

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°
137062 1998 WM										463293 2012 HO₄₀									
<i>(continuation)</i>										<i>(continuation)</i>									
9 18	4 48.67	+15 44.4	1.062	1.609	37.6	19.3	102 W	61	48	2 5	17 23.78	-31 3.3	2.214	1.824	26.0	20.3	54 W	11*	48*
9 23	4 52.18	+16 42.7	1.011	1.610	36.8	19.2	106 W	62	47	2 15	17 47.11	-30 2.9	2.162	1.862	27.1	20.3	59 W	12*	53*
9 28	4 54.78	+17 45.3	0.960	1.611	35.7	19.0	110 W	63	46	2 25	18 8.35	-28 46.4	2.102	1.901	28.1	20.4	65 W	13*	59*
10 3	4 56.30	+18 53.2	0.910	1.610	34.4	18.9	115 W	64	45	3 7	18 27.35	-27 15.9	2.037	1.942	28.8	20.3	70 W	15*	64*
10 8	4 56.58	+20 7.1	0.862	1.609	32.7	18.7	119 W	65	44	3 17	18 43.95	-25 33.4	1.965	1.984	29.2	20.3	76 W	17*	70*
10 13	4 55.41	+21 28.0	0.814	1.607	30.8	18.5	125 W	66	43	3 27	18 57.95	-23 40.7	1.889	2.026	29.3	20.3	83 W	19*	77*
10 18	4 52.58	+22 56.5	0.770	1.603	28.4	18.3	130 W	68	41	4 6	19 9.20	-21 39.2	1.811	2.070	28.9	20.2	90 W	21*	83*
10 23	4 47.87	+24 32.7	0.728	1.599	25.7	18.1	136 W	70	39	4 16	19 17.48	-19 30.5	1.731	2.114	28.1	20.2	98 W	24*	84
10 28	4 41.03	+26 16.0	0.690	1.595	22.6	17.9	142 W	71	38	4 26	19 22.56	-17 16.0	1.654	2.159	26.6	20.1	106 W	27*	81
11 2	4 31.84	+28 4.8	0.656	1.589	19.1	17.7	148 W	73	36	5 6	19 24.27	-14 57.5	1.582	2.204	24.6	20.0	115 W	30*	79
11 7	4 20.20	+29 55.9	0.628	1.582	15.5	17.4	155 W	75	34	5 16	19 22.48	-12 37.4	1.519	2.248	21.8	19.8	124 W	32	77
11 12	4 6.16	+31 44.9	0.606	1.574	12.0	17.2	161 W	77	32	5 26	19 17.26	-10 19.3	1.470	2.293	18.5	19.7	134 W	35	74
11 17	3 50.04	+33 26.5	0.590	1.566	9.6	17.1	165 W	78	31	5 31	19 13.46	-9 12.4	1.452	2.316	16.7	19.6	139 W	36	73
11 22	3 32.41	+34 55.3	0.582	1.556	9.7	17.0	165 E	80	29	6 5	19 8.96	-8 7.9	1.439	2.338	14.8	19.6	144 W	37	72
11 27	3 14.07	+36 7.0	0.580	1.546	12.3	17.1	161 E	81	28	6 10	19 3.87	-7 6.6	1.432	2.360	12.9	19.5	149 W	38	71
12 2	2 55.98	+36 59.9	0.586	1.535	16.2	17.2	154 E	82	27	6 15	18 58.31	-6 9.3	1.431	2.383	11.0	19.5	153 W	39	70
12 7	2 39.09	+37 34.8	0.597	1.523	20.4	17.4	147 E	83	26	6 20	18 52.43	-5 16.7	1.436	2.405	9.5	19.4	157 W	40	69
12 12	2 24.14	+37 52.2	0.614	1.510	24.5	17.6	141 E	83	26	6 25	18 46.40	-4 29.4	1.448	2.427	8.4	19.4	160 W	41	68
12 17	2 11.58	+38 5.5	0.635	1.496	28.3	17.7	134 E	83	26	7 5	18 34.51	-3 12.6	1.492	2.471	8.2	19.5	160 E	42	67
12 22	2 1.58	+38 10.1	0.660	1.481	31.7	17.9	128 E	83	26	7 15	18 23.84	-2 20.6	1.562	2.514	10.3	19.7	154 E	43	66
12 27	1 54.12	+38 12.6	0.686	1.466	34.8	18.0	122 E	83	26	7 25	18 15.33	-1 51.9	1.655	2.557	13.1	20.0	145 E	43	66
1 1	1 49.07	+38 15.9	0.715	1.450	37.5	18.2	116 E	83	26*	8 4	18 9.47	-1 42.6	1.770	2.599	15.7	20.3	136 E	43	66
1 6	1 46.23	+38 22.1	0.744	1.432	39.8	18.3	111 E	83	25*	8 14	18 6.44	-1 47.9	1.902	2.641	17.8	20.5	127 E	43	66
1 11	1 45.39	+38 32.4	0.773	1.414	41.8	18.4	107 E	84	24*	8 24	18 6.14	-2 3.1	2.047	2.682	19.3	20.8	119 E	43	66
1 16	1 46.32	+38 47.4	0.802	1.395	43.5	18.5	102 E	84	23*	9 3	18 8.32	-2 23.7	2.203	2.722	20.3	21.0	110 E	43	66
1 21	1 48.84	+39 7.2	0.829	1.376	45.1	18.6	98 E	84	21*	9 13	18 12.70	-2 46.3	2.365	2.762	20.8	21.2	102 E	42*	67
										9 23	18 18.97	-3 8.0	2.532	2.801	20.9	21.4	95 E	42*	67*
159482 2000 SF₁₆₆										169516 2002 EQ									
12 27	15 33.04	-20 45.1	2.939	2.267	16.0	20.7	39 W	18*	29*	12 27	15 34.63	-17 32.8	2.351	1.716	21.5	20.6	40 W	21*	27*
1 6	15 53.63	-21 38.3	2.822	2.234	18.1	20.6	45 W	19*	35*	1 6	16 3.04	-18 50.0	2.268	1.691	23.4	20.5	43 W	21*	32*
1 16	16 14.54	-22 21.5	2.699	2.201	20.0	20.6	50 W	19*	41*	1 16	16 32.18	-19 49.9	2.187	1.668	25.3	20.5	46 W	21*	36*
1 26	16 35.65	-22 53.7	2.571	2.167	21.9	20.5	55 W	20*	47*	1 26	17 1.86	-20 30.4	2.107	1.649	27.0	20.4	50 W	20*	40*
2 5	16 56.88	-23 14.0	2.438	2.134	23.7	20.4	61 W	20*	53*	2 5	17 31.87	-20 50.0	2.029	1.633	28.7	20.4	53 W	20*	45*
2 15	17 18.10	-23 21.7	2.301	2.100	25.4	20.3	66 W	20*	59*	2 15	18 1.93	-20 48.1	1.954	1.620	30.3	20.3	56 W	20*	48*
2 25	17 39.17	-23 16.3	2.163	2.067	26.9	20.2	71 W	20*	64*	2 25	18 31.74	-20 24.9	1.881	1.611	31.7	20.3	59 W	19*	52*
3 7	17 59.94	-22 57.5	2.024	2.033	28.3	20.0	76 W	21*	70*	3 7	19 1.01	-19 41.3	1.811	1.605	33.1	20.2	62 W	19*	55*
3 17	18 20.23	-22 25.2	1.886	2.000	29.5	19.9	82 W	21*	75*	3 17	19 29.46	-18 39.4	1.742	1.604	34.3	20.2	65 W	20*	59*
3 27	18 39.82	-21 39.5	1.749	1.968	30.4	19.7	87 W	22*	80*	3 27	19 56.82	-17 21.7	1.676	1.606	35.3	20.1	68 W	20*	62*
4 6	18 58.54	-20 40.9	1.615	1.936	31.1	19.5	92 W	23*	84*	4 6	20 22.91	-15 51.6	1.612	1.612	36.2	20.0	72 W	21*	65*
4 16	19 16.12	-19 30.1	1.485	1.905	31.4	19.3	98 W	24*	84	4 16	20 47.53	-14 12.5	1.548	1.621	36.8	20.0	76 W	22*	68*
4 26	19 32.30	-18 8.2	1.361	1.875	31.4	19.1	104 W	26*	82	4 26	21 10.52	-12 28.4	1.485	1.634	37.3	19.9	79 W	23*	71*
5 6	19 46.81	-16 36.5	1.242	1.846	31.0	18.8	110 W	28*	81	5 6	21 31.74	-10 43.1	1.423	1.650	37.4	19.9	84 W	25*	73*
5 16	19 59.27	-14 56.8	1.131	1.818	30.0	18.6	116 W	30*	79	5 16	21 51.02	-9 0.4	1.361	1.670	37.2	19.8	88 W	27*	73*
5 26	20 9.31	-13 11.7	1.028	1.792	28.4	18.3	123 W	32*	77	5 26	22 8.17	-7 24.4	1.299	1.693	36.7	19.7	93 W	30*	71
6 5	20 16.55	-11 24.3	0.935	1.768	26.1	18.0	130 W	34	75	6 5	22 22.98	-5 58.8	1.238	1.718	35.7	19.6	99 W	33*	70
6 15	20 20.58	-9 39.0	0.854	1.745	23.0	17.7	138 W	35	74	6 15	22 35.14	-4 47.5	1.178	1.745	34.2	19.5	105 W	37*	69
6 20	20 21.31	-8 48.9	0.818	1.735	21.2	17.5	142 W	36	73	6 25	22 44.34	-3 54.6	1.120	1.775	32.0	19.3	112 W	40*	68
6 25	20 21.18	-8 1.3	0.786	1.725	19.2	17.3	146 W	37	72	7 5	22 50.27	-3 23.6	1.067	1.807	29.1	19.2	120 W	41*	67
6 30	20 20.22	-7 17.3	0.757	1.716	17.1	17.2	150 W	38	71	7 15	22 52.60	-3 18.0	1.021	1.840	25.4	19.0	129 W	42	67
7 5	20 18.45	-6 37.6	0.733	1.707	14.9	17.0	154 W	38	71	7 25	22 51.25	-3 39.3	0.985	1.875	20.8	18.9	139 W	41	68
7 10	20 15.98	-6 3.1	0.712	1.699	12.7	16.9	158 W	39	70	8 4	22 46.46	-4 26.7	0.963	1.911	15.4	18.7	150 W	41	68
7 15	20 12.94	-5 34.7	0.696	1.692	10.8	16.7	162 W	39	70	8 9	22 42.96	-4 58.9	0.959	1.929	12.4	18.6	156 W	40	69
7 25	20 5.92	-4 57.9	0.677	1.679	9.0	16.6	165 E	40	69	8 14	22 38.92	-5 35.4	0.959	1.947	9.4	18.5	162 W	39	70
8 4	19 59.03	-4 48.4	0.676	1.669	11.3	16.7	161 E	40	69	8 19	22 34.50	-6 15.1	0.965	1.966	6.3	18.4	168 W	39	70
8 14	19 54.02	-5 3.3	0.693	1.662	15.7	16.9	154 E	40	69	8 24	22 29.89	-6 56.4	0.977	1.985	3.2	18.3	174 W	38	71
8 19	19 52.67	-5 17.6	0.707	1.660	18.1	17.0	149 E	40	69	8 29	22 25.29	-7 38.0	0.994	2.004	1.1	18.2	178 E	37	72
8 24	19 52.26	-5 35.1	0.725	1.658	20.4	17.1	145 E	39	70	9 3	22 20.88	-8 18.4	1.018	2.023	3.3	18.4	173 E	37	72
8 29	19 52.82	-5 54.6	0.746	1.658	22.5	17.2	141 E	39	70	9 8	22 16.84	-8 56.5	1.047	2.042	6.1	18.6	167 E	36	73
9 3	19 54.39	-6 15.0	0.770	1.657	24.5	17.4	137 E	39	70	9 13	22 13.31	-9 31.1	1.082	2.061	8.8	18.8	162 E	35	74
9 8	19 56.97	-6 35.5	0.798	1.658	26.3	17.5	133 E	38	71	9 18	22 10.43	-10 1.4	1.122	2.081	11.3	19.0	156 E	35	74
9 13	20 0.52	-6 55.0	0.828	1.660	28.0	17.6	129 E	38	71	9 23	22 8.25	-10 27.0	1.168	2.100	13.6	19.2	150 E	35	74
9 23	20 10.36	-7 28.1	0.896	1.665	30.6	17.9	122 E	38	71	10 3	22 6.16	-11 3.2	1.274	2.139	17.5	19.6	140		

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°
238072 2003 FW₇ (continuation)										306418 1998 KK₅₆ (continuation)									
3 7	18 40.30	-26 31.8	1.851	1.731	31.9	20.2	67 W	15*	61*	9 18	20 43.87	-42 43.6	1.750	2.449	20.1	20.5	123 E	2	73
3 17	19 8.72	-26 43.6	1.749	1.708	33.4	20.1	71 W	14*	65*	9 23	20 44.89	-42 29.2	1.828	2.477	20.7	20.6	119 E	3	74
3 27	19 37.13	-26 41.0	1.650	1.688	34.8	20.0	75 W	13*	69*	9 28	20 46.64	-42 10.5	1.907	2.504	21.2	20.7	115 E	3	74
4 6	20 5.32	-26 25.2	1.555	1.670	35.9	19.8	78 W	13*	72*	10 3	20 49.08	-41 48.0	1.989	2.532	21.6	20.9	111 E	3	74
4 16	20 33.04	-25 57.9	1.465	1.655	36.9	19.7	82 W	13*	76*	10 8	20 52.15	-41 22.3	2.073	2.559	21.9	21.0	108 E	4	75
4 26	21 0.01	-25 21.4	1.378	1.642	37.6	19.6	86 W	13*	79*	10 13	20 55.79	-40 53.8	2.159	2.586	22.0	21.1	104 E	4	75
5 6	21 26.00	-24 38.8	1.296	1.633	38.1	19.5	89 W	13*	83*	10 18	20 59.94	-40 22.9	2.245	2.613	22.0	21.2	100 E	5	76
5 16	21 50.71	-23 53.3	1.218	1.627	38.3	19.3	93 W	14*	87*	10 23	21 4.54	-39 49.9	2.333	2.640	22.0	21.3	97 E	5	76
5 26	22 13.85	-23 8.9	1.145	1.625	38.2	19.2	97 W	15*	87	10 28	21 9.54	-39 15.1	2.422	2.667	21.8	21.4	93 E	6	77
6 5	22 35.10	-22 29.3	1.076	1.625	37.6	19.0	102 W	17*	86	513170 2004 KH₁₅									
6 15	22 54.06	-21 58.7	1.011	1.629	36.6	18.9	107 W	19*	86	12 27	15 36.13	+21 0.4	0.618	0.863	81.4	21.3	60 W	54*	9*
6 25	23 10.29	-21 40.7	0.950	1.636	35.0	18.7	113 W	21*	86	1 1	15 54.32	+21 14.7	0.658	0.877	78.2	21.3	61 W	55*	10*
7 5	23 23.30	-21 37.9	0.895	1.646	32.8	18.5	119 W	22*	86	1 6	16 11.19	+21 11.5	0.696	0.891	75.4	21.4	61 W	55*	11*
7 15	23 32.50	-21 51.9	0.847	1.660	29.8	18.3	126 W	23*	86	1 11	16 26.93	+20 55.8	0.731	0.906	73.0	21.5	62 W	55*	13*
7 25	23 37.39	-22 21.2	0.807	1.676	26.1	18.1	133 W	23*	86	1 16	16 41.67	+20 31.1	0.762	0.921	70.8	21.5	62 W	55*	15*
7 30	23 38.10	-22 40.2	0.790	1.685	24.0	18.0	138 W	22	87	85839 1998 YO₄									
8 4	23 37.63	-23 0.9	0.777	1.695	21.7	18.0	142 W	22	87	12 27	15 36.42	-19 10.1	1.862	1.261	29.4	19.6	39 W	19*	28*
8 9	23 36.00	-23 22.0	0.767	1.705	19.4	17.9	146 W	22	87	1 1	15 54.41	-20 33.7	1.843	1.255	30.0	19.6	40 W	18*	29*
8 14	23 33.28	-23 41.9	0.760	1.716	16.9	17.8	150 W	21	88	1 6	16 12.75	-21 50.9	1.826	1.250	30.6	19.6	40 W	17*	31*
8 19	23 29.61	-23 58.8	0.758	1.727	14.6	17.7	155 W	21	88	1 11	16 31.42	-23 0.9	1.809	1.247	31.2	19.6	41 W	16*	32*
8 24	23 25.18	-24 11.2	0.760	1.739	12.5	17.6	158 W	21	88	1 16	16 50.37	-24 3.1	1.794	1.245	31.7	19.6	42 W	15*	33*
8 29	23 20.19	-24 17.7	0.766	1.752	10.9	17.6	161 W	21	88	1 21	17 9.56	-24 56.9	1.780	1.244	32.2	19.6	42 W	14*	35*
9 3	23 14.89	-24 17.0	0.778	1.765	10.1	17.6	162 W	21	88	1 26	17 28.93	-25 41.9	1.767	1.244	32.7	19.6	43 W	13*	36*
9 8	23 9.55	-24 8.5	0.794	1.779	10.3	17.7	162 W	21	88	1 31	17 48.42	-26 17.9	1.755	1.245	33.1	19.6	44 W	12*	37*
9 13	23 4.45	-23 51.7	0.815	1.793	11.3	17.8	160 E	21	88	2 5	18 7.96	-26 44.5	1.743	1.248	33.6	19.6	44 W	11*	38*
9 18	22 59.82	-23 26.9	0.841	1.807	12.9	18.0	156 E	22	87	2 10	18 27.48	-27 1.7	1.733	1.251	34.0	19.6	45 W	10*	39*
9 23	22 55.84	-22 54.8	0.872	1.822	14.8	18.1	152 E	22	87	2 15	18 46.89	-27 9.7	1.723	1.256	34.4	19.6	46 W	10*	40*
9 28	22 52.64	-22 16.0	0.908	1.837	16.7	18.3	148 E	23	86	2 25	19 25.08	-26 58.9	1.705	1.269	35.2	19.6	48 W	8*	42*
10 3	22 50.30	-21 31.7	0.947	1.852	18.6	18.5	144 E	23	86	3 7	20 2.01	-26 15.4	1.689	1.286	35.8	19.6	49 W	7*	43*
10 8	22 48.85	-20 42.6	0.992	1.868	20.3	18.6	139 E	24	85	3 17	20 37.28	-25 4.0	1.672	1.307	36.5	19.7	51 W	7*	45*
10 13	22 48.32	-19 49.6	1.040	1.883	21.9	18.8	135 E	25	84	3 27	21 10.60	-23 30.5	1.655	1.330	37.1	19.7	54 W	6*	47*
10 18	22 48.66	-18 53.5	1.091	1.900	23.3	19.0	131 E	26	83	4 6	21 41.87	-21 40.6	1.635	1.357	37.6	19.7	56 W	6*	50*
10 23	22 49.83	-17 54.9	1.146	1.916	24.6	19.1	127 E	27	82	4 16	22 11.09	-19 39.9	1.613	1.386	38.1	19.8	59 W	7*	52*
11 2	22 54.37	-15 52.7	1.265	1.949	26.4	19.5	119 E	29	80	4 26	22 38.28	-17 33.4	1.588	1.417	38.6	19.8	61 W	8*	55*
11 12	23 1.46	-13 45.8	1.393	1.983	27.7	19.7	112 E	31	78	5 6	23 3.56	-15 25.5	1.557	1.449	39.0	19.8	65 W	9*	59*
11 22	23 10.61	-11 36.2	1.530	2.018	28.3	20.0	104 E	33	76	5 16	23 26.98	-13 19.7	1.522	1.482	39.3	19.8	68 W	11*	62*
12 2	23 21.37	-9 25.1	1.673	2.052	28.4	20.2	98 E	36	72*	5 26	23 48.59	-11 19.4	1.482	1.516	39.5	19.8	72 W	14*	66*
12 12	23 33.42	-7 13.1	1.820	2.087	28.1	20.4	91 E	38	69*	6 5	0 8.42	-9 26.8	1.436	1.550	39.5	19.8	76 W	17*	68*
12 22	23 46.47	-5 1.0	1.970	2.122	27.5	20.6	85 E	40	59*	6 15	0 26.40	-7 44.3	1.385	1.585	39.3	19.8	81 W	21*	70*
1 1	0 0.30	-2 49.3	2.121	2.157	26.6	20.8	79 E	42	53*	6 25	0 42.39	-6 13.9	1.329	1.619	38.8	19.7	86 W	26*	70*
1 11	0 14.78	-0 38.4	2.272	2.191	25.4	21.0	73 E	44*	46*	7 5	0 56.21	-4 57.1	1.269	1.652	38.0	19.6	92 W	31*	69
1 21	0 29.77	+1 30.9	2.421	2.226	24.0	21.1	67 E	45*	40*	7 15	1 7.55	-3 55.6	1.205	1.685	36.7	19.5	98 W	36*	68
306418 1998 KK₅₆										7 25	1 15.99	-3 10.8	1.140	1.717	34.8	19.4	105 W	40*	67
12 27	15 35.91	+0 48.1	2.189	1.686	25.4	20.3	47 W	37*	19*	8 4	1 21.06	-2 43.7	1.076	1.748	32.2	19.2	113 W	42*	67
1 6	16 3.92	-0 53.9	2.120	1.661	26.8	20.2	50 W	37*	24*	8 14	1 22.18	-2 35.1	1.015	1.778	28.7	19.0	123 W	42	67
1 16	16 31.99	-2 26.6	2.055	1.641	28.1	20.2	52 W	37*	29*	8 24	1 18.89	-2 44.4	0.961	1.807	24.3	18.8	133 W	42	67
1 26	16 59.94	-3 49.2	1.993	1.626	29.4	20.1	54 W	36*	34*	9 3	1 11.02	-3 8.8	0.920	1.834	18.8	18.6	144 W	42	67
2 5	17 27.57	-5 1.7	1.934	1.617	30.6	20.1	57 W	35*	39*	9 8	1 5.45	-3 25.1	0.905	1.848	15.8	18.5	150 W	42	67
2 15	17 54.70	-6 4.4	1.877	1.613	31.8	20.1	59 W	34*	44*	9 13	0 58.94	-3 43.0	0.895	1.861	12.6	18.4	156 W	41	68
2 25	18 21.13	-6 58.5	1.820	1.615	32.8	20.0	62 W	33*	49*	9 18	0 51.69	-4 1.1	0.891	1.873	9.3	18.2	162 W	41	68
3 7	18 46.68	-7 45.9	1.763	1.622	33.8	20.0	65 W	32*	53*	9 23	0 43.94	-4 18.1	0.892	1.885	6.3	18.1	168 W	41	68
3 17	19 11.19	-8 29.0	1.705	1.635	34.6	20.0	69 W	31*	58*	9 28	0 35.95	-4 33.0	0.900	1.897	4.2	18.0	172 W	40	69
3 27	19 34.48	-9 10.9	1.646	1.653	35.2	19.9	73 W	30*	62*	10 3	0 28.01	-4 44.6	0.914	1.909	4.6	18.1	171 E	40	69
4 6	19 56.41	-9 55.1	1.586	1.677	35.6	19.9	77 W	29*	67*	10 8	0 20.41	-4 52.0	0.934	1.920	7.0	18.3	166 E	40	69
4 16	20 16.80	-10 45.6	1.523	1.704	35.7	19.8	82 W	28*	71*	10 13	0 13.40	-4 54.6	0.960	1.930	9.9	18.5	161 E	40	69
4 26	20 35.44	-11 46.8	1.459	1.736	35.4	19.8	88 W	28*	75*	10 23	0 1.91	-4 44.1	1.031	1.951	15.3	18.9	149 E	40	69
5 6	20 52.13	-13 3.6	1.395	1.772	34.6	19.7	94 W	27*	77	11 2	23 54.42	-4 13.5	1.120	1.969	19.9	19.2	137 E	41	68
5 16	21 6.59	-14 40.8	1.333	1.811	33.3	19.6	100 W	26*	79	11 12	23 51.08	-3 25.1	1.226	1.986	23.4	19.5	127 E	42	67
5 26	21 18.48	-16 43.2	1.273	1.854	31.3	19.5	108 W	26*	81	11 22	23 51.57	-2 21.7	1.343	2.002	26.0	19.8	118 E	43	66
6 5	21 27.46	-19 13.9	1.219	1.899	28.7	19.4	116 W	25*	83	12 2	23 55.32	-1 6.3	1.469	2.015	27.6	20.1	109 E	44	65
6 15	21 33.09	-22 14.0	1.175	1.946	25.3	19.3	125 W	23*	86	12 12	0 1.81	+0 18.9	1.599	2.027	28.5	20.3	101 E	45	63*
6 20	21 34.54	-23 54.1	1.158	1.970	23.3	19.2	130 W	21*	88	12 22	0 10.53	+1 52.1	1.732	2.038	28.8	20.5	93 E	47	58*
6 25	21 35.0																		

