

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
331548 2000 VO₄₇										7330 Annelemaître (continuation)									
12 27	18 57.91	-20 46.0	3.362	2.393	3.4	20.1	8 E	1*	—	5 26	22 22.94	+9 36.6	2.548	2.638	22.4	18.6	84 W	43*	54
1 6	19 16.99	-19 24.8	3.330	2.350	1.6	19.9	4 E	—	—	6 5	22 31.29	+10 58.5	2.396	2.610	22.9	18.5	90 W	47*	53
1 16	19 36.25	-17 52.4	3.286	2.307	2.0	19.8	5 W	—	—	6 15	22 38.23	+12 14.4	2.245	2.581	23.0	18.3	97 W	52*	52
1 26	19 55.62	-16 8.3	3.229	2.264	4.1	19.9	9 W	2*	1*	6 25	22 43.55	+13 21.6	2.096	2.551	22.7	18.1	105 W	56*	51
2 5	20 15.06	-14 11.8	3.161	2.220	6.3	19.9	14 W	5*	6*	7 5	22 46.99	+14 16.5	1.951	2.521	21.9	17.9	112 W	59*	50
2 15	20 34.55	-12 2.6	3.084	2.177	8.7	19.9	19 W	8*	11*	7 15	22 48.26	+14 54.7	1.814	2.490	20.6	17.7	121 W	60	49
2 25	20 54.06	-9 40.3	2.997	2.134	11.0	19.9	24 W	10*	16*	7 20	22 48.01	+15 5.8	1.749	2.474	19.7	17.6	125 W	60	49
3 7	21 13.59	-7 4.8	2.904	2.091	13.3	19.9	29 W	13*	21*	7 25	22 47.15	+15 10.7	1.687	2.458	18.7	17.4	129 W	60	49
3 17	21 33.16	-4 15.8	2.805	2.049	15.5	19.8	33 W	15*	25*	7 30	22 45.67	+15 8.7	1.628	2.442	17.5	17.3	134 W	60	49
3 27	21 52.81	-1 13.5	2.701	2.007	17.7	19.8	38 W	17*	29*	8 4	22 43.58	+14 59.0	1.573	2.426	16.2	17.2	138 W	60	49
4 6	22 12.60	+2 2.0	2.596	1.966	19.8	19.7	42 W	20*	33*	8 14	22 37.67	+14 13.7	1.477	2.393	13.2	16.9	147 W	59	50
4 16	22 32.60	+5 30.3	2.489	1.927	21.9	19.7	46 W	23*	35*	8 24	22 29.92	+12 51.3	1.402	2.359	10.2	16.7	156 W	58	51
4 26	22 52.91	+9 10.5	2.384	1.889	23.8	19.6	49 W	26*	38*	9 3	22 21.20	+10 52.8	1.351	2.326	8.4	16.5	160 E	56	53
5 6	23 13.66	+13 1.5	2.280	1.852	25.7	19.5	53 W	29*	39*	9 8	22 16.81	+9 41.7	1.335	2.308	8.5	16.4	160 E	55	54
5 16	23 34.99	+17 1.7	2.181	1.817	27.4	19.4	56 W	32*	39*	9 13	22 12.63	+8 24.5	1.325	2.291	9.3	16.4	158 E	53	56
5 26	23 57.06	+21 8.7	2.085	1.784	29.0	19.3	59 W	36*	38*	9 18	22 8.79	+7 2.9	1.323	2.274	10.7	16.5	155 E	52	57
5 31	0 8.44	+23 13.8	2.040	1.769	29.8	19.3	60 W	38*	37*	9 23	22 5.44	+5 38.7	1.326	2.257	12.5	16.5	151 E	51	58
6 5	0 20.09	+25 19.4	1.995	1.754	30.5	19.2	61 W	40*	36*	9 28	22 2.68	+4 13.7	1.336	2.239	14.4	16.6	146 E	49	60
6 10	0 32.03	+27 25.0	1.953	1.740	31.2	19.2	63 W	43*	35*	10 3	22 0.61	+2 49.7	1.351	2.222	16.4	16.7	141 E	48	61
6 15	0 44.29	+29 30.1	1.911	1.727	31.9	19.1	64 W	45*	33*	10 8	21 59.30	+1 28.4	1.371	2.204	18.3	16.7	136 E	46	63
6 20	0 56.89	+31 33.9	1.872	1.714	32.5	19.1	65 W	48*	32*	10 13	21 58.80	+0 11.1	1.396	2.186	20.1	16.8	131 E	45	64
6 25	1 8.86	+33 35.9	1.834	1.702	33.1	19.1	66 W	50*	30*	10 18	21 59.12	+0 1.2	1.425	2.169	21.7	16.9	126 E	44	65
6 30	1 23.25	+35 35.4	1.797	1.691	33.7	19.0	67 W	53*	28*	10 23	22 0.26	-2 7.5	1.458	2.151	23.3	17.0	121 E	43	66
7 5	1 37.05	+37 31.7	1.761	1.681	34.3	19.0	69 W	55*	26*	11 2	22 4.90	-4 0.9	1.532	2.116	25.7	17.1	112 E	41	68
7 10	1 51.30	+39 24.1	1.727	1.672	34.8	18.9	70 W	58*	24*	11 12	22 12.51	+5 27.2	1.613	2.080	27.6	17.3	104 E	40	69*
7 15	2 5.99	+41 11.7	1.694	1.663	35.2	18.9	71 W	60*	23*	11 22	22 22.74	-6 26.6	1.699	2.045	28.7	17.4	96 E	39	69*
7 20	2 21.12	+42 53.9	1.663	1.656	35.7	18.9	72 W	63*	21*	12 2	22 35.23	-7 1.1	1.786	2.011	29.3	17.5	88 E	38	64*
7 25	2 36.69	+44 29.8	1.632	1.649	36.1	18.8	73 W	65*	19*	12 12	22 49.66	-7 12.7	1.872	1.977	29.5	17.5	81 E	38	59*
7 30	2 52.68	+45 59.0	1.602	1.644	36.4	18.8	74 W	67*	18*	12 22	23 5.73	-7 3.8	1.954	1.943	29.2	17.6	75 E	38	53*
8 4	3 9.03	+47 20.8	1.573	1.639	36.8	18.7	75 W	69*	17*	1 1	23 23.18	-6 37.1	2.033	1.910	28.7	17.6	69 E	38*	47*
8 9	3 25.68	+48 34.6	1.544	1.636	37.0	18.7	76 W	70*	15*	1 11	23 41.86	-5 54.6	2.106	1.879	27.8	17.6	63 E	38*	42*
8 14	3 42.53	+49 40.1	1.515	1.633	37.3	18.7	78 W	72*	14*	1 21	0 1.57	-4 59.0	2.172	1.848	26.8	17.6	58 E	37*	38*
8 19	3 59.47	+50 36.9	1.487	1.632	37.5	18.6	79 W	73*	13*										
8 24	4 16.38	+51 25.0	1.459	1.632	37.7	18.6	80 W	74*	13*										
8 29	4 33.14	+52 4.4	1.430	1.632	37.8	18.6	82 W	75*	12*										
9 3	4 49.56	+52 35.3	1.402	1.634	37.8	18.5	84 W	77*	11*										
9 8	5 5.49	+52 58.0	1.373	1.637	37.8	18.5	85 W	78*	11*										
9 13	5 20.76	+53 12.9	1.344	1.641	37.8	18.4	87 W	79*	11*										
9 18	5 35.21	+53 20.6	1.314	1.646	37.6	18.4	89 W	80*	11*										
9 23	5 48.71	+53 21.6	1.284	1.651	37.4	18.3	92 W	81*	11*										
9 28	6 1.10	+53 16.8	1.253	1.658	37.1	18.3	94 W	82*	11*										
10 3	6 12.26	+53 6.6	1.222	1.666	36.6	18.2	97 W	82*	11*										
10 8	6 22.06	+52 51.7	1.191	1.675	36.1	18.2	99 W	82*	11*										
10 13	6 30.37	+52 32.4	1.159	1.684	35.3	18.1	102 W	82*	11*										
10 18	6 37.11	+52 9.0	1.127	1.695	34.5	18.0	106 W	83*	12*										
10 23	6 42.20	+51 41.5	1.096	1.706	33.4	18.0	109 W	83*	12*										
10 28	6 45.54	+51 9.9	1.065	1.718	32.1	17.9	113 W	84*	13*										
11 2	6 47.08	+50 33.7	1.035	1.731	30.6	17.8	117 W	84*	13*										
11 7	6 46.77	+49 52.1	1.007	1.745	28.9	17.7	122 W	85*	14*										
11 12	6 44.63	+49 3.9	0.980	1.759	26.9	17.6	127 W	86*	15*										
11 17	6 40.74	+48 7.7	0.957	1.774	24.6	17.5	132 W	87*	16*										
11 22	6 35.26	+47 2.4	0.936	1.790	22.1	17.4	137 W	88*	17*										
11 27	6 28.41	+45 46.6	0.920	1.806	19.4	17.3	143 W	89*	18*										
12 2	6 20.49	+44 19.4	0.909	1.823	16.5	17.2	148 W	89*	20*										
12 7	6 11.89	+42 40.7	0.903	1.840	13.5	17.1	154 W	88*	21*										
12 12	6 3.05	+40 51.3	0.903	1.858	10.6	17.0	160 W	86*	23*										
12 17	5 54.39	+38 53.2	0.911	1.876	8.3	16.9	164 W	84*	25*										
12 22	5 46.27	+36 49.3	0.925	1.895	7.1	16.9	166 E	82*	27*										
12 27	5 38.98	+34 42.7	0.947	1.914	7.5	17.0	165 E	80*	29*										
1 1	5 32.72	+32 37.0	0.976	1.934	9.3	17.2	162 E	78*	31*										
1 6	5 27.61	+30 35.2	1.012	1.953	11.6	17.4	157 E	76*	33*										
1 11	5 23.73	+28 39.8	1.054	1.973	13.9	17.6	151 E	74*	35*										
1 16	5 21.05	+26 52.6	1.103	1.994	16.2	17.8	146 E	72*	37*										
1 21	5 19.50	+25 14.5	1.157	2.014	18.2	18.0	140 E	70*	39*										
7330 Annelemaître										72569 2001 EC₁₃									
12 27	18 58.91	-6 26.1	3.870	2.957	6.2	19.2	19 E	12*	—	10 8	5 53.89	+11 0.9	1.112	1.685	34.8	17.0	106 W	56	53
1 6	19 14.25	-6 8.4	3.872	2.942	5.4	19.1	16 E	7*	—	10 13	5 58.56	+12 7.9	1.073	1.692	33.8	16.9	110 W	57	52
1 16	19 29.68	-5 41.5	3.858	2.926	5.4	19.1	16 W	9*	—	10 18	6 2.35	+13 20.8	1.035	1.700	32.5	16.8	114 W	58	51
1 26	19 45.09	-5 5.8	3.829	2.909	6.0	19.1	18 W	12*	—	10 23	6 5.19	+14 40.5	0.999	1.708	31.0	16.7	118 W	60	49
2 5	20 0.41	-4 21.8	3.786	2.892	7.2	19.1	22 W	15*	5*	11 2	6 7.60	+17 42.5	0.934	1.727	27.1	16.5	127 W	63	46
2 15	20 15.57	-3 29.8	3.728	2.873	8.7	19.1	26 W	17*	12*	11 12	6 5.05	+21 15.5	0.881	1.749	22.1	16.2	138 W	66	43
2 25	20 30.49	-2 30.6																	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
72569 2001 EC₁₃										338523 2003 QR₈₉									
<i>(continuation)</i>										<i>(continuation)</i>									
1 1	4 57.20	+38 36.4	0.957	1.884	14.0	16.3	152 E	84	25	9 13	0 47.88	+30 8.4	1.921	2.772	13.4	20.6	140 W	75	34
1 6	4 51.64	+39 29.8	0.999	1.899	16.5	16.5	147 E	84	25	9 23	0 37.33	+30 6.4	1.908	2.813	10.7	20.5	149 W	75	34
1 11	4 47.42	+40 13.7	1.046	1.915	18.7	16.7	141 E	85	24	10 3	0 26.19	+29 36.3	1.920	2.854	8.8	20.5	154 E	75	34
1 16	4 44.60	+40 49.7	1.097	1.931	20.6	16.8	136 E	86	23	10 8	0 20.77	+29 11.8	1.935	2.874	8.4	20.5	155 E	74	35
1 21	4 43.17	+41 19.3	1.152	1.948	22.3	17.0	131 E	86	23	10 13	0 15.64	+28 42.1	1.958	2.893	8.4	20.5	155 E	74	35
20691 1999 VY₇₂										12198 1980 PJ₁									
12 27	18 59.40	-21 52.2	2.968	2.000	4.1	17.6	8 E	1*	—	12 27	18 59.89	-22 13.9	3.278	2.310	3.6	19.3	8 E	—	1*
1 6	19 23.90	-22 6.6	2.944	1.964	1.9	17.4	4 E	—	—	1 6	19 20.70	-21 30.3	3.266	2.285	1.4	19.2	3 E	—	—
1 16	19 49.06	-22 6.8	2.913	1.930	0.6	17.3	1 W	—	—	1 16	19 41.64	-20 35.9	3.242	2.259	1.0	19.1	2 W	—	—
1 26	20 14.77	-21 52.7	2.874	1.896	2.8	17.4	5 W	—	—	1 26	20 2.60	-19 30.7	3.206	2.233	3.2	19.2	7 W	—	1*
2 5	20 40.95	-21 24.4	2.828	1.863	5.0	17.4	10 W	—	3*	2 5	20 23.54	-18 14.9	3.159	2.205	5.5	19.3	12 W	1*	6*
2 15	21 7.53	-20 42.3	2.776	1.831	7.3	17.5	14 W	—	7*	2 15	20 44.40	-16 48.9	3.101	2.178	7.7	19.3	17 W	3*	11*
2 25	21 34.42	-19 46.9	2.720	1.801	9.5	17.5	18 W	—	11*	2 25	21 5.15	-15 13.2	3.034	2.150	10.0	19.3	22 W	4*	16*
3 7	22 1.56	-18 39.2	2.660	1.772	11.7	17.5	21 W	—	15*	3 7	21 25.76	-13 28.3	2.959	2.121	12.2	19.3	27 W	6*	21*
3 17	22 28.90	-17 20.3	2.598	1.746	13.8	17.5	25 W	—	18*	3 17	21 46.23	-11 35.0	2.875	2.093	14.4	19.3	32 W	7*	25*
3 27	22 56.40	-15 51.7	2.535	1.721	15.9	17.5	28 W	—	21*	3 27	22 6.55	-9 34.0	2.785	2.064	16.5	19.3	36 W	9*	30*
4 6	23 24.02	-14 15.0	2.472	1.699	17.8	17.4	31 W	—	24*	4 6	22 26.76	-7 26.1	2.689	2.035	18.6	19.2	40 W	11*	34*
4 16	23 51.74	-12 32.0	2.410	1.680	19.7	17.4	34 W	—	27*	4 16	22 46.88	-5 12.2	2.588	2.005	20.7	19.2	45 W	12*	38*
4 26	0 19.51	-10 45.0	2.349	1.663	21.5	17.4	37 W	—	30*	4 26	23 6.92	-2 53.2	2.483	1.976	22.6	19.1	49 W	14*	42*
5 6	0 47.29	-8 56.2	2.292	1.650	23.1	17.4	40 W	—	33*	5 6	23 26.95	-0 30.1	2.375	1.947	24.5	19.1	53 W	17*	46*
5 16	1 15.06	-7 7.9	2.236	1.640	24.6	17.4	42 W	—	36*	5 16	23 47.00	+1 56.2	2.265	1.919	26.3	19.0	57 W	19*	49*
5 26	1 42.71	-5 22.6	2.184	1.633	26.0	17.3	45 W	—	39*	6 5	0 7.11	+4 24.3	2.154	1.890	28.1	18.9	61 W	23*	51*
6 5	2 10.19	-3 42.7	2.135	1.629	27.3	17.3	47 W	1*	41*	6 5	0 27.32	+6 53.3	2.042	1.863	29.7	18.8	65 W	27*	52*
6 15	2 37.39	-2 10.2	2.089	1.629	28.4	17.3	50 W	4*	44*	6 15	0 47.67	+9 21.8	1.930	1.836	31.2	18.7	69 W	31*	52*
6 25	3 4.18	-0 47.2	2.044	1.632	29.5	17.3	52 W	7*	46*	6 25	1 8.16	+11 48.3	1.819	1.810	32.5	18.6	73 W	36*	51*
7 5	3 30.45	+0 25.1	2.001	1.639	30.4	17.3	55 W	11*	48*	7 5	1 28.80	+14 11.7	1.710	1.785	33.7	18.4	77 W	42*	50*
7 15	3 56.05	+1 25.6	1.958	1.649	31.3	17.3	57 W	16*	49*	7 15	1 49.56	+16 30.1	1.602	1.761	34.8	18.3	81 W	48*	47
7 25	4 20.80	-2 13.8	1.914	1.663	32.0	17.3	60 W	21*	51*	7 25	2 10.34	+18 42.0	1.497	1.739	35.6	18.1	85 W	54*	45
8 4	4 44.56	+2 49.9	1.869	1.679	32.7	17.3	63 W	26*	52*	8 4	2 31.06	+20 46.0	1.395	1.718	36.2	18.0	90 W	60*	43
8 14	5 7.15	+3 14.4	1.822	1.698	33.2	17.2	67 W	31*	53*	8 14	2 51.47	+22 40.2	1.295	1.699	36.5	17.8	94 W	65*	41
8 24	5 28.38	+3 28.4	1.771	1.720	33.6	17.2	70 W	36*	54*	8 19	3 1.48	+23 33.2	1.247	1.690	36.5	17.7	96 W	67*	40
9 3	5 48.08	+3 33.6	1.716	1.744	33.9	17.2	75 W	40*	56*	8 24	3 11.30	+24 23.2	1.200	1.682	36.5	17.6	99 W	69*	40
9 13	6 6.02	+3 32.0	1.657	1.771	33.9	17.1	79 W	44*	57*	8 29	3 20.88	+25 10.2	1.153	1.674	36.3	17.5	101 W	70*	39
9 23	6 21.96	+3 26.1	1.594	1.799	33.7	17.1	84 W	47*	58*	9 3	3 30.16	+25 54.0	1.108	1.667	36.0	17.4	104 W	71	38
10 3	6 35.64	+3 19.2	1.527	1.829	33.2	17.0	90 W	48*	60*	9 8	3 39.05	+26 34.3	1.064	1.660	35.6	17.3	106 W	72	37
10 13	6 46.71	+3 14.8	1.457	1.861	32.2	16.9	97 W	48*	60*	9 13	3 47.49	+27 11.2	1.021	1.654	35.0	17.2	109 W	72	37
10 23	6 54.81	+3 17.6	1.387	1.893	30.6	16.8	104 W	48	61	9 18	3 55.39	+27 44.5	0.980	1.648	34.3	17.1	112 W	73	36
11 2	6 59.55	+3 32.6	1.317	1.927	28.4	16.7	112 W	49	60	9 23	4 2.67	+28 14.1	0.940	1.643	33.5	16.9	115 W	73	36
11 7	7 0.53	+3 46.4	1.284	1.945	27.0	16.6	117 W	49	60	9 28	4 9.22	+28 40.0	0.901	1.639	32.4	16.8	119 W	74	35
11 12	7 0.54	+4 5.4	1.253	1.962	25.4	16.5	122 W	49	60	10 3	4 14.93	+29 1.9	0.864	1.635	31.1	16.7	122 W	74	35
11 17	6 59.55	+4 30.3	1.223	1.980	23.6	16.4	127 W	50	59	10 8	4 19.69	+29 19.7	0.830	1.633	29.6	16.5	126 W	74	35
11 22	6 57.56	+5 1.6	1.197	1.997	21.6	16.3	132 W	50	59	10 13	4 23.41	+29 33.1	0.797	1.630	27.9	16.4	130 W	75	34
12 2	6 50.69	+6 24.8	1.156	2.033	16.9	16.2	143 W	51	58	10 18	4 26.00	+29 41.9	0.767	1.629	25.9	16.3	134 W	75	34
12 12	6 40.48	+8 15.3	1.135	2.070	11.6	16.0	155 W	53	56	10 23	4 27.42	+29 45.6	0.740	1.628	23.6	16.1	139 W	75	34
12 22	6 28.20	+10 27.9	1.140	2.106	6.8	15.8	165 W	55	54	11 2	4 26.61	+29 36.3	0.695	1.628	18.3	15.8	149 W	75	34
12 27	6 21.78	+11 39.5	1.152	2.124	5.4	15.8	168 E	57	52	11 12	4 21.33	+29 2.0	0.665	1.630	12.1	15.5	160 W	74	35
1 1	6 15.48	+12 52.7	1.172	2.143	5.6	15.9	168 E	58	51	11 22	4 13.05	+28 2.7	0.653	1.636	5.8	15.2	170 W	73	36
1 6	6 9.53	+14 6.1	1.199	2.161	7.2	16.0	164 E	59	50	11 27	4 8.48	+27 25.3	0.655	1.639	3.8	15.1	174 E	72	37
1 11	6 4.11	+15 18.3	1.233	2.179	9.3	16.2	159 E	60	49	12 2	4 4.02	+26 44.3	0.662	1.644	4.8	15.2	172 E	72	37
1 16	5 59.40	+16 28.4	1.273	2.198	11.5	16.3	153 E	61	48	12 7	3 59.99	+26 1.5	0.673	1.649	7.6	15.4	167 E	71	38
1 21	5 55.49	+17 35.5	1.320	2.216	13.7	16.5	148 E	63	46	12 12	3 56.65	+25 18.7	0.690	1.654	10.7	15.6	162 E	70	39
338523 2003 QR₈₉										285944 2001 RZ₁₁									
12 27	18 59.75	-27 3.8	2.632	1.668	5.3	19.8	9 E	—	3*	12 27	18 59.97	-43 14.5	1.992	1.134	18.4	19.2	21 E	—	10*
1 6	19 30.01	-25 14.3	2.670	1.695	3.4	19.8	6 E	—	—	1 1	19 23.46	-40 43.2	1.996	1.117	17.0	19.1	19 E	—	10*
1 16	19 58.72	-23 7.6	2.707	1.725	1.6	19.8	3 E	—	—	1 6	19 45.10	-37 57.5	2.003	1.104	15.4	19.1	17 E	—	9*
1 26	20 25.84	-20 47.2	2.741	1.758	1.5	19.8	3 W	—	—	1 11	20 5.02	-35 0.4	2.011	1.094	13.7	19.0	15 E	—	7*
2 5	20 51.40	-18 16.3	2.771	1.794	3.2	20.0	6 W	—	—	1 16	20 23.39	-31 54.6	2.021	1.086	11.8	18.9	13 E	—	6*
2 15	21 15.52	-15 37.7	2.798	1.832	5.2	20.2	10 W	—	4*	1 21	20 40.40	-28 42.1	2.032	1.082	9.8	18.9	11 E	—	4*
2 25	21 38.26	-12 54.0	2.818	1.872	7.2	20.3	14 W	1*	8*	1 26	20 56.22	-25 25.1	2.045	1.081	7.7	18.8	8 E	—	2*
3 7	21 59.75	-10 7.3	2.833	1.913	9.2	20.5	18 W	3*	12*	1 31	21 11.03	-22 4.8	2.057	1.083	5.6	18.7	6 E	—	—
3 17	22 20.07	-7 19.1	2.840	1.957	11.1	20.6	22 W	5*	16*	12 27	18 59.97	-43 14.5	1.992	1.134	18.4	19.2	21 E	—	10*
3 27	22 39.31	-4 31.2	2.840	2.001	13.0	20.7	27 W	7*	20*	1 1	19 23.46	-40 43.2	1.996	1.117	17.0	19.1	19 E	—	10*
4 6	22 57.53	-1 44.5	2.832	2.046	14.8	20.8	31 W	10*	25*	1 6	19 45.10	-37 57.5	2.003	1.104	15.4	19.1	17 E	—	9*
4 16	23 1																		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°										
285944 2001 RZ₁₁										48450 1991 NA																			
<i>(continuation)</i>										<i>(continuation)</i>																			
2 5	21 25.00	-18 42.5	2.070	1.088	3.4	18.6	4 E	—	—	11 7	5 23.92	+32 32.9	1.517	2.372	15.2	19.1	141 W	78	31	11 12	5 19.26	+32 18.7	1.498	2.390	13.0	19.0	147 W	77	32
2 10	21 38.26	-15 19.2	2.083	1.096	1.2	18.5	1 E	—	—	11 17	5 13.88	+32 0.7	1.485	2.409	10.7	18.9	153 W	77	32	11 22	5 7.93	+31 38.6	1.479	2.427	8.4	18.9	159 W	77	32
2 15	21 50.96	-11 55.5	2.095	1.108	1.0	18.5	1 W	—	—	12 2	4 55.10	+30 42.6	1.486	2.462	4.1	18.7	170 W	76	33	12 7	4 48.64	+30 9.4	1.500	2.480	3.0	18.7	172 E	75	34
2 25	22 15.06	-5 9.5	2.119	1.139	5.1	18.8	6 W	—	—	12 12	4 42.44	+29 33.8	1.522	2.497	3.9	18.8	170 E	75	34	12 17	4 36.68	+28 56.7	1.551	2.515	5.8	18.9	165 E	74	35
3 7	22 38.06	+1 32.2	2.141	1.179	8.8	19.1	11 W	4*	—	12 22	4 31.51	+28 19.0	1.587	2.532	7.8	19.1	160 E	73	36	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36
3 17	23 0.56	+8 7.3	2.163	1.228	12.1	19.3	15 W	9*	—	1 1	4 23.34	+27 5.7	1.679	2.565	11.8	19.4	148 E	72	37	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
3 27	23 23.03	+14 33.7	2.184	1.284	14.7	19.6	19 W	13*	2*	1 11	4 18.44	+26 0.0	1.794	2.598	15.1	19.7	137 E	71	38	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38
4 6	23 45.90	+20 49.1	2.207	1.344	16.9	19.8	23 W	17*	3*	1 21	4 16.85	+25 5.7	1.928	2.630	17.6	19.9	126 E	70	39	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36
4 16	0 9.57	+26 51.1	2.232	1.407	18.5	19.9	26 W	20*	4*	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 1	4 23.34	+27 5.7	1.679	2.565	11.8	19.4	148 E	72	37
4 26	0 34.38	+32 36.6	2.261	1.473	19.8	20.1	30 W	24*	5*	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37	1 11	4 18.44	+26 0.0	1.794	2.598	15.1	19.7	137 E	71	38
5 1	0 47.35	+35 22.1	2.276	1.507	20.2	20.2	31 W	25*	4*	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38	1 21	4 16.85	+25 5.7	1.928	2.630	17.6	19.9	126 E	70	39
5 6	1 0.75	+38 2.2	2.292	1.541	20.6	20.3	33 W	26*	4*	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
5 11	1 14.63	+40 36.6	2.309	1.575	20.9	20.3	34 W	28*	4*	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 11	4 18.44	+26 0.0	1.794	2.598	15.1	19.7	137 E	71	38
5 16	1 29.04	+43 4.7	2.327	1.609	21.2	20.4	35 W	29*	3*	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38	1 21	4 16.85	+25 5.7	1.928	2.630	17.6	19.9	126 E	70	39
5 21	1 44.03	+45 26.0	2.345	1.643	21.4	20.5	36 W	30*	3*	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
5 26	1 59.64	+47 40.2	2.364	1.677	21.5	20.5	37 W	31*	2*	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 11	4 18.44	+26 0.0	1.794	2.598	15.1	19.7	137 E	71	38
5 31	2 15.91	+49 46.7	2.383	1.711	21.7	20.6	39 W	33*	1*	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38	1 21	4 16.85	+25 5.7	1.928	2.630	17.6	19.9	126 E	70	39
6 5	2 32.87	+51 45.1	2.403	1.745	21.7	20.7	40 W	34*	—	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
6 10	2 50.55	+53 35.2	2.423	1.779	21.8	20.7	41 W	35*	—	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38	1 21	4 16.85	+25 5.7	1.928	2.630	17.6	19.9	126 E	70	39
6 15	3 8.93	+55 16.5	2.442	1.812	21.8	20.8	42 W	35*	—	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
6 20	3 28.00	+56 48.7	2.462	1.846	21.9	20.8	43 W	36*	—	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38	1 21	4 16.85	+25 5.7	1.928	2.630	17.6	19.9	126 E	70	39
6 25	3 47.72	+58 11.5	2.481	1.879	21.9	20.9	44 W	37*	—	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
6 30	4 8.03	+59 24.9	2.499	1.912	21.9	21.0	45 W	38*	—	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38	1 21	4 16.85	+25 5.7	1.928	2.630	17.6	19.9	126 E	70	39
7 5	4 28.83	+60 28.7	2.517	1.944	21.9	21.0	45 W	39*	—	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
7 10	4 49.99	+61 23.2	2.533	1.976	21.9	21.1	47 W	39*	—	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38	1 21	4 16.85	+25 5.7	1.928	2.630	17.6	19.9	126 E	70	39
7 15	5 11.36	+62 8.6	2.549	2.008	21.9	21.1	48 W	40*	—	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
7 20	5 32.78	+62 45.2	2.563	2.040	22.0	21.2	49 W	40*	—	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38	1 21	4 16.85	+25 5.7	1.928	2.630	17.6	19.9	126 E	70	39
7 25	5 54.08	+63 13.6	2.576	2.071	22.0	21.2	50 W	41*	—	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
7 30	6 15.10	+63 34.4	2.587	2.102	22.0	21.2	51 W	42*	—	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38	1 21	4 16.85	+25 5.7	1.928	2.630	17.6	19.9	126 E	70	39
8 4	6 35.69	+63 48.4	2.596	2.132	22.1	21.3	52 W	42*	—	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
8 9	6 55.70	+63 56.4	2.604	2.162	22.2	21.3	54 W	43*	—	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38	1 21	4 16.85	+25 5.7	1.928	2.630	17.6	19.9	126 E	70	39
8 14	7 15.04	+63 59.5	2.609	2.192	22.3	21.4	55 W	44*	—	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
8 19	7 33.60	+63 58.5	2.612	2.221	22.3	21.4	57 W	45*	—	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38	1 21	4 16.85	+25 5.7	1.928	2.630	17.6	19.9	126 E	70	39
8 24	7 51.35	+63 54.3	2.613	2.250	22.4	21.4	58 W	46*	—	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
8 29	8 8.25	+63 47.8	2.612	2.278	22.5	21.5	60 W	46*	—	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38	1 21	4 16.85	+25 5.7	1.928	2.630	17.6	19.9	126 E	70	39
9 3	8 24.30	+63 40.0	2.609	2.306	22.6	21.5	62 W	48*	—	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
152563 1992 BF										48450 1991 NA																			
12 27	19 0.01	-23 42.2	1.619	0.662	12.5	20.7	8 E	—	1*	12 27	4 27.04	+27 41.7	1.630	2.549	9.9	19.2	154 E	73	36	1 6	4 20.47	+26 31.6	1.734	2.582	13.5	19.5	142 E	72	37
1 1	19 30.63	-22 16.7	1.609	0.666	15.5	20.8	10 E	1*	3*	1 16	4 17.25	+25 31.4	1.859	2.614	16.4	19.8	131 E	71	38	1 21	4 16.85								

