

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°
500791 2013 EQ123									385368 2002 PF179								
11 22	5 31.49	+29 46.0	1.848	2.775	8.6	22.3	155 W	75 34	11 22	5 44.00	+40 6.5	2.797	3.675	8.1	22.4	148 W	85 24
11 27	5 26.00	+29 54.2	1.829	2.780	6.7	22.2	161 W	75 34	11 27	5 39.15	+40 10.6	2.763	3.671	7.0	22.3	153 W	85 24
12 2	5 20.07	+29 59.9	1.817	2.786	4.7	22.1	167 W	75 34	12 2	5 33.90	+40 11.4	2.737	3.667	5.9	22.3	158 W	85 24
12 7	5 13.87	+30 2.8	1.813	2.791	3.1	22.0	171 W	75 34	12 7	5 28.36	+40 8.5	2.718	3.663	5.0	22.2	161 W	85 24
12 12	5 7.59	+30 2.8	1.816	2.796	2.5	22.0	173 E	75 34	12 12	5 22.66	+40 1.7	2.706	3.659	4.5	22.2	163 W	85 24
12 17	5 1.40	+30 0.1	1.827	2.800	3.7	22.1	169 E	75 34	12 17	5 16.93	+39 51.1	2.703	3.655	4.5	22.2	163 E	85 24
12 22	4 55.46	+29 54.9	1.846	2.805	5.5	22.2	164 E	75 34	12 22	5 11.31	+39 36.7	2.707	3.650	5.1	22.2	161 E	85 24
12 27	4 49.94	+29 47.6	1.871	2.809	7.4	22.3	158 E	75 34	12 27	5 5.92	+39 19.0	2.718	3.645	6.0	22.3	157 E	84 25
1 1	4 44.97	+29 38.7	1.904	2.813	9.3	22.5	153 E	75 34	1 1	5 0.88	+38 58.3	2.737	3.640	7.1	22.3	153 E	84 25
									1 6	4 56.29	+38 35.1	2.764	3.635	8.3	22.4	148 E	84 25
									1 11	4 52.24	+38 10.2	2.797	3.629	9.4	22.5	143 E	83 26
358060 2006 HR49									162825 2001 BO61								
11 22	5 33.39	+17 28.4	2.216	3.141	7.5	22.6	155 W	62 47	11 22	5 49.16	+ 9 49.5	1.789	2.687	10.8	22.2	149 W	55 54
12 2	5 23.22	+17 22.5	2.189	3.158	4.0	22.4	167 W	62 47	12 2	5 35.87	+ 9 13.2	1.691	2.640	7.3	21.9	160 W	54 55
12 12	5 12.29	+17 18.4	2.193	3.174	1.8	22.2	174 E	62 47	12 12	5 20.22	+ 8 44.7	1.624	2.590	5.4	21.7	166 W	54 55
12 22	5 1.61	+17 16.9	2.228	3.188	4.6	22.5	165 E	62 47	12 22	5 3.55	+ 8 27.1	1.590	2.536	7.7	21.7	160 E	53 56
1 1	4 52.12	+17 18.6	2.294	3.202	8.0	22.7	153 E	62 47	1 1	4 47.46	+ 8 22.8	1.589	2.480	12.0	21.8	148 E	53 56
									1 11	4 33.46	+ 8 33.0	1.615	2.421	16.4	21.9	136 E	54 55
423321 2005 ED318									390536 1999 KK1								
11 22	5 33.91	+22 51.7	1.725	2.656	8.8	24.7	156 W	68 41	11 22	5 50.96	+23 22.4	1.445	2.362	11.4	21.6	152 W	68 41
11 27	5 27.82	+22 50.4	1.694	2.651	6.6	24.6	162 W	68 41	11 27	5 44.41	+23 34.3	1.440	2.385	8.8	21.5	158 W	69 40
12 2	5 21.21	+22 47.8	1.671	2.645	4.2	24.4	169 W	68 41	12 2	5 37.37	+23 44.9	1.442	2.408	6.1	21.4	165 W	69 40
12 7	5 14.23	+22 44.0	1.656	2.639	1.7	24.2	175 W	68 41	12 7	5 30.05	+23 53.9	1.452	2.431	3.4	21.3	172 W	69 40
12 12	5 7.07	+22 39.0	1.648	2.632	0.8	24.1	178 E	68 41	12 12	5 22.67	+24 1.1	1.469	2.453	0.7	21.1	178 W	69 40
12 17	4 59.93	+22 32.9	1.648	2.625	3.3	24.3	171 E	68 41	12 17	5 15.45	+24 6.6	1.493	2.475	2.1	21.3	175 E	69 40
12 22	4 53.01	+22 25.9	1.657	2.618	5.8	24.4	165 E	67 42	12 22	5 8.60	+24 10.5	1.525	2.496	4.6	21.5	168 E	69 40
12 27	4 46.48	+22 18.5	1.672	2.610	8.1	24.6	158 E	67 42	12 27	5 2.30	+24 13.1	1.565	2.517	7.1	21.7	162 E	69 40
315508 2008 AB31									465619 2009 FJ22								
11 22	5 37.96	+69 40.5	1.043	1.824	25.4	22.8	128 W	65 -	11 22	5 52.38	+ 9 15.0	1.625	2.520	11.8	22.1	148 W	54 55
11 24	5 31.64	+69 47.7	1.028	1.817	25.1	22.7	129 W	65 -	12 2	5 43.58	+ 8 25.0	1.548	2.490	8.5	21.8	158 W	53 56
11 26	5 24.83	+69 51.7	1.013	1.810	24.8	22.7	130 W	65 -	12 12	5 32.79	+ 7 45.4	1.497	2.459	6.3	21.6	164 W	53 56
11 28	5 17.57	+69 52.4	0.998	1.803	24.6	22.6	130 W	65 -	12 22	5 21.22	+ 7 20.4	1.475	2.427	7.4	21.6	161 E	52 57
11 30	5 9.95	+69 49.3	0.985	1.795	24.4	22.6	131 W	65 -	1 1	5 10.20	+ 7 12.3	1.480	2.395	11.0	21.7	152 E	52 57
12 2	5 2.04	+69 42.2	0.971	1.788	24.2	22.5	132 W	65 -	1 11	5 1.05	+ 7 22.0	1.510	2.361	15.0	21.9	142 E	52 57
12 4	4 53.95	+69 30.8	0.959	1.781	24.0	22.5	133 W	65 -									
12 6	4 45.78	+69 15.1	0.947	1.773	23.9	22.4	133 E	66 -									
12 8	4 37.65	+68 54.7	0.936	1.766	23.8	22.4	134 E	66 -									
12 10	4 29.68	+68 29.7	0.925	1.758	23.7	22.4	134 E	67 -									
12 12	4 21.95	+68 0.1	0.915	1.751	23.7	22.3	134 E	67 -									
12 14	4 14.55	+67 26.0	0.906	1.743	23.8	22.3	134 E	68 -									
12 16	4 7.57	+66 47.5	0.898	1.735	23.9	22.3	134 E	68 -									
12 18	4 1.06	+66 4.8	0.890	1.728	24.0	22.3	134 E	69 -									
12 20	3 55.06	+65 18.2	0.883	1.720	24.2	22.2	134 E	70 -									
12 22	3 49.60	+64 27.8	0.877	1.712	24.5	22.2	134 E	71 -									
297839 2002 BE17									255535 2006 HS56								
12 27	3 38.37	+62 7.7	0.865	1.692	25.4	22.2	132 E	73 2	11 22	5 52.44	+27 1.6	1.901	2.806	9.8	21.6	151 W	72 37
1 1	3 30.55	+59 31.2	0.858	1.671	26.7	22.2	130 E	75 4	11 27	5 47.41	+27 15.5	1.879	2.814	7.8	21.5	157 W	72 37
1 6	3 25.87	+56 43.7	0.855	1.650	28.2	22.2	128 E	78 7	12 2	5 41.88	+27 27.9	1.864	2.823	5.8	21.4	163 W	72 37
1 11	3 23.93	+53 50.2	0.857	1.629	29.9	22.2	124 E	81 10	12 7	5 35.98	+27 38.6	1.857	2.831	3.7	21.3	169 W	73 36
									12 12	5 29.86	+27 47.3	1.857	2.838	2.0	21.1	174 W	73 36
									12 17	5 23.71	+27 53.8	1.865	2.846	1.9	21.2	174 E	73 36
									12 22	5 17.68	+27 58.2	1.880	2.853	3.6	21.3	169 E	73 36
									12 27	5 11.94	+28 0.6	1.903	2.860	5.6	21.4	163 E	73 36
									1 1	5 6.62	+28 1.4	1.934	2.867	7.6	21.6	157 E	73 36
									1 6	5 1.85	+28 0.8	1.971	2.873	9.4	21.7	151 E	73 36
									1 11	4 57.73	+27 59.3	2.015	2.879	11.2	21.8	145 E	73 36
358744 2008 CR118									371527 2006 UB216								
11 22	5 40.15	+18 57.2	1.643	2.567	9.7	22.7	154 W	64 45	11 22	5 52.48	+31 36.0	1.997	2.896	9.8	21.7	150 W	77 32
11 27	5 33.57	+18 53.9	1.631	2.582	7.4	22.6	160 W	64 45	11 27	5 47.33	+31 47.3	1.978	2.907	8.0	21.7	156 W	77 32
12 2	5 26.56	+18 50.5	1.626	2.596	4.9	22.4	167 W	64 45	12 2	5 41.69	+31 56.0	1.965	2.917	6.1	21.6	162 W	77 32
12 7	5 19.32	+18 47.0	1.628	2.609	2.7	22.3	173 W	64 45	12 7	5 35.70	+32 1.9	1.959	2.927	4.4	21.5	167 W	77 32
12 12	5 12.03	+18 43.6	1.639	2.622	1.7	22.3	176 E	64 45	12 12	5 29.51	+32 4.7	1.961	2.937	3.2	21.4	170 W	77 32
12 17	5 4.90	+18 40.3	1.658	2.634	3.4	22.4	171 E	64 45	12 17	5 23.32	+32 4.4	1.971	2.946	3.1	21.4	171 E	77 32
12 22	4 58.10	+18 37.4	1.684	2.646	5.6	22.6	165 E	64 45	12 22	5 17.27	+32 1.1	1.988	2.956	4.2	21.5	167 E	77 32
12 27	4 51.80	+18 35.1	1.718	2.657	7.8	22.8	158 E	64 45	12 27	5 11.52	+31 55.0	2.013	2.965	5.8	21.6	162 E	77 32
									1 1	5 6.22	+31 46.7	2.045	2.973	7.6	21.8	157 E	77 32
									1 6	5 1.47	+31 36.6	2.084	2.982	9.2	21.9	151 E	77 32
									1 11	4 57.39	+31 25.3	2.130	2.990	10.8	22.0	145 E	76 33
498152 2007 TK111									514756 2007 EK39								
11 22	5 42.86	+34 15.5	1.636	2.547	10.8	21.4	151 W	79 30	11 22	5 52.50	-26 21.0	1.060	1.815	26.5	21.6	125 W	19 90
11 27	5 36.96	+34 20.5	1.623	2.560	8.7	21.3	157 W	79 30	11 27	5 47.79	-27 36.0	1.051	1.816	26.1	21.6	126 W	17 88
12 2	5 30.55	+34 21.5	1.617	2.574	6.7	21.2	162 W	79 30	12 2	5 42.30	-28 36.6	1.045	1.816	25.8	21.6	127 W	16 87
12 7	5 23.84	+34 18.1	1.619	2.587	5.1	21.1	167 W	79 30	12 7	5 36.22	-29 20.7	1.043	1.816	25.6	21.6	127 W	16 87
12 12	5 17.03	+34 10.4	1.627	2.600	4.2	21.1	169 W	79 30	12 12	5 29.79	-29 47.3	1.044	1.816	25.6	21.6	12	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
241109 2007 MB₁₀										408751 1987 SF₃ (continuation)									
11 22	5 52.52	+20 20.6	1.816	2.724	10.1	21.4	151 W	65	44	12 27	5 11.67	+17 19.3	1.336	2.293	7.5	22.0	162 E	62	47
12 2	5 42.52	+20 23.6	1.773	2.733	5.9	21.2	164 W	65	44	1 1	5 6.17	+17 19.6	1.389	2.323	9.8	22.2	156 E	62	47
12 12	5 31.04	+20 26.4	1.758	2.741	1.6	20.9	176 W	65	44	1 6	5 1.54	+17 21.5	1.448	2.352	12.0	22.4	150 E	62	47
12 22	5 19.33	+20 29.0	1.774	2.748	3.5	21.1	170 E	65	44	349074 2007 BM₈									
1 1	5 8.63	+20 32.0	1.819	2.754	7.8	21.4	158 E	66	43	11 22	6 6.10	+14 50.7	1.320	2.215	14.0	21.4	147 W	60	49
1 11	5 0.01	+20 36.6	1.892	2.759	11.6	21.6	145 E	66	43	11 27	5 56.46	+15 17.1	1.298	2.229	11.1	21.3	154 W	60	49
415746 2000 JN₁₀										12 2	5 45.96	+15 44.8	1.284	2.241	8.0	21.2	162 W	61	48
11 22	5 54.43	+40 38.1	1.836	2.715	11.6	22.0	146 W	86	23	12 7	5 34.87	+16 13.2	1.278	2.252	5.0	21.0	168 W	61	48
11 27	5 47.61	+41 15.9	1.826	2.733	10.0	21.9	151 W	86	23	12 12	5 23.49	+16 41.7	1.282	2.262	2.9	20.9	173 W	62	47
12 2	5 40.14	+41 48.4	1.822	2.750	8.5	21.9	156 W	87	22	12 17	5 12.15	+17 9.5	1.294	2.272	3.7	21.0	171 E	62	47
12 7	5 32.22	+42 14.6	1.826	2.767	7.4	21.9	159 W	87	22	12 22	5 1.19	+17 36.4	1.315	2.280	6.4	21.2	165 E	63	46
12 12	5 24.08	+42 34.0	1.837	2.784	6.8	21.9	160 W	88	21	12 27	4 50.88	+18 2.1	1.345	2.287	9.3	21.4	158 E	63	46
12 17	5 15.97	+42 46.5	1.856	2.801	6.9	21.9	160 E	88	21	1 1	4 41.47	+18 26.7	1.383	2.293	12.0	21.5	151 E	63	46
12 22	5 8.12	+42 52.2	1.882	2.817	7.6	22.0	158 E	88	21	1 6	4 33.13	+18 50.4	1.428	2.298	14.6	21.7	144 E	64	45
12 27	5 0.75	+42 51.8	1.915	2.833	8.7	22.1	154 E	88	21	1 11	4 25.96	+19 13.6	1.480	2.302	16.8	21.9	137 E	64	45
1 1	4 54.04	+42 46.0	1.955	2.849	10.0	22.2	150 E	88	21	280742 2005 LY₄₂									
1 6	4 48.13	+42 35.7	2.002	2.864	11.4	22.3	145 E	88	21	11 22	6 6.57	+26 36.3	1.479	2.375	12.7	22.1	148 W	72	37
1 11	4 43.13	+42 22.2	2.055	2.879	12.7	22.4	140 E	87	22	11 27	6 1.01	+26 39.3	1.465	2.393	10.3	22.0	154 W	72	37
433965 1999 SD₁₀										12 2	5 54.83	+26 40.6	1.458	2.411	7.8	21.9	161 W	72	37
11 22	5 54.50	+21 41.0	2.050	2.952	9.4	21.7	151 W	67	42	12 7	5 48.20	+26 39.9	1.458	2.428	5.2	21.8	167 W	72	37
12 2	5 44.29	+21 51.1	2.049	3.007	5.4	21.6	163 W	67	42	12 12	5 41.33	+26 36.9	1.464	2.445	2.7	21.7	173 W	72	37
12 12	5 33.20	+21 59.4	2.078	3.061	1.3	21.4	176 W	67	42	12 17	5 34.45	+26 31.9	1.478	2.462	1.3	21.6	172 E	72	37
12 22	5 22.32	+22 5.6	2.138	3.114	2.8	21.6	171 E	67	42	12 22	5 27.76	+26 24.8	1.500	2.478	3.1	21.8	177 E	71	38
1 1	5 12.66	+22 10.3	2.229	3.166	6.4	21.9	159 E	67	42	12 27	5 21.46	+26 16.1	1.529	2.494	5.5	22.0	166 E	71	38
1 11	5 4.97	+22 14.8	2.348	3.217	9.6	22.2	147 E	67	42	1 1	5 15.71	+26 6.3	1.565	2.510	7.8	22.1	160 E	71	38
304093 2006 HM₂₉										1 6	5 10.66	+25 55.8	1.607	2.525	10.0	22.3	153 E	71	38
11 22	5 55.07	+11 28.2	2.790	3.669	8.0	22.2	149 W	56	53	1 11	5 6.40	+25 45.3	1.656	2.541	12.0	22.4	147 E	71	38
12 2	5 47.26	+11 11.0	2.749	3.687	5.5	22.1	159 W	56	53	154269 2002 SM									
12 12	5 38.56	+10 59.9	2.739	3.705	3.5	22.0	167 W	56	53	11 22	6 7.35	+44 22.1	1.586	2.445	14.2	21.5	143 W	89	20
12 22	5 29.68	+10 55.7	2.760	3.721	3.8	22.0	166 E	56	53	11 27	6 0.79	+45 2.3	1.539	2.427	12.8	21.4	147 W	90	19
1 1	5 21.32	+10 58.7	2.812	3.736	6.0	22.2	157 E	56	53	12 2	5 53.02	+45 37.7	1.497	2.408	11.4	21.3	151 W	89	18
1 11	5 14.14	+11 8.7	2.894	3.751	8.4	22.4	146 E	56	53	12 7	5 44.16	+46 6.7	1.462	2.388	10.3	21.2	154 W	89	18
23714 1998 EC₃										12 12	5 34.44	+46 27.5	1.434	2.368	9.6	21.1	156 W	89	18
11 22	5 55.95	+14 49.8	2.332	3.222	9.0	21.7	149 W	60	49	12 17	5 24.16	+46 38.9	1.412	2.348	9.6	21.0	157 E	88	17
12 2	5 46.23	+14 44.0	2.269	3.217	5.7	21.5	161 W	60	49	12 22	5 13.68	+46 40.2	1.398	2.327	10.3	21.0	155 E	88	17
12 12	5 35.18	+14 42.4	2.236	3.211	2.9	21.3	170 W	60	49	12 27	5 3.37	+46 31.4	1.391	2.305	11.6	21.0	152 E	88	17
12 22	5 23.72	+14 45.4	2.235	3.203	3.7	21.3	168 E	60	49	1 1	4 53.60	+46 12.9	1.390	2.283	13.3	21.1	148 E	89	18
1 1	5 12.86	+14 53.3	2.266	3.194	6.9	21.5	157 E	60	49	1 6	4 44.71	+45 46.2	1.396	2.261	15.1	21.1	143 E	89	18
1 11	5 3.49	+15 6.2	2.327	3.184	10.2	21.7	145 E	60	49	1 11	4 36.96	+45 12.9	1.407	2.238	17.1	21.2	138 E	90	19
524597 2003 OQ₁₃										1 16	4 30.52	+44 34.9	1.424	2.214	19.0	21.3	133 E	90	19
11 22	5 56.77	-11 2.0	0.599	1.477	27.7	21.3	136 W	34	75	1 21	4 25.48	+43 54.0	1.445	2.190	20.8	21.3	128 E	89	20
11 27	5 49.04	-10 52.5	0.585	1.483	25.3	21.2	140 W	34	75	415802 2001 JT₂									
12 2	5 40.15	-10 25.3	0.575	1.488	23.1	21.1	144 W	35	74	11 22	6 9.49	+50 49.3	1.940	2.761	13.6	21.7	139 W	84	13
12 7	5 30.43	-9 39.1	0.568	1.493	21.3	21.0	147 W	35	74	11 27	6 1.22	+52 5.8	1.921	2.769	12.6	21.7	142 W	83	12
12 12	5 20.31	-8 33.5	0.567	1.497	20.2	20.9	148 W	36	73	12 2	5 51.72	+53 15.3	1.909	2.777	11.7	21.6	145 W	82	11
12 17	5 10.26	-7 9.9	0.570	1.500	19.9	21.0	149 E	38	71	12 7	5 41.15	+54 16.0	1.905	2.784	11.1	21.6	147 W	81	10
12 22	5 0.70	-5 30.6	0.578	1.504	20.5	21.0	148 E	39	70	12 12	5 29.81	+55 6.2	1.908	2.791	10.8	21.6	148 W	80	9
12 27	4 52.03	-3 38.9	0.590	1.506	21.9	21.1	145 E	41	68	12 17	5 18.05	+55 45.1	1.919	2.798	10.9	21.6	147 E	79	8
1 1	4 44.54	-1 38.5	0.608	1.508	23.8	21.2	142 E	43	66	12 22	5 6.26	+56 12.4	1.937	2.805	11.4	21.7	146 E	79	8
1 6	4 38.46	+0 27.1	0.629	1.510	26.0	21.4	138 E	45	64	12 27	4 54.83	+56 28.3	1.961	2.811	12.1	21.7	143 E	79	8
1 11	4 33.91	+2 34.6	0.655	1.511	28.2	21.5	133 E	48	61	1 1	4 44.13	+56 34.0	1.993	2.817	13.0	21.8	140 E	78	7
410186 2007 RH₁₀₃										1 6	4 34.48	+56 30.7	2.030	2.823	14.0	21.9	136 E	78	7
11 22	5 58.82	+17 57.1	1.551	2.453	11.8	21.3	149 W	63	46	1 11	4 26.10	+56 20.4	2.074	2.829	15.0	22.0	132 E	79	8
12 2	5 48.37	+17 40.7	1.529	2.485	7.2	21.1	162 W	63	46	419534 2010 KT₁₁₇									
12 12	5 36.49	+17 27.5	1.536	2.515	2.9	20.9	173 W	62	47	11 22	6 9.82	+20 32.4	1.791	2.675	11.5	21.8	147 W	66	43
12 22	5 24.60	+17 18.3	1.571	2.545	4.0	21.1	170 E	62	47	12 2	6 0.26	+20 54.8	1.746	2.692	7.4	21.6	160 W	66	43
1 1	5 14.03	+17 14.0	1.635	2.574	8.2	21.4	158 E	62	47	12 12	5 48.86	+21 18.0	1.729	2.708	2.8	21.3	172 W	66	43
1 11	5 5.84	+17 15.5	1.726	2.601	12.1	21.7	146 E	62	47	12 22	5 36.86	+21 40.2	1.742	2.723	2.0	21.3	174 E	67	42
358473 2007 PA₅										1 1	5 25.55	+22 0.4	1.786	2.737	6.5	21.6	162 E	67	42
11 22	5 59.73	+14 57.9	1.669	2.564	11.6	21.7	149 W	60	49	1 11	5 16.10	+22 19.1	1.857	2.750	10.5	21.9	149 E	67	42

