

EPHEMERIDES

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>265054</b>	2003 <i>RG</i> <sub>10</sub>		7 7.9 301°22	1°2/ 7.8 18			<b>1814</b>	Bach		7 7.9 202°69	3°0/ 7.2 18	R	
5 31	19 36.66	-24 10.4	1.349	2.207	18.0	21.2	5 31	19 42.47	-27 47.4	1.674	2.510	16.1	16.9
6 10	19 33.64	-24 20.1	1.256	2.184	14.3	20.9	6 10	19 37.38	-28 22.0	1.592	2.507	12.7	16.7
6 20	19 27.28	-24 33.9	1.181	2.161	9.7	20.6	6 20	19 29.27	-28 57.9	1.531	2.503	8.7	16.4
6 30	19 18.09	-24 48.6	1.128	2.138	4.6	20.2	6 30	19 18.80	-29 30.1	1.494	2.499	4.6	16.2
7 10	19 7.23	-24 59.9	1.099	2.115	1.8	20.0	7 10	19 7.11	-29 53.4	1.483	2.494	3.3	16.1
7 20	18 56.22	-25 4.8	1.094	2.092	7.2	20.2	7 20	18 55.58	-30 4.8	1.499	2.489	6.8	16.3
7 30	18 46.78	-25 2.0	1.111	2.070	12.6	20.5	7 30	18 45.60	-30 3.8	1.540	2.483	11.0	16.5
8 9	18 40.27	-24 52.7	1.148	2.048	17.5	20.7	8 9	18 38.27	-29 52.6	1.603	2.476	14.8	16.7
<b>373304</b>	2012 <i>HR</i> <sub>80</sub>		7 7.9 354°69	1°4/ 8.2 18			<b>357706</b>	2005 <i>QX</i> <sub>15</sub>		7 7.9 288°28	4°9/ 9.6 18		
5 31	19 34.72	-19 40.4	1.326	2.183	18.3	20.2	5 31	19 32.27	- 8 13.9	2.166	2.968	14.1	21.5
6 10	19 31.66	-19 28.2	1.253	2.180	14.4	19.9	6 10	19 28.60	- 7 58.1	2.068	2.953	11.6	21.3
6 20	19 25.56	-19 22.7	1.200	2.178	9.8	19.6	6 20	19 22.97	- 7 54.0	1.991	2.937	8.8	21.1
6 30	19 17.11	-19 22.9	1.168	2.176	4.7	19.3	6 30	19 15.83	- 8 2.8	1.937	2.922	6.1	20.9
7 10	19 7.52	-19 26.7	1.159	2.175	1.7	19.1	7 10	19 7.86	- 8 24.4	1.909	2.906	4.9	20.8
7 20	18 58.18	-19 32.4	1.175	2.174	6.5	19.4	7 20	18 59.88	- 8 57.4	1.908	2.891	6.3	20.9
7 30	18 50.49	-19 38.5	1.213	2.175	11.5	19.7	7 30	18 52.74	- 9 39.6	1.933	2.875	9.2	21.0
8 9	18 45.49	-19 44.4	1.272	2.176	15.9	20.0	8 9	18 47.20	-10 27.9	1.981	2.860	12.2	21.2
<b>104379</b>	2000 <i>FB</i> <sub>34</sub>		7 7.9 265°71	3°0/ 7.1 18			<b>429519</b>	2011 <i>BB</i> <sub>52</sub>		7 7.9 16°54	19°7/17.8 16		
5 31	19 36.95	-28 45.1	2.012	2.847	13.8	19.2	5 31	20 22.45	-66 39.2	1.017	1.782	28.6	19.6
6 10	19 32.58	-29 20.6	1.929	2.843	10.8	19.0	6 10	20 12.15	-66 35.5	0.981	1.796	26.4	19.4
6 20	19 25.78	-29 56.4	1.868	2.839	7.5	18.8	6 20	19 52.62	-65 48.1	0.955	1.812	23.9	19.3
6 30	19 17.12	-30 28.4	1.831	2.835	4.1	18.6	6 30	19 28.29	-63 57.4	0.942	1.831	21.7	19.2
7 10	19 7.52	-30 52.6	1.822	2.830	3.2	18.5	7 10	19 5.21	-60 56.7	0.947	1.852	20.1	19.2
7 20	18 58.05	-31 6.5	1.839	2.826	6.1	18.7	7 20	18 47.67	-56 57.3	0.971	1.876	19.7	19.3
7 30	18 49.80	-31 9.5	1.881	2.821	9.5	18.9	7 30	18 37.21	-52 23.2	1.016	1.901	20.6	19.4
8 9	18 43.63	-31 2.9	1.947	2.817	12.8	19.0	8 9	18 33.25	-47 40.5	1.082	1.928	22.3	19.7
<b>230366</b>	2002 <i>EP</i> <sub>113</sub>		7 7.9 151°94	1°6/ 7.7 17			<b>143540</b>	2003 <i>ED</i> <sub>27</sub>		7 7.9 253°41	4°2/ 9.5 18		
5 31	19 41.93	-27 45.7	2.290	3.108	12.9	21.6	5 31	19 32.75	- 9 20.4	2.222	3.025	13.7	20.2
6 10	19 35.84	-27 46.4	2.212	3.117	10.0	21.4	6 10	19 28.82	- 9 10.8	2.136	3.023	11.2	20.0
6 20	19 27.59	-27 45.6	2.157	3.126	6.8	21.3	6 20	19 23.01	- 9 12.2	2.071	3.020	8.3	19.9
6 30	19 17.81	-27 40.6	2.128	3.134	3.3	21.0	6 30	19 15.80	- 9 25.3	2.030	3.018	5.5	19.7
7 10	19 7.38	-27 29.7	2.128	3.141	1.9	21.0	7 10	19 7.89	- 9 49.3	2.015	3.015	4.2	19.6
7 20	18 57.25	-27 12.0	2.156	3.148	4.9	21.2	7 20	19 0.07	-10 22.7	2.027	3.013	5.8	19.7
7 30	18 48.37	-26 48.4	2.213	3.154	8.3	21.4	7 30	18 53.15	-11 3.0	2.066	3.010	8.6	19.9
8 9	18 41.43	-26 20.7	2.294	3.159	11.2	21.6	8 9	18 47.79	-11 47.6	2.129	3.008	11.5	20.0
<b>389071</b>	2008 <i>WC</i> <sub>72</sub>		7 7.9 267°01	4°0/ 8.4 17			<b>476960</b>	2008 <i>XS</i> <sub>49</sub>		7 7.9 216°78	0°9/ 8.4 18		
5 31	19 37.40	-14 18.8	1.956	2.772	14.8	21.4	5 31	19 35.61	-17 36.1	2.418	3.233	12.4	21.6
6 10	19 32.77	-13 27.4	1.860	2.759	12.0	21.2	6 10	19 31.00	-17 58.2	2.323	3.226	9.7	21.4
6 20	19 25.84	-12 41.2	1.785	2.745	8.7	20.9	6 20	19 24.48	-18 27.1	2.251	3.218	6.6	21.2
6 30	19 17.14	-12 1.7	1.735	2.730	5.4	20.7	6 30	19 16.49	-19 1.3	2.204	3.210	3.2	21.0
7 10	19 7.52	-11 30.0	1.711	2.716	4.1	20.6	7 10	19 7.72	-19 38.4	2.186	3.201	1.1	20.8
7 20	18 57.96	-11 6.9	1.714	2.701	6.4	20.7	7 20	18 58.97	-20 15.9	2.196	3.192	4.4	21.0
7 30	18 49.47	-10 52.4	1.743	2.686	10.0	20.9	7 30	18 51.07	-20 52.0	2.234	3.183	7.8	21.2
8 9	18 42.91	-10 45.7	1.795	2.671	13.4	21.1	8 9	18 44.73	-21 25.2	2.298	3.173	10.9	21.4
<b>398797</b>	2013 <i>AT</i> <sub>149</sub>		7 7.9 29°89	6°3/10.1 15			<b>8437</b>	Bernicla		7 7.9 10°51	1°5/ 8.3 18		
5 31	19 31.57	- 6 45.8	1.676	2.492	17.0	20.9	5 31	19 36.20	-18 52.9	1.578	2.420	16.6	18.5
6 10	19 28.25	- 6 16.2	1.618	2.508	13.9	20.7	6 10	19 32.31	-18 46.0	1.503	2.420	13.1	18.3
6 20	19 22.74	- 6 2.3	1.578	2.524	10.7	20.6	6 20	19 25.74	-18 45.9	1.447	2.421	8.9	18.0
6 30	19 15.66	- 6 5.8	1.561	2.542	7.7	20.4	6 30	19 17.14	-18 51.2	1.415	2.422	4.3	17.8
7 10	19 7.93	- 6 26.1	1.567	2.560	6.3	20.4	7 10	19 7.57	-19 0.2	1.408	2.423	1.7	17.6
7 20	19 0.51	- 7 1.2	1.599	2.579	7.6	20.5	7 20	18 58.22	-19 11.0	1.426	2.424	5.9	17.9
7 30	18 54.33	- 7 47.5	1.655	2.599	10.3	20.7	7 30	18 50.31	-19 22.0	1.469	2.426	10.3	18.1
8 9	18 50.11	- 8 40.6	1.732	2.619	13.3	21.0	8 9	18 44.75	-19 32.5	1.534	2.427	14.3	18.4
<b>175099</b>	2004 <i>JF</i> <sub>21</sub>		7 7.9 188°20	0°5/ 7.8 18			<b>25773</b>	2000 <i>CX</i> <sub>27</sub>		7 8.0 342°52	0°7/ 7.8 18	R	
5 31	19 35.46	-22 55.9	2.339	3.164	12.4	21.2	5 31	19 36.12	-24 2.6	1.814	2.655	14.9	18.1
6 10	19 30.92	-23 13.5	2.254	3.164	9.7	21.0	6 10	19 32.00	-24 7.0	1.734	2.652	11.6	17.9
6 20	19 24.40	-23 34.2	2.191	3.163	6.5	20.8	6 20	19 25.41	-24 13.6	1.675	2.650	7.8	17.7
6 30	19 16.42	-23 55.6	2.155	3.163	2.9	20.6	6 30	19 16.96	-24 20.0	1.640	2.648	3.6	17.4
7 10	19 7.72	-24 15.4	2.146	3.162	1.0	20.4	7 10	19 7.61	-24 23.8	1.631	2.647	1.2	17.2
7 20	18 59.15	-24 31.8	2.165	3.160	4.5	20.7	7 20	18 58.47	-24 23.4	1.648	2.645	5.4	17.5
7 30	18 51.55	-24 43.8	2.212	3.159	7.9	20.9	7 30	18 50.62	-24 18.4	1.691	2.644	9.5	17.8
8 9	18 45.63	-24 51.2	2.283	3.157	11.0	21.1	8 9	18 44.93	-24 9.5	1.757	2.643	13.1	18.0
<b>37990</b>	1998 <i>KN</i> <sub>4</sub>		7 7.9 16°62	3°4/ 6.7 18			<b>303946</b>	2005 <i>XR</i> <sub>28</sub>		7 8.0 191°16	0°4/ 7.8 17		
5 31	19 33.74	-24 48.1	1.341	2.205	17.8	17.9	5 31	19 43.81	-17 57.7	1.941	2.753	15.1	21.0
6 10	19 31.05	-26 7.3	1.279	2.210	13.8	17.6	6 10	19 38.02	-19 15.0	1.849	2.751	11.9	20.8
6 20	19 25.25	-27 33.8	1.236	2.216	9.3	17.4	6 20	19 29.57	-20 44.6	1.781	2.749	8.0	20.5
6 30	19 17.01	-29 0.4	1.216	2.223	4.9	17.2	6 30	19 18.95	-22 21.9	1.739	2.746	3.6	20.2
7 10	19 7.56	-30 19.1	1.221	2.231	3.8	17.1	7 10	19 7.09	-24 0.4	1.726	2.742	1.1	20.0
7 20	18 58.34	-31 23.3	1.249	2.240	7.7	17.4	7 20	18 55.12	-25 33.6	1.743	2.737	5.6	20.3
7 30	18 50.83	-32 9.9	1.301	2.250	12.1	17.7	7 30	18 44.27	-26 56.5	1.789	2.730	9.9	20.6
8 9	18 46.11	-32 39.4	1.373	2.261	16.0	17.9	8 9	18 35.59	-28 7.1	1.859	2.723	13.5	20.8
<b>393017</b>	2012 <i>XE</i> <sub>151</sub>		7 7.9 269°66	1°6/ 7.6 18			<b>217674</b>	1998 <i>VU</i> <sub>40</sub>		7 8.0 311°89	4°3/ 8		

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>344920</b>	2004 <i>TA</i> <sub>5</sub>		7 8.0 278°73	3°1/ 7.1	18		<b>149122</b>	2002 <i>EM</i> <sub>12</sub>		7 8.0 44°89	5°7/10.0	18	
5 31	19 38.18	-28 28.1	1.828	2.667	14.8	21.4	5 31	19 32.04	-6 15.2	2.101	2.897	14.6	19.0
6 10	19 33.98	-29 0.7	1.732	2.648	11.7	21.1	6 10	19 28.26	-5 48.6	2.029	2.907	12.1	18.9
6 20	19 27.02	-29 34.5	1.657	2.629	8.1	20.9	6 20	19 22.62	-5 35.0	1.978	2.917	9.3	18.7
6 30	19 17.83	-30 4.9	1.606	2.611	4.5	20.6	6 30	19 15.63	-5 35.8	1.950	2.926	6.8	18.6
7 10	19 7.38	-30 27.4	1.582	2.591	3.3	20.5	7 10	19 8.04	-5 50.9	1.948	2.937	5.7	18.5
7 20	18 56.90	-30 38.7	1.583	2.572	6.6	20.7	7 20	19 0.64	-6 18.8	1.972	2.947	6.8	18.6
7 30	18 47.68	-30 38.1	1.610	2.553	10.6	20.8	7 30	18 54.22	-6 57.2	2.021	2.958	9.2	18.8
8 9	18 40.79	-30 27.0	1.659	2.534	14.4	21.0	8 9	18 49.41	-7 42.7	2.094	2.968	11.8	19.0
<b>793</b>	Arizona		7 8.0 310°79	9°1/ 4.3	18		<b>255838</b>	2006 <i>SE</i> <sub>104</sub>		7 8.0 13°77	2°7/ 7.5	17	
5 31	19 39.99	-41 47.6	1.806	2.632	15.5	14.5	5 31	19 35.24	-26 25.6	1.138	2.011	19.6	20.2
6 10	19 36.03	-43 18.0	1.728	2.620	13.1	14.3	6 10	19 32.65	-26 49.6	1.078	2.014	15.4	19.9
6 20	19 28.74	-44 41.9	1.670	2.609	10.7	14.1	6 20	19 26.51	-27 16.1	1.036	2.018	10.4	19.7
6 30	19 18.71	-45 50.4	1.636	2.597	9.2	14.0	6 30	19 17.65	-27 39.8	1.014	2.023	5.2	19.4
7 10	19 7.15	-46 35.7	1.626	2.586	9.4	14.0	7 10	19 7.53	-27 55.5	1.015	2.029	3.1	19.3
7 20	18 55.60	-46 53.4	1.639	2.575	11.1	14.1	7 20	18 57.85	-28 0.0	1.038	2.036	7.7	19.6
7 30	18 45.72	-46 43.8	1.675	2.564	13.6	14.2	7 30	18 50.25	-27 53.3	1.083	2.043	12.7	19.9
8 9	18 38.79	-46 11.6	1.731	2.554	16.2	14.4	8 9	18 45.84	-27 37.7	1.148	2.052	17.2	20.2
<b>408938</b>	2002 <i>CX</i> <sub>73</sub>		7 8.0 120°13	0°0/ 7.9	17		<b>380754</b>	2005 <i>SS</i> <sub>190</sub>		7 8.0 284°95	1°5/ 7.6	18	
5 31	19 40.09	-20 47.1	1.526	2.367	17.2	21.2	5 31	19 37.55	-24 14.4	1.674	2.516	15.8	21.5
6 10	19 35.42	-21 10.6	1.458	2.376	13.4	21.0	6 10	19 33.75	-24 41.7	1.573	2.493	12.5	21.2
6 20	19 27.86	-21 41.2	1.409	2.384	9.0	20.7	6 20	19 27.05	-25 14.1	1.494	2.469	8.5	20.9
6 30	19 18.12	-22 15.5	1.384	2.393	4.1	20.5	6 30	19 17.95	-25 47.8	1.437	2.445	4.0	20.6
7 10	19 7.36	-22 49.4	1.385	2.401	1.0	20.3	7 10	19 7.42	-26 18.5	1.407	2.421	2.0	20.4
7 20	18 56.90	-23 19.4	1.411	2.409	6.0	20.6	7 20	18 56.73	-26 42.5	1.402	2.397	6.4	20.6
7 30	18 48.05	-23 43.5	1.463	2.416	10.6	20.9	7 30	18 47.27	-26 57.7	1.422	2.373	11.1	20.8
8 9	18 41.78	-24 1.5	1.536	2.423	14.6	21.2	8 9	18 40.24	-27 4.5	1.464	2.348	15.3	21.0
<b>277092</b>	2005 <i>EA</i> <sub>242</sub>		7 8.0 1°33	6°8/ 5.9	17		<b>46393</b>	2002 <i>AS</i> <sub>10</sub>		7 8.0 239°59	0°2/ 8.1	18	
5 31	19 34.97	-34 19.7	1.453	2.311	17.0	19.4	5 31	19 39.08	-19 47.0	1.588	2.426	16.7	19.4
6 10	19 32.15	-35 32.2	1.387	2.309	13.7	19.2	6 10	19 34.84	-20 9.9	1.500	2.417	13.2	19.2
6 20	19 26.08	-36 41.9	1.341	2.308	10.2	19.0	6 20	19 27.68	-20 41.5	1.433	2.407	9.0	18.9
6 30	19 17.44	-37 40.8	1.316	2.308	7.4	18.8	6 30	19 18.19	-21 18.8	1.388	2.396	4.1	18.6
7 10	19 7.52	-38 21.6	1.316	2.309	7.1	18.8	7 10	19 7.40	-21 58.1	1.370	2.386	1.0	18.3
7 20	18 57.84	-38 40.1	1.338	2.311	9.6	19.0	7 20	18 56.60	-22 35.4	1.377	2.375	6.1	18.6
7 30	18 49.95	-38 36.5	1.383	2.314	13.0	19.2	7 30	18 47.17	-23 7.9	1.409	2.363	10.9	18.9
8 9	18 44.99	-38 14.4	1.448	2.318	16.3	19.4	8 9	18 40.24	-23 34.6	1.464	2.351	15.2	19.1
<b>250803</b>	2005 <i>UJ</i> <sub>14</sub>		7 8.0 298°88	6°4/ 9.9	18		<b>95768</b>	2003 <i>EF</i> <sub>47</sub>		7 8.0 223°67	15°9/30.3	18	
5 31	19 32.41	-4 17.1	2.293	3.075	14.0	20.1	5 31	19 54.05	-48 22.8	1.305	2.123	20.7	18.8
6 10	19 28.45	-3 33.9	2.209	3.074	11.7	20.0	6 10	19 49.97	-51 24.0	1.246	2.117	18.5	18.7
6 20	19 22.72	-3 2.8	2.146	3.072	9.3	19.8	6 20	19 40.12	-54 15.7	1.206	2.111	16.7	18.5
6 30	19 15.67	-2 45.9	2.107	3.071	7.3	19.7	6 30	19 24.74	-56 38.6	1.186	2.104	15.9	18.5
7 10	19 7.99	-2 44.2	2.093	3.069	6.4	19.6	7 10	19 5.64	-58 15.5	1.187	2.096	16.6	18.5
7 20	19 0.41	-2 57.3	2.105	3.068	7.3	19.7	7 20	18 46.05	-58 57.4	1.208	2.088	18.4	18.6
7 30	18 53.69	-3 23.5	2.142	3.066	9.4	19.8	7 30	18 29.73	-58 47.4	1.246	2.080	20.7	18.7
8 9	18 48.46	-3 59.8	2.203	3.065	11.8	20.0	8 9	18 19.22	-57 58.0	1.299	2.071	23.1	18.8
<b>66310</b>	1999 <i>JZ</i> <sub>41</sub>		7 8.0 41°85	2°6/ 8.6	17		<b>344465</b>	2002 <i>NB</i> <sub>79</sub>		7 8.0 346°72	1°9/ 7.3	16	
5 31	19 36.67	-16 46.4	1.219	2.074	19.7	19.0	5 31	19 34.44	-23 10.9	1.625	2.474	15.9	20.8
6 10	19 33.21	-16 35.7	1.159	2.083	15.6	18.8	6 10	19 31.16	-24 9.1	1.547	2.470	12.4	20.6
6 20	19 26.58	-16 35.8	1.118	2.093	10.7	18.5	6 20	19 25.16	-25 14.9	1.489	2.466	8.3	20.3
6 30	19 17.58	-16 45.9	1.097	2.103	5.6	18.3	6 30	19 17.01	-26 23.5	1.455	2.463	4.0	20.0
7 10	19 7.53	-17 3.7	1.100	2.114	2.7	18.1	7 10	19 7.71	-27 28.8	1.447	2.460	2.4	19.9
7 20	18 57.91	-17 26.2	1.126	2.125	6.9	18.4	7 20	18 58.46	-28 25.8	1.464	2.458	6.4	20.2
7 30	18 50.13	-17 50.9	1.175	2.136	11.8	18.7	7 30	18 50.56	-29 11.3	1.506	2.456	10.7	20.4
8 9	18 45.21	-18 15.5	1.244	2.148	16.1	19.0	8 9	18 45.03	-29 44.5	1.570	2.455	14.5	20.6
<b>247433</b>	2002 <i>DX</i> <sub>2</sub>		7 8.0 34°59	4°1/ 7.1	17		<b>175662</b>	1993 <i>BB</i> <sub>10</sub>		7 8.0 156°98	0°9/ 7.8	17	
5 31	19 38.38	-28 18.7	1.194	2.060	19.4	19.6	5 31	19 40.53	-23 28.1	1.850	2.680	15.0	21.3
6 10	19 35.01	-29 4.6	1.136	2.067	15.2	19.4	6 10	19 35.36	-23 49.0	1.774	2.686	11.7	21.1
6 20	19 28.05	-29 51.9	1.096	2.075	10.4	19.1	6 20	19 27.64	-24 13.3	1.719	2.692	7.8	20.9
6 30	19 18.33	-30 33.6	1.078	2.084	5.8	18.9	6 30	19 18.02	-24 37.8	1.689	2.697	3.6	20.6
7 10	19 7.34	-31 3.1	1.083	2.093	4.4	18.9	7 10	19 7.49	-24 59.3	1.686	2.701	1.4	20.5
7 20	18 56.84	-31 16.5	1.110	2.102	8.3	19.1	7 20	18 57.19	-25 15.1	1.710	2.705	5.5	20.8
7 30	18 48.47	-31 14.0	1.160	2.112	12.9	19.4	7 30	18 48.26	-25 24.6	1.760	2.708	9.5	21.0
8 9	18 43.36	-30 58.6	1.230	2.123	17.1	19.7	8 9	18 41.56	-25 28.0	1.834	2.711	13.1	21.2
<b>74059</b>	1998 <i>KJ</i> <sub>20</sub>		7 8.0 58°81	0°2/ 7.9	17		<b>19106</b>	1981 <i>EV</i> <sub>15</sub>		7 8.0 71°85	5°9/ 6.9	18	
5 31	19 38.69	-20 46.9	1.303	2.156	18.8	19.3	5 31	19 42.09	-36 18.0	1.743	2.576	15.7	19.1
6 10	19 34.60	-21 13.0	1.248	2.173	14.6	19.1	6 10	19 37.04	-36 53.7	1.674	2.581	12.6	18.9
6 20	19 27.40	-21 47.0	1.213	2.191	9.7	18.9	6 20	19 28.97	-37 22.8	1.626	2.585	9.4	18.7
6 30	19 17.91	-22 24.9	1.200	2.209	4.4	18.6	6 30	19 18.66	-37 39.3	1.601	2.590	6.6	18.6
7 10	19 7.47	-23 2.0	1.211	2.227	1.1	18.4	7 10	19 7.35	-37 38.4	1.601	2.595	6.0	18.6
7 20	18 57.53	-23 34.3	1.246	2.245	6.4	18.8	7 20	18 56.45	-37 18.6	1.627	2.600	8.2	18.7
7 30	18 49.46	-23 59.8	1.305	2.263	11.2	19.1	7 30	18 47.33	-36 41.9	1.677	2.605	11.3	18.9
8 9	18 44.22	-24 18.2	1.386	2.282	15.3	19.4	8 9	18 40.92	-35 52.8	1.749	2.609	14.4	19.1
<b>336136</b>	2008 <i>QR</i> <sub>6</sub>		7 8.0 354°05	3°6/ 8.9	17		<b>270345</b>	2001 <i>XU</i> <sub>223</sub>		7 8.0 105°73			

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7 8.0

7 8.0

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>1098</b>	Hakone		7 8.0 244 <sup>o</sup> 23	5 <sup>o</sup> 2/ 6.9	18		<b>43126</b>	1999 XL <sub>64</sub>		7 8.0 175 <sup>o</sup> 08	0 <sup>o</sup> 1/ 8.1	18	
5 31	19 42.63	-36 23.8	2.063	2.884	14.0	15.2	5 31	19 33.99	-21 10.2	2.860	3.676	10.7	19.7
6 10	19 37.14	-36 47.7	1.975	2.875	11.3	15.0	6 10	19 29.42	-21 19.7	2.773	3.678	8.3	19.5
6 20	19 28.93	-37 5.5	1.909	2.865	8.4	14.8	6 20	19 23.27	-21 32.0	2.710	3.679	5.5	19.3
6 30	19 18.65	-37 12.0	1.867	2.856	5.9	14.6	6 30	19 15.97	-21 45.9	2.673	3.680	2.5	19.1
7 10	19 7.36	-37 3.1	1.851	2.846	5.3	14.5	7 10	19 8.12	-21 59.8	2.665	3.681	0.6	19.0
7 20	18 56.29	-36 37.4	1.863	2.836	7.3	14.6	7 20	19 0.38	-22 12.4	2.686	3.681	3.7	19.2
7 30	18 46.67	-35 56.4	1.900	2.825	10.4	14.8	7 30	18 53.41	-22 22.9	2.735	3.681	6.6	19.4
8 9	18 39.45	-35 4.1	1.960	2.814	13.4	15.0	8 9	18 47.78	-22 31.0	2.809	3.681	9.2	19.6
<b>438520</b>	2007 RZ <sub>297</sub>		7 8.0 298 <sup>o</sup> 39	0 <sup>o</sup> 4/ 7.9	18		<b>140975</b>	2001 VM <sub>121</sub>		7 8.0 197 <sup>o</sup> 55	3 <sup>o</sup> 4/ 9.3	18	
5 31	19 37.21	-24 18.9	1.794	2.633	15.0	20.2	5 31	19 33.76	-10 12.7	2.870	3.658	11.3	21.5
6 10	19 33.06	-24 6.9	1.700	2.617	11.8	20.0	6 10	19 29.19	-10 0.2	2.776	3.655	9.1	21.3
6 20	19 26.30	-23 55.7	1.627	2.602	8.0	19.7	6 20	19 23.10	-9 55.6	2.704	3.651	6.8	21.2
6 30	19 17.51	-23 43.2	1.578	2.586	3.7	19.4	6 30	19 15.90	-9 59.2	2.659	3.647	4.5	21.0
7 10	19 7.65	-23 27.8	1.554	2.570	1.0	19.2	7 10	19 8.15	-10 10.7	2.642	3.642	3.4	20.9
7 20	18 57.87	-23 8.6	1.558	2.555	5.6	19.4	7 20	19 0.45	-10 29.0	2.653	3.636	4.7	21.0
7 30	18 49.37	-22 46.0	1.586	2.540	10.0	19.7	7 30	18 53.45	-10 52.9	2.693	3.631	7.1	21.2
8 9	18 43.08	-22 21.4	1.638	2.525	13.9	19.9	8 9	18 47.69	-11 20.7	2.757	3.624	9.5	21.3
<b>270064</b>	2001 OJ <sub>90</sub>		7 8.0 354 <sup>o</sup> 18	5 <sup>o</sup> 8/ 8.4	18	19.2	<b>247178</b>	2001 CQ <sub>32</sub>		7 8.0 177 <sup>o</sup> 30	6 <sup>o</sup> 3/ 5.8	18	
5 31	19 42.85	-37 33.9	1.156	2.015	20.3	19.2	5 31	19 44.45	-47 9.6	3.270	4.041	10.4	20.8
6 10	19 38.91	-37 4.2	1.086	2.009	16.5	19.0	6 10	19 37.73	-47 47.9	3.193	4.043	8.9	20.7
6 20	19 30.81	-36 18.5	1.033	2.004	12.1	18.7	6 20	19 28.89	-48 16.9	3.140	4.045	7.4	20.6
6 30	19 19.62	-35 10.7	1.001	2.000	7.7	18.5	6 30	19 18.53	-48 32.3	3.111	4.046	6.5	20.5
7 10	19 7.18	-33 38.6	0.991	1.998	5.9	18.3	7 10	19 7.52	-48 31.1	3.110	4.046	6.4	20.5
7 20	18 55.52	-31 45.7	1.005	1.997	9.0	18.5	7 20	18 56.78	-48 12.5	3.135	4.046	7.3	20.5
7 30	18 46.47	-29 40.9	1.041	1.997	13.6	18.8	7 30	18 47.22	-47 37.7	3.187	4.046	8.6	20.6
8 9	18 41.14	-27 34.3	1.098	1.999	18.1	19.0	8 9	18 39.55	-46 49.7	3.262	4.045	10.2	20.8
<b>358957</b>	2008 KL <sub>36</sub>		7 8.0 25 <sup>o</sup> 68	4 <sup>o</sup> 6/ 9.8	18		<b>371990</b>	2008 GF <sub>129</sub>		7 8.0 142 <sup>o</sup> 86	2 <sup>o</sup> 8/ 7.2	17	
5 31	19 31.65	-8 30.6	2.123	2.928	14.2	21.2	5 31	19 40.78	-27 37.8	1.812	2.646	15.1	21.6
6 10	19 28.04	-8 19.9	2.045	2.932	11.6	21.0	6 10	19 35.75	-28 18.1	1.739	2.653	11.8	21.4
6 20	19 22.54	-8 21.2	1.988	2.937	8.7	20.8	6 20	19 28.03	-28 59.5	1.688	2.659	8.1	21.2
6 30	19 15.67	-8 35.3	1.955	2.941	5.9	20.7	6 30	19 18.28	-29 37.3	1.661	2.666	4.3	21.0
7 10	19 8.15	-9 1.5	1.948	2.946	4.6	20.6	7 10	19 7.56	-30 6.9	1.661	2.671	3.1	20.9
7 20	19 0.77	-9 37.8	1.967	2.951	6.0	20.7	7 20	18 57.09	-30 25.4	1.688	2.677	6.3	21.2
7 30	18 54.33	-10 21.7	2.012	2.957	8.7	20.9	7 30	18 48.07	-30 32.2	1.740	2.682	10.1	21.4
8 9	18 49.50	-11 10.1	2.081	2.962	11.6	21.1	8 9	18 41.42	-30 28.8	1.815	2.686	13.5	21.6
<b>198452</b>	2004 XH <sub>8</sub>		7 8.0 240 <sup>o</sup> 78	3 <sup>o</sup> 1/ 7.0	18		<b>483600</b>	2004 QM <sub>6</sub>		7 8.0 299 <sup>o</sup> 84	5 <sup>o</sup> 9/ 10.1	17	
5 31	19 39.76	-29 42.6	2.259	3.083	12.9	21.0	5 31	19 32.51	-4 57.6	2.235	3.021	14.1	21.5
6 10	19 34.69	-30 17.6	2.161	3.067	10.2	20.8	6 10	19 28.94	-4 43.3	2.117	2.988	11.9	21.2
6 20	19 27.24	-30 52.4	2.085	3.052	7.1	20.5	6 20	19 23.39	-4 42.6	2.020	2.954	9.4	21.0
6 30	19 17.92	-31 23.0	2.034	3.035	4.1	20.3	6 30	19 16.21	-4 57.5	1.946	2.919	7.0	20.8
7 10	19 7.58	-31 45.4	2.011	3.018	3.3	20.2	7 10	19 8.05	-5 28.6	1.897	2.885	5.9	20.7
7 20	18 57.22	-31 57.2	2.017	3.001	5.9	20.4	7 20	18 59.69	-6 14.8	1.875	2.851	7.1	20.7
7 30	18 47.93	-31 57.8	2.049	2.983	9.2	20.5	7 30	18 52.01	-7 13.6	1.879	2.816	9.8	20.8
8 9	18 40.58	-31 48.3	2.104	2.964	12.4	20.7	8 9	18 45.83	-8 21.3	1.907	2.781	12.8	20.9
<b>449581</b>	2014 JB <sub>29</sub>		7 8.0 26 <sup>o</sup> 60	0 <sup>o</sup> 9/ 7.6	18		<b>102382</b>	1999 TZ <sub>151</sub>		7 8.0 281 <sup>o</sup> 94	4 <sup>o</sup> 6/ 6.6	18	
5 31	19 33.62	-20 21.3	1.864	2.703	14.6	20.0	5 31	19 39.09	-29 26.2	1.516	2.365	16.8	19.4
6 10	19 30.02	-21 26.6	1.794	2.712	11.3	19.8	6 10	19 35.38	-30 24.3	1.430	2.351	13.4	19.1
6 20	19 24.11	-22 40.4	1.746	2.721	7.5	19.6	6 20	19 28.39	-31 25.2	1.364	2.337	9.4	18.8
6 30	19 16.47	-23 58.3	1.723	2.731	3.4	19.4	6 30	19 18.69	-32 22.1	1.321	2.322	5.7	18.6
7 10	19 7.96	-25 15.1	1.727	2.742	1.4	19.3	7 10	19 7.44	-33 7.9	1.302	2.308	4.9	18.5
7 20	18 59.60	-26 25.8	1.758	2.753	5.3	19.6	7 20	18 56.12	-33 37.5	1.309	2.294	8.2	18.7
7 30	18 52.40	-27 27.0	1.815	2.764	9.2	19.8	7 30	18 46.38	-33 49.0	1.338	2.279	12.5	18.9
8 9	18 47.20	-28 17.3	1.895	2.777	12.5	20.1	8 9	18 39.49	-33 44.8	1.389	2.265	16.5	19.1
<b>482123</b>	2010 OG <sub>110</sub>		7 8.0 264 <sup>o</sup> 72	3 <sup>o</sup> 6/ 6.5	18		<b>77229</b>	2001 FN <sub>35</sub>		7 8.0 206 <sup>o</sup> 74	5 <sup>o</sup> 2/ 6.9	18	
5 31	19 35.91	-31 24.0	2.410	3.237	12.0	21.2	5 31	19 42.80	-33 22.2	1.637	2.474	16.3	19.8
6 10	19 31.53	-32 11.8	2.322	3.230	9.5	21.0	6 10	19 37.88	-34 2.0	1.561	2.473	13.1	19.6
6 20	19 25.02	-32 58.9	2.257	3.222	6.8	20.8	6 20	19 29.76	-34 38.4	1.505	2.471	9.4	19.4
6 30	19 16.87	-33 41.0	2.218	3.215	4.3	20.6	6 30	19 19.17	-35 4.7	1.472	2.468	6.2	19.2
7 10	19 7.86	-34 14.3	2.206	3.207	3.8	20.6	7 10	19 7.36	-35 15.6	1.465	2.466	5.4	19.1
7 20	18 58.90	-34 36.2	2.222	3.199	6.0	20.7	7 20	18 55.83	-35 8.4	1.483	2.463	8.1	19.3
7 30	18 50.93	-34 46.0	2.264	3.192	8.8	20.9	7 30	18 46.05	-34 44.1	1.526	2.460	11.8	19.5
8 9	18 44.73	-34 44.8	2.330	3.184	11.5	21.1	8 9	18 39.10	-34 7.0	1.590	2.457	15.3	19.7
<b>91065</b>	1998 FM <sub>66</sub>		7 8.0 152 <sup>o</sup> 95	7 <sup>o</sup> 3/ 5.9	18		<b>254256</b>	2004 RV <sub>168</sub>		7 8.0 270 <sup>o</sup> 38	0 <sup>o</sup> 7/ 8.2	18	
5 31	19 44.55	-40 53.4	2.031	2.844	14.5	18.9	5 31	19 34.92	-20 41.9	2.382	3.204	12.3	20.7
6 10	19 38.85	-41 53.4	1.962	2.849	12.0	18.8	6 10	19 30.52	-20 29.8	2.287	3.194	9.7	20.6
6 20	19 30.18	-42 45.3	1.914	2.854	9.5	18.6	6 20	19 24.22	-20 20.3	2.214	3.184	6.5	20.3
6 30	19 19.26	-43 22.1	1.890	2.858	7.7	18.5	6 30	19 16.48	-20 12.7	2.167	3.174	3.1	20.1
7 10	19 7.30	-43 38.5	1.892	2.862	7.5	18.5	7 10	19 8.03	-20 5.9	2.148	3.164	1.0	19.9
7 20	18 55.65	-43 32.3	1.919	2.865	9.0	18.6	7 20	18 59.67	-19 59.2	2.157	3.154	4.4	20.2
7 30	18 45.68	-43 5.1	1.971	2.869	11.4	18.8	7 30	18 52.22	-19 52.3	2.194	3.143	7.8	20.3
8 9	18 38.36	-42 21.6	2.045	2.872	13.9	18.9	8 9	18 46.36	-19 45.2	2.254	3.133	10.9	20.5
<b>124957</b>	2001 TU <sub>92</sub>												

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7 8.0

7 8.1

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>48090</b>	2001 <i>FK</i> <sub>42</sub>		7 8.0 54°88	1.7/ 8.4	18		<b>488374</b>	2016 <i>WQ</i> <sub>36</sub>		7 8.1 348°39	6.4/ 8.5	18	
5 31	19 38.35	-18 4.0	1.302	2.152	19.0	18.7	5 31	19 35.32	-9 27.2	1.937	2.744	15.3	19.9
6 10	19 34.26	-18 1.8	1.249	2.171	14.9	18.5	6 10	19 31.09	-8 2.9	1.854	2.740	12.6	19.7
6 20	19 27.15	-18 8.8	1.214	2.189	10.1	18.3	6 20	19 24.71	-6 46.1	1.793	2.736	9.8	19.5
6 30	19 17.87	-18 23.2	1.201	2.208	4.9	18.0	6 30	19 16.76	-5 40.3	1.755	2.733	7.3	19.3
7 10	19 7.73	-18 42.3	1.212	2.228	1.9	17.9	7 10	19 8.06	-4 48.3	1.744	2.730	6.5	19.3
7 20	18 58.11	-19 3.1	1.248	2.247	6.4	18.2	7 20	18 59.51	-4 11.8	1.758	2.728	7.9	19.4
7 30	18 50.33	-19 23.5	1.308	2.267	11.1	18.5	7 30	18 52.05	-3 51.0	1.797	2.726	10.6	19.5
8 9	18 45.27	-19 42.3	1.388	2.287	15.1	18.8	8 9	18 46.42	-3 44.1	1.859	2.724	13.5	19.7
<b>513173</b>	2004 <i>RQ</i> <sub>110</sub>		7 8.1 270°20	12°1/ 4.0	18		<b>27141</b>	Krystleung		7 8.1 310°06	1°7/ 7.5	18	
5 31	20 2.40	-56 33.8	2.235	2.974	15.5	22.4	5 31	19 35.05	-22 47.2	1.446	2.301	17.2	18.2
6 10	19 54.29	-57 41.6	2.138	2.944	14.1	22.2	6 10	19 32.18	-23 35.3	1.358	2.285	13.5	17.9
6 20	19 41.49	-58 34.1	2.060	2.913	12.9	22.1	6 20	19 26.24	-24 32.6	1.290	2.269	9.2	17.6
6 30	19 24.78	-59 0.4	2.002	2.881	12.2	21.9	6 30	19 17.75	-25 34.6	1.244	2.253	4.4	17.3
7 10	19 5.99	-58 51.4	1.968	2.849	12.3	21.9	7 10	19 7.77	-26 35.1	1.223	2.238	2.2	17.1
7 20	18 47.54	-58 3.4	1.956	2.815	13.3	21.9	7 20	18 57.68	-27 28.3	1.227	2.223	7.0	17.4
7 30	18 31.82	-56 39.5	1.967	2.782	14.9	21.9	7 30	18 49.01	-28 10.5	1.254	2.208	11.9	17.6
8 9	18 20.40	-54 48.4	1.999	2.747	16.8	22.0	8 9	18 43.00	-28 40.8	1.302	2.195	16.3	17.9
<b>305677</b>	2009 <i>BA</i> <sub>104</sub>		7 8.1 145°67	2°4/ 8.9	18		<b>309110</b>	2006 <i>WW</i> <sub>104</sub>		7 8.1 298°97	2°4/ 7.0	18	
5 31	19 34.99	-13 56.7	2.237	3.049	13.4	21.4	5 31	19 35.48	-26 23.3	2.125	2.959	13.2	20.8
6 10	19 30.57	-14 2.1	2.156	3.054	10.6	21.3	6 10	19 31.40	-27 13.7	2.041	2.955	10.3	20.6
6 20	19 24.23	-14 16.2	2.097	3.059	7.4	21.1	6 20	19 25.06	-28 6.9	1.979	2.951	7.0	20.4
6 30	19 16.49	-14 38.3	2.064	3.063	4.2	20.9	6 30	19 16.98	-28 59.1	1.942	2.947	3.7	20.1
7 10	19 8.06	-15 6.7	2.057	3.068	2.5	20.8	7 10	19 8.00	-29 45.8	1.933	2.944	2.7	20.1
7 20	18 59.77	-15 39.4	2.078	3.072	4.8	20.9	7 20	18 59.06	-30 23.7	1.951	2.940	5.6	20.2
7 30	18 52.44	-16 14.3	2.127	3.076	8.1	21.1	7 30	18 51.18	-30 51.2	1.996	2.937	9.0	20.4
8 9	18 46.74	-16 49.4	2.199	3.079	11.1	21.3	8 9	18 45.20	-31 8.4	2.064	2.933	12.2	20.6
<b>154493</b>	Portisch		7 8.1 42°68	7°7/ 6.1	17		<b>254254</b>	2004 <i>RM</i> <sub>167</sub>		7 8.1 326°23	0°4/ 8.2	18	
5 31	19 41.48	-38 0.3	1.555	2.394	16.9	19.9	5 31	19 32.20	-19 34.4	1.910	2.749	14.3	20.3
6 10	19 37.13	-39 7.2	1.494	2.401	13.8	19.7	6 10	19 29.02	-19 55.5	1.819	2.735	11.2	20.1
6 20	19 29.37	-40 7.3	1.452	2.407	10.6	19.5	6 20	19 23.57	-20 23.9	1.748	2.722	7.6	19.8
6 30	19 19.01	-40 52.0	1.433	2.414	8.2	19.4	6 30	19 16.34	-20 57.6	1.701	2.709	3.5	19.6
7 10	19 7.44	-41 14.6	1.438	2.422	7.9	19.4	7 10	19 8.15	-21 33.7	1.681	2.697	0.9	19.3
7 20	18 56.30	-41 12.5	1.467	2.429	9.9	19.5	7 20	18 59.96	-22 9.2	1.687	2.685	5.1	19.6
7 30	18 47.14	-40 47.4	1.519	2.437	12.9	19.7	7 30	18 52.81	-22 41.9	1.718	2.674	9.2	19.8
8 9	18 41.04	-40 4.8	1.591	2.445	15.9	19.9	8 9	18 47.55	-23 10.2	1.773	2.663	12.8	20.0
<b>289145</b>	2004 <i>VK</i> <sub>14</sub>		7 8.1 269°11	1°8/ 7.3	18		<b>201847</b>	2003 <i>YB</i> <sub>88</sub>		7 8.1 250°73	0°9/ 8.4	18	
5 31	19 34.57	-26 26.7	2.541	3.367	11.5	20.5	5 31	19 35.62	-18 15.8	2.133	2.957	13.5	20.9
6 10	19 30.33	-26 59.7	2.443	3.353	9.0	20.3	6 10	19 31.40	-18 32.4	2.038	2.945	10.7	20.7
6 20	19 24.17	-27 34.5	2.368	3.339	6.1	20.1	6 20	19 25.02	-18 55.9	1.964	2.934	7.3	20.4
6 30	19 16.51	-28 8.1	2.319	3.324	3.1	19.8	6 30	19 16.97	-19 24.9	1.916	2.922	3.5	20.2
7 10	19 8.05	-28 37.6	2.298	3.310	2.1	19.7	7 10	19 8.01	-19 56.9	1.894	2.910	1.1	20.0
7 20	18 59.59	-29 0.7	2.305	3.295	4.8	19.9	7 20	18 59.06	-20 29.5	1.901	2.898	4.8	20.2
7 30	18 51.96	-29 16.3	2.340	3.280	7.9	20.1	7 30	18 51.05	-21 0.5	1.934	2.885	8.6	20.4
8 9	18 45.89	-29 24.6	2.399	3.266	10.8	20.2	8 9	18 44.81	-21 28.7	1.991	2.872	12.0	20.6
<b>157309</b>	2004 <i>ST</i> <sub>29</sub>		7 8.1 20°44	2°7/ 7.4	18		<b>60837</b>	2000 <i>HU</i> <sub>53</sub>		7 8.1 331°95	4°5/ 6.7	18	
5 31	19 37.71	-27 34.4	1.569	2.417	16.4	19.8	5 31	19 29.23	-26 12.7	0.980	1.871	20.6	18.2
6 10	19 33.76	-28 0.8	1.498	2.420	12.8	19.6	6 10	19 28.98	-27 15.9	0.903	1.850	16.4	17.9
6 20	19 26.91	-28 27.9	1.447	2.422	8.7	19.3	6 20	19 24.88	-28 29.0	0.843	1.829	11.4	17.5
6 30	19 17.86	-28 51.4	1.419	2.425	4.5	19.1	6 30	19 17.41	-29 44.6	0.802	1.810	6.3	17.2
7 10	19 7.77	-29 6.9	1.416	2.428	3.0	19.0	7 10	19 7.86	-30 53.1	0.781	1.792	5.0	17.1
7 20	18 57.96	-29 11.9	1.438	2.431	6.6	19.2	7 20	18 58.13	-31 45.3	0.780	1.776	9.9	17.3
7 30	18 49.75	-29 6.2	1.485	2.435	10.8	19.5	7 30	18 50.40	-32 16.6	0.799	1.762	15.6	17.5
8 9	18 44.11	-28 51.9	1.554	2.439	14.6	19.7	8 9	18 46.34	-32 27.3	0.834	1.749	20.8	17.7
<b>380275</b>	2002 <i>AL</i> <sub>65</sub>		7 8.1 76°06	2°3/ 7.8	17		<b>162876</b>	2001 <i>FC</i> <sub>24</sub>		7 8.1 176°98	18°5/ 16.0	18	
5 31	19 43.55	-29 16.8	1.724	2.557	15.8	20.5	5 31	19 37.82	+15 22.8	1.287	2.010	25.6	20.1
6 10	19 37.66	-29 12.1	1.666	2.578	12.3	20.3	6 10	19 34.17	+16 51.8	1.226	2.011	23.7	20.0
6 20	19 29.08	-29 4.4	1.629	2.600	8.3	20.1	6 20	19 27.42	+17 45.6	1.176	2.012	21.7	19.8
6 30	19 18.67	-28 50.4	1.616	2.622	4.3	19.9	6 30	19 18.21	+17 54.3	1.140	2.012	19.9	19.7
7 10	19 7.62	-28 28.0	1.630	2.643	2.5	19.8	7 10	19 7.72	+17 11.8	1.121	2.012	18.7	19.6
7 20	18 57.18	-27 57.3	1.671	2.664	5.9	20.1	7 20	18 57.36	+15 38.1	1.120	2.012	18.6	19.6
7 30	18 48.48	-27 20.1	1.738	2.685	9.7	20.4	7 30	18 48.59	+13 20.0	1.137	2.011	19.6	19.7
8 9	18 42.28	-26 39.3	1.829	2.706	13.1	20.6	8 9	18 42.56	+10 30.3	1.171	2.010	21.4	19.8
<b>85665</b>	1998 <i>QG</i> <sub>46</sub>		7 8.1 306°47	1°0/ 8.4	18		<b>418156</b>	2008 <i>AW</i> <sub>97</sub>		7 8.1 167°08	2°3/ 7.6	17	
5 31	19 32.88	-18 45.0	2.120	2.950	13.4	19.1	5 31	19 43.16	-27 45.8	1.923	2.749	14.7	22.0
6 10	19 29.32	-18 49.5	2.018	2.930	10.6	18.8	6 10	19 37.44	-28 3.4	1.845	2.754	11.5	21.8
6 20	19 23.66	-18 59.8	1.939	2.910	7.2	18.6	6 20	19 29.10	-28 20.6	1.788	2.758	7.8	21.6
6 30	19 16.35	-19 15.1	1.884	2.890	3.5	18.3	6 30	19 18.81	-28 33.6	1.757	2.762	4.0	21.4
7 10	19 8.12	-19 33.4	1.856	2.871	1.2	18.1	7 10	19 7.62	-28 39.1	1.753	2.765	2.5	21.3
7 20	18 59.87	-19 53.0	1.854	2.852	4.8	18.3	7 20	18 56.70	-28 35.3	1.776	2.767	5.8	21.5
7 30	18 52.52	-20 12.3	1.879	2.833	8.7	18.5	7 30	18 47.20	-28 22.6	1.826	2.769	9.6	21.8
8 9	18 46.89	-20 30.1	1.928	2.814	12.1	18.7	8 9	18 40.02	-28 2.9	1.899	2.769	13.0	22.0
<b>343889</b>	2011 <i>HT</i> <sub>93</sub>		7 8.1 39°39	2°0/ 7.4	17		<b>121612</b>	1999 <i>VD</i> <sub>150</sub>		7 8.1 266°51			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>394710</b>	2008 <i>DD</i> <sub>86</sub>		7 8.1 46°10	3.4/ 9.2	16		<b>239447</b>	2007 <i>TX</i> <sub>186</sub>		7 8.1 306°52	3.6/ 6.9	18	
5 31	19 33.19	-12 27.1	2.045	2.862	14.3	21.2	5 31	19 37.10	-29 20.8	1.858	2.698	14.6	20.0
6 10	19 29.32	-12 17.4	1.972	2.870	11.4	21.1	6 10	19 33.08	-30 7.5	1.776	2.692	11.5	19.8
6 20	19 23.47	-12 17.3	1.919	2.879	8.2	20.9	6 20	19 26.42	-30 55.0	1.716	2.687	8.0	19.6
6 30	19 16.20	-12 27.1	1.891	2.887	5.0	20.7	6 30	19 17.71	-31 38.3	1.680	2.682	4.7	19.4
7 10	19 8.26	-12 45.5	1.889	2.896	3.4	20.6	7 10	19 7.93	-32 12.5	1.670	2.676	3.9	19.3
7 20	19 0.52	-13 11.0	1.914	2.906	5.4	20.8	7 20	18 58.25	-32 34.3	1.686	2.671	6.7	19.5
7 30	18 53.82	-13 41.3	1.965	2.915	8.6	21.0	7 30	18 49.87	-32 42.7	1.727	2.667	10.3	19.7
8 9	18 48.82	-14 14.1	2.040	2.925	11.6	21.2	8 9	18 43.75	-32 39.3	1.791	2.662	13.7	19.9
<b>275707</b>	2000 <i>WH</i> <sub>20</sub>		7 8.1 315°73	6.1/ 5.9	17		<b>109104</b>	2001 <i>QV</i> <sub>36</sub>		7 8.1 208°54	2.7/ 7.7	18	
5 31	19 36.99	-32 21.1	1.542	2.394	16.5	20.1	5 31	19 43.87	-30 19.8	1.974	2.798	14.4	19.0
6 10	19 33.82	-33 37.6	1.460	2.380	13.2	19.9	6 10	19 38.04	-30 21.2	1.887	2.794	11.4	18.8
6 20	19 27.41	-34 55.2	1.398	2.366	9.7	19.6	6 20	19 29.55	-30 19.2	1.821	2.788	7.9	18.6
6 30	19 18.33	-36 6.2	1.359	2.353	6.7	19.4	6 30	19 19.06	-30 10.2	1.780	2.783	4.3	18.4
7 10	19 7.70	-37 2.5	1.344	2.341	6.4	19.4	7 10	19 7.63	-29 51.4	1.766	2.777	2.9	18.3
7 20	18 57.03	-37 38.5	1.353	2.329	9.2	19.5	7 20	18 56.44	-29 22.1	1.780	2.770	6.0	18.4
7 30	18 47.92	-37 52.6	1.386	2.317	13.0	19.7	7 30	18 46.69	-28 43.7	1.821	2.763	9.7	18.6
8 9	18 41.65	-37 47.4	1.438	2.306	16.6	19.9	8 9	18 39.26	-27 59.3	1.886	2.755	13.1	18.8
<b>193590</b>	2001 <i>BQ</i> <sub>45</sub>		7 8.1 208°83	4.3/ 9.1	18		<b>42404</b>	7606 <i>P-L</i>		7 8.1 329°89	1.4/ 7.7	18	
5 31	19 36.88	-10 56.3	2.246	3.045	13.7	20.3	5 31	19 28.66	-22 35.4	1.048	1.933	20.0	18.6
6 10	19 32.07	-10 21.5	2.154	3.040	11.2	20.1	6 10	19 28.21	-23 4.3	0.963	1.907	15.9	18.3
6 20	19 25.30	-9 54.9	2.085	3.034	8.3	19.9	6 20	19 24.20	-23 43.4	0.895	1.881	10.9	17.9
6 30	19 17.05	-9 37.5	2.040	3.028	5.5	19.7	6 30	19 17.08	-24 29.3	0.846	1.857	5.1	17.5
7 10	19 8.06	-9 29.9	2.022	3.022	4.3	19.6	7 10	19 8.03	-25 16.1	0.818	1.834	2.1	17.2
7 20	18 59.15	-9 31.6	2.032	3.015	6.0	19.7	7 20	18 58.73	-25 57.5	0.811	1.813	8.1	17.5
7 30	18 51.17	-9 41.7	2.069	3.007	8.9	19.9	7 30	18 51.16	-26 29.0	0.824	1.793	14.3	17.8
8 9	18 44.83	-9 58.2	2.129	3.000	11.8	20.0	8 9	18 46.93	-26 49.2	0.854	1.776	19.7	18.0
<b>21754</b>	<i>Tvaruzkova</i>		7 8.1 236°42	3.5/ 9.1	18		<b>41076</b>	1999 <i>VH</i> <sub>43</sub>		7 8.1 228°20	0.6/ 7.8	18 R	
5 31	19 37.30	-12 42.5	1.703	2.524	16.5	19.2	5 31	19 35.00	-23 48.3	2.952	3.767	10.4	20.4
6 10	19 33.17	-12 43.5	1.614	2.516	13.3	18.9	6 10	19 30.31	-24 1.8	2.852	3.756	8.1	20.2
6 20	19 26.46	-12 56.8	1.546	2.508	9.5	18.7	6 20	19 23.99	-24 17.0	2.775	3.745	5.4	20.0
6 30	19 17.73	-13 22.5	1.500	2.499	5.6	18.4	6 30	19 16.44	-24 32.2	2.725	3.733	2.5	19.8
7 10	19 7.88	-13 58.7	1.480	2.490	3.5	18.3	7 10	19 8.26	-24 45.6	2.705	3.720	0.9	19.7
7 20	18 58.04	-14 42.6	1.487	2.481	6.3	18.4	7 20	19 0.11	-24 55.8	2.713	3.707	3.8	19.9
7 30	18 49.39	-15 30.8	1.518	2.471	10.4	18.6	7 30	18 52.68	-25 2.2	2.750	3.694	6.7	20.0
8 9	18 42.92	-16 20.1	1.573	2.461	14.3	18.8	8 9	18 46.57	-25 4.7	2.812	3.680	9.3	20.2
<b>386411</b>	2008 <i>UU</i> <sub>262</sub>		7 8.1 231°04	1.7/ 7.3	18		<b>58698</b>	1998 <i>BE</i> <sub>31</sub>		7 8.1 324°59	0.4/ 8.2	18	
5 31	19 37.75	-23 38.0	2.154	2.981	13.3	20.9	5 31	19 36.65	-20 31.4	1.687	2.526	15.8	20.0
6 10	19 33.19	-24 33.2	2.062	2.972	10.4	20.7	6 10	19 32.67	-20 38.8	1.608	2.525	12.4	19.8
6 20	19 26.32	-25 34.0	1.991	2.963	7.0	20.5	6 20	19 26.10	-20 52.0	1.548	2.523	8.4	19.5
6 30	19 17.62	-26 36.4	1.947	2.954	3.4	20.2	6 30	19 17.54	-21 9.1	1.513	2.521	3.9	19.3
7 10	19 7.91	-27 36.0	1.931	2.944	2.0	20.1	7 10	19 8.00	-21 27.3	1.503	2.519	1.0	19.0
7 20	18 58.14	-28 28.6	1.943	2.934	5.4	20.3	7 20	18 58.61	-21 44.3	1.520	2.518	5.6	19.4
7 30	18 49.35	-29 11.8	1.982	2.923	9.0	20.5	7 30	18 50.55	-21 58.5	1.561	2.516	9.9	19.6
8 9	18 42.44	-29 44.9	2.045	2.913	12.3	20.7	8 9	18 44.75	-22 9.5	1.625	2.515	13.8	19.8
<b>205650</b>	2001 <i>XS</i> <sub>101</sub>		7 8.1 218°30	2.1/ 7.4	17		<b>4640</b>	<i>Hara</i>		7 8.1 152°67	2.6/ 7.5	18	
5 31	19 40.91	-24 39.7	1.612	2.452	16.4	20.7	5 31	19 43.25	-27 28.2	1.619	2.456	16.5	17.1
6 10	19 36.38	-25 23.6	1.529	2.446	12.9	20.4	6 10	19 37.99	-27 52.6	1.547	2.462	12.9	16.9
6 20	19 28.83	-26 13.0	1.466	2.441	8.8	20.2	6 20	19 29.74	-28 17.5	1.495	2.467	8.8	16.6
6 30	19 18.88	-27 2.9	1.427	2.434	4.3	19.9	6 30	19 19.21	-28 38.4	1.467	2.472	4.5	16.4
7 10	19 7.60	-27 47.7	1.414	2.427	2.5	19.8	7 10	19 7.62	-28 50.8	1.464	2.477	2.9	16.3
7 20	18 56.38	-28 22.9	1.427	2.420	6.6	20.0	7 20	18 56.35	-28 52.3	1.489	2.481	6.6	16.5
7 30	18 46.62	-28 46.6	1.465	2.413	11.1	20.2	7 30	18 46.76	-28 43.4	1.538	2.484	10.8	16.8
8 9	18 39.46	-28 59.3	1.525	2.404	15.2	20.5	8 9	18 39.85	-28 26.1	1.609	2.487	14.6	17.0
<b>271621</b>	2004 <i>PH</i> <sub>52</sub>		7 8.1 339°58	1.0/ 8.4	18		<b>403982</b>	2012 <i>BL</i> <sub>104</sub>		7 8.1 264°68	1.1/ 8.6	18	
5 31	19 32.65	-17 21.9	1.380	2.235	17.9	20.0	5 31	19 33.44	-16 8.0	2.440	3.255	12.3	20.8
6 10	19 30.18	-17 51.8	1.301	2.226	14.1	19.7	6 10	19 29.43	-16 40.2	2.345	3.247	9.7	20.6
6 20	19 24.79	-18 34.6	1.241	2.218	9.7	19.4	6 20	19 23.58	-17 20.9	2.272	3.238	6.6	20.4
6 30	19 17.06	-19 28.0	1.202	2.210	4.6	19.1	6 30	19 16.32	-18 8.4	2.225	3.230	3.3	20.2
7 10	19 8.05	-20 27.4	1.187	2.203	1.3	18.9	7 10	19 8.30	-19 0.0	2.206	3.221	1.2	20.0
7 20	18 59.08	-21 27.7	1.197	2.197	6.3	19.2	7 20	19 0.26	-19 53.1	2.215	3.212	4.3	20.2
7 30	18 51.54	-22 24.2	1.230	2.192	11.3	19.5	7 30	18 53.02	-20 44.8	2.253	3.203	7.6	20.4
8 9	18 46.57	-23 13.9	1.285	2.188	15.8	19.7	8 9	18 47.25	-21 33.2	2.315	3.194	10.7	20.6
<b>499900</b>	2011 <i>GD</i> <sub>5</sub>		7 8.1 143°27	1.4/ 7.5	17		<b>393151</b>	2013 <i>BB</i> <sub>80</sub>		7 8.1 146°21	1.5/ 8.6	18	
5 31	19 39.72	-23 13.8	2.038	2.863	14.0	22.0	5 31	19 34.39	-16 57.0	2.180	3.002	13.3	21.5
6 10	19 34.62	-24 3.4	1.963	2.873	10.9	21.8	6 10	19 30.26	-17 4.2	2.097	3.003	10.5	21.3
6 20	19 27.17	-24 57.8	1.910	2.882	7.3	21.6	6 20	19 24.15	-17 18.4	2.036	3.003	7.2	21.1
6 30	19 17.96	-25 53.0	1.883	2.890	3.4	21.4	6 30	19 16.56	-17 38.4	2.000	3.004	3.7	20.8
7 10	19 7.87	-26 44.5	1.884	2.898	1.8	21.3	7 10	19 8.25	-18 2.4	1.991	3.005	1.6	20.7
7 20	18 57.94	-27 28.7	1.913	2.905	5.3	21.6	7 20	19 0.05	-18 28.5	2.009	3.006	4.6	20.9
7 30	18 49.20	-28 3.8	1.969	2.912	9.0	21.8	7 30	18 52.84	-18 54.7	2.054	3.006	8.1	21.1
8 9	18 42.49	-28 29.6	2.049	2.919	12.2	22.0	8 9	18 47.30	-19 19.9	2.124	3.007	11.3	21.3
<b>254415</b>	2004 <i>UF</i> <sub>7</sub>		7 8.1 17°51	7.8/ 5.5	18		<b>139186</b>	2001 <i>FR</i> <sub>144</sub>		7 8.1 40°51	1.0/ 7.8		

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>247404</b>	2002 <i>BV</i> <sub>21</sub>		7 8.1 111°69	1.2°/ 8.3	17		<b>455318</b>	2002 <i>HD</i> <sub>14</sub>		7 8.1 38°92	9°7/ 5.4	17	
5 31	19 40.66	-19 15.8	1.509	2.347	17.5	21.0	5 31	19 40.77	-36 12.2	1.096	1.963	20.7	20.6
6 10	19 35.89	-19 13.2	1.442	2.357	13.7	20.7	6 10	19 37.68	-38 7.5	1.056	1.979	16.8	20.4
6 20	19 28.27	-19 17.6	1.394	2.367	9.3	20.5	6 20	19 30.33	-39 56.4	1.033	1.997	12.9	20.2
6 30	19 18.52	-19 27.0	1.370	2.377	4.5	20.3	6 30	19 19.69	-41 25.8	1.031	2.015	10.1	20.1
7 10	19 7.82	-19 39.0	1.371	2.386	1.5	20.1	7 10	19 7.58	-42 24.9	1.050	2.035	10.0	20.2
7 20	18 57.47	-19 51.4	1.397	2.395	6.0	20.4	7 20	18 56.16	-42 49.2	1.091	2.055	12.4	20.4
7 30	18 48.75	-20 2.9	1.449	2.404	10.6	20.7	7 30	18 47.40	-42 41.6	1.152	2.075	15.7	20.7
8 9	18 42.58	-20 12.9	1.523	2.413	14.5	20.9	8 9	18 42.53	-42 9.6	1.231	2.096	18.9	20.9
<b>2565</b>	Grögler		7 8.1 290°72	1.4°/ 7.8	18 R		<b>337132</b>	1999 <i>TO</i> <sub>131</sub>		7 8.1 290°96	2°6/ 8.7	18	
5 31	19 38.44	-24 30.3	1.519	2.366	16.9	18.0	5 31	19 35.55	-15 59.5	1.804	2.633	15.4	20.6
6 10	19 34.87	-24 45.3	1.418	2.340	13.4	17.7	6 10	19 31.86	-15 46.1	1.700	2.609	12.4	20.4
6 20	19 28.14	-25 4.3	1.337	2.314	9.2	17.4	6 20	19 25.68	-15 40.4	1.617	2.585	8.7	20.1
6 30	19 18.73	-25 23.9	1.278	2.287	4.4	17.0	6 30	19 17.46	-15 42.4	1.557	2.560	4.8	19.8
7 10	19 7.71	-25 39.9	1.245	2.260	1.9	16.8	7 10	19 8.07	-15 51.3	1.523	2.536	2.7	19.6
7 20	18 56.46	-25 48.9	1.236	2.233	6.8	17.0	7 20	18 58.55	-16 5.6	1.515	2.511	6.0	19.8
7 30	18 46.57	-25 49.7	1.251	2.206	11.9	17.2	7 30	18 50.06	-16 23.7	1.533	2.487	10.2	20.0
8 9	18 39.35	-25 43.1	1.287	2.179	16.6	17.4	8 9	18 43.61	-16 44.0	1.573	2.462	14.2	20.1
<b>234355</b>	2001 <i>HX</i> <sub>57</sub>		7 8.1 87°38	3°1/ 6.8	18		<b>292753</b>	2006 <i>UJ</i> <sub>183</sub>		7 8.1 181°54	4°6/ 6.3	18	
5 31	19 39.17	-27 3.3	1.929	2.762	14.4	19.9	5 31	19 39.06	-34 37.3	2.417	3.236	12.3	20.9
6 10	19 34.36	-28 9.1	1.865	2.778	11.2	19.8	6 10	19 34.06	-35 30.4	2.337	3.237	9.8	20.7
6 20	19 27.07	-29 17.2	1.824	2.795	7.6	19.6	6 20	19 26.80	-36 20.5	2.280	3.237	7.2	20.6
6 30	19 17.95	-30 22.0	1.808	2.811	4.2	19.4	6 30	19 17.84	-37 2.8	2.249	3.237	5.1	20.4
7 10	19 7.96	-31 18.4	1.819	2.827	3.3	19.4	7 10	19 8.01	-37 33.2	2.245	3.237	4.8	20.4
7 20	18 58.21	-32 2.6	1.857	2.842	6.2	19.6	7 20	18 58.30	-37 49.2	2.269	3.236	6.6	20.5
7 30	18 49.79	-32 33.2	1.921	2.858	9.6	19.8	7 30	18 49.70	-37 50.8	2.319	3.235	9.2	20.7
8 9	18 43.54	-32 51.2	2.009	2.873	12.7	20.1	8 9	18 43.01	-37 39.8	2.392	3.234	11.7	20.9
<b>355694</b>	2008 <i>FD</i> <sub>34</sub>		7 8.1 337°90	4°4/ 9.6	18		<b>383847</b>	2008 <i>JD</i> <sub>38</sub>		7 8.1 67°24	1°1/ 8.6	17	
5 31	19 32.50	-9 23.2	2.101	2.908	14.3	20.8	5 31	19 36.90	-15 35.4	1.582	2.416	16.9	21.0
6 10	19 28.85	-9 11.3	2.016	2.905	11.6	20.6	6 10	19 33.01	-16 23.7	1.508	2.421	13.4	20.8
6 20	19 23.24	-9 10.9	1.952	2.903	8.7	20.5	6 20	19 26.43	-17 25.7	1.455	2.426	9.1	20.5
6 30	19 16.18	-9 22.7	1.912	2.900	5.8	20.3	6 30	19 17.76	-18 38.4	1.425	2.431	4.4	20.3
7 10	19 8.38	-9 46.2	1.898	2.898	4.4	20.2	7 10	19 8.02	-19 56.4	1.420	2.436	1.3	20.1
7 20	19 0.67	-10 19.7	1.910	2.896	6.0	20.3	7 20	18 58.41	-21 14.1	1.443	2.441	5.8	20.4
7 30	18 53.89	-11 0.6	1.948	2.894	8.9	20.5	7 30	18 50.16	-22 26.5	1.491	2.446	10.3	20.7
8 9	18 48.76	-11 46.0	2.010	2.893	11.9	20.6	8 9	18 44.24	-23 30.5	1.561	2.452	14.2	20.9
<b>296493</b>	2009 <i>JB</i> <sub>2</sub>		7 8.1 353°05	8°5/ 8.1	18		<b>109161</b>	2001 <i>QN</i> <sub>62</sub>		7 8.1 281°78	4°4/ 9.2	18	
5 31	19 34.95	-6 57.9	1.757	2.564	16.7	19.1	5 31	19 35.66	-11 30.6	1.709	2.530	16.4	20.1
6 10	19 31.05	-5 4.7	1.678	2.558	14.1	18.9	6 10	19 32.05	-11 17.1	1.608	2.508	13.4	19.8
6 20	19 24.85	-3 19.9	1.619	2.553	11.3	18.7	6 20	19 25.87	-11 15.8	1.527	2.486	9.9	19.5
6 30	19 16.94	-1 49.1	1.584	2.549	9.1	18.5	6 30	19 17.58	-11 27.8	1.469	2.464	6.2	19.3
7 10	19 8.20	-0 36.7	1.573	2.546	8.5	18.5	7 10	19 8.05	-11 52.5	1.436	2.442	4.4	19.1
7 20	18 59.62	+0 14.3	1.587	2.543	9.8	18.6	7 20	18 58.37	-12 28.2	1.428	2.419	6.8	19.2
7 30	18 52.21	+0 43.3	1.625	2.542	12.3	18.7	7 30	18 49.74	-13 12.0	1.445	2.397	10.9	19.4
8 9	18 46.77	+0 52.7	1.684	2.542	15.0	18.9	8 9	18 43.21	-14 0.3	1.484	2.374	14.9	19.6
<b>187179</b>	2005 <i>SV</i> <sub>44</sub>		7 8.1 197°11	3°4/ 9.3	18		<b>344141</b>	2000 <i>HS</i> <sub>66</sub>		7 8.1 90°77	4°0/ 6.8	17	
5 31	19 33.54	-10 50.3	2.747	3.540	11.6	21.5	5 31	19 39.38	-31 35.1	2.058	2.888	13.7	21.2
6 10	19 29.14	-10 32.1	2.655	3.538	9.4	21.4	6 10	19 34.43	-32 23.7	1.993	2.902	10.8	21.0
6 20	19 23.18	-10 21.4	2.587	3.535	6.9	21.2	6 20	19 27.07	-33 10.4	1.950	2.916	7.6	20.8
6 30	19 16.08	-10 18.9	2.544	3.532	4.5	21.1	6 30	19 17.94	-33 50.1	1.933	2.929	4.8	20.7
7 10	19 8.42	-10 24.1	2.528	3.529	3.4	21.0	7 10	19 8.01	-34 18.6	1.942	2.943	4.2	20.7
7 20	19 0.82	-10 36.4	2.541	3.525	4.8	21.1	7 20	18 58.37	-34 33.7	1.978	2.957	6.5	20.8
7 30	18 53.96	-10 54.6	2.582	3.521	7.3	21.2	7 30	18 50.06	-34 35.4	2.040	2.970	9.5	21.0
8 9	18 48.39	-11 17.0	2.647	3.517	9.8	21.4	8 9	18 43.90	-34 25.7	2.125	2.983	12.3	21.2
<b>305398</b>	2008 <i>CD</i> <sub>77</sub>		7 8.1 152°52	1°5/ 8.7	18		<b>22115</b>	2000 <i>RB</i> <sub>62</sub>		7 8.1 99°98	4°9/ 6.3	18	
5 31	19 34.46	-15 53.0	2.391	3.205	12.5	20.6	5 31	19 40.95	-32 11.7	1.907	2.738	14.6	17.8
6 10	19 30.13	-16 11.4	2.308	3.208	9.9	20.4	6 10	19 35.95	-33 21.8	1.843	2.752	11.6	17.6
6 20	19 23.99	-16 37.4	2.247	3.212	6.8	20.2	6 20	19 28.26	-34 30.3	1.801	2.765	8.3	17.5
6 30	19 16.49	-17 9.7	2.211	3.215	3.5	20.0	6 30	19 18.55	-35 30.9	1.784	2.778	5.6	17.3
7 10	19 8.33	-17 46.1	2.204	3.218	1.6	19.9	7 10	19 7.87	-36 17.8	1.794	2.791	5.1	17.3
7 20	19 0.26	-18 24.4	2.225	3.221	4.3	20.1	7 20	18 57.44	-36 47.7	1.830	2.803	7.4	17.5
7 30	18 53.08	-19 2.4	2.273	3.223	7.6	20.3	7 30	18 48.47	-37 0.4	1.892	2.816	10.5	17.7
8 9	18 47.43	-19 38.6	2.347	3.226	10.5	20.5	8 9	18 41.88	-36 58.3	1.976	2.828	13.3	17.9
<b>185541</b>	2007 <i>XE</i> <sub>33</sub>		7 8.1 200°69	4°0/ 9.5	18		<b>340337</b>	2006 <i>DR</i> <sub>47</sub>		7 8.1 340°72	4°6/ 7.4	17	
5 31	19 33.62	-9 26.3	2.522	3.315	12.5	21.1	5 31	19 36.82	-32 3.3	1.412	2.269	17.4	19.9
6 10	19 29.36	-9 11.8	2.432	3.313	10.2	20.9	6 10	19 33.68	-32 21.7	1.334	2.259	13.9	19.7
6 20	19 23.41	-9 6.8	2.364	3.310	7.6	20.7	6 20	19 27.25	-32 36.2	1.276	2.250	9.9	19.4
6 30	19 16.21	-9 11.7	2.321	3.307	5.1	20.6	6 30	19 18.23	-32 41.3	1.239	2.241	6.0	19.2
7 10	19 8.39	-9 26.2	2.306	3.304	4.0	20.5	7 10	19 7.93	-32 32.3	1.226	2.234	4.8	19.1
7 20	19 0.64	-9 49.2	2.318	3.301	5.3	20.6	7 20	18 57.88	-32 7.5	1.237	2.227	8.0	19.3
7 30	18 53.68	-10 19.0	2.357	3.297	7.9	20.7	7 30	18 49.63	-31 28.3	1.271	2.221	12.2	19.5
8 9	18 48.11	-10 53.3	2.421	3.293	10.5	20.9	8 9	18 44.30	-30 39.0	1.326	2.216	16.2	19.7
<b>510877</b>	2013 <i>CG</i> <sub>127</sub>		7 8.1 107°40	1°4/ 7.5	18		<b>75602</b>	2000 <i>AF</i> <sub>28</sub>		7 8.1 60°29	0°5/ 7		

EPHEMERIDES

7 8.1

7 8.1

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>340493</b>	2006 <i>HU</i> <sub>96</sub>		7 8.1 201°49	2°6/ 8.9 18			<b>255002</b>	2005 <i>TT</i> <sub>13</sub>		7 8.1 301°61	2°9/ 8.7 18		
5 31	19 37.08	-14 22.5	2.469	3.271	12.5	22.2	5 31	19 34.29	-15 35.4	2.096	2.917	13.8	20.1
6 10	19 32.11	-14 7.8	2.375	3.267	10.0	22.0	6 10	19 30.39	-15 4.5	1.998	2.901	11.1	19.9
6 20	19 25.30	-13 59.5	2.304	3.262	7.1	21.8	6 20	19 24.39	-14 39.1	1.922	2.885	7.9	19.7
6 30	19 17.11	-13 57.5	2.259	3.256	4.1	21.6	6 30	19 16.79	-14 19.7	1.870	2.869	4.6	19.4
7 10	19 8.24	-14 1.3	2.241	3.250	2.7	21.5	7 10	19 8.34	-14 6.5	1.844	2.854	3.0	19.3
7 20	18 59.43	-14 9.9	2.253	3.243	4.8	21.6	7 20	18 59.91	-13 59.2	1.846	2.838	5.5	19.4
7 30	18 51.48	-14 22.3	2.292	3.236	7.8	21.8	7 30	18 52.43	-13 57.2	1.873	2.823	9.0	19.6
8 9	18 45.06	-14 37.2	2.356	3.228	10.7	22.0	8 9	18 46.68	-13 59.7	1.924	2.808	12.3	19.8
<b>442759</b>	2012 <i>XJ</i> <sub>37</sub>		7 8.1 262°41	3°4/ 6.6 18			<b>254396</b>	2004 <i>TB</i> <sub>230</sub>		7 8.1 237°37	7°3/ 9.7 18		
5 31	19 38.31	-28 8.1	2.133	2.962	13.3	21.2	5 31	19 33.53	-0 21.7	2.655	3.406	13.0	19.9
6 10	19 33.89	-29 13.4	2.035	2.945	10.5	21.0	6 10	19 29.21	+0 43.5	2.565	3.400	11.2	19.8
6 20	19 27.00	-30 22.4	1.959	2.928	7.3	20.7	6 20	19 23.29	+1 37.6	2.496	3.394	9.4	19.7
6 30	19 18.08	-31 29.9	1.909	2.910	4.3	20.5	6 30	19 16.19	+2 17.5	2.451	3.387	7.9	19.6
7 10	19 7.97	-32 30.5	1.886	2.892	3.7	20.4	7 10	19 8.49	+2 41.5	2.432	3.381	7.3	19.5
7 20	18 57.70	-33 19.7	1.892	2.874	6.4	20.6	7 20	19 0.84	+2 48.9	2.439	3.374	8.0	19.5
7 30	18 48.43	-33 55.2	1.923	2.855	9.9	20.7	7 30	18 53.91	+2 40.7	2.471	3.367	9.5	19.6
8 9	18 41.14	-34 17.3	1.978	2.836	13.1	20.9	8 9	18 48.29	+2 19.1	2.527	3.360	11.4	19.7
<b>240681</b>	2005 <i>EZ</i> <sub>132</sub>		7 8.1 139°01	1°9/ 7.3 18			<b>521518</b>	2015 <i>ON</i> <sub>97</sub>		7 8.1 145°93	4°9/ 6.5 18		
5 31	19 37.96	-25 2.0	2.146	2.973	13.3	20.6	5 31	19 39.08	-37 15.6	2.542	3.356	11.9	21.9
6 10	19 33.21	-25 48.7	2.069	2.980	10.4	20.4	6 10	19 33.93	-37 53.6	2.466	3.360	9.6	21.7
6 20	19 26.24	-26 38.5	2.015	2.987	7.0	20.2	6 20	19 26.63	-38 26.2	2.413	3.364	7.2	21.6
6 30	19 17.60	-27 27.7	1.987	2.993	3.5	20.0	6 30	19 17.74	-38 49.3	2.385	3.367	5.3	21.5
7 10	19 8.13	-28 12.1	1.986	2.999	2.1	19.9	7 10	19 8.13	-38 59.4	2.384	3.370	5.0	21.4
7 20	18 58.79	-28 48.7	2.014	3.004	5.3	20.1	7 20	18 58.73	-38 55.1	2.411	3.373	6.6	21.5
7 30	18 50.57	-29 15.9	2.068	3.010	8.7	20.4	7 30	18 50.48	-38 37.1	2.463	3.376	8.8	21.7
8 9	18 44.25	-29 34.0	2.146	3.015	11.8	20.6	8 9	18 44.11	-38 7.8	2.540	3.379	11.1	21.9
<b>513735</b>	2012 <i>TR</i> <sub>326</sub>		7 8.1 160°01	4°4/ 9.4 18			<b>358370</b>	2006 <i>XC</i> <sub>19</sub>		7 8.1 203°93	1°0/ 7.6 18		
5 31	19 35.95	-9 7.5	2.493	3.281	12.8	21.9	5 31	19 35.38	-23 7.3	2.519	3.341	11.7	21.1
6 10	19 31.03	-8 36.6	2.411	3.287	10.5	21.8	6 10	19 30.93	-23 47.0	2.431	3.339	9.1	21.0
6 20	19 24.59	-8 14.6	2.350	3.292	7.9	21.6	6 20	19 24.60	-24 30.7	2.365	3.336	6.1	20.8
6 30	19 16.72	-8 2.5	2.315	3.297	5.4	21.5	6 30	19 16.84	-25 15.5	2.326	3.333	2.9	20.5
7 10	19 8.34	-8 0.4	2.307	3.302	4.4	21.4	7 10	19 8.34	-25 58.3	2.315	3.330	1.3	20.4
7 20	19 0.10	-8 7.8	2.327	3.305	5.7	21.5	7 20	18 59.87	-26 36.5	2.333	3.326	4.4	20.6
7 30	18 52.72	-8 23.3	2.374	3.309	8.1	21.6	7 30	18 52.25	-27 8.3	2.378	3.322	7.6	20.8
8 9	18 46.80	-8 45.0	2.446	3.312	10.6	21.8	8 9	18 46.18	-27 33.3	2.449	3.318	10.5	21.0
<b>35289</b>	1996 <i>TL</i> <sub>40</sub>		7 8.1 302°38	3°3/ 7.1 18			<b>157548</b>	2005 <i>UE</i> <sub>42</sub>		7 8.1 198°35	0°2/ 8.1 18		
5 31	19 36.88	-27 48.2	1.576	2.426	16.3	19.1	5 31	19 38.88	-21 39.8	1.992	2.818	14.2	21.5
6 10	19 33.58	-28 27.5	1.481	2.404	12.9	18.8	6 10	19 34.08	-21 55.5	1.906	2.816	11.1	21.2
6 20	19 27.22	-29 9.7	1.407	2.382	9.0	18.5	6 20	19 26.92	-22 15.8	1.841	2.813	7.5	21.0
6 30	19 18.32	-29 49.9	1.355	2.360	4.9	18.2	6 30	19 17.96	-22 38.3	1.802	2.810	3.4	20.8
7 10	19 7.92	-30 22.3	1.328	2.338	3.7	18.1	7 10	19 8.08	-23 0.0	1.790	2.806	0.8	20.5
7 20	18 57.39	-30 42.8	1.326	2.317	7.3	18.3	7 20	18 58.31	-23 18.8	1.806	2.802	5.1	20.8
7 30	18 48.23	-30 49.5	1.348	2.296	11.8	18.5	7 30	18 49.69	-23 33.3	1.848	2.798	9.0	21.1
8 9	18 41.71	-30 44.0	1.391	2.276	16.0	18.7	8 9	18 43.08	-23 43.3	1.914	2.793	12.5	21.3
<b>191771</b>	2004 <i>TH</i> <sub>68</sub>		7 8.1 201°39	4°1/ 9.6 18			<b>27218</b>	1999 <i>DS</i> <sub>1</sub>		7 8.1 206°03	1°0/ 7.8 18		
5 31	19 36.11	-9 9.9	2.308	3.101	13.6	21.3	5 31	19 36.44	-23 56.0	2.137	2.967	13.3	18.7
6 10	19 31.49	-9 2.3	2.217	3.097	11.1	21.1	6 10	19 32.05	-24 18.5	2.054	2.966	10.4	18.5
6 20	19 24.96	-9 5.6	2.146	3.093	8.2	20.9	6 20	19 25.49	-24 44.0	1.992	2.964	6.9	18.3
6 30	19 16.99	-9 20.3	2.101	3.088	5.5	20.7	6 30	19 17.28	-25 9.7	1.955	2.963	3.2	18.0
7 10	19 8.28	-9 45.6	2.082	3.082	4.2	20.6	7 10	19 8.26	-25 32.7	1.946	2.961	1.4	17.9
7 20	18 59.60	-10 20.0	2.092	3.076	5.7	20.7	7 20	18 59.36	-25 50.9	1.965	2.960	4.9	18.1
7 30	18 51.80	-11 1.1	2.128	3.070	8.5	20.9	7 30	18 51.53	-26 3.0	2.010	2.958	8.5	18.4
8 9	18 45.57	-11 46.2	2.190	3.063	11.4	21.0	8 9	18 45.55	-26 9.4	2.079	2.956	11.8	18.6
<b>158410</b>	2002 <i>AV</i> <sub>39</sub>		7 8.1 249°09	0°8/ 8.3 18			<b>33401</b>	Radiya-Dixit		7 8.1 337°37	2°0/ 8.3 18		
5 31	19 38.74	-19 48.9	2.099	2.919	13.8	20.4	5 31	19 33.18	-20 13.6	1.063	1.938	20.5	17.7
6 10	19 33.97	-19 48.1	1.995	2.902	10.9	20.2	6 10	19 31.42	-19 42.1	0.989	1.926	16.3	17.4
6 20	19 26.88	-19 51.9	1.914	2.883	7.5	19.9	6 20	19 26.09	-19 16.1	0.932	1.914	11.3	17.1
6 30	19 17.97	-19 59.0	1.857	2.864	3.6	19.7	6 30	19 17.88	-18 55.3	0.895	1.903	5.6	16.7
7 10	19 8.04	-20 7.6	1.828	2.844	1.1	19.4	7 10	19 8.12	-18 39.0	0.878	1.894	2.3	16.5
7 20	18 58.05	-20 16.1	1.827	2.824	5.0	19.7	7 20	18 58.50	-18 26.6	0.884	1.885	7.6	16.8
7 30	18 49.06	-20 23.6	1.853	2.803	9.0	19.9	7 30	18 50.78	-18 17.6	0.910	1.878	13.4	17.0
8 9	18 41.93	-20 29.6	1.903	2.781	12.6	20.1	8 9	18 46.25	-18 11.5	0.954	1.872	18.5	17.3
<b>483135</b>	2015 <i>OD</i> <sub>20</sub>		7 8.1 269°10	0°8/ 7.9 17			<b>404206</b>	2013 <i>CH</i> <sub>159</sub>		7 8.1 23°94	3°4/ 7.5 17		
5 31	19 38.09	-25 46.0	2.716	3.532	11.2	22.0	5 31	19 41.92	-28 25.0	1.271	2.127	19.0	21.4
6 10	19 32.95	-25 37.0	2.603	3.507	8.8	21.8	6 10	19 37.86	-28 49.4	1.202	2.127	15.0	21.2
6 20	19 25.92	-25 27.3	2.513	3.482	5.9	21.6	6 20	19 30.16	-29 14.1	1.151	2.127	10.3	20.9
6 30	19 17.44	-25 15.3	2.449	3.456	2.8	21.3	6 30	19 19.64	-29 33.1	1.122	2.128	5.5	20.6
7 10	19 8.18	-24 59.5	2.415	3.430	1.0	21.1	7 10	19 7.73	-29 41.1	1.116	2.128	3.7	20.5
7 20	18 58.92	-24 39.3	2.409	3.403	4.2	21.3	7 20	18 56.17	-29 35.2	1.135	2.129	7.8	20.8
7 30	18 50.47	-24 15.2	2.432	3.376	7.5	21.5	7 30	18 46.67	-29 16.2	1.176	2.129	12.7	21.0
8 9	18 43.53	-23 48.1	2.481	3.349	10.4	21.7	8 9	18 40.43	-28 47.6	1.238	2.130	17.1	21.3
<b>42672</b>	1998 <i>HL</i> <sub>91</sub>		7 8.1 337°15	6°2/ 9.6 18			<b>36895</b>	2000 <i>SL</i> <sub>171</sub>		7 8.1 171°49	4°0/ 9.4 18		

