27	5 4.45	+23 31.1	1.656	2.609	6.7	20.9	12 27	5 5.43	+8 53.2	2.144	3.070	7.4	19.7
1 6	4 56.61	+23 30.5	1.734	2.631	10.8	21.2	1 6	4 57.19	+10 8.7	2.187	3.055	10.2	19.9
1 16	4 51.49	+23 31.1	1.835	2.653	14.2	21.4	1 16	4 50.80	+11 30.7	2.256	3.040	13.0	20.0
<b>291877</b>	2006 PB <sub>18</sub>	12 12.5 91°75		2°5/12.3 18			<b>328799</b>	2009 VU <sub>27</sub>	12 12.5 32°32		5°2/12.7 17		
11 7	5 54.24	+17 19.0	1.524	2.338	17.2	21.0	11 7	5 49.99	+34 58.7	2.066	2.860	14.0	20.1
11 17	5 47.23	+17 7.5	1.474	2.368	13.0	20.8	11 17	5 44.35	+36 9.8	1.991	2.864	11.2	19.9
11 27	5 37.38	+16 59.4	1.447	2.396	8.3	20.6	11 27	5 35.91	+37 13.6	1.940	2.868	8.1	19.7
12 7	5 25.79	+16 55.2	1.447	2.424	3.7	20.4	12 7	5 25.44	+38 4.4	1.915	2.872	5.7	19.6
12 17	5 13.82	+16 55.1	1.474	2.452	3.5	20.4	12 17	5 14.09	+38 38.3	1.919	2.877	5.5	19.6
12 27	5 2.97	+17 0.1	1.531	2.478	7.8	20.7	12 27	5 3.27	+38 54.3	1.951	2.882	7.7	19.7
1 6	4 54.39	+17 10.7	1.614	2.504	11.9	21.1	1 6	4 54.27	+38 54.8	2.010	2.887	10.6	19.9
1 16	4 48.76	+17 27.1	1.719	2.529	15.4	21.3	1 16	4 47.97	+38 44.4	2.093	2.892	13.4	20.1
<b>193322</b>	2000 SM <sub>366</sub>	12 12.5 98°88		4°9/13.1 18			<b>95965</b>	2004 KP <sub>16</sub>	12 12.5 122°86		0°9/12.6 18		
11 7	5 55.43	+34 30.8	1.798	2.592	15.8	21.0	11 7	5 51.68	+25 51.0	1.880	2.687	14.7	20.3
11 17	5 48.45	+35 21.9	1.739	2.613	12.4	20.8	11 17	5 45.22	+25 51.7	1.812	2.702	11.2	20.1
11 27	5 38.37	+36 2.7	1.702	2.634	8.8	20.7	11 27	5 36.17	+25 48.0	1.768	2.717	7.1	19.9
12 7	5 26.22	+36 28.1	1.692	2.654	5.7	20.5	12 7	5 25.43	+25 38.6	1.751	2.731	2.7	19.7
12 17	5 13.42	+36 34.8	1.710	2.674	5.2	20.5	12 17	5 14.18	+25 23.2	1.764	2.744	2.2	19.7
12 27	5 1.60	+36 23.9	1.756	2.694	7.9	20.7	12 27	5 3.74	+25 3.5	1.806	2.757	6.4	20.0
1 6	4 52.09	+35 59.8	1.830	2.712	11.2	21.0	1 6	4 55.21	+24 42.5	1.876	2.770	10.3	20.2
1 16	4 45.69	+35 28.5	1.927	2.731	14.2	21.2	1 16	4 49.31	+24 23.1	1.970	2.781	13.7	20.5
<b>135054</b>	2001 OX <sub>68</sub>	12 12.5 52°44		0°8/12.3 18			<b>236705</b>	2007 ES <sub>124</sub>	12 12.5 208°55		1°3/12.3 18		
11 7	5 47.59	+23 21.3	1.663	2.487	15.6	18.5	11 7	5 49.50	+20 41.8	2.004	2.812	13.9	21.0
11 17	5 42.23	+22 45.8	1.604	2.503	11.8	18.3	11 17	5 43.58	+20 22.7	1.915	2.807	10.6	20.8
11 27	5 34.29	+22 6.6	1.566	2.519	7.4	18.1	11 27	5 35.22	+20 2.4	1.851	2.800	6.8	20.6
12 7	5 24.71	+21 24.8	1.555	2.536	2.7	17.9	12 7	5 25.15	+19 41.4	1.814	2.794	2.7	20.3
12 17	5 14.71	+20 42.4	1.573	2.553	2.4	17.9	12 17	5 14.40	+19 20.5	1.807	2.786	2.5	20.3
12 27	5 5.62	+20 2.7	1.619	2.571	6.9	18.2	12 27	5 4.17	+19 1.5	1.830	2.778	6.6	20.5
1 6	4 58.51	+19 28.8	1.691	2.588	11.0	18.5	1 6	4 55.55	+18 46.5	1.881	2.770	10.6	20.8
1 16	4 54.02	+19 3.0	1.786	2.606	14.5	18.8	1 16	4 49.31	+18 37.1	1.956	2.761	14.0	21.0
<b>38108</b>	1999 JB <sub>24</sub>	12 12.5 16°84		0°8/12.4 18			<b>413782</b>	2006 HG <sub>28</sub>	12 12.5 212°16		6°5/11.4 18		
11 7	5 48.96	+22 54.5	1.225	2.066	19.0	17.9	11 7	5 42.16	+2 16.8	2.531	3.309	12.2	21.1
11 17	5 44.37	+22 34.0	1.159	2.067	14.5	17.6	11 17	5 37.44	+1 36.8	2.454	3.307	10.1	21.0
11 27	5 36.21	+22 10.2	1.113	2.069	9.2	17.3	11 27	5 31.07	+1 7.4	2.400	3.305	8.0	20.9
12 7	5 25.54	+21 43.2	1.090	2.071	3.4	17.0	12 7	5 23.59	+0 51.6	2.373	3.303	6.6	20.8
12 17	5 13.98	+21 14.5	1.093	2.074	2.9	17.0	12 17	5 15.69	+0 51.4	2.374	3.301	6.7	20.8
12 27	5 3.43	+20 47.2	1.121	2.077	8.7	17.3	12 27	5 8.16	+1 7.4	2.403	3.299	8.2	20.9
1 6	4 55.45	+20 25.1	1.173	2.080	14.0	17.6	1 6	5 1.72	+1 38.5	2.459	3.297	10.3	21.0
1 16	4 50.98	+20 11.0	1.246	2.084	18.4	17.9	1 16	4 56.89	+2 22.4	2.538	3.295	12.5	21.2
<b>436425</b>	2011 BT <sub>11</sub>	12 12.5 304°59		3°7/12.3 18			<b>266818</b>	2009 TD <sub>11</sub>	12 12.5 45°29		3°3/12.1 18		
11 7	5 48.07	+14 16.5	1.384	2.213	17.8	20.5	11 7	5 44.63	+14 46.1	1.854	2.672	14.4	20.4
11 17	5 43.44	+14 13.9	1.305	2.205	13.9	20.2	11 17	5 39.77	+14 25.3	1.793	2.687	11.1	20.2
11 27	5 35.59	+14 19.5	1.248	2.198	9.3	19.9	11 27	5 32.69	+14 9.2	1.755	2.702	7.3	20.0
12 7	5 25.36	+14 34.7	1.215	2.190	4.8	19.6	12 7	5 24.18	+13 59.4	1.744	2.718	4.0	19.8
12 17	5 14.08	+14 59.5	1.207	2.183	4.6	19.6	12 17	5 15.24	+13 57.1	1.761	2.734	3.9	19.9
12 27	5 3.40	+15 33.6	1.227	2.176	9.1	19.8	12 27	5 6.98	+14 2.8	1.807	2.750	7.1	20.1
1 6	4 54.84	+16 15.7	1.271	2.169	13.8	20.1	1 6	5 0.33	+14 16.5	1.879	2.767	10.6	20.4
1 16	4 49.41	+17 4.2	1.336	2.162	18.1	20.3	1 16	4 55.93	+14 37.7	1.974	2.784	13.7	20.6
<b>69442</b>	1996 RA <sub>13</sub>	12 12.5 356°07		5°7/11.9 18			<b>34967</b>	3269 T-2	12 12.5 35°94		6°1/11.9 18		
11 7	5 45.41	+13 15.7	1.155	2.000	19.6	18.6	11 7	5 44.99	+10 0.3	1.451	2.277	17.3	18.1



EPHEMERIDES

12 12.5

12 12.5

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>85132</b>	1979 <i>MR</i> <sub>7</sub>		12 12.5 108°14	1°6/12.9 18			<b>112139</b>	2002 <i>JV</i> <sub>58</sub>		12 12.5 123°85	0°5/12.6 18		
11 7	5 52.84	+28 51.1	1.661	2.473	16.1	20.1	11 7	5 53.24	+25 19.4	1.637	2.450	16.2	20.2
11 17	5 46.40	+28 37.0	1.596	2.487	12.4	19.9	11 17	5 46.73	+25 11.3	1.570	2.464	12.4	20.0
11 27	5 37.03	+28 14.5	1.553	2.501	8.0	19.7	11 27	5 37.29	+24 58.5	1.527	2.477	7.8	19.7
12 7	5 25.77	+27 42.1	1.536	2.514	3.4	19.5	12 7	5 25.91	+24 39.7	1.510	2.490	2.9	19.5
12 17	5 14.00	+27 0.7	1.548	2.528	2.6	19.4	12 17	5 13.95	+24 15.4	1.521	2.502	2.3	19.5
12 27	5 3.23	+26 13.5	1.589	2.541	7.0	19.7	12 27	5 2.94	+23 47.9	1.562	2.514	7.1	19.8
1 6	4 54.71	+25 25.5	1.656	2.553	11.2	20.0	1 6	4 54.13	+23 20.8	1.629	2.525	11.5	20.1
1 16	4 49.14	+24 41.4	1.747	2.565	14.8	20.3	1 16	4 48.27	+22 57.5	1.719	2.535	15.1	20.3
<b>180853</b>	2005 <i>GR</i> <sub>167</sub>		12 12.5 252°34	0°9/12.6 18			<b>146079</b>	2000 <i>GW</i> <sub>176</sub>		12 12.5 352°19	2°6/12.9 18		
11 7	5 51.05	+24 52.0	1.581	2.401	16.4	21.8	11 7	5 48.81	+28 34.4	1.327	2.160	18.2	19.6
11 17	5 45.64	+25 2.0	1.492	2.389	12.7	21.5	11 17	5 44.37	+28 50.2	1.255	2.157	14.1	19.4
11 27	5 36.99	+25 9.2	1.425	2.376	8.1	21.2	11 27	5 36.34	+28 59.0	1.203	2.155	9.3	19.1
12 7	5 25.93	+25 11.3	1.383	2.364	3.1	20.9	12 7	5 25.71	+28 57.5	1.175	2.153	4.3	18.8
12 17	5 13.75	+25 7.2	1.370	2.351	2.5	20.8	12 17	5 14.06	+28 43.7	1.172	2.151	3.6	18.7
12 27	5 2.14	+24 57.4	1.384	2.337	7.7	21.1	12 27	5 3.30	+28 19.6	1.196	2.151	8.4	19.0
1 6	4 52.60	+24 45.0	1.424	2.323	12.6	21.3	1 6	4 55.06	+27 49.8	1.244	2.151	13.4	19.3
1 16	4 46.20	+24 33.6	1.487	2.309	16.7	21.6	1 16	4 50.34	+27 19.9	1.313	2.151	17.6	19.6
<b>208798</b>	2002 <i>QN</i> <sub>74</sub>		12 12.5 322°38	7°6/13.4 17			<b>416744</b>	2005 <i>ES</i> <sub>86</sub>		12 12.5 241°99	1°8/12.4 18		
11 7	5 51.05	+39 42.0	1.647	2.443	16.9	20.0	11 7	5 45.10	+15 33.4	2.543	3.344	11.5	20.7
11 17	5 46.09	+40 41.2	1.565	2.434	13.9	19.8	11 17	5 39.82	+15 53.5	2.453	3.339	8.8	20.5
11 27	5 37.49	+41 27.3	1.505	2.425	10.7	19.6	11 27	5 32.69	+16 18.1	2.388	3.334	5.7	20.3
12 7	5 26.15	+41 52.9	1.469	2.417	8.1	19.4	12 7	5 24.25	+16 47.1	2.352	3.328	2.7	20.1
12 17	5 13.59	+41 52.9	1.458	2.409	7.8	19.4	12 17	5 15.25	+17 19.7	2.346	3.323	2.4	20.0
12 27	5 1.77	+41 27.2	1.473	2.401	9.9	19.5	12 27	5 6.56	+17 55.2	2.372	3.318	5.5	20.2
1 6	4 52.42	+40 41.3	1.513	2.394	13.2	19.7	1 6	4 59.00	+18 32.8	2.426	3.312	8.6	20.4
1 16	4 46.64	+39 43.4	1.575	2.388	16.4	19.9	1 16	4 53.20	+19 12.3	2.507	3.307	11.4	20.6
<b>480328</b>	2015 <i>HV</i> <sub>180</sub>		12 12.5 179°39	4°4/13.2 18			<b>296294</b>	2009 <i>DL</i> <sub>89</sub>		12 12.5 286°72	1°7/12.5 17		
11 7	5 53.82	+33 30.3	1.698	2.500	16.2	21.3	11 7	5 47.98	+16 31.0	1.822	2.636	14.8	20.6
11 17	5 47.61	+34 0.8	1.620	2.501	12.8	21.1	11 17	5 42.85	+16 57.7	1.729	2.623	11.4	20.4
11 27	5 38.12	+34 21.4	1.564	2.502	8.9	20.9	11 27	5 35.03	+17 31.0	1.659	2.609	7.4	20.1
12 7	5 26.28	+34 27.5	1.534	2.502	5.3	20.7	12 7	5 25.21	+18 9.9	1.616	2.595	3.2	19.8
12 17	5 13.54	+34 16.1	1.532	2.502	4.8	20.6	12 17	5 14.41	+18 53.1	1.602	2.581	2.8	19.8
12 27	5 1.62	+33 48.5	1.558	2.502	8.0	20.8	12 27	5 3.97	+19 38.9	1.617	2.568	7.1	20.0
1 6	4 51.99	+33 9.7	1.610	2.501	11.9	21.0	1 6	4 55.11	+20 26.1	1.659	2.554	11.4	20.2
1 16	4 45.59	+32 26.1	1.685	2.499	15.5	21.3	1 16	4 48.79	+21 14.2	1.726	2.540	15.1	20.4
<b>357478</b>	2004 <i>FH</i> <sub>131</sub>		12 12.5 199°46	3°1/12.1 18			<b>307496</b>	2002 <i>XC</i> <sub>96</sub>		12 12.5 323°85	0°4/12.5 18		
11 7	5 46.10	+13 52.4	2.179	2.984	13.0	20.7	11 7	5 45.76	+20 55.0	1.467	2.302	16.7	19.8
11 17	5 40.76	+13 42.0	2.096	2.982	10.1	20.5	11 17	5 42.05	+21 41.5	1.369	2.274	13.0	19.5
11 27	5 33.34	+13 36.6	2.037	2.980	6.8	20.3	11 27	5 35.04	+22 34.1	1.293	2.248	8.4	19.2
12 7	5 24.47	+13 37.1	2.005	2.978	3.7	20.1	12 7	5 25.36	+23 30.4	1.241	2.222	3.1	18.8
12 17	5 15.03	+13 44.3	2.003	2.975	3.7	20.1	12 17	5 14.21	+24 26.5	1.216	2.197	2.6	18.7
12 27	5 6.03	+13 58.5	2.031	2.972	6.7	20.3	12 27	5 3.25	+25 19.4	1.217	2.173	8.2	19.0
1 6	4 58.38	+14 19.6	2.086	2.968	10.0	20.5	1 6	4 54.20	+26 7.7	1.244	2.150	13.4	19.2
1 16	4 52.77	+14 47.0	2.166	2.965	13.0	20.7	1 16	4 48.32	+26 52.0	1.292	2.127	18.0	19.4
<b>247089</b>	2000 <i>SP</i> <sub>163</sub>		12 12.5 59°36	8°2/13.6 18			<b>495745</b>	2016 <i>EF</i> <sub>83</sub>		12 12.5 9°07	2°6/12.3 18		
11 7	5 57.67	+42 3.8	1.803	2.576	16.5	19.2	11 7	5 43.36	+13 55.6	2.391	3.197	12.0	20.7
11 17	5 50.56	+43 33.6	1.757	2.606	13.6	19.1	11 17	5 38.54	+14 2.2	2.310	3.197	9.2	20.6
11 27	5 39.93	+44 47.4	1.734	2.636	10.7	19.0	11 27	5 31.87	+14 14.0	2.254	3.198	6.1	20.4
12 7	5 26.90	+45 37.4	1.736	2.667	8.6	18.9	12 7	5 23.94	+14 31.6	2.225	3.199	3.2	20.2
12 17	5 13.11	+45 59.0	1.764	2.697	8.3	19.0	12 17	5 15.52	+14 54.7	2.226	3.200	3.1	20.2
12 27	5 0.45	+45 53.2	1.820	2.727	9.8	19.1	12 27	5 7.48	+15 23.1	2.257	3.201	5.9	20.4
1 6	4 50.45	+45 25.8	1.901	2.757	12.1	19.3	1 6	5 0.63	+15 56.2	2.317	3.202	9.0	20.6
1 16	4 43.98	+44 45.0	2.004	2.787	14.5	19.5	1 16	4 55.58	+16 33.1	2.401	3.203	11.8	20.7
<b>32894</b>	1994 <i>JK</i> <sub>3</sub>		12 12.5 34°02	0°6/12.4 18			<b>143100</b>	2002 <i>XQ</i> <sub>19</sub>		12 12.5 282°78	4°5/12.8 17		
11 7	5 46.03	+22 16.6	1.880	2.699	14.2	19.2	11 7	5 50.21	+32 45.8	1.893	2.696	14.8	19.9
11 17	5 41.05	+22 7.2	1.805	2.702	10.8	19.0	11 17	5 44.77	+33 40.4	1.808	2.689	11.7	19.6
11 27	5 33.64	+21 56.2	1.753	2.705	6.8	18.8	11 27	5 36.34	+34 28.6	1.746	2.683	8.2	19.4
12 7	5 24.60	+21 43.7	1.728	2.708	2.5	18.5	12 7	5 25.70	+35 5.4	1.710	2.676	5.2	19.2
12 17	5 14.96	+21 30.0	1.731	2.712	2.1	18.5	12 17	5 14.05	+35 26.8	1.702	2.670	4.9	19.2
12 27	5 5.95	+21 16.6	1.763	2.715	6.4	18.8	12 27	5 2.92	+35 32.2	1.723	2.663	7.7	19.4
1 6	4 58.61	+21 5.5	1.822	2.719	10.4	19.0	1 6	4 53.68	+35 24.2	1.771	2.657	11.2	19.6
1 16	4 53.67	+20 58.3	1.905	2.723	13.8	19.3	1 16	4 47.31	+35 7.6	1.841	2.651	14.5	19.8
<b>154043</b>	2002 <i>CD</i> <sub>91</sub>		12 12.5 306°06	0°3/12.5 17			<b>399331</b>	1999 <i>TW</i> <sub>243</sub>		12 12.5 7°53	6°7/11.1 18		
11 7	5 45.57	+23 33.6	1.913	2.731	14.0	20.7	11 7	5 40.34	+11 46.4	1.344	2.186	17.6	19.2
11 17	5 40.90	+23 40.5	1.822	2.718	10.7	20.5	11 17	5 37.30	+10 28.5	1.285	2.188	13.8	18.9
11 27	5 33.71	+23 45.9	1.754	2.706	6.8	20.2	11 27	5 31.50	+9 17.6	1.248	2.192	9.9	18.7
12 7	5 24.68	+23 48.7	1.712	2.693	2.5	19.9	12 7	5 23.87	+8 19.6	1.234	2.198	7.0	18.6
12 17	5 14.84	+23 48.4	1.699	2.680	2.0	19.8	12 17	5 15.63	+7 39.6	1.244	2.205	7.4	18.6
12 27	5 5.44	+23 45.4	1.715	2.668	6.5	20.1	12 27	5 8.20	+7 21.0	1.280	2.214	10.5	18.8
1 6	4 57.64	+23 41.6	1.758	2.656	10.6	20.3	1 6	5 2.72	+7 23.3	1.338	2.224	14.2	19.1
1 16	4 52.27	+23 39.0	1.824	2.645	14.2	20.5	1 16	4 59.93	+7 44.1	1.417	2.236	17.6	19.3
<b>467007</b>	2016 <i>CS</i> <sub>103</sub>		12 12.5 6°52	10°8/11.3 17			<b>523347</b>	2017 <i>BD</i> <sub>141</sub>		12 12			

EPHEMERIDES

12 12.5

12 12.5

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>358221</b>	2006 <i>ST</i> <sub>230</sub>		12 12.5	77°54	2.4/12.9	18	<b>475054</b>	2005 <i>UA</i> <sub>102</sub>		12 12.5	348°00	1.1/12.5	18
11 7	5 49.58	+29 33.8	1.836	2.645	14.9	21.3	11 7	5 44.54	+20 16.8	1.172	2.023	19.0	21.0
11 17	5 43.85	+29 46.3	1.769	2.658	11.4	21.1	11 17	5 41.36	+20 25.6	1.101	2.014	14.6	20.7
11 27	5 35.44	+29 51.9	1.726	2.671	7.5	20.9	11 27	5 34.59	+20 37.2	1.049	2.007	9.4	20.4
12 7	5 25.26	+29 48.2	1.708	2.684	3.6	20.7	12 7	5 25.16	+20 50.9	1.019	2.000	3.5	20.1
12 17	5 14.52	+29 34.4	1.720	2.697	3.0	20.6	12 17	5 14.58	+21 5.9	1.014	1.995	3.0	20.0
12 27	5 4.59	+29 11.9	1.760	2.710	6.7	20.9	12 27	5 4.74	+21 22.1	1.034	1.992	8.9	20.4
1 6	4 56.62	+28 44.6	1.827	2.723	10.4	21.1	1 6	4 57.36	+21 40.3	1.076	1.989	14.4	20.7
1 16	4 51.33	+28 16.2	1.918	2.736	13.7	21.4	1 16	4 53.49	+22 1.6	1.139	1.988	19.0	20.9
<b>20999</b>	1987 <i>BF</i>		12 12.5	211°34	1.7/12.8	18	<b>188638</b>	2005 <i>QG</i> <sub>99</sub>		12 12.5	41°15	0.5/12.6	18
11 7	5 52.27	+28 15.1	1.745	2.554	15.6	18.5	11 7	5 46.95	+23 53.6	1.816	2.635	14.7	20.6
11 17	5 46.22	+28 13.6	1.659	2.549	12.0	18.3	11 17	5 41.89	+24 5.4	1.744	2.640	11.1	20.4
11 27	5 37.15	+28 5.2	1.596	2.544	7.8	18.0	11 27	5 34.27	+24 15.4	1.694	2.646	7.1	20.2
12 7	5 25.95	+27 47.6	1.560	2.538	3.4	17.7	12 7	5 24.89	+24 22.3	1.671	2.652	2.6	19.9
12 17	5 13.91	+27 20.3	1.552	2.532	2.7	17.7	12 17	5 14.86	+24 25.3	1.677	2.658	2.1	19.9
12 27	5 2.56	+26 45.4	1.573	2.525	7.2	17.9	12 27	5 5.49	+24 25.0	1.711	2.664	6.5	20.2
1 6	4 53.25	+26 7.2	1.621	2.517	11.5	18.2	1 6	4 57.89	+24 23.1	1.772	2.671	10.5	20.4
1 16	4 46.88	+25 30.4	1.693	2.509	15.3	18.4	1 16	4 52.83	+24 21.8	1.857	2.678	14.0	20.7
<b>72032</b>	2000 <i>XF</i> <sub>35</sub>		12 12.5	215°08	5.8/13.4	18	<b>432743</b>	2011 <i>EP</i> <sub>10</sub>		12 12.5	183°71	2.8/12.1	18
11 7	5 54.27	+39 42.4	2.290	3.058	13.6	19.2	11 7	5 49.94	+15 48.2	2.009	2.813	14.0	22.5
11 17	5 47.54	+40 27.0	2.198	3.050	11.1	19.0	11 17	5 43.83	+15 29.4	1.927	2.814	10.8	22.2
11 27	5 37.95	+41 0.6	2.129	3.042	8.5	18.8	11 27	5 35.36	+15 13.8	1.869	2.814	7.1	22.0
12 7	5 26.26	+41 17.8	2.087	3.033	6.3	18.7	12 7	5 25.26	+15 2.4	1.839	2.813	3.6	21.8
12 17	5 13.66	+41 15.3	2.074	3.023	6.0	18.7	12 17	5 14.55	+14 56.2	1.838	2.812	3.6	21.8
12 27	5 1.59	+40 53.1	2.090	3.012	7.8	18.7	12 27	5 4.37	+14 56.4	1.867	2.810	7.0	22.0
1 6	4 51.38	+40 15.1	2.133	3.001	10.5	18.9	1 6	4 55.77	+15 3.4	1.924	2.807	10.7	22.2
1 16	4 43.93	+39 27.2	2.201	2.989	13.2	19.1	1 16	4 49.48	+15 17.5	2.005	2.803	13.9	22.4
<b>102249</b>	1999 <i>TE</i> <sub>27</sub>		12 12.5	53°43	8°0/13.2	18	<b>177417</b>	2004 <i>CD</i> <sub>5</sub>		12 12.5	339°33	6.8/12.4	18
11 7	5 55.44	+38 48.7	1.509	2.307	18.1	18.7	11 7	5 46.12	+ 4 50.0	1.774	2.573	15.8	19.8
11 17	5 49.40	+40 18.1	1.456	2.325	14.7	18.6	11 17	5 41.18	+ 4 36.5	1.698	2.571	12.8	19.6
11 27	5 39.50	+41 33.5	1.424	2.344	11.2	18.4	11 27	5 33.80	+ 4 37.1	1.644	2.569	9.6	19.4
12 7	5 26.85	+42 26.2	1.417	2.363	8.6	18.3	12 7	5 24.73	+ 4 55.1	1.616	2.567	7.2	19.2
12 17	5 13.24	+42 50.2	1.435	2.383	8.2	18.3	12 17	5 14.97	+ 5 31.4	1.614	2.565	7.1	19.2
12 27	5 0.76	+42 46.1	1.479	2.402	10.3	18.5	12 27	5 5.73	+ 6 25.1	1.640	2.564	9.4	19.3
1 6	4 51.14	+42 20.0	1.547	2.422	13.3	18.7	1 6	4 58.08	+ 7 33.2	1.691	2.562	12.6	19.5
1 16	4 45.35	+41 40.5	1.637	2.442	16.3	19.0	1 16	4 52.80	+ 8 51.7	1.766	2.561	15.6	19.7
<b>71273</b>	2000 <i>AG</i> <sub>35</sub>		12 12.5	323°26	1°0/12.5	18	<b>57574</b>	2001 <i>TF</i> <sub>66</sub>		12 12.5	30°42	0°4/12.5	18
11 7	5 45.37	+18 52.9	2.126	2.938	13.0	18.7	11 7	5 46.19	+22 51.5	1.703	2.528	15.2	19.2
11 17	5 40.39	+19 9.0	2.042	2.935	9.9	18.5	11 17	5 41.39	+22 41.1	1.634	2.534	11.6	19.0
11 27	5 33.21	+19 27.8	1.982	2.932	6.3	18.3	11 27	5 33.96	+22 28.7	1.587	2.540	7.3	18.8
12 7	5 24.49	+19 48.7	1.949	2.929	2.5	18.1	12 7	5 24.77	+22 14.1	1.565	2.546	2.7	18.5
12 17	5 15.12	+20 10.8	1.946	2.926	2.2	18.0	12 17	5 14.98	+21 57.8	1.572	2.553	2.2	18.5
12 27	5 6.17	+20 33.8	1.973	2.924	6.0	18.3	12 27	5 5.91	+21 41.5	1.607	2.560	6.8	18.8
1 6	4 58.63	+20 57.8	2.027	2.921	9.7	18.5	1 6	4 58.69	+21 27.6	1.668	2.568	11.0	19.0
1 16	4 53.20	+21 23.1	2.107	2.919	12.9	18.7	1 16	4 54.08	+21 18.0	1.752	2.576	14.5	19.3
<b>511653</b>	2015 <i>BP</i> <sub>270</sub>		12 12.5	21°21	2°7/12.4	18	<b>12682</b>	Kawada		12 12.5	71°81	0°3/12.6	18
11 7	5 49.94	+16 37.5	1.270	2.104	18.8	21.4	11 7	5 52.33	+22 55.2	1.667	2.481	16.0	18.2
11 17	5 45.05	+16 41.8	1.201	2.105	14.5	21.1	11 17	5 45.81	+23 15.7	1.617	2.511	12.0	18.1
11 27	5 36.70	+16 52.7	1.153	2.106	9.4	20.9	11 27	5 36.59	+23 35.0	1.590	2.541	7.5	17.9
12 7	5 25.86	+17 10.2	1.129	2.107	4.2	20.6	12 7	5 25.66	+23 51.0	1.590	2.571	2.7	17.6
12 17	5 14.01	+17 33.6	1.130	2.109	3.8	20.5	12 17	5 14.33	+24 2.7	1.619	2.600	2.2	17.7
12 27	5 2.99	+18 2.4	1.158	2.110	9.0	20.8	12 27	5 3.99	+24 10.4	1.677	2.629	6.7	18.0
1 6	4 54.38	+18 36.0	1.209	2.112	14.0	21.1	1 6	4 55.77	+24 15.8	1.762	2.658	10.7	18.3
1 16	4 49.16	+19 14.0	1.282	2.114	18.4	21.4	1 16	4 50.33	+24 21.2	1.870	2.686	14.1	18.6
<b>509481</b>	2007 <i>TA</i> <sub>87</sub>		12 12.5	22°93	4°1/12.1	18	<b>470950</b>	2009 <i>KO</i> <sub>37</sub>		12 12.5	158°15	0°9/12.5	18
11 7	5 46.58	+16 47.8	1.020	1.875	20.9	21.1	11 7	5 53.15	+20 8.9	1.730	2.540	15.7	21.9
11 17	5 42.87	+16 13.5	0.967	1.881	16.1	20.9	11 17	5 46.66	+20 20.4	1.655	2.547	11.9	21.6
11 27	5 35.40	+15 44.0	0.932	1.888	10.6	20.6	11 27	5 37.34	+20 33.3	1.604	2.554	7.6	21.4
12 7	5 25.37	+15 22.4	0.918	1.896	5.3	20.3	12 7	5 26.04	+20 46.6	1.580	2.560	2.8	21.1
12 17	5 14.48	+15 11.2	0.929	1.905	5.2	20.4	12 17	5 14.00	+20 59.1	1.584	2.565	2.4	21.1
12 27	5 4.75	+15 12.2	0.962	1.915	10.2	20.7	12 27	5 2.67	+21 11.1	1.619	2.569	7.1	21.4
1 6	4 57.79	+15 25.9	1.018	1.926	15.4	21.0	1 6	4 53.30	+21 23.5	1.680	2.573	11.4	21.7
1 16	4 54.47	+15 51.0	1.093	1.938	19.9	21.3	1 16	4 46.73	+21 37.7	1.765	2.576	15.0	21.9
<b>45996</b>	2001 <i>BY</i> <sub>72</sub>		12 12.5	251°03	2°7/13.2	18	<b>300829</b>	2007 <i>XQ</i> <sub>20</sub>		12 12.5	30°31	0°4/12.6	18
11 7	5 50.35	+31 45.1	1.941	2.744	14.5	19.3	11 7	5 47.34	+23 17.4	1.509	2.339	16.6	20.2
11 17	5 44.59	+31 39.0	1.849	2.733	11.3	19.1	11 17	5 42.61	+23 33.1	1.444	2.346	12.6	20.0
11 27	5 36.05	+31 23.0	1.779	2.722	7.6	18.9	11 27	5 34.91	+23 47.8	1.401	2.355	8.0	19.8
12 7	5 25.55	+30 55.1	1.736	2.710	3.9	18.6	12 7	5 25.17	+23 59.6	1.383	2.363	2.9	19.5
12 17	5 14.28	+30 14.5	1.722	2.699	3.2	18.6	12 17	5 14.71	+24 7.6	1.391	2.373	2.3	19.5
12 27	5 3.63	+29 23.9	1.738	2.687	6.8	18.8	12 27	5 5.06	+24 12.1	1.428	2.383	7.3	19.8
1 6	4 54.84	+28 27.9	1.780	2.675	10.7	19.0	1 6	4 57.52	+24 15.0	1.490	2.393	11.8	20.1
1 16	4 48.76	+27 32.0	1.848	2.663	14.3	19.2	1 16	4 52.91	+24 18.5	1.574	2.404	15.6	20.3
<b>174387</b>	2002 <i>VP</i> <sub>12</sub>		12 12.5	29°05	1°4/12.8	18	<b>56136</b>	1999 <i>CK</i> <sub>55</sub>		12 12.5	155°85	1	

EPHEMERIDES

12 12.5

12 12.5

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>518822</b>	2010 CW <sub>134</sub>		12 12.5 216°05	7°9/ 9.3 18			<b>38032</b>	1998 QH <sub>43</sub>		12 12.5 114°79	0°4/12.5 18		
11 7	5 48.81	+ 6 43.2	1.990	2.781	14.6	21.6	11 7	5 46.73	+21 41.6	2.718	3.516	10.9	20.3
11 17	5 42.88	+ 4 39.6	1.911	2.777	11.9	21.4	11 17	5 40.77	+21 41.7	2.651	3.537	8.2	20.1
11 27	5 34.72	+ 2 40.8	1.858	2.772	9.4	21.3	11 27	5 33.13	+21 41.0	2.610	3.558	5.2	20.0
12 7	5 25.05	+ 0 54.0	1.832	2.766	8.0	21.2	12 7	5 24.42	+21 39.2	2.598	3.578	1.9	19.8
12 17	5 14.82	- 0 34.1	1.835	2.760	8.5	21.2	12 17	5 15.41	+21 36.5	2.616	3.597	1.6	19.8
12 27	5 5.13	- 1 38.8	1.867	2.754	10.7	21.3	12 27	5 6.90	+21 33.3	2.667	3.616	4.8	20.0
1 6	4 56.95	- 2 18.5	1.924	2.748	13.4	21.5	1 6	4 59.61	+21 30.8	2.747	3.634	7.7	20.2
1 16	4 50.98	- 2 34.6	2.003	2.741	16.0	21.7	1 16	4 54.06	+21 30.0	2.853	3.652	10.2	20.4
<b>41393</b>	2000 AV <sub>151</sub>		12 12.5 63°82	0°7/12.5 18			<b>300603</b>	2007 TB <sub>435</sub>		12 12.5 158°11	3°5/13.6 18		
11 7	5 54.24	+19 41.0	1.248	2.078	19.4	17.9	11 7	5 52.48	+34 52.1	2.087	2.876	14.1	20.5
11 17	5 47.96	+20 10.4	1.203	2.105	14.6	17.7	11 17	5 45.89	+34 45.1	2.007	2.881	11.1	20.3
11 27	5 38.25	+20 43.0	1.179	2.133	9.2	17.5	11 27	5 36.69	+34 26.3	1.950	2.885	7.7	20.1
12 7	5 26.34	+21 16.0	1.180	2.160	3.4	17.3	12 7	5 25.78	+33 53.4	1.921	2.889	4.4	19.9
12 17	5 13.88	+21 47.1	1.207	2.188	2.7	17.3	12 17	5 14.34	+33 6.1	1.921	2.893	3.8	19.9
12 27	5 2.71	+22 15.4	1.261	2.215	8.2	17.7	12 27	5 3.71	+32 7.4	1.951	2.896	6.6	20.1
1 6	4 54.23	+22 41.6	1.340	2.243	12.9	18.0	1 6	4 55.00	+31 2.4	2.009	2.899	10.0	20.3
1 16	4 49.21	+23 7.2	1.441	2.270	16.9	18.4	1 16	4 48.93	+29 56.7	2.093	2.901	13.1	20.5
<b>496669</b>	2016 CT <sub>28</sub>		12 12.5 41°79	0°1/12.5 18			<b>247488</b>	2002 NL <sub>19</sub>		12 12.5 88°86	8°2/12.6 18		
11 7	5 44.23	+22 23.5	2.447	3.255	11.7	20.6	11 7	5 48.25	- 0 2.4	1.902	2.677	15.7	20.3
11 17	5 39.26	+22 42.3	2.368	3.259	8.8	20.4	11 17	5 42.34	- 0 31.2	1.849	2.698	13.0	20.2
11 27	5 32.37	+23 1.0	2.314	3.264	5.6	20.2	11 27	5 34.28	- 0 43.2	1.818	2.719	10.4	20.0
12 7	5 24.20	+23 18.4	2.288	3.268	2.0	20.0	12 7	5 24.87	- 0 35.1	1.812	2.740	8.5	20.0
12 17	5 15.52	+23 33.9	2.292	3.273	1.6	20.0	12 17	5 15.10	- 0 5.6	1.833	2.761	8.4	20.0
12 27	5 7.26	+23 47.4	2.326	3.277	5.2	20.2	12 27	5 6.03	+ 0 44.0	1.882	2.781	10.0	20.1
1 6	5 0.25	+23 59.4	2.389	3.282	8.4	20.5	1 6	4 58.57	+ 1 50.1	1.956	2.801	12.4	20.3
1 16	4 55.10	+24 11.1	2.477	3.287	11.2	20.6	1 16	4 53.33	+ 3 8.1	2.053	2.820	14.7	20.5
<b>482899</b>	2014 GT <sub>42</sub>		12 12.5 335°57	4°2/11.8 18			<b>522114</b>	2016 AC <sub>240</sub>		12 12.5 263°34	4°9/13.5 18		
11 7	5 45.49	+15 29.0	1.503	2.333	16.6	20.9	11 7	5 49.24	+38 40.5	2.542	3.316	12.2	22.0
11 17	5 41.18	+14 42.8	1.427	2.327	12.9	20.7	11 17	5 43.47	+39 9.1	2.442	3.299	9.9	21.8
11 27	5 34.03	+13 59.6	1.373	2.322	8.7	20.4	11 27	5 35.28	+39 27.5	2.365	3.282	7.5	21.6
12 7	5 24.89	+13 22.5	1.344	2.317	4.9	20.2	12 7	5 25.34	+39 32.2	2.314	3.265	5.4	21.4
12 17	5 14.96	+12 54.8	1.341	2.312	5.0	20.2	12 17	5 14.63	+39 20.9	2.293	3.248	5.0	21.4
12 27	5 5.69	+12 39.2	1.364	2.308	8.9	20.4	12 27	5 4.33	+38 53.9	2.301	3.230	6.8	21.5
1 6	4 58.34	+12 36.8	1.413	2.305	13.2	20.6	1 6	4 55.54	+38 14.3	2.337	3.212	9.4	21.6
1 16	4 53.76	+12 47.4	1.483	2.302	17.0	20.9	1 16	4 49.06	+37 26.8	2.398	3.194	12.0	21.7
<b>190470</b>	2000 DX <sub>10</sub>		12 12.5 327°18	0°4/12.5 18			<b>66750</b>	1999 TZ <sub>155</sub>		12 12.5 61°04	3°1/12.2 18		
11 7	5 44.09	+22 12.0	1.937	2.758	13.8	20.7	11 7	5 49.25	+16 31.7	1.519	2.343	16.8	19.1
11 17	5 39.71	+22 8.8	1.849	2.747	10.5	20.5	11 17	5 43.61	+16 8.9	1.470	2.367	12.8	18.9
11 27	5 32.94	+22 4.5	1.785	2.737	6.7	20.2	11 27	5 35.27	+15 50.1	1.442	2.392	8.3	18.7
12 7	5 24.47	+21 59.0	1.747	2.727	2.5	20.0	12 7	5 25.25	+15 36.8	1.440	2.416	4.0	18.5
12 17	5 15.28	+21 52.2	1.737	2.718	2.1	19.9	12 17	5 14.83	+15 30.2	1.465	2.441	3.9	18.5
12 27	5 6.55	+21 45.3	1.756	2.709	6.4	20.2	12 27	5 5.40	+15 31.2	1.519	2.466	7.8	18.8
1 6	4 59.35	+21 39.8	1.802	2.700	10.4	20.4	1 6	4 58.05	+15 40.2	1.597	2.490	11.8	19.1
1 16	4 54.47	+21 37.4	1.871	2.692	13.9	20.6	1 16	4 53.45	+15 56.8	1.699	2.515	15.3	19.4
<b>295020</b>	2008 EF <sub>60</sub>		12 12.5 175°93	1°5/12.3 18			<b>73515</b>	2003 EU <sub>5</sub>		12 12.5 258°74	1°0/12.7 18		
11 7	5 50.91	+20 29.9	1.746	2.560	15.4	21.2	11 7	5 49.80	+25 54.0	1.716	2.533	15.5	20.0
11 17	5 46.92	+20 6.9	1.669	2.562	11.7	21.0	11 17	5 44.49	+25 57.9	1.626	2.521	11.9	19.8
11 27	5 36.21	+19 42.9	1.614	2.564	7.5	20.7	11 27	5 36.21	+25 57.6	1.559	2.509	7.7	19.5
12 7	5 25.63	+19 18.4	1.586	2.565	3.0	20.5	12 7	5 25.74	+25 51.3	1.517	2.497	3.0	19.2
12 17	5 14.38	+18 54.8	1.587	2.566	2.8	20.4	12 17	5 14.31	+25 38.1	1.504	2.485	2.4	19.1
12 27	5 3.82	+18 34.2	1.616	2.566	7.2	20.7	12 27	5 3.43	+25 19.3	1.519	2.472	7.2	19.4
1 6	4 55.15	+18 18.7	1.673	2.565	11.5	21.0	1 6	4 54.47	+24 58.1	1.561	2.459	11.7	19.6
1 16	4 49.16	+18 10.3	1.753	2.564	15.1	21.2	1 16	4 48.37	+24 38.1	1.626	2.446	15.6	19.9
<b>478128</b>	2011 UJ <sub>113</sub>		12 12.5 27°92	4°7/12.5 18			<b>144882</b>	2004 RP <sub>106</sub>		12 12.5 35°52	7°9/13.9 17		
11 7	5 51.48	+30 56.3	1.662	2.473	16.1	20.1	11 7	5 52.17	+43 40.0	1.963	2.734	15.5	19.6
11 17	5 46.02	+32 16.4	1.591	2.477	12.6	19.9	11 17	5 46.44	+44 41.1	1.894	2.740	12.9	19.4
11 27	5 37.28	+33 32.1	1.542	2.482	8.8	19.7	11 27	5 37.45	+45 27.1	1.847	2.746	10.3	19.3
12 7	5 26.13	+34 36.8	1.519	2.486	5.4	19.5	12 7	5 26.17	+45 51.4	1.824	2.753	8.4	19.2
12 17	5 13.92	+35 25.0	1.523	2.491	5.2	19.5	12 17	5 14.01	+45 50.3	1.827	2.760	8.0	19.2
12 27	5 2.34	+35 54.6	1.556	2.497	8.3	19.7	12 27	5 2.69	+45 24.2	1.857	2.767	9.4	19.3
1 6	4 52.93	+36 8.1	1.615	2.503	12.1	20.0	1 6	4 53.67	+44 38.5	1.913	2.775	11.8	19.4
1 16	4 46.71	+36 10.1	1.696	2.509	15.4	20.2	1 16	4 47.85	+43 40.4	1.990	2.782	14.2	19.6
<b>356124</b>	2009 FD <sub>39</sub>		12 12.5 205°66	3°6/12.8 18			<b>230186</b>	2001 SV <sub>17</sub>		12 12.5 47°67	2°5/12.3 18		
11 7	5 51.77	+32 40.6	2.412	3.198	12.5	21.4	11 7	5 49.13	+17 58.6	1.262	2.099	18.8	20.1
11 17	5 45.35	+33 29.0	2.321	3.192	9.8	21.2	11 17	5 44.10	+17 47.0	1.212	2.117	14.3	19.9
11 27	5 36.45	+34 11.6	2.254	3.187	6.9	21.0	11 27	5 35.86	+17 39.2	1.182	2.136	9.1	19.6
12 7	5 25.75	+34 44.6	2.215	3.180	4.3	20.8	12 7	5 25.52	+17 35.8	1.176	2.155	4.0	19.4
12 17	5 14.23	+35 5.0	2.206	3.173	4.0	20.8	12 17	5 14.61	+17 37.3	1.196	2.175	3.7	19.4
12 27	5 3.09	+35 12.2	2.228	3.166	6.4	20.9	12 27	5 4.81	+17 44.6	1.243	2.195	8.5	19.8
1 6	4 53.46	+35 8.2	2.279	3.158	9.4	21.1	1 6	4 57.45	+17 58.2	1.313	2.216	13.1	20.1
1 16	4 46.15	+34 56.5	2.355	3.149	12.2	21.3	1 16	4 53.28	+18 18.0	1.405	2.237	17.1	20.4
<b>372225</b>	2008 UB <sub>57</sub>		12 12.5 116°74	0°2/12.5 17			<b>91656</b>	1999 TS <sub>103</sub>		12 12.5 54°62	5°3/13.5 18		
11 7	5 44.89	+22 32.9	2.51										