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°		
455594 2004 SV₅₅ (continuation)									422659 1998 LD										
12 10	4 7.68	+80 29.8	2.231	2.877	16.9	22.8	122 E	55	11 22	6 19.56	+16 29.4	0.766	1.671	20.2	21.4	144 W	61	48	
12 11	4 1.08	+80 23.1	2.232	2.879	16.8	22.8	122 E	55	11 27	6 13.33	+14 27.9	0.736	1.666	17.2	21.3	150 W	59	50	
12 12	3 54.70	+80 15.6	2.233	2.880	16.8	22.8	122 E	55	12 2	6 5.79	+12 20.7	0.712	1.661	14.1	21.1	156 W	57	52	
12 13	3 48.54	+80 7.3	2.234	2.881	16.8	22.8	122 E	55	12 7	5 57.17	+10 10.2	0.694	1.656	11.5	20.9	160 W	55	54	
12 14	3 42.63	+79 58.3	2.236	2.883	16.8	22.8	122 E	55	12 12	5 47.79	+ 8 0.0	0.683	1.650	10.0	20.8	163 W	53	56	
12 15	3 36.98	+79 48.5	2.237	2.884	16.8	22.8	122 E	55	12 17	5 38.04	+ 5 53.7	0.678	1.644	10.3	20.8	163 W	51	58	
12 16	3 31.59	+79 38.2	2.239	2.885	16.8	22.8	122 E	55	12 22	5 28.33	+ 3 55.4	0.680	1.637	12.4	20.9	159 E	49	60	
12 17	3 26.46	+79 27.1	2.241	2.886	16.8	22.8	122 E	56	12 27	5 19.05	+ 2 8.4	0.688	1.630	15.4	21.0	154 E	47	62	
12 18	3 21.60	+79 15.6	2.243	2.887	16.8	22.9	122 E	56	1 1	5 10.57	+ 0 35.2	0.702	1.622	18.7	21.1	148 E	46	63	
12 19	3 17.01	+79 3.4	2.245	2.889	16.8	22.9	122 E	56	1 6	5 3.17	+ 0 42.8	0.722	1.614	22.0	21.3	142 E	44	65	
12 20	3 12.68	+78 50.8	2.248	2.890	16.8	22.9	122 E	56	1 11	4 57.08	- 1 45.5	0.745	1.606	25.1	21.4	136 E	43	66	
12 21	3 8.61	+78 37.7	2.251	2.891	16.8	22.9	122 E	56	1 16	4 52.37	- 2 33.7	0.772	1.598	27.9	21.6	131 E	42	67	
12 22	3 4.79	+78 24.2	2.253	2.892	16.9	22.9	122 E	57	523817 2009 TK										
12 24	2 57.89	+77 56.0	2.260	2.894	16.9	22.9	121 E	57	11 22	6 20.91	-47 50.1	0.320	1.110	59.6	22.2	104 W	—	68	
12 26	2 51.92	+77 26.5	2.267	2.896	17.0	22.9	121 E	58	11 27	6 16.44	-48 46.7	0.340	1.123	58.2	22.3	105 W	—	67	
12 28	2 46.80	+76 55.9	2.275	2.898	17.0	22.9	120 E	58	12 2	6 11.16	-49 17.1	0.359	1.136	56.8	22.4	105 W	—	67	
12 30	2 42.48	+76 24.5	2.283	2.900	17.1	22.9	120 E	59	12 7	6 5.35	-49 22.2	0.377	1.150	55.3	22.5	106 W	—	67	
277616 2006 BN₆									12 12	5 59.39	-49 2.9	0.394	1.164	53.9	22.6	107 W	—	67	
11 22	6 11.15	+17 26.5	2.191	3.063	10.3	22.2	146 W	62	47	12 17	5 53.61	-48 20.4	0.410	1.179	52.5	22.7	108 W	—	68
12 2	6 1.45	+16 40.0	2.063	3.002	7.0	21.9	158 W	62	47	12 22	5 48.31	-47 15.9	0.426	1.194	51.1	22.7	109 E	—	69
12 12	5 49.46	+15 51.6	1.966	2.939	3.6	21.5	169 W	61	48	12 27	5 43.71	-45 50.6	0.441	1.209	49.7	22.8	110 E	—	70
12 22	5 36.07	+15 3.0	1.900	2.874	3.5	21.4	170 E	60	49	1 1	5 40.00	-44 5.7	0.456	1.225	48.5	22.9	111 E	1	72
1 1	5 22.44	+14 16.7	1.868	2.807	7.3	21.5	159 E	59	50	1 6	5 37.36	-42 2.7	0.471	1.240	47.2	22.9	112 E	3	74
1 11	5 9.84	+13 35.7	1.866	2.738	11.6	21.7	146 E	59	50	449465 2013 LT₃₃									
252881 2002 JF₆₃									11 22	6 21.06	+20 48.0	1.712	2.581	12.8	21.9	145 W	66	43	
11 22	6 11.32	+19 19.1	2.009	2.886	10.8	21.9	147 W	64	45	12 2	6 11.95	+20 34.3	1.673	2.608	8.6	21.7	157 W	66	43
12 2	6 2.43	+19 3.0	1.961	2.902	7.1	21.7	159 W	64	45	12 12	6 0.92	+20 21.2	1.661	2.635	4.0	21.5	169 W	65	44
12 12	5 51.95	+18 48.2	1.941	2.917	3.2	21.5	171 W	64	45	12 22	5 49.21	+20 8.5	1.678	2.660	1.5	21.4	176 E	65	44
12 22	5 40.93	+18 35.1	1.951	2.931	2.2	21.4	173 E	64	45	1 1	5 38.14	+19 56.9	1.725	2.685	5.7	21.7	164 E	65	44
1 1	5 30.50	+18 24.3	1.993	2.944	5.9	21.7	162 E	63	46	1 11	5 28.88	+19 47.7	1.801	2.709	9.8	22.0	152 E	65	44
1 11	5 21.65	+18 17.1	2.063	2.956	9.6	22.0	150 E	63	46	496164 2010 WL₄₀									
427521 2002 JK₂₀									11 22	6 21.88	+25 53.4	1.331	2.212	15.0	21.6	145 W	71	38	
11 22	6 12.82	+24 37.2	2.637	3.505	8.9	21.6	147 W	70	39	11 27	6 17.34	+25 45.0	1.316	2.229	12.5	21.5	151 W	71	38
12 2	6 4.43	+25 0.2	2.590	3.526	5.8	21.5	159 W	70	39	12 2	6 12.05	+25 35.4	1.307	2.247	9.9	21.4	157 W	71	38
12 12	5 54.69	+25 20.8	2.571	3.547	2.5	21.3	171 W	70	39	12 7	6 6.20	+25 24.5	1.303	2.265	7.2	21.3	163 W	70	39
12 22	5 44.45	+25 37.5	2.585	3.567	1.2	21.2	176 E	71	38	12 12	5 59.97	+25 12.0	1.307	2.282	4.4	21.2	170 W	70	39
1 1	5 34.57	+25 49.9	2.631	3.586	4.4	21.5	164 E	71	38	12 17	5 53.60	+24 58.2	1.317	2.300	1.7	21.0	176 W	70	39
1 11	5 25.88	+25 58.3	2.707	3.604	7.4	21.7	152 E	71	38	12 22	5 47.31	+24 43.1	1.334	2.317	1.4	21.0	177 E	70	39
392211 2009 TG₁₀									12 27	5 41.30	+24 27.2	1.359	2.334	4.0	21.3	171 E	69	40	
11 22	6 13.08	-25 43.1	1.666	2.349	20.8	21.6	122 W	19	90	1 1	5 35.76	+24 10.9	1.390	2.351	6.5	21.5	164 E	69	40
11 27	6 8.70	-27 26.9	1.633	2.330	20.6	21.5	124 W	18	89	1 6	5 30.84	+23 54.6	1.428	2.368	8.9	21.6	158 E	69	40
12 2	6 3.47	-29 3.9	1.604	2.310	20.6	21.5	124 W	16	87	1 11	5 26.68	+23 39.0	1.472	2.385	11.2	21.8	152 E	69	40
12 7	5 57.48	-30 31.8	1.580	2.289	20.7	21.4	125 W	14	85	1 16	5 23.34	+23 24.3	1.522	2.402	13.2	22.0	146 E	68	41
12 12	5 50.83	-31 48.8	1.560	2.268	21.0	21.4	125 W	13	84	363300 2002 LF₄₀									
12 17	5 43.71	-32 53.5	1.546	2.247	21.4	21.3	124 W	12	83	11 22	6 23.86	+15 15.4	1.917	2.771	12.4	21.7	143 W	60	49
12 22	5 36.28	-33 44.6	1.536	2.225	21.9	21.3	123 E	11	82	12 2	6 15.44	+15 25.9	1.870	2.793	8.7	21.5	155 W	60	49
12 27	5 28.76	-34 21.5	1.530	2.203	22.5	21.3	121 E	11	82	12 12	6 5.17	+15 42.6	1.848	2.815	4.8	21.3	166 W	61	48
1 1	5 21.38	-34 43.9	1.528	2.181	23.2	21.3	119 E	10	81	12 22	5 54.07	+16 4.8	1.857	2.835	2.6	21.2	173 E	61	48
1 6	5 14.36	-34 51.9	1.529	2.158	24.0	21.3	117 E	10	81	1 1	5 43.28	+16 31.1	1.896	2.855	5.4	21.4	164 E	62	47
1 11	5 7.91	-34 46.4	1.533	2.134	24.8	21.3	114 E	10	81	1 11	5 33.91	+17 0.5	1.964	2.873	9.1	21.7	153 E	62	47
1 16	5 2.21	-34 28.4	1.539	2.111	25.7	21.3	112 E	11	82	443842 2001 FA₂₄									
1 21	4 57.38	-33 59.3	1.547	2.086	26.5	21.3	109 E	11	82	11 22	6 24.75	+39 16.0	2.789	3.616	9.8	22.5	142 W	84	25
429733 2011 LX₁₀									11 27	6 20.77	+39 34.6	2.741	3.606	8.6	22.4	147 W	85	24	
11 22	6 13.48	+38 34.0	2.698	3.544	9.4	22.1	144 W	84	25	12 2	6 16.20	+39 51.0	2.699	3.597	7.5	22.3	152 W	85	24
11 27	6 8.76	+38 34.5	2.649	3.533	8.2	22.0	149 W	84	25	12 7	6 11.12	+40 4.8	2.664	3.587	6.4	22.2	156 W	85	24
12 2	6 3.49	+38 32.0	2.606	3.521	7.0	21.9	154 W	84	25	12 12	6 5.64	+40 15.4	2.637	3.577	5.4	22.1	160 W	85	24
12 7	5 57.77	+38 26.0	2.570	3.508	5.8	21.8	159 W	83	26	12 17	5 59.86	+40 22.4	2.616	3.567	4.8	22.1	162 W	85	24
12 12	5 51.71	+38 16.2	2.543	3.496	4.7	21.8	163 W	83	26	12 22	5 53.92	+40 25.5	2.604	3.556	4.6	22.0	163 E	85	24
12 17	5 45.44	+38 2.3	2.523	3.483	4.1	21.7	165 W	83	26	12 27	5 47.97	+40 24.6	2.599	3.546	5.1	22.0	161 E	85	24
12 22	5 39.12	+37 44.5	2.511	3.470	4.2	21.7	165 E	83	26	1 1	5 42.13	+40 19.7	2.602	3.535	5.9	22.1	158 E	85	24
12 27	5 32.89	+37 22.8	2.507	3.457	4.9	21.7	162 E	82	27	1 6	5 36.55	+40 11.1	2.613	3.524	7.0	22.1	154 E	85	24
1 1	5 26.88	+36 57.6	2.510	3.443	6.1	21.8	158 E	82	27	1 11	5 31.36	+39 59.1	2.631	3.512	8.2	22.2	149 E	85	24
1 6	5 21.23	+36 29.3	2.522	3.429	7.4	21.8	153 E	81	28	1 16	5 26.68	+39 44.3	2.655	3.501	9.5	22.3	144 E	85	24
1 11	5 16.07	+35 58.6	2.541	3.415	8.8	21.9	148 E	81	28	360247 2000 GH₁₄									
1 16	5 11.49	+35 26.1	2.567	3.401	10.1	22.0	143 E	80	29	11 22	6 25.13	+26 29.6	1.883	2.743	12.3	22.0	144 W	71	38
38239 1999 OR₃																			

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°		
350988 2003 GW (continuation)									495861 2003 UR₆₅										
12 12	6 0.24	-45 38.8	2.162	2.672	20.2	21.6	111 W	—	70	11 22	6 36.92	+16 17.2	1.384	2.234	16.4	21.3	140 W	61	48
12 17	5 52.83	-45 53.6	2.165	2.676	20.1	21.6	111 W	—	70	12 2	6 28.51	+16 32.6	1.352	2.270	11.7	21.1	152 W	62	47
12 22	5 45.33	-45 55.8	2.170	2.679	20.1	21.6	111 E	—	70	12 12	6 17.54	+16 55.9	1.343	2.306	6.6	21.0	164 W	62	47
12 27	5 37.97	-45 45.6	2.179	2.682	20.1	21.6	110 E	—	70	12 22	6 5.41	+17 24.8	1.361	2.341	2.6	20.8	174 W	62	47
1 1	5 30.93	-45 23.2	2.190	2.684	20.2	21.7	110 E	—	71	1 1	5 53.65	+17 57.0	1.407	2.376	5.3	21.1	167 E	63	46
1 6	5 24.39	-44 49.3	2.203	2.685	20.3	21.7	109 E	—	71	1 11	5 43.72	+18 30.7	1.481	2.410	9.8	21.4	155 E	64	45
1 11	5 18.50	-44 5.0	2.220	2.686	20.4	21.7	108 E	1	72	1 21	5 36.62	+19 4.9	1.580	2.443	13.8	21.7	144 E	64	45
1 16	5 13.38	-43 11.3	2.238	2.687	20.6	21.7	106 E	2	73	352735 2008 SQ₃₀₁									
53426 1999 SL₅									11 22	6 37.90	+24 39.8	1.629	2.476	14.6	21.4	141 W	70	39	
11 22	6 27.34	+8 43.0	1.999	2.830	12.9	21.7	140 W	54	55	12 2	6 29.44	+25 5.2	1.573	2.492	10.4	21.2	153 W	70	39
12 2	6 16.85	+7 34.5	1.948	2.851	9.7	21.6	151 W	53	56	12 12	6 18.28	+25 29.1	1.541	2.506	5.6	21.0	166 W	70	39
12 12	6 4.58	+6 35.9	1.926	2.870	6.8	21.4	160 W	52	57	12 22	6 5.64	+25 48.2	1.537	2.520	1.0	20.7	177 W	71	38
12 22	5 51.60	+5 50.5	1.934	2.887	6.0	21.4	162 E	51	58	1 1	5 53.02	+26 0.3	1.563	2.533	4.7	21.0	168 E	71	38
1 1	5 39.09	+5 20.5	1.975	2.902	7.8	21.5	156 E	50	59	1 11	5 41.92	+26 5.8	1.618	2.545	9.3	21.3	155 E	71	38
1 11	5 28.13	+5 6.5	2.045	2.916	10.8	21.8	146 E	50	59	1 21	5 33.51	+26 6.7	1.698	2.556	13.3	21.6	143 E	71	38
411170 2010 EW₈₀									225586 2000 WS₆₇										
11 22	6 27.97	+13 14.9	1.807	2.653	13.4	22.2	142 W	58	51	11 22	6 46.46	+28 37.7	1.312	2.158	17.5	21.6	139 W	74	35
12 2	6 19.84	+13 1.8	1.748	2.664	9.7	22.0	153 W	58	51	11 27	6 37.84	+29 26.5	1.280	2.168	14.8	21.4	146 W	74	35
12 12	6 9.61	+12 57.0	1.714	2.674	5.9	21.8	164 W	58	51	12 2	6 27.85	+30 14.1	1.254	2.178	11.9	21.3	153 W	75	34
12 22	5 58.31	+13 0.9	1.710	2.683	3.8	21.7	170 E	58	51	12 7	6 16.66	+30 58.4	1.236	2.187	9.0	21.2	160 W	76	33
1 1	5 47.16	+13 13.4	1.734	2.691	6.1	21.8	163 E	58	51	12 12	6 4.55	+31 37.5	1.226	2.194	6.1	21.0	166 W	77	32
1 11	5 37.34	+13 33.6	1.788	2.698	9.7	22.1	152 E	59	50	12 17	5 31.88	+32 9.8	1.224	2.201	4.2	20.9	171 W	77	32
488749 2004 SH₉									12 22	5 59.06	+32 34.3	1.231	2.206	4.6	21.0	170 E	78	31	
11 22	6 28.94	-6 56.5	1.635	2.414	17.6	22.4	132 W	38	71	12 27	5 26.50	+32 50.5	1.247	2.211	6.8	21.1	164 E	78	31
11 27	6 24.62	-7 43.0	1.624	2.435	16.3	22.4	136 W	37	72	1 1	5 14.61	+32 59.0	1.272	2.214	9.6	21.3	158 E	78	31
12 2	6 19.71	-8 23.0	1.618	2.455	15.0	22.3	140 W	37	72	1 6	5 3.73	+33 0.8	1.304	2.216	12.4	21.4	151 E	78	31
12 7	6 14.33	-8 5.4	1.617	2.475	13.9	22.3	143 W	36	73	1 11	4 54.11	+32 57.5	1.343	2.217	15.0	21.6	144 E	78	31
12 12	6 8.63	-9 19.6	1.623	2.495	13.0	22.3	145 W	36	73	1 16	4 45.89	+32 50.7	1.389	2.217	17.4	21.8	138 E	78	31
12 17	6 2.77	-9 35.2	1.635	2.515	12.5	22.3	147 W	35	74	415987 2002 AE₉									
12 22	5 56.92	-9 42.1	1.653	2.534	12.3	22.3	147 E	35	74	11 22	6 57.52	-34 42.7	0.980	1.605	35.5	21.4	109 W	10	81
12 27	5 51.22	-9 40.5	1.677	2.553	12.4	22.4	146 E	35	74	11 27	6 49.35	-35 21.0	0.951	1.609	34.6	21.4	112 W	10	81
1 1	5 45.83	-9 30.6	1.708	2.572	12.9	22.5	144 E	35	74	12 2	6 39.50	-35 43.8	0.924	1.611	33.7	21.3	115 W	9	80
1 6	5 40.87	-9 13.3	1.744	2.590	13.5	22.6	142 E	36	73	12 7	6 28.11	-35 47.1	0.899	1.612	32.8	21.2	118 W	9	80
161999 1989 RC									12 12	6 15.46	-35 27.3	0.876	1.611	32.0	21.1	120 W	10	81	
11 22	6 34.50	+13 23.7	1.478	2.323	15.8	22.2	140 W	58	51	12 17	6 1.93	-34 41.4	0.858	1.609	31.3	21.0	122 W	10	81
12 2	6 23.62	+13 27.6	1.463	2.380	11.1	22.1	152 W	58	51	12 22	5 48.01	-33 27.5	0.843	1.607	30.9	21.0	123 E	12	83
12 12	6 10.74	+13 40.8	1.474	2.436	6.4	22.0	164 W	59	50	12 27	5 34.22	-31 45.2	0.832	1.602	30.7	20.9	124 E	13	84
12 22	5 57.30	+14 1.8	1.514	2.490	3.7	21.9	171 E	59	50	1 1	5 21.07	-29 35.7	0.826	1.597	30.8	20.9	124 E	15	86
1 1	5 44.80	+14 29.1	1.584	2.543	6.3	22.2	163 E	59	50	1 6	5 9.03	-27 1.9	0.825	1.590	31.3	20.9	123 E	18	89
481532 2007 LE									1 11	4 58.41	-24 8.1	0.830	1.582	32.1	21.0	121 E	21	88	
11 22	6 35.34	+27 19.2	0.857	1.743	20.6	21.6	142 W	72	37	1 16	4 49.42	-20 59.8	0.839	1.573	33.1	21.0	119 E	24	85
11 27	6 32.12	+29 39.1	0.793	1.708	18.3	21.3	147 W	75	34	1 21	4 42.12	-17 42.0	0.854	1.563	34.4	21.0	116 E	27	82
12 2	6 26.94	+32 19.9	0.735	1.673	15.8	21.0	153 W	77	32	165117 2000 JB₆₁									
12 7	6 19.41	+35 21.7	0.683	1.637	13.4	20.9	157 W	80	29	11 22	6 58.58	+18 30.0	2.003	2.795	14.3	21.4	136 W	63	46
12 12	6 9.09	+38 42.5	0.638	1.601	11.7	20.5	161 W	84	25	12 2	6 51.91	+18 13.9	1.922	2.802	11.0	21.1	147 W	63	46
12 17	5 55.56	+42 17.4	0.601	1.564	12.0	20.3	161 W	87	22	12 12	6 42.76	+18 1.6	1.866	2.807	7.2	20.9	159 W	63	46
12 22	5 38.38	+45 57.8	0.572	1.527	14.6	20.2	157 E	89	18	12 22	6 31.92	+17 52.6	1.837	2.812	3.2	20.7	171 W	63	46
382758 2003 GY									1 1	6 20.44	+17 46.5	1.839	2.816	2.7	20.7	172 E	63	46	
11 22	6 35.97	+32 36.1	0.747	1.637	22.3	21.7	141 W	78	31	1 11	6 9.54	+17 43.2	1.871	2.819	6.5	20.9	161 E	63	46
11 27	6 27.64	+32 48.9	0.733	1.652	18.7	21.6	147 W	78	31	1 21	6 0.32	+17 42.8	1.932	2.821	10.4	21.1	149 E	63	46
12 2	6 17.80	+32 56.4	0.723	1.667	14.9	21.4	154 W	78	31	306383 1993 VD									
12 7	6 8.80	+32 56.6	0.719	1.681	11.1	21.3	161 W	78	31	11 22	7 4.77	+28 22.4	0.464	1.357	31.0	21.8	135 W	73	36
12 12	5 55.13	+32 48.6	0.721	1.695	7.5	21.2	167 W	78	31	11 27	6 51.05	+29 10.0	0.434	1.359	25.9	21.5	143 W	74	35
12 17	5 43.31	+32 31.8	0.729	1.708	5.3	21.1	171 W	78	31	12 2	6 33.31	+29 55.5	0.407	1.358	20.1	21.2	152 W	75	34
12 22	5 31.90	+32 7.1	0.743	1.720	6.1	21.2	169 E	77	32	12 7	6 11.56	+30 31.7	0.386	1.356	13.7	20.9	161 W	76	33
12 27	5 21.37	+31 36.0	0.764	1.731	8.9	21.4	164 E	77	32	12 12	5 46.42	+30 50.1	0.371	1.351	7.5	20.5	170 W	76	33
1 1	5 12.08	+31 0.5	0.791	1.742	12.2	21.6	158 E	76	33	12 17	5 19.27	+30 43.6	0.363	1.345	6.2	20.4	172 E	76	33
1 6	5 4.29	+30 22.8	0.823	1.752	15.5	21.8	152 E	75	34	12 22	4 51.94	+30 9.8	0.363	1.335	12.2	20.7	163 E	75	34
1 11	4 58.15	+29 45.1	0.860	1.761	18.5	22.1	145 E	75	34	12 27	4 26.34	+29 12.7	0.369	1.324	19.4	20.9	153 E	74	35
1 16	4 53.66	+29 8.9	0.902	1.770	21.2	22.3	140 E	74	35	1 1	4 3.87	+28 0.7	0.382	1.310	26.5	21.2	144 E	73	36
307564 2003 FQ₆									1 6	3 45.27	+26 43.7	0.399	1.295	32.9	21.5	134 E	72	37	
11 22	7 10.01	+20 46.4	0.559	1.430	30.2	21.4	133 W	66	43	1 11	3 30.62	+25 29.6	0.421	1.276	38.6	21.7	126 E	70	39
12 2	7 2.87	+21 47.4	0.524	1.447	22.9	21.1	145 W	67	42	306383 1993 VD									
12 12	6 48.90	+23 3.1	0.501	1.463	14.2	20.7	159 W	68	41	11 22	7 4.77	+28 22.4	0.464	1.357	31.0	21.8	135 W	73	36
12 22	6 30.05	+24 20.6	0.497	1.478	4.6	20.3	173 W	69	40	11 27	6 51.05	+29 10.0	0.434	1.359	25.9	2			

