

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°
432589 2010 RC ₁₀₃										261068 2005 SA ₂₀₁ (continuation)									
8 14	23 28.67	-2 48.9	1.205	2.140	13.9	21.7	149 W	42	67	9 23	23 13.12	-11 17.2	2.426	3.402	4.7	21.9	164 E	34	75
8 24	23 22.83	-3 15.9	1.121	2.101	9.2	21.3	161 W	42	67	10 3	23 5.07	-11 46.4	2.469	3.389	7.8	22.1	153 E	33	76
9 3	23 14.50	-3 58.1	1.058	2.062	3.7	20.8	172 W	41	68	11885 Summanus									
9 13	23 4.62	-4 49.9	1.019	2.024	2.4	20.6	175 E	40	69	8 14	23 45.66	-17 30.1	1.163	2.093	14.7	21.3	148 W	28	81
9 23	22 54.71	-5 42.3	1.004	1.985	8.6	20.9	163 E	39	70	8 19	23 39.65	-17 50.6	1.114	2.071	12.5	21.1	154 W	27	82
10 3	22 46.30	-6 26.4	1.012	1.948	14.5	21.1	151 E	39	70	8 24	23 32.49	-18 10.8	1.071	2.047	10.1	20.9	159 W	27	82
10 13	22 40.75	-6 54.8	1.039	1.911	19.8	21.3	140 E	38	71	8 29	23 24.23	-18 29.2	1.033	2.023	7.9	20.7	164 W	27	82
10 23	22 38.87	-7 2.8	1.081	1.875	24.3	21.5	129 E	38	71	9 3	23 15.02	-18 44.1	1.003	1.999	6.5	20.5	167 W	26	83
13551 Gadsden										9 8	23 5.09	-18 53.8	0.979	1.974	6.6	20.4	167 E	26	83
8 14	23 29.72	+0 16.2	2.337	3.240	9.6	21.4	148 W	45	64	9 13	22 54.73	-18 56.7	0.963	1.948	8.5	20.4	163 E	26	83
8 24	23 21.92	+0 18.7	2.301	3.266	6.3	21.3	159 W	45	64	9 18	22 44.30	-18 51.5	0.953	1.922	11.3	20.5	158 E	26	83
9 3	23 13.13	-1 2.1	2.292	3.292	2.8	21.1	171 W	44	65	9 23	22 34.15	-18 37.8	0.949	1.895	14.4	20.6	152 E	26	83
9 13	23 4.07	-1 50.1	2.313	3.316	1.6	21.0	175 E	43	66	9 28	22 24.59	-18 15.5	0.952	1.867	17.6	20.7	146 E	27	82
9 23	22 55.53	-2 38.0	2.364	3.340	4.8	21.3	164 E	42	67	10 3	22 15.92	-17 45.0	0.960	1.839	20.8	20.8	139 E	27	82
10 3	22 48.17	-3 21.3	2.444	3.362	8.0	21.5	152 E	42	67	10 8	22 8.37	-17 7.1	0.973	1.810	23.8	20.8	133 E	28	81
484403 2007 XF ₂₅										10 13	22 2.08	-16 22.6	0.990	1.781	26.5	20.9	127 E	29	80
8 14	23 34.28	+61 14.1	0.573	1.253	52.6	22.6	101 W	74	3	10 18	21 57.13	-15 32.7	1.010	1.750	29.1	21.0	121 E	29	80
8 19	23 24.92	+63 27.7	0.576	1.261	51.8	22.6	102 W	72	1	10 23	21 53.53	-14 38.0	1.033	1.720	31.3	21.1	116 E	30	79
8 24	23 13.00	+65 18.5	0.578	1.270	51.0	22.6	103 W	70	-	10 28	21 51.24	-13 39.5	1.057	1.689	33.4	21.2	111 E	31	78
8 29	22 58.66	+66 44.5	0.580	1.278	50.2	22.6	104 W	68	-	11 2	21 50.20	-12 37.6	1.082	1.657	35.2	21.2	106 E	32	77
9 3	22 42.43	+67 43.7	0.581	1.285	49.4	22.6	105 E	67	-	11 7	21 50.35	-11 32.6	1.107	1.624	36.7	21.3	101 E	33	76
9 8	22 25.27	+68 14.6	0.582	1.292	48.7	22.6	106 E	67	-	11 12	21 51.61	-10 24.7	1.132	1.592	38.1	21.3	97 E	35	74*
9 13	22 8.46	+68 17.4	0.582	1.299	47.9	22.6	107 E	67	-	11 17	21 53.88	-9 13.9	1.156	1.558	39.3	21.3	93 E	36	70*
9 18	21 53.25	+67 53.5	0.582	1.305	47.2	22.6	108 E	67	-	11 22	21 57.09	-8 0.4	1.178	1.524	40.4	21.4	89 E	37	67*
504090 2006 DW										11 27	22 1.15	-6 44.0	1.199	1.490	41.3	21.4	85 E	38	62*
8 14	23 39.03	-17 36.6	1.406	2.338	12.6	21.2	150 W	27	82	12 2	22 6.00	-5 24.7	1.218	1.455	42.1	21.4	82 E	40	58*
8 19	23 33.86	-17 32.9	1.353	2.311	10.6	21.0	155 W	27	82	12 7	22 11.60	-4 2.1	1.235	1.420	42.9	21.4	79 E	41	54*
8 24	23 27.80	-17 27.4	1.307	2.285	8.5	20.9	160 W	28	81	12 12	22 17.89	-2 36.2	1.249	1.385	43.5	21.4	76 E	42	50*
8 29	23 20.94	-17 19.0	1.267	2.258	6.5	20.7	165 W	28	81	12 17	22 24.84	-1 6.8	1.260	1.350	44.1	21.3	73 E	44*	46*
9 3	23 13.39	-17 6.8	1.233	2.231	5.1	20.5	169 W	28	81	12 22	22 32.40	+0 26.2	1.268	1.314	44.7	21.3	70 E	45*	42*
9 8	23 5.34	-16 49.8	1.207	2.204	5.0	20.4	169 E	28	81	12 27	22 40.57	+2 3.0	1.273	1.279	45.3	21.3	68 E	46*	38*
9 13	22 57.02	-16 27.2	1.188	2.177	6.5	20.5	166 E	29	80	1 6	22 49.33	+3 43.7	1.274	1.243	46.0	21.2	65 E	47*	35*
9 18	22 48.67	-15 58.6	1.175	2.150	8.8	20.5	161 E	29	80	1 6	22 58.71	+5 28.5	1.273	1.208	46.6	21.2	63 E	48*	31*
9 23	22 40.55	-15 23.9	1.170	2.123	11.5	20.6	155 E	30	79	1 11	23 8.69	+7 17.5	1.267	1.174	47.3	21.1	61 E	48*	28*
9 28	22 32.89	-14 43.2	1.171	2.096	14.2	20.7	149 E	30	79	1 16	23 19.31	+9 10.5	1.259	1.140	48.1	21.1	60 E	48*	25*
10 3	22 25.91	-13 57.0	1.178	2.068	16.8	20.7	143 E	31	78	1 21	23 30.60	+11 7.4	1.246	1.107	49.0	21.0	58 E	48*	23*
10 8	22 19.78	-13 5.8	1.191	2.041	19.4	20.8	137 E	32	77	333417 2003 AR ₇₂									
10 13	22 14.64	-12 10.3	1.208	2.014	21.7	20.9	132 E	33	76	8 14	23 48.58	+26 19.6	2.569	3.288	14.1	22.0	128 W	71	38
10 18	22 10.56	-11 11.2	1.229	1.987	23.9	21.0	126 E	34	75	8 24	23 40.40	+27 2.6	2.507	3.310	12.2	21.9	136 W	72	37
10 23	22 7.57	-10 8.9	1.254	1.959	25.9	21.0	121 E	35	74	9 3	23 30.72	+27 22.3	2.466	3.332	10.4	21.8	143 W	72	37
10 28	22 5.67	-9 4.1	1.281	1.932	27.6	21.1	116 E	36	73	9 13	23 20.23	+27 17.3	2.450	3.352	8.9	21.8	149 E	72	37
11 2	22 4.82	-7 57.1	1.311	1.905	29.1	21.2	111 E	37	72	9 23	23 9.82	+26 48.9	2.461	3.371	8.4	21.8	151 E	72	37
11 7	22 5.00	-6 48.0	1.341	1.878	30.4	21.2	106 E	38	71	10 3	23 0.35	+26 1.1	2.498	3.390	9.0	21.8	148 E	71	38
11 12	22 6.16	-5 37.0	1.373	1.852	31.5	21.3	102 E	39	70*	530351 2011 EE ₄₅									
11 17	22 8.22	-4 24.0	1.405	1.825	32.5	21.3	98 E	41	67*	8 14	23 52.16	-35 34.2	2.597	3.457	10.3	22.3	143 W	9	80
11 22	22 11.13	-3 9.2	1.437	1.799	33.2	21.4	94 E	42	66*	8 19	23 48.24	-36 9.2	2.573	3.452	9.6	22.3	145 W	9	80
11 27	22 14.83	-1 52.5	1.469	1.773	33.8	21.4	90 E	43	61*	8 24	23 43.82	-36 41.2	2.555	3.447	9.2	22.2	147 W	8	79
12 2	22 19.26	-0 33.8	1.499	1.748	34.3	21.4	87 E	44	57*	8 29	23 38.98	-37 9.3	2.543	3.442	8.9	22.2	148 W	8	79
12 7	22 24.38	+0 47.1	1.529	1.723	34.6	21.4	83 E	46	53*	9 3	23 33.82	-37 32.6	2.538	3.437	8.9	22.2	148 W	7	78
12 12	22 30.15	+2 10.1	1.558	1.698	34.9	21.5	80 E	47	49*	9 8	23 28.44	-37 50.4	2.539	3.432	9.1	22.2	148 W	7	78
12 17	22 36.53	+3 35.5	1.586	1.674	35.0	21.5	77 E	49	45*	9 13	23 22.96	-38 2.1	2.547	3.426	9.5	22.2	146 E	7	78
12 22	22 43.48	+5 3.1	1.612	1.650	35.1	21.5	75 E	50*	41*	9 18	23 17.51	-38 7.4	2.561	3.421	10.1	22.3	143 E	7	78
12 27	22 50.98	+6 33.1	1.636	1.628	35.1	21.5	72 E	51*	37*	9 23	23 12.22	-38 6.2	2.581	3.414	10.8	22.3	140 E	7	78
1 1	22 59.02	+8 5.4	1.659	1.605	35.0	21.5	70 E	52*	34*	9 28	23 7.20	-37 58.4	2.607	3.408	11.6	22.4	137 E	7	78
1 6	23 7.59	+9 40.1	1.680	1.584	34.9	21.5	67 E	52*	31*	10 3	23 2.54	-37 44.4	2.638	3.402	12.4	22.4	133 E	7	78
1 11	23 16.68	+11 17.1	1.699	1.564	34.8	21.5	65 E	53*	27*	10 8	22 58.34	-37 24.4	2.675	3.395	13.2	22.5	129 E	8	79
1 16	23 26.28	+12 56.2	1.717	1.544	34.6	21.4	63 E	53*	25*	532874 2013 YZ ₁₃									
1 21	23 36.40	+14 37.3	1.733	1.526	34.4	21.4	61 E	52*	22*	8 14	23 53.35	+50 19.1	1.140	1.748	33.4	22.4	108 W	85	14
472261 2014 QH ₃₆₄										8 19	23 47.15	+52 2							

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	
370212 2002 GG₁₄₈									450238 2002 XN₄₀ (<i>continuation</i>)									
8 24	0 1.55	-23 31.7	2.084	3.009	9.4	21.8	151 W	21 88	10 28	22 56.22	+39 18.3	1.286	2.072	21.5	21.5	130 E	84	25
8 29	23 56.48	-23 49.2	2.047	2.992	8.3	21.7	155 W	21 88	11 2	22 53.91	+37 53.3	1.284	2.046	22.6	21.5	127 E	83	26
9 3	23 50.91	-24 3.9	2.017	2.975	7.4	21.6	158 W	21 88	11 7	22 52.84	+36 25.4	1.286	2.019	23.9	21.5	124 E	81	28
354332 2003 AD₁									312978 1999 JG₂₉									
8 24	0 4.14	-33 50.7	1.504	2.408	13.7	21.7	146 W	11 82	8 24	0 12.58	+17 59.1	4.088	4.888	7.9	22.0	138 W	63	46
8 29	23 59.41	-35 17.5	1.496	2.407	13.2	21.7	147 W	10 81	9 3	0 7.76	+17 34.3	4.009	4.894	6.3	21.8	148 W	63	46
9 3	23 54.00	-36 38.1	1.495	2.406	13.1	21.6	147 W	8 79	9 13	0 2.21	+16 57.8	3.956	4.898	4.6	21.7	157 W	62	47
369296 2009 SU₁₉									469191 2016 GU₁₃₄									
8 24	0 4.32	+1 2.2	2.015	2.930	10.1	22.4	149 W	46 63	8 24	0 18.93	+10 5.7	1.404	2.286	15.9	21.3	142 W	55	54
9 3	23 52.81	-0 29.6	1.884	2.861	6.2	22.0	162 W	45 64	9 3	0 14.74	+8 23.8	1.308	2.254	11.7	21.0	153 W	53	56
9 13	23 38.79	-2 20.0	1.784	2.789	1.5	21.6	176 W	43 66	9 13	0 8.20	+6 7.8	1.234	2.221	6.7	20.6	165 W	51	58
280042 2002 AB									162723 2000 VM₂									
8 24	0 4.38	-45 52.8	2.523	3.342	11.7	21.6	138 W	- 70	8 24	0 19.91	+6 26.9	1.840	2.719	12.8	21.9	143 W	51	58
8 29	23 59.58	-46 31.5	2.510	3.332	11.6	21.6	138 W	- 69	9 3	0 9.75	+5 47.1	1.731	2.682	9.0	21.5	156 W	51	58
9 3	23 54.27	-47 4.4	2.502	3.322	11.7	21.6	138 W	- 69	9 13	23 57.12	+4 48.8	1.650	2.642	4.6	21.2	168 W	50	60
434084 2002 CA₁₉									397847 2008 TA₁									
8 24	0 5.44	+24 36.3	2.521	3.310	12.6	22.5	135 W	70 39	8 24	0 26.66	-15 15.4	1.097	2.021	15.9	21.4	147 W	30	79
9 3	23 59.08	+23 56.2	2.422	3.291	10.4	22.3	144 W	69 40	8 29	0 19.53	-15 55.4	1.072	2.022	13.4	21.3	152 W	29	80
9 13	23 51.42	+22 50.9	2.346	3.272	8.2	22.1	152 W	68 41	9 3	0 11.38	-16 34.4	1.053	2.023	10.9	21.1	158 W	28	81
452807 2006 KV₈₉									138859 2000 WN₆₃									
8 24	0 11.78	-10 12.2	1.497	1.463	20.0	21.6	150 W	35 74	8 24	0 31.99	-22 41.6	1.052	1.966	17.4	21.4	145 W	22	87
8 29	0 3.80	-11 29.0	0.480	1.463	15.8	21.4	157 W	34 75	8 29	0 23.86	-23 40.0	1.055	1.991	15.0	21.3	149 W	21	88
9 3	23 54.24	-12 49.2	0.467	1.461	11.7	21.2	163 W	32 77	9 3	0 14.99	-24 32.1	1.063	2.016	13.1	21.3	153 W	20	89
450238 2002 XN₄₀									216115 2006 SU₁₉									
8 24	0 12.29	+42 14.4	1.715	2.385	21.6	22.4	120 W	87 22	8 24	0 32.78	+2 13.8	1.484	2.367	15.1	22.4	142 W	47	62
8 29	0 8.66	+43 6.1	1.658	2.362	21.1	22.3	123 W	88 21	9 3	0 22.69	+0 57.9	1.394	2.347	10.5	22.0	155 W	46	63
9 3	0 4.11	+43 50.5	1.603	2.340	20.5	22.2	126 W	89 20	9 13	0 9.58	-0 37.5	1.330	2.324	5.1	21.7	168 W	44	65

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
501216 2013 UW									376955 2002 GR₃ (continuation)								
8 24	0 51.38	-17 40.0	1.758	2.621	14.1	21.4	141 W	27 82	10 8	1 11.78	+12 54.2	1.554	2.547	3.3	19.9	172 W	58 51
8 29	0 47.68	-17 51.2	1.705	2.601	12.7	21.3	145 W	27 82	10 13	1 7.12	+11 33.7	1.527	2.523	1.6	19.7	176 E	57 52
9 3	0 43.18	-18 1.4	1.658	2.582	11.2	21.2	150 W	27 82	10 18	1 2.38	+10 9.5	1.508	2.499	2.8	19.8	173 E	55 54
9 8	0 37.94	-18 9.7	1.616	2.562	9.8	21.0	154 W	27 82	10 23	0 57.73	+ 8 43.1	1.496	2.475	5.2	19.9	167 E	54 55
9 13	0 32.03	-18 14.9	1.581	2.542	8.5	20.9	158 W	27 82	10 28	0 53.30	+ 7 16.3	1.492	2.451	7.8	20.0	161 E	52 57
9 18	0 25.57	-18 16.0	1.552	2.522	7.6	20.8	160 W	27 82	11 2	0 49.23	+ 5 51.1	1.495	2.427	10.3	20.1	154 E	51 58
9 23	0 18.69	-18 12.0	1.531	2.502	7.4	20.8	161 W	27 82	11 7	0 45.65	+ 4 29.1	1.505	2.402	12.7	20.1	148 E	49 60
9 28	0 11.56	-18 2.1	1.516	2.482	7.9	20.7	160 E	27 82	11 12	0 42.66	+ 3 11.9	1.522	2.378	15.0	20.2	142 E	48 61
10 3	0 4.37	-17 45.8	1.509	2.461	9.1	20.8	157 E	27 82	11 17	0 40.35	+ 2 0.6	1.544	2.353	17.1	20.3	135 E	47 62
10 8	23 57.32	-17 22.7	1.508	2.441	10.7	20.8	153 E	28 81	11 22	0 38.76	+ 0 56.1	1.570	2.328	19.1	20.4	130 E	46 63
10 13	23 50.60	-16 52.8	1.514	2.420	12.5	20.9	148 E	28 81	12 2	0 37.84	- 0 50.8	1.635	2.277	22.4	20.5	119 E	44 65
10 18	23 44.37	-16 16.3	1.527	2.400	14.4	20.9	143 E	29 80	12 12	0 39.96	- 2 7.6	1.711	2.226	24.8	20.7	108 E	43 66
10 23	23 38.78	-15 33.6	1.545	2.379	16.3	21.0	138 E	29 80	12 22	0 44.96	- 2 56.1	1.791	2.175	26.5	20.8	99 E	42 66*
10 28	23 33.93	-14 45.5	1.569	2.358	18.1	21.1	133 E	30 79	1 1	0 52.58	- 3 19.7	1.873	2.123	27.6	20.8	91 E	42 62*
11 2	23 29.89	-13 52.5	1.597	2.337	19.7	21.2	127 E	31 78	1 11	1 2.56	- 3 21.9	1.952	2.072	28.1	20.9	83 E	42 57*
11 7	23 26.72	-12 55.2	1.630	2.316	21.2	21.2	122 E	32 77	1 21	1 14.63	- 3 6.7	2.025	2.020	28.2	20.9	76 E	42 52*
11 12	23 24.43	-11 54.3	1.665	2.295	22.5	21.3	117 E	33 76									
11 17	23 23.01	-10 50.4	1.704	2.275	23.7	21.4	113 E	34 75									
11 22	23 22.42	- 9 43.8	1.745	2.254	24.7	21.4	108 E	35 74									
11 27	23 22.65	- 8 35.1	1.788	2.233	25.5	21.5	103 E	36 73*									
477330 2009 TV₂₁									533372 2014 GG₁₇								
8 24	1 0.50	+21 49.0	1.098	1.887	25.3	21.3	127 W	67 42	8 24	1 38.47	+61 31.8	0.548	1.206	56.4	21.3	97 W	73 2
8 29	1 0.71	+21 14.2	1.052	1.883	23.6	21.2	132 W	66 43	8 26	1 48.39	+61 39.8	0.524	1.195	57.1	21.2	97 W	73 2
9 3	1 0.02	+20 27.3	1.010	1.879	21.5	21.0	137 W	65 44	8 28	1 58.98	+61 43.6	0.500	1.184	57.8	21.1	97 W	73 2
9 8	0 58.46	+19 27.3	0.972	1.874	19.1	20.9	142 W	64 45	8 30	2 10.31	+61 42.6	0.476	1.173	58.6	21.0	98 W	73 2
9 13	0 56.05	+18 13.9	0.937	1.870	16.4	20.7	148 W	63 46	9 1	2 22.42	+61 35.6	0.452	1.162	59.4	20.9	98 W	73 2
9 18	0 52.87	+16 46.9	0.908	1.865	13.5	20.5	154 W	62 47	9 3	2 35.39	+61 21.5	0.428	1.151	60.2	20.8	98 W	74 3
9 23	0 49.07	+15 7.1	0.884	1.860	10.4	20.3	161 W	60 49	9 5	2 49.24	+60 58.8	0.404	1.140	61.1	20.7	98 W	74 3
9 28	0 44.78	+13 15.9	0.865	1.855	7.1	20.2	167 W	58 51	9 7	3 4.01	+60 25.4	0.380	1.129	62.0	20.6	99 W	75 4
10 3	0 40.19	+11 15.5	0.854	1.850	4.0	20.0	173 W	56 53	9 9	3 19.71	+59 39.1	0.357	1.118	63.0	20.4	99 W	75 4
10 8	0 35.55	+ 9 9.1	0.848	1.845	3.1	19.9	174 E	54 55	9 11	3 36.32	+58 36.8	0.333	1.107	64.0	20.3	99 W	76 5
10 13	0 31.07	+ 7 0.4	0.850	1.840	5.5	20.0	170 E	52 57	9 13	3 53.80	+57 14.7	0.310	1.096	65.2	20.2	99 W	78 7
10 18	0 26.99	+ 4 53.5	0.858	1.835	8.9	20.2	164 W	50 59	9 14	4 2.84	+56 24.8	0.299	1.091	65.8	20.1	98 W	79 8
10 23	0 23.49	+ 2 51.8	0.872	1.830	12.3	20.3	157 E	48 61	9 15	4 12.06	+55 28.2	0.288	1.086	66.4	20.0	98 W	80 9
10 28	0 20.71	+ 0 58.4	0.892	1.825	15.5	20.5	151 E	46 63	9 16	4 21.44	+54 24.1	0.277	1.080	67.1	19.9	98 W	81 10
11 2	0 18.76	+ 0 44.5	0.918	1.819	18.5	20.7	144 E	44 65	9 17	4 30.96	+53 11.6	0.266	1.075	67.8	19.9	98 W	82 11
11 7	0 17.72	- 2 15.2	0.948	1.814	21.2	20.8	139 E	43 66	9 18	4 40.60	+51 49.9	0.255	1.070	68.5	19.8	98 W	83 12
11 12	0 17.61	- 3 33.1	0.983	1.809	23.6	21.0	133 E	41 68	9 19	4 50.35	+50 18.0	0.245	1.065	69.3	19.7	97 W	85 14
11 17	0 18.42	+ 4 38.2	1.021	1.803	25.8	21.1	128 W	40 69	9 20	5 0.16	+48 35.0	0.235	1.060	70.2	19.6	97 W	86 15
11 22	0 20.14	+ 5 30.7	1.062	1.798	27.6	21.2	123 E	39 70	9 21	5 10.02	+46 39.6	0.226	1.054	71.1	19.6	97 W	88 17
11 27	0 22.70	+ 6 11.4	1.105	1.792	29.1	21.4	118 E	39 70	9 22	5 19.89	+44 31.0	0.217	1.049	72.0	19.5	96 W	90 19
12 2	0 26.06	- 6 41.2	1.150	1.787	30.5	21.5	113 E	38 71	9 23	5 29.75	+42 8.1	0.208	1.044	73.1	19.4	95 W	87* 22
259691 2003 YV₂									533372 2014 GG₁₇								
8 24	1 16.83	-16 50.7	2.322	3.117	13.3	21.5	135 W	28 81	9 24	5 39.58	+39 29.9	0.200	1.039	74.2	19.4	95 W	84* 24*
9 3	1 11.45	-17 47.7	2.232	3.102	11.1	21.3	144 W	27 82	9 25	5 49.34	+36 35.9	0.193	1.034	75.3	19.3	94 W	81* 27*
9 13	1 3.77	-18 42.7	2.165	3.086	9.0	21.1	151 W	26 83	9 26	5 59.01	+33 25.5	0.186	1.029	76.6	19.3	93 W	78* 30*
9 23	0 54.28	-19 28.6	2.123	3.069	7.5	21.0	156 W	26 83	9 27	6 8.57	+29 58.9	0.180	1.024	77.9	19.3	92 W	74* 34*
10 3	0 43.68	-19 58.9	2.109	3.051	7.6	21.0	156 W	25 84	9 28	6 18.00	+26 16.9	0.175	1.020	79.4	19.2	91 W	71* 37*
10 13	0 32.92	-20 8.1	2.123	3.032	9.3	21.1	151 E	25 84	9 29	6 27.27	+22 20.7	0.171	1.015	80.8	19.2	89 W	66* 41*
10 23	0 22.99	-19 53.8	2.164	3.012	11.7	21.2	142 E	25 84	9 30	6 36.38	+18 12.6	0.168	1.010	82.3	19.2	88 W	62* 45*
11 2	0 14.71	-19 16.7	2.228	2.992	14.1	21.3	133 E	26 83	10 1	6 45.30	+13 55.6	0.166	1.005	83.9	19.3	87 W	58* 48*
11 12	0 8.64	-18 19.1	2.312	2.970	16.2	21.5	123 E	27 82	10 2	6 54.03	+ 9 33.1	0.165	1.001	85.4	19.3	85 W	53* 52*
443158 2014 CX₉									533372 2014 GG₁₇								
8 24	1 26.92	+ 8 52.4	1.417	2.184	21.6	21.4	127 W	54 55	10 3	7 2.56	+ 5 9.2	0.166	0.996	86.8	19.3	84 W	49* 55*