EPHEMERIDES

12 12.5

12 12.6

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>279404</b>	2010 <i>EJ</i> <sub>70</sub>		12 12.5	49°42	9°5/11.1	18	<b>179349</b>	2001 <i>XW</i> <sub>122</sub>		12 12.5	151°43	0°3/12.5	18
11 7	5 46.03	+ 3 49.6	1.467	2.277	18.0	19.7	11 7	5 47.08	+21 52.9	2.090	2.901	13.3	20.3
11 17	5 41.22	+ 2 23.0	1.419	2.292	14.7	19.5	11 17	5 41.72	+22 0.3	2.010	2.903	10.1	20.1
11 27	5 33.81	+ 1 11.6	1.391	2.308	11.7	19.3	11 27	5 34.08	+22 7.4	1.955	2.905	6.4	19.9
12 7	5 24.74	+ 0 22.2	1.387	2.325	9.7	19.3	12 7	5 24.89	+22 13.4	1.926	2.907	2.3	19.6
12 17	5 15.23	- 0 0.8	1.408	2.341	9.9	19.3	12 17	5 15.09	+22 17.9	1.928	2.909	1.9	19.6
12 27	5 6.58	+ 0 3.8	1.454	2.358	12.0	19.5	12 27	5 5.81	+22 21.3	1.959	2.910	6.0	19.8
1 6	4 59.88	+ 0 33.3	1.522	2.375	14.8	19.7	1 6	4 58.04	+22 24.7	2.018	2.912	9.7	20.1
1 16	4 55.79	+ 1 22.5	1.611	2.393	17.5	19.9	1 16	4 52.50	+22 29.6	2.102	2.914	12.9	20.3
<b>377011</b>	2002 <i>QZ</i> <sub>129</sub>		12 12.5	81°40	0°6/12.5	18	<b>329674</b>	2003 <i>UF</i> <sub>59</sub>		12 12.5	2°41	5°6/10.3	18
11 7	5 51.46	+22 30.3	1.421	2.247	17.6	21.3	11 7	5 44.86	+14 29.0	1.782	2.602	14.9	19.0
11 17	5 45.72	+22 18.9	1.361	2.262	13.4	21.1	11 17	5 40.12	+12 34.2	1.709	2.601	11.6	18.7
11 27	5 36.84	+22 5.6	1.323	2.276	8.4	20.9	11 27	5 33.06	+10 39.0	1.660	2.601	8.2	18.5
12 7	5 25.89	+21 49.9	1.310	2.291	3.1	20.6	12 7	5 24.49	+ 8 49.7	1.639	2.602	5.8	18.4
12 17	5 14.32	+21 32.6	1.324	2.305	2.6	20.6	12 17	5 15.44	+ 7 13.0	1.646	2.603	6.4	18.4
12 27	5 3.78	+21 15.7	1.366	2.319	7.7	21.0	12 27	5 7.06	+ 5 54.6	1.682	2.605	9.3	18.6
1 6	4 55.60	+21 2.0	1.433	2.333	12.4	21.3	1 6	5 0.33	+ 4 57.6	1.743	2.608	12.6	18.8
1 16	4 50.55	+20 53.8	1.522	2.347	16.3	21.5	1 16	4 55.91	+ 4 21.9	1.827	2.611	15.6	19.0
<b>25658</b>	Bokor		12 12.5	125°72	1°6/12.4	18	<b>444904</b>	2007 <i>YK</i> <sub>52</sub>		12 12.5	82°51	0°9/12.6	18
11 7	5 50.78	+19 40.5	1.657	2.474	15.9	18.4	11 7	5 48.62	+24 17.6	1.850	2.665	14.6	21.3
11 17	5 44.88	+19 30.1	1.588	2.484	12.1	18.2	11 17	5 43.20	+24 41.2	1.776	2.670	11.1	21.1
11 27	5 36.20	+19 20.6	1.542	2.493	7.7	18.0	11 27	5 35.16	+25 3.3	1.725	2.675	7.1	20.8
12 7	5 25.65	+19 12.0	1.522	2.502	3.1	17.7	12 7	5 25.31	+25 21.9	1.700	2.680	2.7	20.6
12 17	5 14.48	+19 4.9	1.531	2.511	2.8	17.7	12 17	5 14.75	+25 35.4	1.704	2.685	2.2	20.6
12 27	5 4.09	+19 0.5	1.569	2.519	7.3	18.0	12 27	5 4.82	+25 43.9	1.738	2.690	6.5	20.8
1 6	4 55.69	+19 0.3	1.633	2.527	11.6	18.3	1 6	4 56.66	+25 48.8	1.798	2.695	10.5	21.1
1 16	4 50.05	+19 5.4	1.720	2.534	15.2	18.5	1 16	4 51.08	+25 52.5	1.883	2.700	13.9	21.3
<b>523320</b>	2017 <i>BG</i> <sub>138</sub>		12 12.5	360°00	5°8/14.4	17	<b>85099</b>	1213 <i>T</i> -3		12 12.6	28°51	2°6/13.1	18
11 7	5 49.08	+39 0.4	1.464	2.273	18.0	20.8	11 7	5 50.23	+30 3.7	1.300	2.130	18.7	19.3
11 17	5 44.49	+38 51.5	1.390	2.271	14.5	20.6	11 17	5 45.39	+29 59.1	1.235	2.135	14.5	19.0
11 27	5 36.33	+38 23.2	1.336	2.269	10.6	20.4	11 27	5 36.94	+29 43.9	1.190	2.140	9.5	18.8
12 7	5 25.75	+37 31.3	1.306	2.269	7.0	20.2	12 7	5 26.01	+29 15.7	1.168	2.146	4.4	18.5
12 17	5 14.42	+36 15.6	1.302	2.269	6.0	20.1	12 17	5 14.27	+28 34.4	1.173	2.152	3.5	18.4
12 27	5 4.24	+34 41.2	1.324	2.271	8.8	20.3	12 27	5 3.63	+27 43.9	1.203	2.158	8.3	18.7
1 6	4 56.69	+32 57.6	1.371	2.273	12.7	20.5	1 6	4 55.65	+26 50.8	1.258	2.165	13.2	19.0
1 16	4 52.61	+31 14.6	1.441	2.277	16.5	20.8	1 16	4 51.21	+26 1.3	1.335	2.173	17.4	19.3
<b>408761</b>	1997 <i>TV</i> <sub>2</sub>		12 12.5	50°91	7°6/13.7	17	<b>258740</b>	2002 <i>GN</i> <sub>152</sub>		12 12.6	162°59	2°2/12.4	18
11 7	5 52.25	+43 51.3	2.168	2.931	14.4	20.5	11 7	5 52.15	+16 56.8	1.792	2.600	15.3	21.2
11 17	5 46.27	+44 59.8	2.100	2.940	12.1	20.4	11 17	5 45.79	+16 56.3	1.717	2.606	11.7	21.0
11 27	5 37.26	+45 54.3	2.055	2.949	9.7	20.2	11 27	5 36.76	+16 59.6	1.665	2.612	7.6	20.7
12 7	5 26.10	+46 28.8	2.034	2.958	8.0	20.2	12 7	5 25.89	+17 6.7	1.639	2.617	3.4	20.5
12 17	5 14.09	+46 39.5	2.041	2.968	7.7	20.2	12 17	5 14.33	+17 17.3	1.643	2.621	3.1	20.5
12 27	5 2.80	+46 26.4	2.074	2.977	9.0	20.3	12 27	5 3.42	+17 31.8	1.677	2.624	7.2	20.7
1 6	4 53.60	+45 54.0	2.134	2.987	11.1	20.4	1 6	4 54.34	+17 50.4	1.738	2.627	11.3	21.0
1 16	4 47.37	+45 8.5	2.216	2.997	13.3	20.6	1 16	4 47.89	+18 13.4	1.823	2.629	14.8	21.2
<b>261501</b>	2005 <i>WO</i> <sub>28</sub>		12 12.5	95°45	1°0/12.7	18	<b>127465</b>	2002 <i>RY</i> <sub>32</sub>		12 12.6	109°11	2°6/11.9	18
11 7	5 47.97	+25 37.0	2.160	2.967	13.1	21.1	11 7	5 44.44	+14 23.1	2.798	3.594	10.7	20.2
11 17	5 42.25	+25 50.1	2.091	2.981	9.9	20.9	11 17	5 38.95	+13 58.8	2.733	3.615	8.2	20.0
11 27	5 34.32	+26 0.1	2.047	2.995	6.3	20.7	11 27	5 31.96	+13 37.5	2.694	3.635	5.5	19.9
12 7	5 24.93	+26 5.5	2.030	3.009	2.5	20.5	12 7	5 24.04	+13 20.5	2.684	3.655	3.1	19.8
12 17	5 15.06	+26 5.7	2.042	3.023	2.0	20.5	12 17	5 15.85	+13 8.7	2.705	3.674	3.1	19.8
12 27	5 5.82	+26 1.3	2.085	3.036	5.7	20.8	12 27	5 8.13	+13 3.0	2.756	3.693	5.4	20.0
1 6	4 58.14	+25 54.3	2.156	3.050	9.2	21.0	1 6	5 1.51	+13 3.7	2.837	3.711	7.9	20.2
1 16	4 52.69	+25 46.8	2.252	3.063	12.2	21.2	1 16	4 56.45	+13 10.7	2.943	3.729	10.2	20.4
<b>408071</b>	2012 <i>GA</i> <sub>30</sub>		12 12.5	287°46	3°9/11.7	17	<b>217150</b>	2002 <i>NU</i> <sub>51</sub>		12 12.6	130°73	2°2/12.9	18
11 7	5 43.89	+13 26.3	2.142	2.952	13.0	21.2	11 7	5 54.22	+29 35.5	1.680	2.487	16.2	20.8
11 17	5 39.17	+12 45.8	2.058	2.946	10.1	21.0	11 17	5 47.60	+29 34.0	1.611	2.499	12.4	20.6
11 27	5 32.41	+12 9.0	1.999	2.940	7.0	20.8	11 27	5 37.96	+29 24.2	1.564	2.510	8.1	20.3
12 7	5 24.27	+11 38.3	1.966	2.934	4.3	20.6	12 7	5 26.31	+29 3.5	1.544	2.521	3.7	20.1
12 17	5 15.58	+11 15.8	1.962	2.928	4.4	20.6	12 17	5 14.05	+28 31.8	1.552	2.531	3.0	20.1
12 27	5 7.32	+11 3.4	1.987	2.923	7.2	20.7	12 27	5 2.75	+27 51.9	1.590	2.541	7.1	20.4
1 6	5 0.40	+11 1.7	2.039	2.917	10.4	20.9	1 6	4 53.71	+27 8.5	1.654	2.550	11.3	20.6
1 16	4 55.47	+11 10.5	2.115	2.911	13.4	21.1	1 16	4 47.71	+26 26.8	1.742	2.558	14.9	20.9
<b>97610</b>	2000 <i>EG</i> <sub>86</sub>		12 12.5	217°73	0°4/12.6	18	<b>5195</b>	Kaendler		12 12.6	82°08	2°5/12.2	18
11 7	5 44.99	+25 4.6	2.731	3.531	10.8	19.7	11 7	5 52.16	+19 25.2	1.282	2.114	18.8	17.0
11 17	5 39.69	+24 57.5	2.638	3.525	8.2	19.5	11 17	5 46.41	+18 53.6	1.227	2.129	14.3	16.8
11 27	5 32.61	+24 47.4	2.571	3.519	5.2	19.3	11 27	5 37.34	+18 22.8	1.192	2.145	9.2	16.6
12 7	5 24.32	+24 33.7	2.532	3.512	2.0	19.1	12 7	5 26.09	+17 54.1	1.181	2.160	3.9	16.3
12 17	5 15.54	+24 16.7	2.524	3.505	1.5	19.0	12 17	5 14.25	+17 29.5	1.197	2.176	3.7	16.3
12 27	5 7.15	+23 57.4	2.548	3.498	4.8	19.3	12 27	5 3.54	+17 11.9	1.240	2.191	8.7	16.7
1 6	4 59.90	+23 37.6	2.600	3.491	7.9	19.4	1 6	4 55.37	+17 3.1	1.307	2.206	13.5	17.0
1 16	4 54.40	+23 19.1	2.678	3.483	10.6	19.6	1 16	4 50.50	+17 4.0	1.395	2.220	17.5	17.3
<b>327540</b>	2006 <i>BN</i> <sub>180</sub>		12 12.5	175°59	3°5/12.1	17	<b>270078</b>	2001 <i>QG</i> <sub>1</sub>		12 12.6	66°08	0°8/12.4	18
11 7													

EPHEMERIDES

12 12.6

12 12.6

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>34885</b>	2001 <i>VE</i> <sub>12</sub>		12 12.6 195°08	5°4/13.1	18		<b>52520</b>	1996 <i>JK</i> <sub>3</sub>		12 12.6 306°59	3°5/12.4	18	
11 7	5 52.65	+38 42.3	2.483	3.252	12.6	19.7	11 7	5 50.34	+26 42.5	1.407	2.235	17.7	18.1
11 17	5 46.14	+39 38.7	2.397	3.250	10.3	19.5	11 17	5 45.97	+27 53.7	1.314	2.213	13.8	17.8
11 27	5 37.02	+40 25.8	2.334	3.248	7.8	19.4	11 27	5 37.83	+29 7.0	1.242	2.192	9.3	17.5
12 7	5 26.02	+40 58.9	2.299	3.245	5.8	19.2	12 7	5 26.60	+30 16.4	1.195	2.171	4.7	17.2
12 17	5 14.19	+41 14.5	2.293	3.241	5.6	19.2	12 17	5 13.64	+31 15.1	1.175	2.151	4.4	17.1
12 27	5 2.80	+41 12.3	2.317	3.237	7.3	19.3	12 27	5 0.94	+31 58.9	1.181	2.131	9.2	17.3
1 6	4 53.04	+40 55.0	2.368	3.233	9.7	19.5	1 6	4 50.46	+32 28.1	1.211	2.111	14.2	17.5
1 16	4 45.75	+40 27.3	2.444	3.228	12.2	19.6	1 16	4 43.64	+32 46.8	1.263	2.092	18.7	17.8
<b>17230</b>	2000 <i>CX</i> <sub>116</sub>		12 12.6 82°86	0°2/12.5	18		<b>482691</b>	2013 <i>CX</i> <sub>101</sub>		12 12.6 324°09	10°0/11.7	18	
11 7	5 47.19	+21 18.4	2.360	3.164	12.2	17.6	11 7	5 43.67	+ 1 7.5	1.515	2.319	17.8	20.8
11 17	5 41.40	+21 38.3	2.297	3.186	9.2	17.4	11 17	5 39.86	+ 0 16.4	1.435	2.303	15.0	20.5
11 27	5 33.68	+21 58.4	2.259	3.208	5.8	17.3	11 27	5 33.31	- 0 17.4	1.375	2.287	12.2	20.3
12 7	5 24.70	+22 17.8	2.249	3.229	2.1	17.0	12 7	5 24.75	- 0 27.6	1.337	2.272	10.2	20.2
12 17	5 15.34	+22 35.4	2.269	3.250	1.7	17.1	12 17	5 15.26	- 0 9.9	1.324	2.258	10.3	20.1
12 27	5 6.53	+22 51.3	2.320	3.271	5.2	17.3	12 27	5 6.23	+ 0 36.8	1.335	2.244	12.4	20.2
1 6	4 59.11	+23 6.0	2.401	3.292	8.5	17.6	1 6	4 58.91	+ 1 48.9	1.369	2.231	15.6	20.4
1 16	4 53.66	+23 20.5	2.506	3.312	11.2	17.8	1 16	4 54.24	+ 3 20.5	1.424	2.219	18.7	20.6
<b>216455</b>	2009 <i>HG</i> <sub>32</sub>		12 12.6 303°28	3°1/12.2	17		<b>283774</b>	2003 <i>OE</i> <sub>1</sub>		12 12.6 100°85	3°6/12.1	18	
11 7	5 45.62	+16 0.6	1.673	2.496	15.5	20.7	11 7	5 50.29	+13 22.8	1.990	2.791	14.2	21.7
11 17	5 41.28	+15 44.4	1.580	2.478	12.0	20.4	11 17	5 43.82	+13 1.6	1.935	2.818	10.9	21.6
11 27	5 34.19	+15 32.2	1.509	2.459	8.0	20.1	11 27	5 35.20	+12 45.8	1.903	2.844	7.3	21.4
12 7	5 25.06	+15 25.4	1.464	2.440	4.1	19.8	12 7	5 25.25	+12 36.9	1.899	2.870	4.2	21.3
12 17	5 14.96	+15 25.2	1.446	2.422	4.0	19.8	12 17	5 14.98	+12 35.7	1.925	2.894	4.1	21.3
12 27	5 5.25	+15 32.7	1.456	2.404	8.0	20.0	12 27	5 5.47	+12 42.8	1.980	2.918	7.0	21.5
1 6	4 57.22	+15 48.5	1.491	2.386	12.4	20.2	1 6	4 57.61	+12 57.9	2.063	2.942	10.3	21.8
1 16	4 51.81	+16 12.4	1.549	2.369	16.3	20.4	1 16	4 52.00	+13 20.4	2.171	2.964	13.2	22.0
<b>523746</b>	2014 <i>UT</i> <sub>114</sub>		12 12.6 0°54	0°8/13.5	18		<b>449258</b>	2013 <i>DR</i> <sub>16</sub>		12 12.6 300°19	4°0/13.6	17	
11 7	5 26.98	+36 59.3	15.121	15.888	2.3	21.2	11 7	5 50.14	+34 49.0	1.748	2.552	15.8	20.2
11 17	5 25.17	+37 1.3	15.033	15.888	1.8	21.1	11 17	5 44.85	+34 46.3	1.660	2.542	12.5	20.0
11 27	5 23.07	+37 1.6	14.971	15.889	1.3	21.1	11 27	5 36.46	+34 30.7	1.593	2.532	8.7	19.7
12 7	5 20.80	+37 0.0	14.937	15.889	0.9	21.0	12 7	5 25.87	+33 58.7	1.552	2.521	5.1	19.5
12 17	5 18.46	+36 56.5	14.934	15.890	0.9	21.0	12 17	5 14.43	+33 9.6	1.539	2.511	4.4	19.4
12 27	5 16.17	+36 51.2	14.962	15.890	1.2	21.1	12 27	5 3.75	+32 6.1	1.553	2.501	7.6	19.6
1 6	5 14.06	+36 44.3	15.018	15.891	1.7	21.1	1 6	4 55.20	+30 54.7	1.594	2.492	11.6	19.8
1 16	5 12.23	+36 36.1	15.103	15.892	2.2	21.2	1 16	4 49.67	+29 42.2	1.659	2.482	15.3	20.0
<b>306585</b>	2000 <i>FH</i> <sub>9</sub>		12 12.6 137°22	0°7/12.5	18		<b>116845</b>	2004 <i>FY</i> <sub>48</sub>		12 12.6 144°69	0°2/12.5	18	
11 7	5 47.28	+21 54.4	1.900	2.716	14.2	21.3	11 7	5 51.86	+23 35.4	1.857	2.665	14.8	20.7
11 17	5 42.06	+21 46.3	1.822	2.717	10.8	21.1	11 17	5 45.49	+23 24.5	1.784	2.675	11.2	20.5
11 27	5 34.39	+21 36.9	1.767	2.718	6.9	20.8	11 27	5 36.51	+23 10.6	1.735	2.685	7.1	20.3
12 7	5 25.04	+21 26.2	1.738	2.719	2.5	20.5	12 7	5 25.80	+22 53.2	1.713	2.694	2.6	20.0
12 17	5 15.06	+21 14.6	1.739	2.720	2.2	20.5	12 17	5 14.53	+22 32.6	1.721	2.702	2.1	20.0
12 27	5 5.67	+21 3.3	1.769	2.721	6.5	20.8	12 27	5 4.01	+22 10.8	1.758	2.709	6.6	20.3
1 6	4 57.95	+20 54.1	1.826	2.722	10.4	21.0	1 6	4 55.36	+21 50.4	1.823	2.716	10.6	20.5
1 16	4 52.64	+20 48.9	1.907	2.722	13.9	21.3	1 16	4 49.32	+21 33.9	1.912	2.722	14.0	20.8
<b>422110</b>	2014 <i>QD</i> <sub>410</sub>		12 12.6 154°46	6°0/14.1	18		<b>493959</b>	2016 <i>AG</i> <sub>51</sub>		12 12.6 240°67	2°9/12.3	17	
11 7	5 53.04	+42 7.6	2.414	3.174	13.2	20.8	11 7	5 44.69	+13 5.0	2.394	3.196	12.1	21.6
11 17	5 46.36	+42 39.5	2.336	3.180	10.9	20.6	11 17	5 39.64	+13 6.5	2.308	3.192	9.4	21.3
11 27	5 37.07	+42 58.1	2.281	3.185	8.4	20.5	11 27	5 32.69	+13 13.5	2.246	3.187	6.3	21.5
12 7	5 26.00	+42 59.3	2.252	3.190	6.5	20.4	12 7	5 24.43	+13 27.0	2.211	3.183	3.5	21.1
12 17	5 14.31	+42 40.8	2.252	3.194	6.0	20.4	12 17	5 15.61	+13 46.9	2.207	3.178	3.4	21.1
12 27	5 3.35	+42 3.7	2.280	3.198	7.5	20.5	12 27	5 7.16	+14 13.1	2.232	3.174	6.1	21.2
1 6	4 54.25	+41 12.4	2.336	3.202	9.8	20.6	1 6	4 59.89	+14 45.1	2.286	3.169	9.2	21.4
1 16	4 47.76	+40 12.7	2.417	3.205	12.1	20.8	1 16	4 54.43	+15 22.0	2.365	3.164	12.1	21.6
<b>400441</b>	2008 <i>EM</i> <sub>1</sub>		12 12.6 244°26	1°9/13.1	17		<b>20236</b>	1998 <i>BZ</i> <sub>7</sub>		12 12.6 284°28	2°5/12.3	18	
11 7	5 49.27	+30 20.4	2.183	2.983	13.2	21.4	11 7	5 58.21	+17 32.4	1.716	2.516	16.2	21.7
11 17	5 43.48	+30 6.9	2.088	2.971	10.2	21.2	11 17	5 51.65	+17 24.7	1.580	2.465	12.8	21.3
11 27	5 35.27	+29 45.2	2.016	2.960	6.8	21.0	11 27	5 41.44	+17 19.5	1.467	2.413	8.6	20.9
12 7	5 25.36	+29 13.7	1.972	2.948	3.2	20.7	12 7	5 28.02	+17 17.0	1.380	2.358	3.9	20.5
12 17	5 14.79	+28 32.5	1.957	2.936	2.5	20.7	12 17	5 12.46	+17 17.0	1.323	2.301	3.7	20.4
12 27	5 4.77	+27 44.0	1.973	2.923	6.1	20.9	12 27	4 56.45	+17 20.3	1.297	2.242	9.1	20.5
1 6	4 56.34	+26 52.0	2.018	2.911	9.7	21.1	1 6	4 41.89	+17 28.4	1.298	2.181	14.8	20.7
1 16	4 50.29	+26 1.1	2.087	2.898	13.0	21.3	1 16	4 30.33	+17 43.4	1.323	2.117	20.0	20.8
<b>34901</b>	Mauna Loa		12 12.6 358°19	0°1/12.5	17		<b>115943</b>	2003 <i>WC</i> <sub>30</sub>		12 12.6 214°29	3°8/12.9	18	
11 7	5 42.87	+23 15.1	1.768	2.597	14.6	18.7	11 7	5 54.17	+31 4.6	1.695	2.500	16.1	19.8
11 17	5 38.95	+23 11.4	1.692	2.593	11.1	18.5	11 17	5 48.06	+31 43.1	1.610	2.495	12.7	19.6
11 27	5 32.54	+23 5.8	1.637	2.591	7.0	18.3	11 27	5 38.63	+32 15.1	1.548	2.489	8.6	19.3
12 7	5 24.39	+22 57.9	1.609	2.590	2.6	18.0	12 7	5 26.73	+32 35.5	1.511	2.483	4.8	19.1
12 17	5 15.57	+22 47.9	1.608	2.589	2.1	17.9	12 17	5 13.74	+32 40.8	1.503	2.476	4.3	19.0
12 27	5 7.34	+22 37.1	1.635	2.589	6.6	18.2	12 27	5 1.39	+32 31.0	1.522	2.469	7.9	19.2
1 6	5 0.79	+22 27.4	1.688	2.591	10.7	18.5	1 6	4 51.22	+32 10.0	1.569	2.461	12.1	19.5
1 16	4 56.69	+22 20.8	1.764	2.593	14.2	18.7	1 16	4 44.27	+31 43.3	1.638	2.452	15.8	19.7
<b>456131</b>	2006 <i>DY</i> <sub>103</sub>		12 12.6 345°81	5°0/13.5	17		<b>511841</b>	2015 <i>FT</i> <sub>323</sub>		12 12.6			

## EPHEMERIDES

12 12.6

12 12.6

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>196638</b>	2003 <i>SO</i> <sub>10</sub>		12 12.6 279°55	4.3/11.6	18		<b>54285</b>	2000 <i>JR</i> <sub>50</sub>		12 12.6 168°38	1.1/12.7	18	
11 7	5 43.51	+11 48.7	2.254	3.059	12.6	20.4	11 7	5 48.41	+25 50.1	2.054	2.862	13.6	19.8
11 17	5 38.78	+11 7.0	2.173	3.056	9.9	20.3	11 17	5 42.89	+26 3.6	1.973	2.863	10.4	19.6
11 27	5 32.15	+10 30.1	2.116	3.053	7.0	20.1	11 27	5 34.94	+26 13.8	1.916	2.865	6.7	19.4
12 7	5 24.23	+10 0.4	2.086	3.050	4.6	19.9	12 7	5 25.32	+26 19.2	1.886	2.866	2.7	19.1
12 17	5 15.82	+9 40.1	2.086	3.048	4.7	19.9	12 17	5 15.04	+26 18.8	1.886	2.866	2.1	19.1
12 27	5 7.84	+9 30.7	2.114	3.045	7.2	20.1	12 27	5 5.32	+26 13.3	1.916	2.867	6.1	19.4
1 6	5 1.12	+9 32.7	2.170	3.042	10.1	20.3	1 6	4 57.21	+26 4.6	1.973	2.868	9.8	19.6
1 16	4 56.27	+9 45.3	2.249	3.040	12.9	20.4	1 16	4 51.46	+25 55.3	2.055	2.868	13.1	19.8
<b>476037</b>	2007 <i>RB</i> <sub>271</sub>		12 12.6 34°27	10°5/14.5	17		<b>112448</b>	2002 <i>OJ</i> <sub>7</sub>		12 12.6 140°53	2°6/11.9	17	
11 7	5 55.25	+45 42.5	1.478	2.259	19.2	20.8	11 7	5 44.00	+16 30.9	2.371	3.179	12.0	20.0
11 17	5 49.86	+47 1.2	1.422	2.270	16.3	20.6	11 17	5 39.07	+15 55.9	2.291	3.180	9.2	19.8
11 27	5 40.13	+47 59.4	1.385	2.281	13.3	20.5	11 27	5 32.30	+15 22.3	2.236	3.182	6.1	19.6
12 7	5 27.31	+48 27.6	1.369	2.293	11.1	20.4	12 7	5 24.31	+14 51.9	2.209	3.183	3.2	19.5
12 17	5 13.40	+48 20.0	1.378	2.305	10.6	20.4	12 17	5 15.88	+14 26.2	2.211	3.184	3.2	19.5
12 27	5 0.82	+47 38.3	1.410	2.318	12.0	20.5	12 27	5 7.91	+14 7.0	2.244	3.185	6.1	19.6
1 6	4 51.49	+46 31.1	1.466	2.332	14.5	20.7	1 6	5 1.19	+13 55.3	2.304	3.187	9.2	19.8
1 16	4 46.40	+45 9.5	1.543	2.346	17.2	20.9	1 16	4 56.28	+13 51.6	2.389	3.188	12.0	20.0
<b>14026</b>	Esquerdo		12 12.6 142°77	1°5/12.4	18		<b>368338</b>	2002 <i>QP</i> <sub>13</sub>		12 12.6 100°81	3°8/11.9	18	
11 7	5 50.97	+19 38.3	1.842	2.653	14.8	19.6	11 7	5 44.36	+11 7.9	2.592	3.387	11.5	21.9
11 17	5 44.80	+19 27.2	1.771	2.662	11.3	19.4	11 17	5 39.04	+10 37.5	2.529	3.406	8.9	21.8
11 27	5 36.09	+19 16.8	1.723	2.672	7.2	19.1	11 27	5 32.12	+10 12.3	2.491	3.425	6.2	21.6
12 7	5 25.68	+19 7.2	1.701	2.681	2.9	18.9	12 7	5 24.21	+9 54.2	2.481	3.444	4.1	21.5
12 17	5 14.70	+18 58.7	1.710	2.689	2.6	18.9	12 17	5 16.00	+9 44.5	2.501	3.462	4.1	21.6
12 27	5 4.41	+18 52.7	1.747	2.696	6.8	19.2	12 27	5 8.29	+9 43.8	2.551	3.480	6.2	21.7
1 6	4 55.93	+18 50.6	1.812	2.703	10.8	19.4	1 6	5 1.73	+9 52.1	2.629	3.497	8.7	21.9
1 16	4 49.99	+18 53.5	1.901	2.710	14.2	19.7	1 16	4 56.82	+10 8.6	2.733	3.515	11.0	22.1
<b>209250</b>	2003 <i>WH</i> <sub>134</sub>		12 12.6 39°30	0°2/12.6	18		<b>217816</b>	2001 <i>DG</i> <sub>14</sub>		12 12.6 171°66	10°0/15.7	18	
11 7	5 48.38	+21 19.9	1.595	2.419	16.1	19.6	11 7	6 7.42	+52 9.6	2.069	2.781	16.5	20.5
11 17	5 43.34	+21 43.0	1.526	2.425	12.2	19.4	11 17	5 58.35	+52 53.9	1.992	2.786	14.4	20.3
11 27	5 35.42	+22 7.6	1.479	2.432	7.8	19.1	11 27	5 45.13	+53 16.3	1.936	2.789	12.2	20.2
12 7	5 25.50	+22 31.8	1.458	2.439	2.8	18.8	12 7	5 29.08	+53 8.2	1.903	2.792	10.5	20.1
12 17	5 14.82	+22 54.0	1.465	2.446	2.3	18.8	12 17	5 12.21	+52 24.9	1.896	2.794	10.0	20.1
12 27	5 4.85	+23 13.8	1.500	2.453	7.1	19.2	12 27	4 56.79	+51 8.4	1.916	2.796	10.9	20.1
1 6	4 56.87	+23 32.0	1.560	2.461	11.5	19.4	1 6	4 44.60	+49 27.2	1.962	2.796	12.8	20.2
1 16	4 51.71	+23 50.0	1.644	2.469	15.3	19.7	1 16	4 36.54	+47 32.6	2.031	2.796	14.9	20.4
<b>157049</b>	2003 <i>SE</i> <sub>119</sub>		12 12.6 108°44	1°5/12.2	18		<b>495488</b>	2014 <i>UU</i> <sub>98</sub>		12 12.6 346°55	0°3/12.6	17	
11 7	5 45.47	+19 54.1	2.432	3.238	11.8	19.6	11 7	5 45.70	+21 59.8	2.062	2.877	13.3	21.0
11 17	5 40.05	+19 23.2	2.360	3.250	8.9	19.4	11 17	5 40.88	+22 32.5	1.979	2.873	10.1	20.8
11 27	5 32.81	+18 51.6	2.314	3.262	5.7	19.2	11 27	5 33.73	+23 6.6	1.919	2.870	6.4	20.6
12 7	5 24.43	+18 20.6	2.295	3.274	2.4	19.0	12 7	5 24.92	+23 40.2	1.886	2.867	2.4	20.3
12 17	5 15.71	+17 51.3	2.308	3.285	2.3	19.1	12 17	5 15.39	+24 11.5	1.883	2.864	1.9	20.3
12 27	5 7.52	+17 25.6	2.350	3.297	5.5	19.3	12 27	5 6.27	+24 39.7	1.909	2.862	6.0	20.6
1 6	5 0.63	+17 5.1	2.422	3.308	8.6	19.5	1 6	4 58.61	+25 4.9	1.963	2.860	9.8	20.8
1 16	4 55.59	+16 50.7	2.518	3.319	11.3	19.7	1 16	4 53.18	+25 28.2	2.041	2.858	13.0	21.0
<b>199757</b>	2006 <i>JB</i> <sub>45</sub>		12 12.6 208°16	2°2/12.9	18		<b>203709</b>	2002 <i>PS</i> <sub>122</sub>		12 12.6 203°58	0°3/12.7	18	
11 7	5 46.63	+29 24.3	2.596	3.392	11.4	20.5	11 7	5 49.35	+25 3.0	2.463	3.260	11.9	21.1
11 17	5 41.19	+29 52.7	2.508	3.390	8.8	20.3	11 17	5 43.21	+24 51.5	2.369	3.254	9.1	20.9
11 27	5 33.72	+30 16.9	2.445	3.387	5.9	20.2	11 27	5 34.98	+24 36.2	2.301	3.248	5.8	20.7
12 7	5 24.83	+30 34.7	2.410	3.384	3.0	20.0	12 7	5 25.33	+24 16.5	2.261	3.241	2.2	20.5
12 17	5 15.35	+30 44.6	2.406	3.381	2.6	19.9	12 17	5 15.11	+23 52.8	2.252	3.233	1.7	20.4
12 27	5 6.25	+30 46.7	2.432	3.378	5.4	20.1	12 27	5 5.34	+23 26.5	2.275	3.225	5.4	20.7
1 6	4 58.42	+30 42.4	2.486	3.374	8.4	20.3	1 6	4 56.92	+23 0.0	2.327	3.216	8.8	20.9
1 16	4 52.53	+30 34.3	2.566	3.371	11.0	20.5	1 16	4 50.53	+22 35.6	2.405	3.206	11.8	21.1
<b>372790</b>	2010 <i>PQ</i> <sub>26</sub>		12 12.6 40°33	0°7/12.7	18		<b>251347</b>	2007 <i>TY</i> <sub>12</sub>		12 12.6 47°88	2°3/12.8	18	
11 7	5 50.42	+26 12.2	1.137	1.980	20.0	20.4	11 7	5 52.25	+26 35.7	1.108	1.949	20.5	20.2
11 17	5 45.71	+25 53.0	1.081	1.990	15.3	20.1	11 17	5 47.32	+27 5.3	1.056	1.963	15.7	19.9
11 27	5 37.21	+25 26.5	1.045	2.001	9.7	19.8	11 27	5 38.37	+27 30.0	1.023	1.977	10.2	19.7
12 7	5 26.18	+24 52.0	1.031	2.012	3.6	19.5	12 7	5 26.68	+27 45.5	1.012	1.992	4.3	19.4
12 17	5 14.40	+24 10.9	1.043	2.024	2.8	19.5	12 17	5 14.11	+27 49.4	1.027	2.007	3.5	19.4
12 27	5 3.90	+23 27.7	1.080	2.037	8.7	19.9	12 27	5 2.86	+27 42.7	1.066	2.023	9.0	19.8
1 6	4 56.26	+22 47.8	1.140	2.050	14.0	20.2	1 6	4 54.62	+27 30.1	1.129	2.039	14.2	20.1
1 16	4 52.30	+22 15.8	1.221	2.064	18.4	20.6	1 16	4 50.30	+27 16.6	1.212	2.055	18.5	20.4
<b>242627</b>	2005 <i>LS</i> <sub>11</sub>		12 12.6 80°60	2°8/12.6	18		<b>309967</b>	2009 <i>HZ</i> <sub>39</sub>		12 12.6 246°74	3°0/12.7	17	
11 7	5 48.77	+13 34.4	1.922	2.729	14.4	20.5	11 7	5 50.83	+29 14.7	2.073	2.873	13.7	21.3
11 17	5 42.97	+13 52.5	1.858	2.745	11.1	20.3	11 17	5 45.06	+30 6.3	1.980	2.863	10.7	21.0
11 27	5 34.87	+14 17.7	1.817	2.761	7.3	20.1	11 27	5 36.56	+30 54.9	1.911	2.853	7.2	20.8
12 7	5 25.24	+14 49.8	1.803	2.777	3.7	19.9	12 7	5 26.02	+31 36.2	1.870	2.842	3.9	20.6
12 17	5 15.09	+15 27.8	1.818	2.793	3.4	20.0	12 17	5 14.50	+32 6.9	1.858	2.832	3.6	20.5
12 27	5 5.58	+16 10.5	1.864	2.809	6.8	20.2	12 27	5 3.34	+32 25.7	1.876	2.821	6.8	20.7
1 6	4 57.69	+16 56.4	1.937	2.825	10.3	20.5	1 6	4 53.80	+32 34.1	1.922	2.809	10.4	20.9
1 16	4 52.10	+17 44.6	2.034	2.841	13.5	20.7	1 16	4 46.82	+32 35.4	1.991	2.798	13.7	21.1
<b>99708</b>	2002 <i>JM</i> <sub>39</sub>		12 12.6 115°85	2°9/12.3	18		<b>376726</b>	1998 <i>JZ</i> <sub>3</sub>		12 12.6 199°71	4°5/12.3	18	
11													

EPHEMERIDES

12 12.6

12 12.6

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>103015</b>	1999 <i>XF</i> <sub>104</sub>		12 12.6 304°23	2°6/12.4	18		<b>9891</b>	Stephensmith		12 12.6 195°23	1°1/12.6	18	
11 7	5 47.81	+17 36.1	1.388	2.221	17.6	18.9	11 7	5 50.89	+24 10.5	2.142	2.944	13.3	17.6
11 17	5 43.47	+17 27.6	1.306	2.209	13.6	18.6	11 17	5 44.80	+24 48.7	2.055	2.942	10.2	17.4
11 27	5 35.88	+17 22.9	1.244	2.197	8.9	18.3	11 27	5 36.24	+25 26.6	1.992	2.940	6.5	17.1
12 7	5 25.84	+17 22.9	1.207	2.185	4.0	18.0	12 7	5 25.90	+26 1.6	1.958	2.937	2.6	16.9
12 17	5 14.69	+17 28.1	1.195	2.174	3.7	17.9	12 17	5 14.77	+26 31.4	1.954	2.934	2.1	16.8
12 27	5 4.10	+17 39.3	1.210	2.163	8.7	18.2	12 27	5 4.05	+26 55.0	1.980	2.930	6.1	17.1
1 6	4 55.62	+17 57.1	1.250	2.152	13.7	18.4	1 6	4 54.87	+27 13.3	2.035	2.926	9.8	17.3
1 16	4 50.29	+18 21.7	1.311	2.142	18.1	18.7	1 16	4 48.04	+27 28.0	2.115	2.921	13.0	17.5
<b>110651</b>	2001 <i>TO</i> <sub>170</sub>		12 12.6 311°74	4°6/13.5	17		<b>421752</b>	2014 <i>PT</i> <sub>55</sub>		12 12.6 51°19	4°5/12.1	18	
11 7	5 49.19	+35 8.4	1.834	2.636	15.2	19.4	11 7	5 44.81	+10 51.5	1.996	2.804	13.9	21.2
11 17	5 44.12	+35 30.1	1.747	2.627	12.1	19.1	11 17	5 39.97	+10 29.1	1.926	2.810	10.9	21.0
11 27	5 36.05	+35 41.0	1.683	2.618	8.6	18.9	11 27	5 33.03	+10 14.0	1.878	2.816	7.6	20.9
12 7	5 25.84	+35 37.0	1.645	2.610	5.5	18.7	12 7	5 24.67	+10 8.4	1.857	2.822	5.0	20.7
12 17	5 14.73	+35 15.9	1.633	2.602	4.9	18.7	12 17	5 15.80	+10 13.5	1.864	2.829	4.9	20.7
12 27	5 4.28	+34 39.1	1.650	2.594	7.7	18.8	12 27	5 7.46	+10 29.8	1.900	2.835	7.5	20.9
1 6	4 55.83	+33 51.2	1.693	2.586	11.3	19.0	1 6	5 0.57	+10 56.4	1.963	2.842	10.7	21.1
1 16	4 50.30	+32 58.4	1.759	2.578	14.7	19.2	1 16	4 55.77	+11 31.7	2.049	2.849	13.6	21.3
<b>412302</b>	2013 <i>JL</i> <sub>48</sub>		12 12.6 82°84	4°2/12.9	18		<b>78901</b>	2003 <i>ST</i> <sub>66</sub>		12 12.6 42°17	5°7/11.6	18	
11 7	5 51.70	+33 14.8	2.155	2.946	13.6	21.1	11 7	5 44.38	+9 56.9	1.815	2.628	14.9	18.5
11 17	5 45.39	+34 12.2	2.091	2.964	10.7	20.9	11 17	5 39.64	+8 58.2	1.762	2.647	11.7	18.4
11 27	5 36.53	+35 2.3	2.051	2.983	7.5	20.8	11 27	5 32.75	+8 7.5	1.733	2.667	8.5	18.2
12 7	5 25.93	+35 40.7	2.038	3.001	4.8	20.6	12 7	5 24.53	+7 28.6	1.729	2.687	6.0	18.1
12 17	5 14.69	+36 4.4	2.055	3.019	4.5	20.7	12 17	5 15.96	+7 4.4	1.752	2.708	6.2	18.2
12 27	5 4.11	+36 13.3	2.101	3.037	6.8	20.8	12 27	5 8.10	+6 56.2	1.803	2.729	8.6	18.3
1 6	4 55.31	+36 10.0	2.175	3.055	9.7	21.0	1 6	5 1.85	+7 3.6	1.880	2.751	11.5	18.6
1 16	4 49.05	+35 58.5	2.273	3.073	12.4	21.3	1 16	4 57.77	+7 24.3	1.979	2.772	14.3	18.8
<b>279656</b>	2011 <i>FT</i> <sub>7</sub>		12 12.6 209°16	8°2/13.7	18		<b>295008</b>	2008 <i>EB</i> <sub>44</sub>		12 12.6 154°01	1°9/12.3	18	
11 7	5 57.76	+52 53.4	3.076	3.769	11.9	21.1	11 7	5 46.58	+18 10.9	2.127	2.936	13.1	21.2
11 17	5 50.39	+54 9.4	2.992	3.764	10.6	21.0	11 17	5 41.29	+17 57.0	2.048	2.939	10.0	21.0
11 27	5 40.00	+55 11.5	2.930	3.758	9.3	20.9	11 27	5 33.85	+17 44.6	1.994	2.942	6.5	20.8
12 7	5 27.31	+55 53.7	2.893	3.752	8.4	20.9	12 7	5 24.98	+17 34.3	1.967	2.945	2.9	20.6
12 17	5 13.51	+55 11.8	2.882	3.745	8.3	20.8	12 17	5 15.57	+17 26.9	1.969	2.947	2.7	20.6
12 27	5 0.12	+56 5.3	2.899	3.738	8.9	20.9	12 27	5 6.66	+17 23.4	2.002	2.949	6.2	20.8
1 6	4 48.54	+55 37.0	2.940	3.730	10.1	21.0	1 6	4 59.20	+17 24.6	2.062	2.951	9.8	21.1
1 16	4 39.79	+54 52.4	3.004	3.723	11.5	21.1	1 16	4 53.84	+17 31.1	2.146	2.953	12.8	21.3
<b>173809</b>	2001 <i>SJ</i> <sub>241</sub>		12 12.6 182°25	4°2/13.2	18		<b>46663</b>	1996 <i>DR</i> <sub>2</sub>		12 12.6 125°30	2°3/13.0	18	
11 7	5 50.94	+34 26.8	2.227	3.016	13.3	20.9	11 7	5 50.16	+29 27.2	1.926	2.732	14.4	19.5
11 17	5 44.91	+35 5.2	2.144	3.016	10.5	20.7	11 17	5 44.39	+29 37.9	1.851	2.738	11.1	19.3
11 27	5 36.30	+35 35.6	2.085	3.016	7.5	20.5	11 27	5 35.98	+29 41.9	1.799	2.744	7.3	19.1
12 7	5 25.88	+35 53.9	2.053	3.016	4.8	20.4	12 7	5 25.78	+29 37.0	1.773	2.749	3.5	18.9
12 17	5 14.71	+35 57.9	2.050	3.015	4.4	20.3	12 17	5 14.95	+29 22.3	1.777	2.755	2.9	18.8
12 27	5 4.09	+35 47.6	2.077	3.015	6.8	20.5	12 27	5 4.81	+28 59.1	1.810	2.760	6.5	19.1
1 6	4 55.15	+35 26.0	2.131	3.014	9.8	20.7	1 6	4 56.53	+28 30.9	1.870	2.765	10.3	19.3
1 16	4 48.71	+34 57.7	2.210	3.012	12.7	20.9	1 16	4 50.85	+28 1.7	1.954	2.770	13.6	19.6
<b>349976</b>	2010 <i>EC</i> <sub>86</sub>		12 12.6 42°33	4°4/11.8	18		<b>124859</b>	2001 <i>TA</i> <sub>25</sub>		12 12.6 296°86	3°6/13.1	18	
11 7	5 46.90	+15 7.3	1.513	2.339	16.7	19.6	11 7	5 50.00	+30 56.7	1.507	2.328	17.1	19.9
11 17	5 42.11	+14 14.2	1.449	2.347	12.9	19.4	11 17	5 45.40	+31 18.1	1.416	2.309	13.4	19.7
11 27	5 34.57	+13 24.8	1.407	2.354	8.7	19.2	11 27	5 37.27	+31 31.5	1.345	2.291	9.2	19.4
12 7	5 25.22	+12 42.4	1.390	2.362	5.1	19.0	12 7	5 26.45	+31 32.6	1.299	2.273	4.9	19.1
12 17	5 15.29	+12 10.5	1.400	2.370	5.2	19.0	12 17	5 14.33	+31 18.3	1.279	2.255	4.2	19.0
12 27	5 6.15	+11 51.6	1.437	2.379	8.8	19.3	12 27	5 2.76	+30 49.7	1.286	2.237	8.4	19.2
1 6	4 58.99	+11 46.8	1.499	2.388	12.8	19.5	1 6	4 53.46	+30 11.5	1.317	2.219	13.2	19.4
1 16	4 54.54	+11 55.2	1.583	2.397	16.3	19.8	1 16	4 47.56	+29 30.0	1.371	2.202	17.4	19.6
<b>23309</b>	2001 <i>AX</i> <sub>22</sub>		12 12.6 254°52	4°1/12.2	18		<b>367689</b>	2010 <i>RD</i> <sub>59</sub>		12 12.6 115°45	0°5/12.7	17	
11 7	5 44.69	+10 38.1	2.221	3.023	12.9	19.1	11 7	5 54.56	+25 12.3	1.457	2.276	17.6	21.7
11 17	5 39.78	+10 24.0	2.138	3.019	10.1	18.9	11 17	5 48.18	+25 3.1	1.394	2.290	13.4	21.5
11 27	5 32.88	+10 16.9	2.078	3.015	7.1	18.7	11 27	5 38.54	+24 49.0	1.352	2.304	8.5	21.3
12 7	5 24.60	+10 18.6	2.046	3.011	4.6	18.5	12 7	5 26.73	+24 28.7	1.336	2.317	3.2	21.0
12 17	5 15.77	+10 30.1	2.042	3.006	4.5	18.5	12 17	5 14.27	+24 2.5	1.348	2.329	2.4	21.0
12 27	5 7.33	+10 51.5	2.068	3.002	7.1	18.7	12 27	5 2.88	+23 33.3	1.388	2.341	7.7	21.3
1 6	5 0.15	+11 22.1	2.121	2.998	10.1	18.9	1 6	4 53.93	+23 5.0	1.453	2.353	12.3	21.6
1 16	4 54.90	+12 0.5	2.198	2.994	13.0	19.1	1 16	4 48.23	+22 41.5	1.542	2.364	16.3	21.9
<b>323577</b>	2004 <i>TV</i> <sub>172</sub>		12 12.6 93°12	3°1/13.4	17		<b>449260</b>	2013 <i>EJ</i> <sub>1</sub>		12 12.6 271°78	7°5/11.1	17	
11 7	5 48.67	+33 7.9	2.212	3.007	13.2	20.3	11 7	5 45.23	+4 59.9	1.933	2.728	14.8	21.2
11 17	5 42.95	+33 12.1	2.137	3.015	10.3	20.1	11 17	5 40.52	+3 59.5	1.846	2.715	12.1	21.0
11 27	5 34.90	+33 7.3	2.085	3.023	7.0	19.9	11 27	5 33.53	+3 8.8	1.783	2.701	9.5	20.8
12 7	5 25.32	+32 51.4	2.061	3.031	4.0	19.7	12 7	5 24.92	+2 32.7	1.745	2.687	7.7	20.7
12 17	5 15.25	+32 24.0	2.066	3.039	3.4	19.7	12 17	5 15.61	+2 14.9	1.734	2.672	7.9	20.7
12 27	5 5.84	+31 46.9	2.100	3.047	6.1	19.9	12 27	5 6.68	+2 17.6	1.750	2.658	10.0	20.8
1 6	4 58.11	+31 3.7	2.163	3.054	9.3	20.1	1 6	4 59.17	+2 40.0	1.791	2.644	12.9	20.9
1 16	4 52.71	+30 18.9	2.251	3.062	12.2	20.3	1 16	4 53.81	+3 19.6	1.854	2.629	15.8	21.1
<b>46255</b>	2001 <i>HZ</i> <sub>36</sub>		12 12.6 91°37	0°7/12.4	18		<b>447775</b>	2007 <i>RA</i> <sub>83</sub>					