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°
124834 2001 TH									9969 Braille								
<i>(continuation)</i>									<i>(continuation)</i>								
4 16	16 54.62	-7 43.2	2.078	2.839	15.5	20.0	131 W	37 72	11 22	22 23.61	+21 1.9	2.162	2.594	21.6	20.7	105 E	66 42*
4 26	16 49.63	-7 42.8	1.967	2.824	12.9	19.8	141 W	37 72	12 2	22 33.97	+19 33.8	2.319	2.636	21.8	20.9	98 E	65 41*
5 6	16 42.02	-7 48.6	1.877	2.807	9.8	19.5	152 W	37 72	12 12	22 45.46	+18 28.6	2.481	2.677	21.6	21.1	90 E	63 38*
5 16	16 32.16	-8 2.8	1.812	2.789	6.6	19.3	162 W	37 72	12 22	22 57.81	+17 44.3	2.646	2.717	21.1	21.2	83 E	63 34*
5 26	16 20.82	-8 27.3	1.774	2.770	4.7	19.2	167 W	37 72	1 1	23 10.83	+17 18.4	2.813	2.755	20.3	21.4	77 E	61* 30*
6 5	16 9.00	-9 2.7	1.764	2.751	6.2	19.2	163 E	36 73	1 11	23 24.35	+17 8.5	2.976	2.792	19.3	21.5	70 E	59* 25*
6 15	15 57.80	-9 49.0	1.783	2.730	9.5	19.4	154 E	35 74	87005 2000 Jj₅₂								
6 25	15 48.22	-10 45.1	1.828	2.709	13.1	19.5	143 E	34 75	12 27	15 37.66	-20 18.3	3.222	2.528	14.0	20.8	38 W	18* 28*
7 5	15 40.98	-11 49.4	1.894	2.687	16.2	19.7	132 E	33 76	1 6	15 55.05	-21 29.8	3.101	2.496	16.0	20.7	44 W	19* 34*
7 15	15 36.46	-13 0.4	1.978	2.663	18.8	19.9	122 E	32* 77	1 16	16 12.57	-22 36.0	2.971	2.464	17.9	20.7	50 W	19* 41*
7 25	15 34.77	-14 16.4	2.074	2.639	20.8	20.0	113 E	30* 78	1 26	16 30.12	-23 36.7	2.832	2.431	19.7	20.6	56 W	19* 48*
8 4	15 35.84	-15 36.0	2.179	2.614	22.1	20.1	104 E	27* 80	2 5	16 47.61	-24 32.1	2.686	2.397	21.4	20.5	63 W	19* 55*
8 14	15 39.47	-16 57.9	2.288	2.588	22.9	20.3	95 E	25* 81	2 15	17 4.94	-25 22.5	2.535	2.363	22.9	20.4	69 W	19* 62*
8 24	15 45.47	-18 20.9	2.398	2.562	23.2	20.3	88 E	22* 80*	2 25	17 21.95	-26 8.4	2.380	2.327	24.2	20.2	75 W	18* 69*
9 3	15 53.59	-19 43.8	2.506	2.534	23.1	20.4	80 E	20* 74*	3 7	17 38.49	-26 50.8	2.224	2.292	25.3	20.1	81 W	18* 75*
9 13	16 3.65	-21 5.6	2.610	2.506	22.6	20.5	73 E	18* 67*	3 17	17 54.38	-27 30.9	2.066	2.255	26.2	19.9	88 W	17* 82*
9 23	16 15.48	-22 25.3	2.707	2.476	21.7	20.5	66 E	16* 60*	3 27	18 9.38	-28 10.3	1.910	2.218	26.7	19.7	94 W	16* 87*
10 3	16 28.92	-23 41.6	2.797	2.447	20.6	20.5	60 E	14* 54*	4 6	18 23.25	-28 51.0	1.757	2.181	26.8	19.5	101 W	16* 87
10 13	16 43.87	-24 53.7	2.877	2.416	19.3	20.5	53 E	12* 47*	4 16	18 35.66	-29 35.2	1.608	2.143	26.4	19.3	108 W	15* 86
10 23	17 0.21	-26 0.2	2.947	2.385	17.8	20.5	47 E	10* 41*	4 26	18 46.21	-30 25.6	1.467	2.105	25.6	19.0	115 W	15* 86
11 2	17 17.84	-27 0.3	3.006	2.353	16.2	20.4	41 E	9* 35*	5 6	18 54.46	-31 24.5	1.334	2.067	24.1	18.7	123 W	14 85
11 12	17 36.70	-27 52.6	3.053	2.320	14.4	20.4	36 E	7* 29*	5 16	18 59.86	-32 33.9	1.212	2.029	21.9	18.4	132 W	12 83
11 22	17 56.67	-28 36.3	3.088	2.287	12.5	20.3	30 E	5* 24*	5 21	19 1.30	-33 12.8	1.156	2.010	20.5	18.2	136 W	12 83
12 2	18 17.68	-29 10.1	3.110	2.254	10.6	20.2	25 E	3* 19*	5 26	19 1.83	-33 54.4	1.103	1.991	19.0	18.1	140 W	11 82
12 12	18 39.64	-29 33.3	3.121	2.220	8.7	20.1	20 E	1* 14*	5 31	19 1.38	-34 38.2	1.055	1.972	17.2	17.9	145 W	10 81
12 22	19 2.43	-29 44.9	3.119	2.185	6.8	20.0	15 E	— 9*	6 5	18 59.89	-35 23.6	1.011	1.953	15.4	17.7	149 W	10 81
1 1	19 25.96	-29 44.2	3.106	2.151	5.2	19.9	11 E	— 5*	6 10	18 57.36	-36 9.7	0.971	1.934	13.4	17.5	154 W	9 80
1 11	19 50.11	-29 30.8	3.082	2.116	4.2	19.7	9 E	— 2*	6 15	18 53.79	-36 55.4	0.936	1.916	11.5	17.4	158 W	8 79
1 21	20 14.77	-29 4.2	3.047	2.081	4.3	19.7	9 E	—	6 20	18 49.29	-37 39.0	0.906	1.897	9.8	17.2	161 W	7 78
9969 Braille									6 25	18 43.98	-38 19.2	0.881	1.879	8.7	17.1	164 W	7 78
12 27	15 37.16	-29 50.3	2.020	1.377	25.8	19.3	38 W	9* 31*	7 30	18 38.07	-38 54.3	0.862	1.861	8.5	17.0	164 W	6 77
1 1	15 56.28	-29 45.0	1.993	1.365	26.5	19.3	38 W	10* 31*	6 5	18 31.80	-39 23.1	0.848	1.843	9.5	17.0	163 E	6 77
1 6	16 15.45	-29 29.2	1.968	1.355	27.2	19.2	39 W	10* 32*	7 10	18 25.47	-39 44.5	0.838	1.825	11.3	17.0	159 E	5 76
1 11	16 34.57	-29 2.5	1.943	1.346	28.0	19.2	40 W	10* 33*	7 15	18 19.42	-39 58.0	0.834	1.808	13.6	17.1	155 E	5 76
1 16	16 53.56	-28 24.9	1.919	1.339	28.7	19.2	41 W	11* 34*	7 20	18 13.98	-40 3.6	0.835	1.791	16.1	17.1	151 E	5 76
1 21	17 12.35	-27 36.5	1.897	1.333	29.4	19.2	42 W	11* 35*	7 25	18 9.42	-40 2.0	0.839	1.774	18.7	17.2	146 E	5 76
1 26	17 30.84	-26 37.6	1.875	1.329	30.1	19.2	43 W	12* 36*	7 30	18 5.96	-39 53.8	0.848	1.758	21.2	17.3	141 E	5 76
2 5	18 6.74	-24 9.7	1.835	1.327	31.4	19.2	45 W	14* 38*	8 4	18 3.75	-39 40.1	0.860	1.742	23.6	17.4	137 E	5 76
2 15	18 40.87	-21 5.6	1.799	1.333	32.7	19.2	47 W	16* 40*	8 9	18 2.89	-39 21.7	0.874	1.727	25.8	17.5	132 E	6 77
2 25	19 12.98	-17 30.6	1.767	1.345	33.8	19.2	49 W	18* 42*	8 14	18 3.44	-38 59.7	0.892	1.712	27.9	17.6	128 E	6 77
3 7	19 43.00	-13 31.2	1.738	1.364	34.7	19.2	52 W	21* 44*	8 19	18 5.39	-38 34.8	0.912	1.698	29.7	17.6	124 E	6 77
3 17	20 10.94	-9 13.5	1.714	1.389	35.5	19.2	54 W	23* 46*	8 24	18 8.67	-38 7.4	0.934	1.684	31.4	17.7	120 E	7 78
3 27	20 36.84	-4 43.9	1.692	1.420	36.1	19.3	57 W	26* 47*	8 29	18 13.21	-37 38.0	0.957	1.670	32.9	17.8	116 E	7 78
4 6	21 0.82	-0 8.0	1.674	1.456	36.5	19.3	60 W	30* 48*	9 3	18 18.93	-37 6.4	0.982	1.658	34.1	17.9	113 E	8 79
4 16	21 22.93	+4 29.5	1.656	1.497	36.7	19.4	63 W	33* 49*	9 8	18 25.75	-36 32.9	1.008	1.646	35.3	17.9	109 E	8 79
4 26	21 43.21	+9 4.4	1.640	1.540	36.7	19.4	66 W	37* 49*	9 13	18 33.56	-35 57.1	1.035	1.634	36.2	18.0	106 E	9 80
5 6	22 1.69	+13 33.3	1.624	1.587	36.6	19.4	70 W	41* 47*	9 18	18 42.28	-35 18.9	1.062	1.624	37.0	18.1	103 E	10 81
5 16	22 18.31	+17 53.6	1.607	1.636	36.3	19.5	73 W	46* 45*	9 23	18 51.78	-34 38.0	1.091	1.614	37.7	18.1	101 E	10 81
5 26	22 32.93	+22 2.9	1.588	1.687	35.9	19.5	77 W	51* 42*	9 28	19 1.98	-33 54.2	1.120	1.605	38.2	18.2	98 E	11 82
6 5	22 45.42	+25 59.4	1.567	1.739	35.2	19.5	82 W	57* 38	10 3	19 12.78	-33 7.0	1.149	1.596	38.6	18.3	96 E	12 83
6 15	22 55.47	+29 41.0	1.545	1.793	34.4	19.5	86 W	64* 34	10 8	19 24.11	-32 16.3	1.180	1.589	38.9	18.3	93 E	13 83*
6 20	22 59.48	+31 25.4	1.533	1.819	33.9	19.5	89 W	68* 33	10 13	19 35.89	-31 21.9	1.211	1.582	39.1	18.4	91 E	14 83*
6 25	23 2.77	+33 4.9	1.520	1.846	33.4	19.5	91 W	71* 31	10 18	19 48.03	-30 23.5	1.242	1.577	39.2	18.4	89 E	15 82*
6 30	23 5.28	+34 39.3	1.508	1.873	32.8	19.5	94 W	75* 29	10 23	20 0.46	-29 21.2	1.274	1.572	39.2	18.5	87 E	16 81*
7 5	23 6.96	+36 8.0	1.495	1.900	32.1	19.5	96 W	79* 28	10 28	20 13.11	-28 14.9	1.306	1.568	39.1	18.5	85 E	17 79*
7 10	23 7.75	+37 30.2	1.482	1.927	31.4	19.5	99 W	82* 26	11 2	20 25.93	-27 4.5	1.340	1.565	39.0	18.6	83 E	18 77*
7 15	23 7.63	+38 45.2	1.469	1.954	30.6	19.5	102 W	84 25	11 7	20 38.88	-25 50.1	1.374	1.563	38.8	18.6	81 E	19 74*
7 20	23 6.58	+39 52.1	1.457	1.981	29.7	19.5	105 W	85 24	11 12	20 51.90	-24 31.9	1.408	1.562	38.5	18.7	79 E	20 72*
7 25	23 4.58	+40 50.0	1.446	2.008	28.7	19.5	108 W	86 23	11 17	21 4.95	-23 10.1	1.444	1.562	38.2	18.7	77 E	22 69*
7 30	23 1.68	+41 38.0	1.436	2.035	27.7	19.5	111 W	87 22	11 22	21 18.00	-21 45.0	1.480	1.563	37.8	18.7	76 E	23 66*
8 4	22 57.89	+42 15.1	1.427	2.062	26.7	19.4	114 W	87 22	11 27	21 31.01	-20 16.8	1.517	1.565	37.3	18.8	74 E	25 64*
8 9	22 53.33	+42 40.1	1.420	2.088	25.6	19.4	117 W	88 21	12 2	21 43.98	-18 45.7	1.554	1.568	36.8	18.8	72 E	26 61*
8 14	22 48.11	+42 52.2	1.415	2.114	24.5	19.4	120 W	88 21	12 7	21 56.90	-17 12.1	1.593	1.572	36.3	18.9	71 E	28 58*
8 19	22 42.42	+42 50.7	1.412	2.141	23.3	19.4	123 W	88 21	12 12	22 9.73	-15 36.4	1.633	1.576	35.7	18.9	69 E	29* 55*
8 24	22 36.46																

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°
267504 2002 KJ₉										358109 2006 KZ₁₂₃									
<i>(continuation)</i>																			
2 25	18 44.75	-21 47.4	1.812	1.501	33.1	20.8	56 W	17*	49*	12 27	15 41.54	-23 51.7	3.015	2.306	14.9	21.0	37 W	15*	28*
3 7	19 18.29	-21 31.2	1.736	1.478	34.8	20.7	58 W	16*	52*	1 6	16 1.19	-25 44.0	2.896	2.270	17.0	21.0	42 W	15*	34*
3 17	19 51.94	-20 52.0	1.666	1.458	36.4	20.6	60 W	15*	54*	1 16	16 21.50	-27 33.2	2.770	2.233	19.1	20.9	48 W	14*	41*
3 27	20 25.35	-19 51.0	1.602	1.442	37.8	20.5	62 W	15*	56*	1 26	16 42.47	-29 19.1	2.638	2.195	21.1	20.8	53 W	13*	47*
4 6	20 58.23	-18 30.6	1.543	1.431	39.1	20.5	64 W	15*	58*	2 5	17 4.12	-31 1.7	2.502	2.158	22.9	20.8	59 W	12*	52*
4 16	21 30.31	-16 54.3	1.489	1.425	40.2	20.4	66 W	15*	60*	2 15	17 26.46	-32 41.2	2.363	2.121	24.7	20.6	64 W	10*	58*
4 26	22 1.34	-15 6.1	1.439	1.423	41.2	20.4	69 W	15*	62*	2 25	17 49.48	-34 17.8	2.223	2.083	26.3	20.5	69 W	9*	62*
5 6	22 31.17	-13 10.4	1.393	1.427	41.9	20.3	71 W	15*	64*	3 7	18 13.20	-35 51.9	2.084	2.047	27.8	20.4	74 W	7*	66*
5 16	22 59.64	-11 11.8	1.349	1.435	42.4	20.3	73 W	17*	66*	3 17	18 37.60	-37 24.0	1.947	2.010	29.1	20.2	79 W	6*	69*
5 26	23 26.61	-9 14.9	1.308	1.448	42.7	20.2	76 W	19*	68*	3 27	19 2.64	-38 54.9	1.813	1.974	30.2	20.1	84 W	4*	72*
6 5	23 51.98	-7 23.6	1.267	1.466	42.8	20.2	79 W	21*	69*	4 1	19 15.40	-39 40.1	1.748	1.957	30.6	20.0	86 W	3*	73*
6 15	0 15.61	-5 41.8	1.226	1.487	42.6	20.2	83 W	24*	69*	4 6	19 28.30	-40 25.2	1.685	1.939	31.1	19.9	89 W	2*	73*
6 25	0 37.31	-4 12.7	1.184	1.513	42.1	20.1	87 W	28*	68*	4 11	19 41.35	-41 10.5	1.623	1.922	31.4	19.8	91 W	1*	73*
7 5	0 56.88	-2 58.9	1.141	1.541	41.3	20.0	91 W	32*	67	4 16	19 54.51	-41 56.0	1.562	1.905	31.7	19.7	93 W	1*	73*
7 15	1 14.01	-2 2.8	1.097	1.573	40.0	20.0	96 W	37*	66	4 21	20 7.77	-42 41.7	1.504	1.888	32.0	19.6	96 W	—	73*
7 25	1 28.34	-1 26.3	1.053	1.607	38.2	19.9	102 W	41*	65	4 26	20 21.13	-43 27.8	1.447	1.872	32.2	19.5	98 W	—	72*
8 4	1 39.47	-1 10.3	1.009	1.643	35.8	19.8	109 W	43*	65	5 1	20 34.55	-44 14.4	1.393	1.856	32.3	19.4	100 W	—	72
8 14	1 46.88	-1 15.6	0.967	1.681	32.7	19.6	116 W	44	65	5 6	20 48.00	-45 1.6	1.340	1.840	32.4	19.3	102 W	—	71
8 24	1 50.15	-1 41.1	0.929	1.721	28.8	19.5	125 W	43	66	5 11	21 1.44	-45 49.5	1.290	1.825	32.4	19.2	104 W	—	70
9 3	1 48.98	-2 24.0	0.900	1.761	24.1	19.3	135 W	43	66	5 16	21 14.82	-46 38.1	1.242	1.810	32.4	19.1	106 W	—	69
9 8	1 46.71	-2 50.5	0.889	1.782	21.4	19.2	140 W	42	67	5 21	21 28.08	-47 27.5	1.197	1.795	32.3	19.0	108 W	—	69
9 13	1 43.40	-3 18.9	0.882	1.802	18.6	19.2	145 W	42	67	5 26	21 41.17	-48 17.6	1.154	1.781	32.2	18.9	110 W	—	68
9 18	1 39.16	-3 48.0	0.880	1.823	15.7	19.1	151 W	41	68	5 31	21 54.00	-49 8.5	1.113	1.768	32.0	18.8	112 W	—	67
9 23	1 34.13	-4 16.4	0.881	1.844	12.8	19.0	156 W	41	68	6 5	22 6.49	-50 0.2	1.075	1.755	31.8	18.7	114 W	—	66
9 28	1 28.52	-4 42.8	0.888	1.865	10.0	18.9	161 W	40	69	6 10	22 18.52	-50 52.7	1.040	1.743	31.6	18.6	116 W	—	65
10 3	1 22.52	-5 5.9	0.901	1.886	7.8	18.9	165 W	40	69	6 15	22 29.95	-51 45.7	1.006	1.731	31.3	18.5	118 W	—	64
10 8	1 16.40	-5 24.5	0.919	1.907	6.5	18.9	167 W	40	69	6 20	22 40.67	-52 39.1	0.975	1.720	31.0	18.5	119 W	—	63
10 13	1 10.40	-5 37.5	0.943	1.928	6.8	19.0	167 E	39	70	6 25	22 50.53	-53 32.6	0.947	1.709	30.6	18.4	121 W	—	62
10 23	0 59.63	-5 44.6	1.009	1.970	10.5	19.4	159 E	39	70	6 30	22 59.36	-54 25.8	0.921	1.699	30.3	18.3	123 W	—	62
11 2	0 51.52	-5 26.7	1.097	2.012	14.8	19.7	149 E	40	69	7 5	23 6.97	-55 18.3	0.896	1.690	29.9	18.2	124 W	—	61
11 12	0 46.73	-4 46.2	1.204	2.053	18.6	20.1	139 E	40	69	7 10	23 13.18	-56 9.3	0.875	1.682	29.5	18.1	125 W	—	60
11 22	0 45.36	-3 47.2	1.327	2.094	21.5	20.5	129 E	41	68	7 15	23 17.77	-56 57.7	0.855	1.674	29.1	18.1	127 W	—	59
12 2	0 47.08	-2 34.4	1.464	2.134	23.6	20.8	120 E	42	67	7 20	23 20.61	-57 42.1	0.838	1.667	28.7	18.0	128 W	—	58
12 12	0 51.51	-1 11.1	1.612	2.173	24.9	21.1	111 E	44	65	7 25	23 21.55	-58 20.8	0.823	1.661	28.4	17.9	129 W	—	58
12 22	0 58.20	+ 0 19.4	1.766	2.212	25.6	21.3	103 E	45	63*	7 30	23 20.52	-58 52.1	0.810	1.656	28.0	17.9	130 W	—	57
10502 Armaghobs										8 4	23 17.50	-59 13.6	0.799	1.652	27.7	17.8	131 W	—	57
12 27	15 41.51	-5 14.4	3.496	2.856	13.6	20.8	43 W	31*	21*	8 9	23 12.60	-59 22.7	0.791	1.648	27.4	17.8	132 W	—	57
1 6	15 55.38	-5 14.3	3.415	2.875	15.1	20.8	49 W	34*	28*	8 14	23 6.12	-59 17.0	0.785	1.645	27.2	17.8	133 W	—	57
1 16	16 8.58	-5 3.4	3.323	2.893	16.4	20.8	56 W	36*	36*	8 16	23 3.17	-59 10.0	0.783	1.645	27.1	17.8	132 W	—	57
1 26	16 20.93	-4 41.0	3.221	2.910	17.6	20.8	63 W	38*	43*	8 18	23 0.07	-59 0.1	0.782	1.644	27.1	17.8	132 W	—	57
2 5	16 32.29	-4 7.2	3.111	2.926	18.5	20.7	70 W	40*	50*	8 20	22 56.85	-58 47.3	0.781	1.643	27.1	17.8	132 W	—	57
2 15	16 42.47	-3 21.7	2.994	2.941	19.1	20.7	77 W	41*	57*	8 22	22 53.55	-58 31.4	0.781	1.643	27.0	17.8	132 W	—	57
2 25	16 51.25	-2 24.9	2.873	2.955	19.5	20.6	85 W	42*	62*	8 24	22 50.20	-58 12.5	0.781	1.643	27.0	17.8	132 W	—	58
3 7	16 58.41	-1 17.2	2.751	2.968	19.5	20.5	93 W	44*	64*	8 26	22 46.84	-57 50.5	0.782	1.643	27.0	17.8	132 W	—	58
3 17	17 3.73	+ 0 0.5	2.630	2.980	19.2	20.4	101 W	45	64	8 28	22 43.49	-57 25.4	0.783	1.643	27.1	17.8	132 W	—	59
3 27	17 6.97	+ 1 26.4	2.515	2.991	18.4	20.3	109 W	46	63	8 30	22 40.20	-56 57.2	0.785	1.643	27.1	17.8	132 W	—	59
4 6	17 7.95	+ 2 58.1	2.407	3.001	17.2	20.2	117 W	48	61	9 1	22 36.99	-56 25.9	0.787	1.643	27.2	17.8	132 E	—	60
4 16	17 6.54	+ 4 32.3	2.312	3.010	15.7	20.1	126 W	50	59	9 3	22 33.90	-55 51.6	0.789	1.643	27.3	17.8	132 E	—	60
4 26	17 2.73	+ 6 4.1	2.233	3.017	13.9	19.9	134 W	51	58	9 8	22 26.83	-54 13.4	0.798	1.645	27.6	17.8	131 E	—	62
5 1	16 59.98	+ 6 47.4	2.201	3.021	13.0	19.9	137 W	52	57	9 13	22 20.95	-52 18.7	0.810	1.648	27.9	17.9	130 E	—	64
5 6	16 56.71	+ 7 27.9	2.174	3.024	12.1	19.8	141 W	52	57	9 18	22 16.44	-50 10.2	0.826	1.651	28.4	17.9	129 E	—	66
5 11	16 52.98	+ 8 5.0	2.152	3.027	11.3	19.8	144 W	53	56	9 23	22 13.33	-47 50.5	0.845	1.655	29.0	18.0	127 E	—	68
5 16	16 48.86	+ 8 37.8	2.136	3.030	10.7	19.7	146 W	54	55	9 28	22 11.59	-45 22.5	0.868	1.660	29.6	18.1	125 E	—	71
5 26	16 39.83	+ 9 28.0	2.124	3.035	10.0	19.7	149 W	54	55	10 3	22 11.11	-42 48.5	0.894	1.666	30.2	18.2	123 E	2	73
6 5	16 30.41	+ 9 54.8	2.136	3.039	10.4	19.7	147 E	55	54	10 8	22 11.81	-40 11.1	0.924	1.673	30.8	18.3	121 E	5	76
6 15	16 21.43	+ 9 56.7	2.173	3.041	11.8	19.8	142 E	55	54	10 13	22 13.56	-37 32.0	0.957	1.680	31.4	18.4	119 E	7	78
6 25	16 13.67	+ 9 34.7	2.232	3.043	13.5	19.9	136 E	55	54	10 18	22 16.24	-34 53.2	0.994	1.689	32.0	18.5	116 E	10	81
7 5	16 7.67	+ 8 52.2	2.310	3.044	15.3	20.1	128 E	54	55	10 23	22 19.70	-32 16.0	1.034	1.698	32.5	18.6	114 E	13	84
7 15	16 3.76	+ 7 53.3	2.405	3.044	16.8	20.2	120 E	53	56	10 28	22 23.85	-29 41.2	1.077	1.707	32.9	18.7	111 E	15	86
7 25	16 2.08	+ 6 42.4	2.512	3.042	18.0	20.4	112 E	51	57	11 7	22 28.59	-27 9.8	1.123	1.718	33.2	18.8	108 E	18	89
8 4	16 2.57	+ 5 23.8	2.629	3.040	18.9	20.5	104 E	49	59	11 12	22 39.57	-22 18.3	1.224	1.740	33.6	19.0	103 E	23	86
8 14	16 5.13	+ 4 0.8	2.751	3.036	19.4	20.6	96 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°	
159859 2004 LE₂₃									301982 2000 KT₄									
<i>(continuation)</i>									<i>(continuation)</i>									
3 17	17 34.04	-0 32.3	2.108	2.380	24.7	20.3	93 W	44* 64*	7 30	21 37.34	+33 19.2	0.861	1.674	29.3	18.6	126 W	78	31
3 27	17 43.29	-0 0 0	1.959	2.347	24.8	20.2	100 W	45* 64	8 4	21 34.44	+33 58.9	0.853	1.679	28.5	18.5	128 W	79	30
4 6	17 50.66	+0 35.3	1.813	2.313	24.4	20.0	107 W	46 63	8 9	21 31.16	+34 21.4	0.847	1.685	27.6	18.5	130 W	79	30
4 16	17 55.75	+1 10.4	1.673	2.279	23.6	19.7	114 W	46 63	8 14	21 27.71	+34 26.1	0.844	1.691	26.8	18.5	131 E	79	30
4 26	17 58.19	+1 40.8	1.539	2.245	22.3	19.5	122 W	47 62	8 19	21 24.30	+34 13.0	0.843	1.699	26.1	18.5	132 E	79	30
5 1	17 58.30	+1 52.4	1.477	2.227	21.4	19.3	126 W	47 62	8 24	21 21.17	+33 42.9	0.845	1.706	25.4	18.5	134 W	79	30
5 6	17 57.62	+2 0 6	1.417	2.210	20.3	19.2	131 W	47 62	8 29	21 18.48	+32 56.8	0.850	1.715	24.9	18.5	134 W	78	31
5 11	17 56.10	+2 4 5	1.360	2.192	19.1	19.0	135 W	47 62	9 3	21 16.43	+31 56.1	0.857	1.724	24.5	18.5	135 E	77	32
5 16	17 53.72	+2 3 0	1.307	2.174	17.7	18.9	139 W	47 62	9 8	21 15.15	+30 42.9	0.868	1.733	24.3	18.5	135 E	76	33
5 21	17 50.51	+1 55.0	1.259	2.157	16.3	18.7	143 W	47 62	9 13	21 14.76	+29 19.5	0.883	1.744	24.3	18.6	135 E	74	35
5 26	17 46.48	+1 39.5	1.215	2.139	14.8	18.6	147 W	47 62	9 18	21 15.30	+27 48.5	0.901	1.754	24.4	18.6	134 E	73	36
5 31	17 41.70	+1 15.8	1.175	2.121	13.3	18.5	151 W	46 63	9 23	21 16.78	+26 12.4	0.922	1.765	24.6	18.7	133 E	71	38
6 5	17 36.25	+0 42.9	1.142	2.103	12.0	18.3	154 W	46 63	9 28	21 19.19	+24 33.8	0.948	1.777	25.0	18.8	131 E	70	39
6 15	17 23.90	-0 51.8	1.092	2.067	10.9	18.1	157 E	44 65	10 3	21 22.47	+22 54.6	0.976	1.789	25.5	18.9	130 E	68	41
6 25	17 10.86	-3 4 2	1.066	2.031	12.5	18.1	154 E	42 67	10 8	21 26.59	+21 17.0	1.009	1.801	26.1	19.0	128 E	66	43
7 5	16 58.78	-5 47.6	1.064	1.995	16.1	18.2	147 E	39 70	10 13	21 31.49	+19 42.8	1.045	1.814	26.7	19.1	125 E	65	44
7 10	16 53.58	-7 17.7	1.072	1.977	18.3	18.3	142 E	38 71	10 18	21 37.08	+18 13.3	1.084	1.827	27.3	19.2	123 E	63	46
7 15	16 49.16	-8 51.4	1.084	1.960	20.4	18.3	138 E	36 73	10 23	21 43.29	+16 49.7	1.127	1.841	27.8	19.3	120 E	62	47
7 20	16 45.65	-10 27.4	1.102	1.942	22.5	18.4	133 E	35 74	10 28	21 50.04	+15 32.7	1.174	1.855	28.4	19.4	117 E	61	48
7 25	16 43.11	-12 4 4	1.123	1.924	24.5	18.5	128 E	33 76	11 2	21 57.26	+14 22.7	1.223	1.869	28.8	19.6	115 E	59	50
7 30	16 41.58	-13 41.2	1.148	1.907	26.3	18.6	124 E	31 78	11 12	22 12.91	+12 25.0	1.330	1.898	29.6	19.8	109 E	57	52
8 4	16 41.09	-15 17.1	1.176	1.890	28.0	18.7	119 E	30* 79	11 22	22 29.77	+10 57.0	1.448	1.928	29.9	20.0	103 E	56	52*
8 14	16 43.26	-18 23.6	1.239	1.856	30.7	18.8	111 E	26* 82	12 2	22 47.47	+9 56.6	1.574	1.959	30.0	20.2	97 E	55	51*
8 24	16 49.48	-21 19.8	1.309	1.823	32.7	19.0	103 E	23* 85	12 12	23 5.76	+9 21.1	1.707	1.991	29.6	20.4	91 E	54	49*
9 3	16 59.45	-24 3 4	1.383	1.792	34.1	19.1	96 W	20* 88*	12 22	23 24.42	+9 7.1	1.846	2.023	29.0	20.6	86 E	54	45*
9 13	17 12.94	-26 32.8	1.458	1.762	34.8	19.2	89 W	17* 83*	1 1	23 43.29	+9 11.1	1.987	2.055	28.1	20.8	80 E	54	41*
9 23	17 29.66	-28 46.2	1.532	1.733	35.1	19.3	83 E	15* 77*	1 11	0 2.30	+9 29.8	2.131	2.087	26.9	21.0	74 E	54*	37*
10 3	17 49.35	-30 41.7	1.605	1.707	35.0	19.3	78 E	13* 72*	1 21	0 21.37	+10 0.0	2.274	2.120	25.6	21.1	68 E	53*	33*
10 13	18 11.79	-32 17.3	1.675	1.683	34.6	19.4	73 E	11* 67*	327794 2006 UB₂₆₆									
10 23	18 36.67	-33 30.6	1.741	1.661	33.9	19.4	69 W	10* 62*	12 27	15 42.91	-26 0 8	2.673	1.971	17.2	19.9	36 W	12*	28*
11 2	19 3 67	-34 19.3	1.803	1.641	33.1	19.4	64 E	10* 58*	1 6	16 5.45	-26 11.6	2.648	2.019	18.8	20.0	41 W	14*	34*
11 7	19 17.86	-34 33.8	1.833	1.633	32.6	19.5	63 E	9* 56*	1 16	16 26.79	-26 8.0	2.612	2.067	20.3	20.1	47 W	15*	39*
11 12	19 32.44	-34 41.3	1.863	1.625	32.1	19.5	61 E	9* 55*	1 26	16 46.78	-25 50.7	2.566	2.116	21.7	20.1	52 W	16*	45*
11 17	19 47.35	-34 41.8	1.891	1.618	31.5	19.5	59 E	9* 53*	2 5	17 5.24	-25 20.6	2.511	2.166	22.8	20.2	59 W	17*	52*
11 22	20 2 53	-34 35.0	1.918	1.612	31.0	19.5	57 E	9* 51*	2 15	17 22.01	-24 38.8	2.446	2.215	23.8	20.2	65 W	19*	58*
11 27	20 17.93	-34 20.9	1.945	1.606	30.4	19.5	55 E	9* 49*	2 25	17 36.89	-23 46.1	2.373	2.264	24.5	20.2	72 W	20*	65*
12 2	20 33.48	-33 59.5	1.971	1.602	29.8	19.5	54 E	10* 48*	3 7	17 49.70	-22 43.6	2.293	2.313	24.9	20.2	79 W	21*	72*
12 7	20 49.14	-33 30.8	1.996	1.598	29.2	19.5	52 E	10* 46*	3 17	18 0 22	-21 32.2	2.208	2.362	24.9	20.1	86 W	23*	79*
12 12	21 4 84	-32 55.0	2.021	1.595	28.6	19.5	51 E	10* 44*	3 27	18 8.22	-20 13.0	2.121	2.411	24.4	20.1	94 W	24*	84*
12 17	21 20.54	-32 12.2	2.046	1.593	28.0	19.5	49 E	11* 43*	4 6	18 13.50	-18 46.7	2.034	2.459	23.4	20.0	103 W	26*	83
12 22	21 36.18	-31 22.7	2.070	1.592	27.4	19.5	48 E	11* 41*	4 16	18 15.83	-17 14.6	1.951	2.506	21.8	19.9	112 W	28	81
12 27	21 51.72	-30 26.7	2.094	1.591	26.8	19.5	47 E	12* 40*	4 26	18 15.09	-15 38.1	1.876	2.553	19.6	19.8	122 W	29	80
1 1	22 7 15	-29 24.7	2.117	1.592	26.2	19.5	46 E	12* 38*	5 6	18 11.32	-13 59.0	1.815	2.599	16.8	19.7	132 W	31	78
1 6	22 22.42	-28 17.0	2.141	1.593	25.5	19.5	44 E	13* 37*	5 16	18 4 70	-12 20.1	1.770	2.645	13.5	19.5	142 W	33	76
1 11	22 37.52	-27 4 1	2.165	1.596	24.9	19.5	43 E	13* 36*	5 26	17 55.79	-10 45.3	1.748	2.690	9.9	19.4	153 W	34	75
1 16	22 52.42	-25 46.5	2.189	1.599	24.3	19.6	42 E	14* 34*	5 31	17 50.71	-10 0 7	1.747	2.712	8.2	19.3	158 W	35	74
1 21	23 7 11	-24 24.7	2.213	1.603	23.6	19.6	41 E	14* 33*	6 5	17 45.39	-9 18.9	1.752	2.734	6.7	19.3	162 W	36	73
12 27	15 42.82	-23 26.7	2.734	2.033	16.8	21.1	37 W	15* 28*	6 10	17 39.94	-8 40.2	1.765	2.755	5.7	19.3	164 W	36	73
1 6	16 6 86	-23 43.8	2.630	2.001	19.0	21.1	41 W	16* 33*	6 15	17 34.50	-8 5 2	1.784	2.777	5.5	19.3	165 W	37	72
1 16	16 31 26	-23 44.3	2.520	1.969	21.1	21.0	46 W	17* 38*	6 25	17 24.21	-7 7 5	1.844	2.819	7.2	19.5	160 E	38	71
1 26	16 55.87	-23 26.5	2.407	1.938	23.1	20.9	51 W	18* 43*	7 5	17 15.38	-6 27.2	1.931	2.861	10.0	19.8	151 E	39	70
2 5	17 20 55	-22 48.6	2.290	1.908	25.1	20.9	55 W	19* 48*	7 15	17 8 63	-6 3 7	2.041	2.902	12.8	20.0	141 E	39	70
2 15	17 45 14	-21 49.2	2.172	1.878	27.0	20.8	60 W	20* 52*	7 25	17 4 27	-5 55.1	2.171	2.942	15.0	20.3	131 E	39	70
2 25	18 9 46	-20 27.1	2.053	1.850	28.8	20.7	64 W	21* 57*	8 4	17 2 33	-5 58.4	2.318	2.981	16.8	20.5	122 E	39	70
3 7	18 33 34	-18 41.4	1.935	1.823	30.4	20.5	68 W	23* 61*	8 14	17 2 73	-6 10 7	2.476	3.019	18.0	20.7	113 E	39*	70
3 17	18 56 60	-16 31.5	1.819	1.797	31.9	20.4	73 W	25* 65*	8 24	17 5 24	-6 29 0	2.643	3.056	18.7	20.9	104 E	38*	70
3 27	19 19 07	-13 57.3	1.706	1.773	33.3	20.3	77 W	27* 68*	9 3	17 9 63	-6 50 6	2.815	3.093	18.9	21.1	96 E	37*	71
4 6	19 40 61	-10 59.0	1.598	1.750	34.4	20.2	81 W	30* 70*	9 13	17 15 65	-7 13 5	2.989	3.128	18.8	21.2	88 E	36*	70*
4 16	20 1 05	-7 37 4	1.494	1.730	35.3	20.0	85 W	33* 70*	9 23	17 23 08	-7 35 6	3.161	3.163	18.3	21.3	81 E	35*	66*
4 26	20 20 23	+3 54 1	1.397	1.712	36.0	19.9	89 W	36* 68*	10 3	17 31 71	-7 55 6	3.331	3.196	17.5	21.5	74 E	34*	60*
5 6	20 38 02	+0 8 5	1.307	1.696	36.4	19.7	93 W	41* 64	247740 2003 LY₃									
5 16	20 54 19	+4 27 2	1.225	1.683	36.6	19.6	97 W	46* 60	12 27	15 43 41	-28 17 6	2.857	2.144	15.7	20.8	36 W	10*	29*
5 21	21 1 60	+6 41 0	1.186	1.677	36.6	19.5	99 W	48* 57	1 6	16 7								

