

EPHEMERIDES

8 14.9

8 15.0

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>397005</b>	2005 <i>TB</i> <sub>3</sub>		8 14.9 328°96	4.3/18.3	18		<b>297577</b>	2001 <i>RJ</i> <sub>122</sub>		8 14.9	3°57	6°9/11.3	18
7 10	21 58.04	- 1 50.7	1.722	2.553	16.0	20.9	7 10	22 9.56	-30 41.8	1.556	2.430	15.3	19.2
7 20	21 55.04	- 1 42.0	1.632	2.538	13.0	20.6	7 20	22 4.00	-31 6.5	1.496	2.430	12.1	19.0
7 30	21 49.93	- 1 51.8	1.562	2.522	9.5	20.4	7 30	21 55.63	-31 24.6	1.458	2.430	8.9	18.8
8 9	21 43.24	- 2 19.8	1.515	2.507	6.0	20.2	8 9	21 45.37	-31 28.4	1.443	2.431	7.0	18.7
8 19	21 35.75	- 3 3.4	1.492	2.493	4.3	20.0	8 19	21 34.48	-31 12.2	1.453	2.433	7.8	18.8
8 29	21 28.46	- 3 57.9	1.495	2.480	6.6	20.1	8 29	21 24.41	-30 34.0	1.488	2.435	10.6	19.0
9 8	21 22.39	- 4 57.0	1.522	2.467	10.3	20.3	9 8	21 16.40	-29 35.3	1.545	2.438	13.8	19.2
9 18	21 18.32	- 5 54.4	1.572	2.455	14.0	20.5	9 18	21 11.20	-28 20.5	1.624	2.442	16.8	19.4
<b>288325</b>	2004 <i>BB</i> <sub>61</sub>		8 14.9 344°95	1°5/13.8	18		<b>50257</b>	2000 <i>BQ</i> <sub>26</sub>		8 14.9 258°17	1°9/13.6	18	R
7 10	21 59.70	-14 11.5	1.655	2.527	14.7	20.2	7 10	22 5.74	-16 15.0	1.725	2.588	14.6	19.8
7 20	21 56.34	-15 5.0	1.583	2.522	11.1	20.0	7 20	22 1.04	-16 53.7	1.636	2.571	11.1	19.5
7 30	21 50.74	-16 10.3	1.532	2.518	7.0	19.7	7 30	21 53.86	-17 41.8	1.569	2.554	7.1	19.2
8 9	21 43.53	-17 21.5	1.505	2.515	2.7	19.5	8 9	21 44.80	-18 33.6	1.527	2.536	2.9	18.9
8 19	21 35.58	-18 31.4	1.505	2.512	2.9	19.5	8 19	21 34.76	-19 23.0	1.512	2.518	3.2	18.9
8 29	21 28.01	-19 33.0	1.530	2.509	7.2	19.8	8 29	21 24.95	-20 3.5	1.523	2.499	7.6	19.1
9 8	21 21.83	-20 21.0	1.580	2.507	11.4	20.0	9 8	21 16.57	-20 30.8	1.559	2.480	11.9	19.4
9 18	21 17.82	-20 52.6	1.652	2.506	15.0	20.2	9 18	21 10.52	-20 43.0	1.617	2.461	15.7	19.6
<b>261784</b>	2006 <i>BV</i> <sub>147</sub>		8 14.9 226°00	0°5/15.6	18		<b>220680</b>	2004 <i>RV</i> <sub>220</sub>		8 14.9 305°03	1°6/16.1	18	
7 10	21 59.58	- 9 43.2	2.826	3.657	10.4	21.5	7 10	22 3.20	- 9 48.1	2.111	2.950	13.2	19.8
7 20	21 55.34	-10 13.5	2.733	3.648	8.0	21.4	7 20	21 58.57	- 9 31.6	2.015	2.933	10.3	19.6
7 30	21 49.68	-10 52.7	2.664	3.639	5.2	21.2	7 30	21 52.00	- 9 23.7	1.942	2.916	6.9	19.4
8 9	21 43.04	-11 38.2	2.622	3.629	2.2	20.9	8 9	21 44.01	- 9 23.0	1.895	2.900	3.3	19.1
8 19	21 35.93	-12 26.9	2.609	3.619	1.2	20.8	8 19	21 35.32	- 9 27.3	1.874	2.883	2.0	19.0
8 29	21 28.97	-13 15.1	2.625	3.608	4.3	21.1	8 29	21 26.84	- 9 33.9	1.882	2.867	5.5	19.2
9 8	21 22.79	-13 59.3	2.669	3.597	7.3	21.2	9 8	21 19.45	- 9 39.7	1.916	2.851	9.2	19.4
9 18	21 17.89	-14 37.0	2.739	3.586	9.9	21.4	9 18	21 13.86	- 9 42.3	1.973	2.835	12.5	19.6
<b>318281</b>	2004 <i>TV</i> <sub>33</sub>		8 14.9 282°51	1°9/13.3	18		<b>356938</b>	2012 <i>TT</i> <sub>150</sub>		8 15.0 310°70	1°3/14.1	18	
7 10	22 1.24	-17 40.8	2.325	3.184	11.5	20.8	7 10	22 3.14	-15 32.0	1.603	2.473	15.2	20.4
7 20	21 56.99	-18 17.6	2.232	3.165	8.7	20.5	7 20	21 59.11	-15 53.6	1.521	2.460	11.6	20.2
7 30	21 50.94	-19 0.3	2.162	3.146	5.5	20.3	7 30	21 52.62	-16 24.2	1.461	2.447	7.4	19.9
8 9	21 43.57	-19 44.5	2.118	3.126	2.5	20.1	8 9	21 44.31	-16 59.1	1.425	2.435	2.8	19.6
8 19	21 35.56	-20 25.9	2.103	3.107	2.9	20.1	8 19	21 35.13	-17 32.6	1.415	2.423	2.7	19.6
8 29	21 27.71	-20 59.9	2.115	3.087	6.1	20.3	8 29	21 26.28	-17 59.2	1.430	2.411	7.4	19.8
9 8	21 20.86	-21 23.6	2.154	3.068	9.5	20.4	9 8	21 18.94	-18 14.9	1.469	2.400	11.8	20.1
9 18	21 15.67	-21 35.3	2.216	3.048	12.4	20.6	9 18	21 13.97	-18 17.8	1.530	2.389	15.7	20.3
<b>87456</b>	2000 <i>QM</i> <sub>122</sub>		8 14.9 341°88	0°4/15.1	18		<b>367972</b>	2012 <i>DS</i> <sub>97</sub>		8 15.0 230°53	1°9/17.3	18	
7 10	21 59.44	-15 15.6	1.019	1.920	19.4	18.0	7 10	21 58.71	- 3 40.8	2.827	3.636	11.0	21.2
7 20	21 57.46	-14 36.0	0.943	1.897	15.1	17.7	7 20	21 54.70	- 4 16.0	2.729	3.626	8.7	21.1
7 30	21 52.16	-14 3.0	0.884	1.875	9.8	17.3	7 30	21 49.31	- 5 4.0	2.654	3.615	6.1	20.9
8 9	21 44.27	-13 34.2	0.845	1.855	3.9	16.9	8 9	21 42.93	- 6 2.8	2.606	3.604	3.3	20.7
8 19	21 35.04	-13 6.5	0.827	1.838	2.5	16.8	8 19	21 36.07	- 7 9.2	2.586	3.593	2.0	20.6
8 29	21 26.23	-12 36.7	0.830	1.822	8.8	17.1	8 29	21 29.35	- 8 19.2	2.596	3.581	4.2	20.7
9 8	21 19.54	-12 2.1	0.853	1.809	14.7	17.4	9 8	21 23.37	- 9 28.4	2.635	3.569	7.1	20.9
9 18	21 16.15	-11 21.7	0.894	1.799	19.9	17.6	9 18	21 18.63	-10 32.8	2.700	3.556	9.7	21.0
<b>377636</b>	2005 <i>TW</i> <sub>62</sub>		8 14.9 235°27	1°1/14.2	18		<b>26815</b>	1986 <i>QR</i> <sub>1</sub>		8 15.0 32°37	1°8/13.9	18	
7 10	22 4.58	-14 19.7	1.856	2.713	14.0	21.6	7 10	22 5.79	-16 44.6	1.349	2.226	17.0	17.6
7 20	21 59.87	-14 55.3	1.773	2.704	10.7	21.4	7 20	22 1.28	-17 3.3	1.289	2.232	12.9	17.4
7 30	21 52.94	-15 40.7	1.711	2.695	6.8	21.1	7 30	21 54.00	-17 30.0	1.250	2.238	8.1	17.1
8 9	21 44.38	-16 31.1	1.675	2.685	2.6	20.8	8 9	21 44.80	-17 59.0	1.234	2.244	3.2	16.8
8 19	21 35.04	-17 20.9	1.667	2.675	2.4	20.8	8 19	21 34.87	-18 23.9	1.243	2.251	3.2	16.9
8 29	21 25.99	-18 4.5	1.685	2.664	6.7	21.1	8 29	21 25.64	-18 39.4	1.276	2.258	8.1	17.2
9 8	21 18.26	-18 37.5	1.729	2.653	10.7	21.3	9 8	21 18.34	-18 42.4	1.333	2.265	12.6	17.4
9 18	21 12.64	-18 57.8	1.796	2.642	14.3	21.5	9 18	21 13.79	-18 32.2	1.410	2.273	16.5	17.7
<b>476639</b>	2008 <i>SD</i> <sub>253</sub>		8 14.9 279°67	2°8/12.9	16		<b>508560</b>	2016 <i>UT</i> <sub>142</sub>		8 15.0 266°97	7°2/20.1	18	
7 10	22 5.27	-19 14.3	1.828	2.693	13.8	22.5	7 10	22 3.27	+ 4 48.0	1.907	2.689	16.5	21.1
7 20	22 0.64	-19 52.9	1.733	2.670	10.5	22.2	7 20	21 58.86	+ 5 32.2	1.813	2.676	14.0	20.9
7 30	21 53.59	-20 37.8	1.661	2.645	6.8	21.9	7 30	21 52.33	+ 5 57.5	1.739	2.663	11.2	20.7
8 9	21 44.69	-21 23.5	1.614	2.621	3.4	21.7	8 9	21 44.19	+ 6 1.8	1.687	2.650	8.6	20.5
8 19	21 34.81	-22 3.8	1.594	2.596	4.0	21.7	8 19	21 35.21	+ 5 44.9	1.659	2.637	7.2	20.4
8 29	21 25.10	-22 32.8	1.600	2.571	7.9	21.8	8 29	21 26.39	+ 5 9.1	1.658	2.623	8.1	20.5
9 8	21 16.73	-22 47.1	1.632	2.546	11.9	22.0	9 8	21 18.72	+ 4 19.8	1.681	2.610	10.7	20.6
9 18	21 10.60	-22 45.5	1.685	2.520	15.6	22.2	9 18	21 13.02	+ 3 23.1	1.727	2.596	13.7	20.7
<b>238636</b>	2005 <i>CF</i> <sub>55</sub>		8 14.9 171°36	1°3/14.0	18	R	<b>253527</b>	2003 <i>SD</i> <sub>189</sub>		8 15.0 312°38	3°6/17.4	17	
7 10	22 4.01	-15 42.6	1.911	2.770	13.6	21.1	7 10	21 59.95	- 3 45.8	1.292	2.148	19.0	20.4
7 20	21 59.26	-16 10.5	1.838	2.771	10.3	20.9	7 20	21 57.17	- 3 55.2	1.211	2.134	15.2	20.1
7 30	21 52.43	-16 45.7	1.787	2.771	6.5	20.7	7 30	21 51.65	- 4 28.4	1.149	2.121	10.7	19.8
8 9	21 44.14	-17 23.8	1.762	2.772	2.5	20.4	8 9	21 44.03	- 5 23.9	1.107	2.108	6.0	19.5
8 19	21 35.24	-17 59.6	1.764	2.772	2.5	20.4	8 19	21 35.31	- 6 36.8	1.089	2.096	3.7	19.3
8 29	21 26.74	-18 28.7	1.794	2.772	6.4	20.7	8 29	21 26.86	- 7 58.7	1.094	2.084	7.6	19.5
9 8	21 19.57	-18 47.7	1.849	2.772	10.2	20.9	9 8	21 20.07	- 9 19.8	1.122	2.073	12.6	19.8
9 18	21 14.43	-18 55.2	1.927	2.772	13.5	21.1	9 18	21 15.94	-10 31.9	1.171	2.062	17.2	20.0
<b>246089</b>	2007 <i>AA</i> <sub>12</sub>		8 14.9 110°07	2°0/16.6	18		<b>175580</b>	20					

EPHEMERIDES

8 15.0

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>17520</b>	Hisayukiyoshio		8 15.0 186°07	0°2/15.1 18			<b>120832</b>	1998 HQ <sub>133</sub>		8 15.0 164°52	1°6/13.6 17		
7 10	22 7.37	-12 58.8	2.244	3.081	12.6	18.4	7 10	22 4.42	-15 53.5	2.094	2.948	12.7	20.8
7 20	22 1.49	-13 1.4	2.162	3.081	9.6	18.2	7 20	21 59.42	-16 40.1	2.022	2.952	9.6	20.6
7 30	21 53.71	-13 10.9	2.103	3.080	6.2	18.0	7 30	21 52.48	-17 34.0	1.973	2.956	6.0	20.4
8 9	21 44.63	-13 24.5	2.071	3.079	2.4	17.8	8 9	21 44.20	-18 30.2	1.951	2.960	2.5	20.2
8 19	21 34.98	-13 39.1	2.068	3.078	1.5	17.7	8 19	21 35.34	-19 23.4	1.957	2.963	2.7	20.2
8 29	21 25.68	-13 51.6	2.094	3.075	5.3	18.0	8 29	21 26.84	-20 8.5	1.991	2.965	6.3	20.4
9 8	21 17.55	-13 59.3	2.147	3.072	8.9	18.2	9 8	21 19.57	-20 42.1	2.051	2.967	9.8	20.7
9 18	21 11.25	-14 0.8	2.225	3.069	12.0	18.4	9 18	21 14.18	-21 2.7	2.135	2.969	12.8	20.9
<b>105542</b>	2000 RR <sub>40</sub>		8 15.0 193°95	4°3/18.9 18 R			<b>394485</b>	2007 TV <sub>81</sub>		8 15.0 291°12	6°7/20.7 18		
7 10	22 1.31	+ 0 17.4	2.313	3.109	13.5	19.5	7 10	21 59.48	+ 5 50.7	1.914	2.697	16.4	21.2
7 20	21 56.88	+ 0 32.2	2.228	3.108	11.1	19.3	7 20	21 56.05	+ 6 3.8	1.812	2.676	13.9	21.0
7 30	21 50.78	+ 0 32.1	2.164	3.108	8.3	19.1	7 30	21 50.58	+ 5 54.6	1.730	2.656	11.1	20.8
8 9	21 43.51	+ 0 17.5	2.125	3.107	5.6	19.0	8 9	21 43.57	+ 5 21.7	1.669	2.635	8.4	20.6
8 19	21 35.71	+ 0 10.0	2.112	3.106	4.3	18.9	8 19	21 35.70	+ 4 25.8	1.633	2.615	6.8	20.5
8 29	21 28.15	+ 0 47.4	2.127	3.104	5.7	19.0	8 29	21 27.93	+ 3 11.0	1.623	2.595	7.7	20.5
9 8	21 21.58	+ 1 30.3	2.169	3.103	8.3	19.1	9 8	21 21.22	+ 1 43.9	1.637	2.574	10.4	20.6
9 18	21 16.58	+ 2 14.4	2.236	3.102	11.1	19.3	9 18	21 16.38	+ 0 12.4	1.676	2.554	13.6	20.7
<b>323651</b>	2005 BR <sub>20</sub>		8 15.0 199°31	1°0/14.3 17			<b>523223</b>	2016 WJ <sub>57</sub>		8 15.0 232°07	0°3/15.4 18		
7 10	22 6.18	-13 30.2	1.725	2.581	14.9	22.3	7 10	21 59.60	- 9 37.4	2.491	3.328	11.5	21.5
7 20	22 1.20	-14 13.6	1.648	2.578	11.4	22.0	7 20	21 55.56	-10 20.4	2.401	3.320	8.8	21.3
7 30	21 53.85	-15 8.3	1.592	2.575	7.2	21.8	7 30	21 49.96	-11 14.3	2.336	3.312	5.7	21.1
8 9	21 44.76	-16 9.1	1.562	2.571	2.7	21.5	8 9	21 43.23	-12 15.7	2.297	3.304	2.3	20.9
8 19	21 34.88	-17 9.4	1.559	2.567	2.5	21.5	8 19	21 35.97	-13 20.5	2.286	3.296	1.3	20.8
8 29	21 25.35	-18 2.9	1.583	2.562	7.0	21.8	8 29	21 28.89	-14 24.0	2.305	3.288	4.8	21.0
9 8	21 17.30	-18 44.5	1.632	2.556	11.2	22.0	9 8	21 22.70	-15 21.7	2.351	3.279	8.1	21.2
9 18	21 11.53	-19 11.8	1.704	2.550	14.9	22.2	9 18	21 17.96	-16 10.6	2.422	3.270	11.0	21.4
<b>161812</b>	2006 WV <sub>24</sub>		8 15.0 140°12	3°6/17.7 18			<b>192729</b>	1999 TR <sub>182</sub>		8 15.0 242°28	1°7/16.4 18		
7 10	22 3.53	- 2 54.6	1.663	2.492	16.6	20.6	7 10	22 3.42	- 7 38.0	2.109	2.941	13.5	20.8
7 20	21 59.13	- 2 59.5	1.590	2.496	13.3	20.4	7 20	21 58.75	- 7 47.7	2.015	2.928	10.6	20.6
7 30	21 52.48	- 3 23.2	1.536	2.499	9.4	20.1	7 30	21 52.15	- 8 9.7	1.944	2.916	7.1	20.4
8 9	21 44.22	- 4 4.1	1.506	2.503	5.5	19.9	8 9	21 44.11	- 8 41.6	1.898	2.902	3.4	20.1
8 19	21 35.26	- 4 58.2	1.501	2.506	3.6	19.8	8 19	21 35.37	- 9 20.4	1.880	2.889	2.0	20.0
8 29	21 26.69	- 5 59.6	1.523	2.509	6.4	20.0	8 29	21 26.83	-10 1.5	1.890	2.875	5.5	20.2
9 8	21 19.57	- 7 1.5	1.570	2.512	10.4	20.2	9 8	21 19.36	-10 40.7	1.926	2.861	9.2	20.4
9 18	21 14.63	- 7 58.2	1.641	2.515	14.0	20.5	9 18	21 13.70	-11 14.3	1.987	2.846	12.6	20.6
<b>61499</b>	2000 QD <sub>51</sub>		8 15.0 336°00	0°9/14.3 18			<b>168085</b>	2006 DC <sub>70</sub>		8 15.0 84°18	0°2/15.2 18		
7 10	22 1.48	-14 40.1	1.864	2.727	13.7	19.3	7 10	22 2.68	-10 46.2	1.761	2.615	14.8	20.2
7 20	21 57.44	-15 4.8	1.788	2.722	10.4	19.1	7 20	21 58.35	-11 18.2	1.694	2.622	11.3	20.0
7 30	21 51.34	-15 38.0	1.733	2.718	6.6	18.9	7 30	21 51.91	-12 2.7	1.649	2.630	7.2	19.8
8 9	21 43.77	-16 15.4	1.704	2.713	2.5	18.6	8 9	21 44.00	-12 55.2	1.628	2.637	2.8	19.6
8 19	21 35.56	-16 52.2	1.701	2.709	2.2	18.6	8 19	21 35.49	-13 50.2	1.634	2.644	1.7	19.5
8 29	21 27.69	-17 23.6	1.724	2.706	6.4	18.8	8 29	21 27.43	-14 42.0	1.667	2.651	6.1	19.8
9 8	21 21.12	-17 45.8	1.773	2.702	10.2	19.1	9 8	21 20.75	-15 25.5	1.725	2.659	10.2	20.1
9 18	21 16.53	-17 56.9	1.845	2.699	13.6	19.3	9 18	21 16.15	-15 57.9	1.807	2.666	13.6	20.3
<b>514754</b>	2007 EX <sub>22</sub>		8 15.0 217°37	1°3/16.5 18			<b>446185</b>	2013 FF <sub>17</sub>		8 15.0 75°51	1°0/15.9 18		
7 10	21 59.86	- 6 35.8	2.829	3.648	10.8	22.9	7 10	22 0.88	- 8 56.9	2.192	3.031	12.8	21.2
7 20	21 55.56	- 7 2.9	2.734	3.639	8.4	22.8	7 20	21 56.59	- 9 14.5	2.121	3.039	9.8	21.0
7 30	21 49.85	- 7 40.6	2.663	3.631	5.7	22.6	7 30	21 50.60	- 9 42.9	2.072	3.047	6.5	20.8
8 9	21 43.16	- 8 26.7	2.619	3.622	2.8	22.4	8 9	21 43.47	-10 19.2	2.049	3.056	2.9	20.6
8 19	21 35.99	- 9 18.3	2.604	3.612	1.6	22.3	8 19	21 35.87	-10 59.8	2.054	3.064	1.6	20.5
8 29	21 28.97	-10 11.6	2.618	3.602	4.2	22.5	8 29	21 28.62	-11 40.4	2.087	3.072	5.0	20.8
9 8	21 22.73	-11 2.9	2.661	3.592	7.1	22.6	9 8	21 22.45	-12 17.2	2.146	3.080	8.4	21.0
9 18	21 17.76	-11 49.1	2.729	3.581	9.8	22.8	9 18	21 17.94	-12 47.3	2.230	3.089	11.4	21.2
<b>345913</b>	2007 RQ <sub>167</sub>		8 15.0 131°25	1°6/16.5 16			<b>368811</b>	2005 YK <sub>186</sub>		8 15.0 117°81	3°5/15.9 18		
7 10	22 1.36	- 5 44.5	2.061	2.891	13.8	21.5	7 10	22 21.19	-11 53.5	1.074	1.933	21.8	19.9
7 20	21 57.07	- 6 25.7	1.987	2.899	10.7	21.3	7 20	22 13.68	-10 27.3	1.010	1.937	17.1	19.7
7 30	21 50.97	- 7 22.1	1.936	2.907	7.2	21.1	7 30	22 2.29	- 9 8.2	0.964	1.941	11.6	19.4
8 9	21 43.60	- 8 30.1	1.910	2.914	3.4	20.9	8 9	21 48.11	- 7 56.9	0.941	1.946	5.8	19.1
8 19	21 35.71	- 9 44.9	1.912	2.921	1.9	20.8	8 19	21 32.84	- 6 54.6	0.942	1.950	4.0	19.0
8 29	21 28.15	-11 0.4	1.942	2.928	5.3	21.0	8 29	21 18.59	- 6 1.4	0.968	1.953	9.3	19.3
9 8	21 21.72	-12 10.9	2.000	2.935	8.9	21.2	9 8	21 7.18	- 5 16.4	1.017	1.957	14.8	19.6
9 18	21 17.06	-13 12.2	2.081	2.941	12.1	21.5	9 18	20 59.65	- 4 37.3	1.086	1.961	19.5	19.9
<b>233866</b>	2008 VN <sub>76</sub>		8 15.0 64°51	0°5/14.6 16			<b>230347</b>	2002 CQ <sub>273</sub>		8 15.0 166°76	5°7/19.8 18		
7 10	22 2.20	-12 10.5	1.693	2.553	15.0	20.3	7 10	22 4.02	+ 3 26.5	2.099	2.879	15.2	20.5
7 20	21 58.07	-12 51.8	1.629	2.561	11.3	20.1	7 20	21 59.10	+ 3 50.4	2.017	2.883	12.7	20.4
7 30	21 51.75	-13 45.1	1.586	2.569	7.2	19.9	7 30	21 52.29	+ 3 56.2	1.956	2.886	9.8	20.2
8 9	21 43.93	-14 45.2	1.568	2.577	2.7	19.6	8 9	21 44.16	+ 3 43.6	1.918	2.889	7.2	20.0
8 19	21 35.50	-15 45.9	1.576	2.585	2.1	19.6	8 19	21 35.42	+ 3 13.7	1.907	2.891	5.8	20.0
8 29	21 27.54	-16 40.9	1.611	2.594	6.5	19.9	8 29	21 26.97	+ 2 30.0	1.922	2.893	6.8	20.0
9 8	21 21.01	-17 25.2	1.671	2.602	10.6	20.2	9 8	21 19.65	+ 1 37.5	1.964	2.894	9.3	20.2
9 18	21 16.63	-17 56.2	1.753	2.610	14.1	20.4	9 18	21 14.13	+ 0 41.9	2.030	2.895	12.1	20.4
<b>158778</b>	2003 SC <sub>67</sub>		8 15.0 282°50	5°8/21.5 18			<b>123734</b>	2001 AE <sub>10</sub>		8 15.0 229°42	0°7/14.3 18		
7 10	21 57.66	+ 7 34.6	2.448	3.206	13.9	19.8	7 10	22 0.72					

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>148387</b>	2000 <i>TS</i> <sub>29</sub>		8 15.0 291°48	1.2°/14.2	18		<b>324341</b>	2006 <i>PN</i> <sub>26</sub>		8 15.0 350°45	4.9°/12.8	17	
7 10	22 4.44	-16 37.6	2.065	2.921	12.8	20.5	7 10	22 3.00	-22 22.7	1.009	1.915	19.1	19.9
7 20	21 59.63	-16 46.6	1.971	2.902	9.8	20.2	7 20	22 0.19	-22 45.0	0.950	1.906	14.7	19.6
7 30	21 52.77	-17 1.0	1.901	2.884	6.2	20.0	7 30	21 53.88	-23 10.6	0.908	1.899	9.7	19.3
8 9	21 44.39	-17 17.2	1.856	2.865	2.4	19.7	8 9	21 44.98	-23 30.7	0.887	1.893	5.5	19.1
8 19	21 35.26	-17 31.3	1.839	2.847	2.3	19.7	8 19	21 34.98	-23 36.9	0.886	1.889	6.2	19.1
8 29	21 26.37	-17 39.8	1.849	2.828	6.2	19.9	8 29	21 25.77	-23 23.6	0.907	1.886	11.0	19.4
9 8	21 18.66	-17 40.1	1.886	2.810	10.0	20.1	9 8	21 18.98	-22 49.4	0.948	1.884	16.0	19.6
9 18	21 12.88	-17 31.0	1.945	2.791	13.4	20.2	9 18	21 15.64	-21 56.9	1.007	1.884	20.5	19.9
<b>269685</b>	1996 <i>BQ</i> <sub>10</sub>		8 15.0 246°33	2.5°/17.0	17		<b>448398</b>	2009 <i>RD</i> <sub>3</sub>		8 15.0 323°73	7.9°/22.8	17	
7 10	22 2.87	- 4 43.5	1.759	2.592	15.7	21.6	7 10	21 56.40	+10 11.4	1.990	2.749	16.6	20.7
7 20	21 58.72	- 5 3.1	1.670	2.582	12.4	21.3	7 20	21 53.64	+10 26.0	1.892	2.732	14.4	20.5
7 30	21 52.33	- 5 40.7	1.602	2.570	8.6	21.1	7 30	21 49.02	+10 16.4	1.811	2.715	12.0	20.3
8 9	21 44.26	- 6 34.0	1.558	2.559	4.6	20.8	8 9	21 43.02	+ 9 40.4	1.752	2.698	9.6	20.1
8 19	21 35.35	- 7 38.8	1.539	2.547	2.7	20.7	8 19	21 36.28	+ 8 38.6	1.716	2.682	8.1	20.0
8 29	21 26.65	- 8 48.7	1.548	2.535	6.2	20.9	8 29	21 29.69	+ 7 14.6	1.705	2.667	8.3	20.0
9 8	21 19.22	- 9 57.0	1.583	2.522	10.4	21.1	9 8	21 24.10	+ 5 35.1	1.720	2.652	10.3	20.1
9 18	21 13.90	-10 57.8	1.640	2.510	14.3	21.3	9 18	21 20.25	+ 3 48.3	1.757	2.637	12.9	20.2
<b>479876</b>	2014 <i>GD</i> <sub>51</sub>		8 15.0 116°36	1.3°/16.4	18		<b>353832</b>	2012 <i>UX</i> <sub>108</sub>		8 15.0 275°03	2.6°/17.0	18	
7 10	22 0.11	- 5 40.2	2.125	2.955	13.5	21.1	7 10	22 2.65	- 5 28.2	1.915	2.745	14.7	21.3
7 20	21 56.11	- 6 32.3	2.051	2.963	10.4	20.9	7 20	21 58.47	- 5 31.4	1.816	2.726	11.7	21.1
7 30	21 50.37	- 7 39.6	1.999	2.970	7.0	20.7	7 30	21 52.17	- 5 49.4	1.739	2.706	8.1	20.8
8 9	21 43.42	- 8 58.6	1.972	2.977	3.2	20.5	8 9	21 44.26	- 6 20.8	1.685	2.686	4.4	20.6
8 19	21 35.95	-10 23.8	1.974	2.984	1.7	20.4	8 19	21 35.49	- 7 2.6	1.659	2.666	2.8	20.4
8 29	21 28.78	-11 49.1	2.005	2.990	5.1	20.6	8 29	21 26.85	- 7 50.1	1.659	2.645	6.0	20.6
9 8	21 22.69	-13 8.5	2.062	2.997	8.7	20.8	9 8	21 19.34	- 8 38.1	1.685	2.624	10.0	20.8
9 18	21 18.28	-14 17.5	2.145	3.003	11.8	21.1	9 18	21 13.77	- 9 21.7	1.735	2.603	13.7	21.0
<b>254996</b>	2005 <i>TT</i> <sub>5</sub>		8 15.0 350°99	2.1°/13.7	18		<b>250039</b>	2002 <i>CH</i> <sub>164</sub>		8 15.0 224°28	1.9°/13.2	18	
7 10	22 5.04	-19 24.9	1.745	2.614	14.2	19.8	7 10	22 2.32	-18 7.8	2.399	3.255	11.3	21.4
7 20	22 0.27	-19 29.2	1.672	2.610	10.8	19.6	7 20	21 57.72	-18 45.7	2.318	3.249	8.5	21.2
7 30	21 53.21	-19 36.8	1.621	2.606	6.9	19.3	7 30	21 51.39	-19 28.5	2.261	3.243	5.4	21.0
8 9	21 44.54	-19 43.2	1.595	2.603	3.0	19.1	8 9	21 43.86	-20 11.8	2.230	3.238	2.5	20.8
8 19	21 35.22	-19 44.3	1.595	2.601	3.2	19.1	8 19	21 35.79	-20 51.4	2.228	3.231	2.9	20.8
8 29	21 26.38	-19 36.8	1.621	2.599	7.1	19.3	8 29	21 27.98	-21 23.3	2.254	3.225	5.9	21.0
9 8	21 19.06	-19 19.1	1.673	2.597	11.0	19.6	9 8	21 21.19	-21 44.7	2.307	3.218	9.0	21.2
9 18	21 14.00	-18 51.1	1.746	2.597	14.4	19.8	9 18	21 16.02	-21 54.5	2.383	3.211	11.8	21.3
<b>435841</b>	2008 <i>WD</i> <sub>102</sub>		8 15.0 317°66	6.9°/19.4	18		<b>469188</b>	2016 <i>GK</i> <sub>116</sub>		8 15.0 32°46	2.1°/16.3	17	
7 10	22 0.16	+ 1 44.7	1.514	2.335	18.4	20.2	7 10	22 1.55	- 7 28.1	1.039	1.919	20.8	20.4
7 20	21 57.03	+ 2 23.2	1.424	2.317	15.4	19.9	7 20	21 58.51	- 7 39.8	0.993	1.932	16.1	20.2
7 30	21 51.47	+ 2 40.4	1.352	2.299	11.9	19.7	7 30	21 52.46	- 8 13.4	0.964	1.947	10.7	19.9
8 9	21 44.01	+ 2 34.3	1.302	2.282	8.6	19.5	8 9	21 44.36	- 9 4.1	0.955	1.962	5.0	19.7
8 19	21 35.53	+ 2 5.3	1.274	2.265	6.9	19.3	8 19	21 35.53	-10 4.4	0.968	1.978	2.7	19.6
8 29	21 27.22	+ 1 17.1	1.270	2.249	8.4	19.4	8 29	21 27.53	-11 5.1	1.004	1.996	7.8	20.0
9 8	21 20.29	+ 0 16.6	1.290	2.234	11.9	19.5	9 8	21 21.70	-11 57.9	1.062	2.014	13.0	20.3
9 18	21 15.68	- 0 48.3	1.331	2.219	15.7	19.7	9 18	21 18.82	-12 37.6	1.139	2.033	17.4	20.6
<b>353577</b>	Gediminas		8 15.0 202°78	0.6°/15.5	18		<b>206671</b>	2003 <i>YK</i> <sub>95</sub>		8 15.1 242°94	1.3°/13.9	18	
7 10	22 2.10	-10 26.1	2.198	3.039	12.7	21.9	7 10	22 2.80	-14 57.5	2.145	2.998	12.5	21.0
7 20	21 57.61	-10 46.3	2.117	3.037	9.7	21.7	7 20	21 58.33	-15 40.2	2.057	2.987	9.5	20.8
7 30	21 51.33	-11 16.5	2.058	3.035	6.3	21.5	7 30	21 51.93	-16 31.4	1.992	2.975	6.0	20.5
8 9	21 43.81	-11 53.8	2.026	3.033	2.6	21.2	8 9	21 44.13	-17 26.7	1.954	2.963	2.3	20.3
8 19	21 35.73	-12 34.3	2.021	3.031	1.5	21.1	8 19	21 35.63	-18 20.9	1.943	2.951	2.4	20.3
8 29	21 27.93	-13 13.8	2.044	3.029	5.2	21.4	8 29	21 27.35	-19 8.9	1.961	2.938	6.1	20.5
9 8	21 21.21	-13 48.3	2.095	3.026	8.8	21.6	9 8	21 20.17	-19 46.7	2.005	2.925	9.8	20.7
9 18	21 16.19	-14 15.3	2.169	3.023	11.9	21.8	9 18	21 14.78	-20 12.0	2.073	2.911	12.9	20.9
<b>358231</b>	2006 <i>SM</i> <sub>290</sub>		8 15.0 281°65	0.1°/14.9	18		<b>495012</b>	2010 <i>PA</i> <sub>57</sub>		8 15.1 336°14	5.4°/19.5	15	
7 10	22 1.94	-12 21.4	2.026	2.878	13.2	21.7	7 10	21 58.71	+ 1 34.8	1.899	2.707	15.7	20.9
7 20	21 57.73	-12 42.8	1.939	2.866	10.1	21.5	7 20	21 55.37	+ 1 51.7	1.813	2.698	12.9	20.7
7 30	21 51.55	-13 13.9	1.874	2.855	6.5	21.2	7 30	21 50.10	+ 1 49.7	1.746	2.690	9.9	20.5
8 9	21 43.94	-13 51.2	1.834	2.843	2.5	21.0	8 9	21 43.43	+ 1 28.6	1.702	2.683	6.9	20.3
8 19	21 35.64	-14 30.6	1.822	2.832	1.7	20.9	8 19	21 36.09	+ 0 50.2	1.683	2.676	5.4	20.2
8 29	21 27.59	-15 7.4	1.837	2.820	5.8	21.1	8 29	21 28.97	- 0 1.7	1.690	2.669	6.7	20.3
9 8	21 20.68	-15 37.5	1.878	2.809	9.6	21.3	9 8	21 22.97	- 1 1.2	1.723	2.663	9.6	20.4
9 18	21 15.62	-15 58.3	1.942	2.797	13.0	21.5	9 18	21 18.80	- 2 2.3	1.778	2.658	12.8	20.6
<b>397732</b>	2008 <i>EA</i> <sub>100</sub>		8 15.0 52°96	2.1°/12.9	18		<b>490619</b>	2009 <i>YC</i> <sub>19</sub>		8 15.1 193°12	2.1°/13.2	17	
7 10	21 59.76	-15 39.1	1.974	2.839	13.0	20.4	7 10	22 5.03	-17 32.4	2.114	2.969	12.6	22.2
7 20	21 56.00	-16 55.8	1.913	2.850	9.7	20.2	7 20	21 59.98	-18 19.8	2.036	2.968	9.5	22.0
7 30	21 50.37	-18 21.2	1.875	2.861	6.0	20.0	7 30	21 52.94	-19 13.5	1.983	2.966	6.0	21.8
8 9	21 43.45	-19 48.9	1.864	2.872	2.7	19.8	8 9	21 44.50	-20 8.3	1.956	2.963	2.7	21.6
8 19	21 36.00	-21 12.0	1.880	2.883	3.3	19.9	8 19	21 35.42	-20 58.8	1.957	2.960	3.2	21.6
8 29	21 28.92	-22 24.2	1.924	2.895	6.8	20.1	8 29	21 26.65	-21 40.0	1.986	2.956	6.6	21.8
9 8	21 23.06	-23 21.2	1.993	2.906	10.1	20.4	9 8	21 19.11	-22 8.7	2.041	2.952	10.0	22.0
9 18	21 19.04	-24 1.2	2.085	2.918	13.1	20.6	9 18	21 13.46	-22 23.7	2.119	2.947	13.1	22.2
<b>25448</b>	1999 <i>XJ</i> <sub>4</sub>		8 15.0 78°68	1.3°/14.1	18		<b>253721</b>	2003 <					

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>290308</b>	2005 <i>SM</i> <sub>184</sub>	8 15.1 148°89		0°8/14.3 18			<b>263469</b>	2008 <i>EX</i> <sub>57</sub>	8 15.1 242°70		4°2/18.3 18		
7 10	22 2.98	-15 12.5	2.360	3.210	11.7	21.7	7 10	22 2.43	-0 47.2	1.630	2.452	17.2	21.2
7 20	21 58.13	-15 34.6	2.286	3.213	8.8	21.5	7 20	21 58.54	-0 59.5	1.545	2.446	13.9	21.0
7 30	21 51.61	-16 2.6	2.235	3.217	5.5	21.3	7 30	21 52.33	-1 34.0	1.480	2.439	10.1	20.7
8 9	21 43.95	-16 33.0	2.211	3.220	2.1	21.1	8 9	21 44.37	-2 29.6	1.438	2.431	6.2	20.5
8 19	21 35.81	-17 2.2	2.215	3.223	1.9	21.1	8 19	21 35.54	-3 42.2	1.421	2.424	4.2	20.4
8 29	21 28.00	-17 26.6	2.248	3.226	5.3	21.3	8 29	21 26.98	-5 5.1	1.430	2.416	6.7	20.5
9 8	21 21.26	-17 43.6	2.307	3.229	8.5	21.5	9 8	21 19.78	-6 30.0	1.464	2.408	10.8	20.7
9 18	21 16.15	-17 51.9	2.391	3.232	11.4	21.7	9 18	21 14.81	-7 49.4	1.522	2.400	14.7	20.9
<b>507935</b>	2015 <i>AL</i> <sub>125</sub>	8 15.1 173°83		1°9/16.2 17			<b>91149</b>	1998 <i>PS</i>	8 15.1 308°07		0°2/15.3 18		
7 10	22 7.16	-8 50.5	1.597	2.442	16.4	21.8	7 10	21 59.99	-11 21.9	2.070	2.922	13.0	20.0
7 20	22 2.05	-8 43.8	1.523	2.443	12.8	21.6	7 20	21 56.27	-11 43.7	1.978	2.905	10.0	19.7
7 30	21 54.48	-8 50.2	1.469	2.444	8.6	21.4	7 30	21 50.67	-12 15.9	1.908	2.888	6.5	19.5
8 9	21 45.14	-9 7.4	1.440	2.445	4.0	21.1	8 9	21 43.69	-12 55.4	1.864	2.872	2.6	19.2
8 19	21 35.02	-9 31.5	1.436	2.445	2.3	21.0	8 19	21 36.01	-13 38.3	1.846	2.856	1.6	19.1
8 29	21 25.36	-9 58.0	1.459	2.445	6.6	21.3	8 29	21 28.53	-14 19.8	1.856	2.840	5.6	19.4
9 8	21 17.29	-10 22.1	1.507	2.445	11.0	21.5	9 8	21 22.10	-14 55.6	1.891	2.825	9.4	19.6
9 18	21 11.62	-10 40.3	1.577	2.445	14.8	21.8	9 18	21 17.42	-15 22.6	1.950	2.809	12.8	19.7
<b>521120</b>	2015 <i>DC</i> <sub>247</sub>	8 15.1 46°57		2°2/16.8 16			<b>398253</b>	2010 <i>RC</i> <sub>170</sub>	8 15.1 331°23		5°2/19.7 15		
7 10	22 1.28	-5 15.8	1.377	2.231	18.1	21.2	7 10	21 58.50	+2 16.3	1.941	2.745	15.5	21.4
7 20	21 57.69	-5 48.4	1.324	2.248	14.1	21.0	7 20	21 55.18	+2 21.2	1.855	2.737	12.8	21.2
7 30	21 51.68	-6 41.8	1.291	2.266	9.5	20.8	7 30	21 49.99	+2 6.2	1.788	2.730	9.8	21.0
8 9	21 44.03	-7 51.3	1.280	2.284	4.6	20.5	8 9	21 43.42	+1 31.6	1.744	2.724	6.8	20.8
8 19	21 35.79	-9 9.8	1.294	2.303	2.5	20.4	8 19	21 36.20	+0 39.3	1.725	2.718	5.2	20.7
8 29	21 28.17	-10 29.0	1.333	2.322	6.6	20.8	8 29	21 29.21	-0 26.0	1.732	2.712	6.5	20.8
9 8	21 22.25	-11 40.9	1.396	2.341	11.1	21.1	9 8	21 23.31	-1 38.0	1.765	2.707	9.4	20.9
9 18	21 18.72	-12 40.2	1.481	2.361	14.9	21.3	9 18	21 19.19	-2 50.3	1.822	2.702	12.6	21.1
<b>493553</b>	2015 <i>JQ</i> <sub>2</sub>	8 15.1 64°13		7°7/21.0 17			<b>296268</b>	2009 <i>DA</i> <sub>41</sub>	8 15.1 27°39		0°1/15.1 18		
7 10	22 3.64	+5 53.8	1.712	2.496	18.0	20.7	7 10	22 3.52	-12 40.8	1.815	2.670	14.3	20.8
7 20	21 59.11	+6 37.4	1.648	2.511	15.2	20.5	7 20	21 59.03	-12 53.3	1.743	2.672	10.9	20.6
7 30	21 52.45	+6 58.2	1.603	2.525	12.1	20.4	7 30	21 52.42	-13 15.3	1.693	2.674	7.0	20.4
8 9	21 44.31	+6 54.8	1.579	2.540	9.3	20.2	8 9	21 44.35	-13 43.2	1.668	2.676	2.7	20.1
8 19	21 35.59	+6 28.3	1.579	2.554	7.7	20.2	8 19	21 35.65	-14 12.6	1.669	2.679	1.7	20.1
8 29	21 27.32	+5 42.4	1.604	2.569	8.4	20.3	8 29	21 27.37	-14 39.1	1.697	2.681	6.1	20.4
9 8	21 20.48	+4 43.8	1.654	2.584	10.7	20.4	9 8	21 20.46	-14 58.9	1.751	2.684	10.0	20.6
9 18	21 15.74	+3 39.8	1.726	2.599	13.5	20.6	9 18	21 15.60	-15 9.9	1.828	2.687	13.5	20.8
<b>139986</b>	2001 <i>SE</i> <sub>31</sub>	8 15.1 336°28		1°7/13.7 18			<b>439767</b>	2015 <i>GN</i> <sub>5</sub>	8 15.1 21°91		10°2/8.3 17		
7 10	22 1.55	-16 10.9	1.802	2.670	13.9	19.8	7 10	22 7.07	-35 23.3	1.402	2.284	16.3	19.6
7 20	21 57.64	-16 48.1	1.727	2.665	10.5	19.6	7 20	22 2.61	-36 43.8	1.361	2.290	13.4	19.4
7 30	21 51.59	-17 33.3	1.675	2.660	6.6	19.3	7 30	21 55.05	-37 53.6	1.340	2.297	11.0	19.3
8 9	21 44.02	-18 21.6	1.647	2.656	2.7	19.1	8 9	21 45.38	-38 42.0	1.341	2.305	10.2	19.3
8 19	21 35.76	-19 7.2	1.646	2.653	2.9	19.1	8 19	21 35.03	-39 1.0	1.364	2.314	11.3	19.4
8 29	21 27.86	-19 44.7	1.671	2.649	6.9	19.3	8 29	21 25.62	-38 47.7	1.410	2.324	13.6	19.6
9 8	21 21.30	-20 10.3	1.722	2.646	10.8	19.6	9 8	21 18.49	-38 4.3	1.476	2.334	16.3	19.8
9 18	21 16.81	-20 22.3	1.794	2.643	14.2	19.8	9 18	21 14.41	-36 56.6	1.559	2.345	18.8	20.0
<b>30015</b>	2000 <i>CX</i> <sub>92</sub>	8 15.1 60°93		2°6/13.5 18			<b>375168</b>	2008 <i>CO</i> <sub>212</sub>	8 15.1 100°16		0°5/15.4 17		
7 10	22 6.28	-16 3.8	1.153	2.038	18.8	18.0	7 10	22 5.94	-10 15.5	1.576	2.429	16.2	21.7
7 20	22 2.02	-16 55.6	1.105	2.051	14.1	17.8	7 20	22 1.04	-10 43.7	1.516	2.443	12.4	21.5
7 30	21 54.68	-17 58.8	1.076	2.064	8.9	17.5	7 30	21 53.76	-11 25.5	1.477	2.457	8.0	21.3
8 9	21 45.24	-19 4.7	1.069	2.078	3.7	17.3	8 9	21 44.87	-12 16.4	1.462	2.470	3.2	21.0
8 19	21 35.05	-20 3.9	1.086	2.092	4.1	17.4	8 19	21 35.37	-13 10.3	1.473	2.483	1.8	20.9
8 29	21 25.72	-20 48.2	1.126	2.106	9.1	17.7	8 29	21 26.44	-14 0.8	1.511	2.496	6.5	21.3
9 8	21 18.63	-21 13.5	1.189	2.120	13.9	18.0	9 8	21 19.15	-14 42.9	1.574	2.509	10.8	21.6
9 18	21 14.57	-21 19.3	1.271	2.135	18.0	18.3	9 18	21 14.21	-15 13.4	1.659	2.521	14.5	21.8
<b>157420</b>	2004 <i>TC</i> <sub>299</sub>	8 15.1 285°05		0°1/15.1 18			<b>508850</b>	2002 <i>CB</i> <sub>267</sub>	8 15.1 111°95		0°2/14.9 18		
7 10	22 0.33	-11 55.7	2.290	3.137	12.0	20.2	7 10	22 1.17	-11 34.3	2.496	3.336	11.4	22.3
7 20	21 56.33	-12 21.6	2.198	3.123	9.2	20.0	7 20	21 56.65	-12 16.5	2.430	3.351	8.6	22.1
7 30	21 50.60	-12 56.6	2.129	3.109	5.9	19.8	7 30	21 50.63	-13 7.1	2.387	3.366	5.4	22.0
8 9	21 43.62	-13 37.8	2.087	3.095	2.3	19.5	8 9	21 43.61	-14 2.5	2.372	3.381	2.1	21.8
8 19	21 36.03	-14 21.2	2.072	3.082	1.5	19.4	8 19	21 36.20	-14 58.5	2.385	3.395	1.4	21.7
8 29	21 28.63	-15 2.6	2.085	3.068	5.3	19.7	8 29	21 29.10	-15 50.9	2.428	3.409	4.8	22.0
9 8	21 22.20	-15 38.0	2.125	3.054	8.8	19.9	9 8	21 22.97	-16 36.2	2.498	3.422	7.8	22.2
9 18	21 17.37	-16 4.9	2.189	3.040	11.9	20.0	9 18	21 18.33	-17 12.1	2.592	3.435	10.5	22.4
<b>321363</b>	2009 <i>MK</i> <sub>8</sub>	8 15.1 94°98		4°0/17.8 17			<b>305345</b>	2008 <i>AS</i> <sub>129</sub>	8 15.1 156°80		0°7/14.4 18		
7 10	22 6.86	-3 4.8	1.518	2.348	17.9	20.6	7 10	22 2.65	-14 18.6	2.229	3.079	12.2	20.9
7 20	22 1.73	-2 57.0	1.459	2.365	14.2	20.4	7 20	21 58.03	-14 46.1	2.154	3.081	9.2	20.7
7 30	21 54.18	-3 8.4	1.419	2.381	10.1	20.2	7 30	21 51.65	-15 20.9	2.102	3.084	5.8	20.5
8 9	21 44.99	-3 37.3	1.402	2.397	5.9	20.0	8 9	21 44.04	-15 59.2	2.076	3.085	2.2	20.3
8 19	21 35.20	-4 19.8	1.410	2.413	4.0	19.9	8 19	21 35.92	-16 36.9	2.079	3.087	1.9	20.3
8 29	21 26.01	-5 10.0	1.444	2.429	6.8	20.1	8 29	21 28.12	-17 9.8	2.109	3.089	5.5	20.5
9 8	21 18.51	-6 1.3	1.503	2.444	10.7	20.4	9 8	21 21.42	-17 35.0	2.166	3.091	8.9	20.7
9 18	21 13.42	-6 48.2	1.585	2.459	14.4	20.7	9 18	21 16.44	-17 50.4	2.248	3.092	11.9	20.9
<b>329929</b>	2005 <i>NO</i> <sub>102</sub>	8 15.1 345°41		2°0/16.5 17			<b>439723</b>	2015 <i>DQ</i> <sub>208</sub>	8 15.1 5°23				

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>487964</b>	2015 <i>TC</i> <sub>298</sub>		8 15.1 280°35	6°5/20.6	17		<b>121311</b>	1999 <i>RR</i> <sub>209</sub>		8 15.1 331°57	4°5/18.3	18	
7 10	22 1.62	+ 6 17.3	2.473	3.230	13.8	21.4	7 10	22 1.10	- 2 5.3	1.902	2.722	15.2	19.5
7 20	21 57.25	+ 6 59.8	2.370	3.213	11.8	21.2	7 20	21 57.22	- 1 35.6	1.814	2.712	12.3	19.3
7 30	21 51.21	+ 7 26.8	2.287	3.195	9.6	21.0	7 30	21 51.35	- 1 21.0	1.748	2.702	9.1	19.1
8 9	21 43.92	+ 7 36.7	2.227	3.178	7.6	20.9	8 9	21 44.03	- 1 21.5	1.704	2.693	6.0	18.9
8 19	21 35.97	+ 7 29.3	2.194	3.161	6.5	20.8	8 19	21 35.99	- 1 35.8	1.686	2.685	4.5	18.8
8 29	21 28.11	+ 7 5.9	2.187	3.143	7.1	20.8	8 29	21 28.19	- 2 0.9	1.695	2.676	6.4	18.9
9 8	21 21.09	+ 6 30.1	2.206	3.125	9.0	20.9	9 8	21 21.54	- 2 32.2	1.729	2.669	9.7	19.1
9 18	21 15.55	+ 5 46.4	2.249	3.107	11.4	21.0	9 18	21 16.77	- 3 5.1	1.786	2.662	13.0	19.2
<b>137468</b>	1999 <i>UT</i> <sub>11</sub>		8 15.1 157°85	0°8/15.7	18		<b>276821</b>	2004 <i>PJ</i> <sub>82</sub>		8 15.1 4°92	0°1/15.0	18	
7 10	22 6.03	- 9 27.0	1.805	2.647	15.0	20.5	7 10	22 1.92	-10 41.6	1.615	2.475	15.6	20.1
7 20	22 0.94	- 9 51.6	1.733	2.653	11.5	20.3	7 20	21 58.14	-11 26.4	1.543	2.475	11.9	19.8
7 30	21 53.67	-10 29.2	1.682	2.658	7.5	20.1	7 30	21 52.05	-12 26.1	1.493	2.475	7.6	19.6
8 9	21 44.86	-11 16.0	1.656	2.663	3.2	19.8	8 9	21 44.31	-13 35.4	1.466	2.475	2.9	19.3
8 19	21 35.40	-12 7.1	1.657	2.667	1.7	19.7	8 19	21 35.82	-14 47.7	1.466	2.476	2.0	19.2
8 29	21 26.35	-12 56.8	1.686	2.671	6.0	20.0	8 29	21 27.72	-15 55.5	1.491	2.476	6.7	19.5
9 8	21 18.70	-13 40.2	1.741	2.674	10.1	20.3	9 8	21 21.06	-16 52.7	1.542	2.476	11.1	19.8
9 18	21 13.17	-14 14.0	1.819	2.677	13.6	20.5	9 18	21 16.64	-17 35.6	1.615	2.477	14.8	20.0
<b>333982</b>	2000 <i>SU</i> <sub>9</sub>		8 15.1 328°11	5°7/12.9	18		<b>452696</b>	2005 <i>YL</i> <sub>37</sub>		8 15.1 212°54	3°9/18.7	18	
7 10	22 13.57	-27 44.3	1.368	2.244	16.9	19.7	7 10	22 2.86	- 0 26.7	2.737	3.523	11.9	21.4
7 20	22 7.69	-27 41.3	1.292	2.230	13.3	19.5	7 20	21 57.92	+ 0 3.9	2.643	3.517	9.7	21.3
7 30	21 58.47	-27 32.5	1.236	2.215	9.3	19.2	7 30	21 51.49	+ 0 7.3	2.571	3.512	7.3	21.1
8 9	21 46.82	-27 10.2	1.203	2.202	6.1	19.0	8 9	21 44.00	+ 0 6.9	2.525	3.506	5.0	21.0
8 19	21 34.14	-26 28.9	1.195	2.189	6.6	19.0	8 19	21 36.02	- 0 4.1	2.507	3.499	3.9	20.9
8 29	21 22.20	-25 26.6	1.211	2.177	10.4	19.2	8 29	21 28.22	- 0 23.7	2.518	3.493	5.1	20.9
9 8	21 12.54	-24 5.6	1.251	2.166	14.7	19.4	9 8	21 21.23	- 0 48.7	2.556	3.486	7.5	21.1
9 18	21 6.16	-22 31.1	1.311	2.156	18.6	19.6	9 18	21 15.61	- 1 16.0	2.621	3.478	10.0	21.2
<b>301464</b>	2009 <i>DY</i> <sub>120</sub>		8 15.1 210°91	0°1/14.9	18 R		<b>9350</b>	Wasseda		8 15.1 321°80	0°7/15.6	18	
7 10	22 2.51	-12 11.3	2.022	2.873	13.3	21.3	7 10	21 58.89	- 9 59.6	1.206	2.086	18.4	17.3
7 20	21 58.13	-12 37.1	1.945	2.872	10.1	21.1	7 20	21 56.76	-10 18.4	1.121	2.063	14.4	16.9
7 30	21 51.81	-13 12.6	1.890	2.871	6.5	20.9	7 30	21 51.73	-10 56.5	1.055	2.040	9.5	16.6
8 9	21 44.14	-13 54.2	1.861	2.869	2.5	20.6	8 9	21 44.38	-11 50.2	1.009	2.018	4.0	16.2
8 19	21 35.87	-14 37.3	1.858	2.868	1.7	20.5	8 19	21 35.73	-12 53.0	0.986	1.997	2.2	16.0
8 29	21 27.92	-15 17.4	1.884	2.867	5.7	20.8	8 29	21 27.28	-13 56.2	0.987	1.977	8.2	16.3
9 8	21 21.15	-15 50.3	1.936	2.866	9.4	21.0	9 8	21 20.55	-14 51.0	1.008	1.958	13.8	16.6
9 18	21 16.24	-16 13.6	2.011	2.864	12.7	21.3	9 18	21 16.68	-15 31.3	1.049	1.940	18.8	16.8
<b>314544</b>	2005 <i>YS</i> <sub>94</sub>		8 15.1 282°38	2°4/13.2	18		<b>283124</b>	2008 <i>VS</i> <sub>59</sub>		8 15.1 311°48	2°2/13.5	18	
7 10	22 4.66	-20 6.6	2.211	3.070	12.0	20.8	7 10	22 2.79	-16 44.7	1.622	2.495	14.9	20.4
7 20	21 59.76	-20 28.4	2.120	3.052	9.1	20.6	7 20	21 58.91	-17 27.6	1.547	2.486	11.3	20.1
7 30	21 52.88	-20 53.3	2.052	3.034	5.9	20.3	7 30	21 52.62	-18 19.5	1.492	2.478	7.2	19.9
8 9	21 44.57	-21 17.2	2.010	3.017	2.9	20.1	8 9	21 44.57	-19 14.6	1.462	2.471	3.1	19.6
8 19	21 35.58	-21 35.7	1.996	2.999	3.3	20.1	8 19	21 35.68	-20 6.0	1.457	2.463	3.5	19.6
8 29	21 26.82	-21 45.2	2.010	2.980	6.6	20.3	8 29	21 27.16	-20 47.3	1.479	2.456	7.7	19.9
9 8	21 19.19	-21 43.6	2.050	2.962	9.9	20.5	9 8	21 20.13	-21 14.2	1.524	2.449	11.9	20.1
9 18	21 13.41	-21 30.4	2.113	2.944	13.0	20.6	9 18	21 15.42	-21 25.1	1.591	2.442	15.6	20.3
<b>283657</b>	2002 <i>NT</i> <sub>57</sub>		8 15.1 340°03	4°1/17.9	18		<b>72155</b>	2000 <i>YM</i> <sub>08</sub>		8 15.1 96°50	0°5/15.5	18	
7 10	22 0.84	- 3 13.8	1.613	2.450	16.7	20.2	7 10	22 5.19	-10 53.0	1.897	2.742	14.2	19.4
7 20	21 57.32	- 2 59.1	1.534	2.443	13.4	19.9	7 20	22 0.11	-11 9.3	1.835	2.757	10.9	19.2
7 30	21 51.54	- 3 2.3	1.474	2.437	9.7	19.7	7 30	21 53.03	-11 35.9	1.794	2.772	7.0	19.0
8 9	21 44.10	- 3 22.7	1.436	2.432	5.9	19.5	8 9	21 44.62	-12 9.5	1.779	2.787	2.8	18.8
8 19	21 35.88	- 3 57.4	1.424	2.427	4.1	19.4	8 19	21 35.72	-12 45.6	1.791	2.801	1.6	18.7
8 29	21 27.98	- 4 41.7	1.436	2.423	6.7	19.5	8 29	21 27.31	-13 19.7	1.831	2.815	5.7	19.0
9 8	21 21.45	- 5 29.5	1.474	2.419	10.6	19.7	9 8	21 20.26	-13 48.0	1.897	2.829	9.4	19.3
9 18	21 17.09	- 6 14.9	1.533	2.416	14.3	20.0	9 18	21 15.20	-14 8.0	1.986	2.843	12.7	19.5
<b>398208</b>	2010 <i>NX</i> <sub>31</sub>		8 15.1 17°60	2°2/16.8	18		<b>206101</b>	2002 <i>RW</i> <sub>180</sub>		8 15.1 258°79	2°1/17.4	18	
7 10	22 1.84	- 7 6.9	1.897	2.736	14.5	20.5	7 10	22 0.04	- 1 34.4	2.010	2.827	14.6	20.4
7 20	21 57.66	- 7 0.3	1.823	2.739	11.3	20.3	7 20	21 56.38	- 2 48.5	1.917	2.819	11.6	20.2
7 30	21 51.53	- 7 6.3	1.771	2.742	7.7	20.1	7 30	21 50.82	- 4 25.2	1.847	2.810	8.0	19.9
8 9	21 44.03	- 7 23.2	1.743	2.745	4.0	19.9	8 9	21 43.85	- 6 20.6	1.802	2.802	4.2	19.7
8 19	21 35.97	- 7 47.8	1.741	2.749	2.4	19.8	8 19	21 36.16	- 8 28.3	1.785	2.794	2.2	19.5
8 29	21 28.26	- 8 16.2	1.766	2.753	5.6	20.0	8 29	21 28.63	-10 39.8	1.799	2.785	5.5	19.7
9 8	21 21.80	- 8 44.2	1.817	2.757	9.3	20.2	9 8	21 22.16	-12 45.9	1.840	2.777	9.4	20.0
9 18	21 17.24	- 9 8.2	1.891	2.762	12.6	20.4	9 18	21 17.45	-14 39.4	1.907	2.768	12.9	20.2
<b>207604</b>	2006 <i>QW</i> <sub>111</sub>		8 15.1 48°43	2°7/16.6	16		<b>147088</b>	2002 <i>SQ</i> <sub>50</sub>		8 15.1 350°03	1°4/15.9	18	
7 10	22 8.99	- 8 45.0	1.658	2.498	16.2	19.7	7 10	21 57.51	- 8 54.3	1.082	1.968	19.6	18.5
7 20	22 3.14	- 8 1.5	1.597	2.513	12.6	19.5	7 20	21 55.72	- 9 7.3	1.016	1.960	15.3	18.2
7 30	21 55.00	- 7 28.8	1.557	2.528	8.6	19.3	7 30	21 50.99	- 9 41.0	0.967	1.953	10.2	17.9
8 9	21 45.35	- 7 6.1	1.542	2.544	4.5	19.1	8 9	21 44.04	-10 31.6	0.938	1.947	4.5	17.6
8 19	21 35.18	- 6 51.6	1.553	2.560	3.0	19.0	8 19	21 36.04	-11 32.1	0.931	1.942	2.3	17.4
8 29	21 25.65	- 6 43.0	1.591	2.576	6.3	19.2	8 29	21 28.52	-12 33.3	0.947	1.939	8.0	17.8
9 8	21 17.76	- 6 37.1	1.655	2.593	10.2	19.5	9 8	21 22.93	-13 26.4	0.983	1.937	13.5	18.1
9 18	21 12.20	- 6 31.3	1.741	2.609	13.6	19.8	9 18	21 20.26	-14 5.4	1.039	1.937	18.3	18.4
<b>158966</b>	2004 <i>RE</i> <sub>232</sub>		8 15.1 359°59	0°3/14.9	17		<b>453657</b>	2010 <i>TX</i> <sub>140</sub>		8 15			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>468179</b>	2014 YG <sub>28</sub>		8 15.1 317°16	5°4/12.1	17		<b>238655</b>	2005 EV <sub>97</sub>		8 15.1 105°30	3°3/18.0	18	
7 10	22 3.23	-21 31.1	1.107	2.007	18.3	20.8	7 10	22 1.02	-2 7.4	1.907	2.727	15.1	20.1
7 20	22 0.49	-22 23.9	1.033	1.986	14.1	20.5	7 20	21 57.11	-2 23.2	1.828	2.729	12.1	19.9
7 30	21 54.32	-23 24.9	0.977	1.966	9.4	20.1	7 30	21 51.25	-2 57.1	1.771	2.731	8.6	19.7
8 9	21 45.43	-24 24.4	0.942	1.947	5.7	19.9	8 9	21 44.01	-3 47.0	1.738	2.733	5.1	19.5
8 19	21 35.10	-25 11.5	0.929	1.929	6.9	19.9	8 19	21 36.16	-4 49.3	1.731	2.735	3.3	19.4
8 29	21 25.16	-25 36.8	0.938	1.911	11.6	20.1	8 29	21 28.62	-5 58.3	1.751	2.737	5.7	19.6
9 8	21 17.39	-25 36.1	0.967	1.894	16.8	20.3	9 8	21 22.26	-7 7.6	1.797	2.739	9.3	19.8
9 18	21 13.02	-25 10.1	1.013	1.879	21.3	20.5	9 18	21 17.75	-8 11.8	1.867	2.740	12.6	20.0
<b>44444</b>	1998 UZ <sub>19</sub>		8 15.1 319°92	0°9/14.5	18		<b>22385</b>	Fujimoriboshi		8 15.1 182°01	6°5/22.1	18	
7 10	22 1.72	-14 20.8	1.590	2.460	15.3	18.6	7 10	22 4.30	+10 1.3	2.255	2.990	15.5	19.7
7 20	21 58.20	-14 42.8	1.506	2.444	11.7	18.3	7 20	21 59.36	+9 45.8	2.164	2.992	13.3	19.5
7 30	21 52.24	-15 15.3	1.443	2.429	7.5	18.1	7 30	21 52.60	+9 6.8	2.091	2.993	10.7	19.4
8 9	21 44.46	-15 53.8	1.404	2.413	2.9	17.7	8 9	21 44.53	+8 3.8	2.042	2.992	8.2	19.2
8 19	21 35.78	-16 32.7	1.390	2.399	2.4	17.7	8 19	21 35.84	+6 38.9	2.020	2.991	6.6	19.1
8 29	21 27.38	-17 6.2	1.401	2.385	7.2	17.9	8 29	21 27.37	+4 57.1	2.026	2.989	7.0	19.1
9 8	21 20.42	-17 29.5	1.437	2.371	11.7	18.2	9 8	21 19.95	+3 5.5	2.059	2.986	9.1	19.3
9 18	21 15.78	-17 40.1	1.493	2.358	15.7	18.4	9 18	21 14.23	+1 12.1	2.119	2.982	11.8	19.4
<b>223950</b>	Mississauga		8 15.1 237°98	3°5/18.5	18		<b>81118</b>	2000 EP <sub>125</sub>		8 15.1 157°37	0°2/14.9	18	
7 10	22 0.56	-1 26.9	2.552	3.352	12.3	20.6	7 10	22 5.33	-11 6.8	1.986	2.829	13.8	20.8
7 20	21 56.30	-1 17.3	2.462	3.348	10.0	20.4	7 20	22 0.28	-11 51.5	1.914	2.836	10.5	20.6
7 30	21 50.52	-1 20.3	2.395	3.344	7.3	20.2	7 30	21 53.23	-12 47.7	1.864	2.843	6.7	20.4
8 9	21 43.67	-1 35.5	2.352	3.339	4.7	20.1	8 9	21 44.77	-13 50.9	1.840	2.849	2.6	20.2
8 19	21 36.33	-2 1.1	2.337	3.335	3.5	20.0	8 19	21 35.72	-14 55.5	1.845	2.854	1.7	20.1
8 29	21 29.19	-2 34.3	2.351	3.331	5.0	20.1	8 29	21 27.02	-15 55.7	1.878	2.859	5.9	20.4
9 8	21 22.91	-3 11.4	2.391	3.326	7.6	20.2	9 8	21 19.60	-16 46.8	1.937	2.863	9.6	20.7
9 18	21 18.03	-3 48.8	2.457	3.321	10.3	20.4	9 18	21 14.12	-17 26.0	2.020	2.867	12.9	20.9
<b>397633</b>	2007 WF <sub>42</sub>		8 15.1 215°40	0°8/15.8	18		<b>281820</b>	Monnaves		8 15.1 144°86	2°0/16.7	17	
7 10	22 2.32	-9 27.2	2.089	2.930	13.3	21.9	7 10	22 6.90	-7 6.2	2.124	2.946	13.7	21.2
7 20	21 57.95	-9 47.8	2.008	2.927	10.2	21.7	7 20	22 1.26	-7 4.0	2.050	2.957	10.7	21.0
7 30	21 51.72	-10 19.8	1.949	2.925	6.7	21.5	7 30	21 53.75	-7 13.2	1.999	2.966	7.3	20.8
8 9	21 44.17	-11 0.1	1.915	2.922	2.9	21.2	8 9	21 44.95	-7 31.8	1.974	2.975	3.7	20.6
8 19	21 36.02	-11 44.9	1.909	2.919	1.5	21.1	8 19	21 35.63	-7 56.9	1.976	2.984	2.2	20.5
8 29	21 28.14	-12 29.3	1.931	2.916	5.4	21.4	8 29	21 26.70	-8 25.0	2.007	2.992	5.3	20.7
9 8	21 21.39	-13 9.2	1.979	2.913	9.0	21.6	9 8	21 18.99	-8 52.1	2.065	2.999	8.7	21.0
9 18	21 16.40	-13 41.3	2.051	2.909	12.3	21.8	9 18	21 13.13	-9 15.4	2.148	3.006	11.8	21.2
<b>315551</b>	2008 CL <sub>4</sub>		8 15.1 101°86	0°2/15.2	17		<b>261872</b>	2006 GF <sub>2</sub>		8 15.1 16°44	3°8/13.4	18	
7 10	22 7.78	-12 5.3	1.547	2.403	16.4	20.9	7 10	22 6.73	-20 41.8	1.007	1.907	19.7	19.3
7 20	22 2.53	-12 16.8	1.485	2.414	12.5	20.7	7 20	22 2.90	-20 56.8	0.957	1.910	15.0	19.0
7 30	21 54.80	-12 39.5	1.444	2.425	8.0	20.5	7 30	21 55.56	-21 16.3	0.925	1.915	9.7	18.8
8 9	21 45.37	-13 9.4	1.427	2.435	3.1	20.2	8 9	21 45.79	-21 32.4	0.913	1.921	4.7	18.5
8 19	21 35.30	-13 41.2	1.435	2.445	1.9	20.2	8 19	21 35.13	-21 37.5	0.923	1.928	5.2	18.6
8 29	21 25.82	-14 9.7	1.471	2.456	6.7	20.5	8 29	21 25.47	-21 26.5	0.955	1.936	10.2	18.9
9 8	21 18.06	-14 30.7	1.531	2.465	11.1	20.8	9 8	21 18.34	-20 58.4	1.008	1.945	15.2	19.2
9 18	21 12.77	-14 42.1	1.613	2.475	14.8	21.0	9 18	21 14.63	-20 15.1	1.079	1.955	19.5	19.5
<b>368894</b>	2006 SY <sub>165</sub>		8 15.1 275°99	1°3/14.4	18		<b>453222</b>	2008 HQ <sub>68</sub>		8 15.1 15°10	2°6/12.6	18	
7 10	22 7.85	-16 6.3	1.494	2.361	16.2	20.8	7 10	21 59.30	-17 8.8	1.916	2.786	13.1	20.2
7 20	22 2.98	-16 17.0	1.415	2.352	12.4	20.6	7 20	21 55.88	-18 21.4	1.849	2.789	9.8	20.0
7 30	21 55.36	-16 35.7	1.358	2.342	8.0	20.3	7 30	21 50.50	-19 42.0	1.806	2.792	6.2	19.8
8 9	21 45.69	-16 57.6	1.323	2.333	3.1	20.0	8 9	21 43.74	-21 4.4	1.788	2.795	3.0	19.6
8 19	21 35.05	-17 17.2	1.314	2.323	2.8	19.9	8 19	21 36.39	-22 21.5	1.797	2.799	3.8	19.7
8 29	21 24.83	-17 29.3	1.331	2.313	7.7	20.2	8 29	21 29.37	-23 26.9	1.833	2.803	7.2	19.9
9 8	21 16.34	-17 30.7	1.372	2.304	12.4	20.4	9 8	21 23.58	-24 16.5	1.895	2.807	10.6	20.1
9 18	21 10.50	-17 20.2	1.435	2.294	16.5	20.7	9 18	21 19.67	-24 48.6	1.978	2.812	13.7	20.3
<b>439712</b>	2014 LS <sub>17</sub>		8 15.1 318°01	1°1/14.1	18		<b>323720</b>	2005 JG <sub>48</sub>		8 15.1 89°11	0°6/14.7	17	
7 10	21 59.63	-13 15.7	1.986	2.845	13.1	20.7	7 10	22 5.32	-11 48.6	1.489	2.351	16.6	21.6
7 20	21 56.09	-14 12.9	1.906	2.839	9.9	20.5	7 20	22 0.75	-12 38.3	1.433	2.366	12.5	21.4
7 30	21 50.62	-15 21.2	1.850	2.834	6.3	20.3	7 30	21 53.71	-13 41.7	1.397	2.381	7.9	21.2
8 9	21 43.78	-16 35.6	1.819	2.828	2.4	20.0	8 9	21 44.99	-14 52.6	1.386	2.396	3.0	20.9
8 19	21 36.28	-17 50.0	1.815	2.823	2.4	20.0	8 19	21 35.63	-16 3.2	1.401	2.410	2.3	20.9
8 29	21 29.04	-18 58.0	1.839	2.818	6.3	20.3	8 29	21 26.88	-17 6.2	1.442	2.424	7.1	21.2
9 8	21 22.94	-19 54.7	1.889	2.813	10.0	20.5	9 8	21 19.83	-17 56.0	1.507	2.439	11.5	21.5
9 18	21 18.65	-20 37.0	1.962	2.809	13.2	20.7	9 18	21 15.23	-18 30.0	1.594	2.452	15.2	21.8
<b>244401</b>	2002 PL <sub>123</sub>		8 15.1 50°21	4°2/18.1	16		<b>434732</b>	2006 EP <sub>48</sub>		8 15.1 290°54	2°2/13.5	18	
7 10	22 3.40	-2 41.2	1.641	2.469	16.8	20.1	7 10	22 3.61	-16 52.5	1.685	2.554	14.6	21.5
7 20	21 59.04	-2 23.7	1.579	2.483	13.5	19.9	7 20	21 59.48	-17 34.9	1.608	2.547	11.1	21.3
7 30	21 52.49	-2 24.1	1.537	2.497	9.7	19.8	7 30	21 52.99	-18 25.9	1.553	2.539	7.0	21.0
8 9	21 44.47	-2 41.2	1.518	2.511	6.0	19.6	8 9	21 44.76	-19 19.6	1.523	2.531	3.1	20.7
8 19	21 35.88	-3 12.1	1.524	2.525	4.2	19.5	8 19	21 35.73	-20 9.5	1.519	2.524	3.4	20.7
8 29	21 27.80	-3 51.9	1.556	2.540	6.5	19.7	8 29	21 27.04	-20 49.5	1.540	2.517	7.5	21.0
9 8	21 21.19	-4 34.9	1.613	2.555	10.1	19.9	9 8	21 19.81	-21 15.6	1.587	2.509	11.6	21.2
9 18	21 16.74	-5 15.9	1.692	2.570	13.5	20.2	9 18	21 14.85	-21 26.1	1.655	2.502	15.3	21.4
<b>294152</b>	2007 TR <sub>331</sub>		8 15.1 9°29	0°9/15.7	18		<b>160385</b>	2004 JJ <sub>35</sub>		8 15.1 42°80	3°1/12.8	18	
7 10	22 2.87	-10 37.8	1.668	2.524	15.4	20.9	7 10	22 2.93</					