EPHEMERIDES

12 12.6

12 12.6

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>189747</b>	2001 <i>YM</i> <sub>45</sub>		12 12.6 80°34	1°0/12.8 18			<b>48153</b>	2001 <i>FW</i> <sub>172</sub>		12 12.6 141°72	1°5/12.4 18		
11 7	5 53.16	+26 42.3	1.573	2.389	16.7	19.4	11 7	5 45.19	+16 56.5	2.846	3.642	10.5	18.9
11 17	5 46.77	+26 33.6	1.518	2.412	12.7	19.2	11 17	5 39.72	+17 1.5	2.768	3.652	8.0	18.8
11 27	5 37.45	+26 18.7	1.485	2.435	8.1	19.0	11 27	5 32.66	+17 9.0	2.716	3.661	5.2	18.6
12 7	5 26.28	+25 56.6	1.479	2.458	3.1	18.7	12 7	5 24.54	+17 18.8	2.693	3.670	2.3	18.4
12 17	5 14.68	+25 27.9	1.500	2.481	2.4	18.7	12 17	5 16.04	+17 31.0	2.701	3.679	2.1	18.4
12 27	5 4.18	+24 55.2	1.550	2.503	7.0	19.1	12 27	5 7.92	+17 45.5	2.741	3.687	4.9	18.6
1 6	4 55.96	+24 22.7	1.627	2.525	11.3	19.4	1 6	5 0.85	+18 2.5	2.810	3.694	7.7	18.8
1 16	4 50.73	+23 54.0	1.726	2.547	14.9	19.6	1 16	4 55.36	+18 22.1	2.905	3.702	10.1	19.0
<b>358281</b>	2006 <i>UK</i> <sub>40</sub>		12 12.6 229°30	1°8/12.8 17			<b>423100</b>	2004 <i>BX</i> <sub>1</sub>		12 12.6 166°72	1°2/12.4 15		
11 7	5 48.95	+27 32.7	2.124	2.928	13.3	21.4	11 7	5 51.31	+17 34.5	3.619	4.392	8.9	25.0
11 17	5 43.41	+27 54.7	2.035	2.922	10.3	21.2	11 17	5 43.92	+17 33.0	3.530	4.401	6.8	24.9
11 27	5 35.40	+28 12.8	1.969	2.915	6.7	21.0	11 27	5 35.13	+17 32.4	3.469	4.410	4.4	24.7
12 7	5 25.63	+28 24.8	1.932	2.909	3.0	20.8	12 7	5 25.42	+17 32.5	3.440	4.417	1.9	24.5
12 17	5 15.09	+28 29.2	1.923	2.902	2.5	20.7	12 17	5 15.39	+17 33.5	3.446	4.422	1.8	24.5
12 27	5 5.01	+28 26.1	1.945	2.895	6.1	20.9	12 27	5 5.68	+17 35.7	3.486	4.427	4.2	24.7
1 6	4 56.49	+28 17.5	1.994	2.887	9.8	21.1	1 6	4 56.90	+17 39.6	3.558	4.430	6.6	24.9
1 16	4 50.34	+28 6.5	2.068	2.880	13.1	21.3	1 16	4 49.52	+17 45.8	3.660	4.432	8.7	25.0
<b>17071</b>	1999 <i>GK</i> <sub>21</sub>		12 12.6 256°35	2°6/12.2 18			<b>71305</b>	2000 <i>AG</i> <sub>68</sub>		12 12.6 105°60	0°6/12.6 18		
11 7	5 48.50	+17 25.3	1.822	2.636	14.8	18.3	11 7	5 52.32	+21 55.1	1.868	2.676	14.8	18.7
11 17	5 43.30	+17 2.0	1.728	2.621	11.4	18.1	11 17	5 46.03	+22 44.2	1.798	2.688	11.2	18.5
11 27	5 35.46	+16 40.4	1.658	2.606	7.5	17.8	11 27	5 37.08	+23 35.0	1.752	2.701	7.1	18.3
12 7	5 25.69	+16 21.5	1.614	2.590	3.6	17.5	12 7	5 26.26	+24 24.3	1.733	2.713	2.7	18.0
12 17	5 15.04	+16 6.9	1.598	2.574	3.5	17.5	12 17	5 14.72	+25 9.1	1.745	2.725	2.1	18.0
12 27	5 4.81	+15 58.3	1.611	2.558	7.5	17.7	12 27	5 3.80	+25 47.8	1.786	2.737	6.5	18.3
1 6	4 56.22	+15 56.9	1.651	2.541	11.7	17.9	1 6	4 54.70	+26 20.7	1.856	2.749	10.4	18.6
1 16	4 50.13	+16 3.7	1.714	2.524	15.4	18.1	1 16	4 48.21	+26 49.3	1.949	2.760	13.8	18.8
<b>46089</b>	2001 <i>EC</i> <sub>14</sub>		12 12.6 111°34	3°9/12.5 18			<b>486509</b>	2013 <i>GW</i> <sub>113</sub>		12 12.6 234°11	0°4/12.5 17		
11 7	5 49.28	+10 58.5	1.950	2.751	14.5	18.7	11 7	5 47.50	+23 13.1	2.284	3.089	12.5	21.8
11 17	5 43.37	+11 2.3	1.883	2.764	11.3	18.5	11 17	5 42.02	+22 53.6	2.190	3.079	9.5	21.6
11 27	5 35.19	+11 14.7	1.838	2.777	7.7	18.3	11 27	5 34.39	+22 31.0	2.120	3.069	6.1	21.3
12 7	5 25.49	+11 36.6	1.821	2.790	4.6	18.1	12 7	5 25.25	+22 5.5	2.078	3.058	2.2	21.1
12 17	5 15.26	+12 7.7	1.833	2.802	4.4	18.1	12 17	5 15.50	+21 37.8	2.066	3.047	1.8	21.0
12 27	5 5.64	+12 47.1	1.875	2.814	7.3	18.3	12 27	5 6.18	+21 9.8	2.085	3.035	5.8	21.3
1 6	4 57.61	+13 33.2	1.944	2.826	10.7	18.6	1 6	4 58.23	+20 43.7	2.132	3.023	9.4	21.5
1 16	4 51.84	+14 24.2	2.038	2.837	13.7	18.8	1 16	4 52.36	+20 21.7	2.204	3.011	12.5	21.7
<b>40672</b>	1999 <i>RJ</i> <sub>202</sub>		12 12.6 138°19	0°9/12.8 18			<b>521577</b>	2015 <i>PK</i> <sub>130</sub>		12 12.6 16°98	5°8/12.3 18		
11 7	5 51.38	+26 48.4	2.179	2.977	13.2	19.6	11 7	5 46.69	+ 9 12.5	1.568	2.384	16.7	20.7
11 17	5 44.85	+26 38.5	2.105	2.991	10.1	19.4	11 17	5 42.00	+ 8 52.1	1.498	2.385	13.2	20.4
11 27	5 36.04	+26 23.3	2.057	3.003	6.4	19.2	11 27	5 34.62	+ 8 43.0	1.450	2.387	9.5	20.2
12 7	5 25.77	+26 2.0	2.036	3.015	2.5	19.0	12 7	5 25.38	+ 8 48.0	1.426	2.389	6.4	20.1
12 17	5 15.06	+25 34.9	2.046	3.027	1.9	19.0	12 17	5 15.41	+ 9 8.3	1.429	2.392	6.2	20.1
12 27	5 5.04	+25 4.0	2.087	3.037	5.7	19.3	12 27	5 6.08	+ 9 43.8	1.458	2.395	9.2	20.2
1 6	4 56.68	+24 32.3	2.156	3.047	9.3	19.5	1 6	4 58.57	+10 32.2	1.513	2.398	12.9	20.5
1 16	4 50.62	+24 2.8	2.251	3.057	12.3	19.7	1 16	4 53.69	+11 30.5	1.590	2.401	16.4	20.7
<b>48131</b>	2001 <i>FK</i> <sub>119</sub>		12 12.6 214°32	4°6/11.9 18			<b>518505</b>	2006 <i>DW</i> <sub>141</sub>		12 12.6 252°08	1°3/12.8 18		
11 7	5 43.75	+ 8 3.3	2.614	3.403	11.5	20.2	11 7	5 50.15	+25 59.2	1.860	2.671	14.7	22.6
11 17	5 38.79	+ 7 38.0	2.528	3.398	9.2	20.0	11 17	5 44.71	+26 15.6	1.768	2.659	11.3	22.4
11 27	5 32.15	+ 7 19.7	2.467	3.393	6.7	19.8	11 27	5 36.45	+26 28.9	1.698	2.646	7.3	22.1
12 7	5 24.37	+ 7 10.6	2.433	3.387	4.9	19.7	12 7	5 26.10	+26 36.9	1.654	2.633	3.0	21.8
12 17	5 16.12	+ 7 11.9	2.429	3.382	4.9	19.7	12 17	5 14.80	+26 38.0	1.640	2.620	2.4	21.7
12 27	5 8.21	+ 7 24.3	2.454	3.376	6.8	19.8	12 27	5 3.96	+26 32.7	1.655	2.607	6.8	22.0
1 6	5 1.35	+ 7 47.4	2.507	3.370	9.3	20.0	1 6	4 54.86	+26 23.1	1.696	2.593	11.1	22.2
1 16	4 56.11	+ 8 19.7	2.585	3.363	11.7	20.1	1 16	4 48.44	+26 12.4	1.762	2.578	14.8	22.4
<b>321107</b>	2008 <i>TL</i> <sub>72</sub>		12 12.6 333°21	2°9/12.2 18			<b>451821</b>	2013 <i>HK</i> <sub>115</sub>		12 12.6 38°45	0°4/12.7 18		
11 7	5 43.51	+15 13.8	2.057	2.872	13.3	20.3	11 7	5 47.23	+24 2.5	1.809	2.628	14.7	21.7
11 17	5 39.12	+14 58.9	1.973	2.866	10.3	20.1	11 17	5 42.24	+24 5.8	1.736	2.633	11.2	21.5
11 27	5 32.60	+14 48.0	1.913	2.859	6.8	19.9	11 27	5 34.69	+24 6.7	1.686	2.638	7.1	21.3
12 7	5 24.58	+14 42.2	1.879	2.853	3.6	19.7	12 7	5 25.38	+24 4.3	1.663	2.643	2.6	21.0
12 17	5 15.96	+14 42.7	1.874	2.848	3.5	19.7	12 17	5 15.44	+23 58.1	1.668	2.649	2.0	21.0
12 27	5 7.75	+14 50.1	1.897	2.842	6.7	19.9	12 27	5 6.15	+23 49.4	1.701	2.655	6.5	21.3
1 6	5 0.92	+15 4.5	1.948	2.837	10.2	20.1	1 6	4 58.63	+23 40.3	1.761	2.661	10.5	21.5
1 16	4 56.14	+15 25.7	2.022	2.833	13.4	20.3	1 16	4 53.63	+23 32.8	1.845	2.667	14.0	21.8
<b>402171</b>	2004 <i>RX</i> <sub>342</sub>		12 12.6 47°95	3°9/13.5 17			<b>419230</b>	2009 <i>VB</i> <sub>17</sub>		12 12.6 20°25	2°0/12.7 16		
11 7	5 49.07	+34 32.3	1.988	2.787	14.3	20.7	11 7	5 46.41	+25 48.4	1.636	2.461	15.7	20.6
11 17	5 43.61	+34 46.0	1.914	2.793	11.3	20.5	11 17	5 41.95	+26 31.2	1.571	2.470	12.0	20.4
11 27	5 35.52	+34 49.3	1.863	2.799	7.9	20.3	11 27	5 34.66	+27 12.0	1.529	2.480	7.7	20.1
12 7	5 25.65	+34 39.3	1.838	2.805	4.8	20.2	12 7	5 25.41	+27 47.4	1.513	2.491	3.4	19.9
12 17	5 15.17	+34 14.8	1.841	2.811	4.2	20.1	12 17	5 15.42	+28 14.9	1.524	2.503	2.8	19.9
12 27	5 5.44	+33 37.8	1.873	2.818	6.8	20.3	12 27	5 6.15	+28 33.8	1.562	2.516	7.0	20.2
1 6	4 57.58	+32 52.4	1.932	2.824	10.2	20.5	1 6	4 58.83	+28 45.6	1.627	2.529	11.1	20.5
1 16	4 52.34	+32 4.0	2.016	2.831	13.2	20.8	1 16	4 54.29	+28 53.1	1.715	2.543	14.6	20.7
<b>158795</b>	2003 <i>SZ</i> <sub>157</sub>		12 12.6 184°20	1°2/12.9 18			<b>53912</b>	2000 <i>GL</i> <sub>5</sub>		12 12.6 295°91	3°		



EPHEMERIDES

12 12.6

12 12.6

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>442488</b>	2011 <i>UR</i> <sub>391</sub>		12 12.6	39°18'	2°2'/12.7	18	<b>332814</b>	2009 <i>WE</i> <sub>195</sub>		12 12.6	283°18'	1°4'/12.5	18
11 7	5 49.41	+14 53.8	1.463	2.287	17.3	20.3	11 7	5 45.65	+17 40.6	2.263	3.071	12.5	20.3
11 17	5 44.20	+15 32.7	1.405	2.302	13.2	20.1	11 17	5 40.64	+17 55.2	2.175	3.065	9.6	20.0
11 27	5 36.06	+16 20.6	1.368	2.319	8.6	19.9	11 27	5 33.55	+18 13.1	2.112	3.060	6.2	19.8
12 7	5 25.91	+17 15.9	1.357	2.335	3.8	19.7	12 7	5 24.98	+18 34.0	2.076	3.054	2.6	19.6
12 17	5 15.07	+18 15.6	1.374	2.353	3.2	19.7	12 17	5 15.78	+18 57.3	2.070	3.049	2.3	19.6
12 27	5 5.05	+19 16.9	1.418	2.371	7.6	20.0	12 27	5 6.95	+19 22.6	2.094	3.043	5.8	19.8
1 6	4 57.13	+20 17.6	1.489	2.389	12.0	20.3	1 6	4 59.39	+19 49.7	2.146	3.038	9.3	20.0
1 16	4 52.12	+21 16.7	1.582	2.408	15.7	20.6	1 16	4 53.81	+20 18.6	2.224	3.033	12.4	20.2
<b>329712</b>	2003 <i>WV</i> <sub>5</sub>		12 12.6	24°03'	2°6'/12.1	18 R	<b>281213</b>	2007 <i>HT</i> <sub>7</sub>		12 12.6	77°45'	3°6'/12.3	18
11 7	5 43.99	+18 12.9	1.768	2.594	14.7	19.4	11 7	5 49.40	+15 0.7	1.554	2.374	16.6	20.5
11 17	5 39.63	+17 35.2	1.704	2.603	11.2	19.2	11 17	5 43.94	+14 37.4	1.494	2.389	12.8	20.3
11 27	5 32.94	+16 58.6	1.662	2.613	7.3	19.0	11 27	5 35.76	+14 19.4	1.457	2.404	8.5	20.1
12 7	5 24.72	+16 25.0	1.646	2.623	3.5	18.8	12 7	5 25.77	+14 8.4	1.444	2.418	4.5	19.9
12 17	5 16.02	+15 56.6	1.658	2.635	3.4	18.8	12 17	5 15.24	+14 5.7	1.460	2.433	4.4	19.9
12 27	5 8.01	+15 35.6	1.699	2.647	7.1	19.1	12 27	5 5.55	+14 12.2	1.503	2.448	8.1	20.2
1 6	5 1.66	+15 23.3	1.765	2.659	10.8	19.3	1 6	4 57.86	+14 27.8	1.571	2.462	12.1	20.5
1 16	4 57.64	+15 20.1	1.854	2.672	14.1	19.6	1 16	4 52.89	+14 51.6	1.662	2.477	15.6	20.7
<b>139473</b>	2001 <i>OK</i> <sub>99</sub>		12 12.6	142°92'	1°6'/12.4	18	<b>326327</b>	1999 <i>YR</i> <sub>8</sub>		12 12.6	50°16'	2°6'/12.5	18
11 7	5 51.75	+18 46.2	1.988	2.792	14.1	20.9	11 7	5 45.53	+14 39.8	2.114	2.923	13.2	20.3
11 17	5 45.28	+18 40.8	1.917	2.805	10.8	20.7	11 17	5 40.53	+14 44.9	2.039	2.928	10.2	20.1
11 27	5 36.43	+18 36.7	1.869	2.817	6.9	20.5	11 27	5 33.44	+14 55.3	1.988	2.933	6.7	19.9
12 7	5 26.00	+18 34.1	1.849	2.828	2.9	20.3	12 7	5 24.92	+15 11.4	1.964	2.939	3.4	19.7
12 17	5 15.03	+18 33.1	1.860	2.838	2.6	20.3	12 17	5 15.86	+15 33.0	1.969	2.944	3.2	19.7
12 27	5 4.72	+18 34.5	1.900	2.848	6.4	20.6	12 27	5 7.28	+15 59.8	2.004	2.950	6.3	19.9
1 6	4 56.10	+18 39.2	1.969	2.857	10.2	20.8	1 6	5 0.09	+16 31.2	2.066	2.956	9.7	20.2
1 16	4 49.86	+18 48.0	2.062	2.865	13.4	21.0	1 16	4 54.94	+17 6.5	2.154	2.961	12.8	20.4
<b>139134</b>	2001 <i>FJ</i> <sub>76</sub>		12 12.6	320°48'	4°0'/12.3	18	<b>227819</b>	2007 <i>BY</i> <sub>79</sub>		12 12.6	19°43'	7°7'/12.2	18
11 7	5 47.28	+15 27.6	1.304	2.141	18.3	19.3	11 7	5 44.63	+ 9 26.1	1.069	1.915	20.8	19.8
11 17	5 43.19	+15 4.6	1.228	2.131	14.3	19.0	11 17	5 41.26	+ 8 36.8	1.019	1.922	16.5	19.5
11 27	5 35.78	+14 47.2	1.171	2.123	9.6	18.7	11 27	5 34.49	+ 8 1.6	0.987	1.931	11.9	19.3
12 7	5 25.93	+14 37.4	1.138	2.114	5.0	18.4	12 7	5 25.40	+ 7 45.9	0.976	1.940	8.3	19.2
12 17	5 15.01	+14 37.2	1.131	2.106	4.8	18.4	12 17	5 15.54	+ 7 53.1	0.988	1.951	8.2	19.2
12 27	5 4.73	+14 47.8	1.149	2.099	9.4	18.6	12 27	5 6.72	+ 8 23.1	1.023	1.964	11.6	19.4
1 6	4 56.64	+15 9.3	1.191	2.092	14.3	18.9	1 6	5 0.35	+ 9 12.5	1.080	1.977	15.8	19.7
1 16	4 51.78	+15 40.8	1.253	2.085	18.7	19.1	1 16	4 57.30	+10 16.1	1.156	1.992	19.7	20.0
<b>418762</b>	2008 <i>UF</i> <sub>211</sub>		12 12.6	144°38'	4°6'/13.1	17	<b>32013</b>	2000 <i>HJ</i> <sub>57</sub>		12 12.6	134°55'	3°6'/12.1	18
11 7	5 49.80	+36 36.6	2.572	3.350	12.0	21.4	11 7	5 49.89	+14 31.4	1.833	2.641	15.0	20.0
11 17	5 43.88	+37 30.4	2.492	3.353	9.6	21.2	11 17	5 43.99	+14 2.4	1.764	2.652	11.6	19.8
11 27	5 35.64	+38 16.3	2.436	3.357	7.1	21.1	11 27	5 35.67	+13 37.7	1.719	2.662	7.7	19.6
12 7	5 25.75	+38 50.3	2.407	3.360	5.1	21.0	12 7	5 25.74	+13 19.3	1.700	2.672	4.3	19.4
12 17	5 15.17	+39 9.8	2.408	3.363	4.8	21.0	12 17	5 15.28	+13 8.7	1.710	2.681	4.3	19.4
12 27	5 5.02	+39 14.2	2.439	3.366	6.6	21.1	12 27	5 5.49	+13 7.1	1.749	2.689	7.6	19.6
1 6	4 56.33	+39 5.9	2.498	3.369	9.0	21.2	1 6	4 57.43	+13 14.9	1.815	2.698	11.2	19.8
1 16	4 49.86	+38 48.6	2.581	3.372	11.4	21.4	1 16	4 51.79	+13 31.5	1.904	2.705	14.4	20.1
<b>514755</b>	2007 <i>EH</i> <sub>37</sub>		12 12.6	202°02'	6°4'/13.6	18	<b>67370</b>	2000 <i>NX</i> <sub>2</sub>		12 12.6	239°03'	2°4'/13.6	18
11 7	5 56.21	+39 40.4	1.985	2.760	15.2	22.1	11 7	5 55.22	+34 22.3	2.421	3.197	12.7	19.0
11 17	5 49.53	+40 26.5	1.900	2.756	12.4	21.9	11 17	5 47.81	+33 40.6	2.314	3.182	10.0	18.8
11 27	5 39.59	+41 0.2	1.838	2.752	9.4	21.7	11 27	5 38.00	+32 45.7	2.231	3.166	6.8	18.6
12 7	5 27.29	+41 15.3	1.801	2.748	7.0	21.6	12 7	5 26.58	+31 36.1	2.178	3.150	3.5	18.3
12 17	5 13.98	+41 7.9	1.792	2.743	6.6	21.6	12 17	5 14.62	+30 12.9	2.157	3.133	2.7	18.2
12 27	5 1.37	+40 38.5	1.811	2.737	8.5	21.7	12 27	5 3.32	+28 40.1	2.169	3.116	5.8	18.4
1 6	4 50.95	+39 51.9	1.857	2.731	11.5	21.8	1 6	4 53.71	+27 3.5	2.212	3.098	9.3	18.6
1 16	4 43.70	+38 55.4	1.927	2.724	14.5	22.0	1 16	4 46.50	+25 29.4	2.282	3.080	12.4	18.8
<b>285038</b>	2011 <i>EU</i> <sub>54</sub>		12 12.6	305°17'	1°9'/12.3	18	<b>229018</b>	2003 <i>YT</i> <sub>61</sub>		12 12.6	294°19'	0°2'/12.6	18
11 7	5 44.27	+19 9.3	2.063	2.880	13.2	20.8	11 7	5 45.65	+25 2.3	2.301	3.109	12.3	19.7
11 17	5 39.84	+18 45.3	1.967	2.862	10.2	20.6	11 17	5 40.69	+24 27.0	2.199	3.090	9.4	19.5
11 27	5 33.16	+18 21.1	1.895	2.845	6.6	20.4	11 27	5 33.59	+23 46.3	2.121	3.071	6.0	19.2
12 7	5 24.86	+17 57.9	1.849	2.827	2.9	20.1	12 7	5 25.01	+23 0.4	2.072	3.052	2.2	19.0
12 17	5 15.86	+17 36.9	1.832	2.810	2.8	20.0	12 17	5 15.80	+22 10.8	2.052	3.033	1.8	18.9
12 27	5 7.22	+17 20.0	1.844	2.793	6.5	20.3	12 27	5 7.00	+21 20.3	2.063	3.014	5.7	19.1
1 6	4 59.95	+17 8.7	1.883	2.776	10.3	20.5	1 6	4 59.54	+20 32.1	2.102	2.995	9.4	19.3
1 16	4 54.83	+17 4.2	1.947	2.760	13.7	20.6	1 16	4 54.12	+19 49.2	2.166	2.977	12.6	19.5
<b>213480</b>	2002 <i>EV</i> <sub>148</sub>		12 12.6	87°82'	5°6'/12.1	17	<b>221611</b>	2006 <i>XB</i> <sub>8</sub>		12 12.6	34°79'	2°6'/12.6	18
11 7	5 53.36	+11 22.0	1.455	2.268	18.0	20.0	11 7	5 49.52	+15 54.5	1.243	2.079	19.1	19.6
11 17	5 46.79	+10 38.0	1.409	2.296	14.0	19.8	11 17	5 44.84	+16 11.3	1.182	2.086	14.7	19.4
11 27	5 37.42	+10 3.1	1.384	2.323	9.7	19.7	11 27	5 36.75	+16 36.4	1.141	2.094	9.5	19.1
12 7	5 26.32	+ 9 40.5	1.384	2.349	6.2	19.5	12 7	5 26.26	+17 9.3	1.124	2.102	4.3	18.8
12 17	5 14.86	+ 9 32.3	1.411	2.376	6.1	19.6	12 17	5 14.87	+17 48.2	1.132	2.111	3.7	18.8
12 27	5 4.49	+ 9 39.4	1.466	2.401	9.3	19.9	12 27	5 4.37	+18 31.4	1.167	2.121	8.7	19.2
1 6	4 56.35	+10 0.3	1.547	2.426	13.0	20.1	1 6	4 56.30	+19 17.4	1.226	2.131	13.7	19.5
1 16	4 51.09	+10 32.9	1.649	2.450	16.3	20.4	1 16	4 51.57	+20 5.3	1.306	2.141	17.9	19.8
<b>494156</b>	2016 <i>CQ</i> <sub>264</sub>		12 12.6	318°43'	2°2'/12.3	18	<b>440058</b>	2002 <i>RM</i> <sub>70</sub>		12 12.6	103°1		

EPHEMERIDES

12 12.6

12 12.7

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>391557</b>	2007 <i>TQ</i> <sub>71</sub>		12 12.6	95°01'	2°1'/13.0	18	<b>30516</b>	2001 <i>LB</i> <sub>7</sub>		12 12.6	48°22'	5°2'/11.8	18
11 7	5 52.42	+28 54.6	1.869	2.673	14.9	21.6	11 7	5 46.41	+12 32.4	1.614	2.434	16.1	18.0
11 17	5 46.00	+29 5.0	1.807	2.694	11.4	21.4	11 17	5 41.52	+11 37.9	1.558	2.450	12.5	17.9
11 27	5 36.94	+29 8.8	1.769	2.714	7.4	21.2	11 27	5 34.16	+10 49.8	1.525	2.466	8.7	17.7
12 7	5 26.19	+29 3.8	1.758	2.734	3.4	21.0	12 7	5 25.22	+10 11.8	1.517	2.483	5.6	17.5
12 17	5 14.97	+28 49.4	1.776	2.754	2.7	21.0	12 17	5 15.84	+9 46.9	1.536	2.500	5.7	17.6
12 27	5 4.62	+28 27.3	1.823	2.773	6.4	21.3	12 27	5 7.27	+9 36.8	1.582	2.518	8.7	17.8
1 6	4 56.25	+28 0.9	1.898	2.792	10.2	21.6	1 6	5 0.52	+9 41.5	1.654	2.536	12.2	18.0
1 16	4 50.55	+27 34.1	1.997	2.811	13.4	21.8	1 16	4 56.25	+9 59.2	1.748	2.554	15.3	18.3
<b>121536</b>	1999 <i>UY</i> <sub>46</sub>		12 12.6	113°34'	7°3'/13.6	18	<b>220957</b>	2005 <i>MD</i> <sub>2</sub>		12 12.6	95°48'	0°8'/12.6	18
11 7	5 56.80	+41 4.0	1.929	2.702	15.6	19.1	11 7	5 54.55	+20 34.1	1.604	2.416	16.6	20.5
11 17	5 50.04	+42 14.7	1.863	2.714	12.9	19.0	11 17	5 47.77	+20 43.8	1.549	2.442	12.5	20.3
11 27	5 39.92	+43 11.9	1.818	2.725	10.0	18.8	11 27	5 38.15	+20 54.3	1.517	2.467	7.9	20.1
12 7	5 27.41	+43 48.7	1.800	2.737	7.8	18.7	12 7	5 26.69	+21 4.3	1.511	2.491	3.0	19.9
12 17	5 13.98	+44 0.6	1.808	2.748	7.5	18.7	12 17	5 14.74	+21 13.1	1.534	2.515	2.4	19.9
12 27	5 1.38	+43 47.8	1.844	2.759	9.2	18.8	12 27	5 3.78	+21 21.1	1.586	2.538	7.1	20.2
1 6	4 51.14	+43 15.2	1.906	2.770	11.7	19.0	1 6	4 55.00	+21 29.7	1.665	2.560	11.3	20.5
1 16	4 44.20	+42 30.3	1.991	2.780	14.3	19.2	1 16	4 49.12	+21 40.2	1.768	2.582	14.8	20.8
<b>415733</b>	1999 <i>VF</i> <sub>149</sub>		12 12.6	26°13'	0°7'/12.7	17	<b>108282</b>	2001 <i>HY</i> <sub>60</sub>		12 12.7	145°16'	5°5'/12.2	18
11 7	5 47.14	+23 8.0	1.872	2.689	14.4	20.5	11 7	5 47.51	+6 29.0	2.209	2.996	13.5	20.1
11 17	5 42.19	+23 42.0	1.799	2.694	10.9	20.3	11 17	5 41.84	+6 8.7	2.138	3.005	10.8	19.9
11 27	5 34.70	+24 16.2	1.749	2.700	7.0	20.1	11 27	5 34.19	+5 58.3	2.090	3.013	8.0	19.8
12 7	5 25.45	+24 48.3	1.725	2.705	2.6	19.8	12 7	5 25.24	+6 0.1	2.068	3.020	5.8	19.6
12 17	5 15.50	+25 16.5	1.731	2.712	2.1	19.8	12 17	5 15.81	+6 15.2	2.076	3.027	5.8	19.7
12 27	5 6.10	+25 39.9	1.765	2.718	6.3	20.1	12 27	5 6.88	+6 43.6	2.113	3.034	7.8	19.8
1 6	4 58.39	+25 59.2	1.827	2.725	10.3	20.3	1 6	4 59.28	+7 23.7	2.177	3.040	10.5	20.0
1 16	4 53.14	+26 16.1	1.912	2.733	13.6	20.6	1 16	4 53.65	+8 13.1	2.266	3.046	13.1	20.2
<b>434528</b>	2005 <i>SK</i> <sub>246</sub>		12 12.6	140°65'	2°1'/12.3	16	<b>367259</b>	2007 <i>RR</i> <sub>323</sub>		12 12.7	67°21'	0°4'/12.7	18
11 7	5 51.29	+18 40.3	1.894	2.701	14.6	22.1	11 7	5 53.78	+23 49.2	1.203	2.037	19.7	21.3
11 17	5 45.01	+18 12.8	1.823	2.713	11.1	21.9	11 17	5 48.08	+23 55.0	1.152	2.056	15.0	21.1
11 27	5 36.29	+17 45.9	1.776	2.724	7.2	21.7	11 27	5 38.73	+23 58.2	1.121	2.075	9.5	20.9
12 7	5 25.98	+17 20.5	1.757	2.734	3.2	21.4	12 7	5 26.97	+23 56.8	1.114	2.095	3.5	20.6
12 17	5 15.15	+16 58.2	1.767	2.744	3.0	21.4	12 17	5 14.55	+23 50.2	1.133	2.114	2.6	20.6
12 27	5 5.04	+16 40.9	1.807	2.753	6.9	21.7	12 27	5 3.41	+23 40.3	1.178	2.134	8.3	21.0
1 6	4 56.68	+16 30.0	1.874	2.762	10.7	21.9	1 6	4 55.06	+23 30.3	1.247	2.153	13.4	21.3
1 16	4 50.77	+16 26.5	1.966	2.770	14.0	22.2	1 16	4 50.32	+23 23.5	1.337	2.172	17.5	21.6
<b>422566</b>	2014 <i>TB</i> <sub>43</sub>		12 12.6	18°95'	0°1'/12.7	16	<b>333530</b>	2005 <i>RJ</i> <sub>25</sub>		12 12.7	65°97'	0°4'/12.7	18
11 7	5 44.94	+23 11.2	1.843	2.665	14.3	21.3	11 7	5 51.29	+25 40.6	1.423	2.250	17.6	20.3
11 17	5 40.07	+23 16.5	1.772	2.671	10.9	21.1	11 17	5 45.80	+25 19.5	1.362	2.262	13.4	20.1
11 27	5 33.57	+23 20.4	1.725	2.677	6.9	20.8	11 27	5 37.14	+24 52.3	1.322	2.274	8.5	19.9
12 7	5 25.02	+23 22.2	1.703	2.684	2.5	20.6	12 7	5 26.37	+24 18.8	1.306	2.287	3.2	19.6
12 17	5 15.87	+23 21.4	1.710	2.691	2.0	20.5	12 17	5 14.99	+23 40.2	1.318	2.299	2.4	19.6
12 27	5 7.34	+23 19.0	1.745	2.699	6.3	20.8	12 27	5 4.65	+23 0.1	1.357	2.312	7.6	19.9
1 6	5 0.48	+23 16.4	1.806	2.707	10.2	21.1	1 6	4 56.69	+22 22.8	1.422	2.325	12.3	20.2
1 16	4 56.01	+23 15.4	1.892	2.716	13.6	21.3	1 16	4 51.88	+21 52.0	1.509	2.338	16.2	20.5
<b>520135</b>	2014 <i>BX</i> <sub>67</sub>		12 12.6	285°49'	0°1'/12.6	18	<b>26723</b>	2001 <i>HE</i> <sub>8</sub>		12 12.7	60°48'	0°2'/12.6	18
11 7	5 49.33	+22 35.4	1.547	2.372	16.5	21.8	11 7	5 54.29	+22 49.6	1.240	2.071	19.4	18.8
11 17	5 44.53	+22 46.5	1.460	2.360	12.7	21.5	11 17	5 48.12	+22 52.5	1.198	2.100	14.6	18.6
11 27	5 36.58	+22 57.5	1.395	2.348	8.1	21.2	11 27	5 38.54	+22 53.7	1.176	2.130	9.2	18.4
12 7	5 26.26	+23 6.7	1.355	2.336	3.0	20.9	12 7	5 26.83	+22 51.8	1.178	2.159	3.3	18.2
12 17	5 14.84	+23 13.0	1.342	2.324	2.4	20.8	12 17	5 14.70	+22 46.6	1.207	2.189	2.5	18.2
12 27	5 3.94	+23 16.6	1.357	2.312	7.7	21.1	12 27	5 3.93	+22 39.6	1.263	2.218	8.0	18.6
1 6	4 55.04	+23 19.4	1.398	2.300	12.5	21.4	1 6	4 55.89	+22 33.8	1.343	2.247	12.8	19.0
1 16	4 49.18	+23 23.7	1.460	2.288	16.7	21.6	1 16	4 51.26	+22 31.5	1.445	2.276	16.7	19.3
<b>318116</b>	2004 <i>JY</i> <sub>29</sub>		12 12.6	266°34'	3°3'/11.8	18	<b>288441</b>	2004 <i>EM</i> <sub>45</sub>		12 12.7	152°09'	2°1'/12.3	18
11 7	5 46.52	+15 53.3	2.133	2.941	13.2	21.5	11 7	5 47.00	+18 0.4	1.964	2.777	13.9	21.5
11 17	5 41.44	+15 9.3	2.033	2.922	10.2	21.2	11 17	5 41.85	+17 44.1	1.885	2.778	10.7	21.3
11 27	5 34.15	+14 26.1	1.958	2.902	6.9	21.0	11 27	5 34.39	+17 29.5	1.831	2.779	6.9	21.0
12 7	5 25.26	+13 46.0	1.910	2.882	3.9	20.8	12 7	5 25.36	+17 17.4	1.803	2.781	3.1	20.8
12 17	5 15.65	+13 11.3	1.891	2.862	4.0	20.7	12 17	5 15.72	+17 8.8	1.804	2.782	2.9	20.8
12 27	5 6.39	+12 44.6	1.902	2.841	7.2	20.9	12 27	5 6.63	+17 4.7	1.835	2.783	6.6	21.0
1 6	4 58.47	+12 27.6	1.940	2.821	10.7	21.1	1 6	4 59.08	+17 6.1	1.892	2.784	10.4	21.3
1 16	4 52.63	+12 21.2	2.002	2.800	14.0	21.2	1 16	4 53.80	+17 13.5	1.974	2.785	13.6	21.5
<b>56574</b>	2000 <i>JK</i> <sub>24</sub>		12 12.6	123°72'	0°4'/12.6	18	<b>237819</b>	2002 <i>CV</i> <sub>156</sub>		12 12.7	307°38'	1°1'/12.8	18
11 7	5 53.05	+24 8.5	1.986	2.789	14.2	19.2	11 7	5 48.35	+25 11.0	1.508	2.335	16.7	21.0
11 17	5 46.17	+23 38.3	1.920	2.807	10.8	19.0	11 17	5 43.94	+25 23.7	1.421	2.322	12.9	20.8
11 27	5 36.93	+23 3.7	1.877	2.826	6.8	18.8	11 27	5 36.29	+25 33.7	1.356	2.308	8.4	20.5
12 7	5 26.20	+22 25.3	1.863	2.843	2.5	18.6	12 7	5 26.21	+25 38.8	1.315	2.295	3.3	20.1
12 17	5 15.08	+21 44.4	1.879	2.860	2.0	18.6	12 17	5 15.00	+25 37.4	1.301	2.282	2.6	20.0
12 27	5 4.80	+21 4.0	1.926	2.876	6.2	18.9	12 27	5 4.33	+25 30.2	1.315	2.270	7.8	20.3
1 6	4 56.33	+20 27.0	2.001	2.891	10.0	19.2	1 6	4 55.73	+25 20.0	1.353	2.258	12.7	20.6
1 16	4 50.32	+19 56.3	2.101	2.905	13.1	19.4	1 16	4 50.27	+25 10.1	1.413	2.246	16.9	20.8
<b>51512</b>	2001 <i>FG</i> <sub>99</sub>		12 12.6	140°45'	0°9'/12.6	18	<b>160047</b>	1999 <i>TF</i> <sub>181</sub>		12 12.7	53°75'		

EPHEMERIDES

12 12.7

12 12.7

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>393453</b>	2001 <i>UR</i> <sub>206</sub>	12 12.7 57°54'		1.9°/12.8 17			<b>317673</b>	2003 <i>HR</i> <sub>42</sub>	12 12.7 335°02'		19°3'/2.0 17		
11 7	5 53.50	+25 51.9	1.643	2.456	16.2	20.9	11 7	6 0.69	+51 1.8	1.300	2.068	22.0	18.9
11 17	5 46.98	+26 34.2	1.599	2.490	12.3	20.7	11 17	5 58.84	+55 25.0	1.215	2.030	20.5	18.7
11 27	5 37.63	+27 13.1	1.577	2.525	7.9	20.6	11 27	5 50.17	+59 46.2	1.151	1.994	19.5	18.5
12 7	5 26.50	+27 44.7	1.581	2.559	3.4	20.4	12 7	5 33.23	+63 41.6	1.110	1.959	19.5	18.4
12 17	5 14.94	+28 7.0	1.614	2.594	2.7	20.4	12 17	5 8.20	+66 44.3	1.090	1.926	20.7	18.3
12 27	5 4.42	+28 20.0	1.676	2.628	6.8	20.7	12 27	4 39.13	+68 35.8	1.090	1.895	22.7	18.4
1 6	4 56.11	+28 26.1	1.765	2.662	10.7	21.0	1 6	4 13.35	+69 18.0	1.105	1.866	25.1	18.4
1 16	4 50.68	+28 28.6	1.878	2.695	14.0	21.3	1 16	3 57.31	+69 9.6	1.132	1.839	27.4	18.5
<b>282266</b>	2002 <i>LS</i> <sub>18</sub>	12 12.7 98°84'		1.2°/12.4 18			<b>50756</b>	2000 <i>ET</i> <sub>181</sub>	12 12.7 64°52'		8°9'/13.9 18		
11 7	5 51.06	+20 45.1	2.037	2.841	13.8	21.0	11 7	5 57.74	+43 28.3	1.712	2.485	17.3	17.9
11 17	5 44.55	+20 24.3	1.978	2.867	10.4	20.8	11 17	5 51.19	+44 51.3	1.659	2.505	14.4	17.7
11 27	5 35.86	+20 2.9	1.945	2.893	6.6	20.7	11 27	5 40.84	+45 57.2	1.627	2.525	11.5	17.6
12 7	5 25.81	+19 41.2	1.939	2.918	2.6	20.4	12 7	5 27.84	+46 37.8	1.618	2.546	9.4	17.5
12 17	5 15.45	+19 20.3	1.963	2.942	2.3	20.5	12 17	5 13.91	+46 48.2	1.636	2.566	9.0	17.5
12 27	5 5.88	+19 1.8	2.018	2.966	6.1	20.8	12 27	5 1.12	+46 29.2	1.680	2.587	10.4	17.7
1 6	4 57.99	+18 47.5	2.100	2.989	9.6	21.0	1 6	4 51.12	+45 47.5	1.748	2.608	12.8	17.9
1 16	4 52.40	+18 38.6	2.208	3.012	12.6	21.3	1 16	4 44.87	+44 52.1	1.838	2.628	15.3	18.1
<b>242011</b>	2002 <i>PP</i> <sub>93</sub>	12 12.7 114°80'		1.8°/12.2 18			<b>458573</b>	2011 <i>EJ</i> <sub>83</sub>	12 12.7 288°24'		0°8'/12.5 17		
11 7	5 49.95	+20 15.2	2.126	2.930	13.3	20.2	11 7	5 44.95	+21 0.9	2.248	3.059	12.5	22.4
11 17	5 43.68	+19 32.3	2.060	2.948	10.1	20.1	11 17	5 40.22	+20 53.8	2.154	3.046	9.5	22.2
11 27	5 35.30	+18 48.0	2.018	2.966	6.4	19.9	11 27	5 33.37	+20 46.3	2.083	3.033	6.1	22.0
12 7	5 25.62	+18 3.9	2.005	2.983	2.8	19.7	12 7	5 25.03	+20 38.4	2.040	3.020	2.4	21.7
12 17	5 15.59	+17 22.1	2.022	3.000	2.7	19.7	12 17	5 16.03	+20 30.4	2.027	3.007	2.0	21.7
12 27	5 6.28	+16 45.0	2.070	3.016	6.2	20.0	12 27	5 7.39	+20 23.4	2.044	2.995	5.8	21.9
1 6	4 58.56	+16 14.9	2.146	3.031	9.6	20.2	1 6	5 0.05	+20 18.5	2.088	2.982	9.4	22.1
1 16	4 53.00	+15 53.1	2.247	3.046	12.6	20.4	1 16	4 54.72	+20 17.1	2.157	2.969	12.6	22.3
<b>220159</b>	2002 <i>TV</i> <sub>247</sub>	12 12.7 105°16'		5°4'/11.8 17			<b>416141</b>	2002 <i>QG</i> <sub>126</sub>	12 12.7 44°24'		5°6'/11.9 18		
11 7	5 52.76	+11 1.2	1.773	2.572	15.8	21.5	11 7	5 43.73	+7 18.0	2.095	2.894	13.6	21.0
11 17	5 45.95	+10 4.0	1.721	2.599	12.3	21.3	11 17	5 39.10	+6 44.0	2.028	2.903	10.9	20.8
11 27	5 36.77	+9 14.0	1.692	2.626	8.7	21.1	11 27	5 32.52	+6 19.4	1.985	2.911	8.1	20.7
12 7	5 26.15	+8 34.7	1.690	2.651	5.8	21.0	12 7	5 24.66	+6 7.0	1.967	2.920	6.0	20.6
12 17	5 15.22	+8 8.8	1.717	2.676	5.9	21.1	12 17	5 16.36	+6 8.6	1.978	2.929	6.0	20.6
12 27	5 5.18	+7 58.1	1.773	2.700	8.6	21.3	12 27	5 8.57	+6 24.5	2.016	2.939	8.0	20.7
1 6	4 57.02	+8 2.0	1.855	2.723	11.8	21.5	1 6	5 2.12	+6 53.6	2.081	2.948	10.8	20.9
1 16	4 51.33	+8 18.9	1.961	2.745	14.7	21.8	1 16	4 57.60	+7 33.7	2.170	2.958	13.3	21.1
<b>224930</b>	2007 <i>DT</i> <sub>52</sub>	12 12.7 311°65'		4°8'/13.3 18			<b>417847</b>	2007 <i>HR</i> <sub>46</sub>	12 12.7 143°97'		2°1'/12.9 18		
11 7	5 50.00	+33 8.7	1.378	2.202	18.2	20.0	11 7	5 48.16	+29 49.3	2.942	3.728	10.5	22.0
11 17	5 45.80	+33 34.3	1.293	2.186	14.5	19.7	11 17	5 42.14	+30 16.5	2.864	3.739	8.1	21.8
11 27	5 37.78	+33 49.3	1.227	2.170	10.2	19.4	11 27	5 34.32	+30 39.2	2.811	3.750	5.4	21.7
12 7	5 26.84	+33 48.2	1.184	2.155	6.0	19.1	12 7	5 25.31	+30 55.6	2.787	3.760	2.8	21.5
12 17	5 14.53	+33 27.4	1.167	2.140	5.2	19.0	12 17	5 15.85	+31 4.4	2.795	3.769	2.4	21.5
12 27	5 2.92	+32 48.3	1.176	2.126	9.1	19.2	12 27	5 6.80	+31 5.8	2.834	3.778	4.8	21.7
1 6	4 53.84	+31 56.9	1.208	2.113	13.9	19.4	1 6	4 58.92	+31 1.2	2.902	3.787	7.4	21.8
1 16	4 48.49	+31 1.3	1.262	2.099	18.2	19.7	1 16	4 52.79	+30 52.9	2.997	3.795	9.8	22.0
<b>3500</b>	Kobayashi	12 12.7 92°52'		2°5'/13.1 18 A			<b>70791</b>	1999 <i>VX</i> <sub>49</sub>	12 12.7 135°56'		0°3'/12.7 18		
11 7	5 56.26	+29 21.6	1.464	2.277	17.8	16.2	11 7	5 46.76	+24 15.4	1.375	2.212	17.5	19.1
11 17	5 49.52	+29 28.7	1.408	2.299	13.7	16.0	11 17	5 42.64	+24 10.9	1.309	2.215	13.4	18.9
11 27	5 39.44	+29 27.2	1.374	2.321	8.9	15.8	11 27	5 35.33	+24 3.1	1.263	2.218	8.5	18.6
12 7	5 27.20	+29 14.3	1.365	2.342	4.1	15.6	12 7	5 25.81	+23 51.0	1.242	2.223	3.2	18.3
12 17	5 14.43	+28 49.3	1.384	2.363	3.2	15.6	12 17	5 15.48	+23 35.0	1.247	2.228	2.4	18.3
12 27	5 2.87	+28 15.2	1.431	2.383	7.6	15.9	12 27	5 6.02	+23 16.9	1.278	2.234	7.7	18.6
1 6	4 53.91	+27 37.2	1.504	2.403	12.0	16.2	1 6	4 58.80	+23 0.0	1.333	2.241	12.5	18.9
1 16	4 48.30	+27 0.7	1.600	2.422	15.8	16.5	1 16	4 54.70	+22 47.1	1.411	2.249	16.6	19.2
<b>312376</b>	2008 <i>EB</i> <sub>48</sub>	12 12.7 304°05'		1°1'/12.8 17			<b>270667</b>	2002 <i>PF</i> <sub>190</sub>	12 12.7 33°05'		5°2'/12.8 18		
11 7	5 47.19	+25 38.8	1.841	2.658	14.6	21.5	11 7	5 45.52	+7 7.8	1.943	2.743	14.5	19.4
11 17	5 42.49	+25 51.9	1.751	2.646	11.2	21.2	11 17	5 40.62	+7 12.3	1.876	2.753	11.5	19.2
11 27	5 35.09	+26 2.2	1.684	2.634	7.2	21.0	11 27	5 33.56	+7 28.7	1.832	2.763	8.3	19.0
12 7	5 25.71	+26 7.7	1.642	2.622	2.9	20.7	12 7	5 25.07	+7 58.6	1.815	2.774	5.7	18.9
12 17	5 15.44	+26 7.3	1.629	2.610	2.3	20.6	12 17	5 16.05	+8 41.7	1.825	2.785	5.5	18.9
12 27	5 5.63	+26 1.6	1.645	2.598	6.7	20.9	12 27	5 7.58	+9 36.6	1.864	2.797	7.8	19.0
1 6	4 57.51	+25 52.6	1.687	2.587	10.9	21.1	1 6	5 0.57	+10 40.7	1.930	2.809	10.9	19.3
1 16	4 51.98	+25 43.1	1.752	2.575	14.6	21.3	1 16	4 55.70	+11 50.8	2.020	2.821	13.7	19.5
<b>93647</b>	2000 <i>UK</i> <sub>91</sub>	12 12.7 236°80'		0°1'/12.7 18			<b>391182</b>	2006 <i>BT</i> <sub>192</sub>	12 12.7 238°67'		2°1'/12.4 18		
11 7	5 49.76	+24 43.2	1.825	2.639	14.8	18.9	11 7	5 49.04	+18 0.7	1.991	2.799	13.9	22.3
11 17	5 44.30	+24 25.7	1.738	2.632	11.4	18.7	11 17	5 43.56	+17 46.3	1.897	2.787	10.7	22.1
11 27	5 36.14	+24 3.7	1.674	2.624	7.3	18.4	11 27	5 35.61	+17 33.6	1.826	2.774	7.0	21.8
12 7	5 26.06	+23 36.7	1.637	2.617	2.7	18.1	12 7	5 25.90	+17 23.0	1.783	2.760	3.2	21.6
12 17	5 15.21	+23 5.4	1.628	2.609	2.1	18.1	12 17	5 15.37	+17 15.3	1.769	2.746	2.9	21.5
12 27	5 4.95	+22 32.1	1.649	2.601	6.7	18.4	12 27	5 5.25	+17 11.7	1.784	2.732	6.8	21.8
1 6	4 56.48	+22 0.1	1.696	2.593	11.0	18.6	1 6	4 56.64	+17 13.4	1.827	2.716	10.8	22.0
1 16	4 50.64	+21 32.7	1.767	2.585	14.7	18.8	1 16	4 50.34	+17 21.1	1.894	2.701	14.3	22.2
<b>364332</b>	2006 <i>UN</i> <sub>136</sub>	12 12.7 14°17'		2°6'/12.0 18			<b>46890</b>	1998 <i>RK</i> <sub>48</sub>	12 12.7 271°47'		1°7'/12.4 18		
11 7	5 44.89	+20 38.1	1.392	2.231	17.2								