9 3	1 24.66	+ 9 22.6	1.312	2.165	18.4	21.1	137 W	54 55	10 4	7 10.88	+ 0 47.8	0.167	0.992	88.2	19.4	82 W	45* 59*
9 13	1 18.92	+ 9 38.4	1.224	2.146	14.3	20.8	148 W	55 54	10 5	7 18.99	- 3 27.3	0.170	0.987	89.5	19.5	81 W	40* 62*
9 23	1 9.87	+ 9 39.2	1.155	2.126	9.3	20.5	160 W	55 54	10 6	7 26.89	- 7 33.0	0.174	0.983	90.6	19.6	79 W	36* 64*
10 3	0 58.23	+ 9 25.8	1.110	2.105	3.8	20.1	172 W	54 55	10 7	7 34.57	-11 26.6	0.178	0.978	91.6	19.7	78 W	32* 66*
10 8	0 51.85	+ 9 14.8	1.096	2.095	1.7	19.9	176 E	54 55	10 8	7 42.05	-15 6.5	0.184	0.974	92.5	19.7	77 W	28* 67*
10 13	0 45.37	+ 9 1.9	1.090	2.084	3.2	20.0	173 E	54 55	10 9	7 49.31	-18 31.7	0.190	0.970	93.2	19.8	76 W	25* 68*
10 18	0 39.03	+ 8 48.1	1.090	2.073	6.1	20.1	167 E	54 55	10 10	7 56.37	-21 41.7	0.197	0.966	93.8	19.9	75 W	22* 68*
10 23	0 33.04	+ 8 34.3	1.096	2.062	9.1	20.3	161 E	54 55	10 11	8 3.23	-24 36.9	0.205	0.962	94.3	20.0	74 W	19* 68*
10 28	0 27.61	+ 8 21.6	1.109	2.051	11.9	20.4	155 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°
192952 2000 BZ₁₈										499825 2011 DB₂₂ (continuation)									
8 24	1 53.56	+13 47.2	2.199	2.837	18.1	21.4	119 W	59	50	11 27	1 3.06	+44 46.4	1.065	1.895	21.7	19.8	135 E	90	19
9 3	1 51.12	+13 54.5	2.094	2.846	15.8	21.2	130 W	59	50	12 2	0 59.00	+44 24.1	1.078	1.879	23.3	19.8	131 E	89	20
9 13	1 46.11	+13 48.1	2.005	2.854	13.0	21.0	140 W	59	50	12 7	0 56.52	+43 59.5	1.094	1.863	24.9	19.9	127 E	89	20
9 23	1 38.74	+13 27.7	1.936	2.861	9.5	20.8	152 W	58	51	12 12	0 55.62	+43 34.6	1.113	1.848	26.4	20.0	123 E	89	20
10 3	1 29.50	+12 54.3	1.892	2.867	5.6	20.6	164 W	58	51	12 17	0 56.27	+43 10.9	1.134	1.833	27.8	20.0	120 E	88	21*
10 13	1 19.18	+12 10.6	1.876	2.871	1.7	20.4	175 W	57	52	12 22	0 58.38	+42 49.6	1.157	1.818	29.1	20.1	116 E	88	21*
10 18	1 13.94	+11 46.3	1.879	2.873	1.6	20.4	175 E	57	52	12 27	1 1.89	+42 31.3	1.181	1.804	30.2	20.1	113 E	88	21*
10 23	1 8.82	+11 21.3	1.890	2.875	3.5	20.5	170 E	56	53	1 1	1 6.70	+42 16.5	1.207	1.790	31.2	20.2	109 E	87	21*
10 28	1 3.94	+10 56.5	1.908	2.876	5.5	20.6	164 E	56	53	1 6	1 12.75	+42 5.5	1.234	1.777	32.1	20.3	106 E	87	20*
11 2	0 59.41	+10 32.4	1.933	2.877	7.4	20.8	158 E	56	53	1 11	1 19.95	+41 58.3	1.261	1.764	32.9	20.3	103 E	87	19*
11 7	0 55.35	+10 9.9	1.966	2.878	9.3	20.9	152 E	55	54	1 16	1 28.22	+41 54.5	1.289	1.752	33.6	20.4	100 E	87	19*
11 12	0 51.82	+9 49.7	2.004	2.879	11.1	21.0	146 E	55	54	1 21	1 37.49	+41 53.8	1.317	1.741	34.1	20.4	97 E	87	18*
11 17	0 48.88	+9 32.1	2.049	2.879	12.7	21.1	140 E	55	54	461909 2006 QL₅₃									
11 22	0 46.56	+9 17.6	2.098	2.879	14.1	21.2	135 E	54	55	8 24	2 54.69	+21 32.1	1.561	2.044	28.8	21.5	103 W	67*	42
11 27	0 44.88	+9 6.5	2.153	2.879	15.4	21.3	129 E	54	55	9 3	2 59.81	+22 33.0	1.490	2.081	26.8	21.4	111 W	68	41
12 2	0 43.85	+8 58.8	2.211	2.878	16.5	21.4	124 E	54	55	9 13	3 1.50	+23 21.0	1.424	2.119	24.2	21.2	120 W	68	41
12 7	0 43.45	+8 54.8	2.273	2.878	17.5	21.5	119 E	54	55	9 23	2 59.49	+23 54.1	1.367	2.156	20.8	21.1	130 W	69	40
298737 2004 GQ₃₅										10 3	2 53.79	+24 9.7	1.323	2.193	16.7	20.9	141 W	69	40
8 24	1 57.22	+19 56.1	1.797	2.421	22.0	21.5	116 W	65	44	10 13	2 44.84	+24 5.2	1.297	2.230	12.0	20.7	152 W	69	40
9 3	1 56.06	+20 11.3	1.713	2.446	19.5	21.3	126 W	65	44	10 23	2 33.72	+23 40.2	1.294	2.267	7.0	20.6	164 W	69	40
9 13	1 51.87	+20 7.3	1.641	2.470	16.3	21.1	136 W	65	44	11 2	2 21.89	+22 57.7	1.317	2.304	3.6	20.5	172 E	68	41
9 23	1 44.86	+19 42.4	1.587	2.493	12.5	20.9	148 W	65	44	11 7	2 16.21	+22 31.9	1.339	2.322	4.2	20.5	170 E	68	41
10 3	1 35.63	+18 56.5	1.556	2.515	8.2	20.7	159 W	64	45	11 12	2 10.95	+22 4.4	1.367	2.340	6.0	20.7	166 E	67	42
10 13	1 25.15	+17 52.1	1.550	2.537	4.2	20.5	169 W	63	46	11 17	2 6.25	+21 36.6	1.402	2.358	8.1	20.9	160 E	67	42
10 23	1 14.70	+16 35.6	1.572	2.558	3.9	20.6	170 E	62	47	11 22	2 2.23	+21 9.4	1.444	2.375	10.2	21.0	155 E	66	43
11 2	1 5.46	+15 15.5	1.622	2.577	7.6	20.9	160 E	60	49	11 27	1 58.96	+20 43.8	1.491	2.393	12.2	21.2	149 E	66	43
11 12	0 58.37	+14 0.7	1.700	2.596	11.5	21.1	149 E	59	50	12 2	1 56.47	+20 20.6	1.544	2.411	14.0	21.4	144 E	65	44
11 22	0 53.95	+12 58.2	1.800	2.614	14.8	21.4	137 E	58	51	504033 2005 UN₁₅₇									
306749 2000 YS₂										8 24	3 6.72	+4 20.3	1.270	1.816	32.6	21.5	105 W	49*	60
8 24	2 19.82	+8 55.2	1.494	2.129	25.5	21.5	115 W	54	55	9 3	2 50.80	+4 33.9	1.242	1.934	27.4	21.4	118 W	50	59
9 3	2 24.38	+9 21.3	1.367	2.099	23.6	21.2	123 W	54	55	9 13	2 30.28	+4 34.2	1.228	2.048	21.2	21.3	133 W	50	59
9 13	2 25.97	+9 36.2	1.251	2.069	21.0	20.9	133 W	55	54	9 23	2 6.26	+4 23.2	1.239	2.157	14.2	21.2	148 W	49	60
9 23	2 24.15	+9 39.9	1.147	2.039	17.3	20.6	143 W	55	54	10 3	1 40.81	+4 5.1	1.284	2.262	7.1	21.1	164 W	49	60
10 3	2 18.67	+9 32.6	1.061	2.008	12.7	20.2	154 W	55	54	10 13	1 16.47	+3 45.7	1.366	2.362	1.7	21.1	176 W	49	60
10 13	2 9.73	+9 16.1	0.995	1.977	7.2	19.8	166 W	54	55	10 23	0 55.40	+3 31.4	1.486	2.459	6.2	21.6	164 E	49	60
10 18	2 4.22	+9 5.6	0.970	1.961	4.2	19.6	172 W	54	55	11 2	0 38.76	+3 26.1	1.640	2.552	10.9	22.1	151 E	48	61
10 23	1 58.25	+8 54.5	0.952	1.946	1.6	19.3	177 W	54	55	364273 2006 TW₄₈									
10 28	1 52.03	+8 43.7	0.939	1.930	3.1	19.4	174 E	54	55	8 24	3 19.35	+21 38.3	1.376	1.813	33.6	21.5	98 W	66*	42
11 2	1 45.80	+8 34.0	0.933	1.915	6.2	19.5	168 E	54	55	9 3	3 31.05	+21 34.3	1.310	1.845	31.9	21.4	105 W	67	42
11 7	1 39.82	+8 26.4	0.933	1.899	9.5	19.7	162 E	53	56	9 13	3 39.43	+21 11.1	1.247	1.879	29.6	21.2	113 W	66	43
11 12	1 34.33	+8 21.9	0.939	1.884	12.7	19.8	155 E	53	56	9 23	3 44.05	+20 28.6	1.189	1.914	26.6	21.1	121 W	65	44
11 17	1 29.54	+8 21.3	0.949	1.869	15.7	19.9	149 E	53	56	10 3	3 44.63	+19 27.1	1.139	1.951	22.6	20.9	131 W	64	45
11 22	1 25.61	+8 25.2	0.965	1.854	18.6	20.0	143 E	53	56	10 13	3 41.14	+18 7.6	1.102	1.988	17.9	20.7	142 W	63	46
12 2	1 20.72	+8 47.7	1.009	1.824	23.6	20.2	132 E	54	55	10 23	3 34.11	+16 33.6	1.083	2.025	12.4	20.5	154 W	62	47
12 12	1 20.12	+9 30.5	1.065	1.794	27.7	20.4	122 E	55	54	11 2	3 24.63	+14 51.7	1.085	2.063	6.5	20.3	166 W	60	49
12 22	1 23.73	+10 32.5	1.129	1.766	30.8	20.6	113 E	56	53	11 7	3 19.42	+14 0.6	1.096	2.082	3.7	20.2	172 W	59	50
1 1	1 31.16	+11 51.1	1.199	1.739	33.1	20.8	105 E	57	51*	11 12	3 14.20	+13 11.2	1.113	2.101	2.2	20.2	175 W	58	51
1 11	1 42.02	+13 23.1	1.271	1.713	34.7	20.9	98 E	58	48*	11 17	3 9.18	+12 24.9	1.137	2.121	3.7	20.4	172 E	57	52
1 21	1 55.89	+15 5.2	1.344	1.688	35.6	21.0	92 E	60	44*	11 22	3 4.53	+11 42.7	1.167	2.140	6.3	20.6	166 E	57	52
489508 2007 OL₁₀										11 27	3 0.40	+11 5.4	1.204	2.159	8.8	20.8	160 E	56	53
8 24	2 23.00	+13 57.0	1.039	1.707	33.1	21.4	113 W	59	50	12 2	2 56.90	+10 33.8	1.247	2.178	11.2	21.0	155 E	56	53
9 3	2 25.28	+15 1.0	0.998	1.751	29.4	21.3	122 W	60	49	12 7	2 54.12	+10 8.1	1.295	2.197	13.4	21.1	149 E	55	54
9 13	2 23.08	+15 46.4	0.965	1.797	24.8	21.1	131 W	61	48	12 12	2 52.11	+9 48.5	1.348	2.217	15.4	21.3	143 E	55	54
9 23	2 16.46	+16 11.5	0.943	1.844	19.3	21.0	143 W	61	48	12 17	2 50.89	+9 34.9	1.407	2.236	17.2	21.5	138 E	55	54
10 3	2 6.13	+16 15.2	0.937	1.891	13.1	20.8	155 W	61	48	382674 2002 TH₂₂₄									
10 13	1 53.48	+15 58.9	0.953	1.938	6.7	20.6	167 W	61	48	8 24	3 20.29	+21 42.9	1.202	1.668	37.0	21.4	97 W	66*	42
10 23	1 40.51	+15 28.4	0.992	1.985	2.4	20.5	175 E	60	49	8 29	3 30.71	+21 52.1	1.149	1.655	37.0	21.3	100 W	67*	42
11 2	1 29.10	+14 52.4	1.056	2.033	6.9	21.0	166 E	60	49	9 3	3 40.93	+21 55.3	1.098	1.643	36.9	21.2	102 W	67	42
11 12	1 20.61	+14 20.0	1.144	2.080	12.1	21.4	154 E	59	50	9 8	3 50.89	+21 52.2	1.047	1.630	36.7	21.1	105 W	67	42
499825 2011 DB₂₂										9 13	4 0.52	+21 42.4	0.998	1.619	36.3	20.9	108 W	67	42
8 24	2 28.43	+27 40.9	1.725	2.235	25.7	21.3	107 W	73	36	9 18	4 9.75	+21 25.6	0.951	1.607	35.8	20.8	111 W	66	43
9 3	2 33.00	+30 25.6	1.586	2.198	24.8	21.1	114 W	75	34	9 23	4 18.52	+21 1.5	0.905	1.597	35.2	20.6	113 W	66	43
9 13	2 34.65	+33 15.8	1.457	2.161	23.4	20.8	122 W	78	31	9 28	4 26.74	+20 29.9	0.861	1.586	34.4	20.5	117 W	65	44
9 23	2 32.65	+36 8.3	1.342	2.125	21.4	20.5	129 W	81	28	10 3	4 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°
382674 2002 TH₂₂₄										140333 2001 TD₂									
<i>(continuation)</i>										<i>(continuation)</i>									
12 17	4 39.35	+1 30.1	0.552	1.499	16.8	18.9	154 E	47	62	1 16	23 45.71	+31 42.0	0.644	1.050	66.0	20.7	77 E	71*	16*
12 22	4 36.77	+1 1.9	0.566	1.500	19.3	19.0	150 E	46	63	1 21	23 49.67	+31 27.7	0.645	1.011	68.9	20.7	73 E	67*	13*
12 27	4 35.02	+0 47.6	0.583	1.501	21.7	19.2	146 E	46	63	377603 2005 QW₁₆₀									
1 1	4 34.24	+0 46.2	0.604	1.503	24.1	19.3	141 E	46	63	8 24	4 2.87	+17 11.5	1.294	1.623	38.5	21.5	89 W	58*	47
1 6	4 34.50	+0 56.4	0.628	1.506	26.3	19.5	137 E	46	63	9 3	4 27.27	+18 7.2	1.209	1.607	38.8	21.3	92 W	61*	46
1 11	4 35.86	+1 16.7	0.655	1.509	28.3	19.6	133 E	46	63	9 13	4 50.84	+18 48.8	1.129	1.595	38.8	21.1	96 W	64*	45
1 16	4 38.30	+1 45.3	0.684	1.514	30.1	19.8	130 E	47	62	9 23	5 13.10	+19 17.4	1.053	1.587	38.4	21.0	101 W	64	45
1 21	4 41.75	+2 20.4	0.715	1.519	31.6	19.9	126 E	47	62	10 3	5 33.51	+19 35.1	0.982	1.583	37.4	20.8	106 W	65	44
482391 2012 AN₂₃										10 13	5 51.37	+19 44.9	0.916	1.583	35.9	20.6	112 W	65	44
8 24	3 24.62	+23 41.9	0.910	1.428	44.8	21.3	96 W	68*	40	10 23	6 6.02	+19 51.1	0.855	1.588	33.6	20.4	118 W	65	44
8 29	3 41.23	+24 19.5	0.863	1.405	45.5	21.2	97 W	69*	40	11 2	6 16.78	+19 58.1	0.801	1.597	30.4	20.1	125 W	65	44
9 3	3 58.49	+24 49.3	0.819	1.383	46.3	21.0	98 W	70*	39	11 12	6 22.96	+20 10.2	0.756	1.610	26.2	19.9	134 W	65	44
9 8	4 16.39	+25 10.2	0.777	1.361	47.0	20.9	99 W	70*	39	11 22	6 24.26	+20 30.6	0.722	1.627	21.0	19.7	144 W	66	43
9 13	4 34.90	+25 20.9	0.737	1.340	47.8	20.8	99 W	70*	39	12 2	6 20.86	+20 59.8	0.701	1.648	14.8	19.4	155 W	66	43
9 18	4 53.96	+25 20.2	0.700	1.320	48.6	20.7	100 W	70	39	12 7	6 17.66	+21 17.1	0.698	1.659	11.4	19.3	161 W	66	43
9 23	5 13.52	+25 7.0	0.666	1.301	49.4	20.5	100 W	70	39	12 12	6 13.73	+21 35.5	0.698	1.672	7.9	19.2	167 W	67	42
9 28	5 33.48	+24 40.2	0.634	1.282	50.1	20.4	101 W	70	39	12 17	6 9.35	+21 54.4	0.704	1.685	4.3	19.1	173 W	67	42
10 3	5 53.70	+23 59.2	0.605	1.265	50.9	20.3	101 W	69	40	12 22	6 4.80	+22 13.3	0.716	1.699	0.9	18.9	178 W	67	42
10 8	6 14.01	+23 3.4	0.578	1.249	51.6	20.2	101 W	68	41	12 27	6 0.36	+22 31.5	0.732	1.714	2.9	19.1	175 E	68	41
10 13	6 34.26	+21 52.8	0.554	1.235	52.3	20.1	102 W	67	42*	1 1	5 56.29	+22 48.9	0.754	1.729	6.3	19.4	169 E	68	41
10 18	6 54.29	+20 28.0	0.532	1.222	53.0	20.0	102 W	65	43*	1 6	5 52.84	+23 5.2	0.781	1.745	9.5	19.6	163 E	68	41
10 23	7 13.93	+18 50.0	0.513	1.210	53.5	19.9	102 W	64	45*	1 11	5 50.20	+23 20.4	0.813	1.762	12.4	19.8	157 E	68	41
10 28	7 33.04	+17 0.1	0.496	1.200	54.0	19.8	102 W	62	47*	1 16	5 48.49	+23 34.4	0.850	1.779	15.1	20.0	152 E	69	40
11 2	7 51.46	+15 0.2	0.481	1.192	54.4	19.8	102 W	60	49*	1 21	5 47.76	+23 47.3	0.891	1.796	17.6	20.2	147 E	69	40
11 7	8 9.05	+12 52.5	0.468	1.186	54.6	19.7	103 W	58	51*	416301 2003 RL₂₆									
11 12	8 25.71	+10 39.5	0.457	1.181	54.6	19.7	103 W	56	53*	8 24	4 7.20	+21 53.6	1.969	2.163	27.8	21.5	87 W	62*	42*
11 17	8 41.38	+8 23.6	0.448	1.179	54.5	19.6	104 W	53	55*	9 3	4 17.57	+21 5.0	1.879	2.197	27.2	21.4	94 W	65*	43
11 22	8 55.99	+6 7.1	0.439	1.178	54.2	19.6	105 W	51	58*	9 13	4 25.33	+20 0.8	1.789	2.232	26.1	21.3	102 W	65	44
11 27	9 9.49	+3 52.1	0.432	1.180	53.7	19.5	106 W	49	60*	9 23	4 30.13	+18 40.9	1.702	2.266	24.4	21.2	111 W	64	45
12 2	9 21.80	+1 40.9	0.426	1.183	52.9	19.5	107 W	47	62*	10 3	4 31.69	+17 5.6	1.622	2.300	22.0	21.0	121 W	62	47
12 7	9 32.85	+0 24.5	0.421	1.188	51.9	19.4	108 W	45	64	10 13	4 29.82	+15 15.8	1.553	2.333	18.8	20.9	131 W	60	49
12 12	9 42.60	-2 22.4	0.416	1.195	50.6	19.4	110 W	43	66	10 23	4 24.61	+13 14.3	1.500	2.366	15.0	20.7	142 W	58	51
12 17	9 51.03	-4 11.2	0.412	1.204	49.0	19.3	113 W	41	68	11 2	4 16.52	+11 6.3	1.469	2.398	10.7	20.5	153 W	56	53
12 22	9 58.07	-5 49.6	0.408	1.214	47.2	19.3	115 W	39	70	11 12	4 6.39	+8 59.4	1.465	2.430	6.7	20.4	163 W	54	55
12 27	10 3.67	-7 16.1	0.405	1.226	45.1	19.2	118 W	38	71	11 17	4 0.96	+7 59.4	1.473	2.446	5.4	20.3	167 W	53	56
1 1	10 7.77	-8 29.4	0.402	1.240	42.8	19.1	121 W	37	72	11 22	3 55.49	+7 3.2	1.489	2.461	5.2	20.4	167 W	52	57
1 6	10 10.34	-9 27.7	0.399	1.255	40.1	19.1	125 W	36	73	11 27	3 50.15	+6 11.8	1.512	2.476	6.2	20.4	164 E	51	58
1 11	10 11.40	-10 9.8	0.398	1.271	37.1	19.0	129 W	35	74	12 2	3 45.10	+5 26.1	1.542	2.491	7.8	20.6	160 E	50	59
1 16	10 11.04	-10 34.7	0.398	1.289	33.9	19.0	133 W	34	75	12 7	3 40.47	+4 46.6	1.579	2.506	9.6	20.7	155 E	50	59
1 21	10 9.35	-10 41.7	0.399	1.307	30.4	18.9	138 W	34	75	12 12	3 36.38	+4 13.6	1.623	2.521	11.4	20.9	149 E	49	60
140333 2001 TD₂										12 17	3 32.91	+3 47.4	1.673	2.536	13.2	21.0	144 E	49	60
8 24	3 56.46	+20 35.3	0.916	1.358	48.1	21.5	89 W	62*	43	12 22	3 30.10	+3 27.5	1.728	2.550	14.8	21.1	139 E	48	61
8 29	4 1.06	+21 59.9	0.879	1.373	47.3	21.4	93 W	65*	42	12 27	3 28.00	+3 13.8	1.787	2.564	16.2	21.3	133 E	48	61
9 3	4 4.92	+23 28.2	0.840	1.386	46.3	21.3	97 W	68*	41	1 1	3 26.59	+3 5.8	1.852	2.578	17.4	21.4	128 E	48	61
9 8	4 7.87	+25 1.1	0.800	1.397	45.2	21.2	101 W	70*	39	480875 2001 UM₅₂									
9 13	4 9.73	+26 39.6	0.760	1.406	43.8	21.0	105 W	72	37	8 24	4 20.06	+17 29.6	1.513	1.739	35.4	21.5	85 W	57*	46*
9 18	4 10.29	+28 24.7	0.719	1.413	42.3	20.9	109 W	73	36	9 3	4 42.16	+20 4.1	1.402	1.708	36.2	21.3	89 W	62*	44*
9 23	4 9.25	+30 17.1	0.679	1.419	40.4	20.7	114 W	75	34	9 13	5 4.42	+22 44.7	1.297	1.682	36.7	21.1	93 W	67*	41
9 28	4 6.27	+32 17.6	0.640	1.422	38.3	20.5	118 W	77	32	9 23	5 26.71	+25 33.8	1.199	1.660	36.8	20.9	97 W	71*	38
10 3	4 0.89	+34 25.7	0.602	1.425	35.8	20.3	124 W	79	30	10 3	5 48.80	+28 33.9	1.108	1.641	36.6	20.7	102 W	74	35
10 8	3 52.58	+36 40.0	0.567	1.425	33.1	20.1	129 W	82	27	10 13	6 10.32	+31 47.3	1.025	1.628	35.8	20.5	107 W	77	32
10 13	3 40.77	+38 57.2	0.534	1.423	30.1	19.9	134 W	84	25	10 18	6 20.74	+33 29.7	0.987	1.623	35.3	20.4	110 W	78	31
10 18	3 24.94	+41 11.3	0.506	1.420	27.1	19.7	140 W	86	23	10 23	6 30.84	+35 16.2	0.952	1.619	34.6	20.3	113 W	80	29
10 23	3 4.78	+43 13.2	0.483	1.415	24.3	19.5	144 W	88	21	10 28	6 40.53	+37 6.6	0.919	1.617	33.7	20.2	115 W	82	27
10 25	2 55.50	+43 55.9	0.475	1.413	23.4	19.4	146 W	89	20	11 2	6 49.70	+39 1.0	0.890	1.616	32.8	20.1	118 W	84	25
10 27	2 45.59	+44 34.1	0.469	1.410	22.6	19.4	147 W	90	19	11 7	6 58.22	+40 59.0	0.863	1.616	31.7	20.0	121 W	86	23
10 29	2 35.09	+45 6.9	0.463	1.407	22.0	19.3	148 W	90	19	11 12	7 5.98	+43 0.0	0.839	1.617	30.4	19.9	124 W	88	21
10 31	2 24.11	+45 33.5	0.458	1.404	21.7	19.3	148 W	89	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°
165222 2000 SA₄₅										409267 2004 RL₁₇ (continuation)									
8 24	4 21.18	+27 7.5	2.759	2.816	20.9	21.5	83 W	64*	37*	11 17	7 14.76	+33 5.4	1.056	1.838	25.1	20.4	128 W	78	31
9 3	4 28.84	+27 21.2	2.637	2.834	20.9	21.4	91 W	70*	37	11 22	7 14.65	+33 39.8	1.032	1.851	23.1	20.3	133 W	79	30
9 13	4 34.45	+27 29.1	2.513	2.851	20.4	21.3	99 W	72*	37	11 27	7 13.24	+34 14.8	1.011	1.864	20.8	20.2	138 W	79	30
9 23	4 37.71	+27 30.8	2.392	2.866	19.4	21.2	108 W	73	36	12 2	7 10.53	+34 49.6	0.993	1.878	18.4	20.1	143 W	80	29
10 3	4 38.34	+27 25.7	2.276	2.881	17.9	21.0	118 W	72	37	12 7	7 6.59	+35 22.7	0.980	1.892	15.8	20.0	148 W	80	29
