

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/20	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°										
249047 2007 TC₉₁										238063 2003 EG (continuation)																			
12 23	10 58.59	-7 33.7	3.791	4.100	13.6	20.7	101 W	37	71*	3 12	7 21.32	+55 23.6	2.002	2.499	22.2	21.0	108 E	80	9	3 17	7 21.33	+54 0.6	2.082	2.524	22.4	21.1	105 E	81	10
1 2	11 0.11	-8 0.6	3.641	4.094	13.0	20.6	111 W	37	72	3 22	7 22.45	+52 40.4	2.164	2.549	22.6	21.2	101 E	82	11	1 22	10 58.61	-8 20.1	3.374	4.082	10.6	20.4	131 W	37	72
1 12	11 0.12	-8 16.6	3.500	4.088	12.0	20.5	120 W	37	72	3 27	7 24.51	+51 23.1	2.247	2.572	22.6	21.3	97 E	84	13	2 1	10 55.67	-8 9.9	3.265	4.076	8.8	20.2	141 W	37	72
2 1	10 55.67	-8 9.9	3.265	4.076	8.8	20.2	141 W	37	72	4 1	7 27.37	+50 8.7	2.331	2.595	22.6	21.4	94 E	85*	14	2 11	10 51.51	-7 45.6	3.180	4.070	6.8	20.1	151 W	37	72
2 11	10 51.51	-7 45.6	3.180	4.070	6.8	20.1	151 W	37	72	4 6	7 30.87	+48 57.3	2.417	2.617	22.5	21.5	90 E	84*	15	3 2	10 40.98	-6 18.4	3.090	4.059	3.3	19.8	166 E	39	70
3 2	10 40.98	-6 18.4	3.090	4.059	3.3	19.8	166 E	39	70	306895 2001 TT₁₂₇																			
3 12	10 35.57	-5 20.6	3.089	4.054	3.9	19.8	164 E	40	69	12 23	11 0.63	-20 38.9	1.231	1.643	36.6	19.4	95 W	24	83*	4 1	10 26.88	-3 15.9	3.174	4.043	7.9	20.1	146 E	42	67
2 11	10 46.47	-7 7.8	3.120	4.065	4.7	19.9	160 W	38	71	12 28	11 7.48	-22 36.8	1.199	1.645	36.4	19.4	97 W	22	87*	1 2	11 0.11	-8 0.6	3.641	4.094	13.0	20.6	111 W	37	72
3 2	10 40.98	-6 18.4	3.090	4.059	3.3	19.8	166 E	39	70	1 2	11 13.77	-24 31.5	1.167	1.648	36.0	19.3	100 W	20	89	1 7	11 19.47	-26 22.3	1.137	1.652	35.6	19.2	102 W	19	90
3 12	10 35.57	-5 20.6	3.089	4.054	3.9	19.8	164 E	40	69	1 12	11 24.51	-28 8.3	1.108	1.657	35.0	19.2	105 W	17	88	1 17	11 28.83	-29 48.8	1.079	1.662	34.4	19.1	107 W	15	86
3 22	10 30.73	-4 18.4	3.118	4.048	5.7	20.0	156 E	41	68	1 22	11 32.35	-31 22.6	1.052	1.668	33.7	19.0	110 W	14	85	1 27	11 35.01	-32 48.6	1.026	1.675	32.8	19.0	113 W	12	83
4 1	10 26.88	-3 15.9	3.174	4.043	7.9	20.1	146 E	42	67	2 1	11 36.75	-34 5.5	1.002	1.683	31.8	18.9	116 W	11	82	2 2	11 36.75	-34 5.5	1.002	1.683	31.8	18.9	116 W	11	82
4 11	10 24.34	-2 16.9	3.255	4.038	9.9	20.2	136 E	43	66	2 6	11 37.56	-35 12.1	0.979	1.691	30.7	18.8	119 W	10	81	2 11	11 37.43	-36 6.9	0.958	1.700	29.5	18.7	122 W	9	80
4 21	10 23.29	-1 24.6	3.356	4.033	11.6	20.4	126 E	44	65	2 16	11 36.38	-36 48.8	0.938	1.709	28.2	18.7	125 W	8	79	2 21	11 34.45	-37 16.1	0.921	1.719	26.9	18.6	128 W	8	79
5 1	10 23.79	-0 41.0	3.474	4.029	12.9	20.5	117 E	44	65	2 26	11 31.78	-37 27.7	0.907	1.730	25.4	18.5	131 W	8	79	3 2	11 28.54	-37 22.7	0.896	1.741	23.9	18.5	135 W	8	79
5 11	10 25.82	-0 7.3	3.603	4.024	13.8	20.6	108 E	44*	64	3 7	11 24.94	-37 0.6	0.887	1.753	22.5	18.4	138 W	8	79	3 12	11 21.23	-36 21.8	0.882	1.765	21.1	18.4	140 E	9	80
5 21	10 29.27	+0 15.9	3.740	4.019	14.4	20.7	99 E	41*	64	3 17	11 17.62	-35 27.1	0.881	1.777	19.9	18.4	143 E	10	81	3 22	11 14.35	-34 17.9	0.885	1.790	19.0	18.4	144 E	11	82
5 31	10 34.03	+0 28.8	3.881	4.015	14.6	20.8	90 E	36*	64	3 27	11 11.63	-32 56.3	0.892	1.804	18.4	18.4	145 E	12	83	4 1	11 9.64	-31 25.1	0.904	1.818	18.2	18.4	145 E	14	85
6 10	10 39.95	+0 31.8	4.023	4.011	14.5	20.9	82 E	31*	63*	4 6	11 8.47	-29 47.2	0.921	1.832	18.3	18.5	145 E	15	86	4 11	11 8.18	-28 5.8	0.943	1.847	18.9	18.6	143 E	17	88
6 20	10 46.89	+0 25.5	4.162	4.007	14.1	20.9	74 E	25*	61*	4 16	11 8.77	-26 23.6	0.969	1.862	19.7	18.7	141 E	19	90	4 21	11 10.23	-24 43.0	1.000	1.877	20.6	18.8	139 E	20	89
6 30	10 54.70	+0 10.6	4.295	4.003	13.5	21.0	67 E	20*	57*	4 26	11 12.54	-23 6.2	1.035	1.892	21.7	18.9	136 E	22	87	5 1	11 15.63	-21 35.0	1.075	1.908	22.8	19.0	133 E	23	86
7 10	11 3.26	-0 11.9	4.422	3.999	12.6	21.0	59 E	15*	52*	5 6	11 19.43	-20 10.6	1.118	1.924	23.9	19.2	129 E	25	84	5 11	11 23.86	-18 53.7	1.165	1.940	24.9	19.3	126 E	26	83
7 20	11 12.45	-0 41.4	4.539	3.995	11.6	21.0	52 E	11*	46*	5 21	11 34.35	-16 43.6	1.270	1.973	26.6	19.6	119 E	28*	81	6 1	11 46.62	-15 5.3	1.386	2.006	27.8	19.9	112 E	28*	79
7 30	11 22.19	-1 16.8	4.644	3.992	10.4	21.0	45 E	7*	39*	6 10	12 0.23	-13 56.3	1.512	2.040	28.6	20.1	106 E	27*	78	6 20	12 14.84	-13 12.8	1.645	2.074	28.9	20.3	100 E	25*	77
8 9	11 32.37	-1 57.4	4.737	3.988	9.0	21.0	38 E	4*	32*	6 30	12 30.22	-12 50.9	1.784	2.108	28.8	20.5	94 E	23*	77	7 10	12 46.16	-12 46.6	1.927	2.142	28.3	20.7	88 E	21*	76*
8 19	11 42.92	-2 42.4	4.816	3.985	7.6	21.0	31 E	2*	25*	7 20	13 2.55	-12 56.2	2.072	2.176	27.5	20.9	82 E	19*	74*	7 30	13 19.31	-13 16.6	2.217	2.210	26.5	21.0	76 E	17*	69*
8 29	11 53.77	-3 31.0	4.880	3.982	6.0	20.9	24 E	—	18*	8 9	13 36.35	-13 45.0	2.363	2.243	25.3	21.2	71 E	15*	64*	8 19	13 53.65	-14 18.8	2.506	2.276	23.8	21.3	65 E	14*	59*
9 8	12 4.86	-4 22.4	4.927	3.979	4.4	20.9	18 E	—	11*	8 29	14 11.18	-14 56.0	2.645	2.309	22.2	21.4	60 E	13*	54*	9 8	14 28.91	-15 34.5	2.780	2.342	20.5	21.5	54 E	12*	48*
9 18	12 16.13	-5 15.7	4.958	3.977	2.8	20.8	11 E	—	5*	9 28	12 27.53	-6 10.3	4.972	3.974	1.2	20.7	5 E	—	—	10 8	12 39.00	-7 5.2	4.968	3.972	1.0	20.6	4 W	—	—
9 28	12 27.53	-6 10.3	4.972	3.974	1.2	20.7	5 E	—	—	10 18	12 50.49	-7 59.9	4.946	3.969	2.6	20.7	10 W	2*	2*	10 18	13 1.92	-8 53.4	4.906	3.967	4.2	20.8	17 W	9*	7*
10 8	12 39.00	-7 5.2	4.968	3.972	1.0	20.6	4 W	—	—	11 7	13 13.24	-9 45.0	4.848	3.966	5.9	20.9	24 W	14*	12*	11 7	13 13.24	-9 45.0	4.848	3.966	5.9	20.9	24 W	14*	12*
10 18	12 50.49	-7 59.9	4.946	3.969	2.6	20.7	10 W	2*	2*	11 17	13 24.36	-10 34.0	4.774	3.964	7.5	20.9	31 W	20*	18*	11 17	13 24.36	-10 34.0	4.774	3.964	7.5	20.9	31 W	20*	18*
10 28	13 1.92	-8 53.4	4.906	3.967	4.2	20.8	17 W	9*	7*	11 27	13 35.21	-11 19.4	4.683	3.962	9.0	20.9	39 W	24*	24*	12 7	13 45.67	-12 0.6	4.578	3.961	10.3	21.0	46 W	28*	30*
11 7	13 13.24	-9 45.0	4.848	3.966	5.9	20.9	24 W	14*	12*	12 17	13 55.64	-12 36.8	4.459	3.960	11.6	20.9	54 W	30*	38*	12 17	13 55.64	-12 36.8	4.459	3.960	11.6	20.9	54 W	30*	38*
11 17	13 24.36	-10 34.0	4.774	3.964	7.5	20.9	31 W	20*	18*	12 27	14 4.99	-13 7.2	4.328	3.959	12.6	20.9	62 W	31*	46*	12 27	14 4.99	-13 7.2	4.328	3.959	12.6	20.9	62 W	31*	46*
11 27	13 35.21	-11 19.4	4.683	3.962	9.0	20.9	39 W	24*	24*	1 6	14 13.59	-13 31.1	4.187	3.958	13.5	20.9	70 W	31*	54*	1 6	14 13.59	-13 31.1	4.187	3.958	13.5	20.9	70 W	31*	54*
12 7	13 45.67	-12 0.6	4.578	3.961	10.3	21.0	46 W	28*	30*	1 16	14 21.26	-13 47.6	4.039	3.957	14.1	20.8	78 W	31	63*	1 16	14 21.26	-13 47.6	4.039	3.957	14.1	20.8	78 W	31	63*
12 17	13 55.64	-12 36.8	4.459	3.960	11.6	20.9	54 W	30*	38*	310879 2003 ON₁₂																			
12 27	14 4.99	-13 7.2	4.328	3.959	12.6	20.9	62 W	31*	46*	12 23	10 58.75	-10 30.3	2.448	2.794	20.3	21.5	100 W	34	74*	1 2	10 58.99	-12 8.0	2.340	2.818	19.3	21.4	109 W	33	76

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2020	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°		
459386 2012 KJ₁₁ (continuation)									459386 2012 KJ₁₁ (continuation)										
1 12	10 49.36	+40 10.6	1.461	2.261	18.1	20.4	134 W	85	24	1 1	22 47.70	+35 13.5	1.395	1.587	37.8	20.1	82 E	75* 13*	
1 17	10 42.40	+40 57.1	1.406	2.243	16.8	20.3	139 W	86	23	1 6	23 1.71	+36 5.7	1.465	1.625	36.7	20.3	81 E	75* 12*	
1 22	10 33.73	+41 42.1	1.357	2.224	15.4	20.1	143 W	87	22	1 11	23 15.61	+36 55.1	1.535	1.662	35.5	20.4	79 E	73* 10*	
1 27	10 23.34	+42 22.4	1.313	2.205	14.1	20.0	147 W	87	22	1 16	23 29.41	+37 42.4	1.605	1.699	34.5	20.5	78 E	72* 9*	
2 1	10 11.34	+42 54.8	1.277	2.185	13.1	19.9	150 W	88	21	461962 2006 UF₆₄									
2 6	9 57.99	+43 16.0	1.248	2.164	12.7	19.8	151 W	88	21	12 23	11 2.60	-5 37.4	1.271	1.753	33.4	20.5	101 W	39	69*
2 11	9 43.66	+43 23.0	1.226	2.143	12.9	19.8	151 W	88	21	1 2	11 9.88	-7 9.8	1.217	1.797	31.1	20.4	109 W	38	71
2 16	9 28.85	+43 13.8	1.212	2.120	13.9	19.7	149 E	88	21	1 12	11 13.60	-8 17.3	1.168	1.843	28.2	20.3	118 W	37	72
2 21	9 14.13	+42 47.5	1.205	2.097	15.5	19.8	146 E	88	21	1 22	11 13.57	-8 55.5	1.125	1.889	24.5	20.2	127 W	36	73
2 26	9 0.04	+42 4.5	1.206	2.073	17.4	19.8	141 E	87	22	2 1	11 9.82	-8 59.9	1.093	1.938	20.1	20.0	138 W	36	73
3 2	8 47.09	+41 6.5	1.214	2.048	19.6	19.9	136 E	86	23	2 11	11 2.91	-8 28.8	1.077	1.986	15.1	19.9	148 W	37	72
3 7	8 35.62	+39 56.1	1.228	2.022	21.8	19.9	131 E	85	24	2 16	10 58.59	-8 0.7	1.076	2.011	12.5	19.8	154 W	37	72
3 12	8 25.83	+38 36.1	1.247	1.995	23.9	20.0	125 E	84	25	2 21	10 53.90	-7 25.0	1.081	2.036	9.9	19.8	159 W	38	71
3 17	8 17.78	+37 9.5	1.271	1.968	26.0	20.1	120 E	82	27	2 26	10 49.05	-6 43.0	1.092	2.061	7.7	19.7	164 W	38	71
3 22	8 11.46	+35 38.7	1.299	1.939	27.8	20.1	115 E	81	28	3 2	10 44.25	-5 56.2	1.109	2.086	6.3	19.7	167 E	39	70
3 27	8 6.79	+34 5.7	1.329	1.910	29.5	20.2	109 E	79	30	3 7	10 39.68	-5 6.3	1.132	2.111	6.1	19.8	167 E	40	69
4 1	8 3.65	+32 32.0	1.361	1.879	31.0	20.3	104 E	78	31	3 12	10 35.51	-4 15.1	1.162	2.136	7.1	19.9	165 E	41	68
4 6	8 1.89	+30 58.6	1.395	1.848	32.3	20.3	100 E	76	33	3 17	10 31.87	-3 24.0	1.197	2.161	8.8	20.1	161 E	42	67
4 11	8 1.35	+29 26.1	1.429	1.816	33.3	20.4	95 E	74	35	3 22	10 28.86	-2 34.6	1.239	2.186	10.8	20.2	156 E	42	67
4 16	8 1.91	+27 54.8	1.462	1.783	34.2	20.4	91 E	70	36	3 27	10 26.56	-1 48.0	1.286	2.211	12.8	20.4	151 E	43	66
4 21	8 3.43	+26 24.7	1.495	1.749	35.0	20.4	86 E	66	38	4 1	10 25.00	-1 5.1	1.339	2.236	14.6	20.6	146 E	44	65
4 26	8 5.82	+24 55.6	1.527	1.714	35.6	20.4	82 E	67	39	4 6	10 24.19	-0 26.8	1.397	2.261	16.3	20.8	141 E	45	64
5 1	8 8.97	+23 27.3	1.557	1.678	36.0	20.5	79 E	67	40	4 11	10 24.11	+0 6.7	1.459	2.286	17.8	20.9	136 E	45	64
5 11	8 17.22	+20 31.8	1.609	1.603	36.6	20.4	71 E	48*	42*	4 16	10 24.72	+0 35.2	1.525	2.311	19.1	21.1	131 E	46	63
5 21	8 27.62	+17 34.9	1.650	1.525	36.9	20.4	65	38*	43*	4 21	10 25.99	+0 58.6	1.595	2.335	20.3	21.3	126 E	46	63
5 31	8 39.81	+14 33.2	1.676	1.442	37.0	20.3	59	30*	43*	4 26	10 27.87	+1 17.1	1.668	2.360	21.2	21.4	122 E	46	63
6 10	8 53.53	+11 23.3	1.686	1.356	37.0	20.2	54 E	22*	42*	15609 Kosmaczewski									
6 20	9 8.65	+8 1.5	1.678	1.266	37.2	20.0	49 E	14*	41*	12 23	11 3.36	+6 58.0	2.402	2.840	19.4	20.6	106 W	52	57*
6 30	9 25.15	+4 24.3	1.650	1.173	37.6	19.8	45 E	7*	38*	1 2	11 6.00	+7 1.7	2.254	2.826	18.2	20.4	116 W	52	57
7 10	9 43.13	+0 28.3	1.602	1.078	38.7	19.6	42 E	2*	36*	1 12	11 6.34	+7 22.0	2.117	2.811	16.4	20.2	126 W	52	57
7 20	10 2.87	+3 49.9	1.531	0.982	40.8	19.4	39	—	30*	1 22	11 4.18	+7 59.9	1.994	2.795	13.9	19.9	137 W	53	56
7 30	10 24.88	+8 32.3	1.437	0.889	44.5	19.1	38 E	—	28*	2 1	10 59.47	+8 55.0	1.890	2.779	10.6	19.7	149 W	54	55
8 9	10 50.01	-13 37.6	1.318	0.803	50.2	18.9	38 E	—	27*	2 11	10 52.41	+10 4.6	1.810	2.761	6.8	19.4	161 W	55	54
8 14	11 4.21	-16 16.5	1.250	0.765	54.1	18.8	38 E	—	27*	2 16	10 48.16	+10 43.3	1.781	2.752	4.7	19.3	167 W	56	53
8 19	11 19.84	-18 56.9	1.176	0.732	58.7	18.7	38 E	—	27*	2 21	10 43.54	+11 23.4	1.759	2.742	2.6	19.1	173 W	56	53
8 24	11 37.26	-21 34.9	1.098	0.705	64.0	18.6	39 E	—	27*	2 26	10 38.67	+12 4.1	1.744	2.733	1.2	19.0	177 W	57	52
8 29	11 56.94	-24 5.2	1.015	0.685	69.8	18.6	40 E	—	27*	3 2	10 33.70	+12 44.1	1.737	2.723	2.6	19.1	173 E	58	51
8 31	12 5.56	-25 1.5	0.982	0.680	72.3	18.6	40 E	—	27*	3 7	10 28.77	+13 22.6	1.737	2.713	4.8	19.2	167 E	58	51
9 2	12 14.67	-25 54.7	0.948	0.676	74.8	18.5	40 E	—	28*	3 12	10 24.01	+13 58.7	1.745	2.702	7.0	19.3	161 E	59	50
9 4	12 24.31	-26 44.2	0.914	0.673	77.3	18.5	41 E	—	28*	3 17	10 19.54	+14 31.6	1.759	2.692	9.1	19.4	155 E	60	49
9 6	12 34.53	-27 29.1	0.880	0.672	79.8	18.5	41 E	—	29*	3 22	10 15.50	+15 0.7	1.780	2.681	11.2	19.5	149 E	60	49
9 8	12 45.35	-28 8.7	0.847	0.672	82.3	18.6	41 E	—	29*	4 1	10 9.05	+15 45.9	1.839	2.659	14.8	19.7	137 E	61	48
9 10	12 56.84	-28 42.1	0.814	0.674	84.7	18.6	42 E	—	30*	4 11	10 5.19	+16 12.9	1.916	2.635	17.9	19.8	126 E	61	48
9 12	13 9.01	-29 8.1	0.781	0.677	87.0	18.6	42 E	—	31*	4 21	10 4.07	+16 22.2	2.007	2.611	20.2	20.0	116 E	61	48
9 14	13 21.90	-29 25.7	0.749	0.682	89.2	18.6	43 E	—	32*	5 1	10 5.65	+16 15.2	2.108	2.586	21.9	20.1	107 E	61	48
9 16	13 35.52	-29 33.8	0.719	0.688	91.2	18.6	43 E	—	33*	5 11	10 9.70	+15 53.6	2.212	2.560	23.0	20.3	98 E	59	48
9 18	13 49.87	-29 31.1	0.689	0.695	93.1	18.6	44 E	—	34*	5 21	10 15.93	+15 19.0	2.319	2.534	23.5	20.4	90 E	53	49
9 20	14 4.93	-29 16.4	0.661	0.704	94.7	18.6	44 E	—	35*	5 31	10 24.04	+14 32.8	2.423	2.506	23.7	20.4	83 E	47	49
9 22	14 20.66	-28 48.4	0.635	0.714	96.0	18.6	45 E	—	37*	6 10	10 33.76	+13 36.3	2.524	2.478	23.4	20.5	76 E	40	50*
9 24	14 36.99	-28 6.0	0.610	0.725	97.0	18.6	46 E	—	38*	6 20	10 44.85	+12 30.4	2.619	2.448	22.8	20.5	69 E	34	50*
9 26	14 53.83	-27 8.3	0.588	0.737	97.7	18.6	47 E	1*	40*	6 30	10 57.10	+11 16.0	2.706	2.419	22.0	20.5	63 E	28	48*
9 28	15 11.06	-25 54.8	0.568	0.750	98.1	18.6	48 E	4*	41*	7 10	11 10.36	+9 54.1	2.786	2.388	20.9	20.5	57 E	24	45*
9 30	15 28.55	-24 25.2	0.550	0.764	98.0	18.5	49 E	7*	43*	7 20	11 24.49	+8 25.2	2.857	2.357	19.6	20.5	51 E	20	42*
10 2	15 46.15	-22 40.0	0.535	0.779	97.6	18.5	50 E	10*	44*	7 30	11 39.41	+6 50.2	2.917	2.325	18.2	20.5	46 E	16	37*
10 4	16 3.70	-20 40.1	0.522	0.794	96.7	18.5	52 E	13*	46*	8 9	11 55.05	+5 9.8	2.968	2.292	16.7	20.5	40 E	13	33*
10 6	16 21.08	-18 27.2	0.513	0.810	95.6	18.4	54 E	17*	47*	8 19	12 11.37	+3 24.8	3.009	2.259	15.0	20.4	35 E	11	28*
10 8	16 38.13	-16 3.4	0.506	0.826	94.1	18.4	56 E	20*	48*	8 29	12 28.34	+1 36.0	3.039	2.226	13.2	20.3	30 E	9	24*

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°		
133059 2003 EC₅₈										138205 2000 EZ₁₄₈											
<i>(continuation)</i>																					
1	17	11 43.06	+45 15.9	1.024	1.798	25.8	17.9	127 W	90	19	12	23	11 4.64	+14 0.2	3.450	3.877	13.9	21.3	109 W	59	50*
1	22	11 48.87	+46 57.1	0.995	1.785	25.4	17.8	129 W	88	17	1	2	11 4.21	+14 14.6	3.280	3.851	12.9	21.2	119 W	59	50
1	27	11 53.67	+48 39.2	0.969	1.772	25.1	17.7	130 W	86	15	1	12	11 1.84	+14 39.9	3.122	3.825	11.4	21.0	130 W	60	49
2	1	11 57.31	+50 20.0	0.948	1.759	25.0	17.7	131 W	85	14	1	22	10 57.46	+15 14.9	2.983	3.796	9.4	20.8	141 W	60	49
2	6	11 59.67	+51 57.1	0.930	1.747	25.0	17.6	132 W	83	12	2	1	10 51.12	+15 57.6	2.868	3.767	7.0	20.6	152 W	61	48
2	11	12 0.66	+53 28.0	0.916	1.736	25.2	17.6	132 W	82	11	2	11	10 43.08	+16 44.7	2.780	3.737	4.3	20.4	163 W	62	47
2	16	12 0.17	+54 50.2	0.906	1.725	25.5	17.5	131 W	80	9	2	21	10 33.81	+17 31.8	2.724	3.705	2.2	20.2	172 W	63	46
2	21	11 58.21	+56 1.0	0.898	1.715	26.0	17.5	131 W	79	8	2	26	10 28.90	+17 53.8	2.707	3.689	2.4	20.2	171 E	63	46
2	26	11 54.86	+56 57.8	0.894	1.705	26.6	17.5	130 W	78	7	3	2	10 23.94	+18 14.2	2.700	3.672	3.5	20.2	167 E	63	46
3	2	11 50.34	+57 38.3	0.892	1.695	27.3	17.5	128 W	77	6	3	7	10 19.04	+18 32.3	2.700	3.655	4.9	20.3	162 E	64	45
3	7	11 44.96	+58 0.8	0.893	1.687	28.1	17.5	127 W	77	6	3	12	10 14.28	+18 47.9	2.708	3.638	6.4	20.4	156 E	64	45
3	12	11 39.13	+58 4.3	0.896	1.679	28.9	17.6	125 W	77	6	3	22	10 5.55	+19 10.3	2.745	3.603	9.2	20.5	144 E	64	45
3	14	11 36.77	+58 0.2	0.898	1.676	29.3	17.6	125 W	77	6	4	1	9 58.36	+19 20.1	2.807	3.566	11.8	20.6	133 E	64	45
3	16	11 34.42	+57 53.1	0.900	1.673	29.6	17.6	124 E	77	6	4	11	9 53.11	+19 17.5	2.889	3.528	13.9	20.7	122 E	64	45
3	18	11 32.12	+57 42.9	0.903	1.670	29.9	17.6	123 E	77	6	4	21	9 49.98	+19 3.4	2.985	3.489	15.5	20.8	112 E	64	45
3	20	11 29.89	+57 29.5	0.906	1.667	30.3	17.6	122 E	78	7	5	1	9 49.00	+18 39.2	3.091	3.449	16.6	20.9	102 E	63*	45
3	22	11 27.76	+57 13.2	0.909	1.665	30.6	17.6	122 E	78	7	5	11	9 50.03	+18 6.0	3.200	3.407	17.2	21.0	93 E	59*	46
3	27	11 23.00	+56 19.6	0.919	1.659	31.5	17.7	120 E	79	8	5	21	9 52.91	+17 24.9	3.309	3.364	17.4	21.0	84 E	52*	47
4	1	11 19.26	+55 8.8	0.930	1.653	32.3	17.7	118 E	80	9	5	31	9 57.43	+16 36.9	3.415	3.319	17.2	21.1	76 E	44*	47*
4	6	11 16.70	+53 42.4	0.943	1.649	33.1	17.7	116 E	81	10	6	10	10 3.39	+15 42.4	3.513	3.273	16.7	21.1	68 E	37*	46*
4	11	11 15.35	+52 2.3	0.958	1.645	33.8	17.8	114 E	83	12	6	20	10 10.59	+14 42.1	3.602	3.226	15.9	21.1	61 E	30*	44*
4	16	11 15.20	+50 10.2	0.974	1.642	34.5	17.8	112 E	85	14	6	30	10 18.86	+13 36.2	3.678	3.177	14.9	21.1	53 E	23*	41*
4	21	11 16.17	+48 7.6	0.992	1.639	35.1	17.9	110 E	87	16	7	10	10 28.06	+12 25.1	3.742	3.127	13.6	21.0	46 E	18*	37*
4	26	11 18.19	+45 56.0	1.011	1.638	35.6	18.0	109 E	89	18	7	20	10 38.07	+11 9.0	3.791	3.075	12.1	21.0	39 E	13*	31*
5	1	11 21.15	+43 37.0	1.033	1.637	36.1	18.0	107 E	89	20	7	30	10 48.78	+9 48.0	3.824	3.022	10.5	20.9	33 E	9*	26*
5	6	11 24.93	+41 12.0	1.056	1.637	36.5	18.1	105 E	86	23	8	9	11 0.12	+8 22.3	3.841	2.968	8.8	20.8	26 E	6*	20*
5	11	11 29.43	+38 42.3	1.081	1.638	36.9	18.1	103 E	84	25	8	19	11 12.03	+6 52.2	3.841	2.911	6.9	20.7	20 E	3*	14*
5	16	11 34.53	+36 9.0	1.108	1.640	37.2	18.2	101 E	81	28	8	29	11 24.46	+5 17.8	3.823	2.854	4.9	20.5	14 E	—	8*
5	21	11 40.16	+33 33.0	1.136	1.642	37.4	18.3	100 E	78*	30	9	8	11 37.37	+3 39.4	3.789	2.794	2.8	20.3	8 E	—	2*
5	26	11 46.25	+30 55.3	1.167	1.645	37.6	18.3	98 E	74*	33	9	18	11 50.76	+1 56.9	3.738	2.734	0.8	20.1	2 E	—	—
5	31	11 52.75	+28 16.9	1.199	1.649	37.7	18.4	96 E	70*	36	9	28	12 4.62	+0 10.8	3.669	2.671	1.5	20.1	4 W	—	—
6	5	11 59.58	+25 38.5	1.233	1.654	37.7	18.5	94 E	66*	38	10	8	12 18.96	-1 38.8	3.586	2.607	3.8	20.1	10 W	3*	—
6	10	12 6.71	+23 0.8	1.270	1.659	37.7	18.5	92 E	61*	41	10	18	12 33.80	-3 31.8	3.486	2.541	6.1	20.1	16 W	8*	4*
6	15	12 14.10	+20 24.5	1.308	1.665	37.6	18.6	91 E	57*	44	10	28	12 49.16	-5 27.9	3.373	2.474	8.4	20.1	21 W	13*	8*
6	20	12 21.73	+17 50.1	1.348	1.672	37.4	18.7	89 E	53*	46	11	7	13 5.10	-7 26.9	3.246	2.404	10.7	20.0	27 W	17*	13*
6	25	12 29.57	+15 18.0	1.390	1.679	37.2	18.7	87 E	49*	49	11	17	13 21.69	-9 28.6	3.107	2.333	13.1	20.0	32 W	21*	18*
6	30	12 37.61	+12 48.6	1.434	1.687	36.9	18.8	85 E	46*	51	11	27	13 39.00	-11 32.9	2.958	2.261	15.5	19.9	38 W	24*	23*
7	10	12 54.21	+7 59.5	1.526	1.705	36.1	19.0	82 E	39*	56*	12	7	13 57.14	-13 39.4	2.801	2.187	17.9	19.8	43 W	25*	28*
7	20	13 11.44	+3 24.7	1.624	1.726	35.2	19.1	78 E	33*	60*	12	17	14 16.26	-15 48.1	2.636	2.111	20.3	19.6	48 W	26*	34*
7	30	13 29.30	+0 54.6	1.728	1.748	34.0	19.2	74 E	28*	61*	12	27	14 36.54	-17 58.6	2.467	2.033	22.7	19.5	53 W	25*	41*
8	9	13 47.74	+4 57.6	1.836	1.773	32.6	19.3	70 E	24*	61*	1	6	14 58.21	-20 10.5	2.294	1.955	25.2	19.3	58 W	24*	47*
8	19	14 6.79	-8 43.9	1.946	1.799	31.0	19.5	66 E	21*	59*	1	16	15 21.58	-22 23.2	2.122	1.874	27.6	19.1	62 W	22*	53*
8	29	14 26.46	-12 13.6	2.059	1.827	29.4	19.6	62 E	17*	56*	138947 2001 BA₄₀										
9	8	14 46.74	-15 26.3	2.173	1.856	27.6	19.7	58 E	15*	52*	12	23	11 6.10	-7 51.6	0.745	1.329	46.9	20.4	100 W	37	71*
9	18	15 7.67	-18 22.2	2.286	1.886	25.6	19.7	54 E	12*	48*	12	28	11 14.42	-10 35.3	0.702	1.317	47.0	20.2	102 W	34	74*
9	28	15 29.24	-21 1.3	2.398	1.917	23.7	19.8	50 E	10*	44*	1	2	11 22.60	-13 28.9	0.660	1.304	47.2	20.1	103 W	32	77
10	8	15 51.43	-23 23.6	2.507	1.949	21.6	19.9	46 E	9*	40*	1	7	11 30.65	-16 33.6	0.619	1.290	47.4	19.9	105 W	28	81
10	18	16 14.22	-25 28.9	2.613	1.982	19.5	20.0	42 E	7*	36*	1	12	11 38.62	-19 50.4	0.580	1.276	47.7	19.7	106 W	25	84
10	28	16 37.56	-27 17.4	2.713	2.015	17.4	20.0	37 E	5*	31*	1	17	11 46.57	-23 20.6	0.543	1.260	48.0	19.6	108 W	22	87
11	7	17 1.36	-28 49.0	2.808	2.048	15.2	20.0	33 E	4*	27*	1	22	11 54.54	-27 5.2	0.507	1.244	48.5	19.4	109 W	18	89
11	17	17 25.53	-30 3.9	2.897	2.081	13.1	20.1	28 E	2*	22*	1	27	12 2.63	-31 5.3	0.474	1.227	49.2	19.3	109 W	14	85
11	27	17 49.97	-31 2.5	2.977	2.115	11.0	20.1	24 E	—	18*	2	1	12 10.98	-35 21.4	0.443	1.209	50.1	19.1	110 W	10	81
12	7	18 14.52	-31 45.1	3.049	2.148	9.0	20.1	20 E	—	14*	2	6	12 19.84	-39 54.4	0.414	1.191	51.3	19.0	110 W	5	76
12	17	18 39.07	-32 12.6	3.111	2.182	7.1	20.1	16 E	—	10*	2	11	12 29.60	-44 44.6	0.388	1.171	52.8	18.8	109 W	—	71
12	27	19 3.47	-32 25.9	3.164	2.215	5.6	20.1	13 E	—	6*	2	13	12 33.86	-46 45.5	0.378	1.164	53.6	18.8	108 W	—	69
1	6	19 27.58	-32 26.1	3.206	2.248	4.7	20.1	11 E	—	3*	2	15	12 38.41	-48 49.0	0.369	1.156	54.4	18.7	108 W	—	67
1	16	19 51.29	-32 14.6	3.237	2.280	4.8	20.2	11 E	—	—	2	17	12 43.30	-50 55.1	0.360	1.148	55.2	18.7	107 W	—	65
443950 2002 XZ₃₉																					
12	23	11 4.57	+10 7.4	0.688	1.357	43.8	19.7	107 W	55	54*	2	19	12 48.62	-53 3.7	0.351	1.140	56.2	18.7	107 W	—	63
1	2	11 21.24	+9 20.9	0.660	1.383	40.8	19.6	113 W	54	55	2	21	12 54.46	-55 14.4	0.343	1.132	57.2	18.6	106 W	—	61
1																					