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
133819 2003 XS										160519 1995 CS₃									
<i>(continuation)</i>																			
10 13	7 0.61	+29 51.0	1.842	2.189	26.9	20.3	96 W	75	34*	12 27	19 0.84	-21 51.7	2.628	1.663	5.2	20.1	9 E	1*	1*
10 23	7 7.55	+30 15.8	1.762	2.233	25.5	20.2	105 W	75	34*	1 6	19 30.56	-20 53.6	2.608	1.632	3.4	20.0	6 E	—	—
11 2	7 11.07	+30 46.3	1.685	2.275	23.5	20.1	114 W	76	33	1 16	20 0.52	-19 34.0	2.587	1.605	1.6	19.8	3 E	—	—
11 12	7 10.77	+31 22.6	1.616	2.318	20.8	20.0	124 W	76	33	1 26	20 30.51	-17 53.6	2.564	1.580	0.7	19.7	1 W	—	—
11 22	7 6.45	+32 2.4	1.558	2.359	17.3	19.8	135 W	77	32	2 5	21 0.38	-15 53.7	2.542	1.559	2.1	19.7	3 W	—	—
11 27	7 2.80	+32 22.3	1.536	2.379	15.4	19.8	140 W	77	32	2 15	21 30.02	-13 36.2	2.520	1.541	3.8	19.8	6 W	—	—
12 2	6 58.21	+32 41.3	1.518	2.400	13.3	19.7	146 W	78	31	2 25	21 59.34	-11 3.7	2.500	1.527	5.4	19.8	8 W	—	2*
12 7	6 52.79	+32 58.4	1.506	2.420	11.1	19.6	152 W	78	31	3 7	22 28.30	-8 19.2	2.481	1.517	7.0	19.9	11 W	—	5*
12 12	6 46.68	+33 12.9	1.500	2.440	8.8	19.5	158 W	78	31	3 17	22 56.91	-5 26.0	2.464	1.511	8.5	19.9	13 W	—	7*
12 17	6 40.06	+33 24.0	1.501	2.459	6.7	19.4	163 W	78	31	3 27	23 25.16	-2 27.5	2.450	1.510	10.0	20.0	15 W	1*	9*
12 22	6 33.14	+33 31.0	1.509	2.479	4.9	19.4	168 W	79	30	4 6	23 53.11	+0 32.6	2.437	1.513	11.5	20.0	18 W	1*	11*
12 27	6 26.14	+33 33.8	1.524	2.498	4.0	19.4	170 W	79	30	4 16	0 20.79	+3 31.0	2.426	1.521	12.9	20.1	20 W	2*	14*
1 1	6 19.29	+33 32.3	1.546	2.517	4.6	19.5	168 E	79	30	4 26	0 48.24	+6 24.4	2.417	1.532	14.3	20.2	22 W	3*	16*
1 6	6 12.79	+33 26.7	1.576	2.535	6.2	19.6	164 E	78	31	5 6	1 15.50	+9 9.8	2.407	1.548	15.7	20.2	25 W	5*	18*
1 11	6 6.84	+33 17.4	1.613	2.554	8.0	19.7	159 E	78	31	5 16	1 42.58	+11 44.8	2.398	1.567	17.1	20.3	27 W	6*	20*
1 16	6 1.60	+33 5.3	1.656	2.572	9.9	19.9	153 E	78	31	5 26	2 9.47	+14 6.8	2.388	1.590	18.4	20.3	30 W	8*	22*
1 21	5 57.15	+32 50.9	1.705	2.590	11.8	20.0	148 E	78	31	6 5	2 36.13	+16 14.4	2.376	1.616	19.7	20.4	33 W	11*	24*
5892 Milesdavis																			
12 27	19 0.58	-20 10.2	3.974	3.007	3.0	19.4	9 E	2*	—	6 15	3 2.50	+18 6.2	2.362	1.644	21.0	20.5	36 W	14*	26*
1 6	19 16.33	-19 48.9	3.974	2.993	1.1	19.2	3 E	—	—	6 25	3 28.48	+19 41.4	2.343	1.675	22.3	20.5	39 W	17*	28*
1 16	19 32.13	-19 21.0	3.958	2.979	1.6	19.3	5 W	—	—	7 5	3 53.97	+20 59.8	2.321	1.709	23.5	20.6	42 W	22*	29*
1 26	19 47.89	-18 46.8	3.924	2.963	3.6	19.4	11 W	1*	3*	7 15	4 18.83	+22 1.4	2.293	1.744	24.7	20.7	46 W	26*	30*
2 5	20 3.52	-18 6.8	3.875	2.946	5.6	19.4	17 W	4*	10*	7 25	4 42.87	+22 46.8	2.260	1.781	25.8	20.7	50 W	32*	31*
2 15	20 18.97	-17 21.5	3.809	2.929	7.7	19.5	23 W	6*	17*	8 4	5 5.96	+23 17.2	2.220	1.819	26.8	20.7	54 W	37*	32*
2 25	20 34.15	-16 31.4	3.729	2.911	9.7	19.5	30 W	8*	23*	8 14	5 27.91	+23 33.8	2.174	1.858	27.7	20.8	58 W	43*	33*
3 7	20 48.99	-15 37.3	3.635	2.891	11.6	19.5	36 W	10*	30*	8 24	5 48.50	+23 38.3	2.121	1.897	28.5	20.8	63 W	48*	35*
3 17	21 3.43	-14 39.9	3.527	2.871	13.5	19.5	42 W	12*	36*	9 3	6 7.58	+23 32.6	2.061	1.937	29.0	20.8	69 W	54*	36*
3 27	21 17.40	-13 40.2	3.408	2.850	15.3	19.5	49 W	13*	43*	9 13	6 24.89	+23 18.9	1.994	1.978	29.3	20.8	74 W	59*	37*
4 6	21 30.84	-12 39.2	3.278	2.829	16.9	19.4	55 W	15*	49*	9 23	6 40.22	+22 59.5	1.922	2.019	29.4	20.7	81 W	63*	38*
4 16	21 43.66	-11 37.8	3.139	2.806	18.4	19.4	62 W	17*	55*	10 3	6 53.30	+22 36.8	1.845	2.059	29.0	20.7	87 W	66*	40*
4 26	21 55.77	-10 37.3	2.992	2.782	19.6	19.3	68 W	19*	61*	10 13	7 3.80	+22 13.3	1.765	2.100	28.3	20.6	95 W	67	41*
5 6	22 7.08	-9 38.9	2.840	2.758	20.7	19.2	75 W	22*	67*	10 23	7 11.41	+21 51.4	1.684	2.140	26.9	20.5	103 W	67	42*
5 16	22 17.46	-8 44.2	2.683	2.733	21.5	19.1	82 W	24*	71*	11 2	7 15.77	+21 33.3	1.606	2.180	25.0	20.4	112 W	67	42*
5 26	22 26.74	-7 54.8	2.525	2.707	22.0	18.9	89 W	26*	72*	11 12	7 16.52	+21 20.8	1.533	2.219	22.3	20.2	122 W	66	43
6 5	22 34.77	-7 12.5	2.366	2.680	22.1	18.8	97 W	31*	71	11 22	7 13.48	+21 14.7	1.470	2.258	18.8	20.1	132 W	66	43
6 15	22 41.29	-6 39.3	2.209	2.653	21.8	18.6	105 W	34*	71	12 2	7 6.72	+21 14.5	1.423	2.296	14.6	19.9	144 W	66	43
6 25	22 46.07	-6 17.6	2.057	2.624	20.9	18.4	113 W	37*	70	12 12	6 56.74	+21 18.5	1.397	2.334	9.6	19.7	157 W	66	43
7 5	22 48.83	-6 9.5	1.913	2.595	19.5	18.2	122 W	39*	70	12 17	6 50.87	+21 21.3	1.394	2.353	7.0	19.6	163 W	66	43
7 15	22 49.29	-6 17.5	1.780	2.566	17.4	17.9	131 W	39	70	12 22	6 44.63	+21 24.2	1.397	2.371	4.3	19.5	170 W	66	43
7 25	22 47.25	-6 43.2	1.662	2.535	14.5	17.6	141 W	38	71	12 27	6 38.23	+21 26.9	1.407	2.389	1.7	19.3	176 W	66	43
8 4	22 42.65	-7 27.0	1.561	2.504	10.9	17.3	152 W	38	71	1 1	6 31.87	+21 29.2	1.425	2.407	1.4	19.4	177 E	66	43
8 14	22 35.67	-8 27.2	1.484	2.472	6.6	17.0	164 W	37	72	1 6	6 25.75	+21 31.1	1.449	2.425	3.8	19.6	170 E	67	42
8 19	22 31.46	-9 2.1	1.454	2.456	4.2	16.8	170 W	36	73	1 11	6 20.06	+21 32.5	1.481	2.442	6.3	19.8	164 E	67	42
8 24	22 26.91	-9 39.2	1.431	2.440	1.7	16.6	176 W	35	74	1 16	6 14.95	+21 33.6	1.520	2.459	8.7	20.0	158 E	67	42
8 29	22 22.13	-10 17.6	1.414	2.424	0.8	16.5	178 E	35	74	1 21	6 10.54	+21 34.4	1.565	2.476	10.8	20.1	152 E	67	42
9 3	22 17.28	-10 56.2	1.405	2.407	3.4	16.7	172 E	34	75	205378 2001 BJ₁₆									
9 8	22 12.51	-11 34.0	1.402	2.391	6.0	16.8	166 E	33	76	12 27	19 0.91	-18 19.0	2.190	1.234	8.0	21.4	10 E	4*	—
9 13	22 7.97	-12 9.9	1.405	2.374	8.5	16.9	160 E	33	76	1 6	19 37.26	-18 31.1	2.183	1.217	6.5	21.3	8 E	2*	—
9 18	22 3.83	-12 43.0	1.415	2.357	11.0	17.0	154 E	32	77	1 16	20 14.01	-18 15.3	2.177	1.203	5.0	21.2	6 E	—	—
9 23	22 0.21	-13 12.6	1.430	2.340	13.3	17.1	148 E	32	77	1 26	20 50.92	-17 31.9	2.170	1.191	3.6	21.1	4 E	—	—
10 3	21 54.91	-13 59.3	1.476	2.306	17.4	17.3	136 E	31	78	2 5	21 27.75	-16 22.1	2.165	1.182	2.7	21.0	3 E	—	—
10 13	21 52.63	-14 27.4	1.539	2.272	20.9	17.4	126 E	31	78	2 15	22 4.35	-14 48.2	2.160	1.175	2.7	21.0	3 E	—	—
10 23	21 53.57	-14 36.3	1.614	2.237	23.6	17.6	116 E	30	79	2 25	22 40.56	-12 53.2	2.156	1.171	3.6	21.1	4 E	—	—
11 2	21 57.60	-14 26.9	1.697	2.202	25.5	17.7	107 E	31	78	3 7	23 16.32	-10 40.7	2.154	1.171	4.7	21.1	6 E	—	—
11 12	22 4.47	-14 0.2	1.784	2.167	26.8	17.8	99 E	31	78*	3 17	23 51.60	-8 14.8	2.155	1.173	5.9	21.2	7 E	—	—
11 22	22 13.84	-13 17.6	1.873	2.132	27.6	17.9	91 E	32	73*	3 27	0 26.42	-5 39.9	2.157	1.178	6.9	21.2	8 E	—	—
12 2	22 25.35	-12 20.2	1.960	2.098	27.9	18.0	84 E	33	66*	4 6	1 0.82	-3 0.5	2.163	1.186	7.9	21.3	9 E	—	—
12 12	22 38.69	-11 9.1	2.044	2.063	27.7	18.1	77 E	34	59*	4 16	1 34.85	+0 21.1							

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
105943 2000 SY₂₃₃										18919 2000 OJ₅₂ (continuation)									
12 27	19 1.12	-24 6.6	2.654	1.688	5.0	20.2	9E	—	2*	9 13	5 47.00	+30 49.3	2.187	2.293	25.8	19.8	83W	70*	32*
1 6	19 31.16	-23 28.1	2.641	1.665	3.2	20.0	5E	—	—	9 23	5 57.12	+31 22.7	2.109	2.344	25.3	19.7	91W	75*	32*
1 16	20 1.37	-22 27.9	2.627	1.645	1.7	19.9	3E	—	—	10 3	6 4.57	+31 56.1	2.030	2.394	24.4	19.7	99W	77	32*
1 26	20 31.51	-21 6.6	2.611	1.627	1.4	19.8	2W	—	—	10 13	6 8.95	+32 30.2	1.951	2.444	22.9	19.6	107W	78	31
2 5	21 1.39	-19 25.7	2.594	1.613	2.8	19.9	5W	—	—	10 23	6 9.91	+33 5.2	1.878	2.492	20.8	19.5	117W	78	31
2 15	21 30.89	-17 27.0	2.577	1.602	4.5	20.0	7W	—	1*	11 2	6 7.21	+33 39.4	1.813	2.540	18.1	19.4	127W	79	30
2 25	21 59.88	-15 13.2	2.560	1.594	6.2	20.0	10W	—	4*	11 12	6 0.77	+34 9.6	1.764	2.587	14.8	19.2	138W	79	30
3 7	22 28.32	-12 47.1	2.543	1.590	7.8	20.1	13W	—	6*	11 17	5 56.27	+34 21.8	1.746	2.610	12.9	19.2	144W	79	30
3 17	22 56.18	-10 11.6	2.527	1.589	9.5	20.1	15W	—	9*	11 22	5 51.02	+34 31.2	1.734	2.633	11.0	19.1	150W	80	29
3 27	23 23.48	-7 30.0	2.511	1.592	11.1	20.2	18W	—	12*	11 27	5 45.15	+34 37.2	1.728	2.656	9.0	19.0	155W	80	29
4 6	23 50.25	-4 45.4	2.496	1.598	12.7	20.3	21W	—	14*	12 2	5 38.81	+34 39.4	1.728	2.679	7.0	18.9	161W	80	29
4 16	0 16.53	-2 0.7	2.481	1.608	14.2	20.3	23W	—	17*	12 7	5 32.19	+34 37.5	1.736	2.701	5.3	18.9	165W	80	29
4 26	0 42.35	+0 41.2	2.465	1.621	15.7	20.4	26W	—	20*	12 12	5 25.49	+34 31.3	1.751	2.723	4.2	18.9	168W	80	29
5 6	1 7.76	+3 18.0	2.448	1.637	17.2	20.4	29W	2*	23*	12 17	5 18.93	+34 21.2	1.774	2.745	4.2	18.9	168E	79	30
5 16	1 32.79	+5 47.3	2.429	1.656	18.7	20.5	32W	4*	26*	12 22	5 12.67	+34 7.5	1.804	2.766	5.2	19.0	165E	79	30
5 26	1 57.44	+8 7.2	2.408	1.677	20.1	20.5	35W	6*	28*	12 27	5 6.87	+33 50.8	1.842	2.788	6.8	19.2	160E	79	30
6 5	2 21.71	+10 16.4	2.384	1.701	21.5	20.6	38W	9*	31*	1 1	5 1.68	+33 31.9	1.886	2.809	8.5	19.3	155E	79	30
6 15	2 45.56	+12 13.5	2.357	1.728	22.8	20.6	41W	13*	33*	1 6	4 57.20	+33 11.5	1.937	2.830	10.1	19.4	150E	78	31
6 25	3 8.94	+13 57.8	2.325	1.756	24.1	20.7	45W	17*	35*	1 11	4 53.49	+32 50.5	1.995	2.850	11.7	19.6	144E	78	31
7 5	3 31.77	+15 28.9	2.288	1.786	25.3	20.7	49W	22*	37*	1 16	4 50.59	+32 29.3	2.058	2.871	13.1	19.7	139E	77	32
7 15	3 53.94	+16 46.8	2.245	1.818	26.4	20.7	53W	27*	38*	1 21	4 48.51	+32 8.7	2.126	2.891	14.3	19.9	133E	77	32
7 25	4 15.31	+17 51.6	2.197	1.850	27.4	20.8	57W	33*	39*										
8 4	4 35.75	+18 44.2	2.143	1.884	28.3	20.8	62W	39*	40*										
8 14	4 55.06	+19 25.4	2.083	1.919	29.0	20.8	66W	45*	41*										
8 24	5 13.02	+19 56.7	2.017	1.954	29.4	20.8	72W	51*	41*										
9 3	5 29.42	+20 19.7	1.945	1.990	29.7	20.7	78W	57*	42*										
9 13	5 43.96	+20 36.2	1.868	2.026	29.6	20.7	84W	62*	42*										
9 23	5 56.34	+20 48.4	1.788	2.062	29.1	20.6	91W	65*	43*										
10 3	6 6.21	+20 58.6	1.706	2.098	28.2	20.5	98W	66*	43*										
10 13	6 13.15	+21 9.0	1.624	2.134	26.6	20.4	106W	66	43										
10 23	6 16.77	+21 21.8	1.546	2.170	24.4	20.3	116W	66	43										
11 2	6 16.72	+21 38.3	1.475	2.206	21.5	20.1	126W	67	42										
11 12	6 12.80	+21 58.8	1.416	2.241	17.7	19.9	137W	67	42										
11 22	6 5.17	+22 22.4	1.375	2.276	13.2	19.7	148W	67	42										
11 27	6 0.15	+22 34.5	1.362	2.293	10.6	19.6	155W	68	41										
12 2	5 54.48	+22 46.3	1.355	2.310	8.0	19.5	161W	68	41										
12 7	5 48.35	+22 57.6	1.355	2.327	5.3	19.4	167W	68	41										
12 12	5 41.95	+23 7.9	1.362	2.343	2.5	19.3	174W	68	41										
12 17	5 35.51	+23 17.2	1.376	2.360	0.2	19.1	179E	68	41										
12 22	5 29.23	+23 25.2	1.397	2.376	2.9	19.4	173E	68	41										
12 27	5 23.31	+23 32.2	1.425	2.393	5.5	19.6	166E	69	40										
1 1	5 17.91	+23 38.2	1.461	2.409	8.0	19.8	160E	69	40										
1 6	5 13.19	+23 43.6	1.502	2.425	10.3	20.0	154E	69	40										
1 11	5 9.25	+23 48.7	1.550	2.440	12.3	20.1	148E	69	40										
1 16	5 6.14	+23 53.6	1.604	2.456	14.2	20.3	142E	69	40										
1 21	5 3.90	+23 58.7	1.662	2.471	15.9	20.4	137E	69	40										
12 27	19 1.14	-22 7.5	1.854	0.894	9.6	21.2	9E	1*	1*										
1 1	19 24.35	-21 28.3	1.876	0.918	9.7	21.3	9E	1*	1*										
1 6	19 46.76	-20 38.7	1.899	0.942	9.7	21.4	9E	1*	1*										
1 11	20 8.36	-19 40.0	1.921	0.964	9.5	21.5	9E	2*	1*										
1 16	20 29.18	-18 33.4	1.944	0.986	9.3	21.5	9E	2*	1*										
18919 2000 OJ₅₂										189058 2000 UT₁₆									
12 27	19 1.77	-26 22.8	2.468	1.505	6.0	18.4	9E	—	3*	12 27	19 2.17	-13 5.0	2.388	1.451	9.3	19.8	14E	8*	—
1 6	19 36.06	-24 59.9	2.453	1.482	4.6	18.3	7E	—	1*	1 6	19 33.00	-10 51.0	2.342	1.403	9.2	19.7	13E	7*	—
1 16	20 10.08	-23 8.0	2.442	1.464	3.3	18.2	5E	—	—	1 16	20 4.75	-8 13.5	2.298	1.359	9.5	19.6	13E	6*	—
1 26	20 43.49	-20 49.2	2.434	1.452	2.1	18.1	3E	—	—	1 26	20 37.32	-5 14.1	2.258	1.322	10.1	19.5	14E	4*	—
2 5	21 16.03	-18 7.2	2.431	1.446	1.5	18.0	2E	—	—	2 5	21 10.65	-1 55.9	2.226	1.292	10.7	19.5	14W	5*	—
2 15	21 47.60	-15 6.3	2.432	1.446	1.9	18.1	3W	—	—	2 10	21 27.59	-0 11.2	2.212	1.280	11.0	19.4	14W	5*	—
2 25	22 18.10	-11 51.2	2.437	1.452	3.0	18.1	4W	—	—	2 15	21 44.70	+1 36.4	2.202	1.270	11.3	19.4	15W	6*	—
3 7	22 47.56	-8 26.8	2.447	1.464	4.3	18.3	6W	—	—	2 20	22 1.97	+3 25.8	2.194	1.263	11.5	19.4	15W	6*	—
3 17	23 16.05	-4 57.9	2.460	1.482	5.6	18.4	8W	—	2*	2 25	22 19.38	+5 16.3	2.189	1.258	11.6	19.4	15W	6*	—
3 27	23 43.66	-1 28.8	2.475	1.506	7.0	18.5	11W	—	5*	3 2	22 36.93	+7 6.7	2.187	1.255	11.7	19.4	15W	7*	—
4 6	0 10.47	+1 56.8	2.493	1.534	8.4	18.6	13W	—	7*	3 7	22 54.60	+8 56.3	2.188	1.255	11.7	19.4	15W	7*	—
4 16	0 36.60	+5 15.8	2.511	1.567	9.9	18.7	16W	1*	9*	3 12	23 12.38	+10 43.8	2.192	1.257	11.6	19.4	15W	7*	—
4 26	1 2.12	+8 25.4	2.528	1.604	11.3	18.8	18W	2*	12*	3 17	23 30.26	+12 28.6	2.199	1.261	11.4	19.4	15W	7*	—
5 6	1 27.11	+11 23.8	2.544	1.644	12.8	19.0	21W	4*	14*	3 22	23 48.19	+14 9.4	2.210	1.268	11.1	19.4	14W	7*	—
5 16	1 51.60	+14 9.5	2.557	1.687	14.3	19.1	24W	6*	17*	3 27	0 6.16	+15 45.7	2.223	1.277	10.8	19.4	14W	6*	—
5 26	2 15.61	+16 41.4	2.566	1.733	15.7	19.2	28W	9*	20*	4 1	0 24.14	+17 16.5	2.238	1.288	10.4	19.5	14W	6*	—
6 5	2 39.13	+18 59.1	2.569	1.780	17.1	19.3	31W	12*	22*	4 6	0 42.11	+18 41.4	2.257	1.302	10.0	19.5	13W	6*	—
6 15	3 2.14	+21 2.4	2.567	1.829	18.5	19.4	35W	16*	24*	4 16	1 17.87	+21 11.4	2.299	1.334	9.0	19.5	12W	5*	—
6 25	3 24.55	+22 51.5	2.557	1.879	19.9	19.5	39W	20*	26*	4 26	1 53.13	+23 13.0	2.348	1.374	8.0	19.6			

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
189058 2000 UT₁₆										134371 1995 RH									
<i>(continuation)</i>										<i>(continuation)</i>									
7 25	6 13.92	+23 4.2	2.720	1.894	15.0	20.9	29 W	16*	17*	5 6	1 5.15	-10 0.8	2.330	1.646	21.8	19.7	37 W	-	29*
8 4	6 34.96	+21 41.4	2.722	1.958	16.6	21.0	33 W	20*	20*	5 16	1 32.53	-7 53.0	2.288	1.642	23.1	19.7	40 W	-	32*
8 14	6 54.39	+20 9.6	2.714	2.021	18.2	21.1	38 W	25*	23*	5 26	1 59.54	-5 48.8	2.249	1.642	24.4	19.7	42 W	-	35*
8 24	7 12.23	+18 30.0	2.694	2.085	19.6	21.2	44 W	30*	27*	6 5	2 26.11	-3 50.3	2.212	1.646	25.5	19.7	44 W	-	38*
9 3	7 28.46	+16 44.0	2.662	2.147	20.9	21.3	49 W	35*	30*	6 15	2 52.19	-1 59.8	2.176	1.652	26.5	19.7	47 W	1*	41*
9 13	7 43.05	+14 52.5	2.620	2.209	22.0	21.4	55 W	40*	34*	6 25	3 17.68	-0 18.9	2.140	1.662	27.5	19.7	49 W	5*	43*
9 23	7 55.94	+12 56.6	2.567	2.270	22.9	21.4	62 W	45*	38*	7 5	3 42.50	+1 11.4	2.103	1.675	28.4	19.7	52 W	10*	45*
10 3	8 7.04	+10 57.2	2.504	2.330	23.5	21.4	68 W	49*	42*	7 15	4 6.55	+2 30.3	2.065	1.691	29.3	19.7	55 W	15*	47*
10 13	8 16.20	+8 55.3	2.433	2.389	23.9	21.4	76 W	51*	47*	7 25	4 29.70	+3 37.6	2.023	1.710	30.1	19.7	58 W	21*	48*
10 23	8 23.25	+6 52.0	2.357	2.447	23.8	21.4	83 W	52*	51*	8 4	4 51.85	+4 33.9	1.978	1.732	30.8	19.7	61 W	26*	50*
11 2	8 28.01	+4 48.8	2.277	2.504	23.3	21.4	91 W	50	56*	8 14	5 12.85	+5 19.7	1.929	1.756	31.5	19.7	65 W	32*	51*
11 12	8 30.24	+2 47.7	2.196	2.560	22.4	21.3	100 W	48	61*	8 24	5 32.53	+5 56.6	1.874	1.782	32.0	19.7	69 W	37*	52*
11 22	8 29.74	+0 51.2	2.120	2.614	20.9	21.2	109 W	46	63	9 3	5 50.75	+6 26.2	1.814	1.810	32.3	19.6	74 W	42*	53*
12 2	8 26.39	+0 57.4	2.052	2.668	18.9	21.2	119 W	44	65	9 13	6 7.28	+6 50.8	1.748	1.839	32.4	19.6	79 W	47*	54*
12 12	8 20.20	+2 33.6	1.997	2.720	16.5	21.1	128 W	42	67	9 23	6 21.88	+7 13.3	1.678	1.871	32.3	19.5	84 W	50*	55*
12 22	8 11.47	+3 52.8	1.961	2.771	13.8	21.0	138 W	41	68	10 3	6 34.28	+7 36.8	1.604	1.903	31.7	19.5	91 W	52*	55*
1 1	8 0.78	+4 50.6	1.948	2.820	11.1	20.9	146 W	40	69	10 13	6 44.11	+8 5.2	1.527	1.937	30.7	19.4	98 W	53	56*
1 11	7 49.04	+5 23.8	1.962	2.869	9.2	20.9	152 W	40	69	10 23	6 50.99	+8 42.9	1.449	1.971	29.0	19.3	106 W	54	55
1 21	7 37.34	+5 32.3	2.004	2.916	8.8	20.9	153 E	39	70	11 2	6 54.51	+9 34.6	1.374	2.006	26.6	19.1	115 W	55	54
60924 2000 JF₄₄										360433 2002 JR₉									
12 27	19 2.44	-24 21.8	2.602	1.638	5.4	19.6	9 E	-	2*	12 27	19 2.91	-21 57.0	1.884	0.926	9.8	19.5	9 E	1*	1*
1 6	19 33.40	-23 25.3	2.613	1.638	3.6	19.5	6 E	-	-	1 1	19 28.26	-21 46.7	1.857	0.904	10.8	19.5	10 E	1*	2*
1 16	20 3.84	-22 7.3	2.623	1.641	1.9	19.4	3 E	-	-	1 6	19 54.15	-21 21.2	1.833	0.887	12.0	19.5	11 E	2*	3*
1 26	20 33.55	-20 29.8	2.631	1.648	1.0	19.3	2 E	-	-	1 11	20 20.40	-20 40.0	1.814	0.875	13.4	19.5	12 E	3*	4*
2 5	21 2.41	-18 35.6	2.639	1.657	2.3	19.5	4 W	-	-	1 16	20 46.77	-19 43.0	1.799	0.870	14.9	19.5	13 E	4*	5*
2 15	21 30.35	-16 27.4	2.645	1.669	4.0	19.6	7 W	-	1*	1 21	21 13.06	-18 30.9	1.789	0.871	16.3	19.5	14 E	5*	6*
2 25	21 57.31	-14 8.4	2.650	1.683	5.8	19.7	10 W	-	4*	1 26	21 39.04	-17 5.0	1.784	0.878	17.7	19.6	16 E	6*	7*
3 7	22 23.34	-11 41.4	2.652	1.700	7.6	19.8	13 W	-	7*	2 5	22 29.46	-13 38.8	1.790	0.909	19.9	19.8	18 E	8*	9*
3 17	22 48.46	-9 9.4	2.651	1.720	9.4	19.9	16 W	-	10*	2 10	22 53.64	-11 42.9	1.802	0.932	20.7	19.8	20 E	9*	10*
3 27	23 12.74	-6 34.8	2.648	1.741	11.2	20.0	20 W	-	14*	2 15	23 17.05	-9 41.8	1.820	0.960	21.2	20.0	21 E	10*	11*
4 6	23 36.23	-4 0.1	2.640	1.765	12.9	20.1	23 W	1*	17*	2 20	23 39.64	-7 37.6	1.843	0.992	21.5	20.1	22 E	11*	12*
4 16	23 59.01	-1 27.3	2.628	1.790	14.6	20.2	27 W	3*	21*	2 25	0 1.39	-5 32.7	1.871	1.027	21.5	20.2	22 E	12*	12*
4 26	0 21.12	+1 1.8	2.611	1.817	16.3	20.3	30 W	4*	24*	3 2	0 22.33	-3 29.0	1.904	1.065	21.3	20.3	23 E	13*	13*
5 6	0 42.61	+3 25.6	2.589	1.845	17.9	20.3	34 W	6*	28*	3 7	0 42.47	-1 27.9	1.942	1.105	21.0	20.4	23 E	13*	13*
5 16	1 3.52	+5 42.9	2.561	1.874	19.5	20.4	38 W	9*	32*	3 12	1 1.87	+0 29.2	1.984	1.147	20.4	20.5	24 E	13*	13*
5 26	1 23.84	+7 52.5	2.526	1.905	21.0	20.4	42 W	12*	35*	3 17	1 20.55	+2 21.3	2.030	1.190	19.7	20.6	24 E	13*	13*
6 5	1 43.57	+9 53.6	2.485	1.936	22.4	20.5	47 W	15*	38*	3 22	1 38.55	+4 7.7	2.079	1.234	18.9	20.7	24 E	13*	13*
6 15	2 2.66	+11 45.6	2.437	1.967	23.7	20.5	51 W	20*	41*	3 27	1 55.93	+5 48.0	2.131	1.279	18.1	20.8	23 E	13*	13*
6 25	2 21.05	+13 27.9	2.382	1.999	24.9	20.5	56 W	25*	43*	4 1	2 12.71	+7 21.8	2.185	1.324	17.1	20.9	23 E	12*	13*
7 5	2 38.64	+15 0.5	2.321	2.032	25.9	20.5	61 W	31*	44*	4 6	2 28.95	+8 49.0	2.242	1.370	16.1	21.0	22 E	11*	13*
7 15	2 55.29	+16 23.1	2.252	2.064	26.8	20.5	66 W	37*	45*	4 11	2 44.67	+10 9.7	2.299	1.415	15.1	21.1	22 E	10*	12*
7 25	3 10.84	+17 35.8	2.177	2.097	27.4	20.5	72 W	44*	45*	4 16	2 59.92	+11 24.0	2.357	1.461	14.0	21.2	21 E	9*	12*
8 4	3 25.07	+18 38.9	2.097	2.130	27.8	20.5	78 W	51*	45*	4 21	3 14.72	+12 31.9	2.416	1.507	12.9	21.3	20 E	8*	11*
8 14	3 37.71	+19 32.9	2.012	2.162	27.8	20.4	84 W	57*	44*	4 26	3 29.10	+13 33.7	2.475	1.553	11.8	21.3	18 E	7*	10*
8 24	3 48.45	+20 18.0	1.924	2.195	27.4	20.4	91 W	62*	44	5 1	3 43.07	+14 29.7	2.534	1.598	10.7	21.4	17 E	5*	9*
9 3	3 56.95	+20 55.0	1.834	2.227	26.6	20.3	99 W	66*	43	5 6	3 56.67	+15 20.0	2.592	1.643	9.5	21.5	16 E	4*	8*
9 13	4 2.78	+21 23.9	1.745	2.258	25.2	20.1	107 W	66	43	388189 2006 DS₁₄									
9 23	4 5.57	+21 45.0	1.661	2.289	23.1	20.0	116 W	67	42	12 27	19 2.97	-15 23.3	1.559	0.633	19.2	21.4	12 E	6*	-
10 3	4 4.98	+21 57.7	1.584	2.320	20.4	19.8	126 W	67	42	1 1	19 32.99	-16 7.5	1.525	0.609	21.5	21.4	13 E	7*	-
10 13	4 0.84	+22 1.3	1.520	2.350	16.8	19.7	137 W	67	42	1 6	20 3.86	-16 44.1	1.490	0.591	24.5	21.4	14 E	7*	3*
10 23	3 53.35	+21 54.6	1.473	2.380	12.6	19.5	149 W	67	42	1 11	20 35.41	-17 11.7	1.453	0.578	28.3	21.4	16 E	8*	6*
134371 1995 RH										1 16	21 7.39	-17 28.2	1.416	0.573	32.7	21.4	18 E	8*	8*
12 27	19 2.78	-25 39.1	2.903	1.939	4.7	19.9	9 E	-	3*	133059 2003 EC₅₈									
1 6	19 28.82	-25 52.6	2.881	1.905	3.0	19.7	6 E	-	-	12 27	19 3.47	-32 25.9	3.164	2.215	5.6	20.1	13 E	-	6*
1 16	19 55.60	-25 50.1	2.851	1.873	2.6	19.6	5 E	-	-	1 6	19 27.58	-32 26.1	3.206	2.248	4.7	20.1	11 E	-	3*
1 26	20 22.97	-25 31.1	2.814	1.842	3.8	19.6	7 W	-	-	1 16	19 51.29	-32 14.6	3.237	2.280	4.8	20.2	11 E	-	-
2 5	20 50.81	-24 55.7	2.772	1.812	5.7	19.7	10 W	-	3*	1 26	20 14.49	-31 52.9	3.256	2.312	5.8	20.2	14 W	-	4*
2 15	21 18.99	-24 4.1	2.726	1.784	7.7	19.7	14 W	-	7*	2 5	20 37.09	-31 22.8	3.264	2.343	7.3	20.3	18 W	-	9*
2 25	21 47.40	-22 57.0	2.676	1.757	9.7	19.7	17 W	-	10*	2 15	20 59.04	-30 45.9	3.261	2.374	9.0	20.4	22 W	-	13*
3 7	22 15.91	-21 35.3	2.625	1.733	11.7	19.7	21 W	-	13*	2 25	21 20.28	-30 4.1	3.246	2.405	10.7	20.5	27 W	-	18*
3 17	22 44.45	-20 0.5	2.572	1.712	13.7	19.7	24 W	-	16*	3 7	21 40.78	-29 19.3	3.220	2.434	12.4	20.6	32 W	-	23*
3 27	23 12.93	-18 14.4	2.520	1.692	15.5	19.7	27 W	-	18*	3 17	22 0.51	-28 33.3	3.183	2.463	14.1	20.7	37 W	-	28*
4 6	23 41.29	-16 18.9	2.469	1.676	17.2	19.7	30 W	-	21*	3 27	22 19.46	-27 48.1	3.135	2.491	15.7	20.7	42 W	-	33*
4 16	0 9.49	+14 16.4	2.420	1.663	18.9	19.7	32 W	-	21*	4 6	22 37.59	-27 5.4	3.078	2.519	17.1	20.8	48 W	-	38*
4																			

