

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
369454 2010 NZ₁										447903 2007 XJ₂₀ (continuation)									
5 16	5 1.03	+7 59.5	1.725	0.908	27.5	21.4	24 E	—	18*	6 5	6 46.81	+28 34.4	1.787	0.990	27.3	21.0	27 E	16*	13*
5 21	5 19.07	+9 45.1	1.669	0.846	28.7	21.2	24 E	—	18*	6 10	7 6.75	+28 10.2	1.738	0.941	28.5	20.8	26 E	15*	13*
5 26	5 38.35	+11 36.4	1.610	0.784	30.3	21.0	23 E	—	17*	6 15	7 27.55	+27 32.8	1.686	0.894	30.0	20.7	26 E	14*	14*
5 31	5 58.98	+13 34.5	1.547	0.722	32.4	20.8	22 E	—	16*	6 20	7 49.18	+26 40.4	1.632	0.849	32.0	20.6	26 E	13*	14*
6 5	6 21.10	+15 40.5	1.480	0.662	35.3	20.6	22 E	—	16*	6 25	8 11.56	+25 31.1	1.575	0.807	34.4	20.4	27 E	13*	15*
6 10	6 44.80	+17 55.8	1.408	0.605	39.3	20.4	22 E	—	15*	6 30	8 34.60	+24 3.1	1.515	0.769	37.3	20.3	27 E	13*	17*
6 15	7 10.06	+20 21.5	1.331	0.555	44.8	20.3	23 E	—	15*	7 5	8 58.21	+22 14.7	1.454	0.735	40.7	20.2	28 E	12*	18*
6 20	7 36.72	+22 58.4	1.249	0.516	52.1	20.2	24 E	—	14*	7 10	9 22.24	+20 4.7	1.391	0.709	44.6	20.2	29 E	12*	20*
6 25	8 4.43	+25 45.6	1.160	0.491	61.0	20.2	25 E	—	14*	7 15	9 46.58	+17 32.5	1.328	0.690	48.9	20.1	31 E	11*	22*
6 27	8 15.70	+26 54.8	1.123	0.487	64.9	20.2	26 E	—	14*	7 20	10 11.10	+14 38.1	1.265	0.680	53.3	20.1	32 E	11*	24*
6 29	8 27.02	+28 4.8	1.086	0.486	68.8	20.2	26 E	—	13*	7 25	10 35.75	+11 22.5	1.203	0.680	57.6	20.1	34 E	11*	27*
7 1	8 38.39	+29 15.2	1.048	0.487	72.8	20.3	27 E	—	13*	7 30	11 0.52	+7 47.2	1.145	0.689	61.4	20.2	37 E	10*	30*
7 3	8 49.78	+30 25.7	1.010	0.493	76.7	20.4	28 E	—	13*	8 4	11 25.52	+3 54.6	1.092	0.707	64.6	20.2	39 E	10*	32*
7 5	9 1.20	+31 35.7	0.973	0.501	80.4	20.4	29 E	—	13*	8 9	11 50.88	0 12.0	1.045	0.732	66.9	20.3	42 E	9*	35*
7 7	9 12.67	+32 44.8	0.936	0.512	83.8	20.5	30 E	—	12*	8 14	12 16.80	+4 28.4	1.006	0.765	68.2	20.3	45 E	8*	38*
7 9	9 24.23	+33 52.4	0.899	0.525	87.0	20.6	31 E	—	12*	8 19	12 43.45	-8 49.1	0.976	0.803	68.6	20.4	48 E	8*	42*
7 11	9 35.93	+34 58.2	0.863	0.541	89.8	20.7	32 E	—	12*	8 24	13 10.99	-13 7.5	0.956	0.845	68.0	20.4	51 E	7*	45*
7 13	9 47.83	+36 1.6	0.828	0.558	92.2	20.8	33 E	—	11*	8 29	13 39.49	-17 16.0	0.946	0.890	66.7	20.5	54 E	7*	48*
7 15	10 0.00	+37 2.2	0.794	0.578	94.3	20.9	35 E	—	11*	9 3	14 8.90	-21 7.0	0.946	0.937	64.8	20.5	57 E	6*	51*
7 17	10 12.55	+37 59.4	0.761	0.598	96.1	20.9	36 E	—	11*	9 8	14 39.07	-24 33.6	0.957	0.985	62.5	20.6	60 E	6*	53*
7 19	10 25.55	+38 52.7	0.729	0.620	97.5	21.0	37 E	—	11*	9 13	15 9.67	-27 30.6	0.978	1.034	59.9	20.7	63 E	6*	56*
7 21	10 39.10	+39 41.5	0.698	0.643	98.5	21.0	39 E	—	11*	9 18	15 40.29	-29 54.8	1.008	1.083	57.3	20.8	65 E	6*	58*
7 23	10 53.31	+40 24.9	0.668	0.666	99.2	21.0	40 E	—	11*	9 23	16 10.49	-31 45.7	1.046	1.133	54.7	20.9	67 E	7*	60*
7 25	11 8.27	+41 1.9	0.639	0.690	99.6	21.0	42 E	—	11*	9 28	16 39.82	-33 4.8	1.091	1.182	52.1	21.0	69 E	7*	61*
7 27	11 24.06	+41 31.6	0.612	0.714	99.6	21.0	44 E	—	12*	10 3	17 7.95	-33 55.2	1.143	1.231	49.7	21.1	70 E	7*	63*
7 29	11 40.76	+41 52.5	0.586	0.739	99.4	21.0	46 E	—	12*	10 8	17 34.62	-34 20.8	1.201	1.279	47.4	21.2	70 E	8*	63*
7 31	11 58.41	+42 3.1	0.562	0.764	98.8	20.9	48 E	—	13*	10 13	17 59.69	-34 25.7	1.263	1.326	45.2	21.3	71 E	9*	64*
8 2	12 17.03	+42 1.6	0.539	0.789	98.0	20.9	50 E	—	14*	10 18	18 23.12	-34 13.8	1.330	1.373	43.2	21.5	71 E	9*	64*
8 4	12 36.59	+41 46.2	0.517	0.813	96.9	20.8	53 E	—	16*	478997 2012 XU₁₃₄									
8 6	12 57.01	+41 14.9	0.497	0.838	95.4	20.7	55 E	—	17*	5 16	5 41.51	+38 42.6	2.332	1.603	20.9	21.5	34 E	28*	8*
8 8	13 18.12	+40 25.9	0.480	0.863	93.7	20.6	58 E	—	19*	5 26	6 16.57	+39 28.2	2.339	1.581	20.1	21.4	33 E	26*	7*
8 10	13 39.74	+39 17.6	0.464	0.888	91.7	20.5	61 E	—	21*	6 5	6 53.22	+39 39.4	2.346	1.564	19.5	21.4	31 E	24*	7*
8 12	14 1.61	+37 49.0	0.450	0.912	89.5	20.4	64 E	—	23*	6 15	7 30.77	+39 12.8	2.353	1.552	18.8	21.4	30 E	22*	7*
8 14	14 23.47	+35 59.8	0.439	0.937	87.0	20.3	67 E	—	26*	6 25	8 8.41	+38 7.1	2.362	1.545	18.2	21.4	28 E	21*	7*
8 16	14 45.02	+33 50.8	0.431	0.961	84.3	20.2	71 E	—	29*	7 5	8 45.36	+36 23.4	2.375	1.542	17.5	21.3	27 E	20*	7*
8 18	15 6.01	+31 23.6	0.425	0.985	81.4	20.2	74 E	—	32*	7 15	9 21.03	+34 5.1	2.392	1.545	16.8	21.3	26 E	19*	7*
8 20	15 26.23	+28 41.0	0.422	1.008	78.4	20.1	77 E	—	35*	7 25	9 54.99	+31 17.4	2.414	1.552	16.0	21.3	25 E	17*	7*
8 22	15 45.51	+25 46.5	0.422	1.032	75.4	20.0	81 E	—	38*	8 4	10 27.07	+28 6.2	2.442	1.565	15.0	21.3	24 E	16*	7*
8 24	16 3.75	+22 44.3	0.425	1.055	72.4	20.0	84 E	—	41*	8 14	10 57.27	+24 38.2	2.475	1.582	13.9	21.4	22 E	15*	6*
8 26	16 20.91	+19 38.4	0.431	1.078	69.5	20.0	87 E	—	44*	8 24	11 25.70	+20 59.5	2.512	1.604	12.7	21.4	20 E	13*	5*
8 28	16 36.96	+16 32.9	0.440	1.100	66.6	20.0	90 E	—	47*	9 3	11 52.55	+17 15.5	2.554	1.629	11.3	21.4	18 E	12*	4*
8 30	16 51.94	+13 31.2	0.451	1.123	64.0	20.0	92 E	—	50*	9 13	12 18.04	+13 31.0	2.598	1.658	9.9	21.4	16 E	10*	2*
9 1	17 5.90	+10 36.0	0.465	1.145	61.5	20.0	95 E	—	53*	9 23	12 42.35	+9 49.9	2.644	1.691	8.5	21.4	14 E	8*	—
9 3	17 18.90	+7 49.4	0.482	1.167	59.2	20.1	97 E	—	56*	10 3	13 5.70	+6 15.1	2.689	1.726	7.2	21.5	13 E	6*	—
9 5	17 31.02	+5 12.8	0.500	1.188	57.1	20.1	98 E	—	59*	304293 2006 SQ₇₈									
9 7	17 42.34	+2 46.7	0.521	1.210	55.2	20.2	100 E	—	61*	5 16	6 31.65	0 22.8	1.457	1.090	43.9	21.5	48 E	10*	42*
9 9	17 52.92	+0 31.5	0.543	1.231	53.5	20.3	101 E	—	63*	5 26	7 5.61	+1 28.5	1.415	1.033	45.7	21.4	47 E	9*	40*
9 11	18 2.83	-1 33.1	0.567	1.252	52.0	20.4	102 E	—	66*	6 5	7 41.99	+3 23.6	1.369	0.976	47.8	21.2	45 E	8*	39*
9 13	18 12.15	-3 27.3	0.593	1.272	50.6	20.5	102 E	—	67*	6 15	8 20.78	+5 24.5	1.320	0.921	50.1	21.1	44 E	8*	38*
9 18	18 33.21	-7 31.5	0.662	1.322	47.8	20.7	103 E	—	72*	6 25	9 1.82	+7 33.2	1.269	0.871	52.8	21.0	43 E	9*	36*
9 23	18 51.67	-10 44.9	0.737	1.370	45.6	21.0	103 E	—	75*	7 5	9 44.76	+9 51.5	1.218	0.828	55.8	20.8	42 E	12*	35*
9 28	19 8.14	-13 17.4	0.817	1.417	43.8	21.2	102 E	—	77*	7 15	10 29.15	+12 18.6	1.166	0.796	58.9	20.8	42 E	15*	33*
10 3	19 23.08	-15 17.5	0.901	1.462	42.3	21.4	100 E	—	79*	7 25	11 14.41	+14 50.8	1.114	0.778	62.0	20.7	43 E	20*	32*
138893 2000 YH₆₆										8 4	12 0.11	+17 20.2	1.061	0.776	64.9	20.7	44 E	25*	30*
5 16	5 20.43	+20 17.2	2.226	1.387	18.5	21.5	26 E	—	12*	8 14	12 46.15	+19 34.5	1.008	0.790	67.3	20.7	46 E	30*	29*
5 26	5 43.63	+19 58.5	2.171	1.285	17.0	21.2	22 E	—	13*	8 24	13 32.82	+21 19.9	0.953	0.820	69.1	20.7	49 E	36*	28*
6 5	6 8.79	+19 25.0	2.093	1.173	15.7	20.9	18 E	—	3*	9 3	14 20.81	+22 21.3	0.900	0.860	69.9	20.7	53 E	41*	28*
6 15	6 36.36	+18 32.4	1.992	1.049	15.0	20.5	15 E	—	9*	9 13	15 10.92	+22 24.7	0.851	0.910	69.6	20.7	58 E	47*	29*
6 25	7 6.95	+17 15.6	1.866	0.911	15.3	20.1	14 E	—	8*	9 23	16 3.57	+21 18.8	0.811	0.964	68.2	20.7	63 E	51*	31*
6 30	7 23.67	+16 26.1	1.793	0.836	16.1	19.9	13 E	—	7*	10 3	16 58.35	+18 58.0	0.785	1.020	65.8	20.6	68 E	55*	35*
7 5	7 41.56	+15 28.0	1.713	0.758	17.6	19.6	13 E	—	7*	10 13	17 53.91	+15 30.9	0.780	1.078	62.6	20.6	73 E	59*	39*
7 10	8 0.84	+14 20.9	1.625	0.676	20.0	19.3	13 E	—	7*	10 23	18 48.15	+11 23.6	0.800	1.134	58.9	20.7	77 E	55*	44*
7 15	8 21.75	+13 4.4	1.527	0.590	24.0	19.0	14 E	—	7*	11 2	19 39.10	+7 11.8	0.847	1.188	55.3	20.8	80 E	52*	48*
7 20	8 44.57	+11 40.6	1.416	0.															

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	
374267 2005 LW (continuation)									515335 2013 AW₆₀									
5 28	12 25.17	+23 12.3	0.142	1.065	65.0	17.1	108 E	68* 41	5 16	16 33.99	+20 35.0	1.683	2.523	15.7	22.8	137 W	66	43
5 29	12 39.61	+20 26.8	0.149	1.076	61.4	17.1	111 E	65 44	5 21	16 27.68	+20 49.7	1.672	2.517	15.6	22.8	138 W	66	43
5 30	12 52.23	+17 53.3	0.157	1.088	58.3	17.2	114 E	63 46	5 26	16 21.14	+20 54.5	1.666	2.511	15.7	22.8	138 W	66	43
5 31	13 3.31	+15 32.4	0.166	1.099	55.4	17.2	117 E	61 48	5 31	16 14.53	+20 49.3	1.665	2.504	16.0	22.8	137 E	66	43
6 1	13 13.08	+13 23.8	0.176	1.110	53.0	17.3	119 E	58 51	6 5	16 8.02	+20 33.7	1.669	2.497	16.5	22.8	136 E	66	43
6 2	13 21.75	+11 26.6	0.185	1.121	50.8	17.4	121 E	56 53	6 10	16 1.76	+20 8.1	1.679	2.490	17.2	22.8	134 E	65	44
6 3	13 29.49	+9 40.1	0.196	1.132	48.9	17.5	123 E	55 54	6 15	15 55.90	+19 33.0	1.694	2.482	18.0	22.9	131 E	65	44
6 4	13 36.43	+8 3.1	0.206	1.143	47.2	17.5	124 E	53 56	523779 2015 AX₁₆									
6 5	13 42.70	+6 34.8	0.217	1.154	45.8	17.6	125 E	52 57	5 16	16 36.35	-10 27.4	2.521	3.496	5.1	23.2	162 W	35	74
6 6	13 48.39	+5 14.3	0.228	1.165	44.5	17.7	126 E	50 59	5 26	16 27.04	-9 51.1	2.471	3.468	3.4	23.0	168 W	35	74
6 7	13 53.58	+4 0.5	0.240	1.176	43.4	17.8	127 E	49 60	6 5	16 17.33	-9 20.4	2.450	3.439	4.5	23.0	164 E	36	73
6 8	13 58.33	+2 52.9	0.252	1.187	42.4	17.9	128 E	48 61	6 15	16 7.96	-8 57.5	2.460	3.408	7.2	23.1	155 E	36	73
6 9	14 2.72	+1 50.7	0.264	1.197	41.6	18.0	129 E	47 62	6 25	15 59.65	-8 44.2	2.496	3.376	10.1	23.3	145 E	36	73
6 10	14 6.78	+0 53.3	0.276	1.208	40.8	18.1	129 E	46 63	413123 2001 XS₁									
6 11	14 10.56	+0 0.2	0.288	1.218	40.2	18.2	129 E	45 64	5 16	16 36.36	-26 55.9	3.159	4.137	4.1	25.0	163 W	18	89
6 12	14 14.08	-0 49.0	0.301	1.229	39.6	18.3	130 E	44 65	5 26	16 27.47	-26 29.3	3.134	4.142	1.6	24.8	173 W	19	90
6 13	14 17.39	-1 34.8	0.313	1.240	39.1	18.4	130 E	43 66	6 5	16 18.46	-25 57.7	3.140	4.146	2.0	24.8	172 E	19	90
6 14	14 20.50	-2 17.6	0.326	1.250	38.6	18.5	130 E	43 66	6 15	16 9.94	-25 22.7	3.176	4.150	4.6	25.0	161 E	20	89
6 15	14 23.44	-2 57.5	0.339	1.260	38.2	18.6	130 E	42 67	6 25	16 2.49	-24 47.0	3.242	4.152	7.1	25.2	150 E	20	89
6 17	14 28.88	-4 10.2	0.365	1.281	37.6	18.8	130 E	41 68	533722 2014 NE₅₂									
6 19	14 33.83	-5 14.8	0.392	1.301	37.1	18.9	129 E	40 69	5 16	16 38.68	-23 16.5	1.997	2.980	5.5	22.3	164 W	22	87
6 21	14 38.38	-6 12.6	0.419	1.321	36.7	19.1	129 E	39 70	5 26	16 26.46	-23 0.9	1.914	2.925	1.4	21.9	176 W	22	87
6 23	14 42.62	-7 4.7	0.447	1.341	36.4	19.3	129 E	38 71	6 5	16 13.19	-22 38.6	1.862	2.868	3.1	22.0	171 E	22	87
6 25	14 46.60	-7 52.1	0.475	1.361	36.1	19.4	128 E	37 72	6 15	16 0.02	-22 11.4	1.839	2.809	7.6	22.1	159 E	23	86
6 30	14 55.69	-9 34.3	0.547	1.409	35.8	19.8	126 E	35* 74	6 25	15 48.16	-21 42.7	1.845	2.748	11.9	22.2	146 E	23	86
7 5	15 3.96	-10 59.1	0.621	1.455	35.6	20.1	124 E	34* 75	322705 2000 DK₈									
7 10	15 11.73	-12 11.6	0.698	1.501	35.5	20.5	121 E	33* 76	5 16	16 41.21	-11 54.2	2.880	3.853	4.7	24.9	162 W	33	76
7 15	15 19.23	-13 14.9	0.776	1.544	35.4	20.7	118 E	31* 77	5 26	16 31.64	-11 40.6	2.884	3.884	2.8	24.8	169 W	33	76
7 20	15 26.58	-14 11.3	0.857	1.587	35.3	21.0	116 E	30* 78	6 5	16 22.01	-11 31.5	2.919	3.914	3.4	24.9	167 E	33	76
7 25	15 33.87	-15 2.2	0.939	1.628	35.1	21.3	113 E	29* 79	6 15	16 12.98	-11 27.8	2.984	3.942	5.6	25.1	158 E	34	75
7 30	15 41.13	-15 48.4	1.022	1.668	34.9	21.5	110 E	28* 80	6 25	16 5.09	-11 30.1	3.079	3.970	8.0	25.3	147 E	33	76
484199 2006 WS₁									443854 2001 RM₅₁									
5 16	7 12.69	+1 51.8	0.688	0.857	80.9	21.5	57 E	19* 48*	5 16	16 41.44	-31 37.5	2.115	3.084	6.5	22.7	160 W	13	84
5 21	7 16.15	+0 42.6	0.658	0.819	85.8	21.5	54 E	14* 47*	5 21	16 35.95	-31 35.5	2.088	3.075	5.0	22.6	165 W	13	84
5 26	7 18.24	+0 21.8	0.623	0.782	91.6	21.5	50 E	10* 44*	5 26	16 30.18	-31 30.5	2.067	3.067	3.7	22.5	169 W	13	84
5 31	7 18.32	-1 16.1	0.584	0.748	98.4	21.6	47 E	5* 41*	5 31	16 24.26	-31 22.3	2.054	3.058	3.2	22.4	170 E	14	85
6 5	7 15.62	-1 51.8	0.543	0.717	106.4	21.7	43 E	— 37*	6 5	16 18.33	-31 11.0	2.048	3.049	3.8	22.4	169 E	14	85
507013 2008 TP₁₆₅									391275 2006 SJ₁₃₄									
5 16	16 18.68	-27 24.9	4.289	5.277	2.6	22.7	166 W	18 89	5 16	16 46.53	+12 8.1	2.324	3.195	10.8	22.9	144 W	57	52
5 26	16 12.13	-27 23.0	4.270	5.278	1.2	22.5	174 W	18 89	5 26	16 36.47	+12 26.1	2.318	3.207	10.2	22.9	146 W	57	52
6 5	16 5.57	-27 17.4	4.280	5.278	2.2	22.6	168 E	18 89	6 5	16 26.17	+12 20.1	2.337	3.218	10.5	22.9	145 E	57	52
6 15	15 59.40	-27 9.1	4.321	5.279	4.0	22.8	158 E	18 89	6 15	16 16.45	+11 50.1	2.381	3.227	11.6	23.0	140 E	57	52
6 25	15 54.02	-26 59.4	4.389	5.279	5.8	22.9	148 E	18 89	6 25	16 8.01	+10 58.3	2.448	3.235	13.1	23.2	134 E	56	53
533850 2014 OD₃₃₉									405587 2005 SY₁₄									
5 16	16 22.31	-32 12.5	2.297	3.275	5.3	23.9	162 W	13 84	5 16	16 47.54	-17 12.0	2.558	3.533	5.2	22.8	162 W	28	81
5 21	16 16.90	-32 6.4	2.269	3.262	4.1	23.8	167 W	13 84	5 26	16 38.93	-16 45.0	2.547	3.553	2.2	22.6	172 W	28	81
5 26	16 11.30	-31 57.1	2.247	3.248	3.4	23.7	169 W	13 84	6 5	16 30.09	-16 19.7	2.565	3.572	2.3	22.7	172 E	29	80
5 31	16 5.64	-31 44.8	2.233	3.234	3.6	23.7	169 E	13 84	6 15	16 21.72	-15 57.7	2.613	3.591	5.1	22.9	162 E	29	80
6 5	16 0.03	-31 29.5	2.227	3.219	4.6	23.8	165 E	14 85	6 25	16 14.47	-15 40.7	2.688	3.609	7.9	23.1	151 E	29	80
6 10	15 54.62	-31 11.8	2.228	3.204	6.0	23.8	161 E	14 85	16064 Davidharvey									
6 15	15 49.51	-30 52.1	2.236	3.189	7.5	23.9	156 E	14 85	5 16	16 48.00	-28 14.8	3.456	4.420	4.5	23.0	160 W	17	88
483509 2003 CH₁₁									5 26	16 39.54	-28 3.3	3.431	4.433	2.2	22.9	170 W	17	88
5 16	16 25.55	+32 43.0	1.988	2.716	17.4	24.1	127 W	78 31	6 5	16 30.84	-27 46.5	3.437	4.445	1.6	22.8	173 E	17	88
5 21	16 19.31	+32 41.4	2.011	2.739	17.2	24.1	127 W	78 31	6 15	16 22.45	-27 25.3	3.473	4.457	3.7	23.0	164 E	18	89
5 26	16 13.14	+32 29.5	2.038	2.762	17.2	24.2	126 W	77 32	6 25	16 14.95	-27 1.7	3.540	4.467	6.0	23.2	153 E	18	89
5 31	16 7.17	+32 7.8	2.069	2.785	17.2	24.2	126 E	77 32	179806 2002 TD₆₆									
6 5	16 1.52	+31 36.8	2.105	2.807	17.3	24.3	125 E	77 32	5 16	16 49.20	-30 53.9	1.388	2.359	9.0	23.4	159 W	14	85
6 10	15 56.31	+30 57.3	2.145	2.829	17.5	24.3	123 E	76 33	5 21	16 41.07	-30 43.9	1.391	2.382	6.5	23.3	164 W	14	85
6 15	15 51.63	+30 10.1	2.189	2.851	17.7	24.4	121 E	75 34	5 26	16 32.79	-30 29.3	1.401	2.404	4.5	23.2	169 W	15	86
509102 2005 VB₇									5 31	16 24.60	-30 10.5	1.418	2.425	3.5	23.2	172 E	15	86
5 16	16 29.60	-20 20.0	1.263	2.258	6.2	22.4	166 W	25 84	6 5	16 16.73	-29 48.0	1.442	2.446	4.4	23.3	169 E	15	86
5 21	16 22.00	-18 51.0	1.263	2.270	3.3	22.2	173 W	26 83	6 10	16 9.38	-29 22.9	1.473	2.466	6.3	23.5	164 E	16	87
5 26	16 14.41	-17 21.7	1.270	2.281	1.7	22.1	176 W	28 81	6 15	16 2.71	-28 56.2	1.511	2.486	8.4	23.7	159 E	16	87
5 31	16 7.06	-15 54.1	1.285	2.293	3.6	22.3	172 E	29 80	455426 2003 MT₉									
6 5	16 0.13	-14 30.0	1.307	2.303	6.4	22.5	165 E	31 78	5 16	16 50.66	-20 1.3	3.752	4.720	4.0	25.2	161 W	25	84
6 10	15 53.78	-13 10.9	1.337	2.314	9.1	22.7	159 E	32 77	5 26	16 41.41	-19 40.9	3.732	4.738	1.6	25.0	173 W	25	84
6 15	15 48.16	-11 58.1	1.374	2.323	11.6	22.8	153 E	33 76	6 5	16 31.95	-19 19.4	3.745	4.755	1.2	25.0	174 E	26	83

