

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2020	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	2020	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
277616 2006 BN ₆									326488 2002 GU ₂ (continuation)								
10 28	3 40.45	+26 35.2	3.403	4.323	5.6	23.7	155 W	72 37	12 12	3 20.21	+ 3 33.7	1.904	2.740	13.1	21.8	141 E	41 68
11 7	3 31.66	+25 58.1	3.345	4.314	3.2	23.5	166 W	71 38	12 17	3 17.08	+ 3 38.6	1.955	2.750	14.4	21.9	136 E	41 68
11 17	3 22.35	+25 12.9	3.320	4.304	1.5	23.4	174 E	70 39	313309 2002 EH ₈								
11 27	3 13.18	+24 22.1	3.328	4.293	3.2	23.5	166 E	69 40	10 28	4 2.79	+13 7.9	2.091	3.007	8.8	22.1	153 W	58 51
12 7	3 4.80	+23 28.7	3.369	4.280	5.7	23.6	155 E	68 41	11 7	3 53.49	+12 27.8	2.055	3.020	5.2	21.9	164 W	57 52
143643 2003 NP ₇									11 17	3 43.15	+11 49.0	2.049	3.031	2.6	21.7	172 W	57 52
10 28	3 44.84	+32 52.9	2.096	3.002	9.3	22.9	151 W	78 31	11 27	3 32.78	+11 15.2	2.073	3.041	4.4	21.9	166 E	56 53
11 2	3 39.31	+32 38.5	2.075	3.009	7.7	22.8	156 W	78 31	12 7	3 23.34	+10 49.7	2.128	3.050	7.8	22.1	155 E	56 53
11 7	3 33.46	+32 19.4	2.062	3.016	6.1	22.7	161 W	77 32	12 17	3 15.61	+10 34.8	2.210	3.058	11.0	22.3	144 E	56 53
11 12	3 27.41	+31 55.8	2.055	3.023	4.8	22.7	165 W	77 32	260513 2005 ET ₇₁								
11 17	3 21.33	+31 28.1	2.057	3.029	4.1	22.6	167 E	76 33	10 28	4 6.52	+23 42.9	1.910	2.817	10.0	21.4	150 W	69 40
11 22	3 15.38	+30 56.8	2.066	3.035	4.3	22.7	167 E	76 33	11 7	3 56.86	+23 35.7	1.851	2.811	6.1	21.2	162 W	69 40
11 27	3 9.71	+30 22.8	2.083	3.041	5.4	22.7	163 E	75 34	11 17	3 45.64	+23 19.4	1.819	2.805	2.0	20.9	174 W	68 41
12 2	3 4.45	+29 46.9	2.108	3.047	6.8	22.8	159 E	75 34	11 27	3 34.01	+22 55.5	1.818	2.797	3.1	20.9	171 E	68 41
422724 2001 FK ₅₈									12 7	3 23.25	+22 27.7	1.847	2.789	7.3	21.2	159 E	67 42
10 28	3 47.82	+17 3.3	2.308	3.241	7.1	22.5	156 W	62 47	12 17	3 14.38	+22 0.5	1.904	2.779	11.2	21.4	147 E	67 42
11 7	3 38.30	+16 37.4	2.272	3.248	3.6	22.3	168 W	62 47	440009 2002 JP ₂								
11 17	3 28.01	+16 9.1	2.266	3.254	0.9	22.1	177 E	61 48	10 28	4 12.30	-17 18.4	2.566	3.363	11.6	21.8	137 W	28 81
11 27	3 17.89	+15 41.5	2.292	3.259	4.2	22.3	166 E	61 48	11 2	4 8.56	-17 54.0	2.557	3.372	11.1	21.8	139 W	27 82
12 7	3 8.81	+15 17.7	2.349	3.262	7.6	22.6	154 E	60 49	11 7	4 4.51	-18 24.6	2.555	3.380	10.7	21.8	141 W	27 82
344143 2000 JQ ₃									11 12	4 0.21	-18 49.3	2.558	3.388	10.5	21.8	141 W	26 83
10 28	3 51.59	+19 33.8	2.034	2.963	8.2	22.7	155 W	65 44	11 17	3 55.77	-19 7.8	2.567	3.396	10.5	21.8	141 W	26 83
11 7	3 40.71	+19 17.3	2.028	3.003	4.1	22.5	167 W	64 45	11 22	3 51.28	-19 19.6	2.583	3.404	10.6	21.8	141 W	26 83
11 17	3 29.22	+18 56.2	2.052	3.041	0.0	22.2	180 E	64 45	11 27	3 46.85	-19 24.6	2.605	3.412	10.9	21.8	139 E	26 83
11 27	3 18.23	+18 33.5	2.108	3.078	4.1	22.6	167 E	64 45	12 2	3 42.58	-19 22.8	2.633	3.419	11.4	21.9	137 E	26 83
12 7	3 8.71	+18 12.7	2.195	3.114	7.8	22.9	155 E	63 46	12 7	3 38.54	-19 14.6	2.666	3.426	11.9	21.9	134 E	26 83
328734 2009 UA ₁									12 12	3 34.82	-19 0.1	2.705	3.433	12.5	22.0	131 E	26 83
10 28	3 52.37	+18 13.4	1.832	2.763	8.8	21.3	155 W	63 46	12 17	3 31.49	-18 39.8	2.749	3.440	13.1	22.0	128 E	26 83
11 7	3 42.51	+17 28.3	1.811	2.786	4.5	21.1	167 W	62 47	12 22	3 28.59	-18 14.3	2.798	3.446	13.7	22.1	124 E	27 82
11 17	3 31.83	+16 40.2	1.820	2.809	0.8	20.9	178 W	62 47	511777 2015 EZ								
11 27	3 21.48	+15 53.5	1.860	2.830	4.5	21.2	167 E	61 48	10 28	4 12.83	+ 1 26.6	0.771	1.695	18.4	21.8	147 W	46 63
12 7	3 12.52	+15 12.9	1.928	2.850	8.5	21.5	155 E	60 49	11 2	4 5.68	+ 0 2.2	0.762	1.703	15.9	21.7	152 W	45 64
12 17	3 5.68	+14 42.1	2.023	2.869	12.0	21.7	143 E	60 49	11 7	3 57.69	+ 1 25.5	0.759	1.711	13.9	21.7	156 W	44 65
399735 2005 DD ₁									11 12	3 49.16	+ 2 40.6	0.762	1.718	12.8	21.6	157 W	42 67
10 28	3 53.66	-11 14.0	2.176	3.040	10.9	21.5	145 W	34 75	11 17	3 40.44	+ 3 44.9	0.770	1.725	12.9	21.7	157 W	41 68
11 2	3 49.08	-11 27.7	2.143	3.025	10.2	21.4	147 W	34 75	11 22	3 31.87	+ 4 36.5	0.785	1.730	14.0	21.8	155 E	40 69
11 7	3 44.10	-11 36.3	2.116	3.009	9.8	21.4	149 W	33 76	11 27	3 23.80	+ 5 14.6	0.805	1.735	15.9	21.9	151 E	40 69
11 12	3 38.82	-11 39.4	2.097	2.994	9.6	21.3	150 W	33 76	12 2	3 16.50	+ 5 38.8	0.830	1.740	18.2	22.0	147 E	39 70
11 17	3 33.36	-11 36.3	2.084	2.978	9.7	21.3	149 W	33 76	12 7	3 10.16	+ 5 49.9	0.860	1.744	20.5	22.2	142 E	39 70
11 22	3 27.84	-11 26.5	2.078	2.961	10.2	21.3	148 E	34 75	12 12	3 4.92	+ 5 48.9	0.894	1.747	22.7	22.4	137 E	39 70
11 27	3 22.39	-11 10.1	2.078	2.945	10.9	21.3	146 E	34 75	470958 2009 QP ₁								
12 2	3 17.14	-10 47.0	2.086	2.929	11.9	21.3	142 E	34 75	10 28	4 13.21	+ 6 53.9	1.627	2.531	11.7	21.6	149 W	52 57
12 7	3 12.20	-10 17.4	2.099	2.912	12.9	21.4	139 E	35 74	11 2	4 8.65	+ 6 30.4	1.617	2.547	9.7	21.5	154 W	52 57
12 12	3 7.68	+ 9 41.9	2.119	2.895	14.1	21.4	134 E	35 74	11 7	4 3.64	+ 6 8.8	1.612	2.563	7.9	21.4	159 W	51 58
12 17	3 3.65	+ 9 0.8	2.144	2.878	15.2	21.5	130 E	36 73	11 12	3 58.32	+ 5 49.7	1.615	2.578	6.4	21.4	163 W	51 58
154007 2002 BY									11 17	3 52.83	+ 5 33.6	1.624	2.593	5.5	21.4	165 W	51 58
10 28	3 57.79	+19 11.7	1.509	2.438	10.5	21.4	153 W	64 45	11 22	3 47.34	+ 5 21.2	1.641	2.608	5.5	21.4	165 E	50 59
11 2	3 52.11	+18 48.6	1.485	2.441	8.1	21.3	160 W	64 45	11 27	3 42.01	+ 5 12.6	1.664	2.622	6.5	21.5	163 E	50 59
11 7	3 45.90	+18 23.3	1.469	2.443	5.5	21.1	166 W	63 46	12 2	3 36.97	+ 5 8.2	1.695	2.637	7.9	21.6	158 E	50 59
11 12	3 39.34	+17 56.3	1.460	2.445	2.9	21.0	173 W	63 46	12 7	3 32.35	+ 5 8.0	1.733	2.651	9.6	21.7	153 E	50 59
11 17	3 32.61	+17 28.2	1.458	2.446	0.7	20.8	178 W	62 47	12 12	3 28.23	+ 5 11.9	1.777	2.665	11.2	21.9	148 E	50 59
11 22	3 25.93	+16 59.8	1.464	2.447	2.7	21.0	173 E	62 47	12 17	3 24.71	+ 5 19.8	1.827	2.679	12.8	22.0	143 E	50 59
11 27	3 19.48	+16 31.9	1.477	2.448	5.3	21.1	167 E	62 47	424969 2009 BT ₅								
12 2	3 13.45	+16 5.3	1.497	2.448	7.8	21.3	160 E	61 48	10 28	4 15.44	-32 57.4	0.673	1.486	33.2	22.0	125 W	12 83
12 7	3 7.99	+15 40.9	1.525	2.448	10.2	21.4	154 E	61 48	11 2	4 8.99	-34 3.9	0.666	1.483	32.9	22.0	126 W	11 82
12 12	3 3.20	+15 19.3	1.559	2.447	12.5	21.5	148 E	60 49	11 7	4 1.37	-34 51.1	0.661	1.480	32.8	21.9	126 W	10 81
12 17	2 59.19	+15 1.1	1.598	2.446	14.5	21.7	141 E	60 49	11 12	3 52.86	-35 16.2	0.658	1.476	32.8	21.9	126 W	10 81
438319 2006 JX ₄₈									11 17	3 43.84	-35 17.3	0.657	1.472	33.1	21.9	126 W	10 81
10 28	3 58.63	+ 3 29.3	2.219	3.128	8.7	22.1	151 W	48 61	11 22	3 34.76	-34 53.4	0.659	1.468	33.5	21.9	125 E	10 81
11 7	3 50.00	+ 2 46.4	2.210	3.159	6.2	22.0	160 W	48 61	11 27	3 26.04	-34 4.9	0.663	1.463	34.1	22.0	124 E	11 82
11 17	3 40.65	+ 2 13.9	2.231	3.190	5.2	22.0	163 W	47 62	12 2	3 18.05	-32 53.2	0.669	1.457	34.9	22.0	122 E	12 83
11 27	3 31.47	+ 1 55.0	2.281	3.219	6.5	22.1	158 E	47 62	12 7	3 11.08	-31 20.4	0.677	1.452	35.7	22.0	121 E	14 85
12 7	3 23.27	+ 1 51.1															

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
375657 2009 CP₅									515136 2011 GB₆₂ (continuation)								
10 28	4 17.98	+50 40.1	0.741	1.601	26.4	23.1	134 W	84 13	12 2	3 59.59	+13 33.0	1.252	2.226	5.1	20.5	168 E	59 50
11 2	4 6.18	+51 26.1	0.721	1.605	24.2	22.9	138 W	84 13	12 7	3 52.23	+14 15.1	1.249	2.210	7.5	20.5	163 E	59 50
11 7	3 52.26	+51 54.3	0.705	1.608	22.2	22.8	142 W	83 12	12 12	3 45.15	+14 59.3	1.253	2.193	10.2	20.6	157 E	60 49
11 12	3 36.78	+52 0.7	0.694	1.609	20.5	22.8	145 W	83 12	12 17	3 38.57	+15 45.2	1.264	2.176	12.8	20.8	151 E	61 48
11 17	3 20.60	+51 42.9	0.688	1.610	19.4	22.7	147 E	83 12	12 22	3 32.69	+16 32.6	1.282	2.159	15.3	20.9	145 E	62 47
11 22	3 4.71	+51 0.8	0.686	1.610	19.1	22.7	148 E	84 13	12 27	3 27.66	+17 21.1	1.304	2.142	17.7	21.0	138 E	62 47
11 27	2 50.05	+49 57.0	0.690	1.610	19.5	22.7	147 E	85 14	1 1	3 23.57	+18 10.6	1.332	2.126	19.9	21.1	133 E	63 46
12 2	2 37.30	+48 35.8	0.699	1.608	20.7	22.8	145 E	86 15	1 6	3 20.49	+19 1.0	1.364	2.109	21.8	21.2	127 E	64 45
									1 11	3 18.44	+19 52.1	1.400	2.092	23.6	21.2	122 E	65 44
									1 16	3 17.45	+20 43.9	1.438	2.075	25.1	21.3	117 E	66 43
467462 2006 KK₁₃									339715 2005 SS₄								
10 28	4 19.52	+ 8 43.2	1.625	2.522	12.1	22.5	148 W	54 55	10 28	4 43.14	+33 55.0	1.397	2.247	16.7	22.5	140 W	79 30
11 2	4 15.07	+ 8 13.6	1.611	2.537	10.1	22.4	153 W	53 56	11 2	4 35.53	+34 25.3	1.333	2.222	14.7	22.3	145 W	79 30
11 7	4 10.13	+ 7 45.3	1.603	2.551	8.2	22.3	158 W	53 56	11 7	4 26.34	+34 51.6	1.274	2.196	12.5	22.1	151 W	80 29
11 12	4 4.83	+ 7 19.0	1.602	2.565	6.5	22.3	163 W	52 57	11 12	4 15.61	+35 11.9	1.223	2.169	10.2	21.9	157 W	80 29
11 17	3 59.31	+ 6 55.3	1.608	2.578	5.3	22.2	166 W	52 57	11 17	4 4.38	+35 24.0	1.179	2.141	8.2	21.7	162 W	80 29
11 22	3 53.75	+ 6 34.9	1.621	2.592	5.1	22.2	166 W	52 57	11 22	3 50.24	+35 26.1	1.144	2.112	7.1	21.5	165 E	80 29
11 27	3 48.31	+ 6 18.1	1.642	2.605	5.9	22.3	164 E	51 58	11 27	3 36.28	+35 17.0	1.116	2.082	7.6	21.5	164 E	80 29
12 2	3 43.12	+ 6 5.5	1.669	2.618	7.4	22.4	160 E	51 58	12 2	3 32.08	+34 56.2	1.097	2.051	9.6	21.5	160 E	80 29
12 7	3 38.32	+ 5 57.1	1.704	2.630	9.1	22.6	155 E	51 58	12 7	3 8.12	+34 24.4	1.086	2.018	12.4	21.5	154 E	79 30
12 12	3 34.01	+ 5 53.1	1.745	2.643	10.8	22.7	150 E	51 58	12 12	2 54.90	+33 43.3	1.083	1.984	15.6	21.6	147 E	79 30
									12 17	2 42.81	+32 55.4	1.088	1.949	18.8	21.7	140 E	78 31
344861 2004 HP₃₈									433018 2012 RM₃₂								
10 28	4 25.01	+12 50.2	2.191	3.073	10.1	22.1	147 W	58 51	10 28	4 43.77	+24 55.1	1.834	2.687	13.2	22.1	142 W	70 39
11 2	4 16.70	+12 20.8	2.146	3.089	6.8	21.9	158 W	57 52	11 2	4 34.75	+25 0.4	1.794	2.719	9.2	22.0	154 W	70 39
11 7	4 7.03	+11 53.3	2.130	3.105	3.6	21.7	169 W	57 52	11 7	4 23.72	+24 57.3	1.781	2.751	4.9	21.8	166 W	70 39
11 12	3 56.89	+11 30.4	2.144	3.120	3.2	21.7	170 E	57 52	11 12	4 11.83	+24 45.7	1.796	2.781	1.3	21.6	176 E	70 39
11 17	3 47.26	+11 14.7	2.189	3.134	6.1	22.0	160 E	56 53	11 17	4 0.39	+24 27.8	1.842	2.811	4.4	21.9	167 E	69 40
11 22	3 38.95	+11 7.9	2.263	3.147	9.3	22.2	149 E	56 53	11 22	3 50.54	+24 7.1	1.917	2.840	8.4	22.2	155 E	69 40
469483 2002 TP₁₅₃									480823 1998 YW₅								
10 28	4 36.06	+28 42.4	1.432	2.302	15.2	21.9	143 W	74 35	10 28	4 46.26	+18 33.6	0.965	1.853	19.3	22.3	142 W	64 45
11 2	4 31.47	+28 49.7	1.415	2.319	12.9	21.8	148 W	74 35	11 2	4 31.18	+16 55.9	0.862	1.811	13.1	21.8	156 W	62 47
11 7	4 26.14	+28 53.4	1.403	2.336	10.6	21.7	154 W	74 35	11 7	4 9.76	+14 50.4	0.783	1.764	5.8	21.3	170 W	60 49
11 12	4 20.22	+28 53.2	1.398	2.353	8.2	21.7	160 W	74 35	11 12	3 43.80	+12 21.9	0.734	1.712	6.3	21.1	169 E	57 52
11 17	4 13.90	+28 49.0	1.399	2.370	5.8	21.6	166 W	74 35	11 17	3 36.28	+11 4.3	0.715	1.655	15.6	21.3	153 E	55 54
11 22	4 7.40	+28 41.0	1.407	2.387	3.9	21.5	171 W	74 35	11 22	3 20.82	+10 17.1	0.703	1.644	18.8	21.4	148 E	55 54
11 27	4 0.95	+28 29.4	1.422	2.403	3.2	21.5	172 E	73 36	12 2	3 16.83	+ 9 47.3	0.715	1.655	15.6	21.3	153 E	55 54
12 2	3 54.75	+28 14.9	1.444	2.420	4.4	21.6	169 E	73 36	12 7	3 8.12	+ 8 30.0	0.723	1.591	24.9	21.6	137 E	52 57
12 7	3 48.98	+27 58.2	1.473	2.436	6.3	21.8	164 E	73 36									
12 12	3 43.81	+27 40.2	1.509	2.452	8.5	21.9	158 E	73 36									
12 17	3 39.36	+27 21.8	1.552	2.468	10.5	22.1	153 E	72 37									
12 22	3 35.71	+27 3.7	1.600	2.484	12.5	22.2	147 E	72 37									
464885 2005 LS₃									474706 2005 GC₁₄₁								
10 28	4 38.85	-21 33.9	1.074	1.871	24.1	22.1	130 W	23 86	10 28	4 47.38	-17 9.6	0.969	1.784	25.0	21.8	131 W	28 81
11 2	4 30.98	-21 39.0	1.043	1.866	22.9	22.0	133 W	23 86	11 2	4 43.47	-19 27.3	0.955	1.782	24.2	21.8	132 W	26 83
11 7	4 21.91	-21 31.1	1.017	1.861	21.7	21.9	136 W	23 86	11 7	4 38.49	-21 36.5	0.946	1.780	23.8	21.7	134 W	23 86
11 12	4 11.84	-21 7.9	0.995	1.855	20.8	21.9	138 W	24 85	11 12	4 32.56	-23 34.0	0.941	1.778	23.6	21.7	134 W	21 88
11 17	4 1.04	-20 27.5	0.980	1.849	20.2	21.8	140 W	25 84	11 17	4 25.84	-25 16.6	0.941	1.774	23.8	21.7	134 W	20 89
11 22	3 49.88	-19 29.0	0.970	1.842	20.0	21.8	140 E	26 83	11 22	4 18.60	-26 41.8	0.946	1.771	24.2	21.7	133 W	18 89
11 27	3 38.72	-18 12.6	0.966	1.834	20.3	21.8	140 E	27 82	11 27	4 11.12	-27 47.9	0.954	1.767	24.9	21.8	131 E	17 88
12 2	3 27.96	-16 39.5	0.969	1.826	21.1	21.8	138 E	28 81	12 2	4 3.69	-28 34.3	0.967	1.763	25.8	21.8	129 E	16 87
12 7	3 17.91	-14 51.8	0.978	1.818	22.3	21.8	136 E	30 79	12 7	3 56.59	-29 1.2	0.983	1.758	26.8	21.9	126 E	16 87
12 12	3 8.83	-12 52.3	0.993	1.809	23.7	21.9	132 E	32 77	12 12	3 50.07	-29 9.3	1.003	1.752	27.9	22.0	124 E	16 87
12 17	3 0.95	-10 43.9	1.014	1.799	25.4	22.0	128 E	34 75	12 17	3 44.37	-29 0.0	1.024	1.747	28.9	22.0	121 E	16 87
									12 22	3 39.63	-28 35.2	1.049	1.740	30.0	22.1	118 E	16 87
523637 2010 LT₁₀₈									420048 2011 DL₁₉								
10 28	4 40.92	-42 57.2	0.781	1.494	37.4	21.5	114 W	2 73	10 28	5 6.13	+50 17.1	1.329	2.097	21.8	22.1	128 W	85 14
11 2	4 38.84	-45 56.5	0.767	1.470	38.5	21.5	113 W	— 70	11 2	5 0.43	+50 21.6	1.274	2.082	20.4	21.9	133 W	85 14
11 7	4 35.24	-48 43.4	0.756	1.445	39.9	21.5	111 W	— 67	11 7	4 53.06	+50 17.0	1.222	2.066	18.8	21.8	138 W	85 14
11 12	4 30.03	-51 15.0	0.747	1.419	41.3	21.4	109 W	— 65	11 12	4 44.11	+50 0.9	1.175	2.050	17.1	21.6	142 W	85 14
11 17	4 23.25	-53 28.3	0.738	1.393	42.8	21.4	107 W	— 63	11 17	4 33.80	+49 30.8	1.133	2.034	15.4	21.5	147 W	85 14
11 22	4 15.04	-55 21.3	0.731	1.366	44.5	21.4	104 W	— 61	11 22	4 22.48	+48 44.4	1.096	2.016	13.9	21.3	151 W	86 15
11 27	4 5.65	-56 52.6	0.723	1.339	46.1	21.4	102 E	— 59	11 27	4 10.63	+47 40.6	1.067	1.998	12.8	21.2	153 E	87 16
12 2	3 55.43	-58 1.7	0.715	1.311	47.8	21.4	100 E	— 58	12 2	3 58.75	+46 18.9	1.044	1.980	12.3	21.1	155 E	89 18
12 7	3 44.79	-58 48.7	0.706	1.283	49.6	21.3	97 E	— 57	12 7	3 47.37	+44 40.7	1.028	1.961	12.8	21.1	154 E	90 19
12 12	3 34.18	-59 14.0	0.695	1.254	51.5	21.3	95 E	— 57	12 12	3 36.93	+42 48.3	1.019	1.941	14.1	21.1	151 E	88 21
12 17	3 24.09	-59 18.8	0.683	1.225	53.4	21.3	93 E	— 57	12 17	3 27.79	+40 45.2	1.017	1.921	16.0	21.1	147 E	86 23
12 22	3 14.90	-59 4.8	0.668	1.195	55.4	21.2	91 E	— 57	12 22	3 20.19	+38 35.7	1.022	1.900	18.3	21.2	143 E	84 25
12 27	3 6.87	-58 33.7	0.651	1.166	57.5	21.2	89 E	— 57	1 1	3 14.23	+36 23.9	1.032	1.878				

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
287646 2003 KD₇										418896 2009 AK₁₅ (continuation)									
10 28	5 8.98	+10 7.9	1.412	2.237	17.9	21.3	136 W	55	54	12 7	6 42.64	-23 40.8	0.403	1.269	38.4	19.5	127 W	21	88
11 7	5 2.05	+ 9 19.8	1.371	2.267	13.8	21.2	147 W	54	55	12 12	6 40.43	-28 12.6	0.371	1.235	40.8	19.3	125 W	17	88
11 17	4 52.34	+ 8 38.9	1.351	2.296	9.5	21.0	157 W	54	55	12 17	6 36.56	-33 3.9	0.342	1.201	44.1	19.2	122 W	12	83
11 27	4 40.99	+ 8 9.9	1.357	2.325	6.2	20.9	165 W	53	56	12 22	6 30.77	-38 13.7	0.317	1.166	48.2	19.0	118 W	7	78
12 7	4 29.44	+ 7 56.1	1.391	2.354	6.6	21.0	164 E	53	56	12 27	6 22.60	-43 41.8	0.294	1.131	53.2	19.0	113 E	1	72
12 17	4 19.09	+ 7 59.0	1.451	2.381	9.9	21.2	155 E	53	56	12 29	6 18.49	-45 58.2	0.285	1.117	55.4	18.9	111 E	—	70
12 27	4 11.06	+ 8 18.3	1.536	2.408	13.6	21.5	145 E	53	56	12 31	6 13.79	-48 17.5	0.277	1.102	57.8	18.9	108 E	—	68
378056 2006 TM₇₄																			
10 28	5 41.45	+21 18.6	1.458	2.222	20.3	21.5	129 W	66	43	1 2	6 8.39	-50 39.8	0.270	1.088	60.4	18.9	106 E	—	65
11 7	5 36.23	+21 40.9	1.403	2.256	16.3	21.3	140 W	67	42	1 4	6 2.14	-53 5.2	0.263	1.074	63.1	18.9	103 E	—	63
11 17	5 27.46	+22 3.0	1.368	2.290	11.6	21.1	152 W	67	42	1 6	5 54.85	-55 33.4	0.256	1.060	65.9	18.9	100 E	—	60
11 27	5 15.96	+22 23.0	1.356	2.323	6.3	20.9	165 W	67	42	1 7	5 50.72	-56 48.6	0.252	1.053	67.3	18.9	99 E	—	59
12 7	5 3.16	+22 39.0	1.371	2.356	0.8	20.6	178 W	68	41	1 8	5 46.23	-58 4.4	0.249	1.045	68.8	18.9	97 E	—	58
12 17	4 50.67	+22 50.5	1.415	2.388	4.6	20.9	169 E	68	41	1 9	5 41.31	-59 20.8	0.246	1.038	70.4	18.9	96 E	—	57
12 27	4 40.05	+22 59.3	1.487	2.419	9.4	21.3	156 E	68	41	1 10	5 35.90	-60 37.7	0.243	1.031	71.9	18.9	94 E	—	55
1 6	4 32.34	+23 7.9	1.583	2.450	13.5	21.6	144 E	68	41	1 11	5 29.94	-61 55.1	0.240	1.024	73.6	18.9	93 E	—	54
383610 2007 JJ₃₅																			
10 28	5 44.66	- 2 26.7	1.208	1.951	24.8	21.3	125 W	43	66	1 12	5 23.33	-63 12.7	0.237	1.017	75.2	18.9	91 E	—	53
11 2	5 41.75	- 5 52.8	1.158	1.934	23.8	21.2	128 W	39	70	1 13	5 15.96	-64 30.5	0.235	1.010	76.9	19.0	90 E	—	51
11 7	5 37.58	- 9 29.8	1.115	1.917	23.0	21.0	131 W	35	74	1 14	5 7.71	-65 48.2	0.232	1.003	78.6	19.0	88 E	—	50
11 12	5 32.10	-13 14.3	1.080	1.899	22.4	20.9	133 W	32	77	1 15	4 58.41	-67 5.5	0.230	0.996	80.3	19.0	86 E	—	49
11 17	5 25.29	-17 1.2	1.053	1.881	22.2	20.9	134 W	28	81	1 16	4 47.87	-68 22.0	0.227	0.989	82.1	19.0	85 E	—	48
11 22	5 17.20	-20 44.6	1.036	1.863	22.4	20.8	134 W	24	85	480885 2002 AC₂₉									
11 27	5 7.96	-24 18.4	1.027	1.844	23.2	20.8	133 W	21	88	10 28	6 23.04	+13 4.8	1.427	2.093	24.7	21.2	119 W	58	51
12 2	4 57.76	-27 36.7	1.027	1.825	24.4	20.8	130 W	17	88	11 2	6 20.00	+13 27.3	1.350	2.070	23.6	21.0	123 W	58	51
12 7	4 46.88	-30 34.4	1.034	1.806	25.9	20.8	127 E	14	85	11 7	6 21.93	+13 54.7	1.275	2.047	22.2	20.9	129 W	59	50
12 12	4 35.64	-33 8.4	1.049	1.787	27.6	20.9	123 E	12	83	11 12	6 19.73	+14 28.0	1.204	2.023	20.5	20.6	134 W	59	50
12 17	4 24.44	-35 16.7	1.069	1.767	29.2	21.0	119 E	10	81	11 17	6 16.25	+15 7.9	1.136	1.998	18.5	20.4	140 W	60	49
12 22	4 13.67	-36 59.8	1.093	1.747	30.8	21.0	114 E	8	79	11 22	6 11.39	+15 55.1	1.073	1.973	16.1	20.2	146 W	61	48
12 27	4 3.67	-38 19.1	1.120	1.727	32.3	21.1	110 E	7	78	11 27	6 5.07	+16 50.1	1.016	1.947	13.3	20.0	153 W	62	47
1 1	3 54.71	-39 17.3	1.150	1.707	33.6	21.2	106 E	6	77	12 7	5 47.89	+19 2.8	0.919	1.892	6.6	19.4	167 W	64	45
1 6	3 46.98	-39 57.3	1.181	1.686	34.8	21.2	102 E	5	76	12 12	5 25.17	+21 39.7	0.852	1.835	2.0	18.9	176 E	67	42
1 11	3 40.60	-40 21.8	1.212	1.666	35.8	21.3	98 E	5	76	12 17	4 59.07	+24 25.4	0.817	1.775	10.6	19.2	161 E	69	40
1 16	3 35.64	-40 33.8	1.243	1.645	36.6	21.3	95 E	4	75	1 1	4 45.84	+25 46.0	0.811	1.744	15.0	19.3	153 E	71	38
324331 2006 OE₁₂																			
10 28	5 56.89	+22 15.0	1.509	2.237	21.2	21.4	125 W	67	42	1 6	4 33.15	+27 2.9	0.812	1.712	19.3	19.4	145 E	72	37
11 7	5 53.33	+22 16.4	1.445	2.267	17.6	21.2	136 W	67	42	1 11	4 21.43	+28 15.4	0.819	1.679	23.5	19.5	137 E	73	36
11 17	5 46.12	+22 17.6	1.399	2.298	13.2	21.0	148 W	67	42	1 16	4 11.04	+29 23.6	0.831	1.646	27.3	19.6	130 E	74	35
11 27	5 35.87	+22 17.2	1.374	2.328	8.1	20.8	160 W	67	42	200182 1999 OT₃									
12 7	5 23.78	+22 14.2	1.376	2.357	2.8	20.5	173 W	67	42	10 28	6 58.03	+23 8.0	1.145	1.769	31.5	21.4	111 W	68	41
12 17	5 11.39	+22 8.4	1.405	2.386	2.7	20.6	173 E	67	42	11 2	6 7.05	+22 12.8	1.091	1.811	28.1	21.2	121 W	67	42
12 27	5 0.30	+22 1.5	1.464	2.414	7.7	21.0	161 E	67	42	11 17	6 58.13	+21 19.9	1.045	1.853	23.6	21.0	131 W	66	43
1 6	4 51.73	+21 56.0	1.548	2.441	12.1	21.3	149 E	67	42	11 27	6 50.97	+20 30.2	1.011	1.894	18.3	20.9	143 W	66	43
430904 2005 SA₆₉																			
10 28	6 11.87	+39 17.6	2.037	2.687	18.5	21.4	121 W	84	25	12 7	6 25.96	+19 43.8	0.996	1.936	12.2	20.7	155 W	65	44
11 7	6 8.06	+40 21.6	1.959	2.713	16.0	21.3	131 W	85	24	12 17	6 25.96	+19 1.2	1.004	1.977	5.8	20.5	168 W	64	45
11 17	6 0.48	+41 19.4	1.898	2.738	13.1	21.1	141 W	86	23	12 22	6 18.72	+18 41.7	1.017	1.998	3.1	20.3	174 W	64	45
11 27	5 49.51	+42 4.1	1.859	2.762	10.1	21.0	151 W	87	22	12 27	6 11.65	+18 23.6	1.037	2.018	2.8	20.4	174 E	63	46
12 7	5 36.15	+42 28.9	1.845	2.784	7.5	20.9	158 W	87	22	1 1	6 4.99	+18 7.4	1.064	2.038	5.1	20.6	169 E	63	46
12 17	5 21.89	+42 29.7	1.860	2.807	6.7	20.9	161 E	87	22	1 6	5 58.94	+17 53.1	1.097	2.058	7.9	20.8	163 E	63	46
12 27	5 8.49	+42 7.1	1.903	2.828	8.3	21.0	156 E	87	22	1 11	5 53.68	+17 41.1	1.136	2.078	10.6	21.0	157 E	63	46
1 6	4 57.41	+41 26.4	1.974	2.848	10.9	21.2	147 E	86	23	1 16	5 49.34	+17 31.5	1.182	2.097	13.1	21.2	151 E	63	46
1 16	4 49.56	+40 35.0	2.069	2.867	13.5	21.4	137 E	86	23	213895 2003 TF₆									
373907 2003 UE₆₃																			
10 28	6 14.53	+21 4.4	1.401	2.097	23.9	21.4	121 W	66	43	10 28	7 1.31	+20 28.9	2.112	2.629	20.7	21.4	110 W	65	44
11 7	6 12.18	+21 21.3	1.342	2.135	20.2	21.2	132 W	66	43	11 7	7 2.01	+20 38.9	2.004	2.645	18.9	21.3	120 W	66	43
11 17	6 5.81	+21 41.8	1.297	2.173	15.7	21.0	143 W	67	42	11 17	6 59.64	+20 55.6	1.907	2.661	16.3	21.1	131 W	66	43
11 27	5 55.88	+22 4.1	1.272	2.210	10.5	20.8	156 W	67	42	11 27	6 54.14	+21 18.7	1.826	2.676	13.0	20.9	142 W	66	43
12 7	5 43.52	+22 25.5	1.272	2.246	4.9	20.6	169 W	67	42	12 7	6 45.73	+21 46.9	1.767	2.689	9.1	20.7	154 W	67	42
12 17	5 30.30	+22 43.4	1.299	2.283	0.9	20.4	178 E	68	41	12 17	6 35.04	+22 17.6	1.734	2.702	4.7	20.5	167 W	67	42
12 22	5 23.94	+22 50.8	1.323	2.300	3.7	20.7	171 E	68	41	12 22	6 29.15	+22 32.8	1.728	2.708	2.3	20.3	174 W	68	41
12 27	5 18.03	+22 57.3	1.354	2.318	6.3	20.9	165 E	68	41	12 27	6 23.12	+22 47.5	1.730	2.714	0.2	20.1	179 E	68	41
1 1	5 12.73	+23 3.2	1.392	2.335	8.8	21.1	159 E	68	41	1 1	6 17.11	+23 1.5	1.740	2.719	2.4	20.3	173 E	68	41
1 6	5 8.17	+23 8.6	1.436	2.353	11.1	21.2	153 E	68	41	1 6	6 11.29	+23 14.4	1.757	2.724	4.7	20.5	167 E	68	41
1 11	5 4.44	+23 13.9	1.486	2.370	13.2	21.4	147 E	68	41	1 11	6 5.81	+23 26.2	1.782	2.729	6.9	20.6	161 E	68	41
1 16	4 49.56	+40 35.0	2.069	2.867	13.5	21.4	137 E	86	23	1 16	6 0.82	+23 37.0	1.814	2.734	8.9	20.8	154 E	69	40
418896 2009 AK₁₅										487594 2015 KT₄₀									
10 28	6 21.40	+ 1 13.4	0.772	1.507	36.1	21.2	117 W	46	63	10 28	7 14.53								