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2020	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	
138947 2001 BA₄₀ (continuation)									138947 2001 BA₄₀ (continuation)									
3 17	17 47.73	-78 53.8	0.276	1.026	75.7	18.5	89 W	37*	12 17	5 50.61	+27 8.9	0.418	1.401	3.2	17.8	175 W	72	37
3 18	18 18.02	-78 49.8	0.275	1.022	76.7	18.5	88 W	37*	12 22	5 34.95	+25 7.2	0.420	1.402	4.4	17.8	174 E	70	39
3 19	18 47.65	-78 34.5	0.273	1.018	77.6	18.5	87 W	37*	12 27	5 20.53	+23 2.0	0.429	1.403	10.1	18.1	166 E	68	41
3 20	19 15.74	-78 8.4	0.272	1.014	78.5	18.5	86 W	37*	1 1	5 7.96	+20 59.7	0.443	1.402	15.7	18.4	157 E	66	43
3 21	19 41.67	-77 32.6	0.271	1.009	79.5	18.6	85 W	36*	1 6	4 57.57	+19 5.8	0.462	1.401	20.9	18.7	149 E	64	45
3 22	20 5.14	-76 48.0	0.270	1.005	80.4	18.6	84 W	36*	1 11	4 49.51	+17 23.8	0.485	1.398	25.6	18.9	142 E	62	47
3 23	20 26.07	-75 56.0	0.269	1.001	81.4	18.6	83 W	36*	1 16	4 43.74	+15 55.7	0.511	1.395	29.7	19.2	135 E	61	48
3 24	20 44.59	-74 57.8	0.269	0.997	82.3	18.6	82 W	36*	439908 2000 XH₄₇									
3 25	21 0.89	-73 54.3	0.268	0.993	83.3	18.6	81 W	36*	12 23	11 6.96	+0 27.9	0.828	1.420	42.5	21.3	103 W	45	63*
3 26	21 15.24	-72 46.3	0.268	0.988	84.2	18.7	80 W	36*	1 2	11 10.45	+3 42.0	0.779	1.452	39.4	21.1	110 W	41	68
3 27	21 27.89	-71 34.8	0.267	0.984	85.1	18.7	79 W	36*	1 12	11 8.85	+7 43.0	0.734	1.484	35.4	20.9	119 W	37	72
3 28	21 39.06	-70 20.1	0.267	0.980	86.1	18.7	78 W	36*	1 22	11 1.57	-11 25.5	0.696	1.516	30.7	20.7	128 W	34	75
3 29	21 48.98	-69 2.8	0.267	0.976	87.0	18.7	77 W	37*	2 1	10 48.44	-14 33.8	0.670	1.547	25.5	20.5	138 W	30	79
3 30	21 57.82	-67 43.4	0.267	0.972	88.0	18.8	77 W	37*	2 11	10 30.59	-16 49.6	0.660	1.578	20.5	20.4	146 W	28	81
3 31	22 5.74	-66 22.1	0.267	0.968	88.9	18.8	76 W	37*	2 16	10 20.61	-17 33.1	0.662	1.592	18.6	20.4	149 W	27	82
4 1	22 12.86	-64 59.2	0.267	0.964	89.8	18.8	75 W	37*	2 21	10 10.46	-17 59.3	0.669	1.607	17.3	20.4	151 E	27	82
4 2	22 19.31	-63 35.0	0.267	0.960	90.7	18.9	74 W	37*	2 26	10 0.59	-18 8.6	0.681	1.621	16.9	20.4	152 E	27	82
4 3	22 25.17	-62 9.6	0.267	0.956	91.6	18.9	73 W	38*	3 2	9 51.41	-18 2.7	0.698	1.635	17.3	20.5	151 E	27	82
4 4	22 30.53	-60 43.2	0.268	0.952	92.5	18.9	72 W	38*	3 7	9 43.27	-17 44.2	0.720	1.649	18.4	20.6	148 E	27	82
4 5	22 35.44	-59 16.1	0.269	0.948	93.3	19.0	71 W	38*	3 12	9 36.39	-17 15.9	0.746	1.663	19.8	20.8	145 E	28	81
4 6	22 39.98	-57 48.2	0.269	0.944	94.2	19.0	70 W	39*	3 17	9 30.89	-16 40.7	0.777	1.676	21.5	20.9	142 E	28	81
4 7	22 44.18	-56 19.8	0.270	0.940	95.0	19.0	69 W	39*	3 22	9 26.84	-16 1.4	0.811	1.688	23.3	21.1	138 E	29	80
4 8	22 48.10	-54 51.0	0.271	0.937	95.8	19.1	69 W	39*	3 27	9 24.21	-15 20.3	0.849	1.701	25.0	21.3	134 E	30	79
4 9	22 51.76	-53 21.8	0.273	0.933	96.6	19.1	68 W	40*	4 1	9 22.96	-14 39.5	0.890	1.712	26.6	21.4	130 E	30	79
4 10	22 55.20	-51 52.3	0.274	0.929	97.4	19.1	67 W	40*	512245 2016 AU₈									
4 11	22 58.44	-50 22.8	0.275	0.925	98.1	19.2	66 W	40*	12 23	11 8.15	+17 58.3	0.289	1.112	56.7	19.5	109 W	63	46*
4 13	23 4.43	-47 23.6	0.279	0.918	99.5	19.2	65 W	41*	12 28	11 5.55	+16 25.8	0.273	1.123	53.0	19.3	114 W	61	48
4 15	23 9.88	-44 24.9	0.283	0.911	100.8	19.3	63 W	42*	1 2	11 0.65	+14 51.6	0.257	1.133	48.8	19.0	120 W	60	49
4 17	23 14.91	-41 27.3	0.287	0.904	101.9	19.4	62 W	42*	1 7	10 53.07	+13 14.7	0.241	1.142	44.0	18.8	126 W	58	51
4 19	23 19.60	-38 31.3	0.292	0.898	102.9	19.5	61 W	43*	1 12	10 42.46	+11 34.1	0.227	1.151	38.6	18.5	133 W	57	52
4 21	23 24.04	-35 37.6	0.298	0.892	103.8	19.5	59 W	44*	1 17	10 28.50	+9 49.5	0.214	1.158	32.5	18.2	141 W	55	54
4 23	23 28.28	-32 46.5	0.304	0.885	104.5	19.6	58 W	45*	1 22	10 11.11	+8 1.7	0.204	1.164	25.7	17.9	149 W	53	56
4 25	23 32.38	-29 58.5	0.310	0.880	105.1	19.7	58 W	45*	1 27	9 50.66	+6 12.7	0.197	1.169	18.7	17.7	158 W	51	58
4 27	23 36.37	-27 13.9	0.318	0.874	105.5	19.7	57 W	46*	2 1	9 28.12	+4 26.7	0.193	1.173	12.8	17.4	165 W	49	60
4 29	23 40.29	-24 33.0	0.326	0.869	105.7	19.8	56 W	47*	2 6	9 4.94	+2 49.0	0.194	1.176	11.2	17.4	167 E	48	61
5 1	23 44.16	-21 56.1	0.334	0.864	105.8	19.8	56 W	47*	2 11	8 42.70	+1 24.6	0.199	1.178	15.3	17.6	162 E	46	63
5 6	23 53.83	-15 42.3	0.357	0.853	105.4	19.9	55 W	48*	2 16	8 22.73	+0 16.7	0.208	1.178	21.6	17.9	154 E	45	64
5 11	0 3.70	+9 55.9	0.384	0.845	104.2	20.0	54 W	48*	2 21	8 5.88	+0 34.2	0.221	1.178	27.9	18.2	146 E	44	65
5 16	0 13.97	+4 37.3	0.413	0.839	102.3	20.0	54 W	48*	2 26	7 52.54	-1 9.9	0.235	1.177	33.7	18.5	139 E	44	65
5 21	0 24.73	+0 14.5	0.444	0.836	100.0	20.1	54 W	47*	3 2	7 42.66	-1 33.8	0.252	1.175	38.9	18.8	132 E	43	66
5 26	0 36.03	+4 41.0	0.476	0.835	97.4	20.1	55 W	46*	3 7	7 35.94	-1 49.1	0.270	1.171	43.3	19.1	126 E	43	66
5 31	0 47.90	+8 44.0	0.510	0.837	94.5	20.1	55 W	45*	3 12	7 31.92	-1 58.8	0.288	1.167	47.2	19.3	120 E	43	66
6 5	1 0.35	+12 25.5	0.544	0.842	91.5	20.1	56 W	45*	3 17	7 30.20	-2 4.8	0.307	1.161	50.6	19.5	116 E	43	66
6 10	1 13.38	+15 47.4	0.578	0.849	88.6	20.2	57 W	41*	3 22	7 30.41	-2 8.8	0.325	1.155	53.6	19.7	111 E	43	66
6 15	1 26.96	+18 51.4	0.612	0.859	85.6	20.2	57 W	40*	3 27	7 32.28	-2 12.1	0.343	1.147	56.2	19.9	107 E	43	66
6 20	1 41.04	+21 38.8	0.644	0.870	82.8	20.2	58 W	34*	4 1	7 35.53	-2 16.0	0.360	1.138	58.6	20.1	103 E	43	66
6 25	1 55.55	+24 10.8	0.675	0.884	80.1	20.3	59 W	37*	4 11	7 45.23	-2 28.1	0.390	1.118	62.8	20.3	97 E	42*	66
6 30	2 10.44	+26 28.3	0.705	0.900	77.6	20.3	60 W	39*	4 21	7 58.09	-2 47.3	0.414	1.095	66.6	20.5	91 E	39*	67*
7 5	2 25.66	+28 32.2	0.732	0.917	75.2	20.4	61 W	42*	5 1	8 13.24	-3 14.6	0.431	1.067	70.3	20.7	86 E	35*	67*
7 10	2 41.17	+30 23.5	0.757	0.935	73.0	20.4	62 W	45*	5 11	8 29.86	-3 49.2	0.438	1.037	74.2	20.8	81 E	30*	66*
7 15	2 56.90	+32 2.8	0.779	0.954	71.0	20.4	63 W	47*	5 21	8 47.33	-4 26.9	0.437	1.004	78.5	20.9	77 E	25*	65*
7 20	3 12.77	+33 30.7	0.798	0.974	69.1	20.5	64 W	50*	5 31	9 5.09	-5 2.0	0.425	0.970	83.5	20.9	72 E	19*	63*
7 25	3 28.70	+34 47.8	0.815	0.995	67.4	20.5	65 W	52*	6 10	9 22.29	-5 24.1	0.403	0.935	89.6	20.9	67 E	14*	60*
7 30	3 44.63	+35 54.5	0.829	1.016	65.9	20.6	66 W	54*	6 20	9 37.86	-5 14.9	0.372	0.900	97.3	21.0	61 E	10*	55*
8 4	4 0.50	+36 51.4	0.840	1.037	64.4	20.6	67 W	57*	6 30	9 50.13	-4 5.2	0.334	0.866	107.2	21.2	54 E	6*	48*
8 9	4 16.25	+37 39.2	0.848	1.058	63.1	20.6	69 W	59*	5646 1990 TR									
8 14	4 31.79	+38 18.4	0.853	1.080	61.9	20.6	70 W	61*	12 23	11 8.28	+13 27.8	2.390	2.845	19.2	20.5	108 W	58	50*
8 19	4 47.06	+38 49.6	0.855	1.101	60.8	20.6	72 W	63*	1 2	11 8.56	+13 42.2	2.278	2.870	17.7	20.4	118 W	59	50
8 24	5 1.96	+39 13.2	0.853	1.122	59.8	20.6	73 W	65*	1 12	11 6.21	+14 11.2	2.178	2.893	15.4	20.2	128 W	59	50
8 29	5 16.44	+39 29.8	0.850	1.142	58.8	20.6	75 W	67*	1 22	11 1.15	+14 53.5	2.094	2.915	12.6	20.1	140 W	60	49
9 3	5 30.44	+39 40.1	0.843	1.162	57.8	20.6	77 W	70*	2 1	10 53.52	+15 45.5	2.032	2.936	9.2	19.9	152 W	61	48
9 8	5 43.90	+39 44.6	0.833	1.181	56.9	20.6	79 W	72*	2 6	10 48.88	+16 13.6	2.010	2.946	7.3	19.8	158 W	61	48
9 13	5 56.74	+39 43.8	0.821	1.200	56.0	20.6	81 W	74*	2 11	10 43.80	+16 41.9	1.996	2.955	5.5	19.7	163 W	62	47
9 18	6 8.90	+39 38.5	0.807	1.218	55.1	20.6	84 W	76*	2 16	10 38.39	+17 9.7	1.989	2.964	3.8	19.6	169 W	62	47
9 23	6 20.28	+39 29.0	0.790	1.235	54.1	20.5	86 W	79*	2 21	10 32.77	+17 36.1	1.990	2.973	2.7	19.5	172 W	6	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2020	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°		
5646 1990 TR										36284 2000 DM₈											
<i>(continuation)</i>										<i>(continuation)</i>											
5	31	10 5.44	+15 34.8	3.117	3.074	18.8	21.3	78 E	45*	48*	8	4	6 53.13	+27 32.2	0.343	0.739	136.1	18.3	30 W	21*	13*
6	10	10 12.96	+14 33.6	3.259	3.076	18.1	21.3	71 E	38*	48*	8	5	6 53.49	+30 28.0	0.343	0.746	133.9	18.1	32 W	24*	12*
6	20	10 21.50	+13 27.5	3.394	3.078	17.2	21.4	63 E	31*	47*	8	6	6 54.04	+33 22.4	0.344	0.753	131.5	17.8	34 W	27*	10*
6	30	10 30.89	+12 17.0	3.520	3.078	16.0	21.4	56 E	25*	44*	8	7	6 54.80	+36 14.3	0.346	0.760	129.0	17.6	36 W	29*	9*
7	10	10 40.96	+11 2.6	3.634	3.076	14.6	21.5	50 E	19*	40*	8	8	6 55.78	+39 2.7	0.349	0.767	126.3	17.4	38 W	31*	7*
7	20	10 51.61	+9 44.6	3.736	3.073	13.1	21.5	43 E	15*	35*	8	9	6 57.00	+41 46.7	0.353	0.775	123.6	17.2	40 W	34*	6*
7	30	11 2.72	+8 23.4	3.824	3.069	11.4	21.4	37 E	11*	29*	8	10	6 58.47	+44 25.5	0.358	0.782	120.8	17.0	42 W	36*	4*
8	9	11 14.21	+6 59.5	3.897	3.063	9.6	21.4	30 E	7*	24*	8	11	7 0.21	+46 58.6	0.364	0.790	118.1	16.9	43 W	37*	3*
8	19	11 26.01	+5 33.2	3.954	3.056	7.7	21.4	24 E	5*	18*	8	12	7 2.23	+49 25.6	0.370	0.798	115.4	16.8	45 W	39*	1*
8	29	11 38.09	+4 5.0	3.996	3.048	5.7	21.3	18 E	3*	11*	8	13	7 4.55	+51 46.0	0.377	0.806	112.7	16.6	47 W	40*	—
9	8	11 50.37	+2 35.3	4.020	3.038	3.7	21.2	11 E	—	5*	8	14	7 7.19	+53 59.9	0.384	0.814	110.1	16.6	49 W	42*	—
9	18	12 2.84	+1 4.5	4.027	3.027	1.7	21.0	5 E	—	—	8	15	7 10.17	+56 7.1	0.392	0.823	107.6	16.5	51 W	43*	—
9	28	12 15.44	+0 27.0	4.016	3.015	0.6	20.9	2 W	—	—	8	16	7 13.51	+58 7.6	0.401	0.831	105.1	16.4	52 W	44*	—
10	8	12 28.14	+1 58.5	3.988	3.001	2.6	21.1	8 W	1*	—	8	17	7 17.22	+60 1.6	0.410	0.840	102.7	16.3	54 W	44*	—
10	18	12 40.92	+3 29.7	3.943	2.986	4.6	21.2	14 W	7*	3*	8	18	7 21.35	+61 49.2	0.419	0.848	100.5	16.3	56 W	45*	—
10	28	12 53.73	+5 0.1	3.880	2.969	6.7	21.2	20 W	13*	7*	8	19	7 25.90	+63 30.6	0.429	0.857	98.3	16.3	57 W	45*	—
11	7	13 6.52	+6 29.1	3.800	2.951	8.8	21.2	27 W	18*	12*	8	20	7 30.92	+65 6.0	0.439	0.866	96.2	16.2	58 W	46*	—
11	17	13 19.25	+7 56.2	3.705	2.932	10.7	21.3	34 W	23*	18*	8	21	7 36.42	+66 35.7	0.449	0.875	94.1	16.2	60 W	46*	—
11	27	13 31.84	+9 21.0	3.594	2.911	12.6	21.2	40 W	26*	24*	8	22	7 42.45	+67 59.8	0.460	0.884	92.2	16.2	61 W	46*	—
12	7	13 44.21	+10 42.9	3.469	2.889	14.4	21.2	47 W	29*	30*	8	23	7 49.03	+69 18.5	0.470	0.893	90.3	16.2	62 W	46*	—
12	17	13 56.28	+12 1.6	3.332	2.865	16.1	21.2	54 W	31*	37*	8	24	7 56.21	+70 32.2	0.481	0.902	88.5	16.2	63 W	46*	—
12	27	14 7.91	+13 16.4	3.183	2.840	17.6	21.1	61 W	31*	45*	8	25	8 4.02	+71 40.8	0.492	0.911	86.8	16.2	64 W	46*	—
1	6	14 18.97	+14 27.2	3.025	2.814	18.9	21.0	68 W	30*	54*	8	26	8 12.50	+72 44.7	0.503	0.920	85.2	16.2	65 W	46*	—
1	16	14 29.27	+15 33.6	2.859	2.786	20.0	20.9	76 W	29	62*	8	27	8 21.68	+73 44.0	0.514	0.929	83.6	16.2	66 W	46*	—
36284 2000 DM₈										36284 2000 DM₈											
12	23	11 8.33	+23 28.8	1.487	2.054	26.6	18.5	111 W	68	40*	8	30	8 53.73	+76 15.3	0.547	0.957	79.2	16.3	69 W	45*	—
12	28	11 7.08	+23 9.0	1.402	2.033	25.8	18.4	116 W	68	41*	8	31	9 5.99	+76 57.2	0.558	0.966	77.9	16.3	69 W	45*	—
1	2	11 4.57	+22 50.9	1.318	2.012	24.7	18.2	121 W	68	41	9	1	9 19.03	+77 35.0	0.570	0.976	76.6	16.3	70 W	44*	—
1	7	11 0.62	+22 33.9	1.237	1.989	23.3	18.0	127 W	68	41	9	2	9 32.83	+78 8.7	0.581	0.985	75.3	16.3	71 W	44*	—
1	12	10 55.03	+22 17.4	1.160	1.966	21.5	17.7	133 W	67	42	9	3	9 47.35	+78 38.5	0.592	0.994	74.1	16.3	72 W	44*	—
1	17	10 47.58	+22 0.0	1.086	1.941	19.3	17.5	139 W	67	42	9	4	10 2.51	+79 4.4	0.603	1.004	73.0	16.4	72 W	43*	—
1	22	10 38.10	+21 40.4	1.018	1.916	16.6	17.2	146 W	67	42	9	5	10 18.22	+79 26.4	0.614	1.013	71.9	16.4	73 W	43*	—
1	27	10 26.42	+21 16.2	0.956	1.890	13.4	17.0	154 W	66	43	9	6	10 34.37	+79 44.8	0.625	1.023	70.8	16.4	73 W	43*	—
2	1	10 12.54	+20 45.0	0.902	1.862	9.7	16.7	161 W	66	43	9	7	10 50.80	+79 59.5	0.636	1.032	69.8	16.4	74 W	42*	—
2	6	9 56.57	+20 4.0	0.856	1.834	5.7	16.3	169 W	65	44	9	8	11 7.38	+80 10.9	0.647	1.041	68.8	16.5	74 E	42*	—
2	11	9 38.86	+19 10.9	0.820	1.805	2.7	16.0	175 W	64	45	9	9	11 23.96	+80 19.1	0.657	1.051	67.8	16.5	75 E	42*	—
2	16	9 19.95	+18 4.2	0.794	1.775	5.5	16.1	170 E	63	46	9	10	11 40.37	+80 24.2	0.668	1.060	66.9	16.5	76 E	43*	—
2	21	9 0.58	+16 44.2	0.779	1.744	10.5	16.2	161 E	62	47	9	11	11 56.48	+80 26.6	0.679	1.070	66.0	16.5	76 E	44*	—
2	26	8 41.58	+15 13.0	0.774	1.712	15.7	16.4	152 E	60	49	9	12	12 12.18	+80 26.4	0.689	1.079	65.1	16.6	76 W	44*	—
3	2	8 23.71	+13 34.0	0.778	1.679	20.8	16.5	143 E	59	50	9	13	12 27.37	+80 24.1	0.700	1.088	64.3	16.6	77 E	45*	—
3	7	8 7.55	+11 51.2	0.791	1.645	25.6	16.6	134 E	57	52	9	14	12 41.98	+80 19.6	0.710	1.098	63.4	16.6	77 E	45*	—
3	12	7 53.42	+10 8.2	0.810	1.610	29.9	16.8	126 E	55	54	9	15	12 55.96	+80 13.5	0.720	1.107	62.6	16.6	78 E	46*	—
3	17	7 41.45	+8 27.7	0.835	1.574	33.8	16.9	118 E	53	56	9	16	13 9.28	+80 5.8	0.730	1.116	61.9	16.7	78 E	46*	—
3	22	7 31.63	+6 51.3	0.863	1.537	37.2	17.0	111 E	52	57	9	17	13 21.94	+79 56.8	0.741	1.125	61.1	16.7	79 E	47*	—
4	1	7 17.82	+3 52.3	0.925	1.459	42.6	17.2	99 E	49*	60	9	18	13 33.95	+79 46.7	0.751	1.135	60.4	16.7	79 E	47*	—
4	11	7 10.40	+1 8.6	0.985	1.378	46.6	17.3	88 E	43*	62*	9	19	13 45.33	+79 35.7	0.760	1.144	59.7	16.7	79 E	48*	—
4	21	7 7.71	+1 25.9	1.036	1.292	49.7	17.4	79 E	35*	62*	9	20	13 56.09	+79 23.9	0.770	1.153	59.0	16.8	80 E	48*	—
4	26	7 7.72	+2 41.9	1.056	1.248	51.0	17.4	74 E	31*	62*	9	21	14 6.29	+79 11.5	0.780	1.162	58.3	16.8	80 E	48*	—
5	1	7 8.42	+3 58.1	1.072	1.203	52.2	17.4	71 E	26*	60*	9	22	14 15.94	+78 58.7	0.789	1.172	57.7	16.8	81 E	49*	—
5	6	7 9.68	+5 15.1	1.082	1.157	53.4	17.3	67 E	21*	59*	9	23	14 25.10	+78 45.4	0.799	1.181	57.1	16.8	81 E	49*	—
5	11	7 11.37	+6 33.5	1.088	1.111	54.7	17.3	64 E	16*	57*	9	24	14 33.79	+78 31.9	0.808	1.190	56.5	16.9	81 E	50*	—
5	21	7 15.58	+9 15.4	1.079	1.017	57.6	17.2	58 E	7*	52*	9	25	14 42.06	+78 18.1	0.817	1.199	55.9	16.9	82 E	50*	—
5	31	7 20.12	+12 3.8	1.044	0.924	61.7	17.0	53 E	—	46*	9	26	14 49.93	+78 4.2	0.827	1.208	55.3	16.9	82 E	50*	—
6	10	7 23.84	+14 52.0	0.977	0.835	67.6	16.8	50 E	—	40*	9	27	14 57.45	+77 50.2	0.836	1.217	54.7	16.9	82 E	51*	—
6	15	7 24.96	+16 10.1	0.932	0.794	71.6	16.8	48 E	—	36*	9	28	15 4.63	+77 36.2	0.845	1.226	54.2	17.0	83 E	51*	—
6	20	7 25.33	+17 18.3	0.879	0.756	76.5	16.7	46 E	—	32*	9	29	15 11.52	+77 22.3	0.853	1.235	53.6	17.0	83 E	51*	—
6	25	7 24.71	+18 8.9	0.818	0.723	82.3	16.6	45 E	—	27*	9	30	15 18.14	+77 8.3	0.862	1.244	53.1	17.0	83 E	52*	—
6	30	7 22.87	+18 30.4	0.750	0.696	89.3	16.6	43 E	—	22*	10	1	15 24.51	+76 54.5	0.871	1.253	52.6	17.0	84 E	52*	—
7	2	7 21.75	+18 27.2	0.721	0.687	92.4	16.7	42 E	—	20*	10	2	15 30.66	+76 40.8	0.879	1.262	52.1	17.0	84 E	53*	—
7	4	7 20.40	+18 15.2	0.692	0.679	95.7	16.7	42 E	—	18*	10	3	15 36.60	+76 27.2	0.888	1.271	51.6	17.1	84 E	53*	—
7	6	7 18.83	+17 53.0	0.662	0.673</																