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	
169352 2001 UY₁₆									385202 1999 RJ₂₄₆									
5 16	16 52.46	-52 54.2	2.285	3.149	11.2	24.2	143 W	63	5 16	17 5.71	-14 24.3	2.285	3.239	7.0	22.5	157 W	31	78
5 21	16 43.70	-53 23.8	2.267	3.152	10.6	24.1	145 W	63	5 26	16 57.39	-14 7.4	2.212	3.207	4.1	22.2	167 W	31	78
5 26	16 34.40	-53 45.6	2.257	3.155	10.1	24.1	147 W	62	6 5	16 48.07	-13 54.0	2.167	3.174	2.8	22.1	171 E	31	78
5 31	16 24.79	-53 59.1	2.252	3.157	9.8	24.1	148 E	62	6 15	16 38.53	-13 45.4	2.151	3.140	5.1	22.2	164 E	31	78
6 5	16 15.13	-54 4.1	2.255	3.159	9.9	24.1	148 E	62	6 25	16 29.65	-13 43.0	2.163	3.105	8.4	22.3	153 E	31	78
6 10	16 5.69	-54 0.7	2.264	3.161	10.2	24.1	147 E	62	441525 2008 SK₂₂₀									
6 15	15 56.71	-53 49.7	2.280	3.162	10.8	24.2	144 E	62	5 16	17 7.14	-15 18.0	3.601	4.547	5.0	21.8	157 W	30	79
533671 2014 LJ₂₁									5 26	17 1.28	-14 56.8	3.544	4.536	3.0	21.6	167 W	30	79
5 16	16 58.04	+ 2 35.4	4.538	5.434	5.4	23.5	150 W	48	6 5	16 54.90	-14 37.6	3.517	4.524	1.8	21.5	172 W	30	79
5 26	16 50.92	+ 2 55.9	4.513	5.442	4.7	23.5	154 W	48	6 15	16 48.47	-14 21.3	3.519	4.512	3.1	21.6	166 E	31	78
6 5	16 43.53	+ 3 7.6	4.517	5.449	4.6	23.5	154 E	48	6 25	16 42.45	-14 9.0	3.550	4.499	5.2	21.7	156 E	31	78
6 15	16 36.24	+ 3 9.6	4.551	5.456	5.3	23.5	150 E	48	7 5	16 37.26	-14 1.3	3.608	4.487	7.3	21.9	146 E	31	78
6 25	16 29.43	+ 3 2.0	4.613	5.461	6.4	23.6	143 E	48	523610 2005 TG									
524974 2004 PX₂₇									5 16	17 7.25	-17 35.8	3.078	4.028	5.6	24.0	157 W	27	82
5 16	16 59.92	-57 35.7	1.620	2.466	15.9	22.3	138 W	58	5 26	16 59.25	-17 7.4	3.019	4.016	3.0	23.8	168 W	28	81
5 21	16 51.48	-58 4.4	1.573	2.440	15.3	22.2	140 W	58	6 5	16 50.62	-16 39.2	2.991	4.002	1.5	23.7	174 E	28	81
5 26	16 41.90	-58 23.5	1.532	2.414	14.9	22.1	142 W	58	6 15	16 41.97	-16 12.8	2.994	3.987	3.5	23.8	166 E	29	80
5 31	16 31.45	-58 31.4	1.496	2.388	14.7	22.0	143 W	57	6 25	16 33.90	-15 49.6	3.026	3.971	6.2	24.0	155 E	29	80
6 5	16 20.50	-58 27.0	1.466	2.361	14.8	21.9	144 E	58	513572 2010 VX₃₉									
6 10	16 9.49	-58 9.6	1.441	2.334	15.2	21.9	143 E	58	5 16	17 7.47	-19 55.9	1.430	2.394	9.4	22.4	157 W	25	84
6 15	15 58.88	-57 39.5	1.421	2.306	15.9	21.8	142 E	58	5 21	17 0.64	-20 4.9	1.419	2.407	6.8	22.3	164 W	25	84
6 20	15 49.09	-56 57.5	1.407	2.278	16.8	21.8	140 E	59	5 26	16 53.41	-20 13.2	1.414	2.418	4.2	22.1	170 W	25	84
6 25	15 40.47	-56 5.2	1.398	2.250	18.0	21.8	137 E	60	5 31	16 45.95	-20 20.7	1.417	2.429	1.6	22.0	176 W	25	84
6 30	15 33.24	-55 4.5	1.393	2.221	19.3	21.8	134 E	61	6 5	16 38.48	-20 27.4	1.426	2.440	1.5	22.0	176 E	25	84
288783 2004 RL₁₀₈									6 10	16 31.19	-20 33.4	1.444	2.450	4.1	22.2	170 E	24	85
5 16	17 0.00	-35 48.5	1.856	2.801	9.0	22.3	154 W	9	6 15	16 24.28	-20 38.9	1.468	2.460	6.6	22.4	164 E	24	85
5 21	16 54.71	-35 48.1	1.824	2.792	7.5	22.2	159 W	9	6 20	16 17.92	-20 44.1	1.499	2.469	9.0	22.5	158 E	24	85
5 26	16 48.98	-35 43.4	1.798	2.783	6.1	22.1	163 W	9	450356 2004 VB₈₀									
5 31	16 42.96	-35 34.3	1.778	2.773	5.1	22.0	166 W	9	5 16	17 12.06	-25 47.2	2.070	3.020	7.9	22.6	156 W	19	90
6 5	16 36.81	-35 20.7	1.766	2.763	4.8	22.0	167 E	10	5 21	17 7.32	-25 36.4	2.052	3.029	6.1	22.5	162 W	19	90
6 10	16 30.69	-35 2.8	1.760	2.753	5.5	22.0	165 E	10	5 26	17 2.26	-25 23.9	2.041	3.038	4.2	22.4	167 W	20	89
6 15	16 24.78	-34 41.1	1.762	2.743	6.8	22.0	161 E	10	5 31	16 57.01	-25 9.9	2.037	3.046	2.2	22.3	173 W	20	89
6 20	16 19.26	-34 16.2	1.770	2.733	8.5	22.1	157 E	11	6 5	16 51.68	-24 54.5	2.040	3.054	0.8	22.2	178 W	20	89
6 25	16 14.25	-33 49.0	1.784	2.722	10.2	22.2	152 E	11	6 10	16 46.41	-24 38.0	2.051	3.062	2.0	22.3	174 E	20	89
6 30	16 9.86	-33 20.1	1.804	2.711	11.9	22.3	147 E	12	6 15	16 41.33	-24 20.8	2.068	3.070	3.9	22.5	168 E	21	88
250620 2005 GE₅₉									6 20	16 36.54	-24 3.3	2.093	3.077	5.8	22.6	162 E	21	88
5 16	17 1.76	- 4 16.9	2.394	3.329	7.8	23.1	153 W	41	193178 2000 PK₅									
5 26	16 51.79	- 3 30.2	2.371	3.340	6.0	23.0	160 W	41	5 16	17 12.56	-15 13.4	2.167	3.115	7.8	22.3	155 W	30	79
6 5	16 41.32	- 2 55.0	2.378	3.350	5.9	23.0	160 E	42	5 26	17 1.08	-14 27.1	2.094	3.088	4.4	22.0	166 W	31	78
6 15	16 31.15	- 2 33.3	2.414	3.359	7.5	23.1	154 E	42	6 5	16 48.40	-13 41.4	2.052	3.058	2.9	21.9	171 E	31	78
6 25	16 22.03	- 2 26.1	2.478	3.366	9.8	23.2	146 E	43	6 15	16 35.49	-12 59.1	2.041	3.027	5.7	22.0	163 E	32	77
338049 2002 NY₃₁									6 25	16 23.44	-12 23.4	2.060	2.993	9.4	22.2	151 E	33	76
5 16	17 1.95	+25 25.9	2.512	3.259	13.7	22.6	130 W	70	189263 2005 CA									
5 21	16 56.69	+25 39.7	2.488	3.248	13.5	22.5	132 W	71	5 16	17 13.04	- 5 44.1	2.832	3.753	7.3	21.4	152 W	39	70
5 26	16 51.14	+25 46.1	2.469	3.237	13.4	22.5	132 W	71	5 26	17 5.14	- 4 58.7	2.754	3.718	5.5	21.2	159 W	40	69
5 31	16 45.39	+25 44.7	2.455	3.225	13.5	22.5	132 W	71	6 5	16 56.37	- 4 20.7	2.705	3.682	4.9	21.1	162 W	41	68
6 5	16 39.56	+25 35.2	2.447	3.213	13.6	22.5	132 E	71	6 15	16 47.33	- 3 52.6	2.685	3.645	6.1	21.1	158 E	41	68
6 10	16 33.75	+25 17.6	2.444	3.201	13.9	22.5	131 E	70	6 25	16 38.71	- 3 36.0	2.694	3.607	8.2	21.2	150 E	41	68
6 15	16 28.09	+24 51.8	2.446	3.189	14.3	22.5	129 E	70	7 5	16 31.11	- 3 31.5	2.729	3.568	10.6	21.3	140 E	41	68
6 20	16 22.68	+24 18.3	2.454	3.176	14.7	22.5	127 E	69	7 15	16 25.01	- 3 38.7	2.785	3.527	12.7	21.4	130 E	41	68
309273 2007 RD₁₂₈									208115 2000 CT₁₀₁									
5 16	17 2.09	-17 55.2	2.371	3.331	6.4	23.0	158 W	27	5 16	17 14.09	+23 41.7	0.920	1.754	26.0	22.9	130 W	69	40
5 26	16 53.04	-17 35.9	2.342	3.343	3.2	22.8	169 W	27	5 21	17 5.72	+24 11.9	0.910	1.756	25.3	22.9	132 W	69	40
6 5	16 43.42	-17 17.4	2.342	3.353	1.7	22.7	174 E	28	5 26	16 56.65	+24 25.8	0.903	1.759	24.8	22.9	133 W	69	40
6 15	16 34.04	-17 1.1	2.372	3.363	4.5	22.9	165 E	28	5 31	16 47.19	+24 22.1	0.900	1.760	24.7	22.8	134 W	69	40
6 25	16 25.68	-16 48.7	2.431	3.372	7.7	23.1	154 E	28	6 5	16 37.63	+24 0.2	0.902	1.760	24.8	22.8	133 E	69	40
524516 2002 UN									6 10	16 28.30	+23 20.4	0.907	1.760	25.2	22.9	132 E	68	41
5 16	17 2.58	-44 44.2	3.933	4.820	6.4	24.0	148 W	71	6 15	16 19.51	+22 23.6	0.917	1.758	25.9	22.9	131 E	67	42
5 21	16 57.85	-44 55.8	3.903	4.817	5.7	23.9	152 W	71	6 20	16 11.52	+21 11.6	0.930	1.756	26.8	23.0	129 E	66	43
5 26	16 52.87	-45 4.3	3.861	4.815	5.2	23.9	154 W	71	442939 2013 CO₇₄									
5 31	16 47.72	-45 9.6	3.865	4.812	4.8	23.9	156 W	71	5 16	17 14.59	+ 9 17.4	2.074	2.936	12.3	22.2	142 W	54	55
6 5	16 42.49	-45 11.5	3.857	4.809	4.7	23.8	157 E	71	5 21	17 10.43	+ 9 39.6	2.051	2.934	11.6	22.1	144 W	55	54
6 10	16 37.26	-45 10.1	3.856	4.805	4.8	23.8	157 E	71	5 26	17 5.93	+ 9 56.2	2.035	2.931	11.1	22.1	146 W	55	54
6 15	16 32.14	-45 5.5	3.863	4.802	5.1	23.9	155 E	71	5 31	17 1.19	+10 6.9	2.025	2.929	10.8	22.0	147 W	55	54
6 20	16 27.20	-44 57.9	3.876	4.798	5.7	23.9	152 E	71	6 5	16 56.31	+10 11.3	2.020	2.926	10.8	22.0	147 W	55	54
402103 2003 WM₁₀₉									6 10	16 51.40	+10 9.1	2.022	2.922	11.1	22.0	146 E	55	54
5 16	17 5.16	-25 15.1	2.110	3.068	7.3	22.7	157 W	20	6 15	16 46.59	+10 0.2	2.029	2.919	11.6	22.1	145 E	55	54
5 26	16 55.77	-24 51.9	2.051	3.052	3.6	22.4	169 W	20	6 20	16 41.98	+ 9 44.8	2.043	2.915	12.3	22.1	142 E	55	54
6 5	16 45.41	-24 22.5	2.021	3.035	0.8	22.2	178 E	21										

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
541093 2018 RJ₄										31210 1998 BX₇ (continuation)									
5 16	17 15.95	+11 35.5	2.036	2.884	13.1	22.1	140 W	57	52	6 25	16 49.55	-11 11.0	2.699	3.653	6.4	21.8	156 E	34	75
5 21	17 12.07	+12 9.4	2.005	2.871	12.5	22.0	142 W	57	52	7 5	16 41.82	-11 16.5	2.742	3.630	9.0	21.9	146 E	34	75
5 26	17 7.79	+12 37.9	1.979	2.858	12.2	22.0	144 W	58	51	524120 2000 SR₉₄									
5 31	17 3.22	+13 0.1	1.960	2.845	12.0	22.0	144 W	58	51	5 16	17 26.49	-34 13.7	1.716	2.642	11.0	21.9	150 W	11	82
6 5	16 58.44	+13 15.5	1.946	2.832	12.1	21.9	144 W	58	51	5 21	17 21.96	-34 21.6	1.675	2.629	9.2	21.7	155 W	11	82
6 10	16 53.58	+13 23.6	1.938	2.818	12.4	21.9	143 E	58	51	5 26	17 16.80	-34 26.2	1.639	2.616	7.5	21.6	160 W	11	82
6 15	16 48.75	+13 24.2	1.935	2.804	13.0	21.9	142 E	58	51	5 31	17 11.12	-34 27.1	1.610	2.602	5.9	21.5	165 W	11	82
6 20	16 44.07	+13 17.3	1.938	2.790	13.7	22.0	139 E	58	51	6 5	17 5.06	-34 23.9	1.588	2.588	4.8	21.4	168 W	11	82
6 25	16 39.65	+13 3.0	1.947	2.776	14.5	22.0	137 E	58	51	6 10	16 58.80	-34 16.4	1.572	2.574	4.6	21.3	168 E	11	82
6 30	16 35.60	+12 41.8	1.960	2.761	15.4	22.0	134 E	58	51	6 15	16 52.53	-34 4.7	1.563	2.560	5.5	21.4	166 E	11	82
7 5	16 31.99	+12 14.2	1.978	2.747	16.4	22.1	130 E	57	52	6 20	16 46.44	-33 49.1	1.560	2.546	7.1	21.4	162 E	11	82
467372 2004 LG										6 25	16 40.72	-33 30.1	1.564	2.532	9.0	21.5	157 E	11	82
5 16	17 15.98	-34 27.6	2.799	3.722	7.3	23.6	152 W	11	82	6 30	16 35.51	-33 8.4	1.575	2.517	11.0	21.6	152 E	12	83
5 21	17 8.85	-34 11.8	2.752	3.709	5.9	23.5	158 W	11	82	7 5	16 30.96	-32 44.9	1.590	2.502	12.9	21.7	147 E	12	83
5 26	17 1.32	-33 51.9	2.714	3.695	4.6	23.4	163 W	11	82	378610 2008 FT₆									
5 31	16 53.53	-33 27.9	2.684	3.680	3.4	23.3	167 W	12	83	5 16	17 28.51	-33 54.3	2.005	2.924	10.0	21.8	150 W	11	82
6 5	16 45.59	-32 59.7	2.663	3.665	2.9	23.2	169 E	12	83	5 21	17 22.87	-34 12.7	1.983	2.933	8.3	21.7	155 W	11	82
6 10	16 37.66	-32 27.5	2.651	3.650	3.4	23.3	168 E	13	84	5 26	17 16.72	-34 27.9	1.968	2.942	6.7	21.6	160 W	11	82
6 15	16 29.89	-31 52.0	2.648	3.634	4.5	23.3	164 E	13	84	5 31	17 10.22	-34 39.5	1.960	2.950	5.2	21.5	165 W	10	81
6 20	16 22.41	-31 13.5	2.654	3.618	6.0	23.4	158 E	14	85	6 5	17 3.50	-34 47.3	1.960	2.958	4.3	21.5	167 W	10	81
440289 2004 RY₂₁₇										6 10	16 56.73	-34 51.1	1.966	2.966	4.2	21.5	168 E	10	81
5 16	17 19.98	-51 29.4	2.330	3.181	11.5	21.9	141 W	-	65	6 15	16 50.10	-34 51.0	1.980	2.973	5.0	21.6	165 E	10	81
5 21	17 13.57	-51 45.2	2.309	3.188	10.6	21.8	144 W	-	64	6 20	16 43.75	-34 47.3	2.001	2.980	6.4	21.7	161 E	10	81
5 26	17 6.63	-51 54.9	2.294	3.194	9.9	21.8	147 W	-	64	6 25	16 37.83	-34 40.6	2.029	2.987	7.9	21.8	156 E	10	81
5 31	16 59.33	-51 57.9	2.286	3.201	9.3	21.7	149 W	-	64	6 30	16 32.46	-34 31.5	2.064	2.993	9.5	21.9	151 E	10	81
6 5	16 51.87	-51 54.0	2.284	3.207	8.9	21.7	151 W	-	64	7 5	16 27.72	-34 20.5	2.105	2.999	11.0	22.0	146 E	11	82
6 10	16 44.45	-51 43.2	2.288	3.212	8.9	21.7	151 E	-	64	338293 2002 UZ₃₅									
6 15	16 37.28	-51 25.8	2.299	3.218	9.1	21.8	150 E	-	65	5 16	17 29.08	-34 4.7	1.967	2.885	10.2	22.4	150 W	11	82
6 20	16 30.55	-51 2.4	2.316	3.223	9.6	21.8	148 E	-	65	5 21	17 23.91	-34 13.7	1.945	2.894	8.5	22.3	155 W	11	82
6 25	16 24.41	-50 33.9	2.339	3.228	10.3	21.8	145 E	-	65	5 26	17 18.27	-34 19.5	1.930	2.903	6.8	22.3	160 W	11	82
6 30	16 18.98	-50 1.3	2.369	3.233	11.1	21.9	142 E	-	66	5 31	17 12.27	-34 21.8	1.921	2.911	5.3	22.2	165 W	11	82
7 5	16 14.33	-49 25.4	2.404	3.238	12.0	22.0	139 E	-	67	6 5	17 6.07	-34 20.5	1.919	2.919	4.2	22.1	168 W	11	82
511064 2013 TH₅										6 10	16 59.84	-34 15.4	1.925	2.926	4.0	22.1	168 E	11	82
5 16	17 20.28	-36 25.0	1.779	2.704	10.7	21.7	150 W	9	80	6 15	16 53.72	-34 6.8	1.937	2.934	4.7	22.2	166 E	11	82
5 21	17 14.67	-36 4.7	1.719	2.674	9.0	21.5	156 W	9	80	6 20	16 47.89	-33 55.2	1.957	2.941	6.1	22.3	162 E	11	82
5 26	17 8.37	-35 38.5	1.666	2.644	7.3	21.3	161 W	9	80	6 25	16 42.47	-33 40.9	1.983	2.947	7.6	22.4	157 E	11	82
5 31	17 1.49	-35 5.9	1.620	2.613	5.7	21.2	165 W	10	81	6 30	16 37.58	-33 24.7	2.016	2.954	9.2	22.5	152 E	12	83
6 5	16 54.19	-34 26.7	1.581	2.582	4.7	21.1	168 W	11	82	455224 2001 RW₄₇									
6 10	16 46.68	-33 40.9	1.549	2.551	4.8	21.0	168 E	11	82	5 16	17 33.17	-18 45.2	1.892	2.820	10.0	21.9	151 W	26	83
6 15	16 39.15	-32 48.8	1.525	2.519	6.1	21.0	165 E	12	83	5 26	17 24.19	-18 42.9	1.805	2.788	6.2	21.6	163 W	26	83
6 20	16 31.83	-31 51.4	1.508	2.487	8.0	21.0	160 E	13	84	6 5	17 13.34	-18 41.3	1.745	2.755	2.3	21.3	174 W	26	83
6 25	16 24.93	-30 49.6	1.498	2.454	10.3	21.1	155 E	14	85	6 15	17 1.56	-18 40.8	1.712	2.721	3.2	21.3	171 E	26	83
6 30	16 18.61	-29 44.9	1.494	2.422	12.6	21.1	149 E	15	86	6 25	16 50.02	-18 42.1	1.709	2.685	7.5	21.5	160 E	26	83
7 5	16 13.02	-28 38.6	1.497	2.388	14.9	21.2	143 E	16	87	7 5	16 39.86	-18 46.5	1.731	2.648	11.7	21.6	148 E	26	83
7 10	16 8.26	-27 32.1	1.505	2.355	17.1	21.3	137 E	17	88	401840 1999 UH₅₆									
7 15	16 4.42	-26 26.7	1.518	2.321	19.1	21.3	132 E	19	90	5 16	17 33.56	-21 19.0	1.644	2.576	10.9	21.7	151 W	24	85
7 20	16 1.54	-25 23.5	1.536	2.286	21.1	21.4	126 E	20*	89	5 26	17 25.54	-21 4.2	1.560	2.544	6.8	21.4	163 W	24	85
7 25	15 59.62	-24 23.4	1.557	2.252	22.8	21.4	121 E	20*	88	6 5	17 15.47	-20 47.2	1.500	2.512	2.3	21.0	174 W	24	85
7 30	15 58.66	-23 26.9	1.581	2.217	24.4	21.5	116 E	21*	87	6 15	17 4.36	-20 28.6	1.467	2.478	3.0	21.0	173 E	25	84
541958 2012 FL										6 25	16 53.54	-20 10.2	1.461	2.445	7.8	21.2	161 E	25	84
5 16	17 20.61	+ 5 11.2	2.032	2.909	11.9	21.8	144 W	50	59	7 5	16 44.23	-19 54.4	1.480	2.410	12.5	21.4	149 E	25	84
5 21	17 16.40	+ 5 57.9	2.028	2.925	11.0	21.8	146 W	51	58	242643 2005 NZ₆									
5 26	17 11.91	+ 6 39.5	2.030	2.942	10.4	21.7	148 W	52	57	5 16	17 35.75	-30 33.6	2.054	2.970	9.9	22.0	150 W	14	85
5 31	17 7.24	+ 7 15.4	2.039	2.958	10.0	21.7	150 W	52	57	5 21	17 27.93	-30 38.6	2.041	2.993	8.0	21.9	156 W	14	85
6 5	17 2.49	+ 7 45.1	2.054	2.974	9.9	21.8	150 W	53	56	5 26	17 19.69	-30 40.2	2.037	3.016	6.0	21.8	162 W	14	85
6 10	16 57.79	+ 8 8.2	2.076	2.990	10.2	21.8	149 E	53	56	5 31	17 11.19	-30 38.1	2.040	3.038	4.1	21.7	167 W	14	85
6 15	16 53.23	+ 8 24.9	2.104	3.006	10.7	21.9	147 E	53	56	6 5	17 2.62	-30 32.3	2.052	3.059	2.8	21.7	172 W	14	85
6 20	16 48.92	+ 8 35.0	2.138	3.021	11.3	22.0	144 E	54	55	6 10	16 54.16	-30 22.8	2.072	3.080	2.8	21.7	172 E	15	86
6 25	16 44.95	+ 8 38.9	2.177	3.037	12.1	22.0	141 E	54	55	6 15	16 45.99	-30 10.2	2.100	3.099	4.1	21.8	167 E	15	86
6 30	16 41.38	+ 8 37.0	2.222	3.052	13.0	22.1	138 E	54	55	6 20	16 38.27	-29 55.0	2.137	3.119	5.8	22.0	162 E	15	86
7 5	16 38.26	+ 8 29.8	2.272	3.066	13.8	22.2	134 E	53	56	6 25	16 31.13	-29 37.8	2.181	3.137	7.6	22.1	156 E	15	86
496901 2001 HB										6 30	16 24.66	-29 19.5	2.233	3.155	9.2	22.3	150 E	16	87
5 16	17 21.58	-10 2.9	1.267	2.210	12.5	23.4	152 W	35	74	7 5	16 18.93	-29 0.6	2.291	3.173	10.8	22.4	144 E	16	87
5 21	17 12.85	- 9 29.2	1.246	2.215	10.1	23.3	158 W	36	73	371973 2008 GE₁									
5 26	17 3.52	- 8 57.1	1.232	2.219	7.9	23.1	162 W	36	73	5 16	17 39.10	-12 41.7	1.114	2.046	14.9	22.2	149 W	32	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
369993 1999 RO₃₇										496392 2013 TU₅₁ (continuation)									
5 16	17 39.36	+ 6 4.1	1.713	2.568	14.8	21.5	140 W	51	58	6 20	17 14.40	-29 9.8	1.117	2.124	5.0	20.5	169 E	16	87
5 21	17 35.19	+ 6 29.4	1.679	2.561	13.7	21.5	143 W	51	58	6 25	17 8.72	-29 3.1	1.108	2.104	7.6	20.6	164 E	16	87
5 26	17 30.48	+ 6 49.3	1.652	2.555	12.8	21.4	146 W	52	57	6 30	17 3.38	-28 53.9	1.104	2.084	10.3	20.7	159 E	16	87
5 31	17 25.31	+ 7 3.1	1.629	2.548	12.1	21.3	148 W	52	57	7 5	16 58.58	-28 42.7	1.106	2.064	12.9	20.8	153 E	16	87
6 5	17 19.81	+ 7 10.1	1.613	2.540	11.7	21.3	150 W	52	57	7 10	16 54.50	-28 30.1	1.112	2.044	15.5	20.8	147 E	16	87
6 10	17 14.09	+ 7 9.8	1.603	2.533	11.6	21.3	150 W	52	57	7 15	16 51.28	-28 16.8	1.123	2.024	18.0	20.9	142 E	17	88
6 15	17 8.32	+ 7 2.0	1.599	2.525	11.9	21.3	149 E	52	57	7 20	16 49.03	-28 3.6	1.139	2.004	20.3	21.0	137 E	17	88
6 20	17 2.65	+ 6 46.6	1.601	2.516	12.6	21.3	147 E	52	57	7 25	16 47.82	-27 50.8	1.157	1.985	22.4	21.1	132 E	17	88
6 25	16 57.22	+ 6 24.0	1.608	2.508	13.5	21.3	145 E	51	58	7 30	16 47.65	-27 39.1	1.179	1.965	24.4	21.2	127 E	17	88
6 30	16 52.16	+ 5 54.5	1.622	2.499	14.7	21.4	141 E	51	58	8 4	16 48.55	-27 28.5	1.204	1.947	26.1	21.2	122 E	18	89
7 5	16 47.57	+ 5 18.8	1.640	2.489	15.9	21.4	138 E	50	59	8 9	16 50.50	-27 19.2	1.230	1.928	27.6	21.3	118 E	18*	89
7 10	16 43.56	+ 4 37.6	1.664	2.479	17.2	21.5	134 E	50	59	8 14	16 53.47	-27 11.4	1.259	1.910	29.0	21.4	114 E	18*	89
										8 19	16 57.42	-27 4.7	1.289	1.892	30.2	21.4	110 E	18*	89
										8 24	17 2.29	-26 59.0	1.319	1.874	31.2	21.5	106 E	18*	89
537733 2015 TX₃₀₅										21277 1996 TO₅									
5 16	17 40.38	-16 54.8	1.074	2.010	14.9	21.2	149 W	28	81	5 16	17 48.23	+ 4 46.2	2.575	3.401	11.3	21.5	139 W	50	59
5 26	17 34.16	-15 46.9	0.993	1.974	10.3	20.8	160 W	29	80	5 26	17 40.81	+ 5 36.4	2.494	3.377	9.8	21.4	145 W	51	58
6 5	17 24.98	-14 37.6	0.932	1.938	5.8	20.4	169 W	30	79	6 5	17 32.00	+ 6 11.6	2.438	3.353	8.8	21.3	150 W	51	58
6 15	17 14.00	-13 32.0	0.894	1.901	5.7	20.3	169 E	31	78	6 15	17 22.42	+ 6 28.5	2.407	3.327	8.8	21.2	150 E	51	58
6 20	17 8.37	-13 2.7	0.883	1.883	8.0	20.4	165 E	32	77	6 25	17 12.83	+ 6 25.1	2.403	3.300	9.8	21.2	147 E	51	58
6 25	17 2.96	-12 36.8	0.878	1.866	10.8	20.5	160 E	32	77	7 5	17 3.95	+ 6 1.8	2.424	3.271	11.5	21.3	140 E	51	58
6 30	16 57.99	-12 15.0	0.878	1.848	13.8	20.5	154 E	33	76	7 15	16 56.44	+ 5 20.4	2.468	3.241	13.4	21.4	132 E	50	59
7 5	16 53.64	-11 57.7	0.883	1.830	16.7	20.6	149 E	33	76	7 25	16 50.78	+ 4 24.2	2.531	3.210	15.2	21.5	124 E	49	60
7 10	16 50.09	-11 45.5	0.891	1.813	19.5	20.7	144 E	33	76										
7 15	16 47.48	-11 38.3	0.904	1.795	22.1	20.8	138 E	33	76	368818 2006 BK₁₂									
7 20	16 45.90	-11 36.2	0.920	1.778	24.5	20.9	133 E	33	76	5 16	17 49.01	-25 2.3	2.576	3.472	9.0	21.8	148 W	20	89
7 25	16 45.38	-11 38.8	0.939	1.762	26.8	21.0	129 E	33	76	5 26	17 41.50	-24 49.6	2.485	3.449	6.1	21.5	159 W	20	89
7 30	16 45.93	-11 45.7	0.960	1.745	28.8	21.1	124 E	33	76	6 5	17 32.49	-24 33.0	2.420	3.425	2.8	21.3	170 W	20	89
8 4	16 47.55	-11 56.5	0.983	1.729	30.6	21.2	120 E	33	76	6 15	17 22.65	-24 12.3	2.384	3.399	0.8	21.1	177 E	21	88
8 9	16 50.23	-12 10.7	1.008	1.713	32.2	21.2	116 E	33*	76	6 25	17 12.84	-23 48.2	2.379	3.374	4.2	21.3	166 E	21	88
8 14	16 53.93	-12 27.6	1.034	1.698	33.6	21.3	112 E	32*	76	7 5	17 3.87	-23 22.3	2.402	3.347	7.6	21.5	154 E	22	87
8 19	16 58.60	-12 46.5	1.060	1.683	34.8	21.4	109 E	32*	77										
8 24	17 4.19	-13 7.0	1.088	1.668	35.8	21.5	105 E	32*	77	213849 2003 SF₅₅									
										5 16	17 49.93	+ 4 40.9	2.366	3.193	12.1	21.6	138 W	50	59
										5 26	17 42.96	+ 5 45.4	2.300	3.183	10.5	21.5	145 W	51	58
										6 5	17 34.61	+ 6 33.7	2.258	3.171	9.5	21.4	149 W	52	57
										6 15	17 25.51	+ 7 2.1	2.241	3.159	9.4	21.4	150 E	52	57
										6 25	17 16.47	+ 7 8.6	2.250	3.146	10.3	21.4	146 E	52	57
										7 5	17 8.23	+ 6 53.5	2.282	3.132	12.0	21.5	140 E	52	57
										421771 2014 QB₂									
										5 16	17 49.98	-16 10.3	1.947	2.847	11.2	21.5	147 W	29	80
										5 26	17 42.49	-16 19.5	1.856	2.820	7.8	21.2	158 W	29	80
										6 5	17 33.00	-16 33.5	1.790	2.792	4.1	21.0	169 W	28	81
										6 15	17 22.29	-16 52.2	1.752	2.763	2.5	20.8	173 E	28	81
										6 25	17 11.41	-17 15.4	1.742	2.733	5.9	21.0	164 E	28	81
										7 5	17 1.45	-17 42.6	1.759	2.702	9.9	21.1	153 E	27	82
										7 15	16 53.36	-18 13.8	1.800	2.671	13.7	21.3	141 E	27	82
										7 25	16 47.81	-18 48.9	1.860	2.639	16.9	21.5	131 E	26	83
										526964 2007 RE₃₃									
										5 16	17 50.68	-17 23.0	1.881	2.783	11.5	21.4	147 W	28	81
										5 26	17 43.27	-16 43.7	1.795	2.759	8.0	21.1	158 W	28	81
										6 5	17 33.92	-16 5.1	1.734	2.735	4.4	20.9	168 W	29	80
										6 15	17 23.45	-15 29.0	1.700	2.710	3.0	20.7	172 E	30	79
										6 25	17 12.96	-14 57.6	1.695	2.684	6.3	20.9	163 E	30	79
										7 5	17 3.51	-14 33.3	1.715	2.657	10.3	21.1	152 E	30	79
										7 15	16 56.01	-14 17.8	1.759	2.629	14.0	21.2	141 E	31	78
										7 25	16 51.08	-14 11.8	1.823	2.601	17.2	21.4	131 E	31	78
										399587 2003 TW₉									
										5 16	17 51.02	-41 30.3	2.073	2.942	12.0	21.5	143 W	3	74
										5 21	17 46.37	-41 29.9	2.025	2.929	10.7	21.3	148 W	4	75
										5 26	17 41.04	-41 25.1	1.982	2.917	9.3	21.2	152 W	4	75
										5 31	17 35.13	-41 15.5	1.946	2.904	8.0	21.1	156 W	4	75
										6 5	17 28.77	-41 0.4	1.916	2.890	6.9	21.0	160 W	4	75
										6 10	17 22.13	-40 39.7	1.893	2.877	6.2	21.0	162 W	4	75
										6 15	17 15.38	-40 13.3	1.877	2.863	6.1	20.9	163 E	5	76
										6 20	17 8.72	-39 41.4	1.868	2.849	6.6	20.9	161 E	5	76
										6 25	17 2.34	-39 4.6	1.866	2.835	7.7	21.0	158 E	6	77
										6 30	16 56.38	-38 23.7	1.871	2.820	9.1	21.0	154 E	7	78
										7 5	16 50.98	-37 39.4	1.882	2.806	10.6	21.1	149 E	7	78
										7 10	16 46.27	-36 52.8	1.900	2.791	12.2	21.2	144 E	8	79
										7 15	16 42.31	-36 4.9	1.923	2.775	13.8	21.2	139 E	9	80
										7 20	16 39.18	-35 16.8	1.951	2.760	15.5	21.3	134 E	10	81
										7 25	16 36.88	-34 29.1	1.984	2.744	16.6	21.4	129 E	11	82
										7 30	16 35.41	-33 42.7	2.021	2.728	17.8	21.4	125 E	11	82