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>367075</b>	2006 <i>PK</i> <sub>21</sub>		7 8.1 284°87	0°3/ 8.2 18			<b>506602</b>	2006 <i>BE</i> <sub>18</sub>		7 8.1 202°34	1°7/ 7.8 18		
5 31	19 37.94	-19 57.2	1.564	2.405	16.8	21.1	5 31	19 42.31	-28 3.4	2.131	2.953	13.6	21.7
6 10	19 34.38	-20 14.9	1.460	2.378	13.4	20.8	6 10	19 36.63	-28 0.1	2.043	2.950	10.7	21.5
6 20	19 27.80	-20 41.5	1.376	2.350	9.2	20.5	6 20	19 28.57	-27 55.0	1.977	2.946	7.3	21.3
6 30	19 18.66	-21 14.6	1.314	2.323	4.3	20.1	6 30	19 18.73	-27 45.2	1.936	2.941	3.6	21.0
7 10	19 7.92	-21 50.8	1.278	2.294	1.0	19.8	7 10	19 8.06	-27 28.7	1.923	2.936	2.0	20.9
7 20	18 56.87	-22 26.1	1.267	2.266	6.4	20.1	7 20	18 57.60	-27 4.9	1.938	2.931	5.2	21.1
7 30	18 47.00	-22 57.5	1.281	2.237	11.6	20.3	7 30	18 48.39	-26 34.6	1.981	2.925	8.9	21.3
8 9	18 39.63	-23 23.6	1.316	2.209	16.2	20.5	8 9	18 41.26	-25 59.9	2.048	2.919	12.2	21.5
<b>335548</b>	2006 <i>BP</i> <sub>98</sub>		7 8.1 275°10	15°8/ 3.3 18			<b>42843</b>	1999 <i>RV</i> <sub>11</sub>		7 8.1 259°31	11°0/ 5.9 18 R		
5 31	20 14.43	-65 5.7	2.020	2.720	18.0	19.9	5 31	19 57.16	-49 38.1	1.875	2.656	16.6	18.9
6 10	20 5.97	-66 27.4	1.946	2.701	17.0	19.8	6 10	19 50.11	-50 34.7	1.782	2.634	14.6	18.7
6 20	19 50.59	-67 28.5	1.888	2.681	16.2	19.7	6 20	19 38.71	-51 17.6	1.707	2.611	12.7	18.5
6 30	19 29.39	-67 55.0	1.848	2.661	15.8	19.6	6 30	19 23.74	-51 35.8	1.655	2.587	11.3	18.4
7 10	19 5.51	-67 35.8	1.826	2.641	15.9	19.6	7 10	19 6.88	-51 20.4	1.626	2.562	11.2	18.3
7 20	18 43.12	-66 27.7	1.823	2.620	16.6	19.6	7 20	18 50.33	-50 28.2	1.621	2.537	12.5	18.3
7 30	18 25.74	-64 36.6	1.839	2.600	17.7	19.6	7 30	18 36.26	-49 2.6	1.640	2.511	14.8	18.4
8 9	18 14.91	-62 14.7	1.873	2.579	19.1	19.7	8 9	18 26.12	-47 12.9	1.680	2.484	17.4	18.5
<b>433116</b>	2012 <i>TH</i> <sub>143</sub>		7 8.1 43°24	7°3/ 6.9 16			<b>421502</b>	2014 <i>OD</i> <sub>74</sub>		7 8.1 335°41	3°9/ 9.8 18		
5 31	19 43.11	-39 31.4	1.640	2.471	16.6	20.6	5 31	19 31.81	-9 37.8	2.112	2.921	14.1	20.6
6 10	19 38.20	-40 11.9	1.579	2.480	13.6	20.4	6 10	19 28.41	-9 42.3	2.024	2.915	11.5	20.4
6 20	19 30.01	-40 42.7	1.538	2.490	10.4	20.3	6 20	19 23.06	-9 59.3	1.956	2.910	8.5	20.2
6 30	19 19.43	-40 57.0	1.520	2.500	8.0	20.2	6 30	19 16.23	-10 28.9	1.913	2.905	5.5	20.0
7 10	19 7.86	-40 49.6	1.526	2.510	7.5	20.2	7 10	19 8.64	-11 9.8	1.896	2.900	3.9	19.9
7 20	18 56.85	-40 19.6	1.556	2.520	9.3	20.3	7 20	19 1.09	-11 59.7	1.906	2.895	5.6	20.0
7 30	18 47.84	-39 30.0	1.610	2.531	12.1	20.5	7 30	18 54.44	-12 55.3	1.941	2.891	8.7	20.1
8 9	18 41.80	-38 26.6	1.686	2.542	15.1	20.7	8 9	18 49.40	-13 53.4	2.001	2.887	11.8	20.3
<b>514680</b>	2005 <i>WL</i> <sub>83</sub>		7 8.1 248°54	3°3/ 8.9 18			<b>93051</b>	2000 <i>SP</i> <sub>8</sub>		7 8.1 237°90	3°5/ 7.2 18		
5 31	19 34.14	-13 3.2	2.440	3.246	12.6	21.5	5 31	19 40.14	-29 59.1	1.936	2.768	14.4	20.3
6 10	19 29.88	-12 34.9	2.348	3.240	10.1	21.4	6 10	19 35.43	-30 33.4	1.849	2.760	11.4	20.0
6 20	19 23.85	-12 13.2	2.279	3.234	7.3	21.2	6 20	19 28.05	-31 7.2	1.783	2.752	8.0	19.8
6 30	19 16.52	-11 58.8	2.235	3.229	4.6	21.0	6 30	19 18.61	-31 35.9	1.742	2.743	4.6	19.6
7 10	19 8.54	-11 51.6	2.218	3.223	3.3	20.9	7 10	19 8.09	-31 55.1	1.727	2.734	3.7	19.5
7 20	19 0.64	-11 51.2	2.229	3.217	5.1	21.0	7 20	18 57.65	-32 2.1	1.740	2.725	6.5	19.7
7 30	18 53.58	-11 56.8	2.267	3.210	7.9	21.2	7 30	18 48.51	-31 56.6	1.777	2.716	10.1	19.9
8 9	18 47.98	-12 7.2	2.329	3.204	10.7	21.3	8 9	18 41.64	-31 40.6	1.838	2.706	13.5	20.1
<b>433660</b>	2014 <i>BL</i> <sub>28</sub>		7 8.1 103°96	0°9/ 8.3 17			<b>304442</b>	2006 <i>TN</i> <sub>121</sub>		7 8.1 241°62	1°3/ 7.7 18		
5 31	19 38.25	-20 28.6	1.969	2.795	14.4	21.3	5 31	19 36.85	-25 49.4	2.517	3.339	11.8	21.8
6 10	19 33.41	-20 14.8	1.894	2.804	11.2	21.1	6 10	19 32.16	-26 5.9	2.419	3.326	9.2	21.6
6 20	19 26.35	-20 4.7	1.842	2.812	7.6	20.9	6 20	19 25.50	-26 23.6	2.344	3.314	6.2	21.4
6 30	19 17.67	-19 57.2	1.814	2.820	3.6	20.7	6 30	19 17.34	-26 39.9	2.294	3.301	3.0	21.2
7 10	19 8.29	-19 50.9	1.813	2.829	1.2	20.5	7 10	19 8.39	-26 52.5	2.273	3.287	1.6	21.1
7 20	18 59.17	-19 45.1	1.839	2.837	4.9	20.8	7 20	18 59.47	-26 59.6	2.281	3.273	4.6	21.3
7 30	18 51.28	-19 39.3	1.892	2.844	8.7	21.0	7 30	18 51.44	-27 0.8	2.316	3.259	7.8	21.4
8 9	18 45.37	-19 33.7	1.969	2.852	12.1	21.3	8 9	18 45.01	-26 56.4	2.375	3.245	10.8	21.6
<b>283685</b>	2002 <i>QD</i> <sub>124</sub>		7 8.1 37°03	0°4/ 8.2 17			<b>264830</b>	2002 <i>QZ</i> <sub>7</sub>		7 8.1 329°51	2°8/ 7.3 17		
5 31	19 37.19	-22 6.1	1.664	2.506	15.9	20.7	5 31	19 29.37	-23 53.7	1.083	1.967	19.6	19.9
6 10	19 33.02	-21 54.3	1.595	2.513	12.4	20.5	6 10	19 28.82	-24 41.9	0.998	1.940	15.6	19.6
6 20	19 26.30	-21 45.7	1.546	2.520	8.4	20.2	6 20	19 24.72	-25 41.1	0.929	1.915	10.7	19.2
6 30	19 17.71	-21 38.6	1.520	2.528	3.9	20.0	6 30	19 17.49	-26 46.4	0.881	1.890	5.3	18.8
7 10	19 8.29	-21 31.6	1.520	2.536	0.9	19.8	7 10	19 8.29	-27 50.1	0.853	1.867	3.3	18.6
7 20	18 59.20	-21 23.5	1.547	2.545	5.5	20.1	7 20	18 58.82	-28 44.6	0.847	1.846	8.6	18.9
7 30	18 51.55	-21 14.2	1.598	2.554	9.7	20.4	7 30	18 51.03	-29 24.5	0.861	1.826	14.4	19.1
8 9	18 46.17	-21 4.1	1.672	2.563	13.4	20.6	8 9	18 46.56	-29 48.6	0.893	1.808	19.7	19.3
<b>35642</b>	1998 <i>KF</i> <sub>53</sub>		7 8.1 46°09	4°3/ 9.8 18			<b>366658</b>	2003 <i>SV</i> <sub>335</sub>		7 8.1 219°08	2°2/ 7.4 17		
5 31	19 34.73	-9 41.0	1.574	2.398	17.5	17.5	5 31	19 39.98	-24 29.5	1.624	2.465	16.3	21.2
6 10	19 31.14	-9 53.6	1.509	2.410	14.1	17.3	6 10	19 35.69	-25 17.9	1.543	2.461	12.8	21.0
6 20	19 25.08	-10 22.6	1.463	2.422	10.3	17.1	6 20	19 28.45	-26 12.0	1.483	2.457	8.7	20.7
6 30	19 17.17	-11 7.5	1.439	2.435	6.4	16.9	6 30	19 18.88	-27 6.9	1.446	2.453	4.3	20.4
7 10	19 8.41	-12 5.6	1.441	2.448	4.3	16.8	7 10	19 8.03	-27 56.9	1.435	2.448	2.5	20.3
7 20	18 59.90	-13 12.6	1.468	2.461	6.4	17.0	7 20	18 57.25	-28 37.4	1.450	2.444	6.6	20.5
7 30	18 52.73	-14 23.4	1.519	2.475	10.2	17.2	7 30	18 47.90	-29 6.1	1.491	2.438	11.0	20.8
8 9	18 47.74	-15 33.6	1.594	2.489	13.7	17.5	8 9	18 41.08	-29 23.3	1.553	2.433	14.9	21.0
<b>499908</b>	2011 <i>GB</i> <sub>51</sub>		7 8.1 157°70	2°8/ 8.9 17			<b>130175</b>	2000 <i>AL</i> <sub>20</sub>		7 8.1 195°64	0°2/ 8.1 18		
5 31	19 37.93	-14 35.2	2.001	2.815	14.6	22.5	5 31	19 34.60	-22 29.1	2.964	3.778	10.4	20.8
6 10	19 33.16	-14 26.1	1.922	2.820	11.6	22.3	6 10	19 30.00	-22 39.2	2.872	3.776	8.0	20.6
6 20	19 26.21	-14 25.2	1.863	2.825	8.2	22.1	6 20	19 23.82	-22 51.4	2.804	3.773	5.4	20.5
6 30	19 17.65	-14 32.4	1.829	2.829	4.6	21.9	6 30	19 16.50	-23 4.4	2.763	3.770	2.5	20.3
7 10	19 8.31	-14 46.3	1.822	2.833	2.8	21.8	7 10	19 8.63	-23 16.5	2.751	3.767	0.6	20.1
7 20	18 59.14	-15 5.3	1.843	2.836	5.4	21.9	7 20	19 0.82	-23 26.5	2.768	3.763	3.6	20.3
7 30	18 51.09	-15 27.7	1.890	2.839	8.9	22.1	7 30	18 53.76	-23 33.6	2.813	3.759	6.5	20.5
8 9	18 44.91	-15 51.7	1.961	2.842	12.2	22.4	8 9	18 47.98	-23 37.9	2.884	3.755	9.0	20.7
<b>250914</b>	2005 <i>WU</i> <sub>6</sub>		7 8.1 270°40	0°5/ 7.9 18			<b>442519</b>	2011 <i>WN</i> <sub>87&lt;/</sub>					



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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>76247</b>	2000 <i>EM</i> <sub>87</sub>		7 8.1 230°13	5°8/ 6.2 18			<b>70330</b>	1999 <i>RS</i> <sub>165</sub>		7 8.2 189°74	1°0/ 8.4 18		
5 31	19 41.71	-37 56.8	2.285	3.100	13.0	19.3	5 31	19 40.39	-18 53.8	1.960	2.780	14.7	19.8
6 10	19 36.48	-38 46.9	2.199	3.092	10.6	19.1	6 10	19 35.28	-19 0.6	1.874	2.780	11.6	19.6
6 20	19 28.68	-39 31.9	2.134	3.083	8.2	19.0	6 20	19 27.79	-19 13.6	1.810	2.778	7.9	19.4
6 30	19 18.89	-40 6.2	2.095	3.074	6.2	18.8	6 30	19 18.46	-19 31.1	1.770	2.776	3.8	19.1
7 10	19 8.07	-40 25.1	2.082	3.064	6.0	18.8	7 10	19 8.21	-19 50.7	1.758	2.773	1.2	18.9
7 20	18 57.34	-40 26.2	2.096	3.054	7.7	18.9	7 20	18 58.07	-20 10.3	1.773	2.770	5.1	19.2
7 30	18 47.87	-40 9.8	2.135	3.044	10.2	19.0	7 30	18 49.10	-20 28.4	1.815	2.766	9.1	19.4
8 9	18 40.58	-39 39.1	2.198	3.034	12.8	19.2	8 9	18 42.16	-20 44.3	1.881	2.761	12.7	19.6
<b>418989</b>	2009 <i>KA</i> <sub>16</sub>		7 8.1 124°86	1°9/ 7.5 17			<b>125035</b>	2001 <i>TH</i> <sub>194</sub>		7 8.2 346°04	3°1/ 7.9 18		
5 31	19 42.68	-23 45.5	1.736	2.566	15.8	21.4	5 31	19 30.24	-28 57.8	0.878	1.775	21.8	17.9
6 10	19 37.34	-24 38.7	1.669	2.582	12.3	21.2	6 10	19 30.02	-28 49.2	0.812	1.761	17.4	17.6
6 20	19 29.26	-25 36.9	1.624	2.596	8.3	21.0	6 20	19 25.65	-28 36.6	0.761	1.748	12.0	17.2
6 30	19 19.13	-26 35.1	1.604	2.610	4.0	20.8	6 30	19 17.87	-28 15.2	0.728	1.737	6.2	16.9
7 10	19 8.04	-27 27.7	1.610	2.624	2.2	20.7	7 10	19 8.33	-27 41.3	0.714	1.728	3.4	16.7
7 20	18 57.20	-28 10.9	1.644	2.636	6.0	21.0	7 20	18 59.07	-26 54.3	0.719	1.721	8.7	17.0
7 30	18 47.87	-28 42.6	1.704	2.649	10.0	21.2	7 30	18 52.18	-25 57.6	0.744	1.717	14.7	17.3
8 9	18 40.96	-29 3.5	1.787	2.660	13.6	21.5	8 9	18 49.08	-24 56.3	0.785	1.714	20.1	17.5
<b>10704</b>	1981 <i>RQ</i> <sub>1</sub>		7 8.1 304°48	1°1/ 8.5 18 R			<b>64396</b>	2001 <i>UY</i> <sub>153</sub>		7 8.2 135°43	1°3/ 8.5 18		
5 31	19 34.47	-18 37.3	1.960	2.791	14.3	17.7	5 31	19 38.17	-18 45.0	1.807	2.636	15.4	19.8
6 10	19 30.74	-18 42.5	1.870	2.782	11.2	17.5	6 10	19 33.66	-18 43.2	1.730	2.640	12.1	19.6
6 20	19 24.78	-18 54.3	1.801	2.773	7.7	17.2	6 20	19 26.72	-18 47.7	1.674	2.644	8.2	19.4
6 30	19 17.09	-19 11.3	1.757	2.764	3.8	17.0	6 30	19 17.96	-18 57.0	1.642	2.648	4.0	19.2
7 10	19 8.49	-19 31.4	1.739	2.755	1.3	16.8	7 10	19 8.34	-19 9.3	1.637	2.652	1.4	19.0
7 20	18 59.94	-19 52.7	1.748	2.746	5.0	17.0	7 20	18 58.93	-19 22.6	1.658	2.656	5.3	19.3
7 30	18 52.45	-20 13.5	1.783	2.738	9.0	17.2	7 30	18 50.79	-19 35.7	1.705	2.659	9.4	19.5
8 9	18 46.82	-20 32.4	1.841	2.729	12.5	17.5	8 9	18 44.77	-19 47.6	1.776	2.662	13.0	19.7
<b>161327</b>	2003 <i>QS</i> <sub>63</sub>		7 8.1 323°98	9°9/11.2 18			<b>200191</b>	1999 <i>RM</i> <sub>110</sub>		7 8.2 285°76	4°5/ 7.4 18		
5 31	19 29.65	-0 49.6	1.461	2.268	19.4	19.0	5 31	19 43.11	-34 3.1	1.892	2.719	14.8	19.6
6 10	19 27.77	-0 11.2	1.365	2.241	16.9	18.7	6 10	19 38.09	-34 15.6	1.787	2.693	12.0	19.3
6 20	19 23.27	+0 5.6	1.286	2.215	14.0	18.5	6 20	19 30.09	-34 22.9	1.703	2.666	8.7	19.1
6 30	19 16.58	-0 0 4.8	1.226	2.190	11.3	18.2	6 30	19 19.68	-34 19.8	1.643	2.639	5.6	18.8
7 10	19 8.57	-0 45.1	1.188	2.166	10.0	18.1	7 10	19 7.93	-34 2.1	1.609	2.612	4.6	18.7
7 20	19 0.35	-1 54.7	1.171	2.142	10.9	18.1	7 20	18 56.17	-33 27.9	1.602	2.584	7.3	18.8
7 30	18 53.20	-3 29.0	1.177	2.120	13.7	18.2	7 30	18 45.80	-32 38.7	1.620	2.557	11.0	19.0
8 9	18 48.27	-5 20.0	1.203	2.098	17.2	18.3	8 9	18 37.95	-31 38.6	1.661	2.529	14.7	19.1
<b>288508</b>	2004 <i>FB</i> <sub>106</sub>		7 8.1 200°13	1°1/ 8.5 17			<b>206034</b>	2002 <i>QJ</i> <sub>5</sub>		7 8.2 254°63	3°3/ 7.5 18		
5 31	19 38.18	-17 28.5	1.762	2.591	15.7	21.2	5 31	19 40.73	-31 47.3	2.106	2.932	13.6	20.7
6 10	19 33.85	-17 50.8	1.679	2.589	12.4	20.9	6 10	19 35.65	-31 59.0	2.015	2.921	10.8	20.5
6 20	19 26.98	-18 22.6	1.617	2.587	8.5	20.7	6 20	19 28.07	-32 7.3	1.945	2.911	7.6	20.3
6 30	19 18.14	-19 1.6	1.579	2.585	4.1	20.4	6 30	19 18.61	-32 8.4	1.900	2.900	4.5	20.1
7 10	19 8.26	-19 44.7	1.567	2.582	1.3	20.2	7 10	19 8.21	-31 59.1	1.883	2.889	3.5	20.0
7 20	18 58.45	-20 28.1	1.582	2.579	5.5	20.5	7 20	18 57.95	-31 38.3	1.892	2.878	6.0	20.2
7 30	18 49.88	-21 9.2	1.622	2.576	9.8	20.7	7 30	18 48.96	-31 6.8	1.928	2.867	9.4	20.3
8 9	18 43.46	-21 45.9	1.686	2.573	13.6	21.0	8 9	18 42.10	-30 27.2	1.988	2.856	12.6	20.5
<b>229506</b>	2005 <i>WO</i> <sub>64</sub>		7 8.2 149°56	0°3/ 8.0 17			<b>444665</b>	2007 <i>CR</i> <sub>67</sub>		7 8.2 72°95	0°1/ 8.2 15		
5 31	19 38.96	-21 22.6	2.192	3.012	13.3	21.6	5 31	19 34.87	-20 52.6	2.268	3.093	12.8	21.8
6 10	19 33.87	-21 48.2	2.114	3.021	10.4	21.4	6 10	19 30.59	-21 6.4	2.194	3.104	9.9	21.6
6 20	19 26.66	-22 18.4	2.059	3.029	6.9	21.2	6 20	19 24.40	-21 24.3	2.143	3.114	6.6	21.4
6 30	19 17.88	-22 50.5	2.029	3.037	3.2	21.0	6 30	19 16.82	-21 44.5	2.118	3.125	3.0	21.2
7 10	19 8.34	-23 21.7	2.028	3.044	0.8	20.8	7 10	19 8.63	-22 4.9	2.120	3.136	0.7	21.0
7 20	18 58.97	-23 49.5	2.054	3.050	4.6	21.1	7 20	19 0.62	-22 23.6	2.150	3.147	4.3	21.3
7 30	18 50.68	-24 12.5	2.108	3.056	8.2	21.3	7 30	18 53.62	-22 39.6	2.206	3.157	7.7	21.6
8 9	18 44.23	-24 30.2	2.187	3.061	11.4	21.5	8 9	18 48.28	-22 52.2	2.287	3.168	10.7	21.8
<b>116459</b>	2004 <i>AA</i> <sub>6</sub>		7 8.2 77°00	1°5/ 8.5 17			<b>516185</b>	2016 <i>RL</i> <sub>1</sub>		7 8.2 299°20	0°9/ 8.5 18		
5 31	19 39.48	-18 31.4	1.506	2.345	17.4	20.2	5 31	19 35.66	-17 14.3	1.829	2.660	15.2	20.8
6 10	19 34.96	-18 29.7	1.445	2.360	13.7	20.0	6 10	19 32.22	-17 44.4	1.714	2.625	12.1	20.5
6 20	19 27.68	-18 35.6	1.403	2.375	9.3	19.7	6 20	19 26.20	-18 26.0	1.620	2.591	8.4	20.2
6 30	19 18.39	-18 47.5	1.384	2.391	4.5	19.5	6 30	19 17.97	-19 17.5	1.549	2.556	4.1	19.9
7 10	19 8.24	-19 2.9	1.390	2.406	1.6	19.3	7 10	19 8.31	-20 15.6	1.505	2.521	1.2	19.6
7 20	18 58.49	-19 19.4	1.422	2.421	5.9	19.6	7 20	18 58.27	-21 16.2	1.488	2.486	5.7	19.8
7 30	18 50.35	-19 35.5	1.479	2.436	10.3	19.9	7 30	18 49.10	-22 15.2	1.496	2.451	10.3	20.0
8 9	18 44.68	-19 50.1	1.558	2.451	14.1	20.2	8 9	18 41.94	-23 9.6	1.527	2.416	14.6	20.2
<b>374927</b>	2006 <i>YA</i> <sub>17</sub>		7 8.2 279°12	0°3/ 8.1 18			<b>347923</b>	2003 <i>BA</i> <sub>91</sub>		7 8.2 72°91	6°6/12.0 18		
5 31	19 38.18	-21 16.7	1.678	2.516	16.0	21.4	5 31	19 34.78	+0 17.8	2.182	2.942	15.2	20.2
6 10	19 34.35	-21 37.9	1.576	2.492	12.7	21.1	6 10	19 30.40	+0 9.2	2.116	2.962	12.9	20.0
6 20	19 27.67	-22 6.3	1.494	2.468	8.6	20.8	6 20	19 24.20	-0 17.8	2.069	2.982	10.3	19.9
6 30	19 18.62	-22 39.2	1.436	2.444	4.0	20.5	6 30	19 16.72	-1 3.8	2.046	3.003	8.0	19.8
7 10	19 8.13	-23 12.9	1.404	2.420	1.0	20.2	7 10	19 8.66	-2 7.6	2.049	3.023	6.7	19.8
7 20	18 57.43	-23 43.8	1.397	2.395	6.0	20.5	7 20	19 0.82	-3 25.9	2.078	3.043	7.2	19.8
7 30	18 47.90	-24 9.3	1.416	2.370	10.9	20.7	7 30	18 53.97	-4 54.1	2.134	3.063	9.2	20.0
8 9	18 40.71	-24 28.8	1.457	2.345	15.2	20.9	8 9	18 48.70	-6 27.0	2.215	3.083	11.5	20.2
<b>74067</b>	1998 <i>MH</i> <sub>3</sub>		7 8.2 245°35	12°6/ 9.0 18			<b>189853</b>	2003 <i>FF</i> <sub>102</sub>		7 8.2			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>253581</b>	2003 SZ <sub>333</sub>		7 8.2 208 <sup>o</sup> .74	2 <sup>o</sup> .7/ 7.6	17		<b>10334</b>	Gibbon		7 8.2 296 <sup>o</sup> .49	0 <sup>o</sup> .5/ 8.3	18	
5 31	19 42.32	-28 5.9	1.608	2.448	16.5	21.0	5 31	19 35.42	-20 31.5	1.990	2.821	14.1	18.8
6 10	19 37.51	-28 23.8	1.529	2.445	13.0	20.7	6 10	19 31.46	-20 35.6	1.901	2.814	11.0	18.6
6 20	19 29.64	-28 41.7	1.470	2.443	8.9	20.5	6 20	19 25.25	-20 44.6	1.835	2.807	7.5	18.4
6 30	19 19.42	-28 54.8	1.435	2.440	4.6	20.2	6 30	19 17.33	-20 56.7	1.793	2.800	3.5	18.1
7 10	19 8.03	-28 59.2	1.424	2.437	3.0	20.1	7 10	19 8.53	-21 10.0	1.777	2.793	0.9	17.9
7 20	18 56.87	-28 52.7	1.440	2.433	6.7	20.3	7 20	18 59.82	-21 22.6	1.789	2.787	4.9	18.2
7 30	18 47.33	-28 35.6	1.481	2.429	11.0	20.6	7 30	18 52.18	-21 33.3	1.826	2.780	8.9	18.4
8 9	18 40.46	-28 10.7	1.544	2.425	14.9	20.8	8 9	18 46.43	-21 41.7	1.887	2.773	12.4	18.6
<b>357796</b>	2005 TE <sub>59</sub>		7 8.2 194 <sup>o</sup> .59	1 <sup>o</sup> .9/ 7.4	18		<b>294139</b>	2007 TL <sub>301</sub>		7 8.2 305 <sup>o</sup> .23	4 <sup>o</sup> .0/ 8.8	17	
5 31	19 36.18	-27 21.0	2.680	3.500	11.2	21.7	5 31	19 36.42	-15 21.5	1.321	2.168	18.9	21.0
6 10	19 31.50	-27 48.7	2.592	3.499	8.7	21.5	6 10	19 33.32	-14 46.9	1.238	2.155	15.3	20.8
6 20	19 24.98	-28 16.8	2.528	3.497	5.9	21.3	6 20	19 27.11	-14 21.4	1.173	2.143	10.9	20.5
6 30	19 17.12	-28 42.7	2.490	3.495	3.1	21.1	6 30	19 18.38	-14 6.2	1.129	2.131	6.4	20.2
7 10	19 8.57	-29 3.7	2.481	3.492	2.1	21.0	7 10	19 8.28	-14 1.5	1.108	2.119	4.1	20.0
7 20	19 0.11	-29 18.1	2.500	3.489	4.5	21.2	7 20	18 58.21	-14 6.4	1.111	2.108	7.5	20.2
7 30	18 52.52	-29 25.2	2.547	3.486	7.4	21.4	7 30	18 49.67	-14 19.2	1.137	2.097	12.3	20.4
8 9	18 46.45	-29 25.5	2.618	3.483	10.1	21.5	8 9	18 43.82	-14 37.7	1.183	2.086	16.9	20.7
<b>447047</b>	2004 RW <sub>140</sub>		7 8.2 314 <sup>o</sup> .89	6 <sup>o</sup> .3/ 10.1	15		<b>149128</b>	2002 EX <sub>28</sub>		7 8.2 204 <sup>o</sup> .40	5 <sup>o</sup> .1/ 6.1	18	
5 31	19 31.34	-5 35.6	1.992	2.792	15.2	21.5	5 31	19 41.11	-40 21.6	3.027	3.824	10.6	21.9
6 10	19 28.29	-5 7.9	1.892	2.770	12.8	21.3	6 10	19 35.37	-41 2.0	2.940	3.819	8.7	21.7
6 20	19 23.16	-4 53.9	1.812	2.750	10.1	21.0	6 20	19 27.61	-41 36.4	2.876	3.813	6.8	21.6
6 30	19 16.40	-4 55.9	1.754	2.729	7.5	20.8	6 30	19 18.34	-42 0.6	2.839	3.806	5.4	21.5
7 10	19 8.72	-5 14.6	1.721	2.709	6.3	20.7	7 10	19 8.33	-42 11.6	2.828	3.799	5.3	21.5
7 20	19 0.96	-5 49.3	1.713	2.689	7.5	20.8	7 20	18 58.43	-42 7.8	2.846	3.792	6.5	21.6
7 30	18 54.05	-6 37.4	1.730	2.670	10.2	20.9	7 30	18 49.52	-41 49.6	2.890	3.784	8.3	21.7
8 9	18 48.82	-7 35.1	1.770	2.651	13.3	21.0	8 9	18 42.31	-41 19.4	2.959	3.776	10.3	21.8
<b>198059</b>	2004 RM <sub>316</sub>		7 8.2 23 <sup>o</sup> .64	9 <sup>o</sup> .4/ 10.0	18		<b>6511</b>	Furmanov		7 8.2 58 <sup>o</sup> .08	1 <sup>o</sup> .6/ 7.9	18	
5 31	19 35.18	-2 45.6	1.621	2.417	18.3	19.8	5 31	19 40.93	-26 56.3	1.585	2.428	16.5	16.2
6 10	19 31.45	-1 28.0	1.550	2.419	15.6	19.6	6 10	19 36.10	-26 49.6	1.521	2.440	12.9	16.0
6 20	19 25.31	-0 26.4	1.498	2.422	12.8	19.5	6 20	19 28.45	-26 42.1	1.477	2.452	8.7	15.8
6 30	19 17.35	+0 14.2	1.467	2.425	10.4	19.3	6 30	19 18.77	-26 30.7	1.457	2.464	4.2	15.6
7 10	19 8.52	+0 31.2	1.459	2.428	9.4	19.3	7 10	19 8.26	-26 13.4	1.462	2.477	1.9	15.4
7 20	18 59.88	+0 24.2	1.475	2.432	10.3	19.3	7 20	18 58.23	-25 49.5	1.493	2.490	5.9	15.7
7 30	18 52.49	-0 4.2	1.513	2.436	12.7	19.5	7 30	18 49.90	-25 20.4	1.550	2.503	10.2	16.0
8 9	18 47.19	-0 49.2	1.572	2.440	15.4	19.7	8 9	18 44.11	-24 48.2	1.628	2.516	13.9	16.3
<b>475782</b>	2006 XN <sub>2</sub>		7 8.2 104 <sup>o</sup> .75	5 <sup>o</sup> .6/ 9.2	17		<b>120170</b>	2003 JO <sub>5</sub>		7 8.2 334 <sup>o</sup> .75	5 <sup>o</sup> .6/ 9.8	18	
5 31	19 37.79	-7 13.4	2.497	3.273	13.1	20.9	5 31	19 32.50	-7 37.7	2.053	2.856	14.7	19.9
6 10	19 32.44	-6 5.1	2.424	3.288	10.8	20.8	6 10	19 28.98	-7 4.3	1.968	2.851	12.2	19.7
6 20	19 25.43	-5 5.5	2.373	3.303	8.4	20.7	6 20	19 23.48	-6 42.6	1.903	2.846	9.3	19.5
6 30	19 17.24	-4 16.6	2.349	3.317	6.4	20.5	6 30	19 16.49	-6 34.3	1.861	2.841	6.8	19.3
7 10	19 8.57	-3 40.1	2.352	3.331	5.6	20.5	7 10	19 8.75	-6 39.9	1.845	2.837	5.6	19.2
7 20	19 0.12	-3 16.6	2.383	3.345	6.6	20.6	7 20	19 1.09	-6 58.6	1.855	2.833	6.9	19.3
7 30	18 52.60	-3 5.5	2.440	3.358	8.7	20.8	7 30	18 54.37	-7 28.4	1.889	2.829	9.5	19.5
8 9	18 46.57	-3 5.2	2.522	3.371	10.9	20.9	8 9	18 49.30	-8 6.4	1.947	2.826	12.4	19.6
<b>160923</b>	2001 XN <sub>135</sub>		7 8.2 113 <sup>o</sup> .69	0 <sup>o</sup> .5/ 7.9	17		<b>15474</b>	1999 BG <sub>11</sub>		7 8.2 255 <sup>o</sup> .44	0 <sup>o</sup> .7/ 7.9	18	
5 31	19 39.76	-21 37.9	1.959	2.785	14.5	20.7	5 31	19 36.69	-23 36.0	2.171	2.999	13.2	19.0
6 10	19 34.67	-22 8.1	1.891	2.801	11.2	20.5	6 10	19 32.33	-23 50.2	2.078	2.989	10.3	18.8
6 20	19 27.28	-22 43.3	1.845	2.817	7.5	20.3	6 20	19 25.80	-24 7.2	2.007	2.979	6.9	18.6
6 30	19 18.19	-23 20.3	1.824	2.832	3.4	20.1	6 30	19 17.59	-24 24.7	1.961	2.969	3.2	18.3
7 10	19 8.35	-23 55.5	1.831	2.846	1.0	19.9	7 10	19 8.50	-24 40.1	1.943	2.959	1.1	18.2
7 20	18 58.76	-24 26.3	1.865	2.861	5.0	20.3	7 20	18 59.46	-24 51.5	1.952	2.948	4.8	18.4
7 30	18 50.44	-24 51.0	1.926	2.874	8.8	20.5	7 30	18 51.43	-24 58.0	1.988	2.937	8.5	18.6
8 9	18 44.17	-25 9.5	2.010	2.888	12.1	20.7	8 9	18 45.21	-24 59.6	2.048	2.927	11.9	18.8
<b>449034</b>	2012 CO <sub>28</sub>		7 8.2 239 <sup>o</sup> .85	4 <sup>o</sup> .0/ 7.1	18		<b>34870</b>	2001 TS <sub>195</sub>		7 8.2 144 <sup>o</sup> .62	2 <sup>o</sup> .3/ 9.2	18	
5 31	19 41.38	-36 47.1	2.881	3.685	10.9	22.0	5 31	19 34.49	-13 23.5	2.247	3.058	13.3	19.4
6 10	19 35.53	-37 0.4	2.782	3.671	8.8	21.8	6 10	19 30.36	-13 42.1	2.163	3.060	10.6	19.2
6 20	19 27.69	-37 8.1	2.706	3.657	6.5	21.7	6 20	19 24.32	-14 10.5	2.101	3.062	7.5	19.0
6 30	19 18.36	-37 6.8	2.656	3.642	4.6	21.5	6 30	19 16.86	-14 47.7	2.064	3.064	4.2	18.8
7 10	19 8.31	-36 54.0	2.635	3.627	4.1	21.5	7 10	19 8.67	-15 31.6	2.055	3.066	2.3	18.7
7 20	18 58.39	-36 28.8	2.642	3.611	5.7	21.6	7 20	19 0.57	-16 19.5	2.074	3.068	4.7	18.8
7 30	18 49.48	-35 52.2	2.677	3.595	8.0	21.7	7 30	18 53.38	-17 8.8	2.119	3.070	8.0	19.0
8 9	18 42.26	-35 6.4	2.737	3.579	10.3	21.8	8 9	18 47.78	-17 56.9	2.190	3.072	11.0	19.2
<b>177400</b>	2004 BB <sub>107</sub>		7 8.2 68 <sup>o</sup> .68	1 <sup>o</sup> .5/ 7.8	17		<b>364499</b>	2007 EY <sub>53</sub>		7 8.2 203 <sup>o</sup> .90	8 <sup>o</sup> .5/ 11.9	18	
5 31	19 40.04	-24 32.5	1.464	2.312	17.4	20.0	5 31	19 32.31	+9 37.3	3.149	3.831	12.4	21.6
6 10	19 35.68	-24 53.3	1.402	2.323	13.6	19.7	6 10	19 28.10	+10 28.1	3.061	3.827	11.2	21.5
6 20	19 28.33	-25 17.4	1.359	2.335	9.1	19.5	6 20	19 22.53	+11 4.5	2.993	3.822	10.0	21.4
6 30	19 18.77	-25 40.7	1.339	2.347	4.3	19.3	6 30	19 15.96	+11 23.6	2.946	3.816	9.0	21.4
7 10	19 8.22	-25 59.1	1.345	2.360	1.9	19.1	7 10	19 8.88	+11 24.0	2.923	3.811	8.5	21.3
7 20	18 58.08	-26 10.1	1.375	2.372	6.3	19.5	7 20	19 1.83	+11 5.5	2.924	3.805	8.7	21.3
7 30	18 49.68	-26 13.1	1.430	2.384	10.8	19.7	7 30	18 55.37	+10 29.6	2.950	3.798	9.6	21.4
8 9	18 43.94	-26 9.2	1.507	2.397	14.7	20.0	8 9	18 50.00	+9 39.1	2.999	3.791	10.8	21.5
<b>446493</b>	2014 KJ <sub>53</sub>		7 8.2 7 <sup>o</sup> .05	3 <sup>o</sup> .2									

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7 8.2

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>522819</b>	2016 <i>NS</i> <sub>81</sub>		7 8.2 296°45	0°3/ 8.3 18			<b>93352</b>	2000 <i>SZ</i> <sub>252</sub>		7 8.2 295°40	2°2/ 8.8 18		
5 31	19 35.54	-19 37.1	1.688	2.528	15.8	21.5	5 31	19 35.27	-16 10.5	1.671	2.506	16.2	19.9
6 10	19 32.18	-20 0.8	1.591	2.508	12.5	21.2	6 10	19 31.88	-16 12.8	1.577	2.489	12.9	19.6
6 20	19 26.15	-20 33.3	1.514	2.489	8.5	21.0	6 20	19 25.88	-16 24.9	1.503	2.473	9.0	19.4
6 30	19 17.92	-21 12.2	1.461	2.469	4.0	20.7	6 30	19 17.78	-16 46.1	1.452	2.457	4.8	19.1
7 10	19 8.42	-21 54.1	1.434	2.450	0.9	20.4	7 10	19 8.50	-17 14.4	1.427	2.441	2.3	18.9
7 20	18 58.78	-22 35.1	1.432	2.431	5.8	20.7	7 20	18 59.15	-17 47.2	1.427	2.425	5.9	19.1
7 30	18 50.29	-23 12.3	1.455	2.412	10.4	20.9	7 30	18 50.95	-18 21.7	1.452	2.409	10.4	19.3
8 9	18 44.03	-23 43.9	1.501	2.393	14.6	21.1	8 9	18 44.93	-18 55.6	1.499	2.393	14.5	19.5
<b>328521</b>	2009 <i>QA</i> <sub>29</sub>		7 8.2 322°37	5°2/ 6.7 17			<b>206654</b>	2003 <i>YX</i> <sub>27</sub>		7 8.2 244°96	1°1/ 8.5 18		
5 31	19 33.77	-29 22.4	1.221	2.092	18.7	20.1	5 31	19 36.62	-18 57.5	2.091	2.915	13.8	20.8
6 10	19 32.16	-30 17.8	1.133	2.067	15.0	19.8	6 10	19 32.29	-18 56.0	1.999	2.907	10.8	20.6
6 20	19 26.93	-31 17.4	1.063	2.042	10.7	19.5	6 20	19 25.78	-18 59.8	1.929	2.899	7.4	20.4
6 30	19 18.56	-32 14.1	1.014	2.018	6.5	19.1	6 30	19 17.62	-19 7.7	1.884	2.890	3.6	20.1
7 10	19 8.24	-32 59.6	0.987	1.995	5.6	19.0	7 10	19 8.60	-19 18.1	1.866	2.882	1.3	19.9
7 20	18 57.69	-33 27.0	0.983	1.973	9.4	19.2	7 20	18 59.64	-19 29.5	1.876	2.873	4.8	20.2
7 30	18 48.85	-33 34.0	0.999	1.952	14.4	19.4	7 30	18 51.69	-19 40.7	1.912	2.864	8.6	20.4
8 9	18 43.31	-33 22.6	1.033	1.932	19.1	19.6	8 9	18 45.56	-19 51.0	1.972	2.855	12.0	20.6
<b>131285</b>	2001 <i>FO</i> <sub>104</sub>		7 8.2 334°46	1°2/ 7.8 18			<b>93737</b>	2000 <i>VP</i> <sub>50</sub>		7 8.2 168°28	4°0/ 6.6 18		
5 31	19 34.18	-22 34.7	1.574	2.425	16.2	19.2	5 31	19 40.78	-31 4.7	2.174	2.998	13.3	19.4
6 10	19 31.22	-23 10.5	1.491	2.415	12.7	18.9	6 10	19 35.68	-32 5.1	2.096	3.001	10.5	19.3
6 20	19 25.51	-23 53.3	1.429	2.406	8.6	18.7	6 20	19 28.14	-33 5.1	2.041	3.004	7.5	19.1
6 30	19 17.61	-24 39.5	1.390	2.398	4.0	18.4	6 30	19 18.73	-33 59.4	2.011	3.007	4.8	18.9
7 10	19 8.51	-25 24.3	1.375	2.390	1.6	18.2	7 10	19 8.36	-34 43.2	2.009	3.009	4.2	18.9
7 20	18 59.45	-26 3.5	1.386	2.383	6.1	18.5	7 20	18 58.09	-35 13.2	2.034	3.011	6.5	19.0
7 30	18 51.73	-26 34.5	1.421	2.377	10.7	18.7	7 30	18 49.00	-35 28.7	2.086	3.012	9.5	19.2
8 9	18 46.38	-26 56.6	1.478	2.371	14.7	18.9	8 9	18 41.98	-35 31.2	2.161	3.013	12.4	19.4
<b>212661</b>	2006 <i>UL</i> <sub>213</sub>		7 8.2 7°08	1°5/ 7.7 18			<b>427419</b>	2000 <i>NH</i> <sub>8</sub>		7 8.2 29°10	2°5/ 8.7 17		
5 31	19 36.04	-25 31.3	2.010	2.845	13.8	20.5	5 31	19 35.99	-17 29.8	1.336	2.187	18.5	20.4
6 10	19 31.94	-25 49.9	1.930	2.845	10.8	20.3	6 10	19 32.64	-17 8.3	1.274	2.196	14.6	20.2
6 20	19 25.56	-26 10.1	1.872	2.846	7.3	20.1	6 20	19 26.37	-16 55.3	1.231	2.205	10.1	19.9
6 30	19 17.47	-26 29.1	1.839	2.846	3.5	19.8	6 30	19 17.94	-16 50.4	1.210	2.215	5.3	19.7
7 10	19 8.57	-26 44.0	1.833	2.847	1.8	19.7	7 10	19 8.56	-16 52.5	1.212	2.226	2.6	19.5
7 20	18 59.82	-26 52.8	1.853	2.848	5.2	19.9	7 20	18 59.56	-16 59.6	1.238	2.237	6.5	19.8
7 30	18 52.25	-26 54.8	1.900	2.849	8.9	20.2	7 30	18 52.22	-17 10.2	1.288	2.249	11.0	20.1
8 9	18 46.63	-26 50.8	1.970	2.850	12.2	20.4	8 9	18 47.47	-17 22.7	1.359	2.261	15.1	20.4
<b>202624</b>	2006 <i>HU</i> <sub>80</sub>		7 8.2 33°92	1°7/ 7.7 17			<b>175841</b>	1999 <i>TR</i> <sub>192</sub>		7 8.2 321°31	4°8/ 7.4 18		
5 31	19 37.29	-25 11.0	1.795	2.635	15.0	20.9	5 31	19 38.46	-31 30.8	1.275	2.136	18.6	19.0
6 10	19 33.18	-25 37.1	1.719	2.637	11.7	20.7	6 10	19 35.54	-31 53.7	1.194	2.121	14.9	18.7
6 20	19 26.53	-26 5.9	1.664	2.639	7.9	20.5	6 20	19 28.96	-32 13.7	1.132	2.107	10.6	18.5
6 30	19 17.96	-26 33.9	1.634	2.641	3.8	20.2	6 30	19 19.39	-32 24.6	1.091	2.093	6.4	18.2
7 10	19 8.46	-26 57.3	1.630	2.644	2.0	20.1	7 10	19 8.20	-32 20.5	1.072	2.080	5.0	18.1
7 20	18 59.14	-27 13.5	1.651	2.646	5.7	20.4	7 20	18 57.14	-31 58.6	1.076	2.068	8.6	18.2
7 30	18 51.15	-27 21.6	1.699	2.649	9.7	20.6	7 30	18 48.02	-31 20.2	1.103	2.056	13.3	18.5
8 9	18 45.37	-27 22.3	1.769	2.652	13.2	20.8	8 9	18 42.17	-30 30.1	1.149	2.045	17.8	18.7
<b>183416</b>	2003 <i>AD</i> <sub>5</sub>		7 8.2 272°45	1°6/ 7.6 18			<b>488504</b>	2000 <i>SF</i> <sub>186</sub>		7 8.2 278°23	2°1/ 7.7 17		
5 31	19 38.43	-23 16.7	1.703	2.542	15.7	20.4	5 31	19 39.84	-25 40.1	1.465	2.314	17.3	21.8
6 10	19 34.55	-24 1.3	1.607	2.524	12.4	20.2	6 10	19 36.09	-26 3.0	1.376	2.298	13.7	21.5
6 20	19 27.82	-24 53.3	1.531	2.506	8.4	19.9	6 20	19 29.08	-26 29.5	1.305	2.282	9.4	21.2
6 30	19 18.74	-25 48.4	1.480	2.487	4.0	19.6	6 30	19 19.40	-26 55.2	1.258	2.265	4.6	20.9
7 10	19 8.25	-26 41.5	1.454	2.468	2.0	19.4	7 10	19 8.19	-27 15.1	1.235	2.249	2.5	20.7
7 20	18 57.59	-27 27.7	1.455	2.449	6.3	19.6	7 20	18 56.93	-27 25.8	1.237	2.232	7.0	20.9
7 30	18 48.13	-28 4.0	1.481	2.430	10.9	19.9	7 30	18 47.20	-27 26.0	1.262	2.216	12.0	21.2
8 9	18 41.04	-28 29.7	1.529	2.411	15.0	20.1	8 9	18 40.28	-27 17.3	1.309	2.199	16.4	21.4
<b>328263</b>	2008 <i>GX</i> <sub>18</sub>		7 8.2 51°50	2°5/ 7.3 17			<b>338036</b>	2002 <i>JN</i> <sub>58</sub>		7 8.2 32°34	7°9/ 5.4 17		
5 31	19 38.53	-24 46.4	1.531	2.378	16.8	20.4	5 31	19 39.89	-36 57.4	1.555	2.398	16.8	19.6
6 10	19 34.65	-25 39.6	1.460	2.381	13.1	20.2	6 10	19 36.12	-38 30.8	1.496	2.406	13.7	19.4
6 20	19 27.80	-26 38.3	1.408	2.384	8.9	19.9	6 20	19 29.01	-39 59.3	1.458	2.414	10.6	19.2
6 30	19 18.64	-27 37.1	1.381	2.388	4.4	19.7	6 30	19 19.28	-41 13.9	1.442	2.422	8.3	19.1
7 10	19 8.30	-28 30.0	1.378	2.391	2.8	19.6	7 10	19 8.25	-42 6.5	1.451	2.431	8.2	19.1
7 20	18 58.14	-29 12.2	1.402	2.395	6.7	19.8	7 20	18 57.49	-42 33.1	1.483	2.441	10.3	19.3
7 30	18 49.52	-29 41.6	1.449	2.399	11.1	20.1	7 30	18 48.58	-42 34.2	1.538	2.451	13.2	19.4
8 9	18 43.51	-29 58.7	1.519	2.402	14.9	20.3	8 9	18 42.66	-42 14.4	1.613	2.461	16.0	19.7
<b>149384</b>	2002 <i>YY</i> <sub>19</sub>		7 8.2 244°41	0°3/ 8.1 18			<b>353865</b>	2012 <i>VL</i> <sub>104</sub>		7 8.2 101°23	1°4/ 7.6 17		
5 31	19 39.27	-21 43.3	1.888	2.717	14.8	21.1	5 31	19 38.69	-25 10.5	2.513	3.331	11.9	21.3
6 10	19 34.76	-22 2.8	1.792	2.704	11.7	20.8	6 10	19 33.34	-25 42.8	2.450	3.356	9.2	21.2
6 20	19 27.68	-22 27.6	1.718	2.690	7.9	20.6	6 20	19 26.15	-26 16.3	2.410	3.380	6.1	21.0
6 30	19 18.57	-22 55.3	1.668	2.675	3.7	20.3	6 30	19 17.67	-26 48.3	2.397	3.403	3.0	20.9
7 10	19 8.31	-23 22.5	1.644	2.661	0.9	20.1	7 10	19 8.64	-27 16.0	2.413	3.426	1.6	20.8
7 20	18 58.01	-23 46.4	1.648	2.645	5.4	20.3	7 20	18 59.87	-27 37.5	2.457	3.449	4.4	21.0
7 30	18 48.84	-24 5.3	1.679	2.629	9.7	20.6	7 30	18 52.12	-27 52.2	2.529	3.471	7.3	21.3
8 9	18 41.79	-24 18.8	1.732	2.613	13.5	20.8	8 9	18 46.03	-28 0.4	2.627	3.493	10.0	21.5
<b>128707</b>	2004 <i>RQ</i> <sub>104</sub>		7 8.2 272°18	4°8/ 6.8 18			<b>367902</b>	2012					

EPHEMERIDES

7 8.2

7 8.2

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>268027</b>	2004 <i>OJ</i> <sub>5</sub>		7 8.2 347°03	2°7/ 9.1 18			<b>11249</b>	Etna		7 8.2 347°43	6°4/ 6.0 18		
5 31	19 29.39	-14 23.0	1.189	2.054	19.5	19.7	5 31	19 36.26	-41 16.9	2.422	3.237	12.3	17.3
6 10	19 28.11	-14 40.8	1.114	2.042	15.6	19.4	6 10	19 32.18	-42 0.9	2.342	3.230	10.3	17.2
6 20	19 23.78	-15 15.8	1.056	2.032	11.0	19.1	6 20	19 25.79	-42 37.5	2.285	3.224	8.2	17.0
6 30	19 16.95	-16 7.1	1.018	2.024	5.9	18.8	6 30	19 17.65	-43 2.0	2.251	3.218	6.7	16.9
7 10	19 8.75	-17 10.9	1.002	2.016	2.8	18.6	7 10	19 8.67	-43 10.5	2.243	3.213	6.5	16.9
7 20	19 0.58	-18 21.5	1.009	2.010	6.9	18.8	7 20	18 59.85	-43 1.4	2.261	3.208	7.8	17.0
7 30	18 53.93	-19 32.7	1.038	2.006	12.1	19.1	7 30	18 52.23	-42 35.5	2.303	3.204	9.9	17.1
8 9	18 50.02	-20 39.3	1.086	2.003	16.9	19.4	8 9	18 46.61	-41 55.6	2.368	3.200	12.1	17.2
<b>467842</b>	2010 <i>TR</i> <sub>131</sub>		7 8.2 324°31	1°5/ 7.8 17			<b>474410</b>	2002 <i>VY</i> <sub>143</sub>		7 8.2 244°29	5°9/ 9.7 18		
5 31	19 33.57	-22 50.5	1.179	2.050	19.2	20.5	5 31	19 34.88	-6 42.2	2.174	2.964	14.4	21.4
6 10	19 31.77	-23 22.4	1.097	2.032	15.2	20.2	6 10	19 30.74	-5 58.6	2.085	2.958	12.0	21.2
6 20	19 26.50	-24 3.2	1.034	2.016	10.4	19.9	6 20	19 24.65	-5 25.8	2.017	2.952	9.3	21.0
6 30	19 18.32	-24 48.8	0.990	2.000	4.9	19.5	6 30	19 17.10	-5 6.0	1.973	2.946	7.0	20.8
7 10	19 8.43	-25 33.4	0.969	1.984	2.0	19.3	7 10	19 8.80	-5 0.2	1.954	2.940	5.9	20.8
7 20	18 58.45	-26 11.4	0.970	1.970	7.5	19.6	7 20	19 0.56	-5 8.1	1.962	2.934	7.1	20.8
7 30	18 50.15	-26 39.2	0.993	1.957	13.2	19.8	7 30	18 53.22	-5 28.4	1.995	2.927	9.6	21.0
8 9	18 44.97	-26 56.2	1.035	1.945	18.2	20.1	8 9	18 47.49	-5 58.2	2.052	2.921	12.3	21.1
<b>301231</b>	2009 <i>BS</i> <sub>19</sub>		7 8.2 6°97	1°3/ 7.9 16			<b>297053</b>	2010 <i>HG</i> <sub>99</sub>		7 8.2 346°08	6°3/ 10.5 18		
5 31	19 36.96	-25 12.4	1.777	2.618	15.1	21.4	5 31	19 31.90	-5 25.8	1.834	2.638	16.2	20.3
6 10	19 32.95	-25 23.2	1.700	2.618	11.8	21.2	6 10	19 28.80	-5 6.9	1.752	2.633	13.5	20.1
6 20	19 26.40	-25 35.9	1.644	2.619	7.9	20.9	6 20	19 23.55	-5 3.8	1.688	2.628	10.5	19.9
6 30	19 17.94	-25 47.3	1.612	2.619	3.8	20.7	6 30	19 16.65	-5 18.5	1.647	2.624	7.7	19.7
7 10	19 8.57	-25 54.7	1.605	2.620	1.6	20.5	7 10	19 8.91	-5 50.8	1.630	2.621	6.3	19.6
7 20	18 59.41	-25 56.2	1.625	2.622	5.6	20.8	7 20	19 1.22	-6 38.8	1.639	2.618	7.5	19.7
7 30	18 51.59	-25 51.5	1.671	2.623	9.6	21.0	7 30	18 54.56	-7 38.9	1.672	2.616	10.3	19.9
8 9	18 45.97	-25 41.4	1.739	2.625	13.2	21.3	8 9	18 49.72	-8 46.3	1.728	2.614	13.3	20.0
<b>34226</b>	2000 <i>QM</i> <sub>88</sub>		7 8.2 320°15	1°1/ 8.3 18			<b>253863</b>	2004 <i>AC</i> <sub>11</sub>		7 8.2 52°71	3°2/ 7.3 17		
5 31	19 34.47	-21 15.0	1.372	2.229	17.8	17.9	5 31	19 39.49	-26 8.0	1.349	2.204	18.2	19.6
6 10	19 31.95	-20 54.3	1.278	2.205	14.2	17.6	6 10	19 35.62	-27 2.8	1.293	2.218	14.2	19.4
6 20	19 26.34	-20 37.3	1.203	2.181	9.8	17.2	6 20	19 28.53	-28 1.4	1.256	2.233	9.6	19.2
6 30	19 18.16	-20 23.0	1.149	2.157	4.7	16.9	6 30	19 19.01	-28 57.2	1.242	2.248	5.0	19.0
7 10	19 8.48	-20 10.2	1.119	2.135	1.4	16.6	7 10	19 8.40	-29 43.7	1.252	2.264	3.5	18.9
7 20	18 58.71	-19 57.7	1.112	2.113	6.7	16.9	7 20	18 58.21	-30 16.6	1.287	2.279	7.3	19.2
7 30	18 50.36	-19 45.3	1.129	2.092	12.0	17.1	7 30	18 49.90	-30 34.7	1.345	2.295	11.7	19.5
8 9	18 44.70	-19 33.5	1.166	2.072	16.8	17.3	8 9	18 44.47	-30 40.0	1.424	2.312	15.5	19.7
<b>423753</b>	2006 <i>DJ</i> <sub>6</sub>		7 8.2 87°99	7°5/ 6.9 17			<b>510958</b>	2013 <i>GF</i> <sub>24</sub>		7 8.2 142°59	2°2/ 8.9 18		
5 31	19 47.81	-41 51.3	1.891	2.702	15.5	21.0	5 31	19 34.42	-14 54.0	2.685	3.490	11.6	21.8
6 10	19 41.48	-42 38.2	1.837	2.722	12.8	20.8	6 10	19 29.94	-14 42.9	2.603	3.497	9.2	21.6
6 20	19 32.07	-43 14.5	1.804	2.742	10.1	20.7	6 20	19 23.87	-14 37.6	2.543	3.503	6.4	21.4
6 30	19 20.47	-43 33.1	1.794	2.762	8.0	20.6	6 30	19 16.66	-14 37.9	2.510	3.509	3.7	21.3
7 10	19 8.05	-43 29.6	1.810	2.781	7.6	20.7	7 10	19 8.93	-14 43.2	2.504	3.514	2.2	21.2
7 20	18 56.28	-43 3.2	1.851	2.800	9.1	20.8	7 20	19 1.32	-14 52.4	2.527	3.520	4.2	21.3
7 30	18 46.48	-42 17.1	1.916	2.819	11.5	21.0	7 30	18 54.51	-15 4.6	2.578	3.525	7.0	21.5
8 9	18 39.52	-41 16.8	2.004	2.838	13.9	21.2	8 9	18 49.05	-15 18.6	2.654	3.529	9.6	21.7
<b>94357</b>	2001 <i>QZ</i> <sub>178</sub>		7 8.2 341°76	9°7/ 5.4 18			<b>70637</b>	1999 <i>TK</i> <sub>330</sub>		7 8.2 225°06	5°8/ 9.9 18		
5 31	19 34.57	-35 13.7	1.004	1.886	21.0	18.3	5 31	19 35.73	-6 10.8	2.241	3.025	14.2	20.2
6 10	19 33.64	-36 50.3	0.940	1.874	17.2	18.0	6 10	19 31.37	-5 37.1	2.148	3.018	11.8	20.0
6 20	19 28.36	-38 25.7	0.893	1.864	13.3	17.8	6 20	19 25.07	-5 14.9	2.076	3.009	9.2	19.8
6 30	19 19.35	-39 47.5	0.864	1.855	10.2	17.6	6 30	19 17.31	-5 5.9	2.028	3.001	6.8	19.6
7 10	19 8.22	-40 43.0	0.855	1.848	10.1	17.5	7 10	19 8.77	-5 10.8	2.005	2.992	5.8	19.5
7 20	18 57.20	-41 4.5	0.867	1.841	13.1	17.7	7 20	19 0.26	-5 29.2	2.010	2.982	6.9	19.6
7 30	18 48.65	-40 52.1	0.896	1.836	17.2	17.9	7 30	18 52.61	-5 59.1	2.040	2.972	9.4	19.7
8 9	18 44.20	-40 12.3	0.942	1.833	21.3	18.1	8 9	18 46.53	-6 37.7	2.095	2.962	12.1	19.9
<b>268941</b>	2007 <i>DN</i> <sub>33</sub>		7 8.2 353°69	4°6/ 9.6 17			<b>92072</b>	1999 <i>WO</i> <sub>20</sub>		7 8.2 150°69	0°3/ 8.3 18		
5 31	19 31.60	-11 23.4	1.313	2.160	19.0	20.1	5 31	19 34.49	-19 54.9	2.740	3.554	11.1	20.0
6 10	19 29.43	-11 17.1	1.239	2.155	15.4	19.9	6 10	19 30.06	-20 13.2	2.656	3.560	8.6	19.9
6 20	19 24.42	-11 27.2	1.184	2.151	11.3	19.6	6 20	19 24.00	-20 35.8	2.596	3.564	5.8	19.7
6 30	19 17.17	-11 54.7	1.149	2.147	7.0	19.4	6 30	19 16.75	-21 1.0	2.563	3.569	2.7	19.5
7 10	19 8.74	-12 37.8	1.137	2.145	4.6	19.2	7 10	19 8.92	-21 26.9	2.557	3.574	0.6	19.3
7 20	19 0.43	-13 32.6	1.148	2.144	7.3	19.4	7 20	19 1.20	-21 51.8	2.581	3.578	3.8	19.6
7 30	18 53.56	-14 34.3	1.182	2.144	11.6	19.6	7 30	18 54.26	-22 14.4	2.633	3.582	6.7	19.8
8 9	18 49.19	-15 37.7	1.236	2.145	15.9	19.9	8 9	18 48.68	-22 34.0	2.710	3.585	9.4	20.0
<b>384540</b>	2010 <i>ED</i> <sub>33</sub>		7 8.2 268°11	2°3/ 8.9 17			<b>38767</b>	2000 <i>RB</i> <sub>7</sub>		7 8.2 298°10	2°7/ 8.8 18		
5 31	19 35.75	-15 22.2	1.907	2.731	14.9	21.1	5 31	19 35.40	-15 55.9	1.650	2.485	16.3	18.9
6 10	19 31.84	-15 23.2	1.816	2.721	11.9	20.9	6 10	19 32.10	-15 46.1	1.551	2.463	13.1	18.7
6 20	19 25.62	-15 33.1	1.746	2.712	8.3	20.7	6 20	19 26.14	-15 45.2	1.472	2.441	9.3	18.4
6 30	19 17.62	-15 51.4	1.700	2.702	4.5	20.4	6 30	19 18.01	-15 53.2	1.415	2.419	5.1	18.1
7 10	19 8.65	-16 16.4	1.680	2.692	2.4	20.2	7 10	19 8.61	-16 9.0	1.384	2.397	2.7	17.9
7 20	18 59.69	-16 45.9	1.686	2.682	5.4	20.4	7 20	18 59.07	-16 30.6	1.377	2.375	6.2	18.1
7 30	18 51.79	-17 17.7	1.719	2.673	9.3	20.6	7 30	18 50.65	-16 55.8	1.396	2.353	10.7	18.3
8 9	18 45.80	-17 49.6	1.775	2.663	12.9	20.8	8 9	18 44.44	-17 22.7	1.436	2.331	14.9	18.5
<b>179535</b>	2002 <i>CH</i> <sub>213</sub>		7 8.2 42°92	0°3/ 8.3 18			<b>323398</b>	2004 <i>AR</i> <sub>20</sub>		7 8.2 62°24	0°3/ 8.1 17		

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>335121</b>	2004 <i>TS</i> <sub>266</sub>		7 8.2 241°02	2°1/ 8.7 17			<b>16463</b>	Nayoro		7 8.2 233°46	3°5/ 9.3 18		
5 31	19 37.44	-16 36.2	2.060	2.879	14.1	21.7	5 31	19 37.89	-11 35.2	2.361	3.156	13.2	18.7
6 10	19 32.99	-16 28.2	1.965	2.868	11.2	21.5	6 10	19 33.08	-11 24.4	2.256	3.141	10.7	18.5
6 20	19 26.33	-16 26.9	1.891	2.856	7.8	21.2	6 20	19 26.28	-11 22.4	2.173	3.124	7.9	18.3
6 30	19 17.95	-16 31.8	1.842	2.845	4.2	21.0	6 30	19 17.93	-11 29.6	2.115	3.107	4.9	18.1
7 10	19 8.65	-16 41.6	1.819	2.833	2.1	20.8	7 10	19 8.72	-11 45.4	2.084	3.089	3.5	18.0
7 20	18 59.37	-16 54.8	1.825	2.820	5.1	21.0	7 20	18 59.44	-12 8.6	2.082	3.070	5.4	18.1
7 30	18 51.08	-17 10.2	1.856	2.807	8.9	21.2	7 30	18 50.96	-12 37.4	2.108	3.051	8.5	18.2
8 9	18 44.62	-17 26.5	1.912	2.794	12.4	21.4	8 9	18 44.04	-13 9.9	2.158	3.031	11.6	18.4
<b>133378</b>	2003 <i>SD</i> <sub>152</sub>		7 8.2 347°30	0°9/ 7.9 18			<b>440312</b>	2004 <i>SE</i> <sub>42</sub>		7 8.2 265°89	2°0/ 7.6 17		
5 31	19 34.49	-20 25.1	1.177	2.044	19.5	19.4	5 31	19 37.42	-28 41.2	2.614	3.434	11.4	21.9
6 10	19 32.30	-21 12.0	1.106	2.039	15.4	19.1	6 10	19 32.68	-28 52.9	2.509	3.415	9.0	21.7
6 20	19 26.73	-22 11.5	1.053	2.034	10.4	18.8	6 20	19 25.98	-29 3.6	2.428	3.396	6.2	21.5
6 30	19 18.39	-23 18.9	1.021	2.030	4.8	18.5	6 30	19 17.77	-29 10.7	2.373	3.376	3.3	21.2
7 10	19 8.54	-24 27.4	1.011	2.027	1.5	18.3	7 10	19 8.76	-29 12.0	2.346	3.356	2.2	21.1
7 20	18 58.77	-25 30.1	1.024	2.024	7.2	18.6	7 20	18 59.76	-29 6.2	2.347	3.336	4.7	21.3
7 30	18 50.75	-26 22.1	1.060	2.023	12.6	18.9	7 30	18 51.63	-28 53.1	2.375	3.316	7.8	21.4
8 9	18 45.77	-27 1.7	1.115	2.022	17.4	19.2	8 9	18 45.08	-28 33.7	2.429	3.296	10.7	21.6
<b>384573</b>	2010 <i>GQ</i> <sub>171</sub>		7 8.2 71°06	3°1/ 9.9 17			<b>300766</b>	2007 <i>VX</i> <sub>244</sub>		7 8.2 208°42	0°6/ 8.0 18		
5 31	19 38.23	-8 41.5	1.845	2.647	16.1	20.4	5 31	19 37.25	-23 18.7	2.297	3.121	12.7	21.3
6 10	19 33.59	-9 41.5	1.777	2.666	12.9	20.2	6 10	19 32.63	-23 32.7	2.209	3.117	9.9	21.1
6 20	19 26.68	-10 59.0	1.729	2.684	9.2	20.1	6 20	19 25.97	-23 49.5	2.143	3.113	6.7	20.9
6 30	19 18.07	-12 31.5	1.707	2.703	5.4	19.9	6 30	19 17.76	-24 6.6	2.102	3.109	3.1	20.7
7 10	19 8.66	-14 14.0	1.712	2.722	3.1	19.8	7 10	19 8.77	-24 22.0	2.090	3.105	1.0	20.5
7 20	18 59.43	-16 0.3	1.745	2.740	5.4	19.9	7 20	18 59.88	-24 33.6	2.105	3.101	4.5	20.8
7 30	18 51.40	-17 44.5	1.806	2.759	9.0	20.2	7 30	18 51.96	-24 40.8	2.148	3.096	8.1	21.0
8 9	18 45.34	-19 21.8	1.893	2.777	12.4	20.4	8 9	18 45.77	-24 43.6	2.215	3.091	11.2	21.2
<b>467337</b>	2002 <i>PJ</i> <sub>76</sub>		7 8.2 327°58	2°8/ 7.3 17			<b>290246</b>	2005 <i>SU</i> <sub>101</sub>		7 8.2 54°11	3°9/ 9.3 17		
5 31	19 30.36	-23 43.6	1.110	1.990	19.5	20.5	5 31	19 34.50	-11 58.9	2.167	2.976	13.8	20.8
6 10	19 29.63	-24 36.5	1.023	1.964	15.5	20.2	6 10	19 30.40	-11 29.5	2.088	2.981	11.1	20.7
6 20	19 25.36	-25 41.1	0.954	1.938	10.7	19.8	6 20	19 24.39	-11 8.5	2.031	2.985	8.1	20.5
6 30	19 17.98	-26 52.5	0.905	1.914	5.3	19.4	6 30	19 17.00	-10 56.7	1.998	2.989	5.2	20.3
7 10	19 8.61	-28 2.6	0.877	1.891	3.3	19.2	7 10	19 8.95	-10 54.1	1.991	2.994	3.9	20.2
7 20	18 58.92	-29 3.4	0.871	1.869	8.5	19.4	7 20	19 1.07	-11 0.0	2.011	2.999	5.6	20.4
7 30	18 50.87	-29 49.2	0.885	1.849	14.3	19.7	7 30	18 54.15	-11 13.0	2.058	3.003	8.5	20.5
8 9	18 46.10	-30 18.5	0.917	1.830	19.6	19.9	8 9	18 48.86	-11 31.3	2.128	3.008	11.4	20.7
<b>261964</b>	2006 <i>PU</i> <sub>25</sub>		7 8.2 283°94	1°6/ 8.7 18			<b>89959</b>	2002 <i>NT</i> <sub>7</sub>		7 8.2 249°72	14°0/ 13.5 18		
5 31	19 36.87	-16 50.2	1.509	2.349	17.3	20.5	5 31	19 53.75	+13 57.4	1.800	2.457	21.2	20.7
6 10	19 33.51	-17 5.5	1.417	2.333	13.8	20.2	6 10	19 46.78	+14 14.3	1.674	2.426	19.5	20.4
6 20	19 27.25	-17 32.4	1.345	2.317	9.6	19.9	6 20	19 36.45	+14 0.2	1.562	2.392	17.5	20.2
6 30	19 18.58	-18 9.4	1.295	2.301	4.8	19.6	6 30	19 23.07	+13 5.5	1.470	2.356	15.4	19.9
7 10	19 8.52	-18 53.4	1.270	2.285	1.8	19.3	7 10	19 7.52	+11 23.5	1.402	2.317	14.1	19.8
7 20	18 58.33	-19 40.3	1.270	2.269	6.2	19.6	7 20	18 51.12	+8 53.4	1.361	2.276	14.4	19.7
7 30	18 49.42	-20 26.5	1.294	2.253	11.2	19.8	7 30	18 35.52	+5 42.1	1.348	2.232	16.5	19.7
8 9	18 42.97	-21 9.1	1.340	2.237	15.7	20.0	8 9	18 22.22	+2 3.5	1.361	2.186	19.7	19.8
<b>164345</b>	2005 <i>CV</i> <sub>15</sub>		7 8.2 78°70	1°2/ 8.5 17			<b>325081</b>	2008 <i>DB</i> <sub>13</sub>		7 8.2 34°31	1°7/ 7.9 17		
5 31	19 40.84	-18 56.0	1.420	2.261	18.2	20.4	5 31	19 38.81	-26 2.4	1.143	2.010	20.0	20.4
6 10	19 36.23	-18 57.6	1.362	2.278	14.2	20.2	6 10	19 35.36	-26 4.0	1.093	2.025	15.5	20.2
6 20	19 28.69	-19 7.1	1.322	2.296	9.6	19.9	6 20	19 28.43	-26 6.7	1.061	2.042	10.4	19.9
6 30	19 19.03	-19 22.4	1.306	2.313	4.6	19.7	6 30	19 18.97	-26 6.6	1.050	2.059	5.0	19.7
7 10	19 8.48	-19 40.6	1.314	2.330	1.5	19.5	7 10	19 8.54	-26 0.3	1.062	2.077	2.1	19.6
7 20	18 58.37	-19 59.0	1.348	2.347	6.0	19.9	7 20	18 58.79	-25 46.5	1.097	2.097	7.0	19.9
7 30	18 50.00	-20 15.9	1.406	2.364	10.6	20.2	7 30	18 51.19	-25 26.3	1.155	2.116	12.0	20.3
8 9	18 44.26	-20 30.5	1.486	2.380	14.6	20.5	8 9	18 46.71	-25 1.9	1.232	2.137	16.2	20.6
<b>243902</b>	2001 <i>EP</i> <sub>5</sub>		7 8.2 146°86	4°3/ 10.4 18			<b>422975</b>	2003 <i>HF</i> <sub>58</sub>		7 8.2 43°45	3°5/ 7.5 16		
5 31	19 32.97	-5 42.8	2.830	3.604	11.8	20.8	5 31	19 39.37	-28 45.6	1.432	2.284	17.5	21.2
6 10	19 28.75	-5 41.4	2.746	3.610	9.7	20.6	6 10	19 35.39	-29 18.1	1.374	2.297	13.7	21.0
6 20	19 23.06	-5 50.9	2.685	3.616	7.5	20.5	6 20	19 28.30	-29 50.3	1.335	2.310	9.4	20.8
6 30	19 16.32	-6 11.8	2.648	3.622	5.4	20.3	6 30	19 18.92	-30 16.7	1.320	2.324	5.1	20.6
7 10	19 9.06	-6 43.3	2.639	3.628	4.3	20.3	7 10	19 8.55	-30 32.6	1.328	2.338	3.7	20.5
7 20	19 1.90	-7 24.0	2.657	3.633	5.2	20.4	7 20	18 58.65	-30 35.6	1.361	2.353	7.1	20.8
7 30	18 55.42	-8 11.7	2.704	3.638	7.2	20.5	7 30	18 50.57	-30 26.2	1.418	2.368	11.2	21.0
8 9	18 50.17	-9 3.7	2.776	3.643	9.5	20.6	8 9	18 45.27	-30 7.0	1.497	2.383	14.9	21.3
<b>136714</b>	1995 <i>UX</i> <sub>13</sub>		7 8.2 112°95	4°6/ 7.0 17			<b>418119</b>	2007 <i>YN</i> <sub>35</sub>		7 8.2 196°40	1°0/ 7.9 17		
5 31	19 42.34	-31 12.5	1.589	2.430	16.6	20.2	5 31	19 40.11	-22 7.9	1.671	2.507	16.1	21.7
6 10	19 37.66	-31 59.5	1.521	2.435	13.1	20.0	6 10	19 35.70	-22 47.6	1.590	2.506	12.6	21.5
6 20	19 29.87	-32 45.2	1.472	2.441	9.3	19.8	6 20	19 28.49	-23 34.2	1.530	2.504	8.5	21.2
6 30	19 19.68	-33 23.2	1.447	2.446	5.7	19.6	6 30	19 19.08	-24 23.8	1.494	2.502	4.0	20.9
7 10	19 8.34	-33 47.6	1.447	2.452	4.8	19.6	7 10	19 8.50	-25 11.6	1.485	2.500	1.5	20.7
7 20	18 57.30	-33 55.5	1.473	2.457	7.7	19.7	7 20	18 57.99	-25 53.2	1.501	2.497	5.9	21.0
7 30	18 48.00	-33 47.3	1.523	2.462	11.5	20.0	7 30	18 48.85	-26 26.1	1.543	2.494	10.4	21.3
8 9	18 41.47	-33 26.1	1.595	2.467	15.0	20.2	8 9	18 42.11	-26 50.1	1.608	2.491	14.3	21.5
<b>163817</b>	2003 <i>RP</i> <sub>5</sub>		7 8.2 294°36	1°2/ 8.3 18			<b>87725</b>	2000 <i>SK</i> <sub>46</sub>		7 8.2 235°11	3°9/		

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>358423</b>	2007 <i>CF</i> <sub>61</sub>		7 8.2 70°42'	0°9/ 8.4 18			<b>374308</b>	2005 <i>SX</i> <sub>175</sub>		7 8.2 304°57'	3°3/ 8.8 17		
5 31	19 36.79	-21 3.0	2.297	3.118	12.8	20.3	5 31	19 36.59	-15 46.0	1.551	2.388	17.1	21.1
6 10	19 32.12	-20 41.0	2.213	3.120	10.0	20.1	6 10	19 33.03	-15 17.9	1.466	2.378	13.7	20.9
6 20	19 25.52	-20 21.1	2.152	3.122	6.8	19.9	6 20	19 26.74	-14 57.8	1.400	2.368	9.7	20.6
6 30	19 17.52	-20 2.6	2.117	3.123	3.2	19.7	6 30	19 18.31	-14 46.2	1.357	2.359	5.5	20.4
7 10	19 8.88	-19 45.0	2.110	3.125	1.0	19.6	7 10	19 8.75	-14 42.9	1.338	2.350	3.4	20.2
7 20	19 0.43	-19 27.9	2.130	3.127	4.4	19.8	7 20	18 59.25	-14 46.9	1.345	2.341	6.5	20.4
7 30	18 52.99	-19 11.4	2.178	3.129	7.8	20.0	7 30	18 51.07	-14 56.8	1.375	2.332	10.9	20.6
8 9	18 47.22	-18 55.8	2.251	3.131	10.9	20.2	8 9	18 45.22	-15 10.9	1.428	2.323	15.0	20.8
<b>392982</b>	2012 <i>XS</i> <sub>57</sub>		7 8.2 212°19'	1°6/ 7.7 17			<b>488481</b>	1999 <i>TZ</i> <sub>59</sub>		7 8.2 304°77'	8°7/ 6.1 17		
5 31	19 37.39	-24 59.3	2.064	2.895	13.6	21.8	5 31	19 43.36	-41 53.8	1.709	2.534	16.3	21.1
6 10	19 33.05	-25 31.7	1.981	2.893	10.7	21.6	6 10	19 38.97	-42 50.9	1.629	2.522	13.7	20.9
6 20	19 26.42	-26 7.1	1.919	2.891	7.2	21.3	6 20	19 31.08	-43 39.1	1.569	2.510	11.0	20.7
6 30	19 18.04	-26 42.1	1.883	2.890	3.5	21.1	6 30	19 20.41	-44 10.0	1.531	2.499	9.1	20.5
7 10	19 8.76	-27 13.1	1.874	2.888	1.9	21.0	7 10	19 8.29	-44 16.6	1.516	2.488	8.9	20.5
7 20	18 59.58	-27 37.4	1.892	2.885	5.2	21.2	7 20	18 56.38	-43 56.1	1.526	2.477	10.6	20.6
7 30	18 51.50	-27 53.7	1.937	2.883	8.9	21.4	7 30	18 46.34	-43 10.4	1.558	2.466	13.3	20.7
8 9	18 45.37	-28 2.4	2.005	2.881	12.2	21.6	8 9	18 39.39	-42 5.3	1.611	2.456	16.2	20.9
<b>385175</b>	2013 <i>WU</i> <sub>3</sub>		7 8.2 200°90'	5°9/ 9.7 18			<b>476602</b>	2008 <i>SZ</i> <sub>96</sub>		7 8.2 254°48'	1°6/ 7.8 18		
5 31	19 37.31	-6 49.5	2.131	2.918	14.7	21.2	5 31	19 39.31	-25 49.7	2.027	2.856	13.9	22.2
6 10	19 32.68	-6 6.4	2.043	2.915	12.2	21.0	6 10	19 34.73	-26 7.5	1.930	2.842	11.0	22.0
6 20	19 26.01	-5 34.2	1.976	2.911	9.5	20.8	6 20	19 27.69	-26 27.1	1.855	2.827	7.5	21.7
6 30	19 17.81	-5 15.2	1.933	2.908	7.0	20.7	6 30	19 18.71	-26 45.2	1.805	2.812	3.7	21.5
7 10	19 8.82	-5 10.3	1.916	2.903	5.9	20.6	7 10	19 8.67	-26 58.7	1.782	2.796	1.9	21.3
7 20	18 59.91	-5 19.2	1.926	2.898	7.2	20.7	7 20	18 58.62	-27 5.4	1.786	2.780	5.4	21.5
7 30	18 51.96	-5 40.4	1.962	2.893	9.7	20.8	7 30	18 49.69	-27 4.6	1.817	2.764	9.3	21.7
8 9	18 45.70	-6 11.0	2.021	2.888	12.5	21.0	8 9	18 42.79	-26 57.0	1.871	2.748	12.9	21.9
<b>207381</b>	2005 <i>QW</i> <sub>7</sub>		7 8.2 325°41'	0°3/ 8.1 18			<b>41058</b>	1999 <i>VC</i> <sub>24</sub>		7 8.2 254°55'	0°6/ 8.4 18		
5 31	19 31.55	-22 35.2	2.793	3.617	10.7	20.4	5 31	19 35.28	-20 27.2	2.538	3.356	11.8	19.3
6 10	19 27.90	-22 48.0	2.699	3.609	8.3	20.2	6 10	19 30.93	-20 24.5	2.440	3.344	9.2	19.1
6 20	19 22.66	-23 3.4	2.629	3.600	5.6	20.0	6 20	19 24.77	-20 25.1	2.364	3.333	6.3	18.9
6 30	19 16.22	-23 19.9	2.584	3.592	2.6	19.8	6 30	19 17.24	-20 27.8	2.315	3.321	3.0	18.6
7 10	19 9.19	-23 35.8	2.568	3.584	0.7	19.6	7 10	19 9.00	-20 31.4	2.294	3.310	0.8	18.4
7 20	19 2.21	-23 49.6	2.579	3.576	3.8	19.9	7 20	19 0.80	-20 34.9	2.301	3.298	4.1	18.7
7 30	18 55.94	-24 0.5	2.619	3.568	6.7	20.1	7 30	18 53.42	-20 37.4	2.335	3.286	7.4	18.9
8 9	18 50.97	-24 8.2	2.683	3.561	9.4	20.2	8 9	18 47.51	-20 38.8	2.395	3.273	10.4	19.0
<b>476651</b>	2008 <i>SZ</i> <sub>282</sub>		7 8.2 307°14'	2°8/ 8.9 18			<b>175371</b>	2005 <i>SP</i> <sub>165</sub>		7 8.2 322°54'	1°5/ 7.6 18		
5 31	19 34.56	-15 53.0	1.597	2.436	16.6	21.4	5 31	19 32.27	-26 39.9	2.852	3.677	10.4	20.5
6 10	19 31.59	-15 41.9	1.497	2.411	13.4	21.2	6 10	19 28.48	-26 58.5	2.758	3.668	8.1	20.3
6 20	19 25.91	-15 39.9	1.416	2.386	9.5	20.9	6 20	19 23.06	-27 17.7	2.689	3.659	5.5	20.1
6 30	19 18.01	-15 47.3	1.358	2.362	5.2	20.6	6 30	19 16.43	-27 35.4	2.645	3.650	2.8	19.9
7 10	19 8.77	-16 2.9	1.324	2.337	2.8	20.3	7 10	19 9.19	-27 49.5	2.629	3.642	1.6	19.8
7 20	18 59.36	-16 24.8	1.316	2.313	6.3	20.5	7 20	19 2.00	-27 58.8	2.642	3.634	4.1	20.0
7 30	18 51.09	-16 50.9	1.331	2.290	11.0	20.7	7 30	18 55.55	-28 2.5	2.682	3.626	6.9	20.2
8 9	18 45.05	-17 18.8	1.368	2.267	15.3	20.9	8 9	18 50.44	-28 0.9	2.747	3.618	9.4	20.3
<b>98119</b>	2000 <i>SA</i> <sub>4</sub>		7 8.2 37°70'	4°2/ 7.0 17			<b>160061</b>	1999 <i>VG</i> <sub>127</sub>		7 8.2 7°76'	3°7/ 7.2 17		
5 31	19 39.31	-27 27.5	1.227	2.089	19.2	18.8	5 31	19 36.40	-28 24.6	1.467	2.322	17.0	19.7
6 10	19 36.02	-28 30.8	1.167	2.095	15.1	18.6	6 10	19 33.24	-29 9.1	1.398	2.323	13.3	19.4
6 20	19 29.16	-29 37.9	1.125	2.102	10.4	18.3	6 20	19 27.04	-29 55.0	1.348	2.324	9.2	19.2
6 30	19 19.51	-30 41.2	1.105	2.110	5.8	18.1	6 30	19 18.48	-30 36.8	1.322	2.326	5.2	19.0
7 10	19 8.48	-31 32.8	1.108	2.117	4.6	18.0	7 10	19 8.74	-31 8.8	1.319	2.329	4.0	18.9
7 20	18 57.78	-32 7.2	1.135	2.125	8.3	18.3	7 20	18 59.24	-31 27.3	1.342	2.332	7.3	19.1
7 30	18 49.10	-32 23.2	1.184	2.134	12.9	18.6	7 30	18 51.38	-31 31.5	1.387	2.336	11.5	19.4
8 9	18 43.63	-32 23.4	1.253	2.143	17.0	18.8	8 9	18 46.21	-31 23.5	1.454	2.341	15.3	19.6
<b>33285</b>	1998 <i>JR</i> <sub>2</sub>		7 8.2 45°84'	1°2/ 7.7 18			<b>469556</b>	2003 <i>UE</i> <sub>108</sub>		7 8.2 289°10'	7°5/ 5.4 18		
5 31	19 35.55	-23 2.6	2.121	2.952	13.3	18.4	5 31	19 40.98	-38 30.2	1.854	2.682	15.1	21.3
6 10	19 31.52	-23 47.1	2.042	2.955	10.4	18.2	6 10	19 36.82	-39 45.9	1.770	2.669	12.5	21.1
6 20	19 25.34	-24 36.5	1.986	2.959	7.0	18.0	6 20	19 29.54	-40 57.4	1.708	2.657	9.8	20.9
6 30	19 17.54	-25 27.2	1.955	2.962	3.3	17.7	6 30	19 19.72	-41 56.8	1.669	2.644	7.9	20.8
7 10	19 8.91	-26 15.5	1.951	2.966	1.5	17.6	7 10	19 8.47	-42 37.0	1.655	2.632	7.8	20.7
7 20	19 0.37	-26 58.0	1.975	2.969	5.0	17.9	7 20	18 57.19	-42 53.8	1.666	2.620	9.7	20.8
7 30	18 52.87	-27 32.9	2.025	2.973	8.5	18.1	7 30	18 47.41	-42 47.1	1.701	2.607	12.5	21.0
8 9	18 47.18	-27 59.4	2.099	2.976	11.7	18.3	8 9	18 40.31	-42 20.7	1.756	2.595	15.3	21.1
<b>350284</b>	2012 <i>TK</i> <sub>285</sub>		7 8.2 352°58'	6°0/ 9.4 16			<b>198423</b>	2004 <i>VK</i> <sub>80</sub>		7 8.2 255°59'	4°1/ 9.4 18		
5 31	19 26.81	-12 26.1	1.103	1.973	20.4	19.6	5 31	19 36.44	-10 58.3	2.058	2.864	14.6	21.2
6 10	19 26.20	-11 40.9	1.033	1.961	16.6	19.3	6 10	19 32.28	-10 43.0	1.958	2.848	11.9	21.0
6 20	19 22.55	-11 9.5	0.979	1.951	12.3	19.0	6 20	19 25.94	-10 38.0	1.879	2.832	8.8	20.7
6 30	19 16.47	-10 55.0	0.945	1.943	8.0	18.8	6 30	19 17.89	-10 44.1	1.823	2.815	5.7	20.5
7 10	19 9.13	-10 58.7	0.931	1.938	6.0	18.7	7 10	19 8.88	-11 1.0	1.794	2.798	4.1	20.4
7 20	19 1.92	-11 19.1	0.938	1.934	8.5	18.8	7 20	18 59.81	-11 27.3	1.792	2.781	6.0	20.5
7 30	18 56.29	-11 53.0	0.965	1.932	13.0	19.0	7 30	18 51.64	-12 0.9	1.816	2.763	9.4	20.6
8 9	18 53.37	-12 35.3	1.012	1.933	17.4	19.3	8 9	18 45.21	-12 39.2	1.864	2.745	12.7	20.8
<b>387047</b>	2012 <i>TD</i> <sub>16</sub>		7 8.2 284°16'	3°7/ 9.2 16			<b>440316</b>	2004 <i>TF</i> <sub>26</sub>		7 8.2 245			