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
67522 2000 RB₇₉										52761 1998 MN₁₄ <i>(continuation)</i>									
	h m	° ′									h m	° ′							
10 28	7 14.85	+18 43.4	2.341	2.797	19.9	21.5	107 W	64	45	12 12	7 58.44	+ 6 50.6	0.971	1.825	21.2	20.2	138 W	52	57
11 7	7 15.96	+18 33.8	2.219	2.807	18.4	21.3	117 W	64	45	12 17	7 53.60	+ 5 25.4	0.932	1.817	19.0	20.0	143 W	50	59
11 17	7 14.29	+18 29.9	2.107	2.816	16.3	21.1	127 W	63	46	12 22	7 47.56	+ 4 1.0	0.898	1.808	16.8	19.8	148 W	49	60
11 27	7 9.71	+18 32.3	2.010	2.824	13.5	20.9	138 W	64	45	12 27	7 40.42	+ 2 39.1	0.869	1.799	14.8	19.7	152 W	48	61
12 7	7 2.35	+18 40.8	1.933	2.830	10.0	20.7	150 W	64	45	1 1	7 32.35	+ 1 21.2	0.847	1.789	13.2	19.6	156 W	46	63
12 17	6 52.64	+18 54.4	1.882	2.835	6.1	20.5	162 W	64	45	1 6	7 23.58	+ 0 9.2	0.831	1.779	12.3	19.5	157 W	45	64
12 27	6 41.41	+19 11.4	1.860	2.840	2.0	20.3	174 W	64	45	1 11	7 14.41	+ 0 54.9	0.821	1.768	12.6	19.5	157 E	44	65
1 1	6 35.57	+19 20.5	1.860	2.841	1.5	20.2	176 E	64	45	1 16	7 5.19	- 1 49.6	0.817	1.757	13.9	19.5	155 E	43	66
1 6	6 29.79	+19 29.7	1.868	2.843	3.2	20.3	171 E	64	45	122106 2000 HC₈₆									
1 11	6 24.21	+19 38.9	1.884	2.844	5.3	20.5	165 E	65	44	10 28	7 53.61	+21 10.4	2.599	2.915	19.7	21.5	98 W	66	42*
1 16	6 18.97	+19 48.0	1.907	2.845	7.3	20.6	158 E	65	44	11 7	7 56.93	+21 18.6	2.479	2.936	18.8	21.4	108 W	66	43*
368194 2000 WO₄										11 17	7 57.77	+21 35.0	2.365	2.956	17.2	21.2	118 W	67	42
10 28	7 19.46	+26 39.6	1.625	2.137	26.4	21.5	107 W	72	37*	11 27	7 55.92	+22 0.3	2.263	2.976	15.1	21.1	128 W	67	42
11 7	7 22.85	+26 26.5	1.544	2.171	24.2	21.4	116 W	71	38	12 7	7 51.33	+22 34.0	2.177	2.995	12.3	20.9	139 W	68	41
11 17	7 22.35	+26 17.7	1.470	2.204	21.2	21.2	126 W	71	38	12 17	7 44.14	+23 13.9	2.112	3.012	9.0	20.7	151 W	68	41
11 27	7 17.80	+26 12.6	1.409	2.237	17.4	21.0	137 W	71	38	12 27	7 34.82	+23 56.9	2.073	3.029	5.2	20.5	164 W	69	40
12 7	7 9.43	+26 8.7	1.366	2.269	12.8	20.8	149 W	71	38	1 6	7 24.17	+24 38.7	2.064	3.045	1.4	20.3	176 W	70	39
12 17	6 57.95	+26 2.3	1.345	2.301	7.6	20.6	162 W	71	38	1 16	7 13.22	+25 15.7	2.086	3.060	3.1	20.4	170 E	70	39
12 27	6 44.74	+25 50.2	1.351	2.332	2.3	20.4	175 W	71	38	403039 2008 AE									
1 1	6 38.03	+25 41.5	1.365	2.347	1.3	20.3	177 E	71	38	10 28	8 0.62	+ 1 55.9	0.725	1.257	52.1	21.4	93 W	47	60*
1 6	6 31.54	+25 31.1	1.386	2.362	3.6	20.5	171 E	71	38	11 7	8 29.60	+ 0 8.7	0.663	1.237	53.0	21.2	95 W	45	62*
1 11	6 25.47	+25 19.3	1.414	2.377	6.2	20.7	165 E	70	39	11 17	8 59.10	- 1 37.3	0.603	1.217	53.8	21.0	97 W	43	64*
1 16	6 20.00	+25 6.3	1.448	2.392	8.6	20.9	159 E	70	39	11 27	9 29.39	- 3 14.9	0.546	1.198	54.5	20.8	99 W	42	66*
118167 1981 EJ₃₀										12 7	10 0.93	- 4 36.3	0.492	1.180	55.2	20.5	101 W	40	68*
10 28	7 21.42	+16 13.9	1.702	2.183	26.1	21.3	105 W	61	48*	12 17	10 34.14	- 5 31.7	0.441	1.163	55.7	20.3	103 W	39	69*
11 7	7 28.64	+15 31.1	1.558	2.150	25.1	21.1	113 W	61	48	12 22	10 51.48	- 5 45.7	0.418	1.155	55.9	20.1	104 W	39	70*
11 17	7 33.16	+14 50.9	1.421	2.117	23.4	20.8	122 W	60	49	12 27	11 9.39	- 5 48.3	0.395	1.148	56.0	20.0	104 W	39	70*
11 27	7 34.46	+14 16.5	1.294	2.083	20.8	20.5	131 W	59	50	1 1	11 27.92	- 5 38.0	0.373	1.141	56.2	19.9	105 W	39	70*
12 7	7 32.13	+13 51.0	1.181	2.048	17.3	20.1	142 W	59	50	1 6	11 47.07	- 5 13.1	0.353	1.135	56.2	19.8	106 W	40	69
12 17	7 25.92	+13 37.6	1.085	2.012	12.9	19.8	153 W	59	50	1 11	12 6.80	- 4 31.6	0.335	1.129	56.3	19.6	107 W	40	69
12 27	7 16.09	+13 38.5	1.011	1.976	7.8	19.4	164 W	59	50	1 16	12 27.04	- 3 32.0	0.318	1.124	56.3	19.5	108 W	41	68
1 6	7 3.61	+13 54.1	0.961	1.939	4.4	19.0	171 E	59	50	202411 2005 RC									
1 16	6 50.18	+14 22.9	0.936	1.902	8.2	19.1	164 E	59	50	10 28	8 0.65	+ 1 31.5	1.872	2.158	27.4	21.5	93 W	47	60*
169660 2002 JG₆₆										11 7	8 10.62	- 0 39.4	1.666	2.069	28.2	21.1	99 W	44	64*
10 28	7 33.32	+23 19.9	2.238	2.651	21.4	21.4	103 W	68	40*	11 17	8 19.40	- 3 8.9	1.465	1.975	28.8	20.8	106 W	42	67
11 7	7 37.79	+23 32.3	2.093	2.635	20.3	21.2	112 W	69	40	11 27	8 26.65	- 6 0.3	1.271	1.878	29.2	20.4	112 W	39	70
11 17	7 39.59	+23 53.2	1.955	2.618	18.7	21.0	122 W	69	40	12 2	8 29.58	- 7 35.6	1.177	1.827	29.3	20.1	115 W	37	72
11 27	7 38.36	+24 23.5	1.829	2.600	16.2	20.8	133 W	69	40	12 7	8 31.94	- 9 18.5	1.085	1.776	29.3	19.9	118 W	36	73
12 7	7 33.89	+25 2.8	1.720	2.581	13.1	20.5	144 W	70	39	12 12	8 33.65	- 11 9.9	0.996	1.723	29.3	19.7	121 W	34	75
12 17	7 26.16	+25 48.6	1.632	2.561	9.1	20.2	156 W	71	38	12 17	8 34.59	- 13 10.9	0.910	1.670	29.4	19.4	124 W	32	77
12 22	7 21.20	+26 12.6	1.598	2.551	7.0	20.1	162 W	71	38	12 22	8 34.63	- 15 23.1	0.827	1.615	29.5	19.1	126 W	30	79
12 27	7 15.65	+26 36.5	1.570	2.540	4.7	19.9	168 W	72	37	12 27	8 33.61	- 17 48.4	0.747	1.559	29.8	18.8	128 W	27	82
1 1	7 9.64	+26 59.4	1.550	2.529	2.6	19.7	173 W	72	37	1 1	8 31.29	- 20 29.3	0.671	1.502	30.4	18.5	129 W	25	84
1 6	7 3.35	+27 20.8	1.537	2.518	1.9	19.7	175 E	72	37	1 6	8 27.34	- 23 29.4	0.599	1.443	31.4	18.2	130 W	22	87
1 11	6 56.95	+27 40.0	1.532	2.507	3.7	19.8	171 E	73	36	1 11	8 21.28	- 26 53.0	0.530	1.384	33.2	17.9	130 W	18	89
1 16	6 50.67	+27 56.6	1.534	2.496	6.0	19.9	165 E	73	36	1 16	8 12.38	- 30 45.9	0.466	1.323	35.9	17.6	128 W	14	85
141079 2001 XS₃₀										218340 2004 BU₁₂₉									
10 28	7 37.36	+13 14.2	1.464	1.916	30.6	21.3	101 W	58	50*	10 28	8 3.44	+23 3.5	2.145	2.464	23.6	21.4	97 W	68	40*
11 2	7 38.96	+12 11.2	1.372	1.890	30.5	21.1	105 W	57	52*	11 7	8 8.24	+22 37.0	2.043	2.495	22.5	21.3	105 W	68	41*
11 7	7 39.68	+11 2.5	1.280	1.863	30.1	20.9	110 W	56	53	11 17	8 10.12	+22 17.1	1.944	2.526	20.8	21.2	115 W	67	42
11 12	7 39.35	+ 9 47.4	1.189	1.833	29.5	20.7	114 W	55	54	11 27	8 8.81	+22 4.5	1.855	2.555	18.4	21.0	125 W	67	42
11 17	7 37.78	+ 8 24.7	1.100	1.802	28.6	20.4	119 W	53	56	12 7	8 4.22	+21 58.9	1.779	2.583	15.2	20.9	136 W	67	42
11 22	7 34.75	+ 6 53.3	1.014	1.769	27.5	20.2	124 W	52	57	12 17	7 56.46	+21 59.0	1.721	2.611	11.4	20.7	148 W	67	42
11 27	7 30.00	+ 5 11.5	0.931	1.735	26.1	19.9	129 W	50	59	12 27	7 46.10	+22 2.0	1.688	2.637	7.0	20.5	161 W	67	42
12 2	7 23.20	+ 3 17.8	0.852	1.698	24.3	19.6	135 W	48	61	1 1	7 40.24	+22 3.6	1.682	2.650	4.7	20.3	167 W	67	42
12 7	7 13.97	+ 1 10.5	0.779	1.659	22.4	19.3	140 W	46	63	1 6	7 34.12	+22 4.9	1.683	2.663	2.3	20.2	174 W	67	42
12 12	7 1.89	+ 1 11.7	0.711	1.618	20.5	19.0	145 W	44	65	1 11	7 27.93	+22 5.4	1.692	2.676	0.2	20.0	180 E	67	42
12 17	6 46.55	- 3 48.6	0.651	1.575	19.2	18.7	148 W	41	68	1 16	7 21.83	+22 5.0	1.709	2.688	2.5	20.3	173 E	67	42
12 22	6 27.64	- 6 38.2	0.600	1.530	19.2	18.5	149 W	38	71	417201 2005 XM₄									
12 27	6 5.09	- 9 35.2	0.558	1.482	21.3	18.3	147 E	35	74	10 28	8 6.06	+ 2 38.7	0.682	1.220	54.5	21.3	92 W	48	59*
12 29	5 55.10	-10 46.2	0.545	1.462	22.8	18.3	145 E	34	75	11 2	8 17.98	+ 5 0.5	0.644	1.220	54.2	21.2	94 W	50	57*
12 31	5 44.60	-11 56.2	0.533	1.442	24.6	18.3	142 E	33	76	11 7	8 30.24	+ 7 44.0	0.607	1.220	53.8	21.0	97 W	53	55*
1 2	5 33.66	-13 4.5	0.523	1.422	26.7	18.3	139 E	32	77	11 12	8 42.91	+10 52.9	0.570	1.221	53.1	20.9	99 W	56	52*
1 4	5 22.34	-14 10.2	0.515	1.401	29.1	18.3	136 E	31	78	11 17	8 56.11	+14 30.9	0.536	1.222	52.2	20.7	102 W	60	49*
1 6	5 10.72	-15 12.7	0.508	1.379	31.6	18.3	133 E												

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
417201 2005 XM₄										410128 2007 GG₁₁									
(continuation)																			
12 19	10 46.22	+49 12.3	0.420	1.235	45.0	20.0	117 W	86	15*	10 28	8 49.45	-9 54.4	1.575	1.682	35.3	21.5	78 W	35*	63*
12 21	10 55.64	+51 35.9	0.421	1.236	44.9	20.0	118 W	83	12*	11 7	9 6.93	-12 27.6	1.511	1.693	35.5	21.4	82 W	33	67*
12 23	11 5.53	+53 55.8	0.423	1.237	44.9	20.0	118 W	81	10*	11 17	9 22.58	-14 55.8	1.445	1.706	35.4	21.3	87 W	30	72*
12 25	11 15.91	+56 11.0	0.426	1.238	44.9	20.0	117 W	79	8*	11 27	9 36.09	-17 15.1	1.378	1.720	35.0	21.2	92 W	28	78*
12 27	11 26.82	+58 20.7	0.430	1.240	44.9	20.1	117 W	77	6*	12 7	9 47.19	-19 20.9	1.309	1.735	34.3	21.1	97 W	26	83*
12 29	11 38.29	+60 24.2	0.435	1.241	45.1	20.1	117 W	75	3*	12 17	9 55.46	-21 7.6	1.239	1.752	33.1	21.0	103 W	24	85
12 31	11 50.34	+62 20.9	0.440	1.242	45.3	20.1	116 W	73	1*	12 27	10 0.51	-22 27.7	1.171	1.770	31.4	20.8	110 W	23	86
1 2	12 2.98	+64 10.4	0.447	1.244	45.5	20.2	116 W	71	—	1 6	10 2.03	-23 12.4	1.105	1.788	29.2	20.7	118 W	22	87
1 4	12 16.22	+65 52.5	0.454	1.245	45.7	20.2	115 W	69	—	1 16	9 59.86	-23 10.9	1.046	1.808	26.2	20.5	126 W	22	87
1 6	12 30.05	+67 26.9	0.462	1.246	46.0	20.2	114 W	68	—	219319 2000 FH₁₀									
1 8	12 44.44	+68 53.6	0.470	1.248	46.2	20.3	114 W	66	—	10 28	8 52.15	+30 1.1	1.325	1.623	37.7	21.5	88 W	74*	29*
1 10	12 59.36	+70 12.7	0.479	1.249	46.5	20.3	113 W	65	—	11 7	9 11.74	+29 44.5	1.249	1.638	37.2	21.4	93 W	75	31*
1 12	13 14.72	+71 24.4	0.488	1.251	46.8	20.4	112 W	64	—	11 17	9 28.76	+29 35.4	1.173	1.653	36.1	21.2	99 W	75	32*
1 14	13 30.44	+72 28.9	0.497	1.253	47.1	20.5	111 W	63	—	11 27	9 42.70	+29 38.6	1.097	1.669	34.6	21.0	106 W	75	33*
1 16	13 46.42	+73 26.6	0.507	1.254	47.3	20.5	110 W	62	—	12 7	9 53.01	+29 58.0	1.023	1.684	32.3	20.8	114 W	75	34*
184830 2005 UQ₆										12 17	9 58.94	+30 36.6	0.953	1.698	29.3	20.6	122 W	76	33
10 28	8 19.84	+23 51.8	2.442	2.685	21.7	21.4	93 W	69	38*	12 27	9 59.68	+31 33.8	0.892	1.712	25.3	20.4	132 W	77	32
11 7	8 25.36	+23 58.1	2.332	2.714	20.9	21.3	102 W	69	39*	1 1	9 57.91	+32 7.8	0.865	1.719	23.1	20.3	137 W	77	32
11 17	8 28.35	+24 14.0	2.226	2.743	19.6	21.2	111 W	69	40*	1 6	9 54.63	+32 43.6	0.842	1.726	20.6	20.1	142 W	78	31
11 27	8 28.53	+24 40.4	2.126	2.771	17.7	21.1	121 W	70	39	1 11	9 49.85	+33 19.6	0.823	1.733	18.0	20.0	147 W	78	31
12 7	8 25.72	+25 16.7	2.040	2.797	15.1	20.9	132 W	70	39	1 16	9 43.66	+33 53.3	0.808	1.739	15.4	19.9	152 W	79	30
12 17	8 19.89	+26 0.9	1.971	2.823	12.0	20.8	144 W	71	38	292227 2006 ST₅₉									
12 27	8 11.32	+26 48.9	1.924	2.848	8.3	20.6	155 W	72	37	10 28	8 54.91	+11 31.4	2.477	2.536	22.8	21.5	82 W	56*	45*
1 6	8 0.68	+27 35.1	1.905	2.872	4.4	20.4	167 W	73	36	11 7	9 2.66	+10 24.2	2.364	2.559	22.8	21.4	90 W	55	49*
1 16	7 49.01	+28 14.2	1.916	2.895	2.5	20.3	173 E	73	36	11 17	9 8.34	+9 22.0	2.250	2.581	22.3	21.3	98 W	54	53*
173154 1996 ME										11 27	9 11.67	+8 27.0	2.137	2.603	21.3	21.2	107 W	53	55*
10 28	8 20.52	+16 18.0	2.261	2.488	23.5	21.5	91 W	61	45*	12 7	9 12.41	+7 41.6	2.030	2.623	19.6	21.0	117 W	53	56
11 7	8 26.82	+16 4.3	2.153	2.516	22.8	21.4	100 W	61	47*	12 17	9 10.36	+7 8.0	1.932	2.643	17.3	20.9	127 W	52	57
11 17	8 30.62	+16 0.2	2.047	2.544	21.6	21.2	109 W	61	48*	12 27	9 5.47	+6 48.6	1.850	2.661	14.4	20.7	138 W	52	57
11 27	8 31.63	+16 7.9	1.946	2.570	19.7	21.1	119 W	61	48	1 6	8 57.97	+6 44.4	1.787	2.679	10.9	20.5	149 W	52	57
12 7	8 29.65	+16 28.8	1.856	2.595	17.1	20.9	129 W	61	48	1 16	8 48.39	+6 55.8	1.750	2.696	7.1	20.3	160 W	52	57
12 17	8 24.60	+17 3.2	1.782	2.619	13.7	20.7	141 W	62	47	131777 2002 AE₂₁									
12 27	8 16.69	+17 49.5	1.729	2.643	9.7	20.5	153 W	63	46	10 28	9 16.94	+18 35.5	2.377	2.392	24.0	21.5	79 W	62*	37*
1 6	8 6.55	+18 43.9	1.701	2.665	5.2	20.3	166 W	64	45	11 7	9 27.43	+17 59.7	2.267	2.414	24.2	21.4	86 W	63*	40*
1 16	7 55.14	+19 41.3	1.703	2.686	0.6	20.0	178 W	65	44	11 17	9 35.98	+17 32.4	2.155	2.436	23.9	21.3	94 W	63	43*
468450 2003 OW₁₆										11 27	9 42.30	+17 16.1	2.042	2.457	23.1	21.2	103 W	62	45*
10 28	8 23.73	+2 27.4	2.160	2.333	25.2	21.5	87 W	47	57*	12 7	9 46.09	+17 12.8	1.933	2.477	21.6	21.1	112 W	62	47*
11 7	8 29.13	+0 19.3	2.074	2.374	24.6	21.4	95 W	45	62*	12 17	9 47.01	+17 24.4	1.831	2.496	19.5	20.9	122 W	62	47
11 17	8 31.92	+1 46.5	1.989	2.413	23.5	21.3	103 W	43	66*	12 27	9 44.83	+17 51.2	1.740	2.514	16.7	20.7	133 W	63	46
11 27	8 31.85	+3 46.3	1.908	2.451	22.0	21.2	112 W	41	68	1 6	9 39.50	+18 32.0	1.667	2.532	13.1	20.5	144 W	64	45
12 7	8 28.79	+5 35.5	1.837	2.488	19.9	21.1	121 W	39	70	1 16	9 31.23	+19 23.1	1.616	2.548	8.9	20.3	156 W	64	45
12 17	8 22.73	+7 8.6	1.779	2.524	17.4	21.0	130 W	38	71	301917 1999 SK₂									
12 27	8 14.00	+8 19.1	1.739	2.559	14.8	20.9	138 W	37	72	10 28	9 19.17	+20 1.0	2.416	2.426	23.7	21.4	79 W	63*	35*
1 6	8 3.30	+9 1.9	1.721	2.593	12.4	20.8	146 W	36	73	11 7	9 32.49	+19 8.1	2.239	2.376	24.6	21.2	85 W	64*	38*
1 16	7 51.62	+9 13.9	1.729	2.626	10.9	20.8	150 W	36	73	11 17	9 44.85	+18 17.5	2.062	2.325	25.1	21.0	92 W	63	41*
497006 2002 YE₁₂										11 27	9 56.03	+17 31.2	1.886	2.272	25.3	20.7	100 W	63	44*
10 28	8 35.06	+6 50.7	1.325	1.592	38.5	21.4	85 W	52*	52*	12 7	10 5.75	+16 51.2	1.714	2.219	25.1	20.5	107 W	62	47*
11 2	8 43.90	+7 43.7	1.273	1.593	38.5	21.3	88 W	53	52*	12 17	10 13.66	+16 20.1	1.549	2.165	24.2	20.2	116 W	61	48
11 7	8 52.49	+8 44.7	1.220	1.594	38.4	21.2	92 W	54	52*	12 27	10 19.30	+16 0.3	1.392	2.110	22.6	19.8	124 W	61	48
11 12	9 0.83	+9 55.2	1.168	1.595	38.2	21.1	95 W	55	52*	1 6	10 22.19	+15 54.2	1.247	2.054	20.2	19.4	134 W	61	48
11 17	9 8.87	+11 16.7	1.116	1.597	37.8	21.0	99 W	56	51*	1 16	10 21.75	+16 3.4	1.117	1.998	16.8	19.0	144 W	61	48
11 22	9 16.58	+12 51.0	1.064	1.598	37.2	20.9	102 W	58	50*	197710 2004 PU₂									
11 27	9 23.92	+14 39.8	1.014	1.600	36.3	20.7	106 W	60	49*	10 28	9 36.55	+36 53.9	3.098	3.107	18.4	21.5	81 W	75*	19*
12 2	9 30.84	+16 45.0	0.966	1.602	35.3	20.6	110 W	62	47*	11 7	9 46.11	+37 25.9	2.978	3.122	18.5	21.4	89 W	81*	21*
12 7	9 37.29	+19 8.3	0.920	1.604	33.9	20.5	115 W	64	45	11 17	9 53.88	+38 10.9	2.858	3.137	18.2	21.3	97 W	83	22*
12 12	9 43.18	+21 51.2	0.878	1.606	32.4	20.3	119 W	67	42	11 27	9 59.56	+39 10.0	2.741	3.150	17.6	21.2	105 W	84	23*
12 17	9 48.39	+24 54.7	0.840	1.609	30.6	20.2	124 W	70	39	12 7	10 2.81	+40 22.8	2.631	3.163	16.5	21.1	114 W	85	23*
12 22	9 52.83	+28 18.4	0.806	1.612	28.7	20.0	128 W	73	36	12 17	10 3.24	+41 47.8	2.532	3.175	15.1	21.0	123 W	87	22
12 27	9 56.38	+32 1.0	0.778	1.614	26.7	19.9	133 W	77	32	12 27	10 0.53	+43 20.9	2.448	3.185	13.4	20.8	131 W	88	21
1 1	9 58.87	+35 59.3	0.756	1.617	24.7	19.8	136 W	81	28	1 6	9 54.51	+44 55.7	2.384	3.195	11.6	20.7	139 W	90	19
1 6	10 0.12	+40 8.2	0.741	1.620	23.1	19.7	140 W	85	24	1 16	9 45.29	+46 23.3	2.344	3.204	10.0	20.6	146 W	89	18
1 11	9 59.94	+44 21.0	0.733	1.624	22.0	19.6	142 W	89	20	265139 2003 UV₂₈₃									
1 16	9 58.11	+48 29.9	0.732	1.627	21.6	19.6	143 W	87	16	10 28	9 54.41	+16 0.3	1.894	1.805	31.0	21.5	70 W	56*	33*
10295 Hippolyta										11 7	10 12.91	+14 23.6	1.822	1.831	31.5	21.5	75 W	57*	36*
10 28	8 44.42	+39 43.8	2.188	2.432															