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
528736 2008 YS₁₂₆										348306 2005 AY₂₈ (continuation)									
11 22	7 19.28	+37 45.4	1.725	2.492	17.3	21.3	132 W	83	26	12 22	5 31.55	+12 58.0	0.385	1.362	9.0	20.7	168 E	58	51
12 2	7 12.39	+37 35.0	1.613	2.467	14.2	21.0	142 W	83	26	12 27	5 9.18	+13 35.7	0.401	1.367	14.2	21.0	160 E	59	50
12 12	7 1.42	+37 11.6	1.522	2.442	10.4	20.7	153 W	82	27	1 1	4 49.47	+14 10.7	0.423	1.370	20.1	21.3	151 E	59	50
12 22	6 47.18	+36 27.7	1.456	2.416	6.6	20.4	163 W	81	28	1 6	4 32.99	+14 43.7	0.451	1.370	25.6	21.6	143 E	60	49
12 27	6 39.30	+35 56.5	1.434	2.402	5.3	20.3	167 W	81	28	1 11	4 19.88	+15 15.7	0.483	1.368	30.5	21.9	135 E	60	49
1 1	6 31.22	+35 18.6	1.419	2.388	5.2	20.3	167 E	80	29	1 16	4 9.94	+15 47.7	0.519	1.364	34.7	22.2	128 E	61	48
1 6	6 23.22	+34 34.5	1.412	2.375	6.3	20.3	165 E	80	29	191759 2004 TA₁₂									
1 11	6 15.58	+33 44.9	1.412	2.361	8.2	20.4	160 E	79	30	11 22	7 37.64	-1 4.6	2.696	3.306	14.9	21.5	120 W	44	65
1 16	6 8.53	+32 50.8	1.420	2.346	10.4	20.5	155 E	78	31	12 2	7 33.56	-1 45.9	2.607	3.326	13.2	21.4	130 W	43	66
1 21	6 2.27	+31 53.6	1.434	2.332	12.6	20.6	149 E	77	32	12 12	7 27.44	-2 14.0	2.537	3.344	11.1	21.2	139 W	43	66
252902 2002 JX₁₂₇										12 22	7 19.68	-2 26.0	2.489	3.362	9.0	21.1	148 W	43	66
11 22	7 19.85	+22 40.8	2.022	2.774	15.5	21.4	131 W	68	41	1 1	7 10.84	-2 20.2	2.468	3.379	7.4	21.0	154 W	43	66
12 2	7 14.30	+23 13.4	1.945	2.794	12.4	21.2	143 W	68	41	1 11	7 1.67	-1 56.4	2.476	3.395	7.0	21.0	155 E	43	66
12 12	7 5.99	+23 50.5	1.891	2.814	8.6	21.0	155 W	69	40	1 21	6 52.96	-1 16.4	2.513	3.410	8.0	21.1	151 E	44	65
12 22	6 55.58	+24 28.5	1.864	2.832	4.4	20.8	167 W	69	40	399630 2004 OH₃									
1 1	6 44.05	+25 3.7	1.867	2.850	0.7	20.6	178 E	70	39	11 22	7 42.68	+26 58.2	1.583	2.312	20.1	21.4	127 W	72	37
1 11	6 32.64	+25 33.0	1.900	2.867	4.5	20.9	167 E	71	38	12 2	7 37.95	+26 59.7	1.516	2.341	16.5	21.2	138 W	72	37
1 21	6 22.58	+25 55.4	1.964	2.882	8.5	21.1	154 E	71	38	12 12	7 29.52	+27 2.9	1.467	2.369	12.2	21.0	150 W	72	37
329244 1992 UA										12 22	7 18.11	+27 3.4	1.442	2.397	7.3	20.8	162 W	72	37
11 22	7 20.30	+33 2.6	1.255	2.049	21.1	21.5	132 W	78	31	1 1	7 4.98	+26 57.3	1.444	2.424	2.5	20.6	174 W	72	37
11 27	7 19.17	+33 39.1	1.210	2.043	19.3	21.3	137 W	79	30	1 11	6 51.76	+26 42.3	1.475	2.450	3.8	20.7	170 E	72	37
12 2	7 16.85	+34 17.2	1.169	2.038	17.4	21.2	142 W	79	30	1 21	6 40.12	+26 19.3	1.535	2.476	8.5	21.1	158 E	71	38
12 7	7 13.31	+34 55.9	1.133	2.032	15.2	21.1	147 W	80	29	422667 1999 TB₂₈₉									
12 12	7 8.58	+35 33.9	1.102	2.027	12.9	20.9	153 W	81	28	11 22	7 49.73	+18 56.5	1.610	2.309	20.8	21.5	124 W	64	45
12 17	7 2.76	+36 9.6	1.076	2.021	10.7	20.8	158 W	81	28	12 2	7 46.55	+19 5.3	1.544	2.344	17.4	21.3	135 W	64	45
12 22	6 56.00	+36 41.6	1.056	2.015	8.6	20.6	162 W	82	27	12 12	7 39.93	+19 24.0	1.496	2.379	13.3	21.1	146 W	64	45
12 27	6 48.52	+37 8.2	1.043	2.009	7.2	20.5	165 W	82	27	12 22	7 30.42	+19 50.4	1.470	2.413	8.5	20.9	159 W	65	44
1 1	6 40.61	+37 28.3	1.035	2.003	7.0	20.5	166 E	82	27	1 1	7 19.01	+20 20.6	1.469	2.446	3.4	20.7	172 W	65	44
1 6	6 32.60	+37 40.9	1.035	1.996	8.2	20.5	163 E	83	26	1 11	7 7.09	+20 50.8	1.498	2.479	2.0	20.7	175 E	66	43
1 11	6 24.87	+37 45.7	1.040	1.990	10.2	20.6	159 E	83	26	1 21	6 56.16	+21 17.7	1.555	2.511	6.8	21.1	162 E	66	43
1 16	6 17.73	+37 43.3	1.052	1.983	12.5	20.7	154 E	83	26	349219 2007 SV₁₁									
1 21	6 11.46	+37 34.3	1.069	1.977	15.0	20.9	149 E	83	26	11 22	8 19.21	+39 7.1	1.287	1.973	25.8	21.4	120 W	84	25
528351 2008 SX₂₃₅										11 27	8 13.13	+38 56.6	1.257	2.000	23.6	21.3	126 W	84	25
11 22	7 21.47	+18 10.1	1.222	2.006	22.1	21.3	130 W	63	46	12 2	8 5.51	+38 44.0	1.232	2.026	21.3	21.2	132 W	84	25
12 2	7 17.03	+17 47.0	1.170	2.034	17.7	21.1	141 W	63	46	12 7	7 56.43	+38 27.5	1.210	2.052	18.7	21.1	138 W	83	26
12 12	7 8.78	+17 32.8	1.136	2.062	12.5	20.9	153 W	63	46	12 12	7 46.05	+38 5.5	1.194	2.077	15.9	21.0	145 W	83	26
12 22	6 57.70	+17 27.0	1.124	2.090	6.9	20.7	165 W	62	47	12 17	7 34.64	+37 36.3	1.184	2.101	13.0	20.9	151 W	83	26
1 1	6 45.32	+17 27.8	1.137	2.118	2.6	20.5	174 W	62	47	12 22	7 22.55	+36 58.9	1.182	2.125	10.1	20.9	158 W	82	27
1 6	6 39.21	+17 30.3	1.154	2.132	3.8	20.6	172 E	63	46	12 27	7 10.16	+36 13.0	1.187	2.148	7.5	20.8	163 W	81	28
1 11	6 33.47	+17 33.8	1.178	2.146	6.2	20.8	166 E	63	46	1 1	6 57.91	+35 18.9	1.200	2.171	5.7	20.7	167 W	80	29
1 16	6 28.29	+17 38.3	1.208	2.160	8.8	21.0	160 E	63	46	1 6	6 46.20	+34 17.8	1.222	2.192	5.6	20.8	167 E	79	30
1 21	6 23.81	+17 43.5	1.244	2.174	11.2	21.2	155 E	63	46	1 11	6 35.39	+33 11.7	1.252	2.214	7.2	20.9	164 E	78	31
371513 2006 UP₈₂										1 16	6 25.74	+32 2.6	1.291	2.234	9.4	21.1	158 E	77	32
11 22	7 21.61	+28 31.6	1.787	2.550	16.9	21.4	131 W	74	35	1 21	6 17.38	+30 52.7	1.337	2.254	11.7	21.3	152 E	76	33
12 2	7 15.61	+28 58.2	1.725	2.579	13.4	21.2	143 W	74	35	427583 2003 QK₁₀₃									
12 12	7 6.46	+29 24.0	1.684	2.608	9.4	21.0	154 W	74	35	11 22	8 21.06	+9 53.1	1.576	2.175	24.5	21.4	114 W	55	54
12 22	6 55.00	+29 44.1	1.670	2.635	5.1	20.8	166 W	75	34	12 2	8 21.58	+9 53.4	1.501	2.208	21.8	21.3	124 W	55	54
1 1	6 42.48	+29 54.4	1.684	2.663	2.5	20.7	173 E	75	34	12 12	8 18.64	+10 12.3	1.437	2.241	18.2	21.1	135 W	55	54
1 11	6 30.40	+29 53.2	1.728	2.689	5.5	21.0	165 E	75	34	12 22	8 12.38	+10 51.1	1.389	2.273	14.0	20.9	146 W	56	53
1 21	6 20.13	+29 41.8	1.800	2.714	9.4	21.3	153 E	75	34	1 1	8 3.34	+11 48.6	1.364	2.305	9.1	20.7	158 W	57	52
408875 2001 TQ₁₂₃										1 11	7 52.54	+13 0.6	1.364	2.337	4.4	20.5	169 W	58	51
11 22	7 33.63	+19 2.1	1.353	2.105	21.9	21.4	127 W	64	45	1 21	7 41.39	+14 20.2	1.392	2.368	3.8	20.5	171 E	59	50
12 2	7 29.24	+18 22.6	1.295	2.135	17.8	21.2	138 W	63	46	241649 2000 EC₁₄₀									
12 12	7 21.12	+17 50.1	1.254	2.165	13.0	21.0	150 W	63	46	11 22	8 30.13	+20 47.2	2.123	2.692	19.5	21.5	115 W	66	43
12 22	7 10.11	+17 24.3	1.236	2.195	7.7	20.8	163 W	62	47	12 2	8 30.51	+21 15.1	1.998	2.688	17.5	21.3	125 W	66	43
1 1	6 57.59	+17 4.7	1.244	2.224	3.0	20.6	173 W	62	47	12 12	8 27.92	+21 55.7	1.887	2.683	14.8	21.0	136 W	67	42
1 11	6 45.24	+16 50.8	1.280	2.253	4.9	20.8	169 E	62	47	12 22	8 22.26	+22 47.8	1.795	2.677	11.4	20.8	147 W	68	41
1 21	6 34.72	+16 42.3	1.343	2.281	9.8	21.2	157 E	62	47	1 1	8 13.76	+23 48.0	1.727	2.670	7.4	20.6	160 W	69	40
234330 2001 EF										1 11	8 3.03	+24 50.7	1.686	2.663	3.1	20.3	172 W	70	39
11 22	7 34.59	+27 53.7	3.034	3.729	12.0	21.5	128 W	73	36	1 21	7 51.18	+25 49.2	1.675	2.654	2.7	20.2			

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
183581 2003 SY₈₄										3988 Huma (continuation)									
11 22	8 43.89	-11 43.2	3.324	3.644	15.4	21.5	101 W	33	76*	1 11	8 55.38	-2 28.2	1.111	2.012	15.2	20.4	148 W	43	66
12 2	8 43.33	-12 51.0	3.194	3.641	14.8	21.4	109 W	32	77	1 21	8 41.01	-2 21.8	1.080	2.021	11.2	20.2	156 W	43	66
12 12	8 40.82	-13 49.0	3.072	3.637	13.9	21.2	118 W	31	78	325766 2010 JX₁₄₀									
12 22	8 36.39	-14 33.4	2.964	3.632	12.6	21.1	126 W	30	79	11 22	9 14.07	+8 10.3	1.925	2.327	24.6	21.4	101 W	53	55*
1 1	8 30.20	-15 0.3	2.873	3.626	11.2	21.0	134 W	30	79	12 2	9 17.46	+7 5.8	1.830	2.356	23.2	21.3	110 W	52	57*
1 11	8 22.60	-15 6.1	2.804	3.619	9.9	20.9	141 W	30	79	12 12	9 17.90	+6 13.1	1.741	2.386	21.0	21.1	120 W	51	58
1 21	8 14.15	-14 49.0	2.760	3.612	9.0	20.8	145 W	30	79	12 22	9 15.26	+5 34.9	1.663	2.415	18.2	21.0	130 W	51	58
354101 2001 YF₁										1 1	9 9.58	+5 13.7	1.600	2.443	14.8	20.8	141 W	50	59
11 22	8 52.59	+21 51.1	0.908	1.554	36.7	21.3	110 W	67	42*	1 11	9 1.21	+5 11.2	1.558	2.470	10.8	20.6	152 W	50	59
11 27	8 58.82	+20 9.7	0.844	1.531	36.3	21.1	113 W	65	44*	1 21	8 50.96	+5 26.7	1.541	2.497	6.8	20.4	163 W	50	59
12 2	9 4.37	+18 17.0	0.782	1.507	35.8	20.9	117 W	63	46	381906 2010 CL₁₉									
12 7	9 9.14	+16 11.1	0.722	1.484	35.1	20.7	120 W	61	48	11 22	9 14.58	+8 57.0	1.577	2.017	28.7	21.5	101 W	54	54*
12 12	9 13.04	+13 49.6	0.664	1.459	34.3	20.5	123 W	59	50	12 2	9 12.55	+8 14.9	1.500	2.075	26.2	21.4	111 W	53	56
12 17	9 15.97	+11 9.7	0.609	1.435	33.3	20.2	127 W	56	53	12 12	9 6.48	+7 49.4	1.429	2.129	22.9	21.2	123 W	53	56
12 22	9 17.80	+8 8.1	0.557	1.410	32.1	19.9	130 W	53	56	12 22	8 56.26	+7 42.9	1.370	2.180	18.6	21.0	135 W	53	56
12 27	9 18.38	+4 41.4	0.509	1.385	30.9	19.7	134 W	50	59	1 1	8 42.20	+7 56.4	1.331	2.227	13.5	20.8	148 W	53	56
1 1	9 17.51	+0 45.8	0.465	1.360	29.7	19.4	137 W	46	63	1 11	8 25.33	+8 28.4	1.318	2.270	8.2	20.7	161 W	53	56
1 6	9 14.98	-3 41.4	0.425	1.334	28.8	19.1	139 W	41	68	1 21	8 7.36	+9 14.4	1.336	2.310	4.6	20.5	169 E	54	55
1 11	9 10.61	-8 41.5	0.391	1.309	28.6	18.9	140 W	36	73	425528 2010 OJ									
1 16	9 4.20	-14 13.1	0.362	1.283	29.3	18.7	140 W	31	78	11 22	9 16.25	+27 29.4	1.967	2.435	22.9	21.4	106 W	72	36*
1 21	8 55.54	-20 10.4	0.339	1.258	31.3	18.6	138 W	25	84	12 2	9 20.43	+29 8.1	1.876	2.467	21.1	21.3	116 W	74	35*
5863 Tara										12 12	9 21.42	+31 6.1	1.796	2.499	18.7	21.1	125 W	76	33
11 22	8 53.52	-0 30.2	2.904	3.271	17.1	21.5	103 W	44	64*	12 22	9 18.89	+33 19.9	1.731	2.530	15.8	21.0	136 W	78	31
12 2	8 53.56	-1 8.2	2.751	3.256	16.3	21.3	112 W	44	65	1 1	9 12.71	+35 42.0	1.688	2.560	12.5	20.8	146 W	81	28
12 12	8 51.40	-1 35.5	2.607	3.239	14.9	21.2	122 W	43	66	1 11	9 3.10	+38 0.8	1.669	2.589	9.6	20.7	154 W	83	26
12 22	8 46.98	-1 49.2	2.477	3.221	13.1	21.0	132 W	43	66	1 21	8 50.95	+40 3.0	1.678	2.617	8.0	20.7	158 W	85	24
1 1	8 40.36	-1 46.2	2.366	3.202	10.8	20.8	142 W	43	66	88938 2001 TR₃₃									
1 11	8 31.82	-1 24.2	2.280	3.182	8.3	20.6	152 W	44	65	11 22	9 17.24	+14 12.1	2.041	2.449	23.2	21.4	102 W	59	49*
1 21	8 21.97	-0 42.5	2.221	3.160	6.4	20.4	159 W	44	65	12 2	9 20.36	+13 33.6	1.934	2.471	21.8	21.3	111 W	59	50*
159882 2004 RQ₂₈₉										12 12	9 20.59	+13 6.5	1.834	2.493	19.7	21.1	121 W	58	51
11 22	8 57.18	+13 13.7	2.142	2.602	21.3	21.4	107 W	58	51*	12 22	9 17.75	+12 52.3	1.745	2.513	16.9	20.9	132 W	58	51
12 2	8 59.01	+13 16.9	2.030	2.621	19.7	21.2	116 W	58	51	1 1	9 11.83	+12 51.2	1.673	2.533	13.3	20.7	144 W	58	51
12 12	8 58.04	+13 34.7	1.929	2.638	17.4	21.0	127 W	59	50	1 11	9 3.16	+13 2.7	1.623	2.551	9.1	20.5	156 W	58	51
12 22	8 54.16	+14 8.1	1.842	2.655	14.4	20.9	138 W	59	50	1 21	8 52.49	+13 23.8	1.598	2.569	4.5	20.3	168 W	58	51
1 1	8 47.48	+14 56.4	1.774	2.671	10.6	20.7	150 W	60	49	210744 2000 UE₇₅									
1 11	8 38.43	+15 56.9	1.732	2.686	6.4	20.4	162 W	61	48	11 22	9 26.39	+17 45.1	2.356	2.727	20.8	21.5	101 W	63	45*
1 21	8 27.86	+17 4.3	1.718	2.700	1.8	20.2	175 W	62	47	12 2	9 29.78	+17 51.6	2.237	2.744	19.7	21.3	111 W	63	46*
349507 2008 QY										12 12	9 30.60	+18 11.8	2.125	2.760	17.9	21.2	121 W	63	46
11 22	9 1.79	+39 22.9	1.114	1.740	31.9	21.4	112 W	84	24*	12 22	9 28.65	+18 46.1	2.025	2.776	15.4	21.0	131 W	64	45
11 27	9 5.61	+40 21.6	1.048	1.722	31.1	21.2	116 W	85	24*	1 1	9 23.87	+19 33.4	1.943	2.790	12.3	20.8	143 W	65	44
12 2	9 8.35	+41 30.0	0.984	1.704	30.2	21.0	120 W	86	23	1 11	9 16.41	+20 30.6	1.882	2.804	8.6	20.6	155 W	66	43
12 7	9 9.78	+42 49.0	0.922	1.684	29.0	20.8	124 W	88	21	1 21	9 6.84	+21 32.3	1.849	2.816	4.5	20.4	167 W	67	42
12 12	9 9.61	+44 19.2	0.862	1.662	27.7	20.6	128 W	89	20	508818 2001 DC₁									
12 17	9 7.46	+46 0.8	0.806	1.639	26.3	20.4	132 W	89	18	11 22	9 45.54	+1 0.8	2.205	2.437	23.9	21.4	91 W	46	59*
12 22	9 2.88	+47 53.3	0.753	1.615	24.8	20.2	136 W	87	16	12 2	9 54.70	+0 48.3	2.035	2.396	24.0	21.2	99 W	46	62*
12 24	9 0.24	+48 41.0	0.732	1.605	24.2	20.1	138 W	86	15	12 12	10 2.34	+0 52.9	1.867	2.355	23.5	20.9	107 W	46	63*
12 26	8 57.07	+49 30.0	0.713	1.594	23.6	20.0	139 W	86	15	12 22	10 8.14	+1 20.3	1.706	2.314	22.4	20.7	116 W	46	63
12 28	8 53.32	+50 20.0	0.694	1.583	23.1	19.9	141 W	85	14	1 1	10 11.76	+2 17.3	1.553	2.272	20.6	20.4	126 W	47	62
12 30	8 48.95	+51 10.6	0.676	1.573	22.6	19.8	142 W	84	13	1 6	10 12.63	+2 59.2	1.482	2.252	19.3	20.2	131 W	48	61
1 1	8 43.90	+52 1.6	0.659	1.561	22.2	19.7	143 W	83	12	1 11	10 12.83	+3 51.2	1.414	2.231	17.7	20.0	136 W	49	60
1 3	8 38.13	+52 52.4	0.643	1.550	21.9	19.7	144 W	82	11	1 16	10 12.32	+4 54.0	1.351	2.210	15.9	19.8	142 W	50	59
1 5	8 31.60	+53 42.3	0.627	1.538	21.7	19.6	145 W	81	10	1 21	10 11.09	+6 8.1	1.293	2.190	13.9	19.7	148 W	51	58
1 7	8 24.28	+54 30.9	0.613	1.527	21.6	19.5	145 W	80	9	509608 2008 ES₉₁									
1 9	8 16.12	+55 17.3	0.599	1.514	21.7	19.4	145 W	80	9	11 22	9 56.47	+15 38.0	1.733	2.050	28.7	21.3	94 W	61	44*
1 11	8 7.14	+56 0.8	0.586	1.502	22.0	19.4	145 W	79	8	12 2	10 11.86	+16 15.2	1.587	2.016	28.7	21.1	101 W	61	46*
1 13	7 57.32	+56 40.5	0.574	1.489	22.4	19.3	145 W	78	7	12 12	10 26.32	+17 16.9	1.447	1.983	28.2	20.8	108 W	62	46*
1 15	7 46.72	+57 15.6	0.563	1.476	23.1	19.3	144 W	78	7	12 22	10 39.60	+18 49.3	1.315	1.950	27.1	20.6	115 W	64	45
1 17	7 35.38	+57 45.2	0.553	1.463	23.9	19.3	143 E	77	6	1 1	10 51.35	+20 58.6	1.195	1.919	25.4	20.3	123 W	66	43
1 19	7 23.39	+58 8.6	0.544	1.450	24.9	19.2	142 E	77	6	1 11	11 1.10	+23 49.7	1.088	1.887	23.1	20.0	131 W	69	40
1 21	7 10.89	+58 25.1	0.535	1.436	26.1	19.2	140 E	77	6	1 21	11 8.34	+27 22.7	0.999						