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
133059 2003 EC₅₈										2202 Pele									
<i>(continuation)</i>										<i>(continuation)</i>									
4 16	22 54.90	-26 27.2	3.011	2.546	18.5	20.8	54 W	—	44*	9 13	9 15.52	+11 0.7	2.469	1.709	18.5	21.2	33 W	22*	19*
4 26	23 11.33	-25 55.3	2.936	2.572	19.7	20.8	59 W	—	50*	9 23	9 36.96	+9 25.0	2.477	1.777	19.7	21.3	37 W	26*	21*
5 6	23 26.84	-25 31.7	2.854	2.597	20.6	20.8	65 W	—	56*	10 3	9 56.86	+7 49.4	2.473	1.844	21.0	21.4	41 W	30*	24*
5 16	23 41.35	-25 18.1	2.765	2.621	21.4	20.7	71 W	—	63*	306787 2001 HS₈									
5 26	23 54.75	-25 16.4	2.671	2.644	22.0	20.7	78 W	2*	70*	12 27	19 3.67	-7 37.2	2.812	1.905	9.4	20.1	18 E	12*	—
6 5	0 6.92	-25 28.4	2.574	2.667	22.2	20.7	84 W	4*	77*	1 6	19 28.45	-6 31.6	2.873	1.952	8.4	20.1	17 E	9*	—
6 15	0 17.68	-25 55.7	2.476	2.689	22.2	20.6	91 W	7*	84*	1 16	19 52.31	-5 15.8	2.930	2.001	7.7	20.2	16 E	6*	—
6 25	0 26.81	-26 39.5	2.378	2.709	21.8	20.5	98 W	10*	89	1 26	20 15.20	-3 51.1	2.982	2.050	7.4	20.3	16 W	8*	—
7 5	0 34.06	-27 40.4	2.284	2.729	21.1	20.4	105 W	12*	88	2 5	20 37.12	-2 19.1	3.028	2.101	7.6	20.4	16 W	10*	—
7 15	0 39.11	-28 58.2	2.195	2.748	20.0	20.3	112 W	14*	87	2 15	20 58.07	-0 41.2	3.067	2.152	8.3	20.5	18 W	12*	1*
7 25	0 41.64	-30 30.8	2.116	2.766	18.6	20.2	120 W	14*	85	2 25	21 18.06	+1 1.2	3.097	2.203	9.3	20.6	21 W	14*	6*
7 30	0 41.86	-31 21.5	2.080	2.775	17.7	20.1	124 W	14*	85	3 7	21 37.09	+2 46.8	3.119	2.255	10.5	20.7	25 W	16*	11*
8 4	0 41.35	-32 14.4	2.049	2.783	16.8	20.1	127 W	13	84	3 17	21 55.18	+4 34.3	3.132	2.306	11.9	20.8	28 W	18*	16*
8 9	0 40.07	-33 8.4	2.021	2.792	15.9	20.0	131 W	12	83	3 27	22 12.34	+6 22.5	3.134	2.358	13.2	20.9	33 W	20*	21*
8 14	0 38.02	-34 2.6	1.997	2.800	15.0	20.0	134 W	11	82	4 6	22 28.55	+8 10.5	3.125	2.409	14.6	21.0	37 W	22*	26*
8 19	0 35.21	-34 55.6	1.979	2.807	14.2	19.9	137 W	10	81	4 16	22 43.81	+9 57.2	3.106	2.460	16.0	21.1	42 W	24*	31*
8 24	0 31.67	-35 46.3	1.965	2.815	13.4	19.9	140 W	9	80	4 26	22 58.08	+11 41.8	3.076	2.511	17.2	21.1	48 W	26*	35*
8 29	0 27.44	-36 33.3	1.957	2.822	12.7	19.9	142 W	8	79	5 6	23 11.32	+13 23.3	3.035	2.561	18.4	21.2	53 W	29*	39*
9 3	0 22.62	-37 15.4	1.954	2.829	12.3	19.8	143 W	8	79	5 16	23 23.45	+15 0.9	2.983	2.611	19.4	21.2	59 W	33*	42*
9 8	0 17.30	-37 51.2	1.958	2.836	12.0	19.8	144 W	7	78	5 26	23 34.38	+16 33.6	2.922	2.660	20.2	21.3	65 W	37*	44*
9 13	0 11.62	-38 19.8	1.967	2.842	12.0	19.9	144 W	7	78	6 5	23 43.98	+18 0.4	2.853	2.708	20.8	21.3	72 W	42*	45*
9 18	0 5.73	-38 40.1	1.982	2.849	12.3	19.9	143 W	6	77	6 15	23 52.11	+19 20.2	2.776	2.756	21.2	21.3	78 W	48*	45
9 23	23 59.81	-38 51.9	2.003	2.855	12.7	19.9	141 W	6	77	6 25	23 58.59	+20 31.4	2.694	2.803	21.2	21.2	85 W	54*	43
9 28	23 53.99	-38 55.0	2.029	2.861	13.3	20.0	139 E	6	77	7 5	0 3.24	+21 32.4	2.608	2.850	20.9	21.2	93 W	60*	42
10 3	23 48.45	-38 49.3	2.061	2.866	14.0	20.1	136 E	6	77	7 15	0 5.85	+22 20.9	2.522	2.895	20.1	21.1	101 W	66*	42
10 8	23 43.31	-38 35.1	2.098	2.871	14.8	20.1	133 E	6	77	7 25	0 6.29	+22 54.3	2.438	2.940	19.0	21.0	110 W	68	41
10 13	23 38.70	-38 13.1	2.140	2.877	15.6	20.2	129 E	7	78	8 4	0 4.47	+23 9.6	2.361	2.984	17.3	21.0	119 W	68	41
10 18	23 34.70	-37 43.9	2.186	2.881	16.3	20.3	126 E	7	78	8 14	0 4.43	+23 3.8	2.295	3.028	15.3	20.9	128 W	68	41
10 23	23 31.37	-37 8.3	2.236	2.886	17.1	20.4	122 E	8	79	8 24	23 54.44	+22 34.4	2.245	3.070	12.8	20.7	138 W	68	41
10 28	23 28.73	-36 27.2	2.290	2.890	17.7	20.4	118 E	9	80	9 3	23 46.98	+21 40.6	2.215	3.112	10.1	20.6	147 W	67	42
11 2	23 26.81	-35 41.4	2.347	2.895	18.3	20.5	114 E	9	80	9 13	23 38.71	+20 23.5	2.210	3.153	7.6	20.6	155 W	65	44
11 7	23 25.59	-34 51.4	2.407	2.898	18.8	20.6	110 E	10	81	9 23	23 30.47	+18 47.8	2.232	3.193	6.2	20.5	160 E	64	45
11 12	23 25.06	-33 58.0	2.469	2.902	19.1	20.6	106 E	11	82	10 3	23 23.03	+17 0.2	2.283	3.232	6.7	20.6	158 E	62	47
11 17	23 25.18	-33 1.9	2.533	2.905	19.4	20.7	102 E	12	83	10 13	23 17.02	+15 8.9	2.363	3.270	8.6	20.8	151 E	60	49
11 22	23 25.92	-32 3.6	2.598	2.909	19.6	20.8	98 E	13	84	10 23	23 12.89	+13 21.7	2.469	3.308	10.7	21.0	142 E	58	51
11 27	23 27.23	-31 3.5	2.665	2.912	19.8	20.8	94 E	14	85	11 2	23 10.79	+11 44.6	2.599	3.345	12.8	21.2	132 E	57	52
12 2	23 29.07	-30 2.0	2.732	2.914	19.8	20.9	91 E	15	84*	11 12	23 10.75	+10 21.7	2.748	3.380	14.4	21.5	122 E	55	54
12 7	23 31.41	-28 59.4	2.800	2.917	19.7	21.0	87 E	16	81*	306715 2000 WY₅₀									
12 12	23 34.19	-27 56.0	2.867	2.919	19.6	21.0	83 E	17	77*	12 27	19 4.14	-5 51.2	3.794	2.890	6.7	20.2	20 E	14*	—
12 17	23 37.39	-26 51.9	2.934	2.921	19.4	21.0	80 E	18	72*	1 6	19 19.44	-5 0.1	3.853	2.932	5.9	20.2	18 E	9*	—
12 22	23 40.96	-25 47.5	3.001	2.922	19.1	21.1	76 E	19	68*	1 16	19 34.38	-4 1.3	3.897	2.973	5.7	20.3	17 W	9*	—
12 27	23 44.86	-24 42.8	3.066	2.924	18.7	21.1	72 E	20	64*	1 26	19 48.89	-2 55.0	3.925	3.013	6.2	20.3	19 W	13*	—
1 1	23 49.07	-23 38.0	3.130	2.925	18.3	21.2	69 E	21	60*	2 5	20 2.90	-1 41.8	3.939	3.053	7.1	20.4	23 W	16*	3*
1 6	23 53.56	-22 33.2	3.193	2.926	17.8	21.2	66 E	22*	56*	2 15	20 16.35	-0 22.0	3.937	3.092	8.4	20.5	27 W	20*	10*
1 11	23 58.30	-21 28.4	3.254	2.927	17.3	21.2	62 E	23*	52*	2 25	20 29.16	+1 3.7	3.921	3.130	9.7	20.6	32 W	22*	17*
1 16	0 3.26	-20 23.9	3.313	2.927	16.7	21.2	59 E	23*	49*	3 7	20 41.27	+2 34.8	3.890	3.167	11.1	20.6	38 W	25*	23*
1 21	0 8.43	-19 19.6	3.370	2.928	16.1	21.2	56 E	23*	45*	3 17	20 52.61	+4 10.6	3.846	3.203	12.4	20.7	44 W	28*	30*
12 27	19 3.57	-17 40.6	2.768	1.812	5.9	21.1	11 E	4*	—	3 27	21 3.09	+5 50.4	3.789	3.239	13.6	20.7	50 W	31*	36*
1 6	19 29.22	-17 10.6	2.715	1.744	4.1	20.9	7 E	1*	—	4 6	21 12.62	+7 33.5	3.721	3.273	14.7	20.8	56 W	34*	41*
1 16	19 55.97	-16 23.4	2.655	1.677	2.8	20.6	5 E	—	—	4 16	21 21.09	+9 19.1	3.643	3.307	15.7	20.8	63 W	37*	45*
1 26	20 23.81	-15 17.8	2.589	1.609	2.5	20.5	4 W	—	—	4 26	21 28.39	+11 6.0	3.557	3.340	16.4	20.8	69 W	41*	49*
2 5	20 52.70	-13 53.0	2.520	1.542	3.6	20.4	6 W	—	—	5 6	21 34.39	+12 53.2	3.464	3.372	16.9	20.7	76 W	45*	50*
2 15	21 22.67	-12 8.5	2.449	1.476	5.1	20.3	8 W	—	—	5 16	21 38.94	+14 39.3	3.367	3.403	17.2	20.7	83 W	49*	49
2 25	21 53.69	-10 4.6	2.378	1.412	6.7	20.2	10 W	—	3*	5 26	21 41.90	+16 22.2	3.268	3.433	17.2	20.7	91 W	54*	48
3 7	22 25.80	-7 42.2	2.311	1.351	8.2	20.1	11 W	—	5*	6 5	21 43.14	+18 0.0	3.171	3.462	16.9	20.6	98 W	59*	46
3 17	22 59.04	-5 2.9	2.248	1.294	9.5	20.0	12 W	—	6*	6 15	21 42.51	+19 29.9	3.077	3.491	16.3	20.5	106 W	64*	45
3 27	23 33.42	-2 9.9	2.193	1.242	10.6	19.9	13 W	—	7*	6 25	21 39.98	+20 48.5	2.991	3.519	15.4	20.5	113 W	66*	43
4 6	0 8.98	+0 52.4	2.146	1.198	11.4	19.9	14 W	—	8*	7 5	21 35.58	+21 52.4	2.915	3.545	14.3	20.4	121 W	67	42
4 11	0 27.20	+2 25.5	2.127	1.179	11.7	19.8	14 W	—	8*	7 15	21 29.47	+22 37.7	2.855	3.571	13.0	20.3	128 W	68	41
4 16	0 45.70	+3 58.7	2.110	1.162	12.0	19.8	14 W	—	8*	7 25	21 22.00	+23 1.1	2.812	3.596	11.6	20.2	134 W	68	41
4 21	1 4.48	+5 31.3	2.097	1.147	12.2	19.7	14 W	—	8*	8 4	21 13.68	+23 0.8	2.789	3.621	10.5	20.2	139 W	68	41
4 26	1 23.51	+7 2.1	2.086	1.135	12.3	19.7	14 W	—	8*	8 14	21 5.13	+22 36.4	2.790	3.644	9.8	20.2	142 E	68	41
5 1	1 42.78	+8 30.4	2.07																

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
306715 2000 WY₅₀										37314 2001 QP									
<i>(continuation)</i>										<i>(continuation)</i>									
1 11	21 42.42	+10 56.8	4.506	3.895	10.5	21.4	46 E	40*	8*	9 8	21 8.67	+11 51.6	1.677	2.575	12.7	18.6	146 E	57	52
1 21	21 53.02	+11 22.0	4.605	3.905	9.4	21.4	40 E	34*	2*	9 13	21 5.14	+10 39.2	1.678	2.551	13.9	18.7	143 E	56	53
219527 2001 QK₁₄₂										495552 2014 WS₂₀₀									
12 27	19 4.24	-25 56.0	2.446	1.486	6.3	20.0	10 E	—	3*	1 6	19 34.18	-28 17.9	2.768	1.801	6.0	21.2	11 E	—	5*
1 6	19 37.92	-24 54.8	2.392	1.422	5.1	19.8	7 E	—	1*	1 16	20 2.93	-26 56.8	2.747	1.773	3.6	21.0	7 E	—	2*
1 16	20 12.74	-23 21.8	2.338	1.362	4.0	19.6	6 E	—	—	1 26	20 31.52	-25 15.7	2.721	1.747	3.7	20.9	6 W	—	—
1 26	20 48.37	-21 15.4	2.286	1.306	3.3	19.4	4 E	—	—	2 5	20 59.78	-23 15.6	2.693	1.723	4.6	20.9	8 W	—	—
2 5	21 24.51	-18 35.6	2.239	1.257	2.8	19.2	4 E	—	—	2 15	21 27.61	-20 58.0	2.663	1.701	6.0	20.9	10 W	—	3*
2 15	22 0.89	-15 24.1	2.200	1.215	2.5	19.1	3 E	—	—	2 25	21 54.95	-18 24.8	2.631	1.681	7.6	21.0	13 W	—	6*
2 25	22 37.27	-11 45.1	2.170	1.182	2.4	19.0	3 E	—	—	3 7	22 21.75	-15 38.1	2.598	1.664	9.2	21.0	16 W	—	9*
3 2	22 55.41	-9 47.0	2.159	1.170	2.3	19.0	3 E	—	—	3 17	22 48.05	-12 40.5	2.565	1.650	10.9	21.0	18 W	—	12*
3 7	23 13.50	-7 44.5	2.150	1.160	2.2	18.9	3 E	—	—	3 27	23 13.87	-9 34.4	2.531	1.639	12.6	21.0	21 W	—	15*
3 12	23 31.54	-5 38.5	2.145	1.153	2.0	18.9	2 E	—	—	4 6	23 39.27	-6 22.6	2.497	1.631	14.3	21.1	24 W	—	18*
3 17	23 49.52	-3 30.1	2.143	1.149	1.9	18.9	2 E	—	—	4 16	0 4.33	-3 7.5	2.463	1.627	15.9	21.1	26 W	1*	20*
3 22	0 7.43	-1 20.5	2.143	1.148	1.7	18.9	2 E	—	—	4 26	0 29.11	+0 8.1	2.429	1.625	17.5	21.1	29 W	2*	23*
3 27	0 25.27	+0 49.1	2.147	1.150	1.5	18.9	2 E	—	—	5 6	0 53.69	+3 21.9	2.395	1.627	19.1	21.1	32 W	4*	26*
4 1	0 43.05	+2 57.8	2.154	1.155	1.3	18.9	2 E	—	—	5 16	1 18.14	+6 31.5	2.360	1.632	20.6	21.1	35 W	7*	28*
4 6	1 0.77	+5 4.3	2.163	1.163	1.1	18.9	1 E	—	—	5 26	1 42.49	+9 34.8	2.324	1.641	22.1	21.2	37 W	10*	30*
4 11	1 18.43	+7 7.7	2.176	1.174	0.9	18.9	1 E	—	—	6 5	2 6.79	+12 29.8	2.288	1.652	23.5	21.2	40 W	13*	32*
4 16	1 36.02	+9 6.9	2.190	1.187	0.8	18.9	1 W	—	—	6 15	2 31.05	+15 14.9	2.249	1.667	24.8	21.2	44 W	17*	34*
4 21	1 53.54	+11 1.2	2.208	1.203	0.7	18.9	1 W	—	—	6 25	2 55.22	+17 48.7	2.208	1.684	26.1	21.2	47 W	22*	34*
4 26	2 10.98	+12 49.8	2.228	1.222	0.7	19.0	1 W	—	—	7 5	3 19.28	+20 10.3	2.164	1.704	27.3	21.3	50 W	27*	35*
5 6	2 45.60	+16 7.6	2.273	1.265	1.2	19.2	2 W	—	—	7 15	3 43.13	+22 19.0	2.117	1.726	28.4	21.3	54 W	33*	35*
5 16	3 19.77	+18 56.9	2.325	1.315	2.0	19.4	3 W	—	—	7 25	4 6.63	+24 14.6	2.067	1.750	29.4	21.3	58 W	39*	34*
5 26	3 53.32	+21 16.0	2.380	1.372	3.0	19.6	4 W	—	—	8 4	4 29.64	+25 57.6	2.013	1.777	30.2	21.3	62 W	45*	34*
6 5	4 26.08	+23 4.9	2.438	1.433	4.2	19.8	6 W	—	—	8 14	4 51.93	+27 28.7	1.955	1.805	30.9	21.3	66 W	51*	33*
6 15	4 57.87	+24 25.1	2.496	1.497	5.5	20.0	8 W	—	1*	8 24	5 13.27	+28 49.3	1.892	1.835	31.4	21.2	71 W	57*	33*
6 25	5 28.50	+25 18.6	2.551	1.564	6.9	20.2	11 W	2*	2*	9 3	5 33.39	+30 1.3	1.826	1.865	31.7	21.2	76 W	63*	32*
7 5	5 57.83	+25 48.3	2.603	1.632	8.4	20.4	14 W	5*	4*	9 13	5 51.94	+31 6.9	1.756	1.897	31.7	21.2	82 W	69*	32*
7 15	6 25.76	+25 57.4	2.648	1.701	10.0	20.6	17 W	8*	6*	9 23	6 8.57	+32 9.0	1.683	1.930	31.3	21.1	88 W	75*	31*
7 25	6 52.19	+25 49.2	2.687	1.771	11.6	20.8	20 W	12*	8*	10 3	6 22.85	+33 10.3	1.608	1.964	30.5	21.0	95 W	78*	31*
8 4	7 17.11	+25 26.7	2.716	1.840	13.2	21.0	24 W	16*	10*	10 13	6 34.28	+34 13.7	1.534	1.998	29.2	20.9	102 W	79	30*
8 14	7 40.51	+24 53.1	2.736	1.910	14.7	21.1	29 W	20*	12*	10 23	6 42.30	+35 21.4	1.462	2.033	27.3	20.8	110 W	80	29
8 24	8 2.39	+24 11.2	2.745	1.978	16.3	21.3	33 W	25*	14*	11 2	6 46.35	+36 34.2	1.395	2.068	24.8	20.6	119 W	82	27
9 3	8 22.77	+23 23.5	2.742	2.046	17.7	21.4	38 W	30*	16*	11 12	6 45.86	+37 50.4	1.337	2.102	21.6	20.5	129 W	83	26
9 13	8 41.67	+22 32.5	2.728	2.113	19.1	21.5	43 W	35*	18*	11 17	6 43.80	+38 28.3	1.313	2.120	19.7	20.4	134 W	83	26
298737 2004 GQ₃₅										369452 2010 LG₁₄									
12 27	19 4.90	-20 52.5	2.686	1.726	5.6	21.0	10 E	2*	1*	1 6	19 28.45	-12 15.1	2.404	1.469	9.2	21.3	14 E	8*	—
1 6	19 33.00	-19 42.8	2.722	1.749	3.7	20.9	7 E	—	—	1 16	19 52.42	-10 27.1	2.254	1.300	8.0	20.8	11 E	2*	—
1 16	20 0.19	-18 17.6	2.755	1.774	1.9	20.9	3 E	—	—	1 26	20 18.19	-8 17.1	2.150	1.199	9.1	20.6	11 W	4*	—
1 26	20 26.41	-16 39.0	2.783	1.800	1.5	20.9	3 W	—	—	2 5	20 46.41	-5 41.3	2.028	1.085	11.2	20.3	12 W	6*	—
2 5	20 51.61	-14 49.3	2.806	1.827	3.0	21.1	6 W	—	—	2 15	21 18.12	-2 35.7	1.890	0.958	13.9	20.0	13 W	7*	—
2 15	21 15.82	-12 50.7	2.824	1.856	4.9	21.2	9 W	—	2*	2 25	21 54.98	+1 2.8	1.740	0.814	16.9	19.6	14 W	8*	—
2 25	21 39.04	-10 45.4	2.835	1.885	6.9	21.4	13 W	2*	6*	3 2	22 16.15	+3 4.1	1.660	0.735	18.4	19.3	14 W	8*	—
3 7	22 1.33	-8 35.3	2.840	1.916	8.8	21.5	17 W	4*	11*	3 7	22 39.83	+5 11.4	1.579	0.651	20.0	19.0	13 W	7*	—
37314 2001 QP										369452 2010 LG₁₄									
12 27	19 5.41	-2 23.1	4.342	3.460	6.4	21.1	23 E	16*	—	3 12	23 6.71	+7 20.7	1.494	0.562	21.6	18.6	12 W	5*	—
1 6	19 18.25	-2 9.8	4.341	3.438	5.8	21.0	21 E	11*	—	3 17	23 37.69	+9 22.4	1.405	0.469	24.0	18.1	11 W	3*	—
1 16	19 31.21	-1 47.9	4.324	3.415	5.6	21.0	20 W	11*	—										
1 26	19 44.19	-1 17.4	4.289	3.390	6.0	21.0	21 W	15*	—										
2 5	19 57.10	-0 38.9	4.238	3.365	7.0	21.0	24 W	18*	4*										
2 15	20 9.87	+0 7.3	4.170	3.339	8.2	21.0	29 W	21*	11*										
2 25	20 22.40	+1 0.8	4.086	3.311	9.6	21.0	34 W	24*	18*										
3 7	20 34.62	+2 0.9	3.988	3.283	11.1	21.0	39 W	26*	25*										
3 17	20 46.44	+3 7.1	3.877	3.254	12.5	20.9	45 W	28*	32*										
3 27	20 57.77	+4 18.6	3.753	3.223	14.0	20.9	51 W	31*	38*										
4 6	21 8.52	+5 34.7	3.618	3.192	15.3	20.9	57 W	33*	43*										
4 16	21 18.60	+6 54.6	3.474	3.160	16.5	20.8	64 W	36*	48*										
4 26	21 27.88	+8 17.2	3.322	3.126	17.6	20.7	70 W	39*	51*										
5 6	21 36.23	+9 41.5	3.164	3.092	18.5	20.6	77 W	42*	53*										
5 16	21 43.50	+11 6.2	3.001	3.056	19.2	20.5	83 W	46*	53*										
5 26	21 49.50	+12 29.5	2.837	3.020	19.6	20.4	90 W	50*	52										
6 5	21 54.05	+13 49.5	2.673	2.982	19.7	20.2	98 W	54*	50										
6 15	21 56.91	+15 3.5	2.512	2.943	19.5	20.0	105 W	58*	49										
6 25	21 57.86	+16 8.1	2.356	2.904	18.8	19.8	113 W	61*	48										
7 5	21 56.71	+16 59.3	2.209	2.863	17.8	19.6	121 W	62	47										
7 15	21 53.31	+17 32.0	2.073	2.821	16.4	19.4	129 W	63	46										
7 20	21 50.77	+17 39.7	2.011	2.800	15.5	19.3	133 W	63	46										
7 25	21 47.71	+17 40.6	1.953	2.779	14.6	19.2	136 W	63	46										
7 30	21 44.15	+17 34.2	1.899	2.757	13.6	19.1	140 W	63	46										
8 4	21 40.16	+17 19.9	1.851	2.735															

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
369452 2010 LG₁₄										369452 2010 LG₁₄									
<i>(continuation)</i>										<i>(continuation)</i>									
3 19	23 51.45	+10 5.0	1.368	0.432	25.5	17.9	11 W	2*	—	7 30	14 21.23	-24 58.2	1.200	1.630	38.4	20.9	94 E	14*	88*
3 21	0 6.08	+10 41.2	1.329	0.396	27.7	17.7	11 E	2*	—	8 4	14 30.33	-24 10.5	1.284	1.656	37.8	21.1	91 E	14*	85*
3 23	0 21.60	+11 8.0	1.288	0.360	31.0	17.6	11 E	4*	—	8 9	14 39.19	-23 31.2	1.367	1.679	37.1	21.2	88 E	14*	82*
3 25	0 37.95	+11 21.6	1.244	0.328	36.0	17.4	11 E	5*	—	8 14	14 47.88	-22 58.9	1.451	1.700	36.4	21.3	85 E	15*	79*
3 27	0 54.93	+11 17.1	1.196	0.300	43.0	17.3	12 E	6*	—	8 19	14 56.45	-22 32.3	1.533	1.720	35.7	21.5	82 E	15*	76*
100438 1996 PC₃										100438 1996 PC₃									
3 28	1 3.54	+11 6.4	1.171	0.289	47.5	17.3	12 E	6*	—	12 27	19 6.19	-36 49.0	4.134	3.202	5.0	21.3	16 E	—	9*
3 29	1 12.14	+10 49.2	1.144	0.280	52.5	17.4	13 E	7*	—	1 6	19 23.02	-35 56.2	4.124	3.177	4.2	21.3	14 E	—	4*
3 30	1 20.63	+10 25.2	1.116	0.273	58.0	17.4	13 E	7*	1*	1 16	19 39.74	-34 59.8	4.096	3.152	4.4	21.2	14 W	—	3*
3 31	1 28.93	+9 53.9	1.088	0.270	63.9	17.5	14 E	7*	3*	1 26	19 56.27	-33 59.9	4.052	3.126	5.4	21.3	17 W	—	8*
4 1	1 36.93	+9 15.6	1.059	0.269	70.0	17.6	15 E	7*	4*	2 5	20 12.51	-32 56.6	3.991	3.099	6.8	21.3	22 W	—	14*
4 2	1 44.55	+8 30.5	1.030	0.271	76.1	17.8	15 E	7*	6*	2 15	20 28.41	-31 50.4	3.915	3.071	8.5	21.3	27 W	—	20*
4 3	1 51.72	+7 39.2	1.000	0.277	82.0	18.0	16 E	7*	7*	2 25	20 43.88	-30 41.4	3.823	3.042	10.2	21.3	33 W	—	26*
4 4	1 58.42	+6 42.6	0.971	0.285	87.5	18.2	17 E	6*	8*	3 7	20 58.85	-29 30.4	3.716	3.013	12.0	21.3	39 W	—	32*
4 5	2 4.63	+5 41.5	0.943	0.295	92.6	18.4	17 E	6*	9*	3 17	21 13.28	-28 17.7	3.597	2.983	13.7	21.2	45 W	—	38*
4 6	2 10.36	+4 36.9	0.915	0.307	97.1	18.6	18 E	5*	11*	3 27	21 27.07	-27 4.1	3.465	2.951	15.4	21.2	52 W	1*	44*
4 7	2 15.66	+3 29.3	0.889	0.321	101.1	18.9	18 E	4*	12*	4 6	21 40.16	-25 50.2	3.323	2.920	16.9	21.1	58 W	3*	51*
4 8	2 20.54	+2 19.7	0.863	0.336	104.5	19.1	19 E	3*	13*	4 16	21 52.47	-24 36.7	3.171	2.887	18.3	21.1	65 W	5*	58*
4 9	2 25.07	+1 8.3	0.838	0.353	107.3	19.3	20 E	2*	13*	4 26	22 3.87	-23 24.4	3.012	2.853	19.5	21.0	71 W	8*	65*
4 10	2 29.29	+0 4.2	0.815	0.370	109.7	19.4	20 E	1*	14*	5 6	22 14.25	-22 14.1	2.848	2.819	20.5	20.8	78 W	10*	72*
4 11	2 33.23	+1 17.5	0.793	0.387	111.6	19.6	21 E	—	15*	5 16	22 23.46	-21 6.6	2.679	2.784	21.2	20.7	85 W	13*	79*
4 12	2 36.94	+2 31.6	0.771	0.406	113.1	19.7	22 E	—	16*	5 26	22 31.29	-20 2.6	2.509	2.748	21.6	20.5	93 W	16*	84*
4 13	2 40.46	+3 46.0	0.751	0.424	114.3	19.9	23 E	—	16*	6 5	22 37.51	-19 2.8	2.340	2.712	21.6	20.4	100 W	20*	83
4 14	2 43.82	+5 0.8	0.732	0.442	115.1	19.9	24 E	—	17*	6 15	22 41.83	-18 7.9	2.173	2.675	21.1	20.2	108 W	23*	82
4 15	2 47.04	+6 15.8	0.713	0.461	115.7	20.0	24 E	—	18*	6 25	22 43.90	-17 18.3	2.013	2.637	20.1	19.9	117 W	26*	81
4 16	2 50.17	+7 31.1	0.695	0.480	116.1	20.1	25 E	—	18*	7 5	22 43.39	-16 34.0	1.863	2.599	18.3	19.7	126 W	28*	81
4 21	3 5.06	-13 50.5	0.617	0.572	115.3	20.1	31 E	—	21*	7 15	22 39.92	-15 54.3	1.725	2.560	15.9	19.4	136 W	29	80
4 26	3 20.45	-20 18.6	0.553	0.660	111.8	20.0	38 E	—	23*	7 25	22 33.28	-15 17.9	1.605	2.520	12.6	19.1	147 W	30	79
5 1	3 38.42	-27 2.7	0.498	0.744	106.8	19.7	45 E	—	26*	8 4	22 23.51	-14 42.3	1.507	2.480	8.5	18.7	159 W	30	79
5 6	4 1.39	-34 8.8	0.453	0.822	100.5	19.4	53 E	—	29*	8 14	22 11.05	-14 4.4	1.434	2.440	3.7	18.4	171 W	31	78
5 8	4 12.69	-37 5.6	0.438	0.852	97.8	19.3	57 E	—	31*	8 19	22 4.12	-13 43.5	1.408	2.420	1.2	18.1	177 W	31	78
5 10	4 25.60	-40 5.0	0.424	0.881	94.8	19.1	60 E	—	32*	8 24	21 56.94	-13 21.0	1.390	2.399	1.7	18.1	176 E	32	77
5 12	4 40.47	-43 5.6	0.412	0.910	91.7	19.0	64 E	—	34*	8 29	21 49.69	-12 56.6	1.378	2.379	4.4	18.3	170 E	32	77
5 14	4 57.69	-46 4.9	0.401	0.938	88.5	18.9	68 E	—	36*	9 3	21 42.57	-12 30.2	1.374	2.358	7.1	18.4	163 E	32	77
5 16	5 17.70	-48 59.3	0.392	0.965	85.2	18.8	72 E	—	38*	9 13	21 29.53	-11 31.8	1.387	2.317	12.3	18.6	151 E	33	76
5 17	5 28.89	-50 23.3	0.389	0.979	83.5	18.7	74 E	—	39*	9 23	21 19.13	-10 26.4	1.423	2.276	16.9	18.7	139 E	35	74
5 18	5 40.94	-51 44.1	0.386	0.992	81.8	18.7	76 E	—	41*	10 3	21 12.14	-9 15.8	1.478	2.234	20.8	18.9	128 E	36	73
5 19	5 53.89	-53 0.9	0.383	1.005	80.0	18.6	78 E	—	42*	10 13	21 8.87	-8 0.5	1.547	2.193	23.8	19.1	117 E	37	72
5 20	6 7.78	-54 13.0	0.381	1.018	78.3	18.6	80 E	—	43*	10 23	21 9.23	-6 40.7	1.626	2.152	26.1	19.2	108 E	38	71
5 21	6 22.59	-55 19.4	0.380	1.031	76.6	18.5	82 E	—	44*	11 2	21 12.87	-5 15.8	1.708	2.111	27.6	19.3	99 E	40	69*
5 22	6 38.32	-56 19.1	0.379	1.043	74.8	18.5	84 E	—	45*	11 12	21 19.43	-3 44.7	1.792	2.070	28.6	19.4	92 E	41	64*
5 23	6 54.91	-57 11.3	0.378	1.056	73.1	18.5	86 E	—	47*	11 22	21 28.52	-2 6.4	1.874	2.030	29.0	19.5	84 E	43	58*
5 24	7 12.25	-57 55.1	0.379	1.068	71.4	18.4	88 E	—	48*	12 2	21 39.78	-0 20.0	1.953	1.991	28.9	19.5	78 E	45	50*
5 25	7 30.22	-58 29.9	0.379	1.080	69.7	18.4	90 E	—	49*	12 12	21 52.93	+1 35.3	2.026	1.953	28.6	19.5	72 E	46*	42*
5 26	7 48.64	-58 55.2	0.381	1.092	68.0	18.4	92 E	—	50*	12 22	22 7.73	+3 40.1	2.092	1.917	28.0	19.6	66 E	47*	35*
5 27	8 7.30	-59 10.7	0.383	1.104	66.4	18.4	93 E	—	51*	1 1	22 24.02	+5 54.4	2.152	1.881	27.2	19.6	61 E	47*	28*
5 28	8 25.98	-59 16.3	0.386	1.116	64.8	18.4	95 E	—	53*	1 11	22 41.69	+8 18.2	2.204	1.848	26.2	19.5	56 E	46*	22*
5 29	8 44.46	-59 12.3	0.389	1.127	63.2	18.4	97 E	—	54*	1 21	23 0.67	+10 50.7	2.250	1.816	25.2	19.5	52 E	44*	17*
5 30	9 2.53	-58 59.2	0.393	1.139	61.7	18.4	98 E	—	55*	21104 Sveshnikov									
5 31	9 20.01	-58 37.6	0.397	1.150	60.3	18.4	100 E	—	56*	12 27	19 6.90	-28 42.6	3.310	2.353	4.6	18.7	11 E	—	5*
6 1	9 36.77	-58 8.4	0.402	1.161	58.9	18.4	101 E	—	57*	1 6	19 27.81	-27 24.4	3.293	2.320	2.8	18.5	7 E	—	—
6 2	9 52.70	-57 32.6	0.407	1.172	57.6	18.4	103 E	—	58*	1 16	19 48.67	-25 55.7	3.264	2.286	2.1	18.4	5 W	—	—
6 3	10 7.74	-56 51.0	0.413	1.183	56.4	18.4	104 E	—	59*	1 26	20 9.40	-24 16.5	3.223	2.252	3.4	18.4	8 W	—	2*
6 4	10 21.86	-56 4.7	0.420	1.194	55.2	18.4	105 E	—	60*	2 5	20 29.95	-22 26.5	3.171	2.217	5.4	18.5	12 W	—	6*
6 5	10 35.07	-55 14.5	0.427	1.205	54.0	18.4	106 E	—	61	2 15	20 50.29	-20 25.8	3.107	2.182	7.6	18.5	17 W	—	11*
6 6	10 47.39	-54 21.4	0.435	1.215	53.0	18.5	107 E	—	62	2 25	21 10.39	-18 14.6	3.035	2.147	9.9	18.5	22 W	1*	16*
6 7	10 58.87	-53 26.0	0.443	1.226	52.0	18.5	108 E	—	63	3 7	21 30.23	-15 52.8	2.953	2.113	12.1	18.5	27 W	3*	21*
6 8	11 9.54	-52 29.1	0.451	1.236	51.1	18.5	109 E	—	64	3 17	21 49.83	-13 20.							