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/20	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
36284 2000 DM₈										294739 2008 CM									
<i>(continuation)</i>																			
11 12	18 38.12	+70 9.1	1.164	1.592	38.3	17.8	95 E	61*	—	12 23	11 9.37	-23 4.2	0.559	1.149	58.8	18.3	92 W	22	83*
11 17	19 0.01	+69 40.4	1.193	1.628	37.2	17.8	96 E	62*	—	12 28	11 3.83	-28 37.4	0.568	1.179	56.2	18.3	95 W	16	87
11 22	19 22.30	+69 13.8	1.223	1.662	36.1	17.9	97 E	63*	—	1 2	10 56.63	-33 46.7	0.581	1.209	53.7	18.3	98 W	11	82
11 27	19 44.95	+68 48.5	1.253	1.696	35.2	18.0	98 E	63*	—	1 7	10 47.53	-38 27.6	0.597	1.239	51.3	18.3	100 W	7	78
12 2	20 7.94	+68 23.9	1.284	1.729	34.4	18.1	98 E	64*	—	1 12	10 36.39	-42 36.1	0.616	1.270	49.1	18.4	103 W	2	73
12 7	20 31.20	+67 59.1	1.316	1.760	33.6	18.1	99 E	65*	—	1 17	10 23.15	-46 9.0	0.637	1.300	47.0	18.5	105 W	—	70
12 12	20 54.67	+67 33.6	1.348	1.791	32.9	18.2	99 E	65*	—	1 22	10 7.93	-49 3.8	0.660	1.331	45.2	18.5	106 W	—	67
12 17	21 18.25	+67 7.2	1.382	1.820	32.3	18.3	99 E	66*	—	1 27	9 51.14	-51 18.9	0.685	1.362	43.5	18.6	108 W	—	65
12 22	21 41.82	+66 39.3	1.418	1.849	31.7	18.3	99 E	66*	—	2 1	9 33.43	-52 54.1	0.711	1.392	41.9	18.7	109 W	—	63
12 27	22 5.25	+66 10.0	1.456	1.876	31.2	18.4	99 E	67*	—	2 3	9 26.28	-53 21.4	0.722	1.404	41.4	18.8	110 W	—	63
1 1	22 28.44	+65 38.9	1.495	1.903	30.8	18.5	98 E	67*	—	2 5	9 19.18	-53 42.8	0.734	1.416	40.8	18.8	110 W	—	62
1 6	22 51.29	+65 6.1	1.537	1.929	30.4	18.6	97 E	67*	—	2 7	9 12.19	-53 58.6	0.746	1.428	40.3	18.8	110 E	—	62
1 11	23 13.74	+64 31.6	1.581	1.954	30.0	18.6	96 E	68*	—	2 9	9 5.36	-54 8.9	0.757	1.440	39.8	18.9	111 E	—	62
1 16	23 35.72	+63 55.6	1.626	1.978	29.7	18.7	95 E	68*	—	2 11	8 58.74	-54 14.1	0.769	1.452	39.4	18.9	111 E	—	62
442939 2013 CO₇₄																			
12 23	11 8.58	+0 7.0	1.512	1.973	29.1	21.3	102 W	45	63*	2 13	8 52.37	-54 14.5	0.782	1.464	38.9	18.9	111 E	—	62
1 2	11 15.87	+1 0.9	1.429	2.007	27.2	21.2	111 W	46	63	2 15	8 46.29	-54 10.5	0.794	1.476	38.5	19.0	111 E	—	62
1 12	11 20.16	+2 27.6	1.351	2.040	24.4	21.0	121 W	47	62	2 17	8 40.55	-54 2.2	0.807	1.488	38.1	19.0	112 E	—	62
1 22	11 21.17	+4 29.3	1.284	2.074	20.7	20.8	132 W	49	60	2 19	8 35.15	-53 50.1	0.820	1.499	37.8	19.1	112 E	—	62
2 1	11 18.76	+7 4.7	1.234	2.109	16.1	20.6	143 W	52	57	2 21	8 30.14	-53 34.6	0.833	1.511	37.4	19.1	112 E	—	62
2 11	11 13.22	+10 5.8	1.204	2.143	10.9	20.4	156 W	55	54	2 26	8 19.33	-52 42.5	0.867	1.540	36.6	19.2	112 E	—	63
2 16	11 9.48	+11 41.7	1.199	2.160	8.2	20.3	162 W	57	52	3 2	8 11.03	-51 35.6	0.901	1.568	35.9	19.3	112 E	—	64
2 21	11 5.26	+13 18.3	1.201	2.177	5.7	20.2	167 W	58	51	3 7	8 5.14	-50 18.5	0.937	1.596	35.3	19.4	112 E	—	66
2 26	11 0.73	+14 53.1	1.210	2.193	4.0	20.2	171 W	60	49	3 12	8 1.46	-48 54.7	0.974	1.623	34.8	19.5	111 E	—	67
3 2	10 56.07	+16 23.6	1.226	2.210	4.1	20.2	171 W	61	48	3 17	7 59.75	-47 27.0	1.012	1.650	34.4	19.6	111 E	—	69
3 7	10 51.48	+17 47.9	1.250	2.227	5.9	20.4	167 E	63	46	3 22	7 59.78	-45 57.6	1.051	1.676	34.0	19.7	110 E	—	70
3 12	10 47.12	+19 4.2	1.280	2.244	8.2	20.6	161 E	64	45	3 27	8 1.33	-44 28.3	1.091	1.701	33.7	19.8	109 E	—	72
3 17	10 43.16	+20 11.7	1.317	2.260	10.5	20.7	155 E	65	44	4 1	8 4.20	-43 0.7	1.132	1.726	33.4	20.0	108 E	—	73
3 22	10 39.71	+21 9.5	1.360	2.277	12.7	20.9	150 E	66	43	4 6	8 8.20	-41 35.8	1.174	1.751	33.2	20.1	107 E	—	74
3 27	10 36.88	+21 57.6	1.409	2.293	14.8	21.1	144 E	67	42	4 11	8 13.16	-40 14.5	1.218	1.774	32.9	20.2	106 E	—	75
4 1	10 34.75	+22 36.2	1.462	2.309	16.6	21.2	139 E	68	41	4 16	8 18.95	-38 57.2	1.262	1.797	32.7	20.3	104 E	—	77
4 6	10 33.35	+23 5.7	1.521	2.326	18.2	21.4	134 E	68	41	4 21	8 25.46	-37 44.4	1.307	1.820	32.5	20.4	103 E	—	78
102431 1999 TL₂₀₅																			
12 23	11 8.93	+2 12.0	2.140	2.551	22.1	21.3	103 W	47	61*	4 26	8 32.59	-36 36.3	1.354	1.842	32.4	20.5	102 E	—	79
1 2	11 12.75	+1 32.5	1.997	2.537	21.0	21.2	112 W	47	62	5 1	8 40.25	-35 33.3	1.401	1.863	32.2	20.5	100 E	—	80
1 12	11 14.16	+1 7.4	1.862	2.523	19.3	20.9	122 W	46	63	5 6	8 48.36	-34 35.6	1.450	1.883	32.0	20.6	98 E	—	81
1 22	11 12.87	+0 58.9	1.738	2.508	16.9	20.7	132 W	46	63	5 11	8 56.85	-33 43.0	1.499	1.903	31.8	20.7	97 E	—	82*
2 1	11 8.72	+1 9.2	1.631	2.492	13.7	20.4	143 W	46	63	5 16	9 5.67	-32 55.5	1.550	1.923	31.6	20.8	95 E	—	82*
2 11	11 1.83	+1 38.6	1.544	2.475	9.7	20.1	155 W	47	62	5 21	9 14.78	-32 13.1	1.601	1.941	31.4	20.9	93 E	—	82*
2 21	10 52.67	+2 25.4	1.483	2.457	5.1	19.8	167 W	47	62	5 26	9 24.13	-31 35.7	1.653	1.959	31.1	21.0	91 E	—	81*
2 26	10 47.51	+2 54.1	1.462	2.447	2.9	19.7	173 W	48	61	5 31	9 33.70	-31 3.2	1.706	1.977	30.9	21.1	90 E	—	79*
3 2	10 42.15	+3 25.1	1.449	2.438	1.8	19.6	175 E	48	61	6 5	9 43.43	-30 35.5	1.759	1.993	30.6	21.1	88 E	—	78*
3 7	10 36.77	+3 57.5	1.443	2.428	3.5	19.7	171 E	49	60	6 10	9 53.30	-30 12.2	1.813	2.009	30.3	21.2	86 E	—	76*
3 12	10 31.53	+4 30.3	1.443	2.418	5.9	19.8	166 E	50	59	6 15	10 3.30	-29 53.3	1.867	2.025	29.9	21.3	84 E	—	74*
3 17	10 26.58	+5 2.5	1.451	2.408	8.3	19.9	159 E	50	59	6 20	10 13.41	-29 38.5	1.922	2.040	29.5	21.4	82 E	—	71*
3 22	10 22.07	+5 33.1	1.465	2.398	10.7	20.0	153 E	51	58	6 25	10 23.61	-29 27.5	1.978	2.054	29.1	21.4	80 E	—	69*
3 27	10 18.13	+6 1.4	1.485	2.388	13.0	20.1	147 E	51	58	6 30	10 33.89	-29 20.3	2.033	2.067	28.7	21.5	78 E	—	67*
4 1	10 14.85	+6 26.6	1.511	2.377	15.1	20.2	142 E	51	58	140265 2001 SL₂₇₀									
4 11	10 10.52	+7 6.0	1.576	2.355	18.8	20.4	131 E	52	57	12 23	11 9.71	+16 26.1	3.036	3.472	15.6	21.5	108 W	61	47*
4 21	10 9.29	+7 29.1	1.656	2.332	21.8	20.6	120 E	52	57	1 2	11 10.93	+17 10.0	2.903	3.478	14.4	21.3	118 W	62	47
5 1	10 11.09	+7 35.5	1.746	2.309	24.0	20.8	111 E	53*	56	1 12	11 10.09	+18 7.5	2.784	3.482	12.8	21.2	129 W	63	46
5 11	10 15.66	+7 25.7	1.841	2.285	25.6	20.9	103 E	51*	57	1 22	11 7.12	+19 16.8	2.682	3.486	10.6	21.0	139 W	64	45
5 21	10 22.64	+7 0.7	1.939	2.260	26.5	21.0	95 E	47*	57	1 2	11 2.09	+20 34.3	2.602	3.489	8.2	20.9	150 W	66	43
5 31	10 31.70	+6 21.8	2.037	2.235	27.0	21.1	87 E	41*	58	2 11	10 55.26	+21 54.9	2.550	3.492	5.7	20.7	160 W	67	42
6 10	10 42.53	+5 30.2	2.132	2.209	27.0	21.2	81 E	35*	58*	2 21	10 47.12	+23 12.1	2.527	3.493	4.1	20.6	165 W	68	41
6 20	10 54.86	+4 27.1	2.224	2.183	26.6	21.2	74 E	30*	58*	3 2	10 38.37	+24 19.8	2.535	3.493	4.9	20.7	163 E	69	40
6 30	11 8.47	+3 13.5	2.310	2.156	26.0	21.3	69 E	24*	56*	3 12	10 29.82	+25 12.8	2.573	3.493	7.2	20.8	154 E	70	39
7 10	11 23.19	+1 50.6	2.390	2.129	25.2	21.3	63 E	20*	54*	3 22	10 22.22	+25 48.6	2.639	3.492	9.7	21.0	144 E	71	38
7 20	1																		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/20	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
101967 1999 RQ₄₃										190736 2001 PM₄₃									
<i>(continuation)</i>										<i>(continuation)</i>									
5 11	10 12.09	+10 8.8	2.194	2.582	22.6	20.6	101 E	53*	54	7 30	11 29.59	-17 25.1	3.019	2.583	18.9	21.3	55 E	—	48*
5 21	10 17.75	+9 50.9	2.306	2.560	23.3	20.8	93 E	49*	54	8 9	11 44.67	-18 44.3	3.136	2.608	17.4	21.4	50 E	—	42*
5 31	10 25.30	+9 20.4	2.417	2.537	23.5	20.8	85 E	43*	55	8 19	12 0.12	-20 8.1	3.244	2.631	15.9	21.4	45 E	—	36*
6 10	10 34.46	+8 38.6	2.525	2.513	23.3	20.9	78 E	37*	55*	8 29	12 15.90	-21 35.5	3.342	2.654	14.3	21.4	40 E	—	30*
6 20	10 44.98	+7 46.5	2.628	2.488	22.7	21.0	71 E	31*	54*	9 8	12 32.00	-23 5.6	3.431	2.676	12.6	21.5	36 E	—	25*
6 30	10 56.68	+6 45.1	2.723	2.462	21.9	21.0	64 E	25*	52*	9 18	12 48.40	-24 37.6	3.509	2.697	11.0	21.5	31 E	—	20*
7 10	11 9.38	+5 35.4	2.811	2.435	20.8	21.0	58 E	20*	48*	9 28	13 5.10	-26 10.7	3.576	2.718	9.5	21.5	27 E	—	14*
7 20	11 22.95	+4 18.3	2.889	2.407	19.5	21.0	52 E	16*	44*	10 8	13 22.07	-27 44.1	3.631	2.737	8.1	21.5	23 E	—	10*
7 30	11 37.31	+2 54.6	2.957	2.377	18.1	21.0	47 E	13*	40*	10 18	13 39.31	-29 16.9	3.672	2.755	7.0	21.4	20 E	—	5*
8 9	11 52.38	+1 25.2	3.015	2.347	16.5	20.9	41 E	10*	35*	10 28	13 56.81	-30 48.5	3.701	2.773	6.3	21.4	18 W	—	5*
8 19	12 8.11	+0 9.1	3.061	2.316	14.8	20.9	36 E	8*	29*	11 7	14 14.53	-32 18.2	3.716	2.789	6.3	21.5	18 W	—	8*
8 29	12 24.49	+1 47.5	3.097	2.285	13.0	20.8	31 E	6*	24*	11 17	14 32.46	-33 45.3	3.717	2.805	6.8	21.5	20 W	—	12*
9 8	12 41.51	+3 28.9	3.120	2.252	11.1	20.7	25 E	4*	19*	443885 2001 UX₁₃₅									
9 18	12 59.17	+5 12.5	3.133	2.219	9.1	20.6	20 E	2*	14*	12 23	11 12.29	+17 20.3	1.596	2.118	26.2	21.4	108 W	62	46*
9 28	13 17.50	+6 57.2	3.133	2.184	7.0	20.5	16 E	1*	9*	1 2	11 17.12	+17 48.6	1.519	2.151	24.0	21.3	117 W	63	46
10 8	13 36.52	+8 41.8	3.123	2.149	5.0	20.4	11 E	—	5*	1 12	11 18.56	+18 36.8	1.450	2.185	21.1	21.1	127 W	64	45
10 18	13 56.28	+10 25.2	3.102	2.114	2.9	20.2	6 E	—	—	1 22	11 16.39	+19 42.3	1.394	2.218	17.6	21.0	137 W	65	44
10 28	14 16.81	+12 6.0	3.071	2.078	0.9	20.0	2 E	—	—	2 1	11 10.62	+20 59.0	1.355	2.251	13.5	20.8	148 W	66	43
11 7	14 38.15	+13 42.7	3.029	2.042	1.8	20.0	4 W	—	—	2 11	11 1.77	+22 17.2	1.339	2.284	9.3	20.6	158 W	67	42
11 17	15 0.35	+15 13.8	2.979	2.005	3.9	20.0	8 W	2*	—	2 21	10 50.88	+23 25.7	1.347	2.316	6.4	20.6	165 W	68	41
11 27	15 23.43	+16 37.5	2.921	1.968	6.1	20.1	12 W	5*	2*	3 2	10 39.37	+24 14.4	1.383	2.348	7.2	20.7	163 E	69	40
12 7	15 47.41	+17 52.0	2.855	1.931	8.4	20.1	17 W	8*	6*	3 12	10 28.82	+24 37.6	1.445	2.379	10.5	20.9	154 E	70	39
12 17	16 12.31	+18 55.5	2.782	1.894	10.6	20.1	21 W	10*	10*	3 22	10 20.43	+24 34.8	1.530	2.410	14.0	21.2	144 E	70	39
12 27	16 38.08	+19 46.0	2.704	1.857	12.8	20.1	25 W	12*	14*	70111 1999 LM₇									
1 6	17 4.70	+20 21.7	2.621	1.821	15.0	20.0	29 W	13*	19*	12 23	11 12.60	+8 15.1	2.751	3.147	17.6	21.4	105 W	53	55*
1 16	17 32.08	+20 40.8	2.536	1.785	17.2	20.0	32 W	14*	23*	1 2	11 14.58	+8 27.9	2.610	3.147	16.5	21.3	114 W	53	56
162196 1999 RL₄₅										1 12	11 14.42	+8 55.7	2.479	3.146	14.9	21.1	125 W	54	55
12 23	11 10.55	+16 42.9	1.086	1.525	40.0	21.4	95 W	28	79*	1 22	11 12.02	+9 38.7	2.363	3.144	12.6	20.9	136 W	55	54
12 28	11 15.20	+16 49.5	1.062	1.550	38.9	21.3	98 W	28	81*	2 1	11 7.37	+10 35.6	2.267	3.141	9.8	20.7	147 W	56	53
1 2	11 18.92	+16 47.3	1.037	1.576	37.5	21.3	103 W	28	81	2 11	11 0.69	+11 43.1	2.196	3.137	6.5	20.5	159 W	57	52
1 7	11 21.66	+16 35.4	1.011	1.602	36.0	21.2	107 W	28	81	2 16	10 56.74	+12 19.4	2.171	3.135	4.7	20.4	165 W	57	52
1 12	11 23.36	+16 12.9	0.986	1.628	34.2	21.1	111 W	29	80	2 21	10 52.47	+12 56.3	2.153	3.133	3.0	20.3	170 W	58	51
1 17	11 23.99	+15 38.8	0.961	1.653	32.2	21.1	116 W	29	80	2 26	10 48.00	+13 33.1	2.143	3.130	1.8	20.2	174 W	59	50
1 22	11 23.50	+14 51.9	0.937	1.679	29.9	21.0	122 W	30	79	3 2	10 43.43	+14 8.9	2.141	3.127	2.3	20.2	173 E	59	50
1 27	11 21.90	+13 51.4	0.915	1.704	27.3	20.9	127 W	31	78	3 7	10 38.87	+14 42.8	2.147	3.124	3.9	20.3	168 E	60	49
2 1	11 19.21	+12 36.6	0.896	1.729	24.4	20.8	133 W	32	77	3 12	10 34.44	+15 14.3	2.160	3.120	5.6	20.4	162 E	60	49
2 6	11 15.53	+11 7.7	0.881	1.754	21.3	20.7	140 W	34	75	3 17	10 30.25	+15 42.7	2.180	3.116	7.4	20.5	156 E	61	48
2 11	11 10.99	+9 25.3	0.871	1.778	17.9	20.6	146 W	36	73	3 22	10 26.38	+16 7.6	2.207	3.112	9.1	20.6	150 E	61	48
2 16	11 5.75	+7 31.0	0.865	1.803	14.3	20.5	153 W	37	72	3 27	10 22.92	+16 28.7	2.241	3.108	10.7	20.7	145 E	61	48
2 21	11 0.02	+5 27.3	0.866	1.827	10.6	20.4	160 W	40	69	4 1	10 19.95	+16 45.9	2.280	3.104	12.2	20.8	139 E	62	47
2 26	10 54.06	+3 17.5	0.873	1.850	7.1	20.3	167 W	42	67	4 6	10 17.50	+16 59.0	2.325	3.099	13.6	20.9	133 E	62	47
3 2	10 48.11	+1 5.4	0.888	1.874	4.4	20.2	172 E	44	65	4 11	10 15.62	+17 8.1	2.374	3.094	14.8	21.0	128 E	62	47
3 7	10 42.45	+1 5.0	0.909	1.897	4.3	20.3	172 E	46	63	4 16	10 14.30	+17 13.4	2.427	3.089	15.8	21.0	123 E	62	47
3 12	10 37.29	+3 9.9	0.938	1.919	6.7	20.5	167 E	48	61	4 21	10 13.57	+17 14.9	2.483	3.084	16.7	21.1	118 E	62	47
3 17	10 32.78	+5 6.7	0.974	1.942	9.6	20.7	161 E	50	59	4 26	10 13.40	+17 12.9	2.542	3.078	17.5	21.2	113 E	62	47
3 22	10 29.05	+6 53.1	1.016	1.964	12.5	20.9	155 E	52	57	5 1	10 13.80	+17 7.7	2.603	3.072	18.1	21.3	108 E	62	47
3 27	10 26.20	+8 27.9	1.064	1.985	15.2	21.2	149 E	53	56	5 6	10 14.73	+16 59.2	2.666	3.066	18.6	21.3	104 E	61	47
4 1	10 24.25	+9 50.6	1.117	2.006	17.5	21.4	143 E	55	54	5 11	10 16.16	+16 48.0	2.729	3.060	19.0	21.4	99 E	60	47
190736 2001 PM₄₃										5 16	10 18.07	+16 34.0	2.794	3.053	19.3	21.4	95 E	58	47
12 23	11 12.17	+1 26.8	1.433	1.901	30.4	19.4	102 W	46	62*	5 21	10 20.43	+16 17.4	2.858	3.047	19.4	21.5	91 E	55	48
1 2	11 14.33	+1 29.5	1.354	1.932	28.5	19.2	111 W	44	65	79150 1992 UR₇									
1 12	11 12.73	+4 18.0	1.281	1.965	25.8	19.1	120 W	41	68	12 23	11 14.32	+8 23.5	1.989	2.427	23.1	21.3	104 W	53	55*
1 22	11 7.10	+6 54.2	1.221	1.997	22.3	18.9	130 W	38	71	1 2	11 20.49	+8 25.6	1.839	2.401	22.1	21.1	113 W	53	56
1 27	11 2.75	+8 5.5	1.196	2.014	20.4	18.8	135 W	37	72	1 12	11 24.41	+8 47.2	1.697	2.374	20.5	20.8	122 W	54	55
2 1	10 57.45	+9 10.8	1.176	2.030	18.3	18.7	140 W	36	73	1 22	11 25.70	+9 30.6	1.566	2.346	18.0	20.6	133 W	55	54
2 6	10 51.31	+10 9.3	1.161	2.047	16.2	18.7	145 W	35	74	2 1	11 24.03	+10 36.9	1.452	2.318	14.7	20.3	143 W	56	53
2 11	10 44.48	+10 59.9	1.152	2.064	14.1	18.6	149 W	34	75	2 11	11 19.30	+12 4.1	1.358	2.289	10.7	19.9	155 W	57	52
2 16	10 37.14	+11 42.0	1.150	2.081	12.2	18.5	153 W	33	76	2 16	11 15.84	+12 53.8	1.320	2.274	8.4	19.8	160 W	58	51
2 21	10 29.53	+12 15.1	1.153	2.097	10.8	18.5	157 W	33	76	2 21	11 11.74	+13 46.3	1.288	2.259	6.2	19.6	166 W	59	50
2 26	10 21.88	+12 39.1	1.163	2.114	10.1	18.5	158 E	32	77	2 26	11 7.09	+14 40.1	1.262	2.244	4.4	19.4	170 W	60	49
3 2	10 14.45	+12 54.4	1.180	2.131	10.1	18.6	158 E	32	77	3 2	11 2.04	+15 33.6	1.244	2.228	3.9	19.4	171 W	61	48
3 7	10 7.48	+13 1.9	1.203	2.148	10.9	18.6	156 E	32	77	3 7	10 56.78	+16 25.2	1.232	2.213	5.2	19.4	168 E	61	48
3 12	10 1.16	+13 2.7	1.233	2.164	12.2	18.8	153 E	32	77	3 12	10 51.48	+17 13.							

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°
79150 1992 UR₇									115052 2003 RD₆								
<i>(continuation)</i>									<i>(continuation)</i>								
7 20	12 11.32	+ 6 26.1	2.003	1.784	30.4	20.9	63 E	26* 50*	3 7	11 27.31	-23 15.9	0.730	1.669	16.7	18.7	151 W	22 87
7 30	12 30.59	+ 4 2.6	2.055	1.756	29.6	20.9	59 E	23* 49*	3 12	11 21.67	-20 47.4	0.690	1.648	14.3	18.5	156 E	24 85
8 9	12 50.86	+ 1 33.5	2.103	1.729	28.6	20.9	55 E	20* 46*	3 17	11 15.68	-17 49.2	0.657	1.626	12.5	18.3	159 E	27 82
8 19	13 12.11	- 0 59.3	2.147	1.704	27.5	20.8	51 E	18* 43*	3 22	11 9.65	-14 23.1	0.630	1.604	12.0	18.1	160 E	31 78
8 29	13 34.36	- 3 34.1	2.188	1.681	26.3	20.8	48 E	16* 40*	3 27	11 3.88	-10 33.3	0.611	1.582	13.3	18.1	159 E	34 75
9 8	13 57.61	- 6 8.5	2.225	1.660	25.1	20.8	44 E	15* 37*	4 1	10 58.70	- 6 27.0	0.599	1.560	16.2	18.1	154 E	39 70
9 18	14 21.91	- 8 40.2	2.260	1.641	23.7	20.8	41 E	14* 34*	4 6	10 54.39	- 2 12.9	0.594	1.538	20.0	18.2	148 E	43 66
9 28	14 47.27	-11 6.5	2.293	1.625	22.3	20.7	38 E	13* 31*	4 11	10 51.15	+ 2 0.1	0.596	1.516	24.1	18.3	142 E	47 62
10 8	15 13.71	-13 24.4	2.325	1.612	20.8	20.7	35 E	12* 28*	4 16	10 49.11	+ 6 3.9	0.604	1.493	28.3	18.4	135 E	51 58
10 18	15 41.22	-15 31.1	2.356	1.601	19.3	20.7	32 E	11* 25*	4 21	10 48.38	+ 9 52.3	0.617	1.471	32.3	18.6	129 E	55 54
10 28	16 9.75	-17 23.5	2.386	1.594	17.7	20.6	29 E	10* 22*	4 26	10 49.00	+13 21.1	0.634	1.449	35.9	18.7	122 E	58 51
11 7	16 39.22	-18 58.7	2.415	1.589	16.1	20.6	26 E	9* 19*	5 1	10 50.96	+16 28.4	0.654	1.427	39.1	18.8	117 E	61 48
11 17	17 9.47	-20 14.4	2.445	1.588	14.4	20.6	23 E	8* 16*	5 11	10 58.64	+21 38.5	0.701	1.383	44.5	19.0	106 E	67* 42
11 27	17 40.32	-21 8.3	2.475	1.590	12.6	20.5	21 E	7* 12*	5 21	11 10.80	+25 30.8	0.751	1.341	48.4	19.2	98 E	68* 38
12 7	18 11.51	-21 39.2	2.505	1.595	10.8	20.5	18 E	6* 9*	5 31	11 26.83	+28 17.9	0.798	1.300	51.2	19.4	91 E	67* 36
12 17	18 42.79	-21 46.7	2.535	1.603	9.0	20.5	15 E	5* 6*	6 5	11 36.08	+29 21.1	0.820	1.281	52.3	19.4	88 E	65* 35
12 27	19 13.89	-21 31.1	2.564	1.614	7.1	20.4	12 E	3* 3*	6 10	11 46.07	+30 12.4	0.840	1.262	53.3	19.5	85 E	64* 34
1 6	19 44.54	-20 53.5	2.593	1.628	5.3	20.4	9 E	1* 1*	6 15	11 56.72	+30 52.9	0.859	1.245	54.0	19.5	83 E	62* 33
1 16	20 14.56	-19 55.9	2.621	1.645	3.4	20.3	6 E	—	6 20	12 8.00	+31 23.4	0.875	1.228	54.7	19.6	81 E	61* 33
5682 Beresford									396815 2004 QG₂₄								
12 23	11 15.50	- 3 45.9	2.584	2.908	19.5	19.1	99 W	41 66*	12 2	11 15.80	-22 5.6	2.462	2.671	21.6	21.2	91 W	23 82*
1 2	11 17.83	- 4 21.4	2.454	2.920	18.6	18.9	109 W	41 68	1 2	11 18.62	-23 56.7	2.362	2.697	21.1	21.2	99 W	21 88
1 12	11 17.95	- 4 42.5	2.332	2.930	17.2	18.8	118 W	40 69	1 12	11 19.00	-25 35.2	2.265	2.722	20.2	21.1	107 W	19 90
1 22	11 15.73	- 4 47.3	2.221	2.940	15.1	18.6	129 W	40 69	1 22	11 16.75	-26 56.9	2.176	2.746	18.9	20.9	115 W	18 89
2 1	11 11.15	- 4 33.7	2.126	2.949	12.4	18.4	140 W	40 69	2 1	11 11.83	-27 56.0	2.097	2.769	17.2	20.8	124 W	17 88
2 11	11 4.46	- 4 1.1	2.053	2.957	9.2	18.2	151 W	41 68	2 11	11 4.50	-28 27.1	2.033	2.792	15.2	20.7	132 W	17 88
2 21	10 56.15	- 3 10.8	2.005	2.963	5.8	18.0	162 W	42 67	2 21	10 55.34	-28 25.7	1.988	2.813	13.2	20.6	139 W	17 88
3 2	10 46.97	- 2 6.3	1.987	2.969	3.1	17.9	171 E	43 66	3 2	10 45.23	-27 49.9	1.965	2.834	11.6	20.5	145 E	17 88
3 7	10 42.34	- 1 30.5	1.989	2.971	3.3	17.9	170 E	43 66	3 12	10 35.30	-26 42.2	1.966	2.853	10.9	20.5	147 E	18 89
3 12	10 37.85	- 0 53.3	1.998	2.974	4.5	18.0	167 E	44 65	3 22	10 26.56	-25 9.1	1.993	2.872	11.3	20.6	146 E	20 89
3 17	10 33.60	- 0 15.8	2.015	2.976	6.1	18.1	161 E	45 64	4 1	10 19.85	-23 19.8	2.044	2.889	12.6	20.7	141 E	22 87
3 22	10 29.68	+ 0 21.4	2.039	2.977	7.8	18.2	156 E	45 64	4 11	10 15.63	-21 25.1	2.118	2.906	14.4	20.9	134 E	24 85
3 27	10 26.20	+ 0 57.4	2.070	2.979	9.5	18.3	150 E	46 63	4 21	10 14.01	-19 33.6	2.212	2.921	16.1	21.0	126 E	25 84
4 1	10 23.21	+ 1 31.5	2.108	2.980	11.2	18.4	145 E	47 62	5 1	10 14.92	-17 52.1	2.322	2.936	17.6	21.2	118 E	27 82
4 11	10 18.88	+ 2 31.9	2.198	2.982	14.0	18.6	134 E	48 61	5 11	10 18.11	-16 25.0	2.444	2.950	18.7	21.3	110 E	28* 80
4 21	10 16.89	+ 3 19.8	2.307	2.983	16.3	18.8	124 E	48 61	5 21	10 23.27	-15 14.2	2.576	2.963	19.5	21.5	102 E	26* 79
5 1	10 17.20	+ 3 53.6	2.430	2.982	18.0	18.9	114 E	49 60	373825 2002 XD₁₂								
5 11	10 19.67	+ 4 13.2	2.561	2.981	19.1	19.1	105 E	48* 60	12 23	11 16.64	- 4 52.6	1.408	1.833	32.1	21.1	98 W	40 67*
5 21	10 24.05	+ 4 19.3	2.697	2.979	19.7	19.2	96 E	44* 60	1 2	11 23.65	- 7 1.5	1.328	1.858	30.6	21.0	106 W	38 71
5 31	10 30.09	+ 4 12.8	2.835	2.976	19.9	19.3	88 E	39* 60	1 12	11 27.48	- 8 55.7	1.251	1.883	28.4	20.8	114 W	36 73
6 10	10 37.56	+ 3 54.7	2.971	2.971	19.7	19.4	80 E	33* 60*	1 22	11 27.71	-10 30.6	1.181	1.908	25.5	20.6	123 W	34 75
6 20	10 46.22	+ 3 26.5	3.102	2.966	19.1	19.5	73 E	27* 58*	2 1	11 24.08	-11 40.2	1.121	1.933	21.8	20.4	133 W	33 76
6 30	10 55.90	+ 2 48.9	3.228	2.960	18.3	19.5	66 E	22* 55*	115052 2003 RD₆								
7 10	11 6.43	+ 2 3.3	3.345	2.953	17.2	19.6	59 E	17* 51*	12 23	11 15.52	-24 25.5	1.675	1.947	30.3	21.3	90 W	21 83*
7 20	11 17.68	+ 1 10.6	3.452	2.945	15.9	19.6	52 E	13* 45*	12 28	11 20.88	-25 17.6	1.605	1.931	30.5	21.2	93 W	20 87*
7 30	11 29.55	+ 0 11.6	3.549	2.936	14.4	19.6	46 E	10* 40*	1 2	11 25.84	-26 6.7	1.535	1.915	30.7	21.1	97 W	19 90
8 9	11 41.94	- 0 52.6	3.633	2.925	12.8	19.6	40 E	7* 34*	1 7	11 30.34	-26 52.2	1.465	1.899	30.7	20.9	100 W	18 89
8 19	11 54.80	- 2 1.2	3.704	2.914	11.0	19.6	33 E	4* 27*	1 12	11 34.34	-27 33.4	1.396	1.882	30.6	20.8	103 W	17 88
8 29	12 8.06	- 3 13.5	3.762	2.902	9.2	19.5	27 E	2* 21*	1 17	11 37.77	-28 9.5	1.326	1.864	30.4	20.7	107 W	17 88
9 8	12 21.69	- 4 28.5	3.804	2.889	7.3	19.4	21 E	1* 15*	1 22	11 40.56	-28 39.4	1.258	1.846	30.0	20.5	110 W	16 87
9 18	12 35.65	- 5 45.6	3.832	2.875	5.3	19.3	15 E	— 9*	1 27	11 42.64	-29 1.6	1.190	1.828	29.4	20.4	114 W	16 87
9 28	12 49.92	- 7 3.7	3.844	2.860	3.3	19.2	9 E	— 3*	2 1	11 43.93	-29 14.6	1.123	1.810	28.7	20.2	118 W	16 87
10 8	13 4.46	- 8 22.3	3.840	2.844	1.2	19.1	3 E	—	2 6	11 44.37	-29 16.7	1.059	1.791	27.8	20.0	122 W	16 87
10 18	13 19.27	- 9 40.4	3.821	2.827	1.1	19.0	3 W	—	2 11	11 43.90	-29 5.6	0.996	1.771	26.6	19.8	127 W	16 87
10 28	13 34.31	-10 57.2	3.786	2.809	3.2	19.1	9 W	2* 1*	2 16	11 42.48	-28 38.9	0.936	1.751	25.1	19.6	131 W	16 87
11 7	13 49.55	-12 11.8	3.735	2.790	5.3	19.2	15 W	7* 5*	2 21	11 40.06	-27 53.7	0.878	1.731	23.4	19.4	136 W	17 88
11 17	14 4.97	-13 23.6	3.669	2.770	7.4	19.3	21 W	12* 10*	2 26	11 36.67	-26 46.8	0.824	1.711	21.4	19.2	141 W	18 89
11 27	14 20.52	-14 31.6	3.589	2.749	9.5	19.3	27 W	16* 15*	3 2	11 32.37	-25 15.1	0.775	1.690	19.1	19.0	146 W	20 89
12 7	14 36.16	-15 34.9	3.494	2.727	11.5	19.3	33 W	19* 20*	115052 2003 RD₆								
12 17	14 51.82	-16 32.9	3.387	2.705	13.5	19.3	40 W	22* 27*	12 23	11 15.52	-24 25.5	1.675	1.947	30.3	21.3	90 W	21 83*
12 27	15 7.41	-17 24.8	3.267	2.681	15.3	19.3	46 W	23* 33*	12 28	11 20.88	-25 17.6	1.605	1.931	30.5	21.2	93 W	20 87*
1 6	15 22.85	-18 9.8	3.137	2.657	17.1	19.2	53 W	24* 41*	1 2	11 25.84	-26 6.7	1.535	1.915	30.7	21.1	97 W	19 90
1 16	15 38.03	-18 47.4	2.997	2.631	18.7	19.1	59 W	25* 48*	1 7	11 30.34	-26 52.2	1.465	1.899	30.7	20.9	100 W	18 89
115052 2003 RD₆									373825 2002 XD₁₂								
12 23	11 15.52	-24 25.5	1.675	1.947	30.3	21.3	90 W	21 83*	12 23	11 16.64	- 4 52.6	1.408	1.833	32.1	21.1	98 W	40 67*
12 28	11 20.88	-25 17.6	1.605	1.931	30.5	21.2	93 W	20 87*									