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°
247740 2003 LY₃										234341 2001 FZ₅₇									
<i>(continuation)</i>										<i>(continuation)</i>									
6 10	21 10.23	+ 4 55.9	0.978	1.687	32.9	18.5	116 W	50*	59	4 11	9 54.42	+33 2.9	0.749	1.495	36.9	20.6	116 E	78	31
6 15	21 13.30	+ 7 23.2	0.944	1.681	32.2	18.4	118 W	52*	57	4 16	9 50.98	+30 55.8	0.801	1.503	38.2	20.8	112 E	76	33
6 20	21 15.56	+ 9 51.5	0.912	1.675	31.5	18.3	121 W	55	54	4 21	9 49.39	+28 55.2	0.854	1.508	39.3	21.0	108 E	74	35
6 25	21 16.98	+12 19.0	0.884	1.670	30.7	18.2	123 W	57	52	4 26	9 49.31	+27 1.0	0.908	1.512	40.2	21.2	104 E	72	37
6 30	21 17.52	+14 44.1	0.859	1.666	29.9	18.1	125 W	60	49	5 1	9 50.43	+25 12.7	0.963	1.514	40.9	21.3	100 E	70*	39
7 5	21 17.15	+17 4.7	0.837	1.663	29.1	18.0	127 W	62	47	5 6	9 52.54	+23 29.4	1.017	1.514	41.4	21.5	97 E	67*	41
7 10	21 15.87	+19 18.5	0.819	1.660	28.3	17.9	129 W	64	45	188228 2002 TH₂₆₇									
7 15	21 13.72	+21 23.0	0.804	1.659	27.6	17.9	131 W	66	43	12 27	15 45.09	-20 53.8	2.776	2.073	16.5	21.2	37 W	17*	26*
7 20	21 10.79	+23 15.8	0.792	1.657	26.9	17.8	132 W	68	41	1 6	16 8.15	-21 44.3	2.668	2.038	18.6	21.1	41 W	18*	32*
7 25	21 7.19	+24 55.0	0.784	1.657	26.3	17.8	134 W	70	39	1 16	16 31.75	-22 22.4	2.555	2.003	20.7	21.1	46 W	18*	37*
7 30	21 3.06	+26 18.8	0.779	1.658	25.8	17.7	135 W	71	38	1 26	16 55.82	-22 46.4	2.437	1.967	22.8	21.0	51 W	18*	42*
8 4	20 58.59	+27 25.7	0.777	1.659	25.5	17.7	135 W	72	37	2 5	17 20.27	-22 55.2	2.316	1.932	24.8	20.9	55 W	19*	48*
8 9	20 54.02	+28 14.8	0.778	1.661	25.3	17.7	136 E	73	36	2 15	17 45.01	-22 47.6	2.193	1.897	26.7	20.8	60 W	19*	53*
8 14	20 49.59	+28 45.8	0.782	1.664	25.3	17.7	135 E	74	35	2 25	18 9.87	-22 22.6	2.070	1.863	28.5	20.7	64 W	19*	57*
8 19	20 45.55	+28 59.5	0.790	1.667	25.4	17.8	135 E	74	35	3 7	18 34.75	-21 39.7	1.947	1.829	30.3	20.6	68 W	20*	62*
8 24	20 42.12	+28 57.1	0.800	1.672	25.6	17.8	134 E	74	35	3 17	18 59.49	-20 38.4	1.825	1.796	31.9	20.4	72 W	20*	66*
8 29	20 39.46	+28 40.0	0.813	1.677	25.9	17.9	134 E	74	35	3 27	19 23.94	-19 18.8	1.706	1.764	33.4	20.3	76 W	21*	70*
9 3	20 37.71	+28 10.1	0.829	1.682	26.3	17.9	132 E	73	36	4 6	19 47.97	-17 41.3	1.590	1.733	34.7	20.1	80 W	23*	73*
9 8	20 36.97	+27 29.4	0.847	1.689	26.8	18.0	131 E	72	37	4 16	20 11.43	-15 46.4	1.478	1.703	35.9	20.0	84 W	24*	76*
9 13	20 37.31	+26 40.2	0.868	1.696	27.2	18.1	129 E	72	37	4 26	20 34.19	-13 35.6	1.370	1.675	36.9	19.8	88 W	26*	77*
9 18	20 38.72	+25 44.6	0.892	1.704	27.8	18.1	128 E	71	38	5 6	20 56.13	-11 10.2	1.268	1.649	37.7	19.6	92 W	28*	75
9 23	20 41.19	+24 44.7	0.918	1.712	28.3	18.2	126 E	70	39	5 16	21 17.09	- 8 32.5	1.172	1.626	38.2	19.4	96 W	31*	73
9 28	20 44.64	+23 42.4	0.946	1.721	28.8	18.3	124 E	69	40	5 26	21 36.90	- 5 45.1	1.081	1.605	38.4	19.2	100 W	35*	70
10 3	20 49.03	+22 39.0	0.977	1.731	29.3	18.4	122 E	68	41	6 5	21 55.40	- 2 51.1	0.997	1.586	38.3	19.0	104 W	39*	67
10 8	20 54.29	+21 36.0	1.011	1.741	29.8	18.5	120 E	67	42	6 15	22 12.30	+ 0 5.2	0.919	1.571	37.8	18.8	108 W	43*	64
10 13	21 0.34	+20 34.8	1.047	1.752	30.2	18.6	118 E	66	43	6 20	22 20.25	+ 1 32.8	0.883	1.564	37.4	18.7	111 W	45*	62
10 18	21 7.11	+19 36.3	1.086	1.764	30.6	18.7	116 E	65	44	6 25	22 27.09	+ 2 59.0	0.848	1.559	36.8	18.6	113 W	47*	61
10 23	21 14.50	+18 41.4	1.126	1.775	30.9	18.8	113 E	64	45	6 30	22 33.97	+ 4 23.2	0.814	1.554	36.1	18.5	116 W	49*	60
10 28	21 22.45	+17 50.6	1.170	1.788	31.2	18.9	111 E	63	46	7 5	22 40.02	+ 5 44.5	0.783	1.550	35.3	18.4	118 W	51*	58
11 2	21 30.87	+17 4.3	1.215	1.801	31.4	19.0	109 E	62	47	7 10	22 45.39	+ 7 1.9	0.753	1.547	34.2	18.3	121 W	52	57
11 7	21 39.72	+16 22.9	1.263	1.814	31.6	19.1	107 E	61	48*	7 15	22 50.01	+ 8 14.3	0.725	1.545	33.0	18.1	124 W	53	56
11 12	21 48.93	+15 46.7	1.313	1.827	31.7	19.2	104 E	61	48*	7 20	22 53.84	+ 9 20.7	0.700	1.543	31.6	18.0	127 W	54	55
11 22	22 8.19	+14 49.9	1.420	1.856	31.7	19.5	99 E	60	47*	7 25	22 56.83	+10 20.0	0.676	1.543	30.0	17.9	130 W	55	54
12 2	22 28.26	+14 13.2	1.534	1.885	31.4	19.6	94 E	59	45*	7 30	22 58.95	+11 11.0	0.654	1.543	28.3	17.8	134 W	56	53
12 12	22 48.88	+13 55.6	1.654	1.916	30.9	19.8	89 E	59	43*	8 4	23 0.17	+11 52.4	0.635	1.544	26.3	17.6	138 W	57	52
12 22	23 9.80	+13 54.9	1.781	1.948	30.2	20.0	84 E	59	39*	8 9	23 0.50	+12 23.0	0.618	1.547	24.1	17.5	142 W	57	52
1	23 30.87	+14 8.7	1.911	1.980	29.2	20.2	79 E	59*	35*	8 14	22 59.98	+12 41.7	0.605	1.550	21.7	17.4	146 W	58	51
1 11	23 51.99	+14 34.6	2.045	2.013	28.0	20.3	74 E	58*	32*	8 24	22 56.86	+12 41.4	0.587	1.559	16.8	17.2	154 W	58	51
1 21	0 13.07	+15 10.1	2.180	2.046	26.7	20.5	69 E	57*	28*	9 3	22 52.00	+11 51.6	0.583	1.571	12.4	17.1	160 W	57	52
234341 2001 FZ₅₇										9 13	22 47.08	+10 20.8	0.596	1.586	10.6	17.1	163 E	55	54
12 27	15 44.96	+16 13.5	0.497	0.812	94.4	20.3	55 W	49*	10*	9 18	22 45.17	+ 9 25.5	0.609	1.595	11.3	17.1	162 E	54	55
12 29	15 41.83	+17 20.4	0.498	0.836	91.4	20.2	58 W	52*	12*	9 23	22 43.86	+ 8 27.1	0.626	1.604	12.8	17.3	159 E	53	56
12 31	15 38.91	+18 23.7	0.500	0.859	88.6	20.2	61 W	54*	14*	9 28	22 42.27	+ 7 28.1	0.647	1.614	14.7	17.4	156 E	52	57
1	15 36.17	+19 24.2	0.501	0.882	86.0	20.1	63 W	56*	15*	10 3	22 43.48	+ 6 30.6	0.673	1.625	16.8	17.6	152 E	52	57
1 4	15 33.57	+20 22.4	0.501	0.905	83.5	20.1	66 W	59*	17*	10 8	22 44.55	+ 5 36.6	0.702	1.637	19.0	17.8	148 E	51	58
1 6	15 31.06	+21 19.1	0.501	0.927	81.2	20.1	69 W	61*	19*	10 13	22 46.48	+ 4 47.7	0.735	1.649	21.0	18.0	144 E	50	59
1 11	15 24.94	+23 37.8	0.499	0.980	75.7	20.0	75 W	65*	22*	10 18	22 49.25	+ 4 5.0	0.772	1.662	22.9	18.1	140 E	49	60
1 16	15 18.54	+25 57.2	0.494	1.030	70.7	19.9	81 W	70*	25*	10 23	22 52.80	+ 3 29.2	0.813	1.675	24.6	18.3	136 E	48	61
1 21	15 11.24	+28 22.2	0.486	1.077	65.9	19.8	87 W	73*	27*	11 2	23 2.02	+ 2 38.6	0.903	1.702	27.4	18.7	128 E	48	61
1 26	15 2.42	+30 55.5	0.477	1.121	61.2	19.7	94 W	76	29*	11 12	23 13.63	+ 2 15.8	1.005	1.732	29.5	19.0	120 E	47	62
1 31	14 51.39	+33 37.7	0.468	1.162	56.6	19.6	100 W	79	29*	11 22	23 27.13	+ 2 18.5	1.117	1.763	30.9	19.3	114 E	47	62
2 5	14 37.39	+36 27.2	0.459	1.201	51.8	19.5	107 W	81	27*	12 2	23 42.05	+ 2 42.7	1.236	1.795	31.7	19.6	107 E	48	61*
2 10	14 19.65	+39 18.6	0.451	1.237	47.0	19.4	113 W	84	25	12 12	23 58.07	+ 3 24.9	1.363	1.828	31.9	19.8	101 E	48	59*
2 15	13 57.49	+42 1.8	0.446	1.271	42.3	19.3	120 W	87	22	12 22	0 14.92	+ 4 21.3	1.496	1.862	31.7	20.1	95 E	49	56*
2 17	13 47.32	+43 1.6	0.445	1.284	40.4	19.3	123 W	88	21	1 1	0 32.37	+ 5 28.4	1.633	1.896	31.2	20.3	89 E	50	52*
2 19	13 36.42	+43 56.8	0.445	1.296	38.6	19.3	125 W	89	20	1 11	0 50.32	+ 6 43.4	1.772	1.931	30.4	20.5	84 E	52	47*
2 21	13 24.84	+44 46.3	0.446	1.308	36.9	19.2	127 W	90	19	1 21	1 8.64	+ 8 3.5	1.914	1.966	29.3	20.7	78 E	53*	43*
2 23	13 12.65	+45 29.1	0.448	1.320	35.3	19.2	130 W	90	19	219071 1997 US₉									
2 25	12 59.96	+46 4.3	0.450	1.332	33.8	19.2	132 W	89	18	12 27	15 45.98	-24 27.4	1.301	0.766	48.8	18.9	36 W	14*	27*
2 27	12 46.88	+46 31.2	0.454	1.342	32.5	19.2	133 W	88	17	1 1	16 14.38	-24 3.8	1.325	0.759	47.3	18.9	35 W	13*	26*
3 1	12 33.59	+46 49.3	0.458	1.353	31.3	19.2	135 W	88	17	1 6	16 42.45	-23 23.4	1.350	0.756	45.6	18.9	33 W	13*	25*
3 3	12 20.24	+46 58.2	0.464	1.363	30.3	19.2													

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°
219071 1997 US₉									3103 Eger								
<i>(continuation)</i>									<i>(continuation)</i>								
4 16	23 34.49	+ 8 40.6	1.881	1.130	26.4	19.9	30 W	14* 21*	8 19	5 13.72	-14 46.8	0.295	0.975	88.7	15.6	74 W	19* 68*
4 26	0 4.59	+11 19.7	1.903	1.171	26.7	20.0	32 W	15* 22*	8 24	5 45.01	-15 58.4	0.325	0.957	90.0	15.8	71 W	17* 65*
5 6	0 33.98	+13 43.7	1.916	1.208	27.3	20.1	33 W	15* 24*	8 29	6 11.89	-16 40.6	0.357	0.942	90.4	16.0	69 W	17* 63*
5 16	1 2.89	+15 51.9	1.919	1.241	28.1	20.2	35 W	16* 26*	9 3	6 35.29	-17 1.4	0.391	0.929	90.1	16.2	67 W	17* 61*
5 26	1 31.49	+17 43.5	1.911	1.270	29.2	20.3	38 W	17* 27*	9 8	6 56.01	-17 6.8	0.425	0.919	89.3	16.3	66 W	17* 60*
6 5	1 59.96	+19 18.0	1.893	1.294	30.3	20.4	40 W	19* 29*	9 13	7 14.70	-17 0.8	0.458	0.912	88.0	16.4	65 W	18* 59*
6 15	2 28.41	+20 34.3	1.865	1.315	31.6	20.4	43 W	21* 30*	9 18	7 31.88	-16 46.5	0.491	0.908	86.4	16.5	64 W	19* 58*
6 25	2 56.92	+21 31.2	1.827	1.330	33.0	20.4	46 W	24* 31*	9 23	7 47.95	-16 26.3	0.523	0.907	84.6	16.5	64 W	21* 57*
7 5	3 25.59	+22 7.7	1.780	1.341	34.5	20.4	48 W	27* 32*	9 28	8 3.19	-16 2.2	0.553	0.909	82.7	16.6	64 W	22* 57*
7 15	3 54.43	+22 22.0	1.725	1.348	36.1	20.4	51 W	31* 33*	10 3	8 17.79	-15 35.5	0.581	0.915	80.7	16.6	64 W	24* 57*
7 25	4 23.47	+22 12.7	1.662	1.350	37.6	20.4	54 W	35* 34*	10 8	8 31.85	-15 7.3	0.606	0.923	78.6	16.7	65 W	25* 56*
8 4	4 52.72	+21 37.9	1.593	1.347	39.3	20.3	57 W	38* 35*	10 13	8 45.45	-14 38.1	0.628	0.934	76.6	16.7	66 W	26* 56*
8 14	5 22.19	+20 35.7	1.518	1.340	40.9	20.2	60 W	42* 37*	10 23	9 11.47	-13 37.4	0.664	0.965	72.7	16.8	68 W	29* 57*
8 24	5 51.86	+19 3.9	1.440	1.328	42.6	20.2	63 W	44* 38*	11 2	9 35.99	-12 34.2	0.687	1.004	69.0	16.8	71 W	32* 58*
9 3	6 21.80	+17 0.5	1.359	1.312	44.3	20.1	65 W	46* 40*	11 12	9 58.84	-11 25.3	0.697	1.049	65.5	16.8	75 W	34* 59*
9 13	6 52.06	+14 23.2	1.277	1.291	46.1	19.9	68 W	48* 42*	11 17	10 9.55	-10 46.7	0.697	1.074	63.8	16.8	77 W	34 60*
9 23	7 22.78	+11 10.2	1.197	1.266	48.0	19.8	70 W	48* 44*	11 22	10 19.76	-10 4.4	0.694	1.099	62.1	16.8	80 W	35 61*
10 3	7 54.20	+7 20.1	1.119	1.236	50.0	19.7	71 W	47* 47*	11 27	10 29.40	-9 17.1	0.688	1.126	60.3	16.8	82 W	36 63*
10 13	8 26.63	+2 52.8	1.047	1.203	52.1	19.5	72 W	45* 50*	12 2	10 38.42	-8 23.7	0.680	1.152	58.5	16.8	85 W	37 64*
10 23	9 0.54	- 2 9.1	0.981	1.165	54.4	19.4	72 W	41* 52*	12 7	10 46.72	-7 22.8	0.669	1.180	56.6	16.7	89 W	38 65*
10 28	9 18.26	- 4 51.4	0.952	1.145	55.7	19.3	72 W	39* 54*	12 12	10 54.25	-6 12.5	0.656	1.207	54.6	16.7	93 W	39 66*
11 2	9 36.61	- 7 39.9	0.925	1.123	57.0	19.2	72 W	36* 55*	12 17	11 0.92	-4 51.4	0.642	1.234	52.4	16.6	97 W	40 67*
11 7	9 55.69	-10 32.9	0.901	1.102	58.3	19.2	71 W	34* 56*	12 22	11 6.64	-3 17.9	0.626	1.262	49.9	16.5	101 W	42 66*
11 12	10 15.62	-13 28.2	0.880	1.079	59.7	19.1	70 W	31* 57*	12 27	11 11.31	-1 30.1	0.610	1.289	47.3	16.5	106 W	43 65*
11 17	10 36.53	-16 23.6	0.862	1.056	61.1	19.1	69 W	28* 57*	1 1	11 14.78	+ 0 33.6	0.593	1.316	44.3	16.4	111 W	46 63
11 22	10 58.56	-19 16.1	0.848	1.032	62.5	19.0	68 W	26* 57*	1 6	11 16.93	+ 2 54.6	0.577	1.343	41.0	16.3	116 W	48 61
11 27	11 21.82	-22 2.4	0.837	1.008	63.9	19.0	66 W	23* 57*	1 11	11 17.65	+ 5 33.6	0.563	1.370	37.4	16.1	122 W	51 58
12 2	11 46.43	-24 39.1	0.829	0.983	65.3	19.0	65 W	20* 56*	1 16	11 16.83	+ 8 29.8	0.551	1.396	33.4	16.0	129 W	53 56
12 7	12 12.42	-27 2.2	0.824	0.958	66.6	18.9	63 W	18* 55*	1 21	11 14.42	+11 41.1	0.542	1.421	29.1	15.9	135 W	57 52
12 12	12 39.82	-29 7.7	0.824	0.934	67.8	18.9	61 W	16* 54*	29407 1996 U/W								
12 17	13 8.55	-30 52.0	0.826	0.910	68.9	18.9	60 W	14* 53*	12 27	15 46.42	-20 12.1	2.939	2.227	15.2	20.1	37 W	17* 26*
12 22	13 38.45	-32 11.8	0.833	0.886	69.8	18.9	58 W	12* 51*	1 6	16 7.43	-21 26.0	2.827	2.192	17.3	20.1	42 W	18* 32*
12 27	14 9.29	-33 4.7	0.842	0.863	70.4	18.9	56 W	11* 49*	1 16	16 28.94	-22 31.7	2.708	2.156	19.4	20.0	47 W	18* 38*
1 1	14 40.71	-33 29.2	0.855	0.842	70.8	18.9	54 W	11* 48*	1 26	16 50.89	-23 28.3	2.584	2.121	21.4	19.9	52 W	18* 44*
1 6	15 12.33	-33 24.9	0.872	0.822	70.9	18.9	52 W	10* 46*	2 5	17 13.22	-24 15.3	2.456	2.085	23.3	19.8	57 W	18* 50*
1 11	15 43.76	-32 52.5	0.892	0.804	70.7	18.9	50 W	10* 44*	2 15	17 35.86	-24 52.2	2.324	2.050	25.1	19.7	62 W	18* 55*
1 16	16 14.65	-31 54.1	0.915	0.788	70.1	18.8	49 W	10* 43*	2 25	17 58.69	-25 18.8	2.191	2.015	26.8	19.6	67 W	17* 60*
1 21	16 44.75	-30 32.5	0.941	0.775	69.2	18.8	47 W	11* 41*	3 7	18 21.63	-25 35.3	2.058	1.981	28.4	19.5	71 W	17* 65*
12 27	15 46.29	- 3 50.9	2.485	1.884	20.7	19.6	43 W	32* 19*	3 17	18 44.54	-25 41.9	1.925	1.947	29.8	19.4	76 W	17* 70*
1 6	16 7.64	- 4 26.6	2.398	1.872	22.6	19.5	47 W	34* 25*	3 27	19 7.27	-25 39.5	1.794	1.914	31.0	19.2	81 W	17* 75*
1 16	16 29.01	- 4 49.8	2.302	1.858	24.5	19.5	52 W	35* 31*	4 6	19 29.70	-25 29.1	1.666	1.882	32.0	19.0	86 W	17* 80*
1 26	16 50.36	- 5 0.1	2.200	1.840	26.3	19.4	56 W	36* 37*	4 16	19 51.65	-25 12.1	1.541	1.851	32.8	18.9	91 W	17* 85*
2 5	17 11.65	- 4 57.0	2.092	1.820	28.1	19.3	60 W	36* 43*	4 26	20 12.94	-24 50.4	1.421	1.821	33.4	18.7	96 W	17* 89*
2 15	17 32.82	- 4 40.5	1.978	1.797	29.8	19.2	65 W	37* 48*	5 6	20 33.37	-24 26.2	1.306	1.793	33.6	18.4	101 W	18* 88
2 25	17 53.83	- 4 10.8	1.861	1.771	31.5	19.1	69 W	38* 53*	5 16	20 52.68	-24 2.4	1.196	1.767	33.4	18.2	106 W	18* 88
3 7	18 14.64	- 3 28.1	1.740	1.742	33.1	19.0	74 W	39* 57*	5 26	21 10.56	-23 42.0	1.094	1.743	32.7	18.0	112 W	19* 88
3 17	18 35.23	- 2 33.2	1.617	1.710	34.7	18.8	78 W	39* 60*	6 5	21 26.69	-23 28.1	0.999	1.721	31.6	17.7	117 W	20* 87
3 27	18 55.57	- 1 27.1	1.493	1.675	36.1	18.7	82 W	41* 62*	6 15	21 40.58	-23 24.2	0.913	1.701	29.8	17.4	124 W	21* 87
4 6	19 15.73	- 0 10.9	1.369	1.638	37.6	18.5	86 W	42* 63*	6 25	21 51.74	-23 32.9	0.836	1.684	27.3	17.2	131 W	21* 88
4 16	19 35.75	+ 1 13.7	1.245	1.597	38.9	18.2	90 W	43* 63*	7 5	21 59.64	-23 55.6	0.769	1.670	24.0	16.9	138 W	21 88
4 26	19 55.75	+ 2 44.5	1.122	1.554	40.2	18.0	94 W	45* 61	7 15	22 3.76	-24 31.3	0.715	1.659	19.9	16.6	146 W	20 89
5 6	20 15.97	+ 4 18.9	1.001	1.509	41.5	17.7	97 W	46* 60	7 20	22 4.33	-24 52.4	0.693	1.655	17.6	16.4	150 W	20 89
5 16	20 36.73	+ 5 53.4	0.882	1.461	42.8	17.4	101 W	48* 58	7 25	22 3.93	-25 14.3	0.674	1.651	15.2	16.3	155 W	20 89
5 21	20 47.48	+ 6 39.2	0.824	1.436	43.5	17.2	102 W	49* 57	7 30	22 2.62	-25 35.8	0.660	1.648	12.8	16.1	159 W	19 90
5 26	20 58.60	+ 7 23.1	0.768	1.411	44.2	17.1	104 W	50* 57	8 4	22 0.49	-25 55.4	0.649	1.646	10.5	16.0	163 W	19 90
5 31	21 10.23	+ 8 4.1	0.712	1.385	44.9	16.9	105 W	51* 56	8 9	21 57.70	-26 11.4	0.643	1.645	8.7	15.9	166 W	19 90
6 5	21 22.52	+ 8 41.4	0.657	1.359	45.6	16.7	107 W	52* 55	8 14	21 54.48	-26 22.4	0.642	1.645	7.9	15.9	167 W	19 90
6 10	21 35.68	+ 9 13.3	0.603	1.332	46.5	16.5	108 W	53* 55	8 19	21 51.08	-26 26.9	0.644	1.645	8.3	15.9	166 E	19 90
6 15	21 49.97	+ 9 38.0	0.551	1.305	47.3	16.3	109 W	53* 54	8 24	21 47.76	-26 24.2	0.651	1.647	9.9	16.0	164 E	19 90
6 20	22 5.75	+ 9 53.1	0.501	1.278	48.3	16.0	110 W	54* 54	8 29	21 44.74	-26 13.8	0.663	1.649	12.0	16.1	160 E	19 90
6 25	22 23.51	+ 9 55.6	0.453	1.250	49.5	15.8	111 W	54* 54	9 3	21 42.25	-25 55.8	0.678	1.652	14.4	16.3	156 E	19 90
6 30	22 43.85	+ 9 41.3	0.407	1.223	50.9	15.6	111 W	54* 54	9 8	21 40.46	-25 30.5	0.698	1.655	16.8	16.4	152 E	19 90
7 5	23 7.49	+ 9 4.7	0.364	1.195	52.7	15.3	111 W	55* 55	9 13	21 39.51	-24 58.2	0.722	1.660	19.1	16.6	147 E	20 89
7 10	23 35.30	+ 7 58.3	0.325	1.168	55												