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°		
21104 Sveshnikov (continuation)									7482 1994 PC₁ (continuation)										
8 24	3 15.71	+45 0.7	1.289	1.661	37.5	17.0	92 W	85*	19	11 22	7 15.41	-41 41.6	0.608	1.264	49.9	17.8	102 W	3	74
8 29	3 27.91	+46 51.3	1.255	1.657	37.5	16.9	93 W	87*	17	11 27	7 19.02	-42 56.4	0.561	1.238	51.0	17.6	103 W	2	73
9 3	3 40.16	+48 38.2	1.222	1.653	37.4	16.8	95 W	86	15	12 2	7 21.87	-44 7.5	0.513	1.212	52.3	17.4	103 W	1	72
9 8	3 52.38	+50 20.9	1.191	1.651	37.3	16.8	97 W	85	14	12 7	7 23.89	-45 13.8	0.463	1.186	53.6	17.2	104 W	-	71
9 13	4 4.48	+51 59.0	1.160	1.649	37.1	16.7	99 W	83	12	12 12	7 25.03	-46 14.4	0.413	1.161	55.1	16.9	105 W	-	70
9 18	4 16.36	+53 32.3	1.131	1.648	36.8	16.6	101 W	81	10	12 17	7 25.20	-47 8.4	0.361	1.135	56.7	16.6	105 W	-	69
9 23	4 27.88	+55 0.6	1.102	1.648	36.4	16.6	103 W	80	9	12 22	7 24.25	-47 55.2	0.309	1.110	58.3	16.3	106 W	-	68
9 28	4 38.89	+56 23.6	1.075	1.648	36.0	16.5	105 W	79	8	12 27	7 21.80	-48 33.6	0.255	1.085	60.1	15.9	107 W	-	67
10 3	4 49.17	+57 41.3	1.049	1.650	35.4	16.4	107 W	77	6	1 1	7 17.09	-49 1.2	0.201	1.061	62.0	15.4	108 W	-	67
10 8	4 58.51	+58 53.3	1.023	1.652	34.8	16.4	110 W	76	5	1 3	7 14.21	-49 8.2	0.179	1.052	62.9	15.1	108 W	-	67
10 13	5 6.68	+59 59.4	0.999	1.655	34.0	16.3	112 W	75	4	1 5	7 10.47	-49 11.8	0.157	1.043	63.7	14.8	108 W	-	67
10 18	5 13.43	+60 59.2	0.976	1.659	33.1	16.2	114 W	74	3	1 7	7 5.49	-49 11.1	0.134	1.034	64.5	14.5	108 E	-	67
10 23	5 18.52	+61 52.3	0.954	1.663	32.2	16.2	117 W	73	2	1 9	6 58.58	-49 3.6	0.112	1.025	65.4	14.1	109 E	-	67
10 28	5 21.73	+62 37.9	0.934	1.669	31.1	16.1	120 W	72	1	1 11	6 48.43	-48 44.5	0.090	1.016	66.4	13.6	109 E	-	67
11 2	5 22.83	+63 14.8	0.915	1.675	29.9	16.0	123 W	72	1	1 12	6 41.35	-48 27.2	0.079	1.012	66.9	13.4	109 E	-	68
11 7	5 21.70	+63 41.5	0.898	1.682	28.6	16.0	126 W	71	-	1 13	6 32.11	-48 0.6	0.068	1.008	67.4	13.1	109 E	-	68
11 12	5 18.40	+63 56.0	0.883	1.689	27.2	15.9	129 W	71	-	1 14	6 19.62	-47 18.1	0.057	1.003	68.0	12.7	109 E	-	69
11 17	5 13.14	+63 56.5	0.871	1.697	25.8	15.8	132 W	71	-	1 15	6 1.89	-46 5.5	0.046	0.999	68.8	12.2	109 E	-	70
11 22	5 6.30	+63 41.0	0.862	1.706	24.4	15.8	134 W	71	-	1 16	5 35.12	-43 47.3	0.035	0.995	69.9	11.7	108 E	1	72
11 24	5 3.23	+63 30.0	0.859	1.710	23.8	15.8	136 W	72	1	1 17	4 51.74	-38 40.9	0.025	0.991	71.9	11.0	107 E	6	77
11 26	5 0.03	+63 16.2	0.856	1.714	23.3	15.7	137 W	72	1	1 18	3 37.90	-25 7.6	0.017	0.987	77.1	10.3	102 E	20	89
11 28	4 56.74	+62 59.4	0.855	1.718	22.8	15.7	138 W	72	1	1 19	1 44.69	+6 50.5	0.013	0.984	91.0	10.3	88 E	52	51*
11 30	4 53.41	+62 39.7	0.853	1.722	22.3	15.7	139 W	72	1	1 20	23 48.85	+34 40.0	0.018	0.980	102.9	11.5	76 E	70*	12*
12 2	4 50.08	+62 17.0	0.853	1.726	21.8	15.7	140 W	73	2	60216 1999 VG₈₂									
12 4	4 46.80	+61 51.4	0.853	1.730	21.3	15.7	140 W	73	2	12 27	19 7.46	-19 51.5	2.595	1.639	6.4	20.0	11 E	3*	1*
12 6	4 43.59	+61 23.0	0.853	1.734	20.9	15.7	141 E	74	3	1 6	19 37.51	-18 49.4	2.596	1.628	4.8	19.9	8 E	1*	-
12 8	4 40.51	+60 51.9	0.855	1.739	20.6	15.7	142 E	74	3	1 16	20 7.38	-17 27.3	2.597	1.620	3.2	19.8	5 E	-	-
12 10	4 37.58	+60 18.2	0.857	1.743	20.3	15.7	142 E	75	4	1 26	20 36.88	-15 46.8	2.598	1.615	1.9	19.7	3 E	-	-
12 12	4 34.84	+59 42.0	0.860	1.748	20.0	15.7	143 E	75	4	2 5	21 5.88	-13 50.2	2.598	1.614	1.8	19.7	3 W	-	-
12 17	4 28.93	+58 2.2	0.870	1.759	19.6	15.7	143 E	77	6	2 15	21 34.28	-11 39.9	2.599	1.617	3.0	19.8	5 W	-	-
12 22	4 24.53	+56 11.4	0.885	1.772	19.6	15.8	143 E	79	8	2 25	22 2.04	-9 18.8	2.600	1.623	4.5	19.9	7 W	-	1*
12 27	4 21.71	+54 13.1	0.905	1.785	19.9	15.8	142 E	81	10	3 7	22 29.12	-6 50.0	2.600	1.633	6.2	20.0	10 W	-	4*
1 1	4 20.43	+52 10.7	0.930	1.798	20.6	15.9	140 E	83	12	3 17	22 55.57	-4 16.4	2.600	1.646	7.8	20.1	13 W	1*	7*
1 6	4 20.63	+50 7.1	0.960	1.811	21.5	16.0	138 E	85	14	3 27	23 21.39	-1 40.8	2.599	1.662	9.5	20.2	16 W	2*	10*
1 11	4 22.17	+48 5.3	0.995	1.826	22.5	16.2	135 E	87	16	4 6	23 46.63	+0 54.0	2.596	1.661	11.1	20.3	19 W	3*	13*
1 16	4 24.89	+46 7.2	1.034	1.840	23.6	16.3	132 E	89	18	4 16	0 11.35	+3 25.8	2.591	1.703	12.8	20.4	22 W	4*	16*
1 21	4 28.62	+44 14.3	1.077	1.855	24.6	16.4	128 E	89	20	4 26	0 35.57	+5 52.2	2.583	1.728	14.4	20.5	25 W	5*	19*
7482 1994 PC₁									5 6	0 59.33	+8 11.5	2.572	1.754	16.0	20.5	29 W	7*	22*	
12 27	19 7.37	-20 24.1	2.445	1.489	7.0	19.8	11 E	3*	1*	5 16	1 22.64	+10 22.2	2.556	1.783	17.6	20.6	32 W	9*	25*
1 6	19 35.87	-21 4.3	2.501	1.529	4.3	19.8	7 E	-	-	5 26	1 45.50	+12 22.8	2.536	1.814	19.1	20.7	36 W	11*	28*
1 16	20 3.65	-21 25.1	2.548	1.567	1.9	19.7	3 E	-	-	6 5	2 7.89	+14 12.3	2.510	1.846	20.5	20.7	40 W	14*	31*
1 26	20 30.72	-21 28.9	2.584	1.602	1.7	19.8	3 W	-	-	6 15	2 29.75	+15 50.2	2.478	1.879	21.9	20.8	44 W	18*	33*
2 5	20 57.11	-21 18.4	2.609	1.634	4.0	20.0	7 W	-	-	6 25	2 51.02	+17 15.6	2.439	1.913	23.2	20.8	48 W	22*	35*
2 15	21 22.88	-20 55.9	2.621	1.663	6.5	20.2	11 W	-	4*	7 5	3 11.60	+18 28.6	2.394	1.949	24.4	20.9	52 W	27*	37*
2 25	21 48.06	-20 23.7	2.622	1.689	9.0	20.3	15 W	-	9*	7 15	3 31.36	+19 29.1	2.342	1.984	25.5	20.9	57 W	33*	39*
3 7	22 12.73	-19 44.1	2.611	1.712	11.4	20.5	20 W	-	13*	7 25	3 50.13	+20 17.3	2.283	2.021	26.4	20.9	62 W	39*	40*
3 17	22 36.95	-18 59.0	2.588	1.732	13.8	20.5	24 W	-	17*	8 4	4 7.76	+20 53.7	2.218	2.058	27.1	20.9	68 W	45*	41*
3 27	23 0.79	-18 10.5	2.554	1.749	16.0	20.6	29 W	-	21*	8 14	4 24.02	+21 18.9	2.146	2.095	27.6	20.9	73 W	52*	41*
4 6	23 24.32	-17 20.4	2.510	1.763	18.2	20.7	33 W	-	25*	8 24	4 38.64	+21 33.7	2.068	2.132	27.8	20.9	80 W	58*	42*
4 16	23 47.63	-16 30.6	2.457	1.774	20.3	20.7	38 W	-	30*	9 3	4 51.37	+21 39.3	1.986	2.169	27.7	20.8	86 W	63*	42*
4 26	0 10.76	-15 43.0	2.396	1.782	22.2	20.7	42 W	-	34*	9 13	5 1.86	+21 36.5	1.901	2.206	27.1	20.7	94 W	66*	42
5 6	0 33.80	-14 59.2	2.327	1.786	24.1	20.7	46 W	-	38*	9 23	5 9.76	+21 26.5	1.815	2.243	26.0	20.6	102 W	66	43
5 16	0 56.80	-14 21.0	2.252	1.788	25.9	20.7	51 W	-	43*	10 3	5 14.72	+21 10.3	1.731	2.279	24.3	20.5	110 W	66	43
5 26	1 19.80	-13 50.3	2.171	1.787	27.5	20.7	55 W	-	47*	10 13	5 16.39	+20 48.7	1.652	2.316	22.0	20.4	120 W	66	43
6 5	1 42.85	-13 28.5	2.087	1.783	29.1	20.6	59 W	-	52*	10 23	5 14.56	+20 22.3	1.584	2.351	18.9	20.2	130 W	65	44
6 15	2 5.95	-13 17.5	1.999	1.776	30.5	20.6	62 W	1*	56*	11 2	5 9.24	+19 51.5	1.529	2.386	15.1	20.0	141 W	65	44
6 25	2 29.10	-13 18.9	1.909	1.765	31.8	20.5	66 W	4*	60*	11 12	5 0.81	+19 17.0	1.495	2.421	10.6	19.9	153 W	64	45
7 5	2 52.29	-13 34.1	1.819	1.752	33.0	20.4	70 W	7*	64*	11 17	4 55.69	+18 58.8	1.487	2.438	8.2	19.8	159 W	64	45
7 15	3 15.47	-14 4.6	1.728	1.736	34.1	20.3	73 W	11*	67*	11 22	4 50.16	+18 40.2	1.485	2.455	5.7	19.7	166 W	64	45
7 25	3 38.56	-14 51.3	1.637	1.716	35.2	20.2	77 W	14*	70*	11 27	4 44.38	+18 21.5	1.491	2.471	3.3	19.6	172 W	63	46
8 4	4 1.48	-15 55.0	1.547	1.694	36.1	20.1	80 W	17*	73*	12 2	4 38.53	+18 3.3	1.503	2.488	1.6	19.5	176 W	63	46
8 14	4 24.11	-17 16.1	1.459	1.668	37.0	19.9	83 W	19*	76*	12 7	4 32.78	+17 45.8	1.523	2.504	2.7	19.6	173 E	63	46
8 24	4 46.30	-18 54.4	1.373	1.640	37.9	19.8	86 W	21*	78*	12 12	4 27.33	+17 29.7	1.550	2.520	4.9	19.8</			

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	
129813 1999 NJ (continuation)									164220 2004 QW₁₆ (continuation)									
2 25	22 3.56	-14 36.5	2.645	1.674	5.2	20.5	9 W	3*	1 11	9 54.85	-26 43.0	1.297	1.980	25.5	19.5	120 W	18	89
3 7	22 30.48	-12 24.5	2.645	1.687	7.0	20.6	12 W	6*	1 16	9 51.49	-26 43.3	1.274	1.997	24.1	19.5	124 W	18	89
3 17	22 56.61	-10 6.5	2.643	1.703	8.8	20.7	15 W	9*	1 21	9 47.38	-26 30.8	1.253	2.014	22.7	19.4	128 W	18	89
3 27	23 21.96	-7 45.2	2.639	1.721	10.5	20.8	18 W	12*	335071 2004 RB₂₉₀									
4 6	23 46.57	-5 23.3	2.632	1.742	12.2	20.8	22 W	15*	12 27	19 7.85	-26 30.0	3.460	2.500	4.1	121.4	11 E	—	4*
4 16	0 10.51	+3 3.0	2.622	1.765	13.9	20.9	25 W	19*	1 6	19 28.03	-25 51.8	3.432	2.456	2.3	121.2	6 E	—	—
4 26	0 33.80	+0 46.6	2.608	1.789	15.6	21.0	29 W	1*	1 16	19 48.55	-25 3.8	3.392	2.412	1.7	121.1	4 W	—	—
5 6	0 56.49	+1 24.3	2.590	1.816	17.2	21.1	32 W	2*	1 26	20 9.32	-24 5.7	3.339	2.367	3.2	121.1	8 W	—	1*
5 16	1 18.59	+3 28.1	2.566	1.845	18.7	21.1	36 W	5*	2 5	20 30.26	-22 57.4	3.275	2.322	5.3	121.1	12 W	—	6*
5 26	1 40.09	+5 23.4	2.538	1.874	20.2	21.2	40 W	7*	2 15	20 51.33	-21 39.0	3.201	2.277	7.4	121.2	17 W	—	11*
6 5	2 1.01	+7 9.3	2.503	1.905	21.6	21.2	44 W	10*	2 25	21 12.46	-20 10.7	3.117	2.232	9.6	121.1	22 W	—	16*
6 15	2 21.28	+8 44.9	2.462	1.937	23.0	21.3	48 W	14*	3 7	21 33.64	-18 32.8	3.026	2.187	11.8	121.1	27 W	1*	
6 25	2 40.84	+10 9.6	2.415	1.970	24.2	21.3	53 W	19*	3 17	21 54.86	-16 45.8	2.927	2.142	14.0	121.1	31 W	2*	
7 5	2 59.61	+11 23.2	2.361	2.003	25.3	21.3	57 W	25*	3 27	22 16.10	-14 50.3	2.823	2.097	16.2	121.0	36 W	3*	
7 15	3 17.47	+12 25.4	2.300	2.037	26.2	21.3	62 W	31*	4 6	22 37.38	-12 46.7	2.714	2.053	18.3	121.0	40 W	5*	
7 25	3 34.26	+13 16.4	2.233	2.071	27.0	21.3	68 W	37*	4 16	22 58.75	-10 35.9	2.602	2.010	20.4	120.9	44 W	6*	
8 4	3 49.80	+13 56.4	2.159	2.106	27.5	21.3	73 W	43*	4 26	23 20.21	-8 18.6	2.489	1.967	22.4	120.8	48 W	8*	
8 14	4 3.86	+14 25.9	2.081	2.140	27.7	21.3	79 W	49*	5 6	23 41.83	-5 55.6	2.374	1.925	24.4	120.7	52 W	10*	
8 24	4 16.18	+14 45.7	1.998	2.175	27.6	21.1	86 W	55*	5 16	0 3.65	+3 27.9	2.259	1.884	26.3	120.6	56 W	13*	
9 3	4 26.47	+14 56.5	1.912	2.209	27.1	21.1	93 W	58*	5 26	0 25.72	+0 56.7	2.146	1.845	28.1	120.5	59 W	16*	
9 13	4 34.37	+14 59.2	1.825	2.244	26.1	21.0	101 W	60*	6 5	0 48.10	+1 36.8	2.034	1.808	29.9	120.4	63 W	19*	
9 23	4 39.52	+14 55.2	1.740	2.278	24.6	20.9	109 W	60	6 15	1 10.83	+4 11.4	1.925	1.773	31.5	120.3	66 W	23*	
10 3	4 41.60	+14 45.6	1.659	2.311	22.4	20.8	119 W	60	6 25	1 33.93	+6 45.4	1.820	1.741	33.1	120.2	69 W	28*	
10 13	4 40.32	+14 31.6	1.588	2.344	19.4	20.6	129 W	60	7 5	1 57.42	+9 17.2	1.718	1.711	34.5	120.1	72 W	34*	
10 23	4 35.64	+14 14.9	1.531	2.377	15.8	20.5	139 W	59	7 15	2 21.28	+11 45.1	1.620	1.684	35.8	119.9	76 W	39*	
11 2	4 27.84	+13 57.0	1.492	2.409	11.5	20.3	151 W	59	7 25	2 45.43	+14 7.2	1.527	1.661	36.9	119.8	79 W	45*	
11 12	4 17.61	+13 40.0	1.477	2.441	6.9	20.1	163 W	59	8 4	3 9.78	+16 21.9	1.438	1.641	37.8	119.7	82 W	51*	
11 17	4 11.95	+13 32.6	1.480	2.456	4.7	20.0	168 W	59	8 14	3 34.13	+18 27.7	1.354	1.625	38.4	119.6	85 W	57*	
11 22	4 6.15	+13 26.3	1.490	2.472	3.1	19.9	172 W	58	8 24	3 58.21	+20 23.5	1.274	1.614	38.8	119.4	89 W	62*	
11 27	4 0.37	+13 21.5	1.506	2.487	3.2	20.0	172 E	58	9 3	4 21.68	+22 9.0	1.197	1.607	38.8	119.3	93 W	66*	
12 2	3 54.79	+13 18.5	1.530	2.502	4.8	20.1	168 E	58	9 13	4 44.08	+23 44.4	1.125	1.604	38.5	119.1	97 W	69*	
12 12	3 44.84	+13 19.0	1.599	2.532	9.0	20.4	156 E	58	9 23	5 4.86	+25 10.9	1.057	1.606	37.6	119.0	102 W	70	
12 22	3 37.29	+13 29.2	1.693	2.561	12.8	20.7	145 E	58	9 28	5 14.45	+25 51.5	1.025	1.608	37.0	118.9	105 W	71	
1 1	3 32.59	+13 49.3	1.810	2.589	15.9	21.0	134 E	59	10 3	5 23.39	+26 30.8	0.994	1.612	36.2	118.8	108 W	72	
1 11	3 30.89	+14 18.5	1.943	2.616	18.3	21.3	123 E	59	10 8	5 31.58	+27 8.9	0.963	1.617	35.3	118.7	111 W	72	
164220 2004 QW₁₆									10 13	5 38.91	+27 46.3	0.935	1.623	34.1	118.6	114 W	73	
12 27	19 7.50	-4 33.0	2.709	1.830	11.4	20.5	22 E	15*	10 18	5 45.30	+28 23.3	0.907	1.630	32.8	118.5	118 W	73	
1 6	19 32.68	-4 13.9	2.693	1.795	10.4	20.4	19 E	12*	10 23	5 50.65	+29 0.2	0.882	1.638	31.2	118.4	121 W	74	
1 16	19 58.40	-3 41.1	2.673	1.759	9.6	20.3	17 E	8*	10 28	5 54.87	+29 36.9	0.858	1.647	29.5	118.3	125 W	75	
1 26	20 24.59	-3 45.2	2.648	1.723	9.1	20.2	16 W	7*	11 2	5 57.86	+30 13.6	0.837	1.656	27.5	118.2	130 W	75	
2 5	20 51.18	-1 57.2	2.620	1.688	8.8	20.1	15 W	8*	11 7	5 59.55	+30 50.0	0.818	1.667	25.3	118.1	134 W	76	
2 15	21 18.14	-0 48.4	2.589	1.654	8.8	20.1	15 W	9*	11 12	5 59.92	+31 25.6	0.802	1.679	22.8	118.0	139 W	76	
2 25	21 45.44	+0 29.5	2.556	1.621	9.2	20.0	15 W	9*	11 17	5 58.98	+31 59.6	0.789	1.692	20.2	117.9	144 W	77	
3 7	22 13.08	+1 54.4	2.520	1.589	9.9	20.0	16 W	9*	11 22	5 56.80	+32 31.3	0.781	1.705	17.3	117.8	149 W	78	
3 17	22 41.08	+3 24.1	2.483	1.559	10.8	19.9	17 W	9*	11 27	5 53.50	+32 59.5	0.776	1.719	14.4	117.7	154 W	78	
3 27	23 9.45	+4 56.0	2.444	1.531	11.9	19.9	18 W	9*	12 2	5 49.25	+33 23.2	0.776	1.734	11.5	117.7	159 W	78	
4 6	23 38.24	+6 27.5	2.404	1.505	13.3	19.9	20 W	8*	12 7	5 44.31	+33 41.4	0.781	1.750	8.8	117.6	164 W	79	
4 16	0 7.49	+7 55.7	2.363	1.481	14.7	19.8	22 W	8*	12 12	5 39.00	+33 53.6	0.791	1.766	6.6	117.5	168 W	79	
4 26	0 37.22	+9 17.6	2.322	1.461	16.2	19.8	24 W	7*	12 17	5 33.67	+33 59.5	0.807	1.783	5.9	117.6	169 W	79	
5 6	1 7.45	+10 30.5	2.281	1.444	17.8	19.8	26 W	7*	12 22	5 28.60	+33 59.5	0.828	1.801	6.8	117.7	167 E	79	
5 16	1 38.18	+11 31.4	2.240	1.431	19.5	19.8	28 W	7*	12 27	5 24.07	+33 54.3	0.855	1.819	8.9	117.9	163 E	79	
5 26	2 9.35	+12 17.6	2.200	1.421	21.1	19.8	30 W	7*	1 1	5 20.31	+33 44.7	0.886	1.838	11.2	118.1	159 E	79	
6 5	2 40.88	+12 46.7	2.161	1.415	22.7	19.8	33 W	7*	1 6	5 17.48	+33 31.9	0.923	1.857	13.6	118.3	154 E	79	
6 15	3 12.64	+12 56.5	2.123	1.414	24.2	19.8	35 W	8*	1 11	5 15.68	+33 16.8	0.965	1.876	15.8	118.5	149 E	78	
6 25	3 44.44	+12 45.5	2.087	1.416	25.7	19.8	37 W	10*	1 16	5 14.96	+33 0.5	1.012	1.896	17.9	118.6	144 E	78	
7 5	4 16.08	+12 13.0	2.053	1.423	27.0	19.8	39 W	12*	1 21	5 15.29	+32 43.6	1.062	1.916	19.7	118.8	139 E	78	
7 15	4 47.32	+11 18.7	2.021	1.434	28.2	19.9	42 W	14*	284456 2007 FM₂₈									
7 25	5 17.92	+10 3.4	1.991	1.448	29.3	19.9	44 W	17*	12 27	19 8.67	-27 20.3	2.694	1.738	6.2	120.8	11 E	—	5*
8 4	5 47.68	+8 28.4	1.964	1.466	30.2	19.9	47 W	20*	1 6	19 38.01	-26 5.3	2.690	1.721	4.4	120.7	8 E	—	2*
8 14	6 16.40	+6 35.7	1.937	1.487	31.0	19.9	49 W	22*	1 16	20 7.07	-24 29.8	2.682	1.705	2.9	120.6	5 E	—	—
8 24	6 43.90	+4 27.8	1.912	1.511	31.7	20.0	52 W	25*	1 26	20 35.66	-22 35.0	2.672	1.691	2.2	120.5	4 E	—	—
9 3	7 10.07	+2 7.4	1.887	1.538	32.3	20.0	54 W	27*	2 5	21 3.67	-20 22.7	2.660	1.680	3.0	120.6	5 W	—	—
9 13	7 34.81	+0 22.9	1.861	1.567	32.7	20.0	57 W	30*	2 15	21 31.04	-17 54.9	2.645	1.670	4.4	120.6	8 W	—	1*
9 23	7 58.03	-3 0.1	1.833	1.597	33.1	20.0	60 W	31*	2 25	21 57.73	-15 14.0	2.628	1.664	6.2	120.7	10 W	—	4*
10 3	8 19.67	-5 41.9	1.802	1.630	33.4	20.0	64 W	32*	3 7	22 23.77	-12 22.5	2.609	1.659	7.9	120.7	13 W	—	7*
10 13	8 39.65	-8 25.7	1.768	1.663	33.6	20.0	67 W	33*	3 17	22 49.20	-9 22.9	2.588	1.657	9.7	120.8	16 W	—	10*
10 23	8 57.87	-11 9.2	1.730	1.697	33.7	20.0	71 W	32*	3 27	23 14.08								