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/20	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
373825 2002 XD₁₂										61550 2000 QK₇₀									
<i>(continuation)</i>										<i>(continuation)</i>									
2 6	11 20.85	-12 3.6	1.096	1.945	19.7	20.3	138 W	33	76	3 17	11 12.43	+14 33.2	1.062	2.038	7.6	17.8	164 E	60	49
2 11	11 16.76	-12 18.5	1.075	1.958	17.5	20.2	143 W	33	76	3 22	11 8.16	+16 17.4	1.061	2.019	10.7	17.9	158 E	61	48
2 16	11 11.92	-12 24.5	1.059	1.970	15.2	20.1	148 W	33	76	3 27	11 4.19	+17 54.9	1.066	2.001	13.7	18.0	152 E	63	46
2 21	11 6.46	-12 21.4	1.049	1.982	12.9	20.0	153 W	33	76	4 1	11 0.72	+19 23.7	1.078	1.983	16.6	18.1	145 E	64	45
2 26	11 0.59	-12 9.1	1.043	1.995	10.9	20.0	158 W	33	76	4 6	10 57.91	+20 42.5	1.094	1.965	19.3	18.2	139 E	66	43
3 2	10 54.54	-11 48.5	1.044	2.007	9.3	19.9	161 W	33	76	4 11	10 55.86	+21 50.5	1.115	1.947	21.8	18.3	134 E	67	42
3 7	10 48.53	-11 20.4	1.050	2.019	8.5	19.9	162 E	34	75	4 21	10 54.36	+23 33.6	1.166	1.912	26.1	18.5	123 E	69	40
3 12	10 42.80	-10 46.4	1.063	2.031	8.8	20.0	162 E	34	75	5 1	10 56.55	+24 34.6	1.228	1.877	29.4	18.7	114 E	70	39
3 17	10 37.53	-10 8.0	1.082	2.042	10.0	20.1	159 E	35	74	5 11	11 2.31	+24 58.3	1.294	1.843	31.8	18.8	106 E	70	39
3 22	10 32.90	-9 26.9	1.106	2.054	11.7	20.2	155 E	36	73	5 16	11 6.41	+24 57.9	1.328	1.827	32.8	18.9	102 E	69*	39
3 27	10 29.04	-8 44.7	1.136	2.066	13.6	20.3	151 E	36	73	5 21	11 11.27	+24 50.1	1.362	1.811	33.6	19.0	98 E	68*	39
4 1	10 26.04	-8 3.0	1.172	2.077	15.6	20.5	146 E	37	72	5 26	11 16.84	+24 35.4	1.396	1.795	34.2	19.0	95 E	65*	39
4 6	10 23.95	-7 23.3	1.212	2.088	17.5	20.6	141 E	38	71	5 31	11 23.05	+24 14.4	1.429	1.779	34.7	19.1	92 E	63*	40
4 11	10 22.75	-6 46.4	1.256	2.099	19.2	20.8	136 E	38	71	6 5	11 29.86	+23 47.4	1.462	1.764	35.1	19.1	89 E	60*	40
4 16	10 22.44	-6 13.2	1.305	2.110	20.8	20.9	132 E	39	70	6 10	11 37.20	+23 15.0	1.494	1.749	35.4	19.1	86 E	57*	41
4 21	10 22.96	-5 44.1	1.357	2.121	22.2	21.1	127 E	39	70	6 15	11 45.04	+22 37.4	1.525	1.735	35.6	19.2	84 E	55*	41
4 26	10 24.29	-5 19.5	1.412	2.131	23.4	21.2	123 E	40	69	6 20	11 53.33	+21 55.0	1.555	1.721	35.7	19.2	81 E	52*	42
5 1	10 26.35	-4 59.6	1.469	2.142	24.4	21.3	119 E	40	69	6 30	12 11.15	+20 16.6	1.612	1.695	35.7	19.2	77 E	47*	44*
5 6	10 29.10	-4 44.4	1.529	2.152	25.3	21.4	114 E	40*	69	7 10	12 30.38	+18 22.3	1.664	1.671	35.5	19.3	73 E	43*	45*
465617 2009 EK₁										216258 2006 WH₁									
12 23	11 17.27	+47 6.9	0.282	1.130	52.4	20.8	114 W	88	16*	12 23	11 18.26	-33 32.4	0.042	0.981	91.7	16.5	86 W	11	79*
12 28	11 10.50	+47 43.6	0.282	1.148	48.3	20.8	119 W	87	16*	12 24	11 55.52	-35 50.1	0.045	0.976	98.7	17.0	79 W	9	73*
1 2	11 0.52	+48 19.7	0.282	1.166	44.1	20.7	124 W	87	16	12 25	12 29.16	-37 12.8	0.049	0.970	104.5	17.4	73 W	8	67*
1 7	10 47.25	+48 49.1	0.283	1.184	39.6	20.6	130 W	86	15	12 26	12 58.53	-37 54.4	0.053	0.965	109.3	17.9	68 W	7	62*
1 12	10 30.93	+49 5.0	0.285	1.202	35.2	20.5	135 W	86	15	12 27	13 23.66	-38 8.0	0.058	0.959	113.1	18.3	64 W	7	58*
1 17	10 12.16	+49 0.3	0.289	1.220	30.8	20.5	140 W	86	15	12 28	13 44.96	-38 4.0	0.063	0.954	116.2	18.7	61 W	7	55*
1 22	9 51.97	+48 29.4	0.295	1.238	27.0	20.4	145 W	87	16	12 29	14 1.33	-37 49.5	0.069	0.949	118.6	19.0	58 W	7	52*
1 24	9 43.79	+48 8.9	0.299	1.245	25.6	20.4	147 W	87	16	12 30	14 18.33	-37 29.2	0.074	0.944	120.4	19.3	56 W	7	50*
1 26	9 35.70	+47 43.6	0.303	1.252	24.4	20.4	148 W	87	16	12 31	14 31.45	-37 5.9	0.080	0.939	121.9	19.6	54 W	7	48*
1 28	9 27.79	+47 13.9	0.307	1.259	23.4	20.4	150 W	88	17	1 1	14 42.77	-36 41.6	0.086	0.934	123.0	19.8	53 W	7	47*
1 30	9 20.14	+46 39.8	0.313	1.266	22.5	20.5	150 W	88	17	1 2	14 52.63	-36 17.2	0.092	0.929	123.7	20.0	52 W	7	46*
2 1	9 12.82	+46 1.7	0.318	1.273	21.9	20.5	151 W	89	18	1 3	15 1.29	-35 53.4	0.098	0.925	124.3	20.2	51 W	8	45*
2 3	9 5.89	+45 20.0	0.324	1.280	21.6	20.5	151 W	90	19	1 4	15 8.97	-35 30.5	0.105	0.920	124.6	20.3	50 W	8	44*
2 5	8 59.41	+44 35.3	0.331	1.287	21.4	20.6	152 E	90	19	1 5	15 15.84	-35 8.7	0.111	0.916	124.7	20.5	50 W	8	44*
2 7	8 53.40	+43 48.0	0.339	1.293	21.5	20.7	151 E	89	20	1 6	15 22.04	-34 48.1	0.117	0.912	124.7	20.6	50 W	8	43*
2 9	8 47.87	+42 58.6	0.347	1.300	21.7	20.7	151 E	88	21	1 7	15 27.68	-34 28.6	0.124	0.908	124.6	20.7	49 W	8	43*
2 11	8 42.84	+42 7.6	0.355	1.307	22.2	20.8	150 E	87	22	1 8	15 32.86	-34 10.3	0.130	0.904	124.4	20.8	49 W	9	43*
2 16	8 32.43	+39 56.0	0.379	1.323	23.8	21.0	147 E	85	24	1 9	15 37.63	-33 53.0	0.137	0.900	124.1	20.8	49 W	9	43*
2 21	8 24.96	+37 43.0	0.407	1.338	25.9	21.3	144 E	83	26	1 10	15 42.08	-33 36.8	0.144	0.896	123.7	20.9	49 W	9	43*
2 26	8 20.16	+35 32.9	0.437	1.354	28.2	21.5	140 E	81	28	1 11	15 46.25	-33 21.5	0.150	0.893	123.2	20.9	49 W	9	43*
3 2	8 17.70	+33 28.2	0.471	1.368	30.4	21.8	136 E	78	31	1 12	15 50.17	-33 7.0	0.157	0.890	122.6	21.0	50 W	10	43*
448768 2011 SR₃₃										61550 2000 QK₇₀									
12 23	11 17.31	+11 44.7	1.350	1.863	30.7	20.6	105 W	57	51*	1 14	15 57.44	-32 40.6	0.171	0.884	121.4	21.0	50 W	10	44*
1 2	11 24.79	+12 8.0	1.289	1.907	28.2	20.5	113 W	57	52	1 16	16 4.11	-32 17.0	0.184	0.878	120.0	21.1	51 W	10	44*
1 12	11 28.68	+12 56.1	1.235	1.951	25.1	20.4	123 W	58	51	1 18	16 10.33	-31 55.8	0.198	0.874	118.5	21.1	51 W	11	45*
1 22	11 28.71	+14 7.7	1.190	1.996	21.1	20.2	133 W	59	50	1 20	16 16.22	-31 36.6	0.212	0.870	116.9	21.1	52 W	11	46*
1 27	11 27.25	+14 51.0	1.173	2.019	18.8	20.1	139 W	60	49	1 22	16 21.87	-31 19.2	0.226	0.867	115.2	21.2	53 W	11	47*
2 1	11 24.84	+15 38.1	1.160	2.042	16.4	20.1	144 W	61	48	2 1	16 35.28	-30 41.4	0.261	0.862	110.7	21.2	55 W	12	49*
2 6	11 21.56	+16 27.5	1.152	2.065	13.9	20.0	150 W	61	48	2 1	16 48.12	-30 9.5	0.296	0.862	106.0	21.2	57 W	13	51*
2 11	11 17.51	+17 17.7	1.150	2.087	11.4	19.9	155 W	62	47	2 6	17 0.67	-29 41.3	0.330	0.867	101.3	21.2	60 W	13	53*
2 16	11 12.84	+18 7.1	1.153	2.110	9.0	19.8	160 W	63	46	2 11	17 13.05	-29 15.2	0.362	0.876	96.7	21.2	62 W	14	56*
2 21	11 7.71	+18 53.9	1.163	2.133	7.0	19.8	165 W	64	45	2 16	17 25.25	-28 50.1	0.394	0.890	92.3	21.2	64 W	14	58*
2 26	11 2.32	+19 36.7	1.179	2.156	5.8	19.8	167 W	65	44	2 21	17 37.16	-28 25.2	0.423	0.909	88.0	21.2	67 W	15	61*
3 2	10 56.89	+20 13.9	1.201	2.178	5.9	19.9	167 W	65	44	2 26	17 48.65	-27 59.9	0.449	0.930	84.0	21.2	69 W	15	63*
3 7	10 51.62	+20 44.6	1.230	2.201	7.2	20.0	164 E	66	43	3 2	17 59.60	-27 33.9	0.473	0.955	80.2	21.3	72 W	16	66*
3 12	10 46.71	+21 8.3	1.266	2.223	9.0	20.2	159 E	66	43	3 7	18 9.89	-27 7.2	0.495	0.983	76.6	21.3	74 W	16	68*
3 17	10 42.30	+21 24.9	1.307	2.246	11.0	20.3	154 E	66	43	3 12	18 19.45	-26 40.0	0.513	1.013	73.1	21.3	77 W	17	71*
3 22	10 38.50	+21 34.3	1.354	2.268	13.0	20.5	149 E	67	42	3 17	18 28.15	-26 12.5	0.528	1.045	69.9	21.4	80 W	17	74*
4 1	10 33.08	+21 33.3	1.463	2.312	16.5	20.8	139 E	67	42	3 22	18 35.88	-25 45.1	0.540	1.078	66.7	21.4	83 W	18	77*
4 11	10 30.72	+21 9.5	1.590	2.356	19.2	21.1	129 E	66	43	3 27	18 42.53	-25 18.1	0.549	1.113	63.6	21.4	87 W	18	81*
4 21	10 31.27	+20 27.9	1.731	2.399	21.2	21.4	120 E	65	44										
5 1	10 34.40	+19 32.4	1.882	2.442	22.5	21.7	112 E	65	44										
61550 2000 QK₇₀										61550 2000 QK₇₀									
12 23	11 17.58	-2 11.																	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
216258 2006 WH₁										128451 2004 NC₂₅									
<i>(continuation)</i>										<i>(continuation)</i>									
4 1	18 48.00	-24 51.8	0.555	1.148	60.5	21.4	91 W	19*	85*	3 7	10 37.67	+12 26.2	1.941	2.922	3.7	20.1	169 E	57	52
4 6	18 52.20	-24 26.8	0.559	1.184	57.4	21.4	95 W	20*	88*	3 12	10 32.70	+12 42.6	1.963	2.928	5.6	20.2	163 E	58	51
4 11	18 55.05	-24 3.2	0.561	1.221	54.2	21.4	99 W	20*	88	3 22	10 23.82	+13 7.1	2.026	2.939	9.4	20.5	151 E	58	51
4 16	18 56.44	-23 41.4	0.561	1.258	51.0	21.3	103 W	21*	88	4 1	10 16.93	+13 19.0	2.115	2.950	12.6	20.7	140 E	58	51
4 21	18 56.27	-23 21.6	0.560	1.294	47.5	21.3	108 W	21*	87	4 11	10 12.44	+13 17.8	2.225	2.959	15.3	20.9	129 E	58	51
4 26	18 54.44	-23 3.8	0.559	1.331	43.9	21.2	113 W	22*	87	4 21	10 10.41	+13 4.3	2.350	2.968	17.3	21.1	119 E	58	51
5 1	18 50.90	-22 47.8	0.557	1.368	40.1	21.2	119 W	22	87	5 1	10 10.77	+12 39.7	2.486	2.975	18.6	21.3	109 E	58*	51
5 6	18 45.68	-22 33.4	0.556	1.404	36.0	21.1	125 W	22	87	5 11	10 13.29	+12 5.2	2.629	2.982	19.5	21.5	100 E	55*	52
5 11	18 38.82	-22 20.0	0.556	1.440	31.7	21.1	132 W	23	86	49952 1999 XH₂₁₂									
5 16	18 30.46	-22 7.1	0.559	1.476	27.1	21.0	138 W	23	86	12 23	11 19.54	+ 6 28.5	2.260	2.651	21.2	20.6	102 W	51	56*
5 21	18 20.82	-21 54.1	0.565	1.511	22.4	20.9	145 W	23	86	1 2	11 23.18	+ 6 22.5	2.130	2.656	20.1	20.5	112 W	51	58
5 26	18 10.22	-21 40.3	0.575	1.546	17.6	20.9	153 W	23	86	1 12	11 24.41	+ 6 33.2	2.008	2.660	18.3	20.3	122 W	52	57
5 31	17 59.10	-21 25.6	0.589	1.580	12.8	20.8	160 W	24	85	1 22	11 23.01	+ 7 1.5	1.898	2.662	15.9	20.1	132 W	52	57
6 5	17 47.92	-21 10.0	0.609	1.614	8.0	20.7	167 W	24	85	2 1	11 18.88	+ 7 47.3	1.806	2.664	12.6	19.9	144 W	53	56
6 10	17 37.10	-20 53.9	0.633	1.647	3.6	20.6	174 W	24	85	2 11	11 12.18	+ 8 48.0	1.735	2.665	8.8	19.6	156 W	54	55
6 15	17 27.02	-20 37.9	0.664	1.679	1.9	20.7	177 E	24	85	2 16	11 8.01	+ 9 22.5	1.709	2.665	6.7	19.5	162 W	54	55
6 20	17 17.98	-20 22.8	0.700	1.711	5.4	21.0	171 E	25	84	2 21	11 3.41	+ 9 58.7	1.690	2.665	4.5	19.4	168 W	55	54
6 25	17 10.18	-20 9.4	0.741	1.742	9.0	21.4	164 E	25	84	2 26	10 58.50	+10 35.6	1.679	2.665	2.4	19.2	174 W	56	53
6 30	17 3.73	-19 58.3	0.788	1.772	12.3	21.7	158 E	25	84	3 2	10 53.41	+11 12.2	1.675	2.664	1.5	19.1	176 W	56	53
7 5	16 58.68	-19 49.7	0.839	1.802	15.2	21.9	152 E	25	84	3 7	10 48.30	+11 47.5	1.678	2.663	3.2	19.3	171 E	57	52
7 10	16 54.95	-19 43.8	0.895	1.832	17.8	22.2	147 E	25	84	3 12	10 43.30	+12 20.4	1.689	2.662	5.4	19.4	166 E	57	52
52730 1998 HN₄										3 17	10 38.56	+12 50.4	1.706	2.661	7.5	19.5	159 E	58	51
12 23	11 18.54	+15 4.6	2.385	2.817	19.6	21.2	106 W	60	48*	3 22	10 34.20	+13 16.7	1.731	2.659	9.7	19.6	153 E	58	51
1 2	11 21.35	+15 24.3	2.249	2.813	18.4	21.1	115 W	60	49	4 1	10 27.04	+13 56.6	1.798	2.656	13.5	19.9	142 E	59	50
1 12	11 21.70	+15 59.9	2.123	2.809	16.6	20.9	125 W	61	48	4 11	10 22.38	+14 18.6	1.885	2.651	16.6	20.1	131 E	59	50
1 22	11 19.38	+16 50.7	2.011	2.803	14.1	20.7	136 W	62	47	4 21	10 20.43	+14 23.2	1.988	2.645	19.1	20.3	121 E	59	50
2 1	11 14.27	+17 53.8	1.919	2.796	11.1	20.4	147 W	63	46	5 1	10 21.14	+14 11.8	2.102	2.638	20.9	20.4	111 E	59	50
2 6	11 10.73	+18 28.5	1.881	2.792	9.4	20.3	152 W	63	46	5 11	10 24.29	+13 46.2	2.223	2.630	22.0	20.6	102 E	58*	50
2 11	11 6.59	+19 4.0	1.850	2.788	7.7	20.2	158 W	64	45	5 21	10 29.56	+13 8.4	2.347	2.622	22.6	20.7	94 E	58*	51
2 16	11 1.93	+19 39.4	1.826	2.784	6.1	20.1	162 W	65	44	5 31	10 36.68	+12 19.8	2.471	2.612	22.8	20.8	86 E	47*	52
2 21	10 56.84	+20 13.6	1.809	2.779	4.9	20.0	166 W	65	44	6 10	10 45.33	+11 21.7	2.593	2.602	22.5	20.9	79 E	40*	53*
2 26	10 51.47	+20 45.7	1.800	2.774	4.4	20.0	168 W	66	43	6 20	10 55.28	+10 15.5	2.711	2.590	22.0	21.0	72 E	34*	52*
3 2	10 45.95	+21 14.5	1.797	2.769	5.0	20.0	166 E	66	43	6 30	11 6.32	+ 9 1.9	2.822	2.578	21.1	21.0	66 E	28*	51*
3 7	10 40.43	+21 39.2	1.803	2.764	6.3	20.1	162 E	67	42	7 10	11 18.27	+ 7 41.9	2.926	2.564	20.0	21.1	60 E	23*	48*
3 12	10 35.07	+21 59.3	1.815	2.758	8.0	20.2	157 E	67	42	7 20	11 31.00	+ 6 16.4	3.021	2.550	18.7	21.1	53 E	19*	44*
3 17	10 30.01	+22 14.3	1.834	2.752	9.8	20.3	152 E	67	42	7 30	11 44.42	+ 4 46.0	3.106	2.535	17.2	21.1	48 E	16*	40*
3 22	10 25.36	+22 24.0	1.860	2.746	11.6	20.3	146 E	67	42	8 9	11 58.43	+ 3 11.7	3.181	2.519	15.6	21.1	42 E	13*	35*
4 1	10 17.72	+22 27.6	1.928	2.732	14.8	20.5	136 E	67	42	8 19	12 13.00	+ 1 34.1	3.246	2.502	13.8	21.0	36 E	10*	30*
4 11	10 12.71	+22 11.8	2.014	2.718	17.5	20.7	125 E	67	42	8 29	12 28.07	+ 0 6.1	3.298	2.484	12.0	21.0	31 E	8*	24*
4 21	10 10.50	+21 39.3	2.114	2.702	19.6	20.9	115 E	67	42	9 8	12 43.62	+ 1 48.0	3.338	2.466	10.1	20.9	25 E	6*	19*
5 1	10 11.02	+20 53.0	2.224	2.686	21.1	21.0	106 E	66*	43	9 18	12 59.64	+ 3 30.9	3.366	2.446	8.1	20.8	20 E	4*	14*
5 11	10 14.00	+19 55.5	2.338	2.668	22.0	21.1	98 E	63*	44	9 28	13 16.13	+ 5 14.0	3.382	2.426	6.0	20.7	15 E	2*	8*
5 21	10 19.14	+18 48.7	2.454	2.649	22.5	21.2	90 E	57*	45	10 8	13 33.07	+ 6 56.3	3.384	2.405	4.0	20.6	10 E	—	3*
5 31	10 26.14	+17 33.9	2.569	2.630	22.5	21.3	82 E	50*	46	10 18	13 50.50	+ 8 37.0	3.375	2.383	2.0	20.5	5 E	—	—
6 10	10 34.69	+16 12.2	2.679	2.609	22.1	21.4	75 E	42*	48*	10 28	14 8.39	+10 15.1	3.352	2.360	1.2	20.4	3 W	—	—
6 20	10 44.55	+14 44.3	2.784	2.587	21.4	21.4	68 E	36*	47*	11 7	14 26.76	+11 49.6	3.318	2.337	3.0	20.5	7 W	1*	—
6 30	10 55.51	+13 10.8	2.882	2.564	20.5	21.5	62 E	29*	46*	11 17	14 45.62	+13 19.6	3.271	2.313	5.1	20.5	12 W	5*	1*
7 10	11 7.40	+11 32.3	2.971	2.540	19.3	21.5	56 E	24*	43*	11 27	15 4.95	+14 44.1	3.213	2.289	7.3	20.6	17 W	9*	5*
7 20	11 20.09	+ 9 49.2	3.050	2.515	17.9	21.5	50 E	20*	40*	12 7	15 24.75	+16 1.9	3.144	2.263	9.5	20.6	22 W	13*	10*
7 30	11 33.49	+ 8 1.8	3.119	2.489	16.4	21.4	44 E	16*	36*	12 17	15 44.99	+17 12.3	3.065	2.238	11.7	20.6	27 W	15*	15*
8 9	11 47.52	+ 6 10.7	3.176	2.462	14.8	21.4	38 E	13*	31*	12 27	16 5.63	+18 14.1	2.976	2.211	13.8	20.6	33 W	17*	21*
8 19	12 2.12	+ 4 16.4	3.223	2.435	13.0	21.3	33 E	10*	26*	1 6	16 26.63	+19 6.7	2.879	2.185	16.0	20.6	38 W	18*	27*
8 29	12 17.27	+ 2 19.3	3.257	2.406	11.2	21.3	27 E	8*	21*	1 16	16 47.92	+19 49.2	2.774	2.158	18.0	20.5	43 W	19*	33*
9 8	12 32.95	+ 0 20.1	3.279	2.376	9.2	21.2	22 E	5*	16*	475305 2005 XZ₇₉									
9 18	12 49.16	+ 1 40.7	3.288	2.346	7.2	21.1	17 E	3*	11*	12 23	11 20.02	+ 7 32.4	0.853	1.437	41.9	19.9	103 W	53	55*
9 28	13 5.92	+ 3 42.5	3.286	2.315	5.1	20.9	12 E	1*	5*	1 2	11 42.26	+10 12.6	0.797	1.451	39.9	19.7	109 W	55	54*
10 8	13 23.22	+ 5 44.5	3.271	2.282	3.1	20.8	7 E	—	—	1 12	12 2.25	+13 42.5	0.749	1.469	37.3	19.5	115 W	59	50
10 18	13 41.12	+ 7 46.0	3.244	2.250	1.3	20.6	3 E	—	—	1 22	12 19.23	+18 0.9	0.711	1.490	34.0	19.3	122 W	63	46
10 28	13 59.62	+ 9 46.0	3.206	2.216	1.9	20.6	4 W	—	—	1 27	12 26.30	+20 26.0	0.696	1.501	32.2	19.3	126 W	65	44
11 7	14 18.78	+11 43.7	3.157	2.182	3.9	20.7	9 W	2*	—	2 1	12 32.27	+22 58.9	0.686	1.514	30.4	19.2	129 W	68	41
11 17	14 38.64	+13 38.1	3.097	2.147	6.1	20.7	13 W	6*	2*	2 6	12 37.03	+25 36.7	0.679	1.527	28.6	19.1	132 W	71	38
11 27	14 59.22	+15 28.0	3.028	2.112	8.4	20.7	18 W	10*	7*	2 11	12 40.52	+28 15.9	0.675	1.540	27.0	19.1</			

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
475305 2005 XZ₇₉										56950 2000 SA₂									
<i>(continuation)</i>										<i>(continuation)</i>									
5 1	12 6.87	+38 56.3	1.122	1.808	30.1	20.6	116E	84	25	5 1	9 57.74	+30 12.5	2.183	2.554	22.9	19.3	100E	75*	34
5 6	12 8.22	+37 40.1	1.173	1.826	30.5	20.8	113E	83	26	5 11	10 1.38	+28 7.7	2.282	2.527	23.5	19.4	92E	69*	36
5 11	12 10.30	+36 19.0	1.224	1.844	30.8	20.9	111E	81	28	5 21	10 7.27	+25 58.4	2.383	2.499	23.8	19.5	85E	61*	38
5 16	12 13.04	+34 53.9	1.278	1.862	31.0	21.0	108E	80	29	5 31	10 15.04	+23 45.7	2.481	2.471	23.6	19.5	78E	52*	40*
5 21	12 16.36	+33 25.7	1.333	1.880	31.2	21.1	106E	78	31	6 10	10 24.34	+21 30.1	2.576	2.442	23.1	19.6	71E	44*	42*
5 26	12 20.22	+31 55.2	1.389	1.898	31.3	21.2	103E	77*	32	6 20	10 34.91	+19 11.7	2.665	2.413	22.4	19.6	65E	37*	42*
5 31	12 24.55	+30 23.0	1.446	1.916	31.3	21.4	101E	75*	34	6 30	10 46.55	+16 50.4	2.747	2.382	21.4	19.6	59E	30*	42*
6 5	12 29.29	+28 49.9	1.505	1.934	31.3	21.5	98E	72*	35	7 10	10 59.06	+14 26.2	2.822	2.351	20.2	19.6	53E	25*	40*
194513 2001 XR₂										362047 2009 BG₁₄									
12 23	11 22.48	- 8 28.3	2.456	2.734	21.0	20.3	96W	37	70*	12 23	11 22.84	-22 24.6	1.458	1.755	34.1	20.2	90W	23	80*
1 2	11 23.97	-10 7.8	2.340	2.757	20.2	20.2	105W	35	74	12 28	11 30.69	-24 40.1	1.407	1.741	34.4	20.1	92W	20	84*
1 12	11 22.97	-11 37.3	2.231	2.780	18.9	20.0	114W	33	76	1 2	11 38.38	-26 56.9	1.358	1.727	34.6	20.0	94W	18	88*
1 22	11 19.35	-12 53.8	2.132	2.801	17.0	19.9	124W	32	77	1 7	11 45.88	-29 14.5	1.310	1.714	34.8	19.9	96W	16	87
2 1	11 13.06	-13 53.4	2.049	2.821	14.6	19.7	134W	31	78	1 12	11 53.16	-31 32.3	1.265	1.702	35.0	19.8	98W	13	84
2 11	11 4.39	-14 32.3	1.985	2.840	11.9	19.6	144W	30	79	1 17	12 0.20	-33 49.7	1.221	1.690	35.0	19.7	100W	11	82
2 21	10 53.93	-14 48.1	1.945	2.859	9.2	19.4	152W	30	79	1 22	12 6.95	-36 6.1	1.179	1.678	35.1	19.6	101W	9	80
3 2	10 42.56	-14 40.0	1.933	2.876	7.4	19.4	158E	30	79	1 27	12 13.35	-38 20.5	1.139	1.668	35.1	19.5	103W	7	78
3 7	10 36.89	-14 27.9	1.938	2.884	7.2	19.4	159E	31	78	2 1	12 19.36	-40 31.9	1.100	1.658	35.0	19.4	105W	4	75
3 12	10 31.41	-14 11.1	1.950	2.892	7.6	19.4	157E	31	78	2 6	12 24.91	-42 39.4	1.063	1.648	34.9	19.4	107W	2	73
3 17	10 26.24	-13 50.5	1.969	2.900	8.4	19.5	155E	31	78	2 11	12 29.94	-44 42.1	1.029	1.640	34.7	19.3	109W	—	71
3 22	10 21.50	-13 26.9	1.995	2.908	9.5	19.5	151E	32	77	2 16	12 34.37	-46 38.7	0.995	1.632	34.5	19.2	111W	—	69
3 27	10 17.27	-13 1.2	2.027	2.915	10.7	19.6	147E	32	77	2 21	12 38.11	-48 28.1	0.964	1.625	34.2	19.1	113W	—	68
4 1	10 13.63	-12 34.5	2.065	2.922	12.0	19.7	142E	32	77	2 26	12 41.08	-50 8.7	0.934	1.618	33.8	19.0	115W	—	66
4 6	10 10.62	-12 7.5	2.109	2.929	13.3	19.8	138E	33	76	3 2	12 43.21	-51 39.0	0.905	1.613	33.4	18.9	116W	—	64
4 11	10 8.26	-11 41.2	2.158	2.935	14.4	19.9	133E	33	76	3 7	12 44.47	-52 57.5	0.878	1.608	32.8	18.8	118W	—	63
4 21	10 5.52	-10 52.7	2.269	2.948	16.5	20.1	124E	34	75	3 12	12 44.86	-54 2.7	0.853	1.605	32.3	18.7	120W	—	62
5 1	10 5.32	-10 13.0	2.394	2.959	18.0	20.3	115E	35*	74	3 17	12 44.40	-54 53.0	0.829	1.602	31.6	18.7	123W	—	61
5 11	10 7.43	- 9 44.6	2.527	2.969	19.1	20.4	106E	34*	74	3 22	12 43.18	-55 26.6	0.807	1.600	30.8	18.6	125W	—	61
5 21	10 11.55	- 9 28.4	2.666	2.978	19.7	20.6	98E	30*	73	3 27	12 41.38	-55 41.9	0.787	1.598	30.0	18.5	127W	—	60
5 31	10 17.40	- 9 24.7	2.808	2.986	19.8	20.7	90E	26*	73	4 1	12 39.27	-55 37.8	0.768	1.598	29.1	18.4	129E	—	60
6 10	10 24.71	- 9 33.0	2.948	2.994	19.7	20.8	83E	20*	72*	4 6	12 37.14	-55 13.4	0.752	1.598	28.2	18.3	131E	—	61
6 20	10 33.24	- 9 52.7	3.085	3.000	19.2	20.9	76E	15*	68*	4 11	12 35.29	-54 28.8	0.739	1.600	27.3	18.3	133E	—	62
6 30	10 42.79	-10 23.1	3.217	3.005	18.4	21.0	69E	10*	63*	4 16	12 33.99	-53 24.0	0.728	1.602	26.3	18.2	135E	—	63
7 10	10 53.18	-11 3.2	3.342	3.009	17.4	21.0	62E	5*	56*	4 21	12 33.49	-52 0.0	0.719	1.605	25.5	18.2	137E	—	64
7 20	11 4.30	-11 52.0	3.458	3.012	16.3	21.1	56E	1*	50*	4 26	12 33.96	-50 18.5	0.715	1.609	24.8	18.2	138E	—	66
7 30	11 16.03	-12 48.9	3.564	3.014	15.0	21.1	50E	—	43*	5 1	12 35.53	-48 22.0	0.713	1.614	24.3	18.1	139E	—	68
8 9	11 28.27	-13 52.8	3.659	3.015	13.5	21.1	44E	—	36*	5 6	12 38.19	-46 13.6	0.716	1.620	24.0	18.1	139E	—	70
8 19	11 40.96	-15 3.0	3.741	3.015	12.0	21.1	38E	—	30*	5 11	12 41.90	-43 56.7	0.722	1.626	24.0	18.2	139E	—	72
8 29	11 54.06	-16 18.8	3.811	3.014	10.5	21.1	33E	—	24*	5 16	12 46.57	-41 34.5	0.733	1.634	24.3	18.2	138E	—	74
9 8	12 7.51	-17 39.3	3.867	3.012	9.0	21.0	28E	—	18*	5 21	12 52.12	-39 10.6	0.748	1.642	24.8	18.3	137E	—	77
9 18	12 21.28	-19 3.9	3.908	3.009	7.5	21.0	23E	—	12*	5 26	12 58.43	-36 48.3	0.768	1.650	25.5	18.4	135E	—	8
9 28	12 35.34	-20 31.8	3.935	3.005	6.2	20.9	19E	—	6*	5 31	13 5.42	-34 30.5	0.792	1.660	26.4	18.5	133E	—	10
10 8	12 49.67	-22 2.4	3.946	3.000	5.3	20.9	16W	—	3*	6 5	13 12.95	-32 19.6	0.820	1.670	27.4	18.6	131E	—	13*
10 18	13 4.25	-23 34.9	3.942	2.994	5.1	20.9	15W	—	6*	6 10	13 20.94	-30 17.2	0.853	1.681	28.4	18.7	128E	—	15*
10 28	13 19.04	-25 8.9	3.923	2.987	5.6	20.9	17W	—	10*	6 15	13 29.29	-28 24.4	0.889	1.692	29.4	18.9	125E	—	16*
11 7	13 34.03	-26 43.5	3.888	2.979	6.6	20.9	20W	—	14*	6 20	13 37.95	-26 41.7	0.929	1.704	30.3	19.0	122E	—	18*
11 17	13 49.17	-28 18.4	3.838	2.969	8.0	20.9	25W	2*	19*	6 25	13 46.86	-25 9.5	0.972	1.717	31.1	19.1	119E	—	19*
11 27	14 4.42	-29 52.9	3.773	2.959	9.6	21.0	30W	5*	24*	6 30	13 55.98	-23 47.5	1.019	1.730	31.8	19.3	116E	—	20*
12 7	14 19.73	-31 26.6	3.694	2.948	11.2	21.0	36W	7*	29*	7 10	14 14.65	-21 32.1	1.121	1.758	32.8	19.6	111E	—	21*
12 17	14 35.03	-32 59.1	3.601	2.936	12.8	21.0	41W	8*	35*	7 20	14 33.74	-19 50.1	1.233	1.787	33.3	19.8	105E	—	22*
12 27	14 50.21	-34 30.1	3.496	2.923	14.4	21.0	47W	8*	41*	7 30	14 53.14	-18 35.3	1.353	1.818	33.4	20.1	99E	—	22*
1 6	15 5.16	-35 59.4	3.380	2.908	15.8	20.9	54W	8*	48*	8 9	15 12.74	-17 41.6	1.480	1.851	33.1	20.3	94E	—	23*
1 16	15 19.75	-37 27.0	3.254	2.893	17.2	20.9	60W	7*	54*	8 19	15 32.49	-17 3.2	1.611	1.884	32.5	20.5	89E	—	23*
56950 2000 SA₂										362047 2009 BG₁₄									
12 23	11 22.72	+30 56.6	2.335	2.826	19.1	19.6	110W	76	32*	8 29	15 52.38	-16 35.4	1.746	1.919	31.5	20.7	84E	—	23*
1 2	11 25.44	+31 47.3	2.204	2.810	17.9	19.4	119W	77	32	9 8	16 12.37	-16 14.2	1.884	1.954	30.4	20.8	79E	—	24*
1 12	11 25.26	+32 51.9	2.085	2.794	16.2	19.2	127W	78	31	9 18	16 32.44	-15 56.2	2.022	1.989	29.0	21.0	74E	—	24*
1 22	11 21.84	+34 6.1	1.982	2.776	14.2	19.0	136W	79	30	9 28	16 52.59	-15 38.5	2.159	2.025	27.5	21.1	69E	—	24*
1 27	11 18.83	+34 44.6	1.937	2.767	13.1	18.9	140W	80	29	10 8	17 12.75	-15 19.0	2.296	2.061	25.8	21.3	64E	—	24*
2 1	11 14.97	+35 22.6	1.898	2.758	12.1	18.8	144W	80	29	10 18	17 32.92	-14 55.8	2.429	2.097	24.0	21.4	59E	—	25*
2 6	11 10.30	+35 58.7	1.865	2.748	11.1	18.7	148W	81	28	10 28	17 53.05	-14 27.5	2.559	2.134	22.2	21.5	54E	—	25*
2 11	11 4.90	+36 31.4	1.838	2.739	10.3	18.7	150W	82	27										
2 16	10 58.85	+36 59.3	1.818	2.729	9.9	18.6	152W	82	27										