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°		
109226 2001 QH₉₁										288768 2004 RD₉₅											
5	16	17 55.32	-18 17.1	2.661	3.543	9.2	21.6	146 W	27	82	5	16	17 58.64	-15 33.0	1.968	2.853	11.8	21.5	145 W	29	80
5	26	17 48.42	-17 58.7	2.576	3.530	6.5	21.4	157 W	27	82	5	26	17 51.40	-15 0.8	1.879	2.832	8.6	21.2	155 W	30	79
6	5	17 40.13	-17 41.2	2.518	3.516	3.5	21.2	168 W	27	82	6	5	17 42.18	-14 31.4	1.815	2.809	5.1	21.0	166 W	30	79
6	15	17 31.05	-17 25.1	2.489	3.501	1.7	21.0	174 E	28	81	6	15	17 31.74	-14 6.3	1.779	2.786	3.3	20.8	171 E	31	78
6	25	17 21.91	-17 11.2	2.490	3.485	4.0	21.2	166 E	28	81	6	25	17 21.09	-13 47.4	1.770	2.762	5.8	20.9	164 E	31	78
7	5	17 13.46	-17 0.4	2.519	3.469	7.1	21.3	155 E	28	81	7	5	17 11.29	-13 35.9	1.789	2.737	9.5	21.1	154 E	31	78
7	15	17 6.33	-16 53.7	2.575	3.451	9.9	21.5	144 E	28	81	7	15	17 3.23	-13 33.0	1.832	2.710	13.2	21.2	143 E	31	78
											7	25	16 57.59	-13 38.7	1.895	2.683	16.3	21.4	132 E	31	78
299198 2005 GQ₁₇₂										258123 2001 QK₂₉₃											
5	16	17 56.66	-35 0.7	2.383	3.257	10.5	21.4	144 W	10	81	5	16	18 1.50	-58 23.9	2.841	3.598	12.0	21.8	132 W	-	58
5	21	17 52.56	-35 20.7	2.347	3.258	9.1	21.3	149 W	10	81	5	21	17 55.79	-58 45.5	2.806	3.596	11.4	21.7	135 W	-	57
5	26	17 47.91	-35 38.6	2.317	3.260	7.8	21.2	154 W	9	80	5	26	17 49.30	-59 2.0	2.776	3.594	10.8	21.7	138 W	-	57
5	31	17 42.79	-35 54.1	2.294	3.261	6.4	21.2	159 W	9	80	5	31	17 42.15	-59 12.8	2.751	3.592	10.3	21.6	141 W	-	57
6	5	17 37.30	-36 6.7	2.277	3.262	5.2	21.1	163 W	9	80	6	5	17 34.49	-59 17.1	2.732	3.590	9.9	21.6	142 W	-	57
6	10	17 31.55	-36 16.1	2.268	3.263	4.3	21.0	166 W	9	80	6	10	17 26.54	-59 14.5	2.719	3.588	9.7	21.6	144 W	-	57
6	15	17 25.69	-36 22.0	2.266	3.263	4.1	21.0	167 E	9	80	6	15	17 18.51	-59 4.8	2.712	3.585	9.6	21.6	144 E	-	57
6	20	17 19.86	-36 24.6	2.271	3.264	4.6	21.0	165 E	9	80	6	20	17 10.63	-58 48.0	2.712	3.582	9.2	21.6	144 E	-	57
6	25	17 14.19	-36 23.7	2.283	3.264	5.6	21.1	162 E	9	80	6	25	17 3.12	-58 24.6	2.717	3.579	9.9	21.6	143 E	-	58
6	30	17 8.81	-36 19.9	2.303	3.263	7.0	21.2	157 E	9	80	6	30	16 56.15	-57 55.1	2.728	3.576	10.3	21.6	141 E	-	58
7	5	17 3.82	-36 13.3	2.329	3.263	8.3	21.3	152 E	9	80	7	5	16 49.86	-57 20.2	2.746	3.572	10.8	21.6	139 E	-	59
7	10	16 59.34	-36 4.5	2.361	3.262	9.7	21.4	147 E	9	80	7	10	16 44.38	-56 40.9	2.769	3.569	11.5	21.7	136 E	-	59
7	15	16 55.43	-35 53.9	2.399	3.261	11.0	21.5	142 E	9	80											
352102 2007 AG₁₂										338336 2002 WB₁											
5	16	17 57.02	-82 28.1	1.458	2.097	25.9	23.1	115 W	-	34	5	16	18 3.46	-33 14.3	2.114	2.985	11.7	21.9	143 W	12	83
5	17	17 51.09	-82 41.1	1.446	2.089	26.0	23.1	115 W	-	33	5	26	17 54.60	-33 42.0	2.050	2.993	8.6	21.7	154 W	11	82
5	18	17 44.55	-82 53.5	1.435	2.081	26.0	23.1	116 W	-	33	6	5	17 43.67	-34 0.2	2.011	2.999	5.4	21.5	164 W	11	82
5	19	17 37.34	-83 5.3	1.423	2.073	26.1	23.0	116 W	-	33	6	15	17 31.60	-34 5.9	2.000	3.004	3.6	21.4	169 E	11	82
5	20	17 29.44	-83 16.3	1.411	2.065	26.1	23.0	116 W	-	33	6	25	17 19.61	-33 58.5	2.018	3.008	5.4	21.6	164 E	11	82
5	21	17 20.83	-83 26.4	1.400	2.057	26.2	23.0	116 W	-	33	7	5	17 8.85	-33 39.7	2.063	3.010	8.5	21.7	154 E	11	82
5	22	17 11.51	-83 35.7	1.388	2.049	26.3	23.0	116 W	-	32											
5	23	17 1.48	-83 43.8	1.377	2.041	26.3	22.9	117 W	-	32	285618 2000 RN₈										
5	24	16 50.77	-83 50.8	1.366	2.033	26.4	22.9	117 W	-	32	5	16	18 4.10	-52 49.9	2.526	3.320	12.4	21.6	135 W	-	63
5	25	16 39.43	-83 56.5	1.355	2.025	26.5	22.9	117 W	-	32	5	21	17 58.83	-53 14.7	2.490	3.318	11.6	21.5	139 W	-	63
5	26	16 27.53	-84 0.7	1.344	2.017	26.6	22.9	117 W	-	32	5	26	17 52.77	-53 34.9	2.459	3.317	10.8	21.4	142 W	-	62
5	27	16 15.17	-84 3.5	1.333	2.009	26.7	22.8	117 W	-	32	5	31	17 46.04	-53 49.8	2.433	3.315	10.1	21.4	145 W	-	62
5	28	16 2.48	-84 4.6	1.322	2.001	26.7	22.8	117 E	-	32	6	5	17 38.79	-53 58.5	2.414	3.314	9.5	21.3	147 W	-	62
5	29	15 49.57	-84 4.1	1.311	1.993	26.8	22.8	117 E	-	32	6	10	17 31.18	-54 0.6	2.401	3.311	9.1	21.3	149 W	-	62
5	30	15 36.62	-84 1.9	1.301	1.985	26.9	22.8	118 E	-	32	6	15	17 23.44	-53 55.6	2.395	3.309	9.0	21.3	149 E	-	62
5	31	15 23.76	-83 57.9	1.290	1.977	27.0	22.7	118 E	-	32	6	20	17 15.78	-53 43.7	2.395	3.306	9.1	21.3	149 E	-	62
6	1	15 11.14	-83 52.2	1.280	1.968	27.1	22.7	118 E	-	32	6	25	17 8.40	-53 25.2	2.401	3.303	9.5	21.3	147 E	-	63
6	2	14 58.91	-83 44.7	1.270	1.960	27.2	22.7	118 E	-	32	6	30	17 1.49	-53 0.6	2.414	3.300	10.1	21.4	145 E	-	63
6	3	14 47.17	-83 35.6	1.260	1.952	27.4	22.7	118 E	-	32	7	5	16 55.20	-52 30.7	2.432	3.297	10.8	21.4	142 E	-	63
6	4	14 36.02	-83 24.8	1.250	1.943	27.5	22.7	118 E	-	33	7	10	16 49.65	-51 56.3	2.457	3.293	11.7	21.5	139 E	-	64
6	5	14 25.52	-83 12.4	1.240	1.935	27.6	22.6	118 E	-	33											
6	6	14 15.72	-82 58.6	1.230	1.927	27.7	22.6	118 E	-	33	366949 2005 WP₁										
6	7	14 6.64	-82 43.4	1.221	1.918	27.9	22.6	118 E	-	33	5	16	18 6.38	-44 37.1	2.167	3.003	12.8	21.8	139 W	-	71
6	8	13 58.28	-82 26.9	1.211	1.910	28.0	22.6	118 E	-	34	5	21	18 1.92	-44 37.7	2.111	2.985	11.6	21.7	143 W	-	71
6	9	13 50.63	-82 9.2	1.202	1.901	28.2	22.5	118 E	-	34	5	26	17 56.68	-44 34.1	2.060	2.968	10.4	21.6	148 W	-	71
6	10	13 43.67	-81 50.4	1.192	1.893	28.3	22.5	118 E	-	34	5	31	17 50.77	-44 25.3	2.016	2.950	9.2	21.5	152 W	1	72
6	11	13 37.37	-81 30.4	1.183	1.884	28.5	22.5	118 E	-	34	6	5	17 44.29	-44 10.7	1.977	2.932	8.2	21.4	156 W	1	72
6	12	13 31.70	-81 9.5	1.174	1.876	28.6	22.5	118 E	-	35	6	10	17 37.40	-43 49.9	1.946	2.914	7.3	21.3	159 W	1	72
6	13	13 26.61	-80 47.7	1.165	1.867	28.8	22.5	118 E	-	35	6	15	17 30.29	-43 22.4	1.921	2.896	6.9	21.2	160 E	2	73
6	14	13 22.06	-80 25.0	1.156	1.858	29.0	22.4	117 E	-	36	6	20	17 23.16	-42 48.4	1.903	2.877	7.1	21.2	160 E	2	73
6	15	13 18.03	-80 1.6	1.148	1.850	29.2	22.4	117 E	-	36	6	25	17 16.21	-42 8.2	1.892	2.859	7.8	21.2	158 E	3	74
6	16	13 14.47	-79 37.3	1.139	1.841	29.4	22.4	117 E	-	36	6	30	17 9.61	-41 22.5	1.888	2.840	8.9	21.2	154 E	4	75
6	17	13 11.34	-79 12.4	1.131	1.832	29.6	22.4	117 E	-	37	7	5	17 3.54	-40 32.1	1.891	2.820	10.3	21.3	150 E	4	75
6	18	13 8.62	-78 46.8	1.122	1.823	29.8	22.3	117 E	-	37	7	10	16 58.11	-39 38.0	1.900	2.801	11.7	21.3	146 E	5	76
6	19	13 6.26	-78 20.5	1.114	1.815	30.0	22.3	117 E	-	38	7	15	16 53.45	-38 41.4	1.916	2.781	13.3	21.4	141 E	6	77
6	20	13 4.25	-77 53.7	1.106	1.806	30.2	22.3	117 E	-	38	7	20	16 49.63	-37 43.5	1.937	2.762	14.7	21.5	136 E	7	78
6	21	13 2.54	-77 26.2	1.098	1.797	30.5	22.3	116 E	-	39											
6	22	13 1.13	-76 58.3	1.090	1.788	30.7	22.3	116 E	-	39	405199 2003 DW₂₁										
6	23	12 59.98	-76 29.8	1.083	1.779	30.9	22.3	116 E	-	40	5	16	18 8.97	-57 1.9	2.900	3.655	11.8	22.1	132 W	-	59
6	24	12 59.08	-76 0.8	1.075	1.770	31.2	22.2	116 E	-	40	5	21	18 3.63	-57 37.1	2.868	3.657					

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
523616 2007 LC₁₅										458375 2010 WY₈									
<i>(continuation)</i>										<i>(continuation)</i>									
6 10	17 28.94	+ 1 56.6	1.208	2.170	11.5	21.4	155 W	47	62	6 20	18 5.18	-23 36.9	0.373	1.389	1.9	20.1	177 W	21	88
6 15	17 18.02	+ 1 21.8	1.221	2.185	11.3	21.4	155 E	46	63	6 25	17 56.61	-24 44.4	0.383	1.399	3.2	20.3	176 E	20	89
6 20	17 7.50	+ 0 40.3	1.243	2.199	11.9	21.5	153 E	46	63	6 30	17 48.61	-25 45.2	0.397	1.409	7.9	20.6	169 E	19	90
6 25	16 57.61	- 0 6.7	1.272	2.212	13.2	21.6	150 E	45	64	7 5	17 41.61	-26 38.6	0.415	1.418	12.3	20.9	163 E	18	89
6 30	16 48.56	- 0 58.0	1.308	2.223	14.9	21.7	146 E	44	65	7 10	17 35.91	-27 24.6	0.436	1.428	16.4	21.2	157 E	18	89
7 5	16 40.48	- 1 52.5	1.350	2.234	16.6	21.9	141 E	43	66	7 15	17 31.73	-28 3.7	0.461	1.437	20.1	21.4	151 E	17	88
7 10	16 33.46	- 2 49.1	1.399	2.244	18.4	22.0	136 E	42	67	7 20	17 29.18	-28 36.8	0.489	1.446	23.4	21.7	146 E	16	87
215588 2003 HF₂										399640 2004 QL₁₀									
5 16	18 23.03	-17 47.6	0.880	1.773	21.9	21.4	139 W	27	82	5 16	18 45.70	-18 28.2	1.335	2.163	19.6	21.4	134 W	27	82
5 21	18 15.78	-17 28.7	0.825	1.756	19.0	21.2	146 W	28	81	5 26	18 44.40	-18 47.3	1.227	2.131	16.3	21.1	144 W	26	83
5 26	18 6.58	-17 8.5	0.774	1.737	15.7	20.9	152 W	28	81	6 5	18 39.71	-19 17.7	1.136	2.098	12.0	20.7	155 W	26	83
5 31	17 55.37	-16 46.4	0.729	1.716	11.9	20.6	160 W	28	81	6 15	18 31.79	-19 59.0	1.065	2.065	6.8	20.3	166 W	25	84
6 5	17 42.18	-16 21.7	0.691	1.694	8.0	20.3	167 W	29	80	6 20	18 26.85	-20 23.2	1.038	2.049	4.1	20.1	172 W	25	84
6 10	17 27.22	-15 54.1	0.659	1.670	4.8	20.0	172 W	29	80	6 25	18 21.46	-20 49.1	1.017	2.033	1.5	19.9	177 W	24	85
6 15	17 10.87	-15 23.3	0.634	1.645	5.8	20.0	171 E	30	79	6 30	18 15.81	-21 16.3	1.002	2.017	2.5	19.9	175 E	24	85
6 20	16 53.71	-14 49.9	0.617	1.617	10.3	20.1	163 E	30	79	7 5	18 10.09	-21 44.1	0.993	2.001	5.4	20.0	169 E	23	86
6 25	16 36.40	-14 15.0	0.608	1.588	15.7	20.2	155 E	31	78	7 10	18 4.54	-22 12.2	0.989	1.985	8.5	20.1	163 E	23	86
6 30	16 19.62	-13 40.1	0.605	1.557	21.1	20.3	146 E	31	78	7 15	17 59.39	-22 40.0	0.991	1.969	11.4	20.3	157 E	22	87
7 5	16 3.96	-13 7.1	0.608	1.525	26.5	20.4	138 E	32	77	7 20	17 54.86	-23 7.3	0.999	1.953	14.3	20.4	152 E	22	87
7 10	15 49.86	-12 37.9	0.617	1.490	31.5	20.6	130 E	32	77	7 25	17 51.11	-23 33.8	1.011	1.938	17.1	20.5	146 E	21	88
7 15	15 37.60	-12 13.8	0.629	1.453	36.2	20.7	122 E	33	76	7 30	17 48.27	-23 59.5	1.027	1.922	19.6	20.6	141 E	21	88
7 20	15 27.27	-11 55.6	0.643	1.415	40.6	20.8	115 E	32	76	8 4	17 46.44	-24 24.3	1.047	1.907	22.0	20.7	135 E	21	88
7 25	15 18.82	-11 43.5	0.659	1.374	44.6	20.9	108 E	32	76	8 9	17 45.68	-24 48.1	1.071	1.892	24.1	20.8	130 E	20	89
7 30	15 12.11	-11 37.2	0.675	1.331	48.3	21.0	102 E	30	76	8 14	17 46.03	-25 10.8	1.097	1.877	26.0	20.9	126 E	20	89
8 4	15 6.96	-11 36.3	0.691	1.285	51.7	21.1	96 E	29	76	8 19	17 47.49	-25 32.5	1.125	1.863	27.7	20.9	121 E	19	90
8 9	15 3.18	-11 40.2	0.704	1.238	55.0	21.1	90 E	28	76*	8 24	17 50.02	-25 52.9	1.156	1.849	29.2	21.0	117 E	19	90
8 14	15 0.56	-11 48.3	0.715	1.188	58.2	21.1	85 E	26	74*	8 29	17 53.58	-26 12.0	1.188	1.835	30.5	21.1	113 E	19	90
8 19	14 58.84	-11 59.7	0.722	1.135	61.4	21.2	80 E	24	71*	9 3	17 58.13	-26 29.4	1.222	1.821	31.6	21.2	109 E	19	90
8 24	14 57.79	-12 13.5	0.726	1.080	64.7	21.2	75 E	23	67*	9 8	18 3.62	-26 45.0	1.256	1.808	32.5	21.3	106 E	18	89
8 29	14 57.10	-12 28.7	0.725	1.022	68.2	21.1	70 E	21	63*	9 13	18 10.00	-26 58.5	1.291	1.795	33.2	21.3	102 E	18	89
9 3	14 56.48	-12 44.3	0.719	0.961	72.2	21.1	65 E	20	58*	9 18	18 17.21	-27 9.6	1.327	1.783	33.8	21.4	99 E	18	89
9 8	14 55.51	-12 59.0	0.707	0.897	76.8	21.1	60 E	18	53*	9 23	18 25.17	-27 18.1	1.363	1.771	34.3	21.4	96 E	18	89*
9 13	14 53.62	-13 11.0	0.690	0.830	82.4	21.1	55 E	16	48*	9 28	18 33.84	-27 23.5	1.399	1.759	34.7	21.5	93 E	18	87*
9 18	14 49.99	-13 17.4	0.667	0.760	89.3	21.1	49 E	14	43*	297837 2002 BX									
9 23	14 43.45	-13 14.0	0.640	0.687	98.2	21.2	43 E	12	36*	5 16	18 47.16	-47 53.6	1.953	2.726	16.2	21.3	131 W	-	68
9 28	14 32.37	-12 53.7	0.610	0.613	110.0	21.4	35 E	9	29*	5 21	18 44.00	-48 14.2	1.898	2.713	15.2	21.2	135 W	-	68
401000 2011 QV₁₃										5 26	18 39.81	-48 31.9	1.848	2.700	14.1	21.1	140 W	-	67
5 16	18 31.10	-18 0.7	1.254	2.112	18.9	21.4	137 W	27	82	5 31	18 34.60	-48 45.7	1.802	2.687	12.9	21.0	144 W	-	67
5 26	18 28.89	-17 46.7	1.148	2.074	15.3	21.0	147 W	27	82	6 5	18 28.45	-48 54.4	1.762	2.673	11.8	20.9	147 W	-	67
6 5	18 23.24	-17 38.7	1.060	2.037	10.8	20.6	158 W	27	82	6 10	18 21.49	-48 56.9	1.727	2.659	10.8	20.8	151 W	-	67
6 15	18 14.50	-17 37.7	0.992	1.999	5.7	20.2	169 W	27	82	6 15	18 13.89	-48 52.1	1.699	2.645	10.0	20.7	153 W	-	67
6 20	18 9.27	-17 39.9	0.967	1.980	3.5	20.0	173 W	27	82	6 20	18 5.89	-48 39.4	1.676	2.631	9.5	20.6	155 W	-	67
6 25	18 3.70	-17 43.9	0.947	1.961	3.2	20.0	174 E	27	82	6 25	17 57.73	-48 18.2	1.661	2.617	9.5	20.6	155 E	-	68
6 30	17 57.99	-17 49.7	0.933	1.942	5.4	20.0	170 E	27	82	6 30	17 49.67	-47 48.7	1.651	2.602	10.0	20.6	154 E	-	68
7 5	17 52.36	-17 57.2	0.925	1.923	8.2	20.1	164 E	27	82	7 5	17 41.97	-47 11.3	1.648	2.587	10.8	20.6	151 E	-	69
7 10	17 47.05	-18 6.4	0.922	1.905	11.2	20.2	159 E	27	82	7 10	17 34.86	-46 26.8	1.651	2.572	12.0	20.7	148 E	-	70
7 15	17 42.29	-18 17.3	0.924	1.886	14.2	20.3	153 E	27	82	7 15	17 28.52	-45 36.4	1.660	2.556	13.4	20.7	144 E	-	70
7 20	17 38.27	-18 29.8	0.931	1.868	17.1	20.4	147 E	27	82	7 20	17 23.12	-44 41.3	1.674	2.540	14.8	20.8	140 E	-	71
7 25	17 35.14	-18 43.8	0.942	1.850	19.8	20.5	142 E	26	83	7 25	17 18.73	-43 43.0	1.694	2.525	16.3	20.8	136 E	1	72
8 4	17 31.94	-19 15.8	0.974	1.815	24.7	20.7	132 E	26	83	7 30	17 15.39	-42 42.8	1.719	2.508	17.7	20.9	131 E	2	73
8 14	17 33.16	-19 51.9	1.018	1.780	28.7	20.9	122 E	25	84	8 4	17 13.11	-41 41.9	1.748	2.492	19.0	21.0	127 E	3	74
8 24	17 38.82	-20 29.9	1.069	1.747	31.8	21.0	114 E	25	84	8 9	17 11.87	-40 41.1	1.781	2.476	20.3	21.0	122 E	4	75
9 3	17 48.57	-21 6.7	1.125	1.716	34.2	21.1	107 E	24	85	8 14	17 11.64	-39 41.5	1.817	2.459	21.4	21.1	118 E	5	76
9 13	18 2.06	-21 39.1	1.185	1.686	35.9	21.3	100 E	23	86	8 19	17 12.37	-38 43.5	1.856	2.442	22.3	21.2	113 E	6	77
9 23	18 18.83	-22 3.4	1.245	1.659	37.1	21.4	94 E	23	86*	8 24	17 13.99	-37 47.4	1.897	2.425	23.2	21.2	109 E	7	78
10 3	18 38.41	-22 16.4	1.306	1.634	37.8	21.5	89 E	23	82*	8 29	17 16.43	-36 53.6	1.940	2.408	23.9	21.3	105 E	8	79
399637 2004 PQ₆₈										9 3	17 19.63	-36 1.9	1.984	2.390	24.5	21.3	101 E	9	80
5 16	18 35.54	- 8 39.6	1.479	2.300	18.4	21.4	134 W	36	73	9 8	17 23.54	-35 12.5	2.029	2.372	24.9	21.4	97 E	9	81
5 26	18 32.50	- 7 50.6	1.372	2.267	15.5	21.1	143 W	37	72	9 13	17 28.10	-34 25.1	2.075	2.355	25.3	21.4	93 E	10	81*
6 5	18 26.48	- 7 11.6	1.284	2.234	12.1	20.8	153 W	38	71	9 18	17 33.26	-33 39.6	2.121	2.337	25.5	21.4	89 E	11	80*
6 15	18 17.86	- 6 47.3	1.218	2.201	8.9	20.5	160 W	38	71	9 23	17 38.96	-32 55.6	2.167	2.318	25.6	21.5	86 E	11	78*
6 25	18 7.55	- 6 41.7	1.174	2.167	7.8	20.4	163 E	38	71	530558 2011 QF₂₁									
7 5	17 56.81	- 6 56.7	1.154	2.133	10.0	20.4	159 E	38	71										