10 13	4 36.09	+27 12.5	2.171	2.895	15.8	20.9	128 W	72	37	12 12	7 1.55	+35 52.7	0.972	1.906	13.2	19.9	154 W	81	28
10 23	4 30.97	+26 49.9	2.081	2.907	13.0	20.7	139 W	72	37	12 17	6 55.62	+36 18.3	0.969	1.920	10.7	19.8	159 W	81	28
11 2	4 23.17	+26 16.3	2.012	2.919	9.6	20.5	151 W	71	38	12 22	6 49.04	+36 38.1	0.972	1.935	8.5	19.8	163 W	82	27
11 7	4 18.44	+25 55.2	1.987	2.924	7.7	20.4	157 W	71	38	12 27	6 42.12	+36 51.3	0.981	1.949	7.1	19.7	166 W	82	27
11 12	4 13.29	+25 31.2	1.969	2.929	5.7	20.3	163 W	71	38	1 1	6 35.16	+36 57.4	0.996	1.964	7.0	19.8	166 E	82	27
11 17	4 7.85	+25 4.7	1.958	2.934	3.7	20.1	169 W	70	39	1 6	6 28.51	+36 56.3	1.016	1.979	8.1	19.9	163 E	82	27
11 22	4 2.27	+24 35.8	1.954	2.939	1.8	20.0	175 W	70	39	1 11	6 22.46	+36 48.8	1.043	1.994	10.0	20.0	159 E	82	27
11 27	3 56.68	+24 5.3	1.959	2.943	1.5	20.0	176 E	69	40	1 16	6 17.25	+36 35.6	1.076	2.009	12.1	20.2	155 E	82	27
12 2	3 51.23	+23 33.5	1.971	2.947	3.2	20.1	170 E	69	40	1 21	6 13.04	+36 18.0	1.114	2.024	14.3	20.4	149 E	81	28
12 7	3 46.06	+23 1.3	1.991	2.951	5.2	20.3	164 E	68	41	153692 2001 US₁₇									
12 12	3 41.30	+22 29.4	2.018	2.955	7.1	20.4	158 E	67	42	8 24	5 18.98	+30 22.7	1.777	1.715	33.6	21.4	70 W	57*	31*
12 17	3 37.05	+21 58.4	2.052	2.958	9.0	20.5	152 E	67	42	8 29	5 31.84	+30 7.8	1.720	1.702	34.3	21.4	72 W	60*	31*
12 22	3 33.38	+21 29.1	2.093	2.961	10.7	20.6	146 E	66	43	9 3	5 44.65	+29 46.9	1.662	1.688	35.0	21.3	74 W	62*	32*
12 27	3 30.35	+21 2.0	2.140	2.964	12.2	20.7	140 E	66	43	9 8	5 57.36	+29 19.8	1.604	1.674	35.7	21.2	76 W	63*	32*
1 1	3 27.98	+20 37.3	2.193	2.967	13.7	20.9	135 E	66	43	9 13	6 9.95	+28 46.2	1.546	1.660	36.4	21.1	78 W	65*	33*
1 6	3 26.29	+20 15.6	2.250	2.969	14.9	21.0	129 E	65	44	9 18	6 22.39	+28 6.1	1.488	1.646	37.0	21.0	80 W	66*	34*
1 11	3 25.29	+19 56.8	2.312	2.971	16.0	21.1	124 E	65	44	9 23	6 34.65	+27 19.1	1.431	1.632	37.5	21.0	82 W	68*	35*
1 16	3 24.96	+19 41.2	2.377	2.973	16.9	21.1	118 E	65	44	9 28	6 46.71	+26 25.0	1.374	1.618	38.0	20.9	84 W	68*	36*
1 21	3 25.27	+19 28.5	2.444	2.974	17.7	21.2	113 E	64	45	10 3	6 58.53	+25 23.6	1.317	1.604	38.5	20.8	87 W	69*	37*
387648 2002 RT₂₅										10 8	7 10.06	+24 14.7	1.260	1.590	39.9	20.7	89 W	69*	38*
8 24	4 34.81	+1 48.9	0.811	1.227	55.0	21.4	84 W	41*	61*	10 13	7 21.29	+22 57.9	1.204	1.577	39.3	20.6	91 W	68*	39*
8 29	4 58.53	-0 22.6	0.791	1.204	56.4	21.3	83 W	39*	63*	10 18	7 32.17	+21 33.1	1.150	1.563	39.5	20.4	93 W	67	41*
9 3	5 22.41	-2 41.5	0.778	1.183	57.6	21.3	82 W	37*	64*	10 23	7 42.68	+19 59.8	1.096	1.549	39.8	20.3	95 W	65	43*
9 8	5 46.20	-5 4.1	0.771	1.163	58.7	21.3	81 W	35*	65*	10 28	7 52.79	+18 17.8	1.043	1.535	39.9	20.2	98 W	63	45*
9 13	6 9.70	-7 26.6	0.769	1.146	59.6	21.3	79 W	33*	66*	11 2	8 2.46	+16 26.7	0.992	1.522	39.9	20.1	100 W	61	47*
9 18	6 32.71	-9 45.3	0.772	1.130	60.4	21.3	78 W	31*	66*	11 7	8 11.63	+14 26.3	0.942	1.509	39.9	19.9	103 W	59	49*
9 23	6 55.11	-11 57.2	0.779	1.117	60.9	21.3	76 W	30*	66*	11 12	8 20.27	+12 16.2	0.894	1.496	39.8	19.8	105 W	57	52*
9 28	7 16.77	-14 0.3	0.789	1.106	61.2	21.3	75 W	28*	66*	11 22	8 35.78	+7 26.2	0.804	1.470	39.2	19.5	110 W	52	57
10 3	7 37.62	-15 53.3	0.802	1.097	61.3	21.3	74 W	26*	65*	12 2	8 48.59	+1 55.8	0.724	1.446	38.0	19.2	115 W	47	61
10 8	7 57.61	-17 35.5	0.817	1.092	61.2	21.3	73 W	25*	65*	12 12	8 58.14	-4 11.8	0.654	1.424	37.3	18.9	119 W	41	68
10 13	8 16.72	-19 6.8	0.832	1.088	60.9	21.4	72 W	24*	64*	12 17	9 1.53	-7 26.9	0.624	1.414	36.4	18.8	122 W	38	71
10 18	8 34.98	-20 27.5	0.848	1.088	60.4	21.4	72 W	23*	64*	12 22	9 3.91	-10 47.2	0.596	1.404	35.7	18.7	124 W	34	75
10 23	8 52.41	-21 38.1	0.863	1.090	59.9	21.4	71 W	22*	64*	12 27	9 5.19	-14 10.1	0.572	1.395	35.1	18.6	125 W	31	78
10 28	9 9.04	-22 39.3	0.878	1.095	59.3	21.4	71 W	22*	64*	1 1	9 5.32	-17 32.4	0.552	1.386	34.6	18.4	127 W	27	82
11 2	9 24.89	-23 32.0	0.890	1.103	58.6	21.5	71 W	21*	64*	1 6	9 4.24	-20 49.9	0.534	1.378	34.2	18.4	128 W	24	85
11 7	9 39.98	-24 16.6	0.901	1.113	57.8	21.5	72 W	21*	64*	1 11	9 1.99	-23 58.4	0.520	1.371	34.0	18.3	129 W	21	88
94396 2001 SN₂₁₃										1 16	8 58.63	-26 53.7	0.509	1.364	33.9	18.2	129 W	18	89
8 24	4 40.41	+19 46.3	2.501	2.520	23.2	21.5	79 W	56*	43*	1 21	8 54.29	-29 31.8	0.501	1.358	34.1	18.2	129 W	15	86
9 3	4 50.25	+20 7.5	2.388	2.540	23.4	21.4	87 W	61*	44*	379841 2011 UV₁₇₃									
9 13	4 58.21	+20 23.9	2.272	2.558	23.1	21.3	95 W	65*	44	8 24	5 18.98	+16 1.7	1.754	1.713	33.9	21.5	71 W	47*	44*
9 23	5 3.97	+20 36.5	2.157	2.575	22.3	21.2	103 W	66*	43	9 3	5 40.51	+16 9.0	1.687	1.732	34.3	21.5	75 W	52*	45*
10 3	5 7.18	+20 46.1	2.045	2.592	21.0	21.1	112 W	66	43	9 13	6 0.52	+16 5.8	1.618	1.752	34.4	21.4	80 W	56*	46*
10 13	5 7.50	+20 53.2	1.940	2.607	19.0	20.9	122 W	66	43	9 23	6 18.73	+15 54.6	1.547	1.775	34.3	21.3	85 W	59*	47*
10 23	5 4.72	+20 57.8	1.846	2.622	16.3	20.7	132 W	66	43	10 3	6 34.83	+15 38.1	1.473	1.799	33.8	21.2	91 W	60*	48*
11 2	4 58.78	+20 59.8	1.770	2.636	12.9	20.5	144 W	66	43	10 13	6 48.43	+15 19.6	1.399	1.824	32.8	21.1	98 W	60	48*
11 12	4 49.98	+20 58.5	1.715	2.649	8.8	20.3	156 W	66	43	10 23	6 59.13	+15 3.0	1.324	1.851	31.3	21.0	105 W	60	49
11 17	4 44.72	+20 56.5	1.697	2.655	6.6	20.2	162 W	66	43	11 2	7 6.51	+14 52.0	1.252	1.878	29.1	20.8	113 W	60	49
11 22	4 39.06	+20 53.5	1.686	2.661	4.3	20.0	168 W	66	43	11 12	7 10.09	+14 50.9	1.186	1.906	26.1	20.7	122 W	60	49
11 27	4 33.13	+20 49.6	1.682	2.666	1.9	19.9	175 W	66	43	11 22	7 9.57	+15 3.2	1.128	1.935	22.2	20.5	132 W	60	49
12 2	4 27.12	+20 45.1	1.686	2.672	0.6	19.8	178 E	66	43	12 2	7 4.86	+15 30.9	1.083	1.965	17.4	20.3	143 W	61	48
12 7	4 21.18	+20 40.1	1.697	2.677	2.9	20.0	172 E	66	43	12 12	6 56.36	+16 13.9	1.057	1.995	11.8	20.0	155 W	61	48
12 12	4 15.50	+20 35.0	1.716	2.682	5.2	20.1	166 E	66	43	12 17	6 51.00	+16 40.2	1.052	2.010	8.9	19.9	162 W	62	47
12 17	4 10.22	+20 30.2	1.743	2.686	7.4	20.3	159 E	66	43	12 22	6 45.17	+17 8.9	1.053	2.025	5.9	19.8	168 W	62	47
12 22	4 5.46	+20 26.0	1.776	2.691	9.5	20.4	153 E	65	44	12 27	6 39.07	+17 39.2	1.060	2.040	3.3	19.7	173 W	63	46
12 27	4 1.32	+20 22.9	1.815	2.695	11.4	20.5	147 E	65	44	1 1	6 32.95	+18 10.3	1.074	2.055	2.7	19.7	174 E	63	46
1 1	3 57.88	+20 21.0	1.860	2.699	13.2	20.7	141 E	65	44	1 6	6 27.06	+18 41.7	1.095	2.070	4.7	19.9	170 E	64	45
1 6	3 55.17	+20 20.7	1.911	2.702	14.7	20.8	136 E	65	44	1 11	6 21.62	+19 12.5	1.122	2.085	7.4	20.1	164 E	64	45
1 11	3 53.24	+20 22.2	1.966	2.706	16.1	20.9	130 E	65	44										

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°	
407656 2011 SL₁₀₂ (continuation)									363505 2003 UC₂₀ (continuation)									
10 23	10 7.60	+17 44.8	1.179	1.132	51.0	20.7	62 W	52* 27*	12 24	12 13.75	-26 14.1	0.166	0.965	91.4	17.7	79 W	19	71*
10 28	10 28.92	+16 26.8	1.175	1.125	51.1	20.7	62 W	52* 27*	12 26	12 32.12	-28 29.9	0.163	0.958	94.3	17.7	76 W	17	69*
11 2	10 49.68	+15 3.1	1.173	1.121	51.2	20.7	62 W	51* 27*	12 28	12 52.21	-30 41.7	0.160	0.950	97.5	17.8	73 W	14	67*
11 7	11 9.82	+13 35.0	1.173	1.119	51.2	20.7	62 W	51* 27*	12 30	13 14.01	-32 45.3	0.158	0.941	100.9	17.9	70 W	12	64*
11 12	11 29.30	+12 4.1	1.176	1.121	51.0	20.7	62 W	50* 27*	1 1	13 37.41	-34 36.4	0.158	0.932	104.4	18.1	67 W	10	61*
11 17	11 48.09	+10 31.5	1.179	1.126	50.7	20.7	62 W	50* 28*	1 3	14 2.12	-36 10.8	0.158	0.923	107.9	18.3	63 W	9	57*
11 22	12 6.20	+8 58.5	1.184	1.133	50.4	20.7	62 W	49* 29*	1 5	14 27.76	-37 24.9	0.160	0.914	111.4	18.5	60 W	7	54*
11 27	12 23.63	+7 26.2	1.189	1.143	50.0	20.7	63 W	49* 30*	1 7	14 53.80	-38 16.7	0.163	0.904	114.8	18.7	57 W	6	51*
12 2	12 40.37	+5 55.5	1.194	1.156	49.6	20.7	63 W	48* 31*	1 9	15 19.67	-38 45.5	0.167	0.894	118.0	19.0	53 W	5	47*
12 7	12 56.44	+4 27.4	1.199	1.171	49.1	20.8	64 W	47* 33*	1 11	15 44.83	-38 52.4	0.173	0.883	121.1	19.2	50 W	4	44*
12 12	13 11.84	+3 2.5	1.204	1.189	48.6	20.8	65 W	46* 35*	1 12	15 56.99	-38 48.3	0.176	0.878	122.5	19.4	49 W	4	43*
12 17	13 26.59	+1 41.2	1.208	1.208	48.1	20.8	66 W	46* 37*	1 13	16 8.82	-38 39.8	0.180	0.872	123.8	19.5	47 W	4	41*
12 22	13 40.69	+0 24.1	1.211	1.230	47.5	20.9	67 W	45* 39*	1 14	16 20.27	-38 27.2	0.183	0.867	125.1	19.7	46 W	3	40*
12 27	13 54.16	-0 48.7	1.212	1.253	47.0	20.9	69 W	44* 42*	1 15	16 31.32	-38 10.9	0.188	0.861	126.3	19.8	45 W	3	39*
1 1	14 6.98	-1 56.8	1.212	1.278	46.4	20.9	70 W	43* 45*	1 16	16 41.95	-37 51.4	0.192	0.855	127.4	19.9	44 W	3	38*
1 6	14 19.16	-3 0.2	1.211	1.304	45.8	20.9	72 W	42* 47*	1 17	16 52.16	-37 29.2	0.197	0.849	128.4	20.1	43 W	3	37*
1 11	14 30.67	-3 58.7	1.207	1.332	45.2	21.0	74 W	41* 50*	1 18	17 1.95	-37 4.6	0.202	0.844	129.3	20.2	42 W	3	36*
1 16	14 41.51	-4 52.5	1.202	1.360	44.6	21.0	76 W	40* 54*	1 19	17 11.31	-36 38.1	0.207	0.838	130.2	20.3	41 W	3	35*
1 21	14 51.66	-5 41.5	1.195	1.390	44.0	21.0	79 W	39 57*	1 20	17 20.25	-36 9.9	0.212	0.832	131.0	20.4	40 W	3	34*
									1 21	17 28.80	-35 40.4	0.218	0.826	131.6	20.6	39 W	3	33*
307005 2001 XP₁									482533 2012 UA₃₄									
8 24	6 47.07	+38 14.2	1.750	1.394	35.3	21.4	53 W	46* 16*	8 24	7 28.23	+21 12.8	0.731	0.655	93.5	21.4	40 W	29*	22*
8 29	7 7.09	+36 32.0	1.672	1.337	37.2	21.2	53 W	46* 16*	8 26	7 24.83	+22 2.4	0.732	0.691	90.5	21.4	43 W	32*	23*
9 3	7 27.43	+34 28.8	1.597	1.279	39.1	21.1	53 W	46* 17*	8 28	7 21.96	+22 50.6	0.733	0.725	87.7	21.4	46 W	35*	24*
9 8	7 48.06	+32 2.5	1.526	1.221	41.2	21.0	53 W	46* 18*	8 30	7 19.54	+23 37.5	0.733	0.758	85.3	21.4	48 W	38*	25*
9 13	8 9.97	+29 10.9	1.458	1.164	43.3	20.8	53 W	45* 19*	9 1	7 17.50	+24 23.5	0.732	0.789	83.0	21.4	51 W	40*	25*
9 18	8 30.13	+25 52.1	1.396	1.107	45.5	20.7	52 W	44* 21*	9 3	7 15.76	+25 8.8	0.731	0.820	81.0	21.4	53 W	43*	26*
9 23	8 51.57	+22 4.9	1.340	1.050	47.8	20.5	51 W	42* 22*	9 8	7 12.40	+27 0.5	0.723	0.891	76.5	21.4	59 W	49*	27*
9 28	9 13.35	+17 48.9	1.292	0.995	49.9	20.4	49 W	40* 23*	9 13	7 9.83	+28 52.8	0.711	0.955	72.6	21.4	65 W	55*	27*
10 3	9 35.54	+13 5.4	1.253	0.942	51.9	20.3	48 W	37* 25*	9 18	7 7.49	+30 48.7	0.694	1.014	69.2	21.4	71 W	61*	28*
10 8	9 58.25	+7 57.9	1.225	0.892	53.6	20.2	46 W	34* 26*	9 23	7 4.85	+32 51.2	0.672	1.068	65.9	21.3	76 W	67*	26*
10 13	10 21.60	+2 32.4	1.208	0.845	54.8	20.0	44 W	30* 27*	9 28	7 1.39	+35 3.1	0.648	1.117	62.7	21.2	82 W	73*	26*
10 18	10 45.77	-3 2.4	1.204	0.804	55.3	19.9	42 W	26* 28*	10 3	6 56.50	+37 26.9	0.621	1.161	59.5	21.1	88 W	79*	25*
10 23	11 10.91	-8 36.0	1.213	0.769	54.9	19.8	39 W	22* 28*	10 8	6 49.44	+40 4.8	0.592	1.201	56.0	21.0	95 W	85*	23*
10 25	11 21.27	-10 46.4	1.221	0.757	54.4	19.8	38 W	20* 28*	10 13	6 39.23	+42 57.5	0.563	1.238	52.3	20.8	101 W	88	21*
10 27	11 31.82	-12 54.0	1.230	0.746	53.9	19.8	37 W	18* 28*	10 18	6 24.63	+46 3.5	0.535	1.270	48.1	20.7	108 W	89	18
10 29	11 42.56	-14 58.0	1.242	0.737	53.1	19.8	36 W	16* 28*	10 23	6 4.02	+49 16.2	0.509	1.299	43.6	20.5	116 W	86	15
10 31	11 53.48	-16 57.9	1.255	0.729	52.2	19.7	35 W	14* 27*	10 25	5 53.68	+50 32.4	0.500	1.310	41.8	20.4	119 W	84	13
11 2	12 4.58	-18 52.8	1.270	0.723	51.2	19.7	35 W	13* 27*	10 27	5 41.95	+51 46.2	0.491	1.320	39.8	20.3	122 W	83	12
11 7	12 33.08	-23 15.7	1.315	0.716	48.0	19.7	32 W	9* 26*	10 29	5 28.74	+52 55.8	0.484	1.330	37.9	20.3	125 W	82	11
11 12	13 2.42	-26 58.8	1.368	0.719	44.3	19.7	30 W	5* 24*	10 31	5 13.99	+53 59.5	0.477	1.339	36.0	20.2	128 W	81	10
11 17	13 32.21	-29 59.2	1.427	0.733	40.3	19.7	29 W	2* 23*	11 2	4 57.72	+54 55.0	0.472	1.347	34.1	20.1	130 W	80	9
11 22	14 1.96	-32 17.2	1.490	0.757	36.3	19.7	27 W	-21*	11 4	4 40.03	+55 40.1	0.467	1.355	32.3	20.1	133 W	79	8
11 27	14 31.15	-33 56.0	1.556	0.789	32.5	19.8	25 W	-19*	11 6	4 21.12	+56 12.7	0.464	1.363	30.6	20.0	136 W	79	8
12 2	14 59.32	-35 0.2	1.622	0.828	29.2	19.9	24 W	-18*	11 8	4 1.33	+56 31.0	0.463	1.370	29.0	20.0	138 W	78	7
12 7	15 26.13	-35 35.1	1.688	0.872	26.3	20.0	23 W	-17*	11 10	3 41.08	+56 33.8	0.462	1.376	27.7	20.0	140 W	78	7
12 12	15 51.35	-35 45.9	1.753	0.921	23.9	20.2	22 W	-16*	11 12	3 20.85	+56 20.8	0.464	1.382	26.7	19.9	141 W	79	8
12 17	16 14.89	-35 37.6	1.816	0.973	22.0	20.3	22 W	-16*	11 13	3 10.90	+56 8.5	0.465	1.385	25.3	19.9	142 E	79	8
12 22	16 36.74	-35 14.2	1.876	1.028	20.6	20.4	22 W	-15*	11 14	3 1.13	+55 52.4	0.466	1.387	25.9	19.9	142 E	79	8
12 27	16 56.98	-34 39.3	1.934	1.084	19.7	20.6	22 W	-16*	11 15	2 51.59	+55 32.8	0.468	1.390	25.7	19.9	142 E	79	8
1 1	17 15.70	-33 55.6	1.988	1.141	19.1	20.7	22 W	-16*	11 16	2 42.33	+55 9.8	0.471	1.392	25.5	20.0	143 E	80	9
1 6	17 33.01	-33 5.3	2.038	1.198	18.8	20.9	23 W	-17*	11 17	2 33.38	+54 43.7	0.473	1.395	25.5	20.0	143 E	80	9
1 11	17 49.01	-32 10.0	2.085	1.256	18.8	21.1	24 W	-18*	11 18	2 24.77	+54 14.8	0.476	1.397	25.5	20.0	143 E	81	10
1 16	18 3.83	-31 11.0	2.127	1.314	19.0	21.2	26 W	1* 20*	11 19	2 16.52	+53 43.3	0.480	1.399	25.6	20.0	142 E	81	10
1 21	18 17.57	-30 9.3	2.166	1.371	19.4	21.3	28 W	2* 22*	11 20	2 8.66	+53 9.5	0.483	1.401	25.7	20.0	142 E	82	11
									11 21	2 1.18	+52 33.8	0.487	1.403	26.0	20.1	142 E	82	11
									11 22	1 54.09	+51 56.4	0.492	1.405	26.3	20.1	141 E	83	12
									11 24	1 41.09	+50 37.7	0.502	1.408	27.0	20.2	140 E	84	13
8 24	7 22.11	+24 0.8	0.417	0.756	116.2	20.5	42 W	32* 21*	11 26	1 29.59	+49 15.5	0.513	1.410	28.0	20.2	138 E	86	15
8 29	7 17.88	+23 20.8	0.429	0.789	108.5	20.1	48 W	37* 25*	11 28	1 19.51	+47 51.5	0.525	1.412	29.0	20.3	136 E	87	16
9 3	7 17.24	+22 35.8	0.440	0.820	102.1	19.9	53 W	41* 28*	11 30	1 10.72	+46 27.4	0.538	1.414	30.0	20.4	134 E	89	18
9 8	7 19.33	+21 47.5	0.448	0.850	96.9	19.8	57 W	45* 30*	12 2	1 3.12	+45 4.4	0.553	1.415	31.4	20.5	132 E	90	19
9 13	7 23.49	+20 56.6	0.455	0.878	92.4	19.7	61 W	48* 32*	12 4	0 56.59	+43 43.4	0.568	1.416	32.6	20.6	129 E	89	20
9 18	7 29.18	+20 3.1	0.458	0.904	88.7	19.6	64 W	50* 34*	12 6	0 51.00	+42 25.1	0.584	1.416	33.7	20.7	127 E	87	22
9 23	7 36.06</																	

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°
467917 2011 OP₂₄										252399 2001 TX₄₄ (continuation)									
8 24	7 41.06	+11 57.9	1.058	0.654	67.7	21.5	37 W	21*	25*	10 13	14 16.05	-15 22.3	1.337	0.487	37.8	20.1	17 E	—	11*
8 29	8 14.96	+11 13.3	1.107	0.611	64.7	21.3	33 W	19*	22*	10 15	14 29.82	-17 12.3	1.330	0.509	40.2	20.2	19 E	—	13*
9 3	8 48.36	+10 19.3	1.165	0.575	60.0	21.2	30 W	17*	19*	10 17	14 43.56	-18 56.9	1.325	0.531	42.1	20.4	21 E	—	15*
9 8	9 21.23	+ 9 16.6	1.229	0.550	53.9	21.0	26 W	15*	15*	10 19	14 57.28	-20 35.8	1.321	0.554	43.7	20.5	23 E	—	17*
9 13	9 53.46	+ 8 5.5	1.296	0.537	46.6	20.9	23 W	13*	12*	10 21	15 10.99	-22 8.8	1.318	0.578	44.9	20.6	24 E	—	18*
9 18	10 24.91	+ 6 46.4	1.365	0.539	39.0	20.8	20 W	11*	9*	10 23	15 24.70	-23 35.5	1.316	0.602	45.8	20.7	26 E	—	20*
9 23	10 55.31	+ 5 20.6	1.432	0.555	31.7	20.8	17 W	9*	6*	10 28	15 58.92	-26 44.3	1.318	0.662	47.1	21.0	29 E	1*	23*
9 28	11 24.42	+ 3 49.9	1.497	0.583	25.4	20.8	14 W	7*	3*	11 2	16 32.94	-29 12.3	1.329	0.720	47.2	21.2	32 E	2*	26*
10 3	11 52.09	+ 2 16.7	1.559	0.621	20.4	20.8	12 W	6*	1*	11 7	17 6.41	-31 0.0	1.347	0.777	46.7	21.4	35 E	3*	29*
10 8	12 18.26	+ 0 43.4	1.619	0.666	16.6	21.0	11 W	5*	—	11 12	17 38.96	-32 9.8	1.372	0.831	45.7	21.5	37 E	4*	31*
10 13	12 42.96	+ 0 47.9	1.677	0.715	14.0	21.1	10 W	4*	—	313276 2002 AX₁									
10 18	13 6.28	+ 2 15.8	1.732	0.767	12.3	21.3	9 W	3*	—	8 24	8 58.68	+36 9.1	0.876	0.503	90.0	21.1	30 W	23*	—
10 23	13 28.33	+ 3 39.2	1.786	0.820	11.3	21.4	9 W	3*	—	8 26	8 59.68	+36 2.5	0.912	0.525	84.8	21.1	31 W	25*	—