EPHEMERIDES

7 8.2

7 8.3

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>466323</b>	2013 <i>QD</i> <sub>82</sub>		7 8.2 334 <sup>o</sup> .24	0 <sup>o</sup> .4/ 8.3 17			<b>448625</b>	2010 <i>UE</i> <sub>91</sub>		7 8.2 283 <sup>o</sup> .79	3 <sup>o</sup> .4/ 9.1 18		
5 31	19 31.73	-21 21.1	1.098	1.975	19.9	20.8	5 31	19 34.04	-13 2.2	2.345	3.153	12.9	21.2
6 10	19 30.47	-21 17.4	1.019	1.957	15.8	20.5	6 10	19 30.05	-12 36.5	2.251	3.145	10.4	21.0
6 20	19 25.72	-21 20.7	0.958	1.941	10.8	20.1	6 20	19 24.23	-12 17.8	2.180	3.136	7.6	20.8
6 30	19 18.09	-21 29.1	0.915	1.925	5.1	19.8	6 30	19 17.02	-12 6.7	2.133	3.127	4.7	20.6
7 10	19 8.82	-21 39.7	0.895	1.911	1.1	19.4	7 10	19 9.12	-12 3.3	2.113	3.119	3.4	20.5
7 20	18 59.53	-21 49.6	0.896	1.898	7.3	19.8	7 20	19 1.27	-12 6.9	2.121	3.110	5.2	20.6
7 30	18 52.01	-21 56.8	0.917	1.887	13.1	20.1	7 30	18 54.25	-12 16.5	2.155	3.101	8.2	20.8
8 9	18 47.61	-22 0.7	0.957	1.877	18.3	20.3	8 9	18 48.74	-12 30.8	2.214	3.093	11.1	21.0
<b>295569</b>	2008 <i>SF</i> <sub>92</sub>		7 8.2 183 <sup>o</sup> .97	1 <sup>o</sup> .6/ 8.8 18			<b>444644</b>	2006 <i>YZ</i> <sub>31</sub>		7 8.2 155 <sup>o</sup> .47	1 <sup>o</sup> .9/ 7.8 18		
5 31	19 37.80	-16 58.6	2.315	3.126	13.0	22.0	5 31	19 37.86	-28 16.1	2.400	3.223	12.2	21.2
6 10	19 32.96	-16 58.2	2.227	3.126	10.3	21.8	6 10	19 33.04	-28 23.4	2.317	3.225	9.5	21.0
6 20	19 26.16	-17 3.9	2.162	3.126	7.1	21.6	6 20	19 26.20	-28 29.5	2.257	3.226	6.5	20.8
6 30	19 17.90	-17 14.7	2.122	3.126	3.7	21.4	6 30	19 17.91	-28 31.9	2.223	3.228	3.4	20.6
7 10	19 8.90	-17 29.3	2.111	3.124	1.7	21.2	7 10	19 8.94	-28 28.7	2.217	3.229	2.1	20.5
7 20	19 0.01	-17 46.0	2.127	3.123	4.5	21.4	7 20	19 0.16	-28 18.6	2.239	3.230	4.7	20.7
7 30	18 52.05	-18 3.5	2.171	3.121	7.9	21.6	7 30	18 52.42	-28 2.1	2.288	3.232	7.9	20.9
8 9	18 45.74	-18 20.8	2.240	3.118	11.0	21.8	8 9	18 46.42	-27 40.4	2.361	3.233	10.8	21.1
<b>67617</b>	2000 <i>ST</i> <sub>168</sub>		7 8.2 213 <sup>o</sup> .81	0 <sup>o</sup> .1/ 8.2 18			<b>372377</b>	2009 <i>PN</i> <sub>4</sub>		7 8.2 298 <sup>o</sup> .77	6 <sup>o</sup> .8/ 9.6 18		
5 31	19 41.94	-22 15.5	1.782	2.611	15.6	19.5	5 31	19 35.20	- 8 13.4	1.532	2.352	18.1	20.6
6 10	19 36.96	-22 20.6	1.694	2.605	12.3	19.3	6 10	19 32.28	- 7 37.8	1.425	2.320	15.2	20.3
6 20	19 29.27	-22 29.8	1.626	2.598	8.3	19.0	6 20	19 26.55	- 7 16.1	1.337	2.288	11.7	20.0
6 30	19 19.47	-22 40.3	1.583	2.591	3.9	18.7	6 30	19 18.43	- 7 11.6	1.270	2.256	8.4	19.8
7 10	19 8.56	-22 49.6	1.567	2.583	0.9	18.5	7 10	19 8.77	- 7 26.3	1.227	2.224	6.8	19.6
7 20	18 57.73	-22 55.6	1.577	2.574	5.6	18.8	7 20	18 58.74	- 7 59.6	1.207	2.192	8.7	19.6
7 30	18 48.21	-22 57.5	1.614	2.565	10.0	19.0	7 30	18 49.73	- 8 49.0	1.210	2.160	12.7	19.7
8 9	18 41.00	-22 55.7	1.673	2.556	13.9	19.2	8 9	18 42.97	- 9 49.8	1.234	2.128	17.0	19.9
<b>244645</b>	2003 <i>FL</i> <sub>82</sub>		7 8.2 289 <sup>o</sup> .65	13 <sup>o</sup> .0/ 13.3 17			<b>441808</b>	2009 <i>HV</i> <sub>39</sub>		7 8.2 77 <sup>o</sup> .38	0 <sup>o</sup> .5/ 8.0 17		
5 31	19 34.32	+10 2.4	1.812	2.535	19.1	20.1	5 31	19 36.12	-20 37.4	2.123	2.949	13.5	21.3
6 10	19 30.77	+11 10.5	1.737	2.532	17.3	19.9	6 10	19 31.89	-21 22.3	2.049	2.959	10.5	21.1
6 20	19 24.96	+11 54.8	1.678	2.530	15.5	19.8	6 20	19 25.55	-22 13.6	1.997	2.969	7.0	20.9
6 30	19 17.43	+12 9.4	1.638	2.527	13.9	19.7	6 30	19 17.66	-23 8.0	1.971	2.979	3.2	20.7
7 10	19 9.00	+11 51.0	1.617	2.524	13.1	19.6	7 10	19 8.99	-24 1.7	1.973	2.989	0.9	20.5
7 20	19 0.63	+10 59.8	1.618	2.521	13.3	19.6	7 20	19 0.46	-24 51.3	2.002	2.998	4.7	20.8
7 30	18 53.32	+ 9 39.4	1.641	2.519	14.4	19.7	7 30	18 52.97	-25 34.6	2.059	3.008	8.3	21.0
8 9	18 47.90	+ 7 56.9	1.684	2.516	16.2	19.8	8 9	18 47.27	-26 10.3	2.139	3.018	11.4	21.3
<b>38568</b>	1999 <i>VE</i> <sub>184</sub>		7 8.2 328 <sup>o</sup> .33	2 <sup>o</sup> .0/ 8.8 18 R			<b>476201</b>	2007 <i>UD</i> <sub>58</sub>		7 8.3 316 <sup>o</sup> .86	1 <sup>o</sup> .8/ 8.6 16		
5 31	19 33.35	-16 29.1	2.035	2.862	14.0	18.8	5 31	19 33.98	-18 27.5	1.584	2.429	16.4	22.1
6 10	19 29.85	-16 25.5	1.946	2.854	11.1	18.6	6 10	19 31.20	-18 15.2	1.485	2.404	13.1	21.8
6 20	19 24.26	-16 29.2	1.879	2.846	7.7	18.4	6 20	19 25.69	-18 9.5	1.405	2.379	9.1	21.5
6 30	19 17.08	-16 39.5	1.835	2.839	4.1	18.2	6 30	19 17.95	-18 10.1	1.348	2.355	4.7	21.2
7 10	19 9.08	-16 55.2	1.818	2.832	2.0	18.0	7 10	19 8.90	-18 15.6	1.316	2.331	2.0	21.0
7 20	19 1.14	-17 14.5	1.828	2.825	5.0	18.2	7 20	18 59.71	-18 24.4	1.308	2.307	6.1	21.2
7 30	18 54.17	-17 35.8	1.864	2.819	8.6	18.4	7 30	18 51.70	-18 35.1	1.324	2.285	10.9	21.4
8 9	18 48.95	-17 57.5	1.923	2.813	12.0	18.6	8 9	18 45.96	-18 46.3	1.362	2.263	15.2	21.6
<b>311563</b>	2006 <i>CY</i> <sub>37</sub>		7 8.2 219 <sup>o</sup> .45	0 <sup>o</sup> .2/ 8.2 17			<b>38040</b>	1998 <i>RW</i> <sub>49</sub>		7 8.3 344 <sup>o</sup> .51	8 <sup>o</sup> .7/ 12.0 18		
5 31	19 43.11	-22 49.4	1.634	2.467	16.6	22.3	5 31	19 30.89	+ 1 52.4	1.984	2.751	16.3	18.0
6 10	19 38.14	-22 47.8	1.547	2.460	13.1	22.1	6 10	19 27.91	+ 2 21.1	1.900	2.745	14.2	17.8
6 20	19 30.21	-22 49.5	1.480	2.453	8.9	21.8	6 20	19 22.96	+ 2 30.6	1.834	2.739	11.9	17.6
6 30	19 19.95	-22 51.9	1.437	2.445	4.1	21.5	6 30	19 16.50	+ 2 17.9	1.790	2.734	9.8	17.5
7 10	19 8.46	-22 52.3	1.420	2.436	0.9	21.2	7 10	19 9.25	+ 1 42.0	1.769	2.729	8.7	17.4
7 20	18 57.07	-22 49.0	1.429	2.426	6.0	21.6	7 20	19 2.04	+ 0 44.3	1.771	2.724	9.2	17.4
7 30	18 47.15	-22 41.6	1.463	2.416	10.7	21.8	7 30	18 55.75	- 0 31.4	1.799	2.721	11.0	17.5
8 9	18 39.76	-22 31.1	1.521	2.406	14.8	22.0	8 9	18 51.09	- 1 59.5	1.848	2.717	13.4	17.7
<b>437240</b>	2012 <i>XM</i> <sub>23</sub>		7 8.2 327 <sup>o</sup> .30	2 <sup>o</sup> .0/ 7.7 18			<b>233367</b>	2006 <i>DX</i> <sub>144</sub>		7 8.3 201 <sup>o</sup> .63	1 <sup>o</sup> .4/ 7.8 17		
5 31	19 34.75	-24 54.3	1.550	2.403	16.3	20.8	5 31	19 39.74	-25 20.0	2.171	2.995	13.3	21.6
6 10	19 31.89	-25 26.3	1.464	2.389	12.9	20.6	6 10	19 34.79	-25 41.2	2.083	2.992	10.4	21.4
6 20	19 26.17	-26 3.0	1.398	2.376	8.8	20.3	6 20	19 27.57	-26 4.2	2.018	2.988	7.0	21.2
6 30	19 18.14	-26 40.4	1.355	2.363	4.3	20.0	6 30	19 18.63	-26 26.0	1.977	2.984	3.4	21.0
7 10	19 8.84	-27 13.8	1.337	2.351	2.3	19.8	7 10	19 8.80	-26 43.7	1.965	2.979	1.7	20.9
7 20	18 59.53	-27 39.4	1.344	2.340	6.5	20.1	7 20	18 59.06	-26 55.2	1.980	2.974	5.0	21.1
7 30	18 51.59	-27 55.2	1.374	2.329	11.0	20.3	7 30	18 50.42	-26 59.6	2.023	2.968	8.6	21.3
8 9	18 46.12	-28 1.5	1.426	2.319	15.1	20.5	8 9	18 43.67	-26 57.8	2.089	2.962	11.9	21.5
<b>387780</b>	2003 <i>UR</i> <sub>93</sub>		7 8.2 293 <sup>o</sup> .00	8 <sup>o</sup> .4/ 10.1 17			<b>56853</b>	2000 <i>QQ</i> <sub>67</sub>		7 8.3 296 <sup>o</sup> .09	6 <sup>o</sup> .1/ 6.1 18		
5 31	19 34.46	- 2 44.9	1.861	2.647	16.6	20.9	5 31	19 39.75	-37 37.0	2.127	2.950	13.6	19.3
6 10	19 30.84	- 1 45.1	1.773	2.637	14.2	20.8	6 10	19 35.23	-38 32.8	2.048	2.946	11.1	19.1
6 20	19 25.02	- 0 59.7	1.704	2.626	11.6	20.6	6 20	19 28.10	-39 23.7	1.990	2.941	8.5	18.9
6 30	19 17.47	- 0 32.5	1.658	2.616	9.4	20.4	6 30	19 18.94	-40 3.8	1.957	2.937	6.5	18.8
7 10	19 9.00	- 0 25.9	1.635	2.606	8.4	20.3	7 10	19 8.74	-40 28.1	1.950	2.932	6.3	18.8
7 20	19 0.54	- 0 40.1	1.636	2.596	9.3	20.4	7 20	18 58.66	-40 34.1	1.968	2.928	8.0	18.9
7 30	18 53.08	- 1 13.1	1.662	2.586	11.6	20.5	7 30	18 49.90	-40 22.0	2.012	2.924	10.5	19.0
8 9	18 47.46	- 2 0.8	1.709	2.576	14.4	20.6	8 9						

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>277414</b>	2005 <i>UD</i> <sub>231</sub>		7 8.3 144°94	7.3/ 5.4	17		<b>109841</b>	2001 <i>RH</i> <sub>125</sub>		7 8.3 339°71	4.2/ 9.5	17	
5 31	19 46.72	-40 53.7	2.208	3.012	13.7	22.5	5 31	19 34.18	-11 56.8	1.424	2.262	18.3	20.0
6 10	19 40.67	-42 14.1	2.143	3.023	11.4	22.4	6 10	19 31.36	-11 54.0	1.346	2.256	14.8	19.7
6 20	19 31.75	-43 27.5	2.100	3.033	9.1	22.2	6 20	19 25.76	-12 6.5	1.286	2.251	10.7	19.5
6 30	19 20.62	-44 26.7	2.082	3.043	7.5	22.2	6 30	19 17.96	-12 34.4	1.247	2.246	6.5	19.2
7 10	19 8.39	-45 5.7	2.090	3.052	7.5	22.2	7 10	19 8.99	-13 16.0	1.232	2.242	4.2	19.1
7 20	18 56.36	-45 21.9	2.125	3.061	8.9	22.3	7 20	19 0.08	-14 7.8	1.242	2.238	6.9	19.2
7 30	18 45.84	-45 16.3	2.184	3.068	11.1	22.4	7 30	18 52.53	-15 5.4	1.275	2.235	11.2	19.5
8 9	18 37.82	-44 52.6	2.266	3.076	13.3	22.6	8 9	18 47.38	-16 4.2	1.329	2.232	15.4	19.7
<b>404728</b>	2014 <i>JB</i> <sub>21</sub>		7 8.3 51°75	1.2/ 7.9	17		<b>166368</b>	2002 <i>LC</i> <sub>27</sub>		7 8.3 355°61	4.4/ 10.2	16	
5 31	19 36.55	-24 15.3	2.049	2.881	13.7	21.0	5 31	19 26.10	-9 25.6	1.129	1.991	20.5	18.4
6 10	19 32.36	-24 38.2	1.970	2.883	10.7	20.8	6 10	19 25.65	-9 55.6	1.058	1.982	16.7	18.1
6 20	19 25.95	-25 4.0	1.913	2.886	7.2	20.6	6 20	19 22.24	-10 50.5	1.003	1.974	12.2	17.8
6 30	19 17.87	-25 29.7	1.881	2.888	3.4	20.4	6 30	19 16.43	-12 10.5	0.968	1.969	7.4	17.5
7 10	19 8.98	-25 52.4	1.876	2.891	1.5	20.3	7 10	19 9.31	-13 51.1	0.955	1.966	4.4	17.4
7 20	19 0.23	-26 9.7	1.898	2.893	5.0	20.5	7 20	19 2.23	-15 44.2	0.964	1.965	7.3	17.5
7 30	18 52.61	-26 20.8	1.946	2.896	8.7	20.7	7 30	18 56.66	-17 40.2	0.995	1.966	12.1	17.8
8 9	18 46.90	-26 25.7	2.018	2.898	11.9	21.0	8 9	18 53.75	-19 30.0	1.046	1.969	16.8	18.1
<b>245186</b>	2004 <i>TW</i> <sub>255</sub>		7 8.3 4°61	1.6/ 7.9	17		<b>110970</b>	2001 <i>UK</i> <sub>177</sub>		7 8.3 89°99	4.3/ 7.1	18	
5 31	19 34.95	-24 28.7	1.015	1.895	20.9	20.0	5 31	19 42.75	-31 13.8	1.716	2.551	15.8	19.8
6 10	19 33.09	-24 42.6	0.954	1.894	16.4	19.8	6 10	19 37.66	-31 59.9	1.655	2.567	12.5	19.6
6 20	19 27.46	-25 1.2	0.910	1.894	11.1	19.5	6 20	19 29.71	-32 43.9	1.615	2.582	8.8	19.4
6 30	19 18.85	-25 20.2	0.885	1.895	5.3	19.2	6 30	19 19.65	-33 20.1	1.600	2.598	5.4	19.2
7 10	19 8.77	-25 34.7	0.882	1.898	2.1	19.0	7 10	19 8.67	-33 43.4	1.610	2.614	4.5	19.2
7 20	18 59.05	-25 41.1	0.900	1.901	7.7	19.3	7 20	18 58.08	-33 51.5	1.646	2.629	7.1	19.4
7 30	18 51.49	-25 38.6	0.939	1.906	13.3	19.6	7 30	18 49.15	-33 44.8	1.707	2.644	10.6	19.6
8 9	18 47.31	-25 28.8	0.996	1.912	18.2	19.9	8 9	18 42.79	-33 26.4	1.791	2.658	13.8	19.9
<b>52638</b>	1997 <i>WD</i> <sub>36</sub>		7 8.3 159°50	0°6/ 8.1	18		<b>229805</b>	2008 <i>SC</i> <sub>69</sub>		7 8.3 9°20	2°0/ 8.6	17	
5 31	19 37.04	-23 11.3	2.138	2.966	13.3	19.0	5 31	19 36.62	-18 39.8	1.533	2.376	17.0	19.6
6 10	19 32.63	-23 23.5	2.056	2.967	10.4	18.8	6 10	19 32.99	-18 16.9	1.459	2.377	13.4	19.4
6 20	19 26.07	-23 38.6	1.997	2.968	7.0	18.6	6 20	19 26.66	-18 0.0	1.405	2.378	9.2	19.1
6 30	19 17.92	-23 54.3	1.962	2.969	3.2	18.3	6 30	19 18.29	-17 48.8	1.374	2.380	4.7	18.9
7 10	19 8.99	-24 8.2	1.954	2.970	0.9	18.2	7 10	19 8.95	-17 42.1	1.367	2.382	2.1	18.7
7 20	19 0.20	-24 18.5	1.974	2.971	4.7	18.4	7 20	18 59.84	-17 39.1	1.386	2.384	6.0	19.0
7 30	18 52.48	-24 24.5	2.021	2.972	8.3	18.7	7 30	18 52.18	-17 38.9	1.429	2.387	10.4	19.2
8 9	18 46.59	-24 26.2	2.092	2.972	11.6	18.9	8 9	18 46.88	-17 40.6	1.494	2.391	14.3	19.5
<b>469628</b>	2004 <i>RH</i> <sub>273</sub>		7 8.3 271°61	1°4/ 7.9	17		<b>261596</b>	2005 <i>XJ</i> <sub>50</sub>		7 8.3 134°55	1°0/ 7.9	18	
5 31	19 38.46	-24 34.5	1.806	2.642	15.1	21.7	5 31	19 36.18	-25 9.5	2.511	3.334	11.8	21.2
6 10	19 34.37	-24 55.4	1.714	2.629	11.9	21.5	6 10	19 31.63	-25 18.5	2.429	3.337	9.2	21.1
6 20	19 27.63	-25 19.8	1.643	2.616	8.1	21.2	6 20	19 25.23	-25 28.4	2.370	3.340	6.1	20.9
6 30	19 18.79	-25 44.3	1.596	2.603	3.9	21.0	6 30	19 17.49	-25 37.2	2.337	3.344	2.9	20.7
7 10	19 8.78	-26 5.2	1.575	2.590	1.7	20.8	7 10	19 9.13	-25 43.0	2.332	3.347	1.2	20.5
7 20	18 58.77	-26 19.9	1.580	2.576	5.8	21.0	7 20	19 0.91	-25 44.5	2.355	3.350	4.2	20.8
7 30	18 49.99	-26 27.1	1.611	2.562	10.0	21.2	7 30	18 53.63	-25 41.4	2.406	3.353	7.4	21.0
8 9	18 43.42	-26 27.3	1.665	2.549	13.8	21.4	8 9	18 47.93	-25 34.2	2.481	3.356	10.2	21.2
<b>236753</b>	2007 <i>MJ</i>		7 8.3 191°96	2°5/ 7.1	18		<b>478262</b>	2011 <i>UR</i> <sub>401</sub>		7 8.3 227°19	1°6/ 7.6	18	
5 31	19 38.64	-24 51.0	1.925	2.757	14.4	20.5	5 31	19 36.82	-26 3.3	2.456	3.279	12.0	22.4
6 10	19 34.34	-25 58.0	1.844	2.757	11.3	20.3	6 10	19 32.32	-26 30.6	2.364	3.272	9.4	22.2
6 20	19 27.51	-27 10.7	1.785	2.757	7.7	20.1	6 20	19 25.83	-26 59.5	2.296	3.266	6.3	22.0
6 30	19 18.70	-28 23.9	1.751	2.756	4.0	19.9	6 30	19 17.83	-27 27.1	2.253	3.259	3.2	21.7
7 10	19 8.81	-29 31.8	1.744	2.755	2.8	19.8	7 10	19 9.04	-27 50.6	2.239	3.252	1.9	21.6
7 20	18 58.93	-30 29.7	1.765	2.754	6.0	20.0	7 20	19 0.30	-28 7.9	2.253	3.244	4.7	21.8
7 30	18 50.22	-31 15.1	1.812	2.754	9.8	20.2	7 30	18 52.47	-28 18.2	2.293	3.237	7.9	22.0
8 9	18 43.61	-31 47.6	1.883	2.752	13.1	20.4	8 9	18 46.27	-28 21.6	2.359	3.229	10.8	22.2
<b>353769</b>	2012 <i>GC</i> <sub>30</sub>		7 8.3 172°11	1°1/ 7.9	17		<b>29712</b>	1999 <i>AX</i> <sub>6</sub>		7 8.3 248°62	0°2/ 8.2	18	
5 31	19 41.61	-23 52.2	1.818	2.648	15.3	22.3	5 31	19 41.85	-22 59.8	1.536	2.375	17.1	19.0
6 10	19 36.61	-24 14.5	1.739	2.651	11.9	22.0	6 10	19 37.42	-22 58.1	1.448	2.364	13.5	18.8
6 20	19 28.98	-24 40.4	1.681	2.653	8.1	21.8	6 20	19 29.91	-22 59.8	1.379	2.353	9.2	18.5
6 30	19 19.33	-25 6.3	1.648	2.655	3.8	21.6	6 30	19 19.92	-23 2.4	1.333	2.341	4.3	18.2
7 10	19 8.69	-25 28.7	1.641	2.656	1.5	21.4	7 10	19 8.58	-23 2.9	1.313	2.329	1.0	17.9
7 20	18 58.22	-25 44.9	1.661	2.657	5.6	21.7	7 20	18 57.29	-22 59.4	1.318	2.316	6.2	18.2
7 30	18 49.10	-25 54.1	1.708	2.657	9.7	21.9	7 30	18 47.49	-22 51.6	1.348	2.303	11.2	18.5
8 9	18 42.25	-25 56.7	1.777	2.657	13.3	22.1	8 9	18 40.34	-22 40.4	1.400	2.290	15.6	18.7
<b>246093</b>	2007 <i>BR</i> <sub>39</sub>		7 8.3 15°20	1°9/ 9.2	18		<b>478398</b>	2012 <i>BD</i> <sub>97</sub>		7 8.3 194°44	5°5/ 11.3	18	
5 31	19 33.59	-13 19.4	1.954	2.775	14.7	19.7	5 31	19 32.72	+ 2 14.8	3.789	4.505	10.0	23.4
6 10	19 30.10	-14 1.4	1.874	2.778	11.6	19.5	6 10	19 28.25	+ 2 35.9	3.692	4.502	8.6	23.3
6 20	19 24.48	-14 56.4	1.816	2.781	8.1	19.3	6 20	19 22.65	+ 2 46.6	3.617	4.497	7.2	23.2
6 30	19 17.23	-16 2.2	1.782	2.785	4.3	19.1	6 30	19 16.23	+ 2 45.5	3.567	4.493	6.0	23.1
7 10	19 9.14	-17 15.2	1.775	2.789	2.0	18.9	7 10	19 9.40	+ 2 32.4	3.544	4.487	5.5	23.1
7 20	19 1.12	-18 31.0	1.796	2.794	4.9	19.1	7 20	19 2.59	+ 2 7.5	3.549	4.481	5.8	23.1
7 30	18 54.11	-19 45.3	1.843	2.798	8.6	19.4	7 30	18 56.26	+ 1 32.3	3.581	4.474	6.9	23.1
8 9	18 48.90	-20 54.7	1.914	2.804	12.0	19.6	8 9	18 50.82	+ 0 48.8	3.639	4.467	8.3	23.2
<b>503589</b>	2016 <i>GO</i> <sub>64</sub>		7 8.3 114°76	2°4/ 7.6	17		<b>501933</b>	2014 <i>WC</i> <sub>506</sub>		7 8.3			



EPHEMERIDES

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>9294</b>	1983 <i>EV</i>		7 8.3 114°75	2°0/ 7.7	18		<b>23866</b>	1998 <i>RC</i> <sub>69</sub>		7 8.3 318°05	0°3/ 8.2	18	
5 31	19 39.71	-26 37.7	2.021	2.850	14.0	17.8	5 31	19 34.04	-22 24.8	2.015	2.851	13.7	18.0
6 10	19 34.82	-27 1.7	1.949	2.860	10.9	17.6	6 10	19 30.62	-22 34.6	1.919	2.835	10.8	17.8
6 20	19 27.58	-27 26.5	1.898	2.869	7.4	17.4	6 20	19 24.96	-22 48.3	1.844	2.818	7.3	17.5
6 30	19 18.64	-27 48.8	1.873	2.879	3.7	17.2	6 30	19 17.54	-23 3.9	1.794	2.802	3.4	17.2
7 10	19 8.90	-28 5.2	1.875	2.888	2.2	17.1	7 10	19 9.17	-23 19.1	1.770	2.786	0.8	17.0
7 20	18 59.41	-28 13.9	1.904	2.897	5.3	17.3	7 20	19 0.80	-23 31.8	1.773	2.771	4.9	17.3
7 30	18 51.18	-28 14.5	1.960	2.905	8.9	17.6	7 30	18 53.42	-23 40.7	1.801	2.756	8.9	17.5
8 9	18 45.00	-28 8.0	2.039	2.914	12.1	17.8	8 9	18 47.89	-23 45.8	1.853	2.741	12.4	17.7
<b>352515</b>	2008 <i>CP</i> <sub>98</sub>		7 8.3 264°04	3°7/ 9.8	18		<b>30303</b>	2000 <i>HS</i> <sub>93</sub>		7 8.3 286°61	1°1/ 8.5	18	
5 31	19 33.99	-10 8.8	2.214	3.017	13.8	21.1	5 31	19 38.95	-20 11.6	1.350	2.200	18.5	18.7
6 10	19 30.15	-10 12.4	2.125	3.013	11.2	20.9	6 10	19 35.58	-20 1.5	1.262	2.184	14.7	18.4
6 20	19 24.39	-10 27.6	2.056	3.008	8.2	20.7	6 20	19 28.94	-19 57.7	1.192	2.167	10.1	18.1
6 30	19 17.18	-10 54.2	2.012	3.003	5.2	20.5	6 30	19 19.61	-19 58.8	1.144	2.151	4.9	17.8
7 10	19 9.20	-11 31.1	1.994	2.999	3.7	20.4	7 10	19 8.72	-20 2.5	1.119	2.135	1.4	17.5
7 20	19 1.26	-12 16.1	2.004	2.994	5.4	20.5	7 20	18 57.77	-20 6.7	1.119	2.119	6.7	17.8
7 30	18 54.18	-13 6.5	2.040	2.989	8.4	20.7	7 30	18 48.36	-20 10.3	1.142	2.102	12.1	18.0
8 9	18 48.67	-13 59.1	2.101	2.984	11.4	20.9	8 9	18 41.76	-20 12.9	1.185	2.087	17.0	18.3
<b>46092</b>	2001 <i>EP</i> <sub>16</sub>		7 8.3 26°95	8°7/ 10.7	18		<b>255231</b>	2005 <i>UD</i> <sub>438</sub>		7 8.3 243°11	0°0/ 8.2	18	
5 31	19 33.79	-3 4.2	1.600	2.401	18.2	18.3	5 31	19 35.88	-21 51.5	2.640	3.457	11.4	21.6
6 10	19 30.49	-2 5.0	1.534	2.408	15.5	18.1	6 10	19 31.40	-21 55.9	2.541	3.445	8.9	21.4
6 20	19 24.83	-1 23.3	1.487	2.415	12.5	17.9	6 20	19 25.14	-22 2.9	2.464	3.433	6.0	21.2
6 30	19 17.41	-1 3.0	1.460	2.423	9.9	17.8	6 30	19 17.52	-22 11.2	2.414	3.421	2.8	21.0
7 10	19 9.18	-1 5.8	1.456	2.432	8.7	17.7	7 10	19 9.20	-22 19.2	2.392	3.408	0.6	20.8
7 20	19 1.16	-1 30.6	1.476	2.441	9.6	17.8	7 20	19 0.90	-22 25.6	2.399	3.395	4.0	21.0
7 30	18 54.40	-2 14.1	1.519	2.451	12.0	18.0	7 30	18 53.39	-22 29.6	2.433	3.382	7.2	21.2
8 9	18 49.69	-3 11.0	1.583	2.461	14.8	18.2	8 9	18 47.32	-22 31.3	2.493	3.369	10.1	21.4
<b>103245</b>	2000 <i>AN</i> <sub>4</sub>		7 8.3 211°84	3°6/ 9.9	18		<b>43637</b>	2002 <i>EW</i> <sub>28</sub>		7 8.3 59°35	5°3/ 10.2	18	
5 31	19 36.10	-9 8.0	2.520	3.307	12.7	20.7	5 31	19 33.95	-7 0.8	2.135	2.930	14.5	18.8
6 10	19 31.56	-9 16.1	2.422	3.300	10.4	20.5	6 10	19 29.98	-6 36.8	2.067	2.945	11.9	18.6
6 20	19 25.24	-9 35.2	2.347	3.293	7.7	20.3	6 20	19 24.16	-6 25.3	2.020	2.959	9.1	18.5
6 30	19 17.56	-10 5.3	2.297	3.285	5.0	20.1	6 30	19 17.03	-6 27.2	1.996	2.974	6.5	18.4
7 10	19 9.15	-10 45.2	2.274	3.276	3.6	20.0	7 10	19 9.31	-6 42.4	1.998	2.989	5.3	18.3
7 20	19 0.73	-11 32.8	2.280	3.267	5.1	20.1	7 20	19 1.80	-7 9.4	2.026	3.004	6.4	18.4
7 30	18 53.05	-12 25.6	2.314	3.257	7.8	20.2	7 30	18 55.26	-7 45.8	2.080	3.020	8.8	18.6
8 9	18 46.79	-13 20.7	2.373	3.247	10.6	20.4	8 9	18 50.33	-8 28.3	2.158	3.035	11.4	18.8
<b>392848</b>	2012 <i>UQ</i> <sub>51</sub>		7 8.3 231°46	1°5/ 7.8	18		<b>256893</b>	2008 <i>DM</i> <sub>43</sub>		7 8.3 122°16	2°0/ 7.7	17	
5 31	19 37.93	-24 59.0	2.051	2.881	13.7	21.8	5 31	19 42.13	-25 49.0	1.703	2.537	15.9	21.6
6 10	19 33.56	-25 24.5	1.965	2.877	10.8	21.6	6 10	19 37.14	-26 18.2	1.634	2.548	12.4	21.4
6 20	19 26.86	-25 52.5	1.901	2.873	7.3	21.4	6 20	19 29.39	-26 49.6	1.585	2.558	8.4	21.2
6 30	19 18.38	-26 20.1	1.862	2.868	3.5	21.2	6 30	19 19.57	-27 18.9	1.561	2.567	4.2	21.0
7 10	19 8.98	-26 43.8	1.850	2.864	1.7	21.0	7 10	19 8.78	-27 41.9	1.563	2.577	2.3	20.9
7 20	18 59.66	-27 1.3	1.865	2.859	5.2	21.3	7 20	18 58.29	-27 56.0	1.592	2.586	6.0	21.1
7 30	18 51.46	-27 11.5	1.906	2.854	8.9	21.5	7 30	18 49.33	-28 0.5	1.646	2.594	10.1	21.4
8 9	18 45.21	-27 14.8	1.971	2.849	12.3	21.7	8 9	18 42.80	-27 57.0	1.723	2.603	13.7	21.6
<b>387857</b>	2004 <i>QA</i> <sub>10</sub>		7 8.3 1°18	13°1/ 6.0	17		<b>442068</b>	2010 <i>RE</i> <sub>144</sub>		7 8.3 303°54	4°2/ 7.1	18	
5 31	19 36.79	-48 30.3	1.318	2.157	19.5	19.0	5 31	19 38.25	-33 30.4	2.202	3.029	13.0	21.1
6 10	19 35.03	-49 46.9	1.264	2.153	17.1	18.8	6 10	19 33.81	-34 0.9	2.117	3.022	10.4	20.9
6 20	19 29.00	-50 45.7	1.226	2.152	14.8	18.6	6 20	19 27.03	-34 28.2	2.054	3.016	7.5	20.7
6 30	19 19.63	-51 15.9	1.207	2.152	13.4	18.5	6 30	19 18.46	-34 47.9	2.016	3.010	4.9	20.5
7 10	19 8.73	-51 10.0	1.208	2.154	13.2	18.5	7 10	19 9.01	-34 56.5	2.005	3.004	4.3	20.5
7 20	18 58.46	-50 26.2	1.228	2.158	14.5	18.6	7 20	18 59.68	-34 52.1	2.020	2.999	6.4	20.6
7 30	18 50.79	-49 8.9	1.268	2.164	16.6	18.8	7 30	18 51.54	-34 35.1	2.061	2.993	9.3	20.8
8 9	18 46.92	-47 27.6	1.326	2.172	18.9	19.0	8 9	18 45.39	-34 7.6	2.126	2.987	12.2	20.9
<b>193378</b>	2000 <i>VY</i> <sub>16</sub>		7 8.3 229°34	7°5/ 10.0	18		<b>49060</b>	1998 <i>RJ</i> <sub>46</sub>		7 8.3 171°71	3°2/ 9.3	18	
5 31	19 36.47	-3 14.9	2.065	2.841	15.5	20.3	5 31	19 36.75	-12 9.8	2.460	3.257	12.7	20.0
6 10	19 32.19	-2 20.0	1.976	2.834	13.2	20.1	6 10	19 32.01	-11 57.1	2.374	3.261	10.2	19.8
6 20	19 25.83	-1 38.1	1.907	2.827	10.7	19.9	6 20	19 25.48	-11 52.6	2.311	3.263	7.4	19.6
6 30	19 17.88	-1 12.4	1.861	2.819	8.5	19.8	6 30	19 17.65	-11 56.1	2.272	3.265	4.6	19.5
7 10	19 9.10	-1 4.7	1.839	2.811	7.5	19.7	7 10	19 9.18	-12 7.2	2.262	3.267	3.2	19.4
7 20	19 0.34	-1 15.1	1.844	2.803	8.5	19.8	7 20	19 0.82	-12 24.6	2.280	3.268	4.9	19.5
7 30	18 52.52	-1 42.0	1.873	2.794	10.7	19.9	7 30	18 53.31	-12 46.9	2.325	3.269	7.8	19.7
8 9	18 46.40	-2 21.8	1.925	2.785	13.3	20.0	8 9	18 47.29	-13 12.3	2.395	3.269	10.5	19.8
<b>219653</b>	2001 <i>UC</i> <sub>172</sub>		7 8.3 182°85	0°8/ 8.0	17		<b>356320</b>	2010 <i>JK</i> <sub>8</sub>		7 8.3 312°19	3°9/ 9.8	18	
5 31	19 40.13	-23 21.4	1.981	2.808	14.3	21.3	5 31	19 33.49	-10 7.2	2.034	2.844	14.6	20.6
6 10	19 35.26	-23 39.6	1.899	2.809	11.2	21.1	6 10	19 29.98	-10 11.4	1.945	2.837	11.8	20.4
6 20	19 27.99	-24 1.2	1.837	2.809	7.5	20.9	6 20	19 24.41	-10 28.2	1.876	2.830	8.7	20.2
6 30	19 18.90	-24 23.4	1.801	2.808	3.5	20.7	6 30	19 17.25	-10 57.8	1.831	2.823	5.6	20.0
7 10	19 8.89	-24 43.1	1.792	2.808	1.2	20.5	7 10	19 9.26	-11 38.7	1.811	2.816	3.9	19.9
7 20	18 59.01	-24 58.0	1.811	2.807	5.1	20.8	7 20	19 1.27	-12 28.5	1.819	2.810	5.7	20.0
7 30	18 50.33	-25 7.1	1.856	2.805	9.0	21.0	7 30	18 54.21	-13 24.0	1.852	2.804	8.9	20.2
8 9	18 43.70	-25 10.8	1.924	2.803	12.5	21.2	8 9	18 48.84	-14 21.7	1.910	2.798	12.2	20.4
<b>151198</b>	2001 <i>YS</i> <sub>6</sub>		7 8.3 70°16	7°6/ 11.1	18		<b>59845</b>	1999 <i>RC</i> <sub>61</sub>		7 8.3 250°41	3°7/ 9.7	18	

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>237125</b>	2008 <i>UA</i> <sub>2</sub>		7 8.3 274°16	7.4/ 5.1	18		<b>238124</b>	2003 <i>OY</i> <sub>32</sub>		7 8.3 233°09	9.8/12.9	18	
5 31	19 41.84	-37 50.9	1.905	2.731	14.8	20.0	5 31	19 34.87	+ 5 47.0	2.024	2.761	17.0	20.4
6 10	19 37.55	-39 17.2	1.818	2.716	12.2	19.8	6 10	19 31.01	+ 6 14.5	1.940	2.757	15.0	20.3
6 20	19 30.15	-40 41.0	1.752	2.700	9.6	19.6	6 20	19 25.09	+ 6 20.5	1.873	2.754	12.8	20.1
6 30	19 20.16	-41 54.0	1.710	2.685	7.7	19.5	6 30	19 17.60	+ 6 1.5	1.827	2.750	10.9	20.0
7 10	19 8.62	-42 48.8	1.694	2.669	7.7	19.4	7 10	19 9.28	+ 5 16.3	1.804	2.746	9.9	19.9
7 20	18 56.93	-43 20.3	1.702	2.653	9.7	19.5	7 20	19 1.00	+ 4 6.3	1.806	2.742	10.2	19.9
7 30	18 46.61	-43 27.6	1.735	2.637	12.5	19.6	7 30	18 53.65	+ 2 35.7	1.831	2.738	11.7	20.0
8 9	18 38.91	-43 14.0	1.788	2.621	15.3	19.8	8 9	18 47.99	+ 0 51.0	1.880	2.734	13.9	20.1
<b>107005</b>	2000 <i>YE</i> <sub>112</sub>		7 8.3 215°17	1.9/ 7.7	18		<b>130655</b>	2000 <i>ST</i> <sub>95</sub>		7 8.3 6°29	0.0/ 8.2	17	
5 31	19 40.76	-24 5.1	1.664	2.501	16.1	20.5	5 31	19 37.88	-22 53.0	1.162	2.027	19.8	19.4
6 10	19 36.39	-24 49.2	1.582	2.498	12.7	20.2	6 10	19 34.92	-22 39.9	1.096	2.027	15.6	19.1
6 20	19 29.14	-25 39.1	1.520	2.493	8.6	20.0	6 20	19 28.48	-22 30.6	1.047	2.027	10.6	18.8
6 30	19 19.58	-26 30.1	1.482	2.489	4.2	19.7	6 30	19 19.35	-22 22.8	1.019	2.029	4.9	18.5
7 10	19 8.78	-27 16.9	1.470	2.484	2.2	19.6	7 10	19 8.93	-22 14.3	1.014	2.031	1.0	18.2
7 20	18 58.00	-27 55.2	1.484	2.478	6.3	19.8	7 20	18 58.84	-22 3.5	1.032	2.033	6.9	18.6
7 30	18 48.61	-28 22.7	1.524	2.473	10.7	20.1	7 30	18 50.71	-21 50.4	1.072	2.037	12.3	18.9
8 9	18 41.68	-28 39.6	1.586	2.467	14.6	20.3	8 9	18 45.67	-21 36.0	1.132	2.041	17.0	19.2
<b>336138</b>	2008 <i>QP</i> <sub>9</sub>		7 8.3 13°93	19.6/24.9	16		<b>342679</b>	2008 <i>VL</i> <sub>39</sub>		7 8.3 257°52	0.8/ 8.1	17	
5 31	19 29.55	+22 24.9	1.265	1.959	27.2	20.1	5 31	19 38.87	-24 22.9	1.910	2.742	14.5	21.2
6 10	19 27.93	+23 19.6	1.215	1.965	25.6	20.0	6 10	19 34.43	-24 24.9	1.824	2.737	11.4	21.0
6 20	19 23.48	+23 30.6	1.174	1.973	23.8	19.8	6 20	19 27.53	-24 28.6	1.759	2.732	7.7	20.8
6 30	19 16.92	+22 49.1	1.145	1.983	22.0	19.7	6 30	19 18.76	-24 31.6	1.719	2.727	3.6	20.5
7 10	19 9.36	+21 11.2	1.129	1.994	20.5	19.7	7 10	19 9.06	-24 31.7	1.706	2.722	1.1	20.3
7 20	19 2.08	+18 39.0	1.130	2.006	19.7	19.7	7 20	18 59.49	-24 27.3	1.719	2.716	5.2	20.6
7 30	18 56.33	+15 22.0	1.149	2.021	19.7	19.7	7 30	18 51.14	-24 18.2	1.759	2.711	9.2	20.8
8 9	18 53.05	+11 35.6	1.188	2.036	20.5	19.8	8 9	18 44.89	-24 5.3	1.822	2.706	12.8	21.0
<b>312002</b>	2007 <i>PL</i> <sub>6</sub>		7 8.3 315°76	4.6/ 9.3	17		<b>271769</b>	2004 <i>SM</i> <sub>48</sub>		7 8.3 333°31	12.5/ 4.7	18	
5 31	19 32.96	-13 6.1	1.162	2.019	20.3	20.1	5 31	19 40.01	-45 27.5	1.340	2.180	19.1	19.2
6 10	19 31.27	-12 49.6	1.075	1.998	16.6	19.7	6 10	19 37.76	-46 58.1	1.267	2.163	16.6	19.0
6 20	19 26.29	-12 48.4	1.006	1.977	12.1	19.4	6 20	19 31.19	-48 17.5	1.212	2.146	14.2	18.8
6 30	19 18.50	-13 4.2	0.955	1.957	7.3	19.1	6 30	19 20.92	-49 13.4	1.177	2.131	12.7	18.6
7 10	19 8.99	-13 36.5	0.927	1.937	4.6	18.9	7 10	19 8.58	-49 35.4	1.162	2.117	12.8	18.6
7 20	18 59.26	-14 22.4	0.920	1.919	8.1	19.0	7 20	18 56.38	-49 18.4	1.167	2.103	14.5	18.7
7 30	18 51.01	-15 17.1	0.934	1.901	13.4	19.2	7 30	18 46.60	-48 24.6	1.192	2.091	17.1	18.8
8 9	18 45.66	-16 15.5	0.968	1.884	18.5	19.5	8 9	18 40.82	-47 2.4	1.234	2.080	20.1	18.9
<b>105879</b>	2000 <i>SQ</i> <sub>177</sub>		7 8.3 182°67	3.6/ 7.2	18		<b>499591</b>	2010 <i>TA</i> <sub>65</sub>		7 8.3 298°82	5.0/ 7.4	17	
5 31	19 39.06	-32 47.2	2.392	3.213	12.3	19.6	5 31	19 41.33	-32 1.0	1.375	2.227	18.1	21.3
6 10	19 34.17	-33 13.2	2.310	3.213	9.8	19.4	6 10	19 37.79	-32 28.9	1.289	2.210	14.5	21.0
6 20	19 27.12	-33 36.2	2.251	3.213	7.0	19.2	6 20	19 30.63	-32 54.1	1.223	2.194	10.4	20.7
6 30	19 18.47	-33 52.3	2.218	3.213	4.4	19.1	6 30	19 20.49	-33 10.3	1.178	2.179	6.4	20.4
7 10	19 9.06	-33 58.6	2.211	3.213	3.7	19.0	7 10	19 8.70	-33 11.1	1.156	2.163	5.2	20.3
7 20	18 59.82	-33 53.6	2.233	3.213	5.8	19.1	7 20	18 56.94	-32 53.3	1.159	2.147	8.5	20.5
7 30	18 51.69	-33 37.6	2.280	3.212	8.5	19.3	7 30	18 47.02	-32 18.1	1.184	2.132	13.1	20.7
8 9	18 45.41	-33 12.6	2.352	3.211	11.2	19.5	8 9	18 40.29	-31 30.0	1.229	2.117	17.4	20.9
<b>360233</b>	1999 <i>VR</i> <sub>174</sub>		7 8.3 163°48	3.5/ 9.8	18		<b>187004</b>	2004 <i>TV</i> <sub>121</sub>		7 8.3 340°31	4.0/ 9.3	18	
5 31	19 33.82	- 9 22.6	2.944	3.728	11.1	22.3	5 31	19 32.40	-12 40.9	1.866	2.690	15.1	19.6
6 10	19 29.44	- 9 10.9	2.858	3.732	9.1	22.1	6 10	19 29.33	-12 15.5	1.779	2.681	12.2	19.4
6 20	19 23.63	- 9 7.3	2.794	3.737	6.7	22.0	6 20	19 24.09	-11 59.5	1.712	2.672	8.9	19.2
6 30	19 16.79	- 9 12.2	2.756	3.740	4.5	21.9	6 30	19 17.18	-11 53.8	1.669	2.664	5.6	19.0
7 10	19 9.44	- 9 25.2	2.746	3.744	3.5	21.8	7 10	19 9.41	-11 58.3	1.651	2.657	4.0	18.9
7 20	19 2.18	- 9 45.3	2.764	3.747	4.6	21.9	7 20	19 1.69	-12 12.0	1.658	2.650	6.0	19.0
7 30	18 55.60	-10 11.1	2.811	3.749	6.8	22.0	7 30	18 55.00	-12 33.1	1.691	2.644	9.5	19.2
8 9	18 50.20	-10 40.8	2.883	3.752	9.1	22.2	8 9	18 50.13	-12 59.3	1.746	2.638	12.9	19.4
<b>53770</b>	2000 <i>EA</i> <sub>86</sub>		7 8.3 74°99	0.0/ 8.1	18		<b>324362</b>	2006 <i>QE</i> <sub>116</sub>		7 8.3 306°21	1.0/ 8.1	18	
5 31	19 39.61	-20 30.7	1.543	2.383	17.0	19.1	5 31	19 37.81	-24 21.9	1.353	2.209	18.1	20.8
6 10	19 35.29	-20 54.2	1.480	2.397	13.3	18.9	6 10	19 34.85	-24 23.2	1.262	2.189	14.4	20.5
6 20	19 28.20	-21 24.8	1.437	2.412	8.9	18.7	6 20	19 28.57	-24 27.5	1.190	2.169	9.8	20.2
6 30	19 19.06	-21 59.2	1.418	2.426	4.1	18.5	6 30	19 19.54	-24 31.8	1.140	2.149	4.7	19.8
7 10	19 8.99	-22 33.5	1.424	2.441	0.8	18.2	7 10	19 8.90	-24 32.6	1.114	2.130	1.5	19.6
7 20	18 59.26	-23 4.4	1.456	2.455	5.7	18.6	7 20	18 58.18	-24 27.4	1.111	2.111	6.9	19.9
7 30	18 51.08	-23 29.8	1.513	2.469	10.1	18.9	7 30	18 49.02	-24 15.7	1.131	2.092	12.2	20.1
8 9	18 45.35	-23 49.2	1.593	2.484	14.0	19.2	8 9	18 42.73	-23 59.0	1.172	2.074	17.0	20.3
<b>373709</b>	2002 <i>RZ</i> <sub>252</sub>		7 8.3 328°91	4.6/ 9.2	17		<b>379353</b>	2009 <i>WP</i> <sub>150</sub>		7 8.3 142°84	4.6/ 9.6	17	
5 31	19 33.59	-13 43.1	1.268	2.119	19.3	21.5	5 31	19 37.94	-10 8.6	1.975	2.777	15.2	21.7
6 10	19 31.35	-13 12.8	1.187	2.106	15.7	21.2	6 10	19 33.34	- 9 43.9	1.898	2.784	12.4	21.6
6 20	19 26.05	-12 54.5	1.124	2.093	11.4	21.0	6 20	19 26.60	- 9 30.1	1.841	2.791	9.2	21.4
6 30	19 18.27	-12 49.9	1.081	2.081	6.9	20.7	6 30	19 18.28	- 9 28.1	1.808	2.797	6.1	21.2
7 10	19 9.12	-12 58.8	1.060	2.070	4.6	20.5	7 10	19 9.21	- 9 37.7	1.802	2.802	4.6	21.1
7 20	18 59.96	-13 19.7	1.063	2.060	7.7	20.7	7 20	19 0.29	- 9 57.5	1.822	2.808	6.3	21.2
7 30	18 52.29	-13 49.9	1.088	2.050	12.4	20.9	7 30	18 52.47	-10 25.4	1.869	2.813	9.3	21.4
8 9	18 47.29	-14 25.6	1.132	2.042	16.9	21.1	8 9	18 46.49	-10 58.8	1.939	2.817	12.4	21.6
<b>182822</b>	2002 <i>AJ</i> <sub>190</sub>		7 8.3 218°70	2.5/ 7.3	18		<b>41173</b>						

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>418207</b>	2008 <i>CY</i> <sub>128</sub>	7 8.3 209°67	0°7/ 8.5 17				<b>322007</b>	2010 <i>UA</i> <sub>92</sub>	7 8.3 309°51	0°3/ 8.2 18			
5 31	19 41.44	-20 4.7	1.950	2.770	14.7	22.7	5 31	19 34.52	-21 50.1	2.041	2.875	13.7	20.8
6 10	19 36.38	-20 7.9	1.859	2.764	11.6	22.5	6 10	19 31.04	-22 7.5	1.944	2.858	10.8	20.6
6 20	19 28.87	-20 16.2	1.789	2.757	7.9	22.2	6 20	19 25.32	-22 29.9	1.868	2.841	7.3	20.4
6 30	19 19.44	-20 27.9	1.744	2.750	3.8	22.0	6 30	19 17.85	-22 55.1	1.816	2.824	3.4	20.1
7 10	19 8.99	-20 40.7	1.726	2.742	0.9	21.7	7 10	19 9.39	-23 20.3	1.791	2.807	0.8	19.8
7 20	18 58.59	-20 52.7	1.736	2.733	5.1	22.0	7 20	19 0.89	-23 43.2	1.793	2.791	4.9	20.1
7 30	18 49.35	-21 2.6	1.772	2.724	9.3	22.2	7 30	18 53.35	-24 2.0	1.821	2.775	8.9	20.3
8 9	18 42.16	-21 10.3	1.833	2.713	12.9	22.4	8 9	18 47.64	-24 16.1	1.872	2.759	12.4	20.5
<b>23239</b>	2000 <i>WR</i> <sub>116</sub>	7 8.3 323°69	1°5/ 8.1 18				<b>205745</b>	2002 <i>CK</i> <sub>4</sub>	7 8.3 10°44	7°1/ 8.3 17			
5 31	19 34.32	-25 38.0	1.317	2.182	18.0	17.9	5 31	19 40.85	-37 8.9	0.988	1.861	21.9	18.7
6 10	19 32.33	-25 37.7	1.220	2.152	14.3	17.6	6 10	19 38.23	-37 11.5	0.933	1.863	17.8	18.4
6 20	19 27.02	-25 38.9	1.142	2.122	9.9	17.3	6 20	19 31.14	-37 0.7	0.894	1.866	13.2	18.2
6 30	19 18.90	-25 38.5	1.085	2.093	4.8	16.9	6 30	19 20.69	-36 28.9	0.873	1.871	8.8	18.0
7 10	19 9.07	-25 32.9	1.050	2.066	1.9	16.6	7 10	19 8.87	-35 31.7	0.874	1.877	7.2	17.9
7 20	18 59.02	-25 19.7	1.039	2.039	7.1	16.9	7 20	18 57.90	-34 10.8	0.895	1.885	10.1	18.1
7 30	18 50.46	-24 58.6	1.050	2.013	12.6	17.1	7 30	18 49.74	-32 33.4	0.937	1.894	14.6	18.4
8 9	18 44.79	-24 31.6	1.080	1.989	17.6	17.3	8 9	18 45.49	-30 49.4	0.998	1.905	18.9	18.7
<b>389214</b>	2009 <i>DL</i> <sub>51</sub>	7 8.3 68°60	5°0/10.4 18				<b>395868</b>	2013 <i>AZ</i> <sub>20</sub>	7 8.3 38°05	3°7/10.2 18			
5 31	19 34.57	-7 6.0	2.025	2.822	15.1	21.1	5 31	19 34.28	-8 52.4	2.115	2.916	14.4	20.6
6 10	19 30.69	-7 0.7	1.950	2.831	12.4	20.9	6 10	19 30.49	-9 15.1	2.033	2.919	11.7	20.4
6 20	19 24.82	-7 9.4	1.896	2.839	9.4	20.8	6 20	19 24.73	-9 51.8	1.972	2.923	8.6	20.2
6 30	19 17.48	-7 32.7	1.864	2.847	6.5	20.6	6 30	19 17.49	-10 41.9	1.935	2.926	5.4	20.0
7 10	19 9.43	-8 9.6	1.859	2.855	5.0	20.5	7 10	19 9.50	-11 43.2	1.925	2.930	3.7	19.9
7 20	19 1.52	-8 57.8	1.880	2.864	6.3	20.6	7 20	19 1.57	-12 52.3	1.942	2.933	5.3	20.0
7 30	18 54.61	-9 53.9	1.927	2.872	9.0	20.8	7 30	18 54.56	-14 5.3	1.986	2.937	8.4	20.2
8 9	18 49.40	-10 54.0	1.998	2.881	11.9	21.0	8 9	18 49.18	-15 18.2	2.055	2.941	11.5	20.4
<b>505562</b>	2014 <i>AW</i> <sub>40</sub>	7 8.3 140°93	0°7/ 8.1 17				<b>368280</b>	2002 <i>LK</i> <sub>55</sub>	7 8.3 350°92	4°5/ 8.2 18 R			
5 31	19 40.21	-24 27.6	2.279	3.098	12.9	22.2	5 31	19 32.25	-32 23.9	0.928	1.819	21.5	19.3
6 10	19 34.92	-24 30.3	2.202	3.108	10.1	22.0	6 10	19 31.69	-32 8.9	0.862	1.806	17.2	19.0
6 20	19 27.56	-24 34.0	2.147	3.116	6.8	21.8	6 20	19 26.97	-31 44.3	0.812	1.795	12.2	18.7
6 30	19 18.71	-24 36.7	2.118	3.125	3.2	21.6	6 30	19 18.91	-31 4.8	0.780	1.786	7.0	18.3
7 10	19 9.20	-24 36.6	2.117	3.133	1.0	21.5	7 10	19 9.20	-30 7.1	0.768	1.780	4.6	18.2
7 20	18 59.91	-24 32.4	2.145	3.140	4.5	21.7	7 20	18 59.90	-28 52.5	0.776	1.776	8.8	18.4
7 30	18 51.73	-24 24.1	2.200	3.147	7.9	22.0	7 30	18 53.00	-27 26.6	0.803	1.774	14.3	18.7
8 9	18 45.36	-24 12.5	2.279	3.154	11.0	22.2	8 9	18 49.79	-25 57.0	0.848	1.774	19.4	19.0
<b>164170</b>	2004 <i>AS</i> <sub>25</sub>	7 8.3 174°73	5°1/ 9.9 18				<b>471305</b>	2011 <i>HL</i> <sub>56</sub>	7 8.3 73°62	2°5/ 9.2 16			
5 31	19 36.15	-6 46.7	2.454	3.234	13.2	20.8	5 31	19 38.16	-14 25.6	1.711	2.535	16.3	21.8
6 10	19 31.57	-6 16.7	2.369	3.236	10.9	20.6	6 10	19 33.79	-14 35.8	1.649	2.553	12.9	21.6
6 20	19 25.25	-5 57.2	2.304	3.238	8.4	20.4	6 20	19 27.04	-14 56.9	1.607	2.572	9.0	21.4
6 30	19 17.65	-5 49.5	2.265	3.239	6.2	20.3	6 30	19 18.55	-15 27.5	1.589	2.591	4.9	21.2
7 10	19 9.41	-5 53.8	2.252	3.240	5.1	20.2	7 10	19 9.30	-16 5.0	1.597	2.609	2.5	21.1
7 20	19 1.27	-6 9.4	2.267	3.240	6.2	20.3	7 20	19 0.35	-16 46.2	1.631	2.628	5.5	21.3
7 30	18 53.95	-6 34.7	2.308	3.240	8.4	20.5	7 30	18 52.74	-17 28.0	1.691	2.646	9.3	21.6
8 9	18 48.08	-7 7.4	2.374	3.240	10.9	20.6	8 9	18 47.24	-18 8.2	1.774	2.664	12.8	21.8
<b>365960</b>	2012 <i>BE</i> <sub>24</sub>	7 8.3 137°82	1°3/ 7.6 18				<b>433974</b>	1999 <i>TX</i> <sub>261</sub>	7 8.3 311°72	1°8/ 8.7 18			
5 31	19 35.12	-24 3.8	2.783	3.602	10.8	20.6	5 31	19 35.78	-18 40.5	1.618	2.458	16.3	21.5
6 10	19 30.76	-24 48.9	2.700	3.606	8.4	20.4	6 10	19 32.54	-18 25.0	1.525	2.442	13.0	21.2
6 20	19 24.72	-25 37.0	2.641	3.611	5.7	20.3	6 20	19 26.61	-18 15.5	1.453	2.425	9.0	20.9
6 30	19 17.41	-26 25.3	2.609	3.615	2.7	20.1	6 30	19 18.54	-18 11.6	1.403	2.409	4.6	20.6
7 10	19 9.46	-27 10.9	2.606	3.619	1.5	20.0	7 10	19 9.27	-18 11.9	1.378	2.393	1.9	20.4
7 20	19 1.56	-27 51.3	2.632	3.624	4.1	20.2	7 20	18 59.98	-18 15.2	1.378	2.377	5.9	20.6
7 30	18 54.43	-28 25.0	2.685	3.628	6.9	20.4	7 30	18 51.92	-18 20.3	1.403	2.362	10.5	20.9
8 9	18 48.68	-28 51.5	2.765	3.631	9.5	20.5	8 9	18 46.11	-18 26.4	1.450	2.348	14.7	21.1
<b>136890</b>	1998 <i>HO</i> <sub>20</sub>	7 8.3 94°90	4°3/ 6.9 17				<b>254895</b>	2005 <i>SN</i> <sub>59</sub>	7 8.3 251°25	0°0/ 8.2 18			
5 31	19 42.12	-34 47.7	2.462	3.275	12.3	20.1	5 31	19 35.89	-21 45.1	2.321	3.145	12.6	21.3
6 10	19 36.37	-35 32.6	2.405	3.300	9.7	19.9	6 10	19 31.68	-21 53.5	2.232	3.141	9.8	21.1
6 20	19 28.50	-36 13.0	2.371	3.325	7.1	19.8	6 20	19 25.51	-22 5.3	2.166	3.136	6.6	20.9
6 30	19 19.13	-36 44.7	2.362	3.350	4.9	19.7	6 30	19 17.85	-22 18.9	2.125	3.132	3.1	20.6
7 10	19 9.14	-37 4.2	2.382	3.374	4.5	19.7	7 10	19 9.45	-22 32.2	2.111	3.127	0.6	20.4
7 20	18 59.47	-37 10.2	2.429	3.398	6.1	19.9	7 20	19 1.12	-22 43.7	2.125	3.122	4.3	20.7
7 30	18 51.04	-37 3.1	2.503	3.421	8.5	20.0	7 30	18 53.72	-22 52.4	2.166	3.118	7.8	20.9
8 9	18 44.51	-36 45.4	2.600	3.444	10.8	20.2	8 9	18 47.95	-22 58.0	2.232	3.113	10.9	21.1
<b>443050</b>	2013 <i>EV</i> <sub>111</sub>	7 8.3 252°89	2°8/ 7.2 18				<b>472750</b>	2015 <i>FZ</i> <sub>101</sub>	7 8.3 57°51	4°1/ 9.2 17			
5 31	19 36.38	-28 56.6	2.413	3.239	12.1	21.0	5 31	19 38.07	-13 45.6	1.643	2.468	16.8	20.7
6 10	19 32.12	-29 37.9	2.329	3.238	9.5	20.8	6 10	19 33.81	-13 5.6	1.577	2.480	13.5	20.5
6 20	19 25.82	-30 19.6	2.269	3.236	6.6	20.6	6 20	19 27.09	-12 34.8	1.531	2.492	9.7	20.3
6 30	19 17.98	-30 57.9	2.234	3.235	3.8	20.4	6 30	19 18.59	-12 14.2	1.509	2.505	6.0	20.2
7 10	19 9.35	-31 29.6	2.227	3.234	3.0	20.4	7 10	19 9.32	-12 3.9	1.511	2.518	4.2	20.1
7 20	19 0.80	-31 52.1	2.247	3.233	5.3	20.5	7 20	19 0.36	-12 3.3	1.539	2.531	6.5	20.2
7 30	18 53.20	-32 4.7	2.295	3.232	8.2	20.7	7 30	18 52.78	-12 10.8	1.592	2.544	10.1	20.5
8 9	18 47.30	-32 7.9	2.366	3.230	11.0	20.9	8 9	18 47.37	-12 24.4	1.668	2.557	13.5	20.7
<b>434679</b>	2006 <i>BF</i> <sub>20</sub>	7 8.3 243°79	0°2/ 8.2 18				<b>30196</b>	2000 <i>GB</i> <sub>102</sub>	7 8.3 313°90	5°3/ 7.5 18			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>94187</b>	2001 <i>AF</i> <sub>52</sub>		7 8.3 183°09	6°7/ 4.2 18			<b>94173</b>	2001 <i>AP</i> <sub>30</sub>		7 8.3 95°69	0°0/ 8.2 18		
5 31	19 43.06	-43 36.5	2.955	3.743	11.0	19.9	5 31	19 45.40	-25 29.6	1.861	2.684	15.2	18.3
6 10	19 37.49	-45 3.1	2.879	3.743	9.3	19.8	6 10	19 39.29	-24 43.3	1.785	2.692	11.9	18.1
6 20	19 29.59	-46 23.6	2.827	3.743	7.8	19.7	6 20	19 30.64	-23 54.6	1.731	2.700	8.1	17.9
6 30	19 19.84	-47 32.2	2.801	3.743	6.8	19.6	6 30	19 20.21	-23 2.5	1.702	2.709	3.8	17.7
7 10	19 9.04	-48 24.2	2.803	3.742	6.9	19.6	7 10	19 9.06	-22 7.1	1.700	2.717	0.7	17.5
7 20	18 58.16	-48 56.8	2.831	3.741	8.0	19.7	7 20	18 58.35	-21 10.0	1.728	2.725	5.2	17.8
7 30	18 48.26	-49 10.0	2.884	3.739	9.6	19.8	7 30	18 49.16	-20 13.6	1.782	2.733	9.2	18.1
8 9	18 40.21	-49 6.1	2.960	3.737	11.2	19.9	8 9	18 42.27	-19 20.1	1.860	2.741	12.8	18.3
<b>39650</b>	1995 <i>SD</i> <sub>44</sub>		7 8.3 185°44	1°2/ 8.7 18			<b>185461</b>	2007 <i>BK</i> <sub>1</sub>		7 8.3 149°02	1°1/ 7.9 18		
5 31	19 38.06	-18 38.3	1.975	2.799	14.4	19.7	5 31	19 36.30	-23 54.6	2.555	3.375	11.6	20.6
6 10	19 33.64	-18 37.9	1.892	2.799	11.4	19.5	6 10	19 31.83	-24 27.0	2.473	3.380	9.1	20.4
6 20	19 26.96	-18 43.5	1.830	2.799	7.8	19.3	6 20	19 25.52	-25 2.2	2.414	3.384	6.1	20.2
6 30	19 18.57	-18 53.8	1.793	2.798	3.9	19.1	6 30	19 17.85	-25 37.6	2.382	3.388	2.9	20.0
7 10	19 9.32	-19 6.9	1.782	2.798	1.3	18.9	7 10	19 9.51	-26 10.4	2.378	3.392	1.3	19.9
7 20	19 0.20	-19 21.1	1.799	2.797	4.9	19.1	7 20	19 1.26	-26 38.4	2.402	3.396	4.2	20.1
7 30	18 52.20	-19 35.1	1.842	2.796	8.8	19.4	7 30	18 53.88	-27 0.4	2.454	3.399	7.3	20.3
8 9	18 46.11	-19 47.9	1.909	2.795	12.3	19.6	8 9	18 48.02	-27 16.2	2.531	3.403	10.1	20.5
<b>169973</b>	2002 <i>TK</i> <sub>172</sub>		7 8.3 275°11	4°3/ 8.9 18			<b>256466</b>	2007 <i>DF</i> <sub>23</sub>		7 8.3 121°79	0°9/ 8.0 18		
5 31	19 37.52	-12 49.5	2.081	2.889	14.4	19.5	5 31	19 36.74	-24 42.8	2.573	3.392	11.6	21.5
6 10	19 33.19	-12 3.5	1.978	2.870	11.7	19.3	6 10	19 32.07	-24 54.4	2.494	3.401	9.0	21.3
6 20	19 26.69	-11 23.8	1.897	2.851	8.6	19.1	6 20	19 25.61	-25 7.2	2.439	3.409	6.0	21.2
6 30	19 18.48	-10 51.7	1.840	2.832	5.6	18.8	6 30	19 17.86	-25 19.1	2.411	3.417	2.9	21.0
7 10	19 9.33	-10 28.3	1.810	2.812	4.3	18.7	7 10	19 9.53	-25 28.3	2.410	3.425	1.1	20.8
7 20	19 0.14	-10 14.0	1.806	2.792	6.3	18.8	7 20	19 1.35	-25 33.5	2.438	3.433	4.1	21.1
7 30	18 51.87	-10 8.6	1.829	2.773	9.5	19.0	7 30	18 54.10	-25 34.3	2.493	3.440	7.2	21.3
8 9	18 45.34	-10 10.9	1.875	2.753	12.8	19.1	8 9	18 48.38	-25 30.8	2.573	3.447	9.9	21.5
<b>472906</b>	2015 <i>FR</i> <sub>341</sub>		7 8.3 22°60	4°0/ 8.7 17			<b>102722</b>	1999 <i>VL</i> <sub>99</sub>		7 8.3 148°58	1°0/ 8.6 17		
5 31	19 38.46	-16 39.8	1.494	2.331	17.6	19.4	5 31	19 37.64	-18 53.3	1.964	2.789	14.5	20.8
6 10	19 34.42	-15 35.4	1.425	2.336	14.1	19.2	6 10	19 33.32	-18 57.2	1.883	2.791	11.4	20.6
6 20	19 27.66	-14 36.4	1.375	2.342	10.0	19.0	6 20	19 26.75	-19 7.1	1.824	2.794	7.8	20.4
6 30	19 18.91	-13 44.7	1.349	2.349	5.9	18.8	6 30	19 18.49	-19 21.5	1.790	2.795	3.8	20.2
7 10	19 9.28	-13 1.8	1.347	2.356	4.1	18.7	7 10	19 9.40	-19 38.5	1.782	2.797	1.2	20.0
7 20	18 59.99	-12 28.8	1.370	2.363	6.9	18.9	7 20	19 0.44	-19 56.1	1.801	2.799	4.9	20.2
7 30	18 52.22	-12 6.0	1.418	2.372	10.9	19.1	7 30	18 52.61	-20 12.7	1.847	2.801	8.7	20.5
8 9	18 46.84	-11 52.5	1.487	2.380	14.6	19.4	8 9	18 46.69	-20 27.6	1.916	2.802	12.2	20.7
<b>349318</b>	2007 <i>UV</i> <sub>101</sub>		7 8.3 340°84	0°8/ 8.1 17			<b>483634</b>	2004 <i>TS</i> <sub>300</sub>		7 8.3 286°17	7°3/ 5.2 18		
5 31	19 29.82	-22 17.8	0.979	1.867	20.9	19.7	5 31	19 42.27	-42 57.7	2.457	3.259	12.6	21.7
6 10	19 29.45	-22 33.8	0.906	1.851	16.5	19.4	6 10	19 37.39	-43 57.6	2.357	3.233	10.7	21.5
6 20	19 25.40	-22 58.7	0.850	1.836	11.3	19.1	6 20	19 29.81	-44 51.0	2.279	3.207	8.8	21.3
6 30	19 18.27	-23 29.1	0.813	1.823	5.3	18.7	6 30	19 20.06	-45 31.7	2.225	3.181	7.5	21.2
7 10	19 9.38	-24 0.1	0.795	1.812	1.5	18.4	7 10	19 9.05	-45 54.4	2.197	3.154	7.5	21.1
7 20	19 0.48	-24 26.6	0.799	1.802	7.7	18.7	7 20	18 57.94	-45 56.0	2.194	3.127	8.8	21.2
7 30	18 53.51	-24 45.4	0.822	1.794	13.8	19.0	7 30	18 47.97	-45 36.6	2.216	3.101	10.9	21.3
8 9	18 49.90	-24 55.8	0.862	1.788	19.1	19.3	8 9	18 40.21	-44 59.3	2.261	3.074	13.2	21.4
<b>3752</b>	Camillo		7 8.3 168°05	30°4/ 5.5 18			<b>87602</b>	2000 <i>RS</i> <sub>38</sub>		7 8.3 284°92	3°9/ 7.6 18		
5 31	20 17.46	+51 7.7	1.462	1.807	34.1	18.8	5 31	19 43.78	-32 2.1	1.897	2.724	14.8	19.1
6 10	20 6.53	+52 14.2	1.409	1.819	33.7	18.7	6 10	19 38.93	-32 19.1	1.785	2.692	12.0	18.8
6 20	19 50.16	+52 33.8	1.354	1.828	33.2	18.7	6 20	19 31.08	-32 33.2	1.694	2.659	8.6	18.6
6 30	19 29.56	+51 48.3	1.299	1.835	32.5	18.6	6 30	19 20.74	-32 39.4	1.627	2.626	5.2	18.3
7 10	19 7.19	+49 41.8	1.249	1.839	31.7	18.5	7 10	19 8.91	-32 33.2	1.586	2.592	4.1	18.1
7 20	18 46.02	+46 5.8	1.209	1.840	31.0	18.4	7 20	18 56.87	-32 12.0	1.572	2.558	7.0	18.2
7 30	18 28.62	+41 3.4	1.183	1.839	30.5	18.3	7 30	18 46.06	-31 36.3	1.584	2.524	11.0	18.4
8 9	18 16.38	+34 51.5	1.175	1.835	30.4	18.3	8 9	18 37.70	-30 49.4	1.619	2.489	14.9	18.6
<b>119545</b>	2001 <i>VY</i> <sub>26</sub>		7 8.3 271°39	3°0/ 7.4 18			<b>314078</b>	2005 <i>CZ</i> <sub>22</sub>		7 8.3 162°70	4°4/ 7.3 17		
5 31	19 39.44	-27 21.8	1.712	2.553	15.6	19.4	5 31	19 45.10	-31 34.2	1.714	2.544	16.0	20.8
6 10	19 35.43	-28 3.7	1.629	2.545	12.3	19.1	6 10	19 39.79	-32 14.0	1.640	2.549	12.7	20.6
6 20	19 28.59	-28 48.3	1.565	2.538	8.5	18.9	6 20	19 31.44	-32 51.9	1.587	2.553	9.0	20.3
6 30	19 19.49	-29 30.6	1.526	2.530	4.6	18.6	6 30	19 20.76	-33 21.8	1.558	2.556	5.6	20.1
7 10	19 9.16	-30 5.5	1.512	2.523	3.2	18.5	7 10	19 8.94	-33 38.5	1.555	2.559	4.6	20.1
7 20	18 58.87	-30 29.2	1.524	2.515	6.6	18.7	7 20	18 57.38	-33 39.5	1.578	2.561	7.3	20.3
7 30	18 49.93	-30 40.4	1.561	2.507	10.7	18.9	7 30	18 47.47	-33 25.2	1.626	2.563	11.0	20.5
8 9	18 43.42	-30 40.3	1.621	2.500	14.4	19.2	8 9	18 40.24	-32 59.0	1.697	2.564	14.4	20.7
<b>338586</b>	2003 <i>ST</i> <sub>139</sub>		7 8.3 226°22	7°0/10.5 18			<b>98317</b>	2000 <i>SR</i> <sub>262</sub>		7 8.3 173°36	2°4/ 7.6 18		
5 31	19 35.56	- 3 30.1	2.079	2.858	15.3	20.9	5 31	19 42.58	-25 25.6	1.682	2.516	16.1	19.7
6 10	19 31.53	- 2 51.2	1.993	2.854	12.9	20.7	6 10	19 37.81	-26 11.8	1.605	2.519	12.6	19.5
6 20	19 25.47	- 2 26.2	1.926	2.849	10.4	20.6	6 20	19 30.13	-27 2.1	1.548	2.520	8.6	19.2
6 30	19 17.88	- 2 17.7	1.882	2.845	8.1	20.4	6 30	19 20.19	-27 51.6	1.516	2.522	4.4	19.0
7 10	19 9.50	- 2 26.7	1.862	2.840	7.0	20.3	7 10	19 9.06	-28 34.8	1.510	2.523	2.7	18.9
7 20	19 1.15	- 2 52.6	1.869	2.834	7.9	20.4	7 20	18 58.04	-29 7.6	1.531	2.523	6.4	19.1
7 30	18 53.72	- 3 32.8	1.901	2.829	10.2	20.5	7 30	18 48.49	-29 28.5	1.577	2.523	10.6	19.4
8 9	18 47.96	- 4 23.8	1.956	2.823	12.8	20.7	8 9	18 41.44	-29 38.3	1.645	2.522	14.3	19.6
<b>494841</b>	2007 <i>XC</i> <sub>16</sub>		7 8.3										