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/20	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
101496 1998 XM₃										60733 2000 GL₈₀ (continuation)									
12 23	11 23.41	+13 53.3	2.592	2.990	18.6	20.4	104 W	59	49*	8 19	11 50.31	+ 6 15.8	3.628	2.791	10.3	21.0	29 E	9*	22*
1 2	11 24.94	+14 8.0	2.486	3.023	17.3	20.3	114 W	59	50	8 29	12 3.48	+ 4 27.9	3.668	2.772	8.4	20.9	24 E	7*	17*
1 12	11 24.09	+14 36.6	2.389	3.054	15.4	20.2	124 W	60	49	9 8	12 17.01	+ 2 38.7	3.695	2.753	6.4	20.8	18 E	4*	11*
1 22	11 20.78	+15 17.7	2.307	3.085	13.0	20.0	135 W	60	49	9 18	12 30.88	+ 0 48.7	3.707	2.733	4.4	20.7	12 E	2*	5*
2 1	11 15.07	+16 8.3	2.245	3.114	10.1	19.9	146 W	61	48	9 28	12 45.06	- 1 1.8	3.704	2.711	2.5	20.6	7 E	—	—
2 6	11 11.41	+16 35.6	2.223	3.129	8.5	19.8	152 W	62	47	10 8	12 59.53	- 2 52.2	3.686	2.689	1.2	20.5	3 E	—	—
2 11	11 7.30	+17 3.4	2.208	3.143	6.8	19.7	158 W	62	47	10 18	13 14.29	- 4 42.1	3.653	2.666	2.4	20.5	7 W	1*	—
2 16	11 2.82	+17 30.9	2.199	3.157	5.3	19.6	163 W	63	46	10 28	13 29.32	- 6 30.9	3.605	2.641	4.5	20.6	12 W	6*	—
2 21	10 58.07	+17 57.4	2.199	3.171	3.9	19.6	167 W	63	46	11 7	13 44.61	- 8 18.1	3.543	2.616	6.6	20.6	18 W	11*	4*
2 26	10 53.16	+18 21.9	2.205	3.184	3.2	19.6	170 W	63	46	11 17	14 0.15	-10 3.3	3.467	2.590	8.7	20.7	23 W	15*	9*
3 2	10 48.20	+18 44.0	2.220	3.197	3.6	19.6	168 E	64	45	11 27	14 15.91	-11 45.9	3.378	2.563	10.8	20.7	29 W	19*	15*
3 7	10 43.33	+19 2.9	2.242	3.210	4.7	19.7	165 E	64	45	12 7	14 31.86	-13 25.6	3.276	2.535	12.9	20.7	35 W	22*	21*
3 12	10 38.64	+19 18.3	2.272	3.223	6.1	19.8	160 E	64	45	12 17	14 47.97	-15 1.9	3.163	2.507	15.0	20.6	41 W	24*	27*
3 22	10 30.21	+19 37.9	2.353	3.248	9.1	20.0	149 E	65	44	12 27	15 4.18	-16 34.5	3.039	2.477	16.9	20.6	47 W	25*	34*
4 1	10 23.56	+19 42.0	2.458	3.272	11.7	20.2	138 E	65	44	1 6	15 20.44	-18 3.3	2.906	2.447	18.8	20.5	53 W	25*	41*
4 11	10 19.05	+19 31.7	2.584	3.295	13.9	20.4	128 E	65	44	1 16	15 36.67	-19 28.1	2.765	2.416	20.5	20.4	59 W	24*	49*
4 21	10 16.77	+19 8.9	2.727	3.317	15.5	20.6	118 E	64	45	5585 Parks									
5 1	10 16.64	+18 35.4	2.880	3.338	16.6	20.8	108 E	64	45	12 23	11 25.37	-28 5.0	3.701	3.775	15.1	20.6	87 W	17	80*
5 11	10 18.47	+17 53.3	3.041	3.358	17.3	21.0	99 E	61*	46	1 2	11 26.93	-29 40.7	3.561	3.769	15.1	20.5	95 W	15	86
5 21	10 22.02	+17 3.9	3.205	3.377	17.4	21.1	91 E	56*	47	1 12	11 26.64	-31 9.2	3.424	3.762	14.8	20.4	103 W	14	85
5 31	10 27.05	+16 8.5	3.368	3.395	17.2	21.2	83 E	49*	48	1 22	11 24.35	-32 27.2	3.294	3.754	14.2	20.3	111 W	13	84
6 10	10 33.31	+15 8.1	3.529	3.412	16.7	21.3	75 E	41*	49*	2 1	11 20.00	-33 30.6	3.175	3.746	13.4	20.2	118 W	11	82
6 20	10 40.61	+14 3.4	3.684	3.428	15.9	21.4	68 E	34*	48*	2 11	11 13.73	-34 15.1	3.070	3.737	12.3	20.0	126 W	11	82
6 30	10 48.75	+12 55.0	3.831	3.444	14.9	21.4	60 E	28*	45*	2 16	11 9.96	-34 29.1	3.024	3.732	11.8	20.0	130 W	11	82
7 10	10 57.58	+11 43.5	3.968	3.458	13.6	21.5	53 E	23*	42*	2 21	11 5.84	-34 37.0	2.983	3.726	11.2	19.9	133 W	10	81
7 20	11 6.98	+10 29.4	4.093	3.471	12.2	21.5	46 E	18*	37*	2 26	11 1.45	-34 38.5	2.947	3.721	10.7	19.9	136 W	10	81
378526 2007 VH₁₈₆										3 2	10 56.88	-34 33.3	2.917	3.716	10.2	19.8	138 W	10	81
12 23	11 24.16	+48 11.0	0.573	1.321	43.1	21.2	113 W	87	15*	3 7	10 52.23	-34 21.6	2.893	3.710	9.9	19.8	140 E	11	82
12 28	11 36.19	+49 47.9	0.570	1.331	41.9	21.1	115 W	85	14*	3 12	10 47.60	-34 3.4	2.875	3.704	9.6	19.8	141 E	11	82
1 2	11 46.49	+51 24.4	0.568	1.341	40.8	21.1	117 W	84	12*	3 17	10 43.09	-33 39.2	2.864	3.698	9.6	19.8	142 E	11	82
1 7	11 54.84	+53 0.1	0.568	1.352	39.6	21.1	119 W	82	11*	3 22	10 38.78	-33 9.3	2.858	3.691	9.7	19.7	142 E	12	83
1 12	12 0.97	+54 33.8	0.568	1.363	38.4	21.1	121 W	80	9	3 27	10 34.78	-32 34.5	2.859	3.685	9.9	19.8	141 E	12	83
1 17	12 4.62	+56 4.3	0.570	1.375	37.3	21.1	122 W	79	8	4 1	10 31.16	-31 55.5	2.866	3.678	10.3	19.8	139 E	13	84
1 22	12 5.52	+57 29.6	0.573	1.387	36.2	21.1	124 W	78	7	4 6	10 27.98	-31 13.2	2.878	3.671	10.8	19.8	137 E	14	85
1 27	12 3.46	+58 46.9	0.578	1.399	35.2	21.1	125 W	76	5	4 11	10 25.29	-30 28.4	2.897	3.663	11.4	19.8	134 E	15	86
2 1	11 58.37	+59 52.5	0.584	1.412	34.2	21.1	126 W	75	4	4 16	10 23.12	-29 42.1	2.920	3.656	12.0	19.9	131 E	15	86
2 6	11 50.39	+60 42.8	0.592	1.425	33.4	21.1	127 W	74	3	4 21	10 21.49	-28 55.0	2.949	3.648	12.6	19.9	127 E	16	87
2 11	11 39.92	+61 14.0	0.602	1.438	32.7	21.2	128 W	74	3	4 26	10 20.41	-28 8.0	2.982	3.640	13.3	20.0	124 E	17	88
2 16	11 27.59	+61 23.3	0.613	1.451	32.2	21.2	128 W	74	3	5 1	10 19.89	-27 21.9	3.019	3.632	13.9	20.0	120 E	18	89
2 21	11 14.27	+61 8.5	0.627	1.465	31.8	21.3	129 W	74	3	5 11	10 20.42	-25 54.4	3.104	3.616	14.9	20.1	113 E	18*	90
2 26	11 0.96	+60 28.8	0.644	1.478	31.7	21.3	128 W	75	4	5 21	10 22.93	-24 36.4	3.200	3.598	15.8	20.2	105 E	17*	89
3 2	10 48.58	+59 25.3	0.663	1.492	31.7	21.4	128 E	76	5	5 31	10 27.24	-23 30.5	3.304	3.580	16.3	20.2	97 E	14*	88
3 7	10 37.82	+58 0.6	0.684	1.506	31.8	21.5	127 E	77	6	6 10	10 33.11	-22 38.0	3.411	3.560	16.6	20.3	90 E	10*	84*
3 12	10 29.04	+56 18.2	0.708	1.520	32.1	21.6	126 E	79	8	6 20	10 40.34	-21 59.2	3.519	3.540	16.6	20.4	83 E	6*	77*
3 17	10 22.34	+54 21.8	0.734	1.533	32.5	21.7	124 E	81	10	6 30	10 48.75	-21 34.0	3.625	3.519	16.3	20.4	76 E	2*	69*
3 22	10 17.66	+52 14.8	0.764	1.547	32.9	21.8	122 E	83	12	7 10	10 58.16	-21 21.9	3.727	3.497	15.8	20.4	69 E	—	62*
3 27	10 14.85	+50 0.2	0.795	1.561	33.4	22.0	121 E	85	14	7 20	11 8.44	-21 21.9	3.822	3.475	15.1	20.5	63 E	—	54*
60733 2000 GL₈₀										7 30	11 19.47	-21 33.2	3.909	3.451	14.2	20.5	56 E	—	47*
12 23	11 24.34	+18 40.2	2.507	2.931	18.8	20.6	106 W	64	44*	8 9	11 31.14	-21 54.7	3.986	3.427	13.1	20.4	50 E	—	40*
1 2	11 26.67	+19 6.0	2.380	2.937	17.6	20.4	115 W	64	45	8 19	11 43.39	-22 25.3	4.052	3.402	12.0	20.4	44 E	—	33*
1 12	11 26.54	+19 46.3	2.263	2.942	15.9	20.3	125 W	65	44	8 29	11 56.15	-23 4.0	4.105	3.376	10.8	20.4	39 E	—	26*
1 22	11 23.76	+20 39.4	2.162	2.946	13.5	20.1	136 W	66	43	9 8	12 9.36	-23 49.9	4.145	3.349	9.5	20.3	33 E	—	20*
2 1	11 18.26	+21 41.4	2.079	2.948	10.8	19.9	146 W	67	42	9 18	12 23.00	-24 41.8	4.171	3.321	8.3	20.3	28 E	—	14*
2 6	11 14.55	+22 13.9	2.047	2.949	9.3	19.8	151 W	67	42	9 28	12 37.01	-25 38.9	4.182	3.292	7.1	20.2	24 E	—	8*
2 11	11 10.29	+22 46.2	2.021	2.950	7.8	19.7	156 W	68	41	10 8	12 51.38	-26 40.1	4.178	3.263	6.2	20.2	21 W	—	4*
2 16	11 5.54	+23 17.3	2.002	2.951	6.5	19.7	160 W	68	41	10 18	13 6.07	-27 44.6	4.158	3.233	5.8	20.1	19 W	—	8*
2 21	11 0.40	+23 46.3	1.991	2.951	5.6	19.6	163 W	69	40	10 28	13 21.07	-28 51.4	4.122	3.202	5.9	20.1	19 W	—	11*
2 26	10																		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
6041 Juterkilian (continuation)										29407 1996 UW (continuation)									
3 27	10 47.68	+ 0 0.2	1.838	2.778	8.5	18.4	156 E	45	64	6 20	10 51.73	+10 31.2	2.946	2.793	20.2	20.7	71 E	34*	52*
4 1	10 44.09	+ 0 42.4	1.852	2.764	10.4	18.5	150 E	46	63	6 30	11 1.41	+ 9 15.9	3.050	2.770	19.4	20.7	65 E	28*	50*
4 6	10 41.00	+ 1 22.6	1.873	2.749	12.2	18.6	144 E	46	63	7 10	11 12.08	+ 7 54.7	3.146	2.746	18.3	20.7	58 E	22*	47*
4 11	10 38.47	+ 2 0.2	1.900	2.734	14.0	18.7	139 E	47	62	7 20	11 23.60	+ 6 28.0	3.233	2.722	17.0	20.7	52 E	18*	43*
4 21	10 35.23	+ 3 5.0	1.967	2.704	17.0	18.8	128 E	48	61	7 30	11 35.89	+ 4 56.6	3.308	2.696	15.6	20.7	46 E	14*	38*
5 1	10 34.57	+ 3 54.1	2.049	2.673	19.5	19.0	118 E	49	60	8 9	11 48.83	+ 3 21.0	3.372	2.670	14.0	20.7	40 E	11*	33*
5 11	10 36.42	+ 4 26.1	2.141	2.641	21.3	19.1	108 E	49*	60	8 19	12 2.37	+ 1 41.7	3.424	2.643	12.3	20.6	34 E	8*	27*
5 21	10 40.60	+ 4 41.5	2.239	2.609	22.5	19.2	100 E	46*	59	8 29	12 16.48	+ 0 0.7	3.463	2.615	10.4	20.5	28 E	6*	22*
5 31	10 46.89	+ 4 41.1	2.339	2.576	23.2	19.3	92 E	42*	59	9 8	12 31.11	+ 1 45.6	3.489	2.586	8.5	20.5	22 E	3*	16*
6 10	10 55.01	+ 4 26.1	2.439	2.542	23.4	19.4	84 E	36*	60	9 18	12 46.25	+ 3 32.2	3.502	2.556	6.5	20.4	17 E	1*	11*
6 20	11 4.72	+ 3 58.0	2.534	2.508	23.2	19.4	77 E	31*	59*	9 28	13 1.90	+ 5 20.1	3.501	2.526	4.5	20.2	11 E	—	5*
6 30	11 15.84	+ 3 17.9	2.625	2.472	22.8	19.4	70 E	26*	57*	10 8	13 18.04	+ 7 8.4	3.487	2.495	2.4	20.1	6 E	—	—
7 10	11 28.16	+ 2 27.3	2.709	2.437	22.0	19.5	64 E	21*	54*	10 18	13 34.70	+ 8 56.4	3.460	2.464	0.4	19.8	1 E	—	—
7 20	11 41.55	+ 1 27.4	2.784	2.401	21.0	19.5	58 E	17*	50*	10 28	13 51.88	+ 10 43.3	3.420	2.431	2.0	19.9	5 W	—	—
7 30	11 55.91	+ 0 19.3	2.851	2.364	19.8	19.4	52 E	14*	45*	11 7	14 9.58	+ 12 28.3	3.367	2.398	4.2	20.0	10 W	3*	1*
8 9	12 11.16	+ 0 55.7	2.909	2.327	18.4	19.4	46 E	12*	40*	11 17	14 27.84	+ 14 10.4	3.302	2.365	6.5	20.1	16 W	8*	5*
8 19	12 27.24	+ 2 16.5	2.956	2.290	16.8	19.3	41 E	10*	35*	11 27	14 46.64	+ 15 48.8	3.226	2.331	8.7	20.1	21 W	11*	10*
8 29	12 44.12	+ 3 42.0	2.993	2.252	15.2	19.3	36 E	8*	30*	12 7	15 6.01	+ 17 22.5	3.140	2.297	10.9	20.1	26 W	14*	15*
9 8	13 1.79	+ 5 10.8	3.020	2.214	13.4	19.2	31 E	6*	25*	12 17	15 25.94	+ 18 50.6	3.044	2.262	13.1	20.1	31 W	16*	20*
9 18	13 20.25	+ 6 41.8	3.037	2.177	11.6	19.1	26 E	5*	20*	12 27	15 46.42	+ 20 12.1	2.939	2.227	15.2	20.0	37 W	17*	26*
9 28	13 39.52	+ 8 13.5	3.043	2.139	9.7	19.0	21 E	4*	15*	1 6	16 7.43	+ 21 26.0	2.827	2.192	17.3	20.0	42 W	18*	32*
10 8	13 59.60	+ 9 44.5	3.040	2.101	7.8	18.9	17 E	3*	10*	1 16	16 28.94	+ 22 31.7	2.708	2.156	19.4	19.9	47 W	18*	38*
10 18	14 20.55	+ 11 13.2	3.028	2.064	5.8	18.7	12 E	1*	5*	474223 2001 CC₃₂									
10 28	14 42.37	+ 12 37.8	3.006	2.027	3.9	18.6	8 E	—	1*	12 23	11 28.47	+33 13.2	0.849	1.498	38.3	21.0	109 W	78	30*
11 7	15 5.08	+ 13 56.6	2.977	1.991	2.2	18.4	4 E	—	—	12 28	11 30.70	+31 37.9	0.778	1.473	37.9	20.7	113 W	77	32*
11 17	15 28.71	+ 15 7.6	2.940	1.955	1.9	18.3	4 W	—	—	1 2	11 31.49	+29 49.2	0.708	1.448	37.3	20.5	117 W	75	34*
11 27	15 53.24	+ 16 8.8	2.897	1.920	3.4	18.4	7 W	1*	—	1 7	11 30.56	+27 42.2	0.639	1.423	36.2	20.2	121 W	73	36
12 7	16 18.63	+ 16 58.1	2.848	1.887	5.3	18.4	10 W	4*	—	1 12	11 27.56	+25 9.8	0.572	1.398	34.7	19.8	126 W	70	39
12 17	16 44.83	+ 17 33.7	2.794	1.854	7.4	18.4	14 W	7*	2*	1 14	11 25.69	+23 59.6	0.546	1.388	33.9	19.7	128 W	69	40
12 27	17 11.74	+ 17 53.6	2.736	1.823	9.4	18.4	18 W	9*	6*	1 16	11 23.37	+22 43.0	0.520	1.378	33.0	19.6	130 W	68	41
1 6	17 39.25	+ 17 56.3	2.675	1.794	11.4	18.4	21 W	11*	10*	1 18	11 20.58	+21 19.2	0.496	1.369	32.0	19.4	133 W	66	43
1 16	18 7.22	+ 17 40.8	2.613	1.767	13.4	18.4	25 W	12*	14*	1 20	11 17.27	+19 47.1	0.472	1.359	30.8	19.3	135 W	65	44
12 23	11 27.52	+10 25.1	2.379	2.758	20.4	21.5	102 W	55	52*	1 22	11 13.40	+18 5.7	0.448	1.349	29.5	19.1	138 W	63	46
1 2	11 30.71	+10 26.1	2.252	2.767	19.3	21.4	111 W	55	54*	1 24	11 8.91	+16 13.7	0.426	1.339	28.1	18.9	140 W	61	48
1 12	11 31.49	+10 42.8	2.133	2.776	17.6	21.2	121 W	56	53	1 26	11 3.75	+14 10.0	0.404	1.330	26.5	18.7	143 W	59	50
1 22	11 29.67	+11 15.0	2.026	2.783	15.2	21.0	132 W	56	53	1 28	10 57.89	+11 53.2	0.384	1.320	24.8	18.6	146 W	57	52
2 1	11 25.13	+12 1.5	1.937	2.790	12.2	20.8	143 W	57	52	1 30	10 51.26	+ 9 22.2	0.365	1.311	23.0	18.4	149 W	54	55
2 11	11 18.07	+12 58.5	1.870	2.795	8.6	20.6	155 W	58	51	2 1	10 43.82	+ 6 36.0	0.348	1.301	21.3	18.2	151 W	52	57
2 21	11 8.96	+14 0.4	1.829	2.800	4.8	20.4	166 W	59	50	2 6	10 21.43	+ 1 26.9	0.312	1.278	18.2	17.8	156 W	44	65
2 26	11 3.88	+14 30.9	1.820	2.802	3.3	20.3	171 W	60	49	2 11	9 53.42	+ 10 50.1	0.291	1.255	19.9	17.7	154 W	34	75
3 2	10 58.62	+15 0.0	1.818	2.803	2.8	20.2	172 W	60	49	2 16	9 20.29	+ 20 36.7	0.285	1.233	26.9	17.8	146 E	24	85
3 7	10 53.33	+15 26.7	1.824	2.804	3.9	20.3	169 E	60	49	2 21	8 43.77	+ 29 26.6	0.294	1.212	35.9	18.1	134 E	16	87
3 12	10 48.14	+15 50.3	1.837	2.805	5.6	20.4	164 E	61	48	2 23	8 28.84	+ 32 28.4	0.302	1.204	39.3	18.3	130 E	13	84
3 17	10 43.19	+16 10.2	1.857	2.806	7.5	20.5	158 E	61	48	2 25	8 14.02	+ 35 10.3	0.311	1.196	42.6	18.4	125 E	10	81
3 22	10 38.60	+16 26.1	1.884	2.807	9.4	20.6	153 E	61	48	2 27	7 59.52	+ 37 32.1	0.322	1.188	45.7	18.6	121 E	7	78
3 27	10 34.46	+16 37.7	1.918	2.807	11.2	20.7	147 E	62	47	2 29	7 45.48	+ 39 34.8	0.334	1.180	48.4	18.7	117 E	5	76
4 1	10 30.88	+16 44.8	1.957	2.807	12.9	20.9	141 E	62	47	3 2	7 32.06	+ 41 20.0	0.347	1.173	50.9	18.8	113 E	4	75
4 6	10 27.91	+16 47.6	2.002	2.807	14.4	21.0	136 E	62	47	3 4	7 19.34	+ 42 49.5	0.361	1.165	53.1	19.0	110 E	2	73
4 11	10 25.57	+16 46.2	2.051	2.806	15.8	21.1	130 E	62	47	3 6	7 7.38	+ 44 5.5	0.376	1.158	55.1	19.1	107 E	1	72
4 16	10 23.89	+16 40.9	2.104	2.805	17.0	21.2	125 E	62	47	3 8	6 56.22	+ 45 9.8	0.391	1.151	56.8	19.2	104 E	—	71
4 21	10 22.86	+16 31.8	2.160	2.804	18.0	21.2	120 E	62	47	3 10	6 45.85	+ 46 4.4	0.407	1.145	58.3	19.3	101 E	—	70
4 26	10 22.48	+16 19.3	2.220	2.803	18.9	21.3	115 E	61	48	3 12	6 36.26	+ 46 50.7	0.423	1.138	59.6	19.4	99 E	—	69
5 1	10 22.72	+16 3.5	2.282	2.801	19.7	21.4	111 E	61	48	3 14	6 27.41	+ 47 30.2	0.439	1.132	60.7	19.6	97 E	—	68
5 6	10 23.56	+15 44.8	2.345	2.799	20.2	21.5	106 E	61	48	3 16	6 19.27	+ 48 4.0	0.455	1.126	61.7	19.6	95 E	—	68
276400 2002 XS₄₅										3 18	6 11.80	+ 48 33.3	0.471	1.121	62.5	19.7	93 E	—	67*
12 23	11 27.83	+ 9 18.3	2.695	3.049	18.4	20.6	102 W	54	53*	3 20	6 4.94	+ 48 58.7	0.486	1.115	63.2	19.8	91 E	—	67*
1 2	11 30.71	+ 9 15.4	2.548	3.043	17.6	20.5	111 W	54	55*	3 22	5 58.65	+ 49 21.2	0.502	1.110	63.8	19.9	89 E	—	66*
1 12	11 31.46	+ 9 26.3	2.409	3.035	16.1	20.3	121 W	54	55	3 24	5 52.88	+ 49 41.2	0.517	1.106	64.3	20.0	88 E	—	65*
1 22	11 29.89	+ 9 51.4	2.283	3.027	14.1	20.1	132 W	55	54	3 26	5 47.58	+ 49 59.3	0.532	1.101	64.7	20.0	86 E	—	64*
2 1	11 25.89	+ 10 29.8	2.174	3.018	11.4	19.9	143 W	55	54	3 28	5 42.71	+ 50 15.9	0.546	1.097	65.1	20.1	85 E	—	63*
2 11	11 19.58	+ 11 19.0	2.088	3.008	8.1	19.7	154 W	56	53	3 30	5 38.22	+ 50 31.3	0.561	1.093	65.3	20.1	84 E	—	61*
2 21	11 11.34	+ 12 14.6	2.028	2.997	4.6	19.4	166 W	57	52	4 1	5 34.07	+ 50 45.8	0.574	1.					