EPHEMERIDES

8 15.1

8 15.1

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>504697</b>	2009 <i>HP</i> <sub>100</sub>		8 15.1 352°13	0°7/14.6	18		<b>2145</b>	Blaauw		8 15.1 137°32	5°4/20.7	18	
7 10	22 0.37	-13 0.1	1.820	2.682	14.0	21.0	7 10	22 1.52	+ 5 26.1	2.692	3.448	12.8	16.6
7 20	21 56.76	-13 36.9	1.746	2.679	10.6	20.8	7 20	21 56.94	+ 5 53.7	2.609	3.454	10.8	16.5
7 30	21 51.11	-14 24.4	1.694	2.677	6.8	20.6	7 30	21 50.91	+ 6 6.3	2.547	3.460	8.6	16.3
8 9	21 44.00	-15 18.2	1.666	2.676	2.5	20.3	8 9	21 43.89	+ 6 3.4	2.510	3.466	6.6	16.2
8 19	21 36.24	-16 12.6	1.665	2.674	2.1	20.3	8 19	21 36.43	+ 5 45.7	2.499	3.472	5.5	16.1
8 29	21 28.81	-17 2.0	1.691	2.673	6.3	20.6	8 29	21 29.19	+ 5 15.5	2.516	3.477	6.0	16.2
9 8	21 22.66	-17 41.7	1.741	2.673	10.2	20.8	9 8	21 22.80	+ 4 36.3	2.560	3.482	7.8	16.3
9 18	21 18.47	-18 8.9	1.815	2.672	13.7	21.0	9 18	21 17.77	+ 3 52.2	2.629	3.487	9.9	16.5
<b>252100</b>	2000 <i>UP</i> <sub>95</sub>		8 15.1 267°49	4°7/19.3	18		<b>359959</b>	2012 <i>BW</i> <sub>59</sub>		8 15.1 41°03	0°5/15.5	18	
7 10	22 1.16	+ 1 8.2	2.282	3.074	13.8	20.6	7 10	22 4.06	-12 17.2	2.116	2.961	13.0	20.4
7 20	21 57.00	+ 1 25.6	2.188	3.065	11.4	20.4	7 20	21 59.18	-12 13.2	2.043	2.966	9.9	20.3
7 30	21 51.12	+ 1 27.6	2.116	3.056	8.7	20.2	7 30	21 52.47	-12 16.8	1.993	2.971	6.4	20.1
8 9	21 43.99	+ 1 14.0	2.068	3.047	6.0	20.1	8 9	21 44.51	-12 25.4	1.968	2.976	2.6	19.8
8 19	21 36.25	+ 0 46.2	2.046	3.037	4.7	20.0	8 19	21 36.05	-12 36.1	1.971	2.981	1.5	19.7
8 29	21 28.68	+ 0 7.2	2.051	3.028	5.9	20.0	8 29	21 27.97	-12 45.9	2.001	2.986	5.3	20.0
9 8	21 22.07	- 0 38.6	2.083	3.018	8.6	20.2	9 8	21 21.08	-12 52.1	2.059	2.992	8.8	20.2
9 18	21 17.03	- 1 26.6	2.140	3.008	11.4	20.3	9 18	21 15.98	-12 52.9	2.140	2.997	11.9	20.5
<b>520900</b>	2014 <i>WT</i> <sub>527</sub>		8 15.1 174°07	2°7/13.5	17		<b>25575</b>	1999 <i>XD</i> <sub>206</sub>		8 15.1 295°96	1°6/14.2	18	
7 10	22 9.51	-19 16.9	1.609	2.474	15.4	21.9	7 10	22 8.04	-18 1.5	1.856	2.714	14.0	17.9
7 20	22 3.97	-19 42.5	1.540	2.475	11.7	21.7	7 20	22 2.53	-18 5.0	1.781	2.712	10.6	17.7
7 30	21 55.82	-20 13.0	1.493	2.476	7.5	21.5	7 30	21 54.76	-18 12.6	1.728	2.711	6.7	17.5
8 9	21 45.84	-20 42.5	1.470	2.477	3.5	21.2	8 9	21 45.43	-18 20.2	1.701	2.710	2.8	17.2
8 19	21 35.11	-21 4.9	1.474	2.478	3.8	21.3	8 19	21 35.46	-18 23.9	1.702	2.709	2.7	17.2
8 29	21 24.93	-21 15.6	1.504	2.478	7.9	21.5	8 29	21 25.95	-18 20.4	1.729	2.708	6.6	17.5
9 8	21 16.49	-21 12.5	1.558	2.478	12.0	21.8	9 8	21 17.91	-18 8.0	1.783	2.707	10.5	17.7
9 18	21 10.60	-20 55.6	1.635	2.477	15.6	22.0	9 18	21 12.07	-17 46.3	1.859	2.705	13.9	17.9
<b>22948</b>	Maidanak		8 15.1 357°40	6°6/21.0	18		<b>374964</b>	2007 <i>DG</i> <sub>5</sub>		8 15.1 289°81	2°6/13.2	18	
7 10	21 57.17	+ 5 32.5	1.500	2.309	19.1	18.6	7 10	22 3.44	-16 26.2	1.510	2.385	15.7	21.0
7 20	21 54.71	+ 5 22.4	1.424	2.306	16.0	18.3	7 20	21 59.83	-17 21.6	1.422	2.364	12.0	20.8
7 30	21 50.00	+ 4 42.9	1.365	2.304	12.4	18.1	7 30	21 53.54	-18 29.2	1.355	2.342	7.7	20.5
8 9	21 43.63	+ 3 33.9	1.326	2.303	8.9	17.9	8 9	21 45.13	-19 42.5	1.312	2.321	3.4	20.2
8 19	21 36.48	+ 1 59.0	1.311	2.303	6.7	17.8	8 19	21 35.57	-20 53.2	1.294	2.299	4.0	20.1
8 29	21 29.66	+ 0 6.0	1.321	2.303	7.7	17.9	8 29	21 26.19	-21 52.6	1.302	2.277	8.7	20.4
9 8	21 24.22	- 1 54.3	1.355	2.304	11.0	18.1	9 8	21 18.32	-22 34.9	1.332	2.256	13.3	20.6
9 18	21 20.98	- 3 51.4	1.412	2.306	14.6	18.3	9 18	21 13.01	-22 57.4	1.384	2.235	17.5	20.8
<b>185297</b>	2006 <i>UK</i> <sub>252</sub>		8 15.1 130°35	0°9/14.3	18		<b>91201</b>	1998 <i>SC</i> <sub>162</sub>		8 15.1 239°36	7°0/7.8	18	
7 10	22 3.25	-14 52.3	2.317	3.166	11.9	21.5	7 10	22 6.30	-36 4.4	2.513	3.364	11.0	19.1
7 20	21 58.43	-15 23.0	2.247	3.174	8.9	21.4	7 20	22 0.98	-37 6.9	2.449	3.359	9.0	19.0
7 30	21 51.92	-16 0.3	2.201	3.183	5.6	21.2	7 30	21 53.69	-38 2.6	2.408	3.353	7.5	18.9
8 9	21 44.26	-16 40.3	2.182	3.191	2.2	21.0	8 9	21 45.01	-38 45.3	2.394	3.347	7.0	18.8
8 19	21 36.14	-17 18.8	2.190	3.198	2.0	21.0	8 19	21 35.75	-39 10.3	2.405	3.341	7.8	18.9
8 29	21 28.37	-17 52.1	2.227	3.206	5.4	21.2	8 29	21 26.88	-39 14.7	2.442	3.334	9.5	19.0
9 8	21 21.69	-18 17.1	2.291	3.213	8.6	21.4	9 8	21 19.29	-38 58.5	2.503	3.328	11.5	19.1
9 18	21 16.66	-18 32.3	2.380	3.220	11.4	21.6	9 18	21 13.62	-38 23.6	2.584	3.321	13.4	19.2
<b>523573</b>	2018 <i>EM</i> <sub>6</sub>		8 15.1 171°21	2°1/12.8	18		<b>254828</b>	2005 <i>QS</i> <sub>150</sub>		8 15.1 350°86	3°6/12.6	18	
7 10	22 1.56	-18 46.7	2.751	3.603	10.1	21.7	7 10	22 5.37	-22 43.4	1.902	2.770	13.2	20.7
7 20	21 57.00	-19 35.8	2.676	3.606	7.6	21.6	7 20	22 0.52	-23 9.9	1.832	2.768	10.1	20.5
7 30	21 50.95	-20 28.8	2.627	3.608	4.8	21.4	7 30	21 53.49	-23 37.6	1.784	2.766	6.6	20.3
8 9	21 43.89	-21 21.7	2.605	3.610	2.4	21.2	8 9	21 44.95	-24 1.2	1.762	2.765	3.9	20.1
8 19	21 36.38	-22 10.3	2.611	3.612	2.9	21.3	8 19	21 35.80	-24 15.9	1.766	2.764	4.5	20.1
8 29	21 29.12	-22 50.9	2.647	3.613	5.5	21.4	8 29	21 27.11	-24 17.9	1.797	2.763	7.6	20.3
9 8	21 22.75	-23 21.1	2.710	3.614	8.2	21.6	9 8	21 19.85	-24 5.9	1.853	2.762	11.0	20.5
9 18	21 17.78	-23 39.7	2.798	3.614	10.6	21.8	9 18	21 14.71	-23 40.5	1.931	2.762	14.1	20.7
<b>393338</b>	2014 <i>BN</i> <sub>44</sub>		8 15.1 73°23	0°1/15.1	16		<b>188666</b>	2005 <i>SP</i> <sub>126</sub>		8 15.1 107°38	3°9/11.9	18	
7 10	22 8.05	-13 50.4	1.822	2.672	14.5	20.9	7 10	22 5.70	-24 24.2	2.182	3.044	12.0	20.8
7 20	22 2.33	-13 45.7	1.762	2.688	11.0	20.7	7 20	22 0.48	-24 59.5	2.116	3.048	9.1	20.7
7 30	21 54.49	-13 48.2	1.724	2.704	7.0	20.5	7 30	21 53.32	-25 34.7	2.074	3.052	6.2	20.5
8 9	21 45.26	-13 54.7	1.712	2.721	2.7	20.2	8 9	21 44.85	-26 4.6	2.057	3.056	4.0	20.4
8 19	21 35.57	-14 1.9	1.727	2.737	1.7	20.2	8 19	21 35.88	-26 24.7	2.069	3.060	4.7	20.4
8 29	21 26.48	-14 6.3	1.770	2.753	5.9	20.5	8 29	21 27.34	-26 31.7	2.107	3.064	7.3	20.6
9 8	21 18.91	-14 5.7	1.838	2.770	9.8	20.8	9 8	21 20.10	-26 24.4	2.171	3.067	10.2	20.8
9 18	21 13.48	-13 58.6	1.930	2.786	13.1	21.0	9 18	21 14.78	-26 3.6	2.258	3.071	12.9	21.0
<b>146863</b>	2002 <i>AW</i> <sub>162</sub>		8 15.1 229°39	1°9/16.7	18		<b>260287</b>	2004 <i>TY</i> <sub>56</sub>		8 15.1 0°30	5°1/19.7	18	
7 10	22 3.25	- 7 23.4	2.367	3.192	12.4	20.4	7 10	21 58.17	+ 1 56.4	1.895	2.702	15.7	20.2
7 20	21 58.47	- 7 17.2	2.279	3.187	9.7	20.2	7 20	21 55.01	+ 1 59.5	1.815	2.701	12.9	20.0
7 30	21 52.00	- 7 20.9	2.214	3.182	6.6	20.0	7 30	21 49.98	+ 1 42.5	1.755	2.700	9.8	19.8
8 9	21 44.33	- 7 33.1	2.175	3.176	3.4	19.8	8 9	21 43.61	+ 1 5.8	1.718	2.700	6.8	19.6
8 19	21 36.12	- 7 51.5	2.163	3.171	2.1	19.7	8 19	21 36.63	+ 0 12.1	1.706	2.700	5.1	19.5
8 29	21 28.14	- 8 13.1	2.180	3.165	4.9	19.9	8 29	21 29.93	- 0 53.9	1.720	2.701	6.4	19.6
9 8	21 21.14	- 8 34.6	2.224	3.159	8.1	20.1	9 8	21 24.36	- 2 5.8	1.759	2.702	9.3	19.8
9 18	21 15.73	- 8 53.2	2.294	3.153	11.1	20.3	9 18	21 20.57	- 3 17.0	1.823	2.704	12.5	20.0
<b>342131</b>	2008 <i>SS</i> <sub>122</sub>		8 15.1 259°68	0°4/14.9	18		<b>22782</b>	Kushalnaik		8 15.1 172°67	0°9/15.8	18	

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>315893</b>	2008 <i>LJ</i> <sub>3</sub>		8 15.1 92°50	0°1/15.1	18		<b>458232</b>	2010 <i>TG</i> <sub>6</sub>		8 15.2 35°54	2°4/13.4	18	
7 10	21 59.33	-9 59.4	2.290	3.133	12.2	20.5	7 10	22 3.28	-18 37.9	1.758	2.628	14.0	20.4
7 20	21 55.59	-10 55.4	2.212	3.135	9.3	20.3	7 20	21 58.95	-19 9.6	1.701	2.640	10.6	20.2
7 30	21 50.20	-12 3.0	2.158	3.137	5.9	20.1	7 30	21 52.49	-19 46.1	1.667	2.652	6.7	20.0
8 9	21 43.67	-13 18.3	2.130	3.138	2.3	19.9	8 9	21 44.60	-20 22.2	1.657	2.664	3.1	19.8
8 19	21 36.61	-14 35.9	2.130	3.140	1.5	19.8	8 19	21 36.21	-20 52.5	1.673	2.678	3.4	19.9
8 29	21 29.80	-15 50.3	2.159	3.142	5.1	20.1	8 29	21 28.35	-21 12.8	1.716	2.691	7.0	20.1
9 8	21 23.96	-16 56.7	2.215	3.143	8.5	20.3	9 8	21 21.97	-21 20.5	1.784	2.705	10.7	20.4
9 18	21 19.67	-17 51.7	2.296	3.145	11.5	20.5	9 18	21 17.70	-21 15.2	1.874	2.719	13.8	20.6
<b>157398</b>	2004 <i>TV</i> <sub>221</sub>		8 15.1 282°54	1°9/17.2	18		<b>448387</b>	2009 <i>PW</i> <sub>19</sub>		8 15.2 336°28	3°2/18.9	18	
7 10	21 58.75	-4 19.3	2.330	3.152	12.7	19.7	7 10	21 57.62	+2 2.9	2.007	2.810	15.1	20.1
7 20	21 55.21	-4 56.2	2.232	3.137	10.0	19.5	7 20	21 54.60	+0 53.0	1.915	2.804	12.2	19.9
7 30	21 50.03	-5 48.3	2.156	3.121	6.9	19.3	7 30	21 49.76	-0 41.8	1.844	2.797	8.9	19.7
8 9	21 43.63	-6 53.5	2.105	3.106	3.6	19.0	8 9	21 43.60	-2 38.6	1.799	2.791	5.3	19.4
8 19	21 36.61	-8 7.8	2.082	3.090	2.1	18.9	8 19	21 36.78	-4 51.6	1.781	2.785	3.2	19.3
8 29	21 29.72	-9 26.1	2.088	3.075	4.9	19.1	8 29	21 30.14	-7 12.0	1.793	2.780	5.4	19.4
9 8	21 23.70	-10 42.6	2.122	3.059	8.3	19.2	9 8	21 24.53	-9 30.4	1.832	2.775	9.0	19.6
9 18	21 19.19	-11 52.5	2.180	3.044	11.4	19.4	9 18	21 20.62	-11 38.3	1.898	2.771	12.5	19.8
<b>397145</b>	2005 <i>WP</i> <sub>161</sub>		8 15.1 341°32	0°9/14.5	15		<b>11595</b>	Monsummano		8 15.2 155°14	3°2/12.9	18	
7 10	21 59.25	-14 7.7	1.614	2.488	14.9	21.2	7 10	22 7.56	-18 27.8	1.530	2.400	15.8	18.1
7 20	21 56.26	-14 34.9	1.536	2.475	11.4	20.9	7 20	22 2.66	-19 25.6	1.466	2.404	11.9	17.9
7 30	21 51.00	-15 12.9	1.478	2.464	7.3	20.6	7 30	21 55.13	-20 31.2	1.423	2.408	7.6	17.6
8 9	21 44.08	-15 57.1	1.444	2.454	2.8	20.3	8 9	21 45.71	-21 37.0	1.405	2.411	3.8	17.4
8 19	21 36.36	-16 41.7	1.435	2.444	2.4	20.3	8 19	21 35.49	-22 34.8	1.412	2.414	4.5	17.5
8 29	21 28.96	-17 20.7	1.452	2.436	6.9	20.6	8 29	21 25.80	-23 18.0	1.446	2.417	8.5	17.7
9 8	21 22.95	-17 49.5	1.492	2.428	11.3	20.8	9 8	21 17.86	-23 42.9	1.503	2.419	12.7	18.0
9 18	21 19.12	-18 5.2	1.555	2.421	15.0	21.0	9 18	21 12.51	-23 49.2	1.582	2.421	16.3	18.2
<b>444708</b>	2007 <i>EJ</i> <sub>133</sub>		8 15.1 113°06	0°3/14.9	18		<b>69291</b>	1990 <i>WG</i> <sub>1</sub>		8 15.2 244°92	11°3/3.2	18	
7 10	22 1.86	-13 2.3	2.569	3.411	11.1	22.1	7 10	22 9.29	-42 43.6	1.900	2.750	14.0	18.4
7 20	21 57.22	-13 29.4	2.501	3.423	8.4	21.9	7 20	22 4.31	-44 42.2	1.854	2.746	12.4	18.3
7 30	21 51.09	-14 3.4	2.456	3.436	5.3	21.8	7 30	21 56.37	-46 28.0	1.831	2.743	11.4	18.2
8 9	21 43.98	-14 41.0	2.439	3.448	2.0	21.6	8 9	21 46.25	-47 50.5	1.830	2.740	11.5	18.2
8 19	21 36.48	-15 18.7	2.450	3.460	1.4	21.5	8 19	21 35.15	-48 42.0	1.853	2.736	12.6	18.3
8 29	21 29.30	-15 53.1	2.490	3.471	4.7	21.8	8 29	21 24.61	-48 58.9	1.897	2.732	14.3	18.4
9 8	21 23.07	-16 21.3	2.558	3.483	7.7	22.0	9 8	21 16.00	-48 42.7	1.960	2.729	16.2	18.5
9 18	21 18.30	-16 41.6	2.650	3.494	10.3	22.2	9 18	21 10.29	-47 58.2	2.039	2.725	17.9	18.7
<b>141021</b>	2001 <i>WQ</i> <sub>51</sub>		8 15.2 275°02	0°9/14.4	18		<b>420326</b>	2012 <i>AS</i> <sub>21</sub>		8 15.2 168°80	1°5/16.2	17	
7 10	22 2.75	-14 41.6	2.063	2.918	12.9	20.2	7 10	22 7.68	-8 17.4	1.671	2.511	16.1	22.1
7 20	21 58.41	-15 8.4	1.981	2.912	9.8	19.9	7 20	22 2.49	-8 28.5	1.597	2.514	12.5	21.9
7 30	21 52.13	-15 43.1	1.923	2.905	6.2	19.7	7 30	21 54.91	-8 53.8	1.543	2.517	8.3	21.6
8 9	21 44.47	-16 21.6	1.890	2.899	2.4	19.5	8 9	21 45.62	-9 30.4	1.514	2.520	3.8	21.4
8 19	21 36.18	-16 59.5	1.884	2.892	2.1	19.4	8 19	21 35.58	-10 13.6	1.512	2.522	2.1	21.2
8 29	21 28.16	-17 32.3	1.906	2.886	5.9	19.7	8 29	21 25.96	-10 57.8	1.537	2.523	6.3	21.5
9 8	21 21.31	-17 56.4	1.954	2.880	9.6	19.9	9 8	21 17.86	-11 37.7	1.587	2.524	10.6	21.8
9 18	21 16.29	-18 10.0	2.025	2.873	12.8	20.1	9 18	21 12.06	-12 9.5	1.660	2.524	14.4	22.0
<b>315077</b>	2007 <i>DT</i> <sub>58</sub>		8 15.2 231°20	2°6/18.0	18		<b>100739</b>	1998 <i>DA</i> <sub>14</sub>		8 15.2 159°25	0°8/15.8	18	
7 10	21 59.02	-2 2.2	2.388	3.198	12.8	21.2	7 10	22 6.94	-9 21.5	1.830	2.670	14.9	20.6
7 20	21 55.31	-2 36.2	2.300	3.195	10.2	21.0	7 20	22 1.72	-9 49.4	1.758	2.676	11.5	20.4
7 30	21 50.03	-3 26.0	2.233	3.191	7.2	20.8	7 30	21 54.31	-10 30.3	1.707	2.682	7.5	20.1
8 9	21 43.64	-4 29.4	2.193	3.188	4.2	20.6	8 9	21 45.37	-11 20.6	1.681	2.688	3.2	19.9
8 19	21 36.72	-5 42.9	2.180	3.185	2.6	20.5	8 19	21 35.77	-12 15.0	1.682	2.693	1.7	19.8
8 29	21 29.99	-7 1.3	2.196	3.182	4.8	20.6	8 29	21 26.57	-13 7.7	1.712	2.697	6.0	20.1
9 8	21 24.16	-8 19.3	2.239	3.178	7.9	20.8	9 8	21 18.75	-13 53.8	1.767	2.700	10.0	20.3
9 18	21 19.79	-9 31.9	2.308	3.174	10.8	21.0	9 18	21 13.05	-14 29.9	1.847	2.703	13.5	20.6
<b>79223</b>	1994 <i>PM</i> <sub>12</sub>		8 15.2 53°69	1°9/16.7	18 R		<b>80481</b>	2000 <i>AJ</i> <sub>33</sub>		8 15.2 192°95	1°5/15.9	18	
7 10	22 1.89	-5 29.9	1.442	2.293	17.6	19.3	7 10	22 11.05	-11 0.4	1.685	2.527	15.9	19.6
7 20	21 58.34	-6 7.8	1.376	2.299	13.8	19.1	7 20	22 5.05	-10 34.8	1.607	2.527	12.3	19.4
7 30	21 52.34	-7 6.6	1.331	2.306	9.3	18.9	7 30	21 56.55	-10 18.4	1.551	2.526	8.2	19.1
8 9	21 44.61	-8 22.1	1.307	2.312	4.5	18.6	8 9	21 46.27	-10 9.1	1.519	2.524	3.7	18.9
8 19	21 36.13	-9 47.4	1.310	2.319	2.3	18.5	8 19	21 35.21	-10 4.5	1.514	2.523	2.1	18.8
8 29	21 28.11	-11 13.5	1.337	2.326	6.6	18.8	8 29	21 24.61	-10 1.6	1.536	2.521	6.4	19.0
9 8	21 21.69	-12 32.4	1.390	2.334	11.2	19.0	9 8	21 15.61	-9 57.4	1.584	2.519	10.8	19.3
9 18	21 17.65	-13 38.0	1.464	2.341	15.2	19.3	9 18	21 9.02	-9 49.8	1.655	2.517	14.5	19.5
<b>512799</b>	2016 <i>UL</i> <sub>86</sub>		8 15.2 24°75	2°0/16.7	17		<b>65626</b>	5052 <i>T</i> <sub>-3</sub>		8 15.2 348°38	8°3/9.6	18	
7 10	22 1.96	-7 5.0	1.718	2.562	15.5	21.5	7 10	21 58.81	-26 34.4	1.095	2.004	17.7	17.6
7 20	21 58.04	-7 12.6	1.646	2.565	12.1	21.3	7 20	21 57.11	-28 3.0	1.037	1.992	13.9	17.4
7 30	21 51.98	-7 34.9	1.596	2.569	8.2	21.0	7 30	21 52.14	-29 33.7	0.999	1.983	10.2	17.1
8 9	21 44.43	-8 9.5	1.569	2.573	4.1	20.8	8 9	21 44.71	-30 53.8	0.981	1.974	8.3	17.0
8 19	21 36.24	-8 52.1	1.568	2.577	2.3	20.7	8 19	21 36.16	-31 51.2	0.984	1.968	9.9	17.1
8 29	21 28.44	-9 37.4	1.594	2.581	5.9	20.9	8 29	21 28.22	-32 17.3	1.009	1.962	13.5	17.3
9 8	21 22.00	-10 20.2	1.644	2.586	9.9	21.2	9 8	21 22.49	-32 10.2	1.052	1.959	17.6	17.5
9 18	21 17.61	-10 56.1	1.718	2.591	13.5	21.4	9 18	21 19.97	-31 32.8	1.112	1.957	21.2	17.7
<b>474109</b>	2016 <i>LB</i> <sub>28</sub>		8 15.2 217°15	0°4/14.8	17		<b>477518</b>	2010 <i>DV</i> <sub>45</sub>		8 15.2 54°80	0°2/15.3	16	



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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>205048</b>	1998 <i>WN</i> <sub>25</sub>		8 15.2 159°64	1°5/16.5	18		<b>325475</b>	2009 <i>QS</i> <sub>62</sub>		8 15.2 32°56	4°3/13.2	17	
7 10	22 3.30	- 7 17.9	2.318	3.143	12.6	21.1	7 10	22 7.69	-21 36.4	1.074	1.969	19.1	20.1
7 20	21 58.54	- 7 34.9	2.239	3.148	9.8	20.9	7 20	22 3.32	-22 0.3	1.034	1.985	14.4	19.9
7 30	21 52.09	- 8 3.3	2.184	3.153	6.6	20.7	7 30	21 55.69	-22 27.1	1.013	2.001	9.4	19.7
8 9	21 44.47	- 8 40.6	2.154	3.157	3.2	20.5	8 9	21 45.95	-22 48.5	1.012	2.019	4.9	19.5
8 19	21 36.35	- 9 23.4	2.152	3.161	1.7	20.4	8 19	21 35.60	-22 57.4	1.035	2.037	5.5	19.6
8 29	21 28.52	-10 7.7	2.179	3.165	4.8	20.6	8 29	21 26.35	-22 49.4	1.080	2.057	9.9	19.9
9 8	21 21.71	-10 49.5	2.234	3.168	8.1	20.8	9 8	21 19.56	-22 24.0	1.146	2.077	14.4	20.2
9 18	21 16.51	-11 25.5	2.313	3.170	11.1	21.0	9 18	21 15.94	-21 43.5	1.232	2.098	18.2	20.5
<b>13326</b>	Ferri		8 15.2 7°43	0°1/15.2	18		<b>138825</b>	2000 <i>UR</i> <sub>31</sub>		8 15.2 172°00	1°7/13.5	18	
7 10	21 57.73	-10 48.1	1.611	2.479	15.2	16.7	7 10	22 2.73	-17 26.2	2.475	3.327	11.1	21.2
7 20	21 55.00	-11 26.4	1.545	2.480	11.6	16.5	7 20	21 58.08	-18 4.7	2.400	3.329	8.3	21.0
7 30	21 50.14	-12 18.6	1.500	2.483	7.5	16.3	7 30	21 51.80	-18 48.1	2.349	3.331	5.3	20.8
8 9	21 43.78	-13 20.0	1.478	2.487	2.9	16.0	8 9	21 44.39	-19 32.4	2.324	3.332	2.3	20.6
8 19	21 36.78	-14 24.3	1.481	2.492	1.8	16.0	8 19	21 36.49	-20 13.3	2.329	3.333	2.6	20.6
8 29	21 30.18	-15 24.9	1.511	2.497	6.4	16.3	8 29	21 28.87	-20 47.1	2.361	3.334	5.6	20.8
9 8	21 24.94	-16 15.8	1.565	2.504	10.5	16.5	9 8	21 22.25	-21 11.0	2.421	3.334	8.6	21.0
9 18	21 21.77	-16 53.6	1.641	2.512	14.2	16.8	9 18	21 17.20	-21 24.0	2.505	3.334	11.3	21.2
<b>335542</b>	2006 <i>BL</i> <sub>33</sub>		8 15.2 234°45	0°2/14.9	18		<b>187462</b>	2005 <i>XV</i> <sub>70</sub>		8 15.2 285°23	6°6/ 8.3	18	
7 10	22 2.51	-10 12.6	1.996	2.841	13.6	20.9	7 10	22 3.47	-31 5.6	2.204	3.071	11.7	20.0
7 20	21 58.39	-11 10.4	1.908	2.832	10.5	20.6	7 20	21 59.18	-32 26.7	2.133	3.060	9.4	19.8
7 30	21 52.25	-12 22.4	1.842	2.822	6.7	20.4	7 30	21 52.78	-33 45.2	2.086	3.048	7.4	19.7
8 9	21 44.62	-13 44.0	1.803	2.811	2.6	20.1	8 9	21 44.85	-34 54.0	2.065	3.037	6.6	19.6
8 19	21 36.23	-15 9.0	1.791	2.801	1.8	20.0	8 19	21 36.19	-35 46.4	2.070	3.026	7.6	19.6
8 29	21 28.04	-16 30.5	1.808	2.790	6.0	20.3	8 29	21 27.82	-36 18.0	2.100	3.015	9.8	19.7
9 8	21 20.96	-17 42.5	1.851	2.778	10.0	20.5	9 8	21 20.69	-36 27.4	2.154	3.004	12.2	19.9
9 18	21 15.74	-18 40.9	1.918	2.766	13.4	20.7	9 18	21 15.55	-36 15.6	2.228	2.992	14.5	20.0
<b>465051</b>	2006 <i>RW</i> <sub>80</sub>		8 15.2 34°90	0°8/15.7	17		<b>297530</b>	2001 <i>FH</i> <sub>31</sub>		8 15.2 200°51	16°3/30.9	18	
7 10	22 2.69	- 9 40.7	1.111	1.990	19.8	20.9	7 10	22 4.39	+26 33.4	1.212	1.900	28.6	21.1
7 20	21 59.43	-10 4.0	1.062	2.003	15.2	20.7	7 20	22 1.21	+26 49.4	1.133	1.898	26.4	20.9
7 30	21 53.23	-10 46.1	1.031	2.016	9.8	20.4	7 30	21 54.79	+26 13.7	1.064	1.896	23.6	20.6
8 9	21 45.01	-11 41.2	1.022	2.030	4.1	20.2	8 9	21 45.84	+24 35.7	1.007	1.892	20.6	20.4
8 19	21 36.06	-12 41.4	1.035	2.046	2.1	20.1	8 19	21 35.53	+21 49.8	0.968	1.889	17.9	20.2
8 29	21 27.88	-13 38.0	1.072	2.061	7.7	20.5	8 29	21 25.55	+18 1.0	0.949	1.884	16.4	20.1
9 8	21 21.78	-14 24.0	1.130	2.078	12.8	20.8	9 8	21 17.57	+13 27.5	0.953	1.879	17.1	20.2
9 18	21 18.54	-14 55.2	1.209	2.095	17.1	21.1	9 18	21 12.77	+ 8 36.2	0.981	1.873	19.6	20.3
<b>124774</b>	2001 <i>SG</i> <sub>247</sub>		8 15.2 14°00	0°5/15.5	17		<b>337959</b>	2002 <i>AK</i> <sub>105</sub>		8 15.2 119°25	3°2/17.3	18	
7 10	21 57.44	- 9 49.2	0.864	1.767	21.8	19.3	7 10	22 7.88	- 5 29.9	1.870	2.692	15.3	20.6
7 20	21 56.11	-10 18.6	0.817	1.771	16.8	19.0	7 20	22 2.32	- 5 6.1	1.798	2.702	12.1	20.4
7 30	21 51.46	-11 11.3	0.786	1.776	10.9	18.7	7 30	21 54.65	- 4 55.3	1.748	2.711	8.5	20.2
8 9	21 44.42	-12 20.5	0.774	1.783	4.4	18.4	8 9	21 45.53	- 4 56.6	1.723	2.720	4.8	20.0
8 19	21 36.41	-13 36.0	0.781	1.792	2.4	18.3	8 19	21 35.82	- 5 7.7	1.724	2.728	3.3	19.9
8 29	21 29.20	-14 45.8	0.810	1.803	8.8	18.7	8 29	21 26.54	- 5 25.3	1.753	2.737	6.0	20.1
9 8	21 24.31	-15 40.6	0.858	1.814	14.6	19.1	9 8	21 18.65	- 5 45.3	1.808	2.745	9.5	20.3
9 18	21 22.65	-16 15.4	0.924	1.828	19.5	19.4	9 18	21 12.83	- 6 4.2	1.887	2.753	12.9	20.5
<b>204630</b>	2005 <i>XW</i> <sub>57</sub>		8 15.2 161°96	0°8/15.8	17		<b>514681</b>	2005 <i>WY</i> <sub>110</sub>		8 15.2 344°88	5°0/19.4	18	
7 10	22 5.00	-10 22.7	1.847	2.692	14.6	20.5	7 10	22 0.72	+ 1 3.2	2.044	2.845	14.9	21.2
7 20	22 0.25	-10 32.4	1.771	2.693	11.2	20.3	7 20	21 56.87	+ 1 24.3	1.960	2.842	12.3	21.0
7 30	21 53.39	-10 53.1	1.717	2.695	7.3	20.1	7 30	21 51.20	+ 1 28.4	1.897	2.839	9.3	20.8
8 9	21 45.03	-11 22.0	1.689	2.696	3.1	19.8	8 9	21 44.21	+ 1 15.6	1.857	2.837	6.5	20.6
8 19	21 36.02	-11 54.9	1.686	2.697	1.7	19.7	8 19	21 36.61	+ 0 47.2	1.843	2.835	5.0	20.5
8 29	21 27.37	-12 27.2	1.712	2.697	5.9	20.0	8 29	21 29.25	+ 0 6.8	1.855	2.833	6.3	20.6
9 8	21 20.07	-12 54.8	1.763	2.698	9.8	20.2	9 8	21 22.96	- 0 40.8	1.893	2.831	9.1	20.8
9 18	21 14.80	-13 14.7	1.837	2.699	13.3	20.5	9 18	21 18.41	- 1 30.3	1.955	2.830	12.1	20.9
<b>177105</b>	2003 <i>FM</i> <sub>121</sub>		8 15.2 100°48	4°5/19.9	18		<b>1514</b>	Ricouxa		8 15.2 356°59	0°3/15.4	18	R
7 10	22 0.04	+ 3 2.5	2.245	3.031	14.2	20.1	7 10	21 54.52	- 9 31.6	0.906	1.809	21.0	14.8
7 20	21 56.12	+ 2 49.7	2.167	3.039	11.7	19.9	7 20	21 53.92	-10 7.9	0.848	1.802	16.3	14.5
7 30	21 50.57	+ 2 18.3	2.110	3.047	8.8	19.7	7 30	21 50.15	-11 9.1	0.807	1.797	10.6	14.2
8 9	21 43.90	+ 1 29.4	2.078	3.055	6.1	19.6	8 9	21 44.00	-12 29.0	0.784	1.794	4.3	13.8
8 19	21 36.74	+ 0 25.7	2.071	3.064	4.5	19.5	8 19	21 36.73	-13 57.0	0.782	1.793	2.4	13.7
8 29	21 29.85	- 0 48.0	2.093	3.071	5.6	19.6	8 29	21 30.04	-15 20.4	0.801	1.794	8.9	14.1
9 8	21 23.97	- 2 5.9	2.141	3.079	8.2	19.8	9 8	21 25.49	-16 28.3	0.839	1.796	14.8	14.4
9 18	21 19.64	- 3 22.3	2.215	3.087	11.0	20.0	9 18	21 24.09	-17 14.3	0.895	1.800	19.8	14.7
<b>477929</b>	2011 <i>QM</i> <sub>55</sub>		8 15.2 15°39	3°3/17.1	16		<b>273990</b>	2007 <i>MR</i> <sub>13</sub>		8 15.2 187°33	0°9/14.4	18	
7 10	22 3.29	- 7 1.2	1.408	2.263	17.7	20.5	7 10	22 3.84	-13 2.7	1.893	2.746	13.9	20.9
7 20	21 59.42	- 6 29.7	1.344	2.268	14.0	20.3	7 20	21 59.42	-13 53.2	1.817	2.746	10.6	20.7
7 30	21 53.05	- 6 13.3	1.301	2.274	9.7	20.1	7 30	21 52.92	-14 54.8	1.763	2.746	6.7	20.4
8 9	21 44.94	- 6 10.8	1.279	2.280	5.3	19.9	8 9	21 44.90	-16 2.5	1.736	2.745	2.5	20.2
8 19	21 36.13	- 6 19.8	1.281	2.288	3.4	19.8	8 19	21 36.21	-17 10.0	1.735	2.744	2.2	20.1
8 29	21 27.85	- 6 35.8	1.309	2.297	6.9	20.0	8 29	21 27.82	-18 11.1	1.762	2.742	6.4	20.4
9 8	21 21.26	- 6 54.0	1.360	2.307	11.1	20.3	9 8	21 20.71	-19 0.9	1.816	2.740	10.3	20.6
9 18	21 17.11	- 7 9.9	1.432	2.317	15.0	20.5	9 18	21 15.60	-19 36.8	1.892	2.738	13.7	20.9
<b>69355</b>	1994 <i>CM</i> <sub>12</sub>		8 15.2 139°04	0°7/14.6	18		<b>332873</b>	2010 <i>XG</i> <sub>77</sub>		8 15.2 225°94</			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>53745</b>	2000 <i>EG</i> <sub>57</sub>		8 15.2 161°62	0°4/15.5	18		<b>358788</b>	2008 <i>EJ</i> <sub>10</sub>		8 15.2 184°18	4°0/11.7	18	
7 10	22 6.20	-10 36.9	1.861	2.704	14.5	20.0	7 10	22 5.59	-24 50.5	2.294	3.155	11.6	21.2
7 20	22 1.17	-11 2.2	1.787	2.709	11.2	19.8	7 20	22 0.44	-25 31.9	2.224	3.155	8.8	21.0
7 30	21 54.00	-11 39.2	1.735	2.713	7.2	19.6	7 30	21 53.41	-26 13.2	2.178	3.154	6.0	20.9
8 9	21 45.32	-12 24.1	1.709	2.717	2.9	19.3	8 9	21 45.07	-26 49.3	2.158	3.154	4.1	20.7
8 19	21 35.98	-13 11.9	1.710	2.720	1.6	19.2	8 19	21 36.20	-27 15.5	2.165	3.154	4.8	20.8
8 29	21 27.03	-13 57.4	1.738	2.723	5.9	19.5	8 29	21 27.70	-27 28.3	2.201	3.153	7.3	20.9
9 8	21 19.44	-14 36.0	1.793	2.725	9.9	19.8	9 8	21 20.40	-27 26.4	2.261	3.152	10.1	21.1
9 18	21 13.91	-15 4.8	1.871	2.727	13.4	20.0	9 18	21 14.94	-27 10.3	2.345	3.151	12.7	21.3
<b>418293</b>	2008 <i>FF</i>		8 15.2 138°47	1°0/15.9	17		<b>202532</b>	2006 <i>DS</i> <sub>26</sub>		8 15.2 46°57	1°3/14.4	17	
7 10	22 6.20	- 8 53.4	1.781	2.622	15.2	21.7	7 10	22 6.31	-15 15.1	1.401	2.273	16.9	19.8
7 20	22 1.20	- 9 18.3	1.712	2.631	11.7	21.5	7 20	22 1.55	-15 39.0	1.358	2.297	12.7	19.6
7 30	21 54.02	- 9 56.6	1.664	2.640	7.7	21.3	7 30	21 54.27	-16 11.7	1.336	2.321	7.9	19.4
8 9	21 45.32	-10 44.8	1.641	2.648	3.3	21.0	8 9	21 45.39	-16 47.4	1.337	2.346	3.0	19.2
8 19	21 35.99	-11 37.7	1.646	2.656	1.7	20.9	8 19	21 36.06	-17 20.0	1.363	2.372	2.7	19.2
8 29	21 27.10	-12 29.5	1.677	2.663	6.0	21.2	8 29	21 27.54	-17 44.4	1.415	2.397	7.2	19.6
9 8	21 19.62	-13 15.2	1.735	2.670	10.0	21.5	9 8	21 20.89	-17 57.2	1.490	2.423	11.5	19.9
9 18	21 14.26	-13 51.4	1.816	2.676	13.5	21.7	9 18	21 16.76	-17 57.6	1.587	2.450	15.0	20.2
<b>170722</b>	2004 <i>BJ</i> <sub>55</sub>		8 15.2 266°92	0°8/14.5	18		<b>392536</b>	2011 <i>QX</i> <sub>94</sub>		8 15.2 245°23	0°5/14.9	18	
7 10	22 2.04	-13 6.7	1.966	2.821	13.4	20.7	7 10	22 4.90	-14 5.7	1.980	2.832	13.5	21.9
7 20	21 58.03	-13 48.6	1.885	2.815	10.2	20.5	7 20	22 0.12	-14 19.0	1.902	2.830	10.3	21.7
7 30	21 52.02	-14 41.0	1.826	2.809	6.5	20.2	7 30	21 53.31	-14 40.0	1.846	2.827	6.5	21.5
8 9	21 44.57	-15 39.4	1.793	2.802	2.5	20.0	8 9	21 45.07	-15 5.2	1.815	2.824	2.5	21.2
8 19	21 36.44	-16 38.3	1.787	2.796	2.1	19.9	8 19	21 36.19	-15 30.5	1.812	2.821	1.8	21.2
8 29	21 28.56	-17 32.2	1.808	2.789	6.1	20.2	8 29	21 27.65	-15 51.8	1.836	2.818	5.9	21.4
9 8	21 21.87	-18 16.4	1.856	2.783	9.9	20.4	9 8	21 20.36	-16 6.0	1.886	2.816	9.7	21.7
9 18	21 17.05	-18 48.1	1.926	2.776	13.3	20.6	9 18	21 15.02	-16 11.3	1.960	2.813	13.0	21.9
<b>247810</b>	2003 <i>SE</i> <sub>117</sub>		8 15.2 18°92	0°6/14.9	17		<b>107075</b>	2001 <i>AW</i> <sub>20</sub>		8 15.2 221°91	3°3/17.8	18	
7 10	22 2.49	-14 37.7	0.889	1.793	21.2	18.7	7 10	22 5.41	- 2 54.7	1.821	2.640	15.8	20.9
7 20	21 59.85	-14 32.1	0.846	1.801	16.2	18.5	7 20	22 0.77	- 3 4.2	1.731	2.631	12.7	20.6
7 30	21 53.76	-14 39.5	0.820	1.811	10.3	18.2	7 30	21 53.91	- 3 31.7	1.661	2.622	9.0	20.4
8 9	21 45.31	-14 54.2	0.813	1.823	3.9	17.9	8 9	21 45.37	- 4 16.0	1.616	2.612	5.2	20.2
8 19	21 36.06	-15 9.4	0.827	1.837	2.7	17.9	8 19	21 35.97	- 5 13.3	1.597	2.601	3.4	20.0
8 29	21 27.81	-15 18.7	0.861	1.852	8.9	18.3	8 29	21 26.78	- 6 18.3	1.605	2.590	6.2	20.2
9 8	21 22.06	-15 17.6	0.916	1.869	14.4	18.7	9 8	21 18.84	- 7 24.2	1.639	2.579	10.2	20.4
9 18	21 19.62	-15 4.6	0.989	1.887	19.0	19.0	9 18	21 12.96	- 8 25.4	1.697	2.566	13.9	20.6
<b>238834</b>	2005 <i>TN</i> <sub>134</sub>		8 15.2 14°73	1°0/16.1	18		<b>39266</b>	2001 <i>AT</i> <sub>2</sub>		8 15.2 14°83	2°0/13.2	18	
7 10	21 57.93	- 9 9.4	2.372	3.213	11.9	20.1	7 10	21 57.84	-17 28.1	2.145	3.013	11.9	17.4
7 20	21 54.47	- 9 25.2	2.299	3.218	9.1	20.0	7 20	21 54.60	-18 15.5	2.083	3.021	8.9	17.2
7 30	21 49.51	- 9 50.8	2.249	3.224	6.0	19.8	7 30	21 49.68	-19 8.5	2.044	3.029	5.6	17.0
8 9	21 43.52	-10 23.7	2.225	3.231	2.7	19.6	8 9	21 43.62	-20 2.5	2.031	3.038	2.6	16.8
8 19	21 37.11	-11 0.6	2.228	3.238	1.4	19.5	8 19	21 37.11	-20 52.3	2.044	3.048	3.0	16.9
8 29	21 30.98	-11 37.8	2.258	3.245	4.6	19.7	8 29	21 30.93	-21 33.6	2.085	3.059	6.1	17.1
9 8	21 25.78	-12 11.8	2.316	3.253	7.7	19.9	9 8	21 25.83	-22 3.2	2.152	3.070	9.3	17.3
9 18	21 22.03	-12 39.8	2.398	3.261	10.5	20.1	9 18	21 22.37	-22 19.8	2.241	3.082	12.0	17.5
<b>242518</b>	2005 <i>AK</i> <sub>2</sub>		8 15.2 289°65	4°3/17.9	17		<b>513575</b>	2010 <i>VF</i> <sub>179</sub>		8 15.2 322°23	5°6/10.0	18	
7 10	22 7.24	- 2 37.7	2.394	3.189	13.2	20.0	7 10	22 3.41	-28 9.1	2.121	2.991	12.0	20.5
7 20	22 1.65	- 1 44.4	2.290	3.172	10.7	19.8	7 20	21 59.07	-29 12.4	2.054	2.986	9.4	20.4
7 30	21 54.22	- 1 0.8	2.209	3.155	8.0	19.6	7 30	21 52.67	-30 14.3	2.010	2.981	6.9	20.2
8 9	21 45.42	- 0 27.7	2.155	3.138	5.4	19.4	8 9	21 44.83	-31 8.1	1.991	2.977	5.6	20.1
8 19	21 35.91	- 0 5.1	2.128	3.121	4.3	19.3	8 19	21 36.35	-31 48.1	1.999	2.973	6.5	20.2
8 29	21 26.52	+ 0 7.8	2.130	3.104	5.9	19.4	8 29	21 28.24	-32 10.0	2.033	2.968	8.9	20.3
9 8	21 18.08	+ 0 13.2	2.159	3.087	8.7	19.5	9 8	21 21.40	-32 12.5	2.091	2.965	11.6	20.5
9 18	21 11.27	+ 0 13.9	2.214	3.070	11.6	19.7	9 18	21 16.54	-31 56.5	2.170	2.961	14.0	20.6
<b>193197</b>	2000 <i>QQ</i> <sub>129</sub>		8 15.2 298°35	1°5/16.3	18		<b>308536</b>	2005 <i>UM</i> <sub>150</sub>		8 15.2 104°47	3°2/17.7	17	
7 10	22 2.55	- 7 25.2	1.678	2.524	15.7	20.1	7 10	22 3.76	- 3 31.0	1.653	2.484	16.6	21.2
7 20	21 59.09	- 7 50.1	1.566	2.487	12.5	19.8	7 20	21 59.53	- 3 41.0	1.582	2.490	13.2	20.9
7 30	21 53.16	- 8 33.2	1.474	2.450	8.5	19.5	7 30	21 53.06	- 4 9.8	1.532	2.496	9.3	20.7
8 9	21 45.20	- 9 32.3	1.406	2.412	4.0	19.1	8 9	21 45.00	- 4 55.2	1.504	2.502	5.2	20.5
8 19	21 35.97	-10 42.9	1.364	2.374	2.1	18.9	8 19	21 36.26	- 5 52.7	1.502	2.508	3.3	20.4
8 29	21 26.62	-11 58.0	1.348	2.336	6.8	19.1	8 29	21 27.92	- 6 56.2	1.527	2.514	6.2	20.6
9 8	21 18.39	-13 9.8	1.357	2.298	11.8	19.3	9 8	21 21.01	- 7 59.0	1.577	2.520	10.2	20.9
9 18	21 12.38	-14 12.0	1.388	2.259	16.3	19.5	9 18	21 16.26	- 8 55.4	1.650	2.525	13.9	21.1
<b>48082</b>	2001 <i>FT</i> <sub>35</sub>		8 15.2 173°03	1°2/15.9	18		<b>401642</b>	2013 <i>GW</i> <sub>92</sub>		8 15.2 119°83	1°7/16.9	18	
7 10	22 8.36	-10 26.7	1.593	2.442	16.3	19.2	7 10	22 3.03	- 6 55.8	2.649	3.466	11.5	20.8
7 20	22 3.16	-10 22.6	1.520	2.443	12.6	19.0	7 20	21 58.09	- 6 56.5	2.576	3.479	8.9	20.7
7 30	21 55.45	-10 30.3	1.467	2.444	8.3	18.8	7 30	21 51.72	- 7 6.6	2.526	3.491	6.1	20.5
8 9	21 45.94	-10 46.9	1.438	2.445	3.7	18.5	8 9	21 44.38	- 7 24.5	2.503	3.503	3.1	20.3
8 19	21 35.65	-11 8.4	1.435	2.445	2.0	18.4	8 19	21 36.67	- 7 47.6	2.508	3.515	1.9	20.3
8 29	21 25.81	-11 30.3	1.459	2.445	6.6	18.7	8 29	21 29.25	- 8 13.3	2.542	3.527	4.3	20.4
9 8	21 17.58	-11 48.3	1.508	2.445	11.0	18.9	9 8	21 22.75	- 8 38.5	2.605	3.538	7.2	20.6
9 18	21 11.79	-11 59.3	1.579	2.445	14.9	19.2	9 18	21 17.66	- 9 0.6	2.693	3.549	9.7	20.8
<b>43976</b>	1997 <i>GQ</i> <sub>14</sub>		8 15.2 295°52	0°8/14.8	18		<b>353429</b>	2011 <i>QP</i> <sub>46</sub>		8 15.2 35			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>213326</b>	2001 <i>SC</i> <sub>138</sub>		8 15.2 328°45	0°4/14.9	18		<b>41800</b>	Robwilliams		8 15.2 205°34	10°1/26.9	18	
7 10	22 2.59	-13 24.6	1.833	2.691	14.1	20.5	7 10	22 3.33	+21 17.3	2.552	3.192	15.9	19.4
7 20	21 58.56	-13 44.8	1.755	2.686	10.7	20.2	7 20	21 58.72	+21 57.1	2.457	3.187	14.5	19.3
7 30	21 52.42	-14 14.5	1.698	2.681	6.9	20.0	7 30	21 52.37	+22 13.8	2.377	3.181	13.0	19.2
8 9	21 44.76	-14 49.8	1.666	2.675	2.6	19.7	8 9	21 44.75	+22 4.3	2.318	3.174	11.5	19.0
8 19	21 36.41	-15 26.0	1.661	2.671	1.9	19.7	8 19	21 36.48	+21 27.4	2.280	3.166	10.4	19.0
8 29	21 28.39	-15 58.2	1.682	2.666	6.2	19.9	8 29	21 28.35	+20 24.3	2.266	3.158	10.2	18.9
9 8	21 21.65	-16 22.5	1.729	2.662	10.2	20.2	9 8	21 21.12	+18 59.4	2.277	3.149	10.8	19.0
9 18	21 16.92	-16 36.4	1.799	2.658	13.7	20.4	9 18	21 15.45	+17 19.3	2.312	3.140	12.1	19.0
<b>273642</b>	2007 <i>DO</i> <sub>56</sub>		8 15.2 245°15	0°4/14.9	17		<b>346997</b>	2010 <i>CS</i> <sub>170</sub>		8 15.2 9°78	1°1/16.0	18	
7 10	22 6.52	-13 16.4	1.797	2.649	14.6	21.8	7 10	22 2.78	- 9 30.1	1.595	2.450	16.0	20.6
7 20	22 1.69	-13 36.2	1.710	2.638	11.2	21.6	7 20	21 58.92	- 9 40.6	1.524	2.451	12.4	20.4
7 30	21 54.52	-14 5.9	1.646	2.626	7.2	21.3	7 30	21 52.75	-10 5.0	1.473	2.452	8.2	20.2
8 9	21 45.63	-14 41.7	1.606	2.615	2.8	21.0	8 9	21 44.94	-10 39.8	1.447	2.454	3.6	19.9
8 19	21 35.87	-15 18.6	1.592	2.602	1.9	20.9	8 19	21 36.41	-11 20.3	1.445	2.456	1.8	19.8
8 29	21 26.38	-15 51.4	1.607	2.589	6.5	21.2	8 29	21 28.29	-12 1.0	1.470	2.458	6.3	20.1
9 8	21 18.24	-16 15.9	1.646	2.576	10.8	21.4	9 8	21 21.65	-12 36.6	1.519	2.461	10.6	20.3
9 18	21 12.28	-16 29.8	1.709	2.563	14.5	21.6	9 18	21 17.23	-13 3.4	1.590	2.464	14.4	20.6
<b>336460</b>	2008 <i>UL</i> <sub>362</sub>		8 15.2 237°23	2°7/16.9	18		<b>364966</b>	2008 <i>GH</i> <sub>141</sub>		8 15.2 51°58	5°1/10.7	18	
7 10	22 7.66	- 7 4.9	1.944	2.771	14.7	20.6	7 10	22 3.74	-26 31.0	2.039	2.909	12.4	20.7
7 20	22 2.30	- 6 40.5	1.856	2.763	11.6	20.4	7 20	21 59.24	-27 32.9	1.985	2.919	9.5	20.5
7 30	21 54.78	- 6 27.1	1.789	2.756	8.0	20.1	7 30	21 52.73	-28 33.7	1.954	2.929	6.8	20.4
8 9	21 45.69	- 6 23.8	1.748	2.748	4.4	19.9	8 9	21 44.86	-29 26.9	1.949	2.939	5.2	20.3
8 19	21 35.85	- 6 28.7	1.733	2.739	2.8	19.8	8 19	21 36.48	-30 6.7	1.970	2.950	6.0	20.4
8 29	21 26.27	- 6 38.8	1.746	2.731	5.9	20.0	8 29	21 28.57	-30 29.4	2.017	2.960	8.5	20.6
9 8	21 17.95	- 6 50.8	1.786	2.722	9.7	20.2	9 8	21 22.01	-30 33.6	2.089	2.971	11.2	20.8
9 18	21 11.64	- 7 1.4	1.850	2.713	13.2	20.4	9 18	21 17.44	-30 20.4	2.182	2.982	13.7	21.0
<b>268252</b>	2005 <i>MD</i> <sub>27</sub>		8 15.2 317°01	1°1/15.9	18		<b>444254</b>	2005 <i>UL</i> <sub>206</sub>		8 15.2 298°20	1°1/14.3	17	
7 10	22 0.14	- 9 16.7	1.282	2.155	18.0	20.3	7 10	22 1.88	-14 49.1	2.017	2.875	13.0	22.0
7 20	21 57.72	- 9 32.9	1.193	2.131	14.2	20.0	7 20	21 58.00	-15 20.4	1.924	2.856	9.9	21.7
7 30	21 52.48	-10 8.0	1.124	2.107	9.5	19.7	7 30	21 52.10	-16 0.5	1.854	2.837	6.3	21.5
8 9	21 44.99	-10 58.9	1.076	2.084	4.1	19.3	8 9	21 44.70	-16 45.2	1.809	2.818	2.5	21.2
8 19	21 36.22	-11 59.8	1.051	2.062	2.1	19.1	8 19	21 36.53	-17 29.7	1.791	2.799	2.3	21.2
8 29	21 27.59	-13 2.3	1.050	2.040	7.8	19.4	8 29	21 28.52	-18 9.0	1.800	2.780	6.2	21.4
9 8	21 20.57	-13 58.2	1.071	2.019	13.3	19.6	9 8	21 21.62	-18 38.9	1.834	2.761	10.1	21.6
9 18	21 16.28	-14 41.2	1.111	1.999	18.2	19.9	9 18	21 16.58	-18 57.1	1.892	2.742	13.5	21.8
<b>474449</b>	2003 <i>RU</i> <sub>20</sub>		8 15.2 312°59	6°9/11.3	18		<b>260005</b>	2004 <i>FC</i> <sub>121</sub>		8 15.2 87°76	1°4/14.0	17	
7 10	22 9.30	-28 22.8	1.504	2.381	15.6	20.2	7 10	22 3.59	-12 42.7	1.551	2.416	15.9	20.3
7 20	22 4.74	-29 0.6	1.411	2.348	12.4	19.9	7 20	21 59.58	-13 53.3	1.490	2.425	12.0	20.1
7 30	21 57.01	-29 36.6	1.340	2.316	9.1	19.7	7 30	21 53.19	-15 17.9	1.450	2.434	7.5	19.9
8 9	21 46.76	-30 2.0	1.291	2.283	6.9	19.5	8 9	21 45.11	-16 49.1	1.434	2.444	2.9	19.6
8 19	21 35.14	-30 8.3	1.267	2.252	7.9	19.4	8 19	21 36.32	-18 18.6	1.445	2.453	2.9	19.6
8 29	21 23.76	-29 49.8	1.267	2.220	11.4	19.5	8 29	21 28.01	-19 37.7	1.482	2.462	7.4	19.9
9 8	21 14.22	-29 5.6	1.289	2.189	15.5	19.7	9 8	21 21.26	-20 40.7	1.544	2.471	11.6	20.2
9 18	21 7.67	-27 58.6	1.330	2.159	19.3	19.9	9 18	21 16.85	-21 24.7	1.628	2.480	15.3	20.5
<b>150391</b>	2000 <i>DP</i> <sub>94</sub>		8 15.2 210°74	1°2/14.3	18		<b>117545</b>	2005 <i>EN</i> <sub>5</sub>		8 15.2 31°38	0°2/15.3	18	R
7 10	22 7.10	-14 57.2	1.868	2.721	14.1	21.2	7 10	22 0.26	- 9 39.1	1.569	2.430	15.9	19.4
7 20	22 2.00	-15 29.7	1.787	2.716	10.7	21.0	7 20	21 56.98	-10 28.2	1.507	2.438	12.1	19.2
7 30	21 54.65	-16 10.9	1.729	2.711	6.8	20.8	7 30	21 51.48	-11 33.1	1.466	2.447	7.8	18.9
8 9	21 45.66	-16 56.2	1.696	2.705	2.7	20.5	8 9	21 44.44	-12 48.3	1.448	2.457	3.1	18.7
8 19	21 35.90	-17 40.1	1.690	2.698	2.4	20.5	8 19	21 36.74	-14 6.6	1.457	2.467	1.8	18.6
8 29	21 26.45	-18 17.1	1.712	2.691	6.6	20.7	8 29	21 29.51	-15 20.5	1.491	2.478	6.5	18.9
9 8	21 18.35	-18 43.5	1.759	2.683	10.6	20.9	9 8	21 23.72	-16 23.4	1.550	2.489	10.7	19.2
9 18	21 12.39	-18 57.5	1.830	2.674	14.1	21.2	9 18	21 20.09	-17 11.6	1.632	2.500	14.4	19.5
<b>478185</b>	2011 <i>UC</i> <sub>230</sub>		8 15.2 262°20	4°8/11.1	18		<b>165009</b>	2000 <i>CC</i> <sub>46</sub>		8 15.2 237°11	1°8/17.1	18	
7 10	22 5.31	-25 41.0	2.064	2.931	12.4	21.5	7 10	22 1.53	- 4 38.1	2.226	3.046	13.2	20.7
7 20	22 0.56	-26 34.4	1.990	2.923	9.6	21.4	7 20	21 57.48	- 5 17.6	2.131	3.035	10.4	20.5
7 30	21 53.67	-27 28.1	1.939	2.916	6.7	21.2	7 30	21 51.64	- 6 13.0	2.058	3.024	7.2	20.3
8 9	21 45.26	-28 15.8	1.914	2.908	4.9	21.0	8 9	21 44.49	- 7 21.5	2.011	3.012	3.7	20.1
8 19	21 36.17	-28 51.7	1.916	2.900	5.7	21.1	8 19	21 36.68	- 8 39.0	1.992	3.000	2.0	19.9
8 29	21 27.42	-29 11.3	1.944	2.893	8.4	21.2	8 29	21 29.00	- 9 59.8	2.001	2.988	5.1	20.1
9 8	21 19.98	-29 12.9	1.997	2.885	11.4	21.4	9 8	21 22.29	-11 17.8	2.038	2.975	8.7	20.3
9 18	21 14.58	-28 57.4	2.072	2.877	14.1	21.6	9 18	21 17.19	-12 28.2	2.101	2.962	11.9	20.5
<b>423438</b>	2005 <i>QH</i> <sub>190</sub>		8 15.2 128°47	4°6/19.3	17		<b>259765</b>	2004 <i>BK</i> <sub>5</sub>		8 15.2 194°41	0°3/14.9	17	
7 10	22 2.59	+ 1 42.6	1.734	2.541	17.0	20.9	7 10	22 7.43	-12 48.0	1.823	2.672	14.6	22.0
7 20	21 58.58	+ 1 22.0	1.659	2.547	13.8	20.7	7 20	22 2.26	-13 12.3	1.745	2.670	11.2	21.7
7 30	21 52.45	+ 0 38.3	1.604	2.553	10.2	20.5	7 30	21 54.82	-13 46.8	1.688	2.668	7.2	21.5
8 9	21 44.79	- 0 27.0	1.572	2.558	6.6	20.3	8 9	21 45.75	-14 27.4	1.657	2.666	2.8	21.2
8 19	21 36.46	- 1 49.8	1.565	2.564	4.6	20.2	8 19	21 35.93	-15 8.9	1.653	2.663	1.9	21.1
8 29	21 28.48	- 3 22.8	1.585	2.569	6.4	20.3	8 29	21 26.46	-15 46.2	1.676	2.659	6.3	21.4
9 8	21 21.82	- 4 57.9	1.631	2.574	9.9	20.6	9 8	21 18.39	-16 15.0	1.726	2.655	10.4	21.7
9 18	21 17.20	- 6 27.6	1.701	2.579	13.4	20.8	9 18	21 12.47	-16 33.1	1.798	2.650	14.0	21.9
<b>402396</b>	2005 <i>YM</i> <sub>98</sub>		8 15.2 184°53	2°7/17.7	18		<b>179129</b>	2001 <i>SQ</i> <sub>278</sub>					

EPHEMERIDES

8 15.2

8 15.3

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>256449</b>	2007 <i>CC</i> <sub>43</sub>		8 15.2 240°94	0°2/15.4	18		<b>74096</b>	1998 <i>QD</i> <sub>15</sub>		8 15.2 14°49	1°9/16.3	18	
7 10	22 2.79	-11 47.1	2.541	3.378	11.3	21.5	7 10	21 59.11	-8 36.1	0.993	1.882	20.8	18.0
7 20	21 58.19	-12 4.2	2.448	3.366	8.7	21.3	7 20	21 57.10	-8 39.3	0.943	1.887	16.1	17.7
7 30	21 51.97	-12 29.2	2.378	3.354	5.6	21.1	7 30	21 52.02	-9 3.5	0.909	1.894	10.7	17.5
8 9	21 44.59	-12 59.4	2.334	3.342	2.3	20.8	8 9	21 44.77	-9 44.5	0.895	1.902	4.9	17.2
8 19	21 36.64	-13 31.7	2.319	3.329	1.3	20.7	8 19	21 36.66	-10 35.2	0.902	1.912	2.5	17.1
8 29	21 28.86	-14 2.6	2.333	3.316	4.8	21.0	8 29	21 29.28	-11 26.7	0.931	1.924	7.9	17.4
9 8	21 21.98	-14 29.0	2.375	3.303	8.0	21.1	9 8	21 24.01	-12 11.0	0.981	1.937	13.3	17.8
9 18	21 16.57	-14 48.6	2.441	3.289	10.9	21.3	9 18	21 21.70	-12 42.7	1.050	1.951	17.8	18.1
<b>122446</b>	2000 <i>QW</i> <sub>134</sub>		8 15.2 275°35	3°0/13.0	18		<b>35210</b>	1994 <i>PR</i> <sub>39</sub>		8 15.2 335°21	1°0/15.8	18	
7 10	22 5.87	-19 14.9	1.738	2.606	14.3	19.5	7 10	21 55.89	-9 12.9	0.958	1.855	20.7	17.9
7 20	22 1.41	-19 57.0	1.652	2.589	10.9	19.2	7 20	21 55.09	-9 33.4	0.886	1.836	16.2	17.5
7 30	21 54.49	-20 45.7	1.588	2.572	7.1	19.0	7 30	21 51.11	-10 17.9	0.830	1.819	10.8	17.2
8 9	21 45.69	-21 35.0	1.548	2.554	3.6	18.7	8 9	21 44.58	-11 22.7	0.794	1.803	4.6	16.8
8 19	21 35.95	-22 18.2	1.535	2.537	4.1	18.7	8 19	21 36.69	-12 39.5	0.778	1.789	2.4	16.6
8 29	21 26.45	-22 49.4	1.548	2.519	8.0	18.9	8 29	21 29.12	-13 56.9	0.783	1.776	8.9	16.9
9 8	21 18.37	-23 5.1	1.585	2.501	12.1	19.1	9 8	21 23.58	-15 3.6	0.807	1.765	15.0	17.2
9 18	21 12.60	-23 4.2	1.645	2.484	15.7	19.3	9 18	21 21.27	-15 51.8	0.849	1.756	20.4	17.5
<b>65546</b>	3256 <i>T</i> -1		8 15.2 133°15	1°4/14.2	18		<b>253809</b>	2003 <i>YW</i> <sub>22</sub>		8 15.2 329°24	4°5/12.4	18	
7 10	22 8.31	-15 24.7	1.802	2.656	14.5	19.7	7 10	21 59.17	-18 31.7	1.084	1.987	18.3	19.1
7 20	22 2.81	-16 1.2	1.739	2.668	10.9	19.5	7 20	21 57.48	-19 36.6	1.012	1.968	14.0	18.8
7 30	21 55.07	-16 45.7	1.697	2.680	6.9	19.3	7 30	21 52.58	-20 55.1	0.958	1.949	9.2	18.5
8 9	21 45.81	-17 32.9	1.682	2.691	2.7	19.1	8 9	21 45.15	-22 17.8	0.925	1.932	4.9	18.2
8 19	21 35.96	-18 17.0	1.693	2.701	2.6	19.1	8 19	21 36.37	-23 33.0	0.914	1.916	6.1	18.2
8 29	21 26.61	-18 52.9	1.733	2.711	6.7	19.4	8 29	21 27.94	-24 29.4	0.924	1.901	11.1	18.4
9 8	21 18.77	-19 17.2	1.798	2.720	10.5	19.6	9 8	21 21.53	-25 0.2	0.955	1.887	16.3	18.7
9 18	21 13.13	-19 28.6	1.886	2.729	13.9	19.8	9 18	21 18.31	-25 3.9	1.002	1.875	20.9	18.9
<b>433661</b>	2014 <i>BO</i> <sub>28</sub>		8 15.2 49°28	0°8/14.6	16		<b>74875</b>	1999 <i>TH</i> <sub>100</sub>		8 15.2 357°61	4°2/12.6	18	
7 10	22 2.84	-12 47.4	1.578	2.443	15.6	20.8	7 10	22 1.44	-18 46.7	1.106	2.005	18.4	18.7
7 20	21 58.92	-13 31.3	1.518	2.453	11.8	20.6	7 20	21 58.93	-19 47.2	1.048	2.001	13.9	18.4
7 30	21 52.71	-14 27.2	1.479	2.463	7.5	20.3	7 30	21 53.28	-20 58.2	1.008	1.999	9.0	18.1
8 9	21 44.92	-15 29.6	1.465	2.474	2.8	20.1	8 9	21 45.32	-22 10.0	0.990	1.998	4.7	17.9
8 19	21 36.49	-16 31.5	1.476	2.485	2.3	20.1	8 19	21 36.34	-23 12.0	0.995	1.997	5.7	17.9
8 29	21 28.57	-17 26.3	1.514	2.497	6.8	20.4	8 29	21 27.98	-23 55.2	1.021	1.998	10.4	18.2
9 8	21 22.19	-18 9.1	1.576	2.508	11.0	20.7	9 8	21 21.72	-24 14.9	1.069	2.000	15.2	18.5
9 18	21 18.04	-18 37.3	1.659	2.520	14.6	20.9	9 18	21 18.53	-24 11.0	1.134	2.002	19.4	18.8
<b>137074</b>	1998 <i>WJ</i> <sub>34</sub>		8 15.2 272°88	1°1/14.4	18		<b>216969</b>	2000 <i>EL</i> <sub>81</sub>		8 15.2 242°73	0°6/15.9	18	
7 10	22 5.18	-14 17.9	1.629	2.491	15.3	20.8	7 10	22 1.77	-7 58.8	2.214	3.047	12.9	20.9
7 20	22 0.97	-14 50.0	1.543	2.477	11.8	20.5	7 20	21 57.72	-8 50.3	2.119	3.034	10.0	20.7
7 30	21 54.25	-15 33.2	1.478	2.462	7.5	20.2	7 30	21 51.86	-9 56.2	2.047	3.021	6.6	20.5
8 9	21 45.62	-16 22.7	1.438	2.447	2.9	19.9	8 9	21 44.65	-11 12.8	2.001	3.008	2.8	20.2
8 19	21 36.01	-17 12.2	1.423	2.432	2.6	19.9	8 19	21 36.74	-12 35.2	1.984	2.994	1.4	20.1
8 29	21 26.65	-17 55.2	1.435	2.417	7.3	20.1	8 29	21 28.96	-13 57.1	1.995	2.980	5.3	20.3
9 8	21 18.74	-18 26.8	1.472	2.402	11.8	20.4	9 8	21 22.14	-15 12.8	2.034	2.966	9.0	20.5
9 18	21 13.19	-18 44.4	1.530	2.386	15.8	20.6	9 18	21 16.97	-16 17.8	2.098	2.951	12.3	20.7
<b>434057</b>	2001 <i>UN</i> <sub>144</sub>		8 15.2 340°54	12°8/5.8	17		<b>389848</b>	2012 <i>RJ</i> <sub>5</sub>		8 15.2 311°09	16°8/5.9	18	
7 10	22 6.52	-38 26.3	1.265	2.149	17.5	20.0	7 10	22 40.67	-55 38.6	1.606	2.390	19.0	20.0
7 20	22 3.17	-40 14.3	1.214	2.139	15.0	19.8	7 20	22 29.81	-56 36.6	1.542	2.368	17.8	19.8
7 30	21 56.17	-41 50.4	1.183	2.130	13.2	19.7	7 30	22 13.39	-57 7.3	1.495	2.346	17.0	19.7
8 9	21 46.45	-43 0.6	1.172	2.122	12.9	19.6	8 9	21 53.11	-56 54.9	1.467	2.324	16.8	19.7
8 19	21 35.56	-43 33.9	1.182	2.115	14.3	19.7	8 19	21 31.87	-55 48.9	1.459	2.303	17.5	19.7
8 29	21 25.47	-43 25.4	1.212	2.108	16.7	19.8	8 29	21 12.95	-53 48.8	1.472	2.282	18.9	19.7
9 8	21 17.92	-42 37.5	1.259	2.103	19.5	20.0	9 8	20 58.66	-51 4.2	1.504	2.262	20.7	19.8
9 18	21 13.93	-41 17.0	1.322	2.099	22.1	20.2	9 18	20 49.82	-47 49.2	1.554	2.243	22.6	19.9
<b>171648</b>	2000 <i>FS</i> <sub>27</sub>		8 15.2 97°20	5°4/20.6	18		<b>92061</b>	1999 <i>WA</i> <sub>8</sub>		8 15.2 189°02	1°6/16.9	18	
7 10	22 0.63	+ 4 40.5	2.028	2.811	15.6	20.1	7 10	22 2.74	-7 13.9	2.755	3.571	11.1	19.6
7 20	21 56.83	+ 4 32.2	1.950	2.817	13.0	20.0	7 20	21 57.97	-7 14.4	2.668	3.571	8.7	19.4
7 30	21 51.21	+ 4 2.4	1.891	2.822	10.0	19.8	7 30	21 51.75	-7 24.0	2.604	3.569	5.9	19.2
8 9	21 44.32	+ 3 11.7	1.855	2.828	7.1	19.6	8 9	21 44.53	-7 40.9	2.567	3.568	3.0	19.0
8 19	21 36.86	+ 2 3.0	1.845	2.834	5.4	19.5	8 19	21 36.86	-8 3.0	2.558	3.566	1.8	18.9
8 29	21 29.69	+ 0 41.3	1.862	2.839	6.4	19.6	8 29	21 29.40	-8 27.7	2.579	3.564	4.2	19.1
9 8	21 23.61	- 0 46.5	1.906	2.845	9.0	19.8	9 8	21 22.77	-8 51.9	2.628	3.562	7.1	19.3
9 18	21 19.26	- 2 13.5	1.974	2.850	11.9	20.0	9 18	21 17.49	-9 13.4	2.703	3.559	9.7	19.5
<b>189523</b>	2000 <i>OM</i> <sub>31</sub>		8 15.2 359°73	3°8/17.5	18		<b>394722</b>	2008 <i>EN</i> <sub>105</sub>		8 15.2 35°34	0°3/14.9	18	
7 10	22 1.21	- 5 1.3	1.299	2.156	18.8	19.3	7 10	21 59.97	-10 33.6	1.946	2.798	13.6	20.8
7 20	21 58.20	- 4 45.4	1.231	2.154	15.0	19.0	7 20	21 56.45	-11 30.5	1.875	2.803	10.4	20.6
7 30	21 52.54	- 4 49.2	1.181	2.153	10.5	18.8	7 30	21 51.04	-12 40.3	1.827	2.808	6.6	20.4
8 9	21 44.95	- 5 11.3	1.152	2.152	6.0	18.5	8 9	21 44.31	-13 58.2	1.804	2.813	2.5	20.1
8 19	21 36.47	- 5 48.0	1.146	2.152	3.8	18.4	8 19	21 37.00	-15 17.9	1.808	2.818	1.7	20.1
8 29	21 28.45	- 6 33.3	1.164	2.154	7.3	18.6	8 29	21 30.00	-16 33.0	1.841	2.824	5.8	20.3
9 8	21 22.12	- 7 19.8	1.205	2.156	11.8	18.9	9 8	21 24.16	-17 38.0	1.899	2.830	9.5	20.6
9 18	21 18.36	- 8 1.4	1.266	2.159	16.0	19.2	9 18	21 20.13	-18 29.5	1.980	2.836	12.8	20.8
<b>72063</b>	2000 <i>YD</i> <sub>18</sub>		8 15.2 295°92	1°6/16.4	18		<b>430732</b>	2004 <i>GW</i> <sub>34</sub>					

EPHEMERIDES

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>235669</b>	2004 <i>RT</i> <sub>245</sub>		8 15.3 204 <sup>o</sup> 00	8 <sup>o</sup> 2/ 8.8 18			<b>444117</b>	2004 <i>TX</i> <sub>156</sub>		8 15.3 326 <sup>o</sup> 88	4 <sup>o</sup> 8/11.3 18		
7 10	22 19.31	-39 32.3	2.356	3.185	12.4	21.4	7 10	22 4.38	-25 58.4	2.021	2.891	12.5	21.3
7 20	22 11.11	-40 20.3	2.289	3.179	10.4	21.3	7 20	21 59.92	-26 42.4	1.949	2.883	9.7	21.1
7 30	22 0.39	-40 57.7	2.244	3.173	8.8	21.2	7 30	21 53.34	-27 26.1	1.899	2.876	6.8	20.9
8 9	21 47.95	-41 17.0	2.226	3.167	8.2	21.1	8 9	21 45.27	-28 3.4	1.875	2.869	4.9	20.8
8 19	21 34.89	-41 13.1	2.234	3.159	8.9	21.1	8 19	21 36.54	-28 28.9	1.877	2.863	5.7	20.8
8 29	21 22.48	-40 43.9	2.269	3.151	10.5	21.2	8 29	21 28.19	-28 38.5	1.905	2.857	8.3	21.0
9 8	21 11.86	-39 51.4	2.328	3.142	12.6	21.4	9 8	21 21.16	-28 30.9	1.958	2.851	11.3	21.1
9 18	21 3.78	-38 39.8	2.409	3.133	14.6	21.5	9 18	21 16.16	-28 6.9	2.032	2.845	14.1	21.3
<b>169829</b>	2002 <i>QF</i> <sub>72</sub>		8 15.3 275 <sup>o</sup> 23	0 <sup>o</sup> 3/15.0 18			<b>116698</b>	2004 <i>CZ</i> <sub>97</sub>		8 15.3 45 <sup>o</sup> 76	7 <sup>o</sup> 8/11.5 18		
7 10	22 4.21	-13 11.7	1.930	2.782	13.7	20.7	7 10	22 13.27	-30 8.6	1.281	2.162	17.6	18.8
7 20	21 59.83	-13 30.2	1.842	2.770	10.5	20.5	7 20	22 7.48	-30 50.7	1.237	2.174	13.8	18.6
7 30	21 53.33	-13 58.0	1.776	2.757	6.8	20.3	7 30	21 58.43	-31 26.1	1.213	2.187	10.2	18.5
8 9	21 45.27	-14 31.6	1.736	2.745	2.6	20.0	8 9	21 47.24	-31 44.9	1.211	2.200	7.9	18.4
8 19	21 36.45	-15 6.5	1.722	2.732	1.8	19.9	8 19	21 35.45	-31 40.3	1.233	2.214	8.7	18.5
8 29	21 27.86	-15 38.0	1.736	2.719	6.1	20.1	8 29	21 24.78	-31 9.6	1.278	2.228	11.7	18.7
9 8	21 20.48	-16 2.1	1.775	2.706	10.1	20.4	9 8	21 16.60	-30 15.6	1.345	2.242	15.2	18.9
9 18	21 15.07	-16 16.5	1.838	2.694	13.6	20.6	9 18	21 11.66	-29 3.4	1.432	2.257	18.4	19.2
<b>510804</b>	2013 <i>BV</i> <sub>11</sub>		8 15.3 188 <sup>o</sup> 96	3 <sup>o</sup> 9/11.4 18			<b>435171</b>	2007 <i>PU</i> <sub>37</sub>		8 15.3 333 <sup>o</sup> 38	3 <sup>o</sup> 0/17.5 17		
7 10	22 3.69	-22 36.9	2.255	3.117	11.6	21.7	7 10	21 54.14	-3 44.1	1.261	2.127	18.7	20.0
7 20	21 59.16	-23 45.7	2.184	3.117	8.8	21.6	7 20	21 53.13	-4 11.1	1.171	2.101	15.0	19.7
7 30	21 52.74	-24 57.5	2.137	3.116	6.0	21.4	7 30	21 49.58	-5 5.4	1.099	2.075	10.6	19.4
8 9	21 44.99	-26 6.1	2.117	3.115	4.0	21.3	8 9	21 43.99	-6 25.3	1.048	2.051	5.7	19.0
8 19	21 36.64	-27 5.7	2.125	3.114	4.8	21.3	8 19	21 37.23	-8 5.3	1.020	2.029	3.1	18.8
8 29	21 28.57	-27 51.3	2.160	3.112	7.4	21.5	8 29	21 30.60	-9 55.3	1.014	2.007	7.4	19.0
9 8	21 21.63	-28 20.5	2.221	3.110	10.3	21.7	9 8	21 25.45	-11 43.2	1.031	1.988	12.7	19.2
9 18	21 16.48	-28 32.8	2.304	3.108	12.9	21.8	9 18	21 22.85	-13 18.6	1.069	1.970	17.6	19.4
<b>453667</b>	2010 <i>UC</i> <sub>61</sub>		8 15.3 207 <sup>o</sup> 98	1 <sup>o</sup> 9/13.3 18			<b>518217</b>	2016 <i>QS</i> <sub>89</sub>		8 15.3 351 <sup>o</sup> 45	9 <sup>o</sup> 2/20.2 18		
7 10	22 3.52	-19 29.2	2.804	3.653	10.0	22.1	7 10	22 4.40	+ 3 45.0	1.426	2.235	19.9	21.0
7 20	21 58.61	-19 57.7	2.721	3.649	7.6	21.9	7 20	22 0.56	+ 5 12.9	1.351	2.230	16.9	20.8
7 30	21 52.19	-20 29.0	2.663	3.644	4.8	21.7	7 30	21 54.10	+ 6 20.3	1.294	2.225	13.7	20.6
8 9	21 44.73	-20 59.6	2.633	3.638	2.4	21.6	8 9	21 45.67	+ 7 3.0	1.257	2.222	10.7	20.4
8 19	21 36.81	-21 26.2	2.631	3.633	2.6	21.6	8 19	21 36.27	+ 7 18.9	1.243	2.219	9.2	20.3
8 29	21 29.11	-21 45.7	2.658	3.627	5.3	21.8	8 29	21 27.19	+ 7 9.5	1.251	2.217	10.2	20.4
9 8	21 22.30	-21 56.2	2.713	3.620	8.0	21.9	9 8	21 19.68	+ 6 40.3	1.283	2.216	12.9	20.5
9 18	21 16.90	-21 56.9	2.792	3.614	10.4	22.1	9 18	21 14.68	+ 5 58.8	1.334	2.216	16.1	20.7
<b>183303</b>	2002 <i>UU</i> <sub>33</sub>		8 15.3 353 <sup>o</sup> 83	6 <sup>o</sup> 5/11.5 18 R			<b>513660</b>	2011 <i>UC</i> <sub>11</sub>		8 15.3 331 <sup>o</sup> 05	2 <sup>o</sup> 6/13.6 18		
7 10	22 3.56	-24 30.2	1.129	2.029	18.0	19.1	7 10	22 5.54	-19 28.1	1.700	2.570	14.5	21.4
7 20	22 0.64	-25 27.3	1.072	2.023	13.9	18.9	7 20	22 1.07	-19 48.6	1.625	2.563	11.0	21.2
7 30	21 54.43	-26 26.7	1.033	2.019	9.6	18.6	7 30	21 54.22	-20 13.5	1.572	2.556	7.1	20.9
8 9	21 45.82	-27 18.1	1.016	2.016	6.7	18.5	8 9	21 45.65	-20 37.7	1.543	2.550	3.4	20.7
8 19	21 36.18	-27 51.6	1.021	2.014	7.8	18.5	8 19	21 36.32	-20 55.9	1.540	2.545	3.6	20.7
8 29	21 27.24	-28 0.3	1.047	2.013	11.7	18.7	8 29	21 27.41	-21 3.6	1.564	2.539	7.5	20.9
9 8	21 20.55	-27 42.8	1.094	2.013	16.0	19.0	9 8	21 20.00	-20 58.6	1.611	2.534	11.5	21.2
9 18	21 17.04	-27 1.8	1.159	2.014	19.9	19.2	9 18	21 14.89	-20 40.6	1.681	2.530	15.0	21.4
<b>205166</b>	2000 <i>AL</i> <sub>168</sub>		8 15.3 238 <sup>o</sup> 69	0 <sup>o</sup> 6/14.7 18			<b>232621</b>	2003 <i>UR</i> <sub>163</sub>		8 15.3 274 <sup>o</sup> 85	5 <sup>o</sup> 4/19.9 18		
7 10	22 2.71	-12 9.6	2.172	3.018	12.6	21.1	7 10	22 1.38	+ 2 49.2	1.972	2.765	15.6	20.2
7 20	21 58.49	-13 1.0	2.082	3.007	9.7	20.9	7 20	21 57.69	+ 2 52.9	1.873	2.749	13.0	20.0
7 30	21 52.39	-14 3.6	2.015	2.995	6.2	20.7	7 30	21 52.00	+ 2 36.3	1.794	2.732	10.0	19.8
8 9	21 44.90	-15 13.2	1.974	2.983	2.4	20.4	8 9	21 44.80	+ 1 59.2	1.738	2.716	7.1	19.6
8 19	21 36.70	-16 24.3	1.961	2.970	1.9	20.4	8 19	21 36.80	+ 1 3.2	1.707	2.699	5.4	19.5
8 29	21 28.67	-17 31.1	1.977	2.958	5.8	20.6	8 29	21 28.90	+ 0 7.3	1.703	2.682	6.6	19.5
9 8	21 21.67	-18 28.6	2.020	2.944	9.4	20.8	9 8	21 22.05	+ 1 25.7	1.725	2.665	9.7	19.6
9 18	21 16.38	-19 13.8	2.087	2.931	12.7	21.0	9 18	21 17.00	+ 2 45.2	1.770	2.647	13.0	19.8
<b>250591</b>	2005 <i>CN</i> <sub>68</sub>		8 15.3 207 <sup>o</sup> 20	2 <sup>o</sup> 1/16.8 18			<b>753</b>	Tiflis		8 15.3 34 <sup>o</sup> 37	10 <sup>o</sup> 2/ 9.5 18 A		
7 10	22 6.28	- 6 3.0	1.757	2.588	15.8	21.2	7 10	22 6.55	-30 20.4	0.991	1.896	19.5	12.6
7 20	22 1.55	- 6 20.9	1.673	2.584	12.4	21.0	7 20	22 3.05	-32 0.5	0.965	1.913	15.4	12.4
7 30	21 54.51	- 6 55.3	1.609	2.579	8.5	20.8	7 30	21 55.88	-33 32.4	0.956	1.932	11.9	12.3
8 9	21 45.77	- 7 43.6	1.571	2.573	4.3	20.5	8 9	21 46.30	-34 41.8	0.968	1.952	10.2	12.2
8 19	21 36.20	- 8 41.2	1.558	2.567	2.3	20.4	8 19	21 36.05	-35 18.4	1.001	1.973	11.5	12.4
8 29	21 26.89	- 9 42.1	1.573	2.560	6.1	20.6	8 29	21 27.07	-35 18.1	1.053	1.994	14.5	12.6
9 8	21 18.93	-10 40.0	1.614	2.553	10.4	20.8	9 8	21 20.84	-34 44.1	1.125	2.017	17.9	12.9
9 18	21 13.12	-11 30.1	1.679	2.545	14.2	21.1	9 18	21 18.07	-33 43.4	1.213	2.040	20.9	13.2
<b>25902</b>	2000 <i>YZ</i> <sub>105</sub>		8 15.3 263 <sup>o</sup> 78	9 <sup>o</sup> 3/ 9.5 18			<b>374962</b>	2007 <i>CB</i> <sub>61</sub>		8 15.3 173 <sup>o</sup> 07	0 <sup>o</sup> 1/15.3 17		
7 10	22 17.56	-38 52.8	1.863	2.708	14.4	18.5	7 10	22 7.76	-12 45.7	1.825	2.672	14.6	21.4
7 20	22 10.24	-39 36.2	1.803	2.706	12.1	18.4	7 20	22 2.50	-12 56.9	1.750	2.674	11.2	21.1
7 30	22 0.03	-40 7.4	1.765	2.704	10.1	18.2	7 30	21 55.01	-13 17.5	1.696	2.676	7.2	20.9
8 9	21 47.86	-40 17.9	1.750	2.701	9.3	18.2	8 9	21 45.94	-13 43.7	1.668	2.677	2.8	20.6
8 19	21 35.05	-40 1.7	1.761	2.699	10.0	18.2	8 19	21 36.18	-14 11.3	1.667	2.678	1.7	20.6
8 29	21 23.11	-39 17.1	1.796	2.696	11.9	18.3	8 29	21 26.83	-14 35.7	1.694	2.678	6.1	20.9
9 8	21 13.32	-38 7.2	1.854	2.694	14.3	18.5	9 8	21 18.88	-14 53.4	1.747	2.678	10.2	21.1
9 18	21 6.47	-36 37.4	1.933	2.692	16.6	18.7	9 18	21 13.09	-15				