EPHEMERIDES

12 12.7

12 12.7

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>72039</b>	2000 <i>XG</i> <sub>49</sub>		12 12.7 77°33'	4.9/13.2	18		<b>368312</b>	2002 <i>PP</i> <sub>100</sub>		12 12.7 120°16'	1.0/12.4	18	
11 7	5 56.24	+32 11.4	1.359	2.175	18.8	18.7	11 7	5 45.86	+20 58.4	2.702	3.501	10.9	21.9
11 17	5 50.09	+33 3.0	1.304	2.193	14.7	18.5	11 17	5 40.31	+20 34.7	2.629	3.516	8.3	21.7
11 27	5 40.14	+33 45.0	1.269	2.210	10.1	18.3	11 27	5 33.11	+20 10.0	2.583	3.530	5.2	21.5
12 7	5 27.59	+34 11.0	1.258	2.228	6.0	18.1	12 7	5 24.86	+19 44.8	2.565	3.544	2.1	21.3
12 17	5 14.19	+34 17.2	1.274	2.245	5.3	18.1	12 17	5 16.30	+19 20.2	2.578	3.558	1.8	21.3
12 27	5 1.99	+34 4.5	1.316	2.263	8.9	18.4	12 27	5 8.23	+18 57.5	2.623	3.571	4.9	21.6
1 6	4 52.64	+33 38.8	1.384	2.280	13.1	18.7	1 6	5 1.34	+18 38.3	2.697	3.584	7.8	21.8
1 16	4 47.04	+33 7.0	1.473	2.297	16.8	18.9	1 16	4 56.14	+18 23.6	2.797	3.596	10.4	22.0
<b>427384</b>	2014 <i>XX</i> <sub>28</sub>		12 12.7 137°39'	0.4/12.6	17		<b>350459</b>	1998 <i>FQ</i> <sub>8</sub>		12 12.7 126°92'	7.1/13.4	18	
11 7	5 45.71	+20 44.3	2.551	3.354	11.4	21.4	11 7	5 55.22	+39 5.4	1.781	2.566	16.2	20.6
11 17	5 40.45	+20 58.7	2.470	3.358	8.6	21.2	11 17	5 49.16	+40 14.9	1.707	2.569	13.3	20.4
11 27	5 33.34	+21 13.8	2.414	3.363	5.5	21.0	11 27	5 39.60	+41 12.6	1.656	2.573	10.1	20.2
12 7	5 24.98	+21 28.9	2.387	3.367	2.0	20.8	12 7	5 27.47	+41 51.1	1.630	2.576	7.7	20.1
12 17	5 16.13	+21 43.4	2.390	3.371	1.6	20.7	12 17	5 14.26	+42 5.3	1.630	2.579	7.3	20.1
12 27	5 7.66	+21 57.3	2.424	3.375	5.0	21.0	12 27	5 1.79	+41 54.9	1.658	2.582	9.3	20.2
1 6	5 0.39	+22 11.0	2.487	3.379	8.2	21.2	1 6	4 51.71	+41 24.8	1.711	2.585	12.3	20.4
1 16	4 54.92	+22 25.3	2.576	3.382	11.0	21.4	1 16	4 45.02	+40 42.4	1.787	2.588	15.3	20.6
<b>35215</b>	1994 <i>SH</i> <sub>9</sub>		12 12.7 183°61'	0.9/12.8	18		<b>404584</b>	2013 <i>LG</i> <sub>11</sub>		12 12.7 151°14'	1.4/12.5	18	
11 7	5 47.25	+25 42.3	2.281	3.085	12.5	18.7	11 7	5 46.81	+17 40.4	2.516	3.315	11.6	20.9
11 17	5 41.90	+25 49.6	2.197	3.086	9.6	18.5	11 17	5 41.25	+17 47.5	2.436	3.322	8.9	20.7
11 27	5 34.39	+25 53.8	2.138	3.085	6.1	18.3	11 27	5 33.84	+17 57.1	2.382	3.328	5.7	20.6
12 7	5 25.39	+25 53.7	2.106	3.085	2.4	18.0	12 7	5 25.18	+18 8.9	2.356	3.334	2.5	20.3
12 17	5 15.81	+25 48.7	2.104	3.085	1.9	18.0	12 17	5 16.05	+18 22.7	2.360	3.339	2.2	20.3
12 27	5 6.71	+25 39.6	2.133	3.084	5.5	18.2	12 27	5 7.33	+18 38.5	2.396	3.344	5.3	20.6
1 6	4 59.02	+25 28.3	2.189	3.084	9.0	18.5	1 6	4 59.82	+18 56.4	2.461	3.348	8.5	20.8
1 16	4 53.44	+25 16.9	2.271	3.083	12.1	18.7	1 16	4 54.12	+19 16.7	2.551	3.353	11.2	21.0
<b>14167</b>	1998 <i>UL</i> <sub>8</sub>		12 12.7 350°21'	0.2/12.6	18		<b>113001</b>	2002 <i>RT</i> <sub>38</sub>		12 12.7 73°67'	1.0/12.8	18	
11 7	5 44.52	+22 24.5	1.811	2.635	14.5	17.5	11 7	5 49.47	+25 21.9	1.757	2.573	15.2	19.8
11 17	5 40.34	+22 29.8	1.730	2.630	11.1	17.3	11 17	5 44.09	+25 34.5	1.687	2.581	11.6	19.6
11 27	5 33.65	+22 34.7	1.672	2.625	7.0	17.0	11 27	5 36.00	+25 43.9	1.639	2.589	7.4	19.4
12 7	5 25.18	+22 38.2	1.640	2.621	2.6	16.7	12 7	5 26.05	+25 48.4	1.617	2.597	2.9	19.1
12 17	5 15.98	+22 40.1	1.636	2.618	2.0	16.7	12 17	5 15.42	+25 47.0	1.624	2.605	2.2	19.1
12 27	5 7.29	+22 41.0	1.661	2.615	6.5	17.0	12 27	5 5.51	+25 40.5	1.660	2.613	6.6	19.4
1 6	5 0.24	+22 42.2	1.711	2.613	10.6	17.2	1 6	4 57.50	+25 31.4	1.722	2.622	10.7	19.6
1 16	4 55.63	+22 45.3	1.785	2.612	14.2	17.4	1 16	4 52.16	+25 22.5	1.808	2.630	14.3	19.9
<b>369792</b>	2012 <i>HB</i> <sub>18</sub>		12 12.7 129°11'	3.7/12.2	17		<b>121102</b>	1999 <i>FE</i> <sub>63</sub>		12 12.7 280°05'	2.6/12.5	18	
11 7	5 44.49	+11 15.6	2.406	3.204	12.1	21.3	11 7	5 48.58	+16 30.6	1.633	2.453	16.0	20.0
11 17	5 39.52	+11 1.3	2.328	3.208	9.5	21.1	11 17	5 43.76	+16 28.0	1.543	2.439	12.4	19.7
11 27	5 32.74	+10 53.2	2.275	3.212	6.6	20.9	11 27	5 36.05	+16 30.2	1.475	2.424	8.2	19.4
12 7	5 24.76	+10 52.6	2.250	3.215	4.2	20.8	12 7	5 26.17	+16 37.8	1.433	2.410	3.8	19.1
12 17	5 16.32	+11 0.3	2.254	3.219	4.1	20.8	12 17	5 15.26	+16 50.9	1.418	2.396	3.5	19.1
12 27	5 8.30	+11 16.7	2.287	3.222	6.4	20.9	12 27	5 4.77	+17 9.8	1.431	2.381	7.9	19.3
1 6	5 1.45	+11 41.2	2.349	3.225	9.3	21.1	1 6	4 56.05	+17 34.6	1.470	2.367	12.4	19.5
1 16	4 56.38	+12 12.8	2.435	3.228	11.9	21.3	1 16	4 50.09	+18 5.0	1.532	2.352	16.4	19.8
<b>68618</b>	2002 <i>AK</i> <sub>164</sub>		12 12.7 192°70'	0.6/12.6	18		<b>195677</b>	2002 <i>OQ</i> <sub>23</sub>		12 12.7 38°40'	7.5/15.9	17	
11 7	5 52.93	+22 30.6	1.719	2.530	15.7	20.6	11 7	5 56.27	+46 46.2	1.906	2.662	16.3	19.2
11 17	5 46.81	+22 19.9	1.637	2.529	12.0	20.4	11 17	5 49.30	+46 38.7	1.843	2.679	13.6	19.1
11 27	5 37.79	+22 7.1	1.577	2.527	7.7	20.2	11 27	5 39.15	+46 9.5	1.800	2.696	10.8	18.9
12 7	5 26.72	+21 51.5	1.545	2.525	2.9	19.9	12 7	5 27.10	+45 14.3	1.781	2.713	8.3	18.8
12 17	5 14.83	+21 33.6	1.541	2.521	2.3	19.8	12 17	5 14.78	+43 52.9	1.790	2.731	7.5	18.8
12 27	5 3.59	+21 15.0	1.566	2.517	7.2	20.1	12 27	5 3.86	+42 10.1	1.827	2.749	8.7	18.9
1 6	4 54.31	+20 58.5	1.618	2.513	11.6	20.4	1 6	4 55.55	+40 14.7	1.891	2.768	11.2	19.1
1 16	4 47.85	+20 46.6	1.694	2.507	15.4	20.6	1 16	4 50.46	+38 16.3	1.980	2.787	13.8	19.3
<b>25997</b>	2001 <i>FP</i> <sub>90</sub>		12 12.7 239°95'	5.6/13.9	18		<b>519299</b>	2011 <i>CE</i> <sub>121</sub>		12 12.7 283°30'	3.7/13.2	18	
11 7	5 50.72	+40 25.6	2.307	3.079	13.4	18.3	11 7	5 51.74	+31 27.5	1.500	2.317	17.3	21.1
11 17	5 44.90	+40 54.5	2.223	3.077	10.9	18.2	11 17	5 46.75	+31 47.8	1.415	2.306	13.6	20.9
11 27	5 36.45	+41 11.1	2.162	3.075	8.3	18.0	11 27	5 38.21	+31 59.2	1.350	2.295	9.3	20.6
12 7	5 26.19	+41 11.2	2.128	3.073	6.2	17.9	12 7	5 27.03	+31 57.3	1.310	2.284	5.0	20.3
12 17	5 15.23	+40 52.7	2.121	3.071	5.8	17.8	12 17	5 14.65	+31 39.4	1.297	2.273	4.3	20.2
12 27	5 4.91	+40 16.5	2.143	3.069	7.4	17.9	12 27	5 2.97	+31 6.8	1.311	2.262	8.3	20.4
1 6	4 56.37	+39 26.9	2.192	3.067	9.9	18.1	1 6	4 53.63	+30 24.9	1.350	2.251	13.0	20.7
1 16	4 50.39	+38 29.4	2.266	3.065	12.5	18.3	1 16	4 47.74	+29 40.1	1.411	2.240	17.1	20.9
<b>389625</b>	2011 <i>JR</i> <sub>4</sub>		12 12.7 347°42'	3.8/12.4	18		<b>276103</b>	2002 <i>EW</i> <sub>128</sub>		12 12.7 82°49'	1.9/13.0	18	
11 7	5 48.04	+14 29.7	1.446	2.273	17.3	20.9	11 7	5 52.39	+28 25.4	1.666	2.478	16.1	19.6
11 17	5 43.43	+14 18.2	1.373	2.271	13.5	20.6	11 17	5 46.33	+28 30.9	1.605	2.496	12.3	19.4
11 27	5 35.80	+14 13.7	1.320	2.269	9.0	20.4	11 27	5 37.37	+28 29.6	1.567	2.514	8.0	19.2
12 7	5 26.02	+14 17.7	1.293	2.267	4.8	20.1	12 7	5 26.54	+28 19.4	1.554	2.532	3.5	19.0
12 17	5 15.35	+14 31.0	1.291	2.266	4.5	20.1	12 17	5 15.16	+27 59.8	1.570	2.550	2.7	19.0
12 27	5 5.34	+14 53.7	1.317	2.265	8.7	20.4	12 27	5 4.74	+27 33.0	1.615	2.567	6.9	19.3
1 6	4 57.35	+15 25.1	1.367	2.264	13.1	20.6	1 6	4 56.49	+27 3.0	1.686	2.585	11.0	19.6
1 16	4 52.29	+16 3.9	1.439	2.264	17.1	20.9	1 16	4 51.13	+26 33.8	1.781	2.602	14.5	19.8
<b>238207</b>	2003 <i>UR</i> <sub>31</sub>		12 12.7 106°90'	4.9/11.8	18		<b>212951</b>	2009 <i>BB</i> <sub>40</sub>		12 12.7 114°59'</			

EPHEMERIDES

12 12.7

12 12.7

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>493192</b>	2014 <i>UK</i> <sub>23</sub>		12 12.7 222°19	1°6/12.8 18			<b>263346</b>	2008 <i>CW</i> <sub>109</sub>		12 12.7 315°57	1°9/13.0 18		
11 7	5 47.43	+26 27.4	2.399	3.200	12.1	21.5	11 7	5 50.70	+28 8.5	1.343	2.172	18.3	20.6
11 17	5 42.07	+27 2.3	2.313	3.199	9.3	21.3	11 17	5 46.05	+28 7.0	1.265	2.166	14.2	20.3
11 27	5 34.57	+27 35.2	2.251	3.197	6.0	21.1	11 27	5 37.78	+27 57.6	1.209	2.160	9.3	20.0
12 7	5 25.54	+28 3.7	2.218	3.195	2.7	20.8	12 7	5 26.88	+27 37.8	1.176	2.155	4.0	19.7
12 17	5 15.86	+28 26.1	2.215	3.194	2.2	20.8	12 17	5 14.90	+27 6.9	1.169	2.149	3.0	19.6
12 27	5 6.55	+28 41.8	2.242	3.192	5.5	21.0	12 27	5 3.76	+26 27.8	1.188	2.144	8.3	19.9
1 6	4 58.56	+28 51.9	2.298	3.190	8.8	21.2	1 6	4 55.10	+25 46.0	1.232	2.139	13.4	20.2
1 16	4 52.62	+28 58.4	2.379	3.188	11.7	21.4	1 16	4 49.96	+25 7.0	1.298	2.135	17.8	20.4
<b>290235</b>	2005 <i>SO</i> <sub>74</sub>		12 12.7 48°90	1°0/12.8 18			<b>50271</b>	2000 <i>CW</i>		12 12.7 165°96	4°3/13.6 18		
11 7	5 47.96	+25 48.7	1.826	2.642	14.7	20.9	11 7	5 52.71	+36 30.0	2.353	3.131	13.0	19.3
11 17	5 42.86	+25 56.4	1.756	2.651	11.2	20.7	11 17	5 46.20	+36 54.4	2.272	3.135	10.4	19.1
11 27	5 35.18	+26 0.3	1.709	2.659	7.2	20.5	11 27	5 37.21	+37 8.9	2.215	3.139	7.5	19.0
12 7	5 25.76	+25 59.0	1.689	2.668	2.9	20.3	12 7	5 26.52	+37 9.8	2.184	3.143	5.0	18.8
12 17	5 15.74	+25 52.0	1.697	2.677	2.2	20.2	12 17	5 15.21	+36 55.5	2.183	3.146	4.5	18.8
12 27	5 6.41	+25 40.4	1.733	2.687	6.4	20.5	12 27	5 4.52	+36 26.9	2.213	3.148	6.6	18.9
1 6	4 58.87	+25 26.7	1.797	2.697	10.3	20.8	1 6	4 55.54	+35 47.8	2.270	3.150	9.4	19.1
1 16	4 53.88	+25 13.6	1.884	2.706	13.7	21.0	1 16	4 49.00	+35 2.9	2.353	3.152	12.1	19.3
<b>211512</b>	2003 <i>QW</i> <sub>43</sub>		12 12.7 127°12	1°9/12.5 18			<b>356286</b>	2010 <i>DO</i> <sub>26</sub>		12 12.7 116°19	1°6/12.6 18		
11 7	5 53.57	+18 57.4	1.628	2.441	16.4	21.0	11 7	5 50.07	+17 16.6	1.960	2.767	14.2	21.5
11 17	5 47.15	+18 46.1	1.563	2.456	12.5	20.8	11 17	5 44.19	+17 34.3	1.889	2.778	10.8	21.3
11 27	5 37.90	+18 36.2	1.521	2.470	8.0	20.5	11 27	5 35.93	+17 55.9	1.841	2.789	7.0	21.1
12 7	5 26.76	+18 28.0	1.504	2.483	3.4	20.3	12 7	5 26.05	+18 20.9	1.821	2.800	2.9	20.8
12 17	5 15.01	+18 22.1	1.517	2.496	3.0	20.3	12 17	5 15.57	+18 48.1	1.831	2.810	2.5	20.8
12 27	5 4.12	+18 19.5	1.558	2.508	7.4	20.6	12 27	5 5.67	+19 16.9	1.870	2.820	6.4	21.1
1 6	4 55.29	+18 21.5	1.626	2.519	11.7	20.9	1 6	4 57.40	+19 47.1	1.938	2.830	10.1	21.3
1 16	4 49.29	+18 29.2	1.717	2.530	15.3	21.1	1 16	4 51.46	+20 18.6	2.030	2.839	13.4	21.6
<b>452275</b>	2015 <i>TP</i> <sub>161</sub>		12 12.7 58°74	7°1/11.6 18			<b>324944</b>	2007 <i>XQ</i> <sub>58</sub>		12 12.7 27°37	1°9/12.6 18		
11 7	5 46.03	+ 6 44.3	1.747	2.552	15.7	20.8	11 7	5 50.72	+22 15.1	0.972	1.826	21.8	19.6
11 17	5 41.22	+ 5 44.7	1.682	2.558	12.7	20.6	11 17	5 46.79	+23 28.9	0.922	1.836	16.7	19.3
11 27	5 34.06	+ 4 55.6	1.640	2.565	9.6	20.5	11 27	5 38.56	+24 47.2	0.891	1.848	10.7	19.1
12 7	5 25.34	+ 4 21.6	1.623	2.572	7.4	20.3	12 7	5 27.22	+26 3.2	0.881	1.861	4.3	18.8
12 17	5 16.09	+ 4 5.8	1.633	2.579	7.5	20.4	12 17	5 14.71	+27 9.4	0.894	1.875	3.5	18.8
12 27	5 7.46	+ 4 9.8	1.669	2.587	9.8	20.5	12 27	5 3.41	+28 2.2	0.932	1.891	9.6	19.2
1 6	4 50.48	+ 4 32.2	1.731	2.594	12.8	20.7	1 6	4 55.26	+28 42.3	0.993	1.907	15.1	19.5
1 16	4 55.81	+ 5 10.2	1.814	2.601	15.6	20.9	1 16	4 51.33	+29 13.0	1.072	1.924	19.7	19.9
<b>16282</b>	2512 <i>P-L</i>		12 12.7 134°15	0°8/12.8 18			<b>411546</b>	2011 <i>CQ</i> <sub>6</sub>		12 12.7 141°55	3°0/13.1 17		
11 7	5 49.30	+25 29.0	1.851	2.664	14.7	18.9	11 7	5 48.53	+31 36.5	2.430	3.223	12.2	21.3
11 17	5 43.91	+25 33.2	1.773	2.666	11.2	18.7	11 17	5 42.92	+32 8.2	2.350	3.227	9.5	21.1
11 27	5 35.90	+25 33.9	1.718	2.668	7.2	18.4	11 27	5 35.10	+32 34.0	2.293	3.231	6.5	20.9
12 7	5 26.06	+25 29.5	1.690	2.670	2.8	18.2	12 7	5 25.76	+32 51.2	2.265	3.234	3.7	20.8
12 17	5 15.53	+25 19.7	1.691	2.672	2.1	18.1	12 17	5 15.81	+32 58.0	2.266	3.238	3.3	20.8
12 27	5 5.63	+25 5.5	1.721	2.674	6.5	18.4	12 27	5 6.33	+32 54.5	2.297	3.241	5.8	20.9
1 6	4 57.51	+24 49.6	1.777	2.676	10.5	18.7	1 6	4 58.29	+32 43.0	2.357	3.244	8.8	21.1
1 16	4 51.97	+24 34.7	1.858	2.677	14.0	18.9	1 16	4 52.38	+32 26.6	2.442	3.247	11.5	21.3
<b>227275</b>	2005 <i>SG</i> <sub>145</sub>		12 12.7 244°18	1°3/12.8 18			<b>249991</b>	2001 <i>XX</i> <sub>65</sub>		12 12.7 29°64	1°7/13.2 18		
11 7	5 51.34	+25 25.0	1.644	2.461	16.0	21.0	11 7	5 48.90	+30 27.8	1.507	2.329	17.0	19.3
11 17	5 45.98	+25 44.9	1.560	2.454	12.4	20.8	11 17	5 43.91	+29 49.0	1.446	2.343	13.0	19.1
11 27	5 37.51	+26 2.4	1.497	2.447	8.0	20.5	11 27	5 35.92	+28 58.7	1.407	2.357	8.5	18.9
12 7	5 26.75	+26 14.7	1.460	2.440	3.3	20.2	12 7	5 26.03	+27 56.7	1.393	2.371	3.6	18.6
12 17	5 14.97	+26 20.0	1.452	2.432	2.5	20.1	12 17	5 15.69	+26 45.8	1.407	2.387	2.6	18.6
12 27	5 3.76	+26 18.6	1.471	2.425	7.3	20.4	12 27	5 6.42	+25 31.2	1.448	2.403	7.1	18.9
1 6	4 54.55	+26 12.8	1.517	2.417	11.9	20.6	1 6	4 59.43	+24 19.4	1.515	2.420	11.5	19.2
1 16	4 48.33	+26 6.0	1.586	2.409	15.9	20.9	1 16	4 55.40	+23 15.4	1.606	2.438	15.2	19.5
<b>378007</b>	2006 <i>SQ</i> <sub>38</sub>		12 12.7 193°09	2°7/13.1 18			<b>186827</b>	2004 <i>FA</i> <sub>43</sub>		12 12.7 334°21	5°2/12.3 18		
11 7	5 53.57	+29 45.3	1.576	2.388	16.8	21.4	11 7	5 48.29	+12 0.4	1.400	2.225	17.9	19.9
11 17	5 47.77	+29 57.5	1.498	2.388	13.1	21.1	11 17	5 43.71	+11 37.4	1.327	2.222	14.0	19.6
11 27	5 38.65	+30 1.9	1.441	2.387	8.7	20.9	11 27	5 36.07	+11 23.5	1.275	2.220	9.7	19.4
12 7	5 27.15	+29 55.2	1.409	2.385	4.2	20.6	12 7	5 26.22	+11 21.5	1.247	2.217	5.9	19.2
12 17	5 14.71	+29 35.6	1.406	2.384	3.4	20.6	12 17	5 15.45	+11 33.1	1.245	2.215	5.8	19.2
12 27	5 3.07	+29 5.0	1.430	2.382	7.7	20.8	12 27	5 5.34	+11 58.7	1.269	2.213	9.5	19.4
1 6	4 53.73	+28 28.2	1.480	2.379	12.2	21.1	1 6	4 57.29	+12 36.8	1.318	2.211	13.8	19.6
1 16	4 47.62	+27 50.7	1.554	2.377	16.1	21.3	1 16	4 52.21	+13 25.2	1.387	2.209	17.8	19.9
<b>372108</b>	2008 <i>SK</i> <sub>129</sub>		12 12.7 63°34	0°8/12.8 17			<b>336607</b>	2009 <i>UT</i> <sub>38</sub>		12 12.7 154°83	3°0/12.1 18		
11 7	5 45.91	+25 52.1	2.292	3.099	12.4	21.7	11 7	5 50.61	+17 18.5	1.753	2.566	15.4	21.1
11 17	5 40.84	+25 51.1	2.216	3.105	9.4	21.5	11 17	5 44.80	+16 40.5	1.680	2.571	11.8	20.9
11 27	5 33.70	+25 46.6	2.163	3.111	6.0	21.3	11 27	5 36.39	+16 3.7	1.629	2.576	7.8	20.7
12 7	5 25.20	+25 37.6	2.138	3.117	2.4	21.1	12 7	5 26.24	+15 30.2	1.605	2.581	3.9	20.4
12 17	5 16.21	+25 24.2	2.143	3.124	1.8	21.0	12 17	5 15.47	+15 2.1	1.610	2.585	3.8	20.5
12 27	5 7.74	+25 7.6	2.178	3.130	5.4	21.3	12 27	5 5.40	+14 41.7	1.644	2.589	7.6	20.7
1 6	5 0.67	+24 49.8	2.240	3.136	8.8	21.5	1 6	4 57.14	+14 30.7	1.704	2.592	11.6	20.9
1 16	4 55.64	+24 33.0	2.328	3.143	11.7	21.7	1 16	4 51.45	+14 29.5	1.788	2.595	15.0	21.2
<b>487251</b>	2014 <i>PW</i> <sub>27</sub>		12 12.7 194°86	3°0/13.2 18			<b>199686</b>	2006 <i>HK</i> <sub>17</sub>		12 12.7 198°54	2°1/12.9		

EPHEMERIDES

12 12.7

12 12.7

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>265517</b>	2005 <i>MK</i> <sub>8</sub>		12 12.7 199°34	0°6/12.8	18		<b>486295</b>	2013 <i>CV</i> <sub>73</sub>		12 12.7	0°29	5°1/13.8	17
11 7	5 52.86	+25 13.1	1.919	2.723	14.6	22.2	11 7	5 49.99	+35 26.2	1.474	2.289	17.7	21.4
11 17	5 46.60	+25 10.1	1.832	2.720	11.2	22.0	11 17	5 45.40	+35 41.1	1.401	2.288	14.1	21.1
11 27	5 37.63	+25 3.0	1.768	2.716	7.2	21.7	11 27	5 37.29	+35 42.1	1.348	2.287	10.0	20.9
12 7	5 26.74	+24 50.7	1.732	2.711	2.7	21.4	12 7	5 26.71	+35 25.0	1.319	2.286	6.2	20.7
12 17	5 15.07	+24 32.8	1.725	2.706	2.0	21.4	12 17	5 15.22	+34 47.7	1.316	2.287	5.4	20.6
12 27	5 3.98	+24 10.8	1.748	2.699	6.5	21.7	12 27	5 4.68	+33 53.1	1.340	2.288	8.5	20.8
1 6	4 54.67	+23 47.6	1.798	2.692	10.7	21.9	1 6	4 56.62	+32 48.3	1.388	2.290	12.6	21.1
1 16	4 47.99	+23 26.5	1.874	2.684	14.3	22.1	1 16	4 51.98	+31 40.9	1.458	2.292	16.4	21.3
<b>298401</b>	2003 <i>SS</i> <sub>261</sub>		12 12.7 79°46	3°9/11.9	11 C		<b>428413</b>	2007 <i>TA</i> <sub>117</sub>		12 12.7 44°45	1°1/12.6	18	
11 7	5 50.11	+15 48.1	1.717	2.531	15.6	20.8	11 7	5 51.50	+22 19.9	1.007	1.857	21.5	20.8
11 17	5 44.17	+14 51.3	1.663	2.554	12.0	20.7	11 17	5 46.79	+21 59.8	0.964	1.876	16.3	20.6
11 27	5 35.81	+13 57.4	1.632	2.577	8.0	20.5	11 27	5 38.14	+21 37.9	0.938	1.896	10.3	20.3
12 7	5 25.96	+13 9.5	1.628	2.599	4.5	20.3	12 7	5 26.96	+21 14.6	0.935	1.916	3.9	20.0
12 17	5 15.77	+12 30.6	1.652	2.622	4.5	20.4	12 17	5 15.15	+20 51.3	0.956	1.937	3.1	20.1
12 27	5 6.46	+12 3.2	1.704	2.644	7.8	20.6	12 27	5 4.81	+20 31.1	1.002	1.959	9.1	20.5
1 6	4 59.02	+11 48.4	1.784	2.666	11.4	20.9	1 6	4 57.50	+20 17.3	1.070	1.982	14.5	20.8
1 16	4 54.05	+11 45.9	1.886	2.688	14.5	21.1	1 16	4 53.97	+20 11.7	1.157	2.004	18.9	21.2
<b>274268</b>	2008 <i>PQ</i> <sub>9</sub>		12 12.7 107°13	3°1/13.2	18		<b>251614</b>	2009 <i>JE</i> <sub>7</sub>		12 12.7 180°02	4°6/12.1	18	
11 7	5 55.06	+30 50.0	1.813	2.613	15.5	20.9	11 7	5 46.40	+10 33.5	2.078	2.880	13.7	21.0
11 17	5 48.27	+31 14.6	1.751	2.633	12.0	20.7	11 17	5 41.29	+10 4.0	2.000	2.880	10.8	20.8
11 27	5 38.61	+31 31.3	1.712	2.653	8.0	20.5	11 27	5 34.07	+9 41.4	1.945	2.880	7.6	20.6
12 7	5 27.06	+31 36.7	1.699	2.672	4.2	20.4	12 7	5 25.42	+9 27.9	1.918	2.881	5.1	20.4
12 17	5 14.93	+31 29.2	1.716	2.691	3.5	20.4	12 17	5 16.20	+9 25.3	1.919	2.880	5.1	20.4
12 27	5 3.73	+31 10.2	1.761	2.709	6.9	20.6	12 27	5 7.46	+9 34.4	1.948	2.880	7.6	20.6
1 6	4 54.66	+30 43.7	1.834	2.726	10.6	20.9	1 6	5 0.10	+9 54.8	2.005	2.880	10.7	20.8
1 16	4 48.48	+30 14.5	1.931	2.743	13.9	21.1	1 16	4 54.79	+10 25.1	2.085	2.879	13.6	21.0
<b>103175</b>	1999 <i>XS</i> <sub>234</sub>		12 12.7 3°49	3°5/12.3	18		<b>321034</b>	2008 <i>PH</i> <sub>8</sub>		12 12.7 133°74	0°3/12.6	18	
11 7	5 46.09	+15 42.6	1.482	2.312	16.8	18.9	11 7	5 46.57	+23 4.3	2.616	3.416	11.2	21.5
11 17	5 41.88	+15 22.8	1.411	2.311	13.0	18.6	11 17	5 41.02	+22 51.5	2.540	3.427	8.5	21.3
11 27	5 34.81	+15 7.9	1.361	2.311	8.6	18.4	11 27	5 33.70	+22 36.6	2.489	3.437	5.4	21.1
12 7	5 25.74	+14 59.8	1.336	2.312	4.5	18.1	12 7	5 25.23	+22 19.7	2.466	3.446	2.0	20.9
12 17	5 15.87	+14 59.6	1.338	2.313	4.2	18.1	12 17	5 16.37	+22 1.3	2.475	3.456	1.5	20.9
12 27	5 6.69	+15 8.5	1.366	2.315	8.3	18.4	12 27	5 8.00	+21 42.5	2.514	3.465	4.9	21.1
1 6	4 59.44	+15 26.3	1.419	2.317	12.6	18.6	1 6	5 0.85	+21 25.1	2.583	3.473	8.0	21.3
1 16	4 54.97	+15 52.5	1.493	2.320	16.5	18.9	1 16	4 55.49	+21 10.5	2.677	3.481	10.6	21.5
<b>215216</b>	2000 <i>UE</i> <sub>9</sub>		12 12.7 103°48	2°2/12.3	18		<b>447475</b>	2006 <i>QL</i> <sub>114</sub>		12 12.7 178°23	5°5/11.6	18	
11 7	5 53.51	+20 5.1	1.483	2.302	17.3	19.8	11 7	5 47.06	+6 19.9	2.485	3.266	12.3	21.7
11 17	5 47.25	+19 27.9	1.423	2.319	13.2	19.6	11 17	5 41.41	+5 37.6	2.406	3.268	9.9	21.5
11 27	5 38.00	+18 50.1	1.386	2.336	8.4	19.3	11 27	5 33.98	+5 3.3	2.352	3.270	7.5	21.4
12 7	5 26.83	+18 13.0	1.374	2.353	3.6	19.1	12 7	5 25.36	+4 39.6	2.325	3.270	5.7	21.3
12 17	5 15.13	+17 38.9	1.390	2.369	3.3	19.1	12 17	5 16.28	+4 28.7	2.327	3.271	5.8	21.3
12 27	5 4.45	+17 10.9	1.435	2.384	7.9	19.4	12 27	5 7.61	+4 31.7	2.359	3.270	7.6	21.4
1 6	4 56.03	+16 51.3	1.505	2.399	12.3	19.7	1 6	5 0.11	+4 47.9	2.418	3.269	10.1	21.5
1 16	4 50.62	+16 41.6	1.598	2.414	16.1	20.0	1 16	4 54.35	+5 15.8	2.502	3.267	12.4	21.7
<b>228845</b>	2003 <i>EQ</i> <sub>54</sub>		12 12.7 310°70	0°8/12.6	18		<b>287950</b>	2003 <i>UG</i> <sub>93</sub>		12 12.7 29°98	7°9/10.8	18	
11 7	5 47.76	+21 47.2	1.438	2.270	17.1	20.4	11 7	5 43.98	+6 36.1	1.689	2.500	15.9	19.2
11 17	5 43.58	+21 39.4	1.353	2.256	13.2	20.1	11 17	5 39.63	+5 2.8	1.637	2.515	12.9	19.0
11 27	5 36.16	+21 30.6	1.289	2.243	8.5	19.8	11 27	5 33.03	+3 40.1	1.609	2.531	10.0	18.9
12 7	5 26.32	+21 20.6	1.249	2.230	3.2	19.4	12 7	5 25.01	+2 34.1	1.605	2.548	8.1	18.8
12 17	5 15.38	+21 9.6	1.236	2.217	2.6	19.4	12 17	5 16.59	+1 49.3	1.627	2.565	8.3	18.9
12 27	5 5.00	+20 59.2	1.250	2.205	8.1	19.7	12 27	5 8.90	+1 28.0	1.676	2.584	10.4	19.0
1 6	4 56.69	+20 51.8	1.288	2.193	13.1	19.9	1 6	5 2.85	+1 29.3	1.748	2.603	13.1	19.3
1 16	4 51.51	+20 49.7	1.347	2.182	17.5	20.2	1 16	4 59.06	+1 49.9	1.842	2.622	15.7	19.5
<b>79588</b>	1998 <i>RJ</i> <sub>18</sub>		12 12.7 42°44	2°5/13.2	18		<b>375411</b>	2008 <i>SP</i> <sub>282</sub>		12 12.7 176°40	4°2/11.4	18	
11 7	5 51.48	+29 41.0	1.330	2.157	18.5	18.3	11 7	5 43.72	+9 18.1	2.969	3.754	10.4	21.4
11 17	5 46.45	+29 38.2	1.266	2.165	14.3	18.1	11 17	5 38.64	+8 30.8	2.887	3.756	8.2	21.2
11 27	5 37.87	+29 25.8	1.223	2.173	9.4	17.8	11 27	5 32.12	+7 48.2	2.832	3.758	6.0	21.1
12 7	5 26.87	+29 1.1	1.203	2.181	4.3	17.6	12 7	5 24.64	+7 12.6	2.805	3.759	4.4	21.0
12 17	5 15.08	+28 24.0	1.210	2.189	3.3	17.5	12 17	5 16.83	+6 45.9	2.809	3.759	4.5	21.0
12 27	5 4.38	+27 38.2	1.243	2.198	8.1	17.9	12 27	5 9.35	+6 29.5	2.843	3.759	6.2	21.1
1 6	4 56.29	+26 49.6	1.301	2.208	12.9	18.1	1 6	5 2.82	+6 23.7	2.905	3.759	8.4	21.3
1 16	4 51.66	+26 4.2	1.381	2.217	17.0	18.4	1 16	4 57.71	+6 28.1	2.992	3.759	10.5	21.4
<b>92162</b>	1999 <i>XG</i> <sub>151</sub>		12 12.7 63°29	0°6/12.7	18		<b>475299</b>	2005 <i>XQ</i> <sub>54</sub>		12 12.7 32°75	1°4/12.9	16	
11 7	5 48.53	+22 50.1	1.997	2.808	13.8	18.1	11 7	5 49.34	+26 0.0	1.116	1.961	20.1	21.0
11 17	5 43.11	+23 23.0	1.927	2.819	10.5	17.9	11 17	5 45.08	+26 6.6	1.068	1.978	15.3	20.8
11 27	5 35.30	+23 56.2	1.881	2.830	6.7	17.7	11 27	5 37.08	+26 7.9	1.039	1.995	9.8	20.5
12 7	5 25.86	+24 27.3	1.862	2.842	2.5	17.5	12 7	5 26.60	+26 1.7	1.033	2.013	3.9	20.2
12 17	5 15.81	+24 54.7	1.872	2.853	1.9	17.5	12 17	5 15.43	+25 47.7	1.051	2.033	2.9	20.2
12 27	5 6.32	+25 17.7	1.912	2.865	6.0	17.8	12 27	5 5.55	+25 28.2	1.095	2.053	8.5	20.6
1 6	4 58.44	+25 36.9	1.980	2.876	9.7	18.0	1 6	4 58.47	+25 7.7	1.161	2.074	13.5	21.0
1 16	4 52.90	+25 53.9	2.073	2.888	12.9	18.2	1 16	4 55.00	+24 50.1	1.249	2.096	17.8	21.3
<b>109109</b>	2001 <i>QU</i> <sub>38</sub>		12 12.7 57°73	5°0/12.4	18		<b>139914</b>	2001 <i>RV</i> <sub>110</sub>		12 12.7 122°23	2°4/12.4	18	

EPHEMERIDES

12 12.7

12 12.7

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>38267</b>	1999 <i>RB</i> <sub>26</sub>		12 12.7 108°85	0°6/12.8	18		<b>294566</b>	2007 <i>YJ</i> <sub>46</sub>		12 12.7 356°33	3°4/12.4	18	
11 7	5 47.78	+24 35.5	2.232	3.037	12.7	19.3	11 7	5 46.25	+14 50.4	1.666	2.488	15.6	20.6
11 17	5 42.31	+24 43.5	2.157	3.046	9.7	19.1	11 17	5 41.77	+14 38.7	1.591	2.486	12.1	20.4
11 27	5 34.70	+24 49.1	2.107	3.055	6.2	18.9	11 27	5 34.67	+14 32.6	1.538	2.485	8.1	20.2
12 7	5 25.65	+24 51.3	2.084	3.064	2.4	18.7	12 7	5 25.74	+14 33.6	1.510	2.484	4.3	20.0
12 17	5 16.09	+24 49.6	2.091	3.072	1.7	18.7	12 17	5 16.07	+14 42.3	1.509	2.484	4.0	19.9
12 27	5 7.07	+24 44.6	2.129	3.081	5.5	18.9	12 27	5 6.96	+14 59.2	1.536	2.484	7.7	20.2
1 6	4 59.51	+24 38.1	2.194	3.089	9.0	19.2	1 6	4 59.58	+15 23.9	1.589	2.484	11.8	20.4
1 16	4 54.06	+24 31.9	2.285	3.097	12.0	19.4	1 16	4 54.73	+15 55.7	1.665	2.485	15.4	20.6
<b>436078</b>	2009 <i>SB</i> <sub>133</sub>		12 12.7 238°11	2°8/12.9	18		<b>276631</b>	2003 <i>UO</i> <sub>157</sub>		12 12.7 134°91	0°4/12.7	17	
11 7	5 52.78	+28 6.4	1.574	2.389	16.7	21.3	11 7	5 46.22	+21 20.0	2.441	3.245	11.8	20.7
11 17	5 47.34	+28 46.0	1.493	2.385	13.0	21.0	11 17	5 40.97	+21 25.8	2.362	3.250	9.0	20.5
11 27	5 38.54	+29 21.8	1.434	2.381	8.6	20.8	11 27	5 33.81	+21 31.5	2.307	3.255	5.7	20.3
12 7	5 27.25	+29 49.5	1.400	2.376	4.2	20.5	12 7	5 25.35	+21 36.7	2.280	3.260	2.1	20.1
12 17	5 14.84	+30 5.4	1.394	2.372	3.6	20.4	12 17	5 16.40	+21 41.2	2.284	3.264	1.7	20.1
12 27	5 3.05	+30 9.1	1.416	2.367	7.8	20.7	12 27	5 7.87	+21 45.2	2.318	3.269	5.2	20.3
1 6	4 53.45	+30 3.5	1.463	2.362	12.3	20.9	1 6	5 0.61	+21 49.6	2.380	3.273	8.5	20.5
1 16	4 47.09	+29 53.0	1.533	2.357	16.3	21.2	1 16	4 55.21	+21 55.5	2.469	3.277	11.3	20.7
<b>157513</b>	2005 <i>SD</i> <sub>105</sub>		12 12.7 347°59	3°4/12.3	18		<b>408149</b>	2013 <i>CN</i> <sub>122</sub>		12 12.7 216°07	10°0/12.5	18	
11 7	5 42.74	+18 30.3	1.091	1.948	19.6	19.2	11 7	5 47.28	- 5 2.7	1.978	2.733	15.9	20.7
11 17	5 40.36	+17 54.5	1.021	1.937	15.2	18.9	11 17	5 42.06	- 5 40.6	1.906	2.732	13.7	20.6
11 27	5 34.38	+17 19.7	0.970	1.927	10.0	18.6	11 27	5 34.64	- 5 59.2	1.854	2.730	11.6	20.4
12 7	5 25.76	+16 48.9	0.940	1.919	4.7	18.3	12 7	5 25.70	- 5 53.8	1.826	2.728	10.2	20.3
12 17	5 15.98	+16 25.3	0.933	1.912	4.5	18.3	12 17	5 16.15	- 5 21.8	1.824	2.725	10.2	20.3
12 27	5 6.98	+16 12.1	0.951	1.907	9.8	18.5	12 27	5 7.09	- 4 23.6	1.848	2.723	11.5	20.4
1 6	5 0.41	+16 11.2	0.990	1.903	15.3	18.8	1 6	4 59.45	- 3 3.0	1.896	2.721	13.5	20.5
1 16	4 57.35	+16 22.8	1.048	1.901	20.0	19.1	1 16	4 53.95	- 1 25.6	1.967	2.718	15.8	20.7
<b>192164</b>	2007 <i>DB</i> <sub>11</sub>		12 12.7 107°40	3°8/12.3	18		<b>84798</b>	2002 <i>XJ</i> <sub>92</sub>		12 12.7 172°82	1°2/12.7	18	
11 7	5 50.32	+14 18.4	1.680	2.493	15.9	20.8	11 7	5 53.11	+17 48.1	2.036	2.835	14.0	19.9
11 17	5 44.60	+13 53.4	1.616	2.506	12.3	20.6	11 17	5 46.59	+18 14.2	1.953	2.838	10.7	19.7
11 27	5 36.29	+13 33.8	1.575	2.519	8.3	20.4	11 27	5 37.59	+18 44.4	1.895	2.841	6.9	19.5
12 7	5 26.27	+13 21.4	1.559	2.532	4.6	20.2	12 7	5 26.82	+19 17.4	1.865	2.844	2.8	19.2
12 17	5 15.68	+13 17.5	1.572	2.544	4.4	20.2	12 17	5 15.30	+19 51.6	1.865	2.845	2.3	19.2
12 27	5 5.84	+13 23.1	1.613	2.556	7.9	20.4	12 27	5 4.27	+20 25.9	1.897	2.846	6.3	19.4
1 6	4 57.87	+13 38.0	1.680	2.567	11.7	20.7	1 6	4 54.82	+21 0.0	1.957	2.846	10.2	19.7
1 16	4 52.48	+14 1.5	1.770	2.578	15.1	20.9	1 16	4 47.75	+21 34.2	2.042	2.846	13.5	19.9
<b>46871</b>	1998 <i>QF</i> <sub>100</sub>		12 12.7 351°86	9°1/11.9	18		<b>442909</b>	2013 <i>CS</i> <sub>19</sub>		12 12.7 82°70	12°7/15.5	18	
11 7	5 43.70	+ 3 55.3	1.417	2.234	18.1	18.2	11 7	5 53.19	-14 52.7	1.898	2.596	18.2	20.5
11 17	5 40.12	+ 3 1.8	1.348	2.228	15.0	18.0	11 17	5 46.33	-15 8.1	1.848	2.616	16.3	20.4
11 27	5 33.76	+ 2 24.0	1.300	2.223	11.8	17.8	11 27	5 37.17	-14 55.0	1.816	2.636	14.4	20.3
12 7	5 25.42	+ 2 8.0	1.274	2.219	9.5	17.7	12 7	5 26.58	-14 8.8	1.805	2.655	13.1	20.3
12 17	5 16.27	+ 2 17.7	1.272	2.216	9.5	17.7	12 17	5 15.62	-12 48.4	1.820	2.675	12.7	20.3
12 27	5 7.72	+ 2 53.6	1.295	2.214	11.8	17.8	12 27	5 5.46	-10 57.2	1.859	2.694	13.4	20.4
1 6	5 1.02	+ 3 52.6	1.340	2.213	15.1	18.0	1 6	4 57.06	- 8 42.4	1.924	2.713	14.8	20.5
1 16	4 57.03	+ 5 9.1	1.406	2.213	18.3	18.2	1 16	4 51.05	- 6 12.6	2.012	2.732	16.5	20.7
<b>97555</b>	2000 <i>DT</i> <sub>68</sub>		12 12.7 351°33	6°1/13.8	17		<b>88837</b>	2001 <i>SL</i> <sub>175</sub>		12 12.7 138°60	1°4/12.6	18	
11 7	5 47.76	+37 59.4	1.746	2.548	15.9	19.1	11 7	5 51.68	+19 36.5	1.849	2.658	14.8	20.8
11 17	5 43.45	+38 36.3	1.667	2.542	12.9	18.9	11 17	5 45.57	+19 31.7	1.778	2.669	11.3	20.6
11 27	5 35.99	+39 0.7	1.610	2.537	9.6	18.7	11 27	5 36.93	+19 27.9	1.730	2.679	7.2	20.4
12 7	5 26.27	+39 7.3	1.576	2.532	6.8	18.5	12 7	5 26.56	+19 25.0	1.709	2.688	2.9	20.1
12 17	5 15.63	+38 53.3	1.569	2.529	6.3	18.5	12 17	5 15.59	+19 23.1	1.717	2.697	2.5	20.1
12 27	5 5.69	+38 19.5	1.588	2.526	8.5	18.6	12 27	5 5.30	+19 22.9	1.755	2.705	6.7	20.4
1 6	4 57.88	+37 30.9	1.633	2.524	11.8	18.8	1 6	4 56.79	+19 25.7	1.820	2.713	10.6	20.6
1 16	4 53.12	+36 34.4	1.701	2.523	15.0	19.0	1 16	4 50.79	+19 32.7	1.910	2.720	14.0	20.9
<b>68578</b>	2001 <i>YP</i> <sub>75</sub>		12 12.7 188°31	1°3/12.7	18		<b>85960</b>	1999 <i>FR</i> <sub>50</sub>		12 12.7 285°48	4°5/13.5	18	
11 7	5 51.38	+17 48.1	2.031	2.833	13.9	20.0	11 7	5 50.44	+34 52.1	1.932	2.729	14.7	19.8
11 17	5 45.31	+18 8.4	1.946	2.833	10.7	19.8	11 17	5 45.16	+35 18.7	1.844	2.720	11.7	19.6
11 27	5 36.78	+18 32.6	1.885	2.832	6.9	19.5	11 27	5 36.96	+35 35.5	1.778	2.711	8.4	19.4
12 7	5 26.50	+18 59.8	1.852	2.830	2.8	19.3	12 7	5 26.66	+35 38.5	1.738	2.702	5.3	19.2
12 17	5 15.46	+19 28.7	1.848	2.828	2.3	19.3	12 17	5 15.46	+35 25.2	1.726	2.694	4.8	19.1
12 27	5 4.86	+19 58.5	1.876	2.825	6.4	19.5	12 27	5 4.84	+34 56.4	1.742	2.685	7.4	19.3
1 6	4 55.80	+20 29.1	1.931	2.822	10.2	19.7	1 6	4 56.11	+34 16.3	1.786	2.676	10.9	19.5
1 16	4 49.08	+21 0.7	2.012	2.818	13.6	20.0	1 16	4 50.18	+33 30.4	1.852	2.668	14.2	19.7
<b>475566</b>	2006 <i>TE</i> <sub>122</sub>		12 12.7 60°88	2°0/12.9	18		<b>517449</b>	2014 <i>OH</i> <sub>205</sub>		12 12.7 155°62	0°3/12.7	18	
11 7	5 54.01	+26 5.6	1.255	2.085	19.3	21.5	11 7	5 48.61	+21 28.9	2.432	3.232	12.0	22.2
11 17	5 48.38	+26 37.6	1.204	2.104	14.7	21.2	11 17	5 42.80	+21 41.6	2.352	3.238	9.1	22.0
11 27	5 39.10	+27 5.6	1.172	2.124	9.5	21.0	11 27	5 34.99	+21 54.4	2.297	3.245	5.8	21.8
12 7	5 27.37	+27 25.6	1.165	2.144	4.0	20.8	12 7	5 25.83	+22 6.4	2.270	3.250	2.2	21.6
12 17	5 14.91	+27 35.1	1.184	2.164	3.1	20.8	12 17	5 16.14	+22 17.0	2.274	3.255	1.6	21.6
12 27	5 3.66	+27 34.9	1.230	2.185	8.2	21.1	12 27	5 6.89	+22 26.3	2.309	3.260	5.3	21.8
1 6	4 55.16	+27 28.7	1.300	2.205	13.0	21.4	1 6	4 58.94	+22 35.0	2.373	3.264	8.6	22.0
1 16	4 50.24	+27 20.8	1.391	2.225	17.0	21.8	1 16	4 52.94	+22 44.3	2.463	3.268	11.4	22.2
<b>334974</b>	2004 <i>EB</i> <sub>34</sub>		12 12.7 292°32	4°9/13.3	18		<b>44862</b>	1999 <i>UM</i> <sub>15</sub>					