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
142989 2002 VK₉₀										530938 2011 XE									
11 22	10 1.97	+18 11.6	2.558	2.796	20.7	21.5	93 W	63	41*	11 22	12 1.77	-19 22.4	1.113	0.950	56.5	21.5	53 W	23*	43*
12 2	10 7.40	+18 28.7	2.441	2.821	20.0	21.4	102 W	63	44*	11 27	12 26.11	-21 40.5	1.090	0.915	58.2	21.4	52 W	21*	42*
12 12	10 10.59	+19 0.8	2.329	2.846	18.7	21.3	112 W	64	45*	12 2	12 52.57	-23 50.3	1.071	0.878	59.8	21.3	50 W	19*	41*
12 22	10 11.30	+19 48.8	2.224	2.869	16.9	21.1	122 W	65	44	12 7	13 21.33	-25 46.8	1.057	0.838	61.4	21.2	48 W	16*	40*
1 1	10 9.35	+20 52.1	2.134	2.892	14.5	21.0	133 W	66	43	12 12	13 52.51	-27 24.3	1.048	0.795	62.8	21.1	46 W	14*	38*
1 11	10 4.68	+22 8.0	2.061	2.914	11.5	20.8	144 W	67	42	12 17	14 26.06	-28 36.4	1.045	0.749	64.0	21.0	43 W	13*	36*
1 21	9 57.51	+23 31.3	2.013	2.935	8.1	20.6	155 W	69	40	12 22	15 1.81	-29 17.0	1.051	0.701	64.8	20.9	40 W	11*	33*
										12 27	15 39.37	-29 20.9	1.064	0.651	64.8	20.8	37 W	10*	30*
										1 1	16 18.22	-28 45.0	1.086	0.601	63.9	20.6	33 W	9*	26*
										1 6	16 57.84	-27 28.4	1.118	0.550	61.6	20.4	29 W	8*	22*
										1 11	17 37.79	-25 33.5	1.159	0.503	57.3	20.2	26 W	7*	18*
										1 13	17 53.81	-24 37.9	1.178	0.486	55.0	20.1	24 W	7*	17*
										1 15	18 9.82	-23 37.5	1.197	0.470	52.4	20.0	22 W	6*	15*
										1 17	18 25.83	-22 32.8	1.218	0.456	49.3	19.9	21 W	6*	13*
										1 19	18 41.82	-21 24.3	1.239	0.444	45.9	19.7	19 W	6*	11*
										1 21	18 57.78	-20 12.8	1.261	0.434	42.2	19.6	17 W	5*	9*
173561 2000 YV₁₃₇										67522 2000 RB₇₉									
11 22	10 6.50	-2 41.9	1.327	1.585	38.4	21.5	85 W	42	59*	11 22	12 9.65	+0 5.8	2.738	2.358	20.7	21.5	57 W	41*	33*
11 27	10 12.69	-2 36.2	1.289	1.604	37.9	21.4	89 W	42	61*	12 2	12 25.10	-1 22.6	2.594	2.326	22.3	21.4	63 W	42*	39*
12 2	10 18.27	-2 24.2	1.249	1.623	37.4	21.3	92 W	43	62*	12 12	12 40.27	-2 46.9	2.444	2.293	23.7	21.3	70 W	42*	45*
12 7	10 23.18	-2 5.1	1.208	1.641	36.6	21.3	96 W	43	64*	12 22	12 55.07	-4 5.9	2.290	2.259	25.0	21.1	76 W	41	51*
12 12	10 27.36	-1 37.7	1.167	1.658	35.7	21.2	101 W	43	65*	1 1	13 9.40	+5 18.2	2.133	2.225	26.0	21.0	82 W	40	58*
12 17	10 30.74	-1 0.8	1.125	1.675	34.6	21.1	105 W	44	65*	1 11	13 23.08	-6 22.1	1.976	2.189	26.7	20.8	89 W	39	64*
12 22	10 33.25	-0 13.5	1.083	1.691	33.2	21.0	110 W	45	64	1 21	13 35.90	-7 16.2	1.820	2.153	27.0	20.6	96 W	38	70*
12 27	10 34.82	-0 45.7	1.042	1.707	31.5	20.9	115 W	46	63										
1 1	10 35.36	+1 58.0	1.002	1.722	29.5	20.8	120 W	47	62										
1 6	10 34.78	+3 24.3	0.965	1.737	27.2	20.6	126 W	48	61										
1 11	10 33.02	+5 5.5	0.930	1.751	24.5	20.5	132 W	50	59										
1 16	10 30.05	+7 1.3	0.900	1.764	21.5	20.4	139 W	52	57										
1 21	10 25.87	+9 11.1	0.875	1.777	18.2	20.2	146 W	54	55										
103173 1999 XS₂₃₃										303933 2005 VQ									
11 22	10 10.77	+10 36.8	2.719	2.872	20.1	21.5	89 W	56	47*	11 22	12 12.70	+18 28.9	1.071	1.118	53.6	21.4	66 W	57*	22*
12 2	10 16.37	+10 13.0	2.587	2.885	19.8	21.4	97 W	55	51*	11 27	12 36.75	+16 25.6	1.032	1.078	55.7	21.3	64 W	55*	22*
12 12	10 19.99	+10 1.0	2.457	2.897	19.0	21.2	107 W	55	54*	12 2	13 1.66	+14 5.5	0.999	1.036	57.9	21.2	63 W	53*	22*
12 22	10 21.41	+10 2.5	2.333	2.909	17.6	21.1	117 W	55	54	12 7	13 27.37	+11 28.4	0.972	0.993	60.2	21.1	61 W	51*	23*
1 1	10 20.41	+10 18.9	2.219	2.919	15.6	20.9	127 W	55	54	12 12	13 53.81	+8 34.9	0.951	0.949	62.4	21.0	59 W	48*	23*
1 11	10 16.90	+10 50.6	2.120	2.928	12.9	20.7	138 W	56	53	12 17	14 20.91	+5 26.7	0.939	0.904	64.5	20.9	56 W	45*	24*
1 21	10 10.99	+11 36.3	2.043	2.937	9.6	20.5	150 W	57	52	12 22	14 48.61	+2 6.6	0.934	0.859	66.4	20.9	53 W	41*	24*
164725 1998 QF₉₈										163373 2002 PZ₃₉									
11 22	10 20.90	+4 58.8	3.159	3.216	17.8	21.5	84 W	50	50*	11 22	12 29.38	-2 55.3	1.289	1.029	48.9	21.3	52 W	36*	30*
12 2	10 25.66	+4 33.6	3.036	3.245	17.7	21.4	93 W	50	55*	11 27	12 53.38	-5 35.5	1.257	0.983	50.5	21.2	50 W	34*	30*
12 12	10 28.65	+4 19.1	2.914	3.273	17.1	21.3	103 W	49	59*	12 2	13 18.74	-8 19.1	1.233	0.937	51.9	21.1	48 W	31*	30*
12 22	10 29.71	+4 17.0	2.797	3.300	16.0	21.2	112 W	49	60	12 7	13 45.48	-11 2.7	1.216	0.892	53.0	21.0	46 W	28*	30*
1 1	10 28.71	+4 28.7	2.688	3.326	14.4	21.1	123 W	49	60	12 12	14 13.61	-13 42.2	1.209	0.849	53.8	20.9	44 W	26*	29*
1 11	10 25.61	+4 55.2	2.594	3.351	12.2	20.9	134 W	50	59	12 17	14 43.08	-16 12.7	1.210	0.807	54.0	20.8	42 W	23*	28*
1 21	10 20.53	+5 36.1	2.519	3.376	9.5	20.8	145 W	51	58	12 22	15 13.76	-18 29.5	1.220	0.769	53.6	20.7	39 W	20*	27*
172451 2003 QV₇₉										99935 2002 AV₄									
11 22	10 35.41	+19 24.8	2.217	2.371	24.6	21.4	86 W	64	37*	11 22	12 38.54	+0 49.4	3.128	2.625	17.1	21.5	51 W	38*	26*
12 2	10 47.30	+18 53.7	2.063	2.342	24.8	21.3	94 W	64	40*	12 2	12 49.95	-0 27.9	2.982	2.601	18.8	21.4	58 W	41*	33*
12 12	10 57.72	+18 33.8	1.910	2.313	24.7	21.1	101 W	64	43*	12 12	13 0.80	-1 40.6	2.825	2.574	20.3	21.3	65 W	42*	40*
12 22	11 6.36	+18 27.5	1.762	2.283	24.0	20.8	109 W	63	45*	12 22	13 10.93	-2 47.7	2.658	2.545	21.7	21.2	73 W	42*	47*
1 1	11 12.82	+18 37.2	1.620	2.252	22.7	20.6	118 W	64	45	1 1	13 20.17	-3 48.6	2.483	2.512	22.7	21.1	80 W	41	55*
1 11	11 16.62	+19 4.8	1.488	2.221	20.8	20.3	127 W	64	45	1 11	13 28.23	-4 42.1	2.303	2.477	23.4	20.9	88 W	40	62*
1 21	11 17.30	+19 50.2	1.369	2.189	18.1	20.0	136 W	65	44	1 21	13 34.82	-5 27.3	2.121	2.439	23.6	20.7	97 W	40	68*
285944 2001 RZ₁₁										168710 2000 HE₄₁									
11 22	10 46.58	+67 3.6	2.299	2.699	20.9	21.5	103 W	68*	-	11 22	12 39.89	+3 32.1	2.961	2.481	18.3	21.5	52 W	41*	25*
11 27	10 46.48	+67 55.7	2.275	2.720	20.4	21.5	106 W	67	-	12 2	12 55.00	+2 21.3	2.831	2.461	19.9	21.4	58 W	43*	30*
12 2	10 44.49	+68 51.7	2.252	2.741	19.9	21.4	109 W	66	-	12 12	13 9.76	+1 17.3	2.694	2.439	21.4	21.3	65 W	45*	36*
12 7	10 40.26	+69 50.7	2.232	2.761	19.3	21.4	112 W	65	-	12 22	13 24.05	+0 21.3	2.552	2.417	22.6	21.2	71 W	45*	43*
12 12	10 33.42	+70 50.8	2.215	2.781	18.7	21.4	115 W	64	-	1 1	13 37.74	-0 25.4	2.404	2.394	23.7	21.1	78 W	45	49*
12 17	10 23.55	+71 50.0	2.202	2.800	18.1	21.4	118 W	63	-	1 11	13 50.65	-1 1.2	2.254	2.370	24.4	21.0	84 W	44	56*
12 22	10 10.28	+72 45.3	2.192	2.819	17.5	21.4	120 W	62	-	1 21	14 2.56	-1 24.7	2.103	2.346	24.8	20.8	92 W	44	61*
12 27	9 53.35	+73 33.6	2.186	2.838	17.0	21.4	122 W	61	-										
1 1	9 32.80	+74 10.9	2.185	2.856	16.5	21.4	124 W	61	-										
1 6	9 9.18	+74 33.3	2.189	2.874	16.2	21.4	126 W	60	-										
1 11	8 43.69	+74 37.8	2.199	2.892	15.9	21.4	126 W	60	-										
1 16	8 17.92	+74 22.6	2.214	2.909	15.8	21.4	127 W	61	-										
1 21	7 53.55	+73 48.1	2.235	2.926	15.8	21.4	126 E	61	-										
97725 2000 GB₁₄₇										182263 2001 HQ₈									
11 22	11 2.88	+12 29.8	1.156	1.350	45.6	21.4	78 W	57*	38*	11 22	12 47.61	+0 1.4	2.844	2.316	18.7	21.5	49 W	37*	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
182263 2001 HQ₈										513171 2004 MD₆									
<i>(continuation)</i>																			
1 11	14 17.89	- 2 2.0	2.122	2.142	26.7	20.9	78 W	43	52*	11 22	14 4.84	-22 59.3	0.968	0.416	80.4	21.2	25 W	7*	17*
1 21	14 35.80	- 1 40.9	1.974	2.106	27.7	20.7	84 W	43	57*	11 24	14 15.43	-24 27.8	1.019	0.418	73.7	21.1	24 W	6*	17*
414903 2010 XT₄₅																			
11 22	12 47.72	-10 57.2	2.284	1.726	23.7	21.5	45 W	27*	30*	11 28	14 38.34	-26 47.6	1.119	0.435	61.3	21.0	23 W	4*	16*
12 2	13 11.88	-12 52.6	2.176	1.691	25.9	21.4	48 W	28*	34*	11 30	14 50.35	-27 40.4	1.167	0.448	55.7	21.0	22 W	3*	16*
12 12	13 36.99	-14 41.8	2.066	1.656	28.0	21.3	52 W	28*	38*	12 2	15 2.51	-28 22.9	1.213	0.463	50.5	21.0	21 W	2*	15*
12 22	14 3.21	-16 21.9	1.953	1.619	30.2	21.2	56 W	27*	42*	12 4	15 14.71	-28 56.2	1.258	0.481	45.9	21.1	21 W	1*	14*
1 1	14 30.71	-17 49.9	1.839	1.581	32.3	21.1	59 W	26*	47*	12 6	15 26.83	-29 21.1	1.300	0.501	41.8	21.1	20 W	1*	14*
1 11	14 59.59	-19 2.0	1.726	1.543	34.4	21.0	63 W	25*	51*	12 8	15 38.80	-29 38.7	1.341	0.522	38.2	21.2	19 W	—	13*
1 21	15 29.97	-19 53.8	1.615	1.504	36.6	20.8	66 W	25*	55*	12 10	15 50.56	-29 49.8	1.380	0.544	35.0	21.2	18 W	—	12*
154007 2002 BY																			
11 22	12 55.10	- 7 28.3	1.973	1.438	28.5	21.4	44 W	29*	27*	12 12	16 2.05	-29 55.2	1.417	0.567	32.2	21.3	18 W	—	12*
12 2	13 26.15	-10 27.8	1.887	1.394	30.5	21.3	46 W	28*	29*	12 14	16 13.25	-29 55.6	1.452	0.590	29.8	21.4	17 W	—	11*
12 12	13 59.00	-13 22.1	1.806	1.353	32.5	21.2	48 W	27*	32*	12 16	16 24.15	-29 51.6	1.486	0.614	27.6	21.4	17 W	—	11*
12 22	14 33.80	-16 5.2	1.733	1.315	34.3	21.1	49 W	26*	35*	408982 2002 SP									
1 1	15 10.64	-18 30.5	1.668	1.280	36.0	21.0	50 W	24*	38*	11 22	14 28.21	- 9 1.0	0.949	0.381	84.4	21.3	23 W	15*	6*
1 11	15 49.38	-20 30.5	1.612	1.250	37.6	20.9	51 W	22*	40*	11 24	14 37.25	-11 24.2	0.999	0.369	77.4	21.1	21 W	14*	7*
1 21	16 29.71	-21 58.1	1.566	1.225	38.9	20.9	51 W	20*	42*	11 26	14 47.16	-13 44.7	1.050	0.363	70.1	21.0	20 W	12*	8*
438096 2005 CX₂₃																			
11 22	13 5.42	+ 3 55.9	2.110	1.607	26.7	21.5	47 W	38*	19*	11 28	14 57.93	-16 0.8	1.100	0.362	62.5	20.8	19 W	10*	8*
12 2	13 34.03	+ 3 16.9	2.014	1.578	28.7	21.4	50 W	40*	21*	11 30	15 9.52	-18 10.6	1.148	0.366	55.2	20.7	18 W	8*	8*
12 12	14 3.65	+ 2 47.7	1.920	1.551	30.7	21.3	53 W	42*	24*	12 2	15 21.80	-20 12.2	1.195	0.375	48.3	20.7	17 W	6*	8*
12 22	14 34.27	+ 2 30.4	1.831	1.525	32.5	21.2	56 W	43*	27*	12 4	15 34.63	-22 4.2	1.239	0.389	42.1	20.7	15 W	4*	7*
1 1	15 5.81	+ 2 26.9	1.747	1.500	34.2	21.1	59 W	44*	30*	12 6	15 47.86	-23 45.7	1.282	0.407	36.6	20.7	14 W	2*	7*
1 11	15 38.10	+ 2 38.9	1.671	1.477	35.7	21.0	61 W	45*	33*	12 8	16 1.33	-25 16.4	1.322	0.428	31.9	20.7	13 W	1*	7*
1 21	16 10.90	+ 3 6.9	1.603	1.456	37.1	20.9	63 W	45*	36*	12 10	16 14.92	-26 36.3	1.360	0.451	28.0	20.8	12 W	—	6*
513472 2009 CS₅																			
11 22	13 53.80	-23 29.8	1.590	0.841	32.3	21.4	27 W	8*	20*	12 12	16 28.52	-27 45.7	1.396	0.475	24.8	20.9	12 W	—	6*
11 27	14 22.21	-26 30.8	1.546	0.779	32.9	21.2	25 W	5*	19*	12 14	16 42.04	-28 45.2	1.430	0.501	22.2	20.9	11 W	—	5*
12 2	14 54.27	-29 16.0	1.510	0.718	32.8	21.0	23 W	2*	17*	12 16	16 55.41	-29 35.3	1.463	0.528	20.1	21.0	11 W	—	5*
12 7	15 30.21	-31 32.7	1.484	0.660	31.7	20.7	21 W	—	15*	12 18	17 8.58	-30 16.9	1.495	0.555	18.4	21.1	10 W	—	4*
12 12	16 9.86	-33 6.0	1.466	0.607	29.5	20.4	18 W	—	12*	12 20	17 21.50	-30 50.5	1.525	0.582	17.0	21.2	10 W	—	3*
12 14	16 26.60	-33 27.6	1.462	0.587	28.2	20.3	16 W	—	10*	12 22	17 34.15	-31 17.0	1.555	0.609	15.9	21.3	10 W	—	3*
12 16	16 43.73	-33 38.9	1.459	0.569	26.7	20.2	15 W	—	9*	12 24	17 46.51	-31 36.8	1.584	0.636	14.9	21.4	10 W	—	2*
12 18	17 1.13	-33 39.3	1.458	0.553	24.9	20.1	14 W	—	7*	308242 2005 GO₂₁									
12 20	17 18.70	-33 28.1	1.457	0.539	22.9	20.0	12 W	—	5*	11 22	14 30.93	-10 50.8	0.569	0.500	134.8	20.0	21 W	13*	7*
12 22	17 36.29	-33 5.2	1.458	0.527	20.8	19.9	11 W	—	3*	11 24	14 25.56	-12 55.3	0.588	0.504	129.1	19.5	23 W	14*	10*
12 24	17 53.79	-32 30.4	1.460	0.517	18.7	19.7	10 W	—	2*	11 26	14 21.61	-14 57.5	0.611	0.510	123.2	19.1	26 W	14*	14*
12 26	18 11.06	-31 44.2	1.462	0.511	16.5	19.7	8 W	—	—	11 28	14 19.06	-16 55.9	0.635	0.517	117.5	18.7	28 W	14*	17*
12 28	18 27.99	-30 47.0	1.465	0.507	14.7	19.6	7 E	—	—	11 30	14 17.85	-18 49.1	0.662	0.525	111.9	18.5	30 W	14*	19*
12 30	18 44.47	-29 39.8	1.469	0.506	13.2	19.5	7 E	—	—	12 2	14 17.89	-20 36.7	0.689	0.534	106.7	18.3	31 W	14*	22*
1 1	19 0.43	-28 23.4	1.473	0.508	12.5	19.5	6 E	—	—	12 4	14 19.07	-22 18.3	0.717	0.545	101.8	18.2	33 W	13*	24*
1 3	19 15.82	-26 59.2	1.478	0.513	12.6	19.5	7 E	—	—	12 6	14 21.27	-23 53.8	0.746	0.556	97.3	18.1	34 W	13*	26*
1 5	19 30.60	-25 28.4	1.483	0.521	13.4	19.6	7 E	—	—	12 8	14 24.36	-25 23.2	0.775	0.568	93.1	18.0	35 W	12*	27*
1 7	19 44.77	-23 52.1	1.488	0.532	14.7	19.7	8 E	—	—	12 10	14 28.25	-26 46.8	0.804	0.581	89.2	18.0	36 W	11*	28*
1 9	19 58.32	-22 11.7	1.495	0.545	16.3	19.8	9 E	—	—	12 12	14 32.82	-28 4.7	0.832	0.594	85.6	18.0	37 W	11*	30*
1 11	20 11.29	-20 28.1	1.501	0.560	18.0	20.0	10 E	2*	2*	12 14	14 37.99	-29 17.2	0.860	0.607	82.3	18.0	38 W	10*	31*
1 13	20 23.70	-18 42.4	1.508	0.577	19.5	20.1	11 E	3*	2*	12 16	14 43.68	-30 24.6	0.887	0.621	79.3	18.0	38 W	9*	31*
1 15	20 35.59	-16 55.5	1.516	0.596	21.0	20.2	13 E	5*	2*	12 18	14 49.83	-31 27.0	0.913	0.635	76.0	18.0	39 W	8*	32*
1 17	20 46.99	-15 8.1	1.525	0.616	22.4	20.3	14 E	7*	2*	12 20	14 56.36	-32 24.6	0.939	0.649	74.0	18.0	39 W	8*	33*
1 19	20 57.95	-13 20.8	1.535	0.637	23.5	20.5	15 E	8*	2*	12 22	15 3.23	-33 17.8	0.963	0.664	71.7	18.0	40 W	7*	33*
1 21	21 8.49	-11 34.1	1.545	0.659	24.5	20.6	16 E	9*	2*	12 27	15 21.58	-35 12.2	1.021	0.699	66.7	18.1	41 W	6*	35*
154993 2005 EA₉₄																			
11 22	14 4.22	-16 8.5	0.552	0.543	128.9	20.8	25 W	13*	15*	12 27	15 21.58	-35 12.2	1.021	0.699	66.7	18.1	41 W	6*	35*
11 24	14 0.13	-14 40.2	0.573	0.557	121.8	20.3	29 W	16*	17*	1 1	15 41.14	-36 42.3	1.072	0.734	62.7	18.2	42 W	4*	36*
11 26	13 57.40	-13 22.3	0.596	0.573	115.2	20.0	32 W	19*	18*	1 6	16 1.49	-37 50.4	1.117	0.768	59.5	18.3	42 W	3*	36*
11 28	13 55.83	-12 14.7	0.619	0.591	109.2	19.7	34 W	21*	20*	1 11	16 22.28	-38 38.3	1.156	0.800	56.9	18.4	43 W	2*	37*
11 30	13 55.26	-11 16.5	0.643	0.610	103.8	19.6	37 W	24*	21*	1 16	16 43.25	-39 7.8	1.189	0.830	54.9	18.5	44 W	2*	38*
12 2	13 55.50	-10 26.9	0.666	0.631	98.9	19.5	39 W	25*	23*	1 21	17 4.22	-39 20.1	1.217	0.859	53.3	18.5	44 W	1*	38*
12 4	13 56.39	- 9 44.7	0.690	0.652	94.5	19.4	41 W	27*	24*	415949 2001 XY₁₀									
12 6	13 57.82	- 9 8.8	0.712	0.675	90.5	19.4	43 W	29*	25*	11 22	14 55.44	- 0 52.1	1.711	0.894	25.9	21.4	23 W	17*	—
12 8	13 59.67	- 8 38.3	0.734	0.698	86.9	19.4	45 W	30*	27*	12 2	15 38.09	- 5 45.3	1.665	0.822	25.2	21.1	21 W	15*	—
12 10	14 1.84	- 8 12.4	0.755	0.722	83.6	19.4	47 W	31*	28*	12 12	16 24.51	-10 53.4	1.626	0.745	23.1	20.8	17 W	11*	—
12 12	14 4.27	- 7 50.2	0.775	0.746	80.6	19.4	48 W	32*	29*	12 22	17 15.99	-16 3.9	1.592	0.669	18.9	20.4	13 W	6*	—
12 17	14 11.06	- 7 7.2	0.821	0.807	74.4	19.5	52 W	34*	32*	12 27	17 44.14	-18 33.0	1.577	0.633	15.8	20.2	10 W	3*	—
12 22	14 18.39	- 6 36.1	0.860	0.869	69.4	19.6	56 W	36*	35*	1 1	18 14.16	-20 52.1	1.562	0.600	12.1				