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/20	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
474223 2001 CC₃₂										31843 2000 CQ₈₀									
<i>(continuation)</i>										<i>(continuation)</i>									
6 12	4 23.43	-63 38.9	0.653	1.183	59.0	20.5	88 W	—	32*	3 17	11 7.73	+ 4 4.5	1.410	2.395	4.3	18.0	170 E	49	60
6 14	4 20.82	-64 30.0	0.644	1.191	58.5	20.4	89 W	—	33*	3 22	11 3.13	+ 5 20.6	1.409	2.380	6.9	18.1	163 E	50	59
6 16	4 17.86	-65 24.5	0.635	1.199	57.9	20.4	90 W	—	34*	3 27	10 58.84	+ 6 34.7	1.415	2.365	9.5	18.3	157 E	52	57
6 18	4 14.47	-66 22.7	0.626	1.207	57.3	20.4	91 W	—	35*	4 1	10 54.99	+ 7 45.1	1.428	2.350	12.1	18.4	151 E	53	56
6 20	4 10.53	-67 24.7	0.617	1.215	56.6	20.3	93 W	—	36*	4 6	10 51.70	+ 8 50.7	1.446	2.334	14.4	18.5	144 E	54	55
6 21	4 8.31	-67 57.2	0.613	1.220	56.3	20.3	94 W	—	36*	4 11	10 49.06	+ 9 50.4	1.470	2.319	16.6	18.6	139 E	55	54
6 22	4 5.89	-68 30.6	0.608	1.224	55.9	20.3	94 W	—	36*	4 21	10 45.93	+11 30.3	1.532	2.287	20.4	18.7	127 E	57	52
6 23	4 3.24	-69 5.1	0.603	1.228	55.5	20.3	95 W	—	37*	5 1	10 45.87	+12 42.4	1.608	2.254	23.4	18.9	117 E	58	51
6 24	4 0.35	-69 40.6	0.599	1.232	55.1	20.2	96 W	—	37*	5 11	10 48.80	+13 27.8	1.692	2.221	25.6	19.0	108 E	58*	51
6 25	3 57.16	-70 17.1	0.594	1.237	54.7	20.2	97 W	—	37*	5 21	10 54.47	+13 48.9	1.780	2.187	27.2	19.2	99 E	56*	50
6 26	3 53.64	-70 54.5	0.589	1.241	54.3	20.2	98 W	—	37*	5 31	11 2.58	+13 48.3	1.869	2.152	28.1	19.3	92 E	52*	50
6 27	3 49.73	-71 32.9	0.584	1.246	53.8	20.2	99 W	—	38*	6 10	11 12.79	+13 28.8	1.956	2.118	28.5	19.3	85 E	46*	51
6 28	3 45.39	-72 12.2	0.580	1.250	53.4	20.2	99 W	—	38*	6 20	11 24.82	+12 52.9	2.039	2.083	28.5	19.4	78 E	41*	51*
6 29	3 40.54	-72 52.4	0.575	1.254	52.9	20.1	100 W	—	38*	6 30	11 38.42	+12 2.7	2.117	2.047	28.2	19.4	72 E	36*	51*
6 30	3 35.09	-73 33.3	0.571	1.259	52.4	20.1	101 W	—	38*	7 10	11 53.39	+10 59.9	2.189	2.012	27.6	19.4	66 E	32*	50*
7 1	3 28.96	-74 14.8	0.566	1.263	51.9	20.1	102 W	—	38*	7 20	12 9.57	+ 9 46.4	2.253	1.977	26.8	19.4	61 E	28*	47*
7 2	3 22.02	-74 56.9	0.562	1.268	51.3	20.1	103 W	—	38*	7 30	12 26.85	+ 8 23.6	2.309	1.941	25.8	19.4	56 E	26*	45*
7 3	3 14.13	-75 39.3	0.557	1.273	50.8	20.0	104 W	—	38*	8 9	12 45.16	+ 6 53.0	2.358	1.906	24.7	19.4	52 E	23*	41*
7 4	3 5.12	-76 21.7	0.553	1.277	50.2	20.0	105 W	—	38*	8 19	13 4.46	+ 5 16.0	2.399	1.872	23.5	19.4	48 E	22*	38*
7 5	2 54.79	-77 4.0	0.549	1.282	49.7	20.0	106 W	—	38*	8 29	13 24.73	+ 3 34.2	2.432	1.838	22.3	19.3	44 E	20*	34*
7 6	2 42.90	-77 45.5	0.545	1.286	49.1	20.0	107 W	—	37*	9 8	13 45.96	+ 1 49.2	2.458	1.805	21.0	19.3	40 E	19*	31*
7 7	2 29.17	-78 25.9	0.541	1.291	48.5	19.9	108 W	—	37*	9 18	14 8.18	+ 0 2.6	2.478	1.773	19.7	19.2	36 E	18*	27*
7 8	2 13.31	-79 4.4	0.537	1.296	47.9	19.9	109 W	—	37*	9 28	14 31.40	+ 1 43.6	2.493	1.743	18.4	19.1	33 E	17*	24*
7 9	1 55.00	-79 40.2	0.533	1.300	47.2	19.9	110 W	—	36*	10 8	14 55.64	+ 3 27.3	2.502	1.714	17.1	19.1	30 E	17*	20*
7 10	1 33.97	-80 12.2	0.529	1.305	46.6	19.9	111 W	—	36	10 18	15 20.92	+ 5 6.4	2.507	1.686	15.8	19.0	27 E	16*	16*
7 11	1 10.07	-80 39.2	0.526	1.310	45.9	19.8	112 W	—	35	10 28	15 47.23	+ 6 38.5	2.510	1.661	14.5	18.9	25 E	15*	13*
7 12	0 43.34	-80 59.8	0.523	1.315	45.2	19.8	113 W	—	35	11 7	16 14.53	+ 8 1.1	2.510	1.638	13.3	18.8	22 E	14*	9*
7 13	0 14.19	-81 12.6	0.520	1.319	44.5	19.8	114 W	—	35	11 17	16 42.78	+ 9 11.9	2.509	1.618	12.2	18.8	20 E	13*	5*
7 14	23 43.38	-81 16.2	0.517	1.324	43.9	19.8	116 W	—	35	11 27	17 11.86	+10 8.6	2.508	1.600	11.1	18.7	18 E	12*	2*
7 15	23 12.03	-81 9.9	0.515	1.329	43.2	19.7	117 W	—	35	12 7	17 41.62	+10 49.3	2.507	1.585	10.0	18.6	16 E	10*	—
7 16	22 41.35	-80 53.4	0.512	1.334	42.4	19.7	118 W	—	35	12 17	18 11.91	+11 12.5	2.508	1.574	9.0	18.6	14 E	8*	—
7 17	22 12.43	-80 26.9	0.510	1.339	41.7	19.7	119 W	—	36	12 27	18 42.51	+11 17.5	2.509	1.566	8.0	18.5	13 E	6*	—
7 18	21 46.03	-79 51.1	0.508	1.343	41.0	19.7	120 W	—	36	1 6	19 13.19	+11 4.2	2.512	1.561	7.2	18.5	12 E	3*	—
7 19	21 22.49	-79 7.3	0.507	1.348	40.3	19.7	121 W	—	37	1 16	19 43.77	+10 33.1	2.516	1.560	6.6	18.5	11 W	3*	—
7 20	21 1.84	-78 16.3	0.506	1.353	39.6	19.6	122 W	—	38										
7 21	20 43.93	-77 19.4	0.505	1.358	38.9	19.6	123 W	—	39										
7 22	20 28.47	-76 17.5	0.504	1.363	38.2	19.6	124 W	—	40										
7 23	20 15.15	-75 11.3	0.504	1.368	37.5	19.6	125 W	—	41	12 23	11 29.18	+13 4.2	1.107	1.634	36.0	17.6	103 W	58	49*
7 24	20 3.66	-74 1.7	0.504	1.373	36.9	19.6	126 E	—	42	1 2	11 42.86	+14 27.5	1.047	1.664	33.7	17.4	110 W	59	49*
7 25	19 53.74	-72 49.3	0.504	1.378	36.2	19.6	127 E	—	43	1 12	11 53.19	+16 24.4	0.993	1.696	30.7	17.3	118 W	61	48
7 26	19 45.15	-71 34.4	0.505	1.383	35.6	19.6	128 E	—	44	1 22	11 59.59	+18 54.3	0.947	1.727	27.1	17.1	127 W	64	45
7 27	19 37.69	-70 17.7	0.506	1.388	35.0	19.6	128 E	—	46	1 27	12 1.13	+20 20.1	0.928	1.744	25.0	17.0	131 W	65	44
7 28	19 31.20	-68 59.4	0.507	1.393	34.4	19.6	129 E	—	47	2 1	12 1.49	+21 51.4	0.913	1.760	22.9	16.9	136 W	67	42
7 29	19 25.52	-67 40.0	0.509	1.397	33.9	19.6	130 E	—	48	2 6	12 0.67	+23 26.2	0.901	1.776	20.7	16.8	140 W	68	41
7 30	19 20.54	-66 19.6	0.511	1.402	33.4	19.6	131 E	—	50	2 11	11 58.69	+25 1.9	0.894	1.793	18.5	16.8	145 W	70	39
7 31	19 16.18	-64 58.7	0.514	1.407	32.9	19.6	131 E	—	51	2 16	11 55.61	+26 35.8	0.892	1.809	16.6	16.7	148 W	72	37
8 1	19 12.33	-63 37.4	0.517	1.412	32.4	19.6	132 E	—	52	2 21	11 51.54	+28 5.0	0.895	1.826	15.0	16.7	151 W	73	36
8 2	19 8.95	-62 16.0	0.520	1.417	32.0	19.6	132 E	—	54	2 26	11 46.65	+29 26.3	0.904	1.843	13.9	16.7	153 W	74	35
8 3	19 5.96	-60 54.6	0.524	1.422	31.7	19.6	133 E	—	55	3 2	11 41.19	+30 37.2	0.917	1.859	13.6	16.7	154 W	76	33
8 4	19 3.32	-59 33.5	0.528	1.427	31.4	19.6	133 E	—	56	3 7	11 35.42	+31 35.6	0.936	1.876	13.9	16.8	153 W	77	32
8 5	19 1.00	-58 12.9	0.532	1.432	31.1	19.6	133 E	—	58	3 12	11 29.62	+32 20.4	0.961	1.892	14.8	16.9	151 W	77	32
8 6	18 58.95	-56 52.9	0.537	1.437	30.8	19.7	133 E	—	59	3 17	11 24.06	+32 51.1	0.990	1.909	16.0	17.1	148 E	78	31
8 7	18 57.14	-55 33.6	0.542	1.442	30.6	19.7	134 E	—	60	3 22	11 18.96	+33 7.9	1.025	1.925	17.5	17.2	145 E	78	31
8 8	18 55.55	-54 15.1	0.548	1.447	30.5	19.7	134 E	—	62	3 27	11 14.52	+33 11.5	1.063	1.941	19.0	17.3	141 E	78	31
8 9	18 54.16	-52 57.7	0.554	1.452	30.4	19.7	134 E	—	63	4 1	11 10.90	+33 3.3	1.106	1.957	20.5	17.5	137 E	78	31
8 11	18 51.89	-50 26.2	0.566	1.462	30.2	19.8	133 E	—	66	4 6	11 8.16	+32 44.5	1.153	1.973	21.9	17.6	133 E	78	31
8 13	18 50.21	-47 59.9	0.581	1.472	30.2	19.9	133 E	—	68	4 11	11 6.35	+32 16.6	1.203	1.989	23.2	17.8	129 E	77	32
8 15	18 49.03	-45 39.1	0.596	1.482	30.3	19.9	132 E	—	70	4 16	11 5.44	+31 41.1	1.256	2.005	24.3	17.9	125 E	77	32
8 17	18 48.26	-43 24.2	0.613	1.492	30.5	20.0	132 E	2	73	4 21	11 5.40	+30 59.2	1.312	2.020	25.3	18.1	121 E	76	33
8 19	18 47.84	-41 15.5	0.632	1.502	30.8	20.1	131 E	4	75	4 26	11 6.19	+30 11.9	1.370	2.036	26.1	18.2	117 E	75	34
8 24	18 48.07	-36 20.9	0.682	1.526	31.6	20.3	128 E	9	80	5 1	11 7.75	+29 20.2	1.430	2.051	26.8	18.3	113 E	74	35
8 29	18 49.68	-32 3.8	0.738	1.551	32.5	20.6	124 E	13	84	5 6	11 10.01	+28 24.9	1.492	2.066	27.3	18.5	110 E	73	36
9 3	18 52.33	-28 21.0	0.800</																

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	2020	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°
24814 1994 VW ₁ (continuation)									18882 1999 YN ₄ (continuation)								
11 7	15 25.70	-9 15.4	3.403	2.439	4.6	19.8	11 E	5*	4 17	23 58.67	-83 59.2	0.855	1.374	46.7	18.1	95 W	28*
11 17	15 43.17	-10 35.1	3.419	2.447	3.6	19.8	9 E	2*	4 18	0 0.68	-83 56.9	0.852	1.376	46.6	18.1	95 W	28*
11 27	16 0.80	-11 46.6	3.422	2.455	3.9	19.8	10 W	3*	4 19	0 2.49	-83 55.2	0.850	1.379	46.5	18.1	96 W	28*
12 7	16 18.53	-12 49.5	3.411	2.461	5.2	19.9	13 W	7*	4 20	0 5.09	-83 54.1	0.847	1.381	46.3	18.1	96 W	29*
12 17	16 36.30	-13 43.7	3.385	2.466	7.0	19.9	18 W	11*	4 21	0 4.49	-83 53.7	0.845	1.383	46.2	18.1	96 W	29*
12 27	16 54.03	-14 28.9	3.346	2.470	8.9	20.0	23 W	14*	4 23	0 7.67	-83 54.7	0.840	1.388	45.9	18.1	97 W	29*
1 6	17 11.65	-15 5.3	3.292	2.472	10.9	20.0	28 W	17*	4 25	0 9.01	-83 58.4	0.834	1.393	45.7	18.1	98 W	29*
1 16	17 29.08	-15 33.0	3.226	2.473	12.9	20.1	34 W	19*	4 27	0 9.43	-84 4.8	0.829	1.398	45.4	18.0	99 W	29*
18882 1999 YN ₄									4 29	0 8.81	-84 13.8	0.823	1.403	45.0	18.0	100 W	29*
12 23	11 30.47	-20 37.4	0.939	1.346	47.0	18.3	89 W	24	5 1	0 6.96	-84 25.4	0.816	1.408	44.7	18.0	101 W	29*
12 28	11 38.58	-25 26.2	0.910	1.337	47.4	18.2	90 W	20	5 2	0 5.50	-84 32.2	0.813	1.411	44.5	18.0	101 W	29*
1 2	11 46.67	-30 23.1	0.885	1.328	47.7	18.1	90 W	15	5 3	0 3.62	-84 39.7	0.810	1.414	44.3	18.0	102 W	29*
1 7	11 54.78	-35 25.0	0.865	1.321	48.1	18.1	91 W	10	5 4	0 1.28	-84 47.8	0.807	1.416	44.1	18.0	102 W	29*
1 12	12 2.97	-40 28.4	0.850	1.314	48.4	18.1	91 W	5	5 5	23 58.41	-84 56.5	0.803	1.419	43.9	18.0	102 W	29*
1 17	12 11.29	-45 29.6	0.840	1.309	48.7	18.0	91 W	—	5 6	23 54.94	-85 5.8	0.800	1.422	43.7	18.0	103 W	29*
1 22	12 19.83	-50 25.0	0.833	1.304	49.0	18.0	91 W	—	5 7	23 50.76	-85 15.6	0.797	1.424	43.5	18.0	104 W	29*
1 27	12 28.67	-55 10.9	0.831	1.300	49.2	18.0	91 W	—	5 8	23 45.78	-85 26.0	0.793	1.427	43.3	17.9	104 W	29*
2 1	12 37.95	-59 44.3	0.831	1.297	49.4	18.0	91 W	—	5 9	23 39.84	-85 36.9	0.790	1.430	43.1	17.9	105 W	29*
2 6	12 47.89	-64 2.8	0.835	1.295	49.6	18.0	90 W	—	5 10	23 32.77	-85 48.1	0.786	1.432	42.9	17.9	105 W	29*
2 11	12 58.80	-68 4.8	0.840	1.295	49.7	18.0	90 W	—	5 11	23 24.37	-85 59.6	0.783	1.435	42.7	17.9	106 W	29*
2 13	13 3.54	-69 36.7	0.843	1.295	49.7	18.0	90 W	—	5 12	23 14.37	-86 11.3	0.779	1.438	42.4	17.9	106 W	29*
2 15	13 8.54	-71 5.7	0.845	1.295	49.7	18.0	90 W	—	5 13	23 2.46	-86 23.0	0.776	1.441	42.2	17.9	107 W	29*
2 17	13 13.85	-72 31.8	0.848	1.295	49.7	18.1	89 W	—	5 14	22 48.30	-86 34.4	0.772	1.444	41.9	17.9	107 W	29*
2 19	13 19.54	-73 54.9	0.851	1.296	49.7	18.1	89 W	—	5 15	22 31.47	-86 45.3	0.769	1.446	41.7	17.9	108 W	29*
2 21	13 25.68	-75 15.1	0.854	1.296	49.7	18.1	89 W	—	5 16	22 11.59	-86 55.4	0.765	1.449	41.4	17.8	109 W	29*
2 22	13 28.95	-75 54.0	0.855	1.297	49.7	18.1	89 W	—	5 17	21 48.35	-87 4.0	0.762	1.452	41.1	17.8	109 W	29*
2 23	13 32.36	-76 32.1	0.857	1.297	49.7	18.1	89 W	—	5 18	21 21.64	-87 10.7	0.758	1.455	40.9	17.8	110 W	29
2 24	13 35.95	-77 9.5	0.858	1.297	49.7	18.1	89 W	—	5 19	20 51.77	-87 14.8	0.755	1.458	40.6	17.8	110 W	29
2 25	13 39.72	-77 46.1	0.860	1.298	49.7	18.1	89 W	—	5 20	20 19.57	-87 15.7	0.752	1.461	40.3	17.8	111 W	29
2 26	13 43.69	-78 21.9	0.861	1.299	49.7	18.1	89 W	—	5 21	19 46.35	-87 12.9	0.748	1.464	40.0	17.8	112 W	29
2 27	13 47.90	-78 56.8	0.862	1.299	49.6	18.1	89 W	—	5 22	19 13.72	-87 6.2	0.745	1.467	39.7	17.8	112 W	29
2 28	13 52.38	-79 31.0	0.864	1.300	49.6	18.1	89 W	—	5 23	18 43.11	-86 55.5	0.742	1.469	39.4	17.8	113 W	29
2 29	13 57.15	-80 4.4	0.865	1.300	49.6	18.1	89 W	—	5 24	18 15.48	-86 41.1	0.738	1.472	39.1	17.7	114 W	29
3 1	14 2.25	-80 36.9	0.867	1.301	49.6	18.1	89 W	—	5 25	17 51.26	-86 23.4	0.735	1.475	38.8	17.7	114 W	30
3 2	14 7.73	-81 8.6	0.868	1.302	49.6	18.1	89 W	—	5 26	17 30.44	-86 2.6	0.732	1.478	38.5	17.7	115 W	30
3 3	14 13.65	-81 39.4	0.869	1.303	49.5	18.1	89 W	—	5 27	17 12.75	-85 39.2	0.729	1.481	38.1	17.7	116 W	30
3 4	14 20.06	-82 9.4	0.870	1.303	49.5	18.1	89 W	—	5 28	16 57.80	-85 13.5	0.726	1.484	37.8	17.7	116 W	31
3 5	14 27.04	-82 38.4	0.872	1.304	49.5	18.1	89 W	—	5 29	16 45.20	-84 45.7	0.723	1.487	37.5	17.7	117 W	31
3 6	14 34.68	-83 6.5	0.873	1.305	49.5	18.1	89 W	—	5 30	16 34.57	-84 16.0	0.720	1.490	37.1	17.7	117 W	32
3 7	14 43.07	-83 33.6	0.874	1.306	49.4	18.1	89 W	—	5 31	16 25.58	-83 44.7	0.718	1.493	36.8	17.6	118 E	32
3 8	14 52.35	-83 59.7	0.875	1.307	49.4	18.1	89 W	—	6 1	16 17.97	-83 11.8	0.715	1.496	36.4	17.6	119 E	33
3 9	15 2.63	-84 24.6	0.876	1.308	49.4	18.1	89 W	—	6 2	16 11.50	-82 37.4	0.713	1.499	36.1	17.6	119 E	33
3 10	15 14.10	-84 48.4	0.877	1.309	49.3	18.1	89 W	—	6 3	16 5.99	-82 1.7	0.710	1.502	35.7	17.6	120 E	34
3 11	15 26.94	-85 11.0	0.878	1.310	49.3	18.1	89 W	—	6 4	16 1.30	-81 24.7	0.708	1.505	35.4	17.6	121 E	35
3 12	15 41.35	-85 32.1	0.879	1.311	49.2	18.1	89 W	—	6 5	15 57.29	-80 46.5	0.706	1.508	35.0	17.6	121 E	35
3 13	15 57.55	-85 51.7	0.879	1.312	49.2	18.1	89 W	—	6 6	15 53.86	-80 7.2	0.704	1.512	34.6	17.6	122 E	36
3 14	16 15.77	-86 9.7	0.880	1.314	49.2	18.2	89 W	—	6 7	15 50.93	-79 26.7	0.702	1.515	34.3	17.6	123 E	37
3 15	16 36.18	-86 25.8	0.881	1.315	49.1	18.2	89 W	—	6 8	15 48.44	-78 45.1	0.700	1.518	33.9	17.5	123 E	37
3 16	16 58.90	-86 39.7	0.881	1.316	49.1	18.2	89 W	—	6 9	15 46.32	-78 2.6	0.699	1.521	33.6	17.5	124 E	38
3 17	17 23.89	-86 51.4	0.882	1.317	49.0	18.2	89 W	—	6 10	15 44.52	-77 19.0	0.697	1.524	33.2	17.5	125 E	39
3 18	17 50.92	-87 0.6	0.882	1.319	49.0	18.2	89 W	—	6 11	15 43.01	-76 34.5	0.696	1.527	32.9	17.5	125 E	39
3 19	18 19.51	-87 7.1	0.882	1.320	48.9	18.2	89 W	—	6 12	15 41.75	-75 49.1	0.695	1.530	32.6	17.5	126 E	40
3 20	18 48.92	-87 10.9	0.883	1.322	48.9	18.2	89 W	—	6 13	15 40.72	-75 2.9	0.694	1.533	32.2	17.5	126 E	41
3 21	19 18.30	-87 12.1	0.883	1.323	48.8	18.2	89 W	—	6 14	15 39.88	-74 15.8	0.694	1.536	31.9	17.5	127 E	42
3 22	19 46.78	-87 10.8	0.883	1.325	48.8	18.2	89 W	—	6 15	15 39.21	-73 28.0	0.693	1.539	31.6	17.5	127 E	43
3 23	20 13.66	-87 7.3	0.883	1.326	48.7	18.2	90 W	—	6 16	15 38.71	-72 39.4	0.693	1.543	31.3	17.5	128 E	43
3 24	20 38.46	-87 2.0	0.883	1.328	48.7	18.2	90 W	—	6 17	15 38.35	-71 50.2	0.693	1.546	31.0	17.5	128 E	44
3 25	21 0.95	-86 55.2	0.883	1.329	48.6	18.2	90 W	—	6 18	15 38.11	-71 0.3	0.693	1.549	30.7	17.5	129 E	45
3 26	21 21.11	-86 47.2	0.882	1.331	48.6	18.2	90 W	—	6 19	15 38.00	-70 9.9	0.694	1.552	30.4	17.5	129 E	46
3 27	21 39.06	-86 38.3	0.882	1.332	48.5	18.2	90 W	—	6 20	15 37.99	-69 18.9	0.694	1.555	30.1	17.5	130 E	47
3 28	21 54.97	-86 28.9	0.882	1.334	48.4	18.2	90 W	—	6 22	15 38.25	-67 35.6	0.696	1.561	29.7	17.5	131 E	48
3 29	2																

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
18882 1999 YN₄ (continuation)										82233 2001 JF₁ (continuation)									
9 3	17 5.46	-22 55.7	1.357	1.784	34.2	19.3	97 E	21*	87	4 1	10 35.25	+14 34.7	1.974	2.838	12.2	20.4	143 E	60	49
9 8	17 13.33	-21 36.8	1.427	1.798	34.0	19.5	94 E	22*	85*	4 11	10 29.75	+14 41.1	2.069	2.841	15.1	20.6	132 E	60	49
9 13	17 21.32	-20 25.0	1.497	1.811	33.7	19.6	91 E	23*	82*	4 21	10 26.79	+14 32.3	2.181	2.843	17.5	20.8	122 E	60	49
9 18	17 29.42	-19 19.3	1.567	1.825	33.4	19.7	88 E	24*	79*	5 1	10 26.37	+14 9.7	2.305	2.844	19.1	21.0	112 E	59	50
9 28	17 45.94	-17 22.0	1.709	1.851	32.4	19.9	82 E	26*	73*	5 11	10 28.27	+13 35.2	2.437	2.844	20.2	21.1	103 E	58*	50
10 8	18 2.81	-15 38.1	1.849	1.876	31.1	20.0	76 E	28*	67*	5 21	10 32.24	+12 50.5	2.572	2.842	20.8	21.2	95 E	53*	51
10 18	18 19.99	-14 2.5	1.985	1.899	29.6	20.2	70 E	29*	60*	5 31	10 37.99	+11 56.9	2.709	2.840	20.9	21.4	87 E	47*	52
10 28	18 37.45	-12 31.0	2.117	1.921	28.0	20.3	65 E	30*	53*	6 10	10 45.24	+10 55.6	2.843	2.836	20.6	21.5	79 E	40*	53*
11 7	18 55.12	-11 0.4	2.242	1.942	26.2	20.4	60 E	31*	46*	160092 2000 PL₆									
11 17	19 12.99	-9 28.4	2.359	1.961	24.3	20.5	55 E	32*	39*	12 23	11 31.57	-1 0.3	2.243	2.552	22.5	19.6	97 W	44	62*
11 27	19 31.01	-7 53.0	2.468	1.979	22.4	20.5	50 E	32*	32*	1 2	11 33.15	-2 28.0	2.139	2.587	21.4	19.5	106 W	43	66*
12 7	19 49.13	-6 12.8	2.567	1.996	20.4	20.6	45 E	31*	25*	1 12	11 32.05	-3 44.7	2.042	2.623	19.7	19.3	116 W	41	68
12 17	20 7.34	-4 26.7	2.656	2.011	18.5	20.6	40 E	30*	18*	1 22	11 28.11	-4 48.4	1.954	2.657	17.4	19.2	126 W	40	69
12 27	20 25.60	-2 34.0	2.734	2.024	16.6	20.6	36 E	29*	11*	2 1	11 21.32	-5 36.5	1.882	2.690	14.4	19.0	137 W	39	70
1 6	20 43.88	-0 34.3	2.801	2.036	14.9	20.6	32 E	26*	5*	2 11	11 11.99	-6 7.2	1.832	2.722	10.9	18.9	148 W	39	70
1139 Atami										2 21	11 0.79	-6 19.9	1.807	2.753	7.3	18.7	159 W	39	70
12 23	11 30.75	-13 20.9	1.439	1.768	33.8	15.9	92 W	32	73*	3 2	10 48.72	-6 15.5	1.810	2.784	4.8	18.6	167 E	39	70
1 2	11 40.63	-15 6.6	1.367	1.801	32.7	15.8	99 W	30	79*	3 12	10 36.97	-5 57.8	1.845	2.813	5.6	18.7	164 E	39	70
1 12	11 47.62	-16 32.4	1.296	1.833	31.0	15.7	106 W	28	81	3 17	10 31.56	-5 45.5	1.873	2.827	7.0	18.8	160 E	39	70
1 22	11 51.29	-17 33.5	1.226	1.866	28.6	15.6	115 W	27	82	3 22	10 26.61	-5 32.0	1.908	2.842	8.6	19.0	155 E	39	70
1 27	11 51.75	-17 53.0	1.194	1.882	27.2	15.5	119 W	27	82	3 27	10 22.21	-5 17.8	1.950	2.855	10.2	19.1	150 E	40	69
2 1	11 51.27	-18 3.8	1.163	1.898	25.5	15.4	124 W	27	82	4 1	10 18.43	-5 3.8	1.998	2.869	11.8	19.2	144 E	40	69
2 6	11 49.84	-18 5.4	1.134	1.914	23.6	15.3	129 W	27	82	4 11	10 12.86	-4 38.5	2.111	2.895	14.5	19.4	134 E	40	69
2 11	11 47.49	-17 56.9	1.109	1.930	21.5	15.2	134 W	27	82	4 21	10 9.96	-4 19.7	2.241	2.921	16.6	19.7	124 E	41	68
2 21	11 40.30	-17 7.8	1.069	1.962	16.9	15.0	145 W	28	81	5 1	10 9.61	-4 9.6	2.384	2.945	18.2	19.9	114 E	41*	68
3 2	11 30.62	-15 35.6	1.049	1.993	12.0	14.8	155 W	29	80	5 11	10 11.53	-4 9.4	2.536	2.969	19.2	20.1	105 E	39*	68
3 12	11 19.99	-13 27.1	1.052	2.023	8.2	14.7	163 E	32	77	5 21	10 15.40	-4 19.4	2.694	2.991	19.6	20.2	97 E	36*	68
3 17	11 14.84	-12 13.5	1.063	2.038	7.6	14.7	164 E	33	76	5 31	10 20.94	-4 39.4	2.852	3.012	19.7	20.4	89 E	30*	69
3 22	11 10.07	-10 56.5	1.080	2.053	8.3	14.8	163 E	34	75	6 10	10 27.85	-5 9.1	3.010	3.033	19.3	20.5	82 E	25*	68*
3 27	11 5.85	-9 38.6	1.103	2.067	9.8	14.9	159 E	35	74	6 20	10 35.91	-5 47.5	3.164	3.052	18.7	20.6	74 E	19*	65*
4 1	11 2.31	-8 21.8	1.133	2.082	11.7	15.1	155 E	37	72	6 30	10 44.91	-6 34.3	3.312	3.070	17.8	20.7	68 E	13*	61*
4 6	10 59.55	-7 8.3	1.169	2.096	13.8	15.2	150 E	38	71	7 10	10 54.69	-7 28.5	3.452	3.088	16.7	20.7	61 E	8*	55*
4 11	10 57.60	-5 59.5	1.209	2.110	15.8	15.4	145 E	39	70	7 20	11 5.10	-8 29.6	3.583	3.104	15.4	20.8	54 E	4*	48*
4 16	10 56.47	-4 56.4	1.255	2.123	17.7	15.6	140 E	40	69	7 30	11 16.04	-9 36.9	3.704	3.119	14.0	20.8	48 E	-	42*
4 21	10 56.16	-3 59.9	1.305	2.137	19.5	15.7	135 E	41	68	8 9	11 27.42	-10 49.7	3.812	3.133	12.5	20.8	42 E	-	35*
5 1	10 57.87	-2 27.7	1.417	2.163	22.3	16.0	125 E	43	66	8 19	11 39.17	-12 7.3	3.907	3.147	10.9	20.8	36 E	-	28*
5 11	11 2.35	-1 23.4	1.541	2.188	24.4	16.3	117 E	44*	65	8 29	11 51.22	-13 29.3	3.988	3.159	9.3	20.8	30 E	-	22*
5 21	11 9.15	0 44.7	1.674	2.212	25.7	16.5	108 E	43*	65	9 8	12 3.53	-14 55.0	4.055	3.170	7.7	20.8	25 E	-	16*
5 31	11 17.86	0 28.6	1.812	2.235	26.5	16.7	101 E	40*	64	9 18	12 16.05	-16 24.0	4.105	3.180	6.2	20.8	20 E	-	9*
6 10	11 28.11	0 31.8	1.952	2.257	26.7	16.9	94 E	36*	65	9 28	12 28.75	-17 55.6	4.140	3.189	5.0	20.7	16 E	-	3*
6 20	11 39.57	0 51.1	2.096	2.278	26.5	17.1	87 E	32*	65	10 8	12 41.57	-19 29.4	4.158	3.198	4.3	20.7	14 W	-	3*
6 30	11 52.04	1 23.8	2.238	2.297	25.9	17.2	80 E	28*	65*	10 18	12 54.50	-21 4.9	4.159	3.205	4.5	20.7	15 W	-	7*
7 10	12 5.30	2 7.4	2.377	2.316	25.0	17.4	74 E	24*	63*	10 28	13 7.48	-22 41.8	4.143	3.211	5.4	20.8	18 W	-	12*
7 20	12 19.23	2 59.7	2.512	2.333	23.8	17.5	68 E	20*	59*	11 7	13 20.45	-24 19.5	4.111	3.216	6.7	20.8	22 W	2*	16*
7 30	12 33.73	3 58.9	2.642	2.349	22.5	17.6	62 E	17*	55*	11 17	13 33.37	-25 57.8	4.062	3.220	8.2	20.9	28 W	6*	21*
8 9	12 48.71	5 3.1	2.766	2.364	21.0	17.6	57 E	15*	50*	11 27	13 46.16	-27 36.3	3.997	3.223	9.8	20.9	34 W	9*	27*
8 19	13 4.12	6 10.9	2.881	2.377	19.3	17.7	51 E	13*	49*	12 7	13 58.73	-29 14.8	3.917	3.225	11.3	20.9	40 W	11*	33*
8 29	13 19.93	7 21.0	2.988	2.390	17.5	17.7	45 E	11*	39*	12 17	14 10.98	-30 53.1	3.823	3.226	12.8	20.9	47 W	11*	40*
9 8	13 36.11	8 31.9	3.086	2.401	15.6	17.7	40 E	10*	34*	12 27	14 22.76	-32 31.0	3.716	3.226	14.1	20.9	53 W	11*	47*
9 18	13 52.64	9 42.5	3.172	2.411	13.6	17.7	34 E	8*	28*	1 6	14 33.93	-34 8.5	3.598	3.225	15.4	20.9	60 W	11*	54*
9 28	14 9.51	10 51.7	3.248	2.420	11.6	17.7	29 E	7*	23*	1 16	14 44.29	-35 45.6	3.470	3.223	16.4	20.8	67 W	9*	61*
10 8	14 26.68	11 58.2	3.311	2.427	9.4	17.7	23 E	5*	17*	191589 2004 FQ₅									
10 18	14 44.17	13 1.2	3.361	2.433	7.3	17.6	18 E	4*	11*	12 23	11 31.65	+3 11.3	2.459	2.778	20.5	21.0	98 W	48	59*
10 28	15 1.93	13 59.5	3.398	2.438	5.1	17.5	13 E	2*	6*	1 2	11 36.22	+3 35.0	2.318	2.778	19.7	20.8	108 W	49	60*
11 7	15 19.95	14 52.1	3.421	2.442	3.1	17.4	8 E	-	-	1 12	11 38.68	+4 18.7	2.182	2.777	18.3	20.7	118 W	49	60
11 17	15 38.18	15 38.3	3.430	2.444	1.6	17.3	4 E	-	-	1 22	11 38.79	+5 24.3	2.058	2.776	16.2	20.5	128 W	50	59
11 27	15 56.60	16 17.0	3.424	2.445	2.4	17.4	6 W	-	-	2 1	11 36.37	+6 52.4	1.950	2.773	13.4	20.2	139 W	52	57
12 7	16 15.12	16 47.5	3.405	2.445	4.4	17.5	11 W	5*	-	2 11	11 31.46	+8 40.6	1.864	2.769	10.0	20.0	151 W	54	55
12 17	16 33.71	17 9.2	3.371	2.444	6.6	17.6	17 W	9*	5*	2 16	11 28.14	+9 40.8	1.830	2.766	8.0	19.9	157 W	55	54
12 27	16 52.28	17 21.5	3.323	2.441	8.7	17.7	22 W	12*	10*	2 21	11 24.33	+10 43.8	1.804	2.764	6.1	19.8	163 W	56	53
1 6	17 10.74	17 23.9	3.262	2.437	10.9	17.7	28 W	15*	16*	2 26	11 20.11	+11 48.4	1.784	2.761	4.2	19.6	168 W	57	52
1 16	17 29.01	17 16.2	3.188	2.432	13.0	17.7	34 W	17*	23*	3 2	11 15.59	+12 53.3	1.773	2.758	2.9	19.5	172 W	58	51
82233 2001 JF₁										3 7	11 10.90								