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>70187</b>	1999 RY <sub>10</sub>		8 15.3 295°66	0°5/15.0	18		<b>333936</b>	1999 VC <sub>82</sub>		8 15.3 283°49	9°0/7.7	18	
7 10	22 7.75	-14 28.8	1.390	2.258	17.2	17.7	7 10	22 11.12	-35 42.9	1.878	2.737	13.8	20.6
7 20	22 3.47	-14 27.4	1.302	2.238	13.3	17.4	7 20	22 5.79	-36 59.3	1.796	2.710	11.5	20.4
7 30	21 56.21	-14 35.5	1.233	2.217	8.7	17.1	7 30	21 57.57	-38 9.9	1.735	2.684	9.6	20.3
8 9	21 46.61	-14 49.3	1.187	2.197	3.4	16.7	8 9	21 47.12	-39 5.1	1.699	2.657	9.0	20.2
8 19	21 35.75	-15 3.8	1.166	2.176	2.3	16.6	8 19	21 35.52	-39 36.4	1.688	2.630	10.1	20.2
8 29	21 25.11	-15 13.6	1.170	2.156	7.9	16.9	8 29	21 24.21	-39 38.8	1.701	2.602	12.4	20.3
9 8	21 16.18	-15 14.6	1.197	2.136	13.1	17.1	9 8	21 14.59	-39 11.8	1.735	2.574	15.2	20.4
9 18	21 10.08	-15 5.0	1.245	2.117	17.7	17.3	9 18	21 7.69	-38 18.8	1.789	2.546	17.8	20.5
<b>316976</b>	2001 FH <sub>159</sub>		8 15.3 116°19	3°3/17.9	17		<b>91219</b>	1999 AN <sub>7</sub>		8 15.3 251°03	1°8/16.4	18	
7 10	22 6.01	-2 35.1	1.718	2.538	16.5	21.5	7 10	22 7.00	-8 9.1	1.480	2.329	17.3	19.9
7 20	22 1.16	-2 51.6	1.653	2.554	13.1	21.3	7 20	22 2.58	-8 13.7	1.396	2.318	13.6	19.6
7 30	21 54.12	-3 27.2	1.608	2.568	9.3	21.1	7 30	21 55.46	-8 34.4	1.332	2.307	9.2	19.4
8 9	21 45.58	-4 19.2	1.586	2.583	5.3	20.9	8 9	21 46.28	-9 8.5	1.291	2.296	4.4	19.0
8 19	21 36.45	-5 23.2	1.591	2.597	3.3	20.8	8 19	21 36.03	-9 51.7	1.275	2.285	2.3	18.9
8 29	21 27.77	-6 32.6	1.624	2.610	6.0	21.0	8 29	21 26.05	-10 37.5	1.285	2.273	7.0	19.1
9 8	21 20.53	-7 40.7	1.682	2.623	9.8	21.3	9 8	21 17.65	-11 19.7	1.320	2.262	11.9	19.4
9 18	21 15.43	-8 42.1	1.764	2.635	13.3	21.5	9 18	21 11.81	-11 53.6	1.376	2.249	16.2	19.6
<b>516088</b>	2015 TF <sub>348</sub>		8 15.3 320°02	8°8/6.9	18		<b>388950</b>	2008 TG <sub>22</sub>		8 15.3 281°34	2°3/17.0	18	
7 10	22 6.97	-38 11.4	2.099	2.955	12.6	20.7	7 10	22 3.11	-6 13.4	1.771	2.608	15.4	21.6
7 20	22 2.13	-39 23.2	2.037	2.945	10.7	20.6	7 20	21 59.16	-6 20.4	1.683	2.598	12.2	21.3
7 30	21 54.88	-40 26.3	1.998	2.936	9.2	20.5	7 30	21 53.03	-6 43.0	1.617	2.587	8.4	21.1
8 9	21 45.92	-41 12.8	1.982	2.927	8.8	20.4	8 9	21 45.25	-7 19.1	1.574	2.576	4.4	20.8
8 19	21 36.23	-41 36.5	1.992	2.918	9.7	20.5	8 19	21 36.65	-8 4.8	1.557	2.565	2.5	20.7
8 29	21 27.00	-41 34.3	2.025	2.909	11.5	20.6	8 29	21 28.28	-8 55.1	1.567	2.555	6.0	20.9
9 8	21 19.34	-41 6.6	2.080	2.901	13.6	20.7	9 8	21 21.15	-9 44.1	1.602	2.544	10.2	21.1
9 18	21 14.01	-40 16.6	2.154	2.893	15.7	20.8	9 18	21 16.08	-10 27.0	1.660	2.533	13.9	21.3
<b>273795</b>	2007 FN <sub>17</sub>		8 15.3 74°37	3°3/17.7	17		<b>165</b>	Loreley		8 15.3 29°84	2°3/16.9	18	
7 10	22 5.96	-4 13.5	1.621	2.452	16.9	20.5	7 10	22 4.49	-7 38.3	2.057	2.888	13.8	12.3
7 20	22 1.15	-4 10.4	1.563	2.470	13.3	20.3	7 20	21 59.74	-7 18.0	1.982	2.892	10.8	12.1
7 30	21 54.11	-4 24.7	1.525	2.489	9.3	20.1	7 30	21 53.11	-7 8.2	1.929	2.897	7.4	11.9
8 9	21 45.57	-4 54.0	1.510	2.508	5.3	19.9	8 9	21 45.19	-7 7.6	1.900	2.901	3.9	11.7
8 19	21 36.48	-5 34.7	1.521	2.527	3.3	19.9	8 19	21 36.73	-7 14.0	1.899	2.906	2.4	11.6
8 29	21 27.95	-6 21.0	1.559	2.546	6.2	20.1	8 29	21 28.62	-7 24.6	1.926	2.912	5.3	11.8
9 8	21 20.97	-7 7.3	1.622	2.564	10.0	20.3	9 8	21 21.69	-7 36.2	1.978	2.917	8.8	12.1
9 18	21 16.19	-7 48.6	1.708	2.583	13.5	20.6	9 18	21 16.56	-7 45.8	2.055	2.922	11.9	12.3
<b>252107</b>	2000 WC <sub>11</sub>		8 15.3 268°04	3°7/18.4	18		<b>342644</b>	2008 UZ <sub>363</sub>		8 15.3 358°83	0°2/15.4	18	
7 10	22 2.02	-1 53.3	2.290	3.095	13.4	20.7	7 10	22 10.89	-14 47.3	1.639	2.492	15.7	19.7
7 20	21 57.82	-1 42.5	2.196	3.085	10.8	20.5	7 20	22 5.10	-14 21.7	1.564	2.492	12.1	19.5
7 30	21 51.90	-1 45.5	2.123	3.075	7.9	20.3	7 30	21 56.79	-14 1.8	1.511	2.491	7.8	19.2
8 9	21 44.73	-2 1.8	2.076	3.065	5.1	20.1	8 9	21 46.69	-13 45.2	1.483	2.491	3.1	19.0
8 19	21 36.93	-2 29.6	2.055	3.054	3.7	20.0	8 19	21 35.86	-13 29.0	1.481	2.491	1.8	18.9
8 29	21 29.30	-3 5.8	2.062	3.044	5.4	20.1	8 29	21 25.54	-13 10.7	1.506	2.491	6.6	19.2
9 8	21 22.61	-3 46.1	2.095	3.033	8.4	20.3	9 8	21 16.88	-12 48.5	1.557	2.492	10.9	19.4
9 18	21 17.49	-4 26.4	2.154	3.023	11.4	20.5	9 18	21 10.69	-12 21.7	1.630	2.492	14.7	19.7
<b>234812</b>	2002 QQ <sub>102</sub>		8 15.3 9°96	3°9/12.5	18		<b>318584</b>	2005 GV <sub>187</sub>		8 15.3 319°62	1°2/16.1	18	
7 10	22 3.33	-20 43.6	1.509	2.390	15.3	19.6	7 10	21 59.51	-8 10.1	1.166	2.043	19.2	20.0
7 20	21 59.62	-21 33.3	1.448	2.391	11.6	19.4	7 20	21 57.50	-8 36.5	1.085	2.024	15.1	19.6
7 30	21 53.37	-22 28.0	1.408	2.393	7.6	19.2	7 30	21 52.54	-9 25.7	1.022	2.005	10.1	19.3
8 9	21 45.35	-23 20.5	1.391	2.396	4.3	19.0	8 9	21 45.23	-10 34.1	0.980	1.988	4.5	18.9
8 19	21 36.60	-24 3.3	1.400	2.399	5.0	19.1	8 19	21 36.64	-11 54.6	0.960	1.971	2.2	18.7
8 29	21 28.36	-24 30.7	1.434	2.403	8.7	19.3	8 29	21 28.25	-13 17.0	0.963	1.955	8.1	19.0
9 8	21 21.80	-24 39.9	1.490	2.408	12.6	19.5	9 8	21 21.62	-14 30.9	0.988	1.940	13.8	19.3
9 18	21 17.69	-24 30.9	1.568	2.413	16.1	19.8	9 18	21 17.88	-15 28.9	1.032	1.925	18.8	19.6
<b>350199</b>	2012 BK <sub>68</sub>		8 15.3 22°69	0°2/15.1	18		<b>27712</b>	Coudray		8 15.3 332°65	1°1/14.6	18	
7 10	21 59.52	-10 39.9	2.053	2.903	13.1	19.8	7 10	21 58.39	-12 38.8	0.997	1.896	19.9	17.7
7 20	21 56.05	-11 30.2	1.980	2.906	10.0	19.6	7 20	21 57.02	-13 14.9	0.926	1.879	15.4	17.3
7 30	21 50.80	-12 32.4	1.929	2.910	6.4	19.4	7 30	21 52.40	-14 11.0	0.873	1.864	9.9	17.0
8 9	21 44.29	-13 42.2	1.905	2.914	2.5	19.2	8 9	21 45.21	-15 20.9	0.839	1.849	3.8	16.6
8 19	21 37.23	-14 54.1	1.908	2.918	1.6	19.1	8 19	21 36.66	-16 34.8	0.826	1.836	3.1	16.5
8 29	21 30.45	-16 2.2	1.938	2.922	5.5	19.4	8 29	21 28.48	-17 41.3	0.835	1.824	9.4	16.8
9 8	21 24.77	-17 1.5	1.995	2.926	9.1	19.6	9 8	21 22.35	-18 31.2	0.864	1.814	15.4	17.1
9 18	21 20.78	-17 48.7	2.076	2.931	12.3	19.9	9 18	21 19.47	-18 59.3	0.909	1.805	20.5	17.4
<b>471761</b>	2012 UR <sub>112</sub>		8 15.3 318°43	4°4/18.9	18		<b>473016</b>	2015 HD <sub>55</sub>		8 15.3 301°83	1°5/16.5	18	
7 10	21 57.61	+ 0 28.0	1.480	2.312	18.1	20.6	7 10	22 0.90	-6 28.2	1.533	2.384	16.7	20.4
7 20	21 55.44	+ 0 2.2	1.387	2.292	14.9	20.3	7 20	21 57.85	-7 4.9	1.446	2.370	13.1	20.1
7 30	21 50.90	-0 51.1	1.312	2.272	11.0	20.1	7 30	21 52.38	-8 1.9	1.380	2.357	8.9	19.9
8 9	21 44.49	-2 11.4	1.259	2.253	6.8	19.8	8 9	21 45.07	-9 15.9	1.337	2.343	4.2	19.6
8 19	21 37.05	-3 54.2	1.230	2.234	4.4	19.6	8 19	21 36.77	-10 40.7	1.319	2.330	2.0	19.4
8 29	21 29.72	-5 50.9	1.226	2.216	7.0	19.7	8 29	21 28.68	-12 7.9	1.327	2.316	6.7	19.6
9 8	21 23.71	-7 50.4	1.247	2.199	11.4	19.9	9 8	21 21.96	-13 29.0	1.360	2.304	11.4	19.9
9 18	21 19.98	-9 42.2	1.289	2.182	15.8	20.1	9 18	21 17.54	-14 37.4	1.414	2.291	15.7	20.1
<b>478704</b>	2012 UO <sub>36</sub>		8 15.3 328°33	3°4/13.0	18		<b>482225</b>	2010 XS <sub>74</sub>		8 15.3 294°57	5°3/10.5	18	
7 10	22 1.23	-18 38.9	1.364	2.251	16.3	20.5	7 10	22 4.83					

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>283720</b>	2002 <i>TA</i> <sub>170</sub>		8 15.3 265°87	4.5/18.5	18		<b>478018</b>	2011 <i>SF</i> <sub>197</sub>		8 15.3 238°60	0.7/15.9	18	
7 10	22 4.97	- 1 50.6	2.002	2.811	14.9	20.3	7 10	22 3.00	- 9 47.8	1.989	2.832	13.8	21.7
7 20	22 0.28	- 1 19.4	1.915	2.804	12.2	20.1	7 20	21 58.79	-10 8.8	1.910	2.830	10.6	21.5
7 30	21 53.60	- 1 2.6	1.848	2.798	9.0	19.9	7 30	21 52.63	-10 41.6	1.852	2.829	7.0	21.3
8 9	21 45.45	- 1 0.2	1.805	2.792	5.9	19.7	8 9	21 45.09	-11 22.8	1.820	2.827	3.0	21.1
8 19	21 36.59	- 1 11.1	1.789	2.786	4.5	19.6	8 19	21 36.91	-12 8.2	1.814	2.825	1.5	20.9
8 29	21 27.96	- 1 32.6	1.800	2.780	6.2	19.7	8 29	21 29.01	-12 53.0	1.837	2.823	5.5	21.2
9 8	21 20.48	- 2 0.4	1.837	2.774	9.4	19.9	9 8	21 22.28	-13 32.6	1.885	2.821	9.3	21.4
9 18	21 14.85	- 2 30.2	1.897	2.767	12.6	20.0	9 18	21 17.39	-14 3.8	1.957	2.819	12.6	21.7
<b>63389</b>	Noshiro		8 15.3 61°32	3.5/12.4	18		<b>107628</b>	2001 <i>EV</i> <sub>10</sub>		8 15.3 86°56	1.5/14.3	17	
7 10	22 4.09	-19 31.1	1.699	2.571	14.4	18.7	7 10	22 7.80	-14 44.0	1.483	2.348	16.5	20.0
7 20	21 59.82	-20 38.7	1.647	2.586	10.8	18.5	7 20	22 2.85	-15 23.4	1.428	2.363	12.4	19.8
7 30	21 53.32	-21 51.7	1.618	2.602	6.9	18.3	7 30	21 55.37	-16 12.9	1.395	2.379	7.9	19.6
8 9	21 45.30	-23 2.6	1.613	2.618	3.8	18.2	8 9	21 46.16	-17 6.2	1.385	2.394	3.1	19.3
8 19	21 36.72	-24 4.3	1.635	2.633	4.6	18.3	8 19	21 36.33	-17 56.4	1.401	2.410	2.8	19.3
8 29	21 28.68	-24 51.0	1.683	2.649	8.0	18.5	8 29	21 27.14	-18 37.3	1.444	2.425	7.4	19.7
9 8	21 22.17	-25 19.6	1.756	2.665	11.5	18.8	9 8	21 19.74	-19 4.7	1.510	2.440	11.6	19.9
9 18	21 17.85	-25 30.1	1.850	2.681	14.5	19.0	9 18	21 14.84	-19 17.4	1.599	2.454	15.3	20.2
<b>324268</b>	2006 <i>BM</i> <sub>274</sub>		8 15.3 249°95	0.8/16.1	18		<b>121429</b>	1999 <i>TL</i> <sub>164</sub>		8 15.3 59°21	7.4/21.6	17	
7 10	22 0.16	- 8 45.5	2.457	3.291	11.7	20.9	7 10	22 2.30	+ 6 44.1	1.736	2.517	17.9	19.3
7 20	21 56.28	- 9 14.1	2.372	3.288	9.1	20.7	7 20	21 58.45	+ 7 9.1	1.665	2.524	15.2	19.2
7 30	21 50.84	- 9 53.2	2.311	3.284	6.0	20.5	7 30	21 52.50	+ 7 10.1	1.611	2.532	12.1	19.0
8 9	21 44.32	-10 40.3	2.275	3.281	2.6	20.2	8 9	21 45.05	+ 6 46.0	1.580	2.541	9.2	18.8
8 19	21 37.28	-11 31.6	2.268	3.278	1.3	20.1	8 19	21 36.95	+ 5 58.2	1.571	2.549	7.5	18.8
8 29	21 30.45	-12 22.9	2.289	3.275	4.6	20.4	8 29	21 29.20	+ 4 51.3	1.588	2.557	8.1	18.8
9 8	21 24.51	-13 10.2	2.337	3.271	7.8	20.6	9 8	21 22.76	+ 3 32.8	1.630	2.566	10.5	19.0
9 18	21 20.01	-13 50.4	2.411	3.268	10.7	20.8	9 18	21 18.34	+ 2 10.5	1.695	2.575	13.4	19.2
<b>127177</b>	2002 <i>GK</i> <sub>160</sub>		8 15.3 275°23	2.2/17.5	18		<b>328540</b>	2009 <i>RJ</i> <sub>31</sub>		8 15.3 263°94	2.0/17.3	18	
7 10	21 59.64	- 3 53.9	2.269	3.089	13.0	19.8	7 10	22 0.82	- 5 45.1	2.567	3.386	11.7	21.6
7 20	21 56.05	- 4 26.1	2.178	3.081	10.3	19.6	7 20	21 56.78	- 5 54.3	2.470	3.373	9.3	21.4
7 30	21 50.79	- 5 13.6	2.110	3.074	7.2	19.4	7 30	21 51.20	- 6 14.6	2.396	3.361	6.4	21.2
8 9	21 44.32	- 6 14.2	2.067	3.067	3.9	19.2	8 9	21 44.51	- 6 44.6	2.348	3.348	3.4	21.0
8 19	21 37.27	- 7 23.9	2.052	3.059	2.2	19.0	8 19	21 37.27	- 7 21.6	2.328	3.335	2.1	20.9
8 29	21 30.39	- 8 37.8	2.065	3.052	4.9	19.2	8 29	21 30.17	- 8 2.4	2.336	3.322	4.5	21.0
9 8	21 24.43	- 9 50.1	2.105	3.045	8.2	19.4	9 8	21 23.89	- 8 43.1	2.372	3.309	7.6	21.2
9 18	21 20.01	-10 56.2	2.170	3.037	11.4	19.6	9 18	21 18.99	- 9 20.4	2.433	3.295	10.4	21.4
<b>175404</b>	2006 <i>OV</i> <sub>11</sub>		8 15.3 324°50	2.2/16.8	18		<b>250595</b>	2005 <i>EZ</i> <sub>21</sub>		8 15.3 221°17	0.8/15.9	17	
7 10	22 3.64	- 7 42.0	1.769	2.611	15.2	19.8	7 10	22 4.49	- 8 42.9	1.484	2.339	17.0	20.7
7 20	21 59.52	- 7 31.1	1.686	2.604	12.0	19.5	7 20	22 0.56	- 9 18.5	1.410	2.337	13.2	20.5
7 30	21 53.22	- 7 33.0	1.625	2.597	8.2	19.3	7 30	21 54.10	-10 11.7	1.356	2.335	8.7	20.2
8 9	21 45.33	- 7 46.0	1.587	2.590	4.2	19.0	8 9	21 45.76	-11 18.0	1.326	2.334	3.7	19.9
8 19	21 36.68	- 8 7.2	1.575	2.583	2.5	18.9	8 19	21 36.54	-12 30.7	1.321	2.332	1.8	19.8
8 29	21 28.32	- 8 32.5	1.590	2.577	6.0	19.1	8 29	21 27.68	-13 41.8	1.342	2.330	6.9	20.1
9 8	21 21.26	- 8 57.4	1.629	2.571	10.0	19.4	9 8	21 20.40	-14 44.0	1.388	2.328	11.6	20.4
9 18	21 16.25	- 9 18.3	1.692	2.566	13.7	19.6	9 18	21 15.55	-15 32.7	1.455	2.326	15.7	20.6
<b>56461</b>	2000 <i>GX</i> <sub>96</sub>		8 15.3 41°77	9.5/22.8	18		<b>36193</b>	1999 <i>TD</i> <sub>89</sub>		8 15.3 17°64	0.4/14.9	18	
7 10	22 2.22	+ 9 5.8	1.444	2.228	20.8	17.5	7 10	22 1.11	-12 32.8	1.910	2.767	13.7	18.7
7 20	21 58.74	+ 9 49.8	1.382	2.239	17.9	17.3	7 20	21 57.41	-13 6.7	1.839	2.770	10.4	18.5
7 30	21 52.83	+10 4.6	1.335	2.249	14.6	17.1	7 30	21 51.76	-13 50.9	1.791	2.773	6.6	18.3
8 9	21 45.19	+ 9 47.7	1.308	2.260	11.6	17.0	8 9	21 44.75	-14 41.1	1.767	2.776	2.5	18.0
8 19	21 36.81	+ 8 59.9	1.302	2.272	9.7	16.9	8 19	21 37.15	-15 32.4	1.770	2.780	1.8	18.0
8 29	21 28.88	+ 7 46.4	1.320	2.284	10.0	16.9	8 29	21 29.90	-16 19.2	1.800	2.784	5.8	18.3
9 8	21 22.52	+ 6 16.3	1.360	2.296	12.1	17.1	9 8	21 23.86	-16 57.4	1.856	2.788	9.6	18.5
9 18	21 18.52	+ 4 39.9	1.423	2.309	15.0	17.3	9 18	21 19.67	-17 24.4	1.935	2.793	12.9	18.7
<b>2515</b>	Gansu		8 15.3 289°92	1.9/13.5	18		<b>181411</b>	2006 <i>SY</i> <sub>170</sub>		8 15.3 199°14	1.1/14.6	17	
7 10	22 2.15	-17 47.9	2.293	3.151	11.7	17.5	7 10	22 8.03	-14 39.4	1.686	2.542	15.2	21.4
7 20	21 58.05	-18 23.7	2.201	3.133	8.8	17.3	7 20	22 3.00	-15 5.5	1.610	2.541	11.6	21.2
7 30	21 52.14	-19 5.4	2.133	3.115	5.7	17.1	7 30	21 55.53	-15 40.9	1.556	2.538	7.4	20.9
8 9	21 44.88	-19 48.5	2.090	3.097	2.6	16.8	8 9	21 46.29	-16 20.8	1.527	2.536	2.9	20.6
8 19	21 36.97	-20 28.7	2.075	3.080	2.8	16.8	8 19	21 36.25	-16 59.6	1.524	2.533	2.4	20.6
8 29	21 29.21	-21 1.5	2.088	3.062	6.1	17.0	8 29	21 26.60	-17 31.7	1.549	2.530	6.9	20.9
9 8	21 22.45	-21 23.7	2.127	3.044	9.4	17.2	9 8	21 18.48	-17 53.2	1.598	2.526	11.2	21.1
9 18	21 17.35	-21 33.9	2.190	3.026	12.4	17.3	9 18	21 12.68	-18 2.4	1.670	2.522	14.9	21.4
<b>35075</b>	1989 <i>XW</i> <sub>1</sub>		8 15.3 283°31	2.1/17.4	18		<b>496388</b>	2013 <i>TY</i> <sub>35</sub>		8 15.3 284°44	2.1/16.7	17	
7 10	21 59.96	- 4 36.3	2.210	3.033	13.2	18.4	7 10	22 3.77	- 6 40.1	1.554	2.401	16.8	21.9
7 20	21 56.36	- 5 3.1	2.118	3.023	10.5	18.2	7 20	22 0.16	- 6 54.5	1.459	2.379	13.3	21.6
7 30	21 51.04	- 5 44.8	2.048	3.014	7.2	18.0	7 30	21 53.99	- 7 27.2	1.383	2.357	9.1	21.3
8 9	21 44.46	- 6 39.3	2.004	3.004	3.9	17.8	8 9	21 45.80	- 8 16.0	1.330	2.334	4.5	21.0
8 19	21 37.25	- 7 42.9	1.986	2.994	2.2	17.6	8 19	21 36.47	- 9 16.4	1.302	2.312	2.4	20.8
8 29	21 30.22	- 8 50.4	1.997	2.984	5.0	17.8	8 29	21 27.21	-10 21.7	1.300	2.289	6.8	21.0
9 8	21 24.13	- 9 56.6	2.034	2.974	8.5	18.0	9 8	21 19.31	-11 24.2	1.323	2.266	11.7	21.2
9 18	21 19.62	-10 56.8	2.097	2.964	11.7	18.2	9 18	21 13.77	-12 18.0	1.367	2.244	16.1	21.4
<b>150307</b>	1999 <i>TR</i> <sub>303</sub>		8 15.3 94°85	0.1/15.2	18		<b>136878</b>	1998 <i>FD</i> <sub>122</sub>		8 15.3 128°42	0.2		

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8 15.3

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>304521</b>	2006 <i>UV</i> <sub>225</sub>		8 15.3 280°08	1.7°/13.9	18		<b>256468</b>	2007 <i>DK</i> <sub>34</sub>		8 15.3 215°80	0°1/15.4	18	
7 10	22 3.70	-16 36.8	1.997	2.856	13.1	20.4	7 10	22 1.95	-11 36.4	2.571	3.408	11.2	21.8
7 20	21 59.38	-17 11.1	1.918	2.851	9.9	20.2	7 20	21 57.61	-12 3.4	2.484	3.403	8.6	21.6
7 30	21 53.05	-17 52.3	1.863	2.846	6.3	20.0	7 30	21 51.72	-12 38.6	2.421	3.398	5.5	21.4
8 9	21 45.28	-18 35.7	1.833	2.841	2.7	19.8	8 9	21 44.74	-13 19.2	2.384	3.392	2.2	21.2
8 19	21 36.85	-19 16.3	1.830	2.836	2.7	19.8	8 19	21 37.25	-14 1.7	2.376	3.387	1.3	21.1
8 29	21 28.72	-19 49.3	1.855	2.832	6.4	20.0	8 29	21 29.95	-14 42.2	2.397	3.381	4.6	21.3
9 8	21 21.80	-20 11.4	1.905	2.827	10.0	20.2	9 8	21 23.53	-15 17.5	2.446	3.374	7.8	21.5
9 18	21 16.79	-20 21.1	1.978	2.822	13.3	20.4	9 18	21 18.53	-15 45.2	2.520	3.368	10.6	21.7
<b>478956</b>	2012 <i>XS</i> <sub>64</sub>		8 15.3 249°58	7.4°/21.9	18		<b>387962</b>	2005 <i>GQ</i> <sub>136</sub>		8 15.3 30°02	0°5/14.9	18	
7 10	22 2.19	+ 8 16.7	2.069	2.826	16.1	21.1	7 10	22 1.91	-12 3.9	1.822	2.678	14.2	20.9
7 20	21 58.21	+ 8 45.1	1.978	2.819	13.9	20.9	7 20	21 58.14	-12 48.5	1.750	2.680	10.8	20.7
7 30	21 52.32	+ 8 52.4	1.905	2.812	11.3	20.7	7 30	21 52.31	-13 45.0	1.701	2.683	6.9	20.5
8 9	21 45.01	+ 8 36.9	1.855	2.804	9.0	20.6	8 9	21 45.02	-14 48.5	1.677	2.686	2.6	20.3
8 19	21 36.99	+ 7 58.9	1.829	2.797	7.5	20.5	8 19	21 37.09	-15 53.1	1.679	2.688	1.9	20.2
8 29	21 29.14	+ 7 1.4	1.829	2.789	7.9	20.5	8 29	21 29.50	-16 52.5	1.708	2.691	6.2	20.5
9 8	21 22.32	+ 5 50.2	1.854	2.781	10.0	20.6	9 8	21 23.18	-17 41.7	1.763	2.695	10.1	20.7
9 18	21 17.26	+ 4 31.9	1.903	2.773	12.6	20.8	9 18	21 18.83	-18 17.8	1.841	2.698	13.5	21.0
<b>72166</b>	2000 <i>YL</i> <sub>105</sub>		8 15.3 192°58	1°1/14.3	18		<b>511876</b>	2015 <i>GT</i> <sub>33</sub>		8 15.3 317°67	9°2/7.3	18	
7 10	22 4.58	-14 30.4	2.230	3.077	12.3	19.7	7 10	22 3.41	-30 8.1	1.421	2.310	15.6	20.4
7 20	21 59.83	-15 13.9	2.150	3.076	9.3	19.5	7 20	22 0.40	-32 6.7	1.357	2.296	12.6	20.2
7 30	21 53.24	-16 5.4	2.093	3.074	5.9	19.3	7 30	21 54.38	-34 5.6	1.314	2.283	10.1	20.0
8 9	21 45.34	-17 0.8	2.063	3.072	2.3	19.1	8 9	21 46.02	-35 51.9	1.294	2.269	9.2	20.0
8 19	21 36.83	-17 55.0	2.061	3.069	2.2	19.1	8 19	21 36.47	-37 13.8	1.297	2.257	10.8	20.0
8 29	21 28.57	-18 43.1	2.088	3.065	5.7	19.3	8 29	21 27.28	-38 2.9	1.323	2.244	13.8	20.2
9 8	21 21.40	-19 21.5	2.141	3.061	9.2	19.5	9 8	21 19.98	-38 17.2	1.369	2.233	17.1	20.3
9 18	21 15.95	-19 48.1	2.218	3.057	12.2	19.7	9 18	21 15.61	-37 59.4	1.432	2.221	20.1	20.5
<b>389665</b>	2011 <i>OA</i> <sub>59</sub>		8 15.3 213°36	5°5/10.3	18		<b>288094</b>	2003 <i>WT</i> <sub>13</sub>		8 15.3 316°49	4°5/11.9	18	
7 10	22 4.42	-25 16.8	1.891	2.763	13.1	20.5	7 10	22 5.56	-23 14.3	1.709	2.582	14.2	20.1
7 20	22 0.17	-26 40.4	1.827	2.763	10.1	20.3	7 20	22 1.23	-24 4.1	1.638	2.576	10.9	19.9
7 30	21 53.67	-28 5.7	1.786	2.762	7.2	20.1	7 30	21 54.45	-24 56.6	1.589	2.570	7.4	19.7
8 9	21 45.56	-29 24.8	1.770	2.761	5.5	20.0	8 9	21 45.91	-25 44.7	1.564	2.565	4.7	19.5
8 19	21 36.71	-30 29.9	1.781	2.761	6.6	20.1	8 19	21 36.58	-26 21.5	1.566	2.559	5.6	19.6
8 29	21 28.23	-31 15.4	1.818	2.760	9.3	20.2	8 29	21 27.66	-26 41.9	1.593	2.554	8.8	19.7
9 8	21 21.15	-31 39.0	1.878	2.759	12.3	20.4	9 8	21 20.28	-26 43.6	1.644	2.549	12.4	20.0
9 18	21 16.22	-31 41.3	1.960	2.758	15.1	20.6	9 18	21 15.24	-26 27.2	1.715	2.544	15.6	20.2
<b>306221</b>	2011 <i>QJ</i> <sub>44</sub>		8 15.3 13°41	3°4/16.9	18		<b>6747</b>	Ozegahara		8 15.3 331°24	2°0/13.9	18	
7 10	22 3.35	- 8 46.7	1.152	2.025	19.6	19.6	7 10	22 3.00	-17 28.8	1.793	2.660	13.9	17.4
7 20	22 0.01	- 7 55.7	1.098	2.032	15.4	19.4	7 20	21 59.12	-17 54.8	1.714	2.651	10.6	17.2
7 30	21 53.81	- 7 19.6	1.063	2.041	10.6	19.2	7 30	21 53.03	-18 27.2	1.657	2.642	6.8	16.9
8 9	21 45.64	- 6 57.8	1.048	2.051	5.6	18.9	8 9	21 45.34	-19 1.5	1.625	2.633	2.9	16.7
8 19	21 36.73	- 6 48.1	1.056	2.064	3.6	18.8	8 19	21 36.91	-19 32.2	1.619	2.625	3.0	16.6
8 29	21 28.54	- 6 46.6	1.087	2.077	7.5	19.1	8 29	21 28.80	-19 54.6	1.639	2.617	6.9	16.9
9 8	21 22.33	- 6 48.6	1.140	2.093	12.2	19.4	9 8	21 22.03	-20 5.4	1.684	2.610	10.9	17.1
9 18	21 18.90	- 6 49.7	1.213	2.110	16.3	19.7	9 18	21 17.34	-20 3.4	1.751	2.603	14.3	17.3
<b>211242</b>	2002 <i>QB</i> <sub>21</sub>		8 15.3 315°92	1°8/16.8	18		<b>131683</b>	2001 <i>XP</i> <sub>194</sub>		8 15.3 305°14	1°7/16.3	18	
7 10	22 1.24	- 6 29.4	1.772	2.614	15.2	20.2	7 10	22 3.76	- 8 37.3	1.250	2.117	18.8	19.3
7 20	21 57.74	- 6 50.5	1.689	2.606	11.9	19.9	7 20	22 0.61	- 8 42.9	1.169	2.102	14.8	19.0
7 30	21 52.13	- 7 27.7	1.627	2.599	8.1	19.7	7 30	21 54.51	- 9 7.0	1.107	2.087	10.0	18.7
8 9	21 44.98	- 8 18.5	1.589	2.593	4.0	19.4	8 9	21 46.09	- 9 46.7	1.066	2.073	4.6	18.3
8 19	21 37.07	- 9 18.1	1.577	2.586	2.1	19.3	8 19	21 36.43	-10 36.7	1.049	2.059	2.3	18.1
8 29	21 29.40	-10 20.6	1.591	2.580	5.8	19.5	8 29	21 27.03	-11 29.4	1.055	2.045	7.7	18.4
9 8	21 22.97	-11 19.8	1.631	2.574	10.0	19.8	9 8	21 19.38	-12 17.0	1.083	2.032	13.1	18.7
9 18	21 18.53	-12 10.8	1.694	2.568	13.7	20.0	9 18	21 14.58	-12 53.8	1.132	2.019	17.9	18.9
<b>357866</b>	2005 <i>UE</i> <sub>308</sub>		8 15.3 335°40	5°7/10.3	18		<b>310005</b>	2009 <i>KE</i>		8 15.3 320°84	7°5/29.7	18	
7 10	22 4.95	-28 28.7	2.094	2.961	12.2	20.6	7 10	21 58.19	+26 42.2	4.488	5.040	10.3	19.3
7 20	22 0.36	-29 27.8	2.029	2.959	9.6	20.4	7 20	21 54.28	+27 33.3	4.396	5.037	9.6	19.3
7 30	21 53.68	-30 24.8	1.987	2.957	7.0	20.3	7 30	21 49.38	+28 10.2	4.320	5.035	8.9	19.2
8 9	21 45.54	-31 13.3	1.970	2.955	5.7	20.2	8 9	21 43.79	+28 31.3	4.264	5.033	8.2	19.1
8 19	21 36.77	-31 47.5	1.980	2.954	6.5	20.2	8 19	21 37.84	+28 35.9	4.229	5.031	7.7	19.1
8 29	21 28.40	-32 3.4	2.016	2.952	8.9	20.4	8 29	21 31.96	+28 24.1	4.217	5.029	7.5	19.1
9 8	21 21.36	-32 0.0	2.075	2.951	11.6	20.5	9 8	21 26.55	+27 57.5	4.228	5.027	7.6	19.1
9 18	21 16.33	-31 38.5	2.157	2.949	14.1	20.7	9 18	21 21.98	+27 18.6	4.261	5.025	8.1	19.1
<b>406797</b>	2008 <i>TG</i> <sub>141</sub>		8 15.3 226°23	2°2/13.1	18		<b>37030</b>	2000 <i>UB</i> <sub>7</sub>		8 15.3 313°66	1°6/14.1	18	
7 10	22 2.43	-20 2.3	2.659	3.513	10.3	21.5	7 10	22 2.19	-16 5.9	1.894	2.758	13.5	18.9
7 20	21 57.92	-20 32.0	2.582	3.512	7.8	21.3	7 20	21 58.44	-16 37.7	1.809	2.744	10.3	18.6
7 30	21 51.88	-21 4.5	2.529	3.510	5.0	21.2	7 30	21 52.59	-17 17.5	1.745	2.729	6.5	18.4
8 9	21 44.78	-21 35.9	2.504	3.509	2.6	21.0	8 9	21 45.18	-18 0.8	1.707	2.715	2.7	18.1
8 19	21 37.23	-22 2.7	2.506	3.507	2.9	21.0	8 19	21 37.01	-18 42.3	1.695	2.702	2.7	18.1
8 29	21 29.93	-22 21.7	2.537	3.505	5.5	21.2	8 29	21 29.07	-19 16.8	1.709	2.688	6.6	18.3
9 8	21 23.57	-22 31.2	2.595	3.504	8.3	21.4	9 8	21 22.34	-19 40.4	1.749	2.675	10.5	18.5
9 18	21 18.66	-22 30.2	2.677	3.502	10.8	21.5	9 18	21 17.57	-19 51.3	1.811	2.663	14.0	18.7
<b>266775</b>	2009 <i>SZ</i> <sub>198</sub>		8 15.3 336°83	1°2/16.2	17		<b>397214</b>	2006 <i>GU</i> <sub>37</sub>		8 15.3 1			



EPHEMERIDES

8 15.3

8 15.3

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>221111</b>	2005 SA <sub>165</sub>		8 15.3 281°86	3°6/18.1	18		<b>213467</b>	2002 CX <sub>311</sub>		8 15.3 238°65	2°0/13.9	18	
7 10	22 2.48	- 2 30.8	1.613	2.443	17.0	20.3	7 10	22 6.73	-15 6.8	1.549	2.414	15.9	20.4
7 20	21 58.97	- 2 41.0	1.525	2.432	13.7	20.0	7 20	22 2.38	-15 58.0	1.470	2.405	12.1	20.2
7 30	21 53.11	- 3 12.0	1.457	2.420	9.8	19.8	7 30	21 55.38	-17 1.2	1.412	2.396	7.7	19.9
8 9	21 45.46	- 4 2.4	1.412	2.408	5.8	19.5	8 9	21 46.38	-18 10.1	1.378	2.387	3.2	19.6
8 19	21 36.87	- 5 8.5	1.391	2.396	3.7	19.4	8 19	21 36.38	-19 16.9	1.370	2.377	3.3	19.6
8 29	21 28.48	- 6 23.6	1.397	2.385	6.6	19.5	8 29	21 26.68	-20 13.7	1.389	2.367	7.9	19.8
9 8	21 21.41	- 7 40.0	1.427	2.373	10.8	19.7	9 8	21 18.55	-20 55.3	1.431	2.356	12.5	20.1
9 18	21 16.54	- 8 50.5	1.480	2.361	14.8	19.9	9 18	21 12.92	-21 19.1	1.495	2.346	16.4	20.3
<b>424038</b>	2007 AH <sub>15</sub>		8 15.3 175°51	0°3/15.1	17		<b>114714</b>	2003 GC <sub>15</sub>		8 15.3 79°67	0°5/14.9	18	
7 10	22 9.54	-13 45.3	1.970	2.813	13.9	21.3	7 10	22 1.17	-11 31.7	2.094	2.943	12.9	19.8
7 20	22 3.76	-13 54.6	1.893	2.815	10.6	21.1	7 20	21 57.34	-12 24.8	2.021	2.947	9.8	19.6
7 30	21 55.85	-14 11.5	1.838	2.817	6.8	20.9	7 30	21 51.71	-13 29.2	1.970	2.951	6.3	19.4
8 9	21 46.43	-14 32.6	1.810	2.818	2.7	20.6	8 9	21 44.81	-14 40.2	1.946	2.955	2.4	19.2
8 19	21 36.36	-14 53.8	1.809	2.819	1.7	20.6	8 19	21 37.34	-15 52.2	1.949	2.959	1.7	19.1
8 29	21 26.67	-15 11.3	1.836	2.819	5.9	20.8	8 29	21 30.16	-16 59.6	1.981	2.963	5.6	19.4
9 8	21 18.33	-15 22.0	1.891	2.818	9.8	21.1	9 8	21 24.06	-17 57.4	2.039	2.967	9.1	19.6
9 18	21 12.05	-15 24.5	1.968	2.817	13.1	21.3	9 18	21 19.68	-18 42.6	2.120	2.971	12.2	19.8
<b>233291</b>	2006 AO <sub>97</sub>		8 15.3 206°17	0°8/14.6	17		<b>235726</b>	2004 TX <sub>171</sub>		8 15.3 285°10	3°0/13.4	18	
7 10	22 2.81	-11 17.0	1.860	2.712	14.2	20.3	7 10	22 8.51	-20 31.3	1.742	2.606	14.4	20.3
7 20	21 58.87	-12 24.4	1.782	2.710	10.8	20.1	7 20	22 3.58	-20 53.4	1.652	2.587	11.1	20.0
7 30	21 52.85	-13 46.0	1.726	2.708	6.9	19.9	7 30	21 56.09	-21 19.4	1.585	2.567	7.3	19.8
8 9	21 45.29	-15 16.2	1.696	2.705	2.6	19.6	8 9	21 46.66	-21 43.8	1.542	2.547	3.7	19.5
8 19	21 36.99	-16 47.7	1.694	2.703	2.1	19.6	8 19	21 36.24	-22 1.0	1.525	2.527	4.0	19.5
8 29	21 28.96	-18 13.0	1.719	2.700	6.4	19.8	8 29	21 26.08	-22 6.2	1.535	2.507	7.9	19.7
9 8	21 22.15	-19 26.0	1.771	2.697	10.4	20.1	9 8	21 17.39	-21 57.0	1.569	2.487	12.0	19.9
9 18	21 17.31	-20 22.8	1.845	2.694	13.9	20.3	9 18	21 11.08	-21 33.4	1.625	2.467	15.7	20.1
<b>20463</b>	1999 MC <sub>1</sub>		8 15.3 205°71	3°7/18.1	18		<b>174596</b>	2003 QC <sub>65</sub>		8 15.3 302°58	7°1/10.3	18	
7 10	22 4.38	- 2 14.4	1.566	2.394	17.5	19.2	7 10	22 5.15	-24 47.2	1.294	2.185	16.8	20.0
7 20	22 0.38	- 2 25.4	1.488	2.393	14.1	19.0	7 20	22 1.90	-26 14.8	1.222	2.168	13.1	19.7
7 30	21 53.96	- 2 57.7	1.429	2.391	10.1	18.7	7 30	21 55.46	-27 48.1	1.170	2.152	9.3	19.4
8 9	21 45.77	- 3 49.6	1.393	2.389	5.9	18.5	8 9	21 46.53	-29 15.8	1.141	2.136	7.1	19.3
8 19	21 36.71	- 4 56.7	1.382	2.387	3.8	18.3	8 19	21 36.30	-30 26.0	1.135	2.120	8.5	19.3
8 29	21 27.97	- 6 12.2	1.397	2.385	6.6	18.5	8 29	21 26.42	-31 9.5	1.152	2.105	12.3	19.5
9 8	21 20.68	- 7 28.1	1.437	2.382	10.8	18.8	9 8	21 18.49	-31 22.5	1.190	2.090	16.5	19.7
9 18	21 15.69	- 8 37.5	1.500	2.380	14.8	19.0	9 18	21 13.66	-31 6.6	1.245	2.075	20.3	19.9
<b>436577</b>	2011 HZ <sub>84</sub>		8 15.3 51°42	4°4/19.3	17		<b>276064</b>	2002 CO <sub>124</sub>		8 15.3 158°32	1°2/16.3	18	
7 10	22 1.13	+ 1 5.9	1.669	2.484	17.2	20.6	7 10	22 6.03	- 9 50.0	2.600	3.422	11.5	21.0
7 20	21 57.68	+ 0 44.0	1.596	2.489	14.0	20.4	7 20	22 0.58	- 9 41.9	2.519	3.427	8.9	20.8
7 30	21 52.10	- 0 1.3	1.542	2.494	10.3	20.2	7 30	21 53.58	- 9 41.2	2.461	3.431	5.9	20.6
8 9	21 44.99	- 1 8.4	1.510	2.499	6.6	20.0	8 9	21 45.50	- 9 46.2	2.431	3.435	2.8	20.4
8 19	21 37.19	- 2 32.8	1.504	2.505	4.4	19.9	8 19	21 36.98	- 9 54.8	2.430	3.439	1.5	20.3
8 29	21 29.73	- 4 7.0	1.524	2.511	6.4	20.0	8 29	21 28.73	-10 4.6	2.458	3.442	4.4	20.5
9 8	21 23.59	- 5 42.5	1.570	2.516	10.0	20.2	9 8	21 21.44	-10 13.0	2.514	3.446	7.5	20.7
9 18	21 19.50	- 7 11.8	1.639	2.522	13.6	20.5	9 18	21 15.66	-10 18.4	2.596	3.448	10.2	20.9
<b>86627</b>	2000 EJ <sub>126</sub>		8 15.3 172°66	1°5/14.1	18		<b>123723</b>	2000 YD <sub>135</sub>		8 15.3 316°11	2°1/16.8	18	
7 10	22 8.01	-15 52.5	2.054	2.902	13.2	20.8	7 10	21 59.64	- 6 32.8	1.415	2.274	17.4	19.3
7 20	22 2.57	-16 32.5	1.979	2.906	10.0	20.6	7 20	21 57.27	- 6 50.1	1.319	2.246	13.9	19.0
7 30	21 55.07	-17 19.6	1.928	2.909	6.3	20.4	7 30	21 52.31	- 7 28.0	1.242	2.219	9.5	18.6
8 9	21 46.12	-18 9.1	1.903	2.911	2.6	20.2	8 9	21 45.26	- 8 24.6	1.188	2.193	4.7	18.3
8 19	21 36.54	-18 55.7	1.907	2.913	2.6	20.2	8 19	21 37.01	- 9 34.8	1.157	2.167	2.4	18.1
8 29	21 27.31	-19 34.5	1.938	2.914	6.3	20.4	8 29	21 28.80	-10 51.0	1.150	2.141	7.1	18.3
9 8	21 19.35	-20 2.1	1.996	2.914	9.9	20.7	9 8	21 21.98	-12 4.2	1.167	2.116	12.3	18.5
9 18	21 13.36	-20 17.2	2.078	2.914	13.0	20.9	9 18	21 17.61	-13 7.2	1.205	2.093	17.0	18.7
<b>168660</b>	2000 EN <sub>33</sub>		8 15.3 106°78	0°4/14.9	18		<b>374946</b>	2007 BU <sub>61</sub>		8 15.3 312°02	1°3/14.6	18	
7 10	22 2.20	-10 41.0	2.005	2.852	13.5	19.9	7 10	22 3.69	-14 40.2	1.321	2.199	17.3	20.8
7 20	21 58.16	-11 43.0	1.935	2.860	10.3	19.7	7 20	22 0.55	-15 3.3	1.236	2.178	13.3	20.5
7 30	21 52.24	-12 57.4	1.888	2.868	6.5	19.5	7 30	21 54.49	-15 39.0	1.171	2.158	8.6	20.2
8 9	21 45.01	-14 19.3	1.868	2.877	2.5	19.2	8 9	21 46.14	-16 22.1	1.129	2.138	3.4	19.8
8 19	21 37.20	-15 42.4	1.875	2.885	1.7	19.2	8 19	21 36.54	-17 5.7	1.110	2.119	2.9	19.8
8 29	21 29.71	-17 0.2	1.910	2.892	5.7	19.5	8 29	21 27.17	-17 42.3	1.115	2.100	8.3	20.0
9 8	21 23.38	-18 7.3	1.972	2.900	9.4	19.7	9 8	21 19.48	-18 6.1	1.142	2.082	13.5	20.3
9 18	21 18.85	-19 0.4	2.058	2.908	12.6	19.9	9 18	21 14.59	-18 14.1	1.189	2.064	18.2	20.5
<b>514897</b>	2008 SB <sub>7</sub>		8 15.3 289°09	15°5/29.9	18		<b>220268</b>	2003 AL <sub>39</sub>		8 15.3 318°00	6°1/18.1	18	
7 10	22 36.61	-57 9.5	1.974	2.741	16.5	21.4	7 10	22 5.03	- 3 13.8	1.332	2.175	19.2	19.7
7 20	22 27.10	-58 41.5	1.901	2.703	15.8	21.2	7 20	22 1.51	- 2 11.4	1.244	2.155	15.8	19.4
7 30	22 12.29	-59 52.5	1.846	2.665	15.5	21.1	7 30	21 55.10	- 1 24.8	1.174	2.135	11.8	19.1
8 9	21 53.28	-60 28.1	1.811	2.626	15.9	21.0	8 9	21 46.40	- 0 56.1	1.124	2.116	7.9	18.8
8 19	21 32.37	-60 17.5	1.795	2.587	16.8	21.0	8 19	21 36.40	- 0 46.0	1.098	2.097	6.1	18.7
8 29	21 12.67	-59 16.9	1.798	2.547	18.2	21.0	8 29	21 26.54	- 0 52.3	1.095	2.079	8.7	18.8
9 8	20 56.85	-57 31.3	1.819	2.506	19.9	21.1	9 8	21 18.27	- 1 10.0	1.115	2.062	13.0	19.0
9 18	20 46.25	-55 10.7	1.855	2.465	21.5	21.1	9 18	21 12.72	- 1 33.1	1.154	2.045	17.4	19.2
<b>171916</b>	2001 SN <sub>90</sub>		8 15.3 248°95	0°5/15.8	18		<b>358856</b>	2008 FR <sub>85</sub>		8 15.3 110°45	3°0/18.4	18	
7 10	22 3.32												

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>236457</b>	2006 <i>EZ</i> <sub>56</sub>	8 15.4 173°23		0°6/14.9 18			<b>235820</b>	2004 <i>XP</i> <sub>92</sub>	8 15.4 318°42		8°1/ 9.0 18		
7 10	22 8.23	-14 59.6	1.829	2.681	14.4	20.5	7 10	22 7.62	-31 31.2	1.643	2.517	14.6	19.7
7 20	22 2.95	-15 5.3	1.754	2.682	11.0	20.2	7 20	22 3.13	-32 50.8	1.582	2.512	11.8	19.5
7 30	21 55.44	-15 18.0	1.702	2.682	7.0	20.0	7 30	21 55.87	-34 6.4	1.543	2.508	9.2	19.4
8 9	21 46.34	-15 33.9	1.674	2.683	2.7	19.8	8 9	21 46.61	-35 8.1	1.528	2.503	8.1	19.3
8 19	21 36.57	-15 49.1	1.674	2.683	1.9	19.7	8 19	21 36.47	-35 47.7	1.537	2.498	9.2	19.3
8 29	21 27.21	-15 59.6	1.700	2.683	6.2	20.0	8 29	21 26.86	-36 0.3	1.570	2.494	11.8	19.5
9 8	21 19.28	-16 2.6	1.753	2.683	10.2	20.2	9 8	21 19.06	-35 45.5	1.624	2.490	14.7	19.7
9 18	21 13.52	-15 57.0	1.829	2.683	13.7	20.4	9 18	21 13.92	-35 6.5	1.698	2.486	17.4	19.8
<b>225198</b>	2008 <i>JR</i> <sub>25</sub>	8 15.4 289°00		6°3/20.7 18			<b>413096</b>	2001 <i>UY</i> <sub>60</sub>	8 15.4 277°60		2°6/16.9 17		
7 10	22 0.78	+ 4 58.3	1.585	2.386	18.5	20.0	7 10	22 5.21	- 6 16.9	1.363	2.214	18.4	21.3
7 20	21 57.75	+ 4 49.0	1.496	2.374	15.6	19.8	7 20	22 1.54	- 6 21.5	1.279	2.201	14.6	21.1
7 30	21 52.39	+ 4 11.7	1.425	2.363	12.1	19.6	7 30	21 55.06	- 6 45.6	1.214	2.188	10.1	20.8
8 9	21 45.25	+ 3 5.8	1.375	2.352	8.6	19.3	8 9	21 46.39	- 7 27.3	1.171	2.175	5.2	20.5
8 19	21 37.16	+ 1 34.1	1.349	2.341	6.4	19.2	8 19	21 36.54	- 8 21.8	1.152	2.161	2.9	20.3
8 29	21 29.25	- 0 16.3	1.348	2.331	7.6	19.2	8 29	21 26.92	- 9 22.1	1.158	2.148	7.3	20.5
9 8	21 22.64	- 2 15.2	1.373	2.320	11.0	19.4	9 8	21 18.92	-10 20.1	1.187	2.134	12.4	20.8
9 18	21 18.22	- 4 12.2	1.420	2.309	14.9	19.6	9 18	21 13.58	-11 9.6	1.238	2.121	17.0	21.0
<b>325911</b>	2010 <i>UE</i> <sub>76</sub>	8 15.4 232°33		2°4/17.7 18			<b>294064</b>	2007 <i>TF</i> <sub>169</sub>	8 15.4 307°66		2°4/13.7 18		
7 10	22 2.32	- 4 36.0	2.762	3.569	11.3	21.4	7 10	22 6.05	-18 45.0	1.801	2.666	14.0	20.5
7 20	21 57.84	- 4 34.7	2.665	3.559	9.0	21.2	7 20	22 1.44	-19 11.2	1.726	2.661	10.7	20.3
7 30	21 51.90	- 4 43.8	2.591	3.549	6.4	21.0	7 30	21 54.56	-19 42.5	1.673	2.656	6.9	20.0
8 9	21 44.91	- 5 2.3	2.543	3.539	3.7	20.8	8 9	21 46.05	-20 13.9	1.644	2.651	3.2	19.8
8 19	21 37.41	- 5 28.2	2.523	3.528	2.4	20.7	8 19	21 36.80	-20 40.1	1.642	2.647	3.4	19.8
8 29	21 30.05	- 5 58.7	2.533	3.517	4.4	20.8	8 29	21 27.94	-20 56.6	1.667	2.643	7.1	20.0
9 8	21 23.46	- 6 30.7	2.570	3.505	7.2	21.0	9 8	21 20.49	-21 0.5	1.717	2.638	11.0	20.3
9 18	21 18.19	- 7 1.1	2.633	3.493	9.8	21.2	9 18	21 15.21	-20 51.5	1.789	2.634	14.4	20.5
<b>186842</b>	2004 <i>FU</i> <sub>140</sub>	8 15.4 242°94		0°5/15.0 18			<b>512878</b>	2016 <i>WN</i> <sub>15</sub>	8 15.4 1°25		1°4/14.4 18		
7 10	22 6.92	-12 57.0	1.741	2.594	15.0	21.0	7 10	22 2.74	-15 43.0	1.486	2.361	15.9	20.4
7 20	22 2.25	-13 23.3	1.655	2.583	11.5	20.8	7 20	21 59.26	-16 4.1	1.419	2.360	12.1	20.2
7 30	21 55.19	-14 0.6	1.591	2.571	7.4	20.5	7 30	21 53.30	-16 34.2	1.373	2.359	7.7	19.9
8 9	21 46.34	-14 44.9	1.551	2.560	2.9	20.2	8 9	21 45.57	-17 8.1	1.350	2.359	3.1	19.6
8 19	21 36.57	-15 30.6	1.538	2.547	2.0	20.1	8 19	21 37.08	-17 40.1	1.351	2.360	2.7	19.6
8 29	21 27.05	-16 11.9	1.551	2.535	6.7	20.4	8 29	21 29.06	-18 4.6	1.378	2.362	7.3	19.9
9 8	21 18.89	-16 44.1	1.591	2.522	11.0	20.6	9 8	21 22.63	-18 17.7	1.429	2.364	11.7	20.2
9 18	21 12.97	-17 4.4	1.652	2.508	14.8	20.8	9 18	21 18.59	-18 17.8	1.500	2.368	15.5	20.4
<b>396309</b>	2014 <i>DH</i> <sub>31</sub>	8 15.4 117°51		3°5/18.8 16			<b>513478</b>	2009 <i>DG</i> <sub>37</sub>	8 15.4 265°37		0°1/15.4 18		
7 10	22 1.55	- 0 10.5	2.016	2.822	14.9	21.2	7 10	22 4.90	-12 34.8	1.940	2.790	13.8	21.7
7 20	21 57.67	- 0 40.2	1.938	2.828	12.0	21.0	7 20	22 0.39	-12 48.7	1.859	2.784	10.6	21.4
7 30	21 51.97	- 1 29.2	1.881	2.834	8.7	20.8	7 30	21 53.82	-13 11.8	1.799	2.778	6.9	21.2
8 9	21 44.97	- 2 35.4	1.848	2.840	5.3	20.6	8 9	21 45.75	-13 40.8	1.764	2.772	2.7	20.9
8 19	21 37.39	- 3 54.6	1.843	2.845	3.5	20.5	8 19	21 36.98	-14 11.7	1.756	2.767	1.6	20.8
8 29	21 30.09	- 5 20.8	1.865	2.851	5.4	20.7	8 29	21 28.50	-14 39.9	1.776	2.761	5.8	21.1
9 8	21 23.89	- 6 47.0	1.914	2.856	8.8	20.9	9 8	21 21.25	-15 1.7	1.822	2.755	9.7	21.3
9 18	21 19.43	- 8 7.4	1.988	2.861	12.0	21.1	9 18	21 15.94	-15 14.9	1.891	2.749	13.2	21.5
<b>304349</b>	2006 <i>SO</i> <sub>285</sub>	8 15.4 32°10		0°1/15.3 18			<b>49402</b>	1998 <i>XZ</i> <sub>44</sub>	8 15.4 282°50		1°3/14.5 18		
7 10	22 3.26	-12 22.1	1.725	2.583	14.8	20.5	7 10	22 5.92	-16 13.2	1.914	2.770	13.7	18.6
7 20	21 59.24	-12 43.2	1.659	2.589	11.3	20.3	7 20	22 1.24	-16 28.8	1.831	2.761	10.4	18.4
7 30	21 53.08	-13 14.9	1.614	2.596	7.3	20.0	7 30	21 54.40	-16 50.9	1.770	2.752	6.7	18.1
8 9	21 45.42	-13 53.1	1.594	2.603	2.9	19.8	8 9	21 45.99	-17 15.5	1.735	2.743	2.7	17.9
8 19	21 37.15	-14 32.9	1.600	2.610	1.7	19.7	8 19	21 36.85	-17 38.1	1.726	2.734	2.3	17.8
8 29	21 29.30	-15 8.9	1.632	2.618	6.1	20.0	8 29	21 28.00	-17 54.6	1.745	2.725	6.4	18.1
9 8	21 22.85	-15 37.1	1.690	2.626	10.1	20.3	9 8	21 20.43	-18 1.9	1.789	2.716	10.3	18.3
9 18	21 18.47	-15 55.0	1.770	2.634	13.6	20.5	9 18	21 14.90	-17 58.7	1.856	2.707	13.7	18.5
<b>145425</b>	2005 <i>QP</i> <sub>39</sub>	8 15.4 86°83		3°9/18.4 18 R			<b>388218</b>	2006 <i>HT</i> <sub>70</sub>	8 15.4 352°20		1°7/14.1 18		
7 10	22 4.43	- 2 36.4	2.124	2.933	14.2	19.8	7 10	22 3.34	-15 32.5	1.564	2.435	15.4	20.8
7 20	21 59.78	- 2 12.2	2.042	2.933	11.4	19.6	7 20	21 59.65	-16 10.6	1.494	2.433	11.7	20.5
7 30	21 53.29	- 2 1.5	1.981	2.933	8.3	19.4	7 30	21 53.54	-16 58.6	1.445	2.431	7.5	20.3
8 9	21 45.49	- 2 4.0	1.945	2.934	5.3	19.2	8 9	21 45.68	-17 50.8	1.420	2.429	3.1	20.0
8 19	21 37.10	- 2 18.0	1.935	2.934	3.9	19.1	8 19	21 37.03	-18 40.6	1.421	2.428	3.0	20.0
8 29	21 28.96	- 2 40.8	1.953	2.934	5.7	19.2	8 29	21 28.79	-19 21.6	1.446	2.427	7.4	20.3
9 8	21 21.92	- 3 8.2	1.997	2.935	8.7	19.4	9 8	21 22.07	-19 49.4	1.496	2.427	11.6	20.5
9 18	21 16.61	- 3 36.4	2.066	2.935	11.7	19.6	9 18	21 17.67	-20 2.1	1.568	2.427	15.4	20.7
<b>59687</b>	1999 <i>JU</i> <sub>108</sub>	8 15.4 130°39		0°9/14.7 18			<b>236398</b>	2006 <i>DZ</i> <sub>58</sub>	8 15.4 253°44		1°6/14.2 18		
7 10	22 6.25	-13 23.0	1.938	2.787	13.8	19.8	7 10	22 7.15	-16 28.6	1.994	2.847	13.3	21.7
7 20	22 1.28	-14 5.0	1.872	2.798	10.5	19.6	7 20	22 2.21	-16 55.8	1.902	2.831	10.2	21.5
7 30	21 54.28	-14 56.4	1.829	2.809	6.6	19.4	7 30	21 55.07	-17 30.1	1.833	2.814	6.5	21.3
8 9	21 45.88	-15 52.4	1.811	2.820	2.6	19.1	8 9	21 46.29	-18 7.1	1.789	2.797	2.7	21.0
8 19	21 36.91	-16 47.6	1.821	2.830	2.0	19.1	8 19	21 36.67	-18 41.7	1.772	2.779	2.6	20.9
8 29	21 28.34	-17 36.4	1.859	2.840	6.0	19.4	8 29	21 27.23	-19 9.2	1.784	2.761	6.5	21.2
9 8	21 21.09	-18 14.8	1.923	2.849	9.8	19.6	9 8	21 19.00	-19 26.2	1.821	2.743	10.4	21.4
9 18	21 15.82	-18 40.9	2.011	2.857	13.0	19.9	9 18	21 12.78	-19 31.1	1.882	2.724	13.9	21.5
<b>485275</b>	2010 <i>XD</i> <sub>15</sub>	8 15.4 261°24		1°0/16.3 17			<b>305306</b>	2008 <i>AO</i> <sub>36</sub>	8 15.4 293°50		0°4/15.1 18		
7 10	22 2.1												

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>218296</b>	2003 <i>QN</i> <sub>54</sub>	8 15.4 303°12	1°5/13.9	18			<b>424607</b>	2008 <i>HE</i> <sub>51</sub>	8 15.4 136°73	3°1/13.0	17		
7 10	22 1.29	-14 44.7	2.178	3.034	12.3	18.9	7 10	22 8.87	-19 29.1	1.810	2.670	14.2	22.0
7 20	21 57.73	-15 37.6	2.068	2.999	9.4	18.7	7 20	22 3.48	-20 20.6	1.748	2.680	10.7	21.8
7 30	21 52.23	-16 41.3	1.981	2.964	6.0	18.4	7 30	21 55.81	-21 17.1	1.708	2.690	6.9	21.6
8 9	21 45.19	-17 51.4	1.920	2.928	2.5	18.1	8 9	21 46.55	-22 12.1	1.695	2.700	3.6	21.4
8 19	21 37.27	-19 2.3	1.886	2.893	2.6	18.1	8 19	21 36.66	-22 59.3	1.708	2.708	4.1	21.5
8 29	21 29.32	-20 8.0	1.881	2.857	6.4	18.2	8 29	21 27.27	-23 33.3	1.748	2.717	7.6	21.7
9 8	21 22.28	-21 3.2	1.902	2.822	10.2	18.4	9 8	21 19.40	-23 51.6	1.814	2.724	11.2	22.0
9 18	21 16.92	-21 44.5	1.945	2.786	13.6	18.6	9 18	21 13.77	-23 54.0	1.902	2.732	14.3	22.2
<b>431116</b>	2006 <i>HN</i> <sub>34</sub>	8 15.4 112°31	7°9/8.6	17			<b>162458</b>	2000 <i>HK</i> <sub>48</sub>	8 15.4 59°69	0°5/15.6	17		
7 10	22 10.37	-34 9.2	1.946	2.806	13.3	20.9	7 10	22 8.92	-10 48.6	1.121	1.993	20.1	20.3
7 20	22 4.70	-35 28.9	1.900	2.817	10.8	20.7	7 20	22 4.27	-11 7.3	1.078	2.015	15.4	20.0
7 30	21 56.59	-36 41.3	1.877	2.829	8.8	20.6	7 30	21 56.59	-11 42.4	1.054	2.037	9.9	19.8
8 9	21 46.82	-37 38.0	1.878	2.840	8.0	20.6	8 9	21 46.89	-12 28.1	1.050	2.059	4.0	19.5
8 19	21 36.44	-38 12.6	1.905	2.851	8.9	20.7	8 19	21 36.55	-13 16.6	1.071	2.081	2.0	19.5
8 29	21 26.69	-38 22.0	1.957	2.862	10.9	20.8	8 29	21 27.16	-14 0.3	1.115	2.104	7.7	19.9
9 8	21 18.65	-38 6.7	2.032	2.872	13.2	21.0	9 8	21 20.00	-14 33.5	1.182	2.127	12.7	20.3
9 18	21 13.03	-37 30.1	2.126	2.883	15.4	21.2	9 18	21 15.84	-14 53.2	1.270	2.149	16.9	20.6
<b>253559</b>	2003 <i>SK</i> <sub>259</sub>	8 15.4 16°62	5°6/12.7	17			<b>41945</b>	2000 <i>XY</i> <sub>5</sub>	8 15.4 172°59	1°2/14.5	18		
7 10	22 5.76	-23 0.5	0.997	1.900	19.5	19.9	7 10	22 8.34	-16 6.2	2.119	2.966	12.9	19.0
7 20	22 2.53	-23 38.3	0.951	1.905	14.9	19.6	7 20	22 2.79	-16 24.0	2.043	2.968	9.8	18.8
7 30	21 55.81	-24 18.7	0.923	1.911	10.0	19.4	7 30	21 55.26	-16 47.6	1.990	2.970	6.2	18.5
8 9	21 46.64	-24 51.8	0.914	1.919	6.0	19.2	8 9	21 46.34	-17 13.0	1.964	2.972	2.5	18.3
8 19	21 36.58	-25 8.7	0.928	1.927	6.8	19.3	8 19	21 36.82	-17 36.2	1.965	2.973	2.1	18.3
8 29	21 27.50	-25 3.6	0.963	1.937	11.1	19.5	8 29	21 27.67	-17 53.4	1.995	2.974	5.9	18.5
9 8	21 20.91	-24 36.1	1.018	1.949	15.7	19.8	9 8	21 19.77	-18 2.1	2.052	2.974	9.4	18.8
9 18	21 17.69	-23 49.1	1.091	1.961	19.8	20.1	9 18	21 13.77	-18 1.3	2.133	2.974	12.5	19.0
<b>493741</b>	2015 <i>TO</i> <sub>203</sub>	8 15.4 314°17	20°7/3.3	17			<b>268882</b>	2007 <i>BQ</i> <sub>3</sub>	8 15.4 259°68	0°7/14.9	18		
7 10	21 58.47	+26 33.1	1.105	1.816	29.8	21.1	7 10	22 5.30	-12 37.7	1.693	2.549	15.2	21.2
7 20	21 57.15	+28 17.5	1.036	1.806	28.1	20.9	7 20	22 1.15	-13 15.2	1.606	2.536	11.7	21.0
7 30	21 52.67	+29 17.6	0.976	1.796	26.1	20.7	7 30	21 54.59	-14 5.6	1.541	2.523	7.5	20.7
8 9	21 45.60	+29 21.6	0.926	1.787	24.0	20.5	8 9	21 46.20	-15 4.1	1.500	2.509	2.9	20.4
8 19	21 37.03	+28 20.1	0.888	1.779	22.1	20.4	8 19	21 36.86	-16 4.5	1.486	2.495	2.1	20.3
8 29	21 28.63	+26 10.8	0.866	1.771	20.8	20.3	8 29	21 27.73	-17 0.0	1.498	2.481	6.9	20.6
9 8	21 22.14	+23 2.4	0.859	1.763	20.8	20.2	9 8	21 19.96	-17 45.0	1.535	2.467	11.3	20.8
9 18	21 18.87	+19 13.2	0.871	1.757	22.1	20.3	9 18	21 14.42	-18 16.1	1.595	2.452	15.2	21.0
<b>504318</b>	2007 <i>RC</i> <sub>97</sub>	8 15.4 311°59	4°3/18.0	18			<b>352241</b>	2007 <i>TS</i> <sub>137</sub>	8 15.4 333°02	21°2/6.8	17		
7 10	22 0.73	-3 17.7	1.211	2.069	19.9	21.1	7 10	22 33.61	-52 55.7	0.987	1.830	24.4	20.0
7 20	21 58.49	-3 11.3	1.124	2.046	16.2	20.8	7 20	22 26.32	-54 31.0	0.950	1.824	22.7	19.9
7 30	21 53.33	-3 29.2	1.054	2.024	11.7	20.5	7 30	22 12.21	-55 32.9	0.928	1.819	21.5	19.8
8 9	21 45.81	-4 11.4	1.004	2.003	6.9	20.1	8 9	21 53.27	-55 40.6	0.920	1.815	21.2	19.8
8 19	21 36.92	-5 14.6	0.975	1.982	4.4	19.9	8 19	21 33.13	-54 41.5	0.928	1.811	22.0	19.8
8 29	21 28.12	-6 31.1	0.970	1.962	8.0	20.1	8 29	21 15.91	-52 36.3	0.952	1.808	23.6	19.9
9 8	21 20.95	-7 50.9	0.987	1.942	13.3	20.3	9 8	21 4.24	-49 39.4	0.992	1.805	25.7	20.0
9 18	21 16.60	-9 4.3	1.023	1.923	18.3	20.5	9 18	20 58.74	-46 9.2	1.045	1.803	27.8	20.2
<b>448525</b>	2010 <i>OM</i> <sub>89</sub>	8 15.4 265°85	5°9/21.8	18			<b>155574</b>	1999 <i>XX</i> <sub>73</sub>	8 15.4 285°89	1°1/16.4	18		
7 10	22 0.05	+7 32.1	2.451	3.204	14.0	21.3	7 10	22 2.66	-8 50.9	2.366	3.197	12.2	19.9
7 20	21 56.39	+7 34.8	2.349	3.190	11.9	21.1	7 20	21 58.53	-9 4.6	2.256	3.169	9.6	19.7
7 30	21 51.14	+7 18.2	2.267	3.177	9.6	20.9	7 30	21 52.62	-9 29.0	2.169	3.141	6.4	19.5
8 9	21 44.70	+6 41.8	2.208	3.163	7.4	20.8	8 9	21 45.36	-10 2.1	2.108	3.113	3.0	19.2
8 19	21 37.65	+5 46.8	2.174	3.149	6.0	20.6	8 19	21 37.34	-10 40.8	2.074	3.084	1.5	19.0
8 29	21 30.70	+4 36.2	2.168	3.135	6.5	20.7	8 29	21 29.36	-11 21.2	2.069	3.055	5.0	19.2
9 8	21 24.58	+3 15.5	2.189	3.120	8.4	20.8	9 8	21 22.23	-11 59.2	2.091	3.026	8.6	19.4
9 18	21 19.88	+1 50.6	2.235	3.106	10.9	20.9	9 18	21 16.63	-12 31.5	2.138	2.997	11.8	19.6
<b>203021</b>	2000 <i>AJ</i> <sub>152</sub>	8 15.4 248°15	5°7/8.8	18			<b>479624</b>	2014 <i>DJ</i> <sub>34</sub>	8 15.4 121°65	3°1/13.1	18		
7 10	22 4.67	-23 42.8	2.046	2.912	12.5	19.6	7 10	22 10.22	-22 27.5	2.110	2.964	12.7	21.1
7 20	22 0.53	-25 57.6	1.967	2.901	9.6	19.4	7 20	22 4.16	-22 49.3	2.046	2.974	9.6	21.0
7 30	21 54.14	-28 19.2	1.914	2.889	6.9	19.2	7 30	21 56.07	-23 11.7	2.006	2.985	6.3	20.8
8 9	21 46.00	-30 37.9	1.889	2.876	5.7	19.1	8 9	21 46.63	-23 30.0	1.992	2.995	3.5	20.6
8 19	21 36.88	-32 43.5	1.893	2.864	7.0	19.2	8 19	21 36.71	-23 39.9	2.006	3.004	3.9	20.7
8 29	21 27.83	-34 27.5	1.925	2.851	9.9	19.3	8 29	21 27.30	-23 38.6	2.048	3.014	6.8	20.9
9 8	21 19.93	-35 45.4	1.981	2.838	12.8	19.5	9 8	21 19.29	-23 25.1	2.117	3.023	10.0	21.1
9 18	21 14.05	-36 36.5	2.059	2.824	15.5	19.7	9 18	21 13.30	-23 0.1	2.208	3.032	12.8	21.3
<b>509603</b>	2008 <i>EU</i> <sub>63</sub>	8 15.4 183°49	1°6/17.1	18			<b>455096</b>	2015 <i>UR</i> <sub>73</sub>	8 15.4 326°51	0°6/15.8	17		
7 10	22 3.54	-6 35.6	2.938	3.747	10.6	23.3	7 10	22 3.41	-12 20.5	1.764	2.620	14.6	20.7
7 20	21 58.63	-6 45.5	2.849	3.747	8.3	23.1	7 20	21 59.61	-12 9.7	1.671	2.599	11.4	20.5
7 30	21 52.36	-7 4.5	2.784	3.747	5.7	22.9	7 30	21 53.55	-12 7.6	1.599	2.579	7.5	20.2
8 9	21 45.12	-7 31.1	2.746	3.746	2.9	22.8	8 9	21 45.78	-12 11.8	1.551	2.559	3.2	19.9
8 19	21 37.45	-8 2.8	2.737	3.745	1.7	22.7	8 19	21 37.12	-12 19.4	1.529	2.539	1.6	19.8
8 29	21 29.96	-8 36.7	2.758	3.743	4.0	22.8	8 29	21 28.65	-12 26.5	1.533	2.521	6.1	20.0
9 8	21 23.25	-9 10.0	2.808	3.741	6.7	23.0	9 8	21 21.44	-12 29.9	1.562	2.503	10.5	20.2
9 18	21 17.80	-9 39.9	2.884	3.738	9.3	23.2	9 18	21 16.31	-12 27.1	1.614	2.486	14.3	20.4
<b>137570</b>	1999 <i>VF</i> <sub>109</sub>	8 15.4 198°40	3°0/17.5	18			<b>283363</b>	2000 <i>AQ</i> <sub>196</sub>	8 15.4 307°09	7			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>210414</b>	Gebartolomei		8 15.4	68°86'	2°3/13.9	17	<b>309047</b>	2006 UB <sub>254</sub>		8 15.4	359°73'	0°4/15.7	18
7 10	22 7.61	-15 41.8	1.281	2.157	17.9	20.1	7 10	22 2.80	-10 52.4	1.902	2.751	14.0	21.3
7 20	22 3.17	-16 34.0	1.232	2.173	13.5	19.9	7 20	21 58.82	-11 12.0	1.826	2.751	10.8	21.1
7 30	21 55.89	-17 37.1	1.202	2.188	8.5	19.7	7 30	21 52.84	-11 42.8	1.772	2.750	7.0	20.9
8 9	21 46.66	-18 43.1	1.195	2.204	3.6	19.4	8 9	21 45.44	-12 21.2	1.743	2.750	2.9	20.6
8 19	21 36.72	-19 43.3	1.213	2.220	3.7	19.5	8 19	21 37.40	-13 2.9	1.740	2.750	1.5	20.5
8 29	21 27.53	-20 30.1	1.256	2.236	8.4	19.8	8 29	21 29.68	-13 43.1	1.764	2.751	5.6	20.8
9 8	21 20.35	-20 59.4	1.322	2.252	12.9	20.1	9 8	21 23.17	-14 17.2	1.814	2.751	9.5	21.0
9 18	21 15.96	-21 10.2	1.408	2.268	16.7	20.4	9 18	21 18.55	-14 42.5	1.888	2.752	12.9	21.2
<b>316247</b>	2010 OF <sub>42</sub>		8 15.4	347°94'	0°3/15.6	18	<b>476183</b>	2007 TW <sub>449</sub>		8 15.4	293°23'	2°3/13.6	18
7 10	22 5.23	-13 20.5	1.794	2.649	14.5	19.7	7 10	22 3.81	-17 23.2	1.842	2.707	13.7	21.0
7 20	22 0.79	-13 8.8	1.716	2.644	11.2	19.5	7 20	21 59.81	-18 6.7	1.762	2.697	10.4	20.7
7 30	21 54.15	-13 4.7	1.659	2.639	7.3	19.2	7 30	21 53.60	-18 57.8	1.704	2.688	6.7	20.5
8 9	21 45.96	-13 5.5	1.627	2.635	3.0	19.0	8 9	21 45.79	-19 51.1	1.671	2.678	3.1	20.3
8 19	21 37.08	-13 8.3	1.621	2.632	1.6	18.9	8 19	21 37.19	-20 40.5	1.664	2.669	3.3	20.3
8 29	21 28.55	-13 9.6	1.642	2.629	6.0	19.1	8 29	21 28.86	-21 20.4	1.684	2.660	7.1	20.5
9 8	21 21.37	-13 6.7	1.689	2.626	10.0	19.4	9 8	21 21.82	-21 46.9	1.730	2.650	11.0	20.7
9 18	21 16.28	-12 57.9	1.758	2.625	13.6	19.6	9 18	21 16.85	-21 58.4	1.797	2.641	14.4	20.9
<b>75355</b>	1999 XP <sub>70</sub>		8 15.4	99°62'	0°5/15.0	18	<b>433024</b>	2012 SY		8 15.4	5°31'	2°1/16.9	16
7 10	22 7.28	-12 17.2	1.578	2.435	16.1	19.2	7 10	21 59.03	- 6 3.7	1.288	2.153	18.5	20.5
7 20	22 2.47	-12 54.4	1.519	2.448	12.2	19.0	7 20	21 56.74	- 6 30.0	1.223	2.153	14.5	20.2
7 30	21 55.25	-13 43.7	1.481	2.462	7.8	18.8	7 30	21 51.88	- 7 18.2	1.176	2.154	9.8	20.0
8 9	21 46.38	-14 39.8	1.467	2.476	3.0	18.5	8 9	21 45.15	- 8 24.4	1.150	2.155	4.8	19.7
8 19	21 36.87	-15 36.0	1.479	2.489	2.0	18.5	8 19	21 37.57	- 9 41.9	1.148	2.158	2.4	19.5
8 29	21 27.90	-16 26.0	1.518	2.502	6.7	18.8	8 29	21 30.43	-11 1.5	1.171	2.162	6.9	19.8
9 8	21 20.55	-17 4.9	1.582	2.514	11.0	19.1	9 8	21 24.91	-12 14.6	1.216	2.167	11.7	20.1
9 18	21 15.56	-17 30.3	1.668	2.527	14.6	19.3	9 18	21 21.87	-13 14.5	1.282	2.173	16.0	20.4
<b>365791</b>	2011 AT <sub>23</sub>		8 15.4	231°75'	2°6/13.3	18	<b>360883</b>	2005 SN <sub>84</sub>		8 15.4	342°75'	3°9/19.0	18
7 10	22 6.33	-16 50.3	1.776	2.637	14.3	21.6	7 10	22 0.07	- 0 16.8	1.993	2.804	14.9	21.1
7 20	22 1.86	-17 51.4	1.694	2.628	10.9	21.3	7 20	21 56.68	- 0 27.9	1.909	2.801	12.1	20.9
7 30	21 55.00	-19 2.3	1.635	2.618	7.0	21.1	7 30	21 51.46	- 0 57.6	1.846	2.798	8.9	20.7
8 9	21 46.36	-20 16.5	1.601	2.608	3.3	20.8	8 9	21 44.91	- 1 44.5	1.807	2.796	5.7	20.5
8 19	21 36.82	-21 26.5	1.594	2.598	3.7	20.8	8 19	21 37.72	- 2 45.6	1.793	2.794	3.9	20.4
8 29	21 27.52	-22 25.4	1.614	2.587	7.7	21.1	8 29	21 30.76	- 3 55.6	1.806	2.792	5.7	20.5
9 8	21 19.58	-23 8.2	1.660	2.575	11.7	21.3	9 8	21 24.87	- 5 8.4	1.846	2.790	8.9	20.7
9 18	21 13.86	-23 33.3	1.727	2.563	15.2	21.5	9 18	21 20.69	- 6 18.0	1.910	2.789	12.1	20.9
<b>391912</b>	2008 UL <sub>184</sub>		8 15.4	235°91'	2°6/13.2	18	<b>211518</b>	2003 QK <sub>55</sub>		8 15.4	344°68'	5°0/12.9	18
7 10	22 6.29	-18 57.7	2.109	2.965	12.6	22.2	7 10	21 56.85	-20 40.8	0.859	1.780	20.1	19.0
7 20	22 1.45	-19 40.8	2.024	2.954	9.6	22.0	7 20	21 56.42	-21 13.6	0.797	1.762	15.5	18.7
7 30	21 54.55	-20 29.3	1.961	2.943	6.2	21.8	7 30	21 52.40	-21 54.7	0.751	1.745	10.3	18.3
8 9	21 46.13	-21 18.2	1.926	2.931	3.1	21.6	8 9	21 45.57	-22 34.6	0.723	1.731	5.6	18.0
8 19	21 36.98	-22 2.1	1.917	2.919	3.5	21.6	8 19	21 37.31	-23 2.8	0.715	1.719	6.4	18.0
8 29	21 28.05	-22 35.9	1.937	2.907	6.8	21.8	8 29	21 29.61	-23 10.1	0.726	1.710	11.7	18.3
9 8	21 20.28	-22 56.7	1.982	2.894	10.3	22.0	9 8	21 24.29	-22 52.4	0.754	1.703	17.2	18.6
9 18	21 14.43	-23 3.4	2.051	2.880	13.4	22.1	9 18	21 22.54	-22 10.5	0.798	1.698	22.2	18.8
<b>12278</b>	Kisohinoki		8 15.4	268°64'	3°6/18.3	18	<b>291398</b>	2006 CH <sub>57</sub>		8 15.4	189°61'	0°1/15.5	17
7 10	22 3.10	- 2 15.7	2.003	2.817	14.7	18.1	7 10	22 9.15	-11 25.3	1.601	2.450	16.2	22.0
7 20	21 59.10	- 2 16.5	1.905	2.801	11.9	17.9	7 20	22 4.07	-11 49.7	1.525	2.450	12.5	21.8
7 30	21 53.10	- 2 33.8	1.828	2.785	8.7	17.6	7 30	21 56.45	-12 27.1	1.470	2.449	8.1	21.5
8 9	21 45.59	- 3 6.7	1.775	2.768	5.3	17.4	8 9	21 46.95	-13 13.0	1.439	2.447	3.3	21.3
8 19	21 37.27	- 3 52.8	1.748	2.751	3.6	17.3	8 19	21 36.57	-14 1.8	1.435	2.445	1.8	21.1
8 29	21 29.06	- 4 47.8	1.749	2.734	5.8	17.4	8 29	21 26.58	-14 47.0	1.457	2.442	6.8	21.5
9 8	21 21.90	- 5 45.8	1.775	2.717	9.4	17.5	9 8	21 18.16	-15 23.5	1.505	2.439	11.3	21.7
9 18	21 16.53	- 6 41.7	1.826	2.699	12.9	17.7	9 18	21 12.17	-15 48.3	1.575	2.435	15.2	22.0
<b>255460</b>	2005 YS <sub>77</sub>		8 15.4	174°94'	0°9/14.5	18	<b>241212</b>	2007 TT <sub>50</sub>		8 15.4	10°79'	5°5/12.1	18
7 10	22 2.53	-14 54.7	2.622	3.466	10.8	21.6	7 10	22 7.03	-25 25.8	1.481	2.362	15.6	19.8
7 20	21 58.08	-15 26.2	2.543	3.467	8.2	21.4	7 20	22 2.66	-26 4.4	1.423	2.364	12.0	19.6
7 30	21 52.11	-16 3.8	2.488	3.468	5.2	21.2	7 30	21 55.55	-26 42.5	1.386	2.366	8.3	19.4
8 9	21 45.09	-16 44.0	2.461	3.469	2.0	21.0	8 9	21 46.56	-27 12.4	1.371	2.369	5.7	19.2
8 19	21 37.60	-17 23.3	2.461	3.470	1.8	21.0	8 19	21 36.84	-27 27.5	1.382	2.373	6.4	19.3
8 29	21 30.34	-17 57.9	2.491	3.470	4.9	21.2	8 29	21 27.76	-27 23.4	1.417	2.378	9.7	19.5
9 8	21 23.99	-18 25.2	2.549	3.470	7.9	21.4	9 8	21 20.55	-26 59.6	1.474	2.383	13.3	19.7
9 18	21 19.06	-18 43.4	2.631	3.470	10.5	21.6	9 18	21 15.98	-26 18.3	1.552	2.389	16.6	19.9
<b>321803</b>	2010 PZ <sub>71</sub>		8 15.4	303°81'	2°7/17.8	18	<b>312389</b>	2008 EG <sub>142</sub>		8 15.4	310°78'	0°6/15.9	18
7 10	22 0.16	- 3 45.1	2.031	2.856	14.2	20.5	7 10	22 4.69	-11 41.2	1.993	2.839	13.6	20.5
7 20	21 56.90	- 4 1.6	1.926	2.831	11.4	20.3	7 20	22 0.23	-11 38.3	1.908	2.830	10.5	20.3
7 30	21 51.71	- 4 34.7	1.842	2.806	8.1	20.0	7 30	21 53.76	-11 44.1	1.845	2.822	6.9	20.1
8 9	21 45.05	- 5 23.1	1.782	2.781	4.6	19.8	8 9	21 45.83	-11 56.2	1.806	2.814	2.9	19.8
8 19	21 37.57	- 6 23.6	1.749	2.756	2.8	19.6	8 19	21 37.22	-12 11.4	1.795	2.806	1.5	19.7
8 29	21 30.13	- 7 31.2	1.743	2.731	5.5	19.7	8 29	21 28.86	-12 26.1	1.811	2.798	5.5	20.0
9 8	21 23.65	- 8 39.7	1.763	2.706	9.3	19.9	9 8	21 21.69	-12 37.2	1.854	2.790	9.4	20.2
9 18	21 18.89	- 9 43.6	1.807	2.682	12.9	20.1	9 18	21 16.39	-12 42.3	1.920	2.783	12.8	20.4
<b>166266</b>	2002 GO <sub>84</sub>		8 15.4	136°34'	1°6/16.7	17	<b>479669</b>	2014 DP <sub>77</sub>		8 15.4	234°37'	1°4/14.2	18
7 10	22 6.68	- 5 44.2	1.724	2.555	16.0	20.1	7 10						