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7 8.3

7 8.4

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>492297</b>	2013 <i>YJ</i> <sub>148</sub>		7 8.3 234°90	1°1/ 8.6 18			<b>352161</b>	2007 <i>RJ</i> <sub>7</sub>		7 8.4 292°90	5°2/ 9.8 18		
5 31	19 39.84	-18 52.2	2.390	3.199	12.7	22.1	5 31	19 35.39	-8 42.4	1.928	2.733	15.4	21.1
6 10	19 34.78	-18 49.4	2.284	3.183	10.1	21.9	6 10	19 31.90	-8 25.4	1.816	2.703	12.8	20.8
6 20	19 27.66	-18 51.0	2.201	3.166	6.9	21.6	6 20	19 26.10	-8 21.1	1.725	2.673	9.8	20.6
6 30	19 18.94	-18 56.1	2.144	3.148	3.5	21.4	6 30	19 18.38	-8 31.1	1.656	2.643	6.7	20.3
7 10	19 9.32	-19 3.2	2.114	3.130	1.2	21.2	7 10	19 9.48	-8 55.8	1.613	2.612	5.2	20.2
7 20	18 59.65	-19 11.0	2.114	3.110	4.5	21.4	7 20	19 0.33	-9 33.8	1.595	2.581	6.9	20.2
7 30	18 50.82	-19 18.6	2.142	3.090	8.1	21.6	7 30	18 52.00	-10 22.8	1.603	2.551	10.3	20.3
8 9	18 43.63	-19 25.4	2.194	3.069	11.3	21.7	8 9	18 45.45	-11 18.8	1.634	2.520	14.0	20.5
<b>284609</b>	2007 <i>TH</i> <sub>444</sub>		7 8.3 335°47	1°1/ 8.5 18			<b>366358</b>	1999 <i>WX</i> <sub>25</sub>		7 8.4 275°25	1°2/ 8.6 18		
5 31	19 35.10	-20 28.2	1.533	2.381	16.7	20.5	5 31	19 39.49	-19 9.1	1.643	2.477	16.4	22.0
6 10	19 32.10	-20 11.6	1.449	2.370	13.2	20.2	6 10	19 35.59	-19 6.0	1.542	2.455	13.1	21.8
6 20	19 26.35	-19 59.7	1.384	2.359	9.1	20.0	6 20	19 28.84	-19 9.7	1.461	2.433	9.1	21.5
6 30	19 18.45	-19 51.5	1.342	2.350	4.4	19.7	6 30	19 19.73	-19 18.8	1.404	2.410	4.5	21.1
7 10	19 9.42	-19 45.7	1.325	2.341	1.4	19.4	7 10	19 9.21	-19 31.4	1.371	2.387	1.4	20.9
7 20	19 0.47	-19 41.1	1.332	2.332	5.9	19.7	7 20	18 58.51	-19 45.1	1.365	2.364	6.0	21.1
7 30	18 52.88	-19 37.0	1.364	2.325	10.5	20.0	7 30	18 48.99	-19 58.3	1.383	2.340	10.8	21.3
8 9	18 47.64	-19 33.1	1.416	2.318	14.7	20.2	8 9	18 41.81	-20 10.1	1.424	2.316	15.2	21.5
<b>256927</b>	2008 <i>EU</i> <sub>21</sub>		7 8.4 321°51	5°5/ 10.1 18			<b>472436</b>	2015 <i>BW</i> <sub>300</sub>		7 8.4 5°02	7°9/ 11.7 18		
5 31	19 32.96	-7 17.5	2.086	2.885	14.6	20.4	5 31	19 30.85	-3 20.1	1.325	2.147	20.2	19.9
6 10	19 29.56	-6 50.8	1.997	2.877	12.1	20.2	6 10	19 28.91	-3 10.8	1.256	2.147	17.0	19.7
6 20	19 24.18	-6 36.2	1.928	2.869	9.3	20.0	6 20	19 24.26	-3 25.9	1.204	2.148	13.4	19.4
6 30	19 17.31	-6 35.3	1.882	2.862	6.7	19.9	6 30	19 17.51	-4 7.9	1.171	2.150	10.0	19.3
7 10	19 9.66	-6 48.5	1.862	2.854	5.5	19.8	7 10	19 9.68	-5 16.0	1.161	2.153	8.0	19.2
7 20	19 2.03	-7 14.6	1.867	2.847	6.7	19.8	7 20	19 1.98	-6 45.5	1.173	2.158	9.0	19.2
7 30	18 55.29	-7 51.5	1.898	2.840	9.4	20.0	7 30	18 55.65	-8 28.9	1.208	2.163	12.2	19.4
8 9	18 50.16	-8 35.9	1.953	2.833	12.2	20.1	8 9	18 51.66	-10 17.7	1.264	2.170	15.8	19.7
<b>136940</b>	1998 <i>QG</i> <sub>45</sub>		7 8.4 294°40	2°2/ 8.7 18 R			<b>467741</b>	2009 <i>ST</i> <sub>21</sub>		7 8.4 336°97	10°0/ 8.2 16		
5 31	19 37.75	-18 10.1	1.520	2.361	17.2	19.6	5 31	19 28.85	-10 38.9	1.045	1.911	21.5	20.0
6 10	19 34.41	-17 52.1	1.422	2.337	13.8	19.3	6 10	19 28.26	-8 44.8	0.963	1.885	18.1	19.7
6 20	19 28.12	-17 40.7	1.342	2.314	9.7	19.0	6 20	19 24.41	-6 57.0	0.898	1.862	14.4	19.4
6 30	19 19.40	-17 35.7	1.285	2.290	5.1	18.7	6 30	19 17.81	-5 23.1	0.852	1.839	11.1	19.2
7 10	19 9.22	-17 35.8	1.253	2.267	2.3	18.4	7 10	19 9.60	-4 10.9	0.825	1.819	10.0	19.0
7 20	18 58.85	-17 39.7	1.245	2.244	6.4	18.6	7 20	19 1.27	-3 26.1	0.818	1.801	12.3	19.1
7 30	18 49.74	-17 46.1	1.261	2.220	11.4	18.8	7 30	18 54.48	-3 10.3	0.830	1.785	16.3	19.2
8 9	18 43.08	-17 54.2	1.299	2.197	16.0	19.0	8 9	18 50.61	-3 20.3	0.858	1.771	20.6	19.4
<b>97388</b>	2000 <i>AU</i> <sub>90</sub>		7 8.4 154°85	2°1/ 9.2 18			<b>341279</b>	2007 <i>RV</i> <sub>284</sub>		7 8.4 63°35	1°8/ 8.9 16		
5 31	19 36.89	-14 13.1	2.228	3.037	13.5	19.9	5 31	19 36.52	-16 44.8	1.911	2.736	14.8	21.5
6 10	19 32.44	-14 29.8	2.145	3.041	10.7	19.7	6 10	19 32.51	-16 45.0	1.832	2.739	11.7	21.3
6 20	19 26.03	-14 55.7	2.085	3.046	7.5	19.6	6 20	19 26.25	-16 52.9	1.774	2.741	8.1	21.1
6 30	19 18.14	-15 29.7	2.049	3.050	4.1	19.4	6 30	19 18.31	-17 7.5	1.740	2.744	4.2	20.9
7 10	19 9.51	-16 9.6	2.041	3.054	2.1	19.2	7 10	19 9.55	-17 27.1	1.733	2.747	1.9	20.7
7 20	19 0.97	-16 52.8	2.061	3.057	4.6	19.4	7 20	19 0.92	-17 49.6	1.752	2.750	5.1	20.9
7 30	18 53.36	-17 36.9	2.109	3.060	8.0	19.6	7 30	18 53.41	-18 13.1	1.798	2.753	8.9	21.2
8 9	18 47.40	-18 19.6	2.181	3.063	11.1	19.8	8 9	18 47.81	-18 36.1	1.867	2.756	12.3	21.4
<b>228621</b>	2002 <i>CT</i> <sub>82</sub>		7 8.4 139°48	1°4/ 7.9 17			<b>87548</b>	2000 <i>QC</i> <sub>222</sub>		7 8.4 303°45	6°6/ 6.3 18		
5 31	19 40.88	-25 10.0	2.078	2.902	13.8	21.2	5 31	19 39.84	-34 14.3	1.563	2.408	16.6	19.2
6 10	19 35.75	-25 31.9	2.003	2.911	10.8	21.0	6 10	19 36.63	-35 16.1	1.466	2.381	13.6	18.9
6 20	19 28.33	-25 55.6	1.950	2.920	7.3	20.8	6 20	19 30.01	-36 17.5	1.389	2.354	10.2	18.6
6 30	19 19.22	-26 18.0	1.922	2.928	3.5	20.6	6 30	19 20.45	-37 10.8	1.335	2.327	7.3	18.4
7 10	19 9.31	-26 36.0	1.922	2.936	1.6	20.5	7 10	19 9.07	-37 48.0	1.305	2.300	6.9	18.3
7 20	18 59.62	-26 47.6	1.950	2.944	5.0	20.7	7 20	18 57.41	-38 3.4	1.298	2.273	9.5	18.4
7 30	18 51.13	-26 52.2	2.004	2.951	8.6	21.0	7 30	18 47.24	-37 55.9	1.315	2.247	13.4	18.5
8 9	18 44.63	-26 50.5	2.083	2.958	11.8	21.2	8 9	18 40.00	-37 28.8	1.351	2.221	17.3	18.7
<b>192359</b>	1995 <i>VY</i> <sub>7</sub>		7 8.4 17°95	2°0/ 7.8 17			<b>250356</b>	2003 <i>SF</i> <sub>252</sub>		7 8.4 270°16	4°9/ 6.8 18		
5 31	19 36.76	-25 8.8	1.499	2.351	16.8	20.0	5 31	19 43.19	-30 56.4	1.697	2.532	16.0	20.6
6 10	19 33.46	-25 40.4	1.431	2.355	13.2	19.8	6 10	19 38.90	-31 53.0	1.596	2.508	12.8	20.4
6 20	19 27.26	-26 15.7	1.382	2.359	8.9	19.6	6 20	19 31.36	-32 51.7	1.516	2.482	9.3	20.1
6 30	19 18.86	-26 50.4	1.356	2.364	4.4	19.3	6 30	19 21.03	-33 45.8	1.459	2.457	5.9	19.8
7 10	19 9.39	-27 19.8	1.355	2.369	2.3	19.2	7 10	19 8.97	-34 28.1	1.428	2.431	5.1	19.7
7 20	19 0.14	-27 40.6	1.379	2.375	6.3	19.5	7 20	18 56.59	-34 53.5	1.422	2.404	8.2	19.8
7 30	18 52.45	-27 51.6	1.427	2.382	10.7	19.7	7 30	18 45.53	-35 0.0	1.441	2.377	12.3	20.0
8 9	18 47.28	-27 53.6	1.496	2.389	14.6	20.0	8 9	18 37.15	-34 50.0	1.482	2.349	16.2	20.2
<b>505962</b>	2015 <i>FA</i> <sub>287</sub>		7 8.4 58°04	1°1/ 7.9 17			<b>480225</b>	2015 <i>GO</i> <sub>36</sub>		7 8.4 355°41	11°0/ 12.5 16		
5 31	19 38.53	-20 32.6	1.674	2.511	16.1	20.5	5 31	19 27.75	+ 0 35.7	1.304	2.119	20.9	19.4
6 10	19 34.38	-21 38.5	1.613	2.529	12.5	20.3	6 10	19 26.56	+ 1 24.2	1.234	2.111	18.2	19.2
6 20	19 27.65	-22 52.9	1.573	2.547	8.3	20.1	6 20	19 22.73	+ 1 47.5	1.179	2.105	15.3	19.0
6 30	19 18.97	-24 10.8	1.558	2.566	3.9	19.9	6 30	19 16.83	+ 1 40.2	1.142	2.100	12.6	18.8
7 10	19 9.38	-25 26.3	1.569	2.584	1.5	19.7	7 10	19 9.84	+ 1 0.0	1.125	2.097	11.1	18.8
7 20	19 0.02	-26 33.9	1.607	2.603	5.6	20.1	7 20	19 2.92	- 0 11.1	1.129	2.096	11.6	18.8
7 30	18 52.05	-27 30.6	1.671	2.622	9.7	20.3	7 30	18 57.30	- 1 46.9	1.154	2.097	13.9	18.9
8 9	18 46.35	-28 15.4	1.758	2.641	13.3	20.6	8 9	18 53.97	- 3 38.1	1.199	2.099	16.9	19.1
<b>135644</b>	2002 <i>JZ</i> <sub>109</sub>		7 8.4 18°17	0°8/ 8.5 18			<b>242870</b>	2006 <i>HP</i> <sub>47</sub>					

EPHEMERIDES

7 8.4

7 8.4

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>497196</b>	2004 <i>TJ</i> <sub>184</sub>		7 8.4 217°58	1°1/ 8.6 17			<b>511470</b>	2014 <i>KN</i> <sub>86</sub>		7 8.4 358°14	1°2/ 8.9 18		
5 31	19 41.84	-19 22.1	1.650	2.479	16.6	22.0	5 31	19 32.15	-16 26.1	1.728	2.567	15.5	19.7
6 10	19 37.21	-19 19.5	1.563	2.473	13.1	21.8	6 10	19 29.47	-16 58.5	1.649	2.564	12.3	19.5
6 20	19 29.76	-19 23.3	1.497	2.467	9.0	21.5	6 20	19 24.43	-17 42.0	1.590	2.562	8.4	19.2
6 30	19 20.09	-19 31.9	1.454	2.460	4.4	21.3	6 30	19 17.58	-18 34.8	1.555	2.561	4.2	19.0
7 10	19 9.23	-19 43.0	1.437	2.452	1.3	21.0	7 10	19 9.78	-19 33.0	1.545	2.560	1.3	18.8
7 20	18 58.43	-19 54.5	1.446	2.444	5.8	21.3	7 20	19 2.03	-20 32.5	1.561	2.561	5.2	19.0
7 30	18 48.98	-20 5.0	1.481	2.436	10.4	21.5	7 30	18 55.40	-21 29.5	1.602	2.562	9.3	19.3
8 9	18 41.92	-20 14.0	1.538	2.427	14.5	21.8	8 9	18 50.75	-22 21.2	1.666	2.564	13.1	19.5
<b>510135</b>	2010 <i>UY</i> <sub>69</sub>		7 8.4 258°57	9°3/ 2.5 18			<b>264192</b>	2010 <i>GQ</i> <sub>97</sub>		7 8.4 350°88	1°4/ 8.0 16		
5 31	19 45.55	-49 13.2	2.565	3.343	12.8	20.9	5 31	19 36.99	-24 55.4	1.716	2.559	15.5	20.6
6 10	19 40.38	-50 56.8	2.488	3.332	11.2	20.8	6 10	19 33.35	-25 12.1	1.637	2.556	12.1	20.3
6 20	19 32.14	-52 31.8	2.433	3.321	10.0	20.7	6 20	19 27.09	-25 31.5	1.579	2.554	8.2	20.1
6 30	19 21.34	-53 50.4	2.403	3.310	9.3	20.6	6 30	19 18.82	-25 50.3	1.545	2.552	4.0	19.8
7 10	19 8.96	-54 46.1	2.397	3.299	9.6	20.6	7 10	19 9.54	-26 5.3	1.536	2.550	1.7	19.7
7 20	18 56.36	-55 15.7	2.415	3.288	10.6	20.7	7 20	19 0.42	-26 14.1	1.552	2.549	5.7	19.9
7 30	18 45.03	-55 19.0	2.456	3.276	12.1	20.8	7 30	18 52.62	-26 15.9	1.594	2.549	9.8	20.2
8 9	18 36.21	-55 0.0	2.516	3.265	13.7	20.9	8 9	18 47.06	-26 11.3	1.659	2.548	13.6	20.4
<b>77284</b>	2001 <i>FD</i> <sub>65</sub>		7 8.4 175°48	0°0/ 8.2 18			<b>505949</b>	2015 <i>FM</i> <sub>148</sub>		7 8.4 67°50	6°7/ 6.3 17		
5 31	19 40.55	-20 14.9	1.736	2.566	15.9	20.1	5 31	19 42.30	-36 19.0	1.749	2.581	15.7	20.7
6 10	19 36.03	-20 42.2	1.656	2.567	12.5	19.9	6 10	19 37.85	-37 26.5	1.680	2.584	12.7	20.5
6 20	19 28.86	-21 17.0	1.597	2.569	8.4	19.6	6 20	19 30.31	-38 29.5	1.632	2.588	9.6	20.4
6 30	19 19.63	-21 56.1	1.562	2.570	3.9	19.4	6 30	19 20.38	-39 20.7	1.607	2.591	7.2	20.2
7 10	19 9.34	-22 35.8	1.554	2.570	0.8	19.1	7 10	19 9.24	-39 53.7	1.608	2.594	6.9	20.2
7 20	18 59.15	-23 12.5	1.572	2.570	5.5	19.5	7 20	18 58.31	-40 5.2	1.633	2.598	8.9	20.3
7 30	18 50.26	-23 43.7	1.616	2.570	9.8	19.7	7 30	18 49.02	-39 55.8	1.682	2.601	11.8	20.5
8 9	18 43.63	-24 8.8	1.683	2.569	13.6	20.0	8 9	18 42.43	-39 29.3	1.753	2.605	14.8	20.7
<b>497245</b>	2005 <i>FH</i>		7 8.4 184°16	6°1/12.3 17			<b>260284</b>	2004 <i>TG</i> <sub>39</sub>		7 8.4 270°71	0°3/ 8.3 18		
5 31	19 37.24	+ 6 1.6	3.785	4.467	10.5	24.2	5 31	19 35.59	-22 24.0	2.498	3.319	11.9	21.5
6 10	19 31.82	+ 6 12.7	3.688	4.467	9.2	24.1	6 10	19 31.47	-22 37.2	2.397	3.304	9.3	21.3
6 20	19 25.20	+ 6 11.4	3.613	4.467	7.9	24.0	6 20	19 25.45	-22 53.5	2.319	3.289	6.3	21.1
6 30	19 17.69	+ 5 56.3	3.562	4.466	6.7	23.9	6 30	19 17.98	-23 11.3	2.267	3.274	2.9	20.9
7 10	19 9.75	+ 5 27.3	3.539	4.463	6.1	23.9	7 10	19 9.72	-23 28.4	2.242	3.258	0.7	20.6
7 20	19 1.83	+ 4 45.0	3.544	4.460	6.3	23.9	7 20	19 1.44	-23 43.1	2.246	3.243	4.2	20.9
7 30	18 54.43	+ 3 51.3	3.577	4.456	7.3	23.9	7 30	18 53.95	-23 54.4	2.277	3.227	7.6	21.1
8 9	18 47.98	+ 2 48.7	3.637	4.451	8.6	24.0	8 9	18 47.98	-24 1.9	2.333	3.211	10.6	21.2
<b>429685</b>	2011 <i>HA</i> <sub>25</sub>		7 8.4 28°51	6°1/10.1 17			<b>329969</b>	2005 <i>SJ</i> <sub>36</sub>		7 8.4 324°87	0°8/ 8.2 17		
5 31	19 34.68	- 8 59.2	1.461	2.288	18.5	20.3	5 31	19 34.87	-23 10.2	1.300	2.162	18.3	20.9
6 10	19 31.55	- 8 25.1	1.397	2.296	15.1	20.1	6 10	19 32.68	-23 20.6	1.214	2.144	14.5	20.6
6 20	19 25.82	- 8 6.4	1.352	2.306	11.4	19.9	6 20	19 27.24	-23 36.5	1.147	2.127	9.9	20.3
6 30	19 18.18	- 8 4.9	1.328	2.316	7.8	19.7	6 30	19 19.13	-23 54.9	1.101	2.110	4.7	19.9
7 10	19 9.65	- 8 20.6	1.327	2.326	6.1	19.6	7 10	19 9.47	-24 12.0	1.078	2.094	1.3	19.7
7 20	19 1.38	- 8 51.3	1.350	2.338	7.8	19.7	7 20	18 59.75	-24 24.4	1.078	2.079	6.8	20.0
7 30	18 54.50	- 9 33.4	1.397	2.350	11.1	20.0	7 30	18 51.58	-24 30.4	1.101	2.065	12.2	20.2
8 9	18 49.87	-10 22.5	1.465	2.362	14.6	20.2	8 9	18 46.23	-24 30.2	1.144	2.052	16.9	20.5
<b>206301</b>	2003 <i>FH</i> <sub>21</sub>		7 8.4 356°49	4°7/ 7.0 17			<b>57108</b>	2001 <i>OS</i> <sub>74</sub>		7 8.4 267°24	1°4/ 8.6 18		
5 31	19 33.29	-26 50.2	0.995	1.880	20.8	19.1	5 31	19 38.50	-19 55.4	2.234	3.052	13.2	17.5
6 10	19 32.27	-27 57.8	0.933	1.875	16.5	18.8	6 10	19 33.86	-19 28.6	2.134	3.037	10.4	17.3
6 20	19 27.37	-29 12.5	0.888	1.871	11.5	18.5	6 20	19 27.11	-19 4.3	2.056	3.023	7.2	17.1
6 30	19 19.25	-30 25.7	0.863	1.869	6.5	18.2	6 30	19 18.77	-18 41.8	2.003	3.008	3.6	16.8
7 10	19 9.41	-31 27.8	0.858	1.868	5.1	18.2	7 10	19 9.58	-18 20.9	1.978	2.993	1.5	16.7
7 20	18 59.73	-32 11.4	0.874	1.869	9.4	18.4	7 20	19 0.42	-18 1.3	1.981	2.978	4.7	16.9
7 30	18 52.19	-32 33.5	0.910	1.870	14.5	18.7	7 30	18 52.21	-17 43.2	2.011	2.962	8.3	17.1
8 9	18 48.20	-32 36.4	0.964	1.874	19.2	19.0	8 9	18 45.72	-17 26.9	2.066	2.947	11.7	17.2
<b>439408</b>	2013 <i>CF</i> <sub>17</sub>		7 8.4 279°99	1°8/ 7.9 18			<b>318511</b>	2005 <i>EW</i> <sub>170</sub>		7 8.4 130°77	6°4/ 9.8 17		
5 31	19 38.42	-27 42.4	2.203	3.030	13.0	20.6	5 31	19 40.70	- 8 4.0	1.707	2.508	17.3	21.0
6 10	19 33.89	-27 46.6	2.114	3.023	10.2	20.4	6 10	19 35.84	- 7 15.6	1.637	2.518	14.3	20.8
6 20	19 27.15	-27 50.0	2.046	3.016	7.0	20.2	6 20	19 28.54	- 6 40.0	1.585	2.528	10.9	20.6
6 30	19 18.76	-27 50.0	2.004	3.009	3.6	19.9	6 30	19 19.42	- 6 19.8	1.557	2.537	7.8	20.4
7 10	19 9.54	-27 44.4	1.988	3.001	2.0	19.8	7 10	19 9.46	- 6 15.6	1.554	2.546	6.4	20.4
7 20	19 0.44	-27 31.9	2.001	2.994	5.0	20.0	7 20	18 59.74	- 6 26.9	1.576	2.555	7.8	20.5
7 30	18 52.42	-27 13.0	2.040	2.987	8.5	20.2	7 30	18 51.33	- 6 51.2	1.624	2.563	10.9	20.7
8 9	18 46.26	-26 48.8	2.103	2.980	11.7	20.4	8 9	18 45.05	- 7 25.1	1.694	2.570	14.0	20.9
<b>2994</b>	<i>Flynn</i>		7 8.4 336°51	2°6/ 7.9 18			<b>73185</b>	2002 <i>JP</i>		7 8.4 64°51	4°0/ 9.6 18		
5 31	19 32.17	-26 14.9	1.116	1.995	19.5	16.6	5 31	19 38.66	-12 2.5	1.351	2.185	19.3	19.2
6 10	19 31.10	-26 33.4	1.037	1.976	15.5	16.3	6 10	19 34.87	-12 3.7	1.291	2.199	15.5	19.0
6 20	19 26.46	-26 55.3	0.975	1.958	10.7	16.0	6 20	19 28.18	-12 20.5	1.249	2.213	11.1	18.8
6 30	19 18.83	-27 16.0	0.933	1.942	5.4	15.6	6 30	19 19.33	-12 52.5	1.229	2.228	6.5	18.6
7 10	19 9.50	-27 30.1	0.912	1.927	2.9	15.4	7 10	19 9.48	-13 36.8	1.232	2.242	4.0	18.5
7 20	19 0.14	-27 33.8	0.913	1.913	7.9	15.7	7 20	18 59.97	-14 29.1	1.261	2.257	6.8	18.7
7 30	18 52.59	-27 26.0	0.935	1.901	13.4	15.9	7 30	18 52.07	-15 25.0	1.313	2.272	11.1	19.0
8 9	18 48.26	-27 8.4	0.975	1.891	18.4	16.2	8 9	18 46.73	-16 20.2	1.387	2.287	15.0	19.2
<b>33308</b>	1998 <i>KR</i> <sub>53</sub>		7 8.4 20°51	0°4/ 8.6 18			<b>412319</b>	2013 <i>JT</i> <sub>63</sub>		7 8.4 3°87	2		

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>86127</b>	1999 <i>RB</i> <sub>154</sub>		7 8.4 260°33	4.7/10.0	18		<b>249613</b>	1999 <i>RH</i> <sub>207</sub>		7 8.4 287°29	1.5/ 8.0	18	
5 31	19 33.99	- 7 30.8	2.456	3.243	13.0	19.9	5 31	19 38.07	-27 3.6	2.258	3.084	12.8	20.7
6 10	19 30.11	- 7 11.0	2.358	3.232	10.8	19.7	6 10	19 33.66	-27 4.6	2.159	3.068	10.1	20.5
6 20	19 24.48	- 7 1.6	2.282	3.220	8.2	19.5	6 20	19 27.08	-27 5.1	2.082	3.052	6.9	20.2
6 30	19 17.51	- 7 3.9	2.230	3.208	5.9	19.3	6 30	19 18.81	-27 2.7	2.030	3.036	3.4	20.0
7 10	19 9.84	- 7 17.8	2.204	3.197	4.7	19.2	7 10	19 9.66	-26 55.3	2.006	3.020	1.7	19.8
7 20	19 2.15	- 7 42.5	2.206	3.185	5.9	19.3	7 20	19 0.55	-26 41.7	2.009	3.003	4.9	20.0
7 30	18 55.20	- 8 16.1	2.234	3.173	8.3	19.4	7 30	18 52.43	-26 22.2	2.039	2.987	8.4	20.2
8 9	18 49.63	- 8 56.2	2.286	3.160	11.0	19.6	8 9	18 46.11	-25 57.9	2.093	2.971	11.7	20.4
<b>342817</b>	2008 <i>XQ</i> <sub>8</sub>		7 8.4 224°89	3.4/ 9.4	17		<b>185921</b>	2000 <i>SN</i> <sub>298</sub>		7 8.4 263°84	5.6/ 9.9	18	
5 31	19 36.69	-12 51.9	2.000	2.812	14.7	21.6	5 31	19 35.08	- 5 53.5	2.515	3.292	13.0	21.4
6 10	19 32.58	-12 38.6	1.913	2.809	11.8	21.4	6 10	19 30.97	- 5 16.2	2.409	3.273	10.9	21.2
6 20	19 26.32	-12 34.8	1.848	2.806	8.5	21.2	6 20	19 25.09	- 4 48.8	2.325	3.253	8.6	21.0
6 30	19 18.42	-12 40.5	1.806	2.802	5.2	21.0	6 30	19 17.85	- 4 33.0	2.264	3.234	6.5	20.8
7 10	19 9.67	-12 55.2	1.791	2.799	3.4	20.8	7 10	19 9.85	- 4 30.0	2.230	3.213	5.6	20.7
7 20	19 0.99	-13 17.2	1.802	2.795	5.6	21.0	7 20	19 1.78	- 4 39.6	2.224	3.193	6.6	20.8
7 30	18 53.32	-13 44.6	1.840	2.791	9.0	21.2	7 30	18 54.41	- 5 0.6	2.243	3.172	8.8	20.9
8 9	18 47.44	-14 15.0	1.902	2.787	12.3	21.4	8 9	18 48.38	- 5 30.9	2.287	3.151	11.3	21.0
<b>480740</b>	2016 <i>NA</i> <sub>10</sub>		7 8.4 344°50	0.8/ 8.6	17		<b>203717</b>	2002 <i>PK</i> <sub>172</sub>		7 8.4 341°44	1.5/ 7.9	18	
5 31	19 36.83	-19 9.9	1.647	2.485	16.2	20.8	5 31	19 37.21	-24 22.7	1.762	2.602	15.2	20.0
6 10	19 33.26	-19 20.9	1.568	2.483	12.8	20.6	6 10	19 33.51	-24 49.8	1.682	2.600	11.9	19.8
6 20	19 27.07	-19 39.7	1.508	2.481	8.7	20.4	6 20	19 27.23	-25 20.8	1.623	2.597	8.1	19.6
6 30	19 18.86	-20 4.2	1.472	2.479	4.2	20.1	6 30	19 18.96	-25 52.1	1.587	2.594	3.9	19.3
7 10	19 9.61	-20 31.5	1.462	2.478	1.0	19.9	7 10	19 9.66	-26 20.0	1.578	2.592	1.8	19.2
7 20	19 0.46	-20 58.8	1.477	2.477	5.5	20.2	7 20	19 0.46	-26 41.4	1.594	2.590	5.6	19.4
7 30	18 52.60	-21 23.9	1.517	2.475	9.9	20.4	7 30	18 52.53	-26 54.9	1.636	2.589	9.8	19.7
8 9	18 46.98	-21 45.5	1.580	2.475	13.8	20.7	8 9	18 46.80	-27 0.9	1.700	2.587	13.4	19.9
<b>414435</b>	2009 <i>DH</i> <sub>112</sub>		7 8.4 153°23	0.9/ 8.2	17		<b>198170</b>	2004 <i>TQ</i> <sub>90</sub>		7 8.4 294°17	1.5/ 8.7	18	
5 31	19 42.29	-23 33.1	1.512	2.353	17.3	21.6	5 31	19 37.36	-18 53.8	1.693	2.529	16.0	20.4
6 10	19 37.78	-23 47.2	1.439	2.356	13.6	21.3	6 10	19 33.76	-18 43.3	1.599	2.512	12.7	20.2
6 20	19 30.24	-24 5.3	1.384	2.359	9.2	21.1	6 20	19 27.52	-18 38.8	1.524	2.495	8.8	19.9
6 30	19 20.36	-24 24.1	1.353	2.361	4.3	20.8	6 30	19 19.16	-18 39.5	1.473	2.478	4.5	19.6
7 10	19 9.33	-24 39.6	1.348	2.363	1.3	20.6	7 10	19 9.61	-18 44.0	1.446	2.462	1.6	19.4
7 20	18 58.52	-24 49.3	1.368	2.365	6.1	20.9	7 20	19 0.01	-18 50.5	1.446	2.445	5.7	19.6
7 30	18 49.32	-24 52.3	1.412	2.367	10.8	21.2	7 30	18 51.58	-18 57.9	1.471	2.429	10.2	19.8
8 9	18 42.78	-24 49.4	1.479	2.369	14.9	21.5	8 9	18 45.34	-19 5.3	1.518	2.413	14.3	20.0
<b>95060</b>	2002 <i>AJ</i> <sub>59</sub>		7 8.4 149°45	2.0/ 8.0	18		<b>455313</b>	2002 <i>GW</i> <sub>107</sub>		7 8.4 75°90	4.4/ 7.3	16	
5 31	19 43.89	-28 39.6	2.078	2.898	13.9	20.0	5 31	19 46.36	-28 52.1	1.383	2.226	18.5	21.4
6 10	19 38.13	-28 39.6	2.000	2.905	10.9	19.8	6 10	19 41.07	-29 55.9	1.337	2.253	14.4	21.2
6 20	19 29.97	-28 37.4	1.944	2.912	7.5	19.6	6 20	19 32.41	-30 59.8	1.310	2.281	10.0	21.0
6 30	19 20.07	-28 30.2	1.914	2.918	3.9	19.4	6 30	19 21.33	-31 56.2	1.306	2.308	5.8	20.9
7 10	19 9.40	-28 15.8	1.911	2.924	2.2	19.3	7 10	19 9.25	-32 38.2	1.328	2.335	4.6	20.9
7 20	18 59.03	-27 53.5	1.936	2.929	5.2	19.5	7 20	18 57.80	-33 2.3	1.374	2.361	7.7	21.1
7 30	18 49.99	-27 24.3	1.989	2.934	8.8	19.7	7 30	18 48.43	-33 9.0	1.445	2.387	11.7	21.4
8 9	18 43.07	-26 50.3	2.066	2.938	12.0	19.9	8 9	18 42.11	-33 1.7	1.537	2.413	15.2	21.7
<b>289120</b>	2004 <i>TT</i> <sub>360</sub>		7 8.4 344°95	4.2/ 9.1	17		<b>232565</b>	2003 <i>SU</i> <sub>288</sub>		7 8.4 332°70	3.0/ 7.4	18	
5 31	19 32.99	-15 40.1	1.032	1.904	21.3	20.4	5 31	19 38.15	-27 26.1	1.731	2.573	15.4	20.3
6 10	19 31.55	-15 5.2	0.963	1.894	17.2	20.1	6 10	19 34.41	-28 8.7	1.652	2.569	12.1	20.1
6 20	19 26.62	-14 41.8	0.910	1.886	12.3	19.8	6 20	19 27.94	-28 53.6	1.593	2.566	8.4	19.8
6 30	19 18.87	-14 31.6	0.875	1.879	7.1	19.5	6 30	19 19.33	-29 36.1	1.558	2.562	4.5	19.6
7 10	19 9.60	-14 34.3	0.861	1.874	4.3	19.3	7 10	19 9.60	-30 11.1	1.549	2.560	3.2	19.5
7 20	19 0.44	-14 48.4	0.869	1.869	8.0	19.5	7 20	18 59.96	-30 35.3	1.566	2.557	6.4	19.7
7 30	18 53.10	-15 11.0	0.897	1.866	13.4	19.8	7 30	18 51.65	-30 47.2	1.608	2.554	10.4	19.9
8 9	18 48.87	-15 38.5	0.943	1.864	18.4	20.1	8 9	18 45.68	-30 48.1	1.671	2.552	14.0	20.1
<b>156369</b>	2001 <i>XD</i> <sub>253</sub>		7 8.4 164°23	1.3/ 8.8	18		<b>479203</b>	2013 <i>CN</i> <sub>103</sub>		7 8.4 156°17	1.5/ 7.8	18	
5 31	19 39.06	-17 19.6	2.088	2.903	14.1	21.0	5 31	19 37.82	-26 12.1	2.619	3.437	11.5	22.2
6 10	19 34.34	-17 29.5	2.006	2.907	11.1	20.8	6 10	19 33.03	-26 36.3	2.537	3.442	8.9	22.0
6 20	19 27.45	-17 46.5	1.945	2.911	7.6	20.6	6 20	19 26.40	-27 1.4	2.479	3.447	6.1	21.8
6 30	19 18.94	-18 9.3	1.910	2.915	3.9	20.4	6 30	19 18.43	-27 24.8	2.446	3.451	3.0	21.6
7 10	19 9.62	-18 35.5	1.902	2.917	1.4	20.2	7 10	19 9.80	-27 44.0	2.443	3.456	1.7	21.5
7 20	19 0.41	-19 3.0	1.922	2.920	4.7	20.5	7 20	19 1.29	-27 57.4	2.467	3.460	4.3	21.7
7 30	18 52.26	-19 29.9	1.969	2.922	8.4	20.7	7 30	18 53.67	-28 4.4	2.520	3.463	7.3	21.9
8 9	18 45.93	-19 54.9	2.041	2.923	11.7	20.9	8 9	18 47.60	-28 5.2	2.598	3.466	10.0	22.1
<b>89705</b>	2001 <i>YY</i> <sub>93</sub>		7 8.4 272°46	8.9/ 4.7	18		<b>299822</b>	2006 <i>SB</i> <sub>161</sub>		7 8.4 305°38	3.4/ 7.2	18	
5 31	19 44.06	-40 37.2	1.781	2.604	15.8	18.5	5 31	19 37.56	-29 11.9	1.948	2.785	14.1	20.9
6 10	19 39.82	-42 13.0	1.700	2.592	13.3	18.3	6 10	19 33.75	-29 54.2	1.861	2.775	11.2	20.7
6 20	19 32.10	-43 44.3	1.640	2.579	10.8	18.1	6 20	19 27.40	-30 37.4	1.795	2.765	7.8	20.4
6 30	19 21.47	-45 1.4	1.603	2.566	9.2	18.0	6 30	19 19.07	-31 17.0	1.753	2.755	4.6	20.2
7 10	19 9.10	-45 55.7	1.590	2.553	9.2	18.0	7 10	19 9.66	-31 48.4	1.738	2.745	3.6	20.1
7 20	18 56.59	-46 22.0	1.601	2.540	11.0	18.0	7 20	19 0.25	-32 8.5	1.749	2.736	6.3	20.3
7 30	18 45.70	-46 20.0	1.635	2.527	13.7	18.2	7 30	18 52.02	-32 16.2	1.785	2.726	9.9	20.5
8 9	18 37.80	-45 54.2	1.689	2.514	16.4	18.3	8 9	18 45.89	-32 12.6	1.844	2.717	13.2	20.7
<b>444416</b>	2006 <i>BQ</i> <sub>8</sub>		7 8.4 349°04	8.3/ 9.6									

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>199155</b>	2005 <i>YH</i> <sub>166</sub>		7 8.4 39°28'	2.3/ 8.9	17		<b>246361</b>	2007 <i>TS</i> <sub>366</sub>		7 8.4 302°00'	4.5/ 7.2	18	
5 31	19 37.31	-16 39.9	1.589	2.425	16.8	20.4	5 31	19 39.38	-32 14.3	1.841	2.677	14.8	20.9
6 10	19 33.56	-16 29.3	1.518	2.430	13.3	20.2	6 10	19 35.42	-32 52.7	1.753	2.665	11.9	20.7
6 20	19 27.22	-16 27.3	1.467	2.436	9.3	20.0	6 20	19 28.69	-33 29.3	1.687	2.653	8.6	20.4
6 30	19 18.93	-16 33.2	1.439	2.443	4.9	19.7	6 30	19 19.74	-33 58.8	1.644	2.641	5.5	20.2
7 10	19 9.71	-16 45.5	1.436	2.449	2.4	19.6	7 10	19 9.62	-34 16.5	1.627	2.630	4.7	20.2
7 20	19 0.72	-17 2.1	1.458	2.456	5.8	19.8	7 20	18 59.53	-34 19.4	1.636	2.618	7.2	20.3
7 30	18 53.10	-17 21.0	1.505	2.463	10.0	20.1	7 30	18 50.78	-34 7.4	1.669	2.607	10.7	20.5
8 9	18 47.73	-17 40.7	1.574	2.471	13.8	20.3	8 9	18 44.38	-33 42.8	1.725	2.597	14.1	20.7
<b>215145</b>	1999 <i>UM</i> <sub>57</sub>		7 8.4 359°66'	1.6/ 8.7	17		<b>59810</b>	1999 <i>RM</i> <sub>17</sub>		7 8.4 205°17'	0.4/ 8.3	18	
5 31	19 30.88	-19 40.1	0.990	1.873	21.1	20.0	5 31	19 36.92	-23 17.3	2.680	3.496	11.3	20.2
6 10	19 30.01	-19 26.1	0.928	1.869	16.7	19.7	6 10	19 32.30	-23 23.0	2.589	3.493	8.8	20.0
6 20	19 25.61	-19 20.9	0.883	1.866	11.5	19.4	6 20	19 25.92	-23 30.6	2.520	3.489	5.9	19.8
6 30	19 18.41	-19 23.7	0.856	1.865	5.7	19.1	6 30	19 18.25	-23 38.4	2.478	3.485	2.8	19.6
7 10	19 9.81	-19 32.1	0.849	1.865	1.8	18.8	7 10	19 9.92	-23 44.7	2.465	3.481	0.7	19.4
7 20	19 1.47	-19 43.5	0.864	1.868	7.2	19.2	7 20	19 1.67	-23 48.3	2.480	3.476	3.9	19.6
7 30	18 55.06	-19 55.0	0.899	1.872	12.9	19.5	7 30	18 54.24	-23 48.8	2.523	3.471	7.0	19.8
8 9	18 51.78	-20 6.5	0.953	1.878	17.8	19.8	8 9	18 48.25	-23 46.1	2.591	3.466	9.8	20.0
<b>438939</b>	2010 <i>GQ</i> <sub>161</sub>		7 8.4 346°23'	5.6/10.9	18		<b>518403</b>	2018 <i>AZ</i> <sub>6</sub>		7 8.4 107°91'	2.1/ 9.1	18	
5 31	19 33.00	-5 48.7	1.694	2.502	17.1	20.1	5 31	19 35.40	-15 55.9	2.504	3.314	12.2	21.2
6 10	19 30.16	-6 1.3	1.610	2.496	14.2	19.9	6 10	19 31.09	-15 39.2	2.422	3.319	9.6	21.1
6 20	19 24.96	-6 33.3	1.545	2.491	10.8	19.7	6 20	19 25.08	-15 28.0	2.363	3.324	6.8	20.9
6 30	19 17.93	-7 25.6	1.501	2.486	7.5	19.5	6 30	19 17.83	-15 22.0	2.329	3.329	3.8	20.7
7 10	19 9.90	-8 36.5	1.483	2.482	5.6	19.4	7 10	19 10.00	-15 20.7	2.323	3.334	2.2	20.6
7 20	19 1.87	-10 1.7	1.490	2.479	7.0	19.5	7 20	19 2.31	-15 23.3	2.345	3.339	4.3	20.8
7 30	18 54.90	-11 35.6	1.522	2.476	10.3	19.6	7 30	18 55.46	-15 29.0	2.394	3.344	7.3	20.9
8 9	18 49.89	-13 11.8	1.577	2.474	13.8	19.8	8 9	18 50.06	-15 36.7	2.468	3.349	10.0	21.1
<b>79006</b>	4261 <i>P-L</i>		7 8.4 226°77'	2.1/ 9.0	18		<b>433800</b>	2015 <i>BT</i> <sub>99</sub>		7 8.4 198°51'	0.7/ 8.6	17	
5 31	19 36.87	-16 16.7	2.101	2.918	13.9	19.8	5 31	19 41.09	-19 14.9	1.971	2.789	14.7	22.8
6 10	19 32.68	-16 10.1	2.013	2.915	11.1	19.6	6 10	19 36.21	-19 27.7	1.882	2.787	11.6	22.6
6 20	19 26.38	-16 10.5	1.947	2.911	7.7	19.4	6 20	19 28.92	-19 46.9	1.815	2.783	7.9	22.4
6 30	19 18.50	-16 17.2	1.906	2.908	4.2	19.2	6 30	19 19.77	-20 10.6	1.773	2.779	3.8	22.1
7 10	19 9.81	-16 29.1	1.891	2.904	2.1	19.0	7 10	19 9.63	-20 36.1	1.758	2.774	0.9	21.9
7 20	19 1.18	-16 44.6	1.904	2.900	4.9	19.2	7 20	18 59.54	-21 0.9	1.771	2.769	5.0	22.2
7 30	18 53.54	-17 2.2	1.943	2.896	8.5	19.4	7 30	18 50.56	-21 23.3	1.810	2.762	9.0	22.4
8 9	18 47.64	-17 20.6	2.006	2.892	11.8	19.6	8 9	18 43.58	-21 42.4	1.874	2.756	12.6	22.6
<b>437069</b>	2012 <i>UK</i> <sub>54</sub>		7 8.4 317°96'	0.7/ 8.3	18		<b>387263</b>	2012 <i>UA</i> <sub>104</sub>		7 8.4 216°90'	2.2/ 9.0	18	
5 31	19 38.36	-23 56.1	1.802	2.638	15.1	21.1	5 31	19 37.12	-16 11.3	2.027	2.846	14.3	21.7
6 10	19 34.31	-23 59.7	1.719	2.634	11.9	20.9	6 10	19 32.95	-16 4.4	1.942	2.844	11.4	21.5
6 20	19 27.72	-24 5.6	1.657	2.630	8.0	20.7	6 20	19 26.62	-16 4.8	1.878	2.842	7.9	21.3
6 30	19 19.20	-24 11.6	1.619	2.627	3.8	20.4	6 30	19 18.65	-16 11.9	1.838	2.840	4.3	21.1
7 10	19 9.69	-24 15.1	1.607	2.623	1.1	20.2	7 10	19 9.85	-16 24.4	1.825	2.838	2.2	20.9
7 20	19 0.33	-24 14.4	1.622	2.620	5.3	20.5	7 20	19 1.14	-16 40.7	1.839	2.836	5.0	21.1
7 30	18 52.22	-24 9.1	1.662	2.616	9.5	20.7	7 30	18 53.46	-16 59.2	1.880	2.833	8.7	21.3
8 9	18 46.28	-23 59.9	1.725	2.613	13.2	20.9	8 9	18 47.58	-17 18.5	1.944	2.831	12.0	21.5
<b>170758</b>	2004 <i>CA</i> <sub>24</sub>		7 8.4 155°45'	6.9/11.2	18		<b>509931</b>	2009 <i>ON</i> <sub>22</sub>		7 8.4 358°59'	0.6/ 8.3	18	
5 31	19 35.29	-1 19.4	2.315	3.077	14.4	20.6	5 31	19 37.00	-25 29.3	1.780	2.621	15.1	20.0
6 10	19 31.12	-0 49.7	2.234	3.081	12.3	20.4	6 10	19 33.21	-25 7.6	1.701	2.618	11.8	19.8
6 20	19 25.17	-0 34.6	2.173	3.084	10.0	20.3	6 20	19 26.92	-24 45.4	1.642	2.616	8.0	19.5
6 30	19 17.89	-0 36.1	2.135	3.088	7.9	20.2	6 30	19 18.80	-24 20.9	1.608	2.615	3.8	19.3
7 10	19 9.95	-0 54.8	2.122	3.091	6.9	20.1	7 10	19 9.83	-23 53.2	1.599	2.615	1.0	19.1
7 20	19 2.10	-1 29.4	2.135	3.093	7.5	20.1	7 20	19 1.09	-23 22.1	1.617	2.616	5.2	19.4
7 30	18 55.10	-2 17.6	2.174	3.096	9.4	20.3	7 30	18 53.67	-22 48.6	1.660	2.617	9.3	19.6
8 9	18 49.57	-3 15.4	2.237	3.098	11.7	20.4	8 9	18 48.40	-22 14.2	1.726	2.619	13.0	19.8
<b>56894</b>	2000 <i>QP</i> <sub>145</sub>		7 8.4 350°07'	0.1/ 8.5	18		<b>131123</b>	2001 <i>BO</i> <sub>22</sub>		7 8.4 244°15'	0.9/ 8.7	17	
5 31	19 33.72	-20 16.0	1.678	2.523	15.7	18.7	5 31	19 38.08	-18 44.0	2.012	2.835	14.3	20.3
6 10	19 30.87	-20 36.4	1.597	2.517	12.3	18.5	6 10	19 33.86	-18 55.8	1.919	2.825	11.3	20.1
6 20	19 25.51	-21 4.3	1.537	2.512	8.4	18.2	6 20	19 27.36	-19 14.4	1.847	2.815	7.7	19.8
6 30	19 18.21	-21 37.1	1.500	2.508	3.9	17.9	6 30	19 19.05	-19 38.2	1.799	2.805	3.8	19.6
7 10	19 9.88	-22 11.6	1.488	2.504	0.7	17.7	7 10	19 9.77	-20 4.8	1.779	2.795	1.0	19.3
7 20	19 1.63	-22 44.6	1.501	2.501	5.4	18.0	7 20	19 0.47	-20 31.7	1.786	2.784	4.9	19.6
7 30	18 54.58	-23 13.6	1.540	2.499	9.7	18.3	7 30	18 52.18	-20 57.1	1.819	2.773	8.9	19.8
8 9	18 49.65	-23 37.4	1.600	2.498	13.5	18.5	8 9	18 45.76	-21 19.7	1.876	2.762	12.5	20.0
<b>440521</b>	2005 <i>UW</i> <sub>84</sub>		7 8.4 318°22'	4.6/ 9.7	18		<b>56637</b>	2000 <i>KG</i> <sub>14</sub>		7 8.4 233°15'	2.0/ 8.9	18	
5 31	19 34.06	-10 19.5	2.062	2.870	14.5	21.3	5 31	19 36.95	-16 47.6	2.157	2.974	13.6	19.7
6 10	19 30.53	-9 49.7	1.972	2.862	11.8	21.1	6 10	19 32.69	-16 34.6	2.069	2.970	10.8	19.5
6 20	19 24.97	-9 29.7	1.903	2.854	8.9	20.9	6 20	19 26.38	-16 27.6	2.002	2.967	7.5	19.3
6 30	19 17.87	-9 20.9	1.858	2.845	6.0	20.7	6 30	19 18.53	-16 26.1	1.960	2.963	4.1	19.1
7 10	19 9.97	-9 23.4	1.838	2.838	4.6	20.6	7 10	19 9.89	-16 29.2	1.946	2.959	2.1	18.9
7 20	19 2.10	-9 36.5	1.844	2.830	6.2	20.7	7 20	19 1.34	-16 35.8	1.958	2.954	4.8	19.1
7 30	18 55.15	-9 58.7	1.876	2.823	9.1	20.8	7 30	18 53.75	-16 44.8	1.998	2.950	8.3	19.3
8 9	18 49.85	-10 27.4	1.932	2.816	12.2	21.0	8 9	18 47.87	-16 55.2	2.061	2.946	11.5	19.5
<b>69128</b>	2003 <i>FR</i> <sub>16</sub>		7 8.4 92°83'	4.5/10.6	18		<b>385556</b>	2004 <i>TU</i> <sub>73</sub>		7 8.4 133°12'	2.0/ 9.		



EPHEMERIDES

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>121313</b>	Tamsin		7 8.4 343°21	0°7/ 8.6 18			<b>274548</b>	2008 SA <sub>255</sub>		7 8.4 0°85 10°5/11.9 18			
5 31	19 36.70	-20 8.1	1.607	2.449	16.4	20.4	5 31	19 31.97	+ 0 2.6	1.404	2.206	20.3	19.7
6 10	19 33.28	-20 9.4	1.527	2.445	12.9	20.1	6 10	19 29.71	+ 0 57.5	1.334	2.204	17.5	19.5
6 20	19 27.18	-20 16.9	1.467	2.441	8.8	19.9	6 20	19 24.84	+ 1 29.8	1.281	2.203	14.6	19.3
6 30	19 19.02	-20 28.9	1.431	2.438	4.2	19.6	6 30	19 17.95	+ 1 34.3	1.247	2.203	12.0	19.1
7 10	19 9.80	-20 43.0	1.419	2.435	1.0	19.3	7 10	19 10.04	+ 1 8.9	1.234	2.204	10.6	19.0
7 20	19 0.69	-20 56.9	1.433	2.433	5.6	19.7	7 20	19 2.22	+ 0 15.2	1.243	2.206	11.2	19.1
7 30	18 52.92	-21 9.2	1.471	2.431	10.1	19.9	7 30	18 55.70	- 1 1.9	1.273	2.209	13.5	19.2
8 9	18 47.42	-21 19.1	1.532	2.429	14.1	20.2	8 9	18 51.42	- 2 34.5	1.324	2.212	16.4	19.4
<b>131268</b>	2001 FW <sub>50</sub>		7 8.4 8°93 8°8/10.9 18				<b>165198</b>	2000 RK <sub>24</sub>		7 8.4 284°85 3°5/ 8.9 18			
5 31	19 31.81	- 4 5.6	1.405	2.224	19.5	18.8	5 31	19 39.08	-16 4.6	1.444	2.282	18.1	20.5
6 10	19 29.52	- 3 11.4	1.339	2.226	16.5	18.6	6 10	19 35.64	-15 33.9	1.349	2.262	14.6	20.2
6 20	19 24.64	- 2 36.2	1.290	2.229	13.2	18.4	6 20	19 29.15	-15 11.0	1.273	2.242	10.5	19.9
6 30	19 17.81	- 2 24.2	1.262	2.233	10.3	18.2	6 30	19 20.13	-14 56.6	1.219	2.221	6.0	19.6
7 10	19 10.03	- 2 36.8	1.255	2.238	8.8	18.1	7 10	19 9.61	-14 50.5	1.189	2.201	3.5	19.4
7 20	19 2.43	- 3 12.6	1.271	2.245	9.8	18.2	7 20	18 58.93	-14 52.1	1.184	2.181	7.0	19.6
7 30	18 56.16	- 4 7.4	1.309	2.253	12.5	18.4	7 30	18 49.57	-15 0.0	1.202	2.160	11.9	19.8
8 9	18 52.10	- 5 14.9	1.367	2.261	15.6	18.6	8 9	18 42.76	-15 12.7	1.241	2.140	16.5	20.0
<b>504039</b>	2005 UW <sub>291</sub>		7 8.4 198°85 1°0/ 8.7 17				<b>192284</b>	1981 EL <sub>11</sub>		7 8.4 111°67 1°7/ 8.7 18			
5 31	19 40.55	-18 53.7	2.407	3.214	12.7	23.9	5 31	19 43.00	-19 12.8	1.376	2.216	18.7	20.1
6 10	19 35.29	-18 51.9	2.312	3.210	10.0	23.7	6 10	19 38.43	-18 54.8	1.308	2.223	14.8	19.8
6 20	19 28.05	-18 54.6	2.241	3.205	6.9	23.5	6 20	19 30.74	-18 43.4	1.259	2.231	10.2	19.6
6 30	19 19.29	-19 0.6	2.195	3.199	3.4	23.3	6 30	19 20.70	-18 37.4	1.232	2.238	5.1	19.3
7 10	19 9.76	-19 8.5	2.178	3.193	1.1	23.1	7 10	19 9.55	-18 35.2	1.230	2.246	1.9	19.1
7 20	19 0.28	-19 16.9	2.189	3.186	4.3	23.3	7 20	18 58.74	-18 35.2	1.254	2.253	6.3	19.4
7 30	18 51.70	-19 24.8	2.229	3.178	7.8	23.5	7 30	18 49.67	-18 36.5	1.301	2.259	11.2	19.7
8 9	18 44.76	-19 32.0	2.294	3.170	10.9	23.7	8 9	18 43.37	-18 38.5	1.369	2.266	15.4	20.0
<b>179441</b>	2002 AC <sub>116</sub>		7 8.4 201°78 1°4/ 8.0 18				<b>76662</b>	2000 HB <sub>41</sub>		7 8.4 137°55 6°1/10.9 18			
5 31	19 38.11	-26 19.5	2.422	3.244	12.2	20.8	5 31	19 35.78	- 3 13.1	2.338	3.106	14.1	19.6
6 10	19 33.45	-26 29.3	2.335	3.242	9.5	20.6	6 10	19 31.48	- 2 49.6	2.259	3.114	11.8	19.5
6 20	19 26.82	-26 39.4	2.271	3.240	6.5	20.4	6 20	19 25.41	- 2 39.8	2.201	3.122	9.4	19.3
6 30	19 18.71	-26 47.5	2.233	3.238	3.2	20.2	6 30	19 18.04	- 2 45.1	2.166	3.129	7.2	19.2
7 10	19 9.88	-26 51.4	2.222	3.236	1.6	20.1	7 10	19 10.05	- 3 5.7	2.158	3.135	6.1	19.1
7 20	19 1.17	-26 49.9	2.240	3.234	4.5	20.3	7 20	19 2.16	- 3 40.3	2.176	3.142	6.9	19.2
7 30	18 53.43	-26 42.7	2.285	3.231	7.7	20.5	7 30	18 55.13	- 4 26.3	2.220	3.148	8.9	19.3
8 9	18 47.35	-26 30.6	2.354	3.229	10.7	20.7	8 9	18 49.59	- 5 20.3	2.288	3.154	11.3	19.5
<b>317542</b>	2002 UH <sub>4</sub>		7 8.4 183°43 7°3/ 8.8 18				<b>478048</b>	2011 SD <sub>261</sub>		7 8.4 292°42 0°6/ 8.3 16			
5 31	19 42.29	- 3 59.7	2.468	3.221	13.8	19.4	5 31	19 37.03	-23 17.4	2.002	2.834	14.0	22.0
6 10	19 36.40	- 2 23.4	2.379	3.222	11.8	19.2	6 10	19 33.13	-23 28.9	1.909	2.822	11.0	21.7
6 20	19 28.65	- 0 55.4	2.314	3.221	9.6	19.1	6 20	19 26.91	-23 43.7	1.838	2.810	7.5	21.5
6 30	19 19.53	+ 0 20.7	2.275	3.221	7.9	19.0	6 30	19 18.88	-23 59.5	1.791	2.799	3.5	21.2
7 10	19 9.74	+ 1 21.7	2.263	3.220	7.3	18.9	7 10	19 9.87	-24 13.7	1.771	2.787	1.0	21.0
7 20	19 0.03	+ 2 5.7	2.280	3.219	8.2	19.0	7 20	19 0.88	-24 24.1	1.778	2.776	5.0	21.3
7 30	18 51.22	+ 2 32.5	2.323	3.218	10.1	19.1	7 30	18 52.94	-24 29.9	1.811	2.764	8.9	21.5
8 9	18 43.94	+ 2 43.8	2.390	3.216	12.2	19.3	8 9	18 46.93	-24 30.9	1.867	2.753	12.5	21.7
<b>418332</b>	2008 GE <sub>7</sub>		7 8.4 171°18 0°0/ 8.3 17				<b>510095</b>	2010 ON <sub>55</sub>		7 8.4 197°90 8°3/12.2 18			
5 31	19 41.23	-20 50.0	1.931	2.754	14.8	22.2	5 31	19 33.53	+ 9 21.7	3.213	3.892	12.2	22.1
6 10	19 36.33	-21 9.0	1.850	2.757	11.6	21.9	6 10	19 29.33	+10 12.4	3.125	3.889	11.0	22.0
6 20	19 28.99	-21 33.6	1.790	2.759	7.8	21.7	6 20	19 23.78	+10 48.9	3.056	3.885	9.8	21.9
6 30	19 19.80	-22 1.2	1.755	2.762	3.7	21.5	6 30	19 17.25	+11 8.8	3.010	3.881	8.8	21.8
7 10	19 9.68	-22 28.7	1.747	2.763	0.7	21.2	7 10	19 10.21	+11 10.4	2.988	3.877	8.3	21.8
7 20	18 59.67	-22 53.5	1.767	2.764	5.0	21.6	7 20	19 3.19	+10 53.7	2.990	3.872	8.5	21.8
7 30	18 50.85	-23 13.9	1.813	2.765	9.0	21.8	7 30	18 56.74	+10 19.9	3.016	3.866	9.3	21.9
8 9	18 44.10	-23 29.6	1.883	2.765	12.6	22.0	8 9	18 51.34	+ 9 31.9	3.066	3.861	10.5	21.9
<b>355665</b>	2008 EH <sub>122</sub>		7 8.4 205°25 4°4/ 6.9 18				<b>510725</b>	2012 VQ <sub>77</sub>		7 8.4 290°79 1°7/ 8.8 18			
5 31	19 40.58	-35 35.0	2.567	3.380	11.8	21.8	5 31	19 37.89	-18 10.7	1.831	2.659	15.2	22.0
6 10	19 35.50	-36 11.6	2.482	3.376	9.5	21.6	6 10	19 34.16	-18 1.4	1.723	2.631	12.2	21.7
6 20	19 28.27	-36 44.2	2.419	3.373	7.1	21.5	6 20	19 27.86	-17 58.2	1.635	2.603	8.5	21.4
6 30	19 19.42	-37 8.6	2.383	3.369	5.0	21.3	6 30	19 19.46	-18 0.6	1.570	2.575	4.4	21.1
7 10	19 9.75	-37 21.5	2.373	3.365	4.5	21.3	7 10	19 9.77	-18 7.3	1.532	2.546	1.8	20.9
7 20	19 0.20	-37 20.9	2.392	3.361	6.2	21.4	7 20	18 59.87	-18 16.6	1.519	2.518	5.6	21.1
7 30	18 51.69	-37 7.3	2.436	3.356	8.6	21.6	7 30	18 50.95	-18 27.2	1.533	2.489	10.0	21.3
8 9	18 44.99	-36 42.6	2.505	3.351	11.1	21.7	8 9	18 44.05	-18 38.3	1.569	2.460	14.1	21.4
<b>100335</b>	1995 SC <sub>12</sub>		7 8.4 36°90 4°9/10.2 16				<b>193582</b>	2001 BF <sub>11</sub>		7 8.4 158°37 0°2/ 8.5 18			
5 31	19 34.53	- 8 7.1	2.071	2.871	14.7	20.1	5 31	19 41.76	-22 30.5	2.364	3.176	12.7	20.8
6 10	19 30.80	- 7 50.0	1.991	2.873	12.1	19.9	6 10	19 36.16	-22 16.7	2.282	3.183	10.0	20.7
6 20	19 25.10	- 7 45.1	1.931	2.876	9.1	19.7	6 20	19 28.56	-22 4.5	2.222	3.189	6.7	20.5
6 30	19 17.94	- 7 53.6	1.895	2.879	6.3	19.6	6 30	19 19.51	-21 52.3	2.189	3.195	3.2	20.2
7 10	19 10.04	- 8 14.9	1.885	2.881	4.9	19.5	7 10	19 9.81	-21 39.1	2.184	3.200	0.6	20.0
7 20	19 2.25	- 8 47.6	1.901	2.884	6.2	19.6	7 20	19 0.31	-21 24.5	2.207	3.204	4.2	20.3
7 30	18 55.40	- 9 28.9	1.943	2.888	9.0	19.7	7 30	18 51.87	-21 8.5	2.259	3.208	7.7	20.6
8 9	18 50.20	-10 15.7	2.008	2.891	11.9	19.9	8 9	18 45.16	-20 51.7	2.337	3.212	10.7	20.8
<b>445495</b>	2010 VZ <sub>191</sub>		7 8.4 276°18 0°3/ 8.3 16				<b>80772</b>	2000 CX <sub>61</sub>		7 8.4 200°15 1°0/ 8.6 18			
5 31	19 35.78	-22 8.7	2.441										

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7 8.4

7 8.5

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>257704</b>	1999 <i>XK</i> <sub>45</sub>		7 8.4 248°97	0°3/ 8.3 17			<b>5782</b>	Akirafujiwara		7 8.5 222°96	2°5/ 8.9 18		
5 31	19 40.86	-21 23.9	1.805	2.633	15.4	21.6	5 31	19 41.28	-17 7.4	1.628	2.455	16.9	17.8
6 10	19 36.50	-21 45.7	1.707	2.618	12.2	21.4	6 10	19 36.83	-16 44.9	1.543	2.450	13.5	17.6
6 20	19 29.44	-22 13.9	1.631	2.602	8.3	21.1	6 20	19 29.61	-16 29.1	1.478	2.445	9.4	17.3
6 30	19 20.18	-22 45.7	1.578	2.586	3.9	20.8	6 30	19 20.24	-16 20.1	1.436	2.439	5.1	17.0
7 10	19 9.65	-23 17.6	1.553	2.569	0.8	20.5	7 10	19 9.73	-16 16.8	1.420	2.433	2.6	16.9
7 20	18 58.99	-23 46.2	1.554	2.551	5.5	20.8	7 20	18 59.31	-16 18.1	1.429	2.426	6.1	17.1
7 30	18 49.47	-24 9.4	1.581	2.533	10.0	21.1	7 30	18 50.22	-16 23.1	1.464	2.420	10.5	17.3
8 9	18 42.15	-24 26.7	1.631	2.515	14.0	21.3	8 9	18 43.48	-16 30.6	1.522	2.412	14.5	17.5
<b>374879</b>	2006 <i>VN</i> <sub>150</sub>		7 8.4 196°26	2°7/ 9.0 17			<b>178458</b>	1999 <i>RQ</i> <sub>56</sub>		7 8.5 347°87	6°7/ 11.0 18		
5 31	19 40.44	-16 1.7	1.814	2.633	15.7	21.5	5 31	19 30.98	-5 2.2	1.661	2.472	17.3	19.1
6 10	19 35.80	-15 41.6	1.730	2.632	12.5	21.2	6 10	19 28.66	-4 47.2	1.578	2.463	14.5	18.9
6 20	19 28.70	-15 28.7	1.666	2.630	8.8	21.0	6 20	19 24.03	-4 50.3	1.513	2.455	11.4	18.6
6 30	19 19.71	-15 22.9	1.627	2.628	4.9	20.8	6 30	19 17.61	-5 13.6	1.470	2.448	8.4	18.5
7 10	19 9.77	-15 23.4	1.613	2.625	2.7	20.6	7 10	19 10.22	-5 57.2	1.450	2.442	6.7	18.4
7 20	18 59.93	-15 29.0	1.627	2.622	5.7	20.8	7 20	19 2.84	-6 58.4	1.454	2.437	7.9	18.4
7 30	18 51.30	-15 38.6	1.666	2.619	9.6	21.0	7 30	18 56.51	-8 12.7	1.482	2.433	10.8	18.6
8 9	18 44.75	-15 50.7	1.729	2.615	13.3	21.2	8 9	18 52.12	-9 34.3	1.533	2.430	14.1	18.8
<b>152506</b>	2005 <i>XN</i> <sub>1</sub>		7 8.4 114°35	0°7/ 8.2 18			<b>250750</b>	2005 <i>SM</i> <sub>179</sub>		7 8.5 270°63	4°2/ 9.9 18		
5 31	19 36.64	-23 35.6	2.538	3.357	11.7	20.9	5 31	19 34.59	-9 23.9	2.347	3.143	13.3	21.3
6 10	19 32.14	-23 52.5	2.460	3.366	9.1	20.7	6 10	19 30.78	-9 12.0	2.247	3.128	10.9	21.1
6 20	19 25.85	-24 11.7	2.405	3.375	6.1	20.5	6 20	19 25.12	-9 10.4	2.168	3.114	8.2	20.9
6 30	19 18.26	-24 31.0	2.376	3.383	2.9	20.3	6 30	19 18.03	-9 19.8	2.113	3.100	5.5	20.7
7 10	19 10.05	-24 48.3	2.376	3.391	0.9	20.2	7 10	19 10.15	-9 40.0	2.085	3.085	4.2	20.6
7 20	19 1.98	-25 2.0	2.404	3.400	4.0	20.4	7 20	19 2.22	-10 9.6	2.084	3.070	5.6	20.7
7 30	18 54.81	-25 11.3	2.459	3.408	7.2	20.6	7 30	18 55.05	-10 46.8	2.110	3.056	8.4	20.8
8 9	18 49.17	-25 16.2	2.539	3.415	9.9	20.8	8 9	18 49.34	-11 28.7	2.161	3.041	11.3	21.0
<b>354059</b>	2001 <i>TR</i> <sub>97</sub>		7 8.4 288°97	5°1/ 6.9 18			<b>16709</b>	Auratian		7 8.5 268°56	0°0/ 8.4 18		
5 31	19 40.28	-34 58.6	2.060	2.887	13.8	20.4	5 31	19 36.77	-21 51.1	2.238	3.062	13.0	18.7
6 10	19 35.92	-35 37.9	1.972	2.875	11.2	20.2	6 10	19 32.65	-21 59.3	2.144	3.052	10.2	18.5
6 20	19 28.92	-36 13.6	1.904	2.863	8.3	20.0	6 20	19 26.45	-22 11.1	2.072	3.042	6.9	18.3
6 30	19 19.87	-36 40.3	1.861	2.851	5.8	19.8	6 30	19 18.66	-22 24.8	2.026	3.032	3.2	18.1
7 10	19 9.73	-36 53.7	1.844	2.839	5.2	19.7	7 10	19 10.03	-22 38.2	2.006	3.022	0.6	17.8
7 20	18 59.64	-36 51.1	1.853	2.827	7.3	19.8	7 20	19 1.43	-22 49.6	2.014	3.012	4.5	18.1
7 30	18 50.81	-36 32.7	1.888	2.816	10.3	20.0	7 30	18 53.75	-22 58.1	2.049	3.002	8.1	18.3
8 9	18 44.19	-36 1.5	1.945	2.804	13.2	20.2	8 9	18 47.76	-23 3.2	2.109	2.992	11.4	18.5
<b>179228</b>	2001 <i>UX</i> <sub>14</sub>		7 8.5 175°61	1°5/ 9.0 18			<b>352299</b>	2007 <i>TB</i> <sub>441</sub>		7 8.5 292°05	0°5/ 8.6 16		
5 31	19 36.60	-16 43.1	2.827	3.629	11.1	21.2	5 31	19 36.72	-18 37.1	1.903	2.732	14.7	21.4
6 10	19 31.89	-16 39.0	2.738	3.631	8.8	21.1	6 10	19 33.20	-19 5.3	1.796	2.706	11.7	21.1
6 20	19 25.58	-16 39.7	2.672	3.633	6.1	20.9	6 20	19 27.22	-19 42.9	1.711	2.681	8.1	20.9
6 30	19 18.13	-16 44.6	2.633	3.635	3.2	20.7	6 30	19 19.20	-20 27.8	1.649	2.656	3.9	20.6
7 10	19 10.10	-16 52.8	2.622	3.635	1.6	20.6	7 10	19 9.93	-21 16.7	1.614	2.630	0.8	20.3
7 20	19 2.16	-17 3.2	2.641	3.636	3.8	20.8	7 20	19 0.42	-22 6.0	1.606	2.605	5.2	20.5
7 30	18 54.96	-17 14.9	2.687	3.636	6.6	21.0	7 30	18 51.82	-22 52.3	1.624	2.579	9.6	20.7
8 9	18 49.06	-17 27.0	2.760	3.635	9.3	21.1	8 9	18 45.15	-23 33.6	1.665	2.554	13.6	20.9
<b>227484</b>	2005 <i>XB</i> <sub>3</sub>		7 8.5 353°18	3°1/ 7.6 17			<b>499020</b>	2009 <i>CF</i> <sub>62</sub>		7 8.5 68°54	2°8/ 8.0 17		
5 31	19 37.88	-27 5.4	1.443	2.297	17.3	19.9	5 31	19 43.84	-27 56.5	1.322	2.172	18.8	21.1
6 10	19 34.74	-27 44.4	1.370	2.294	13.6	19.7	6 10	19 39.41	-28 11.3	1.261	2.182	14.8	20.9
6 20	19 28.48	-28 26.3	1.316	2.292	9.4	19.4	6 20	19 31.56	-28 26.0	1.219	2.193	10.1	20.7
6 30	19 19.77	-29 5.9	1.284	2.290	5.0	19.2	6 30	19 21.15	-28 35.4	1.199	2.204	5.2	20.4
7 10	19 9.78	-29 37.4	1.277	2.289	3.4	19.1	7 10	19 9.62	-28 35.3	1.202	2.215	3.0	20.3
7 20	18 59.94	-29 57.1	1.294	2.288	7.1	19.3	7 20	18 58.57	-28 23.7	1.231	2.227	7.0	20.6
7 30	18 51.71	-30 3.8	1.335	2.288	11.5	19.5	7 30	18 49.53	-28 1.9	1.283	2.238	11.7	20.9
8 9	18 46.18	-29 59.0	1.396	2.288	15.5	19.8	8 9	18 43.54	-27 33.0	1.356	2.249	15.8	21.2
<b>386381</b>	2008 <i>UR</i> <sub>60</sub>		7 8.5 312°58	1°7/ 8.1 18			<b>474777</b>	2005 <i>QL</i> <sub>126</sub>		7 8.5 277°29	0°5/ 8.3 18		
5 31	19 37.06	-25 25.6	1.520	2.371	16.7	20.6	5 31	19 36.72	-22 52.4	2.194	3.020	13.1	21.9
6 10	19 34.14	-25 38.1	1.424	2.347	13.3	20.3	6 10	19 32.65	-23 5.8	2.104	3.014	10.3	21.7
6 20	19 28.20	-25 53.5	1.348	2.324	9.1	20.0	6 20	19 26.47	-23 22.5	2.036	3.007	6.9	21.5
6 30	19 19.73	-26 8.2	1.294	2.302	4.5	19.7	6 30	19 18.68	-23 40.4	1.994	3.001	3.3	21.2
7 10	19 9.79	-26 18.6	1.264	2.279	2.0	19.4	7 10	19 10.06	-23 57.0	1.978	2.994	0.8	21.0
7 20	18 59.71	-26 21.5	1.259	2.257	6.5	19.7	7 20	19 1.48	-24 10.4	1.990	2.988	4.6	21.3
7 30	18 50.97	-26 16.1	1.278	2.236	11.4	19.9	7 30	18 53.88	-24 19.6	2.029	2.981	8.2	21.5
8 9	18 44.79	-26 3.4	1.318	2.216	15.8	20.1	8 9	18 48.01	-24 24.4	2.092	2.975	11.5	21.7
<b>360967</b>	2005 <i>UJ</i> <sub>183</sub>		7 8.5 249°70	2°1/ 7.6 18			<b>18195</b>	2000 <i>QG</i> <sub>116</sub>		7 8.5 281°65	0°7/ 8.6 18 R		
5 31	19 37.39	-27 26.6	2.531	3.352	11.7	21.6	5 31	19 40.33	-19 33.0	1.537	2.375	17.2	19.6
6 10	19 33.01	-27 58.2	2.435	3.341	9.2	21.4	6 10	19 36.74	-19 42.0	1.432	2.347	13.8	19.3
6 20	19 26.64	-28 30.8	2.361	3.329	6.3	21.2	6 20	19 30.06	-19 59.4	1.345	2.318	9.6	19.0
6 30	19 18.73	-29 1.5	2.314	3.318	3.4	21.0	6 30	19 20.71	-20 23.5	1.282	2.289	4.7	18.6
7 10	19 10.00	-29 27.2	2.295	3.306	2.3	20.9	7 10	19 9.64	-20 51.2	1.243	2.259	1.0	18.3
7 20	19 1.26	-29 45.7	2.304	3.293	4.8	21.0	7 20	18 58.18	-21 19.0	1.229	2.229	6.3	18.6
7 30	18 53.37	-29 56.0	2.340	3.281	7.9	21.2	7 30	18 47.88	-21 44.3	1.240	2.199	11.7	18.8
8 9	18 47.06	-29 58.6	2.400	3.268	10.7	21.3	8 9	18 40.08	-22 5.7	1.273	2.168	16.5	19.0
<b>19594</b>	1999 <i>NL</i> <sub>31</sub>		7 8.5 11°77	3°6/ 8.2 18 R			<b>290419</b>	2005 <i>TL</i> <sub>64</sub>		7 8.5 336°86	0°1/ 8.4 18</		

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7 8.5

7 8.5

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>238141</b>	2003 <i>RN</i> <sub>13</sub>		7 8.5 267°48	3°1/ 9.3 18			<b>315044</b>	2007 <i>CR</i> <sub>44</sub>		7 8.5 174°72	2°7/ 9.6 18		
5 31	19 37.06	-14 19.8	1.891	2.710	15.2	20.6	5 31	19 34.71	-12 21.8	2.413	3.217	12.7	21.1
6 10	19 33.12	-14 4.5	1.804	2.705	12.2	20.4	6 10	19 30.76	-12 30.3	2.327	3.217	10.2	20.9
6 20	19 26.89	-13 57.9	1.738	2.700	8.7	20.2	6 20	19 25.03	-12 48.2	2.261	3.217	7.3	20.7
6 30	19 18.92	-14 0.1	1.696	2.695	5.1	19.9	6 30	19 17.97	-13 15.0	2.222	3.218	4.4	20.6
7 10	19 10.02	-14 10.2	1.680	2.690	3.1	19.8	7 10	19 10.24	-13 49.1	2.209	3.218	2.7	20.4
7 20	19 1.19	-14 26.9	1.690	2.685	5.6	19.9	7 20	19 2.56	-14 28.5	2.224	3.218	4.6	20.6
7 30	18 53.42	-14 48.3	1.726	2.680	9.3	20.1	7 30	18 55.69	-15 11.0	2.267	3.218	7.5	20.8
8 9	18 47.56	-15 12.5	1.785	2.674	12.8	20.3	8 9	18 50.25	-15 54.1	2.335	3.218	10.4	20.9
<b>192950</b>	2000 <i>BQ</i> <sub>2</sub>		7 8.5 123°35	1°9/ 7.9 18			<b>371406</b>	2006 <i>RM</i> <sub>86</sub>		7 8.5 173°42	3°8/ 7.5 17		
5 31	19 42.44	-28 24.9	2.752	3.560	11.3	20.6	5 31	19 43.75	-30 9.1	1.712	2.546	15.9	21.8
6 10	19 36.40	-28 40.7	2.684	3.581	8.8	20.4	6 10	19 38.88	-30 43.9	1.636	2.547	12.6	21.5
6 20	19 28.58	-28 55.3	2.639	3.603	6.0	20.3	6 20	19 31.06	-31 17.8	1.580	2.548	8.8	21.3
6 30	19 19.52	-29 6.1	2.621	3.623	3.2	20.1	6 30	19 20.96	-31 45.6	1.549	2.549	5.2	21.1
7 10	19 9.94	-29 11.0	2.632	3.643	2.0	20.0	7 10	19 9.71	-32 2.3	1.542	2.550	4.0	21.0
7 20	19 0.62	-29 9.0	2.673	3.662	4.3	20.2	7 20	18 58.65	-32 5.2	1.563	2.550	6.9	21.2
7 30	18 52.32	-29 0.3	2.742	3.680	7.0	20.4	7 30	18 49.15	-31 54.5	1.608	2.550	10.7	21.4
8 9	18 45.62	-28 46.0	2.837	3.698	9.5	20.6	8 9	18 42.21	-31 32.9	1.676	2.550	14.3	21.7
<b>307020</b>	2001 <i>XF</i> <sub>78</sub>		7 8.5 221°90	2°3/ 7.4 18			<b>438245</b>	2005 <i>WU</i> <sub>3</sub>		7 8.5 273°65	4°2/ 7.5 17		
5 31	19 37.97	-26 43.6	2.386	3.209	12.3	21.1	5 31	19 44.54	-36 19.0	2.653	3.456	11.7	21.1
6 10	19 33.58	-27 31.1	2.297	3.204	9.6	20.9	6 10	19 38.72	-36 32.2	2.539	3.427	9.5	20.9
6 20	19 27.09	-28 21.1	2.231	3.199	6.6	20.7	6 20	19 30.60	-36 39.9	2.447	3.398	7.1	20.7
6 30	19 18.99	-29 9.7	2.191	3.194	3.6	20.5	6 30	19 20.69	-36 38.2	2.381	3.368	4.9	20.5
7 10	19 10.01	-29 53.3	2.179	3.189	2.5	20.4	7 10	19 9.79	-36 23.9	2.343	3.337	4.3	20.4
7 20	19 1.02	-30 28.7	2.194	3.183	5.1	20.5	7 20	18 58.86	-35 55.5	2.333	3.306	6.0	20.5
7 30	18 52.95	-30 54.5	2.238	3.177	8.3	20.7	7 30	18 48.93	-35 13.9	2.351	3.275	8.7	20.6
8 9	18 46.56	-31 10.8	2.305	3.171	11.2	20.9	8 9	18 40.85	-34 21.8	2.395	3.243	11.4	20.8
<b>188124</b>	2002 <i>CR</i> <sub>28</sub>		7 8.5 185°50	0°9/ 8.1 18			<b>357727</b>	2005 <i>QB</i> <sub>138</sub>		7 8.5 335°68	3°9/ 9.9 18		
5 31	19 37.20	-23 59.8	2.946	3.757	10.5	21.5	5 31	19 34.29	-10 28.4	2.058	2.866	14.5	20.9
6 10	19 32.43	-24 25.7	2.855	3.757	8.2	21.3	6 10	19 30.76	-10 22.9	1.972	2.863	11.8	20.7
6 20	19 26.02	-24 53.8	2.788	3.756	5.5	21.1	6 20	19 25.22	-10 28.8	1.907	2.860	8.7	20.5
6 30	19 18.39	-25 21.8	2.749	3.755	2.6	21.0	6 30	19 18.14	-10 46.5	1.866	2.857	5.6	20.3
7 10	19 10.13	-25 47.6	2.738	3.753	1.1	20.8	7 10	19 10.26	-11 15.1	1.850	2.855	3.9	20.2
7 20	19 1.92	-26 9.5	2.757	3.751	3.8	21.0	7 20	19 2.43	-11 52.5	1.862	2.852	5.6	20.3
7 30	18 54.44	-26 26.3	2.804	3.748	6.6	21.2	7 30	18 55.52	-12 36.2	1.899	2.850	8.7	20.5
8 9	18 48.28	-26 38.1	2.877	3.745	9.1	21.4	8 9	18 50.27	-13 23.0	1.960	2.848	11.9	20.7
<b>437945</b>	2002 <i>RS</i> <sub>198</sub>		7 8.5 303°23	1°9/ 7.9 17			<b>435342</b>	2007 <i>VY</i> <sub>113</sub>		7 8.5 341°52	1°1/ 8.8 18		
5 31	19 37.37	-25 27.7	1.774	2.614	15.1	21.5	5 31	19 31.72	-19 0.5	1.373	2.232	17.7	20.5
6 10	19 33.98	-25 52.1	1.673	2.590	12.0	21.2	6 10	19 29.97	-19 5.1	1.290	2.217	14.1	20.2
6 20	19 27.88	-26 19.9	1.592	2.566	8.2	20.9	6 20	19 25.36	-19 18.6	1.225	2.203	9.7	19.9
6 30	19 19.55	-26 47.7	1.535	2.542	4.1	20.6	6 30	19 18.42	-19 39.9	1.182	2.190	4.8	19.6
7 10	19 9.89	-27 11.6	1.504	2.518	2.1	20.4	7 10	19 10.19	-20 6.1	1.162	2.178	1.3	19.3
7 20	19 0.07	-27 28.2	1.499	2.494	6.0	20.6	7 20	19 1.94	-20 34.1	1.165	2.167	6.1	19.6
7 30	18 51.37	-27 36.0	1.518	2.471	10.4	20.8	7 30	18 55.05	-21 1.0	1.192	2.158	11.1	19.8
8 9	18 44.89	-27 35.5	1.560	2.448	14.4	21.0	8 9	18 50.64	-21 24.9	1.239	2.150	15.6	20.1
<b>311541</b>	2005 <i>YG</i> <sub>213</sub>		7 8.5 125°52	3°4/ 7.9 18			<b>265863</b>	2005 <i>YH</i> <sub>162</sub>		7 8.5 226°91	0°7/ 8.8 18		
5 31	19 43.32	-34 53.5	2.619	3.426	11.8	20.3	5 31	19 35.31	-18 5.9	2.756	3.565	11.2	21.2
6 10	19 37.32	-34 50.7	2.539	3.432	9.4	20.1	6 10	19 31.10	-18 26.4	2.658	3.557	8.8	21.0
6 20	19 29.30	-34 42.2	2.482	3.439	6.7	20.0	6 20	19 25.23	-18 52.6	2.584	3.549	6.0	20.8
6 30	19 19.88	-34 25.0	2.452	3.445	4.3	19.8	6 30	19 18.09	-19 23.0	2.536	3.541	3.0	20.6
7 10	19 9.89	-33 57.4	2.450	3.451	3.5	19.8	7 10	19 10.28	-19 55.8	2.517	3.532	0.8	20.4
7 20	19 0.21	-33 19.4	2.477	3.457	5.2	19.9	7 20	19 2.46	-20 28.9	2.526	3.524	3.7	20.6
7 30	18 51.69	-32 32.4	2.531	3.463	7.8	20.1	7 30	18 55.32	-21 0.8	2.564	3.515	6.8	20.8
8 9	18 44.99	-31 39.2	2.611	3.469	10.3	20.2	8 9	18 49.50	-21 30.1	2.627	3.505	9.6	21.0
<b>19258</b>	Gongyi		7 8.5 353°62	3°3/ 9.6 18			<b>283884</b>	2004 <i>BT</i> <sub>22</sub>		7 8.5 299°49	1°4/ 9.0 18		
5 31	19 33.15	-13 9.5	1.129	1.989	20.7	17.6	5 31	19 35.71	-16 10.6	1.827	2.655	15.3	20.2
6 10	19 31.48	-13 24.8	1.059	1.984	16.7	17.3	6 10	19 32.46	-16 37.5	1.726	2.634	12.2	19.9
6 20	19 26.56	-13 58.9	1.006	1.980	11.9	17.0	6 20	19 26.75	-17 15.9	1.645	2.613	8.5	19.7
6 30	19 19.00	-14 51.4	0.973	1.977	6.7	16.7	6 30	19 19.03	-18 4.3	1.588	2.593	4.4	19.4
7 10	19 10.01	-15 58.3	0.962	1.975	3.4	16.5	7 10	19 10.10	-18 59.6	1.557	2.572	1.5	19.1
7 20	19 1.07	-17 13.3	0.973	1.974	7.1	16.7	7 20	19 0.97	-19 57.9	1.552	2.551	5.3	19.3
7 30	18 53.78	-18 29.6	1.006	1.975	12.4	17.0	7 30	18 52.80	-20 55.3	1.573	2.531	9.7	19.5
8 9	18 49.37	-19 41.6	1.058	1.976	17.2	17.3	8 9	18 46.58	-21 48.8	1.618	2.511	13.7	19.7
<b>113419</b>	2002 <i>SM</i> <sub>33</sub>		7 8.5 335°76	0°5/ 8.6 17			<b>390900</b>	2005 <i>ES</i> <sub>29</sub>		7 8.5 241°89	2°7/ 9.6 18		
5 31	19 36.82	-21 13.6	1.747	2.585	15.4	19.2	5 31	19 37.95	-12 11.2	2.360	3.157	13.2	22.2
6 10	19 33.21	-21 9.0	1.664	2.580	12.2	19.0	6 10	19 33.51	-12 26.6	2.254	3.141	10.7	22.0
6 20	19 27.09	-21 8.7	1.602	2.575	8.3	18.8	6 20	19 27.07	-12 52.5	2.169	3.124	7.7	21.8
6 30	19 19.05	-21 11.2	1.563	2.570	4.0	18.5	6 30	19 19.05	-13 28.4	2.110	3.106	4.5	21.6
7 10	19 10.02	-21 14.5	1.549	2.565	0.8	18.2	7 10	19 10.12	-14 12.6	2.079	3.088	2.7	21.4
7 20	19 1.10	-21 17.1	1.562	2.561	5.2	18.5	7 20	19 1.06	-15 2.7	2.076	3.070	4.8	21.5
7 30	18 53.41	-21 18.0	1.599	2.557	9.5	18.8	7 30	18 52.75	-15 55.8	2.101	3.050	8.1	21.7
8 9	18 47.84	-21 17.2	1.660	2.554	13.3	19.0	8 9	18 45.95	-16 49.1	2.151	3.031	11.3	21.9
<b>274327</b>	2008 <i>RS</i> <sub>11</sub>		7 8.5 37°61	7°6/11.4 17			<b>310367</b>	2011 <i>UT</i> <sub>335</sub>		7 8.5 186°95			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>102470</b>	1999 <i>TQ</i> <sub>239</sub>		7 8.5 247°23	0°8/ 8.2 18			<b>432799</b>	2011 <i>GR</i> <sub>7</sub>		7 8.5 213°97	13°2/13.2 17		
5 31	19 40.19	-21 38.4	1.639	2.476	16.4	20.4	5 31	19 36.18	+11 40.9	1.975	2.675	18.4	21.2
6 10	19 36.22	-22 12.3	1.553	2.468	12.9	20.2	6 10	19 32.33	+13 2.2	1.900	2.673	16.8	21.0
6 20	19 29.41	-22 53.9	1.487	2.460	8.8	19.9	6 20	19 26.35	+14 1.3	1.842	2.671	15.2	20.9
6 30	19 20.30	-23 39.5	1.444	2.451	4.1	19.6	6 30	19 18.73	+14 32.3	1.801	2.669	13.9	20.8
7 10	19 9.90	-24 24.6	1.427	2.443	1.2	19.4	7 10	19 10.24	+14 31.7	1.782	2.666	13.2	20.8
7 20	18 59.46	-25 4.8	1.436	2.434	5.9	19.7	7 20	19 1.78	+13 58.8	1.783	2.664	13.4	20.8
7 30	18 50.31	-25 37.5	1.470	2.425	10.5	19.9	7 30	18 54.29	+12 56.5	1.806	2.661	14.3	20.8
8 9	18 43.55	-26 1.9	1.527	2.416	14.6	20.2	8 9	18 48.56	+11 30.6	1.848	2.658	15.8	20.9
<b>48168</b>	2001 <i>HC</i> <sub>12</sub>		7 8.5 183°69	3°3/ 9.3 18			<b>19664</b>	Yancey		7 8.5 14°51	5°8/ 7.3 18		
5 31	19 39.77	-14 20.8	1.693	2.514	16.6	19.7	5 31	19 39.08	-35 42.9	1.682	2.523	15.8	18.0
6 10	19 35.49	-14 4.2	1.613	2.514	13.3	19.5	6 10	19 35.37	-36 19.3	1.616	2.527	12.8	17.8
6 20	19 28.64	-13 57.1	1.552	2.514	9.5	19.3	6 20	19 28.72	-36 49.9	1.571	2.532	9.5	17.6
6 30	19 19.82	-13 59.8	1.515	2.514	5.5	19.1	6 30	19 19.89	-37 8.7	1.548	2.538	6.6	17.5
7 10	19 10.01	-14 11.2	1.503	2.514	3.3	18.9	7 10	19 10.04	-37 11.4	1.549	2.545	6.0	17.4
7 20	19 0.30	-14 29.5	1.518	2.513	6.0	19.1	7 20	19 0.54	-36 56.0	1.576	2.552	8.0	17.6
7 30	18 51.86	-14 52.6	1.558	2.512	10.0	19.3	7 30	18 52.67	-36 24.1	1.626	2.561	11.2	17.8
8 9	18 45.59	-15 18.5	1.620	2.511	13.8	19.5	8 9	18 47.37	-35 39.7	1.698	2.570	14.2	18.0
<b>510504</b>	2012 <i>BW</i> <sub>3</sub>		7 8.5 173°85	1°6/ 7.9 18			<b>468798</b>	2012 <i>FX</i> <sub>72</sub>		7 8.5 103°73	3°3/ 6.9 16		
5 31	19 37.77	-27 47.1	2.895	3.709	10.6	22.5	5 31	19 46.40	-24 49.4	1.737	2.561	16.1	21.6
6 10	19 32.92	-28 0.4	2.809	3.711	8.3	22.4	6 10	19 40.78	-26 27.8	1.676	2.584	12.5	21.4
6 20	19 26.37	-28 13.1	2.746	3.712	5.6	22.2	6 20	19 32.28	-28 11.9	1.638	2.607	8.5	21.2
6 30	19 18.60	-28 23.1	2.710	3.713	2.9	22.0	6 30	19 21.56	-29 54.1	1.626	2.629	4.6	21.1
7 10	19 10.24	-28 28.5	2.702	3.714	1.8	21.9	7 10	19 9.74	-31 26.4	1.642	2.650	3.6	21.0
7 20	19 1.99	-28 28.2	2.724	3.715	4.0	22.1	7 20	18 58.12	-32 42.7	1.686	2.671	6.7	21.3
7 30	18 54.56	-28 21.9	2.774	3.716	6.8	22.3	7 30	18 48.01	-33 40.5	1.756	2.691	10.5	21.5
8 9	18 48.54	-28 10.4	2.849	3.716	9.3	22.4	8 9	18 40.41	-34 20.7	1.849	2.710	13.8	21.8
<b>365057</b>	2008 <i>YJ</i> <sub>12</sub>		7 8.5 172°95	1°5/ 8.1 17			<b>510870</b>	2013 <i>CJ</i> <sub>109</sub>		7 8.5 145°87	2°4/ 9.7 18		
5 31	19 43.30	-23 36.7	1.530	2.368	17.3	21.7	5 31	19 36.02	-11 58.5	2.613	3.408	12.1	21.6
6 10	19 38.75	-24 8.3	1.454	2.370	13.6	21.5	6 10	19 31.63	-12 22.6	2.529	3.414	9.7	21.4
6 20	19 31.12	-24 45.4	1.398	2.371	9.2	21.2	6 20	19 25.57	-12 56.1	2.466	3.421	6.9	21.2
6 30	19 21.08	-25 23.5	1.365	2.373	4.4	20.9	6 30	19 18.28	-13 38.2	2.430	3.427	4.0	21.1
7 10	19 9.78	-25 57.8	1.358	2.373	1.8	20.8	7 10	19 10.36	-14 26.8	2.423	3.432	2.4	21.0
7 20	18 58.62	-26 24.2	1.377	2.374	6.3	21.1	7 20	19 2.49	-15 19.5	2.444	3.438	4.2	21.1
7 30	18 49.03	-26 41.2	1.421	2.374	10.9	21.3	7 30	18 55.39	-16 13.6	2.493	3.443	7.0	21.3
8 9	18 42.09	-26 49.5	1.486	2.373	15.0	21.6	8 9	18 49.64	-17 6.9	2.569	3.448	9.7	21.5
<b>504115</b>	2006 <i>PF</i> <sub>19</sub>		7 8.5 345°76	4°9/10.1 17			<b>208478</b>	2001 <i>UO</i> <sub>132</sub>		7 8.5 246°40	4°5/ 9.2 17		
5 31	19 30.62	-10 47.8	1.086	1.947	21.2	20.6	5 31	19 40.75	-13 45.9	1.509	2.335	18.0	20.3
6 10	19 29.64	-10 49.7	1.013	1.936	17.4	20.3	6 10	19 36.68	-13 7.5	1.423	2.327	14.6	20.0
6 20	19 25.44	-11 12.8	0.956	1.927	12.8	20.0	6 20	19 29.72	-12 38.4	1.357	2.319	10.6	19.8
6 30	19 18.58	-11 58.5	0.918	1.918	7.9	19.7	6 30	19 20.46	-12 19.8	1.313	2.310	6.6	19.5
7 10	19 10.21	-13 4.4	0.901	1.912	4.9	19.5	7 10	19 9.95	-12 12.3	1.293	2.301	4.5	19.4
7 20	19 1.82	-14 24.9	0.906	1.906	7.8	19.6	7 20	18 59.46	-12 15.2	1.299	2.292	7.2	19.5
7 30	18 55.01	-15 52.2	0.932	1.903	12.9	19.9	7 30	18 50.34	-12 27.1	1.329	2.282	11.5	19.7
8 9	18 51.08	-17 18.8	0.977	1.900	17.7	20.2	8 9	18 43.65	-12 45.7	1.380	2.273	15.6	19.9
<b>61248</b>	2000 <i>OH</i> <sub>23</sub>		7 8.5 339°96	4°0/ 7.8 18			<b>151041</b>	2001 <i>UX</i> <sub>201</sub>		7 8.5 131°39	0°4/ 8.6 17		
5 31	19 37.04	-29 43.9	1.305	2.167	18.3	18.3	5 31	19 41.32	-20 48.4	1.907	2.730	14.9	20.9
6 10	19 34.57	-30 6.2	1.228	2.156	14.5	18.0	6 10	19 36.37	-20 49.6	1.833	2.740	11.7	20.7
6 20	19 28.68	-30 27.5	1.170	2.146	10.2	17.8	6 20	19 29.05	-20 55.3	1.780	2.749	7.9	20.5
6 30	19 20.05	-30 42.5	1.132	2.137	5.8	17.5	6 30	19 19.97	-21 3.5	1.751	2.758	3.8	20.3
7 10	19 9.97	-30 45.9	1.118	2.129	4.1	17.4	7 10	19 10.07	-21 12.1	1.750	2.766	0.8	20.1
7 20	19 0.01	-30 35.0	1.127	2.121	7.8	17.5	7 20	19 0.40	-21 19.4	1.775	2.774	4.9	20.4
7 30	18 51.84	-30 10.3	1.158	2.115	12.4	17.8	7 30	18 51.98	-21 24.7	1.828	2.781	8.9	20.6
8 9	18 46.66	-29 35.0	1.210	2.110	16.8	18.0	8 9	18 45.62	-21 27.6	1.904	2.788	12.3	20.9
<b>151471</b>	2002 <i>GD</i> <sub>161</sub>		7 8.5 349°46	2°0/ 9.3 18			<b>515418</b>	2013 <i>HF</i> <sub>92</sub>		7 8.5 185°54	6°4/11.2 18		
5 31	19 34.20	-14 45.8	2.157	2.975	13.6	19.5	5 31	19 34.54	+ 1 21.1	3.099	3.829	11.7	22.9
6 10	19 30.65	-15 2.4	2.072	2.973	10.8	19.3	6 10	19 30.18	+ 1 59.6	3.010	3.829	10.1	22.8
6 20	19 25.13	-15 28.4	2.007	2.971	7.6	19.1	6 20	19 24.45	+ 2 26.4	2.942	3.828	8.5	22.6
6 30	19 18.12	-16 2.6	1.968	2.970	4.1	18.9	6 30	19 17.72	+ 2 39.7	2.897	3.827	7.1	22.5
7 10	19 10.33	-16 42.9	1.955	2.968	2.0	18.8	7 10	19 10.48	+ 2 38.6	2.879	3.825	6.4	22.5
7 20	19 2.58	-17 26.7	1.970	2.967	4.6	18.9	7 20	19 3.27	+ 2 23.2	2.888	3.823	6.9	22.5
7 30	18 55.72	-18 11.4	2.011	2.966	8.1	19.1	7 30	18 56.66	+ 1 55.1	2.922	3.820	8.1	22.6
8 9	18 50.48	-18 54.6	2.077	2.966	11.3	19.3	8 9	18 51.15	+ 1 16.6	2.982	3.817	9.8	22.7
<b>519912</b>	2013 <i>QH</i> <sub>96</sub>		7 8.5 238°97	3°9/ 7.8 17			<b>214962</b>	2007 <i>YE</i> <sub>11</sub>		7 8.5 305°77	0°7/ 8.8 18		
5 31	19 44.71	-31 32.7	1.761	2.591	15.7	22.4	5 31	19 35.71	-17 41.7	2.107	2.930	13.7	20.0
6 10	19 39.71	-31 51.9	1.674	2.582	12.5	22.1	6 10	19 31.97	-18 11.8	2.019	2.926	10.8	19.8
6 20	19 31.71	-32 8.3	1.607	2.573	8.9	21.9	6 20	19 26.12	-18 50.4	1.953	2.921	7.4	19.6
6 30	19 21.34	-32 16.8	1.564	2.564	5.3	21.7	6 30	19 18.65	-19 35.3	1.911	2.917	3.6	19.4
7 10	19 9.75	-32 13.2	1.547	2.554	4.0	21.6	7 10	19 10.30	-20 23.6	1.897	2.913	0.9	19.2
7 20	18 58.28	-31 55.3	1.556	2.544	6.9	21.7	7 20	19 1.95	-21 12.0	1.910	2.909	4.6	19.4
7 30	18 48.32	-31 24.3	1.591	2.534	10.8	21.9	7 30	18 54.54	-21 57.7	1.950	2.905	8.3	19.6
8 9	18 40.93	-30 43.5	1.648	2.523	14.4	22.1	8 9	18 48.84	-22 39.0	2.014	2.901	11.7	19.8
<b>70976</b>	1999 <i>X5</i> <sub>23</sub>		7 8.5 191°83	1°0/ 8.2 18			<b>380266</b>	2001 <i>YU</i> <sub>47</sub>					