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°
29407 1996 UW (continuation)										316855 2000 JK₇₂ (continuation)									
1 11	0 13.16	+0 45.3	1.998	1.951	28.8	19.4	73 E	46*	45*	5 26	18 9.24	-35 46.8	1.091	2.033	14.3	17.8	150 W	9	80
1 21	0 31.65	+3 6.6	2.133	1.984	27.3	19.6	68 E	47*	40*	5 31	18 4.95	-37 40.1	1.046	2.009	12.6	17.7	154 W	7	78
310434 2000 AP₁₄₆																			
12 27	15 46.47	-34 33.1	2.175	1.494	22.7	18.8	36 W	4*	30*	6 5	17 59.36	-39 37.0	1.008	1.985	11.2	17.5	158 W	5	76
1 1	16 5.38	-35 2.8	2.156	1.489	23.3	18.8	37 W	4*	31*	6 10	17 52.49	-41 35.2	0.976	1.960	10.4	17.4	160 W	3	74
1 6	16 24.39	-35 22.6	2.138	1.486	23.8	18.8	38 W	4*	32*	6 15	17 44.43	-43 31.5	0.951	1.936	10.5	17.3	160 W	1	72
1 11	16 43.39	-35 32.3	2.121	1.485	24.4	18.8	39 W	4*	33*	6 20	17 35.36	-45 23.0	0.933	1.912	11.6	17.3	158 E	—	71
1 16	17 2.30	-35 31.8	2.104	1.485	25.0	18.8	40 W	4*	34*	6 25	17 25.54	-47 6.9	0.921	1.889	13.5	17.3	154 E	—	69
1 21	17 20.99	-35 21.3	2.088	1.486	25.5	18.8	41 W	4*	35*	6 30	17 15.33	-48 40.8	0.914	1.865	15.8	17.3	150 E	—	67
1 26	17 39.37	-35 1.0	2.072	1.488	26.1	18.8	42 W	4*	36*	7 5	17 5.15	-50 3.3	0.914	1.842	18.4	17.4	145 E	—	66
1 31	17 57.38	-34 31.3	2.057	1.492	26.6	18.8	43 W	4*	37*	7 10	16 55.47	-51 13.8	0.918	1.820	21.0	17.4	140 E	—	65
2 5	18 14.92	-33 52.6	2.041	1.497	27.2	18.8	44 W	4*	38*	7 15	16 46.76	-52 12.9	0.927	1.797	23.5	17.5	135 E	—	64
2 15	18 48.40	-32 11.1	2.010	1.512	28.3	18.9	47 W	5*	40*	7 20	16 39.39	-53 1.9	0.939	1.775	25.8	17.6	130 E	—	63
2 25	19 19.45	-30 1.4	1.977	1.532	29.4	18.9	49 W	6*	43*	7 25	16 33.67	-53 42.4	0.954	1.754	28.0	17.7	126 E	—	62
3 7	19 47.94	-27 29.1	1.942	1.556	30.5	18.9	53 W	8*	47*	7 30	16 29.78	-54 16.2	0.972	1.733	30.0	17.7	121 E	—	62
3 17	20 13.86	-24 39.0	1.904	1.585	31.5	18.9	56 W	10*	50*	8 4	16 27.85	-54 44.9	0.991	1.712	31.8	17.8	117 E	—	61
3 27	20 37.24	-21 35.7	1.863	1.617	32.4	19.0	60 W	12*	54*	8 9	16 27.93	-55 9.8	1.012	1.693	33.4	17.9	113 E	—	61
4 6	20 58.19	-18 22.8	1.818	1.653	33.1	19.0	64 W	15*	58*	8 14	16 30.05	-55 31.9	1.033	1.674	34.7	17.9	110 E	—	60
4 16	21 16.76	-15 3.3	1.769	1.692	33.6	19.0	69 W	18*	63*	8 19	16 34.17	-55 51.9	1.055	1.655	35.9	18.0	106 E	—	60
4 26	21 32.98	-11 39.9	1.717	1.733	33.9	19.0	74 W	21*	66*	8 24	16 40.22	-56 10.0	1.076	1.638	36.9	18.0	103 E	—	60
5 6	21 46.85	-8 14.5	1.661	1.777	33.9	19.0	79 W	26*	69*	8 29	16 48.14	-56 26.0	1.098	1.621	37.8	18.1	100 E	—	60
5 16	21 58.27	-4 49.0	1.604	1.822	33.6	18.9	85 W	30*	68*	9 3	16 57.87	-56 39.4	1.119	1.605	38.5	18.1	98 E	—	59*
5 26	22 7.08	-1 25.3	1.545	1.869	32.8	18.9	91 W	36*	65	9 8	17 9.33	-56 49.5	1.140	1.590	39.1	18.1	95 E	—	59*
6 5	22 13.09	+1 54.4	1.488	1.916	31.6	18.8	98 W	41*	62	9 13	17 22.44	-56 55.5	1.160	1.576	39.6	18.2	93 E	—	59*
6 15	22 16.02	+5 7.1	1.432	1.965	29.9	18.7	105 W	47*	59	9 18	17 37.08	-56 56.3	1.179	1.563	40.0	18.2	91 E	—	59*
6 25	22 15.61	+8 8.4	1.383	2.014	27.6	18.7	113 W	53*	56	9 23	17 53.09	-56 50.7	1.198	1.551	40.3	18.2	89 E	—	59*
6 30	22 14.11	+9 33.2	1.361	2.038	26.3	18.6	117 W	55*	54	9 28	18 10.32	-56 37.5	1.216	1.540	40.5	18.3	87 E	—	59*
7 5	22 11.74	+10 53.0	1.341	2.063	24.9	18.6	121 W	56	53	10 3	18 28.56	-56 15.3	1.234	1.531	40.7	18.3	86 E	—	59*
7 10	22 8.50	+12 6.7	1.325	2.088	23.3	18.5	126 W	57	52	10 8	18 47.62	-55 43.2	1.251	1.523	40.8	18.3	84 E	—	59*
7 15	22 4.44	+13 13.3	1.312	2.113	21.7	18.5	130 W	58	51	10 13	19 7.25	-55 0.2	1.269	1.516	40.8	18.3	83 E	—	60*
7 20	21 59.64	+14 11.8	1.303	2.137	20.0	18.4	134 W	59	50	10 18	19 27.20	-54 5.7	1.286	1.510	40.8	18.3	82 E	—	60*
7 25	21 54.19	+15 1.4	1.299	2.162	18.4	18.4	138 W	60	49	10 23	19 47.21	-52 59.2	1.303	1.505	40.7	18.4	81 E	—	61*
7 30	21 48.24	+15 41.4	1.299	2.187	16.8	18.4	141 W	61	48	11 2	20 26.62	-50 10.1	1.340	1.501	40.4	18.4	79 E	—	63*
8 4	21 41.93	+16 11.2	1.304	2.211	15.4	18.3	145 W	61	48	11 7	20 45.70	-48 28.2	1.360	1.500	40.2	18.4	78 E	—	64*
8 9	21 35.45	+16 30.6	1.315	2.236	14.2	18.3	147 W	62	47	11 12	21 4.21	-46 35.6	1.381	1.502	39.9	18.5	77 E	—	65*
8 14	21 28.98	+16 39.8	1.332	2.260	13.4	18.4	149 E	62	47	11 17	21 22.08	-44 33.3	1.404	1.504	39.6	18.5	76 E	—	66*
8 19	21 22.72	+16 39.4	1.354	2.285	13.0	18.4	150 E	62	47	11 22	21 39.26	-42 22.4	1.428	1.508	39.2	18.5	75 E	3	67*
8 24	21 16.85	+16 30.4	1.382	2.309	13.0	18.5	149 E	62	47	11 27	21 55.76	-40 4.1	1.454	1.513	38.8	18.6	74 E	5	67*
8 29	21 11.49	+16 13.9	1.415	2.333	13.3	18.6	148 E	61	48	12 2	22 11.58	-37 39.5	1.482	1.519	38.3	18.6	73 E	7	67*
9 3	21 6.78	+15 51.2	1.454	2.357	14.0	18.7	146 E	61	48	12 7	22 26.78	-35 9.9	1.512	1.527	37.8	18.6	72 E	10	66*
9 8	21 2.79	+15 23.7	1.498	2.381	14.8	18.8	143 E	60	49	12 12	22 41.39	-32 36.6	1.545	1.536	37.3	18.7	71 E	12	65*
9 13	20 59.59	+14 52.7	1.548	2.405	15.7	18.9	140 E	60	49	12 17	22 55.44	-30 0.8	1.580	1.546	36.7	18.7	70 E	15	63*
9 18	20 57.20	+14 19.7	1.602	2.428	16.7	19.0	136 E	59	50	12 22	23 8.98	-27 23.7	1.617	1.558	36.0	18.8	69 E	18	61*
9 23	20 55.62	+13 45.8	1.660	2.451	17.6	19.2	132 E	59	50	12 27	23 22.07	-24 46.2	1.657	1.570	35.4	18.8	67 E	20	59*
9 28	20 54.82	+13 12.0	1.722	2.475	18.4	19.3	129 E	58	51	1 1	23 34.76	-22 9.2	1.699	1.584	34.6	18.9	66 E	23*	56*
10 3	20 54.78	+12 39.1	1.788	2.498	19.2	19.4	125 E	58	51	1 6	23 47.09	-19 33.6	1.744	1.598	33.9	18.9	65 E	25*	54*
10 13	20 56.82	+11 38.7	1.929	2.543	20.5	19.7	117 E	57	52	1 11	23 59.11	-17 0.1	1.791	1.614	33.1	19.0	64 E	28*	51*
10 23	21 1.34	+10 48.6	2.081	2.588	21.3	19.9	109 E	56	53	1 16	0 10.84	-14 29.3	1.840	1.630	32.2	19.0	62 E	30*	48*
11 2	21 7.93	+10 11.0	2.239	2.632	21.6	20.1	102 E	55	54*	1 21	0 22.33	-12 1.8	1.891	1.647	31.3	19.1	61 E	31*	46*
11 12	21 16.25	+9 46.7	2.403	2.675	21.6	20.3	95 E	55	52*	337066 1998 BM₁₀									
11 22	21 25.95	+9 35.9	2.569	2.717	21.3	20.5	88 E	55	48*	12 27	15 47.37	-1 49.1	2.216	1.648	24.2	20.0	43 W	34*	18*
12 2	21 36.75	+9 32.1	2.735	2.758	20.7	20.6	81 E	55	42*	1 6	16 13.47	-2 40.2	2.194	1.679	25.2	20.1	47 W	35*	23*
12 12	21 48.44	+9 52.7	2.899	2.798	19.8	20.7	74 E	54*	36*	1 16	16 38.52	-3 16.8	2.170	1.713	26.1	20.1	50 W	35*	28*
12 22	22 0.79	+10 18.8	3.059	2.838	18.7	20.9	68 E	53*	30*	1 26	17 2.36	-3 39.2	2.141	1.748	27.0	20.2	54 W	36*	34*
1 1	22 13.66	+10 55.3	3.214	2.876	17.5	20.9	61 E	51*	23*	2 5	17 24.85	-3 48.4	2.108	1.786	27.8	20.2	58 W	36*	39*
1 11	22 26.93	+11 41.4	3.361	2.913	16.1	21.0	55 E	47*	17*	2 15	17 45.85	-3 45.8	2.070	1.825	28.5	20.2	62 W	37*	45*
1 21	22 40.47	+12 35.8	3.499	2.950	14.6	21.1	49 E	43*	12*	2 25	18 5.22	-3 33.0	2.025	1.866	29.1	20.3	67 W	37*	50*
12 27	15 46.91	-11 26.5	3.428	2.736	13.1	20.9	39 W	25*	22*	3 7	18 22.81	-3 12.2	1.974	1.908	29.6	20.3	72 W	38*	55*
1 6	16 1.56	-12 40.9	3.294	2.694	15.0	20.9	45 W	27*	30*	3 17	18 38.46	-2 45.6	1.917	1.950	29.8	20.3	77 W	39*	60*
1 16	16 16.20	-13 51.3	3.148	2.650	16.9	20.8	52 W	27*	38*	3 27	18 51.98	-2 16.0	1.854	1.993	29.8	20.2	83 W	40*	63*
1 26	16 30.74	-14 58.3	2.993	2.607	18.7	20.7	58 W	28*	46*	4 6	19 3.19	-1 46.1	1.787	2.037	29.4	20.2	89 W	41*	65*
2 5	16 45.08	-16 2.5	2.829	2.562	20.3	20.6	64 W	27*	53*	4 16	19 11.83	-1 19.4	1.716	2.080	28.7	20.1	96 W	42*	65
2 15	16 59.11	-17 5.0	2.659	2.516															

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°
337066 1998 BM₁₀										5604 1992 FE									
<i>(continuation)</i>										<i>(continuation)</i>									
9 3	18 11.22	-18 10.2	2.100	2.651	20.6	20.8	112 E	27	82	1 31	17 41.73	-26 43.7	1.748	1.265	33.6	20.3	45 W	12*	39*
9 13	18 16.12	-19 25.3	2.264	2.686	21.3	21.1	104 E	26	83	2 5	17 59.32	-26 48.0	1.709	1.252	34.7	20.3	46 W	12*	40*
9 23	18 23.11	-20 28.9	2.434	2.720	21.5	21.3	96 E	24*	84*	2 10	18 17.31	-26 44.4	1.669	1.237	36.0	20.2	47 W	12*	41*
10 3	18 31.86	-21 21.5	2.606	2.754	21.3	21.4	88 E	23*	80*	2 15	18 35.70	-26 32.1	1.629	1.220	37.2	20.2	48 W	11*	42*
65808 1996 LO₁										5604 1992 FE									
12 27	15 47.89	-27 22.8	2.950	2.221	14.8	20.4	35 W	11*	28*	2 20	18 54.52	-26 10.5	1.588	1.202	38.5	20.1	49 W	11*	43*
1 6	16 10.33	-27 49.8	2.839	2.183	16.9	20.4	40 W	12*	33*	2 25	19 13.75	-25 39.1	1.547	1.182	39.8	20.1	50 W	11*	44*
1 16	16 33.11	-28 3.5	2.720	2.144	19.0	20.3	45 W	13*	38*	3 2	19 33.43	-24 56.9	1.507	1.160	41.1	20.0	50 W	10*	44*
1 26	16 56.13	-28 2.6	2.594	2.106	21.1	20.2	50 W	13*	44*	3 7	19 53.56	-24 3.3	1.467	1.136	42.5	20.0	51 W	10*	45*
2 5	17 19.26	-27 45.3	2.463	2.067	23.1	20.1	55 W	14*	49*	3 12	20 14.15	-22 57.4	1.429	1.111	43.9	19.9	51 W	10*	45*
2 15	17 42.37	-27 10.4	2.328	2.028	25.0	20.0	60 W	15*	54*	3 17	20 35.19	-21 38.6	1.391	1.083	45.3	19.8	51 W	10*	45*
2 25	18 5.29	-26 16.5	2.191	1.989	26.8	19.9	65 W	16*	59*	3 22	20 56.69	-20 6.1	1.356	1.054	46.8	19.7	50 W	10*	44*
3 7	18 27.86	-25 2.3	2.052	1.951	28.6	19.8	70 W	17*	64*	3 27	21 18.67	-18 19.4	1.324	1.023	48.2	19.7	50 W	9*	44*
3 17	18 49.93	-23 26.5	1.914	1.913	30.1	19.6	75 W	18*	69*	4 6	22 4.08	-14 2.2	1.269	0.956	51.1	19.5	48 W	9*	42*
3 27	19 11.30	-21 27.9	1.777	1.876	31.5	19.5	80 W	20*	73*	4 16	22 51.56	-8 47.9	1.232	0.883	53.6	19.3	45 W	9*	39*
4 6	19 31.84	-19 5.4	1.644	1.840	32.8	19.3	84 W	23*	77*	4 26	23 41.32	-2 45.6	1.218	0.805	55.2	19.2	41 W	9*	35*
4 16	19 51.37	-16 17.6	1.514	1.805	33.8	19.1	89 W	25*	79*	5 1	0 7.19	+0 28.1	1.221	0.766	55.4	19.1	39 W	8*	32*
4 26	20 9.70	-13 3.6	1.391	1.771	34.5	18.9	94 W	29*	77	5 6	0 33.83	+3 46.0	1.230	0.726	55.0	19.0	36 W	8*	30*
5 6	20 26.69	-9 22.3	1.274	1.739	35.0	18.7	99 W	33*	73	5 11	1 1.31	+7 4.3	1.248	0.688	54.0	18.8	33 W	8*	27*
5 16	20 42.10	-5 13.3	1.166	1.709	35.2	18.4	103 W	37*	69	5 16	1 29.76	+10 18.7	1.272	0.651	52.0	18.7	31 W	7*	24*
5 26	20 55.68	-0 37.6	1.068	1.681	35.0	18.2	108 W	43*	65	5 21	1 59.26	+13 24.4	1.303	0.618	49.1	18.6	27 W	7*	20*
6 5	21 7.17	+4 22.4	0.981	1.656	34.6	18.0	112 W	49*	60	5 26	2 29.88	+16 16.6	1.339	0.590	45.1	18.4	24 W	6*	17*
6 10	21 12.02	+6 59.9	0.942	1.644	34.3	17.9	114 W	52*	57	5 31	3 1.63	+18 50.3	1.380	0.569	40.2	18.3	21 W	5*	14*
6 15	21 16.20	+9 41.1	0.905	1.633	33.9	17.8	116 W	55*	54	6 5	3 34.39	+21 0.8	1.423	0.555	34.4	18.1	18 W	4*	10*
6 20	21 19.67	+12 24.6	0.873	1.623	33.5	17.7	118 W	57*	52	6 10	4 7.89	+22 44.0	1.468	0.552	28.1	18.0	15 W	3*	7*
6 25	21 22.40	+15 8.8	0.843	1.613	33.0	17.6	120 W	60	49	6 15	4 41.68	+23 57.1	1.512	0.558	21.9	17.9	12 W	2*	4*
6 30	21 24.34	+17 52.0	0.816	1.605	32.6	17.5	122 W	63	46	6 20	5 15.25	+24 39.1	1.555	0.573	15.9	17.8	9 W	—	1*
7 5	21 25.44	+20 32.0	0.793	1.597	32.1	17.4	123 W	66	43	6 25	5 48.07	+24 51.2	1.596	0.596	10.7	17.8	6 W	—	—
7 10	21 25.68	+23 6.3	0.773	1.590	31.7	17.3	125 W	68	41	6 30	6 19.71	+24 36.1	1.636	0.626	6.3	17.7	4 W	—	—
7 15	21 25.06	+25 32.4	0.755	1.584	31.2	17.2	126 W	71	38	7 5	6 49.89	+23 57.4	1.675	0.660	2.8	17.7	2 W	—	—
7 20	21 23.62	+27 47.7	0.741	1.579	30.9	17.2	127 W	73	36	7 10	7 18.43	+22 59.2	1.713	0.697	1.2	17.8	1 E	—	—
7 25	21 21.42	+29 50.0	0.730	1.574	30.5	17.1	128 W	75	34	7 15	7 45.28	+21 45.4	1.751	0.735	2.7	18.0	2 E	—	—
7 30	21 18.57	+31 37.0	0.721	1.571	30.2	17.1	129 W	77	32	7 20	8 10.49	+20 19.8	1.788	0.775	4.1	18.3	3 E	—	—
8 4	21 15.19	+33 6.8	0.715	1.569	30.0	17.1	129 W	78	31	7 25	8 34.15	+18 45.2	1.824	0.815	5.2	18.5	4 E	—	—
8 9	21 11.50	+34 17.9	0.712	1.568	29.8	17.0	130 E	79	30	7 30	8 56.38	+17 4.3	1.861	0.854	5.9	18.7	5 E	—	—
8 14	21 7.72	+35 9.4	0.711	1.567	29.7	17.0	130 E	80	29	8 4	9 17.34	+15 19.0	1.896	0.892	6.2	18.8	5 E	—	—
8 19	21 4.12	+35 41.2	0.712	1.568	29.6	17.0	130 E	81	28	8 9	9 37.14	+13 31.0	1.932	0.929	6.4	19.0	6 E	—	—
8 24	21 0.95	+35 53.8	0.715	1.570	29.5	17.0	130 E	81	28	8 14	9 55.94	+11 41.6	1.966	0.964	6.3	19.1	6 E	—	—
8 29	20 58.43	+35 48.4	0.720	1.572	29.5	17.1	130 E	81	28	8 19	10 13.85	+9 51.6	1.999	0.998	6.1	19.2	6 E	—	—
9 3	20 56.73	+35 26.1	0.728	1.576	29.6	17.1	130 E	80	29	8 24	10 30.98	+8 1.9	2.031	1.030	5.7	19.3	6 E	—	—
9 8	20 56.03	+34 48.7	0.738	1.580	29.6	17.1	129 E	80	29	9 3	11 3.34	+4 25.3	2.091	1.090	4.7	19.4	5 E	—	—
9 13	20 56.43	+33 58.4	0.749	1.586	29.7	17.2	129 E	79	30	9 13	11 33.75	+0 54.6	2.144	1.142	3.4	19.5	4 E	—	—
9 18	20 57.98	+32 57.5	0.763	1.592	29.8	17.2	128 E	78	31	9 23	12 2.77	+2 28.4	2.188	1.187	2.2	19.5	3 E	—	—
9 23	21 0.68	+31 48.3	0.780	1.600	30.0	17.3	127 E	77	32	10 3	12 30.90	-5 42.5	2.224	1.225	1.8	19.6	2 W	—	—
9 28	21 4.48	+30 33.0	0.798	1.608	30.2	17.3	126 E	76	33	10 13	12 58.55	-8 47.2	2.249	1.255	2.8	19.7	4 W	—	—
10 3	21 9.33	+29 13.4	0.819	1.617	30.5	17.4	125 E	74	35	10 23	13 26.05	-11 41.6	2.264	1.278	4.5	19.9	6 W	—	—
10 8	21 15.16	+27 51.6	0.843	1.626	30.7	17.5	124 E	73	36	11 2	13 53.71	-14 24.8	2.268	1.294	6.4	20.0	8 W	—	1*
10 13	21 21.88	+26 29.4	0.870	1.637	31.0	17.6	122 E	71	38	11 12	14 21.82	-16 55.9	2.261	1.303	8.4	20.1	11 W	2*	3*
10 18	21 29.40	+25 8.5	0.899	1.648	31.3	17.7	121 E	70	39	11 22	14 50.63	-19 13.3	2.242	1.305	10.5	20.2	14 W	4*	6*
10 23	21 37.61	+23 50.3	0.931	1.660	31.6	17.8	119 E	69	40	12 2	15 20.38	-21 15.4	2.214	1.300	12.6	20.2	17 W	5*	8*
10 28	21 46.41	+22 35.7	0.966	1.673	31.9	17.9	117 E	68	41	12 12	15 51.31	-23 0.0	2.174	1.288	14.7	20.3	19 W	6*	11*
11 2	21 55.72	+21 25.7	1.004	1.686	32.1	18.0	115 E	66	43	12 22	16 23.60	-24 24.2	2.126	1.269	16.9	20.3	22 W	7*	14*
11 7	22 5.45	+20 21.1	1.044	1.700	32.4	18.1	113 E	65	44	1 1	16 57.46	-25 24.7	2.069	1.243	19.1	20.2	24 W	7*	17*
11 12	22 15.54	+19 22.3	1.088	1.715	32.6	18.2	111 E	64	45	1 6	17 15.01	-25 44.8	2.038	1.227	20.3	20.2	26 W	7*	18*
11 17	22 25.91	+18 29.9	1.134	1.730	32.7	18.3	109 E	63	45*	1 11	17 33.01	-25 57.3	2.005	1.209	21.4	20.2	27 W	7*	19*
11 22	22 36.50	+17 43.7	1.183	1.745	32.8	18.5	107 E	63	46*	1 16	17 51.44	-26 1.7	1.971	1.190	22.5	20.1	28 W	7*	21*
12 2	22 58.10	+16 30.2	1.290	1.778	32.9	18.7	102 E	62	46*	1 21	18 10.33	-25 57.3	1.936	1.168	23.6	20.1	28 W	7*	22*
12 12	23 20.06	+15 40.7	1.405	1.811	32.6	18.9	97 E	61	45*	434326 2004 JG₆									
12 22	23 42.10	+15 12.8	1.529	1.847	32.2	19.1	92 E	60	42*	12 27	15 48.81	-16 26.6	1.536	0.954	38.2	20.8	37 W	21*	24*
1 1	0 4.09	+15 3.3	1.660	1.883	31.4	19.3	87 E	60	40*	1 6	16 21.02	-19 18.0	1.514	0.971	39.5	20.8	39 W	19*	28*
1 11	0 25.95	+15 9.0	1.797	1.920	30.5	19.5	82 E	60*	37*	1 16	16 55.86	-21 53.6	1.475	0.970	41.3	20.8	41 W	17*	32*
1 21	0 47.62	+15 26.6	1.937	1.958	29.3	19.7	77 E	59*	34*	1 26	17 34.30	-24 7.9	1.425	0.953	43.5	20.7	42 W	14*	34*
304330 2006 SX₂₁₇										2 5	18 17.50	-25 50.6	1.368	0.920	46.				