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
122258 2000 OD₄₄										99942 Apophis (continuation)									
10 28	10 12.04	+ 7 5.7	3.315	2.988	17.1	21.5	62 W	46*	36*	12 17	11 28.49	-10 16.6	0.262	1.011	76.6	19.0	88 W	35	67*
11 7	10 21.70	+ 5 48.0	3.163	2.968	18.2	21.4	70 W	49*	41*	12 22	11 32.90	-11 32.2	0.256	1.024	73.7	18.9	92 W	33	71*
11 17	10 30.37	+ 4 32.3	3.004	2.948	19.1	21.3	77 W	49*	46*	12 27	11 36.87	-12 46.8	0.248	1.036	70.9	18.7	95 W	32	75*
11 27	10 37.83	+ 3 19.6	2.841	2.927	19.6	21.2	85 W	48	52*	1 1	11 40.21	-14 0.0	0.239	1.048	68.0	18.6	99 W	31	78*
12 7	10 43.89	+ 2 11.6	2.675	2.905	19.8	21.0	93 W	47	58*	1 6	11 42.69	-15 10.9	0.228	1.058	65.0	18.4	103 W	30	79
12 17	10 48.27	+ 1 9.7	2.510	2.882	19.5	20.9	102 W	46	62*	1 11	11 44.02	-16 18.2	0.217	1.067	61.9	18.2	107 W	29	80
12 27	10 50.68	+ 0 16.2	2.350	2.858	18.7	20.7	111 W	45	64	1 16	11 43.86	-17 19.9	0.204	1.075	58.5	18.0	111 W	28	81
1 6	10 50.88	+ 0 27.0	2.198	2.833	17.3	20.5	121 W	45	64	490684 2010 LL₃₄									
1 16	10 48.61	- 0 57.3	2.058	2.807	15.2	20.3	131 W	44	65	10 28	11 27.57	-11 42.3	0.713	0.636	94.7	21.1	40 W	20*	29*
162039 1996 JG										11 2	11 35.69	- 9 13.9	0.763	0.675	87.0	21.0	43 W	25*	30*
10 28	10 32.93	+ 8 6.6	0.268	0.881	107.1	20.4	58 W	44*	31*	11 7	11 45.87	- 7 11.9	0.810	0.718	80.6	21.0	46 W	28*	31*
11 2	10 7.50	+12 31.1	0.273	0.936	93.7	19.9	70 W	54*	36*	11 12	11 57.20	- 5 31.2	0.852	0.766	75.3	21.1	48 W	32*	31*
11 7	9 43.54	+16 29.4	0.281	0.992	81.6	19.6	82 W	61*	39*	11 17	12 9.09	- 4 6.7	0.888	0.815	70.8	21.2	51 W	34*	32*
11 12	9 20.09	+20 4.0	0.290	1.049	70.4	19.4	94 W	65	40*	11 22	12 21.15	- 2 53.8	0.919	0.866	67.1	21.3	54 W	37*	32*
11 17	8 56.34	+23 16.7	0.302	1.105	59.9	19.3	105 W	68	40*	11 27	12 33.13	- 1 49.0	0.944	0.916	64.0	21.4	57 W	39*	33*
11 22	8 31.84	+26 6.4	0.316	1.161	50.0	19.2	116 W	71	38	12 2	12 44.89	- 0 49.3	0.964	0.967	61.4	21.4	59 W	41*	34*
11 27	8 6.65	+28 29.9	0.333	1.216	40.6	19.1	127 W	73	36	6456 Golombek									
12 2	7 41.23	+30 23.8	0.355	1.270	31.8	19.1	137 W	75	34	10 28	11 27.87	+ 0 27.5	3.351	2.702	14.4	21.5	42 W	30*	24*
12 7	7 16.39	+31 46.4	0.382	1.323	23.6	19.1	147 W	77	32	11 7	11 40.96	- 1 15.3	3.218	2.669	16.2	21.4	49 W	34*	29*
12 12	6 53.02	+32 38.7	0.415	1.375	16.4	19.2	157 W	78	31	11 17	11 53.76	- 2 58.7	3.073	2.636	17.9	21.4	55 W	37*	34*
12 17	6 31.94	+33 4.9	0.453	1.427	10.4	19.2	165 W	78	31	11 27	12 6.19	- 4 42.1	2.919	2.600	19.5	21.3	62 W	38*	40*
12 22	6 13.73	+33 10.5	0.498	1.477	6.7	19.3	170 W	78	31	12 7	12 18.14	- 6 25.0	2.758	2.564	20.9	21.2	68 W	38*	47*
12 27	5 58.59	+33 2.0	0.549	1.526	7.2	19.6	169 E	78	31	12 17	12 29.48	- 8 6.8	2.590	2.526	22.1	21.0	75 W	37	54*
1 1	5 46.46	+32 44.7	0.606	1.574	10.1	20.0	164 E	78	31	12 27	12 40.05	- 9 46.7	2.419	2.487	23.1	20.9	82 W	35	62*
1 6	5 37.11	+32 22.9	0.668	1.621	13.3	20.4	158 E	77	32	1 6	12 49.63	-11 24.2	2.245	2.447	23.7	20.7	90 W	34	70*
1 11	5 30.22	+31 59.4	0.735	1.667	16.3	20.8	152 E	77	32	1 16	12 57.96	-12 58.5	2.073	2.406	23.9	20.5	97 W	32	76*
1 16	5 25.50	+31 36.2	0.806	1.712	18.8	21.2	146 E	77	32	267136 2000 EF₁₀₄									
367525 2009 QZ₆										10 28	11 40.68	+ 2 3.6	0.547	0.673	108.5	20.8	40 W	30*	20*
10 28	10 43.37	- 0 6.3	1.915	1.534	31.0	21.5	53 W	36*	34*	11 2	11 52.57	+ 3 10.9	0.604	0.685	100.5	20.6	43 W	33*	21*
11 7	11 7.71	- 4 11.6	1.819	1.501	33.0	21.4	56 W	35*	38*	11 7	12 5.69	+ 3 42.6	0.660	0.703	93.3	20.5	45 W	35*	21*
11 17	11 32.79	- 8 30.9	1.725	1.469	34.9	21.3	58 W	34*	42*	11 12	12 19.55	+ 3 47.5	0.714	0.725	86.9	20.5	47 W	37*	22*
11 27	11 58.87	-13 1.6	1.635	1.437	36.8	21.1	61 W	31*	46*	11 17	12 33.75	+ 3 32.7	0.764	0.753	81.3	20.5	49 W	38*	22*
12 7	12 26.36	-17 40.3	1.550	1.405	38.6	21.0	63 W	27*	50*	11 22	12 48.01	+ 3 4.1	0.811	0.783	76.5	20.6	50 W	39*	23*
12 17	12 55.70	-22 22.1	1.471	1.375	40.3	20.9	65 W	23*	55*	11 27	13 2.13	+ 2 26.2	0.854	0.816	72.4	20.6	52 W	40*	25*
12 27	13 27.34	-26 59.7	1.400	1.346	41.9	20.8	66 W	18*	58*	12 2	13 16.02	+ 1 42.5	0.891	0.851	68.9	20.7	54 W	41*	26*
1 6	14 1.84	-31 23.8	1.335	1.319	43.5	20.7	67 W	14	61*	12 7	13 29.58	+ 0 55.5	0.924	0.887	65.9	20.8	55 W	41*	28*
1 16	14 39.62	-35 23.3	1.278	1.295	44.9	20.6	68 W	10	62*	12 12	13 42.76	+ 0 7.3	0.952	0.924	63.3	20.9	57 W	41*	30*
22771 1999 CU₃										12 17	13 55.54	+ 0 40.6	0.975	0.960	61.1	20.9	59 W	41*	32*
10 28	10 46.61	+12 0.8	2.474	2.093	23.3	21.5	56 W	46*	26*	12 22	14 7.88	- 1 27.2	0.993	0.997	59.2	21.0	61 W	41*	35*
11 7	11 2.82	+10 7.5	2.321	2.049	25.2	21.3	62 W	49*	30*	12 27	14 19.78	- 2 11.7	1.007	1.034	57.6	21.1	63 W	41*	38*
11 17	11 18.88	+ 8 10.3	2.160	2.003	27.1	21.2	68 W	51*	35*	1 1	14 31.23	- 2 53.4	1.017	1.070	56.2	21.1	65 W	41*	40*
11 27	11 34.78	+ 6 8.9	1.995	1.952	28.9	21.0	73 W	51*	40*	1 6	14 42.23	- 3 32.2	1.022	1.105	54.9	21.2	67 W	41*	43*
12 7	11 50.56	+ 4 2.9	1.826	1.899	30.6	20.8	79 W	49	46*	1 11	14 52.75	- 4 7.5	1.022	1.139	53.8	21.2	69 W	40*	46*
12 17	12 6.24	+ 1 51.3	1.655	1.843	32.1	20.6	85 W	47	52*	1 16	15 2.78	- 4 39.2	1.019	1.172	52.8	21.2	72 W	40*	49*
12 27	12 21.84	- 0 27.1	1.484	1.783	33.5	20.3	90 W	45	58*	347149 2011 CB₇₆									
1 6	12 37.42	- 2 55.0	1.314	1.720	34.7	20.0	96 W	42	64*	10 28	11 59.66	+ 6 58.4	2.758	2.068	17.2	21.5	38 W	31*	14*
1 16	12 53.09	- 5 36.3	1.148	1.653	35.7	19.7	101 W	39	69*	11 7	12 17.42	+ 4 10.4	2.652	2.038	19.3	21.4	43 W	34*	18*
456537 2007 BG										11 17	12 35.16	+ 1 18.3	2.539	2.007	21.3	21.4	47 W	36*	23*
10 28	11 9.62	-22 34.2	0.349	0.780	118.2	21.4	44 W	13*	37*	11 27	12 52.89	- 1 37.7	2.421	1.976	23.2	21.3	52 W	38*	29*
11 2	10 59.19	-23 47.0	0.356	0.812	110.2	21.0	50 W	16*	43*	12 7	13 10.66	- 4 38.0	2.298	1.946	25.1	21.2	57 W	38*	35*
11 7	10 52.32	-24 54.8	0.363	0.842	103.5	20.7	56 W	17*	49*	12 17	13 28.49	- 7 43.0	2.171	1.916	26.9	21.1	62 W	36*	42*
11 12	10 48.30	-26 1.8	0.368	0.870	97.8	20.5	61 W	18*	53*	12 27	13 46.37	-10 53.1	2.043	1.886	28.6	21.0	67 W	34*	49*
11 17	10 46.42	-27 10.4	0.371	0.897	93.1	20.4	65 W	17*	58*	1 6	14 4.34	-14 9.3	1.914	1.858	30.2	20.9	72 W	31	57*
11 22	10 46.11	-28 21.7	0.371	0.921	89.1	20.3	69 W	17*	62*	1 16	14 22.38	-17 32.8	1.785	1.830	31.6	20.7	77 W	27	64*
11 27	10 46.95	-29 36.2	0.369	0.943	85.6	20.2	72 W	15	66*	376771 2000 DH₁₇									
12 2	10 48.59	-30 54.5	0.364	0.964	82.7	20.1	76 W	14	70*	10 28	12 17.25	+ 0 28.3	2.553	1.772	16.6	21.5	31 W	22*	13*
12 7	10 50.73	-32 17.0	0.357	0.982	80.1	20.0	79 W	13	73*	11 7	12 42.23	- 2 28.1	2.471	1.742	18.6	21.4	34 W	25*	16*
12 12	10 53.13	-33 44.1	0.347	0.998	77.8	19.9	82 W	11	76*	11 17	13 7.83	- 4 25.8	2.388	1.714	20.6	21.4	38 W	27*	19*
12 17	10 55.52	-35 15.8	0.334	1.011	75.8	19.8	85 W	10	78*	11 27	13 34.08	- 6 18.8	2.305	1.688	22.5	21.3	41 W	29*	22*
12 22	10 57.71	-36 52.0	0.320	1.023	73.9	19.7	88 W	8	79*	12 7	14 1.00	- 8 4.5	2.222	1.664	24.4	21.3	44 W	30*	25*
12 27	10 59.53	-38 33.2	0.303	1.032	72.3	19.5	91 W	6	77	12 17	14 28.57	- 9 40.4	2.140	1.643	26.2	21.2	47 W	30*	29*
1 1	11 1.07	-40 20.4	0.285	1.039	70.9	19.3	93 W	5	76	12 27	14 56.73	-11 3.5	2.059	1.624	27.9	21.2	51 W	30*	33*
1 6	11 1.19	-42 14.9	0.265	1.044	69.6	19.2	96 W	3	74	1 6	15 25.38	-12 11.5	1.981	1.609	29.5	21.1	54 W	30*	38*
1 11	11 0.39	-44 18.1	0.244	1.046	68.5	18.9	98 W	1	72	1 16	15 54.35	-13 2.2	1.906	1.					

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
482533 2012 UA₃₄ (continuation)										362310 2009 UM₃ (continuation)									
11 22	16 20.91	-24 52.6	1.101	0.191	49.6	18.2	8 E	—	2*	12 27	17 40.59	-18 28.5	1.524	0.590	18.8	18.7	11 W	4*	—
11 23	16 35.00	-25 39.6	1.081	0.213	58.9	18.6	11 E	—	5*	1 1	18 18.56	-18 50.4	1.508	0.549	13.7	18.4	8 W	1*	—
11 24	16 48.63	-26 15.1	1.060	0.238	65.9	19.0	13 E	—	7*	1 6	18 57.81	-18 48.8	1.500	0.525	8.2	18.1	4 W	—	—
11 25	17 1.85	-26 40.7	1.041	0.264	71.1	19.4	15 E	—	9*	1 11	19 37.48	-18 22.3	1.498	0.521	7.5	18.0	4 E	—	—
11 26	17 14.72	-26 57.9	1.022	0.290	74.9	19.7	16 E	—	10*	1 16	20 16.59	-17 31.4	1.502	0.539	12.8	18.3	7 E	1*	—
11 27	17 27.30	-27 8.0	1.005	0.316	77.7	19.9	18 E	—	12*	523654 2011 SR₅									
11 29	17 51.72	-27 9.3	0.974	0.366	81.2	20.3	22 E	—	3*	10 28	12 50.66	-14 1.7	1.051	0.347	70.9	21.0	19 W	6*	12*
12 1	18 15.26	-26 49.5	0.949	0.415	82.6	20.6	25 E	—	5*	10 30	13 3.47	-13 39.0	1.108	0.348	61.9	20.8	18 W	6*	10*
12 3	18 37.95	-26 11.9	0.930	0.462	82.8	20.8	28 E	—	8*	11 1	13 16.68	-13 17.1	1.162	0.356	53.4	20.7	17 W	6*	8*
12 5	18 59.77	-25 19.1	0.917	0.506	82.2	20.9	31 E	—	10*	11 3	13 30.08	-12 56.7	1.214	0.369	45.7	20.7	15 W	6*	7*
12 7	19 20.64	-24 13.8	0.909	0.548	81.0	21.0	33 E	—	12*	11 5	13 43.47	-12 38.1	1.262	0.389	39.1	20.7	14 W	6*	5*
12 9	19 40.51	-22 58.4	0.905	0.589	79.4	21.1	36 E	—	15*	11 7	13 56.69	-12 21.3	1.307	0.412	33.6	20.8	13 W	6*	3*
12 11	19 59.35	-21 35.3	0.906	0.627	77.6	21.2	38 E	—	17*	11 12	14 28.33	-11 46.5	1.408	0.481	24.3	21.0	12 W	5*	—
12 13	20 17.12	-20 6.7	0.911	0.664	75.6	21.2	41 E	—	19*	11 17	14 57.51	-11 18.8	1.497	0.558	19.6	21.3	11 W	5*	—
12 15	20 33.85	-18 34.5	0.919	0.699	73.5	21.3	43 E	—	21*	11 22	15 24.23	-10 54.9	1.576	0.637	17.5	21.6	11 W	5*	—
12 17	20 49.55	-17 0.5	0.931	0.733	71.4	21.4	45 E	—	23*	11 27	15 48.72	-10 32.5	1.650	0.715	16.6	21.9	12 W	6*	—
12 19	21 4.26	-15 26.2	0.945	0.766	69.3	21.4	47 E	—	25*	138815 2000 TQ₆₄									
12 21	21 18.05	-13 52.8	0.962	0.797	67.2	21.5	48 E	—	27*	10 28	13 1.48	-4 58.6	2.440	1.533	12.0	21.5	19 W	12*	5*
416567 2004 EB										11 7	13 29.01	-8 17.9	2.371	1.490	13.9	21.4	21 W	13*	8*
10 28	12 25.51	+ 6 46.4	2.626	1.868	16.7	21.4	33 W	26*	8*	11 17	13 57.98	-11 36.8	2.304	1.449	15.7	21.4	23 W	14*	10*
11 7	12 47.41	+ 3 34.3	2.486	1.783	19.1	21.3	36 W	29*	12*	11 27	14 28.57	-14 51.1	2.240	1.412	17.4	21.3	25 W	14*	13*
11 17	13 10.59	+ 0 9.1	2.346	1.698	21.6	21.1	39 W	30*	16*	12 7	15 0.95	-17 55.6	2.180	1.379	19.0	21.3	27 W	14*	16*
11 27	13 35.33	- 3 29.9	2.207	1.613	24.1	21.0	42 W	31*	20*	12 17	15 35.23	-20 44.5	2.127	1.350	20.5	21.2	29 W	13*	19*
12 7	14 2.05	+ 7 22.7	2.072	1.529	26.7	20.8	44 W	30*	25*	12 27	16 11.37	-23 11.3	2.079	1.327	22.0	21.2	30 W	12*	21*
12 17	14 31.28	-11 28.6	1.944	1.448	29.4	20.6	46 W	28*	29*	1 6	16 49.20	-25 9.4	2.039	1.309	23.2	21.1	32 W	11*	24*
12 27	15 3.61	-15 44.4	1.826	1.369	32.0	20.4	47 W	25*	34*	1 16	17 28.33	-26 33.1	2.006	1.297	24.4	21.1	33 W	9*	26*
1 1	15 21.17	-17 54.0	1.772	1.331	33.3	20.4	48 W	24*	36*	475534 2006 TS₇									
1 6	15 39.79	-20 3.3	1.722	1.295	34.5	20.3	48 W	22*	37*	10 28	13 15.78	-9 36.3	1.285	0.397	36.3	21.2	14 W	6*	4*
1 11	15 59.56	-22 10.5	1.676	1.260	35.7	20.2	48 W	19*	39*	11 2	13 53.76	-12 42.5	1.361	0.410	21.9	21.0	9 W	1*	1*
1 16	16 20.55	-24 13.7	1.635	1.227	36.8	20.1	48 W	17*	40*	11 7	14 31.21	-15 20.3	1.427	0.446	9.8	20.9	4 W	—	—
476904 2008 WK₃₂										11 12	15 7.26	-17 26.5	1.487	0.497	1.1	20.7	1 W	—	—
10 28	12 39.02	+ 5 3.5	1.672	0.936	30.9	21.5	29 W	23*	6*	11 17	15 41.44	-19 1.8	1.542	0.556	4.9	21.3	3 E	—	—
11 2	13 0.34	+ 2 27.0	1.667	0.917	30.5	21.4	28 W	22*	6*	450300 2004 QD₁₄									
11 7	13 21.76	+ 0 12.7	1.665	0.900	29.8	21.4	27 W	20*	6*	10 28	13 33.35	-7 16.8	1.572	0.624	17.2	21.4	11 W	4*	—
11 12	13 43.31	- 2 53.6	1.667	0.887	29.0	21.3	26 W	19*	6*	11 2	14 1.09	-10 8.6	1.594	0.628	13.1	21.3	8 W	2*	—
11 17	14 5.01	- 5 33.8	1.673	0.877	28.0	21.3	25 W	18*	6*	11 7	14 28.93	-12 51.0	1.616	0.639	9.3	21.2	6 W	—	—
11 22	14 26.86	+ 8 11.2	1.682	0.870	26.9	21.2	24 W	16*	7*	11 12	14 56.81	-15 20.6	1.640	0.655	5.7	21.1	4 W	—	—
11 27	14 48.90	-10 43.8	1.693	0.867	25.7	21.2	22 W	15*	7*	11 17	15 24.65	-17 34.7	1.664	0.676	2.7	21.0	2 W	—	—
12 2	15 11.11	-13 9.6	1.707	0.868	24.5	21.2	21 W	13*	7*	11 22	15 52.37	-19 31.5	1.689	0.701	1.0	21.0	1 E	—	—
12 7	15 33.52	-15 26.9	1.724	0.873	23.3	21.2	21 W	12*	8*	11 27	16 19.86	-21 9.7	1.714	0.729	2.5	21.3	2 E	—	—
12 12	15 56.10	-17 34.0	1.742	0.881	22.2	21.2	20 W	10*	8*	12 2	16 47.01	-22 28.7	1.741	0.758	4.2	21.5	3 E	—	—
12 17	16 18.83	-19 29.4	1.762	0.892	21.1	21.2	19 W	9*	9*	204131 2003 YL									
12 22	16 41.63	-21 12.0	1.784	0.907	20.2	21.2	19 W	7*	9*	10 28	13 54.73	-14 37.6	1.900	0.911	4.3	21.4	4 W	—	—
12 27	17 4.46	-22 41.1	1.806	0.924	19.4	21.3	18 W	6*	10*	11 2	14 15.36	-16 16.9	1.837	0.850	4.3	21.2	4 W	—	—
1 1	17 27.23	-23 56.0	1.829	0.944	18.8	21.3	18 W	5*	10*	11 7	14 37.86	-17 54.5	1.774	0.786	4.0	20.9	3 W	—	—
1 6	17 49.85	-24 56.7	1.853	0.967	18.3	21.4	18 W	4*	11*	11 12	15 2.54	-19 27.9	1.709	0.721	3.3	20.6	2 W	—	—
1 11	18 12.24	-25 43.4	1.877	0.991	17.9	21.5	18 W	2*	11*	11 17	15 29.73	-20 53.7	1.643	0.656	2.9	20.3	2 W	—	—
152941 2000 FM₁₀										11 22	15 59.75	-22 6.7	1.575	0.591	4.9	20.1	3 E	—	—
10 28	12 40.69	+ 2 21.7	0.525	0.577	128.6	20.6	27 W	20*	7*	11 27	16 32.81	-23 0.5	1.505	0.530	9.7	19.9	5 E	—	—
11 2	12 27.57	+ 5 34.1	0.559	0.635	112.1	19.7	36 W	29*	12*	12 2	17 8.92	-23 27.0	1.431	0.477	17.5	19.9	8 E	—	2*
11 7	12 19.93	+ 7 42.0	0.597	0.698	99.5	19.3	44 W	36*	16*	12 7	17 47.63	-23 18.0	1.350	0.439	28.1	19.9	12 E	1*	5*
11 12	12 16.13	+ 9 5.7	0.633	0.763	89.8	19.2	50 W	42*	20*	12 9	18 3.63	-23 3.0	1.316	0.429	33.1	19.9	14 E	3*	6*
11 17	12 14.73	+10 1.8	0.664	0.829	82.1	19.2	56 W	46*	23*	12 11	18 19.80	-22 41.3	1.281	0.423	38.4	20.0	15 E	4*	7*
11 22	12 14.71	+10 42.1	0.690	0.894	75.9	19.2	61 W	50*	26*	12 13	18 36.04	-22 12.8	1.245	0.421	43.8	20.1	17 E	6*	9*
11 27	12 15.36	+11 14.0	0.710	0.958	70.7	19.2	66 W	53*	29*	12 15	18 52.28	-21 37.8	1.208	0.424	49.1	20.2	19 E	7*	10*
12 2	12 16.16	+11 42.7	0.725	1.021	66.2	19.3	71 W	55*	33*	12 17	19 8.43	-20 56.6	1.171	0.430	54.3	20.3	21 E	9*	11*
12 7	12 16.76	+12 12.1	0.734	1.082	62.2	19.3	76 W	57*	36*	12 22	19 48.19	-18 49.0	1.082	0.463	65.4	20.6	25 E	13*	14*
12 12	12 16.83	+12 44.6	0.739	1.142	58.5	19.3	82 W	58	39*	12 27	20 27.01	-16 11.3	1.002	0.512	73.1	20.9	30 E	17*	17*
12 17	12 16.13	+13 22.5	0.740	1.200	55.0	19.3	87 W	58	42*	1 1	21 5.15	-13 8.0	0.935	0.571	77.4	21.1	34 E	22*	19*
12 22	12 14.42	+14 7.2	0.737	1.256	51.5	19.3	93 W	59	44*	1 6	21 42.90	-9 43.7	0.884	0.634	78.8	21.3	39 E	26*	22*
12 27	12 11.51	+14 59.7	0.732	1.311	47.9	19.3	99 W	60	46*	1 11	22 20.27	-6 4.5	0.850	0.700	78.1	21.4	44 E	31*	24*
1 1	12 7.20	+16 0.3	0.726	1.363	44.2	19.3	105 W	61	47*	1 16	22 57.04	-2 18.7	0.833	0.765	75.8	21.5	49 E	35*	26*
1 6	12 1.34	+17 9.2	0.719	1.414	40.3	19.2	111 W	62	47*	437846 1999 RJ₂₇									
1 11	11 53.77	+18 25.5	0.714	1.464	36.2	19.2	118 W	63	46	10 28	13 55.78	-4 13.8	1.959	0.993	9.5	21.5	10 W	3*	—
1 16	11 44.42	+19 47.4	0.710	1.512	31.9	19.1	126 W	65	44	11 7	14 38.88	-5 57.6	1.928	0.971	10.8	21.4	11 W	3*	—

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° – 26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° – 26°	
172722 2004 BV₁₀₂ (<i>continuation</i>)									334042 2001 EC₁₈ (<i>continuation</i>)									
12 7	15 29.61	–23 8.5	2.444	1.552	12.3	21.1	20 W	6* 12*	11 22	17 0.59	–32 13.5	2.203	1.316	14.7	21.4	20 E	–	13*
12 17	15 58.85	–24 45.9	2.308	1.453	15.3	21.0	23 W	7* 15*	11 27	17 20.77	–32 25.1	2.212	1.319	14.1	21.4	19 E	–	13*
12 27	16 31.69	–26 10.1	2.166	1.347	18.3	20.8	25 W	7* 18*	12 2	17 40.97	–32 25.8	2.221	1.322	13.5	21.4	18 E	–	12*
1 6	17 8.95	–27 12.2	2.023	1.234	21.4	20.5	27 W	7* 20*	12 7	18 1.10	–32 15.5	2.232	1.326	12.9	21.4	18 E	–	11*
1 16	17 51.47	–27 39.1	1.883	1.115	24.5	20.2	28 W	6* 21*	12 12	18 21.06	–31 54.5	2.244	1.331	12.3	21.4	17 E	–	11*
244694 2003 QQ₅									120644 1996 RM₃									
10 28	14 15.67	–7 36.6	3.161	2.175	2.6	21.5	6 E	–	10 28	15 24.52	–23 37.9	4.250	3.338	6.0	21.4	21 E	–	14*
11 7	14 36.17	–9 3.5	3.115	2.138	3.6	21.5	8 W	1*	11 7	15 38.35	–24 25.2	4.269	3.317	4.2	21.3	14 E	–	8*
11 17	14 57.41	–10 25.1	3.060	2.100	5.4	21.5	12 W	6*	11 17	15 52.65	–25 10.5	4.271	3.295	2.4	21.2	8 E	–	2*
11 27	15 19.40	–11 39.7	2.995	2.063	7.4	21.5	16 W	9*	11 27	16 7.33	–25 53.2	4.255	3.273	1.5	21.1	5 W	–	–
12 7	15 42.15	–12 45.7	2.924	2.026	9.5	21.5	20 W	13*	12 7	16 22.32	–26 32.7	4.221	3.250	2.5	21.2	8 W	–	2*
12 17	16 5.64	–13 41.7	2.846	1.989	11.7	21.5	24 W	15*	12 17	16 37.55	–27 8.6	4.169	3.225	4.4	21.2	14 W	–	8*
12 27	16 29.85	–14 25.9	2.762	1.952	13.8	21.5	28 W	17*	12 27	16 52.93	–27 40.5	4.100	3.200	6.3	21.3	21 W	3*	14*
1 6	16 54.72	–14 56.9	2.674	1.917	15.9	21.4	32 W	19*	1 6	17 8.37	–28 8.2	4.014	3.175	8.2	21.3	27 W	6*	21*
1 16	17 20.19	–15 13.3	2.583	1.882	18.0	21.4	36 W	20*	1 16	17 23.77	–28 31.6	3.913	3.148	10.1	21.3	34 W	8*	28*
238519 2004 TC₁₃₃									152739 1998 WC₃₂									
10 28	14 27.61	–14 43.5	3.537	2.548	1.8	21.4	5 E	–	10 28	15 30.31	–21 28.8	3.147	2.247	9.1	21.5	21 E	1*	15*
11 7	14 44.80	–16 12.8	3.511	2.520	0.4	21.2	1 W	–	11 7	15 50.83	–22 45.3	3.155	2.219	7.0	21.3	16 E	–	10*
11 17	15 2.55	–17 38.4	3.471	2.492	2.6	21.4	7 W	–	11 17	16 12.26	–23 54.4	3.152	2.190	5.0	21.2	11 E	–	5*
11 27	15 20.83	–18 59.4	3.418	2.462	4.8	21.4	12 W	4*	11 27	16 34.55	–24 54.7	3.138	2.160	2.9	21.1	6 E	–	–
12 7	15 39.63	–20 14.8	3.353	2.433	7.1	21.5	18 W	7*	12 7	16 57.65	–25 44.7	3.113	2.131	1.5	20.9	3 E	–	–
12 17	15 58.93	–21 24.0	3.275	2.402	9.3	21.5	23 W	10*	12 17	17 21.52	–26 23.1	3.079	2.101	2.3	20.9	5 W	–	–
12 27	16 18.68	–22 26.1	3.186	2.371	11.5	21.5	29 W	12*	12 27	17 46.06	–26 48.6	3.036	2.071	4.3	21.0	9 W	–	3*
1 6	16 38.84	–23 20.5	3.086	2.339	13.7	21.5	34 W	13*	1 6	18 11.17	–27 0.2	2.984	2.041	6.5	21.0	14 W	–	7*
1 16	16 59.36	–24 6.5	2.977	2.306	15.8	21.4	40 W	14*	1 16	18 36.75	–26 56.9	2.924	2.011	8.7	21.0	18 W	1*	12*
190716 2001 KH₃₂									147874 2006 QP₃₉									
10 28	14 29.90	–12 15.4	3.352	2.364	2.1	21.4	5 E	–	10 28	15 45.00	–16 24.4	3.271	2.390	9.4	21.5	23 E	7*	16*
11 7	14 48.48	–13 44.4	3.325	2.335	1.1	21.3	3 W	–	11 7	16 3.87	–17 19.2	3.277	2.354	7.4	21.4	18 E	5*	10*
11 17	15 7.66	–15 8.4	3.286	2.306	2.8	21.4	7 W	–	11 17	16 23.54	–18 7.2	3.271	2.317	5.4	21.2	13 E	3*	5*
11 27	15 27.44	–16 26.5	3.235	2.276	5.0	21.5	11 W	5*	11 27	16 43.98	–18 47.0	3.254	2.281	3.4	21.1	8 E	1*	–
12 7	15 47.81	–17 37.3	3.173	2.246	7.2	21.5	17 W	8*	12 7	17 5.13	–19 17.5	3.225	2.243	1.8	20.9	4 E	–	–
102074 1999 RN₁₄₃									302129 2001 QY₁₉₃									
10 28	14 58.69	–11 28.0	3.978	3.014	3.9	21.5	12 E	3*	10 28	15 50.05	–19 33.1	2.817	1.960	12.3	21.4	25 E	5*	18*
11 7	15 13.21	–12 24.2	3.978	2.997	2.3	21.3	7 E	1*	11 7	16 13.88	–20 24.6	2.827	1.930	10.4	21.3	21 E	4*	14*
11 17	15 28.07	–13 15.9	3.962	2.979	1.9	21.3	6 W	–	11 17	16 38.64	–21 4.9	2.829	1.900	8.4	21.2	16 E	3*	9*
11 27	15 43.20	–14 2.5	3.928	2.961	3.3	21.4	10 W	4*	11 27	17 4.24	–21 32.0	2.824	1.871	6.4	21.1	12 E	2*	5*
12 7	15 58.55	–14 43.2	3.879	2.942	5.1	21.4	16 W	9*	12 7	17 30.58	–21 44.1	2.812	1.843	4.4	21.0	8 E	–	1*
12 17	16 14.04	–15 17.5	3.814	2.921	7.1	21.5	22 W	13*	12 17	17 57.55	–21 39.6	2.795	1.816	2.5	20.8	5 E	–	–
12 27	16 29.59	–15 44.7	3.733	2.900	9.1	21.5	28 W	16*	12 27	18 25.00	–21 17.4	2.772	1.790	1.1	20.6	2 E	–	–
1 6	16 45.10	–16 4.6	3.638	2.878	11.1	21.5	34 W	19*	1 6	18 52.76	–20 36.6	2.745	1.765	2.2	20.7	4 W	–	–
1 16	17 0.50	–16 16.7	3.530	2.855	12.9	21.5	41 W	21*	1 16	19 20.68	–19 36.9	2.714	1.742	4.1	20.7	7 W	–	–
85236 1993 KH									285110 1995 MA₁									
10 28	15 7.62	–18 32.5	2.154	1.221	12.1	21.4	15 E	–	10 28	16 2.44	–16 43.1	2.702	1.877	14.1	21.4	27 E	9*	20*
11 7	15 40.33	–21 24.7	2.115	1.171	11.1	21.3	13 E	–	11 7	16 23.50	–18 52.3	2.674	1.800	12.2	21.2	23 E	7*	15*
11 17	16 15.97	–23 58.9	2.070	1.121	10.4	21.1	12 E	–	11 17	16 46.56	–20 55.6	2.635	1.723	10.3	21.0	18 E	4*	11*
11 27	16 54.86	–26 7.0	2.022	1.070	10.2	20.9	11 E	–	11 27	17 11.78	–22 50.7	2.586	1.646	8.3	20.8	14 E	2*	7*
12 7	17 37.13	–27 38.7	1.972	1.021	10.4	20.8	11 E	–	12 7	17 39.36	–24 34.6	2.528	1.569	6.5	20.6	10 E	–	4*
12 17	18 22.62	–28 22.4	1.922	0.974	11.1	20.7	11 E	–	12 17	18 9.49	–26 3.4	2.463	1.493	4.9	20.3	7 E	–	1*
12 27	19 10.71	–28 6.8	1.874	0.932	12.3	20.5	12 E	–	12 27	18 42.32	–27 12.2	2.394	1.419	4.0	20.1	6 E	–	–
1 6	20 0.33	–26 43.0	1.829	0.896	13.9	20.5	13 E	–	1 1	18 59.77	–27 37.3	2.359	1.383	4.0	20.0	6 E	–	–
1 16	20 50.21	–24 7.5	1.791	0.869	15.9	20.4	14 E	1*	1 6	19 17.90	–27 55.1	2.323	1.348	4.3	20.0	6 E	–	–
380818 2005 YV₁₂₈									88453 2001 QF₉₁									
10 28	15 10.14	–13 13.3	1.464	0.562	26.6	21.4	15 E	4*	10 28	16 6.56	–38 29.7	3.611	2.871	11.8	21.5	36 E	–	28*
11 7	15 37.66	–15 58.6	1.384	0.517	33.1	21.3	17 E	5*	11 7	16 25.67	–38 40.0	3.666	2.860	10.2	21.5	31 E	–	22*
11 17	16 7.14	–18 48.8	1.297	0.480	41.6	21.2	19 E	5*	11 17	16 45.27	–38 47.1	3.707	2.848	8.7	21.4	26 E	–	17*
11 27	16 38.38	–21 40.2	1.203	0.456	52.1	21.2	21 E	5*	11 27	17 11.78	–22 50.7	3.734	2.836	7.2	21.4	21 E	–	12*
11 17	17 10.92	–24 27.7	1.103	0.450	63.6	21.3	24 E	5*	12 7	17 25.51	–38 47.3	3.746	2.822	6.0	21.3	17 E	–	8*
307984 2004 QV₁₃									334042 2001 EC₁₈									
10 28	15 22.80	–32 22.9	3.528	2.666	9.2	21.5	25 E	–	10 28	15 23.26	–28 41.6	2.172	1.318	17.2	21.5	23 E	–	16*
11 7	15 42.24	–32 48.0	3.546	2.640	7.5	21.4	20 E	–	11 2	15 41.99	–29 42.8	2.177	1.316	16.7	21.5	22 E	–	16*
11 17	16 2.22	–33 8.8	3.551	2.614	6.0	21.3	16 E	–	11 7	16 1.15	–30 35.2	2.182	1.314	16.3	21.5	22 E	–	15*
11 27	16 22.66	–33 24.0	3.541	2.586	4.7	21.2	13 E	–	11 12	16 20.68	–31 18.2	2.188	1.314	15.8	21.5	21 E	–	15*
12 7	16 43.48	–33 32.5	3.517	2.558	4.3	21.2	11 W	–	11 17	16 40.53	–31 51.1	2.195	1.315	15.2	21.4	20 E	–	14*
12 17	17 4.61	–33 33.0	3.480	2.529	4.9	21.1	13 W	–										
12 27	17 25.93	–33 24.8	3.429	2.499	6.3	21.1	16 W	–										
1 6	17 47.34	–33 7.0	3.364	2.468	8.1	21.2	21 W	–										
1 16	18 8.73	–32 39.0	3.287	2.437	10.0	21.2	26 W	–										