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>483158</b>	2015 $PO_8$		7 8.5 284°51	7.3/11.4	18		<b>164486</b>	2006 $FR_{34}$		7 8.5 18°42	0.7/ 8.4	17	
5 31	19 33.38	+ 0 1.7	2.369	3.127	14.2	21.4	5 31	19 37.41	-24 51.7	1.350	2.207	18.0	19.2
6 10	19 29.82	+ 0 32.4	2.276	3.117	12.3	21.2	6 10	19 34.25	-24 39.0	1.288	2.214	14.1	19.0
6 20	19 24.50	+ 0 48.3	2.202	3.107	10.1	21.0	6 20	19 28.06	-24 27.5	1.245	2.223	9.5	18.7
6 30	19 17.84	+ 0 46.9	2.151	3.097	8.3	20.9	6 30	19 19.63	-24 15.0	1.224	2.232	4.5	18.5
7 10	19 10.46	+ 0 27.4	2.125	3.087	7.3	20.8	7 10	19 10.21	-23 59.5	1.226	2.242	1.1	18.3
7 20	19 3.07	- 0 9.6	2.124	3.078	7.9	20.8	7 20	19 1.19	-23 40.1	1.253	2.254	6.0	18.6
7 30	18 56.41	- 1 1.7	2.149	3.068	9.6	20.9	7 30	18 53.90	-23 17.5	1.304	2.266	10.8	18.9
8 9	18 51.15	- 2 5.0	2.197	3.058	11.8	21.1	8 9	18 49.27	-22 53.1	1.375	2.279	14.9	19.2
<b>89615</b>	2001 $XW_{187}$		7 8.5 310°39	1.2/ 8.8	17		<b>314494</b>	2005 $WW_{184}$		7 8.5 228°18	3.6/ 6.9	18	
5 31	19 36.10	-18 58.5	1.496	2.342	17.2	19.4	5 31	19 38.60	-31 57.1	2.573	3.391	11.6	21.1
6 10	19 33.32	-18 59.5	1.402	2.322	13.7	19.2	6 10	19 34.07	-32 44.5	2.484	3.385	9.2	20.9
6 20	19 27.65	-19 8.6	1.328	2.302	9.5	18.9	6 20	19 27.47	-33 30.8	2.418	3.379	6.6	20.8
6 30	19 19.59	-19 24.6	1.275	2.282	4.7	18.5	6 30	19 19.30	-34 12.1	2.379	3.373	4.3	20.6
7 10	19 10.13	-19 45.1	1.247	2.263	1.4	18.2	7 10	19 10.27	-34 44.7	2.367	3.366	3.8	20.6
7 20	19 0.51	-20 7.3	1.243	2.244	6.1	18.5	7 20	19 1.25	-35 6.0	2.382	3.359	5.7	20.7
7 30	18 52.16	-20 28.9	1.264	2.226	11.1	18.7	7 30	18 53.14	-35 15.4	2.425	3.352	8.3	20.8
8 9	18 46.22	-20 48.4	1.305	2.208	15.6	19.0	8 9	18 46.68	-35 13.8	2.492	3.345	10.9	21.0
<b>87559</b>	2000 $RC_4$		7 8.5 276°46	4.9/ 9.9	18		<b>333165</b>	2012 $CG_{12}$		7 8.5 245°35	0.1/ 8.6	17	
5 31	19 37.01	- 9 26.2	1.887	2.692	15.7	19.4	5 31	19 41.39	-20 5.0	1.650	2.481	16.5	21.9
6 10	19 33.32	- 9 12.2	1.783	2.671	13.0	19.1	6 10	19 37.22	-20 26.0	1.557	2.468	13.1	21.7
6 20	19 27.28	- 9 10.9	1.699	2.649	9.8	18.9	6 20	19 30.17	-20 55.2	1.484	2.455	9.0	21.4
6 30	19 19.30	- 9 23.6	1.638	2.627	6.6	18.7	6 30	19 20.77	-21 29.9	1.435	2.442	4.3	21.1
7 10	19 10.18	- 9 50.2	1.602	2.604	4.9	18.5	7 10	19 10.00	-22 6.3	1.411	2.427	0.7	20.8
7 20	19 0.88	-10 29.0	1.593	2.582	6.7	18.6	7 20	18 59.11	-22 40.7	1.414	2.413	5.8	21.1
7 30	18 52.48	-11 17.2	1.609	2.559	10.2	18.7	7 30	18 49.46	-23 10.5	1.442	2.398	10.6	21.4
8 9	18 45.93	-12 11.1	1.649	2.536	13.8	18.9	8 9	18 42.18	-23 34.6	1.493	2.382	14.8	21.6
<b>17477</b>	1991 $GN_9$		7 8.5 168°47	0°3/ 8.4	18		<b>186782</b>	2004 $DT_{47}$		7 8.5 84°38	5.4/10.2	17	
5 31	19 42.89	-21 48.4	1.832	2.656	15.4	19.7	5 31	19 40.33	- 8 56.7	1.622	2.430	17.7	20.4
6 10	19 37.85	-22 7.8	1.752	2.660	12.1	19.5	6 10	19 35.73	- 8 33.3	1.563	2.451	14.4	20.2
6 20	19 30.22	-22 32.3	1.694	2.664	8.2	19.2	6 20	19 28.67	- 8 24.5	1.522	2.471	10.8	20.1
6 30	19 20.60	-22 59.0	1.660	2.667	3.8	19.0	6 30	19 19.82	- 8 31.2	1.504	2.491	7.2	19.9
7 10	19 9.98	-23 24.4	1.653	2.669	0.8	18.8	7 10	19 10.21	- 8 52.6	1.511	2.511	5.4	19.8
7 20	18 59.49	-23 45.8	1.673	2.671	5.2	19.1	7 20	19 0.93	- 9 26.3	1.544	2.531	7.0	20.0
7 30	18 50.31	-24 1.9	1.720	2.672	9.4	19.3	7 30	18 53.05	-10 8.8	1.602	2.550	10.3	20.2
8 9	18 43.32	-24 12.5	1.790	2.672	13.1	19.6	8 9	18 47.35	-10 56.2	1.682	2.569	13.6	20.5
<b>137315</b>	1999 $TB_{20}$		7 8.5 272°31	3°0/ 7.6	18		<b>132344</b>	2002 $GA_{44}$		7 8.5 160°81	3°5/ 7.5	18	
5 31	19 40.99	-26 37.9	1.590	2.432	16.5	20.6	5 31	19 43.05	-31 11.1	2.189	3.008	13.4	21.1
6 10	19 37.22	-27 22.9	1.499	2.416	13.1	20.4	6 10	19 37.72	-31 45.4	2.111	3.014	10.6	20.9
6 20	19 30.35	-28 12.4	1.428	2.400	9.1	20.1	6 20	19 29.99	-32 17.8	2.055	3.018	7.5	20.7
6 30	19 20.90	-29 1.2	1.379	2.384	4.9	19.8	6 30	19 20.47	-32 44.2	2.025	3.023	4.5	20.5
7 10	19 9.91	-29 43.4	1.356	2.368	3.3	19.7	7 10	19 10.09	-33 0.6	2.022	3.027	3.6	20.5
7 20	18 58.76	-30 14.1	1.359	2.351	7.0	19.8	7 20	18 59.87	-33 5.1	2.047	3.030	5.9	20.6
7 30	18 48.98	-30 31.2	1.386	2.334	11.5	20.1	7 30	18 50.88	-32 57.7	2.098	3.033	9.0	20.8
8 9	18 41.81	-30 35.6	1.434	2.318	15.7	20.3	8 9	18 43.93	-32 40.5	2.174	3.035	11.9	21.0
<b>470319</b>	2007 $PY_{43}$		7 8.5 308°80	3°3/ 8.1	18		<b>245663</b>	2006 $AC_{17}$		7 8.5 136°89	0°6/ 8.7	17	
5 31	19 41.75	-31 18.6	1.656	2.495	16.1	20.6	5 31	19 39.12	-19 20.4	1.863	2.689	15.1	21.1
6 10	19 37.68	-31 14.4	1.559	2.473	12.9	20.3	6 10	19 34.84	-19 37.3	1.784	2.693	11.9	20.9
6 20	19 30.53	-31 5.5	1.482	2.452	9.1	20.0	6 20	19 28.16	-20 1.1	1.727	2.697	8.1	20.7
6 30	19 20.90	-30 47.7	1.428	2.431	5.2	19.7	6 30	19 19.65	-20 29.7	1.694	2.700	3.9	20.5
7 10	19 9.92	-30 17.7	1.400	2.410	3.5	19.6	7 10	19 10.24	-21 0.0	1.688	2.704	0.8	20.2
7 20	18 58.97	-29 34.4	1.397	2.390	6.8	19.7	7 20	19 0.94	-21 29.4	1.708	2.707	5.0	20.5
7 30	18 49.50	-28 39.9	1.418	2.370	11.1	19.9	7 30	18 52.83	-21 55.7	1.755	2.710	9.0	20.8
8 9	18 42.65	-27 38.1	1.462	2.350	15.2	20.1	8 9	18 46.75	-22 18.1	1.825	2.713	12.6	21.0
<b>39042</b>	2000 $UX_{89}$		7 8.5 11°71	4.7/10.2	18		<b>87470</b>	2000 $QM_{133}$		7 8.5 199°79	9.4/ 7.1	18	
5 31	19 34.29	- 8 31.5	2.121	2.921	14.4	19.2	5 31	19 54.44	-47 41.8	1.983	2.769	15.7	19.1
6 10	19 30.68	- 8 14.8	2.039	2.922	11.8	19.0	6 10	19 47.56	-48 23.8	1.908	2.767	13.5	18.9
6 20	19 25.13	- 8 9.9	1.978	2.923	8.9	18.8	6 20	19 37.08	-48 52.1	1.853	2.765	11.4	18.7
6 30	19 18.14	- 8 17.6	1.940	2.924	6.1	18.6	6 30	19 23.90	-48 58.5	1.820	2.762	9.8	18.6
7 10	19 10.43	- 8 37.7	1.927	2.925	4.7	18.6	7 10	19 9.52	-48 37.1	1.812	2.759	9.4	18.6
7 20	19 2.79	- 9 8.5	1.942	2.926	6.0	18.6	7 20	18 55.69	-47 46.8	1.828	2.756	10.6	18.7
7 30	18 56.07	- 9 47.7	1.982	2.928	8.8	18.8	7 30	18 44.04	-46 31.1	1.869	2.753	12.7	18.8
8 9	18 50.93	-10 32.2	2.046	2.930	11.7	19.0	8 9	18 35.65	-44 57.7	1.932	2.749	15.0	19.0
<b>359881</b>	2011 $WU_{32}$		7 8.5 78°67	2.7/ 9.2	17		<b>504904</b>	2011 $AV_{32}$		7 8.5 258°35	1.5/ 8.2	18	
5 31	19 40.33	-15 22.1	1.332	2.172	19.2	20.9	5 31	19 42.79	-25 17.4	1.807	2.636	15.4	22.3
6 10	19 36.52	-15 22.3	1.266	2.180	15.3	20.6	6 10	19 38.21	-25 30.5	1.706	2.617	12.2	22.1
6 20	19 29.64	-15 35.0	1.219	2.189	10.7	20.4	6 20	19 30.80	-25 46.0	1.626	2.597	8.4	21.8
6 30	19 20.41	-15 59.0	1.194	2.197	5.8	20.2	6 30	19 21.08	-26 0.5	1.570	2.576	4.1	21.5
7 10	19 10.05	-16 31.5	1.192	2.206	2.8	20.0	7 10	19 10.01	-26 10.4	1.540	2.555	1.7	21.3
7 20	18 59.94	-17 8.9	1.215	2.214	6.5	20.2	7 20	18 58.81	-26 13.1	1.538	2.534	5.8	21.5
7 30	18 51.49	-17 47.6	1.261	2.222	11.2	20.5	7 30	18 48.82	-26 8.1	1.561	2.512	10.3	21.7
8 9	18 45.73	-18 24.8	1.329	2.231	15.5	20.8	8 9	18 41.12	-25 56.3	1.607	2.489	14.3	21.9
<b>387097</b>	2012 $TH_{128}$		7 8.5 283°43	2.7/ 9.4	18		<b>90106</b>	2002 $XY_{33}$		7 8.5 41°65	3.1/ 7.8	18	
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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>180930</b>	2005 <i>LS</i> <sub>30</sub>		7 8.5 48°33'	1.0°/ 8.7	18		<b>236704</b>	2007 <i>EM</i> <sub>118</sub>		7 8.5 31°75'	0.6°/ 8.7	17	
5 31	19 38.88	-21 6.5	2.009	2.834	14.2	19.7	5 31	19 38.15	-19 16.0	1.054	1.921	21.3	20.7
6 10	19 34.35	-20 41.7	1.932	2.840	11.1	19.5	6 10	19 35.61	-19 33.0	0.997	1.929	16.8	20.4
6 20	19 27.65	-20 19.4	1.878	2.847	7.6	19.3	6 20	19 29.46	-20 1.7	0.957	1.937	11.4	20.1
6 30	19 19.36	-19 59.0	1.848	2.853	3.7	19.1	6 30	19 20.50	-20 38.5	0.937	1.945	5.5	19.8
7 10	19 10.35	-19 39.7	1.845	2.860	1.1	18.9	7 10	19 10.19	-21 18.6	0.939	1.955	1.0	19.6
7 20	19 1.58	-19 21.2	1.869	2.867	4.7	19.1	7 20	19 0.24	-21 56.8	0.963	1.965	7.0	20.0
7 30	18 53.97	-19 3.7	1.920	2.874	8.4	19.4	7 30	18 52.32	-22 29.6	1.009	1.976	12.5	20.3
8 9	18 48.25	-18 47.5	1.994	2.882	11.7	19.6	8 9	18 47.60	-22 55.6	1.074	1.987	17.3	20.7
<b>248680</b>	2006 <i>KO</i> <sub>11</sub>		7 8.5 13°01'	5.3°/ 9.6	16		<b>340557</b>	2006 <i>KH</i> <sub>64</sub>		7 8.5 214°79'	6°0'/ 10.3	18	
5 31	19 32.21	-13 19.8	1.190	2.048	19.9	19.6	5 31	19 36.65	- 6 27.2	2.042	2.832	15.2	21.6
6 10	19 30.33	-12 29.4	1.134	2.055	16.1	19.4	6 10	19 32.63	- 5 53.7	1.957	2.830	12.7	21.4
6 20	19 25.51	-11 51.6	1.094	2.063	11.7	19.2	6 20	19 26.56	- 5 32.8	1.891	2.827	9.8	21.2
6 30	19 18.50	-11 28.6	1.075	2.073	7.5	19.0	6 30	19 18.92	- 5 26.3	1.850	2.825	7.2	21.0
7 10	19 10.50	-11 20.9	1.078	2.085	5.3	18.9	7 10	19 10.47	- 5 34.9	1.833	2.822	6.0	20.9
7 20	19 2.85	-11 27.6	1.103	2.098	7.7	19.1	7 20	19 2.07	- 5 57.5	1.843	2.819	7.1	21.0
7 30	18 56.82	-11 45.9	1.150	2.113	11.8	19.3	7 30	18 54.62	- 6 32.1	1.878	2.816	9.7	21.2
8 9	18 53.33	-12 11.8	1.217	2.129	15.8	19.6	8 9	18 48.86	- 7 15.2	1.937	2.813	12.5	21.3
<b>283712</b>	2002 <i>TA</i> <sub>104</sub>		7 8.5 307°94'	2.7°/ 8.0	18		<b>246241</b>	2007 <i>RQ</i> <sub>301</sub>		7 8.5 288°86'	7.5°/ 11.1	18	
5 31	19 40.38	-29 20.2	1.842	2.676	14.9	20.4	5 31	19 34.88	- 2 20.5	1.959	2.739	16.1	20.9
6 10	19 36.12	-29 27.5	1.755	2.668	11.8	20.2	6 10	19 31.44	- 1 50.3	1.868	2.728	13.7	20.7
6 20	19 29.19	-29 33.1	1.690	2.660	8.2	19.9	6 20	19 25.87	- 1 36.3	1.796	2.718	11.1	20.5
6 30	19 20.21	-29 33.2	1.649	2.652	4.4	19.7	6 30	19 18.65	- 1 41.3	1.746	2.707	8.7	20.4
7 10	19 10.20	-29 25.0	1.634	2.645	2.8	19.6	7 10	19 10.51	- 2 6.2	1.720	2.697	7.5	20.3
7 20	19 0.32	-29 6.9	1.645	2.638	5.9	19.8	7 20	19 2.33	- 2 49.9	1.719	2.687	8.3	20.3
7 30	18 51.78	-28 39.7	1.681	2.631	9.8	20.0	7 30	18 55.06	- 3 49.3	1.743	2.676	10.6	20.4
8 9	18 45.50	-28 5.6	1.741	2.624	13.4	20.2	8 9	18 49.50	- 4 59.6	1.790	2.666	13.4	20.6
<b>40085</b>	1998 <i>MW</i> <sub>32</sub>		7 8.5 51°39'	2.7°/ 8.9	18		<b>340479</b>	2006 <i>HO</i> <sub>57</sub>		7 8.5 218°42'	7.9°/ 5.7	18	
5 31	19 43.57	-17 59.6	1.178	2.026	20.7	17.8	5 31	19 45.63	-41 44.1	2.046	2.856	14.5	20.6
6 10	19 38.90	-17 26.4	1.136	2.055	16.2	17.6	6 10	19 40.56	-42 56.5	1.969	2.852	12.2	20.5
6 20	19 31.03	-17 2.1	1.113	2.085	11.2	17.4	6 20	19 32.43	-44 1.7	1.914	2.847	9.9	20.3
6 30	19 20.94	-16 46.4	1.110	2.115	5.8	17.2	6 30	19 21.85	-44 52.3	1.882	2.843	8.2	20.2
7 10	19 10.12	-16 37.9	1.132	2.145	2.8	17.1	7 10	19 9.96	-45 21.9	1.875	2.838	8.1	20.2
7 20	19 0.06	-16 35.2	1.177	2.176	6.6	17.4	7 20	18 58.15	-45 27.4	1.893	2.833	9.6	20.3
7 30	18 52.08	-16 37.1	1.245	2.207	11.3	17.8	7 30	18 47.87	-45 9.4	1.936	2.828	11.9	20.4
8 9	18 47.01	-16 42.0	1.335	2.237	15.4	18.1	8 9	18 40.23	-44 32.4	2.000	2.822	14.3	20.6
<b>416067</b>	2002 <i>KM</i> <sub>16</sub>		7 8.5 16°64'	1.3°/ 8.5	17		<b>506648</b>	2006 <i>RP</i> <sub>122</sub>		7 8.5 278°69'	1.5°/ 8.2	17	
5 31	19 41.99	-24 18.1	1.145	2.006	20.3	19.7	5 31	19 40.78	-24 17.9	1.585	2.426	16.6	22.1
6 10	19 38.28	-23 10.7	1.082	2.010	16.1	19.5	6 10	19 37.05	-24 38.3	1.489	2.406	13.2	21.8
6 20	19 31.01	-22 1.0	1.037	2.015	11.0	19.2	6 20	19 30.27	-25 3.4	1.412	2.385	9.1	21.5
6 30	19 21.11	-20 49.5	1.013	2.021	5.3	18.9	6 30	19 20.95	-25 29.4	1.358	2.365	4.4	21.2
7 10	19 10.08	-19 37.7	1.013	2.028	1.6	18.7	7 10	19 10.10	-25 52.2	1.329	2.344	1.7	21.0
7 20	18 59.61	-18 28.9	1.036	2.037	6.9	19.0	7 20	18 59.06	-26 8.1	1.325	2.323	6.3	21.2
7 30	18 51.25	-17 26.6	1.081	2.046	12.2	19.4	7 30	18 49.32	-26 15.5	1.346	2.302	11.2	21.5
8 9	18 46.02	-16 33.2	1.147	2.056	16.9	19.7	8 9	18 42.12	-26 15.0	1.389	2.280	15.6	21.7
<b>295216</b>	2008 <i>FO</i> <sub>132</sub>		7 8.5 338°97'	0.3°/ 8.7	18		<b>122415</b>	2000 <i>QF</i> <sub>94</sub>		7 8.5 276°94'	0.7°/ 8.4	18	
5 31	19 34.23	-19 26.1	1.918	2.752	14.4	20.3	5 31	19 40.78	-24 18.9	1.799	2.631	15.3	20.3
6 10	19 31.10	-19 50.0	1.831	2.744	11.3	20.1	6 10	19 36.55	-24 16.4	1.701	2.613	12.1	20.1
6 20	19 25.72	-20 21.3	1.765	2.737	7.7	19.9	6 20	19 29.62	-24 15.7	1.623	2.595	8.3	19.8
6 30	19 18.58	-20 58.1	1.723	2.730	3.7	19.6	6 30	19 20.51	-24 14.2	1.570	2.577	4.0	19.5
7 10	19 10.50	-21 37.1	1.707	2.723	0.7	19.4	7 10	19 10.19	-24 9.6	1.543	2.559	1.0	19.2
7 20	19 2.42	-22 15.4	1.718	2.717	4.8	19.7	7 20	18 59.81	-24 0.3	1.542	2.540	5.5	19.5
7 30	18 55.37	-22 50.5	1.754	2.712	8.9	19.9	7 30	18 50.64	-23 46.1	1.567	2.521	10.0	19.7
8 9	18 50.17	-23 20.8	1.814	2.707	12.4	20.1	8 9	18 43.70	-23 28.1	1.615	2.503	14.0	19.9
<b>1383</b>	Limburgia		7 8.5 306°57'	0.0°/ 8.4	18		<b>329313</b>	2000 <i>SG</i> <sub>183</sub>		7 8.5 293°82'	2.1°/ 8.9	18	
5 31	19 35.80	-21 32.4	2.044	2.874	13.8	16.6	5 31	19 38.31	-17 21.4	1.389	2.234	18.3	21.0
6 10	19 32.28	-21 40.1	1.944	2.856	10.9	16.4	6 10	19 35.46	-17 18.2	1.289	2.207	14.8	20.7
6 20	19 26.51	-21 52.2	1.866	2.838	7.4	16.2	6 20	19 29.44	-17 25.1	1.208	2.180	10.4	20.4
6 30	19 18.97	-22 7.0	1.812	2.819	3.5	15.9	6 30	19 20.66	-17 41.7	1.148	2.154	5.5	20.0
7 10	19 10.43	-22 22.2	1.785	2.802	0.6	15.6	7 10	19 10.13	-18 5.7	1.112	2.127	2.2	19.7
7 20	19 1.83	-22 35.8	1.785	2.784	4.8	15.9	7 20	18 59.24	-18 34.3	1.100	2.100	6.7	19.9
7 30	18 54.18	-22 46.5	1.811	2.766	8.8	16.1	7 30	18 49.59	-19 4.5	1.111	2.073	12.2	20.1
8 9	18 48.33	-22 53.9	1.860	2.749	12.4	16.3	8 9	18 42.57	-19 34.0	1.142	2.047	17.2	20.4
<b>99024</b>	2001 <i>DO</i> <sub>90</sub>		7 8.5 10°82'	2.1°/ 8.4	18		<b>510836</b>	2013 <i>CJ</i> <sub>33</sub>		7 8.5 131°63'	0.2°/ 8.5	18	
5 31	19 41.32	-29 7.0	1.519	2.364	17.0	18.8	5 31	19 39.86	-23 54.9	2.594	3.406	11.7	21.6
6 10	19 37.14	-28 45.5	1.447	2.366	13.4	18.5	6 10	19 34.62	-23 43.8	2.515	3.416	9.1	21.5
6 20	19 29.96	-28 20.0	1.395	2.368	9.2	18.3	6 20	19 27.59	-23 33.3	2.458	3.426	6.2	21.3
6 30	19 20.56	-27 47.9	1.366	2.372	4.7	18.1	6 30	19 19.29	-23 22.1	2.429	3.435	2.9	21.1
7 10	19 10.18	-27 7.5	1.361	2.376	2.2	17.9	7 10	19 10.44	-23 9.1	2.428	3.444	0.6	20.9
7 20	19 0.20	-26 19.2	1.383	2.380	6.1	18.2	7 20	19 1.79	-22 53.8	2.456	3.453	3.9	21.2
7 30	18 51.92	-25 25.7	1.429	2.386	10.5	18.4	7 30	18 54.09	-22 36.4	2.512	3.461	7.0	21.4
8 9	18 46.28	-24 30.4	1.497	2.392	14.5	18.7	8 9	18 47.94	-22 17.6	2.593	3.469	9.8	21.6
<b>143816</b>	2003 <i>WC</i> <sub>137</sub>		7 8.5 258°29'	2.7°/ 7.7	18		<b>398911</b>	201					

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>50234</b>	2000 <i>BP</i>		7 8.5 349°54	0°0/ 8.5 18			<b>425093</b>	2009 <i>SW</i> <sub>58</sub>		7 8.6 151°62	1°0/ 8.8 17		
5 31	19 38.61	-23 48.9	1.282	2.140	18.8	18.5	5 31	19 41.51	-19 27.2	2.101	2.915	14.0	21.6
6 10	19 35.59	-23 29.7	1.208	2.135	14.8	18.2	6 10	19 36.37	-19 23.5	2.022	2.923	11.0	21.4
6 20	19 29.29	-23 12.4	1.153	2.131	10.1	17.9	6 20	19 29.04	-19 24.5	1.964	2.930	7.5	21.2
6 30	19 20.42	-22 55.0	1.119	2.128	4.8	17.6	6 30	19 20.09	-19 28.8	1.932	2.937	3.7	21.0
7 10	19 10.26	-22 35.5	1.108	2.125	0.8	17.3	7 10	19 10.39	-19 34.8	1.928	2.943	1.1	20.8
7 20	19 0.32	-22 13.3	1.122	2.123	6.4	17.7	7 20	19 0.85	-19 41.1	1.951	2.949	4.6	21.1
7 30	18 52.13	-21 49.0	1.158	2.122	11.6	18.0	7 30	18 52.43	-19 46.8	2.002	2.954	8.3	21.3
8 9	18 46.80	-21 23.9	1.214	2.121	16.2	18.2	8 9	18 45.88	-19 51.5	2.077	2.959	11.6	21.6
<b>312549</b>	2009 <i>FE</i> <sub>29</sub>		7 8.6 42°45	2°1/ 7.9 17			<b>180352</b>	2003 <i>YD</i> <sub>75</sub>		7 8.6 273°42	1°0/ 8.4 18		
5 31	19 39.58	-22 57.8	1.230	2.088	19.4	19.9	5 31	19 42.28	-24 37.1	1.612	2.449	16.6	20.8
6 10	19 36.43	-23 51.3	1.170	2.097	15.2	19.7	6 10	19 38.16	-24 40.0	1.514	2.429	13.2	20.5
6 20	19 29.89	-24 53.2	1.129	2.107	10.3	19.4	6 20	19 31.00	-24 45.3	1.435	2.408	9.1	20.2
6 30	19 20.70	-25 57.5	1.110	2.118	5.0	19.2	6 30	19 21.31	-24 50.0	1.380	2.387	4.4	19.9
7 10	19 10.22	-26 56.9	1.114	2.128	2.4	19.0	7 10	19 10.15	-24 50.6	1.351	2.366	1.3	19.6
7 20	19 0.02	-27 45.6	1.142	2.140	7.1	19.4	7 20	18 58.85	-24 45.1	1.347	2.345	6.1	19.9
7 30	18 51.69	-28 20.7	1.193	2.151	12.0	19.7	7 30	18 48.88	-24 33.0	1.368	2.323	11.0	20.1
8 9	18 46.36	-28 42.5	1.264	2.163	16.3	20.0	8 9	18 41.44	-24 15.6	1.411	2.302	15.4	20.3
<b>40600</b>	1999 <i>RZ</i> <sub>150</sub>		7 8.6 350°25	0°7/ 8.4 18			<b>118261</b>	1998 <i>FF</i> <sub>79</sub>		7 8.6 122°78	0°6/ 8.8 18		
5 31	19 34.88	-21 44.6	1.138	2.008	19.8	18.3	5 31	19 40.68	-19 0.4	2.100	2.915	14.0	20.0
6 10	19 33.11	-22 8.3	1.068	2.002	15.7	18.0	6 10	19 35.70	-19 18.8	2.028	2.930	11.0	19.9
6 20	19 27.89	-22 41.0	1.016	1.997	10.7	17.7	6 20	19 28.57	-19 43.3	1.978	2.945	7.4	19.7
6 30	19 19.88	-23 19.2	0.983	1.992	5.1	17.4	6 30	19 19.88	-20 11.7	1.953	2.959	3.6	19.5
7 10	19 10.35	-23 57.4	0.973	1.989	1.2	17.1	7 10	19 10.45	-20 41.5	1.956	2.972	0.8	19.3
7 20	19 0.92	-24 30.9	0.985	1.987	7.0	17.5	7 20	19 1.21	-21 10.2	1.987	2.985	4.5	19.6
7 30	18 53.28	-24 56.4	1.019	1.986	12.5	17.8	7 30	18 53.08	-21 36.2	2.045	2.998	8.1	19.8
8 9	18 48.67	-25 13.3	1.072	1.986	17.3	18.1	8 9	18 46.79	-21 58.4	2.128	3.010	11.4	20.0
<b>94341</b>	2001 <i>QM</i> <sub>74</sub>		7 8.6 263°46	4°5/ 7.5 18			<b>75595</b>	2000 <i>AM</i> <sub>22</sub>		7 8.6 86°87	1°5/ 8.2 18		
5 31	19 44.56	-30 36.6	1.497	2.338	17.4	19.7	5 31	19 43.38	-24 42.5	1.577	2.413	16.9	19.2
6 10	19 40.39	-31 13.0	1.408	2.322	14.0	19.5	6 10	19 38.52	-25 3.1	1.516	2.430	13.2	19.0
6 20	19 32.74	-31 49.5	1.337	2.306	10.0	19.2	6 20	19 30.81	-25 26.5	1.475	2.447	8.9	18.8
6 30	19 22.19	-32 19.5	1.289	2.290	6.0	18.9	6 30	19 20.99	-25 48.7	1.457	2.464	4.3	18.6
7 10	19 9.95	-32 36.7	1.266	2.273	4.7	18.8	7 10	19 10.26	-26 6.0	1.466	2.481	1.7	18.4
7 20	18 57.61	-32 37.1	1.267	2.256	8.0	18.9	7 20	18 59.92	-26 15.9	1.500	2.497	5.8	18.7
7 30	18 46.90	-32 20.3	1.293	2.238	12.5	19.1	7 30	18 51.22	-26 17.9	1.560	2.513	10.1	19.0
8 9	18 39.17	-31 50.0	1.339	2.220	16.7	19.4	8 9	18 45.05	-26 13.2	1.642	2.529	13.8	19.3
<b>504903</b>	2011 <i>AQ</i> <sub>16</sub>		7 8.6 278°65	1°3/ 8.2 18			<b>167706</b>	2004 <i>TS</i> <sub>135</sub>		7 8.6 293°75	2°4/ 8.2 17		
5 31	19 40.60	-23 24.4	1.562	2.403	16.8	22.4	5 31	19 41.58	-26 51.4	1.328	2.181	18.5	20.3
6 10	19 36.98	-23 48.8	1.465	2.382	13.4	22.1	6 10	19 38.19	-27 2.6	1.244	2.168	14.7	20.0
6 20	19 30.29	-24 19.3	1.387	2.361	9.2	21.8	6 20	19 31.30	-27 15.3	1.179	2.155	10.2	19.7
6 30	19 21.01	-24 52.3	1.333	2.340	4.5	21.5	6 30	19 21.53	-27 24.8	1.135	2.142	5.2	19.4
7 10	19 10.15	-25 23.2	1.303	2.318	1.6	21.2	7 10	19 10.13	-27 26.7	1.114	2.129	2.6	19.2
7 20	18 59.07	-25 48.1	1.299	2.297	6.4	21.5	7 20	18 58.75	-27 18.0	1.118	2.116	7.2	19.4
7 30	18 49.26	-26 4.7	1.319	2.275	11.3	21.7	7 30	18 49.08	-26 58.8	1.145	2.103	12.4	19.6
8 9	18 42.00	-26 13.0	1.361	2.253	15.8	21.9	8 9	18 42.45	-26 31.8	1.192	2.091	17.1	19.9
<b>349832</b>	2009 <i>CV</i> <sub>19</sub>		7 8.6 242°12	1°6/ 8.2 18			<b>245650</b>	2005 <i>YL</i> <sub>139</sub>		7 8.6 63°86	1°5/ 8.2 17		
5 31	19 42.15	-27 24.5	2.344	3.160	12.7	21.7	5 31	19 42.07	-22 42.1	1.214	2.069	19.8	20.7
6 10	19 36.96	-27 28.0	2.242	3.145	10.0	21.5	6 10	19 38.32	-23 21.7	1.158	2.083	15.5	20.5
6 20	19 29.53	-27 30.8	2.162	3.129	6.9	21.3	6 20	19 31.12	-24 8.9	1.120	2.097	10.4	20.2
6 30	19 20.38	-27 30.2	2.108	3.113	3.5	21.0	6 30	19 21.28	-24 58.2	1.103	2.111	5.0	20.0
7 10	19 10.30	-27 24.0	2.083	3.096	1.8	20.9	7 10	19 10.21	-25 43.2	1.110	2.125	1.9	19.8
7 20	19 0.23	-27 10.9	2.085	3.079	4.8	21.0	7 20	18 59.54	-26 19.1	1.141	2.140	6.9	20.1
7 30	18 51.16	-26 51.2	2.116	3.061	8.3	21.2	7 30	18 50.85	-26 43.9	1.195	2.154	11.9	20.5
8 9	18 43.89	-26 26.1	2.171	3.043	11.5	21.4	8 9	18 45.22	-26 58.1	1.269	2.169	16.2	20.8
<b>376073</b>	2010 <i>TO</i> <sub>179</sub>		7 8.6 15°98	0°7/ 8.3 15			<b>396995</b>	2005 <i>SL</i> <sub>213</sub>		7 8.6 292°28	5°5/ 6.6 18		
5 31	19 35.99	-23 7.0	1.863	2.701	14.6	21.2	5 31	19 40.15	-36 11.8	2.172	2.995	13.4	21.3
6 10	19 32.46	-23 22.8	1.788	2.704	11.4	21.0	6 10	19 35.89	-37 1.2	2.084	2.983	10.9	21.1
6 20	19 26.61	-23 42.3	1.735	2.708	7.7	20.8	6 20	19 29.07	-37 46.8	2.018	2.972	8.2	21.0
6 30	19 19.00	-24 2.9	1.705	2.713	3.6	20.6	6 30	19 20.26	-38 23.3	1.977	2.961	6.0	20.8
7 10	19 10.54	-24 21.9	1.702	2.718	1.0	20.4	7 10	19 10.37	-38 45.9	1.961	2.950	5.7	20.8
7 20	19 2.25	-24 37.0	1.725	2.723	5.0	20.7	7 20	19 0.49	-38 51.9	1.972	2.939	7.4	20.9
7 30	18 55.13	-24 47.0	1.773	2.729	8.9	20.9	7 30	18 51.79	-38 41.2	2.008	2.928	10.2	21.0
8 9	18 50.00	-24 51.9	1.845	2.735	12.4	21.2	8 9	18 45.21	-38 16.3	2.066	2.917	12.9	21.2
<b>171145</b>	2005 <i>GD</i> <sub>66</sub>		7 8.6 218°95	2°1/ 9.2 17			<b>302234</b>	2001 <i>WB</i> <sub>24</sub>		7 8.6 295°89	1°2/ 8.2 18		
5 31	19 37.44	-16 2.1	2.098	2.913	14.0	21.0	5 31	19 37.26	-24 15.7	2.032	2.863	13.8	20.9
6 10	19 33.28	-15 56.1	2.011	2.911	11.1	20.8	6 10	19 33.46	-24 37.5	1.939	2.852	10.9	20.7
6 20	19 27.03	-15 57.2	1.945	2.908	7.8	20.6	6 20	19 27.35	-25 2.7	1.868	2.840	7.4	20.5
6 30	19 19.18	-16 5.0	1.904	2.906	4.3	20.4	6 30	19 19.43	-25 28.3	1.822	2.829	3.6	20.2
7 10	19 10.52	-16 18.1	1.890	2.903	2.2	20.2	7 10	19 10.52	-25 51.3	1.803	2.818	1.4	20.0
7 20	19 1.91	-16 35.1	1.903	2.900	4.8	20.4	7 20	19 1.59	-26 9.2	1.810	2.807	5.1	20.3
7 30	18 54.29	-16 54.2	1.943	2.897	8.4	20.6	7 30	18 53.70	-26 20.6	1.843	2.796	8.9	20.5
8 9	18 48.40	-17 14.2	2.007	2.893	11.7	20.8	8 9	18 47.69	-26 25.6	1.900	2.785	12.4	20.7
<b>252754</b>	2002 <i>EV</i> <sub>42</sub>		7 8.6 165°17	7°7/ 6.2 18			<b>126469</b>	2002 <					

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7 8.6

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>71254</b>	2000 AV <sub>15</sub>		7 8.6 311°08	1.7/ 8.7	18		<b>139331</b>	2001 KW <sub>44</sub>		7 8.6 78°82	3°5/ 9.8	17	
5 31	19 40.14	-21 15.7	1.683	2.517	16.1	18.5	5 31	19 40.10	-11 48.9	1.525	2.347	18.1	19.4
6 10	19 36.07	-20 30.0	1.589	2.502	12.8	18.3	6 10	19 35.90	-12 0.3	1.464	2.364	14.5	19.2
6 20	19 29.29	-19 44.8	1.517	2.487	8.9	18.0	6 20	19 29.04	-12 26.6	1.421	2.381	10.3	19.0
6 30	19 20.39	-19 0.3	1.467	2.473	4.5	17.7	6 30	19 20.20	-13 6.7	1.401	2.399	6.1	18.8
7 10	19 10.37	-18 16.5	1.444	2.459	1.8	17.5	7 10	19 10.47	-13 57.4	1.406	2.416	3.5	18.7
7 20	19 0.40	-17 34.5	1.447	2.445	5.8	17.7	7 20	19 1.01	-14 54.5	1.436	2.433	6.1	18.9
7 30	18 51.73	-16 55.8	1.475	2.432	10.3	17.9	7 30	18 53.00	-15 53.8	1.492	2.450	10.1	19.2
8 9	18 45.32	-16 21.3	1.526	2.419	14.3	18.1	8 9	18 47.31	-16 51.3	1.571	2.466	13.9	19.4
<b>317477</b>	2002 RT <sub>198</sub>		7 8.6 304°87	2°7/ 7.8	18		<b>91721</b>	1999 TQ <sub>157</sub>		7 8.6 117°96	7°5/ 10.8	18	
5 31	19 38.97	-27 52.3	1.854	2.690	14.7	20.8	5 31	19 36.88	+ 1 24.5	2.739	3.471	13.1	19.5
6 10	19 35.07	-28 18.8	1.768	2.683	11.6	20.6	6 10	19 32.16	+ 2 32.3	2.666	3.484	11.3	19.3
6 20	19 28.57	-28 46.3	1.704	2.675	8.1	20.4	6 20	19 25.91	+ 3 27.8	2.614	3.497	9.6	19.2
6 30	19 20.04	-29 10.6	1.663	2.667	4.3	20.1	6 30	19 18.58	+ 4 8.2	2.586	3.509	8.1	19.2
7 10	19 10.43	-29 28.0	1.648	2.660	2.8	20.0	7 10	19 10.74	+ 4 31.7	2.584	3.521	7.5	19.1
7 20	19 0.87	-29 35.9	1.660	2.652	6.0	20.2	7 20	19 3.03	+ 4 38.3	2.607	3.533	7.9	19.2
7 30	18 52.55	-29 33.6	1.697	2.645	9.8	20.4	7 30	18 56.07	+ 4 29.0	2.657	3.544	9.2	19.3
8 9	18 46.42	-29 22.4	1.756	2.638	13.3	20.6	8 9	18 50.38	+ 4 6.4	2.729	3.555	10.8	19.4
<b>199863</b>	2007 EM <sub>119</sub>		7 8.6 0°96 10°4	18/ 5.5	18		<b>338547</b>	2003 SF <sub>35</sub>		7 8.6 259°72	0°5/ 8.4	17	
5 31	19 39.19	-40 21.6	1.298	2.150	18.9	19.4	5 31	19 38.89	-22 38.0	1.933	2.763	14.5	21.8
6 10	19 36.96	-41 56.7	1.238	2.148	15.9	19.2	6 10	19 34.79	-22 53.2	1.845	2.756	11.4	21.5
6 20	19 30.77	-43 24.0	1.196	2.147	12.9	19.0	6 20	19 28.28	-23 12.8	1.778	2.749	7.7	21.3
6 30	19 21.34	-44 32.4	1.175	2.147	10.8	18.9	6 30	19 19.89	-23 33.9	1.735	2.742	3.7	21.0
7 10	19 10.20	-45 12.1	1.175	2.148	10.7	18.9	7 10	19 10.50	-23 53.9	1.719	2.735	0.9	20.8
7 20	18 59.31	-45 18.7	1.196	2.150	12.6	19.0	7 20	19 1.14	-24 10.2	1.729	2.727	5.0	21.1
7 30	18 50.62	-44 53.6	1.238	2.153	15.5	19.2	7 30	18 52.89	-24 21.6	1.766	2.720	9.1	21.3
8 9	18 45.50	-44 3.8	1.298	2.157	18.5	19.4	8 9	18 46.63	-24 28.0	1.826	2.713	12.7	21.5
<b>434077</b>	2001 YN <sub>1</sub>		7 8.6 174°93	6°7/ 4.9	17		<b>399810</b>	2005 SY <sub>81</sub>		7 8.6 183°02	7°2/ 12.2	18	
5 31	19 49.02	-40 38.6	2.627	3.417	12.2	22.1	5 31	19 34.55	+ 4 37.1	3.013	3.726	12.4	22.0
6 10	19 42.62	-42 11.5	2.550	3.421	10.1	22.0	6 10	19 30.33	+ 5 9.5	2.925	3.726	10.9	21.9
6 20	19 33.59	-43 39.4	2.497	3.424	8.2	21.8	6 20	19 24.70	+ 5 28.2	2.858	3.726	9.3	21.8
6 30	19 22.42	-44 55.6	2.471	3.426	6.8	21.7	6 30	19 18.03	+ 5 30.9	2.813	3.725	7.9	21.7
7 10	19 10.03	-45 54.1	2.472	3.428	6.9	21.8	7 10	19 10.84	+ 5 17.0	2.794	3.725	7.3	21.6
7 20	18 57.54	-46 31.6	2.502	3.428	8.2	21.8	7 20	19 3.69	+ 4 46.8	2.800	3.723	7.5	21.6
7 30	18 46.16	-46 47.7	2.557	3.428	10.1	22.0	7 30	18 57.14	+ 4 2.2	2.832	3.721	8.7	21.7
8 9	18 36.90	-46 45.2	2.635	3.427	12.1	22.1	8 9	18 51.71	+ 3 6.2	2.889	3.719	10.2	21.8
<b>5515</b>	Naderi		7 8.6 45°33	8°5/ 12.1	18 R		<b>434674</b>	2006 AR <sub>52</sub>		7 8.6 168°82	0°8/ 8.8	17	
5 31	19 36.34	- 1 38.9	1.474	2.271	19.7	16.5	5 31	19 40.11	-19 51.8	1.946	2.769	14.7	21.9
6 10	19 32.88	- 1 10.1	1.421	2.292	16.6	16.4	6 10	19 35.56	-19 51.8	1.865	2.771	11.6	21.7
6 20	19 26.92	- 1 3.7	1.386	2.314	13.3	16.2	6 20	19 28.68	-19 57.0	1.804	2.773	7.9	21.5
6 30	19 19.15	- 1 22.1	1.370	2.335	10.2	16.1	6 30	19 20.04	-20 5.8	1.768	2.774	3.9	21.2
7 10	19 10.62	- 2 4.8	1.378	2.358	8.6	16.0	7 10	19 10.52	-20 16.2	1.759	2.775	0.9	21.0
7 20	19 2.41	- 3 8.2	1.409	2.381	9.3	16.1	7 20	19 1.12	-20 26.4	1.777	2.776	4.8	21.3
7 30	18 55.60	- 4 26.6	1.463	2.404	11.7	16.3	7 30	18 52.87	-20 35.3	1.822	2.777	8.8	21.5
8 9	18 50.98	- 5 52.9	1.539	2.427	14.5	16.6	8 9	18 46.59	-20 42.5	1.890	2.777	12.3	21.7
<b>181054</b>	2005 PZ <sub>11</sub>		7 8.6 264°51	0°7/ 8.8	18		<b>354210</b>	2002 FY <sub>16</sub>		7 8.6 52°96	6°6/ 6.7	18	
5 31	19 36.48	-19 1.2	2.239	3.059	13.1	20.7	5 31	19 42.87	-41 1.5	2.229	3.039	13.5	20.4
6 10	19 32.52	-19 14.8	2.146	3.051	10.3	20.5	6 10	19 37.89	-41 46.4	2.159	3.044	11.1	20.3
6 20	19 26.54	-19 34.4	2.076	3.044	7.1	20.3	6 20	19 30.31	-42 23.4	2.110	3.048	8.8	20.1
6 30	19 19.01	-19 58.4	2.030	3.036	3.5	20.1	6 30	19 20.80	-42 46.9	2.085	3.053	7.1	20.0
7 10	19 10.63	-20 24.8	2.012	3.028	0.8	19.9	7 10	19 10.40	-42 52.7	2.086	3.058	6.7	20.0
7 20	19 2.26	-20 51.2	2.021	3.019	4.4	20.1	7 20	19 0.26	-42 39.3	2.113	3.064	8.1	20.1
7 30	18 54.77	-21 16.0	2.057	3.011	8.0	20.3	7 30	18 51.53	-42 7.9	2.165	3.069	10.3	20.3
8 9	18 48.91	-21 38.0	2.118	3.003	11.2	20.5	8 9	18 45.05	-41 22.3	2.239	3.074	12.6	20.4
<b>380708</b>	2005 LG <sub>53</sub>		7 8.6 325°70	0°2/ 8.5	17		<b>507367</b>	2011 YW <sub>21</sub>		7 8.6 194°08	2°6/ 9.1	18	
5 31	19 35.47	-23 16.9	1.242	2.107	18.8	21.1	5 31	19 38.99	-15 0.4	2.954	3.744	11.0	21.6
6 10	19 33.53	-23 7.8	1.155	2.086	15.0	20.7	6 10	19 33.77	-14 21.0	2.859	3.742	8.8	21.4
6 20	19 28.24	-23 2.0	1.085	2.065	10.3	20.4	6 20	19 27.00	-13 45.2	2.787	3.739	6.3	21.3
6 30	19 20.14	-22 57.6	1.037	2.046	5.0	20.1	6 30	19 19.12	-13 13.6	2.742	3.736	3.8	21.1
7 10	19 10.41	-22 51.7	1.011	2.027	0.9	19.7	7 10	19 10.69	-12 46.5	2.726	3.733	2.6	21.0
7 20	19 0.57	-22 42.4	1.007	2.009	6.8	20.0	7 20	19 2.35	-12 24.2	2.740	3.729	4.2	21.1
7 30	18 52.31	-22 29.4	1.026	1.993	12.4	20.3	7 30	18 54.74	-12 6.7	2.783	3.725	6.8	21.3
8 9	18 46.96	-22 13.4	1.064	1.977	17.4	20.5	8 9	18 48.39	-11 53.7	2.852	3.720	9.2	21.4
<b>395261</b>	2010 RR <sub>50</sub>		7 8.6 324°91	0°7/ 8.8	15		<b>74911</b>	1999 TZ <sub>139</sub>		7 8.6 12°54	5°9/ 7.2	18	
5 31	19 34.13	-19 53.3	1.733	2.574	15.4	20.9	5 31	19 40.74	-32 1.8	1.274	2.132	18.9	18.6
6 10	19 31.44	-19 57.2	1.635	2.552	12.2	20.6	6 10	19 37.68	-32 57.6	1.210	2.133	15.1	18.4
6 20	19 26.24	-20 7.7	1.557	2.531	8.4	20.4	6 20	19 30.97	-33 52.1	1.164	2.135	10.9	18.2
6 30	19 19.02	-20 23.2	1.503	2.510	4.1	20.1	6 30	19 21.37	-34 37.3	1.139	2.137	7.1	18.0
7 10	19 10.62	-20 41.6	1.473	2.490	0.9	19.8	7 10	19 10.30	-35 5.7	1.138	2.141	6.1	17.9
7 20	19 2.11	-21 0.6	1.470	2.470	5.3	20.0	7 20	18 59.51	-35 13.2	1.159	2.144	9.1	18.1
7 30	18 54.66	-21 18.2	1.490	2.451	9.8	20.3	7 30	18 50.73	-35 0.2	1.203	2.149	13.2	18.3
8 9	18 49.26	-21 33.3	1.534	2.433	13.9	20.5	8 9	18 45.17	-34 31.2	1.266	2.154	17.1	18.6
<b>162894</b>	2001 HD		7 8.6 320°25	6°3/ 5.9	18		<b>438610</b>	2007 VS <sub>297</sub>		7 8.6 315°26	1°2/ 7.9	18	
5 31	19 39.11	-33 21.4</											



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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>386404</b>	2008 <i>UX</i> <sub>214</sub>		7 8.6 322°44	0°6/ 8.5 18			<b>60376</b>	2000 <i>AH</i> <sub>150</sub>		7 8.6 273°00	5°6/ 9.9 18		
5 31	19 35.74	-24 25.5	1.325	2.187	18.1	20.0	5 31	19 38.02	-9 35.2	1.632	2.446	17.4	19.6
6 10	19 33.74	-24 13.7	1.226	2.155	14.5	19.7	6 10	19 34.49	-9 6.6	1.540	2.433	14.4	19.4
6 20	19 28.45	-24 3.2	1.145	2.124	10.0	19.4	6 20	19 28.33	-8 51.2	1.468	2.419	10.9	19.1
6 30	19 20.33	-23 51.8	1.085	2.093	4.9	19.0	6 30	19 20.06	-8 50.9	1.417	2.405	7.4	18.9
7 10	19 10.45	-23 36.9	1.047	2.064	1.1	18.6	7 10	19 10.57	-9 6.0	1.391	2.392	5.6	18.8
7 20	19 0.29	-23 16.7	1.033	2.035	6.8	18.9	7 20	19 1.00	-9 35.3	1.390	2.378	7.5	18.8
7 30	18 51.53	-22 51.5	1.042	2.008	12.4	19.1	7 30	18 52.54	-10 15.9	1.413	2.364	11.1	19.0
8 9	18 45.58	-22 23.0	1.070	1.981	17.5	19.4	8 9	18 46.23	-11 4.0	1.458	2.350	14.9	19.2
<b>164171</b>	2004 <i>AP</i> <sub>26</sub>		7 8.6 245°97	3°7/ 9.9 18			<b>88212</b>	2000 <i>YN</i> <sub>135</sub>		7 8.6 219°92	4°6/ 10.7 18		
5 31	19 37.07	-10 30.6	2.335	3.130	13.4	20.7	5 31	19 34.96	-5 34.4	2.815	3.584	11.9	20.4
6 10	19 32.90	-10 25.8	2.233	3.115	10.9	20.5	6 10	19 30.84	-5 25.7	2.717	3.576	9.9	20.3
6 20	19 26.79	-10 31.1	2.151	3.100	8.1	20.3	6 20	19 25.17	-5 27.7	2.640	3.568	7.7	20.1
6 30	19 19.16	-10 46.9	2.095	3.085	5.2	20.1	6 30	19 18.34	-5 41.3	2.588	3.560	5.7	20.0
7 10	19 10.68	-11 12.6	2.065	3.069	3.7	20.0	7 10	19 10.88	-6 6.3	2.563	3.551	4.6	19.9
7 20	19 2.12	-11 46.5	2.064	3.053	5.3	20.0	7 20	19 3.41	-6 41.5	2.566	3.542	5.4	19.9
7 30	18 54.33	-12 26.4	2.089	3.036	8.3	20.2	7 30	18 56.57	-7 25.0	2.597	3.532	7.5	20.1
8 9	18 48.02	-13 9.8	2.139	3.019	11.4	20.4	8 9	18 50.93	-8 14.0	2.653	3.522	9.8	20.2
<b>203740</b>	2002 <i>QF</i> <sub>95</sub>		7 8.6 87°07	0°3/ 8.5 18			<b>245679</b>	2006 <i>BJ</i> <sub>82</sub>		7 8.6 310°37	1°9/ 8.0 17		
5 31	19 38.26	-21 12.0	1.933	2.762	14.5	20.5	5 31	19 37.70	-24 54.2	1.596	2.442	16.3	20.3
6 10	19 34.20	-21 36.3	1.855	2.765	11.4	20.3	6 10	19 34.60	-25 23.3	1.506	2.426	12.9	20.1
6 20	19 27.82	-22 6.3	1.797	2.768	7.7	20.0	6 20	19 28.60	-25 57.0	1.436	2.411	8.8	19.8
6 30	19 19.66	-22 39.4	1.764	2.771	3.6	19.8	6 30	19 20.25	-26 31.5	1.389	2.396	4.4	19.5
7 10	19 10.61	-23 12.2	1.758	2.775	0.7	19.6	7 10	19 10.55	-27 2.2	1.367	2.381	2.2	19.3
7 20	19 1.66	-23 41.9	1.779	2.778	4.9	19.9	7 20	19 0.76	-27 25.2	1.370	2.367	6.3	19.5
7 30	18 53.84	-24 6.8	1.826	2.781	8.8	20.1	7 30	18 52.26	-27 38.7	1.397	2.353	10.8	19.8
8 9	18 47.97	-24 26.1	1.897	2.784	12.3	20.3	8 9	18 46.18	-27 43.1	1.446	2.339	15.0	20.0
<b>40788</b>	1999 <i>TK</i> <sub>31</sub>		7 8.6 258°05	2°2/ 7.8 18			<b>323313</b>	2003 <i>US</i> <sub>101</sub>		7 8.6 310°23	9°0/ 10.4 18		
5 31	19 38.30	-28 18.3	2.524	3.344	11.8	19.5	5 31	19 35.07	-5 35.2	1.329	2.151	20.2	20.8
6 10	19 33.88	-28 42.1	2.426	3.331	9.3	19.4	6 10	19 32.75	-4 35.5	1.242	2.133	17.2	20.5
6 20	19 27.44	-29 6.1	2.351	3.317	6.4	19.2	6 20	19 27.49	-3 52.3	1.172	2.115	13.8	20.3
6 30	19 19.46	-29 27.2	2.301	3.304	3.5	18.9	6 30	19 19.78	-3 30.8	1.121	2.098	10.6	20.0
7 10	19 10.64	-29 42.8	2.279	3.290	2.4	18.8	7 10	19 10.62	-3 34.4	1.092	2.081	9.0	19.9
7 20	19 1.81	-29 50.8	2.286	3.276	4.8	19.0	7 20	19 1.29	-4 3.2	1.085	2.064	10.4	19.9
7 30	18 53.84	-29 50.8	2.319	3.261	7.9	19.2	7 30	18 53.21	-4 54.2	1.100	2.048	13.9	20.1
8 9	18 47.47	-29 43.3	2.378	3.247	10.8	19.3	8 9	18 47.61	-6 1.2	1.134	2.033	17.8	20.2
<b>167595</b>	2004 <i>BC</i> <sub>112</sub>		7 8.6 258°68	0°8/ 8.4 18			<b>471117</b>	2010 <i>CC</i> <sub>99</sub>		7 8.6 108°64	6°5/ 11.5 17		
5 31	19 38.66	-23 46.7	2.064	2.891	13.8	20.3	5 31	19 37.10	-2 38.0	2.048	2.821	15.7	21.7
6 10	19 34.45	-23 58.9	1.976	2.886	10.8	20.1	6 10	19 32.94	-2 27.0	1.974	2.832	13.2	21.5
6 20	19 27.96	-24 13.9	1.909	2.880	7.3	19.8	6 20	19 26.78	-2 32.8	1.919	2.842	10.5	21.3
6 30	19 19.73	-24 29.2	1.868	2.874	3.5	19.6	6 30	19 19.13	-2 56.5	1.887	2.852	7.9	21.2
7 10	19 10.60	-24 42.0	1.853	2.869	1.0	19.4	7 10	19 10.77	-3 37.8	1.880	2.862	6.5	21.2
7 20	19 1.52	-24 51.0	1.866	2.863	4.8	19.6	7 20	19 2.53	-4 34.3	1.899	2.871	7.3	21.2
7 30	18 53.50	-24 54.8	1.905	2.857	8.6	19.9	7 30	18 55.27	-5 42.2	1.945	2.881	9.5	21.4
8 9	18 47.37	-24 53.8	1.968	2.851	12.0	20.1	8 9	18 49.69	-6 56.6	2.014	2.890	12.2	21.6
<b>149106</b>	2002 <i>CD</i> <sub>206</sub>		7 8.6 308°15	2°1/ 7.9 18			<b>172530</b>	2003 <i>TF</i> <sub>50</sub>		7 8.6 356°86	4°7/ 7.3 18		
5 31	19 37.38	-27 6.2	2.022	2.856	13.8	19.9	5 31	19 34.81	-27 24.9	1.055	1.934	20.4	18.7
6 10	19 33.67	-27 25.9	1.927	2.840	10.9	19.7	6 10	19 33.55	-28 26.0	0.992	1.930	16.1	18.4
6 20	19 27.58	-27 46.7	1.854	2.825	7.5	19.4	6 20	19 28.52	-29 32.4	0.945	1.926	11.3	18.1
6 30	19 19.61	-28 5.4	1.805	2.810	3.9	19.2	6 30	19 20.37	-30 36.5	0.919	1.924	6.4	17.8
7 10	19 10.62	-28 18.7	1.782	2.795	2.3	19.0	7 10	19 10.54	-31 29.4	0.913	1.923	4.9	17.7
7 20	19 1.60	-28 24.4	1.786	2.780	5.4	19.2	7 20	19 0.85	-32 4.5	0.929	1.924	9.0	18.0
7 30	18 53.64	-28 21.8	1.816	2.766	9.2	19.4	7 30	18 53.20	-32 19.6	0.966	1.926	14.0	18.2
8 9	18 47.64	-28 11.7	1.869	2.752	12.6	19.6	8 9	18 48.95	-32 17.0	1.021	1.929	18.5	18.5
<b>145592</b>	2006 <i>PL</i> <sub>33</sub>		7 8.6 228°13	3°6/ 10.1 18			<b>341195</b>	2007 <i>RO</i> <sub>65</sub>		7 8.6 111°54	2°9/ 7.9 17		
5 31	19 36.54	-9 43.6	2.433	3.223	13.0	20.8	5 31	19 41.67	-29 23.7	1.967	2.795	14.3	21.3
6 10	19 32.36	-9 48.5	2.335	3.214	10.6	20.6	6 10	19 36.90	-29 45.4	1.892	2.801	11.3	21.1
6 20	19 26.36	-10 4.4	2.259	3.205	7.9	20.5	6 20	19 29.65	-30 6.0	1.838	2.806	7.8	20.9
6 30	19 18.95	-10 31.2	2.207	3.196	5.1	20.3	6 30	19 20.54	-30 21.6	1.810	2.812	4.4	20.7
7 10	19 10.77	-11 7.8	2.183	3.186	3.6	20.2	7 10	19 10.54	-30 28.8	1.807	2.817	3.0	20.6
7 20	19 2.54	-11 52.3	2.187	3.176	5.0	20.2	7 20	19 0.77	-30 25.7	1.832	2.822	5.8	20.8
7 30	18 55.06	-12 42.1	2.218	3.166	7.9	20.4	7 30	18 52.31	-30 12.8	1.883	2.828	9.3	21.0
8 9	18 49.01	-13 34.4	2.275	3.155	10.8	20.6	8 9	18 45.99	-29 51.8	1.957	2.833	12.5	21.3
<b>335147</b>	2004 <i>XF</i> <sub>5</sub>		7 8.6 243°53	0°5/ 8.4 18			<b>73099</b>	2002 <i>GR</i> <sub>21</sub>		7 8.6 0°32	4°3/ 9.3 18		
5 31	19 40.99	-23 9.0	2.275	3.091	13.0	22.2	5 31	19 36.94	-15 22.1	1.206	2.059	20.0	19.0
6 10	19 36.17	-23 20.7	2.171	3.074	10.3	22.0	6 10	19 34.31	-14 40.2	1.137	2.057	16.1	18.7
6 20	19 29.13	-23 35.3	2.089	3.057	7.0	21.7	6 20	19 28.49	-14 8.3	1.086	2.056	11.6	18.5
6 30	19 20.33	-23 50.7	2.032	3.038	3.3	21.5	6 30	19 20.17	-13 47.9	1.055	2.056	6.8	18.2
7 10	19 10.53	-24 4.4	2.004	3.020	0.8	21.2	7 10	19 10.59	-13 39.2	1.046	2.056	4.3	18.0
7 20	19 0.65	-24 14.3	2.003	3.000	4.6	21.5	7 20	19 1.21	-13 41.4	1.060	2.058	7.5	18.2
7 30	18 51.68	-24 19.7	2.031	2.980	8.4	21.7	7 30	18 53.50	-13 52.5	1.096	2.060	12.2	18.5
8 9	18 44.45	-24 20.4	2.083	2.960	11.8	21.9	8 9	18 48.56	-14 9.9	1.152	2.063	16.6	18.8
<b>75224</b>	1999 <i>WC</i> <sub>3</sub>		7 8.6 136°81	0°7/ 8.4 18			<b>146036</b>	2000 <i>DF</i> <sub>89</sub>		7 8.6 339°75			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>133598</b>	2003 <i>UQ</i> <sub>88</sub>		7 8.6 337°34	0°8/ 8.2 18			<b>86080</b>	1999 <i>RJ</i> <sub>71</sub>		7 8.6 274°57	0°4/ 8.7 18		
5 31	19 35.96	-18 53.5	1.569	2.412	16.7	18.4	5 31	19 36.58	-20 9.3	2.382	3.201	12.4	20.2
6 10	19 33.17	-20 1.9	1.484	2.403	13.1	18.1	6 10	19 32.60	-20 21.2	2.279	3.184	9.8	19.9
6 20	19 27.62	-21 24.0	1.420	2.395	8.9	17.9	6 20	19 26.66	-20 38.1	2.199	3.167	6.7	19.7
6 30	19 19.79	-22 55.4	1.380	2.388	4.2	17.6	6 30	19 19.17	-20 58.3	2.143	3.149	3.2	19.5
7 10	19 10.65	-24 29.5	1.365	2.381	1.2	17.3	7 10	19 10.82	-21 19.9	2.115	3.132	0.6	19.2
7 20	19 1.37	-25 59.1	1.376	2.375	6.0	17.6	7 20	19 2.40	-21 41.0	2.115	3.114	4.2	19.5
7 30	18 53.30	-27 18.7	1.413	2.370	10.6	17.9	7 30	18 54.77	-22 0.0	2.143	3.096	7.8	19.7
8 9	18 47.55	-28 25.1	1.471	2.365	14.8	18.1	8 9	18 48.68	-22 16.1	2.195	3.078	11.0	19.8
<b>338541</b>	2003 <i>SE</i> <sub>12</sub>		7 8.6 294°30	1°4/ 8.2 18			<b>401172</b>	2011 <i>WS</i> <sub>65</sub>		7 8.6 231°68	1°2/ 8.2 18		
5 31	19 38.88	-24 40.5	1.773	2.610	15.3	21.1	5 31	19 37.81	-24 54.6	2.503	3.322	11.9	22.0
6 10	19 35.28	-24 57.1	1.673	2.589	12.1	20.8	6 10	19 33.44	-25 16.1	2.410	3.315	9.3	21.8
6 20	19 28.95	-25 17.1	1.594	2.567	8.3	20.5	6 20	19 27.14	-25 39.6	2.339	3.308	6.3	21.6
6 30	19 20.41	-25 37.4	1.539	2.546	4.1	20.2	6 30	19 19.36	-26 2.7	2.295	3.301	3.1	21.4
7 10	19 10.57	-25 54.5	1.509	2.525	1.6	20.0	7 10	19 10.81	-26 22.8	2.279	3.293	1.4	21.3
7 20	19 0.59	-26 5.5	1.506	2.503	5.7	20.2	7 20	19 2.28	-26 38.1	2.291	3.286	4.3	21.5
7 30	18 51.74	-26 9.1	1.528	2.482	10.2	20.4	7 30	18 54.60	-26 47.6	2.330	3.278	7.6	21.7
8 9	18 45.11	-26 5.9	1.572	2.461	14.2	20.6	8 9	18 48.47	-26 51.4	2.394	3.270	10.5	21.8
<b>333186</b>	2012 <i>FQ</i> <sub>12</sub>		7 8.6 188°39	1°4/ 8.9 17			<b>504221</b>	2006 <i>UH</i> <sub>100</sub>		7 8.6 209°11	1°8/ 7.9 17		
5 31	19 42.06	-17 49.2	1.834	2.653	15.6	22.3	5 31	19 43.09	-25 7.7	2.089	2.909	13.9	23.2
6 10	19 37.31	-17 55.6	1.749	2.652	12.4	22.1	6 10	19 38.05	-25 44.8	1.997	2.902	11.0	23.0
6 20	19 30.03	-18 9.7	1.685	2.652	8.5	21.8	6 20	19 30.54	-26 25.3	1.927	2.895	7.5	22.8
6 30	19 20.79	-18 29.8	1.646	2.650	4.3	21.6	6 30	19 21.08	-27 5.6	1.883	2.887	3.8	22.5
7 10	19 10.53	-18 53.7	1.633	2.648	1.4	21.4	7 10	19 10.53	-27 41.3	1.866	2.879	2.0	22.4
7 20	19 0.33	-19 18.6	1.647	2.645	5.2	21.6	7 20	18 59.95	-28 9.5	1.877	2.870	5.3	22.6
7 30	18 51.32	-19 42.8	1.687	2.642	9.4	21.9	7 30	18 50.44	-28 28.5	1.915	2.860	9.1	22.8
8 9	18 44.41	-20 4.9	1.752	2.638	13.1	22.1	8 9	18 42.93	-28 38.7	1.977	2.849	12.5	23.0
<b>376936</b>	2002 <i>CO</i> <sub>189</sub>		7 8.6 164°83	0°0/ 8.5 17			<b>443395</b>	2014 <i>HC</i> <sub>29</sub>		7 8.6 354°85	1°5/ 9.1 18		
5 31	19 40.61	-20 24.5	2.149	2.965	13.7	22.1	5 31	19 34.83	-17 34.4	1.802	2.635	15.2	20.4
6 10	19 35.79	-20 47.7	2.066	2.970	10.7	21.9	6 10	19 31.70	-17 38.1	1.721	2.632	12.0	20.2
6 20	19 28.79	-21 16.4	2.006	2.974	7.3	21.7	6 20	19 26.25	-17 49.7	1.660	2.630	8.3	20.0
6 30	19 20.15	-21 48.2	1.971	2.977	3.5	21.5	6 30	19 19.02	-18 8.0	1.623	2.628	4.3	19.7
7 10	19 10.66	-22 20.2	1.964	2.980	0.6	21.2	7 10	19 10.87	-18 31.0	1.612	2.627	1.6	19.5
7 20	19 1.25	-22 49.9	1.985	2.983	4.5	21.6	7 20	19 2.81	-18 56.4	1.626	2.626	5.0	19.8
7 30	18 52.88	-23 15.5	2.033	2.985	8.2	21.8	7 30	18 55.84	-19 22.0	1.666	2.626	9.1	20.0
8 9	18 46.32	-23 36.4	2.106	2.986	11.5	22.0	8 9	18 50.82	-19 46.2	1.729	2.626	12.7	20.2
<b>504891</b>	2010 <i>WG</i> <sub>45</sub>		7 8.6 247°56	2°4/ 7.9 17			<b>42082</b>	2001 <i>AF</i> <sub>11</sub>		7 8.6 15°42	5°1/ 11.6 18		
5 31	19 43.35	-26 45.8	1.799	2.629	15.4	22.8	5 31	19 34.85	-3 54.5	1.936	2.723	16.0	17.8
6 10	19 38.78	-27 15.0	1.703	2.614	12.2	22.6	6 10	19 31.45	-4 30.1	1.855	2.727	13.3	17.6
6 20	19 31.33	-27 46.7	1.628	2.598	8.5	22.3	6 20	19 25.95	-5 25.6	1.794	2.731	10.2	17.4
6 30	19 21.55	-28 16.5	1.577	2.582	4.4	22.0	6 30	19 18.85	-6 40.7	1.756	2.736	7.1	17.2
7 10	19 10.41	-28 39.9	1.552	2.565	2.6	21.9	7 10	19 10.91	-8 12.8	1.745	2.742	5.2	17.1
7 20	18 59.16	-28 53.6	1.554	2.548	6.2	22.1	7 20	19 3.01	-9 57.0	1.760	2.748	6.2	17.2
7 30	18 49.14	-28 56.4	1.582	2.530	10.4	22.3	7 30	18 56.07	-11 47.1	1.803	2.754	9.1	17.4
8 9	18 41.49	-28 49.6	1.633	2.511	14.3	22.5	8 9	18 50.85	-13 37.0	1.870	2.761	12.2	17.6
<b>509859</b>	2008 <i>YT</i> <sub>161</sub>		7 8.6 147°13	1°1/ 8.9 17			<b>257638</b>	1999 <i>TQ</i> <sub>244</sub>		7 8.6 328°17	4°4/ 9.3 17		
5 31	19 40.08	-19 46.5	2.216	3.031	13.4	22.1	5 31	19 31.50	-15 42.4	1.091	1.960	20.5	20.3
6 10	19 35.20	-19 33.0	2.135	3.036	10.5	21.9	6 10	19 30.73	-15 4.8	1.004	1.934	16.7	19.9
6 20	19 28.27	-19 23.2	2.076	3.042	7.2	21.7	6 20	19 26.59	-14 36.9	0.934	1.910	12.2	19.6
6 30	19 19.85	-19 16.1	2.042	3.047	3.6	21.5	6 30	19 19.57	-14 20.9	0.882	1.886	7.2	19.2
7 10	19 10.72	-19 10.7	2.036	3.052	1.2	21.3	7 10	19 10.76	-14 17.6	0.852	1.864	4.4	19.0
7 20	19 1.75	-19 6.1	2.059	3.056	4.4	21.6	7 20	19 1.68	-14 26.3	0.842	1.843	8.1	19.1
7 30	18 53.82	-19 2.0	2.108	3.061	7.9	21.8	7 30	18 54.11	-14 45.1	0.852	1.823	13.6	19.3
8 9	18 47.62	-18 58.0	2.182	3.064	11.1	22.0	8 9	18 49.51	-15 10.7	0.881	1.806	18.9	19.6
<b>374329</b>	2005 <i>TZ</i> <sub>93</sub>		7 8.6 257°61	3°9/ 7.6 17			<b>275983</b>	2001 <i>XE</i> <sub>82</sub>		7 8.6 218°75	1°5/ 9.1 18		
5 31	19 42.70	-30 38.3	1.749	2.582	15.6	21.8	5 31	19 39.99	-17 29.3	2.015	2.831	14.5	21.2
6 10	19 38.32	-31 10.5	1.663	2.574	12.4	21.6	6 10	19 35.52	-17 30.3	1.923	2.825	11.5	21.0
6 20	19 31.01	-31 41.7	1.598	2.565	8.8	21.4	6 20	19 28.76	-17 38.2	1.853	2.818	8.0	20.8
6 30	19 21.36	-32 6.9	1.556	2.556	5.3	21.1	6 30	19 20.21	-17 51.9	1.807	2.811	4.1	20.5
7 10	19 10.45	-32 21.1	1.540	2.547	4.1	21.0	7 10	19 10.71	-18 9.6	1.789	2.803	1.6	20.3
7 20	18 59.60	-32 21.4	1.550	2.538	6.9	21.2	7 20	19 1.22	-18 29.3	1.797	2.795	4.9	20.5
7 30	18 50.17	-32 7.9	1.586	2.529	10.8	21.4	7 30	18 52.74	-18 49.5	1.833	2.787	8.8	20.7
8 9	18 43.22	-31 43.0	1.643	2.519	14.4	21.6	8 9	18 46.14	-19 8.8	1.892	2.778	12.3	20.9
<b>444975</b>	2008 <i>EL</i> <sub>75</sub>		7 8.6 354°10	6°0/ 10.8 18			<b>117432</b>	2005 <i>AQ</i> <sub>28</sub>		7 8.6 211°77	1°9/ 8.1 17		
5 31	19 31.39	-7 5.9	1.653	2.471	17.0	20.1	5 31	19 43.93	-25 37.0	1.703	2.534	16.1	21.2
6 10	19 29.14	-6 50.8	1.573	2.465	14.1	19.8	6 10	19 39.22	-26 2.2	1.618	2.530	12.7	21.0
6 20	19 24.58	-6 52.2	1.512	2.460	10.9	19.6	6 20	19 31.60	-26 30.4	1.554	2.525	8.7	20.8
6 30	19 18.25	-7 11.6	1.472	2.456	7.7	19.4	6 30	19 21.66	-26 57.3	1.513	2.519	4.4	20.5
7 10	19 10.97	-7 48.8	1.456	2.453	6.0	19.3	7 10	19 10.48	-27 18.6	1.499	2.513	2.2	20.3
7 20	19 3.72	-8 41.2	1.464	2.451	7.3	19.4	7 20	18 59.34	-27 31.3	1.511	2.506	6.0	20.6
7 30	18 57.54	-9 44.7	1.496	2.450	10.4	19.6	7 30	18 49.59	-27 34.5	1.548	2.499	10.4	20.8
8 9	18 53.29	-10 54.2	1.550	2.450	13.7	19.8	8 9	18 42.30	-27 29.3	1.608	2.491	14.3	21.0
<b>237556</b>	2000 <i>WN</i> <sub>154</sub>												