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°
434326 2004 JG₆										155334 2006 DZ₁₆₉									
<i>(continuation)</i>										<i>(continuation)</i>									
4 18	2 11.53	+15 26.7	1.275	0.316	27.2	17.6	8 E	2*	—	7 15	2 50.59	+15 31.0	1.617	1.548	37.4	20.6	68 W	37*	46*
4 20	2 27.93	+17 54.9	1.259	0.334	35.2	18.0	11 E	5*	—	7 25	3 9.65	+17 26.0	1.586	1.601	37.2	20.6	72 W	44*	45*
4 22	2 44.29	+20 12.7	1.241	0.355	41.9	18.3	14 E	7*	—	8 4	3 26.91	+19 7.7	1.547	1.655	36.8	20.6	77 W	51*	44*
4 24	3 0.63	+22 19.4	1.222	0.379	47.5	18.5	16 E	10*	1*	8 14	3 42.08	+20 37.6	1.502	1.709	36.1	20.6	83 W	57*	43*
4 26	3 16.98	+24 14.7	1.204	0.405	52.0	18.8	18 E	12*	2*	8 24	3 54.80	+21 56.9	1.451	1.763	35.0	20.6	90 W	63*	42
4 28	3 33.36	+25 58.4	1.186	0.431	55.5	19.0	21 E	14*	3*	9 3	4 4.64	+23 7.4	1.396	1.816	33.5	20.5	97 W	68*	41
4 30	3 49.79	+27 30.6	1.169	0.458	58.3	19.1	23 E	16*	5*	9 13	4 11.09	+24 10.0	1.339	1.869	31.4	20.4	105 W	69	40
5 2	4 6.27	+28 51.6	1.154	0.485	60.5	19.3	25 E	18*	6*	9 23	4 13.62	+25 5.0	1.283	1.921	28.5	20.3	114 W	70	39
5 4	4 22.78	+30 1.4	1.141	0.512	62.1	19.4	27 E	20*	7*	10 3	4 11.77	+25 51.4	1.232	1.973	24.9	20.2	124 W	71	38
5 6	4 39.30	+31 0.3	1.129	0.538	63.3	19.6	28 E	21*	8*	10 13	4 5.29	+26 26.3	1.191	2.023	20.5	20.0	135 W	71	38
5 11	5 20.34	+32 41.1	1.106	0.601	64.9	19.8	33 E	25*	11*	10 18	4 0.39	+26 38.1	1.176	2.047	17.9	19.9	141 W	72	37
5 16	6 0.26	+33 20.1	1.094	0.659	65.0	20.0	36 E	28*	14*	10 23	3 54.50	+26 45.5	1.166	2.072	15.2	19.9	147 W	72	37
5 21	6 38.17	+33 5.3	1.091	0.711	64.3	20.1	39 E	29*	17*	10 28	3 47.79	+26 48.0	1.161	2.096	12.4	19.8	153 W	72	37
5 26	7 13.34	+32 6.5	1.096	0.758	63.2	20.2	42 E	30*	20*	11 2	3 40.45	+26 45.2	1.162	2.120	9.5	19.7	159 W	72	37
5 31	7 45.45	+30 34.0	1.107	0.801	61.8	20.3	44 E	31*	23*	11 7	3 32.72	+26 37.2	1.169	2.143	6.7	19.6	165 W	72	37
6 5	8 14.45	+28 37.4	1.123	0.838	60.2	20.4	46 E	30*	26*	11 12	3 24.88	+26 24.3	1.184	2.166	4.4	19.5	170 W	71	38
6 10	8 40.55	+26 24.9	1.143	0.870	58.7	20.5	47 E	29*	29*	11 17	3 17.22	+26 7.4	1.205	2.189	3.5	19.5	172 E	71	38
6 15	9 4.06	+24 2.7	1.166	0.898	57.2	20.6	48 E	28*	31*	11 22	3 9.97	+25 47.4	1.233	2.211	4.8	19.7	169 E	71	38
6 20	9 25.32	+21 35.4	1.190	0.921	55.8	20.6	49 E	26*	33*	11 27	3 3.34	+25 25.4	1.268	2.233	7.0	19.9	164 E	70	39
6 25	9 44.67	+19 6.2	1.215	0.940	54.5	20.7	49 E	25*	35*	12 2	2 57.50	+25 2.6	1.310	2.255	9.4	20.1	158 E	70	39
6 30	10 2.43	+16 37.0	1.239	0.954	53.3	20.7	49 E	23*	36*	12 7	2 52.56	+24 40.2	1.358	2.276	11.7	20.3	152 E	70	39
7 5	10 18.87	+14 9.3	1.263	0.965	52.3	20.8	49 E	21*	37*	12 12	2 48.59	+24 19.3	1.411	2.297	13.7	20.4	146 E	69	40
7 10	10 34.24	+11 43.7	1.285	0.971	51.3	20.8	48 E	19*	38*	12 22	2 43.59	+23 44.6	1.534	2.337	17.3	20.8	135 E	69	40
7 15	10 48.72	+9 20.6	1.304	0.973	50.5	20.8	48 E	17*	39*	1 1	2 42.32	+23 22.1	1.674	2.377	19.9	21.1	125 E	68	41
7 20	11 2.49	+7 0.1	1.321	0.970	49.8	20.8	47 E	15*	39*	1 11	2 44.36	+23 12.8	1.827	2.414	21.6	21.4	115 E	68	41
7 25	11 15.68	+4 42.1	1.335	0.964	49.3	20.8	46 E	13*	39*	1 21	2 49.22	+23 15.6	1.988	2.451	22.7	21.6	106 E	68	40*
7 30	11 28.41	+2 26.6	1.345	0.953	48.9	20.8	45 E	11*	38*	12 27	15 51.27	-33 7.3	2.139	1.444	22.8	20.7	35 W	5*	28*
8 4	11 40.79	+0 13.4	1.350	0.938	48.7	20.7	44 E	10*	38*	1 1	16 8.16	-34 15.5	2.134	1.459	23.4	20.8	36 W	5*	30*
8 9	11 52.91	-1 58.0	1.351	0.919	48.6	20.7	43 E	8*	37*	1 6	16 25.16	-35 16.0	2.129	1.475	23.9	20.8	37 W	4*	31*
8 14	12 4.85	-4 7.5	1.346	0.896	48.8	20.6	42 E	7*	36*	1 11	16 42.22	-36 8.6	2.123	1.492	24.5	20.8	39 W	3*	33*
8 19	12 16.65	-6 15.4	1.335	0.868	49.3	20.6	41 E	5*	35*	1 16	16 59.29	-36 53.4	2.117	1.509	25.0	20.9	40 W	3*	34*
8 24	12 28.38	-8 21.5	1.318	0.835	50.1	20.5	39 E	4*	33*	1 21	17 16.29	-37 30.5	2.109	1.526	25.5	20.9	42 W	2*	36*
9 3	12 51.66	-12 27.5	1.260	0.754	53.2	20.2	37 E	1*	30*	1 26	17 33.17	-38 0.0	2.100	1.543	26.1	20.9	43 W	1*	37*
9 13	13 14.46	-16 18.8	1.166	0.654	59.5	19.9	34 E	—	27*	1 31	17 49.88	-38 22.2	2.090	1.560	26.6	21.0	45 W	1*	39*
9 23	13 34.61	-19 27.5	1.028	0.533	72.3	19.6	30 E	—	23*	2 5	18 6.36	-38 37.5	2.079	1.577	27.1	21.0	47 W	1*	40*
9 25	13 37.77	-19 53.5	0.994	0.506	76.3	19.6	29 E	—	22*	2 10	18 22.55	-38 46.2	2.066	1.595	27.6	21.0	49 W	—	42*
9 27	13 40.38	-20 12.6	0.959	0.479	81.0	19.5	28 E	—	21*	2 15	18 38.39	-38 48.9	2.052	1.612	28.1	21.0	50 W	—	43*
9 29	13 42.28	-20 22.4	0.921	0.452	86.6	19.5	27 E	—	20*	2 20	18 53.84	-38 46.0	2.036	1.629	28.6	21.1	52 W	—	45*
10 1	13 43.23	-20 20.0	0.883	0.425	93.2	19.6	25 E	—	18*	2 25	19 8.86	-38 38.0	2.019	1.647	29.1	21.1	54 W	—	46*
10 3	13 42.94	-20 1.1	0.844	0.399	101.2	19.7	23 E	—	16*	3 2	19 23.42	-38 25.6	2.000	1.664	29.6	21.1	56 W	—	48*
10 4	13 42.25	-19 44.0	0.824	0.386	105.8	19.8	22 E	—	14*	3 7	19 37.49	-38 9.1	1.980	1.681	30.1	21.1	58 W	—	49*
10 5	13 41.12	-19 20.7	0.805	0.374	110.8	20.0	20 E	—	13*	3 12	19 51.05	-37 49.3	1.957	1.698	30.5	21.1	60 W	—	51*
10 6	13 39.53	-18 50.6	0.786	0.362	116.2	20.2	19 E	—	12*	3 17	20 4.08	-37 26.6	1.933	1.715	30.9	21.1	62 W	—	53*
10 7	13 37.46	-18 12.8	0.768	0.350	122.2	20.6	17 E	—	10*	3 22	20 16.55	-37 1.6	1.907	1.732	31.3	21.1	65 W	—	55*
10 8	13 34.87	-17 26.7	0.752	0.339	128.7	21.0	15 E	—	8*	3 27	20 28.46	-36 34.9	1.880	1.749	31.7	21.1	67 W	—	57*
12 27	15 50.09	-21 55.3	2.201	1.510	22.1	20.8	35 W	15*	26*	4 1	20 39.81	-36 6.9	1.850	1.765	32.0	21.1	69 W	—	59*
1 1	16 6.56	-22 55.4	2.154	1.484	23.2	20.7	36 W	15*	27*	4 6	20 50.58	-35 38.1	1.819	1.782	32.2	21.1	72 W	1*	62*
1 6	16 23.62	-23 50.6	2.109	1.459	24.3	20.7	38 W	14*	29*	4 11	21 0.77	-35 9.0	1.787	1.798	32.5	21.1	74 W	1*	64*
1 11	16 41.26	-24 40.2	2.065	1.435	25.3	20.6	39 W	14*	30*	4 16	21 10.35	-34 40.1	1.752	1.813	32.6	21.1	77 W	1*	67*
1 16	16 59.48	-25 23.3	2.023	1.411	26.3	20.6	40 W	13*	32*	4 21	21 19.31	-34 11.9	1.717	1.829	32.7	21.1	80 W	3*	69*
1 21	17 18.26	-25 59.0	1.983	1.388	27.3	20.5	40 W	12*	33*	4 26	21 27.64	-33 44.6	1.680	1.844	32.8	21.0	83 W	3*	72*
1 26	17 37.55	-26 26.7	1.944	1.365	28.3	20.5	41 W	12*	34*	5 1	21 35.33	-33 18.8	1.641	1.859	32.7	21.0	86 W	3*	75*
1 31	17 57.31	-26 45.3	1.908	1.344	29.2	20.4	42 W	11*	35*	5 6	21 42.35	-32 54.7	1.602	1.874	32.6	21.0	89 W	4*	78*
2 5	18 17.48	-26 54.4	1.874	1.324	30.1	20.4	42 W	10*	36*	5 11	21 48.67	-32 32.9	1.562	1.888	32.3	20.9	92 W	5*	81*
2 10	18 37.98	-26 53.2	1.842	1.304	30.9	20.3	43 W	9*	37*	5 16	21 54.23	-32 13.5	1.521	1.902	31.9	20.9	95 W	6*	83*
2 15	18 58.70	-26 41.3	1.813	1.287	31.7	20.3	43 W	9*	37*	5 21	21 59.01	-31 56.9	1.479	1.916	31.5	20.8	99 W	7*	84
2 20	19 19.56	-26 18.5	1.787</																

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°
6446 Lomberg										32581 2001 QW₉₈									
<i>(continuation)</i>										<i>(continuation)</i>									
12 12	18 43.17	-9 47.6	3.388	2.527	9.4	20.3	25 E	18*	6*	8 4	23 13.81	+ 3 13.9	0.772	1.682	22.7	16.9	140 W	48	61
12 22	19 1.05	-10 2.9	3.401	2.498	7.7	20.2	20 E	14*	—	8 14	23 12.33	+ 2 8.7	0.742	1.699	17.0	16.6	151 W	47	62
1 1	19 19.35	-10 7.6	3.402	2.468	6.1	20.1	15 E	9*	—	8 24	23 7.93	+ 0 29.5	0.729	1.718	10.6	16.4	162 W	45	64
1 11	19 38.00	-10 1.9	3.389	2.436	4.8	20.0	12 E	4*	—	8 29	23 4.97	- 0 29.6	0.729	1.728	7.3	16.2	167 W	45	64
1 21	19 56.90	-9 46.1	3.364	2.405	4.4	19.9	11 W	4*	—	9 3	23 1.75	- 1 32.6	0.734	1.739	4.1	16.1	173 W	43	66
65425 2002 TL₁₂₉										316651 1990 OL									
12 27	15 51.91	-23 35.8	2.762	2.031	16.0	21.2	35 W	14*	26*	12 27	15 52.65	- 9 20.5	2.742	2.067	17.3	20.5	39 W	26*	20*
1 6	16 15.94	-24 39.7	2.665	2.003	18.1	21.2	39 W	14*	31*	1 6	16 15.79	-10 3.1	2.620	2.014	19.4	20.4	43 W	28*	26*
1 16	16 40.57	-25 30.8	2.563	1.974	20.2	21.1	44 W	15*	36*	1 16	16 39.74	-10 33.8	2.496	1.962	21.5	20.3	47 W	29*	31*
1 26	17 5.68	-26 8.0	2.457	1.946	22.2	21.1	48 W	15*	41*	1 26	17 4.45	-10 51.2	2.370	1.910	23.6	20.2	51 W	29*	36*
2 5	17 31.16	-26 30.0	2.348	1.917	24.1	21.0	53 W	15*	46*	2 5	17 29.90	-10 54.3	2.246	1.859	25.6	20.1	55 W	29*	41*
2 15	17 56.89	-26 35.9	2.237	1.890	26.0	20.9	57 W	14*	51*	2 15	17 56.02	-10 42.1	2.124	1.809	27.6	20.0	58 W	29*	46*
2 25	18 22.67	-26 25.3	2.124	1.863	27.8	20.8	61 W	14*	55*	2 25	18 22.74	-10 14.1	2.005	1.761	29.6	19.8	61 W	30*	50*
3 7	18 48.36	-25 57.9	2.011	1.837	29.4	20.7	66 W	15*	59*	3 7	18 49.99	- 9 30.4	1.891	1.715	31.5	19.7	64 W	30*	53*
3 17	19 13.77	-25 13.8	1.898	1.812	31.0	20.6	70 W	15*	64*	3 17	19 17.68	- 8 31.6	1.781	1.671	33.3	19.6	67 W	30*	56*
3 27	19 38.69	-24 13.7	1.787	1.788	32.4	20.5	74 W	16*	68*	3 27	19 45.70	- 7 19.1	1.678	1.630	35.1	19.4	70 W	30*	59*
4 6	20 2.99	-22 58.5	1.677	1.765	33.7	20.4	78 W	16*	72*	4 6	20 13.96	- 5 54.8	1.581	1.593	36.7	19.3	72 W	31*	61*
4 16	20 26.48	-21 29.4	1.569	1.744	34.8	20.2	82 W	18*	76*	4 16	20 42.38	- 4 21.4	1.491	1.560	38.3	19.2	75 W	31*	62*
4 26	20 48.97	-19 48.2	1.465	1.725	35.6	20.1	86 W	19*	80*	4 26	21 10.85	- 2 42.5	1.408	1.531	39.8	19.0	77 W	32*	63*
5 6	21 10.33	-17 56.7	1.363	1.707	36.2	19.9	91 W	21*	81*	5 6	21 39.27	- 1 2.1	1.330	1.507	41.1	18.9	79 W	33*	63*
5 16	21 30.35	-15 57.2	1.266	1.691	36.5	19.7	95 W	23*	80*	5 16	22 7.52	+ 0 35.2	1.259	1.489	42.1	18.8	81 W	34*	63*
5 26	21 48.81	-13 52.2	1.173	1.678	36.5	19.6	100 W	26*	78	5 26	22 35.44	+ 2 4.5	1.194	1.476	43.0	18.7	84 W	35*	62*
6 5	22 5.50	-11 44.3	1.085	1.666	36.0	19.4	105 W	29*	76	5 31	22 49.22	+ 2 44.6	1.163	1.472	43.3	18.6	85 W	36*	61*
6 15	22 20.06	- 9 36.8	1.001	1.657	35.0	19.1	110 W	33*	74	6 5	23 2.85	+ 3 20.8	1.133	1.470	43.5	18.6	86 W	37*	61
6 25	22 32.12	- 7 33.1	0.924	1.651	33.4	18.9	116 W	37*	72	6 10	23 16.29	+ 3 52.6	1.105	1.469	43.7	18.5	88 W	38*	60
7 5	22 41.26	- 5 36.8	0.854	1.647	31.1	18.7	123 W	39*	70	6 15	23 29.50	+ 4 19.2	1.077	1.469	43.7	18.5	89 W	39*	60
7 15	22 46.99	- 3 52.6	0.791	1.646	27.9	18.4	131 W	41	68	6 20	23 42.43	+ 4 40.1	1.051	1.472	43.7	18.4	91 W	40*	59
7 25	22 48.94	- 2 25.2	0.739	1.647	23.8	18.1	139 W	43	66	6 25	23 55.05	+ 4 54.7	1.025	1.475	43.5	18.4	93 W	41*	59
8 4	22 47.00	- 1 18.9	0.699	1.651	18.8	17.9	148 W	44	65	7 5	0 19.14	+ 5 3.1	0.976	1.487	42.8	18.3	97 W	44*	59
8 14	22 41.50	- 0 37.5	0.673	1.657	13.0	17.6	158 W	44	65	7 15	0 41.26	+ 4 40.5	0.931	1.505	41.5	18.2	101 W	46*	59
8 24	22 33.61	- 0 21.4	0.664	1.666	7.4	17.4	168 W	45	64	7 25	1 0.89	+ 3 43.7	0.889	1.528	39.6	18.0	107 W	47*	60
8 29	22 29.27	- 0 21.7	0.667	1.672	5.5	17.3	171 E	45	64	8 4	1 17.46	+ 2 11.2	0.852	1.556	37.0	17.9	113 W	47*	62
9 3	22 24.99	- 0 26.6	0.674	1.678	5.5	17.3	171 E	45	64	8 14	1 30.33	+ 0 3.0	0.820	1.589	33.6	17.8	120 W	45	64
9 8	22 21.01	- 0 35.1	0.686	1.684	7.3	17.4	168 E	44	65	8 19	1 35.21	- 1 13.4	0.807	1.607	31.6	17.7	124 W	44	65
9 13	22 17.55	- 0 45.7	0.703	1.691	9.9	17.6	163 E	44	65	8 24	1 38.99	- 2 37.0	0.796	1.626	29.4	17.6	128 W	42	67
9 18	22 14.81	- 0 57.3	0.724	1.699	12.7	17.8	158 E	44	65	8 29	1 41.64	- 4 6.4	0.789	1.646	27.1	17.6	132 W	41	68
9 23	22 12.90	- 1 8.5	0.750	1.707	15.3	18.0	153 E	44	65	9 3	1 43.15	- 5 40.2	0.784	1.666	24.7	17.5	136 W	39	70
9 28	22 11.89	- 1 18.5	0.780	1.716	17.8	18.2	148 E	44	65	9 8	1 43.51	- 7 16.3	0.782	1.688	22.2	17.5	141 W	38	71
10 3	22 11.82	- 1 26.5	0.813	1.725	20.1	18.3	144 E	44	65	9 13	1 42.81	- 8 52.4	0.785	1.710	19.7	17.4	145 W	36	73
10 13	22 14.48	- 1 33.7	0.891	1.744	24.0	18.7	135 E	43	66	9 18	1 41.14	-10 25.8	0.791	1.732	17.3	17.4	149 W	35	74
10 23	22 20.61	- 1 26.7	0.982	1.765	26.9	19.0	127 E	44	65	9 23	1 38.64	-11 54.0	0.802	1.756	15.2	17.4	153 W	33	76
11 2	22 29.66	- 1 4.4	1.083	1.788	29.1	19.3	119 E	44	65	9 28	1 35.48	-13 14.4	0.818	1.779	13.5	17.4	155 W	32	77
11 12	22 41.10	- 0 27.3	1.193	1.812	30.5	19.6	112 E	45	64	10 3	1 31.86	-14 25.1	0.839	1.803	12.5	17.4	157 W	31	78
11 22	22 54.44	- 0 23.9	1.309	1.837	31.2	19.8	105 E	45	64*	10 8	1 27.98	-15 24.3	0.865	1.828	12.2	17.5	157 W	30	79
12 2	23 9.22	+ 1 27.2	1.432	1.863	31.5	20.1	99 E	46	61*	10 13	1 24.08	-16 10.9	0.897	1.853	12.7	17.7	156 W	29	80
12 12	23 25.15	+ 2 41.0	1.560	1.890	31.3	20.3	93 E	48	57*	10 18	1 20.37	-16 44.5	0.933	1.878	13.6	17.8	154 E	28	81
12 22	23 41.94	+ 4 3.6	1.690	1.918	30.8	20.5	87 E	49	52*	10 23	1 17.01	-17 5.3	0.974	1.904	14.9	18.0	150 E	28	81
1 1	23 59.39	+ 5 32.8	1.823	1.946	30.0	20.7	82 E	51	47*	10 28	1 14.13	-17 14.1	1.020	1.930	16.3	18.1	147 E	28	81
1 11	0 17.39	+ 7 7.1	1.958	1.974	29.0	20.8	76 E	52*	42*	11 2	1 11.84	-17 11.7	1.070	1.956	17.8	18.3	143 E	28	81
1 21	0 35.81	+ 8 44.7	2.091	2.003	27.7	20.9	71 E	52*	37*	11 7	1 10.20	-16 59.2	1.125	1.982	19.2	18.5	139 E	28	81
32581 2001 QW₉₈										316651 1990 OL									
12 27	15 52.29	-16 32.0	2.660	1.953	17.2	19.7	36 W	20*	23*	12 27	1 24.44	-10 38.3	1.761	2.222	25.4	19.9	105 E	34	75
1 6	16 16.71	-17 21.4	2.563	1.922	19.3	19.6	40 W	21*	28*	1 1	1 33.10	- 8 44.5	1.926	2.275	25.4	20.2	98 E	36	71*
1 16	16 41.68	-17 57.1	2.462	1.892	21.4	19.6	45 W	22*	34*	1 11	1 43.10	- 6 48.7	2.095	2.327	25.0	20.4	91 E	38	66*
1 26	17 7.09	-18 17.5	2.360	1.863	23.4	19.5	49 W	22*	39*	1 21	1 54.18	- 4 53.5	2.266	2.380	24.3	20.6	84 E	40	60*
2 5	17 32.84	-18 21.6	2.255	1.835	25.3	19.4	53 W	22*	44*	12 22	1 17.37	-12 27.5	1.602	2.168	25.0	19.7	112 E	33	77
2 15	17 58.80	-18 8.9	2.151	1.807	27.2	19.4	57 W	22*	48*	12 22	1 24.44	-10 38.3	1.761	2.222	25.4	19.9	105 E	34	75
2 25	18 24.80	-17 38.8	2.046	1.782	28.9	19.3	61 W	23*	53*	1 1	1 33.10	- 8 44.5	1.926	2.275	25.4	20.2	98 E	36	71*
3 7	18 50.70	-16 51.6	1.943	1.757	30.6	19.2	64 W	23*	57*	1 11	1 43.10	- 6 48.7	2.095	2.327	25.0	20.4	91 E	38	66*
3 17	19 16.34	-15 47.9	1.841	1.735	32.1	19.1	68 W	24*	60*	1 21	1 54.18	- 4 53.5	2.266	2.380	24.3	20.6	84 E	40	60*
3 27	19 41.54	-14 29.0	1.742	1.714	33.5	19.0	72 W	24*	64*	12 22	1 17.37	-12 27.5	1.602	2.168	25.0	19.7	112 E	33	77
4 6	20 6.19	-12 56.5	1.646	1.695	34.8	18.9	75 W	25*	67*	12 22	1 24.44	-10 38.3	1.761	2.222	25.4	19.9	105 E	34	75
4 16	20 30.14	-11 12.6	1.5																