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
413907 2006 WO₂₉ (continuation)										310435 2000 AV₁₅₆									
1 11	18 37.13	-14 57.0	3.299	2.356	5.8	21.1	14 W	7*	1*	11 22	17 31.04	-23 19.2	3.176	2.307	9.9	21.5	24 E	7*	17*
1 21	18 57.04	-15 22.5	3.228	2.314	7.7	21.1	18 W	9*	8*	12 2	17 51.91	-23 43.9	3.183	2.269	7.9	21.4	18 E	4*	11*
277530 2005 XM₆₆										343223 2009 WD₈₂									
11 22	17 10.48	-21 49.8	3.290	2.378	7.8	21.4	19 E	5*	12*	12 2	18 13.58	-23 57.9	3.178	2.231	5.8	21.2	13 E	2*	6*
12 2	17 29.48	-22 59.0	3.294	2.345	5.5	21.3	13 E	2*	6*	12 22	18 35.93	-24 0.4	3.162	2.192	3.7	21.1	8 E	—	1*
12 12	17 49.33	-23 59.7	3.284	2.312	3.3	21.1	8 E	—	1*	1 1	18 58.89	-23 50.5	3.135	2.154	1.6	20.9	3 E	—	—
12 22	18 9.96	-24 51.3	3.261	2.279	1.1	20.9	3 E	—	—	1 11	19 22.36	-23 27.6	3.098	2.116	1.0	20.7	2 W	—	—
1 1	18 31.33	-25 33.5	3.224	2.244	1.7	20.9	4 W	—	—	1 21	19 46.22	-22 51.4	3.053	2.078	3.1	20.8	6 W	—	—
1 11	18 53.38	-26 6.1	3.175	2.209	4.0	21.0	9 W	—	3*	246911 1998 QY₉₆									
1 21	19 16.07	-26 28.6	3.115	2.174	6.4	21.0	14 W	—	8*	11 22	17 37.76	-25 53.3	2.628	1.788	13.8	21.4	26 E	5*	19*
319421 2006 HR₇₇										12 2	18 5.86	-25 46.3	2.644	1.766	11.9	21.4	22 E	5*	15*
11 22	17 11.62	-22 23.2	2.532	1.632	11.5	21.5	19 E	5*	12*	12 12	18 34.43	-25 20.0	2.655	1.746	10.1	21.3	18 E	4*	11*
12 2	17 41.95	-22 48.7	2.545	1.621	9.7	21.4	16 E	4*	9*	12 22	19 3.25	-24 33.7	2.662	1.727	8.2	21.2	14 E	2*	7*
12 12	18 12.75	-22 52.2	2.556	1.613	7.9	21.3	13 E	3*	5*	1 1	19 32.12	-23 27.2	2.666	1.711	6.3	21.1	11 E	1*	4*
12 22	18 43.75	-22 32.9	2.566	1.607	6.1	21.3	10 E	1*	2*	1 11	20 0.84	-22 1.0	2.666	1.696	4.4	21.0	8 E	—	1*
1 1	19 14.70	-21 51.0	2.574	1.603	4.3	21.2	7 E	—	—	1 21	20 29.25	-20 16.1	2.663	1.683	2.5	20.8	4 E	—	—
1 11	19 45.35	-20 47.1	2.582	1.602	2.5	21.1	4 E	—	—	189263 2005 CA									
1 21	20 15.50	-19 23.0	2.588	1.604	0.7	20.9	1 E	—	—	11 22	17 41.96	-41 38.0	4.197	3.401	8.9	21.5	32 E	—	24*
200073 2190 T-2										12 2	17 58.71	-41 4.9	4.244	3.390	7.4	21.4	26 E	—	19*
11 22	17 16.38	-18 15.7	3.053	2.156	9.3	21.4	21 E	9*	11*	12 12	18 15.60	-40 30.2	4.276	3.379	6.1	21.4	22 E	—	13*
12 2	17 38.31	-18 34.4	3.055	2.123	7.3	21.3	16 E	7*	6*	12 22	18 32.49	-39 53.3	4.290	3.367	5.1	21.3	18 E	—	8*
12 12	18 0.92	-18 41.2	3.046	2.090	5.3	21.2	11 E	4*	1*	1 1	18 49.31	-39 14.0	4.287	3.354	4.7	21.3	16 E	—	3*
12 22	18 24.11	-18 35.1	3.029	2.057	3.5	21.0	7 E	1*	—	1 11	19 5.93	-38 32.1	4.265	3.340	5.0	21.3	17 W	—	7*
1 1	18 47.80	-18 15.2	3.003	2.025	2.4	20.9	5 E	—	—	1 21	19 22.27	-37 47.9	4.227	3.325	6.0	21.3	21 W	—	12*
1 11	19 11.87	-17 41.1	2.969	1.992	2.8	20.9	6 W	—	—	528231 2008 OL₂₂									
1 21	19 36.23	-16 52.6	2.927	1.961	4.4	20.9	9 W	2*	—	11 22	17 42.93	-10 59.0	3.715	2.888	9.5	21.5	29 E	18*	14*
25872 2000 MV₁										12 2	17 57.53	-11 11.1	3.710	2.830	7.8	21.4	23 E	15*	7*
11 22	17 18.76	-19 52.4	2.399	1.519	13.4	21.5	21 E	8*	13*	12 12	18 12.87	-11 15.2	3.690	2.770	6.3	21.2	18 E	12*	—
12 2	17 50.23	-20 18.8	2.387	1.483	12.0	21.4	18 E	7*	9*	12 22	18 28.86	-11 10.5	3.653	2.709	5.1	21.1	14 E	8*	—
12 12	18 22.84	-20 22.0	2.374	1.452	10.6	21.3	16 E	6*	4*	1 1	18 45.46	-10 56.4	3.600	2.646	4.5	21.0	12 E	3*	—
12 22	18 56.30	-20 0.0	2.362	1.424	9.3	21.2	13 E	5*	4*	1 11	19 2.60	-10 32.4	3.532	2.583	4.9	20.9	13 W	7*	—
1 1	19 30.34	-19 11.7	2.350	1.400	8.0	21.0	11 E	4*	1*	1 21	19 20.23	-9 58.0	3.449	2.517	6.1	20.9	16 W	10*	—
1 11	20 4.62	-17 57.0	2.342	1.381	6.7	21.0	9 E	3*	—	448110 2008 NF₅									
1 21	20 38.84	-16 17.2	2.336	1.367	5.4	20.9	8 E	1*	—	11 22	17 47.89	-23 45.2	2.340	1.535	17.4	21.5	28 E	8*	20*
306805 2001 QO₆₅										12 2	18 19.96	-23 12.4	2.347	1.510	15.9	21.4	25 E	8*	17*
11 22	17 22.16	-1 3.8	4.220	3.396	8.2	21.5	30 E	23*	5*	12 12	18 52.47	-22 14.7	2.354	1.490	14.5	21.3	22 E	9*	13*
12 2	17 35.04	-1 35.1	4.235	3.371	7.2	21.4	25 E	19*	—	12 22	19 25.08	-20 51.6	2.361	1.474	13.1	21.3	20 E	8*	10*
12 12	17 48.30	-1 57.5	4.234	3.346	6.5	21.3	23 E	15*	—	1 1	19 57.53	-19 4.1	2.370	1.462	11.7	21.2	17 E	8*	7*
12 22	18 1.82	-2 11.0	4.217	3.319	6.2	21.3	21 E	10*	—	1 11	20 29.57	-16 54.0	2.381	1.456	10.2	21.2	15 E	7*	4*
1 1	18 15.52	-2 15.3	4.183	3.292	6.4	21.3	22 W	14*	—	1 21	21 1.02	-14 24.1	2.395	1.454	8.9	21.1	13 E	6*	2*
1 11	18 29.30	-2 10.4	4.133	3.263	7.1	21.3	24 W	18*	—	366431 2001 VB₉₉									
1 21	18 43.08	-1 56.4	4.068	3.234	8.2	21.3	28 W	22*	5*	11 22	18 1.87	-21 38.2	2.600	1.824	16.1	21.5	31 E	12*	23*
223483 2003 YF₃₆										12 2	18 28.07	-21 16.2	2.619	1.796	14.4	21.4	27 E	11*	18*
11 22	17 23.52	-23 48.1	2.880	2.000	10.7	21.5	22 E	5*	15*	12 12	18 54.82	-20 37.2	2.634	1.770	12.6	21.3	23 E	10*	13*
12 2	17 47.90	-24 17.4	2.889	1.971	8.7	21.4	18 E	3*	11*	12 22	19 21.94	-19 40.7	2.643	1.746	10.8	21.2	19 E	9*	9*
12 12	18 13.05	-24 32.2	2.889	1.943	6.6	21.2	13 E	1*	6*	1 1	19 49.28	-18 26.3	2.649	1.723	8.9	21.1	16 E	7*	5*
12 22	18 38.84	-24 31.4	2.881	1.915	4.6	21.1	9 E	—	2*	1 11	20 16.71	-16 54.5	2.650	1.703	7.1	21.0	12 E	5*	2*
1 1	19 5.14	-24 14.2	2.866	1.888	2.5	20.9	5 E	—	—	1 21	20 44.07	-15 6.1	2.649	1.685	5.4	20.9	9 E	3*	—
1 11	19 31.80	-23 40.1	2.844	1.861	1.0	20.8	2 E	—	—	206913 2004 PH₂₀									
1 21	19 58.67	-22 48.9	2.815	1.835	2.2	20.8	4 W	—	—	11 22	18 14.46	-20 35.1	3.402	2.640	12.0	21.5	34 E	14*	25*
303226 2004 NY₃₀										12 2	18 30.85	-21 17.3	3.432	2.598	10.1	21.4	28 E	11*	19*
11 22	17 26.27	-15 22.5	4.803	3.917	5.8	21.4	23 E	12*	12*	12 12	18 48.12	-21 51.1	3.447	2.555	8.1	21.3	21 E	8*	12*
12 2	17 37.60	-15 51.9	4.818	3.883	4.2	21.3	17 E	9*	5*	12 22	19 6.17	-22 16.3	3.447	2.511	5.9	21.2	15 E	5*	7*
12 12	17 49.35	-16 16.5	4.813	3.849	2.6	21.2	10 E	4*	—	1 1	19 24.94	-22 32.9	3.432	2.467	3.7	21.0	9 E	1*	2*
12 22	18 1.41	-16 36.2	4.789	3.814	1.8	21.1	7 E	—	—	1 11	19 44.34	-22 40.8	3.402	2.422	1.5	20.8	4 E	—	—
1 1	18 13.70	-16 50.9	4.744	3.778	2.5	21.1	10 W	3*	—	1 21	20 4.32	-22 40.1	3.358	2.376	1.3	20.7	3 W	—	—
1 11	18 26.10	-17 0.7	4.680	3.742	4.0	21.2	15 W	7*	5*	402064 2003 TW₆									
1 21	18 38.53	-17 5.8	4.598	3.705	5.7	21.2	22 W	10*	12*	11 22	18 19.96	-16 10.2	3.204	2.472	13.5	21.5	36 E	19*	25*
189062 2000 VA₄₅										12 2	18 37.52	-16 42.5	3.241	2.437	11.7	21.4	30 E	16*	18*
11 22	17 27.48	-30 19.4	2.099	1.266	18.7	21.5	24 E	—	18*	12 12	18 55.84	-17 4.5	3.265	2.401	9.7	21.3	24 E	13*	12*
11 27	17 47.49	-30 37.7	2.089	1.250	18.5	21.4	24 E	—	18*	12 22	19 14.82	-17 16.1	3.276	2.364	7.6	21.2	19 E	10*	7*
12 2	18 7.97	-30 45.2	2.080	1.235	18.3	21.4	23 E	1*	17*	1 1	19 34.39	-17 17.2	3.274	2.327	5.5	21.1	13 E	6*	1*
12 7	18 28.83	-30 41.1	2.071	1.222	18														