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>130779</b>	2000 $TQ_{11}$		8 15.4 248°83	6°8/9.6	18		<b>511821</b>	2015 $FC_{166}$		8 15.4 203°66	2°7/13.2	17	
7 10	22 9.28	-30 13.2	1.967	2.830	13.1	20.4	7 10	22 8.39	-19 3.9	1.988	2.843	13.3	22.3
7 20	22 4.10	-31 23.2	1.891	2.817	10.4	20.2	7 20	22 3.13	-19 49.5	1.909	2.839	10.1	22.1
7 30	21 56.44	-32 31.0	1.839	2.803	8.0	20.0	7 30	21 55.68	-20 40.6	1.853	2.834	6.5	21.9
8 9	21 46.95	-33 28.6	1.811	2.790	6.8	19.9	8 9	21 46.63	-21 31.6	1.824	2.829	3.3	21.7
8 19	21 36.58	-34 8.6	1.810	2.775	7.8	20.0	8 19	21 36.84	-22 16.6	1.821	2.823	3.7	21.7
8 29	21 26.52	-34 26.3	1.834	2.761	10.2	20.1	8 29	21 27.35	-22 50.4	1.847	2.816	7.1	21.9
9 8	21 17.95	-34 20.5	1.882	2.746	13.1	20.2	9 8	21 19.17	-23 10.2	1.899	2.809	10.7	22.1
9 18	21 11.70	-33 53.1	1.950	2.731	15.8	20.4	9 18	21 13.06	-23 15.1	1.973	2.802	13.9	22.3
<b>137319</b>	1999 $TV_{23}$		8 15.4 274°62	0°7/14.9	18		<b>235866</b>	2005 $AC_{61}$		8 15.4 28°19	0°9/15.9	18	
7 10	22 4.41	-13 23.2	1.823	2.678	14.3	21.0	7 10	22 9.21	-13 8.8	1.391	2.254	17.5	19.3
7 20	22 0.28	-13 53.1	1.737	2.667	10.9	20.7	7 20	22 4.16	-12 36.6	1.333	2.264	13.4	19.1
7 30	21 53.94	-14 33.5	1.674	2.656	7.0	20.5	7 30	21 56.44	-12 13.2	1.295	2.275	8.8	18.8
8 9	21 45.95	-15 20.2	1.635	2.644	2.7	20.2	8 9	21 46.91	-11 56.2	1.279	2.287	3.7	18.6
8 19	21 37.14	-16 7.9	1.623	2.632	2.0	20.1	8 19	21 36.74	-11 42.8	1.289	2.300	1.9	18.5
8 29	21 28.56	-16 50.9	1.638	2.621	6.4	20.4	8 29	21 27.27	-11 30.0	1.325	2.313	6.8	18.8
9 8	21 21.24	-17 24.5	1.678	2.609	10.5	20.6	9 8	21 19.68	-11 15.2	1.384	2.327	11.3	19.1
9 18	21 15.99	-17 46.3	1.741	2.597	14.2	20.8	9 18	21 14.72	-10 56.5	1.466	2.342	15.2	19.4
<b>113315</b>	2002 $RD_{197}$		8 15.4 22°07	1°1/14.6	18	R	<b>389051</b>	2008 $VE_{47}$		8 15.4 272°93	2°3/13.6	18	
7 10	21 59.90	-10 31.9	1.144	2.027	19.0	18.6	7 10	22 5.06	-17 10.2	1.853	2.715	13.8	21.1
7 20	21 57.66	-11 45.2	1.089	2.033	14.5	18.3	7 20	22 0.85	-17 54.5	1.765	2.699	10.5	20.9
7 30	21 52.58	-13 19.5	1.053	2.040	9.2	18.1	7 30	21 54.37	-18 47.2	1.699	2.682	6.8	20.6
8 9	21 45.46	-15 6.1	1.038	2.048	3.5	17.8	8 9	21 46.17	-19 42.7	1.658	2.666	3.1	20.3
8 19	21 37.45	-16 53.7	1.047	2.057	2.8	17.8	8 19	21 37.08	-20 35.0	1.644	2.649	3.3	20.3
8 29	21 30.01	-18 30.3	1.080	2.067	8.3	18.1	8 29	21 28.18	-21 17.8	1.657	2.632	7.2	20.5
9 8	21 24.46	-19 47.1	1.135	2.077	13.4	18.4	9 8	21 20.54	-21 47.2	1.695	2.615	11.2	20.7
9 18	21 21.66	-20 39.9	1.210	2.088	17.7	18.7	9 18	21 15.00	-22 1.2	1.755	2.598	14.7	20.9
<b>355083</b>	2006 $SK_{347}$		8 15.4 314°14	0°1/15.4	16		<b>379213</b>	2009 $SG_{134}$		8 15.4 139°11	4°2/12.2	17	
7 10	22 3.29	-12 10.4	1.887	2.740	14.0	21.8	7 10	22 8.59	-22 23.1	1.784	2.649	14.1	21.1
7 20	21 59.28	-12 28.3	1.806	2.733	10.7	21.5	7 20	22 3.42	-23 20.9	1.722	2.656	10.7	20.9
7 30	21 53.21	-12 56.4	1.746	2.726	7.0	21.3	7 30	21 55.89	-24 21.5	1.683	2.663	7.2	20.7
8 9	21 45.63	-13 31.3	1.711	2.719	2.8	21.0	8 9	21 46.70	-25 17.8	1.669	2.669	4.5	20.5
8 19	21 37.35	-14 8.4	1.703	2.713	1.6	20.9	8 19	21 36.84	-26 3.0	1.682	2.675	5.2	20.6
8 29	21 29.33	-14 43.1	1.721	2.707	5.9	21.2	8 29	21 27.47	-26 32.1	1.721	2.681	8.4	20.8
9 8	21 22.54	-15 11.1	1.766	2.701	9.8	21.4	9 8	21 19.66	-26 42.8	1.785	2.686	11.8	21.0
9 18	21 17.68	-15 29.7	1.833	2.695	13.3	21.6	9 18	21 14.14	-26 35.9	1.870	2.691	14.8	21.2
<b>174326</b>	2002 $TD_{122}$		8 15.4 283°01	7°0/21.1	18		<b>334386</b>	2002 $CZ_{26}$		8 15.4 238°71	2°2/13.7	18	
7 10	22 2.37	+ 6 9.3	2.023	2.794	16.0	20.8	7 10	22 7.36	-17 48.8	1.978	2.833	13.3	21.1
7 20	21 58.61	+ 6 37.7	1.919	2.774	13.7	20.6	7 20	22 2.42	-18 25.8	1.891	2.821	10.2	20.9
7 30	21 52.85	+ 6 46.0	1.835	2.753	11.1	20.4	7 30	21 55.28	-19 9.2	1.828	2.809	6.5	20.6
8 9	21 45.54	+ 6 32.6	1.773	2.732	8.5	20.2	8 9	21 46.50	-19 54.2	1.790	2.797	3.0	20.4
8 19	21 37.36	+ 5 57.4	1.735	2.711	7.0	20.1	8 19	21 36.92	-20 35.0	1.779	2.783	3.2	20.4
8 29	21 29.23	+ 5 3.2	1.723	2.690	7.7	20.1	8 29	21 27.56	-21 6.6	1.796	2.770	6.9	20.6
9 8	21 22.08	+ 3 55.4	1.736	2.669	10.2	20.2	9 8	21 19.46	-21 25.8	1.839	2.756	10.6	20.8
9 18	21 16.70	+ 2 40.8	1.773	2.647	13.1	20.3	9 18	21 13.39	-21 31.2	1.905	2.741	14.0	21.0
<b>323663</b>	2005 $EQ_{38}$		8 15.4 146°11	6°0/21.8	17		<b>11378</b>	Dauria		8 15.4 297°65	0°1/15.4	18	
7 10	22 5.16	+ 8 43.3	1.893	2.649	17.5	21.2	7 10	22 3.38	-10 49.3	1.465	2.328	16.7	18.1
7 20	22 0.61	+ 8 2.3	1.812	2.659	14.7	21.0	7 20	22 0.05	-11 21.7	1.381	2.314	12.9	17.8
7 30	21 54.00	+ 6 53.1	1.751	2.669	11.5	20.9	7 30	21 54.10	-12 10.2	1.317	2.299	8.5	17.5
8 9	21 45.93	+ 5 16.5	1.712	2.678	8.3	20.7	8 9	21 46.13	-13 10.5	1.276	2.285	3.4	17.2
8 19	21 37.21	+ 3 16.9	1.700	2.686	6.2	20.6	8 19	21 37.11	-14 16.0	1.260	2.270	1.9	17.0
8 29	21 28.80	+ 1 2.1	1.717	2.694	6.9	20.6	8 29	21 28.29	-15 18.8	1.269	2.256	7.2	17.3
9 8	21 21.64	- 1 17.6	1.762	2.700	9.6	20.8	9 8	21 20.98	-16 11.9	1.302	2.242	12.2	17.6
9 18	21 16.42	- 3 32.6	1.832	2.707	12.8	21.0	9 18	21 16.13	-16 50.7	1.356	2.229	16.5	17.8
<b>295145</b>	2008 $FM_{44}$		8 15.4 66°77	0°4/15.8	18		<b>310187</b>	2011 $SS_{88}$		8 15.4 270°50	0°4/15.1	18	
7 10	22 1.57	- 9 41.1	2.103	2.946	13.1	20.8	7 10	22 4.65	-13 36.5	2.035	2.885	13.2	21.3
7 20	21 57.64	-10 19.5	2.036	2.956	10.1	20.6	7 20	22 0.20	-13 53.6	1.951	2.878	10.1	21.1
7 30	21 51.96	-11 9.4	1.990	2.967	6.5	20.5	7 30	21 53.75	-14 18.9	1.890	2.870	6.5	20.9
8 9	21 45.09	-12 6.9	1.971	2.978	2.7	20.2	8 9	21 45.87	-14 49.0	1.855	2.863	2.6	20.6
8 19	21 37.71	-13 7.4	1.979	2.989	1.3	20.1	8 19	21 37.31	-15 19.8	1.846	2.856	1.7	20.5
8 29	21 30.66	-14 5.5	2.015	3.000	5.1	20.4	8 29	21 29.02	-15 47.0	1.866	2.849	5.7	20.8
9 8	21 24.71	-14 56.8	2.077	3.012	8.6	20.7	9 8	21 21.88	-16 7.1	1.911	2.842	9.5	21.0
9 18	21 20.43	-15 38.1	2.164	3.023	11.7	20.9	9 18	21 16.60	-16 18.2	1.980	2.835	12.8	21.2
<b>238827</b>	2005 $SE_{85}$		8 15.4 27°28	0°4/15.8	18		<b>314448</b>	2005 $VK_{87}$		8 15.4 346°50	1°8/14.1	18	
7 10	21 59.35	-10 52.9	2.504	3.346	11.3	20.2	7 10	22 0.08	-15 45.2	1.555	2.432	15.2	20.4
7 20	21 55.70	-11 12.7	2.434	3.355	8.6	20.1	7 20	21 57.30	-16 20.1	1.480	2.422	11.6	20.2
7 30	21 50.59	-11 40.8	2.387	3.364	5.6	19.9	7 30	21 52.17	-17 4.8	1.426	2.413	7.4	19.9
8 9	21 44.51	-12 14.4	2.366	3.374	2.3	19.7	8 9	21 45.31	-17 54.1	1.396	2.405	3.1	19.6
8 19	21 38.04	-12 50.4	2.373	3.384	1.1	19.6	8 19	21 37.63	-18 41.6	1.390	2.397	3.0	19.6
8 29	21 31.83	-13 25.1	2.408	3.394	4.4	19.9	8 29	21 30.28	-19 20.8	1.409	2.391	7.4	19.9
9 8	21 26.52	-13 55.5	2.471	3.405	7.4	20.1	9 8	21 24.36	-19 47.1	1.452	2.386	11.7	20.1
9 18	21 22.59	-14 19.2	2.558	3.416	10.1	20.3	9 18	21 20.68	-19 58.3	1.517	2.382	15.4	20.3
<b>335078</b>	2004 $RD_{337}$		8 15.4 326°45	1°5/16.3	16		<b>97015</b>	1999 $TR_{262}$		8 15.4 282°75	6°7/19.6	18	
7 10	22 0.1												

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8 15.4

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>511417</b>	2014 <i>HR</i> <sub>161</sub>		8 15.4 44°96'	4.6°/11.1	18		<b>236388</b>	2006 <i>DK</i> <sub>27</sub>		8 15.4 219°55'	2.1°/13.8	18	
7 10	22 2.82	-22 37.6	1.837	2.711	13.4	20.9	7 10	22 8.01	-18 19.0	2.014	2.868	13.2	22.1
7 20	21 58.98	-23 59.5	1.782	2.721	10.1	20.7	7 20	22 2.81	-18 47.8	1.932	2.862	10.0	21.9
7 30	21 53.02	-25 24.5	1.751	2.732	6.9	20.5	7 30	21 55.48	-19 21.8	1.874	2.855	6.4	21.6
8 9	21 45.57	-26 44.8	1.745	2.742	4.7	20.4	8 9	21 46.59	-19 56.2	1.842	2.849	2.9	21.4
8 19	21 37.51	-27 53.2	1.765	2.753	5.7	20.5	8 19	21 36.99	-20 26.1	1.837	2.841	3.1	21.4
8 29	21 29.89	-28 43.9	1.811	2.764	8.6	20.7	8 29	21 27.69	-20 47.0	1.860	2.834	6.6	21.6
9 8	21 23.64	-29 14.3	1.882	2.776	11.7	20.9	9 8	21 19.67	-20 56.2	1.909	2.826	10.3	21.8
9 18	21 19.46	-29 24.6	1.973	2.787	14.4	21.1	9 18	21 13.66	-20 53.1	1.981	2.818	13.5	22.0
<b>172336</b>	2002 <i>VE</i> <sub>37</sub>		8 15.4 259°91'	4.3°/11.6	18		<b>27590</b>	2000 <i>YO</i> <sub>132</sub>		8 15.4 135°86'	4.4°/21.1	18	
7 10	22 4.80	-23 5.4	2.006	2.873	12.7	20.1	7 10	22 0.10	+ 5 34.2	2.693	3.452	12.7	19.1
7 20	22 0.46	-24 7.2	1.931	2.866	9.7	19.9	7 20	21 56.21	+ 5 7.5	2.607	3.459	10.6	18.9
7 30	21 54.00	-25 12.1	1.880	2.860	6.6	19.7	7 30	21 50.94	+ 4 23.1	2.543	3.465	8.2	18.8
8 9	21 45.99	-26 13.5	1.855	2.853	4.4	19.5	8 9	21 44.71	+ 3 21.9	2.504	3.472	5.9	18.7
8 19	21 37.26	-27 4.9	1.856	2.846	5.2	19.5	8 19	21 38.05	+ 2 6.7	2.492	3.478	4.4	18.6
8 29	21 28.82	-27 41.2	1.884	2.839	8.1	19.7	8 29	21 31.59	+ 0 41.5	2.509	3.485	5.1	18.6
9 8	21 21.65	-27 59.8	1.937	2.833	11.3	19.9	9 8	21 25.93	- 0 48.1	2.555	3.491	7.2	18.8
9 18	21 16.48	-28 0.5	2.011	2.826	14.2	20.1	9 18	21 21.57	- 2 17.0	2.627	3.496	9.5	18.9
<b>91808</b>	1999 <i>TH</i> <sub>247</sub>		8 15.4 328°71'	8.2°/23.8	18		<b>323760</b>	2005 <i>OP</i> <sub>22</sub>		8 15.4 25°24'	1.7°/14.5	17	
7 10	21 58.54	+11 34.3	2.034	2.778	16.7	19.5	7 10	22 4.57	-15 43.9	1.063	1.955	19.5	19.7
7 20	21 55.62	+11 51.4	1.942	2.769	14.6	19.3	7 20	22 1.31	-16 2.4	1.017	1.966	14.8	19.4
7 30	21 50.86	+11 44.1	1.867	2.759	12.3	19.1	7 30	21 54.93	-16 31.9	0.989	1.978	9.4	19.2
8 9	21 44.75	+11 10.4	1.813	2.750	9.9	18.9	8 9	21 46.42	-17 5.6	0.982	1.992	3.7	18.9
8 19	21 37.95	+10 10.7	1.783	2.742	8.4	18.8	8 19	21 37.15	-17 36.1	0.997	2.006	3.2	18.9
8 29	21 31.30	+ 8 48.6	1.777	2.734	8.4	18.8	8 29	21 28.73	-17 56.6	1.035	2.022	8.5	19.3
9 8	21 25.65	+ 7 10.7	1.797	2.726	10.1	18.9	9 8	21 22.52	-18 3.2	1.095	2.039	13.5	19.6
9 18	21 21.70	+ 5 25.1	1.840	2.719	12.5	19.0	9 18	21 19.32	-17 55.0	1.174	2.057	17.8	19.9
<b>177224</b>	2003 <i>UL</i> <sub>218</sub>		8 15.4 289°95'	0.3°/15.3	18		<b>22909</b>	Gongmyunglee		8 15.4 150°34'	0.5°/15.8	18	
7 10	22 4.19	-11 19.1	1.416	2.282	17.1	20.6	7 10	22 5.69	-10 50.4	1.884	2.728	14.4	19.0
7 20	22 0.83	-11 53.7	1.329	2.263	13.2	20.3	7 20	22 1.05	-11 5.8	1.809	2.730	11.1	18.8
7 30	21 54.72	-12 45.1	1.262	2.245	8.6	20.0	7 30	21 54.33	-11 32.0	1.755	2.733	7.2	18.5
8 9	21 46.45	-13 48.5	1.218	2.227	3.5	19.6	8 9	21 46.13	-12 5.8	1.727	2.735	3.0	18.3
8 19	21 36.98	-14 56.9	1.198	2.209	2.1	19.5	8 19	21 37.27	-12 43.0	1.726	2.737	1.5	18.2
8 29	21 27.67	-16 1.9	1.204	2.190	7.6	19.8	8 29	21 28.77	-13 18.6	1.752	2.738	5.7	18.5
9 8	21 19.89	-16 56.1	1.233	2.172	12.8	20.0	9 8	21 21.54	-13 48.6	1.805	2.740	9.6	18.7
9 18	21 14.72	-17 34.8	1.282	2.154	17.3	20.2	9 18	21 16.31	-14 10.1	1.880	2.742	13.1	18.9
<b>162858</b>	2001 <i>DZ</i> <sub>71</sub>		8 15.4 161°51'	1.2°/14.5	18		<b>41804</b>	2000 <i>WA</i> <sub>30</sub>		8 15.4 206°92'	2.0°/17.5	18	
7 10	22 8.02	-16 15.5	2.088	2.936	13.0	20.2	7 10	22 3.86	- 4 4.9	2.350	3.160	12.9	20.2
7 20	22 2.62	-16 32.5	2.014	2.940	9.9	20.0	7 20	21 59.37	- 4 40.3	2.257	3.154	10.2	20.0
7 30	21 55.22	-16 55.1	1.963	2.943	6.3	19.8	7 30	21 53.14	- 5 30.8	2.186	3.148	7.1	19.8
8 9	21 46.44	-17 19.5	1.938	2.946	2.5	19.6	8 9	21 45.65	- 6 33.8	2.141	3.140	3.8	19.6
8 19	21 37.08	-17 41.5	1.941	2.949	2.2	19.5	8 19	21 37.53	- 7 45.6	2.125	3.132	2.1	19.5
8 29	21 28.09	-17 57.5	1.972	2.951	5.9	19.8	8 29	21 29.56	- 9 0.8	2.138	3.124	4.8	19.6
9 8	21 20.36	-18 4.9	2.030	2.953	9.4	20.0	9 8	21 22.51	-10 14.1	2.179	3.115	8.2	19.8
9 18	21 14.55	-18 2.7	2.111	2.955	12.6	20.2	9 18	21 17.02	-11 20.8	2.245	3.105	11.3	20.0
<b>239351</b>	2007 <i>RL</i> <sub>161</sub>		8 15.4 22°16'	2.8°/13.3	18		<b>128097</b>	2003 <i>PS</i> <sub>8</sub>		8 15.4 335°64'	0.3°/15.3	18	
7 10	22 4.44	-18 18.8	1.700	2.570	14.5	20.1	7 10	22 2.52	-13 37.7	1.874	2.732	13.8	19.3
7 20	22 0.37	-19 5.9	1.634	2.572	11.0	19.9	7 20	21 58.76	-13 45.3	1.790	2.721	10.6	19.1
7 30	21 54.00	-19 59.8	1.589	2.574	7.0	19.7	7 30	21 52.94	-14 1.3	1.729	2.710	6.9	18.9
8 9	21 46.01	-20 54.2	1.569	2.576	3.4	19.5	8 9	21 45.61	-14 22.6	1.692	2.701	2.7	18.6
8 19	21 37.31	-21 42.7	1.576	2.579	3.8	19.5	8 19	21 37.56	-14 45.1	1.681	2.691	1.7	18.5
8 29	21 29.03	-22 19.4	1.608	2.582	7.6	19.7	8 29	21 29.77	-15 4.6	1.697	2.683	5.9	18.8
9 8	21 22.22	-22 41.0	1.665	2.585	11.4	20.0	9 8	21 23.20	-15 17.7	1.738	2.675	9.9	19.0
9 18	21 17.60	-22 46.6	1.743	2.588	14.7	20.2	9 18	21 18.57	-15 22.3	1.802	2.667	13.4	19.2
<b>403418</b>	2009 <i>SM</i> <sub>92</sub>		8 15.4 340°33'	0.4°/15.1	18		<b>390203</b>	2012 <i>XQ</i>		8 15.4 269°12'	0.7°/15.9	18	
7 10	22 4.07	-14 11.5	2.213	3.061	12.4	21.1	7 10	22 4.44	-10 12.7	1.885	2.730	14.3	21.6
7 20	21 59.54	-14 19.0	2.133	3.058	9.4	20.9	7 20	22 0.22	-10 28.0	1.800	2.721	11.1	21.3
7 30	21 53.22	-14 33.0	2.077	3.056	6.1	20.7	7 30	21 53.88	-10 55.1	1.735	2.712	7.3	21.1
8 9	21 45.65	-14 50.5	2.046	3.054	2.4	20.4	8 9	21 45.99	-11 30.9	1.696	2.703	3.2	20.8
8 19	21 37.52	-15 8.3	2.043	3.053	1.5	20.4	8 19	21 37.34	-12 11.3	1.683	2.694	1.5	20.7
8 29	21 29.67	-15 23.0	2.068	3.051	5.2	20.6	8 29	21 28.91	-12 51.3	1.698	2.685	5.8	21.0
9 8	21 22.92	-15 32.0	2.119	3.050	8.7	20.8	9 8	21 21.70	-13 26.3	1.738	2.675	9.8	21.2
9 18	21 17.86	-15 33.5	2.195	3.048	11.8	21.0	9 18	21 16.44	-13 52.9	1.802	2.666	13.4	21.4
<b>87560</b>	2000 <i>RE</i> <sub>4</sub>		8 15.4 303°35'	0.6°/15.9	18		<b>476901</b>	2008 <i>WA</i> <sub>30</sub>		8 15.4 280°49'	7.6°/20.6	16	
7 10	22 2.40	- 9 41.7	1.563	2.421	16.1	19.3	7 10	22 5.04	+ 5 31.7	1.925	2.699	16.6	21.5
7 20	21 59.20	-10 7.7	1.471	2.400	12.6	19.0	7 20	22 0.83	+ 6 20.8	1.821	2.676	14.3	21.2
7 30	21 53.53	-10 49.9	1.400	2.380	8.3	18.7	7 30	21 54.42	+ 6 51.3	1.735	2.653	11.6	21.0
8 9	21 45.94	-11 44.9	1.352	2.360	3.6	18.4	8 9	21 46.28	+ 7 0.8	1.672	2.630	9.0	20.8
8 19	21 37.29	-12 46.9	1.329	2.340	1.7	18.2	8 19	21 37.13	+ 6 48.1	1.632	2.607	7.6	20.7
8 29	21 28.77	-13 48.9	1.332	2.320	6.8	18.5	8 29	21 27.98	+ 6 15.0	1.619	2.583	8.4	20.7
9 8	21 21.59	-14 43.8	1.359	2.301	11.6	18.7	9 8	21 19.87	+ 5 26.2	1.630	2.559	11.0	20.8
9 18	21 16.72	-15 26.8	1.408	2.282	15.9	18.9	9 18	21 13.68	+ 4 28.0	1.665	2.535	14.0	20.9
<b>352383</b>	2007 <i>VN</i> <sub>318</sub>		8 15.4 268°34'	1.1°/14.5	18		<b>192497</b>	1998 <i>HJ</i> <sub>89</sub>		8			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>481614</b>	2007 <i>UJ</i> <sub>5</sub>		8 15.4 304°55	3°6/18.1	18		<b>75136</b>	1999 <i>VF</i> <sub>79</sub>		8 15.4 15°56	4°5/12.9	18	
7 10	22 3.05	- 3 21.2	1.819	2.644	15.6	20.9	7 10	22 8.21	-21 44.7	1.281	2.165	17.3	19.1
7 20	21 59.21	- 3 14.0	1.734	2.636	12.5	20.6	7 20	22 3.95	-22 24.8	1.222	2.167	13.3	18.9
7 30	21 53.26	- 3 23.2	1.669	2.629	9.0	20.4	7 30	21 56.64	-23 9.1	1.183	2.169	8.8	18.6
8 9	21 45.76	- 3 47.8	1.627	2.622	5.4	20.2	8 9	21 47.16	-23 49.3	1.167	2.171	5.0	18.4
8 19	21 37.49	- 4 25.1	1.611	2.615	3.6	20.1	8 19	21 36.79	-24 17.2	1.174	2.174	5.6	18.5
8 29	21 29.45	- 5 10.7	1.621	2.608	6.0	20.2	8 29	21 27.09	-24 27.2	1.206	2.177	9.7	18.7
9 8	21 22.61	- 5 58.8	1.657	2.601	9.7	20.4	9 8	21 19.46	-24 17.2	1.259	2.181	14.1	19.0
9 18	21 17.72	- 6 44.5	1.716	2.595	13.3	20.6	9 18	21 14.79	-23 48.7	1.332	2.185	17.9	19.3
<b>164051</b>	2003 <i>UL</i> <sub>314</sub>		8 15.4 350°55	1°3/16.3	18		<b>665</b>	Sabine		8 15.4 50°22	3°7/18.1	18	R
7 10	22 2.74	- 9 17.4	1.531	2.389	16.4	20.3	7 10	22 6.72	- 4 11.9	2.000	2.815	14.7	13.2
7 20	21 59.29	- 9 24.2	1.457	2.385	12.8	20.1	7 20	22 1.56	- 3 34.4	1.934	2.830	11.7	13.0
7 30	21 53.44	- 9 45.4	1.403	2.381	8.5	19.8	7 30	21 54.50	- 3 9.7	1.890	2.846	8.4	12.8
8 9	21 45.85	-10 17.9	1.372	2.379	3.9	19.5	8 9	21 46.17	- 2 57.2	1.870	2.861	5.2	12.7
8 19	21 37.45	-10 57.3	1.366	2.376	1.9	19.4	8 19	21 37.35	- 2 55.7	1.877	2.877	3.7	12.6
8 29	21 29.41	-11 37.6	1.385	2.375	6.4	19.7	8 29	21 28.95	- 3 2.5	1.911	2.893	5.7	12.8
9 8	21 22.83	-12 13.2	1.429	2.374	10.9	19.9	9 8	21 21.81	- 3 14.1	1.972	2.910	8.8	13.0
9 18	21 18.53	-12 40.3	1.494	2.373	14.9	20.2	9 18	21 16.53	- 3 27.1	2.057	2.926	11.8	13.2
<b>83247</b>	2001 <i>RZ</i> <sub>58</sub>		8 15.4 156°15	2°6/13.2	18		<b>514008</b>	2014 <i>JE</i> <sub>48</sub>		8 15.4 2°90	7°2/ 8.5	18	
7 10	22 4.51	-18 57.3	2.040	2.901	12.8	19.8	7 10	22 2.33	-29 13.5	1.807	2.686	13.3	20.0
7 20	22 0.09	-19 42.5	1.968	2.902	9.6	19.6	7 20	21 58.91	-30 53.6	1.751	2.685	10.5	19.8
7 30	21 53.69	-20 32.8	1.920	2.902	6.2	19.4	7 30	21 53.16	-32 32.2	1.717	2.685	8.1	19.7
8 9	21 45.88	-21 23.0	1.897	2.903	3.1	19.2	8 9	21 45.74	-34 0.2	1.708	2.686	7.2	19.6
8 19	21 37.46	-22 7.6	1.902	2.904	3.5	19.2	8 19	21 37.56	-35 9.3	1.725	2.687	8.3	19.7
8 29	21 29.37	-22 41.9	1.934	2.904	6.8	19.5	8 29	21 29.76	-35 54.1	1.766	2.689	10.8	19.9
9 8	21 22.50	-23 2.9	1.991	2.904	10.1	19.7	9 8	21 23.42	-36 12.8	1.829	2.691	13.5	20.0
9 18	21 17.52	-23 9.9	2.071	2.905	13.1	19.9	9 18	21 19.30	-36 7.1	1.912	2.693	16.0	20.2
<b>429735</b>	2011 <i>MA</i>		8 15.4 59°84	9°0/22.9	17		<b>26586</b>	Harshaw		8 15.4 49°11	5°9/10.6	18	
7 10	22 7.80	+ 9 16.5	1.598	2.362	19.9	20.3	7 10	22 5.56	-26 8.7	1.706	2.582	14.1	17.3
7 20	22 2.67	+10 6.5	1.552	2.395	17.0	20.2	7 20	22 1.29	-27 24.7	1.654	2.591	10.9	17.1
7 30	21 55.30	+10 29.2	1.523	2.427	13.8	20.0	7 30	21 54.62	-28 40.5	1.623	2.599	7.8	17.0
8 9	21 46.48	+10 23.2	1.515	2.460	10.9	19.9	8 9	21 46.29	-29 47.6	1.618	2.608	6.0	16.9
8 19	21 37.18	+ 9 49.8	1.530	2.493	9.1	19.9	8 19	21 37.29	-30 38.8	1.637	2.618	7.0	17.0
8 29	21 28.52	+ 8 54.0	1.569	2.525	9.3	20.0	8 29	21 28.82	-31 8.8	1.682	2.627	9.7	17.2
9 8	21 21.48	+ 7 43.6	1.632	2.558	11.2	20.2	9 8	21 21.96	-31 16.3	1.750	2.637	12.8	17.4
9 18	21 16.69	+ 6 27.0	1.718	2.590	13.6	20.4	9 18	21 17.43	-31 2.8	1.839	2.647	15.6	17.6
<b>106771</b>	2000 <i>XE</i> <sub>15</sub>		8 15.4 295°45	10°8/31.9	18		<b>190611</b>	2000 <i>VN</i> <sub>38</sub>		8 15.4 307°30	0°2/15.5	18	
7 10	22 12.09	-44 26.0	2.274	3.105	12.6	19.3	7 10	22 3.26	-11 17.0	1.551	2.412	16.0	20.8
7 20	22 6.96	-46 24.9	2.188	3.064	11.4	19.1	7 20	21 59.84	-11 39.0	1.465	2.397	12.4	20.6
7 30	21 58.83	-48 15.9	2.126	3.021	10.8	19.0	7 30	21 53.93	-12 14.9	1.400	2.381	8.1	20.3
8 9	21 48.21	-49 48.7	2.088	2.978	11.1	19.0	8 9	21 46.12	-13 1.0	1.358	2.366	3.3	20.0
8 19	21 36.05	-50 54.5	2.073	2.935	12.3	19.0	8 19	21 37.32	-13 51.6	1.341	2.351	1.8	19.8
8 29	21 23.78	-51 27.5	2.080	2.891	14.1	19.0	8 29	21 28.72	-14 40.1	1.349	2.337	6.8	20.1
9 8	21 12.94	-51 26.9	2.107	2.846	16.1	19.1	9 8	21 21.54	-15 20.6	1.382	2.323	11.6	20.3
9 18	21 4.80	-50 55.9	2.150	2.801	17.9	19.1	9 18	21 16.70	-15 49.2	1.436	2.309	15.7	20.6
<b>309838</b>	2009 <i>CG</i> <sub>20</sub>		8 15.4 174°93	0°7/15.9	17		<b>46206</b>	2001 <i>FS</i> <sub>156</sub>		8 15.4 228°84	1°4/16.4	18	
7 10	22 7.79	- 9 7.5	1.589	2.435	16.5	21.9	7 10	22 7.47	- 9 55.0	1.932	2.769	14.3	19.3
7 20	22 3.07	- 9 37.7	1.515	2.437	12.8	21.7	7 20	22 2.40	- 9 43.7	1.851	2.766	11.2	19.0
7 30	21 55.85	-10 23.5	1.462	2.439	8.4	21.4	7 30	21 55.22	- 9 42.2	1.791	2.764	7.5	18.8
8 9	21 46.82	-11 20.8	1.433	2.440	3.6	21.2	8 9	21 46.52	- 9 48.5	1.756	2.761	3.5	18.6
8 19	21 36.94	-12 23.4	1.430	2.441	1.7	21.0	8 19	21 37.14	- 9 59.8	1.749	2.758	1.8	18.4
8 29	21 27.44	-13 24.3	1.454	2.441	6.5	21.3	8 29	21 28.07	-10 12.7	1.769	2.756	5.6	18.7
9 8	21 19.48	-14 17.3	1.503	2.440	11.1	21.6	9 8	21 20.27	-10 23.9	1.815	2.753	9.5	18.9
9 18	21 13.89	-14 58.3	1.575	2.439	15.0	21.9	9 18	21 14.46	-10 30.7	1.885	2.750	12.9	19.1
<b>513691</b>	2012 <i>BL</i> <sub>94</sub>		8 15.4 166°16	1°2/13.8	18		<b>162386</b>	2000 <i>BA</i> <sub>26</sub>		8 15.4 269°04	0°1/15.5	18	
7 10	22 1.69	-13 17.4	2.745	3.584	10.5	22.1	7 10	22 6.97	-13 0.5	2.004	2.849	13.6	20.1
7 20	21 57.49	-14 38.3	2.665	3.587	7.9	22.0	7 20	22 2.13	-13 5.8	1.909	2.831	10.5	19.8
7 30	21 51.82	-16 8.1	2.611	3.590	5.0	21.8	7 30	21 55.14	-13 19.5	1.835	2.813	6.9	19.6
8 9	21 45.11	-17 42.0	2.585	3.593	2.0	21.6	8 9	21 46.54	-13 38.4	1.787	2.795	2.8	19.3
8 19	21 37.90	-19 14.7	2.590	3.595	2.1	21.6	8 19	21 37.11	-13 59.1	1.767	2.777	1.5	19.2
8 29	21 30.84	-20 40.8	2.625	3.597	5.1	21.8	8 29	21 27.84	-14 17.5	1.774	2.758	5.8	19.4
9 8	21 24.60	-21 56.0	2.688	3.599	7.9	22.0	9 8	21 19.73	-14 30.2	1.807	2.740	9.8	19.6
9 18	21 19.68	-22 58.0	2.777	3.600	10.5	22.2	9 18	21 13.56	-14 35.2	1.865	2.721	13.4	19.8
<b>103614</b>	2000 <i>CF</i> <sub>22</sub>		8 15.4 159°80	0°5/15.9	16		<b>137558</b>	1999 <i>VY</i> <sub>89</sub>		8 15.4 256°76	4°2/12.8	18	
7 10	22 4.65	-10 9.3	2.301	3.134	12.5	21.0	7 10	22 9.66	-21 47.1	1.561	2.432	15.5	20.1
7 20	21 59.90	-10 35.2	2.224	3.139	9.6	20.8	7 20	22 4.78	-22 29.7	1.485	2.422	11.9	19.9
7 30	21 53.43	-11 11.0	2.170	3.144	6.2	20.7	7 30	21 57.12	-23 16.7	1.431	2.413	7.9	19.7
8 9	21 45.75	-11 53.6	2.142	3.149	2.6	20.4	8 9	21 47.38	-24 0.6	1.400	2.403	4.6	19.4
8 19	21 37.55	-12 39.1	2.142	3.152	1.3	20.3	8 19	21 36.66	-24 34.1	1.395	2.393	5.2	19.5
8 29	21 29.62	-13 23.2	2.171	3.156	4.9	20.6	8 29	21 26.33	-24 51.4	1.416	2.383	9.0	19.6
9 8	21 22.73	-14 2.1	2.227	3.159	8.3	20.8	9 8	21 17.71	-24 49.8	1.460	2.373	13.1	19.9
9 18	21 17.47	-14 33.1	2.308	3.162	11.3	21.0	9 18	21 11.74	-24 30.1	1.525	2.363	16.8	20.1
<b>344336</b>	2001 <i>VP</i> <sub>98</sub>		8 15.4 137°88	2°9/11.4	18		<b>347871</b>	2002 <i>RL</i> <sub>269</sub>		8 15.4 281°73	5°1/10.8	1	

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>148529</b>	2001 <i>QQ</i> <sub>5</sub>		8 15.4 357°19	0°7/14.9	18		<b>243708</b>	2000 <i>DQ</i> <sub>45</sub>		8 15.5 203°09	1°4/16.4	17	
7 10	21 59.35	-12 36.7	1.097	1.989	19.0	19.3	7 10	22 6.85	-8 13.2	1.348	2.204	18.3	20.8
7 20	21 57.50	-13 6.2	1.035	1.984	14.6	19.0	7 20	22 2.77	-8 31.4	1.277	2.203	14.3	20.6
7 30	21 52.68	-13 52.4	0.991	1.980	9.4	18.7	7 30	21 55.88	-9 7.9	1.225	2.202	9.6	20.3
8 9	21 45.66	-14 49.4	0.968	1.978	3.7	18.4	8 9	21 46.92	-9 58.9	1.195	2.201	4.4	20.0
8 19	21 37.62	-15 48.7	0.967	1.977	2.5	18.3	8 19	21 36.97	-10 58.1	1.190	2.200	2.1	19.8
8 29	21 30.10	-16 41.3	0.988	1.978	8.3	18.6	8 29	21 27.44	-11 57.9	1.210	2.199	7.1	20.1
9 8	21 24.50	-17 19.9	1.031	1.980	13.6	18.9	9 8	21 19.66	-12 50.9	1.253	2.198	12.2	20.4
9 18	21 21.77	-17 40.9	1.092	1.983	18.2	19.2	9 18	21 14.56	-13 32.2	1.318	2.196	16.5	20.7
<b>472160</b>	2014 <i>DK</i> <sub>19</sub>		8 15.5 177°67	0°8/16.1	18		<b>288310</b>	2004 <i>BX</i> <sub>33</sub>		8 15.5 330°82	1°0/14.8	18	
7 10	22 6.11	-10 14.2	2.014	2.852	13.8	21.5	7 10	22 4.94	-15 2.8	1.732	2.593	14.6	20.8
7 20	22 1.27	-10 24.2	1.936	2.853	10.7	21.3	7 20	22 0.77	-15 18.9	1.655	2.588	11.2	20.6
7 30	21 54.45	-10 44.6	1.879	2.854	7.0	21.1	7 30	21 54.32	-15 43.2	1.599	2.582	7.2	20.3
8 9	21 46.22	-11 12.5	1.848	2.854	3.1	20.8	8 9	21 46.23	-16 11.7	1.568	2.577	2.8	20.0
8 19	21 37.35	-11 44.4	1.844	2.854	1.5	20.7	8 19	21 37.38	-16 39.3	1.563	2.572	2.2	20.0
8 29	21 28.79	-12 15.9	1.868	2.854	5.4	21.0	8 29	21 28.87	-17 1.4	1.584	2.568	6.5	20.2
9 8	21 21.43	-12 43.1	1.919	2.854	9.2	21.2	9 8	21 21.75	-17 14.4	1.631	2.564	10.7	20.5
9 18	21 15.95	-13 3.3	1.993	2.853	12.5	21.4	9 18	21 16.78	-17 16.5	1.699	2.560	14.3	20.7
<b>92414</b>	2000 <i>JU</i> <sub>40</sub>		8 15.5 45°51	3°3/17.5	17		<b>345041</b>	2005 <i>ES</i> <sub>233</sub>		8 15.5 195°17	2°0/13.4	18	
7 10	22 4.99	-4 54.4	1.124	1.985	20.8	19.4	7 10	22 4.53	-16 37.9	2.323	3.173	11.8	21.8
7 20	22 1.52	-4 57.5	1.071	1.997	16.5	19.1	7 20	21 59.95	-17 37.7	2.243	3.171	8.9	21.6
7 30	21 55.08	-5 24.1	1.035	2.009	11.4	18.9	7 30	21 53.56	-18 44.7	2.187	3.168	5.7	21.4
8 9	21 46.56	-6 11.1	1.019	2.021	6.1	18.6	8 9	21 45.88	-19 53.8	2.158	3.165	2.6	21.2
8 19	21 37.19	-7 12.2	1.026	2.034	3.4	18.5	8 19	21 37.59	-20 59.5	2.158	3.161	2.9	21.2
8 29	21 28.51	-8 18.5	1.057	2.048	7.5	18.8	8 29	21 29.50	-21 56.7	2.186	3.157	6.1	21.4
9 8	21 21.86	-9 21.1	1.109	2.062	12.5	19.1	9 8	21 22.44	-22 41.7	2.241	3.152	9.3	21.6
9 18	21 18.08	-10 13.3	1.183	2.076	16.9	19.4	9 18	21 17.04	-23 12.6	2.321	3.147	12.1	21.7
<b>228615</b>	2002 <i>CH</i> <sub>35</sub>		8 15.5 173°00	5°2/10.4	18		<b>151498</b>	2002 <i>JM</i> <sub>78</sub>		8 15.5 162°97	1°8/13.7	18	
7 10	22 6.28	-24 27.4	1.976	2.842	12.9	20.5	7 10	22 4.25	-18 20.3	2.537	3.387	10.9	20.6
7 20	22 1.67	-25 59.3	1.911	2.844	9.9	20.3	7 20	21 59.50	-18 52.4	2.463	3.390	8.2	20.4
7 30	21 54.84	-27 33.9	1.870	2.846	7.0	20.1	7 30	21 53.14	-19 28.5	2.412	3.393	5.3	20.2
8 9	21 46.41	-29 2.9	1.856	2.847	5.3	20.0	8 9	21 45.68	-20 4.7	2.389	3.395	2.4	20.0
8 19	21 37.24	-30 18.6	1.868	2.848	6.3	20.1	8 19	21 37.73	-20 37.0	2.393	3.397	2.6	20.0
8 29	21 28.39	-31 15.1	1.908	2.849	9.0	20.3	8 29	21 30.06	-21 2.2	2.427	3.399	5.5	20.2
9 8	21 20.89	-31 49.6	1.971	2.849	12.0	20.5	9 8	21 23.37	-21 17.9	2.488	3.401	8.4	20.4
9 18	21 15.47	-32 2.5	2.057	2.849	14.7	20.7	9 18	21 18.21	-21 23.1	2.572	3.402	11.0	20.6
<b>29851</b>	1999 <i>FW</i> <sub>25</sub>		8 15.5 318°62	0°8/16.1	18		<b>231921</b>	2001 <i>CK</i> <sub>16</sub>		8 15.5 151°38	1°0/14.8	18	
7 10	22 2.68	-9 52.4	1.888	2.734	14.2	17.7	7 10	22 9.30	-15 56.2	2.119	2.963	13.0	20.4
7 20	21 58.86	-10 9.1	1.805	2.728	11.0	17.4	7 20	22 3.56	-16 6.5	2.046	2.969	9.9	20.2
7 30	21 53.01	-10 37.9	1.745	2.721	7.3	17.2	7 30	21 55.84	-16 22.1	1.996	2.975	6.3	20.0
8 9	21 45.68	-11 15.7	1.709	2.715	3.2	16.9	8 9	21 46.77	-16 39.6	1.972	2.980	2.5	19.7
8 19	21 37.64	-11 58.3	1.699	2.709	1.5	16.8	8 19	21 37.15	-16 55.1	1.977	2.986	1.9	19.7
8 29	21 29.86	-12 40.7	1.716	2.704	5.6	17.1	8 29	21 27.93	-17 5.4	2.010	2.990	5.7	19.9
9 8	21 23.26	-13 18.1	1.759	2.698	9.6	17.3	9 8	21 19.97	-17 8.1	2.070	2.994	9.2	20.2
9 18	21 18.56	-13 47.3	1.826	2.693	13.1	17.5	9 18	21 13.93	-17 2.4	2.154	2.998	12.3	20.4
<b>77870</b>	MOTESS		8 15.5 10°92	9°9/ 8.6	18		<b>411670</b>	2011 <i>WR</i> <sub>86</sub>		8 15.5 260°43	0°1/15.5	17	
7 10	22 12.02	-38 32.5	1.707	2.566	14.9	17.2	7 10	22 7.21	-11 19.8	1.382	2.244	17.6	22.0
7 20	22 6.50	-39 34.7	1.657	2.568	12.5	17.1	7 20	22 3.17	-11 44.7	1.302	2.234	13.6	21.7
7 30	21 58.08	-40 25.1	1.628	2.569	10.7	17.0	7 30	21 56.26	-12 25.0	1.242	2.223	8.9	21.4
8 9	21 47.68	-40 54.5	1.622	2.572	9.9	16.9	8 9	21 47.15	-13 16.4	1.204	2.213	3.6	21.1
8 19	21 36.60	-40 56.4	1.639	2.575	10.8	17.0	8 19	21 36.90	-14 12.1	1.191	2.202	2.0	20.9
8 29	21 26.33	-40 28.4	1.679	2.578	12.7	17.1	8 29	21 26.93	-15 4.5	1.204	2.191	7.5	21.2
9 8	21 18.14	-39 33.1	1.741	2.581	15.1	17.3	9 8	21 18.65	-15 46.9	1.240	2.180	12.7	21.5
9 18	21 12.79	-38 15.5	1.822	2.585	17.3	17.5	9 18	21 13.09	-16 15.4	1.297	2.168	17.1	21.8
<b>65628</b>	5098 <i>T</i> <sub>3</sub>		8 15.5 348°57	3°4/13.2	18		<b>126726</b>	2002 <i>CJ</i> <sub>263</sub>		8 15.5 96°56	10°2/ 8.0	17	
7 10	21 56.43	-15 4.5	0.939	1.848	19.9	18.4	7 10	22 15.83	-40 7.5	1.793	2.641	14.8	19.5
7 20	21 55.77	-16 17.4	0.878	1.838	15.1	18.1	7 20	22 9.28	-41 21.8	1.752	2.653	12.5	19.4
7 30	21 51.86	-17 49.9	0.835	1.829	9.7	17.8	7 30	21 59.81	-42 22.8	1.733	2.664	10.8	19.3
8 9	21 45.43	-19 32.0	0.812	1.822	4.4	17.4	8 9	21 48.39	-43 1.1	1.737	2.675	10.3	19.3
8 19	21 37.76	-21 10.2	0.810	1.816	5.1	17.5	8 19	21 36.36	-43 10.6	1.765	2.686	11.1	19.4
8 29	21 30.57	-22 30.8	0.828	1.812	10.7	17.8	8 29	21 25.24	-42 49.3	1.816	2.696	12.8	19.5
9 8	21 25.53	-23 24.9	0.866	1.810	16.2	18.1	9 8	21 16.30	-42 0.0	1.888	2.707	14.9	19.7
9 18	21 23.70	-23 49.5	0.921	1.809	21.0	18.3	9 18	21 10.28	-40 48.4	1.980	2.717	16.9	19.9
<b>99028</b>	2001 <i>DC</i> <sub>98</sub>		8 15.5 249°26	0°1/15.4	18		<b>90012</b>	2002 <i>TA</i> <sub>211</sub>		8 15.5 256°08	0°6/15.9	18	
7 10	22 4.38	-11 3.5	2.110	2.951	13.1	19.9	7 10	22 5.86	-9 41.2	1.764	2.609	15.2	20.6
7 20	22 0.07	-11 41.0	2.014	2.935	10.1	19.7	7 20	22 1.60	-10 8.2	1.671	2.593	11.8	20.3
7 30	21 53.78	-12 30.3	1.942	2.919	6.6	19.5	7 30	21 55.00	-10 49.6	1.600	2.577	7.8	20.0
8 9	21 46.01	-13 27.8	1.895	2.903	2.6	19.2	8 9	21 46.60	-11 41.9	1.553	2.560	3.3	19.7
8 19	21 37.45	-14 28.5	1.876	2.886	1.5	19.1	8 19	21 37.23	-12 40.0	1.532	2.543	1.6	19.6
8 29	21 29.01	-15 26.9	1.885	2.868	5.6	19.3	8 29	21 27.99	-13 37.6	1.539	2.525	6.3	19.8
9 8	21 21.61	-16 18.1	1.921	2.851	9.5	19.5	9 8	21 20.01	-14 28.7	1.571	2.507	10.7	20.1
9 18	21 15.98	-16 58.6	1.981	2.832	12.9	19.7	9 18	21 14.17	-15 9.1	1.626	2.489	14.7	20.3
<b>53339</b>	1999 <i>JA</i> <sub>47</sub>		8 15.5 35°44	1°6/14.1	18		<b>375153</b>	2008 <i>CS</i> <sub>39</sub>		8 15.5 37°82	0°7/15		



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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>189176</b>	2002 <i>XJ</i> <sub>94</sub>		8 15.5 264°35	13°5/25.6	18		<b>325583</b>	2009 <i>SH</i> <sub>140</sub>		8 15.5 250°95	5°2/21.4	18	
7 10	22 6.35	+20 53.5	1.977	2.642	19.4	20.1	7 10	22 0.51	+ 6 18.3	2.792	3.542	12.5	21.1
7 20	22 2.07	+22 17.6	1.873	2.618	17.9	19.9	7 20	21 56.65	+ 6 23.9	2.687	3.529	10.6	21.0
7 30	21 55.43	+23 17.3	1.784	2.595	16.3	19.7	7 30	21 51.37	+ 6 13.5	2.604	3.515	8.5	20.8
8 9	21 46.84	+23 46.3	1.712	2.570	14.8	19.5	8 9	21 45.04	+ 5 46.6	2.544	3.501	6.4	20.6
8 19	21 37.06	+23 40.0	1.660	2.545	13.7	19.4	8 19	21 38.18	+ 5 4.3	2.511	3.487	5.2	20.5
8 29	21 27.15	+22 57.0	1.630	2.519	13.6	19.4	8 29	21 31.40	+ 4 9.3	2.506	3.472	5.7	20.6
9 8	21 18.27	+21 41.2	1.622	2.493	14.5	19.3	9 8	21 25.33	+ 3 5.5	2.528	3.457	7.5	20.7
9 18	21 11.41	+20 0.2	1.634	2.466	16.1	19.4	9 18	21 20.51	+ 1 57.8	2.576	3.442	9.8	20.8
<b>428232</b>	2006 <i>WP</i> <sub>167</sub>		8 15.5 28°01	10°1/22.7	17		<b>80609</b>	2000 <i>AU</i> <sub>162</sub>		8 15.5 251°48	1°5/14.4	18	
7 10	22 4.71	+ 9 16.3	1.501	2.276	20.5	21.1	7 10	22 7.86	-15 24.4	1.753	2.610	14.7	19.3
7 20	22 0.90	+10 19.7	1.429	2.278	17.8	20.9	7 20	22 3.17	-15 56.3	1.665	2.595	11.3	19.1
7 30	21 54.59	+10 56.4	1.373	2.280	14.8	20.7	7 30	21 56.03	-16 37.5	1.599	2.581	7.3	18.8
8 9	21 46.43	+11 2.8	1.337	2.283	12.0	20.5	8 9	21 47.03	-17 23.2	1.557	2.566	3.0	18.5
8 19	21 37.36	+10 37.8	1.323	2.286	10.3	20.5	8 19	21 37.08	-18 7.5	1.543	2.551	2.6	18.5
8 29	21 28.62	+ 9 44.7	1.331	2.289	10.6	20.5	8 29	21 27.33	-18 44.4	1.555	2.535	7.0	18.7
9 8	21 21.38	+ 8 31.1	1.363	2.292	12.6	20.6	9 8	21 18.94	-19 9.7	1.592	2.519	11.4	18.9
9 18	21 16.52	+ 7 6.5	1.415	2.295	15.5	20.8	9 18	21 12.82	-19 21.4	1.652	2.502	15.1	19.1
<b>509160</b>	2006 <i>DO</i> <sub>93</sub>		8 15.5 155°70	0°3/15.8	17		<b>509824</b>	2008 <i>WT</i> <sub>84</sub>		8 15.5 298°07	5°3/11.4	18	
7 10	22 5.71	-10 30.5	2.098	2.935	13.4	22.5	7 10	22 5.67	-24 7.6	1.686	2.561	14.3	21.3
7 20	22 0.90	-10 57.9	2.023	2.941	10.3	22.3	7 20	22 1.65	-25 12.2	1.611	2.549	11.0	21.1
7 30	21 54.19	-11 35.8	1.971	2.946	6.7	22.1	7 30	21 55.10	-26 20.0	1.558	2.537	7.7	20.8
8 9	21 46.16	-12 21.0	1.944	2.951	2.8	21.9	8 9	21 46.66	-27 23.1	1.529	2.526	5.4	20.7
8 19	21 37.55	-13 8.8	1.945	2.956	1.4	21.8	8 19	21 37.30	-28 13.6	1.526	2.514	6.3	20.7
8 29	21 29.24	-13 54.6	1.975	2.960	5.3	22.1	8 29	21 28.26	-28 45.2	1.548	2.503	9.5	20.9
9 8	21 22.10	-14 34.2	2.031	2.963	8.9	22.3	9 8	21 20.74	-28 55.3	1.594	2.492	13.1	21.1
9 18	21 16.74	-15 4.8	2.112	2.966	12.1	22.5	9 18	21 15.60	-28 44.3	1.659	2.482	16.4	21.3
<b>342310</b>	2008 <i>TO</i> <sub>66</sub>		8 15.5 332°10	4°0/12.8	18		<b>101520</b>	1998 <i>XA</i> <sub>52</sub>		8 15.5 265°62	1°2/14.8	18	
7 10	22 3.83	-20 17.1	1.408	2.292	16.1	20.7	7 10	22 10.83	-16 15.1	1.792	2.643	14.7	19.2
7 20	22 0.56	-21 4.8	1.336	2.281	12.3	20.5	7 20	22 5.46	-16 22.0	1.696	2.623	11.3	18.9
7 30	21 54.54	-21 59.3	1.284	2.270	8.1	20.2	7 30	21 57.54	-16 35.3	1.621	2.602	7.3	18.7
8 9	21 46.45	-22 53.1	1.255	2.260	4.5	20.0	8 9	21 47.67	-16 51.1	1.572	2.581	3.0	18.3
8 19	21 37.36	-23 38.2	1.250	2.251	5.2	20.0	8 19	21 36.75	-17 4.8	1.550	2.559	2.3	18.3
8 29	21 28.66	-24 7.5	1.270	2.243	9.2	20.2	8 29	21 25.99	-17 12.0	1.555	2.536	6.9	18.5
9 8	21 21.66	-24 17.4	1.312	2.235	13.6	20.4	9 8	21 16.60	-17 9.8	1.586	2.513	11.3	18.7
9 18	21 17.30	-24 7.6	1.374	2.228	17.4	20.6	9 18	21 9.53	-16 57.1	1.639	2.490	15.2	18.9
<b>450303</b>	2004 <i>RA</i> <sub>3</sub>		8 15.5 283°97	18°1/25.4	17		<b>518912</b>	2010 <i>FC</i> <sub>121</sub>		8 15.5 242°20	5°6/19.8	16	
7 10	22 7.65	+17 37.0	1.188	1.934	26.3	20.6	7 10	22 4.58	+ 1 52.6	1.832	2.630	16.5	21.1
7 20	22 4.13	+20 1.5	1.118	1.927	24.2	20.4	7 20	22 0.42	+ 2 13.8	1.746	2.624	13.7	20.9
7 30	21 57.30	+21 54.6	1.061	1.919	21.9	20.2	7 30	21 54.12	+ 2 15.6	1.679	2.619	10.5	20.7
8 9	21 47.74	+23 5.5	1.019	1.912	19.8	20.0	8 9	21 46.24	+ 1 57.4	1.635	2.614	7.4	20.5
8 19	21 36.57	+23 25.9	0.993	1.905	18.4	19.9	8 19	21 37.56	+ 1 20.7	1.616	2.608	5.6	20.4
8 29	21 25.49	+22 53.3	0.985	1.897	18.2	19.9	8 29	21 29.09	+ 0 29.6	1.624	2.602	7.0	20.4
9 8	21 16.28	+21 34.5	0.994	1.890	19.3	19.9	9 8	21 21.82	+ 0 29.9	1.656	2.596	10.0	20.6
9 18	21 10.26	+19 42.4	1.020	1.883	21.4	20.1	9 18	21 16.52	+ 1 31.3	1.713	2.590	13.3	20.8
<b>394956</b>	2008 <i>YV</i> <sub>76</sub>		8 15.5 243°59	2°6/12.8	18		<b>317281</b>	2002 <i>EC</i> <sub>151</sub>		8 15.5 63°68	2°6/17.4	17	
7 10	22 4.42	-17 26.8	2.204	3.059	12.2	21.5	7 10	22 4.40	- 4 16.3	1.317	2.166	19.1	20.0
7 20	22 0.12	-18 40.2	2.114	3.044	9.2	21.3	7 20	22 0.79	- 4 45.0	1.257	2.177	15.0	19.8
7 30	21 53.85	-20 2.2	2.047	3.029	6.0	21.0	7 30	21 54.53	- 5 36.8	1.216	2.188	10.3	19.6
8 9	21 46.09	-21 27.0	2.007	3.013	3.0	20.8	8 9	21 46.41	- 6 47.7	1.197	2.199	5.4	19.3
8 19	21 37.55	-22 48.1	1.996	2.996	3.6	20.8	8 19	21 37.50	- 8 10.6	1.202	2.211	2.8	19.2
8 29	21 29.11	-23 59.0	2.013	2.980	6.9	21.0	8 29	21 29.12	- 9 36.4	1.232	2.223	6.8	19.5
9 8	21 21.68	-24 55.2	2.057	2.962	10.3	21.2	9 8	21 22.48	-10 56.0	1.286	2.234	11.5	19.8
9 18	21 16.02	-25 34.6	2.124	2.944	13.3	21.4	9 18	21 18.40	-12 3.0	1.362	2.246	15.7	20.1
<b>212974</b>	2009 <i>BQ</i> <sub>155</sub>		8 15.5 1°43	2°0/13.6	18		<b>444438</b>	2006 <i>BM</i> <sub>228</sub>		8 15.5 230°73	0°5/15.1	17	
7 10	22 0.55	-13 14.8	1.637	2.505	15.0	19.7	7 10	22 4.73	-14 29.9	2.769	3.606	10.5	22.6
7 20	21 57.58	-14 39.8	1.566	2.504	11.4	19.5	7 20	21 59.82	-14 42.6	2.676	3.595	8.0	22.4
7 30	21 52.37	-16 19.4	1.518	2.504	7.2	19.2	7 30	21 53.38	-15 0.7	2.607	3.585	5.1	22.2
8 9	21 45.53	-18 6.2	1.495	2.504	3.0	19.0	8 9	21 45.85	-15 21.5	2.566	3.574	2.0	22.0
8 19	21 37.89	-19 51.3	1.498	2.504	3.2	19.0	8 19	21 37.80	-15 42.1	2.553	3.563	1.4	21.9
8 29	21 30.56	-21 25.5	1.528	2.505	7.5	19.3	8 29	21 29.92	-15 59.7	2.570	3.551	4.5	22.1
9 8	21 24.59	-22 42.1	1.582	2.506	11.6	19.5	9 8	21 22.88	-16 12.0	2.615	3.539	7.6	22.3
9 18	21 20.73	-23 37.8	1.659	2.508	15.1	19.7	9 18	21 17.22	-16 17.5	2.685	3.527	10.2	22.4
<b>174207</b>	2002 <i>QF</i> <sub>69</sub>		8 15.5 66°33	2°2/14.1	17		<b>136139</b>	2003 <i>SH</i> <sub>201</sub>		8 15.5 111°26	6°4/19.2	18	
7 10	22 9.33	-16 14.3	1.318	2.191	17.7	20.2	7 10	22 17.30	+ 0 52.5	1.781	2.561	17.6	19.3
7 20	22 4.42	-16 54.9	1.273	2.211	13.3	20.0	7 20	22 9.80	+ 1 59.4	1.717	2.584	14.5	19.2
7 30	21 56.73	-17 44.6	1.247	2.232	8.4	19.8	7 30	21 59.94	+ 2 49.2	1.674	2.607	11.0	19.0
8 9	21 47.20	-18 36.0	1.245	2.253	3.5	19.6	8 9	21 48.48	+ 3 20.4	1.656	2.629	7.9	18.9
8 19	21 37.06	-19 21.7	1.267	2.274	3.4	19.6	8 19	21 36.42	+ 3 32.9	1.665	2.650	6.4	18.8
8 29	21 27.74	-19 55.1	1.315	2.295	8.0	20.0	8 29	21 24.96	+ 3 29.0	1.702	2.670	7.7	18.9
9 8	21 20.43	-20 13.1	1.386	2.316	12.4	20.3	9 8	21 15.15	+ 3 13.2	1.765	2.690	10.5	19.2
9 18	21 15.86	-20 15.1	1.478	2.337	16.1	20.6	9 18	21 7.73	+ 2 50.8	1.852	2.708	13.5	19.4
<b>233550</b>	2007 <i>JC</i> <sub>31</sub>		8 15.5 100°58	3°7/19.0	17		<b>284594</b>	2007					

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>191555</b>	2003 <i>WC</i> <sub>20</sub>	8 15.5 347°92		8°9/ 9.2 18			<b>508205</b>	2015 <i>FS</i> <sub>396</sub>	8 15.5 94°19		6°9/ 9.5 17		
7 10	22 10.46	-34 36.3	1.642	2.510	15.0	19.3	7 10	22 9.54	-29 56.8	1.887	2.751	13.5	21.0
7 20	22 5.44	-35 40.9	1.585	2.507	12.3	19.1	7 20	22 4.14	-31 24.3	1.845	2.771	10.6	20.8
7 30	21 57.54	-36 37.5	1.548	2.505	9.9	19.0	7 30	21 56.41	-32 47.6	1.827	2.791	8.1	20.7
8 9	21 47.61	-37 16.8	1.536	2.502	8.9	18.9	8 9	21 47.10	-33 58.1	1.834	2.811	6.9	20.7
8 19	21 36.88	-37 31.3	1.546	2.500	9.9	19.0	8 19	21 37.24	-34 48.9	1.868	2.830	7.8	20.8
8 29	21 26.81	-37 17.6	1.581	2.499	12.2	19.1	8 29	21 27.98	-35 16.1	1.927	2.849	10.1	20.9
9 8	21 18.70	-36 36.9	1.637	2.498	14.9	19.3	9 8	21 20.36	-35 19.7	2.009	2.867	12.6	21.1
9 18	21 13.38	-35 33.4	1.713	2.497	17.5	19.5	9 18	21 15.06	-35 2.1	2.111	2.885	14.9	21.4
<b>80858</b>	2000 <i>DL</i> <sub>24</sub>	8 15.5 192°87		0°5/15.1 18			<b>389969</b>	2012 <i>TJ</i> <sub>214</sub>	8 15.5 320°40		7°8/11.0 18		
7 10	22 6.96	-12 25.1	1.846	2.693	14.5	20.5	7 10	22 10.23	-30 24.8	1.435	2.313	16.2	19.9
7 20	22 2.21	-13 2.2	1.767	2.692	11.1	20.3	7 20	22 5.76	-31 7.4	1.359	2.294	13.0	19.6
7 30	21 55.25	-13 50.6	1.711	2.691	7.1	20.0	7 30	21 58.09	-31 45.8	1.303	2.274	9.8	19.4
8 9	21 46.68	-14 45.8	1.680	2.688	2.8	19.8	8 9	21 47.98	-32 10.3	1.269	2.256	7.9	19.2
8 19	21 37.36	-15 42.0	1.676	2.686	1.9	19.7	8 19	21 36.70	-32 12.6	1.259	2.238	8.8	19.2
8 29	21 28.33	-16 33.4	1.700	2.683	6.2	20.0	8 29	21 25.91	-31 47.9	1.272	2.220	11.9	19.4
9 8	21 20.61	-17 15.2	1.749	2.679	10.3	20.2	9 8	21 17.14	-30 56.4	1.308	2.204	15.6	19.6
9 18	21 14.97	-17 44.6	1.822	2.675	13.8	20.4	9 18	21 11.44	-29 42.4	1.362	2.188	19.1	19.7
<b>25264</b>	Erickeen	8 15.5 129°41		4°1/11.8 18			<b>253794</b>	2003 <i>WQ</i> <sub>194</sub>	8 15.5 161°34		0°6/15.9 17		
7 10	22 5.56	-22 22.1	2.004	2.869	12.8	18.5	7 10	22 7.77	-9 28.1	1.857	2.694	14.8	22.1
7 20	22 1.01	-23 29.0	1.940	2.874	9.7	18.3	7 20	22 2.74	-9 58.3	1.782	2.700	11.4	21.9
7 30	21 54.38	-24 38.9	1.900	2.880	6.5	18.1	7 30	21 55.54	-10 41.6	1.730	2.705	7.5	21.7
8 9	21 46.30	-25 45.3	1.886	2.885	4.2	18.0	8 9	21 46.80	-11 34.1	1.703	2.710	3.2	21.4
8 19	21 37.59	-26 41.5	1.899	2.890	5.0	18.0	8 19	21 37.38	-12 30.5	1.703	2.714	1.5	21.3
8 29	21 29.25	-27 22.6	1.938	2.895	7.9	18.2	8 29	21 28.30	-13 25.2	1.731	2.717	5.8	21.6
9 8	21 22.21	-27 46.1	2.003	2.899	11.0	18.4	9 8	21 20.55	-14 12.9	1.786	2.720	9.8	21.9
9 18	21 17.16	-27 51.9	2.090	2.904	13.7	18.6	9 18	21 14.86	-14 50.4	1.864	2.722	13.3	22.1
<b>374014</b>	2004 <i>DB</i> <sub>8</sub>	8 15.5 97°76		0°5/15.2 17			<b>14785</b>	3508 <i>T</i> <sub>-3</sub>	8 15.5 212°23		3°2/17.9 18		
7 10	22 8.86	-13 4.4	1.599	2.454	16.0	21.1	7 10	22 5.75	-3 36.7	1.725	2.550	16.3	18.7
7 20	22 3.74	-13 27.8	1.539	2.468	12.2	20.9	7 20	22 1.44	-3 45.0	1.642	2.546	13.0	18.5
7 30	21 56.21	-14 1.8	1.501	2.482	7.8	20.7	7 30	21 54.86	-4 11.6	1.579	2.542	9.2	18.2
8 9	21 47.03	-14 41.4	1.487	2.495	3.1	20.5	8 9	21 46.58	-4 54.5	1.540	2.538	5.3	18.0
8 19	21 37.22	-15 21.1	1.499	2.509	1.9	20.4	8 19	21 37.47	-5 50.1	1.527	2.533	3.2	17.9
8 29	21 27.98	-15 55.3	1.537	2.522	6.6	20.7	8 29	21 28.61	-6 52.5	1.540	2.528	6.1	18.0
9 8	21 20.37	-16 20.1	1.601	2.535	10.8	21.0	9 8	21 21.07	-7 55.1	1.579	2.522	10.2	18.3
9 18	21 15.12	-16 33.4	1.688	2.547	14.4	21.3	9 18	21 15.65	-8 52.1	1.642	2.517	14.0	18.5
<b>232212</b>	2002 <i>GD</i> <sub>166</sub>	8 15.5 113°99		0°7/16.1 18			<b>273780</b>	2007 <i>EH</i> <sub>211</sub>	8 15.5 40°53		3°5/12.8 18		
7 10	22 3.91	-7 41.6	1.936	2.772	14.4	20.6	7 10	22 2.90	-16 15.6	1.280	2.165	17.3	19.2
7 20	21 59.66	-8 35.5	1.867	2.784	11.1	20.4	7 20	21 59.75	-17 44.7	1.235	2.181	13.0	19.0
7 30	21 53.48	-9 44.4	1.821	2.795	7.3	20.2	7 30	21 53.89	-19 25.2	1.210	2.198	8.2	18.8
8 9	21 45.93	-11 3.7	1.800	2.806	3.1	19.9	8 9	21 46.18	-21 7.0	1.208	2.215	4.0	18.6
8 19	21 37.80	-12 27.2	1.807	2.817	1.4	19.8	8 19	21 37.76	-22 39.2	1.231	2.234	4.8	18.7
8 29	21 30.01	-13 48.4	1.842	2.828	5.5	20.1	8 29	21 29.99	-23 52.9	1.278	2.252	9.0	19.0
9 8	21 23.43	-15 1.1	1.904	2.838	9.3	20.4	9 8	21 24.06	-24 43.1	1.349	2.272	13.2	19.3
9 18	21 18.71	-16 1.5	1.989	2.848	12.6	20.6	9 18	21 20.74	-25 9.2	1.439	2.291	16.8	19.6
<b>256524</b>	2007 <i>EB</i> <sub>213</sub>	8 15.5 109°98		6°8/23.6 18			<b>335110</b>	2004 <i>TE</i> <sub>168</sub>	8 15.5 270°76		0°1/15.4 18		
7 10	22 1.57	+11 32.1	2.640	3.357	13.9	20.1	7 10	22 4.69	-11 26.9	1.837	2.686	14.4	21.1
7 20	21 57.43	+11 53.7	2.561	3.369	12.1	20.0	7 20	22 0.67	-11 58.8	1.744	2.669	11.2	20.8
7 30	21 51.83	+11 56.6	2.501	3.380	10.1	19.9	7 30	21 54.41	-12 43.4	1.672	2.652	7.3	20.6
8 9	21 45.23	+11 39.7	2.464	3.390	8.2	19.8	8 9	21 46.44	-13 36.9	1.626	2.634	2.9	20.3
8 19	21 38.18	+11 3.9	2.452	3.401	7.0	19.7	8 19	21 37.56	-14 34.0	1.606	2.616	1.7	20.1
8 29	21 31.36	+10 11.7	2.467	3.412	7.0	19.7	8 29	21 28.82	-15 28.5	1.613	2.598	6.2	20.4
9 8	21 25.38	+9 7.5	2.507	3.422	8.3	19.8	9 8	21 21.26	-16 15.0	1.646	2.580	10.5	20.6
9 18	21 20.77	+7 56.5	2.573	3.432	10.1	20.0	9 18	21 15.74	-16 49.8	1.702	2.562	14.3	20.8
<b>7793</b>	1995 <i>YC</i> <sub>3</sub>	8 15.5 209°36		0°7/14.8 18			<b>238287</b>	2003 <i>WF</i> <sub>144</sub>	8 15.5 317°13		7°8/ 9.4 18		
7 10	22 3.00	-13 56.1	2.520	3.363	11.2	18.3	7 10	22 7.22	-30 49.3	1.665	2.540	14.5	20.0
7 20	21 58.65	-14 29.5	2.436	3.359	8.5	18.2	7 20	22 2.99	-32 4.8	1.600	2.531	11.6	19.8
7 30	21 52.69	-15 10.2	2.376	3.355	5.4	18.0	7 30	21 56.04	-33 17.1	1.556	2.522	9.0	19.7
8 9	21 45.60	-15 54.5	2.343	3.351	2.1	17.7	8 9	21 47.09	-34 17.0	1.536	2.514	7.8	19.6
8 19	21 37.98	-16 38.8	2.338	3.347	1.6	17.7	8 19	21 37.24	-34 56.2	1.541	2.506	8.9	19.6
8 29	21 30.56	-17 19.0	2.362	3.342	5.0	17.9	8 29	21 27.83	-35 9.6	1.569	2.498	11.5	19.8
9 8	21 24.04	-17 51.8	2.413	3.337	8.1	18.1	9 8	21 20.14	-34 56.3	1.620	2.491	14.5	19.9
9 18	21 19.00	-18 15.4	2.489	3.332	10.9	18.3	9 18	21 15.04	-34 19.2	1.690	2.484	17.3	20.1
<b>255150</b>	2005 <i>US</i> <sub>171</sub>	8 15.5 291°53		0°1/15.6 18			<b>171667</b>	2000 <i>NU</i> <sub>14</sub>	8 15.5 339°30		2°6/13.9 18		
7 10	22 3.02	-11 51.6	2.157	3.001	12.8	21.5	7 10	21 53.09	-13 52.6	0.879	1.794	20.3	19.1
7 20	21 58.92	-12 10.7	2.072	2.995	9.8	21.3	7 20	21 53.49	-14 47.6	0.810	1.772	15.6	18.7
7 30	21 53.00	-12 39.1	2.010	2.988	6.4	21.1	7 30	21 50.64	-16 5.3	0.757	1.752	10.1	18.4
8 9	21 45.75	-13 13.7	1.974	2.982	2.6	20.8	8 9	21 45.16	-17 37.8	0.724	1.734	4.2	18.0
8 19	21 37.89	-13 50.5	1.965	2.975	1.4	20.7	8 19	21 38.22	-19 12.7	0.709	1.718	4.4	17.9
8 29	21 30.25	-14 25.4	1.983	2.969	5.2	21.0	8 29	21 31.61	-20 35.5	0.715	1.704	10.6	18.2
9 8	21 23.65	-14 54.6	2.029	2.962	8.9	21.2	9 8	21 27.09	-21 34.8	0.739	1.693	16.7	18.5
9 18	21 18.75	-15 15.6	2.098	2.956	12.1	21.4	9 18	21 25.92	-22 4.8	0.779	1.684	22.0	18.7
<b>38878</b>	2000 <i>SL</i> <sub>121</sub>	8 15.5 346°79		11°7/ 7.4 18			<b>397725</b>	2008 <i>ES</i> <sub>24</sub>	8 15.5 38°58		5°1/11.2 18		
7 10	22 9.83	-37 57.6</											