EPHEMERIDES

12 12.7

12 12.8

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>216685</b>	2004 <i>GM</i> <sub>45</sub>		12 12.7 238°86	1°5/12.4	18		<b>8751</b>	Nigricollis		12 12.7 144°01	1°1/12.6	18	
11 7	5 47.38	+19 58.2	2.015	2.827	13.7	21.1	11 7	5 46.83	+20 4.9	2.187	2.996	12.9	18.9
11 17	5 42.27	+19 37.0	1.930	2.822	10.5	20.8	11 17	5 41.65	+19 57.1	2.108	2.999	9.8	18.7
11 27	5 34.85	+19 15.4	1.868	2.818	6.7	20.6	11 27	5 34.36	+19 49.7	2.052	3.001	6.3	18.5
12 7	5 25.82	+18 54.1	1.834	2.813	2.8	20.4	12 7	5 25.64	+19 42.7	2.025	3.004	2.5	18.3
12 17	5 16.14	+18 34.3	1.829	2.808	2.5	20.3	12 17	5 16.37	+19 36.6	2.026	3.006	2.1	18.3
12 27	5 6.96	+18 17.5	1.853	2.803	6.4	20.6	12 27	5 7.59	+19 32.1	2.058	3.008	5.8	18.5
1 6	4 59.28	+18 5.5	1.905	2.798	10.2	20.8	1 6	5 0.20	+19 30.6	2.118	3.011	9.4	18.7
1 16	4 53.84	+17 59.5	1.981	2.793	13.6	21.0	1 16	4 54.87	+19 32.8	2.202	3.013	12.4	18.9
<b>77437</b>	2001 <i>GQ</i> <sub>8</sub>		12 12.7 271°29	2°6/12.6	18		<b>447591</b>	2006 <i>UF</i> <sub>44</sub>		12 12.7 103°54	2°3/12.3	15	
11 7	5 50.03	+16 41.1	1.511	2.334	16.9	19.8	11 7	5 49.15	+17 34.1	2.160	2.963	13.2	22.3
11 17	5 45.13	+16 40.6	1.427	2.324	13.1	19.6	11 17	5 43.16	+17 3.6	2.098	2.985	10.0	22.1
11 27	5 37.13	+16 45.3	1.363	2.313	8.6	19.3	11 27	5 35.15	+16 34.6	2.060	3.006	6.5	22.0
12 7	5 26.80	+16 55.7	1.325	2.303	4.0	19.0	12 7	5 25.87	+16 8.2	2.050	3.026	3.1	21.8
12 17	5 15.38	+17 11.6	1.314	2.292	3.6	18.9	12 17	5 16.25	+15 46.0	2.071	3.046	3.0	21.8
12 27	5 4.46	+17 33.1	1.330	2.281	8.2	19.2	12 27	5 7.29	+15 29.5	2.121	3.065	6.2	22.0
1 6	4 55.50	+18 0.1	1.372	2.271	13.0	19.4	1 6	4 59.83	+15 19.7	2.200	3.084	9.5	22.3
1 16	4 49.51	+18 32.4	1.436	2.260	17.1	19.7	1 16	4 54.45	+15 17.2	2.303	3.103	12.3	22.5
<b>366331</b>	2013 <i>EO</i> <sub>98</sub>		12 12.7 103°83	1°8/13.0	18		<b>482557</b>	2012 <i>VL</i> <sub>54</sub>		12 12.7 20°80	2°4/12.9	16	
11 7	5 49.82	+28 3.3	2.017	2.822	13.9	21.4	11 7	5 50.86	+26 33.3	1.509	2.332	16.9	21.3
11 17	5 44.17	+28 18.2	1.944	2.831	10.7	21.2	11 17	5 45.88	+27 15.5	1.437	2.334	13.1	21.1
11 27	5 36.05	+28 28.1	1.895	2.840	7.0	21.0	11 27	5 37.62	+27 55.3	1.386	2.336	8.6	20.8
12 7	5 26.26	+28 30.9	1.872	2.849	3.2	20.8	12 7	5 26.99	+28 28.6	1.360	2.338	3.9	20.6
12 17	5 15.87	+28 25.6	1.879	2.858	2.5	20.7	12 17	5 15.35	+28 52.0	1.362	2.341	3.2	20.5
12 27	5 6.12	+28 13.2	1.916	2.867	6.1	21.0	12 27	5 4.42	+29 5.0	1.391	2.344	7.7	20.8
1 6	4 58.08	+27 56.2	1.979	2.875	9.8	21.2	1 6	4 55.69	+29 9.6	1.445	2.347	12.2	21.1
1 16	4 52.47	+27 37.9	2.068	2.883	12.9	21.4	1 16	4 50.14	+29 9.6	1.522	2.351	16.1	21.3
<b>148204</b>	2000 <i>CN</i> <sub>90</sub>		12 12.7 331°65	1°6/12.9	18		<b>228467</b>	2001 <i>RT</i> <sub>90</sub>		12 12.7 70°58	0°6/12.8	18	
11 7	5 47.44	+26 27.6	1.228	2.070	18.9	19.6	11 7	5 53.50	+23 44.8	1.441	2.263	17.6	20.0
11 17	5 43.98	+26 34.2	1.150	2.058	14.6	19.3	11 17	5 47.49	+24 0.7	1.388	2.286	13.4	19.8
11 27	5 36.78	+26 35.4	1.091	2.046	9.6	19.0	11 27	5 38.34	+24 14.7	1.357	2.308	8.5	19.6
12 7	5 26.75	+26 28.9	1.055	2.035	4.0	18.6	12 7	5 27.13	+24 24.5	1.351	2.331	3.2	19.3
12 17	5 15.44	+26 13.3	1.044	2.025	3.0	18.5	12 17	5 15.35	+24 29.0	1.372	2.354	2.3	19.3
12 27	5 4.84	+25 50.5	1.057	2.016	8.7	18.8	12 27	5 4.63	+24 29.0	1.422	2.376	7.4	19.7
1 6	4 56.75	+25 24.8	1.095	2.007	14.2	19.1	1 6	4 56.29	+24 27.0	1.497	2.399	11.9	20.0
1 16	4 52.30	+25 1.1	1.152	2.000	18.9	19.4	1 16	4 51.09	+24 25.8	1.595	2.421	15.6	20.3
<b>522</b>	Helga		12 12.7 65°39	1°0/12.6	18		<b>13958</b>	1991 <i>DY</i>		12 12.7 284°01	4°0/11.9	18	
11 7	5 43.41	+19 35.4	2.692	3.496	10.8	14.5	11 7	5 46.44	+14 13.4	1.862	2.676	14.6	18.0
11 17	5 38.67	+19 33.2	2.615	3.504	8.2	14.4	11 17	5 41.80	+13 35.4	1.770	2.660	11.4	17.8
11 27	5 32.29	+19 31.7	2.563	3.511	5.2	14.2	11 27	5 34.71	+13 0.7	1.702	2.645	7.8	17.5
12 7	5 24.82	+19 31.1	2.540	3.519	2.1	14.0	12 7	5 25.85	+12 32.1	1.659	2.630	4.6	17.3
12 17	5 16.95	+19 31.5	2.547	3.526	1.8	14.0	12 17	5 16.19	+12 11.8	1.645	2.615	4.6	17.3
12 27	5 9.47	+19 33.5	2.584	3.534	4.8	14.2	12 27	5 6.93	+12 1.9	1.659	2.600	7.9	17.4
1 6	5 3.08	+19 37.5	2.650	3.542	7.8	14.4	1 6	4 59.17	+12 3.5	1.699	2.584	11.7	17.6
1 16	4 58.31	+19 44.2	2.742	3.549	10.3	14.6	1 16	4 53.74	+12 16.2	1.763	2.569	15.2	17.8
<b>122866</b>	2000 <i>SD</i> <sub>136</sub>		12 12.7 125°32	1°3/12.9	18		<b>32407</b>	2000 <i>RT</i> <sub>1</sub>		12 12.7 141°72	0°4/12.8	18	
11 7	5 52.41	+27 27.9	1.856	2.662	14.9	20.4	11 7	5 47.99	+24 35.7	2.141	2.948	13.1	18.9
11 17	5 46.22	+27 22.3	1.785	2.673	11.4	20.2	11 17	5 42.64	+24 34.3	2.061	2.952	10.0	18.7
11 27	5 37.37	+27 10.7	1.737	2.684	7.4	20.0	11 27	5 35.03	+24 29.9	2.006	2.955	6.4	18.5
12 7	5 26.75	+26 51.7	1.717	2.695	3.0	19.7	12 7	5 25.90	+24 22.0	1.978	2.958	2.4	18.2
12 17	5 15.56	+26 25.4	1.725	2.705	2.2	19.7	12 17	5 16.20	+24 10.3	1.979	2.961	1.8	18.2
12 27	5 5.16	+25 53.8	1.763	2.715	6.4	20.0	12 27	5 7.03	+23 56.0	2.011	2.963	5.7	18.4
1 6	4 56.69	+25 20.6	1.828	2.724	10.4	20.2	1 6	4 59.37	+23 41.1	2.070	2.966	9.4	18.7
1 16	4 50.87	+24 49.5	1.918	2.733	13.8	20.5	1 16	4 53.90	+23 27.9	2.154	2.968	12.5	18.9
<b>442351</b>	2011 <i>SF</i> <sub>228</sub>		12 12.7 112°54	1°5/13.0	18		<b>302684</b>	2002 <i>TK</i> <sub>54</sub>		12 12.7 50°68	2°5/13.1	18	
11 7	5 51.76	+28 0.5	2.013	2.815	14.1	22.4	11 7	5 51.85	+28 13.6	1.508	2.327	17.1	20.4
11 17	5 45.51	+28 0.3	1.945	2.831	10.7	22.2	11 17	5 46.22	+28 40.1	1.457	2.352	13.1	20.2
11 27	5 36.81	+27 54.3	1.901	2.847	7.0	22.0	11 27	5 37.52	+29 0.5	1.429	2.377	8.5	20.0
12 7	5 26.52	+27 40.9	1.884	2.862	3.0	21.8	12 7	5 26.83	+29 11.4	1.425	2.402	4.0	19.8
12 17	5 15.74	+27 19.9	1.897	2.877	2.3	21.7	12 17	5 15.59	+29 11.5	1.449	2.428	3.2	19.8
12 27	5 5.72	+26 53.3	1.939	2.891	6.0	22.0	12 27	5 5.42	+29 1.9	1.501	2.453	7.3	20.2
1 6	4 57.48	+26 24.1	2.010	2.905	9.7	22.3	1 6	4 57.57	+28 46.4	1.578	2.479	11.4	20.5
1 16	4 51.72	+25 55.8	2.106	2.918	12.8	22.5	1 16	4 52.79	+28 29.1	1.678	2.506	14.9	20.7
<b>477238</b>	2009 <i>RC</i> <sub>34</sub>		12 12.7 37°42	3°2/12.4	16		<b>191892</b>	2005 <i>AZ</i> <sub>11</sub>		12 12.7 74°36	3°4/12.4	18	
11 7	5 49.29	+18 17.8	1.053	1.902	20.8	21.0	11 7	5 45.39	+12 17.9	2.237	3.039	12.8	20.0
11 17	5 44.86	+17 45.8	1.012	1.923	15.8	20.8	11 17	5 40.42	+12 10.2	2.164	3.047	9.9	19.8
11 27	5 36.86	+17 17.4	0.990	1.946	10.2	20.6	11 27	5 33.52	+12 8.7	2.115	3.054	6.8	19.7
12 7	5 26.58	+16 54.5	0.990	1.969	4.7	20.4	12 7	5 25.32	+12 14.4	2.093	3.062	4.0	19.5
12 17	5 15.77	+16 39.4	1.015	1.993	4.3	20.4	12 17	5 16.65	+12 27.9	2.101	3.070	3.9	19.5
12 27	5 6.31	+16 33.7	1.064	2.018	9.3	20.8	12 27	5 8.44	+12 49.1	2.138	3.077	6.5	19.7
1 6	4 59.58	+16 38.4	1.136	2.044	14.2	21.1	1 6	5 1.52	+13 17.5	2.202	3.085	9.5	19.9
1 16	4 56.32	+16 52.8	1.228	2.071	18.3	21.5	1 16	4 56.49	+13 52.0	2.292	3.092	12.3	20.1
<b>485589</b>	2011 <i>UO</i> <sub>237</sub>		12 12.7 21°40	5°4/12.9	17		<b>185385</b>	2006 <i>WR</i> <sub>7</sub>		12 12.8 111°67	2°3/12.4	18	
11 7</													



EPHEMERIDES

12 12.8

12 12.8

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>453760</b>	2011 <i>DY</i> <sub>50</sub>		12 12.8 226°00		8°9/10.9 18		<b>100298</b>	1995 <i>FY</i> <sub>6</sub>		12 12.8 259°22		2°7/12.5 18	
11 7	5 43.41	- 9 53.7	2.937	3.649	12.1	21.4	11 7	5 50.45	+17 26.6	1.441	2.266	17.4	20.8
11 17	5 38.55	-10 44.1	2.859	3.641	10.8	21.3	11 17	5 45.51	+17 11.5	1.363	2.261	13.5	20.5
11 27	5 32.20	-11 19.6	2.802	3.631	9.6	21.2	11 27	5 37.40	+16 59.8	1.305	2.256	8.9	20.2
12 7	5 24.82	-11 36.2	2.770	3.622	9.0	21.1	12 7	5 26.96	+16 52.5	1.273	2.251	4.1	20.0
12 17	5 17.03	-11 31.6	2.764	3.612	9.1	21.1	12 17	5 15.53	+16 50.4	1.267	2.245	3.7	19.9
12 27	5 9.52	-11 5.1	2.783	3.602	9.9	21.1	12 27	5 4.73	+16 54.7	1.289	2.240	8.5	20.2
1 6	5 2.92	-10 18.4	2.827	3.591	11.1	21.2	1 6	4 56.03	+17 6.2	1.335	2.234	13.2	20.4
1 16	4 57.75	- 9 14.7	2.892	3.581	12.5	21.3	1 16	4 50.40	+17 25.2	1.403	2.228	17.4	20.7
<b>285312</b>	1998 <i>XQ</i> <sub>15</sub>		12 12.8 22°61		2°9/12.3 18		<b>263843</b>	2008 <i>YT</i> <sub>160</sub>		12 12.8 72°98		2°7/13.1 18	
11 7	5 46.92	+19 40.3	1.133	1.982	19.7	20.5	11 7	5 50.28	+29 38.0	1.840	2.648	14.9	20.9
11 17	5 43.16	+18 56.1	1.078	1.989	15.0	20.3	11 17	5 44.94	+30 0.7	1.762	2.649	11.6	20.7
11 27	5 35.91	+18 11.9	1.042	1.998	9.7	20.0	11 27	5 36.79	+30 17.4	1.706	2.651	7.7	20.4
12 7	5 26.32	+17 30.4	1.029	2.008	4.4	19.8	12 7	5 26.67	+30 25.1	1.677	2.652	3.9	20.2
12 17	5 15.98	+16 55.1	1.040	2.019	4.1	19.8	12 17	5 15.77	+30 21.8	1.676	2.653	3.2	20.2
12 27	5 6.73	+16 29.4	1.077	2.031	9.2	20.1	12 27	5 5.49	+30 8.4	1.704	2.654	6.8	20.4
1 6	5 0.00	+16 15.6	1.136	2.044	14.2	20.4	1 6	4 57.09	+29 48.1	1.759	2.656	10.7	20.6
1 16	4 56.63	+16 14.4	1.215	2.058	18.5	20.7	1 16	4 51.42	+29 24.8	1.837	2.657	14.1	20.8
<b>75037</b>	1999 <i>UG</i> <sub>28</sub>		12 12.8 64°35		1°4/12.9 18		<b>78962</b>	2003 <i>SP</i> <sub>249</sub>		12 12.8 130°30		2°2/13.0 18	
11 7	5 54.20	+25 46.7	1.540	2.356	17.0	19.7	11 7	5 55.83	+27 40.3	1.631	2.439	16.5	20.4
11 17	5 47.78	+26 7.7	1.494	2.387	12.9	19.5	11 17	5 49.29	+28 5.8	1.563	2.452	12.7	20.2
11 27	5 38.39	+26 24.6	1.470	2.419	8.2	19.3	11 27	5 39.59	+28 26.3	1.518	2.464	8.3	19.9
12 7	5 27.13	+26 34.8	1.471	2.450	3.3	19.1	12 7	5 27.70	+28 38.2	1.498	2.475	3.8	19.7
12 17	5 15.45	+26 37.1	1.500	2.481	2.5	19.1	12 17	5 15.05	+28 39.4	1.507	2.486	3.0	19.7
12 27	5 4.88	+26 32.7	1.558	2.512	7.0	19.5	12 27	5 3.26	+28 30.9	1.545	2.496	7.3	20.0
1 6	4 56.62	+26 24.5	1.642	2.542	11.1	19.8	1 6	4 53.73	+28 15.9	1.609	2.506	11.6	20.2
1 16	4 51.38	+26 15.9	1.750	2.572	14.6	20.1	1 16	4 47.33	+27 59.0	1.697	2.515	15.2	20.5
<b>155384</b>	1993 <i>TZ</i> <sub>19</sub>		12 12.8 44°22		1°1/12.9 18		<b>118063</b>	4259 <i>T-2</i>		12 12.8 95°23		0°6/12.7 18	
11 7	5 51.31	+24 28.3	1.254	2.089	19.0	19.3	11 7	5 54.69	+21 47.3	1.635	2.447	16.4	20.5
11 17	5 46.31	+24 51.4	1.204	2.108	14.4	19.0	11 17	5 47.99	+21 46.5	1.580	2.472	12.4	20.3
11 27	5 37.83	+25 12.2	1.174	2.128	9.2	18.8	11 27	5 38.49	+21 44.9	1.548	2.497	7.8	20.1
12 7	5 27.03	+25 27.7	1.168	2.148	3.6	18.5	12 7	5 27.21	+21 41.7	1.542	2.522	2.9	19.8
12 17	5 15.54	+25 36.3	1.187	2.168	2.6	18.5	12 17	5 15.46	+21 36.7	1.565	2.546	2.2	19.9
12 27	5 5.20	+25 38.5	1.233	2.190	8.0	18.9	12 27	5 4.69	+21 31.1	1.617	2.569	6.9	20.2
1 6	4 57.45	+25 37.3	1.303	2.211	12.8	19.3	1 6	4 56.07	+21 27.0	1.696	2.592	11.1	20.5
1 16	4 53.11	+25 35.9	1.395	2.233	16.8	19.6	1 16	4 50.29	+21 26.1	1.798	2.614	14.6	20.8
<b>492140</b>	2013 <i>NU</i> <sub>19</sub>		12 12.8 156°71		3°6/12.3 17		<b>278261</b>	2007 <i>EL</i> <sub>221</sub>		12 12.8 175°41		1°0/12.6 18	
11 7	5 45.20	+10 37.6	2.640	3.431	11.4	22.7	11 7	5 50.94	+21 1.1	1.977	2.783	14.1	21.9
11 17	5 40.01	+10 24.2	2.561	3.436	8.9	22.5	11 17	5 45.01	+20 48.4	1.896	2.786	10.8	21.7
11 27	5 33.16	+10 16.7	2.507	3.441	6.3	22.4	11 27	5 36.63	+20 34.9	1.839	2.788	6.9	21.5
12 7	5 25.21	+10 16.5	2.482	3.445	4.0	22.2	12 7	5 26.57	+20 20.7	1.810	2.789	2.7	21.2
12 17	5 16.83	+10 24.2	2.486	3.449	4.0	22.2	12 17	5 15.86	+20 6.1	1.810	2.790	2.2	21.2
12 27	5 8.82	+10 40.3	2.520	3.452	6.1	22.4	12 27	5 5.73	+19 52.8	1.839	2.790	6.4	21.4
1 6	5 1.89	+11 4.1	2.583	3.456	8.7	22.5	1 6	4 57.24	+19 42.4	1.897	2.789	10.3	21.7
1 16	4 56.59	+11 34.8	2.672	3.459	11.1	22.7	1 16	4 51.14	+19 36.6	1.979	2.788	13.7	21.9
<b>237447</b>	1999 <i>TD</i> <sub>87</sub>		12 12.8 108°66		1°7/12.5 18		<b>145066</b>	2005 <i>GJ</i> <sub>26</sub>		12 12.8 117°13		0°9/12.9 18	
11 7	5 50.27	+18 59.8	1.936	2.744	14.3	21.7	11 7	5 50.79	+25 51.6	2.151	2.952	13.3	20.9
11 17	5 44.33	+18 43.8	1.871	2.761	10.9	21.5	11 17	5 44.66	+25 58.9	2.082	2.968	10.1	20.7
11 27	5 36.07	+18 28.8	1.829	2.777	7.0	21.3	11 27	5 36.27	+26 2.7	2.037	2.984	6.5	20.5
12 7	5 26.30	+18 15.3	1.815	2.793	3.0	21.1	12 7	5 26.39	+26 1.4	2.020	2.998	2.6	20.3
12 17	5 16.06	+18 4.1	1.830	2.809	2.6	21.1	12 17	5 16.02	+25 54.8	2.032	3.013	1.9	20.3
12 27	5 6.52	+17 56.5	1.875	2.824	6.4	21.4	12 27	5 6.30	+25 43.6	2.075	3.027	5.7	20.5
1 6	4 58.66	+17 53.5	1.947	2.838	10.1	21.7	1 6	4 58.19	+25 30.2	2.147	3.040	9.2	20.8
1 16	4 53.14	+17 56.1	2.044	2.853	13.3	21.9	1 16	4 52.35	+25 17.0	2.243	3.054	12.2	21.0
<b>138410</b>	2000 <i>HV</i> <sub>31</sub>		12 12.8 312°00		3°0/13.0 18		<b>244460</b>	2002 <i>RW</i> <sub>171</sub>		12 12.8 172°94		3°7/13.4 18	
11 7	5 51.04	+11 46.8	1.805	2.608	15.4	19.3	11 7	5 48.69	+34 48.5	2.580	3.363	11.8	20.5
11 17	5 45.44	+12 31.6	1.718	2.602	12.0	19.1	11 17	5 43.09	+35 15.7	2.496	3.364	9.4	20.3
11 27	5 37.14	+13 28.4	1.655	2.597	8.1	18.8	11 27	5 35.32	+35 35.1	2.436	3.365	6.7	20.2
12 7	5 26.84	+14 36.5	1.618	2.592	4.1	18.6	12 7	5 26.07	+35 44.0	2.404	3.366	4.3	20.0
12 17	5 15.59	+15 53.1	1.611	2.587	3.5	18.5	12 17	5 16.23	+35 40.6	2.401	3.367	3.9	20.0
12 27	5 4.70	+17 14.9	1.634	2.582	7.3	18.8	12 27	5 6.84	+35 25.6	2.429	3.367	5.9	20.1
1 6	4 55.43	+18 38.3	1.686	2.578	11.4	19.0	1 6	4 58.86	+35 1.4	2.484	3.367	8.6	20.3
1 16	4 48.69	+20 1.0	1.761	2.573	15.0	19.2	1 16	4 52.96	+34 31.6	2.565	3.367	11.1	20.5
<b>333175</b>	2012 <i>DZ</i> <sub>3</sub>		12 12.8 196°06		5°1/11.9 18		<b>84055</b>	2002 <i>PM</i> <sub>84</sub>		12 12.8 116°49		13°9/17.5 18	
11 7	5 43.74	- 0 29.5	3.767	4.510	9.1	22.4	11 7	6 14.39	+58 25.6	1.726	2.420	20.0	19.6
11 17	5 38.45	- 0 49.5	3.679	4.506	7.6	22.2	11 17	6 5.67	+59 44.9	1.670	2.432	18.0	19.5
11 27	5 31.99	- 1 0.7	3.616	4.501	6.2	22.1	11 27	5 51.01	+60 36.7	1.630	2.445	16.0	19.4
12 7	5 24.75	- 1 1.3	3.582	4.495	5.3	22.1	12 7	5 32.09	+60 48.3	1.610	2.457	14.5	19.3
12 17	5 17.19	- 0 50.3	3.577	4.489	5.3	22.1	12 17	5 11.95	+60 12.3	1.612	2.469	13.9	19.3
12 27	5 9.85	- 0 27.5	3.602	4.483	6.3	22.1	12 27	4 54.13	+58 51.0	1.637	2.480	14.4	19.4
1 6	5 3.21	+ 0 6.2	3.656	4.475	7.7	22.2	1 6	4 41.10	+56 56.0	1.684	2.491	15.8	19.5
1 16	4 57.70	+ 0 49.3	3.736	4.467	9.2	22.3	1 16	4 33.76	+54 42.2	1.752	2.501	17.5	19.6
<b>292987</b>	2006 <i>VY</i> <sub>168</sub>		12 12.8 26°60		1°3/12.5 18		<b>270139</b>	2001 <i>SP</i> <sub>1</sub>		12 12.8 80°83			

EPHEMERIDES

12 12.8

12 12.8

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>522172</b>	2016 <i>AY</i> <sub>255</sub>		12 12.8 339°00	2°9/12.0 17			<b>121597</b>	1999 <i>VC</i> <sub>130</sub>		12 12.8 95°18	0°8/12.9 18		
11 7	5 44.41	+16 29.2	2.194	3.005	12.7	21.5	11 7	5 48.07	+25 52.9	2.198	3.003	12.9	20.4
11 17	5 39.81	+15 47.6	2.112	3.002	9.8	21.4	11 17	5 42.64	+25 55.6	2.125	3.013	9.8	20.2
11 27	5 33.22	+15 7.4	2.054	3.000	6.5	21.1	11 27	5 35.03	+25 54.8	2.076	3.023	6.3	20.0
12 7	5 25.28	+14 30.4	2.024	2.997	3.5	21.0	12 7	5 25.98	+25 49.3	2.055	3.034	2.5	19.7
12 17	5 16.83	+13 58.9	2.023	2.995	3.5	20.9	12 17	5 16.43	+25 39.0	2.063	3.044	1.8	19.7
12 27	5 8.84	+13 34.9	2.051	2.993	6.5	21.1	12 27	5 7.45	+25 24.8	2.101	3.054	5.5	20.0
1 6	5 2.15	+13 19.7	2.106	2.991	9.8	21.3	1 6	4 59.98	+25 9.1	2.168	3.063	9.0	20.2
1 16	4 57.40	+13 13.8	2.186	2.990	12.7	21.5	1 16	4 54.66	+24 53.9	2.259	3.073	12.0	20.4
<b>281982</b>	2011 <i>HN</i> <sub>13</sub>		12 12.8 297°82	4°6/11.8 18			<b>116484</b>	2004 <i>BD</i> <sub>10</sub>		12 12.8 182°88	3°3/13.3 18		
11 7	5 43.39	+ 9 39.9	2.434	3.232	12.0	20.6	11 7	5 54.70	+31 18.8	1.796	2.596	15.6	20.6
11 17	5 38.82	+ 9 1.6	2.354	3.230	9.5	20.4	11 17	5 48.44	+31 39.3	1.715	2.596	12.2	20.4
11 27	5 32.49	+ 8 29.4	2.298	3.229	6.9	20.3	11 27	5 39.11	+31 51.8	1.656	2.597	8.3	20.1
12 7	5 24.99	+ 8 5.6	2.269	3.227	4.9	20.1	12 7	5 27.60	+31 52.5	1.624	2.596	4.4	19.9
12 17	5 17.04	+ 7 52.2	2.269	3.226	4.9	20.1	12 17	5 15.22	+31 39.4	1.621	2.596	3.7	19.9
12 27	5 9.46	+ 7 50.3	2.299	3.224	7.0	20.3	12 27	5 3.54	+31 13.8	1.646	2.594	7.2	20.1
1 6	5 3.01	+ 7 59.8	2.355	3.223	9.6	20.4	1 6	4 53.95	+30 39.8	1.699	2.592	11.2	20.3
1 16	4 58.25	+ 8 19.8	2.436	3.221	12.1	20.6	1 16	4 47.34	+30 2.9	1.775	2.590	14.8	20.5
<b>230761</b>	2003 <i>WV</i> <sub>189</sub>		12 12.8 3°96	8°6/12.9 17			<b>405703</b>	2005 <i>UZ</i> <sub>527</sub>		12 12.8 40°08	1°1/12.9 16		
11 7	5 43.86	+ 0 24.9	1.713	2.506	16.5	19.2	11 7	5 48.01	+25 47.3	1.887	2.701	14.4	22.1
11 17	5 39.82	+ 0 5.8	1.645	2.506	13.8	19.1	11 17	5 43.00	+25 56.6	1.813	2.706	11.0	21.9
11 27	5 33.42	+ 0 5.0	1.597	2.506	11.0	18.9	11 27	5 35.46	+26 2.5	1.762	2.711	7.1	21.7
12 7	5 25.40	+ 0 26.5	1.573	2.508	9.0	18.8	12 7	5 26.19	+26 3.5	1.737	2.716	2.9	21.5
12 17	5 16.74	+ 1 11.8	1.574	2.511	8.7	18.8	12 17	5 16.26	+25 58.8	1.741	2.722	2.1	21.4
12 27	5 8.60	+ 2 19.4	1.602	2.514	10.5	18.9	12 27	5 6.95	+25 49.4	1.774	2.727	6.2	21.7
1 6	5 2.02	+ 3 45.0	1.654	2.519	13.2	19.1	1 6	4 59.36	+25 37.5	1.833	2.733	10.2	22.0
1 16	4 57.73	+ 5 23.1	1.729	2.524	15.9	19.3	1 16	4 54.23	+25 25.9	1.917	2.739	13.5	22.2
<b>285975</b>	2001 <i>RP</i> <sub>116</sub>		12 12.8 208°08	5°1/13.6 18			<b>488254</b>	2016 <i>CG</i> <sub>24</sub>		12 12.8 142°16	0°6/12.7 18		
11 7	5 53.06	+37 52.8	2.297	3.072	13.3	21.1	11 7	5 46.07	+20 32.0	2.701	3.501	10.9	21.3
11 17	5 46.85	+38 32.3	2.209	3.068	10.8	20.9	11 17	5 40.75	+20 40.6	2.621	3.508	8.3	21.1
11 27	5 37.95	+39 1.8	2.144	3.063	8.0	20.8	11 27	5 33.69	+20 49.8	2.567	3.514	5.3	20.9
12 7	5 27.12	+39 16.8	2.105	3.058	5.7	20.6	12 7	5 25.47	+20 59.0	2.541	3.520	2.0	20.7
12 17	5 15.46	+39 14.4	2.096	3.052	5.3	20.6	12 17	5 16.81	+21 7.9	2.546	3.526	1.6	20.7
12 27	5 4.31	+38 54.9	2.116	3.046	7.2	20.7	12 27	5 8.53	+21 16.7	2.582	3.532	4.8	20.9
1 6	4 54.89	+38 21.7	2.163	3.039	10.0	20.8	1 6	5 1.36	+21 26.0	2.647	3.538	7.8	21.1
1 16	4 48.04	+37 40.1	2.235	3.032	12.7	21.0	1 16	4 55.89	+21 36.4	2.738	3.543	10.4	21.3
<b>186639</b>	2003 <i>KP</i> <sub>8</sub>		12 12.8 121°11	3°1/12.6 18			<b>216231</b>	2006 <i>UM</i> <sub>223</sub>		12 12.8 24°55	1°3/12.6 18		
11 7	5 46.83	+13 16.8	2.187	2.989	13.1	19.8	11 7	5 47.46	+19 55.1	1.709	2.531	15.3	20.5
11 17	5 41.63	+13 17.0	2.109	2.993	10.1	19.7	11 17	5 42.72	+19 49.1	1.636	2.534	11.7	20.3
11 27	5 34.37	+13 23.1	2.056	2.998	6.8	19.5	11 27	5 35.36	+19 44.2	1.586	2.537	7.5	20.1
12 7	5 25.72	+13 35.8	2.030	3.002	3.8	19.3	12 7	5 26.18	+19 40.4	1.561	2.541	3.0	19.8
12 17	5 16.52	+13 55.4	2.034	3.006	3.5	19.3	12 17	5 16.30	+19 37.9	1.564	2.544	2.5	19.8
12 27	5 7.77	+14 21.4	2.067	3.010	6.4	19.5	12 27	5 7.06	+19 37.8	1.595	2.548	6.9	20.1
1 6	5 0.35	+14 53.3	2.128	3.014	9.7	19.7	1 6	4 59.58	+19 41.2	1.653	2.553	11.1	20.3
1 16	4 54.92	+15 30.1	2.214	3.018	12.6	19.9	1 16	4 54.67	+19 49.0	1.734	2.557	14.7	20.6
<b>355081</b>	2006 <i>SO</i> <sub>341</sub>		12 12.8 51°41	2°7/13.0 18			<b>487516</b>	2014 <i>UM</i> <sub>7</sub>		12 12.8 100°97	4°5/13.6 17		
11 7	5 50.24	+28 46.5	1.786	2.597	15.2	20.7	11 7	5 50.70	+36 13.4	2.298	3.081	13.1	21.2
11 17	5 44.96	+29 21.6	1.713	2.603	11.7	20.5	11 17	5 44.85	+36 47.8	2.224	3.090	10.4	21.0
11 27	5 36.84	+29 52.0	1.663	2.608	7.8	20.2	11 27	5 36.56	+37 12.8	2.173	3.099	7.6	20.9
12 7	5 26.72	+30 14.1	1.639	2.614	3.9	20.0	12 7	5 26.59	+37 24.8	2.150	3.108	5.1	20.8
12 17	5 15.81	+30 25.5	1.643	2.620	3.3	20.0	12 17	5 16.01	+37 21.8	2.155	3.117	4.6	20.7
12 27	5 5.56	+30 26.4	1.675	2.626	6.9	20.2	12 27	5 6.04	+37 4.4	2.190	3.125	6.6	20.9
1 6	4 57.21	+30 19.2	1.735	2.632	10.8	20.5	1 6	4 57.73	+36 35.9	2.252	3.134	9.4	21.1
1 16	4 51.63	+30 7.9	1.817	2.638	14.2	20.7	1 16	4 51.83	+36 0.7	2.339	3.142	12.0	21.3
<b>124547</b>	2001 <i>RG</i> <sub>121</sub>		12 12.8 88°07	0°3/12.8 18			<b>444006</b>	2004 <i>BF</i> <sub>91</sub>		12 12.8 325°25	4°2/13.5 17		
11 7	5 53.80	+23 29.3	1.588	2.403	16.6	20.7	11 7	5 48.50	+33 19.6	1.542	2.360	16.9	20.3
11 17	5 47.51	+23 37.8	1.531	2.425	12.6	20.5	11 17	5 44.38	+33 32.8	1.454	2.344	13.4	20.0
11 27	5 38.31	+23 44.4	1.496	2.447	8.0	20.3	11 27	5 36.88	+33 34.9	1.387	2.330	9.3	19.8
12 7	5 27.20	+23 47.4	1.488	2.468	3.0	20.0	12 7	5 26.88	+33 21.8	1.345	2.315	5.4	19.5
12 17	5 15.54	+23 46.1	1.508	2.489	2.1	20.0	12 17	5 15.75	+32 51.5	1.328	2.302	4.6	19.4
12 27	5 4.84	+23 41.6	1.556	2.510	7.0	20.4	12 27	5 5.27	+32 5.8	1.338	2.289	8.2	19.6
1 6	4 56.34	+23 36.2	1.631	2.530	11.3	20.7	1 6	4 57.01	+31 10.3	1.373	2.277	12.6	19.8
1 16	4 50.76	+23 32.4	1.729	2.550	14.8	20.9	1 16	4 52.02	+30 12.1	1.431	2.266	16.6	20.0
<b>155007</b>	2005 <i>OB</i> <sub>15</sub>		12 12.8 120°92	0°5/12.7 18			<b>242919</b>	2006 <i>OA</i> <sub>7</sub>		12 12.8 182°99	1°1/12.5 18		
11 7	5 49.55	+20 8.4	2.097	2.902	13.4	20.7	11 7	5 49.63	+21 43.3	2.419	3.217	12.1	21.4
11 17	5 43.84	+20 31.0	2.022	2.911	10.2	20.5	11 17	5 43.58	+21 10.0	2.332	3.217	9.2	21.2
11 27	5 35.86	+20 55.4	1.971	2.919	6.5	20.3	11 27	5 35.54	+20 34.1	2.271	3.217	5.9	21.0
12 7	5 26.30	+21 20.3	1.948	2.927	2.5	20.1	12 7	5 26.18	+19 56.5	2.238	3.217	2.4	20.7
12 17	5 16.14	+21 44.6	1.954	2.935	1.9	20.0	12 17	5 16.33	+19 18.5	2.236	3.216	2.0	20.7
12 27	5 6.48	+22 7.6	1.991	2.943	5.9	20.3	12 27	5 6.97	+18 42.5	2.266	3.214	5.6	21.0
1 6	4 58.33	+22 29.8	2.056	2.950	9.5	20.5	1 6	4 58.96	+18 10.5	2.325	3.212	8.9	21.2
1 16	4 52.41	+22 51.7	2.147	2.958	12.7	20.8	1 16	4 52.92	+17 44.6	2.409	3.209	11.8	21.4
<b>454751</b>	2014 <i>VU</i> <sub>5</sub>		12 12.8 76°84	2°1/12.9 17			<b>76593</b>	2000 <i>GU</i> <sub>154</sub>		12 12.8 268°00</			

EPHEMERIDES

12 12.8

12 12.8

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>455463</b>	2003 <i>TW</i> <sub>46</sub>		12 12.8	68°99	5°0/13.7	17	<b>242034</b>	2002 <i>QK</i> <sub>124</sub>		12 12.8	111°60	1°3/12.6	18
11 7	5 50.60	+37 25.6	2.209	2.992	13.6	21.4	11 7	5 49.97	+20 11.1	1.989	2.797	14.0	21.6
11 17	5 44.93	+38 5.3	2.137	3.001	10.9	21.2	11 17	5 44.13	+19 55.5	1.922	2.812	10.6	21.4
11 27	5 36.68	+38 34.6	2.088	3.010	8.0	21.1	11 27	5 36.01	+19 39.9	1.878	2.826	6.8	21.2
12 7	5 26.67	+38 49.6	2.065	3.019	5.7	20.9	12 7	5 26.39	+19 24.7	1.861	2.840	2.8	21.0
12 17	5 15.99	+38 47.8	2.070	3.028	5.2	20.9	12 17	5 16.30	+19 10.5	1.875	2.854	2.3	21.0
12 27	5 5.95	+38 30.1	2.104	3.037	7.1	21.1	12 27	5 6.87	+18 58.7	1.917	2.867	6.2	21.3
1 6	4 57.68	+37 59.8	2.166	3.046	9.8	21.2	1 6	4 59.08	+18 50.8	1.988	2.880	9.9	21.5
1 16	4 51.92	+37 21.9	2.251	3.055	12.4	21.4	1 16	4 53.58	+18 48.0	2.083	2.893	13.1	21.8
<b>32738</b>	1978 <i>VT</i> <sub>1</sub>		12 12.8	325°07	3°8/13.0	18	<b>448836</b>	2011 <i>UU</i> <sub>76</sub>		12 12.8	26°34	1°6/13.0	17
11 7	5 49.51	+29 33.2	1.389	2.217	17.9	18.5	11 7	5 48.46	+27 16.2	1.471	2.298	17.0	20.6
11 17	5 45.47	+30 16.8	1.307	2.205	14.0	18.2	11 17	5 43.95	+27 18.0	1.406	2.306	13.1	20.4
11 27	5 37.78	+30 55.6	1.246	2.193	9.5	17.9	11 27	5 36.33	+27 13.8	1.363	2.315	8.5	20.2
12 7	5 27.29	+31 24.3	1.208	2.182	5.1	17.6	12 7	5 26.60	+27 1.9	1.345	2.324	3.6	19.9
12 17	5 15.46	+31 38.8	1.196	2.172	4.4	17.6	12 17	5 16.15	+26 41.8	1.353	2.334	2.6	19.9
12 27	5 4.21	+31 38.2	1.210	2.162	8.7	17.8	12 27	5 6.59	+26 15.8	1.388	2.344	7.3	20.2
1 6	4 55.31	+31 25.9	1.248	2.153	13.5	18.0	1 6	4 59.23	+25 47.9	1.449	2.355	11.8	20.5
1 16	4 49.96	+31 7.4	1.308	2.145	17.7	18.3	1 16	4 54.90	+25 22.0	1.532	2.367	15.7	20.8
<b>349200</b>	2007 <i>RT</i> <sub>232</sub>		12 12.8	86°78	2°9/12.5	16	<b>183637</b>	2003 <i>VW</i> <sub>8</sub>		12 12.8	343°39	3°1/12.9	18
11 7	5 53.71	+17 40.8	1.300	2.127	18.9	21.4	11 7	5 50.78	+27 25.7	1.227	2.063	19.3	20.5
11 17	5 47.89	+17 19.6	1.245	2.144	14.5	21.1	11 17	5 46.68	+28 10.2	1.155	2.058	15.0	20.2
11 27	5 38.76	+17 1.7	1.211	2.161	9.4	20.9	11 27	5 38.66	+28 51.6	1.102	2.054	10.0	19.9
12 7	5 27.45	+16 48.4	1.200	2.178	4.3	20.7	12 7	5 27.66	+29 24.7	1.072	2.050	4.8	19.6
12 17	5 15.49	+16 40.7	1.217	2.195	3.9	20.7	12 17	5 15.31	+29 45.0	1.068	2.047	4.0	19.6
12 27	5 4.62	+16 40.0	1.260	2.211	8.6	21.0	12 27	5 3.73	+29 51.7	1.089	2.044	9.0	19.8
1 6	4 56.21	+16 47.2	1.328	2.227	13.3	21.3	1 6	4 54.80	+29 48.1	1.133	2.042	14.2	20.1
1 16	4 51.07	+17 2.5	1.417	2.243	17.3	21.6	1 16	4 49.71	+29 39.3	1.198	2.041	18.7	20.4
<b>264316</b>	1999 <i>TS</i> <sub>117</sub>		12 12.8	64°92	1°2/12.9	18	<b>257796</b>	2000 <i>EQ</i> <sub>21</sub>		12 12.8	284°67	15°3/10.9	18
11 7	5 54.37	+26 44.1	1.281	2.109	19.1	20.2	11 7	5 47.08	-19 15.6	1.990	2.670	18.0	20.6
11 17	5 48.53	+26 38.8	1.230	2.130	14.6	20.0	11 17	5 42.19	-20 30.7	1.921	2.656	16.8	20.4
11 27	5 39.19	+26 26.9	1.200	2.151	9.3	19.8	11 27	5 34.97	-21 19.1	1.869	2.642	15.9	20.3
12 7	5 27.60	+26 6.7	1.193	2.173	3.7	19.5	12 7	5 26.08	-21 33.1	1.835	2.628	15.3	20.3
12 17	5 15.43	+25 38.7	1.213	2.195	2.6	19.5	12 17	5 16.49	-21 8.0	1.822	2.614	15.4	20.2
12 27	5 4.55	+25 6.0	1.260	2.216	7.9	19.9	12 27	5 7.31	-20 2.8	1.829	2.600	16.1	20.3
1 6	4 56.37	+24 33.5	1.332	2.238	12.7	20.2	1 6	4 59.59	-18 21.6	1.856	2.586	17.3	20.3
1 16	4 51.65	+24 5.4	1.426	2.260	16.7	20.5	1 16	4 54.09	-16 11.6	1.902	2.572	18.7	20.4
<b>135967</b>	2002 <i>TD</i> <sub>281</sub>		12 12.8	77°30	5°5/13.7	18	<b>270830</b>	2002 <i>SE</i> <sub>35</sub>		12 12.8	38°98	3°0/12.4	18
11 7	5 54.78	+36 47.7	1.822	2.612	15.8	20.0	11 7	5 45.13	+15 8.7	1.946	2.761	14.0	19.6
11 17	5 48.43	+37 31.5	1.763	2.632	12.6	19.9	11 17	5 40.50	+14 50.8	1.883	2.775	10.7	19.5
11 27	5 39.01	+38 3.4	1.727	2.652	9.1	19.7	11 27	5 33.73	+14 37.4	1.843	2.789	7.1	19.3
12 7	5 27.54	+38 18.2	1.715	2.672	6.2	19.6	12 7	5 25.56	+14 29.6	1.830	2.804	3.8	19.1
12 17	5 15.43	+38 13.3	1.732	2.692	5.7	19.6	12 17	5 16.93	+14 28.4	1.845	2.819	3.6	19.1
12 27	5 4.27	+37 50.1	1.776	2.712	7.9	19.8	12 27	5 8.91	+14 34.5	1.889	2.834	6.7	19.3
1 6	4 55.36	+37 13.5	1.847	2.731	11.0	20.0	1 6	5 2.38	+14 47.8	1.959	2.850	10.1	19.6
1 16	4 49.50	+36 30.0	1.942	2.751	13.9	20.2	1 16	4 57.98	+15 7.8	2.054	2.866	13.1	19.8
<b>215111</b>	1997 <i>WK</i> <sub>56</sub>		12 12.8	76°51	1°6/12.5	17	<b>512093</b>	2015 <i>OE</i> <sub>12</sub>		12 12.8	174°61	0°4/12.9	18
11 7	5 48.14	+20 20.0	1.861	2.676	14.5	21.0	11 7	5 51.70	+24 25.5	2.044	2.847	13.8	22.0
11 17	5 42.94	+19 54.1	1.790	2.684	11.0	20.8	11 17	5 45.63	+24 27.1	1.962	2.849	10.6	21.8
11 27	5 35.34	+19 27.5	1.743	2.693	7.1	20.6	11 27	5 37.10	+24 25.9	1.904	2.852	6.8	21.6
12 7	5 26.15	+19 1.2	1.722	2.701	2.9	20.3	12 7	5 26.86	+24 20.7	1.873	2.853	2.6	21.3
12 17	5 16.42	+18 36.7	1.730	2.710	2.6	20.3	12 17	5 15.96	+24 11.2	1.873	2.854	1.8	21.3
12 27	5 7.35	+18 15.8	1.767	2.718	6.6	20.6	12 27	5 5.62	+23 58.5	1.902	2.854	6.1	21.5
1 6	4 59.96	+18 0.4	1.831	2.726	10.5	20.9	1 6	4 56.93	+23 44.7	1.960	2.854	9.9	21.8
1 16	4 54.95	+17 51.9	1.919	2.735	13.8	21.1	1 16	4 50.63	+23 32.4	2.042	2.853	13.2	22.0
<b>328466</b>	2008 <i>VW</i> <sub>24</sub>		12 12.8	112°93	0°5/12.7	18	<b>327766</b>	2006 <i>UC</i> <sub>69</sub>		12 12.8	76°30	1°3/12.7	18
11 7	5 46.15	+21 39.6	2.575	3.376	11.3	21.5	11 7	5 54.08	+19 39.9	1.368	2.192	18.3	20.7
11 17	5 40.86	+21 38.4	2.500	3.388	8.6	21.3	11 17	5 48.05	+19 44.8	1.316	2.214	13.9	20.5
11 27	5 33.78	+21 36.5	2.451	3.399	5.4	21.1	11 27	5 38.82	+19 51.8	1.285	2.236	8.8	20.3
12 7	5 25.53	+21 33.8	2.430	3.410	2.1	20.9	12 7	5 27.49	+20 0.2	1.279	2.259	3.5	20.0
12 17	5 16.88	+21 30.4	2.439	3.420	1.6	20.9	12 17	5 15.58	+20 9.2	1.300	2.281	2.7	20.0
12 27	5 8.67	+21 26.9	2.480	3.431	4.9	21.2	12 27	5 4.75	+20 19.2	1.348	2.302	7.8	20.4
1 6	5 1.67	+21 24.3	2.549	3.441	8.0	21.4	1 6	4 56.33	+20 31.2	1.423	2.324	12.4	20.7
1 16	4 56.44	+21 23.7	2.644	3.451	10.7	21.6	1 16	4 51.10	+20 46.4	1.519	2.345	16.3	21.0
<b>47096</b>	1999 <i>AX</i> <sub>25</sub>		12 12.8	24°90	6°4/15.0	18	<b>452884</b>	2006 <i>TB</i> <sub>89</sub>		12 12.8	351°43	2°5/12.2	18
11 7	5 52.32	+42 59.5	2.028	2.798	15.0	17.4	11 7	5 45.87	+19 56.5	1.580	2.409	16.0	20.6
11 17	5 46.46	+43 5.4	1.954	2.804	12.4	17.2	11 17	5 41.73	+19 8.6	1.503	2.405	12.3	20.3
11 27	5 37.70	+42 54.3	1.901	2.810	9.6	17.1	11 27	5 34.84	+18 18.9	1.449	2.401	8.0	20.1
12 7	5 27.04	+42 22.2	1.873	2.816	7.2	16.9	12 7	5 26.06	+17 29.6	1.420	2.398	3.6	19.8
12 17	5 15.83	+41 27.9	1.873	2.822	6.4	16.9	12 17	5 16.56	+16 44.0	1.418	2.396	3.5	19.8
12 27	5 5.58	+40 14.3	1.900	2.829	8.0	17.0	12 27	5 7.71	+16 5.4	1.444	2.394	7.8	20.0
1 6	4 57.49	+38 48.1	1.955	2.836	10.6	17.2	1 6	5 0.71	+15 36.9	1.495	2.393	12.1	20.3
1 16	4 52.28	+37 16.7	2.034	2.844	13.3	17.4	1 16	4 56.38	+15 19.9	1.568	2.393	15.9	20.5
<b>259541</b>	2003 <i>UW</i> <sub>83</sub>		12 12.8	163°58	2°8/13.7	17	<b>318056</b>	2004 <i>FQ</i> <sub>67</sub>		12 12.8</			