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°										
276297 2002 TZ₉₆										425450 2010 EV₄₅																			
11 22	18 43.04	-26 45.8	2.296	1.667	22.5	21.5	40 E	12*	33*	12 2	5 49.41	+14 12.1	1.528	2.479	7.8	22.9	160 W	59	50	12 2	5 36.36	+14 14.9	1.488	2.464	4.0	22.7	170 W	59	50
12 2	19 12.53	-26 24.3	2.329	1.647	21.0	21.4	37 E	11*	29*	12 12	5 22.50	+14 25.1	1.478	2.447	5.1	22.7	167 E	59	50	12 22	5 9.36	+14 42.9	1.497	2.429	9.5	22.9	156 E	60	49
12 12	19 42.52	-25 40.1	2.359	1.629	19.4	21.4	33 E	11*	25*	1 11	4 58.36	+15 8.0	1.544	2.409	13.9	23.1	144 E	60	49	1 1	5 49.41	+14 12.1	1.528	2.479	7.8	22.9	160 W	59	50
12 22	20 12.71	-24 32.9	2.386	1.614	17.9	21.4	30 E	11*	22*	12 12	5 44.40	+54 37.7	3.113	3.955	8.4	23.2	144 W	81	10	12 12	5 36.36	+14 14.9	1.488	2.464	4.0	22.7	170 W	59	50
1 1	20 42.85	-23 3.5	2.412	1.602	16.3	21.3	27 E	11*	18*	12 22	5 22.50	+14 25.1	1.478	2.447	5.1	22.7	167 E	59	50	1 1	5 9.36	+14 42.9	1.497	2.429	9.5	22.9	156 E	60	49
1 11	21 12.73	-21 13.4	2.437	1.592	14.7	21.3	24 E	10*	15*	12 2	5 51.35	+54 28.9	3.113	3.955	8.4	23.2	144 W	81	10	12 12	5 44.40	+54 37.7	3.085	3.945	7.9	23.2	147 W	80	9
1 21	21 42.17	-19 4.8	2.461	1.586	13.1	21.2	21 E	9*	13*	12 7	5 37.11	+54 40.7	3.063	3.934	7.6	23.1	148 W	80	9	12 17	5 29.66	+54 37.7	3.048	3.922	7.5	23.1	149 E	80	9
497117 2004 FU₄										230118 2001 DB₃																			
11 22	19 35.53	-38 15.2	1.657	1.301	36.6	21.5	52 E	5*	46*	12 2	5 51.35	+54 28.9	3.113	3.955	8.4	23.2	144 W	81	10	12 12	5 44.40	+54 37.7	3.085	3.945	7.9	23.2	147 W	80	9
11 27	19 52.83	-36 51.7	1.662	1.281	36.4	21.4	50 E	6*	44*	12 7	5 44.40	+54 37.7	3.085	3.945	7.9	23.2	147 W	80	9	12 17	5 29.66	+54 37.7	3.048	3.922	7.5	23.1	149 E	80	9
12 2	20 9.94	-35 19.5	1.665	1.261	36.2	21.4	49 E	7*	43*	12 22	5 22.22	+54 28.5	3.041	3.911	7.6	23.1	148 E	81	10	12 22	5 22.22	+54 28.5	3.041	3.911	7.6	23.1	148 E	81	10
12 7	20 26.82	-33 38.8	1.668	1.241	36.0	21.3	48 E	9*	41*	12 27	5 14.98	+54 13.4	3.040	3.899	8.0	23.1	147 E	81	10	1 1	5 9.36	+14 42.9	1.497	2.429	9.5	22.9	156 E	60	49
12 12	20 43.46	-31 49.7	1.669	1.220	35.8	21.3	46 E	10*	40*	1 1	5 8.11	+53 52.6	3.046	3.887	8.5	23.2	144 E	81	10	12 2	5 51.35	+54 28.9	3.113	3.955	8.4	23.2	144 W	81	10
12 17	20 59.85	-29 52.5	1.668	1.200	35.6	21.3	45 E	12*	38*	12 7	5 44.40	+54 37.7	3.085	3.945	7.9	23.2	147 W	80	9	12 12	5 44.40	+54 37.7	3.085	3.945	7.9	23.2	147 W	80	9
12 22	21 15.97	-27 47.3	1.667	1.179	35.5	21.2	44 E	14*	36*	12 17	5 29.66	+54 37.7	3.048	3.922	7.5	23.1	149 E	80	9	12 22	5 22.22	+54 28.5	3.041	3.911	7.6	23.1	148 E	81	10
12 27	21 31.84	-25 34.3	1.664	1.158	35.4	21.2	43 E	15*	34*	12 22	5 22.22	+54 28.5	3.041	3.911	7.6	23.1	148 E	81	10	12 27	5 14.98	+54 13.4	3.040	3.899	8.0	23.1	147 E	81	10
1 1	21 47.48	-23 14.0	1.660	1.137	35.3	21.1	42 E	17*	33*	1 1	5 10.35	+24 48.9	1.599	2.539	8.2	22.3	158 E	70	39	12 2	5 51.40	+23 30.3	1.608	2.563	6.9	22.3	162 W	69	40
1 6	22 2.91	-20 46.6	1.656	1.116	35.2	21.1	41 E	18*	31*	1 6	5 4.39	+24 57.3	1.623	2.534	10.5	22.4	152 E	70	39	12 7	5 44.90	+23 46.4	1.588	2.560	4.5	22.1	168 W	69	40
1 11	22 18.16	-18 12.6	1.650	1.096	35.2	21.0	40 E	20*	29*	12 12	5 38.00	+24 1.7	1.575	2.557	2.0	22.0	175 W	69	40	12 17	5 30.90	+24 15.7	1.569	2.553	0.7	21.8	178 E	69	40
1 16	22 33.26	-15 32.3	1.643	1.076	35.2	21.0	39 E	21*	27*	12 22	5 23.79	+24 28.3	1.571	2.549	3.2	22.0	172 E	69	40	12 27	5 16.88	+24 39.3	1.581	2.544	5.7	22.2	165 E	70	39
1 21	22 48.25	-12 46.2	1.636	1.056	35.2	20.9	38 E	22*	25*	1 1	5 10.35	+24 48.9	1.599	2.539	8.2	22.3	158 E	70	39	1 1	5 16.88	+24 39.3	1.581	2.544	5.7	22.2	165 E	70	39
530990 2012 BW₈₅										318050 2004 FC₃₂																			
12 2	4 27.74	+20 9.4	1.756	2.742	0.7	21.2	178 E	65	44	12 2	5 51.40	+23 30.3	1.608	2.563	6.9	22.3	162 W	69	40	1 1	5 10.35	+24 48.9	1.599	2.539	8.2	22.3	158 E	70	39
12 7	4 21.95	+19 49.4	1.748	2.727	2.9	21.4	172 E	65	44	1 6	5 4.39	+24 57.3	1.623	2.534	10.5	22.4	152 E	70	39	12 7	5 44.90	+23 46.4	1.588	2.560	4.5	22.1	168 W	69	40
12 12	4 16.28	+19 29.4	1.747	2.712	5.2	21.5	166 E	64	45	12 12	5 40.27	+24 1.9	1.557	2.538	2.2	22.3	174 W	69	40	12 17	5 33.67	+23 54.5	1.568	2.552	0.4	22.2	179 E	69	40
12 17	4 10.90	+19 9.9	1.753	2.696	7.4	21.6	159 E	64	45	12 22	5 27.23	+23 46.2	1.587	2.566	2.9	22.4	172 E	69	40	12 27	5 21.12	+23 37.1	1.614	2.579	5.3	22.6	166 E	69	40
12 22	4 5.94	+18 51.4	1.766	2.680	9.6	21.7	153 E	64	45	1 1	5 15.52	+23 27.6	1.648	2.592	7.6	22.8	160 E	68	41	1 1	5 15.52	+23 27.6	1.648	2.592	7.6	22.8	160 E	68	41
393359 1998 ME₃										396967 2005 RZ₅₁																			
12 2	5 32.80	+16 3.4	1.765	2.728	5.5	23.1	165 W	61	48	12 2	5 53.19	+24 12.8	1.556	2.510	7.3	22.6	161 W	69	40	12 7	5 46.85	+24 8.0	1.553	2.524	4.7	22.5	168 W	69	40
12 7	5 26.48	+16 2.4	1.771	2.747	3.6	23.0	170 W	61	48	12 12	5 40.27	+24 1.9	1.557	2.538	2.2	22.3	174 W	69	40	12 17	5 33.67	+23 54.5	1.568	2.552	0.4	22.2	179 E	69	40
12 12	5 20.11	+16 2.4	1.786	2.765	2.5	22.9	173 W	61	48	12 22	5 27.23	+23 46.2	1.587	2.566	2.9	22.4	172 E	69	40	12 27	5 21.12	+23 37.1	1.614	2.579	5.3	22.6	166 E	69	40
12 17	5 13.86	+16 3.4	1.808	2.784	3.3	23.0	171 E	61	48	1 1	5 15.52	+23 27.6	1.648	2.592	7.6	22.8	160 E	68	41	1 1	5 15.52	+23 27.6	1.648	2.592	7.6	22.8	160 E	68	41
12 22	5 7.88	+16 5.4	1.838	2.801	5.0	23.2	166 E	61	48	12 2	5 56.77	+17 27.3	1.617	2.564	7.7	22.8	160 W	62	47	12 7	5 51.14	+17 20.9	1.603	2.569	5.5	22.7	166 W	62	47
12 27	5 2.30	+16 8.6	1.875	2.819	6.9	23.3	160 E	61	48	12 7	5 51.14	+17 20.9	1.603	2.569	5.5	22.7	166 W	62	47	12 12	5 45.20	+17 15.4	1.597	2.575	3.4	22.6	171 W	62	47
1 1	4 57.24	+16 13.1	1.920	2.836	8.8	23.5	154 E	61	48	12 17	5 39.12	+17 10.8	1.599	2.579	2.3	22.5	174 W	62	47	12 22	5 33.09	+17 7.2	1.608	2.584	3.4	22.6	171 E	62	47
391033 2005 TR₁₅										396661 2002 OS₃₃																			
12 2	5 34.57	+19 11.2	2.001	2.965	4.9	23.4	165 W	64	45	12 2	5 56.77	+17 27.3	1.617	2.564	7.7	22.8	160 W	62	47	12 7	5 51.14	+17 20.9	1.603	2.569	5.5	22.7	166 W	62	47
12 7	5 28.72	+19 2.5	1.994	2.971	2.9	23.3	171 W	64	45	12 7	5 51.14	+17 20.9	1.603	2.569	5.5	22.7	166 W	62	47	12 12	5 45.20	+17 15.4	1.597	2.575	3.4	22.6	171 W	62	47
12 12	5 22.74	+18 54.0	1.995	2.978	1.5	23.2	176 W	64	45	12 12	5 45.20	+17 15.4	1.597	2.575	3.4	22.6	171 W	62	47	12 17	5 39.12	+17 10.8	1.599	2.579	2.3	22.5	174 W	62	47
12 17	5 16.78	+18 45.7	2.004	2.984	2.2	23.2	173 E	64	45	12 22	5 33.09	+17 7.2	1.608	2.584	3.4	22.6	171 E	62	47	12 27	5 27.27	+17 4.7	1.624	2.588	5.4	22.8	166 E	62	47
12 22	5 10.99	+18 37.9	2.021	2.990	4.1	23.4	168 E	64	45	1 1	5 21.82	+17 3.5	1.648	2.592	7.6	22.9	160 E	62	47	1 6	5 16.87	+17 3.6	1.678	2.596	9.7	23.0	154 E		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
391151 2005 YY ₉₃ (continuation)									495973 2007 TC ₁₃								
12 27	5 35.31	+39 55.9	2.699	3.642	5.1	22.5	161 E	85 24	12 2	6 34.85	+19 28.6	1.453	2.366	11.6	21.8	151 W	64 45
1 1	5 27.60	+39 39.0	2.688	3.612	6.2	22.5	157 E	85 24	12 7	6 29.67	+19 28.3	1.442	2.382	9.1	21.7	157 W	64 45
1 6	5 20.17	+39 17.7	2.684	3.582	7.4	22.6	152 E	84 25	12 12	6 23.99	+19 28.8	1.437	2.398	6.6	21.6	164 W	64 45
378810 2008 SG ₂₀₉									12 17 6 17.97 +19 29.8 1.438 2.413 4.1 21.5 170 W 64 45								
12 2	6 13.53	+17 32.7	1.590	2.522	9.2	22.3	156 W	63 46	12 22	6 11.81	+19 31.3	1.447	2.429	1.9	21.4	175 W	65 44
12 12	6 2.33	+17 29.3	1.568	2.538	4.7	22.1	168 W	62 47	12 27	6 5.69	+19 33.1	1.463	2.444	2.2	21.4	175 E	65 44
12 22	5 50.22	+17 29.8	1.574	2.554	2.5	22.0	174 E	62 47	1 1	5 59.80	+19 35.2	1.487	2.459	4.4	21.6	169 E	65 44
1 1	5 38.60	+17 34.0	1.610	2.569	6.2	22.3	164 E	63 46	1 6	5 54.32	+19 37.7	1.517	2.474	6.7	21.8	163 E	65 44
1 11	5 28.73	+17 42.1	1.675	2.582	10.4	22.5	152 E	63 46	1 11	5 49.41	+19 40.6	1.554	2.489	9.0	21.9	157 E	65 44
488515 2001 FE ₉₀									1 16 5 45.17 +19 44.0 1.598 2.503 11.1 22.1 151 E 65 44								
12 2	6 15.79	+20 16.6	1.779	2.709	8.6	24.6	156 W	65 44	1 21	5 41.68	+19 47.9	1.648	2.517	13.0	22.3	145 E	65 44
12 12	6 3.47	+20 36.8	1.710	2.682	4.1	24.3	169 W	66 43	400525 2008 SU ₂₆₆								
12 22	5 49.49	+20 57.5	1.671	2.654	1.3	24.0	177 E	66 43	12 2	6 34.94	+28 27.5	1.674	2.584	10.5	22.2	152 W	73 36
1 1	5 35.25	+21 17.0	1.665	2.623	6.0	24.3	164 E	66 43	12 7	6 29.55	+28 40.5	1.653	2.592	8.3	22.1	158 W	74 35
1 11	5 22.24	+21 34.8	1.688	2.591	10.7	24.5	151 E	67 42	12 12	6 23.60	+28 51.9	1.640	2.600	6.1	22.0	164 W	74 35
495417 2014 SO ₁₄₃									12 17 6 17.25 +29 1.1 1.634 2.607 3.9 21.9 170 W 74 35								
12 2	6 19.33	+20 44.4	1.963	2.887	8.3	24.0	155 W	66 43	12 22	6 10.69	+29 7.8	1.635	2.615	2.3	21.8	174 W	74 35
12 12	6 8.13	+20 43.8	1.939	2.908	4.1	23.8	168 W	66 43	12 27	6 4.10	+29 11.7	1.643	2.622	2.7	21.9	173 E	74 35
12 22	5 56.07	+20 42.9	1.945	2.928	1.0	23.6	177 E	66 43	1 1	5 57.69	+29 12.9	1.659	2.629	4.5	22.0	168 E	74 35
1 1	5 44.35	+20 41.3	1.983	2.947	4.7	23.9	166 E	66 43	1 6	5 51.63	+29 11.6	1.683	2.636	6.6	22.1	162 E	74 35
1 11	5 34.07	+20 39.9	2.052	2.964	8.5	24.2	153 E	66 43	1 11	5 46.11	+29 8.0	1.714	2.642	8.8	22.3	156 E	74 35
475016 2005 UO									1 16 5 41.25 +29 2.7 1.751 2.648 10.7 22.4 150 E 74 35								
12 2	6 21.17	+36 4.3	1.116	2.042	12.9	24.6	152 W	81 28	474436 2003 GF ₅₃								
12 7	6 9.72	+36 27.5	1.106	2.055	10.1	24.5	159 W	81 28	12 2	6 35.33	-11 33.0	2.500	3.272	12.3	22.1	135 W	33 76
12 12	5 57.51	+36 42.1	1.103	2.067	7.7	24.4	164 W	82 27	12 12	6 27.00	-12 25.6	2.477	3.296	11.0	22.0	140 W	33 76
12 17	5 45.00	+36 47.1	1.108	2.078	6.4	24.4	166 W	82 27	12 22	6 17.77	-12 54.2	2.478	3.320	10.2	22.0	143 W	32 77
12 22	5 32.65	+36 42.4	1.121	2.088	6.8	24.5	165 E	82 27	1 1	6 8.43	-12 57.1	2.505	3.343	10.2	22.1	143 E	32 77
12 27	5 20.88	+36 28.7	1.142	2.097	8.6	24.6	161 E	81 28	1 11	5 59.78	-12 35.4	2.558	3.365	11.0	22.2	139 E	32 77
1 1	5 10.09	+36 7.4	1.170	2.106	11.1	24.7	156 E	81 28	1 21	5 52.53	-11 52.5	2.635	3.386	12.2	22.3	133 E	33 76
1 6	5 0.55	+35 40.6	1.205	2.113	13.6	24.9	150 E	81 28	501743 2014 UM ₁₁₆								
362352 2010 MW ₈₇									12 2 6 35.84 +25 51.1 1.669 2.579 10.5 22.0 152 W 71 38								
12 2	6 24.99	+22 52.5	1.643	2.566	9.7	21.7	154 W	68 41	12 7	6 30.64	+25 48.3	1.651	2.589	8.3	21.9	158 W	71 38
12 7	6 19.63	+23 2.9	1.632	2.581	7.4	21.6	160 W	68 41	12 12	6 24.93	+25 44.4	1.638	2.599	6.0	21.8	164 W	71 38
12 12	6 13.83	+23 12.9	1.628	2.596	5.0	21.5	167 W	68 41	12 17	6 18.86	+25 39.1	1.633	2.609	3.6	21.7	170 W	71 38
12 17	6 7.76	+23 22.3	1.631	2.611	2.6	21.3	173 W	68 41	12 22	6 12.62	+25 32.3	1.636	2.618	1.3	21.5	176 W	71 38
12 22	6 1.61	+23 30.7	1.642	2.625	0.1	21.1	180 W	69 40	12 27	6 6.37	+25 24.0	1.646	2.627	1.6	21.6	176 E	70 39
12 27	5 55.54	+23 38.1	1.660	2.640	2.3	21.4	174 E	69 40	1 1	6 0.31	+25 14.3	1.663	2.636	3.8	21.8	170 E	70 39
1 1	5 49.73	+23 44.4	1.686	2.654	4.6	21.6	167 E	69 40	1 6	5 54.61	+25 3.6	1.688	2.645	6.1	21.9	163 E	70 39
1 6	5 44.33	+23 49.7	1.718	2.668	6.9	21.7	161 E	69 40	1 11	5 49.42	+24 52.1	1.720	2.654	8.3	22.1	157 E	70 39
1 11	5 39.50	+23 54.2	1.758	2.682	9.0	21.9	155 E	69 40	1 16	5 44.86	+24 40.3	1.758	2.662	10.3	22.2	151 E	70 39
1 16	5 35.32	+23 58.1	1.805	2.695	10.9	22.0	149 E	69 40	1 21	5 41.02	+24 28.6	1.803	2.670	12.2	22.3	145 E	69 40
1 21	5 31.87	+24 1.6	1.857	2.708	12.6	22.2	143 E	69 40	164216 2004 OT ₁₁								
241661 2000 JA ₇₂									12 2 6 36.01 +35 24.2 2.449 3.338 8.5 22.3 150 W 80 29								
12 2	6 29.74	+27 13.1	1.876	2.790	9.3	21.7	153 W	72 37	12 7	6 30.25	+35 24.7	2.412	3.333	7.1	22.2	155 W	80 29
12 7	6 24.54	+27 29.2	1.854	2.796	7.3	21.6	159 W	72 37	12 12	6 24.00	+35 22.2	2.383	3.328	5.6	22.1	161 W	80 29
12 12	6 18.86	+27 44.1	1.840	2.803	5.2	21.5	165 W	73 36	12 17	6 17.39	+35 16.2	2.361	3.323	4.3	22.1	165 W	80 29
12 17	6 12.83	+27 57.4	1.833	2.809	3.2	21.4	171 W	73 36	12 22	6 10.57	+35 6.7	2.348	3.317	3.5	22.0	168 W	80 29
12 22	6 6.62	+28 8.7	1.834	2.815	1.7	21.3	175 W	73 36	12 27	6 3.69	+34 53.4	2.343	3.310	3.6	22.0	168 E	80 29
12 27	6 0.39	+28 17.7	1.842	2.821	2.4	21.3	173 E	73 36	1 1	5 56.90	+34 36.5	2.346	3.304	4.6	22.0	164 E	80 29
1 1	5 54.31	+28 24.5	1.858	2.826	4.3	21.5	167 E	73 36	1 6	5 50.38	+34 16.2	2.357	3.297	6.0	22.1	160 E	79 30
1 6	5 48.55	+28 29.1	1.882	2.831	6.3	21.6	161 E	73 36	1 11	5 44.25	+33 53.2	2.376	3.289	7.5	22.2	154 E	79 30
1 11	5 43.26	+28 31.6	1.913	2.836	8.3	21.7	155 E	74 35	1 16	5 38.65	+33 27.9	2.402	3.281	9.0	22.3	148 E	78 31
1 16	5 38.55	+28 32.5	1.950	2.841	10.2	21.9	149 E	74 35	1 21	5 33.66	+33 1.0	2.436	3.273	10.5	22.4	143 E	78 31
1 21	5 34.53	+28 32.1	1.994	2.846	11.9	22.0	143 E	74 35	469634 2004 SZ ₁₉								
379156 2009 QN ₈									12 2 6 39.05 -27 18.2 0.994 1.732 28.9 21.6 122 W 18 89								
12 2	6 30.91	+ 6 41.7	1.957	2.839	10.7	21.4	148 W	52 57	12 7	6 33.17	-27 41.5	0.996	1.752	27.7	21.6	124 W	17 88
12 12	6 21.53	+ 6 23.7	1.936	2.868	7.7	21.3	157 W	51 58	12 12	6 26.68	-27 47.8	1.001	1.772	26.6	21.6	126 W	17 88
12 22	6 11.19	+ 6 20.0	1.942	2.896	5.8	21.2	163 W	51 58	12 17	6 19.84	-27 36.6	1.009	1.792	25.6	21.7	128 W	17 88
1 1	6 0.91	+ 6 30.5	1.978	2.923	6.5	21.3	160 E	52 57	12 22	6 12.89	-27 7.9	1.020	1.811	24.8	21.7	129 W	18 89
1 11	5 51.71	+ 6 54.0	2.043	2.949	8.9	21.5	152 E	52 57	12 27	6 6.12	-26 22.3	1.035	1.830	24.3	21.7	130 E	19 90
1 21	5 44.37	+ 7 27.9	2.134	2.974	11.7	21.7	142 E	52 57	1 1	5 59.74	-25 21.0	1.053	1.849	23.9	21.8	130 E	20 89
501767 2014 UA ₁₈₄									1 6 5 54.00 -24 5.6 1.076 1.868 23.7 21.8 130 E 21 88								
12 2	6 32.65	+25 12.3	1.694	2.608	10.1	22.3	152 W	70 39	1 11	5 49.05	-22 38.5	1.103	1.886	23.8	21.9	129 E	22 87
12 7	6 27.49	+25 22.4	1.676	2.617	7.9	22.2	158 W	70 39	1 16	5 45.02	-21 2.0	1.133	1.904	24.0	22.0	12	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
169675 2002 JM₉₇									351192 2004 CN₇₀								
12 2	6 46.32	+31 6.4	2.838	3.716	7.9	22.1	149 W	76 33	12 2	7 2.12	+31 52.5	1.024	1.919	17.0	21.3	145 W	77 32
12 7	6 41.80	+31 23.8	2.818	3.732	6.5	22.0	154 W	76 33	12 7	6 59.29	+32 5.6	0.985	1.906	14.6	21.1	151 W	77 32
12 12	6 36.90	+31 39.8	2.806	3.747	5.1	21.9	160 W	77 32	12 12	6 55.32	+32 17.1	0.951	1.894	12.1	20.9	156 W	77 32
12 17	6 31.71	+31 54.0	2.801	3.762	3.8	21.9	165 W	77 32	12 17	6 50.34	+32 26.0	0.922	1.881	9.5	20.7	162 W	77 32
12 22	6 26.35	+32 6.3	2.805	3.776	2.7	21.8	170 W	77 32	12 22	6 44.49	+32 31.1	0.898	1.869	7.0	20.5	167 W	78 31
12 27	6 20.92	+32 16.2	2.816	3.791	2.3	21.8	171 E	77 32	12 27	6 38.00	+32 31.6	0.880	1.857	5.2	20.4	170 W	78 31
1 1	6 15.53	+32 23.8	2.836	3.805	2.9	21.9	169 E	77 32	1 1	6 31.15	+32 26.7	0.868	1.845	5.2	20.4	170 E	77 32
1 6	6 10.29	+32 28.9	2.864	3.819	4.0	22.0	164 E	77 32	1 6	6 24.29	+32 16.0	0.863	1.833	7.2	20.4	167 E	77 32
1 11	6 5.33	+32 31.8	2.899	3.833	5.3	22.1	159 E	78 31	1 11	6 17.77	+31 59.8	0.862	1.822	9.9	20.5	161 E	77 32
1 16	6 0.73	+32 32.6	2.943	3.846	6.6	22.2	153 E	78 31	1 16	6 11.90	+31 38.6	0.868	1.810	12.9	20.6	156 E	77 32
1 21	5 56.56	+32 31.6	2.993	3.859	7.9	22.3	147 E	78 31	1 21	6 6.95	+31 13.5	0.878	1.799	15.9	20.8	150 E	76 33
509018 2005 NE₁									311116 2004 NZ₂₃								
12 2	6 48.01	+27 16.9	1.995	2.884	10.2	22.0	149 W	72 37	12 2	7 2.32	+19 7.2	1.664	2.535	12.9	21.5	145 W	64 45
12 12	6 39.54	+27 31.9	1.895	2.842	6.6	21.7	161 W	73 36	12 12	6 53.16	+19 1.6	1.618	2.553	8.7	21.3	157 W	64 45
12 22	6 28.87	+27 42.8	1.822	2.800	2.7	21.3	172 W	73 36	12 22	6 41.99	+18 59.6	1.598	2.571	4.1	21.0	169 W	64 45
1 1	6 17.00	+27 47.0	1.779	2.757	2.8	21.2	172 E	73 36	1 1	6 30.02	+19 0.0	1.607	2.588	2.0	20.9	175 E	64 45
1 11	6 5.23	+27 42.9	1.767	2.713	7.0	21.4	160 E	73 36	1 11	6 18.64	+19 1.9	1.647	2.604	6.2	21.2	163 E	64 45
1 21	5 54.90	+27 31.4	1.783	2.669	11.3	21.6	148 E	73 36	1 21	6 9.11	+19 5.2	1.714	2.620	10.4	21.5	151 E	64 45
317404 2002 PT₁₃₂									190166 2005 UP₁₅₆								
12 2	6 48.40	+20 56.6	2.131	3.016	9.9	22.5	148 W	66 43	12 2	7 2.43	+16 51.8	2.210	3.066	10.8	22.0	144 W	62 47
12 12	6 39.62	+21 5.8	2.064	3.011	6.3	22.3	161 W	66 43	12 12	6 53.20	+16 52.6	2.149	3.076	7.4	21.8	156 W	62 47
12 22	6 29.20	+21 16.2	2.026	3.005	2.3	22.0	173 W	66 43	12 22	6 42.30	+16 57.8	2.116	3.085	3.7	21.6	168 W	62 47
1 1	6 18.10	+21 26.3	2.019	2.998	2.1	22.0	174 E	66 43	1 1	6 30.63	+17 6.4	2.114	3.093	2.1	21.5	173 E	62 47
1 11	6 7.43	+21 35.1	2.042	2.990	6.1	22.2	161 E	67 42	1 11	6 19.29	+17 17.4	2.145	3.099	5.3	21.7	163 E	62 47
1 21	5 58.26	+21 42.7	2.095	2.981	9.8	22.4	149 E	67 42	1 21	6 9.29	+17 30.1	2.206	3.104	8.8	22.0	151 E	63 46
413390 2004 RG₉₆									213084 1999 TV₁₆₉								
12 2	6 49.19	+16 12.1	1.700	2.584	11.9	22.1	147 W	61 48	12 2	7 2.44	+15 47.5	1.990	2.848	11.7	21.7	144 W	61 48
12 12	6 39.66	+16 1.7	1.658	2.602	7.8	21.9	159 W	61 48	12 12	6 54.00	+15 38.6	1.938	2.864	8.1	21.5	156 W	61 48
12 22	6 28.45	+15 57.4	1.644	2.619	3.7	21.7	170 W	61 48	12 22	6 43.84	+15 35.7	1.912	2.879	4.4	21.3	167 W	61 48
1 1	6 16.78	+15 58.7	1.660	2.635	3.6	21.7	170 E	61 48	1 1	6 32.94	+15 38.3	1.917	2.894	2.7	21.2	172 E	61 48
1 11	6 5.97	+16 5.1	1.705	2.649	7.4	22.0	160 E	61 48	1 11	6 22.41	+15 45.6	1.952	2.908	5.6	21.4	163 E	61 48
1 21	5 57.14	+16 16.1	1.777	2.663	11.3	22.3	148 E	61 48	1 21	6 13.32	+15 56.8	2.016	2.920	9.2	21.7	152 E	61 48
506298 2017 ME₈									405020 2001 QX								
12 2	6 51.44	+21 56.5	1.364	2.260	13.5	21.3	148 W	67 42	12 2	7 4.76	+13 6.4	1.631	2.488	13.9	22.4	143 W	58 51
12 7	6 46.66	+22 9.3	1.351	2.277	10.9	21.2	154 W	67 42	12 7	6 56.05	+13 10.2	1.585	2.508	9.8	22.2	154 W	58 51
12 12	6 41.24	+22 22.5	1.343	2.295	8.3	21.1	160 W	67 42	12 12	6 45.30	+13 24.7	1.564	2.528	5.6	22.0	165 W	58 51
12 17	6 35.34	+22 35.7	1.343	2.312	5.6	21.0	167 W	68 41	1 1	6 33.65	+13 48.6	1.572	2.547	3.7	22.0	170 E	59 50
12 22	6 29.16	+22 48.4	1.349	2.329	2.8	20.9	173 W	68 41	1 11	6 22.47	+14 19.8	1.610	2.565	6.6	22.2	163 E	59 50
12 27	6 22.89	+23 0.2	1.363	2.346	0.1	20.7	180 W	68 41	1 21	6 13.00	+14 55.7	1.675	2.582	10.5	22.4	151 E	60 49
1 1	6 16.75	+23 11.0	1.383	2.363	2.7	21.0	174 E	68 41									
1 6	6 10.95	+23 20.6	1.411	2.380	5.3	21.2	167 E	68 41									
1 11	6 5.66	+23 29.0	1.445	2.396	7.7	21.3	161 E	68 41									
1 16	6 1.02	+23 36.4	1.486	2.413	10.0	21.5	155 E	69 40									
1 21	5 57.15	+23 42.8	1.534	2.429	12.1	21.7	149 E	69 40									
466191 2012 KL₄₅									331522 2000 QD₇₀								
12 2	6 51.76	+12 10.5	1.166	2.055	15.8	21.6	145 W	57 52	12 2	7 5.54	+ 5 26.0	1.981	2.804	13.2	21.5	139 W	50 59
12 7	6 44.86	+13 7.9	1.148	2.070	12.9	21.4	152 W	58 51	12 7	6 57.47	+ 5 17.4	1.945	2.839	10.1	21.4	150 W	50 59
12 12	6 37.12	+14 9.9	1.136	2.085	9.8	21.3	159 W	59 50	12 12	6 47.85	+ 5 24.4	1.935	2.873	7.2	21.3	159 W	50 59
12 17	6 28.73	+15 15.3	1.131	2.099	6.7	21.2	166 W	60 49	1 1	6 37.61	+ 5 46.8	1.953	2.907	5.8	21.2	163 E	51 58
12 22	6 19.97	+16 22.5	1.134	2.112	3.9	21.1	172 W	61 48	1 11	6 27.78	+ 6 22.8	2.001	2.939	7.0	21.4	159 E	51 58
12 27	6 11.09	+17 30.1	1.145	2.126	3.0	21.0	174 E	63 46	1 21	6 19.31	+ 7 9.2	2.077	2.970	9.5	21.6	150 E	52 57
1 1	6 2.39	+18 36.7	1.164	2.138	4.9	21.2	169 E	64 45									
1 6	5 54.15	+19 40.9	1.191	2.150	7.7	21.4	163 E	65 44									
1 11	5 46.62	+20 42.0	1.225	2.162	10.5	21.6	156 E	66 43									
1 16	5 39.98	+21 39.4	1.266	2.173	13.2	21.8	150 E	67 42									
1 21	5 34.37	+22 32.9	1.313	2.183	15.6	21.9	143 E	68 41									
380785 2005 VW₅									469338 2000 SF₁₃₇								
12 2	6 54.22	+17 4.7	1.590	2.471	12.8	22.0	146 W	62 47	12 2	7 7.58	+26 24.5	1.629	2.498	13.3	21.4	144 W	71 38
12 12	6 43.98	+17 7.0	1.558	2.501	8.3	21.8	159 W	62 47	12 7	7 2.99	+26 24.9	1.614	2.518	11.1	21.3	150 W	71 38
12 22	6 31.97	+17 14.9	1.553	2.529	3.8	21.6	170 W	62 47	12 12	6 57.76	+26 24.6	1.604	2.539	8.8	21.2	157 W	71 38
1 1	6 19.53	+17 26.8	1.578	2.556	3.1	21.6	172 E	62 47	12 17	6 52.05	+26 23.3	1.602	2.559	6.5	21.2	163 W	71 38
1 11	6 8.09	+17 41.5	1.633	2.581	7.2	22.0	161 E	63 46	12 22	6 46.02	+26 20.6	1.606	2.579	4.1	21.1	169 W	71 38
1 21	5 58.84	+17 58.4	1.715	2.606	11.3	22.2	149 E	63 46	12 27	6 39.85	+26 16.2	1.618	2.599	1.9	20.9	175 W	71 38
									1 1	6 33.72	+26 10.3	1.637	2.619	1.5	21.0	176 E	71 38
									1 6	6 27.81	+26 2.7	1.664	2.638	3.5	21.2	171 E	71 38
									1 11	6 22.30	+25 53.8	1.698	2.658	5.7	21.3	164 E	71 38
									1 16	6 17.33	+25 43.8	1.739	2.677	7.8	21.5	158 E	71 38
									1 21	6 12.99	+25 33.1	1.786	2.696	9.8	21.7	152 E	71 38
194268 2001 UY₄									501691 2014 TJ₇₄								
12 2	7 7.78	+14 55.6	1.713	2.567	13.5	22.2	143 W	60 49	12 2	7 7.80	+25 13.7	1.705	2.571	12.9	21.8	144 W	70 39
12 12	6 53.53	+14 58.5	1.621	2.551	9.2	21.9	156 W	60 49	12 12	6 58.67	+25 59.4	1.658	2.590	8.7	21.6	156 W	71 38
12 22	6 36.22	+15 7.6															

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°										
173689 2001 PK₉										311321 2005 NP₁ <i>(continuation)</i>																			
12 2	7 8.23	+23 32.8	1.235	2.114	15.9	21.2	144 W	69	40	1 6	6 23.82	+15 42.8	0.992	1.964	6.1	20.4	168 E	61	48	1 6	6 13.80	+13 59.7	0.992	1.947	9.7	20.6	161 E	59	50
12 12	6 58.00	+22 57.5	1.135	2.075	10.9	20.8	157 W	68	41	1 11	6 4.48	+12 19.3	0.999	1.930	13.2	20.7	153 E	57	52	1 21	5 56.11	+10 43.9	1.014	1.912	16.6	20.8	146 E	56	53
12 22	6 43.68	+22 15.6	1.059	2.035	4.9	20.4	170 W	67	42																				
1 1	6 26.62	+21 25.1	1.011	1.992	2.2	20.1	176 E	66	43																				
1 6	6 17.74	+20 56.7	0.997	1.971	5.7	20.2	169 E	66	43																				
1 11	6 9.07	+20 26.9	0.991	1.948	9.2	20.3	161 E	65	44																				
1 16	6 0.92	+19 56.5	0.991	1.925	12.7	20.5	154 E	65	44																				
1 21	5 53.56	+19 26.1	0.997	1.902	16.1	20.6	148 E	64	45																				
276888 2004 RM₃₂₃										361586 2007 RB₂₄₀																			
12 2	7 12.07	+19 41.2	2.426	3.265	10.5	22.5	143 W	65	44	12 2	7 36.78	+29 37.5	1.685	2.506	15.3	21.5	138 W	75	34	12 12	7 29.03	+30 36.1	1.631	2.529	11.4	21.3	149 W	76	33
12 12	7 4.14	+19 39.2	2.370	3.287	7.4	22.3	155 W	65	44	12 22	7 18.29	+31 31.8	1.602	2.552	7.2	21.1	161 W	77	32	1 1	7 5.65	+32 17.6	1.600	2.574	3.9	20.9	170 W	77	32
12 22	6 54.65	+19 39.6	2.342	3.307	3.9	22.1	167 W	65	44	1 11	6 52.62	+32 48.1	1.628	2.595	5.1	21.1	167 E	78	31	1 21	6 40.84	+33 1.8	1.685	2.615	8.8	21.3	156 E	78	31
1 1	6 44.39	+19 41.2	2.345	3.327	1.0	21.9	177 E	65	44																				
1 11	6 34.28	+19 43.2	2.380	3.346	3.7	22.2	167 E	65	44																				
1 21	6 25.24	+19 45.1	2.445	3.363	7.1	22.4	155 E	65	44																				
508997 2005 FL₄										279776 1999 TA₁₂₂																			
12 2	7 12.86	+41 25.8	2.370	3.198	11.2	22.1	141 W	86	23	12 2	7 40.07	+21 10.9	1.570	2.384	16.5	21.4	136 W	66	43	12 12	7 32.37	+21 21.3	1.514	2.409	12.4	21.1	148 W	66	43
12 7	7 7.85	+42 15.7	2.303	3.167	10.0	22.0	146 W	87	22	12 22	7 21.78	+21 36.0	1.482	2.433	7.5	20.9	161 W	67	42	1 1	7 9.34	+21 51.6	1.476	2.457	2.3	20.7	174 W	67	42
12 12	7 1.89	+43 4.8	2.243	3.136	8.9	21.8	150 W	88	21	1 11	6 56.54	+22 5.0	1.500	2.479	2.9	20.8	173 E	67	42	1 21	6 44.95	+22 14.3	1.554	2.500	7.8	21.1	160 E	67	42
12 17	6 55.02	+43 51.7	2.190	3.105	8.0	21.7	154 W	89	20																				
12 22	6 47.32	+44 35.4	2.145	3.073	7.3	21.6	157 W	90	19																				
12 27	6 38.91	+45 14.4	2.107	3.041	7.0	21.6	158 W	90	19																				
1 1	6 29.96	+45 47.6	2.078	3.008	7.3	21.5	157 E	89	18																				
1 6	6 20.70	+46 14.1	2.057	2.975	8.2	21.5	155 E	89	18																				
1 11	6 11.37	+46 33.4	2.043	2.941	9.4	21.5	151 E	88	17																				
1 16	6 2.23	+46 45.4	2.037	2.907	10.8	21.5	146 E	88	17																				
1 21	5 53.54	+46 50.3	2.038	2.872	12.4	21.6	141 E	88	17																				
417999 2007 TG₄₀₀										173245 1999 LY₇																			
12 2	7 16.61	+17 27.9	1.637	2.483	14.4	21.5	141 W	62	47	12 2	7 46.72	+20 30.9	2.101	2.882	14.0	21.4	135 W	66	43	12 12	7 40.92	+20 59.5	2.006	2.878	10.9	21.2	146 W	66	43
12 12	7 7.88	+17 59.1	1.596	2.515	10.1	21.3	153 W	63	46	12 22	7 32.57	+21 34.6	1.935	2.873	7.2	21.0	159 W	67	42	1 1	7 22.25	+22 13.0	1.891	2.867	3.0	20.7	171 W	67	42
12 22	6 56.91	+18 36.9	1.581	2.546	5.4	21.1	166 W	64	45	1 11	6 56.54	+22 5.0	1.500	2.479	2.9	20.8	173 E	67	42	1 21	6 59.83	+23 24.8	1.896	2.852	5.8	20.8	163 E	68	41
1 1	6 44.84	+19 18.0	1.594	2.576	1.4	20.9	176 W	64	45																				
1 11	6 33.09	+19 58.7	1.638	2.606	4.9	21.2	167 E	65	44																				
1 21	6 22.97	+20 36.7	1.711	2.634	9.2	21.5	155 E	66	43																				
388185 2006 CX₁₀										485652 2011 WO₄₁																			
12 2	7 17.91	+56 18.1	1.998	2.776	14.8	22.2	134 W	79	8	12 2	7 48.87	+16 5.3	2.186	2.952	14.1	21.3	133 W	61	48	12 12	7 43.23	+16 43.2	2.015	2.877	11.4	21.0	145 W	62	47
12 7	7 12.78	+57 24.5	1.946	2.751	14.1	22.1	137 W	78	7	12 22	7 34.51	+17 35.4	1.867	2.800	7.8	20.6	157 W	63	46	1 1	7 22.85	+18 40.6	1.748	2.721	3.6	20.2	170 W	64	45
12 12	7 6.18	+58 27.6	1.901	2.725	13.6	22.1	139 W	77	6	1 6	7 16.09	+19 17.2	1.700	2.681	1.5	20.0	176 W	64	45	1 11	7 8.89	+19 55.4	1.660	2.641	1.8	19.9	175 E	65	44
12 17	6 58.13	+59 25.4	1.861	2.699	13.2	22.0	141 W	76	5	1 16	7 1.40	+20 34.8	1.628	2.600	4.3	20.0	169 E	66	43	1 21	6 53.80	+21 14.5	1.605	2.558	6.9	20.1	162 E	66	43
12 22	6 48.73	+60 15.9	1.827	2.673	13.0	21.9	142 W	75	4																				
12 27	6 38.17	+60 57.2	1.800	2.647	13.1	21.9	142 W	74	3																				
1 1	6 26.77	+61 27.7	1.778	2.620	13.5	21.8	141 E	74	3																				
1 6	6 14.97	+61 46.3	1.763	2.593	14.2	21.8	140 E	73	2																				
1 11	6 3.26	+61 52.7	1.754	2.566	15.0	21.8	137 E	73	2																				
1 16	5 52.13	+61 47.3	1.750	2.538	16.1	21.8	134 E	73	2																				
1 21	5 42.03	+61 31.1	1.751	2.510	17.2	21.8	131 E	73	2																				
185702 1998 HK₃										382486 2001 CX₁₉																			
12 2	7 18.83	+57 23.6	1.496	2.289	18.2	21.5	133 W	78	7	12 2	7 52.07	+46 54.5	2.533	3.284	12.7	21.4	133 W	88	17	12 7	7 48.25	+47 14.8	2.477	3.271	11.8	21.3	137 W	88	17
12 7	7 11.17	+58 34.0	1.480	2.297	17.2	21.5	136 W	76	5	12 12	7 43.55	+47 32.9	2.428	3.258	10.8	21.2	142 W	87	16	12 17	7 38.04	+47 47.8	2.384	3.245	9.8	21.1	146 W	87	16
12 12	7 1.74	+59 36.0	1.470	2.305	16.3	21.4	139 W	75	4	12 22	7 31.79	+47 58.6	2.346	3.232	8.9	21.0	149 W	87	16	12 27	7 24.93	+48 4.4	2.315	3.219	8.2	20.9	152 W	87	16
12 17	6 50.75	+60 27.2	1.464	2.312	15.6	21.4	141 W	75	4	1 1	7 17.61	+48 4.2	2.291	3.205	7.7	20.9	154 W	87	16	1 6	7 10.03	+47 57.6	2.275	3.191	7.6	20.8	155 W	87	16
12 22	6 38.56	+61 5.6	1.465	2.319	15.2	21.4	142 W	74	3	1 11	7 2.40	+47 44.1	2.266	3.177	7.9	20.8	154 E	87	16	1 16	6 54.94	+47 23.9	2.264	3.163	8.6	20.9	151 E	88	17
12 27	6 25.67	+61 29.5	1.472	2.326	15.1	21.4	142 W	74	3	1 21	6 47.84	+46 57.2	2.269	3.148	9.5	20.9	148 E	88	17										
1 1	6 12.68	+61 38.4	1.484	2.332	15.4	21.4	141 E	73	2																				
1 6	6 0.21	+61 32.8	1.502	2.337	15.9	21.5	139 E	73	2																				
1 11	5 48.83	+61 13.9	1.525	2.343	16.6	21.6	137 E	74	3																				
1 16	5 38.96	+60 43.8	1.554	2.348	17.5	21.6	134 E	74	3																				
1 21	5 30.84	+60 4.9	1.587	2.352	18.4	21.7	131 E	75	4																				
451217 2009 XE₁₁										363267 2002 GS																			
12 2	7 19.16	+20 32.3	1.869	2.708	13.2	21.3	141 W	66	43	12 2	7 58.42	+52 20.1	0.940	1.748	25.4	22.1	130 W	83	12	12 7	7 50.15	+54 8.8	0.927	1.763	23.5	22.1	134 W	81	10
12 12	7 13.37	+21 22.0	1.726	2.640	9.8	20.9	153 W	66	43	12 12	7 39.16	+55 49.4	0.920	1.778	21.8	22.0	138 W	79	8	12 17	7 25.57	+57 17.1	0.917	1.792	20.3	22.0	141 W	78	7
12 22	7 4.57	+22 23.0	1.608	2.572	5.6	20.5	165 W	67	42	12 22	7 9.72	+58 26.9	0.920	1.805	19.2	22.0	143 W	77	6	12 27	6 52.32	+59 15.2	0.929	1.817	18.7	22.0	144 W	76	5
1 1	6 53.19	+23 31.8	1.519	2.502	0.8	20.0	178 W	69	40	1 1	6 34.33	+59 39.8	0.943	1.828	18.7	22.0	143 E	75	4										