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
154589 2003 MX₂										2100 Ra-Shalom									
<i>(continuation)</i>										<i>(continuation)</i>									
11 22	9 59.02	+20 0.8	2.077	2.371	24.5	21.2	95 W	65	40*	9 28	15 47.83	-8 45.4	1.086	0.930	59.0	18.3	53 E	23*	44*
12 2	10 4.30	+20 13.6	1.992	2.421	23.3	21.1	104 W	65	42*	10 3	16 12.71	-10 30.3	1.107	0.964	57.3	18.3	54 E	24*	45*
12 12	10 6.71	+20 43.0	1.909	2.469	21.5	21.0	113 W	66	43*	10 13	16 59.71	-13 25.8	1.162	1.026	53.8	18.5	56 E	24*	47*
12 22	10 6.00	+21 29.2	1.835	2.516	19.0	20.9	124 W	66	43	10 23	17 43.24	-15 35.1	1.229	1.077	50.6	18.6	57 E	24*	48*
1 1	10 1.99	+22 30.5	1.773	2.562	15.8	20.7	135 W	68	41	11 2	18 23.65	-17 1.6	1.304	1.120	47.6	18.7	56 E	24*	47*
1 11	9 54.75	+23 42.2	1.730	2.606	12.1	20.6	146 W	69	40	11 7	18 42.83	-17 30.2	1.342	1.137	46.2	18.8	56 E	24*	46*
1 21	9 44.76	+24 57.0	1.712	2.649	8.0	20.4	158 W	70	39	11 12	19 1.39	-17 50.1	1.380	1.152	44.9	18.8	55 E	24*	45*
353947 1999 CT₈										370061 2000 YO₂₉									
12 27	19 10.00	-40 47.5	1.952	1.082	18.1	21.4	20 E	—	11*	11 17	19 19.38	-18 1.7	1.418	1.165	43.7	18.9	54 E	24*	44*
1 1	19 32.50	-38 38.2	1.934	1.049	17.3	21.2	19 E	—	10*	11 22	19 36.84	-18 5.9	1.455	1.176	42.5	18.9	53 E	24*	43*
1 6	19 54.04	-36 11.3	1.915	1.016	16.4	21.1	17 E	—	9*	11 27	19 53.83	-18 3.0	1.492	1.184	41.3	19.0	52 E	24*	41*
1 11	20 14.62	-33 27.9	1.897	0.983	15.3	21.0	15 E	—	8*	12 2	20 10.41	-17 53.7	1.527	1.190	40.2	19.0	51 E	24*	39*
1 16	20 34.26	-30 29.0	1.879	0.951	14.1	20.9	14 E	—	7*	12 7	20 26.60	-17 38.4	1.560	1.194	39.2	19.0	50 E	24*	38*
1 21	20 53.03	-27 15.9	1.861	0.920	12.7	20.7	12 E	—	6*	12 12	20 42.46	-17 17.6	1.592	1.195	38.1	19.0	49 E	24*	36*
1 26	21 11.02	-23 49.5	1.843	0.890	11.2	20.6	10 E	—	4*	12 22	21 13.31	-16 20.7	1.647	1.191	36.3	19.0	46 E	24*	32*
1 31	21 28.34	-20 10.8	1.824	0.862	9.8	20.4	9 E	—	2*	1 1	21 43.27	-15 5.8	1.692	1.179	34.5	19.0	43 E	24*	29*
2 5	21 45.13	-16 21.0	1.804	0.836	8.8	20.3	7 E	—	1*	1 11	22 12.67	-13 34.7	1.724	1.157	33.0	19.0	40 E	23*	26*
2 10	22 1.55	-12 21.1	1.784	0.813	8.5	20.2	7 E	—	—	1 21	22 41.77	-11 49.2	1.742	1.125	31.8	18.9	37 E	22*	23*
2 15	22 17.75	-8 12.2	1.762	0.793	9.3	20.1	7 E	1*	—	361518 2007 FD									
2 20	22 33.92	+ 3 55.8	1.740	0.777	11.2	20.1	9 E	3*	—	12 27	19 10.16	+ 2 34.9	1.978	1.206	22.7	20.7	28 E	21*	—
2 25	22 50.25	+ 0 26.6	1.717	0.766	13.8	20.2	11 E	4*	—	1 6	19 39.95	+ 6 44.6	2.072	1.320	22.1	21.0	30 E	21*	—
3 2	23 6.96	+ 4 53.2	1.693	0.759	16.9	20.2	13 E	5*	—	1 16	20 7.85	+10 40.4	2.167	1.430	21.3	21.2	32 E	20*	—
3 7	23 24.30	+ 9 21.8	1.669	0.757	20.1	20.3	15 E	7*	—	1 26	20 34.22	+14 24.7	2.260	1.534	20.6	21.4	33 E	18*	—
3 12	23 42.53	+13 49.8	1.646	0.761	23.3	20.4	18 E	9*	—	2 5	20 59.31	+17 59.0	2.353	1.634	19.8	21.6	34 W	21*	—
3 17	0 1.91	+18 14.2	1.624	0.769	26.4	20.5	20 E	11*	—	12 27	19 10.19	-18 12.7	2.661	1.711	6.9	20.8	12 E	5*	1*
3 22	0 22.73	+22 31.2	1.604	0.782	29.1	20.6	22 E	13*	—	1 6	19 35.78	-17 21.4	2.593	1.627	5.1	20.5	8 E	2*	—
3 27	0 45.24	+26 36.6	1.588	0.799	31.5	20.7	25 E	15*	—	1 16	20 2.82	-16 10.8	2.516	1.540	3.5	20.3	6 E	—	—
4 1	1 9.68	+30 25.6	1.576	0.820	33.4	20.8	27 E	17*	—	1 26	20 31.36	-14 38.9	2.432	1.452	2.8	20.0	4 W	—	—
4 6	1 36.20	+33 53.0	1.569	0.844	34.9	20.8	29 E	20*	—	2 5	21 1.53	-12 43.8	2.343	1.362	3.3	19.8	4 W	—	—
4 11	2 4.82	+36 53.6	1.567	0.870	35.9	20.9	31 E	22*	—	2 15	21 33.49	-10 23.6	2.252	1.272	4.3	19.7	6 W	—	—
4 16	2 35.36	+39 22.3	1.572	0.899	36.5	21.0	32 E	24*	—	2 25	22 7.45	-7 37.5	2.161	1.182	5.3	19.5	6 W	—	—
4 21	3 7.39	+41 15.3	1.583	0.929	36.7	21.1	34 E	26*	—	3 7	22 43.65	-4 25.8	2.075	1.095	5.9	19.3	7 W	—	—
4 26	3 40.26	+42 30.5	1.601	0.961	36.5	21.2	35 E	28*	—	3 17	23 22.40	+ 0 50.8	1.997	1.013	5.9	19.0	6 W	—	—
5 1	4 13.20	+43 7.7	1.624	0.993	36.0	21.3	35 E	29*	—	3 22	23 42.82	+ 1 3.9	1.962	0.975	5.6	18.9	6 W	—	—
5 6	4 45.40	+43 9.3	1.653	1.026	35.3	21.4	36 E	30*	1*	3 27	0 3.98	+ 3 1.9	1.930	0.940	5.1	18.7	5 W	—	—
5 11	5 16.18	+42 39.2	1.688	1.059	34.4	21.5	36 E	30*	4*	4 1	0 25.89	+ 5 2.0	1.902	0.908	4.2	18.6	4 W	—	—
2100 Ra-Shalom										29780 1999 CJ₅₀									
12 27	19 10.05	-16 10.2	1.877	0.946	13.6	18.1	13 E	7*	—	12 27	19 10.37	-26 28.4	3.896	2.937	3.7	21.0	11 E	—	5*
1 1	19 30.61	-15 46.6	1.913	0.979	12.9	18.2	13 E	6*	—	1 6	19 26.94	-25 52.7	3.905	2.928	1.9	20.9	6 E	—	—
1 6	19 50.33	-15 17.1	1.948	1.010	12.1	18.3	12 E	6*	—	1 16	19 43.48	-25 11.5	3.897	2.918	1.5	20.9	5 W	—	—
1 11	20 9.30	-14 42.4	1.981	1.038	11.2	18.3	12 E	6*	—	1 26	19 59.90	-24 25.1	3.873	2.906	3.2	21.0	10 W	—	4*
1 16	20 27.57	-14 3.0	2.012	1.064	10.3	18.4	11 E	5*	—	2 5	20 16.11	-23 33.6	3.832	2.894	5.3	21.1	16 W	—	10*
1 26	21 2.32	-12 32.6	2.069	1.109	8.3	18.5	9 E	3*	—	2 15	20 32.07	-22 37.7	3.775	2.881	7.3	21.1	22 W	—	16*
2 5	21 35.06	-10 49.6	2.115	1.144	6.2	18.5	7 E	1*	—	2 25	20 47.69	-21 38.0	3.702	2.867	9.3	21.1	28 W	2*	22*
2 15	22 6.28	-8 56.9	2.151	1.170	4.1	18.4	5 E	—	—	3 7	21 2.92	-20 35.0	3.615	2.851	11.3	21.2	34 W	4*	28*
2 25	22 36.39	+ 6 56.7	2.175	1.187	2.1	18.4	2 E	—	—	3 17	22 43.65	-4 25.8	2.075	1.095	5.9	19.3	7 W	—	—
3 7	23 5.76	+ 4 50.8	2.187	1.195	0.9	18.3	1 W	—	—	3 22	23 42.82	+ 1 3.9	1.962	0.975	5.6	18.9	6 W	—	—
3 17	23 34.80	+ 2 40.6	2.186	1.193	2.6	18.4	3 W	—	—	3 27	0 3.98	+ 3 1.9	1.930	0.940	5.1	18.7	5 W	—	—
3 27	0 3.85	+ 0 27.3	2.172	1.183	4.7	18.5	6 W	—	—	4 1	0 48.59	+ 7 2.6	1.878	0.880	3.2	18.4	3 W	—	—
4 6	0 33.32	+ 1 47.8	2.146	1.164	6.8	18.6	8 W	—	—	4 11	1 12.05	+ 9 1.6	1.858	0.856	1.9	18.2	2 W	—	—
4 16	1 3.61	+ 4 3.8	2.109	1.135	8.9	18.6	10 W	—	—	4 16	1 36.25	+10 57.1	1.842	0.838	1.1	18.1	1 E	—	—
4 26	1 35.17	+ 6 19.1	2.062	1.097	10.8	18.5	12 W	—	—	4 21	1 36.25	+10 57.1	1.842	0.838	1.1	18.1	1 E	—	—
5 6	2 8.53	+ 8 32.4	2.006	1.049	12.7	18.4	13 W	—	—	4 21	2 1.12	+12 46.7	1.830	0.826	2.3	18.2	2 E	—	—
5 16	2 44.29	+10 41.3	1.943	0.992	14.3	18.3	14 W	—	—	4 26	2 26.56	+14 28.3	1.823	0.821	4.1	18.2	3 E	—	—
5 26	3 23.15	+12 42.5	1.874	0.926	15.5	18.1	14 W	—	—	5 1	2 52.46	+15 59.6	1.821	0.822	6.0	18.3	5 E	—	—
5 31	3 43.99	+13 38.9	1.838	0.889	15.9	18.0	14 W	—	—	5 6	3 18.66	+17 19.0	1.824	0.829	7.9	18.5	6 E	—	—
6 5	4 5.92	+14 31.6	1.803	0.849	16.2	17.9	13 W	—	—	5 11	3 44.98	+18 25.1	1.831	0.843	9.7	18.6	8 E	—	1*
6 10	4 29.04	+15 19.6	1.766	0.808	16.1	17.7	13 W	—	—	5 16	4 11.22	+19 16.9	1.844	0.863	11.2	18.7	10 E	—	2*
6 15	4 53.47	+16 1.9	1.730	0.765	15.8	17.6	12 W	—	—	5 21	4 37.18	+19 54.2	1.861	0.888	12.5	18.8	11 E		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
29780 1999 CJ₅₀										5929 Manzano									
<i>(continuation)</i>										<i>(continuation)</i>									
3 17	21 17.70	-19 29.6	3.515	2.835	13.2	21.2	41 W	6*	35*	11 27	5 16.81	-20 30.3	0.820	1.673	24.5	15.3	135 W	24	85
3 27	21 31.97	-18 22.6	3.402	2.817	15.0	21.1	47 W	7*	41*	12 2	5 12.04	-19 36.6	0.816	1.680	23.4	15.3	137 W	25	84
4 6	21 45.66	-17 14.8	3.278	2.799	16.7	21.1	53 W	9*	47*	12 7	5 7.02	-18 25.3	0.817	1.688	22.6	15.3	139 W	27	82
4 16	21 58.70	-16 7.3	3.144	2.779	18.2	21.0	60 W	11*	54*	12 12	5 2.01	-16 57.0	0.821	1.697	22.0	15.3	140 E	28	81
4 26	22 11.01	-15 1.2	3.002	2.758	19.5	21.0	66 W	14*	60*	12 17	4 57.28	-15 13.3	0.830	1.706	21.7	15.3	140 E	30	79
5 6	22 22.50	-13 57.4	2.854	2.737	20.7	20.9	73 W	16*	67*	12 22	4 53.03	-13 16.5	0.843	1.716	21.7	15.4	140 E	32	77
5 16	22 33.03	-12 57.3	2.700	2.714	21.5	20.8	80 W	19*	72*	12 27	4 49.44	-11 9.3	0.861	1.727	22.1	15.4	139 E	34	75
5 26	22 42.45	-12 2.2	2.543	2.690	22.1	20.6	87 W	22*	75*	1 1	4 46.65	-8 54.5	0.884	1.738	22.7	15.5	137 E	36	73
6 5	22 50.59	-11 13.6	2.386	2.665	22.3	20.5	95 W	26*	75	1 6	4 44.77	-6 35.0	0.912	1.750	23.5	15.6	135 E	38	71
6 15	22 57.20	-10 33.0	2.229	2.640	22.1	20.3	102 W	29*	75	1 11	4 43.85	-4 13.8	0.945	1.762	24.5	15.7	132 E	41	68
6 25	23 2.02	-10 2.2	2.076	2.613	21.4	20.1	111 W	33*	74	1 16	4 43.91	-1 53.2	0.982	1.775	25.5	15.9	129 E	43	66
7 5	23 4.76	-9 42.7	1.930	2.585	20.1	19.9	119 W	35*	74	1 21	4 44.93	+0 24.6	1.024	1.788	26.5	16.0	126 E	45	64
7 15	23 5.08	-9 36.0	1.794	2.556	18.1	19.6	129 W	35	74	85236 1993 KH									
7 25	23 2.72	-9 43.0	1.672	2.527	15.3	19.4	139 W	35	74	12 27	19 10.71	-28 6.8	1.874	0.932	12.3	20.6	12 E	—	6*
8 4	22 57.55	-10 3.3	1.567	2.496	11.9	19.1	150 W	35	74	1 1	19 35.40	-27 33.8	1.851	0.913	13.1	20.6	12 E	—	6*
8 14	22 49.67	-10 35.0	1.484	2.465	7.6	18.8	161 W	34	75	1 6	20 0.33	-26 43.0	1.829	0.896	13.9	20.6	13 E	—	7*
8 19	22 44.85	-10 53.8	1.452	2.449	5.3	18.6	167 W	34	75	1 11	20 25.32	-25 34.1	1.809	0.882	14.9	20.5	13 E	—	7*
8 24	22 39.60	-11 13.7	1.426	2.432	2.9	18.4	173 W	34	75	1 16	20 50.21	-24 7.5	1.791	0.869	15.9	20.5	14 E	1*	8*
8 29	22 34.03	-11 33.8	1.406	2.416	1.0	18.2	178 W	33	76	1 21	21 14.86	-22 23.8	1.774	0.860	17.0	20.5	15 E	2*	8*
9 3	22 28.29	-11 53.5	1.394	2.399	2.7	18.3	174 E	33	76	1 26	21 39.13	-20 24.1	1.760	0.854	18.0	20.5	16 E	3*	9*
9 8	22 22.55	-12 11.7	1.388	2.382	5.2	18.4	168 E	33	76	1 31	22 2.95	-18 10.2	1.748	0.850	19.1	20.5	16 E	5*	9*
9 13	22 17.00	-12 27.8	1.390	2.365	7.8	18.5	161 E	33	76	2 5	22 26.25	-15 43.8	1.739	0.850	20.2	20.6	17 E	6*	9*
9 18	22 11.80	-12 41.0	1.397	2.348	10.3	18.6	155 E	32	77	2 10	22 49.02	-13 7.1	1.733	0.853	21.2	20.6	18 E	7*	10*
9 23	22 7.10	-12 50.9	1.410	2.330	12.7	18.7	149 E	32	77	2 15	23 11.25	-10 22.5	1.730	0.859	22.1	20.6	19 E	9*	10*
10 3	21 59.67	-12 59.6	1.453	2.295	17.0	18.9	138 E	32	77	2 20	23 32.96	-7 32.4	1.730	0.869	22.9	20.7	20 E	10*	10*
10 13	21 55.38	-12 52.4	1.513	2.259	20.7	19.1	127 E	32	77	2 25	23 54.19	-4 39.1	1.732	0.880	23.6	20.7	21 E	11*	10*
10 23	21 54.47	-12 29.6	1.586	2.222	23.5	19.2	117 E	33	76	3 2	0 15.00	-1 44.9	1.738	0.895	24.1	20.8	22 E	13*	10*
11 2	21 56.84	-11 52.1	1.667	2.185	25.6	19.4	108 E	33	76	3 7	0 35.44	+1 8.2	1.747	0.912	24.5	20.8	22 E	14*	10*
11 12	22 2.22	-11 0.7	1.753	2.147	27.1	19.5	99 E	34	75*	3 12	0 55.58	+3 58.2	1.759	0.930	24.7	20.9	23 E	15*	10*
11 22	22 10.25	-9 56.3	1.840	2.109	27.9	19.6	91 E	35	70*	3 17	1 15.47	+6 43.5	1.774	0.951	24.8	21.0	24 E	15*	10*
12 2	22 20.57	-8 39.7	1.925	2.070	28.3	19.7	84 E	36	63*	3 22	1 35.16	+9 22.6	1.792	0.972	24.8	21.1	24 E	16*	10*
12 12	22 32.85	-7 11.5	2.007	2.032	28.2	19.7	77 E	38	56*	3 27	1 54.70	+11 54.2	1.812	0.995	24.7	21.1	25 E	17*	10*
12 22	22 46.82	-5 32.3	2.083	1.993	27.8	19.7	71 E	39*	48*	4 1	2 14.13	+14 17.3	1.834	1.019	24.4	21.2	25 E	17*	10*
1 1	23 2.24	-3 42.8	2.154	1.955	27.1	19.7	65 E	40*	41*	4 6	2 33.48	+16 31.1	1.859	1.043	24.1	21.3	25 E	18*	10*
1 11	23 18.97	-1 43.9	2.218	1.917	26.2	19.7	60 E	41*	35*	4 11	2 52.78	+18 35.0	1.885	1.068	23.6	21.3	25 E	18*	10*
1 21	23 36.85	+0 23.6	2.275	1.879	25.2	19.7	54 E	40*	30*	4 16	3 12.04	+20 28.5	1.913	1.094	23.1	21.4	25 E	18*	9*
5929 Manzano										162483 2000 PJ₅									
12 27	19 10.52	-17 55.6	3.395	2.443	4.9	18.5	12 E	5*	1*	12 27	19 11.50	-17 25.8	2.099	1.160	10.7	20.0	13 E	6*	1*
1 6	19 29.72	-18 0.6	3.383	2.410	2.8	18.3	7 E	1*	—	1 6	19 41.98	-19 2.8	2.143	1.181	7.3	19.9	9 E	2*	—
1 16	19 49.32	-17 56.1	3.358	2.376	1.3	18.2	3 W	—	—	1 16	20 12.18	-20 17.1	2.171	1.194	4.1	19.8	5 E	—	—
1 26	20 9.24	-17 42.3	3.320	2.342	2.4	18.2	6 W	—	—	1 26	20 42.40	-21 10.5	2.180	1.199	2.6	19.8	3 E	—	—
2 5	20 29.44	-17 19.9	3.269	2.308	4.6	18.3	11 W	—	4*	2 5	21 12.93	-21 44.5	2.173	1.196	4.7	19.9	6 W	—	—
2 15	20 49.86	-16 49.3	3.206	2.273	6.9	18.3	16 W	2*	10*	2 15	21 44.09	-21 59.5	2.149	1.186	7.9	20.0	10 W	—	—
2 25	21 10.47	-16 11.5	3.132	2.238	9.2	18.3	21 W	3*	15*	2 25	22 16.19	-21 55.2	2.109	1.168	11.2	20.1	13 W	—	3*
3 7	21 31.25	-15 27.2	3.049	2.202	11.5	18.3	26 W	4*	20*	3 7	22 49.53	-21 30.2	2.055	1.142	14.6	20.1	17 W	—	6*
3 17	21 52.21	-14 37.6	2.956	2.167	13.7	18.3	31 W	4*	25*	3 17	23 24.48	-20 41.7	1.990	1.109	17.9	20.0	20 W	—	7*
3 27	22 13.33	-13 43.7	2.856	2.131	16.0	18.3	36 W	5*	30*	3 27	0 1.33	-19 25.9	1.918	1.067	21.0	20.0	23 W	—	8*
4 6	22 34.66	-12 46.7	2.749	2.095	18.2	18.2	41 W	5*	35*	4 1	0 20.56	-18 35.9	1.880	1.044	22.5	19.9	24 W	—	9*
4 16	22 56.20	-11 48.0	2.638	2.060	20.3	18.2	45 W	6*	39*	4 6	0 40.36	-17 36.8	1.842	1.018	24.0	19.9	24 W	—	9*
4 26	23 18.00	-10 49.1	2.522	2.025	22.3	18.1	50 W	7*	44*	4 11	1 0.76	-16 27.7	1.804	0.991	25.3	19.8	25 W	—	8*
5 6	23 40.09	-9 51.5	2.404	1.990	24.3	18.0	54 W	8*	48*	4 16	1 21.76	-15 7.7	1.767	0.962	26.6	19.8	25 W	—	8*
5 16	0 2.53	-8 56.9	2.284	1.956	26.1	17.9	58 W	9*	52*	4 21	1 43.35	-13 35.9	1.731	0.931	27.7	19.7	26 W	—	8*
5 26	0 25.31	-8 7.2	2.165	1.922	27.9	17.8	63 W	10*	56*	4 26	2 5.53	-11 51.4	1.698	0.898	28.7	19.6	25 W	—	7*
6 5	0 48.49	-7 24.3	2.047	1.890	29.5	17.7	67 W	12*	60*	5 6	2 51.52	-7 41.7	1.639	0.829	29.9	19.4	24 W	—	5*
6 15	1 12.05	-6 50.3	1.932	1.858	31.0	17.6	70 W	15*	63*	5 16	3 39.45	-2 35.8	1.596	0.756	29.7	19.1	22 E	—	5*
6 25	1 35.95	-6 27.3	1.821	1.828	32.4	17.5	74 W	18*	66*	5 26	4 28.95	+3 23.6	1.567	0.682	27.6	18.8	18 E	—	6*
7 5	2 0.14	-6 17.2	1.714	1.799	33.5	17.3	78 W	21*	67*	5 31	4 54.24	+6 40.9	1.557	0.648	25.8	18.6	16 E	—	6*
7 15	2 24.48	-6 22.1	1.612	1.773	34.5	17.2	81 W	24*	69*	6 5	5 19.90	+10 7.4	1.548	0.616	23.7	18.4	14 E	—	6*
7 25	2 48.78	-6 43.3	1.516	1.748	35.4	17.1	85 W	28*	70*	6 10	5 45.98	+13 40.5	1.539	0.588	21.5	18.2	12 E	—	5*
8 4	3 12.84	-7 21.9	1.427	1.725	36.0	16.9	88 W	30*	71*	6 15	6 12.58	+17 16.5	1.529	0.566	20.1	18.1	11 E	—	5*
8 14	3 36.31	-8 18.3	1.344	1.704	36.5	16.8	92 W	32*	72*	6 20	6 39.79	+20 50.7	1.515	0.552	20.4	18.0	11 E	—	5*
8 24	3 58.83	-9 31.8	1.267	1.687	36.7	16.6	95 W	33*	74	6 25	7 7.76	+24 17.2	1.497	0.547	23.1	18.1	12 E	2*	4*
9 3	4 20.00	-11 0.7	1.197	1.672	36.7	16.5	98 W	33*	75	6 30	7 36.66	+27 29.0	1.473	0.550	27.5	18.2	14 E		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
162483 2000 PJ₅										247748 2003 OL₁₆									
<i>(continuation)</i>										<i>(continuation)</i>									
9 13	14 56.23	+ 8 2.4	1.223	1.013	52.5	19.8	53 E	34*	37*	10 28	6 59.51	+62 7.0	0.982	1.614	35.5	18.3	110 W	73	2
9 18	15 15.52	+ 4 11.6	1.253	1.039	51.0	19.9	53 E	32*	39*	11 2	7 8.63	+62 54.4	0.964	1.622	34.5	18.2	112 W	72	1
9 23	15 33.77	+ 0 30.8	1.287	1.062	49.4	19.9	54 E	30*	41*	11 7	7 15.69	+63 38.1	0.947	1.632	33.5	18.1	115 W	71	—
9 28	15 51.13	- 2 58.0	1.326	1.085	47.8	20.0	53 E	29*	42*	11 12	7 20.43	+64 17.6	0.931	1.642	32.4	18.1	117 W	71	—
10 3	16 7.77	- 6 13.4	1.368	1.105	46.2	20.1	53 E	27*	42*	11 17	7 22.61	+64 52.3	0.917	1.653	31.1	18.0	120 W	70	—
10 13	16 39.42	-12 2.9	1.459	1.139	43.0	20.2	51 E	23*	42*	11 22	7 22.06	+65 20.9	0.904	1.664	29.8	18.0	123 W	70	—
10 23	17 9.58	-16 59.0	1.552	1.165	39.9	20.3	49 E	19*	41*	11 27	7 18.67	+65 41.7	0.893	1.676	28.4	17.9	126 W	69	—
11 2	17 38.92	-21 6.6	1.642	1.184	36.8	20.3	46 E	16*	38*	12 2	7 12.51	+65 52.3	0.884	1.689	26.9	17.9	129 W	69	—
11 7	17 53.46	-22 54.1	1.685	1.191	35.3	20.4	44 E	15*	37*	12 4	7 9.32	+65 53.0	0.882	1.695	26.3	17.9	130 W	69	—
11 12	18 7.98	-24 31.7	1.725	1.195	33.9	20.4	42 E	13*	35*	12 6	7 5.77	+65 51.5	0.879	1.700	25.8	17.8	131 W	69	—
11 17	18 22.53	-25 59.9	1.762	1.198	32.5	20.4	41 E	12*	34*	12 8	7 1.88	+65 47.5	0.877	1.706	25.2	17.8	133 W	69	—
11 22	18 37.13	-27 19.3	1.795	1.199	31.1	20.4	39 E	11*	32*	12 10	6 57.72	+65 40.9	0.876	1.711	24.6	17.8	134 W	69	—
11 27	18 51.85	-28 30.4	1.826	1.198	29.8	20.4	37 E	9*	30*	12 12	6 53.33	+65 31.6	0.875	1.717	24.0	17.8	135 W	69	—
12 2	19 6.72	-29 33.5	1.852	1.195	28.6	20.4	35 E	8*	29*	12 14	6 48.75	+65 19.4	0.875	1.723	23.5	17.8	136 W	70	—
12 12	19 37.02	-31 17.1	1.891	1.183	26.4	20.3	32 E	6*	26*	12 16	6 44.06	+65 4.3	0.875	1.729	23.0	17.8	137 W	70	—
12 22	20 8.26	-32 31.7	1.912	1.163	24.7	20.3	30 E	4*	23*	12 18	6 39.30	+64 46.2	0.876	1.735	22.5	17.8	138 W	70	—
1	20 40.67	-33 17.2	1.913	1.135	23.5	20.2	27 E	1*	21*	12 20	6 34.54	+64 25.1	0.878	1.741	22.0	17.8	138 W	71	—
1 11	21 14.47	-33 32.2	1.894	1.100	23.2	20.2	26 E	—	20*	12 22	6 29.82	+64 1.0	0.880	1.747	21.6	17.8	139 W	71	—
1 21	21 49.82	-33 13.4	1.855	1.057	23.7	20.0	26 E	—	19*	12 24	6 25.20	+63 34.0	0.883	1.753	21.2	17.8	140 W	71	—
12 27	19 12.04	-30 4.3	2.575	1.631	7.6	20.7	13 E	—	7*	12 26	6 20.73	+63 4.2	0.887	1.759	20.9	17.8	140 W	72	1
1	19 28.42	-29 40.4	2.612	1.661	6.9	20.7	12 E	—	6*	12 28	6 16.44	+62 31.6	0.891	1.766	20.6	17.8	141 E	72	1
1	19 44.32	-29 10.7	2.648	1.691	6.1	20.7	11 E	—	4*	12 30	6 12.37	+61 56.5	0.896	1.772	20.4	17.8	141 E	73	2
1 11	19 59.72	-28 36.0	2.684	1.722	5.5	20.8	10 E	—	3*	1	6 8.55	+61 18.9	0.902	1.779	20.3	17.8	141 E	74	3
1 16	20 14.61	-27 56.9	2.719	1.754	4.9	20.8	9 E	—	2*	1 6	6 0.27	+59 35.9	0.920	1.795	20.1	17.9	141 E	75	4
1 21	20 29.00	-27 13.9	2.754	1.785	4.5	20.9	8 E	—	1*	1 11	5 53.94	+57 42.5	0.943	1.812	20.3	18.0	140 E	77	6
1 26	20 42.89	-26 27.8	2.787	1.817	4.3	20.9	8 E	—	—	1 16	5 49.56	+55 42.5	0.971	1.829	20.8	18.1	139 E	79	8
1 31	20 56.30	-25 38.9	2.819	1.849	4.4	21.0	8 E	—	—	1 21	5 47.01	+53 39.2	1.004	1.847	21.5	18.2	137 E	81	10
2 5	21 9.24	-24 47.8	2.849	1.881	4.6	21.0	9 W	—	—	302162 2001 SL₃₃₃									
2 10	21 21.73	-23 55.0	2.878	1.913	5.1	21.1	10 W	—	1*	12 27	19 12.99	-24 53.5	2.635	1.682	6.6	21.2	11 E	—	5*
2 15	21 33.78	-23 0.8	2.905	1.946	5.7	21.2	11 W	—	3*	1	6 19 43.11	-23 58.7	2.638	1.671	4.9	21.1	8 E	—	2*
2 20	21 45.41	-22 5.7	2.929	1.978	6.4	21.3	13 W	—	5*	1 16	20 13.00	-22 42.9	2.640	1.663	3.2	21.0	5 E	—	—
2 25	21 56.64	-21 10.0	2.952	2.010	7.2	21.4	15 W	—	7*	1 26	20 42.46	-21 7.5	2.640	1.658	1.9	20.9	3 E	—	—
3 2	22 7.49	-20 14.0	2.972	2.042	8.0	21.5	17 W	—	9*	2 5	21 11.33	-19 14.5	2.638	1.655	2.0	20.9	3 W	—	—
12 27	19 12.11	-32 51.9	3.289	2.348	5.9	20.7	14 E	—	8*	2 15	21 39.54	-17 6.6	2.635	1.655	3.3	21.0	6 W	—	—
1	19 34.01	-31 31.4	3.270	2.312	4.5	20.6	11 E	—	4*	2 25	22 7.03	-14 46.3	2.631	1.657	5.0	21.1	8 W	—	2*
1 16	19 55.81	-30 0.2	3.240	2.274	3.9	20.5	9 E	—	—	3 7	22 33.78	-12 16.6	2.625	1.663	6.7	21.2	11 W	—	5*
1 26	20 17.44	-28 18.2	3.199	2.236	4.5	20.5	10 W	—	2*	3 17	22 59.84	-9 40.2	2.617	1.671	8.4	21.3	14 W	—	8*
2 5	20 38.82	-26 25.4	3.146	2.198	5.9	20.5	13 W	—	6*	3 27	23 25.23	-6 59.9	2.608	1.681	10.1	21.4	17 W	—	11*
2 15	20 59.94	-24 21.7	3.083	2.160	7.8	20.5	17 W	—	11*	4 6	23 50.01	-4 18.4	2.596	1.694	11.8	21.4	20 W	—	14*
2 25	21 20.75	-22 7.3	3.011	2.121	9.8	20.5	21 W	—	15*	358629 2007 VN₁₆₆									
3 7	21 41.26	-19 42.4	2.930	2.082	12.0	20.5	26 W	—	20*	12 27	19 13.11	-24 48.9	2.566	1.614	6.9	20.8	11 E	—	5*
3 17	22 1.49	-17 7.2	2.841	2.043	14.2	20.4	30 W	1*	24*	1	6 19 44.73	-24 0.0	2.570	1.604	5.3	20.7	9 E	—	2*
3 27	22 21.45	-14 21.8	2.746	2.005	16.4	20.4	34 W	3*	28*	1 16	20 16.12	-22 47.8	2.573	1.599	3.7	20.6	6 E	—	—
4 6	22 41.19	-11 26.4	2.645	1.966	18.6	20.3	39 W	5*	33*	1 26	20 47.01	-21 14.1	2.577	1.596	2.5	20.5	4 E	—	—
4 16	23 0.77	-8 21.1	2.540	1.929	20.7	20.3	43 W	8*	37*	2 5	21 17.23	-19 21.4	2.581	1.598	2.1	20.5	3 E	—	—
4 26	23 20.25	-5 5.8	2.432	1.892	22.8	20.2	47 W	10*	41*	2 15	21 46.65	-17 12.7	2.585	1.603	2.9	20.6	5 W	—	—
5 6	23 39.72	-1 40.6	2.322	1.855	24.9	20.1	51 W	14*	44*	2 25	22 15.21	-14 51.2	2.589	1.611	4.3	20.7	7 W	—	—
5 16	23 59.26	+ 1 54.4	2.211	1.820	26.9	20.0	54 W	17*	47*	3 7	22 42.89	-12 20.4	2.593	1.623	5.9	20.8	10 W	—	3*
5 26	0 18.97	+ 5 39.2	2.100	1.786	28.8	19.9	58 W	22*	48*	3 17	23 9.73	-9 43.5	2.596	1.638	7.5	20.9	12 W	—	6*
6 5	0 38.99	+ 9 33.6	1.991	1.754	30.6	19.8	62 W	27*	48*	3 27	23 35.75	-7 3.6	2.598	1.656	9.1	21.0	15 W	—	9*
6 15	0 59.43	+13 37.1	1.885	1.724	32.3	19.7	65 W	32*	47*	4 6	0 1.03	+ 4 23.7	2.598	1.676	10.7	21.1	18 W	—	12*
6 25	1 20.44	+17 48.9	1.783	1.696	33.9	19.6	68 W	39*	45*	4 16	0 25.64	-1 46.2	2.596	1.700	12.3	21.2	21 W	—	15*
7 5	1 42.22	+22 7.7	1.685	1.670	35.3	19.5	72 W	45*	41*	4 26	0 49.61	+ 0 46.6	2.592	1.725	13.9	21.2	24 W	—	18*
7 10	1 53.45	+24 19.2	1.638	1.658	35.9	19.4	73 W	49*	39*	5 6	1 13.02	+ 3 12.9	2.583	1.753	15.5	21.3	28 W	1*	22*
7 15	2 4.94	+26 31.7	1.593	1.647	36.5	19.4	75 W	53*	37*	5 16	1 35.88	+ 5 31.1	2.570	1.783	17.0	21.4	31 W	3*	25*
7 20	2 16.70	+28 44.6	1.549	1.636	37.1	19.3	76 W	56*	35*	5 26	1 58.21	+ 7 39.9	2.552	1.814	18.5	21.5	35 W	6*	28*
7 25	2 28.78	+30 57.8	1.507	1.626	37.6	19.3	78 W	60*	33*	500922 2013 PE₂₆									
7 30	2 41.19	+33 10.6	1.467	1.618	38.0	19.2	79 W	64*	31	12 27	19 13.76	-35 56.8	2.382	1.468	11.1	21.2	17 E	—	10*
8 4	2 53.97	+35 22.6	1.428	1.609	38.4	19.1	80 W	67*	29	1	1 19 28.79	-34 43.5	2.440	1.511	9.7	21.3	15 E	—	8*
8 9	3 7.12	+37 33.2	1.391	1.602	38.8	19.1	82 W	71*	26	1 6	19 42.83	-33 28.6	2.494	1.554	8.4	21.3	13 E	—	6*
8 14	3 20.66	+39 41.7	1.356	1.596	39.1	19.0	83 W	74*	24	1 11	19 56.00	-32 12.9	2.545	1.596	7.3	21.4	12 E	—	4*
8 19	3 34.60	+41 47.5	1.322	1.590	39.3	19.0	85 W	77*	22	1 16	20 8.38	-30 56.6	2.593	1.636	6.4	21.4	11 E	—	2*
8 24	3 48.95	+43 49.8	1.290	1.586	39.5	18.9	86 W	79*	20	1 21	20 20.06	-29 40.2	2.637	1.676	5.8	21.5	10 E	—	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°
79150 1992 UR₇									137084 1998 XS₁₆								
<i>(continuation)</i>									<i>(continuation)</i>								
4 26	0 25.37	-1 37.9	2.706	1.912	15.6	21.2	31 W	2* 25*	1 13	12 13.40	-41 33.7	0.778	1.257	51.5	18.3	90 W	3 74
5 6	0 46.05	+0 11.8	2.683	1.944	17.3	21.3	35 W	3* 29*	1 15	12 20.23	-43 30.2	0.760	1.241	52.4	18.2	90 W	1 72
5 16	1 6.08	+1 54.6	2.652	1.977	18.9	21.4	39 W	6* 33*	1 17	12 27.63	-45 28.9	0.744	1.226	53.3	18.2	89 W	- 71
5 26	1 25.44	+3 29.3	2.613	2.010	20.4	21.4	44 W	8* 37*	1 19	12 35.68	-47 29.4	0.728	1.211	54.3	18.1	89 W	- 69
6 5	1 44.12	+4 55.1	2.567	2.043	21.9	21.5	49 W	12* 41*	1 21	12 44.51	-49 31.3	0.714	1.195	55.4	18.1	88 W	- 66
6 15	2 2.07	+6 11.2	2.513	2.075	23.2	21.5	53 W	16* 45*	4257 Ubasti								
6 25	2 19.20	+7 16.8	2.450	2.108	24.3	21.5	59 W	21* 48*	12 27	19 14.38	+1 57.4	3.084	2.265	11.8	20.8	28 E	21*
7 5	2 35.43	+8 11.6	2.381	2.140	25.3	21.5	64 W	27* 51*	1 6	19 33.21	+1 42.7	3.088	2.236	10.7	20.8	25 E	16*
7 15	2 50.61	+8 54.9	2.304	2.172	26.0	21.5	70 W	33* 52*	1 16	19 52.28	+1 40.1	3.080	2.205	9.9	20.7	23 E	11*
7 25	3 4.55	+9 26.5	2.222	2.204	26.5	21.4	76 W	39* 54*	1 26	20 11.54	+1 48.9	3.059	2.172	9.5	20.6	21 W	13*
8 4	3 17.06	+9 46.2	2.134	2.234	26.7	21.4	82 W	45* 54*	2 5	20 30.95	+2 7.9	3.026	2.135	9.5	20.6	21 W	14*
8 14	3 27.86	+9 53.9	2.043	2.265	26.6	21.3	89 W	50* 54	2 15	20 50.53	+2 36.4	2.979	2.097	10.2	20.5	22 W	16*
8 24	3 36.65	+9 49.6	1.949	2.295	26.0	21.2	96 W	53* 54	2 25	21 10.26	+3 13.2	2.920	2.055	11.3	20.5	24 W	17*
9 3	3 43.13	+9 33.6	1.856	2.324	24.9	21.1	104 W	55* 54	3 7	21 30.17	+3 57.0	2.849	2.011	12.7	20.4	27 W	18*
9 13	3 46.91	+9 6.4	1.767	2.352	23.2	21.0	113 W	54 55	3 17	21 50.32	+4 46.5	2.766	1.965	14.5	20.4	30 W	19*
9 23	3 47.71	+8 29.2	1.684	2.380	20.8	20.8	123 W	53 56	3 27	22 10.77	+5 40.2	2.672	1.915	16.5	20.3	33 W	19*
10 3	3 45.33	+7 43.6	1.613	2.406	17.8	20.7	133 W	52 56	4 6	22 31.63	+6 36.6	2.567	1.863	18.7	20.3	37 W	20*
10 13	3 39.78	+6 52.7	1.557	2.432	14.1	20.5	143 W	52 57	4 16	22 53.05	+7 34.0	2.453	1.809	21.1	20.2	40 W	21*
10 23	3 31.44	+6 0.8	1.522	2.457	10.1	20.3	154 W	51 58	4 26	23 15.18	+8 30.2	2.330	1.752	23.5	20.1	44 W	21*
10 28	3 26.46	+5 36.1	1.514	2.470	8.1	20.2	159 W	51 58	5 6	23 38.28	+9 23.1	2.200	1.692	26.1	19.9	48 W	22*
11 2	3 21.10	+5 13.1	1.513	2.482	6.3	20.2	164 W	50 59	5 16	0 2.63	+10 9.9	2.064	1.630	28.8	19.8	51 W	23*
11 7	3 15.52	+4 52.7	1.518	2.493	5.2	20.1	167 W	50 59	5 26	0 28.58	+10 47.0	1.925	1.565	31.7	19.6	54 W	24*
11 12	3 9.90	+4 35.5	1.530	2.505	5.1	20.1	167 W	50 59	5 31	0 42.30	+11 0.7	1.855	1.532	33.1	19.6	56 W	24*
11 22	2 59.15	+4 12.8	1.577	2.527	7.7	20.4	160 E	49 60	6 5	0 56.60	+11 10.4	1.785	1.498	34.6	19.5	57 W	25*
12 2	2 49.99	+4 7.4	1.650	2.549	11.3	20.6	150 E	49 60	6 10	1 11.55	+11 15.3	1.715	1.464	36.2	19.4	58 W	25*
12 12	2 43.23	+4 19.9	1.746	2.569	14.7	20.9	139 E	49 60	6 15	1 27.22	+11 14.5	1.646	1.430	37.8	19.3	60 W	26*
12 22	2 39.26	+4 48.6	1.862	2.589	17.4	21.1	128 E	50 59	6 20	1 43.70	+11 7.3	1.578	1.395	39.4	19.2	61 W	26*
1 1	2 38.12	+5 30.9	1.994	2.607	19.4	21.4	118 E	51 58	6 25	2 1.05	+10 52.7	1.512	1.360	41.0	19.1	61 W	27*
137084 1998 XS₁₆									6 30	2 19.38	+10 29.7	1.448	1.325	42.7	19.0	62 W	27*
12 27	19 14.02	-15 42.7	1.568	0.660	21.3	17.5	14 E	8* 1*	7 5	2 38.74	+9 57.3	1.388	1.289	44.5	18.9	63 W	27*
1 1	19 42.38	-12 49.9	1.570	0.691	24.4	17.7	17 E	11* 1*	7 10	2 59.20	+9 14.5	1.331	1.254	46.2	18.8	63 W	27*
1 6	20 9.49	-9 52.7	1.576	0.727	26.8	17.9	19 E	13* 1*	7 15	3 20.80	+8 20.5	1.279	1.218	48.0	18.7	63 W	27*
1 11	20 35.41	-6 55.2	1.587	0.767	28.5	18.1	22 E	16* 1*	7 25	4 7.35	+5 57.5	1.193	1.149	51.4	18.5	62 W	26*
1 16	21 0.26	-4 0.4	1.604	0.809	29.5	18.3	24 E	18* 1*	8 4	4 57.91	+2 52.0	1.135	1.082	54.4	18.3	60 W	24*
1 21	21 24.12	-1 10.8	1.625	0.853	30.0	18.4	26 E	20* 1*	8 14	5 51.14	-0 40.8	1.110	1.019	56.6	18.2	57 W	21*
1 26	21 47.06	+1 31.9	1.652	0.898	30.1	18.6	27 E	21* 1*	8 19	6 18.14	-2 29.3	1.110	0.991	57.2	18.2	55 W	20*
1 31	22 9.17	+4 6.3	1.683	0.942	29.9	18.7	28 E	22* 1*	8 24	6 45.06	-4 14.5	1.119	0.965	57.5	18.1	54 W	18*
2 5	22 30.50	+6 31.7	1.719	0.987	29.4	18.8	29 E	23* 1*	8 29	7 11.68	-5 53.1	1.136	0.941	57.3	18.1	52 W	17*
2 15	23 11.05	+10 54.5	1.801	1.074	27.8	19.1	30 E	24* 1*	9 3	7 37.78	+7 22.7	1.159	0.921	56.6	18.1	50 W	16*
2 25	23 49.09	+14 39.8	1.895	1.157	25.8	19.3	31 E	24*	9 8	8 3.21	-8 41.5	1.188	0.904	55.6	18.1	48 W	15*
3 7	0 24.95	+17 49.9	1.995	1.235	23.5	19.5	30 E	23*	9 13	8 27.88	-9 48.8	1.221	0.891	54.2	18.1	46 W	14*
3 17	0 58.93	+20 28.5	2.098	1.309	21.1	19.6	28 E	22*	9 23	9 14.77	-11 28.7	1.295	0.877	50.7	18.1	43 W	13*
3 27	1 31.26	+22 39.1	2.201	1.377	18.6	19.8	26 E	20*	10 3	9 58.43	-12 27.5	1.373	0.881	46.6	18.1	40 W	14*
4 6	2 2.18	+24 24.9	2.301	1.440	16.1	19.9	24 E	17*	10 13	10 39.09	-12 53.9	1.447	0.902	42.9	18.1	38 W	15*
4 16	2 31.87	+25 48.8	2.396	1.498	13.6	20.0	21 E	15*	10 18	10 58.39	-12 57.4	1.480	0.919	41.3	18.2	38 W	16*
4 26	3 0.47	+26 53.0	2.482	1.551	11.2	20.0	17 E	11*	10 23	11 17.07	-12 55.6	1.511	0.939	40.0	18.2	37 W	17*
5 6	3 28.10	+27 39.2	2.559	1.598	8.8	20.1	14 E	8*	10 28	11 35.17	-12 49.2	1.539	0.962	38.8	18.3	37 W	18*
5 16	3 54.87	+28 9.0	2.624	1.641	6.5	20.1	11 E	5*	11 2	11 52.72	-12 38.7	1.563	0.988	38.0	18.4	38 W	20*
5 26	4 20.84	+28 23.3	2.677	1.679	4.6	20.1	8 E	1*	11 12	12 26.29	-12 6.6	1.601	1.047	36.9	18.5	39 W	22*
6 5	4 46.04	+28 23.1	2.718	1.712	3.6	20.1	6 W	-	11 22	12 57.99	-11 20.0	1.626	1.111	36.6	18.7	42 W	25*
6 15	5 10.54	+28 9.2	2.744	1.740	4.1	20.2	7 W	1*	12 2	13 27.99	-10 18.7	1.637	1.180	36.6	18.8	46 W	28*
6 25	5 34.35	+27 42.0	2.756	1.764	5.8	20.3	10 W	3*	12 12	13 56.37	-9 1.4	1.637	1.250	36.9	19.0	50 W	33*
7 5	5 57.48	+27 2.1	2.753	1.783	7.9	20.4	14 W	6* 4*	12 22	14 23.17	+7 25.9	1.625	1.321	37.2	19.1	54 W	35*
7 15	6 19.98	+26 9.8	2.735	1.797	10.2	20.5	18 W	9* 7*	1 1	14 48.38	-5 30.5	1.605	1.392	37.5	19.2	59 W	38*
7 25	6 41.83	+25 5.4	2.702	1.807	12.5	20.6	23 W	13* 10*	1 11	15 11.91	-3 12.8	1.577	1.461	37.5	19.2	65 W	41*
8 4	7 3.07	+23 48.9	2.655	1.813	14.8	20.6	27 W	17* 14*	1 21	15 33.63	-0 31.3	1.544	1.529	37.4	19.3	71 W	44*
8 14	7 23.71	+22 20.6	2.594	1.814	17.1	20.7	32 W	21* 17*	4183 Cuno								
8 24	7 43.78	+20 40.3	2.519	1.811	19.4	20.7	37 W	26* 20*	12 27	19 14.48	-22 26.1	2.746	1.795	6.4	18.1	12 E	2*
9 3	8 3.30	+18 47.7	2.431	1.803	21.7	20.7	41 W	30* 23*	1 6	19 38.84	-21 20.9	2.849	1.878	3.8	18.1	7 E	-
9 13	8 22.30	+16 42.4	2.331	1.790	24.0	20.6	46 W	35* 26*	1 16	20 1.52	-20 7.5	2.940	1.958	1.3	18.1	3 E	-
9 23	8 40.81	+14 23.6	2.221	1.774	26.2	20.6	51 W	39* 29*	1 26	20 22.67	-18 47.9	3.018	2.035	1.2	18.2	3 W	-
10 3	8 58.88	+11 50.3	2.100	1.752	28.3	20.5	56 W	42* 33*	2 5	20 42.42	-17 23.8	3.081	2.109	3.6	18.5	8 W	-
10 13	9 16.54	+9 0.9	1.972	1.726	30.4	20.4	61 W	45* 37*	2 15	21 0.90	-15 56.6	3.130	2.180	5.9	18.7	13 W	1*
10 23	9 33.85	+5 53.4	1.837	1.695	32.4	20.2	66 W	46* 41*	2 25	21 18.18	-14 27.6	3.162	2.248	8.2	18.9	19 W	3*
11 2	9 50.91	+2 25.0	1.698	1.660	34.4	20.1	71 W	46* 46*	3 7	21 34.34	-12 57.9	3.177	2.313	10.3	19.1	25 W	5*
11 12	10 7.80	-1 28.1	1.556	1.620	36.3	19.9	75 W	43* 51*	3 17	21 49.41	-11 28.5	3.176	2.376	12.4	19.2	31 W	7*
11 17	10 16.23	-3 35.4	1.485	1.598	37.2	19.8	78 W	41* 54*	3 2								