5797 Bivoj										8 28	9 1.31	+35 46.0	0.947	0.548	80.2	21.1	32 W	26*	—
8 24	8 10.43	+21 14.5	1.803	1.066	28.9	21.5	31 W	22*	14*	8 30	9 3.43	+35 22.0	0.980	0.571	76.2	21.1	33 W	27*	—
8 29	8 31.84	+19 50.2	1.801	1.059	28.7	21.5	30 W	22*	14*	9 1	9 5.95	+34 52.3	1.011	0.594	72.7	21.1	34 W	28*	1*
9 3	8 52.82	+18 16.7	1.801	1.054	28.5	21.4	30 W	21*	13*	9 3	9 8.77	+34 18.1	1.041	0.618	69.6	21.2	35 W	29*	2*
9 8	9 13.32	+16 35.2	1.804	1.053	28.2	21.4	30 W	21*	13*	9 5	9 11.82	+33 40.4	1.069	0.642	66.9	21.2	36 W	30*	2*
9 13	9 33.30	+14 47.1	1.810	1.054	27.8	21.4	29 W	21*	13*	9 7	9 15.03	+33 0.2	1.095	0.665	64.6	21.3	37 W	30*	3*
9 18	9 52.74	+12 53.8	1.817	1.058	27.5	21.4	29 W	21*	13*	9 9	9 18.37	+32 18.0	1.119	0.688	62.5	21.4	37 W	31*	4*
9 23	10 11.64	+10 56.8	1.826	1.066	27.1	21.5	29 W	21*	13*	9 11	9 21.79	+31 34.2	1.141	0.712	60.7	21.4	38 W	32*	5*
9 28	10 30.02	+ 8 57.1	1.837	1.076	26.8	21.5	29 W	21*	13*	9 13	9 25.27	+30 49.2	1.162	0.734	59.1	21.5	39 W	33*	6*
144900 2004 VG₆₄										9 18	9 34.06	+28 53.4	1.207	0.790	55.8	21.6	41 W	35*	8*
8 24	8 16.15	+ 1 49.5	1.971	1.228	25.4	21.4	31 W	5*	25*	9 23	9 42.84	+26 54.8	1.242	0.843	53.5	21.8	42 W	36*	10*
9 3	8 49.14	+ 4 1.2	1.866	1.140	27.8	21.2	32 W	6*	26*	9 28	9 51.46	+24 54.8	1.269	0.893	51.7	21.9	44 W	38*	12*
9 13	9 25.76	+ 6 26.1	1.761	1.040	30.1	20.9	31 W	7*	25*	10 3	9 59.88	+22 54.2	1.288	0.941	50.5	22.0	46 W	40*	14*
9 23	10 7.16	+ 8 58.0	1.660	0.928	32.1	20.6	29 W	7*	23*	85953 1999 FK₂₁									
10 3	10 54.91	+11 24.9	1.568	0.801	33.3	20.2	26 W	6*	20*	8 24	9 2.85	+13 11.5	1.120	0.330	62.5	18.2	17 W	7*	8*
10 8	11 21.74	+12 30.2	1.527	0.732	33.3	19.9	24 W	5*	17*	8 26	9 8.66	+12 22.6	1.181	0.369	54.2	18.3	17 W	7*	8*
10 13	11 50.92	+13 25.2	1.490	0.661	32.4	19.6	21 W	4*	15*	8 28	9 15.15	+11 36.4	1.237	0.409	47.9	18.4	17 W	7*	9*
10 18	12 22.72	+14 5.0	1.457	0.586	30.4	19.3	17 W	2*	11*	8 30	9 21.97	+10 52.6	1.289	0.448	43.1	18.6	18 W	7*	9*
10 23	12 57.48	+14 24.3	1.427	0.510	26.2	18.8	13 W	1*	7*	9 1	9 28.89	+10 10.7	1.337	0.486	39.3	18.7	18 W	8*	9*
10 28	13 35.54	+14 17.7	1.397	0.437	18.9	18.2	8 W	—	2*	9 3	9 35.81	+ 9 30.6	1.381	0.522	36.3	18.9	18 W	8*	9*
11 2	14 17.12	+13 42.0	1.363	0.375	7.6	17.4	3 W	—	—	9 8	9 52.70	+ 7 56.3	1.477	0.609	31.2	19.2	18 W	8*	9*
11 4	14 34.69	+13 20.3	1.346	0.356	5.5	17.1	2 W	—	—	9 13	10 8.78	+ 6 28.6	1.558	0.688	28.2	19.5	19 W	9*	10*
11 6	14 52.71	+12 55.4	1.326	0.342	10.6	17.3	4 E	—	—	9 18	10 24.02	+ 5 6.0	1.627	0.759	26.4	19.8	20 W	10*	10*
11 8	15 11.08	+12 28.8	1.303	0.335	18.3	17.4	6 E	—	—	9 23	10 38.51	+ 3 47.3	1.685	0.825	25.3	20.0	21 W	11*	10*
11 10	15 29.64	+12 2.0	1.277	0.334	26.7	17.7	9 E	3*	—	10 3	11 5.64	+ 1 19.2	1.772	0.938	24.7	20.3	23 W	13*	12*
11 12	15 48.25	+11 36.7	1.249	0.340	35.0	17.9	11 E	5*	—	10 13	11 30.93	+ 0 59.6	1.828	1.030	25.2	20.6	26 W	16*	14*
11 14	16 6.80	+11 14.2	1.219	0.353	42.7	18.1	14 E	7*	2*	10 23	11 54.98	+ 3 10.8	1.856	1.105	26.4	20.9	30 W	19*	16*
11 16	16 25.21	+10 55.3	1.189	0.371	49.5	18.4	17 E	10*	3*	11 2	12 18.29	+ 5 15.7	1.858	1.164	27.9	21.0	33 W	22*	19*
11 18	16 43.47	+10 40.3	1.159	0.393	55.1	18.6	19 E	12*	5*	11 12	12 41.26	+ 7 15.1	1.837	1.208	29.7	21.1	37 W	25*	22*
11 20	17 1.57	+10 29.0	1.131	0.418	59.7	18.8	21 E	14*	7*	11 22	13 4.24	+ 9 8.9	1.794	1.238	31.8	21.2	41 W	27*	25*
11 22	17 19.53	+10 21.1	1.105	0.445	63.2	19.0	24 E	15*	9*	12 2	13 27.65	+10 57.4	1.732	1.255	34.0	21.2	45 W	28*	29*
11 24	17 37.37	+10 16.0	1.081	0.474	65.9	19.2	26 E	17*	11*	12 12	13 51.88	+12 40.0	1.652	1.258	36.5	21.2	49 W	28*	34*
11 26	17 55.10	+10 13.0	1.061	0.504	67.7	19.3	28 E	19*	13*	12 22	14 17.46	+14 16.0	1.558	1.248	39.1	21.1	53 W	29*	38*
11 28	18 12.70	+10 11.7	1.044	0.534	68.9	19.5	30 E	20*	14*	1	14 45.07	+15 44.3	1.451	1.225	42.1	21.0	57 W	28*	43*
11 30	18 30.16	+10 11.3	1.030	0.564	69.5	19.6	32 E	22*	16*	1 11	15 15.66	+17 2.1	1.334	1.188	45.4	20.8	59 W	27*	47*
12 2	18 47.44	+10 11.5	1.020	0.595	69.6	19.7	34 E	23*	18*	1 21	15 50.55	+18 5.1	1.213	1.136	49.4	20.6	61 W	26*	50*
12 7	19 29.56	+10 11.0	1.009	0.669	68.5	19.9	39 E	26*	22*	444584 2006 UK									
12 12	20 9.53	+10 5.8	1.018	0.741	65.9	20.0	43 E	28*	26*	8 24	9 16.82	+14 6.3	1.642	0.701	19.8	21.5	14 W	5*	5*
12 17	20 46.67	+ 9 53.4	1.043	0.809	62.7	20.2	47 E	30*	29*	8 29	9 44.68	+11 40.8	1.652	0.691	16.6	21.4	11 W	3*	3*
12 22	21 20.60	+ 9 33.9	1.082	0.873	59.2	20.3	50 E	31*	31*	9 3	10 12.06	+ 9 6.5	1.667	0.688	13.2	21.3	9 W	1*	1*
12 27	21 51.28	+ 9 8.3	1.133	0.934	55.8	20.5	52 E	32*	33*	9 8	10 38.84	+ 6 27.0	1.685	0.695	9.8	21.2	7 W	—	—
1	22 18.88	+ 8 37.9	1.192	0.992	52.6	20.6	53 E	33*	34*	9 13	11 4.96	+ 3 45.9	1.707	0.709	6.7	21.1	5 W	—	—
1	22 43.70	+ 8 3.9	1.257	1.046	49.5	20.7	54 E	34*	35*	9 18	11 30.35	+ 1 6.4	1.732	0.730	4.1	21.1	3 W	—	—
1	23 6.11	+ 7 27.6	1.326	1.097	46.7	20.9	54 E	34*	35*	9 23	11 55.01	+ 1 28.7	1.760	0.758	2.5	21.1	2 W	—	—
1	23 26.44	+ 6 49.8	1.398	1.145	44.1	21.0	54 E	34*	35*	9 28	12 18.93	+ 3 57.2	1.791	0.791	2.6	21.2	2 E	—	—
1	23 45.04	+ 6 11.1	1.472	1.190	41.7	21.1	54 E	34*	35*	10 3	12 42.13	+ 6 17.5	1.825	0.828	3.5	21.4	3 E	—	—
252399 2001 TX₄₄										226514 2003 UX₃₄									
8 24	8 29.86	+22 41.7	1.476	0.732	38.5	21.2	27 W	19*	10*	8 24	9 32.25	+15 35.7	1.706	0.735	14.5	21.4	10 W	4*	1*
8 29	9 1.07	+21 19.1	1.450	0.674	38.2	21.0	24 W	17*	7*	8 29	9 58.27	+13 14.2	1.652	0.671	12.9	21.1	9 W	2*	—
9 3	9 33.67	+19 23.4	1.430	0.614	36.9	20.7	21 W	15*	5*	9 3	10 25.77	+10 30.2	1.600	0.607	10.2	20.7	6 W	—	—
9 8	10 7.47	+16 51.0	1.417	0.555	34.2	20.4	18 W	12*	2*	9 8	10 54.92	+ 7 22.9	1.549	0.546	5.8	20.2	3 W	—	—
9 13	10 42.27	+13 38.6	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°
226514 2003 UX₃₄										101328 1998 SJ₁₆₂									
<i>(continuation)</i>																			
10 9	14 31.53	-16 3.5	1.177	0.503	57.3	21.0	25 E	3*	19*	8 24	10 29.82	+6 38.7	3.556	2.554	2.6	21.5	6 E	—	—
10 11	14 46.84	-17 17.5	1.156	0.525	59.6	21.2	27 E	4*	21*	9 3	10 45.99	+5 7.3	3.594	2.586	1.0	21.4	3 W	—	—
10 13	15 2.26	-18 26.4	1.136	0.548	61.4	21.3	29 E	4*	23*	9 13	11 1.80	+3 34.8	3.617	2.617	2.1	21.5	5 W	—	—
10 18	15 41.25	-20 54.8	1.098	0.609	64.1	21.5	33 E	6*	27*	9 23	11 17.25	+2 2.0	3.626	2.647	4.1	21.7	11 W	3*	3*
10 23	16 20.56	-22 45.8	1.075	0.673	64.7	21.7	38 E	9*	32*	10 3	11 32.33	+0 29.7	3.621	2.677	6.1	21.8	16 W	8*	6*
10 28	16 59.60	-23 57.3	1.066	0.737	63.9	21.8	42 E	11*	35*	101363 1998 UQ									
11 2	17 37.60	-24 30.0	1.071	0.800	62.1	22.0	45 E	13*	39*	8 24	10 32.67	+16 19.1	4.097	3.097	2.4	21.5	7 E	1*	—
137064 1998 WP₅										9 3	10 45.98	+14 55.6	4.099	3.101	2.4	21.5	7 W	—	—
8 24	9 37.42	+25 12.4	2.042	1.107	14.7	21.5	16 W	10*	—	9 13	10 59.14	+13 32.0	4.084	3.104	3.7	21.6	11 W	5*	—
8 29	9 57.13	+23 32.9	2.041	1.106	14.6	21.5	16 W	10*	—	9 23	11 12.12	+12 8.9	4.053	3.106	5.4	21.6	17 W	11*	—
9 3	10 16.32	+21 45.0	2.040	1.106	14.6	21.5	16 W	9*	—	10 3	11 24.89	+10 46.9	4.005	3.107	7.2	21.7	23 W	17*	3*
9 8	10 34.99	+19 49.7	2.041	1.107	14.4	21.5	16 W	9*	—	5590 1990 VA									
9 13	10 53.15	+17 48.2	2.043	1.109	14.3	21.5	16 W	9*	—	8 24	10 34.91	+3 34.6	1.859	0.879	11.1	21.5	10 E	—	3*
9 18	11 10.81	+15 41.7	2.046	1.113	14.1	21.5	16 W	9*	—	9 3	11 16.84	+0 32.8	1.804	0.830	12.4	21.3	10 E	—	4*
9 23	11 28.01	+13 31.3	2.051	1.117	14.0	21.5	16 W	9*	—	9 13	12 1.07	+2 36.3	1.746	0.785	14.6	21.2	11 E	—	5*
380476 2003 YO₁										9 23	12 47.85	+5 44.5	1.687	0.748	18.1	21.1	13 E	—	7*
8 24	9 50.76	+20 7.5	1.960	0.981	10.5	21.4	10 W	4*	—	10 3	13 37.31	+8 42.2	1.628	0.722	22.6	21.1	16 E	1*	10*
9 3	10 32.55	+16 25.4	1.892	0.912	10.5	21.2	10 W	3*	—	10 13	14 29.33	-11 18.6	1.571	0.711	27.7	21.2	19 E	5*	13*
9 13	11 15.59	+11 51.5	1.829	0.845	9.8	20.9	8 W	1*	—	10 23	15 23.43	-13 23.8	1.517	0.715	32.9	21.3	23 E	8*	16*
9 23	11 59.95	+6 28.5	1.774	0.785	8.2	20.6	6 E	—	—	11 2	16 18.92	-14 49.7	1.471	0.736	37.3	21.4	27 E	12*	18*
10 3	12 45.87	+0 24.5	1.728	0.736	6.7	20.3	5 E	—	—	168315 1982 RA₁									
10 8	13 9.52	-2 48.2	1.708	0.718	6.8	20.3	5 E	—	—	8 24	10 36.13	+6 12.2	3.424	2.426	3.3	21.4	8 E	—	2*
10 13	13 33.70	-6 4.6	1.691	0.705	7.9	20.2	6 E	—	—	9 3	10 52.98	+4 38.9	3.401	2.395	1.4	21.2	3 E	—	—
10 18	13 58.47	-9 21.3	1.677	0.697	9.7	20.3	7 E	—	—	9 13	11 10.09	+3 1.1	3.366	2.363	1.5	21.2	4 W	—	—
10 23	14 23.86	-12 34.5	1.665	0.696	12.1	20.3	8 E	—	2*	9 23	11 27.45	+1 19.3	3.318	2.329	3.5	21.3	8 W	1*	1*
10 28	14 49.92	-15 40.4	1.655	0.701	14.7	20.4	10 E	—	4*	10 3	11 45.11	+0 25.6	3.258	2.294	5.7	21.3	13 W	5*	4*
11 2	15 16.67	-18 34.9	1.649	0.711	17.2	20.6	12 E	—	6*	10 13	12 3.08	+2 13.1	3.186	2.259	7.9	21.3	18 W	10*	7*
11 7	15 44.08	-21 14.3	1.646	0.727	19.5	20.7	14 E	—	8*	10 23	12 21.39	+4 2.0	3.104	2.222	10.1	21.3	23 W	14*	10*
11 12	16 12.06	-23 35.1	1.647	0.748	21.5	20.8	16 E	—	10*	11 2	12 40.10	+5 51.7	3.011	2.185	12.3	21.3	28 W	18*	14*
11 17	16 40.49	-25 34.6	1.651	0.772	23.1	20.9	18 E	—	12*	11 12	12 59.24	+7 41.0	2.909	2.147	14.5	21.3	33 W	22*	18*
11 22	17 9.18	-27 10.8	1.659	0.800	24.4	21.1	20 E	—	13*	11 22	13 18.85	+9 28.8	2.799	2.108	16.7	21.2	38 W	25*	22*
11 27	17 37.90	-28 22.7	1.672	0.830	25.3	21.2	21 E	—	15*	12 2	13 39.00	+11 13.8	2.681	2.068	18.9	21.2	43 W	27*	27*
12 2	18 6.39	-29 10.2	1.688	0.863	25.8	21.3	22 E	—	16*	12 12	13 59.72	+12 54.8	2.558	2.028	21.0	21.1	48 W	28*	32*
12 7	18 34.40	-29 34.0	1.708	0.896	26.1	21.4	24 E	—	17*	12 22	14 21.05	+14 30.1	2.430	1.987	23.1	21.0	52 W	28*	38*
307298 2002 QV₆										1 1	14 43.05	-15 58.3	2.298	1.945	25.1	20.9	57 W	28*	43*
8 24	10 5.57	+14 1.8	3.436	2.427	1.3	21.5	3 W	—	—	1 11	15 5.73	-17 17.5	2.164	1.904	27.0	20.8	62 W	27*	49*
9 3	10 21.45	+11 43.2	3.376	2.380	3.2	21.5	8 W	1*	—	1 21	15 29.10	-18 25.9	2.029	1.862	28.9	20.7	66 W	26*	55*
9 13	10 37.47	+9 17.6	3.304	2.332	5.4	21.6	13 W	6*	2*	137173 1999 JY₄									
9 23	10 53.63	+6 44.8	3.220	2.285	7.7	21.6	18 W	10*	6*	8 24	10 44.38	+13 6.9	3.336	2.340	3.6	21.4	8 E	1*	—
10 3	11 9.99	+4 4.4	3.125	2.236	10.0	21.6	23 W	15*	10*	9 3	11 1.93	+11 6.4	3.317	2.314	2.1	21.3	5 E	—	—
162162 1999 DB₇										9 13	11 19.62	+9 1.9	3.287	2.287	2.3	21.2	5 W	—	—
8 24	10 8.16	+10 41.1	2.016	1.005	0.9	21.4	1 W	—	—	9 23	11 37.43	+6 54.0	3.246	2.260	3.9	21.3	9 W	3*	—
9 3	10 47.67	+7 55.7	1.997	0.989	0.3	21.2	0 W	—	—	10 3	11 55.42	+4 43.3	3.195	2.232	5.9	21.3	13 W	7*	—
9 13	11 27.30	+4 53.4	1.983	0.977	1.4	21.3	1 E	—	—	10 13	12 13.60	+2 30.3	3.133	2.204	8.0	21.4	18 W	12*	3*
9 23	12 7.03	+1 40.1	1.973	0.971	2.6	21.4	2 E	—	—	10 23	12 32.00	+0 16.0	3.061	2.175	10.1	21.4	23 W	16*	6*
10 3	12 46.91	-1 37.9	1.969	0.972	3.7	21.5	4 E	—	—	11 2	12 50.66	+1 59.2	2.981	2.147	12.2	21.4	27 W	20*	10*
182263 2001 HQ₈										11 12	13 9.61	+4 14.3	2.891	2.118	14.3	21.3	32 W	23*	14*
8 24	10 13.46	+9 10.4	3.605	2.594	0.8	21.4	2 E	—	—	11 22	13 28.87	+6 28.5	2.795	2.088	16.4	21.3	37 W	26*	19*
9 3	10 29.96	+8 13.9	3.571	2.566	1.7	21.4	4 W	—	—	12 2	13 48.49	+8 41.1	2.692	2.059	18.5	21.3	41 W	28*	24*
9 13	10 46.63	+7 13.7	3.523	2.538	3.9	21.5	10 W	3*	1*	12 12	14 8.49	-10 51.1	2.582	2.030	20.5	21.2	46 W	29*	29*
9 23	11 3.44	+6 10.8	3.462	2.508	6.1	21.6	15 W	8*	4*	12 22	14 28.88	-12 57.7	2.468	2.001	22.5	21.1	51 W	29*	35*
10 3	11 20.41	+5 6.2	3.388	2.478	8.3	21.6	21 W	14*	7*	1 1	14 49.68	-15 0.1	2.350	1.972	24.3	21.1	56 W	28*	41*
354713 2005 SG₁₉										1 11	15 10.88	-16 57.6	2.230	1.944	26.1	21.0	60 W	27*	48*
8 24	10 25.31	+23 18.3	3.295	2.319	5.4	21.5	13 E	5*	—	1 21	15 32.45	-18 49.3	2.107	1.916	27.8	20.9	65 W	26*	54*
9 3	10 42.97	+20 58.5	3.218	2.249	6.0	21.4	13 W	5*	—	510189 2011 CZ₄									
9 13	11 0.94	+18 30.8	3.129	2.177	7.2	21.3	16 W	8*	—	8 24	10 56.34	+0 36.1	2.552	1.607	10.2	21.4	16 E	—	9*
9 23	11 19.26	+15 54.8	3.030	2.104	8.8	21.2	19 W	12*	—	9 3	11 19.94	+4 5.8	2.525	1.567	9.1	21.3	14 E	—	6*
10 3	11 38.00	+13 9.8	2.921	2.030	10.7	21.1	22 W	16*	—	9 13	11 44.57	+7 43.4	2.496	1.531	8.3	21.2	13 E	—	4*
10 13	11 57.27	+10 15.1	2.804	1.955	12.9	21.1	26 W	20*	3*	9 23	12 10.42	-11 26.5	2.466	1.498	7.9	21.1	12 E	—	2*
10 23	12 17.16	+7 10.0	2.680	1.879	15.1	20.9	30 W	23*	6*	10 3	12 37.71	-15 11.7	2.436	1.469	7.7	21.0	11 E	—	—
11 2	12 37.85	+3 53.4	2.551	1.802	17.5	20.8	33 W	26*	10*	10 13	13 6.70	-18 54.8							

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°									
174287 2002 SX₃₇ (continuation)									279815 2000 JT₃																	
10 3	12 10.12	+ 6 45.9	3.782	2.813	4.4	21.2	12 W	6*	8 24	12 10.13	+ 2 22.0	3.332	2.517	11.9	21.4	31 E	8*	24*								
10 13	12 24.86	+ 5 10.7	3.714	2.778	6.2	21.2	17 W	11*	9 3	12 25.76	+ 1 3.0	3.358	2.484	10.0	21.4	25 E	6*	19*								
10 23	12 39.76	+ 3 36.1	3.632	2.743	8.1	21.3	23 W	17*	9 13	12 41.97	- 0 18.6	3.371	2.450	8.1	21.3	20 E	5*	13*								
11 2	12 54.81	+ 2 2.8	3.537	2.707	10.1	21.3	29 W	22*	9 23	12 58.72	- 1 41.9	3.371	2.415	6.1	21.1	15 E	3*	8*								
11 12	13 9.99	+ 0 31.6	3.429	2.670	12.1	21.2	34 W	27*	10 3	13 16.05	- 3 5.7	3.358	2.380	4.2	21.0	10 E	2*	3*								
11 22	13 25.27	+ 0 56.8	3.310	2.632	14.0	21.2	40 W	31*	10 13	13 33.95	- 4 29.0	3.333	2.344	2.7	20.8	6 E	—	—								
12 2	13 40.62	- 2 21.6	3.180	2.594	15.9	21.1	46 W	34*	10 23	13 52.44	- 5 50.6	3.295	2.307	2.4	20.8	5 E	—	—								
12 12	13 55.98	- 3 42.0	3.041	2.556	17.7	21.1	52 W	37*	11 2	14 11.53	- 7 9.2	3.246	2.270	3.7	20.8	9 W	2*	—								
12 22	14 11.30	- 4 57.3	2.895	2.516	19.4	21.0	58 W	38*	11 12	14 31.25	- 8 23.6	3.186	2.232	5.7	20.8	13 W	7*	—								
1 1	14 26.50	- 6 6.8	2.741	2.477	20.9	20.9	64 W	38*	11 22	14 51.60	- 9 32.2	3.116	2.194	7.8	20.8	18 W	11*	1*								
1 11	14 41.47	- 7 9.8	2.583	2.436	22.4	20.8	70 W	38*	12 2	15 12.60	- 10 33.8	3.037	2.156	9.9	20.8	22 W	15*	6*								
1 21	14 56.09	- 8 5.7	2.421	2.396	23.6	20.6	77 W	37	12 12	15 34.24	- 11 26.7	2.949	2.118	12.1	20.8	27 W	18*	10*								
301846 1993 OV₁									137176 1999 JZ₁₁																	
8 24	11 14.71	- 1 30.6	2.871	1.954	10.3	21.4	20 E	—	14*	8 24	12 20.13	+ 1 17.4	3.244	2.465	13.1	21.5	33 E	9*	27*							
9 3	11 34.68	- 3 51.0	2.846	1.900	8.6	21.3	16 E	—	10*	9 3	12 35.56	- 0 24.4	3.284	2.441	11.2	21.4	28 E	7*	22*							
9 13	11 55.59	- 6 18.5	2.812	1.845	7.0	21.1	13 E	—	6*	9 13	12 51.54	- 2 8.0	3.312	2.416	9.3	21.3	23 E	5*	16*							
9 23	12 17.57	- 8 52.0	2.771	1.791	5.6	20.9	10 E	—	2*	9 23	13 8.03	- 3 52.4	3.328	2.390	7.3	21.2	18 E	3*	11*							
10 3	12 40.75	- 11 30.0	2.723	1.737	4.5	20.8	8 E	—	—	10 3	13 25.04	- 5 36.8	3.331	2.364	5.2	21.1	12 E	1*	6*							
10 13	13 5.31	- 14 10.7	2.671	1.684	4.0	20.6	7 W	—	—	10 13	13 42.60	- 7 20.3	3.322	2.336	3.2	21.0	8 E	—	1*							
10 23	13 31.44	- 16 51.3	2.615	1.632	4.3	20.5	7 W	—	1*	11 2	14 19.38	- 10 40.6	3.268	2.280	2.0	20.8	5 W	—	—							
11 2	13 59.33	- 19 28.5	2.557	1.582	5.3	20.5	8 W	—	2*	11 12	14 38.63	- 12 15.3	3.223	2.251	3.9	20.9	9 W	3*	—							
11 12	14 29.20	- 21 58.0	2.499	1.535	6.5	20.4	10 W	—	4*	11 22	14 58.46	- 13 44.9	3.168	2.221	6.1	20.9	14 W	7*	2*							
11 17	14 44.91	- 23 8.2	2.470	1.512	7.2	20.4	11 W	—	5*	12 2	15 18.89	- 15 8.2	3.102	2.190	8.3	20.9	19 W	10*	6*							
11 22	15 1.16	- 24 14.5	2.442	1.490	7.9	20.4	12 W	—	6*	12 12	15 39.90	- 16 24.1	3.026	2.160	10.5	20.9	24 W	13*	11*							
11 27	15 17.96	- 25 16.0	2.415	1.469	8.6	20.3	13 W	—	7*	12 22	16 1.48	- 17 31.3	2.942	2.129	12.7	20.9	28 W	16*	16*							