EPHEMERIDES

12 12.8

12 12.8

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>189199</b>	2003 <i>RJ</i> <sub>1</sub>		12 12.8	70°81	0°7/12.7	18	<b>21703</b>	Shravanimikk		12 12.8	226°27	0°4/12.9	18
11 7	5 47.20	+21 10.8	2.145	2.954	13.1	20.1	11 7	5 53.32	+25 14.6	1.756	2.565	15.5	18.5
11 17	5 41.93	+21 8.4	2.079	2.970	9.9	19.9	11 17	5 47.43	+25 4.4	1.665	2.555	12.0	18.3
11 27	5 34.58	+21 5.7	2.037	2.987	6.3	19.7	11 27	5 38.56	+24 49.5	1.597	2.545	7.7	18.0
12 7	5 25.87	+21 2.6	2.023	3.003	2.4	19.5	12 7	5 27.53	+24 28.7	1.555	2.534	3.0	17.7
12 17	5 16.73	+20 59.2	2.039	3.020	1.9	19.5	12 17	5 15.56	+24 1.9	1.542	2.523	2.1	17.6
12 27	5 8.17	+20 56.3	2.084	3.036	5.6	19.8	12 27	5 4.14	+23 31.2	1.558	2.511	7.0	17.9
1 6	5 1.09	+20 55.1	2.157	3.052	9.1	20.0	1 6	4 54.63	+23 0.3	1.601	2.498	11.6	18.1
1 16	4 56.09	+20 56.6	2.255	3.069	12.1	20.2	1 16	4 47.96	+22 32.8	1.668	2.485	15.5	18.3
<b>331467</b>	2012 <i>HY</i> <sub>36</sub>		12 12.8	111°87	1°9/12.7	18	<b>244344</b>	2002 <i>KY</i> <sub>15</sub>		12 12.8	175°24	0°3/12.8	18
11 7	5 53.36	+17 31.1	1.538	2.354	17.0	20.9	11 7	5 50.46	+22 52.3	2.356	3.154	12.4	22.3
11 17	5 47.38	+17 40.7	1.473	2.367	13.0	20.7	11 17	5 44.36	+22 45.7	2.272	3.157	9.4	22.1
11 27	5 38.41	+17 54.8	1.430	2.379	8.4	20.4	11 27	5 36.15	+22 37.2	2.212	3.159	6.0	21.9
12 7	5 27.39	+18 12.8	1.412	2.391	3.6	20.2	12 7	5 26.52	+22 26.4	2.181	3.161	2.3	21.6
12 17	5 15.63	+18 33.7	1.423	2.402	3.0	20.2	12 17	5 16.33	+22 13.4	2.181	3.162	1.7	21.6
12 27	5 4.68	+18 57.1	1.462	2.414	7.6	20.5	12 27	5 6.63	+21 59.3	2.212	3.162	5.4	21.9
1 6	4 55.83	+19 23.0	1.527	2.424	12.0	20.8	1 6	4 58.32	+21 45.9	2.271	3.162	8.9	22.1
1 16	4 49.92	+19 51.6	1.615	2.435	15.8	21.0	1 16	4 52.07	+21 35.0	2.357	3.161	11.9	22.3
<b>184522</b>	2005 <i>QS</i> <sub>16</sub>		12 12.8	73°52	4°0/12.5	18	<b>454974</b>	2015 <i>TV</i> <sub>208</sub>		12 12.8	28°87	1°6/12.5	17
11 7	5 53.24	+14 3.8	1.443	2.260	17.9	20.2	11 7	5 47.30	+21 56.1	1.600	2.426	16.0	20.8
11 17	5 47.04	+13 43.9	1.396	2.288	13.7	20.0	11 17	5 42.66	+21 13.3	1.534	2.434	12.2	20.6
11 27	5 37.99	+13 31.0	1.371	2.316	9.1	19.8	11 27	5 35.34	+20 27.7	1.491	2.443	7.8	20.4
12 7	5 27.15	+13 26.8	1.371	2.344	5.0	19.7	12 7	5 26.24	+19 40.9	1.472	2.452	3.1	20.1
12 17	5 15.89	+13 32.0	1.398	2.371	4.6	19.7	12 17	5 16.59	+18 55.4	1.482	2.462	2.7	20.1
12 27	5 5.69	+13 46.8	1.453	2.398	8.3	20.0	12 27	5 7.72	+18 14.8	1.519	2.472	7.2	20.4
1 6	4 57.72	+14 10.4	1.534	2.425	12.4	20.3	1 6	5 0.78	+17 42.1	1.583	2.483	11.5	20.7
1 16	4 52.64	+14 41.5	1.637	2.451	15.8	20.6	1 16	4 56.49	+17 19.1	1.669	2.494	15.1	20.9
<b>37897</b>	1998 <i>FP</i> <sub>64</sub>		12 12.8	80°16	7°2/12.0	18	<b>517396</b>	2014 <i>KR</i> <sub>105</sub>		12 12.8	126°62	3°6/12.3	18
11 7	5 51.22	+ 5 16.6	1.796	2.586	16.0	18.4	11 7	5 48.01	+12 19.6	2.274	3.070	12.8	21.7
11 17	5 44.87	+ 4 16.8	1.754	2.619	12.8	18.3	11 17	5 42.37	+11 59.1	2.204	3.083	10.0	21.5
11 27	5 36.33	+ 3 29.6	1.735	2.652	9.7	18.2	11 27	5 34.82	+11 44.1	2.159	3.096	6.8	21.3
12 7	5 26.48	+ 2 59.2	1.741	2.684	7.6	18.1	12 7	5 26.00	+11 36.0	2.142	3.109	4.2	21.2
12 17	5 16.38	+ 2 47.8	1.776	2.716	7.6	18.2	12 17	5 16.75	+11 35.8	2.154	3.121	4.0	21.2
12 27	5 7.14	+ 2 56.0	1.837	2.747	9.5	18.3	12 27	5 8.02	+11 44.2	2.196	3.132	6.6	21.4
1 6	4 59.66	+ 3 21.4	1.925	2.778	12.1	18.6	1 6	5 0.62	+12 0.7	2.266	3.143	9.5	21.6
1 16	4 54.50	+ 4 0.8	2.035	2.808	14.6	18.8	1 16	4 55.14	+12 24.6	2.361	3.154	12.2	21.8
<b>222150</b>	1999 <i>XK</i> <sub>133</sub>		12 12.8	21°11	4°1/12.9	17	<b>287087</b>	2002 <i>RQ</i> <sub>71</sub>		12 12.8	41°66	3°2/12.4	18
11 7	5 49.83	+31 29.4	1.917	2.722	14.6	19.4	11 7	5 47.80	+16 48.8	1.497	2.324	16.8	19.9
11 17	5 44.70	+32 29.4	1.843	2.725	11.4	19.2	11 17	5 43.09	+16 19.7	1.439	2.338	12.9	19.7
11 27	5 36.78	+33 24.0	1.791	2.729	7.9	19.0	11 27	5 35.63	+15 54.1	1.403	2.353	8.5	19.5
12 7	5 26.83	+34 8.6	1.766	2.734	4.8	18.8	12 7	5 26.36	+15 33.9	1.392	2.368	4.2	19.3
12 17	5 16.02	+34 39.3	1.770	2.739	4.4	18.8	12 17	5 16.52	+15 20.8	1.407	2.383	4.0	19.3
12 27	5 5.75	+34 55.4	1.801	2.744	7.2	19.0	12 27	5 7.52	+15 16.3	1.450	2.399	7.9	19.6
1 6	4 57.27	+34 58.9	1.860	2.750	10.6	19.2	1 6	5 0.52	+15 20.9	1.518	2.415	12.0	19.8
1 16	4 51.49	+34 53.7	1.942	2.756	13.7	19.4	1 16	4 56.23	+15 34.3	1.608	2.432	15.6	20.1
<b>522301</b>	2016 <i>BT</i> <sub>09</sub>		12 12.8	216°89	3°6/12.3	17	<b>28684</b>	2000 <i>GK</i> <sub>72</sub>		12 12.8	241°59	0°4/12.7	18
11 7	5 44.66	+11 8.2	2.527	3.323	11.7	21.5	11 7	5 45.66	+21 55.5	2.677	3.478	11.0	19.6
11 17	5 39.81	+10 53.4	2.442	3.320	9.2	21.4	11 17	5 40.63	+21 53.4	2.581	3.468	8.4	19.4
11 27	5 33.20	+10 44.5	2.382	3.317	6.4	21.2	11 27	5 33.77	+21 50.5	2.510	3.457	5.3	19.2
12 7	5 25.39	+10 42.8	2.349	3.314	4.1	21.0	12 7	5 25.65	+21 46.5	2.467	3.446	2.0	19.0
12 17	5 17.09	+10 49.2	2.346	3.311	4.0	21.0	12 17	5 16.97	+21 41.6	2.454	3.435	1.5	18.9
12 27	5 9.13	+11 4.2	2.373	3.307	6.3	21.2	12 27	5 8.60	+21 36.3	2.473	3.424	4.9	19.2
1 6	5 2.26	+11 27.4	2.427	3.304	9.0	21.3	1 6	5 1.32	+21 31.7	2.520	3.412	8.1	19.3
1 16	4 57.07	+11 57.7	2.507	3.300	11.6	21.5	1 16	4 55.74	+21 29.1	2.594	3.401	10.9	19.5
<b>284778</b>	2008 <i>XH</i> <sub>35</sub>		12 12.8	80°61	1°4/13.1	18	<b>254990</b>	2005 <i>SK</i> <sub>268</sub>		12 12.8	165°73	2°8/13.4	18
11 7	5 51.13	+27 31.5	1.663	2.478	16.0	20.1	11 7	5 50.78	+32 21.5	2.536	3.321	12.0	21.8
11 17	5 45.68	+27 26.0	1.591	2.484	12.3	19.9	11 17	5 44.64	+32 35.4	2.453	3.326	9.3	21.6
11 27	5 37.33	+27 14.1	1.542	2.491	7.9	19.7	11 27	5 36.34	+32 42.0	2.395	3.330	6.4	21.4
12 7	5 26.99	+26 54.3	1.519	2.498	3.3	19.4	12 7	5 26.60	+32 39.4	2.365	3.334	3.6	21.2
12 17	5 15.98	+26 26.6	1.524	2.504	2.4	19.4	12 17	5 16.32	+32 26.3	2.365	3.337	3.0	21.2
12 27	5 5.76	+25 53.4	1.557	2.511	6.9	19.7	12 27	5 6.54	+32 3.8	2.395	3.340	5.5	21.4
1 6	4 57.61	+25 18.7	1.617	2.518	11.2	19.9	1 6	4 58.21	+31 34.7	2.455	3.342	8.5	21.6
1 16	4 52.32	+24 46.5	1.699	2.524	14.9	20.2	1 16	4 51.98	+31 2.3	2.540	3.344	11.2	21.7
<b>226016</b>	2002 <i>EN</i> <sub>84</sub>		12 12.8	309°77	0°7/12.7	17	<b>271377</b>	2003 <i>YR</i> <sub>116</sub>		12 12.8	235°95	1°6/12.7	18
11 7	5 46.82	+21 12.0	2.029	2.842	13.6	20.4	11 7	5 45.81	+16 48.1	2.540	3.341	11.5	20.3
11 17	5 42.00	+21 13.1	1.944	2.838	10.4	20.2	11 17	5 40.76	+17 0.8	2.452	3.337	8.8	20.2
11 27	5 34.85	+21 14.4	1.884	2.834	6.6	19.9	11 27	5 33.87	+17 17.0	2.388	3.334	5.7	20.0
12 7	5 26.07	+21 15.4	1.850	2.830	2.5	19.7	12 7	5 25.69	+17 36.3	2.353	3.330	2.6	19.7
12 17	5 16.61	+21 15.9	1.845	2.826	2.0	19.6	12 17	5 16.96	+17 58.6	2.348	3.326	2.2	19.7
12 27	5 7.60	+21 16.7	1.869	2.822	6.1	19.9	12 27	5 8.53	+18 23.3	2.374	3.322	5.3	19.9
1 6	5 0.06	+21 18.7	1.921	2.818	9.9	20.1	1 6	5 1.22	+18 50.2	2.428	3.318	8.5	20.1
1 16	4 54.75	+21 23.3	1.997	2.815	13.2	20.3	1 16	4 55.66	+19 19.3	2.509	3.314	11.2	20.3
<b>293075</b>	2006 <i>WO</i> <sub>174</sub>		12 12.8	110°50	1°2/12.6	18	<b>447577</b>	2006 <i>TD</i> <sub>93</sub>		12 12.8	68°85	5°4/13.6	

EPHEMERIDES

12 12.8

12 12.8

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>238912</b>	2006 <i>AB</i> <sub>9</sub>		12 12.8 298°89	7°0/12.9 16			<b>217232</b>	2003 <i>BU</i> <sub>48</sub>		12 12.8 315°50	1°2/12.9 18		
11 7	5 53.33	+35 44.4	1.560	2.365	17.3	20.1	11 7	5 48.42	+25 52.7	1.352	2.186	17.9	20.2
11 17	5 48.64	+37 2.9	1.468	2.345	14.1	19.9	11 17	5 44.62	+25 57.4	1.265	2.169	13.9	19.9
11 27	5 40.07	+38 14.7	1.397	2.326	10.6	19.6	11 27	5 37.29	+25 57.6	1.199	2.152	9.1	19.6
12 7	5 28.35	+39 11.3	1.350	2.307	7.6	19.4	12 7	5 27.23	+25 51.3	1.156	2.136	3.7	19.2
12 17	5 14.90	+39 45.3	1.329	2.288	7.3	19.3	12 17	5 15.86	+25 37.2	1.139	2.120	2.7	19.1
12 27	5 1.79	+39 53.8	1.335	2.269	10.1	19.5	12 27	5 5.04	+25 16.8	1.148	2.105	8.3	19.4
1 6	4 50.99	+39 40.0	1.364	2.250	14.0	19.6	1 6	4 56.49	+24 53.9	1.181	2.091	13.6	19.6
1 16	4 43.93	+39 11.3	1.415	2.232	17.8	19.8	1 16	4 51.35	+24 32.9	1.235	2.077	18.3	19.9
<b>434652</b>	2005 <i>YO</i> <sub>30</sub>		12 12.8 50°84	0°2/12.8 18			<b>488202</b>	2015 <i>XB</i> <sub>253</sub>		12 12.8 87°51	7°7/12.1 18		
11 7	5 51.48	+20 48.1	1.381	2.210	17.9	20.5	11 7	5 46.42	+ 1 17.7	2.086	2.863	14.4	21.0
11 17	5 46.37	+21 18.1	1.320	2.221	13.7	20.2	11 17	5 41.28	+ 0 32.9	2.027	2.878	12.0	20.9
11 27	5 37.99	+21 50.9	1.280	2.233	8.7	20.0	11 27	5 34.17	+ 0 1.9	1.990	2.892	9.6	20.7
12 7	5 27.33	+22 23.8	1.265	2.245	3.3	19.7	12 7	5 25.80	- 0 11.7	1.978	2.906	7.9	20.7
12 17	5 15.83	+22 54.4	1.276	2.258	2.3	19.7	12 17	5 17.01	- 0 5.8	1.994	2.920	7.9	20.7
12 27	5 5.20	+23 21.8	1.315	2.271	7.7	20.0	12 27	5 8.78	+ 0 19.7	2.037	2.934	9.4	20.8
1 6	4 56.86	+23 46.6	1.379	2.284	12.4	20.3	1 6	5 1.93	+ 1 2.5	2.105	2.948	11.7	21.0
1 16	4 51.73	+24 10.1	1.465	2.297	16.4	20.6	1 16	4 57.04	+ 1 59.1	2.196	2.961	13.9	21.2
<b>327927</b>	2007 <i>DH</i> <sub>51</sub>		12 12.8 129°52	5°1/13.9 17			<b>274591</b>	2008 <i>TE</i> <sub>26</sub>		12 12.8 93°22	10°4/15.1 17		
11 7	5 51.67	+38 14.1	2.194	2.974	13.8	20.9	11 7	6 3.56	+56 26.3	2.542	3.223	14.5	20.8
11 17	5 45.82	+38 38.9	2.115	2.977	11.1	20.7	11 17	5 55.93	+57 56.3	2.483	3.237	13.0	20.7
11 27	5 37.33	+38 52.1	2.059	2.980	8.2	20.5	11 27	5 44.36	+59 7.5	2.445	3.251	11.6	20.6
12 7	5 27.02	+38 50.0	2.028	2.982	5.7	20.4	12 7	5 29.84	+59 52.3	2.430	3.265	10.7	20.6
12 17	5 16.05	+38 30.5	2.026	2.985	5.2	20.3	12 17	5 14.05	+60 5.8	2.438	3.278	10.4	20.6
12 27	5 5.73	+37 54.9	2.053	2.987	7.1	20.5	12 27	4 59.12	+59 47.9	2.472	3.292	10.9	20.6
1 6	4 57.24	+37 7.4	2.108	2.990	9.9	20.6	1 6	4 46.91	+59 3.6	2.528	3.305	12.0	20.7
1 16	4 51.33	+36 13.5	2.187	2.992	12.7	20.8	1 16	4 38.52	+58 0.8	2.606	3.318	13.3	20.9
<b>154478</b>	2003 <i>EJ</i> <sub>10</sub>		12 12.8 173°97	0°8/12.7 18			<b>485625</b>	2011 <i>UC</i> <sub>366</sub>		12 12.8 15°72	1°7/12.9 17		
11 7	5 51.50	+20 50.4	2.107	2.909	13.5	20.6	11 7	5 49.14	+26 4.7	1.576	2.399	16.3	21.3
11 17	5 45.39	+20 49.9	2.025	2.912	10.3	20.4	11 17	5 44.48	+26 30.8	1.504	2.401	12.6	21.0
11 27	5 36.94	+20 49.3	1.967	2.915	6.6	20.2	11 27	5 36.78	+26 53.9	1.454	2.404	8.2	20.8
12 7	5 26.86	+20 48.3	1.937	2.917	2.6	19.9	12 7	5 26.92	+27 11.4	1.428	2.407	3.5	20.5
12 17	5 16.15	+20 46.7	1.937	2.918	2.0	19.9	12 17	5 16.18	+27 21.0	1.430	2.411	2.7	20.5
12 27	5 5.95	+20 45.1	1.968	2.918	6.0	20.2	12 27	5 6.13	+27 23.1	1.460	2.415	7.2	20.8
1 6	4 57.29	+20 44.8	2.027	2.918	9.8	20.4	1 6	4 58.13	+27 19.9	1.515	2.419	11.6	21.0
1 16	4 50.91	+20 47.3	2.111	2.918	13.0	20.6	1 16	4 53.07	+27 14.7	1.593	2.424	15.4	21.3
<b>244414</b>	2002 <i>PJ</i> <sub>189</sub>		12 12.8 197°73	1°2/12.6 18			<b>216132</b>	2006 <i>SH</i> <sub>102</sub>		12 12.8 47°11	3°4/12.3 18		
11 7	5 49.45	+20 6.4	2.224	3.026	12.9	21.6	11 7	5 47.19	+15 30.1	1.800	2.616	14.9	21.1
11 17	5 43.75	+19 53.1	2.136	3.023	9.8	21.4	11 17	5 42.35	+14 57.3	1.727	2.619	11.5	20.9
11 27	5 35.86	+19 39.6	2.073	3.020	6.3	21.2	11 27	5 35.10	+14 28.0	1.678	2.623	7.7	20.7
12 7	5 26.46	+19 26.2	2.037	3.016	2.6	20.9	12 7	5 26.21	+14 4.0	1.654	2.627	4.2	20.5
12 17	5 16.44	+19 13.4	2.032	3.012	2.2	20.9	12 17	5 16.71	+13 47.5	1.658	2.631	4.1	20.5
12 27	5 6.86	+19 2.4	2.057	3.007	5.9	21.1	12 27	5 7.81	+13 39.8	1.691	2.635	7.5	20.7
1 6	4 58.68	+18 54.6	2.111	3.001	9.5	21.3	1 6	5 0.54	+13 41.9	1.750	2.639	11.2	20.9
1 16	4 52.60	+18 51.4	2.190	2.995	12.7	21.5	1 16	4 55.63	+13 53.3	1.832	2.643	14.5	21.1
<b>164109</b>	2003 <i>XF</i> <sub>13</sub>		12 12.8 272°13	0°9/13.0 18			<b>413733</b>	2006 <i>BM</i> <sub>175</sub>		12 12.8 90°52	4°2/13.6 17		
11 7	5 46.44	+26 39.8	2.396	3.199	12.0	20.4	11 7	5 50.57	+35 15.6	2.243	3.030	13.3	21.3
11 17	5 41.47	+26 37.5	2.303	3.190	9.2	20.2	11 17	5 44.83	+35 47.6	2.170	3.039	10.5	21.2
11 27	5 34.42	+26 31.0	2.235	3.182	6.0	20.0	11 27	5 36.65	+36 10.6	2.120	3.049	7.5	21.0
12 7	5 25.92	+26 19.5	2.195	3.173	2.5	19.8	12 7	5 26.78	+36 21.2	2.097	3.058	4.9	20.9
12 17	5 16.82	+26 2.8	2.184	3.164	1.8	19.7	12 17	5 16.31	+36 17.4	2.103	3.067	4.4	20.8
12 27	5 8.12	+25 42.0	2.203	3.156	5.3	19.9	12 27	5 6.44	+36 0.0	2.138	3.077	6.6	21.0
1 6	5 0.72	+25 19.4	2.251	3.147	8.7	20.1	1 6	4 58.26	+35 32.2	2.201	3.086	9.4	21.2
1 16	4 55.30	+24 57.3	2.324	3.138	11.7	20.3	1 16	4 52.48	+34 58.4	2.288	3.095	12.1	21.4
<b>395461</b>	2011 <i>TT</i>		12 12.8 241°13	2°0/13.0 18			<b>161994</b>	1981 <i>EK</i> <sub>48</sub>		12 12.8 29°70	9°3/14.8 18		
11 7	5 51.11	+27 20.8	1.923	2.729	14.5	21.2	11 7	5 56.69	+45 14.3	1.649	2.421	17.9	19.8
11 17	5 45.64	+27 46.3	1.833	2.721	11.2	21.0	11 17	5 50.96	+46 9.7	1.579	2.424	15.1	19.7
11 27	5 37.39	+28 8.3	1.766	2.712	7.4	20.7	11 27	5 41.24	+46 46.3	1.529	2.427	12.2	19.5
12 7	5 27.12	+28 24.0	1.726	2.703	3.4	20.5	12 7	5 28.64	+46 55.8	1.502	2.430	10.0	19.4
12 17	5 15.93	+28 31.3	1.715	2.694	2.7	20.4	12 17	5 14.98	+46 33.6	1.500	2.433	9.4	19.3
12 27	5 5.18	+28 30.2	1.734	2.685	6.6	20.6	12 27	5 2.42	+45 40.8	1.523	2.437	10.8	19.4
1 6	4 56.15	+28 22.9	1.779	2.675	10.6	20.9	1 6	4 52.74	+44 25.4	1.571	2.441	13.4	19.6
1 16	4 49.73	+28 12.7	1.849	2.665	14.2	21.1	1 16	4 46.93	+42 57.6	1.641	2.445	16.3	19.8
<b>414931</b>	2011 <i>AQ</i> <sub>63</sub>		12 12.8 230°76	4°2/12.4 17			<b>351374</b>	2005 <i>EM</i> <sub>26</sub>		12 12.8 313°32	4°1/13.2 16		
11 7	5 45.21	+ 9 48.7	2.351	3.147	12.5	21.1	11 7	5 49.10	+31 24.2	1.513	2.333	17.0	21.4
11 17	5 40.36	+ 9 33.4	2.269	3.145	9.8	20.9	11 17	5 45.12	+31 55.2	1.418	2.311	13.5	21.2
11 27	5 33.63	+ 9 25.4	2.210	3.142	7.0	20.7	11 27	5 37.64	+32 18.9	1.344	2.288	9.3	20.9
12 7	5 25.61	+ 9 26.4	2.178	3.140	4.7	20.6	12 7	5 27.41	+32 30.8	1.294	2.266	5.3	20.6
12 17	5 17.07	+ 9 37.2	2.175	3.137	4.6	20.6	12 17	5 15.77	+32 27.0	1.270	2.245	4.6	20.5
12 27	5 8.89	+ 9 58.2	2.202	3.134	6.8	20.7	12 27	5 4.55	+32 7.4	1.272	2.224	8.5	20.6
1 6	5 1.88	+10 28.6	2.257	3.132	9.7	20.9	1 6	4 55.48	+31 36.2	1.299	2.203	13.2	20.9
1 16	4 56.67	+11 6.9	2.336	3.129	12.4	21.1	1 16	4 49.79	+30 59.5	1.348	2.183	17.4	21.1
<b>241997</b>	2002 <i>NX</i> <sub>67</sub>		12 12.8 165°45	1°8/12.6 18			<b>27378</b>	2000 <i>EG</i> <sub>55</sub>		12 12.8 214°			

EPHEMERIDES

12 12.8

12 12.8

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>305209</b>	2007 <i>WC</i> <sub>26</sub>		12 12.8 346°40	0°8/12.8 17			<b>79663</b>	1998 <i>SU</i> <sub>32</sub>		12 12.8 359°78	11°4/11.3 18		
11 7	5 47.96	+20 42.9	1.608	2.433	16.0	21.2	11 7	5 40.03	+3 53.0	1.131	1.970	20.3	18.5
11 17	5 43.46	+20 49.6	1.530	2.429	12.2	21.0	11 17	5 37.99	+2 19.2	1.074	1.965	17.0	18.3
11 27	5 36.10	+20 57.6	1.474	2.426	7.9	20.7	11 27	5 32.84	+1 2.3	1.036	1.962	13.7	18.1
12 7	5 26.68	+21 6.1	1.444	2.424	3.0	20.4	12 7	5 25.50	+0 11.9	1.017	1.960	11.6	18.0
12 17	5 16.39	+21 14.6	1.440	2.422	2.3	20.4	12 17	5 17.31	-0 5.3	1.021	1.961	11.8	18.0
12 27	5 6.68	+21 23.4	1.465	2.420	7.2	20.7	12 27	5 9.87	+0 13.0	1.046	1.964	14.1	18.2
1 6	4 58.83	+21 33.5	1.515	2.419	11.7	20.9	1 6	5 4.54	+1 2.9	1.091	1.969	17.4	18.4
1 16	4 53.73	+21 46.1	1.589	2.418	15.5	21.2	1 16	5 2.19	+2 17.5	1.155	1.975	20.7	18.6
<b>254055</b>	2004 <i>GA</i> <sub>60</sub>		12 12.8 141°90	5°5/11.6 18			<b>158794</b>	2003 <i>SG</i> <sub>149</sub>		12 12.8 103°93	0°4/12.9 18	R	
11 7	5 46.66	+8 8.4	2.245	3.037	13.1	20.7	11 7	5 47.69	+24 35.7	2.422	3.223	12.0	20.2
11 17	5 41.42	+7 14.6	2.174	3.044	10.5	20.6	11 17	5 42.21	+24 38.7	2.350	3.237	9.1	20.0
11 27	5 34.27	+6 28.1	2.126	3.050	7.8	20.4	11 27	5 34.78	+24 39.3	2.303	3.250	5.8	19.8
12 7	5 25.87	+5 52.0	2.106	3.057	5.8	20.3	12 7	5 26.07	+24 36.7	2.283	3.263	2.2	19.6
12 17	5 17.03	+5 28.9	2.114	3.063	5.9	20.3	12 17	5 16.93	+24 30.7	2.294	3.276	1.6	19.6
12 27	5 8.67	+5 20.5	2.151	3.068	7.9	20.5	12 27	5 8.30	+24 22.0	2.336	3.288	5.1	19.9
1 6	5 1.60	+5 26.3	2.215	3.074	10.5	20.6	1 6	5 1.01	+24 12.4	2.406	3.301	8.3	20.1
1 16	4 56.41	+5 45.1	2.303	3.079	13.0	20.8	1 16	4 55.66	+24 3.5	2.502	3.313	11.1	20.3
<b>114340</b>	2002 <i>XS</i> <sub>69</sub>		12 12.8 45°20	1°7/12.9 18			<b>196355</b>	2003 <i>FB</i> <sub>103</sub>		12 12.8 155°01	0°7/12.9 18		
11 7	5 51.94	+16 35.0	1.276	2.107	19.0	18.8	11 7	5 52.39	+25 3.7	1.948	2.753	14.4	21.3
11 17	5 46.87	+17 12.9	1.218	2.120	14.5	18.6	11 17	5 46.30	+25 8.2	1.871	2.759	11.0	21.1
11 27	5 38.40	+17 59.4	1.181	2.133	9.4	18.3	11 27	5 37.63	+25 9.5	1.818	2.765	7.0	20.8
12 7	5 27.55	+18 52.0	1.168	2.147	3.9	18.1	12 7	5 27.20	+25 6.1	1.792	2.771	2.8	20.6
12 17	5 15.83	+19 47.4	1.181	2.162	2.9	18.0	12 17	5 16.11	+24 57.5	1.795	2.776	1.9	20.5
12 27	5 5.01	+20 42.9	1.221	2.176	8.2	18.4	12 27	5 5.65	+24 44.8	1.828	2.780	6.2	20.8
1 6	4 56.60	+21 36.6	1.286	2.192	13.1	18.7	1 6	4 56.95	+24 30.3	1.889	2.784	10.2	21.1
1 16	4 51.53	+22 28.3	1.373	2.207	17.2	19.0	1 16	4 50.76	+24 16.9	1.974	2.788	13.5	21.3
<b>344890</b>	2004 <i>RP</i> <sub>14</sub>		12 12.8 146°16	1°8/13.2 18			<b>392600</b>	2011 <i>SK</i> <sub>226</sub>		12 12.8 88°59	4°3/13.7 18		
11 7	5 53.78	+28 31.1	2.027	2.824	14.1	21.4	11 7	5 55.00	+34 48.1	1.875	2.666	15.3	21.3
11 17	5 47.26	+28 36.3	1.952	2.834	10.9	21.2	11 17	5 48.43	+35 13.5	1.815	2.688	12.1	21.2
11 27	5 38.17	+28 35.6	1.901	2.844	7.1	21.0	11 27	5 38.99	+35 27.9	1.777	2.709	8.5	21.0
12 7	5 27.37	+28 26.7	1.877	2.854	3.2	20.8	12 7	5 27.68	+35 27.7	1.766	2.730	5.3	20.8
12 17	5 15.97	+28 9.2	1.883	2.862	2.4	20.7	12 17	5 15.84	+35 11.2	1.783	2.751	4.6	20.9
12 27	5 5.27	+27 44.5	1.919	2.870	6.1	21.0	12 27	5 4.94	+34 40.2	1.829	2.772	7.1	21.1
1 6	4 56.37	+27 15.9	1.984	2.877	9.9	21.2	1 6	4 56.19	+33 59.6	1.903	2.792	10.4	21.3
1 16	4 50.01	+26 47.1	2.073	2.884	13.1	21.4	1 16	4 50.31	+33 15.0	2.000	2.812	13.5	21.5
<b>341936</b>	2008 <i>OD</i> <sub>9</sub>		12 12.8 81°00	0°1/12.8 18			<b>442337</b>	2011 <i>SN</i> <sub>178</sub>		12 12.8 112°44	0°8/12.9 15		
11 7	5 53.66	+22 56.4	1.566	2.382	16.7	21.0	11 7	5 51.87	+26 2.5	2.025	2.827	14.0	22.3
11 17	5 47.51	+23 4.5	1.510	2.405	12.7	20.8	11 17	5 45.68	+25 59.6	1.957	2.844	10.6	22.1
11 27	5 38.44	+23 11.2	1.477	2.427	8.0	20.5	11 27	5 37.10	+25 52.3	1.913	2.860	6.8	21.9
12 7	5 27.47	+23 15.0	1.469	2.450	3.0	20.3	12 7	5 26.96	+25 39.7	1.897	2.876	2.7	21.7
12 17	5 15.95	+23 15.2	1.490	2.472	2.1	20.3	12 17	5 16.34	+25 21.7	1.911	2.892	1.9	21.6
12 27	5 5.40	+23 12.8	1.539	2.494	7.0	20.6	12 27	5 6.45	+24 59.8	1.954	2.907	5.9	21.9
1 6	4 57.03	+23 10.0	1.615	2.515	11.3	20.9	1 6	4 58.28	+24 36.9	2.026	2.921	9.6	22.2
1 16	4 51.59	+23 9.0	1.714	2.536	14.9	21.2	1 16	4 52.51	+24 15.7	2.123	2.935	12.7	22.4
<b>196896</b>	2003 <i>TA</i> <sub>5</sub>		12 12.8 122°22	2°6/12.2 18			<b>367115</b>	2006 <i>SU</i> <sub>52</sub>		12 12.8 131°39	3°1/13.4 18		
11 7	5 45.74	+16 37.2	2.399	3.203	12.0	20.1	11 7	5 56.12	+31 10.0	1.613	2.418	16.8	21.4
11 17	5 40.68	+16 1.4	2.323	3.209	9.2	19.9	11 17	5 49.71	+31 20.7	1.544	2.429	13.1	21.1
11 27	5 33.78	+15 27.1	2.271	3.215	6.1	19.7	11 27	5 40.04	+31 22.0	1.496	2.438	8.8	20.9
12 7	5 25.69	+14 55.9	2.247	3.220	3.2	19.5	12 7	5 28.15	+31 10.5	1.474	2.448	4.5	20.7
12 17	5 17.18	+14 29.3	2.253	3.226	3.1	19.5	12 17	5 15.50	+30 45.0	1.480	2.456	3.6	20.6
12 27	5 9.13	+14 9.1	2.289	3.231	5.9	19.7	12 27	5 3.80	+30 7.8	1.514	2.465	7.5	20.9
1 6	5 2.31	+13 56.3	2.353	3.237	9.0	19.9	1 6	4 54.46	+29 24.1	1.575	2.472	11.7	21.2
1 16	4 57.30	+13 51.3	2.443	3.242	11.7	20.1	1 16	4 48.33	+28 39.9	1.659	2.480	15.4	21.4
<b>372944</b>	2011 <i>BF</i> <sub>73</sub>		12 12.8 306°95	3°3/12.2 17			<b>234764</b>	2002 <i>PL</i> <sub>21</sub>		12 12.8 352°12	9°8/16.8 18		
11 7	5 44.81	+15 7.4	2.105	2.916	13.2	21.5	11 7	5 59.24	+52 58.3	2.063	2.784	16.3	20.0
11 17	5 40.36	+14 33.0	2.017	2.906	10.2	21.3	11 17	5 52.40	+53 18.2	1.983	2.781	14.3	19.8
11 27	5 33.80	+14 1.3	1.952	2.896	6.9	21.1	11 27	5 41.83	+53 15.2	1.922	2.778	12.2	19.7
12 7	5 25.76	+13 34.3	1.914	2.886	3.9	20.9	12 7	5 28.79	+52 42.4	1.884	2.776	10.5	19.6
12 17	5 17.10	+13 13.9	1.905	2.877	3.9	20.9	12 17	5 15.10	+51 36.7	1.870	2.774	9.8	19.5
12 27	5 8.82	+13 1.8	1.925	2.867	6.9	21.0	12 27	5 2.72	+50 0.4	1.883	2.773	10.5	19.6
1 6	5 1.87	+12 59.0	1.972	2.858	10.3	21.2	1 6	4 53.20	+48 1.9	1.923	2.772	12.3	19.7
1 16	4 56.92	+13 5.5	2.043	2.849	13.4	21.4	1 16	4 47.33	+45 51.6	1.986	2.772	14.5	19.8
<b>214881</b>	2007 <i>RT</i> <sub>178</sub>		12 12.8 9°09	0°6/12.8 18			<b>20884</b>	2000 <i>VA</i> <sub>59</sub>		12 12.8 108°67	1°1/12.7 18		
11 7	5 48.62	+20 41.2	1.026	1.879	20.9	20.1	11 7	5 47.59	+19 56.3	2.138	2.946	13.1	18.9
11 17	5 45.23	+20 59.0	0.965	1.879	16.1	19.8	11 17	5 42.38	+19 51.4	2.062	2.952	10.0	18.7
11 27	5 37.83	+21 20.3	0.923	1.881	10.3	19.5	11 27	5 35.02	+19 47.1	2.010	2.959	6.4	18.5
12 7	5 27.46	+21 43.2	0.902	1.883	3.9	19.1	12 7	5 26.21	+19 43.4	1.986	2.965	2.6	18.2
12 17	5 15.89	+22 5.6	0.905	1.887	2.9	19.1	12 17	5 16.86	+19 40.7	1.991	2.971	2.1	18.2
12 27	5 5.29	+22 26.8	0.932	1.892	9.3	19.4	12 27	5 8.03	+19 39.6	2.026	2.977	5.8	18.5
1 6	4 57.51	+22 47.8	0.981	1.898	15.0	19.8	1 6	5 0.63	+19 41.1	2.089	2.983	9.4	18.7
1 16	4 53.65	+23 10.0	1.049	1.904	19.8	20.1	1 16	4 55.32	+19 46.1	2.176	2.989	12.5	18.9
<b>21464</b>	Chinaroonchai		12 12.8 157°66	1°9/12.5 18			<b>320489</b>	2007 <i>WG</i> <sub>4</sub>		12 12.8 87°34	0°8/12.7 18		