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>77597</b>	2001 <i>KO</i> <sub>22</sub>		7 8.6 109°91	4.6/ 9.7	18		<b>240440</b>	2003 <i>XM</i> <sub>14</sub>		7 8.6 261°72	3.9/ 7.4	18	
5 31	19 39.18	-10 58.8	2.069	2.868	14.7	19.7	5 31	19 40.88	-30 47.9	1.984	2.813	14.2	21.0
6 10	19 34.53	-10 14.5	1.993	2.877	12.0	19.5	6 10	19 36.58	-31 28.8	1.897	2.805	11.3	20.8
6 20	19 27.85	-9 38.9	1.939	2.886	8.9	19.3	6 20	19 29.68	-32 9.3	1.831	2.796	8.0	20.6
6 30	19 19.68	-9 13.6	1.909	2.895	6.0	19.2	6 30	19 20.73	-32 44.6	1.789	2.787	4.9	20.4
7 10	19 10.82	-8 59.1	1.905	2.904	4.6	19.1	7 10	19 10.66	-33 9.9	1.774	2.779	4.0	20.3
7 20	19 2.15	-8 55.1	1.929	2.912	6.2	19.2	7 20	19 0.61	-33 22.4	1.785	2.770	6.5	20.5
7 30	18 54.52	-9 0.5	1.978	2.921	9.0	19.4	7 30	18 51.76	-33 21.4	1.823	2.761	9.9	20.7
8 9	18 48.63	-9 13.4	2.052	2.929	11.9	19.6	8 9	18 45.06	-33 8.6	1.883	2.752	13.2	20.8
<b>172236</b>	2002 <i>RH</i> <sub>173</sub>		7 8.6 279°26	2.5/ 7.6	18		<b>497009</b>	2003 <i>BU</i> <sub>35</sub>		7 8.6 156°64	1.2/ 9.3	17	
5 31	19 39.41	-26 15.6	2.075	2.903	13.7	20.1	5 31	19 33.40	-15 30.5	4.826	5.609	7.1	24.1
6 10	19 35.42	-27 2.1	1.970	2.880	10.9	19.9	6 10	19 28.90	-15 25.7	4.738	5.619	5.6	24.0
6 20	19 28.94	-27 52.9	1.887	2.857	7.5	19.6	6 20	19 23.51	-15 24.0	4.675	5.628	3.9	23.9
6 30	19 20.43	-28 43.8	1.830	2.833	4.0	19.3	6 30	19 17.51	-15 25.1	4.640	5.637	2.2	23.7
7 10	19 10.67	-29 30.3	1.799	2.810	2.7	19.2	7 10	19 11.22	-15 28.5	4.635	5.645	1.2	23.7
7 20	19 0.68	-30 8.3	1.795	2.786	5.8	19.4	7 20	19 4.98	-15 33.7	4.661	5.653	2.4	23.8
7 30	18 51.62	-30 35.7	1.818	2.762	9.6	19.5	7 30	18 59.16	-15 40.2	4.716	5.660	4.1	23.9
8 9	18 44.49	-30 52.2	1.864	2.737	13.1	19.7	8 9	18 54.07	-15 47.5	4.799	5.667	5.8	24.0
<b>338778</b>	2003 <i>UK</i> <sub>272</sub>		7 8.6 218°73	0.4/ 8.8	18		<b>394745</b>	2008 <i>FZ</i> <sub>34</sub>		7 8.6 108°43	4.5/ 10.4	16	
5 31	19 38.94	-19 40.2	2.358	3.171	12.7	21.7	5 31	19 35.75	-7 51.8	2.379	3.165	13.4	21.8
6 10	19 34.41	-19 56.4	2.262	3.163	10.0	21.5	6 10	19 31.65	-7 39.2	2.300	3.174	11.0	21.6
6 20	19 27.86	-20 18.1	2.189	3.155	6.9	21.3	6 20	19 25.82	-7 37.7	2.243	3.183	8.3	21.4
6 30	19 19.75	-20 43.4	2.141	3.147	3.3	21.1	6 30	19 18.72	-7 48.0	2.210	3.191	5.8	21.3
7 10	19 10.81	-21 10.0	2.122	3.138	0.6	20.8	7 10	19 11.01	-8 9.5	2.204	3.200	4.5	21.2
7 20	19 1.84	-21 35.8	2.131	3.129	4.2	21.1	7 20	19 3.40	-8 40.6	2.225	3.208	5.6	21.3
7 30	18 53.73	-21 59.3	2.167	3.119	7.8	21.3	7 30	18 56.63	-9 19.2	2.273	3.216	8.0	21.5
8 9	18 47.22	-22 19.4	2.228	3.109	11.0	21.5	8 9	18 51.30	-10 2.6	2.346	3.224	10.6	21.7
<b>289363</b>	2005 <i>BC</i> <sub>49</sub>		7 8.6 108°13	1.1/ 8.9	18		<b>112869</b>	2002 <i>QH</i> <sub>35</sub>		7 8.6 278°29	2.8/ 7.9	18	
5 31	19 41.88	-19 33.4	2.285	3.094	13.2	21.2	5 31	19 40.07	-28 34.5	1.958	2.789	14.3	20.2
6 10	19 36.38	-19 21.8	2.218	3.116	10.3	21.1	6 10	19 35.88	-28 59.3	1.870	2.781	11.3	20.0
6 20	19 28.94	-19 14.1	2.172	3.137	7.0	20.9	6 20	19 29.15	-29 24.2	1.804	2.773	7.8	19.8
6 30	19 20.14	-19 9.0	2.153	3.157	3.5	20.7	6 30	19 20.46	-29 45.4	1.762	2.765	4.3	19.5
7 10	19 10.78	-19 5.6	2.162	3.177	1.1	20.6	7 10	19 10.72	-29 59.2	1.746	2.757	2.9	19.4
7 20	19 1.69	-19 3.0	2.200	3.197	4.2	20.8	7 20	19 1.03	-30 3.2	1.757	2.748	5.8	19.6
7 30	18 53.70	-19 0.6	2.265	3.216	7.5	21.1	7 30	18 52.53	-29 57.0	1.794	2.740	9.5	19.8
8 9	18 47.44	-18 58.2	2.355	3.234	10.5	21.3	8 9	18 46.13	-29 42.1	1.854	2.732	12.9	20.0
<b>173857</b>	2001 <i>TH</i> <sub>172</sub>		7 8.6 277°68	0.6/ 8.4	18		<b>35845</b>	1999 <i>JM</i> <sub>60</sub>		7 8.6 324°94	6.1/ 9.2	18	
5 31	19 37.65	-22 38.4	2.130	2.957	13.4	21.0	5 31	19 37.69	-12 17.8	1.519	2.346	17.8	17.8
6 10	19 33.73	-22 58.4	2.034	2.943	10.6	20.8	6 10	19 34.37	-11 5.9	1.433	2.335	14.7	17.5
6 20	19 27.58	-23 22.6	1.959	2.930	7.2	20.5	6 20	19 28.32	-10 1.5	1.367	2.324	11.0	17.3
6 30	19 19.69	-23 48.7	1.909	2.916	3.4	20.3	6 30	19 20.13	-9 7.8	1.323	2.313	7.6	17.1
7 10	19 10.82	-24 13.8	1.886	2.902	0.9	20.0	7 10	19 10.78	-8 27.6	1.303	2.303	6.1	17.0
7 20	19 1.90	-24 35.5	1.891	2.889	4.7	20.3	7 20	19 1.47	-8 2.4	1.308	2.294	8.1	17.1
7 30	18 53.92	-24 52.3	1.922	2.875	8.5	20.5	7 30	18 53.43	-7 52.1	1.336	2.285	11.8	17.2
8 9	18 47.73	-25 3.7	1.977	2.861	12.0	20.7	8 9	18 47.67	-7 54.8	1.385	2.277	15.6	17.4
<b>114506</b>	2003 <i>AU</i> <sub>79</sub>		7 8.6 184°74	5.7/ 6.2	18		<b>67094</b>	2000 <i>AC</i> <sub>62</sub>		7 8.6 234°11	1.2/ 9.2	18	
5 31	19 45.02	-33 56.5	1.992	2.812	14.5	19.8	5 31	19 35.35	-16 13.2	2.713	3.519	11.4	19.8
6 10	19 39.99	-35 16.3	1.913	2.813	11.7	19.6	6 10	19 31.33	-16 33.7	2.616	3.512	9.1	19.6
6 20	19 32.10	-36 35.2	1.857	2.812	8.7	19.4	6 20	19 25.64	-17 1.1	2.543	3.505	6.3	19.4
6 30	19 21.92	-37 46.0	1.825	2.812	6.3	19.2	6 30	19 18.68	-17 34.2	2.495	3.497	3.3	19.2
7 10	19 10.46	-38 42.0	1.821	2.810	5.9	19.2	7 10	19 11.04	-18 11.1	2.475	3.490	1.3	19.1
7 20	18 58.97	-39 19.0	1.843	2.809	8.0	19.3	7 20	19 3.38	-18 49.8	2.484	3.482	3.8	19.2
7 30	18 48.80	-39 36.0	1.891	2.807	10.9	19.5	7 30	18 56.40	-19 28.3	2.522	3.474	6.8	19.4
8 9	18 41.01	-39 35.4	1.961	2.804	13.8	19.7	8 9	18 50.71	-20 4.9	2.585	3.466	9.6	19.6
<b>366703</b>	2003 <i>WP</i> <sub>85</sub>		7 8.6 192°53	2.8/ 7.8	17		<b>256708</b>	2008 <i>AA</i> <sub>28</sub>		7 8.6 227°03	1.6/ 9.1	18	
5 31	19 44.96	-28 11.2	2.005	2.825	14.4	22.2	5 31	19 41.46	-16 38.1	1.927	2.741	15.1	21.6
6 10	19 39.60	-28 43.8	1.919	2.824	11.4	22.0	6 10	19 36.89	-16 48.0	1.831	2.731	12.1	21.3
6 20	19 31.62	-29 17.1	1.855	2.821	7.9	21.8	6 20	19 29.85	-17 6.6	1.755	2.719	8.4	21.1
6 30	19 21.61	-29 46.8	1.816	2.818	4.3	21.5	6 30	19 20.84	-17 32.6	1.704	2.707	4.4	20.8
7 10	19 10.52	-30 8.5	1.804	2.815	2.9	21.4	7 10	19 10.70	-18 3.7	1.680	2.694	1.7	20.6
7 20	18 59.50	-30 19.7	1.820	2.810	5.8	21.6	7 20	19 0.47	-18 37.2	1.683	2.681	5.2	20.8
7 30	18 49.73	-30 19.8	1.863	2.805	9.5	21.8	7 30	18 51.26	-19 10.7	1.713	2.667	9.3	21.0
8 9	18 42.15	-30 10.3	1.930	2.799	12.9	22.0	8 9	18 44.03	-19 42.4	1.767	2.652	13.1	21.2
<b>20016</b>	Rietschel		7 8.6 248°48	3.4/ 7.8	18		<b>438136</b>	2005 <i>RA</i> <sub>7</sub>		7 8.6 316°65	2.3/ 8.1	18	
5 31	19 42.73	-30 51.9	1.993	2.818	14.3	19.3	5 31	19 38.39	-28 14.9	1.867	2.704	14.6	20.9
6 10	19 37.97	-31 13.2	1.902	2.808	11.4	19.0	6 10	19 34.73	-28 22.8	1.773	2.688	11.6	20.7
6 20	19 30.57	-31 32.6	1.833	2.798	8.0	18.8	6 20	19 28.48	-28 30.0	1.700	2.671	8.0	20.5
6 30	19 21.13	-31 45.9	1.788	2.788	4.7	18.6	6 30	19 20.20	-28 33.3	1.651	2.655	4.3	20.2
7 10	19 10.60	-31 49.2	1.770	2.777	3.5	18.5	7 10	19 10.80	-28 29.6	1.627	2.640	2.5	20.0
7 20	19 0.13	-31 40.6	1.779	2.767	6.2	18.6	7 20	19 1.42	-28 17.3	1.630	2.625	5.7	20.2
7 30	18 50.92	-31 20.4	1.814	2.756	9.7	18.8	7 30	18 53.22	-27 56.4	1.658	2.610	9.7	20.4
8 9	18 43.90	-30 50.8	1.872	2.744	13.1	19.0	8 9	18 47.18	-27 28.8	1.709	2.596	13.4	20.6
<b>51199</b>	2000 <i>JA</i> <sub>4</sub>		7 8.6 17°75	6.9/ 11.5	18		<b>123800</b>	2001 <i>BL</i> <sub>48</sub>		7 8.6 158°16	1.9/ 9.2	18	

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>479629</b>	2014 <i>DM</i> <sub>39</sub>		7 8.6 302°88	2.7/ 9.8	17		<b>387237</b>	2012 <i>UV</i> <sub>45</sub>		7 8.7 232°46	1.2/ 9.0	18	
5 31	19 36.58	-12 11.2	1.720	2.541	16.4	20.9	5 31	19 38.54	-18 3.8	2.129	2.946	13.8	21.8
6 10	19 33.36	-12 44.0	1.627	2.528	13.2	20.6	6 10	19 34.31	-18 10.8	2.037	2.939	10.9	21.6
6 20	19 27.63	-13 32.8	1.554	2.516	9.5	20.4	6 20	19 27.93	-18 24.4	1.966	2.932	7.5	21.3
6 30	19 19.86	-14 36.4	1.504	2.504	5.4	20.1	6 30	19 19.88	-18 43.3	1.920	2.924	3.8	21.1
7 10	19 10.89	-15 51.5	1.480	2.493	2.7	19.9	7 10	19 10.94	-19 5.3	1.901	2.916	1.2	20.9
7 20	19 1.77	-17 13.2	1.483	2.481	5.6	20.1	7 20	19 1.99	-19 28.6	1.910	2.908	4.6	21.1
7 30	18 53.68	-18 35.9	1.511	2.470	9.9	20.3	7 30	18 53.98	-19 51.4	1.945	2.900	8.3	21.3
8 9	18 47.62	-19 55.2	1.562	2.459	13.9	20.5	8 9	18 47.71	-20 12.5	2.005	2.891	11.7	21.5
<b>425526</b>	2010 <i>NV</i> <sub>42</sub>		7 8.6 309°13	18°0/26.1	18		<b>506771</b>	2006 <i>WZ</i> <sub>178</sub>		7 8.7 261°80	0°1/ 8.6	17	
5 31	19 47.59	-51 46.1	1.299	2.117	20.8	19.5	5 31	19 41.53	-21 48.5	1.745	2.575	15.8	22.8
6 10	19 46.48	-54 54.8	1.226	2.090	19.2	19.3	6 10	19 37.38	-21 57.3	1.646	2.557	12.5	22.6
6 20	19 39.72	-57 56.1	1.172	2.062	18.2	19.2	6 20	19 30.44	-22 11.4	1.569	2.539	8.6	22.3
6 30	19 27.00	-60 31.5	1.137	2.035	18.1	19.1	6 30	19 21.24	-22 28.2	1.514	2.521	4.1	22.0
7 10	19 9.58	-62 22.4	1.121	2.008	19.1	19.0	7 10	19 10.71	-22 44.8	1.486	2.502	0.7	21.7
7 20	18 50.58	-63 16.8	1.121	1.981	20.9	19.1	7 20	19 0.04	-22 58.6	1.484	2.483	5.6	22.0
7 30	18 34.32	-63 14.0	1.137	1.955	23.2	19.1	7 30	18 50.53	-23 8.1	1.508	2.464	10.2	22.2
8 9	18 24.25	-62 24.3	1.165	1.930	25.6	19.2	8 9	18 43.28	-23 13.0	1.555	2.444	14.3	22.4
<b>316240</b>	2010 <i>OZ</i> <sub>27</sub>		7 8.6 218°35	3°6/ 7.8	18		<b>385241</b>	2000 <i>UE</i> <sub>65</sub>		7 8.7 252°95	0°5/ 8.8	18	
5 31	19 42.29	-34 45.5	2.665	3.473	11.5	20.7	5 31	19 40.86	-20 54.4	2.077	2.896	14.0	21.5
6 10	19 36.88	-34 55.7	2.575	3.469	9.3	20.6	6 10	19 36.32	-20 53.3	1.975	2.879	11.1	21.3
6 20	19 29.43	-35 1.2	2.508	3.464	6.7	20.4	6 20	19 29.42	-20 56.2	1.893	2.861	7.6	21.0
6 30	19 20.48	-34 58.6	2.467	3.459	4.4	20.2	6 30	19 20.65	-21 1.6	1.837	2.843	3.7	20.7
7 10	19 10.82	-34 45.7	2.454	3.453	3.7	20.2	7 10	19 10.82	-21 7.5	1.808	2.825	0.7	20.5
7 20	19 1.32	-34 21.7	2.469	3.448	5.4	20.3	7 20	19 0.90	-21 12.3	1.807	2.806	4.8	20.7
7 30	18 52.85	-33 47.3	2.512	3.442	7.9	20.4	7 30	18 51.95	-21 15.2	1.833	2.786	8.9	20.9
8 9	18 46.11	-33 4.8	2.580	3.436	10.5	20.6	8 9	18 44.87	-21 16.0	1.882	2.766	12.5	21.1
<b>437180</b>	2012 <i>VN</i> <sub>74</sub>		7 8.6 54°87	2°4/ 9.3	16		<b>277168</b>	2005 <i>NB</i> <sub>72</sub>		7 8.7 290°11	1°9/ 8.9	18	
5 31	19 37.57	-15 37.1	1.873	2.695	15.2	21.7	5 31	19 39.86	-19 2.4	1.580	2.415	16.9	21.0
6 10	19 33.68	-15 32.1	1.795	2.699	12.1	21.5	6 10	19 36.27	-18 39.3	1.482	2.395	13.6	20.7
6 20	19 27.52	-15 35.6	1.738	2.703	8.5	21.2	6 20	19 29.80	-18 21.2	1.405	2.375	9.5	20.4
6 30	19 19.66	-15 47.1	1.705	2.707	4.7	21.0	6 30	19 20.97	-18 7.7	1.350	2.354	5.0	20.1
7 10	19 10.95	-16 4.8	1.698	2.711	2.4	20.9	7 10	19 10.76	-17 57.9	1.319	2.334	2.0	19.9
7 20	19 2.37	-16 27.0	1.718	2.715	5.1	21.1	7 20	19 0.41	-17 50.9	1.315	2.314	6.1	20.1
7 30	18 54.90	-16 51.5	1.763	2.719	8.9	21.3	7 30	18 51.30	-17 46.2	1.334	2.294	10.9	20.3
8 9	18 49.34	-17 16.6	1.832	2.724	12.4	21.5	8 9	18 44.55	-17 43.2	1.376	2.274	15.3	20.5
<b>65022</b>	2002 <i>AQ</i> <sub>104</sub>		7 8.6 55°45	0°3/ 8.5	18		<b>501984</b>	2014 <i>YN</i> <sub>41</sub>		7 8.7 240°34	1°2/ 8.9	17	
5 31	19 37.74	-22 11.4	2.033	2.862	13.9	19.5	5 31	19 42.82	-18 44.3	1.849	2.667	15.5	22.7
6 10	19 33.63	-22 24.2	1.964	2.874	10.9	19.3	6 10	19 38.16	-18 46.1	1.748	2.652	12.4	22.5
6 20	19 27.36	-22 40.8	1.915	2.886	7.3	19.1	6 20	19 30.86	-18 54.6	1.669	2.635	8.6	22.2
6 30	19 19.53	-22 58.9	1.892	2.899	3.5	18.9	6 30	19 21.41	-19 8.3	1.613	2.618	4.3	21.9
7 10	19 10.98	-23 16.0	1.895	2.912	0.6	18.7	7 10	19 10.70	-19 25.1	1.584	2.600	1.3	21.7
7 20	19 2.63	-23 30.3	1.926	2.925	4.5	19.0	7 20	18 59.85	-19 42.7	1.583	2.581	5.4	21.9
7 30	18 55.41	-23 40.7	1.983	2.938	8.2	19.3	7 30	18 50.09	-19 59.3	1.608	2.562	9.8	22.1
8 9	18 50.02	-23 47.1	2.064	2.951	11.4	19.5	8 9	18 42.43	-20 14.2	1.656	2.542	13.8	22.3
<b>425578</b>	2010 <i>TV</i> <sub>90</sub>		7 8.6 275°80	3°8/ 7.6	17		<b>389135</b>	2009 <i>AH</i> <sub>33</sub>		7 8.7 265°82	1°3/ 8.3	18	
5 31	19 42.27	-28 36.1	1.508	2.352	17.2	21.5	5 31	19 39.72	-25 22.8	2.007	2.836	14.1	21.3
6 10	19 38.58	-29 17.4	1.421	2.338	13.7	21.2	6 10	19 35.48	-25 34.9	1.918	2.828	11.1	21.1
6 20	19 31.60	-30 1.0	1.353	2.324	9.6	20.9	6 20	19 28.84	-25 48.7	1.850	2.820	7.6	20.8
6 30	19 21.89	-30 41.1	1.307	2.310	5.5	20.6	6 30	19 20.35	-26 1.4	1.806	2.812	3.7	20.6
7 10	19 10.59	-31 11.6	1.287	2.296	4.0	20.5	7 10	19 10.89	-26 10.2	1.789	2.804	1.5	20.4
7 20	18 59.19	-31 27.9	1.291	2.282	7.5	20.7	7 20	19 1.47	-26 13.2	1.800	2.796	5.1	20.6
7 30	18 49.31	-31 28.9	1.319	2.268	12.0	20.9	7 30	18 53.16	-26 9.7	1.837	2.788	8.9	20.9
8 9	18 42.22	-31 16.6	1.368	2.254	16.2	21.1	8 9	18 46.83	-26 0.6	1.897	2.780	12.4	21.1
<b>315477</b>	2007 <i>YP</i> <sub>33</sub>		7 8.6 107°18	0°0/ 8.5	17		<b>50039</b>	2000 <i>AV</i> <sub>56</sub>		7 8.7 332°20	1°2/ 8.3	18	
5 31	19 42.50	-20 43.6	1.566	2.400	17.1	21.9	5 31	19 36.26	-22 24.3	1.274	2.135	18.7	18.7
6 10	19 38.01	-21 2.0	1.498	2.411	13.4	21.7	6 10	19 34.10	-22 53.6	1.195	2.124	14.8	18.4
6 20	19 30.69	-21 27.1	1.450	2.422	9.1	21.4	6 20	19 28.67	-23 31.4	1.135	2.113	10.1	18.2
6 30	19 21.22	-21 56.0	1.425	2.432	4.3	21.2	6 30	19 20.53	-24 13.7	1.095	2.103	4.9	17.8
7 10	19 10.73	-22 24.9	1.426	2.442	0.7	20.9	7 10	19 10.87	-24 55.3	1.078	2.094	1.5	17.6
7 20	19 0.48	-22 50.5	1.452	2.452	5.6	21.3	7 20	19 1.15	-25 31.2	1.085	2.086	6.8	17.9
7 30	18 51.74	-23 11.2	1.504	2.461	10.1	21.6	7 30	18 53.01	-25 58.2	1.115	2.078	12.0	18.2
8 9	18 45.46	-23 26.5	1.579	2.471	14.0	21.9	8 9	18 47.71	-26 15.8	1.164	2.072	16.7	18.4
<b>98405</b>	2000 <i>UN</i> <sub>9</sub>		7 8.6 202°12	6°6/ 5.9	18		<b>468572</b>	2007 <i>EB</i> <sub>57</sub>		7 8.7 23°16	21°2/ 1.6	16	
5 31	19 44.34	-36 45.9	2.017	2.836	14.4	19.3	5 31	19 31.74	+28 0.0	1.146	1.812	30.8	19.7
6 10	19 39.57	-38 6.8	1.939	2.834	11.7	19.1	6 10	19 30.16	+28 50.9	1.118	1.835	29.1	19.6
6 20	19 31.90	-39 24.7	1.883	2.831	9.0	18.9	6 20	19 25.55	+28 51.2	1.095	1.859	27.2	19.6
6 30	19 21.90	-40 32.3	1.851	2.829	7.0	18.8	6 30	19 18.79	+27 52.8	1.082	1.886	25.2	19.5
7 10	19 10.60	-41 23.0	1.846	2.826	6.8	18.8	7 10	19 11.19	+25 53.1	1.080	1.915	23.3	19.5
7 20	18 59.28	-41 52.7	1.866	2.822	8.6	18.9	7 20	19 4.10	+22 56.5	1.093	1.945	21.9	19.5
7 30	18 49.28	-42 1.0	1.912	2.819	11.3	19.1	7 30	18 58.76	+19 14.6	1.124	1.977	21.2	19.6
8 9	18 41.71	-41 50.8	1.979	2.815	14.0	19.2	8 9	18 56.02	+15 5.1	1.173	2.011	21.4	19.7
<b>494231</b>	2016 <i>NA</i> <sub>47</sub>		7 8.6 283°54	0°8/ 8.9	16		<b>199932</b>	2007					

EPHEMERIDES

7 8.7

7 8.7

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>390082</b>	2012 <i>UM</i> <sub>137</sub>		7 8.7 280°90	0°0/ 8.5 16			<b>428880</b>	2008 <i>UB</i> <sub>299</sub>		7 8.7 356°89	2°9/ 8.9 16		
5 31	19 38.66	-21 37.9	1.889	2.719	14.8	21.9	5 31	19 35.81	-19 6.9	1.283	2.140	18.8	20.1
6 10	19 34.79	-21 46.8	1.798	2.709	11.7	21.7	6 10	19 33.37	-18 15.9	1.211	2.135	15.0	19.8
6 20	19 28.47	-22 0.4	1.728	2.699	8.0	21.4	6 20	19 27.89	-17 29.1	1.157	2.132	10.5	19.5
6 30	19 20.23	-22 16.6	1.682	2.689	3.8	21.1	6 30	19 20.05	-16 47.7	1.125	2.129	5.7	19.3
7 10	19 10.94	-22 32.9	1.663	2.679	0.6	20.9	7 10	19 11.05	-16 12.5	1.115	2.128	3.0	19.1
7 20	19 1.65	-22 47.0	1.670	2.669	5.0	21.2	7 20	19 2.25	-15 44.1	1.129	2.129	6.7	19.3
7 30	18 53.45	-22 57.6	1.702	2.659	9.2	21.4	7 30	18 55.05	-15 23.0	1.165	2.130	11.5	19.6
8 9	18 47.26	-23 4.3	1.759	2.649	12.9	21.6	8 9	18 50.47	-15 8.6	1.222	2.133	15.8	19.8
<b>398262</b>	2010 <i>TA</i> <sub>31</sub>		7 8.7 335°85	1°2/ 8.9 18			<b>55250</b>	2001 <i>RX</i> <sub>102</sub>		7 8.7 297°04	1°1/ 8.3 18		
5 31	19 35.78	-18 47.7	1.971	2.800	14.3	21.4	5 31	19 37.88	-23 38.6	1.983	2.814	14.1	19.4
6 10	19 32.32	-18 44.0	1.884	2.793	11.3	21.2	6 10	19 34.11	-24 1.7	1.893	2.805	11.1	19.2
6 20	19 26.66	-18 46.0	1.818	2.787	7.8	21.0	6 20	19 27.98	-24 28.8	1.826	2.797	7.6	19.0
6 30	19 19.31	-18 52.7	1.776	2.781	3.9	20.7	6 30	19 20.01	-24 57.0	1.782	2.789	3.7	18.7
7 10	19 11.09	-19 2.7	1.761	2.776	1.3	20.5	7 10	19 11.05	-25 23.0	1.765	2.781	1.3	18.5
7 20	19 2.92	-19 14.3	1.772	2.771	4.7	20.8	7 20	19 2.09	-25 44.2	1.775	2.773	5.0	18.8
7 30	18 55.76	-19 26.2	1.808	2.766	8.6	21.0	7 30	18 54.19	-25 59.1	1.812	2.765	8.9	19.0
8 9	18 50.42	-19 37.4	1.869	2.762	12.1	21.2	8 9	18 48.20	-26 7.7	1.871	2.757	12.4	19.2
<b>327196</b>	2005 <i>MR</i> <sub>33</sub>		7 8.7 354°37	1°9/ 9.1 18			<b>73679</b>	1989 <i>SQ</i> <sub>2</sub>		7 8.7 302°42	0°3/ 8.6 18		
5 31	19 35.02	-17 46.5	1.216	2.076	19.5	20.4	5 31	19 38.00	-21 8.4	1.344	2.197	18.4	19.4
6 10	19 32.99	-17 42.9	1.145	2.071	15.5	20.1	6 10	19 35.57	-21 28.2	1.247	2.171	14.7	19.1
6 20	19 27.78	-17 50.0	1.091	2.068	10.8	19.8	6 20	19 29.85	-21 57.4	1.169	2.145	10.2	18.8
6 30	19 20.05	-18 6.7	1.058	2.065	5.6	19.5	6 30	19 21.25	-22 33.2	1.112	2.120	4.9	18.4
7 10	19 10.98	-18 30.4	1.048	2.063	2.0	19.3	7 10	19 10.83	-23 11.2	1.078	2.094	0.9	18.0
7 20	19 2.02	-18 57.7	1.060	2.062	6.5	19.6	7 20	19 0.01	-23 46.8	1.068	2.069	6.7	18.3
7 30	18 54.67	-19 25.7	1.095	2.063	11.7	19.9	7 30	18 50.52	-24 16.3	1.081	2.044	12.4	18.6
8 9	18 50.07	-19 51.8	1.150	2.064	16.3	20.2	8 9	18 43.81	-24 38.5	1.114	2.020	17.4	18.8
<b>291643</b>	2006 <i>HT</i> <sub>38</sub>		7 8.7 64°96	1°3/ 8.3 17			<b>327215</b>	2005 <i>OC</i> <sub>17</sub>		7 8.7 45°72	9°0/ 12.2 17		
5 31	19 41.64	-22 17.1	1.314	2.163	18.9	20.5	5 31	19 36.88	- 0 27.3	1.550	2.337	19.3	20.9
6 10	19 37.94	-22 56.5	1.251	2.173	14.8	20.3	6 10	19 33.55	+ 0 3.5	1.479	2.341	16.6	20.7
6 20	19 30.98	-23 43.8	1.208	2.184	10.0	20.1	6 20	19 27.69	+ 0 12.1	1.425	2.346	13.5	20.5
6 30	19 21.50	-24 33.9	1.187	2.194	4.8	19.8	6 30	19 19.88	- 0 4.8	1.391	2.351	10.7	20.3
7 10	19 10.78	-25 21.0	1.189	2.205	1.6	19.6	7 10	19 11.09	- 0 47.8	1.380	2.356	9.1	20.3
7 20	19 0.33	-26 0.3	1.217	2.216	6.5	19.9	7 20	19 2.39	- 1 54.4	1.392	2.361	9.8	20.3
7 30	18 51.67	-26 29.1	1.268	2.227	11.4	20.3	7 30	18 54.93	- 3 19.2	1.428	2.366	12.1	20.5
8 9	18 45.85	-26 47.8	1.340	2.238	15.6	20.5	8 9	18 49.61	- 4 54.7	1.486	2.371	15.1	20.7
<b>162089</b>	1998 <i>OL</i> <sub>13</sub>		7 8.7 306°37	1°5/ 8.3 18			<b>33969</b>	2000 <i>NM</i> <sub>13</sub>		7 8.7 205°63	5°1/ 8.3 18		
5 31	19 38.90	-25 40.1	1.704	2.545	15.7	19.5	5 31	19 51.58	-37 33.5	1.925	2.734	15.3	19.0
6 10	19 35.42	-25 47.6	1.609	2.526	12.4	19.3	6 10	19 44.96	-37 30.5	1.840	2.731	12.5	18.7
6 20	19 29.16	-25 56.7	1.535	2.508	8.5	19.0	6 20	19 35.31	-37 18.2	1.777	2.729	9.2	18.5
6 30	19 20.66	-26 4.6	1.483	2.490	4.2	18.7	6 30	19 23.42	-36 51.2	1.737	2.726	6.3	18.4
7 10	19 10.90	-26 7.9	1.457	2.472	1.7	18.5	7 10	19 10.56	-36 6.4	1.725	2.723	5.2	18.3
7 20	19 1.06	-26 4.5	1.457	2.455	5.8	18.7	7 20	18 58.12	-35 3.9	1.740	2.719	7.2	18.4
7 30	18 52.47	-25 53.9	1.481	2.438	10.3	18.9	7 30	18 47.43	-33 47.3	1.783	2.716	10.4	18.6
8 9	18 46.17	-25 37.3	1.528	2.421	14.3	19.2	8 9	18 39.44	-32 22.3	1.849	2.712	13.6	18.8
<b>373773</b>	2002 <i>TR</i> <sub>303</sub>		7 8.7 289°37	0°1/ 8.7 13 C			<b>477493</b>	2010 <i>CN</i> <sub>24</sub>		7 8.7 217°1	2°6/ 8.3 17		
5 31	19 39.38	-20 14.7	1.562	2.401	16.9	22.2	5 31	19 41.98	-29 6.4	1.633	2.472	16.3	20.8
6 10	19 36.15	-20 32.7	1.460	2.376	13.5	21.9	6 10	19 37.70	-29 8.1	1.559	2.474	12.9	20.6
6 20	19 29.93	-20 59.4	1.378	2.351	9.4	21.6	6 20	19 30.54	-29 7.8	1.506	2.477	8.9	20.4
6 30	19 21.17	-21 32.4	1.318	2.325	4.5	21.2	6 30	19 21.22	-29 1.7	1.476	2.481	4.7	20.1
7 10	19 10.82	-22 8.2	1.283	2.299	0.7	20.9	7 10	19 10.89	-28 46.9	1.472	2.484	2.7	20.0
7 20	19 0.13	-22 42.9	1.274	2.274	6.0	21.2	7 20	19 0.85	-28 22.5	1.493	2.488	6.1	20.2
7 30	18 50.59	-23 13.3	1.288	2.248	11.2	21.4	7 30	18 52.38	-27 49.7	1.539	2.493	10.2	20.5
8 9	18 43.47	-23 38.1	1.325	2.222	15.8	21.6	8 9	18 46.41	-27 11.2	1.608	2.497	14.0	20.7
<b>40797</b>	1999 <i>TM</i> <sub>37</sub>		7 8.7 6°45	6°4/ 11.0 18			<b>311448</b>	2005 <i>UG</i> <sub>287</sub>		7 8.7 181°62	2°6/ 7.6 18		
5 31	19 35.32	- 5 53.1	1.646	2.452	17.6	17.9	5 31	19 38.67	-28 41.6	2.495	3.315	11.9	21.3
6 10	19 32.25	- 5 36.5	1.569	2.452	14.7	17.6	6 10	19 34.24	-29 20.8	2.411	3.315	9.4	21.1
6 20	19 26.76	- 5 37.2	1.511	2.453	11.4	17.4	6 20	19 27.80	-30 0.5	2.350	3.315	6.5	21.0
6 30	19 19.43	- 5 57.2	1.474	2.454	8.2	17.3	6 30	19 19.84	-30 37.1	2.314	3.315	3.7	20.8
7 10	19 11.14	- 6 35.9	1.461	2.455	6.4	17.2	7 10	19 11.10	-31 7.4	2.307	3.315	2.8	20.7
7 20	19 2.91	- 7 30.9	1.473	2.457	7.6	17.2	7 20	19 2.41	-31 29.0	2.328	3.314	5.0	20.9
7 30	18 55.82	- 8 37.7	1.509	2.459	10.7	17.4	7 30	18 54.62	-31 41.0	2.375	3.314	7.9	21.0
8 9	18 50.74	- 9 50.8	1.568	2.462	14.0	17.6	8 9	18 48.47	-31 44.0	2.448	3.313	10.6	21.2
<b>370912</b>	2005 <i>JL</i> <sub>70</sub>		7 8.7 145°05	4°4/ 7.4 17			<b>479380</b>	2013 <i>YT</i> <sub>1</sub>		7 8.7 83°39	0°6/ 8.4 16		
5 31	19 44.39	-30 23.6	1.641	2.476	16.4	21.0	5 31	19 39.95	-21 15.2	1.928	2.754	14.7	21.3
6 10	19 39.79	-31 14.3	1.569	2.480	13.0	20.8	6 10	19 35.52	-21 53.3	1.862	2.770	11.4	21.2
6 20	19 32.12	-32 5.0	1.517	2.484	9.2	20.6	6 20	19 28.77	-22 37.2	1.816	2.786	7.7	21.0
6 30	19 22.04	-32 49.4	1.489	2.488	5.6	20.4	6 30	19 20.31	-23 23.6	1.796	2.802	3.6	20.8
7 10	19 10.73	-33 21.6	1.486	2.491	4.6	20.3	7 10	19 11.04	-24 8.6	1.802	2.818	0.9	20.6
7 20	18 59.60	-33 37.9	1.509	2.495	7.4	20.5	7 20	19 1.96	-24 48.9	1.836	2.834	4.8	20.9
7 30	18 50.05	-33 38.0	1.557	2.498	11.1	20.7	7 30	18 54.07	-25 22.5	1.897	2.850	8.6	21.2
8 9	18 43.16	-33 24.7	1.627	2.500	14.7	21.0	8 9	18 48.17	-25 48.7	1.981	2.865	12.0	21.4
<b>3254</b>	<i>Bus</i>		7 8.7 313°80	1°5/ 8.0 18			<b>153240</b>	2001 <i>AG</i> <sub>39</sub>					

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>70748</b>	1999 VV <sub>22</sub>		7 8.7 100°90	15°8/15.3	18		<b>469028</b>	2015 AR <sub>245</sub>		7 8.7 290°90	1°9/ 9.3	18	
5 31	19 40.05	+22 37.5	2.230	2.828	18.8	18.7	5 31	19 38.00	-15 51.4	1.541	2.375	17.3	20.7
6 10	19 35.35	+24 48.1	2.180	2.841	17.8	18.6	6 10	19 34.91	-16 9.1	1.448	2.359	13.9	20.5
6 20	19 28.56	+26 33.7	2.146	2.854	16.9	18.5	6 20	19 28.98	-16 39.6	1.374	2.343	9.8	20.2
6 30	19 20.20	+27 48.0	2.127	2.867	16.2	18.5	6 30	19 20.70	-17 21.5	1.322	2.327	5.2	19.9
7 10	19 11.05	+28 27.1	2.126	2.879	15.9	18.5	7 10	19 11.00	-18 11.7	1.296	2.311	1.9	19.6
7 20	19 1.99	+28 29.7	2.142	2.892	15.8	18.5	7 20	19 1.10	-19 6.1	1.294	2.295	5.9	19.8
7 30	18 53.91	+27 58.0	2.175	2.904	16.2	18.6	7 30	18 52.38	-20 0.4	1.317	2.279	10.8	20.1
8 9	18 47.56	+26 57.4	2.225	2.915	16.8	18.7	8 9	18 45.99	-20 51.2	1.362	2.263	15.2	20.3
<b>44776</b>	1999 TM <sub>149</sub>		7 8.7 212°86	0°6/ 8.8	18		<b>99554</b>	2002 EV <sub>143</sub>		7 8.7 326°26	3°5/ 9.6	17	
5 31	19 42.32	-20 21.8	1.788	2.613	15.7	20.0	5 31	19 34.38	-14 29.1	1.422	2.266	18.0	19.0
6 10	19 37.74	-20 24.2	1.701	2.608	12.4	19.8	6 10	19 32.19	-14 16.7	1.333	2.248	14.6	18.7
6 20	19 30.53	-20 32.1	1.634	2.603	8.5	19.5	6 20	19 27.18	-14 16.2	1.263	2.232	10.5	18.4
6 30	19 21.26	-20 43.5	1.591	2.597	4.1	19.3	6 30	19 19.85	-14 28.0	1.214	2.216	6.1	18.1
7 10	19 10.89	-20 56.1	1.575	2.591	0.8	19.0	7 10	19 11.16	-14 51.0	1.188	2.200	3.5	17.9
7 20	19 0.55	-21 7.7	1.585	2.585	5.2	19.3	7 20	19 2.36	-15 22.9	1.187	2.186	6.6	18.1
7 30	18 51.44	-21 17.1	1.622	2.578	9.6	19.5	7 30	18 54.79	-16 0.5	1.208	2.172	11.2	18.3
8 9	18 44.52	-21 23.9	1.682	2.570	13.5	19.8	8 9	18 49.61	-16 40.4	1.250	2.160	15.7	18.5
<b>357219</b>	2002 GP <sub>190</sub>		7 8.7 50°60	2°7/ 9.5	18		<b>446680</b>	2015 OF <sub>13</sub>		7 8.7 275°58	2°3/ 7.9	18	
5 31	19 36.17	-14 38.8	2.200	3.012	13.5	20.9	5 31	19 39.00	-28 7.1	2.225	3.050	13.0	21.3
6 10	19 32.22	-14 22.0	2.123	3.019	10.8	20.7	6 10	19 34.74	-28 28.7	2.138	3.046	10.2	21.1
6 20	19 26.37	-14 12.3	2.067	3.026	7.7	20.5	6 20	19 28.27	-28 50.4	2.074	3.042	7.1	20.9
6 30	19 19.13	-14 9.9	2.036	3.034	4.5	20.3	6 30	19 20.13	-29 8.9	2.035	3.038	3.8	20.7
7 10	19 11.23	-14 14.1	2.032	3.042	2.7	20.2	7 10	19 11.14	-29 21.4	2.022	3.034	2.4	20.6
7 20	19 3.48	-14 23.6	2.055	3.050	4.8	20.4	7 20	19 2.22	-29 25.9	2.037	3.029	5.1	20.8
7 30	18 56.66	-14 37.2	2.105	3.058	7.9	20.6	7 30	18 54.33	-29 21.9	2.079	3.025	8.4	21.0
8 9	18 51.44	-14 53.4	2.179	3.066	10.9	20.8	8 9	18 48.25	-29 10.6	2.145	3.021	11.5	21.2
<b>230383</b>	2002 GH <sub>83</sub>		7 8.7 53°96	0°6/ 8.9	17		<b>499229</b>	2009 UT <sub>103</sub>		7 8.7 298°47	4°8/ 6.9	18	
5 31	19 38.59	-18 44.6	1.656	2.490	16.3	20.0	5 31	19 40.73	-29 23.9	1.579	2.422	16.5	20.8
6 10	19 34.83	-19 8.9	1.587	2.500	12.8	19.7	6 10	19 37.30	-30 34.8	1.497	2.414	13.2	20.6
6 20	19 28.51	-19 41.8	1.539	2.510	8.7	19.5	6 20	19 30.73	-31 49.2	1.436	2.405	9.4	20.3
6 30	19 20.26	-20 20.6	1.514	2.521	4.2	19.3	6 30	19 21.57	-33 0.3	1.397	2.397	5.9	20.1
7 10	19 11.06	-21 1.8	1.515	2.531	0.8	19.1	7 10	19 10.91	-34 0.4	1.384	2.388	5.0	20.0
7 20	19 2.05	-21 41.7	1.542	2.542	5.2	19.4	7 20	19 0.15	-34 43.9	1.396	2.380	8.0	20.2
7 30	18 54.35	-22 17.6	1.594	2.553	9.5	19.7	7 30	18 50.82	-35 8.5	1.432	2.372	11.9	20.4
8 9	18 48.85	-22 48.2	1.669	2.564	13.2	19.9	8 9	18 44.15	-35 15.8	1.489	2.365	15.7	20.6
<b>25349</b>	1999 RL <sub>127</sub>		7 8.7 201°55	1°0/ 8.5	18 R		<b>184328</b>	2005 GB <sub>91</sub>		7 8.7 178°90	1°8/ 8.3	17	
5 31	19 43.27	-25 50.6	2.176	2.993	13.5	18.1	5 31	19 44.42	-26 4.5	1.726	2.556	15.9	21.4
6 10	19 37.97	-25 44.2	2.087	2.990	10.6	17.9	6 10	19 39.53	-26 21.0	1.647	2.557	12.6	21.2
6 20	19 30.39	-25 37.6	2.019	2.987	7.3	17.7	6 20	19 31.82	-26 39.0	1.588	2.558	8.6	20.9
6 30	19 21.09	-25 28.5	1.977	2.983	3.5	17.5	6 30	19 21.91	-26 54.8	1.553	2.558	4.3	20.7
7 10	19 10.94	-25 15.1	1.963	2.979	1.2	17.3	7 10	19 10.90	-27 4.8	1.544	2.558	2.0	20.5
7 20	19 0.91	-24 56.7	1.977	2.974	4.7	17.6	7 20	19 0.04	-27 6.5	1.562	2.558	5.8	20.8
7 30	18 52.02	-24 33.6	2.019	2.969	8.4	17.8	7 30	18 50.62	-26 59.8	1.605	2.557	10.0	21.0
8 9	18 45.04	-24 7.3	2.085	2.963	11.7	18.0	8 9	18 43.61	-26 46.3	1.672	2.556	13.8	21.2
<b>374910</b>	2006 XT <sub>12</sub>		7 8.7 125°88	1°5/ 8.9	17		<b>340208</b>	2006 AA <sub>40</sub>		7 8.7 34°97	3°0/ 8.4	17	
5 31	19 41.99	-19 21.5	1.697	2.524	16.3	20.8	5 31	19 43.75	-30 25.0	1.583	2.421	16.7	20.3
6 10	19 37.41	-19 5.4	1.621	2.529	12.9	20.6	6 10	19 39.15	-30 20.2	1.513	2.427	13.2	20.1
6 20	19 30.22	-18 54.6	1.566	2.535	8.9	20.4	6 20	19 31.55	-30 11.5	1.463	2.433	9.2	19.9
6 30	19 21.06	-18 48.0	1.535	2.539	4.5	20.1	6 30	19 21.74	-29 55.2	1.436	2.440	5.0	19.6
7 10	19 10.95	-18 44.3	1.529	2.544	1.5	20.0	7 10	19 10.94	-29 28.7	1.435	2.446	3.1	19.5
7 20	19 1.05	-18 42.2	1.550	2.549	5.4	20.2	7 20	19 0.54	-28 51.6	1.459	2.453	6.3	19.8
7 30	18 52.50	-18 41.2	1.596	2.553	9.6	20.5	7 30	18 51.84	-28 6.0	1.508	2.461	10.4	20.0
8 9	18 46.21	-18 40.6	1.666	2.557	13.4	20.7	8 9	18 45.77	-27 15.5	1.580	2.469	14.2	20.3
<b>154905</b>	2004 RB <sub>306</sub>		7 8.7 286°65	0°8/ 8.9	18		<b>128433</b>	2004 NY <sub>1</sub>		7 8.7 339°99	3°4/ 7.1	18	
5 31	19 35.89	-18 44.9	2.337	3.156	12.7	20.5	5 31	19 33.56	-24 46.6	1.565	2.419	16.1	18.5
6 10	19 32.14	-18 54.7	2.239	3.143	10.0	20.3	6 10	19 31.62	-26 7.3	1.477	2.402	12.8	18.2
6 20	19 26.45	-19 10.3	2.163	3.130	6.9	20.1	6 20	19 26.87	-27 37.7	1.409	2.385	8.8	17.9
6 30	19 19.25	-19 30.4	2.112	3.117	3.4	19.8	6 30	19 19.75	-29 11.9	1.365	2.370	4.9	17.7
7 10	19 11.22	-19 53.2	2.088	3.104	0.9	19.6	7 10	19 11.20	-30 42.2	1.346	2.356	3.7	17.6
7 20	19 3.15	-20 16.2	2.092	3.091	4.2	19.8	7 20	19 2.43	-32 1.4	1.352	2.343	7.2	17.7
7 30	18 55.88	-20 39.2	2.123	3.078	7.7	20.0	7 30	18 54.84	-33 4.6	1.382	2.331	11.5	17.9
8 9	18 50.15	-20 59.7	2.178	3.065	10.9	20.2	8 9	18 49.62	-33 50.4	1.433	2.321	15.4	18.2
<b>65847</b>	1997 BH <sub>6</sub>		7 8.7 324°76	2°2/ 9.3	18		<b>62747</b>	2000 UB <sub>3</sub>		7 8.7 347°31	7°1/ 6.4	18	
5 31	19 36.02	-16 18.7	1.572	2.410	16.9	19.5	5 31	19 33.52	-32 7.3	1.168	2.042	19.1	18.3
6 10	19 33.15	-16 18.3	1.486	2.399	13.5	19.2	6 10	19 32.63	-33 25.0	1.097	2.030	15.5	18.0
6 20	19 27.62	-16 28.0	1.419	2.389	9.5	19.0	6 20	19 28.10	-34 44.1	1.044	2.019	11.4	17.7
6 30	19 19.96	-16 47.0	1.375	2.378	5.1	18.7	6 30	19 20.48	-35 55.6	1.012	2.009	8.0	17.5
7 10	19 11.12	-17 13.5	1.355	2.369	2.2	18.5	7 10	19 11.09	-36 50.0	1.001	2.001	7.4	17.4
7 20	19 2.23	-17 44.6	1.359	2.360	5.8	18.7	7 20	19 1.70	-37 20.3	1.011	1.995	10.4	17.6
7 30	18 54.55	-18 17.5	1.389	2.351	10.3	18.9	7 30	18 54.18	-37 25.1	1.042	1.990	14.5	17.8
8 9	18 49.09	-18 49.8	1.440	2.343	14.4	19.2	8 9	18 49.96	-37 7.7	1.091	1.987	18.6	18.0
<b>446387</b>	2014 HK <sub>159</sub>		7 8.7 350°37	5°9/10.6	16		<b>146935</b>	2002 DF <sub>5</sub>		7 8.7 117°35	6°9/ 5.0	18	
5 31	19 33.05												

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>501589</b>	2014 QY <sub>140</sub>		7 8.7 319°02	0°2/ 8.7 17			<b>46933</b>	1998 SP <sub>62</sub>		7 8.7 246°53	3°2/ 7.7 18		
5 31	19 37.08	-20 13.7	1.120	1.986	20.4	22.0	5 31	19 40.97	-29 32.5	2.016	2.844	14.0	19.4
6 10	19 35.21	-20 27.8	1.042	1.973	16.3	21.7	6 10	19 36.62	-30 6.8	1.931	2.839	11.1	19.2
6 20	19 29.75	-20 52.5	0.980	1.960	11.2	21.4	6 20	19 29.76	-30 41.1	1.867	2.834	7.8	19.0
6 30	19 21.26	-21 25.3	0.939	1.947	5.5	21.1	6 30	19 20.95	-31 11.1	1.828	2.829	4.5	18.8
7 10	19 10.98	-22 1.7	0.919	1.935	0.8	20.7	7 10	19 11.11	-31 32.6	1.816	2.823	3.4	18.7
7 20	19 0.58	-22 36.6	0.921	1.924	7.1	21.1	7 20	19 1.32	-31 43.1	1.830	2.818	6.0	18.8
7 30	18 51.88	-23 6.5	0.945	1.914	13.0	21.3	7 30	18 52.70	-31 41.9	1.870	2.812	9.5	19.0
8 9	18 46.34	-23 29.6	0.988	1.904	18.2	21.6	8 9	18 46.16	-31 30.5	1.934	2.807	12.7	19.2
<b>121398</b>	1999 TH <sub>129</sub>		7 8.7 317°09	1°0/ 8.5 18			<b>300477</b>	2007 TV <sub>119</sub>		7 8.7 202°63	5°8/ 10.2 18		
5 31	19 38.55	-23 49.7	1.639	2.481	16.1	20.3	5 31	19 37.82	-5 55.2	2.374	3.149	13.7	21.0
6 10	19 35.16	-24 1.0	1.553	2.471	12.7	20.1	6 10	19 33.42	-5 8.9	2.285	3.146	11.5	20.8
6 20	19 29.00	-24 16.0	1.487	2.461	8.7	19.8	6 20	19 27.20	-4 33.0	2.216	3.143	9.1	20.6
6 30	19 20.65	-24 31.8	1.445	2.452	4.2	19.5	6 30	19 19.62	-4 9.4	2.172	3.140	6.9	20.5
7 10	19 11.10	-24 45.2	1.427	2.443	1.2	19.3	7 10	19 11.32	-3 59.2	2.154	3.136	5.8	20.4
7 20	19 1.56	-24 53.7	1.435	2.434	5.7	19.6	7 20	19 3.06	-4 2.4	2.163	3.132	6.8	20.5
7 30	18 53.33	-24 56.1	1.468	2.426	10.2	19.8	7 30	18 55.61	-4 17.7	2.199	3.127	9.0	20.6
8 9	18 47.42	-24 52.9	1.522	2.418	14.2	20.0	8 9	18 49.62	-4 42.7	2.258	3.123	11.4	20.7
<b>10100</b>	Bürigel		7 8.7 241°65	1°0/ 8.4 18			<b>59196</b>	1999 BN <sub>2</sub>		7 8.7 27°58	1°4/ 8.5 17		
5 31	19 42.32	-23 32.5	1.881	2.707	15.0	18.7	5 31	19 40.37	-25 12.1	1.063	1.932	21.0	19.3
6 10	19 37.83	-23 53.4	1.786	2.694	11.9	18.4	6 10	19 37.59	-25 9.9	1.008	1.940	16.5	19.0
6 20	19 30.70	-24 18.5	1.711	2.681	8.1	18.2	6 20	19 31.06	-25 10.1	0.969	1.949	11.2	18.8
6 30	19 21.45	-24 44.7	1.661	2.667	3.9	17.9	6 30	19 21.68	-25 8.9	0.951	1.959	5.4	18.5
7 10	19 10.98	-25 8.5	1.637	2.653	1.3	17.7	7 10	19 11.03	-25 2.8	0.954	1.970	1.6	18.3
7 20	19 0.42	-25 26.9	1.641	2.638	5.4	17.9	7 20	19 0.87	-24 49.9	0.980	1.982	7.0	18.7
7 30	18 50.98	-25 38.5	1.670	2.622	9.7	18.1	7 30	18 52.88	-24 31.0	1.028	1.994	12.4	19.0
8 9	18 43.69	-25 43.5	1.723	2.607	13.5	18.3	8 9	18 48.17	-24 8.0	1.095	2.007	17.1	19.3
<b>224106</b>	2005 PR <sub>2</sub>		7 8.7 311°04	1°2/ 8.9 18			<b>239967</b>	2001 PH <sub>4</sub>		7 8.7 304°28	0°5/ 8.8 17		
5 31	19 36.33	-18 42.5	1.379	2.229	18.1	20.0	5 31	19 38.16	-19 15.1	1.219	2.076	19.6	20.1
6 10	19 34.09	-18 46.5	1.282	2.203	14.5	19.7	6 10	19 35.84	-19 34.5	1.135	2.061	15.7	19.8
6 20	19 28.74	-19 0.2	1.203	2.177	10.2	19.3	6 20	19 30.10	-20 5.6	1.069	2.046	10.9	19.5
6 30	19 20.74	-19 22.4	1.145	2.152	5.2	19.0	6 30	19 21.44	-20 46.2	1.024	2.031	5.3	19.1
7 10	19 11.06	-19 50.5	1.111	2.127	1.4	18.7	7 10	19 11.02	-21 31.6	1.001	2.017	0.9	18.8
7 20	19 1.06	-20 21.0	1.100	2.102	6.4	18.9	7 20	19 0.40	-22 16.7	1.001	2.003	6.8	19.1
7 30	18 52.31	-20 50.8	1.113	2.078	11.9	19.1	7 30	18 51.33	-22 57.1	1.023	1.990	12.6	19.4
8 9	18 46.15	-21 17.7	1.146	2.055	16.8	19.4	8 9	18 45.22	-23 30.6	1.066	1.977	17.7	19.6
<b>257010</b>	2008 EO <sub>166</sub>		7 8.7 47°05	7°4/ 5.5 18			<b>106638</b>	2000 WB <sub>133</sub>		7 8.7 332°13	2°8/ 9.0 18		
5 31	19 42.07	-39 5.2	2.021	2.841	14.3	19.5	5 31	19 39.45	-17 31.0	2.032	2.849	14.3	18.8
6 10	19 37.78	-40 35.8	1.960	2.852	11.8	19.4	6 10	19 35.05	-16 39.7	1.943	2.844	11.5	18.6
6 20	19 30.69	-42 1.0	1.921	2.863	9.3	19.2	6 20	19 28.47	-15 51.5	1.877	2.839	8.1	18.4
6 30	19 21.41	-43 13.1	1.907	2.875	7.6	19.1	6 30	19 20.26	-15 7.3	1.835	2.835	4.7	18.2
7 10	19 11.00	-44 6.0	1.918	2.886	7.6	19.2	7 10	19 11.24	-14 27.9	1.820	2.830	2.8	18.1
7 20	19 0.71	-44 36.3	1.954	2.898	9.1	19.3	7 20	19 2.34	-13 54.2	1.832	2.827	5.3	18.2
7 30	18 51.82	-44 44.1	2.015	2.911	11.3	19.4	7 30	18 54.51	-13 26.5	1.871	2.823	8.8	18.4
8 9	18 45.33	-44 32.8	2.096	2.923	13.6	19.6	8 9	18 48.49	-13 4.9	1.934	2.820	12.1	18.6
<b>443495</b>	2014 JS <sub>26</sub>		7 8.7 43°30	3°2/ 10.2 16			<b>151709</b>	2003 BN <sub>37</sub>		7 8.7 19°44	5°5/ 7.6 18		
5 31	19 35.77	-10 43.4	1.982	2.791	14.9	21.0	5 31	19 43.31	-33 53.1	1.531	2.372	17.1	19.7
6 10	19 32.17	-11 5.5	1.909	2.801	12.0	20.9	6 10	19 39.24	-34 27.5	1.461	2.374	13.7	19.5
6 20	19 26.50	-11 40.7	1.856	2.811	8.7	20.7	6 20	19 31.90	-34 57.5	1.411	2.376	10.0	19.3
6 30	19 19.30	-12 28.2	1.827	2.822	5.3	20.5	6 30	19 22.05	-35 16.7	1.384	2.379	6.6	19.1
7 10	19 11.33	-13 25.4	1.824	2.833	3.2	20.4	7 10	19 10.98	-35 19.9	1.380	2.381	5.6	19.0
7 20	19 3.47	-14 28.7	1.849	2.844	5.1	20.5	7 20	19 0.20	-35 4.8	1.402	2.385	8.1	19.2
7 30	18 56.61	-15 34.4	1.900	2.856	8.4	20.8	7 30	18 51.21	-34 32.8	1.447	2.388	11.7	19.4
8 9	18 51.47	-16 38.8	1.976	2.868	11.6	21.0	8 9	18 45.07	-33 48.4	1.513	2.392	15.3	19.6
<b>107386</b>	2001 CS <sub>42</sub>		7 8.7 56°09	2°0/ 8.3 17			<b>473081</b>	2015 HX <sub>123</sub>		7 8.7 347°15	2°1/ 9.2 16		
5 31	19 43.38	-25 43.8	1.301	2.151	19.0	19.7	5 31	19 34.15	-17 33.3	1.415	2.265	17.7	20.8
6 10	19 39.21	-26 2.4	1.247	2.169	14.8	19.5	6 10	19 31.96	-17 24.2	1.335	2.256	14.1	20.5
6 20	19 31.75	-26 23.2	1.213	2.188	10.1	19.3	6 20	19 26.96	-17 24.0	1.275	2.248	9.9	20.2
6 30	19 21.86	-26 41.8	1.200	2.207	5.0	19.0	6 30	19 19.74	-17 32.4	1.236	2.241	5.2	19.9
7 10	19 10.96	-26 53.5	1.212	2.226	2.2	18.9	7 10	19 11.31	-17 47.4	1.221	2.235	2.1	19.7
7 20	19 0.58	-26 56.1	1.247	2.246	6.5	19.2	7 20	19 2.93	-18 6.7	1.229	2.230	6.0	20.0
7 30	18 52.15	-26 49.8	1.307	2.265	11.2	19.6	7 30	18 55.90	-18 28.1	1.261	2.227	10.7	20.2
8 9	18 46.64	-26 36.3	1.388	2.285	15.2	19.8	8 9	18 51.25	-18 49.4	1.314	2.224	15.0	20.5
<b>152522</b>	2006 SQ <sub>48</sub>		7 8.7 273°49	4°2/ 9.8 18			<b>428322</b>	2007 HC <sub>13</sub>		7 8.7 28°14	3°8/ 9.7 16		
5 31	19 39.06	-12 12.5	1.635	2.455	17.1	20.6	5 31	19 35.91	-14 10.8	1.174	2.028	20.4	20.3
6 10	19 35.54	-11 57.8	1.538	2.437	14.0	20.4	6 10	19 33.39	-13 54.1	1.125	2.045	16.2	20.1
6 20	19 29.31	-11 55.0	1.461	2.419	10.3	20.1	6 20	19 27.83	-13 51.5	1.094	2.064	11.5	19.9
6 30	19 20.87	-12 5.3	1.406	2.401	6.4	19.8	6 30	19 20.04	-14 2.8	1.082	2.084	6.7	19.7
7 10	19 11.10	-12 28.0	1.375	2.383	4.2	19.7	7 10	19 11.30	-14 26.0	1.093	2.105	3.8	19.6
7 20	19 1.15	-13 1.1	1.370	2.365	6.6	19.8	7 20	19 3.01	-14 57.6	1.128	2.127	6.8	19.8
7 30	18 52.28	-13 41.7	1.390	2.346	10.8	19.9	7 30	18 56.45	-15 33.8	1.184	2.150	11.2	20.1
8 9	18 45.59	-14 26.4	1.432	2.327	15.0	20.1	8 9	18 52.53	-16 11.0	1.262	2.175	15.3	20.4
<b>343858</b>	2011 HP <sub>52</sub>		7 8.7 322°33	2°3/ 7.6 18			<b>314071</b>	2005 CO <sub>1</sub>		7 8.7 183°05	0°6/ 8.6 17		
5 31	19 36.34	-21 25.7	1.48										

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>216516</b>	2000 <i>WQ</i> <sub>21</sub>	7 8.7 242°85	3°2/ 9.3 18				<b>273239</b>	2006 <i>KG</i> <sub>26</sub>	7 8.7 209°39	0°5/ 8.9 18			
5 31	19 41.66	-15 37.5	1.628	2.452	17.0	20.4	5 31	19 35.25	-18 11.8	2.829	3.637	11.0	20.4
6 10	19 37.49	-15 11.0	1.539	2.443	13.7	20.2	6 10	19 31.27	-18 41.3	2.737	3.636	8.6	20.3
6 20	19 30.55	-14 52.5	1.470	2.434	9.8	19.9	6 20	19 25.70	-19 16.7	2.669	3.634	5.9	20.1
6 30	19 21.42	-14 42.2	1.424	2.424	5.6	19.6	6 30	19 18.92	-19 56.4	2.627	3.631	2.9	19.9
7 10	19 11.08	-14 39.6	1.403	2.414	3.2	19.5	7 10	19 11.51	-20 38.1	2.613	3.629	0.6	19.7
7 20	19 0.72	-14 43.8	1.408	2.404	6.2	19.6	7 20	19 4.10	-21 19.6	2.629	3.627	3.5	19.9
7 30	18 51.61	-14 53.4	1.437	2.393	10.6	19.9	7 30	18 57.34	-21 59.0	2.672	3.625	6.5	20.1
8 9	18 44.79	-15 6.9	1.490	2.383	14.6	20.1	8 9	18 51.84	-22 34.9	2.742	3.622	9.2	20.3
<b>346708</b>	2008 <i>YT</i> <sub>162</sub>	7 8.7 272°30	1°5/ 9.1 18				<b>161277</b>	2003 <i>FR</i> <sub>117</sub>	7 8.7 24°86	0°3/ 8.8 18			
5 31	19 38.29	-17 48.4	1.952	2.775	14.6	21.5	5 31	19 36.54	-19 35.0	1.913	2.743	14.6	19.5
6 10	19 34.40	-17 45.8	1.860	2.765	11.6	21.3	6 10	19 33.01	-19 59.6	1.837	2.748	11.5	19.3
6 20	19 28.22	-17 50.0	1.789	2.756	8.1	21.0	6 20	19 27.24	-20 31.3	1.782	2.752	7.8	19.1
6 30	19 20.23	-17 59.9	1.742	2.746	4.2	20.8	6 30	19 19.76	-21 7.6	1.751	2.757	3.7	18.9
7 10	19 11.26	-18 14.0	1.722	2.737	1.6	20.6	7 10	19 11.41	-21 45.5	1.746	2.763	0.6	18.6
7 20	19 2.29	-18 30.3	1.728	2.727	4.9	20.8	7 20	19 3.17	-22 21.9	1.769	2.768	4.7	19.0
7 30	18 54.32	-18 47.4	1.761	2.718	8.9	21.0	7 30	18 56.00	-22 54.5	1.817	2.774	8.6	19.2
8 9	18 48.23	-19 3.9	1.817	2.708	12.5	21.2	8 9	18 50.72	-23 22.2	1.889	2.781	12.1	19.4
<b>144965</b>	2005 <i>EA</i> <sub>86</sub>	7 8.7 357°21	0°5/ 8.6 18				<b>523148</b>	2016 <i>SM</i> <sub>55</sub>	7 8.7 141°73	6°3/ 6.0 18			
5 31	19 31.03	-20 49.8	0.987	1.871	21.0	18.7	5 31	19 43.24	-41 9.0	2.590	3.390	12.1	21.6
6 10	19 30.63	-21 16.4	0.923	1.865	16.6	18.4	6 10	19 38.11	-42 11.1	2.519	3.396	10.0	21.5
6 20	19 26.66	-21 54.5	0.876	1.860	11.4	18.1	6 20	19 30.63	-43 6.9	2.469	3.401	8.0	21.4
6 30	19 19.78	-22 40.5	0.848	1.858	5.4	17.7	6 30	19 21.36	-43 50.8	2.445	3.406	6.6	21.3
7 10	19 11.32	-23 28.5	0.840	1.857	1.1	17.4	7 10	19 11.18	-44 18.7	2.448	3.411	6.4	21.3
7 20	19 2.98	-24 12.4	0.854	1.857	7.2	17.8	7 20	19 1.11	-44 28.5	2.477	3.416	7.6	21.4
7 30	18 56.52	-24 48.0	0.887	1.860	13.0	18.1	7 30	18 52.18	-44 20.4	2.531	3.421	9.5	21.5
8 9	18 53.24	-25 13.4	0.939	1.865	18.0	18.5	8 9	18 45.21	-43 57.3	2.608	3.425	11.5	21.7
<b>508483</b>	2016 <i>PW</i> <sub>61</sub>	7 8.7 145°28	1°0/ 9.1 17				<b>170751</b>	2004 <i>BC</i> <sub>163</sub>	7 8.7 211°56	0°8/ 8.9 18			
5 31	19 39.73	-16 31.4	2.088	2.900	14.2	21.5	5 31	19 38.24	-18 58.1	2.110	2.929	13.8	20.6
6 10	19 35.29	-17 7.3	2.007	2.907	11.2	21.3	6 10	19 34.15	-19 7.2	2.024	2.928	10.9	20.4
6 20	19 28.67	-17 52.6	1.948	2.912	7.7	21.1	6 20	19 27.92	-19 22.3	1.959	2.927	7.5	20.2
6 30	19 20.39	-18 45.0	1.914	2.918	3.9	20.9	6 30	19 20.07	-19 42.0	1.920	2.925	3.7	20.0
7 10	19 11.25	-19 40.9	1.907	2.923	1.0	20.7	7 10	19 11.37	-20 3.9	1.907	2.923	0.9	19.8
7 20	19 2.16	-20 36.9	1.929	2.928	4.5	21.0	7 20	19 2.72	-20 26.1	1.922	2.921	4.5	20.0
7 30	18 54.06	-21 29.8	1.979	2.933	8.3	21.2	7 30	18 55.05	-20 47.0	1.964	2.919	8.2	20.3
8 9	18 47.75	-22 17.6	2.052	2.937	11.6	21.4	8 9	18 49.13	-21 5.4	2.030	2.917	11.5	20.5
<b>474436</b>	2003 <i>GF</i> <sub>53</sub>	7 8.7 351°70	32°7/31.0 16				<b>427637</b>	2003 <i>UL</i> <sub>229</sub>	7 8.7 277°58	1°6/ 8.9 17			
5 31	19 13.14	+27 6.0	0.936	1.667	32.7	19.1	5 31	19 41.41	-19 23.8	1.556	2.391	17.2	21.7
6 10	19 16.42	+31 38.3	0.899	1.641	33.1	19.0	6 10	19 37.67	-19 8.0	1.459	2.371	13.8	21.4
6 20	19 16.94	+35 26.7	0.870	1.619	33.7	18.9	6 20	19 30.95	-18 57.8	1.381	2.351	9.6	21.1
6 30	19 15.14	+38 16.2	0.849	1.601	34.1	18.9	6 30	19 21.76	-18 52.3	1.326	2.331	4.9	20.8
7 10	19 12.00	+39 56.9	0.833	1.587	34.5	18.8	7 10	19 11.11	-18 50.1	1.295	2.311	1.6	20.5
7 20	19 8.81	+40 22.9	0.821	1.577	34.7	18.8	7 20	19 0.28	-18 49.5	1.290	2.290	6.0	20.7
7 30	19 7.09	+39 32.8	0.813	1.573	34.7	18.8	7 30	18 50.71	-18 49.8	1.310	2.270	11.0	21.0
8 9	19 8.16	+37 30.9	0.810	1.572	34.4	18.8	8 9	18 43.57	-18 50.5	1.351	2.249	15.5	21.2
<b>202292</b>	2005 <i>CY</i> <sub>24</sub>	7 8.7 185°70	1°8/ 9.2 18				<b>343494</b>	2010 <i>EA</i> <sub>102</sub>	7 8.7 254°03	1°5/ 8.4 18			
5 31	19 40.20	-17 12.1	2.371	3.176	12.9	21.4	5 31	19 40.83	-25 48.5	1.895	2.725	14.7	21.2
6 10	19 35.34	-16 59.4	2.282	3.176	10.2	21.3	6 10	19 36.50	-25 58.8	1.813	2.724	11.6	21.0
6 20	19 28.53	-16 51.7	2.215	3.176	7.1	21.1	6 20	19 29.68	-26 10.4	1.753	2.723	7.9	20.8
6 30	19 20.28	-16 48.6	2.173	3.175	3.8	20.9	6 30	19 20.94	-26 20.2	1.716	2.722	3.9	20.5
7 10	19 11.29	-16 49.1	2.160	3.173	1.8	20.7	7 10	19 11.25	-26 25.5	1.707	2.721	1.7	20.3
7 20	19 2.38	-16 52.3	2.175	3.171	4.4	20.9	7 20	19 1.69	-26 24.4	1.724	2.720	5.2	20.6
7 30	18 54.37	-16 57.3	2.217	3.169	7.7	21.1	7 30	18 53.36	-26 16.7	1.767	2.720	9.2	20.8
8 9	18 47.94	-17 3.4	2.285	3.166	10.7	21.3	8 9	18 47.14	-26 3.4	1.833	2.719	12.7	21.0
<b>188963</b>	2007 <i>GQ</i> <sub>13</sub>	7 8.7 311°21	10°0/ 5.2 18				<b>388661</b>	2007 <i>TS</i> <sub>327</sub>	7 8.7 318°32	6°3/ 6.9 18			
5 31	19 42.41	-40 29.0	1.475	2.314	17.7	19.5	5 31	19 40.79	-35 32.6	1.684	2.521	15.9	20.5
6 10	19 39.66	-41 56.3	1.389	2.291	15.0	19.2	6 10	19 37.35	-36 21.7	1.598	2.507	13.0	20.3
6 20	19 33.03	-43 19.1	1.321	2.268	12.3	19.0	6 20	19 30.77	-37 7.3	1.533	2.493	9.8	20.1
6 30	19 23.00	-44 26.9	1.275	2.245	10.3	18.8	6 30	19 21.66	-37 42.4	1.491	2.479	7.1	19.9
7 10	19 10.84	-45 9.5	1.251	2.223	10.3	18.8	7 10	19 11.13	-38 1.0	1.473	2.466	6.5	19.8
7 20	18 58.40	-45 20.3	1.249	2.201	12.3	18.8	7 20	19 0.60	-37 59.4	1.479	2.454	8.7	19.9
7 30	18 47.78	-44 59.0	1.269	2.180	15.5	19.0	7 30	18 51.56	-37 37.8	1.509	2.441	12.0	20.1
8 9	18 40.59	-44 10.9	1.307	2.159	18.8	19.1	8 9	18 45.19	-36 59.9	1.560	2.430	15.4	20.2
<b>335533</b>	2006 <i>AH</i> <sub>83</sub>	7 8.7 75°55	3°8/ 8.3 18				<b>522977</b>	2016 <i>PS</i> <sub>117</sub>	7 8.7 279°52	2°0/ 8.3 16			
5 31	19 47.82	-33 1.7	1.748	2.573	16.0	19.7	5 31	19 41.05	-27 0.3	1.841	2.674	15.0	21.9
6 10	19 41.92	-33 4.8	1.689	2.593	12.7	19.6	6 10	19 36.87	-27 13.1	1.754	2.666	11.8	21.7
6 20	19 33.18	-33 2.2	1.650	2.613	9.0	19.4	6 20	19 30.04	-27 26.4	1.688	2.659	8.2	21.4
6 30	19 22.47	-32 49.7	1.635	2.633	5.4	19.2	6 30	19 21.17	-27 37.0	1.646	2.651	4.2	21.2
7 10	19 11.00	-32 24.7	1.646	2.653	3.9	19.2	7 10	19 11.22	-27 41.6	1.630	2.644	2.2	21.0
7 20	19 0.11	-31 47.0	1.685	2.673	6.4	19.4	7 20	19 1.33	-27 38.2	1.641	2.637	5.6	21.2
7 30	18 50.98	-30 59.3	1.749	2.692	9.9	19.6	7 30	18 52.69	-27 26.6	1.677	2.629	9.6	21.5
8 9	18 44.43	-30 5.5	1.836	2.712	13.2	19.9	8 9	18 46.26	-27 8.3	1.737	2.622	13.3	21.7
<b>310656</b>	2002 <i>EO</i> <sub>1</sub>	7 8.7 145°04	9°5/14.6 16				<b>69250</b>	1981 <i>E</i>					



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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>291658</b>	2006 <i>HR</i> <sub>61</sub>		7 8.7 56°44	2.2/ 8.1	17		<b>287886</b>	2003 <i>SJ</i> <sub>330</sub>		7 8.7 8°93	1.3/ 8.5	17	
5 31	19 40.41	-25 56.0	1.702	2.540	15.8	21.0	5 31	19 35.48	-23 24.5	1.021	1.899	21.0	20.7
6 10	19 36.38	-26 30.3	1.635	2.550	12.4	20.8	6 10	19 34.03	-23 41.9	0.962	1.900	16.5	20.4
6 20	19 29.68	-27 7.1	1.588	2.560	8.4	20.6	6 20	19 28.90	-24 5.9	0.919	1.902	11.3	20.1
6 30	19 20.96	-27 42.3	1.565	2.571	4.3	20.4	6 30	19 20.85	-24 32.3	0.897	1.906	5.4	19.8
7 10	19 11.27	-28 11.3	1.568	2.581	2.4	20.3	7 10	19 11.34	-24 55.8	0.895	1.911	1.6	19.6
7 20	19 1.81	-28 31.4	1.597	2.592	5.8	20.5	7 20	19 2.12	-25 12.5	0.915	1.917	7.2	19.9
7 30	18 53.75	-28 41.5	1.652	2.603	9.8	20.8	7 30	18 54.93	-25 20.6	0.956	1.925	12.7	20.3
8 9	18 47.99	-28 42.5	1.729	2.615	13.3	21.0	8 9	18 50.96	-25 20.6	1.015	1.934	17.6	20.6
<b>169062</b>	2001 <i>FN</i> <sub>137</sub>		7 8.7 108°99	1.8/ 8.1	17		<b>445231</b>	2009 <i>HK</i> <sub>82</sub>		7 8.7 186°14	19°0/ 12.0	18	
5 31	19 43.92	-23 56.3	1.672	2.503	16.3	20.1	5 31	19 42.38	+11 39.8	1.301	2.034	24.8	20.7
6 10	19 39.13	-24 40.5	1.606	2.517	12.8	19.9	6 10	19 38.57	+14 12.2	1.241	2.035	23.0	20.5
6 20	19 31.55	-25 29.7	1.560	2.531	8.7	19.7	6 20	19 31.59	+16 17.4	1.195	2.035	21.1	20.4
6 30	19 21.85	-26 18.8	1.539	2.545	4.3	19.4	6 30	19 22.08	+17 43.7	1.164	2.034	19.7	20.3
7 10	19 11.14	-27 3.0	1.544	2.559	2.0	19.3	7 10	19 11.16	+18 22.9	1.151	2.033	19.0	20.2
7 20	19 0.66	-27 38.3	1.576	2.572	5.8	19.6	7 20	19 0.24	+18 11.7	1.155	2.032	19.3	20.2
7 30	18 51.65	-28 3.1	1.634	2.584	9.9	19.9	7 30	18 50.82	+17 13.4	1.176	2.030	20.5	20.3
8 9	18 45.06	-28 17.9	1.714	2.597	13.6	20.1	8 9	18 44.09	+15 37.4	1.213	2.028	22.2	20.4
<b>9137</b>	<i>Remo</i>		7 8.7 147°58	2.0/ 9.3	18		<b>384715</b>	2011 <i>HU</i> <sub>58</sub>		7 8.7 23°76	2.4/ 9.4	17	
5 31	19 42.51	-16 18.6	1.873	2.687	15.5	18.5	5 31	19 36.91	-15 49.9	1.473	2.313	17.7	20.9
6 10	19 37.61	-16 18.2	1.796	2.695	12.3	18.3	6 10	19 33.87	-15 50.6	1.405	2.318	14.1	20.7
6 20	19 30.32	-16 25.9	1.740	2.703	8.6	18.1	6 20	19 28.11	-16 2.3	1.355	2.325	9.9	20.4
6 30	19 21.22	-16 40.8	1.709	2.711	4.6	17.8	6 30	19 20.28	-16 24.0	1.328	2.331	5.3	20.2
7 10	19 11.23	-17 0.6	1.704	2.718	2.0	17.7	7 10	19 11.43	-16 53.2	1.325	2.339	2.4	20.0
7 20	19 1.40	-17 23.5	1.726	2.724	5.1	17.9	7 20	19 2.76	-17 26.9	1.347	2.347	5.8	20.3
7 30	18 52.76	-17 47.3	1.775	2.730	9.0	18.1	7 30	18 55.48	-18 2.0	1.393	2.356	10.2	20.5
8 9	18 46.16	-18 10.5	1.848	2.735	12.5	18.4	8 9	18 50.52	-18 35.9	1.461	2.365	14.2	20.8
<b>206941</b>	2004 <i>RG</i> <sub>99</sub>		7 8.7 179°25	2.4/ 8.3	17		<b>236528</b>	2006 <i>HV</i> <sub>12</sub>		7 8.7 325°66	3.2/ 9.8	17	
5 31	19 46.08	-27 11.3	1.557	2.392	17.2	20.9	5 31	19 37.51	-13 5.0	1.841	2.658	15.6	20.8
6 10	19 41.22	-27 26.8	1.480	2.393	13.6	20.6	6 10	19 33.85	-13 2.1	1.758	2.656	12.6	20.6
6 20	19 33.20	-27 43.1	1.423	2.393	9.4	20.4	6 20	19 27.88	-13 10.2	1.695	2.655	9.1	20.4
6 30	19 22.73	-27 55.6	1.389	2.394	4.8	20.1	6 30	19 20.13	-13 29.0	1.656	2.654	5.4	20.2
7 10	19 11.01	-28 0.3	1.380	2.394	2.5	20.0	7 10	19 11.45	-13 57.1	1.642	2.652	3.2	20.0
7 20	18 59.48	-27 54.7	1.398	2.393	6.4	20.2	7 20	19 2.81	-14 32.1	1.655	2.651	5.5	20.2
7 30	18 49.59	-27 39.3	1.440	2.392	10.9	20.5	7 30	18 55.24	-15 11.3	1.694	2.650	9.2	20.4
8 9	18 42.43	-27 16.4	1.505	2.391	14.9	20.7	8 9	18 49.56	-15 51.8	1.755	2.649	12.7	20.6
<b>16859</b>	1997 <i>YJ</i> <sub>10</sub>		7 8.7 168°92	2.0/ 7.9	18		<b>474856</b>	2005 <i>SQ</i> <sub>93</sub>		7 8.7 186°78	5.0/ 6.8	18	
5 31	19 42.11	-24 52.5	2.060	2.882	14.0	18.2	5 31	19 41.50	-36 28.6	2.476	3.289	12.2	21.3
6 10	19 37.38	-25 42.3	1.979	2.885	11.0	18.0	6 10	19 36.72	-37 16.7	2.396	3.288	9.9	21.1
6 20	19 30.24	-26 36.3	1.919	2.888	7.5	17.8	6 20	19 29.70	-38 0.7	2.338	3.288	7.5	21.0
6 30	19 21.24	-27 30.1	1.886	2.890	3.8	17.5	6 30	19 20.96	-38 35.9	2.306	3.288	5.5	20.8
7 10	19 11.24	-28 19.2	1.879	2.892	2.2	17.4	7 10	19 11.34	-38 58.4	2.300	3.287	5.1	20.8
7 20	19 1.26	-29 0.0	1.901	2.894	5.3	17.6	7 20	19 1.79	-39 6.0	2.322	3.286	6.7	20.9
7 30	18 52.39	-29 30.6	1.949	2.894	9.0	17.9	7 30	18 53.32	-38 58.8	2.370	3.285	9.0	21.1
8 9	18 45.49	-29 51.0	2.022	2.895	12.2	18.1	8 9	18 46.71	-38 38.8	2.441	3.284	11.4	21.2
<b>131217</b>	2001 <i>DW</i> <sub>67</sub>		7 8.7 202°97	5.2/ 10.9	18		<b>444233</b>	2005 <i>UW</i> <sub>83</sub>		7 8.7 293°52	2.1/ 9.4	18	
5 31	19 38.02	- 5 46.0	2.304	3.080	14.1	20.5	5 31	19 36.46	-16 17.6	2.168	2.985	13.6	21.8
6 10	19 33.73	- 5 37.2	2.212	3.076	11.7	20.3	6 10	19 32.77	-16 8.9	2.071	2.971	10.9	21.6
6 20	19 27.54	- 5 41.6	2.140	3.072	9.1	20.1	6 20	19 27.04	-16 6.9	1.995	2.958	7.7	21.4
6 30	19 19.89	- 6 0.0	2.093	3.068	6.5	19.9	6 30	19 19.72	-16 11.1	1.944	2.945	4.2	21.2
7 10	19 11.45	- 6 32.2	2.072	3.063	5.2	19.8	7 10	19 11.52	-16 20.7	1.919	2.932	2.1	21.0
7 20	19 3.00	- 7 16.4	2.078	3.057	6.2	19.9	7 20	19 3.28	-16 34.1	1.921	2.919	4.7	21.1
7 30	18 55.35	- 8 9.8	2.111	3.051	8.7	20.0	7 30	18 55.91	-16 50.1	1.950	2.906	8.3	21.3
8 9	18 49.21	- 9 8.9	2.169	3.045	11.4	20.2	8 9	18 50.16	-17 7.3	2.003	2.893	11.6	21.5
<b>435792</b>	2008 <i>UO</i> <sub>358</sub>		7 8.7 270°83	3.5/ 9.7	16		<b>151463</b>	2002 <i>GS</i> <sub>121</sub>		7 8.7 133°69	4.6/ 10.5	18	
5 31	19 37.90	-13 2.1	1.890	2.704	15.4	21.1	5 31	19 36.16	- 7 11.9	2.640	3.416	12.5	20.6
6 10	19 34.13	-12 47.2	1.801	2.697	12.4	20.9	6 10	19 31.93	- 6 46.9	2.559	3.424	10.3	20.5
6 20	19 28.07	-12 42.2	1.731	2.689	9.0	20.6	6 20	19 26.11	- 6 31.7	2.499	3.432	7.9	20.3
6 30	19 20.23	-12 47.3	1.686	2.682	5.5	20.4	6 30	19 19.14	- 6 27.3	2.464	3.439	5.7	20.2
7 10	19 11.41	-13 1.9	1.666	2.674	3.5	20.3	7 10	19 11.62	- 6 33.7	2.457	3.446	4.6	20.1
7 20	19 2.58	-13 24.3	1.673	2.667	5.7	20.4	7 20	19 4.18	- 6 50.0	2.476	3.453	5.5	20.2
7 30	18 54.77	-13 52.5	1.705	2.659	9.3	20.6	7 30	18 57.49	- 7 14.8	2.523	3.459	7.6	20.4
8 9	18 48.83	-14 24.0	1.761	2.652	12.8	20.8	8 9	18 52.10	- 7 45.8	2.595	3.466	9.9	20.5
<b>96118</b>	1087 <i>T</i> <sub>-3</sub>		7 8.7 39°75	2.9/ 8.4	18		<b>420451</b>	2012 <i>DH</i> <sub>59</sub>		7 8.7 169°62	3.8/ 7.7	17	
5 31	19 44.01	-28 35.0	1.139	2.000	20.5	18.4	5 31	19 45.87	-30 4.8	1.753	2.581	15.8	22.2
6 10	19 40.33	-28 35.6	1.083	2.010	16.1	18.2	6 10	19 40.83	-30 43.5	1.677	2.584	12.6	22.0
6 20	19 32.88	-28 34.4	1.044	2.021	11.1	17.9	6 20	19 32.84	-31 21.8	1.621	2.587	8.8	21.8
6 30	19 22.60	-28 26.8	1.026	2.033	5.8	17.7	6 30	19 22.57	-31 54.1	1.589	2.589	5.2	21.6
7 10	19 11.10	-28 8.8	1.031	2.045	3.0	17.5	7 10	19 11.12	-32 15.4	1.584	2.591	4.0	21.5
7 20	19 0.18	-27 39.6	1.059	2.057	7.3	17.8	7 20	18 59.83	-32 22.7	1.604	2.592	6.8	21.7
7 30	18 51.50	-27 1.6	1.109	2.071	12.3	18.1	7 30	18 50.04	-32 15.9	1.651	2.592	10.5	21.9
8 9	18 46.14	-26 18.6	1.179	2.084	16.8	18.4	8 9	18 42.77	-31 57.8	1.720	2.592	14.0	22.1
<b>374299</b>	2005 <i>SC</i> <sub>79</sub>		7 8.7 277°91	2.1/ 8.1	18		<b>280071</b>	2002 <i>CX</i> <sub>215</sub>					