12 2	15 35.30	- 26 12.0	2.388	1.449	9.3	20.3	14 W	—	7*	1 1	16 23.61	- 18 28.9	2.850	2.097	14.9	20.9	33 W	17*	22*							
12 7	15 53.16	- 27 1.6	2.363	1.430	9.9	20.3	14 W	—	8*	1 11	16 46.23	- 19 15.8	2.751	2.065	17.0	20.9	38 W	18*	27*							
12 12	16 11.52	- 27 43.9	2.338	1.412	10.6	20.3	15 W	—	9*	1 21	17 9.29	- 19 51.0	2.645	2.034	19.1	20.8	43 W	19*	33*							
12 17	16 30.32	- 28 18.2	2.315	1.396	11.2	20.2	16 W	—	10*	480927 2002 YZ₃																
12 22	16 49.52	- 28 43.6	2.294	1.381	11.8	20.2	17 W	—	10*	8 24	12 22.01	- 14 11.6	1.940	1.354	29.4	21.5	41 E	—	34*							
12 27	17 9.05	- 28 59.6	2.274	1.367	12.4	20.2	17 W	—	11*	9 3	12 40.88	- 16 7.9	1.868	1.219	29.7	21.2	37 E	—	29*							
1 1	17 28.82	- 29 5.7	2.255	1.355	13.0	20.2	18 W	—	12*	9 13	13 2.77	- 18 16.6	1.771	1.077	30.6	20.8	33 E	—	25*							
1 6	17 48.75	- 29 1.4	2.239	1.344	13.5	20.2	19 W	—	12*	9 23	13 28.55	- 20 34.2	1.648	0.926	32.8	20.4	30 E	—	22*							
1 11	18 8.72	- 28 46.5	2.224	1.335	14.0	20.2	19 W	—	13*	9 28	13 43.26	- 21 43.9	1.575	0.847	34.7	20.2	29 E	—	21*							
1 16	18 28.64	- 28 21.1	2.211	1.328	14.5	20.2	20 W	—	14*	10 3	13 59.46	- 22 51.6	1.494	0.767	37.5	19.9	28 E	—	20*							
1 21	18 48.41	- 27 45.2	2.199	1.323	15.0	20.2	20 W	—	14*	10 8	14 17.34	- 23 53.5	1.404	0.686	41.5	19.6	27 E	—	20*							
129322 2005 TN₄₅									234341 2001 FZ₅₇																	
8 24	11 28.65	+ 6 11.5	3.231	2.305	8.5	21.4	20 E	4*	13*	8 24	12 24.49	- 9 41.6	1.530	0.982	40.5	21.4	39 E	2*	33*							
9 3	11 45.38	+ 3 57.6	3.235	2.274	6.5	21.3	15 E	—	8*	9 3	12 46.01	- 13 12.0	1.457	0.873	42.8	21.1	36 E	—	29*							
9 13	12 2.51	+ 1 40.3	3.227	2.243	4.4	21.2	10 E	—	4*	9 13	13 9.70	- 16 48.6	1.351	0.753	47.3	20.7	33 E	—	26*							
9 23	12 20.06	+ 0 39.7	3.209	2.211	2.3	21.0	5 E	—	—	9 23	13 35.61	- 20 18.5	1.204	0.622	56.4	20.3	31 E	—	24*							
10 3	12 38.06	+ 3 2.0	3.180	2.179	0.5	20.8	1 E	—	—	9 25	13 40.97	- 20 56.8	1.169	0.595	59.1	20.2	31 E	—	23*							
10 13	12 56.55	+ 5 25.8	3.140	2.147	2.1	20.9	4 W	—	—	9 27	13 46.33	- 21 32.5	1.132	0.568	62.2	20.2	30 E	—	23*							
10 23	13 15.59	+ 7 50.3	3.092	2.115	4.3	21.0	9 W	2*	—	9 29	13 51.64	- 22 4.8	1.093	0.542	65.9	20.1	30 E	—	22*							
11 2	13 35.23	- 10 14.7	3.034	2.083	6.5	21.0	14 W	6*	4*	10 1	13 56.83	- 22 32.6	1.052	0.515	70.1	20.0	29 E	—	22*							
11 12	13 55.54	- 12 38.0	2.967	2.051	8.7	21.0	18 W	9*	7*	10 3	14 1.79	- 22 54.3	1.009	0.490	75.0	20.0	28 E	—	21*							
11 22	14 16.57	- 14 59.0	2.893	2.019	10.9	21.0	23 W	12*	11*	10 5	14 6.39	- 23 7.9	0.964	0.466	80.7	20.0	27 E	—	20*							
12 2	14 38.41	- 17 16.5	2.813	1.987	13.1	21.0	27 W	14*	16*	10 7	14 10.44	- 23 10.9	0.917	0.443	87.4	20.0	26 E	—	19*							
12 12	15 1.10	- 19 29.2	2.726	1.956	15.3	21.0	32 W	16*	21*	10 9	14 13.72	- 23 0.1	0.869	0.422	95.1	20.1	25 E	—	18*							
12 22	15 24.71	- 21 35.5	2.635	1.925	17.4	20.9	36 W	16*	26*	10 11	14 15.94	- 22 31.5	0.821	0.404	103.9	20.3	23 E	—	16*							
1 1	15 49.29	- 23 33.8	2.539	1.896	19.5	20.9	40 W	16*	31*	10 13	14 16.80	- 21 40.7	0.774	0.390	114.0	20.7	21 E	—	14*							
1 11	16 14.85	- 25 22.3	2.441	1.867	21.6	20.8	44 W	15*	36*	10 15	14 16.05	- 20 23.5	0.729	0.380	125.3	21.4	18 E	—	11*							
1 21	16 41.37	- 26 59.4	2.341	1.839	23.5	20.8	48 W	14*	41*	99248 2001 KY₆₆																
161775 2006 TG₁₀₈									8 24									12 27.42	- 11 34.3	2.882	2.217	17.3	21.4	41 E	1*	34*
8 24	11 40.15	+ 19 33.8	3.656	2.754	8.2	21.5	23 E	15*	9*	9 3	12 43.65	- 12 54.9	2.908	2.166	15.7	21.4	35 E	—	29*							
9 3	11 55.62	+ 17 59.5	3.702	2.771	7.0	21.5	19 E	13*	4*	9 13	13 0.88	- 14 20.5	2.920	2.112	13.9	21.2	30 E	—	24*							
9 13	12 11.02	+ 16 26.7	3.734	2.787	6.1	21.5	17 E	11*	—	9 23	13 19.14	- 15 49.7	2.919	2.057	12.0	21.1	25 E	—	19*							
9 23	12 26.32	+ 14 56.5	3.752	2.803	5.8	21.5	16 E	9*	—																	
10 3	12 41.53	+ 13 29.5	3.757	2.818	6.1	21.5	17 E	7*	—																	
105106 2000 LS₁₄																										
8 24	11 49.59	- 3 24.5	3.475	2.631	10.6	21.5	28 E	1*	22*																	
9 3	12 4.16	- 4 58.8	3.494	2.594	8.7	21.4	23 E	—	17*																	
9 13	12 19.30	- 6 37.0	3.498	2.556	6.8	21.3	17 E	—	11*																	
9 23	12 35.00	- 8 18.4	3.489	2.517	4.8	21.1	12 E	—	6*																	
10 3	12 51.26	- 10 2.2	3.466	2.477	2.9	21.0	7 E	—	—																	
10 13	13 8.12	- 11 47.6	3.430	2.436	1.7	20.8	4 W	—	—																	
10 23	13 25.58	- 13 33.9	3.381	2.394	2.6	20.8	6 W	—	—																	
11 2	13 43.69	- 15 19.9	3.319	2.352	4.5	20.9	11 W	1*	4*																	
11 12	14 2.50	- 17 4.9	3.246	2.309	6.7	20.9	16 W	5*	8*																	
11 22	14 22.03	- 18 47.4	3.162	2.265	8.9	20.9	21 W	8*	12*																	
12 2	14 42.34	- 20 26.4	3.068	2.221	11.1	20.9	26 W	11*	16*																	
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°
99248 2001 KY₆₆										186823 2004 FN₃₂									
<i>(continuation)</i>																			
10 3	13 38.49	-17 21.1	2.905	1.999	10.1	21.0	20 E	—	14*	8 24	12 49.27	+ 6 4.4	1.364	0.866	47.8	21.3	39 E	18*	30*
10 13	13 59.05	-18 53.3	2.878	1.938	8.1	20.8	16 E	—	9*	9 3	13 11.56	+ 4 32.2	1.241	0.727	54.4	20.9	36 E	17*	27*
10 23	14 20.91	-20 24.3	2.839	1.876	6.2	20.6	12 E	—	5*	9 13	13 33.35	+ 2 42.6	1.074	0.584	67.4	20.5	32 E	16*	23*
11 2	14 44.22	-21 52.0	2.788	1.811	4.5	20.4	8 E	—	1*	9 23	13 46.74	+ 0 15.6	0.862	0.453	94.3	20.4	27 E	13*	18*
11 12	15 9.14	-23 13.9	2.727	1.744	3.2	20.2	6 E	—	—	9 25	13 46.52	- 0 23.1	0.816	0.433	102.4	20.6	25 E	12*	16*
11 22	15 35.80	-24 26.7	2.656	1.676	3.2	20.1	5 W	—	—	9 27	13 44.59	- 1 6.8	0.771	0.416	111.8	20.9	23 E	10*	14*
12 2	16 4.38	-25 26.9	2.578	1.605	4.5	20.0	7 W	—	1*	9 29	13 40.57	- 1 56.4	0.727	0.402	122.4	21.5	20 E	8*	12*
12 12	16 35.01	-26 9.9	2.494	1.533	6.3	19.9	10 W	—	4*	10 1	13 34.13	- 2 52.8	0.687	0.393	134.1	22.4	16 E	6*	9*
12 17	16 51.11	-26 23.5	2.450	1.496	7.2	19.9	11 W	—	5*	282531 2004 RR₂₁₅									
12 22	17 7.74	-26 30.7	2.406	1.459	8.2	19.8	12 W	—	6*	8 24	13 0.08	- 9 42.4	2.546	1.996	21.7	21.5	47 E	8*	41*
12 27	17 24.90	-26 30.9	2.361	1.422	9.2	19.7	13 W	—	7*	9 3	13 19.93	-11 16.6	2.587	1.963	20.3	21.4	42 E	7*	36*
1 1	17 42.59	-26 23.4	2.316	1.385	10.2	19.7	14 W	1*	8*	9 13	13 40.81	-12 52.3	2.622	1.930	18.7	21.4	38 E	6*	32*
1 6	18 0.78	-26 7.4	2.271	1.348	11.2	19.6	15 W	1*	9*	9 23	14 2.71	-14 27.5	2.649	1.898	17.1	21.3	34 E	5*	28*
1 11	18 19.44	-25 42.1	2.227	1.311	12.1	19.6	16 W	1*	10*	10 3	14 25.66	-15 59.9	2.670	1.867	15.4	21.2	30 E	4*	24*
1 16	18 38.55	-25 6.9	2.183	1.275	13.0	19.5	17 W	2*	10*	10 13	14 49.69	-17 27.4	2.685	1.837	13.6	21.1	26 E	3*	20*
1 21	18 58.06	-24 21.0	2.141	1.238	13.8	19.4	17 W	2*	11*	10 23	15 14.78	-18 47.3	2.694	1.809	11.8	21.1	22 E	3*	16*
8 24	12 38.57	+32 12.5	2.174	1.540	24.9	21.4	40 E	33*	12*	11 2	15 40.91	-19 57.3	2.699	1.782	10.0	21.0	18 E	2*	12*
9 3	13 1.25	+30 52.5	2.099	1.458	25.7	21.2	39	33*	10*	11 12	16 8.05	-20 54.7	2.698	1.757	8.1	20.8	14 E	1*	8*
9 13	13 26.50	+29 18.8	2.006	1.372	27.2	21.0	39 E	33*	7*	11 22	16 36.10	-21 37.0	2.694	1.734	6.2	20.7	11 E	—	4*
9 23	13 54.69	+27 25.8	1.900	1.284	29.4	20.8	39 E	33*	6*	12 2	17 4.92	-22 2.0	2.686	1.714	4.4	20.6	8 E	—	1*
10 3	14 26.30	+25 5.0	1.782	1.193	32.2	20.6	39 E	33*	5*	12 12	17 34.36	-22 7.7	2.676	1.695	2.5	20.5	4 E	—	—
10 13	15 1.81	+22 4.4	1.660	1.102	35.6	20.4	40 E	34*	4*	12 22	18 4.18	-21 52.8	2.663	1.680	1.1	20.3	2 E	—	—
10 18	15 21.14	+20 14.4	1.599	1.057	37.5	20.3	40 E	34*	5*	1 1	18 34.17	-21 16.5	2.648	1.667	1.8	20.3	3 W	—	—
10 23	15 41.55	+18 8.3	1.539	1.012	39.5	20.1	40 E	34*	5*	1 11	19 4.10	-20 18.9	2.632	1.657	3.5	20.4	6 W	—	—
10 28	16 3.04	+15 43.8	1.482	0.968	41.6	20.0	40 E	34*	6*	1 21	19 33.74	-19 0.6	2.615	1.650	5.3	20.5	9 W	1*	1*
11 2	16 25.55	+12 59.0	1.430	0.926	43.6	19.9	40 E	34*	7*	153814 2001 WN₅									
11 7	16 49.01	+ 9 52.5	1.382	0.885	45.6	19.8	40 E	33*	9*	8 24	13 12.35	- 8 42.2	1.702	1.293	36.3	21.5	49 E	11*	43*
11 12	17 13.27	+ 6 24.1	1.342	0.848	47.4	19.7	39 E	32*	11*	9 3	13 38.49	-11 4.7	1.678	1.224	36.7	21.4	46 E	10*	40*
11 17	17 38.14	+ 2 34.9	1.309	0.814	49.0	19.6	38 E	31*	13*	9 13	14 7.27	-13 30.1	1.643	1.157	37.3	21.2	44 E	9*	38*
11 22	18 3.41	+ 1 32.1	1.285	0.784	50.2	19.5	38 E	29*	15*	9 23	14 39.02	-15 53.8	1.600	1.094	38.2	21.0	42 E	9*	36*
11 27	18 28.85	+ 5 52.2	1.270	0.760	51.0	19.4	37 E	27*	17*	10 3	15 14.15	-18 9.4	1.550	1.036	39.6	20.9	41 E	9*	35*
12 2	18 54.26	-10 19.1	1.263	0.742	51.2	19.4	36 E	24*	19*	10 13	15 52.99	-20 8.3	1.495	0.986	41.4	20.8	41 E	10*	35*
12 7	19 19.47	-14 46.0	1.265	0.732	51.0	19.3	35 E	21*	22*	10 23	16 35.70	-21 39.6	1.438	0.947	43.5	20.7	41 E	11*	35*
12 12	19 44.36	-19 6.0	1.274	0.729	50.4	19.3	35 E	17*	24*	11 2	17 22.14	-22 31.0	1.382	0.922	45.8	20.6	42 E	13*	35*
12 17	20 8.90	-23 13.1	1.287	0.734	49.5	19.3	35 E	14*	25*	11 12	18 11.71	-22 30.6	1.332	0.912	48.0	20.5	43 E	15*	35*
12 22	20 33.13	-27 2.9	1.304	0.747	48.5	19.4	35 E	11*	27*	11 22	19 3.31	-21 29.4	1.292	0.919	49.6	20.5	45 E	18*	36*
12 27	20 57.18	-30 32.0	1.322	0.766	47.5	19.4	35 E	8*	28*	12 2	19 55.50	-19 25.2	1.267	0.941	50.5	20.6	47 E	22*	37*
1 1	21 21.19	-33 38.4	1.341	0.792	46.6	19.5	36 E	5*	30*	12 12	20 46.82	-16 24.1	1.260	0.978	50.3	20.6	50 E	25*	37*
1 6	21 45.33	-36 21.3	1.360	0.823	45.8	19.6	37 E	3*	31*	12 22	21 36.03	-12 39.8	1.274	1.026	49.2	20.7	52 E	29*	36*
1 11	22 9.73	-38 40.4	1.377	0.858	45.2	19.7	38 E	—	32*	1 1	22 22.38	- 8 30.3	1.310	1.082	47.4	20.8	54 E	33*	35*
1 16	22 34.50	-40 35.8	1.392	0.897	44.7	19.8	40 E	—	33*	1 11	23 5.59	- 4 13.3	1.367	1.145	45.0	20.1	55 E	37*	34*
1 21	22 59.69	-42 7.8	1.406	0.938	44.3	19.9	42 E	—	35*	1 21	23 45.69	- 0 3.3	1.443	1.211	42.4	21.2	56 E	40*	32*
8 24	12 39.20	- 3 58.2	1.776	1.190	32.9	21.3	40 E	9*	34*	220921 2005 GS₂₁									
9 3	12 56.83	- 5 58.7	1.716	1.061	33.0	21.0	35 E	7*	29*	8 24	13 14.13	- 3 53.9	2.288	1.777	25.0	21.5	48 E	15*	41*
9 13	13 16.53	- 8 9.6	1.624	0.915	34.1	20.6	31 E	5*	25*	9 3	13 36.22	- 6 5.6	2.333	1.756	23.6	21.5	44 E	13*	38*
9 23	13 38.63	-10 30.8	1.493	0.749	37.1	20.0	27 E	4*	21*	9 13	13 59.23	- 8 16.4	2.373	1.738	22.2	21.4	41 E	12*	34*
9 28	13 50.60	-11 44.5	1.409	0.657	40.3	19.7	25 E	3*	19*	9 23	14 23.16	-10 23.9	2.410	1.721	20.6	21.4	37 E	11*	31*
10 3	14 2.99	-12 58.6	1.310	0.558	45.4	19.4	23 E	3*	17*	10 3	14 48.03	-12 25.7	2.444	1.706	19.1	21.4	34 E	10*	27*
10 8	14 15.11	-14 8.8	1.192	0.453	54.5	18.9	22 E	2*	16*	10 13	15 13.85	-14 19.3	2.475	1.693	17.4	21.3	31 E	9*	24*
10 13	14 24.46	-15 1.9	1.049	0.344	72.0	18.6	19 E	1*	13*	10 23	15 40.59	-16 2.2	2.504	1.683	15.7	21.3	27 E	9*	20*
10 14	14 25.42	-15 7.4	1.017	0.323	77.4	18.6	18 E	1*	12*	11 2	16 8.19	-17 31.8	2.531	1.675	14.0	21.2	24 E	8*	17*
10 15	14 25.85	-15 10.1	0.985	0.302	83.6	18.6	18 E	—	11*	11 12	16 36.57	-18 45.7	2.555	1.669	12.3	21.2	21 E	7*	13*
10 16	14 25.57	-15 8.8	0.951	0.283	91.0	18.7	16 E	—	10*	11 22	17 5.58	-19 42.0	2.578	1.666	10.5	21.1	18 E	6*	10*
10 17	14 24.40	-15 2.6	0.918	0.265	99.6	18.8	15 E	—	9*	12 2	17 35.07	-20 18.9	2.600	1.665	8.7	21.1	15 E	5*	6*
10 18	14 22.13	-14 50.2	0.885	0.249	109.7	19.2	14 E	—	8*	12 12	18 4.83	-20 35.4	2.620	1.667	6.8	21.0	12 E	3*	3*
10 19	14 18.55	-14 30.1	0.854	0.236	121.2	19.8	12 E	—	6*	12 22	18 34.62	-20 31.2	2.638	1.672	5.0	20.9	9 E	1*	—
10 20	14 13.54	-14 1.2	0.825	0.226	134.2	20.8	9 E	—	3*	1 1	19 4.24	-20 6.4	2.655	1.679	3.2	20.9	5 E	—	—
8 24	12 47.36	+ 0 58.8	3.153	2.467	15.3	21.5	40 E	14*	33*	1 11	19 33.47	-19 22.1	2.670	1.688	1.6	20.8	3 E	—	—
9 3	13 2.05	+ 0 51.3	3.193	2.430	13.6	21.4	35 E	11*	28*	1 21	20 2.14	-18 19.9	2.682	1.700	1.6	20.8	3 W	—	—
9 13	13 17.50	- 2 43.1	3.221	2.393	11.8	21.4	29 E	9*	22*	394474 2007 TT₂₃									
9 23	13 33.69	- 4 35.7	3.237	2.356	10.0	21.3	24 E	7*	17*	8 24	13 20.46	- 7 15.6	2.430	1.951	23.6	21.5	51 E	13*	44*
10 3	13 50.64	- 6 28.3	3.242	2.317	8.0	21.1	19 E	5*	12*	9 3	13 39.96	- 8 51.7	2.468	1.910	22.3	21.4	46 E	12*	40*
10 13	14 8.35	- 8 19.9	3.234	2.278	6.0	21.0	14 E	3*	7*	9 13	14 0.66	-10 29.6	2.499	1.870	20.9	21.4	42 E	11*	35*
10 23	14 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°	
538212 2016 CA₁₃₆									352102 2007 AG₁₂									
8 24	13 24.21	8 18.0	0.996	0.876	65.0	21.3	52 E	13* 46*	8 24	14 41.42	-36 34.8	0.809	1.172	58.0	21.5	79 E	—	67*
8 29	13 28.97	8 41.0	0.947	0.801	70.0	21.2	48 E	12* 42*	8 29	14 53.37	-32 40.6	0.798	1.120	60.8	21.4	76 E	3*	66*
9 3	13 32.97	8 58.8	0.890	0.726	76.5	21.0	44 E	11* 38*	9 3	15 5.15	-28 39.1	0.788	1.069	63.7	21.4	72 E	7*	65*
9 8	13 35.29	9 6.5	0.825	0.652	85.2	20.9	40 E	9* 34*	9 8	15 16.66	-24 29.7	0.779	1.018	66.7	21.3	68 E	11*	62*
9 13	13 34.37	8 55.3	0.753	0.581	97.1	21.0	35 E	8* 29*	9 13	15 27.74	-20 11.6	0.770	0.969	69.6	21.3	65 E	15*	58*
9 18	13 27.63	8 10.9	0.678	0.519	113.5	21.4	28 E	5* 22*	9 18	15 38.22	-15 44.1	0.761	0.921	72.6	21.3	61 E	19*	54*
257744 2000 AD₂₀₅									537342 2015 KN₁₂₀									
8 24	13 49.90	4 8.5	1.416	1.203	44.5	21.5	56 E	20* 49*	8 24	15 14.02	+20 39.2	0.453	0.978	80.9	21.5	73 E	52*	41*
8 29	14 11.41	6 37.0	1.373	1.107	46.5	21.3	53 E	18* 46*	8 29	15 30.90	+19 12.5	0.424	0.975	82.3	21.4	73 E	52*	42*
9 3	14 35.83	9 16.9	1.312	1.012	49.2	21.1	50 E	17* 43*	9 3	15 49.42	+17 26.7	0.395	0.976	83.2	21.2	74 E	52*	43*
9 23	15 3.48	12 7.5	1.233	0.920	53.2	20.8	47 E	16* 40*	9 8	16 9.98	+15 16.6	0.366	0.979	83.8	21.1	75 E	52*	45*
10 3	15 34.78	-15 8.0	1.136	0.835	58.7	20.6	45 E	15* 39*	9 13	16 33.06	+12 36.2	0.338	0.986	83.7	20.9	77 E	51*	48*
10 13	16 10.14	-18 17.0	1.022	0.765	66.1	20.4	44 E	14* 38*	9 18	16 59.20	+9 19.4	0.312	0.995	82.8	20.8	79 E	50*	51*
10 18	16 29.45	-19 54.2	0.960	0.738	70.5	20.3	44 E	14* 38*	9 23	17 28.93	+5 21.0	0.290	1.007	81.1	20.6	82 E	48*	56*
10 23	16 49.88	-21 32.9	0.894	0.717	75.4	20.3	44 E	13* 38*	9 28	18 2.63	+0 41.1	0.272	1.021	78.3	20.4	86 E	45*	61*
10 28	17 11.53	-23 13.0	0.828	0.705	80.4	20.2	44 E	13* 38*	10 3	18 40.29	-4 30.0	0.262	1.038	74.6	20.2	91 E	40*	67*
11 2	17 34.56	-24 54.2	0.760	0.701	85.5	20.2	45 E	12* 39*	10 5	18 56.33	-6 38.2	0.260	1.045	72.9	20.1	93 E	38*	70*
11 7	17 59.26	-26 36.1	0.694	0.706	90.2	20.2	45 E	12* 39*	10 7	19 12.81	-8 45.6	0.259	1.053	71.1	20.1	95 E	36	72*
11 12	18 26.09	-28 17.1	0.629	0.719	94.2	20.2	46 E	11* 40*	10 9	19 29.63	-10 49.9	0.260	1.061	69.3	20.0	97 E	34	75*
11 14	18 37.58	-28 56.8	0.605	0.727	95.5	20.2	47 E	11* 41*	10 11	19 46.66	-12 48.9	0.262	1.069	67.4	20.0	99 E	32	77
11 16	18 49.57	-29 35.5	0.581	0.736	96.7	20.2	48 E	11* 41*	10 13	20 3.75	-14 40.7	0.266	1.078	65.6	20.0	100 E	30	79
11 18	19 2.14	-30 13.0	0.557	0.746	97.7	20.2	48 E	11* 42*	10 15	20 20.77	-16 23.7	0.271	1.087	63.8	20.0	102 E	29	80
11 20	19 15.35	-30 48.6	0.535	0.757	98.4	20.2	49 E	11* 43*	10 17	20 37.57	-17 56.7	0.277	1.096	62.2	20.0	104 E	27	82
11 22	19 29.27	-31 21.8	0.513	0.768	98.9	20.2	50 E	11* 44*	10 20	20 54.02	-19 18.9	0.285	1.105	60.6	20.1	105 E	26	83
11 24	19 43.97	-31 51.8	0.493	0.781	99.1	20.1	51 E	11* 45*	10 21	21 10.00	-20 30.2	0.294	1.114	59.1	20.1	106 E	24	85
11 26	19 59.52	-32 17.4	0.474	0.795	99.0	20.1	53 E	11* 46*	10 23	21 25.44	-21 30.7	0.305	1.124	57.7	20.2	107 E	23	86
11 28	20 15.95	-32 37.7	0.456	0.809	98.6	20.0	54 E	11* 48*	10 25	21 40.25	-22 20.9	0.316	1.134	56.4	20.2	108 E	23	86