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	2020	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	
74721 1999 <i>RH</i> ₁₆₇									520808 2014 <i>TF</i> ₆₄ <i>(continuation)</i>									
10 28	16 13.29	-22 37.2	3.267	2.467	11.9	21.5	31 E	6* 25*	11 17	20 50.53	+8 9.2	0.498	1.055	68.6	21.1	83 E	53	47*
11 7	16 31.85	-23 23.5	3.294	2.434	10.0	21.4	25 E	4* 19*	11 19	21 6.59	+5 35.3	0.504	1.065	67.4	21.1	84 E	51	50*
11 17	16 51.27	-24 3.1	3.309	2.400	7.9	21.3	20 E	3* 13*	11 21	21 22.16	+3 4.8	0.513	1.075	66.3	21.1	85 E	48	53*
11 27	17 11.48	-24 34.9	3.310	2.366	5.9	21.1	14 E	— 8*	11 23	21 37.18	+0 39.9	0.524	1.086	65.1	21.2	86 E	46	56*
12 7	17 32.41	-24 57.7	3.299	2.331	3.7	21.0	9 E	— 3*	11 25	21 51.59	+1 37.7	0.538	1.096	64.0	21.2	87 E	43	58*
12 17	17 53.99	-25 10.4	3.277	2.296	1.6	20.8	4 E	—	11 27	22 5.37	+3 46.7	0.554	1.107	62.9	21.3	87 E	41	61*
12 27	18 16.12	-25 12.2	3.242	2.260	1.1	20.7	3 W	—	12 2	22 37.03	+8 27.9	0.604	1.135	60.2	21.4	88 E	37	66*
1 6	18 38.71	-25 2.1	3.197	2.224	3.1	20.8	7 W	— 1*	12 7	23 4.87	+12 10.2	0.663	1.164	57.7	21.6	88 E	33	69*
1 16	19 1.68	-24 39.8	3.141	2.188	5.3	20.8	12 W	— 6*	12 12	23 29.34	+15 0.2	0.730	1.194	55.5	21.8	87 E	30	71*
									12 17	23 50.98	+17 7.3	0.801	1.224	53.3	22.0	86 E	28	72*
354820 2005 <i>WR</i> ₉₇									451217 2009 <i>XE</i> ₁₁									
10 28	16 31.43	-23 17.4	2.433	1.717	19.4	21.5	35 E	8* 29*	11 7	3 50.84	+7 1.5	3.657	4.611	3.7	23.5	162 W	52	57
11 7	16 59.20	-24 21.1	2.460	1.696	17.8	21.4	31 E	7* 25*	11 17	3 43.41	+6 40.3	3.609	4.579	2.7	23.4	167 W	52	57
11 17	17 28.08	-25 6.6	2.483	1.676	16.1	21.4	28 E	7* 21*	11 27	3 35.76	+6 24.4	3.593	4.546	3.7	23.4	163 E	51	58
11 27	17 57.88	-25 31.7	2.503	1.659	14.4	21.3	25 E	6* 18*	12 7	3 28.40	+6 15.4	3.609	4.512	5.6	23.5	153 E	51	58
12 7	18 28.36	-25 34.6	2.520	1.644	12.7	21.2	21 E	5* 14*	12 17	3 21.80	+6 14.4	3.653	4.477	7.6	23.6	143 E	51	58
12 17	18 59.25	-25 14.2	2.536	1.631	10.9	21.2	18 E	4* 11*	481027 2004 <i>XV</i> ₄₄									
12 27	19 30.28	-24 30.3	2.549	1.621	9.2	21.1	15 E	3* 8*	11 7	3 52.39	+16 52.1	2.376	3.343	4.4	23.4	165 W	62	47
1 6	20 1.16	-23 23.4	2.561	1.614	7.5	21.0	12 E	1* 5*	11 17	3 41.83	+16 14.8	2.390	3.377	1.2	23.2	176 W	61	48
1 16	20 31.66	-21 54.9	2.572	1.610	5.8	20.9	9 E	— 3*	11 27	3 31.46	+15 38.5	2.436	3.410	3.2	23.4	169 E	61	48
154020 2002 <i>CA</i> ₁₀									468681 2009 <i>MZ</i> ₆									
10 28	16 38.74	-18 7.8	1.451	0.874	42.1	21.3	36 E	13* 29*	11 7	4 12.20	+11 50.1	1.663	2.614	7.7	24.2	159 W	57	52
11 2	16 57.26	-19 29.7	1.397	0.826	44.4	21.1	36 E	13* 28*	11 12	4 6.42	+11 32.8	1.667	2.636	5.6	24.2	165 W	57	52
11 7	17 17.08	-20 50.2	1.339	0.780	47.2	21.0	35 E	12* 28*	11 17	4 0.47	+11 16.9	1.679	2.657	3.9	24.1	169 W	56	53
11 12	17 38.27	-22 8.6	1.277	0.738	50.7	20.8	35 E	12* 28*	11 22	3 54.52	+11 2.9	1.698	2.677	3.4	24.1	171 W	56	53
11 17	18 0.88	-23 23.6	1.210	0.701	54.8	20.7	35 E	12* 28*	11 27	3 48.72	+10 51.0	1.724	2.698	4.2	24.2	168 E	56	53
11 22	18 24.92	-24 34.0	1.140	0.670	59.6	20.7	36 E	12* 28*	12 2	3 43.21	+10 41.8	1.758	2.718	5.9	24.4	164 E	56	53
11 27	18 50.37	-25 38.0	1.066	0.648	65.1	20.6	37 E	12* 29*	12 7	3 38.13	+10 35.3	1.799	2.738	7.7	24.5	158 E	56	53
12 2	19 17.17	-26 33.9	0.991	0.635	70.8	20.6	37 E	12* 30*	12 12	3 33.57	+10 31.8	1.847	2.757	9.5	24.7	152 E	56	53
12 7	19 45.30	-27 19.3	0.915	0.633	76.6	20.6	39 E	12* 31*	424532 2008 <i>EZ</i> ₉₇									
12 12	20 14.80	-27 51.3	0.841	0.642	82.0	20.6	40 E	12* 33*	11 7	4 14.23	+19 7.8	2.287	3.234	6.1	22.8	160 W	64	45
12 17	20 45.85	-28 5.8	0.770	0.660	86.6	20.7	42 E	13* 34*	11 17	4 3.66	+18 54.3	2.278	3.260	2.4	22.6	172 W	64	45
12 22	21 18.68	-27 57.4	0.704	0.688	90.0	20.7	44 E	14* 37*	11 27	3 52.76	+18 38.8	2.302	3.286	1.5	22.6	175 E	64	45
12 27	21 53.58	-27 19.0	0.644	0.723	91.9	20.7	47 E	15* 39*	12 7	3 42.50	+18 23.5	2.357	3.310	5.1	22.9	163 E	63	46
1 1	22 30.73	-26 2.2	0.592	0.763	92.1	20.6	51 E	17* 43*	12 17	3 33.69	+18 11.0	2.442	3.333	8.4	23.1	150 E	63	46
1 6	23 10.01	-23 58.4	0.549	0.808	90.8	20.5	55 E	20* 46*	377972 2006 <i>MF</i> ₁₀									
1 11	23 50.87	-21 2.0	0.518	0.855	87.9	20.4	60 E	23* 50*	11 7	4 15.91	+18 15.5	2.047	2.994	6.7	23.8	159 W	63	46
1 16	0 32.31	-17 14.4	0.499	0.904	83.7	20.3	66 E	27* 54*	11 17	4 5.16	+17 39.2	2.033	3.014	2.8	23.6	172 W	63	46
315186 Schade									445775 2011 <i>YA</i>									
10 28	17 4.09	-26 52.0	2.480	1.879	21.1	21.5	43 E	9* 37*	11 12	4 16.67	+29 33.3	1.626	2.563	9.1	22.3	156 W	75	34
11 7	17 29.39	-26 57.2	2.513	1.845	19.6	21.4	39 E	8* 32*	11 17	4 0.65	+29 17.1	1.516	2.490	4.9	21.9	168 W	74	35
11 17	17 55.67	-26 47.6	2.540	1.812	17.9	21.3	34 E	8* 28*	11 22	3 51.57	+29 0.6	1.473	2.453	3.6	21.7	171 W	74	35
11 27	18 22.76	-26 21.5	2.561	1.780	16.3	21.3	30 E	8* 23*	11 27	3 42.04	+28 38.1	1.437	2.415	4.1	21.7	170 E	74	35
12 7	18 50.45	-25 37.2	2.576	1.750	14.5	21.2	26 E	8* 19*	12 2	3 32.34	+28 9.8	1.410	2.376	6.2	21.7	165 E	73	36
12 17	19 18.56	-24 33.7	2.587	1.721	12.8	21.1	23 E	7* 15*	12 7	3 22.74	+27 36.4	1.392	2.336	8.9	21.8	159 E	73	36
12 27	19 46.87	-23 10.4	2.593	1.694	11.0	21.0	19 E	6* 11*	12 12	3 13.50	+26 58.8	1.380	2.296	11.7	21.8	152 E	72	37
1 6	20 15.20	-21 27.7	2.595	1.670	9.2	20.9	16 E	5* 7*	12 17	3 4.88	+26 18.6	1.377	2.254	14.5	21.9	145 E	71	38
1 16	20 43.41	-19 26.1	2.595	1.648	7.4	20.8	12 E	3* 4*	12 22	2 57.10	+25 37.3	1.379	2.212	17.2	21.9	138 E	71	38
458418 2011 <i>AM</i> ₁₂									303449 2005 <i>BE</i> ₂									
10 28	17 35.21	-41 17.1	0.999	0.883	63.4	21.5	53 E	— 45*	11 7	4 20.78	+16 12.1	2.141	3.083	6.9	22.8	158 W	61	48
11 2	17 53.00	-44 50.3	0.981	0.870	64.5	21.4	52 E	— 44*	11 17	4 8.69	+15 46.1	2.130	3.108	3.1	22.6	170 W	61	48
11 7	18 12.89	-48 16.6	0.962	0.861	65.6	21.4	52 E	— 43*	11 27	3 56.19	+15 20.4	2.150	3.132	2.2	22.6	173 E	60	49
11 12	18 35.41	-51 33.1	0.940	0.857	66.6	21.4	53 E	— 42*	12 7	3 44.36	+14 57.8	2.204	3.154	5.7	22.9	162 E	60	49
11 17	19 1.26	-54 35.9	0.918	0.859	67.5	21.4	53 E	— 42*	12 17	3 34.13	+14 41.0	2.288	3.174	9.1	23.1	149 E	60	49
11 22	19 31.22	-57 19.6	0.893	0.867	68.3	21.3	55 E	— 42*	434231 2003 <i>SR</i> ₂₈₀									
11 27	20 6.08	-59 37.0	0.868	0.879	68.8	21.3	56 E	— 42*	11 7	4 21.08	+15 38.2	1.995	2.937	7.3	22.5	158 W	61	48
12 2	20 46.29	-61 18.3	0.842	0.896	69.0	21.3	58 E	— 43*	11 17	4 11.39	+14 56.5	1.990	2.967	3.6	22.3	169 W	60	49
12 7	21 31.49	-62 12.0	0.815	0.918	69.0	21.3	60 E	— 45*	11 27	4 1.27	+14 17.4	2.015	2.997	2.4	22.3	173 E	59	50
12 12	22 20.00	-62 6.2	0.790	0.943	68.6	21.3	63 E	— 47*	12 7	3 51.76	+13 44.1	2.071	3.026	5.6	22.5	163 E	59	50
12 17	23 8.95	-60 52.8	0.766	0.972	67.8	21.2	66 E	— 51*	12 17	3 43.70	+13 19.4	2.156	3.054	9.0	22.8	151 E	58	51
12 22	23 55.24	-58 29.2	0.745	1.003	66.6	21.2	69 E	— 54*	436671 2011 <i>SV</i> ₇₁									
12 27	0 36.75	-54 59.8	0.727	1.037	65.0	21.2	73 E	— 59*	11 7	4 21.10	+14 45.5	2.488	3.426	6.3	23.1	158 W	60	49
1 1	1 12.77	-50 33.1	0.715	1.073	63.0	21.2	77 E	— 64*	11 17	4 10.68	+14 33.9	2.492	3.469	3.0	23.0	169 W	60	49
1 6	1 43.59	-45 20.9	0.710	1.110	60.8	21.2	80 E	— 69*	11 27	3 59.99	+14 24.0	2.529	3.510	2.0	23.0	173 E	59	50
1 11	2 9.98	-39 36.2	0.712	1.148	58.3	21.2	84 E	5 75*	12 7	3 49.88	+14 17.4	2.598	3.550	4.8	23.2	162 E	59	50
1 16	2 32.82	-33 33.2	0.723	1.187	55.8	21.2	87 E	11 80*	12 17	3 41.08	+14 15.7	2.698	3.588	7.7	23.5	151 E	59	50
520808 2014 <i>TF</i> ₆₄																		
10 28	18 7.61	+28 25.6	0.589	0.975</														

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	2020	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
382745 2003 CC									514031 2014 KY₇₅								
11 7	4 21.40	+17 2.4	1.035	1.989	10.8	22.5	158 W	62 47	11 7	4 42.89	+54 5.0	2.736	3.519	11.2	22.0	136 W	81 10
11 12	4 13.73	+16 39.7	1.018	1.990	7.6	22.4	165 W	62 47	11 12	4 36.28	+54 28.4	2.715	3.527	10.5	22.0	140 W	81 10
11 17	4 5.45	+16 15.9	1.008	1.991	4.4	22.2	171 W	61 48	11 17	4 29.08	+54 45.6	2.699	3.535	9.8	21.9	142 W	80 9
11 22	3 56.88	+15 51.6	1.005	1.991	2.2	22.1	175 W	61 48	11 22	4 21.48	+54 56.0	2.691	3.543	9.3	21.9	145 W	80 9
11 27	3 48.30	+15 27.8	1.008	1.990	3.9	22.2	172 E	60 49	11 27	4 13.66	+54 59.1	2.688	3.550	8.9	21.9	146 W	80 9
12 2	3 40.03	+15 5.4	1.019	1.989	7.1	22.4	166 E	60 49	12 2	4 5.85	+54 55.2	2.693	3.558	8.8	21.9	147 E	80 9
12 7	3 32.33	+14 45.3	1.036	1.987	10.3	22.5	159 E	60 49	12 7	3 58.25	+54 44.3	2.704	3.565	8.9	21.9	146 E	80 9
12 12	3 25.43	+14 28.4	1.060	1.985	13.3	22.7	152 E	59 50	12 12	3 51.06	+54 27.1	2.722	3.571	9.2	22.0	145 E	81 10
312979 1999 KT₄									272191 2005 QR₃								
11 7	4 25.13	+19 1.9	2.089	3.026	7.4	22.3	157 W	64 45	11 7	4 43.24	+24 56.7	1.935	2.849	9.4	21.5	152 W	70 39
11 17	4 14.91	+18 37.4	2.047	3.024	3.5	22.1	169 W	64 45	11 12	4 38.41	+24 50.5	1.915	2.857	7.4	21.4	158 W	70 39
11 27	4 3.84	+18 10.6	2.036	3.021	1.1	21.9	177 E	63 46	11 17	4 33.16	+24 42.2	1.902	2.866	5.4	21.3	164 W	70 39
12 7	3 52.99	+17 44.2	2.056	3.018	5.0	22.2	165 E	63 46	11 22	4 27.62	+24 32.0	1.896	2.874	3.3	21.2	170 W	70 39
12 17	3 43.37	+17 21.2	2.107	3.012	8.7	22.4	152 E	62 47	11 27	4 21.94	+24 20.1	1.897	2.882	1.4	21.1	176 W	69 40
178871 2001 MA₈									508818 2001 DC₁								
11 7	4 25.85	+26 46.3	2.272	3.199	7.5	22.5	155 W	72 37	11 7	4 43.71	-16 32.1	2.685	3.473	11.3	22.1	137 W	28 81
11 12	4 20.69	+26 31.3	2.258	3.212	5.7	22.5	161 W	72 37	11 12	4 39.92	-16 58.8	2.661	3.467	10.8	22.1	139 W	28 81
11 17	4 15.26	+26 13.9	2.252	3.224	3.9	22.4	167 W	71 38	11 17	4 35.81	-17 20.4	2.643	3.461	10.5	22.1	140 W	28 81
11 22	4 9.69	+25 54.3	2.253	3.236	2.2	22.3	173 W	71 38	11 22	4 31.46	-17 36.3	2.631	3.455	10.4	22.1	141 W	27 82
11 27	4 4.12	+25 32.9	2.263	3.247	1.5	22.2	175 E	71 38	11 27	4 26.96	-17 46.0	2.626	3.448	10.4	22.0	141 W	27 82
12 2	3 58.67	+25 10.2	2.280	3.258	2.6	22.3	171 E	70 39	12 2	4 22.40	-17 49.3	2.626	3.442	10.6	22.1	140 W	27 82
12 7	3 53.47	+24 46.6	2.306	3.269	4.3	22.5	166 E	70 39	12 7	4 17.89	-17 46.0	2.633	3.435	10.9	22.1	139 E	27 82
12 12	3 48.63	+24 22.7	2.339	3.280	6.0	22.6	160 E	69 40	12 12	4 13.52	-17 36.1	2.646	3.428	11.4	22.1	136 E	27 82
450143 1999 ED₅									344191 2001 KB₁₈								
11 7	4 26.90	+47 45.8	1.281	2.155	16.2	22.7	143 W	87 16	11 7	4 47.67	+24 3.8	1.778	2.689	10.2	21.5	151 W	69 40
11 12	4 16.10	+48 8.5	1.280	2.176	14.5	22.6	147 W	87 16	11 12	4 42.78	+23 48.7	1.763	2.703	8.1	21.4	157 W	69 40
11 17	4 4.69	+48 8.5	1.284	2.196	13.1	22.6	150 W	87 16	11 17	4 37.45	+23 31.8	1.754	2.717	5.9	21.3	164 W	69 40
11 22	3 53.14	+48 15.2	1.295	2.216	12.1	22.6	152 W	87 16	11 22	4 31.83	+23 13.1	1.753	2.731	3.6	21.1	170 W	68 41
11 27	3 41.90	+47 59.3	1.313	2.235	11.8	22.7	152 E	87 16	11 27	4 26.09	+22 53.0	1.759	2.745	1.3	21.0	176 W	68 41
12 2	3 31.38	+47 32.2	1.338	2.254	12.0	22.7	152 E	87 16	12 2	4 20.39	+22 32.0	1.773	2.758	1.1	21.0	177 E	68 41
12 7	3 21.91	+46 55.9	1.368	2.272	12.8	22.8	149 E	88 17	12 7	4 14.87	+22 10.6	1.794	2.771	3.3	21.2	171 E	67 42
12 12	3 13.71	+46 12.7	1.406	2.289	13.9	22.9	146 E	89 18	12 12	4 9.69	+21 49.2	1.823	2.784	5.5	21.4	164 E	67 42
461365 2000 JF₁									2608 Seneca								
11 7	4 31.42	+23 46.6	1.852	2.781	8.7	23.3	155 W	69 40	11 7	4 56.63	+ 2 15.6	2.159	3.029	10.6	22.3	146 W	47 62
11 12	4 25.39	+23 50.1	1.842	2.798	6.5	23.2	161 W	69 40	11 17	4 48.20	+ 1 13.3	2.061	2.981	8.4	22.0	154 W	46 63
11 17	4 19.01	+23 51.4	1.840	2.814	4.3	23.1	168 W	69 40	11 27	4 38.01	+ 0 21.1	1.991	2.930	7.2	21.9	158 W	45 64
11 22	4 12.45	+23 50.7	1.845	2.829	2.2	22.9	174 W	69 40	12 7	4 26.88	- 0 15.9	1.950	2.879	8.0	21.8	156 E	45 64
11 27	4 5.87	+23 48.1	1.859	2.844	1.0	22.9	177 E	69 40	12 17	4 15.83	- 0 33.8	1.938	2.826	10.4	21.9	149 E	44 65
12 2	3 59.44	+23 44.0	1.880	2.859	2.8	23.0	172 E	69 40	12 27	4 5.93	- 0 30.8	1.953	2.771	13.5	22.0	139 E	44 65
12 7	3 53.31	+23 38.7	1.909	2.874	4.8	23.2	166 E	69 40	427861 2005 OV₃₁								
12 12	3 47.63	+23 32.6	1.945	2.888	6.9	23.4	159 E	69 40	11 7	4 57.58	+30 41.1	1.859	2.746	11.2	21.7	147 W	76 33
423422 2005 PG₁₀									373883 2003 SB₂₃₄								
11 7	4 36.85	+14 52.3	2.024	2.947	8.5	22.5	154 W	60 49	11 7	5 0.06	+18 32.6	1.653	2.552	11.6	21.7	149 W	64 45
11 17	4 27.22	+14 33.9	1.989	2.957	4.8	22.3	166 W	60 49	11 17	4 50.17	+18 18.3	1.620	2.575	7.2	21.5	161 W	63 46
11 27	4 16.63	+14 17.8	1.985	2.967	2.3	22.1	173 W	59 50	11 27	4 38.70	+18 3.3	1.614	2.596	2.7	21.3	173 W	63 46
12 7	4 6.10	+14 6.1	2.011	2.975	4.7	22.3	166 E	59 50	12 7	4 26.94	+17 49.1	1.638	2.617	3.1	21.4	172 E	63 46
12 17	3 56.65	+14 0.7	2.066	2.982	8.3	22.5	154 E	59 50	12 17	4 16.19	+17 38.2	1.691	2.637	7.4	21.7	160 E	63 46
213053 1998 WT₃₀									302523 2002 KH₃								
11 7	4 37.04	+22 27.7	0.827	1.771	14.3	21.3	154 W	67 42	11 7	4 38.74	+26 37.3	1.835	2.753	9.6	21.6	153 W	72 37
11 17	4 26.67	+22 12.5	0.750	1.726	7.8	20.8	166 W	67 42	11 12	4 32.79	+26 15.1	1.836	2.783	7.4	21.6	159 W	71 38
11 27	4 12.37	+21 45.1	0.695	1.681	0.4	20.1	179 W	67 42	11 17	4 26.56	+25 50.3	1.845	2.812	5.1	21.5	165 W	71 38
12 7	3 56.30	+21 7.1	0.662	1.636	8.2	20.4	166 E	66 43	11 22	4 20.23	+25 23.5	1.861	2.841	3.0	21.4	171 W	70 39
12 12	3 48.49	+20 46.2	0.654	1.613	12.4	20.6	159 E	66 43	11 27	4 13.97	+24 55.0	1.884	2.870	1.3	21.3	176 W	70 39
12 17	3 41.34	+20 25.6	0.651	1.590	16.6	20.7	153 E	65 44	12 2	4 7.93	+24 25.6	1.916	2.898	2.2	21.5	174 E	69 40
12 22	3 35.20	+20 6.9	0.652	1.567	20.6	20.8	146 E	65 44	12 7	4 2.26	+23 56.0	1.955	2.926	4.1	21.7	168 E	69 40
12 27	3 30.31	+19 51.3	0.657	1.544	24.3	20.9	140 E	65 44	12 12	3 57.05	+23 26.7	2.003	2.953	6.0	21.8	162 E	68 41
1 1	3 26.85	+19 40.0	0.665	1.522	27.8	21.0	134 E	65 44	12 17	3 52.42	+22 58.4	2.057	2.981	7.9	22.0	156 E	68 41
1 6	3 24.88	+19 33.6	0.676	1.499	31.0	21.1	128 E	65 44	12 22	3 48.43	+22 31.9	2.118	3.007	9.6	22.2	149 E	68 41
1 11	3 24.46	+19 32.4	0.689	1.477	33.9	21.2	123 E	65 44	12 27	3 45.12	+22 7.4	2.186	3.034	11.1	22.3	144 E	67 42
1 16	3 25.57	+19 36.6	0.703	1.455	36.6	21.2	118 E	65 44									