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
530558 2011 QF₂₁ (continuation)										162741 2000 WG₆ (continuation)									
8 14	17 42.47	-35 51.0	1.061	1.834	27.2	20.7	124 E	9	80	7 25	17 30.68	-37 4.6	1.182	2.066	18.5	20.2	140 E	8	79
8 19	17 44.22	-35 24.6	1.085	1.817	28.8	20.7	120 E	10	81	7 30	17 25.24	-37 7.0	1.191	2.035	20.9	20.2	134 E	8	79
8 24	17 47.18	-34 57.6	1.111	1.801	30.3	20.8	116 E	10	81	8 4	17 20.94	-37 6.2	1.203	2.003	23.2	20.3	129 E	8	79
8 29	17 51.25	-34 30.3	1.139	1.784	31.6	20.9	112 E	10	81	8 9	17 17.87	-37 3.2	1.218	1.972	25.3	20.4	124 E	8	79
9 3	17 56.39	-34 2.6	1.168	1.769	32.8	21.0	108 E	11	82	8 14	17 16.10	-36 58.8	1.236	1.940	27.2	20.4	119 E	8	79
9 8	18 2.51	-33 34.4	1.197	1.753	33.7	21.0	105 E	11*	82	8 24	17 16.40	-36 48.0	1.276	1.876	30.5	20.5	110 E	8*	79
9 13	18 9.54	-33 5.4	1.227	1.738	34.5	21.1	102 E	12*	83	9 3	17 21.63	-36 37.0	1.319	1.811	33.1	20.6	101 E	8*	79
9 18	18 17.41	-32 35.5	1.258	1.723	35.2	21.1	99 E	12*	83	9 13	17 31.44	-36 25.8	1.361	1.746	35.1	20.6	94 E	8*	79*
9 23	18 26.03	-32 4.1	1.289	1.709	35.8	21.2	96 E	13*	84*	9 23	17 45.42	-36 12.9	1.399	1.681	36.6	20.6	87 E	8*	79*
9 28	18 35.33	-31 30.9	1.320	1.696	36.2	21.2	93 E	13*	84*	10 3	18 3.15	-35 54.8	1.432	1.616	37.7	20.6	81 E	8*	73*
10 3	18 45.24	-30 55.6	1.351	1.683	36.5	21.3	90 E	14*	83*	10 13	18 24.30	-35 27.4	1.459	1.552	38.5	20.6	76 E	9*	69*
10 8	18 55.70	-30 17.8	1.383	1.670	36.7	21.3	87 E	15*	81*	10 23	18 48.50	-34 45.5	1.478	1.490	39.2	20.6	71 E	9*	65*
10 13	19 6.65	-29 37.3	1.414	1.658	36.8	21.3	85 E	15*	79*	11 2	19 15.36	-33 44.0	1.490	1.430	39.7	20.5	67 E	11*	61*
10 18	19 18.03	-28 53.6	1.445	1.647	36.9	21.4	83 E	16*	77*	11 12	19 44.52	-32 17.6	1.495	1.373	40.1	20.4	63 E	12*	57*
10 23	19 29.76	-28 6.5	1.476	1.636	36.8	21.4	80 E	17*	74*	11 22	20 15.51	-30 21.5	1.495	1.320	40.5	20.4	60 E	14*	54*
10 28	19 41.81	-27 15.9	1.508	1.626	36.7	21.4	78 E	18*	72*	12 2	20 47.88	-27 51.9	1.490	1.273	40.9	20.3	58 E	16*	50*
11 2	19 54.12	-26 21.5	1.539	1.617	36.5	21.5	76 E	19*	69*	12 12	21 21.23	-24 46.5	1.483	1.232	41.2	20.2	56 E	19*	47*
11 7	20 6.65	-25 23.3	1.570	1.609	36.3	21.5	74 E	20*	67*	12 22	21 55.14	-21 5.0	1.475	1.200	41.6	20.2	54 E	22*	43*
490559 2009 WR₂₀										530540 2011 OY₃₉									
5 16	18 51.00	-28 53.1	1.725	2.530	16.8	21.3	134 W	16	87	5 16	18 57.62	-14 20.8	1.239	2.045	22.1	21.3	130 W	31	78
5 26	18 48.54	-29 41.0	1.601	2.490	14.0	21.0	144 W	15	86	5 26	18 58.64	-13 49.5	1.131	2.011	19.1	21.0	139 W	31	78
6 5	18 42.83	-30 32.9	1.496	2.448	10.5	20.7	154 W	14	85	6 5	18 56.31	-13 27.2	1.037	1.978	15.3	20.6	149 W	32	77
6 15	18 34.06	-31 24.6	1.413	2.407	6.6	20.4	164 W	14	85	6 15	18 50.66	-13 17.4	0.962	1.945	10.7	20.2	159 W	32	77
6 20	18 28.72	-31 48.5	1.381	2.386	4.8	20.2	169 W	13	84	6 25	18 42.25	-13 22.8	0.906	1.912	6.3	19.9	168 W	32	77
6 25	18 22.94	-32 10.2	1.356	2.365	3.8	20.1	171 W	13	84	7 5	18 32.24	-13 44.1	0.871	1.880	5.8	19.7	169 E	31	78
6 30	18 16.87	-32 29.0	1.336	2.344	4.4	20.1	170 E	13	84	7 10	18 27.12	-14 0.5	0.862	1.864	7.8	19.8	166 E	31	78
7 5	18 10.71	-32 44.3	1.323	2.323	6.1	20.1	166 E	12	83	7 15	18 22.24	-14 20.3	0.858	1.849	10.4	19.9	161 E	31	78
7 10	18 4.67	-32 56.1	1.317	2.301	8.3	20.2	161 E	12	83	7 20	18 17.83	-14 43.2	0.860	1.834	13.2	20.0	156 E	30	79
7 15	17 58.97	-33 4.0	1.316	2.280	10.7	20.3	155 E	12	83	7 25	18 14.08	-15 8.7	0.865	1.819	16.0	20.1	150 E	30	79
7 20	17 53.79	-33 8.5	1.321	2.259	13.0	20.3	150 E	12	83	7 30	18 11.16	-15 36.0	0.875	1.804	18.7	20.2	145 E	29	80
7 25	17 49.32	-33 9.9	1.331	2.238	15.3	20.4	145 E	12	83	8 4	18 9.17	-16 4.9	0.889	1.790	21.3	20.3	140 E	29	80
7 30	17 45.67	-33 8.5	1.346	2.216	17.4	20.5	139 E	12	83	8 14	18 8.40	-17 5.0	0.927	1.763	25.9	20.4	131 E	28	81
8 4	17 42.95	-33 5.1	1.365	2.195	19.4	20.6	134 E	12	83	8 24	18 12.06	-18 4.6	0.976	1.737	29.6	20.6	122 E	27	82
8 9	17 41.22	-33 0.0	1.388	2.174	21.3	20.6	129 E	12	83	9 3	18 19.98	-18 59.8	1.032	1.714	32.5	20.8	114 E	26	83
8 14	17 40.52	-32 53.8	1.414	2.153	22.9	20.7	124 E	12	83	9 13	18 31.83	-19 47.2	1.094	1.692	34.6	21.0	107 E	25	84
8 19	17 40.86	-32 46.7	1.442	2.132	24.4	20.8	120 E	12	83	9 23	18 47.11	-20 23.2	1.159	1.673	36.0	21.1	101 E	25	84
8 24	17 42.22	-32 39.2	1.473	2.111	25.7	20.8	115 E	12	83	10 3	19 5.29	-20 45.0	1.227	1.657	37.0	21.2	96 E	24	85*
8 29	17 44.57	-32 31.3	1.505	2.090	26.9	20.9	111 E	12	83	10 13	19 25.90	-20 50.0	1.298	1.643	37.4	21.4	90 E	24	82*
9 3	17 47.86	-32 22.9	1.539	2.069	27.8	21.0	107 E	13*	84	10 23	19 48.44	-20 36.5	1.369	1.632	37.4	21.5	86 E	24	77*
9 8	17 52.07	-32 14.2	1.573	2.048	28.7	21.0	103 E	13*	84	495829 1995 LG									
9 13	17 57.14	-32 4.9	1.608	2.028	29.3	21.0	99 E	13*	84	5 16	19 7.09	-53 42.2	1.085	1.870	25.8	21.4	126 W	-	62
9 18	18 3.01	-31 55.0	1.643	2.007	29.9	21.1	96 E	13*	84*	5 21	18 50.10	-54 18.0	1.047	1.880	23.6	21.3	132 W	-	62
9 23	18 9.64	-31 44.0	1.678	1.987	30.3	21.1	92 E	13*	83*	5 26	18 29.93	-54 38.1	1.014	1.889	21.3	21.1	137 W	-	61
9 28	18 16.97	-31 31.8	1.713	1.967	30.6	21.2	89 E	13*	81*	5 31	18 7.07	-54 35.8	0.987	1.895	18.9	21.0	143 W	-	61
10 3	18 24.96	-31 18.0	1.748	1.948	30.8	21.2	86 E	13*	79*	6 5	17 42.50	-54 5.3	0.967	1.901	16.9	20.9	147 W	-	62
10 8	18 33.56	-31 2.4	1.782	1.929	30.9	21.2	83 E	14*	76*	6 10	17 17.54	-53 3.3	0.956	1.904	15.5	20.9	150 W	-	63
10 13	18 42.72	-30 44.7	1.815	1.910	30.9	21.2	80 E	14*	74*	6 15	16 53.64	-51 30.3	0.954	1.906	15.1	20.8	151 E	-	64
10 18	18 52.40	-30 24.5	1.848	1.891	30.9	21.2	77 E	14*	71*	6 20	16 31.97	-49 31.1	0.960	1.906	15.8	20.9	149 E	-	66
10 23	19 2.54	-30 1.6	1.880	1.873	30.8	21.3	74 E	15*	68*	6 25	16 13.24	-47 13.0	0.975	1.905	17.4	21.0	146 E	-	69
10 28	19 13.10	-29 35.6	1.911	1.855	30.6	21.3	72 E	15*	66*	6 30	15 57.70	-44 44.4	0.998	1.902	19.5	21.1	141 E	-	71
11 2	19 24.05	-29 6.3	1.941	1.837	30.3	21.3	69 E	15*	63*	7 5	15 45.24	-42 12.9	1.029	1.897	21.8	21.2	136 E	3	74
11 7	19 35.35	-28 33.5	1.970	1.821	30.0	21.3	67 E	16*	60*	7 10	15 35.63	-39 44.6	1.066	1.891	24.2	21.4	130 E	5	76
11 12	19 46.96	-27 57.0	1.998	1.804	29.6	21.3	64 E	16*	58*	7 15	15 28.51	-37 24.0	1.109	1.883	26.4	21.5	125 E	7*	79
11 17	19 58.83	-27 16.6	2.026	1.788	29.2	21.3	62 E	17*	55*	396618 2001 SW₃₂₅									
11 22	20 10.92	-26 32.3	2.052	1.773	28.8	21.3	60 E	18*	52*	5 16	19 8.60	-17 33.1	1.353	2.134	21.8	21.5	129 W	27	82
11 27	20 23.21	-25 43.8	2.078	1.758	28.3	21.3	58 E	18*	50*	5 26	19 9.63	-17 23.2	1.237	2.101	18.9	21.1	138 W	28	81
12 2	20 35.66	-24 51.2	2.103	1.744	27.8	21.3	55 E	19*	47*	6 5	19 7.34	-17 22.4	1.137	2.068	15.2	20.8	148 W	28	81
12 7	20 48.25	-23 54.4	2.127	1.731	27.2	21.2	53 E	19*	44*	6 15	19 1.66	-17 32.4	1.055	2.035	10.5	20.4	159 W	27	82
12 12	21 0.94	-22 53.5	2.150	1.719	26.6	21.2	51 E	20*	42*	6 25	18 53.05	-17 53.2	0.994	2.002	5.3	20.0	169 W	27	82
12 17	21 13.71	-21 48.5	2.173	1.707	26.0	21.2	50 E	21*	39*	6 30	18 47.94	-18 7.3	0.971	1.985	3.0	19.8	174 W	27	82
12 22	21 26.53	-20 39.6	2.195	1.696	25.4	21.2	48 E	21*	37*	7 5	18 42.52	-18 23.3	0.954	1.969	2.8	19.8	175 E	27	82
12 27	21 39.39	-19 26.9	2.216	1.686	24.7	21.2	46 E	22*	34*	7 10	18 37.01	-18 41.0	0.943	1.953	5.2	19.9	170 E	26	83
1 1	21 52.28																		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°
396618 2001 SW₃₂₅									523593 2001 TZ₁								
<i>(continuation)</i>									<i>(continuation)</i>								
8 14	18 13.22	-21 0.8	1.006	1.844	24.1	20.6	132 E	24 85	9 19	2 54.55	+33 20.0	0.250	1.161	46.2	18.1	123 W	78 31
8 24	18 15.09	-21 38.1	1.056	1.815	28.0	20.8	123 E	23 86	9 21	2 57.19	+28 1.5	0.242	1.166	43.3	17.9	127 W	73 36
9 3	18 21.23	-22 10.9	1.115	1.787	30.9	20.9	114 E	23 86	9 23	2 59.40	+22 22.7	0.237	1.172	40.4	17.8	131 W	67 42
9 13	18 31.34	-22 37.0	1.179	1.761	33.1	21.1	107 E	22 87	9 24	3 0.35	+19 27.6	0.235	1.175	38.9	17.8	133 W	64 45
9 23	18 44.96	-22 53.9	1.247	1.736	34.6	21.2	100 E	22 87	9 25	3 1.20	+16 29.8	0.234	1.178	37.6	17.7	134 W	61 48
10 3	19 1.56	-22 59.2	1.316	1.714	35.6	21.3	94 E	22 86*	9 26	3 1.94	+13 30.5	0.233	1.181	36.3	17.7	136 W	59 50
10 13	19 20.70	-22 50.6	1.387	1.694	36.1	21.4	89 E	22 82*	9 27	3 2.60	+10 30.7	0.233	1.184	35.1	17.7	137 W	56 53
457498 2008 VP₂									523593 2001 TZ₁								
5 16	19 15.83	-31 12.4	1.343	2.123	22.0	21.2	128 W	14 85	9 28	3 3.16	+7 31.4	0.234	1.187	34.1	17.6	138 W	53 56
5 26	19 17.83	-32 9.9	1.226	2.085	19.3	20.9	137 W	13 84	9 29	3 3.62	+4 33.9	0.236	1.191	33.2	17.6	139 W	50 59
6 5	19 16.07	-33 15.6	1.123	2.047	15.9	20.6	147 W	12 83	9 30	3 4.01	+1 39.2	0.238	1.194	32.5	17.6	140 W	47 62
6 15	19 10.24	-34 25.4	1.038	2.009	11.8	20.2	156 W	11 82	10 1	3 4.31	-1 11.8	0.241	1.198	31.9	17.7	141 W	44 65
6 20	19 5.86	-34 59.2	1.003	1.990	9.8	20.0	161 W	10 81	10 2	3 4.52	-3 58.2	0.244	1.201	31.5	17.7	141 W	41 68
6 25	19 0.62	-35 30.8	0.973	1.971	8.0	19.9	164 W	9 80	10 3	3 4.66	-6 39.3	0.248	1.205	31.2	17.7	141 W	38 71
6 30	18 54.69	-35 58.7	0.949	1.952	7.0	19.8	167 W	9 80	10 5	3 4.72	-11 43.5	0.258	1.212	31.2	17.8	141 W	33 76
7 5	18 48.26	-36 21.7	0.930	1.933	7.1	19.7	166 E	9 80	10 7	3 4.51	-16 21.3	0.270	1.220	31.6	17.9	140 W	29 80
7 10	18 41.59	-36 38.8	0.917	1.914	8.6	19.7	164 E	9 80	10 9	3 4.05	-20 31.6	0.284	1.228	32.2	18.1	139 W	24 85
7 15	18 35.01	-36 49.4	0.909	1.896	10.7	19.8	160 E	8 79	10 11	3 3.37	-24 14.8	0.300	1.236	33.1	18.2	138 W	21 88
7 20	18 28.82	-36 53.1	0.907	1.877	13.3	19.8	155 E	8 79	10 13	3 2.51	-27 32.3	0.316	1.245	34.0	18.4	136 W	17 88
7 25	18 23.29	-36 50.4	0.909	1.859	15.9	19.9	150 E	8 79	10 15	3 1.49	-30 26.1	0.334	1.253	34.8	18.5	134 W	15 86
7 30	18 18.67	-36 41.8	0.915	1.840	18.6	20.0	145 E	8 79	10 17	3 0.33	-32 58.3	0.353	1.262	35.7	18.7	132 W	12 83
8 4	18 15.12	-36 28.2	0.926	1.822	21.1	20.1	140 E	8 79	10 19	2 59.06	-35 11.2	0.373	1.271	36.4	18.9	131 W	10 81
8 9	18 12.80	-36 10.4	0.940	1.804	23.5	20.2	135 E	9 80	10 21	2 57.70	-37 6.9	0.394	1.281	37.1	19.0	129 W	8 79
8 14	18 11.78	-35 49.4	0.957	1.787	25.7	20.2	130 E	9 80	10 23	2 56.28	-38 47.4	0.414	1.290	37.7	19.2	128 W	6 77
8 24	18 13.69	-35 0.5	0.999	1.752	29.5	20.4	121 E	10 81	10 25	2 54.82	-40 14.2	0.436	1.300	38.2	19.3	126 W	5 76
9 3	18 20.58	-34 5.3	1.048	1.720	32.6	20.6	113 E	11 82	10 27	2 53.33	-41 28.9	0.458	1.310	38.6	19.4	125 W	4 75
9 13	18 31.93	-33 4.7	1.101	1.688	34.9	20.7	106 E	12 83	10 29	2 51.83	-42 32.9	0.480	1.320	38.9	19.6	123 W	2 73
9 23	18 47.09	-31 57.7	1.158	1.659	36.5	20.8	100 E	13 84	10 31	2 50.35	-43 27.3	0.503	1.330	39.2	19.7	122 W	2 73
10 3	19 5.36	-30 42.0	1.216	1.633	37.7	20.9	94 E	14 85*	11 2	2 48.91	-44 13.1	0.525	1.340	39.4	19.8	121 W	1 72
10 13	19 26.15	-29 15.1	1.274	1.608	38.3	21.0	89 E	16 83*	11 4	2 47.51	-44 51.2	0.548	1.351	39.6	19.9	120 W	— 71
10 23	19 48.87	-27 34.6	1.333	1.587	38.6	21.1	85 E	17 79*	11 6	2 46.18	-45 22.3	0.571	1.362	39.7	20.0	119 W	— 71
11 2	20 13.01	-25 39.1	1.393	1.569	38.6	21.1	80 E	19 74*	11 8	2 44.93	-45 47.1	0.595	1.372	39.7	20.1	118 E	— 70
11 12	20 38.16	-23 27.4	1.453	1.554	38.3	21.2	76 E	22 68*	11 10	2 43.77	-46 6.3	0.618	1.383	39.8	20.2	117 E	— 70
11 22	21 3.93	-20 59.9	1.514	1.543	37.7	21.3	73 E	24 63*	11 12	2 42.72	-46 20.4	0.641	1.394	39.7	20.3	116 E	— 70
12 2	21 30.03	-18 17.3	1.576	1.535	36.9	21.3	69 E	27* 57*	11 17	2 40.58	-46 36.4	0.700	1.422	39.6	20.6	114 E	— 69
12 12	21 56.27	-15 21.4	1.639	1.532	36.0	21.4	66 E	30* 52*	11 22	2 39.21	-46 29.7	0.759	1.450	39.3	20.8	112 E	— 70
12 22	22 22.49	-12 14.5	1.705	1.532	34.9	21.4	63 E	32* 46*	11 27	2 38.64	-46 4.7	0.818	1.479	38.9	21.0	110 E	— 70
1 1	22 48.61	-8 59.4	1.773	1.537	33.6	21.5	60 E	35* 41*	12 2	2 38.87	-45 24.9	0.878	1.508	38.5	21.1	108 E	— 71
523593 2001 TZ₁									313041 2000 QN₇₀								
5 16	19 20.69	+44 28.7	0.989	1.506	41.7	21.5	98 W	89 20	5 16	19 26.24	+5 25.3	2.103	2.718	19.3	21.5	117 W	50 59
5 21	19 29.77	+47 36.3	0.969	1.477	42.9	21.4	96 W	87 16	5 26	19 24.95	+6 24.0	1.979	2.692	17.9	21.3	125 W	51 58
5 26	19 38.98	+50 37.2	0.951	1.448	44.2	21.4	95 W	84 13	6 5	19 21.14	+7 8.6	1.869	2.666	16.2	21.1	133 W	52 57
5 31	19 48.38	+53 30.3	0.935	1.420	45.5	21.3	93 W	81 10	6 15	19 14.90	+7 33.5	1.775	2.638	14.2	20.9	140 W	53 56
6 5	19 58.04	+56 14.6	0.919	1.392	46.8	21.3	92 W	79 8	6 25	19 6.60	+7 32.8	1.701	2.610	12.4	20.7	147 W	53 56
6 10	20 8.07	+58 49.3	0.903	1.365	48.1	21.3	91 W	76 5	7 5	18 56.90	+7 3.0	1.650	2.582	11.3	20.5	150 W	52 57
6 15	20 18.59	+61 13.8	0.887	1.339	49.4	21.2	89 W	74 3	7 15	18 46.73	+6 2.4	1.622	2.552	11.6	20.5	150 E	51 58
6 20	20 29.82	+63 27.6	0.870	1.313	50.7	21.2	88 W	72 1	7 25	18 37.19	+4 33.8	1.618	2.521	13.2	20.5	145 E	50 59
6 25	20 41.97	+65 30.7	0.851	1.288	52.0	21.1	87 W	69 —	8 4	18 29.27	+2 43.0	1.637	2.490	15.6	20.6	139 E	48 61
6 30	20 55.33	+67 22.9	0.831	1.265	53.3	21.1	86 W	68 —	8 14	18 23.72	+0 37.5	1.676	2.458	18.2	20.7	131 E	46 63
7 5	21 10.17	+69 4.0	0.809	1.243	54.6	21.0	85 W	66 —	8 24	18 21.03	-1 34.7	1.733	2.426	20.7	20.8	122 E	43 66
7 10	21 26.86	+70 33.3	0.785	1.222	55.9	20.9	84 W	64 —	9 3	18 21.34	-3 46.8	1.802	2.393	22.7	21.0	114 E	41 68
7 15	21 45.79	+71 50.0	0.758	1.203	57.2	20.9	84 W	63 —	9 13	18 24.62	-5 53.7	1.881	2.359	24.3	21.1	106 E	39 70
7 20	22 7.37	+72 52.6	0.729	1.186	58.4	20.8	84 W	62 —	9 23	18 30.70	-7 51.7	1.967	2.325	25.3	21.2	98 E	37 72
7 25	22 31.87	+73 39.3	0.697	1.171	59.6	20.7	84 W	61 —	10 3	18 39.32	-9 38.4	2.056	2.290	25.9	21.2	90 E	35 72*
7 30	22 59.29	+74 7.4	0.662	1.158	60.8	20.6	85 W	61 —	10 13	18 50.26	-11 12.3	2.145	2.255	26.1	21.3	83 E	34 69*
8 4	23 29.18	+74 13.2	0.625	1.147	61.9	20.5	85 W	61 —	10 23	19 3.24	-12 32.3	2.232	2.220	25.8	21.4	76 E	32 64*
8 6	23 41.64	+74 8.2	0.609	1.143	62.2	20.4	86 W	61 —	11 2	19 18.02	-13 37.9	2.316	2.184	25.3	21.4	70 E	30 58*
8 8	23 54.26	+73 58.6	0.593	1.140	62.6	20.4	86 W	61 —	11 12	19 34.39	-14 28.6	2.395	2.148	24.4	21.4	64 E	29 51*
8 10	0 6.96	+73 44.0	0.577	1.137	62.9	20.3	87 W	61 —	11 22	19 52.15	-15 4.1	2.467	2.112	23.3	21.4	58 E	28 45*
8 12	0 19.65	+73 24.1	0.560	1.134	63.2	20.3	87 W	62 —	12 2	20 11.11	-15 24.6	2.532	2.076	22.0	21.4	52 E	27 39*
8 14	0 32.22	+72 58.3	0.543	1.132	63.4	20.2	88 W	62 —	12 12	20 31.10	-15 30.0	2.589	2.040	20.5	21.3	46 E	25 33*
8 16	0 44.58	+72 26.3	0.526	1.130	63.6	20.1	89 W	63 —	12 22	20 51.97	-15 20.8	2.638	2.005	18.8	21.3	41 E	23 27*
8 18	0 56.64	+71 47.5	0.508	1.129	63.8	20.1	89 W	63 —	1 1	21 13.59	-14 57.3	2.678	1.970	17.1	21.2	36 E	21 22*
8 20	1 8.31	+71 1.6	0.490	1.128	63.8	20.0	90 W	64 —	1 11	21 35.81	-14 20.2	2.709	1.935	15.2	21.1	31 E	18 18*
8 22	1 19.53	+70 7.9	0.472	1.127	63.8	19.9	91 W	65 —	1 21	21 58.67	-13 30.5	2.731	1.902	13.3	21.1	26 E	15 14*

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
194263 2001 UL										189011 Ogmios									
<i>(continuation)</i>																			
9 3	18 30.50	+ 2 43.4	2.147	2.731	19.6	21.1	115 E	48	61	5 16	20 6.05	-13 28.9	0.891	1.598	35.3	21.2	114 W	31*	77
9 13	18 32.25	+ 1 6.7	2.237	2.708	20.8	21.2	107 E	46	63	5 21	20 10.68	-11 27.8	0.839	1.583	34.6	21.0	117 W	33*	75
9 23	18 36.45	+ 0 25.2	2.335	2.685	21.7	21.3	99 E	45	64	5 26	20 14.52	- 9 16.7	0.789	1.568	33.9	20.9	120 W	36*	73
10 3	18 42.88	+ 1 49.6	2.436	2.660	22.1	21.4	92 E	43*	65*	5 31	20 17.47	- 6 55.2	0.742	1.552	33.0	20.7	124 W	38*	71
10 13	18 51.33	+ 3 4.5	2.538	2.635	22.1	21.5	84 E	42*	63*	6 5	20 19.45	- 4 22.8	0.697	1.536	32.0	20.5	127 W	41	68
331785 Sumners																			
5 16	19 42.16	- 0 3.6	2.286	2.872	18.5	21.4	116 W	45*	64	6 10	20 20.37	- 1 39.5	0.656	1.521	30.9	20.3	130 W	43	66
5 26	19 38.78	+ 1 35.6	2.218	2.913	16.7	21.3	124 W	47	62	6 15	20 20.13	+ 1 14.2	0.618	1.504	29.8	20.1	133 W	46	63
6 5	19 33.08	+ 3 3.9	2.166	2.953	14.5	21.2	133 W	48	61	6 20	20 18.67	+ 4 17.4	0.584	1.488	28.8	20.0	135 W	49	60
6 15	19 25.34	+ 4 17.0	2.132	2.992	12.3	21.2	141 W	49	60	6 25	20 15.94	+ 7 28.2	0.553	1.472	28.0	19.8	137 W	52	57
6 25	19 16.15	+ 5 10.9	2.122	3.031	10.3	21.1	148 W	50	59	6 30	20 11.90	+10 43.9	0.527	1.455	27.5	19.7	139 W	56	53
7 5	19 6.23	+ 5 43.2	2.137	3.068	9.1	21.1	151 W	51	58	7 5	20 6.54	+14 0.7	0.505	1.438	27.4	19.5	139 W	59	50
7 15	18 56.43	+ 5 53.3	2.177	3.105	9.2	21.2	151 E	51	58	7 10	19 59.92	+17 13.7	0.487	1.421	27.9	19.4	139 W	62	47
7 25	18 47.57	+ 5 42.8	2.244	3.140	10.3	21.3	146 E	51	58	7 15	19 52.20	+20 17.6	0.474	1.405	29.0	19.4	138 W	65	44
8 4	18 40.29	+ 5 15.6	2.334	3.175	12.0	21.5	140 E	50	59	7 20	19 43.65	+23 7.4	0.464	1.388	30.5	19.4	136 E	68	41
533736 2014 OG₃																			
5 16	19 43.09	-29 31.1	1.694	2.392	21.0	21.3	122 W	15*	86	7 30	19 25.37	+27 48.8	0.454	1.355	34.7	19.4	131 E	73	36
5 26	19 42.54	-28 40.5	1.560	2.359	18.7	21.0	132 W	16	87	8 4	19 16.41	+29 35.7	0.453	1.339	37.1	19.4	127	75	34
6 5	19 38.38	-27 43.7	1.441	2.326	15.5	20.7	142 W	17	88	8 9	19 8.10	+30 59.2	0.454	1.322	39.5	19.5	124	76	33
6 15	19 30.52	-26 37.6	1.340	2.293	11.5	20.3	153 W	18	89	8 14	19 0.85	+32 0.7	0.456	1.307	41.8	19.5	121 E	77	32
6 25	19 19.37	-25 19.1	1.261	2.259	6.6	20.0	165 W	20	89	8 19	18 54.93	+32 42.5	0.459	1.291	43.9	19.6	118 E	78	31
6 30	19 12.85	-24 34.6	1.232	2.242	3.9	19.8	171 W	20	89	8 24	18 50.54	+33 7.5	0.463	1.276	46.0	19.6	115 E	78	31
7 5	19 5.92	-23 46.8	1.209	2.225	1.1	19.5	178 W	21	88	8 29	18 47.78	+33 18.2	0.466	1.262	47.8	19.6	112 E	78	31
7 10	18 58.80	-22 55.8	1.192	2.208	1.9	19.5	176 E	22	87	9 3	18 46.71	+33 17.1	0.469	1.248	49.5	19.7	110 E	78	31
7 15	18 51.71	-22 2.3	1.183	2.190	4.9	19.7	169 E	23	86	9 8	18 47.37	+33 6.1	0.472	1.235	51.1	19.7	108	78	31
7 20	18 44.90	-21 7.2	1.181	2.173	7.8	19.8	163 E	24	85	9 13	18 49.76	+32 47.5	0.474	1.223	52.4	19.7	106	78	31
7 25	18 38.57	-20 11.3	1.185	2.156	10.7	19.9	157 E	25	84	9 18	18 53.85	+32 22.8	0.474	1.211	53.6	19.8	104 E	77	32
7 30	18 32.89	-19 15.8	1.195	2.139	13.4	20.0	151 E	26	83	9 23	18 59.58	+31 53.2	0.474	1.200	54.7	19.8	103 E	77	32
8 4	18 28.01	-18 21.4	1.210	2.121	16.0	20.1	145 E	27	82	9 28	19 6.92	+31 19.0	0.473	1.190	55.6	19.8	102 E	76	33
8 9	18 24.04	-17 29.0	1.231	2.104	18.4	20.2	139 E	28	81	10 3	19 15.86	+30 40.7	0.470	1.181	56.4	19.8	101 E	76	33
8 14	18 21.04	-16 39.2	1.255	2.087	20.6	20.3	134 E	28	81	10 8	19 26.40	+29 58.3	0.467	1.174	57.0	19.8	100 E	75	34*
8 24	18 18.08	-15 8.3	1.316	2.053	24.3	20.5	123 E	30	79	10 13	19 38.55	+29 12.1	0.463	1.167	57.5	19.7	99 E	74	35*
9 3	18 19.04	-13 49.3	1.387	2.019	27.2	20.7	114 E	31	78	10 18	19 52.29	+28 21.7	0.459	1.161	57.9	19.7	99 E	73	35*
9 13	18 23.61	-12 40.4	1.464	1.985	29.3	20.8	105 E	32	77	10 23	20 7.59	+27 26.7	0.454	1.157	58.1	19.7	99 E	72	36*
9 23	18 31.40	-11 38.4	1.544	1.952	30.6	20.9	98 E	33*	76	10 28	20 24.43	+26 26.4	0.450	1.154	58.2	19.7	99 E	71	37*
10 3	18 41.95	-10 40.1	1.624	1.920	31.4	21.0	91 E	34*	75*	11 2	20 42.77	+25 20.2	0.446	1.152	58.2	19.6	99	70	38*
10 13	18 54.93	- 9 42.0	1.702	1.888	31.7	21.1	84 E	35*	68*	11 7	21 2.55	+24 7.9	0.443	1.152	58.0	19.6	100	69	39*
10 23	19 9.97	- 8 40.9	1.778	1.858	31.7	21.1	79 E	36*	63*	11 12	21 23.63	+22 49.7	0.442	1.153	57.7	19.6	100	68	40*
11 2	19 26.78	- 7 34.5	1.849	1.829	31.3	21.2	73 E	37*	56*	11 17	21 45.81	+21 26.0	0.442	1.155	57.3	19.6	101 E	66	41*
11 12	19 45.15	- 6 20.5	1.915	1.802	30.7	21.2	68 E	38*	50*	11 22	22 8.83	+19 57.7	0.445	1.158	56.8	19.6	101 E	65	42*
11 22	20 4.85	- 4 57.2	1.977	1.776	29.9	21.2	64 E	39*	43*	11 27	22 32.42	+18 26.1	0.451	1.163	56.3	19.6	101	63	44*
12 2	20 25.70	- 3 23.6	2.033	1.752	29.0	21.2	59 E	39*	37*	12 7	22 56.28	+16 53.4	0.460	1.169	55.7	19.7	102	62	45*
12 12	20 47.58	- 1 39.1	2.086	1.731	28.0	21.2	56 E	40*	30*	12 7	23 20.14	+15 22.0	0.472	1.176	55.1	19.7	102	60	47*
12 22	21 10.35	+ 0 16.6	2.134	1.711	26.9	21.2	52 E	39*	25*	12 12	23 43.70	+13 54.4	0.488	1.184	54.5	19.8	102	59	48*
1 1	21 33.93	+ 2 22.6	2.179	1.695	25.7	21.2	48 E	39*	19*	12 17	0 6.73	+12 32.8	0.507	1.193	53.9	19.9	101 E	58	50*
1 11	21 58.24	+ 4 38.2	2.221	1.680	24.6	21.2	45 E	38*	15*	12 22	0 29.06	+11 18.7	0.530	1.203	53.4	20.0	101	56	51*
1 21	22 23.23	+ 7 1.7	2.261	1.669	23.4	21.2	42 E	36*	11*	12 27	0 50.56	+10 13.1	0.556	1.214	52.8	20.1	100	55	52*
138131 2000 ES₂₀										494838 2007 UU₁₀₄									
5 16	19 43.93	+ 6 32.8	2.496	3.033	17.9	21.4	113 W	51*	57	5 16	20 7.30	-25 40.1	1.393	2.053	26.2	21.4	116 W	19*	90
5 26	19 43.01	+ 7 43.8	2.367	3.011	16.8	21.3	121 W	53	56	5 26	20 16.38	-26 27.2	1.263	2.014	24.6	21.1	124 W	18*	90
6 5	19 39.85	+ 8 44.4	2.251	2.988	15.5	21.1	128 W	54	55	6 5	20 22.99	-27 31.9	1.144	1.975	22.4	20.7	132 W	17	88
6 15	19 34.51	+ 9 29.6	2.150	2.964	13.8	20.9	136 W	54	55	6 15	20 26.58	-28 56.3	1.039	1.936	19.3	20.4	141 W	16	87
6 25	19 27.26	+ 9 54.6	2.069	2.939	12.2	20.8	142 W	55	54	6 25	20 26.71	-30 39.9	0.949	1.898	15.6	20.0	150 W	14	85
7 5	19 18.58	+ 9 55.2	2.009	2.913	11.0	20.6	147 W	55	54	6 30	20 25.40	-31 37.5	0.911	1.880	13.6	19.9	154 W	13	84
7 15	19 9.19	+ 9 29.2	1.973	2.887	10.7	20.6	148 E	54	55	7 5	20 23.15	-32 37.6	0.878	1.861	11.6	19.7	158 W	12	83
7 25	18 59.98	+ 8 36.9	1.961	2.859	11.5	20.5	146 E	54	55	7 10	20 20.00	-33 38.5	0.849	1.843	9.8	19.5	162 W	11	82
8 4	18 51.81	+ 7 21.8	1.973	2.831	13.1	20.6	141 E	52	57	7 15	20 16.06	-34 38.5	0.825	1.825	8.6	19.4	164 W	10	81
8 14	18 45.41	+ 5 49.1	2.006	2.802	15.2	20.7	134 E	51	58	7 20	20 11.51	-35 35.5	0.807	1.807	8.5	19.3	165 W	9	80
8 24	18 41.33	+ 4 5.4	2.059	2.772	17.3	20.8	126 E	49	60	7 25	20 6.55	-36 27.6	0.794	1.790	9.5	19.3	163 E	9	80
9 3	18 39.78	+ 2 17.0	2.127	2.741	19.1	20.9	117 E	47	62	7 30	20 1.44	-37 12.9	0.785	1.773	11.4	19.3	160 E	8	79
9 13	18 40.85	+ 0 29.3	2.206	2.709	20.5	21.0	109 E	45	64	8 4	19 56.46	-37 50.1	0.782	1.757	13.8	19.4	156 E	7	78
9 23	18 44.45	+ 1 13.4	2.294	2.677	21.6	21.1	101 E	44	65	8 9	19 51.91	-38 18.3	0.783	1.741	16.3	19.5	151 E	7	78
10 3	18 50.39	+ 2 48.1	2.387	2.644	22.2	21.2	93 E	42*	66*	8 14	19 48.08	-38 37.1							