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8 15.5

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>10880</b>	Kaguya		8 15.5 155°78	0°6/16.0	18		<b>338630</b>	2003 SJ <sub>272</sub>		8 15.5 346°55	6°3/20.4	18	
7 10	22 3.61	-10 10.0	2.193	3.030	12.8	18.7	7 10	22 1.53	+ 2 58.2	1.616	2.424	17.9	20.0
7 20	21 59.29	-10 30.2	2.114	3.032	9.9	18.5	7 20	21 58.36	+ 3 18.2	1.536	2.420	15.0	19.8
7 30	21 53.19	-11 0.6	2.059	3.034	6.5	18.3	7 30	21 52.95	+ 3 15.2	1.475	2.416	11.6	19.6
8 9	21 45.85	-11 38.2	2.029	3.035	2.8	18.0	8 9	21 45.87	+ 2 48.7	1.435	2.413	8.3	19.4
8 19	21 37.94	-12 19.2	2.026	3.037	1.3	17.9	8 19	21 37.98	+ 2 0.3	1.419	2.410	6.4	19.3
8 29	21 30.30	-12 59.3	2.052	3.038	5.0	18.2	8 29	21 30.35	+ 0 55.0	1.428	2.408	7.5	19.3
9 8	21 23.71	-13 34.7	2.104	3.039	8.5	18.4	9 8	21 24.03	- 0 19.5	1.461	2.407	10.6	19.5
9 18	21 18.79	-14 2.5	2.181	3.040	11.6	18.6	9 18	21 19.82	- 1 35.6	1.517	2.405	14.1	19.7
<b>383242</b>	2006 BY <sub>143</sub>		8 15.5 175°80	2°0/17.3	17		<b>256420</b>	2007 BJ <sub>22</sub>		8 15.5 282°95	1°3/14.4	18	
7 10	22 6.21	- 5 52.5	2.330	3.143	12.9	22.4	7 10	22 3.28	-15 21.5	2.138	2.992	12.5	21.1
7 20	22 1.15	- 6 4.3	2.246	3.146	10.2	22.2	7 20	21 59.25	-15 56.4	2.049	2.978	9.5	20.9
7 30	21 54.35	- 6 28.3	2.185	3.148	7.0	22.0	7 30	21 53.32	-16 39.2	1.983	2.965	6.1	20.6
8 9	21 46.31	- 7 2.4	2.150	3.150	3.7	21.8	8 9	21 45.98	-17 25.8	1.943	2.952	2.5	20.4
8 19	21 37.71	- 7 43.5	2.143	3.151	2.1	21.7	8 19	21 37.94	-18 11.3	1.931	2.939	2.3	20.3
8 29	21 29.35	- 8 27.6	2.165	3.151	4.8	21.9	8 29	21 30.07	-18 50.9	1.946	2.925	5.9	20.5
9 8	21 21.99	- 9 10.5	2.215	3.150	8.1	22.1	9 8	21 23.26	-19 21.0	1.987	2.912	9.5	20.7
9 18	21 16.26	- 9 48.9	2.290	3.149	11.1	22.3	9 18	21 18.20	-19 39.3	2.052	2.899	12.7	20.9
<b>79185</b>	1993 OZ <sub>3</sub>		8 15.5 52°32	1°0/14.8	17		<b>41127</b>	1999 VZ <sub>92</sub>		8 15.5 340°97	1°4/16.5	18	
7 10	22 6.66	-13 28.7	1.312	2.184	17.8	19.1	7 10	22 2.07	- 8 19.1	1.494	2.351	16.8	18.9
7 20	22 2.45	-14 4.2	1.264	2.202	13.5	18.9	7 20	21 58.97	- 8 33.3	1.417	2.344	13.1	18.7
7 30	21 55.55	-14 52.0	1.236	2.221	8.6	18.7	7 30	21 53.44	- 9 3.9	1.361	2.338	8.8	18.4
8 9	21 46.84	-15 45.7	1.230	2.239	3.3	18.4	8 9	21 46.11	- 9 47.9	1.327	2.332	4.1	18.1
8 19	21 37.49	-16 37.7	1.249	2.259	2.5	18.4	8 19	21 37.90	-10 40.0	1.317	2.327	1.9	18.0
8 29	21 28.86	-17 21.2	1.293	2.278	7.4	18.8	8 29	21 30.00	-11 33.7	1.333	2.323	6.5	18.2
9 8	21 22.12	-17 51.4	1.361	2.298	12.0	19.1	9 8	21 23.55	-12 22.4	1.373	2.319	11.1	18.5
9 18	21 18.01	-18 6.6	1.449	2.318	15.8	19.4	9 18	21 19.40	-13 1.3	1.434	2.316	15.2	18.7
<b>257971</b>	2001 CV <sub>34</sub>		8 15.5 195°98	5°9/ 8.3	18		<b>144095</b>	2004 BO <sub>58</sub>		8 15.5 195°31	1°4/16.6	18	
7 10	22 6.11	-33 31.0	2.842	3.691	9.9	21.1	7 10	22 6.41	- 7 24.5	1.807	2.641	15.3	20.7
7 20	22 1.07	-34 42.1	2.777	3.689	8.0	21.0	7 20	22 1.86	- 7 50.5	1.726	2.640	11.9	20.5
7 30	21 54.29	-35 48.9	2.736	3.686	6.5	20.9	7 30	21 55.11	- 8 31.9	1.666	2.638	8.0	20.3
8 9	21 46.29	-36 45.9	2.723	3.683	5.9	20.9	8 9	21 46.74	- 9 25.4	1.631	2.635	3.8	20.0
8 19	21 37.74	-37 28.3	2.736	3.679	6.7	20.9	8 19	21 37.58	-10 26.0	1.622	2.632	1.8	19.9
8 29	21 29.43	-37 53.0	2.777	3.675	8.3	21.0	8 29	21 28.69	-11 27.7	1.641	2.629	5.8	20.1
9 8	21 22.13	-37 59.4	2.842	3.670	10.2	21.1	9 8	21 21.09	-12 24.5	1.686	2.625	10.0	20.4
9 18	21 16.44	-37 48.3	2.928	3.665	12.0	21.3	9 18	21 15.55	-13 12.0	1.755	2.620	13.7	20.6
<b>143488</b>	2003 CX <sub>21</sub>		8 15.5 104°40	0°7/14.9	18		<b>123379</b>	2000 WJ <sub>53</sub>		8 15.5 266°09	0°7/16.2	18	
7 10	22 5.28	-14 0.6	2.370	3.211	11.9	21.2	7 10	22 2.97	- 9 50.2	2.240	3.077	12.6	20.8
7 20	22 0.31	-14 31.4	2.308	3.230	9.0	21.1	7 20	21 58.85	-10 7.0	2.154	3.070	9.8	20.6
7 30	21 53.70	-15 8.8	2.270	3.249	5.7	20.9	7 30	21 52.97	-10 34.2	2.090	3.064	6.5	20.4
8 9	21 46.01	-15 49.3	2.258	3.267	2.2	20.7	8 9	21 45.83	-11 8.9	2.051	3.057	2.8	20.2
8 19	21 37.92	-16 28.7	2.275	3.284	1.6	20.7	8 19	21 38.08	-11 47.7	2.040	3.051	1.3	20.1
8 29	21 30.19	-17 3.4	2.321	3.302	5.0	20.9	8 29	21 30.53	-12 26.5	2.058	3.044	4.9	20.3
9 8	21 23.53	-17 30.3	2.394	3.319	8.1	21.2	9 8	21 23.97	-13 1.2	2.102	3.038	8.5	20.5
9 18	21 18.48	-17 48.0	2.492	3.335	10.9	21.4	9 18	21 19.02	-13 29.1	2.170	3.031	11.6	20.7
<b>504860</b>	2010 UT <sub>12</sub>		8 15.5 336°99	6°4/12.1	18		<b>98674</b>	2000 WQ <sub>168</sub>		8 15.5 256°38	0°6/16.1	18	
7 10	22 7.76	-24 55.9	1.165	2.058	18.1	20.6	7 10	22 4.84	- 9 14.5	2.072	2.907	13.6	20.4
7 20	22 4.19	-25 42.9	1.102	2.049	14.1	20.4	7 20	22 0.56	- 9 44.6	1.972	2.888	10.6	20.1
7 30	21 57.21	-26 31.5	1.057	2.041	9.8	20.1	7 30	21 54.26	-10 27.7	1.895	2.869	7.0	19.9
8 9	21 47.68	-27 11.8	1.034	2.034	6.7	19.9	8 9	21 46.42	-11 20.8	1.843	2.850	3.1	19.6
8 19	21 36.99	-27 34.3	1.033	2.027	7.6	19.9	8 19	21 37.74	-12 19.5	1.819	2.830	1.4	19.4
8 29	21 26.93	-27 32.6	1.055	2.021	11.5	20.2	8 29	21 29.14	-13 18.2	1.823	2.809	5.5	19.7
9 8	21 19.11	-27 5.5	1.097	2.017	15.9	20.4	9 8	21 21.56	-14 11.7	1.854	2.788	9.5	19.9
9 18	21 14.58	-26 16.0	1.158	2.012	19.9	20.6	9 18	21 15.78	-14 56.0	1.909	2.767	13.1	20.1
<b>296690</b>	2009 SM <sub>245</sub>		8 15.5 295°47	0°1/15.6	16		<b>266236</b>	2006 XY <sub>24</sub>		8 15.5 253°80	1°1/14.7	18	
7 10	21 57.08	-12 41.2	4.211	5.041	7.3	20.8	7 10	22 6.95	-13 58.1	1.731	2.586	14.9	21.5
7 20	21 53.59	-12 52.8	4.116	5.031	5.6	20.6	7 20	22 2.56	-14 35.1	1.642	2.572	11.5	21.2
7 30	21 49.19	-13 8.5	4.046	5.021	3.6	20.5	7 30	21 55.74	-15 23.5	1.575	2.557	7.4	21.0
8 9	21 44.19	-13 26.8	4.004	5.012	1.5	20.3	8 9	21 47.06	-16 18.3	1.533	2.542	3.0	20.7
8 19	21 38.90	-13 46.1	3.991	5.002	0.8	20.2	8 19	21 37.40	-17 13.4	1.518	2.527	2.4	20.6
8 29	21 33.71	-14 4.6	4.009	4.992	2.9	20.4	8 29	21 27.93	-18 2.3	1.529	2.511	6.9	20.8
9 8	21 28.99	-14 20.5	4.054	4.982	5.0	20.5	9 8	21 19.79	-18 39.9	1.566	2.495	11.3	21.1
9 18	21 25.08	-14 32.6	4.127	4.973	6.9	20.7	9 18	21 13.89	-19 3.5	1.625	2.478	15.2	21.3
<b>145671</b>	1073 T- <sub>2</sub>		8 15.5 335°33	2°6/14.1	18		<b>41591</b>	2000 SL <sub>52</sub>		8 15.5 261°37	6°4/19.9	18	
7 10	22 8.45	-18 25.8	1.361	2.236	17.0	19.3	7 10	22 6.36	+ 2 41.9	1.931	2.717	16.2	18.3
7 20	22 4.11	-18 46.2	1.292	2.232	13.0	19.1	7 20	22 1.83	+ 3 23.8	1.834	2.703	13.6	18.1
7 30	21 56.86	-19 13.4	1.243	2.228	8.4	18.8	7 30	21 55.14	+ 3 48.4	1.757	2.688	10.7	17.8
8 9	21 47.47	-19 41.2	1.216	2.224	3.8	18.5	8 9	21 46.79	+ 3 54.2	1.703	2.674	7.9	17.6
8 19	21 37.12	-20 2.9	1.215	2.221	3.8	18.5	8 19	21 37.55	+ 3 41.1	1.674	2.659	6.4	17.5
8 29	21 27.28	-20 13.0	1.238	2.218	8.4	18.8	8 29	21 28.39	+ 3 11.4	1.672	2.644	7.5	17.6
9 8	21 19.31	-20 8.6	1.284	2.216	13.1	19.0	9 8	21 20.35	+ 2 30.0	1.695	2.629	10.3	17.7
9 18	21 14.15	-19 49.5	1.351	2.213	17.1	19.3	9 18	21 14.23	+ 1 42.6	1.741	2.613	13.5	17.9
<b>86292</b>	1999 VY <sub>11</sub>		8 15.5 339°54	6°1/18.2	18		<b>348744</b>	2006 HZ <sub>9</sub>		8 15.5 33°46	2°7/13.4	16	
7 10	21 59.86	- 4 3.0	1.328										

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>434373</b>	2004 <i>TU</i> <sub>315</sub>		8 15.5 347°06	6°8/21.2 16			<b>435090</b>	2007 <i>CQ</i> <sub>28</sub>		8 15.5 225°39	0°2/15.7 17		
7 10	22 1.37	+ 5 1.0	1.600	2.398	18.5	21.2	7 10	22 7.11	-11 0.2	1.874	2.716	14.5	22.6
7 20	21 58.27	+ 5 12.0	1.520	2.396	15.6	21.0	7 20	22 2.42	-11 24.9	1.787	2.708	11.2	22.4
7 30	21 52.93	+ 4 57.4	1.459	2.393	12.2	20.7	7 30	21 55.51	-12 1.6	1.723	2.700	7.3	22.2
8 9	21 45.91	+ 4 16.4	1.419	2.391	8.9	20.6	8 9	21 46.96	-12 46.5	1.683	2.691	3.0	21.9
8 19	21 38.07	+ 3 11.0	1.401	2.389	6.9	20.4	8 19	21 37.57	-13 34.9	1.671	2.681	1.5	21.8
8 29	21 30.47	+ 1 47.0	1.409	2.388	7.8	20.5	8 29	21 28.40	-14 21.1	1.686	2.671	6.0	22.0
9 8	21 24.21	+ 0 13.1	1.442	2.387	10.8	20.7	9 8	21 20.48	-15 0.4	1.727	2.661	10.1	22.3
9 18	21 20.06	- 1 21.7	1.497	2.386	14.2	20.9	9 18	21 14.60	-15 29.6	1.791	2.650	13.8	22.5
<b>417093</b>	2005 <i>UE</i> <sub>309</sub>		8 15.5 286°30	1°5/14.4 18			<b>362603</b>	2010 <i>WB</i> <sub>62</sub>		8 15.5 13°94	2°5/17.7 18		
7 10	22 5.19	-14 37.4	1.607	2.471	15.4	21.1	7 10	22 2.40	- 5 26.3	2.088	2.914	13.8	20.4
7 20	22 1.44	-15 17.6	1.517	2.452	11.9	20.9	7 20	21 58.48	- 5 23.2	2.010	2.916	10.9	20.2
7 30	21 55.15	-16 9.8	1.449	2.433	7.7	20.6	7 30	21 52.76	- 5 33.1	1.953	2.918	7.6	20.0
8 9	21 46.87	-17 8.9	1.404	2.413	3.1	20.3	8 9	21 45.78	- 5 54.4	1.921	2.920	4.2	19.8
8 19	21 37.52	-18 7.9	1.385	2.394	2.8	20.2	8 19	21 38.23	- 6 24.3	1.916	2.922	2.6	19.7
8 29	21 28.31	-18 59.6	1.393	2.374	7.5	20.4	8 29	21 30.95	- 6 59.1	1.938	2.925	5.1	19.9
9 8	21 20.49	-19 38.4	1.424	2.355	12.1	20.7	9 8	21 24.74	- 7 34.4	1.986	2.928	8.5	20.1
9 18	21 15.02	-20 1.3	1.477	2.335	16.2	20.9	9 18	21 20.20	- 8 6.5	2.058	2.931	11.6	20.3
<b>246884</b>	1996 <i>EJ</i> <sub>15</sub>		8 15.5 320°88	3°7/12.9 18			<b>205684</b>	2001 <i>YO</i> <sub>66</sub>		8 15.5 314°91	0°6/15.3 17		
7 10	22 9.90	-24 53.2	2.142	2.998	12.4	20.1	7 10	22 7.41	-13 51.3	1.227	2.102	18.5	19.8
7 20	22 4.20	-25 6.3	2.067	2.995	9.6	19.9	7 20	22 3.69	-13 58.4	1.153	2.093	14.3	19.5
7 30	21 56.43	-25 18.2	2.015	2.991	6.5	19.7	7 30	21 56.85	-14 17.8	1.098	2.083	9.3	19.2
8 9	21 47.22	-25 24.1	1.988	2.987	4.0	19.5	8 9	21 47.64	-14 44.8	1.065	2.074	3.7	18.9
8 19	21 37.42	-25 20.2	1.990	2.984	4.4	19.6	8 19	21 37.25	-15 13.2	1.056	2.066	2.3	18.8
8 29	21 28.04	-25 3.7	2.019	2.981	7.2	19.7	8 29	21 27.25	-15 36.3	1.070	2.058	8.1	19.1
9 8	21 20.00	-24 34.3	2.074	2.978	10.3	19.9	9 8	21 19.19	-15 49.1	1.106	2.050	13.4	19.4
9 18	21 13.98	-23 53.1	2.152	2.975	13.1	20.1	9 18	21 14.10	-15 49.2	1.163	2.043	18.1	19.6
<b>216703</b>	2004 <i>RD</i> <sub>175</sub>		8 15.5 328°57	3°1/17.9 18			<b>351852</b>	2006 <i>RC</i> <sub>29</sub>		8 15.5 278°08	1°3/16.5 18		
7 10	22 4.10	- 4 33.1	2.167	2.984	13.7	19.9	7 10	22 5.47	- 9 22.2	1.969	2.806	14.1	21.0
7 20	21 59.72	- 4 16.0	2.083	2.982	10.9	19.7	7 20	22 1.01	- 9 21.0	1.884	2.800	11.0	20.8
7 30	21 53.54	- 4 11.3	2.020	2.979	7.8	19.6	7 30	21 54.51	- 9 30.7	1.820	2.793	7.4	20.6
8 9	21 46.08	- 4 17.9	1.982	2.977	4.6	19.4	8 9	21 46.54	- 9 49.0	1.782	2.787	3.5	20.3
8 19	21 38.01	- 4 34.2	1.971	2.975	3.1	19.3	8 19	21 37.86	-10 12.7	1.770	2.780	1.7	20.2
8 29	21 30.17	- 4 56.9	1.988	2.973	5.2	19.4	8 29	21 29.42	-10 37.9	1.786	2.774	5.4	20.4
9 8	21 23.37	- 5 22.4	2.031	2.971	8.5	19.6	9 8	21 22.15	-11 0.8	1.828	2.767	9.3	20.6
9 18	21 18.24	- 5 47.0	2.099	2.969	11.5	19.8	9 18	21 16.76	-11 18.2	1.894	2.761	12.8	20.8
<b>281962</b>	2011 <i>GX</i> <sub>63</sub>		8 15.5 133°53	2°5/13.4 17			<b>512185</b>	2015 <i>RU</i> <sub>218</sub>		8 15.5 5°17	0°7/14.9 18		
7 10	22 7.57	-17 50.0	1.971	2.826	13.4	21.2	7 10	22 2.41	-13 59.7	1.814	2.675	14.1	20.8
7 20	22 2.51	-18 44.9	1.908	2.838	10.1	21.0	7 20	21 58.79	-14 23.3	1.743	2.675	10.7	20.6
7 30	21 55.37	-19 45.9	1.867	2.849	6.5	20.8	7 30	21 53.10	-14 56.1	1.694	2.676	6.9	20.4
8 9	21 46.80	-20 47.1	1.853	2.859	3.1	20.6	8 9	21 45.96	-15 33.7	1.669	2.677	2.7	20.1
8 19	21 37.64	-21 42.6	1.866	2.869	3.4	20.7	8 19	21 38.18	-16 11.4	1.670	2.679	1.9	20.1
8 29	21 28.89	-22 27.0	1.908	2.878	6.8	20.9	8 29	21 30.74	-16 44.2	1.698	2.682	6.1	20.4
9 8	21 21.47	-22 57.2	1.975	2.887	10.3	21.1	9 8	21 24.57	-17 8.3	1.751	2.685	10.0	20.6
9 18	21 16.04	-23 12.3	2.065	2.896	13.3	21.4	9 18	21 20.36	-17 21.4	1.826	2.689	13.4	20.8
<b>369024</b>	2007 <i>VY</i> <sub>211</sub>		8 15.5 60°06	5°2/19.2 17			<b>290766</b>	2005 <i>UH</i> <sub>514</sub>		8 15.5 120°93	0°3/15.8 17		
7 10	22 5.01	- 0 9.0	1.305	2.138	20.1	20.8	7 10	22 7.39	-10 15.5	1.828	2.669	14.9	21.4
7 20	22 1.33	- 0 4.9	1.245	2.149	16.3	20.6	7 20	22 2.45	-10 47.7	1.762	2.682	11.4	21.2
7 30	21 54.98	- 0 26.3	1.202	2.160	12.0	20.4	7 30	21 55.38	-11 32.1	1.719	2.695	7.4	21.0
8 9	21 46.74	- 1 11.9	1.180	2.171	7.6	20.2	8 9	21 46.85	-12 24.5	1.700	2.708	3.1	20.7
8 19	21 37.69	- 2 17.3	1.181	2.183	5.2	20.1	8 19	21 37.73	-13 19.5	1.709	2.720	1.5	20.6
8 29	21 29.16	- 3 34.6	1.207	2.195	7.4	20.3	8 29	21 29.02	-14 11.6	1.746	2.732	5.8	21.0
9 8	21 22.39	- 4 54.3	1.257	2.207	11.5	20.5	9 8	21 21.70	-14 55.7	1.809	2.743	9.7	21.2
9 18	21 18.18	- 6 8.2	1.327	2.219	15.5	20.8	9 18	21 16.42	-15 29.2	1.895	2.754	13.1	21.5
<b>381749</b>	2009 <i>SP</i> <sub>114</sub>		8 15.5 228°96	5°7/12.4 17			<b>185470</b>	2007 <i>BT</i> <sub>45</sub>		8 15.5 196°06	1°2/14.3 18		
7 10	22 15.04	-27 22.7	1.621	2.484	15.4	20.9	7 10	22 2.77	-14 59.5	2.355	3.204	11.7	20.8
7 20	22 8.81	-27 49.1	1.553	2.482	12.0	20.7	7 20	21 58.64	-15 43.3	2.276	3.203	8.8	20.6
7 30	21 59.72	-28 12.3	1.506	2.481	8.5	20.4	7 30	21 52.83	-16 34.4	2.221	3.202	5.6	20.4
8 9	21 48.62	-28 25.1	1.484	2.479	5.9	20.3	8 9	21 45.82	-17 28.8	2.193	3.201	2.3	20.2
8 19	21 36.71	-28 21.3	1.488	2.477	6.5	20.3	8 19	21 38.26	-18 21.8	2.193	3.200	2.1	20.2
8 29	21 25.46	-27 57.6	1.518	2.475	9.6	20.5	8 29	21 30.92	-19 8.9	2.221	3.199	5.4	20.4
9 8	21 16.15	-27 14.7	1.572	2.472	13.2	20.7	9 8	21 24.56	-19 46.6	2.276	3.197	8.7	20.6
9 18	21 9.62	-26 15.8	1.647	2.470	16.4	20.9	9 18	21 19.77	-20 12.9	2.355	3.195	11.5	20.8
<b>506231</b>	2016 <i>LO</i> <sub>49</sub>		8 15.5 116°62	11°1/24.9 17			<b>256526</b>	2007 <i>EF</i> <sub>214</sub>		8 15.6 81°48	3°7/19.5 18		
7 10	22 11.01	+15 16.6	1.818	2.525	19.7	21.0	7 10	22 0.77	+ 0 37.8	2.335	3.129	13.5	20.5
7 20	22 5.29	+16 30.8	1.754	2.544	17.4	20.9	7 20	21 57.09	+ 0 25.2	2.251	3.132	11.0	20.3
7 30	21 57.27	+17 18.6	1.707	2.562	15.0	20.7	7 30	21 51.81	- 0 3.8	2.190	3.134	8.1	20.2
8 9	21 47.61	+17 35.7	1.679	2.580	12.8	20.6	8 9	21 45.41	- 0 48.1	2.152	3.137	5.3	20.0
8 19	21 37.24	+17 20.9	1.674	2.598	11.4	20.6	8 19	21 38.49	- 1 45.0	2.141	3.139	3.7	19.9
8 29	21 27.27	+16 36.6	1.692	2.614	11.2	20.6	8 29	21 31.78	- 2 50.2	2.159	3.142	5.1	20.0
9 8	21 18.76	+15 29.3	1.734	2.630	12.4	20.7	9 8	21 25.98	- 3 58.3	2.203	3.144	7.8	20.2
9 18	21 12.46	+14 7.6	1.799	2.645	14.3	20.9	9 18	21 21.65	- 5 4.6	2.273	3.147	10.6	20.3
<b>386813</b>	2010 <i>FG</i> <sub>57</sub>		8 15.5 171°91	0°6/16.0 18 R			<b>64172</b>	2001 <i>TH</i> <					

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>445464</b>	2010 <i>VE</i> <sub>64</sub>		8 15.6 245°47'	4.6°/10.6	17		<b>36010</b>	1999 <i>NH</i> <sub>37</sub>		8 15.6 295°62'	0.9°/16.2	18	
7 10	22 4.56	-26 42.7	2.529	3.388	10.7	21.8	7 10	22 5.58	-10 57.4	2.089	2.928	13.3	18.1
7 20	22 0.08	-27 45.3	2.450	3.377	8.3	21.7	7 20	22 1.05	-10 51.2	1.998	2.916	10.4	17.9
7 30	21 53.80	-28 48.0	2.396	3.367	6.0	21.5	7 30	21 54.55	-10 53.7	1.930	2.905	6.9	17.7
8 9	21 46.24	-29 45.4	2.369	3.356	4.6	21.4	8 9	21 46.62	-11 2.7	1.888	2.894	3.1	17.4
8 19	21 38.05	-30 32.1	2.369	3.346	5.4	21.4	8 19	21 37.98	-11 15.5	1.872	2.882	1.5	17.3
8 29	21 30.06	-31 4.1	2.397	3.335	7.6	21.6	8 29	21 29.55	-11 28.8	1.884	2.871	5.3	17.5
9 8	21 23.07	-31 19.6	2.450	3.323	10.1	21.7	9 8	21 22.21	-11 39.5	1.923	2.860	9.0	17.7
9 18	21 17.71	-31 18.5	2.525	3.312	12.4	21.9	9 18	21 16.67	-11 45.1	1.985	2.849	12.4	17.9
<b>103443</b>	2000 <i>AP</i> <sub>188</sub>		8 15.6 288°26'	1.4°/16.8	18		<b>253830</b>	2003 <i>YQ</i> <sub>80</sub>		8 15.6 284°71'	2.6°/13.8	18	
7 10	22 2.31	- 6 16.2	1.841	2.678	14.9	19.9	7 10	22 7.00	-16 58.5	1.487	2.358	16.1	20.8
7 20	21 58.97	- 6 56.8	1.738	2.653	11.8	19.6	7 20	22 3.14	-17 41.5	1.399	2.337	12.4	20.5
7 30	21 53.45	- 7 56.0	1.656	2.628	8.0	19.4	7 30	21 56.47	-18 35.3	1.331	2.316	8.1	20.2
8 9	21 46.23	- 9 11.0	1.599	2.603	3.8	19.1	8 9	21 47.57	-19 33.6	1.286	2.294	3.7	19.9
8 19	21 38.02	-10 36.6	1.568	2.578	1.7	18.8	8 19	21 37.43	-20 28.6	1.267	2.273	3.8	19.9
8 29	21 29.83	-12 5.6	1.564	2.552	5.9	19.1	8 29	21 27.43	-21 12.6	1.273	2.251	8.5	20.1
9 8	21 22.69	-13 30.3	1.586	2.527	10.3	19.3	9 8	21 18.98	-21 40.1	1.303	2.230	13.3	20.3
9 18	21 17.49	-14 44.5	1.632	2.502	14.3	19.5	9 18	21 13.14	-21 49.2	1.353	2.208	17.5	20.5
<b>210706</b>	2000 <i>SR</i> <sub>157</sub>		8 15.6 20°77'	6.2°/19.6	18		<b>88701</b>	2001 <i>RW</i> <sub>150</sub>		8 15.6 34°61'	4.3°/12.5	18	
7 10	22 1.28	+ 0 4.3	1.055	1.910	22.4	19.5	7 10	22 5.29	-19 42.9	1.394	2.276	16.4	19.3
7 20	21 59.02	+ 0 23.6	0.999	1.915	18.3	19.3	7 20	22 1.64	-20 53.4	1.337	2.281	12.4	19.1
7 30	21 53.77	+ 0 13.4	0.959	1.922	13.6	19.0	7 30	21 55.27	-22 11.4	1.301	2.287	8.1	18.8
8 9	21 46.37	- 0 26.1	0.938	1.930	8.9	18.8	8 9	21 46.96	-23 28.0	1.288	2.293	4.6	18.7
8 19	21 38.02	- 1 30.4	0.938	1.939	6.2	18.7	8 19	21 37.83	-24 33.9	1.300	2.299	5.4	18.7
8 29	21 30.24	- 2 50.6	0.959	1.949	8.4	18.8	8 29	21 29.24	-25 21.7	1.337	2.306	9.3	19.0
9 8	21 24.42	- 4 15.2	1.003	1.960	12.8	19.1	9 8	21 22.42	-25 47.8	1.396	2.313	13.3	19.2
9 18	21 21.48	- 5 34.0	1.065	1.972	17.2	19.4	9 18	21 18.22	-25 52.1	1.476	2.321	16.9	19.5
<b>353765</b>	2012 <i>FK</i> <sub>1</sub>		8 15.6 175°56'	0°1/15.5	18		<b>255146</b>	2005 <i>UD</i> <sub>165</sub>		8 15.6 65°13'	1°2/16.6	18	
7 10	22 2.71	-12 8.2	2.808	3.641	10.5	21.8	7 10	22 3.38	- 8 28.8	2.097	2.932	13.4	20.9
7 20	21 58.29	-12 32.4	2.726	3.643	8.0	21.6	7 20	21 59.21	- 8 42.9	2.026	2.940	10.4	20.7
7 30	21 52.46	-13 3.6	2.668	3.644	5.1	21.5	7 30	21 53.24	- 9 8.5	1.976	2.948	7.0	20.5
8 9	21 45.66	-13 39.1	2.637	3.645	2.1	21.3	8 9	21 46.04	- 9 42.9	1.952	2.957	3.3	20.3
8 19	21 38.41	-14 15.8	2.635	3.645	1.1	21.2	8 19	21 38.32	-10 22.2	1.955	2.965	1.5	20.2
8 29	21 31.37	-14 50.5	2.662	3.646	4.2	21.4	8 29	21 30.90	-11 2.4	1.986	2.973	5.0	20.5
9 8	21 25.13	-15 20.3	2.718	3.646	7.1	21.6	9 8	21 24.60	-11 39.1	2.043	2.982	8.5	20.7
9 18	21 20.20	-15 43.1	2.798	3.646	9.7	21.8	9 18	21 19.99	-12 9.2	2.124	2.990	11.6	20.9
<b>237935</b>	2002 <i>QJ</i> <sub>77</sub>		8 15.6 100°84'	0°2/15.7	18		<b>127123</b>	2002 <i>GE</i> <sub>102</sub>		8 15.6 92°30'	7°7/9.2	18 R	
7 10	22 6.69	-11 42.8	1.953	2.796	14.0	20.7	7 10	22 8.93	-31 12.2	1.762	2.631	14.1	19.8
7 20	22 1.79	-11 59.8	1.886	2.808	10.7	20.5	7 20	22 4.10	-32 36.9	1.710	2.637	11.3	19.7
7 30	21 54.91	-12 26.5	1.842	2.820	6.9	20.3	7 30	21 56.71	-33 57.2	1.680	2.642	8.8	19.5
8 9	21 46.68	-12 59.2	1.824	2.831	2.8	20.1	8 9	21 47.50	-35 3.9	1.674	2.648	7.7	19.5
8 19	21 37.90	-13 33.8	1.832	2.843	1.4	20.0	8 19	21 37.56	-35 49.6	1.694	2.654	8.7	19.6
8 29	21 29.53	-14 5.8	1.869	2.854	5.5	20.3	8 29	21 28.16	-36 9.7	1.738	2.659	11.0	19.7
9 8	21 22.44	-14 31.6	1.932	2.865	9.2	20.5	9 8	21 20.46	-36 3.9	1.805	2.665	13.7	19.9
9 18	21 17.28	-14 48.9	2.018	2.876	12.5	20.8	9 18	21 15.25	-35 35.2	1.891	2.671	16.2	20.1
<b>355705</b>	2008 <i>FC</i> <sub>88</sub>		8 15.6 66°71'	0°5/15.1	18		<b>511485</b>	2014 <i>NO</i>		8 15.6 71°75'	1°0/14.6	18	
7 10	22 3.59	-13 4.0	2.085	2.934	13.0	21.2	7 10	22 2.78	-13 40.1	2.094	2.946	12.8	21.2
7 20	21 59.34	-13 36.1	2.021	2.947	9.9	21.0	7 20	21 58.79	-14 29.5	2.029	2.957	9.7	21.0
7 30	21 53.28	-14 16.8	1.980	2.960	6.3	20.8	7 30	21 52.99	-15 27.8	1.986	2.967	6.2	20.8
8 9	21 46.01	-15 2.0	1.965	2.973	2.5	20.6	8 9	21 45.95	-16 30.3	1.969	2.978	2.4	20.6
8 19	21 38.25	-15 47.3	1.977	2.987	1.6	20.6	8 19	21 38.38	-17 31.7	1.980	2.989	2.0	20.6
8 29	21 30.85	-16 27.9	2.017	3.000	5.4	20.8	8 29	21 31.14	-18 26.6	2.019	2.999	5.7	20.9
9 8	21 24.61	-17 0.4	2.083	3.013	8.9	21.1	9 8	21 25.02	-19 11.2	2.084	3.010	9.1	21.1
9 18	21 20.10	-17 22.7	2.173	3.027	11.9	21.3	9 18	21 20.62	-19 43.2	2.173	3.021	12.1	21.3
<b>96841</b>	1999 <i>RP</i> <sub>205</sub>		8 15.6 313°19'	10.6°/24.5	18		<b>79589</b>	1998 <i>RF</i> <sub>19</sub>		8 15.6 302°40'	1.4°/14.6	18	
7 10	21 59.94	+13 8.1	1.659	2.410	19.7	19.0	7 10	22 4.12	-13 51.6	1.403	2.275	16.8	19.2
7 20	21 57.37	+13 50.0	1.565	2.391	17.6	18.8	7 20	22 1.07	-14 30.1	1.312	2.251	13.0	18.9
7 30	21 52.53	+14 3.7	1.486	2.373	15.1	18.6	7 30	21 55.21	-15 23.3	1.242	2.227	8.4	18.6
8 9	21 45.90	+13 44.7	1.426	2.356	12.6	18.4	8 9	21 47.10	-16 26.0	1.194	2.203	3.4	18.2
8 19	21 38.26	+12 51.4	1.386	2.339	10.9	18.2	8 19	21 37.70	-17 30.6	1.170	2.179	2.8	18.1
8 29	21 30.68	+11 26.2	1.370	2.322	10.8	18.2	8 29	21 28.38	-18 28.5	1.172	2.156	8.1	18.4
9 8	21 24.29	+ 9 36.8	1.376	2.306	12.5	18.3	9 8	21 20.56	-19 12.8	1.196	2.133	13.3	18.6
9 18	21 19.99	+ 7 33.6	1.405	2.290	15.2	18.4	9 18	21 15.38	-19 39.5	1.240	2.110	17.9	18.8
<b>260610</b>	2005 <i>GN</i> <sub>23</sub>		8 15.6 126°48'	3.9°/12.9	17		<b>294088</b>	2007 <i>TR</i> <sub>205</sub>		8 15.6 340°17'	0.6°/16.1	18	
7 10	22 11.73	-21 13.6	1.690	2.552	14.9	20.7	7 10	22 2.15	- 8 52.7	1.646	2.499	15.7	20.4
7 20	22 6.01	-22 5.2	1.633	2.565	11.3	20.5	7 20	21 58.88	- 9 29.5	1.569	2.495	12.2	20.2
7 30	21 57.81	-23 0.3	1.598	2.578	7.5	20.3	7 30	21 53.36	-10 22.4	1.513	2.491	8.0	19.9
8 9	21 47.89	-23 51.7	1.588	2.590	4.3	20.2	8 9	21 46.20	-11 27.2	1.481	2.488	3.5	19.7
8 19	21 37.32	-24 32.5	1.604	2.602	4.8	20.2	8 19	21 38.24	-12 37.9	1.474	2.485	1.5	19.5
8 29	21 27.34	-24 57.8	1.648	2.613	8.2	20.4	8 29	21 30.57	-13 47.3	1.494	2.482	6.2	19.8
9 8	21 19.06	-25 5.6	1.716	2.624	11.8	20.7	9 8	21 24.21	-14 48.9	1.539	2.480	10.5	20.1
9 18	21 13.22	-24 56.6	1.806	2.634	15.0	20.9	9 18	21 19.97	-15 38.1	1.606	2.478	14.4	20.3
<b>355691</b>	2008 <i>FT</i> <sub>26</sub>		8 15.6 137°41'	2.6°/18.4	18		<b>85527</b>	1997 <i>WT</i> <sub>1</sub>					

EPHEMERIDES

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>314546</b>	2005 YJ <sub>113</sub>		8 15.6 198°62	1.4/14.0	18		<b>64996</b>	2002 AG <sub>60</sub>		8 15.6 248°96	0.8/14.8	18	
7 10	22 2.76	-16 5.9	2.582	3.429	10.8	20.9	7 10	22 2.00	-12 43.9	2.240	3.087	12.3	19.2
7 20	21 58.54	-16 49.5	2.501	3.427	8.2	20.7	7 20	21 58.21	-13 36.2	2.158	3.084	9.3	19.0
7 30	21 52.75	-17 39.3	2.445	3.425	5.2	20.5	7 30	21 52.68	-14 38.6	2.100	3.080	6.0	18.8
8 9	21 45.86	-18 31.1	2.415	3.423	2.2	20.3	8 9	21 45.89	-15 46.6	2.068	3.077	2.3	18.6
8 19	21 38.46	-19 20.9	2.415	3.420	2.2	20.3	8 19	21 38.50	-16 55.2	2.065	3.073	1.8	18.5
8 29	21 31.25	-20 4.6	2.443	3.418	5.2	20.5	8 29	21 31.30	-17 58.8	2.089	3.070	5.4	18.8
9 8	21 24.93	-20 39.0	2.498	3.415	8.2	20.7	9 8	21 25.09	-18 53.1	2.140	3.066	8.9	19.0
9 18	21 20.05	-21 2.6	2.577	3.412	10.8	20.9	9 18	21 20.48	-19 35.2	2.216	3.063	11.9	19.2
<b>374827</b>	2006 UW <sub>213</sub>		8 15.6 246°98	0.7/15.1	18		<b>508089</b>	2015 DF <sub>114</sub>		8 15.6 149°08	4.9/11.9	17	
7 10	22 8.41	-13 27.0	1.809	2.658	14.7	22.3	7 10	22 10.03	-23 43.0	1.723	2.589	14.5	21.9
7 20	22 3.64	-13 52.9	1.718	2.643	11.3	22.1	7 20	22 4.86	-24 45.7	1.661	2.595	11.1	21.7
7 30	21 56.48	-14 29.3	1.648	2.628	7.3	21.8	7 30	21 57.19	-25 50.5	1.621	2.600	7.6	21.5
8 9	21 47.51	-15 12.0	1.604	2.612	2.9	21.5	8 9	21 47.75	-26 49.6	1.607	2.604	5.1	21.3
8 19	21 37.57	-15 55.7	1.586	2.596	2.0	21.4	8 19	21 37.56	-27 35.6	1.619	2.608	5.9	21.4
8 29	21 27.79	-16 34.9	1.595	2.579	6.5	21.7	8 29	21 27.86	-28 3.2	1.656	2.612	9.0	21.6
9 8	21 19.31	-17 4.8	1.631	2.561	10.9	21.9	9 8	21 19.78	-28 10.6	1.718	2.616	12.4	21.8
9 18	21 12.99	-17 22.9	1.689	2.543	14.7	22.1	9 18	21 14.12	-27 58.8	1.802	2.619	15.5	22.0
<b>511690</b>	2015 BW <sub>532</sub>		8 15.6 92°76	7.7/ 9.1	17		<b>137289</b>	1999 RP <sub>193</sub>		8 15.6 36°72	0.2/15.5	17	
7 10	22 9.05	-28 55.0	1.622	2.496	14.9	21.0	7 10	22 3.56	- 9 56.8	1.273	2.143	18.3	19.6
7 20	22 4.31	-30 44.6	1.578	2.510	11.7	20.8	7 20	22 0.44	-10 48.0	1.213	2.149	14.1	19.4
7 30	21 56.90	-32 31.5	1.557	2.524	8.9	20.7	7 30	21 54.58	-11 58.0	1.173	2.156	9.1	19.1
8 9	21 47.62	-34 4.9	1.561	2.539	7.7	20.6	8 9	21 46.75	-13 20.3	1.155	2.164	3.7	18.8
8 19	21 37.58	-35 15.8	1.589	2.553	8.8	20.7	8 19	21 38.07	-14 46.0	1.161	2.172	2.0	18.7
8 29	21 28.15	-35 58.7	1.643	2.567	11.4	20.9	8 29	21 29.89	-16 5.4	1.192	2.180	7.4	19.1
9 8	21 20.52	-36 13.0	1.718	2.580	14.2	21.1	9 8	21 23.49	-17 10.7	1.246	2.189	12.4	19.4
9 18	21 15.50	-36 1.6	1.813	2.594	16.8	21.4	9 18	21 19.71	-17 57.6	1.321	2.198	16.6	19.7
<b>239425</b>	2007 TG <sub>140</sub>		8 15.6 318°19	14°6/ 2.2	18		<b>30157</b>	Roberts <span>spira</span>		8 15.6 356°03	1°0/16.2	18	
7 10	22 21.60	-53 6.4	1.821	2.627	16.3	19.8	7 10	21 59.35	- 9 16.5	1.125	2.008	19.3	18.3
7 20	22 14.88	-54 37.8	1.781	2.621	15.2	19.7	7 20	21 57.59	- 9 34.1	1.060	2.002	15.1	18.1
7 30	22 4.17	-55 47.5	1.760	2.615	14.7	19.6	7 30	21 52.95	-10 11.6	1.013	1.998	10.0	17.8
8 9	21 50.61	-56 24.4	1.758	2.609	14.8	19.6	8 9	21 46.16	-11 4.6	0.987	1.995	4.4	17.5
8 19	21 36.06	-56 21.6	1.776	2.604	15.6	19.7	8 19	21 38.35	-12 6.1	0.982	1.993	1.9	17.3
8 29	21 22.69	-55 37.5	1.813	2.598	16.8	19.8	8 29	21 30.98	-13 7.1	1.001	1.993	7.6	17.6
9 8	21 12.29	-54 17.0	1.868	2.593	18.3	19.9	9 8	21 25.43	-13 59.2	1.041	1.995	12.9	17.9
9 18	21 5.78	-52 27.8	1.937	2.589	19.7	20.0	9 18	21 22.65	-14 36.8	1.100	1.997	17.5	18.2
<b>140186</b>	2001 SZ <sub>206</sub>		8 15.6 226°96	0°3/15.8	18		<b>166928</b>	2003 GD <sub>13</sub>		8 15.6 61°62	1°9/16.8	17	
7 10	22 3.67	-10 37.7	2.080	2.922	13.3	20.6	7 10	22 7.88	- 6 53.7	1.173	2.033	20.2	20.1
7 20	21 59.55	-11 4.3	2.000	2.920	10.2	20.4	7 20	22 3.65	- 7 16.3	1.127	2.054	15.7	19.9
7 30	21 53.57	-11 41.9	1.942	2.918	6.7	20.2	7 30	21 56.55	- 7 59.8	1.099	2.076	10.5	19.7
8 9	21 46.24	-12 26.9	1.909	2.917	2.8	19.9	8 9	21 47.49	- 8 59.0	1.093	2.098	4.9	19.4
8 19	21 38.28	-13 15.1	1.904	2.915	1.3	19.8	8 19	21 37.75	-10 6.4	1.110	2.120	2.3	19.3
8 29	21 30.57	-14 1.6	1.927	2.913	5.3	20.1	8 29	21 28.81	-11 13.0	1.152	2.143	7.1	19.7
9 8	21 23.95	-14 42.1	1.976	2.911	9.0	20.3	9 8	21 21.92	-12 11.1	1.217	2.165	12.0	20.0
9 18	21 19.07	-15 13.5	2.050	2.909	12.2	20.5	9 18	21 17.84	-12 55.8	1.303	2.187	16.2	20.3
<b>307773</b>	2003 WW <sub>50</sub>		8 15.6 164°86	1°6/16.7	17		<b>132574</b>	2002 JO <sub>109</sub>		8 15.6 66°36	0°2/15.7	18	
7 10	22 7.91	- 7 43.6	1.675	2.513	16.1	21.9	7 10	22 6.50	-11 37.0	1.689	2.541	15.4	20.4
7 20	22 3.17	- 7 58.5	1.601	2.516	12.6	21.7	7 20	22 1.98	-11 53.2	1.626	2.552	11.8	20.2
7 30	21 56.09	- 8 28.6	1.547	2.519	8.5	21.4	7 30	21 55.22	-12 20.4	1.584	2.563	7.7	20.0
8 9	21 47.30	- 9 10.6	1.517	2.521	4.0	21.2	8 9	21 46.93	-12 54.9	1.566	2.574	3.1	19.7
8 19	21 37.73	-10 0.0	1.513	2.523	1.9	21.0	8 19	21 38.02	-13 31.6	1.575	2.586	1.5	19.7
8 29	21 28.51	-10 50.7	1.537	2.525	6.1	21.3	8 29	21 29.58	-14 5.6	1.610	2.597	6.0	20.0
9 8	21 20.74	-11 37.0	1.586	2.526	10.4	21.6	9 8	21 22.59	-14 32.5	1.671	2.609	10.1	20.2
9 18	21 15.19	-12 14.8	1.658	2.527	14.2	21.8	9 18	21 17.77	-14 49.8	1.755	2.620	13.7	20.5
<b>288462</b>	2004 EB <sub>88</sub>		8 15.6 115°00	0°3/15.8	16		<b>88327</b>	2001 OH <sub>54</sub>		8 15.6 323°12	8°3/ 8.2	18	
7 10	22 8.27	-10 46.1	1.689	2.535	15.7	21.8	7 10	22 4.99	-31 37.5	1.695	2.572	14.2	18.2
7 20	22 3.33	-11 10.0	1.624	2.546	12.0	21.6	7 20	22 1.45	-33 9.8	1.628	2.559	11.5	18.0
7 30	21 56.10	-11 46.3	1.581	2.558	7.8	21.4	7 30	21 55.26	-34 39.3	1.584	2.547	9.2	17.8
8 9	21 47.27	-12 30.7	1.562	2.569	3.2	21.1	8 9	21 47.07	-35 56.4	1.563	2.534	8.3	17.8
8 19	21 37.78	-13 17.8	1.569	2.580	1.5	21.0	8 19	21 37.91	-36 52.1	1.566	2.523	9.5	17.8
8 29	21 28.76	-14 2.0	1.604	2.590	6.1	21.4	8 29	21 29.08	-37 20.5	1.593	2.512	12.0	17.9
9 8	21 21.24	-14 38.5	1.664	2.601	10.3	21.6	9 8	21 21.87	-37 20.3	1.641	2.501	14.9	18.1
9 18	21 15.93	-15 4.4	1.748	2.610	13.9	21.9	9 18	21 17.16	-36 53.6	1.708	2.491	17.6	18.3
<b>217344</b>	2004 RV <sub>188</sub>		8 15.6 8°30	4°5/19.4	18		<b>508211</b>	2015 GU <sub>20</sub>		8 15.6 231°14	1°4/14.5	17	
7 10	22 2.27	- 0 20.5	2.014	2.821	14.9	19.8	7 10	22 7.83	-14 56.6	1.829	2.682	14.4	22.0
7 20	21 58.51	- 0 3.1	1.935	2.821	12.2	19.6	7 20	22 3.13	-15 34.0	1.744	2.673	11.0	21.7
7 30	21 52.90	- 0 2.0	1.875	2.822	9.1	19.4	7 30	21 56.12	-16 20.9	1.682	2.663	7.1	21.5
8 9	21 45.98	- 0 17.0	1.839	2.824	6.1	19.3	8 9	21 47.38	-17 12.5	1.645	2.653	2.9	21.2
8 19	21 38.44	- 0 46.2	1.829	2.826	4.5	19.2	8 19	21 37.76	-18 2.8	1.635	2.643	2.5	21.1
8 29	21 31.15	- 1 26.0	1.846	2.828	5.9	19.3	8 29	21 28.38	-18 46.1	1.652	2.632	6.7	21.4
9 8	21 24.94	- 2 11.4	1.888	2.830	8.9	19.4	9 8	21 20.30	-19 17.8	1.695	2.620	10.8	21.6
9 18	21 20.45	- 2 57.4	1.954	2.833	11.9	19.6	9 18	21 14.36	-19 36.0	1.760	2.608	14.4	21.8
<b>285385</b>	1999 TS <sub>176</sub>		8 15.6 279°56	2°7/13.9	18		<b>416529</b>	2003 YR <sub>181</sub>		8 15.6 198°38	0°6/16.0	17	
7 10	22 9.40												

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>97028</b>	1999 TA <sub>292</sub>		8 15.6 175°01	1.8/17.1	18		<b>339249</b>	2004 VV <sub>38</sub>		8 15.6 320°60	1.4/14.7	18	
7 10	22 6.10	- 6 56.9	2.192	3.013	13.4	19.9	7 10	22 4.31	-14 42.4	1.527	2.396	15.9	21.1
7 20	22 1.29	- 7 5.3	2.110	3.015	10.5	19.7	7 20	22 0.84	-15 14.0	1.449	2.386	12.2	20.8
7 30	21 54.64	- 7 25.7	2.050	3.017	7.2	19.5	7 30	21 54.84	-15 56.7	1.391	2.376	7.8	20.6
8 9	21 46.70	- 7 55.9	2.016	3.018	3.6	19.3	8 9	21 46.94	-16 45.4	1.357	2.366	3.2	20.3
8 19	21 38.16	- 8 32.7	2.010	3.019	1.9	19.1	8 19	21 38.09	-17 33.5	1.348	2.357	2.6	20.2
8 29	21 29.87	- 9 12.0	2.032	3.019	5.0	19.4	8 29	21 29.54	-18 14.4	1.364	2.348	7.3	20.5
9 8	21 22.65	- 9 49.6	2.082	3.019	8.4	19.6	9 8	21 22.48	-18 43.0	1.404	2.339	11.9	20.7
9 18	21 17.13	-10 22.3	2.156	3.018	11.6	19.8	9 18	21 17.79	-18 57.0	1.466	2.332	15.9	20.9
<b>103059</b>	1999 XV <sub>136</sub>		8 15.6 288°37	5°3/11.4	18		<b>469398</b>	2001 TQ <sub>247</sub>		8 15.6 291°38	0°1/15.6	18	
7 10	22 5.33	-20 56.6	1.469	2.349	15.8	19.4	7 10	22 4.84	-11 24.2	1.575	2.433	16.0	21.4
7 20	22 2.04	-22 26.3	1.385	2.328	12.1	19.1	7 20	22 1.29	-11 51.7	1.483	2.413	12.4	21.1
7 30	21 55.89	-24 6.8	1.323	2.306	8.3	18.8	7 30	21 55.21	-12 33.8	1.412	2.393	8.2	20.8
8 9	21 47.45	-25 48.6	1.284	2.284	5.4	18.6	8 9	21 47.14	-13 26.4	1.365	2.373	3.4	20.5
8 19	21 37.70	-27 20.5	1.270	2.263	6.7	18.6	8 19	21 37.96	-14 23.6	1.343	2.353	1.8	20.3
8 29	21 28.05	-28 32.4	1.281	2.241	10.6	18.8	8 29	21 28.90	-15 18.4	1.347	2.334	6.9	20.6
9 8	21 19.97	-29 18.3	1.314	2.219	14.9	19.0	9 8	21 21.20	-16 4.4	1.375	2.314	11.7	20.8
9 18	21 14.56	-29 37.0	1.367	2.197	18.8	19.1	9 18	21 15.84	-16 37.6	1.424	2.294	16.0	21.0
<b>402435</b>	2006 AD <sub>84</sub>		8 15.6 230°94	3°1/12.4	18		<b>358645</b>	2007 VT <sub>295</sub>		8 15.6 273°09	2°0/17.4	18	
7 10	22 5.86	-23 23.8	2.738	3.588	10.2	21.6	7 10	22 3.24	- 5 14.8	2.077	2.901	13.9	21.5
7 20	22 0.91	-24 0.8	2.652	3.578	7.8	21.4	7 20	21 59.44	- 5 38.2	1.974	2.880	11.1	21.3
7 30	21 54.31	-24 38.8	2.592	3.568	5.3	21.3	7 30	21 53.68	- 6 17.3	1.894	2.860	7.7	21.0
8 9	21 46.56	-25 13.7	2.558	3.557	3.3	21.1	8 9	21 46.43	- 7 10.0	1.838	2.838	4.1	20.8
8 19	21 38.25	-25 41.6	2.553	3.546	3.8	21.1	8 19	21 38.35	- 8 12.7	1.809	2.817	2.1	20.6
8 29	21 30.14	-25 59.1	2.577	3.534	6.1	21.3	8 29	21 30.32	- 9 20.1	1.807	2.796	5.3	20.8
9 8	21 22.95	-26 4.6	2.628	3.522	8.7	21.4	9 8	21 23.25	-10 26.2	1.833	2.774	9.2	20.9
9 18	21 17.25	-25 57.9	2.702	3.510	11.1	21.6	9 18	21 17.90	-11 26.0	1.883	2.752	12.7	21.1
<b>302824</b>	2003 DZ <sub>8</sub>		8 15.6 236°16	0°2/15.7	18		<b>119846</b>	2002 CL <sub>46</sub>		8 15.6 105°58	2°1/17.2	18	
7 10	22 3.67	-11 5.2	2.258	3.097	12.5	21.8	7 10	22 8.14	- 6 55.0	1.883	2.709	15.1	20.1
7 20	21 59.48	-11 32.5	2.172	3.091	9.6	21.6	7 20	22 2.99	- 6 53.0	1.816	2.723	11.8	19.9
7 30	21 53.51	-12 9.8	2.108	3.084	6.3	21.3	7 30	21 55.80	- 7 4.1	1.770	2.737	8.1	19.7
8 9	21 46.26	-12 53.9	2.070	3.078	2.6	21.1	8 9	21 47.20	- 7 26.0	1.750	2.751	4.2	19.5
8 19	21 38.40	-13 40.7	2.060	3.071	1.3	21.0	8 19	21 38.03	- 7 55.3	1.756	2.764	2.3	19.4
8 29	21 30.72	-14 25.6	2.079	3.064	5.0	21.2	8 29	21 29.29	- 8 27.7	1.790	2.777	5.5	19.6
9 8	21 24.02	-15 4.8	2.124	3.057	8.6	21.4	9 8	21 21.88	- 8 58.9	1.850	2.790	9.2	19.9
9 18	21 18.95	-15 35.4	2.194	3.049	11.7	21.6	9 18	21 16.46	- 9 25.4	1.934	2.802	12.5	20.1
<b>130984</b>	2000 WA <sub>133</sub>		8 15.6 276°76	5°2/12.2	18		<b>481508</b>	2007 EW <sub>87</sub>		8 15.6 163°22	5°2/21.6	18	
7 10	22 11.36	-25 48.5	1.788	2.652	14.2	20.4	7 10	22 3.31	+ 6 46.1	2.994	3.731	12.0	21.8
7 20	22 6.10	-26 25.8	1.703	2.633	11.1	20.1	7 20	21 58.73	+ 7 5.5	2.906	3.736	10.2	21.6
7 30	21 58.18	-27 3.2	1.639	2.615	7.8	19.9	7 30	21 52.82	+ 7 10.4	2.839	3.741	8.2	21.5
8 9	21 48.27	-27 33.6	1.600	2.596	5.4	19.7	8 9	21 45.98	+ 7 0.5	2.796	3.745	6.3	21.4
8 19	21 37.36	-27 50.6	1.588	2.577	6.0	19.7	8 19	21 38.72	+ 6 36.4	2.781	3.749	5.2	21.3
8 29	21 26.73	-27 49.3	1.601	2.558	9.2	19.9	8 29	21 31.60	+ 6 0.4	2.793	3.753	5.6	21.4
9 8	21 17.65	-27 28.4	1.639	2.539	12.8	20.0	9 8	21 25.23	+ 5 15.8	2.834	3.756	9.1	21.5
9 18	21 11.02	-26 49.5	1.699	2.520	16.1	20.2	9 18	21 20.05	+ 4 26.4	2.900	3.758	9.1	21.6
<b>475388</b>	2006 GK <sub>38</sub>		8 15.6 77°77	4°4/11.7	17		<b>193512</b>	2000 YG <sub>52</sub>		8 15.6 332°18	4°5/11.9	18	
7 10	22 6.43	-20 55.2	1.753	2.621	14.2	20.7	7 10	22 3.41	-20 23.8	1.545	2.425	15.1	19.1
7 20	22 1.93	-22 28.0	1.706	2.643	10.7	20.5	7 20	22 0.21	-21 43.8	1.476	2.418	11.5	18.9
7 30	21 55.20	-24 5.0	1.683	2.664	7.1	20.4	7 30	21 54.47	-23 11.7	1.428	2.412	7.7	18.6
8 9	21 46.94	-25 37.7	1.685	2.685	4.5	20.3	8 9	21 46.84	-24 39.0	1.404	2.406	4.8	18.5
8 19	21 38.10	-26 57.8	1.714	2.706	5.4	20.4	8 19	21 38.28	-25 56.4	1.406	2.401	5.7	18.5
8 29	21 29.78	-27 59.1	1.770	2.726	8.5	20.6	8 29	21 30.05	-26 55.9	1.432	2.396	9.3	18.7
9 8	21 22.96	-28 39.0	1.851	2.747	11.7	20.8	9 8	21 23.34	-27 33.2	1.482	2.392	13.2	18.9
9 18	21 18.32	-28 57.7	1.952	2.767	14.5	21.1	9 18	21 19.04	-27 47.3	1.552	2.388	16.7	19.1
<b>160600</b>	1999 RV <sub>210</sub>		8 15.6 327°37	2°7/14.4	18		<b>316050</b>	2009 HQ <sub>45</sub>		8 15.6 87°95	2°8/17.8	17	
7 10	22 11.86	-21 2.3	1.502	2.370	16.1	18.6	7 10	22 7.13	- 3 37.6	1.447	2.282	18.4	21.4
7 20	22 6.68	-20 52.4	1.423	2.359	12.4	18.4	7 20	22 2.76	- 4 4.7	1.389	2.300	14.5	21.2
7 30	21 58.62	-20 43.7	1.365	2.347	8.2	18.1	7 30	21 55.91	- 4 53.2	1.351	2.318	10.0	21.0
8 9	21 48.44	-20 31.1	1.330	2.337	3.9	17.8	8 9	21 47.33	- 5 59.5	1.335	2.335	5.4	20.8
8 19	21 37.29	-20 10.4	1.321	2.327	3.6	17.8	8 19	21 38.07	- 7 17.2	1.344	2.353	2.9	20.7
8 29	21 26.61	-19 38.6	1.337	2.317	8.0	18.0	8 29	21 29.36	- 8 38.1	1.380	2.370	6.4	21.0
9 8	21 17.73	-18 55.2	1.378	2.308	12.5	18.3	9 8	21 22.31	- 9 54.2	1.441	2.386	10.7	21.3
9 18	21 11.58	-18 1.5	1.440	2.300	16.4	18.5	9 18	21 17.67	-10 59.3	1.524	2.403	14.6	21.5
<b>162334</b>	1999 XP <sub>103</sub>		8 15.6 293°00	4°4/18.2	18		<b>263840</b>	2008 WG <sub>61</sub>		8 15.6 300°58	4°3/22.2	15	
7 10	22 7.27	- 3 34.3	1.810	2.628	15.9	19.4	7 10	21 58.82	+ 8 22.3	4.447	5.160	8.7	20.1
7 20	22 2.78	- 2 54.0	1.712	2.609	13.0	19.1	7 20	21 54.97	+ 8 52.7	4.348	5.156	7.5	20.0
7 30	21 55.98	- 2 27.0	1.634	2.590	9.5	18.9	7 30	21 50.25	+ 9 13.1	4.271	5.152	6.2	19.9
8 9	21 47.39	- 2 13.8	1.581	2.572	6.1	18.6	8 9	21 44.92	+ 9 23.4	4.219	5.148	5.0	19.8
8 19	21 37.82	- 2 13.8	1.553	2.553	4.4	18.5	8 19	21 39.29	+ 9 23.6	4.195	5.145	4.3	19.8
8 29	21 28.34	- 2 24.6	1.551	2.534	6.7	18.6	8 29	21 33.74	+ 9 14.6	4.198	5.141	4.5	19.8
9 8	21 20.04	- 2 42.3	1.575	2.516	10.4	18.8	9 8	21 28.62	+ 8 58.1	4.229	5.137	5.4	19.8
9 18	21 13.81	- 3 2.3	1.622	2.497	14.1	18.9	9 18	21 24.26	+ 8 36.2	4.287	5.133	6.6	19.9
<b>332488</b>	2008 EY <sub>165</sub>		8 15.6 197°16	0°3/15.8	17		<b>445483</b>	2010 VS <sub>152</sub>		8 15.6 282°66	4°2/19.7	17	
7 10	22 6.27												

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8 15.6

8 15.6

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>72297</b>	2001 <i>BV</i> <sub>26</sub>	8 15.6 335°38		3°7/17.2 18			<b>314517</b>	2005 <i>XF</i> <sub>90</sub>	8 15.6 4°17		4°0/18.7 18		
7 10	22 3.79	- 8 16.2	1.075	1.951	20.5	18.3	7 10	22 4.01	- 2 38.9	1.997	2.811	14.8	20.5
7 20	22 1.37	- 7 29.3	0.999	1.934	16.4	18.0	7 20	21 59.91	- 2 12.3	1.917	2.811	12.0	20.3
7 30	21 55.72	- 6 57.5	0.940	1.919	11.5	17.7	7 30	21 53.90	- 1 59.9	1.858	2.811	8.8	20.1
8 9	21 47.51	- 6 41.0	0.901	1.904	6.3	17.4	8 9	21 46.53	- 2 1.5	1.822	2.812	5.6	19.9
8 19	21 37.92	- 6 38.0	0.883	1.891	3.9	17.2	8 19	21 38.53	- 2 15.4	1.813	2.813	4.0	19.8
8 29	21 28.62	- 6 44.6	0.887	1.880	8.3	17.4	8 29	21 30.78	- 2 38.5	1.831	2.814	5.8	19.9
9 8	21 21.25	- 6 55.0	0.912	1.870	13.8	17.6	9 8	21 24.15	- 3 6.7	1.874	2.816	8.9	20.1
9 18	21 17.00	- 7 3.6	0.955	1.861	18.8	17.9	9 18	21 19.30	- 3 35.7	1.941	2.818	12.0	20.3
<b>72138</b>	2000 <i>YQ</i> <sub>84</sub>	8 15.6 246°22		2°6/17.4 18			<b>174380</b>	2002 <i>VX</i> <sub>6</sub>	8 15.6 343°49		0°4/15.9 18		
7 10	22 7.32	- 5 55.7	1.593	2.429	16.9	19.6	7 10	22 5.04	-11 35.1	1.743	2.595	15.0	19.8
7 20	22 3.05	- 5 57.3	1.508	2.420	13.5	19.4	7 20	22 1.01	-11 41.7	1.666	2.592	11.6	19.6
7 30	21 56.28	- 6 15.9	1.443	2.411	9.4	19.1	7 30	21 54.77	-11 59.0	1.610	2.588	7.6	19.3
8 9	21 47.59	- 6 49.5	1.401	2.402	5.0	18.9	8 9	21 46.92	-12 23.8	1.578	2.585	3.2	19.1
8 19	21 37.91	- 7 34.4	1.384	2.392	2.7	18.7	8 19	21 38.33	-12 52.0	1.572	2.583	1.5	18.9
8 29	21 28.44	- 8 24.8	1.393	2.382	6.4	18.9	8 29	21 30.05	-13 18.9	1.593	2.580	5.9	19.2
9 8	21 20.39	- 9 14.3	1.427	2.371	11.0	19.1	9 8	21 23.10	-13 40.3	1.639	2.579	10.1	19.5
9 18	21 14.65	- 9 57.5	1.484	2.361	15.1	19.4	9 18	21 18.23	-13 53.5	1.707	2.577	13.8	19.7
<b>42189</b>	2001 <i>CJ</i> <sub>33</sub>	8 15.6 80°79		6°7/ 9.4 18 R			<b>511508</b>	2014 <i>OM</i> <sub>239</sub>	8 15.6 242°34		2°3/13.1 18		
7 10	22 8.11	-33 13.7	2.268	3.124	11.8	18.5	7 10	22 2.09	-17 42.3	2.454	3.309	11.1	21.2
7 20	22 2.98	-34 14.8	2.214	3.132	9.5	18.3	7 20	21 58.23	-18 44.5	2.375	3.305	8.4	21.1
7 30	21 55.81	-35 10.2	2.185	3.139	7.6	18.2	7 30	21 52.73	-19 52.9	2.319	3.301	5.4	20.9
8 9	21 47.24	-35 53.3	2.180	3.147	6.7	18.2	8 9	21 46.04	-21 2.7	2.291	3.296	2.7	20.7
8 19	21 38.15	-36 19.1	2.202	3.154	7.4	18.2	8 19	21 38.78	-22 8.6	2.291	3.292	3.1	20.7
8 29	21 29.51	-36 24.7	2.249	3.162	9.3	18.4	8 29	21 31.70	-23 5.9	2.319	3.288	5.9	20.9
9 8	21 22.22	-36 10.1	2.320	3.169	11.5	18.5	9 8	21 25.53	-23 50.9	2.374	3.283	8.9	21.1
9 18	21 16.92	-35 37.3	2.412	3.177	13.5	18.7	9 18	21 20.86	-24 22.0	2.453	3.279	11.6	21.2
<b>78438</b>	2002 <i>RR</i> <sub>6</sub>	8 15.6 262°50		0°4/15.4 18			<b>91753</b>	1999 <i>TN</i> <sub>189</sub>	8 15.6 284°31		0°2/15.8 18		
7 10	22 7.83	-14 6.5	2.014	2.859	13.5	19.5	7 10	22 5.58	-12 39.8	2.237	3.077	12.5	19.4
7 20	22 2.94	-14 12.0	1.925	2.848	10.4	19.3	7 20	22 0.97	-12 41.9	2.150	3.070	9.6	19.2
7 30	21 55.93	-14 24.9	1.858	2.837	6.8	19.0	7 30	21 54.53	-12 51.4	2.086	3.063	6.3	19.0
8 9	21 47.37	-14 41.9	1.817	2.825	2.7	18.7	8 9	21 46.78	-13 5.7	2.048	3.055	2.6	18.8
8 19	21 38.05	-14 59.3	1.803	2.813	1.6	18.6	8 19	21 38.42	-13 21.7	2.037	3.048	1.3	18.6
8 29	21 28.94	-15 13.4	1.817	2.801	5.7	18.9	8 29	21 30.27	-13 36.2	2.055	3.041	5.0	18.9
9 8	21 21.02	-15 21.1	1.857	2.789	9.7	19.1	9 8	21 23.16	-13 46.4	2.099	3.033	8.6	19.1
9 18	21 15.03	-15 20.7	1.921	2.777	13.1	19.3	9 18	21 17.73	-13 50.4	2.168	3.026	11.7	19.3
<b>49739</b>	1999 <i>VZ</i> <sub>121</sub>	8 15.6 52°03		2°2/14.3 18			<b>318378</b>	2004 <i>VF</i> <sub>85</sub>	8 15.6 213°42		1°7/17.4 18		
7 10	22 7.40	-15 17.4	1.228	2.106	18.3	18.9	7 10	22 2.49	- 6 27.7	2.629	3.446	11.5	21.4
7 20	22 3.35	-16 5.7	1.182	2.124	13.8	18.7	7 20	21 58.34	- 6 38.1	2.541	3.443	9.1	21.2
7 30	21 56.44	-17 5.4	1.156	2.142	8.8	18.5	7 30	21 52.70	- 6 59.0	2.475	3.439	6.2	21.0
8 9	21 47.57	-18 8.5	1.152	2.161	3.7	18.2	8 9	21 46.01	- 7 28.5	2.435	3.436	3.3	20.8
8 19	21 38.01	-19 6.4	1.173	2.180	3.4	18.3	8 19	21 38.82	- 8 4.1	2.424	3.432	1.8	20.7
8 29	21 29.22	-19 51.5	1.217	2.200	8.2	18.6	8 29	21 31.79	- 8 42.4	2.441	3.428	4.2	20.9
9 8	21 22.44	-20 19.5	1.285	2.219	12.8	18.9	9 8	21 25.59	- 9 20.0	2.486	3.424	7.2	21.1
9 18	21 18.44	-20 29.4	1.372	2.239	16.7	19.2	9 18	21 20.73	- 9 53.7	2.557	3.420	10.0	21.3
<b>424345</b>	2007 <i>VY</i> <sub>48</sub>	8 15.6 18°01		3°8/13.8 17			<b>404933</b>	2014 <i>LR</i> <sub>23</sub>	8 15.6 19°30		2°2/13.6 18		
7 10	22 8.70	-20 7.1	1.093	1.984	19.1	20.0	7 10	22 1.22	-15 42.8	1.804	2.671	13.9	20.1
7 20	22 4.90	-20 31.3	1.040	1.988	14.6	19.7	7 20	21 58.03	-16 49.7	1.739	2.676	10.5	19.9
7 30	21 57.74	-21 1.3	1.004	1.992	9.5	19.4	7 30	21 52.79	-18 6.2	1.696	2.681	6.7	19.7
8 9	21 48.19	-21 29.1	0.990	1.997	4.8	19.2	8 9	21 46.11	-19 25.9	1.679	2.687	3.0	19.5
8 19	21 37.68	-21 46.8	0.998	2.003	4.9	19.2	8 19	21 38.77	-20 41.8	1.688	2.693	3.3	19.5
8 29	21 27.97	-21 48.5	1.029	2.010	9.7	19.5	8 29	21 31.76	-21 47.1	1.724	2.699	6.9	19.8
9 8	21 20.57	-21 32.2	1.082	2.017	14.5	19.8	9 8	21 26.01	-22 37.3	1.784	2.707	10.6	20.0
9 18	21 16.39	-20 59.2	1.153	2.025	18.8	20.1	9 18	21 22.20	-23 10.1	1.867	2.714	13.8	20.2
<b>158351</b>	2001 <i>XW</i> <sub>106</sub>	8 15.6 111°02		0°5/16.1 18			<b>237899</b>	2002 <i>NL</i> <sub>67</sub>	8 15.6 345°56		1°5/16.9 18		
7 10	22 4.13	-10 18.9	2.128	2.967	13.1	20.3	7 10	22 2.85	- 7 9.8	1.709	2.553	15.6	20.5
7 20	21 59.89	-10 38.3	2.051	2.970	10.1	20.1	7 20	21 59.39	- 7 32.5	1.631	2.550	12.2	20.2
7 30	21 53.82	-11 8.1	1.997	2.972	6.6	19.9	7 30	21 53.75	- 8 11.2	1.575	2.548	8.3	20.0
8 9	21 46.47	-11 45.2	1.968	2.975	2.9	19.6	8 9	21 46.53	- 9 2.9	1.541	2.546	4.0	19.7
8 19	21 38.54	-12 25.6	1.966	2.977	1.3	19.5	8 19	21 38.54	-10 2.6	1.534	2.544	1.8	19.6
8 29	21 30.88	-13 5.1	1.993	2.980	5.1	19.8	8 29	21 30.84	-11 4.1	1.553	2.543	5.8	19.8
9 8	21 24.31	-13 39.6	2.046	2.982	8.6	20.0	9 8	21 24.40	-12 1.1	1.597	2.541	10.0	20.1
9 18	21 19.44	-14 6.3	2.123	2.984	11.8	20.2	9 18	21 20.01	-12 48.9	1.665	2.540	13.8	20.3
<b>326274</b>	1995 <i>QM</i> <sub>14</sub>	8 15.6 27°84		4°3/18.6 17			<b>137460</b>	1999 <i>TN</i> <sub>313</sub>	8 15.6 224°81		0°7/16.3 18		
7 10	22 3.37	- 2 10.1	1.274	2.119	19.8	21.0	7 10	22 3.60	- 9 48.8	2.372	3.205	12.2	20.8
7 20	22 0.31	- 2 10.1	1.211	2.125	15.9	20.7	7 20	21 59.35	-10 5.0	2.287	3.201	9.4	20.6
7 30	21 54.57	- 2 34.4	1.165	2.131	11.5	20.5	7 30	21 53.43	-10 30.8	2.225	3.198	6.2	20.4
8 9	21 46.88	- 3 21.2	1.141	2.137	6.9	20.2	8 9	21 46.33	-11 3.6	2.188	3.194	2.8	20.2
8 19	21 38.32	- 4 25.7	1.139	2.144	4.3	20.1	8 19	21 38.66	-11 40.2	2.180	3.191	1.2	20.1
8 29	21 30.22	- 5 39.8	1.161	2.152	7.2	20.3	8 29	21 31.19	-12 16.8	2.200	3.187	4.7	20.3
9 8	21 23.84	- 6 54.4	1.207	2.160	11.6	20.6	9 8	21 24.67	-12 49.6	2.247	3.183	8.0	20.5
9 18	21 20.02	- 8 1.7	1.274	2.169	15.8	20.9	9 18	21 19.67	-13 16.1	2.319	3.179	11.0	20.7
<b>507078</b>	2009 <i>AB</i> <sub>15</sub>	8 15.6 207°03		2°6/17.1 17			<b>441578</b>	2008 <i>UN</i> <sub>65</sub>	8 15.6 277°43		7°7/21.4 18		
7 10	22 10.85	- 7 38											