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°
511002 2013 MZ₅									333707 2008 YT₃₀								
12 2	8 25.65	+16 41.2	0.668	1.475	33.2	21.5	125 W	62 47	12 2	8 40.28	+15 4.1	0.769	1.532	33.4	21.2	121 W	60 49
12 7	8 25.81	+19 45.0	0.643	1.487	30.1	21.3	131 W	65 44	12 7	8 40.91	+13 26.4	0.719	1.521	31.8	20.9	126 W	58 51
12 12	8 24.39	+23 7.8	0.621	1.500	26.7	21.2	137 W	68 41	12 12	8 40.13	+11 41.7	0.672	1.508	29.9	20.7	130 W	57 52
12 17	8 21.24	+26 46.8	0.605	1.512	23.0	21.0	143 W	72 37	12 17	8 37.79	+ 9 49.6	0.627	1.495	27.7	20.5	135 W	55 54
12 22	8 16.26	+30 36.5	0.594	1.524	19.4	20.9	149 W	76 33	12 22	8 33.75	+ 7 49.7	0.585	1.481	25.3	20.3	140 W	53 56
12 27	8 9.38	+34 29.4	0.590	1.537	16.2	20.8	154 W	79 30	12 27	8 27.88	+ 5 42.3	0.548	1.466	22.6	20.0	145 W	51 58
1 1	8 0.66	+38 16.4	0.593	1.549	13.9	20.7	158 W	83 26	1 1	8 20.10	+ 3 28.2	0.514	1.451	20.0	19.8	150 W	48 61
1 6	7 50.34	+41 48.2	0.603	1.561	13.2	20.7	159 W	87 22	1 6	8 10.42	+ 1 9.4	0.486	1.435	17.8	19.5	154 W	46 63
1 11	7 38.88	+44 56.6	0.621	1.573	14.2	20.9	157 W	90 19	1 11	7 59.04	- 1 10.8	0.463	1.418	16.6	19.4	156 W	44 65
1 16	7 26.90	+47 36.6	0.644	1.585	16.4	21.0	153 E	87 16	1 16	7 46.28	- 3 28.3	0.445	1.401	16.9	19.3	155 E	42 67
1 21	7 15.10	+49 46.5	0.674	1.597	18.9	21.2	148 E	85 14	1 21	7 32.61	- 5 38.2	0.433	1.383	19.1	19.3	153 E	39 70
468826 2012 TL₇₈									328059 2007 UB₆								
12 2	8 31.80	+11 18.2	2.269	2.914	16.7	21.5	122 W	56 53	12 2	8 49.33	+35 18.5	0.849	1.614	30.8	21.4	123 W	80 29
12 12	8 27.31	+10 35.4	2.189	2.948	14.2	21.4	133 W	56 53	12 7	8 50.81	+36 50.9	0.820	1.621	28.8	21.3	127 W	82 27
12 22	8 20.36	+10 2.1	2.129	2.981	11.2	21.2	144 W	55 54	12 12	8 50.73	+38 30.3	0.795	1.628	26.7	21.2	132 W	84 25
1 1	8 11.39	+ 9 39.0	2.092	3.013	7.8	21.1	155 W	55 54	12 17	8 48.94	+40 14.9	0.772	1.634	24.4	21.0	137 W	85 24
1 11	8 1.12	+ 9 26.3	2.083	3.045	4.7	20.9	165 W	54 55	12 22	8 45.31	+42 2.3	0.753	1.640	22.1	20.9	141 W	87 22
1 21	7 50.50	+ 9 23.0	2.106	3.075	3.7	20.9	168 E	54 55	12 27	8 39.73	+43 49.2	0.739	1.645	19.9	20.8	145 W	89 20
503892 2001 UF₁₈									368284 2002 NH₃₁								
12 2	8 33.13	+63 19.5	0.887	1.644	30.3	21.2	123 W	72 1	12 2	8 49.53	+11 40.3	1.883	2.502	20.4	21.4	118 W	57 52
12 4	8 33.41	+64 42.8	0.870	1.635	30.2	21.2	123 W	70 1	12 12	8 47.11	+11 2.3	1.801	2.533	17.7	21.2	128 W	56 53
12 6	8 33.24	+66 8.2	0.854	1.625	30.2	21.1	124 W	69 1	12 22	8 41.68	+10 36.5	1.735	2.563	14.4	21.1	139 W	56 53
12 8	8 32.51	+67 35.5	0.838	1.615	30.2	21.1	124 W	67 1	1 1	8 33.54	+10 23.8	1.688	2.593	10.6	20.9	151 W	55 54
12 10	8 31.12	+69 4.6	0.824	1.604	30.3	21.0	125 W	66 1	1 11	8 23.36	+10 23.7	1.667	2.622	6.5	20.7	163 W	55 54
12 12	8 28.90	+70 35.0	0.810	1.594	30.4	21.0	125 W	64 1	1 21	8 12.22	+10 34.4	1.674	2.650	3.5	20.6	171 W	56 53
12 13	8 27.41	+71 20.6	0.804	1.589	30.5	20.9	125 W	64 1	153305 2001 HV₆₂								
12 14	8 25.63	+72 6.4	0.798	1.583	30.6	20.9	125 W	63 1	12 2	9 10.56	+18 0.1	2.014	2.590	20.2	21.4	115 W	63 46
12 15	8 23.53	+72 52.4	0.792	1.578	30.7	20.9	125 W	62 1	12 12	9 10.26	+18 12.6	1.907	2.603	18.0	21.2	125 W	63 46
12 16	8 21.04	+73 38.4	0.786	1.572	30.9	20.9	125 W	61 1	12 22	9 6.92	+18 38.4	1.813	2.615	15.1	21.0	136 W	64 45
12 17	8 18.13	+74 24.4	0.780	1.566	31.1	20.9	125 W	61 1	1 1	9 0.55	+19 16.3	1.739	2.626	11.4	20.8	148 W	64 45
12 18	8 14.72	+75 10.3	0.775	1.561	31.2	20.8	125 W	60 1	1 11	8 51.48	+20 2.6	1.688	2.636	7.1	20.6	161 W	65 44
12 19	8 10.74	+75 55.9	0.770	1.555	31.5	20.8	124 W	59 1	1 21	8 40.52	+20 51.9	1.665	2.645	2.6	20.3	173 W	66 43
12 20	8 6.10	+76 41.3	0.765	1.549	31.7	20.8	124 W	58 1	170880 2004 PH₈₅								
12 21	8 0.70	+77 26.2	0.760	1.543	31.9	20.8	124 W	58 1	12 2	9 26.47	+11 54.3	2.020	2.526	21.6	21.4	110 W	57 52*
12 22	7 54.39	+78 10.5	0.756	1.537	32.2	20.8	124 W	57 1	12 12	9 27.56	+11 50.3	1.916	2.548	19.7	21.2	119 W	57 52
12 23	7 47.02	+78 53.9	0.751	1.531	32.5	20.8	123 W	56 1	12 22	9 25.75	+12 1.9	1.823	2.568	17.1	21.1	130 W	57 52
12 24	7 38.40	+79 36.3	0.747	1.525	32.8	20.8	123 W	55 1	1 1	9 21.00	+12 29.7	1.746	2.588	13.7	20.9	141 W	57 52
12 25	7 28.32	+80 17.4	0.744	1.519	33.1	20.8	123 W	55 1	1 11	9 13.50	+13 12.5	1.689	2.607	9.7	20.7	154 W	58 51
12 26	7 16.51	+80 56.7	0.740	1.513	33.4	20.7	122 W	54 1	1 21	9 3.87	+14 6.8	1.659	2.625	5.2	20.4	166 W	59 50
12 27	7 2.69	+81 33.9	0.737	1.506	33.8	20.7	122 W	53 1	276785 2004 KA₁								
12 28	6 46.55	+82 8.4	0.733	1.500	34.1	20.7	121 W	53 1	12 2	9 38.58	+23 26.4	1.300	1.884	29.4	21.4	110 W	68 40*
12 29	6 27.80	+82 39.6	0.730	1.494	34.5	20.7	121 E	52 1	12 12	9 45.43	+24 59.6	1.215	1.899	26.9	21.2	119 W	70 39
12 30	6 6.24	+83 6.9	0.727	1.487	34.9	20.7	120 E	52 1	12 22	9 48.46	+27 1.3	1.139	1.914	23.6	21.0	129 W	72 37
12 31	5 41.82	+83 29.3	0.725	1.481	35.4	20.7	119 E	52 1	1 1	9 47.07	+29 29.3	1.076	1.928	19.6	20.8	139 W	74 35
1 1	5 14.81	+83 46.0	0.722	1.474	35.8	20.7	119 E	51 1	1 11	9 40.86	+32 14.3	1.032	1.941	15.2	20.5	149 W	77 32
1 2	4 45.80	+83 56.5	0.720	1.467	36.2	20.7	118 E	51 1	1 21	9 30.11	+34 58.9	1.009	1.954	11.3	20.4	157 W	80 29
1 3	4 15.77	+84 0.2	0.718	1.460	36.7	20.7	117 E	51 1	316870 2000 QE₁₇₄								
1 4	3 45.91	+83 57.1	0.716	1.454	37.2	20.7	117 E	51 1	12 2	9 39.53	+15 29.0	1.709	2.217	25.1	21.4	108 W	60 48*
1 5	3 17.36	+83 47.5	0.714	1.447	37.7	20.7	116 E	51 1	12 12	9 41.96	+15 0.6	1.622	2.249	22.9	21.3	117 W	60 49
1 6	2 50.99	+83 32.0	0.712	1.440	38.1	20.7	115 E	51 1	12 22	9 41.04	+14 46.6	1.545	2.280	20.0	21.1	127 W	60 49
1 7	2 27.32	+83 11.4	0.711	1.433	38.6	20.7	115 E	52 1	1 1	9 36.65	+14 47.4	1.480	2.311	16.3	21.0	139 W	60 49
1 8	2 6.51	+82 46.7	0.710	1.426	39.2	20.7	114 E	52 1	1 11	9 28.98	+15 1.7	1.434	2.341	11.9	20.8	151 W	60 49
1 9	1 48.45	+82 18.7	0.708	1.418	39.7	20.7	113 E	53 1	1 21	9 18.71	+15 25.6	1.412	2.371	6.8	20.5	163 W	60 49
1 10	1 32.91	+81 48.0	0.707	1.411	40.2	20.7	112 E	53 1	243127 2007 RY₂₅₈								
1 11	1 19.60	+81 15.4	0.706	1.404	40.8	20.7	111 E	54 1	12 2	9 50.30	+16 42.2	2.281	2.718	20.5	21.5	106 W	62 47*
1 12	1 8.21	+80 41.3	0.705	1.396	41.3	20.7	110 E	54 1	12 12	9 53.24	+16 56.4	2.150	2.719	19.1	21.3	115 W	62 47
1 13	0 58.46	+80 6.1	0.705	1.389	41.9	20.7	110 E	55 1	12 22	9 53.62	+17 26.0	2.028	2.718	17.2	21.1	125 W	62 47
1 14	0 50.11	+79 30.2	0.704	1.381	42.4	20.7	109 E	55 1	1 1	9 51.19	+18 11.3	1.921	2.717	14.5	20.9	136 W	63 46
1 15	0 42.94	+78 53.7	0.703	1.374	43.0	20.7	108 E	56* 1	1 11	9 45.89	+19 10.7	1.832	2.715	11.1	20.7	148 W	64 45
1 16	0 36.77	+78 17.0	0.703	1.366	43.5	20.7	107 E	57* 1	1 21	9 37.97	+20 19.9	1.768	2.712	7.2	20.4	160 W	65 44
1 17	0 31.46	+77 40.1	0.703	1.358	44.1	20.7	106 E	57* 1	347558 2000 UP₁₈								
1 18	0 26.89	+77 3.1	0.702	1.350	44.7	20.7	105 E	58* 1	12 2	9 53.73	+ 9 1.0	2.360	2.743	20.6	21.5	102 W	54 54*
1 19	0 22.94	+76 26.3	0.702	1.342	45.3	20.7	104 E	58* 1	12 12	9 55.51	+ 8 21.1	2.241	2.761	19.4	21.3	112 W	53 56
1 20	0 19.53	+75 49.7	0.702	1.334	45.8	20.7	103 E	59* 1	12 22	9 54.76	+ 7 53.0	2.130	2.777	17.5	21.2	122 W	53 56
163132 2002 CU₁₁									1 1	9 51.34	+ 7 38.0	2.032	2.793	15.0	21.0	133 W	53 56
12 2	8 36.27	-49 58.1	1.231	1.580	38.6	21.5	90 W	66	1 11	9 45.28	+ 7 37.1	1.951	2.808	11.9	20.8	144 W	53 56
12 7	8 34.16	-51 5.3	1.201	1.579	38.6	21.4	92 W	65	1 21	9 36.92	+ 7 49.8	1.894	2.821	8.2	20.6	156 W	53 56
12 12	8 30.45	-52 4.4	1.														

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°										
475391 2006 HW₃₀										159542 2001 QN₂₉₄ <i>(continuation)</i>																			
12 2	9 54.67	+40 2.0	1.392	1.972	27.9	21.3	111 W	85	23*	1 11	11 1.28	+ 1 42.5	1.448	2.162	22.0	20.5	124 W	47	62	1 21	11 1.29	+ 1 12.7	1.328	2.135	19.2	20.2	134 W	46	63
12 7	10 0.93	+41 24.9	1.346	1.969	27.1	21.2	114 W	86	22*																				
12 12	10 6.49	+42 55.0	1.303	1.967	26.3	21.1	118 W	88	21*																				
12 17	10 11.23	+44 31.9	1.263	1.964	25.4	21.0	121 W	90	19																				
12 22	10 15.03	+46 15.0	1.226	1.960	24.4	20.9	125 W	89	18																				
12 27	10 17.75	+48 3.4	1.194	1.957	23.4	20.8	128 W	87	16																				
1 1	10 19.21	+49 55.6	1.165	1.953	22.5	20.8	131 W	85	14																				
1 6	10 19.25	+51 49.7	1.141	1.949	21.6	20.7	133 W	83	12																				
1 11	10 17.71	+53 43.0	1.122	1.945	21.0	20.6	135 W	81	10																				
1 16	10 14.47	+55 32.7	1.107	1.941	20.5	20.6	136 W	79	8																				
1 21	10 9.43	+57 15.6	1.097	1.936	20.3	20.5	137 W	78	7																				
220906 2005 BC₇										380818 2005 YV₁₂₈																			
12 2	10 1.60	+11 1.8	1.457	1.910	30.4	21.3	101 W	56	51*	12 2	10 58.87	-31 38.3	0.287	0.944	89.8	20.9	73 W	13	67*	12 4	10 49.86	-30 56.4	0.281	0.962	86.5	20.8	77 W	14	71*
12 12	10 13.46	+10 11.6	1.334	1.890	29.7	21.1	108 W	55	54*	12 6	10 40.70	-30 10.6	0.275	0.980	83.2	20.7	81 W	15	75*	12 8	10 31.31	-29 20.5	0.269	0.997	79.8	20.5	85 W	16	78*
12 22	10 23.17	+ 9 35.1	1.216	1.869	28.2	20.8	116 W	55	54	12 10	10 21.65	-28 25.3	0.264	1.013	76.4	20.4	89 W	17	82*	12 12	10 11.66	-27 24.4	0.258	1.029	72.9	20.3	93 W	18	87*
1 1	10 30.28	+ 9 16.9	1.106	1.850	26.0	20.5	124 W	54	55	12 14	10 1.32	-26 17.1	0.253	1.045	69.2	20.1	97 W	19	90	12 16	9 50.60	-25 2.7	0.248	1.061	65.5	20.0	101 W	20	89
1 11	10 34.25	+ 9 21.5	1.007	1.830	22.9	20.2	134 W	54	55	12 18	9 39.49	-23 40.6	0.244	1.076	61.7	19.9	106 W	21	88	12 20	9 28.00	-22 10.1	0.240	1.090	57.8	19.8	110 W	23	86
1 21	10 34.66	+ 9 52.3	0.921	1.811	18.6	19.9	144 W	55	54	12 22	9 16.16	-20 30.9	0.236	1.105	53.7	19.6	115 W	24	85	12 27	8 45.42	-15 45.3	0.231	1.139	43.2	19.4	128 W	29	80
205457 2001 QY₁₂										459386 2012 KJ₁₁																			
12 2	10 8.85	+13 35.7	2.082	2.458	23.2	21.4	100 W	59	48*	1 13	7 7.47	+ 3 25.9	0.267	1.238	15.4	19.0	160 E	48	61	1 15	6 58.49	+ 5 26.4	0.277	1.248	15.2	19.1	161 E	50	59
12 12	10 12.77	+13 6.3	1.970	2.478	22.0	21.3	109 W	58	51*	1 17	6 50.23	+ 7 19.5	0.289	1.258	15.9	19.3	159 E	52	57	1 19	6 42.69	+ 9 4.8	0.301	1.267	17.2	19.4	158 E	54	55
12 22	10 13.96	+12 50.4	1.865	2.498	20.1	21.1	119 W	58	51	1 21	6 35.85	+10 42.5	0.315	1.276	18.8	19.6	155 E	56	53	12 2	11 3.15	+33 20.8	2.029	2.344	24.7	21.4	96 W	78	26*
1 1	10 12.16	+12 49.2	1.770	2.516	17.5	21.0	130 W	58	51	12 7	11 6.16	+33 26.8	1.950	2.330	24.6	21.3	100 W	78	27*	12 12	11 8.47	+33 37.6	1.872	2.316	24.4	21.2	104 W	79	28*
1 11	10 7.27	+13 2.6	1.691	2.534	14.1	20.8	141 W	58	51	12 17	11 10.00	+33 53.4	1.794	2.301	24.0	21.1	108 W	79	29*	12 22	11 10.65	+34 14.3	1.717	2.285	23.4	21.0	113 W	79	29*
1 21	9 59.51	+13 28.7	1.633	2.551	10.0	20.5	153 W	58	51	12 27	11 10.30	+34 40.3	1.642	2.269	22.7	20.8	117 W	80	29*	1 1	11 8.81	+35 11.3	1.570	2.251	21.7	20.7	122 W	80	29
306819 2001 QM₂₃₇										173274 1999 SS₇																			
12 2	10 10.79	+16 24.5	1.562	1.998	29.0	21.4	101 W	61	46*	12 2	10 32.91	+17 32.0	2.630	2.908	19.7	21.4	96 W	63	43*	12 12	10 37.93	+17 31.3	2.477	2.896	19.2	21.3	105 W	63	45*
12 12	10 17.27	+15 58.2	1.482	2.033	27.2	21.3	109 W	61	48*	12 12	10 40.87	+17 44.2	2.329	2.882	18.1	21.1	115 W	63	46	12 22	10 40.87	+17 44.2	2.329	2.882	18.1	21.1	115 W	63	46
12 22	10 20.39	+15 49.1	1.407	2.069	24.6	21.2	119 W	61	48	1 1	10 41.43	+18 11.8	2.191	2.867	16.4	20.9	125 W	63	46	1 11	10 39.34	+18 53.8	2.067	2.851	14.0	20.7	135 W	64	45
1 1	10 19.82	+15 58.2	1.341	2.104	21.3	21.0	129 W	61	48	1 21	10 34.49	+19 48.1	1.962	2.835	11.1	20.4	146 W	65	44	1 1	10 41.43	+18 11.8	2.191	2.867	16.4	20.9	125 W	63	46
1 11	10 15.40	+16 24.7	1.288	2.139	17.1	20.8	140 W	61	48	1 11	10 39.34	+18 53.8	2.067	2.851	14.0	20.7	135 W	64	45	1 11	10 39.34	+18 53.8	2.067	2.851	14.0	20.7	135 W	64	45
1 21	10 7.40	+17 4.4	1.253	2.173	12.1	20.6	152 W	62	47	1 21	10 34.49	+19 48.1	1.962	2.835	11.1	20.4	146 W	65	44	1 21	10 34.49	+19 48.1	1.962	2.835	11.1	20.4	146 W	65	44
173274 1999 SS₇										54401 2000 LM																			
12 2	10 32.91	+17 32.0	2.630	2.908	19.7	21.4	96 W	63	43*	12 2	10 32.92	-12 18.1	1.994	2.151	27.2	21.5	85 W	33	68*	12 12	10 41.08	-14 50.1	1.871	2.144	27.3	21.3	92 W	30	75*
12 12	10 37.93	+17 31.3	2.477	2.896	19.2	21.3	105 W	63	45*	12 12	10 47.18	-17 20.0	1.749	2.136	27.1	21.2	99 W	28	81*	1 1	10 50.79	-19 44.6	1.630	2.127	26.4	21.0	106 W	25	84
12 22	10 40.87	+17 44.2	2.329	2.882	18.1	21.1	115 W	63	46	1 11	10 51.44	-21 59.0	1.517	2.116	25.2	20.8	114 W	23	86	1 11	10 51.44	-21 59.0	1.517	2.116	25.2	20.8	114 W	23	86
1 1	10 41.43	+18 11.8	2.191	2.867	16.4	20.9	125 W	63	46	1 21	10 48.72	-23 56.2	1.412	2.103	23.5	20.6	122 W	21	88	1 21	10 48.72	-23 56.2	1.412	2.103	23.5	20.6	122 W	21	88
1 11	10 39.34	+18 53.8	2.067	2.851	14.0	20.7	135 W	64	45																				
1 21	10 34.49	+19 48.1	1.962	2.835	11.1	20.4	146 W	65	44																				
54401 2000 LM										26050 3167 T-2																			
12 2	10 32.92	-12 18.1	1.994	2.151	27.2	21.5	85 W	33	68*	12 2	10 33.19	+10 27.8	2.611	2.849	20.2	21.4	94 W	55	49*	12 12	10 38.84	+10 3.8	2.452	2.832	19.9	21.2	102 W	55	53*
12 12	10 41.08	-14 50.1	1.871	2.144	27.3	21.3	92 W	30	75*	12 22	10 42.57	+ 9 51.9	2.298	2.813	19.0	21.0	112 W	55	54*	1 1	10 44.10	+ 9 54.0	2.151	2.793	17.5	20.8	121 W	55	54
12 22	10 47.18	-17 20.0	1.749	2.136	27.1	21.2	99 W	28	81*	1 11	10 43.14	+10 11.8	2.017	2.773	15.3	20.6	132 W	55	54	1 11	10 43.14	+10 11.8	2.017	2.773	15.3	20.6	132 W	55	54
1 1	10 50.79	-19 44.6	1.630	2.127	26.4	21.0	106 W	25	84	1 21	10 39.57	+10 45.3	1.900	2.751	12.4	20.3	143 W	56	53	1 21	10 39.57	+10 45.3	1.900	2.751	12.4	20.3	143 W	56	53
1 11	10 51.44	-21 59.0	1.517	2.116	25.2	20.8	114 W	23	86																				
1 21	10 48.72	-23 56.2	1.412	2.103	23.5	20.6	122 W	21	88																				
26050 3167 T-2										499672 2010 VK₁₈₈																			
12 2	10 33.19	+10 27.8	2.611	2.849	20.2	21.4	94 W	55	49*	12 2	10 34.04	+15 39.5	1.249	1.662	36.2	21.5	95 W	61	44*	12 12	10 44.54	+15 21.1	1.204	1.718	33.9	21.4	103 W	60	47*
12 12	10 38.84	+10 3.8	2.452	2.832	19.9	21.2	102 W	55	53*	12 22	10 51.24	+15 25.0	1.159	1.774	31.0	21.3	112 W	60	49*	1 1	10 53.76	+15 52.9	1.117	1.831	27.3	21.2	121 W	61	48
12 22	10 42.57	+ 9 51.9	2.298	2.813	19.0	21.0	112 W	55	54*	1 11	10 51.81	+16 44.0	1.084	1.888	22.8	21.0	132 W	62	47	1 11	10 51.81	+16 44.0	1.084	1.888	22.8	21.0	132 W	62	47
1 1	10 44.10	+ 9 54.0	2.151	2.793	17.5	20.8	121 W	55	54	1 21	10 45.49	+17 53.1	1.064	1.945	17.5	20.9	144 W	63	46	1 1	10 53.76								