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
494388 2007 UU₁₀₄										100088 1993 DC									
<i>(continuation)</i>										<i>(continuation)</i>									
10 23	20 52.37	-30 47.6	1.105	1.578	38.7	20.7	97 E	14	85	11 22	20 0.52	-28 42.5	2.834	2.444	19.9	21.2	57 E	15*	50*
10 28	21 3.12	-29 35.3	1.137	1.574	39.0	20.7	95 E	15	86	11 27	20 8.39	-28 14.5	2.866	2.421	19.2	21.2	54 E	15*	47*
11 2	21 14.21	-28 18.6	1.170	1.571	39.1	20.8	93 E	17	87*	12 2	20 16.53	-27 44.5	2.895	2.397	18.6	21.2	51 E	15*	43*
11 7	21 25.58	-26 57.8	1.203	1.569	39.2	20.8	91 E	18	85*	12 7	20 24.93	-27 12.6	2.921	2.373	17.9	21.1	48 E	15*	40*
11 12	21 37.16	-25 32.9	1.237	1.567	39.2	20.9	89 E	19	82*	12 12	20 33.56	-26 38.5	2.944	2.349	17.2	21.1	45 E	15*	37*
11 17	21 48.91	-24 4.4	1.273	1.567	39.0	21.0	87 E	21	79*	12 17	20 42.40	-26 2.3	2.965	2.325	16.4	21.1	42 E	14*	33*
11 22	22 0.76	-22 32.6	1.309	1.568	38.9	21.0	85 E	22	76*	12 22	20 51.43	-25 23.9	2.982	2.300	15.6	21.0	39 E	14*	30*
11 27	22 12.69	-20 57.7	1.346	1.570	38.6	21.1	83 E	24	73*	12 27	21 0.63	-24 43.2	2.996	2.276	14.7	21.0	36 E	13*	27*
12 2	22 24.67	-19 20.1	1.384	1.572	38.3	21.1	81 E	26	70*	1	1 21 10.01	-24 0.2	3.007	2.251	13.9	20.9	33 E	13*	25*
12 7	22 36.67	-17 40.2	1.423	1.576	37.9	21.2	79 E	27	67*	1	1 21 19.54	-23 14.8	3.015	2.226	13.0	20.9	31 E	12*	22*
12 12	22 48.68	-15 58.4	1.463	1.581	37.5	21.2	78 E	29	64*	1	1 21 29.21	-22 27.1	3.020	2.200	12.1	20.8	28 E	11*	19*
12 17	23 0.67	-14 15.1	1.505	1.586	37.0	21.3	76 E	31	60*	1	1 21 39.00	-21 37.0	3.022	2.175	11.2	20.8	25 E	10*	17*
12 22	23 12.65	-12 30.7	1.547	1.593	36.5	21.3	74 E	32	57*	1	1 21 48.92	-20 44.5	3.021	2.149	10.3	20.7	23 E	8*	15*
12 27	23 24.59	-10 45.7	1.590	1.600	35.9	21.4	73 E	34	54*	518678 2008 UZ₉₄									
1	1 23 36.50	-9 0.3	1.634	1.608	35.3	21.4	71 E	36*	51*	5 16	20 15.62	+3 9.9	1.663	2.179	26.4	21.4	107 W	47*	61
394013 2005 VY₅₉										5 26	20 19.66	+6 54.8	1.500	2.112	26.2	21.1	113 W	52*	57
5 16	20 12.17	-24 45.9	1.381	2.029	26.8	21.3	115 W	20*	89	6 5	20 21.07	+11 5.1	1.350	2.042	25.8	20.8	119 W	56	53
5 26	20 20.84	-25 13.1	1.259	2.000	25.2	21.1	123 W	20*	89	6 15	20 19.24	+15 39.5	1.216	1.970	25.4	20.5	124 W	61	48
6 5	20 26.79	-25 54.7	1.148	1.971	22.8	20.8	131 W	19	90	6 20	20 16.92	+18 4.3	1.155	1.933	25.2	20.3	126 W	63	46
6 15	20 29.50	-26 52.7	1.050	1.942	19.6	20.4	140 W	18	89	6 25	20 13.55	+20 32.6	1.099	1.896	25.2	20.2	127 W	66	43
6 25	20 28.57	-28 6.2	0.966	1.913	15.6	20.1	150 W	17	88	6 30	20 9.07	+23 3.0	1.047	1.859	25.4	20.0	128 W	68	41
6 30	20 26.69	-28 47.5	0.931	1.900	13.3	19.9	154 W	16	87	7 5	20 3.39	+25 33.2	1.001	1.821	25.7	19.9	129 W	71	38
7 5	20 23.87	-29 30.6	0.900	1.886	11.0	19.7	159 W	15	86	7 10	19 56.50	+28 0.6	0.959	1.782	26.4	19.8	129 W	73	36
7 10	20 20.20	-30 14.2	0.875	1.872	8.8	19.6	164 W	15	86	7 15	19 48.42	+30 22.3	0.923	1.743	27.4	19.7	128 W	75	34
7 15	20 15.79	-30 56.8	0.854	1.859	6.9	19.4	167 W	14	85	7 20	19 39.23	+32 35.1	0.891	1.704	28.6	19.6	127 E	78	31
7 20	20 10.83	-31 36.7	0.839	1.846	6.2	19.3	169 W	13	84	7 25	19 29.08	+34 36.2	0.864	1.665	30.2	19.5	124 E	80	29
7 25	20 5.55	-32 12.4	0.829	1.833	7.0	19.3	167 E	13	84	7 30	19 18.17	+36 23.2	0.840	1.625	32.0	19.4	122 E	81	28
7 30	20 0.19	-32 42.5	0.824	1.820	9.0	19.4	164 E	12	83	8 4	19 6.78	+37 53.9	0.820	1.585	34.0	19.4	119 E	83	26
8 4	19 55.04	-33 6.2	0.824	1.808	11.6	19.5	159 E	12	83	8 9	18 55.27	+39 7.4	0.803	1.544	36.2	19.3	116 E	84	25
8 9	19 50.36	-33 22.7	0.829	1.796	14.3	19.6	154 E	12	83	8 14	18 44.00	+40 3.5	0.788	1.504	38.4	19.3	113 E	85	24
8 14	19 46.43	-33 32.0	0.838	1.785	17.0	19.7	149 E	11	82	8 19	18 33.32	+40 43.4	0.774	1.464	40.7	19.3	109 E	86	23
8 19	19 43.43	-33 34.3	0.852	1.773	19.6	19.8	144 E	11	82	8 24	18 23.53	+41 8.7	0.761	1.423	43.1	19.2	106 E	86	23
8 24	19 41.51	-33 30.0	0.869	1.762	22.0	19.9	139 E	11	82	8 29	18 14.85	+41 21.5	0.748	1.383	45.4	19.2	103 E	86	23
8 29	19 40.75	-33 19.8	0.889	1.752	24.3	20.0	134 E	12	83	9 3	18 7.44	+41 23.9	0.735	1.343	47.8	19.2	100 E	86	23
9 3	19 41.19	-33 4.3	0.913	1.742	26.3	20.1	130 E	12	83	9 8	18 1.40	+41 18.3	0.720	1.303	50.2	19.1	96 E	86*	23
9 13	19 45.62	-32 19.3	0.967	1.723	29.8	20.3	122 E	13	84	9 13	17 56.77	+41 7.0	0.704	1.264	52.6	19.1	94 E	85*	23
9 23	19 54.46	-31 18.2	1.028	1.706	32.4	20.5	114 E	14	85	9 18	17 53.51	+40 52.0	0.685	1.225	55.1	19.0	91 E	85*	23*
10 3	20 6.99	-30 2.8	1.095	1.692	34.3	20.7	108 E	15	86	9 23	17 51.57	+40 35.1	0.664	1.188	57.6	19.0	88 E	81*	23*
10 13	20 22.56	-28 33.6	1.167	1.679	35.6	20.8	101 E	16	87	9 28	17 50.86	+40 17.1	0.639	1.152	60.2	18.9	86 E	79*	22*
10 23	20 40.48	-26 50.6	1.241	1.669	36.4	21.0	96 E	18	89	10 3	17 51.31	+39 58.7	0.612	1.117	63.0	18.8	84 E	77*	22*
11 2	21 0.14	-24 54.0	1.319	1.662	36.7	21.1	91 E	20	84*	10 8	17 52.86	+39 40.5	0.581	1.085	65.9	18.7	82 E	76*	20*
11 12	21 21.06	-22 44.0	1.398	1.657	36.6	21.2	86 E	22	78*	10 13	17 55.44	+39 22.6	0.547	1.054	68.9	18.6	80 E	74*	19*
11 22	21 42.85	-20 21.5	1.479	1.655	36.2	21.3	82 E	25	71*	10 18	17 58.97	+39 4.3	0.509	1.027	72.2	18.5	79 E	73*	17*
12 2	22 5.17	-17 47.8	1.562	1.655	35.5	21.4	77 E	27	65*	10 23	18 3.40	+38 44.2	0.467	1.002	75.6	18.4	77 E	71*	16*
100088 1993 DC										10 28	18 8.77	+38 19.3	0.422	0.981	79.4	18.3	76 E	70*	14*
5 16	20 15.26	-26 45.1	2.567	3.129	17.0	21.4	115 W	18*	89	11 2	18 15.20	+37 45.5	0.374	0.963	83.4	18.1	75 E	69*	12*
5 26	20 15.68	-27 22.6	2.417	3.103	15.6	21.2	124 W	18*	89	11 7	18 22.96	+36 55.7	0.324	0.950	87.6	17.9	73 E	67*	11*
6 5	20 13.58	-28 9.4	2.280	3.076	13.6	21.0	134 W	17	88	11 12	18 32.59	+35 37.5	0.271	0.942	92.2	17.7	72 E	66*	9*
6 15	20 8.80	-29 4.0	2.162	3.048	11.1	20.8	145 W	16	87	11 14	18 37.18	+34 53.3	0.250	0.940	94.1	17.6	71 E	65*	9*
6 25	20 1.39	-30 3.0	2.065	3.019	8.1	20.5	155 W	15	86	11 16	18 42.33	+33 58.1	0.228	0.938	96.1	17.5	71 E	64*	9*
7 5	19 51.68	-31 1.7	1.994	2.989	5.0	20.3	165 W	14	85	11 18	18 48.21	+32 48.2	0.207	0.938	98.2	17.4	70 E	64*	9*
7 10	19 46.16	-31 29.1	1.969	2.973	3.8	20.2	169 W	14	85	11 20	18 55.04	+31 18.1	0.185	0.938	100.5	17.2	69 E	63*	10*
7 15	19 40.35	-31 54.3	1.951	2.957	3.5	20.1	170 W	13	84	11 22	19 3.12	+29 19.6	0.163	0.939	102.8	17.1	68 E	62*	11*
7 20	19 34.40	-32 16.6	1.941	2.941	4.3	20.2	167 E	13	84	11 23	19 7.78	+28 5.9	0.153	0.939	104.0	17.0	67 E	61*	11*
7 25	19 28.45	-32 35.7	1.937	2.924	5.8	20.2	163 E	12	83	11 24	19 12.94	+26 39.6	0.142	0.940	105.3	16.9	67 E	61*	12*
7 30	19 22.65	-32 51.1	1.941	2.908	7.5	20.3	158 E	12	83	11 25	19 18.70	+24 58.0	0.132	0.941	106.6	16.8	66 E	60*	14*
8 4	19 17.15	-33 2.8	1.951	2.891	9.2	20.4	153 E	12	83	11 26	19 25.18	+22 57.1	0.121	0.943	108.0	16.7	65 E	59*	15*
8 9	19 12.08	-33 10.9	1.967	2.873	11.0	20.4	147 E	12	83	11 27	19 32.52	+20 32.2	0.111	0.944	109.4	16.6	65 E	57*	17*
8 14	19 7.56	-33 15.4	1.989	2.856	12.7	20.5	142 E	12	83	11 28	19 40.93	+17 36.8	0.102	0.946	110.8	16.5	64 E	55*	20*
8 19	19 3.70	-33 16.8	2.017	2.838	14.2	20.6	136 E	12	83	11 29	19 50.64	+14 2.8	0.092	0.948	112.2	16.4	63 E	53*	23*
8 24	19 0.56	-33 15.3	2.049	2.819	15.7	20.7	131 E	12	83	11 30	20 1.96	+9 40.4	0.084	0.950	113.5	16.3	62 E	50*	27*
8 29	18 58.17	-33 11.4	2.085	2.801	17.0	20.7	126 E	12	83	12 1									

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
518678 2008 UZ₉₄										151723 2003 BX₆₃									
<i>(continuation)</i>										<i>(continuation)</i>									
12 19	4 10.87	-56 35.1	0.172	1.021	72.9	16.2	97 E	—	59	6 25	20 37.32	-8 18.2	2.152	3.024	11.8	20.7	143 W	37	72
12 20	4 19.38	-56 3.5	0.183	1.026	71.7	16.3	98 E	—	60	7 5	20 31.14	-8 44.0	2.055	2.997	8.8	20.4	153 W	36	73
12 21	4 26.77	-55 33.0	0.193	1.031	70.5	16.4	99 E	—	60	7 15	20 23.19	-9 23.7	1.981	2.970	5.6	20.2	164 W	36	73
12 22	4 33.25	-55 3.7	0.204	1.037	69.5	16.5	99 E	—	61	7 25	20 14.12	-10 15.4	1.935	2.942	3.3	20.0	171 E	35	74
12 23	4 38.96	-54 35.6	0.215	1.042	68.4	16.6	100 E	—	61	8 4	20 4.72	-11 15.9	1.918	2.913	4.8	20.0	166 E	34	75
12 24	4 44.04	-54 8.7	0.226	1.048	67.5	16.6	100 E	—	62	8 9	20 0.19	-11 48.2	1.919	2.898	6.4	20.1	161 E	33	76
12 25	4 48.59	-53 42.9	0.236	1.053	66.5	16.7	101 E	—	62	8 14	19 55.92	-12 21.1	1.928	2.883	8.2	20.2	156 E	33	76
12 26	4 52.69	-53 18.0	0.247	1.059	65.6	16.8	101 E	—	63	8 19	19 52.03	-12 54.0	1.943	2.868	10.0	20.3	151 E	32	77
12 27	4 56.40	-52 53.9	0.258	1.065	64.8	16.9	102 E	—	63	8 24	19 48.60	-13 26.4	1.964	2.853	11.7	20.4	145 E	32	77
12 28	4 59.78	-52 30.7	0.269	1.071	63.9	17.0	102 E	—	63	9 3	19 43.40	-14 28.3	2.022	2.821	14.8	20.5	134 E	31	78
12 29	5 2.88	-52 8.1	0.279	1.077	63.1	17.0	102 E	—	64	9 13	19 40.72	-15 24.0	2.099	2.789	17.4	20.7	124 E	30	79
12 30	5 5.73	-51 46.1	0.290	1.084	62.4	17.1	102 E	—	64	9 23	19 40.74	-16 11.8	2.188	2.756	19.4	20.8	114 E	29	80
12 31	5 8.37	-51 24.6	0.301	1.090	61.6	17.2	103 E	—	65	10 3	19 43.39	-16 50.7	2.286	2.723	20.8	20.9	105 E	28	81
1 1	5 10.82	-51 3.5	0.311	1.097	60.9	17.2	103 E	—	65	10 13	19 48.52	-17 20.0	2.389	2.688	21.7	21.0	96 E	28	81*
1 3	5 15.27	-50 22.5	0.332	1.110	59.5	17.4	104 E	—	66	10 23	19 55.91	-17 39.4	2.494	2.653	22.0	21.1	88 E	27	77*
1 5	5 19.22	-49 42.5	0.354	1.123	58.1	17.5	104 E	—	66	11 2	20 5.28	-17 48.7	2.596	2.617	21.9	21.1	80 E	27	70*
1 7	5 22.79	-49 3.3	0.375	1.137	56.8	17.6	105 E	—	67	11 12	20 16.41	-17 47.7	2.695	2.581	21.5	21.2	73 E	27*	62*
1 9	5 26.06	-48 24.7	0.395	1.151	55.6	17.7	105 E	—	68	11 22	20 29.05	-17 36.3	2.786	2.544	20.7	21.2	66 E	27*	54*
1 11	5 29.10	-47 46.3	0.416	1.165	54.5	17.8	105 E	—	68	12 2	20 42.97	-17 14.6	2.870	2.506	19.7	21.2	59 E	27*	47*
1 13	5 31.96	-47 8.0	0.437	1.180	53.4	17.9	106 E	—	69	12 12	20 58.00	-16 42.5	2.944	2.468	18.4	21.2	52 E	26*	39*
1 15	5 34.69	-46 29.8	0.457	1.194	52.3	18.0	106 E	—	70	12 22	21 13.97	-16 0.4	3.008	2.430	16.9	21.1	46 E	25*	32*
1 17	5 37.31	-45 51.6	0.478	1.209	51.3	18.1	106 E	—	70	1 1	21 30.72	-15 8.5	3.061	2.391	15.3	21.1	40 E	25*	26*
1 19	5 39.86	-45 13.1	0.498	1.224	50.3	18.2	107 E	—	71	1 11	21 48.16	-14 7.1	3.101	2.352	13.5	21.0	34 E	20*	21*
1 21	5 42.35	-44 34.5	0.519	1.239	49.4	18.3	107 E	—	71	1 21	22 6.17	-12 56.8	3.130	2.312	11.7	20.9	28 E	17*	16*
510013 2009 YZ₁										86878 2000 HD₂₄									
5 16	20 23.71	-16 14.8	1.738	2.299	24.3	21.4	111 W	28*	80	5 16	21 0.28	-6 44.4	1.552	1.986	30.2	21.3	99 W	34*	71
5 21	20 27.45	-16 50.7	1.657	2.275	23.8	21.3	115 W	27*	81	5 26	21 6.71	-4 59.3	1.393	1.945	29.9	21.1	107 W	38*	69
5 26	20 30.72	-17 33.3	1.579	2.252	23.2	21.2	119 W	27*	82	6 5	21 10.64	-3 10.2	1.238	1.899	29.1	20.7	115 W	41*	67
5 31	20 33.47	-18 23.3	1.504	2.229	22.3	21.0	123 W	26*	82	6 15	21 11.35	-1 18.4	1.089	1.848	27.5	20.3	123 W	44*	65
6 5	20 35.64	-19 21.8	1.431	2.205	21.3	20.8	128 W	26*	83	6 25	21 7.98	+0 34.3	0.949	1.793	25.1	19.9	132 W	46	63
6 10	20 37.18	-20 29.3	1.362	2.182	20.0	20.7	133 W	25	84	7 5	20 59.41	+2 24.4	0.822	1.733	21.8	19.4	141 W	47	62
6 15	20 38.01	-21 46.5	1.298	2.158	18.5	20.5	137 W	23	86	7 10	20 52.78	+3 16.4	0.764	1.701	19.9	19.2	145 W	48	61
6 25	20 37.35	-24 51.4	1.182	2.112	15.0	20.1	148 W	20	89	7 15	20 44.41	+4 4.6	0.710	1.668	18.0	18.9	150 W	49	60
7 5	20 33.29	-28 35.4	1.089	2.065	10.9	19.7	157 W	16	87	7 20	20 34.21	+4 47.4	0.661	1.633	16.5	18.7	153 W	50	59
7 15	20 25.63	-32 48.5	1.021	2.019	7.8	19.4	164 W	12	83	7 25	20 22.17	+5 23.0	0.618	1.597	15.7	18.4	155 W	50	59
7 20	20 20.57	-35 0.1	0.997	1.996	7.7	19.3	165 W	10	81	7 30	20 8.39	+5 49.2	0.580	1.560	16.2	18.3	155 E	51	58
7 25	20 14.84	-37 11.0	0.980	1.973	8.9	19.3	163 E	8	79	8 4	19 53.08	+6 3.8	0.549	1.521	18.3	18.2	152 E	51	58
7 30	20 8.63	-39 17.7	0.970	1.950	11.0	19.4	158 E	6	77	8 9	19 36.64	+6 5.1	0.523	1.480	21.8	18.1	147 E	51	58
8 4	20 2.16	-41 17.4	0.967	1.928	13.6	19.4	153 E	4	75	8 14	19 19.60	+5 52.1	0.503	1.439	26.3	18.1	141 E	51	58
8 9	19 55.72	-43 7.3	0.969	1.906	16.4	19.5	148 E	2	73	8 19	19 2.57	+5 25.3	0.488	1.395	31.5	18.1	134 E	50	59
8 14	19 49.65	-44 45.9	0.977	1.884	19.1	19.6	142 E	—	71	8 24	18 46.08	+4 46.2	0.477	1.351	37.0	18.1	127 E	50	59
8 19	19 44.26	-46 12.1	0.989	1.863	21.7	19.7	137 E	—	70	8 29	18 30.56	+3 56.7	0.470	1.304	42.6	18.2	119 E	49	60
8 24	19 39.83	-47 25.9	1.006	1.841	24.1	19.8	132 E	—	69	9 3	18 16.30	+2 59.1	0.465	1.256	48.4	18.2	111 E	48	61
8 29	19 36.58	-48 27.7	1.026	1.821	26.4	19.9	127 E	—	68	9 8	18 3.42	+1 55.9	0.462	1.207	54.1	18.3	104 E	47*	62
9 3	19 34.70	-49 18.4	1.048	1.800	28.3	19.9	122 E	—	67	9 13	17 51.85	+0 48.8	0.459	1.155	59.8	18.4	97 E	46*	63
9 8	19 34.32	-49 58.7	1.073	1.780	30.1	20.0	118 E	—	66	9 18	17 41.36	+0 20.5	0.455	1.103	65.7	18.4	90 E	44*	64*
9 13	19 35.50	-50 29.8	1.099	1.761	31.6	20.1	113 E	—	66	9 23	17 31.54	-1 31.6	0.450	1.048	71.8	18.5	83 E	41*	62*
9 18	19 38.27	-50 52.5	1.127	1.742	32.9	20.1	110 E	—	65	10 3	17 11.71	-4 0.2	0.433	0.936	85.6	18.6	69 E	36*	54*
9 23	19 42.56	-51 7.5	1.154	1.724	34.1	20.2	106 E	—	65	10 13	16 46.17	-6 44.6	0.409	0.820	103.5	19.0	53 E	28*	41*
9 28	19 48.33	-51 15.2	1.182	1.706	35.0	20.3	102 E	—	65	10 23	16 5.57	-9 54.0	0.388	0.704	129.0	20.4	33 E	17*	24*
10 3	19 55.47	-51 15.9	1.210	1.689	35.8	20.3	109 E	—	65	10 28	15 37.47	-11 33.5	0.387	0.650	145.6	22.3	22 E	10*	13*
10 8	20 3.92	-51 9.5	1.237	1.673	36.4	20.4	96 E	—	65	11 2	15 5.84	-13 5.4	0.400	0.601	164.6	27.5	9 E	1*	—
10 13	20 13.54	-50 56.1	1.264	1.658	36.9	20.4	94 E	—	65	11 7	14 35.17	-14 20.7	0.434	0.559	173.5	36.8	4 W	—	—
10 18	20 24.21	-50 35.7	1.290	1.643	37.3	20.4	91 E	—	65	11 12	14 10.81	-15 19.5	0.489	0.529	153.1	23.7	14 W	5*	5*
10 23	20 35.80	-50 7.9	1.316	1.630	37.6	20.5	89 E	—	66*	11 17	13 56.13	-16 11.4	0.564	0.513	133.2	20.9	22 W	10*	13*
10 28	20 48.16	-49 32.5	1.340	1.617	37.8	20.5	86 E	—	66*	11 22	13 51.30	-17 5.2	0.652	0.515	115.2	19.7	28 W	14*	18*
11 2	21 1.18	-48 49.3	1.364	1.605	38.0	20.5	84 E	—	67*	11 24	13 51.73	-17 28.2	0.689	0.521	108.7	19.5	30 W	15*	20*
11 7	21 14.73	-47 58.0	1.387	1.594	38.0	20.6	82 E	—	67*	11 26	13 53.27	-17 52.0	0.726	0.529	102.6	19.3	32 W	16*	21*
11 12	21 28.69	-46 58.5	1.410	1.585	38.0	20.6	81 E	—	67*	11 28	13 55.74	-18 16.3	0.764	0.539	96.9	19.2	33 W	16*	22*
11 17	21 42.95	-45 50.8	1.432	1.576	38.0	20.6	79 E	—	67*	11 30	13 59.00	-18 41.1	0.801	0.552	91.8	19.1	34 W	17*	23*
11 22	21 57.38	-44 34.9	1.453	1.569	37.9	20.6	77 E	—	68*	12 2	14 2.90	-19 5.9	0.837	0.566	87.0	19.0	35 W	17*	24*
11 27	22 11.90	-43 10.9	1.474	1.562	37.8	20.6	76 E	—	67*	12 7</									