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
4183 Cuno										5649 Donnashirley									
<i>(continuation)</i>																			
7 5	23 10.78	0 3.3	2.338	2.906	18.6	19.2	114 W	44*	64	12 27	19 15.09	-37 57.1	3.612	2.696	6.6	20.0	18 E	—	11*
7 15	23 7.09	+0 0.5	2.244	2.941	16.6	19.1	124 W	45	64	1 6	19 35.71	-37 3.7	3.602	2.669	5.7	20.0	16 E	—	7*
7 25	23 0.97	+0 11.3	2.165	2.974	13.9	18.9	135 W	45	64	1 16	19 56.30	-36 3.1	3.577	2.640	5.6	19.9	15 E	—	3*
8 4	22 52.60	0 38.9	2.104	3.005	10.6	18.8	147 W	44	65	1 26	20 16.73	-34 55.6	3.539	2.610	6.2	19.9	17 W	—	5*
8 14	22 42.40	-1 21.0	2.068	3.034	7.0	18.6	159 W	44	65	2 5	20 36.94	-33 41.3	3.487	2.579	7.4	19.9	20 W	—	10*
8 24	22 31.12	-2 14.2	2.061	3.061	3.4	18.4	170 W	43	66	2 15	20 56.87	-32 20.7	3.422	2.548	8.9	19.9	24 W	—	14*
8 29	22 25.34	-2 43.6	2.069	3.074	2.2	18.4	173 E	42	67	2 25	21 16.45	-30 54.2	3.346	2.515	10.6	19.9	28 W	—	19*
9 3	22 19.64	-3 13.9	2.085	3.086	2.7	18.4	172 E	42	67	3 7	21 35.67	-29 22.5	3.258	2.481	12.5	19.9	33 W	—	24*
9 8	22 14.13	-3 44.4	2.108	3.098	4.2	18.6	167 E	41	68	3 17	21 54.49	-27 46.1	3.159	2.447	14.3	19.9	38 W	—	29*
9 13	22 8.93	-4 14.5	2.139	3.109	5.9	18.7	161 E	41	68	3 27	22 12.89	-26 5.7	3.051	2.412	16.2	19.8	42 W	—	34*
9 23	21 59.80	-5 10.7	2.223	3.131	9.3	18.9	150 E	40	69	4 6	22 30.86	-24 21.9	2.935	2.376	18.1	19.8	47 W	—	39*
10 3	21 52.80	-5 58.6	2.333	3.150	12.2	19.2	138 E	39	70	4 16	22 48.40	-22 35.5	2.811	2.339	19.9	19.7	52 W	—	45*
10 13	21 48.20	-6 35.9	2.463	3.168	14.5	19.4	127 E	38	71	4 26	23 5.47	-20 46.9	2.680	2.301	21.6	19.6	57 W	1*	50*
10 23	21 46.05	-7 1.4	2.610	3.183	16.2	19.6	117 E	38	71	5 6	23 22.08	-18 56.8	2.544	2.263	23.3	19.5	63 W	3*	56*
11 2	21 46.19	-7 15.0	2.767	3.197	17.3	19.7	107 E	38	71	5 16	23 38.20	-17 5.6	2.403	2.224	24.9	19.4	68 W	6*	61*
11 12	21 48.42	-7 17.2	2.930	3.209	17.8	19.9	97 E	38	70*	5 26	23 53.76	-15 13.7	2.259	2.185	26.3	19.3	73 W	10*	67*
11 22	21 52.45	-7 8.6	3.095	3.219	17.9	20.0	88 E	38	65*	6 5	0 8.74	-13 21.4	2.112	2.145	27.6	19.1	78 W	14*	71*
12 2	21 58.03	-6 50.2	3.258	3.228	17.5	20.1	80 E	38	58*	6 15	0 23.03	-11 28.7	1.964	2.105	28.6	18.9	83 W	18*	74*
12 12	22 4.91	-6 22.6	3.415	3.234	16.7	20.2	71 E	37*	49*	6 25	0 36.50	-9 35.6	1.816	2.064	29.5	18.8	89 W	24*	74*
12 22	22 12.86	-5 46.8	3.563	3.239	15.7	20.3	63 E	37*	41*	7 5	0 49.00	-7 41.6	1.670	2.023	30.1	18.5	95 W	29*	72
1 1	22 21.69	-5 3.6	3.700	3.242	14.4	20.3	55 E	37*	33*	7 15	1 0.27	-5 45.8	1.525	1.983	30.3	18.3	101 W	35*	70
1 11	22 31.23	-4 13.7	3.824	3.244	12.9	20.3	48 E	34*	26*	7 25	1 9.99	-3 46.9	1.385	1.942	30.0	18.0	107 W	40*	68
1 21	22 41.34	-3 17.9	3.932	3.243	11.3	20.3	40 E	30*	19*	8 4	1 17.77	-1 42.8	1.249	1.902	29.2	17.8	114 W	43*	66
12 27	19 14.57	-29 39.6	2.808	1.863	6.8	19.9	13 E	—	7*	8 14	1 23.01	+0 29.1	1.121	1.863	27.6	17.4	121 W	45	64
1 6	19 41.43	-29 11.7	2.822	1.862	5.3	19.8	10 E	—	4*	8 24	1 25.06	+2 52.5	1.003	1.824	25.2	17.1	130 W	48	61
1 16	20 8.13	-28 27.5	2.827	1.860	4.4	19.8	8 E	—	1*	9 3	1 23.13	+5 30.9	0.897	1.786	21.7	16.7	139 W	51	58
1 26	20 34.55	-27 28.1	2.824	1.856	4.6	19.8	9 E	—	1*	9 13	1 16.44	+8 26.5	0.807	1.749	17.1	16.3	149 W	53	56
2 5	21 0.59	-26 14.7	2.811	1.852	5.7	19.8	11 W	—	2*	9 23	1 4.64	+11 38.0	0.736	1.714	11.5	15.8	160 W	57	52
2 15	21 26.22	-24 48.6	2.791	1.846	7.3	19.9	14 W	—	5*	9 28	0 56.93	+13 17.4	0.709	1.697	8.8	15.6	165 W	58	51
2 25	21 51.39	-23 11.4	2.763	1.840	9.1	19.9	17 W	—	9*	10 3	0 48.22	+14 57.0	0.688	1.681	6.8	15.4	168 W	60	49
3 7	22 16.10	-21 24.5	2.727	1.832	11.0	20.0	21 W	—	13*	10 8	0 38.78	+16 34.6	0.674	1.665	6.8	15.4	169 E	62	47
3 17	22 40.37	-19 29.5	2.685	1.824	12.9	20.0	24 W	—	16*	10 13	0 28.99	+18 8.3	0.665	1.650	8.9	15.4	165 E	63	46
3 27	23 4.22	-17 28.1	2.636	1.814	14.9	20.0	28 W	—	20*	10 18	0 19.28	+19 36.6	0.663	1.635	12.0	15.5	160 E	65	44
4 6	23 27.71	-15 21.8	2.581	1.804	16.8	20.0	31 W	—	24*	10 23	0 10.05	+20 58.1	0.666	1.621	15.5	15.6	154 E	66	43
4 16	23 50.90	-13 11.9	2.520	1.793	18.7	20.0	35 W	—	28*	10 28	0 1.69	+22 12.6	0.675	1.608	18.9	15.7	148 E	67	42
4 26	0 13.84	-11 0.1	2.455	1.780	20.6	20.0	38 W	—	31*	11 2	23 54.52	+23 20.3	0.688	1.595	22.1	15.9	143 E	68	41
5 6	0 36.59	-8 47.6	2.385	1.768	22.4	20.0	42 W	—	35*	11 7	23 48.76	+24 22.1	0.705	1.583	25.1	16.0	137 E	69	40
5 16	0 59.21	-6 35.7	2.311	1.754	24.2	20.0	45 W	1*	39*	11 12	23 44.57	+25 19.4	0.726	1.572	27.8	16.1	132 E	70	39
5 26	1 21.75	-4 25.7	2.233	1.740	25.9	19.9	49 W	3*	43*	11 17	23 42.00	+26 13.7	0.749	1.562	30.1	16.2	128 E	71	38
6 5	1 44.27	-2 18.5	2.153	1.725	27.6	19.9	52 W	7*	46*	11 22	23 41.04	+27 5.9	0.774	1.553	32.2	16.4	123 E	72	37
6 15	2 6.81	-0 15.4	2.069	1.709	29.3	19.8	55 W	11*	49*	11 27	23 41.62	+27 57.3	0.801	1.545	33.9	16.5	119 E	73	36
6 25	2 29.37	+1 42.8	1.982	1.693	30.8	19.8	59 W	15*	51*	12 2	23 43.70	+28 48.4	0.830	1.537	35.4	16.6	115 E	74	35*
7 5	2 52.01	+3 35.5	1.894	1.677	32.4	19.7	62 W	20*	52*	12 7	23 47.19	+29 40.1	0.860	1.531	36.6	16.7	112 E	75	34*
7 15	3 14.70	+5 21.9	1.803	1.660	33.8	19.6	65 W	26*	53*	12 12	23 52.01	+30 32.9	0.890	1.526	37.6	16.8	109 E	76	33*
7 25	3 37.43	+7 1.7	1.711	1.643	35.2	19.5	69 W	32*	53*	12 17	23 58.08	+31 26.9	0.921	1.521	38.4	16.9	106 E	76	31*
8 4	4 0.20	+8 35.1	1.617	1.626	36.5	19.4	72 W	38*	53*	12 22	0 5.31	+32 22.0	0.952	1.518	39.1	17.0	103 E	77	29*
8 14	4 22.92	+10 2.2	1.522	1.609	37.6	19.3	76 W	43*	52*	12 27	0 13.63	+33 18.2	0.983	1.516	39.9	17.0	101 E	78	27*
8 24	4 45.55	+11 23.8	1.427	1.592	38.7	19.1	80 W	48*	51*	1 1	0 22.99	+34 15.0	1.015	1.515	39.9	17.1	99 E	79	25*
9 3	5 8.00	+12 41.3	1.331	1.575	39.5	19.0	83 W	53*	51*	1 6	0 33.36	+35 12.4	1.047	1.515	40.2	17.2	96 E	80	24*
9 13	5 30.14	+13 56.7	1.235	1.559	40.2	18.8	88 W	57*	50*	1 11	0 44.69	+36 9.7	1.079	1.516	40.3	17.3	94 E	81	22*
9 23	5 51.83	+15 12.9	1.140	1.543	40.5	18.6	92 W	60*	49*	1 16	0 56.93	+37 6.5	1.112	1.518	40.3	17.3	93 E	82*	20*
10 3	6 12.92	+16 33.9	1.047	1.528	40.6	18.4	97 W	62	47*	1 21	1 10.03	+38 2.1	1.145	1.521	40.3	17.4	91 E	83*	19*
10 13	6 33.12	+18 4.9	0.955	1.514	40.2	18.2	102 W	63	46*	12 27	19 15.19	-30 55.4	2.949	2.008	6.7	21.0	14 E	—	8*
10 23	6 52.17	+19 52.8	0.867	1.501	39.3	17.9	107 W	65	44	1 6	19 39.41	-30 19.8	2.988	2.029	5.1	20.9	11 E	—	4*
10 28	7 1.15	+20 55.6	0.825	1.495	38.6	17.8	110 W	66	43	1 16	20 3.10	-29 32.9	3.014	2.048	4.3	20.9	9 E	—	1*
11 2	7 9.67	+22 5.9	0.784	1.489	37.7	17.7	113 W	67	42	1 26	20 26.18	-28 35.9	3.027	2.065	4.7	21.0	10 W	—	5*
11 7	7 17.66	+23 24.8	0.744	1.483	36.7	17.5	117 W	68	41	2 5	20 48.65	-27 30.1	3.028	2.079	6.1	21.1	13 W	—	9*
11 12	7 25.03	+24 53.7	0.706	1.478	35.4	17.3	120 W	70	39	2 15	21 10.50	-26 17.0	3.015	2.090	7.9	21.2	17 W	—	14*
11 17	7 31.69	+26 33.6	0.671	1.473	33.8	17.2	124 W	72	37	2 25	21 31.72	-24 57.8	2.990	2.099	9.9	21.2	21 W	—	19*
11 22	7 37.53	+28 25.5	0.638	1.468	32.1	17.0	128 W	73	36	3 7	21 52.33	-23 34.0	2.952	2.106	11.9	21.3	26 W	—	23*
11 27	7 42.42	+30 30.0	0.608	1.464	30.1	16.9	132 W	75	34	3 17	22 12.36	-22 6.7	2.902	2.110	14.0	21.3	31 W	—	28*
12 2	7 46.19	+32 47.0	0.580	1.460	28.0	16.7	136 W	78	31	3 27	22 31.82	-20							