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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>267064</b>	1999 <i>FU</i> <sub>83</sub>		8 15.6	92°14	2°9/18.4	17	<b>447090</b>	2004 <i>TT</i> <sub>65</sub>		8 15.7	350°98	6°1/10.8	18
7 10	22 3.75	-1 5.6	1.736	2.553	16.5	20.6	7 10	22 6.65	-29 8.1	1.908	2.777	13.2	20.1
7 20	21 59.92	-1 53.9	1.667	2.565	13.2	20.4	7 20	22 2.25	-29 59.5	1.843	2.773	10.4	19.9
7 30	21 53.99	-3 4.2	1.618	2.578	9.3	20.2	7 30	21 55.56	-30 48.1	1.801	2.771	7.7	19.7
8 9	21 46.59	-4 33.2	1.594	2.591	5.3	20.0	8 9	21 47.25	-31 26.9	1.783	2.768	6.2	19.6
8 19	21 38.54	-6 14.5	1.596	2.603	2.9	19.9	8 19	21 38.27	-31 49.9	1.791	2.766	7.0	19.7
8 29	21 30.85	-8 0.1	1.626	2.615	5.7	20.1	8 29	21 29.71	-31 53.4	1.824	2.764	9.4	19.8
9 8	21 24.46	-9 41.3	1.682	2.627	9.5	20.4	9 8	21 22.61	-31 36.5	1.881	2.763	12.2	20.0
9 18	21 20.05	-11 11.5	1.763	2.639	13.1	20.6	9 18	21 17.69	-31 1.2	1.958	2.763	14.9	20.2
<b>126287</b>	2002 <i>AG</i> <sub>104</sub>		8 15.6	298°22	1°7/14.4	18	<b>378113</b>	2006 <i>UM</i> <sub>244</sub>		8 15.7	347°60	1°0/16.2	16
7 10	22 5.55	-14 53.9	1.678	2.540	15.0	19.9	7 10	21 59.92	-10 30.2	1.027	1.917	20.1	20.8
7 20	22 1.52	-15 39.9	1.606	2.539	11.4	19.7	7 20	21 58.41	-10 32.1	0.960	1.906	15.8	20.5
7 30	21 55.17	-16 36.5	1.555	2.539	7.3	19.4	7 30	21 53.77	-10 52.3	0.910	1.896	10.5	20.2
8 9	21 47.11	-17 37.8	1.529	2.538	3.0	19.2	8 9	21 46.74	-11 27.4	0.880	1.888	4.6	19.8
8 19	21 38.26	-18 37.0	1.530	2.537	2.8	19.1	8 19	21 38.49	-12 10.8	0.871	1.882	2.0	19.6
8 29	21 29.75	-19 27.8	1.556	2.537	7.0	19.4	8 29	21 30.65	-12 54.3	0.883	1.877	8.1	20.0
9 8	21 22.66	-20 5.3	1.608	2.536	11.1	19.6	9 8	21 24.78	-13 29.9	0.916	1.873	13.8	20.3
9 18	21 17.77	-20 27.5	1.681	2.536	14.7	19.9	9 18	21 21.94	-13 52.4	0.967	1.872	18.7	20.5
<b>8552</b>	Hyoichi		8 15.6	250°77	2°0/13.9	18	<b>290513</b>	2005 <i>UY</i> <sub>35</sub>		8 15.7	124°78	1°0/14.6	18
7 10	22 6.37	-17 46.4	2.229	3.080	12.2	18.9	7 10	22 4.47	-15 11.9	2.485	3.329	11.3	21.4
7 20	22 1.71	-18 21.3	2.138	3.066	9.3	18.7	7 20	21 59.88	-15 44.0	2.415	3.338	8.6	21.2
7 30	21 55.10	-19 1.9	2.071	3.051	6.0	18.5	7 30	21 53.70	-16 22.0	2.368	3.347	5.5	21.0
8 9	21 47.06	-19 43.9	2.030	3.036	2.8	18.2	8 9	21 46.42	-17 2.4	2.348	3.356	2.2	20.8
8 19	21 38.29	-20 22.6	2.017	3.021	2.8	18.2	8 19	21 38.70	-17 41.2	2.357	3.365	1.8	20.8
8 29	21 29.68	-20 53.4	2.032	3.006	6.2	18.4	8 29	21 31.25	-18 14.8	2.394	3.373	5.0	21.1
9 8	21 22.12	-21 13.3	2.073	2.990	9.6	18.6	9 8	21 24.77	-18 40.4	2.458	3.381	8.0	21.3
9 18	21 16.32	-21 20.9	2.138	2.974	12.7	18.8	9 18	21 19.81	-18 56.4	2.547	3.389	10.7	21.5
<b>78863</b>	2003 <i>QJ</i> <sub>78</sub>		8 15.6	272°13	4°8/21.1	18	<b>161515</b>	2004 <i>RO</i> <sub>291</sub>		8 15.7	146°58	3°0/18.8	18
7 10	22 0.32	+ 4 47.8	2.497	3.265	13.4	19.2	7 10	22 1.83	-1 39.3	2.405	3.206	12.9	20.5
7 20	21 56.81	+ 4 41.4	2.403	3.259	11.2	19.1	7 20	21 57.96	-1 52.8	2.321	3.209	10.4	20.3
7 30	21 51.79	+ 4 17.2	2.330	3.254	8.8	18.9	7 30	21 52.52	-2 20.8	2.259	3.211	7.5	20.1
8 9	21 45.67	+ 3 35.5	2.281	3.249	6.4	18.7	8 9	21 45.97	-3 1.9	2.222	3.212	4.6	20.0
8 19	21 39.01	+ 2 38.2	2.258	3.243	4.9	18.6	8 19	21 38.91	-3 53.4	2.212	3.214	3.0	19.9
8 29	21 32.48	+ 1 29.0	2.263	3.238	5.6	18.7	8 29	21 32.04	-4 51.2	2.231	3.216	4.7	20.0
9 8	21 26.77	+ 0 13.0	2.295	3.233	7.7	18.8	9 8	21 26.06	-5 50.5	2.277	3.218	7.6	20.2
9 18	21 22.42	-1 4.4	2.353	3.227	10.3	19.0	9 18	21 21.53	-6 47.0	2.348	3.219	10.4	20.4
<b>109344</b>	2001 <i>QG</i> <sub>149</sub>		8 15.7	311°98	3°6/13.4	18	<b>436968</b>	2012 <i>TY</i> <sub>173</sub>		8 15.7	357°91	3°3/17.9	18
7 10	22 4.99	-18 45.9	1.363	2.245	16.6	19.5	7 10	22 3.53	-5 0.4	1.463	2.308	17.7	20.8
7 20	22 1.89	-19 31.0	1.280	2.224	12.8	19.2	7 20	22 0.23	-4 51.4	1.390	2.306	14.1	20.5
7 30	21 55.88	-20 25.7	1.218	2.204	8.4	18.9	7 30	21 54.46	-5 0.4	1.336	2.305	10.0	20.3
8 9	21 47.57	-21 22.9	1.177	2.184	4.3	18.6	8 9	21 46.89	-5 26.2	1.304	2.304	5.6	20.0
8 19	21 38.00	-22 14.0	1.161	2.165	4.7	18.6	8 19	21 38.45	-6 5.1	1.297	2.304	3.4	19.9
8 29	21 28.64	-22 51.0	1.169	2.146	9.3	18.8	8 29	21 30.36	-6 51.3	1.314	2.304	6.6	20.1
9 8	21 20.94	-23 8.8	1.199	2.128	14.1	19.0	9 8	21 23.76	-7 38.2	1.355	2.305	10.9	20.4
9 18	21 16.00	-23 6.0	1.249	2.110	18.3	19.3	9 18	21 19.49	-8 20.2	1.418	2.307	14.9	20.6
<b>153232</b>	2000 <i>YG</i> <sub>111</sub>		8 15.7	230°55	0°8/16.4	18	<b>249770</b>	2000 <i>VL</i> <sub>53</sub>		8 15.7	313°09	4°5/19.2	18
7 10	22 4.76	-10 0.9	2.574	3.400	11.5	20.7	7 10	22 3.07	-0 47.0	2.022	2.828	14.9	19.8
7 20	22 0.12	-10 7.1	2.481	3.392	8.9	20.5	7 20	21 59.29	-0 27.1	1.931	2.819	12.2	19.6
7 30	21 53.89	-10 21.6	2.413	3.384	5.9	20.3	7 30	21 53.60	-0 22.9	1.861	2.809	9.1	19.4
8 9	21 46.52	-10 42.2	2.370	3.375	2.7	20.1	8 9	21 46.48	-0 34.5	1.815	2.800	6.1	19.2
8 19	21 38.59	-11 6.4	2.356	3.367	1.2	20.0	8 19	21 38.65	-1 0.4	1.794	2.791	4.5	19.1
8 29	21 30.82	-11 31.0	2.371	3.358	4.4	20.2	8 29	21 30.97	-1 37.1	1.800	2.782	6.0	19.2
9 8	21 23.92	-11 53.1	2.414	3.348	7.6	20.4	9 8	21 24.33	-2 19.9	1.832	2.774	9.1	19.3
9 18	21 18.46	-12 10.3	2.482	3.339	10.5	20.6	9 18	21 19.87	-3 3.9	1.887	2.766	12.3	19.5
<b>185590</b>	2008 <i>BJ</i> <sub>33</sub>		8 15.7	78°98	0°3/15.9	17	<b>476907</b>	2008 <i>WS</i> <sub>39</sub>		8 15.7	260°99	1°5/14.5	18
7 10	22 6.46	-9 28.0	1.473	2.327	17.1	20.4	7 10	22 6.20	-15 13.8	1.960	2.813	13.5	22.1
7 20	22 2.30	-10 9.5	1.415	2.341	13.2	20.2	7 20	22 1.87	-15 51.6	1.869	2.797	10.4	21.9
7 30	21 55.67	-11 7.1	1.376	2.355	8.6	19.9	7 30	21 55.38	-16 38.5	1.800	2.781	6.7	21.6
8 9	21 47.30	-12 15.4	1.362	2.369	3.6	19.7	8 9	21 47.25	-17 29.9	1.757	2.765	2.8	21.3
8 19	21 38.23	-13 27.2	1.372	2.383	1.6	19.6	8 19	21 38.26	-18 20.3	1.741	2.748	2.5	21.3
8 29	21 29.68	-14 34.7	1.409	2.397	6.6	19.9	8 29	21 29.41	-19 4.1	1.752	2.731	6.4	21.5
9 8	21 22.76	-15 31.6	1.471	2.411	11.1	20.2	9 8	21 21.72	-19 37.0	1.789	2.714	10.4	21.7
9 18	21 18.22	-16 14.1	1.554	2.424	14.9	20.5	9 18	21 15.98	-19 56.8	1.849	2.697	13.9	21.9
<b>339203</b>	2004 <i>TN</i> <sub>245</sub>		8 15.7	15°03	9°0/11.4	16	<b>25485</b>	1999 <i>XY</i> <sub>75</sub>		8 15.7	174°33	0°0/15.7	18
7 10	22 11.09	-31 54.9	1.186	2.073	18.2	20.3	7 10	22 2.99	-11 42.4	2.982	3.810	10.0	19.7
7 20	22 6.69	-32 37.7	1.140	2.078	14.6	20.1	7 20	21 58.54	-12 9.6	2.899	3.813	7.7	19.6
7 30	21 58.83	-33 11.9	1.113	2.084	11.1	19.9	7 30	21 52.76	-12 43.8	2.840	3.815	5.0	19.4
8 9	21 48.61	-33 27.2	1.107	2.092	9.1	19.8	8 9	21 46.05	-13 22.4	2.809	3.816	2.0	19.2
8 19	21 37.63	-33 15.9	1.123	2.100	9.9	19.9	8 19	21 38.92	-14 2.3	2.807	3.817	1.0	19.1
8 29	21 27.67	-32 35.5	1.162	2.110	12.7	20.1	8 29	21 31.97	-14 40.3	2.835	3.818	4.0	19.3
9 8	21 20.22	-31 28.9	1.221	2.121	16.1	20.3	9 8	21 25.77	-15 13.7	2.890	3.818	6.8	19.5
9 18	21 16.07	-30 2.3	1.298	2.133	19.4	20.6	9 18	21 20.79	-15 40.4	2.972	3.818	9.2	19.7
<b>304269</b>	2006 <i>RL</i> <sub>96</sub>		8 15.7	325°65	0°6/16.1	18	<b>476811</b>	2008 <i>UD</i> <sub>196</sub>		8 15.7	31°97	2°8/13.5	16

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>270991</b>	2002 <i>XU</i> <sub>25</sub>		8 15.7 237°44	3°0/17.7	18		<b>313917</b>	2004 <i>QO</i> <sub>7</sub>		8 15.7 277°19	2°1/13.9	18	
7 10	22 7.30	-5 9.1	1.752	2.578	16.0	21.0	7 10	22 7.29	-19 40.3	2.291	3.142	11.9	20.8
7 20	22 2.82	-5 3.4	1.665	2.571	12.8	20.8	7 20	22 2.34	-19 56.3	2.202	3.129	9.1	20.6
7 30	21 56.04	-5 13.1	1.600	2.564	9.0	20.6	7 30	21 55.49	-20 15.3	2.136	3.116	5.9	20.4
8 9	21 47.54	-5 37.0	1.557	2.556	5.0	20.3	8 9	21 47.25	-20 33.4	2.097	3.102	2.8	20.2
8 19	21 38.15	-6 12.1	1.541	2.548	3.0	20.2	8 19	21 38.35	-20 46.8	2.085	3.089	2.9	20.1
8 29	21 28.97	-6 53.6	1.552	2.539	6.1	20.4	8 29	21 29.67	-20 52.3	2.101	3.075	6.0	20.3
9 8	21 21.09	-7 36.0	1.588	2.531	10.2	20.6	9 8	21 22.06	-20 47.7	2.145	3.062	9.3	20.5
9 18	21 15.32	-8 14.5	1.647	2.522	13.9	20.8	9 18	21 16.19	-20 32.6	2.212	3.048	12.3	20.7
<b>145790</b>	1998 <i>QE</i> <sub>36</sub>		8 15.7	1°94	0°8/16.1	18	<b>506404</b>	2017 <i>SM</i> <sub>5</sub>		8 15.7 281°46	2°9/13.6	17	
7 10	22 7.16	-12 31.9	1.185	2.060	19.1	18.7	7 10	22 5.78	-15 33.3	1.357	2.232	17.1	21.3
7 20	22 3.52	-12 12.2	1.120	2.058	14.8	18.4	7 20	22 2.49	-16 39.6	1.277	2.217	13.1	21.0
7 30	21 56.83	-12 4.2	1.074	2.057	9.8	18.2	7 30	21 56.29	-18 0.9	1.217	2.203	8.5	20.7
8 9	21 47.91	-12 5.0	1.050	2.058	4.2	17.8	8 9	21 47.79	-19 29.8	1.180	2.188	3.9	20.4
8 19	21 37.99	-12 10.2	1.048	2.059	1.9	17.7	8 19	21 38.03	-20 56.1	1.167	2.173	4.2	20.4
8 29	21 28.63	-12 15.1	1.070	2.061	7.5	18.1	8 29	21 28.47	-22 9.7	1.180	2.158	9.0	20.6
9 8	21 21.25	-12 15.3	1.114	2.064	12.7	18.4	9 8	21 20.57	-23 3.3	1.215	2.143	14.0	20.9
9 18	21 16.80	-12 8.2	1.178	2.068	17.2	18.6	9 18	21 15.41	-23 34.1	1.270	2.128	18.3	21.1
<b>495617</b>	2015 <i>RS</i> <sub>77</sub>		8 15.7 256°43	0°4/16.1	17		<b>360213</b>	1999 <i>PY</i> <sub>5</sub>		8 15.7 351°32	0°6/15.0	18	
7 10	22 4.45	-10 55.2	2.718	3.546	10.9	23.0	7 10	22 1.20	-10 53.1	2.013	2.862	13.4	20.5
7 20	21 59.92	-11 9.9	2.614	3.526	8.5	22.8	7 20	21 57.88	-12 0.0	1.935	2.861	10.2	20.3
7 30	21 53.81	-11 32.6	2.533	3.505	5.6	22.6	7 30	21 52.68	-13 20.3	1.880	2.860	6.6	20.0
8 9	21 46.54	-12 1.0	2.478	3.485	2.4	22.3	8 9	21 46.13	-14 48.9	1.850	2.859	2.6	19.8
8 19	21 38.66	-12 32.2	2.453	3.464	1.1	22.2	8 19	21 38.92	-16 19.2	1.848	2.858	1.8	19.7
8 29	21 30.86	-13 3.1	2.457	3.442	4.4	22.4	8 29	21 31.92	-17 44.4	1.875	2.857	5.8	20.0
9 8	21 23.82	-13 30.5	2.489	3.420	7.6	22.6	9 8	21 25.98	-18 58.6	1.927	2.857	9.5	20.2
9 18	21 18.13	-13 52.0	2.546	3.398	10.4	22.7	9 18	21 21.77	-19 58.1	2.004	2.857	12.7	20.4
<b>371880</b>	2008 <i>CQ</i> <sub>47</sub>		8 15.7 263°69	1°8/14.3	17		<b>391959</b>	2008 <i>WQ</i> <sub>73</sub>		8 15.7 252°12	3°1/13.2	18	
7 10	22 6.62	-14 7.9	1.601	2.462	15.7	21.6	7 10	22 6.90	-19 39.8	1.962	2.822	13.2	21.5
7 20	22 2.72	-15 3.2	1.513	2.446	12.0	21.4	7 20	22 2.41	-20 27.4	1.879	2.811	10.1	21.3
7 30	21 56.23	-16 12.3	1.445	2.428	7.8	21.1	7 30	21 55.72	-21 20.6	1.819	2.800	6.6	21.0
8 9	21 47.70	-17 29.5	1.402	2.411	3.2	20.8	8 9	21 47.40	-22 13.7	1.784	2.788	3.5	20.8
8 19	21 38.04	-18 46.7	1.385	2.393	3.0	20.7	8 19	21 38.27	-23 0.7	1.776	2.777	3.9	20.8
8 29	21 28.51	-19 55.7	1.394	2.374	7.7	20.9	8 29	21 29.36	-23 36.2	1.796	2.765	7.3	21.0
9 8	21 20.36	-20 50.0	1.428	2.356	12.3	21.2	9 8	21 21.69	-23 56.9	1.841	2.753	10.9	21.2
9 18	21 14.59	-21 26.2	1.483	2.337	16.4	21.4	9 18	21 16.03	-24 1.8	1.908	2.740	14.1	21.4
<b>255589</b>	2006 <i>OM</i> <sub>5</sub>		8 15.7	5°62	1°6/16.4	17	<b>505687</b>	2014 <i>WP</i> <sub>427</sub>		8 15.7 154°17	0°9/16.5	17	
7 10	22 5.32	-11 41.4	1.002	1.889	20.8	19.5	7 10	22 7.26	-8 3.2	1.984	2.813	14.3	22.2
7 20	22 2.49	-11 10.1	0.945	1.888	16.2	19.2	7 20	22 2.41	-8 38.9	1.910	2.821	11.1	22.0
7 30	21 56.33	-10 52.9	0.904	1.889	10.8	18.9	7 30	21 55.56	-9 28.3	1.857	2.829	7.4	21.8
8 9	21 47.74	-10 47.1	0.884	1.891	4.9	18.6	8 9	21 47.28	-10 27.7	1.830	2.836	3.3	21.6
8 19	21 38.09	-10 48.8	0.884	1.895	2.3	18.5	8 19	21 38.36	-11 32.0	1.831	2.842	1.4	21.5
8 29	21 29.11	-10 52.6	0.907	1.900	8.0	18.8	8 29	21 29.75	-12 35.4	1.860	2.847	5.4	21.8
9 8	21 22.34	-10 53.6	0.950	1.906	13.5	19.2	9 8	21 22.34	-13 32.7	1.917	2.852	9.2	22.0
9 18	21 18.76	-10 48.2	1.012	1.914	18.3	19.5	9 18	21 16.82	-14 20.1	1.997	2.856	12.5	22.2
<b>193458</b>	2000 <i>XQ</i> <sub>4</sub>		8 15.7 313°29	4°9/12.8	18		<b>264044</b>	2009 <i>RD</i> <sub>20</sub>		8 15.7 266°25	4°2/19.9	18	
7 10	22 8.89	-23 46.7	1.461	2.338	16.0	20.0	7 10	22 1.90	+1 49.0	2.608	3.387	12.6	20.5
7 20	22 4.80	-24 16.3	1.377	2.316	12.4	19.8	7 20	21 58.04	+1 52.7	2.503	3.370	10.5	20.3
7 30	21 57.72	-24 48.1	1.313	2.295	8.5	19.5	7 30	21 52.63	+1 41.6	2.419	3.353	8.0	20.1
8 9	21 48.34	-25 14.6	1.272	2.274	5.3	19.2	8 9	21 46.09	+1 15.8	2.360	3.336	5.6	19.9
8 19	21 37.74	-25 28.4	1.256	2.253	5.9	19.2	8 19	21 38.93	+0 36.7	2.327	3.319	4.2	19.8
8 29	21 27.43	-25 23.8	1.264	2.233	9.7	19.4	8 29	21 31.84	+0 12.6	2.323	3.301	5.2	19.9
9 8	21 18.85	-24 59.0	1.295	2.214	14.0	19.6	9 8	21 25.50	+1 8.0	2.346	3.283	7.6	20.0
9 18	21 13.08	-24 15.4	1.346	2.195	18.0	19.8	9 18	21 20.49	-2 5.1	2.395	3.265	10.3	20.1
<b>184920</b>	2005 <i>UQ</i> <sub>492</sub>		8 15.7 300°60	6°2/10.1	18		<b>94326</b>	2001 <i>FW</i> <sub>139</sub>		8 15.7 229°60	1°9/13.9	18	
7 10	22 6.21	-28 50.7	2.008	2.875	12.7	20.1	7 10	22 7.79	-19 55.1	2.801	3.643	10.3	19.9
7 20	22 1.95	-29 57.0	1.935	2.864	10.0	19.9	7 20	22 2.35	-20 9.5	2.710	3.632	7.8	19.7
7 30	21 55.44	-31 2.0	1.885	2.853	7.5	19.7	7 30	21 55.31	-20 26.0	2.644	3.622	5.1	19.5
8 9	21 47.28	-31 58.5	1.860	2.843	6.2	19.6	8 9	21 47.14	-20 41.4	2.605	3.611	2.5	19.3
8 19	21 38.32	-32 39.8	1.860	2.832	7.1	19.6	8 19	21 38.44	-20 52.4	2.596	3.599	2.5	19.3
8 29	21 29.66	-33 1.1	1.887	2.821	9.5	19.8	8 29	21 29.93	-20 56.7	2.616	3.587	5.2	19.5
9 8	21 22.33	-33 1.0	1.937	2.811	12.3	19.9	9 8	21 22.32	-20 52.5	2.664	3.575	8.0	19.7
9 18	21 17.10	-32 40.6	2.008	2.801	14.9	20.1	9 18	21 16.17	-20 39.4	2.737	3.563	10.5	19.8
<b>266155</b>	2006 <i>UB</i> <sub>68</sub>		8 15.7 338°32	5°9/11.7	18		<b>71706</b>	2000 <i>GY</i> <sub>38</sub>		8 15.7 227°84	3°0/12.9	18	
7 10	22 3.49	-21 51.8	1.187	2.083	17.6	19.9	7 10	22 7.94	-21 33.5	2.435	3.285	11.3	19.9
7 20	22 1.02	-23 10.1	1.123	2.074	13.5	19.6	7 20	22 2.78	-22 15.1	2.347	3.273	8.7	19.7
7 30	21 55.42	-24 36.5	1.079	2.065	9.2	19.4	7 30	21 55.76	-22 59.6	2.284	3.261	5.8	19.5
8 9	21 47.42	-26 0.2	1.056	2.057	6.1	19.2	8 9	21 47.37	-23 42.2	2.247	3.248	3.3	19.3
8 19	21 38.24	-27 9.8	1.056	2.050	7.3	19.2	8 19	21 38.31	-24 18.2	2.239	3.235	3.8	19.4
8 29	21 29.50	-27 55.7	1.078	2.044	11.3	19.4	8 29	21 29.44	-24 43.5	2.259	3.221	6.5	19.5
9 8	21 22.74	-28 13.7	1.121	2.039	15.8	19.7	9 8	21 21.58	-24 55.9	2.306	3.207	9.5	19.7
9 18	21 19.00	-28 4.6	1.182	2.035	19.7	19.9	9 18	21 15.41	-24 54.9	2.376	3.192	12.2	19.8
<b>17863</b>	1998 <i>KN</i> <sub>30</sub>		8 15.7 259°52	5°3/10.7	18		<b>95439</b>	2002 <i>CJ</i> <sub>244</sub>		8 15.7 340°72	4°1/13.4		

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>90123</b>	2002 <i>XO</i> <sub>76</sub>		8 15.7 248°60	1°8/14.4	18		<b>269746</b>	1998 <i>WW</i> <sub>25</sub>		8 15.7 234°27	1°2/14.8	17	
7 10	22 8.34	-16 9.1	1.760	2.617	14.7	20.6	7 10	22 8.08	-14 33.9	1.830	2.682	14.4	22.0
7 20	22 3.74	-16 44.0	1.675	2.605	11.2	20.4	7 20	22 3.43	-15 8.3	1.745	2.672	11.0	21.7
7 30	21 56.72	-17 27.6	1.611	2.593	7.3	20.1	7 30	21 56.46	-15 52.6	1.682	2.662	7.1	21.5
8 9	21 47.87	-18 14.9	1.573	2.581	3.1	19.9	8 9	21 47.76	-16 41.8	1.643	2.652	2.9	21.2
8 19	21 38.08	-18 59.7	1.561	2.568	2.9	19.8	8 19	21 38.18	-17 30.4	1.632	2.641	2.3	21.1
8 29	21 28.51	-19 36.2	1.576	2.555	7.1	20.0	8 29	21 28.81	-18 12.6	1.648	2.630	6.6	21.4
9 8	21 20.31	-20 0.3	1.616	2.542	11.3	20.3	9 8	21 20.74	-18 43.8	1.690	2.618	10.7	21.6
9 18	21 14.33	-20 10.1	1.678	2.528	15.0	20.5	9 18	21 14.78	-19 2.0	1.755	2.606	14.4	21.8
<b>92211</b>	2000 <i>AO</i> <sub>3</sub>		8 15.7 250°63	0°4/15.3	18		<b>346016</b>	2007 <i>TF</i> <sub>283</sub>		8 15.7 274°65	3°3/13.1	18	
7 10	22 8.19	-15 19.6	2.585	3.420	11.2	19.4	7 10	22 6.86	-20 30.6	1.878	2.741	13.6	20.6
7 20	22 2.76	-15 16.3	2.491	3.409	8.6	19.2	7 20	22 2.39	-21 13.3	1.804	2.738	10.4	20.4
7 30	21 55.64	-15 17.1	2.420	3.397	5.6	19.0	7 30	21 55.70	-22 0.3	1.753	2.734	6.8	20.2
8 9	21 47.31	-15 19.8	2.377	3.385	2.2	18.8	8 9	21 47.40	-22 45.9	1.727	2.731	3.7	20.0
8 19	21 38.39	-15 21.8	2.363	3.373	1.4	18.7	8 19	21 38.37	-23 24.1	1.727	2.727	4.1	20.0
8 29	21 29.66	-15 20.8	2.378	3.360	4.8	18.9	8 29	21 29.67	-23 50.0	1.754	2.723	7.5	20.2
9 8	21 21.86	-15 14.7	2.421	3.348	8.0	19.1	9 8	21 22.31	-24 0.9	1.807	2.720	11.0	20.4
9 18	21 15.60	-15 2.8	2.490	3.335	10.8	19.3	9 18	21 17.03	-23 56.3	1.881	2.716	14.2	20.6
<b>215370</b>	2001 <i>YU</i> <sub>64</sub>		8 15.7 296°93	5°3/10.6	18		<b>413095</b>	2001 <i>UC</i> <sub>56</sub>		8 15.7 295°46	3°1/14.0	17	
7 10	22 4.81	-25 56.1	2.050	2.918	12.4	19.7	7 10	22 9.66	-18 26.8	1.265	2.143	17.9	20.7
7 20	22 0.78	-27 10.7	1.980	2.913	9.6	19.5	7 20	22 5.59	-18 56.4	1.192	2.133	13.8	20.4
7 30	21 54.63	-28 26.5	1.934	2.908	6.9	19.4	7 30	21 58.34	-19 34.5	1.138	2.124	9.0	20.1
8 9	21 46.96	-29 36.3	1.913	2.903	5.3	19.3	8 9	21 48.64	-20 13.9	1.107	2.115	4.2	19.8
8 19	21 38.55	-30 33.4	1.919	2.898	6.2	19.3	8 19	21 37.74	-20 46.6	1.100	2.105	4.2	19.8
8 29	21 30.42	-31 12.6	1.951	2.893	8.8	19.5	8 29	21 27.24	-21 5.7	1.116	2.096	9.1	20.1
9 8	21 23.53	-31 31.7	2.007	2.888	11.6	19.6	9 8	21 18.72	-21 7.3	1.155	2.088	14.1	20.3
9 18	21 18.60	-31 30.9	2.084	2.883	14.3	19.8	9 18	21 13.23	-20 51.2	1.214	2.079	18.5	20.6
<b>125192</b>	2001 <i>UR</i> <sub>122</sub>		8 15.7 140°95	5°0/19.2	17		<b>221039</b>	2005 <i>QP</i> <sub>68</sub>		8 15.7 301°58	5°4/12.1	18	
7 10	22 7.74	-0 18.6	1.497	2.314	18.7	20.1	7 10	22 8.08	-23 31.2	1.452	2.330	16.0	20.0
7 20	22 3.39	-0 10.2	1.425	2.320	15.2	19.8	7 20	22 4.15	-24 25.4	1.375	2.316	12.4	19.8
7 30	21 56.51	-0 24.2	1.371	2.325	11.2	19.6	7 30	21 57.30	-25 23.6	1.320	2.301	8.5	19.5
8 9	21 47.77	-0 59.9	1.340	2.329	7.2	19.4	8 9	21 48.20	-26 17.4	1.287	2.287	5.6	19.3
8 19	21 38.17	-1 53.9	1.333	2.333	5.0	19.3	8 19	21 37.96	-26 58.1	1.279	2.273	6.5	19.3
8 29	21 28.93	-3 0.1	1.352	2.337	7.1	19.4	8 29	21 28.05	-27 18.8	1.295	2.259	10.2	19.5
9 8	21 21.25	-4 10.4	1.395	2.341	11.0	19.7	9 8	21 19.89	-27 16.6	1.334	2.245	14.3	19.7
9 18	21 15.97	-5 17.5	1.461	2.344	14.9	19.9	9 18	21 14.49	-26 52.7	1.393	2.232	18.0	19.9
<b>289746</b>	2005 <i>JT</i> <sub>53</sub>		8 15.7 203°35	5°0/20.6	18		<b>322203</b>	2010 <i>YZ</i>		8 15.7 328°04	3°1/18.2	18	
7 10	22 2.96	+ 3 34.5	2.171	2.950	14.8	21.4	7 10	22 3.39	-4 12.7	2.144	2.962	13.8	20.6
7 20	21 59.07	+ 3 32.2	2.082	2.948	12.3	21.2	7 20	21 59.41	-3 59.4	2.057	2.956	11.0	20.4
7 30	21 53.39	+ 3 10.7	2.015	2.946	9.5	21.0	7 30	21 53.62	-3 59.1	1.992	2.950	7.9	20.2
8 9	21 46.43	+ 2 30.4	1.970	2.944	6.7	20.8	8 9	21 46.53	-4 10.8	1.951	2.945	4.7	20.0
8 19	21 38.84	+ 1 33.3	1.952	2.942	5.0	20.7	8 19	21 38.81	-4 32.5	1.937	2.940	3.1	19.9
8 29	21 31.42	+ 0 23.7	1.961	2.939	6.0	20.8	8 29	21 31.28	-5 1.0	1.950	2.936	5.2	20.0
9 8	21 24.97	+ 0 52.3	1.996	2.936	8.6	20.9	9 8	21 24.76	-5 32.2	1.989	2.931	8.5	20.2
9 18	21 20.15	-2 8.8	2.057	2.933	11.5	21.1	9 18	21 19.89	-6 2.2	2.053	2.927	11.6	20.4
<b>254301</b>	2004 <i>RA</i> <sub>292</sub>		8 15.7 308°74	2°0/14.1	18		<b>56466</b>	2000 <i>GZ</i> <sub>99</sub>		8 15.7 70°75	3°2/17.7	17	
7 10	22 6.38	-19 0.7	2.187	3.041	12.3	20.0	7 10	22 9.31	-4 35.2	1.221	2.068	20.4	19.0
7 20	22 1.67	-19 19.0	2.108	3.037	9.3	19.9	7 20	22 4.77	-4 42.4	1.172	2.089	16.1	18.8
7 30	21 55.05	-19 41.0	2.052	3.032	6.0	19.6	7 30	21 57.40	-5 11.8	1.141	2.111	11.1	18.6
8 9	21 47.09	-20 2.6	2.022	3.028	2.8	19.4	8 9	21 48.09	-6 0.0	1.132	2.132	5.9	18.4
8 19	21 38.52	-20 19.9	2.019	3.024	2.8	19.4	8 19	21 38.09	-7 0.6	1.146	2.154	3.3	18.3
8 29	21 30.25	-20 29.3	2.045	3.020	6.0	19.6	8 29	21 28.83	-8 5.3	1.185	2.175	7.0	18.6
9 8	21 23.11	-20 28.9	2.096	3.016	9.4	19.8	9 8	21 21.57	-9 6.1	1.248	2.197	11.7	18.9
9 18	21 17.75	-20 17.9	2.171	3.012	12.3	20.0	9 18	21 17.08	-9 57.0	1.331	2.218	15.8	19.2
<b>219249</b>	1999 <i>XC</i> <sub>139</sub>		8 15.7 236°36	4°1/11.0	18		<b>166543</b>	2002 <i>RR</i> <sub>41</sub>		8 15.7 292°23	3°1/13.4	18	
7 10	22 3.53	-24 11.4	2.498	3.358	10.7	20.0	7 10	22 6.58	-19 51.3	1.828	2.692	13.9	19.9
7 20	21 59.42	-25 22.9	2.422	3.352	8.2	19.8	7 20	22 2.37	-20 28.4	1.741	2.676	10.6	19.6
7 30	21 53.59	-26 36.5	2.371	3.347	5.7	19.7	7 30	21 55.83	-21 11.0	1.677	2.659	7.0	19.4
8 9	21 46.50	-27 46.5	2.348	3.341	4.2	19.5	8 9	21 47.52	-21 53.5	1.637	2.642	3.7	19.1
8 19	21 38.81	-28 47.3	2.352	3.335	4.9	19.6	8 19	21 38.30	-22 29.8	1.624	2.626	4.0	19.1
8 29	21 31.29	-29 34.5	2.383	3.329	7.2	19.7	8 29	21 29.30	-22 54.6	1.637	2.609	7.6	19.3
9 8	21 24.74	-30 5.6	2.441	3.323	9.8	19.9	9 8	21 21.59	-23 4.6	1.675	2.593	11.4	19.5
9 18	21 19.76	-30 20.1	2.521	3.316	12.2	20.0	9 18	21 16.03	-22 59.1	1.735	2.577	14.9	19.7
<b>285454</b>	1999 <i>XD</i> <sub>210</sub>		8 15.7 219°23	1°8/14.1	18		<b>252745</b>	2002 <i>EV</i> <sub>4</sub>		8 15.7 88°47	0°6/16.2	18	
7 10	22 8.34	-18 0.7	2.570	3.411	11.1	21.6	7 10	22 3.65	-9 36.9	2.287	3.121	12.5	21.2
7 20	22 2.96	-18 30.5	2.478	3.400	8.4	21.4	7 20	21 59.37	-10 4.8	2.220	3.135	9.6	21.0
7 30	21 55.82	-19 4.7	2.411	3.389	5.5	21.2	7 30	21 53.45	-10 43.0	2.176	3.149	6.3	20.9
8 9	21 47.40	-19 39.4	2.370	3.377	2.5	21.0	8 9	21 46.41	-11 28.1	2.157	3.163	2.7	20.7
8 19	21 38.36	-20 10.7	2.359	3.364	2.5	21.0	8 19	21 38.91	-12 16.2	2.167	3.177	1.2	20.6
8 29	21 29.48	-20 35.1	2.377	3.350	5.5	21.2	8 29	21 31.72	-13 2.9	2.204	3.191	4.7	20.8
9 8	21 21.54	-20 50.0	2.423	3.336	8.6	21.3	9 8	21 25.55	-13 44.5	2.269	3.205	8.0	21.1
9 18	21 15.17	-20 54.4	2.494	3.321	11.4	21.5	9 18	21 20.95	-14 18.1	2.359	3.218	10.9	21.3
<b>362548</b>	2010 <i>UK</i> <sub>60</sub>		8 15.7 357°81	5°1/19.9	18		<b>118530</b>	2000 <i>EW</i> <sub>48</sub>		8 15.7 95°05	1°8/14.5	17	

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>401403</b>	2013 <i>CK</i> <sub>61</sub>		8 15.7 63°64	1.3°/16.7	18		<b>71584</b>	2000 <i>DD</i> <sub>62</sub>		8 15.7 227°79	0°0/15.7	18	
7 10	22 5.94	-9 21.8	2.090	2.923	13.5	20.6	7 10	22 2.97	-11 48.9	2.781	3.613	10.6	20.3
7 20	22 1.31	-9 17.9	2.014	2.927	10.5	20.4	7 20	21 58.73	-12 13.8	2.690	3.605	8.1	20.1
7 30	21 54.81	-9 23.9	1.960	2.931	7.1	20.2	7 30	21 53.04	-12 46.2	2.622	3.597	5.3	19.9
8 9	21 47.00	-9 37.7	1.931	2.936	3.4	20.0	8 9	21 46.30	-13 23.5	2.581	3.589	2.2	19.7
8 19	21 38.62	-9 56.4	1.930	2.940	1.6	19.9	8 19	21 39.05	-14 2.6	2.569	3.580	1.1	19.6
8 29	21 30.54	-10 16.6	1.957	2.944	5.0	20.1	8 29	21 31.95	-14 40.0	2.586	3.571	4.3	19.8
9 8	21 23.60	-10 34.8	2.010	2.949	8.6	20.4	9 8	21 25.61	-15 12.6	2.631	3.561	7.3	20.0
9 18	21 18.43	-10 48.4	2.087	2.953	11.8	20.6	9 18	21 20.58	-15 38.3	2.702	3.552	9.9	20.2
<b>44334</b>	1998 <i>RO</i> <sub>63</sub>		8 15.7 354°64	2°5/13.9	18		<b>94965</b>	2001 <i>YG</i> <sub>105</sub>		8 15.7 272°40	0°9/14.9	18	
7 10	22 3.90	-17 10.5	1.512	2.387	15.7	18.8	7 10	22 5.03	-12 44.9	1.698	2.554	15.1	19.7
7 20	22 0.56	-17 53.1	1.444	2.384	11.9	18.6	7 20	22 1.24	-13 29.0	1.617	2.547	11.6	19.5
7 30	21 54.73	-18 44.6	1.396	2.382	7.7	18.4	7 30	21 55.13	-14 25.8	1.558	2.540	7.5	19.2
8 9	21 47.08	-19 38.6	1.372	2.380	3.5	18.1	8 9	21 47.28	-15 30.3	1.524	2.533	3.0	18.9
8 19	21 38.59	-20 28.0	1.373	2.379	3.6	18.1	8 19	21 38.56	-16 36.0	1.516	2.525	2.1	18.9
8 29	21 30.49	-21 6.3	1.399	2.378	7.8	18.4	8 29	21 30.07	-17 36.0	1.534	2.518	6.7	19.1
9 8	21 23.93	-21 29.3	1.449	2.378	12.0	18.6	9 8	21 22.92	-18 24.7	1.578	2.511	11.0	19.4
9 18	21 19.74	-21 35.5	1.519	2.379	15.7	18.8	9 18	21 17.92	-18 58.7	1.643	2.503	14.7	19.6
<b>294153</b>	2007 <i>TB</i> <sub>334</sub>		8 15.7 270°25	1°3/16.7	18		<b>440443</b>	2005 <i>SN</i> <sub>47</sub>		8 15.7 196°31	3°7/12.4	18	
7 10	22 5.06	-8 37.8	1.969	2.805	14.1	21.5	7 10	22 8.13	-24 33.8	2.429	3.282	11.2	21.5
7 20	22 0.90	-8 46.7	1.881	2.796	11.1	21.3	7 20	22 2.87	-25 7.4	2.355	3.280	8.6	21.3
7 30	21 54.71	-9 7.7	1.816	2.788	7.5	21.1	7 30	21 55.79	-25 41.0	2.304	3.279	5.9	21.2
8 9	21 47.03	-9 38.5	1.775	2.779	3.5	20.8	8 9	21 47.43	-26 9.9	2.280	3.277	3.9	21.0
8 19	21 38.60	-10 15.4	1.760	2.770	1.6	20.7	8 19	21 38.53	-26 29.8	2.284	3.275	4.3	21.1
8 29	21 30.37	-10 54.0	1.773	2.762	5.4	20.9	8 29	21 29.93	-26 37.5	2.316	3.273	6.8	21.2
9 8	21 23.26	-11 29.6	1.813	2.753	9.3	21.1	9 8	21 22.45	-26 31.8	2.375	3.270	9.5	21.4
9 18	21 18.01	-11 58.7	1.876	2.744	12.8	21.3	9 18	21 16.69	-26 13.2	2.456	3.267	12.0	21.5
<b>434092</b>	2002 <i>EE</i> <sub>9</sub>		8 15.7 107°39	1°2/14.9	17		<b>140207</b>	2001 <i>SC</i> <sub>228</sub>		8 15.7 351°70	1°3/14.7	18	
7 10	22 12.82	-16 47.4	1.952	2.796	13.9	21.0	7 10	22 4.84	-15 25.5	1.835	2.694	14.0	20.0
7 20	22 6.53	-16 54.2	1.891	2.813	10.6	20.8	7 20	22 0.85	-15 53.9	1.761	2.693	10.7	19.8
7 30	21 58.13	-17 5.8	1.852	2.831	6.8	20.6	7 30	21 54.72	-16 30.4	1.709	2.691	6.9	19.5
8 9	21 48.32	-17 18.3	1.840	2.848	2.8	20.4	8 9	21 47.06	-17 10.5	1.682	2.690	2.8	19.3
8 19	21 38.03	-17 27.7	1.856	2.864	2.1	20.4	8 19	21 38.70	-17 48.9	1.681	2.689	2.3	19.2
8 29	21 28.29	-17 31.0	1.900	2.880	5.9	20.7	8 29	21 30.67	-18 20.8	1.706	2.688	6.3	19.5
9 8	21 20.02	-17 26.2	1.971	2.896	9.6	20.9	9 8	21 23.91	-18 42.3	1.757	2.688	10.2	19.7
9 18	21 13.86	-17 13.0	2.066	2.911	12.7	21.1	9 18	21 19.16	-18 51.8	1.831	2.688	13.6	19.9
<b>447354</b>	2005 <i>YR</i> <sub>239</sub>		8 15.7 287°25	0°2/15.5	17		<b>349251</b>	2007 <i>TT</i> <sub>127</sub>		8 15.7 54°04	2°8/13.5	18	
7 10	22 3.32	-11 51.0	2.257	3.098	12.4	22.0	7 10	22 6.04	-18 45.6	1.811	2.675	14.0	20.4
7 20	21 59.47	-12 21.0	2.153	3.074	9.6	21.7	7 20	22 1.77	-19 31.1	1.745	2.679	10.6	20.2
7 30	21 53.77	-13 1.1	2.072	3.050	6.3	21.5	7 30	21 55.30	-20 22.5	1.701	2.684	6.9	20.0
8 9	21 46.66	-13 48.4	2.017	3.025	2.6	21.2	8 9	21 47.29	-21 13.8	1.683	2.688	3.4	19.8
8 19	21 38.78	-14 38.6	1.990	3.000	1.4	21.1	8 19	21 38.60	-21 59.0	1.690	2.693	3.7	19.8
8 29	21 30.95	-15 26.9	1.991	2.975	5.3	21.3	8 29	21 30.31	-22 32.7	1.725	2.698	7.2	20.1
9 8	21 24.01	-16 9.0	2.018	2.950	9.0	21.5	9 8	21 23.39	-22 52.0	1.784	2.702	10.8	20.3
9 18	21 18.68	-16 41.8	2.070	2.925	12.3	21.6	9 18	21 18.55	-22 56.1	1.866	2.707	14.0	20.5
<b>35856</b>	1999 <i>JG</i> <sub>64</sub>		8 15.7 56°48	5°0/12.7	18		<b>390126</b>	2012 <i>VN</i> <sub>59</sub>		8 15.7 166°54	2°2/13.8	18	
7 10	22 9.64	-20 54.8	1.181	2.067	18.4	17.8	7 10	22 6.38	-17 28.1	2.018	2.874	13.1	21.2
7 20	22 5.32	-22 2.0	1.140	2.085	13.9	17.6	7 20	22 1.84	-18 12.5	1.946	2.876	9.9	21.0
7 30	21 57.89	-23 14.4	1.118	2.103	9.2	17.4	7 30	21 55.27	-19 3.4	1.896	2.877	6.4	20.8
8 9	21 48.34	-24 21.7	1.118	2.122	5.4	17.2	8 9	21 47.27	-19 55.6	1.872	2.879	3.0	20.6
8 19	21 38.06	-25 14.1	1.142	2.140	6.1	17.3	8 19	21 38.61	-20 43.5	1.875	2.880	3.1	20.6
8 29	21 28.67	-25 45.0	1.190	2.160	10.1	17.6	8 29	21 30.26	-21 22.1	1.906	2.881	6.5	20.8
9 8	21 21.49	-25 52.5	1.259	2.179	14.3	17.9	9 8	21 23.12	-21 48.2	1.963	2.882	10.0	21.0
9 18	21 17.33	-25 38.2	1.348	2.198	17.9	18.2	9 18	21 17.89	-22 0.5	2.043	2.882	13.1	21.2
<b>431246</b>	2006 <i>TX</i> <sub>64</sub>		8 15.7 301°42	6°0/19.3	15		<b>19194</b>	1992 <i>DG</i> <sub>7</sub>		8 15.7 331°96	0°1/15.8	18	
7 10	22 3.68	-0 5.9	1.400	2.229	19.2	21.7	7 10	22 1.30	-10 9.2	1.896	2.746	14.0	18.4
7 20	22 0.85	+0 19.0	1.303	2.204	16.0	21.5	7 20	21 58.13	-10 52.0	1.814	2.739	10.8	18.2
7 30	21 55.29	+0 21.5	1.224	2.178	12.1	21.2	7 30	21 52.97	-11 48.4	1.754	2.732	7.1	17.9
8 9	21 47.50	-0 0.1	1.165	2.153	8.2	20.9	8 9	21 46.37	-12 54.3	1.718	2.726	2.9	17.7
8 19	21 38.35	-0 45.0	1.129	2.128	6.0	20.7	8 19	21 39.04	-14 4.2	1.709	2.720	1.4	17.5
8 29	21 29.15	-1 48.4	1.117	2.103	8.1	20.7	8 29	21 31.92	-15 11.7	1.728	2.715	5.7	17.8
9 8	21 21.31	-3 1.9	1.127	2.079	12.4	20.9	9 8	21 25.91	-16 11.2	1.772	2.709	9.7	18.0
9 18	21 15.97	-4 16.7	1.159	2.055	17.0	21.1	9 18	21 21.72	-16 58.6	1.839	2.704	13.2	18.3
<b>57960</b>	2002 <i>JE</i> <sub>129</sub>		8 15.7 306°13	2°2/13.9	18		<b>94285</b>	2001 <i>DY</i> <sub>51</sub>		8 15.7 120°40	4°5/11.2	18	
7 10	22 5.38	-16 23.8	1.748	2.611	14.5	19.6	7 10	22 5.37	-25 56.3	2.358	3.219	11.3	19.7
7 20	22 1.40	-17 11.1	1.674	2.608	11.0	19.4	7 20	22 0.86	-26 54.1	2.293	3.222	8.7	19.5
7 30	21 55.15	-18 7.3	1.622	2.606	7.1	19.2	7 30	21 54.54	-27 51.7	2.252	3.225	6.2	19.4
8 9	21 47.25	-19 6.6	1.596	2.603	3.1	18.9	8 9	21 46.94	-28 43.5	2.236	3.227	4.6	19.3
8 19	21 38.56	-20 2.5	1.595	2.601	3.2	18.9	8 19	21 38.80	-29 24.4	2.249	3.230	5.2	19.3
8 29	21 30.19	-20 48.7	1.621	2.599	7.1	19.1	8 29	21 30.96	-29 50.6	2.288	3.233	7.5	19.5
9 8	21 23.17	-21 21.0	1.672	2.596	11.0	19.4	9 8	21 24.22	-30 0.5	2.353	3.236	10.1	19.7
9 18	21 18.28	-21 37.7	1.745	2.594	14.5	19.6	9 18	21 19.21	-29 54.5	2.440	3.239	12.5	19.8
<b>164037</b>	2003 <i>UP</i> <sub>257</sub>		8 15.7 262°21	3°0/18.3	18		<b>42180</b>	2001 <i>CL</i> <sub>26</sub>		8 15.7 264°71	0		

EPHEMERIDES

8 15.7

8 15.7

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>86113</b>	1999 <i>RC</i> <sub>129</sub>		8 15.7 205°52	0°2/15.5	18		<b>481359</b>	2006 <i>FO</i> <sub>9</sub>		8 15.7 217°42	7°2/ 7.7	18	
7 10	22 7.10	-13 52.8	2.590	3.423	11.2	18.2	7 10	22 9.68	-38 27.3	2.706	3.545	10.6	20.8
7 20	22 1.93	-13 58.2	2.503	3.419	8.6	18.1	7 20	22 4.16	-39 28.4	2.643	3.540	9.0	20.7
7 30	21 55.13	-14 9.3	2.440	3.415	5.6	17.9	7 30	21 56.68	-40 21.8	2.605	3.536	7.7	20.6
8 9	21 47.18	-14 23.4	2.404	3.411	2.3	17.6	8 9	21 47.84	-41 1.6	2.592	3.531	7.3	20.5
8 19	21 38.70	-14 37.9	2.396	3.406	1.2	17.5	8 19	21 38.41	-41 23.2	2.605	3.525	7.9	20.6
8 29	21 30.43	-14 49.9	2.418	3.401	4.6	17.8	8 29	21 29.33	-41 24.1	2.643	3.520	9.4	20.7
9 8	21 23.09	-14 57.2	2.468	3.396	7.8	18.0	9 8	21 21.46	-41 4.5	2.705	3.514	11.2	20.8
9 18	21 17.25	-14 58.3	2.543	3.390	10.6	18.1	9 18	21 15.45	-40 26.5	2.787	3.509	12.8	20.9
<b>301246</b>	2009 <i>BW</i> <sub>45</sub>		8 15.7 75°43	1°3/16.8	18		<b>126898</b>	2002 <i>EK</i> <sub>107</sub>		8 15.7 2°25	4°3/11.7	18	
7 10	22 4.90	- 8 15.7	1.918	2.755	14.4	21.4	7 10	22 3.48	-22 42.8	1.998	2.867	12.7	19.5
7 20	22 0.73	- 8 29.6	1.844	2.759	11.2	21.2	7 20	21 59.76	-23 51.9	1.931	2.867	9.7	19.3
7 30	21 54.57	- 8 56.3	1.791	2.763	7.6	21.0	7 30	21 54.01	-25 4.4	1.887	2.867	6.6	19.2
8 9	21 47.00	- 9 33.0	1.763	2.767	3.6	20.8	8 9	21 46.80	-26 13.5	1.869	2.867	4.4	19.0
8 19	21 38.79	-10 15.6	1.761	2.771	1.6	20.7	8 19	21 38.93	-27 12.7	1.877	2.867	5.2	19.1
8 29	21 30.89	-10 59.2	1.787	2.776	5.3	20.9	8 29	21 31.35	-27 56.6	1.912	2.868	8.0	19.3
9 8	21 24.19	-11 39.1	1.839	2.780	9.1	21.2	9 8	21 24.99	-28 22.5	1.971	2.869	11.0	19.5
9 18	21 19.35	-12 11.9	1.915	2.784	12.5	21.4	9 18	21 20.53	-28 30.1	2.053	2.870	13.8	19.6
<b>37776</b>	1997 <i>GW</i> <sub>28</sub>		8 15.7 7°65	4°2/18.7	18	R	<b>391924</b>	2008 <i>UR</i> <sub>284</sub>		8 15.7 315°61	2°7/13.8	18	
7 10	22 1.42	- 2 12.3	1.228	2.079	20.0	18.7	7 10	22 6.06	-17 55.8	1.636	2.504	15.0	21.5
7 20	21 59.04	- 2 17.3	1.162	2.080	16.2	18.5	7 20	22 2.14	-18 38.3	1.562	2.498	11.5	21.3
7 30	21 53.96	- 2 47.9	1.114	2.081	11.6	18.2	7 30	21 55.76	-19 28.6	1.509	2.493	7.4	21.0
8 9	21 46.88	- 3 42.4	1.085	2.083	6.9	18.0	8 9	21 47.59	-20 20.5	1.480	2.487	3.5	20.8
8 19	21 38.84	- 4 55.5	1.080	2.086	4.2	17.8	8 19	21 38.54	-21 7.4	1.477	2.482	3.7	20.8
8 29	21 31.20	- 6 18.4	1.098	2.090	7.2	18.0	8 29	21 29.83	-21 42.9	1.500	2.477	7.7	21.0
9 8	21 25.26	- 7 41.0	1.138	2.094	11.8	18.3	9 8	21 22.58	-22 3.4	1.547	2.472	11.8	21.2
9 18	21 21.89	- 8 54.8	1.200	2.100	16.2	18.6	9 18	21 17.63	-22 7.6	1.616	2.467	15.4	21.4
<b>69452</b>	1996 <i>TL</i> <sub>5</sub>		8 15.7 169°11	1°1/14.8	18		<b>501546</b>	2014 <i>JJ</i> <sub>80</sub>		8 15.7 344°12	0°6/22.3	18	
7 10	22 8.38	-13 5.4	1.749	2.599	15.0	19.6	7 10	21 44.78	+ 5 18.0	31.446	32.169	1.3	20.7
7 20	22 3.66	-13 57.2	1.676	2.603	11.5	19.4	7 20	21 44.00	+ 5 17.8	31.345	32.165	1.1	20.7
7 30	21 56.61	-15 0.9	1.626	2.606	7.4	19.2	7 30	21 43.12	+ 5 16.3	31.268	32.161	0.9	20.7
8 9	21 47.88	-16 10.8	1.600	2.608	3.0	18.9	8 9	21 42.19	+ 5 13.5	31.216	32.158	0.7	20.6
8 19	21 38.36	-17 20.3	1.601	2.610	2.3	18.9	8 19	21 41.23	+ 5 9.5	31.191	32.154	0.6	20.6
8 29	21 29.17	-18 22.3	1.630	2.612	6.6	19.1	8 29	21 40.28	+ 5 4.5	31.195	32.150	0.6	20.6
9 8	21 21.38	-19 11.8	1.685	2.612	10.8	19.4	9 8	21 39.38	+ 4 58.8	31.226	32.147	0.7	20.6
9 18	21 15.77	-19 46.0	1.762	2.613	14.3	19.6	9 18	21 38.56	+ 4 52.5	31.284	32.143	0.9	20.7
<b>290657</b>	2005 <i>UZ</i> <sub>293</sub>		8 15.7 249°48	2°2/13.7	18		<b>242790</b>	2006 <i>AH</i> <sub>37</sub>		8 15.7 313°33	2°9/13.9	17	
7 10	22 5.60	-19 5.5	2.466	3.316	11.2	21.7	7 10	22 4.53	-15 57.1	1.123	2.012	18.9	20.1
7 20	22 1.00	-19 38.7	2.377	3.304	8.5	21.5	7 20	22 2.08	-16 46.5	1.049	1.997	14.5	19.8
7 30	21 54.65	-20 16.1	2.312	3.292	5.5	21.3	7 30	21 56.36	-17 51.2	0.993	1.981	9.5	19.5
8 9	21 47.03	-20 53.5	2.274	3.279	2.7	21.1	8 9	21 48.03	-19 3.5	0.958	1.966	4.2	19.2
8 19	21 38.78	-21 26.8	2.264	3.266	2.9	21.0	8 19	21 38.29	-20 13.1	0.945	1.952	4.3	19.1
8 29	21 30.70	-21 52.1	2.282	3.253	5.8	21.2	8 29	21 28.81	-21 9.4	0.955	1.938	9.7	19.4
9 8	21 23.58	-22 7.0	2.327	3.240	8.9	21.4	9 8	21 21.29	-21 45.1	0.986	1.925	15.2	19.6
9 18	21 18.03	-22 10.4	2.396	3.227	11.7	21.6	9 18	21 16.91	-21 57.7	1.036	1.913	20.0	19.9
<b>392726</b>	2012 <i>QD</i> <sub>39</sub>		8 15.7 274°25	0°9/15.2	18		<b>398989</b>	2013 <i>EA</i> <sub>101</sub>		8 15.7 135°34	1°6/14.0	18	
7 10	22 11.19	-16 0.5	1.814	2.664	14.6	21.2	7 10	22 2.96	-15 2.0	2.266	3.117	12.0	20.5
7 20	22 5.92	-15 58.3	1.721	2.646	11.3	21.0	7 20	21 59.06	-16 2.6	2.191	3.119	9.1	20.3
7 30	21 58.19	-16 1.9	1.649	2.629	7.4	20.7	7 30	21 53.42	-17 11.5	2.141	3.122	5.8	20.1
8 9	21 48.58	-16 7.8	1.603	2.611	3.0	20.4	8 9	21 46.54	-18 23.8	2.117	3.124	2.5	19.9
8 19	21 38.00	-16 12.0	1.583	2.593	2.0	20.3	8 19	21 39.09	-19 33.9	2.121	3.127	2.5	19.9
8 29	21 27.61	-16 10.9	1.591	2.575	6.5	20.6	8 29	21 31.86	-20 36.5	2.153	3.129	5.7	20.1
9 8	21 18.58	-16 1.9	1.625	2.556	10.8	20.8	9 8	21 25.64	-21 27.6	2.213	3.132	9.0	20.3
9 18	21 11.78	-15 44.0	1.682	2.538	14.6	21.0	9 18	21 21.01	-22 4.9	2.296	3.134	11.9	20.5
<b>208955</b>	2002 <i>WM</i> <sub>22</sub>		8 15.7 326°82	1°9/17.2	18		<b>71432</b>	2000 <i>AO</i> <sub>202</sub>		8 15.7 294°60	7°0/21.2	18	
7 10	22 2.81	- 6 53.6	1.737	2.579	15.5	20.6	7 10	22 2.99	+ 5 12.1	1.831	2.615	17.0	18.8
7 20	21 59.46	- 7 4.9	1.654	2.571	12.2	20.4	7 20	21 59.64	+ 5 38.8	1.732	2.596	14.5	18.6
7 30	21 53.94	- 7 31.6	1.591	2.563	8.4	20.1	7 30	21 54.14	+ 5 44.1	1.652	2.577	11.6	18.4
8 9	21 46.81	- 8 11.4	1.552	2.555	4.2	19.9	8 9	21 46.96	+ 5 26.1	1.593	2.559	8.8	18.1
8 19	21 38.88	- 9 0.1	1.538	2.548	2.1	19.7	8 19	21 38.84	+ 4 45.1	1.558	2.541	7.0	18.0
8 29	21 31.17	- 9 52.3	1.551	2.541	5.8	19.9	8 29	21 30.77	+ 3 44.5	1.549	2.522	7.8	18.0
9 8	21 24.67	-10 42.0	1.588	2.534	9.9	20.2	9 8	21 23.76	+ 2 30.5	1.564	2.504	10.5	18.1
9 18	21 20.18	-11 24.5	1.649	2.528	13.7	20.4	9 18	21 18.67	+ 1 10.8	1.603	2.486	13.8	18.3
<b>392638</b>	2011 <i>UT</i> <sub>118</sub>		8 15.7 21°12	4°0/12.9	18		<b>427463</b>	2001 <i>TO</i> <sub>219</sub>		8 15.7 344°62	1°6/16.6	17	
7 10	22 6.77	-22 12.3	1.692	2.563	14.5	20.8	7 10	22 5.76	-10 34.5	1.268	2.136	18.5	20.1
7 20	22 2.49	-22 52.5	1.630	2.567	11.0	20.6	7 20	22 2.44	-10 14.8	1.195	2.128	14.5	19.8
7 30	21 55.85	-23 35.4	1.589	2.571	7.4	20.4	7 30	21 56.24	-10 8.5	1.141	2.121	9.8	19.6
8 9	21 47.55	-24 14.4	1.573	2.576	4.4	20.2	8 9	21 47.87	-10 13.2	1.108	2.114	4.6	19.2
8 19	21 38.56	-24 43.5	1.583	2.580	4.9	20.3	8 19	21 38.43	-10 25.2	1.099	2.109	2.1	19.1
8 29	21 30.05	-24 58.0	1.618	2.586	8.1	20.5	8 29	21 29.37	-10 39.5	1.113	2.105	7.2	19.4
9 8	21 23.07	-24 56.1	1.678	2.592	11.7	20.7	9 8	21 22.09	-10 51.0	1.150	2.101	12.3	19.7
9 18	21 18.36	-24 38.1	1.759	2.598	14.9	20.9	9 18	21 17.54	-10 56.1	1.208	2.099	16.8	19.9
<b>27252</b>	1999 <i>XK</i> <sub>14</sub>		8 15.7 54°52	2°0/14.6	18		<b>36153</b>	1999 <i>RF</i> <sub>201</sub>					

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>22984</b>	1999 <i>VP</i> <sub>36</sub>		8 15.7 173°56	0°7/14.9	18		<b>515323</b>	2012 <i>XT</i> <sub>139</sub>		8 15.7 259°29	0°4/15.4	18	
7 10	22 3.81	-14 18.0	2.697	3.536	10.7	18.9	7 10	22 5.24	-11 56.4	2.092	2.935	13.2	22.4
7 20	21 59.39	-14 48.7	2.617	3.537	8.1	18.7	7 20	22 1.09	-12 33.1	1.996	2.918	10.2	22.2
7 30	21 53.48	-15 25.6	2.561	3.539	5.2	18.5	7 30	21 54.93	-13 21.1	1.923	2.900	6.6	21.9
8 9	21 46.53	-16 5.7	2.532	3.540	2.1	18.3	8 9	21 47.26	-14 16.6	1.875	2.883	2.7	21.6
8 19	21 39.12	-16 45.2	2.532	3.541	1.5	18.3	8 19	21 38.76	-15 14.6	1.854	2.865	1.5	21.5
8 29	21 31.90	-17 20.7	2.561	3.541	4.6	18.5	8 29	21 30.36	-16 9.7	1.862	2.846	5.7	21.8
9 8	21 25.53	-17 49.4	2.617	3.542	7.5	18.7	9 8	21 22.98	-16 57.0	1.896	2.827	9.5	22.0
9 18	21 20.54	-18 9.5	2.699	3.542	10.2	18.9	9 18	21 17.37	-17 33.2	1.954	2.808	13.0	22.2
<b>504692</b>	2009 <i>HN</i> <sub>65</sub>		8 15.7 25°36	2°5/14.0	17		<b>509663</b>	2008 <i>HY</i> <sub>7</sub>		8 15.7 75°11	4°1/11.6	18	
7 10	22 4.85	-15 2.0	1.212	2.095	18.2	21.1	7 10	22 4.23	-22 32.9	2.164	3.028	12.0	20.8
7 20	22 1.78	-16 1.6	1.155	2.099	13.9	20.8	7 20	22 0.12	-23 48.3	2.106	3.039	9.1	20.6
7 30	21 55.78	-17 15.2	1.116	2.104	8.9	20.6	7 30	21 54.13	-25 6.3	2.072	3.051	6.2	20.5
8 9	21 47.65	-18 34.4	1.100	2.109	3.8	20.3	8 9	21 46.85	-26 20.4	2.065	3.062	4.2	20.4
8 19	21 38.57	-19 49.3	1.108	2.115	3.8	20.3	8 19	21 39.01	-27 24.5	2.085	3.073	4.9	20.4
8 29	21 30.04	-20 50.6	1.139	2.121	8.7	20.6	8 29	21 31.51	-28 13.8	2.132	3.085	7.5	20.6
9 8	21 23.41	-21 32.4	1.193	2.128	13.5	20.9	9 8	21 25.16	-28 45.7	2.204	3.096	10.3	20.8
9 18	21 19.58	-21 52.7	1.266	2.135	17.6	21.2	9 18	21 20.59	-29 0.0	2.299	3.108	12.8	21.0
<b>257641</b>	1999 <i>TX</i> <sub>263</sub>		8 15.7 197°03	0°9/16.7	18		<b>5355</b>	Akihiro		8 15.7 97°14	0°4/16.0	18	
7 10	22 3.38	- 8 32.4	2.780	3.600	10.9	21.9	7 10	22 10.10	-10 14.9	1.519	2.368	17.0	16.8
7 20	21 59.03	- 8 51.5	2.692	3.598	8.5	21.7	7 20	22 5.05	-10 41.7	1.463	2.386	13.1	16.6
7 30	21 53.25	- 9 19.7	2.626	3.595	5.7	21.5	7 30	21 57.50	-11 22.5	1.426	2.404	8.5	16.4
8 9	21 46.45	- 9 54.8	2.588	3.592	2.7	21.3	8 9	21 48.25	-12 12.4	1.414	2.421	3.6	16.1
8 19	21 39.16	-10 34.0	2.578	3.588	1.2	21.2	8 19	21 38.35	-13 5.4	1.428	2.438	1.6	16.0
8 29	21 32.04	-11 13.8	2.598	3.584	4.0	21.4	8 29	21 29.03	-13 54.7	1.468	2.455	6.4	16.4
9 8	21 25.69	-11 51.1	2.645	3.580	7.0	21.6	9 8	21 21.39	-14 35.3	1.533	2.472	10.8	16.7
9 18	21 20.63	-12 23.2	2.719	3.575	9.7	21.8	9 18	21 16.17	-15 4.1	1.621	2.488	14.5	16.9
<b>321916</b>	2010 <i>TA</i> <sub>45</sub>		8 15.7 154°19	0°7/16.3	17		<b>512832</b>	2016 <i>UC</i> <sub>112</sub>		8 15.7 5°41	0°8/15.1	18	
7 10	22 9.50	- 9 37.6	1.757	2.594	15.5	21.5	7 10	22 4.81	-13 36.5	1.731	2.589	14.8	21.3
7 20	22 4.43	- 9 59.0	1.684	2.601	12.0	21.3	7 20	22 0.95	-14 4.5	1.659	2.589	11.3	21.1
7 30	21 57.08	-10 33.4	1.633	2.607	7.9	21.1	7 30	21 54.88	-14 42.7	1.608	2.590	7.3	20.8
8 9	21 48.09	-11 17.2	1.607	2.613	3.5	20.9	8 9	21 47.22	-15 26.6	1.582	2.590	2.9	20.6
8 19	21 38.37	-12 5.3	1.607	2.618	1.5	20.7	8 19	21 38.83	-16 10.7	1.581	2.591	1.9	20.5
8 29	21 29.02	-12 52.1	1.635	2.622	5.9	21.0	8 29	21 30.77	-16 49.6	1.608	2.592	6.3	20.8
9 8	21 21.08	-13 32.6	1.689	2.626	10.1	21.3	9 8	21 24.06	-17 18.8	1.659	2.594	10.4	21.0
9 18	21 15.30	-14 3.4	1.767	2.630	13.7	21.5	9 18	21 19.43	-17 36.1	1.733	2.596	13.9	21.3
<b>139002</b>	2001 <i>DL</i> <sub>31</sub>		8 15.7 92°02	2°3/14.2	17		<b>149297</b>	2002 <i>TM</i> <sub>280</sub>		8 15.7 273°91	2°0/16.9	18	
7 10	22 11.22	-16 43.7	1.534	2.395	16.2	20.0	7 10	22 8.37	- 8 1.1	1.692	2.529	16.0	21.0
7 20	22 5.89	-17 26.6	1.482	2.415	12.3	19.8	7 20	22 4.02	- 7 57.7	1.592	2.507	12.7	20.8
7 30	21 58.02	-18 17.3	1.452	2.434	7.8	19.6	7 30	21 57.15	- 8 8.1	1.513	2.484	8.8	20.5
8 9	21 48.44	-19 9.1	1.446	2.453	3.4	19.4	8 9	21 48.28	- 8 30.6	1.458	2.461	4.4	20.2
8 19	21 38.24	-19 55.0	1.466	2.472	3.3	19.4	8 19	21 38.27	- 9 1.9	1.428	2.438	2.2	20.0
8 29	21 28.70	-20 29.4	1.513	2.491	7.4	19.7	8 29	21 28.29	- 9 37.2	1.425	2.414	6.4	20.2
9 8	21 20.93	-20 49.1	1.584	2.509	11.5	20.0	9 8	21 19.56	-10 11.1	1.448	2.390	11.0	20.4
9 18	21 15.65	-20 53.5	1.677	2.526	15.0	20.3	9 18	21 13.07	-10 39.2	1.493	2.366	15.2	20.6
<b>243858</b>	2000 <i>WR</i> <sub>104</sub>		8 15.7 269°48	6°6/20.1	18		<b>273939</b>	2007 <i>JV</i> <sub>21</sub>		8 15.7 65°12	0°8/15.2	17	
7 10	22 7.53	+ 2 28.3	1.861	2.649	16.6	20.2	7 10	22 7.93	-13 17.4	1.546	2.405	16.2	21.0
7 20	22 2.97	+ 3 19.3	1.772	2.641	14.0	19.9	7 20	22 3.34	-13 50.1	1.494	2.425	12.3	20.8
7 30	21 56.20	+ 3 53.1	1.703	2.634	11.0	19.7	7 30	21 56.36	-14 33.7	1.463	2.445	7.9	20.6
8 9	21 47.78	+ 4 7.9	1.656	2.626	8.1	19.6	8 9	21 47.78	-15 22.5	1.456	2.464	3.1	20.4
8 19	21 38.49	+ 4 3.6	1.634	2.618	6.6	19.5	8 19	21 38.62	-16 10.3	1.474	2.484	2.0	20.4
8 29	21 29.35	+ 3 42.2	1.639	2.610	7.6	19.5	8 29	21 30.04	-16 51.3	1.519	2.504	6.6	20.7
9 8	21 21.40	+ 3 8.5	1.668	2.602	10.4	19.7	9 8	21 23.10	-17 21.1	1.589	2.524	10.8	21.0
9 18	21 15.43	+ 2 28.1	1.721	2.595	13.5	19.8	9 18	21 18.48	-17 38.0	1.681	2.544	14.3	21.3
<b>144246</b>	2004 <i>CZ</i> <sub>78</sub>		8 15.7 244°65	0°5/15.3	18		<b>105287</b>	2000 <i>QF</i> <sub>44</sub>		8 15.7 320°40	0°6/16.1	18	
7 10	22 5.38	-11 0.6	1.572	2.428	16.1	20.0	7 10	22 2.93	- 9 27.7	1.187	2.062	19.1	19.4
7 20	22 1.67	-11 52.2	1.496	2.425	12.4	19.7	7 20	22 0.57	- 9 54.5	1.111	2.048	15.0	19.1
7 30	21 55.52	-12 59.6	1.441	2.422	8.1	19.5	7 30	21 55.24	-10 41.7	1.052	2.035	10.0	18.8
8 9	21 47.53	-14 17.3	1.410	2.418	3.2	19.2	8 9	21 47.57	-11 45.2	1.015	2.023	4.3	18.4
8 19	21 38.63	-15 37.8	1.405	2.415	1.9	19.1	8 19	21 38.63	-12 57.4	1.000	2.011	1.9	18.2
8 29	21 30.01	-16 53.0	1.426	2.411	6.8	19.4	8 29	21 29.93	-14 8.8	1.009	2.000	7.8	18.6
9 8	21 22.83	-17 56.0	1.472	2.408	11.4	19.6	9 8	21 22.99	-15 10.2	1.039	1.989	13.4	18.9
9 18	21 17.94	-18 42.9	1.540	2.404	15.3	19.9	9 18	21 18.89	-15 55.7	1.089	1.980	18.2	19.1
<b>169984</b>	2002 <i>TS</i> <sub>211</sub>		8 15.7 271°24	1°9/13.9	18		<b>206486</b>	2003 <i>US</i> <sub>66</sub>		8 15.7 272°74	0°3/16.0	18	
7 10	22 3.77	-15 5.2	1.983	2.839	13.3	20.2	7 10	22 3.43	- 8 41.7	1.958	2.797	14.1	20.4
7 20	22 0.07	-16 9.0	1.896	2.826	10.1	20.0	7 20	21 59.85	- 9 32.3	1.861	2.780	11.0	20.2
7 30	21 54.32	-17 23.6	1.831	2.813	6.5	19.8	7 30	21 54.22	-10 38.8	1.786	2.762	7.3	19.9
8 9	21 47.01	-18 43.5	1.792	2.800	2.9	19.5	8 9	21 47.01	-11 57.4	1.737	2.744	3.1	19.6
8 19	21 38.88	-20 2.0	1.781	2.787	2.9	19.5	8 19	21 38.93	-13 22.3	1.715	2.726	1.4	19.4
8 29	21 30.89	-21 12.3	1.797	2.773	6.7	19.7	8 29	21 30.91	-14 46.5	1.721	2.707	5.7	19.7
9 8	21 23.99	-22 9.1	1.839	2.760	10.4	19.9	9 8	21 23.93	-16 3.3	1.753	2.689	9.9	19.9
9 18	21 18.94	-22 49.8	1.904	2.746	13.8	20.1	9 18	21 18.77	-17 7.8	1.809	2.670	13.5	20.1
<b>504908</b>	2011 <i>AZ</i> <sub>55</sub>		8 15.7 212°71	0°8/15.1	17		<b>502700</b>	2015 <i>DS</i> <sub>17</sub>		8 15.7 231°76			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>137371</b>	1999 <i>TF</i> <sub>126</sub>		8 15.7 206°11	1°5/14.6	18		<b>202247</b>	2005 <i>AW</i> <sub>15</sub>		8 15.8 267°27	0°9/16.4	18	
7 10	22 10.01	-15 24.0	1.841	2.691	14.4	20.4	7 10	22 6.49	-10 8.8	1.849	2.691	14.7	20.5
7 20	22 4.92	-15 58.4	1.760	2.686	11.0	20.2	7 20	22 2.18	-10 17.2	1.765	2.684	11.4	20.3
7 30	21 57.49	-16 41.5	1.701	2.681	7.1	19.9	7 30	21 55.70	-10 37.2	1.702	2.677	7.6	20.0
8 9	21 48.33	-17 28.3	1.668	2.676	3.0	19.7	8 9	21 47.62	-11 5.9	1.664	2.670	3.4	19.8
8 19	21 38.34	-18 13.1	1.662	2.669	2.5	19.6	8 19	21 38.74	-11 39.4	1.653	2.663	1.5	19.6
8 29	21 28.62	-18 50.4	1.683	2.663	6.6	19.9	8 29	21 30.11	-12 13.0	1.668	2.656	5.7	19.9
9 8	21 20.25	-19 16.2	1.730	2.655	10.7	20.1	9 8	21 22.70	-12 42.2	1.710	2.649	9.8	20.1
9 18	21 14.03	-19 28.9	1.800	2.647	14.2	20.3	9 18	21 17.29	-13 3.8	1.774	2.642	13.4	20.3
<b>445008</b>	2008 <i>HJ</i> <sub>2</sub>		8 15.7 45°66	6°8/10.0	18		<b>92248</b>	2000 <i>AM</i> <sub>154</sub>		8 15.8 19°67	0°8/15.2	18	
7 10	22 7.45	-30 35.4	1.888	2.756	13.3	20.2	7 10	22 6.85	-15 46.4	2.155	3.002	12.7	18.6
7 20	22 2.88	-31 44.7	1.842	2.770	10.6	20.0	7 20	22 2.05	-15 49.0	2.079	3.004	9.7	18.4
7 30	21 56.04	-32 49.5	1.819	2.784	8.1	19.9	7 30	21 55.37	-15 56.8	2.027	3.006	6.2	18.2
8 9	21 47.67	-33 42.0	1.821	2.798	6.8	19.8	8 9	21 47.40	-16 6.7	2.001	3.009	2.5	18.0
8 19	21 38.73	-34 16.2	1.847	2.813	7.7	19.9	8 19	21 38.88	-16 15.5	2.002	3.011	1.7	17.9
8 29	21 30.34	-34 28.6	1.899	2.827	9.9	20.1	8 29	21 30.68	-16 20.2	2.031	3.014	5.3	18.2
9 8	21 23.50	-34 18.9	1.974	2.842	12.4	20.3	9 8	21 23.63	-16 18.5	2.087	3.017	8.8	18.4
9 18	21 18.85	-33 49.6	2.070	2.858	14.7	20.5	9 18	21 18.36	-16 9.3	2.167	3.020	11.9	18.6
<b>235133</b>	2003 <i>QN</i> <sub>59</sub>		8 15.7 326°89	6°4/12.4	18		<b>152500</b>	2005 <i>WX</i> <sub>165</sub>		8 15.8 39°14	0°1/15.8	18	
7 10	22 13.67	-28 52.8	1.555	2.423	15.7	19.7	7 10	22 3.81	-11 40.4	2.125	2.968	13.0	20.6
7 20	22 8.26	-29 16.2	1.483	2.414	12.4	19.5	7 20	21 59.78	-12 4.0	2.049	2.971	10.0	20.4
7 30	21 59.88	-29 35.2	1.432	2.404	9.0	19.3	7 30	21 53.94	-12 37.1	1.997	2.974	6.5	20.2
8 9	21 49.35	-29 42.1	1.404	2.396	6.6	19.1	8 9	21 46.83	-13 16.4	1.969	2.977	2.7	19.9
8 19	21 37.90	-29 30.5	1.401	2.387	7.2	19.1	8 19	21 39.15	-13 57.7	1.969	2.980	1.3	19.8
8 29	21 27.02	-28 57.1	1.424	2.379	10.2	19.3	8 29	21 31.73	-14 36.6	1.997	2.983	5.1	20.1
9 8	21 18.07	-28 2.8	1.470	2.372	13.8	19.5	9 8	21 25.38	-15 9.4	2.051	2.986	8.7	20.3
9 18	21 11.97	-26 51.3	1.536	2.365	17.1	19.7	9 18	21 20.73	-15 33.3	2.129	2.989	11.8	20.5
<b>361441</b>	2007 <i>BA</i> <sub>14</sub>		8 15.8 171°17	0°7/15.1	18		<b>399095</b>	2014 <i>DR</i> <sub>37</sub>		8 15.8 75°33	0°1/15.8	17	
7 10	22 4.61	-14 4.4	2.578	3.417	11.1	22.2	7 10	22 3.82	-9 32.9	1.867	2.711	14.5	20.9
7 20	22 0.08	-14 33.4	2.499	3.419	8.5	22.0	7 20	21 59.98	-10 23.8	1.800	2.722	11.1	20.7
7 30	21 53.99	-15 9.1	2.443	3.421	5.4	21.9	7 30	21 54.16	-11 28.3	1.756	2.733	7.2	20.5
8 9	21 46.81	-15 48.0	2.415	3.423	2.2	21.6	8 9	21 46.94	-12 41.8	1.736	2.743	3.0	20.3
8 19	21 39.13	-16 26.7	2.415	3.424	1.5	21.6	8 19	21 39.11	-13 58.1	1.744	2.754	1.4	20.2
8 29	21 31.66	-17 1.4	2.443	3.425	4.7	21.8	8 29	21 31.62	-15 10.6	1.779	2.765	5.6	20.5
9 8	21 25.10	-17 29.2	2.500	3.425	7.8	22.0	9 8	21 25.35	-16 13.7	1.840	2.776	9.5	20.8
9 18	21 19.98	-17 48.2	2.581	3.426	10.5	22.2	9 18	21 20.95	-17 3.9	1.925	2.786	12.8	21.0
<b>40167</b>	1998 <i>QF</i> <sub>103</sub>		8 15.8 345°63	4°5/12.2	18		<b>476920</b>	2008 <i>WE</i> <sub>94</sub>		8 15.8 327°90	3°3/13.5	18	
7 10	22 7.01	-25 26.0	2.054	2.917	12.6	18.5	7 10	22 3.07	-17 54.1	1.394	2.276	16.3	20.6
7 20	22 2.41	-26 2.8	1.983	2.914	9.7	18.3	7 20	22 0.38	-18 43.7	1.316	2.260	12.5	20.3
7 30	21 55.72	-26 39.3	1.936	2.911	6.8	18.2	7 30	21 54.96	-19 43.6	1.258	2.245	8.2	20.0
8 9	21 47.56	-27 9.8	1.913	2.909	4.6	18.0	8 9	21 47.45	-20 46.9	1.223	2.230	4.0	19.7
8 19	21 38.77	-27 29.3	1.918	2.907	5.2	18.1	8 19	21 38.83	-21 45.0	1.212	2.217	4.4	19.7
8 29	21 30.34	-27 34.1	1.949	2.905	7.8	18.2	8 29	21 30.47	-22 30.1	1.226	2.204	8.8	20.0
9 8	21 23.20	-27 23.0	2.005	2.903	10.8	18.4	9 8	21 23.69	-22 56.8	1.262	2.192	13.4	20.2
9 18	21 18.04	-26 56.8	2.083	2.902	13.6	18.6	9 18	21 19.49	-23 3.3	1.317	2.180	17.5	20.4
<b>18831</b>	1999 <i>NP</i> <sub>37</sub>		8 15.8 130°76	1°7/17.2	18		<b>279841</b>	2000 <i>TA</i> <sub>49</sub>		8 15.8 306°80	4°9/12.0	18	
7 10	22 6.50	-7 56.8	2.282	3.104	12.9	17.9	7 10	22 5.44	-21 42.4	1.546	2.424	15.2	20.0
7 20	22 1.65	-7 49.4	2.203	3.108	10.1	17.7	7 20	22 2.02	-22 51.2	1.470	2.410	11.7	19.8
7 30	21 55.07	-7 51.8	2.146	3.113	6.9	17.5	7 30	21 55.94	-24 6.8	1.414	2.397	7.9	19.5
8 9	21 47.26	-8 2.5	2.115	3.117	3.5	17.3	8 9	21 47.83	-25 20.8	1.383	2.384	5.1	19.3
8 19	21 38.92	-8 19.0	2.112	3.121	1.9	17.2	8 19	21 38.66	-26 24.4	1.376	2.371	6.0	19.3
8 29	21 30.84	-8 38.2	2.137	3.124	4.7	17.4	8 29	21 29.75	-27 9.9	1.395	2.358	9.6	19.5
9 8	21 23.79	-8 56.9	2.190	3.128	8.0	17.6	9 8	21 22.38	-27 33.2	1.436	2.346	13.5	19.7
9 18	21 18.37	-9 12.4	2.267	3.131	11.0	17.8	9 18	21 17.49	-27 34.0	1.497	2.334	17.1	19.9
<b>478173</b>	2011 <i>UP</i> <sub>190</sub>		8 15.8 307°40	8°3/8.6	18		<b>13856</b>	1999 <i>XZ</i> <sub>105</sub>		8 15.8 317°90	7°9/21.0	18	R
7 10	22 7.53	-32 9.2	1.736	2.607	14.1	20.8	7 10	22 2.80	+ 4 32.4	1.611	2.409	18.4	16.9
7 20	22 3.63	-33 31.4	1.659	2.586	11.5	20.6	7 20	21 59.80	+ 5 20.6	1.518	2.390	15.7	16.7
7 30	21 56.99	-34 50.8	1.605	2.566	9.3	20.4	7 30	21 54.43	+ 5 47.3	1.443	2.372	12.7	16.4
8 9	21 48.24	-35 58.0	1.574	2.545	8.3	20.3	8 9	21 47.21	+ 5 49.8	1.388	2.355	9.7	16.2
8 19	21 38.39	-36 44.2	1.568	2.525	9.5	20.3	8 19	21 38.94	+ 5 27.3	1.356	2.338	7.9	16.1
8 29	21 28.80	-37 3.4	1.585	2.505	12.0	20.4	8 29	21 30.72	+ 4 42.5	1.349	2.322	8.8	16.1
9 8	21 20.78	-36 54.1	1.624	2.486	14.9	20.6	9 8	21 23.73	+ 3 41.7	1.364	2.306	11.6	16.2
9 18	21 15.32	-36 18.7	1.682	2.466	17.7	20.7	9 18	21 18.88	+ 2 32.7	1.402	2.291	15.0	16.4
<b>62742</b>	2000 <i>TD</i> <sub>68</sub>		8 15.8 51°39	1°4/16.7	18		<b>34332</b>	2000 <i>QU</i> <sub>209</sub>		8 15.8 236°44	0°6/16.3	18	
7 10	22 5.83	-8 16.7	1.501	2.352	17.1	19.4	7 10	22 4.06	-9 43.9	2.179	3.015	13.0	19.2
7 20	22 1.89	-8 32.7	1.441	2.363	13.3	19.2	7 20	21 59.98	-10 5.8	2.096	3.012	10.0	19.1
7 30	21 55.55	-9 4.6	1.400	2.375	8.9	19.0	7 30	21 54.10	-10 38.6	2.035	3.009	6.7	18.8
8 9	21 47.52	-9 48.6	1.382	2.388	4.1	18.8	8 9	21 46.92	-11 19.3	2.000	3.006	2.9	18.6
8 19	21 38.80	-10 39.2	1.390	2.400	1.8	18.6	8 19	21 39.13	-12 4.0	1.993	3.004	1.2	18.5
8 29	21 30.57	-11 29.9	1.423	2.413	6.2	19.0	8 29	21 31.55	-12 48.3	2.013	3.001	5.0	18.7
9 8	21 23.89	-12 14.8	1.481	2.426	10.6	19.2	9 8	21 24.98	-13 27.9	2.061	2.998	8.5	18.9
9 18	21 19.51	-12 49.8	1.561	2.440	14.4	19.5	9 18	21 20.06	-13 59.8	2.132	2.995	11.7	19.1
<b>45708</b>	2000 <i>FD</i> <sub>35</sub>		8 15.8 296°62	2°1/17.5	18		<b>38748</b>	2000 <i>QY</i> <sub>191</sub>		8 15.8 20°87			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>439379</b>	2013 <i>AO</i> <sub>78</sub>		8 15.8 257°07	1°3/16.9	18		<b>254153</b>	2004 <i>PM</i> <sub>86</sub>		8 15.8 10°83	1°5/14.5	18	
7 10	22 3.52	- 6 52.3	2.106	2.935	13.6	21.6	7 10	22 2.08	-14 12.5	1.863	2.723	13.8	20.3
7 20	21 59.71	- 7 22.4	2.014	2.924	10.7	21.4	7 20	21 58.78	-15 5.3	1.792	2.725	10.5	20.1
7 30	21 54.02	- 8 6.8	1.944	2.914	7.3	21.2	7 30	21 53.47	-16 8.3	1.744	2.727	6.7	19.9
8 9	21 46.93	- 9 2.8	1.899	2.903	3.5	20.9	8 9	21 46.73	-17 16.3	1.721	2.729	2.8	19.6
8 19	21 39.11	-10 6.1	1.882	2.892	1.6	20.8	8 19	21 39.32	-18 23.0	1.724	2.732	2.4	19.6
8 29	21 31.43	-11 11.4	1.892	2.881	5.1	21.0	8 29	21 32.20	-19 22.2	1.754	2.735	6.3	19.9
9 8	21 24.74	-12 13.1	1.929	2.869	8.8	21.2	9 8	21 26.28	-20 9.2	1.810	2.739	10.1	20.1
9 18	21 19.73	-13 6.8	1.991	2.858	12.2	21.4	9 18	21 22.23	-20 41.5	1.888	2.743	13.3	20.3
<b>371836</b>	2007 <i>VE</i> <sub>317</sub>		8 15.8 123°30	3°8/12.9	17		<b>351073</b>	2003 <i>UR</i> <sub>11</sub>		8 15.8 289°57	7°0/22.8	18	
7 10	22 8.10	-18 45.8	1.519	2.390	15.8	20.6	7 10	22 3.29	+10 32.9	2.015	2.758	16.9	21.1
7 20	22 3.85	-19 57.4	1.457	2.394	12.0	20.3	7 20	21 59.91	+10 6.1	1.891	2.725	14.7	20.9
7 30	21 56.98	-21 17.5	1.416	2.399	7.9	20.1	7 30	21 54.43	+ 9 9.9	1.785	2.691	12.0	20.6
8 9	21 48.19	-22 37.6	1.399	2.403	4.3	19.9	8 9	21 47.25	+ 7 42.1	1.702	2.656	9.2	20.4
8 19	21 38.54	-23 48.8	1.408	2.408	4.8	20.0	8 19	21 39.00	+ 5 43.6	1.643	2.621	7.2	20.2
8 29	21 29.34	-24 43.6	1.442	2.412	8.7	20.2	8 29	21 30.60	+ 3 19.6	1.612	2.586	7.5	20.1
9 8	21 21.80	-25 17.9	1.501	2.416	12.7	20.4	9 8	21 23.07	+ 0 39.8	1.610	2.550	10.2	20.2
9 18	21 16.76	-25 31.1	1.580	2.420	16.2	20.7	9 18	21 17.29	- 2 4.3	1.633	2.515	13.7	20.4
<b>321698</b>	2010 <i>EZ</i> <sub>136</sub>		8 15.8 123°16	0°5/15.3	18		<b>395772</b>	2012 <i>VD</i> <sub>62</sub>		8 15.8 220°12	2°0/17.8	18	
7 10	22 7.67	-13 24.7	2.062	2.904	13.3	21.2	7 10	22 5.07	- 4 40.3	2.495	3.302	12.4	22.9
7 20	22 2.72	-13 49.5	1.993	2.915	10.2	21.0	7 20	22 0.60	- 5 2.0	2.397	3.292	9.8	22.7
7 30	21 55.83	-14 22.6	1.947	2.925	6.5	20.8	7 30	21 54.47	- 5 36.7	2.321	3.281	6.9	22.5
8 9	21 47.62	-15 0.0	1.927	2.935	2.6	20.5	8 9	21 47.12	- 6 22.6	2.272	3.270	3.7	22.3
8 19	21 38.84	-15 37.4	1.935	2.945	1.6	20.5	8 19	21 39.13	- 7 16.6	2.251	3.258	2.0	22.2
8 29	21 30.43	-16 10.3	1.971	2.954	5.5	20.8	8 29	21 31.24	- 8 14.6	2.259	3.246	4.5	22.3
9 8	21 23.22	-16 35.5	2.033	2.963	9.1	21.0	9 8	21 24.18	- 9 11.8	2.295	3.233	7.8	22.5
9 18	21 17.86	-16 50.9	2.119	2.972	12.2	21.2	9 18	21 18.58	-10 4.5	2.357	3.219	10.8	22.7
<b>504494</b>	2008 <i>HN</i> <sub>5</sub>		8 15.8 175°64	0°4/15.5	17		<b>186014</b>	2001 <i>QO</i> <sub>127</sub>		8 15.8 332°99	5°2/19.1	18	
7 10	22 9.27	-12 30.9	1.806	2.651	14.8	22.1	7 10	22 0.16	- 1 43.1	1.235	2.086	20.0	19.1
7 20	22 4.31	-12 57.8	1.730	2.653	11.4	21.9	7 20	21 58.33	- 1 26.0	1.154	2.070	16.4	18.8
7 30	21 57.07	-13 35.5	1.676	2.654	7.4	21.7	7 30	21 53.77	- 1 33.2	1.090	2.054	12.2	18.5
8 9	21 48.19	-14 19.5	1.647	2.655	3.0	21.4	8 9	21 47.04	- 2 5.2	1.046	2.040	7.7	18.2
8 19	21 38.55	-15 4.8	1.645	2.656	1.7	21.3	8 19	21 39.12	- 2 59.3	1.023	2.027	5.2	18.0
8 29	21 29.24	-15 45.7	1.671	2.656	6.1	21.6	8 29	21 31.37	- 4 9.0	1.023	2.014	7.7	18.1
9 8	21 21.29	-16 17.9	1.723	2.655	10.2	21.9	9 8	21 25.18	- 5 24.5	1.046	2.003	12.4	18.3
9 18	21 15.46	-16 38.9	1.798	2.654	13.8	22.1	9 18	21 21.61	- 6 36.7	1.088	1.994	17.0	18.6
<b>347826</b>	2002 <i>PZ</i> <sub>3</sub>		8 15.8 16°31	7°6/20.6	18		<b>140295</b>	2001 <i>SH</i> <sub>304</sub>		8 15.8 346°50	0°7/16.4	18	
7 10	22 5.28	+ 2 30.5	1.478	2.289	19.2	20.2	7 10	22 4.08	- 9 56.7	1.824	2.670	14.7	20.3
7 20	22 1.60	+ 3 33.3	1.411	2.293	16.1	20.0	7 20	22 0.35	-10 12.3	1.746	2.667	11.4	20.0
7 30	21 55.48	+ 4 14.7	1.361	2.298	12.7	19.8	7 30	21 54.52	-10 40.1	1.689	2.665	7.5	19.8
8 9	21 47.58	+ 4 32.6	1.332	2.304	9.4	19.7	8 9	21 47.18	-11 17.0	1.656	2.663	3.3	19.5
8 19	21 38.85	+ 4 26.9	1.326	2.311	7.6	19.6	8 19	21 39.12	-11 58.7	1.650	2.661	1.4	19.4
8 29	21 30.50	+ 4 0.8	1.344	2.319	8.6	19.7	8 29	21 31.32	-12 40.0	1.671	2.659	5.6	19.7
9 8	21 23.64	+ 3 20.5	1.385	2.327	11.4	19.8	9 8	21 24.75	-13 16.2	1.717	2.658	9.6	19.9
9 18	21 19.11	+ 2 33.4	1.448	2.336	14.7	20.1	9 18	21 20.12	-13 43.8	1.786	2.657	13.2	20.2
<b>415885</b>	2001 <i>TG</i> <sub>17</sub>		8 15.8 359°17	6°3/13.9	18		<b>384045</b>	2008 <i>UY</i> <sub>204</sub>		8 15.8 155°00	7°1/ 9.3	17	
7 10	22 5.46	-25 40.1	0.764	1.684	22.0	19.0	7 10	22 12.23	-33 23.9	2.200	3.051	12.3	22.0
7 20	22 3.75	-25 32.9	0.716	1.678	17.2	18.7	7 20	22 6.40	-34 34.5	2.144	3.058	10.0	21.8
7 30	21 57.79	-25 21.5	0.682	1.673	11.8	18.4	7 30	21 58.33	-35 39.4	2.112	3.064	8.0	21.7
8 9	21 48.71	-24 56.6	0.666	1.672	7.2	18.2	8 9	21 48.69	-36 31.3	2.105	3.069	7.1	21.7
8 19	21 38.36	-24 11.4	0.669	1.672	7.2	18.2	8 19	21 38.42	-37 4.3	2.125	3.075	7.9	21.7
8 29	21 29.05	-23 3.4	0.690	1.675	12.0	18.4	8 29	21 28.61	-37 15.0	2.171	3.079	9.8	21.9
9 8	21 22.70	-21 35.9	0.730	1.681	17.3	18.8	9 8	21 20.25	-37 3.5	2.240	3.084	12.0	22.0
9 18	21 20.30	-19 55.0	0.785	1.688	22.1	19.1	9 18	21 14.06	-36 32.3	2.331	3.087	14.2	22.2
<b>435826</b>	2008 <i>WL</i> <sub>66</sub>		8 15.8 329°66	13°6/24.5	17		<b>512365</b>	2016 <i>NV</i> <sub>53</sub>		8 15.8 80°26	9°3/22.6	17	
7 10	22 1.25	+13 39.8	1.440	2.199	21.9	20.4	7 10	22 8.78	+ 9 11.4	1.794	2.545	18.4	20.6
7 20	21 58.98	+15 18.8	1.353	2.180	19.8	20.1	7 20	22 3.91	+10 23.9	1.724	2.556	16.0	20.5
7 30	21 54.13	+16 31.4	1.281	2.161	17.5	19.9	7 30	21 56.82	+11 14.1	1.671	2.566	13.3	20.3
8 9	21 47.18	+17 10.7	1.226	2.144	15.3	19.7	8 9	21 48.12	+11 38.8	1.640	2.576	10.9	20.2
8 19	21 38.98	+17 11.7	1.190	2.127	13.8	19.6	8 19	21 38.67	+11 36.9	1.633	2.587	9.4	20.2
8 29	21 30.79	+16 33.7	1.175	2.111	13.8	19.6	8 29	21 29.54	+11 10.4	1.649	2.597	9.6	20.2
9 8	21 23.93	+15 22.4	1.179	2.097	15.2	19.6	9 8	21 21.74	+10 25.1	1.690	2.608	11.4	20.3
9 18	21 19.49	+13 47.5	1.203	2.084	17.6	19.7	9 18	21 16.03	+ 9 27.9	1.754	2.618	13.7	20.5
<b>191792</b>	2004 <i>TV</i> <sub>136</sub>		8 15.8 327°10	1°7/14.9	18		<b>390000</b>	2012 <i>TB</i> <sub>300</sub>		8 15.8 294°86	2°5/13.9	18	
7 10	22 5.82	-16 34.5	1.342	2.220	17.1	19.9	7 10	22 6.16	-17 48.8	1.772	2.636	14.3	21.4
7 20	22 2.60	-16 42.6	1.260	2.202	13.2	19.6	7 20	22 2.12	-18 29.6	1.694	2.628	10.9	21.1
7 30	21 56.49	-16 59.1	1.199	2.184	8.6	19.3	7 30	21 55.78	-19 17.8	1.637	2.620	7.1	20.9
8 9	21 48.12	-17 19.4	1.159	2.167	3.6	18.9	8 9	21 47.73	-20 7.7	1.605	2.612	3.3	20.6
8 19	21 38.57	-17 37.4	1.143	2.152	2.8	18.8	8 19	21 38.85	-20 53.2	1.600	2.605	3.4	20.6
8 29	21 29.29	-17 47.3	1.151	2.137	8.0	19.1	8 29	21 30.24	-21 28.5	1.621	2.597	7.2	20.9
9 8	21 21.69	-17 45.3	1.181	2.123	13.0	19.4	9 8	21 22.97	-21 49.9	1.667	2.590	11.2	21.1
9 18	21 16.81	-17 30.0	1.232	2.110	17.5	19.6	9 18	21 17.84	-21 56.0	1.734	2.582	14.6	21.3
<b>315228</b>	2007 <i>RC</i> <sub>192</sub>		8 15.8 250°01	3°9/18.6	17		<b>389841</b>	2012					