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	
211206 2002 OM₂₄									528205 2008 JS₃₆									
<i>(continuation)</i>																		
6 25	21 13.19	+ 0 13.5	1.415	2.216	20.4	20.5	131 W	45 64	5 16	21 11.36	-11 16.5	1.090	1.589	39.0	21.3	98 W	29*	75
7 5	21 8.88	+ 1 14.6	1.312	2.189	17.5	20.2	140 W	46 63	5 26	21 30.29	- 9 16.2	1.017	1.586	38.5	21.2	103 W	32*	73
7 10	21 5.54	+ 1 38.1	1.267	2.175	15.8	20.1	144 W	47 62	6 5	21 47.07	- 7 19.6	0.949	1.586	37.6	21.0	108 W	35*	71
7 15	21 1.45	+ 1 55.9	1.226	2.161	14.1	19.9	149 W	47 62	6 15	22 1.28	- 5 31.9	0.885	1.589	36.0	20.8	113 W	38*	70
7 20	20 56.70	+ 2 7.4	1.191	2.146	12.5	19.8	153 W	47 62	6 25	22 12.53	- 3 58.8	0.826	1.595	33.7	20.6	120 W	41*	68
7 25	20 51.37	+ 2 12.3	1.161	2.131	10.9	19.7	157 W	47 62	7 5	22 20.40	- 2 45.9	0.774	1.604	30.6	20.4	127 W	42	67
8 4	20 39.57	+ 2 0.8	1.118	2.101	9.4	19.5	160 E	47 62	7 10	22 22.92	- 2 19.0	0.751	1.610	28.6	20.3	131 W	43	66
8 14	20 27.45	+ 1 21.8	1.098	2.069	11.0	19.5	157 E	46 63	7 15	22 24.46	- 1 59.4	0.730	1.616	26.5	20.2	135 W	43	66
8 24	20 16.65	+ 0 20.6	1.101	2.037	14.7	19.6	149 E	45 64	7 20	22 25.02	- 1 47.6	0.712	1.623	24.1	20.0	139 W	43	66
8 29	20 12.18	- 0 15.8	1.110	2.020	16.8	19.7	145 E	45 64	7 25	22 24.61	- 1 44.1	0.696	1.631	21.5	19.9	144 W	43	66
9 3	20 8.52	- 0 54.6	1.124	2.003	19.0	19.7	140 W	44 65	8 4	22 21.12	- 2 1.9	0.675	1.649	15.6	19.7	154 W	43	66
9 8	20 5.77	- 1 34.7	1.143	1.987	21.1	19.8	135 W	43 66	8 14	22 14.85	- 2 50.6	0.670	1.668	9.3	19.5	165 W	42	67
9 13	20 3.99	- 2 14.9	1.165	1.969	23.0	19.9	130 W	43 66	8 24	22 7.38	- 4 1.1	0.683	1.691	4.3	19.3	173 E	41	68
9 18	20 3.22	- 2 54.2	1.190	1.952	24.8	20.0	125 E	42 67	8 29	22 3.76	- 4 40.6	0.696	1.702	4.7	19.4	172 E	40	69
9 23	20 3.45	- 3 31.9	1.217	1.935	26.4	20.1	121 E	41 68	9 3	22 0.48	- 5 20.5	0.715	1.715	7.0	19.6	168 E	40	69
10 3	20 6.83	- 4 40.0	1.279	1.899	29.2	20.2	112 E	40 69	9 8	21 57.75	- 5 59.4	0.738	1.727	9.8	19.8	163 E	39	70
10 13	20 13.87	- 5 35.2	1.345	1.864	31.2	20.3	104 E	39 70	9 13	21 55.71	- 6 35.7	0.766	1.740	12.5	20.0	158 E	38	71
10 23	20 24.17	- 6 14.8	1.414	1.828	32.7	20.4	97 E	39 70*	9 18	21 54.47	- 7 8.1	0.799	1.754	15.2	20.2	153 E	38	71
11 2	20 37.28	- 6 37.7	1.483	1.791	33.6	20.5	90 E	38 67*	9 23	21 54.07	- 7 35.9	0.836	1.768	17.6	20.4	148 E	37	72
11 12	20 52.85	- 6 43.0	1.551	1.755	34.1	20.6	84 E	38 63*	10 3	21 55.82	- 8 16.1	0.921	1.796	21.7	20.7	138 E	37	72
11 22	21 10.50	- 6 30.4	1.615	1.719	34.3	20.6	79 E	38 57*	10 13	22 0.81	- 8 34.4	1.020	1.826	24.9	21.1	130 E	36	73
12 2	21 29.92	- 6 0.1	1.676	1.683	34.1	20.7	73 E	39* 52*	10 23	22 8.62	- 8 31.4	1.131	1.857	27.2	21.4	122 E	36	73
12 12	21 50.87	- 5 12.6	1.733	1.648	33.7	20.7	68 E	40* 46*	11 2	22 18.73	- 8 9.1	1.252	1.888	28.7	21.7	114 E	37	72
12 22	22 13.14	- 4 8.7	1.785	1.614	33.2	20.7	64 W	40* 40*	220839 2004 VA									
1	22 36.55	- 2 49.7	1.833	1.581	32.4	20.7	60 W	40* 35*	5 16	21 19.59	-15 38.4	1.801	2.180	27.4	21.5	98 W	24*	80
1 11	23 0.99	- 1 17.1	1.876	1.550	31.6	20.7	56 E	39* 31*	5 26	21 21.82	-15 40.0	1.728	2.241	25.6	21.4	107 W	26*	80
1 21	23 26.38	+ 0 27.0	1.915	1.521	30.6	20.6	52 E	38* 28*	6 5	21 20.84	-15 57.4	1.659	2.300	23.2	21.3	117 W	28*	80
506490 2003 UO₂₇									6 15	21 16.42	-16 31.4	1.597	2.356	20.0	21.2	127 W	28*	81
5 16	21 5.29	-30 18.3	2.054	2.511	22.9	21.5	105 W	12* 86	6 25	21 8.56	-17 20.6	1.549	2.410	16.1	21.0	139 W	28	81
5 26	21 14.95	-31 7.6	1.891	2.460	22.4	21.2	112 W	12* 85	7 5	20 57.57	-18 21.3	1.520	2.461	11.4	20.9	151 W	27	82
6 5	21 22.85	-32 13.5	1.736	2.409	21.4	21.0	120 W	11* 84	7 15	20 44.21	-19 27.5	1.516	2.510	6.4	20.7	164 W	26	83
6 15	21 28.56	-33 38.1	1.593	2.358	19.9	20.7	128 W	11* 82	7 25	20 29.72	-20 31.8	1.541	2.556	1.2	20.5	177 W	24	85
6 25	21 31.60	-35 21.8	1.464	2.306	17.9	20.4	136 W	10 81	7 30	20 22.51	-21 1.1	1.565	2.578	1.6	20.5	176 E	24	85
6 30	21 31.98	-36 20.1	1.406	2.280	16.7	20.2	140 W	9 80	8 4	20 15.55	-21 27.8	1.596	2.600	4.0	20.8	170 E	24	85
7 5	21 31.50	-37 22.1	1.352	2.253	15.5	20.1	144 W	8 79	8 9	20 9.02	-21 51.4	1.634	2.621	6.4	20.9	163 E	23	86
7 10	21 30.12	-38 26.8	1.303	2.227	14.3	19.9	147 W	7 78	8 14	20 3.06	-22 11.7	1.679	2.642	8.6	21.1	157 E	23	86
7 15	21 27.81	-39 32.9	1.260	2.201	13.2	19.8	150 W	5 76	8 19	19 57.78	-22 28.7	1.731	2.661	10.6	21.3	151 E	23	86
7 20	21 24.58	-40 38.8	1.221	2.175	12.4	19.7	153 W	4 75	8 24	19 53.24	-22 42.6	1.788	2.681	12.4	21.4	145 E	22	87
7 25	21 20.48	-41 42.6	1.188	2.149	11.9	19.6	154 W	3 74	306703 2000 WT									
7 30	21 15.58	-42 42.4	1.161	2.122	11.9	19.5	155 W	2 73	5 16	21 24.45	-30 48.7	2.263	2.648	22.0	21.4	101 W	10*	85
8 4	21 10.02	-43 36.3	1.139	2.096	12.5	19.4	154 W	1 72	5 26	21 30.31	-30 33.0	2.111	2.621	21.4	21.2	109 W	12*	85
8 9	21 3.99	-44 22.3	1.122	2.070	13.5	19.4	151 E	1 72	6 5	21 33.68	-30 25.0	1.965	2.593	20.3	20.9	117 W	13*	86
8 14	20 57.75	-44 58.7	1.111	2.044	15.0	19.4	149 E	1 71	6 15	21 34.14	-30 24.4	1.829	2.565	18.6	20.7	126 W	14*	86
8 19	20 51.59	-45 24.7	1.104	2.018	16.7	19.4	145 E	1 70	6 25	21 31.32	-30 29.5	1.705	2.536	16.2	20.5	136 W	15	86
8 24	20 45.80	-45 39.6	1.103	1.993	18.6	19.5	141 E	1 70	7 5	21 25.02	-30 36.8	1.598	2.506	13.1	20.2	146 W	14	85
8 29	20 40.64	-45 43.4	1.105	1.967	20.5	19.5	137 E	1 70	7 10	21 20.55	-30 39.6	1.552	2.491	11.4	20.0	151 W	14	85
9 3	20 36.35	-45 36.5	1.111	1.942	22.5	19.5	133 E	1 70	7 15	21 15.25	-30 40.7	1.511	2.476	9.5	19.9	156 W	14	85
9 8	20 33.13	-45 19.6	1.120	1.917	24.3	19.6	128 E	1 71	7 20	21 9.23	-30 39.0	1.477	2.460	7.7	19.8	161 W	14	85
9 13	20 31.10	-44 53.5	1.133	1.892	26.1	19.6	124 E	1 71	7 25	21 2.61	-30 33.8	1.449	2.445	6.2	19.6	165 W	14	85
9 18	20 30.35	-44 19.4	1.147	1.868	27.7	19.7	120 E	1 72	7 30	20 55.55	-30 24.1	1.428	2.429	5.2	19.5	167 W	15	86
9 23	20 30.88	-43 38.1	1.164	1.844	29.2	19.7	116 E	1 72	8 4	20 48.23	-30 9.5	1.413	2.413	5.4	19.5	167 E	15	86
9 28	20 32.66	-42 50.3	1.182	1.820	30.5	19.8	113 E	2 73	8 9	20 40.88	-29 49.4	1.406	2.397	6.7	19.5	164 E	15	86
10 3	20 35.64	-41 56.9	1.201	1.797	31.8	19.8	109 E	3 74	8 14	20 33.72	-29 24.0	1.405	2.380	8.5	19.6	160 E	16	87
10 8	20 39.75	-40 58.1	1.222	1.774	32.9	19.9	106 E	4 75	8 19	20 26.97	-28 53.3	1.410	2.364	10.7	19.7	154 E	16	87
10 13	20 44.92	-39 54.4	1.243	1.752	33.8	19.9	102 E	5 76	8 24	20 20.81	-28 17.9	1.422	2.348	12.8	19.8	149 E	17	88
10 18	20 51.04	-38 46.0	1.264	1.730	34.6	19.9	99 E	6 77	8 29	20 15.39	-27 38.6	1.440	2.331	14.9	19.9	144 E	17	88
10 23	20 58.01	-37 33.1	1.286	1.709	35.4	20.0	96 E	7 78	9 3	20 10.81	-26 55.9	1.463	2.314	16.9	19.9	138 E	18	89
10 28	21 5.74	-36 15.7	1.308	1.689	36.0	20.0	93 E	8 80	9 8	20 7.16	-26 10.8	1.490	2.297	18.8	20.0	133 E	19	90
11 2	21 14.15	-34 54.0	1.330	1.670	36.5	20.0	91 E	10 81*	9 13	20 4.48	-25 23.8	1.522	2.280	20.4	20.1	128 E	20	89
11 7	21 23.16	-33 27.7	1.352	1.651	36.9	20.0	88 E	12 81*	9 23	20 2.03	-23 46.5	1.596	2.246	23.3	20.3	118 E	21	88
11 12	21 32.69	-31 57.1	1.374	1.633	37.2	20.1	86 E	13 79*	10 3	20 3.24	-22 7.0	1.679	2.212	25.4	20.4	109 E	23	86
11 17	21 42.67	-30 22.2	1.397	1.616	37.4	20.1	83 E	15 77*	10 13	20 7.74	-20 26.4	1.768	2.177	26.8	20.5	100 E	25	84
11 22	21 53.04	-28 43.0	1.419	1.600	37.6	20.1	81 E	16 75*	10 23	20 15.07	-18 44.5	1.859	2.143	27.6	20.6	92 E		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
100766 1998 FX₂₄										313088 2000 UQ₂₁ (continuation)									
5 16	21 41.21	-16 56.7	3.017	3.234	18.2	21.5	93 W	21*	81	7 30	23 48.51	+ 3 11.5	0.846	1.675	28.5	19.7	128 W	48	61
5 26	21 46.05	-16 31.3	2.849	3.208	18.0	21.3	101 W	24*	81	8 4	23 52.46	+ 3 23.4	0.810	1.668	27.0	19.6	132 W	48	61
6 5	21 49.18	-16 13.7	2.685	3.182	17.4	21.2	110 W	26*	80	8 9	23 55.67	+ 3 28.0	0.777	1.662	25.1	19.4	136 W	48	61
6 15	21 50.37	-16 5.1	2.528	3.154	16.3	21.0	119 W	28*	80	8 14	23 58.08	+ 3 24.7	0.747	1.657	23.1	19.3	140 W	48	61
6 25	21 49.41	-16 6.1	2.383	3.126	14.6	20.8	129 W	29*	80	8 24	0 0.46	+ 2 53.7	0.696	1.649	18.2	18.9	149 W	48	61
7 5	21 46.18	-16 16.8	2.252	3.097	12.3	20.6	140 W	29	80	9 3	23 59.69	+ 1 51.2	0.660	1.643	12.3	18.6	160 W	47	62
7 15	21 40.65	-16 36.4	2.142	3.067	9.4	20.3	150 W	28	81	9 13	23 56.39	+ 0 23.4	0.640	1.641	5.6	18.3	171 W	45	64
7 25	21 33.04	-17 2.8	2.055	3.036	6.0	20.0	162 W	28	81	9 18	23 54.19	- 0 25.8	0.637	1.642	2.1	18.0	177 W	45	64
8 4	21 23.80	-17 32.7	1.994	3.005	2.2	19.7	173 W	27	82	9 23	23 51.88	- 1 15.9	0.639	1.643	1.4	18.0	178 E	44	65
8 9	21 18.79	-17 47.7	1.975	2.988	0.7	19.6	178 W	27	82	9 28	23 49.66	- 2 4.7	0.646	1.644	4.9	18.2	172 E	43	66
8 14	21 13.68	-18 2.1	1.963	2.972	2.1	19.7	174 E	27	82	10 3	23 47.73	- 2 50.2	0.657	1.647	8.3	18.4	166 E	42	67
8 19	21 8.58	-18 15.4	1.958	2.955	4.1	19.8	168 E	27	82	10 8	23 46.28	- 3 30.5	0.674	1.650	11.5	18.6	161 E	41	68
8 24	21 3.63	-18 27.1	1.960	2.939	6.1	19.9	162 E	27	82	10 13	23 45.46	- 4 4.0	0.694	1.654	14.6	18.8	155 E	41	68
8 29	20 58.94	-18 36.9	1.969	2.921	8.0	20.0	156 E	26	83	10 18	23 45.39	- 4 29.9	0.719	1.659	17.4	19.0	150 E	41	68
9 3	20 54.61	-18 44.6	1.984	2.904	9.9	20.0	150 E	26	83	10 23	23 46.10	- 4 47.6	0.747	1.665	19.9	19.2	145 E	40	69
9 13	20 47.45	-18 52.9	2.033	2.869	13.3	20.2	139 E	26	83	11 2	23 49.96	- 4 58.6	0.815	1.678	24.2	19.5	136 E	40	69
9 23	20 42.71	-18 51.5	2.101	2.833	16.2	20.3	128 E	26	83	11 12	23 56.94	- 4 38.7	0.896	1.694	27.9	19.8	128 E	40	69
10 3	20 40.64	-18 40.8	2.184	2.796	18.4	20.5	118 E	26	83	11 22	0 6.68	- 3 52.2	0.987	1.713	29.9	20.1	120 E	41	68
10 13	20 41.29	-18 21.1	2.278	2.759	20.1	20.6	108 E	27	82	11 27	0 12.42	- 3 20.6	1.036	1.723	30.7	20.3	117 E	42	67
10 23	20 44.52	-17 52.8	2.377	2.721	21.2	20.7	99 E	27	82	12 2	0 18.67	- 2 44.3	1.088	1.734	31.5	20.4	113 E	42	67
11 2	20 50.07	-17 16.4	2.479	2.682	21.7	20.8	91 E	28	78*	12 7	0 25.38	- 2 3.8	1.141	1.745	32.0	20.6	110 E	43	66
11 12	20 57.69	-16 31.8	2.580	2.642	21.8	20.8	83 E	28	70*	12 12	0 32.51	- 1 19.7	1.196	1.757	32.4	20.7	107 E	44	65*
11 22	21 7.11	-15 39.1	2.676	2.601	21.5	20.9	75 E	29	62*	12 17	0 40.00	- 0 32.5	1.252	1.770	32.7	20.8	104 E	44	64*
12 2	21 18.07	-14 38.1	2.767	2.560	20.9	20.9	68 E	30*	53*	12 22	0 47.80	+ 0 17.1	1.310	1.783	32.8	20.9	101 E	45	63*
12 12	21 30.36	-13 28.8	2.849	2.519	19.9	20.9	61 E	31*	45*	12 27	0 55.89	+ 1 8.7	1.370	1.796	32.8	21.0	98 E	46	61*
12 22	21 43.76	-12 11.2	2.922	2.476	18.8	20.9	54 E	30*	38*	1 1	1 4.23	+ 2 2.0	1.430	1.810	32.8	21.1	95 E	47	59*
1 1	21 58.13	-10 45.4	2.984	2.433	17.4	20.8	48 E	29*	31*	1 6	1 12.81	+ 2 56.5	1.492	1.824	32.6	21.2	93 E	48	56*
1 11	22 13.33	- 9 11.4	3.035	2.390	15.8	20.8	42 E	27*	24*	1 11	1 21.59	+ 3 51.8	1.555	1.838	32.3	21.3	90 E	49	54*
1 21	22 29.25	- 7 29.6	3.075	2.347	14.2	20.7	36 E	25*	18*	1 16	1 30.56	+ 4 47.7	1.619	1.853	32.0	21.4	87 E	50	52*
497130 2004 PC₆₇										4034 Vishnu									
5 16	21 42.95	-30 22.6	1.793	2.163	27.6	21.4	97 W	9*	86*	5 16	21 58.55	- 1 11.2	1.218	1.497	42.2	21.3	84 W	33*	65*
5 26	21 53.96	-28 52.6	1.633	2.113	27.8	21.1	104 W	12*	87	5 26	22 17.55	+ 0 49.4	1.106	1.475	43.3	21.1	88 W	36*	63
6 5	22 2.78	-27 17.0	1.477	2.063	27.4	20.8	110 W	15*	89	6 5	22 36.73	+ 2 53.0	0.991	1.447	44.5	20.9	92 W	40*	61
6 15	22 8.94	-25 34.0	1.327	2.014	26.5	20.5	118 W	18*	90	6 15	22 56.46	+ 4 59.2	0.877	1.414	45.6	20.6	96 W	44*	59
6 25	22 11.86	-23 40.6	1.186	1.965	24.7	20.2	126 W	21*	88	6 25	23 17.32	+ 7 7.5	0.763	1.374	46.7	20.3	100 W	48*	57
6 30	22 11.92	-22 38.6	1.120	1.940	23.5	20.0	130 W	22*	87	7 5	23 40.32	+ 9 18.1	0.651	1.329	48.1	19.9	103 W	52*	55
7 5	22 10.91	-21 32.1	1.057	1.916	22.0	19.8	135 W	23	86	7 10	23 53.09	+ 10 24.3	0.596	1.304	48.9	19.7	105 W	53*	54
7 10	22 8.77	-20 20.2	0.997	1.893	20.2	19.6	140 W	25	84	7 15	0 7.10	+ 11 31.0	0.543	1.277	49.9	19.5	106 W	55*	52
7 15	22 5.40	-19 2.1	0.942	1.869	18.1	19.4	145 W	26	83	7 20	0 22.81	+ 12 38.2	0.491	1.249	51.2	19.2	107 W	57*	51
7 20	22 0.80	-17 36.8	0.891	1.846	15.6	19.1	151 W	27	82	7 25	0 40.83	+ 13 45.6	0.440	1.220	52.8	19.0	107 W	58*	50
7 25	21 54.96	-16 3.5	0.846	1.823	12.9	18.9	156 W	29	80	7 30	1 2.03	+ 14 52.5	0.392	1.188	54.9	18.7	107 W	59*	49
8 4	21 39.82	-12 31.7	0.773	1.778	6.6	18.4	168 W	32	77	8 4	1 27.59	+ 15 56.7	0.347	1.156	57.9	18.5	105 W	61*	48
8 14	21 21.28	- 8 30.3	0.725	1.736	3.9	18.1	173 E	36	73	8 6	1 39.38	+ 16 20.6	0.330	1.142	59.3	18.4	104 W	61*	48
8 24	21 1.86	- 4 14.0	0.706	1.695	10.9	18.3	161 E	41	68	8 8	1 52.22	+ 16 42.8	0.314	1.129	60.9	18.3	103 W	61*	47
8 29	20 52.72	- 2 7.2	0.706	1.676	14.8	18.4	155 E	43	66	8 10	2 6.24	+ 17 2.6	0.299	1.115	62.8	18.2	102 W	61*	47
9 3	20 44.42	- 0 5.0	0.712	1.658	18.6	18.5	148 E	45	64	8 12	2 21.58	+ 17 19.0	0.284	1.101	64.9	18.2	100 W	61*	47
9 8	20 37.22	+ 1 50.7	0.724	1.640	22.2	18.6	142 E	47	62	8 14	2 38.33	+ 17 31.1	0.271	1.086	67.3	18.1	98 W	61*	46
9 13	20 31.32	+ 3 38.7	0.740	1.623	25.4	18.8	136 E	49	60	8 16	2 56.59	+ 17 37.5	0.258	1.072	69.9	18.1	96 W	61*	46
9 23	20 23.81	+ 6 50.9	0.782	1.592	30.8	19.0	126 E	52	57	8 18	3 16.39	+ 17 36.6	0.248	1.057	72.9	18.0	94 W	60*	46
10 3	20 22.00	+ 9 34.5	0.834	1.566	34.8	19.2	117 E	55	54	8 20	3 37.72	+ 17 26.7	0.238	1.042	76.1	18.0	91 W	59*	47
10 13	20 25.50	+ 11 57.0	0.892	1.543	37.6	19.4	109 E	57	52	8 22	4 0.44	+ 17 6.5	0.231	1.027	79.7	18.1	87 W	57*	47*
10 18	20 29.05	+ 13 3.1	0.921	1.534	38.6	19.5	106 E	58	51	8 24	4 24.31	+ 16 34.8	0.225	1.012	83.5	18.1	84 W	55*	47*
10 23	20 33.69	+ 14 6.9	0.951	1.526	39.4	19.6	103 E	59	50*	8 26	4 49.00	+ 15 51.0	0.222	0.996	87.4	18.2	80 W	53*	47*
10 28	20 39.33	+ 15 9.1	0.981	1.519	40.0	19.6	101 E	60	48*	8 28	5 14.07	+ 14 55.6	0.221	0.980	91.4	18.3	76 W	50*	47*
11 2	20 45.92	+ 16 10.3	1.011	1.514	40.5	19.7	98 E	61	47*	8 30	5 39.04	+ 13 50.2	0.222	0.964	95.4	18.5	72 W	47*	46*
11 7	20 53.40	+ 17 11.1	1.041	1.509	40.8	19.8	96 E	62	45*	9 1	6 3.44	+ 12 37.1	0.225	0.948	99.2	18.6	68 W	44*	45*
11 12	21 1.72	+ 18 12.0	1.070	1.507	41.0	19.8	94 E	63	43*	9 3	6 26.90	+ 11 19.3	0.231	0.932	102.8	18.8	64 W	41*	44*
11 17	21 10.83	+ 19 13.3	1.099	1.505	41.0	19.9	92 E	64	40*	9 5	6 49.12	+ 9 59.6	0.238	0.916	106.1	19.0	61 W	38*	43*
11 22	21 20.68	+ 20 15.0	1.128	1.505	41.0	20.0	90 E	65	38*	9 7	7 9.93	+ 8 40.7	0.248	0.900	109.0	19.2	58 W	36*	41*
12 2	21 42.47	+ 22 20.2	1.186	1.509	40.7	20.1	88 E	67	33*	9 9	7 29.25	+ 7 24.6	0.260	0.883	111.4	19.5	55 W	33*	39*
12 12	22 6.86	+ 24 27.4	1.245	1.519	40.2	20.2	85 E	69*	28*	9 11	7 47.11	+ 6 12.8	0.273	0.867	113.5	19.7	52 W	31*	38*
12 22	22 33.60	+ 26 35.0	1.306	1.534	39.5	20.													

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
4034 Vishnu										99761 2002 JK₁₀₁									
<i>(continuation)</i>										<i>(continuation)</i>									
12 12	14 54.60	-13 38.6	1.445	0.848	41.4	20.5	35 W	21*	20*	8 19	22 21.78	-29 10.1	2.037	3.017	5.8	20.1	162 W	16	87
12 22	15 30.77	-14 43.6	1.519	0.930	38.7	20.7	36 W	22*	22*	8 24	22 16.97	-30 2.5	2.039	3.013	6.2	20.1	161 W	15	86
1 1	16 4.72	-15 26.9	1.576	1.010	37.2	20.9	38 W	22*	25*	8 29	22 12.08	-30 50.3	2.048	3.009	7.1	20.2	158 E	14	85
1 11	16 36.64	-15 49.0	1.615	1.085	36.5	21.1	41 W	22*	28*	9 3	22 7.23	-31 32.7	2.063	3.004	8.4	20.2	154 E	13	84
1 21	17 6.68	-15 51.4	1.639	1.154	36.3	21.3	44 W	23*	32*	9 8	22 2.56	-32 9.0	2.086	2.999	9.7	20.3	150 E	13	84
6611 1993 VW										387514 1999 RM₁₉₀									
5 16	22 3.27	-2 31.2	2.182	2.293	26.0	21.5	83 W	32*	66*	5 16	22 29.67	-10 45.6	1.500	1.656	36.9	21.5	80 W	21*	71*
5 26	22 9.76	-1 12.5	2.080	2.325	25.8	21.4	91 W	35*	65	5 26	22 52.40	-8 41.5	1.412	1.643	37.8	21.3	84 W	24*	72*
6 5	22 14.08	0 2.0	1.976	2.354	25.2	21.3	99 W	40*	64	6 5	23 14.32	-6 37.6	1.327	1.633	38.4	21.2	87 W	27*	71*
6 15	22 15.92	+0 57.8	1.872	2.380	24.0	21.2	107 W	43*	63	6 15	23 35.26	-4 37.0	1.245	1.625	38.7	21.1	91 W	31*	69
6 25	22 15.02	+1 43.9	1.772	2.404	22.2	21.0	116 W	46*	62	6 25	23 55.03	-2 42.6	1.166	1.620	38.6	20.9	96 W	35*	67
7 5	22 11.15	+2 13.0	1.681	2.426	19.7	20.8	126 W	47	62	7 5	0 13.41	0 57.3	1.090	1.617	38.2	20.8	100 W	39*	65
7 15	22 4.24	+2 21.9	1.604	2.446	16.5	20.7	137 W	47	62	7 15	0 30.03	+0 35.6	1.018	1.618	37.3	20.6	105 W	43*	63
7 25	21 54.53	+2 7.7	1.544	2.463	12.8	20.5	148 W	47	62	7 25	0 44.48	+1 53.2	0.950	1.621	35.8	20.4	111 W	46*	62
8 4	21 42.64	+1 30.1	1.508	2.478	8.8	20.3	158 W	47	62	8 4	0 56.29	+2 52.8	0.887	1.626	33.6	20.2	117 W	48	61
8 14	21 29.58	+0 31.2	1.498	2.490	6.0	20.1	165 E	46	63	8 14	1 4.83	+3 31.7	0.829	1.635	30.6	20.0	125 W	49	60
8 19	21 23.03	0 4.5	1.504	2.496	5.9	20.1	165 E	45	64	8 24	1 9.59	+3 48.2	0.780	1.646	26.6	19.7	133 W	49	60
8 24	21 16.70	0 43.1	1.516	2.500	6.8	20.2	163 W	44	65	9 3	1 10.20	+3 42.1	0.740	1.659	21.6	19.5	143 W	49	60
8 29	21 10.73	1 23.6	1.536	2.505	8.4	20.3	159 W	44	65	9 13	1 6.67	+3 15.1	0.714	1.675	15.7	19.2	153 W	48	61
9 3	21 5.25	2 4.9	1.563	2.508	10.2	20.4	154 E	43	66	9 18	1 3.56	+2 55.6	0.707	1.684	12.4	19.1	159 W	48	61
9 8	21 0.40	2 46.2	1.596	2.512	12.1	20.5	149 E	42	67	9 23	0 59.76	+2 33.6	0.704	1.693	9.0	19.0	165 W	48	61
9 13	20 56.25	3 26.5	1.635	2.514	13.9	20.7	143 E	42	67	9 28	0 55.48	+2 10.2	0.706	1.703	5.6	18.8	171 W	47	62
9 18	20 52.87	4 4.9	1.679	2.516	15.6	20.8	138 E	41	68	10 3	0 50.93	+1 46.9	0.713	1.713	2.5	18.7	176 W	47	62
9 23	20 50.28	4 41.0	1.729	2.518	17.1	20.9	132 E	40	69	10 8	0 46.37	+1 25.2	0.725	1.723	2.7	18.8	175 E	46	63
9 28	20 48.48	5 14.2	1.782	2.519	18.5	21.0	127 E	40	69	10 13	0 42.06	+1 6.4	0.743	1.734	5.7	19.0	170 E	46	63
10 3	20 47.47	5 44.3	1.839	2.519	19.6	21.1	122 E	39	70	10 18	0 38.22	+0 51.7	0.766	1.746	8.9	19.2	164 E	46	63
10 8	20 47.22	6 11.1	1.899	2.519	20.6	21.2	117 E	39	70	10 23	0 35.02	+0 41.9	0.793	1.757	11.9	19.4	159 E	46	63
10 13	20 47.71	6 34.3	1.961	2.518	21.5	21.3	113 E	38	71	11 2	0 30.98	+0 38.7	0.862	1.782	17.3	19.8	148 E	46	63
10 18	20 48.89	6 54.0	2.025	2.516	22.1	21.4	108 E	38	71	11 12	0 30.44	+0 57.8	0.948	1.808	21.6	20.2	138 E	46	63
10 23	20 50.71	7 10.1	2.091	2.515	22.6	21.5	103 E	38	71	11 22	0 33.35	+1 37.7	1.047	1.835	24.9	20.6	129 E	47	62
436761 2012 DN										31318 1998 GQ₁₀									
5 16	22 15.48	+0 43.6	1.382	1.552	39.8	21.3	79 W	33*	62*	5 16	22 37.14	-3 6.7	3.319	3.217	17.7	21.5	75 W	27*	63*
5 26	22 46.75	+2 28.1	1.237	1.468	42.9	21.1	81 W	34*	61*	5 26	22 44.61	-2 11.7	3.152	3.190	18.4	21.4	83 W	30*	66*
6 5	23 22.29	+4 14.3	1.105	1.383	46.5	20.8	81 W	35*	60*	6 5	22 50.95	-1 22.0	2.981	3.161	18.7	21.2	91 W	34*	65
6 15	0 3.27	+5 56.8	0.989	1.299	50.5	20.5	81 W	36*	58*	6 15	22 55.96	-0 39.2	2.811	3.132	18.7	21.1	99 W	38*	65
6 25	0 50.69	+7 26.9	0.895	1.217	55.0	20.3	79 W	36*	56*	6 25	22 59.43	-0 5.1	2.644	3.101	18.2	20.9	107 W	42*	64
6 30	1 16.96	+8 3.7	0.857	1.178	57.4	20.2	77 W	36*	55*	7 5	23 1.15	+0 18.4	2.483	3.070	17.3	20.7	116 W	45*	64
7 5	1 44.81	+8 32.8	0.827	1.139	59.8	20.1	76 W	35*	55*	7 15	23 0.92	+0 29.2	2.331	3.038	15.8	20.5	126 W	45	64
7 10	2 14.00	+8 52.5	0.805	1.103	62.1	20.1	73 W	35*	54*	7 25	22 58.57	+0 25.4	2.193	3.004	13.7	20.3	136 W	45	64
7 15	2 44.15	+9 1.9	0.791	1.068	64.3	20.0	71 W	34*	53*	8 4	22 54.09	+0 5.5	2.073	2.970	11.0	20.0	146 W	45	64
7 20	3 14.78	+9 0.6	0.786	1.035	66.2	20.0	69 W	33*	52*	8 14	22 47.59	+0 31.0	1.975	2.935	7.7	19.8	157 W	44	65
7 25	3 45.38	+8 49.3	0.789	1.005	67.7	20.0	66 W	32*	51*	8 24	22 39.51	+1 22.7	1.903	2.899	4.2	19.5	168 W	44	65
7 30	4 15.48	+8 29.5	0.800	0.979	68.8	20.0	64 W	31*	49*	9 3	22 30.50	-2 26.3	1.858	2.862	2.4	19.3	173 E	43	66
8 4	4 44.64	+8 3.1	0.818	0.956	69.3	20.0	62 W	30*	48*	9 8	22 25.90	-3 1.0	1.847	2.844	3.6	19.3	170 E	42	67
8 9	5 12.59	+7 32.1	0.842	0.937	69.2	20.0	60 W	29*	47*	9 13	22 21.42	-3 36.5	1.842	2.825	5.5	19.4	164 E	41	68
8 14	5 39.15	+6 58.5	0.872	0.923	68.6	20.0	58 W	29*	45*	9 18	22 17.16	-4 12.1	1.845	2.805	7.4	19.5	159 E	41	68
8 19	6 4.28	+6 23.8	0.906	0.914	67.6	20.1	57 W	29*	44*	9 23	22 13.24	-4 46.9	1.854	2.786	9.4	19.6	153 E	40	69
8 24	6 27.99	+5 49.1	0.942	0.910	66.1	20.1	55 W	29*	43*	9 28	22 9.75	-5 20.2	1.870	2.766	11.3	19.7	147 E	40	69
9 3	7 11.47	+4 41.7	1.020	0.918	62.5	20.2	54 W	29*	41*	10 3	22 6.76	-5 51.5	1.891	2.746	13.1	19.7	142 E	39	70
9 13	7 50.24	+3 37.8	1.096	0.946	58.5	20.3	53 W	30*	40*										
9 23	8 24.91	+2 37.6	1.167	0.991	54.7	20.4	54 W	32*	40*										
10 3	8 56.01	+1 40.7	1.227	1.051	51.4	20.6	55 W	34*	40*										
10 13	9 23.86	+0 48.0	1.274	1.121	48.7	20.7	58 W	37*	40*										
10 23	9 48.72	+0 1.2	1.307	1.197	46.6	20.8	61 W	39*	42*										
11 2	10 10.78	+0 37.3	1.325	1.278	44.8	21.0	65 W	41*	44*										
11 12	10 30.07	+1 4.7	1.329	1.362	43.2	21.1	70 W	43*	47*										
11 22	10 46.59	+1 17.4	1.318	1.446	41.5	21.1	76 W	44*	51*										
12 2	11 0.22	+1 11.7	1.296	1.531	39.7	21.2	83 W	44	55*										
12 12	11 10.71	+0 43.1	1.264	1.615	37.6	21.2	91 W	44	59*										
12 22	11 17.76	+0 13.0	1.226	1.698	34.8	21.1	100 W	45	62*										
1 1	11 21.01	+1 41.0	1.186	1.779	31.3	21.1	110 W	47	62										
1 11	11 20.11	+3 44.0	1.149	1.859	27.0	21.0	121 W	49	60										
1 21	11 14.98	+6 20.7	1.123	1.936	21.7	20.8	133 W	51	58										
99761 2002 JK₁₀₁																			
5 16	22 24.18	-16 27.1	2.999	3.051	19.2	21.5	83 W	17*	76*										
5 26	22 31.93	-16 46.4	2.857	3.052	19.4	21.4	91 W	19*	81*										
6 5	22 38.27	-17 19.7	2.714	3.051	19.1	21.3	100 W	21*	81										
6 15	22 42.95	-18 8.9	2.575	3.050	18.4	21.1	108 W	23*	82										
6 25	22 45.76	-19 15.3	2.444	3.047	17.2	21.0	117 W	24*	83										
7 5	22 46.46	-20 39.5	2.324	3.044	15.5	20.8	127 W	24*	85										
7 15	22 44.86	-22 20.2	2.220	3.040	13.3	20.6	137 W	23	86										
7 25	22 40.86	-24 13.8	2.136	3.035	10.7	20.4	146 W	21	88										
7 30	22 38.00	-25 13.8	2.102	3.032	9.3	20.3	151 W	20	89										
8 4	22 34.59	-26 14.5	2.076	3.028	8.0	20.3	155 W	19	90										