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°
496177 2011 CA₆₆									153220 2000 YN₂₉								
11 7	5 0.86	+39 44.4	3.143	3.979	8.6	21.8	143 W	85 24	11 7	5 11.67	+22 53.8	1.906	2.783	11.5	21.7	146 W	68 41
11 12	4 56.87	+39 42.1	3.090	3.964	7.6	21.7	148 W	85 24	11 17	5 1.97	+22 55.7	1.774	2.716	7.8	21.4	158 W	68 41
11 17	4 52.44	+39 36.5	3.044	3.949	6.6	21.6	153 W	85 24	11 27	4 49.30	+22 52.4	1.668	2.648	3.3	20.9	171 W	68 41
11 22	4 47.67	+39 27.4	3.005	3.934	5.6	21.5	157 W	84 25	12 7	4 34.55	+22 42.4	1.594	2.577	1.8	20.7	175 E	68 41
11 27	4 42.63	+39 14.6	2.974	3.919	4.8	21.4	161 W	84 25	12 17	4 19.10	+22 26.2	1.552	2.505	7.1	20.9	162 E	67 42
12 2	4 37.45	+38 58.1	2.950	3.903	4.2	21.4	163 W	84 25	12 27	4 4.64	+22 6.5	1.539	2.430	12.4	21.0	148 E	67 42
12 7	4 32.23	+38 37.9	2.934	3.888	4.2	21.4	163 E	84 25	1 6	3 52.61	+21 48.0	1.552	2.353	17.2	21.1	135 E	67 42
12 12	4 27.08	+38 14.2	2.926	3.872	4.6	21.4	161 E	83 26	1 16	3 44.02	+21 35.5	1.584	2.274	21.3	21.2	123 E	67 42
12 17	4 22.12	+37 47.5	2.926	3.856	5.5	21.4	158 E	83 26	370027 2000 PK₂₉								
12 22	4 17.47	+37 18.2	2.933	3.840	6.5	21.5	154 E	82 27	11 7	5 15.25	+26 44.6	1.735	2.607	12.7	22.3	145 W	72 37
12 27	4 13.20	+36 46.9	2.947	3.824	7.6	21.5	149 E	82 27	11 17	5 5.32	+26 52.1	1.691	2.629	8.6	22.1	157 W	72 37
1 1	4 9.40	+36 14.2	2.969	3.807	8.8	21.6	144 E	81 28	11 27	4 53.33	+26 50.7	1.674	2.649	4.1	21.9	169 W	72 37
387632 2002 PD₄₀									12 7	4 40.60	+26 39.8	1.686	2.669	1.9	21.8	175 E	72 37
11 7	5 1.78	-10 58.5	3.011	3.799	10.2	21.4	137 W	34 75	12 17	4 28.57	+26 21.2	1.728	2.687	5.9	22.1	164 E	71 38
11 17	4 54.54	-11 56.0	2.968	3.802	9.1	21.4	143 W	33 76	12 27	4 18.51	+25 58.9	1.799	2.705	10.0	22.4	152 E	71 38
11 27	4 46.31	-12 36.5	2.950	3.803	8.5	21.3	145 W	32 77	431107 2006 GU								
12 7	4 37.70	-12 56.9	2.960	3.803	8.7	21.4	144 E	32 77	11 7	5 23.00	-1 29.5	2.109	2.923	13.1	22.4	138 W	44 65
12 17	4 29.37	-12 56.2	2.997	3.803	9.6	21.4	140 E	32 77	11 17	5 13.81	-2 9.9	2.101	2.978	10.5	22.3	147 W	43 66
12 27	4 21.96	-12 35.0	3.058	3.801	10.8	21.5	133 E	32 77	11 27	5 3.35	-2 33.1	2.118	3.032	8.4	22.3	153 W	42 67
508932 2004 JY₁₁									12 7	4 52.56	-2 36.6	2.164	3.084	7.8	22.4	155 E	42 67
11 7	5 3.12	-5 3.8	1.853	2.693	13.5	21.9	141 W	40 69	12 17	4 42.37	-2 20.5	2.239	3.136	8.8	22.5	151 E	43 66
11 12	4 59.17	-5 20.8	1.812	2.680	12.4	21.8	144 W	40 69	251365 2007 TQ₄₄₇								
11 17	4 54.64	-5 33.1	1.778	2.667	11.4	21.7	148 W	39 70	11 7	5 38.66	+14 57.8	1.428	2.273	16.5	21.3	139 W	60 49
11 22	4 49.62	-5 40.0	1.749	2.653	10.6	21.6	150 W	39 70	11 17	5 30.70	+14 35.8	1.385	2.299	12.1	21.1	151 W	60 49
11 27	4 44.22	-5 40.6	1.727	2.640	10.1	21.5	152 W	39 70	11 27	5 20.11	+14 19.0	1.365	2.325	7.4	20.9	162 W	59 50
12 2	4 38.58	-5 34.6	1.712	2.626	10.0	21.5	152 W	39 70	12 7	5 8.13	+14 9.1	1.372	2.350	3.8	20.8	171 W	59 50
12 7	4 32.85	-5 21.6	1.703	2.611	10.4	21.5	152 E	40 69	12 17	4 56.24	+14 7.3	1.407	2.374	5.6	21.0	166 E	59 50
12 12	4 27.16	-5 1.5	1.701	2.597	11.1	21.5	149 E	40 69	12 27	4 45.93	+14 14.8	1.469	2.398	9.9	21.3	155 E	59 50
12 17	4 21.68	-4 34.4	1.706	2.583	12.2	21.6	146 E	40 69	1 6	4 38.24	+14 31.5	1.556	2.420	13.9	21.6	144 E	60 49
12 22	4 16.56	-4 0.7	1.716	2.568	13.5	21.6	143 E	41 68	374684 2006 QD₆₄								
12 27	4 11.92	-3 20.9	1.733	2.553	14.9	21.7	138 E	42 67	11 7	5 40.41	+10 13.6	1.566	2.396	16.1	21.4	138 W	55 54
1 1	4 7.85	-2 35.7	1.756	2.538	16.2	21.7	134 E	42 67	11 17	5 32.89	+9 32.0	1.523	2.423	12.2	21.3	149 W	55 54
348304 2005 AN₁₉									11 27	5 22.99	+8 59.8	1.503	2.450	8.3	21.1	159 W	54 55
11 7	5 3.68	-39 48.8	1.428	2.062	25.7	21.5	116 W	5 76	12 7	5 11.80	+8 40.2	1.510	2.477	5.7	21.0	166 W	54 55
11 12	4 58.02	-40 26.7	1.397	2.042	25.7	21.5	117 W	5 76	12 17	5 0.63	+8 35.2	1.546	2.502	6.8	21.1	163 E	54 55
11 17	4 51.37	-40 51.7	1.369	2.023	25.8	21.4	117 W	4 75	12 27	4 50.78	+8 45.2	1.609	2.527	10.0	21.4	153 E	54 55
11 22	4 43.90	-41 2.0	1.344	2.003	25.9	21.3	118 W	4 75	1 6	4 43.22	+9 8.9	1.697	2.551	13.4	21.7	143 E	54 55
11 27	4 35.83	-40 55.6	1.321	1.983	26.1	21.3	118 W	4 75	137284 1999 RZ₁₈₂								
12 2	4 27.42	-40 31.4	1.302	1.963	26.5	21.2	118 E	4 75	11 7	5 48.85	+14 5.7	1.792	2.603	15.1	21.5	137 W	59 50
12 7	4 18.95	-39 48.5	1.285	1.942	26.9	21.2	117 E	5 76	11 17	5 41.72	+13 37.7	1.736	2.627	11.5	21.3	148 W	59 50
12 12	4 10.70	-38 46.6	1.271	1.921	27.4	21.2	116 E	6 77	11 27	5 32.22	+13 14.8	1.703	2.649	7.6	21.1	159 W	58 51
12 17	4 2.96	-37 25.8	1.261	1.900	28.0	21.1	115 E	8 79	12 7	5 21.27	+12 58.5	1.698	2.671	4.2	21.0	169 W	58 51
12 22	3 55.98	-35 47.3	1.253	1.879	28.6	21.1	114 E	9 80	12 17	5 10.04	+12 50.3	1.723	2.692	4.6	21.0	167 E	58 51
12 27	3 49.93	-33 52.4	1.249	1.858	29.4	21.1	112 E	11 82	12 27	4 5.76	+12 51.2	1.777	2.712	8.0	21.3	158 E	58 51
1 1	3 44.94	-31 43.1	1.248	1.836	30.2	21.1	110 E	13 84	1 6	4 51.43	+13 1.4	1.858	2.731	11.5	21.5	146 E	58 51
1 6	3 41.07	-29 21.2	1.249	1.815	31.0	21.1	108 E	16 87	220159 2002 TV₂₄₇								
1 11	3 38.35	-26 48.9	1.254	1.793	31.8	21.1	106 E	18 89	11 7	5 52.76	+11 1.2	1.773	2.572	15.8	21.5	135 W	56 53
1 16	3 36.78	-24 8.2	1.262	1.771	32.7	21.1	103 E	21 88	11 17	5 45.95	+10 4.0	1.721	2.599	12.3	21.3	146 W	55 54
465342 2007 VF₂₀₅									11 27	5 36.77	+9 14.0	1.692	2.626	8.7	21.1	156 W	54 55
11 7	5 5.68	+23 7.6	1.396	2.293	13.5	21.8	147 W	68 41	12 7	5 26.15	+8 34.7	1.690	2.651	5.8	21.0	164 W	54 55
11 12	5 0.55	+23 4.8	1.382	2.310	11.1	21.7	153 W	68 41	12 17	5 15.22	+8 8.8	1.717	2.676	5.9	21.1	164 E	53 56
11 17	4 54.78	+23 0.2	1.374	2.327	8.4	21.6	160 W	68 41	12 27	5 5.18	+7 58.1	1.773	2.700	8.6	21.3	156 E	53 56
11 22	4 48.54	+22 54.0	1.372	2.344	5.7	21.5	166 W	68 41	1 6	4 57.02	+8 2.0	1.855	2.723	11.8	21.5	145 E	53 56
11 27	4 42.04	+22 46.2	1.378	2.360	3.0	21.4	173 W	68 41	408980 2002 RB₁₂₆								
12 2	4 35.48	+22 37.1	1.390	2.376	0.3	21.2	179 W	68 41	11 7	5 59.57	+45 0.8	1.366	2.150	20.4	22.0	131 W	90 19
12 7	4 29.08	+22 27.1	1.410	2.392	2.5	21.4	174 E	67 42	11 12	5 53.21	+46 3.9	1.299	2.125	18.9	21.8	136 W	89 18
12 12	4 23.02	+22 16.5	1.437	2.408	5.1	21.6	168 E	67 42	11 17	5 44.74	+47 5.8	1.238	2.098	17.4	21.6	141 W	88 17
12 17	4 17.48	+22 6.0	1.471	2.423	7.5	21.8	161 E	67 42	11 27	5 34.05	+48 3.8	1.182	2.071	15.8	21.4	145 W	87 16
12 22	4 12.61	+21 56.1	1.512	2.438	9.8	22.0	155 E	67 42	11 22	5 21.10	+48 54.1	1.132	2.042	14.4	21.2	149 W	86 15
12 27	4 8.49	+21 47.4	1.558	2.453	12.0	22.1	149 E	67 42	12 2	5 6.02	+49 32.9	1.089	2.012	13.5	21.1	152 W	85 14
1 1	4 5.20	+21 40.2	1.611	2.468	13.9	22.3	143 E	67 42	12 7	4 49.18	+49 56.1	1.054	1.981	13.2	21.0	153 E	85 14
467833 2010 RN₉₀									12 12	4 31.15	+50 0.4	1.025	1.949	13.9	20.9	152 E	85 14
11 7	5 9.73	+25 55.8	1.42														

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
152942 2000 FN₁₀										514572 1997 SU₂₁									
<i>(continuation)</i>																			
11 27	5 31.74	+61 10.3	1.923	2.734	14.1	21.1	138 W	74	3	11 7	7 29.34	+31 34.8	1.039	1.714	31.5	21.4	115 W	77	32
12 2	5 20.39	+61 41.5	1.900	2.725	13.6	21.1	139 W	73	2	11 12	7 33.58	+31 47.1	1.008	1.724	30.1	21.3	119 W	77	32
12 7	5 8.12	+62 1.3	1.882	2.716	13.3	21.0	141 W	73	2	11 17	7 36.61	+32 0.9	0.979	1.734	28.4	21.2	124 W	77	32
12 12	4 55.37	+62 8.6	1.871	2.706	13.3	21.0	141 E	73	2	11 22	7 38.38	+32 16.2	0.952	1.744	26.5	21.1	128 W	77	32
12 17	4 42.64	+62 3.2	1.866	2.696	13.5	21.0	140 E	73	2	11 27	7 38.83	+32 32.7	0.928	1.755	24.3	21.0	133 W	78	31
12 22	4 30.48	+61 45.4	1.867	2.685	14.0	21.0	139 E	73	2	12 2	7 37.94	+32 49.7	0.907	1.767	21.9	20.9	138 W	78	31
12 27	4 19.33	+61 16.7	1.873	2.674	14.7	21.0	136 E	74	3	12 7	7 35.71	+33 6.7	0.889	1.779	19.4	20.8	143 W	78	31
1 1	4 9.54	+60 38.6	1.886	2.662	15.5	21.1	134 E	74	3	12 12	7 32.21	+33 22.4	0.875	1.791	16.6	20.7	149 W	78	31
1 6	4 1.31	+59 53.2	1.904	2.650	16.4	21.1	131 E	75	4	12 17	7 27.54	+33 35.7	0.866	1.803	13.8	20.6	154 W	79	30
1 11	3 54.75	+59 2.6	1.926	2.638	17.3	21.1	127 E	76	5	12 22	7 21.92	+33 45.2	0.862	1.816	10.9	20.5	160 W	79	30
1 16	3 49.88	+58 8.7	1.953	2.625	18.3	21.2	123 E	77	6	12 27	7 15.63	+33 49.9	0.863	1.829	8.3	20.4	164 W	79	30
39557 Gielgud										484861 2009 KL₇									
11 7	6 9.05	+25 49.2	1.944	2.715	15.6	21.4	133 W	71	38	11 7	7 34.52	+41 33.9	2.112	2.680	19.7	21.4	115 W	87	22
11 17	6 1.46	+26 11.0	1.886	2.751	12.1	21.2	144 W	71	38	11 12	7 35.23	+41 39.3	2.034	2.660	19.0	21.2	119 W	87	22
11 27	5 51.13	+26 29.6	1.851	2.785	8.1	21.0	157 W	71	38	11 17	7 35.01	+41 44.9	1.959	2.639	18.2	21.1	124 W	87	22
12 7	5 38.94	+26 42.3	1.843	2.817	3.7	20.8	169 W	72	37	11 22	7 33.80	+41 50.0	1.887	2.618	17.2	21.0	129 W	87	22
12 17	5 26.10	+26 47.4	1.866	2.848	1.6	20.7	175 E	72	37	11 27	7 31.56	+41 54.1	1.818	2.598	16.0	20.8	133 W	87	22
12 27	5 13.99	+26 45.2	1.921	2.879	5.4	21.1	164 E	72	37	12 2	7 28.24	+41 56.4	1.754	2.577	14.7	20.7	138 W	87	22
1 6	5 3.76	+26 37.9	2.005	2.907	9.3	21.3	152 E	72	37	12 7	7 23.85	+41 55.9	1.695	2.555	13.3	20.6	144 W	87	22
210389 2007 VA₁₄₉										287400 2002 VG₀₅									
11 7	6 9.58	+21 25.2	1.531	2.319	18.4	21.4	132 W	66	43	11 7	8 8.53	+22 30.3	1.683	2.167	26.2	21.4	105 W	68	41*
11 17	6 3.61	+21 14.4	1.470	2.343	14.4	21.2	144 W	66	43	11 12	8 11.96	+22 25.4	1.606	2.208	24.0	21.3	115 W	67	42
11 27	5 54.42	+21 3.9	1.430	2.366	9.7	21.0	156 W	66	43	11 17	8 11.76	+22 30.9	1.536	2.249	21.1	21.1	125 W	68	41
12 7	5 42.94	+20 52.8	1.415	2.389	4.6	20.7	169 W	66	43	12 7	8 7.78	+22 46.7	1.478	2.290	17.5	21.0	136 W	68	41
12 17	5 30.53	+20 41.2	1.428	2.412	1.4	20.6	177 E	66	43	12 17	8 0.16	+23 10.4	1.438	2.329	13.0	20.8	148 W	68	41
12 27	5 18.79	+20 30.0	1.471	2.433	6.1	20.9	165 E	65	44	12 27	7 49.55	+23 37.8	1.420	2.369	8.0	20.6	160 W	69	40
1 6	5 9.08	+20 21.2	1.540	2.454	10.7	21.3	152 E	65	44	1 6	6 48.58	+40 31.3	1.492	2.447	6.9	19.9	162 E	86	23
202435 2005 XH₈										86964 2000 JV₂									
11 7	6 25.13	+18 28.5	1.319	2.086	21.8	21.2	129 W	63	46	11 7	8 24.82	+17 26.2	2.813	3.147	18.0	21.5	100 W	62	46*
11 12	6 20.64	+19 3.0	1.248	2.067	19.9	21.0	135 W	64	45	11 17	8 27.22	+17 25.7	2.673	3.150	17.2	21.3	110 W	62	47*
11 17	6 14.60	+19 42.5	1.181	2.048	17.6	20.7	141 W	65	44	11 27	8 27.35	+17 34.5	2.540	3.152	15.7	21.2	120 W	63	46
11 22	6 9.90	+20 26.8	1.120	2.027	14.9	20.5	148 W	65	44	12 7	8 25.05	+17 53.2	2.420	3.153	13.7	21.0	131 W	63	46
11 27	5 57.46	+21 15.4	1.065	2.005	11.8	20.3	155 W	66	43	12 17	8 20.27	+18 21.9	2.318	3.153	11.0	20.8	142 W	63	46
12 2	5 46.28	+22 7.2	1.017	1.981	8.3	20.0	163 W	67	42	12 27	8 13.16	+18 59.3	2.238	3.152	7.8	20.6	154 W	64	45
12 7	5 33.46	+23 0.6	0.977	1.957	4.4	19.7	171 W	68	41	1 6	8 4.18	+19 42.6	2.186	3.150	4.2	20.4	167 W	65	44
12 12	5 19.21	+23 53.4	0.946	1.931	0.5	19.3	179 W	69	40	1 16	7 54.04	+20 28.3	2.164	3.148	0.3	20.0	179 W	65	44
12 17	5 3.93	+24 43.4	0.925	1.904	4.2	19.5	172 E	70	39	138859 2000 WN₆₃									
12 22	4 48.12	+25 28.7	0.912	1.875	8.7	19.7	163 E	70	39	11 7	8 35.09	+28 32.2	0.939	1.487	40.9	19.9	103 W	75	31*
12 27	4 32.39	+26 8.0	0.908	1.846	13.2	19.8	155 E	71	38	11 12	8 51.63	+28 56.3	0.868	1.448	41.9	21.0	102 W	74	34*
1 1	4 17.29	+26 41.2	0.913	1.815	17.5	19.9	146 E	72	37	11 17	9 9.61	+29 20.8	0.799	1.408	43.1	20.8	103 W	74	33*
1 6	4 3.31	+27 8.7	0.925	1.782	21.6	20.0	138 E	72	37	11 22	9 29.36	+29 44.6	0.734	1.368	44.4	20.6	104 W	75	33*
1 11	3 50.82	+27 31.8	0.942	1.748	25.4	20.1	130 E	73	36	11 27	9 51.28	+30 5.8	0.672	1.327	46.0	20.4	105 W	75	33*
1 16	3 40.06	+27 52.3	0.965	1.713	28.8	20.3	123 E	73	36	12 2	10 15.86	+30 21.0	0.614	1.285	48.0	20.2	104 W	75	32*
215120 1999 JG₄										495187 2012 VO₇₆									
11 7	6 36.43	+21 31.3	2.050	2.755	16.9	21.4	126 W	67	42	11 7	6 46.71	-0 5.6	0.377	1.220	45.1	21.1	119 W	45	64
11 17	6 31.91	+21 8.8	1.959	2.769	14.0	21.2	137 W	66	43	11 9	6 48.30	-3 42.8	0.367	1.213	45.4	21.1	119 W	41	68
11 27	6 24.49	+20 47.0	1.888	2.782	10.5	21.0	149 W	66	43	11 11	6 49.69	-7 29.2	0.359	1.207	45.7	21.0	119 W	38	71
12 7	6 14.70	+20 25.3	1.842	2.794	6.5	20.8	161 W	65	44	11 13	6 50.88	-11 23.0	0.352	1.200	46.3	21.0	119 W	34	75
12 17	6 3.37	+20 3.6	1.825	2.804	2.3	20.5	173 W	65	44	11 15	6 51.85	-15 22.3	0.347	1.193	47.0	21.0	118 W	30	79
12 27	5 51.70	+19 42.2	1.838	2.814	2.9	20.6	172 E	65	44	11 17	6 52.60	-19 24.7	0.344	1.186	47.8	21.0	117 W	26	83
1 6	5 40.91	+19 22.4	1.881	2.823	7.0	20.8	160 E	64	45	11 19	6 53.13	-23 27.7	0.343	1.179	48.9	21.0	116 W	22	87
1 16	5 32.03	+19 5.8	1.953	2.831	10.8	21.1	147 E	64	45	11 21	6 53.43	-27 28.5	0.343	1.173	50.1	21.0	114 W	18	89
495187 2012 VO₇₆										138859 2000 WN₆₃									
11 7	6 46.71	-0 5.6	0.377	1.220	45.1	21.1	119 W	45	64	12 7	10 43.56	+30 25.3	0.562	1.243	50.4	20.0	104 W	75	31*
11 9	6 48.30	-3 42.8	0.367	1.213	45.4	21.1	119 W	41	68	12 9	10 55.61	+30 22.4	0.542	1.226	51.5	19.9	103 W	75	31*
11 11	6 49.69	-7 29.2	0.359	1.207	45.7	21.0	119 W	38	71	12 11	11 8.25	+30 16.0	0.523	1.209	52.7	19.8	102 W	75	31*
11 13	6 50.88	-11 23.0	0.352	1.200	46.3	21.0	119 W	34	75	12 13	11 21.48	+30 5.5	0.506	1.192	54.1	19.8	101 W	75	31*
11 15	6 51.85	-15 22.3	0.347	1.193	47.0	21.0	118 W	30	79	12 15	11 35.31	+29 50.2	0.489	1.175	55.5	19.7	100 W	75	31*
11 17	6 52.60	-19 24.7	0.344	1.186	47.8	21.0	117 W	26	83	12 17	11 49.72	+29 29.3	0.474	1.158	57.1	19.7	99 W	74	31*
11 19	6 53.13	-23 27.7	0.343	1.179	48.9	21.0	116 W	22	87	12 19	12 4.70	+29 2.1	0.460	1.141	58.7	19.6	98 W	74	30*
11 21	6 53.43	-27 28.5	0.343	1.173	50.1	21.0	114 W	18	89	12 21	12 20.19	+28 28.0	0.447	1.123	60.5	19.6	96 W	73	30*
11 23	6 53.49	-31 24.9	0.345	1.166	51.3	21.0	113 W	14	85	12 23	12 36.14	+27 46.2	0.435	1.106	62.4	19.5	94 W	73	30*
11 25	6 53.30	-35 14.6	0.349	1.159	52.7	21.1	111 W	10	81	12 25	12 52.47	+26 56.2	0.425	1.089	64.5	19.5	93 W	72	30*
11 27	6 52.87	-38 55.8	0.353	1.152	54.0	21.1	109 W	6	77	12 27	13 9.09	+25 57.7	0.416	1.072	66.6				

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	
22753 1998 WT									418849 2008 WM₆₄									
11 7	8 38.90	+20 39.3	1.499	1.909	30.9	21.3	98 W	66 42*	11 30	4 25.67	-81 9.7	0.281	0.964	86.3	20.8	77 W	-	35
186448 2002 SK₄₀									<i>(continuation)</i>									
11 7	9 20.32	+14 33.7	4.210	4.271	13.4	21.5	87 W	60 44*	12 1	4 8.18	-80 27.2	0.273	0.966	86.3	20.7	78 E	-	36
67473 2000 RH₆																		
11 7	9 37.78	+ 9 47.9	2.353	2.411	24.0	21.5	81 W	55* 45*	12 2	3 52.25	-79 39.2	0.264	0.967	86.2	20.7	78 E	-	36
265661 2005 UB																		
11 7	9 48.01	- 3 5.6	2.330	2.284	24.8	21.4	75 W	42* 53*	12 3	3 37.78	-78 45.5	0.256	0.969	86.2	20.6	79 E	-	37
103358 2000 AE₉₃																		
11 7	10 49.20	+14 43.1	3.106	2.865	18.5	21.5	67 W	54* 30*	12 4	3 24.67	-77 45.9	0.247	0.971	86.1	20.5	79 E	-	38
418849 2008 WM₆₄																		
11 7	11 0.99	-80 2.6	0.460	0.927	84.0	21.7	69 W	- 32*	12 5	3 12.79	-76 40.2	0.239	0.973	86.0	20.5	80 E	-	39
									78545 2002 RT₁₂₁									
11 7	11 6.05	+ 4 48.1	2.862	2.501	19.9	21.5	59 W	44* 33*	12 6	3 2.00	-75 27.9	0.231	0.974	85.9	20.4	81 E	-	41
									164120 2003 YK									
11 7	11 22.68	+12 50.4	1.156	1.063	52.9	21.4	59 W	49* 25*	12 7	2 52.20	-74 8.6	0.222	0.976	85.8	20.3	81 E	-	42
									153344 2001 OR₁₀₆									
11 7	11 25.50	- 0 14.6	3.117	2.636	17.4	21.5	53 W	37* 32*	12 8	2 43.27	-72 41.8	0.214	0.978	85.6	20.2	82 E	-	43

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
153344 2001 OR₁₀₆										448628 2010 VF₁									
<i>(continuation)</i>																			
12 27	12 22.19	-8 46.3	2.370	2.515	23.0	21.0	87 W	36	65*	11 7	13 7.71	-16 32.0	1.179	0.493	55.9	21.2	24 W	10*	16*
1 6	12 30.50	-10 19.9	2.210	2.488	23.2	20.8	94 W	35	72*	11 12	13 47.60	-17 52.7	1.243	0.452	46.7	20.9	19 W	7*	11*
1 16	12 37.19	-11 47.7	2.053	2.461	23.0	20.6	102 W	33	76	11 17	14 28.21	-18 38.7	1.311	0.433	35.1	20.6	15 W	4*	7*
172678 2003 YM₁₃₇										491007 2011 GL₆₂									
11 7	11 35.54	+ 4 30.0	1.451	1.150	42.9	21.5	52 W	40*	27*	11 7	13 17.77	-14 32.1	0.950	0.374	85.2	20.2	22 W	10*	13*
11 12	11 57.90	+ 2 9.9	1.409	1.102	44.4	21.4	51 W	38*	27*	11 9	13 22.22	-14 34.3	1.006	0.397	76.3	20.2	23 W	11*	13*
11 17	12 21.21	- 0 17.7	1.374	1.055	45.8	21.2	50 W	37*	27*	11 11	13 27.72	-14 39.2	1.060	0.424	68.9	20.2	24 W	11*	14*
11 22	12 45.44	- 2 50.7	1.346	1.010	46.9	21.1	48 W	34*	27*	11 13	13 33.90	-14 46.2	1.111	0.453	62.8	20.2	24 W	12*	14*
11 27	13 10.57	- 5 26.7	1.328	0.967	47.8	21.0	47 W	32*	27*	11 15	13 40.49	-14 54.6	1.159	0.484	57.7	20.2	24 W	12*	14*
12 2	13 36.52	- 8 2.3	1.317	0.928	48.4	21.0	45 W	30*	26*	11 17	13 47.30	-15 3.8	1.204	0.516	53.5	20.4	25 W	13*	14*
12 7	14 3.22	-10 34.1	1.316	0.893	48.5	20.9	43 W	27*	26*	11 22	14 4.61	-15 28.4	1.306	0.596	45.8	20.7	26 W	14*	15*
12 12	14 30.55	-12 58.5	1.323	0.863	48.1	20.8	41 W	25*	25*	11 27	14 21.61	-15 52.1	1.393	0.675	40.9	21.0	27 W	15*	15*
12 17	14 58.33	-15 12.0	1.337	0.838	47.2	20.7	39 W	22*	25*	12 2	14 37.94	-16 13.2	1.468	0.753	37.7	21.2	28 W	15*	16*
12 22	15 26.40	-17 11.4	1.359	0.820	45.9	20.7	37 W	20*	24*	12 7	14 53.52	-16 31.0	1.532	0.827	35.6	21.5	29 W	16*	17*
12 27	15 54.55	-18 54.5	1.387	0.809	44.1	20.6	35 W	18*	23*	436775 2012 LC₁									
1 1	16 22.55	-20 19.7	1.421	0.806	42.0	20.6	33 W	16*	23*	11 7	13 41.61	- 1 31.1	0.562	0.517	133.5	19.9	22 W	16*	2*
1 6	16 50.19	-21 26.1	1.459	0.811	39.7	20.6	32 W	14*	22*	11 9	13 49.02	+ 0 10.8	0.606	0.501	126.8	19.3	24 W	19*	1*
1 11	17 17.22	-22 14.0	1.500	0.823	37.4	20.7	31 W	12*	22*	11 11	13 56.20	+ 1 26.2	0.652	0.489	119.7	18.8	25 W	19*	1*
1 16	17 43.45	-22 44.0	1.544	0.843	35.2	20.7	30 W	11*	21*	11 13	14 3.23	+ 2 17.3	0.701	0.480	112.5	18.5	27 W	21*	—
171576 1999 VP₁₁										11 15	14 10.16	+ 2 46.8	0.751	0.475	105.3	18.2	28 W	22*	—
11 7	11 38.79	-10 25.7	1.588	1.157	38.5	21.5	47 W	26*	33*	11 17	14 17.02	+ 2 57.4	0.802	0.474	98.3	17.9	28 W	22*	—
11 12	11 57.97	-12 9.4	1.531	1.111	40.2	21.3	46 W	26*	34*	11 19	14 23.83	+ 2 52.1	0.854	0.477	91.4	17.8	29 W	23*	—
11 17	12 18.60	-13 54.6	1.477	1.063	42.0	21.2	46 W	25*	34*	11 21	14 30.58	+ 2 33.6	0.906	0.484	84.9	17.7	29 W	23*	—
11 22	12 40.90	-15 39.6	1.427	1.013	43.8	21.1	45 W	23*	33*	11 23	14 37.28	+ 2 4.5	0.956	0.494	78.8	17.6	29 W	23*	1*
11 27	13 5.11	-17 22.1	1.381	0.961	45.6	21.0	44 W	22*	33*	11 25	14 43.90	+ 1 27.3	1.006	0.508	73.1	17.6	30 W	24*	1*
12 2	13 31.44	-18 59.3	1.340	0.906	47.4	20.8	43 W	20*	32*	11 27	14 50.43	+ 0 44.1	1.055	0.525	68.0	17.6	30 W	24*	2*
12 7	14 0.09	-20 27.2	1.306	0.850	49.0	20.7	41 W	19*	30*	11 29	14 56.85	- 0 3.4	1.101	0.544	63.4	17.6	30 W	24*	2*
12 12	14 31.16	-21 41.3	1.279	0.792	50.3	20.5	38 W	17*	28*	12 1	15 3.16	- 0 53.7	1.146	0.566	59.3	17.7	30 W	23*	3*
12 17	15 4.66	-22 36.3	1.262	0.733	51.1	20.3	35 W	15*	26*	12 3	15 9.35	- 1 45.7	1.189	0.589	55.7	17.7	30 W	23*	4*
12 22	15 40.44	-23 7.0	1.254	0.674	51.2	20.1	32 W	13*	23*	12 5	15 15.42	- 2 38.4	1.231	0.614	52.4	17.8	30 W	23*	4*
12 27	16 18.19	-23 9.0	1.257	0.616	50.1	19.9	29 W	11*	20*	12 7	15 21.35	- 3 31.2	1.270	0.640	49.6	17.9	30 W	23*	5*
1 1	16 57.52	-23 39.7	1.271	0.561	47.5	19.7	25 W	10*	16*	12 12	15 35.63	- 5 40.7	1.361	0.708	44.1	18.1	30 W	23*	8*
1 6	17 37.94	-21 38.9	1.295	0.513	42.9	19.4	21 W	8*	12*	12 17	15 49.13	- 7 43.3	1.442	0.778	40.1	18.3	31 W	23*	10*
1 11	18 18.95	-20 9.4	1.327	0.476	36.0	19.1	17 W	6*	8*	12 22	16 1.90	- 9 37.3	1.512	0.850	37.4	18.6	32 W	23*	13*
1 16	18 59.95	-18 16.7	1.365	0.455	27.5	18.8	12 W	4*	3*	12 27	16 14.00	-11 22.5	1.574	0.922	35.5	18.8	33 W	22*	16*
307064 2002 AR₅										1 1	16 25.50	-12 59.5	1.628	0.993	34.3	19.0	35 W	22*	19*
11 7	12 16.66	+ 9 51.4	2.305	1.765	23.8	21.5	46 W	38*	16*	1 6	16 36.43	-14 28.8	1.675	1.063	33.5	19.2	37 W	22*	23*
11 17	12 40.74	+ 8 42.2	2.214	1.751	25.6	21.4	50 W	42*	18*	1 11	16 46.83	-15 51.4	1.714	1.131	33.0	19.3	39 W	21*	26*
11 27	13 5.06	+ 7 38.0	2.119	1.736	27.4	21.4	54 W	44*	21*	1 16	16 56.72	-17 8.0	1.746	1.198	32.8	19.5	41 W	21*	30*
12 2	13 29.64	+ 6 41.0	2.022	1.720	29.1	21.3	58 W	46*	25*	482796 2013 QJ₁₀									
12 17	13 54.49	+ 5 53.1	1.924	1.703	30.7	21.2	62 W	48*	29*	11 7	12 24.59	+ 1 52.8	1.168	0.757	57.3	21.3	40 W	31*	18*
12 27	14 19.55	+ 5 16.4	1.826	1.685	32.2	21.1	66 W	49*	33*	11 12	12 49.28	+ 2 37.0	1.174	0.717	57.2	21.2	37 W	28*	18*
1 1	14 44.80	+ 4 52.7	1.728	1.667	33.6	21.0	70 W	49*	38*	11 17	13 15.06	- 7 10.0	1.187	0.677	56.4	21.1	35 W	24*	18*
1 16	15 10.14	+ 4 43.5	1.632	1.648	34.9	20.9	73 W	49*	42*	11 22	13 42.22	-11 39.6	1.208	0.641	54.7	20.9	32 W	20*	18*
482796 2013 QJ₁₀										11 27	14 11.05	-15 58.1	1.237	0.608	52.0	20.8	29 W	16*	17*
11 7	12 24.59	+ 1 52.8	1.168	0.757	57.3	21.3	40 W	31*	18*	12 2	14 41.79	-19 56.6	1.273	0.582	48.2	20.7	26 W	12*	16*
11 12	12 49.28	+ 2 37.0	1.174	0.717	57.2	21.2	37 W	28*	18*	12 7	15 14.54	-23 26.0	1.314	0.562	43.4	20.5	23 W	8*	15*
11 17	13 15.06	- 7 10.0	1.187	0.677	56.4	21.1	35 W	24*	18*	12 12	15 49.14	-26 17.5	1.360	0.553	38.0	20.4	20 W	4*	13*
11 22	13 42.22	-11 39.6	1.208	0.641	54.7	20.9	32 W	20*	18*	12 17	16 25.10	-28 24.0	1.407	0.553	32.1	20.3	17 W	1*	11*
11 27	14 11.05	-15 58.1	1.237	0.608	52.0	20.8	29 W	16*	17*	12 22	17 1.62	-29 41.8	1.456	0.563	26.3	20.3	15 W	—	9*
12 2	14 41.79	-19 56.6	1.273	0.582	48.2	20.7	26 W	12*	16*	12 27	17 37.76	-30 11.6	1.505	0.583	21.0	20.2	12 W	—	6*
12 7	15 14.54	-23 26.0	1.314	0.562	43.4	20.5	23 W	8*	15*	12 29	17 51.90	-30 10.9	1.524	0.593	19.1	20.3	11 W	—	5*
12 12	15 49.14	-26 17.5	1.360	0.553	38.0	20.4	20 W	4*	13*	12 31	18 5.79	-30 3.6	1.543	0.604	17.3	20.3	11 W	—	4*
12 17	16 25.10	-28 24.0	1.407	0.553	32.1	20.3	17 W	1*	11*	1 2	18 19.39	-29 50.2	1.563	0.616	15.6	20.3	10 W	—	3*
12 22	17 1.62	-29 41.8	1.456	0.563	26.3	20.3	15 W	—	9*	1 4	18 32.67	-29 31.1	1.582	0.629	14.1	20.3	9 W	—	2*
12 27	17 37.76	-30 11.6	1.505	0.583	21.0	20.2	12 W	—	6*	1 6	18 45.60	-29 6.9	1.601	0.643	12.7	20.3	8 W	—	2*
12 29	17 51.90	-30 10.9	1.524	0.593	19.1	20.3	11 W	—	5*	1 8	18 58.17	-28 38.0	1.619	0.657	11.4	20.3	8 W	—	1*
12 31	18 5.79	-30 3.6	1.543	0.604	17.3	20.3	11 W	—	4*	1 10	19 10.37	-28 4.9	1.638	0.672	10.2	20.4	7 W	—	—
1 2	18 19.39	-29 50.2	1.563	0.616	15.6	20.3	10 W	—	3*	1 12	19 22.19	-27 28.1	1.656	0.688	9.1	20.4	6 W	—	—
1 4	18 32.67	-29 31.1	1.582	0.629	14.1	20.3	9 W	—	2*	1 14	19 33.63	-26 48.0	1.675	0.703	8.1	20.4	6 W	—	—
1 6	18 45.60	-29 6.9	1.601	0.643	12.7	20.3	8 W	—	2*	1 16	19 44.70	-26 5.1	1.693	0.719	7.3	20.5	5 W	—	—
1 8	18 58.17	-28 38.0	1.619	0.657	11.4	20.3	8 W	—	1*	303174 2004 FH₁₁									
1 10	19 10.37	-28 4.9	1.638	0.672	10.2	20.4	7 W	—	—	11 7	12 37.92	-11 23.8	2.977	2.203	13.9	21.5	32 W	18*	21*
1 12	19 22.19	-27 28.1	1.656	0.688	9.1	20.4	6 W	—	—	11 17	12 57.44								