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
25330 1999 KV₄										280017 2001 WC₂									
<i>(continuation)</i>																			
9 18	2 1.57	-10 15.2	0.825	1.742	19.7	18.4	144 W	35	74	12 27	19 15.78	-10 56.9	4.239	3.315	5.1	21.2	18 E	12*	—
9 23	1 56.92	-10 50.4	0.782	1.721	17.5	18.2	149 W	34	75	1 6	19 28.78	-10 7.3	4.290	3.341	3.9	21.1	13 E	7*	—
9 28	1 50.83	-11 24.8	0.743	1.699	15.4	18.0	153 W	34	75	1 16	19 41.60	-9 11.8	4.323	3.367	3.5	21.2	12 W	4*	—
10 3	1 43.32	-11 56.2	0.709	1.676	13.5	17.8	157 W	33	76	1 26	19 54.15	-8 10.3	4.337	3.391	4.1	21.2	14 W	8*	—
10 8	1 34.49	-12 21.8	0.680	1.653	12.4	17.6	159 W	33	76	2 5	20 6.34	-7 3.2	4.333	3.415	5.4	21.3	19 W	12*	5*
10 13	1 24.58	-12 38.8	0.657	1.629	12.4	17.5	159 W	32	77	2 15	20 18.11	-5 50.8	4.312	3.438	6.9	21.4	25 W	15*	12*
10 18	1 13.91	-12 44.6	0.639	1.605	13.8	17.4	157 E	32	77	2 25	20 29.35	-4 33.3	4.273	3.460	8.4	21.4	31 W	18*	19*
10 23	1 2.88	-12 37.3	0.626	1.580	16.4	17.5	153 E	32	77	3 7	20 40.00	-3 11.4	4.217	3.482	10.0	21.5	37 W	21*	27*
10 28	0 51.94	-12 15.6	0.619	1.555	19.6	17.5	148 E	33	76	178833 2001 HN₁₂									
11 2	0 41.53	-11 39.3	0.617	1.529	23.2	17.6	143 E	33	76	12 27	19 15.90	-26 51.9	2.586	1.639	7.4	19.4	12 E	—	6*
11 7	0 32.05	-10 48.9	0.618	1.503	26.8	17.6	137 E	34	75	1 6	19 47.72	-25 53.4	2.588	1.628	5.9	19.3	10 E	—	4*
11 12	0 23.84	-9 45.5	0.624	1.477	30.4	17.7	131 E	35	74	1 16	20 19.26	-24 30.9	2.591	1.620	4.5	19.2	7 E	—	1*
11 17	0 17.08	-8 30.8	0.632	1.450	33.8	17.8	125 E	36	73	1 26	20 50.22	-22 46.3	2.593	1.616	3.4	19.1	6 E	—	—
11 22	0 11.86	-7 6.6	0.643	1.423	37.0	17.9	120 E	38	71	2 5	21 20.43	-20 42.2	2.596	1.616	3.0	19.1	5 E	—	—
11 27	0 8.20	-5 34.5	0.655	1.395	39.9	18.0	115 E	39	70	2 15	21 49.76	-18 21.8	2.599	1.620	3.5	19.2	6 W	—	—
12 2	0 6.07	-3 55.7	0.668	1.368	42.6	18.1	110 E	41	68	2 25	22 18.15	-15 48.6	2.603	1.627	4.5	19.2	7 W	—	—
12 7	0 5.39	-2 11.2	0.682	1.340	45.1	18.1	106 E	43	66*	3 7	22 45.59	-13 6.1	2.608	1.638	5.9	19.3	10 W	—	3*
12 12	0 6.08	-0 21.7	0.695	1.312	47.3	18.2	101 E	45	63*	3 17	23 12.13	-10 17.6	2.612	1.653	7.4	19.4	12 W	—	6*
12 22	0 11.12	+3 30.3	0.719	1.257	51.3	18.3	94 E	49	56*	3 27	23 37.81	-7 26.4	2.615	1.671	8.9	19.5	15 W	—	8*
1 1	0 20.44	+7 37.4	0.738	1.203	54.7	18.3	87 E	53	48*	4 6	0 2.70	-4 35.4	2.616	1.692	10.5	19.6	18 W	—	12*
1 11	0 33.54	+11 58.9	0.749	1.151	57.8	18.4	82 E	57	41*	4 16	0 26.89	-1 47.0	2.616	1.716	12.0	19.7	21 W	—	15*
1 21	0 50.11	+16 33.9	0.752	1.103	60.6	18.4	78 E	61*	34*	4 26	0 50.42	+0 56.4	2.613	1.743	13.6	19.8	24 W	—	18*
488789 2004 XK₅₀										5 6	1 13.36	+3 33.1	2.606	1.772	15.2	19.9	27 W	1*	21*
12 27	19 15.35	-31 13.5	1.861	0.937	14.7	21.3	14 E	—	8*	5 16	1 35.75	+6 1.8	2.595	1.803	16.7	19.9	31 W	3*	25*
1 1	19 38.80	-32 5.2	1.919	1.001	14.6	21.5	15 E	—	9*	5 26	1 57.60	+8 21.0	2.579	1.837	18.2	20.0	35 W	6*	28*
1 6	20 1.21	-32 38.8	1.978	1.064	14.4	21.7	16 E	—	9*	6 5	2 18.91	+10 30.2	2.557	1.871	19.7	20.1	38 W	10*	31*
1 11	20 22.60	-32 57.2	2.035	1.125	14.1	21.9	16 E	—	10*	6 15	2 39.65	+12 28.7	2.528	1.907	21.1	20.1	42 W	14*	34*
1 16	20 42.99	-33 2.6	2.092	1.184	13.8	22.1	17 E	—	10*	6 25	2 59.77	+14 16.2	2.493	1.944	22.4	20.2	47 W	19*	36*
276109 2002 GL₅										7 5	3 19.20	+15 52.9	2.451	1.982	23.6	20.2	51 W	24*	38*
12 27	19 15.57	-24 26.2	2.418	1.470	8.0	19.7	12 E	1*	5*	7 15	3 37.83	+17 19.0	2.401	2.021	24.7	20.3	56 W	31*	40*
1 6	19 49.40	-23 7.0	2.425	1.465	6.5	19.6	10 E	—	3*	7 25	3 55.52	+18 34.9	2.344	2.060	25.6	20.3	61 W	37*	41*
1 16	20 22.63	-21 21.9	2.434	1.464	4.9	19.6	7 E	—	1*	8 4	4 12.12	+19 41.5	2.279	2.099	26.4	20.3	67 W	44*	41*
1 26	20 54.99	-19 14.1	2.445	1.467	3.5	19.5	5 E	—	—	8 14	4 27.41	+20 39.8	2.208	2.139	26.9	20.3	73 W	51*	42*
2 5	21 26.34	-16 47.1	2.458	1.474	2.0	19.4	3 E	—	—	8 24	4 41.15	+21 31.0	2.131	2.179	27.1	20.3	79 W	57*	42*
2 15	21 56.62	-14 5.1	2.472	1.485	1.0	19.4	1 E	—	—	9 3	4 53.07	+22 16.4	2.050	2.218	27.0	20.2	86 W	63*	42*
2 25	22 25.83	-11 12.2	2.488	1.500	1.7	19.5	3 W	—	—	9 13	5 2.83	+22 57.6	1.965	2.258	26.4	20.1	93 W	67*	41*
3 7	22 54.02	-8 12.4	2.505	1.518	3.1	19.6	5 W	—	—	9 23	5 10.06	+23 35.9	1.879	2.297	25.4	20.0	101 W	69	40
3 17	23 21.29	-5 9.3	2.522	1.540	4.7	19.8	7 W	—	1*	10 3	5 14.39	+24 12.4	1.795	2.337	23.7	19.9	110 W	69	40
3 27	23 47.71	-2 6.3	2.538	1.564	6.3	19.9	10 W	—	4*	10 13	5 15.42	+24 47.7	1.717	2.375	21.4	19.8	120 W	70	39
4 6	0 13.41	+0 53.7	2.552	1.592	7.9	20.0	13 W	—	7*	10 23	5 12.91	+25 21.3	1.649	2.413	18.4	19.6	130 W	70	39
4 16	0 38.49	+3 48.4	2.565	1.621	9.6	20.1	16 W	—	10*	11 2	5 6.83	+25 51.7	1.596	2.451	14.7	19.5	141 W	71	38
4 26	1 3.02	+6 35.7	2.574	1.652	11.2	20.2	19 W	1*	13*	11 12	4 57.53	+26 16.1	1.564	2.488	10.3	19.3	153 W	71	38
5 6	1 27.08	+9 13.9	2.579	1.685	12.9	20.3	22 W	3*	16*	11 17	4 51.94	+26 25.2	1.557	2.506	8.0	19.2	159 W	71	38
5 16	1 50.72	+11 41.7	2.580	1.720	14.5	20.5	25 W	5*	19*	11 22	4 45.92	+26 31.9	1.556	2.525	5.6	19.1	166 W	72	37
5 26	2 13.96	+13 58.2	2.575	1.755	16.1	20.5	29 W	7*	22*	11 27	4 39.65	+26 35.9	1.563	2.543	3.3	19.0	171 W	72	37
6 5	2 36.80	+16 2.6	2.563	1.791	17.7	20.6	32 W	10*	24*	12 2	4 33.31	+26 37.4	1.576	2.560	1.8	19.0	175 W	72	37
6 15	2 59.23	+17 54.7	2.545	1.828	19.2	20.7	36 W	14*	27*	12 7	4 27.10	+26 36.6	1.598	2.578	2.8	19.1	173 E	72	37
6 25	3 21.19	+19 34.1	2.519	1.865	20.7	20.8	40 W	19*	29*	12 12	4 21.21	+26 33.8	1.626	2.595	4.9	19.2	167 E	72	37
7 5	3 42.63	+21 1.1	2.486	1.903	22.1	20.8	45 W	24*	31*	12 17	4 15.80	+26 29.6	1.662	2.613	7.0	19.4	161 E	71	38
7 15	4 3.43	+22 16.0	2.444	1.940	23.4	20.9	49 W	29*	32*	12 22	4 11.00	+26 24.5	1.705	2.630	9.1	19.6	155 E	71	38
7 25	4 23.47	+23 19.4	2.394	1.977	24.6	20.9	54 W	35*	33*	12 27	4 6.89	+26 19.1	1.754	2.647	11.0	19.7	149 E	71	38
8 4	4 42.62	+24 12.3	2.336	2.014	25.6	20.9	59 W	42*	34*	1 1	4 3.55	+26 13.8	1.809	2.664	12.7	19.9	143 E	71	38
8 14	5 0.69	+24 55.6	2.270	2.051	26.5	20.9	65 W	48*	35*	1 6	4 1.01	+26 9.2	1.869	2.680	14.3	20.0	138 E	71	38
8 24	5 17.46	+25 30.9	2.196	2.086	27.2	20.9	70 W	55*	36*	1 11	3 59.28	+26 5.6	1.934	2.696	15.6	20.1	132 E	71	38
9 3	5 32.73	+25 59.6	2.116	2.122	27.5	20.9	77 W	61*	36*	1 16	3 58.35	+26 3.3	2.003	2.712	16.8	20.3	127 E	71	38
9 13	5 46.19	+26 23.5	2.029	2.157	27.6	20.8	83 W	66*	37*	1 21	3 58.19	+26 2.3	2.076	2.728	17.8	20.4	122 E	71	38
9 23	5 57.52	+26 44.6	1.939	2.190	27.3	20.8	90 W	71*	37*	154331 2002 VF₉₅									
10 3	6 6.36	+27 4.6	1.847	2.224	26.4	20.7	98 W	72	37*	12 27	19 16.13	-19 24.9	2.641	1.697	7.4	21.2	13 E	5*	3*
10 13	6 12.28	+27 25.2	1.755	2.256	25.1	20.5	107 W	72	37	1 6	19 44.55	-18 30.2	2.634	1.673	5.6	21.1	10 E	3*	—
10 23	6 14.86	+27 47.4	1.667	2.287	23.0	20.4	116 W	73	36	1 16	20 13.14	-17 16.6	2.624	1.650	3.8	20.9	6 E	—	—
11 2	6 13.71	+28 11.2	1.588	2.317	20.2	20.2	126 W	73	36	1 26	20 41.74	-15 45.1	2.612	1.630	2.2	20.8	4 E	—	—
11 12	6 8.61	+28 35.1	1.521	2.347	16.6	20.1	137 W	74	35	2 5	21 10.25	-13 57.0	2.598	1.613	1.4	20.7	2 W	—	—
11 22	5 59.75	+28 55.6	1.472	2.375	12.3	19.9	149 W	74	35	2 15	21 38.58	-11 54.1	2.582	1.598	2.4	20.7	4 W	—	—
11 27	5 54.10	+29 3																	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°		
85953 1999 FK ₂₁										1009 Sirene											
12	27	19 16.28	-22 11.6	1.032	0.220	71.2	17.4	12 E	3*	4*	2	5	20 25.57	-7 58.9	3.466	2.523	5.6	19.1	14 W	8*	1*
12	28	19 24.37	-22 32.3	0.992	0.224	81.3	17.7	13 E	3*	5*	2	15	20 43.30	-6 41.4	3.390	2.472	7.2	19.0	18 W	10*	7*
12	29	19 31.71	-22 55.4	0.952	0.232	91.0	18.0	14 E	3*	6*	2	25	21 1.22	-5 14.2	3.302	2.421	9.2	19.0	23 W	12*	13*
12	30	19 38.27	-23 20.9	0.912	0.243	99.9	18.5	14 E	3*	6*	3	7	21 19.31	-3 37.8	3.204	2.370	11.2	19.0	28 W	14*	18*
12	31	19 44.08	-23 48.5	0.873	0.257	108.0	18.9	14 E	3*	7*	3	17	21 37.59	-1 52.3	3.098	2.317	13.2	19.0	32 W	16*	23*
1	1	19 49.20	-24 18.0	0.836	0.273	115.0	19.4	15 E	2*	7*	3	27	21 56.05	+0 1.6	2.983	2.265	15.3	18.9	37 W	18*	28*
1	2	19 53.73	-24 49.1	0.801	0.291	121.2	19.9	15 E	2*	8*	4	6	22 14.73	+2 3.4	2.863	2.211	17.4	18.8	41 W	20*	32*
1	3	19 57.74	-25 21.7	0.767	0.310	126.6	20.4	15 E	1*	8*	4	16	22 33.68	+4 12.6	2.737	2.158	19.4	18.7	46 W	22*	36*
1	4	20 1.32	-25 55.4	0.735	0.329	131.2	20.9	15 E	1*	8*	4	26	22 52.96	+6 28.2	2.608	2.104	21.4	18.6	50 W	24*	39*
1	5	20 4.54	-26 30.3	0.705	0.348	135.3	21.3	14 E	—	8*	5	6	23 12.64	+8 49.4	2.476	2.050	23.4	18.5	54 W	26*	42*
99761 2002 JK ₁₀₁										<i>(continuation)</i>											
12	27	19 16.78	-19 39.8	3.898	2.948	4.3	21.4	13 E	5*	3*	5	16	23 32.84	+11 15.1	2.344	1.996	25.4	18.4	58 W	29*	44*
1	6	19 32.51	-19 39.9	3.936	2.961	2.1	21.3	6 E	—	—	5	26	23 53.65	+13 43.8	2.212	1.943	27.3	18.3	61 W	32*	45*
1	16	19 48.19	-19 33.7	3.957	2.974	0.5	21.2	2 W	—	—	6	5	0 15.22	+16 13.8	2.081	1.890	29.1	18.1	65 W	35*	45*
1	26	20 3.71	-19 21.8	3.960	2.985	2.3	21.3	7 W	—	—	6	15	0 37.70	+18 43.0	1.952	1.838	30.9	18.0	68 W	39*	44*
2	5	20 19.02	-19 5.3	3.946	2.996	4.4	21.5	14 W	1*	7*	6	20	0 49.32	+19 56.4	1.888	1.813	31.8	17.9	70 W	42*	43*
132124 2002 CW ₂₃₇										6	25	1 1.23	+21 8.6	1.826	1.788	32.7	17.8	72 W	44*	42*	
12	27	19 17.06	-39 23.3	3.646	2.740	6.9	20.2	20 E	—	12*	6	30	1 13.44	+22 19.1	1.765	1.763	33.5	17.8	73 W	47*	41*
1	6	19 38.23	-38 48.6	3.684	2.763	6.2	20.2	18 E	—	8*	7	5	1 25.99	+23 27.4	1.704	1.739	34.3	17.7	75 W	49*	40*
1	16	19 58.97	-38 7.9	3.709	2.785	6.0	20.2	17 E	—	4*	7	10	1 38.87	+24 33.0	1.645	1.715	35.2	17.6	76 W	52*	39*
1	26	20 19.19	-37 22.3	3.720	2.806	6.5	20.3	19 W	—	6*	7	15	1 52.10	+25 35.3	1.587	1.691	35.9	17.5	78 W	54*	38
2	5	20 38.80	-36 32.8	3.716	2.826	7.5	20.3	22 W	—	11*	7	20	2 5.69	+26 33.6	1.530	1.669	36.7	17.4	79 W	57*	37
2	15	20 57.78	-35 40.7	3.699	2.846	8.8	20.4	26 W	—	15*	7	25	2 19.65	+27 27.4	1.475	1.647	37.5	17.3	80 W	59*	37
2	25	21 16.06	-34 47.1	3.667	2.864	10.2	20.5	31 W	—	20*	8	4	2 48.65	+28 58.2	1.368	1.605	38.9	17.2	83 W	64*	35
3	7	21 33.61	-33 53.5	3.623	2.882	11.7	20.5	36 W	—	26*	8	9	3 3.66	+29 33.7	1.317	1.585	39.5	17.1	85 W	66*	34
3	17	21 50.40	-33 1.2	3.565	2.899	13.2	20.5	42 W	—	31*	8	14	3 18.95	+30 1.5	1.268	1.567	40.2	17.0	86 W	68*	34
3	27	22 6.39	-32 11.6	3.496	2.915	14.6	20.6	47 W	—	37*	8	19	3 34.49	+30 20.8	1.220	1.549	40.7	16.9	87 W	70*	34
4	6	22 21.54	-31 26.1	3.415	2.929	15.9	20.6	53 W	—	43*	8	24	3 50.22	+30 30.9	1.173	1.533	41.3	16.8	89 W	71*	33
4	16	22 35.80	-30 46.3	3.324	2.943	17.1	20.6	59 W	—	49*	8	29	4 6.07	+30 31.1	1.129	1.517	41.7	16.7	90 W	72*	33
4	26	22 49.10	-30 13.7	3.224	2.956	18.1	20.5	66 W	—	55*	9	3	4 21.94	+30 20.7	1.085	1.503	42.1	16.6	92 W	73*	34
5	6	23 1.34	-29 49.7	3.116	2.969	18.9	20.5	72 W	—	62*	9	8	4 37.74	+29 59.1	1.044	1.490	42.5	16.5	93 W	74*	34
5	16	23 12.43	-29 36.0	3.003	2.980	19.5	20.4	79 W	—	70*	9	13	4 53.34	+29 25.9	1.004	1.478	42.7	16.4	95 W	74*	35
5	26	23 22.19	-29 34.1	2.886	2.990	19.8	20.4	86 W	2*	77*	9	18	5 8.65	+28 40.9	0.966	1.468	42.9	16.3	96 W	74*	35
6	5	23 30.47	-29 45.0	2.767	2.999	19.7	20.3	93 W	5*	84*	9	23	5 23.55	+27 43.9	0.930	1.460	42.9	16.2	98 W	73	36
6	15	23 37.02	-30 10.0	2.649	3.008	19.4	20.2	101 W	8*	86	9	28	5 37.93	+26 35.0	0.896	1.452	42.9	16.1	100 W	72	37
6	25	23 41.59	-30 49.4	2.535	3.015	18.6	20.1	108 W	10*	85	10	3	5 51.67	+25 14.5	0.863	1.447	42.7	16.0	102 W	70	39
7	5	23 43.90	-31 42.5	2.427	3.022	17.5	19.9	117 W	12*	84	10	8	6 4.65	+23 42.6	0.832	1.442	42.3	15.9	104 W	69	40
7	15	23 43.63	-32 47.6	2.330	3.027	16.0	19.8	125 W	12*	83	10	13	6 16.76	+22 0.1	0.803	1.440	41.8	15.8	106 W	67	42
7	25	23 40.57	-34 0.6	2.247	3.032	14.2	19.7	133 W	11	82	10	23	6 38.08	+18 6.5	0.751	1.440	40.4	15.7	110 W	63	46
7	30	23 37.96	-34 38.3	2.212	3.034	13.2	19.6	137 W	10	81	11	2	6 54.98	+13 42.3	0.707	1.446	38.2	15.5	116 W	59	50
8	4	23 34.63	-35 15.6	2.183	3.035	12.3	19.5	141 W	10	81	11	12	7 6.88	+8 59.8	0.672	1.458	35.3	15.3	122 W	54	55
8	9	23 30.61	-35 51.4	2.158	3.037	11.3	19.5	144 W	9	80	11	17	7 10.87	+6 36.5	0.658	1.467	33.7	15.2	125 W	52	57
8	14	23 25.95	-36 24.6	2.139	3.038	10.5	19.4	147 W	9	80	11	22	7 13.52	+4 15.0	0.647	1.477	31.8	15.2	128 W	49	60
8	19	23 20.74	-36 54.1	2.127	3.039	9.9	19.4	149 W	8	79	11	27	7 14.85	+1 57.8	0.639	1.488	29.9	15.1	131 W	47	62
8	24	23 15.07	-37 18.7	2.120	3.040	9.5	19.4	150 W	8	79	12	2	7 14.89	-0 12.5	0.634	1.501	27.9	15.0	135 W	45	64
8	29	23 9.08	-37 37.7	2.121	3.040	9.4	19.4	150 W	7	78	12	7	7 13.72	-2 13.0	0.633	1.515	25.9	15.0	138 W	43	66
9	3	23 2.90	-37 50.2	2.127	3.040	9.7	19.4	150 W	7	78	12	12	7 11.50	-4 1.0	0.635	1.530	23.9	15.0	141 W	41	68
9	8	22 56.69	-37 55.8	2.140	3.041	10.2	19.4	148 E	7	78	12	17	7 8.41	-5 34.3	0.640	1.547	22.2	14.9	144 W	39	70
9	13	22 50.60	-37 54.2	2.160	3.040	10.9	19.5	145 E	7	78	12	22	7 4.67	-6 51.1	0.650	1.564	20.7	15.0	146 W	38	71
9	18	22 44.79	-37 45.3	2.185	3.040	11.8	19.5	142 E	7	78	12	27	7 0.53	-7 50.3	0.663	1.583	19.5	15.0	147 W	37	72
9	23	22 39.39	-37 29.5	2.216	3.039	12.7	19.6	138 E	8	79	1	1	6 56.25	-8 31.7	0.680	1.602	18.8	15.0	148 W	36	73
9	28	22 34.51	-37 7.1	2.253	3.038	13.7	19.7	134 E	8	79	1	6	6 52.10	-8 55.3	0.702	1.623	18.6	15.1	148 E	36	73
10	3	22 30.22	-36 38.9	2.295	3.037	14.6	19.7	130 E	8	79	1	11	6 48.32	-9 2.6	0.727	1.644	18.7	15.2	148 E	36	73
10	8	22 26.60	-36 5.4	2.342	3.036	15.5	19.8	126 E	9	80	1	16	6 45.13	-8 55.3	0.756	1.666	19.2	15.4	146 E	36	73
10	13	22 23.68	-35 27.2	2.392	3.034	16.3	19.9	121 E	10	81	1	21	6 42.66	-8 35.5	0.790	1.688	20.0	15.5	144 E	36	73
129493 1995 BM ₂										12	27	19 17.38	-10 43.4	3.665	2.747	6.3	20.9	18 E	12*	—	
11	2	22 19.04	-32 20.9	2.626	3.025	18.5	20.2	104 E	13	84	1	6	19 33.46	-9 51.3	3.713	2.770	5.0	20.9	14 E	8*	—
11	12	22 20.61	-30 34.8	2.755	3.020	19.0	20.3	96 E	14	85	1	16	19 49.31	-8 51.6	3.746	2.792	4.2	20.9	12 W	3*	—
11	22	22 24.37	-28 43.8	2.887	3.013	19.1	20.4	88 E	16	82*	2	5	20 4.84	-7 44.6	3.763	2.813	4.5	20.9	13 W	7*	—
12	2	22 29.99	-26 49.6	3.018	3.005	18.8	20.5	80 E	18	73*	2	5	20 19.99	-6 30.8	3.765	2.832	5.6	21.0	16 W	10*	1*
12	12	22 37.15	-24 53.2	3.147	2.997	18.2	20.5	72 E	20	64*	2	15	20 34.71	-5 1							

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
129493 1995 BM₂										154715 2004 LB₆									
<i>(continuation)</i>										<i>(continuation)</i>									
8 14	22 6.36	+20 22.7	2.146	3.027	11.3	20.2	144 W	65	44	3 22	1 46.96	+ 9 5.7	1.680	0.910	29.6	20.6	27 E	18*	13*
8 24	21 56.85	+19 55.9	2.118	3.028	10.0	20.1	149 E	65	44	3 27	2 10.43	+11 2.2	1.694	0.938	29.9	20.7	28 E	19*	14*
8 29	21 52.10	+19 32.7	2.113	3.028	9.7	20.1	150 E	65	44	4 1	2 33.63	+12 49.4	1.713	0.969	30.0	20.8	29 E	20*	15*
9 3	21 47.48	+19 3.5	2.115	3.027	9.8	20.1	149 E	64	45	4 6	2 56.54	+14 26.4	1.737	1.002	29.8	20.9	30 E	20*	16*
9 8	21 43.11	+18 29.0	2.123	3.026	10.1	20.1	148 E	63	46	4 11	3 19.08	+15 52.6	1.765	1.036	29.5	21.0	31 E	20*	16*
9 13	21 39.10	+17 50.2	2.137	3.026	10.6	20.1	146 E	63	46	4 16	3 41.21	+17 7.6	1.797	1.072	29.0	21.1	31 E	21*	17*
9 18	21 35.54	+17 7.9	2.157	3.024	11.4	20.2	143 E	62	47	4 21	4 2.87	+18 11.3	1.833	1.109	28.3	21.2	32 E	20*	18*
9 23	21 32.48	+16 23.1	2.183	3.023	12.3	20.2	140 E	61	48	4 26	4 24.01	+19 4.0	1.872	1.146	27.5	21.3	32 E	20*	18*
9 28	21 29.97	+15 36.9	2.215	3.021	13.2	20.3	136 E	61	48	5 1	4 44.60	+19 46.0	1.914	1.184	26.7	21.4	32 E	19*	19*
10 3	21 28.06	+14 50.2	2.251	3.019	14.1	20.4	133 E	60	49	5 6	5 4.60	+20 18.0	1.959	1.222	25.7	21.5	32 E	19*	19*
10 8	21 26.75	+14 3.9	2.293	3.017	15.0	20.4	128 E	59	50	90367 2003 LC₅									
10 13	21 26.08	+13 18.7	2.339	3.015	15.9	20.5	124 E	58	51	12 27	19 19.04	-27 4.8	1.955	1.022	12.6	20.0	13 E	—	7*
10 18	21 26.01	+12 35.4	2.388	3.012	16.7	20.6	120 E	58	51	1 1	19 39.92	-26 51.5	1.918	0.984	12.9	19.9	13 E	—	7*
10 23	21 26.54	+11 54.5	2.441	3.009	17.3	20.6	116 E	57	52	1 6	20 1.51	-26 25.5	1.880	0.947	13.4	19.8	13 E	—	7*
10 28	21 27.65	+11 16.4	2.497	3.006	17.9	20.7	111 E	56	53	1 11	20 23.79	-25 45.5	1.840	0.909	14.1	19.7	13 E	—	7*
11 2	21 29.30	+10 41.5	2.555	3.003	18.4	20.8	107 E	56	53	1 16	20 46.70	-24 50.0	1.799	0.872	15.1	19.6	13 E	—	7*
11 7	21 31.48	+10 10.0	2.615	2.999	18.8	20.8	103 E	55	54*	1 21	21 10.19	-23 37.9	1.756	0.835	16.5	19.5	14 E	—	8*
11 12	21 34.15	+ 9 42.2	2.676	2.995	19.0	20.9	99 E	55	53*	1 26	21 34.17	-22 7.8	1.713	0.800	18.1	19.4	15 E	1*	8*
11 17	21 37.28	+ 8 18.1	2.738	2.991	19.2	20.9	95 E	54	52*	1 31	21 58.57	-20 18.7	1.670	0.767	20.1	19.3	16 E	2*	9*
11 22	21 40.83	+ 7 57.8	2.801	2.987	19.3	21.0	91 E	54	50*	2 5	22 23.30	-18 9.9	1.626	0.737	22.5	19.3	17 E	4*	10*
11 27	21 44.77	+ 8 41.2	2.864	2.982	19.3	21.0	87 E	54	48*	2 15	23 13.38	-12 52.7	1.539	0.690	28.4	19.2	19 E	7*	11*
12 2	21 49.08	+ 8 28.4	2.927	2.977	19.2	21.1	83 E	53	45*	2 25	0 3.74	- 6 22.4	1.456	0.665	35.3	19.2	23 E	12*	13*
12 7	21 53.72	+ 8 19.2	2.989	2.972	19.0	21.1	80 E	53*	42*	3 7	0 54.08	+ 1 1.7	1.382	0.668	42.1	19.3	27 E	17*	15*
12 12	21 58.67	+ 8 13.6	3.051	2.967	18.8	21.1	76 E	53*	39*	3 12	1 19.31	+ 4 54.7	1.350	0.680	45.1	19.3	29 E	19*	15*
12 17	22 3.89	+ 8 11.6	3.111	2.961	18.4	21.2	72 E	53*	36*	3 17	1 44.69	+ 8 48.9	1.323	0.698	47.5	19.4	31 E	22*	16*
12 22	22 9.37	+ 8 12.9	3.169	2.956	18.0	21.2	69 E	52*	33*	3 22	2 10.31	+12 39.4	1.301	0.722	49.4	19.5	33 E	25*	16*
12 27	22 15.09	+ 8 17.4	3.226	2.949	17.6	21.2	65 E	51*	29*	3 27	2 36.30	+16 21.4	1.286	0.750	50.8	19.6	36 E	27*	16*
1 1	22 21.02	+ 8 24.9	3.281	2.943	17.1	21.2	62 E	49*	26*	4 1	3 2.73	+19 50.3	1.276	0.781	51.5	19.7	38 E	30*	17*
1 6	22 27.14	+ 8 35.5	3.334	2.937	16.5	21.2	58 E	48*	23*	4 6	3 29.66	+23 2.0	1.273	0.815	51.8	19.8	40 E	32*	17*
1 11	22 33.45	+ 8 48.9	3.385	2.930	15.9	21.2	55 E	46*	20*	4 11	3 57.07	+25 52.9	1.276	0.851	51.6	19.9	42 E	34*	17*
1 16	22 39.91	+ 9 4.9	3.432	2.923	15.3	21.2	51 E	46*	17*	4 16	4 24.87	+28 20.2	1.285	0.888	51.1	20.0	44 E	35*	18*
1 21	22 46.52	+ 9 23.4	3.477	2.915	14.6	21.2	48 E	41*	14*	4 21	4 52.91	+30 22.1	1.299	0.925	50.4	20.1	45 E	37*	18*
280244 2002 WP₁₁										334042 2001 EC₁₈									
12 27	19 17.54	-20 40.9	2.165	1.225	10.2	20.9	13 E	4*	4*	12 27	19 19.07	-29 51.8	2.283	1.351	10.2	21.3	14 E	—	8*
1 6	19 56.20	-18 48.6	2.149	1.204	9.7	20.8	12 E	4*	2*	1 1	19 37.57	-28 52.9	2.298	1.358	9.4	21.3	13 E	—	7*
1 16	20 34.64	-16 23.6	2.141	1.192	9.3	20.8	11 E	4*	1*	1 6	19 55.57	-27 46.3	2.313	1.367	8.6	21.3	12 E	—	6*
1 26	21 12.45	-13 30.4	2.141	1.188	8.9	20.7	11 E	4*	—	1 11	20 13.06	-26 32.7	2.329	1.376	7.8	21.3	11 E	—	5*
2 5	21 49.35	-10 15.5	2.151	1.194	8.5	20.7	10 E	4*	—	1 16	20 30.02	-25 12.9	2.345	1.386	7.0	21.3	10 E	—	4*
2 15	22 25.21	- 6 45.9	2.171	1.209	8.0	20.8	10 E	4*	—	1 21	20 46.47	-23 47.7	2.361	1.397	6.2	21.3	9 E	—	3*
2 25	22 59.95	- 3 9.3	2.199	1.232	7.3	20.8	9 E	3*	—	1 26	21 2.40	-22 17.9	2.377	1.407	5.4	21.3	8 E	—	2*
3 7	23 33.61	+ 0 27.5	2.236	1.263	6.6	20.9	8 E	2*	—	1 31	21 17.83	-20 44.0	2.393	1.419	4.5	21.2	7 E	—	1*
3 17	0 6.26	+ 3 58.4	2.281	1.300	5.6	20.9	7 E	1*	—	2 5	21 32.80	-19 6.9	2.409	1.431	3.7	21.2	5 E	—	—
3 27	0 37.97	+ 7 18.4	2.331	1.343	4.5	21.0	6 E	—	—	2 10	21 47.32	-17 26.9	2.425	1.443	3.0	21.2	4 E	—	—
4 6	1 8.83	+10 23.9	2.385	1.391	3.4	21.0	5 E	—	—	2 15	22 1.42	-15 44.9	2.440	1.455	2.4	21.2	3 E	—	—
4 16	1 38.92	+13 12.3	2.442	1.442	2.3	21.1	3 E	—	—	2 20	22 15.13	-14 1.1	2.455	1.468	2.0	21.2	3 E	—	—
4 26	2 8.27	+15 41.9	2.500	1.495	1.8	21.2	3 W	—	—	2 25	22 28.48	-12 16.2	2.469	1.481	2.1	21.3	3 W	—	—
5 6	2 36.91	+17 51.9	2.556	1.551	2.5	21.4	4 W	—	—	3 2	22 41.50	-10 30.5	2.482	1.495	2.6	21.3	4 W	—	—
238518 2004 TC₁₂₁										163242 2002 FE									
12 27	19 17.56	-23 46.5	2.591	1.644	7.4	20.8	12 E	2*	5*	12 27	19 19.16	-37 57.1	3.960	3.046	6.0	21.1	19 E	—	11*
1 6	19 47.84	-22 26.0	2.606	1.644	5.5	20.7	9 E	—	2*	1 6	19 37.20	-37 8.7	3.971	3.038	5.1	21.0	16 E	—	7*
1 16	20 17.51	-20 45.0	2.621	1.646	3.7	20.6	6 E	—	—	1 16	19 55.07	-36 16.5	3.966	3.028	4.9	21.0	15 E	—	3*
1 26	20 46.39	-18 47.5	2.634	1.652	1.8	20.5	3 E	—	—	1 26	20 12.68	-35 21.0	3.945	3.018	5.5	21.0	17 W	—	6*
2 5	21 14.41	-16 34.5	2.646	1.660	0.3	20.4	1 E	—	—	2 5	20 29.95	-34 22.4	3.908	3.007	6.7	21.1	21 W	—	11*
2 15	21 41.54	-14 9.3	2.657	1.672	1.9	20.6	6 W	—	—	2 15	20 12.98	-33 22.4	3.908	3.007	6.7	21.1	21 W	—	11*
2 25	22 7.78	-11 34.9	2.665	1.685	3.8	20.7	3 W	—	—	2 25	20 46.84	-33 21.5	3.855	2.995	8.2	21.1	26 W	—	17*
3 7	22 33.17	- 8 54.1	2.671	1.701	5.7	20.8	10 W	—	4*	3 12	21 3.26	-32 18.8	3.787	2.982	9.8	21.1	31 W	—	22*
3 17	22 57.78	- 6 9.4	2.674	1.720	7.5	21.0	13 W	—	7*	3 17	21 23.30	-31 15.2	3.704	2.967	11.5	21.1	37 W	—	28*
3 27	23 21.66	+ 3 23.3	2.674	1.740	9.3	21.1	16 W	1*	10*	154715 2004 LB₆									
4 6	23 44.88	+ 0 37.9	2.671	1.763	11.1	21.2	20 W	2*	14*	12 27	19 17.89	-20 15.7	2.014	1.078	11.8	20.8	13 E	5*	4*
4 16	0 7.54	+ 2 4.9	2.662	1.787	12.9	21.2	23 W	4*	17*	1 6	19 58.73	-18 54.8	1.945	1.008	12.2	20.6	12 E	5*	3*
4 26	0 29.66	+ 4 43.4	2.650	1.812	14.6	21.3	27 W	5*	21*	1 16	20 41.72	-16 51.4	1.878	0.943	13.2	20.4	13 E	5*	3*
5 6	0 51.30	+ 7 16.1	2.631	1.839	16.3	21.4	31 W	8*	24*	1 26	21 26.52	-14 3.7	1.815	0.889	15.1	20.3	14 E	6*	3*
5 16	1 12.51	+ 9 41.9	2.607	1.867	18.0	21.5	35 W	10*	27*	2 5	22 12.73	-10 33.9	1.760	0.849	17.8	20.2	15 E	8*	4*