11 30	20 33.31	-32 51.2	0.439	0.824	98.0	19.9	56 E	11* 50*	10 27	21 54.41	-23 1.4	0.328	1.144	55.2	20.3	109 E	22	87
12 2	20 51.59	-32 56.3	0.424	0.840	97.0	19.8	58 E	11* 51*	10 29	22 7.87	-23 32.9	0.342	1.154	54.1	20.4	110 E	21	88
12 4	21 10.75	-32 51.7	0.410	0.856	95.8	19.8	60 E	12* 53*	10 31	22 20.65	-23 56.4	0.356	1.165	53.1	20.4	110 E	21	88
12 6	21 30.71	-32 35.6	0.398	0.873	94.2	19.7	62 E	12* 53*	11 2	22 32.75	-24 12.7	0.371	1.175	52.2	20.5	111 E	21	88
12 8	21 51.33	-32 6.8	0.387	0.890	92.3	19.6	65 E	13* 58*	11 4	22 44.18	-24 22.5	0.386	1.186	51.4	20.6	111 E	21	88
12 10	22 12.42	-31 24.1	0.379	0.908	90.2	19.5	67 E	14* 61*	11 6	22 54.99	-24 26.7	0.403	1.197	50.6	20.7	111 E	21	88
12 12	22 33.75	-30 27.0	0.373	0.925	87.9	19.4	70 E	15* 63*	11 8	23 5.20	-24 26.0	0.419	1.208	49.9	20.8	111 E	21	88
12 14	22 55.08	-29 15.7	0.368	0.943	85.3	19.3	73 E	16* 66*	11 10	23 14.86	-24 20.9	0.437	1.219	49.3	20.9	111 E	21	88
12 16	23 16.14	-27 50.9	0.366	0.962	82.6	19.2	76 E	17* 69*	11 12	23 23.99	-24 12.1	0.455	1.230	48.6	21.0	111 E	21	88
12 18	23 36.69	-26 14.1	0.366	0.980	79.8	19.2	79 E	19* 71*	11 17	23 44.80	-23 36.8	0.502	1.258	47.3	21.2	111 E	21	88
12 20	23 56.54	-24 27.3	0.368	0.999	77.0	19.1	82 E	21* 73*	11 22	0 3.13	-22 47.1	0.552	1.286	46.1	21.4	110 E	22	87
12 22	0 15.53	-22 32.9	0.372	1.018	74.2	19.1	85 E	22* 75*	11 27	0 19.49	-21 47.3	0.604	1.315	45.1	21.6	109 E	23	86
12 24	0 33.54	-20 33.4	0.378	1.037	71.4	19.1	87 E	24* 76*	12 2	0 34.30	-20 40.3	0.658	1.344	44.3	21.8	108 E	24	85
12 26	0 50.53	-18 31.3	0.386	1.056	68.7	19.1	90 E	26* 77*	170013 2002 UO₃									
12 28	1 6.48	-16 28.8	0.397	1.075	66.1	19.1	92 E	29* 77*	8 24	23 0.71	+5 24.0	4.127	5.086	4.0	24.7	159 W	50	59
12 30	1 21.39	-14 27.7	0.408	1.094	63.7	19.1	94 E	31* 76*	9 3	22 53.96	+4 34.8	4.074	5.064	2.4	24.5	168 W	50	59
1	1 35.33	-12 29.6	0.422	1.113	61.4	19.1	96 E	33* 75*	9 13	22 47.05	+3 39.2	4.053	5.042	2.4	24.5	168 E	49	60
1	1 48.34	-10 35.5	0.437	1.132	59.3	19.2	98 E	34* 74*	9 23	22 40.40	+2 40.1	4.064	5.018	3.9	24.6	160 E	48	61
1	5 2 0.48	8 46.3	0.454	1.151	57.3	19.3	100 E	36* 72*	10 3	22 34.40	+1 40.6	4.105	4.994	5.8	24.7	150 E	47	62
1	7 2 11.84	7 2.3	0.472	1.170	55.5	19.3	101 E	38* 71*										
1	9 2 22.47	5 23.8	0.491	1.189	53.9	19.4	102 E	40* 69*										
1	11 2 32.44	3 50.8	0.511	1.208	52.4	19.5	103 E	41* 68*										
1	13 2 41.82	2 23.3	0.532	1.227	51.0	19.6	104 E	43* 66*										
1	15 2 50.66	1 1.1	0.555	1.246	49.8	19.7	105 E	44* 65*										
1	17 2 59.02	+0 16.1	0.578	1.265	48.6	19.7	105 E	45* 64*										
1	19 3 6.94	+1 28.5	0.602	1.284	47.6	19.8	106 E	46* 62*										
1	21 3 14.48	+2 36.4	0.627	1.302	46.7	19.9	106 E	48* 61*										
8 24	14 16.95	-13 30.8	1.055	1.122	55.3	21.5	66 E	17* 59*										
9 3	14 44.00	-15 6.1	1.030	1.062	57.6	21.4	63 E	16* 57*										
9 13	15 14.01	-16 37.4	0.993	1.007	60.4	21.3	60 E	16* 54*										
9 23	15 47.19	-17 58.2	0.946	0.957	63.7	21.1	59 E	17* 52*										
10 3	16 23.74	-19 0.8	0.889	0.916	67.3	21.0	58 E	17* 51*										
10 13	17 3.89	-19 36.8	0.825	0.886	71.2	20.9	57 E	19* 50*										
10 23	17 47.81	-19 36.7	0.758	0.871	75.0	20.8	58 E	21* 50*										
11 2	18 35.71	-18 50.3	0.691	0.871	78.0	20.7	59 E	23* 50*										
11 12	19 27.86	-17 7.1	0.631	0.886	79.6	20.6	62 E	26* 51*										
11 22	20 24.14	-14 17.6	0.583	0.914	79.2	20.5	65 E	30* 52*										
11 27	20 53.60	-12 27.1	0.566	0.933	78.1	20.4	68 E	32* 52*										
12 2	21 23.70	-10 20.4	0.553	0.955	76.5	20.4	70 E	35* 53*										
12 7	21 54.14	8 0.1	0.547	0.979	74.5	20.3	73 E	37* 53*										
12 12	22 24.56	5 29.8	0.546	1.004	72.1	20.3	76 E	40* 53*										
12 17	22 54.59	2 54.2	0.552	1.031	69.4	20.3	79 E	42* 53*										
12 22	23 23.86	0 18.6	0.565	1.060	66.7	20.3	82 E	45* 52*										
12 27	23 52.09	+2 12.5	0.583	1.089	63.9	20.4	84 E	47* 51*										
1	1 0 19.07	+4 35.5	0.608	1.119	61.2	20.4	86 E	50* 50*										
1	6 0 44.71	+6 48.1	0.638	1.150	58.7	20.5	88 E	52* 49*										
1	11 1 8.97	+8 49.0	0.674	1.181	56.4	20.6	89 E	54* 48*										
1	16 1 31.85	+10 37.9	0.714	1.212	54.3	20.8	90 E	56* 47*										
1	21 1 53.44	+12 15.0	0.758	1.243	52.4	20.9	90 E	57* 46*										

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
20425 1998 VD₃₅										533011 2014 AY₂₈									
8 24	23 2.41	+5 52.4	1.337	2.309	9.2	23.5	159 W	51	58	8 24	23 22.57	-1 24.2	0.734	1.719	11.7	23.0	160 W	44	65
8 29	22 55.65	+5 12.3	1.322	2.310	6.9	23.3	164 W	50	59	8 29	23 15.25	-2 38.0	0.731	1.730	7.7	22.9	167 W	42	67
9 3	22 48.66	+4 26.8	1.315	2.311	5.3	23.2	168 W	49	60	9 3	23 7.55	-3 54.9	0.734	1.741	3.6	22.7	174 W	41	68
9 8	22 41.62	+3 37.1	1.314	2.311	4.9	23.2	169 E	49	60	9 8	22 59.79	-5 12.2	0.743	1.751	0.9	22.5	178 E	40	69
9 13	22 34.76	+2 44.5	1.321	2.310	6.0	23.3	166 E	48	61	9 13	22 52.30	-6 26.9	0.758	1.760	4.7	22.8	172 E	39	70
9 18	22 28.26	+1 50.7	1.335	2.309	8.0	23.4	161 E	47	62	9 18	22 45.37	-7 36.6	0.779	1.769	8.5	23.1	165 E	37	72
9 23	22 22.29	+0 57.1	1.355	2.307	10.3	23.5	156 E	46	63	9 23	22 39.25	-8 39.4	0.806	1.777	12.1	23.3	158 E	36	73
222165 2000 AX₉₃										437316 2013 OS₃									
8 24	23 6.05	+24 41.8	2.399	3.253	11.1	22.9	142 W	70	39	8 24	23 23.49	+37 13.3	1.854	2.608	17.6	22.7	129 W	82	27
9 3	22 55.54	+24 35.8	2.348	3.246	9.6	22.7	148 W	70	39	8 29	23 16.56	+37 43.9	1.817	2.599	16.9	22.7	132 W	83	26
9 13	22 44.63	+24 4.4	2.323	3.237	8.8	22.7	150 E	69	40	9 3	23 9.04	+38 4.6	1.785	2.590	16.3	22.6	134 W	83	26
9 23	22 34.27	+23 10.6	2.325	3.226	9.3	22.7	149 E	68	41	9 8	23 1.12	+38 14.5	1.759	2.580	15.8	22.5	136 E	83	26
10 3	22 25.27	+22 0.1	2.354	3.215	10.7	22.8	144 E	67	42	9 13	22 52.99	+38 13.0	1.738	2.569	15.4	22.5	137 E	83	26
										9 18	22 44.87	+38 0.4	1.722	2.558	15.3	22.5	138 E	83	26
										9 23	22 36.99	+37 36.9	1.713	2.547	15.3	22.4	138 E	83	26
										9 28	22 29.55	+37 3.5	1.709	2.535	15.7	22.4	137 E	82	27
										10 3	22 22.74	+36 21.3	1.710	2.522	16.2	22.4	135 E	81	28
509353 2007 AT₂										399457 2002 PD₄₃									
8 24	23 6.17	+13 40.1	1.346	2.287	12.1	22.8	152 W	59	50	8 24	23 36.87	+22 43.8	2.579	3.417	10.9	24.5	140 W	68	41
9 3	22 52.43	+13 25.3	1.303	2.273	9.2	22.6	159 W	58	51	9 3	23 24.23	+22 27.9	2.443	3.345	9.0	24.3	149 W	67	42
9 13	22 37.98	+12 41.2	1.285	2.257	8.8	22.5	160 E	58	51	9 13	23 9.90	+21 45.3	2.336	3.271	7.7	24.1	154 E	67	42
9 23	22 24.51	+11 34.4	1.294	2.238	11.5	22.6	154 E	57	52	9 23	22 54.82	+20 35.6	2.262	3.194	7.9	24.0	154 E	66	43
10 3	22 13.46	+10 15.0	1.328	2.218	15.3	22.8	144 E	55	54	10 3	22 40.09	+19 2.6	2.221	3.115	9.8	23.9	148 E	64	45
308607 2005 WY₃										417871 2007 MB₂₄									
8 24	23 8.88	+8 20.0	8.005	8.936	2.7	23.1	156 W	53	56	8 24	23 36.91	+63 43.1	2.744	3.136	18.3	23.8	103 W	71	-
9 3	23 5.38	+7 55.0	7.930	8.903	1.8	23.0	164 W	53	56	8 29	23 27.61	+64 12.8	2.703	3.128	18.1	23.8	106 W	71	-
9 13	23 1.78	+7 26.1	7.885	8.870	1.4	22.9	167 E	52	57	9 3	23 17.39	+64 32.4	2.663	3.120	18.0	23.7	108 W	70	-
9 23	22 58.24	+6 54.4	7.871	8.837	1.9	22.9	163 E	52	57	9 8	23 6.49	+64 41.0	2.626	3.111	17.8	23.7	110 W	70	-
10 3	22 54.93	+6 21.1	7.887	8.803	2.8	23.0	155 E	51	58	9 13	22 55.25	+64 37.9	2.592	3.102	17.6	23.6	111 E	70	-
										9 18	22 44.05	+64 22.7	2.561	3.092	17.4	23.6	113 E	71	-
										9 23	22 33.23	+63 55.6	2.533	3.082	17.3	23.6	114 E	71	-
										9 28	22 23.14	+63 16.9	2.508	3.071	17.2	23.5	115 E	72	1
418094 2007 WV₄										452639 2005 UY₆									
8 24	23 9.08	+58 47.5	1.521	2.083	27.3	23.3	109 W	76	5	8 24	23 37.17	-0 52.8	3.186	4.132	5.6	24.2	156 W	44	65
8 29	22 58.98	+58 59.9	1.501	2.092	26.7	23.3	111 W	76	5	9 3	23 28.16	-1 41.6	3.122	4.115	2.9	24.0	168 W	43	66
9 3	22 48.32	+58 55.8	1.484	2.100	26.2	23.3	113 W	76	5	9 13	23 18.49	-2 35.1	3.090	4.096	0.5	23.8	178 E	42	67
9 8	22 37.55	+58 34.2	1.468	2.107	25.6	23.2	115 E	76	5	9 23	23 8.76	-3 29.5	3.093	4.076	3.2	24.0	167 E	42	67
9 13	22 27.12	+57 55.1	1.456	2.114	25.1	23.2	117 E	77	6	10 3	22 59.60	-4 21.1	3.128	4.055	6.1	24.2	155 E	41	68
9 18	22 17.46	+56 59.2	1.446	2.120	24.6	23.2	119 E	78	7										
9 23	22 8.90	+55 47.7	1.440	2.125	24.2	23.2	120 E	79	8										
535148 2014 XR₆										526255 2005 YP₁₂₈									
8 24	23 10.91	-44 25.4	3.007	3.874	8.7	24.2	144 W	1	72	8 24	23 41.70	+34 13.1	2.787	3.520	12.8	22.3	130 W	79	30
8 29	23 5.70	-44 53.9	3.007	3.867	8.9	24.2	144 W	-	71	8 29	23 37.94	+34 15.8	2.744	3.515	12.1	22.2	133 W	79	30
9 3	23 0.29	-45 16.9	3.013	3.860	9.2	24.2	142 W	-	71	9 3	23 33.86	+34 12.0	2.706	3.509	11.4	22.2	137 W	79	30
9 8	22 54.82	-45 33.8	3.024	3.853	9.6	24.3	140 E	-	70	9 8	23 29.53	+34 1.6	2.673	3.503	10.7	22.1	140 W	79	30
9 13	22 49.39	-45 44.3	3.042	3.845	10.2	24.3	138 E	-	70	9 13	23 25.05	+33 44.4	2.646	3.497	10.1	22.1	142 W	79	30
9 18	22 44.12	-45 48.5	3.066	3.837	10.8	24.3	134 E	-	70	9 18	23 20.53	+33 20.7	2.625	3.491	9.7	22.0	144 E	78	31
9 23	22 39.14	-45 46.4	3.095	3.829	11.4	24.4	131 E	-	70	9 23	23 16.06	+32 50.5	2.610	3.484	9.4	22.0	146 E	78	31
										9 28	23 11.74	+32 14.6	2.602	3.478	9.3	22.0	146 E	77	32
										10 3	23 7.68	+31 33.3	2.600	3.471	9.4	22.0	145 E	77	32
										10 8	23 3.96	+30 47.5	2.604	3.463	9.7	22.0	144 E	76	33
										10 13	23 0.66	+29 58.2	2.615	3.456	10.3	22.0	142 E	75	34
416261 2003 FD₅										485379 2011 FO₅₆									
8 24	23 12.49	-46 47.8	2.703	3.555	10.1	23.0	142 W	-	69	8 24	23 44.57	+6 57.6	1.204	2.143	13.4	21.3	151 W	52	57
8 29	23 7.03	-47 14.7	2.711	3.556	10.2	23.0	141 W	-	69	9 3	23 35.28	+6 5.1	1.190	2.172	8.3	21.1	162 W	51	58
9 3	23 1.39	-47 35.0	2.725	3.557	10.5	23.0	140 W	-	68	9 13	23 24.96	+4 53.9	1.200	2.199	4.0	21.0	171 W	50	59
9 8	22 55.70	-47 48.4	2.745	3.557	10.9	23.0	138 E	-	68	9 23	23 15.04	+3 33.7	1.235	2.227	5.2	21.1	168 E	49	60
9 13	22 50.11	-47 54.5	2.770	3.558	11.5	23.1	135 E	-	68	10 3	23 6.78	+2 14.7	1.295	2.254	9.7	21.5	158 E	47	62
9 18	22 44.76	-47 53.6	2.801	3.558	12.0	23.1	132 E	-	68	10 13	23 1.09	+1 5.8	1.379	2.280	13.9	21.8	147 E	46	63
9 23	22 39.76	-47 45.8	2.837	3.558	12.6	23.2	129 E	-	68										
523608 2005 EZ₂₉										430802 2004 XK₄									
8 24	23 12.61	-5 33.0	1.578	2.565	6.3	23.8	164 W	39	70	8 24	23 45.42	-18 12.4	1.222	2.185	10.8	23.8	156 W	27	82
8 29	23 7.13	-6 19.4	1.574	2.575	3.8	23.7	170 W	39	70	8 29	23 40.26	-19 3.2	1.191	2.169	9.0	23.7	160 W	26	83
9 3	23 1.45	-7 6.6	1.576	2.584	1.3	23.5	177 W	38	71	9 3	23 34.40	-19 52.8	1.167	2.153	7.7	23.6	163 W	25	84
9 8	22 55.73	-7 53.3	1.586	2.593	1.3	23.5	177 E	37	72	9 8	23 27.97	-20 39.4	1.149	2.136	7.4	23.5	164 W	24	85
9 13	22 50.14	-8 38.4	1.604	2.601	3.7	23.8	170 E	36	73	9 13	23 21.18	-21 21.2	1.138	2.119	8.2	23.5	163 E	24	85
9 18	22 44.82	-9 20.8	1.629	2.609	6.1	23.9	164 E	36	73	9 18	23 14.25	-21 56.6	1.133	2.102	9.9	23.5	159 E	23	86
9 23	22 39.89	-9 59.7	1.660	2.617	8.3	24.1	158 E	35	74	9 23	23 7.42	-22 24.3	1.134	2.084	12.1	23.6	154 E	23	86
										9 28	23 0.92	-22 43.6	1.141	2.066	14.4	23.7	149 E	22	87

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
497230 2005 CU₂₅										475354 2006 CE									
8 24	23 51.41	-15 1.6	1.741	2.693	9.0	22.0	155 W	30	79	9 3	0 9.15	+47 45.6	1.718	2.407	20.9	22.7	122 W	87	16
8 29	23 46.69	-15 42.8	1.744	2.716	7.2	21.9	160 W	29	80	9 8	23 58.67	+48 47.5	1.696	2.410	20.2	22.7	124 W	86	15
9 3	23 41.67	-16 22.0	1.753	2.738	5.8	21.9	164 W	29	80	9 13	23 47.22	+49 36.0	1.678	2.413	19.6	22.6	126 W	85	14
9 8	23 36.47	-16 58.3	1.770	2.760	4.9	21.9	167 W	28	81	9 18	23 35.10	+50 9.6	1.665	2.416	19.2	22.6	128 E	85	14
9 13	23 31.23	-17 30.7	1.794	2.781	4.9	21.9	166 W	27	82	9 23	23 22.65	+50 27.7	1.658	2.418	18.8	22.6	129 E	85	14
9 18	23 26.09	-17 58.6	1.824	2.803	5.8	22.0	164 E	27	82	9 28	23 10.28	+50 30.2	1.656	2.419	18.7	22.6	129 E	84	13
9 23	23 21.19	-18 21.4	1.862	2.824	7.2	22.1	159 E	27	82	10 3	22 58.38	+50 17.7	1.660	2.420	18.7	22.6	129 E	85	14
9 28	23 16.62	-18 38.9	1.907	2.844	8.7	22.3	155 E	26	83	452313 1998 XR₁₆									
10 3	23 12.48	-18 50.9	1.957	2.865	10.2	22.4	149 E	26	83	9 3	0 10.55	-28 51.4	2.631	3.548	7.9	23.9	151 W	16	87
362047 2009 BG₁₄										9 8	0 5.93	-29 31.4	2.619	3.542	7.6	23.9	152 W	15	86
8 24	23 52.78	+33 8.9	2.166	2.915	15.5	21.6	129 W	78	31	9 13	0 1.03	-30 7.5	2.614	3.536	7.6	23.9	152 W	15	86
8 29	23 48.60	+33 17.2	2.134	2.921	14.6	21.5	133 W	78	31	9 18	23 55.96	-30 38.8	2.616	3.530	7.9	23.9	151 W	14	85
9 3	23 44.00	+33 17.9	2.108	2.927	13.6	21.4	137 W	78	31	9 23	23 50.82	-31 4.7	2.625	3.523	8.5	23.9	149 E	14	85
9 8	23 39.08	+33 10.5	2.086	2.932	12.7	21.4	140 W	78	31	9 28	23 45.71	-31 24.8	2.641	3.516	9.2	24.0	146 E	14	85
9 13	23 33.95	+32 54.9	2.070	2.938	11.9	21.3	143 W	78	31	10 3	23 40.74	-31 38.9	2.664	3.508	10.1	24.0	142 E	13	84
9 18	23 28.76	+32 31.4	2.060	2.943	11.2	21.3	145 E	78	31	10 8	23 36.02	-31 46.8	2.692	3.500	11.0	24.1	138 E	13	84
9 23	23 23.65	+32 0.3	2.056	2.948	10.7	21.3	147 E	77	32	417264 2006 AT₂									
9 28	23 18.73	+31 22.3	2.058	2.952	10.5	21.3	147 E	76	33	9 3	0 13.05	-13 43.4	3.317	4.270	5.0	23.4	158 W	31	78
10 3	23 14.14	+30 38.2	2.067	2.957	10.6	21.3	147 E	76	33	9 13	0 6.02	-14 55.2	3.301	4.281	3.5	23.3	165 W	30	79
10 8	23 9.98	+29 49.1	2.081	2.961	11.0	21.3	146 E	75	34	9 23	23 58.55	-16 0.6	3.316	4.290	3.7	23.3	164 E	29	80
10 13	23 6.35	+28 56.2	2.102	2.965	11.5	21.4	144 E	74	35	10 3	23 51.14	-16 55.7	3.362	4.299	5.3	23.4	156 E	28	81
10 18	23 3.32	+28 0.9	2.129	2.968	12.3	21.4	141 E	73	36	10 13	23 44.33	-17 37.8	3.438	4.306	7.3	23.6	147 E	27	82
471034 2009 TG₈										513182 2005 CV₃₈									
8 24	23 55.89	+26 55.1	1.040	1.889	22.6	21.7	134 W	72	37	9 3	0 13.29	-8 4.0	1.377	2.346	8.9	23.4	159 W	37	72
8 29	23 53.18	+26 59.0	0.990	1.869	21.1	21.6	138 W	72	37	9 8	0 7.75	-9 6.9	1.379	2.364	6.6	23.3	164 W	36	73
9 3	23 49.60	+26 50.5	0.944	1.849	19.5	21.4	142 W	72	37	9 13	0 1.93	-10 8.2	1.387	2.382	4.8	23.2	169 W	35	74
9 8	23 45.22	+26 27.9	0.902	1.828	17.8	21.2	146 W	71	38	9 18	23 55.98	-11 6.3	1.403	2.399	4.1	23.2	170 W	34	75
9 13	23 40.18	+25 49.7	0.864	1.807	16.2	21.0	150 W	71	38	9 23	23 50.10	-11 59.7	1.426	2.416	5.0	23.3	168 E	33	76
9 18	23 34.66	+24 55.3	0.831	1.786	14.8	20.9	153 E	70	39	9 28	23 44.43	-12 47.5	1.456	2.432	6.9	23.3	163 E	32	77
9 23	23 28.88	+23 44.3	0.803	1.765	13.9	20.8	155 E	69	40	10 3	23 39.14	-13 28.8	1.493	2.448	8.9	23.6	158 E	32	77
9 28	23 23.09	+22 17.4	0.780	1.743	13.7	20.7	156 E	67	42	10 8	23 34.36	-14 3.1	1.536	2.463	11.0	23.8	152 E	31	78
10 3	23 17.58	+20 35.9	0.763	1.721	14.4	20.6	155 E	66	43	523915 1997 VM₄									
10 8	23 12.61	+18 42.4	0.751	1.699	16.0	20.6	152 E	64	45	9 3	0 15.22	-13 39.9	3.775	4.723	4.6	24.9	158 W	31	78
10 13	23 8.44	+16 40.4	0.744	1.677	18.1	20.6	148 E	62	47	9 13	0 7.63	-14 32.0	3.737	4.715	3.2	24.7	165 W	30	79
10 18	23 5.28	+14 33.5	0.742	1.655	20.7	20.7	144 E	60	49	9 23	23 59.54	-15 18.9	3.730	4.706	3.2	24.7	165 E	30	79
10 23	23 3.25	+12 25.6	0.744	1.633	23.4	20.7	139 E	57	52	10 3	23 51.44	-15 57.5	3.756	4.695	4.7	24.8	157 E	29	80
10 28	23 2.44	+10 20.2	0.751	1.611	26.2	20.8	134 E	55	54	10 13	23 43.81	-16 25.5	3.812	4.684	6.6	25.0	147 E	29	80
11 2	23 2.89	+8 20.1	0.762	1.589	28.9	20.9	129 E	53	56	524819 2003 YM₈									
11 7	23 4.60	+6 27.9	0.775	1.566	31.4	21.0	125 E	51	58	9 3	0 28.61	-35 52.7	2.252	3.122	11.1	22.0	144 W	9	80