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°
3554 Amun										306416 1998 HS7 (continuation)									
12 27	15 52.87	-29 8.8	1.826	1.153	28.6	18.7	34 W	9*	27*	3 27	18 35.32	-26 42.6	2.080	2.281	25.9	20.6	88 W	17*	82*
1 1	16 12.58	-30 44.9	1.795	1.136	29.6	18.6	35 W	7*	28*	4 6	18 44.48	-27 34.2	2.002	2.333	25.2	20.5	96 W	17*	88
1 6	16 33.40	-32 12.4	1.765	1.119	30.6	18.6	35 W	6*	29*	4 16	18 50.90	-28 31.4	1.925	2.385	24.0	20.4	105 W	16*	87
1 11	16 55.39	-33 29.6	1.735	1.100	31.5	18.5	36 W	4*	30*	4 26	18 54.23	-29 35.7	1.851	2.437	22.2	20.3	114 W	15*	86
1 16	17 18.54	-34 34.1	1.707	1.080	32.4	18.5	36 W	3*	30*	5 6	18 54.22	-30 46.7	1.786	2.487	19.8	20.2	123 W	14	85
1 21	17 42.84	-35 23.8	1.679	1.060	33.3	18.4	36 W	2*	30*	5 16	18 50.66	-32 2.6	1.733	2.538	16.8	20.1	134 W	13	84
1 26	18 8.18	-35 56.2	1.654	1.038	34.1	18.4	36 W	—	30*	5 26	18 43.65	-33 18.9	1.698	2.587	13.3	20.0	144 W	12	83
1 31	18 34.43	-36 9.0	1.630	1.015	34.8	18.3	36 W	—	30*	5 31	18 38.99	-33 55.4	1.687	2.612	11.4	19.9	149 W	11	82
2 5	19 1.38	-36 0.0	1.609	0.991	35.4	18.3	36 W	—	29*	6 5	18 33.66	-34 29.7	1.683	2.636	9.5	19.9	155 W	11	82
2 10	19 28.76	-35 27.6	1.591	0.967	35.9	18.2	35 W	—	28*	6 10	18 27.81	-35 0.8	1.685	2.661	7.6	19.8	160 W	10	81
2 15	19 56.27	-34 30.7	1.575	0.942	36.3	18.1	34 W	—	27*	6 15	18 21.58	-35 28.2	1.694	2.685	6.0	19.8	164 W	10	81
2 20	20 23.62	-33 8.7	1.562	0.917	36.5	18.1	33 W	—	26*	6 20	18 15.17	-35 51.2	1.709	2.708	4.9	19.7	167 W	9	80
2 25	20 50.53	-31 22.0	1.552	0.892	36.5	18.0	32 W	—	25*	6 25	18 8.75	-36 9.6	1.732	2.732	4.7	19.8	167 E	9	80
3 2	21 16.80	-29 11.5	1.546	0.866	36.3	17.9	31 W	—	23*	6 30	18 2.51	-36 23.3	1.761	2.756	5.5	19.9	165 E	9	80
3 7	21 42.30	-26 38.6	1.543	0.841	35.9	17.8	30 W	—	22*	7 5	17 56.60	-36 32.5	1.797	2.779	6.8	20.0	161 E	8	79
3 12	22 6.95	-23 45.4	1.543	0.817	35.1	17.7	28 W	—	20*	7 10	17 51.17	-36 37.6	1.839	2.802	8.3	20.1	157 E	8	79
3 17	22 30.76	-20 34.2	1.546	0.794	34.1	17.7	27 W	—	19*	7 15	17 46.35	-36 38.9	1.888	2.825	9.8	20.3	152 E	8	79
3 22	22 53.78	-17 7.5	1.553	0.772	32.8	17.6	25 W	—	17*	7 20	17 42.22	-36 37.2	1.943	2.847	11.3	20.4	147 E	8	79
3 27	23 16.11	-13 28.0	1.561	0.752	31.2	17.5	23 W	—	16*	7 25	17 38.84	-36 33.1	2.003	2.870	12.7	20.5	142 E	8	79
4 1	23 37.89	-9 38.4	1.573	0.735	29.3	17.4	21 W	—	14*	7 30	17 36.23	-36 27.1	2.068	2.892	13.9	20.7	137 E	9	80
4 6	23 59.30	-5 41.7	1.586	0.721	27.2	17.3	19 W	—	13*	8 4	17 34.41	-36 19.8	2.138	2.914	15.0	20.8	132 E	9	80
4 11	0 20.51	+ 1 40.7	1.601	0.710	24.9	17.2	17 W	—	11*	8 9	17 33.35	-36 11.5	2.211	2.935	16.0	20.9	127 E	9	80
4 16	0 41.68	+ 2 21.4	1.617	0.703	22.5	17.2	16 W	—	10*	8 14	17 33.06	-36 2.8	2.288	2.957	16.8	21.0	122 E	9	80
4 21	1 3.00	+ 6 21.3	1.633	0.701	20.1	17.1	14 W	—	8*	8 19	17 33.48	-35 53.8	2.368	2.978	17.5	21.2	118 E	9	80
4 26	1 24.64	+10 15.8	1.651	0.702	17.9	17.1	12 W	—	6*	8 24	17 34.57	-35 44.8	2.451	2.999	18.0	21.3	113 E	9	80
5 1	1 46.74	+14 1.5	1.669	0.708	15.9	17.0	11 W	—	4*	8 29	17 36.29	-35 35.9	2.536	3.020	18.4	21.4	109 E	9	80
5 6	2 9.45	+17 35.3	1.688	0.718	14.4	17.0	10 W	—	2*	9 3	17 38.60	-35 27.2	2.623	3.041	18.7	21.5	105 E	9	81
5 11	2 32.83	+20 54.1	1.707	0.731	13.3	17.1	10 W	—	2*	401954 2002 RW25									
5 16	2 56.95	+23 55.1	1.727	0.747	12.6	17.1	9 W	—	3*	12 27	15 53.02	-19 25.6	0.964	0.588	74.2	20.2	35 W	17*	24*
5 21	3 21.78	+26 35.9	1.747	0.766	12.3	17.2	9 W	—	3*	1 1	16 19.12	-20 37.9	1.035	0.592	68.2	20.1	34 W	16*	24*
5 26	3 47.28	+28 54.5	1.768	0.787	12.2	17.3	9 W	—	3*	1 6	16 45.55	-21 36.1	1.105	0.602	62.4	20.1	33 W	14*	23*
5 31	4 13.30	+30 49.6	1.790	0.810	12.3	17.3	10 W	—	4*	1 11	17 12.08	-22 18.6	1.172	0.617	57.0	20.2	32 W	13*	23*
6 5	4 39.68	+32 20.2	1.813	0.834	12.4	17.4	10 W	—	4*	1 16	17 38.46	-22 44.9	1.235	0.637	52.2	20.2	31 W	11*	23*
6 10	5 6.19	+33 26.3	1.837	0.859	12.5	17.5	11 W	—	3*	1 21	18 4.45	-22 54.9	1.295	0.659	48.0	20.3	30 W	10*	22*
6 15	5 32.58	+34 8.3	1.861	0.884	12.5	17.6	11 W	—	3*	1 26	18 29.87	-22 49.5	1.350	0.685	44.3	20.3	29 W	9*	22*
6 20	5 58.59	+34 27.4	1.886	0.910	12.4	17.7	11 E	—	4*	1 31	18 54.58	-22 29.7	1.401	0.712	41.2	20.4	28 W	8*	22*
6 25	6 23.99	+34 25.0	1.911	0.935	12.2	17.8	11 E	—	4*	2 5	19 18.50	-21 56.8	1.448	0.740	38.7	20.5	28 W	7*	21*
6 30	6 48.59	+34 3.2	1.937	0.960	11.9	17.9	11 E	—	5*	2 10	19 41.57	-21 12.4	1.492	0.768	36.5	20.6	28 W	7*	21*
7 5	7 12.26	+33 24.1	1.962	0.985	11.5	17.9	11 E	—	5*	2 15	20 3.78	-20 17.8	1.531	0.796	34.8	20.7	27 W	6*	21*
7 10	7 34.91	+32 29.7	1.988	1.009	11.1	18.0	11 E	—	5*	2 20	20 25.15	-19 14.6	1.566	0.824	33.4	20.8	27 W	6*	21*
7 15	7 56.50	+31 22.4	2.013	1.032	10.6	18.1	11 E	—	4*	2 25	20 45.71	-18 4.1	1.598	0.851	32.3	20.8	27 W	5*	21*
7 20	8 17.02	+30 4.1	2.037	1.054	10.0	18.1	10 E	—	4*	3 2	21 5.51	-16 47.4	1.627	0.876	31.4	20.9	27 W	5*	21*
7 25	8 36.52	+28 36.5	2.061	1.075	9.4	18.1	10 E	—	4*	3 7	21 24.63	-15 25.4	1.652	0.900	30.8	21.0	28 W	5*	22*
7 30	8 55.05	+27 1.4	2.084	1.095	8.8	18.2	9 E	—	3*	3 12	21 43.11	-13 59.2	1.674	0.923	30.3	21.1	28 W	4*	22*
8 4	9 12.69	+25 20.0	2.105	1.114	8.1	18.2	9 E	—	3*	3 17	22 1.04	-12 29.4	1.693	0.944	30.0	21.1	28 W	4*	22*
8 9	9 29.51	+23 33.5	2.125	1.132	7.5	18.2	8 E	—	2*	3 22	22 18.46	-10 56.7	1.709	0.964	29.9	21.2	29 W	4*	23*
8 14	9 45.59	+21 43.0	2.144	1.148	6.8	18.3	8 E	—	1*	3 27	22 35.45	-9 21.8	1.722	0.982	29.8	21.2	29 W	4*	23*
8 19	10 1.00	+19 49.2	2.161	1.164	6.3	18.3	7 E	—	1*	4 1	22 52.09	-7 45.1	1.733	0.998	29.8	21.3	30 W	4*	24*
8 24	10 15.84	+17 52.8	2.176	1.178	5.8	18.3	7 E	—	—	4 6	23 8.43	-6 7.0	1.740	1.012	30.0	21.3	30 W	5*	24*
9 3	10 44.08	+13 54.3	2.200	1.202	5.3	18.3	6 W	—	—	4 11	23 24.53	-4 27.8	1.745	1.025	30.2	21.4	31 W	5*	25*
9 13	11 10.85	+9 50.5	2.215	1.221	5.5	18.4	7 W	—	—	4 16	23 40.47	-2 48.0	1.748	1.036	30.5	21.4	32 W	5*	25*
9 23	11 36.63	+5 43.5	2.221	1.235	6.5	18.5	8 W	—	2*	4 21	23 56.29	-1 7.9	1.748	1.044	30.8	21.4	32 W	5*	26*
10 3	12 1.88	+ 1 34.6	2.217	1.244	8.1	18.6	10 W	—	4*	4 26	0 12.05	+ 0 32.3	1.746	1.051	31.2	21.5	33 W	6*	27*
10 13	12 27.01	- 2 35.3	2.204	1.247	9.9	18.6	12 W	—	6*	5 1	0 27.82	+ 2 12.4	1.742	1.056	31.6	21.5	33 W	6*	27*
10 23	12 52.43	- 6 45.4	2.181	1.245	11.8	18.7	15 W	—	7*	5 6	0 43.67	+ 3 51.9	1.736	1.060	32.0	21.5	34 W	6*	28*
11 2	13 18.57	-10 54.8	2.149	1.238	13.9	18.7	17 W	—	8*	5 11	0 59.63	+ 5 30.8	1.728	1.061	32.5	21.5	34 W	7*	28*
11 12	13 45.90	-15 2.3	2.109	1.225	16.0	18.7	20 W	—	9*	5 16	1 15.79	+ 7 8.6	1.718	1.060	33.0	21.5	35 W	8*	28*
11 22	14 14.93	-19 5.4	2.062	1.207	18.1	18.7	22 W	—	9*	5 21	1 32.18	+ 8 44.9	1.707	1.058	33.6	21.5	35 W	8*	29*
11 27	14 30.27	-21 4.3	2.036	1.197	19.1	18.7	23 W	—	9*	5 26	1 48.88	+10 19.5	1.694	1.054	34.2	21.5	36 W	9*	29*
12 2	14 46.28	-23 0.7	2.009	1.184	20.2	18.7	24 W	—	8*	5 31	2 5.96	+11 52.0	1.680	1.047	34.7	21.5	36 W	10*	29*
12 7	15 3.03	-24 53.8	1.981	1.171	21.2	18.7	25 W	—	8*	6 5	2 23.48	+13 21.8	1.665	1.039	35.3	21.4	36 W	11*	29*
12 12	15 20.62	-26 42.7	1.953	1.156	22.2	18.6	26 W	—	7*	6 10	2 41.51	+14 48.3	1.650	1.029	35.9	21.4	37 W	12*	28*
12 17	15 39.13	-28 26.3	1.924	1.140	23.2	18.6	27 W	—	6*	6 15</									

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°
401954 2002 RW₂₅ (continuation)										298824 2004 RB₈₀ (continuation)									
9 13	10 32.96	+ 9 30.5	1.535	0.608	23.2	19.7	14 W	7*	3*	3 2	19 40.04	-22 37.2	1.865	1.416	31.5	20.9	48 W	12*	42*
9 18	11 1.36	+ 6 42.6	1.549	0.596	18.9	19.6	11 W	4*	1*	3 7	19 57.26	-21 52.5	1.843	1.413	32.2	20.8	49 W	12*	43*
9 23	11 29.63	+ 3 46.8	1.564	0.589	14.3	19.4	8 W	2*	—	3 12	20 14.18	-21 1.5	1.823	1.413	32.8	20.8	50 W	12*	44*
9 28	11 57.75	+ 0 46.8	1.578	0.589	9.6	19.3	6 W	—	—	3 17	20 30.78	-20 4.9	1.803	1.413	33.3	20.8	51 W	12*	45*
10 3	12 25.70	+ 2 13.7	1.592	0.595	5.0	19.1	3 W	—	—	3 22	20 47.01	-19 3.3	1.785	1.415	33.8	20.8	52 W	12*	46*
10 8	12 53.46	+ 5 10.9	1.605	0.606	1.0	18.9	1 W	—	—	3 27	21 2.86	-17 57.3	1.767	1.419	34.3	20.8	53 W	12*	47*
10 13	13 21.03	+ 8 1.3	1.618	0.622	3.5	19.2	2 E	—	—	4 1	21 18.31	-16 47.4	1.750	1.423	34.8	20.8	54 W	12*	48*
10 18	13 48.39	+ 10 41.9	1.632	0.643	6.9	19.4	4 E	—	—	4 6	21 33.36	-15 34.5	1.734	1.429	35.2	20.8	56 W	12*	49*
10 23	14 15.54	+ 13 10.3	1.645	0.667	9.9	19.6	7 E	—	—	4 11	21 47.98	-14 19.0	1.718	1.437	35.6	20.8	57 W	13*	51*
10 28	14 42.49	+ 15 24.5	1.660	0.693	12.2	19.8	8 E	—	2*	4 16	22 2.18	-13 1.6	1.702	1.445	36.0	20.8	58 W	13*	52*
11 2	15 9.20	+ 17 23.3	1.675	0.720	14.1	20.0	10 E	—	4*	4 21	22 15.95	-11 43.1	1.687	1.455	36.4	20.8	59 W	14*	53*
11 7	15 35.66	+ 19 5.7	1.691	0.748	15.6	20.2	12 E	—	5*	4 26	22 29.30	-10 23.8	1.671	1.466	36.7	20.8	61 W	15*	54*
11 12	16 1.80	+ 20 31.5	1.709	0.776	16.6	20.3	13 E	—	7*	5 1	22 42.22	-9 4.3	1.655	1.478	37.0	20.8	62 W	15*	55*
11 22	16 52.93	+ 22 32.9	1.746	0.832	17.9	20.5	15 E	2*	8*	5 6	22 54.74	-7 45.1	1.639	1.491	37.2	20.8	63 W	16*	57*
12 2	17 42.16	+ 23 30.9	1.786	0.883	18.1	20.7	16 E	3*	9*	5 11	23 6.83	-6 26.7	1.623	1.506	37.4	20.9	65 W	17*	58*
12 12	18 29.07	+ 23 32.0	1.828	0.930	17.8	20.9	17 E	4*	9*	5 16	23 18.51	-5 9.4	1.606	1.521	37.6	20.9	67 W	19*	59*
12 22	19 13.42	+ 22 44.4	1.868	0.969	17.1	21.0	17 E	5*	9*	5 21	23 29.76	-3 53.7	1.588	1.537	37.7	20.9	68 W	20*	60*
1 1	19 55.19	+ 21 16.5	1.906	1.002	16.1	21.1	16 E	6*	8*	5 26	23 40.60	-2 40.0	1.570	1.553	37.8	20.9	70 W	22*	61*
1 11	20 34.53	+ 19 16.0	1.940	1.028	15.0	21.1	16 E	6*	6*	5 31	23 51.01	-1 28.4	1.551	1.571	37.9	20.9	72 W	23*	61*
1 21	21 11.72	+ 16 49.7	1.968	1.047	13.8	21.2	15 E	6*	5*	6 5	0 0.99	-0 19.3	1.531	1.589	37.9	20.9	74 W	25*	61*
10051 Albee										172678 2003 YM₁₃₇									
12 27	15 54.30	+ 3 31.1	3.748	3.076	12.1	20.6	41 W	31*	17*	12 27	15 54.55	-18 54.5	1.387	0.809	44.1	20.6	35 W	18*	23*
1 6	16 7.49	+ 3 35.1	3.650	3.072	13.7	20.6	48 W	34*	25*	1 1	16 22.55	-20 19.7	1.421	0.806	42.0	20.6	33 W	16*	23*
1 16	16 20.21	+ 3 28.8	3.539	3.067	15.1	20.6	54 W	37*	32*	1 6	16 50.19	-21 26.1	1.459	0.811	39.7	20.6	32 W	14*	22*
1 26	16 32.31	+ 3 11.8	3.417	3.061	16.3	20.6	61 W	39*	40*	1 11	17 17.22	-22 14.0	1.500	0.823	37.4	20.7	31 W	12*	22*
2 5	16 43.64	+ 2 44.0	3.287	3.054	17.4	20.5	68 W	41*	47*	1 16	17 43.45	-22 44.0	1.544	0.843	35.2	20.7	30 W	11*	21*
2 15	16 54.02	+ 2 5.1	3.151	3.046	18.2	20.5	75 W	42*	54*	1 21	18 8.69	-22 57.6	1.588	0.868	33.2	20.8	29 W	10*	21*
2 25	17 3.25	+ 1 15.4	3.009	3.037	18.8	20.4	82 W	43*	59*	1 26	18 32.81	-22 56.5	1.634	0.900	31.4	20.9	28 W	9*	21*
3 7	17 11.12	+ 0 15.1	2.865	3.026	19.1	20.3	90 W	45*	63*	1 31	18 55.74	-22 42.8	1.680	0.936	29.8	21.0	28 W	8*	21*
3 17	17 17.39	+ 0 55.0	2.722	3.015	19.1	20.1	97 W	46*	63*	2 5	19 17.45	-22 18.3	1.726	0.976	28.6	21.1	28 W	7*	22*
3 27	17 21.82	+ 2 13.6	2.583	3.002	18.7	20.0	105 W	47	62	2 10	19 37.92	-21 45.1	1.770	1.019	27.6	21.2	29 W	7*	22*
4 6	17 24.17	+ 3 38.8	2.450	2.989	17.9	19.9	113 W	49	60	2 15	19 57.20	-21 5.0	1.813	1.064	26.8	21.3	29 W	6*	23*
4 16	17 24.24	+ 5 7.6	2.327	2.974	16.8	19.7	121 W	50	59	2 20	20 15.32	-20 19.4	1.855	1.112	26.2	21.5	30 W	6*	24*
4 26	17 21.89	+ 6 36.1	2.219	2.959	15.3	19.5	129 W	52	57	523585 1998 MW₅									
5 1	17 19.81	+ 7 18.5	2.170	2.950	14.5	19.4	133 W	52	57	12 27	15 54.56	-16 59.8	1.515	0.913	38.6	21.2	35 W	19*	23*
5 6	17 17.14	+ 7 58.8	2.127	2.942	13.6	19.4	137 W	53	56	1 6	16 30.63	-18 52.6	1.568	0.978	37.0	21.4	37 W	18*	26*
5 11	17 13.91	+ 8 36.2	2.088	2.933	12.8	19.3	140 W	54	55	1 16	17 5.33	-20 14.9	1.608	1.041	36.2	21.6	39 W	17*	29*
5 16	17 10.18	+ 9 9.9	2.055	2.924	12.1	19.2	143 W	54	55	1 26	17 38.70	-21 8.8	1.633	1.099	36.0	21.7	41 W	16*	32*
5 21	17 6.01	+ 9 38.9	2.028	2.915	11.5	19.2	145 W	55	54	2 5	18 10.80	-21 37.3	1.645	1.153	36.1	21.9	44 W	16*	36*
5 26	17 1.49	+ 10 2.7	2.006	2.905	11.1	19.1	146 W	55	54	307006 2001 XQ₁									
6 5	16 51.78	+ 10 32.1	1.981	2.885	11.1	19.1	147 W	56	53	12 27	15 55.15	-41 49.4	4.307	3.558	9.3	21.4	36 W	—	30*
6 15	16 41.91	+ 10 34.7	1.980	2.864	12.1	19.1	144 E	56	53	1 6	16 9.67	-43 10.5	4.212	3.543	10.7	21.4	42 W	—	35*
6 25	16 32.82	+ 10 10.2	2.002	2.842	13.8	19.2	138 E	55	54	1 16	16 24.09	-44 32.9	4.102	3.528	12.0	21.4	48 W	—	41*
7 5	16 25.26	+ 9 21.2	2.045	2.819	15.8	19.3	131 E	54	55	1 26	16 38.27	-45 57.1	3.981	3.511	13.3	21.4	55 W	—	47*
7 15	16 19.80	+ 8 11.8	2.105	2.794	17.7	19.4	123 E	53	56	2 5	16 52.07	-47 23.6	3.850	3.494	14.4	21.4	62 W	—	52*
7 25	16 16.75	+ 6 47.2	2.179	2.769	19.4	19.5	115 E	52*	57	2 15	17 5.28	-48 53.2	3.710	3.475	15.4	21.3	69 W	—	57*
8 4	16 16.18	+ 5 12.4	2.263	2.743	20.7	19.6	107 E	50*	59	2 25	17 17.66	-50 26.6	3.565	3.456	16.1	21.2	76 W	—	60*
8 14	16 18.04	+ 3 31.6	2.354	2.715	21.6	19.7	100 E	47*	60	3 7	17 28.95	-52 4.8	3.416	3.436	16.6	21.1	83 W	—	62*
8 24	16 22.18	+ 1 48.5	2.449	2.687	22.1	19.8	92 E	44*	62	298824 2004 RB₈₀									
9 3	16 28.41	+ 0 5.8	2.544	2.657	22.2	19.8	85 E	41*	63*	12 27	15 54.38	-21 18.0	2.263	1.555	21.0	21.2	34 W	16*	24*
9 13	16 36.56	+ 1 34.4	2.638	2.627	22.0	19.9	78 E	39*	61*	1 1	16 10.50	-22 4.4	2.225	1.538	21.9	21.1	36 W	15*	26*
9 23	16 46.42	+ 3 10.1	2.729	2.595	21.5	19.9	72 E	36*	57*	1 6	16 26.97	-22 45.5	2.188	1.522	22.9	21.1	37 W	15*	28*
10 3	16 57.84	+ 4 40.0	2.814	2.563	20.8	19.9	65 E	34*	52*	1 11	16 43.78	-23 20.7	2.153	1.507	23.8	21.1	38 W	15*	29*
10 13	17 10.67	+ 6 3.1	2.892	2.530	19.8	19.9	59 E	32*	46*	1 16	17 0.88	-23 49.5	2.118	1.493	24.7	21.0	39 W	14*	31*
10 23	17 24.77	+ 7 18.1	2.962	2.495	18.6	19.9	53 E	30*	40*	1 21	17 18.24	-24 11.5	2.084	1.480	25.5	21.0	40 W	14*	33*
11 2	17 40.02	+ 8 24.4	3.023	2.460	17.2	19.9	47 E	28*	34*	1 26	17 35.81	-24 26.3	2.052	1.467	26.4	21.0	41 W	14*	34*
11 12	17 56.33	+ 9 21.0	3.074	2.424	15.7	19.8	42 E	25*	27*	1 31	17 53.54	-24 33.7	2.021	1.456	27.2	21.0	43 W	13*	35*
11 22	18 13.57	+ 10 7.4	3.114	2.387	14.1	19.8	36 E	23*	21*	2 5	18 11.39	-24 33.4	1.992	1.446	28				