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/20	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°										
191589 2004 FQ₅										231792 2000 DH₈																			
<i>(continuation)</i>										<i>(continuation)</i>																			
7 10	11 32.33	+15 41.8	2.937	2.586	19.9	21.2	60 E	31*	43*	3 10	15 50.79	+29 16.9	0.517	1.278	46.2	19.4	112 W	74	35	3 12	15 57.24	+31 23.7	0.522	1.279	46.4	19.4	111 W	76	33
7 20	11 44.91	+14 27.2	3.025	2.565	18.7	21.2	54 E	27*	40*	3 17	16 12.66	+36 19.9	0.539	1.282	46.9	19.5	110 W	81	28	3 22	16 26.85	+40 43.8	0.561	1.286	47.5	19.6	108 W	86	23
7 30	11 58.27	+13 7.6	3.102	2.544	17.4	21.2	48 E	24*	36*	3 27	16 39.61	+44 34.5	0.585	1.291	47.9	19.7	106 W	90	19	4 1	16 50.80	+47 53.2	0.613	1.298	48.1	19.8	105 W	87	16
8 9	12 12.33	+11 44.0	3.169	2.522	15.9	21.2	43 E	21*	32*	4 6	17 0.29	+50 42.6	0.641	1.306	48.3	19.9	103 W	84	13	4 11	17 8.02	+53 5.6	0.670	1.315	48.2	20.0	102 W	82	11
8 19	12 27.02	+10 17.2	3.223	2.499	14.3	21.1	38 E	17*	28*	4 16	17 13.92	+55 5.2	0.699	1.325	48.1	20.1	101 W	80	9	5 1	17 20.59	+59 2.3	0.780	1.362	47.0	20.4	98 W	76	5
8 29	12 42.29	+8 48.2	3.266	2.475	12.7	21.1	33 E	17*	23*	5 6	17 19.49	+59 44.5	0.804	1.376	46.5	20.5	98 W	75	4	5 11	17 17.02	+60 9.6	0.827	1.391	46.0	20.6	98 W	75	4
9 8	12 58.12	+7 17.9	3.297	2.450	11.0	21.0	28 E	15*	18*	5 16	17 13.44	+60 17.7	0.848	1.407	45.4	20.6	98 W	75	4	5 21	17 9.03	+60 8.6	0.868	1.424	44.7	20.7	98 W	75	4
9 18	13 14.49	+5 47.1	3.315	2.424	9.4	20.9	23 E	13*	13*	5 26	17 4.13	+59 42.4	0.886	1.441	44.1	20.7	98 W	75	4	6 5	16 54.28	+57 59.1	0.919	1.477	42.7	20.8	99 W	77	6
9 28	13 31.39	+4 16.9	3.321	2.398	7.9	20.9	19 E	11*	8*	6 10	16 49.88	+56 43.0	0.934	1.495	41.9	20.9	100 E	78	7	6 15	16 46.11	+55 11.3	0.948	1.514	41.2	20.9	101 E	80	9
10 8	13 48.81	+2 48.2	3.315	2.370	6.7	20.8	16 E	10*	2*	6 20	16 43.12	+53 24.8	0.962	1.534	40.5	20.9	102 E	82	11	6 25	16 41.00	+51 24.2	0.977	1.553	39.7	21.0	102 E	84	13
10 18	14 6.76	+1 22.1	3.297	2.342	5.9	20.7	14 E	8*	—	6 30	16 39.80	+49 11.0	0.992	1.573	39.0	21.0	103 E	86	15	7 5	16 39.54	+46 46.4	1.007	1.593	38.3	21.1	104 E	88	17
10 28	14 25.24	0 0.2	3.267	2.313	5.8	20.7	14 E	6*	—	7 10	16 40.16	+44 12.1	1.025	1.613	37.6	21.1	104 E	89	20	7 15	16 41.62	+41 29.4	1.043	1.633	37.0	21.2	105 E	86	23
11 7	14 44.25	+1 17.7	3.226	2.284	6.5	20.6	15 W	6*	—	7 20	16 43.88	+38 40.0	1.064	1.654	36.4	21.2	105 E	84	25	7 25	16 46.88	+35 45.7	1.088	1.674	35.8	21.3	105 E	81	28
11 17	15 3.78	+2 29.2	3.175	2.253	7.7	20.6	18 W	10*	—	8 4	16 54.90	+29 50.1	1.143	1.715	34.8	21.3	105 E	75	34	8 9	16 59.79	+26 52.4	1.176	1.735	34.4	21.5	105 E	72*	37
11 27	15 23.83	-3 33.4	3.115	2.223	9.2	20.6	21 W	15*	—	8 9	16 59.79	+26 52.4	1.176	1.735	34.4	21.5	105 E	72*	37	12 7	15 44.38	-4 29.2	3.045	2.191	10.9	20.6	25 W	19*	1*
12 7	15 44.38	-4 29.2	3.045	2.191	10.9	20.6	25 W	19*	1*	12 17	16 5.40	-5 15.5	2.967	2.159	12.7	20.6	29 W	22*	6*	12 27	16 26.85	-5 51.1	2.882	2.127	14.6	20.6	33 W	25*	11*
12 17	16 5.40	-5 15.5	2.967	2.159	12.7	20.6	29 W	22*	6*	1 6	16 48.67	-6 15.3	2.791	2.094	16.5	20.5	37 W	27*	17*	1 16	17 10.82	-6 27.2	2.694	2.062	18.4	20.5	41 W	29*	22*
12 27	16 26.85	-5 51.1	2.882	2.127	14.6	20.6	33 W	25*	11*	12 23	11 31.70	+13 4.9	1.936	2.348	24.2	20.1	102 W	58	49*	1 2	11 35.96	+13 5.1	1.853	2.391	22.5	20.0	111 W	58	51*
1 6	16 48.67	-6 15.3	2.791	2.094	16.5	20.5	37 W	27*	17*	1 12	11 37.31	+13 22.6	1.778	2.434	20.3	19.9	121 W	58	51	1 22	11 35.57	+13 56.3	1.713	2.477	17.3	19.8	131 W	59	50
1 16	17 10.82	-6 27.2	2.694	2.062	18.4	20.5	41 W	29*	22*	2 1	11 30.74	+14 43.1	1.664	2.519	13.8	19.6	143 W	60	49	2 11	11 27.26	+15 9.8	1.648	2.540	11.8	19.5	148 W	60	49
150165 1997 UG₉										220095 2002 SU₄₁																			
12 23	11 31.70	+13 4.9	1.936	2.348	24.2	20.1	102 W	58	49*	1 2	11 48.94	+7 2.2	1.030	1.609	36.0	20.5	106 W	52	57*	3 22	11 43.57	+18 5.7	1.799	2.721	9.7	19.8	152 E	63	46
1 2	11 35.96	+13 5.1	1.853	2.391	22.5	20.0	111 W	58	51*	1 12	11 59.99	+5 38.5	0.951	1.614	34.1	20.2	113 W	51	58	4 1	10 36.70	+18 2.6	1.905	2.760	13.0	20.1	142 E	63	46
1 12	11 37.31	+13 22.6	1.778	2.434	20.3	19.9	121 W	58	51	1 22	12 7.64	+4 30.4	0.877	1.621	31.3	20.0	121 W	50	59	4 11	10 32.37	+17 43.1	2.032	2.798	15.6	20.3	131 E	63	46
1 22	11 35.57	+13 56.3	1.713	2.477	17.3	19.8	131 W	59	50	4 21	10 30.61	+17 9.8	1.776	1.628	27.7	19.7	130 W	49	60	4 21	10 30.61	+17 9.8	1.776	1.628	27.7	19.7	130 W	49	60
2 1	11 30.74	+14 43.1	1.664	2.519	13.8	19.6	143 W	60	49	5 1	10 31.29	+16 25.2	2.332	1.628	27.7	19.7	130 W	49	60	5 11	10 34.10	+15 31.5	2.496	2.871	18.9	20.0	112 E	61	48
2 6	11 27.26	+15 9.8	1.648	2.540	11.8	19.5	148 W	60	49	5 21	10 34.10	+15 31.5	2.496	2.871	18.9	20.0	112 E	61	48	5 11	10 34.10	+15 31.5	2.496	2.871	18.9	20.0	112 E	61	48
2 11	11 23.16	+15 37.4	1.637	2.561	9.8	19.4	154 W	61	48	5 21	10 38.72	+14 30.6	2.665	2.942	20.0	21.2	96 E	55*	49	5 31	10 44.88	+13 23.7	2.836	2.976	19.9	21.3	88 E	49*	51
2 16	11 18.55	+16 5.1	1.633	2.581	7.7	19.4	159 W	61	48	6 10	10 52.27	+12 11.9	3.006	3.009	19.4	21.5	80 E	42*	52*	6 10	10 52.27	+12 11.9	3.006	3.009	19.4	21.5	80 E	42*	52*
2 21	11 13.55	+16 31.8	1.635	2.602	5.8	19.3	165 W	62	47	3 22	11 33.22	-10 5.2	0.334	1.053	68.9	20.8	93 W	35	70*	3 27	11 33.22	-10 5.2	0.334	1.053	68.9	20.8	93 W	35	70*
2 26	11 8.29	+16 56.6	1.645	2.622	4.3	19.3	168 W	62	47	4 1	11 37.31	+13 22.6	1.778	2.434	20.3	19.9	121 W	58	51	4 11	11 10.29	+3 21.9	0.776	1.702	19.3	19.5	146 E	48	61
3 2	11 2.94	+17 18.5	1.661	2.642	3.9	19.3	170 W	62	47	4 21	11 7.46	+2 53.7	0.845	1.714	24.2	19.8	136 E	48	61	4 21	11 7.46	+2 53.7	0.845	1.714	24.2	19.8	136 E	48	61
3 7	10 57.66	+17 36.7	1.685	2.662	4.7	19.4	167 E	63	46	5 1	11 8.89	+2 9.0	0.925	1.727	28.0	20.2	127 E	47	62	5 11	11 14.05	+1 9.4	1.015	1.740	30.7	20.5	118 E	46	63
3 12	10 52.59	+17 50.8	1.716	2.682	6.2	19.5	163 E	63	46	5 21	11 14.05	+1 9.4	1.015	1.740	30.7	20.5	118 E	46	63	5 21	11 22.26	-0 2.9	1.111	1.753	32.6	20.7	111 E	44*	64
3 22	10 43.57	+18 5.7	1.799	2.721	9.7	19.8	152 E	63	46	5 31	11 32.96	-1 26.3	1.212	1.765	33.8	21.0	105 E	41*	65	6 10	11 45.64	-2 58.8	1.317	1.778	34.4	21.2	99 E	36*	67
4 1	10 36.70	+18 2.6	1.905	2.760	13.0	20.1	142 E	63	46	6 20	11 59.90	-4 38.5	1.423	1.791	34.5	21.4	93 E	31*	69	6 20	11 59.90	-4 38.5	1.423	1.791	34.5	21.4	93 E	31*	69
4 11	10 32.37	+17 43.1	2.032	2.798	15.6	20.3	131 E	63	46	3 17	11 34.82	+3 24.2	0.678	1.672	2.2	18.4	176 E	48	61	3 17	11 34.82	+3 24.2	0.678	1.672	2.2	18.4	176 E	48	61
4 21	10 30.61	+17 9.8	1.776	2.835	17.6	20.6	122 E	62	47	3 22	11 28.42	+3 30.0	0.688	1.678	6.0	18.7	170 E	48	61	3 27	11 22.55	+3 33.3	0.703	1.684	9.7	18.9	163 E	49	60
5 1	10 31.29	+16 25.2	2.332	2.871	18.9	20.0	112 E	61	48	4 1	11 17.47	+3																	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/20	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
413199 2002 YB										310024 2009 TA									
<i>(continuation)</i>																			
5 11	11 1.92	+25 48.1	2.230	2.678	21.3	21.0	105 E	71*	38	12 23	11 36.78	+13 9.6	2.462	2.820	20.0	20.9	101 W	58	49*
5 21	11 7.10	+25 6.8	2.402	2.723	21.6	21.2	97 E	68*	39	1 2	11 38.23	+12 52.2	2.364	2.862	18.8	20.8	111 W	58	51*
5 31	11 13.90	+24 14.0	2.575	2.767	21.5	21.4	90 E	62*	40	1 12	11 37.15	+12 47.5	2.273	2.903	16.9	20.7	121 W	58	51
21030 1989 TZ₁₁																			
12 23	11 35.38	+12 54.9	2.771	3.115	18.0	20.5	101 W	58	49*	1 22	11 33.42	+12 54.4	2.195	2.943	14.5	20.6	143 W	58	51
1 2	11 38.02	+13 13.3	2.642	3.128	17.1	20.4	111 W	58	51*	2 1	11 27.10	+13 10.8	2.135	2.983	11.4	20.4	132 W	58	51
1 12	11 38.50	+13 46.3	2.521	3.140	15.6	20.2	121 W	59	50	2 11	11 18.55	+13 32.8	2.099	3.021	8.0	20.3	155 W	59	50
1 22	11 36.65	+14 33.2	2.414	3.152	13.6	20.1	131 W	60	49	2 16	11 13.62	+13 44.4	2.090	3.041	6.1	20.2	161 W	59	50
2 1	11 32.42	+15 31.8	2.324	3.162	11.0	19.9	142 W	61	48	2 21	11 8.39	+13 55.7	2.089	3.059	4.3	20.1	166 W	59	50
2 11	11 25.96	+16 38.0	2.258	3.171	8.1	19.7	153 W	62	47	2 26	11 2.97	+14 5.9	2.096	3.078	2.8	20.0	171 W	59	50
2 16	11 22.02	+17 12.1	2.235	3.175	6.6	19.7	158 W	62	47	3 2	10 57.49	+14 14.6	2.111	3.097	2.3	20.0	173 W	59	50
2 21	11 17.69	+17 45.9	2.219	3.179	5.2	19.6	163 W	63	46	3 12	10 46.88	+14 25.4	2.164	3.133	4.8	20.3	165 E	59	50
2 26	11 13.06	+18 18.5	2.211	3.182	4.1	19.5	167 W	63	46	3 22	10 37.45	+14 25.8	2.246	3.169	8.1	20.5	153 E	59	50
3 2	11 8.26	+18 49.0	2.210	3.186	3.8	19.5	168 W	64	45	4 1	10 29.88	+14 14.9	2.355	3.204	11.0	20.8	142 E	59	50
3 7	11 3.39	+19 16.6	2.217	3.189	4.3	19.5	166 E	64	45	4 11	10 24.55	+13 53.2	2.486	3.238	13.4	21.0	131 E	59	50
3 12	10 58.56	+19 40.8	2.232	3.192	5.5	19.6	162 E	65	44	4 21	10 21.53	+13 21.9	2.635	3.271	15.2	21.2	121 E	58	51
3 17	10 53.90	+20 1.1	2.253	3.194	6.9	19.7	157 E	65	44	5 1	10 20.74	+12 42.4	2.797	3.303	16.5	21.4	112 E	58	51
3 22	10 49.49	+20 17.1	2.282	3.196	8.4	19.8	152 E	65	44	52297 1991 CH₂									
4 1	10 41.84	+20 35.7	2.359	3.200	11.3	20.0	141 E	66	43	12 23	11 37.86	-7 57.6	1.929	2.202	26.5	18.8	92 W	37	68*
4 11	10 36.15	+20 37.0	2.458	3.203	13.7	20.2	131 E	66	43	1 2	11 45.23	-11 20.6	1.771	2.161	26.7	18.6	99 W	34	75*
4 21	10 32.68	+20 22.5	2.575	3.205	15.7	20.3	121 E	65	44	1 12	11 50.64	-14 56.2	1.620	2.120	26.4	18.4	106 W	30	79
5 1	10 31.48	+19 54.5	2.703	3.205	17.1	20.5	111 E	65	44	1 22	11 53.58	-18 44.8	1.480	2.080	25.7	18.1	114 W	26	83
5 11	10 32.42	+19 15.2	2.840	3.205	18.0	20.6	102 E	63*	45	2 1	11 53.39	-22 44.3	1.352	2.040	24.5	17.8	121 W	22	87
5 21	10 35.30	+18 26.7	2.981	3.204	18.4	20.7	93 E	58*	46	2 6	11 51.92	-24 46.6	1.294	2.020	23.8	17.7	124 W	20	89
5 31	10 39.87	+17 30.5	3.122	3.201	18.4	20.8	85 E	52*	46	2 11	11 49.42	-26 49.5	1.240	2.000	23.0	17.6	127 W	18	89
6 10	10 45.90	+16 27.8	3.260	3.198	18.1	20.9	77 E	44*	47*	2 16	11 45.82	-28 51.5	1.191	1.981	22.3	17.4	131 W	16	87
6 20	10 53.15	+15 19.8	3.394	3.193	17.4	21.0	70 E	37*	47*	2 21	11 41.07	-30 50.7	1.147	1.962	21.5	17.3	133 W	14	85
6 30	11 1.45	+14 7.2	3.520	3.188	16.5	21.0	63 E	31*	46*	2 26	11 35.15	-32 45.1	1.108	1.943	20.9	17.2	136 W	12	83
7 10	11 10.60	+12 50.7	3.636	3.181	15.4	21.1	56 E	26*	43*	3 2	11 28.12	-34 32.2	1.074	1.925	20.4	17.1	137 W	10	81
7 20	11 20.48	+11 30.8	3.742	3.174	14.0	21.1	49 E	21*	39*	3 7	11 20.11	-36 9.9	1.046	1.906	20.2	17.0	138 W	9	80
7 30	11 30.98	+10 8.2	3.835	3.165	12.6	21.1	43 E	17*	34*	3 12	11 11.29	-37 35.8	1.023	1.889	20.3	16.9	139 E	7	78
8 9	11 42.00	+8 43.3	3.915	3.155	11.0	21.0	36 E	14*	28*	3 17	11 1.92	-38 48.4	1.006	1.871	20.6	16.9	138 E	6	77
8 19	11 53.45	+7 16.6	3.980	3.144	9.2	21.0	30 E	11*	22*	3 22	10 52.34	-39 46.2	0.993	1.854	21.3	16.9	137 E	5	76
8 29	12 5.28	+5 48.6	4.030	3.132	7.5	20.9	24 E	8*	17*	3 27	10 42.93	-40 29.1	0.986	1.838	22.3	16.9	136 E	5	76
9 8	12 17.43	+4 19.8	4.065	3.120	5.6	20.9	18 E	5*	10*	4 1	10 34.07	-40 57.6	0.982	1.822	23.4	16.9	134 E	4	75
9 18	12 29.85	+2 50.8	4.082	3.106	3.8	20.8	12 E	3*	4*	4 6	10 26.11	-41 13.3	0.983	1.806	24.7	16.9	131 E	4	75
9 28	12 42.52	+1 22.0	4.083	3.091	2.2	20.7	7 E	1*	—	4 11	10 19.31	-41 18.1	0.987	1.791	26.0	16.9	128 E	4	75
10 8	12 55.37	0 5.9	4.067	3.075	1.9	20.6	6 E	—	—	4 16	10 13.87	-41 14.2	0.993	1.777	27.3	17.0	126 E	4	75
10 18	13 8.40	-1 32.5	4.034	3.058	3.2	20.7	10 W	4*	—	4 21	10 9.92	-41 3.8	1.002	1.763	28.6	17.0	123 E	4	75
10 28	13 21.54	-2 57.0	3.984	3.040	5.1	20.7	16 W	10*	—	4 26	10 7.54	-40 49.1	1.014	1.750	29.9	17.0	120 E	4	75
11 7	13 34.76	-4 19.0	3.918	3.020	7.0	20.8	22 W	15*	5*	5 1	10 6.73	-40 32.2	1.026	1.737	31.0	17.1	117 E	4*	75
11 17	13 48.01	-5 37.8	3.835	3.000	8.9	20.8	28 W	20*	10*	5 6	10 7.45	-40 14.9	1.040	1.726	32.1	17.1	115 E	4*	76
11 27	14 1.23	-6 52.8	3.738	2.979	10.8	20.8	35 W	25*	16*	5 11	10 9.63	-39 58.4	1.056	1.715	33.0	17.2	112 E	4*	76
12 7	14 14.34	-8 3.5	3.625	2.957	12.7	20.8	41 W	28*	22*	5 16	10 13.20	-39 43.6	1.071	1.704	33.9	17.2	110 E	3*	76
12 17	14 27.27	-9 9.3	3.500	2.933	14.4	20.8	48 W	31*	29*	5 21	10 18.10	-39 31.1	1.088	1.695	34.7	17.3	108 E	3*	76
12 27	14 39.90	-10 9.7	3.363	2.909	16.0	20.7	55 W	32*	37*	5 26	10 24.26	-39 21.4	1.105	1.687	35.4	17.3	105 E	1*	77
1 6	14 52.11	-11 4.3	3.215	2.883	17.5	20.7	62 W	33*	45*	5 31	10 31.59	-39 15.0	1.122	1.679	36.0	17.3	104 E	—	77
1 16	15 3.76	-11 52.6	3.058	2.857	18.7	20.6	69 W	33*	53*	6 5	10 40.04	-39 11.8	1.140	1.672	36.5	17.4	102 E	—	77
385497 2004 DD										6 10	10 49.52	-39 11.6	1.157	1.666	36.9	17.4	100 E	—	77*
12 23	11 35.55	+18 50.0	1.014	1.567	37.6	21.3	103 W	64	43*	6 15	11 0.00	-39 14.0	1.176	1.661	37.2	17.5	98 E	—	76*
1 2	11 36.80	+19 8.7	0.971	1.629	33.8	21.2	113 W	64	45*	6 20	11 11.41	-39 18.8	1.195	1.657	37.5	17.5	97 E	—	76*
1 12	11 32.70	+19 53.2	0.931	1.689	28.9	21.1	124 W	65	44	6 25	11 23.71	-39 25.5	1.214	1.654	37.7	17.5	95 E	—	75*
1 22	11 22.86	+20 58.1	0.900	1.746	23.1	20.9	136 W	66	43	6 30	11 36.84	-39 33.6	1.235	1.652	37.9	17.6	94 E	—	74*
2 1	11 7.48	+22 11.5	0.885	1.800	16.6	20.7	149 W	67	42	7 5	11 50.74	-39 42.6	1.256	1.651	38.0	17.6	93 E	—	73*
2 11	10 47.99	+23 15.9	0.892	1.852	10.2	20.5	161 W	68	41	7 10	12 5.36	-39 51.6	1.278	1.651	38.0	17.6	91 E	—	72*
2 21	10 26.99	+23 55.1	0.925	1.901	6.9	20.5	167 W	69	40	7 15	12 20.62	-40 0.1	1.302	1.651	38.0	17.7	90 E	—	71*
3 2	10 7.50	+24 0.9	0.985	1.947	10.0	20.9	160 E	69	40	7 20	12 36.48	-40 7.4	1.327	1.653	37.9	17.7	89 E	—	70*
3 12	9 51.91	+23 35.3	1.071	1.990	14.9	21.3	149 E	69	40	7 25	12 52.87	-40 12.9	1.353	1.656	37.8	17.8	87 E	—	69*
3 22	9 41.25	+22 46.4	1.179	2.030	19.3	21.7	138 E	68	41	7 30	13 9.69	-40 16.1	1.382	1.660	37.6	17.8	86 E	—	68*
310991 2003 WH₈₄										8 4	13 26.86	-40 16.4	1.412	1.664	37.4	17.9	85 E	—	68*
12 23	11 36.21	-5 27.1	2.026	2.311	25.1	21.4	94 W	40	66*	8 9	13 44.30	-40 13.3	1.444	1.670	37.1	17.9	84 E	—	67*
1 2	11 41.34	-6 43.4	1.936	2.349	24.1	21.3	102 W	38	70*	8 14	14 1.92	-40 6.5	1.477	1.677	36.8	18.0	82 E	—	66*
1 12	11 43.86	-7 44.9	1.848	2.387	22.6	21.2	111 W	37	72	8 19	14 19.65	-39 55.7	1.514	1.684	36.4	18.0			