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
488698 2003 XV₁₀										121007 1999 AT₉									
11 7	14 25.08	-17 43.1	1.961	0.980	6.0	21.2	6 W	—	—	11 7	15 6.86	-9 36.1	4.007	3.029	2.6	21.5	8 E	2*	—
11 12	14 45.08	-19 33.4	1.895	0.916	6.5	21.0	6 W	—	—	11 17	15 21.02	-10 38.9	4.002	3.028	2.8	21.5	9 W	1*	—
11 17	15 7.05	-21 22.2	1.829	0.851	6.8	20.8	6 W	—	—	11 27	15 35.30	-11 36.2	3.979	3.025	4.2	21.6	13 W	7*	—
11 22	15 31.31	-23 6.6	1.762	0.785	6.8	20.5	5 W	—	—	12 7	15 49.64	-12 27.4	3.939	3.022	6.0	21.6	19 W	12*	3*
11 27	15 58.19	-24 42.1	1.697	0.718	6.6	20.2	5 W	—	—	12 17	16 3.97	-13 12.2	3.883	3.018	7.8	21.7	25 W	16*	9*
12 2	16 28.02	-26 2.9	1.632	0.653	6.5	19.9	4 W	—	—	120966 1998 VT₂₉									
12 7	17 1.00	-27 0.9	1.568	0.591	7.7	19.7	5 E	—	—	11 7	15 7.94	-19 57.2	3.777	2.793	2.1	21.5	6 E	—	—
12 9	17 15.09	-27 15.5	1.542	0.568	8.9	19.6	5 E	—	—	11 17	15 24.35	-20 57.5	3.796	2.809	0.8	21.4	2 W	—	—
12 11	17 29.67	-27 24.2	1.516	0.546	10.6	19.6	6 E	—	—	11 27	15 40.82	-21 52.4	3.800	2.824	2.5	21.5	7 W	—	1*
12 13	17 44.71	-27 26.1	1.490	0.526	12.8	19.5	7 E	—	1*	12 7	15 57.29	-22 41.6	3.787	2.838	4.6	21.7	13 W	3*	6*
12 15	18 0.16	-27 20.6	1.464	0.507	15.4	19.5	8 E	—	2*	12 17	16 13.68	-23 24.8	3.758	2.850	6.6	21.8	20 W	6*	11*
12 17	18 15.96	-27 7.1	1.438	0.492	18.5	19.5	9 E	—	3*	129558 1996 XQ₈									
12 19	18 32.04	-26 44.9	1.411	0.479	22.0	19.5	11 E	—	4*	11 7	15 12.79	-20 26.1	3.061	2.081	3.3	21.4	7 E	—	1*
12 21	18 48.31	-26 13.6	1.384	0.469	25.9	19.5	12 E	—	6*	11 17	15 34.81	-22 17.3	3.026	2.041	1.7	21.3	4 E	—	—
12 23	19 4.66	-25 33.1	1.357	0.462	29.9	19.6	14 E	—	1*	11 27	15 58.05	-24 1.4	2.982	2.000	2.1	21.2	4 W	—	—
12 25	19 21.01	-24 43.4	1.330	0.460	34.1	19.6	15 E	—	3*	12 7	16 22.55	-25 36.3	2.930	1.959	4.0	21.3	8 W	—	2*
12 27	19 37.25	-23 44.6	1.303	0.461	38.3	19.7	17 E	—	4*	12 17	16 48.34	-27 0.1	2.871	1.919	6.1	21.3	12 W	—	6*
1	1 20 16.92	-20 41.4	1.237	0.480	48.1	20.0	21 E	—	9*	12 27	17 15.41	-28 10.4	2.805	1.880	8.3	21.3	16 W	—	10*
1	6 20 54.74	-16 55.3	1.178	0.518	55.7	20.2	26 E	—	14*	1	6 17 43.71	-29 5.0	2.734	1.841	10.5	21.3	20 W	—	14*
1	11 21 30.60	-12 38.6	1.130	0.570	60.5	20.5	30 E	—	19*	1	16 18 13.16	-29 41.6	2.660	1.803	12.7	21.3	24 W	—	18*
1	16 22 4.71	-8 3.3	1.096	0.630	62.9	20.7	35 E	—	24*	397131 2005 WS₅₆									
464644 2000 RO₃₈										11 7	15 22.74	-20 9.8	3.288	2.314	3.8	21.5	9 E	—	3*
11 7	14 40.91	-25 53.8	3.196	2.226	4.4	21.4	10 W	—	—	11 17	15 43.08	-21 8.9	3.271	2.285	1.6	21.3	4 E	—	—
11 17	15 2.63	-27 41.9	3.137	2.173	4.9	21.4	11 W	—	4*	11 27	16 4.08	-22 0.6	3.241	2.256	0.9	21.2	2 W	—	—
11 27	15 25.72	-29 25.2	3.068	2.120	6.2	21.3	13 W	—	7*	12 7	16 25.71	-22 43.4	3.201	2.226	3.0	21.3	7 W	—	—
12 7	15 50.29	-31 1.5	2.991	2.067	7.9	21.3	17 W	—	11*	12 17	16 47.92	-23 16.1	3.149	2.195	5.2	21.3	12 W	—	2*
12 17	16 16.43	-32 28.2	2.907	2.014	9.8	21.3	20 W	—	14*	12 27	17 10.64	-23 37.4	3.088	2.164	7.5	21.4	17 W	—	4*
12 27	16 44.16	-33 42.3	2.817	1.961	11.8	21.2	24 W	—	18*	1	6 17 33.79	-23 46.4	3.016	2.133	9.8	21.4	22 W	—	7*
1	6 17 13.48	-34 40.4	2.723	1.908	13.9	21.2	28 W	—	22*	1	16 17 57.29	-23 42.0	2.937	2.102	12.0	21.4	26 W	—	8*
1	16 17 44.32	-35 19.1	2.626	1.856	15.9	21.1	31 W	—	25*	329838 2004 SM₅₈									
482049 2009 XG₈										11 7	15 31.44	-18 34.0	2.935	1.968	5.2	21.4	10 E	—	4*
11 7	14 46.39	-1 32.8	2.088	1.157	12.6	21.5	15 W	—	5*	11 17	15 56.00	-19 42.6	2.909	1.929	3.2	21.3	6 E	—	—
11 17	15 9.23	-7 19.1	2.103	1.158	10.8	21.4	13 W	—	6*	11 27	16 21.62	-20 39.7	2.878	1.892	1.2	21.1	2 E	—	—
11 27	15 32.33	-12 53.9	2.108	1.164	10.6	21.4	13 W	—	6*	12 7	16 48.22	-21 23.0	2.841	1.857	1.1	21.0	2 W	—	—
12 7	15 56.25	-18 18.2	2.102	1.174	12.1	21.5	14 W	—	4*	12 17	17 15.73	-21 50.3	2.800	1.824	3.0	21.0	6 W	—	—
12 17	16 21.61	-23 32.3	2.085	1.187	14.7	21.6	18 W	—	5*	12 27	17 44.00	-21 59.7	2.756	1.792	5.0	21.1	9 W	—	1*
172718 2004 BD₈₅										1	6 18 12.84	-21 49.7	2.709	1.763	7.0	21.1	13 W	—	3*
11 7	14 57.20	-23 50.9	2.305	1.330	5.8	21.5	8 E	—	—	1	16 18 42.08	-21 19.2	2.661	1.737	9.0	21.1	16 W	—	4*
11 17	15 32.80	-24 56.6	2.328	1.349	4.4	21.5	6 E	—	—	162780 2000 XJ₃₈									
11 27	16 8.20	-25 32.5	2.351	1.370	3.2	21.5	5 W	—	—	11 7	15 34.75	-36 9.9	3.992	3.098	7.0	21.5	22 E	—	12*
12 7	16 43.06	-25 38.7	2.374	1.393	2.9	21.5	4 W	—	—	11 17	15 52.31	-36 48.4	4.011	3.090	5.8	21.4	19 E	—	7*
12 17	17 17.13	-25 16.3	2.395	1.418	3.7	21.6	5 W	—	—	11 27	16 10.26	-37 24.4	4.015	3.080	5.2	21.4	16 W	—	3*
451124 2009 KC₃										12 7	16 28.50	-37 57.1	4.003	3.070	5.2	21.4	16 W	—	7*
11 7	14 58.93	-23 2.1	2.530	1.551	4.6	21.4	7 E	—	—	12 17	16 46.96	-38 26.2	3.975	3.059	5.9	21.4	19 W	—	11*
11 12	15 13.95	-24 1.8	2.484	1.505	4.2	21.2	6 E	—	—	12 27	17 5.54	-38 51.0	3.930	3.047	7.2	21.4	23 W	—	16*
11 17	15 29.79	-24 58.7	2.438	1.458	4.1	21.1	6 W	—	—	1	6 17 24.13	-39 11.5	3.871	3.034	8.6	21.4	28 W	—	21*
11 22	15 46.49	-25 51.8	2.391	1.412	4.1	21.0	6 W	—	—	1	16 17 42.62	-39 27.5	3.796	3.020	10.2	21.5	33 W	—	26*
11 27	16 4.09	-26 40.1	2.344	1.367	4.2	20.9	6 W	—	—	98333 2000 SC₂₉₅									
12 2	16 22.63	-27 22.2	2.298	1.322	4.4	20.8	6 W	—	—	11 7	15 39.41	-23 2.4	3.823	2.869	4.7	21.4	14 E	—	8*
12 7	16 42.12	-27 56.8	2.253	1.278	4.7	20.7	6 W	—	—	11 17	15 55.86	-23 49.2	3.826	2.850	2.7	21.3	8 E	—	2*
12 12	17 2.56	-28 22.4	2.210	1.236	5.0	20.6	6 W	—	—	11 27	16 12.75	-24 31.6	3.813	2.829	1.2	21.1	3 E	—	—
12 17	17 23.92	-28 37.4	2.168	1.195	5.2	20.5	6 W	—	—	12 7	16 30.01	-25 8.7	3.785	2.807	2.2	21.2	6 W	—	—
12 22	17 46.13	-28 40.1	2.129	1.156	5.3	20.4	6 W	—	—	12 17	16 47.58	-25 40.0	3.740	2.785	4.2	21.3	12 W	—	5*
12 27	18 9.09	-28 29.1	2.092	1.119	5.3	20.3	6 W	—	—	12 27	17 5.37	-26 4.9	3.680	2.761	6.3	21.3	18 W	—	3*
1	1 18 32.66	-28 2.9	2.059	1.086	5.3	20.2	6 W	—	—	1	6 17 23.30	-26 23.0	3.606	2.737	8.4	21.4	24 W	—	6*
1	6 18 56.70	-27 20.6	2.030	1.055	5.0	20.1	5 W	—	—	1	16 17 41.28	-26 34.0	3.517	2.712	10.5	21.4	30 W	—	8*
1	11 19 21.02	-26 21.5	2.004	1.028	4.7	20.0	5 W	—	—	467460 2006 JF₄₂									
1	16 19 45.44	-25 5.5	1.983	1.005	4.2	19.9	4 W	—	—	11 7	16 3.62	-22 51.1	1.828	0.945	19.7	21.4	19 E	—	1*
282128 2001 NT₁₂										11 12	16 21.08	-23 41.2	1.802	0.912	19.4	21.3	18 E	—	1*
11 7	15 4.81	-12 41.4	2.891	1.906	2.7	21.5	5 E	—	—	11 17	16 39.26	-24 24.9	1.770	0.874	19.3	21.1	17 E	—	1*
11 17	15 29.04	-14 6.0	2.863	1.879	2.6	21.4	5 W	—	—	11 27	16 58.23	-25 1.2	1.731	0.831	19.5	21.0	16 E	—	1*
11 27	15 54.10	-15 20.3	2.828	1.853	3.8	21.5	7 W	—	1*	11 27	17 18.11	-25 28.8	1.686	0.784	20.1	20.8	16 E	—	1*
12 7	16 19.94	-16 22.4	2.788	1.828	5.6	21.5	10 W	—	4*	12 2	17 39.01	-25 46.3	1.632	0.731	21.1	20.6	15 E	—	1*
12 17	16 46.52	-17 10.6	2.744	1.803	7.5	21.5	14 W	—	7*	12 7	18 1.05	-25 51.6	1.570	0.673	22.8	20.4	15 E	—	1*
277172 2005 OB										12 12	18 24.31	-25 42.2	1.498	0.609	25.6	20.2	16 E	—	2*
11 7	15 4.84	-21 22.8	2.734	1.752	3.6	21.3	6 E	—	—	12 17	18 48.81	-25 14.5	1.413	0.540	30.1	19.9	16 E	—	3*
11 17	15 32.18	-22 52.5	2.694	1.709	2.3	21.2	4 E	—	—	12 22	19 14.35	-2							

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
514561 2017 XE₃										267940 2004 EM₂₀ <i>(continuation)</i>									
11 7	16 11.97	-29 45.3	3.299	2.420	9.3	21.4	23 E	17*	12 29	1 22.72	+45 41.7	0.583	1.338	41.8	21.4	115 E	89	18*	
11 17	16 33.12	-30 0.1	3.293	2.373	7.4	21.3	18 E	12*	12 31	1 29.51	+45 2.8	0.606	1.351	41.5	21.5	114 E	90	19*	
18109 2000 NG₁₁										151703 2003 BU₂₁									
11 7	16 36.61	-22 17.3	2.766	1.925	13.1	21.4	26 E	6*	10*	11 7	17 26.28	-20 23.3	3.482	2.761	12.6	21.5	37 E	14*	30*
11 17	17 0.05	-22 58.8	2.765	1.880	11.1	21.3	21 E	5*	15*	11 17	17 42.25	-20 27.3	3.528	2.730	10.8	21.4	31 E	12*	23*
497676 2006 SR₂										498152 2007 TK₁₁₁									
11 7	16 55.46	-9 30.5	2.373	1.613	18.7	21.5	31 E	19*	19*	11 17	17 59.53	-27 12.0	2.292	1.591	21.0	21.4	35 E	8*	29*
11 17	17 24.23	-9 59.4	2.383	1.593	17.6	21.4	29 E	19*	15*	11 27	18 31.64	-26 37.4	2.326	1.583	19.5	21.4	32 E	9*	25*
506348 2017 OK₅₂										363438 2003 SY₁₀₅									
11 7	17 3.99	-25 55.5	2.577	1.825	17.1	21.5	33 E	7*	27*	11 7	17 38.95	-24 34.7	2.339	1.711	22.1	21.5	40 E	12*	34*
11 17	17 31.04	-26 10.3	2.597	1.795	15.4	21.4	29 E	6*	22*	11 17	18 7.68	-24 28.0	2.378	1.696	20.5	21.4	37 E	12*	30*
267940 2004 EM₂₀										490581 2009 WZ₁₀₄									
11 7	17 18.87	+35 37.6	0.222	0.911	104.7	20.7	63 E	55*	1*	11 7	18 49.33	-7 59.9	0.531	0.851	88.5	21.4	59 E	33*	43*
11 8	17 28.48	+37 48.4	0.221	0.921	101.9	20.6	65 E	57*	1*	11 17	19 45.45	-6 6.3	0.500	0.886	86.3	21.3	63 E	37*	44*
306383 1993 VD										410777 2009 FD									
11 7	20 48.04	-13 13.2	0.229	1.002	80.8	21.1	86 E	32	71*	11 7	20 49.47	-9 55.2	0.177	0.999	82.5	21.2	87 E	35	68*
11 9	21 10.53	-11 33.7	0.241	1.019	76.5	21.1	90 E	33	71*	11 8	21 3.88	-8 40.7	0.180	1.007	79.6	21.2	90 E	36	69*
410777 2009 FD										11 9 21 17.71									
11 9	21 17.71	-7 26.9	0.184	1.016	76.9	21.1	93 E	38	69*	11 9	21 17.71	-7 26.9	0.184	1.016	76.9	21.1	93 E	38	69*
11 10	21 30.91	-6 14.6	0.188	1.025	74.2	21.1	95 E	39	69*	11 10	21 30.91	-6 14.6	0.188	1.025	74.2	21.1	95 E	39	69*
11 11	21 43.46	-5 4.3	0.193	1.033	71.8	21.1	98 E	40	68*	11 11	21 43.46	-5 4.3	0.193	1.033	71.8	21.1	98 E	40	68*
11 12	21 55.35	-3 56.8	0.199	1.042	69.4	21.1	100 E	41	68*	11 12	21 55.35	-3 56.8	0.199	1.042	69.4	21.1	100 E	41	68*
11 13	22 6.59	-2 52.2	0.205	1.050	67.3	21.1	102 E	42	67*	11 13	22 6.59	-2 52.2	0.205	1.050	67.3	21.1	102 E	42	67*
11 14	22 17.19	-1 50.8	0.211	1.059	65.3	21.2	104 E	43	66*	11 14	22 17.19	-1 50.8	0.211	1.059	65.3	21.2	104 E	43	66*
11 15	22 27.19	-0 52.7	0.218	1.067	63.4	21.2	105 E	44	65*	11 15	22 27.19	-0 52.7	0.218	1.067	63.4	21.2	105 E	44	65*
11 16	22 36.60	+0 2.1	0.226	1.076	61.6	21.2	107 E	45	64	11 16	22 36.60	+0 2.1	0.226	1.076	61.6	21.2	107 E	45	64
11 17	22 45.86	+0 53.7	0.233	1.084	60.1	21.3	108 E	46	63	11 17	22 45.86	+0 53.7	0.233	1.084	60.1	21.3	108 E	46	63
11 19	23 1.68	+2 27.7	0.250	1.101	57.2	21.4	111 E	47	62	11 19	23 1.68	+2 27.7	0.250	1.101	57.2	21.4	111 E	47	62
11 21	23 16.11	+3 50.5	0.267	1.117	54.8	21.5	112 E	49	60	11 21	23 16.11	+3 50.5	0.267	1.117	54.8	21.5	112 E	49	60

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2020	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
410777 2009 FD									355256 2007 KN₄								
<i>(continuation)</i>																	
11 23	23 29.01	+ 5 3.4	0.286	1.134	52.8	21.6	114 E	50 59	11 17	4 43.96	+17 51.5	3.187	4.141	4.1	22.9	162 W	63 46
11 25	23 40.60	+ 6 7.9	0.306	1.150	51.2	21.7	115 E	51 58	11 27	4 35.47	+17 19.8	3.203	4.184	1.6	22.7	173 W	62 47
475390 2006 HN₇									153460 2001 RN								
11 17	4 23.57	+20 4.4	1.779	2.752	4.5	22.3	167 W	65 44	11 17	4 47.02	+12 36.3	1.275	2.231	8.6	22.5	160 W	58 51
11 22	4 17.91	+19 50.7	1.769	2.753	2.3	22.2	174 W	65 44	11 22	4 38.46	+11 56.5	1.257	2.228	6.2	22.3	166 W	57 52
11 27	4 12.12	+19 36.3	1.767	2.754	0.5	22.0	178 W	65 44	11 27	4 29.50	+11 17.7	1.247	2.224	4.7	22.2	169 W	56 53
12 2	4 6.37	+19 21.6	1.773	2.754	2.4	22.2	173 E	64 45	12 2	4 20.40	+10 40.7	1.245	2.219	5.2	22.2	168 E	56 53
12 7	4 0.79	+19 7.0	1.786	2.755	4.7	22.4	167 E	64 45	12 7	4 11.44	+10 6.6	1.251	2.213	7.2	22.3	164 E	55 54
12 12	3 55.55	+18 53.1	1.807	2.755	6.8	22.5	161 E	64 45	12 12	4 2.85	+ 9 36.2	1.264	2.207	9.7	22.5	158 E	55 54
12 17	3 50.76	+18 40.3	1.834	2.754	8.9	22.6	154 E	64 45	12 17	3 54.88	+ 9 10.4	1.285	2.199	12.4	22.6	151 E	54 55
318411 2005 AH₁₄									508997 2005 FL₄								
11 17	4 24.00	+23 13.4	2.710	3.679	3.6	22.4	167 W	68 41	11 17	4 47.53	+24 15.1	3.547	4.495	4.1	23.4	161 W	69 40
11 22	4 18.57	+23 9.3	2.702	3.684	1.9	22.3	173 W	68 41	11 27	4 38.02	+24 19.4	3.501	4.482	1.5	23.2	173 W	69 40
11 27	4 13.07	+23 4.0	2.703	3.689	0.5	22.2	178 W	68 41	12 7	4 28.12	+24 19.8	3.489	4.469	1.4	23.2	174 E	69 40
12 2	4 7.58	+22 57.6	2.712	3.693	1.6	22.3	174 E	68 41	12 17	4 18.47	+24 17.0	3.510	4.454	4.0	23.3	162 E	69 40
12 7	4 2.23	+22 50.5	2.729	3.698	3.2	22.4	168 E	68 41	12 27	4 9.71	+24 12.5	3.564	4.439	6.5	23.5	149 E	69 40
12 12	3 57.11	+22 42.9	2.754	3.702	4.8	22.6	162 E	68 41	448003 2008 DE								
12 17	3 52.32	+22 35.2	2.788	3.705	6.3	22.7	155 E	68 41	11 17	4 52.42	+27 16.3	1.436	2.387	8.4	22.9	159 W	72 37
437879 2001 RX₁₁									11 22	4 44.68	+27 34.3	1.411	2.380	5.9	22.7	166 W	73 36
11 17	4 25.23	+40 28.5	2.215	3.142	7.5	22.5	155 W	85 24	11 27	4 36.39	+27 49.0	1.393	2.373	3.6	22.5	171 W	73 36
11 22	4 18.61	+40 21.2	2.224	3.166	6.4	22.4	159 W	85 24	12 2	4 27.77	+28 0.2	1.383	2.366	2.6	22.5	174 E	73 36
11 27	4 11.99	+40 8.8	2.240	3.189	5.8	22.4	161 W	85 24	12 7	4 19.07	+28 7.5	1.381	2.358	4.1	22.5	170 E	73 36
12 2	4 5.54	+39 51.6	2.264	3.213	5.7	22.5	161 E	85 24	12 12	4 10.57	+28 11.2	1.386	2.349	6.6	22.7	164 E	73 36
12 7	3 59.40	+39 30.2	2.295	3.236	6.2	22.5	159 E	85 24	12 17	4 2.51	+28 11.8	1.399	2.340	9.2	22.8	158 E	73 36
12 12	3 53.72	+39 5.4	2.334	3.259	7.0	22.6	156 E	84 25	391151 2005 YY₉₃								
12 17	3 48.60	+38 37.9	2.380	3.281	8.1	22.7	152 E	84 25	11 17	4 52.97	+44 5.0	3.970	4.848	5.9	24.0	149 W	89 20
455299 2002 EL₆									11 22	4 47.34	+44 2.4	3.942	4.845	5.3	23.9	153 W	89 20
11 17	4 27.56	+16 38.9	2.160	3.129	4.4	22.5	166 W	62 47	11 27	4 41.51	+43 56.3	3.922	4.842	4.7	23.9	156 W	89 20
11 27	4 15.70	+16 26.4	2.181	3.166	1.5	22.4	175 W	61 48	12 2	4 35.60	+43 46.4	3.910	4.839	4.3	23.9	158 W	89 20
12 7	4 4.21	+16 15.7	2.235	3.201	4.1	22.6	166 E	61 48	12 7	4 29.69	+43 32.9	3.906	4.836	4.3	23.9	158 E	89 20
12 17	3 54.04	+16 8.7	2.320	3.235	7.6	22.9	154 E	61 48	12 12	4 23.89	+43 15.8	3.910	4.832	4.6	23.9	157 E	88 21
12 27	3 45.89	+16 7.2	2.433	3.267	10.6	23.2	142 E	61 48	12 17	4 18.30	+42 55.7	3.923	4.828	5.1	23.9	154 E	88 21
482650 2013 BK₁₈									12 22	4 13.01	+42 32.7	3.943	4.824	5.8	24.0	151 E	88 21
11 17	4 34.47	-28 26.4	1.307	2.086	21.3	22.7	130 W	17 88	356991 1998 QA₁								
11 22	4 26.65	-29 3.9	1.285	2.064	21.5	22.7	130 W	16 87	11 17	5 2.97	+31 48.4	2.049	2.977	7.9	23.4	155 W	77 32
11 27	4 18.32	-29 27.0	1.268	2.042	21.9	22.6	129 W	16 87	11 22	4 56.56	+31 39.5	2.038	2.991	6.1	23.3	161 W	77 32
12 2	4 9.70	-29 34.3	1.255	2.019	22.6	22.6	128 E	15 86	11 27	4 49.89	+31 27.0	2.035	3.004	4.4	23.2	167 W	76 33
12 7	4 1.07	-29 25.3	1.246	1.995	23.4	22.6	126 E	16 87	12 2	4 43.11	+31 11.1	2.040	3.017	3.1	23.2	171 W	76 33
12 12	3 52.69	-28 59.8	1.242	1.971	24.4	22.6	124 E	16 87	12 7	4 36.39	+30 52.1	2.053	3.029	3.0	23.2	171 E	76 33
12 17	3 44.84	-28 18.3	1.241	1.945	25.6	22.6	121 E	17 88	12 12	4 29.90	+30 30.4	2.074	3.042	4.1	23.3	167 E	76 33
478429 2012 HE₂₈									12 17	4 23.78	+30 6.7	2.103	3.053	5.7	23.4	162 E	75 34
11 17	4 37.74	+16 39.6	1.868	2.831	5.6	22.5	164 W	62 47	12 22	4 18.17	+29 41.5	2.139	3.065	7.5	23.5	156 E	75 34
11 27	4 26.92	+16 18.3	1.866	2.849	2.1	22.3	174 W	61 48	430552 2002 HU₁₁								
12 7	4 16.07	+15 59.7	1.895	2.867	3.9	22.4	169 E	61 48	11 17	5 3.87	+ 0 30.7	2.179	3.078	9.1	22.6	150 W	46 63
12 17	4 6.27	+15 46.1	1.953	2.884	7.7	22.7	157 E	61 48	11 27	4 53.19	+ 0 30.2	2.194	3.127	7.1	22.6	157 W	46 63
12 27	3 58.42	+15 39.8	2.038	2.900	11.2	23.0	145 E	61 48	12 7	4 42.30	+ 0 45.6	2.239	3.174	6.7	22.7	158 E	46 63
163691 2003 BB₄₃									12 17	4 32.11	+ 1 16.4	2.315	3.220	8.1	22.8	153 E	46 63
11 17	4 41.31	-33 56.0	2.575	3.239	14.6	22.5	124 W	11 82	12 27	4 23.42	+ 2 0.7	2.418	3.265	10.2	23.0	144 E	47 62
11 22	4 36.07	-34 20.2	2.558	3.222	14.6	22.5	124 W	11 82	333311 2001 MR₃								
11 27	4 30.58	-34 35.8	2.546	3.205	14.8	22.5	124 W	10 81	11 17	5 10.75	+19 43.3	2.192	3.122	7.3	23.8	156 W	65 44
12 2	4 24.97	-34 42.4	2.538	3.188	15.0	22.5	123 E	10 81	11 27	5 0.37	+19 18.4	2.176	3.149	3.6	23.6	168 W	64 45
12 7	4 19.35	-34 39.8	2.535	3.171	15.3	22.5	122 E	10 81	12 7	4 49.41	+18 53.0	2.191	3.174	1.2	23.5	176 E	64 45
12 12	4 13.86	-34 27.8	2.536	3.153	15.6	22.5	121 E	11 82	12 17	4 38.86	+18 28.9	2.237	3.198	4.5	23.8	165 E	63 46
12 17	4 8.62	-34 6.7	2.542	3.135	16.0	22.5	119 E	11 82	12 27	4 29.67	+18 8.5	2.314	3.221	8.0	24.0	153 E	63 46
12 22	4 3.75	-33 37.0	2.551	3.116	16.4	22.5	116 E	11 82	243732 2000 KV₁₃								
12 27	3 59.33	-32 59.1	2.564	3.098	16.9	22.5	114 E	12 83	11 17	5 19.35	+21 0.9	1.702	2.628	9.4	21.4	154 W	66 43
243566 1995 SA									11 22	5 14.25	+20 47.6	1.682	2.634	7.2	21.3	160 W	66 43
11 17	4 42.68	- 4 6.2	2.667	3.563	7.8	22.7	151 W	41 68	11 27	5 8.72	+20 33.7	1.669	2.639	4.9	21.1	167 W	66 43
11 27	4 33.16	- 4 51.5	2.617	3.528	7.2	22.7	154 W	40 69	12 2	5 2.90	+20 19.2	1.662	2.644	2.6	21.0	173 W	65 44
12 7	4 23.15	- 5 20.3	2.597	3.491	7.9	22.6	151 E	40 69	12 7	4 56.96	+20 4.4	1.664	2.648	1.0	20.9	177 W	65 44
12 17	4 13.42	- 5 30.4	2.605	3.453	9.6	22.7	144 E	39 70	12 12	4 51.05	+19 49.5	1.672	2.653	2.5	21.0	173 E	65 44
12 27	4 4.72	- 5 21.2	2.641	3.413	11.6	22.8	136 E	40 69	12 17	4 45.36	+19 35.1	1.689	2.657	4.8	21.2	167 E	65 44
205744 2002 BK₂₅									12 22	4 40.04	+19 21.4	1.712	2.661	7.0	21.3	161 E	64 45
11 17	4 43.76	+ 6 3.9	2.756	3.690	5.8	23.7	158 W	51 58	12 27	4 35.22	+19 9.0	1.743	2.664	9.2	21.4	154 E	64 45
11 27	4 33.34	+ 5 3															