EPHEMERIDES

7 8.8

7 8.8

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>519164</b>	2010 NR <sub>105</sub>		7 8.8 14°92	5°6/11.5	15		<b>440588</b>	2005 UV <sub>511</sub>		7 8.8 337°22	3°6/ 9.5	18	
5 31	19 32.77	- 5 35.7	1.515	2.332	18.4	20.1	5 31	19 37.06	-13 47.0	2.130	2.940	14.0	20.9
6 10	19 30.48	- 5 56.7	1.449	2.340	15.2	19.9	6 10	19 33.14	-13 8.2	2.043	2.936	11.3	20.7
6 20	19 25.75	- 6 39.2	1.400	2.349	11.5	19.7	6 20	19 27.22	-12 36.0	1.977	2.933	8.2	20.5
6 30	19 19.16	- 7 43.5	1.373	2.359	7.9	19.5	6 30	19 19.79	-12 11.3	1.936	2.930	5.2	20.3
7 10	19 11.64	- 9 6.4	1.369	2.371	5.6	19.4	7 10	19 11.60	-11 54.6	1.921	2.927	3.6	20.2
7 20	19 4.25	-10 42.5	1.391	2.383	6.9	19.5	7 20	19 3.49	-11 45.7	1.933	2.924	5.4	20.3
7 30	18 58.07	-12 24.8	1.437	2.397	10.2	19.7	7 30	18 56.31	-11 44.0	1.972	2.922	8.6	20.5
8 9	18 53.96	-14 6.4	1.506	2.412	13.7	20.0	8 9	18 50.77	-11 48.1	2.034	2.920	11.6	20.7
<b>420353</b>	2012 BG <sub>78</sub>		7 8.8 169°91	3°0/ 8.2	17		<b>123254</b>	2000 UT <sub>70</sub>		7 8.8 275°55	2°9/ 7.9	18	
5 31	19 45.84	-28 50.6	1.563	2.399	17.1	21.8	5 31	19 42.04	-28 5.2	1.885	2.715	14.8	20.1
6 10	19 41.05	-29 4.8	1.488	2.400	13.5	21.5	6 10	19 37.90	-28 35.4	1.783	2.693	11.8	19.8
6 20	19 33.11	-29 18.1	1.432	2.401	9.4	21.3	6 20	19 31.00	-29 7.2	1.702	2.671	8.3	19.6
6 30	19 22.72	-29 25.8	1.399	2.402	5.1	21.1	6 30	19 21.83	-29 36.4	1.645	2.648	4.6	19.3
7 10	19 11.13	-29 23.7	1.391	2.403	3.1	20.9	7 10	19 11.29	-29 58.4	1.615	2.625	3.0	19.1
7 20	18 59.77	-29 10.0	1.410	2.404	6.6	21.1	7 20	19 0.56	-30 10.0	1.611	2.602	6.2	19.3
7 30	18 50.09	-28 45.5	1.453	2.404	10.9	21.4	7 30	18 50.95	-30 9.9	1.632	2.579	10.2	19.5
8 9	18 43.13	-28 13.1	1.518	2.404	14.8	21.6	8 9	18 43.56	-29 59.5	1.677	2.555	14.0	19.7
<b>320394</b>	2007 UT <sub>69</sub>		7 8.8 206°71	0°5/ 8.6	18		<b>196996</b>	2003 UZ <sub>88</sub>		7 8.8 282°25	2°5/ 7.6	18	
5 31	19 39.30	-22 32.9	2.110	2.934	13.7	21.3	5 31	19 39.64	-24 9.7	1.904	2.735	14.6	20.0
6 10	19 35.06	-22 49.6	2.025	2.932	10.7	21.1	6 10	19 35.92	-25 18.2	1.809	2.721	11.6	19.8
6 20	19 28.61	-23 10.3	1.961	2.930	7.3	20.9	6 20	19 29.61	-26 34.5	1.736	2.707	8.0	19.5
6 30	19 20.47	-23 32.4	1.922	2.929	3.5	20.7	6 30	19 21.15	-27 53.6	1.688	2.693	4.2	19.3
7 10	19 11.46	-23 53.4	1.911	2.927	0.8	20.5	7 10	19 11.39	-29 9.6	1.667	2.679	2.7	19.1
7 20	19 2.50	-24 10.9	1.926	2.925	4.6	20.8	7 20	19 1.41	-30 16.8	1.673	2.665	6.0	19.3
7 30	18 54.56	-24 23.8	1.969	2.922	8.3	21.0	7 30	18 52.42	-31 11.7	1.706	2.651	10.0	19.5
8 9	18 48.44	-24 31.8	2.036	2.920	11.7	21.2	8 9	18 45.49	-31 53.1	1.761	2.637	13.6	19.7
<b>308621</b>	2005 WV <sub>193</sub>		7 8.8 248°60	1°3/ 9.2	17		<b>210849</b>	2001 QD <sub>253</sub>		7 8.8 318°71	3°8/ 10.2	18	
5 31	19 39.79	-17 36.4	1.870	2.692	15.2	21.2	5 31	19 34.83	-11 7.3	1.759	2.579	16.1	20.2
6 10	19 35.79	-17 48.5	1.777	2.682	12.1	20.9	6 10	19 32.04	-11 14.2	1.664	2.563	13.1	19.9
6 20	19 29.33	-18 8.9	1.705	2.672	8.4	20.7	6 20	19 26.88	-11 35.2	1.589	2.547	9.7	19.7
6 30	19 20.92	-18 36.3	1.657	2.661	4.3	20.4	6 30	19 19.80	-12 10.8	1.536	2.532	6.0	19.4
7 10	19 11.40	-19 8.0	1.635	2.650	1.3	20.2	7 10	19 11.59	-12 59.2	1.508	2.517	3.8	19.2
7 20	19 1.81	-19 41.3	1.640	2.639	5.1	20.4	7 20	19 3.25	-13 57.4	1.506	2.502	5.9	19.3
7 30	18 53.26	-20 13.6	1.671	2.628	9.3	20.6	7 30	18 55.88	-15 1.2	1.529	2.488	9.8	19.5
8 9	18 46.69	-20 43.3	1.725	2.616	13.1	20.8	8 9	18 50.41	-16 6.5	1.575	2.475	13.6	19.7
<b>472051</b>	2013 YY <sub>49</sub>		7 8.8 311°98	0°4/ 8.7	18		<b>429587</b>	2011 EP <sub>39</sub>		7 8.8 95°52	0°9/ 9.0	17	
5 31	19 43.12	-26 3.3	1.604	2.441	16.6	20.4	5 31	19 41.04	-18 30.3	1.803	2.627	15.6	21.5
6 10	19 38.86	-25 26.7	1.512	2.427	13.2	20.1	6 10	19 36.57	-18 46.5	1.735	2.641	12.3	21.3
6 20	19 31.62	-24 47.4	1.441	2.413	9.1	19.8	6 20	19 29.68	-19 10.3	1.687	2.655	8.4	21.1
6 30	19 22.05	-24 3.4	1.393	2.400	4.4	19.5	6 30	19 20.99	-19 39.4	1.663	2.669	4.1	20.9
7 10	19 11.25	-23 14.1	1.371	2.387	0.8	19.2	7 10	19 11.45	-20 10.8	1.666	2.682	1.0	20.7
7 20	19 0.56	-22 20.1	1.375	2.375	5.7	19.5	7 20	19 2.12	-20 41.7	1.696	2.696	4.9	21.0
7 30	18 51.34	-21 24.1	1.404	2.362	10.5	19.8	7 30	18 54.05	-21 10.0	1.752	2.709	8.9	21.3
8 9	18 44.63	-20 28.9	1.455	2.351	14.8	20.0	8 9	18 48.05	-21 34.6	1.832	2.722	12.5	21.5
<b>186479</b>	2002 TO <sub>78</sub>		7 8.8 273°77	4°3/ 7.3	18		<b>247114</b>	2000 UA <sub>23</sub>		7 8.8 280°98	0°8/ 8.5	18	
5 31	19 42.10	-28 56.9	1.616	2.456	16.4	20.2	5 31	19 41.56	-22 3.7	1.524	2.363	17.2	20.6
6 10	19 38.41	-29 55.3	1.529	2.443	13.1	19.9	6 10	19 38.14	-22 27.6	1.422	2.338	13.8	20.3
6 20	19 31.59	-30 57.2	1.461	2.431	9.3	19.7	6 20	19 31.56	-22 59.2	1.340	2.313	9.5	20.0
6 30	19 22.17	-31 56.1	1.417	2.418	5.6	19.4	6 30	19 22.26	-23 35.6	1.280	2.287	4.6	19.6
7 10	19 11.22	-32 45.2	1.398	2.405	4.5	19.3	7 10	19 11.22	-24 12.2	1.245	2.261	1.1	19.3
7 20	19 0.11	-33 19.4	1.405	2.392	7.6	19.5	7 20	18 59.80	-24 44.5	1.235	2.235	6.3	19.6
7 30	18 50.38	-33 36.6	1.436	2.379	11.7	19.7	7 30	18 49.58	-25 9.5	1.250	2.208	11.6	19.8
8 9	18 43.27	-33 38.3	1.488	2.366	15.5	19.9	8 9	18 41.91	-25 26.6	1.286	2.181	16.3	20.0
<b>418041</b>	2007 VL <sub>75</sub>		7 8.8 26°36	3°3/ 7.8	17		<b>93334</b>	2000 SC <sub>235</sub>		7 8.8 67°56	0°3/ 8.8	18	
5 31	19 40.83	-26 6.1	1.263	2.120	19.0	20.8	5 31	19 40.65	-21 10.9	1.677	2.510	16.2	19.8
6 10	19 37.78	-26 56.4	1.197	2.123	15.0	20.6	6 10	19 36.56	-21 13.2	1.603	2.515	12.7	19.6
6 20	19 31.26	-27 51.9	1.151	2.127	10.4	20.3	6 20	19 29.84	-21 20.7	1.550	2.521	8.7	19.4
6 30	19 21.98	-28 46.0	1.126	2.131	5.5	20.0	6 30	19 21.13	-21 31.0	1.520	2.526	4.2	19.1
7 10	19 11.27	-29 31.6	1.124	2.136	3.5	19.9	7 10	19 11.44	-21 41.8	1.516	2.532	0.6	18.8
7 20	19 0.74	-30 3.6	1.146	2.141	7.5	20.2	7 20	19 1.95	-21 51.0	1.538	2.538	5.2	19.2
7 30	18 52.06	-30 20.3	1.191	2.147	12.3	20.5	7 30	18 53.80	-21 57.5	1.585	2.543	9.6	19.5
8 9	18 46.40	-30 23.2	1.256	2.153	16.5	20.7	8 9	18 47.89	-22 1.1	1.655	2.549	13.4	19.7
<b>278751</b>	2008 SH <sub>106</sub>		7 8.8 12°46	4°3/ 9.8	17		<b>6830</b>	Johnbackus		7 8.8 39°50	1°3/ 8.3	18	
5 31	19 34.07	-14 2.9	1.226	2.080	19.7	19.7	5 31	19 37.50	-23 56.3	1.993	2.825	14.0	17.2
6 10	19 32.08	-13 34.6	1.164	2.084	15.9	19.5	6 10	19 33.72	-24 26.8	1.923	2.835	11.0	17.0
6 20	19 27.12	-13 19.0	1.120	2.089	11.4	19.2	6 20	19 27.72	-25 0.7	1.874	2.845	7.4	16.8
6 30	19 19.90	-13 17.2	1.096	2.096	6.9	19.0	6 30	19 20.06	-25 35.0	1.850	2.856	3.6	16.6
7 10	19 11.58	-13 28.4	1.094	2.105	4.3	18.9	7 10	19 11.60	-26 6.2	1.852	2.867	1.5	16.4
7 20	19 3.51	-13 50.3	1.116	2.114	7.0	19.1	7 20	19 3.30	-26 31.7	1.882	2.878	4.8	16.7
7 30	18 57.01	-14 19.7	1.159	2.125	11.4	19.4	7 30	18 56.11	-26 50.2	1.937	2.890	8.5	16.9
8 9	18 53.06	-14 52.9	1.223	2.137	15.6	19.6	8 9	18 50.81	-27 1.7	2.016	2.902	11.7	17.1
<b>12146</b>	Ostriker		7 8.8 348°13	9°5/ 6.9	18		<b>42840</b>	1999 RU		7 8.8 300°99	3°1/ 9.6	18	
5 31	19 40.21	-40 28.1	1.325	2.17									

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>434778</b>	2006 <i>KK</i> <sub>87</sub>		7 8.8 290°91	3.4/ 7.6	18		<b>499386</b>	2010 <i>AQ</i> <sub>79</sub>		7 8.8 192°44	2.9/ 8.1	18	
5 31	19 40.27	-28 36.6	1.856	2.690	14.8	21.1	5 31	19 45.70	-31 13.8	2.338	3.148	12.9	21.7
6 10	19 36.41	-29 22.5	1.772	2.683	11.7	20.9	6 10	19 39.93	-31 25.5	2.249	3.147	10.2	21.5
6 20	19 29.88	-30 10.2	1.708	2.677	8.2	20.7	6 20	19 31.85	-31 34.2	2.183	3.144	7.2	21.3
6 30	19 21.23	-30 54.8	1.669	2.671	4.8	20.5	6 30	19 22.03	-31 36.6	2.143	3.141	4.2	21.1
7 10	19 11.43	-31 31.2	1.656	2.664	3.6	20.4	7 10	19 11.36	-31 29.9	2.130	3.138	3.0	21.0
7 20	19 1.61	-31 55.8	1.669	2.658	6.4	20.5	7 20	19 0.84	-31 12.7	2.146	3.134	5.3	21.2
7 30	18 53.01	-32 7.4	1.708	2.652	10.1	20.7	7 30	18 51.46	-30 45.9	2.190	3.129	8.5	21.4
8 9	18 46.62	-32 7.1	1.769	2.646	13.5	20.9	8 9	18 44.02	-30 11.7	2.259	3.124	11.4	21.5
<b>429959</b>	2012 <i>VB</i> <sub>14</sub>		7 8.8 356°20	4.0/ 9.7	16		<b>457635</b>	2009 <i>BD</i> <sub>148</sub>		7 8.8 86°71	4.3/ 10.1	17	
5 31	19 31.89	-14 35.3	1.215	2.075	19.5	20.2	5 31	19 41.12	-11 40.7	1.423	2.248	19.0	21.0
6 10	19 30.57	-14 11.9	1.144	2.068	15.8	19.9	6 10	19 37.20	-11 33.3	1.358	2.259	15.3	20.8
6 20	19 26.26	-14 0.8	1.091	2.063	11.3	19.7	6 20	19 30.42	-11 40.8	1.310	2.270	11.1	20.6
6 30	19 19.58	-14 3.3	1.058	2.060	6.7	19.4	6 30	19 21.47	-12 3.3	1.285	2.281	6.8	20.3
7 10	19 11.66	-14 18.3	1.046	2.058	4.0	19.2	7 10	19 11.46	-12 38.6	1.283	2.292	4.3	20.2
7 20	19 3.83	-14 43.7	1.057	2.058	7.0	19.4	7 20	19 1.68	-13 23.5	1.307	2.303	6.7	20.4
7 30	18 57.49	-15 16.0	1.090	2.059	11.6	19.7	7 30	18 53.39	-14 13.6	1.355	2.313	10.8	20.7
8 9	18 53.72	-15 51.5	1.143	2.062	16.1	19.9	8 9	18 47.56	-15 5.1	1.424	2.324	14.8	20.9
<b>358443</b>	2007 <i>DF</i> <sub>99</sub>		7 8.8 342°94	3.2/ 10.1	18		<b>153911</b>	2001 <i>XL</i> <sub>241</sub>		7 8.8 13°96	0.6/ 8.6	18	
5 31	19 35.39	-11 23.2	2.305	3.106	13.3	20.7	5 31	19 39.44	-21 41.8	1.568	2.409	16.8	20.0
6 10	19 31.72	-11 27.6	2.218	3.105	10.8	20.6	6 10	19 35.94	-22 8.4	1.493	2.410	13.2	19.7
6 20	19 26.22	-11 42.2	2.152	3.105	7.8	20.4	6 20	19 29.64	-22 41.9	1.437	2.411	9.0	19.5
6 30	19 19.33	-12 6.9	2.111	3.104	4.9	20.2	6 30	19 21.15	-23 19.0	1.405	2.412	4.3	19.2
7 10	19 11.71	-12 40.3	2.096	3.103	3.2	20.1	7 10	19 11.50	-23 55.3	1.397	2.414	0.9	19.0
7 20	19 4.12	-12 20.4	2.109	3.102	4.8	20.2	7 20	19 1.95	-24 27.3	1.416	2.415	5.6	19.3
7 30	18 57.33	-14 4.6	2.149	3.102	7.8	20.4	7 30	18 53.77	-24 52.7	1.458	2.417	10.2	19.6
8 9	18 52.02	-14 50.5	2.214	3.101	10.7	20.6	8 9	18 47.97	-25 10.8	1.524	2.420	14.2	19.8
<b>371566</b>	2006 <i>VX</i> <sub>70</sub>		7 8.8 120°17	0°/ 8.6	17		<b>37637</b>	1993 <i>UZ</i> <sub>5</sub>		7 8.8 107°51	1.3/ 9.2	17	R
5 31	19 42.54	-20 48.8	1.769	2.595	15.8	21.2	5 31	19 41.08	-17 16.0	1.473	2.308	17.9	19.1
6 10	19 37.88	-21 6.7	1.698	2.606	12.4	21.0	6 10	19 37.31	-17 36.2	1.400	2.312	14.2	18.9
6 20	19 30.65	-21 30.5	1.647	2.616	8.4	20.8	6 20	19 30.62	-18 7.6	1.346	2.316	9.8	18.6
6 30	19 21.50	-21 57.5	1.620	2.626	4.0	20.5	6 30	19 21.63	-18 47.8	1.314	2.319	5.0	18.3
7 10	19 11.41	-22 24.4	1.620	2.636	0.6	20.3	7 10	19 11.44	-19 33.0	1.307	2.323	1.3	18.1
7 20	19 1.51	-22 48.4	1.646	2.646	5.1	20.6	7 20	19 1.35	-20 18.8	1.325	2.326	5.8	18.4
7 30	18 52.93	-23 7.9	1.699	2.655	9.3	20.9	7 30	18 52.70	-21 1.9	1.368	2.329	10.5	18.7
8 9	18 46.55	-23 22.5	1.775	2.663	12.9	21.1	8 9	18 46.54	-21 39.9	1.434	2.332	14.7	18.9
<b>311489</b>	2005 <i>VY</i> <sub>110</sub>		7 8.8 217°91	3.7/ 7.1	18		<b>150615</b>	2000 <i>YS</i> <sub>42</sub>		7 8.8 196°69	0.8/ 8.9	18	
5 31	19 39.92	-32 7.8	2.589	3.405	11.6	22.0	5 31	19 38.65	-20 26.4	2.532	3.343	12.0	20.4
6 10	19 35.38	-32 55.8	2.501	3.400	9.3	21.9	6 10	19 34.10	-20 13.1	2.442	3.342	9.5	20.2
6 20	19 28.78	-33 42.8	2.436	3.395	6.7	21.7	6 20	19 27.73	-20 2.5	2.375	3.340	6.5	20.0
6 30	19 20.59	-34 24.7	2.397	3.390	4.4	21.5	6 30	19 20.04	-19 53.8	2.334	3.339	3.2	19.8
7 10	19 11.54	-34 57.7	2.386	3.385	3.8	21.5	7 10	19 11.68	-19 46.2	2.321	3.337	0.9	19.6
7 20	19 2.48	-35 19.4	2.402	3.379	5.6	21.6	7 20	19 3.40	-19 38.8	2.337	3.335	3.9	19.8
7 30	18 54.31	-35 29.0	2.446	3.373	8.2	21.8	7 30	18 55.98	-19 31.5	2.380	3.333	7.1	20.0
8 9	18 47.79	-35 27.5	2.513	3.367	10.8	21.9	8 9	18 50.03	-19 24.1	2.449	3.331	10.0	20.2
<b>43208</b>	2000 <i>AV</i> <sub>98</sub>		7 8.8 348°92	8.5/ 4.5	18		<b>469618</b>	2004 <i>QM</i> <sub>28</sub>		7 8.8 357°76	3.2/ 9.4	17	
5 31	19 37.31	-36 51.6	1.619	2.464	16.1	16.7	5 31	19 37.66	-16 8.6	1.450	2.290	17.9	21.3
6 10	19 35.01	-38 46.3	1.546	2.455	13.3	16.5	6 10	19 34.60	-15 39.9	1.375	2.288	14.4	21.1
6 20	19 29.50	-40 40.2	1.493	2.446	10.6	16.3	6 20	19 28.74	-15 19.7	1.319	2.287	10.2	20.9
6 30	19 21.27	-42 23.4	1.464	2.439	8.7	16.2	6 30	19 20.71	-15 8.6	1.284	2.286	5.8	20.6
7 10	19 11.41	-43 46.5	1.458	2.433	8.8	16.1	7 10	19 11.57	-15 5.9	1.273	2.286	3.2	20.4
7 20	19 1.39	-44 43.1	1.477	2.428	10.9	16.3	7 20	19 2.56	-15 10.5	1.287	2.286	6.3	20.6
7 30	18 52.82	-45 11.3	1.517	2.423	13.7	16.4	7 30	18 54.94	-15 20.8	1.325	2.287	10.7	20.9
8 9	18 47.04	-45 14.2	1.577	2.421	16.6	16.6	8 9	18 49.70	-15 34.9	1.384	2.288	14.8	21.1
<b>344770</b>	2003 <i>WQ</i> <sub>102</sub>		7 8.8 284°03	5.5/ 7.6	18		<b>480518</b>	2015 <i>MJ</i> <sub>7</sub>		7 8.8 46°28	1.7/ 9.1	17	
5 31	19 45.23	-36 2.9	1.934	2.755	14.8	20.6	5 31	19 39.31	-19 1.9	2.041	2.861	14.2	21.1
6 10	19 40.52	-36 29.0	1.834	2.733	12.1	20.3	6 10	19 34.97	-18 35.2	1.962	2.865	11.2	20.9
6 20	19 32.82	-36 49.8	1.755	2.711	9.1	20.1	6 20	19 28.49	-18 12.5	1.904	2.870	7.8	20.7
6 30	19 22.71	-36 59.7	1.700	2.688	6.4	19.9	6 30	19 20.43	-17 53.4	1.871	2.874	4.1	20.5
7 10	19 11.24	-36 53.6	1.670	2.666	5.6	19.8	7 10	19 11.63	-17 37.3	1.864	2.879	1.7	20.4
7 20	18 59.72	-36 29.1	1.666	2.643	7.7	19.9	7 20	19 2.99	-17 24.0	1.885	2.883	4.7	20.6
7 30	18 49.56	-35 47.2	1.688	2.620	11.0	20.0	7 30	18 55.43	-17 13.1	1.933	2.888	8.3	20.8
8 9	18 41.86	-34 51.9	1.733	2.597	14.3	20.2	8 9	18 49.69	-17 4.4	2.004	2.893	11.6	21.0
<b>122466</b>	2000 <i>QM</i> <sub>150</sub>		7 8.8 290°89	8.3/ 6.8	18		<b>135933</b>	2002 <i>TA</i> <sub>186</sub>		7 8.8 282°68	0.4/ 8.7	18	
5 31	19 46.90	-41 0.1	1.722	2.543	16.4	19.1	5 31	19 39.77	-23 23.7	1.969	2.796	14.3	19.5
6 10	19 42.48	-41 49.5	1.632	2.523	13.8	18.9	6 10	19 35.65	-23 24.5	1.880	2.790	11.3	19.3
6 20	19 34.52	-42 31.0	1.561	2.504	11.0	18.6	6 20	19 29.15	-23 27.9	1.813	2.783	7.7	19.1
6 30	19 23.64	-42 56.3	1.513	2.485	8.8	18.5	6 30	19 20.84	-23 31.6	1.770	2.776	3.7	18.8
7 10	19 11.10	-42 58.3	1.489	2.466	8.4	18.4	7 10	19 11.56	-23 33.6	1.754	2.770	0.7	18.6
7 20	18 58.57	-42 33.5	1.488	2.446	10.2	18.5	7 20	19 2.34	-23 32.4	1.764	2.763	4.8	18.9
7 30	18 47.77	-41 43.4	1.512	2.427	13.1	18.6	7 30	18 54.22	-23 27.4	1.801	2.757	8.8	19.1
8 9	18 40.02	-40 33.7	1.556	2.408	16.3	18.7	8 9	18 48.06	-23 19.0	1.862	2.750	12.4	19.3
<b>523053</b>													

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>288120</b>	2003 WL <sub>68</sub>		7 8.8 286°44	3°2/ 7.8 18			<b>84293</b>	2002 TR <sub>32</sub>		7 8.8 236°89	0°8/ 9.0 18		
5 31	19 41.30	-26 25.6	1.485	2.330	17.3	20.9	5 31	19 42.09	-19 25.4	1.938	2.756	14.9	21.0
6 10	19 38.07	-27 10.5	1.393	2.312	13.8	20.6	6 10	19 37.60	-19 31.6	1.840	2.743	11.8	20.7
6 20	19 31.57	-28 0.9	1.320	2.293	9.6	20.3	6 20	19 30.61	-19 44.0	1.764	2.730	8.2	20.5
6 30	19 22.31	-28 51.4	1.270	2.275	5.2	20.0	6 30	19 21.62	-20 0.9	1.712	2.717	4.1	20.2
7 10	19 11.34	-29 35.6	1.244	2.256	3.4	19.9	7 10	19 11.50	-20 20.0	1.686	2.702	0.9	19.9
7 20	19 0.12	-30 8.0	1.243	2.237	7.3	20.1	7 20	19 1.28	-20 39.0	1.688	2.687	5.0	20.2
7 30	18 50.28	-30 26.2	1.266	2.219	12.0	20.3	7 30	18 52.10	-20 56.2	1.717	2.672	9.2	20.4
8 9	18 43.17	-30 31.0	1.310	2.200	16.4	20.5	8 9	18 44.90	-21 10.8	1.770	2.656	13.0	20.6
<b>184239</b>	2004 RE <sub>227</sub>		7 8.8 350°25	1°2/ 9.1 18			<b>45439</b>	2000 AO <sub>177</sub>		7 8.8 148°47	2°8/ 9.8 18		
5 31	19 35.81	-19 34.7	1.851	2.684	14.9	19.4	5 31	19 39.27	-12 49.7	2.428	3.223	12.9	19.6
6 10	19 32.62	-19 22.6	1.767	2.679	11.8	19.2	6 10	19 34.57	-12 46.5	2.347	3.232	10.4	19.5
6 20	19 27.12	-19 15.6	1.704	2.674	8.1	19.0	6 20	19 28.07	-12 51.7	2.287	3.240	7.5	19.3
6 30	19 19.87	-19 12.7	1.665	2.670	4.1	18.7	6 30	19 20.22	-13 4.9	2.253	3.248	4.5	19.1
7 10	19 11.72	-19 12.6	1.651	2.667	1.3	18.5	7 10	19 11.73	-13 24.8	2.247	3.255	2.8	19.0
7 20	19 3.65	-19 14.1	1.664	2.664	4.9	18.7	7 20	19 3.33	-13 50.0	2.269	3.262	4.5	19.1
7 30	18 56.66	-19 16.3	1.702	2.662	8.9	19.0	7 30	18 55.79	-14 18.7	2.319	3.269	7.5	19.3
8 9	18 51.59	-19 18.5	1.763	2.661	12.5	19.2	8 9	18 49.73	-14 48.9	2.394	3.274	10.3	19.5
<b>235895</b>	2005 CR <sub>63</sub>		7 8.8 120°11	2°0/ 9.4 18			<b>39410</b>	2191 T <sub>-1</sub>		7 8.8 6°28	5°6/ 10.4 18		
5 31	19 39.75	-15 51.3	2.160	2.969	13.9	21.3	5 31	19 32.63	-10 55.7	1.020	1.883	22.2	18.7
6 10	19 35.16	-15 50.6	2.085	2.981	11.0	21.2	6 10	19 31.58	-10 40.2	0.959	1.882	18.1	18.4
6 20	19 28.55	-15 57.2	2.031	2.992	7.7	21.0	6 20	19 27.20	-10 44.9	0.914	1.883	13.4	18.2
6 30	19 20.45	-16 10.3	2.002	3.003	4.2	20.8	6 30	19 20.15	-11 11.3	0.887	1.886	8.5	17.9
7 10	19 11.65	-16 28.3	2.001	3.014	2.0	20.6	7 10	19 11.72	-11 57.8	0.881	1.890	5.6	17.8
7 20	19 3.00	-16 49.4	2.027	3.024	4.5	20.8	7 20	19 3.45	-12 59.5	0.896	1.895	8.1	17.9
7 30	18 55.35	-17 11.9	2.081	3.034	7.9	21.1	7 30	18 56.91	-14 9.5	0.931	1.902	12.8	18.2
8 9	18 49.41	-17 34.4	2.159	3.044	11.0	21.3	8 9	18 53.29	-15 21.0	0.986	1.910	17.4	18.5
<b>106195</b>	2000 UM <sub>15</sub>		7 8.8 238°43	3°7/ 7.2 18			<b>400473</b>	2008 GG <sub>37</sub>		7 8.8 50°34	4°4/ 10.3 15		
5 31	19 39.81	-31 10.5	2.387	3.207	12.4	19.9	5 31	19 36.08	-9 43.1	2.111	2.911	14.4	21.3
6 10	19 35.47	-31 59.2	2.299	3.202	9.8	19.7	6 10	19 32.30	-9 21.1	2.039	2.923	11.7	21.1
6 20	19 28.96	-32 47.5	2.235	3.197	7.0	19.5	6 20	19 26.62	-9 10.0	1.988	2.935	8.8	20.9
6 30	19 20.74	-33 31.0	2.196	3.192	4.5	19.3	6 30	19 19.55	-9 10.4	1.960	2.946	5.9	20.8
7 10	19 11.60	-34 5.9	2.185	3.186	3.8	19.3	7 10	19 11.82	-9 22.1	1.959	2.959	4.4	20.7
7 20	19 2.45	-34 29.3	2.201	3.181	5.8	19.4	7 20	19 4.25	-9 43.5	1.984	2.971	5.7	20.8
7 30	18 54.26	-34 40.4	2.243	3.175	8.6	19.6	7 30	18 57.62	-10 12.6	2.035	2.983	8.4	21.0
8 9	18 47.82	-34 40.0	2.310	3.170	11.4	19.7	8 9	18 52.59	-10 46.8	2.110	2.996	11.3	21.2
<b>182795</b>	2002 AX <sub>47</sub>		7 8.8 171°50	0°0/ 8.7 18			<b>435383</b>	2007 XN <sub>34</sub>		7 8.8 330°48	4°1/ 9.1 18		
5 31	19 38.45	-21 30.1	2.647	3.458	11.5	21.9	5 31	19 38.68	-16 25.7	1.614	2.445	16.8	19.7
6 10	19 33.89	-21 39.4	2.560	3.460	9.1	21.7	6 10	19 35.21	-15 21.3	1.525	2.433	13.6	19.4
6 20	19 27.58	-21 51.9	2.496	3.462	6.1	21.6	6 20	19 29.10	-14 20.6	1.456	2.420	9.8	19.2
6 30	19 19.98	-22 5.9	2.458	3.464	2.9	21.4	6 30	19 20.91	-13 25.5	1.410	2.409	6.0	18.9
7 10	19 11.72	-22 19.7	2.449	3.465	0.4	21.1	7 10	19 11.63	-12 38.0	1.389	2.398	4.1	18.8
7 20	19 3.53	-22 31.8	2.468	3.466	3.7	21.4	7 20	19 2.37	-11 59.5	1.394	2.387	6.7	18.9
7 30	18 56.14	-22 41.4	2.515	3.467	6.9	21.6	7 30	18 54.36	-11 31.0	1.423	2.378	10.7	19.1
8 9	18 50.19	-22 48.1	2.588	3.467	9.7	21.8	8 9	18 48.53	-11 12.1	1.473	2.369	14.6	19.3
<b>441957</b>	2010 LD <sub>100</sub>		7 8.8 307°88	7°3/ 10.7 15			<b>300051</b>	2006 UU <sub>169</sub>		7 8.8 190°28	0°9/ 9.1 18		
5 31	19 34.74	-3 57.2	1.990	2.776	15.7	21.7	5 31	19 37.91	-18 18.9	2.307	3.121	12.9	21.5
6 10	19 31.73	-3 16.2	1.884	2.750	13.4	21.4	6 10	19 33.76	-18 29.1	2.220	3.121	10.2	21.4
6 20	19 26.58	-2 48.7	1.797	2.723	10.8	21.2	6 20	19 27.66	-18 45.2	2.155	3.120	7.0	21.2
6 30	19 19.69	-2 37.9	1.732	2.697	8.5	21.0	6 30	19 20.09	-19 6.0	2.115	3.119	3.5	20.9
7 10	19 11.75	-2 45.5	1.691	2.671	7.3	20.9	7 10	19 11.75	-19 29.4	2.103	3.119	1.0	20.7
7 20	19 3.62	-3 11.6	1.675	2.645	8.3	20.9	7 20	19 3.45	-19 53.4	2.118	3.117	4.2	21.0
7 30	18 56.26	-3 54.3	1.684	2.620	10.8	21.0	7 30	18 56.02	-20 16.6	2.161	3.116	7.6	21.2
8 9	18 50.53	-4 49.8	1.715	2.594	13.7	21.1	8 9	18 50.18	-20 37.7	2.229	3.115	10.7	21.4
<b>147122</b>	2002 TZ <sub>122</sub>		7 8.8 264°46	5°6/ 9.7 18			<b>339387</b>	2005 BP <sub>8</sub>		7 8.8 224°28	1°4/ 8.3 18		
5 31	19 40.38	-11 6.3	1.649	2.463	17.3	20.0	5 31	19 40.76	-24 5.3	2.179	2.999	13.4	21.0
6 10	19 36.47	-10 15.3	1.561	2.453	14.2	19.7	6 10	19 36.32	-24 39.8	2.086	2.992	10.5	20.7
6 20	19 29.93	-9 34.0	1.492	2.443	10.7	19.5	6 20	19 29.61	-25 18.3	2.015	2.984	7.2	20.5
6 30	19 21.31	-9 4.6	1.445	2.433	7.3	19.3	6 30	19 21.11	-25 57.5	1.970	2.976	3.6	20.3
7 10	19 11.53	-8 48.7	1.423	2.423	5.6	19.1	7 10	19 11.62	-26 33.9	1.953	2.967	1.6	20.1
7 20	19 1.73	-8 46.4	1.426	2.413	7.5	19.2	7 20	19 2.08	-27 4.4	1.963	2.958	4.9	20.3
7 30	18 53.11	-8 56.6	1.454	2.403	11.1	19.4	7 30	18 53.50	-27 27.4	2.000	2.949	8.5	20.5
8 9	18 46.63	-9 16.6	1.504	2.392	14.8	19.6	8 9	18 46.72	-27 42.6	2.062	2.940	11.8	20.7
<b>315215</b>	2007 RL <sub>97</sub>		7 8.8 315°46	3°4/ 9.6 18			<b>371467</b>	2006 SF <sub>409</sub>		7 8.8 241°87	0°9/ 9.1 18		
5 31	19 35.61	-14 37.7	1.196	2.050	20.1	19.5	5 31	19 42.99	-18 12.8	2.180	2.987	13.8	22.9
6 10	19 33.90	-14 33.2	1.109	2.031	16.3	19.2	6 10	19 38.12	-18 30.0	2.070	2.967	11.0	22.6
6 20	19 28.90	-14 43.4	1.040	2.012	11.8	18.9	6 20	19 30.92	-18 54.6	1.982	2.946	7.7	22.4
6 30	19 21.09	-15 8.9	0.990	1.994	6.7	18.6	6 30	19 21.80	-19 24.9	1.920	2.924	3.9	22.1
7 10	19 11.54	-15 47.9	0.963	1.976	3.4	18.3	7 10	19 11.52	-19 58.3	1.885	2.901	0.9	21.8
7 20	19 1.73	-16 36.5	0.958	1.959	7.2	18.5	7 20	19 1.02	-20 32.1	1.879	2.877	4.7	22.1
7 30	18 53.33	-17 30.0	0.974	1.943	12.7	18.7	7 30	18 51.35	-21 4.1	1.900	2.852	8.7	22.3
8 9	18 47.76	-18 23.6	1.010	1.928	17.8	19.0	8 9	18 43.43	-21 32.9	1.947	2.827	12.3	22.4
<b>442060</b>	2010 RS <sub>111</sub>		7 8.8 115°23	4°3/ 7.3 18			<b>335126</b>	2004 TB <sub>285</sub>		7 8.8 259°92	2°0/ 8.4 18		
5 31	19 40.92	-34 12.6											

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>8331</b>	Dawkins		7 8.8 345°18	0°9/ 8.5 18			<b>470869</b>	2009 AT <sub>13</sub>		7 8.8 299°98	1°6/ 9.4 16		
5 31	19 37.84	-21 2.8	1.212	2.072	19.5	16.8	5 31	19 37.74	-16 26.1	1.885	2.708	15.1	21.7
6 10	19 35.58	-21 39.2	1.139	2.067	15.4	16.5	6 10	19 34.15	-16 39.3	1.798	2.703	12.0	21.5
6 20	19 29.94	-22 26.5	1.085	2.063	10.6	16.2	6 20	19 28.23	-17 1.9	1.732	2.698	8.4	21.2
6 30	19 21.53	-23 20.4	1.051	2.059	5.1	15.9	6 30	19 20.50	-17 32.3	1.689	2.693	4.4	21.0
7 10	19 11.56	-24 14.9	1.040	2.056	1.2	15.6	7 10	19 11.77	-18 8.3	1.673	2.688	1.6	20.8
7 20	19 1.60	-25 4.1	1.052	2.053	6.8	16.0	7 20	19 3.04	-18 46.8	1.684	2.683	4.9	21.0
7 30	18 53.30	-25 43.9	1.087	2.051	12.2	16.3	7 30	18 55.33	-19 25.3	1.720	2.679	8.9	21.2
8 9	18 47.94	-26 13.1	1.141	2.050	16.9	16.5	8 9	18 49.52	-20 1.4	1.780	2.674	12.6	21.4
<b>131630</b>	2001 XO <sub>64</sub>		7 8.8 213°06	0°9/ 8.9 18			<b>126971</b>	2002 FH <sub>22</sub>		7 8.8 26°27	3°9/ 10.5 18		
5 31	19 43.76	-20 17.0	1.589	2.419	17.1	19.8	5 31	19 37.60	-9 33.0	1.698	2.510	16.9	19.6
6 10	19 39.33	-20 10.2	1.506	2.416	13.6	19.6	6 10	19 34.18	-9 56.8	1.619	2.512	13.8	19.4
6 20	19 31.98	-20 8.8	1.442	2.411	9.4	19.3	6 20	19 28.32	-10 37.4	1.559	2.514	10.1	19.2
6 30	19 22.34	-20 11.4	1.401	2.407	4.6	19.0	6 30	19 20.55	-11 34.3	1.523	2.517	6.2	19.0
7 10	19 11.46	-20 15.5	1.386	2.402	1.0	18.8	7 10	19 11.77	-12 44.4	1.512	2.520	3.9	18.9
7 20	19 0.65	-20 19.4	1.397	2.397	5.7	19.1	7 20	19 3.01	-14 3.2	1.527	2.523	5.9	19.0
7 30	18 51.23	-20 22.1	1.433	2.391	10.4	19.3	7 30	18 55.37	-15 25.3	1.568	2.526	9.6	19.2
8 9	18 44.26	-20 23.3	1.491	2.385	14.6	19.6	8 9	18 49.74	-16 45.8	1.632	2.530	13.3	19.5
<b>175741</b>	1998 MQ <sub>24</sub>		7 8.8 309°24	1°6/ 8.6 18			<b>197878</b>	2004 RJ <sub>14</sub>		7 8.8 89°46	3°8/ 8.1 18		
5 31	19 41.17	-26 9.9	1.392	2.242	18.0	19.7	5 31	19 45.45	-31 35.0	1.737	2.567	15.9	20.0
6 10	19 37.96	-26 6.0	1.304	2.226	14.3	19.4	6 10	19 40.42	-31 54.3	1.670	2.577	12.6	19.8
6 20	19 31.44	-26 2.6	1.236	2.211	9.9	19.1	6 20	19 32.52	-32 10.4	1.622	2.588	8.9	19.6
6 30	19 22.22	-25 56.4	1.189	2.196	4.9	18.8	6 30	19 22.50	-32 18.4	1.599	2.598	5.3	19.4
7 10	19 11.47	-25 44.2	1.167	2.182	1.8	18.5	7 10	19 11.52	-32 14.7	1.602	2.609	3.9	19.4
7 20	19 0.70	-25 24.1	1.168	2.168	6.5	18.8	7 20	19 0.90	-31 57.8	1.630	2.619	6.5	19.5
7 30	18 51.50	-24 56.8	1.193	2.155	11.7	19.1	7 30	18 51.88	-31 29.1	1.685	2.629	10.1	19.8
8 9	18 45.12	-24 24.6	1.239	2.142	16.3	19.3	8 9	18 45.36	-30 51.7	1.762	2.639	13.5	20.0
<b>13588</b>	1993 TU <sub>38</sub>		7 8.8 186°72	0°4/ 8.6 18			<b>428335</b>	2007 HA <sub>87</sub>		7 8.8 15°64	3°7/ 9.8 17		
5 31	19 39.15	-21 34.7	2.046	2.870	14.0	18.9	5 31	19 35.65	-13 47.2	1.350	2.194	18.8	20.5
6 10	19 35.07	-22 1.5	1.962	2.870	11.0	18.7	6 10	19 33.17	-13 35.9	1.284	2.198	15.1	20.3
6 20	19 28.74	-22 33.7	1.900	2.870	7.5	18.5	6 20	19 27.85	-13 37.8	1.236	2.203	10.8	20.1
6 30	19 20.67	-23 8.7	1.863	2.870	3.6	18.3	6 30	19 20.37	-13 53.1	1.209	2.210	6.4	19.8
7 10	19 11.70	-23 43.1	1.853	2.869	0.7	18.1	7 10	19 11.80	-14 19.8	1.205	2.217	3.7	19.7
7 20	19 2.76	-24 14.2	1.870	2.869	4.7	18.4	7 20	19 3.42	-14 55.1	1.226	2.225	6.4	19.9
7 30	18 54.85	-24 40.0	1.914	2.868	8.5	18.6	7 30	18 56.49	-15 35.1	1.269	2.234	10.8	20.1
8 9	18 48.78	-25 0.0	1.982	2.868	11.9	18.8	8 9	18 51.97	-16 16.4	1.334	2.243	14.9	20.4
<b>232769</b>	2004 PJ <sub>51</sub>		7 8.8 315°42	1°4/ 8.4 18			<b>16341</b>	2182 T <sub>-3</sub>		7 8.8 34°62	1°9/ 9.2 18		
5 31	19 36.66	-22 53.6	1.425	2.279	17.5	20.2	5 31	19 40.59	-18 45.5	1.192	2.046	20.2	18.0
6 10	19 34.48	-23 23.1	1.329	2.253	13.9	19.9	6 10	19 37.45	-18 29.8	1.130	2.052	16.0	17.8
6 20	19 29.19	-24 0.6	1.251	2.228	9.6	19.6	6 20	19 30.97	-18 22.7	1.085	2.059	11.1	17.5
6 30	19 21.23	-24 42.7	1.195	2.203	4.7	19.2	6 30	19 21.91	-18 23.2	1.061	2.067	5.7	17.3
7 10	19 11.60	-25 24.5	1.163	2.179	1.6	18.9	7 10	19 11.61	-18 29.1	1.059	2.074	2.0	17.0
7 20	19 1.64	-26 1.1	1.155	2.155	6.6	19.2	7 20	19 1.61	-18 38.1	1.081	2.083	6.5	17.4
7 30	18 52.94	-26 29.1	1.170	2.132	11.8	19.4	7 30	18 53.43	-18 48.4	1.126	2.091	11.7	17.7
8 9	18 46.84	-26 47.6	1.206	2.110	16.5	19.6	8 9	18 48.15	-18 58.8	1.190	2.101	16.2	18.0
<b>180299</b>	2003 WP <sub>130</sub>		7 8.8 232°00	1°2/ 8.5 17			<b>440610</b>	2005 VJ <sub>101</sub>		7 8.8 21°12	7°8/ 6.3 18		
5 31	19 43.94	-24 5.3	1.864	2.688	15.2	21.8	5 31	19 42.95	-41 32.6	1.969	2.786	14.7	20.2
6 10	19 39.25	-24 24.5	1.769	2.677	12.0	21.6	6 10	19 38.73	-42 38.1	1.903	2.790	12.3	20.1
6 20	19 31.86	-24 47.5	1.695	2.665	8.3	21.3	6 20	19 31.57	-43 35.7	1.857	2.794	9.9	19.9
6 30	19 22.29	-25 10.8	1.646	2.652	4.1	21.1	6 30	19 22.14	-44 18.4	1.835	2.798	8.2	19.8
7 10	19 11.48	-25 31.0	1.623	2.639	1.4	20.8	7 10	19 11.57	-44 40.5	1.837	2.803	8.0	19.8
7 20	19 0.59	-25 45.1	1.628	2.625	5.4	21.1	7 20	19 1.21	-44 39.5	1.863	2.808	9.4	19.9
7 30	18 50.87	-25 52.0	1.659	2.611	9.7	21.3	7 30	18 52.38	-44 16.7	1.913	2.814	11.6	20.1
8 9	18 43.34	-25 52.2	1.713	2.596	13.6	21.5	8 9	18 46.09	-43 36.2	1.985	2.819	14.0	20.2
<b>183149</b>	2002 RL <sub>254</sub>		7 8.8 157°50	1°1/ 9.1 17			<b>254142</b>	2004 PV <sub>60</sub>		7 8.8 253°13	5°9/ 11.3 18		
5 31	19 42.87	-18 48.6	1.857	2.675	15.4	21.6	5 31	19 35.48	-1 35.4	2.836	3.585	12.3	21.1
6 10	19 38.07	-18 51.1	1.778	2.681	12.2	21.4	6 10	19 31.54	-1 15.2	2.729	3.567	10.5	20.9
6 20	19 30.81	-19 0.1	1.720	2.686	8.4	21.2	6 20	19 26.04	-1 7.2	2.642	3.549	8.6	20.7
6 30	19 21.67	-19 13.8	1.686	2.690	4.2	21.0	6 30	19 19.34	-1 12.8	2.580	3.531	6.8	20.6
7 10	19 11.59	-19 30.1	1.679	2.694	1.2	20.7	7 10	19 11.96	-1 32.7	2.543	3.513	5.9	20.5
7 20	19 1.63	-19 46.9	1.699	2.698	5.0	21.0	7 20	19 4.50	-2 6.2	2.534	3.494	6.4	20.5
7 30	18 52.90	-20 2.5	1.745	2.701	9.1	21.3	7 30	18 57.60	-2 51.5	2.552	3.474	8.2	20.6
8 9	18 46.23	-20 16.3	1.816	2.704	12.7	21.5	8 9	18 51.84	-3 45.8	2.595	3.455	10.3	20.7
<b>277518</b>	2005 WD <sub>208</sub>		7 8.8 173°98	0°5/ 8.7 17			<b>337</b>	Devosa		7 8.8 192°53	4°4/ 7.7 18 A		
5 31	19 41.76	-23 0.2	1.853	2.681	15.1	21.8	5 31	19 46.81	-32 24.0	1.888	2.709	15.1	13.1
6 10	19 37.33	-23 9.1	1.772	2.682	11.9	21.6	6 10	19 41.55	-33 0.6	1.806	2.708	12.1	12.9
6 20	19 30.38	-23 21.5	1.712	2.682	8.1	21.4	6 20	19 33.41	-33 34.9	1.745	2.706	8.7	12.7
6 30	19 21.50	-23 34.9	1.677	2.683	3.9	21.1	6 30	19 23.03	-34 1.4	1.709	2.704	5.5	12.5
7 10	19 11.64	-23 46.4	1.667	2.683	0.8	20.9	7 10	19 11.47	-34 15.2	1.698	2.701	4.5	12.4
7 20	19 1.88	-23 54.2	1.685	2.684	5.0	21.2	7 20	19 0.03	-34 13.6	1.715	2.698	6.9	12.6
7 30	18 53.36	-23 57.2	1.728	2.684	9.2	21.4	7 30	18 50.01	-33 57.0	1.758	2.694	10.4	12.7
8 9	18 46.95	-23 55.8	1.795	2.683	12.8	21.7	8 9	18 42.43	-33 28.5	1.823	2.689	13.7	12.9
<b>158995</b>	2004 SH <sub>31</sub>		7 8.8 258°18	7°4/ 11.7 18			<b>396813</b>	2004 PS <sub>112</sub>		7 8.8 283°92	7°2/ 12.8 18		
5 31	19 34.94	+ 1 56.1	2.681	3.417									

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>271055</b>	2003 <i>GB</i> <sub>5</sub>		7 8.8 60°85	5°8/10.6	17		<b>168178</b>	2006 <i>HN</i> <sub>84</sub>		7 8.8 337°76	7°7/10.4	17	
5 31	19 38.91	- 8 26.0	1.584	2.395	18.0	20.5	5 31	19 35.82	- 6 14.8	1.635	2.443	17.7	19.9
6 10	19 35.14	- 7 59.9	1.520	2.408	14.7	20.3	6 10	19 32.88	- 5 13.6	1.553	2.435	14.9	19.7
6 20	19 28.88	- 7 49.1	1.474	2.422	11.1	20.2	6 20	19 27.51	- 4 25.9	1.490	2.428	11.8	19.5
6 30	19 20.77	- 7 54.8	1.451	2.436	7.6	20.0	6 30	19 20.23	- 3 55.4	1.448	2.421	9.0	19.3
7 10	19 11.80	- 8 16.6	1.452	2.450	5.8	19.9	7 10	19 11.92	- 3 44.4	1.429	2.415	7.7	19.2
7 20	19 3.05	- 8 52.2	1.477	2.465	7.2	20.0	7 20	19 3.62	- 3 53.0	1.434	2.409	8.8	19.3
7 30	18 55.60	- 9 37.9	1.527	2.479	10.4	20.3	7 30	18 56.42	- 4 19.3	1.463	2.404	11.6	19.4
8 9	18 50.30	-10 29.4	1.600	2.493	13.8	20.5	8 9	18 51.23	- 4 59.2	1.512	2.400	14.8	19.6
<b>9213</b>	1995 <i>UX</i> <sub>5</sub>		7 8.8 192°00	0°8/ 8.7	18		<b>355063</b>	2006 <i>SZ</i> <sub>191</sub>		7 8.8 245°34	1°0/ 9.2	18	
5 31	19 44.39	-24 25.1	1.730	2.558	16.0	18.3	5 31	19 38.28	-18 32.9	2.272	3.086	13.1	22.5
6 10	19 39.60	-24 22.9	1.648	2.558	12.6	18.1	6 10	19 34.20	-18 39.8	2.177	3.078	10.4	22.3
6 20	19 32.05	-24 22.5	1.587	2.557	8.6	17.8	6 20	19 28.09	-18 52.5	2.104	3.070	7.2	22.1
6 30	19 22.36	-24 21.2	1.549	2.555	4.2	17.6	6 30	19 20.42	-19 9.8	2.057	3.061	3.6	21.8
7 10	19 11.59	-24 16.4	1.538	2.554	1.0	17.3	7 10	19 11.91	-19 29.8	2.037	3.052	1.0	21.6
7 20	19 0.96	-24 6.8	1.553	2.552	5.4	17.6	7 20	19 3.37	-19 50.7	2.044	3.043	4.3	21.9
7 30	18 51.72	-23 52.3	1.594	2.550	9.8	17.9	7 30	18 55.68	-20 10.8	2.079	3.034	7.8	22.1
8 9	18 44.82	-23 34.3	1.659	2.547	13.6	18.1	8 9	18 49.61	-20 29.1	2.138	3.025	11.1	22.2
<b>3664</b>	Anneres		7 8.8 254°00	0°9/ 9.0	18		<b>367346</b>	2008 <i>EP</i> <sub>45</sub>		7 8.8 209°32	0°4/ 8.9	17	
5 31	19 39.55	-19 48.6	2.159	2.977	13.6	17.0	5 31	19 44.12	-20 49.4	1.999	2.813	14.6	21.9
6 10	19 35.31	-19 44.8	2.063	2.965	10.8	16.8	6 10	19 39.08	-20 51.7	1.906	2.807	11.6	21.7
6 20	19 28.91	-19 45.4	1.987	2.954	7.4	16.6	6 20	19 31.58	-20 58.4	1.834	2.800	8.0	21.4
6 30	19 20.82	-19 49.3	1.937	2.942	3.7	16.3	6 30	19 22.15	-21 7.7	1.787	2.793	3.9	21.2
7 10	19 11.80	-19 55.0	1.914	2.930	0.9	16.1	7 10	19 11.68	-21 17.3	1.768	2.784	0.6	20.9
7 20	19 2.77	-20 1.0	1.919	2.918	4.5	16.3	7 20	19 1.19	-21 25.4	1.776	2.775	4.8	21.2
7 30	18 54.66	-20 6.3	1.950	2.906	8.3	16.5	7 30	18 51.80	-21 31.1	1.812	2.765	8.9	21.4
8 9	18 48.27	-20 10.6	2.006	2.893	11.7	16.7	8 9	18 44.41	-21 34.1	1.871	2.754	12.6	21.6
<b>179304</b>	2001 <i>VW</i> <sub>95</sub>		7 8.8 203°70	1°1/ 9.3	18		<b>350424</b>	2012 <i>VU</i> <sub>72</sub>		7 8.8 264°65	2°5/ 9.5	18	
5 31	19 37.74	-16 21.4	2.395	3.203	12.7	20.8	5 31	19 38.81	-15 44.0	2.034	2.848	14.4	21.2
6 10	19 33.62	-16 48.3	2.305	3.201	10.1	20.6	6 10	19 34.84	-15 30.7	1.938	2.836	11.6	21.0
6 20	19 27.61	-17 23.2	2.236	3.199	7.0	20.4	6 20	19 28.66	-15 24.5	1.863	2.825	8.2	20.8
6 30	19 20.15	-18 4.5	2.193	3.196	3.6	20.2	6 30	19 20.74	-15 25.4	1.813	2.813	4.7	20.5
7 10	19 11.90	-18 49.9	2.178	3.193	1.2	20.0	7 10	19 11.86	-15 32.3	1.789	2.801	2.5	20.4
7 20	19 3.63	-19 36.4	2.192	3.190	4.1	20.2	7 20	19 2.94	-15 44.1	1.792	2.789	5.1	20.5
7 30	18 56.16	-20 21.8	2.233	3.187	7.4	20.4	7 30	18 54.95	-15 59.2	1.821	2.776	8.8	20.7
8 9	18 50.18	-21 4.0	2.299	3.184	10.5	20.6	8 9	18 48.73	-16 16.3	1.874	2.764	12.3	20.9
<b>436463</b>	2011 <i>DV</i> <sub>7</sub>		7 8.8 345°43	2°6/ 9.6	17		<b>478633</b>	2012 <i>TD</i> <sub>190</sub>		7 8.8 230°13	1°8/ 9.4	18	
5 31	19 36.46	-15 37.0	1.438	2.280	18.0	20.7	5 31	19 40.13	-16 47.4	2.455	3.257	12.6	22.7
6 10	19 33.83	-15 34.0	1.360	2.274	14.4	20.5	6 10	19 35.47	-16 39.0	2.353	3.245	10.1	22.5
6 20	19 28.39	-15 42.3	1.300	2.269	10.2	20.2	6 20	19 28.88	-16 36.0	2.272	3.232	7.1	22.3
6 30	19 20.72	-16 1.5	1.262	2.265	5.6	19.9	6 30	19 20.79	-16 37.9	2.218	3.219	3.9	22.0
7 10	19 11.83	-16 29.5	1.248	2.261	2.7	19.7	7 10	19 11.87	-16 43.7	2.191	3.205	1.8	21.9
7 20	19 2.96	-17 3.4	1.258	2.258	6.0	19.9	7 20	19 2.90	-16 52.2	2.193	3.190	4.3	22.0
7 30	18 55.43	-17 39.7	1.291	2.256	10.7	20.2	7 30	18 54.71	-17 2.5	2.223	3.175	7.6	22.2
8 9	18 50.26	-18 15.8	1.347	2.254	14.9	20.4	8 9	18 48.03	-17 13.7	2.278	3.159	10.7	22.4
<b>284295</b>	2006 <i>KT</i> <sub>103</sub>		7 8.8 340°30	2°4/ 7.8	18		<b>349495</b>	2008 <i>JH</i> <sub>35</sub>		7 8.8 64°10	1°4/ 8.6	18	
5 31	19 34.17	-22 49.5	1.397	2.256	17.5	19.7	5 31	19 43.93	-27 46.6	2.118	2.937	13.8	19.8
6 10	19 32.47	-23 54.6	1.314	2.242	13.8	19.4	6 10	19 38.41	-27 31.4	2.056	2.960	10.8	19.6
6 20	19 27.77	-25 10.7	1.250	2.228	9.5	19.2	6 20	19 30.71	-27 14.5	2.016	2.983	7.3	19.4
6 30	19 20.56	-26 32.6	1.208	2.216	4.8	18.8	6 30	19 21.53	-26 53.6	2.001	3.005	3.6	19.2
7 10	19 11.84	-27 53.0	1.191	2.205	2.7	18.7	7 10	19 11.79	-26 27.8	2.014	3.028	1.5	19.1
7 20	19 2.94	-29 4.8	1.197	2.195	6.9	18.9	7 20	19 2.46	-25 56.9	2.055	3.051	4.6	19.4
7 30	18 55.37	-30 2.9	1.227	2.186	11.7	19.2	7 30	18 54.43	-25 22.1	2.123	3.074	8.0	19.6
8 9	18 50.37	-30 45.7	1.278	2.178	16.0	19.4	8 9	18 48.37	-24 45.2	2.216	3.097	11.0	19.9
<b>2120</b>	Tyumenia		7 8.8 352°59	9°5/10.8	18		<b>470315</b>	2007 <i>NY</i> <sub>4</sub>		7 8.8 21°98	9°0/11.9	16	
5 31	19 35.46	- 0 14.8	1.910	2.681	16.7	15.4	5 31	20 13.21	-49 44.8	0.987	1.805	26.0	19.4
6 10	19 32.18	+ 1 8.1	1.831	2.677	14.6	15.3	6 10	20 3.06	-48 8.2	0.941	1.828	21.8	19.2
6 20	19 26.79	+ 2 16.3	1.771	2.674	12.3	15.1	6 20	19 47.51	-45 55.8	0.911	1.853	16.9	19.0
6 30	19 19.80	+ 3 5.0	1.733	2.672	10.4	15.0	6 30	19 29.06	-42 59.7	0.901	1.881	12.0	18.9
7 10	19 11.97	+ 3 31.2	1.718	2.670	9.5	14.9	7 10	19 10.93	-39 24.2	0.915	1.910	9.1	18.8
7 20	19 4.19	+ 3 34.0	1.726	2.669	10.2	15.0	7 20	18 55.76	-35 26.8	0.956	1.941	10.4	19.0
7 30	18 57.36	+ 3 14.8	1.758	2.668	11.9	15.1	7 30	18 45.09	-31 29.9	1.022	1.974	14.2	19.3
8 9	18 52.24	+ 2 37.6	1.811	2.668	14.2	15.2	8 9	18 39.22	-27 51.6	1.111	2.009	18.2	19.7
<b>93899</b>	2000 <i>WL</i> <sub>145</sub>		7 8.8 154°32	6°8/11.7	18		<b>8996</b>	Waynedwards		7 8.8 27°43	4°0/ 9.9	18	
5 31	19 38.62	- 2 2.0	2.120	2.885	15.5	20.2	5 31	19 36.24	-12 10.2	1.874	2.690	15.4	18.7
6 10	19 34.38	- 1 42.1	2.040	2.890	13.1	20.0	6 10	19 32.78	-11 44.7	1.801	2.697	12.5	18.5
6 20	19 28.14	- 1 38.1	1.978	2.895	10.5	19.9	6 20	19 27.16	-11 29.3	1.749	2.704	9.1	18.3
6 30	19 20.41	- 1 52.0	1.940	2.899	8.1	19.7	6 30	19 19.96	-11 24.7	1.720	2.713	5.8	18.1
7 10	19 11.90	- 2 23.9	1.926	2.903	6.8	19.6	7 10	19 11.99	-11 30.4	1.716	2.721	4.0	18.0
7 20	19 3.46	- 3 12.0	1.939	2.907	7.5	19.7	7 20	19 4.17	-11 45.2	1.738	2.730	5.8	18.1
7 30	18 55.92	- 4 13.0	1.978	2.910	9.6	19.8	7 30	18 57.42	-12 7.2	1.786	2.740	9.0	18.4
8 9	18 50.01	- 5 22.4	2.042	2.913	12.2	20.0	8 9	18 52.47	-12 33.8	1.856	2.749	12.2	18.6
<b>185014</b>	2006 <i>QT</i> <sub>17</sub>		7 8.8 214°03	3°4/ 9.9	18		<b>285330</b>	1999 <i>FH</i> <sub>17</sub>		7 8.8 40°17	3°2/ 9.6	1	

EPHEMERIDES

7 8.8

7 8.9

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>193428</b>	2000 WE <sub>101</sub>		7 8.8 230°18	1.4/ 8.3	18		<b>67124</b>	2000 AY <sub>127</sub>		7 8.8 233°89	2.3/ 9.8	18	
5 31	19 41.78	-24 12.1	2.296	3.111	12.9	20.2	5 31	19 39.29	-13 38.1	2.497	3.292	12.6	19.5
6 10	19 37.09	-24 45.9	2.196	3.099	10.2	20.0	6 10	19 34.83	-13 47.8	2.391	3.277	10.2	19.3
6 20	19 30.18	-25 23.4	2.119	3.086	7.0	19.8	6 20	19 28.48	-14 6.1	2.307	3.262	7.3	19.1
6 30	19 21.49	-26 1.7	2.068	3.073	3.5	19.6	6 30	19 20.64	-14 32.5	2.250	3.247	4.2	18.9
7 10	19 11.78	-26 37.2	2.044	3.059	1.5	19.4	7 10	19 11.94	-15 5.4	2.220	3.231	2.3	18.7
7 20	19 1.96	-27 7.0	2.049	3.044	4.7	19.6	7 20	19 3.13	-15 42.8	2.218	3.214	4.4	18.9
7 30	18 53.03	-27 29.3	2.082	3.029	8.3	19.8	7 30	18 55.02	-16 22.5	2.245	3.197	7.6	19.0
8 9	18 45.83	-27 44.1	2.139	3.014	11.6	20.0	8 9	18 48.34	-17 2.6	2.298	3.179	10.7	19.2
<b>273756</b>	2007 EU <sub>144</sub>		7 8.8 348°52	4.0/ 7.8	17		<b>16854</b>	1997 YL <sub>3</sub>		7 8.8 356°98	2.0/ 8.1	18	
5 31	19 37.06	-28 26.5	1.288	2.151	18.4	20.1	5 31	19 35.63	-22 16.8	1.292	2.153	18.5	17.3
6 10	19 35.00	-29 5.2	1.215	2.144	14.6	19.8	6 10	19 33.72	-23 15.6	1.220	2.149	14.6	17.0
6 20	19 29.58	-29 46.1	1.160	2.137	10.3	19.5	6 20	19 28.64	-24 25.0	1.168	2.146	9.9	16.7
6 30	19 21.42	-30 23.2	1.127	2.131	5.8	19.3	6 30	19 20.98	-25 39.5	1.136	2.144	4.9	16.4
7 10	19 11.78	-30 50.2	1.116	2.127	4.1	19.2	7 10	19 11.89	-26 51.9	1.129	2.143	2.3	16.3
7 20	19 2.21	-31 3.0	1.128	2.123	7.7	19.3	7 20	19 2.80	-27 55.5	1.145	2.144	6.8	16.6
7 30	18 54.34	-31 0.6	1.163	2.120	12.3	19.6	7 30	18 55.24	-28 45.8	1.184	2.145	11.8	16.8
8 9	18 49.39	-30 45.2	1.217	2.119	16.6	19.8	8 9	18 50.43	-29 21.7	1.243	2.147	16.1	17.1
<b>471705</b>	2012 TD <sub>282</sub>		7 8.8 329°43	0.6/ 8.9	18		<b>178341</b>	1995 UK <sub>35</sub>		7 8.8 119°50	0.0/ 8.7	17	
5 31	19 42.11	-22 56.5	1.750	2.581	15.7	20.6	5 31	19 43.59	-20 35.5	1.744	2.568	16.0	21.4
6 10	19 37.73	-22 24.8	1.666	2.577	12.5	20.4	6 10	19 38.81	-20 56.3	1.674	2.581	12.6	21.2
6 20	19 30.73	-21 53.8	1.603	2.573	8.5	20.2	6 20	19 31.42	-21 23.5	1.625	2.593	8.6	21.0
6 30	19 21.74	-21 22.6	1.564	2.570	4.2	19.9	6 30	19 22.07	-21 54.2	1.599	2.605	4.1	20.8
7 10	19 11.76	-20 50.6	1.550	2.567	0.8	19.6	7 10	19 11.77	-22 24.7	1.601	2.617	0.5	20.5
7 20	19 1.95	-20 17.8	1.564	2.564	5.2	19.9	7 20	19 1.67	-22 52.1	1.629	2.628	5.1	20.9
7 30	18 53.45	-19 45.3	1.603	2.561	9.5	20.2	7 30	18 52.93	-23 14.7	1.683	2.639	9.3	21.2
8 9	18 47.16	-19 14.3	1.665	2.558	13.3	20.4	8 9	18 46.41	-23 31.8	1.761	2.649	13.0	21.4
<b>404632</b>	2014 HB <sub>11</sub>		7 8.8 55°34	5.8/ 11.8	16		<b>16874</b>	Kurtwahl		7 8.8 254°18	1.4/ 9.2	18	
5 31	19 35.76	-3 21.0	2.168	2.943	14.9	20.9	5 31	19 41.08	-17 53.9	1.492	2.327	17.7	18.4
6 10	19 32.11	-3 20.5	2.091	2.951	12.5	20.7	6 10	19 37.46	-18 2.3	1.411	2.323	14.1	18.2
6 20	19 26.58	-3 35.9	2.033	2.959	9.8	20.5	6 20	19 30.89	-18 20.4	1.349	2.319	9.8	17.9
6 30	19 19.66	-4 8.2	1.999	2.968	7.3	20.4	6 30	19 21.97	-18 46.5	1.310	2.315	5.0	17.6
7 10	19 12.05	-4 56.3	1.991	2.977	5.8	20.3	7 10	19 11.77	-19 17.6	1.295	2.311	1.4	17.4
7 20	19 4.52	-5 57.9	2.009	2.985	6.6	20.4	7 20	19 1.56	-19 50.1	1.306	2.307	5.8	17.7
7 30	18 57.85	-7 9.1	2.053	2.994	8.8	20.5	7 30	18 52.74	-20 21.3	1.341	2.303	10.6	17.9
8 9	18 52.72	-8 25.5	2.122	3.003	11.4	20.7	8 9	18 46.38	-20 49.3	1.398	2.298	15.0	18.2
<b>471661</b>	2012 TO <sub>137</sub>		7 8.8 350°81	1.9/ 8.2	16		<b>444145</b>	2004 VC <sub>54</sub>		7 8.8 309°96	4.3/ 9.2	17	
5 31	19 33.18	-22 15.0	1.220	2.089	18.9	20.3	5 31	19 38.62	-13 54.5	2.035	2.845	14.6	20.8
6 10	19 31.97	-23 5.7	1.147	2.080	14.9	20.0	6 10	19 34.89	-12 59.8	1.917	2.810	12.0	20.6
6 20	19 27.55	-24 7.0	1.091	2.072	10.2	19.7	6 20	19 28.87	-12 9.2	1.820	2.775	8.9	20.3
6 30	19 20.49	-25 14.3	1.057	2.065	5.0	19.4	6 30	19 20.96	-11 24.4	1.748	2.740	5.8	20.1
7 10	19 11.92	-26 20.5	1.045	2.060	2.1	19.2	7 10	19 11.90	-10 46.8	1.701	2.705	4.3	19.9
7 20	19 3.31	-27 19.0	1.057	2.057	6.9	19.5	7 20	19 2.59	-10 17.7	1.681	2.670	6.4	19.9
7 30	18 56.26	-28 5.2	1.090	2.055	12.1	19.8	7 30	18 54.08	-9 57.6	1.687	2.635	9.9	20.1
8 9	18 52.01	-28 37.7	1.143	2.054	16.7	20.0	8 9	18 47.27	-9 46.2	1.717	2.601	13.5	20.2
<b>258725</b>	2002 GB <sub>97</sub>		7 8.8 18°26	2.6/ 8.3	17		<b>442106</b>	2010 TS <sub>99</sub>		7 8.8 288°65	4.5/ 7.2	16	
5 31	19 37.30	-25 52.4	1.011	1.889	21.2	20.1	5 31	19 40.37	-33 34.1	2.241	3.063	13.0	21.5
6 10	19 35.59	-26 14.8	0.958	1.896	16.7	19.9	6 10	19 36.21	-34 17.8	2.152	3.053	10.5	21.4
6 20	19 30.08	-26 40.7	0.922	1.903	11.4	19.6	6 20	19 29.67	-34 59.4	2.085	3.044	7.7	21.2
6 30	19 21.63	-27 4.7	0.905	1.913	5.8	19.4	6 30	19 21.28	-35 34.2	2.044	3.035	5.2	21.0
7 10	19 11.79	-27 21.3	0.909	1.923	2.8	19.2	7 10	19 11.87	-35 57.9	2.028	3.025	4.6	20.9
7 20	19 2.38	-27 27.0	0.934	1.935	7.5	19.5	7 20	19 2.46	-36 7.9	2.040	3.016	6.5	21.0
7 30	18 55.11	-27 21.4	0.981	1.948	12.8	19.9	7 30	18 54.10	-36 3.8	2.077	3.007	9.4	21.2
8 9	18 51.14	-27 6.6	1.046	1.963	17.4	20.2	8 9	18 47.68	-35 47.4	2.138	2.998	12.2	21.4
<b>355659</b>	2008 EY <sub>99</sub>		7 8.8 62°68	3.7/ 7.2	17		<b>481517</b>	2007 FA <sub>34</sub>		7 8.8 315°10	4.3/ 7.5	18	
5 31	19 40.06	-29 23.3	2.112	2.939	13.5	20.4	5 31	19 39.32	-32 54.0	2.087	2.915	13.6	20.7
6 10	19 35.88	-30 28.6	2.043	2.950	10.7	20.3	6 10	19 35.57	-33 26.4	1.994	2.900	10.9	20.5
6 20	19 29.36	-31 34.8	1.996	2.961	7.5	20.1	6 20	19 29.35	-33 56.7	1.922	2.884	8.0	20.3
6 30	19 21.07	-32 36.8	1.975	2.972	4.6	19.9	6 30	19 21.16	-34 20.2	1.874	2.869	5.2	20.1
7 10	19 11.87	-33 29.6	1.980	2.984	3.8	19.9	7 10	19 11.89	-34 32.8	1.852	2.853	4.4	20.0
7 20	19 2.77	-34 9.8	2.013	2.995	6.1	20.1	7 20	19 2.60	-34 32.2	1.857	2.839	6.5	20.1
7 30	18 54.78	-34 36.1	2.072	3.007	9.1	20.3	7 30	18 54.40	-34 18.2	1.887	2.824	9.7	20.3
8 9	18 48.73	-34 49.3	2.154	3.018	11.9	20.5	8 9	18 48.23	-33 52.5	1.940	2.810	12.8	20.4
<b>521539</b>	2015 OU <sub>100</sub>		7 8.8 7°56	4.4/ 10.3	16		<b>435850</b>	2008 WC <sub>129</sub>		7 8.9 313°93	0.5/ 8.9	18	
5 31	19 35.64	-9 28.9	2.209	3.006	14.0	21.6	5 31	19 40.94	-23 58.6	1.548	2.389	16.9	20.1
6 10	19 32.04	-9 7.2	2.125	3.007	11.4	21.4	6 10	19 37.62	-23 21.6	1.441	2.358	13.6	19.8
6 20	19 26.55	-8 55.9	2.062	3.007	8.6	21.3	6 20	19 31.24	-22 43.0	1.353	2.326	9.5	19.5
6 30	19 19.67	-8 56.0	2.023	3.008	5.9	21.1	6 30	19 22.27	-22 1.3	1.288	2.295	4.7	19.2
7 10	19 12.07	-9 7.1	2.010	3.008	4.4	21.0	7 10	19 11.73	-21 15.7	1.248	2.265	0.8	18.8
7 20	19 4.52	-9 28.2	2.023	3.010	5.7	21.1	7 20	19 0.95	-20 26.8	1.233	2.234	6.0	19.1
7 30	18 57.82	-9 57.4	2.063	3.011	8.4	21.2	7 30	18 51.41	-19 36.5	1.243	2.205	11.3	19.3
8 9	18 52.64	-10 32.1	2.127	3.012	11.2	21.4	8 9	18 44.36	-18 47.4	1.274	2.176	16.0	19.5
<b>29751</b>	1999 CE <sub>4</sub>		7 8.8 346°76	0.7/ 9.1	18		<b>143956</b>	2003 YL <sub>123</sub>		7 8.9 150°69	0.9/ 9.1	17	
5 31	19 38.17	-19 22.4	2.008	2.83									

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>225847</b>	2001 XE <sub>136</sub>		7 8.9 192°01	0°2/ 8.9 18			<b>182880</b>	2002 CH <sub>253</sub>		7 8.9 139°59	0°1/ 8.9 18		
5 31	19 41.88	-20 22.6	2.162	2.975	13.7	22.0	5 31	19 41.32	-22 59.4	2.652	3.459	11.6	20.2
6 10	19 37.11	-20 37.3	2.073	2.974	10.8	21.8	6 10	19 36.08	-22 42.6	2.569	3.467	9.1	20.1
6 20	19 30.14	-20 57.2	2.006	2.972	7.4	21.6	6 20	19 29.09	-22 26.6	2.510	3.475	6.2	19.9
6 30	19 21.46	-21 20.2	1.964	2.969	3.6	21.4	6 30	19 20.84	-22 10.4	2.478	3.483	3.0	19.7
7 10	19 11.87	-21 43.9	1.950	2.966	0.5	21.1	7 10	19 12.01	-21 53.3	2.474	3.490	0.4	19.5
7 20	19 2.30	-22 5.9	1.964	2.963	4.4	21.4	7 20	19 3.36	-21 34.8	2.499	3.497	3.7	19.8
7 30	18 53.73	-22 24.8	2.005	2.959	8.2	21.6	7 30	18 55.61	-21 15.2	2.553	3.504	6.8	20.0
8 9	18 46.94	-22 40.0	2.071	2.954	11.6	21.8	8 9	18 49.35	-20 55.0	2.632	3.510	9.6	20.2
<b>257361</b>	2009 ME <sub>7</sub>		7 8.9 314°17	1°3/ 9.0 17			<b>469322</b>	1999 TG <sub>316</sub>		7 8.9 237°75	1°2/ 8.5 18		
5 31	19 39.36	-21 5.9	1.358	2.208	18.4	20.0	5 31	19 41.49	-24 25.8	2.252	3.069	13.1	22.9
6 10	19 36.55	-20 40.1	1.269	2.190	14.7	19.7	6 10	19 36.91	-24 46.7	2.153	3.057	10.3	22.7
6 20	19 30.56	-20 17.9	1.198	2.173	10.2	19.4	6 20	19 30.08	-25 10.5	2.076	3.043	7.1	22.4
6 30	19 21.93	-19 58.5	1.150	2.156	5.2	19.1	6 30	19 21.50	-25 34.3	2.025	3.030	3.5	22.2
7 10	19 11.79	-19 40.7	1.124	2.140	1.4	18.8	7 10	19 11.91	-25 55.2	2.001	3.016	1.3	22.0
7 20	19 1.56	-19 23.8	1.123	2.124	6.3	19.1	7 20	19 2.26	-26 10.9	2.005	3.001	4.7	22.2
7 30	18 52.79	-19 7.8	1.144	2.109	11.6	19.3	7 30	18 53.53	-26 20.3	2.037	2.986	8.3	22.4
8 9	18 46.70	-18 53.1	1.187	2.095	16.4	19.6	8 9	18 46.55	-26 23.5	2.093	2.971	11.7	22.6
<b>163934</b>	2003 SG <sub>311</sub>		7 8.9 164°09	0°4/ 8.7 18			<b>177596</b>	2004 GS <sub>47</sub>		7 8.9 193°03	1°1/ 8.5 18		
5 31	19 41.47	-22 55.0	2.590	3.397	11.9	21.2	5 31	19 40.18	-24 36.5	2.548	3.361	11.9	21.1
6 10	19 36.35	-23 8.3	2.505	3.403	9.3	21.1	6 10	19 35.49	-24 57.0	2.458	3.359	9.3	20.9
6 20	19 29.36	-23 24.1	2.443	3.409	6.3	20.9	6 20	19 28.89	-25 19.6	2.391	3.357	6.4	20.7
6 30	19 20.99	-23 40.4	2.408	3.413	3.0	20.7	6 30	19 20.84	-25 41.7	2.350	3.355	3.1	20.5
7 10	19 11.95	-23 55.0	2.401	3.418	0.6	20.5	7 10	19 12.02	-26 1.1	2.337	3.352	1.2	20.3
7 20	19 2.98	-24 6.4	2.424	3.421	3.9	20.8	7 20	19 3.24	-26 15.7	2.353	3.349	4.1	20.6
7 30	18 54.90	-24 13.8	2.475	3.424	7.1	21.0	7 30	18 55.31	-26 24.8	2.397	3.345	7.3	20.8
8 9	18 48.35	-24 17.3	2.551	3.427	9.9	21.2	8 9	18 48.91	-26 28.4	2.465	3.341	10.2	20.9
<b>159240</b>	2005 YW <sub>33</sub>		7 8.9 138°54	0°2/ 8.9 18			<b>17709</b>	1997 WV <sub>1</sub>		7 8.9 107°93	0°1/ 8.8 18		
5 31	19 37.47	-20 44.4	2.669	3.480	11.5	21.0	5 31	19 44.68	-22 30.5	1.490	2.326	17.7	18.5
6 10	19 33.16	-20 52.8	2.586	3.486	9.0	20.9	6 10	19 40.14	-22 29.3	1.421	2.334	14.0	18.3
6 20	19 27.17	-21 4.8	2.525	3.491	6.1	20.7	6 20	19 32.59	-22 32.3	1.371	2.342	9.5	18.1
6 30	19 19.93	-21 18.8	2.491	3.496	3.0	20.5	6 30	19 22.74	-22 36.8	1.344	2.350	4.6	17.8
7 10	19 12.09	-21 33.3	2.484	3.501	0.4	20.3	7 10	19 11.79	-22 39.9	1.342	2.358	0.6	17.5
7 20	19 4.32	-21 46.7	2.506	3.505	3.6	20.6	7 20	19 1.12	-22 39.9	1.365	2.366	5.7	17.9
7 30	18 57.34	-21 58.3	2.557	3.510	6.7	20.8	7 30	18 52.06	-22 36.1	1.414	2.373	10.4	18.2
8 9	18 51.74	-22 7.4	2.632	3.514	9.4	21.0	8 9	18 45.62	-22 29.2	1.485	2.380	14.5	18.5
<b>334435</b>	2002 GS <sub>138</sub>		7 8.9 60°63	2°4/ 9.4 17			<b>425645</b>	2010 VF <sub>192</sub>		7 8.9 214°83	1°0/ 8.6 17		
5 31	19 42.26	-17 11.4	1.607	2.434	17.1	20.6	5 31	19 44.63	-24 18.8	1.950	2.770	14.8	22.4
6 10	19 37.65	-16 47.7	1.551	2.457	13.5	20.4	6 10	19 39.66	-24 30.7	1.858	2.763	11.7	22.2
6 20	19 30.51	-16 31.4	1.515	2.481	9.4	20.2	6 20	19 32.10	-24 45.2	1.787	2.755	8.0	21.9
6 30	19 21.57	-16 22.2	1.502	2.504	5.1	20.0	6 30	19 22.51	-24 59.3	1.741	2.747	3.9	21.7
7 10	19 11.89	-16 18.8	1.515	2.528	2.4	19.9	7 10	19 11.82	-25 10.1	1.722	2.738	1.2	21.4
7 20	19 2.62	-16 20.1	1.554	2.552	5.5	20.1	7 20	19 1.11	-25 15.3	1.731	2.728	5.1	21.7
7 30	18 54.83	-16 24.9	1.618	2.576	9.4	20.4	7 30	18 51.57	-25 14.2	1.766	2.718	9.2	21.9
8 9	18 49.28	-16 31.8	1.705	2.600	13.0	20.7	8 9	18 44.13	-25 7.5	1.825	2.707	12.9	22.1
<b>55984</b>	1998 RZ <sub>77</sub>		7 8.9 310°76	1°3/ 9.2 18			<b>368120</b>	2013 GM <sub>116</sub>		7 8.9 12°21	3°6/ 7.4 18		
5 31	19 36.96	-18 11.8	1.160	2.021	20.2	18.5	5 31	19 39.14	-30 38.4	2.244	3.069	12.9	20.4
6 10	19 35.27	-18 20.4	1.073	2.001	16.2	18.1	6 10	19 35.12	-31 28.3	2.164	3.070	10.2	20.3
6 20	19 30.09	-18 41.6	1.004	1.980	11.4	17.8	6 20	19 28.87	-32 18.0	2.107	3.071	7.3	20.1
6 30	19 21.90	-19 14.1	0.954	1.961	5.8	17.4	6 30	19 20.91	-33 3.1	2.075	3.071	4.6	19.9
7 10	19 11.80	-19 54.3	0.926	1.942	1.4	17.1	7 10	19 12.03	-33 39.5	2.069	3.072	3.8	19.9
7 20	19 1.37	-20 37.4	0.920	1.923	7.0	17.4	7 20	19 3.20	-34 4.3	2.091	3.073	5.9	20.0
7 30	18 52.44	-21 19.0	0.936	1.906	12.9	17.6	7 30	18 55.38	-34 16.5	2.139	3.075	8.8	20.2
8 9	18 46.52	-21 56.1	0.971	1.889	18.3	17.9	8 9	18 49.40	-34 17.3	2.211	3.076	11.6	20.4
<b>367306</b>	2007 VX <sub>325</sub>		7 8.9 108°39	0°4/ 8.9 17			<b>83864</b>	2001 UT <sub>72</sub>		7 8.9 357°12	0°5/ 8.6 18		
5 31	19 44.12	-18 54.8	1.637	2.462	16.9	21.2	5 31	19 38.35	-20 18.3	2.089	2.912	13.8	19.5
6 10	19 39.35	-19 23.4	1.571	2.478	13.3	21.0	6 10	19 34.51	-21 4.3	2.005	2.912	10.8	19.3
6 20	19 31.86	-20 0.6	1.526	2.494	9.1	20.8	6 20	19 28.47	-21 57.7	1.943	2.912	7.4	19.1
6 30	19 22.32	-20 43.2	1.504	2.510	4.4	20.6	6 30	19 20.73	-22 55.6	1.905	2.912	3.5	18.9
7 10	19 11.80	-21 27.2	1.508	2.525	0.6	20.3	7 10	19 12.05	-23 53.7	1.895	2.912	0.7	18.6
7 20	19 1.52	-22 8.5	1.540	2.540	5.3	20.7	7 20	19 3.36	-24 48.5	1.913	2.912	4.6	18.9
7 30	18 52.67	-22 44.7	1.597	2.554	9.6	21.0	7 30	18 55.62	-25 36.8	1.958	2.912	8.4	19.2
8 9	18 46.17	-23 14.5	1.677	2.568	13.4	21.2	8 9	18 49.64	-26 17.4	2.027	2.912	11.7	19.4
<b>280155</b>	2002 PE <sub>166</sub>		7 8.9 324°00	0°5/ 8.7 17			<b>127182</b>	2002 GC <sub>166</sub>		7 8.9 19°37	6°6/ 5.9 18		
5 31	19 38.70	-22 19.1	1.791	2.625	15.3	21.0	5 31	19 42.08	-32 46.8	1.638	2.476	16.3	19.0
6 10	19 35.16	-22 35.6	1.707	2.620	12.0	20.8	6 10	19 38.54	-34 29.2	1.568	2.478	13.1	18.8
6 20	19 29.09	-22 57.2	1.643	2.615	8.2	20.5	6 20	19 31.85	-36 12.9	1.520	2.481	9.8	18.6
6 30	19 21.06	-23 21.2	1.603	2.610	4.0	20.3	6 30	19 22.57	-37 48.9	1.495	2.483	7.1	18.5
7 10	19 11.96	-23 44.4	1.589	2.605	0.8	20.0	7 10	19 11.82	-39 8.4	1.496	2.486	6.8	18.5
7 20	19 2.88	-24 4.1	1.601	2.600	5.1	20.3	7 20	19 1.02	-40 5.3	1.522	2.490	9.2	18.6
7 30	18 54.97	-24 18.8	1.638	2.596	9.4	20.6	7 30	18 51.71	-40 38.0	1.572	2.493	12.4	18.8
8 9	18 49.14	-24 28.1	1.699	2.592	13.1	20.8	8 9	18 45.07	-40 48.9	1.642	2.497	15.5	19.0
<b>266573</b>	2008 HH <sub>1</sub>		7 8.9 46°93	1°9/ 9.5 17			<b>203288</b>	2001 SX					