EPHEMERIDES

12 12.8

12 12.9

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>362782</b>	2011 WE <sub>114</sub>		12 12.8	10°49	17°4/	7.6 18	<b>494306</b>	2016 SG <sub>11</sub>		12 12.9	61°72	0°8/12.9	16
11 7	5 44.01	-14 4.9	1.527	2.268	20.4	19.8	11 7	5 54.17	+25 28.4	1.322	2.149	18.7	21.7
11 17	5 40.28	-16 44.1	1.486	2.270	18.9	19.7	11 17	5 48.34	+25 26.4	1.273	2.173	14.2	21.5
11 27	5 33.96	-18 54.3	1.464	2.273	17.8	19.6	11 27	5 39.16	+25 19.6	1.245	2.197	9.0	21.3
12 7	5 25.87	-20 24.9	1.460	2.277	17.4	19.6	12 7	5 27.83	+25 6.5	1.241	2.221	3.5	21.0
12 17	5 17.14	-21 9.1	1.476	2.282	17.7	19.7	12 17	5 15.98	+24 47.3	1.264	2.246	2.4	21.0
12 27	5 9.06	-21 5.6	1.509	2.287	18.6	19.7	12 27	5 5.35	+24 24.3	1.314	2.270	7.6	21.4
1 6	5 2.75	-20 19.0	1.559	2.294	19.9	19.9	1 6	4 57.30	+24 1.7	1.389	2.295	12.3	21.8
1 16	4 58.97	-18 57.4	1.624	2.301	21.3	20.0	1 16	4 52.56	+23 42.7	1.486	2.319	16.2	22.1
<b>18118</b>	2000 NB <sub>24</sub>		12 12.8	11°41	0°8/12.8	18	<b>458610</b>	2011 FU <sub>57</sub>		12 12.9	9°23	6°4/13.9	16
11 7	5 49.39	+22 10.1	1.107	1.953	20.2	17.9	11 7	5 50.00	+39 28.2	1.935	2.722	15.1	20.8
11 17	5 45.56	+22 2.6	1.044	1.954	15.5	17.6	11 17	5 45.10	+40 16.7	1.861	2.724	12.3	20.7
11 27	5 37.90	+21 54.1	1.000	1.956	9.9	17.3	11 27	5 37.22	+40 53.0	1.809	2.726	9.4	20.5
12 7	5 27.48	+21 44.0	0.978	1.959	3.8	17.0	12 7	5 27.20	+41 11.7	1.781	2.729	7.0	20.4
12 17	5 15.98	+21 32.7	0.980	1.962	2.8	16.9	12 17	5 16.33	+41 9.6	1.781	2.732	6.5	20.3
12 27	5 5.48	+21 22.2	1.008	1.966	9.0	17.3	12 27	5 6.13	+40 47.2	1.807	2.736	8.4	20.4
1 6	4 57.67	+21 15.2	1.058	1.971	14.5	17.6	1 6	4 57.95	+40 8.8	1.860	2.740	11.1	20.6
1 16	4 53.57	+21 14.2	1.127	1.976	19.2	17.9	1 16	4 52.66	+39 20.6	1.935	2.745	13.9	20.8
<b>293969</b>	2007 TV <sub>51</sub>		12 12.8	56°21	2°3/13.1	18	<b>523413</b>	2017 DN <sub>122</sub>		12 12.9	251°08	4°7/12.5	17
11 7	5 50.76	+28 24.5	1.708	2.522	15.7	20.6	11 7	5 46.31	+ 8 41.2	2.199	2.993	13.3	21.1
11 17	5 45.53	+28 24.6	1.635	2.526	12.1	20.4	11 17	5 41.40	+ 8 28.5	2.115	2.989	10.5	20.9
11 27	5 37.38	+28 59.6	1.584	2.531	8.0	20.2	11 27	5 34.45	+ 8 24.5	2.054	2.985	7.6	20.7
12 7	5 27.18	+29 6.1	1.559	2.536	3.8	19.9	12 7	5 26.08	+ 8 31.1	2.021	2.980	5.2	20.5
12 17	5 16.19	+29 2.7	1.562	2.541	3.0	19.9	12 17	5 17.12	+ 8 49.3	2.016	2.976	5.1	20.5
12 27	5 5.91	+28 50.3	1.593	2.546	6.9	20.2	12 27	5 8.52	+ 9 19.0	2.040	2.971	7.4	20.6
1 6	4 57.62	+28 31.9	1.650	2.551	11.1	20.4	1 6	5 1.18	+ 9 59.1	2.092	2.967	10.3	20.8
1 16	4 52.17	+28 11.7	1.731	2.556	14.6	20.7	1 16	4 55.75	+10 47.6	2.168	2.962	13.1	21.0
<b>266033</b>	2006 GW <sub>42</sub>		12 12.8	270°93	5°9/10.6	18	<b>46242</b>	2001 HQ <sub>12</sub>		12 12.9	291°40	3°4/12.0	17 R
11 7	5 45.45	+ 7 36.6	2.490	3.277	12.1	20.4	11 7	5 45.19	+14 47.8	2.250	3.056	12.6	19.2
11 17	5 40.55	+ 6 19.5	2.391	3.257	9.8	20.2	11 17	5 40.48	+14 5.7	2.167	3.053	9.8	19.0
11 27	5 33.81	+ 5 6.8	2.318	3.236	7.5	20.0	11 27	5 33.82	+13 26.1	2.109	3.050	6.7	18.8
12 7	5 25.78	+ 4 2.4	2.272	3.215	6.0	19.9	12 7	5 25.83	+12 51.1	2.077	3.047	3.9	18.7
12 17	5 17.17	+ 3 10.2	2.255	3.194	6.3	19.9	12 17	5 17.33	+12 22.8	2.075	3.044	3.9	18.7
12 27	5 8.83	+ 2 33.2	2.268	3.173	8.2	20.0	12 27	5 9.25	+12 3.2	2.103	3.041	6.6	18.8
1 6	5 1.55	+ 2 12.6	2.307	3.151	10.8	20.1	1 6	5 2.43	+11 53.2	2.157	3.038	9.8	19.0
1 16	4 55.96	+ 2 7.9	2.370	3.129	13.2	20.2	1 16	4 57.49	+11 53.0	2.236	3.036	12.6	19.2
<b>258164</b>	2001 SL <sub>97</sub>		12 12.8	44°54	0°8/12.9	18	<b>26979</b>	1997 UR <sub>9</sub>		12 12.9	72°81	0°9/13.0	18
11 7	5 48.90	+25 42.0	1.734	2.552	15.3	20.9	11 7	5 50.30	+25 38.7	1.823	2.635	14.9	18.8
11 17	5 43.90	+25 38.8	1.665	2.559	11.7	20.7	11 17	5 44.80	+25 41.7	1.759	2.650	11.3	18.6
11 27	5 36.22	+25 31.3	1.618	2.568	7.5	20.4	11 27	5 36.71	+25 40.8	1.717	2.665	7.3	18.4
12 7	5 26.72	+25 18.5	1.596	2.576	2.9	20.2	12 7	5 26.93	+25 34.8	1.701	2.680	2.9	18.2
12 17	5 16.58	+25 0.4	1.603	2.585	2.1	20.1	12 17	5 16.59	+25 23.4	1.714	2.695	2.0	18.2
12 27	5 7.17	+24 38.8	1.639	2.594	6.5	20.4	12 27	5 7.00	+25 8.0	1.756	2.710	6.3	18.5
1 6	4 59.64	+24 16.6	1.701	2.603	10.7	20.7	1 6	4 59.26	+24 51.2	1.826	2.725	10.2	18.7
1 16	4 54.73	+23 56.8	1.786	2.612	14.2	21.0	1 16	4 54.06	+24 35.7	1.919	2.740	13.6	19.0
<b>58848</b>	1998 HH <sub>71</sub>		12 12.8	136°26	0°9/12.7	18	<b>66911</b>	1999 VF <sub>167</sub>		12 12.9	60°43	2°3/13.2	18
11 7	5 54.12	+20 54.2	1.850	2.655	15.0	20.7	11 7	5 54.13	+28 6.7	1.515	2.331	17.2	18.6
11 17	5 47.57	+20 51.8	1.781	2.669	11.4	20.5	11 17	5 48.04	+28 27.5	1.466	2.358	13.2	18.5
11 27	5 38.41	+20 49.3	1.735	2.683	7.3	20.3	11 27	5 38.87	+28 41.9	1.439	2.387	8.6	18.3
12 7	5 27.52	+20 46.1	1.716	2.696	2.8	20.0	12 7	5 27.72	+28 47.0	1.438	2.415	3.9	18.1
12 17	5 16.03	+20 42.2	1.727	2.708	2.2	20.0	12 17	5 16.09	+28 41.6	1.464	2.443	3.0	18.1
12 27	5 5.27	+20 38.5	1.768	2.719	6.5	20.3	12 27	5 5.56	+28 27.3	1.518	2.471	7.2	18.4
1 6	4 56.35	+20 36.5	1.837	2.730	10.5	20.6	1 6	4 57.40	+28 7.9	1.598	2.499	11.3	18.7
1 16	4 50.02	+20 37.9	1.930	2.740	13.9	20.8	1 16	4 52.32	+27 47.8	1.701	2.527	14.8	19.0
<b>15874</b>	1996 TL <sub>66</sub>		12 12.9	9°36	0°4/11.7	17	<b>444841</b>	2007 VK <sub>93</sub>		12 12.9	33°71	0°9/13.1	17
11 7	5 23.67	+ 6 14.8	37.523	38.297	0.9	21.2	11 7	5 50.89	+29 13.5	1.389	2.215	18.0	20.0
11 17	5 22.96	+ 6 10.8	37.449	38.305	0.7	21.2	11 17	5 45.82	+28 21.8	1.330	2.228	13.8	19.7
11 27	5 22.16	+ 6 7.5	37.402	38.314	0.6	21.2	11 27	5 37.55	+27 18.5	1.291	2.242	8.8	19.5
12 7	5 21.31	+ 6 4.9	37.383	38.323	0.4	21.2	12 7	5 27.24	+26 4.5	1.278	2.257	3.5	19.2
12 17	5 20.43	+ 6 3.1	37.394	38.331	0.5	21.2	12 17	5 16.44	+24 43.3	1.291	2.273	2.3	19.2
12 27	5 19.58	+ 6 2.2	37.434	38.340	0.6	21.2	12 27	5 6.79	+23 21.3	1.332	2.289	7.5	19.6
1 6	5 18.77	+ 6 2.1	37.503	38.349	0.8	21.2	1 6	4 59.56	+22 5.3	1.399	2.306	12.1	19.9
1 16	5 18.04	+ 6 2.8	37.598	38.358	0.9	21.2	1 16	4 55.46	+21 0.6	1.488	2.323	16.1	20.2
<b>336810</b>	2011 DS <sub>18</sub>		12 12.9	233°62	3°0/12.4	18	<b>284576</b>	2007 TD <sub>92</sub>		12 12.9	45°21	3°4/12.7	18
11 7	5 50.98	+16 37.6	1.808	2.617	15.1	21.9	11 7	5 50.46	+15 12.9	1.341	2.170	18.3	19.9
11 17	5 45.50	+16 11.2	1.717	2.606	11.7	21.7	11 17	5 45.25	+15 2.7	1.298	2.197	14.0	19.7
11 27	5 37.33	+15 46.9	1.649	2.595	7.8	21.4	11 27	5 37.08	+14 59.5	1.276	2.225	9.2	19.5
12 7	5 27.22	+15 26.3	1.607	2.582	4.0	21.2	12 7	5 27.06	+15 3.9	1.277	2.253	4.6	19.3
12 17	5 16.22	+15 10.9	1.594	2.570	3.7	21.1	12 17	5 16.58	+15 16.3	1.306	2.282	4.2	19.3
12 27	5 5.66	+15 2.5	1.611	2.556	7.6	21.3	12 27	5 7.18	+15 36.5	1.361	2.311	8.2	19.7
1 6	4 56.75	+15 2.2	1.653	2.542	11.8	21.5	1 6	5 0.03	+16 3.5	1.441	2.341	12.4	20.0
1 16	4 50.38	+15 10.7	1.720	2.528	15.4	21.7	1 16	4 55.81	+16 36.3	1.543	2.370	16.0	20.3
<b>417369</b>	2006 GD <sub>30</sub>		12 12.9	270°63	2°4/13.1	18	<b>329095</b>	2011 BR <sub>100</sub>		12 12.9	319°53	5°7/11.9	18
11 7	5 48.32	+29 27.1	2.374	3.172</									

EPHEMERIDES

12 12.9

12 12.9

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>436051</b>	2009 <i>QW</i> <sub>45</sub>		12 12.9	57°58'	5°8'/13.8	18	<b>224873</b>	2007 <i>BA</i> <sub>32</sub>		12 12.9	49°65'	4°0'/12.6	18
11 7	5 55.51	+35 20.5	1.323	2.137	19.3	20.5	11 7	5 50.02	+14 20.0	1.379	2.205	18.0	20.8
11 17	5 50.05	+35 55.4	1.265	2.150	15.4	20.3	11 17	5 45.21	+14 3.6	1.315	2.212	14.0	20.5
11 27	5 40.65	+36 16.6	1.226	2.163	10.9	20.1	11 27	5 37.32	+13 54.5	1.271	2.219	9.4	20.3
12 7	5 28.53	+36 17.8	1.211	2.176	6.9	19.9	12 7	5 27.27	+13 54.4	1.252	2.226	5.1	20.1
12 17	5 15.52	+35 56.2	1.221	2.189	6.1	19.9	12 17	5 16.44	+14 4.1	1.259	2.233	4.7	20.0
12 27	5 3.76	+35 14.3	1.257	2.203	9.2	20.1	12 27	5 6.39	+14 24.0	1.293	2.241	8.7	20.3
1 6	4 54.91	+34 19.7	1.317	2.217	13.3	20.4	1 6	4 58.48	+14 53.2	1.351	2.249	13.2	20.6
1 16	4 49.88	+33 20.9	1.399	2.231	17.1	20.7	1 16	4 53.58	+15 30.3	1.431	2.257	17.1	20.9
<b>149625</b>	2004 <i>EK</i> <sub>41</sub>		12 12.9	262°42'	0°9'/12.7	18	<b>400414</b>	2008 <i>CH</i> <sub>54</sub>		12 12.9	213°57'	2°4'/13.5	17
11 7	5 51.18	+21 49.2	1.630	2.448	16.1	20.6	11 7	5 51.08	+31 36.7	2.338	3.128	12.7	21.5
11 17	5 46.11	+21 37.4	1.538	2.434	12.4	20.3	11 17	5 45.16	+31 34.7	2.246	3.123	9.9	21.3
11 27	5 37.98	+21 24.1	1.468	2.419	8.0	20.0	11 27	5 36.92	+31 24.8	2.178	3.116	6.7	21.1
12 7	5 27.58	+21 9.1	1.423	2.403	3.1	19.7	12 7	5 27.07	+31 5.0	2.137	3.110	3.5	20.8
12 17	5 16.10	+20 52.6	1.407	2.388	2.4	19.6	12 17	5 16.58	+30 34.9	2.127	3.103	2.8	20.8
12 27	5 5.07	+20 36.5	1.418	2.372	7.5	19.9	12 27	5 6.60	+29 56.1	2.147	3.095	5.8	21.0
1 6	4 55.93	+20 23.1	1.456	2.356	12.3	20.1	1 6	4 58.13	+29 12.1	2.195	3.087	9.1	21.2
1 16	4 49.68	+20 15.1	1.516	2.339	16.4	20.3	1 16	4 51.91	+28 26.8	2.269	3.079	12.1	21.4
<b>455051</b>	2015 <i>US</i> <sub>11</sub>		12 12.9	73°68'	2°6'/12.4	18	<b>63017</b>	2000 <i>WB</i> <sub>41</sub>		12 12.9	7°72'	6°0'/12.1	18
11 7	5 48.04	+17 23.8	1.838	2.652	14.7	21.3	11 7	5 45.23	+12 33.3	1.270	2.108	18.6	17.6
11 17	5 43.01	+16 56.2	1.766	2.658	11.3	21.1	11 17	5 41.76	+11 40.0	1.208	2.109	14.6	17.4
11 27	5 35.58	+16 30.5	1.717	2.664	7.4	20.8	11 27	5 35.21	+10 54.2	1.165	2.111	10.3	17.1
12 7	5 26.54	+16 8.3	1.695	2.671	3.6	20.6	12 7	5 26.51	+10 20.5	1.145	2.114	6.6	16.9
12 17	5 16.91	+15 50.9	1.701	2.677	3.3	20.6	12 17	5 17.00	+10 2.9	1.150	2.118	6.6	16.9
12 27	5 7.89	+15 40.1	1.735	2.683	7.0	20.9	12 27	5 8.27	+10 3.4	1.180	2.123	10.1	17.1
1 6	5 0.51	+15 36.9	1.797	2.689	10.8	21.1	1 6	5 1.66	+10 21.4	1.233	2.129	14.4	17.4
1 16	4 55.49	+15 41.7	1.882	2.696	14.1	21.3	1 16	4 58.04	+10 54.4	1.306	2.136	18.2	17.7
<b>80881</b>	2000 <i>DV</i> <sub>40</sub>		12 12.9	132°24'	1°3'/12.7	18	<b>363323</b>	2002 <i>PW</i> <sub>55</sub>		12 12.9	134°87'	6°2'/11.8	18
11 7	5 52.98	+20 9.3	1.886	2.691	14.7	20.5	11 7	5 44.52	- 3 46.6	3.504	4.234	10.0	22.2
11 17	5 46.66	+19 59.6	1.816	2.705	11.2	20.3	11 17	5 39.17	- 4 24.8	3.442	4.252	8.5	22.1
11 27	5 37.85	+19 50.1	1.771	2.718	7.2	20.0	11 27	5 32.63	- 4 52.2	3.406	4.270	7.2	22.0
12 7	5 27.37	+19 40.7	1.752	2.731	2.9	19.8	12 7	5 25.35	- 5 6.5	3.396	4.286	6.3	22.0
12 17	5 16.34	+19 32.0	1.764	2.744	2.3	19.8	12 17	5 17.83	- 5 6.6	3.415	4.302	6.4	22.0
12 27	5 6.01	+19 24.9	1.805	2.755	6.5	20.1	12 27	5 10.64	- 4 52.0	3.462	4.318	7.2	22.1
1 6	4 57.45	+19 21.1	1.873	2.766	10.4	20.3	1 6	5 4.26	- 4 24.0	3.537	4.333	8.5	22.2
1 16	4 51.38	+19 21.8	1.966	2.776	13.7	20.6	1 16	4 59.10	- 3 44.5	3.636	4.347	9.8	22.3
<b>235674</b>	2004 <i>RR</i> <sub>279</sub>		12 12.9	17°63'	0°4'/12.8	18	<b>130393</b>	2000 <i>KV</i> <sub>67</sub>		12 12.9	142°28'	0°8'/12.9	18
11 7	5 47.37	+23 29.3	1.198	2.043	19.1	20.5	11 7	5 49.04	+23 52.7	2.822	3.613	10.7	19.9
11 17	5 43.70	+23 15.8	1.139	2.048	14.6	20.3	11 17	5 43.15	+24 31.3	2.740	3.621	8.2	19.8
11 27	5 36.55	+22 59.2	1.099	2.055	9.3	20.0	11 27	5 35.45	+25 9.4	2.685	3.629	5.2	19.6
12 7	5 27.00	+22 39.3	1.082	2.063	3.5	19.7	12 7	5 26.49	+25 45.3	2.658	3.637	2.1	19.4
12 17	5 16.60	+22 17.1	1.090	2.072	2.5	19.6	12 17	5 17.01	+26 17.2	2.663	3.644	1.6	19.3
12 27	5 7.20	+21 55.3	1.124	2.083	8.2	20.0	12 27	5 7.85	+26 44.6	2.701	3.651	4.6	19.6
1 6	5 0.28	+21 37.1	1.181	2.094	13.4	20.3	1 6	4 59.80	+27 7.6	2.768	3.657	7.6	19.8
1 16	4 56.71	+21 25.2	1.259	2.106	17.7	20.6	1 16	4 53.47	+27 27.4	2.862	3.664	10.1	20.0
<b>281059</b>	2006 <i>KF</i> <sub>13</sub>		12 12.9	149°50'	5°2'/11.9	18	<b>442614</b>	2012 <i>QZ</i> <sub>12</sub>		12 12.9	43°96'	1°4'/12.7	18
11 7	5 44.00	+ 4 46.2	2.907	3.681	10.9	21.1	11 7	5 50.46	+20 31.8	1.270	2.106	18.8	20.8
11 17	5 39.08	+ 4 10.0	2.833	3.688	8.8	21.0	11 17	5 45.67	+20 22.7	1.218	2.123	14.3	20.6
11 27	5 32.71	+ 3 41.9	2.784	3.695	6.8	20.9	11 27	5 37.60	+20 14.5	1.187	2.141	9.1	20.3
12 7	5 25.39	+ 3 24.1	2.763	3.701	5.4	20.8	12 7	5 27.36	+20 7.2	1.179	2.159	3.6	20.1
12 17	5 17.73	+ 3 18.1	2.771	3.707	5.4	20.8	12 17	5 16.48	+20 1.2	1.198	2.178	2.8	20.1
12 27	5 10.41	+ 3 24.6	2.808	3.713	6.8	20.9	12 27	5 6.66	+19 58.0	1.242	2.198	8.0	20.4
1 6	5 4.04	+ 3 43.0	2.873	3.718	8.8	21.0	1 6	4 59.27	+19 59.0	1.311	2.218	12.8	20.8
1 16	4 59.09	+ 4 11.8	2.962	3.723	10.8	21.2	1 16	4 55.08	+20 5.6	1.402	2.239	16.8	21.1
<b>168257</b>	2006 <i>MF</i> <sub>1</sub>		12 12.9	80°10'	6°4'/11.5	18	<b>78856</b>	2003 <i>QR</i> <sub>68</sub>		12 12.9	41°33'	1°9'/12.6	18
11 7	5 49.10	+ 9 36.7	1.760	2.564	15.6	19.7	11 7	5 51.38	+22 26.4	1.050	1.898	21.0	18.8
11 17	5 43.63	+ 8 19.9	1.703	2.582	12.4	19.6	11 17	5 46.80	+21 38.4	1.004	1.915	16.0	18.6
11 27	5 35.85	+ 7 10.7	1.670	2.600	9.1	19.4	11 27	5 38.45	+20 47.1	0.977	1.933	10.2	18.3
12 7	5 26.59	+ 6 13.9	1.663	2.617	6.7	19.3	12 7	5 27.68	+19 54.7	0.972	1.952	4.1	18.1
12 17	5 16.93	+ 5 33.5	1.683	2.635	6.8	19.3	12 17	5 16.31	+19 5.2	0.992	1.972	3.4	18.1
12 27	5 8.02	+ 5 11.8	1.732	2.652	9.2	19.5	12 27	5 6.32	+18 23.2	1.036	1.993	9.1	18.5
1 6	5 0.82	+ 5 8.6	1.805	2.669	12.3	19.7	1 6	4 59.20	+17 52.7	1.104	2.014	14.3	18.8
1 16	4 55.95	+ 5 21.8	1.901	2.686	15.1	20.0	1 16	4 55.69	+17 35.2	1.191	2.036	18.6	19.2
<b>472678</b>	2015 <i>EU</i> <sub>37</sub>		12 12.9	126°17'	2°1'/13.2	18	<b>95728</b>	2003 <i>DZ</i> <sub>13</sub>		12 12.9	212°20'	3°3'/12.2	18
11 7	5 56.35	+28 14.4	1.661	2.467	16.4	21.5	11 7	5 50.25	+15 43.2	2.012	2.815	14.0	20.6
11 17	5 49.74	+28 29.1	1.594	2.481	12.6	21.3	11 17	5 44.63	+15 7.4	1.924	2.809	10.9	20.3
11 27	5 40.05	+28 37.6	1.550	2.495	8.3	21.1	11 27	5 36.64	+14 33.7	1.859	2.802	7.3	20.1
12 7	5 28.26	+28 37.0	1.531	2.508	3.8	20.9	12 7	5 27.00	+14 4.0	1.822	2.795	4.0	19.9
12 17	5 15.76	+28 25.8	1.541	2.521	2.8	20.8	12 17	5 16.66	+13 40.2	1.815	2.787	3.9	19.9
12 27	5 4.17	+28 5.8	1.581	2.533	7.1	21.1	12 27	5 6.78	+13 24.4	1.836	2.778	7.2	20.1
1 6	4 54.81	+27 40.7	1.647	2.544	11.3	21.4	1 6	4 58.38	+13 17.7	1.886	2.769	10.9	20.3
1 16	4 48.50	+27 15.0	1.736	2.555	14.9	21.7	1 16	4 52.23	+13 20.5	1.959	2.759	14.1	20.5
<b>330773</b>	2008 <i>TR</i> <sub>3</sub>		12 12.9	58°27'	1°2'/12.6	18	<b>178394</b>	1998 <i>HT</i> <sub>41</sub>		12 12.9	217°10'		



EPHEMERIDES

12 12.9

12 12.9

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>354994</b>	2006 <i>OW</i> <sub>21</sub>		12 12.9 124°68	4.7°/13.3	18		<b>386756</b>	2010 <i>CT</i> <sub>59</sub>		12 12.9 231°25	5°0°/12.3	18	
11 7	5 55.27	+34 55.0	2.145	2.927	14.0	21.0	11 7	5 48.98	+11 19.4	1.783	2.590	15.4	21.0
11 17	5 48.68	+35 52.3	2.074	2.940	11.1	20.8	11 17	5 43.93	+10 46.6	1.701	2.585	12.1	20.7
11 27	5 39.32	+36 41.3	2.026	2.952	8.0	20.6	11 27	5 36.34	+10 20.9	1.642	2.580	8.6	20.5
12 7	5 28.04	+37 17.1	2.006	2.965	5.4	20.5	12 7	5 26.96	+10 4.9	1.609	2.574	5.6	20.3
12 17	5 15.97	+37 36.5	2.015	2.976	4.9	20.5	12 17	5 16.81	+10 0.7	1.604	2.569	5.5	20.3
12 27	5 4.53	+37 39.1	2.054	2.988	7.1	20.7	12 27	5 7.14	+10 9.7	1.626	2.563	8.4	20.5
1 6	4 54.92	+37 27.9	2.120	2.999	10.0	20.9	1 6	4 59.08	+10 31.4	1.675	2.556	12.1	20.7
1 16	4 47.98	+37 7.7	2.211	3.009	12.8	21.1	1 16	4 53.43	+11 4.2	1.746	2.550	15.4	20.9
<b>386023</b>	2007 <i>DX</i> <sub>112</sub>		12 12.9 13°94	1°3°/12.8	18		<b>268605</b>	2006 <i>BA</i> <sub>256</sub>		12 12.9 186°28	0°1°/12.9	18	
11 7	5 45.66	+20 47.5	1.003	1.862	20.9	20.4	11 7	5 46.57	+23 17.8	3.088	3.880	9.9	21.9
11 17	5 42.90	+20 43.0	0.949	1.866	16.0	20.1	11 17	5 41.13	+23 18.7	2.998	3.880	7.5	21.8
11 27	5 36.31	+20 39.8	0.914	1.873	10.2	19.8	11 27	5 34.11	+23 18.1	2.933	3.879	4.8	21.6
12 7	5 27.00	+20 38.0	0.900	1.881	4.0	19.5	12 7	5 26.01	+23 15.6	2.898	3.877	1.8	21.4
12 17	5 16.73	+20 37.8	0.909	1.890	3.0	19.5	12 17	5 17.49	+23 11.1	2.894	3.875	1.3	21.3
12 27	5 7.53	+20 40.3	0.941	1.902	9.1	19.9	12 27	5 9.27	+23 5.2	2.922	3.873	4.3	21.5
1 6	5 1.07	+20 47.1	0.996	1.914	14.6	20.2	1 6	5 2.03	+22 58.8	2.980	3.870	7.1	21.7
1 16	4 58.28	+20 59.3	1.070	1.928	19.2	20.5	1 16	4 56.31	+22 53.2	3.065	3.866	9.5	21.9
<b>110749</b>	2001 <i>UN</i> <sub>8</sub>		12 12.9 8°38	0°5°/12.9	18		<b>488383</b>	2016 <i>WX</i> <sub>46</sub>		12 12.9 350°34	0°6°/12.9	18	
11 7	5 48.44	+23 49.3	1.796	2.613	14.9	20.0	11 7	5 47.18	+20 47.9	1.283	2.124	18.3	20.6
11 17	5 43.65	+24 2.1	1.718	2.613	11.4	19.8	11 17	5 43.65	+21 3.0	1.210	2.117	14.1	20.3
11 27	5 36.20	+24 13.5	1.663	2.614	7.3	19.5	11 27	5 36.70	+21 20.8	1.157	2.112	9.1	20.0
12 7	5 26.88	+24 22.0	1.635	2.615	2.8	19.2	12 7	5 27.22	+21 39.9	1.127	2.108	3.5	19.7
12 17	5 16.80	+24 26.6	1.634	2.616	2.0	19.2	12 17	5 16.61	+21 58.9	1.123	2.104	2.5	19.6
12 27	5 7.28	+24 27.8	1.662	2.617	6.5	19.5	12 27	5 6.66	+22 17.3	1.144	2.102	8.2	20.0
1 6	4 59.49	+24 27.2	1.717	2.619	10.6	19.7	1 6	4 58.95	+22 35.9	1.189	2.101	13.4	20.3
1 16	4 54.26	+24 26.9	1.796	2.621	14.2	20.0	1 16	4 54.55	+22 56.0	1.255	2.100	17.8	20.5
<b>270886</b>	2002 <i>TR</i> <sub>209</sub>		12 12.9 47°13	0°2°/12.9	17		<b>521671</b>	2015 <i>RZ</i> <sub>235</sub>		12 12.9 178°00	5°3°/12.4	18	
11 7	5 47.41	+20 59.8	2.130	2.939	13.1	20.0	11 7	5 47.16	+ 8 13.9	2.010	2.807	14.2	21.3
11 17	5 42.36	+21 24.8	2.058	2.949	10.0	19.9	11 17	5 42.22	+ 7 51.5	1.932	2.807	11.4	21.1
11 27	5 35.14	+21 51.2	2.010	2.959	6.4	19.7	11 27	5 35.09	+ 7 38.6	1.878	2.807	8.3	20.9
12 7	5 26.42	+22 17.5	1.990	2.970	2.4	19.4	12 7	5 26.46	+ 7 37.6	1.850	2.807	5.8	20.7
12 17	5 17.13	+22 42.5	1.999	2.981	1.7	19.4	12 17	5 17.22	+ 7 49.8	1.850	2.807	5.7	20.7
12 27	5 8.34	+23 5.6	2.038	2.992	5.6	19.7	12 27	5 8.43	+ 8 15.5	1.878	2.807	8.0	20.9
1 6	5 0.97	+23 27.2	2.105	3.003	9.2	19.9	1 6	5 1.03	+ 8 53.4	1.933	2.807	11.1	21.1
1 16	4 55.73	+23 48.1	2.197	3.014	12.2	20.1	1 16	4 55.73	+ 9 41.1	2.012	2.807	14.0	21.3
<b>334278</b>	2001 <i>UU</i> <sub>99</sub>		12 12.9 68°62	2°5°/12.5	18		<b>492838</b>	2014 <i>QF</i> <sub>322</sub>		12 12.9 90°11	1°3°/13.1	17	
11 7	5 52.78	+18 52.1	1.437	2.259	17.7	20.4	11 7	5 48.71	+26 44.3	2.211	3.014	12.9	22.1
11 17	5 46.93	+18 22.1	1.387	2.284	13.4	20.2	11 17	5 43.33	+26 55.6	2.138	3.024	9.9	21.9
11 27	5 38.15	+17 53.6	1.358	2.308	8.6	20.0	11 27	5 35.75	+27 3.2	2.088	3.034	6.4	21.7
12 7	5 27.52	+17 28.0	1.355	2.333	3.9	19.8	12 7	5 26.69	+27 5.5	2.066	3.044	2.7	21.5
12 17	5 16.45	+17 7.1	1.379	2.357	3.4	19.8	12 17	5 17.09	+27 1.9	2.074	3.054	2.0	21.4
12 27	5 6.43	+16 52.8	1.431	2.382	7.8	20.1	12 27	5 8.03	+26 53.1	2.111	3.064	5.5	21.7
1 6	4 58.66	+16 46.5	1.508	2.406	12.1	20.4	1 6	5 0.47	+26 41.1	2.177	3.073	9.0	21.9
1 16	4 53.83	+16 48.8	1.608	2.430	15.7	20.7	1 16	4 55.07	+26 28.3	2.268	3.083	11.9	22.1
<b>334225</b>	2001 <i>TT</i> <sub>53</sub>		12 12.9 16°58	1°0°/12.8	18		<b>61237</b>	2000 <i>OP</i> <sub>16</sub>		12 12.9 155°40	0°9°/12.8	18	
11 7	5 47.04	+20 10.5	1.100	1.951	20.0	19.8	11 7	5 52.04	+20 57.6	2.002	2.805	14.1	20.3
11 17	5 43.71	+20 22.6	1.044	1.956	15.3	19.5	11 17	5 45.97	+20 51.7	1.925	2.813	10.7	20.1
11 27	5 36.73	+20 37.9	1.007	1.964	9.8	19.2	11 27	5 37.49	+20 45.5	1.872	2.819	6.9	19.9
12 7	5 27.16	+20 55.3	0.991	1.972	3.8	18.9	12 7	5 27.36	+20 38.7	1.846	2.826	2.7	19.7
12 17	5 16.63	+21 13.5	1.001	1.982	2.8	18.9	12 17	5 16.62	+20 31.5	1.851	2.831	2.1	19.6
12 27	5 7.08	+21 32.2	1.034	1.993	8.6	19.3	12 27	5 6.47	+20 24.8	1.885	2.836	6.2	19.9
1 6	5 0.12	+21 52.2	1.091	2.006	14.0	19.6	1 6	4 57.94	+20 20.1	1.947	2.841	10.0	20.2
1 16	4 56.69	+22 14.2	1.167	2.020	18.4	19.9	1 16	4 51.78	+20 19.1	2.035	2.844	13.3	20.4
<b>413312</b>	2003 <i>UU</i> <sub>300</sub>		12 12.9 89°45	0°3°/12.8	18		<b>155313</b>	2005 <i>YZ</i> <sub>170</sub>		12 12.9 209°99	1°5°/12.6	17	
11 7	5 47.73	+23 25.1	2.332	3.136	12.3	21.4	11 7	5 46.60	+18 51.0	2.438	3.240	11.9	21.0
11 17	5 42.31	+23 10.3	2.263	3.151	9.3	21.2	11 17	5 41.53	+18 36.3	2.350	3.237	9.1	20.8
11 27	5 34.94	+22 53.2	2.219	3.167	5.9	21.0	11 27	5 34.54	+18 22.3	2.287	3.233	5.9	20.6
12 7	5 26.31	+22 33.7	2.202	3.182	2.2	20.8	12 7	5 26.23	+18 9.5	2.252	3.230	2.6	20.4
12 17	5 17.28	+22 12.6	2.216	3.197	1.6	20.8	12 17	5 17.39	+17 58.7	2.247	3.226	2.3	20.4
12 27	5 8.82	+21 51.3	2.260	3.212	5.2	21.0	12 27	5 8.93	+17 50.8	2.273	3.221	5.5	20.6
1 6	5 1.75	+21 31.6	2.333	3.227	8.5	21.3	1 6	5 1.67	+17 46.9	2.327	3.217	8.8	20.8
1 16	4 56.64	+21 15.2	2.430	3.242	11.4	21.5	1 16	4 56.23	+17 47.6	2.406	3.212	11.6	21.0
<b>14614</b>	1998 <i>TX</i> <sub>2</sub>		12 12.9 303°45	2°1°/13.2	18 R		<b>328371</b>	2008 <i>QP</i> <sub>18</sub>		12 12.9 178°92	6°0°/11.4	17	
11 7	5 47.61	+28 47.2	2.098	2.904	13.4	18.8	11 7	5 44.85	+ 6 0.1	2.388	3.174	12.6	21.3
11 17	5 42.91	+29 4.0	2.002	2.889	10.4	18.6	11 17	5 40.10	+ 5 2.7	2.311	3.175	10.2	21.2
11 27	5 35.73	+29 16.2	1.930	2.874	6.9	18.3	11 27	5 33.57	+ 4 13.2	2.259	3.175	7.8	21.0
12 7	5 26.74	+29 21.2	1.884	2.860	3.4	18.1	12 7	5 25.85	+ 3 35.1	2.233	3.175	6.2	20.9
12 17	5 16.91	+29 17.9	1.867	2.846	2.7	18.0	12 17	5 17.68	+ 3 11.1	2.236	3.175	6.3	20.9
12 27	5 7.45	+29 6.5	1.880	2.831	6.2	18.2	12 27	5 9.89	+ 3 2.7	2.267	3.175	8.1	21.1
1 6	4 59.49	+28 49.3	1.919	2.817	9.9	18.4	1 6	5 3.26	+ 3 9.7	2.325	3.175	10.4	21.2
1 16	4 53.86	+28 29.6	1.984	2.804	13.2	18.6	1 16	4 58.34	+ 3 30.5	2.406	3.174	12.8	21.4
<b>176312</b>	2001 <i>SS</i> <sub>191</sub>		12 12.9 9°96	0°7°/12.8	18		<b>464409</b>	2016 <i>BH</i> <sub>20</sub>		12 12.			

EPHEMERIDES

12 12.9

12 12.9

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>332087</b>	2005 <i>UE</i> <sub>71</sub>		12 12.9	88°50	2°1/13.3	18	<b>90957</b>	1997 <i>WS</i> <sub>4</sub>		12 12.9	150°23	2°1/13.1	18
11 7	5 57.39	+29 16.0	1.632	2.436	16.7	20.4	11 7	5 54.07	+27 32.5	1.882	2.684	14.9	20.1
11 17	5 50.33	+29 17.3	1.579	2.465	12.8	20.2	11 17	5 47.91	+28 2.9	1.806	2.691	11.5	19.9
11 27	5 40.28	+29 10.5	1.548	2.493	8.4	20.0	11 27	5 38.95	+28 29.4	1.753	2.697	7.6	19.7
12 7	5 28.37	+28 53.5	1.544	2.520	3.8	19.8	12 7	5 28.00	+28 48.8	1.727	2.703	3.5	19.5
12 17	5 16.03	+28 26.0	1.568	2.547	2.8	19.8	12 17	5 16.27	+28 58.8	1.730	2.709	2.8	19.4
12 27	5 4.83	+27 50.8	1.621	2.573	6.9	20.1	12 27	5 5.16	+28 59.7	1.763	2.714	6.6	19.7
1 6	4 55.98	+27 12.7	1.701	2.599	11.0	20.4	1 6	4 55.91	+28 53.7	1.823	2.718	10.5	19.9
1 16	4 50.17	+26 36.3	1.805	2.624	14.4	20.7	1 16	4 49.38	+28 44.4	1.908	2.722	13.9	20.2
<b>489465</b>	2007 <i>DY</i> <sub>27</sub>		12 12.9	329°94	4°2/13.5	17	<b>220408</b>	2003 <i>SG</i> <sub>66</sub>		12 12.9	20°95	0°8/12.9	18
11 7	5 50.22	+33 43.7	1.994	2.792	14.3	21.3	11 7	5 46.61	+20 8.0	1.800	2.620	14.7	19.1
11 17	5 45.09	+34 18.3	1.911	2.789	11.3	21.1	11 17	5 42.16	+20 22.4	1.729	2.626	11.2	18.9
11 27	5 37.20	+34 44.8	1.852	2.786	8.0	20.9	11 27	5 35.22	+20 38.8	1.682	2.633	7.2	18.7
12 7	5 27.34	+34 59.3	1.818	2.783	5.0	20.7	12 7	5 26.58	+20 56.4	1.660	2.640	2.8	18.4
12 17	5 16.63	+34 59.3	1.812	2.781	4.4	20.7	12 17	5 17.27	+21 14.1	1.667	2.648	2.0	18.4
12 27	5 6.46	+34 45.0	1.835	2.778	7.1	20.9	12 27	5 8.53	+21 32.0	1.702	2.657	6.4	18.7
1 6	4 58.07	+34 19.8	1.885	2.776	10.4	21.1	1 6	5 1.44	+21 50.2	1.764	2.666	10.4	18.9
1 16	4 52.32	+33 48.2	1.958	2.774	13.5	21.3	1 16	4 56.75	+22 9.6	1.850	2.676	13.8	19.2
<b>441004</b>	2007 <i>DG</i> <sub>82</sub>		12 12.9	241°49	0°1/12.9	18	<b>465303</b>	2007 <i>TR</i> <sub>425</sub>		12 12.9	48°77	2°5/13.2	18
11 7	5 51.76	+22 41.3	1.767	2.579	15.3	22.2	11 7	5 47.64	+29 59.5	2.524	3.319	11.7	21.3
11 17	5 46.37	+22 46.9	1.677	2.569	11.8	22.0	11 17	5 42.48	+30 33.7	2.442	3.321	9.1	21.2
11 27	5 38.11	+22 51.7	1.609	2.558	7.6	21.7	11 27	5 35.25	+31 3.5	2.384	3.323	6.1	21.0
12 7	5 27.72	+22 54.4	1.567	2.547	2.9	21.4	12 7	5 26.57	+31 26.5	2.354	3.325	3.3	20.8
12 17	5 16.34	+22 54.3	1.554	2.536	2.0	21.3	12 17	5 17.27	+31 41.0	2.353	3.328	2.8	20.8
12 27	5 5.42	+22 51.8	1.571	2.524	6.9	21.6	12 27	5 8.37	+31 46.8	2.383	3.330	5.4	20.9
1 6	4 56.27	+22 48.9	1.613	2.512	11.4	21.8	1 6	5 0.75	+31 45.3	2.442	3.333	8.4	21.1
1 16	4 49.83	+22 47.8	1.680	2.500	15.2	22.1	1 16	4 55.10	+31 39.1	2.526	3.335	11.1	21.3
<b>12206</b>	1981 <i>EG</i> <sub>27</sub>		12 12.9	221°16	0°8/13.1	17	<b>488240</b>	2016 <i>AO</i> <sub>184</sub>		12 12.9	27°33	2°4/12.9	17
11 7	5 47.95	+26 2.0	2.325	3.127	12.4	19.8	11 7	5 47.80	+14 11.4	2.173	2.975	13.1	20.3
11 17	5 42.76	+26 3.1	2.237	3.124	9.5	19.6	11 17	5 42.66	+14 30.6	2.092	2.976	10.2	20.1
11 27	5 35.42	+26 0.7	2.174	3.121	6.1	19.4	11 27	5 35.39	+14 56.3	2.034	2.978	6.7	19.9
12 7	5 26.60	+25 53.7	2.139	3.117	2.5	19.2	12 7	5 26.63	+15 28.2	2.004	2.979	3.4	19.7
12 17	5 17.18	+25 41.9	2.133	3.114	1.7	19.1	12 17	5 17.23	+16 5.6	2.004	2.980	2.9	19.7
12 27	5 8.19	+25 26.1	2.157	3.110	5.4	19.4	12 27	5 8.21	+16 47.3	2.034	2.981	6.1	19.9
1 6	5 0.56	+25 8.5	2.210	3.106	8.9	19.6	1 6	5 0.51	+17 32.1	2.092	2.983	9.6	20.1
1 16	4 54.97	+24 51.4	2.288	3.102	11.9	19.8	1 16	4 54.83	+18 19.3	2.175	2.984	12.6	20.3
<b>112668</b>	2002 <i>PH</i> <sub>92</sub>		12 12.9	334°10	10°9/13.2	18	<b>348949</b>	2006 <i>TY</i> <sub>106</sub>		12 12.9	39°24	1°5/13.0	18
11 7	5 48.37	- 6 2.2	1.792	2.549	17.2	19.3	11 7	5 49.92	+25 29.7	1.628	2.448	16.0	20.6
11 17	5 43.37	- 6 37.1	1.722	2.547	15.0	19.1	11 17	5 45.00	+25 58.1	1.562	2.458	12.3	20.4
11 27	5 35.94	- 6 49.9	1.671	2.545	12.8	19.0	11 27	5 37.19	+26 24.1	1.518	2.468	7.9	20.1
12 7	5 26.83	- 6 35.2	1.643	2.543	11.2	18.9	12 7	5 27.36	+26 45.0	1.500	2.479	3.3	19.9
12 17	5 17.03	- 5 50.4	1.639	2.541	11.1	18.9	12 17	5 16.77	+26 58.8	1.509	2.490	2.5	19.8
12 27	5 7.74	- 4 36.5	1.661	2.540	12.3	19.0	12 27	5 6.90	+27 5.5	1.546	2.501	6.9	20.1
1 6	5 0.00	- 2 58.3	1.707	2.538	14.5	19.1	1 6	4 59.03	+27 7.3	1.610	2.513	11.1	20.4
1 16	4 54.59	- 1 2.7	1.775	2.537	16.9	19.3	1 16	4 53.98	+27 6.8	1.696	2.525	14.7	20.7
<b>288141</b>	2003 <i>WQ</i> <sub>101</sub>		12 12.9	338°70	10°2/12.8	18	<b>445215</b>	2009 <i>EN</i> <sub>16</sub>		12 12.9	213°89	5°0/12.0	18
11 7	5 44.53	+ 1 6.0	1.355	2.166	19.1	19.5	11 7	5 47.83	+ 9 44.2	2.190	2.984	13.3	21.6
11 17	5 41.29	+ 0 28.1	1.279	2.151	16.1	19.3	11 17	5 42.61	+ 9 4.3	2.105	2.979	10.6	21.4
11 27	5 35.08	+ 0 10.6	1.221	2.138	13.0	19.0	11 27	5 35.33	+ 8 30.7	2.043	2.973	7.7	21.2
12 7	5 26.63	+ 0 20.0	1.185	2.125	10.7	18.9	12 7	5 26.60	+ 8 6.2	2.008	2.966	5.4	21.0
12 17	5 17.14	+ 1 0.0	1.172	2.113	10.5	18.8	12 17	5 17.27	+ 7 53.1	2.002	2.959	5.4	21.0
12 27	5 8.10	+ 2 10.5	1.183	2.103	12.7	18.9	12 27	5 8.33	+ 7 52.7	2.025	2.952	7.7	21.1
1 6	5 0.92	+ 3 46.1	1.217	2.094	16.0	19.1	1 6	5 0.67	+ 8 5.0	2.076	2.944	10.7	21.3
1 16	4 56.59	+ 5 39.5	1.271	2.086	19.4	19.3	1 16	4 54.97	+ 8 28.8	2.150	2.936	13.5	21.5
<b>320003</b>	2007 <i>DP</i> <sub>30</sub>		12 12.9	337°21	6°5/12.1	18	<b>454717</b>	2014 <i>SM</i> <sub>212</sub>		12 12.9	32°66	8°6/10.9	18
11 7	5 45.46	+ 5 58.5	1.974	2.770	14.5	20.6	11 7	5 44.03	+ 1 24.1	2.000	2.785	14.7	20.3
11 17	5 40.98	+ 5 18.4	1.897	2.768	11.7	20.4	11 17	5 39.71	- 0 0.3	1.942	2.795	12.3	20.1
11 27	5 34.34	+ 4 48.8	1.843	2.765	8.9	20.2	11 27	5 33.42	- 1 11.9	1.907	2.806	10.1	20.0
12 7	5 26.21	+ 4 33.2	1.814	2.763	6.9	20.1	12 7	5 25.84	- 2 5.3	1.897	2.816	8.8	19.9
12 17	5 17.49	+ 4 33.9	1.813	2.760	6.8	20.1	12 17	5 17.83	- 2 36.5	1.912	2.828	8.9	20.0
12 27	5 9.19	+ 4 51.9	1.839	2.758	8.9	20.2	12 27	5 10.36	- 2 44.1	1.954	2.839	10.4	20.1
1 6	5 2.27	+ 5 25.8	1.891	2.757	11.7	20.4	1 6	5 4.25	- 2 29.5	2.020	2.851	12.6	20.2
1 16	4 57.42	+ 6 12.9	1.966	2.755	14.5	20.6	1 16	5 0.08	- 1 56.0	2.108	2.864	14.7	20.4
<b>325710</b>	2009 <i>UL</i> <sub>90</sub>		12 12.9	27°26	6°3/12.4	18	<b>249069</b>	2007 <i>UP</i> <sub>7</sub>		12 12.9	128°40	6°0/14.8	18
11 7	5 45.41	+ 6 37.8	1.885	2.687	14.9	19.8	11 7	5 57.81	+41 37.0	2.016	2.782	15.3	20.5
11 17	5 40.95	+ 6 6.0	1.818	2.692	12.0	19.6	11 17	5 50.77	+41 46.5	1.942	2.792	12.5	20.3
11 27	5 34.31	+ 5 45.2	1.772	2.698	9.0	19.4	11 27	5 40.69	+41 39.8	1.890	2.801	9.5	20.1
12 7	5 26.19	+ 5 38.5	1.752	2.704	6.7	19.3	12 7	5 28.61	+41 12.5	1.864	2.810	6.9	20.0
12 17	5 17.52	+ 5 47.9	1.758	2.710	6.5	19.3	12 17	5 15.97	+40 23.0	1.865	2.819	6.1	20.0
12 27	5 9.37	+ 6 13.5	1.793	2.717	8.7	19.4	12 27	5 4.33	+39 14.3	1.896	2.827	7.9	20.1
1 6	5 2.68	+ 6 53.4	1.852	2.724	11.6	19.6	1 6	4 54.96	+37 52.9	1.954	2.835	10.7	20.3
1 16	4 58.11	+ 7 45.0	1.935	2.732	14.4	19.8	1 16	4 48.63	+36 26.8	2.038	2.842	13.5	20.5
<b>201621</b>	2003 <i>SJ</i> <sub>252</sub>		12 12.9	38°13	3°4/12.8	17	<b>220050</b>	2002 <i>RU</i> <sub>93</sub>		12 12.9			