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
52297 1991 CH₂										88954 2001 TE₄₂									
<i>(continuation)</i>																			
11 17	18 57.62	-26 56.9	2.451	1.937	22.4	19.0	48 E	14*	41*	12 23	11 41.51	-2 58.6	2.613	2.849	20.2	20.5	94 W	42	63*
11 27	19 21.73	-24 48.1	2.568	1.975	20.2	19.0	44 E	15*	36*	1 2	11 44.97	-3 50.7	2.485	2.866	19.6	20.3	103 W	41	68*
12 7	19 44.68	-22 35.1	2.681	2.014	17.9	19.1	39 E	16*	30*	1 12	11 46.27	-4 30.9	2.362	2.881	18.4	20.2	112 W	40	69
12 17	20 6.60	-20 18.4	2.790	2.053	15.7	19.1	34 E	16*	24*	1 22	11 45.23	-4 57.4	2.246	2.895	16.7	20.1	122 W	40	69
12 27	20 27.55	-17 58.6	2.893	2.093	13.4	19.2	29 E	16*	18*	2 1	11 41.70	-5 8.2	2.144	2.908	14.3	19.9	133 W	40	69
1 6	20 47.62	-15 36.1	2.989	2.134	11.0	19.2	25 E	14*	12*	2 11	11 35.80	-5 2.3	2.061	2.920	11.4	19.7	144 W	40	69
1 16	21 6.90	-13 11.2	3.076	2.175	8.8	19.2	20 E	12*	6*	2 21	11 27.84	-4 39.7	2.000	2.931	7.9	19.5	156 W	40	69
348595 2005 XE₁										44168 1998 J₄									
12 23	11 38.60	+39 3.8	0.700	1.380	42.4	20.6	109 W	84	24*	12 23	11 42.32	-8 7.4	3.052	3.229	17.7	21.0	91 W	37	67*
12 28	11 52.55	+41 49.9	0.692	1.391	41.3	20.5	111 W	87	21*	1 2	11 45.76	-8 52.4	2.903	3.228	17.4	20.9	100 W	36	72*
1 2	12 5.96	+44 38.4	0.686	1.402	40.2	20.5	113 W	90	19*	1 12	11 47.36	-9 26.5	2.758	3.226	16.7	20.7	110 W	36	73
1 7	12 18.65	+47 27.2	0.684	1.413	39.2	20.5	115 W	88	16*	1 22	11 46.95	-9 47.4	2.620	3.223	15.4	20.6	120 W	35	74
1 12	12 30.43	+50 14.2	0.684	1.424	38.3	20.5	116 W	85	14*	2 1	11 44.40	-9 53.0	2.495	3.219	13.5	20.4	130 W	35	74
1 17	12 41.06	+52 57.7	0.688	1.435	37.6	20.5	117 W	82	11*	2 11	11 39.76	-9 41.2	2.388	3.214	11.2	20.2	141 W	35	74
1 22	12 50.24	+55 35.9	0.693	1.446	36.9	20.5	118 W	79	8	2 21	11 33.26	-9 11.2	2.303	3.209	8.4	20.0	152 W	36	73
1 27	12 57.63	+58 6.7	0.702	1.456	36.4	20.5	119 W	77	6	3 2	11 25.35	-8 23.7	2.244	3.202	5.4	19.8	162 W	37	72
2 1	13 2.90	+60 28.1	0.712	1.467	36.1	20.6	119 W	75	4	3 12	11 16.73	-7 21.6	2.214	3.195	3.4	19.7	169 E	38	71
2 6	13 5.69	+62 38.3	0.725	1.478	35.8	20.6	119 W	72	1	3 17	11 12.40	-6 46.5	2.211	3.191	3.7	19.7	168 E	38	71
2 11	13 5.66	+64 35.3	0.739	1.488	35.7	20.7	118 W	70	1	3 22	11 8.20	-6 9.6	2.215	3.186	4.8	19.8	165 E	39	70
2 16	13 2.52	+66 17.1	0.755	1.499	35.6	20.7	118 W	69	—	3 27	11 4.22	-5 31.9	2.226	3.182	6.2	19.8	160 E	39	70
2 21	12 56.10	+67 41.6	0.773	1.509	35.6	20.8	117 W	67	—	4 1	11 0.56	-4 54.1	2.245	3.177	7.7	19.9	155 E	40	69
2 26	12 46.50	+68 46.0	0.792	1.519	35.7	20.9	117 W	66	—	4 6	10 57.29	-4 17.0	2.270	3.172	9.3	20.0	149 E	41	68
3 2	12 34.23	+69 28.1	0.812	1.528	35.8	20.9	116 W	66	—	4 11	10 54.46	-3 41.3	2.302	3.167	10.8	20.1	144 E	41	68
3 7	12 20.17	+69 46.4	0.833	1.538	36.0	21.0	115 W	65	—	4 21	10 50.32	-2 36.3	2.382	3.156	13.4	20.3	133 E	42	67
3 12	12 5.45	+69 40.5	0.855	1.547	36.1	21.1	113 W	65	—	5 1	10 48.34	-1 42.8	2.480	3.144	15.6	20.4	123 E	43	66
3 17	11 51.22	+69 11.2	0.878	1.556	36.3	21.2	112 W	66	—	5 11	10 48.52	-1 2.7	2.592	3.131	17.3	20.6	113 E	44*	65
3 22	11 38.45	+68 20.1	0.902	1.565	36.5	21.2	111 E	67	—	5 21	10 50.73	-0 36.7	2.713	3.117	18.4	20.7	104 E	42*	65
3 27	11 27.79	+67 9.7	0.927	1.573	36.7	21.3	110 E	68	—	5 31	10 54.79	-0 24.5	2.838	3.102	19.0	20.8	95 E	38*	64
4 1	11 19.52	+65 42.6	0.953	1.581	36.9	21.4	108 E	69	—	6 10	11 0.49	-0 25.2	2.965	3.086	19.2	20.9	87 E	33*	64
4 6	11 13.64	+64 1.9	0.979	1.589	37.1	21.5	107 E	71	—	6 20	11 7.60	-0 37.9	3.089	3.069	19.0	21.0	79 E	28*	64*
4 11	11 9.95	+62 10.0	1.007	1.596	37.3	21.5	105 E	73	2	6 30	11 15.95	-1 1.4	3.209	3.052	18.5	21.0	72 E	22*	61*
4 16	11 8.15	+60 9.1	1.035	1.604	37.4	21.6	104 E	75	4	7 10	11 25.34	-1 34.6	3.323	3.033	17.7	21.0	65 E	18*	56*
24242 1999 XY₁₀₀										44168 1998 J₄									
12 23	11 39.04	-0 38.0	2.435	2.706	21.2	19.6	95 W	44	61*	12 23	11 42.32	-8 7.4	3.052	3.229	17.7	21.0	91 W	37	67*
1 2	11 43.74	-1 29.5	2.287	2.697	20.7	19.5	104 W	44	65*	1 2	11 45.76	-8 52.4	2.903	3.228	17.4	20.9	100 W	36	72*
1 12	11 46.32	-2 9.6	2.143	2.687	19.7	19.3	113 W	43	66	1 12	11 47.36	-9 26.5	2.758	3.226	16.7	20.7	110 W	36	73
1 22	11 46.51	-2 36.0	2.008	2.675	17.9	19.1	123 W	42	67	1 22	11 46.95	-9 47.4	2.620	3.223	15.4	20.6	120 W	35	74
2 1	11 44.06	-2 46.7	1.885	2.663	15.5	18.9	134 W	42	67	2 1	11 44.40	-9 53.0	2.495	3.219	13.5	20.4	130 W	35	74
2 11	11 38.91	-2 40.1	1.780	2.650	12.3	18.6	145 W	42	67	2 11	11 39.76	-9 41.2	2.388	3.214	11.2	20.2	141 W	35	74
2 21	11 31.27	-2 16.1	1.698	2.635	8.5	18.3	157 W	43	66	2 21	11 33.26	-9 11.2	2.303	3.209	8.4	20.0	152 W	36	73
3 2	11 21.67	-1 36.2	1.641	2.620	4.3	18.1	169 W	43	66	3 2	11 25.35	-8 23.7	2.244	3.202	5.4	19.8	162 W	37	72
3 7	11 16.43	-1 11.6	1.623	2.612	2.5	17.9	173 W	44	65	3 12	11 16.73	-7 21.6	2.214	3.195	3.4	19.7	169 E	38	71
3 12	11 11.08	-0 44.8	1.613	2.603	2.3	17.9	174 E	44	65	3 17	11 12.40	-6 46.5	2.211	3.191	3.7	19.7	168 E	38	71
3 17	11 5.76	-0 16.7	1.610	2.595	4.0	18.0	169 E	45	64	3 22	11 8.20	-6 9.6	2.215	3.186	4.8	19.8	165 E	39	70
3 22	11 0.62	+0 11.8	1.614	2.586	6.2	18.1	164 E	45	64	3 27	11 4.22	-5 31.9	2.226	3.182	6.2	19.8	160 E	39	70
3 27	10 55.81	+0 39.9	1.625	2.577	8.4	18.2	158 E	46	63	4 1	11 0.56	-4 54.1	2.245	3.177	7.7	19.9	155 E	40	69
4 1	10 51.44	+1 6.6	1.643	2.568	10.6	18.3	152 E	46	63	4 6	10 57.29	-4 17.0	2.270	3.172	9.3	20.0	149 E	41	68
4 6	10 47.64	+1 31.3	1.667	2.558	12.7	18.4	146 E	47	62	4 11	10 54.46	-3 41.3	2.302	3.167	10.8	20.1	144 E	41	68
4 11	10 44.46	+1 53.2	1.696	2.548	14.6	18.5	140 E	47	62	4 21	10 50.32	-2 36.3	2.382	3.156	13.4	20.3	133 E	42	67
4 21	10 40.16	+2 27.4	1.768	2.528	17.9	18.7	129 E	47	62	5 1	10 48.34	-1 42.8	2.480	3.144	15.6	20.4	123 E	43	66
5 1	10 38.73	+2 46.8	1.855	2.507	20.5	18.9	119 E	48	61	5 11	10 48.52	-1 2.7	2.592	3.131	17.3	20.6	113 E	44*	65
5 11	10 40.07	+2 50.7	1.952	2.485	22.5	19.0	110 E	47*	61	5 21	10 50.73	-0 36.7	2.713	3.117	18.4	20.7	104 E	42*	65
5 21	10 43.94	+2 39.7	2.055	2.462	23.8	19.1	101 E	45*	61	5 31	10 54.79	-0 24.5	2.838	3.102	19.0	20.8	95 E	38*	64
5 31	10 50.04	+2 14.4	2.160	2.438	24.5	19.2	93 E	40*	62	6 10	11 0.49	-0 25.2	2.965	3.086	19.2	20.9	87 E	33*	64
6 10	10 58.07	+1 36.2	2.264	2.413	24.8	19.3	86 E	34*	62	6 20	11 7.60	-0 37.9	3.089	3.069	19.0	21.0	79 E	28*	64*
6 20	11 7.75	+0 46.2	2.366	2.387	24.7	19.4	79 E	29*	62*	6 30	11 15.95	-1 1.4	3.209	3.052	18.5	21.0	72 E	22*	61*
6 30	11 18.87	-0 14.4	2.462	2.361	24.2	19.5	72 E	23*	61*	7 10	11 25.34	-1 34.6	3.323	3.033	17.7	21.0	65 E	18*	56*
7 10	11 31.21	-1 24.5	2.553	2.334	23.5	19.5	66 E	19*	57*	7 20	11 35.65	-2 16.1	3.427	3.014	16.6	21.1	58 E	14*	51*
7 20	11 44.64	-2 43.0	2.636	2.306	22.5	19.5	60 E	15*	53*	8 9	11 46.76	-3 5.2	3.522	2.993	15.3	21.1	51 E	10*	45*
7 30	11 59.06	-4 8.8	2.711	2.277	21.3	19.5	55 E	12*	48*	8 19	11 58.55	-4 0.5	3.604	2.972	13.9	21.0	45 E	7*	39*
8 9	12 14.36	-5 40.9	2.778	2.248	19.9	19.5	49 E	9*	43*	8 29	12 10.96	-5 1.3	3.675	2.950	12.3	21.0	38 E	5*	32*
8 19	12 30.52	-7 18.1	2.835	2.218	18.4	19.4	44 E	7*	38*	9 8	12 23.94	-6 6.5	3.731	2.927	10.6	21.0	32 E	3*	26*
8 29	12 47.51	-8 59.5	2.882	2.188	16.8	19.4	39 E	5*	33*	9 18									

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
44168 1998 JJ₄										1864 Daedalus									
<i>(continuation)</i>										<i>(continuation)</i>									
11 7	14 7.33	-14 30.4	3.711	2.741	3.7	20.5	10 W	2*	2*	12 7	15 43.46	-27 42.6	1.977	1.074	15.5	17.3	17 W	1*	11*
11 17	14 23.63	-15 38.1	3.647	2.711	5.8	20.5	16 W	7*	6*	12 12	16 5.47	-29 13.3	1.919	1.020	16.6	17.2	17 W	—	11*
11 27	14 40.24	-16 41.9	3.569	2.681	8.0	20.6	22 W	11*	11*	12 17	16 29.49	-30 34.6	1.862	0.965	17.4	17.0	17 W	—	11*
12 7	14 57.12	-17 40.8	3.477	2.649	10.1	20.6	28 W	15*	17*	12 22	16 55.67	-31 42.2	1.807	0.910	18.1	16.9	17 W	—	11*
12 17	15 14.23	-18 34.0	3.373	2.617	12.2	20.6	34 W	18*	22*	12 27	17 24.10	-32 30.9	1.756	0.855	18.5	16.7	16 W	—	10*
12 27	15 31.51	-19 20.5	3.257	2.584	14.2	20.5	40 W	20*	29*	1 1	17 54.72	-32 54.6	1.709	0.800	18.5	16.5	15 W	—	9*
1 6	15 48.87	-19 59.4	3.130	2.550	16.2	20.5	46 W	21*	35*	1 6	18 27.31	-32 46.8	1.666	0.747	18.0	16.3	14 W	—	7*
1 16	16 6.25	-20 30.0	2.994	2.516	18.0	20.4	52 W	22*	42*	1 11	19 1.44	-32 1.0	1.629	0.697	17.0	16.0	12 W	—	4*
402267 2005 QE₁₆₆										7088 Ishtar									
12 23	11 42.51	-9 16.6	1.577	1.871	31.7	20.7	91 W	36	68*	12 23	11 43.04	+7 25.8	0.631	1.235	52.2	18.2	97 W	52	54*
1 2	11 50.54	-10 1.2	1.524	1.935	30.1	20.7	99 W	35	73*	1 2	12 8.87	+7 22.3	0.614	1.259	49.9	18.1	102 W	52	55*
1 12	11 55.43	-10 22.3	1.470	2.000	28.0	20.6	108 W	35	74	1 12	12 30.53	+7 47.5	0.598	1.290	46.9	18.0	107 W	53	56*
1 22	11 56.95	-10 16.7	1.419	2.064	25.1	20.5	117 W	35	74	2 1	12 47.41	+8 44.0	0.582	1.326	43.1	17.9	113 W	54	55
2 1	11 54.99	-9 41.4	1.376	2.129	21.4	20.4	128 W	35	74	2 1	12 58.77	+10 12.4	0.569	1.366	38.4	17.8	121 W	55	54
2 11	11 49.75	-8 35.6	1.346	2.192	17.0	20.3	140 W	36	73	2 6	13 2.21	+11 7.2	0.564	1.387	35.7	17.7	125 W	56	53
2 21	11 41.85	-7 1.4	1.336	2.256	12.0	20.1	152 W	38	71	2 11	13 4.10	+12 7.7	0.560	1.410	32.8	17.7	129 W	57	52
2 26	11 37.19	-6 5.6	1.339	2.287	9.3	20.1	158 W	39	70	2 16	13 4.42	+13 12.4	0.559	1.433	29.8	17.6	134 W	58	51
3 2	11 32.27	-5 5.6	1.349	2.318	6.7	20.0	164 W	40	69	2 21	13 3.19	+14 19.2	0.559	1.456	26.6	17.6	139 W	59	50
3 7	11 27.27	-4 3.0	1.366	2.349	4.3	19.9	170 W	41	68	2 26	13 0.49	+15 25.7	0.563	1.481	23.4	17.5	144 W	60	49
3 12	11 22.35	-2 59.4	1.390	2.380	2.7	19.9	173 E	42	67	3 2	12 56.50	+16 29.0	0.569	1.505	20.3	17.5	148 W	61	48
3 17	11 17.66	-1 56.4	1.421	2.411	3.4	20.0	172 E	43	66	3 7	12 51.46	+17 26.0	0.580	1.530	17.4	17.5	153 W	62	47
3 22	11 13.34	-0 55.3	1.460	2.441	5.3	20.0	167 E	44	65	3 12	12 45.65	+18 14.3	0.594	1.556	15.0	17.5	156 W	63	46
3 27	11 9.50	+0 2.5	1.505	2.471	7.5	20.4	161 E	45	64	3 17	12 39.40	+18 51.9	0.613	1.581	13.4	17.5	158 W	64	45
4 1	11 6.23	+0 55.9	1.557	2.501	9.6	20.6	155 E	46	63	3 22	12 33.03	+19 17.5	0.636	1.607	12.8	17.6	159 W	64	45
4 6	11 3.58	+1 44.3	1.615	2.530	11.5	20.8	150 E	47	62	3 27	12 26.88	+19 30.4	0.664	1.633	13.3	17.7	158 W	65	44
4 11	11 1.58	+2 27.2	1.679	2.560	13.2	20.9	144 E	47	62	4 1	12 21.23	+19 30.8	0.697	1.659	14.5	17.9	155 E	65	44
4 16	11 0.23	+3 4.4	1.748	2.589	14.8	21.1	139 E	48	61	4 6	12 16.31	+19 19.6	0.734	1.685	16.2	18.1	152 E	64	45
4 21	10 59.53	+3 35.9	1.822	2.618	16.2	21.3	134 E	49	60	4 11	12 12.25	+18 58.0	0.775	1.711	18.0	18.3	148 E	64	45
4 26	10 59.45	+4 1.8	1.900	2.646	17.3	21.4	129 E	49	60	4 16	12 9.13	+18 27.6	0.821	1.737	19.8	18.6	144 E	63	46
1864 Daedalus										125472 2001 WM₁₄									
12 23	11 42.77	+24 55.3	1.787	2.236	25.3	19.0	104 W	70	37*	12 23	11 43.89	+0 4.7	2.529	2.781	20.7	21.0	94 W	45	60*
1 2	11 43.23	+25 55.7	1.684	2.263	23.5	18.9	113 W	71	38*	1 2	11 48.69	-0 43.6	2.378	2.771	20.2	20.8	103 W	44	64*
1 12	11 39.73	+27 17.9	1.590	2.287	21.0	18.7	124 W	72	37*	1 12	11 51.46	-1 20.6	2.231	2.759	19.2	20.6	112 W	44	65
1 22	11 31.73	+28 57.1	1.509	2.307	17.8	18.5	134 W	74	35	1 22	11 51.93	-1 44.5	2.092	2.747	17.6	20.4	122 W	43	66
1 27	11 25.92	+29 50.1	1.476	2.316	16.0	18.4	140 W	75	34	2 1	11 49.85	-1 53.4	1.966	2.733	15.3	20.2	133 W	43	66
2 1	11 18.92	+30 43.0	1.449	2.324	14.2	18.3	145 W	76	33	2 11	11 45.16	-1 46.2	1.858	2.719	12.3	20.0	144 W	43	66
2 6	11 10.81	+31 33.7	1.427	2.331	12.4	18.2	149 W	77	32	2 21	11 38.01	-1 22.9	1.771	2.703	8.6	19.7	156 W	44	65
2 11	11 1.73	+32 19.9	1.413	2.337	10.9	18.1	153 W	77	32	3 2	11 28.88	-0 45.1	1.710	2.687	4.5	19.4	168 W	44	65
2 16	10 51.89	+32 59.5	1.406	2.343	9.9	18.1	156 W	78	31	3 12	11 18.64	+0 2.8	1.678	2.670	1.6	19.2	176 E	45	64
2 21	10 41.53	+33 30.6	1.407	2.347	9.6	18.1	157 W	79	30	3 17	11 13.43	+0 28.8	1.673	2.661	3.2	19.3	171 E	45	64
2 26	10 30.97	+33 51.8	1.416	2.351	10.2	18.1	155 E	79	30	3 22	11 8.35	+0 55.1	1.675	2.652	5.4	19.4	166 E	46	63
3 2	10 20.55	+34 2.2	1.432	2.354	11.3	18.2	152 E	79	30	3 27	11 3.54	+1 20.8	1.684	2.642	7.6	19.5	160 E	46	63
3 7	10 10.58	+34 1.8	1.455	2.357	12.9	18.3	148 E	79	30	4 1	10 59.14	+1 45.2	1.700	2.633	9.7	19.6	154 E	47	62
3 12	10 1.32	+33 51.3	1.486	2.358	14.6	18.4	143 E	79	30	4 11	10 51.91	+2 27.1	1.750	2.613	13.7	19.8	142 E	47	62
3 17	9 52.99	+33 31.7	1.522	2.359	16.4	18.5	138 E	79	30	4 21	10 47.20	+2 56.8	1.821	2.592	17.0	20.0	131 E	48	61
3 22	9 45.72	+33 4.2	1.564	2.358	18.0	18.6	133 E	78	31	5 1	10 45.27	+3 12.2	1.907	2.571	19.7	20.1	121 E	48	61
3 27	9 39.60	+32 30.2	1.611	2.357	19.6	18.7	128 E	78	31	5 11	10 46.05	+3 12.6	2.003	2.548	21.7	20.3	111 E	48*	61
4 1	9 34.66	+31 51.1	1.663	2.355	21.0	18.8	122 E	77	32	5 21	10 49.33	+2 58.4	2.106	2.525	23.0	20.4	102 E	45*	61
4 6	9 30.86	+31 8.0	1.717	2.353	22.2	18.9	117 E	76	33	5 31	10 54.84	+2 30.6	2.212	2.501	23.8	20.5	94 E	41*	61
4 11	9 28.17	+30 21.9	1.775	2.349	23.2	19.0	113 E	75	34	6 10	11 2.30	+1 50.2	2.318	2.477	24.2	20.6	87 E	35*	62
4 16	9 26.49	+29 33.6	1.834	2.345	24.0	19.1	108 E	75	34	6 20	11 11.42	+0 58.5	2.421	2.451	24.1	20.7	80 E	25*	62*
4 21	9 25.76	+28 43.7	1.895	2.340	24.7	19.2	103 E	74	35	6 30	11 21.99	-0 3.5	2.520	2.425	23.6	20.7	73 E	24*	61*
4 26	9 25.90	+27 52.7	1.956	2.334	25.2	19.3	99 E	72*	36	7 10	11 33.81	-1 14.7	2.613	2.398	22.9	20.8	67 E	19*	58*
5 1	9 26.82	+27 0.8	2.019	2.327	25.6	19.4	95 E	70*	37	7 20	11 46.72	-2 33.9	2.698	2.371	21.9	20.8	61 E	15*	53*
5 11	9 30.71	+25 15.2	2.142	2.311	25.9	19.5	86 E	62*	39	7 30	12 0.63	-4 0.3	2.776	2.342	20.7	20.8	55 E	12*	48*
5 21	9 36.84	+23 27.9	2.261	2.292	25.7	19.6	79 E	54*	41*	8 12	12 15.42	-5 32.7	2.844	2.314	19.4	20.8	49 E	9*	43*
5 31	9 44.80	+21 38.7	2.374	2.269	25.1	19.7	72 E	46*	42*	8 19	12 31.07	-7 10.1	2.904	2.285	17.9	20.7	44 E	7*	38*
6 10	9 54.21	+19 47.4	2.478	2.242	24.2	19.7	65 E	38*	42*	8 29	12 47.53	-8 51.5	2.953	2.255	16.3	20.7	39 E	5*	33*
6 20	10 4.80	+17 53.6	2.571	2.213	23.0	19.7	58 E	31*	41*	9 8	13 4.79	-10 35.7	2.993	2.225	14.5	20.6	34 E	3*	28*
6 30	10 16.38	+15 56.6	2.653	2.179	21.6	19.7	52 E	24*	39*	9 18	13 22.86	-12 21.6	3.022	2.194	12.7	20.6	29 E	1*	23*
7 10	10 28.79	+13 56.0	2.720	2.142	20.0	19.7	46 E	19*	36*	9 28	13 41.75	-14 8.0	3.042	2.164	10.8	20.5	24 E	—	18*
7 20	10 41.92	+11 51.4	2.773	2.102	18.2	19.6	40 E	14*	32*	10 8	14 1.49	-15 53.4	3.051	2.133	8.9	20.4	19 E	—	13*
7 30	10 55.73	+9 42.2	2.811	2.057	16.3	19.5	35 E	10*	27*	10 18</									

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	19/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
125472 2001 WM₁₄										42887 1999 RV₁₅₅									
<i>(continuation)</i>										<i>(continuation)</i>									
10 28	14 43.65	-19 15.1	3.041	2.070	4.9	20.1	10 E	-	4*	3 7	11 25.12	-0 51.0	1.653	2.640	2.7	18.8	173 W	44	65
11 7	15 6.13	-20 48.1	3.022	2.039	2.9	20.0	6 E	-	-	3 12	11 19.93	-0 20.5	1.645	2.637	1.6	18.7	176 E	45	64
11 17	15 29.57	-22 13.3	2.995	2.009	1.6	19.8	3 W	-	-	3 17	11 14.75	+0 11.1	1.645	2.634	3.1	18.8	172 E	45	64
11 27	15 53.96	-23 28.9	2.960	1.978	2.4	19.8	5 W	-	-	3 22	11 9.73	+0 42.8	1.652	2.630	5.3	18.9	166 E	46	63
12 7	16 19.27	-24 32.8	2.917	1.948	4.3	19.9	8 W	-	2*	3 27	11 5.01	+1 13.8	1.667	2.626	7.5	19.0	160 E	46	63
12 17	16 45.46	-25 23.0	2.868	1.919	6.3	19.9	12 W	-	6*	4 1	11 0.71	+1 43.2	1.688	2.622	9.6	19.2	154 E	47	62
12 27	17 12.43	-25 57.6	2.813	1.890	8.4	19.9	16 W	2*	9*	4 6	10 56.93	+2 10.2	1.715	2.618	11.7	19.3	148 E	47	62
1 6	17 40.05	-26 15.0	2.753	1.862	10.5	19.9	20 W	4*	13*	4 11	10 53.74	+2 34.3	1.748	2.613	13.6	19.4	142 E	48	61
1 16	18 8.17	-26 13.7	2.689	1.835	12.6	19.9	24 W	5*	17*	4 21	10 49.33	+3 12.0	1.828	2.603	16.9	19.6	131 E	48	61
89566 2001 XZ₁₀₃										306678 2000 UK									
12 23	11 44.64	+0 18.4	2.591	2.838	20.2	20.9	94 W	45	60*	5 1	10 47.66	+3 34.3	1.924	2.592	19.4	19.8	121 E	49	60
1 2	11 48.63	+0 17.6	2.461	2.851	19.6	20.8	103 W	45	64*	5 11	10 48.65	+3 40.8	2.031	2.580	21.3	19.9	112 E	49	60
1 12	11 50.49	+0 40.6	2.335	2.864	18.4	20.7	113 W	44	65	5 21	10 52.06	+3 32.2	2.145	2.567	22.6	20.1	103 E	46*	60
1 22	11 50.01	+0 49.1	2.218	2.875	16.7	20.5	123 W	44	65	5 31	10 57.61	+3 9.6	2.262	2.553	23.3	20.2	95 E	42*	61
2 1	11 47.06	+0 41.9	2.114	2.886	14.2	20.3	134 W	44	65	6 10	11 5.01	+2 34.3	2.380	2.539	23.5	20.3	87 E	36*	61
2 11	11 41.69	+0 18.9	2.028	2.896	11.1	20.1	145 W	45	64	6 20	11 13.97	+1 47.9	2.495	2.523	23.4	20.4	80 E	30*	62*
2 21	11 34.19	+0 18.8	1.966	2.905	7.5	19.9	157 W	45	64	6 30	11 24.28	+0 51.3	2.606	2.506	22.8	20.5	73 E	25*	60*
3 2	11 25.16	+1 7.8	1.932	2.912	3.5	19.7	170 W	46	63	7 10	11 35.73	-0 13.9	2.710	2.488	22.0	20.5	67 E	20*	57*
3 7	11 20.33	+1 35.1	1.925	2.916	1.5	19.5	176 W	47	62	7 20	11 48.17	-1 26.8	2.808	2.470	21.0	20.5	60 E	16*	53*
3 12	11 15.45	+2 3.2	1.927	2.919	1.2	19.5	176 E	47	62	7 30	12 1.50	-2 46.3	2.897	2.450	19.7	20.5	54 E	13*	48*
3 17	11 10.64	+2 31.4	1.936	2.922	3.1	19.7	171 E	48	61	8 9	12 15.60	-4 11.3	2.977	2.430	18.3	20.5	49 E	10*	42*
3 22	11 6.02	+2 59.0	1.952	2.925	5.2	19.8	165 E	48	61	8 19	12 30.44	-5 40.9	3.047	2.409	16.7	20.5	43 E	8*	37*
3 27	11 1.71	+3 25.2	1.975	2.927	7.1	19.9	159 E	48	61	8 29	12 45.96	-7 14.0	3.106	2.387	15.0	20.5	38 E	6*	32*
4 1	10 57.80	+3 49.3	2.006	2.930	9.0	20.1	153 E	49	60	9 8	13 2.13	-8 49.6	3.154	2.364	13.1	20.4	32 E	4*	26*
4 11	10 51.46	+4 29.7	2.085	2.933	12.4	20.3	141 E	49	60	9 18	13 18.95	-10 26.6	3.191	2.340	11.2	20.4	27 E	2*	21*
4 21	10 47.39	+4 57.5	2.185	2.936	15.1	20.5	130 E	50	59	9 28	13 36.42	-12 4.2	3.217	2.316	9.2	20.3	22 E	—	16*
5 1	10 45.71	+5 11.7	2.301	2.938	17.3	20.7	120 E	50	59	10 8	13 54.55	-13 40.9	3.230	2.291	7.2	20.2	17 E	—	11*
5 11	10 46.34	+5 12.3	2.428	2.939	18.8	20.8	111 E	50	59	10 18	14 13.35	-15 15.8	3.232	2.265	5.1	20.0	12 E	—	6*
5 21	10 49.08	+5 0.2	2.563	2.939	19.7	21.0	102 E	47*	59	10 28	14 32.83	-16 47.6	3.223	2.239	3.0	19.9	7 E	—	1*
5 31	10 53.68	+4 36.4	2.701	2.938	20.2	21.1	93 E	47*	59	11 7	14 53.01	-18 14.9	3.202	2.212	1.0	19.7	2 E	—	—
6 10	10 59.89	+4 2.2	2.839	2.936	20.2	21.2	85 E	37*	60	11 17	15 13.90	-19 36.5	3.170	2.184	1.7	19.7	4 W	—	—
6 20	11 7.46	+3 18.6	2.974	2.933	19.8	21.3	78 E	31*	60*	11 27	15 35.50	-20 50.8	3.127	2.156	3.9	19.8	8 W	—	1*
6 30	11 16.20	+2 26.8	3.105	2.929	19.1	21.4	71 E	25*	58*	12 7	15 57.78	-21 56.6	3.075	2.128	6.1	19.9	13 W	3*	5*
7 10	11 25.91	+1 27.8	3.229	2.924	18.2	21.4	64 E	20*	54*	12 17	16 20.73	-22 52.3	3.013	2.099	8.3	19.9	18 W	6*	10*
7 20	11 36.45	+0 22.6	3.344	2.918	17.0	21.4	57 E	16*	49*	12 27	16 44.29	-23 36.7	2.942	2.070	10.6	19.9	23 W	8*	14*
7 30	11 47.72	+0 48.2	3.449	2.911	15.6	21.5	51 E	12*	44*	1 6	17 8.39	-24 8.4	2.864	2.041	12.8	19.9	27 W	9*	19*
8 9	11 59.59	+2 3.4	3.543	2.903	14.1	21.5	44 E	9*	38*	1 16	17 32.97	-24 26.4	2.778	2.012	15.0	19.9	32 W	11*	24*
8 19	12 12.01	+3 22.6	3.624	2.894	12.4	21.4	38 E	6*	32*	306678 2000 UK									
8 29	12 24.91	+4 44.8	3.693	2.884	10.6	21.4	32 E	4*	26*	12 23	11 44.92	+31 48.7	1.254	1.790	32.0	18.5	106 W	77	30*
9 8	12 38.24	+6 9.3	3.747	2.873	8.8	21.4	26 E	2*	20*	12 28	11 46.87	+31 13.6	1.222	1.806	30.9	18.4	110 W	76	32*
9 18	12 51.97	+7 35.5	3.787	2.861	6.8	21.3	20 E	—	14*	1 2	11 47.59	+30 41.3	1.190	1.823	29.6	18.4	114 W	76	33*
9 28	13 6.06	+9 2.5	3.812	2.848	4.8	21.2	14 E	—	8*	1 7	11 47.03	+30 11.5	1.160	1.840	28.1	18.3	118 W	75	34
10 8	13 20.49	+10 29.7	3.821	2.834	2.8	21.1	8 E	—	2*	1 12	11 45.15	+29 43.3	1.131	1.858	26.4	18.2	123 W	75	34
10 18	13 35.24	+11 56.4	3.815	2.820	0.9	20.9	2 E	—	—	1 17	11 41.91	+29 15.9	1.105	1.877	24.5	18.1	128 W	74	35
10 28	13 50.28	+13 21.8	3.793	2.804	1.7	20.9	5 W	—	—	1 22	11 37.31	+28 48.2	1.082	1.896	22.5	18.0	133 W	74	35
11 7	14 5.59	+14 45.3	3.756	2.787	3.7	21.1	11 W	2*	3*	1 27	11 31.38	+28 18.9	1.063	1.915	19.9	17.9	139 W	73	36
11 17	14 21.14	+16 6.0	3.703	2.770	5.9	21.1	17 W	7*	7*	2 1	11 24.24	+27 46.7	1.049	1.935	17.3	17.8	144 W	73	36
11 27	14 36.88	+17 23.5	3.635	2.751	8.0	21.2	23 W	11*	12*	2 6	11 16.08	+27 10.1	1.039	1.956	14.7	17.8	150 W	72	37
12 7	14 52.77	+18 36.9	3.553	2.732	10.0	21.2	29 W	15*	18*	2 11	11 7.12	+26 28.1	1.036	1.976	12.0	17.7	155 W	71	38
12 17	15 8.75	+19 45.8	3.457	2.712	12.0	21.2	35 W	17*	24*	2 16	10 57.67	+25 40.0	1.039	1.997	9.6	17.6	160 W	71	38
12 27	15 24.75	+20 49.6	3.349	2.690	14.0	21.2	41 W	19*	31*	2 21	10 48.04	+24 45.8	1.050	2.019	7.8	17.6	164 W	70	39
1 6	15 40.69	+21 47.9	3.229	2.668	15.8	21.1	48 W	20*	38*	2 26	10 38.57	+23 45.7	1.067	2.040	7.1	17.6	165 W	69	40
1 16	15 56.44	+22 40.5	3.099	2.645	17.5	21.1	54 W	20*	45*	3 2	10 29.59	+22 40.5	1.092	2.062	7.8	17.7	164 E	68	41
498901 2009 AU₁										3 7	10 21.35	+21 31.6	1.124	2.084	9.4	17.9	160 E	67	42
12 23	11 44.76	+14 50.2	4.171	4.445	12.6	21.4	100 W	60	47*	3 12	10 14.04	+20 20.1	1.163	2.106	11.5	18.1	155 E	65	44
1 2	11 46.78	+15 33.6	4.061	4.486	11.9	21.3	110 W	61	48*	3 17	10 7.77	+19 7.6	1.209	2.129	13.6	18.2	150 E	64	45
1 12	11 47.31	+16 27.4	3.960	4.527	10.9	21.3	120 W	61	48	3 22	10 2.61	+17 55.0	1.261	2.151	15.6	18.4	145 E	63	46
1 22	11 46.30	+17 30.2	3.875	4.567	9.5	21.2	130 W	63	46	4 1	9 55.59	+15 32.9	1.381	2.197	19.0	18.8	134 E	61	48
2 1	11 43.79	+18 39.8	3.809	4.607	7.9	21.1	140 W	64	45	4 11	9 52.66	+13 17.7	1.518	2.243	21.6	19.1	124 E	58	51
2 11	11 39.93	+19 52.6	3.767	4.646	6.1	21.0	150 W	65	44	4 21	9 53.17	+11 10.2	1.669	2.289	23.3	19.4	116 E	56	53
2 21	11 34.97	+21 4.8	3.753	4.686	4.5	20.9	158 W	66	43	5 1	9 56.48	+9 9.5	1.829	2.335	24.3	19.7	107 E	54*	55
3 2	11 29.27	+22 12.1	3.770	4.724	3.6	20.9	163 W	67	42	5 11	10 2.02	+7 14.1	1.996	2.381	24.7	19.9	99 E	50*	57
3 12	11 23.26	+23 10.7	3.817	4.763	4.1	21.0	160 E	68	41	5 21	10 9.29	+5 22.5	2.167	2.427					