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°									
390636 2002 JV8																										
11 17	5 19.71	-17 13.3	2.585	3.356	12.1	21.8	135 W	28 81	11 17	5 29.41	+22 1.5	1.377	2.296	11.7	21.9	152 W	67 42									
11 22	5 15.63	-17 36.9	2.576	3.366	11.6	21.8	137 W	27 82	11 22	5 24.10	+21 59.9	1.362	2.309	9.2	21.8	158 W	67 42									
11 27	5 11.30	-17 54.4	2.573	3.375	11.2	21.8	138 W	27 82	11 27	5 18.24	+21 57.5	1.355	2.321	6.5	21.7	165 W	67 42									
12 2	5 6.79	-18 5.4	2.576	3.384	11.0	21.8	139 W	27 82	12 2	5 12.01	+21 54.2	1.354	2.333	3.8	21.6	171 W	67 42									
12 7	5 2.19	-18 9.6	2.585	3.393	10.9	21.8	139 W	27 82	12 7	5 5.61	+21 50.2	1.360	2.344	1.1	21.4	177 W	67 42									
12 12	4 57.62	-18 7.0	2.600	3.401	11.0	21.8	139 E	27 82	12 12	4 59.25	+21 45.5	1.373	2.356	1.8	21.5	176 E	67 42									
12 17	4 53.17	-17 57.6	2.622	3.410	11.3	21.9	137 E	27 82	12 17	4 53.13	+21 40.5	1.393	2.367	4.4	21.7	169 E	67 42									
12 22	4 48.93	-17 41.7	2.649	3.418	11.7	21.9	135 E	27 82	12 22	4 47.45	+21 35.5	1.421	2.378	7.0	21.9	163 E	67 42									
12 27	4 45.00	-17 19.6	2.681	3.426	12.2	21.9	133 E	28 81	12 27	4 42.38	+21 30.9	1.455	2.389	9.4	22.0	157 E	67 42									
1 1	4 41.44	-16 52.0	2.719	3.433	12.7	22.0	130 E	28 81	1 1	4 38.02	+21 27.1	1.495	2.400	11.6	22.2	150 E	66 43									
1 6	4 38.30	-16 19.4	2.762	3.441	13.3	22.1	127 E	29 80	1 6	4 34.46	+21 24.4	1.541	2.411	13.7	22.3	145 E	66 43									
504033 2005 UN157																										
11 17	5 20.21	+76 18.6	1.998	2.646	18.7	22.9	121 W	59 —	11 17	5 29.97	-43 30.2	3.508	3.981	13.3	22.5	112 W	1 72									
11 19	5 10.44	+76 50.7	1.974	2.628	18.7	22.8	121 W	58 —	11 22	5 23.82	-43 41.8	3.493	3.980	13.2	22.5	113 W	1 72									
11 21	4 59.39	+77 20.4	1.951	2.611	18.7	22.8	122 W	58 —	11 27	5 17.36	-43 45.9	3.482	3.978	13.2	22.5	113 W	1 72									
11 23	4 47.04	+77 47.3	1.928	2.593	18.8	22.8	122 W	57 —	12 2	5 10.69	-43 42.1	3.475	3.976	13.1	22.5	114 W	1 72									
11 25	4 33.38	+78 10.8	1.907	2.575	18.9	22.7	122 W	57 —	12 7	5 3.92	-43 30.2	3.472	3.974	13.1	22.5	114 W	1 72									
11 27	4 18.47	+78 30.4	1.886	2.556	19.0	22.7	123 W	56 —	12 12	4 57.18	-43 10.0	3.474	3.972	13.1	22.5	114 E	2 73									
11 28	4 10.58	+78 38.5	1.876	2.547	19.0	22.7	123 E	56 —	12 17	4 50.60	-42 41.6	3.480	3.969	13.2	22.5	113 E	2 73									
11 29	4 2.44	+78 45.5	1.866	2.538	19.1	22.6	123 E	56 —	12 22	4 44.29	-42 5.3	3.490	3.966	13.3	22.5	112 E	3 74									
11 30	3 54.07	+78 51.2	1.856	2.529	19.2	22.6	123 E	56 —	12 27	4 38.36	-41 21.5	3.505	3.963	13.4	22.5	111 E	4 75									
12 1	3 45.51	+78 55.7	1.847	2.520	19.2	22.6	123 E	56 —	285160 1995 WP6																	
12 2	3 36.80	+78 58.9	1.838	2.510	19.3	22.6	123 E	56 —	11 17	5 31.43	+16 57.8	1.466	2.380	11.6	21.7	151 W	62 47									
12 3	3 27.98	+79 0.7	1.829	2.501	19.4	22.6	123 E	56 —	11 27	5 20.66	+16 44.9	1.442	2.403	6.8	21.5	163 W	62 47									
12 4	3 19.09	+79 1.1	1.820	2.492	19.5	22.6	122 E	56 —	12 7	5 8.49	+16 35.2	1.445	2.426	2.8	21.3	173 W	62 47									
12 5	3 10.19	+79 0.1	1.812	2.482	19.6	22.6	122 E	56 —	12 17	4 56.36	+16 30.1	1.477	2.448	4.9	21.5	168 E	62 47									
12 6	3 1.32	+78 57.8	1.803	2.473	19.7	22.5	122 E	56 —	12 27	4 45.73	+16 31.0	1.538	2.469	9.3	21.8	156 E	62 47									
12 7	2 52.53	+78 54.0	1.795	2.463	19.8	22.5	122 E	56 —	1 6	4 37.66	+16 38.9	1.624	2.489	13.3	22.1	144 E	62 47									
12 8	2 43.87	+78 48.9	1.787	2.454	19.9	22.5	122 E	56 —	383580 2007 FA3																	
12 9	2 35.37	+78 42.4	1.780	2.444	20.1	22.5	122 E	56 —	11 17	5 32.84	+29 9.4	2.629	3.521	8.0	22.3	150 W	74 35									
12 10	2 27.08	+78 34.7	1.772	2.435	20.2	22.5	121 E	56 —	11 27	5 23.39	+29 20.1	2.568	3.519	5.0	22.1	162 W	74 35									
12 11	2 19.03	+78 25.7	1.765	2.425	20.3	22.5	121 E	57 —	12 7	5 12.71	+29 23.4	2.538	3.516	2.2	21.9	172 W	74 35									
12 12	2 11.24	+78 15.4	1.758	2.416	20.5	22.5	121 E	57 —	12 17	5 1.68	+29 18.7	2.539	3.512	2.9	21.9	170 E	74 35									
12 13	2 3.75	+78 4.0	1.751	2.406	20.6	22.4	121 E	57 —	12 27	4 51.29	+29 7.0	2.573	3.507	5.9	22.1	159 E	74 35									
12 14	1 56.57	+77 51.6	1.745	2.396	20.8	22.4	120 E	57 —	1 6	4 42.39	+28 50.7	2.636	3.500	8.8	22.3	147 E	74 35									
12 15	1 49.72	+77 38.1	1.738	2.386	21.0	22.4	120 E	57 —	306600 2000 HO27																	
12 16	1 43.19	+77 23.6	1.732	2.377	21.1	22.4	120 E	58 —	11 17	5 34.60	+18 5.0	2.883	3.775	7.4	21.5	150 W	63 46									
12 17	1 37.01	+77 8.3	1.726	2.367	21.3	22.4	119 E	58 —	11 27	5 26.75	+17 38.5	2.807	3.758	4.7	21.3	162 W	63 46									
12 19	1 25.64	+76 35.2	1.715	2.347	21.7	22.4	118 E	58 —	12 7	5 17.82	+17 12.3	2.761	3.739	2.0	21.1	172 W	62 47									
12 21	1 15.58	+75 59.4	1.704	2.327	22.0	22.4	117 E	59 —	12 17	5 8.50	+16 47.5	2.746	3.720	2.6	21.1	170 E	62 47									
12 23	1 6.76	+75 21.3	1.694	2.307	22.4	22.3	116 E	60 —	12 27	4 59.54	+16 25.5	2.764	3.700	5.4	21.3	159 E	61 48									
12 25	0 59.10	+74 41.4	1.685	2.287	22.9	22.3	115 E	60 —	1 6	4 51.66	+16 7.9	2.812	3.679	8.3	21.4	147 E	61 48									
12 27	0 52.50	+74 0.1	1.676	2.266	23.3	22.3	114 E	61 —	385342 2002 LL																	
510178 2011 BC43																										
11 17	5 24.91	+28 43.3	2.095	3.004	8.9	22.2	152 W	74 35	11 17	5 36.30	-14 32.7	2.749	3.511	11.6	21.8	134 W	30 79									
11 22	5 20.04	+28 52.5	2.057	2.996	7.1	22.1	158 W	74 35	11 27	5 28.52	-15 12.8	2.715	3.521	10.6	21.8	139 W	30 79									
11 27	5 14.66	+28 59.8	2.027	2.987	5.3	21.9	164 W	74 35	12 7	5 19.80	-15 30.7	2.706	3.530	10.0	21.7	141 W	29 80									
12 2	5 8.88	+29 4.9	2.004	2.978	3.5	21.8	169 W	74 35	12 17	5 10.82	-15 24.1	2.723	3.539	10.2	21.8	141 E	30 79									
12 7	5 2.85	+29 7.7	1.989	2.969	2.2	21.7	173 W	74 35	12 27	5 2.35	-14 53.1	2.764	3.547	10.9	21.8	137 E	30 79									
12 12	4 56.71	+29 8.0	1.981	2.960	2.5	21.7	172 E	74 35	1 6	4 55.04	-14 0.5	2.829	3.553	12.0	21.9	131 E	31 78									
12 17	4 50.62	+29 5.9	1.982	2.951	4.1	21.8	168 E	74 35	322775 2001 HA8																	
12 22	4 44.76	+29 1.7	1.990	2.941	5.9	21.9	162 E	74 35	11 17	5 38.29	+17 6.5	1.868	2.766	10.5	21.4	149 W	62 47									
12 27	4 39.27	+28 55.7	2.005	2.931	7.8	22.0	156 E	74 35	11 27	5 26.84	+17 18.4	1.859	2.813	6.3	21.3	162 W	62 47									
1 1	4 34.27	+28 48.5	2.027	2.920	9.7	22.1	150 E	74 35	12 7	5 14.33	+17 31.9	1.879	2.860	2.3	21.1	173 W	63 46									
1 6	4 29.88	+28 40.4	2.056	2.910	11.4	22.2	144 E	74 35	12 17	5 1.96	+17 46.7	1.931	2.904	3.5	21.3	170 E	63 46									
385355 2002 PQ87																										
11 17	5 26.38	-15 41.7	2.703	3.473	11.6	22.2	135 W	29 80	12 27	4 50.92	+18 3.0	2.014	2.948	7.3	21.6	158 E	63 46									
11 27	5 18.21	-16 12.7	2.676	3.484	10.6	22.1	139 W	29 80	1 6	4 42.07	+18 21.4	2.126	2.990	10.7	21.9	146 E	63 46									
12 7	5 9.23	-16 20.3	2.674	3.495	10.2	22.1	141 W	29 80	387668 2002 SZ																	
12 17	5 0.17	-16 2.5	2.697	3.504	10.5	22.1	139 E	29 80	11 17	5 42.29	+66 9.9	1.034	1.819	25.3	22.9	128 W	69 —									
12 27	4 51.80	-15 20.3	2.745	3.513	11.4	22.2	135 E	30 79	11 19	5 35.22	+66 34.0	1.029	1.822	24.8	22.9	129 W	68 —									
1 6	4 44.74	-14 16.9	2.816	3.521	12.5	22.3	129 E	31 78	11 21	5 27.59	+66 55.0	1.024	1.826	24.4	22.9	130 W	68 —									
468449 2003 MF1																										
11 17	5 29.13	+24 39.5	1.770	2.682	10.0	22.1	152 W	70 39	11 23	5 19.47	+67 12.4	1.020	1.829	24.0	22.9	131 W	68 —									
11 22	5 23.72	+24 28.3	1.755	2.696	7.9	22.0	158 W	69 40	11 25	5 10.92	+67 25.9	1.017	1.832	23.6	22.9	132 W	68 —									
11 27	5 17.88	+24 15.6	1.747	2.710	5.6	21.9	164 W	69 40	11 27	5 2.01	+67 35.4	1.015	1.835	23.2	22.8	133 W	67 —									
12 2	5 11.75	+24 1.3	1.746	2.724	3.3	21.8	171 W	69 40	11 29	4 52.86	+67 40.6	1.013	1.837	22.9	22.8	134 W	67 —									
12 7	5 5.51	+23 45.8	1.753	2.737	1.0	21.7	177 W	69 40	12 1	4 43.56	+67 41.4	1.012	1.840	22.7	22.8	134 W	67 —									
12 12	4 59.32	+23 29.2	1.767	2.750	1.5	21.7	176 E	68 41	12 3	4 34.24	+67 37.7	1.012	1.842	22.5	22.8	134 E	67 —									
12 17	4 53.35	+23 12.0	1.789	2.763																						

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°		
387668 2002 SZ (continuation)									335220 2005 GB₂₇										
12 22	3 22.60	+63 48.6	1.049	1.857	23.2	22.9	132 E	71	—	11 17	5 55.66	+12 45.1	1.821	2.688	12.4	22.1	144 W	58	51
12 27	3 11.98	+62 10.6	1.070	1.859	24.1	23.0	130 E	73	2	11 27	5 47.63	+12 20.5	1.733	2.662	8.8	21.8	155 W	57	52
1 1	3 4.76	+60 27.3	1.095	1.859	25.1	23.1	127 E	75	4	12 7	5 37.37	+12 2.5	1.670	2.635	5.4	21.6	165 W	57	52
1 6	3 0.51	+58 42.8	1.124	1.859	26.1	23.2	124 E	76	5	12 17	5 25.82	+11 53.1	1.637	2.608	4.5	21.4	168 E	57	52
499442 2010 DG₇₈									12 27 5 14.25 +11 53.8 1.633 2.579 7.5 21.6 160 E 57 52										
11 17	5 44.56	+46 16.3	1.255	2.118	17.0	21.7	141 W	89	18	1 6	5 3.92	+12 5.3	1.657	2.549	11.5	21.7	149 E	57	52
11 22	5 37.76	+46 40.3	1.223	2.113	15.3	21.6	146 W	88	17	369463 2010 RA₁₁₂									
11 27	5 29.74	+46 56.4	1.195	2.107	13.7	21.5	150 W	88	17	11 17	5 56.46	+30 28.9	1.660	2.533	13.0	22.1	145 W	75	34
12 2	5 20.72	+47 2.9	1.174	2.101	12.2	21.4	153 W	88	17	11 22	5 51.74	+30 40.5	1.633	2.541	10.9	22.0	151 W	76	33
12 7	5 11.03	+46 58.4	1.158	2.094	11.3	21.3	155 W	88	17	11 27	5 46.31	+30 49.8	1.612	2.549	8.8	21.9	157 W	76	33
12 12	5 1.05	+46 42.2	1.149	2.088	11.0	21.3	156 E	88	17	12 2	5 40.30	+30 56.5	1.598	2.556	6.6	21.8	163 W	76	33
12 17	4 51.22	+46 14.4	1.146	2.080	11.5	21.3	155 E	89	18	12 7	5 33.89	+31 0.0	1.591	2.563	4.6	21.7	168 W	76	33
12 22	4 41.97	+45 35.9	1.149	2.073	12.6	21.3	153 E	89	18	12 12	5 27.24	+31 0.1	1.592	2.570	3.2	21.6	172 E	76	33
12 27	4 33.66	+44 48.6	1.159	2.065	14.2	21.4	149 E	90	19	12 17	5 20.58	+30 56.8	1.599	2.576	3.3	21.6	171 E	76	33
1 1	4 26.53	+43 54.5	1.174	2.056	16.1	21.5	145 E	89	20	12 22	5 14.12	+30 50.3	1.614	2.583	4.9	21.7	167 E	76	33
1 6	4 20.77	+42 55.9	1.195	2.048	18.0	21.6	140 E	88	21	12 27	5 8.05	+30 41.1	1.637	2.589	6.9	21.8	162 E	76	33
253841 2003 YG₁₁₈									1 1 5 2.53 +30 29.6 1.666 2.595 8.9 22.0 156 E 75 34										
11 17	5 46.56	+35 9.8	1.946	2.819	11.4	21.5	146 W	80	29	1 6	4 57.70	+30 16.6	1.702	2.600	10.9	22.1	150 E	75	34
11 22	5 41.16	+35 24.5	1.884	2.791	9.8	21.3	151 W	80	29	1 11	4 53.64	+30 2.8	1.744	2.606	12.8	22.2	144 E	75	34
11 27	5 34.90	+35 36.3	1.828	2.762	8.1	21.2	157 W	81	28	323048 2002 RP₁₄₃									
12 2	5 27.87	+35 44.3	1.780	2.734	6.5	21.0	162 W	81	28	11 17	5 59.04	+16 5.9	1.877	2.742	12.1	22.5	144 W	61	48
12 7	5 20.21	+35 47.9	1.739	2.704	5.2	20.9	166 W	81	28	11 27	5 50.37	+15 47.1	1.831	2.762	8.3	22.3	156 W	61	48
12 12	5 12.08	+35 46.3	1.705	2.674	4.7	20.8	167 E	81	28	12 7	5 39.95	+15 32.3	1.811	2.780	4.5	22.1	167 W	61	48
12 17	5 3.70	+35 39.3	1.680	2.644	5.3	20.8	165 E	81	28	12 17	5 28.80	+15 22.5	1.821	2.798	2.9	22.0	172 E	60	49
12 22	4 55.31	+35 26.7	1.662	2.613	6.9	20.8	161 E	80	29	12 27	5 18.12	+15 18.5	1.861	2.815	6.0	22.3	163 E	60	49
12 27	4 47.17	+35 9.1	1.652	2.582	8.9	20.9	156 E	80	29	380981 2006 SU₁₃₁									
1 1	4 39.48	+34 47.0	1.650	2.550	11.1	20.9	150 E	80	29	11 17	6 2.52	+15 21.4	1.454	2.324	14.7	22.2	143 W	60	49
1 6	4 32.46	+34 21.3	1.654	2.518	13.2	21.0	144 E	79	30	11 27	5 50.82	+15 31.8	1.406	2.341	9.9	21.9	156 W	61	48
1 11	4 26.26	+33 53.2	1.664	2.485	15.3	21.0	138 E	79	30	12 7	5 36.63	+15 48.2	1.384	2.357	5.0	21.7	168 W	61	48
1 16	4 21.00	+33 23.8	1.680	2.451	17.3	21.1	132 E	78	31	12 17	5 21.44	+16 9.5	1.393	2.371	3.4	21.6	172 E	61	48
302156 2001 SF₂₈₆									12 27 5 7.04 +16 34.9 1.431 2.382 7.8 21.9 161 E 62 47										
11 17	5 48.98	+ 4 7.4	1.202	2.078	16.7	21.7	143 W	49	60	1 6	4 54.96	+17 4.1	1.498	2.392	12.4	22.2	148 E	62	47
11 22	5 40.56	+ 2 41.7	1.169	2.074	14.6	21.5	148 W	48	61	412575 2014 OK₆									
11 27	5 31.14	+ 1 17.5	1.142	2.068	12.8	21.4	152 W	46	63	11 17	6 3.80	+12 17.5	2.394	3.234	10.7	21.5	142 W	57	52
12 2	5 20.92	+ 0 3.2	1.124	2.061	11.6	21.3	155 W	45	64	11 27	5 56.69	+11 55.8	2.292	3.204	8.0	21.3	153 W	57	52
12 7	5 10.17	+1 18.1	1.114	2.052	11.3	21.3	156 W	44	65	12 7	5 47.75	+11 39.5	2.216	3.173	5.1	21.1	163 W	57	52
12 12	4 59.20	+ 2 25.3	1.112	2.043	12.1	21.3	154 E	43	66	12 17	5 37.65	+11 30.2	2.171	3.141	3.7	20.9	168 E	57	52
12 17	4 48.34	+ 3 22.9	1.117	2.033	13.8	21.4	151 E	42	67	12 27	5 27.30	+11 29.0	2.157	3.107	5.6	21.0	162 E	56	53
12 22	4 37.94	+ 4 9.8	1.131	2.021	15.9	21.5	146 E	41	68	1 6	5 17.67	+11 36.4	2.172	3.073	8.8	21.1	152 E	57	52
12 27	4 28.27	+ 4 45.6	1.151	2.008	18.2	21.6	140 E	40	69	1 16	5 9.60	+11 52.2	2.215	3.038	11.9	21.3	140 E	57	52
1 1	4 19.56	+ 5 10.5	1.178	1.995	20.6	21.7	135 E	40	69	161998 1988 PA									
1 6	4 11.96	+ 5 25.1	1.209	1.980	22.8	21.8	129 E	40	69	11 17	6 6.00	+11 10.4	1.725	2.574	13.8	21.5	142 W	56	53
20236 1998 BZ₇									11 27 5 56.38 +10 48.6 1.690 2.608 9.9 21.4 153 W 56 53										
11 17	5 51.65	+17 24.7	1.580	2.465	12.8	21.3	146 W	62	47	12 7	5 44.92	+10 36.5	1.682	2.640	6.2	21.2	163 W	56	53
11 27	5 41.44	+17 19.5	1.467	2.413	8.6	20.9	159 W	62	47	12 17	5 32.75	+10 35.1	1.703	2.672	4.7	21.2	167 E	56	53
12 7	5 28.02	+17 17.0	1.380	2.358	3.9	20.5	171 W	62	47	12 27	5 21.18	+10 44.7	1.754	2.701	7.0	21.4	161 E	56	53
12 17	5 12.46	+17 17.0	1.323	2.301	3.7	20.4	171 E	62	47	1 6	5 11.34	+11 4.4	1.834	2.730	10.4	21.7	150 E	56	53
12 22	5 4.39	+17 18.2	1.306	2.272	6.3	20.4	165 E	62	47	431686 2008 DP₃₄									
12 27	4 56.45	+17 20.3	1.297	2.242	9.1	20.5	159 E	62	47	11 17	6 6.80	+52 35.4	2.119	2.901	14.0	22.1	135 W	82	11
1 1	4 48.88	+17 23.6	1.294	2.212	12.0	20.6	152 E	62	47	11 22	6 1.24	+53 1.5	2.082	2.898	13.0	22.1	139 W	82	11
1 6	4 41.89	+17 28.4	1.298	2.181	14.8	20.7	145 E	62	47	11 27	5 54.70	+53 22.2	2.051	2.895	12.0	22.0	142 W	82	11
1 11	4 35.65	+17 34.9	1.308	2.149	17.5	20.8	139 E	63	46	12 2	5 47.32	+53 36.1	2.025	2.891	11.2	21.9	145 W	81	10
1 16	4 30.33	+17 43.4	1.323	2.117	20.0	20.8	133 E	63	46	12 7	5 39.30	+53 42.5	2.006	2.887	10.5	21.9	148 W	81	10
511787 2015 EF₆₃									12 12 5 30.88 +53 40.5 1.993 2.883 10.0 21.8 149 W 81 10										
11 17	5 54.46	+30 45.5	2.043	2.911	11.1	22.3	145 W	76	33	12 17	5 22.34	+53 29.8	1.986	2.879	9.9	21.8	150 E	82	11
11 27	5 45.14	+31 15.1	1.976	2.909	7.7	22.0	157 W	76	33	12 22	5 13.97	+53 10.4	1.987	2.875	10.2	21.8	149 E	82	11
12 7	5 33.73	+31 36.0	1.936	2.906	4.2	21.8	168 W	77	32	12 27	5 6.05	+52 42.9	1.994	2.870	10.7	21.9	147 E	82	11
12 17	5 21.31	+31 45.5	1.927	2.902	3.1	21.8	171 E	77	32	1 1	4 58.81	+52 8.3	2.007	2.865	11.5	21.9	144 E	83	12
12 27	5 9.26	+31 43.0	1.948	2.897	6.2	21.9	162 E	77	32	1 6	4 52.44	+51 27.8	2.027	2.860	12.5	22.0	141 E	84	13
1 6	4 58.82	+31 30.9	1.998	2.892	9.8	22.1	150 E	77	32	1 11	4 47.06	+50 42.5	2.053	2.854	13.5	22.0	137 E	84	13
456651 2007 RT₁₉									369461 2010 RC₆₈										
11 17	5 54.53	+ 9 26.9	1.																