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	
163242 2002 FE									96590 1998 XB									
<i>(continuation)</i>									<i>(continuation)</i>									
3 17	21 34.53	-30 11.6	3.608	2.952	13.2	21.1	42 W	— 34*	10 18	14 45.03	-16 4.7	1.443	0.600	33.1	17.3	19 E	2*	13*
3 27	21 49.26	-29 8.9	3.500	2.935	14.8	21.1	49 W	— 40*	10 23	15 12.51	-19 17.5	1.391	0.591	38.1	17.3	21 E	2*	15*
4 6	22 3.31	-28 8.1	3.380	2.918	16.2	21.0	55 W	— 46*	10 28	15 41.50	-22 19.9	1.339	0.589	43.1	17.4	24 E	2*	18*
4 16	22 16.62	-27 10.3	3.250	2.899	17.6	21.0	61 W	— 53*	11 2	16 12.06	-25 6.0	1.287	0.595	48.0	17.4	26 E	2*	20*
4 26	22 29.09	-26 16.8	3.112	2.880	18.8	20.9	67 W	2* 60*	11 7	16 44.17	-27 29.8	1.236	0.608	52.5	17.5	29 E	3*	23*
5 6	22 40.63	-25 28.6	2.966	2.859	19.8	20.8	74 W	4* 67*	11 12	17 17.75	-29 25.2	1.189	0.627	56.3	17.6	32 E	4*	26*
5 16	22 51.11	-24 47.2	2.816	2.838	20.6	20.7	81 W	7* 74*	11 17	17 52.54	-30 47.0	1.146	0.651	59.4	17.7	35 E	5*	28*
5 26	23 0.34	-24 13.9	2.662	2.815	21.1	20.6	88 W	9* 82*	11 22	18 28.15	-31 31.2	1.108	0.679	61.7	17.8	37 E	6*	31*
6 5	23 8.14	-23 49.9	2.507	2.791	21.2	20.5	95 W	12* 88	11 27	19 4.02	-31 35.5	1.076	0.710	63.2	17.9	40 E	8*	34*
6 15	23 14.25	-23 36.6	2.353	2.767	20.9	20.3	103 W	16* 88	12 2	19 39.54	-30 59.6	1.051	0.742	64.0	17.9	43 E	10*	36*
6 25	23 18.35	-23 34.8	2.203	2.741	20.2	20.1	111 W	18* 88	12 7	20 14.09	-29 45.7	1.033	0.776	64.2	18.0	45 E	12*	38*
7 5	23 20.12	-23 44.9	2.060	2.714	18.9	19.9	120 W	20* 88	12 12	20 47.14	-27 57.9	1.021	0.809	63.8	18.1	48 E	14*	40*
7 15	23 19.17	-24 6.3	1.928	2.687	17.1	19.7	129 W	21* 88	12 17	21 18.33	-25 42.1	1.017	0.843	63.1	18.1	50 E	17*	41*
7 25	23 15.20	-24 36.5	1.810	2.658	14.6	19.4	139 W	20 89	12 22	21 47.50	-23 4.7	1.019	0.876	62.0	18.2	52 E	20*	42*
8 4	23 8.05	-25 11.2	1.710	2.629	11.7	19.2	148 W	20 89	12 27	22 14.62	-20 12.0	1.027	0.908	60.7	18.2	54 E	23*	42*
8 9	23 3.30	-25 28.2	1.669	2.613	10.1	19.1	153 W	20 89	1 1	22 39.81	-17 10.1	1.041	0.939	59.3	18.3	55 E	26*	42*
8 14	22 57.85	-25 43.6	1.634	2.598	8.6	18.9	157 W	19 90	1 6	23 3.23	-14 3.8	1.060	0.969	57.8	18.3	56 E	29*	42*
8 19	22 51.79	-25 56.3	1.605	2.582	7.4	18.8	161 W	19 90	1 11	23 25.08	-10 57.4	1.083	0.998	56.2	18.4	57 E	32*	41*
8 24	22 45.24	-26 5.2	1.582	2.567	6.6	18.7	163 W	19 90	1 16	23 45.54	-7 53.8	1.110	1.025	54.7	18.5	58 E	35*	40*
8 29	22 38.36	-26 9.5	1.567	2.550	6.6	18.7	163 W	19 90	1 21	0 4.83	-4 55.3	1.141	1.050	53.2	18.5	59 E	37*	39*
9 3	22 31.33	-26 8.2	1.559	2.534	7.4	18.7	161 E	19 90	433965 1999 SD₁₀									
9 8	22 24.34	-26 0.9	1.557	2.518	8.8	18.8	157 E	19 90	12 27	19 19.37	-23 46.8	2.371	1.429	8.8	20.4	13 E	2*	5*
9 13	22 17.59	-25 47.4	1.562	2.501	10.5	18.8	153 E	19 90	1 6	19 55.38	-22 47.1	2.361	1.408	7.7	20.4	11 E	1*	4*
9 18	22 11.26	-25 27.5	1.574	2.484	12.4	18.9	148 E	20 89	1 16	20 31.37	-21 16.6	2.357	1.396	6.6	20.3	9 E	—	2*
9 23	22 5.50	-25 1.7	1.592	2.467	14.2	19.0	143 E	20 89	1 26	21 6.88	-19 17.7	2.359	1.391	5.6	20.2	8 E	—	1*
9 28	22 0.44	-24 30.5	1.615	2.449	16.0	19.1	138 E	20 89	1 31	21 24.33	-18 8.9	2.363	1.392	5.1	20.2	7 E	—	1*
10 3	21 56.16	-23 54.4	1.643	2.432	17.7	19.1	132 E	21 88	2 5	21 41.54	-16 54.6	2.369	1.395	4.7	20.2	7 E	—	—
10 13	21 50.20	-22 29.8	1.712	2.396	20.7	19.3	122 E	23 86	2 10	21 58.48	-15 35.6	2.377	1.400	4.2	20.2	6 E	—	—
10 23	21 47.73	-20 52.7	1.793	2.360	22.9	19.4	112 E	24 85	2 15	22 15.12	-14 12.4	2.387	1.407	3.8	20.2	5 E	—	—
11 2	21 48.56	-19 6.5	1.883	2.322	24.6	19.5	103 E	26 83	2 20	22 31.46	-12 46.0	2.398	1.416	3.3	20.2	5 E	—	—
11 12	21 52.36	-17 13.3	1.977	2.284	25.6	19.6	95 E	28 80*	2 25	22 47.48	-11 17.1	2.412	1.426	3.0	20.2	4 E	—	—
11 22	21 58.70	-15 14.1	2.071	2.246	26.0	19.7	87 E	30 72*	3 2	23 3.18	-9 46.2	2.426	1.439	2.7	20.2	4 E	—	—
12 2	22 7.21	-13 9.4	2.164	2.207	26.1	19.8	79 E	32 63*	3 7	23 18.56	-8 14.2	2.443	1.454	2.5	20.2	4 E	—	—
12 12	22 17.55	-10 58.9	2.251	2.168	25.7	19.8	72 E	34 55*	3 17	23 48.42	-5 9.2	2.479	1.487	2.5	20.3	4 E	—	—
12 22	22 29.44	-8 42.6	2.333	2.128	24.9	19.8	66 E	36* 46*	3 27	0 17.09	-2 6.7	2.519	1.527	3.1	20.4	5 W	—	—
1 1	22 42.66	-6 20.3	2.406	2.088	24.0	19.8	60 E	37* 39*	4 6	0 44.67	+0 49.4	2.562	1.572	4.2	20.6	7 W	—	—
1 11	22 57.04	-3 51.8	2.471	2.048	22.8	19.8	54 E	37* 32*	4 16	1 11.25	+3 36.2	2.605	1.621	5.5	20.8	9 W	—	—
1 21	23 12.46	-1 17.1	2.527	2.007	21.4	19.8	48 E	35* 25*	4 26	1 36.90	+6 11.6	2.648	1.674	6.9	20.9	12 W	—	—
96590 1998 XB									5 6	2 1.68	+8 34.2	2.688	1.730	8.4	21.1	15 W	—	—
12 27	19 19.35	-26 33.1	1.527	0.611	21.3	17.1	13 E	— 7*	5 16	2 25.64	+10 42.9	2.725	1.789	10.0	21.3	18 W	—	—
1 1	19 53.82	-26 1.8	1.518	0.631	25.1	17.3	16 E	2* 9*	5 26	2 48.78	+12 37.5	2.755	1.849	11.5	21.4	21 W	—	—
1 6	20 27.22	-24 58.6	1.512	0.656	28.2	17.4	18 E	4* 11*	20187 Janapittichová									
1 11	20 59.20	-23 27.4	1.509	0.685	30.6	17.6	21 E	6* 13*	12 27	19 19.47	-19 27.9	2.963	2.021	6.6	17.9	14 E	5*	4*
1 16	21 29.52	-21 32.9	1.511	0.716	32.4	17.7	23 E	8* 15*	1 6	19 41.89	-17 46.0	2.952	1.988	4.6	17.7	9 E	3*	—
1 21	21 58.09	-19 20.1	1.516	0.748	33.6	17.9	25 E	10* 16*	1 16	20 4.41	-15 50.6	2.931	1.955	3.0	17.6	6 E	—	—
1 26	22 24.93	-16 54.1	1.526	0.782	34.3	18.0	27 E	12* 17*	1 26	20 26.98	-13 41.6	2.902	1.924	2.7	17.5	5 W	—	—
1 31	22 50.13	-14 19.3	1.540	0.816	34.6	18.1	28 E	14* 18*	2 5	20 49.57	-11 19.1	2.866	1.893	4.0	17.5	8 W	2*	—
2 5	23 13.84	-11 39.4	1.558	0.849	34.6	18.2	29 E	16* 18*	2 15	21 12.17	-8 43.5	2.824	1.864	5.8	17.6	11 W	4*	1*
2 10	23 36.21	-8 57.6	1.580	0.882	34.4	18.3	30 E	18* 18*	2 25	21 34.79	-5 55.4	2.776	1.835	7.8	17.6	15 W	6*	5*
2 15	23 57.41	-6 16.5	1.604	0.914	33.9	18.4	31 E	19* 19*	3 7	21 57.46	-2 55.8	2.725	1.809	9.9	17.6	18 W	8*	9*
2 20	0 17.60	-3 38.0	1.631	0.945	33.3	18.5	32 E	20* 18*	3 17	22 20.26	+0 14.2	2.670	1.783	11.9	17.6	22 W	10*	13*
2 25	0 36.91	-1 3.6	1.660	0.975	32.6	18.6	32 E	21* 18*	3 27	22 43.22	+3 33.0	2.614	1.760	13.8	17.6	25 W	12*	16*
3 2	0 55.47	+1 25.7	1.691	1.003	31.8	18.7	32 E	22* 18*	4 6	23 6.46	+6 58.8	2.557	1.739	15.7	17.6	28 W	14*	19*
3 7	1 13.42	+3 49.1	1.723	1.030	30.9	18.8	32 E	22* 17*	4 16	23 30.08	+10 29.5	2.501	1.720	17.5	17.6	31 W	16*	21*
3 17	1 47.89	+8 16.7	1.788	1.078	29.1	18.9	32 E	22* 16*	4 26	23 54.18	+14 2.4	2.445	1.704	19.2	17.6	34 W	18*	23*
3 27	2 21.01	+12 17.0	1.853	1.120	27.2	19.0	31 E	22* 15*	5 6	0 18.89	+17 34.7	2.391	1.690	20.8	17.6	36 W	20*	24*
4 6	2 53.32	+15 49.3	1.916	1.155	25.2	19.1	29 E	21* 14*	5 16	0 44.33	+21 3.1	2.338	1.679	22.3	17.5	39 W	23*	25*
4 16	3 25.25	+18 53.9	1.974	1.183	23.3	19.1	28 E	19* 13*	5 26	1 10.58	+24 24.2	2.288	1.671	23.7	17.5	42 W	25*	26*
4 26	3 57.12	+21 31.0	2.025	1.204	21.4	19.2	26 E	17* 12*	5 31	1 24.04	+26 0.9	2.264	1.668	24.4	17.5	43 W	27*	26*
5 6	4 29.14	+23 40.7	2.069	1.218	19.6	19.2	24 E	15* 10*	6 5	1 37.74	+27 34.4	2.240	1.666	25.0	17.5	44 W	28*	26*
5 16	5 1.48	+25 22.9	2.104	1.226	17.9	19.2	22 E	13* 9*	6 10	1 51.68	+29 4.2	2.216	1.664	25.6	17.5	45 W	30*	25*
5 26	5 34.23	+26 37.4	2.130	1.226	16.3	19.2	20 E	11* 8*	6 15	2 5.84	+30 29.9	2.193	1.664	26.2	17.5	46 W	31*	25*
6 5	6 7.42	+27 23.6	2.145	1.219	14.7	19.1	18 E	9* 7*	6 20	2 20.22	+31 51.1	2.170	1.664	26.8	17.5	48 W	33*	25*
6 15	6 41.05	+27 40.9	2.150	1.206	13.4	19.0	16 E	7* 5*	6 25	2 34.81	+33 7.4	2.147	1.665	27.4	17.5	49 W	35*	24*
6 2																		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
20187 Janapittichová (continuation)										36236 1999 VV (continuation)									
9 8	6 12.25	+40 17.2	1.760	1.764	33.2	17.4	74 W	67*	21*	3 12	0 39.59	+24 54.8	2.171	1.446	22.1	19.6	33 E	26*	—
9 13	6 24.13	+40 2.5	1.727	1.775	33.4	17.3	76 W	69*	21*	3 17	0 55.42	+25 3.6	2.230	1.474	20.5	19.6	31 E	24*	—
9 18	6 35.36	+39 44.1	1.693	1.788	33.4	17.3	78 W	72*	22*	3 27	1 25.26	+25 12.3	2.345	1.528	17.4	19.7	27 E	21*	—
9 23	6 45.91	+39 22.6	1.659	1.800	33.4	17.3	81 W	74*	22*	4 6	1 53.02	+25 11.4	2.452	1.578	14.2	19.7	23 E	16*	—
10 3	7 4.74	+38 31.8	1.586	1.826	33.2	17.2	87 W	79*	24*	4 16	2 19.06	+25 2.3	2.547	1.624	11.1	19.8	18 E	12*	—
10 13	7 20.23	+37 33.4	1.510	1.854	32.5	17.1	93 W	82*	25*	4 26	2 43.64	+24 45.7	2.629	1.666	8.0	19.8	13 E	7*	—
10 23	7 31.97	+36 30.0	1.432	1.883	31.3	17.0	100 W	81	27*	5 6	3 7.00	+24 21.7	2.696	1.705	5.1	19.7	9 E	2*	—
10 28	7 36.32	+35 56.9	1.393	1.898	30.5	16.9	104 W	81	28*	5 16	3 29.34	+23 50.2	2.746	1.740	2.8	19.7	5 W	—	—
11 2	7 39.56	+35 23.2	1.355	1.913	29.5	16.9	108 W	80	29*	5 26	3 50.80	+23 10.5	2.779	1.772	2.9	19.8	5 W	—	—
11 7	7 41.64	+34 48.7	1.317	1.929	28.3	16.8	113 W	80	29	6 5	4 11.49	+22 22.1	2.794	1.800	5.2	19.9	9 W	—	2*
11 12	7 42.51	+34 13.5	1.281	1.945	26.9	16.7	117 W	79	30	6 15	4 31.50	+21 24.1	2.791	1.824	7.9	20.1	14 W	1*	7*
11 22	7 40.51	+32 59.5	1.214	1.977	23.4	16.5	127 W	78	31	6 25	4 50.87	+20 15.7	2.770	1.845	10.7	20.2	20 W	4*	12*
12 2	7 33.49	+31 38.1	1.161	2.009	18.9	16.3	139 W	77	32	7 5	5 9.66	+18 55.7	2.732	1.863	13.4	20.3	25 W	7*	17*
12 12	7 21.96	+30 5.6	1.125	2.043	13.5	16.1	151 W	75	34	7 15	5 27.88	+17 22.9	2.678	1.876	16.0	20.4	31 W	11*	22*
12 17	7 14.91	+29 14.2	1.115	2.059	10.5	16.0	158 W	74	35	7 25	5 45.53	+15 35.8	2.608	1.887	18.6	20.4	36 W	16*	27*
12 22	7 7.31	+28 19.4	1.112	2.076	7.4	15.9	164 W	73	36	8 4	6 2.62	+13 32.8	2.523	1.893	21.0	20.4	42 W	20*	31*
12 27	6 59.42	+27 21.6	1.116	2.093	4.3	15.7	171 W	72	37	8 14	6 19.12	+11 11.9	2.427	1.897	23.2	20.4	48 W	25*	36*
1 1	6 51.55	+26 21.6	1.128	2.110	1.7	15.6	176 W	71	38	8 24	6 34.98	+8 30.8	2.319	1.896	25.3	20.4	53 W	29*	40*
1 6	6 43.96	+25 20.5	1.146	2.127	2.7	15.7	174 E	70	39	9 3	6 50.16	+5 26.8	2.203	1.893	27.2	20.3	59 W	33*	45*
1 11	6 36.92	+24 19.4	1.172	2.144	5.5	15.9	168 E	69	40	9 13	7 4.59	+1 56.9	2.081	1.886	28.9	20.2	65 W	36*	50*
1 16	6 30.64	+23 19.6	1.205	2.161	8.3	16.2	162 E	68	41	9 23	7 18.16	+2 2.4	1.956	1.875	30.3	20.1	70 W	37*	55*
1 21	6 25.25	+22 22.1	1.245	2.178	10.9	16.3	155 E	67	42	10 3	7 30.73	+6 34.5	1.831	1.861	31.4	20.0	76 W	36*	61*
12 27	19 19.84	-24 38.3	3.925	2.975	4.2	21.4	13 E	1*	6*	10 13	7 42.10	-11 43.0	1.710	1.843	32.3	19.9	81 W	33*	68*
1 6	19 37.65	-24 1.7	3.932	2.958	2.3	21.3	7 E	—	1*	10 23	7 52.00	-17 29.8	1.595	1.822	33.0	19.7	86 W	28	75*
1 16	19 55.51	-23 17.9	3.925	2.942	0.8	21.2	3 E	—	—	11 2	8 0.06	-23 55.2	1.492	1.797	33.5	19.5	90 W	21	83*
1 26	20 13.31	-22 27.3	3.904	2.927	2.0	21.2	6 W	—	—	11 7	8 3.21	-27 21.5	1.445	1.783	33.7	19.5	92 W	18	86*
2 5	20 30.96	-21 30.3	3.871	2.913	3.9	21.3	12 W	—	6*	11 12	8 5.67	-30 55.5	1.402	1.768	34.0	19.4	94 W	14	85*
2 15	20 48.41	-20 27.5	3.826	2.899	5.9	21.4	17 W	—	11*	11 17	8 7.31	-34 35.9	1.364	1.753	34.2	19.3	95 W	10	81
2 25	21 5.55	-19 19.7	3.769	2.886	7.8	21.4	23 W	1*	17*	11 22	8 8.01	-38 21.0	1.330	1.736	34.5	19.2	96 W	7	78
3 7	21 22.34	-18 7.7	3.700	2.874	9.7	21.5	29 W	3*	23*	11 27	8 7.57	-42 8.6	1.300	1.719	34.8	19.2	96 W	3	74
3 17	21 38.73	-16 52.5	3.621	2.864	11.5	21.5	35 W	5*	29*	12 2	8 5.78	-45 56.3	1.275	1.701	35.2	19.1	97 W	—	70
3 27	21 54.63	-15 35.0	3.532	2.854	13.2	21.5	41 W	6*	35*	12 7	8 2.36	-49 40.9	1.255	1.682	35.6	19.1	97 W	—	66
4 6	22 10.02	-14 16.2	3.435	2.845	14.9	21.5	47 W	8*	41*	12 12	7 56.97	-53 19.2	1.238	1.661	36.1	19.0	96 W	—	63
4 16	22 24.82	-12 57.4	3.329	2.837	16.4	21.5	53 W	10*	47*	12 17	7 49.25	-56 47.7	1.226	1.640	36.7	19.0	95 W	—	59
4 26	22 38.96	-11 39.7	3.216	2.830	17.7	21.4	59 W	12*	53*	12 22	7 38.72	-60 2.9	1.216	1.618	37.3	19.0	94 W	—	56
5 6	22 52.38	-10 24.2	3.098	2.824	18.9	21.4	65 W	15*	59*	12 24	7 33.62	-61 16.4	1.214	1.609	37.6	19.0	94 W	—	55
5 16	23 4.99	-9 12.2	2.975	2.819	19.9	21.3	71 W	18*	64*	12 26	7 27.95	-62 27.0	1.211	1.600	37.9	19.0	93 W	—	54
5 26	23 16.66	-8 5.1	2.848	2.815	20.6	21.2	78 W	21*	68*	12 28	7 21.70	-63 34.3	1.209	1.591	38.1	19.0	92 W	—	52
6 5	23 27.28	-7 4.0	2.720	2.812	21.1	21.2	85 W	25*	71*	12 30	7 14.83	-64 38.1	1.207	1.581	38.4	18.9	92 W	—	51
6 15	23 36.68	-6 10.5	2.591	2.810	21.2	21.0	92 W	29*	77*	1 1	7 7.33	-65 38.1	1.206	1.572	38.7	18.9	91 W	—	50
6 25	23 44.68	-5 25.9	2.464	2.809	20.9	20.9	99 W	33*	69	1 6	6 45.78	-67 50.2	1.203	1.547	39.5	18.9	90 E	—	48
7 5	23 51.08	-4 51.5	2.341	2.809	20.3	20.8	107 W	37*	69	1 11	6 20.46	-69 34.0	1.200	1.521	40.2	18.9	88 E	—	46
7 15	23 55.68	-4 28.6	2.224	2.811	19.1	20.7	115 W	40*	68	1 16	5 52.22	-70 47.3	1.198	1.495	41.0	18.9	86 E	—	45
7 25	23 58.27	-4 18.0	2.116	2.813	17.4	20.5	124 W	41	68	1 21	5 22.53	-71 29.8	1.196	1.468	41.8	18.9	84 E	—	44
8 4	23 58.73	-4 20.0	2.021	2.817	15.2	20.3	133 W	41	68	119905 2002 EH₁₀									
8 14	23 57.00	-4 34.2	1.942	2.821	12.3	20.1	143 W	40	69	12 27	19 21.05	-8 36.5	4.081	3.176	6.1	21.2	20 E	14*	—
8 24	23 53.26	-4 58.6	1.883	2.827	9.0	19.9	154 W	40	69	1 6	19 35.18	-8 29.4	4.087	3.150	4.8	21.2	16 E	9*	—
9 3	23 47.88	-5 30.1	1.847	2.833	5.3	19.7	165 W	39	70	1 16	19 49.51	-8 14.2	4.075	3.124	4.0	21.1	13 W	3*	—
9 13	23 41.45	-6 4.4	1.837	2.841	1.7	19.5	175 W	39	70	1 26	20 3.94	-7 51.4	4.047	3.096	4.1	21.1	13 W	7*	—
9 23	23 34.77	-6 36.2	1.854	2.850	3.2	19.6	171 E	38	71	2 5	20 18.40	-7 21.6	4.002	3.067	5.1	21.1	16 W	10*	2*
10 3	23 28.66	-7 1.0	1.898	2.859	6.9	19.9	160 E	38	71	2 15	20 32.82	-6 45.2	3.940	3.037	6.6	21.1	21 W	12*	9*
10 13	23 23.84	-7 15.1	1.967	2.870	10.3	20.1	149 E	38	71	2 25	20 47.12	-6 2.9	3.863	3.007	8.4	21.1	26 W	14*	16*
10 23	23 20.84	-7 16.4	2.059	2.881	13.2	20.3	139 E	38	71	3 7	21 1.26	-5 15.7	3.770	2.975	10.2	21.1	32 W	16*	23*
11 2	23 19.93	-7 4.3	2.169	2.893	15.6	20.5	128 E	38	71	3 17	21 15.16	-4 24.2	3.664	2.943	12.0	21.1	38 W	18*	29*
11 12	23 21.16	-6 39.1	2.295	2.906	17.3	20.7	119 E	38	71	3 27	21 28.77	-3 29.4	3.545	2.910	13.8	21.1	44 W	20*	35*
11 22	23 24.44	-6 1.8	2.433	2.920	18.5	20.9	110 E	39	70	4 6	21 42.04	-2 32.4	3.414	2.876	15.5	21.0	50 W	22*	41*
12 2	23 29.58	-5 13.8	2.579	2.935	19.2	21.1	101 E	40	69*	4 16	21 54.89	-1 34.3	3.273	2.841	17.1	20.9	56 W	23*	47*

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
119905 2002 EH₁₀										85713 1998 SS₄₉									
<i>(continuation)</i>										<i>(continuation)</i>									
10 8	22 33.88	-15 25.0	1.265	2.125	17.8	18.3	139 E	30	79	5 16	22 30.58	-21 11.2	2.972	3.033	19.3	21.4	84 W	12*	78*
10 13	22 32.32	-16 29.6	1.287	2.103	20.1	18.4	134 E	29	80	5 26	22 36.06	-21 17.0	2.846	3.054	19.4	21.3	92 W	15*	85*
10 23	22 31.68	-18 13.5	1.342	2.060	23.9	18.5	123 E	27	82	6 5	22 39.74	-21 35.9	2.718	3.073	18.9	21.2	101 W	17*	86
11 2	22 34.48	-19 23.6	1.408	2.017	26.9	18.7	113 E	26	83	6 15	22 41.37	-22 8.9	2.593	3.090	18.0	21.1	110 W	20*	86
11 12	22 40.64	-20 1.6	1.481	1.974	29.1	18.8	104 E	25	84	6 25	22 40.68	-22 56.1	2.476	3.105	16.6	20.9	119 W	21*	87
11 22	22 49.87	-20 10.8	1.555	1.933	30.5	18.9	96 E	25	84*	7 5	22 37.48	-23 56.5	2.371	3.118	14.6	20.8	130 W	21*	88
12 2	23 1.79	-19 54.5	1.630	1.892	31.4	19.0	89 E	25	78*	7 15	22 31.61	-25 7.4	2.282	3.129	12.1	20.6	140 W	20	89
12 12	23 16.06	-19 15.4	1.702	1.853	31.8	19.0	83 E	26	71*	7 25	22 23.16	-26 23.9	2.215	3.138	9.2	20.4	150 W	19	90
12 22	23 32.32	-18 16.2	1.770	1.816	31.8	19.1	77 E	27	64*	7 30	22 18.07	-27 2.2	2.191	3.142	7.8	20.3	155 W	18	89
1 1	23 50.28	-16 59.2	1.832	1.780	31.6	19.1	71 E	28	58*	8 4	22 12.49	-27 39.3	2.175	3.145	6.5	20.3	160 W	17	88
1 11	0 9.71	-15 26.5	1.890	1.747	31.1	19.1	66 E	29*	53*	8 9	22 6.51	-28 14.3	2.165	3.148	5.4	20.2	163 W	17	88
1 21	0 30.43	-13 40.2	1.942	1.716	30.4	19.1	62 E	30*	48*	8 14	22 0.25	-28 46.2	2.163	3.151	4.9	20.2	164 W	16	87
141484 2002 DB₄										85141 1981 UW₂₂									
12 27	19 21.42	-15 50.0	1.423	0.543	29.0	17.1	16 E	9*	2*	12 27	19 22.12	-22 37.6	2.640	1.700	7.8	19.4	14 E	3*	5*
1 1	19 54.79	-14 18.0	1.374	0.541	35.3	17.2	19 E	11*	4*	1 6	19 51.37	-21 47.1	2.645	1.686	5.9	19.3	10 E	1*	2*
1 6	20 28.24	-12 37.0	1.326	0.548	41.3	17.3	22 E	14*	6*	1 16	20 20.55	-20 36.9	2.647	1.674	4.1	19.2	7 E	—	—
1 11	21 1.55	-10 50.5	1.281	0.564	46.6	17.5	25 E	17*	9*	1 26	20 49.48	-19 8.2	2.646	1.665	2.3	19.1	4 E	—	—
1 16	21 34.54	9 1.4	1.240	0.587	51.1	17.6	28 E	19*	11*	2 5	21 18.01	-17 23.0	2.644	1.659	1.0	19.0	2 E	—	—
1 21	22 7.07	7 12.0	1.205	0.615	54.5	17.7	31 E	22*	13*	2 15	21 46.08	-15 23.2	2.641	1.655	1.9	19.0	3 W	—	—
1 26	22 39.02	5 24.2	1.176	0.648	56.9	17.9	33 E	24*	16*	2 25	22 13.60	-13 11.6	2.635	1.654	3.6	19.1	6 W	—	—
2 5	23 40.74	1 58.8	1.140	0.719	59.0	18.1	39 E	28*	20*	3 7	22 40.57	-10 50.7	2.629	1.656	5.4	19.2	9 W	—	3*
2 15	0 38.92	+1 6.2	1.133	0.793	58.6	18.3	43 E	31*	24*	3 17	23 6.99	-8 23.2	2.621	1.661	7.2	19.3	12 W	—	6*
2 25	1 32.98	+3 45.6	1.150	0.863	56.8	18.4	47 E	34*	28*	3 27	23 32.89	-5 52.0	2.612	1.668	8.9	19.4	15 W	—	9*
3 7	2 22.75	+5 57.4	1.186	0.929	54.3	18.6	49 E	35*	31*	4 6	23 58.31	-3 19.6	2.601	1.678	10.7	19.5	18 W	—	12*
3 17	3 8.49	+7 42.3	1.234	0.987	51.8	18.7	51 E	35*	33*	4 16	0 23.30	-0 48.4	2.588	1.691	12.4	19.5	21 W	—	15*
3 27	3 50.70	+9 2.4	1.290	1.037	49.3	18.9	52 E	35*	35*	4 26	0 47.88	+1 39.1	2.572	1.705	14.0	19.6	24 W	—	18*
4 6	4 29.92	+9 59.8	1.350	1.080	47.0	19.0	52 E	33*	36*	5 6	1 12.12	+4 1.1	2.554	1.722	15.7	19.7	27 W	2*	21*
4 16	5 6.74	+10 37.0	1.411	1.115	44.9	19.1	52 E	31*	37*	5 16	1 36.02	+6 15.7	2.532	1.741	17.3	19.7	31 W	3*	25*
4 26	5 41.64	+10 55.3	1.470	1.142	43.1	19.2	51 E	28*	38*	5 26	1 59.58	+8 21.3	2.507	1.762	18.8	19.8	34 W	6*	28*
5 6	6 15.01	+10 56.3	1.525	1.161	41.4	19.3	50 E	25*	38*	6 5	2 22.80	+10 16.7	2.478	1.785	20.3	19.8	38 W	9*	31*
5 16	6 47.22	+10 41.1	1.575	1.172	39.9	19.3	48 E	21*	38*	6 15	2 45.65	+12 0.8	2.443	1.809	21.8	19.9	41 W	12*	33*
5 26	7 18.56	+10 10.5	1.619	1.175	38.6	19.3	46 E	17*	37*	6 25	3 8.06	+13 32.9	2.404	1.835	23.1	19.9	45 W	17*	36*
6 5	7 49.26	+9 25.6	1.654	1.170	37.4	19.3	44 E	13*	36*	7 5	3 29.95	+14 52.7	2.359	1.861	24.4	19.9	49 W	22*	37*
6 15	8 19.57	+8 27.2	1.681	1.157	36.4	19.3	42 E	10*	35*	7 15	3 51.22	+15 59.9	2.309	1.889	25.6	20.0	53 W	27*	39*
6 25	8 49.70	+7 16.4	1.698	1.137	35.5	19.3	41 E	7*	34*	7 25	4 11.74	+16 54.8	2.252	1.917	26.7	20.0	58 W	33*	40*
7 5	9 19.87	+5 54.2	1.704	1.108	34.9	19.2	39 E	4*	32*	8 4	4 31.35	+17 37.8	2.189	1.947	27.6	20.0	63 W	39*	41*
7 15	9 50.36	+4 21.8	1.699	1.071	34.5	19.1	37 E	3*	31*	8 14	4 49.87	+18 9.7	2.120	1.976	28.4	20.0	68 W	45*	42*
7 25	10 21.41	+2 40.9	1.681	1.026	34.4	19.0	35 E	2*	29*	8 24	5 7.09	+18 31.6	2.046	2.006	28.9	19.9	73 W	51*	43*
8 4	10 53.36	+0 53.5	1.649	0.974	34.8	18.9	33 E	2*	27*	9 3	5 22.77	+18 44.8	1.967	2.037	29.1	19.9	79 W	56*	44*
8 14	11 26.57	+0 58.0	1.603	0.914	35.7	18.7	32 E	2*	26*	9 13	5 36.62	+18 51.0	1.883	2.067	29.0	19.8	86 W	61*	44*
8 24	12 1.45	-2 49.7	1.540	0.848	37.6	18.5	31 E	3*	25*	9 23	5 48.33	+18 52.0	1.796	2.098	28.5	19.7	93 W	63*	45*
8 29	12 19.63	-3 44.2	1.502	0.812	39.0	18.4	30 E	4*	24*	10 3	5 57.54	+18 49.9	1.708	2.128	27.6	19.6	100 W	64	45
9 3	12 38.39	-4 36.7	1.459	0.776	40.9	18.3	30 E	5*	24*	10 13	6 3.85	+18 46.8	1.622	2.158	26.0	19.5	109 W	64	45
9 8	12 57.76	-5 26.4	1.410	0.739	43.2	18.2	30 E	6*	24*	10 23	6 6.88	+18 44.8	1.540	2.188	23.7	19.4	118 W	64	45
9 13	13 17.75	-6 12.1	1.357	0.702	46.1	18.0	30 E	7*	24*	11 2	6 6.29	+18 45.5	1.466	2.218	20.7	19.2	128 W	64	45
9 18	13 38.33	-6 52.7	1.297	0.666	49.8	17.9	30 E	8*	24*	11 12	6 1.93	+18 50.0	1.406	2.248	16.8	19.0	139 W	64	45
9 23	13 59.45	-7 27.0	1.230	0.632	54.4	17.8	31 E	9*	24*	11 22	5 54.05	+18 58.4	1.363	2.276	12.3	18.8	151 W	64	45
9 28	14 20.95	-7 54.0	1.158	0.601	59.9	17.8	31 E	11*	24*	12 2	5 43.34	+19 9.8	1.343	2.305	7.1	18.6	163 W	64	45
10 3	14 42.58	-8 13.2	1.079	0.575	66.6	17.7	32 E	13*	24*	12 7	5 37.30	+19 16.3	1.343	2.319	4.5	18.5	169 W	64	45
10 8	15 3.97	-8 25.1	0.994	0.556	74.4	17.7	32 E	14*	24*	12 12	5 31.07	+19 23.1	1.350	2.333	2.1	18.3	175 W	64	45
10 13	15 24.63	-8 31.6	0.905	0.544	83.1	17.8	33 E	16*	24*	12 17	5 24.85	+19 30.2	1.364	2.346	2.1	18.4	175 E	65	44
10 18	15 43.99	-8 36.6	0.813	0.541	92.5	17.9	33 E	17*	23*	12 22	5 18.85	+19 37.5	1.386	2.360	4.3	18.6	170 E	65	44
10 23	16 1.52	-8 46.5	0.722	0.548	102.4	18.1	33 E	17*	22*	12 27	5 13.25	+19 45.1	1.414	2.373	6.7	18.7	164 E	65	44
10 28	16 16.83	-9 9.7	0.633	0.563	112.3	18.5	32 E	18*	21*	1 1	5 8.20	+19 53.1	1.449	2.387	9.1	18.9	157 E	65	44
11 2	16 29.69	-9 56.8	0.549	0.585	122.1	18.9	30 E	17*	19*	1 6	5 3.84	+20 1.6	1.490	2.400	11.3	19.1	151 E	65	44
11 4	16 34.13	-10 25.1	0.517	0.596	125.9	19.2	29 E	17*	18*	1 11	5 0.26	+20 10.6	1.537	2.413	13.4	19.2	145 E	65	44
11 6	16 38.17	-11 0.1	0.486	0.608	129.7	19.4	28 E	16*	17*	1 16	4 57.51	+20 20.4	1.589	2.425	15.2	19.4	140 E	65	44
11 8	16 41.82	-11 42.8	0.457	0.620	133.5	19.7	27 E	15*	16*	1 21	4 55.62	+20 30.9	1.647	2.438	16.8	19.5	134 E	66	43
11 10	16 45.08	-12 34.2	0.428	0.633	137.2	20.1	26 E	14*	15*										
11 12	16 47.97	-13 35.6	0.401	0.646	140.9	20.4	24 E	13*	14*										
11 14	16 50.49	-14 48.0	0.375	0.660	144.5	20.9	23 E	11*	13*										
11 16	16 52.66	-16 12.9	0.351	0.674	148.1	21.3	21 E	10*	12*										
85713 1998 SS₄₉										85713 1998 SS₄₉									
12 27	19 21.50	-29 35.8	3.458	2.518	5.6	20.7	14 E	—	8*	12 7	5 37.30	+19 16.3	1.343	2.319	4.5				