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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>278887</b>	2008 TA <sub>86</sub>		7 8.9 48°39'	8°9/ 6.7 17			<b>424843</b>	2008 UV <sub>275</sub>		7 8.9 100°11'	0°2/ 8.9 17		
5 31	19 46.80	-41 31.2	1.607	2.432	17.2	20.1	5 31	19 41.10	-21 4.6	1.911	2.735	14.9	21.5
6 10	19 42.39	-42 41.4	1.550	2.442	14.3	19.9	6 10	19 36.68	-21 12.1	1.837	2.744	11.7	21.3
6 20	19 34.42	-43 42.0	1.511	2.452	11.5	19.8	6 20	19 29.92	-21 24.3	1.785	2.753	7.9	21.1
6 30	19 23.72	-44 24.3	1.495	2.462	9.4	19.7	6 30	19 21.41	-21 39.1	1.756	2.762	3.8	20.9
7 10	19 11.71	-44 41.4	1.502	2.472	9.0	19.7	7 10	19 12.06	-21 54.1	1.755	2.771	0.5	20.6
7 20	19 0.09	-44 30.8	1.533	2.483	10.6	19.8	7 20	19 2.88	-22 7.3	1.780	2.780	4.7	21.0
7 30	18 50.49	-43 55.0	1.586	2.494	13.1	20.0	7 30	18 54.88	-22 17.5	1.832	2.789	8.6	21.2
8 9	18 44.02	-43 0.1	1.660	2.505	15.8	20.2	8 9	18 48.87	-22 24.4	1.908	2.797	12.1	21.5
<b>188811</b>	2005 WJ <sub>185</sub>		7 8.9 157°00'	3°9/10.4 18			<b>216264</b>	2006 WU <sub>44</sub>		7 8.9 313°78'	5°6/10.4 18		
5 31	19 36.31	-9 11.2	2.664	3.447	12.2	20.6	5 31	19 36.40	-7 58.2	2.030	2.826	15.1	20.7
6 10	19 32.22	-8 55.2	2.578	3.451	10.0	20.5	6 10	19 32.91	-7 19.1	1.941	2.819	12.5	20.5
6 20	19 26.54	-8 48.2	2.514	3.454	7.5	20.3	6 20	19 27.35	-6 51.2	1.872	2.811	9.7	20.3
6 30	19 19.68	-8 50.7	2.474	3.457	5.1	20.2	6 30	19 20.20	-6 36.3	1.826	2.804	7.0	20.2
7 10	19 12.24	-9 2.5	2.462	3.460	3.9	20.1	7 10	19 12.21	-6 35.2	1.805	2.797	5.6	20.1
7 20	19 4.84	-9 22.5	2.478	3.462	5.0	20.2	7 20	19 4.21	-6 47.6	1.810	2.791	6.8	20.1
7 30	18 58.16	-9 49.1	2.521	3.465	7.3	20.3	7 30	18 57.10	-7 11.7	1.841	2.784	9.5	20.3
8 9	18 52.75	-10 20.4	2.590	3.467	9.7	20.5	8 9	18 51.64	-7 44.7	1.895	2.778	12.5	20.4
<b>216962</b>	2000 AW <sub>227</sub>		7 8.9 3°66'	14°2/17.5 17			<b>341138</b>	2007 OX <sub>10</sub>		7 8.9 328°66'	3°6/10.1 18		
5 31	19 38.80	+11 11.5	1.079	1.844	27.3	19.6	5 31	19 36.46	-12 11.7	1.665	2.489	16.7	20.3
6 10	19 36.51	+11 5.2	1.009	1.843	24.5	19.4	6 10	19 33.51	-12 12.5	1.580	2.481	13.6	20.0
6 20	19 30.77	+10 12.6	0.951	1.843	21.2	19.2	6 20	19 28.07	-12 26.5	1.513	2.473	9.9	19.8
6 30	19 22.16	+8 24.7	0.908	1.843	17.7	18.9	6 30	19 20.66	-12 54.0	1.469	2.467	6.0	19.6
7 10	19 11.90	+5 39.4	0.884	1.844	15.0	18.8	7 10	19 12.14	-13 33.1	1.450	2.460	3.6	19.4
7 20	19 1.54	+2 4.8	0.880	1.846	14.3	18.8	7 20	19 3.58	-14 20.9	1.457	2.454	5.9	19.5
7 30	18 52.81	-2 1.4	0.900	1.848	16.2	18.9	7 30	18 56.12	-15 13.8	1.488	2.448	9.9	19.7
8 9	18 47.06	-6 16.6	0.941	1.850	19.6	19.1	8 9	18 50.69	-16 7.8	1.541	2.443	13.7	20.0
<b>147794</b>	2005 RO <sub>2</sub>		7 8.9 221°90'	2°3/ 8.4 18			<b>329758</b>	2004 ET <sub>28</sub>		7 8.9 33°09'	1°4/ 9.2 16		
5 31	19 42.68	-30 22.3	2.606	3.416	11.7	20.4	5 31	19 39.04	-18 26.6	1.290	2.140	19.1	21.9
6 10	19 37.44	-30 22.1	2.512	3.410	9.3	20.2	6 10	19 36.04	-18 28.7	1.229	2.150	15.1	21.6
6 20	19 30.19	-30 19.1	2.441	3.404	6.5	20.0	6 20	19 29.97	-18 40.4	1.186	2.160	10.4	21.4
6 30	19 21.47	-30 10.8	2.397	3.397	3.6	19.8	6 30	19 21.56	-18 59.8	1.165	2.171	5.3	21.1
7 10	19 12.02	-29 55.5	2.380	3.390	2.3	19.7	7 10	19 12.04	-19 23.8	1.167	2.183	1.5	20.9
7 20	19 2.68	-29 32.2	2.393	3.383	4.6	19.8	7 20	19 2.80	-19 49.1	1.193	2.195	6.0	21.3
7 30	18 54.29	-29 1.8	2.433	3.376	7.5	20.0	7 30	18 55.21	-20 13.2	1.243	2.208	10.9	21.6
8 9	18 47.55	-28 25.8	2.499	3.369	10.3	20.2	8 9	18 50.28	-20 34.4	1.313	2.222	15.1	21.9
<b>97049</b>	1999 UK <sub>44</sub>		7 8.9 300°13'	7°8/ 5.9 18			<b>441424</b>	2008 GE <sub>84</sub>		7 8.9 148°11'	0°5/ 8.6 18		
5 31	19 43.25	-38 5.2	1.751	2.580	15.8	19.1	5 31	19 38.39	-22 20.9	2.539	3.353	11.9	21.9
6 10	19 39.58	-39 22.8	1.668	2.567	13.1	18.9	6 10	19 34.08	-22 46.3	2.456	3.358	9.3	21.7
6 20	19 32.65	-40 36.9	1.606	2.554	10.3	18.7	6 20	19 27.93	-23 15.4	2.395	3.362	6.3	21.5
6 30	19 23.02	-41 39.2	1.566	2.542	8.2	18.6	6 30	19 20.41	-23 45.8	2.360	3.366	3.0	21.3
7 10	19 11.80	-42 22.1	1.550	2.529	8.0	18.5	7 10	19 12.19	-24 15.1	2.354	3.370	0.7	21.1
7 20	19 0.45	-42 40.8	1.560	2.517	9.9	18.6	7 20	19 4.03	-24 41.1	2.376	3.374	3.9	21.4
7 30	18 50.59	-42 34.8	1.592	2.505	12.8	18.8	7 30	18 56.69	-25 2.6	2.426	3.377	7.1	21.6
8 9	18 43.48	-42 7.9	1.645	2.493	15.8	18.9	8 9	18 50.83	-25 19.0	2.501	3.380	10.0	21.8
<b>288887</b>	2004 RZ <sub>254</sub>		7 8.9 248°76'	4°7/10.8 18			<b>309780</b>	2008 YU <sub>140</sub>		7 8.9 106°64'	1°7/ 9.3 16		
5 31	19 38.69	-7 39.3	1.947	2.741	15.7	20.7	5 31	19 44.26	-18 2.0	1.478	2.308	18.1	21.4
6 10	19 34.89	-7 47.8	1.853	2.731	13.0	20.5	6 10	19 39.74	-17 55.9	1.411	2.320	14.4	21.2
6 20	19 28.83	-8 11.9	1.778	2.722	9.8	20.3	6 20	19 32.28	-17 58.1	1.363	2.331	10.0	21.0
6 30	19 20.97	-8 52.2	1.726	2.712	6.6	20.1	6 30	19 22.62	-18 7.1	1.339	2.343	5.1	20.7
7 10	19 12.08	-9 47.1	1.701	2.702	4.7	19.9	7 10	19 11.91	-18 20.5	1.339	2.354	1.8	20.5
7 20	19 3.07	-10 53.8	1.702	2.692	6.1	20.0	7 20	19 1.47	-18 36.0	1.364	2.365	5.8	20.8
7 30	18 54.96	-12 7.9	1.729	2.681	9.4	20.2	7 30	18 52.60	-18 51.8	1.415	2.375	10.4	21.1
8 9	18 48.62	-13 24.8	1.781	2.671	12.8	20.3	8 9	18 46.26	-19 6.7	1.488	2.385	14.4	21.4
<b>160562</b>	1998 SO <sub>74</sub>		7 8.9 292°77'	3°2/ 9.8 18			<b>57156</b>	2001 QM <sub>10</sub>		7 8.9 268°11'	1°0/ 8.6 18		
5 31	19 38.04	-13 37.5	1.903	2.718	15.2	19.9	5 31	19 42.40	-23 48.0	1.808	2.637	15.4	19.9
6 10	19 34.64	-13 30.4	1.793	2.690	12.4	19.7	6 10	19 38.31	-24 2.3	1.708	2.618	12.2	19.7
6 20	19 28.85	-13 33.3	1.703	2.662	9.0	19.4	6 20	19 31.47	-24 20.4	1.628	2.598	8.4	19.4
6 30	19 21.07	-13 46.4	1.637	2.634	5.4	19.1	6 30	19 22.37	-24 39.5	1.571	2.578	4.2	19.1
7 10	19 12.06	-14 9.1	1.596	2.606	3.2	18.9	7 10	19 11.93	-24 56.1	1.541	2.557	1.2	18.9
7 20	19 2.77	-14 39.4	1.582	2.578	5.7	19.0	7 20	19 1.32	-25 7.5	1.538	2.536	5.5	19.1
7 30	18 54.32	-15 15.0	1.593	2.550	9.7	19.2	7 30	18 51.80	-25 12.3	1.560	2.515	10.0	19.3
8 9	18 47.69	-15 53.3	1.628	2.522	13.6	19.3	8 9	18 44.48	-25 10.9	1.605	2.494	14.0	19.5
<b>348365</b>	2005 EJ <sub>259</sub>		7 8.9 263°89'	2°9/ 8.0 18			<b>190579</b>	2000 SB <sub>287</sub>		7 8.9 211°26'	2°5/ 8.2 18		
5 31	19 41.56	-29 6.0	2.036	2.862	14.0	21.1	5 31	19 45.22	-29 39.7	2.408	3.217	12.6	21.0
6 10	19 37.27	-29 31.5	1.946	2.853	11.1	20.9	6 10	19 39.67	-29 53.2	2.312	3.210	10.0	20.8
6 20	19 30.49	-29 57.0	1.877	2.844	7.8	20.7	6 20	19 31.88	-30 5.2	2.239	3.202	7.0	20.6
6 30	19 21.77	-30 18.4	1.833	2.835	4.4	20.5	6 30	19 22.37	-30 12.3	2.193	3.193	3.9	20.4
7 10	19 11.99	-30 32.1	1.816	2.826	3.0	20.4	7 10	19 11.96	-30 11.9	2.174	3.183	2.6	20.3
7 20	19 2.22	-30 35.8	1.826	2.816	5.7	20.5	7 20	19 1.59	-30 2.3	2.184	3.173	5.0	20.4
7 30	18 53.57	-30 29.0	1.861	2.807	9.3	20.7	7 30	18 52.24	-29 43.9	2.221	3.163	8.2	20.6
8 9	18 46.96	-30 13.1	1.920	2.797	12.6	20.9	8 9	18 44.72	-29 18.2	2.284	3.151	11.2	20.8
<b>64059</b>	2001 SB <sub>261</sub>		7 8.9 108°92'	2°4/ 9.6 18			<b>494385</b>	2016 UV <sub>47</sub>		7 8.9 62°52'	3°7/ 9.8 17		
5 31	19 42.87	-15 21.9	1.968										

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>6250</b>	Saekohayashi		7 8.9 114°56'	16°7/10.8	18	R	<b>38374</b>	1999 RY <sub>172</sub>		7 8.9 107°43'	9°1/13.6	18	
5 31	19 45.34	+ 4 39.1	1.201	1.974	24.6	17.2	5 31	19 37.77	+ 4 2.8	1.911	2.655	17.6	18.0
6 10	19 41.06	+ 7 19.8	1.147	1.982	22.1	17.0	6 10	19 34.07	+ 4 14.8	1.829	2.656	15.3	17.9
6 20	19 33.47	+ 9 36.9	1.107	1.990	19.5	16.9	6 20	19 28.20	+ 4 4.3	1.765	2.657	12.9	17.7
6 30	19 23.32	+11 19.0	1.086	1.998	17.6	16.8	6 30	19 20.66	+ 3 28.2	1.721	2.658	10.6	17.6
7 10	19 11.86	+12 17.6	1.083	2.005	16.7	16.8	7 10	19 12.22	+ 2 26.1	1.701	2.659	9.2	17.5
7 20	19 0.61	+12 29.8	1.100	2.012	17.3	16.8	7 20	19 3.78	+ 1 0.7	1.706	2.659	9.4	17.5
7 30	18 51.08	+11 59.0	1.135	2.019	19.0	17.0	7 30	18 56.31	- 0 43.0	1.736	2.660	11.2	17.6
8 9	18 44.41	+10 54.4	1.186	2.025	21.2	17.1	8 9	18 50.60	- 2 37.6	1.789	2.661	13.6	17.8
<b>471102</b>	2010 BO <sub>2</sub>		7 8.9 209°46'	0°1/ 8.9	17		<b>436221</b>	2010 AZ <sub>11</sub>		7 8.9 137°21'	1°0/ 9.2	18	
5 31	19 40.47	-19 49.5	1.953	2.775	14.7	21.4	5 31	19 42.07	-18 47.6	2.251	3.059	13.4	22.1
6 10	19 36.34	-20 15.3	1.866	2.772	11.6	21.2	6 10	19 37.02	-18 47.2	2.174	3.071	10.6	21.9
6 20	19 29.83	-20 48.3	1.801	2.769	7.9	20.9	6 20	19 29.95	-18 51.9	2.119	3.082	7.3	21.7
6 30	19 21.47	-21 25.9	1.760	2.766	3.9	20.7	6 30	19 21.39	-19 0.2	2.089	3.093	3.7	21.5
7 10	19 12.09	-22 4.9	1.746	2.763	0.5	20.4	7 10	19 12.14	-19 10.6	2.088	3.103	1.1	21.3
7 20	19 2.71	-22 42.0	1.760	2.759	4.8	20.7	7 20	19 3.03	-19 21.6	2.115	3.113	4.2	21.6
7 30	18 54.36	-23 15.0	1.800	2.756	8.8	21.0	7 30	18 54.94	-19 32.1	2.169	3.122	7.7	21.8
8 9	18 47.95	-23 42.5	1.864	2.752	12.4	21.2	8 9	18 48.55	-19 41.4	2.248	3.131	10.8	22.0
<b>480754</b>	2016 NV <sub>40</sub>		7 8.9 304°61'	4°5/10.3	16		<b>250925</b>	2005 WN <sub>72</sub>		7 8.9 303°08'	8°6/11.1	18	
5 31	19 37.01	-10 34.9	1.658	2.476	17.0	21.1	5 31	19 35.49	+ 0 1.2	2.143	2.904	15.4	20.0
6 10	19 34.02	-10 28.6	1.567	2.463	13.9	20.8	6 10	19 32.14	+ 1 1.6	2.049	2.889	13.4	19.8
6 20	19 28.49	-10 36.4	1.495	2.450	10.4	20.6	6 20	19 26.84	+ 1 47.9	1.974	2.875	11.3	19.7
6 30	19 20.92	-10 59.3	1.445	2.438	6.7	20.3	6 30	19 20.00	+ 2 16.3	1.921	2.861	9.5	19.5
7 10	19 12.16	-11 36.3	1.419	2.426	4.5	20.2	7 10	19 12.30	+ 2 24.7	1.892	2.847	8.6	19.4
7 20	19 3.27	-12 24.8	1.419	2.413	6.5	20.3	7 20	19 4.53	+ 2 12.3	1.887	2.834	9.2	19.5
7 30	18 55.44	-13 21.0	1.443	2.402	10.3	20.5	7 30	18 57.53	+ 1 40.8	1.907	2.820	10.9	19.5
8 9	18 49.65	-14 20.6	1.490	2.390	14.2	20.7	8 9	18 52.05	+ 0 53.7	1.948	2.807	13.2	19.7
<b>466060</b>	2011 TN <sub>3</sub>		7 8.9 191°44'	1°8/ 8.3	17		<b>87212</b>	2000 OQ <sub>36</sub>		7 8.9 321°94'	4°0/ 9.4	17	
5 31	19 46.23	-24 14.1	1.799	2.621	15.7	22.4	5 31	19 37.50	-16 5.7	1.411	2.254	18.2	19.1
6 10	19 41.20	-24 54.3	1.714	2.620	12.4	22.2	6 10	19 34.90	-15 18.5	1.322	2.235	14.8	18.8
6 20	19 33.35	-25 39.6	1.650	2.618	8.5	22.0	6 20	19 29.37	-14 37.6	1.250	2.218	10.7	18.5
6 30	19 23.24	-26 25.4	1.610	2.615	4.3	21.7	6 30	19 21.43	-14 4.7	1.200	2.201	6.4	18.2
7 10	19 11.88	-27 6.9	1.598	2.612	2.0	21.5	7 10	19 12.11	-13 40.6	1.174	2.184	4.0	18.0
7 20	19 0.49	-27 40.1	1.612	2.608	5.7	21.8	7 20	19 2.68	-13 25.8	1.171	2.169	7.0	18.1
7 30	18 50.38	-28 3.0	1.653	2.602	10.0	22.0	7 30	18 54.55	-13 19.9	1.192	2.154	11.6	18.4
8 9	18 42.59	-28 16.0	1.718	2.597	13.7	22.2	8 9	18 48.86	-13 21.6	1.233	2.140	16.0	18.6
<b>508315</b>	2015 KK <sub>138</sub>		7 8.9 68°82'	5°4/ 9.9	17		<b>404973</b>	1999 UF <sub>57</sub>		7 8.9 52°95'	4°6/10.2	18	
5 31	19 41.09	-10 39.3	1.814	2.618	16.3	21.0	5 31	19 36.78	- 9 25.9	2.316	3.107	13.6	21.4
6 10	19 36.54	- 9 42.3	1.749	2.634	13.3	20.8	6 10	19 32.85	- 8 51.5	2.232	3.110	11.1	21.2
6 20	19 29.72	- 8 55.2	1.704	2.650	10.0	20.6	6 20	19 27.12	- 8 26.3	2.170	3.112	8.4	21.0
6 30	19 21.29	- 8 20.3	1.682	2.666	6.9	20.5	6 30	19 20.05	- 8 11.6	2.132	3.114	5.9	20.9
7 10	19 12.14	- 7 58.4	1.686	2.683	5.4	20.4	7 10	19 12.31	- 8 7.6	2.121	3.117	4.6	20.8
7 20	19 3.26	- 7 49.5	1.716	2.699	6.8	20.5	7 20	19 4.64	- 8 14.0	2.136	3.119	5.8	20.9
7 30	18 55.59	- 7 52.4	1.771	2.715	9.8	20.7	7 30	18 57.80	- 8 29.3	2.178	3.121	8.3	21.0
8 9	18 49.87	- 8 4.6	1.850	2.732	12.8	21.0	8 9	18 52.43	- 8 51.3	2.244	3.124	10.9	21.2
<b>6860</b>	Sims		7 8.9 122°97'	0°4/ 9.1	18		<b>295280</b>	2008 GG <sub>93</sub>		7 8.9 106°99'	0°0/ 8.9	17	
5 31	19 38.38	-19 54.3	2.515	3.326	12.1	18.6	5 31	19 42.24	-19 47.4	1.644	2.474	16.6	20.9
6 10	19 34.00	-20 4.8	2.435	3.335	9.5	18.5	6 10	19 38.03	-20 15.4	1.573	2.483	13.1	20.7
6 20	19 27.84	-20 19.6	2.378	3.343	6.5	18.3	6 20	19 31.11	-20 51.6	1.521	2.491	8.9	20.5
6 30	19 20.36	-20 37.2	2.347	3.352	3.2	18.1	6 30	19 22.11	-21 32.7	1.494	2.500	4.3	20.2
7 10	19 12.25	-20 55.7	2.343	3.360	0.6	17.9	7 10	19 12.06	-22 14.7	1.492	2.508	0.5	20.0
7 20	19 4.24	-21 13.7	2.369	3.368	3.8	18.2	7 20	19 2.14	-22 53.8	1.516	2.517	5.3	20.3
7 30	18 57.08	-21 29.7	2.421	3.375	7.0	18.4	7 30	18 53.59	-23 27.4	1.567	2.525	9.7	20.6
8 9	18 51.38	-21 43.3	2.500	3.383	9.8	18.6	8 9	18 47.33	-23 54.6	1.640	2.532	13.5	20.9
<b>150073</b>	2006 SK <sub>181</sub>		7 8.9 110°03'	0°5/ 9.0	17		<b>510098</b>	2010 PZ <sub>40</sub>		7 8.9 12°05'	4°8/ 8.0	18	
5 31	19 43.70	-20 12.3	1.658	2.485	16.6	20.4	5 31	19 43.73	-36 36.2	2.180	2.996	13.5	20.9
6 10	19 39.04	-20 19.1	1.589	2.497	13.1	20.2	6 10	19 38.77	-36 49.5	2.101	2.997	11.0	20.7
6 20	19 31.70	-20 32.1	1.540	2.509	8.9	19.9	6 20	19 31.36	-36 56.4	2.044	2.998	8.1	20.5
6 30	19 22.33	-20 48.9	1.515	2.520	4.4	19.7	6 30	19 22.13	-36 52.6	2.012	2.999	5.6	20.4
7 10	19 12.01	-21 6.8	1.515	2.532	0.7	19.4	7 10	19 12.07	-36 35.2	2.005	3.001	4.8	20.3
7 20	19 1.91	-21 23.3	1.543	2.543	5.2	19.8	7 20	19 2.26	-36 3.3	2.026	3.003	6.5	20.4
7 30	18 53.24	-21 36.8	1.596	2.553	9.6	20.1	7 30	18 53.77	-35 18.4	2.073	3.005	9.3	20.6
8 9	18 46.87	-21 47.1	1.671	2.564	13.4	20.3	8 9	18 47.40	-34 24.0	2.143	3.007	12.0	20.8
<b>397414</b>	2006 YK <sub>27</sub>		7 8.9 53°32'	1°6/ 8.1	16		<b>393268</b>	2013 WA <sub>53</sub>		7 8.9 297°61'	10°2/ 4.4	17	
5 31	19 39.14	-22 14.3	2.056	2.881	13.9	20.8	5 31	19 47.11	-42 41.6	1.706	2.524	16.6	20.3
6 10	19 35.14	-23 22.7	1.985	2.893	10.9	20.6	6 10	19 43.11	-44 36.8	1.638	2.521	14.1	20.1
6 20	19 28.92	-24 37.6	1.937	2.906	7.3	20.4	6 20	19 35.38	-46 25.7	1.590	2.518	11.8	19.9
6 30	19 20.99	-25 54.6	1.914	2.919	3.6	20.2	6 30	19 24.50	-47 57.4	1.565	2.516	10.4	19.8
7 10	19 12.17	-27 8.6	1.919	2.933	1.8	20.1	7 10	19 11.75	-49 2.3	1.563	2.513	10.5	19.8
7 20	19 3.42	-28 14.9	1.952	2.946	5.0	20.3	7 20	18 58.86	-49 35.1	1.585	2.510	12.1	19.9
7 30	18 55.70	-29 10.7	2.012	2.960	8.5	20.6	7 30	18 47.75	-49 36.0	1.629	2.507	14.5	20.1
8 9	18 49.82	-29 55.2	2.096	2.974	11.6	20.8	8 9	18 39.87	-49 10.3	1.692	2.505	16.9	20.2
<b>361575</b>	2007 RO <sub>143</sub>		7 8.9 328°70'	7°3/10.2	17		<b>201562</b>	2003 SF <sub>13</sub>		7 8.9 350°93'	2°1/ 9.5	17	
5 31	19 32.40	-10 49.											

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>33725</b>	Robertkent		7 8.9	9°84	0°6/ 8.8	18	<b>196667</b>	2003 SN <sub>50</sub>		7 8.9	173°75	0°5/ 8.8	18
5 31	19 40.55	-25 3.4	2.021	2.847	14.1	18.7	5 31	19 41.84	-23 38.7	1.911	2.737	14.8	20.3
6 10	19 36.23	-24 51.1	1.939	2.848	11.1	18.5	6 10	19 37.43	-23 37.6	1.829	2.737	11.6	20.1
6 20	19 29.62	-24 39.2	1.879	2.849	7.5	18.3	6 20	19 30.57	-23 38.7	1.768	2.737	8.0	19.9
6 30	19 21.32	-24 25.7	1.844	2.850	3.7	18.0	6 30	19 21.86	-23 40.0	1.732	2.738	3.8	19.6
7 10	19 12.19	-24 9.3	1.835	2.851	0.8	17.8	7 10	19 12.22	-23 39.1	1.722	2.738	0.7	19.4
7 20	19 3.23	-23 49.3	1.854	2.853	4.6	18.1	7 20	19 2.69	-23 34.7	1.739	2.738	4.8	19.7
7 30	18 55.42	-23 26.1	1.899	2.854	8.4	18.4	7 30	18 54.36	-23 26.4	1.782	2.738	8.9	19.9
8 9	18 49.53	-23 0.8	1.968	2.857	11.8	18.6	8 9	18 48.08	-23 15.0	1.849	2.738	12.4	20.2
<b>136469</b>	2005 FM <sub>2</sub>		7 8.9	26°33	0°3/ 8.8	18	<b>21096</b>	1992 EZ <sub>11</sub>		7 8.9	329°69	1°8/ 9.5	18
5 31	19 38.77	-20 59.4	1.835	2.665	15.1	19.6	5 31	19 36.35	-16 28.7	1.586	2.423	16.8	17.5
6 10	19 35.12	-21 25.6	1.757	2.668	11.9	19.4	6 10	19 33.69	-16 39.7	1.499	2.412	13.4	17.3
6 20	19 29.05	-21 58.3	1.699	2.670	8.1	19.2	6 20	19 28.39	-17 1.7	1.432	2.401	9.4	17.0
6 30	19 21.12	-22 34.5	1.666	2.673	3.9	18.9	6 30	19 20.96	-17 33.4	1.387	2.392	5.0	16.7
7 10	19 12.21	-23 10.9	1.659	2.676	0.6	18.6	7 10	19 12.31	-18 12.2	1.367	2.382	1.8	16.5
7 20	19 3.38	-23 44.3	1.679	2.679	4.9	19.0	7 20	19 3.59	-18 54.5	1.372	2.373	5.5	16.7
7 30	18 55.69	-24 12.5	1.725	2.682	9.0	19.2	7 30	18 56.02	-19 37.1	1.401	2.365	10.1	17.0
8 9	18 50.00	-24 34.6	1.793	2.686	12.6	19.5	8 9	18 50.63	-20 17.2	1.453	2.358	14.2	17.2
<b>222502</b>	2001 TK <sub>5</sub>		7 8.9	252°69	3°3/ 7.8	18	<b>311539</b>	2005 YL <sub>173</sub>		7 8.9	220°92	4°2/ 6.6	18
5 31	19 42.75	-27 46.1	1.782	2.614	15.4	20.4	5 31	19 40.69	-32 56.4	2.635	3.448	11.5	20.8
6 10	19 38.69	-28 32.6	1.694	2.604	12.3	20.2	6 10	19 36.22	-34 3.9	2.547	3.443	9.3	20.6
6 20	19 31.78	-29 22.1	1.626	2.594	8.6	19.9	6 20	19 29.65	-35 10.9	2.483	3.438	6.8	20.5
6 30	19 22.57	-30 9.4	1.582	2.584	4.9	19.7	6 30	19 21.43	-36 12.7	2.446	3.434	4.8	20.3
7 10	19 12.03	-30 49.2	1.564	2.574	3.4	19.6	7 10	19 12.26	-37 4.9	2.436	3.428	4.4	20.3
7 20	19 1.40	-31 17.2	1.573	2.563	6.5	19.7	7 20	19 3.01	-37 44.2	2.454	3.423	6.1	20.4
7 30	18 52.00	-31 31.8	1.607	2.552	10.5	19.9	7 30	18 54.58	-38 9.5	2.499	3.418	8.5	20.5
8 9	18 44.92	-31 34.1	1.663	2.542	14.1	20.1	8 9	18 47.78	-38 21.4	2.569	3.412	10.9	20.7
<b>326118</b>	2011 UR <sub>379</sub>		7 8.9	273°82	1°2/ 9.4	18	<b>479487</b>	2014 AH <sub>28</sub>		7 8.9	212°79	0°1/ 8.9	18
5 31	19 37.60	-16 26.1	2.209	3.023	13.5	20.7	5 31	19 42.05	-22 46.6	2.084	2.903	14.0	21.9
6 10	19 33.87	-16 51.4	2.111	3.011	10.7	20.5	6 10	19 37.42	-22 44.1	1.995	2.899	11.0	21.7
6 20	19 28.08	-17 25.7	2.035	2.998	7.5	20.3	6 20	19 30.50	-22 44.1	1.928	2.895	7.5	21.5
6 30	19 20.65	-18 7.4	1.983	2.986	3.9	20.0	6 30	19 21.82	-22 44.7	1.885	2.891	3.6	21.2
7 10	19 12.28	-18 54.0	1.959	2.974	1.2	19.8	7 10	19 12.24	-22 44.1	1.870	2.886	0.5	21.0
7 20	19 3.81	-19 42.4	1.962	2.961	4.4	20.0	7 20	19 2.72	-22 41.0	1.882	2.881	4.6	21.3
7 30	18 56.14	-20 29.9	1.993	2.949	8.0	20.2	7 30	18 54.26	-22 34.9	1.922	2.876	8.4	21.5
8 9	18 50.07	-21 14.3	2.048	2.937	11.4	20.4	8 9	18 47.67	-22 26.1	1.985	2.871	11.9	21.7
<b>307160</b>	2002 DR <sub>2</sub>		7 8.9	78°33	3°0/ 7.3	18	<b>19875</b>	Guedes		7 8.9	52°13	8°8/ 6.8	17
5 31	19 43.66	-27 19.0	2.406	3.217	12.5	19.9	5 31	19 47.01	-40 58.4	1.595	2.421	17.2	18.3
6 10	19 38.32	-28 40.8	2.348	3.247	9.8	19.8	6 10	19 42.56	-42 10.5	1.541	2.435	14.3	18.2
6 20	19 30.89	-30 4.1	2.314	3.277	6.8	19.6	6 20	19 34.58	-43 13.4	1.507	2.449	11.4	18.0
6 30	19 21.91	-31 23.8	2.308	3.306	4.0	19.5	6 30	19 23.91	-43 58.2	1.495	2.463	9.3	17.9
7 10	19 12.17	-32 35.0	2.330	3.335	3.2	19.5	7 10	19 12.00	-44 18.0	1.506	2.477	8.9	18.0
7 20	19 2.57	-33 34.0	2.382	3.364	5.3	19.7	7 20	19 0.50	-44 10.7	1.541	2.492	10.4	18.1
7 30	18 54.01	-34 19.3	2.462	3.392	8.1	19.9	7 30	18 51.03	-43 38.5	1.598	2.507	13.0	18.3
8 9	18 47.20	-34 51.5	2.567	3.420	10.6	20.1	8 9	18 44.65	-42 47.4	1.676	2.522	15.6	18.5
<b>97625</b>	2000 EC <sub>121</sub>		7 8.9	29°12	1°7/ 8.3	18	<b>38823</b>	2000 RN <sub>87</sub>		7 8.9	223°64	0°2/ 8.9	18
5 31	19 40.00	-24 57.1	1.882	2.714	14.7	19.7	5 31	19 38.81	-20 56.6	2.448	3.261	12.3	20.4
6 10	19 36.11	-25 28.3	1.803	2.715	11.6	19.5	6 10	19 34.55	-21 4.2	2.355	3.256	9.7	20.3
6 20	19 29.75	-26 2.9	1.746	2.717	7.9	19.2	6 20	19 28.38	-21 15.5	2.285	3.251	6.6	20.1
6 30	19 21.49	-26 37.3	1.713	2.718	4.0	19.0	6 30	19 20.76	-21 29.2	2.240	3.245	3.2	19.8
7 10	19 12.23	-27 7.6	1.706	2.720	1.9	18.9	7 10	19 12.38	-21 43.3	2.223	3.239	0.4	19.6
7 20	19 3.04	-27 30.8	1.726	2.722	5.3	19.1	7 20	19 4.00	-21 56.3	2.234	3.233	4.0	19.9
7 30	18 55.03	-27 45.6	1.771	2.724	9.2	19.3	7 30	18 56.45	-22 7.0	2.273	3.227	7.3	20.1
8 9	18 49.07	-27 52.2	1.840	2.726	12.6	19.6	8 9	18 50.41	-22 15.0	2.337	3.221	10.4	20.2
<b>469675</b>	2004 XB <sub>33</sub>		7 8.9	201°69	2°9/ 9.6	18	<b>309607</b>	2008 BV <sub>34</sub>		7 8.9	289°63	3°2/ 8.1	18
5 31	19 41.80	-14 29.2	2.446	3.239	12.9	22.1	5 31	19 41.47	-30 48.9	2.109	2.934	13.6	20.6
6 10	19 36.75	-13 59.8	2.351	3.235	10.4	21.9	6 10	19 37.19	-31 6.2	2.017	2.922	10.9	20.4
6 20	19 29.80	-13 36.0	2.277	3.230	7.5	21.7	6 20	19 30.48	-31 21.6	1.946	2.910	7.7	20.2
6 30	19 21.40	-13 18.1	2.230	3.224	4.5	21.5	6 30	19 21.87	-31 31.3	1.899	2.899	4.5	20.0
7 10	19 12.25	-13 6.1	2.211	3.218	2.9	21.4	7 10	19 12.25	-31 32.0	1.879	2.887	3.3	19.9
7 20	19 3.13	-12 59.5	2.220	3.211	4.8	21.5	7 20	19 2.65	-31 22.1	1.886	2.876	5.7	20.0
7 30	18 54.84	-12 58.0	2.257	3.204	7.8	21.6	7 30	18 54.16	-31 1.6	1.920	2.864	9.1	20.2
8 9	18 48.08	-13 0.6	2.319	3.196	10.7	21.8	8 9	18 47.66	-30 32.4	1.977	2.853	12.3	20.4
<b>275321</b>	2010 UX <sub>54</sub>		7 8.9	338°89	6°9/ 6.9	17	<b>31294</b>	1998 FJ <sub>71</sub>		7 8.9	225°44	4°5/ 7.4	18
5 31	19 35.62	-31 16.3	1.078	1.955	20.2	20.1	5 31	19 42.33	-34 38.3	2.357	3.172	12.7	18.9
6 10	19 34.87	-32 26.0	1.006	1.940	16.3	19.8	6 10	19 37.67	-35 17.7	2.272	3.168	10.2	18.7
6 20	19 30.21	-33 38.4	0.951	1.927	12.0	19.5	6 20	19 30.69	-35 53.9	2.209	3.164	7.5	18.6
6 30	19 22.17	-34 44.3	0.915	1.915	8.0	19.3	6 30	19 21.93	-36 22.4	2.172	3.160	5.2	18.4
7 10	19 12.13	-35 33.8	0.900	1.904	7.1	19.2	7 10	19 12.24	-36 39.2	2.161	3.156	4.6	18.4
7 20	19 1.97	-35 59.4	0.906	1.894	10.4	19.3	7 20	19 2.61	-36 42.3	2.177	3.151	6.4	18.5
7 30	18 53.78	-35 59.4	0.932	1.886	15.0	19.6	7 30	18 54.04	-36 31.5	2.220	3.146	9.0	18.6
8 9	18 49.13	-35 37.3	0.975	1.879	19.5	19.8	8 9	18 47.37	-36 9.0	2.286	3.142	11.7	18.8
<b>439472</b>	2013 YJ <sub>74</sub>		7 8.9	173°28	4°2/ 10.0	17	<b>385558</b>	2004 TU <sub>80</sub>		7 8.9	266°54	0°1/ 8.9	18
5 31	19 41.43	-10 28.3	2.393	3.176									

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>286927</b>	2002 PA <sub>113</sub>		7 8.9 341°20	11°1/13.0	17		<b>520415</b>	2014 JE <sub>89</sub>		7 8.9 328°40	1°9/ 9.3	18	
5 31	19 30.62	+ 1 18.6	1.374	2.176	20.7	19.8	5 31	19 38.44	-18 15.8	2.082	2.901	14.0	20.7
6 10	19 29.45	+ 2 4.2	1.291	2.159	18.2	19.6	6 10	19 34.53	-17 50.0	1.993	2.895	11.1	20.5
6 20	19 25.66	+ 2 25.4	1.223	2.143	15.4	19.3	6 20	19 28.51	-17 28.6	1.926	2.890	7.8	20.3
6 30	19 19.71	+ 2 16.1	1.174	2.128	12.8	19.1	6 30	19 20.88	-17 11.3	1.883	2.886	4.2	20.1
7 10	19 12.50	+ 1 33.3	1.145	2.115	11.2	19.0	7 10	19 12.42	-16 57.8	1.867	2.881	1.9	19.9
7 20	19 5.15	+ 0 18.1	1.137	2.103	11.6	19.0	7 20	19 4.02	-16 47.5	1.878	2.877	4.7	20.1
7 30	18 58.91	- 1 24.0	1.150	2.093	13.9	19.1	7 30	18 56.60	-16 40.1	1.916	2.872	8.3	20.3
8 9	18 54.88	- 3 23.9	1.183	2.084	17.0	19.3	8 9	18 50.91	-16 35.1	1.977	2.869	11.6	20.5
<b>134713</b>	1999 XC <sub>251</sub>		7 8.9 18°42	1°1/ 8.7	17		<b>11037</b>	Distler		7 8.9 190°89	0°6/ 9.1	18	
5 31	19 39.48	-24 3.4	1.216	2.076	19.4	19.4	5 31	19 39.03	-19 23.6	2.165	2.983	13.6	18.8
6 10	19 36.80	-24 8.6	1.153	2.081	15.3	19.1	6 10	19 34.95	-19 35.3	2.080	2.983	10.7	18.6
6 20	19 30.76	-24 17.8	1.108	2.086	10.5	18.9	6 20	19 28.78	-19 52.9	2.016	2.982	7.3	18.4
6 30	19 22.12	-24 27.6	1.085	2.093	5.1	18.6	6 30	19 21.01	-20 14.5	1.977	2.982	3.6	18.2
7 10	19 12.23	-24 34.3	1.084	2.100	1.3	18.4	7 10	19 12.41	-20 37.9	1.965	2.981	0.7	18.0
7 20	19 2.62	-24 35.3	1.106	2.108	6.4	18.7	7 20	19 3.84	-21 1.0	1.980	2.980	4.3	18.2
7 30	18 54.84	-24 30.1	1.151	2.117	11.5	19.0	7 30	18 56.21	-21 22.3	2.023	2.979	8.0	18.5
8 9	18 49.95	-24 19.7	1.217	2.127	16.0	19.3	8 9	18 50.28	-21 40.6	2.090	2.978	11.2	18.7
<b>353535</b>	2011 SY <sub>166</sub>		7 8.9 305°95	0°2/ 8.9	18		<b>153463</b>	2001 RX <sub>4</sub>		7 8.9 315°22	6°5/ 8.2	18	
5 31	19 38.24	-20 25.7	1.926	2.754	14.6	21.2	5 31	19 45.70	-36 42.8	1.441	2.281	18.0	19.9
6 10	19 34.70	-20 41.2	1.836	2.746	11.5	21.0	6 10	19 41.96	-37 2.1	1.356	2.266	14.8	19.7
6 20	19 28.82	-21 3.0	1.768	2.737	7.9	20.8	6 20	19 34.53	-37 13.6	1.290	2.251	11.2	19.4
6 30	19 21.09	-21 28.8	1.723	2.730	3.9	20.5	6 30	19 24.09	-37 10.0	1.245	2.236	7.8	19.2
7 10	19 12.35	-21 56.0	1.705	2.722	0.5	20.2	7 10	19 12.02	-36 45.4	1.224	2.223	6.6	19.1
7 20	19 3.57	-22 21.9	1.714	2.714	4.8	20.5	7 20	19 0.08	-35 57.8	1.226	2.209	9.0	19.2
7 30	18 55.82	-22 44.5	1.748	2.707	8.8	20.8	7 30	18 50.04	-34 49.9	1.252	2.196	12.9	19.4
8 9	18 49.96	-23 3.0	1.806	2.700	12.5	21.0	8 9	18 43.20	-33 28.6	1.299	2.184	16.9	19.6
<b>313130</b>	2001 BN <sub>3</sub>		7 8.9 206°58	1°3/ 9.4	18		<b>372907</b>	2011 AT <sub>65</sub>		7 8.9 255°82	2°1/ 8.5	18	
5 31	19 38.04	-17 30.9	3.078	3.874	10.4	21.9	5 31	19 43.76	-26 47.6	1.691	2.524	16.1	21.2
6 10	19 33.48	-17 25.2	2.979	3.868	8.3	21.8	6 10	19 39.51	-27 0.0	1.604	2.516	12.8	21.0
6 20	19 27.42	-17 23.4	2.903	3.862	5.8	21.6	6 20	19 32.36	-27 13.5	1.538	2.508	8.8	20.7
6 30	19 20.24	-17 25.0	2.854	3.855	3.1	21.4	6 30	19 22.89	-27 24.2	1.494	2.499	4.6	20.5
7 10	19 12.47	-17 29.2	2.834	3.848	1.3	21.3	7 10	19 12.17	-27 28.5	1.477	2.491	2.2	20.3
7 20	19 4.71	-17 35.1	2.843	3.840	3.4	21.4	7 20	19 1.48	-27 24.2	1.486	2.482	5.9	20.5
7 30	18 57.58	-17 41.9	2.881	3.832	6.1	21.6	7 30	18 52.15	-27 11.1	1.519	2.474	10.3	20.7
8 9	18 51.62	-17 49.1	2.945	3.823	8.7	21.7	8 9	18 45.24	-26 50.8	1.576	2.465	14.2	21.0
<b>188877</b>	2006 VM <sub>44</sub>		7 8.9 132°63	1°7/ 8.0	18		<b>318351</b>	2004 TJ <sub>317</sub>		7 8.9 271°30	6°0/ 10.6	18	
5 31	19 39.98	-24 54.4	2.693	3.504	11.4	20.6	5 31	19 36.28	- 4 50.9	2.487	3.257	13.3	20.5
6 10	19 35.31	-25 46.8	2.614	3.514	8.9	20.4	6 10	19 32.46	- 4 5.7	2.392	3.248	11.2	20.3
6 20	19 28.82	-26 42.2	2.559	3.524	6.1	20.2	6 20	19 26.92	- 3 30.8	2.318	3.239	9.0	20.2
6 30	19 20.96	-27 37.1	2.530	3.534	3.1	20.1	6 30	19 20.07	- 3 8.4	2.268	3.230	7.0	20.0
7 10	19 12.38	-28 28.1	2.531	3.543	1.8	20.0	7 10	19 12.52	- 2 59.6	2.244	3.221	6.0	20.0
7 20	19 3.83	-29 12.5	2.561	3.552	4.2	20.2	7 20	19 4.95	- 3 4.5	2.246	3.211	6.8	20.0
7 30	18 56.08	-29 48.5	2.619	3.561	7.1	20.4	7 30	18 58.08	- 3 21.9	2.274	3.202	8.8	20.1
8 9	18 49.78	-30 16.0	2.702	3.569	9.7	20.6	8 9	18 52.55	- 3 49.4	2.327	3.193	11.1	20.2
<b>283216</b>	2010 OO <sub>63</sub>		7 8.9 285°11	8°4/11.8	18		<b>520177</b>	2014 DT <sub>8</sub>		7 8.9 225°15	1°2/ 9.3	18	
5 31	19 35.34	+ 2 19.4	2.365	3.106	14.7	20.6	5 31	19 40.12	-18 20.3	1.990	2.808	14.5	21.9
6 10	19 31.87	+ 3 7.0	2.268	3.092	12.9	20.4	6 10	19 36.01	-18 23.7	1.902	2.804	11.5	21.6
6 20	19 26.60	+ 3 39.6	2.191	3.079	10.9	20.2	6 20	19 29.62	-18 33.8	1.835	2.800	8.0	21.4
6 30	19 19.94	+ 3 54.1	2.136	3.065	9.3	20.1	6 30	19 21.46	-18 49.0	1.792	2.796	4.1	21.2
7 10	19 12.50	+ 3 48.6	2.105	3.051	8.4	20.0	7 10	19 12.35	-19 7.6	1.776	2.792	1.2	21.0
7 20	19 4.98	+ 3 22.9	2.099	3.037	8.8	20.0	7 20	19 3.26	-19 27.3	1.788	2.787	4.7	21.2
7 30	18 58.16	+ 2 39.0	2.117	3.024	10.4	20.1	7 30	18 55.18	-19 46.6	1.825	2.783	8.6	21.4
8 9	18 52.71	+ 1 40.5	2.158	3.010	12.4	20.2	8 9	18 48.95	-20 4.2	1.887	2.778	12.1	21.6
<b>307177</b>	2002 ES <sub>57</sub>		7 8.9 279°56	0°2/ 8.9	18		<b>83607</b>	2001 SC <sub>272</sub>		7 8.9 303°76	0°7/ 8.7	18	
5 31	19 43.64	-22 1.5	1.507	2.343	17.5	20.2	5 31	19 38.95	-23 27.7	1.978	2.807	14.2	19.5
6 10	19 39.96	-21 56.1	1.404	2.318	14.1	19.9	6 10	19 35.24	-23 39.7	1.887	2.798	11.2	19.3
6 20	19 33.07	-21 55.2	1.320	2.292	9.8	19.5	6 20	19 29.18	-23 55.0	1.818	2.788	7.7	19.1
6 30	19 23.43	-21 56.6	1.259	2.266	4.9	19.2	6 30	19 21.28	-24 11.3	1.773	2.779	3.7	18.8
7 10	19 12.05	-21 57.6	1.223	2.239	0.6	18.8	7 10	19 12.38	-24 25.9	1.754	2.770	0.9	18.6
7 20	19 0.33	-21 55.9	1.212	2.213	6.2	19.1	7 20	19 3.46	-24 36.6	1.762	2.761	4.8	18.8
7 30	18 49.86	-21 50.6	1.225	2.185	11.5	19.3	7 30	18 55.58	-24 42.2	1.796	2.753	8.8	19.1
8 9	18 41.98	-21 42.2	1.260	2.158	16.4	19.6	8 9	18 49.61	-24 43.0	1.854	2.744	12.3	19.3
<b>482204</b>	2010 VU <sub>170</sub>		7 8.9 267°41	3°4/ 7.4	18		<b>399633</b>	2004 PZ <sub>21</sub>		7 8.9 287°88	4°0/ 10.8	18	
5 31	19 39.25	-30 46.0	2.462	3.282	12.0	21.4	5 31	19 36.68	- 8 16.2	2.329	3.117	13.6	20.6
6 10	19 35.12	-31 33.0	2.376	3.278	9.6	21.2	6 10	19 33.10	- 8 26.8	2.217	3.093	11.3	20.4
6 20	19 28.90	-32 19.8	2.312	3.274	6.8	21.0	6 20	19 27.59	- 8 50.4	2.126	3.069	8.5	20.2
6 30	19 21.07	-33 2.4	2.274	3.270	4.3	20.8	6 30	19 20.50	- 9 27.6	2.059	3.044	5.7	19.9
7 10	19 12.37	-33 37.0	2.263	3.266	3.5	20.8	7 10	19 12.47	-10 17.4	2.018	3.020	4.0	19.8
7 20	19 3.65	-34 0.9	2.280	3.261	5.5	20.9	7 20	19 4.23	-11 17.4	2.006	2.996	5.4	19.8
7 30	18 55.84	-34 13.4	2.323	3.257	8.3	21.1	7 30	18 56.63	-12 24.5	2.020	2.971	8.3	20.0
8 9	18 49.68	-34 15.0	2.391	3.253	11.0	21.2	8 9	18 50.45	-13 35.0	2.060	2.946	11.5	20.1
<b>60624</b>	2000 FT <sub>14</sub>		7 8.9 144°71	17°1/16.8	18		<b>47398</b>	1999 XC <sub>116</sub>		7 8.9 205°89	3°5/ 8.1	18	
5 31	19 41.76	+14											

EPHEMERIDES

7 8.9

7 8.9

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>404847</b>	2014 <i>KA</i> <sub>13</sub>		7 8.9 335°33	0°2/ 8.9 15			<b>438989</b>	2010 <i>SO</i> <sub>12</sub>		7 8.9 8°89 15°4/15.2 15			
5 31	19 35.69	-21 30.0	1.825	2.662	14.9	20.3	5 31	19 27.17	+ 5 20.7	1.119	1.928	24.0	19.8
6 10	19 32.90	-21 45.1	1.734	2.650	11.8	20.0	6 10	19 26.94	+ 7 10.2	1.074	1.934	21.6	19.6
6 20	19 27.70	-22 5.8	1.665	2.637	8.1	19.8	6 20	19 23.93	+ 8 28.7	1.042	1.943	19.1	19.5
6 30	19 20.61	-22 30.1	1.619	2.626	3.9	19.5	6 30	19 18.83	+ 9 8.0	1.027	1.954	16.9	19.4
7 10	19 12.46	-22 55.1	1.598	2.615	0.5	19.2	7 10	19 12.74	+ 9 3.9	1.028	1.969	15.6	19.4
7 20	19 4.25	-23 18.1	1.603	2.604	4.9	19.5	7 20	19 6.88	+ 8 17.6	1.047	1.985	15.5	19.4
7 30	18 57.09	-23 37.1	1.634	2.595	9.1	19.7	7 30	19 2.44	+ 6 55.5	1.084	2.005	16.7	19.6
8 9	18 51.87	-23 51.3	1.687	2.586	12.9	20.0	8 9	19 0.33	+ 5 8.6	1.139	2.026	18.6	19.8
<b>326678</b>	2002 <i>VM</i> <sub>116</sub>		7 8.9 294°02	0°2/ 8.8 18			<b>1346</b>	Gotha		7 8.9 246°67	6°3/11.3 18		
5 31	19 39.42	-18 50.8	1.523	2.362	17.3	20.3	5 31	19 38.67	- 4 0.1	2.145	2.917	15.1	16.1
6 10	19 36.49	-19 37.1	1.430	2.345	13.8	20.0	6 10	19 34.73	- 3 39.9	2.046	2.904	12.8	15.9
6 20	19 30.60	-20 36.5	1.356	2.329	9.5	19.7	6 20	19 28.72	- 3 34.1	1.966	2.890	10.2	15.7
6 30	19 22.21	-21 45.7	1.305	2.312	4.7	19.4	6 30	19 21.07	- 3 44.7	1.909	2.876	7.7	15.5
7 10	19 12.25	-22 59.3	1.279	2.295	0.6	19.1	7 10	19 12.47	- 4 12.2	1.877	2.861	6.3	15.4
7 20	19 2.00	-24 11.2	1.279	2.279	5.9	19.4	7 20	19 3.75	- 4 55.3	1.872	2.846	7.2	15.4
7 30	18 52.90	-25 16.0	1.303	2.263	11.0	19.6	7 30	18 55.82	- 5 51.3	1.893	2.830	9.7	15.5
8 9	18 46.22	-26 10.8	1.349	2.247	15.5	19.9	8 9	18 49.46	- 6 56.1	1.938	2.814	12.5	15.7
<b>155262</b>	2005 <i>WL</i> <sub>95</sub>		7 8.9 153°08	2°9/ 9.8 18			<b>162399</b>	2000 <i>DN</i> <sub>10</sub>		7 8.9 203°18	3°7/ 8.0 18		
5 31	19 37.87	-13 25.3	2.624	3.418	12.1	20.4	5 31	19 45.14	-32 57.1	2.295	3.107	13.1	20.7
6 10	19 33.52	-13 0.5	2.538	3.422	9.7	20.2	6 10	19 39.83	-33 15.5	2.207	3.104	10.4	20.5
6 20	19 27.53	-12 41.8	2.474	3.425	7.0	20.1	6 20	19 32.15	-33 30.4	2.142	3.100	7.5	20.4
6 30	19 20.32	-12 29.8	2.436	3.428	4.4	19.9	6 30	19 22.68	-33 37.9	2.102	3.096	4.7	20.2
7 10	19 12.51	-12 24.2	2.425	3.431	2.9	19.8	7 10	19 12.30	-33 34.7	2.089	3.092	3.7	20.1
7 20	19 4.78	-12 24.4	2.443	3.434	4.5	19.9	7 20	19 2.04	-33 19.6	2.104	3.087	5.8	20.2
7 30	18 57.81	-12 29.7	2.488	3.436	7.1	20.1	7 30	18 52.93	-32 53.0	2.146	3.082	8.7	20.4
8 9	18 52.18	-12 38.8	2.559	3.439	9.7	20.3	8 9	18 45.80	-32 17.4	2.212	3.077	11.6	20.6
<b>123307</b>	2000 <i>VZ</i> <sub>4</sub>		7 8.9 191°77	1°3/ 8.5 18			<b>364020</b>	2005 <i>VF</i> <sub>34</sub>		7 8.9 238°08	1°0/ 8.5 18		
5 31	19 42.92	-24 57.1	2.325	3.138	12.9	21.1	5 31	19 38.67	-24 0.3	2.583	3.398	11.7	21.7
6 10	19 37.94	-25 21.1	2.236	3.137	10.1	20.9	6 10	19 34.46	-24 25.5	2.487	3.389	9.2	21.5
6 20	19 30.80	-25 47.4	2.169	3.135	6.9	20.7	6 20	19 28.38	-24 53.5	2.414	3.381	6.3	21.3
6 30	19 22.00	-26 13.1	2.127	3.132	3.5	20.5	6 30	19 20.85	-25 22.0	2.367	3.372	3.1	21.1
7 10	19 12.32	-26 35.1	2.114	3.129	1.5	20.3	7 10	19 12.52	-25 48.4	2.347	3.363	1.1	21.0
7 20	19 2.65	-26 51.4	2.129	3.125	4.5	20.5	7 20	19 4.16	-26 10.6	2.357	3.353	4.1	21.2
7 30	18 53.95	-27 0.8	2.172	3.120	8.0	20.7	7 30	18 56.56	-26 27.3	2.394	3.344	7.3	21.3
8 9	18 46.98	-27 3.7	2.240	3.115	11.1	20.9	8 9	18 50.43	-26 38.4	2.456	3.334	10.2	21.5
<b>228616</b>	2002 <i>CR</i> <sub>35</sub>		7 8.9 136°47	2°6/ 8.1 17			<b>257192</b>	2008 <i>MG</i>		7 8.9 50°58	2°7/ 9.9 18		
5 31	19 43.61	-27 19.7	2.013	2.835	14.3	20.7	5 31	19 36.79	-13 44.2	2.180	2.989	13.8	20.5
6 10	19 38.79	-27 59.4	1.938	2.844	11.2	20.5	6 10	19 33.05	-13 40.5	2.104	2.997	11.0	20.3
6 20	19 31.52	-28 40.6	1.885	2.852	7.8	20.3	6 20	19 27.40	-13 45.4	2.049	3.007	7.9	20.1
6 30	19 22.37	-29 19.1	1.857	2.859	4.2	20.1	6 30	19 20.34	-13 58.7	2.019	3.016	4.6	19.9
7 10	19 12.28	-29 50.5	1.856	2.867	2.7	20.0	7 10	19 12.60	-14 19.0	2.016	3.026	2.7	19.8
7 20	19 2.31	-30 12.1	1.883	2.874	5.5	20.2	7 20	19 4.96	-14 44.5	2.039	3.035	4.6	20.0
7 30	18 53.55	-30 23.0	1.936	2.881	9.0	20.4	7 30	18 58.23	-15 13.3	2.090	3.045	7.8	20.2
8 9	18 46.84	-30 24.2	2.013	2.887	12.2	20.7	8 9	18 53.08	-15 43.4	2.164	3.055	10.8	20.4
<b>75396</b>	1999 <i>XU</i> <sub>98</sub>		7 8.9 103°82	3°4/ 7.9 18			<b>439733</b>	2015 <i>FY</i> <sub>162</sub>		7 8.9 136°69	5°9/ 6.8 17		
5 31	19 44.21	-27 18.9	1.604	2.440	16.7	18.6	5 31	19 47.88	-36 58.3	2.188	2.995	13.8	21.5
6 10	19 39.93	-28 11.9	1.535	2.448	13.2	18.3	6 10	19 42.24	-38 3.7	2.120	3.008	11.2	21.3
6 20	19 32.65	-29 7.8	1.487	2.456	9.1	18.1	6 20	19 33.93	-39 4.6	2.074	3.020	8.5	21.2
6 30	19 23.03	-30 0.7	1.462	2.464	5.1	17.9	6 30	19 23.59	-39 54.6	2.054	3.031	6.4	21.1
7 10	19 12.21	-30 44.6	1.462	2.472	3.5	17.8	7 10	19 12.22	-40 28.5	2.060	3.042	6.0	21.1
7 20	19 1.55	-31 15.4	1.489	2.480	6.7	18.0	7 20	19 1.00	-40 43.5	2.094	3.053	7.6	21.2
7 30	18 52.40	-31 31.7	1.540	2.488	10.7	18.3	7 30	18 51.13	-40 40.1	2.153	3.062	10.1	21.3
8 9	18 45.82	-31 35.2	1.614	2.495	14.3	18.5	8 9	18 43.53	-40 21.2	2.235	3.072	12.5	21.5
<b>111980</b>	2002 <i>GU</i> <sub>93</sub>		7 8.9 331°79	4°4/ 7.9 18			<b>285515</b>	2000 <i>ET</i> <sub>114</sub>		7 8.9 145°48	0°0/ 8.9 17		
5 31	19 33.44	-28 3.2	1.035	1.918	20.4	19.1	5 31	19 44.40	-21 45.6	1.917	2.735	15.0	21.7
6 10	19 33.24	-28 38.4	0.954	1.894	16.4	18.8	6 10	19 39.37	-21 53.6	1.840	2.743	11.8	21.5
6 20	19 29.21	-29 17.4	0.889	1.871	11.7	18.4	6 20	19 31.90	-22 5.8	1.784	2.752	8.1	21.3
6 30	19 21.82	-29 54.3	0.843	1.849	6.6	18.1	6 30	19 22.57	-22 19.9	1.754	2.759	3.9	21.1
7 10	19 12.33	-30 21.3	0.817	1.829	4.6	17.9	7 10	19 12.35	-22 33.1	1.750	2.766	0.5	20.8
7 20	19 2.55	-30 32.7	0.812	1.810	8.9	18.0	7 20	19 2.28	-22 43.5	1.774	2.773	4.8	21.2
7 30	18 54.57	-30 26.1	0.826	1.794	14.5	18.3	7 30	18 53.44	-22 50.2	1.824	2.779	8.8	21.4
8 9	18 50.06	-30 3.8	0.857	1.779	19.7	18.5	8 9	18 46.67	-22 53.2	1.899	2.785	12.3	21.7
<b>163915</b>	2003 <i>SO</i> <sub>248</sub>		7 8.9 351°70	8°7/11.4 18			<b>79327</b>	1996 <i>RT</i> <sub>11</sub>		7 8.9 322°22	1°3/ 8.6 18		
5 31	19 37.01	- 1 52.5	1.775	2.556	17.5	19.7	5 31	19 39.10	-24 26.5	1.898	2.730	14.6	19.6
6 10	19 33.69	- 0 56.0	1.696	2.555	15.0	19.5	6 10	19 35.48	-24 46.2	1.812	2.724	11.5	19.4
6 20	19 28.10	- 0 15.8	1.636	2.553	12.3	19.3	6 20	19 29.43	-25 9.2	1.747	2.718	7.9	19.1
6 30	19 20.76	+ 0 4.0	1.597	2.552	9.9	19.2	6 30	19 21.46	-25 32.4	1.706	2.712	3.9	18.9
7 10	19 12.50	+ 0 1.6	1.581	2.551	8.7	19.1	7 10	19 12.47	-25 52.7	1.691	2.706	1.4	18.7
7 20	19 4.26	- 0 22.7	1.590	2.551	9.4	19.2	7 20	19 3.49	-26 7.6	1.703	2.701	5.1	18.9
7 30	18 57.06	- 1 6.2	1.621	2.550	11.5	19.3	7 30	18 55.62	-26 15.7	1.741	2.696	9.1	19.2
8 9	18 51.71	- 2 3.9	1.675	2.550	14.2	19.5	8 9	18 49.75	-26 17.3	1.801	2.691	12.7	19.4
<b>248075</b>	2004 <i>PO</i> <sub>56</sub>		7 8.9 263°42	0°0/ 8.8 18			<b>513035</b>	2017 <i>VX</i> <sub>4</sub>		7 8.9 268°17			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>350954</b>	2002 <i>XK</i> <sub>72</sub>		7 8.9 182°33	0.4/ 8.8 18			<b>255252</b>	2005 <i>UA</i> <sub>514</sub>		7 8.9 250°61	0.7/ 8.7 18		
5 31	19 40.22	-22 52.0	2.997	3.800	10.5	22.8	5 31	19 38.78	-23 39.9	2.446	3.263	12.2	21.6
6 10	19 35.29	-23 8.1	2.905	3.800	8.3	22.6	6 10	19 34.63	-23 53.6	2.352	3.256	9.6	21.5
6 20	19 28.72	-23 26.4	2.836	3.800	5.6	22.4	6 20	19 28.54	-24 9.8	2.281	3.249	6.5	21.2
6 30	19 20.95	-23 45.3	2.795	3.800	2.7	22.2	6 30	19 20.96	-24 26.4	2.236	3.241	3.2	21.0
7 10	19 12.55	-24 2.8	2.783	3.799	0.6	22.0	7 10	19 12.58	-24 41.2	2.218	3.234	0.9	20.8
7 20	19 4.17	-24 17.5	2.800	3.797	3.4	22.3	7 20	19 4.19	-24 52.6	2.228	3.226	4.1	21.1
7 30	18 56.50	-24 28.6	2.846	3.795	6.3	22.5	7 30	18 56.65	-24 59.5	2.266	3.218	7.5	21.3
8 9	18 50.11	-24 35.7	2.918	3.792	8.9	22.6	8 9	18 50.64	-25 1.9	2.328	3.210	10.5	21.4
<b>309706</b>	Avila		7 8.9 50°01	4.4/ 6.7 18			<b>133644</b>	2003 <i>UJ</i> <sub>148</sub>		7 8.9 265°38	1°5/ 9.5 18		
5 31	19 41.13	-29 50.5	2.038	2.865	13.9	19.6	5 31	19 38.87	-16 29.1	1.961	2.780	14.7	20.0
6 10	19 37.02	-31 21.2	1.972	2.878	11.0	19.5	6 10	19 35.14	-16 44.4	1.871	2.773	11.8	19.8
6 20	19 30.45	-32 53.5	1.929	2.892	7.9	19.3	6 20	19 29.13	-17 8.9	1.802	2.767	8.2	19.6
6 30	19 21.95	-34 21.0	1.912	2.906	5.2	19.2	6 30	19 21.33	-17 41.2	1.757	2.760	4.3	19.3
7 10	19 12.43	-35 37.3	1.922	2.920	4.6	19.1	7 10	19 12.53	-18 18.6	1.738	2.753	1.5	19.1
7 20	19 2.94	-36 38.0	1.959	2.935	6.8	19.3	7 20	19 3.68	-18 58.4	1.747	2.747	4.7	19.3
7 30	18 54.59	-37 21.0	2.022	2.949	9.7	19.5	7 30	18 55.79	-19 37.9	1.781	2.740	8.7	19.5
8 9	18 48.28	-37 47.5	2.108	2.964	12.5	19.7	8 9	18 49.72	-20 15.0	1.840	2.733	12.3	19.7
<b>113005</b>	2002 <i>RF</i> <sub>39</sub>		7 8.9 274°16	2°5/ 9.7 17			<b>380859</b>	2006 <i>BN</i> <sub>139</sub>		7 8.9 189°52	0°2/ 8.9 18		
5 31	19 38.70	-15 14.3	1.969	2.784	14.8	20.2	5 31	19 42.60	-21 55.0	2.355	3.164	12.8	22.2
6 10	19 34.92	-15 7.2	1.881	2.780	11.9	20.0	6 10	19 37.62	-22 6.6	2.264	3.163	10.1	22.0
6 20	19 28.91	-15 8.5	1.814	2.775	8.4	19.8	6 20	19 30.57	-22 21.7	2.196	3.161	6.9	21.8
6 30	19 21.18	-15 17.8	1.770	2.770	4.8	19.6	6 30	19 21.93	-22 38.3	2.154	3.159	3.3	21.6
7 10	19 12.52	-15 33.8	1.753	2.765	2.5	19.4	7 10	19 12.47	-22 54.2	2.140	3.156	0.4	21.3
7 20	19 3.86	-15 54.7	1.763	2.761	5.0	19.6	7 20	19 3.03	-23 7.4	2.154	3.153	4.2	21.6
7 30	18 56.19	-16 18.6	1.799	2.756	8.7	19.8	7 30	18 54.51	-23 17.0	2.197	3.149	7.7	21.8
8 9	18 50.31	-16 43.8	1.858	2.751	12.2	20.0	8 9	18 47.66	-23 22.8	2.264	3.144	10.8	22.0
<b>469554</b>	2003 <i>UN</i> <sub>93</sub>		7 8.9 298°94	6°6/10.1 18			<b>240175</b>	2002 <i>PK</i> <sub>191</sub>		7 8.9 23°67	1°8/ 8.4 17		
5 31	19 38.08	- 8 17.6	1.781	2.584	16.6	21.2	5 31	19 40.45	-25 22.3	1.767	2.602	15.4	20.8
6 10	19 34.78	- 7 21.1	1.681	2.563	13.9	21.0	6 10	19 36.67	-25 46.7	1.691	2.604	12.1	20.5
6 20	19 29.06	- 6 34.8	1.600	2.542	10.9	20.7	6 20	19 30.28	-26 13.9	1.635	2.607	8.3	20.3
6 30	19 21.36	- 6 1.9	1.542	2.521	8.0	20.5	6 30	19 21.89	-26 40.3	1.604	2.609	4.2	20.1
7 10	19 12.50	- 5 44.5	1.509	2.500	6.6	20.4	7 10	19 12.47	-27 2.1	1.598	2.612	1.9	19.9
7 20	19 3.46	- 5 43.4	1.500	2.479	8.1	20.4	7 20	19 3.16	-27 16.7	1.618	2.615	5.5	20.2
7 30	18 55.36	- 5 57.6	1.515	2.459	11.1	20.5	7 30	18 55.13	-27 22.9	1.663	2.618	9.5	20.4
8 9	18 49.15	- 6 24.3	1.553	2.439	14.6	20.7	8 9	18 49.28	-27 21.6	1.732	2.621	13.1	20.7
<b>475973</b>	2007 <i>LZ</i> <sub>27</sub>		7 8.9 358°31	10°0/12.8 16			<b>498126</b>	2007 <i>TG</i> <sub>19</sub>		7 8.9 314°13	3°8/ 9.7 17		
5 31	19 31.29	- 1 12.1	1.250	2.069	21.4	21.0	5 31	19 37.46	-15 9.5	1.220	2.071	20.0	21.3
6 10	19 30.13	- 0 32.9	1.181	2.064	18.5	20.8	6 10	19 35.46	-14 45.6	1.134	2.053	16.3	21.0
6 20	19 26.18	- 0 18.8	1.127	2.061	15.1	20.6	6 20	19 30.18	-14 33.0	1.066	2.036	11.8	20.7
6 30	19 20.02	- 0 34.8	1.092	2.059	12.0	20.4	6 30	19 22.14	-14 33.1	1.018	2.020	6.9	20.4
7 10	19 12.66	- 1 22.2	1.077	2.059	10.1	20.3	7 10	19 12.42	-14 45.1	0.992	2.004	3.8	20.1
7 20	19 5.33	- 2 38.4	1.083	2.060	10.7	20.3	7 20	19 2.48	-15 7.2	0.988	1.988	7.3	20.3
7 30	18 59.31	- 4 16.5	1.110	2.062	13.3	20.5	7 30	18 53.98	-15 36.4	1.006	1.974	12.5	20.5
8 9	18 55.65	- 6 6.9	1.157	2.067	16.7	20.7	8 9	18 48.25	-16 9.4	1.044	1.960	17.5	20.8
<b>11598</b>	Kubik		7 8.9 65°64	0°8/ 9.2 18			<b>251935</b>	1999 <i>VR</i> <sub>219</sub>		7 8.9 306°62	5°9/ 7.5 18		
5 31	19 43.31	-18 46.5	1.343	2.183	19.1	18.3	5 31	19 42.43	-32 20.9	1.362	2.213	18.3	20.0
6 10	19 39.27	-19 3.7	1.287	2.202	15.0	18.1	6 10	19 39.62	-33 11.4	1.278	2.197	14.8	19.8
6 20	19 32.17	-19 30.5	1.250	2.222	10.3	17.9	6 20	19 33.17	-34 1.8	1.213	2.181	10.9	19.5
6 30	19 22.78	-20 3.9	1.236	2.242	5.0	17.6	6 30	19 23.63	-34 44.4	1.169	2.165	7.2	19.2
7 10	19 12.36	-20 39.7	1.245	2.261	0.9	17.4	7 10	19 12.25	-35 11.4	1.147	2.150	6.1	19.1
7 20	19 2.32	-21 13.9	1.280	2.281	5.8	17.8	7 20	19 0.73	-35 17.6	1.150	2.135	9.1	19.3
7 30	18 54.00	-21 44.0	1.339	2.301	10.5	18.1	7 30	18 50.90	-35 2.6	1.174	2.121	13.3	19.5
8 9	18 48.35	-22 8.7	1.419	2.321	14.7	18.4	8 9	18 44.22	-34 30.1	1.219	2.107	17.5	19.7
<b>463902</b>	2014 <i>UB</i> <sub>117</sub>		7 8.9 343°21	2°4/ 9.1 17			<b>329800</b>	2004 <i>QL</i> <sub>6</sub>		7 8.9 303°39	3°4/ 9.9 18		
5 31	19 44.24	-20 53.4	1.252	2.099	19.8	20.2	5 31	19 38.28	-14 0.0	1.619	2.445	17.0	20.6
6 10	19 40.50	-19 56.4	1.177	2.096	15.8	19.9	6 10	19 35.19	-13 47.7	1.529	2.433	13.8	20.3
6 20	19 33.33	-19 1.2	1.121	2.093	11.1	19.6	6 20	19 29.45	-13 46.2	1.458	2.421	10.0	20.1
6 30	19 23.48	-18 8.0	1.086	2.091	5.8	19.3	6 30	19 21.59	-13 56.0	1.410	2.409	5.9	19.8
7 10	19 12.28	-17 18.0	1.074	2.089	2.5	19.1	7 10	19 12.52	-14 15.8	1.386	2.397	3.4	19.6
7 20	19 1.28	-16 32.5	1.087	2.087	6.8	19.4	7 20	19 3.34	-14 43.8	1.388	2.386	6.1	19.8
7 30	18 52.07	-15 53.5	1.122	2.086	12.0	19.7	7 30	18 55.28	-15 17.1	1.414	2.374	10.3	20.0
8 9	18 45.80	-15 21.9	1.179	2.085	16.7	19.9	8 9	18 49.37	-15 52.9	1.462	2.363	14.3	20.2
<b>95549</b>	2002 <i>EK</i> <sub>89</sub>		7 8.9 13°51	2°9/ 9.7 18 R			<b>428296</b>	2007 <i>EE</i> <sub>174</sub>		7 8.9 66°34	5°6/ 7.7 18		
5 31	19 36.55	-15 5.2	1.870	2.693	15.2	18.8	5 31	19 45.66	-34 33.4	1.655	2.487	16.4	20.8
6 10	19 33.24	-14 46.5	1.794	2.696	12.2	18.6	6 10	19 41.15	-35 13.2	1.588	2.493	13.2	20.6
6 20	19 27.74	-14 35.9	1.737	2.699	8.7	18.3	6 20	19 33.51	-35 48.6	1.540	2.500	9.7	20.4
6 30	19 20.59	-14 33.6	1.704	2.703	5.0	18.1	6 30	19 23.49	-36 13.1	1.516	2.507	6.6	20.2
7 10	19 12.62	-14 38.7	1.697	2.708	2.9	18.0	7 10	19 12.32	-36 21.4	1.516	2.514	5.7	20.2
7 20	19 4.75	-14 50.0	1.716	2.713	5.2	18.2	7 20	19 1.43	-36 11.4	1.542	2.521	7.9	20.3
7 30	18 57.95	-15 5.7	1.760	2.719	8.8	18.4	7 30	18 52.24	-35 44.3	1.592	2.529	11.2	20.5
8 9	18 52.96	-15 24.1	1.828	2.725	12.1	18.6	8 9	18 45.74	-35 4.1	1.664	2.536	14.5	20.7
<b>266112</b>	2006 <i>SY</i> <sub>274</sub>		7 8.9 312°07										

EPHEMERIDES

7 8.9

7 9.0

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>385248</b>	2001 <i>BH</i> <sub>79</sub>		7 8.9 203°20	2°1/ 8.4	18		<b>424513</b>	2008 <i>ES</i> <sub>23</sub>		7 8.9 218°00	3°0/ 7.9	17	
5 31	19 44.92	-28 42.3	2.467	3.275	12.4	22.1	5 31	19 45.31	-27 28.4	1.899	2.722	15.0	22.2
6 10	19 39.44	-28 53.8	2.373	3.270	9.8	21.9	6 10	19 40.61	-28 15.8	1.809	2.714	11.9	22.0
6 20	19 31.82	-29 4.3	2.302	3.264	6.8	21.7	6 20	19 33.14	-29 6.2	1.740	2.706	8.3	21.7
6 30	19 22.55	-29 10.7	2.257	3.258	3.7	21.5	6 30	19 23.42	-29 54.6	1.696	2.697	4.7	21.5
7 10	19 12.44	-29 10.6	2.240	3.251	2.2	21.4	7 10	19 12.42	-30 35.7	1.678	2.688	3.2	21.4
7 20	19 2.38	-29 2.6	2.252	3.244	4.7	21.5	7 20	19 1.30	-31 5.4	1.688	2.678	6.2	21.6
7 30	18 53.30	-28 46.7	2.292	3.235	7.9	21.7	7 30	18 51.36	-31 22.3	1.724	2.668	10.0	21.8
8 9	18 45.97	-28 24.3	2.357	3.227	10.8	21.9	8 9	18 43.66	-31 27.1	1.783	2.657	13.6	22.0
<b>504970</b>	2011 <i>GB</i> <sub>31</sub>		7 8.9 104°44	5°0/ 7.5	17		<b>168774</b>	2000 <i>RC</i> <sub>28</sub>		7 8.9 298°99	2°5/ 9.3	18	
5 31	19 45.03	-33 6.8	1.804	2.631	15.5	21.3	5 31	19 41.39	-18 41.2	1.349	2.193	18.8	20.0
6 10	19 40.42	-33 56.6	1.734	2.638	12.4	21.1	6 10	19 38.28	-18 7.8	1.262	2.178	15.2	19.7
6 20	19 32.91	-34 43.9	1.685	2.646	9.0	21.0	6 20	19 31.94	-17 39.9	1.193	2.164	10.7	19.4
6 30	19 23.19	-35 22.5	1.660	2.653	6.0	20.8	6 30	19 22.97	-17 17.7	1.146	2.150	5.8	19.1
7 10	19 12.37	-35 47.3	1.661	2.660	5.2	20.8	7 10	19 12.46	-17 0.7	1.122	2.136	2.6	18.9
7 20	19 1.73	-35 55.3	1.688	2.667	7.4	20.9	7 20	19 1.86	-16 48.3	1.122	2.122	6.6	19.1
7 30	18 52.57	-35 46.7	1.739	2.673	10.6	21.1	7 30	18 52.71	-16 40.3	1.145	2.109	11.8	19.3
8 9	18 45.88	-35 24.6	1.813	2.680	13.7	21.3	8 9	18 46.24	-16 36.0	1.189	2.096	16.5	19.6
<b>189606</b>	2000 <i>XV</i> <sub>31</sub>		7 8.9 310°50	4°0/ 8.2	18		<b>118455</b>	1999 <i>VP</i> <sub>191</sub>		7 8.9 56°40	0°8/ 8.7	18	
5 31	19 41.59	-30 38.4	1.547	2.391	16.8	19.3	5 31	19 38.86	-23 18.3	2.154	2.978	13.4	19.8
6 10	19 38.43	-30 58.0	1.452	2.369	13.5	19.1	6 10	19 34.83	-23 37.3	2.083	2.990	10.5	19.6
6 20	19 32.05	-31 16.2	1.377	2.347	9.7	18.8	6 20	19 28.72	-23 59.5	2.033	3.002	7.1	19.5
6 30	19 23.00	-31 27.9	1.324	2.326	5.7	18.5	6 30	19 21.08	-24 22.4	2.008	3.014	3.4	19.2
7 10	19 12.37	-31 28.1	1.295	2.304	4.1	18.3	7 10	19 12.71	-24 43.2	2.010	3.026	0.9	19.1
7 20	19 1.60	-31 13.8	1.291	2.284	7.3	18.5	7 20	19 4.49	-25 0.0	2.039	3.038	4.3	19.3
7 30	18 52.24	-30 45.1	1.311	2.264	11.7	18.7	7 30	18 57.30	-25 11.8	2.096	3.050	7.8	19.6
8 9	18 45.58	-30 5.2	1.352	2.244	15.9	18.9	8 9	18 51.84	-25 18.4	2.176	3.063	10.9	19.8
<b>204056</b>	2003 <i>US</i> <sub>245</sub>		7 8.9 194°60	5°3/ 6.6	18		<b>187484</b>	2006 <i>RK</i> <sub>97</sub>		7 8.9 195°65	2°5/ 9.7	17	
5 31	19 44.24	-34 36.8	2.252	3.066	13.2	20.7	5 31	19 43.07	-15 0.6	2.069	2.872	14.6	21.8
6 10	19 39.46	-35 46.2	2.170	3.065	10.7	20.5	6 10	19 38.25	-14 53.1	1.979	2.869	11.7	21.6
6 20	19 32.16	-36 53.8	2.111	3.063	8.0	20.3	6 20	19 31.17	-14 53.6	1.909	2.866	8.4	21.4
6 30	19 22.85	-37 53.9	2.077	3.061	5.8	20.2	6 30	19 22.35	-15 1.6	1.864	2.862	4.8	21.1
7 10	19 12.41	-38 40.9	2.070	3.058	5.4	20.1	7 10	19 12.58	-15 15.8	1.846	2.858	2.5	21.0
7 20	19 1.93	-39 11.4	2.090	3.055	7.2	20.3	7 20	19 2.81	-15 34.6	1.856	2.853	5.0	21.1
7 30	18 52.54	-39 24.5	2.136	3.052	9.8	20.4	7 30	18 54.02	-15 56.3	1.894	2.847	8.6	21.3
8 9	18 45.18	-39 22.0	2.205	3.049	12.5	20.6	8 9	18 47.04	-16 19.3	1.955	2.840	12.0	21.5
<b>126422</b>	2002 <i>BJ</i> <sub>30</sub>		7 8.9 288°84	10°1/ 6.8	18		<b>5297</b>	Schinkel		7 8.9 185°33	2°9/ 9.9	18	
5 31	19 51.53	-45 25.3	1.713	2.519	17.0	19.2	5 31	19 43.19	-13 43.3	1.732	2.544	16.7	17.5
6 10	19 46.73	-46 19.8	1.625	2.500	14.7	19.0	6 10	19 38.78	-13 46.8	1.649	2.544	13.4	17.3
6 20	19 37.97	-47 3.4	1.555	2.480	12.3	18.8	6 20	19 31.77	-14 1.9	1.585	2.544	9.6	17.1
6 30	19 25.93	-47 26.3	1.507	2.460	10.5	18.6	6 30	19 22.71	-14 27.9	1.545	2.543	5.5	16.8
7 10	19 12.06	-47 20.3	1.482	2.441	10.2	18.5	7 10	19 12.54	-15 2.7	1.530	2.542	2.9	16.6
7 20	18 58.24	-46 41.9	1.480	2.421	11.6	18.6	7 20	19 2.36	-15 43.4	1.542	2.540	5.6	16.8
7 30	18 46.45	-45 33.3	1.501	2.401	14.2	18.7	7 30	18 53.36	-16 26.6	1.580	2.537	9.7	17.1
8 9	18 38.09	-44 2.0	1.543	2.382	17.1	18.8	8 9	18 46.48	-17 9.7	1.642	2.534	13.5	17.3
<b>288204</b>	2003 <i>YM</i> <sub>12</sub>		7 8.9 228°38	2°7/ 7.9	18		<b>80661</b>	2000 <i>BF</i> <sub>10</sub>		7 8.9 298°90	2°7/ 8.5	18	
5 31	19 39.62	-31 45.3	3.092	3.899	10.1	21.3	5 31	19 43.20	-28 13.4	1.464	2.308	17.6	19.2
6 10	19 34.95	-32 5.1	2.996	3.891	8.1	21.1	6 10	19 39.91	-28 19.8	1.366	2.283	14.1	18.9
6 20	19 28.59	-32 22.9	2.924	3.882	5.7	20.9	6 20	19 33.24	-28 25.8	1.286	2.258	10.0	18.6
6 30	19 20.95	-32 36.1	2.878	3.874	3.5	20.8	6 30	19 23.70	-28 27.2	1.229	2.233	5.4	18.2
7 10	19 12.65	-32 42.4	2.860	3.864	2.8	20.7	7 10	19 12.40	-28 19.4	1.195	2.208	2.9	18.0
7 20	19 4.38	-32 40.6	2.872	3.855	4.4	20.8	7 20	19 0.86	-27 59.7	1.186	2.184	6.9	18.2
7 30	18 56.84	-32 30.5	2.911	3.846	6.8	21.0	7 30	18 50.74	-27 28.6	1.201	2.159	11.9	18.4
8 9	18 50.63	-32 13.1	2.975	3.836	9.1	21.1	8 9	18 43.43	-26 49.0	1.237	2.135	16.6	18.6
<b>170999</b>	2005 <i>EK</i> <sub>10</sub>		7 8.9 111°66	2°4/ 9.7	18		<b>262670</b>	2006 <i>WH</i> <sub>128</sub>		7 8.9 178°16	0°7/ 9.2	17	
5 31	19 39.58	-15 15.5	2.023	2.835	14.6	20.2	5 31	19 44.09	-20 19.6	1.937	2.752	15.0	21.4
6 10	19 35.45	-15 8.9	1.944	2.841	11.6	20.0	6 10	19 39.20	-20 14.6	1.853	2.754	11.9	21.2
6 20	19 29.18	-15 10.3	1.886	2.846	8.2	19.8	6 20	19 31.87	-20 14.1	1.790	2.755	8.2	20.9
6 30	19 21.30	-15 19.2	1.852	2.852	4.7	19.6	6 30	19 22.69	-20 16.5	1.751	2.756	4.1	20.7
7 10	19 12.62	-15 34.3	1.845	2.857	2.4	19.5	7 10	19 12.55	-20 20.1	1.740	2.756	0.8	20.4
7 20	19 4.03	-15 53.9	1.865	2.862	4.8	19.6	7 20	19 2.50	-20 23.2	1.756	2.756	4.8	20.7
7 30	18 56.46	-16 16.2	1.911	2.867	8.4	19.9	7 30	18 53.60	-20 25.1	1.799	2.755	8.8	21.0
8 9	18 50.65	-16 39.4	1.981	2.872	11.6	20.1	8 9	18 46.72	-20 25.6	1.866	2.753	12.4	21.2
<b>264224</b>	2010 <i>RL</i> <sub>123</sub>		7 8.9 99°33	3°9/ 9.8	17		<b>385575</b>	2004 <i>VY</i> <sub>27</sub>		7 8.9 296°73	4°6/ 9.5	18	
5 31	19 42.82	-14 17.6	1.519	2.342	18.1	21.0	5 31	19 40.18	-14 0.0	1.703	2.522	16.6	20.9
6 10	19 38.63	-13 46.0	1.448	2.349	14.6	20.8	6 10	19 36.64	-13 8.5	1.602	2.500	13.6	20.6
6 20	19 31.66	-13 24.2	1.396	2.357	10.5	20.6	6 20	19 30.48	-12 23.2	1.521	2.479	10.1	20.3
6 30	19 22.59	-13 13.0	1.366	2.364	6.3	20.3	6 30	19 22.17	-11 45.9	1.463	2.457	6.4	20.1
7 10	19 12.48	-13 11.8	1.362	2.371	3.9	20.2	7 10	19 12.60	-11 18.0	1.430	2.436	4.6	19.9
7 20	19 2.56	-13 19.4	1.382	2.378	6.4	20.4	7 20	19 2.86	-11 0.3	1.422	2.414	6.8	20.0
7 30	18 54.07	-13 34.1	1.428	2.385	10.5	20.6	7 30	18 54.15	-10 52.6	1.439	2.393	10.8	20.2
8 9	18 47.93	-13 53.4	1.495	2.392	14.4	20.9	8 9	18 47.52	-10 53.7	1.479	2.372	14.7	20.3
<b>264956</b>	2002 <i>XB</i> <sub>27</sub>		7 8.9 316°56	3°0/ 7.8	18		<b>276125</b>	2002 <i>GT</i> <sub>99</sub>					