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
475134 2005 UH₃₃₂										165765 2001 QW₂₃₆									
<i>(continuation)</i>																			
12 12	5 40.63	+31 11.1	1.767	2.742	3.5	21.2	170 W	76	33	11 17	6 32.62	+11 51.3	1.640	2.445	16.5	21.5	135 W	57	52
12 17	5 34.07	+31 28.8	1.778	2.755	2.9	21.2	172 E	76	33	11 27	6 25.43	+11 25.9	1.581	2.465	12.7	21.3	147 W	56	53
12 22	5 27.60	+31 43.1	1.796	2.768	3.9	21.2	169 E	77	32	12 7	6 15.62	+11 10.5	1.545	2.484	8.7	21.1	158 W	56	53
12 27	5 21.42	+31 54.0	1.822	2.780	5.7	21.4	164 E	77	32	12 17	6 4.15	+11 6.6	1.535	2.502	5.3	21.0	166 W	56	53
1 1	5 15.67	+32 1.7	1.855	2.792	7.5	21.5	158 E	77	32	12 27	5 52.32	+11 14.5	1.555	2.520	5.5	21.0	166 E	56	53
1 6	5 10.50	+32 6.7	1.895	2.804	9.4	21.6	152 E	77	32	1 6	5 41.50	+11 33.5	1.603	2.536	8.8	21.2	157 E	57	52
1 11	5 6.01	+32 9.5	1.942	2.816	11.1	21.8	147 E	77	32	1 16	5 32.79	+12 1.9	1.677	2.551	12.5	21.5	146 E	57	52
239803 1995 WE₄										435058 2006 XG₂									
11 17	6 10.13	+20 41.9	1.596	2.454	14.2	22.1	142 W	66	43	11 17	6 39.70	+15 18.3	0.647	1.515	27.7	21.4	135 W	60	49
11 27	6 0.54	+20 59.7	1.554	2.482	9.8	21.9	155 W	66	43	11 22	6 35.47	+17 3.3	0.618	1.519	24.2	21.2	141 W	62	47
12 7	5 48.62	+21 18.1	1.538	2.509	4.9	21.6	168 W	66	43	11 27	6 29.37	+19 1.3	0.593	1.521	20.3	21.0	148 W	64	45
12 17	5 35.64	+21 35.1	1.551	2.534	0.8	21.4	178 E	67	42	12 2	6 21.39	+21 10.7	0.573	1.524	15.9	20.8	155 W	66	43
12 27	5 23.14	+21 49.8	1.594	2.559	5.3	21.8	166 E	67	42	12 7	6 11.59	+23 28.2	0.558	1.526	11.3	20.5	162 W	68	41
1 6	5 12.49	+22 2.9	1.665	2.582	9.8	22.1	153 E	67	42	12 12	6 0.20	+25 49.2	0.548	1.527	6.6	20.3	170 W	71	38
264791 2002 NG₉										501647 2014 SD₂₂₄									
11 17	6 12.31	+31 50.0	1.788	2.634	13.5	21.3	141 W	77	32	11 17	6 45.76	+38 16.0	0.244	1.170	37.8	21.1	134 W	83	26
11 22	6 7.76	+31 46.3	1.762	2.647	11.7	21.3	147 W	77	32	11 22	6 49.88	+39 18.5	0.210	1.150	35.7	20.7	137 W	84	25
11 27	6 2.52	+31 40.0	1.742	2.660	9.6	21.2	153 W	77	32	11 27	6 52.67	+40 36.1	0.176	1.129	33.5	20.2	141 W	86	23
12 2	5 56.71	+31 31.0	1.729	2.673	7.6	21.1	159 W	77	32	12 2	6 53.73	+42 17.3	0.144	1.106	31.3	19.7	144 W	87	22
12 7	5 50.48	+31 18.8	1.722	2.686	5.5	21.0	165 W	76	33	12 7	6 52.13	+44 39.4	0.113	1.082	29.3	19.0	147 W	90	19
12 12	5 44.01	+31 3.4	1.723	2.698	3.6	20.9	170 W	76	33	12 9	6 50.31	+45 55.3	0.101	1.072	28.8	18.7	148 W	89	18
12 17	5 37.48	+30 45.0	1.731	2.710	2.7	20.8	173 E	76	33	12 11	6 47.42	+47 27.9	0.089	1.062	28.5	18.4	149 W	88	17
12 22	5 31.10	+30 23.7	1.747	2.722	3.5	20.9	170 E	75	34	12 13	6 42.95	+49 24.2	0.078	1.052	28.6	18.1	149 W	86	15
12 27	5 25.05	+30 0.2	1.771	2.733	5.2	21.1	165 E	75	34	12 15	6 35.91	+51 55.1	0.066	1.041	29.4	17.8	149 W	83	12
1 1	5 19.47	+29 35.1	1.802	2.745	7.2	21.2	160 E	75	34	12 17	6 24.20	+55 19.0	0.055	1.031	31.4	17.4	147 W	80	9
1 6	5 14.50	+29 9.0	1.839	2.756	9.1	21.3	154 E	74	35	12 18	6 15.16	+57 29.8	0.050	1.025	33.0	17.2	145 W	78	7
1 11	5 10.23	+28 42.6	1.884	2.767	10.9	21.5	148 E	74	35	12 19	6 7.42	+60 6.6	0.044	1.020	35.3	17.0	143 W	75	4
256004 2006 UP										73755 4789 P-L									
11 17	6 22.13	+26 14.8	0.223	1.168	33.2	21.5	140 W	71	38	12 9	6 50.31	+45 55.3	0.101	1.072	28.8	18.7	148 W	89	18
11 22	6 20.60	+27 4.9	0.228	1.182	28.6	21.4	145 W	72	37	12 11	6 47.42	+47 27.9	0.089	1.062	28.5	18.4	149 W	88	17
11 27	6 17.17	+27 50.6	0.235	1.197	23.7	21.4	151 W	73	36	12 13	6 42.95	+49 24.2	0.078	1.052	28.6	18.1	149 W	86	15
12 2	6 12.23	+28 30.5	0.244	1.214	18.7	21.3	157 W	74	35	12 15	6 35.91	+51 55.1	0.066	1.041	29.4	17.8	149 W	83	12
12 7	6 6.21	+29 3.0	0.255	1.231	13.7	21.3	163 W	74	35	12 17	6 24.20	+55 19.0	0.055	1.031	31.4	17.4	147 W	80	9
12 12	5 59.64	+29 27.1	0.269	1.249	9.0	21.2	169 W	74	35	12 18	6 15.16	+57 29.8	0.050	1.025	33.0	17.2	145 W	78	7
12 17	5 53.10	+29 42.6	0.285	1.268	5.5	21.2	173 W	75	34	12 19	6 7.42	+60 6.6	0.044	1.020	35.3	17.0	143 W	75	4
12 22	5 47.15	+29 50.1	0.305	1.287	5.4	21.4	173 E	75	34	12 20	5 42.92	+63 15.0	0.039	1.014	38.4	16.8	140 E	72	1
12 27	5 42.20	+29 51.1	0.329	1.307	8.5	21.7	169 E	75	34	12 21	5 11.10	+66 57.4	0.035	1.009	42.8	16.7	136 E	68	—
1 1	5 38.49	+29 46.9	0.355	1.328	12.1	22.1	164 E	75	34	12 22	4 13.26	+70 56.7	0.030	1.003	48.7	16.5	130 E	64	—
1 6	5 36.14	+29 39.1	0.385	1.348	15.6	22.4	158 E	75	34	12 23	2 24.17	+73 37.1	0.026	0.998	56.8	16.4	122 E	61	—
73575 4789 P-L										350964 2003 BT₃₅									
11 17	6 26.88	+24 34.8	1.861	2.684	14.1	21.5	139 W	70	39	11 17	6 31.69	-73 42.4	1.240	1.486	41.3	21.5	83 W	—	42
11 27	6 18.94	+24 44.0	1.799	2.702	10.3	21.3	151 W	70	39	11 19	6 24.77	-73 49.5	1.232	1.481	41.5	21.5	83 W	—	42
12 7	6 8.52	+24 51.3	1.761	2.719	6.1	21.1	163 W	70	39	11 21	6 17.30	-73 53.9	1.223	1.477	41.6	21.5	83 W	—	42
12 17	5 56.58	+24 54.5	1.752	2.735	1.5	20.8	176 W	70	39	11 23	6 9.36	-73 55.4	1.214	1.472	41.8	21.5	83 W	—	42
12 27	5 44.44	+24 52.6	1.774	2.749	3.2	21.0	171 E	70	39	11 25	6 0.99	-73 53.6	1.205	1.468	41.9	21.5	83 W	—	42
1 6	5 33.43	+24 46.3	1.825	2.763	7.5	21.3	158 E	70	39	11 27	5 52.29	-73 48.4	1.195	1.463	42.1	21.5	84 W	—	42
1 16	5 24.61	+24 37.7	1.904	2.776	11.4	21.5	146 E	70	39	11 29	5 43.33	-73 39.6	1.185	1.459	42.2	21.4	84 W	—	42
350964 2003 BT₃₅										376995 2002 PP₁₃₈									
11 17	6 31.69	-73 42.4	1.240	1.486	41.3	21.5	83 W	—	42	11 17	6 49.56	+18 42.8	1.755	2.534	16.6	21.4	133 W	64	45
11 19	6 24.77	-73 49.5	1.232	1.481	41.5	21.5	83 W	—	42	11 27	6 43.09	+18 10.1	1.693	2.560	13.0	21.2	144 W	63	46
11 21	6 17.30	-73 53.9	1.223	1.477	41.6	21.5	83 W	—	42	12 7	6 33.90	+17 40.8	1.653	2.585	8.8	21.1	156 W	63	46
11 23	6 9.36	-73 55.4	1.214	1.472	41.8	21.5	83 W	—	42	12 17	6 22.82	+17 15.2	1.639	2.610	4.5	20.8	168 W	62	47
11 25	6 0.99	-73 53.6	1.205	1.468	41.9	21.5	83 W	—	42	12 27	6 11.08	+16 53.9	1.655	2.633	2.6	20.8	173 E	62	47
11 27	5 52.29	-73 48.4	1.195	1.463	42.1	21.5	84 W	—	42	1 6	6 0.00	+16 37.6	1.700	2.656	6.2	21.1	163 E	62	47
11 29	5 43.33	-73 39.6	1.174	1.454	42.4	21.4	84 W	—	42	1 16	5 50.73	+16 27.0	1.774	2.678	10.2	21.3	151 E	61	48
12 1	5 34.22	-73 26.8	1.174	1.454	42.4	21.4	84 W	—	43	182260 2001 GA₃									
12 3	5 25.06	-73 9.9	1.163	1.449	42.6	21.4	84 W	—	43	11 17	6 50.35	-1 52.8	2.248	2.946	15.6	21.4	127 W	43	66
12 5	5 15.94	-72 48.7	1.151	1.445	42.8	21.4	85 W	—	43	11 27	6 45.07	-2 19.9	2.155	2.944	13.5	21.2	136 W	43	66
12 7	5 6.98	-72 23.1	1.140	1.440	43.0	21.3	85 W	—	44	12 7	6 37.52	-2 30.4	2.082	2.941	11.2	21.0	145 W	42	67
12 9	4 58.24	-71 52.9	1.128	1.435	43.2	21.3	85 E	—	44	12 17	6 28.20	-2 20.5	2.034	2.937	9.1	20.9	152 W	43	66
12 11	4 49.83	-71 18.1	1.115	1.430	43.3	21.3	86 E	—	45	12 27	6 17.91	-1 48.2	2.012	2.932	8.2	20.8	155 E	43	66
12 13	4 41.80	-70 38.6	1.103	1.426	43.5	21.3	86 E	—	45	1 6	6 7.63	-0 54.4	2.020	2.927	9.0	20.9	152 E	44	65
12 15	4 34.21	-69 54.4	1.090	1.421	43.7	21.2	86 E	—	46	1 16	5 58.35	+0 18.0	2.055	2.920	11.0	21.0	146 E	45	64
12 17	4 27.11	-69 5.4	1.077	1.416	43.9	21.2	87 E	—	47	321950 2010 TJ₁₇₀									
12 19	4 20.52	-68 11.7	1.064	1.411	44.1	21.2	87 E	—	48	11 17	6 55.28	+23 3.9	1.646	2.422</					

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°										
321950 2010 TJ₁₇₀ (continuation)										189040 2000 MU₁ (continuation)																			
12 27	6 15.56	+22 28.2	1.524	2.507	0.8	20.5	178 E	67	42	1 1	9 23.73	-11 12.6	0.232	1.142	42.5	18.7	128 W	34	75	1 6	9 46.96	-12 14.7	0.193	1.112	44.4	18.3	128 W	33	76
1 6	6 3.56	+22 15.4	1.563	2.526	5.7	20.9	165 E	67	42	1 8	9 58.61	-12 37.4	0.178	1.100	45.5	18.1	127 W	32	77	1 10	10 12.08	-12 58.0	0.163	1.088	46.9	17.9	126 W	32	77
1 16	5 53.47	+22 1.8	1.629	2.544	10.2	21.2	153 E	67	42	1 12	10 27.82	-13 15.4	0.149	1.076	48.6	17.8	125 W	32	77	1 14	10 46.37	-13 27.6	0.136	1.064	50.8	17.6	123 W	32	77
482566 2012 WK₄										337084 1998 SE₃₆																			
11 17	6 56.64	+7 58.3	0.365	1.250	38.1	21.3	129 W	53	56	11 17	7 53.63	-0 1.9	0.740	1.445	39.2	21.4	113 W	45	64	11 22	7 57.84	-1 48.6	0.705	1.441	38.2	21.3	116 W	43	66
11 22	6 46.83	+7 56.1	0.362	1.272	32.8	21.2	136 W	53	56	11 27	8 1.04	-3 36.5	0.672	1.436	37.1	21.1	119 W	41	68	12 2	8 3.15	-5 24.6	0.640	1.431	35.8	21.0	122 W	40	69
11 27	6 35.28	+8 2.4	0.362	1.295	27.3	21.1	143 W	53	56	12 7	8 4.06	-7 11.4	0.610	1.426	34.5	20.8	125 W	38	71	12 12	8 3.68	-8 55.1	0.582	1.420	33.0	20.7	128 W	36	73
12 2	6 22.38	+8 17.3	0.365	1.316	21.7	21.0	150 W	53	56	12 17	8 1.95	-10 33.2	0.557	1.415	31.5	20.5	131 W	34	75	12 22	7 58.84	-12 3.0	0.533	1.409	30.0	20.4	134 W	33	76
12 7	6 8.63	+8 40.3	0.372	1.337	16.4	20.9	158 W	54	55	12 27	7 54.40	-13 21.5	0.512	1.403	28.5	20.2	137 W	32	77	1 1	7 48.72	-14 25.7	0.494	1.396	27.2	20.1	139 W	31	78
12 12	5 54.68	+9 10.4	0.383	1.357	11.9	20.8	163 W	54	55	1 6	7 41.98	-15 12.5	0.479	1.390	26.2	20.0	141 W	30	79	1 11	7 34.43	-15 39.0	0.467	1.383	25.7	19.9	142 W	29	80
12 17	5 41.22	+9 46.5	0.400	1.376	9.7	20.8	166 W	55	54	1 16	7 26.45	-15 43.1	0.458	1.376	25.6	19.9	143 E	29	80										
12 22	5 28.89	+10 27.0	0.421	1.394	10.6	21.0	165 E	55	54																				
12 27	5 18.16	+11 10.4	0.446	1.412	13.6	21.3	160 E	56	53																				
1 1	5 9.29	+11 55.6	0.476	1.428	17.2	21.6	155 E	57	52																				
1 6	5 2.37	+12 41.5	0.511	1.444	20.8	21.9	149 E	58	51																				
1 11	4 57.38	+13 27.4	0.548	1.459	24.0	22.1	143 E	58	51																				
1 16	4 54.26	+14 12.9	0.589	1.473	26.8	22.4	137 E	59	50																				
508798 2000 QB₁₄₉										159555 2001 SJ₂₇₆																			
11 17	6 56.97	+31 16.9	1.401	2.190	19.6	21.4	132 W	76	33	11 17	7 55.69	-17 44.4	1.152	1.702	34.1	21.5	105 W	27	82	11 22	7 55.97	-19 57.9	1.134	1.717	33.2	21.4	108 W	25	84
11 27	6 50.58	+31 31.2	1.348	2.218	15.5	21.2	143 W	77	32	11 27	7 55.15	-22 6.3	1.118	1.731	32.3	21.4	110 W	23	86	12 2	7 53.22	-24 8.0	1.104	1.745	31.3	21.4	113 W	21	88
12 7	6 40.39	+31 39.5	1.314	2.246	10.7	21.0	155 W	77	32	12 7	7 50.14	-26 0.8	1.093	1.759	30.4	21.3	116 W	19	90	12 12	7 45.95	-27 42.9	1.084	1.772	29.4	21.3	118 W	17	88
12 17	6 27.49	+31 36.1	1.304	2.273	5.8	20.8	166 W	77	32	12 17	7 40.71	-29 11.8	1.078	1.785	28.6	21.3	120 W	16	87	12 22	7 34.54	-30 25.7	1.074	1.798	27.8	21.3	122 W	15	86
12 27	6 13.62	+31 17.9	1.322	2.300	3.5	20.8	172 E	76	33	12 27	7 27.65	-31 22.8	1.074	1.810	27.0	21.3	123 W	14	85	1 1	7 20.25	-32 2.1	1.077	1.822	26.5	21.3	124 W	13	84
1 6	6 0.74	+30 45.7	1.368	2.326	7.1	21.0	163 E	76	33	1 6	7 12.61	-32 22.7	1.083	1.834	26.0	21.3	125 W	13	84	1 11	7 5.00	-32 24.8	1.092	1.845	25.7	21.3	125 E	13	84
1 16	5 50.43	+30 4.0	1.440	2.351	11.5	21.4	151 E	75	34	1 16	6 57.72	-32 8.7	1.105	1.856	25.6	21.3	125 E	13	84										
158153 2001 KE₄₉										380710 2005 MN₃₂																			
11 17	7 11.64	+20 48.6	1.636	2.377	19.1	21.3	128 W	66	43	11 17	7 56.57	+39 2.3	2.470	3.082	16.2	21.4	120 W	84	25	11 27	7 53.64	+39 16.9	2.327	3.052	14.4	21.2	130 W	84	25
11 27	7 6.97	+20 46.3	1.559	2.395	15.6	21.1	139 W	66	43	12 7	7 47.31	+39 29.9	2.201	3.022	12.1	20.9	140 W	84	25	12 17	7 37.61	+39 35.8	2.097	2.991	9.4	20.7	150 W	85	24
12 7	6 58.93	+20 49.1	1.502	2.413	11.3	20.9	151 W	66	43	12 27	7 25.08	+39 27.8	2.019	2.959	6.8	20.5	159 W	84	25	1 1	7 18.07	+39 16.7	1.991	2.943	5.8	20.4	162 W	84	25
12 17	6 48.11	+20 55.3	1.468	2.429	6.5	20.7	164 W	66	43	1 6	7 10.79	+39 0.2	1.970	2.926	5.5	20.3	164 W	84	25	1 11	7 3.43	+38 38.0	1.957	2.910	5.9	20.3	162 E	84	25
12 27	6 35.69	+21 2.4	1.463	2.445	1.5	20.4	176 W	66	43	1 16	6 56.21	+38 10.1	1.952	2.893	7.0	20.4	159 E	83	26										
1 1	6 29.35	+21 5.7	1.471	2.452	1.7	20.4	176 E	66	43																				
1 6	6 23.18	+21 8.7	1.486	2.460	4.1	20.6	170 E	66	43																				
1 11	6 17.36	+21 11.4	1.509	2.467	6.6	20.8	163 E	66	43																				
1 16	6 12.06	+21 13.7	1.538	2.473	9.0	20.9	157 E	66	43																				
456863 2007 VX₇										306381 1993 RR₂																			
11 17	7 13.86	+13 37.6	0.815	1.610	29.7	21.4	126 W	59	50	11 17	8 2.71	+10 0.4	2.946	3.464	15.2	21.5	114 W	55	54	11 27	8 0.32	+9 50.7	2.844	3.494	13.5	21.4	124 W	55	54
11 22	7 10.02	+12 6.4	0.803	1.635	26.8	21.3	132 W	57	52	12 7	7 55.83	+9 50.1	2.758	3.524	11.4	21.2	135 W	55	54	12 17	7 49.39	+9 59.3	2.692	3.552	8.9	21.1	146 W	55	54
11 27	7 4.89	+10 38.1	0.795	1.661	23.8	21.2	137 W	56	53	12 27	7 41.39	+10 18.2	2.652	3.580	6.1	21.0	157 W	55	54	1 6	7 32.41	+10 45.7	2.642	3.606	3.6	20.8	167 W	56	53
12 2	6 58.62	+9 14.0	0.791	1.686	20.7	21.1	143 W	54	55	1 16	7 23.17	+11 20.0	2.663	3.632	3.2	20.8	168 E	56	53										
12 7	6 51.41	+7 55.7	0.792	1.711	17.5	21.1	148 W	53	56																				
12 12	6 43.49	+6 44.7	0.799	1.736	14.6	21.0	154 W	52	57																				
12 17	6 35.17	+5 42.4	0.811	1.761	12.2	21.0	158 W	51	58																				
12 22	6 26.80	+4 50.0	0.829	1.786	10.6	21.0	160 W	50	59																				
12 27	6 18.70	+4 8.1	0.853	1.810	10.3	21.1	161 E	49	60																				
1 1	6 11.14	+3 36.6	0.883	1.835	11.1	21.2	159 E	49	60																				
1 6	6 4.36	+3 15.2	0.919	1.859	12.7	21.4	155 E	48	61																				
1 11	5 58.51	+3 3.2	0.961	1.882	14.7	21.6	151 E	48	61																				
1 16	5 53.71	+2 59.4	1.008	1.906	16.7	21.8	146 E	48	61																				
211583 2003 SA₁₈₃										368455 2003 QA₄₆																			
11 17	7 19.58	+27 12.9	2.017	2.729	16.8	21.5	127 W	72	37	11 17	8 14.80	+25 52.2	1.736	2.327	22.7	21.4	115 W	71	38	11 27	8 14.76	+26 6.4	1.652	2.357	20.2	21.3	125 W	71	38
11 27	7 15.19	+27 34.2	1.923	2.737	14.0	21.3	138 W	73	36	12 7	8 11.04	+26 29.3	1.581	2.386	16.8	21.1	136 W	71	38	12 17	8 3.65	+26 57.8	1.528	2.415	12.7	20.9	147 W	72	37
12 7	7 7.66	+27 57.5	1.848	2.744	10.5	21.1	150 W	73	36	12 27	7 53.14	+27 26.8	1.497	2.443	8.2	20.7	159 W	72	37	1 6	7 40.57	+27 50.2	1.494	2.469	3.6	20.5	171 W	73	36
12 17	6 57.42	+28 18.8	1.799	2.750	6.4	20.9	162 W	73	36	1 16	7 27.45	+28 3.2	1.519	2.495	3.5	20.5	171 E	73	36										
12 27	6 45.40	+28 34.1	1.777	2.756	2.6	20.6	173 W	74	35																				
1 6	6 32.89	+28 40.3	1.786	2.760	3.5	20.7	170																						

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
264310 1999 RH₉₅										67729 2000 UQ₂₃									
(continuation)																			
12 27	7 57.33	+17 16.5	1.574	2.510	8.7	20.8	157 W	62	47	11 17	9 2.69	+14 28.0	2.049	2.438	23.5	21.4	101 W	59	48*
1 6	7 46.30	+17 46.9	1.564	2.538	3.9	20.6	170 W	63	46	11 27	9 6.73	+14 11.4	1.942	2.461	22.1	21.3	110 W	59	50*
1 16	7 34.56	+18 20.2	1.583	2.565	1.8	20.5	175 E	63	46	12 7	9 7.97	+14 7.9	1.841	2.483	20.1	21.1	120 W	59	50
102454 1999 TY₂₁₈										330250 2006 RF₁₉									
11 17	8 19.46	+13 34.0	2.294	2.801	19.3	21.4	111 W	59	50	11 17	9 16.90	+25 35.9	2.250	2.623	21.7	21.4	101 W	71	37*
11 27	8 19.11	+13 19.8	2.184	2.819	17.5	21.3	121 W	58	51	11 27	9 21.22	+25 58.0	2.139	2.644	20.5	21.3	110 W	71	38*
12 7	8 16.04	+13 16.1	2.086	2.836	15.1	21.1	132 W	58	51	12 7	9 22.75	+26 33.4	2.034	2.663	18.7	21.1	120 W	72	37
12 17	8 10.26	+13 23.6	2.005	2.852	12.0	20.9	143 W	58	51	12 17	9 21.20	+27 21.8	1.940	2.682	16.3	21.0	130 W	72	37
12 27	8 2.06	+13 42.2	1.947	2.867	8.4	20.7	155 W	59	50	12 27	9 16.40	+28 20.3	1.863	2.699	13.3	20.8	141 W	73	36
1 6	7 52.08	+14 10.1	1.916	2.881	4.6	20.5	167 W	59	50	1 6	8 53.50	+15 25.5	1.623	2.544	9.7	20.5	154 W	60	49
1 16	7 41.23	+14 44.7	1.914	2.894	2.3	20.4	173 E	60	49	1 16	8 43.50	+16 15.5	1.595	2.563	5.1	20.3	167 W	61	48
137173 1999 JY₄										482554 2012 VW₃₆									
11 17	8 19.82	+30 29.9	2.181	2.739	19.2	21.5	114 W	75	34	11 17	9 21.78	+3 17.2	1.079	1.501	41.1	21.4	93 W	48	57*
11 27	8 20.43	+31 14.0	2.060	2.737	17.4	21.3	124 W	76	33	11 27	9 35.52	-1 37.7	1.002	1.500	40.7	21.2	98 W	43	64*
12 7	8 17.84	+32 7.3	1.953	2.734	14.9	21.1	134 W	77	32	12 7	9 46.61	-6 50.3	0.930	1.499	39.8	21.0	103 W	38	71*
12 17	8 11.87	+33 6.4	1.864	2.731	11.9	20.9	145 W	78	31	12 17	9 54.54	-12 15.8	0.865	1.499	38.6	20.8	108 W	33	76
12 27	8 2.71	+34 5.2	1.799	2.726	8.5	20.6	156 W	79	30	12 27	9 58.68	-17 46.1	0.807	1.499	37.0	20.6	113 W	27	82
1 6	7 51.02	+34 56.1	1.760	2.720	5.6	20.5	164 W	80	29	1 6	9 58.40	-23 8.5	0.759	1.500	35.3	20.4	118 W	22	87
1 16	7 37.97	+35 32.0	1.751	2.714	5.3	20.4	165 E	81	28	1 16	9 53.09	-28 4.8	0.720	1.501	33.4	20.3	123 W	17	88
108519 2001 LF										100743 1998 DC₃₀									
11 17	8 21.75	+15 44.9	1.387	1.968	28.0	21.3	111 W	61	48	11 17	9 35.73	+7 12.8	2.497	2.700	21.5	21.4	91 W	52	52*
11 27	8 24.28	+13 53.5	1.263	1.951	26.0	21.0	120 W	59	50	11 27	9 41.86	+6 23.9	2.346	2.688	21.2	21.2	99 W	51	56*
12 7	8 22.83	+11 58.5	1.149	1.932	23.2	20.7	130 W	57	52	12 7	9 46.02	+5 43.6	2.198	2.674	20.5	21.1	108 W	51	58*
12 17	8 16.84	+10 2.0	1.049	1.911	19.3	20.4	140 W	55	54	12 17	9 47.90	+5 14.7	2.056	2.659	19.2	20.9	118 W	50	59
12 27	8 6.13	+8 7.6	0.967	1.888	14.6	20.0	151 W	53	56	12 27	9 47.23	+5 0.1	1.925	2.643	17.1	20.6	128 W	50	59
1 1	7 59.13	+7 12.9	0.934	1.876	12.2	19.8	156 W	52	57	1 6	9 43.86	+5 2.4	1.809	2.627	14.4	20.4	138 W	50	59
1 6	7 51.23	+6 21.0	0.907	1.864	10.0	19.7	161 W	51	58	1 16	9 37.79	+5 23.3	1.711	2.609	10.9	20.1	150 W	50	59
1 11	7 42.63	+5 33.0	0.887	1.851	8.7	19.6	163 W	51	58	483558 2003 YD₁₀₈									
1 16	7 33.62	+4 49.8	0.874	1.838	8.8	19.5	163 E	50	59	11 17	9 40.20	+12 11.1	2.254	2.486	23.4	21.4	92 W	57	47*
376571 2013 PA₁₄										11 27	9 46.29	+12 59.3	2.156	2.530	22.6	21.4	100 W	58	49*
11 17	8 23.36	+21 54.2	1.402	1.994	27.4	21.5	112 W	67	42*	12 7	9 49.98	+14 7.1	2.061	2.573	21.1	21.3	110 W	59	50*
11 27	8 26.36	+21 36.1	1.328	2.023	24.7	21.3	121 W	67	42	12 17	9 51.00	+15 36.5	1.974	2.616	18.9	21.1	121 W	61	48
12 7	8 25.34	+21 29.1	1.263	2.053	21.1	21.1	132 W	66	43	12 27	9 49.13	+17 27.6	1.900	2.657	16.0	21.0	132 W	62	47
12 17	8 20.18	+21 32.8	1.212	2.083	16.6	20.9	143 W	67	42	1 6	9 44.36	+19 37.3	1.845	2.699	12.5	20.8	143 W	65	44
12 27	8 11.26	+21 44.4	1.180	2.113	11.3	20.7	155 W	67	42	1 16	9 36.90	+21 59.0	1.814	2.739	8.6	20.7	155 W	67	42
1 6	7 59.61	+21 59.1	1.171	2.143	5.5	20.4	168 W	67	42	171819 2001 FZ₆									
1 16	7 46.79	+22 11.8	1.189	2.172	0.7	20.2	178 E	67	42	11 17	9 50.43	+26 47.4	1.313	1.699	35.5	21.5	94 W	72	33*
276741 2004 EM₆₆										11 27	10 4.88	+26 42.9	1.224	1.710	34.5	21.3	101 W	72	35*
11 17	8 37.33	+33 3.7	2.217	2.731	19.8	21.4	111 W	78	31*	12 7	10 16.46	+26 55.7	1.135	1.720	33.0	21.1	108 W	72	36*
11 27	8 40.59	+34 2.1	2.064	2.697	18.5	21.2	120 W	79	30	12 17	10 24.53	+27 29.7	1.049	1.728	30.7	20.9	116 W	72	36*
12 7	8 40.85	+35 14.3	1.922	2.662	16.6	20.9	130 W	80	29	12 27	10 28.29	+28 27.3	0.969	1.734	27.6	20.7	125 W	73	36
12 17	8 37.61	+36 38.2	1.797	2.625	14.1	20.7	140 W	82	27	1 6	10 26.91	+29 47.4	0.899	1.739	23.5	20.4	135 W	75	34
12 27	8 30.60	+38 8.2	1.693	2.587	11.2	20.4	149 W	83	26	1 16	10 19.62	+31 22.7	0.842	1.743	18.8	20.1	145 W	76	33
1 1	8 25.68	+38 52.7	1.650	2.568	9.8	20.3	153 W	84	25	141808 2002 NV₃₈									
1 6	8 19.90	+39 35.2	1.614	2.548	8.7	20.2	157 W	85	24	11 17	10 16.29	+8 33.1	2.759	2.797	20.5	21.5	82 W	54*	46*
1 11	8 13.36	+40 14.1	1.584	2.528	7.9	20.1	159 W	85	24	11 27	10 22.78	+7 40.6	2.634	2.816	20.5	21.4	90 W	53	51*
1 16	8 6.23	+40 47.9	1.562	2.508	7.7	20.0	160 W	86	23	12 7	10 27.42	+6 57.1	2.507	2.834	20.1	21.3	99 W	52	55*
253387 2003 KA₁₄										12 7	10 29.94	+6 24.3	2.383	2.851	19.1	21.1	108 W	51	58*
11 17	8 47.99	+22 59.7	2.017	2.486	22.4	21.4	107 W	68	41*	12 17	10 30.12	+6 4.1	2.266	2.867	17.6	21.0	118 W	51	58
11 27	8 50.78	+23 23.2	1.912	2.508	20.7	21.2	116 W	68	41	1 6	10 27.80	+5 58.0	2.160	2.882	15.4	20.8	129 W	51	58
12 7	8 50.49	+24 0.1	1.817	2.529	18.3	21.1	126 W	69	40	1 16	10 22.95	+6 6.8	2.070	2.896	12.5	20.6	140 W	51	58
12 17	8 46.86	+24 49.4	1.736	2.549	15.2	20.9	137 W	70	39	105406 2000 QN₁₅₀									
12 27	8 39.94	+25 47.8	1.674	2.568	11.4	20.7	149 W	71	38	11 17	10 28.38	+11 36.7	2.566	2.589	22.1	21.5	80 W	56*	41*
1 6	8 30.16	+26 49.4	1.637	2.586	7.2	20.5	161 W	72	37	11 27	10 36.69	+10 42.9	2.441	2.604	22.3	21.4	88 W	56	46*
1 16	8 18.40	+27 46.9	1.627	2.603	3.5	20.3	171 W	73	36	12 7	10 43.18	+9 58.3	2.315	2.617	22.0	21.3	97 W	55	51*
271368 2003 YU₁₇										12 7	10 47.58	+9 25.0	2.190	2.629	21.1	21.1	105 W	54	54*
11 17	8 50.82	+19 10.2	1.689	2.166	26.2	21.4	105 W	64	44*	12 17	10 49.57	+9 4.9	2.069	2.641	19.7	21.0	115 W	54	55
11 27	8 55.06	+19 24.4	1.606	2.202	24.1	21.3	114 W	64	45	12 27	10 48.93	+8 59.1	1.958	2.651	17.6	20.8	125 W	54	55
12 7	8 55.91	+19 54.6	1.529	2.237	21.4	21.1	124 W	65	44	1 6	10 45.46	+9 8.6	1.860	2.661	14.8	20.6	136 W	54	55
12 17	8 53.12	+20 40.9	1.465	2.272	17.8	20.9	135 W	66	43	279577 2011 DY₂₂									
12 27	8 46.72	+21 41.0	1.418	2.306	13.4	20.8	147 W	67	42	11 17	10 36.43								