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°
307006 2001 XQ₁									203467 2001 YR₁₅₁								
<i>(continuation)</i>									<i>(continuation)</i>								
3 17	17 38.79	-53 48.4	3.268	3.415	16.9	21.0	90 W	— 62*	7 10	20 50.52	-27 14.9	0.776	1.760	12.4	17.7	158 W	18 89
3 27	17 46.71	-55 37.8	3.121	3.393	17.0	20.9	97 W	— 60	7 15	20 47.31	-27 15.8	0.751	1.748	9.8	17.5	163 W	18 89
4 6	17 52.20	-57 32.6	2.980	3.370	16.7	20.8	104 W	— 58	7 20	20 43.34	-27 14.3	0.731	1.737	7.2	17.3	168 W	18 89
4 16	17 54.56	-59 31.6	2.848	3.346	16.2	20.7	111 W	— 56	7 25	20 38.81	-27 9.2	0.715	1.726	5.3	17.2	171 W	18 89
4 26	17 52.98	-61 31.6	2.727	3.322	15.5	20.5	118 W	— 54	7 30	20 33.93	-26 59.8	0.705	1.715	5.0	17.1	172 E	18 89
5 6	17 46.64	-63 27.2	2.621	3.296	14.6	20.4	124 W	— 53	8 4	20 28.97	-26 45.6	0.699	1.706	6.7	17.2	169 E	18 89
5 11	17 41.44	-64 21.0	2.574	3.283	14.2	20.3	127 W	— 52	8 9	20 24.21	-26 26.0	0.698	1.696	9.4	17.3	164 E	19 90
5 16	17 34.83	-65 10.5	2.532	3.270	13.8	20.3	130 W	— 51	8 14	20 19.94	-26 1.3	0.702	1.688	12.3	17.4	159 E	19 90
5 21	17 26.82	-65 54.4	2.495	3.256	13.4	20.2	132 W	— 50	8 19	20 16.41	-25 31.6	0.710	1.679	15.3	17.5	154 E	19 90
5 26	17 17.53	-66 31.5	2.462	3.242	13.1	20.2	133 W	— 49	8 24	20 13.80	-24 57.7	0.722	1.672	18.2	17.6	149 E	20 89
5 31	17 7.14	-67 0.4	2.435	3.228	12.9	20.1	135 W	— 49	8 29	20 12.23	-24 20.1	0.738	1.665	20.8	17.8	144 E	21 88
6 5	16 55.93	-67 20.3	2.414	3.214	12.9	20.1	135 W	— 49	9 3	20 11.77	-23 39.5	0.758	1.659	23.3	17.9	139 E	21 88
6 7	16 51.29	-67 25.5	2.406	3.208	12.9	20.1	135 E	— 49	9 13	20 14.29	-22 11.5	0.806	1.649	27.6	18.1	131 E	23 86
6 9	16 46.60	-67 29.1	2.400	3.202	12.9	20.1	135 E	— 49	9 23	20 21.16	-20 36.4	0.865	1.642	30.9	18.4	123 E	24 85
6 11	16 41.90	-67 31.1	2.395	3.196	12.9	20.1	135 E	— 48	10 3	20 31.75	-18 55.6	0.932	1.638	33.4	18.6	116 E	26 83
6 13	16 37.21	-67 31.5	2.390	3.190	13.0	20.1	135 E	— 48	10 13	20 45.41	-17 9.0	1.006	1.637	35.1	18.8	110 E	28 81
6 15	16 32.56	-67 30.3	2.386	3.185	13.1	20.1	135 E	— 48	10 23	21 1.50	-15 15.8	1.086	1.639	36.1	19.0	104 E	30 79
6 17	16 27.98	-67 27.5	2.383	3.179	13.2	20.1	134 E	— 49	11 2	21 19.39	-13 16.0	1.171	1.644	36.6	19.2	99 E	32 77*
6 19	16 23.49	-67 23.2	2.381	3.173	13.3	20.1	134 E	— 49	11 12	21 38.66	-11 9.1	1.260	1.652	36.7	19.4	94 E	34 73*
6 21	16 19.12	-67 17.4	2.380	3.166	13.5	20.1	134 E	— 49	11 22	21 58.91	-8 55.6	1.354	1.664	36.4	19.5	89 E	36 68*
6 23	16 14.90	-67 10.2	2.379	3.160	13.6	20.1	133 E	— 49	12 2	22 19.84	-6 36.2	1.451	1.677	35.8	19.7	85 E	38 62*
6 25	16 10.84	-67 1.7	2.380	3.154	13.8	20.1	132 E	— 49	12 12	22 41.25	-4 11.8	1.552	1.694	35.0	19.8	80 E	41 55*
6 30	16 1.50	-66 35.0	2.384	3.139	14.3	20.1	130 E	— 49	12 22	23 2.98	-1 43.9	1.656	1.713	33.9	20.0	76 E	43 49*
7 5	15 53.51	-66 1.6	2.392	3.123	14.9	20.1	128 E	— 50	1 1	23 24.93	+0 46.0	1.763	1.734	32.7	20.1	72 E	46* 44*
7 10	15 47.00	-65 22.9	2.406	3.107	15.5	20.1	125 E	— 51	1 11	23 47.04	+3 16.5	1.871	1.757	31.3	20.2	68 E	47* 38*
7 15	15 42.01	-64 40.4	2.423	3.091	16.1	20.1	123 E	— 51	1 21	0 9.28	+5 45.9	1.981	1.782	29.7	20.3	64 E	48* 34*
7 20	15 38.54	-63 55.4	2.443	3.075	16.7	20.2	120 E	— 52	382395 1990 SM								
7 25	15 36.50	-63 9.1	2.467	3.058	17.3	20.2	116 E	— 53	12 27	15 57.26	-15 40.4	1.128	0.653	60.2	17.7	35 W	20* 22*
7 30	15 35.82	-62 22.4	2.494	3.041	17.9	20.2	113 E	— 54	1 1	16 36.77	-17 5.7	1.161	0.594	57.8	17.5	31 W	17* 19*
8 4	15 36.39	-61 36.1	2.524	3.024	18.4	20.3	110 E	— 54	1 6	17 16.77	-18 8.4	1.209	0.545	53.1	17.2	26 W	14* 15*
8 9	15 38.12	-60 50.7	2.555	3.007	18.8	20.3	107 E	— 55	1 11	17 56.76	-18 47.1	1.268	0.511	45.9	17.0	22 W	10* 12*
8 14	15 40.91	-60 6.9	2.589	2.990	19.3	20.3	103 E	— 56	1 16	18 36.21	-19 1.4	1.335	0.497	36.9	16.8	18 W	7* 9*
8 19	15 44.67	-59 24.8	2.624	2.972	19.6	20.3	100 E	— 57*	1 21	19 14.42	-18 51.6	1.405	0.506	27.4	16.7	14 W	4* 6*
8 24	15 49.30	-58 44.6	2.660	2.954	19.9	20.4	97 E	— 57*	1 26	19 50.69	-18 19.6	1.476	0.535	18.8	16.7	10 W	1* 3*
8 29	15 54.72	-58 6.3	2.696	2.936	20.1	20.4	93 E	— 57*	1 31	20 24.47	-17 28.9	1.546	0.581	12.0	16.7	7 W	— —
9 3	16 0.87	-57 30.0	2.733	2.918	20.2	20.4	90 E	— 57*	2 5	20 55.55	-16 23.9	1.617	0.638	7.0	16.8	5 W	— —
9 8	16 7.70	-56 55.4	2.771	2.899	20.3	20.4	87 E	— 57*	2 10	21 23.95	-15 9.1	1.687	0.702	3.6	16.9	3 W	— —
9 13	16 15.14	-56 22.5	2.808	2.880	20.3	20.4	84 E	— 56*	2 15	21 49.83	-13 48.2	1.757	0.770	1.8	17.1	1 W	— —
9 18	16 23.15	-55 51.2	2.844	2.861	20.3	20.5	81 E	— 55*	2 20	22 13.46	-12 24.4	1.828	0.840	1.6	17.3	1 E	— —
9 23	16 31.67	-55 21.0	2.880	2.842	20.2	20.5	78 E	— 54*	2 25	22 35.09	-10 59.9	1.899	0.910	2.1	17.6	2 E	— —
9 28	16 40.66	-54 51.8	2.916	2.823	20.0	20.5	75 E	— 53*	3 2	22 54.98	-9 36.2	1.969	0.980	2.5	17.9	2 E	— —
10 3	16 50.09	-54 23.3	2.950	2.803	19.8	20.5	72 E	— 52*	3 7	23 13.35	-8 14.4	2.038	1.049	2.8	18.1	3 E	— —
10 8	16 59.92	-53 55.2	2.983	2.783	19.6	20.5	69 E	— 50*	3 12	23 30.41	-6 55.2	2.107	1.117	3.1	18.4	4 E	— —
10 13	17 10.12	-53 27.2	3.014	2.763	19.3	20.5	66 E	— 49*	3 17	23 46.32	-5 39.1	2.174	1.183	3.5	18.6	4 W	— —
10 18	17 20.65	-52 59.0	3.044	2.743	18.9	20.5	63 E	— 48*	3 27	0 15.26	-3 17.1	2.300	1.313	4.6	19.0	6 W	— —
10 23	17 31.48	-52 30.5	3.073	2.722	18.5	20.5	60 E	— 46*	4 6	0 41.11	-1 9.0	2.417	1.436	6.1	19.4	9 W	— 1*
11 2	17 53.90	-51 30.8	3.124	2.681	17.7	20.4	55 E	— 43*	4 16	1 4.53	+0 45.2	2.521	1.554	7.8	19.7	12 W	— 5*
11 12	18 17.15	-50 26.3	3.167	2.639	16.7	20.4	50 E	— 39*	4 26	1 25.96	+2 26.0	2.610	1.667	9.6	20.0	16 W	— 9*
11 22	18 40.96	-49 15.1	3.201	2.596	15.6	20.4	45 E	— 36*	5 6	1 45.75	+3 54.0	2.684	1.774	11.5	20.3	20 W	— 14*
12 2	19 5.12	-47 55.8	3.226	2.552	14.4	20.3	40 E	— 32*	5 16	2 4.11	+5 9.7	2.741	1.877	13.3	20.5	25 W	— 19*
12 12	19 29.43	-46 27.4	3.242	2.508	13.2	20.2	36 E	— 28*	5 26	2 21.18	+6 13.5	2.781	1.975	15.1	20.7	30 W	1* 24*
12 22	19 53.66	-44 49.0	3.248	2.463	12.0	20.1	31 E	— 24*	6 5	2 37.04	+7 5.9	2.804	2.070	16.7	20.9	36 W	4* 30*
1 1	20 17.69	-43 0.3	3.244	2.417	10.9	20.1	28 E	— 20*	6 15	2 51.73	+7 47.0	2.810	2.160	18.2	21.1	42 W	8* 35*
1 11	20 41.38	-41 1.1	3.230	2.371	9.9	20.0	25 E	— 16*	6 25	3 5.21	+8 17.1	2.800	2.246	19.6	21.2	48 W	14* 40*
1 21	21 4.63	-38 51.7	3.207	2.325	9.2	19.9	22 E	— 13*	7 5	3 17.44	+8 36.3	2.773	2.329	20.7	21.3	54 W	20* 44*
203467 2001 YR₁₅₁									7 15	3 28.32	+8 44.6	2.731	2.408	21.7	21.3	61 W	26* 48*
12 27	15 55.90	-24 40.3	3.125	2.370	13.3	21.4	34 W	12* 25*	7 25	3 37.71	+8 42.1	2.676	2.485	22.3	21.4	68 W	33* 51*
1 6	16 16.09	-25 43.2	3.018	2.339	15.4	21.4	39 W	13* 31*	8 4	3 45.44	+8 28.9	2.610	2.558	22.6	21.4	76 W	40* 54*
1 16	16 36.61	-26 38.2	2.903	2.308	17.4	21.3	45 W	14* 37*	8 14	3 51.29	+8 4.7	2.535	2.628	22.5	21.4	84 W	46* 56*
1 26	16 57.39	-27 24.7	2.780	2.276	19.4	21.3	50 W	14* 43*	8 24	3 55.03	+7 29.8	2.454	2.695	22.0	21.4	92 W	50* 57*
2 5	17 18.34	-28 2.3	2.651	2.244	21.2	21.2	55 W	14* 49*	9 3	3 56.42	+6 44.4	2.372	2.759	21.0	21.3	102 W	52* 57*
2 15	17 39.34	-28 31.0	2.517	2.212	23.0	21.1	61 W	14* 55*	9 13	3 55.22	+5 49.3	2.292	2.821	19.4	21.2	112 W	51 58
2 25	18 0.28	-28 50.6	2.378	2.179	24.6	21.0	66 W	14* 60*	9 23	3 51.27	+4 45.8	2.221	2.880	17.2	21.1	122 W	50 59
3 7	18 21.02	-29 1.5	2.237	2.146	26.1	20.9	72 W	14* 66*	10 3	3 44.59	+3 36.3	2.163	2.937	14.5	21.0	133 W	49 60
3 17	18 41.40	-29 4.3	2.095	2.113	27.4	20.8	77 W	14* 71*	10 13	3 35.38	+2 24.6	2.126</					

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°
67399 2000 PJ ₆										113681 2002 TL ₁₁₀									
(continuation)										(continuation)									
2 15	20 5.15	-28 9.8	1.760	1.025	28.4	20.8	30 W	-	23*	11 2	1 45.21	-8 16.6	0.899	1.845	13.3	18.2	155 E	37	72
2 20	20 24.92	-26 54.1	1.784	1.052	28.0	20.9	30 W	-	24*	11 12	1 37.80	-7 37.3	0.980	1.886	16.9	18.5	146 E	37	72
2 25	20 43.64	-25 31.2	1.807	1.079	27.8	21.0	31 W	-	24*	11 22	1 33.70	-6 30.1	1.080	1.926	20.3	18.9	137 E	38	71
3 2	21 1.37	-24 2.7	1.829	1.107	27.6	21.1	31 W	-	25*	11 27	1 32.92	-5 48.5	1.136	1.946	21.8	19.1	133 E	39	70
3 7	21 18.18	-22 30.0	1.848	1.134	27.5	21.1	32 W	-	26*	12 2	1 32.98	-5 2.8	1.195	1.967	23.1	19.3	129 E	40	69
3 12	21 34.14	-20 54.0	1.865	1.162	27.6	21.2	33 W	1*	26*	12 7	1 33.82	-4 13.6	1.257	1.987	24.2	19.4	124 E	41	68
3 17	21 49.31	-19 15.8	1.881	1.190	27.7	21.3	34 W	1*	27*	12 12	1 35.41	-3 21.8	1.323	2.007	25.1	19.6	120 E	42	67
3 22	22 3.76	-17 36.1	1.894	1.217	27.9	21.4	35 W	2*	29*	12 22	1 40.58	-1 32.4	1.461	2.047	26.4	19.9	112 E	43	66
3 27	22 17.56	-15 55.5	1.904	1.245	28.1	21.4	36 W	2*	30*	1 1	1 48.02	+0 21.2	1.607	2.086	27.1	20.1	105 E	45	63*
4 1	22 30.77	-14 14.6	1.912	1.271	28.5	21.5	37 W	3*	31*	1 11	1 57.37	+2 16.5	1.759	2.125	27.3	20.4	98 E	47	60*
144901 2004 WG ₁										67502 2000 RE ₄₄									
12 27	15 59.63	-18 35.4	1.642	0.990	33.6	19.9	34 W	17*	22*	12 27	16 0.29	-22 31.2	3.381	2.611	11.8	20.9	33 W	14*	23*
1 1	16 24.18	-20 27.1	1.616	0.954	34.0	19.8	33 W	15*	23*	1 6	16 18.08	-23 11.9	3.270	2.580	13.9	20.9	39 W	16*	30*
1 6	16 50.11	-22 8.5	1.596	0.919	34.3	19.7	32 W	13*	23*	1 16	16 35.94	-23 45.2	3.147	2.548	15.8	20.9	45 W	17*	37*
1 11	17 17.36	-23 36.0	1.581	0.887	34.2	19.6	30 W	11*	22*	1 26	16 53.78	-24 10.7	3.014	2.515	17.7	20.8	51 W	17*	43*
1 16	17 45.80	-24 46.2	1.572	0.858	33.8	19.5	29 W	9*	22*	2 2	5 17 11.48	-24 28.2	2.873	2.481	19.5	20.7	57 W	18*	50*
1 21	18 15.19	-25 35.9	1.570	0.833	33.1	19.4	28 W	7*	21*	2 5	17 28.93	-24 37.4	2.725	2.446	21.1	20.7	63 W	18*	57*
1 26	18 45.24	-26 2.6	1.574	0.812	32.0	19.3	26 W	4*	20*	2 15	17 45.95	-24 38.5	2.572	2.411	22.6	20.5	70 W	19*	63*
1 31	19 15.58	-26 4.5	1.583	0.797	30.6	19.2	24 W	2*	18*	2 25	17 45.95	-24 31.7	2.415	2.375	23.9	20.4	76 W	19*	70*
2 5	19 45.78	-25 41.3	1.598	0.788	29.0	19.2	23 W	1*	17*	3 7	18 2.42	-24 17.5	2.255	2.338	24.9	20.3	82 W	19*	76*
2 10	20 15.46	-24 53.8	1.618	0.785	27.1	19.1	21 W	-	15*	3 17	18 18.14	-24 17.5	2.255	2.338	24.9	20.3	82 W	19*	76*
2 15	20 44.26	-23 44.0	1.642	0.788	25.1	19.1	20 W	-	14*	3 27	18 32.91	-23 56.4	2.095	2.301	25.7	20.1	89 W	20*	83*
2 20	21 11.91	-22 14.9	1.671	0.797	23.1	19.1	18 W	-	12*	4 4	6 18 46.50	-23 29.3	1.937	2.263	26.1	19.9	95 W	21*	87*
2 25	21 38.23	-20 30.0	1.702	0.812	21.2	19.1	17 W	-	11*	4 16	18 58.63	-22 57.2	1.781	2.225	26.1	19.7	102 W	21*	87*
3 2	22 3.14	-18 33.1	1.736	0.832	19.4	19.2	16 W	-	9*	4 26	19 8.98	-22 21.2	1.630	2.186	25.7	19.4	110 W	22*	86
3 7	22 26.64	-16 27.6	1.773	0.857	17.8	19.2	15 W	-	8*	5 6	19 17.20	-21 42.5	1.485	2.147	24.6	19.2	118 W	23*	86
3 12	22 48.78	-14 16.8	1.812	0.886	16.4	19.3	15 W	-	7*	5 16	19 22.88	-21 2.6	1.350	2.107	22.9	18.9	126 W	24	85
3 17	23 9.64	-12 3.3	1.851	0.918	15.2	19.4	14 W	-	7*	5 26	19 25.58	-20 22.7	1.226	2.068	20.4	18.5	135 W	25	84
3 22	23 29.32	-9 49.5	1.892	0.953	14.2	19.5	14 W	-	6*	6 5	19 24.96	-19 43.9	1.116	2.028	17.0	18.2	144 W	25	84
3 27	23 47.94	-7 37.0	1.933	0.990	13.5	19.6	13 W	-	6*	6 15	19 20.79	-19 7.0	1.023	1.989	12.7	17.8	155 W	26	83
4 1	0 5.59	-5 27.3	1.974	1.028	12.9	19.7	13 W	-	6*	6 25	19 13.31	-18 32.3	0.949	1.950	7.5	17.4	165 W	26	83
4 6	0 22.40	-3 21.2	2.015	1.067	12.5	19.8	13 W	-	7*	6 30	19 8.55	-18 15.8	0.920	1.931	4.8	17.2	171 W	27	82
4 16	0 53.83	+0 37.5	2.095	1.149	12.3	20.0	14 W	-	8*	7 5	19 3.30	-17 59.9	0.897	1.911	2.7	17.0	175 W	27	82
4 26	1 22.84	+4 16.1	2.170	1.231	12.6	20.3	16 W	-	9*	7 10	18 57.76	-17 44.7	0.879	1.892	3.4	16.9	174 E	27	82
5 6	1 49.95	+7 33.8	2.239	1.312	13.4	20.5	18 W	-	11*	7 15	18 52.18	-17 30.3	0.866	1.874	6.1	17.0	169 E	27	82
5 16	2 15.51	+10 31.1	2.298	1.392	14.4	20.7	20 W	-	14*	7 20	18 46.79	-17 16.8	0.859	1.855	9.2	17.1	163 E	28	81
5 26	2 39.79	+13 9.0	2.347	1.470	15.7	20.9	23 W	2*	17*	7 25	18 41.84	-17 4.4	0.857	1.837	12.3	17.2	157 E	28	81
6 5	3 2.96	+15 28.9	2.384	1.545	17.1	21.1	27 W	5*	20*	7 30	18 37.53	-16 53.3	0.860	1.818	15.4	17.3	152 E	28	81
6 15	3 25.15	+17 32.3	2.409	1.618	18.6	21.3	30 W	9*	22*	8 4	18 34.04	-16 43.6	0.867	1.801	18.3	17.4	146 E	28	81
6 25	3 46.40	+19 20.7	2.421	1.687	20.0	21.5	35 W	14*	25*	8 14	18 30.06	-16 28.5	0.893	1.766	23.6	17.6	136 E	29	80
113681 2002 TL ₁₁₀										27254 2005 QJ ₁₄₅									
12 27	15 59.66	-14 29.0	2.593	1.875	17.5	20.7	35 W	21*	21*	12 27	16 0.58	-15 55.1	2.452	1.732	18.7	20.9	34 W	20*	21*
1 6	16 24.83	-15 38.1	2.492	1.835	19.7	20.6	39 W	22*	26*	1 6	16 28.33	-17 4.7	2.372	1.704	20.7	20.9	38 W	20*	26*
1 16	16 50.88	-16 34.9	2.389	1.795	21.8	20.5	43 W	22*	31*	1 16	16 56.83	-17 58.3	2.291	1.678	22.6	20.8	41 W	20*	30*
1 26	17 17.77	-17 17.7	2.284	1.756	23.9	20.4	46 W	22*	36*	1 26	17 25.94	-18 34.3	2.211	1.655	24.5	20.8	44 W	20*	35*
2 5	17 45.45	-17 45.3	2.180	1.718	26.0	20.4	50 W	22*	41*	2 5	17 55.51	-18 51.6	2.131	1.633	26.4	20.7	47 W	20*	39*
2 15	18 13.85	-17 56.7	2.076	1.681	28.0	20.3	53 W	21*	45*	2 15	18 25.34	-18 49.5	2.054	1.614	28.1	20.6	50 W	19*	42*
2 25	18 42.85	-17 51.0	1.975	1.645	30.0	20.2	56 W	21*	49*	2 25	18 55.20	-18 28.0	1.978	1.598	29.8	20.6	53 W	19*	46*
3 7	19 12.35	-17 28.1	1.877	1.612	31.9	20.1	59 W	20*	52*	3 7	19 24.88	-17 48.1	1.904	1.585	31.4	20.5	56 W	19*	49*
3 17	19 42.22	-16 48.0	1.782	1.580	33.8	20.0	62 W	20*	55*	3 17	19 54.18	-16 51.2	1.833	1.574	32.9	20.5	59 W	19*	52*
3 27	20 12.31	-15 51.6	1.692	1.552	35.5	19.9	65 W	20*	58*	3 27	20 22.89	-15 39.4	1.764	1.567	34.2	20.4	62 W	19*	55*
4 6	20 42.49	-14 40.5	1.606	1.526	37.2	19.7	67 W	20*	60*	4 6	20 50.86	-14 15.6	1.697	1.563	35.4	20.4	65 W	19*	58*
4 16	21 12.62	-13 16.5	1.526	1.503	38.7	19.6	69 W	20*	63*	4 16	21 17.95	-12 42.7	1.632	1.563	36.5	20.3	68 W	20*	61*
4 26	21 42.57	-11 42.4	1.451	1.484	40.1	19.5	72 W	20*	64*	4 26	21 44.03	-11 4.3	1.568	1.566	37.5	20.3	71 W	20*	64*
5 6	22 12.22	-10 1.5	1.382	1.469	41.3	19.5	74 W	21*	66*	5 6	22 9.01	-9 23.9	1.505	1.573	38.2	20.2	75 W	22*	66*
5 16	22 41.42	-8 17.2	1.317	1.459	42.3	19.4	76 W	22*	67*	5 16	22 32.79	-7 45.1	1.443	1.582	38.7	20.1	78 W	23*	68*
5 26	23 10.03	-6 33.7	1.257	1.452	43.2	19.3	79 W	23*	68*	5 26	22 55.23	-6 11.6	1.381	1.595	39.0	20.1	82 W	25*	69*
6 5	23 37.90	-4 54.8	1.201	1.451	43.7	19.2	81 W	25*	68*	6 5	23 16.22	-4 46.8	1.320	1.611	38.9	20.0	86 W	28*	69*
6 15	0 4.82	-3 24.7	1.149	1.453	44.0	19.1	84 W	28*	67*	6 15	23 35.55	-3 34.3	1.259	1.629	38.6	19.9	91 W	31*	68
6 25	0 30.54	-2 7.3	1.100	1.461	44.0	19.0	87 W	31*	66	6 25	23 52.97	-2 37.7	1.198	1.650	37.8	19.8	96 W	35*	67
7 5	0 54.80	-1 5.7	1.052	1.473	43.7	18.9	91 W	34*	65	7 5	0 8.19	-2 0.0	1.138	1.674	36.5	19.7	102 W	39*	66
7 15	1 17.24	-0 23.1	1.007	1.489	42.9	18.8	95 W	38*	64										
7 25	1 37.45	-0 1.9	0.963	1.509	41.6	18.7	99 W	41*	64										
8 4	1 54.98	-0 3.5	0.920																