11 12	23 7.54	+4 45.1	0.791	1.544	33.8	21.0	120 E	50	59	9 8	0 24.28	-36 37.3	2.241	3.116	10.9	22.0	144 W	8	79
11 17	23 11.65	+3 12.8	0.809	1.522	35.9	21.1	115 E	48	61	9 13	0 19.53	-37 16.4	2.237	3.109	10.9	22.0	144 W	8	79
11 22	23 16.84	+1 51.5	0.829	1.501	37.9	21.2	111 E	47	62	9 18	0 14.49	-37 49.0	2.238	3.103	11.1	22.0	143 W	7	78
11 27	23 23.06	+0 41.2	0.850	1.479	39.6	21.3	107 E	46	63*	9 23	0 9.27	-38 14.3	2.245	3.096	11.6	22.0	142 W	7	78
12 2	23 30.21	+0 18.3	0.871	1.458	41.2	21.3	103 E	45	64*	9 28	0 4.01	-38 31.9	2.258	3.089	12.2	22.0	139 E	6	77
12 7	23 38.24	+1 7.3	0.893	1.437	42.5	21.4	100 E	44	64*	10 3	23 58.83	-38 41.5	2.277	3.082	12.9	22.1	137 E	6	77
12 12	23 47.07	+1 46.3	0.914	1.417	43.7	21.4	96 E	43	63*	10 8	23 53.89	-38 43.0	2.301	3.074	13.7	22.1	133 E	6	77
12 17	23 56.63	+2 16.0	0.936	1.397	44.7	21.5	93 E	43	62*	10 13	23 49.29	-38 36.5	2.330	3.067	14.5	22.2	130 E	6	77
458012 2009 WW₁₀₅										10 18	23 45.16	-38 22.5	2.363	3.059	15.3	22.2	126 E	7	78
8 24	23 58.54	+22 44.8	2.001	2.827	14.1	22.5	137 W	68	41	10 23	23 41.56	-38 1.4	2.401	3.051	16.0	22.3	122 E	7	78
9 3	23 50.20	+22 46.9	1.911	2.804	11.6	22.3	146 W	68	41	508784 1999 XV₈₁									
9 13	23 40.17	+22 21.7	1.844	2.780	9.3	22.1	153 W	67	42	9 3	0 38.72	+10 21.9	1.574	2.481	12.8	21.8	147 W	55	54
9 23	23 29.38	+21 29.0	1.803	2.755	8.1	21.9	157 E	66	43	9 13	0 32.28	+9 54.3	1.467	2.430	8.9	21.5	158 W	55	54
10 3	23 18.91	+20 12.7	1.788	2.729	8.9	21.9	155 E	65	44	9 23	0 23.68	+9 6.7	1.384	2.377	4.6	21.1	169 W	54	55
10 13	23 9.85	+18 40.2	1.801	2.701	11.2	22.0	148 E	64	45	10 3	0 13.71	+8 2.1	1.327	2.324	3.0	20.8	173 E	53	56
482562 2012 VN₈₂										10 13	0 3.59	+6 46.9	1.298	2.270	7.4	21.0	163 E	52	57
9 3	0 7.50	+16 1.6	1.204	2.134	14.0	22.8	149 W	61	48	10 23	23 54.69	+5 30.6	1.293	2.216	12.6	21.1	151 E	51	58
9 8	0 0.34	+15 15.4	1.195	2.150	11.4	22.8	155 W	60	49	11 2	23 48.15	+4 22.7	1.311	2.162	17.4	21.3	139 E	49	60
9 13	23 52.86	+14 21.2	1.192	2.166	9.0	22.7	160 W	59	50	11 12	23 44.77	+3 30.8	1.347	2.108	21.6	21.4	128 E	49	60
9 18	23 45.30	+13 20.4	1.196	2.182	7.0	22.6	165 W	58	51	136620 1994 JC									
9 23	23 37.89	+12 14.6	1.208	2.196	6.1	22.6	167 E	57	52	9 3	0 38.91	-26 7.0	4.171	5.053	6.1	22.0	148 W	19	90
9 28	23 30.83	+11 5.7	1.226	2.210	6.7	22.7	165 E	56	53	9 13	0 32.14	-26 45.5	4.148	5.058	5.4	21.9	152 W	18	89
10 3	23 24.32	+9 55.9	1.252	2.223	8.3	22.8	161 E	55	54	9 23	0 24.76	-27 13.9	4.154	5.063	5.3	22.0	152 W	18	89
10 8	23 18.52	+8 46.9	1.284	2.235	10.4	23.0	156 E	54	55	10 3	0 17.21	-27 29.8	4.188	5.068	5.9	22.0	148 E	18	89
530940 2011 XE₁										10 13	0 9.94	-27 31.5	4.250	5.071	7.0	22.1	142 E	17	88
9 3	0 7.68	+28 40.8	2.277	3.108	12.3	23.2	139 W	74	35	10 23	0 3.41	-27 18.9	4.337	5.074	8.2	22.2	134 E	18	89

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°		
452474 2004 BG₁₁ (continuation)									468305 2015 YA₈										
10 8	23 45.29	-50 55.2	1.854	2.523	19.8	22.9	121 E	65	9 3	0 53.93	-2 47.9	2.363	3.264	9.4	21.9	148 W	42	67	
10 13	23 39.03	-50 34.9	1.903	2.534	20.3	23.0	118 E	65	9 13	0 46.99	-4 13.8	2.337	3.297	6.2	21.7	159 W	41	68	
471956 2013 SC₂₅									350973 2003 EN₃₁										
9 3	0 45.17	+23 45.3	1.241	2.098	19.0	22.2	137 W	69	40	9 23	0 38.98	-5 40.2	2.340	3.329	3.4	21.6	169 W	39	70
9 8	0 39.59	+23 58.4	1.176	2.068	17.3	22.0	142 W	69	40	10 3	0 30.57	-7 1.0	2.372	3.360	3.2	21.6	169 E	38	71
9 13	0 32.80	+24 2.8	1.116	2.037	15.4	21.8	147 W	69	40	10 13	0 22.51	-8 10.4	2.436	3.390	5.8	21.8	160 E	37	72
9 18	0 24.84	+23 57.0	1.061	2.005	13.6	21.6	152 W	69	40	10 23	0 15.48	-9 4.3	2.528	3.419	8.6	22.1	149 E	36	73
9 23	0 15.80	+23 39.4	1.012	1.972	12.0	21.4	156 W	69	40	511140 2013 YJ₂									
9 28	0 5.85	+23 8.9	0.970	1.938	10.9	21.3	159 E	68	41	9 3	0 54.22	+14 53.7	2.020	2.878	12.6	21.7	141 W	60	49
10 3	23 55.25	+22 24.7	0.934	1.902	10.9	21.1	159 E	67	42	9 13	0 46.31	+14 31.6	1.965	2.895	9.2	21.5	152 W	60	49
10 8	23 44.32	+21 27.0	0.905	1.866	12.1	21.1	157 E	66	43	9 23	0 36.89	+13 52.4	1.935	2.911	5.7	21.3	163 W	59	50
10 13	23 33.45	+20 17.1	0.883	1.829	14.4	21.1	153 E	65	44	10 3	0 26.83	+12 59.4	1.934	2.926	3.2	21.2	171 E	58	51
10 18	23 23.02	+18 57.2	0.868	1.791	17.3	21.1	148 E	64	45	10 13	0 17.10	+11 57.7	1.962	2.939	4.8	21.3	166 E	57	52
10 23	23 13.38	+17 30.1	0.859	1.752	20.6	21.1	142 E	63	46	10 23	0 8.65	+10 54.2	2.019	2.952	8.1	21.5	155 E	56	53
10 28	23 4.78	+15 59.1	0.855	1.711	24.1	21.1	135 E	61	48	172718 2004 BD₈₅									
11 2	22 57.44	+14 27.2	0.855	1.669	27.5	21.2	129 E	59	50	9 3	0 56.84	+41 39.3	1.197	1.936	26.1	21.6	123 W	87	22
11 7	22 51.50	+12 57.5	0.860	1.626	30.8	21.3	123 E	58	51	9 13	0 52.53	+42 15.3	1.164	1.937	24.8	21.5	126 W	87	22
11 12	22 47.01	+11 32.3	0.867	1.582	34.0	21.3	117 E	57	52	9 18	0 47.14	+42 39.7	1.134	1.938	23.5	21.4	130 W	88	21
11 17	22 43.96	+10 13.4	0.875	1.537	36.9	21.3	111 E	55	54	9 23	0 40.92	+32 6.6	2.074	2.963	10.8	21.9	146 W	77	32
11 22	22 42.29	+9 1.8	0.885	1.491	39.7	21.4	105 E	54	55*	10 3	0 31.66	+30 55.0	2.000	2.927	9.0	21.7	153 E	76	33
11 27	22 41.93	+7 57.8	0.894	1.443	42.3	21.4	100 E	53	55*	10 13	0 22.17	+29 13.5	1.952	2.889	8.3	21.6	155 E	74	35
12 2	22 42.80	+7 1.7	0.902	1.394	44.8	21.4	95 E	52	53*	10 23	0 13.53	+27 8.1	1.932	2.851	9.3	21.6	152 E	72	37
12 7	22 44.81	+6 13.3	0.909	1.344	47.2	21.4	90 E	51	52*	334673 2003 AL₁₈									
12 12	22 47.87	+5 32.1	0.913	1.292	49.5	21.4	86 E	51	49*	9 3	0 57.01	+27 26.4	1.542	2.349	18.3	21.6	133 W	72	37
12 17	22 51.89	+4 57.5	0.913	1.239	51.8	21.4	81 E	50	47*	9 8	0 51.56	+27 44.8	1.509	2.355	16.7	21.5	138 W	73	36
12 22	22 56.76	+4 28.6	0.910	1.185	54.1	21.3	77 E	49*	44*	9 13	0 45.33	+27 55.0	1.481	2.360	15.0	21.5	143 W	73	36
12 27	23 2.40	+4 4.3	0.903	1.130	56.5	21.3	73 E	49*	41*	9 18	0 38.46	+27 56.6	1.458	2.366	13.3	21.4	147 W	73	36
1 1	23 8.75	+3 43.5	0.892	1.074	59.2	21.2	70 E	48*	39*	9 23	0 33.70	+42 47.5	1.084	1.939	20.9	21.2	136 W	88	21
1 6	23 15.69	+3 24.7	0.875	1.017	62.1	21.2	66 E	47*	36*	9 28	0 26.09	+42 28.5	1.065	1.939	19.7	21.2	139 W	87	22
1 11	23 23.11	+3 6.1	0.852	0.959	65.5	21.1	63 E	45*	34*	10 3	0 18.27	+41 53.5	1.051	1.939	18.6	21.1	142 E	87	22
1 16	23 30.83	+2 45.0	0.824	0.901	69.4	21.0	59 E	44*	31*	10 8	0 10.58	+41 2.7	1.041	1.938	17.9	21.1	143 E	86	23
1 21	23 38.65	+2 18.2	0.789	0.844	74.0	20.9	56 E	41*	29*	10 13	0 3.37	+39 57.3	1.037	1.936	17.5	21.0	144 E	85	24
152575 1994 GY									334673 2003 AL₁₈										
9 3	0 45.97	-5 58.6	2.162	3.081	9.2	21.7	151 W	39	70	10 18	23 56.91	+38 39.4	1.037	1.934	17.6	21.0	144 E	84	25
9 13	0 36.90	-6 44.7	2.156	3.127	5.8	21.6	162 W	38	71	10 23	23 51.43	+37 11.7	1.043	1.932	18.1	21.1	143 E	82	27
9 23	0 26.93	-7 27.8	2.178	3.171	3.2	21.5	170 W	38	71	10 28	23 47.08	+35 37.1	1.054	1.930	18.9	21.1	141 E	81	28
10 3	0 16.92	-8 2.9	2.231	3.214	3.9	21.6	167 E	37	72	11 2	23 43.95	+33 58.5	1.069	1.927	20.1	21.2	138 E	79	30
10 13	0 7.71	-8 26.5	2.313	3.256	6.8	21.9	157 E	37	72	11 7	23 42.05	+32 18.9	1.090	1.923	21.4	21.2	135 E	77	32
10 23	23 59.98	-8 36.5	2.423	3.297	9.7	22.1	146 E	36	73	11 12	23 41.40	+30 41.0	1.115	1.919	22.7	21.3	131 E	76	33
496124 2010 EK₁₂									334673 2003 AL₁₈										
9 3	0 46.67	+25 51.0	2.177	2.984	13.6	22.4	136 W	71	38	11 17	23 41.91	+29 6.9	1.144	1.915	24.1	21.4	128 E	74	35
9 13	0 37.64	+25 51.4	2.125	3.008	11.0	22.3	145 W	71	38	334673 2003 AL₁₈									
9 23	0 27.23	+25 27.5	2.098	3.030	8.5	22.2	154 W	70	39	9 3	0 57.01	+27 26.4	1.542	2.349	18.3	21.6	133 W	72	37
10 3	0 16.37	+24 40.7	2.097	3.051	6.9	22.1	159 E	70	39	9 8	0 51.56	+27 44.8	1.509	2.355	16.7	21.5	138 W	73	36
10 13	0 6.08	+23 35.3	2.124	3.070	7.1	22.2	158 E	69	40	9 13	0 45.33	+27 55.0	1.481	2.360	15.0	21.5	143 W	73	36
10 23	23 57.30	+22 18.7	2.180	3.088	9.0	22.3	151 E	67	42	9 18	0 38.46	+27 56.6	1.458	2.366	13.3	21.4	147 W	73	36
276468 2003 HQ₃₂									334673 2003 AL₁₈										
9 3	0 48.59	+36 44.9	1.696	2.443	19.2	22.1	127 W	82	27	9 23	0 33.12	+27 49.0	1.441	2.370	11.8	21.3	151 W	73	36
9 8	0 44.95	+36 24.1	1.640	2.431	18.0	21.9	132 W	81	28	9 28	0 23.49	+27 32.3	1.431	2.374	10.5	21.2	154 W	73	36
9 13	0 40.60	+35 52.3	1.588	2.417	16.7	21.8	136 W	81	28	10 3	0 15.80	+27 6.7	1.427	2.377	9.8	21.2	156 E	72	37
9 18	0 35.64	+35 8.5	1.540	2.404	15.3	21.7	141 W	80	29	10 8	0 8.28	+26 33.0	1.430	2.380	9.6	21.2	157 E	72	37
9 23	0 30.20	+34 12.2	1.498	2.390	13.9	21.6	145 W	79	30	10 13	0 1.15	+25 52.6	1.440	2.383	10.1	21.2	155 E	71	38
9 28	0 24.44	+33 3.0	1.462	2.376	12.6	21.5	149 W	78	31	10 18	23 54.60	+25 7.0	1.457	2.384	11.2	21.3	152 E	70	39
10 3	0 18.54	+31 41.1	1.432	2.362	11.5	21.4	152 E	77	32	10 23	23 48.78	+24 18.0	1.480	2.386	12.6	21.4	149 E	69	40
10 8	0 12.70	+30 7.2	1.408	2.347	10.8	21.3	154 E	75	34	10 28	23 43.80	+23 27.3	1.509	2.386	14.1	21.5	144 E	68	41
10 13	0 7.12	+28 23.0	1.393	2.332	10.7	21.2	154 E	73	36	334955 2004 CY₁₀₄									
10 18	0 2.00	+26 30.4	1.384	2.316	11.3	21.2	153 E	72	37	9 3	0 58.57	+3 7.7	1.427	2.330	14.1	21.6	146 W	48	61
10 23	23 57.47	+24 32.0	1.383	2.300	12.4	21.3	150 E	70	39	9 13	0 51.28	+1 40.4	1.373	2.335	9.5	21.4	157 W	47	62
10 28	23 53.66	+22 30.6	1.389	2.284	13.9	21.3	147 E	68	41	9 23	0 41.86	+0 1.1	1.345	2.338	4.5	21.1	169 W	45	64
11 2	23 50.65	+20 28.7	1.401	2.268	15.6	21.4	142 E	65	44	10 3	0 31.38	-1 40.5	1.343	2.341	2.4	21.0	174 E	43	66
11 7	23 48.51	+18 28.9	1.421	2.251															

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
138877 2000 XG₄₇									475462 2006 SW₅ (continuation)								
9 3	1 3.63	-21 34.5	2.423	3.296	10.3	21.8	144 W	23 86	10 18	1 16.68	+22 54.0	0.610	1.596	8.6	19.4	166 E	68 41
9 8	0 59.19	-22 8.0	2.395	3.294	9.3	21.7	148 W	23 86	10 23	1 7.19	+23 13.7	0.587	1.568	9.9	19.4	164 E	68 41
9 13	0 54.28	-22 39.4	2.373	3.291	8.5	21.6	151 W	22 87	10 28	0 57.41	+23 25.8	0.569	1.541	12.7	19.4	160 E	68 41
9 18	0 48.96	-23 7.5	2.359	3.288	7.9	21.6	153 W	22 87	11 2	0 47.78	+23 30.6	0.556	1.514	16.3	19.4	155 E	69 40
9 23	0 43.35	-23 31.7	2.351	3.284	7.6	21.6	154 W	21 88	11 7	0 38.77	+23 29.4	0.547	1.486	20.2	19.5	149 E	68 41
9 28	0 37.55	-23 51.0	2.351	3.280	7.8	21.6	154 W	21 88	11 12	0 30.81	+23 24.3	0.543	1.459	24.2	19.5	143 E	68 41
10 3	0 31.66	-24 5.0	2.358	3.276	8.2	21.6	152 E	21 88	11 17	0 24.24	+23 17.4	0.541	1.433	28.1	19.6	137 E	68 41
10 8	0 25.83	-24 13.2	2.372	3.271	9.0	21.7	149 E	21 88	11 22	0 19.25	+23 10.9	0.542	1.406	31.9	19.7	131 E	68 41
10 13	0 20.16	-24 15.3	2.394	3.266	9.9	21.7	146 E	21 88	11 27	0 15.99	+23 6.9	0.546	1.380	35.4	19.7	126 E	68 41
10 18	0 14.79	-24 11.3	2.421	3.261	11.0	21.8	142 E	21 88	12 2	0 14.50	+23 6.8	0.550	1.354	38.6	19.8	121 E	68 41
10 23	0 9.79	-24 1.3	2.455	3.255	12.0	21.8	137 E	21 88	12 7	0 14.80	+23 12.1	0.555	1.329	41.6	19.9	116 E	68 41
10 28	0 5.26	-23 45.7	2.495	3.249	13.1	21.9	132 E	21 88	12 12	0 16.85	+23 23.6	0.561	1.304	44.4	19.9	112 E	68 40*
523828 1992 BC									12 22 0 25.89 +24 6.3 0.571 1.258 49.1 20.0 105 E 69 38*								
9 3	1 7.27	-17 35.0	0.898	1.817	18.8	21.8	145 W	27 82	1 1	0 41.08	+25 13.7	0.579	1.216	53.0	20.1	99 E	70 35*
9 8	1 1.53	-19 13.3	0.891	1.829	16.6	21.7	149 W	26 83	1 11	1 2.15	+26 41.9	0.583	1.179	56.3	20.1	94 E	72 32*
9 13	0 54.81	-20 47.3	0.889	1.840	14.8	21.7	152 W	24 85	1 21	1 28.99	+28 23.2	0.583	1.149	58.9	20.1	91 E	73 29*
9 18	0 47.33	-22 13.8	0.893	1.850	13.7	21.7	154 W	23 86	307240 2002 JU₆₇								
9 23	0 39.35	-23 29.7	0.903	1.860	13.4	21.7	155 W	22 87	9 3	1 54.81	+30 41.3	2.416	3.061	16.4	21.3	121 W	76 33
9 28	0 31.15	-24 33.0	0.919	1.869	13.9	21.8	153 W	20 89	9 13	1 50.99	+30 37.1	2.293	3.047	14.5	21.1	131 W	76 33
10 3	0 23.06	-25 22.1	0.940	1.878	15.2	21.9	151 E	20 89	9 23	1 44.76	+30 11.0	2.187	3.032	12.1	20.9	141 W	75 34
10 8	0 15.36	-25 56.4	0.967	1.885	16.8	22.0	147 E	19 90	10 3	1 36.49	+29 20.3	2.103	3.016	9.3	20.7	151 W	74 35
10 13	0 8.34	-26 15.9	0.999	1.892	18.6	22.1	143 E	19 90	10 13	1 26.87	+28 3.8	2.044	2.998	6.8	20.5	159 W	73 36
10 18	0 2.20	-26 21.7	1.036	1.898	20.5	22.3	138 E	19 90	10 23	1 16.87	+26 24.4	2.014	2.980	5.6	20.4	163 E	71 38
10 23	23 57.06	-26 15.0	1.077	1.904	22.3	22.4	134 E	19 90	10 28	1 12.06	+25 28.0	2.010	2.970	6.0	20.5	162 E	70 39
333755 2010 VC₁									11 2 1 7.53 +24 28.5 2.014 2.960 7.0 20.5 159 E 69 40								
9 3	1 24.71	+10 0.8	0.922	1.797	22.5	21.5	137 W	55 54	11 7	1 3.41	+23 27.1	2.025	2.950	8.4	20.6	154 E	68 41
9 13	1 11.73	+ 6 35.9	0.854	1.802	15.7	21.1	151 W	52 57	11 12	0 59.78	+22 25.3	2.043	2.940	9.8	20.7	149 E	67 42
9 23	0 54.12	+ 2 23.7	0.810	1.801	7.7	20.7	166 W	47 62	11 17	0 56.73	+21 24.2	2.068	2.929	11.4	20.6	144 E	66 43
10 3	0 33.70	- 2 11.8	0.797	1.795	3.4	20.4	174 E	43 66	11 22	0 54.28	+20 24.9	2.099	2.918	12.8	20.8	139 E	65 44
10 8	0 23.31	- 4 27.0	0.802	1.790	7.1	20.6	167 E	41 68	11 27	0 52.48	+19 28.3	2.136	2.906	14.2	20.9	134 E	64 45
10 13	0 13.32	- 6 34.1	0.815	1.784	11.3	20.8	160 E	38 71	12 2	0 51.34	+18 35.3	2.178	2.895	15.5	20.9	128 E	64 45
10 18	0 4.09	- 8 29.3	0.835	1.777	15.3	21.0	152 E	37 72	12 7	0 50.86	+17 46.5	2.224	2.883	16.6	21.0	123 E	63 46
10 23	23 55.88	-10 10.3	0.861	1.768	19.1	21.2	144 E	35 74	12 12	0 51.03	+17 2.3	2.274	2.871	17.6	21.1	118 E	62 47
10 28	23 48.88	-11 36.0	0.893	1.758	22.5	21.4	137 E	33 76	12 17	0 51.82	+16 22.9	2.327	2.858	18.5	21.2	113 E	61 48*
481918 2009 BE₇₇									12 22 0 53.20 +15 48.4 2.382 2.846 19.2 21.2 108 E 61 48*								
9 3	1 37.51	+18 19.6	1.363	2.161	20.7	21.5	131 W	63 46	12 27	0 55.15	+15 18.9	2.439	2.833	19.7	21.3	103 E	60 47*
9 8	1 30.37	+17 17.1	1.362	2.212	17.9	21.4	137 W	62 47	1 1	0 57.64	+14 54.0	2.498	2.820	20.2	21.3	99 E	60 46*
9 13	1 22.65	+16 8.2	1.366	2.262	15.0	21.4	144 W	61 48	1 6	1 0.62	+14 33.8	2.557	2.806	20.5	21.4	94 E	60 45*
9 18	1 14.55	+14 53.9	1.378	2.311	12.0	21.3	151 W	60 49	1 11	1 4.08	+14 18.1	2.616	2.792	20.6	21.4	90 E	59 43*
9 23	1 6.28	+13 35.6	1.396	2.359	8.9	21.3	159 W	59 50	1 16	1 7.97	+14 6.4	2.676	2.778	20.7	21.5	86 E	59 41*
9 28	0 58.03	+12 15.2	1.423	2.406	5.9	21.2	166 W	57 52	474585 2004 HC₂								
10 3	0 50.02	+10 54.4	1.458	2.453	3.2	21.2	172 W	56 53	9 3	2 10.21	+26 31.2	0.803	1.574	33.6	21.4	120 W	72 37
10 8	0 42.42	+ 9 35.1	1.501	2.498	1.9	21.2	175 E	55 54	9 8	2 11.02	+23 30.4	0.731	1.555	31.5	21.1	126 W	69 40
10 13	0 35.40	+ 8 19.2	1.553	2.543	3.6	21.4	171 E	55 56	9 13	2 10.54	+19 41.7	0.664	1.536	28.8	20.8	133 W	65 44
10 18	0 29.07	+ 7 8.0	1.613	2.587	5.9	21.7	165 E	52 57	9 18	2 8.62	+14 54.8	0.603	1.517	25.3	20.5	140 W	60 49
10 23	0 23.50	+ 6 2.6	1.681	2.630	8.1	21.9	158 E	51 58	9 23	2 5.13	+ 9 0.3	0.550	1.497	21.1	20.1	147 W	54 55
10 28	0 18.74	+ 5 3.7	1.756	2.673	10.2	22.1	152 E	50 59	10 3	1 52.86	- 6 18.3	0.478	1.455	14.8	19.5	158 W	39 70
11 2	0 14.79	+ 4 11.7	1.838	2.714	11.9	22.3	146 E	49 60	10 13	1 33.45	-24 7.2	0.463	1.411	22.1	19.6	148 W	21 88
413578 2005 UM₆									10 23 1 8.76 -39 34.5 0.504 1.366 34.9 20.1 128 E 5 76								
9 3	1 49.90	+21 10.1	1.062	1.851	25.9	21.3	127 W	66 43	10 28	0 55.59	-45 27.4	0.540	1.343	40.2	20.4	119 E	- 71
9 8	1 49.24	+21 20.7	1.025	1.854	24.0	21.2	132 W	66 43	11 2	0 42.68	-50 6.7	0.581	1.319	44.5	20.6	111 E	- 66
9 13	1 47.54	+21 24.1	0.992	1.857	21.8	21.1	137 W	66 43	11 7	0 30.64	-53 42.9	0.626	1.295	47.9	20.8	104 E	- 62