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
264357 2000 AZ ₉₃ (continuation)										66400 1999 LT ₇									
1 19	13 28.04	-39 30.1	0.153	0.978	87.6	20.1	84 W	5	74*	12 2	14 37.80	-11 14.7	0.871	0.483	88.6	20.3	29 W	19*	14*
1 21	13 43.35	-43 15.4	0.149	0.973	90.0	20.1	81 W	2	71*	12 4	14 40.58	-11 6.2	0.907	0.508	83.1	20.3	31 W	20*	15*
33060 1997 VY										500094 2012 BC ₂₀									
12 2	11 58.92	-2 54.8	3.410	3.189	16.8	21.5	69 W	42*	45*	12 2	14 50.20	-5 45.1	1.846	1.100	26.2	21.4	29 W	22*	9*
12 12	12 6.44	-3 51.4	3.277	3.201	17.4	21.4	77 W	41	52*	12 12	15 31.71	-7 16.7	1.806	1.067	27.1	21.3	30 W	22*	9*
314082 Dryope										364136 2006 CJ									
12 2	12 24.13	+6 46.5	1.870	1.743	31.4	21.3	67 W	50*	34*	12 2	15 28.73	-22 45.2	1.409	0.519	28.8	20.8	15 W	3*	7*
12 12	12 50.85	+5 18.9	1.708	1.664	33.9	21.1	71 W	50*	38*	12 4	15 43.74	-23 22.4	1.382	0.479	28.1	20.5	13 W	2*	—
83992 2002 MG ₃										153002 2000 JG ₅									
12 2	12 26.04	-5 2.0	3.236	2.903	17.4	21.5	62 W	38*	40*	12 3	15 45.43	-30 10.5	0.808	0.282	121.8	20.0	14 W	—	8*
12 12	12 36.04	-6 25.2	3.089	2.888	18.6	21.4	69 W	38*	48*	12 4	15 40.83	-30 13.9	0.834	0.290	113.3	19.5	16 W	—	10*
479345 2013 WY ₆₇										249816 2001 FD ₉₀									
12 2	12 26.32	+19 11.0	0.996	1.176	53.2	21.5	73 W	62*	26*	12 2	15 53.03	-18 18.3	2.046	1.088	8.9	21.4	10 W	3*	—
12 7	12 49.72	+17 38.8	0.965	1.146	54.8	21.4	72 W	60*	26*	12 7	16 14.84	-19 1.3	2.037	1.079	8.9	21.4	10 W	3*	—
136618 1994 CN ₂										21228 1995 SC									
12 2	12 33.67	-2 22.3	2.494	2.193	23.2	21.5	61 W	40*	37*	12 2	16 13.27	-42 20.1	4.377	3.473	5.8	21.5	21 W	—	8*
12 12	12 47.40	-3 44.5	2.373	2.194	24.5	21.4	68 W	41*	44*	12 12	16 30.88	-42 45.3	4.343	3.448	6.1	21.5	22 W	—	12*
350513 2000 BG ₁₉										322966 2002 KF ₄									
12 2	13 14.51	-4 24.2	1.827	1.428	32.4	21.4	51 W	35*	29*	12 2	14 16.76	+16 56.5	2.479	2.012	22.4	21.5	51 W	45*	6*
12 7	13 31.80	-5 32.0	1.777	1.398	33.5	21.3	52 W	35*	31*	12 12	14 39.81	+14 56.0	2.351	1.941	24.2	21.3	54 W	48*	10*
417612 2006 WQ ₂₉										322966 2002 KF ₄									
12 2	13 44.21	-5 26.5	1.741	1.235	33.6	21.4	44 W	31*	23*	12 12	15 3.42	+12 55.2	2.223	1.869	26.0	21.2	56 W	49*	15*
12 7	14 2.79	-6 59.4	1.703	1.207	34.6	21.3	44 W	30*	24*	1 1	15 27.62	+10 54.0	2.097	1.798	27.9	21.0	59 W	50*	21*
49816 2001 FD ₉₀										322966 2002 KF ₄									
12 2	15 53.03	-18 18.3	2.046	1.088	8.9	21.4	10 W	3*	—	1 11	15 52.43	+8 51.8	1.972	1.728	29.9	20.9	61 W	49*	26*
12 7	16 14.84	-19 1.3	2.037	1.079	8.9	21.4	10 W	3*	—	1 21	16 17.92	+6 47.5	1.849	1.659	32.0	20.7	63 W	48*	32*

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
21228 1995 SC (continuation)										451896 2014 JN₅₄ (continuation)									
	^{h m}	^{° ' "}									^{h m}	^{° ' "}							
1 11	17 24.48	-43 46.8	4.140	3.366	9.3	21.4	34 W	—	26*	1 11	18 48.83	-31 24.1	2.878	1.932	6.6	21.2	13 W	—	6*
1 21	17 42.21	-44 2.0	4.042	3.337	10.7	21.4	39 W	—	32*	1 21	19 17.19	-31 41.7	2.817	1.897	8.6	21.2	17 W	—	10*
162698 2000 UN₃₀										277279 2005 SA₇₁									
12 2	16 26.10	-21 58.9	2.607	1.622	0.9	21.5	1 W	—	—	12 2	17 15.47	-31 8.8	2.100	1.163	11.3	21.4	13 E	—	7*
12 12	16 54.75	-23 57.7	2.534	1.556	3.1	21.5	5 W	—	—	12 7	17 36.74	-31 53.9	2.077	1.141	11.5	21.4	13 E	—	7*
12 22	17 25.84	-25 42.0	2.457	1.490	5.4	21.5	8 W	—	2*	12 12	17 58.83	-32 26.7	2.056	1.121	11.7	21.3	13 E	—	7*
1 1	17 59.54	-27 6.5	2.379	1.426	7.5	21.4	11 W	—	5*	12 17	18 21.66	-32 45.7	2.035	1.102	12.0	21.3	13 E	—	7*
1 11	18 35.91	-28 5.0	2.301	1.363	9.6	21.3	13 W	—	7*	12 22	18 45.09	-32 49.6	2.015	1.084	12.3	21.2	14 E	—	7*
1 21	19 14.81	-28 30.6	2.226	1.304	11.6	21.2	15 W	—	9*	12 27	19 8.96	-32 37.2	1.998	1.069	12.7	21.2	14 E	—	7*
495866 2004 MU₂										347375 2012 RL₁₂									
12 2	16 35.17	-23 41.2	3.600	2.615	0.7	21.5	2 E	—	—	12 2	17 23.35	-27 42.4	2.640	1.694	7.5	21.4	13 E	—	7*
12 12	16 54.13	-24 2.3	3.544	2.564	2.0	21.5	5 W	—	—	12 12	17 54.11	-27 58.2	2.629	1.668	5.8	21.3	10 E	—	4*
12 22	17 13.69	-24 15.4	3.473	2.513	4.2	21.6	11 W	—	4*	12 22	18 25.57	-27 50.3	2.616	1.644	4.3	21.2	7 E	—	1*
1 1	17 33.80	-24 19.5	3.389	2.460	6.4	21.6	16 W	3*	9*	1 1	18 57.43	-27 17.5	2.600	1.623	3.1	21.0	5 E	—	—
1 11	17 54.40	-24 13.4	3.293	2.407	8.7	21.6	22 W	6*	14*	1 11	19 29.38	-26 19.2	2.583	1.604	2.7	21.0	4 E	—	—
										1 21	20 1.11	-24 56.0	2.565	1.589	3.4	21.0	5 W	—	—
275778 2001 QD₇										344077 1998 HG₈									
12 2	16 40.68	-25 51.3	2.875	1.894	2.3	21.4	4 E	—	—	12 2	17 25.51	-20 9.1	2.673	1.724	7.1	21.4	13 E	4*	4*
12 12	17 8.00	-26 25.3	2.846	1.865	2.0	21.4	4 W	—	—	12 12	17 54.13	-20 32.5	2.668	1.703	5.3	21.3	9 E	2*	—
12 22	17 36.06	-26 41.6	2.812	1.838	3.4	21.4	6 W	—	—	12 22	18 23.31	-20 36.4	2.660	1.685	3.5	21.2	6 E	—	—
1 1	18 4.69	-26 38.7	2.773	1.812	5.3	21.4	10 W	—	4*	1 1	18 52.85	-20 20.2	2.650	1.670	2.0	21.1	3 E	—	—
1 11	18 33.69	-26 15.5	2.730	1.787	7.2	21.5	13 W	—	7*	1 11	19 22.56	-19 43.5	2.638	1.656	1.5	21.0	3 W	—	—
1 21	19 2.83	-25 31.3	2.684	1.764	9.2	21.5	17 W	—	11*	1 21	19 52.21	-18 46.8	2.624	1.646	2.8	21.1	5 W	—	—
345106 2005 OS₄										393858 2005 ST₂₂₀									
12 2	16 42.56	-20 25.7	3.010	2.026	1.4	21.4	3 E	—	—	12 2	17 26.20	-23 49.1	2.915	1.964	6.3	21.5	13 E	1*	6*
12 12	17 6.64	-21 18.9	2.977	1.994	1.4	21.4	3 W	—	—	12 12	17 51.66	-23 46.8	2.902	1.933	4.2	21.3	8 E	—	1*
12 22	17 31.50	-21 59.0	2.936	1.963	3.4	21.4	7 W	—	—	12 22	18 17.65	-23 28.6	2.883	1.903	2.1	21.1	4 E	—	—
1 1	17 57.07	-22 24.8	2.888	1.932	5.5	21.5	11 W	2*	3*	1 1	18 44.06	-22 53.6	2.856	1.873	0.1	20.9	0 W	—	—
1 11	18 23.23	-22 35.3	2.834	1.902	7.7	21.5	15 W	3*	8*	1 11	19 10.73	-22 1.1	2.824	1.844	2.2	21.0	4 W	—	—
										1 21	19 37.51	-20 50.9	2.786	1.817	4.3	21.1	8 W	—	1*
357037 2000 NU₂₃										363814 2005 ND₇									
12 2	16 45.31	-27 2.2	3.078	2.099	2.8	21.4	6 E	—	—	12 2	17 30.95	-9 26.7	2.407	1.508	12.2	21.3	19 E	13*	1*
12 12	17 9.97	-27 23.3	3.039	2.059	2.2	21.3	5 W	—	—	12 12	17 55.99	-12 32.5	2.375	1.440	9.6	21.1	14 E	8*	—
12 22	17 35.39	-27 30.3	2.991	2.018	3.4	21.3	7 W	—	1*	12 22	18 22.76	-15 28.9	2.334	1.374	6.8	20.8	10 E	3*	—
1 1	18 1.47	-27 21.6	2.935	1.977	5.3	21.4	11 W	—	5*	1 1	18 51.55	-18 15.0	2.285	1.308	3.8	20.5	5 E	—	—
1 11	18 28.07	-26 55.8	2.873	1.937	7.4	21.4	15 W	—	8*	1 11	19 22.71	-20 48.8	2.228	1.246	1.3	20.2	2 W	—	—
1 21	18 55.04	-26 11.8	2.804	1.898	9.5	21.4	19 W	1*	12*	1 21	19 56.63	-23 6.9	2.165	1.187	3.8	20.2	5 W	—	—
163902 2003 SW₂₂₂										86326 1999 WK₁₃									
12 2	16 46.73	-27 38.2	3.029	2.052	3.2	21.5	7 E	—	—	12 2	17 59.91	-33 24.0	2.642	1.771	12.3	21.4	22 E	—	16*
12 12	17 10.35	-27 42.2	3.039	2.060	2.3	21.4	5 W	—	—	12 12	18 27.33	-34 24.6	2.622	1.723	10.9	21.3	19 E	—	13*
12 22	17 33.82	-27 33.8	3.038	2.066	3.4	21.5	7 W	—	1*	12 22	18 56.62	-35 7.1	2.591	1.675	9.9	21.1	17 E	—	10*
1 1	17 57.08	-27 12.8	3.024	2.070	5.4	21.6	12 W	—	5*	1 1	19 27.72	-35 28.5	2.551	1.625	9.4	21.0	16 E	—	8*
1 11	18 20.01	-26 39.1	2.998	2.072	7.6	21.7	16 W	1*	10*	1 11	20 0.51	-35 25.1	2.504	1.576	9.4	20.9	15 E	—	7*
										1 21	20 34.74	-34 53.6	2.451	1.527	10.1	20.8	16 E	—	6*
461432 2001 WT₁₅										470004 2006 MJ₁₀									
12 2	16 49.91	-28 13.5	3.902	2.927	2.5	21.4	7 E	—	1*	12 2	18 12.01	-26 11.8	2.012	1.172	19.3	21.4	23 E	5*	16*
12 12	17 6.91	-28 3.0	3.865	2.886	1.8	21.3	5 W	—	—	12 7	18 28.41	-27 29.0	1.979	1.127	19.1	21.3	22 E	4*	15*
12 22	17 24.17	-27 46.4	3.810	2.844	3.2	21.3	9 W	—	3*	12 12	18 45.91	-28 41.3	1.943	1.082	19.0	21.2	21 E	2*	15*
1 1	17 41.61	-27 23.0	3.740	2.801	5.2	21.3	15 W	—	9*	12 17	19 4.61	-29 47.5	1.903	1.039	19.3	21.1	20 E	1*	14*
1 11	17 59.13	-26 51.8	3.653	2.757	7.3	21.3	21 W	3*	14*	12 22	19 24.59	-30 46.0	1.861	0.996	19.9	20.9	20 E	—	14*
1 21	18 16.65	-26 12.2	3.552	2.712	9.5	21.3	27 W	6*	20*	12 27	19 45.94	-31 34.7	1.816	0.956	20.9	20.8	20 E	—	14*
										1 1	20 8.72	-32 11.3	1.769	0.917	22.3	20.7	21 E	—	15*
444185 2005 SR₁										282639 2005 TC₄₆									
12 2	16 56.12	-20 59.3	2.122	1.145	4.9	21.4	6 E	—	—	12 2	18 12.77	-22 0.2	2.654	1.792	12.6	21.4	23 E	9*	15*
12 7	17 17.30	-21 30.8	2.110	1.133	4.8	21.4	6 E	—	—	12 12	18 40.08	-22 3.4	2.662	1.765	10.7	21.3	19 E	7*	11*
12 12	17 38.86	-21 52.3	2.100	1.124	4.8	21.4	5 E	—	—	12 22	19 8.00	-21 47.8	2.665	1.739	8.8	21.2	16 E	5*	7*
12 17	18 0.69	-22 3.2	2.093	1.118	4.7	21.4	5 E	—	—	1 1	19 36.36	-21 13.1	2.664	1.715	6.9	21.1	12 E	3*	4*
12 22	18 22.69	-22 3.1	2.090	1.114	4.7	21.3	5 E	—	—	1 11	20 4.98	-20 19.0	2.660	1.694	5.0	21.0	9 E	1*	1*
12 27	18 44.73	-21 51.8	2.089	1.114	4.7	21.3	5 E	—	—	1 21	20 33.67	-19 6.1	2.652	1.675	3.2	20.9	5 E	—	—
1 1	19 6.70	-21 29.5	2.091	1.116	4.7	21.3	5 E	—	—										
1 6	19 28.48	-20 56.5	2.097	1.121	4.7	21.4	5 E	—	—										
1 11	19 49.95	-20 13.4	2.105	1.130	4.6	21.4	5 E	—	—										
1 16	20 11.03	-19 21.0	2.117	1.141	4.5	21.4	5 E	—	—										
1 21	20 31.63	-18 20.3	2.131	1.154	4.4	21.4	5 E	—	—										
105208 2000 OH₄₈										242191 2003 NZ₆									
12 2	16 59.88	-23 55.0	2.884	1.908	3.4	21.4	7 E	—	1*	12 2	18 12.81	-22 1.8	1.786	0.963	23.9	21.3	23 E	9*	15*
12 12	17 26.09	-24 26.4	2.860	1.877	1.4	21.2	3 E	—	—	12 7	18 30.74	-22 36.4	1.759	0.926	23.8	21.2	22 E	8*	14*
12 22	17 53.07	-24 41.6	2.830	1.847	1.1	21.2	2 W	—	—	12 12	18 49.35	-23 4.5	1.726	0.887	24.0	21.0	21 E	7*	13*
1 1	18 20.67	-24 39.1	2.794	1.818	3.1	21.2	6 W	—	—	12 17	19 8.70	-23 25.2	1.688	0.844	24.5	20.9	21 E	7*	13*
1 11	18 48.74	-24 17.9	2.752	1.789	5.2	21.3	9 W	—	3*										
1 21	19 17.12	-23 37.3	2.706	1.761	7.3	21.3	13 W	—	7*										
451896 2014 JN₅₄																			
12 2	17 6.02	-27 42.7	3.043	2.077	4.5	21.4	10 E	—	4*										
12 12	17 29.97	-28 57.7	3.015	2.040	3.2	21.3	7 E	—	—										
12 22	17 55.11	-30 0.6	2.977	2.004	3.3</														

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
242191 2003 NZ ₆ (continuation)										457260 2008 RY ₂₄ (continuation)									
12 22	19 28.86	-23 37.7	1.644	0.798	25.3	20.8	20 E	7*	12*	1 11	22 29.60	-5 59.6	1.795	1.326	32.6	21.2	47 E	32*	26*
182323 2003 YM ₁₁₇										422686 2000 AC ₆									
12 2	18 24.68	-24 14.4	2.785	1.947	12.8	21.4	26 E	8*	18*	12 2	22 27.63	-29 52.5	0.160	0.966	92.3	20.7	78 E	15	72*
310522 2000 YS ₆₆										154783 2004 PA ₄₄									
12 2	18 25.43	-22 47.5	3.171	2.327	10.8	21.4	26 E	10*	18*	12 27	1 5.33	-0 22.3	0.241	1.051	67.3	20.9	100 E	45	63*
197594 2004 HD ₄₉										378842 2008 TD ₄									
12 2	18 49.01	-25 17.1	2.442	1.682	17.8	21.5	31 E	10*	24*	12 12	6 13.77	+7 30.5	1.971	2.912	6.9	24.0	159 W	53	56
440043 2002 QF ₂₄										407740 2011 UX ₄₀₁									
12 2	19 26.02	-26 8.6	2.416	1.773	20.8	21.5	40 E	13*	32*	12 12	6 13.93	+24 56.9	1.698	2.666	4.9	22.3	167 W	70	39
297837 2002 BX										514914 2008 TN ₂₆									
12 2	19 35.87	-22 41.4	2.671	2.052	18.9	21.5	42 E	17*	33*	12 12	6 14.53	+19 39.8	1.978	2.943	4.7	24.2	166 W	65	44
464798 2004 JX ₂₀										355256 2007 KN ₄									
12 2	20 3.86	-28 28.8	1.095	0.851	59.3	21.4	48 E	14*	41*	12 12	6 17.09	+13 37.9	4.325	5.274	3.2	23.9	163 W	59	50
6318 Cronkite										362310 2009 UM ₃									
12 2	20 12.24	-39 38.3	3.304	2.770	15.7	21.5	50 E	3*	44*	12 12	6 20.57	+6 48.0	2.590	3.520	6.1	23.3	158 W	52	57
497138 2004 RE ₁₀										434751 2006 HV ₅₇									
12 2	20 42.68	-24 15.9	2.042	1.720	28.8	21.5	57 E	20*	48*	12 12	6 21.65	+22 24.2	3.242	4.201	3.5	24.5	165 W	67	42
457260 2008 RY ₂₄										436671 2011 SV ₇₁									
12 2	20 44.74	-14 42.3	1.765	1.531	33.9	21.5	60 E	29*	46*	12 12	6 22.39	+26 41.0	3.272	4.229	3.6	23.9	165 W	72	37

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

Table of astronomical ephemerides with columns: 21/22, α2000, δ2000, Δ, r, β, V, ψ, 45°-26°, 21/22, α2000, δ2000, Δ, r, β, V, ψ, 45°-26°. Includes sections for 205744 2002 BK25, 481027 2004 XN44, 488640 2003 FR6, 469369 2001 QO146, 310737 2002 QG24, 506409 2017 SF13, 462041 2007 DL8, 363407 2003 QY1, 501567 2014 NF63, 475979 2007 PM4, 434783 2006 MT14, 528159 2008 HS3, 500026 2011 SS21, 276274 2002 SS41, 399307 1991 RJ2, 451124 2009 KC3, 477885 2011 JT9, 423100 2004 BX1, 518509 2006 FZ51, 436616 2011 LC1, 498066 2007 RM133.