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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>252121</b>	2000 <i>WR</i> <sub>94</sub>		8 15.8 252°10	1°2/14.6	18		<b>157920</b>	1999 <i>VJ</i> <sub>32</sub>		8 15.8 259°57	1°0/16.8	18	
7 10	22 5.16	-15 48.7	2.544	3.386	11.1	21.4	7 10	22 4.04	-8 39.3	2.679	3.500	11.2	21.3
7 20	22 0.69	-16 19.5	2.448	3.371	8.5	21.2	7 20	21 59.77	-8 55.9	2.573	3.479	8.8	21.1
7 30	21 54.55	-16 56.5	2.376	3.355	5.5	21.0	7 30	21 53.93	-9 22.1	2.490	3.459	5.9	20.8
8 9	21 47.16	-17 36.3	2.330	3.338	2.3	20.7	8 9	21 46.92	-9 55.8	2.434	3.438	2.8	20.6
8 19	21 39.13	-18 14.8	2.314	3.321	2.0	20.7	8 19	21 39.29	-10 34.4	2.406	3.416	1.2	20.5
8 29	21 31.22	-18 48.3	2.326	3.304	5.2	20.9	8 29	21 31.71	-11 14.3	2.408	3.395	4.3	20.6
9 8	21 24.16	-19 13.6	2.365	3.287	8.4	21.0	9 8	21 24.87	-11 51.9	2.437	3.373	7.5	20.8
9 18	21 18.59	-19 29.0	2.429	3.269	11.2	21.2	9 18	21 19.37	-12 24.4	2.492	3.350	10.4	21.0
<b>509582</b>	2008 <i>CX</i> <sub>197</sub>		8 15.8 91°47	0°5/15.4	17		<b>92247</b>	2000 <i>AY</i> <sub>153</sub>		8 15.8 265°32	5°4/10.2	18	
7 10	22 6.56	-13 42.5	2.262	3.102	12.4	21.7	7 10	22 5.76	-28 38.4	2.348	3.209	11.3	19.1
7 20	22 1.67	-14 2.1	2.198	3.119	9.4	21.5	7 20	22 1.39	-29 44.3	2.277	3.203	8.9	18.9
7 30	21 55.06	-14 28.8	2.157	3.135	6.0	21.3	7 30	21 55.09	-30 48.9	2.230	3.197	6.7	18.8
8 9	21 47.31	-14 59.0	2.143	3.151	2.4	21.1	8 9	21 47.41	-31 46.1	2.209	3.191	5.5	18.7
8 19	21 39.10	-15 28.9	2.157	3.167	1.4	21.1	8 19	21 39.08	-32 30.1	2.215	3.185	6.2	18.7
8 29	21 31.26	-15 55.0	2.199	3.183	5.0	21.3	8 29	21 30.99	-32 57.1	2.247	3.178	8.4	18.8
9 8	21 24.53	-16 14.4	2.268	3.198	8.3	21.6	9 8	21 24.02	-33 5.3	2.304	3.172	10.8	19.0
9 18	21 19.46	-16 25.5	2.362	3.213	11.1	21.8	9 18	21 18.83	-32 55.6	2.383	3.166	13.2	19.2
<b>102681</b>	1999 <i>VM</i> <sub>69</sub>		8 15.8 285°21	0°7/16.3	18		<b>97296</b>	1999 <i>XS</i> <sub>179</sub>		8 15.8 257°03	1°6/14.3	18	
7 10	22 5.54	-10 3.3	1.795	2.640	14.9	20.2	7 10	22 4.46	-16 58.5	2.481	3.329	11.2	19.8
7 20	22 1.59	-10 18.2	1.708	2.630	11.6	20.0	7 20	22 0.18	-17 30.8	2.393	3.319	8.5	19.6
7 30	21 55.42	-10 45.8	1.643	2.619	7.7	19.7	7 30	21 54.22	-18 8.5	2.328	3.308	5.5	19.4
8 9	21 47.59	-11 22.9	1.603	2.609	3.4	19.4	8 9	21 47.04	-18 47.9	2.291	3.298	2.4	19.2
8 19	21 38.92	-12 5.1	1.588	2.599	1.4	19.3	8 19	21 39.26	-19 25.0	2.281	3.287	2.3	19.1
8 29	21 30.44	-12 47.1	1.601	2.589	5.8	19.6	8 29	21 31.65	-19 56.0	2.300	3.276	5.4	19.3
9 8	21 23.19	-13 23.9	1.638	2.579	10.1	19.8	9 8	21 24.94	-20 17.9	2.345	3.265	8.5	19.5
9 18	21 17.97	-13 52.0	1.699	2.569	13.8	20.0	9 18	21 19.74	-20 29.3	2.415	3.254	11.3	19.7
<b>254233</b>	2004 <i>RJ</i> <sub>118</sub>		8 15.8 146°67	0°1/15.7	18		<b>288157</b>	2003 <i>WZ</i> <sub>128</sub>		8 15.8 199°18	1°0/15.1	17	
7 10	22 4.61	-12 19.9	2.389	3.227	11.9	21.5	7 10	22 10.29	-14 4.3	1.881	2.726	14.4	22.0
7 20	22 0.22	-12 41.6	2.311	3.230	9.1	21.3	7 20	22 5.12	-14 35.9	1.800	2.723	11.0	21.7
7 30	21 54.17	-13 11.2	2.257	3.233	5.9	21.1	7 30	21 57.66	-15 17.0	1.741	2.719	7.1	21.5
8 9	21 46.97	-13 45.8	2.228	3.236	2.4	20.9	8 9	21 48.52	-16 3.0	1.707	2.715	2.9	21.2
8 19	21 39.25	-14 21.6	2.228	3.238	1.2	20.8	8 19	21 38.57	-16 48.5	1.700	2.710	2.0	21.2
8 29	21 31.77	-14 54.9	2.256	3.241	4.7	21.0	8 29	21 28.88	-17 28.0	1.722	2.704	6.3	21.4
9 8	21 25.25	-15 22.5	2.311	3.243	8.0	21.2	9 8	21 20.50	-17 57.5	1.770	2.697	10.3	21.7
9 18	21 20.27	-15 42.2	2.392	3.246	10.9	21.4	9 18	21 14.22	-18 14.9	1.841	2.690	13.9	21.9
<b>398168</b>	2010 <i>GY</i> <sub>104</sub>		8 15.8 163°67	1°9/17.4	17		<b>295072</b>	2008 <i>ER</i> <sub>126</sub>		8 15.8 287°03	1°3/14.9	18	
7 10	22 5.47	-6 6.4	2.041	2.865	14.2	21.7	7 10	22 7.79	-16 46.0	2.069	2.920	13.0	21.1
7 20	22 1.15	-6 21.6	1.961	2.867	11.1	21.5	7 20	22 3.02	-16 55.4	1.983	2.910	10.0	20.9
7 30	21 54.92	-6 50.7	1.903	2.869	7.7	21.3	7 30	21 56.21	-17 10.0	1.920	2.900	6.5	20.6
8 9	21 47.32	-7 31.2	1.870	2.871	4.0	21.1	8 9	21 47.90	-17 26.2	1.882	2.890	2.7	20.4
8 19	21 39.08	-8 19.5	1.864	2.873	2.0	21.0	8 19	21 38.88	-17 40.2	1.872	2.880	2.1	20.3
8 29	21 31.09	-9 10.7	1.886	2.874	5.1	21.2	8 29	21 30.10	-17 48.4	1.889	2.870	5.9	20.5
9 8	21 24.20	-9 59.8	1.934	2.875	8.7	21.4	9 8	21 22.48	-17 48.3	1.932	2.860	9.6	20.7
9 18	21 19.08	-10 42.9	2.007	2.876	12.0	21.6	9 18	21 16.74	-17 39.0	2.000	2.851	12.8	20.9
<b>220375</b>	2003 <i>OO</i> <sub>26</sub>		8 15.8 302°59	2°0/17.4	18		<b>479626</b>	2014 <i>DX</i> <sub>35</sub>		8 15.8 264°16	0°5/15.4	18	
7 10	22 5.23	-7 24.5	2.245	3.068	13.0	20.5	7 10	22 6.29	-11 45.7	1.977	2.820	13.8	21.8
7 20	22 0.85	-7 11.8	2.155	3.061	10.3	20.3	7 20	22 2.15	-12 27.4	1.876	2.798	10.7	21.6
7 30	21 54.69	-7 9.3	2.088	3.053	7.1	20.0	7 30	21 55.84	-13 21.8	1.798	2.776	7.0	21.3
8 9	21 47.22	-7 15.7	2.046	3.046	3.8	19.8	8 9	21 47.84	-14 25.0	1.745	2.753	2.9	21.0
8 19	21 39.13	-7 28.9	2.031	3.039	2.1	19.7	8 19	21 38.88	-15 31.5	1.719	2.729	1.7	20.9
8 29	21 31.21	-7 45.8	2.044	3.032	4.9	19.9	8 29	21 29.94	-16 34.9	1.722	2.706	6.1	21.1
9 8	21 24.28	-8 3.3	2.084	3.025	8.3	20.1	9 8	21 22.06	-17 29.6	1.750	2.681	10.2	21.3
9 18	21 18.96	-8 18.4	2.149	3.018	11.4	20.3	9 18	21 16.07	-18 11.9	1.803	2.656	13.9	21.5
<b>137580</b>	1999 <i>VO</i> <sub>136</sub>		8 15.8 272°22	4°9/12.3	18		<b>343488</b>	2010 <i>ET</i> <sub>89</sub>		8 15.8 213°36	0°6/15.3	18	
7 10	22 9.15	-22 13.7	1.568	2.439	15.4	20.0	7 10	22 5.86	-12 44.7	1.926	2.774	13.9	20.9
7 20	22 4.94	-23 15.0	1.486	2.423	11.9	19.7	7 20	22 1.65	-13 21.3	1.847	2.772	10.7	20.7
7 30	21 57.92	-24 22.3	1.426	2.407	8.1	19.4	7 30	21 55.36	-14 8.5	1.790	2.769	6.9	20.5
8 9	21 48.72	-25 27.4	1.390	2.390	5.2	19.2	8 9	21 47.57	-15 1.9	1.758	2.767	2.8	20.2
8 19	21 38.38	-26 21.6	1.379	2.374	5.9	19.2	8 19	21 39.05	-15 56.3	1.754	2.764	1.7	20.1
8 29	21 28.25	-26 57.5	1.394	2.357	9.6	19.4	8 29	21 30.77	-16 46.0	1.777	2.761	5.9	20.4
9 8	21 19.70	-27 11.5	1.432	2.340	13.7	19.6	9 8	21 23.69	-17 26.5	1.826	2.758	9.8	20.6
9 18	21 13.75	-27 3.6	1.490	2.323	17.4	19.8	9 18	21 18.53	-17 55.1	1.898	2.754	13.2	20.9
<b>68111</b>	2000 <i>YT</i> <sub>139</sub>		8 15.8 318°02	2°6/13.5	18		<b>161593</b>	2005 <i>QE</i> <sub>28</sub>		8 15.8 263°93	0°6/15.4	17	
7 10	22 3.27	-15 25.1	1.654	2.522	14.9	19.2	7 10	22 9.21	-14 1.2	1.632	2.487	15.7	20.6
7 20	22 0.07	-16 42.3	1.579	2.516	11.3	19.0	7 20	22 4.64	-14 14.2	1.550	2.478	12.1	20.4
7 30	21 54.54	-18 11.9	1.525	2.510	7.3	18.7	7 30	21 57.54	-14 37.0	1.489	2.470	7.9	20.1
8 9	21 47.26	-19 47.0	1.497	2.504	3.4	18.5	8 9	21 48.53	-15 5.4	1.452	2.461	3.2	19.8
8 19	21 39.10	-21 18.8	1.494	2.499	3.7	18.5	8 19	21 38.58	-15 34.3	1.441	2.452	1.9	19.7
8 29	21 31.17	-22 38.9	1.519	2.494	7.8	18.7	8 29	21 28.89	-15 58.4	1.457	2.442	6.7	20.0
9 8	21 24.58	-23 41.1	1.567	2.489	11.8	19.0	9 8	21 20.68	-16 13.7	1.497	2.433	11.2	20.2
9 18	21 20.16	-24 22.8	1.637	2.484	15.4	19.2	9 18	21 14.81	-16 18.1	1.560	2.424	15.2	20.4
<b>311924</b>	2007 <i>BW</i> <sub>58</sub>		8 15.8 144°34	0°2/15.9	18		<b>391921</b>	2008 <i>UZ</i> <sub>258</sub>		8 15.8 216°4			

EPHEMERIDES

8 15.8

8 15.8

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>476990</b>	2008 <i>YM</i> <sub>98</sub>		8 15.8 328°08	1.4/14.9	18		<b>512433</b>	2016 <i>PW</i> <sub>90</sub>		8 15.8 254°86	2.1/14.0	18	
7 10	22 0.40	-13 24.4	1.322	2.203	17.1	20.7	7 10	22 6.40	-16 16.5	1.922	2.778	13.6	21.7
7 20	21 58.53	-14 3.8	1.235	2.179	13.2	20.4	7 20	22 2.24	-17 7.8	1.835	2.765	10.4	21.5
7 30	21 53.94	-14 59.1	1.168	2.155	8.6	20.1	7 30	21 55.88	-18 8.3	1.770	2.751	6.7	21.2
8 9	21 47.18	-16 5.3	1.123	2.132	3.5	19.7	8 9	21 47.87	-19 12.7	1.731	2.738	3.1	21.0
8 19	21 39.18	-17 14.4	1.101	2.111	2.7	19.6	8 19	21 38.98	-20 14.5	1.719	2.724	3.1	21.0
8 29	21 31.30	-18 17.5	1.103	2.090	8.1	19.9	8 29	21 30.24	-21 7.6	1.734	2.710	6.9	21.2
9 8	21 24.92	-19 6.6	1.128	2.071	13.3	20.1	9 8	21 22.68	-21 47.3	1.775	2.696	10.7	21.4
9 18	21 21.13	-19 37.4	1.172	2.053	17.9	20.3	9 18	21 17.11	-22 11.5	1.838	2.681	14.2	21.6
<b>218604</b>	2005 <i>NB</i> <sub>80</sub>		8 15.8 340°43	5.4/13.1	17		<b>438612</b>	2007 <i>VL</i> <sub>325</sub>		8 15.8 230°89	3.4/18.7	18	
7 10	22 6.93	-23 18.2	1.139	2.033	18.3	18.9	7 10	22 6.24	- 2 21.2	2.347	3.145	13.3	21.7
7 20	22 3.95	-23 46.1	1.071	2.020	14.2	18.6	7 20	22 1.62	- 2 11.3	2.250	3.135	10.8	21.5
7 30	21 57.60	-24 16.7	1.023	2.009	9.7	18.3	7 30	21 55.23	- 2 14.5	2.175	3.125	7.9	21.3
8 9	21 48.68	-24 41.4	0.995	1.998	5.9	18.1	8 9	21 47.53	- 2 30.4	2.125	3.114	5.0	21.1
8 19	21 38.53	-24 51.8	0.989	1.989	6.4	18.1	8 19	21 39.15	- 2 57.2	2.102	3.102	3.4	21.0
8 29	21 28.89	-24 41.7	1.005	1.981	10.6	18.3	8 29	21 30.89	- 3 31.8	2.107	3.091	5.1	21.1
9 8	21 21.40	-24 9.7	1.042	1.974	15.4	18.5	9 8	21 23.53	- 4 10.1	2.140	3.079	8.2	21.3
9 18	21 17.13	-23 18.0	1.098	1.968	19.7	18.8	9 18	21 17.72	- 4 48.2	2.198	3.066	11.2	21.4
<b>123021</b>	2000 <i>SV</i> <sub>272</sub>		8 15.8 274°25	0°3/16.1	18		<b>11933</b>	<i>Himuka</i>		8 15.8 68°30	4.9/12.8	18	
7 10	22 4.59	-11 10.8	2.183	3.022	12.8	20.4	7 10	22 13.97	-25 28.1	1.651	2.514	15.1	16.7
7 20	22 0.48	-11 27.9	2.094	3.013	9.9	20.1	7 20	22 7.92	-26 0.0	1.604	2.535	11.6	16.6
7 30	21 54.53	-11 54.7	2.028	3.003	6.5	19.9	7 30	21 59.36	-26 30.2	1.579	2.555	8.0	16.4
8 9	21 47.22	-12 28.3	1.987	2.994	2.8	19.7	8 9	21 49.16	-26 52.0	1.579	2.576	5.2	16.3
8 19	21 39.24	-13 5.0	1.974	2.984	1.2	19.5	8 19	21 38.47	-26 59.8	1.604	2.596	5.7	16.4
8 29	21 31.44	-13 40.5	1.988	2.975	5.1	19.8	8 29	21 28.56	-26 50.8	1.656	2.617	8.6	16.6
9 8	21 24.64	-14 11.0	2.030	2.966	8.7	20.0	9 8	21 20.49	-26 24.9	1.733	2.637	11.9	16.8
9 18	21 19.50	-14 33.8	2.095	2.956	11.9	20.2	9 18	21 14.95	-25 44.6	1.831	2.657	14.9	17.1
<b>308671</b>	2006 <i>CQ</i> <sub>10</sub>		8 15.8 170°32	0°2/15.7	17		<b>379169</b>	2009 <i>QP</i> <sub>53</sub>		8 15.8 179°73	0°8/15.2	18	
7 10	22 8.82	-10 33.7	1.507	2.359	16.9	21.1	7 10	22 9.91	-14 14.4	1.802	2.651	14.7	21.2
7 20	22 4.43	-11 17.3	1.436	2.362	13.1	20.8	7 20	22 4.86	-14 36.8	1.727	2.652	11.3	21.0
7 30	21 57.43	-12 16.7	1.385	2.364	8.5	20.6	7 30	21 57.52	-15 8.0	1.673	2.652	7.3	20.8
8 9	21 48.50	-13 26.7	1.357	2.365	3.5	20.3	8 9	21 48.51	-15 43.8	1.644	2.652	3.0	20.5
8 19	21 38.65	-14 39.9	1.356	2.366	1.8	20.2	8 19	21 38.73	-16 19.0	1.643	2.652	1.9	20.4
8 29	21 29.16	-15 48.2	1.381	2.367	6.9	20.5	8 29	21 29.30	-16 48.7	1.668	2.652	6.3	20.7
9 8	21 21.25	-16 45.0	1.431	2.368	11.5	20.8	9 8	21 21.25	-17 9.2	1.720	2.651	10.3	21.0
9 18	21 15.79	-17 26.6	1.502	2.367	15.6	21.0	9 18	21 15.36	-17 18.5	1.794	2.649	13.9	21.2
<b>328159</b>	2008 <i>CD</i> <sub>133</sub>		8 15.8 104°65	0°3/16.1	17		<b>482618</b>	2013 <i>AQ</i> <sub>35</sub>		8 15.8 358°66	1°1/15.1	18	
7 10	22 8.17	- 9 43.2	1.605	2.451	16.3	21.3	7 10	22 7.19	-15 36.9	1.794	2.651	14.4	21.0
7 20	22 3.62	-10 19.7	1.542	2.464	12.6	21.0	7 20	22 2.78	-15 48.6	1.720	2.650	11.0	20.8
7 30	21 56.70	-11 10.9	1.500	2.477	8.2	20.8	7 30	21 56.15	-16 7.3	1.668	2.649	7.1	20.6
8 9	21 48.13	-12 11.8	1.483	2.490	3.5	20.6	8 9	21 47.94	-16 29.2	1.641	2.649	2.9	20.3
8 19	21 38.85	-13 16.1	1.492	2.502	1.5	20.5	8 19	21 39.01	-16 49.8	1.639	2.649	2.1	20.2
8 29	21 30.04	-14 16.9	1.527	2.515	6.2	20.8	8 29	21 30.44	-17 4.7	1.665	2.649	6.2	20.5
9 8	21 22.74	-15 8.4	1.588	2.527	10.5	21.1	9 8	21 23.22	-17 10.9	1.716	2.650	10.2	20.7
9 18	21 17.71	-15 47.2	1.672	2.538	14.2	21.3	9 18	21 18.09	-17 7.2	1.790	2.650	13.7	21.0
<b>36411</b>	2000 <i>OM</i> <sub>49</sub>		8 15.8 312°33	9°4/10.1	18		<b>300734</b>	2007 <i>VH</i> <sub>147</sub>		8 15.8 15°68	1°7/14.4	18	
7 10	22 14.96	-34 59.7	1.537	2.402	16.0	17.6	7 10	22 4.31	-15 16.0	1.728	2.591	14.6	20.3
7 20	22 9.61	-35 54.2	1.470	2.390	13.2	17.4	7 20	22 0.68	-16 1.5	1.659	2.593	11.1	20.1
7 30	22 1.00	-36 40.2	1.423	2.379	10.7	17.2	7 30	21 54.83	-16 56.6	1.612	2.595	7.1	19.8
8 9	21 50.00	-37 7.5	1.399	2.368	9.4	17.1	8 9	21 47.41	-17 55.8	1.589	2.597	3.0	19.6
8 19	21 37.96	-37 8.0	1.399	2.357	10.3	17.1	8 19	21 39.26	-18 52.6	1.592	2.600	2.7	19.6
8 29	21 26.54	-36 37.7	1.422	2.346	12.8	17.3	8 29	21 31.45	-19 40.9	1.622	2.603	6.7	19.8
9 8	21 17.27	-35 38.3	1.466	2.336	15.8	17.4	9 8	21 24.98	-20 16.3	1.677	2.606	10.7	20.1
9 18	21 11.10	-34 15.3	1.530	2.327	18.7	17.6	9 18	21 20.58	-20 36.7	1.754	2.610	14.1	20.3
<b>377889</b>	2006 <i>DD</i> <sub>67</sub>		8 15.8 196°72	5°3/20.2	18		<b>376773</b>	2000 <i>GJ</i> <sub>149</sub>		8 15.8 83°92	0°7/16.4	17	
7 10	22 7.79	+ 2 32.6	2.215	2.989	14.7	21.3	7 10	22 8.10	- 9 5.4	1.571	2.417	16.6	21.3
7 20	22 2.85	+ 2 59.9	2.125	2.987	12.3	21.1	7 20	22 3.56	- 9 34.7	1.513	2.434	12.8	21.1
7 30	21 56.04	+ 3 11.0	2.055	2.984	9.5	21.0	7 30	21 56.66	-10 18.9	1.475	2.451	8.5	20.9
8 9	21 47.85	+ 3 5.4	2.010	2.980	6.8	20.8	8 9	21 48.13	-11 13.4	1.462	2.468	3.7	20.6
8 19	21 38.97	+ 2 43.8	1.990	2.976	5.4	20.7	8 19	21 38.96	-12 12.1	1.474	2.485	1.5	20.5
8 29	21 30.24	+ 2 9.1	1.999	2.972	6.3	20.8	8 29	21 30.30	-13 8.5	1.513	2.501	6.1	20.9
9 8	21 22.52	+ 1 25.7	2.034	2.967	8.9	20.9	9 8	21 23.20	-13 56.8	1.577	2.518	10.4	21.2
9 18	21 16.48	+ 0 38.6	2.094	2.962	11.7	21.1	9 18	21 18.37	-14 33.6	1.664	2.534	14.1	21.4
<b>482390</b>	2012 <i>AX</i> <sub>19</sub>		8 15.8 154°45	2°8/12.9	18		<b>378172</b>	2006 <i>WV</i> <sub>96</sub>		8 15.8 72°11	6°2/11.5	17	
7 10	22 3.94	-19 32.2	2.318	3.175	11.6	21.1	7 10	22 10.17	-25 12.4	1.460	2.337	16.0	20.6
7 20	21 59.88	-20 30.3	2.245	3.176	8.8	21.0	7 20	22 5.62	-26 24.2	1.407	2.344	12.4	20.4
7 30	21 54.07	-21 33.2	2.197	3.177	5.7	20.8	7 30	21 58.23	-27 37.0	1.375	2.352	8.7	20.2
8 9	21 47.01	-22 35.7	2.175	3.178	3.1	20.6	8 9	21 48.84	-28 41.4	1.366	2.360	6.3	20.1
8 19	21 39.38	-23 32.4	2.180	3.179	3.6	20.6	8 19	21 38.62	-29 28.5	1.382	2.368	7.2	20.2
8 29	21 31.97	-24 18.7	2.214	3.180	6.4	20.8	8 29	21 29.02	-29 52.6	1.422	2.376	10.4	20.4
9 8	21 25.58	-24 51.6	2.274	3.181	9.4	21.0	9 8	21 21.31	-29 52.4	1.485	2.384	13.9	20.6
9 18	21 20.82	-25 9.9	2.357	3.181	12.0	21.2	9 18	21 16.32	-29 30.1	1.568	2.392	17.1	20.9
<b>436272</b>	2010 <i>CJ</i> <sub>111</sub>		8 15.8 77°20	1.4/14.9	16		<b>16444</b>	<i>Godfrey</i>		8 15.8 309°74			

EPHEMERIDES

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>143251</b>	2002 <i>YY</i> <sub>30</sub>		8 15.8 233°20	1.4/14.6	18		<b>368114</b>	2013 <i>GP</i> <sub>70</sub>		8 15.8 82°53	5.5/21.6	18	
7 10	22 5.24	-15 19.6	2.104	2.955	12.8	20.4	7 10	22 2.50	+ 5 27.0	2.396	3.159	14.0	20.8
7 20	22 1.05	-15 56.6	2.026	2.953	9.8	20.2	7 20	21 58.68	+ 5 41.0	2.312	3.162	11.8	20.6
7 30	21 54.93	-16 41.4	1.970	2.950	6.3	20.0	7 30	21 53.27	+ 5 37.5	2.249	3.166	9.4	20.5
8 9	21 47.43	-17 29.6	1.939	2.947	2.6	19.8	8 9	21 46.74	+ 5 16.2	2.208	3.169	7.0	20.3
8 19	21 39.28	-18 16.3	1.937	2.944	2.2	19.7	8 19	21 39.67	+ 4 38.4	2.194	3.173	5.6	20.3
8 29	21 31.37	-18 56.5	1.962	2.942	5.8	20.0	8 29	21 32.78	+ 3 47.3	2.206	3.176	6.1	20.3
9 8	21 24.55	-19 26.7	2.013	2.939	9.4	20.2	9 8	21 26.78	+ 2 47.6	2.246	3.180	8.1	20.4
9 18	21 19.50	-19 45.0	2.088	2.936	12.5	20.4	9 18	21 22.23	+ 1 44.4	2.310	3.184	10.5	20.6
<b>22447</b>	1996 <i>TP</i> <sub>34</sub>		8 15.8 337°05	11°2/	9.8 18		<b>67232</b>	2000 <i>EB</i> <sub>3</sub>		8 15.8 7°04	1°8/17.3	18	
7 10	22 9.58	-33 20.7	1.087	1.981	19.0	17.2	7 10	22 1.02	- 5 48.2	1.522	2.372	16.9	18.7
7 20	22 6.54	-34 33.2	1.028	1.968	15.6	17.0	7 20	21 58.40	- 6 19.4	1.451	2.372	13.3	18.5
7 30	21 59.58	-35 38.5	0.987	1.955	12.6	16.8	7 30	21 53.49	- 7 10.3	1.400	2.374	9.1	18.2
8 9	21 49.62	-36 22.8	0.966	1.944	11.2	16.7	8 9	21 46.93	- 8 17.1	1.372	2.376	4.5	18.0
8 19	21 38.26	-36 34.4	0.965	1.934	12.3	16.7	8 19	21 39.58	- 9 33.9	1.369	2.379	2.0	17.8
8 29	21 27.63	-36 7.3	0.984	1.925	15.4	16.8	8 29	21 32.55	-10 52.9	1.391	2.383	6.0	18.1
9 8	21 19.62	-35 3.3	1.022	1.917	19.0	17.0	9 8	21 26.88	-12 6.2	1.438	2.387	10.4	18.3
9 18	21 15.34	-33 29.7	1.076	1.911	22.5	17.2	9 18	21 23.36	-13 8.0	1.507	2.392	14.4	18.6
<b>69589</b>	1998 <i>EM</i> <sub>7</sub>		8 15.8 220°51	1°5/14.8	18		<b>481332</b>	2006 <i>BJ</i> <sub>76</sub>		8 15.8 311°01	2°4/13.3	18	
7 10	22 11.43	-15 41.9	1.757	2.608	15.0	20.2	7 10	22 2.24	-17 5.9	2.192	3.050	12.1	20.8
7 20	22 6.24	-16 10.0	1.674	2.600	11.5	20.0	7 20	21 58.78	-18 12.1	2.111	3.043	9.2	20.6
7 30	21 58.57	-16 46.7	1.612	2.591	7.5	19.7	7 30	21 53.49	-19 26.1	2.054	3.036	5.9	20.3
8 9	21 49.02	-17 27.0	1.575	2.582	3.1	19.5	8 9	21 46.88	-20 42.6	2.024	3.030	2.9	20.1
8 19	21 38.54	-18 5.2	1.565	2.573	2.5	19.4	8 19	21 39.60	-21 55.5	2.021	3.023	3.2	20.2
8 29	21 28.30	-18 35.7	1.582	2.562	6.9	19.7	8 29	21 32.49	-22 59.0	2.046	3.017	6.4	20.3
9 8	21 19.48	-18 54.8	1.625	2.552	11.1	19.9	9 8	21 26.37	-23 49.1	2.097	3.011	9.7	20.5
9 18	21 12.94	-19 0.8	1.690	2.540	14.9	20.1	9 18	21 21.91	-24 23.5	2.171	3.005	12.6	20.7
<b>214030</b>	2004 <i>ES</i> <sub>1</sub>		8 15.8 243°78	1°8/17.6	18		<b>476574</b>	2008 <i>RG</i> <sub>40</sub>		8 15.8 294°04	6°0/12.4	18	
7 10	22 4.40	- 5 26.0	2.331	3.146	12.9	21.4	7 10	22 13.97	-27 48.1	1.654	2.518	15.1	21.2
7 20	22 0.29	- 5 50.0	2.232	3.132	10.2	21.2	7 20	22 8.46	-28 18.1	1.579	2.508	11.9	21.0
7 30	21 54.43	- 6 27.6	2.155	3.118	7.1	21.0	7 30	22 0.11	-28 45.5	1.525	2.497	8.5	20.8
8 9	21 47.25	- 7 16.9	2.103	3.103	3.7	20.7	8 9	21 49.69	-29 2.7	1.494	2.487	6.2	20.6
8 19	21 39.37	- 8 14.4	2.080	3.088	1.9	20.6	8 19	21 38.31	-29 3.3	1.490	2.477	6.7	20.6
8 29	21 31.57	- 9 15.5	2.085	3.073	4.7	20.7	8 29	21 27.40	-28 43.4	1.511	2.466	9.7	20.8
9 8	21 24.65	-10 15.2	2.117	3.057	8.2	20.9	9 8	21 18.28	-28 2.9	1.556	2.456	13.3	21.0
9 18	21 19.25	-11 9.3	2.175	3.040	11.4	21.1	9 18	21 11.84	-27 4.7	1.622	2.447	16.6	21.2
<b>406800</b>	2008 <i>US</i> <sub>24</sub>		8 15.8 319°30	0°3/16.1	18		<b>66060</b>	1998 <i>QB</i> <sub>103</sub>		8 15.8 314°75	0°9/15.0	18	
7 10	22 2.05	-10 58.4	2.472	3.309	11.6	21.7	7 10	22 2.10	-13 13.7	2.040	2.893	13.1	18.9
7 20	21 58.32	-11 20.4	2.387	3.304	8.9	21.5	7 20	21 58.80	-13 54.8	1.951	2.879	10.0	18.7
7 30	21 53.03	-11 51.2	2.324	3.299	5.9	21.3	7 30	21 53.59	-14 46.4	1.884	2.865	6.5	18.5
8 9	21 46.62	-12 28.2	2.287	3.294	2.5	21.1	8 9	21 46.95	-15 44.4	1.843	2.851	2.6	18.2
8 19	21 39.68	-13 7.8	2.278	3.289	1.1	20.9	8 19	21 39.57	-16 43.5	1.829	2.838	1.9	18.1
8 29	21 32.91	-13 46.4	2.298	3.285	4.5	21.2	8 29	21 32.32	-17 38.3	1.842	2.825	5.8	18.3
9 8	21 26.99	-14 20.4	2.345	3.280	7.7	21.4	9 8	21 26.10	-18 23.8	1.881	2.812	9.6	18.5
9 18	21 22.49	-14 47.2	2.416	3.276	10.6	21.6	9 18	21 21.61	-18 57.1	1.943	2.800	12.9	18.7
<b>425814</b>	2011 <i>DV</i> <sub>19</sub>		8 15.8 217°96	0°8/16.4	17		<b>35162</b>	1993 <i>OE</i> <sub>2</sub>		8 15.8 345°42	1°2/16.6	18	
7 10	22 7.65	- 9 9.3	1.854	2.690	14.9	22.3	7 10	21 59.92	- 8 24.6	1.027	1.912	20.6	18.1
7 20	22 3.18	- 9 35.3	1.768	2.684	11.6	22.1	7 20	21 58.61	- 8 45.3	0.960	1.902	16.2	17.8
7 30	21 56.49	-10 15.0	1.704	2.677	7.7	21.8	7 30	21 54.21	- 9 29.3	0.909	1.894	10.9	17.5
8 9	21 48.15	-11 5.0	1.664	2.670	3.5	21.6	8 9	21 47.40	-10 32.6	0.878	1.886	5.0	17.1
8 19	21 38.96	-12 0.5	1.652	2.663	1.4	21.4	8 19	21 39.34	-11 47.4	0.869	1.880	2.0	16.9
8 29	21 29.98	-12 55.5	1.667	2.655	5.7	21.7	8 29	21 31.64	-13 2.8	0.881	1.875	8.0	17.3
9 8	21 22.21	-13 44.8	1.708	2.646	9.9	21.9	9 8	21 25.85	-14 8.5	0.914	1.871	13.7	17.6
9 18	21 16.45	-14 24.2	1.773	2.637	13.6	22.1	9 18	21 23.05	-14 57.4	0.965	1.869	18.8	17.8
<b>349207</b>	2007 <i>RM</i> <sub>273</sub>		8 15.8 231°61	5°8/21.3	18		<b>71081</b>	1999 <i>XL</i> <sub>119</sub>		8 15.8 5°12	6°0/11.8	18	
7 10	22 3.34	+ 5 0.9	2.025	2.801	15.9	21.2	7 10	22 8.72	-26 14.5	1.537	2.413	15.4	18.5
7 20	21 59.66	+ 5 3.3	1.937	2.798	13.3	21.0	7 20	22 4.47	-27 6.4	1.476	2.413	12.0	18.3
7 30	21 54.09	+ 4 44.6	1.869	2.795	10.4	20.9	7 30	21 57.50	-27 57.8	1.437	2.414	8.5	18.1
8 9	21 47.13	+ 4 4.4	1.823	2.792	7.6	20.7	8 9	21 48.58	-28 40.6	1.420	2.415	6.2	18.0
8 19	21 39.46	+ 3 4.7	1.803	2.789	5.8	20.6	8 19	21 38.85	-29 7.5	1.429	2.416	6.9	18.0
8 29	21 31.96	+ 1 50.1	1.809	2.786	6.6	20.6	8 29	21 29.64	-29 13.4	1.462	2.418	10.0	18.2
9 8	21 25.49	+ 0 27.0	1.841	2.782	9.1	20.8	9 8	21 22.20	-28 57.5	1.518	2.420	13.4	18.4
9 18	21 20.75	- 0 57.5	1.899	2.779	12.1	20.9	9 18	21 17.35	-28 21.8	1.594	2.423	16.6	18.6
<b>511201</b>	2013 <i>YT</i> <sub>138</sub>		8 15.8 240°89	3°5/13.3	18		<b>487696</b>	2015 <i>RJ</i> <sub>1</sub>		8 15.8 301°41	1°8/17.2	18	
7 10	22 10.12	-21 10.4	1.821	2.681	14.1	21.2	7 10	22 5.78	- 8 15.6	2.173	3.001	13.3	21.0
7 20	22 5.17	-21 47.4	1.743	2.675	10.8	21.0	7 20	22 1.38	- 8 5.6	2.085	2.994	10.4	20.8
7 30	21 57.82	-22 28.2	1.688	2.667	7.2	20.8	7 30	21 55.14	- 8 5.5	2.019	2.987	7.2	20.6
8 9	21 48.70	-23 6.9	1.657	2.660	4.0	20.6	8 9	21 47.55	- 8 14.0	1.978	2.980	3.7	20.4
8 19	21 38.73	-23 37.3	1.653	2.652	4.3	20.6	8 19	21 39.31	- 8 28.6	1.964	2.973	1.9	20.3
8 29	21 29.08	-23 54.6	1.675	2.645	7.7	20.8	8 29	21 31.26	- 8 46.2	1.979	2.967	4.9	20.5
9 8	21 20.85	-23 56.4	1.723	2.637	11.4	21.0	9 8	21 24.23	- 9 3.5	2.020	2.960	8.5	20.7
9 18	21 14.86	-23 42.6	1.793	2.628	14.8	21.2	9 18	21 18.87	- 9 17.5	2.085	2.954	11.7	20.9
<b>261931</b>	2006 <i>ML</i> <sub>1</sub>		8 15.8 8°52	3°3/13.9	17		<b>355991</b>	2009 <i>BX</i> <sub>7</sub>		8 15.8 242			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>313676</b>	2003 <i>SF</i> <sub>230</sub>		8 15.8	18°58'	4.4/12.5	18	<b>146871</b>	2002 <i>AT</i> <sub>182</sub>		8 15.8	207°32'	4.8/10.9	18
7 10	22 7.90	-25 23.0	1.976	2.840	13.0	19.8	7 10	22 6.37	-26 18.0	2.331	3.190	11.4	20.3
7 20	22 3.17	-25 53.9	1.913	2.844	10.0	19.6	7 20	22 1.89	-27 24.0	2.261	3.188	8.9	20.1
7 30	21 56.32	-26 24.0	1.872	2.848	6.9	19.4	7 30	21 55.49	-28 30.3	2.214	3.186	6.4	19.9
8 9	21 48.01	-26 47.8	1.856	2.853	4.7	19.3	8 9	21 47.73	-29 30.7	2.194	3.183	4.9	19.8
8 19	21 39.12	-27 0.4	1.867	2.858	5.1	19.4	8 19	21 39.33	-30 19.7	2.201	3.180	5.6	19.9
8 29	21 30.68	-26 58.4	1.904	2.863	7.8	19.5	8 29	21 31.18	-30 52.8	2.236	3.177	7.9	20.0
9 8	21 23.61	-26 41.1	1.966	2.869	10.8	19.7	9 8	21 24.13	-31 8.3	2.295	3.174	10.5	20.2
9 18	21 18.57	-26 9.5	2.050	2.875	13.6	19.9	9 18	21 18.84	-31 6.4	2.377	3.170	12.9	20.3
<b>19120</b>	Doronina		8 15.8	345°69'	6.6/19.2	18	<b>166428</b>	2002 <i>PY</i> <sub>22</sub>		8 15.8	145°30'	1.1/16.7	18
7 10	22 2.78	- 2 0.2	1.228	2.076	20.2	16.8	7 10	22 7.15	- 9 16.9	1.976	2.810	14.2	20.3
7 20	22 0.38	- 0 56.8	1.152	2.064	16.7	16.6	7 20	22 2.56	- 9 23.8	1.899	2.812	11.0	20.1
7 30	21 55.16	- 0 12.5	1.093	2.053	12.7	16.3	7 30	21 55.96	- 9 42.1	1.843	2.815	7.4	19.9
8 9	21 47.76	+ 0 10.2	1.054	2.043	8.7	16.1	8 9	21 47.93	-10 8.9	1.813	2.818	3.4	19.7
8 19	21 39.20	+ 0 11.0	1.037	2.035	6.6	15.9	8 19	21 39.25	-10 40.7	1.810	2.820	1.5	19.5
8 29	21 30.88	- 0 7.0	1.042	2.028	8.6	16.0	8 29	21 30.85	-11 13.2	1.834	2.822	5.2	19.8
9 8	21 24.21	- 0 37.4	1.068	2.022	12.6	16.2	9 8	21 23.65	-11 42.4	1.885	2.824	9.0	20.0
9 18	21 20.21	- 1 13.0	1.115	2.019	16.8	16.5	9 18	21 18.30	-12 5.0	1.960	2.826	12.4	20.3
<b>512561</b>	2016 <i>SN</i> <sub>21</sub>		8 15.8	8°96'	1.2/16.9	18	<b>25439</b>	1999 <i>WV</i> <sub>6</sub>		8 15.8	184°33'	0.2/15.9	18
7 10	22 0.86	- 6 14.7	1.528	2.380	16.8	20.0	7 10	22 6.19	-10 56.5	2.030	2.870	13.6	19.8
7 20	21 58.29	- 7 3.6	1.458	2.381	13.1	19.8	7 20	22 1.83	-11 24.1	1.951	2.870	10.5	19.6
7 30	21 53.44	- 8 12.9	1.407	2.383	8.8	19.5	7 30	21 55.50	-12 2.5	1.894	2.870	6.9	19.4
8 9	21 46.93	- 9 37.9	1.380	2.385	4.1	19.3	8 9	21 47.75	-12 48.3	1.862	2.869	2.9	19.1
8 19	21 39.62	-11 11.6	1.377	2.388	1.6	19.1	8 19	21 39.33	-13 36.9	1.858	2.869	1.3	19.0
8 29	21 32.62	-12 45.1	1.401	2.392	6.1	19.4	8 29	21 31.16	-14 23.3	1.882	2.868	5.4	19.3
9 8	21 26.98	-14 10.0	1.450	2.397	10.6	19.7	9 8	21 24.12	-15 3.1	1.932	2.867	9.1	19.5
9 18	21 23.47	-15 20.3	1.521	2.402	14.5	19.9	9 18	21 18.89	-15 33.3	2.006	2.866	12.5	19.7
<b>385212</b>	1999 <i>TA</i> <sub>250</sub>		8 15.8	242°67'	14.4/ 9.8	18	<b>253544</b>	2003 <i>SQ</i> <sub>234</sub>		8 15.9	319°15'	4.6/13.2	17
7 10	22 32.09	-42 12.5	1.203	2.052	20.5	20.6	7 10	22 5.39	-20 7.0	1.150	2.043	18.3	20.0
7 20	22 24.21	-43 23.1	1.144	2.043	17.8	20.4	7 20	22 2.96	-20 51.6	1.072	2.021	14.2	19.7
7 30	22 11.25	-44 15.8	1.102	2.034	15.5	20.2	7 30	21 57.21	-21 45.6	1.012	2.000	9.5	19.4
8 9	21 54.47	-44 33.8	1.081	2.024	14.4	20.1	8 9	21 48.76	-22 40.7	0.973	1.979	5.2	19.1
8 19	21 36.19	-44 4.4	1.080	2.014	15.2	20.1	8 19	21 38.81	-23 26.9	0.956	1.959	5.8	19.0
8 29	21 19.32	-42 44.7	1.101	2.003	17.6	20.2	8 29	21 29.07	-23 54.7	0.962	1.940	10.6	19.2
9 8	21 6.24	-40 42.8	1.142	1.992	20.6	20.4	9 8	21 21.26	-23 59.4	0.988	1.922	15.8	19.5
9 18	20 58.06	-38 12.0	1.200	1.981	23.7	20.6	9 18	21 16.64	-23 40.3	1.032	1.905	20.4	19.7
<b>469976</b>	2006 <i>EE</i> <sub>9</sub>		8 15.8	234°29'	8.3/11.1	17	<b>220866</b>	2004 <i>WB</i> <sub>6</sub>		8 15.9	285°37'	4.1/12.1	18
7 10	22 20.57	-35 52.8	1.833	2.678	14.7	21.5	7 10	22 6.60	-24 52.5	2.304	3.162	11.6	20.3
7 20	22 13.26	-36 27.3	1.768	2.676	12.1	21.3	7 20	22 2.05	-25 34.2	2.227	3.155	8.9	20.1
7 30	22 3.05	-36 51.9	1.724	2.673	9.7	21.2	7 30	21 55.60	-26 16.4	2.173	3.148	6.2	20.0
8 9	21 50.83	-36 58.3	1.705	2.670	8.3	21.1	8 9	21 47.78	-26 53.8	2.145	3.141	4.2	19.8
8 19	21 37.88	-36 40.4	1.711	2.667	8.9	21.1	8 19	21 39.34	-27 21.7	2.145	3.134	4.8	19.8
8 29	21 25.68	-35 56.3	1.744	2.664	11.1	21.2	8 29	21 31.15	-27 36.4	2.172	3.127	7.2	20.0
9 8	21 15.53	-34 48.4	1.800	2.661	13.7	21.4	9 8	21 24.06	-27 36.1	2.224	3.119	10.1	20.2
9 18	21 8.25	-33 21.9	1.877	2.658	16.3	21.6	9 18	21 18.74	-27 21.0	2.299	3.112	12.7	20.3
<b>218519</b>	2004 <i>TT</i> <sub>237</sub>		8 15.8	355°66'	2.3/14.2	18	<b>84084</b>	2002 <i>QT</i> <sub>21</sub>		8 15.9	265°29'	1.0/15.2	18
7 10	22 3.48	-17 47.1	1.678	2.549	14.6	19.6	7 10	22 9.15	-14 6.8	1.657	2.511	15.5	20.4
7 20	22 0.17	-18 15.6	1.607	2.545	11.1	19.3	7 20	22 4.78	-14 32.9	1.566	2.494	12.0	20.2
7 30	21 54.59	-18 50.7	1.558	2.542	7.2	19.1	7 30	21 57.84	-15 10.1	1.495	2.476	7.9	19.9
8 9	21 47.39	-19 27.4	1.532	2.539	3.3	18.9	8 9	21 48.88	-15 53.6	1.450	2.458	3.2	19.6
8 19	21 39.44	-20 0.0	1.531	2.538	3.2	18.9	8 19	21 38.81	-16 37.8	1.430	2.439	2.2	19.5
8 29	21 31.83	-20 23.4	1.557	2.537	7.0	19.1	8 29	21 28.87	-17 16.4	1.436	2.420	7.0	19.7
9 8	21 25.60	-20 34.1	1.606	2.537	11.0	19.3	9 8	21 20.29	-17 44.3	1.468	2.401	11.6	19.9
9 18	21 21.48	-20 31.1	1.678	2.538	14.5	19.6	9 18	21 14.04	-17 58.9	1.521	2.382	15.7	20.2
<b>514284</b>	2015 <i>RV</i> <sub>252</sub>		8 15.8	355°43'	3.5/13.3	18	<b>316109</b>	2009 <i>PL</i> <sub>5</sub>		8 15.9	336°87'	2.9/18.7	18
7 10	22 4.53	-20 40.9	1.649	2.524	14.6	20.4	7 10	21 59.63	- 1 49.4	1.902	2.724	15.1	20.1
7 20	22 1.05	-21 16.7	1.580	2.520	11.2	20.2	7 20	21 57.01	- 2 21.1	1.813	2.714	12.2	19.9
7 30	21 55.21	-21 56.9	1.533	2.516	7.4	20.0	7 30	21 52.49	- 3 12.7	1.745	2.705	8.7	19.7
8 9	21 47.66	-22 35.5	1.509	2.514	4.0	19.8	8 9	21 46.57	- 4 22.2	1.700	2.696	5.1	19.4
8 19	21 39.35	-23 6.3	1.511	2.512	4.4	19.8	8 19	21 39.91	- 5 45.3	1.682	2.688	2.9	19.3
8 29	21 31.42	-23 24.2	1.538	2.512	7.9	20.0	8 29	21 33.40	- 7 15.4	1.690	2.680	5.3	19.4
9 8	21 24.94	-23 26.5	1.589	2.512	11.7	20.2	9 8	21 27.91	- 8 45.1	1.725	2.673	9.1	19.6
9 18	21 20.67	-23 13.0	1.662	2.513	15.0	20.4	9 18	21 24.15	-10 7.9	1.783	2.667	12.6	19.8
<b>44957</b>	1999 <i>VG</i> <sub>78</sub>		8 15.8	65°58'	0.3/16.0	18	<b>357514</b>	2004 <i>RH</i> <sub>54</sub>		8 15.9	16°96'	5.9/22.6	18
7 10	22 11.33	-12 2.5	1.334	2.193	18.3	18.9	7 10	22 0.41	+ 8 9.5	2.041	2.803	16.2	20.3
7 20	22 6.38	-12 7.3	1.281	2.211	14.0	18.7	7 20	21 57.41	+ 7 45.1	1.957	2.806	13.7	20.1
7 30	21 58.67	-12 24.6	1.248	2.228	9.2	18.4	7 30	21 52.64	+ 6 55.7	1.892	2.808	10.9	19.9
8 9	21 49.06	-12 50.0	1.238	2.245	3.8	18.2	8 9	21 46.58	+ 5 41.9	1.849	2.811	8.0	19.7
8 19	21 38.76	-13 17.9	1.252	2.263	1.6	18.1	8 19	21 39.91	+ 4 6.5	1.832	2.815	6.1	19.6
8 29	21 29.16	-13 42.5	1.292	2.280	6.9	18.5	8 29	21 33.45	+ 2 15.6	1.842	2.818	6.5	19.7
9 8	21 21.48	-13 59.7	1.355	2.298	11.6	18.8	9 8	21 27.98	+ 0 17.3	1.878	2.822	8.8	19.8
9 18	21 16.50	-14 7.0	1.440	2.316	15.5	19.1	9 18	21 24.15	- 1 40.2	1.941	2.826	11.6	20.0
<b>318347</b>	2004 <i>TX</i> <sub>285</sub>		8 15.8	317°44'	0.9/15.1	18	<b>307119</b>	2002 <i>CM</i> <sub>107</sub>		8 15			

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>3456</b>	Etienne-marey		8 15.9	74°31	1.4°/14.9 18		<b>146300</b>	2001 JM <sub>5</sub>		8 15.9	19°60	4.0°/13.4 17	
7 10	22 9.15	-13 56.6	1.280	2.150	18.2	16.8	7 10	22 4.14	-18 23.4	1.079	1.975	18.9	18.7
7 20	22 5.16	-14 33.0	1.216	2.152	14.0	16.6	7 20	22 1.65	-19 19.4	1.031	1.982	14.4	18.5
7 30	21 58.18	-15 23.1	1.170	2.154	9.1	16.3	7 30	21 56.01	-20 25.2	1.001	1.990	9.3	18.2
8 9	21 49.01	-16 20.3	1.147	2.156	3.7	16.0	8 9	21 48.13	-21 31.1	0.992	1.999	4.8	18.0
8 19	21 38.81	-17 16.5	1.148	2.157	2.7	16.0	8 19	21 39.34	-22 27.2	1.005	2.009	5.1	18.1
8 29	21 29.10	-18 3.8	1.174	2.159	8.0	16.3	8 29	21 31.24	-23 5.1	1.041	2.021	9.7	18.4
9 8	21 21.26	-18 36.4	1.223	2.161	13.0	16.6	9 8	21 25.24	-23 20.8	1.098	2.033	14.4	18.7
9 18	21 16.26	-18 52.1	1.292	2.163	17.2	16.8	9 18	21 22.21	-23 14.6	1.174	2.047	18.5	19.0
<b>503984</b>	2004 TT <sub>99</sub>		8 15.9	357°83	1.4°/16.7 17		<b>248524</b>	2005 WC <sub>98</sub>		8 15.9	223°97	1°8/13.8 18	
7 10	21 48.71	-9 39.4	0.678	1.604	23.1	20.1	7 10	22 4.93	-18 7.3	2.916	3.758	9.9	21.4
7 20	21 50.79	-9 37.4	0.628	1.594	18.2	19.7	7 20	22 0.40	-18 47.3	2.825	3.748	7.5	21.3
7 30	21 49.48	-10 1.0	0.593	1.587	12.2	19.4	7 30	21 54.39	-19 31.7	2.759	3.737	4.9	21.1
8 9	21 45.57	-10 46.4	0.574	1.583	5.6	19.0	8 9	21 47.31	-20 16.8	2.720	3.725	2.3	20.9
8 19	21 40.38	-11 44.8	0.571	1.582	2.2	18.8	8 19	21 39.69	-20 59.0	2.710	3.713	2.4	20.9
8 29	21 35.75	-12 44.1	0.586	1.585	8.8	19.2	8 29	21 32.19	-21 34.8	2.730	3.701	5.0	21.0
9 8	21 33.39	-13 32.3	0.617	1.591	15.1	19.6	9 8	21 25.45	-22 1.5	2.777	3.688	7.7	21.2
9 18	21 34.29	-14 1.7	0.664	1.600	20.5	19.9	9 18	21 20.01	-22 17.9	2.850	3.675	10.2	21.4
<b>169065</b>	2001 FO <sub>156</sub>		8 15.9	186°59	1°3/14.8 18		<b>111321</b>	2001 XS <sub>76</sub>		8 15.9	308°93	0°6/16.4 18	
7 10	22 8.18	-13 12.2	1.749	2.600	15.0	20.3	7 10	22 4.12	-9 56.2	1.975	2.817	13.9	20.3
7 20	22 3.72	-14 5.8	1.673	2.600	11.5	20.1	7 20	22 0.37	-10 17.2	1.892	2.811	10.8	20.1
7 30	21 56.93	-15 11.5	1.619	2.599	7.4	19.9	7 30	21 54.65	-10 50.1	1.830	2.805	7.2	19.9
8 9	21 48.42	-16 23.9	1.590	2.599	3.0	19.6	8 9	21 47.49	-11 31.7	1.792	2.799	3.2	19.6
8 19	21 39.08	-17 35.9	1.588	2.597	2.3	19.5	8 19	21 39.61	-12 17.9	1.782	2.793	1.3	19.5
8 29	21 30.01	-18 40.4	1.614	2.595	6.7	19.8	8 29	21 31.94	-13 3.5	1.799	2.787	5.3	19.7
9 8	21 22.29	-19 32.1	1.665	2.593	10.8	20.1	9 8	21 25.36	-13 43.9	1.842	2.781	9.2	20.0
9 18	21 16.73	-20 8.1	1.739	2.590	14.4	20.3	9 18	21 20.57	-14 15.7	1.908	2.776	12.6	20.2
<b>308963</b>	2006 TE <sub>61</sub>		8 15.9	288°42	1°3/14.8 15		<b>459813</b>	2013 SP <sub>30</sub>		8 15.9	356°24	22°3/10.3 18	
7 10	22 5.77	-15 6.3	2.017	2.868	13.3	21.7	7 10	22 36.96	-57 32.5	1.011	1.836	25.2	19.4
7 20	22 1.78	-15 37.6	1.917	2.845	10.2	21.4	7 20	22 29.52	-58 27.6	0.974	1.828	23.8	19.3
7 30	21 55.67	-16 17.8	1.840	2.821	6.6	21.2	7 30	22 14.98	-58 44.0	0.950	1.823	22.7	19.2
8 9	21 47.93	-17 2.8	1.788	2.796	2.8	20.9	8 9	21 55.85	-58 2.6	0.940	1.819	22.3	19.1
8 19	21 39.28	-17 47.6	1.764	2.772	2.2	20.8	8 19	21 36.14	-56 12.9	0.945	1.817	22.6	19.2
8 29	21 30.68	-18 26.9	1.766	2.747	6.2	21.0	8 29	21 19.87	-53 17.9	0.966	1.817	23.6	19.2
9 8	21 23.14	-18 56.4	1.795	2.723	10.2	21.2	9 8	21 9.30	-49 33.7	1.003	1.820	25.2	19.4
9 18	21 17.45	-19 13.7	1.846	2.698	13.7	21.4	9 18	21 4.69	-45 20.1	1.056	1.824	27.0	19.5
<b>136143</b>	2003 SQ <sub>251</sub>		8 15.9	288°54	3°4/18.0 18		<b>483277</b>	2015 TO <sub>245</sub>		8 15.9	259°45	2°7/13.5 18	
7 10	22 6.17	-4 35.9	1.450	2.290	18.1	19.7	7 10	22 7.59	-21 24.2	2.366	3.218	11.5	21.1
7 20	22 2.76	-4 30.1	1.361	2.273	14.6	19.5	7 20	22 2.71	-21 48.2	2.286	3.213	8.8	20.9
7 30	21 56.67	-4 43.6	1.290	2.257	10.4	19.2	7 30	21 56.00	-22 14.1	2.229	3.207	5.8	20.7
8 9	21 48.45	-5 15.5	1.241	2.240	5.9	18.9	8 9	21 48.00	-22 37.9	2.198	3.202	3.2	20.6
8 19	21 39.03	-6 2.5	1.216	2.223	3.5	18.7	8 19	21 39.40	-22 55.4	2.196	3.196	3.4	20.6
8 29	21 29.70	-6 58.6	1.216	2.207	6.9	18.9	8 29	21 31.07	-23 3.6	2.221	3.190	6.1	20.7
9 8	21 21.80	-7 56.3	1.241	2.190	11.7	19.1	9 8	21 23.80	-23 0.5	2.274	3.185	9.2	20.9
9 18	21 16.35	-8 48.7	1.286	2.174	16.2	19.3	9 18	21 18.21	-22 46.0	2.349	3.179	11.9	21.1
<b>477951</b>	2011 RE <sub>12</sub>		8 15.9	281°29	5°0/20.7 18		<b>255166</b>	2005 US <sub>199</sub>		8 15.9	202°62	0°1/15.8 18	
7 10	22 2.53	+ 3 38.0	2.075	2.858	15.3	21.3	7 10	22 4.45	-11 51.7	2.638	3.470	11.1	21.7
7 20	21 59.18	+ 3 25.9	1.969	2.838	12.8	21.1	7 20	22 0.11	-12 18.4	2.551	3.466	8.5	21.5
7 30	21 53.93	+ 2 52.4	1.884	2.818	9.9	20.9	7 30	21 54.22	-12 53.0	2.488	3.463	5.5	21.3
8 9	21 47.21	+ 1 57.4	1.821	2.798	6.9	20.6	8 9	21 47.25	-13 32.6	2.452	3.459	2.3	21.1
8 19	21 39.65	+ 0 43.2	1.784	2.777	5.0	20.5	8 19	21 39.74	-14 13.9	2.444	3.455	1.1	21.0
8 29	21 32.11	-0 45.5	1.775	2.756	6.1	20.5	8 29	21 32.40	-14 53.1	2.466	3.450	4.4	21.2
9 8	21 25.48	-2 21.6	1.792	2.736	9.1	20.7	9 8	21 25.89	-15 27.0	2.515	3.446	7.5	21.4
9 18	21 20.51	-3 57.9	1.834	2.715	12.4	20.8	9 18	21 20.76	-15 53.4	2.590	3.441	10.3	21.6
<b>157885</b>	1999 RD <sub>78</sub>		8 15.9	37°69	3°2/18.6 18		<b>93563</b>	2000 UY <sub>37</sub>		8 15.9	177°13	2°9/18.9 18	
7 10	22 2.21	-1 21.8	1.266	2.110	20.0	18.9	7 10	22 3.90	-1 47.8	2.683	3.474	12.0	19.7
7 20	21 59.50	-2 6.4	1.218	2.132	15.8	18.7	7 20	21 59.62	-1 53.7	2.595	3.476	9.7	19.5
7 30	21 54.27	-3 17.8	1.188	2.155	11.1	18.5	7 30	21 53.87	-2 12.4	2.529	3.477	7.0	19.3
8 9	21 47.32	-4 51.1	1.179	2.178	6.2	18.3	8 9	21 47.09	-2 42.6	2.489	3.478	4.4	19.2
8 19	21 39.70	-6 37.9	1.195	2.202	3.2	18.2	8 19	21 39.82	-3 22.2	2.477	3.478	2.9	19.1
8 29	21 32.67	-8 27.3	1.235	2.228	6.4	18.5	8 29	21 32.70	-4 7.8	2.494	3.478	4.4	19.2
9 8	21 27.32	-10 8.9	1.299	2.253	10.9	18.8	9 8	21 26.38	-4 55.7	2.538	3.478	7.0	19.3
9 18	21 24.36	-11 35.2	1.386	2.279	14.9	19.1	9 18	21 21.37	-5 42.2	2.609	3.477	9.6	19.5
<b>7694</b>	Krasetin		8 15.9	348°87	3°7/18.3 18 R		<b>476565</b>	2008 QA <sub>37</sub>		8 15.9	8°82	1°3/15.2 16	
7 10	22 5.76	-5 0.3	1.784	2.611	15.7	16.4	7 10	22 3.60	-15 32.8	1.059	1.953	19.4	21.0
7 20	22 1.78	-4 23.7	1.702	2.606	12.6	16.2	7 20	22 1.25	-15 35.8	1.006	1.955	14.9	20.7
7 30	21 55.63	-4 0.2	1.640	2.601	9.1	16.0	7 30	21 55.77	-15 49.6	0.970	1.959	9.6	20.4
8 9	21 47.90	-3 49.7	1.602	2.596	5.5	15.7	8 9	21 48.06	-16 8.7	0.955	1.964	3.9	20.1
8 19	21 39.40	-3 50.8	1.589	2.593	3.7	15.6	8 19	21 39.41	-16 26.7	0.961	1.971	2.6	20.1
8 29	21 31.13	-4 0.6	1.603	2.590	6.1	15.8	8 29	21 31.42	-16 37.4	0.990	1.980	8.1	20.4
9 8	21 24.11	-4 15.3	1.642	2.587	9.7	16.0	9 8	21 25.49	-16 36.7	1.040	1.991	13.3	20.8
9 18	21 19.07	-4 30.7	1.704	2.586	13.2	16.2	9 18	21 22.51	-16 23.0	1.109	2.003	17.7	21.1
<b>380132</b>	1998 TL <sub>3</sub>		8 15.9	332°41	9°1/22.6 18		<b>371395</b>	2006 RB <sub>33</sub>		8 15.9	302°08	3°0/14.2 18	
7 10	21 54.91	+ 6 18.8	1.128	1.961	22.6	19.6	7 10	22 9.29	-18 35.2	1.359	2.233	17.1	20.9