9 18	1 44.82	+21 19.9	0.963	1.860	19.5	20.9	142 W	66 43	11 12	0 19.97	-56 28.7	0.673	1.272	50.4	21.0	98 E	- 60
9 23	1 41.12	+21 7.4	0.937	1.862	16.9	20.8	147 W	66 43	11 17	0 10.97	-58 36.0	0.719	1.248	52.4	21.2	93 E	- 57
9 28	1 36.53	+20 46.3	0.915	1.865	14.1	20.7	153 W	66 43	11 22	0 3.79	-60 14.7	0.763	1.224	53.8	21.3	88 E	- 56
10 3	1 31.20	+20 16.5	0.899	1.867	11.2	20.5	159 W	65 44	11 27	23 58.44	-61 32.3	0.805	1.200	54.8	21.4	83 E	- 54
10 8	1 25.33	+19 38.5	0.888	1.869	8.4	20.4	164 W	65 44	376811 2000 WU₁₂₄								
10 13	1 19.16	+18 53.2	0.882	1.871	6.0	20.3	169 W	64 45	9 3	2 10.63	-24 25.8	2.160	2.900	15.7	21.4	129 W	21 88
10 18	1 12.98	+18 2.1	0.883	1.873	5.1	20.2	170 E	63 46	9 8	2 8.72	-25 3.6	2.107	2.882	15.0	21.4	132 W	20 89
10 23	1 7.04	+17 7.2	0.889	1.874	6.3	20.3	168 E	62 47	9 13	2 6.09	-25 40.6	2.059	2.864	14.3	21.3	135 W	19 90
10 28	1 1.59	+16 10.6	0.902	1.876	8.7	20.4	163 E	61 48	9 18	2 2.74	-26 16.0	2.015	2.845	13.6	21.2	138 W	19 90
11 2	0 56.82	+15 14.2	0.920	1.877	11.5	20.6	158 E	60 49	9 23	1 58.70	-26 48.3	1.977	2.827	13.0	21.1	141 W	18 89
11 7	0 52.91	+14 20.3	0.944	1.878	14.3	20.7	152 E	59 50	9 28	1 54.01	-27 16.6	1.944	2.808	12.5	21.0	143 W	18 89
11 12	0 49.96	+13 30.5	0.972	1.879	16.9	20.9	146 E	59 50	10 3	1 48.74	-27 39.4	1.917	2.789	12.2	21.0	144 W	17 88
11 17	0 48.04	+12 46.2	1.006	1.880	19.4	21.1	141 E	58 51	10 8	1 43.01	-27 55.7	1.896	2.769	12.2	20.9	144 W	17 88
11 22	0 47.14	+12 8.2	1.043	1.880	21.6	21.2	136 E	57 52	10 13	1 36.93	-28 4.2	1.881	2.750	12.4	20.9	144 W	17 88
11 27	0 47.24	+11 36.9	1.084	1.881	23.5	21.4	130 E	57 52									

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°
495831 2000 AW₉₃ (continuation)										163454 2002 RN₁₂₉ (continuation)									
10 13	4 2.12	-38 46.4	0.877	1.618	32.6	20.9	119 W	6	77	1 3	15 51.86	+ 7 19.3	0.388	0.816	103.8	20.2	54 W	44*	20*
10 18	3 57.95	-39 51.3	0.866	1.614	32.3	20.9	120 W	5	76	1 5	15 57.25	+ 3 56.1	0.393	0.806	104.9	20.3	52 W	42*	22*
10 23	3 52.38	-40 42.6	0.856	1.610	32.1	20.9	121 W	4	75	1 7	16 2.82	+ 0 34.8	0.399	0.797	105.8	20.3	51 W	39*	25*
10 28	3 45.54	-41 17.7	0.848	1.607	31.9	20.8	121 W	4	75	1 9	16 8.60	+ 2 42.9	0.407	0.788	106.4	20.4	50 W	36*	27*
11 2	3 37.66	-41 34.0	0.842	1.602	31.9	20.8	122 W	3	74	1 11	16 14.61	+ 5 56.0	0.416	0.780	106.7	20.4	49 W	33*	29*
11 7	3 29.05	-41 29.3	0.838	1.598	31.9	20.8	122 W	4	75	1 13	16 20.88	+ 9 2.9	0.426	0.772	106.8	20.5	49 W	31*	31*
11 12	3 20.11	-41 2.3	0.837	1.594	32.1	20.8	121 W	4	75	1 15	16 27.42	+ 12 2.8	0.438	0.765	106.6	20.5	48 W	28*	33*
11 17	3 11.24	-40 12.6	0.837	1.589	32.3	20.8	121 E	5	76	1 17	16 34.25	+ 14 54.7	0.451	0.758	106.1	20.5	48 W	25*	35*
11 22	3 2.81	-39 0.7	0.840	1.584	32.7	20.8	120 E	6	77	1 19	16 41.39	+ 17 37.8	0.465	0.752	105.4	20.5	47 W	23*	36*
11 27	2 55.16	-37 27.8	0.846	1.579	33.2	20.8	119 E	8	79	1 21	16 48.85	+ 20 11.5	0.480	0.747	104.5	20.5	47 W	20*	38*
12 2	2 48.52	-35 35.7	0.854	1.574	33.8	20.8	117 E	9	80	514609 2003 TY₇									
12 7	2 43.07	-33 26.8	0.864	1.569	34.4	20.9	116 E	12	83	9 3	4 4.17	+18 56.3	1.072	1.567	39.6	21.5	98 W	64*	45
12 12	2 38.93	-31 3.7	0.877	1.563	35.1	20.9	114 E	14	85	9 8	4 6.36	+22 5.4	1.017	1.567	39.1	21.4	101 W	67	42
12 17	2 36.10	-28 29.3	0.892	1.558	35.8	21.0	112 E	17	88	9 13	4 7.56	+25 31.9	0.964	1.567	38.3	21.2	105 W	71	38
12 22	2 34.54	-25 46.4	0.910	1.552	36.5	21.0	110 E	19	90	9 18	4 7.52	+29 17.3	0.915	1.567	37.2	21.1	109 W	74	35
12 27	2 34.20	-22 57.3	0.930	1.546	37.3	21.1	108 E	22	87	9 23	4 5.92	+33 22.4	0.870	1.567	36.0	20.9	113 W	78	31
1 1	2 35.01	-20 4.1	0.952	1.540	38.0	21.2	105 E	25	84	9 28	4 2.32	+37 46.4	0.830	1.568	34.6	20.8	117 W	83	26
1 6	2 36.88	-17 8.8	0.976	1.534	38.6	21.2	103 E	28	81	10 3	3 56.11	+42 26.3	0.797	1.569	33.1	20.7	121 W	87	22
1 11	2 39.75	-14 13.1	1.003	1.528	39.2	21.3	101 E	31	78*	10 8	3 46.48	+47 16.3	0.771	1.570	31.6	20.6	124 W	88	17
1 16	2 43.52	-11 18.5	1.031	1.522	39.8	21.4	98 E	34	75*	10 13	3 32.35	+52 6.8	0.753	1.572	30.4	20.5	127 W	83	12
1 21	2 48.12	- 8 26.0	1.060	1.516	40.2	21.4	96 E	37	71*	10 15	3 25.17	+54 0.1	0.748	1.572	30.0	20.5	128 W	81	10
9 3	3 49.94	+47 8.2	0.994	1.465	43.4	21.4	94 W	87*	17	10 17	3 16.99	+55 50.5	0.745	1.573	29.7	20.4	129 W	79	8
9 8	4 2.79	+49 45.6	0.947	1.448	43.8	21.3	96 W	85	14	10 19	3 7.71	+57 36.7	0.743	1.574	29.5	20.4	129 W	77	6
9 13	4 16.66	+52 28.2	0.901	1.430	44.3	21.2	97 W	83	12	10 21	2 57.27	+59 17.6	0.743	1.574	29.3	20.4	129 W	76	5
9 18	4 31.91	+55 15.4	0.857	1.410	44.8	21.0	98 W	80	9	10 23	2 45.61	+60 52.0	0.744	1.575	29.2	20.4	129 W	74	3
9 23	4 48.99	+58 6.8	0.815	1.390	45.5	20.9	99 W	77	6	10 25	2 32.70	+62 18.8	0.746	1.576	29.2	20.4	129 W	73	2
9 28	5 8.56	+61 0.8	0.775	1.369	46.2	20.8	100 W	74	3	10 27	2 18.58	+63 37.0	0.749	1.577	29.3	20.4	129 W	71	—
10 3	5 31.56	+63 55.2	0.737	1.346	47.0	20.7	100 W	71	—	10 29	2 3.32	+64 45.5	0.754	1.578	29.5	20.5	129 E	70	—
10 8	5 59.32	+66 46.2	0.701	1.323	47.9	20.5	101 W	68	—	10 31	1 47.08	+65 43.6	0.760	1.579	29.7	20.5	128 E	69	—
10 13	6 33.75	+69 27.3	0.667	1.298	49.1	20.4	101 W	66	—	11 2	1 30.10	+66 30.9	0.768	1.580	30.0	20.5	127 E	68	—
10 14	6 41.64	+69 57.6	0.661	1.293	49.3	20.4	100 W	65	—	11 3	1 21.42	+66 50.3	0.772	1.580	30.2	20.5	127 E	68	—
10 15	6 49.92	+70 26.9	0.654	1.288	49.6	20.4	100 W	65	—	11 4	1 12.67	+67 7.1	0.776	1.581	30.3	20.6	126 E	68	—
10 16	6 58.60	+70 55.3	0.648	1.283	49.9	20.4	100 W	64	—	11 5	1 3.90	+67 21.1	0.781	1.581	30.5	20.6	126 E	68	—
10 17	7 7.70	+71 22.6	0.642	1.278	50.2	20.3	100 W	64	—	11 6	0 55.14	+67 32.4	0.785	1.582	30.7	20.6	125 E	67	—
10 18	7 17.23	+71 48.7	0.636	1.272	50.4	20.3	100 W	63	—	11 7	0 46.46	+67 41.2	0.790	1.582	30.9	20.6	125 E	67	—
10 19	7 27.22	+72 13.3	0.630	1.267	50.7	20.3	100 W	63	—	11 8	0 37.87	+67 47.5	0.796	1.583	31.1	20.6	124 E	67	—
10 20	7 37.67	+72 36.5	0.624	1.262	51.0	20.3	100 W	62	—	11 9	0 29.44	+67 51.4	0.801	1.583	31.3	20.7	124 E	67	—
10 21	7 48.59	+72 58.0	0.618	1.257	51.4	20.2	100 W	62	—	11 10	0 21.19	+67 53.2	0.807	1.584	31.5	20.7	123 E	67	—
10 22	7 59.96	+73 17.7	0.612	1.251	51.7	20.2	99 W	62*	—	11 11	0 13.16	+67 52.8	0.813	1.585	31.7	20.7	123 E	67	—
10 23	8 11.79	+73 35.4	0.606	1.246	52.0	20.2	99 W	61*	—	11 12	0 5.37	+67 50.6	0.819	1.585	31.9	20.7	122 E	67	—
10 24	8 24.05	+73 50.9	0.601	1.240	52.4	20.2	99 W	61*	—	11 13	23 57.85	+67 46.6	0.826	1.586	32.2	20.7	121 E	67	—
10 25	8 36.71	+74 4.2	0.595	1.235	52.7	20.2	99 W	61*	—	11 14	23 50.62	+67 40.9	0.832	1.586	32.4	20.8	121 E	67	—
10 26	8 49.74	+74 15.0	0.590	1.230	53.1	20.1	99 W	61*	—	11 15	23 43.69	+67 33.8	0.839	1.587	32.6	20.8	120 E	67	—
10 27	9 3.08	+74 23.3	0.584	1.224	53.5	20.1	98 W	60*	—	11 16	23 37.06	+67 25.5	0.846	1.588	32.8	20.8	120 E	68	—
10 28	9 16.67	+74 28.8	0.579	1.218	53.8	20.1	98 W	60*	—	11 17	23 30.76	+67 15.9	0.853	1.588	33.0	20.8	119 E	68	—
10 29	9 30.44	+74 31.5	0.574	1.213	54.2	20.1	98 W	60*	—	11 18	23 24.77	+67 5.4	0.860	1.589	33.2	20.9	118 E	68	—
10 30	9 44.31	+74 31.4	0.568	1.207	54.6	20.1	98 W	60*	—	11 19	23 19.10	+66 54.0	0.868	1.590	33.4	20.9	118 E	68	—
10 31	9 58.21	+74 28.3	0.563	1.202	55.1	20.1	97 W	59*	—	11 20	23 13.74	+66 41.8	0.875	1.590	33.6	20.9	117 E	68	—
11 1	10 12.06	+74 22.2	0.558	1.196	55.5	20.0	97 W	59*	—	11 21	23 8.69	+66 29.1	0.883	1.591	33.8	20.9	116 E	69	—
11 2	10 25.76	+74 13.2	0.553	1.190	55.9	20.0	97 W	59*	—	11 22	23 3.94	+66 15.8	0.890	1.591	34.0	21.0	116 E	69	—
11 3	10 39.26	+74 1.2	0.548	1.184	56.4	20.0	96 W	59*	—	11 24	22 55.32	+65 48.2	0.906	1.593	34.3	21.0	114 E	69	—
11 4	10 52.47	+73 46.4	0.543	1.178	56.9	20.0	96 W	59*	—	11 26	22 47.78	+65 19.7	0.922	1.594	34.7	21.1	113 E	70	—
11 5	11 5.35	+73 28.7	0.538	1.173	57.3	20.0	95 W	59*	—	11 28	22 41.26	+64 51.0	0.939	1.596	35.0	21.1	112 E	70	—
11 6	11 17.83	+73 8.3	0.534	1.167	57.8	20.0	95 W	59*	—	11 30	22 35.66	+64 22.5	0.955	1.597	35.3	21.2	111 E	71	—
11 7	11 29.89	+72 45.3	0.529	1.161	58.3	19.9	95 W	58*	—	12 2	22 30.89	+63 54.7	0.972	1.599	35.6	21.2	109 E	71	—
11 8	11 41.50	+72 19.7	0.524	1.155	58.8	19.9	94 W	58*	—	12 4	22 26.89	+63 27.9	0.989	1.600	35.8	21.3	108 E	72	—
11 9	11 52.63	+71 51.7	0.520	1.14															

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°
98891 2001 BK₄₁										412961 2014 QS₂₉₀									
<i>(continuation)</i>																			
12 22	3 5.06	+16 54.2	2.329	3.135	12.0	20.6	139 E	62	47	9 3	4 23.72	+11 30.9	1.716	2.054	29.3	21.4	94 W	55*	52
1 1	3 0.72	+16 22.5	2.425	3.120	14.5	20.8	127 E	61	48	9 13	4 32.68	+11 24.7	1.634	2.085	28.2	21.3	102 W	56	53
1 11	2 58.88	+16 2.5	2.538	3.104	16.5	21.0	116 E	61	48	9 23	4 38.78	+11 10.8	1.553	2.116	26.5	21.2	110 W	56	53
1 21	2 59.48	+15 54.2	2.662	3.087	17.8	21.1	106 E	61	48*	10 3	4 41.65	+10 50.9	1.478	2.146	24.1	21.0	119 W	56	53
351545 2005 TE₁₅										243775 2000 RA₁₀₁									
9 3	4 9.35	+22 19.8	0.722	1.299	50.6	21.4	96 W	67*	42	9 3	4 27.40	+15 34.4	2.134	2.405	24.8	21.5	93 W	59*	48
9 8	4 12.38	+23 48.0	0.703	1.323	48.6	21.4	100 W	69*	40	9 13	4 34.42	+14 23.4	2.033	2.433	24.0	21.4	101 W	59*	50
9 13	4 14.19	+25 17.1	0.684	1.346	46.5	21.3	104 W	70	39	9 23	4 38.86	+12 58.9	1.935	2.461	22.6	21.3	110 W	58	51
9 18	4 14.58	+26 47.3	0.664	1.368	44.2	21.2	108 W	72	37	10 3	4 40.45	+11 21.6	1.844	2.488	20.6	21.1	119 W	56	53
9 23	4 13.37	+28 18.3	0.644	1.390	41.6	21.1	113 W	73	36	10 13	4 39.00	+9 33.2	1.765	2.515	18.0	21.0	129 W	55	54
9 28	4 10.32	+29 49.7	0.625	1.410	38.8	21.0	118 W	75	34	10 23	4 34.51	+7 37.4	1.702	2.540	14.8	20.8	139 W	53	56
10 3	4 5.21	+31 19.9	0.607	1.429	35.6	20.8	124 W	76	33	11 2	4 27.28	+5 39.6	1.661	2.565	11.3	20.6	149 W	51	58
10 8	3 57.84	+32 47.0	0.590	1.448	32.2	20.7	129 W	78	31	11 12	4 17.94	+3 47.1	1.645	2.589	8.2	20.5	158 W	49	60
10 13	3 48.13	+34 7.6	0.577	1.466	28.5	20.6	135 W	79	30	11 22	4 7.51	+2 8.3	1.657	2.613	6.9	20.5	162 W	47	62
10 18	3 36.14	+35 18.1	0.566	1.482	24.7	20.5	142 W	80	29	11 27	4 2.25	+1 26.3	1.674	2.624	7.3	20.5	160 E	46	63
10 23	3 22.14	+36 14.2	0.560	1.498	20.9	20.3	147 W	81	28	12 2	3 57.14	+0 50.1	1.698	2.635	8.3	20.6	157 E	46	63
10 28	3 6.63	+36 52.0	0.559	1.513	17.4	20.3	153 W	82	27	12 7	3 52.33	+0 20.2	1.729	2.646	9.7	20.7	153 E	45	64
11 2	2 50.33	+37 9.0	0.563	1.527	14.7	20.2	157 W	82	27	12 12	3 47.94	-0 3.1	1.767	2.657	11.2	20.9	149 E	45	64
11 7	2 34.13	+37 4.9	0.573	1.540	13.4	20.2	159 E	82	27	12 17	3 44.07	-0 20.1	1.810	2.667	12.7	21.0	144 E	45	64
11 12	2 18.87	+36 41.8	0.589	1.551	13.8	20.3	158 E	82	27	12 22	3 40.79	-0 30.8	1.860	2.677	14.1	21.1	139 E	44	65
11 17	2 5.28	+36 4.0	0.610	1.562	15.6	20.4	155 E	81	28	12 27	3 38.13	-0 35.7	1.914	2.687	15.4	21.2	133 E	44	65
11 22	1 53.76	+35 16.5	0.636	1.572	18.1	20.6	150 E	80	29	1 1	3 36.14	-0 35.2	1.973	2.697	16.6	21.3	128 E	44	65
11 27	1 44.52	+34 24.2	0.667	1.581	20.8	20.8	145 E	79	30	1 6	3 34.81	-0 29.8	2.036	2.707	17.6	21.4	124 E	45	64
12 2	1 37.56	+33 31.2	0.702	1.589	23.5	21.0	140 E	79	30	409214 2003 WV₈₇									
12 7	1 32.79	+32 40.8	0.741	1.596	26.0	21.2	135 E	78	31	9 3	4 28.57	+16 59.1	1.889	2.177	27.6	21.5	92 W	60*	47
12 12	1 30.03	+31 55.5	0.783	1.602	28.2	21.4	130 E	77	32	9 13	4 42.12	+17 16.3	1.730	2.129	27.8	21.3	99 W	62*	47
442148 2010 VC₆₂										9 23	4 54.50	+17 26.8	1.575	2.082	27.7	21.0	105 W	62	47
9 3	4 16.97	+26 48.1	1.114	1.546	40.6	21.5	93 W	70*	37	10 3	5 5.34	+17 31.4	1.426	2.034	27.0	20.7	113 W	63	46
9 8	4 27.63	+27 11.0	1.082	1.551	40.3	21.4	96 W	72*	37	10 13	5 14.15	+17 31.3	1.285	1.986	25.7	20.4	120 W	63	46
9 13	4 37.72	+27 29.3	1.051	1.557	39.8	21.3	98 W	72*	37	10 23	5 20.40	+17 28.4	1.153	1.938	23.6	20.1	129 W	62	47
9 18	4 47.16	+27 43.4	1.019	1.563	39.1	21.3	101 W	73	36	11 2	5 23.50	+17 25.0	1.032	1.890	20.6	19.7	138 W	62	47
9 23	4 55.87	+27 53.5	0.988	1.570	38.3	21.2	104 W	73	36	11 12	5 22.90	+17 23.6	0.927	1.842	16.6	19.2	148 W	62	47
9 28	5 3.77	+27 59.9	0.957	1.577	37.4	21.1	107 W	73	36	11 22	5 18.32	+17 27.2	0.839	1.796	11.4	18.8	159 W	62	47
10 3	5 10.73	+28 2.6	0.927	1.585	36.3	21.0	111 W	73	36	12 2	5 10.01	+17 38.0	0.770	1.750	5.5	18.3	170 W	63	46
10 8	5 16.67	+28 2.0	0.898	1.593	34.9	20.9	114 W	73	36	12 7	5 4.75	+17 46.7	0.744	1.727	3.1	18.1	175 W	63	46
10 13	5 21.48	+27 58.3	0.870	1.602	33.4	20.8	118 W	73	36	12 12	4 59.06	+17 57.9	0.723	1.705	3.7	18.0	174 E	63	46
10 18	5 25.07	+27 51.5	0.843	1.612	31.6	20.7	122 W	73	36	12 17	4 53.22	+18 11.7	0.708	1.684	6.8	18.1	168 E	63	46
10 23	5 27.39	+27 41.8	0.818	1.621	29.5	20.6	127 W	73	36	12 22	4 47.54	+18 28.2	0.698	1.663	10.3	18.2	162 E	63	46
10 28	5 28.35	+27 29.1	0.795	1.632	27.2	20.5	131 W	72	37	12 27	4 42.30	+18 47.4	0.694	1.642	14.0	18.3	156 E	64	45
11 2	5 27.92	+27 13.4	0.774	1.642	24.6	20.4	136 W	72	37	1 1	4 37.81	+19 9.5	0.693	1.622	17.5	18.4	150 E	64	45
11 12	5 22.97	+26 32.1	0.742	1.665	18.6	20.1	148 W	72	37	1 6	4 34.33	+19 34.4	0.697	1.603	20.9	18.5	144 E	65	44
11 22	5 13.40	+25 37.2	0.726	1.688	11.6	19.9	160 W	71	38	1 11	4 32.05	+20 2.2	0.705	1.584	24.1	18.6	139 E	65	44
12 2	5 1.03	+24 30.4	0.730	1.713	4.1	19.6	173 W	70	39	1 16	4 31.12	+20 32.6	0.716	1.566	27.0	18.7	134 E	66	43
12 7	4 54.58	+23 54.1	0.741	1.726	0.8	19.4	179 W	69	40	1 21	4 31.57	+21 5.3	0.729	1.549	29.7	18.8	129 E	66	43
12 12	4 48.42	+23 17.6	0.757	1.739	3.6	19.6	174 E	68	41	238518 2004 TC₁₂₁									
12 17	4 42.84	+22 42.0	0.778	1.752	7.1	19.9	167 E	68	41	9 3	4 20.18	+26 30.2	1.916	2.207	27.2	21.4	93 W	70*	37
12 22	4 38.06	+22 8.6	0.805	1.765	10.4	20.1	161 E	67	42	9 13	4 28.55	+27 12.6	1.825	2.237	26.3	21.3	100 W	72	37
12 27	4 34.25	+21 38.2	0.838	1.778	13.5	20.3	155 E	67	42	9 23	4 34.07	+27 48.9	1.736	2.268	24.8	21.2	109 W	73	36
1 1	4 31.50	+21 11.6	0.875	1.792	16.3	20.6	149 E	66	43	10 3	4 36.31	+28 19.2	1.651	2.297	22.6	21.1	118 W	73	36
1 6	4 29.86	+20 49.4	0.916	1.805	18.8	20.8	144 E	66	43	10 13	4 34.90	+28 41.9	1.576	2.326	19.8	20.9	128 W	74	35
1 11	4 29.33	+20 31.5	0.962	1.819	21.0	20.9	138 E	66	43	10 23	4 29.75	+28 54.9	1.513	2.355	16.2	20.7	139 W	74	35
1 16	4 29.88	+20 17.9	1.012	1.833	23.0	21.1	133 E	65	44	11 2	4 21.12	+28 55.0	1.470	2.383	11.9	20.5	150 W	74	35
1 21	4 31.43	+20 8.2	1.064	1.846	24.6	21.3	129 E	65	44	11 12	4 9.82	+28 39.7	1.449	2.410	7.3	20.3	162 W	74	35
399714 2004 VK₂₇										11 17	4 3.60	+28 26.0	1.449	2.424	5.0	20.2	168 W	73	36
9 3	4 20.18	+26 30.2	1.916	2.207	27.2	21.4	93 W	70*	37	11 22	3 57.25	+28 8.6	1.455	2.437	3.3	20.2	172 W	73	36
9 13	4 28.55	+27 12.6	1.825	2.237	26.3	21.3	100 W	72	37	11 27	3 50.99	+27 48.1	1.469	2.450	3.3	20.2	172 E	73	36
9 23	4 34.07	+27 48.9	1.736	2.268	24.8	21.2	109 W	73	36	12 2	3 45.00	+27 25.2	1.490	2.463	4.8	20.3	168 E	72	37
10 3	4 36.31	+28 19.2	1.651	2.297	22.6	21.1	118 W	73	36	12 7	3 39.47	+27 0.7	1.518	2.475	6.9	20.5	163 E	72	37
10 13	4 34.90	+28 41.9	1.576	2.326	19.8	20.9	128 W	74	35	12 12	3 34.56	+26 35.6	1.553	2.488	9.0	20.6	157 E	72	37
10 23	4 29.75	+28 54.9	1.513	2.355	16.2	20.7	139 W	74	35	12 17	3 30.38	+26 10.9	1.594	2.500	11.0	20.8	151 E	71	38
11 2	4 21.12	+28 55.0	1.470	2.383	11.9	20.5	150 W	74	35	12 22	3 26.98	+25 47.3	1.641	2.512	12.9	20.9	145 E	71	38
11 12	4 9.82	+28 39.7	1.449	2.410	7.3	20.3	162 W	74	35	12 27	3 24.41	+25 25.5	1.693	2.524	14.6	21.1	140 E	70	39
11 17	4 3.60	+28 26.0	1.449	2.424	5.0	20.2	168 W	73	36	1 1	3 22.69	+25 6.							