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
31318 1998 GQ₁₀ (continuation)										162913 2001 MT₁₈									
10 13	22 2.58	6 45.4	1.949	2.706	16.3	19.9	131 E	38	71	5 26	0 46.01	+45 49.1	0.217	0.883	121.1	19.5	48 W	41*	11*
10 23	22 1.02	7 25.6	2.023	2.665	18.8	20.0	120 E	38	71	5 28	0 24.21	+45 58.7	0.213	0.902	115.8	19.2	53 W	46*	14*
11 2	22 2.12	7 50.6	2.108	2.623	20.8	20.1	110 E	37	72	5 30	0 2.26	+45 52.0	0.210	0.921	110.6	18.8	58 W	50*	16*
11 12	22 5.78	8 0.2	2.200	2.580	22.1	20.2	101 E	37	72*	6 1	23 40.47	+45 29.2	0.208	0.939	105.3	18.6	63 W	55*	18*
11 22	22 11.79	7 54.5	2.295	2.537	22.9	20.3	92 E	37	69*	6 3	23 19.09	+44 51.1	0.206	0.958	100.1	18.3	68 W	60*	19*
12 2	22 19.89	7 34.5	2.389	2.493	23.2	20.4	84 E	37	62*	6 5	22 58.34	+43 58.6	0.206	0.976	94.9	18.1	73 W	64*	20
12 12	22 29.84	7 1.0	2.479	2.448	23.0	20.4	77 E	38	55*	6 7	22 38.36	+42 52.9	0.206	0.995	89.8	17.9	79 W	68*	21
12 22	22 41.39	6 14.8	2.564	2.403	22.5	20.4	69 E	38	48*	6 9	22 19.28	+41 35.3	0.206	1.013	84.8	17.8	84 W	73*	22
1	22 54.33	5 17.1	2.641	2.357	21.7	20.4	63 E	39*	41*	6 11	22 1.15	+40 7.2	0.207	1.031	79.8	17.6	89 W	77*	24
1 11	23 8.51	4 8.8	2.709	2.310	20.7	20.4	56 E	37*	34*	6 13	21 44.00	+38 29.9	0.209	1.049	75.0	17.5	94 W	80*	26
1 21	23 23.77	2 51.0	2.768	2.264	19.4	20.4	50 E	35*	29*	6 15	21 27.84	+36 44.8	0.212	1.067	70.3	17.4	98 W	81*	27
412869 2014 QP₂										100756 1998 FM₅									
5 16	22 39.51	7 27.2	1.630	1.705	35.2	21.5	76 W	23*	67*	5 26	1 4.32	+6 21.1	2.985	2.418	18.0	21.4	47 W	14*	40*
5 26	22 57.80	5 22.2	1.567	1.729	35.4	21.4	81 W	26*	68*	6 5	1 20.56	+7 35.5	2.828	2.358	20.1	21.3	53 W	18*	44*
6 5	23 14.30	3 24.3	1.503	1.756	35.2	21.4	86 W	30*	67*	6 15	1 37.16	+8 46.1	2.664	2.297	22.1	21.2	58 W	22*	47*
6 15	23 28.82	1 36.2	1.437	1.784	34.7	21.3	92 W	34*	66	6 25	1 54.17	+9 51.5	2.495	2.233	24.0	21.1	63 W	27*	49*
6 25	23 41.12	0 0.6	1.371	1.813	33.7	21.2	98 W	39*	64	7 5	2 11.65	+10 50.7	2.323	2.168	25.9	20.9	69 W	33*	51*
7 5	23 50.92	+1 20.2	1.306	1.844	32.3	21.1	104 W	43*	63	7 15	2 29.64	+11 42.0	2.148	2.101	27.7	20.7	74 W	38*	51*
7 15	23 57.85	+2 23.4	1.242	1.877	30.2	20.9	112 W	47*	62	7 25	2 48.21	+12 23.7	1.972	2.033	29.3	20.5	79 W	44*	51*
7 25	0 1.56	+3 6.1	1.183	1.910	27.3	20.8	120 W	48	61	8 4	3 7.45	+12 53.8	1.798	1.962	30.9	20.3	84 W	49*	51*
8 4	0 1.81	+3 26.2	1.132	1.944	23.7	20.6	130 W	48	61	8 14	3 27.44	+13 9.5	1.626	1.891	32.4	20.0	88 W	53*	51
8 14	23 58.48	+3 21.8	1.092	1.978	19.2	20.4	140 W	48	61	8 19	3 37.74	+13 11.1	1.542	1.854	33.1	19.9	91 W	54*	51
8 24	23 51.91	+2 53.4	1.067	2.013	14.0	20.3	151 W	48	61	8 24	3 48.27	+13 7.9	1.459	1.818	33.7	19.7	93 W	56*	51
8 29	23 47.65	+2 31.2	1.062	2.031	11.1	20.2	157 W	48	61	8 29	3 59.07	+12 59.4	1.378	1.781	34.4	19.6	95 W	57*	51
9 3	23 42.90	+2 4.5	1.062	2.049	8.2	20.1	163 W	47	62	9 3	4 10.13	+12 45.1	1.298	1.743	35.0	19.4	97 W	57*	51
9 8	23 37.86	+1 34.5	1.068	2.067	5.3	20.0	169 W	47	62	9 8	4 21.49	+12 24.3	1.220	1.706	35.6	19.3	99 W	57*	51
9 13	23 32.71	+1 2.3	1.080	2.084	2.6	19.8	175 W	46	63	9 13	4 33.17	+11 56.4	1.144	1.668	36.2	19.1	102 W	57	52
9 18	23 27.67	+0 29.2	1.099	2.102	2.0	19.9	176 E	45	64	9 18	4 45.22	+11 20.5	1.071	1.630	36.8	18.9	103 W	56	53
9 23	23 22.90	+0 3.4	1.123	2.120	4.3	20.1	171 E	45	64	9 23	4 57.67	+10 35.9	1.000	1.592	37.5	18.7	105 W	56	53
9 28	23 18.56	+0 34.5	1.154	2.138	7.0	20.3	165 E	44	65	9 28	5 10.59	+9 41.6	0.932	1.554	38.1	18.5	107 W	55	54
10 3	23 14.78	+1 3.0	1.190	2.155	9.5	20.5	159 E	44	65	10 3	5 24.02	+8 36.6	0.867	1.516	38.8	18.3	108 W	54	55
10 8	23 11.67	+1 28.1	1.233	2.173	11.9	20.7	153 E	44	65	10 8	5 38.02	+7 19.8	0.806	1.478	39.6	18.1	109 W	52	57
10 13	23 9.30	+1 49.3	1.280	2.191	14.0	20.8	148 E	43	66	10 13	5 52.69	+5 50.2	0.747	1.440	40.5	18.0	110 W	51	58
10 18	23 7.70	+2 6.0	1.333	2.208	15.9	21.0	143 E	43	66	10 18	6 8.13	+4 6.8	0.692	1.403	41.5	17.8	111 W	49	60
10 23	23 6.86	+2 18.2	1.390	2.226	17.7	21.2	137 E	43	66	10 23	6 24.46	+2 8.8	0.642	1.366	42.7	17.6	111 W	47	62
10 28	23 6.77	+2 25.7	1.451	2.243	19.1	21.3	132 E	43	66	11 2	7 0.35	-2 33.4	0.553	1.294	45.9	17.2	111 W	42	67
11 2	23 7.41	+2 28.7	1.516	2.260	20.4	21.5	127 E	43	66	11 12	7 41.48	-8 13.2	0.482	1.226	50.2	16.9	108 W	37	72
509871 2009 BX₂										100756 1998 FM₅									
5 16	23 11.42	8 55.1	2.102	1.993	28.4	21.4	70 W	17*	63*	11 22	8 29.11	-14 29.1	0.430	1.163	55.8	16.7	103 W	31	78
5 26	23 32.76	7 47.2	1.964	1.947	30.0	21.2	74 W	19*	66*	11 27	8 55.57	-17 37.8	0.412	1.135	58.8	16.7	100 W	27	82
6 5	23 54.46	6 43.3	1.829	1.903	31.5	21.1	78 W	21*	68*	12 2	9 23.70	-20 37.3	0.399	1.109	62.0	16.6	97 W	24	84*
6 15	0 16.50	5 45.8	1.698	1.860	32.8	20.9	82 W	24*	69*	12 7	9 53.24	-23 19.7	0.390	1.085	65.0	16.6	94 W	22	85*
6 25	0 38.89	4 56.9	1.572	1.819	33.9	20.7	86 W	27*	69*	12 12	10 23.83	-25 37.9	0.385	1.064	67.8	16.6	91 W	19	84*
7 5	1 1.60	4 19.1	1.453	1.779	34.8	20.5	90 W	31*	68	12 17	10 54.94	-27 27.1	0.385	1.046	70.2	16.7	88 W	18	82*
7 15	1 24.52	3 55.1	1.340	1.742	35.6	20.3	94 W	34*	68	12 22	11 25.99	-28 45.0	0.388	1.031	72.1	16.7	86 W	16	80*
7 25	1 47.50	3 47.6	1.235	1.708	36.1	20.1	98 W	37*	68	12 27	11 56.36	-29 32.0	0.393	1.020	73.5	16.8	84 W	15	78*
8 4	2 10.29	3 58.6	1.139	1.676	36.3	19.9	102 W	39*	68	1 1	12 25.52	-29 50.4	0.401	1.013	74.3	16.8	83 W	15	76*
8 14	2 32.53	4 29.9	1.050	1.648	36.2	19.7	106 W	40*	68	1 6	12 53.08	-29 43.6	0.411	1.010	74.5	16.9	82 W	15	76*
8 24	2 53.76	5 21.7	0.971	1.624	35.8	19.5	110 W	40*	69	1 11	13 18.79	-29 15.7	0.422	1.011	74.2	16.9	81 W	16	75*
9 3	3 13.41	6 33.0	0.901	1.604	35.0	19.2	114 W	38	71	1 16	13 42.55	-28 30.8	0.433	1.016	73.4	17.0	82 W	16	75*
9 8	3 22.43	7 15.1	0.869	1.595	34.5	19.1	116 W	38	71	1 21	14 4.34	-27 32.7	0.445	1.024	72.2	17.0	82 W	17	76*
9 13	3 30.79	8 0.6	0.839	1.588	33.8	19.0	118 W	37	72										
9 18	3 38.41	8 48.8	0.811	1.582	33.1	18.9	121 W	36	73										
9 23	3 45.21	9 38.5	0.786	1.577	32.2	18.8	123 W	35	74										
9 28	3 51.09	10 28.7	0.763	1.573	31.3	18.7	125 W	35	74										
10 3	3 55.97	11 18.0	0.742	1.570	30.2	18.6	128 W	34	75										
10 8	3 59.77	12 4.9	0.724	1.569	29.0	18.5	130 W	33	76										
10 13	4 2.46	12 47.3	0.708	1.569	27.7	18.5	133 W	32	77										
10 18	4 4.04	13 23.4	0.695	1.570	26.3	18.4	136 W	32	77										
10 23	4 4.52	13 51.3	0.684	1.572	25.0	18.3	138 W	31	78										
10 28	4 3.95	14 9.0	0.676	1.576	23.6	18.2	141 W	31	78										
11 2	4 2.44	14 15.0	0.672	1.581	22.3	18.2	143 W	31	78										
11 7	4 0.14	14 7.4	0.670	1.587	21.1	18.2	145 W												

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
302311 2002 AA										202435 2005 XH₈ (continuation)									
5 26	1 5.60	+9 56.2	1.166	0.860	57.7	21.5	46 W	16*	37*	6 3	3 2.15	+3 50.0	0.777	0.527	100.3	19.6	31 W	—	24*
5 31	1 28.47	+13 4.3	1.183	0.843	57.1	21.5	44 W	17*	35*	6 5	3 4.11	+2 28.8	0.811	0.553	94.2	19.5	33 W	—	27*
6 5	1 51.86	+16 2.1	1.204	0.829	56.3	21.4	43 W	18*	32*	6 7	3 6.58	+1 22.4	0.844	0.580	88.9	19.5	35 W	—	28*
6 10	2 15.80	+18 46.8	1.229	0.817	55.1	21.4	41 W	19*	30*	6 9	3 9.44	+0 28.2	0.876	0.608	84.2	19.5	37 W	—	30*
6 15	2 40.27	+21 15.9	1.257	0.808	53.7	21.4	40 W	20*	28*	6 11	3 12.59	+0 16.1	0.908	0.636	80.1	19.5	38 W	—	32*
6 20	3 5.23	+23 27.4	1.288	0.803	52.1	21.4	39 W	20*	25*	6 13	3 15.93	+0 52.3	0.938	0.665	76.5	19.5	40 W	—	33*
6 25	3 30.60	+25 19.6	1.321	0.801	50.3	21.4	37 W	21*	23*	6 15	3 19.41	+1 22.1	0.968	0.693	73.3	19.6	41 W	—	35*
6 30	3 56.26	+26 51.3	1.355	0.802	48.3	21.4	36 W	21*	21*	6 17	3 22.97	+1 46.6	0.996	0.722	70.5	19.7	42 W	—	36*
7 5	4 22.04	+28 2.1	1.390	0.807	46.3	21.4	35 W	21*	20*	6 19	3 26.59	+2 6.9	1.022	0.750	68.0	19.7	43 W	—	37*
7 10	4 47.75	+28 51.9	1.426	0.816	44.3	21.4	34 W	22*	18*	6 21	3 30.23	+2 23.8	1.048	0.779	65.7	19.8	44 W	—	38*
7 15	5 13.20	+29 21.2	1.461	0.827	42.4	21.5	33 W	22*	17*	6 23	3 33.87	+2 37.9	1.072	0.807	63.7	19.8	45 W	—	39*
7 20	5 38.18	+29 31.1	1.496	0.841	40.5	21.5	33 W	22*	16*	6 25	3 37.49	+2 49.9	1.094	0.835	61.9	19.9	46 W	—	40*
259871 2004 DP₁										247517 2002 QY₆									
5 26	2 1.63	+12 17.6	2.419	1.651	19.0	21.5	32 W	8*	25*	5 26	3 7.62	+13 23.8	1.700	0.788	22.0	21.4	17 W	—	11*
6 5	2 29.12	+14 40.6	2.346	1.617	20.9	21.4	35 W	11*	27*	5 31	3 31.96	+14 48.3	1.638	0.717	22.6	21.1	16 W	—	10*
6 15	2 57.75	+16 53.8	2.276	1.586	22.6	21.4	37 W	14*	28*	6 5	3 59.06	+16 12.2	1.575	0.639	22.5	20.8	14 W	—	8*
6 25	3 27.51	+18 53.7	2.208	1.558	24.3	21.3	39 W	17*	28*	6 10	4 29.55	+17 33.8	1.512	0.555	21.2	20.4	11 W	—	5*
7 5	3 58.35	+20 36.9	2.145	1.534	25.9	21.3	41 W	21*	29*	6 15	5 4.24	+18 50.4	1.448	0.465	17.9	19.8	8 W	—	2*
7 15	4 30.15	+22 0.0	2.085	1.513	27.4	21.2	43 W	24*	29*	6 20	5 44.14	+19 58.9	1.379	0.372	11.3	19.0	4 W	—	—
7 25	5 2.65	+23 0.3	2.029	1.497	28.8	21.2	45 W	28*	28*	6 25	6 30.09	+20 57.0	1.291	0.288	15.4	18.4	4 E	—	—
8 4	5 35.59	+23 35.7	1.977	1.486	30.0	21.1	47 W	32*	28*	6 27	6 49.95	+21 17.7	1.247	0.263	26.1	18.5	7 E	—	—
8 14	6 8.57	+23 45.2	1.928	1.480	31.2	21.1	49 W	35*	28*	6 29	7 10.07	+21 37.8	1.194	0.249	40.3	18.7	9 E	—	3*
8 24	6 41.21	+23 29.1	1.882	1.479	32.3	21.1	51 W	39*	28*	7 1	7 29.74	+21 58.2	1.133	0.247	56.2	19.0	12 E	—	5*
9 3	7 13.12	+22 48.9	1.838	1.482	33.2	21.1	54 W	42*	28*	7 3	7 48.24	+22 19.2	1.068	0.258	71.8	19.4	14 E	—	2* 7*
9 13	7 43.97	+21 47.1	1.796	1.491	34.1	21.1	56 W	45*	29*	7 5	8 5.26	+22 40.9	1.001	0.280	85.3	19.9	16 E	—	4* 8*
9 23	8 13.46	+20 27.3	1.754	1.504	34.8	21.0	59 W	48*	29*	7 7	8 20.89	+23 2.6	0.936	0.310	96.1	20.5	18 E	—	6* 9*
10 3	8 41.41	+18 53.2	1.711	1.522	35.5	21.0	62 W	50*	31*	7 9	8 35.46	+23 23.7	0.875	0.344	104.5	20.9	19 E	—	7* 10*
10 13	9 7.64	+17 9.3	1.667	1.544	36.0	21.0	65 W	53*	32*	7 11	8 49.36	+23 43.5	0.818	0.380	110.8	21.4	20 E	—	8* 11*
10 23	9 32.03	+15 19.7	1.620	1.570	36.3	21.0	69 W	55*	35*	418265 2008 EA₃₂									
11 2	9 54.51	+13 28.6	1.571	1.600	36.5	21.0	73 W	56*	37*	5 26	3 11.73	+24 42.2	0.623	0.436	145.5	21.2	14 W	—	5* 4*
11 12	10 14.95	+11 39.9	1.519	1.632	36.4	21.0	78 W	56*	41*	5 27	3 11.22	+23 16.7	0.633	0.433	143.1	20.9	15 W	—	5* 6*
11 22	10 33.22	+9 57.5	1.463	1.668	36.0	20.9	83 W	55	45*	5 28	3 11.07	+21 53.4	0.644	0.431	140.2	20.5	16 W	—	4* 8*
12 2	10 49.13	+8 24.9	1.404	1.705	35.3	20.8	89 W	53	49*	5 29	3 11.28	+20 33.2	0.656	0.430	137.1	20.1	17 W	—	4* 9*
12 12	11 2.42	+7 5.7	1.343	1.745	34.2	20.8	96 W	52	53*	5 30	3 11.83	+19 16.6	0.669	0.429	133.7	19.8	18 W	—	3* 11*
12 22	11 12.78	+6 3.3	1.282	1.786	32.4	20.7	103 W	51	57*	5 31	3 12.74	+18 4.2	0.683	0.428	130.2	19.5	19 W	—	3* 12*
1 1	11 19.85	+5 20.8	1.222	1.828	30.0	20.5	112 W	50	59	6 1	3 13.97	+16 56.3	0.699	0.428	126.5	19.2	20 W	—	2* 13*
1 11	11 23.23	+5 1.3	1.166	1.871	26.8	20.4	121 W	50	59	6 2	3 15.51	+15 53.2	0.715	0.429	122.9	18.9	21 W	—	2* 14*
1 21	11 22.68	+5 6.2	1.119	1.915	22.8	20.2	131 W	50	59	6 3	3 17.34	+14 55.0	0.733	0.430	119.2	18.7	22 W	—	2* 15*
530938 2011 XE										202435 2005 XH₈									
5 26	2 20.52	+24 55.0	0.857	0.442	97.2	20.7	26 W	14*	14*	5 26	3 3.26	+12 38.9	0.657	0.440	133.9	21.3	18 W	—	12*
5 28	2 24.04	+25 6.9	0.902	0.454	90.4	20.6	27 W	14*	15*	5 28	3 1.22	+9 51.4	0.683	0.458	124.1	20.5	22 W	—	16*
5 30	2 28.64	+25 16.6	0.947	0.468	84.3	20.5	27 W	15*	15*	5 30	3 0.50	+7 28.5	0.713	0.479	115.2	20.1	25 W	—	19*
6 1	2 34.08	+25 24.5	0.990	0.484	78.8	20.5	28 W	15*	16*	6 1	3 0.88	+5 28.9	0.744	0.502	107.3	19.8	28 W	—	22*
6 3	2 40.18	+25 30.8	1.032	0.501	73.9	20.5	28 W	15*	16*										
6 5	2 46.76	+25 35.6	1.072	0.519	69.5	20.5	29 W	15*	16*										
6 7	2 53.71	+25 39.1	1.110	0.538	65.7	20.5	29 W	15*	17*										
6 9	3 0.91	+25 41.2	1.146	0.557	62.3	20.5	29 W	15*	17*										
6 11	3 8.28	+25 42.1	1.181	0.577	59.2	20.6	29 W	15*	17*										
6 13	3 15.77	+25 41.7	1.214	0.598	56.6	20.7	29 W	15*	17*										
6 15	3 23.32	+25 40.2	1.245	0.618	54.2	20.7	30 W	15*	17*										
6 20	3 42.25	+25 31.5	1.315	0.668	49.4	20.9	30 W	15*	18*										
6 25	4 0.98	+25 16.2	1.376	0.718	45.9	21.0	30 W	16*	18*										
6 30	4 19.34	+24 54.7	1.428	0.765	43.3	21.2	31 W	16*	19*										
7 5	4 37.25	+24 27.5	1.472	0.810	41.4	21.3	32 W	16*	20*										
7 10	4 54.69	+23 54.9	1.509	0.852	40.0	21.4	33 W	17*	20*										
202683 2006 US₂₁₆																			
5 26	2 54.68	+17 54.2	0.886	0.326	103.4	20.9	18 W	3*	11*										
5 28	2 54.35	+17 47.2	0.939	0.351	91.9	20.6	20 W	4*	13*										
5 30	2 56.23	+17 48.5	0.990	0.378	82.6	20.6	22 W	5*	15*										
6 1	2 59.67	+17 55.8	1.040	0.407	75.0	20.6	23 W	6*	15*										
6 3	3 4.20	+18 7.2	1.087	0.436	68.8	20.6	24 W	6*	16*										
6 5	3 9.48	+18 21.2	1.131	0.466	63.6	20.7	24 W	6*	17*										
6 7	3 15.28	+18 36.9	1.173	0.495	59.4	20.7	25 W	7*	17*										
6 9	3 21.42	+18 53.3	1.212	0.523	55.9	20.8	25 W	7*	17*										
6 11	3 27.81	+19 10.0	1.248	0.551	52.9	20.9	26 W	8*	18*										
6 13	3 34.35	+19 26.7	1.281	0.577	50.4	21.0	26 W	8*	18*										
6 15	3 40.99	+19 43.0	1.312	0.603	48.2	21.1	26 W	8*	18*										
6 20	3 57.81	+20 21.0	1.381	0.664	44.1	21.3	27 W	9*	19*										
6 25	4 14.69	+20 54.1	1.439	0.719	41.3	21.5	28 W	10*	19*										
6 30	4 31.50	+21 21.6	1.486	0.769	39.4	21.7	29 W	11*	19*										
7 5	4 48.20	+21 43.2	1.524	0.813	38.1	21.8	30 W	13*	20*										

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	
418265 2008 EA₃₂ (continuation)									162687 2000 UH₁ (continuation)									
6 15	3 54.94	+9 5.2	0.973	0.474	81.3	17.6	27 W	— 21*	9 18	12 16.56	+6 9.4	2.087	1.109	8.7	21.1	10 E	3*	—
6 17	4 2.81	+8 53.6	1.013	0.485	76.5	17.5	28 W	— 22*	9 23	12 34.01	+4 8.4	2.125	1.148	8.3	21.2	10 E	3*	—
6 19	4 10.86	+8 50.4	1.052	0.498	72.0	17.5	28 W	— 22*	9 28	12 50.77	+2 10.6	2.165	1.187	7.8	21.3	9 E	3*	—
6 21	4 19.04	+8 53.9	1.090	0.511	68.0	17.5	28 W	— 22*	10 3	13 6.93	+0 16.8	2.206	1.227	7.2	21.4	9 E	2*	—
6 23	4 27.30	+9 2.9	1.127	0.525	64.3	17.5	28 W	— 22*	10 8	13 22.53	-1 32.5	2.248	1.268	6.5	21.5	8 E	2*	—
6 25	4 35.61	+9 16.1	1.163	0.539	60.9	17.6	28 W	— 22*	467336 2002 LT₃₈									
6 27	4 43.94	+9 32.8	1.197	0.553	57.8	17.6	27 W	— 21*	5 26	3 28.21	+20 29.2	1.564	0.593	17.2	21.2	10 W	—	3*
6 29	4 52.27	+9 52.1	1.229	0.567	55.0	17.6	27 W	— 21*	5 31	4 0.60	+21 45.1	1.575	0.583	12.4	21.1	7 W	—	—
7 1	5 0.59	+10 13.3	1.260	0.581	52.5	17.7	27 W	— 21*	6 5	4 33.58	+22 36.4	1.587	0.580	7.3	20.9	4 W	—	—
7 3	5 8.88	+10 36.0	1.289	0.594	50.1	17.7	27 W	— 21*	6 10	5 6.75	+23 1.7	1.598	0.584	2.3	20.6	1 W	—	—
7 5	5 17.15	+10 59.6	1.317	0.608	48.0	17.7	26 W	— 20*	6 15	5 39.68	+23 1.0	1.609	0.594	2.6	20.7	2 E	—	—
7 10	5 37.69	+12 0.6	1.381	0.641	43.5	17.8	26 W	2* 20*	6 20	6 11.98	+22 35.8	1.619	0.610	7.1	21.0	4 E	—	—
7 15	5 58.05	+13 1.4	1.436	0.672	39.9	17.9	25 W	3* 19*	6 25	6 43.30	+21 48.4	1.629	0.631	11.0	21.2	7 E	—	1*
7 20	6 18.25	+13 59.2	1.483	0.699	37.0	18.0	24 W	5* 18*	6 30	7 13.44	+20 41.8	1.640	0.656	14.3	21.5	9 E	—	3*
7 25	6 38.36	+14 52.3	1.522	0.724	34.8	18.0	24 W	6* 17*	504033 2005 UN₁₅₇									
8 4	7 18.58	+16 20.0	1.581	0.764	31.7	18.2	23 W	9* 15*	5 26	3 35.25	-2 50.7	0.839	0.442	99.9	19.8	25 W	—	13*
8 14	7 59.23	+17 18.2	1.617	0.790	30.0	18.2	23 W	12* 13*	5 27	3 33.31	-3 21.5	0.858	0.457	96.0	19.7	27 W	—	14*
8 24	8 40.76	+17 42.1	1.632	0.803	29.3	18.3	23 W	14* 10*	5 28	3 31.58	-3 46.3	0.877	0.472	92.4	19.7	28 W	—	16*
9 3	9 23.62	+17 26.7	1.631	0.801	29.1	18.3	23 W	15* 8*	5 29	3 30.04	-4 5.8	0.897	0.488	89.0	19.6	29 W	—	17*
9 13	10 8.16	+16 25.9	1.616	0.786	29.2	18.2	22 W	16* 5*	5 30	3 28.70	-4 20.8	0.916	0.504	85.9	19.6	30 W	—	19*
9 18	10 31.14	+15 36.3	1.605	0.773	29.3	18.1	22 W	16* 3*	5 31	3 27.52	-4 31.8	0.935	0.521	83.1	19.6	31 W	—	20*
9 23	10 54.66	+14 32.5	1.592	0.756	29.3	18.1	22 W	16* 2*	6 1	3 26.51	-4 39.5	0.953	0.538	80.5	19.7	32 W	—	21*
9 28	11 18.73	+13 13.3	1.578	0.737	29.2	18.0	21 W	15* —	6 2	3 25.63	-4 44.3	0.971	0.555	78.1	19.7	32 W	—	22*
10 3	11 43.40	+11 37.7	1.563	0.714	29.0	17.9	20 W	14* —	6 3	3 24.89	-4 46.6	0.989	0.573	75.8	19.7	33 W	—	24*
10 8	12 8.68	+9 44.5	1.548	0.687	28.5	17.8	19 W	13* —	6 4	3 24.27	-4 46.9	1.006	0.590	73.8	19.7	34 W	—	25*
10 13	12 34.61	+7 32.8	1.532	0.658	27.7	17.7	18 W	11* —	6 5	3 23.76	-4 45.3	1.023	0.608	71.9	19.8	35 W	—	26*
10 23	13 28.62	+2 10.1	1.502	0.593	24.8	17.3	14 W	7* —	6 7	3 23.01	-4 37.8	1.054	0.644	68.5	19.9	36 W	—	28*
11 2	14 25.99	-4 33.3	1.470	0.523	19.4	16.8	10 W	2* —	6 9	3 22.58	-4 26.0	1.084	0.680	65.7	20.0	38 W	—	30*
11 12	15 27.65	-12 28.7	1.429	0.462	15.0	16.3	7 E	1* —	6 11	3 22.40	-4 11.0	1.112	0.716	63.2	20.0	39 W	—	32*
11 17	16 0.39	-16 43.1	1.399	0.440	17.8	16.3	8 E	1* —	6 13	3 22.41	-3 53.8	1.139	0.751	61.0	20.1	40 W	—	33*
11 22	16 34.49	-20 57.2	1.360	0.429	24.9	16.4	11 E	— 4*	6 15	3 22.58	-3 35.2	1.163	0.787	59.1	20.2	42 W	—	35*
11 27	17 9.93	-24 58.7	1.313	0.430	34.2	16.6	14 E	— 8*	6 20	3 23.46	-2 45.2	1.216	0.874	55.3	20.4	45 W	—	39*
12 2	17 46.61	-28 33.7	1.258	0.443	43.7	16.8	18 E	— 12*	6 25	3 24.69	-1 53.9	1.258	0.960	52.5	20.6	48 W	—	42*
12 4	18 1.59	-29 49.4	1.234	0.451	47.3	16.9	20 E	— 14*	6 30	3 26.00	-1 4.1	1.292	1.042	50.3	20.8	52 W	—	46*
12 6	18 16.74	-30 58.2	1.210	0.460	50.8	17.0	21 E	— 15*	7 5	3 27.20	-0 16.9	1.317	1.123	48.5	21.0	56 W	—	49*
12 8	18 32.03	-31 59.3	1.185	0.471	54.0	17.1	23 E	— 17*	7 10	3 28.14	+0 27.0	1.334	1.201	46.9	21.1	60 W	—	52*
12 10	18 47.43	-32 52.5	1.161	0.482	57.0	17.2	24 E	— 18*	7 15	3 28.68	+1 7.3	1.344	1.277	45.5	21.2	64 W	—	54*
12 12	19 2.94	-33 37.1	1.136	0.494	59.8	17.3	26 E	— 20*	7 20	3 28.71	+1 43.8	1.348	1.351	44.2	21.3	68 W	—	56*
12 14	19 18.50	-34 12.9	1.112	0.507	62.3	17.4	27 E	— 21*	7 25	3 28.15	+2 16.8	1.347	1.422	42.9	21.4	73 W	—	58*
12 16	19 34.10	-34 39.6	1.088	0.521	64.6	17.5	29 E	1* 23*	7 30	3 26.88	+2 46.2	1.341	1.492	41.6	21.4	77 W	—	60*
12 18	19 49.68	-34 57.1	1.065	0.535	66.7	17.5	30 E	1* 24*	8 4	3 24.83	+3 12.0	1.331	1.560	40.1	21.5	82 W	—	60*
12 20	20 5.20	-35 5.1	1.042	0.549	68.5	17.6	31 E	2* 25*	8 9	3 21.87	+3 34.3	1.318	1.626	38.5	21.5	87 W	—	60*
12 22	20 20.62	-35 3.7	1.020	0.563	70.2	17.7	33 E	2* 27*	331876 2004 CL									
12 24	20 35.89	-34 52.9	0.998	0.577	71.7	17.7	34 E	3* 28*	5 26	3 38.22	+14 34.2	1.574	0.604	17.2	21.3	10 W	—	4*
12 26	20 50.95	-34 32.8	0.978	0.591	73.0	17.8	35 E	4* 29*	5 31	4 8.49	+16 37.0	1.613	0.622	12.3	21.2	8 W	—	1*
12 28	21 5.76	-34 3.6	0.958	0.604	74.2	17.8	36 E	5* 30*	6 5	4 38.22	+18 22.8	1.653	0.649	8.1	21.2	5 W	—	—
12 30	21 20.28	-33 25.5	0.940	0.618	75.2	17.8	37 E	6* 31*	6 10	5 7.23	+19 50.2	1.694	0.683	5.0	21.2	3 W	—	—
1 1	21 34.46	-32 38.8	0.922	0.631	76.0	17.9	39 E	7* 32*	6 15	5 35.34	+20 58.6	1.736	0.723	3.3	21.3	2 E	—	—
1 6	22 8.28	-30 7.2	0.882	0.662	77.7	17.9	41 E	10* 34*	415980 2001 YZ₉₀									
1 11	22 39.49	-26 51.3	0.848	0.691	78.7	18.0	44 E	14* 36*	5 26	4 5.43	+18 52.5	2.946	1.935	1.3	21.5	3 W	—	—
1 16	23 7.99	-22 59.4	0.820	0.717	79.3	18.0	46 E	18* 37*	6 5	4 29.55	+20 7.4	2.906	1.899	3.0	21.5	6 W	—	—
1 21	23 33.85	-18 40.0	0.798	0.739	79.5	18.0	48 E	22* 37*	6 15	4 54.60	+21 10.4	2.859	1.863	5.0	21.6	9 W	—	3*
5 26	3 26.57	+14 5.9	2.130	1.163	11.0	21.4	13 W	— 7*	6 25	5 20.54	+21 59.9	2.807	1.828	7.0	21.6	13 W	1*	6*
5 31	3 44.88	+15 45.5	2.092	1.124	11.3	21.3	13 W	— 7*	7 5	5 47.30	+22 34.2	2.750	1.794	8.9	21.6	16 W	4*	8*
6 5	4 4.13	+17 22.2	2.056	1.086	11.5	21.1	12 W	— 6*	510156 2010 WO₅₅									
6 10	4 24.37	+18 54.6	2.022	1.049	11.5	21.0	12 W	— 6*	5 26	4 33.17	+27 9.5	3.210	2.211	3.6	21.5	8 E	2*	—
6 15	4 45.63	+20 21.3	1.990	1.015	11.4	20.9	11 W	— 5*	6 5	4 55.57	+27 4.9	3.184	2.174	2.2	21.4	5 E	—	—
6 20	5 7.94	+21 40.2	1.962	0.982	11.1	20.8	11 W	— 4*	6 15	5 18.38	+26 48.8	3.147	2.137	2.3	21.3	5 W	—	—
6 25	5 31.28	+22 49.6	1.936	0.952	10.7	20.7	10 W	— 3*	6 25	5 41.52	+26 19.9	3.101	2.100	3.9	21.3	8 W	1*	—
6 30	5 55.60	+23 47.3	1.914	0.925	10.1	20.6	9 W	— 2*	7 5	6 4.90	+25 37.1	3.046	2.062	5.9	21.4	12 W	3*	3*
7 5	6 20.82	+24 31.1	1.896	0.902	9.3	20.5	8 W											