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8 15.9

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>38425</b>	1999 <i>RO</i> <sub>230</sub>		8 15.9 303°26	1°3/14.6	18		<b>15093</b>	Lestermackey		8 15.9 268°37	2°4/17.5	18	
7 10	22 2.25	-13 21.0	2.082	2.934	12.9	18.3	7 10	22 7.40	-6 12.9	1.609	2.446	16.8	18.7
7 20	21 58.94	-14 20.7	1.995	2.923	9.8	18.1	7 20	22 3.49	-6 18.4	1.517	2.429	13.4	18.4
7 30	21 53.73	-15 31.7	1.932	2.913	6.3	17.8	7 30	21 57.06	-6 41.1	1.444	2.413	9.3	18.1
8 9	21 47.13	-16 49.1	1.894	2.902	2.6	17.6	8 9	21 48.65	-7 19.0	1.394	2.396	4.9	17.8
8 19	21 39.80	-18 7.0	1.884	2.892	2.2	17.5	8 19	21 39.13	-8 8.3	1.370	2.379	2.5	17.6
8 29	21 32.60	-19 18.8	1.902	2.882	5.9	17.8	8 29	21 29.69	-9 3.1	1.372	2.362	6.4	17.8
9 8	21 26.40	-20 19.6	1.946	2.872	9.6	18.0	9 8	21 21.56	-9 56.6	1.398	2.344	11.0	18.1
9 18	21 21.90	-21 5.9	2.013	2.862	12.8	18.2	9 18	21 15.71	-10 43.3	1.448	2.327	15.2	18.3
<b>488014</b>	2015 <i>UD</i> <sub>6</sub>		8 15.9 270°26	5°1/10.2	18		<b>487721</b>	2015 <i>RF</i> <sub>71</sub>		8 15.9 262°68	3°6/12.5	18	
7 10	22 5.82	-27 38.2	2.471	3.329	10.9	20.8	7 10	22 7.31	-23 59.1	2.542	3.394	10.8	22.0
7 20	22 1.56	-28 48.6	2.386	3.311	8.6	20.6	7 20	22 2.52	-24 37.5	2.452	3.377	8.4	21.8
7 30	21 55.40	-29 59.4	2.324	3.292	6.4	20.4	7 30	21 55.94	-25 17.0	2.385	3.360	5.7	21.6
8 9	21 47.81	-31 4.5	2.290	3.273	5.1	20.3	8 9	21 48.03	-25 53.0	2.346	3.343	3.8	21.4
8 19	21 39.48	-31 58.3	2.282	3.254	5.9	20.3	8 19	21 39.46	-26 21.2	2.334	3.325	4.2	21.4
8 29	21 31.26	-32 36.0	2.302	3.235	8.1	20.4	8 29	21 31.04	-26 37.8	2.351	3.307	6.6	21.6
9 8	21 24.01	-32 55.4	2.347	3.215	10.7	20.6	9 8	21 23.58	-26 40.9	2.393	3.289	9.4	21.7
9 18	21 18.44	-32 56.6	2.414	3.196	13.0	20.7	9 18	21 17.71	-26 30.4	2.460	3.271	12.0	21.9
<b>115087</b>	2003 <i>SP</i> <sub>13</sub>		8 15.9 271°82	0°5/15.4	18		<b>78417</b>	2002 <i>QE</i> <sub>37</sub>		8 15.9 147°12	0°4/15.6	17	
7 10	22 4.04	-13 27.9	2.514	3.353	11.3	20.6	7 10	22 9.20	-11 52.1	1.758	2.603	15.2	21.0
7 20	21 59.97	-13 53.8	2.417	3.337	8.7	20.4	7 20	22 4.41	-12 28.0	1.687	2.610	11.7	20.8
7 30	21 54.25	-14 27.3	2.343	3.321	5.7	20.2	7 30	21 57.34	-13 15.9	1.639	2.616	7.6	20.6
8 9	21 47.31	-15 5.4	2.296	3.304	2.3	20.0	8 9	21 48.64	-14 10.8	1.615	2.623	3.1	20.3
8 19	21 39.74	-15 44.3	2.278	3.288	1.4	19.9	8 19	21 39.20	-15 7.1	1.618	2.628	1.6	20.3
8 29	21 32.26	-16 20.3	2.288	3.271	4.8	20.1	8 29	21 30.12	-15 58.5	1.648	2.634	6.1	20.6
9 8	21 25.63	-16 50.0	2.325	3.254	8.1	20.3	9 8	21 22.44	-16 40.3	1.705	2.638	10.2	20.8
9 18	21 20.43	-17 11.2	2.386	3.237	11.0	20.4	9 18	21 16.90	-17 9.6	1.784	2.643	13.8	21.1
<b>120706</b>	1997 <i>MD</i> <sub>1</sub>		8 15.9 103°52	2°3/18.3	18		<b>431332</b>	2006 <i>XR</i> <sub>21</sub>		8 15.9 239°11	1°8/14.5	18	
7 10	22 3.02	-3 42.6	2.372	3.181	12.9	19.8	7 10	22 9.03	-15 35.1	1.835	2.687	14.4	21.7
7 20	21 59.10	-4 4.9	2.295	3.190	10.2	19.7	7 20	22 4.45	-16 18.3	1.747	2.674	11.0	21.4
7 30	21 53.60	-4 41.1	2.240	3.198	7.2	19.5	7 30	21 57.52	-17 11.2	1.681	2.662	7.1	21.2
8 9	21 47.00	-5 28.8	2.210	3.207	4.0	19.3	8 9	21 48.78	-18 8.5	1.641	2.648	3.1	20.9
8 19	21 39.90	-6 24.8	2.208	3.215	2.3	19.2	8 19	21 39.10	-19 4.0	1.627	2.634	2.8	20.9
8 29	21 33.03	-7 24.6	2.235	3.223	4.5	19.4	8 29	21 29.57	-19 51.4	1.641	2.620	6.9	21.1
9 8	21 27.07	-8 23.6	2.289	3.231	7.5	19.6	9 8	21 21.31	-20 26.1	1.681	2.605	11.0	21.3
9 18	21 22.57	-9 17.6	2.369	3.239	10.4	19.8	9 18	21 15.17	-20 46.0	1.743	2.590	14.6	21.5
<b>294820</b>	2008 <i>CS</i> <sub>125</sub>		8 15.9 319°38	2°1/17.4	18		<b>205153</b>	1999 <i>XV</i> <sub>186</sub>		8 15.9 296°52	4°2/18.2	17	
7 10	22 4.80	-6 58.1	1.791	2.628	15.3	20.6	7 10	22 8.81	-4 19.1	1.781	2.600	16.1	20.5
7 20	22 1.10	-6 59.6	1.708	2.621	12.1	20.4	7 20	22 4.50	-3 41.5	1.671	2.569	13.1	20.2
7 30	21 55.23	-7 15.2	1.644	2.614	8.4	20.1	7 30	21 57.73	-3 16.5	1.581	2.539	9.7	20.0
8 9	21 47.78	-7 43.1	1.605	2.607	4.3	19.9	8 9	21 48.96	-3 4.9	1.515	2.508	6.1	19.7
8 19	21 39.52	-8 19.7	1.591	2.600	2.2	19.7	8 19	21 38.98	-3 6.0	1.474	2.477	4.2	19.5
8 29	21 31.47	-9 0.3	1.604	2.594	5.6	19.9	8 29	21 28.89	-3 17.5	1.460	2.445	6.7	19.6
9 8	21 24.62	-9 39.6	1.642	2.588	9.7	20.2	9 8	21 19.88	-3 35.3	1.471	2.414	10.8	19.7
9 18	21 19.75	-10 13.5	1.704	2.582	13.4	20.4	9 18	21 12.96	-3 55.1	1.505	2.383	14.8	19.9
<b>84027</b>	2002 <i>PE</i> <sub>44</sub>		8 15.9 353°65	2°6/14.7	18		<b>264092</b>	2009 <i>SM</i> <sub>284</sub>		8 15.9 307°77	3°8/18.9	18	
7 10	22 9.67	-18 54.8	1.189	2.072	18.5	18.5	7 10	22 4.92	-2 12.9	2.292	3.093	13.5	20.2
7 20	22 5.83	-18 56.7	1.124	2.067	14.2	18.2	7 20	22 0.72	-1 46.7	2.199	3.085	11.0	20.0
7 30	21 58.77	-19 4.3	1.078	2.064	9.3	18.0	7 30	21 54.78	-1 33.1	2.128	3.076	8.1	19.8
8 9	21 49.34	-19 11.6	1.053	2.061	4.2	17.7	8 9	21 47.55	-1 32.0	2.081	3.068	5.3	19.7
8 19	21 38.84	-19 12.7	1.052	2.060	3.6	17.6	8 19	21 39.68	-1 42.2	2.061	3.059	3.8	19.6
8 29	21 28.91	-19 2.5	1.074	2.059	8.6	17.9	8 29	21 31.95	-2 1.3	2.069	3.051	5.3	19.6
9 8	21 21.07	-18 39.1	1.118	2.059	13.6	18.2	9 8	21 25.13	-2 25.6	2.103	3.043	8.2	19.8
9 18	21 16.28	-18 2.8	1.182	2.060	18.0	18.5	9 18	21 19.86	-2 51.6	2.162	3.035	11.1	20.0
<b>273316</b>	2006 <i>SD</i> <sub>391</sub>		8 15.9 276°03	2°1/14.5	17		<b>293302</b>	2007 <i>DD</i> <sub>30</sub>		8 15.9 30°07	1°1/16.9	18	
7 10	22 8.91	-16 12.3	1.580	2.442	15.8	21.8	7 10	22 1.91	-6 56.8	2.117	2.948	13.4	20.5
7 20	22 4.82	-16 49.2	1.489	2.422	12.2	21.5	7 20	21 58.52	-7 37.8	2.039	2.952	10.5	20.3
7 30	21 58.02	-17 36.6	1.419	2.401	8.0	21.2	7 30	21 53.38	-8 32.9	1.984	2.955	7.0	20.1
8 9	21 49.06	-18 28.8	1.373	2.381	3.5	20.9	8 9	21 46.99	-9 38.7	1.955	2.959	3.3	19.8
8 19	21 38.91	-19 19.1	1.352	2.360	3.2	20.8	8 19	21 40.02	-10 50.5	1.952	2.963	1.3	19.7
8 29	21 28.85	-20 0.1	1.358	2.338	7.8	21.1	8 29	21 33.26	-12 2.5	1.978	2.967	4.8	20.0
9 8	21 20.22	-20 26.9	1.387	2.317	12.5	21.3	9 8	21 27.51	-13 9.3	2.030	2.971	8.4	20.2
9 18	21 14.04	-20 37.2	1.438	2.295	16.6	21.5	9 18	21 23.36	-14 6.7	2.107	2.976	11.6	20.4
<b>359983</b>	2012 <i>UM</i> <sub>169</sub>		8 15.9 228°12	4°5/19.3	18		<b>24708</b>	1991 <i>PX</i> <sub>5</sub>		8 15.9 358°99	1°4/15.1	18	
7 10	22 8.32	-0 37.8	2.174	2.964	14.5	20.9	7 10	22 10.51	-16 2.4	1.398	2.265	17.2	18.4
7 20	22 3.43	-0 8.6	2.079	2.956	11.9	20.7	7 20	22 6.03	-16 13.0	1.330	2.264	13.2	18.2
7 30	21 56.60	+0 6.4	2.006	2.948	9.0	20.5	7 30	21 58.71	-16 32.1	1.281	2.264	8.6	17.9
8 9	21 48.32	+0 7.0	1.957	2.939	6.1	20.3	8 9	21 49.31	-16 54.6	1.255	2.263	3.6	17.6
8 19	21 39.29	-0 5.9	1.935	2.930	4.5	20.2	8 19	21 38.97	-17 14.8	1.254	2.263	2.6	17.5
8 29	21 30.39	-0 29.7	1.941	2.920	5.9	20.2	8 29	21 29.10	-17 27.3	1.279	2.264	7.5	17.8
9 8	21 22.49	-1 0.3	1.973	2.910	8.9	20.4	9 8	21 21.02	-17 28.7	1.327	2.264	12.2	18.1
9 18	21 16.31	-1 33.6	2.031	2.900	11.9	20.6	9 18	21 15.63	-17 17.9	1.396	2.265	16.3	18.4
<b>120781</b>	1998 <i>EL</i> <sub>11</sub>		8 15.9 63°04	3°8/13.3	17		<b>502723</b>	2015 <i>DA</i> <sub>31</sub>		8 15.9 249°85	2°5/13.9	18	
7 10	22 11.25												

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>159116</b>	2004 VV <sub>22</sub>	8 15.9 301°82		1.7/17.4 18			<b>509107</b>	2005 VY <sub>130</sub>	8 15.9 135°81		4.6/21.7 18		
7 10	22 3.21	- 6 55.8	2.203	3.029	13.2	20.2	7 10	22 3.09	+ 6 2.1	2.744	3.492	12.8	22.1
7 20	21 59.54	- 7 4.2	2.109	3.017	10.4	20.0	7 20	21 58.98	+ 5 48.4	2.661	3.503	10.7	21.9
7 30	21 54.09	- 7 24.8	2.037	3.004	7.2	19.8	7 30	21 53.47	+ 5 17.6	2.599	3.513	8.4	21.8
8 9	21 47.32	- 7 55.8	1.990	2.992	3.7	19.5	8 9	21 47.00	+ 4 30.6	2.562	3.524	6.1	21.7
8 19	21 39.87	- 8 34.1	1.971	2.980	1.8	19.4	8 19	21 40.09	+ 3 29.3	2.552	3.533	4.7	21.6
8 29	21 32.54	- 9 15.6	1.979	2.968	4.8	19.6	8 29	21 33.37	+ 2 17.5	2.570	3.543	5.2	21.6
9 8	21 26.14	- 9 56.1	2.013	2.956	8.4	19.8	9 8	21 27.43	+ 0 59.9	2.617	3.552	7.1	21.8
9 18	21 21.32	-10 31.7	2.072	2.944	11.6	19.9	9 18	21 22.77	- 0 18.5	2.690	3.560	9.3	21.9
<b>339468</b>	2005 EX <sub>243</sub>	8 15.9 236°20		4.6/12.1 18			<b>72444</b>	2001 CZ <sub>48</sub>	8 15.9 51°55		9.4/ 8.9 18		
7 10	22 12.21	-26 19.4	2.292	3.142	12.0	21.0	7 10	22 11.79	-34 54.0	1.599	2.467	15.3	18.3
7 20	22 6.50	-27 1.1	2.206	3.128	9.3	20.8	7 20	22 6.94	-36 19.2	1.557	2.477	12.6	18.2
7 30	21 58.66	-27 42.5	2.143	3.113	6.6	20.6	7 30	21 59.21	-37 35.5	1.536	2.488	10.3	18.1
8 9	21 49.24	-28 17.7	2.106	3.098	4.7	20.5	8 9	21 49.48	-38 32.9	1.538	2.499	9.4	18.0
8 19	21 39.03	-28 41.5	2.098	3.082	5.3	20.5	8 19	21 39.01	-39 3.8	1.564	2.511	10.4	18.1
8 29	21 29.05	-28 50.1	2.117	3.066	7.8	20.6	8 29	21 29.26	-39 4.7	1.613	2.523	12.5	18.3
9 8	21 20.25	-28 41.9	2.162	3.049	10.7	20.8	9 8	21 21.51	-38 36.9	1.684	2.535	15.0	18.5
9 18	21 13.39	-28 17.8	2.230	3.032	13.4	20.9	9 18	21 16.53	-37 45.1	1.773	2.547	17.3	18.7
<b>221880</b>	2008 HW <sub>32</sub>	8 15.9 7°56		5.8/11.0 18			<b>491497</b>	2012 JG	8 15.9 343°62		10.8/25.9 17		
7 10	22 5.30	-26 41.0	1.837	2.709	13.4	19.6	7 10	21 59.28	+16 9.2	0.981	1.771	28.1	21.4
7 20	22 1.56	-27 46.0	1.776	2.710	10.5	19.4	7 20	21 58.37	+15 36.4	0.909	1.768	24.8	21.2
7 30	21 55.55	-28 50.8	1.738	2.712	7.6	19.2	7 30	21 54.30	+14 5.8	0.849	1.765	20.6	20.9
8 9	21 47.94	-29 47.8	1.724	2.714	5.8	19.1	8 9	21 47.70	+11 30.7	0.804	1.763	15.9	20.6
8 19	21 39.63	-30 30.5	1.736	2.716	6.6	19.2	8 19	21 39.71	+ 7 53.7	0.778	1.761	11.9	20.4
8 29	21 31.71	-30 53.9	1.773	2.719	9.2	19.3	8 29	21 32.00	+ 3 31.1	0.775	1.759	11.0	20.4
9 8	21 25.19	-30 56.6	1.833	2.723	12.2	19.5	9 8	21 26.22	- 1 8.4	0.795	1.758	14.3	20.5
9 18	21 20.79	-30 39.6	1.915	2.727	14.9	19.7	9 18	21 23.57	- 5 35.0	0.837	1.758	19.1	20.8
<b>276890</b>	2004 RU <sub>333</sub>	8 15.9 336°87		2.3/14.2 18			<b>348042</b>	2003 UO <sub>104</sub>	8 15.9 250°11		5.9/21.3 18		
7 10	21 58.73	-13 52.3	1.193	2.083	17.9	20.0	7 10	22 5.35	+ 5 27.8	2.285	3.046	14.7	21.3
7 20	21 57.55	-14 54.6	1.116	2.065	13.8	19.7	7 20	22 1.20	+ 5 42.2	2.180	3.029	12.5	21.1
7 30	21 53.55	-16 15.6	1.059	2.048	8.9	19.4	7 30	21 55.23	+ 5 38.3	2.094	3.011	9.9	20.9
8 9	21 47.32	-17 48.0	1.023	2.032	3.8	19.0	8 9	21 47.85	+ 5 15.0	2.031	2.993	7.5	20.8
8 19	21 39.86	-19 21.3	1.009	2.017	3.7	19.0	8 19	21 39.68	+ 4 33.1	1.994	2.974	5.9	20.6
8 29	21 32.60	-20 44.2	1.019	2.004	9.0	19.3	8 29	21 31.53	+ 3 35.4	1.985	2.955	6.6	20.6
9 8	21 26.98	-21 47.6	1.050	1.992	14.2	19.5	9 8	21 24.24	+ 2 27.3	2.002	2.936	8.9	20.7
9 18	21 24.10	-22 26.7	1.100	1.982	18.8	19.8	9 18	21 18.50	+ 1 14.4	2.044	2.916	11.7	20.9
<b>320277</b>	2007 RH <sub>100</sub>	8 15.9 272°20		0.1/15.9 18			<b>140732</b>	2001 UM <sub>09</sub>	8 15.9 359°96		0.1/16.0 18		
7 10	22 5.92	-11 31.9	1.876	2.722	14.3	21.6	7 10	22 4.22	-10 55.1	1.876	2.724	14.3	19.9
7 20	22 1.96	-11 58.7	1.788	2.711	11.1	21.3	7 20	22 0.54	-11 22.5	1.800	2.723	11.0	19.6
7 30	21 55.85	-12 37.2	1.722	2.699	7.3	21.1	7 30	21 54.83	-12 1.8	1.746	2.723	7.2	19.4
8 9	21 48.11	-13 23.7	1.680	2.687	3.0	20.8	8 9	21 47.66	-12 49.1	1.716	2.723	3.0	19.2
8 19	21 39.53	-14 13.4	1.665	2.676	1.4	20.6	8 19	21 39.80	-13 39.6	1.712	2.723	1.3	19.0
8 29	21 31.11	-15 0.7	1.677	2.664	5.8	20.9	8 29	21 32.19	-14 27.9	1.736	2.723	5.6	19.3
9 8	21 23.85	-15 40.7	1.715	2.652	10.0	21.1	9 8	21 25.76	-15 9.0	1.785	2.724	9.5	19.6
9 18	21 18.54	-16 10.0	1.777	2.640	13.6	21.3	9 18	21 21.21	-15 39.9	1.858	2.725	13.0	19.8
<b>358667</b>	2007 WV <sub>60</sub>	8 15.9 305°25		2.1/13.9 18			<b>197187</b>	2003 UV <sub>314</sub>	8 15.9 317°60		0.7/15.4 18		
7 10	22 3.03	-14 15.3	1.756	2.618	14.4	20.1	7 10	22 5.22	-12 56.4	1.702	2.558	15.1	19.8
7 20	22 0.15	-15 24.9	1.653	2.587	11.1	19.8	7 20	22 1.60	-13 25.9	1.622	2.551	11.6	19.6
7 30	21 54.94	-16 49.8	1.572	2.555	7.2	19.5	7 30	21 55.68	-14 6.9	1.563	2.544	7.5	19.3
8 9	21 47.85	-18 24.2	1.516	2.524	3.2	19.2	8 9	21 48.07	-14 55.0	1.529	2.537	3.1	19.1
8 19	21 39.61	-20 0.4	1.487	2.493	3.2	19.2	8 19	21 39.60	-15 44.6	1.521	2.531	1.8	18.9
8 29	21 31.30	-21 29.4	1.484	2.462	7.6	19.4	8 29	21 31.38	-16 29.6	1.539	2.525	6.4	19.2
9 8	21 24.07	-22 43.7	1.507	2.432	12.0	19.5	9 8	21 24.46	-17 5.1	1.581	2.519	10.6	19.5
9 18	21 18.91	-23 38.7	1.550	2.401	15.9	19.7	9 18	21 19.65	-17 28.1	1.647	2.513	14.4	19.7
<b>264970</b>	2003 AQ <sub>72</sub>	8 15.9 154°48		13.4/11.8 15			<b>174072</b>	2002 EA <sub>111</sub>	8 15.9 43°03		0.6/15.5 17		
7 10	22 36.62	-41 24.5	1.179	2.025	21.0	19.9	7 10	22 5.07	-10 22.8	1.147	2.022	19.5	19.2
7 20	22 27.27	-42 12.0	1.128	2.028	17.9	19.7	7 20	22 2.13	-11 20.6	1.096	2.035	15.0	19.0
7 30	22 12.95	-42 39.6	1.095	2.031	15.1	19.6	7 30	21 56.27	-12 38.0	1.065	2.049	9.7	18.7
8 9	21 55.21	-42 31.4	1.082	2.034	13.5	19.5	8 9	21 48.32	-14 7.0	1.054	2.063	3.9	18.4
8 19	21 36.52	-41 37.6	1.091	2.036	14.0	19.5	8 19	21 39.52	-15 37.5	1.068	2.078	2.2	18.4
8 29	21 19.72	-39 58.4	1.123	2.038	16.3	19.7	8 29	21 31.35	-16 58.7	1.105	2.094	7.8	18.8
9 8	21 6.89	-37 44.0	1.177	2.040	19.3	19.9	9 8	21 25.11	-18 2.8	1.165	2.109	12.8	19.1
9 18	20 58.91	-35 8.2	1.249	2.041	22.3	20.1	9 18	21 21.65	-18 46.2	1.245	2.126	17.1	19.4
<b>123140</b>	2000 TD <sub>18</sub>	8 15.9 260°50		0.5/15.5 17			<b>267731</b>	2003 FK <sub>21</sub>	8 15.9 67°35		3.4/18.9 18		
7 10	22 7.46	-13 1.9	1.756	2.607	14.9	20.0	7 10	22 4.62	- 0 47.0	1.593	2.413	17.6	20.4
7 20	22 3.22	-13 25.2	1.677	2.603	11.5	19.8	7 20	22 1.02	- 1 20.5	1.529	2.428	14.1	20.3
7 30	21 56.68	-13 59.1	1.619	2.598	7.5	19.6	7 30	21 55.20	- 2 17.0	1.485	2.444	10.1	20.1
8 9	21 48.46	-14 39.4	1.586	2.594	3.1	19.3	8 9	21 47.81	- 3 33.4	1.465	2.459	5.9	19.9
8 19	21 39.41	-15 20.9	1.579	2.589	1.7	19.2	8 19	21 39.76	- 5 3.8	1.469	2.475	3.4	19.7
8 29	21 30.62	-15 58.2	1.598	2.584	6.2	19.5	8 29	21 32.10	- 6 40.0	1.500	2.490	5.9	19.9
9 8	21 23.16	-16 26.9	1.644	2.579	10.4	19.7	9 8	21 25.84	- 8 13.4	1.557	2.506	9.8	20.2
9 18	21 17.81	-16 44.3	1.711	2.574	14.1	19.9	9 18	21 21.68	- 9 37.0	1.637	2.521	13.5	20.5
<b>508565</b>	2016 WM <sub>36</sub>	8 15.9 58°65		4.5/19.7 18			<b>216659</b>	2003 UP <sub>368</sub>	8 15.9 111°98		4.8/12.4 17		
7 10	22 5.43	- 0 5.7	2.064	2.861	14.9	20.4	7 10						

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>283677</b>	2002 QG <sub>49</sub>		8 15.9	21°87	3°4/14.3	16	<b>137498</b>	1999 VP <sub>8</sub>		8 15.9	235°94	2°8/13.7	18
7 10	22 8.28	-20 31.8	1.166	2.054	18.4	19.7	7 10	22 9.75	-17 42.8	1.828	2.684	14.3	20.0
7 20	22 4.50	-20 40.1	1.121	2.067	14.0	19.5	7 20	22 5.09	-18 37.2	1.742	2.671	10.9	19.7
7 30	21 57.69	-20 52.3	1.096	2.082	9.1	19.3	7 30	21 58.03	-19 40.3	1.678	2.658	7.1	19.5
8 9	21 48.85	-21 1.6	1.092	2.099	4.5	19.1	8 9	21 49.11	-20 45.9	1.639	2.645	3.5	19.2
8 19	21 39.35	-21 2.2	1.111	2.117	4.3	19.1	8 19	21 39.21	-21 46.9	1.627	2.630	3.7	19.2
8 29	21 30.70	-20 50.1	1.154	2.136	8.6	19.4	8 29	21 29.46	-22 36.7	1.643	2.615	7.5	19.4
9 8	21 24.18	-20 24.2	1.219	2.157	13.0	19.8	9 8	21 21.00	-23 10.9	1.683	2.600	11.5	19.6
9 18	21 20.54	-19 45.6	1.304	2.178	16.9	20.1	9 18	21 14.71	-23 27.9	1.747	2.584	15.0	19.8
<b>118417</b>	1999 TW <sub>12</sub>		8 15.9	239°66	6°4/8.6	18 R	<b>142215</b>	2002 RD <sub>68</sub>		8 15.9	314°58	5°9/19.3	18
7 10	22 10.23	-35 22.9	2.799	3.640	10.3	19.8	7 10	22 4.83	-1 24.7	1.336	2.173	19.5	19.6
7 20	22 4.79	-36 22.8	2.722	3.626	8.5	19.7	7 20	22 2.00	-0 47.3	1.249	2.155	16.2	19.3
7 30	21 57.45	-37 17.5	2.669	3.611	7.0	19.5	7 30	21 56.39	-0 30.6	1.180	2.137	12.2	19.0
8 9	21 48.74	-38 1.2	2.642	3.596	6.4	19.5	8 9	21 48.55	-0 36.0	1.131	2.121	8.1	18.8
8 19	21 39.36	-38 29.3	2.642	3.580	7.1	19.5	8 19	21 39.43	-1 2.7	1.104	2.104	5.9	18.6
8 29	21 30.18	-38 38.5	2.669	3.564	8.7	19.6	8 29	21 30.40	-1 46.4	1.101	2.088	8.0	18.7
9 8	21 22.06	-38 28.5	2.720	3.548	10.6	19.7	9 8	21 22.84	-2 39.6	1.121	2.073	12.3	18.9
9 18	21 15.66	-38 0.6	2.793	3.531	12.5	19.8	9 18	21 17.87	-3 34.6	1.161	2.059	16.7	19.1
<b>477597</b>	2010 JN <sub>163</sub>		8 15.9	18°92	0°5/16.3	17	<b>2351</b>	O/Higgins		8 15.9	306°11	0°5/15.6	18 R
7 10	22 2.91	-10 16.8	1.375	2.242	17.4	20.8	7 10	22 7.30	-13 43.4	1.518	2.380	16.3	16.7
7 20	22 0.08	-10 38.4	1.316	2.249	13.4	20.5	7 20	22 3.64	-13 52.3	1.429	2.360	12.7	16.4
7 30	21 54.76	-11 15.4	1.277	2.258	8.8	20.3	7 30	21 57.31	-14 11.9	1.359	2.341	8.4	16.1
8 9	21 47.68	-12 3.1	1.260	2.268	3.8	20.0	8 9	21 48.89	-14 38.3	1.313	2.321	3.5	15.8
8 19	21 39.85	-12 55.4	1.268	2.279	1.5	19.9	8 19	21 39.30	-15 6.6	1.291	2.302	1.8	15.6
8 29	21 32.48	-13 45.1	1.300	2.290	6.5	20.3	8 29	21 29.84	-15 30.9	1.295	2.283	7.0	15.9
9 8	21 26.70	-14 26.3	1.355	2.303	11.1	20.6	9 8	21 21.82	-15 46.6	1.323	2.264	11.9	16.1
9 18	21 23.27	-14 55.1	1.432	2.317	15.0	20.8	9 18	21 16.25	-15 50.9	1.372	2.246	16.2	16.3
<b>342171</b>	2008 SB <sub>178</sub>		8 15.9	303°68	2°0/14.5	18	<b>113306</b>	2002 RQ <sub>186</sub>		8 15.9	103°97	4°7/20.1	18
7 10	22 6.75	-16 16.9	1.651	2.514	15.1	21.0	7 10	22 6.58	+ 1 20.6	2.097	2.884	15.0	19.6
7 20	22 2.89	-16 52.9	1.572	2.506	11.6	20.8	7 20	22 2.02	+ 1 32.4	2.026	2.898	12.3	19.5
7 30	21 56.60	-17 38.1	1.515	2.498	7.5	20.5	7 30	21 55.63	+ 1 26.9	1.974	2.912	9.3	19.3
8 9	21 48.48	-18 26.9	1.482	2.490	3.3	20.3	8 9	21 47.98	+ 1 4.8	1.947	2.925	6.4	19.2
8 19	21 39.46	-19 12.9	1.475	2.483	3.0	20.2	8 19	21 39.77	+ 0 28.1	1.946	2.939	4.7	19.1
8 29	21 30.70	-19 50.1	1.494	2.475	7.2	20.5	8 29	21 31.86	-0 19.3	1.972	2.952	5.8	19.2
9 8	21 23.35	-20 14.2	1.538	2.468	11.4	20.7	9 8	21 25.06	-1 12.1	2.025	2.965	8.5	19.4
9 18	21 18.25	-20 23.2	1.603	2.461	15.1	20.9	9 18	21 19.96	-2 5.4	2.102	2.977	11.3	19.6
<b>200303</b>	2000 CQ <sub>97</sub>		8 15.9	296°12	1°5/14.5	18	<b>112848</b>	2002 QE <sub>21</sub>		8 15.9	22°59	1°4/16.8	17
7 10	22 3.15	-12 7.9	1.763	2.620	14.6	20.3	7 10	22 2.90	-8 43.4	0.999	1.883	21.1	19.2
7 20	22 0.18	-13 24.4	1.665	2.595	11.3	20.1	7 20	22 0.76	-8 54.8	0.952	1.893	16.4	19.0
7 30	21 54.93	-14 58.2	1.589	2.571	7.3	19.8	7 30	21 55.52	-9 27.3	0.922	1.905	11.0	18.7
8 9	21 47.85	-16 43.6	1.538	2.546	3.0	19.5	8 9	21 48.08	-10 16.0	0.911	1.918	5.0	18.4
8 19	21 39.71	-18 32.4	1.514	2.522	2.7	19.4	8 19	21 39.74	-11 13.1	0.921	1.932	2.0	18.3
8 29	21 31.54	-20 15.2	1.517	2.497	7.1	19.6	8 29	21 32.11	-12 9.2	0.954	1.948	7.5	18.7
9 8	21 24.47	-21 44.0	1.546	2.473	11.6	19.8	9 8	21 26.54	-12 56.3	1.009	1.965	12.9	19.0
9 18	21 19.43	-22 53.6	1.597	2.449	15.5	20.0	9 18	21 23.90	-13 29.3	1.082	1.984	17.4	19.4
<b>102632</b>	1999 VX <sub>32</sub>		8 15.9	334°42	5°0/18.8	17	<b>344748</b>	2003 UT <sub>284</sub>		8 15.9	299°81	3°3/13.5	18
7 10	22 2.23	-3 10.8	1.172	2.029	20.4	19.4	7 10	22 7.22	-19 43.7	1.713	2.580	14.5	21.1
7 20	22 0.22	-2 45.0	1.094	2.015	16.7	19.1	7 20	22 3.28	-20 24.9	1.631	2.566	11.2	20.9
7 30	21 55.30	-2 41.8	1.034	2.002	12.3	18.8	7 30	21 56.88	-21 12.3	1.571	2.553	7.4	20.7
8 9	21 48.08	-3 1.7	0.993	1.989	7.6	18.5	8 9	21 48.64	-21 59.8	1.535	2.540	3.9	20.4
8 19	21 39.61	-3 42.3	0.973	1.978	5.0	18.3	8 19	21 39.45	-22 40.7	1.525	2.527	4.2	20.4
8 29	21 31.34	-4 37.2	0.977	1.968	7.8	18.5	8 29	21 30.49	-23 9.2	1.541	2.514	7.9	20.6
9 8	21 24.74	-5 37.5	1.001	1.960	12.7	18.7	9 8	21 22.91	-23 21.9	1.581	2.501	11.8	20.8
9 18	21 20.91	-6 34.6	1.045	1.952	17.4	19.0	9 18	21 17.57	-23 17.9	1.643	2.489	15.4	21.0
<b>356393</b>	2010 PC <sub>81</sub>		8 15.9	105°87	3°4/18.9	18	<b>30944</b>	1994 GD <sub>1</sub>		8 15.9	83°15	5°2/11.3	18
7 10	22 5.21	-2 35.2	2.236	3.040	13.7	20.5	7 10	22 9.29	-26 28.0	2.081	2.941	12.6	18.5
7 20	22 0.93	-2 24.9	2.155	3.043	11.1	20.4	7 20	22 4.17	-27 36.0	2.036	2.963	9.7	18.3
7 30	21 54.92	-2 28.2	2.095	3.046	8.0	20.2	7 30	21 57.03	-28 42.7	2.015	2.985	6.9	18.2
8 9	21 47.68	-2 44.4	2.060	3.049	5.0	20.0	8 9	21 48.54	-29 41.1	2.019	3.008	5.2	18.1
8 19	21 39.86	-3 11.4	2.051	3.053	3.4	19.9	8 19	21 39.56	-30 25.5	2.050	3.029	5.9	18.2
8 29	21 32.26	-3 45.7	2.071	3.056	5.1	20.0	8 29	21 31.07	-30 52.2	2.109	3.051	8.2	18.4
9 8	21 25.65	-4 23.1	2.117	3.059	8.1	20.2	9 8	21 23.95	-31 0.2	2.192	3.072	10.8	18.6
9 18	21 20.62	-4 59.8	2.188	3.062	11.0	20.4	9 18	21 18.80	-30 50.8	2.297	3.093	13.2	18.8
<b>387489</b>	1994 TC <sub>7</sub>		8 15.9	243°38	5°2/11.9	18	<b>343561</b>	2010 FG <sub>55</sub>		8 15.9	118°73	2°3/18.0	16
7 10	22 11.09	-26 32.3	1.987	2.845	13.1	21.5	7 10	22 5.52	-4 17.8	2.050	2.866	14.4	21.7
7 20	22 5.91	-27 18.1	1.911	2.838	10.3	21.3	7 20	22 1.30	-4 40.2	1.976	2.876	11.4	21.5
7 30	21 58.40	-28 3.3	1.858	2.830	7.3	21.1	7 30	21 55.22	-5 18.1	1.924	2.885	7.9	21.3
8 9	21 49.19	-28 41.3	1.831	2.823	5.3	21.0	8 9	21 47.83	-6 8.8	1.896	2.895	4.3	21.1
8 19	21 39.20	-29 6.3	1.830	2.814	5.9	21.0	8 19	21 39.85	-7 8.3	1.896	2.904	2.3	21.0
8 29	21 29.53	-29 14.0	1.856	2.806	8.6	21.2	8 29	21 32.15	-8 11.3	1.923	2.912	5.0	21.2
9 8	21 21.25	-29 3.1	1.906	2.798	11.7	21.3	9 8	21 25.54	-9 12.4	1.978	2.921	8.5	21.4
9 18	21 15.13	-28 34.9	1.979	2.789	14.5	21.5	9 18	21 20.67	-10 7.2	2.057	2.929	11.7	21.6
<b>168061</b>	2006 BJ <sub>256</sub>		8 15.9	39°54	2°9/14.7	17	<b>416671</b>	2004 VA <sub>38</sub>		8 15.9	332°68	0°9/15.2	15
7 10	22 13.32	-19 8.0	1.018	1.906	20.5	18.6							



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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>261607</b>	2005 <i>XD</i> <sub>91</sub>		8 15.9	59°94	3°9/12.3	18	<b>224776</b>	2006 <i>GV</i> <sub>13</sub>		8 15.9	230°54	0°7/16.7	18
7 10	22 5.75	-22 47.5	2.125	2.987	12.3	20.4	7 10	22 3.66	-9 28.6	2.531	3.358	11.6	20.9
7 20	22 1.48	-23 44.3	2.068	2.999	9.4	20.3	7 20	21 59.63	-9 47.0	2.444	3.355	9.0	20.7
7 30	21 55.32	-24 42.9	2.035	3.013	6.3	20.1	7 30	21 54.04	-10 14.8	2.381	3.352	6.0	20.5
8 9	21 47.86	-25 37.4	2.027	3.026	4.1	20.0	8 9	21 47.35	-10 49.6	2.344	3.349	2.7	20.3
8 19	21 39.87	-26 22.5	2.047	3.039	4.6	20.1	8 19	21 40.12	-11 28.1	2.335	3.345	1.1	20.1
8 29	21 32.26	-26 53.8	2.094	3.052	7.2	20.3	8 29	21 33.06	-12 6.8	2.354	3.342	4.3	20.4
9 8	21 25.84	-27 9.5	2.166	3.066	10.1	20.5	9 8	21 26.83	-12 42.1	2.401	3.338	7.5	20.6
9 18	21 21.23	-27 9.5	2.261	3.080	12.7	20.7	9 18	21 22.01	-13 11.4	2.473	3.335	10.3	20.7
<b>82039</b>	2000 <i>SG</i> <sub>186</sub>		8 15.9	34°44	0°9/15.3	18	<b>350938</b>	2002 <i>TP</i> <sub>378</sub>		8 15.9	307°67	1°6/14.6	18
7 10	22 5.69	-14 9.8	1.667	2.528	15.2	19.2	7 10	22 4.75	-14 55.4	1.787	2.647	14.3	21.0
7 20	22 1.79	-14 33.0	1.609	2.540	11.6	19.0	7 20	22 1.21	-15 38.4	1.705	2.637	11.0	20.8
7 30	21 55.67	-15 5.5	1.571	2.553	7.4	18.8	7 30	21 55.46	-16 31.7	1.645	2.627	7.1	20.5
8 9	21 48.04	-15 42.6	1.558	2.566	3.0	18.5	8 9	21 48.05	-17 30.2	1.610	2.618	3.0	20.2
8 19	21 39.80	-16 18.9	1.571	2.580	1.9	18.5	8 19	21 39.79	-18 27.7	1.601	2.609	2.6	20.2
8 29	21 32.02	-16 49.5	1.609	2.595	6.2	18.8	8 29	21 31.73	-19 17.9	1.618	2.599	6.6	20.4
9 8	21 25.66	-17 10.5	1.673	2.610	10.2	19.1	9 8	21 24.91	-19 56.0	1.660	2.590	10.7	20.6
9 18	21 21.41	-17 20.1	1.759	2.625	13.6	19.3	9 18	21 20.11	-20 19.5	1.725	2.582	14.3	20.9
<b>215029</b>	2009 <i>BF</i> <sub>130</sub>		8 15.9	156°93	3°0/13.6	18	<b>112107</b>	2002 <i>JT</i> <sub>38</sub>		8 15.9	59°05	3°8/19.5	18
7 10	22 10.01	-21 15.5	2.092	2.945	12.8	20.7	7 10	22 4.16	-0 51.0	2.272	3.069	13.7	19.7
7 20	22 4.79	-21 43.6	2.021	2.948	9.8	20.5	7 20	22 0.12	-0 39.8	2.191	3.073	11.2	19.5
7 30	21 57.51	-22 14.2	1.972	2.950	6.5	20.3	7 30	21 54.41	-0 43.1	2.132	3.077	8.3	19.4
8 9	21 48.80	-22 42.2	1.949	2.952	3.5	20.1	8 9	21 47.52	-1 0.4	2.097	3.082	5.4	19.2
8 19	21 39.46	-23 3.0	1.954	2.954	3.7	20.2	8 19	21 40.07	-1 29.7	2.089	3.087	3.8	19.1
8 29	21 30.47	-23 13.0	1.987	2.956	6.7	20.3	8 29	21 32.83	-2 7.6	2.108	3.091	5.2	19.2
9 8	21 22.75	-23 10.3	2.045	2.958	10.0	20.6	9 8	21 26.55	-2 49.9	2.154	3.096	7.9	19.4
9 18	21 16.98	-22 55.0	2.127	2.959	12.9	20.8	9 18	21 21.80	-3 32.3	2.225	3.101	10.8	19.6
<b>23989</b>	Farpoint		8 15.9	318°58	5°4/20.6	18	<b>434691</b>	2006 <i>BK</i> <sub>90</sub>		8 15.9	2°42	2°3/15.1	18
7 10	22 0.04	+ 3 4.5	1.537	2.350	18.5	18.5	7 10	22 11.92	-20 14.9	1.230	2.109	18.2	19.2
7 20	21 57.96	+ 2 45.8	1.442	2.331	15.4	18.3	7 20	22 7.45	-19 50.2	1.166	2.107	14.1	19.0
7 30	21 53.56	+ 1 58.8	1.366	2.313	11.8	18.0	7 30	21 59.81	-19 27.1	1.122	2.106	9.2	18.7
8 9	21 47.33	+ 0 43.1	1.310	2.295	8.0	17.8	8 9	21 49.89	-19 1.3	1.099	2.107	4.1	18.4
8 19	21 40.04	-0 57.8	1.279	2.278	5.4	17.6	8 19	21 39.04	-18 28.7	1.101	2.109	3.2	18.3
8 29	21 32.81	-2 56.4	1.272	2.261	6.9	17.6	8 29	21 28.87	-17 47.0	1.126	2.112	8.1	18.6
9 8	21 26.79	-5 1.6	1.291	2.245	10.9	17.8	9 8	21 20.81	-16 56.1	1.175	2.117	13.0	18.9
9 18	21 22.91	-7 2.5	1.332	2.230	15.0	18.0	9 18	21 15.78	-15 57.6	1.244	2.122	17.3	19.2
<b>233377</b>	2006 <i>DZ</i> <sub>197</sub>		8 15.9	115°00	5°1/19.6	18	<b>477545</b>	2010 <i>FJ</i> <sub>26</sub>		8 15.9	337°36	4°2/12.9	18
7 10	22 11.12	+ 0 7.1	2.014	2.801	15.6	20.1	7 10	22 7.87	-21 56.0	1.656	2.526	14.8	20.7
7 20	22 5.55	+ 0 47.7	1.942	2.814	12.8	19.9	7 20	22 3.78	-22 43.7	1.586	2.523	11.3	20.5
7 30	21 57.97	+ 1 12.7	1.890	2.827	9.7	19.8	7 30	21 57.19	-23 35.3	1.539	2.519	7.6	20.3
8 9	21 48.98	+ 1 21.9	1.862	2.840	6.7	19.6	8 9	21 48.79	-24 24.0	1.515	2.516	4.6	20.1
8 19	21 39.38	+ 1 16.0	1.861	2.852	5.1	19.6	8 19	21 39.54	-25 2.7	1.517	2.514	5.1	20.1
8 29	21 30.12	+ 0 57.9	1.887	2.864	6.3	19.7	8 29	21 30.66	-25 25.9	1.544	2.511	8.5	20.3
9 8	21 22.09	+ 0 31.7	1.941	2.876	9.1	19.8	9 8	21 23.29	-25 31.0	1.595	2.509	12.2	20.5
9 18	21 15.96	+ 0 2.0	2.018	2.887	12.0	20.1	9 18	21 18.26	-25 18.2	1.668	2.507	15.5	20.8
<b>514654</b>	2005 <i>SN</i> <sub>113</sub>		8 15.9	250°28	0°4/15.6	18	<b>124031</b>	2001 <i>FC</i> <sub>124</sub>		8 15.9	262°06	3°5/12.9	18
7 10	22 5.43	-13 6.2	2.266	3.107	12.4	22.0	7 10	22 9.96	-24 33.5	2.571	3.418	10.9	20.1
7 20	22 1.19	-13 29.5	2.181	3.101	9.5	21.8	7 20	22 4.59	-24 59.0	2.477	3.399	8.4	19.9
7 30	21 55.17	-14 1.0	2.118	3.095	6.2	21.6	7 30	21 57.36	-25 24.7	2.408	3.381	5.8	19.7
8 9	21 47.84	-14 37.5	2.081	3.088	2.5	21.3	8 9	21 48.78	-25 46.0	2.365	3.362	3.7	19.6
8 19	21 39.88	-15 14.9	2.071	3.082	1.4	21.2	8 19	21 39.54	-25 58.9	2.351	3.343	4.1	19.5
8 29	21 32.09	-15 49.2	2.090	3.075	5.1	21.5	8 29	21 30.46	-26 0.4	2.365	3.324	6.5	19.7
9 8	21 25.29	-16 16.9	2.136	3.068	8.6	21.7	9 8	21 22.36	-25 49.0	2.407	3.304	9.3	19.8
9 18	21 20.11	-16 35.7	2.206	3.061	11.7	21.9	9 18	21 15.92	-25 25.1	2.472	3.284	11.9	20.0
<b>45988</b>	2001 <i>BK</i> <sub>66</sub>		8 15.9	86°08	0°1/15.8	18	<b>107252</b>	2001 <i>BS</i> <sub>59</sub>		8 15.9	205°03	1°6/17.3	18
7 10	22 4.39	-9 6.5	1.846	2.689	14.7	19.0	7 10	22 8.23	-7 44.3	2.196	3.016	13.4	20.4
7 20	22 0.69	-10 10.9	1.777	2.698	11.3	18.8	7 20	22 3.37	-7 47.5	2.108	3.012	10.6	20.2
7 30	21 54.96	-11 30.5	1.730	2.707	7.3	18.6	7 30	21 56.62	-8 1.8	2.042	3.008	7.2	20.0
8 9	21 47.77	-12 59.9	1.708	2.715	3.0	18.3	8 9	21 48.49	-8 25.3	2.001	3.003	3.6	19.7
8 19	21 39.92	-14 32.3	1.714	2.724	1.4	18.2	8 19	21 39.67	-8 55.0	1.989	2.998	1.7	19.6
8 29	21 32.36	-16 0.0	1.747	2.733	5.7	18.6	8 29	21 31.04	-9 27.2	2.004	2.992	4.9	19.8
9 8	21 26.00	-17 16.8	1.807	2.742	9.7	18.8	9 8	21 23.44	-9 57.8	2.047	2.986	8.5	20.0
9 18	21 21.53	-18 18.5	1.890	2.750	13.1	19.0	9 18	21 17.54	-10 23.8	2.115	2.979	11.7	20.2
<b>237070</b>	2008 <i>SM</i> <sub>246</sub>		8 15.9	225°06	0°3/16.2	18	<b>204069</b>	2003 <i>UR</i> <sub>316</sub>		8 15.9	321°87	3°2/17.9	18
7 10	22 8.33	-11 2.7	2.127	2.960	13.3	21.7	7 10	22 7.10	-6 27.3	1.627	2.463	16.6	19.9
7 20	22 3.56	-11 20.4	2.036	2.951	10.4	21.5	7 20	22 3.19	-5 59.4	1.541	2.452	13.3	19.7
7 30	21 56.80	-11 48.2	1.968	2.941	6.9	21.2	7 30	21 56.87	-5 45.2	1.475	2.441	9.4	19.4
8 9	21 48.56	-12 23.1	1.925	2.931	3.0	21.0	8 9	21 48.71	-5 43.8	1.432	2.431	5.3	19.1
8 19	21 39.56	-13 1.1	1.910	2.921	1.2	20.8	8 19	21 39.59	-5 53.4	1.414	2.421	3.2	19.0
8 29	21 30.71	-13 37.8	1.924	2.910	5.2	21.1	8 29	21 30.67	-6 10.4	1.422	2.411	6.3	19.2
9 8	21 22.93	-14 9.3	1.964	2.899	9.0	21.3	9 8	21 23.08	-6 30.0	1.455	2.402	10.5	19.4
9 18	21 16.92	-14 32.6	2.029	2.887	12.4	21.5	9 18	21 17.69	-6 48.2	1.510	2.394	14.4	19.6
<b>136041</b>	2002 <i>WY</i> <sub>11</sub>		8 15.9	296°37	0°9/15.1	18	<b>400701</b>	2009 <i>RM</i> <sub>14</sub>		8 15.9	290°08	4°9/21.2	18

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>72228</b>	2001 AR <sub>14</sub>		8 15.9 315°41	5°8/19.9	18		<b>220998</b>	2005 ND <sub>70</sub>		8 15.9 34°76	0°4/15.8	17	
7 10	22 6.84	+ 0 38.7	1.731	2.535	17.1	19.2	7 10	22 8.07	-13 0.5	1.178	2.053	19.1	20.0
7 20	22 2.82	+ 1 17.6	1.647	2.530	14.2	19.0	7 20	22 4.39	-13 11.6	1.128	2.066	14.7	19.8
7 30	21 56.53	+ 1 38.5	1.583	2.525	10.9	18.8	7 30	21 57.76	-13 36.0	1.096	2.079	9.5	19.5
8 9	21 48.55	+ 1 40.3	1.540	2.520	7.6	18.6	8 9	21 49.06	-14 8.2	1.085	2.094	3.9	19.2
8 19	21 39.69	+ 1 23.7	1.523	2.515	5.8	18.5	8 19	21 39.57	-14 41.8	1.098	2.109	1.9	19.2
8 29	21 31.02	+ 0 52.1	1.531	2.511	7.1	18.5	8 29	21 30.78	-15 10.1	1.134	2.124	7.4	19.5
9 8	21 23.60	+ 0 10.8	1.564	2.506	10.3	18.7	9 8	21 23.99	-15 28.2	1.194	2.141	12.3	19.9
9 18	21 18.23	- 0 34.3	1.619	2.502	13.7	18.9	9 18	21 20.01	-15 33.8	1.273	2.158	16.5	20.2
<b>332504</b>	2008 FF <sub>128</sub>		8 15.9 82°70	0°6/15.5	17		<b>66125</b>	1998 SA <sub>112</sub>		8 15.9 250°35	0°5/16.5	18	
7 10	22 9.12	-12 15.8	1.527	2.382	16.6	21.2	7 10	22 3.33	- 9 29.3	2.562	3.389	11.5	19.1
7 20	22 4.61	-12 52.5	1.470	2.397	12.7	21.0	7 20	21 59.45	- 9 58.8	2.468	3.379	8.9	18.9
7 30	21 57.63	-13 41.8	1.433	2.413	8.2	20.8	7 30	21 54.01	-10 38.4	2.397	3.369	5.9	18.7
8 9	21 48.94	-14 38.1	1.420	2.428	3.3	20.5	8 9	21 47.42	-11 25.4	2.353	3.358	2.6	18.5
8 19	21 39.56	-15 34.6	1.433	2.443	1.8	20.4	8 19	21 40.26	-12 16.3	2.337	3.348	1.0	18.3
8 29	21 30.70	-16 24.7	1.472	2.458	6.6	20.8	8 29	21 33.19	-13 7.0	2.349	3.337	4.4	18.6
9 8	21 23.45	-17 3.5	1.536	2.473	10.9	21.1	9 8	21 26.93	-13 53.5	2.390	3.326	7.6	18.7
9 18	21 18.56	-17 28.4	1.623	2.488	14.6	21.4	9 18	21 22.03	-14 32.8	2.456	3.314	10.5	18.9
<b>217138</b>	2002 GA <sub>156</sub>		8 15.9 68°91	2°2/18.2	18		<b>14057</b>	Manfredstoll		8 15.9 106°70	0°5/15.6	18	
7 10	22 2.75	- 3 54.4	2.212	3.028	13.5	20.0	7 10	22 9.41	-12 1.4	1.671	2.519	15.7	19.5
7 20	21 59.10	- 4 22.5	2.137	3.036	10.7	19.8	7 20	22 4.68	-12 37.6	1.609	2.533	12.0	19.3
7 30	21 53.78	- 5 5.4	2.083	3.044	7.5	19.7	7 30	21 57.64	-13 25.6	1.568	2.546	7.8	19.1
8 9	21 47.29	- 6 0.8	2.054	3.052	4.1	19.5	8 9	21 48.97	-14 20.6	1.551	2.559	3.2	18.8
8 19	21 40.27	- 7 4.6	2.053	3.060	2.2	19.3	8 19	21 39.61	-15 16.2	1.561	2.571	1.7	18.7
8 29	21 33.48	- 8 11.9	2.080	3.069	4.6	19.5	8 29	21 30.70	-16 6.4	1.598	2.584	6.2	19.1
9 8	21 27.65	- 9 17.3	2.133	3.077	7.9	19.7	9 8	21 23.27	-16 46.2	1.661	2.596	10.4	19.3
9 18	21 23.36	-10 16.5	2.212	3.086	10.9	20.0	9 18	21 18.05	-17 13.3	1.746	2.607	13.9	19.6
<b>264997</b>	2003 EA <sub>4</sub>		8 15.9 259°35	5°4/11.1	17		<b>90100</b>	2002 XP <sub>13</sub>		8 15.9 182°79	3°1/18.7	18	
7 10	22 6.34	-12 55.8	1.136	2.016	19.4	19.9	7 10	22 7.04	- 2 12.9	1.925	2.733	15.4	20.2
7 20	22 3.91	-15 57.3	1.061	2.006	14.8	19.6	7 20	22 2.72	- 2 31.3	1.841	2.734	12.4	20.0
7 30	21 58.14	-17 32.1	1.007	1.994	9.6	19.2	7 30	21 56.34	- 3 7.9	1.778	2.734	8.9	19.7
8 9	21 49.53	-23 23.9	0.978	1.983	5.5	19.0	8 9	21 48.45	- 4 0.8	1.740	2.734	5.2	19.5
8 19	21 39.18	-27 10.1	0.976	1.971	7.5	19.1	8 19	21 39.81	- 5 6.1	1.728	2.733	3.1	19.4
8 29	21 28.80	-30 27.3	0.999	1.959	12.8	19.3	8 29	21 31.37	- 6 18.1	1.744	2.732	5.5	19.5
9 8	21 20.25	-33 0.9	1.045	1.947	18.1	19.6	9 8	21 24.08	- 7 30.3	1.786	2.730	9.2	19.8
9 18	21 14.95	-34 46.7	1.108	1.934	22.5	19.8	9 18	21 18.65	- 8 36.9	1.853	2.728	12.6	20.0
<b>256480</b>	2007 DG <sub>95</sub>		8 15.9 164°63	1°1/14.8	18		<b>252906</b>	2002 JB <sub>134</sub>		8 15.9 89°01	6°9/23.6	18	
7 10	22 4.61	-14 55.3	2.557	3.398	11.1	21.2	7 10	22 2.91	+10 10.0	2.400	3.131	14.8	20.5
7 20	22 0.36	-15 34.6	2.479	3.401	8.4	21.0	7 20	21 59.16	+10 29.0	2.317	3.137	12.8	20.4
7 30	21 54.53	-16 20.4	2.425	3.403	5.4	20.8	7 30	21 53.82	+10 28.1	2.254	3.143	10.6	20.2
8 9	21 47.60	-17 9.2	2.398	3.405	2.3	20.6	8 9	21 47.33	+10 6.3	2.212	3.149	8.4	20.1
8 19	21 40.16	-17 56.7	2.399	3.407	1.8	20.6	8 19	21 40.31	+ 9 24.5	2.196	3.155	7.0	20.0
8 29	21 32.91	-18 39.0	2.429	3.409	4.9	20.8	8 29	21 33.47	+ 8 25.6	2.205	3.161	7.1	20.0
9 8	21 26.55	-19 13.0	2.487	3.410	7.9	21.0	9 8	21 27.51	+ 7 14.6	2.241	3.167	8.6	20.1
9 18	21 21.62	-19 36.9	2.569	3.412	10.6	21.2	9 18	21 23.00	+ 5 57.4	2.302	3.172	10.7	20.3
<b>33393</b>	Khandelwal		8 15.9 38°62	0°9/15.5	18		<b>97349</b>	2000 AM <sub>14</sub>		8 15.9 277°85	0°5/15.5	18	
7 10	22 9.33	-13 54.4	1.072	1.954	20.2	17.8	7 10	22 4.77	-13 28.7	2.341	3.183	12.0	19.8
7 20	22 5.59	-14 7.5	1.025	1.966	15.5	17.6	7 20	22 0.74	-13 53.2	2.248	3.169	9.2	19.6
7 30	21 58.64	-14 33.8	0.995	1.980	10.0	17.3	7 30	21 54.94	-14 25.8	2.177	3.155	6.0	19.4
8 9	21 49.44	-15 7.3	0.985	1.994	4.1	17.0	8 9	21 47.85	-15 3.1	2.133	3.140	2.5	19.1
8 19	21 39.39	-15 40.4	0.999	2.009	2.3	17.0	8 19	21 40.08	-15 41.4	2.116	3.126	1.4	19.0
8 29	21 30.13	-16 6.3	1.035	2.025	8.0	17.4	8 29	21 32.43	-16 16.5	2.127	3.111	5.1	19.2
9 8	21 23.10	-16 20.1	1.094	2.041	13.2	17.7	9 8	21 25.69	-16 44.9	2.166	3.097	8.5	19.4
9 18	21 19.12	-16 20.1	1.172	2.058	17.5	18.0	9 18	21 20.50	-17 4.3	2.228	3.082	11.6	19.6
<b>353752</b>	2012 BC <sub>16</sub>		8 15.9 116°64	1°1/16.9	18		<b>38150</b>	1999 JX <sub>64</sub>		8 15.9 147°13	3°1/18.4	18	
7 10	22 6.61	- 9 46.6	2.369	3.195	12.4	20.5	7 10	22 8.61	- 3 4.0	1.628	2.449	17.3	19.4
7 20	22 1.94	- 9 44.0	2.289	3.198	9.6	20.4	7 20	22 4.21	- 3 19.5	1.555	2.456	13.8	19.2
7 30	21 55.58	- 9 50.0	2.231	3.201	6.5	20.2	7 30	21 57.44	- 3 55.0	1.501	2.462	9.8	19.0
8 9	21 48.05	-10 2.5	2.200	3.204	3.1	20.0	8 9	21 48.94	- 4 48.0	1.471	2.468	5.6	18.7
8 19	21 39.98	-10 19.1	2.197	3.207	1.3	19.8	8 19	21 39.62	- 5 54.0	1.466	2.473	3.1	18.6
8 29	21 32.14	-10 36.7	2.222	3.210	4.5	20.1	8 29	21 30.62	- 7 6.1	1.488	2.478	6.1	18.8
9 8	21 25.29	-10 52.3	2.274	3.212	7.8	20.3	9 8	21 23.03	- 8 17.0	1.536	2.482	10.2	19.1
9 18	21 19.98	-11 3.7	2.352	3.215	10.7	20.5	9 18	21 17.66	- 9 20.6	1.607	2.486	14.0	19.3
<b>509838</b>	2008 YQ <sub>20</sub>		8 15.9 173°15	2°3/17.9	18		<b>229536</b>	2005 YC <sub>37</sub>		8 15.9 172°86	2°3/14.1	18	
7 10	22 8.05	- 5 57.6	2.255	3.067	13.4	22.3	7 10	22 7.79	-16 31.6	1.779	2.637	14.5	20.4
7 20	22 3.14	- 5 52.6	2.172	3.069	10.6	22.1	7 20	22 3.51	-17 22.1	1.707	2.638	11.0	20.2
7 30	21 56.43	- 5 59.2	2.110	3.071	7.4	21.9	7 30	21 56.94	-18 21.4	1.657	2.639	7.1	19.9
8 9	21 48.42	- 6 15.9	2.074	3.072	4.1	21.7	8 9	21 48.72	-19 23.3	1.633	2.639	3.3	19.7
8 19	21 39.81	- 6 40.2	2.066	3.073	2.3	21.6	8 19	21 39.72	-20 21.3	1.634	2.640	3.2	19.7
8 29	21 31.42	- 7 8.7	2.087	3.074	4.8	21.7	8 29	21 31.02	-21 9.2	1.663	2.640	7.0	19.9
9 8	21 24.05	- 7 37.7	2.134	3.074	8.1	22.0	9 8	21 23.66	-21 42.9	1.717	2.640	10.9	20.2
9 18	21 18.32	- 8 3.9	2.207	3.074	11.2	22.2	9 18	21 18.43	-22 0.7	1.793	2.640	14.3	20.4
<b>438087</b>	2004 TB <sub>273</sub>		8 15.9 262°24	6°2/20.9	18		<b>184584</b>	2005 QX <sub>115</sub>		8 15.9 21°40	1°6/17.5	18	
7 10	22 5.81	+ 4 8.3	1.948	2.727	16.3								

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2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>201086</b>	2002 <i>GJ</i> <sub>59</sub>		8 15.9	37°98	0°8/16.6	18	<b>330645</b>	2008 <i>FF</i> <sub>40</sub>		8 15.9	89°56	1°1/15.2	17
7 10	22 6.07	- 9 5.5	1.763	2.605	15.3	20.8	7 10	22 9.45	-13 29.8	1.554	2.411	16.3	21.0
7 20	22 2.15	- 9 29.0	1.687	2.605	11.9	20.5	7 20	22 4.89	-14 9.8	1.496	2.425	12.4	20.8
7 30	21 56.05	-10 6.4	1.631	2.606	7.9	20.3	7 30	21 57.86	-15 1.2	1.458	2.438	8.0	20.6
8 9	21 48.35	-10 54.2	1.601	2.606	3.6	20.0	8 9	21 49.11	-15 58.0	1.444	2.452	3.3	20.4
8 19	21 39.89	-11 47.5	1.596	2.607	1.4	19.9	8 19	21 39.65	-16 53.6	1.456	2.466	2.2	20.3
8 29	21 31.70	-12 40.3	1.618	2.607	5.7	20.2	8 29	21 30.69	-17 41.4	1.495	2.479	6.7	20.7
9 8	21 24.78	-13 27.2	1.666	2.608	9.8	20.4	9 8	21 23.33	-18 16.8	1.558	2.492	11.0	20.9
9 18	21 19.88	-14 4.4	1.737	2.608	13.5	20.7	9 18	21 18.32	-18 37.7	1.644	2.505	14.7	21.2
<b>449091</b>	2012 <i>TK</i> <sub>143</sub>		8 15.9	71°60	15°1/30.6	16	<b>119920</b>	2002 <i>EW</i> <sub>88</sub>		8 15.9	189°66	1°8/18.0	18
7 10	22 3.87	+22 17.1	1.207	1.927	27.2	20.9	7 10	22 3.35	- 4 32.8	2.637	3.444	11.8	20.2
7 20	22 1.50	+22 56.1	1.141	1.932	24.8	20.7	7 20	21 59.38	- 4 59.8	2.549	3.443	9.3	20.0
7 30	21 56.16	+22 49.5	1.086	1.937	22.0	20.5	7 30	21 53.92	- 5 39.2	2.483	3.442	6.5	19.9
8 9	21 48.55	+21 49.9	1.044	1.943	19.0	20.3	8 9	21 47.41	- 6 29.0	2.443	3.441	3.5	19.7
8 19	21 39.79	+19 54.3	1.020	1.949	16.4	20.2	8 19	21 40.38	- 7 26.1	2.431	3.439	1.8	19.5
8 29	21 31.38	+17 8.3	1.015	1.955	15.1	20.1	8 29	21 33.49	- 8 26.3	2.449	3.437	4.1	19.7
9 8	21 24.79	+13 47.0	1.031	1.960	15.8	20.2	9 8	21 27.38	- 9 25.3	2.494	3.435	7.1	19.9
9 18	21 21.03	+10 10.4	1.070	1.966	18.0	20.3	9 18	21 22.59	-10 19.5	2.566	3.432	9.9	20.1
<b>123794</b>	2001 <i>BE</i> <sub>42</sub>		8 15.9	68°20	4°4/12.4	18	<b>390784</b>	2003 <i>WW</i> <sub>175</sub>		8 15.9	213°03	3°4/18.9	18
7 10	22 7.84	-21 19.2	1.672	2.541	14.7	18.9	7 10	22 5.78	- 2 4.5	2.135	2.939	14.3	21.9
7 20	22 3.59	-22 31.9	1.620	2.556	11.2	18.7	7 20	22 1.60	- 2 6.3	2.047	2.935	11.6	21.7
7 30	21 56.96	-23 48.7	1.590	2.571	7.5	18.5	7 30	21 55.55	- 2 23.8	1.979	2.931	8.4	21.5
8 9	21 48.70	-25 1.8	1.585	2.585	4.6	18.4	8 9	21 48.15	- 2 55.6	1.936	2.927	5.2	21.3
8 19	21 39.78	-26 3.4	1.606	2.600	5.3	18.4	8 19	21 40.05	- 3 39.3	1.920	2.922	3.4	21.2
8 29	21 31.34	-26 47.6	1.653	2.615	8.4	18.7	8 29	21 32.11	- 4 30.7	1.931	2.918	5.2	21.3
9 8	21 24.44	-27 11.8	1.724	2.630	11.9	18.9	9 8	21 25.17	- 5 24.7	1.970	2.913	8.5	21.5
9 18	21 19.80	-27 16.3	1.817	2.646	14.9	19.1	9 18	21 19.90	- 6 16.5	2.033	2.907	11.7	21.7
<b>281981</b>	2011 <i>HJ</i> <sub>12</sub>		8 15.9	23°84	2°1/14.3	17 R	<b>382945</b>	2004 <i>TM</i> <sub>333</sub>		8 15.9	228°63	5°5/20.7	17
7 10	22 4.63	-14 42.7	1.487	2.357	16.2	19.7	7 10	22 5.64	+ 3 3.0	1.954	2.738	16.1	21.7
7 20	22 1.43	-15 42.3	1.424	2.361	12.3	19.5	7 20	22 1.69	+ 3 14.9	1.865	2.734	13.4	21.5
7 30	21 55.75	-16 54.2	1.381	2.366	7.9	19.2	7 30	21 55.73	+ 3 7.0	1.796	2.729	10.4	21.3
8 9	21 48.27	-18 11.3	1.363	2.371	3.4	19.0	8 9	21 48.26	+ 2 38.9	1.750	2.724	7.4	21.1
8 19	21 39.97	-19 25.4	1.369	2.376	3.2	19.0	8 19	21 40.00	+ 1 52.4	1.728	2.719	5.5	21.0
8 29	21 32.05	-20 28.6	1.401	2.382	7.5	19.3	8 29	21 31.90	+ 0 51.5	1.734	2.713	6.5	21.1
9 8	21 25.66	-21 15.5	1.457	2.388	11.8	19.5	9 8	21 24.87	- 0 17.5	1.765	2.707	9.4	21.2
9 18	21 21.60	-21 43.7	1.534	2.395	15.5	19.8	9 18	21 19.65	- 1 28.1	1.821	2.701	12.5	21.4
<b>342478</b>	2008 <i>UD</i> <sub>147</sub>		8 15.9	278°54	0°8/16.6	18	<b>481028</b>	2004 <i>XB</i> <sub>73</sub>		8 15.9	239°32	4°9/21.5	18
7 10	22 6.73	- 9 51.6	1.787	2.629	15.1	21.5	7 10	22 3.75	+ 5 46.3	3.030	3.772	11.8	21.7
7 20	22 2.72	-10 5.4	1.702	2.622	11.8	21.3	7 20	21 59.57	+ 6 0.2	2.922	3.757	10.0	21.6
7 30	21 56.48	-10 31.7	1.639	2.614	7.9	21.0	7 30	21 54.02	+ 6 0.1	2.835	3.742	8.0	21.4
8 9	21 48.58	-11 7.8	1.600	2.606	3.6	20.7	8 9	21 47.46	+ 5 45.5	2.772	3.727	6.1	21.2
8 19	21 39.82	-11 49.1	1.587	2.598	1.4	20.6	8 19	21 40.36	+ 5 17.0	2.736	3.710	4.9	21.1
8 29	21 31.27	-12 30.4	1.601	2.590	5.7	20.8	8 29	21 33.29	+ 4 36.7	2.729	3.694	5.4	21.2
9 8	21 23.95	-13 6.7	1.641	2.583	10.0	21.1	9 8	21 26.85	+ 3 47.9	2.749	3.677	7.1	21.2
9 18	21 18.67	-13 34.5	1.704	2.575	13.7	21.3	9 18	21 21.55	+ 2 54.6	2.795	3.660	9.2	21.4
<b>418335</b>	2008 <i>GK</i> <sub>9</sub>		8 15.9	47°34	13°3/3.6	18	<b>65189</b>	2002 <i>CR</i> <sub>247</sub>		8 15.9	100°94	4°6/12.9	17
7 10	22 21.81	-53 47.1	2.078	2.871	14.9	20.4	7 10	22 13.45	-24 49.8	1.775	2.634	14.4	19.7
7 20	22 14.87	-55 9.4	2.053	2.882	13.9	20.4	7 20	22 7.80	-25 21.6	1.712	2.641	11.1	19.5
7 30	22 4.51	-56 10.6	2.048	2.892	13.3	20.3	7 30	21 59.69	-25 53.0	1.672	2.648	7.7	19.3
8 9	21 51.85	-56 42.0	2.063	2.902	13.4	20.4	8 9	21 49.86	-26 17.6	1.657	2.654	4.9	19.1
8 19	21 38.50	-56 38.8	2.099	2.913	14.0	20.4	8 19	21 39.36	-26 29.7	1.668	2.661	5.3	19.2
8 29	21 26.30	-56 0.2	2.154	2.924	14.9	20.5	8 29	21 29.40	-26 25.8	1.705	2.667	8.3	19.4
9 8	21 16.68	-54 50.6	2.227	2.936	16.1	20.6	9 8	21 21.07	-26 5.2	1.768	2.673	11.7	19.6
9 18	21 10.43	-53 16.4	2.316	2.947	17.2	20.8	9 18	21 15.12	-25 29.5	1.852	2.679	14.7	19.8
<b>109304</b>	2001 <i>QQ</i> <sub>130</sub>		8 15.9	306°34	3°6/18.2	18	<b>299702</b>	2006 <i>QG</i> <sub>156</sub>		8 15.9	306°83	0°8/16.6	18
7 10	22 5.25	- 4 41.6	1.460	2.301	17.9	19.2	7 10	22 5.94	-10 13.5	1.847	2.690	14.6	21.1
7 20	22 2.19	- 4 29.9	1.369	2.282	14.5	18.9	7 20	22 2.07	-10 20.9	1.761	2.680	11.4	20.9
7 30	21 56.49	- 4 36.7	1.296	2.263	10.4	18.6	7 30	21 56.04	-10 39.8	1.696	2.670	7.7	20.6
8 9	21 48.71	- 5 1.5	1.245	2.244	6.0	18.3	8 9	21 48.42	-11 7.6	1.655	2.661	3.5	20.4
8 19	21 39.73	- 5 41.4	1.218	2.225	3.6	18.1	8 19	21 39.98	-11 40.3	1.640	2.651	1.4	20.2
8 29	21 30.81	- 6 30.8	1.216	2.207	6.8	18.3	8 29	21 31.72	-12 13.2	1.653	2.642	5.6	20.5
9 8	21 23.26	- 7 22.8	1.238	2.189	11.5	18.5	9 8	21 24.63	-12 42.0	1.691	2.633	9.7	20.7
9 18	21 18.09	- 8 10.8	1.281	2.172	16.0	18.7	9 18	21 19.50	-13 3.3	1.752	2.624	13.4	20.9
<b>104711</b>	2000 <i>GU</i> <sub>168</sub>		8 15.9	293°28	5°1/12.5	18	<b>154111</b>	2002 <i>EH</i> <sub>31</sub>		8 15.9	80°01	1°0/15.1	18
7 10	22 9.45	-22 57.5	1.502	2.376	15.8	19.4	7 10	22 5.24	-14 15.5	2.230	3.075	12.4	20.1
7 20	22 5.48	-23 51.7	1.424	2.362	12.3	19.2	7 20	22 1.00	-14 51.9	2.164	3.088	9.4	19.9
7 30	21 58.63	-24 50.5	1.367	2.347	8.4	18.9	7 30	21 55.04	-15 35.7	2.121	3.100	6.0	19.8
8 9	21 49.58	-25 45.9	1.333	2.333	5.4	18.7	8 9	21 47.89	-16 23.0	2.105	3.113	2.5	19.6
8 19	21 39.38	-26 29.2	1.324	2.319	6.1	18.7	8 19	21 40.24	-17 9.2	2.116	3.125	1.8	19.5
8 29	21 29.45	-26 53.6	1.340	2.305	9.7	18.9	8 29	21 32.89	-17 49.8	2.156	3.138	5.2	19.8
9 8	21 21.17	-26 56.0	1.379	2.291	13.8	19.1	9 8	21 26.60	-18 21.7	2.222	3.150	8.5	20.0
9 18	21 15.55	-26 37.0	1.438	2.278	17.5	19.3	9 18	21 21.93	-18 43.0	2.312	3.162	11.4	20.2
<b>174737</b>	2003 <i>UR</i> <sub>213</sub>		8 15.9	162°78	2°3/14.3	17	<b>146160</b>	2000 <i>SA</i> <sub>183</sub> </					

EPHEMERIDES

8 15.9

8 16.0

2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$	2020	$\alpha_{2000}$	$\delta_{2000}$	$\Delta$	$r$	$\beta$	$V$
<b>398177</b>	2010 <i>JE</i> <sub>38</sub>		8 15.9 13°53	7.4/11.5	18		<b>174364</b>	Zakamska		8 16.0 0°33	6.8/10.1	18	
7 10	22 7.43	-28 21.3	1.320	2.207	16.7	19.7	7 10	22 5.81	-27 0.1	1.642	2.520	14.5	19.8
7 20	22 3.99	-29 17.2	1.271	2.212	13.2	19.5	7 20	22 2.40	-28 31.5	1.582	2.519	11.4	19.6
7 30	21 57.57	-30 9.9	1.243	2.219	9.7	19.3	7 30	21 56.45	-30 3.7	1.545	2.518	8.4	19.4
8 9	21 49.07	-30 50.0	1.236	2.226	7.5	19.2	8 9	21 48.64	-31 27.1	1.532	2.518	6.9	19.3
8 19	21 39.76	-31 9.4	1.252	2.235	8.3	19.3	8 19	21 39.96	-32 32.9	1.543	2.518	7.9	19.4
8 29	21 31.16	-31 3.8	1.292	2.245	11.3	19.5	8 29	21 31.64	-33 14.8	1.579	2.519	10.7	19.6
9 8	21 24.56	-30 33.5	1.352	2.256	14.7	19.7	9 8	21 24.87	-33 30.6	1.638	2.520	13.8	19.8
9 18	21 20.78	-29 41.8	1.432	2.268	17.8	20.0	9 18	21 20.48	-33 21.7	1.716	2.522	16.6	20.0
<b>79537</b>	1998 <i>QX</i> <sub>31</sub>		8 15.9 358°61	1°/15.3	18		<b>453257</b>	2008 <i>SE</i> <sub>141</sub>		8 16.0 303°14	4°7/20.6	17	
7 10	21 59.77	-12 26.6	1.018	1.913	19.9	18.1	7 10	22 3.24	+ 2 21.9	2.521	3.296	13.1	21.4
7 20	21 58.64	-13 4.1	0.958	1.908	15.3	17.9	7 20	21 59.41	+ 2 42.6	2.428	3.290	10.9	21.2
7 30	21 54.43	-14 0.3	0.916	1.905	10.0	17.6	7 30	21 54.03	+ 2 48.7	2.355	3.284	8.5	21.0
8 9	21 47.89	-15 8.6	0.894	1.903	4.1	17.2	8 9	21 47.52	+ 2 40.2	2.307	3.278	6.1	20.9
8 19	21 40.22	-16 19.2	0.893	1.903	2.6	17.1	8 19	21 40.44	+ 2 17.9	2.285	3.272	4.7	20.8
8 29	21 33.01	-17 21.7	0.914	1.905	8.5	17.5	8 29	21 33.47	+ 1 44.4	2.291	3.266	5.5	20.8
9 8	21 27.74	-18 7.8	0.955	1.908	13.9	17.8	9 8	21 27.31	+ 1 3.5	2.323	3.260	7.7	20.9
9 18	21 25.40	-18 33.4	1.015	1.913	18.7	18.1	9 18	21 22.50	+ 0 19.2	2.381	3.255	10.2	21.1
<b>220211</b>	2002 <i>VJ</i> <sub>54</sub>		8 15.9 286°87	5°4/12.8	18		<b>476138</b>	2007 <i>TK</i> <sub>251</sub>		8 16.0 304°73	2°3/17.7	18	
7 10	22 13.50	-25 0.2	1.525	2.393	15.9	20.0	7 10	22 5.34	- 6 30.1	1.759	2.594	15.6	21.1
7 20	22 8.41	-25 37.2	1.455	2.389	12.4	19.7	7 20	22 1.75	- 6 30.5	1.670	2.582	12.4	20.8
7 30	22 0.42	-26 14.7	1.407	2.384	8.6	19.5	7 30	21 55.93	- 6 45.7	1.602	2.570	8.7	20.6
8 9	21 50.29	-26 44.8	1.383	2.380	5.7	19.3	8 9	21 48.43	- 7 14.1	1.556	2.557	4.6	20.3
8 19	21 39.21	-27 0.4	1.383	2.376	6.2	19.4	8 19	21 40.04	- 7 52.4	1.537	2.546	2.4	20.1
8 29	21 28.61	-26 56.7	1.409	2.372	9.5	19.5	8 29	21 31.78	- 8 35.5	1.544	2.534	5.7	20.3
9 8	21 19.85	-26 32.8	1.458	2.368	13.4	19.8	9 8	21 24.71	- 9 17.9	1.576	2.523	9.9	20.5
9 18	21 13.84	-25 50.7	1.528	2.364	16.9	20.0	9 18	21 19.65	- 9 55.1	1.631	2.512	13.7	20.8
<b>23187</b>	2000 <i>PN</i> <sub>9</sub>		8 15.9 286°63	14°5/26.5	17		<b>114904</b>	2003 <i>QX</i> <sub>25</sub>		8 16.0 226°62	1°1/16.7	18	
7 10	22 22.54	+25 42.5	1.704	2.317	23.6	20.2	7 10	22 11.59	-10 25.4	1.512	2.358	17.2	20.0
7 20	22 16.68	+25 34.9	1.544	2.262	22.2	19.9	7 20	22 6.83	-10 20.3	1.434	2.355	13.4	19.7
7 30	22 7.06	+24 42.1	1.396	2.205	20.1	19.5	7 30	21 59.38	-10 27.7	1.377	2.352	9.0	19.5
8 9	21 53.76	+22 48.1	1.264	2.144	17.6	19.2	8 9	21 49.90	-10 44.9	1.342	2.348	4.2	19.2
8 19	21 37.39	+19 37.4	1.156	2.081	15.2	18.8	8 19	21 39.43	-11 7.7	1.333	2.344	1.7	19.0
8 29	21 19.44	+15 3.0	1.077	2.015	14.6	18.6	8 29	21 29.28	-11 31.0	1.351	2.340	6.5	19.3
9 8	21 1.94	+ 9 15.6	1.030	1.946	17.1	18.5	9 8	21 20.71	-11 50.2	1.393	2.336	11.2	19.6
9 18	20 46.93	+ 2 45.0	1.017	1.874	21.9	18.6	9 18	21 14.65	-12 2.0	1.457	2.332	15.4	19.8
<b>171117</b>	2005 <i>GF</i> <sub>1</sub>		8 15.9 100°02	3°5/13.3	18		<b>506775</b>	2006 <i>XP</i> <sub>22</sub>		8 16.0 212°23	1°9/14.5	18	
7 10	22 11.74	-22 35.0	2.090	2.942	12.9	20.3	7 10	22 9.40	-15 34.7	1.895	2.744	14.1	22.7
7 20	22 6.03	-23 11.4	2.035	2.961	9.8	20.1	7 20	22 4.73	-16 22.4	1.812	2.738	10.8	22.5
7 30	21 58.31	-23 48.8	2.003	2.979	6.5	20.0	7 30	21 57.81	-17 19.4	1.753	2.732	7.0	22.2
8 9	21 49.25	-24 21.9	1.997	2.998	3.9	19.8	8 9	21 49.21	-18 20.5	1.718	2.726	3.1	22.0
8 19	21 39.71	-24 45.9	2.019	3.016	4.1	19.9	8 19	21 39.75	-19 19.2	1.711	2.718	2.7	21.9
8 29	21 30.66	-24 57.4	2.069	3.033	6.9	20.1	8 29	21 30.49	-20 9.5	1.732	2.710	6.6	22.2
9 8	21 22.98	-24 55.1	2.145	3.051	9.9	20.3	9 8	21 22.48	-20 47.1	1.779	2.702	10.6	22.4
9 18	21 17.27	-24 39.6	2.244	3.067	12.6	20.5	9 18	21 16.51	-21 9.7	1.848	2.693	14.0	22.6
<b>249502</b>	2009 <i>YL</i> <sub>16</sub>		8 15.9 84°63	5°4/19.9	18		<b>444120</b>	2004 <i>TW</i> <sub>178</sub>		8 16.0 10°63	4°2/12.8	18	
7 10	22 9.58	+ 0 26.9	1.836	2.631	16.6	19.8	7 10	22 8.33	-24 21.6	1.978	2.840	13.0	20.2
7 20	22 4.63	+ 1 5.8	1.766	2.643	13.6	19.6	7 20	22 3.75	-24 55.1	1.911	2.841	10.0	20.0
7 30	21 57.56	+ 1 27.4	1.717	2.656	10.3	19.5	7 30	21 57.03	-25 29.0	1.866	2.843	6.9	19.8
8 9	21 49.00	+ 1 31.3	1.690	2.669	7.2	19.3	8 9	21 48.81	-25 57.6	1.847	2.845	4.5	19.7
8 19	21 39.79	+ 1 18.6	1.690	2.681	5.4	19.2	8 19	21 39.95	-26 15.9	1.854	2.847	4.9	19.7
8 29	21 30.93	+ 0 52.6	1.715	2.694	6.7	19.3	8 29	21 31.49	-26 20.1	1.887	2.849	7.6	19.9
9 8	21 23.37	+ 0 18.3	1.767	2.706	9.6	19.5	9 8	21 24.35	-26 9.0	1.946	2.852	10.7	20.1
9 18	21 17.81	- 0 19.1	1.842	2.719	12.6	19.7	9 18	21 19.22	-25 43.4	2.027	2.855	13.6	20.3
<b>259347</b>	2003 <i>GD</i> <sub>24</sub>		8 15.9 209°99	3°2/19.3	18		<b>164253</b>	2004 <i>TU</i> <sub>232</sub>		8 16.0 108°56	4°2/19.0	17	
7 10	22 3.43	- 0 46.5	2.342	3.138	13.4	21.1	7 10	22 10.57	- 1 27.2	1.522	2.338	18.5	20.4
7 20	21 59.65	- 1 1.9	2.253	3.136	10.9	20.9	7 20	22 5.77	- 1 27.5	1.459	2.354	14.9	20.2
7 30	21 54.22	- 1 33.0	2.186	3.134	8.0	20.7	7 30	21 58.49	- 1 49.2	1.415	2.370	10.8	20.0
8 9	21 47.60	- 2 18.7	2.143	3.131	5.0	20.6	8 9	21 49.46	- 2 30.4	1.393	2.385	6.6	19.8
8 19	21 40.38	- 3 16.0	2.127	3.128	3.2	20.4	8 19	21 39.68	- 3 27.1	1.397	2.400	4.2	19.7
8 29	21 33.30	- 4 20.7	2.139	3.125	4.8	20.5	8 29	21 30.37	- 4 32.5	1.427	2.414	6.5	19.9
9 8	21 27.11	- 5 27.5	2.179	3.122	7.8	20.7	9 8	21 22.64	- 5 39.2	1.482	2.428	10.4	20.1
9 18	21 22.38	- 6 31.6	2.244	3.119	10.7	20.9	9 18	21 17.28	- 6 40.6	1.560	2.442	14.2	20.4
<b>354592</b>	2004 <i>XS</i> <sub>81</sub>		8 16.0 227°38	4°8/11.3	18		<b>261762</b>	2006 <i>BP</i> <sub>55</sub>		8 16.0 187°70	0°8/16.9	18	
7 10	22 8.08	-23 54.6	2.100	2.960	12.5	21.0	7 10	22 2.73	- 7 30.7	2.501	3.324	11.9	20.5
7 20	22 3.64	-25 14.6	2.022	2.952	9.7	20.8	7 20	21 59.02	- 8 13.0	2.416	3.324	9.2	20.3
7 30	21 57.06	-26 38.1	1.968	2.943	6.8	20.6	7 30	21 53.78	- 9 7.3	2.355	3.324	6.2	20.1
8 9	21 48.86	-27 58.0	1.940	2.933	4.9	20.5	8 9	21 47.43	-10 10.5	2.319	3.323	2.9	19.9
8 19	21 39.82	-29 7.0	1.940	2.924	5.7	20.5	8 19	21 40.54	-11 18.6	2.312	3.323	1.1	19.8
8 29	21 30.96	-29 59.4	1.966	2.914	8.4	20.7	8 29	21 33.79	-12 26.8	2.334	3.322	4.3	20.0
9 8	21 23.25	-30 31.9	2.018	2.903	11.4	20.8	9 8	21 27.88	-13 30.4	2.384	3.321	7.5	20.2
9 18	21 17.48	-30 44.4	2.092	2.892	14.2	21.0	9 18	21 23.34	-14 25.9	2.459	3.320	10.4	20.4
<b>432631</b>	2010 <i>VV</i> <sub>123</sub>		8 16.0 265°80	0°9/15.4	18		<b>254980</b>	2005 <i>SW</i> <sub>255</sub>		8			