EPHEMERIDES

12 12.9

12 12.9

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>74305</b>	1998 <i>TD</i> <sub>13</sub>		12 12.9 73°61	0°9/13.0	18		<b>420191</b>	2011 <i>GT</i> <sub>60</sub>		12 12.9 315°55	7°5/13.8	18	
11 7	5 50.65	+25 17.5	1.767	2.581	15.2	19.4	11 7	5 51.25	+41 55.6	1.996	2.772	15.0	20.9
11 17	5 45.31	+25 28.4	1.698	2.591	11.6	19.2	11 17	5 46.50	+42 50.8	1.900	2.752	12.6	20.6
11 27	5 37.26	+25 36.2	1.652	2.600	7.5	19.0	11 27	5 38.51	+43 33.6	1.826	2.732	10.0	20.4
12 7	5 27.37	+25 39.3	1.631	2.610	3.0	18.8	12 7	5 28.04	+43 57.7	1.776	2.713	8.0	20.3
12 17	5 16.80	+25 36.6	1.639	2.620	2.1	18.7	12 17	5 16.33	+43 58.4	1.752	2.693	7.6	20.2
12 27	5 6.94	+25 29.2	1.676	2.631	6.5	19.0	12 27	5 5.05	+43 34.9	1.755	2.674	9.2	20.3
1 6	4 58.94	+25 19.3	1.740	2.641	10.6	19.3	1 6	4 55.74	+42 51.2	1.783	2.656	12.0	20.4
1 16	4 53.58	+25 9.8	1.827	2.651	14.0	19.5	1 16	4 49.51	+41 53.9	1.835	2.638	14.8	20.6
<b>376751</b>	1999 <i>UU</i> <sub>40</sub>		12 12.9 45°77	1°7/13.2	18		<b>189503</b>	2000 <i>AH</i> <sub>228</sub>		12 12.9 42°60	0°3/12.9	17	
11 7	5 46.08	+28 14.3	2.622	3.420	11.3	21.4	11 7	5 47.45	+24 30.0	2.006	2.818	13.7	20.7
11 17	5 41.15	+28 33.1	2.540	3.423	8.7	21.2	11 17	5 42.57	+24 27.4	1.934	2.826	10.5	20.5
11 27	5 34.33	+28 48.0	2.483	3.426	5.7	21.0	11 27	5 35.39	+24 22.0	1.885	2.835	6.7	20.2
12 7	5 26.22	+28 57.7	2.454	3.430	2.7	20.8	12 7	5 26.66	+24 13.1	1.863	2.843	2.6	20.0
12 17	5 17.59	+29 1.0	2.455	3.433	2.1	20.8	12 17	5 17.38	+24 0.8	1.870	2.852	1.7	20.0
12 27	5 9.34	+28 58.3	2.486	3.437	5.0	21.0	12 27	5 8.68	+23 46.3	1.907	2.861	5.8	20.2
1 6	5 2.31	+28 51.1	2.546	3.440	7.9	21.2	1 6	5 1.55	+23 31.7	1.970	2.870	9.6	20.5
1 16	4 57.09	+28 41.5	2.632	3.444	10.6	21.4	1 16	4 56.67	+23 19.1	2.058	2.880	12.8	20.7
<b>420089</b>	2011 <i>EC</i> <sub>55</sub>		12 12.9 325°20	5°1/13.5	18		<b>461040</b>	2014 <i>WT</i> <sub>501</sub>		12 12.9 355°71	7°8/12.1	17	
11 7	5 50.48	+37 6.0	2.264	3.047	13.3	21.0	11 7	5 43.47	+2 35.4	1.927	2.720	14.9	20.4
11 17	5 45.16	+37 55.7	2.180	3.044	10.7	20.8	11 17	5 39.53	+1 52.4	1.855	2.717	12.4	20.3
11 27	5 37.23	+38 36.6	2.120	3.041	8.0	20.6	11 27	5 33.47	+1 22.7	1.804	2.715	9.8	20.1
12 7	5 27.42	+39 4.3	2.085	3.038	5.7	20.5	12 7	5 25.96	+1 10.7	1.777	2.713	8.1	20.0
12 17	5 16.76	+39 15.6	2.079	3.035	5.3	20.4	12 17	5 17.85	+1 18.7	1.776	2.711	8.0	20.0
12 27	5 6.55	+39 10.2	2.102	3.033	7.2	20.5	12 27	5 10.17	+1 47.4	1.802	2.711	9.8	20.1
1 6	4 57.96	+38 50.9	2.152	3.030	9.9	20.7	1 6	5 3.85	+2 34.7	1.853	2.711	12.3	20.2
1 16	4 51.86	+38 22.3	2.226	3.028	12.6	20.9	1 16	4 59.56	+3 36.8	1.926	2.711	14.9	20.4
<b>365944</b>	2012 <i>AZ</i> <sub>16</sub>		12 12.9 324°54	0°2/12.9	17		<b>447605</b>	2006 <i>UO</i> <sub>123</sub>		12 12.9 132°25	0°9/13.1	18	
11 7	5 47.85	+21 21.5	1.631	2.455	15.8	20.8	11 7	5 50.20	+25 15.0	2.020	2.826	13.9	22.0
11 17	5 43.71	+21 52.8	1.542	2.441	12.2	20.5	11 17	5 44.73	+25 25.5	1.943	2.831	10.6	21.8
11 27	5 36.62	+22 27.1	1.474	2.426	7.9	20.2	11 27	5 36.83	+25 33.3	1.889	2.836	6.8	21.6
12 7	5 27.28	+23 2.4	1.432	2.412	3.0	19.9	12 7	5 27.23	+25 36.7	1.862	2.841	2.7	21.3
12 17	5 16.81	+23 36.5	1.417	2.399	2.1	19.8	12 17	5 16.98	+25 35.0	1.864	2.845	1.9	21.3
12 27	5 6.70	+24 8.0	1.430	2.386	7.2	20.1	12 27	5 7.29	+25 28.9	1.896	2.849	5.9	21.5
1 6	4 58.35	+24 36.7	1.469	2.374	11.8	20.3	1 6	4 59.20	+25 20.3	1.955	2.853	9.7	21.8
1 16	4 52.79	+25 3.8	1.531	2.363	15.9	20.6	1 16	4 53.48	+25 11.6	2.040	2.857	13.0	22.0
<b>109719</b>	2001 <i>RG</i> <sub>53</sub>		12 12.9 9°20	2°2/12.8	18		<b>189818</b>	2002 <i>NL</i> <sub>33</sub>		12 12.9 34°90	3°1/13.8	18	
11 7	5 48.04	+16 38.0	1.710	2.529	15.4	18.8	11 7	5 49.33	+33 22.2	1.921	2.723	14.6	18.4
11 17	5 43.40	+16 46.3	1.635	2.529	11.9	18.6	11 17	5 44.14	+33 11.2	1.855	2.736	11.4	18.2
11 27	5 36.13	+16 59.8	1.582	2.530	7.8	18.4	11 27	5 36.40	+32 49.5	1.811	2.750	7.8	18.0
12 7	5 27.00	+17 18.3	1.554	2.532	3.6	18.1	12 7	5 27.03	+32 15.5	1.793	2.764	4.2	17.9
12 17	5 17.09	+17 41.5	1.555	2.534	3.0	18.1	12 17	5 17.18	+31 29.5	1.803	2.779	3.3	17.8
12 27	5 7.71	+18 8.7	1.584	2.536	7.0	18.3	12 27	5 8.14	+30 34.7	1.843	2.794	6.3	18.0
1 6	5 0.04	+18 39.5	1.639	2.538	11.2	18.6	1 6	5 0.98	+29 35.8	1.910	2.809	9.8	18.3
1 16	4 54.88	+19 13.6	1.717	2.541	14.8	18.8	1 16	4 56.34	+28 37.8	2.001	2.825	13.0	18.5
<b>404027</b>	2012 <i>CU</i> <sub>37</sub>		12 12.9 357°00	2°3/12.7	18		<b>208344</b>	2001 <i>QZ</i> <sub>253</sub>		12 12.9 151°27	4°9/13.9	18	
11 7	5 46.99	+17 12.1	1.774	2.592	15.0	20.9	11 7	5 54.91	+38 22.7	2.453	3.219	12.8	20.8
11 17	5 42.51	+17 4.1	1.696	2.591	11.5	20.7	11 17	5 48.20	+38 59.2	2.375	3.228	10.4	20.7
11 27	5 35.52	+16 59.6	1.641	2.590	7.6	20.5	11 27	5 38.98	+39 25.4	2.321	3.237	7.7	20.5
12 7	5 26.76	+16 59.2	1.612	2.589	3.5	20.2	12 7	5 28.04	+39 37.1	2.295	3.245	5.5	20.4
12 17	5 17.27	+17 3.3	1.611	2.589	3.1	20.2	12 17	5 16.45	+39 32.2	2.298	3.252	5.0	20.4
12 27	5 8.30	+17 12.5	1.638	2.589	7.0	20.5	12 27	5 5.46	+39 11.2	2.330	3.259	6.7	20.5
1 6	5 0.96	+17 27.2	1.691	2.589	11.0	20.7	1 6	4 56.15	+38 37.6	2.391	3.265	9.3	20.7
1 16	4 56.02	+17 47.4	1.768	2.590	14.5	20.9	1 16	4 49.29	+37 56.2	2.477	3.270	11.7	20.9
<b>65591</b>	2147 <i>T</i> <sub>-3</sub>		12 12.9 76°92	4°6/12.1	18		<b>157720</b>	2006 <i>BD</i> <sub>20</sub>		12 12.9 184°85	3°0/12.6	18	
11 7	5 50.20	+14 39.9	1.577	2.395	16.6	19.0	11 7	5 46.54	+13 19.5	2.414	3.212	12.1	19.9
11 17	5 44.91	+13 41.3	1.516	2.407	12.9	18.8	11 17	5 41.50	+13 14.2	2.331	3.212	9.4	19.7
11 27	5 36.95	+12 46.6	1.477	2.420	8.8	18.6	11 27	5 34.58	+13 14.0	2.272	3.212	6.4	19.5
12 7	5 27.24	+11 59.3	1.463	2.433	5.3	18.4	12 7	5 26.37	+13 19.7	2.241	3.212	3.6	19.3
12 17	5 16.99	+11 23.0	1.477	2.446	5.2	18.4	12 17	5 17.63	+13 31.9	2.240	3.211	3.4	19.3
12 27	5 7.55	+11 0.3	1.518	2.458	8.6	18.6	12 27	5 9.25	+13 50.5	2.268	3.210	6.0	19.5
1 6	5 0.03	+10 52.0	1.585	2.471	12.4	18.9	1 6	5 2.03	+14 15.3	2.325	3.209	9.0	19.7
1 16	4 55.14	+10 57.5	1.674	2.484	15.8	19.2	1 16	4 56.60	+14 45.5	2.408	3.208	11.8	19.9
<b>374662</b>	2006 <i>KN</i> <sub>51</sub>		12 12.9 138°68	2°4/12.6	16		<b>383504</b>	2007 <i>CD</i> <sub>11</sub>		12 12.9 300°77	1°4/12.8	18	
11 7	5 54.59	+18 16.0	1.679	2.488	16.1	22.6	11 7	5 49.65	+20 24.8	1.438	2.267	17.3	21.7
11 17	5 48.21	+17 51.2	1.611	2.500	12.4	22.4	11 17	5 45.34	+20 17.2	1.353	2.254	13.4	21.4
11 27	5 39.07	+17 27.8	1.565	2.512	8.0	22.1	11 27	5 37.78	+20 10.2	1.290	2.242	8.7	21.1
12 7	5 28.06	+17 6.7	1.546	2.523	3.7	21.9	12 7	5 27.77	+20 3.9	1.250	2.230	3.5	20.8
12 17	5 16.43	+16 49.3	1.556	2.534	3.3	21.9	12 17	5 16.62	+19 58.5	1.237	2.218	2.8	20.7
12 27	5 5.58	+16 37.3	1.595	2.543	7.4	22.2	12 27	5 5.99	+19 55.3	1.252	2.207	8.1	21.0
1 6	4 56.70	+16 32.3	1.661	2.552	11.6	22.4	1 6	4 57.40	+19 56.0	1.290	2.196	13.1	21.2
1 16	4 50.56	+16 34.9	1.750	2.560	15.1	22.7	1 16	4 51.91	+20 2.3	1.351	2.185	17.5	21.5
<b>334189</b>	2001 <i>SU</i> <sub>197</sub>		12 12.9 76°30	0°8/13.0	18		<b>206410</b>	2003 <i>SE</i> <sub>99</sub>		12 12.9 54°14	0°8		

EPHEMERIDES

12 12.9

12 12.9

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>207254</b>	2005 <i>EX</i> <sub>242</sub>		12 12.9 88°34	5°3/12.9 18			<b>241647</b>	2000 <i>EL</i>		12 12.9 338°29	2°3/13.3 18		
11 7	5 50.53	+ 7 48.4	1.874	2.668	15.2	19.6	11 7	5 49.57	+28 2.8	1.270	2.105	18.8	20.5
11 17	5 44.76	+ 7 40.2	1.814	2.687	12.1	19.5	11 17	5 45.80	+28 13.2	1.194	2.097	14.6	20.2
11 27	5 36.71	+ 7 43.2	1.777	2.706	8.7	19.3	11 27	5 38.31	+28 16.9	1.138	2.090	9.7	19.9
12 7	5 27.16	+ 7 59.1	1.767	2.725	5.9	19.2	12 7	5 28.05	+28 10.7	1.105	2.083	4.4	19.6
12 17	5 17.14	+ 8 28.2	1.784	2.744	5.6	19.2	12 17	5 16.57	+27 53.1	1.097	2.077	3.2	19.5
12 27	5 7.77	+ 9 9.5	1.831	2.763	8.0	19.4	12 27	5 5.85	+27 25.9	1.114	2.072	8.4	19.8
1 6	5 0.02	+10 0.7	1.904	2.781	11.1	19.6	1 6	4 57.62	+26 53.9	1.155	2.067	13.7	20.1
1 16	4 54.55	+10 59.1	2.001	2.799	14.0	19.8	1 16	4 52.98	+26 22.6	1.217	2.064	18.2	20.3
<b>369761</b>	2012 <i>FJ</i> <sub>76</sub>		12 12.9 130°31	8°6/11.9 18			<b>397269</b>	2006 <i>RE</i> <sub>61</sub>		12 12.9 125°91	3°8/14.0 18		
11 7	5 44.94	-10 8.9	3.025	3.731	11.9	21.2	11 7	5 54.63	+35 34.9	2.126	2.909	14.0	21.0
11 17	5 39.78	-10 57.3	2.968	3.745	10.5	21.1	11 17	5 48.05	+35 36.6	2.053	2.921	11.1	20.8
11 27	5 33.23	-11 30.3	2.933	3.758	9.4	21.0	11 27	5 38.89	+35 27.0	2.002	2.932	7.8	20.6
12 7	5 25.80	-11 44.7	2.923	3.771	8.7	21.0	12 7	5 28.04	+35 3.3	1.979	2.943	4.8	20.4
12 17	5 18.07	-11 38.8	2.939	3.784	8.7	21.0	12 17	5 16.67	+34 24.8	1.985	2.954	4.0	20.4
12 27	5 10.71	-11 12.4	2.980	3.796	9.4	21.1	12 27	5 6.10	+33 34.1	2.020	2.964	6.5	20.6
1 6	5 4.30	-10 27.5	3.046	3.808	10.5	21.2	1 6	4 57.42	+32 35.8	2.084	2.974	9.6	20.8
1 16	4 59.29	- 9 27.4	3.135	3.820	11.7	21.3	1 16	4 51.32	+31 35.5	2.174	2.984	12.6	21.0
<b>244477</b>	2002 <i>SJ</i> <sub>17</sub>		12 12.9 126°20	1°3/12.7 18			<b>9948</b>	1990 <i>QB</i> <sub>2</sub>		12 12.9 92°68	1°3/12.8 18 R		
11 7	5 50.57	+19 56.1	2.191	2.992	13.1	21.9	11 7	5 54.20	+20 20.2	1.635	2.447	16.3	18.2
11 17	5 44.61	+19 42.1	2.121	3.007	10.0	21.8	11 17	5 47.90	+20 9.1	1.578	2.470	12.4	18.0
11 27	5 36.54	+19 28.3	2.075	3.021	6.4	21.6	11 27	5 38.85	+19 58.4	1.544	2.493	7.9	17.8
12 7	5 27.10	+19 14.9	2.057	3.035	2.7	21.4	12 7	5 28.02	+19 48.1	1.536	2.515	3.2	17.6
12 17	5 17.19	+19 2.5	2.069	3.048	2.2	21.3	12 17	5 16.70	+19 38.5	1.557	2.537	2.5	17.6
12 27	5 7.87	+18 52.2	2.111	3.061	5.8	21.6	12 27	5 6.30	+19 31.0	1.607	2.559	7.0	17.9
1 6	5 0.02	+18 45.4	2.183	3.073	9.2	21.8	1 6	4 57.95	+19 27.3	1.683	2.580	11.1	18.2
1 16	4 54.28	+18 43.1	2.279	3.085	12.2	22.1	1 16	4 52.36	+19 28.5	1.783	2.600	14.6	18.5
<b>301283</b>	2009 <i>BA</i> <sub>105</sub>		12 12.9 259°23	2°8/12.6 18			<b>21931</b>	1999 <i>VB</i> <sub>64</sub>		12 12.9 165°30	4°1/11.9 18		
11 7	5 48.64	+16 45.1	1.804	2.618	14.9	21.5	11 7	5 49.62	+13 50.9	2.113	2.912	13.6	19.0
11 17	5 43.73	+16 23.3	1.724	2.616	11.5	21.3	11 17	5 43.99	+12 56.6	2.036	2.917	10.6	18.8
11 27	5 36.30	+16 4.2	1.667	2.614	7.6	21.0	11 27	5 36.23	+12 5.1	1.982	2.920	7.3	18.6
12 7	5 27.09	+15 49.3	1.636	2.611	3.8	20.8	12 7	5 27.04	+11 19.2	1.957	2.924	4.5	18.5
12 17	5 17.16	+15 39.7	1.633	2.609	3.5	20.8	12 17	5 17.35	+10 41.9	1.961	2.926	4.6	18.5
12 27	5 7.75	+15 36.8	1.659	2.607	7.2	21.0	12 27	5 8.17	+10 15.3	1.994	2.929	7.3	18.7
1 6	4 59.98	+15 41.3	1.711	2.604	11.2	21.2	1 6	5 0.43	+10 0.6	2.056	2.930	10.5	18.9
1 16	4 54.61	+15 53.5	1.786	2.602	14.7	21.5	1 16	4 54.77	+ 9 57.8	2.141	2.932	13.4	19.1
<b>31199</b>	1998 <i>AK</i> <sub>3</sub>		12 12.9 295°89	1°9/12.7 18			<b>489920</b>	2008 <i>QG</i> <sub>22</sub>		12 12.9 92°38	0°3/12.9 18		
11 7	5 47.71	+18 0.1	1.956	2.768	14.0	18.6	11 7	5 48.76	+23 28.2	2.516	3.314	11.7	21.1
11 17	5 42.90	+17 54.3	1.872	2.764	10.8	18.3	11 17	5 42.96	+23 10.8	2.453	3.337	8.8	21.0
11 27	5 35.72	+17 50.9	1.812	2.760	7.0	18.1	11 27	5 35.37	+22 51.0	2.414	3.361	5.6	20.8
12 7	5 26.88	+17 50.4	1.779	2.756	3.2	17.9	12 7	5 26.65	+22 28.9	2.404	3.384	2.1	20.6
12 17	5 17.32	+17 52.9	1.774	2.752	2.7	17.8	12 17	5 17.64	+22 5.4	2.425	3.407	1.5	20.6
12 27	5 8.21	+17 59.2	1.798	2.749	6.5	18.1	12 27	5 9.20	+21 41.8	2.477	3.429	4.9	20.9
1 6	5 0.59	+18 9.8	1.849	2.745	10.3	18.3	1 6	5 2.08	+21 20.0	2.559	3.451	8.0	21.1
1 16	4 55.21	+18 25.0	1.925	2.741	13.7	18.5	1 16	4 56.81	+21 1.5	2.666	3.473	10.6	21.3
<b>459739</b>	2013 <i>QE</i> <sub>10</sub>		12 12.9 146°94	5°0/11.9 17			<b>140206</b>	2001 <i>SB</i> <sub>228</sub>		12 12.9 99°25	0°4/13.0 18		
11 7	5 44.54	+ 6 27.0	2.744	3.525	11.3	22.3	11 7	5 52.10	+24 30.0	2.221	3.019	13.1	21.3
11 17	5 39.68	+ 5 49.4	2.669	3.531	9.1	22.2	11 17	5 45.73	+24 32.6	2.160	3.044	9.9	21.1
11 27	5 33.28	+ 5 19.3	2.619	3.536	6.8	22.0	11 27	5 37.23	+24 32.5	2.124	3.070	6.3	21.0
12 7	5 25.86	+ 4 58.9	2.596	3.542	5.2	22.0	12 7	5 27.38	+24 28.7	2.115	3.094	2.4	20.7
12 17	5 18.06	+ 4 50.0	2.603	3.547	5.2	22.0	12 17	5 17.15	+24 21.1	2.137	3.118	1.6	20.7
12 27	5 10.62	+ 4 53.3	2.639	3.552	6.8	22.1	12 27	5 7.59	+24 10.6	2.190	3.142	5.4	21.0
1 6	5 4.18	+ 5 8.3	2.702	3.556	9.0	22.2	1 6	4 59.60	+23 59.2	2.271	3.165	8.8	21.3
1 16	4 59.24	+ 5 33.7	2.790	3.561	11.1	22.4	1 16	4 53.79	+23 48.9	2.378	3.187	11.7	21.5
<b>193108</b>	2000 <i>GB</i> <sub>138</sub>		12 12.9 283°16	8°0/13.3 18			<b>350379</b>	2012 <i>UG</i> <sub>160</sub>		12 12.9 156°83	0°9/13.1 18		
11 7	5 55.80	+45 27.5	2.404	3.149	13.7	20.0	11 7	5 52.96	+25 21.0	2.007	2.808	14.1	21.5
11 17	5 49.67	+46 53.8	2.323	3.146	11.6	19.8	11 17	5 46.88	+25 32.8	1.928	2.814	10.8	21.3
11 27	5 40.43	+48 8.2	2.265	3.143	9.7	19.7	11 27	5 38.25	+25 41.7	1.874	2.820	7.0	21.0
12 7	5 28.80	+49 3.7	2.232	3.140	8.3	19.6	12 7	5 27.86	+25 45.8	1.847	2.826	2.8	20.8
12 17	5 15.96	+49 35.3	2.227	3.138	8.1	19.6	12 17	5 16.79	+25 44.2	1.849	2.830	1.9	20.7
12 27	5 3.50	+49 41.6	2.249	3.135	9.2	19.7	12 27	5 6.30	+25 37.6	1.882	2.835	6.1	21.0
1 6	4 52.89	+49 25.8	2.297	3.132	11.1	19.8	1 6	4 57.50	+25 28.1	1.943	2.838	9.9	21.3
1 16	4 45.19	+48 53.7	2.367	3.130	13.1	19.9	1 16	4 51.17	+25 18.4	2.028	2.842	13.2	21.5
<b>115089</b>	2003 <i>SF</i> <sub>14</sub>		12 12.9 138°66	0°8/12.8 18			<b>474229</b>	2001 <i>FR</i> <sub>107</sub>		12 12.9 294°16	5°4/13.6 18		
11 7	5 47.25	+20 40.0	2.510	3.311	11.6	20.2	11 7	5 53.45	+34 8.0	1.405	2.220	18.4	20.8
11 17	5 41.97	+20 34.1	2.432	3.318	8.8	20.0	11 17	5 48.98	+34 41.7	1.316	2.203	14.7	20.5
11 27	5 34.84	+20 28.1	2.378	3.325	5.7	19.8	11 27	5 40.55	+35 4.9	1.247	2.185	10.6	20.2
12 7	5 26.47	+20 22.0	2.352	3.331	2.3	19.6	12 7	5 29.01	+35 11.2	1.200	2.168	6.6	20.0
12 17	5 17.64	+20 16.0	2.357	3.337	1.7	19.6	12 17	5 15.92	+34 56.1	1.180	2.151	5.7	19.9
12 27	5 9.24	+20 10.9	2.393	3.343	5.1	19.8	12 27	5 3.40	+34 19.8	1.185	2.133	9.4	20.0
1 6	5 2.06	+20 7.7	2.457	3.349	8.3	20.1	1 6	4 53.43	+33 28.3	1.214	2.116	14.0	20.2
1 16	4 56.67	+20 7.5	2.547	3.355	11.0	20.2	1 16	4 47.27	+32 30.3	1.265	2.100	18.4	20.5
<b>71774</b>	2000 <i>SA</i> <sub>121</sub>		12 12.9 95°81	2°3/12.8 18			<b>391549</b>	2007 <i>TR</i> <sub>33</sub>		12 12.9 117°87	1°6/13.		

EPHEMERIDES

12 12.9

12 12.9

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>67443</b>	2000 <i>QH</i> <sub>149</sub>		12 12.9 191°22	0°6/13.1	18		<b>249952</b>	2001 <i>TD</i> <sub>222</sub>		12 12.9 105°57	2°5/12.4	18	
11 7	5 54.86	+25 4.3	1.625	2.436	16.4	20.0	11 7	5 49.70	+17 56.3	2.152	2.955	13.2	20.7
11 17	5 48.94	+25 1.5	1.545	2.436	12.7	19.7	11 17	5 43.93	+17 13.3	2.086	2.972	10.1	20.5
11 27	5 39.88	+24 54.7	1.486	2.434	8.2	19.5	11 27	5 36.12	+16 31.0	2.044	2.989	6.6	20.3
12 7	5 28.57	+24 42.4	1.453	2.433	3.2	19.2	12 7	5 27.02	+15 51.0	2.030	3.005	3.3	20.2
12 17	5 16.34	+24 24.0	1.449	2.430	2.2	19.1	12 17	5 17.53	+15 15.5	2.046	3.021	3.1	20.2
12 27	5 4.79	+24 1.3	1.473	2.427	7.2	19.4	12 27	5 8.67	+14 46.5	2.092	3.037	6.2	20.4
1 6	4 55.33	+23 37.7	1.524	2.424	11.8	19.7	1 6	5 1.28	+14 25.7	2.167	3.052	9.5	20.6
1 16	4 48.89	+23 17.0	1.598	2.420	15.8	19.9	1 16	4 55.96	+14 13.6	2.266	3.067	12.4	20.9
<b>164983</b>	2000 <i>AE</i> <sub>178</sub>		12 12.9 13°91	2°6/12.2	18		<b>517378</b>	2014 <i>KZ</i> <sub>66</sub>		12 12.9 180°72	0°2/12.9	18	
11 7	5 46.47	+23 20.0	1.159	2.007	19.3	18.2	11 7	5 51.07	+21 47.7	2.249	3.048	12.9	21.7
11 17	5 43.05	+21 53.2	1.102	2.013	14.8	18.0	11 17	5 45.23	+22 4.1	2.164	3.049	9.8	21.5
11 27	5 36.21	+20 18.5	1.064	2.021	9.5	17.7	11 27	5 37.15	+22 20.7	2.103	3.049	6.3	21.3
12 7	5 27.14	+18 40.9	1.050	2.030	4.1	17.4	12 7	5 27.49	+22 36.4	2.070	3.049	2.4	21.1
12 17	5 17.42	+17 7.5	1.062	2.041	3.9	17.4	12 17	5 17.16	+22 50.1	2.068	3.049	1.6	21.0
12 27	5 8.78	+15 46.1	1.098	2.053	9.0	17.8	12 27	5 7.24	+23 1.8	2.096	3.048	5.6	21.3
1 6	5 2.60	+14 42.1	1.158	2.066	14.0	18.1	1 6	4 58.71	+23 12.3	2.153	3.047	9.2	21.5
1 16	4 59.65	+13 57.9	1.239	2.081	18.2	18.4	1 16	4 52.32	+23 22.8	2.236	3.045	12.3	21.7
<b>368193</b>	2000 <i>UZ</i> <sub>64</sub>		12 12.9 35°91	0°3/13.0	18		<b>188913</b>	2007 <i>BV</i> <sub>15</sub>		12 12.9 117°84	0°2/12.9	18	
11 7	5 51.37	+25 6.0	1.001	1.851	21.5	20.2	11 7	5 48.86	+22 32.3	2.133	2.939	13.2	21.6
11 17	5 47.24	+24 47.5	0.955	1.867	16.4	19.9	11 17	5 43.60	+22 37.6	2.055	2.944	10.1	21.4
11 27	5 39.08	+24 23.4	0.927	1.884	10.5	19.7	11 27	5 36.11	+22 42.1	2.001	2.950	6.4	21.1
12 7	5 28.26	+23 53.2	0.921	1.902	4.0	19.4	12 7	5 27.08	+22 45.0	1.975	2.955	2.5	20.9
12 17	5 16.69	+23 18.6	0.938	1.920	2.6	19.4	12 17	5 17.45	+22 45.9	1.978	2.959	1.7	20.8
12 27	5 6.54	+22 43.6	0.980	1.940	8.9	19.8	12 27	5 8.32	+22 45.3	2.011	2.964	5.7	21.1
1 6	4 59.41	+22 13.1	1.044	1.961	14.3	20.2	1 6	5 0.66	+22 44.5	2.072	2.969	9.3	21.4
1 16	4 56.09	+21 50.7	1.128	1.982	18.8	20.5	1 16	4 55.15	+22 45.2	2.158	2.973	12.5	21.6
<b>72672</b>	2001 <i>FG</i> <sub>53</sub>		12 12.9 200°11	1°2/13.2	18		<b>305213</b>	2007 <i>WV</i> <sub>47</sub>		12 12.9 103°90	4°1/13.4	18	
11 7	5 48.00	+27 2.1	2.646	3.440	11.3	20.1	11 7	5 53.40	+32 35.4	1.863	2.661	15.2	20.8
11 17	5 42.66	+27 11.7	2.556	3.438	8.7	19.9	11 17	5 47.66	+33 17.0	1.790	2.668	11.9	20.6
11 27	5 35.38	+27 17.9	2.491	3.435	5.6	19.7	11 27	5 38.99	+33 51.2	1.739	2.675	8.3	20.4
12 7	5 26.77	+27 19.3	2.455	3.432	2.5	19.5	12 7	5 28.24	+34 13.3	1.715	2.682	5.0	20.2
12 17	5 17.61	+27 15.4	2.449	3.428	1.8	19.4	12 17	5 16.66	+34 20.5	1.719	2.689	4.4	20.2
12 27	5 8.80	+27 6.6	2.473	3.425	4.9	19.7	12 27	5 5.75	+34 13.0	1.751	2.695	7.2	20.4
1 6	5 1.19	+26 54.5	2.527	3.421	8.0	19.8	1 6	4 56.79	+33 54.2	1.810	2.702	10.7	20.6
1 16	4 55.41	+26 41.3	2.607	3.417	10.7	20.0	1 16	4 50.68	+33 29.0	1.893	2.708	14.0	20.8
<b>97561</b>	2000 <i>DQ</i> <sub>77</sub>		12 12.9 147°83	0°3/13.0	18		<b>181002</b>	2005 <i>NG</i> <sub>45</sub>		12 12.9 201°57	1°6/12.9	18	
11 7	5 47.19	+24 26.9	2.810	3.604	10.7	19.9	11 7	5 52.86	+18 29.5	1.615	2.429	16.4	20.6
11 17	5 41.81	+24 29.0	2.729	3.612	8.1	19.7	11 17	5 47.39	+18 37.6	1.535	2.428	12.6	20.4
11 27	5 34.72	+24 29.0	2.673	3.619	5.2	19.6	11 27	5 38.92	+18 49.2	1.477	2.426	8.2	20.1
12 7	5 26.48	+24 26.2	2.646	3.625	2.0	19.3	12 7	5 28.26	+19 3.8	1.444	2.423	3.5	19.9
12 17	5 17.82	+24 20.5	2.650	3.631	1.3	19.3	12 17	5 16.65	+19 20.5	1.440	2.420	2.7	19.8
12 27	5 9.54	+24 12.6	2.685	3.637	4.5	19.5	12 27	5 5.58	+19 39.3	1.464	2.417	7.4	20.1
1 6	5 2.38	+24 3.6	2.750	3.643	7.5	19.7	1 6	4 56.43	+20 0.3	1.515	2.414	12.0	20.3
1 16	4 56.89	+23 55.2	2.841	3.648	10.0	19.9	1 16	4 50.13	+20 24.2	1.588	2.410	15.9	20.6
<b>371350</b>	2006 <i>KG</i> <sub>103</sub>		12 12.9 19°31	1°8/12.9	17		<b>38542</b>	1999 <i>VD</i> <sub>7</sub>		12 12.9 120°36	0°1/12.9	18	
11 7	5 46.53	+16 39.1	2.223	3.029	12.8	20.7	11 7	5 48.91	+23 16.7	2.500	3.298	11.8	19.4
11 17	5 41.73	+16 49.9	2.143	3.031	9.8	20.5	11 17	5 43.23	+23 15.5	2.427	3.312	8.9	19.2
11 27	5 34.88	+17 4.6	2.087	3.033	6.4	20.3	11 27	5 35.67	+23 12.6	2.380	3.326	5.7	19.0
12 7	5 26.60	+17 23.2	2.058	3.035	2.9	20.1	12 7	5 26.87	+23 7.5	2.361	3.340	2.2	18.8
12 17	5 17.74	+17 45.3	2.059	3.037	2.4	20.0	12 17	5 17.64	+23 0.2	2.372	3.353	1.5	18.8
12 27	5 9.26	+18 10.4	2.089	3.039	5.8	20.3	12 27	5 8.91	+22 51.5	2.414	3.366	4.9	19.1
1 6	5 2.07	+18 38.2	2.148	3.042	9.2	20.5	1 6	5 1.47	+22 42.8	2.486	3.379	8.1	19.3
1 16	4 56.84	+19 8.5	2.231	3.044	12.2	20.7	1 16	4 55.91	+22 35.7	2.583	3.391	10.9	19.5
<b>446491</b>	2014 <i>KD</i> <sub>48</sub>		12 12.9 196°08	3°2/12.3	18		<b>367389</b>	2008 <i>MJ</i> <sub>3</sub>		12 12.9 154°43	2°4/13.6	17	
11 7	5 49.45	+15 56.1	2.091	2.894	13.6	21.5	11 7	5 49.78	+31 41.6	2.451	3.241	12.2	21.5
11 17	5 44.00	+15 14.1	2.008	2.892	10.5	21.3	11 17	5 44.14	+31 43.1	2.368	3.244	9.5	21.4
11 27	5 36.33	+14 33.8	1.948	2.890	7.1	21.1	11 27	5 36.37	+31 37.2	2.310	3.248	6.4	21.2
12 7	5 27.16	+13 57.1	1.915	2.887	3.9	20.9	12 7	5 27.16	+31 22.4	2.279	3.251	3.4	21.0
12 17	5 17.38	+13 26.4	1.913	2.884	3.8	20.9	12 17	5 17.44	+30 58.1	2.278	3.254	2.7	20.9
12 27	5 8.07	+13 3.7	1.939	2.881	6.9	21.0	12 27	5 8.23	+30 25.8	2.308	3.257	5.4	21.1
1 6	5 0.20	+12 50.5	1.994	2.877	10.4	21.3	1 6	5 0.46	+29 48.4	2.366	3.259	8.5	21.3
1 16	4 54.45	+12 47.1	2.073	2.872	13.5	21.5	1 16	4 54.77	+29 9.5	2.450	3.262	11.3	21.5
<b>303508</b>	2005 <i>EN</i> <sub>167</sub>		12 12.9 160°33	0°2/12.9	18		<b>117328</b>	2004 <i>WH</i> <sub>9</sub>		12 12.9 7°47	4°5/13.0	17	
11 7	5 50.26	+23 53.9	1.867	2.678	14.6	21.5	11 7	5 47.87	+30 5.2	1.480	2.306	17.1	18.4
11 17	5 45.00	+23 50.7	1.787	2.679	11.2	21.3	11 17	5 44.13	+31 16.2	1.413	2.308	13.4	18.1
11 27	5 37.16	+23 44.9	1.731	2.680	7.2	21.1	11 27	5 37.09	+32 23.0	1.367	2.312	9.2	17.9
12 7	5 27.51	+23 35.8	1.701	2.681	2.8	20.8	12 7	5 27.62	+33 19.6	1.346	2.316	5.4	17.7
12 17	5 17.14	+23 23.3	1.700	2.682	1.9	20.7	12 17	5 17.08	+34 0.9	1.350	2.323	4.9	17.7
12 27	5 7.35	+23 8.6	1.728	2.683	6.3	21.0	12 27	5 7.19	+34 25.2	1.381	2.330	8.3	17.9
1 6	4 59.27	+22 54.1	1.784	2.683	10.4	21.3	1 6	4 59.49	+34 34.7	1.437	2.339	12.3	18.2
1 16	4 53.68	+22 42.1	1.863	2.684	13.9	21.5	1 16	4 54.97	+34 33.8	1.515	2.349	15.9	18.4
<b>113367</b>	2002 <i>SY</i> <sub>2</sub>		12 12.9 287°52	8°5/15.8	18		<b>243959</b>	2001 <i>QM</i> <sub>212</sub>		12 12.9 31°86	2°3/12.8</		

EPHEMERIDES

12 12.9

12 12.9

2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020/21	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>218564</b>	2005 <i>GP</i> <sub>69</sub>		12 12.9 157°98	2°3/12.6	18		<b>71298</b>	2000 <i>AH</i> <sub>62</sub>		12 12.9 52°89	1°6/12.8	18	
11 7	5 53.35	+18 35.1	1.753	2.561	15.6	21.0	11 7	5 47.09	+18 37.7	2.067	2.878	13.4	18.9
11 17	5 47.33	+18 8.9	1.678	2.567	12.0	20.8	11 17	5 42.24	+18 32.8	1.996	2.887	10.3	18.7
11 27	5 38.63	+17 43.5	1.626	2.573	7.8	20.6	11 27	5 35.24	+18 29.6	1.949	2.896	6.6	18.5
12 7	5 28.08	+17 20.0	1.601	2.578	3.6	20.3	12 7	5 26.80	+18 28.6	1.928	2.906	2.9	18.2
12 17	5 16.85	+16 59.7	1.605	2.583	3.1	20.3	12 17	5 17.82	+18 29.9	1.936	2.916	2.3	18.2
12 27	5 6.29	+16 44.5	1.638	2.587	7.2	20.6	12 27	5 9.37	+18 34.1	1.974	2.926	5.9	18.5
1 6	4 57.57	+16 36.1	1.698	2.590	11.3	20.8	1 6	5 2.35	+18 41.7	2.040	2.936	9.5	18.7
1 16	4 51.48	+16 35.4	1.782	2.593	14.9	21.1	1 16	4 57.43	+18 53.3	2.130	2.946	12.6	18.9
<b>191868</b>	2004 <i>XD</i> <sub>72</sub>		12 12.9 325°64	2°7/12.4	18		<b>288497</b>	2004 <i>FU</i> <sub>58</sub>		12 12.9 4°81	1°4/13.2	18	
11 7	5 45.77	+17 38.6	1.978	2.793	13.8	19.3	11 7	5 48.23	+26 18.2	1.500	2.328	16.8	20.5
11 17	5 41.43	+17 0.2	1.892	2.785	10.6	19.1	11 17	5 44.13	+26 27.2	1.428	2.328	12.9	20.3
11 27	5 34.83	+16 22.3	1.830	2.777	7.0	18.9	11 27	5 36.95	+26 32.0	1.377	2.328	8.4	20.0
12 7	5 26.66	+15 46.8	1.794	2.769	3.6	18.6	12 7	5 27.56	+26 30.5	1.350	2.329	3.5	19.7
12 17	5 17.83	+15 16.0	1.787	2.762	3.4	18.6	12 17	5 17.29	+26 21.8	1.350	2.331	2.4	19.7
12 27	5 9.44	+14 52.1	1.808	2.755	6.8	18.8	12 27	5 7.73	+26 7.1	1.377	2.334	7.2	20.0
1 6	5 2.47	+14 36.7	1.856	2.748	10.5	19.0	1 6	5 0.24	+25 49.7	1.429	2.338	11.8	20.2
1 16	4 57.66	+14 30.6	1.928	2.742	13.8	19.2	1 16	4 55.72	+25 32.9	1.504	2.342	15.8	20.5
<b>9359</b>	Fleringe		12 12.9 23°47	5°7/13.8	18	R	<b>78226</b>	2002 <i>ON</i> <sub>11</sub>		12 12.9 203°46	1°7/13.2	18	
11 7	5 52.79	+36 5.4	1.612	2.415	16.9	17.4	11 7	5 55.24	+26 46.0	1.825	2.627	15.3	20.1
11 17	5 47.76	+36 45.5	1.541	2.418	13.6	17.1	11 17	5 49.12	+27 6.7	1.737	2.623	11.8	19.9
11 27	5 39.33	+37 13.8	1.490	2.421	9.9	16.9	11 27	5 40.03	+27 23.8	1.673	2.618	7.8	19.7
12 7	5 28.46	+37 24.9	1.464	2.425	6.6	16.8	12 7	5 28.74	+27 34.4	1.635	2.613	3.4	19.4
12 17	5 16.63	+37 15.4	1.465	2.429	5.9	16.7	12 17	5 16.48	+27 36.4	1.627	2.607	2.5	19.3
12 27	5 5.62	+36 46.4	1.492	2.434	8.5	16.9	12 27	5 4.74	+27 30.3	1.648	2.600	6.8	19.6
1 6	4 56.95	+36 3.2	1.545	2.439	12.1	17.1	1 6	4 54.87	+27 18.6	1.696	2.592	11.1	19.8
1 16	4 51.58	+35 12.9	1.620	2.444	15.5	17.3	1 16	4 47.82	+27 4.9	1.768	2.584	14.8	20.0
<b>16734</b>	1996 <i>HZ</i> <sub>22</sub>		12 12.9 314°70	4°6/12.2	18	R	<b>374223</b>	2005 <i>FZ</i> <sub>6</sub>		12 12.9 274°08	8°8/11.0	18	
11 7	5 49.78	+16 13.8	1.264	2.099	18.9	17.5	11 7	5 43.94	- 4 26.8	2.509	3.257	13.0	20.5
11 17	5 45.64	+15 20.8	1.190	2.092	14.8	17.2	11 17	5 39.53	- 5 27.5	2.430	3.248	11.3	20.4
11 27	5 38.08	+14 29.9	1.135	2.085	10.0	16.9	11 27	5 33.41	- 6 14.5	2.372	3.238	9.8	20.3
12 7	5 28.03	+13 44.8	1.104	2.078	5.6	16.7	12 7	5 26.10	- 6 43.3	2.340	3.229	8.9	20.2
12 17	5 16.91	+13 9.6	1.098	2.072	5.4	16.6	12 17	5 18.28	- 6 51.0	2.333	3.219	9.0	20.2
12 27	5 6.49	+12 48.2	1.117	2.066	9.9	16.9	12 27	5 10.76	- 6 36.4	2.353	3.210	10.1	20.2
1 6	4 58.33	+12 42.4	1.160	2.060	14.8	17.1	1 6	5 4.27	- 6 0.8	2.397	3.200	11.8	20.3
1 16	4 53.43	+12 51.8	1.223	2.055	19.1	17.4	1 16	4 59.39	- 5 7.5	2.463	3.190	13.6	20.5
<b>126249</b>	2002 <i>AP</i> <sub>67</sub>		12 12.9 53°30	0°7/13.1	18		<b>486564</b>	2013 <i>HY</i> <sub>115</sub>		12 12.9 155°72	4°0/13.5	18	
11 7	5 53.60	+25 12.1	1.317	2.145	18.7	19.6	11 7	5 52.73	+34 21.3	2.347	3.129	12.9	22.2
11 17	5 48.11	+25 11.1	1.269	2.169	14.2	19.4	11 17	5 46.70	+35 3.2	2.267	3.134	10.2	22.0
11 27	5 39.28	+25 5.9	1.242	2.193	9.1	19.2	11 27	5 38.21	+35 37.6	2.211	3.139	7.3	21.8
12 7	5 28.33	+24 54.9	1.238	2.218	3.5	18.9	12 7	5 27.98	+36 0.7	2.182	3.143	4.7	21.7
12 17	5 16.83	+24 38.2	1.262	2.244	2.3	18.9	12 17	5 17.03	+36 10.1	2.182	3.147	4.2	21.7
12 27	5 6.52	+24 18.1	1.312	2.269	7.5	19.3	12 27	5 6.56	+36 5.8	2.212	3.150	6.4	21.8
1 6	4 58.74	+23 58.1	1.388	2.295	12.2	19.6	1 6	4 57.66	+35 50.2	2.271	3.153	9.3	22.0
1 16	4 54.21	+23 41.7	1.485	2.320	16.1	20.0	1 16	4 51.11	+35 27.4	2.354	3.156	12.0	22.2
<b>95852</b>	Leatherbarrow		12 12.9 205°64	0°2/12.9	18		<b>438906</b>	2009 <i>WG</i> <sub>245</sub>		12 12.9 197°92	0°4/13.1	18	
11 7	5 52.12	+23 4.8	1.935	2.741	14.4	20.6	11 7	5 52.83	+25 33.3	1.699	2.510	15.8	21.2
11 17	5 46.42	+23 0.3	1.848	2.737	11.1	20.4	11 17	5 47.25	+25 14.7	1.617	2.509	12.2	21.0
11 27	5 38.11	+22 53.7	1.784	2.732	7.1	20.2	11 27	5 38.77	+24 50.7	1.559	2.508	7.9	20.7
12 7	5 27.95	+22 44.4	1.748	2.727	2.7	19.9	12 7	5 28.23	+24 20.5	1.526	2.506	3.1	20.4
12 17	5 16.99	+22 32.3	1.740	2.722	1.9	19.8	12 17	5 16.89	+23 44.9	1.522	2.504	2.0	20.3
12 27	5 6.54	+22 18.5	1.763	2.716	6.3	20.1	12 27	5 6.22	+23 6.5	1.547	2.501	6.9	20.7
1 6	4 57.74	+22 5.3	1.813	2.710	10.5	20.3	1 6	4 57.52	+22 29.3	1.598	2.499	11.3	20.9
1 16	4 51.42	+21 54.9	1.887	2.703	14.0	20.5	1 16	4 51.63	+21 56.9	1.673	2.496	15.2	21.1
<b>448070</b>	2008 <i>GV</i> <sub>80</sub>		12 12.9 299°77	5°4/13.0	17		<b>325751</b>	2009 <i>WB</i> <sub>74</sub>		12 12.9 125°17	0°4/13.0	18	
11 7	5 52.26	+33 53.3	1.840	2.639	15.3	21.1	11 7	5 48.91	+22 57.6	2.472	3.270	11.9	20.6
11 17	5 47.39	+35 0.0	1.742	2.619	12.3	20.8	11 17	5 43.41	+23 22.4	2.394	3.279	9.0	20.4
11 27	5 39.27	+36 1.5	1.667	2.599	9.0	20.6	11 27	5 35.92	+23 47.0	2.340	3.286	5.8	20.2
12 7	5 28.57	+36 51.5	1.617	2.579	6.0	20.4	12 7	5 27.07	+24 9.8	2.315	3.294	2.2	20.0
12 17	5 16.47	+37 24.8	1.595	2.559	5.7	20.3	12 17	5 17.66	+24 29.7	2.320	3.302	1.5	19.9
12 27	5 4.61	+37 39.0	1.601	2.539	8.4	20.4	12 27	5 8.66	+24 46.4	2.357	3.309	5.0	20.2
1 6	4 54.57	+37 36.1	1.633	2.520	12.0	20.6	1 6	5 0.92	+25 0.4	2.422	3.316	8.3	20.4
1 16	4 47.56	+37 21.2	1.688	2.501	15.5	20.8	1 16	4 55.08	+25 13.1	2.513	3.323	11.1	20.6
<b>105099</b>	2000 <i>LC</i> <sub>7</sub>		12 12.9 15°64	3°7/12.6	17		<b>13803</b>	1998 <i>WU</i> <sub>10</sub>		12 12.9 151°90	0°5/12.9	18	
11 7	5 45.11	+13 1.8	2.034	2.844	13.6	19.3	11 7	5 53.85	+22 31.5	2.017	2.817	14.1	18.8
11 17	5 40.76	+12 44.0	1.960	2.847	10.6	19.1	11 17	5 47.44	+22 22.7	1.942	2.827	10.8	18.6
11 27	5 34.32	+12 32.0	1.909	2.850	7.3	18.9	11 27	5 38.59	+22 12.0	1.890	2.837	6.9	18.4
12 7	5 26.45	+12 27.4	1.884	2.854	4.3	18.7	12 7	5 28.09	+21 59.0	1.866	2.845	2.6	18.1
12 17	5 18.02	+12 31.2	1.888	2.858	4.1	18.7	12 17	5 17.00	+21 44.0	1.872	2.853	1.8	18.1
12 27	5 10.05	+12 43.9	1.920	2.862	6.9	18.9	12 27	5 6.54	+21 28.4	1.908	2.860	6.1	18.4
1 6	5 3.44	+13 5.2	1.979	2.867	10.2	19.1	1 6	4 57.75	+21 14.1	1.973	2.866	9.9	18.6
1 16	4 58.85	+13 34.0	2.062	2.873	13.2	19.3	1 16	4 51.37	+21 3.3	2.062	2.872	13.2	18.8
<b>61765</b>	2000 <i>QA</i> <sub>167</sub>		12 12.9 228°99	0°2/13.0	18		<b>68321</b>	2001 <i>FF</i> <sub>169</sub>		12 12.9 236°41	2°2/12.8	18	