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
510156 2010 WO ₅₅ (continuation)									170086 2002 XR ₁₄ (continuation)								
12 17	12 24.95	-22 50.4	1.631	1.607	35.4	20.4	71 W	22 61*	11 2	17 10.22	-23 44.9	1.809	1.213	31.1	20.9	39 E	11* 33*
12 22	12 36.72	-24 57.1	1.595	1.603	35.8	20.4	73 W	20 64*	11 7	17 31.67	-24 9.4	1.868	1.263	29.6	21.1	39 E	11* 32*
12 27	12 48.58	-27 2.2	1.560	1.600	36.2	20.4	74 W	18 67*	11 12	17 52.20	-24 22.3	1.929	1.312	28.2	21.2	39 E	12* 32*
1 1	13 0.52	-29 5.1	1.526	1.599	36.6	20.3	76 W	16 69*	11 17	18 11.79	-24 24.9	1.994	1.361	26.7	21.3	38 E	12* 31*
1 6	13 12.53	-31 5.3	1.493	1.598	36.9	20.3	77 W	14 71*	11 22	18 30.48	-24 18.6	2.061	1.409	25.2	21.4	37 E	13* 30*
1 11	13 24.58	-33 2.1	1.460	1.598	37.2	20.2	79 W	12 73*	11 27	18 48.30	-24 4.7	2.129	1.457	23.7	21.5	36 E	13* 28*
1 16	13 36.67	-34 55.1	1.429	1.599	37.4	20.2	81 W	10 74*	439885 2000 CD ₃₂								
1 21	13 48.77	-36 43.9	1.398	1.601	37.5	20.2	82 W	8 75*	5 26	5 47.41	+13 25.7	2.438	1.570	15.4	21.5	24 E	3* 18*
271073 2003 KU ₁₃									6 5	6 15.08	+14 43.6	2.444	1.542	13.8	21.4	21 E	1* 15*
5 26	4 39.97	+30 45.2	3.697	2.713	4.3	21.5	12 E	6* —	6 15	6 43.63	+15 44.3	2.446	1.515	12.1	21.3	18 E	— 12*
6 5	4 58.45	+31 33.8	3.746	2.749	3.4	21.5	9 E	2* —	6 25	7 12.95	+16 26.6	2.445	1.489	10.4	21.2	15 E	— 9*
6 15	5 16.87	+32 15.4	3.781	2.785	3.5	21.5	10 W	3* —	7 5	7 42.93	+16 49.8	2.441	1.465	8.7	21.1	13 E	— 7*
6 25	5 35.14	+32 50.3	3.802	2.820	4.6	21.7	13 W	7* —	7 15	8 13.47	+16 53.5	2.435	1.443	6.9	20.9	10 E	— 4*
7 5	5 53.20	+33 19.1	3.808	2.854	6.1	21.8	17 W	11* 1*	7 25	8 44.43	+16 37.8	2.426	1.424	5.1	20.8	7 E	— 1*
481044 2005 EG ₂₂₅									8 4	9 15.69	+16 3.1	2.416	1.408	3.5	20.7	5 E	— —
5 26	4 52.78	+22 3.3	3.073	2.082	4.7	21.3	10 E	1* 2*	8 14	9 47.17	+15 10.2	2.404	1.394	2.4	20.6	3 E	— —
6 5	5 14.46	+23 37.8	3.043	2.035	2.7	21.1	5 E	— —	8 24	10 18.74	+14 0.7	2.392	1.384	2.4	20.6	3 E	— —
6 15	5 37.35	+25 2.9	3.003	1.989	1.0	20.9	2 E	— —	9 3	10 50.35	+12 36.3	2.379	1.377	3.7	20.6	5 E	— —
6 25	6 1.48	+26 17.4	2.955	1.943	2.2	20.9	4 W	— —	9 13	11 21.95	+10 59.2	2.367	1.374	5.2	20.7	7 W	— —
7 5	6 26.86	+27 19.8	2.899	1.898	4.3	21.0	8 W	2* —	9 23	11 53.49	+9 12.1	2.355	1.374	6.8	20.8	9 W	2* —
7 15	6 53.49	+28 8.6	2.837	1.854	6.5	21.0	12 W	5* —	10 3	12 24.95	+7 17.9	2.345	1.379	8.3	20.8	11 W	4* —
7 25	7 21.32	+28 42.1	2.770	1.812	8.6	21.0	16 W	9* 1*	10 13	12 56.31	+5 19.7	2.336	1.386	9.7	20.9	14 W	6* —
8 4	7 50.29	+28 58.9	2.699	1.771	10.8	21.0	19 W	13* 2*	10 23	13 27.55	+3 21.0	2.329	1.397	11.1	21.0	16 W	8* —
8 14	8 20.30	+28 57.4	2.626	1.733	12.9	20.9	22 W	16* 3*	11 2	13 58.63	+1 25.1	2.325	1.412	12.3	21.0	18 W	11* —
8 24	8 51.20	+28 36.4	2.553	1.698	14.9	20.9	26 W	20* 3*	11 12	14 29.53	-0 24.8	2.322	1.429	13.5	21.1	20 W	13* —
9 3	9 22.80	+27 55.0	2.480	1.665	16.8	20.9	29 W	23* 2*	11 22	15 0.17	-2 5.5	2.320	1.449	14.6	21.2	22 W	15* —
9 13	9 54.90	+26 53.1	2.409	1.635	18.6	20.8	31 W	25* 2*	12 2	15 30.48	-3 34.7	2.320	1.471	15.6	21.2	24 W	18* —
9 23	10 27.25	+25 31.0	2.342	1.609	20.3	20.8	34 W	28* 2*	12 12	16 0.38	-4 50.3	2.320	1.495	16.6	21.3	26 W	20* 2*
10 3	10 59.62	+23 50.2	2.280	1.587	21.9	20.8	36 W	30* 2*	12 22	16 29.73	-5 50.9	2.319	1.522	17.7	21.4	28 W	21* 5*
10 13	11 31.79	+21 52.7	2.223	1.570	23.3	20.7	38 W	32* 3*	1 1	16 58.43	-6 35.8	2.316	1.549	18.7	21.4	30 W	23* 9*
10 23	12 3.54	+19 41.8	2.172	1.557	24.5	20.7	41 W	34* 3*	415713 1998 XX ₂								
11 2	12 34.71	+17 21.1	2.127	1.549	25.7	20.7	43 W	36* 4*	5 26	5 50.72	+25 50.8	1.513	0.708	34.5	21.5	23 E	13* 11*
11 12	13 5.14	+14 54.6	2.088	1.546	26.7	20.6	44 W	38* 6*	5 31	6 13.90	+26 3.8	1.458	0.669	37.7	21.4	24 E	13* 12*
11 22	13 34.71	+12 26.8	2.053	1.548	27.5	20.6	46 W	40* 9*	6 5	6 37.78	+26 1.6	1.395	0.630	41.7	21.2	24 E	12* 13*
12 2	14 3.33	+10 1.3	2.022	1.555	28.4	20.6	48 W	42* 12*	6 10	7 2.17	+25 42.3	1.324	0.591	46.8	21.1	25 E	12* 14*
12 12	14 30.91	+7 41.9	1.992	1.567	29.1	20.6	51 W	43* 16*	6 15	7 26.76	+25 4.2	1.245	0.554	53.3	21.0	26 E	12* 15*
12 22	14 57.35	+5 31.2	1.964	1.584	29.8	20.7	53 W	43* 20*	6 20	7 51.00	+24 6.2	1.156	0.520	61.5	21.0	27 E	12* 16*
1 1	15 22.61	+3 31.0	1.934	1.605	30.5	20.7	56 W	43* 26*	6 25	8 14.12	+22 48.6	1.059	0.494	71.5	21.0	27 E	12* 18*
1 11	15 46.56	+1 42.6	1.901	1.630	31.2	20.7	59 W	43* 32*	6 30	8 35.03	+21 13.5	0.956	0.476	83.3	21.1	28 E	11* 18*
1 21	16 9.10	+0 6.1	1.864	1.658	31.8	20.7	63 W	42* 38*	7 5	8 52.38	+19 25.2	0.849	0.469	96.7	21.4	27 E	9* 19*
413577 2005 UL ₅									762828 2000 SL ₁₆₁								
5 26	4 52.98	+25 40.9	1.634	0.666	16.4	21.4	11 E	4* —	5 26	5 56.64	+18 36.3	3.318	2.437	10.1	21.5	25 E	9* 17*
5 31	5 18.95	+26 49.0	1.559	0.604	20.3	21.2	12 E	5* 1*	6 5	6 14.76	+18 21.6	3.363	2.434	8.1	21.4	20 E	3* 13*
6 5	5 47.31	+27 39.2	1.475	0.544	26.0	21.0	14 E	6* 3*	6 15	6 33.03	+17 58.4	3.396	2.429	6.2	21.4	15 E	— 9*
6 10	6 17.98	+28 3.2	1.382	0.488	34.1	20.9	16 E	7* 4*	6 25	6 51.36	+17 26.5	3.416	2.423	4.4	21.3	10 E	— 4*
6 15	6 50.41	+27 50.8	1.276	0.441	45.4	20.8	18 E	9* 7*	7 5	7 9.70	+16 45.7	3.423	2.416	2.9	21.2	7 E	— —
6 20	7 23.23	+26 51.3	1.158	0.411	60.0	20.8	20 E	10* 10*	7 15	7 27.99	+15 56.0	3.417	2.408	2.5	21.2	6 W	— —
6 25	7 54.29	+24 58.0	1.030	0.403	76.7	21.1	23 E	10* 13*	7 25	7 46.18	+14 57.6	3.398	2.399	3.7	21.2	9 W	— 3*
170086 2002 XR ₁₄									8 4	8 4.22	+13 50.6	3.367	2.389	5.5	21.3	13 W	— 7*
5 26	5 6.85	+23 7.5	2.424	1.455	9.1	21.2	13 E	4* 4*	8 14	8 22.09	+12 35.3	3.324	2.378	7.4	21.3	18 W	5* 10*
6 5	5 36.29	+23 40.7	2.346	1.360	7.7	21.0	10 E	1* 3*	8 24	8 39.73	+11 12.2	3.268	2.366	9.4	21.4	22 W	10* 14*
6 15	6 8.42	+23 53.1	2.259	1.261	6.5	20.7	8 E	— 1*	9 3	8 57.13	+9 41.5	3.202	2.352	11.4	21.4	27 W	15* 17*
6 25	6 43.43	+23 38.1	2.166	1.162	5.8	20.4	7 E	— —	9 13	9 14.25	+8 3.8	3.124	2.338	13.4	21.4	32 W	20* 21*
6 30	7 2.07	+23 18.1	2.118	1.112	5.6	20.2	6 E	— —	9 23	9 31.07	+6 19.6	3.036	2.323	15.3	21.4	38 W	24* 24*
7 5	7 21.49	+22 48.4	2.069	1.062	5.6	20.1	6 E	— —	10 3	9 47.55	+4 29.6	2.938	2.306	17.1	21.4	43 W	29* 27*
7 10	7 41.69	+22 7.8	2.020	1.013	5.8	19.9	6 E	— —	10 13	10 3.67	+2 34.2	2.831	2.289	18.9	21.3	48 W	33* 31*
7 15	8 2.67	+21 15.2	1.971	0.966	6.3	19.8	6 E	— —	10 23	10 19.39	+0 34.3	2.716	2.271	20.6	21.3	54 W	36* 35*
7 20	8 24.40	+20 9.7	1.922	0.919	7.1	19.7	6 E	— —	11 2	10 34.65	+1 29.4	2.593	2.252	22.2	21.2	59 W	38* 40*
7 25	8 46.86	+18 50.3	1.874	0.875	8.3	19.5	7 E	— 1*	11 12	10 49.39	-3 36.2	2.465	2.232	23.7	21.1	65 W	39* 45*
7 30	9 10.02	+17 16.3	1.827	0.834	9.8	19.5	8 E	— 2*	11 22	11 3.52	-5 45.1	2.331	2.211	24.9	21.0	71 W	39* 50*
8 4	9 33.83	+15 27.2	1.782	0.798	11.8	19.4	9 E	— 3*	12 2	11 16.94	-7 55.3	2.194	2.189	26.0	20.9	77 W	37 56*
8 14	10 23.13	+11 4.6	1.698	0.741	17.1	19.3	12 E	— 6*	12 12	11 29.48	-10 5.5	2.053	2.166	26.8	20.7	83 W	35 63*
8 24	11 14.19	+5 50.5	1.625	0.715	23.6	19.3	16 E	1* 10*	12 22	11 40.94	-12 14.4	1.913	2.143	27.3	20.6	89 W	33 70*
9 3	12 6.40	+0 3.2	1.569	0.725	30.0	19.5	21 E	2* 15*	1 1	11 51.09	-14 20.4	1.772	2.119	27.5	20.4	96 W	31 77*
9 8	12 32.78	-2 54.6	1.550	0.742	32.6	19.6	23 E	3* 17*	1 11	11 59.57	-16 21.3	1.635	2.094	27.2	20.2	103 W	29 80*
9 13	12 59.26	-5 50.3	1.537	0.767	34.8	19.7	26 E	4* 20*	1 21	12 6.01	-18 14.3	1.502	2.068	26.4	20.0	111 W	27 82
9 18	13 25.78	-8 40.2	1.531	0.799	36.3	19.8	28 E	5* 22*	302156 2001 SF ₂₈₆								
9 23	13 52.26	-11 20.9	1.533														

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
302156 2001 SF₂₈₆ (continuation)										524207 2001 RP₈₂									
7 3	8 40.49	+10 38.3	1.038	0.524	73.0	20.0	30 E	2*	23*	5 26	17 5.83	-14 9.0	2.214	3.203	4.6	22.4	165 W	31	78
7 5	8 48.57	+11 32.8	0.998	0.505	77.6	20.0	29 E	3*	23*	6 5	16 56.50	-13 39.6	2.170	3.176	2.8	22.2	171 W	31	78
7 7	8 56.52	+12 37.5	0.957	0.489	82.6	20.0	28 E	4*	22*	6 15	16 46.88	-13 14.8	2.155	3.147	4.8	22.3	165 E	32	77
7 9	9 4.23	+13 53.7	0.917	0.474	87.9	20.1	28 E	5*	21*	6 25	16 37.85	-12 56.6	2.168	3.118	8.0	22.4	155 E	32	77
7 11	9 11.56	+15 22.8	0.876	0.463	93.6	20.2	27 E	6*	20*	7 5	16 30.15	-12 46.4	2.207	3.088	11.2	22.6	144 E	32	77
7 13	9 18.38	+17 6.2	0.837	0.455	99.6	20.3	26 E	7*	19*	365246 2009 NE									
7 15	9 24.51	+19 4.5	0.798	0.451	105.5	20.5	25 E	9*	17*	5 26	17 6.36	-3 28.4	3.714	4.668	4.7	22.5	158 W	42	67
7 17	9 29.78	+21 17.7	0.762	0.450	111.3	20.7	24 E	10*	15*	6 5	16 57.73	-2 52.8	3.673	4.641	4.2	22.4	160 W	42	67
7 19	9 34.05	+23 45.1	0.729	0.453	116.7	21.0	23 E	12*	13*	6 15	16 48.93	-2 25.4	3.663	4.612	5.0	22.5	157 E	43	66
7 21	9 37.18	+26 24.8	0.698	0.460	121.3	21.3	23 E	13*	10*	6 25	16 40.48	-2 7.3	3.683	4.583	6.6	22.5	149 E	43	66
194126 2001 SG₂₇₆										7 5	16 32.83	-1 58.9	3.731	4.552	8.3	22.6	139 E	43	66
5 26	6 40.66	+41 9.1	2.157	1.485	24.5	21.5	37 E	30*	9*	476703 2008 TQ₁₄₅									
5 31	6 58.19	+40 38.0	2.158	1.468	24.1	21.4	36 E	29*	9*	5 26	17 8.36	-18 57.8	3.812	4.803	2.9	22.7	166 W	26	83
6 5	7 15.76	+39 58.4	2.159	1.451	23.7	21.4	35 E	28*	9*	6 5	17 2.09	-18 47.8	3.787	4.799	0.9	22.5	176 W	26	83
6 10	7 33.32	+39 10.4	2.158	1.433	23.3	21.4	34 E	26*	10*	6 15	16 55.73	-18 38.6	3.791	4.794	2.1	22.6	170 E	26	83
6 15	7 50.80	+38 13.6	2.156	1.415	22.9	21.3	33 E	25*	10*	6 25	16 49.70	-18 30.8	3.824	4.790	4.2	22.8	160 E	26	83
6 20	8 8.16	+37 8.3	2.153	1.397	22.6	21.3	32 E	23*	10*	7 5	16 44.42	-18 25.3	3.885	4.785	6.3	22.9	149 E	27	82
6 25	8 25.33	+35 54.3	2.149	1.379	22.2	21.2	31 E	22*	11*	419880 2011 AH₃₇									
6 30	8 42.29	+34 31.9	2.145	1.360	21.8	21.2	30 E	21*	11*	5 26	17 8.61	-16 57.9	3.146	4.135	3.5	25.6	166 W	28	81
7 5	8 59.01	+33 1.2	2.139	1.342	21.5	21.1	29 E	20*	11*	6 5	16 59.52	-16 50.5	3.108	4.118	1.5	25.4	174 W	28	81
7 10	9 15.47	+31 22.4	2.133	1.324	21.1	21.1	28 E	17*	12*	6 15	16 50.24	-16 44.5	3.101	4.100	3.0	25.5	168 E	28	81
7 15	9 31.66	+29 35.9	2.127	1.305	20.7	21.0	27 E	15*	12*	6 25	16 41.39	-16 40.8	3.125	4.081	5.6	25.7	157 E	28	81
7 20	9 47.58	+27 41.9	2.120	1.287	20.3	21.0	26 E	16*	12*	7 5	16 33.52	-16 40.2	3.177	4.060	8.1	25.8	146 E	28	81
7 25	10 3.22	+25 41.0	2.113	1.269	19.9	20.9	25 E	15*	12*	461374 2000 WS₂₁									
7 30	10 18.60	+23 33.3	2.106	1.252	19.5	20.9	24 E	14*	12*	5 26	17 9.50	-17 28.6	2.132	3.123	4.6	22.4	166 W	28	81
8 4	10 33.75	+21 19.5	2.098	1.234	19.0	20.8	23 E	13*	12*	6 5	16 59.32	-17 23.1	2.093	3.104	1.8	22.2	175 W	28	81
8 9	10 48.69	+18 59.8	2.091	1.217	18.6	20.8	22 E	11*	12*	6 15	16 48.81	-17 19.5	2.083	3.084	3.9	22.3	168 E	28	81
8 14	11 3.45	+16 34.9	2.083	1.201	18.1	20.7	22 E	10*	12*	6 25	16 38.92	-17 18.9	2.102	3.063	7.5	22.5	157 E	28	81
8 19	11 18.05	+14 5.1	2.076	1.185	17.6	20.7	21 E	9*	12*	7 5	16 30.47	-17 22.4	2.147	3.040	10.9	22.7	145 E	28	81
8 24	11 32.54	+11 31.0	2.069	1.170	17.1	20.6	20 E	8*	12*	409204 2003 WX₂₅									
8 29	11 46.96	+8 53.2	2.062	1.156	16.6	20.6	19 E	7*	11*	5 26	17 13.21	-42 4.7	3.662	4.602	5.3	25.3	155 W	3	74
9 3	12 1.36	+6 12.2	2.055	1.143	16.1	20.5	18 E	6*	11*	5 31	17 8.24	-42 13.5	3.645	4.601	4.7	25.2	158 W	3	74
9 8	12 15.79	+3 28.6	2.049	1.130	15.6	20.5	18 E	5*	11*	6 5	17 3.11	-42 19.2	3.634	4.601	4.3	25.2	160 W	3	74
9 13	12 30.29	+0 42.9	2.043	1.119	15.2	20.4	17 E	3*	10*	6 10	16 57.92	-42 21.8	3.631	4.600	4.2	25.2	160 E	3	74
9 18	12 44.92	-2 4.0	2.037	1.109	14.8	20.4	16 E	2*	10*	6 15	16 52.77	-42 21.4	3.636	4.599	4.5	25.2	159 E	3	74
9 23	12 59.74	-4 51.6	2.031	1.100	14.4	20.4	16 E	1*	10*	6 20	16 47.74	-42 17.9	3.648	4.598	5.0	25.2	157 E	3	74
9 28	13 14.81	-7 39.1	2.026	1.093	14.1	20.3	15 E	—	9*	6 25	16 42.93	-42 11.7	3.667	4.597	5.7	25.3	153 E	3	74
10 3	13 30.20	-10 25.6	2.022	1.087	13.8	20.3	15 E	—	9*	436763 2012 FN₅₂									
10 8	13 45.99	-13 10.3	2.018	1.082	13.7	20.3	15 E	—	9*	5 26	17 13.22	-11 40.8	2.199	3.179	5.5	22.7	162 W	33	76
10 13	14 2.23	-15 52.2	2.014	1.079	13.6	20.3	15 E	—	9*	6 5	17 0.73	-11 51.6	2.197	3.199	3.4	22.6	169 W	33	76
10 18	14 18.99	-18 30.3	2.012	1.078	13.6	20.3	15 E	—	8*	6 15	16 48.26	-12 8.2	2.226	3.217	4.8	22.7	165 E	33	76
10 23	14 36.35	-21 3.4	2.010	1.078	13.7	20.3	15 E	—	8*	6 25	16 36.78	-12 30.5	2.286	3.233	7.8	22.9	154 E	32	77
10 28	14 54.37	-23 30.4	2.008	1.080	13.8	20.3	15 E	—	8*	7 5	16 27.01	-12 58.1	2.374	3.247	10.8	23.1	143 E	32	77
11 2	15 13.12	-25 49.8	2.008	1.083	14.0	20.3	15 E	—	8*	368565 2004 FE₅									
11 7	15 32.63	-28 0.4	2.009	1.088	14.2	20.3	16 E	—	9*	5 26	17 19.39	+8 21.1	1.070	1.992	16.5	22.4	146 W	53	56
11 12	15 52.92	-30 0.7	2.011	1.094	14.5	20.3	16 E	—	9*	5 31	17 9.80	+9 11.8	1.061	1.992	15.9	22.4	148 W	54	55
11 17	16 14.00	-31 49.3	2.014	1.102	14.7	20.4	16 E	—	9*	6 5	16 59.84	+9 51.7	1.059	1.991	15.9	22.4	148 W	55	54
11 22	16 35.83	-33 24.7	2.019	1.111	14.9	20.4	17 E	—	9*	6 10	16 49.82	+10 19.5	1.063	1.989	16.5	22.4	146 E	55	54
11 27	16 58.36	-34 45.6	2.025	1.121	15.1	20.4	17 E	—	10*	6 15	16 40.04	+10 34.9	1.074	1.986	17.6	22.5	144 E	56	53
12 2	17 21.46	-35 51.1	2.033	1.133	15.3	20.5	18 E	—	10*	6 20	16 30.77	+10 38.0	1.090	1.981	19.1	22.5	140 E	56	53
12 7	17 45.01	-36 40.1	2.042	1.146	15.3	20.5	18 E	—	10*	6 25	16 22.25	+10 29.6	1.111	1.976	20.8	22.6	136 E	55	54
12 12	18 8.81	-37 12.2	2.053	1.159	15.4	20.5	18 E	—	11*	448443 2009 YL₂₄									
12 17	18 32.67	-37 27.3	2.066	1.173	15.3	20.6	18 E	—	11*	5 26	17 23.96	-28 50.5	1.778	2.758	6.6	22.4	162 W	16	87
12 22	18 56.38	-37 25.6	2.080	1.189	15.2	20.6	18 E	—	11*	5 31	17 18.48	-28 44.5	1.757	2.755	4.6	22.2	167 W	16	87
12 27	19 19.75	-37 7.7	2.096	1.205	15.0	20.6	18 E	—	11*	6 5	17 12.71	-28 36.0	1.743	2.752	2.8	22.1	172 W	16	87
1 1	19 42.60	-36 34.6	2.114	1.221	14.8	20.7	18 E	—	11*	6 10	17 6.80	-28 25.0	1.737	2.749	2.1	22.0	174 E	17	88
1 6	20 4.80	-35 47.7	2.132	1.238	14.5	20.7	18 E	—	11*	6 15	17 0.91	-28 11.8	1.737	2.745	3.2	22.1	171 E	17	88
1 11	20 26.23	-34 48.2	2.152	1.255	14.1	20.8	18 E	—	11*	6 20	16 55.21	-27 56.7	1.744	2.742	5.1	22.2	166 E	17	88
1 16	20 46.81	-33 37.8	2.174	1.273	13.7	20.8	18 E	—	11*	6 25	16 49.85	-27 40.0	1.759	2.738	7.2	22.3	160 E	17	88
1 21	21 6.53	-32 17.9	2.196	1.291	13.2	20.8	17 E	—	11*	6 30	16 44.94	-27 22.4	1.779	2.733	9.1	22.4	155 E	18	89
420048 2011 DL₁₉										413820 2006 QR₈₉									
5 26	7 10.48	+4 9.2	1.443	1.051	44.6	21.4	47 E	11*	40*	5 26	17 27.46	-8 19.9	1.611	2.577	8.6	23.2	158 W	37	72
6 5	7 42.77	+1 37.0	1.390	1.009	46.8	21.3	46 E	7*	40*	6 5	17 15.87	-7 51.8	1.580	2.572	6.1	23.0	164 W	37	72
6 15	8 17.73	+1 9.9	1.329	0.976	49.4	21.2	47 E	3*	41*	6 15	17 3.64	-7 36.7	1.577	2.565	6.7	23.0	163 E	37	72
6 25	8 55.80	-4 7.3	1.266	0.955	52.2	21.1	48 E	—	42*	6 25	16 52.05	-7 36.3	1.601	2.557	9.8	23.2	155 E	37	