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°		
272254 2005 QJ₁₄₅									158105 2000 YH₁₂										
<i>(continuation)</i>									<i>(continuation)</i>										
7 15	0 20.82	-1 44.6	1.079	1.699	34.6	19.5	108 W	41*	66	2 5	17 18.28	-9 7.7	2.498	2.142	22.9	20.0	58 W	32*	43*
7 25	0 30.43	-1 54.3	1.024	1.726	32.0	19.4	116 W	42*	66	2 15	17 37.42	-9 45.3	2.366	2.107	24.6	19.9	63 W	32*	50*
8 4	0 36.58	-2 30.7	0.974	1.755	28.7	19.2	124 W	42*	67	2 25	17 56.44	-10 17.2	2.231	2.071	26.3	19.8	68 W	32*	56*
8 14	0 38.86	-3 34.1	0.932	1.786	24.4	19.0	133 W	41	68	3 7	18 15.25	-10 44.7	2.093	2.036	27.8	19.7	73 W	32*	61*
8 24	0 37.16	-5 1.0	0.902	1.817	19.4	18.9	143 W	40	69	3 17	18 33.77	-11 9.7	1.953	2.001	29.1	19.5	78 W	31*	67*
8 29	0 34.88	-5 51.0	0.893	1.833	16.6	18.8	149 W	39	70	3 27	18 51.90	-11 34.9	1.813	1.967	30.3	19.4	83 W	31*	71*
9 3	0 31.75	-6 43.6	0.888	1.849	13.7	18.7	154 W	38	71	4 6	19 9.55	-12 3.3	1.674	1.933	31.2	19.2	89 W	31*	75*
9 8	0 27.89	-7 37.1	0.888	1.865	10.9	18.6	160 W	37	72	4 16	19 26.61	-12 39.1	1.536	1.900	31.8	19.0	94 W	30*	77
9 13	0 23.48	-8 29.6	0.893	1.882	8.2	18.5	164 W	37	72	4 26	19 42.93	-13 27.5	1.402	1.867	32.0	18.7	100 W	30*	77
9 18	0 18.73	-9 19.2	0.904	1.899	6.2	18.5	168 W	36	73	5 6	19 58.40	-14 34.6	1.273	1.836	31.8	18.5	107 W	29*	79
9 23	0 13.85	-10 4.1	0.920	1.915	5.5	18.5	169 W	35	74	5 11	20 5.74	-15 17.5	1.211	1.821	31.5	18.4	110 W	29*	79
9 28	0 9.06	-10 42.9	0.942	1.932	6.6	18.6	167 E	34	75	5 16	20 12.78	-16 8.2	1.150	1.806	31.0	18.2	113 W	28*	80
10 3	0 4.54	-11 14.7	0.970	1.949	8.6	18.8	163 E	34	75	5 21	20 19.49	-17 7.8	1.092	1.792	30.3	18.1	117 W	27*	81
10 13	23 57.02	-11 54.5	1.042	1.983	13.2	19.1	153 E	33	76	5 26	20 25.84	-18 17.4	1.036	1.778	29.5	17.9	120 W	26*	82
10 23	23 52.31	-12 2.5	1.134	2.017	17.4	19.5	143 E	33	76	5 31	20 31.79	-19 38.2	0.983	1.764	28.4	17.8	124 W	25*	84
11 2	23 50.72	-11 42.4	1.243	2.051	20.8	19.9	133 E	33	76	6 5	20 37.27	-21 11.5	0.933	1.751	27.2	17.6	128 W	24*	85
11 12	23 52.20	-10 58.9	1.366	2.085	23.2	20.2	124 E	34	75	6 15	20 46.61	-24 58.7	0.844	1.726	24.1	17.2	136 W	20	89
11 22	23 56.43	-9 57.0	1.500	2.119	24.9	20.5	115 E	35	74	6 25	20 53.09	-29 41.5	0.773	1.704	20.5	16.9	144 W	15	86
12 2	0 2.98	-8 41.3	1.642	2.152	25.9	20.7	107 E	36	73	7 5	20 57.39	-35 11.2	0.721	1.684	17.0	16.6	151 W	10	81
12 12	0 11.46	-7 15.0	1.791	2.185	26.4	21.0	100 E	38	70*	7 10	20 57.62	-38 6.8	0.704	1.675	15.9	16.5	153 W	7	78
12 22	0 21.52	-5 41.0	1.943	2.217	26.3	21.2	93 E	39	65*	7 15	20 57.25	-41 3.8	0.692	1.667	15.4	16.5	154 W	4	75
1 1	0 32.84	-4 1.6	2.097	2.249	25.9	21.3	86 E	41	59*	7 20	20 56.03	-43 57.1	0.686	1.659	15.7	16.4	154 W	1	72
58980 1998 RG₄₇									158105 2000 YH₁₂										
12 27	16 1.63	-19 46.5	2.861	2.107	14.8	20.2	33 W	16*	22*	7 25	20 54.06	-46 41.6	0.685	1.652	16.8	16.5	152 W	-	69
1 6	16 24.37	-20 29.9	2.761	2.075	16.9	20.2	38 W	17*	28*	7 30	20 51.47	-49 12.9	0.690	1.646	18.4	16.5	149 W	-	67
1 16	16 47.56	-21 0.9	2.655	2.043	19.0	20.1	43 W	18*	33*	8 4	20 48.48	-51 27.2	0.699	1.641	20.3	16.6	146 E	-	65
1 26	17 11.10	-21 18.4	2.543	2.011	21.1	20.1	47 W	19*	39*	8 9	20 45.39	-53 22.0	0.713	1.636	22.4	16.7	142 E	-	63
2 5	17 34.91	-21 21.4	2.428	1.980	23.1	20.0	52 W	19*	44*	8 14	20 42.57	-54 56.0	0.730	1.632	24.4	16.8	138 E	-	61
2 15	17 58.87	-21 9.3	2.310	1.948	25.0	19.9	57 W	19*	49*	8 19	20 40.37	-56 9.2	0.751	1.629	26.3	16.9	135 E	-	60
2 25	18 22.84	-20 41.5	2.191	1.917	26.8	19.8	61 W	20*	54*	8 24	20 39.09	-57 2.4	0.775	1.627	28.0	17.0	131 E	-	59
3 7	18 46.71	-19 57.9	2.070	1.887	28.6	19.7	65 W	20*	59*	8 29	20 38.96	-57 37.0	0.801	1.626	29.6	17.2	127 E	-	58
3 17	19 10.35	-18 58.7	1.950	1.857	30.2	19.6	70 W	21*	63*	9 3	20 40.13	-57 54.4	0.829	1.625	30.9	17.3	124 E	-	58
3 27	19 33.59	-17 44.4	1.832	1.829	31.6	19.5	74 W	22*	67*	9 8	20 42.68	-57 56.3	0.859	1.626	32.1	17.4	121 E	-	58
4 6	19 56.35	-16 15.8	1.715	1.801	33.0	19.3	78 W	23*	71*	9 13	20 46.62	-57 44.2	0.890	1.627	33.1	17.5	118 E	-	58
4 16	20 18.49	-14 34.0	1.601	1.775	34.1	19.2	82 W	25*	74*	9 18	20 51.86	-57 19.5	0.923	1.629	33.9	17.6	115 E	-	59
4 26	20 39.86	-12 40.7	1.491	1.750	35.0	19.0	87 W	26*	75*	9 23	20 58.25	-56 43.4	0.956	1.632	34.6	17.7	113 E	-	59
5 6	21 0.36	-10 37.6	1.384	1.727	35.7	18.9	91 W	29*	75*	9 28	21 5.64	-55 57.0	0.991	1.636	35.1	17.8	110 E	-	60
5 16	21 19.84	-8 27.2	1.283	1.705	36.2	18.7	95 W	31*	72	10 3	21 13.85	-55 1.1	1.026	1.640	35.5	17.9	108 E	-	61
5 26	21 38.10	-6 12.3	1.186	1.686	36.3	18.5	100 W	34*	70	10 8	21 22.75	-53 56.3	1.062	1.645	35.8	18.0	106 E	-	62
6 5	21 54.97	-3 55.9	1.094	1.669	36.0	18.3	105 W	38*	68	10 13	21 32.20	-52 43.5	1.100	1.651	35.9	18.1	104 E	-	63
6 15	22 10.15	-1 42.1	1.008	1.655	35.3	18.1	110 W	41*	66	10 18	21 42.04	-51 23.3	1.137	1.658	36.0	18.1	102 E	-	65
6 25	22 23.32	+0 24.4	0.929	1.643	34.0	17.8	115 W	45*	64	10 23	21 52.17	-49 56.5	1.176	1.666	36.1	18.2	100 E	-	66
6 30	22 29.05	+1 23.4	0.892	1.638	33.2	17.7	118 W	46*	63	10 28	22 2.46	-48 23.5	1.216	1.674	36.0	18.3	98 E	-	68
7 5	22 34.12	+2 18.6	0.856	1.634	32.1	17.6	121 W	47*	62	11 2	22 12.87	-46 45.1	1.256	1.683	35.9	18.4	96 E	-	69
7 10	22 38.48	+3 8.9	0.823	1.631	30.9	17.5	125 W	48	61	11 7	22 23.32	-45 1.7	1.298	1.692	35.7	18.5	94 E	-	71
7 15	22 42.07	+3 53.6	0.791	1.628	29.4	17.3	128 W	49	60	11 12	22 33.78	-43 14.1	1.341	1.703	35.5	18.5	93 E	-	73
7 20	22 44.86	+4 31.8	0.762	1.626	27.8	17.2	132 W	50	59	11 17	22 44.21	-41 22.9	1.384	1.714	35.2	18.6	91 E	-	75
7 25	22 46.82	+5 2.6	0.735	1.625	25.9	17.1	136 W	50	59	11 22	22 54.58	-39 28.7	1.429	1.725	34.9	18.7	89 E	-	76
7 30	22 47.92	+5 25.1	0.711	1.624	23.8	16.9	140 W	50	59	11 27	23 4.86	-37 32.0	1.475	1.737	34.6	18.8	87 E	-	78*
8 4	22 48.16	+5 38.5	0.690	1.625	21.5	16.8	144 W	51	58	12 2	23 15.06	-35 33.4	1.523	1.749	34.2	18.8	86 E	-	78*
8 14	22 46.23	+5 35.4	0.658	1.627	16.3	16.5	153 W	51	58	12 7	23 25.17	-33 33.4	1.571	1.762	33.8	18.9	84 E	-	78*
8 24	22 41.83	+4 52.5	0.641	1.633	10.9	16.3	162 W	50	59	12 12	23 35.20	-31 32.5	1.621	1.776	33.3	19.0	82 E	-	76*
9 3	22 36.30	+3 35.9	0.641	1.641	7.1	16.1	168 E	49	60	12 17	23 45.14	-29 31.2	1.672	1.790	32.8	19.1	80 E	-	75
9 8	22 33.62	+2 48.7	0.648	1.647	7.2	16.2	168 E	48	61	12 22	23 54.98	-27 30.0	1.724	1.804	32.3	19.1	78 E	-	78
9 13	22 31.30	+1 58.3	0.659	1.653	8.7	16.3	166 E	47	62	12 27	0 4.75	-25 29.3	1.778	1.819	31.7	19.2	76 E	-	76
9 18	22 29.52	+1 7.2	0.675	1.659	11.0	16.4	162 E	46	63	1 1	0 14.44	-23 29.4	1.832	1.834	31.1	19.3	75 E	-	72
9 23	22 28.42	+0 17.4	0.696	1.667	13.5	16.6	157 E	45	64	1 6	0 24.07	-21 30.5	1.888	1.850	30.5	19.3	73 E	-	72
9 28	22 28.09	+0 29.5	0.720	1.675	16.0	16.8	153 E	45	64	1 11	0 33.64	-19 33.2	1.944	1.865	29.8	19.4	71 E	-	75
10 3	22 28.58	+1 12.0	0.749	1.683	18.4	17.0	148 E	44	65	1 16	0 43.16	-17 37.6	2.001	1.881	29.1	19.5	69 E	-	77*
10 8	22 29.94	+1 49.0	0.782	1.692	20.7	17.1	143 E	43	66	1 21	0 52.63	-15 44.0	2.059	1.898	28.4	19.5	67 E	-	79*
10 13	22 32.15	+2 19.7	0.819	1.702	22.7	17.3	139 E	43	66	194515 2001 XV₆									
10 23	22 38.98	+3 0.9	0.902	1.723	26.1	17.6	130 E	42	67	12 27	16 2.20	-12 12.1	2.346	1.645	20.2	19.4	35 W	23*	19*
11 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°	
194515 2001 XV₆									159857 2004 LJ₁									
<i>(continuation)</i>									<i>(continuation)</i>									
6 5	20 41.36	-38 11.1	1.406	2.191	21.1	19.0	129 W	7*	8 9	16 59.95	+36 10.6	0.529	1.225	54.5	16.4	100 E	81	28
6 10	20 40.44	-39 33.3	1.387	2.210	19.5	18.9	133 W	5	8 14	16 52.40	+37 31.0	0.519	1.186	58.2	16.4	96 E	82*	26
6 15	20 38.41	-40 56.4	1.372	2.230	17.9	18.9	138 W	4	8 19	16 45.70	+38 46.0	0.507	1.148	61.8	16.4	92 E	81*	25
6 20	20 35.27	-42 18.9	1.361	2.249	16.3	18.8	142 W	3	8 24	16 39.71	+39 58.6	0.494	1.111	65.4	16.4	88 E	79*	24
6 25	20 31.06	-43 39.0	1.356	2.268	14.7	18.8	145 W	1	8 29	16 34.21	+41 11.5	0.479	1.077	69.1	16.4	85 E	77*	23*
6 30	20 25.86	-44 54.8	1.357	2.287	13.3	18.7	149 W	-	9 3	16 28.91	+42 27.1	0.461	1.044	72.8	16.4	81 E	75*	21*
7 5	20 19.78	-46 4.3	1.363	2.306	12.2	18.7	151 W	-	9 8	16 23.43	+43 48.0	0.440	1.015	76.5	16.3	78 E	72*	19*
7 10	20 13.01	-47 5.8	1.375	2.325	11.6	18.7	153 W	-	9 13	16 17.22	+45 16.4	0.416	0.988	80.4	16.3	76 E	70*	16*
7 15	20 5.77	-47 57.9	1.393	2.344	11.4	18.8	153 W	-	9 15	16 14.36	+45 54.3	0.406	0.979	81.9	16.3	75 E	68*	15*
7 20	19 58.35	-48 39.7	1.417	2.363	11.6	18.8	152 W	-	9 17	16 11.21	+46 33.7	0.396	0.970	83.5	16.2	73 E	67*	13*
7 25	19 51.04	-49 10.9	1.446	2.381	12.3	18.9	150 E	-	9 19	16 7.68	+47 14.8	0.385	0.962	85.1	16.2	72 E	66*	12*
7 30	19 44.09	-49 31.6	1.482	2.399	13.2	19.0	147 E	-	9 21	16 3.70	+47 57.3	0.373	0.954	86.7	16.2	72 E	65*	10*
8 4	19 37.74	-49 42.5	1.522	2.418	14.3	19.1	144 E	-	9 23	15 59.17	+48 41.4	0.362	0.947	88.2	16.2	71 E	64*	8*
8 9	19 32.19	-49 44.5	1.568	2.436	15.4	19.3	140 E	-	9 25	15 54.00	+49 26.7	0.350	0.941	89.8	16.2	70 E	62*	6*
8 14	19 27.59	-49 38.7	1.619	2.454	16.5	19.4	136 E	-	9 27	15 48.06	+50 13.1	0.338	0.935	91.4	16.1	69 E	61*	4*
8 19	19 24.03	-49 26.3	1.673	2.471	17.6	19.5	132 E	-	9 29	15 41.22	+51 0.3	0.325	0.931	93.0	16.1	68 E	59*	2*
8 24	19 21.54	-49 8.5	1.732	2.489	18.6	19.6	128 E	-	10 1	15 33.32	+51 47.6	0.313	0.927	94.5	16.1	67 E	57*	-
8 29	19 20.11	-48 46.3	1.794	2.506	19.4	19.7	124 E	-	10 3	15 24.17	+52 34.5	0.300	0.924	96.0	16.1	67 E	55*	-
9 3	19 19.71	-48 20.7	1.859	2.523	20.2	19.9	120 E	-	10 5	15 13.58	+53 19.9	0.287	0.921	97.4	16.0	66 E	53*	-
9 8	19 20.28	-47 52.4	1.927	2.540	20.8	20.0	116 E	-	10 7	15 1.33	+54 2.5	0.275	0.920	98.8	16.0	65 E	51*	-
9 13	19 21.77	-47 22.0	1.997	2.557	21.3	20.1	113 E	-	10 9	14 47.17	+54 40.5	0.262	0.919	100.1	15.9	65 E	49*	-
9 18	19 24.09	-46 49.9	2.069	2.574	21.7	20.2	109 E	-	10 11	14 30.88	+55 11.2	0.249	0.920	101.2	15.9	65 E	46*	-
9 23	19 27.17	-46 16.6	2.143	2.590	22.0	20.3	105 E	-	10 13	14 12.29	+55 31.4	0.237	0.921	102.2	15.8	64 E	43*	-
9 28	19 30.93	-45 42.3	2.218	2.606	22.2	20.4	101 E	-	10 15	13 51.29	+55 37.0	0.225	0.922	102.9	15.8	64 E	40*	-
10 3	19 35.31	-45 7.1	2.294	2.622	22.2	20.5	98 E	-	10 17	13 27.99	+55 22.9	0.214	0.925	103.4	15.7	65 E	36*	-
10 8	19 40.23	-44 31.1	2.371	2.638	22.2	20.5	94 E	-	10 19	13 2.67	+54 43.5	0.203	0.929	103.6	15.6	65 W	40*	-
10 13	19 45.64	-43 54.5	2.448	2.654	22.1	20.6	91 E	1	10 21	12 35.90	+53 33.1	0.193	0.933	103.5	15.5	66 W	45*	-
10 18	19 51.47	-43 17.3	2.525	2.669	21.9	20.7	87 E	2	10 23	12 8.43	+51 46.8	0.184	0.938	102.9	15.4	67 W	50*	-
10 23	19 57.67	-42 39.4	2.602	2.684	21.6	20.8	84 E	2	10 24	11 54.71	+50 38.9	0.179	0.941	102.4	15.3	67 W	52*	-
10 28	20 4.20	-42 0.9	2.679	2.699	21.3	20.8	80 E	3	10 25	11 41.12	+49 21.0	0.175	0.944	101.8	15.2	68 W	55*	-
11 2	20 11.00	-41 21.8	2.756	2.714	20.9	20.9	77 E	4	10 26	11 27.78	+47 52.9	0.172	0.947	101.0	15.1	69 W	57*	-
11 7	20 18.05	-40 42.0	2.831	2.728	20.4	21.0	74 E	4	10 27	11 14.76	+46 14.7	0.169	0.950	100.2	15.1	70 W	60*	-
11 12	20 25.31	-40 1.6	2.906	2.742	19.9	21.0	71 E	5*	10 27	11 14.76	+46 14.7	0.169	0.950	100.2	15.1	70 W	60*	-
11 17	20 32.75	-39 20.5	2.979	2.756	19.4	21.1	68 E	6*	10 28	11 2.13	+44 26.8	0.166	0.954	99.1	15.0	71 W	63*	3*
11 22	20 40.32	-38 38.7	3.050	2.770	18.8	21.1	64 E	6*	10 29	10 49.95	+42 29.8	0.163	0.957	98.0	14.9	73 W	65*	6*
11 27	20 48.01	-37 56.3	3.120	2.784	18.1	21.1	61 E	7*	10 30	10 38.26	+40 24.2	0.161	0.961	96.7	14.8	74 W	67*	9*
12 2	20 55.80	-37 13.2	3.189	2.797	17.4	21.2	58 E	7*	10 31	10 27.08	+38 11.0	0.159	0.965	95.3	14.7	75 W	69*	13*
12 7	21 3.68	-36 29.4	3.255	2.810	16.7	21.2	55 E	8*	11 1	10 16.41	+35 51.2	0.158	0.970	93.8	14.7	77 W	71*	16*
12 12	21 11.60	-35 45.1	3.319	2.823	16.0	21.2	52 E	8*	11 2	10 6.26	+33 26.0	0.157	0.974	92.1	14.6	79 W	72*	20*
12 17	21 19.57	-35 0.1	3.380	2.836	15.2	21.2	49 E	8*	11 3	9 56.63	+30 56.6	0.157	0.978	90.4	14.5	80 W	72*	24*
12 22	21 27.56	-34 14.7	3.439	2.848	14.4	21.3	46 E	8*	11 4	9 47.48	+28 24.1	0.157	0.983	88.6	14.5	82 W	71*	27*
12 27	21 35.57	-33 28.8	3.496	2.860	13.6	21.3	43 E	8*	11 5	9 38.81	+25 50.1	0.158	0.988	86.7	14.4	84 W	70*	31*
1 1	21 43.57	-32 42.4	3.549	2.872	12.8	21.3	40 E	8*	11 6	9 30.59	+23 15.6	0.158	0.993	84.8	14.4	86 W	68*	34*
1 6	21 51.58	-31 55.6	3.600	2.884	12.0	21.3	38 E	7*	11 7	9 22.78	+20 41.9	0.160	0.998	82.9	14.3	88 W	66*	38*
1 11	21 59.56	-31 8.5	3.647	2.895	11.2	21.3	35 E	6*	11 8	9 15.38	+18 10.1	0.162	1.003	80.9	14.3	90 W	63	41*
1 16	22 7.52	-30 21.2	3.691	2.907	10.4	21.3	32 E	5*	11 9	9 8.34	+15 41.1	0.164	1.009	79.0	14.3	92 W	61	45*
1 21	22 15.44	-29 33.8	3.732	2.918	9.6	21.3	30 E	4*	11 10	9 1.65	+13 15.8	0.167	1.014	77.1	14.2	94 W	58	48*
									11 11	8 55.28	+10 54.7	0.170	1.020	75.1	14.2	95 W	56	51*
									11 12	8 49.21	+8 38.5	0.173	1.026	73.3	14.2	97 W	54	54*
12 27	16 2.59	-21 53.0	3.590	2.810	10.8	21.1	32 W	14*	11 14	8 37.85	+4 22.2	0.181	1.038	69.6	14.2	101 W	49	59*
1 6	16 18.09	-22 5.2	3.452	2.759	13.0	21.1	39 W	17*	11 16	8 27.43	+0 28.6	0.189	1.050	66.2	14.2	104 W	45	63*
1 16	16 33.62	-22 9.7	3.300	2.707	15.1	21.0	46 W	18*	11 18	8 17.79	-3 2.2	0.199	1.063	63.0	14.3	107 W	42	67
1 26	16 49.09	-22 5.7	3.137	2.652	17.1	20.9	52 W	20*	11 20	8 8.82	-6 10.7	0.210	1.076	60.0	14.3	109 W	39	70
2 5	17 4.40	-21 52.1	2.962	2.596	19.0	20.8	59 W	21*	11 22	8 0.41	-8 58.2	0.221	1.090	57.3	14.4	112 W	36	73
2 15	17 19.43	-21 28.1	2.779	2.538	20.8	20.7	66 W	22*	11 24	7 52.49	-11 26.4	0.233	1.103	54.7	14.5	114 W	34	75
2 25	17 34.05	-20 52.5	2.590	2.477	22.4	20.5	72 W	23*	11 26	7 44.98	-13 36.9	0.246	1.118	52.4	14.5	116 W	31	78
3 7	17 48.12	-20 4.1	2.396	2.415	23.8	20.3	79 W	24*	11 28	7 37.84	-15 31.3	0.259	1.132	50.2	14.6	118 W	29	80
3 17	18 1.48	-19 1.5	2.201	2.351	25.0	20.1	86 W	25*	11 30	7 31.03	-17 11.1	0.273	1.147	48.2	14.7	120 W	28	81
3 27	18 13.90	-17 42.7	2.005	2.285	25.9	19.9	93 W	27*	12 2	7 24.51	-18 37.7	0.287	1.162	46.3	14.8	122 W	26	83
4 6	18 25.18	-16 5.7	1.812	2.216	26.4	19.6	100 W	29*	12 4	7 18.26	-19 52.1	0.301	1.177	44.6	14.9	123 W	25	84
4 16	18 35.03	-14 7.3	1.624	2.146	26.5	19.3	107 W	31*	12 6	7 12.27	-20 55.7	0.316	1.193	43.0	14.9	124 W	24	85
4 21	18 39.30	-12 59.0	1.533	2.110	26.4	19.1	111 W	32*	12 8	7 6.54	-21 49.2	0.331	1.208	41.5	15.0	126 W	23	86
4 26	18 43.09	-11 43.9	1.444	2.074	26.2	19.0	114 W	33*	12 10	7 1.07	-22 33.7	0.347	1.224	40.1	15.1	127 W	22	87
5 1	18 46.33	-10 21.5	1.358	2.037	25.9	18.8	118 W	35	12 12	6 55.84	-23 10.0	0.363	1.240	38.9	15.2	128 W	22	87
5 6	18 48.97	-8 50.9	1.274	1.999														

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°
9082 Leonardmartin (continuation)										498143 2007 TR₆₅ (continuation)									
2 5	17 16.71	-26 54.7	2.670	2.268	21.1	18.9	56 W	15*	49*	2 5	18 31.46	+ 4 34.5	0.677	0.700	91.4	20.5	45 W	36*	21*
2 15	17 36.77	-28 36.6	2.514	2.219	23.0	18.8	61 W	14*	55*	2 10	18 55.55	- 2 49.5	0.680	0.648	95.9	20.6	41 W	28*	24*
2 25	17 57.52	-30 20.1	2.355	2.170	24.8	18.7	67 W	12*	61*	2 15	19 23.16	-10 16.7	0.699	0.601	98.6	20.6	37 W	20*	26*
3 7	18 19.06	-32 6.8	2.197	2.121	26.5	18.5	72 W	11*	66*	2 20	19 54.83	-17 8.2	0.738	0.560	98.3	20.5	34 W	12*	27*
3 17	18 41.47	-33 58.3	2.040	2.072	28.0	18.4	78 W	9*	70*	2 25	20 30.41	-22 40.6	0.797	0.528	94.4	20.4	32 W	4*	26*
3 27	19 4.90	-35 56.3	1.886	2.024	29.3	18.2	83 W	7*	73*	2 27	20 45.47	-24 23.5	0.826	0.519	91.9	20.3	32 W	1*	25*
4 6	19 29.55	-38 2.5	1.739	1.977	30.4	18.0	88 W	4*	75*	3 1	21 0.82	-25 47.2	0.858	0.513	88.9	20.2	31 W	—	25*
4 11	19 42.40	-39 9.2	1.669	1.953	30.9	17.9	90 W	3*	75*	3 3	21 16.29	-26 51.1	0.892	0.508	85.5	20.2	31 W	—	23*
4 16	19 55.65	-40 18.5	1.600	1.930	31.3	17.8	93 W	2*	75*	3 5	21 31.70	-27 35.6	0.928	0.506	81.7	20.1	30 W	—	22*
4 21	20 9.32	-41 30.3	1.535	1.907	31.7	17.7	95 W	1*	74*	3 7	21 46.89	-28 1.4	0.966	0.507	77.8	20.1	30 W	—	21*
4 26	20 23.47	-42 44.7	1.472	1.885	32.0	17.6	97 W	—	73*	3 9	22 1.69	-28 9.9	1.006	0.511	73.8	20.0	30 W	—	20*
5 1	20 38.14	-44 1.5	1.412	1.863	32.2	17.5	99 W	—	72*	3 11	22 15.99	-28 2.9	1.046	0.517	69.8	20.0	29 W	—	19*
5 6	20 53.36	-45 20.4	1.355	1.841	32.5	17.4	101 W	—	71	3 13	22 29.68	-27 42.3	1.086	0.525	65.8	20.0	29 W	—	18*
5 11	21 9.18	-46 41.2	1.301	1.820	32.7	17.2	103 W	—	69	3 15	22 42.71	-27 10.1	1.127	0.535	61.9	20.0	28 W	—	17*
5 16	21 25.60	-48 3.2	1.251	1.800	32.9	17.1	105 W	—	68	3 17	22 55.04	-26 28.2	1.167	0.547	58.2	20.0	28 W	—	16*
5 21	21 42.66	-49 25.7	1.205	1.780	33.1	17.0	106 W	—	67	3 19	23 6.68	-25 38.5	1.207	0.562	54.8	20.1	27 W	—	15*
5 26	22 0.36	-50 47.8	1.163	1.760	33.2	16.9	108 W	—	65	3 21	23 17.64	-24 42.6	1.247	0.577	51.5	20.1	27 W	—	14*
5 31	22 18.68	-52 8.4	1.124	1.741	33.4	16.9	109 W	—	64	3 23	23 27.95	-23 42.0	1.286	0.594	48.4	20.1	26 W	—	13*
6 5	22 37.55	-53 26.7	1.089	1.723	33.6	16.8	110 W	—	63	3 25	23 37.66	-22 37.8	1.324	0.612	45.6	20.2	26 W	—	13*
6 10	22 56.87	-54 41.6	1.057	1.706	33.8	16.7	111 W	—	61	3 27	23 46.80	-21 31.1	1.361	0.631	43.0	20.2	26 W	—	12*
6 15	23 16.49	-55 52.2	1.029	1.689	34.1	16.6	111 W	—	60	3 29	23 55.42	-20 22.8	1.398	0.651	40.6	20.3	25 W	—	12*
6 20	23 36.22	-56 57.5	1.004	1.673	34.3	16.5	112 W	—	59	3 31	0 3.57	-19 13.4	1.433	0.671	38.5	20.4	25 W	—	12*
6 25	23 55.84	-57 57.0	0.982	1.659	34.6	16.5	112 W	—	58	4 2	0 11.29	-18 3.6	1.467	0.692	36.5	20.4	24 W	—	11*
6 30	0 15.09	-58 50.5	0.963	1.645	34.9	16.4	112 W	—	57	4 4	0 18.62	-16 53.7	1.500	0.713	34.7	20.5	24 W	—	11*
7 5	0 33.66	-59 38.2	0.947	1.632	35.2	16.4	112 W	—	56	4 6	0 25.60	-15 44.1	1.533	0.735	33.0	20.5	24 W	—	11*
7 10	0 51.24	-60 20.4	0.932	1.620	35.5	16.4	112 W	—	56	4 11	0 41.73	-12 53.0	1.609	0.789	29.6	20.7	23 W	—	11*
7 15	1 7.53	-60 57.6	0.920	1.609	35.8	16.3	112 W	—	55	4 16	0 56.30	-10 7.9	1.678	0.843	27.0	20.9	22 W	—	12*
7 20	1 22.24	-61 30.4	0.909	1.599	36.0	16.3	112 W	—	54	4 21	1 9.65	-7 29.7	1.741	0.897	25.2	21.0	22 W	—	13*
7 25	1 35.14	-61 59.4	0.899	1.590	36.2	16.3	112 W	—	54	4 26	1 22.02	-4 58.9	1.798	0.949	23.8	21.2	22 W	—	14*
7 30	1 46.01	-62 25.3	0.890	1.583	36.4	16.2	112 W	—	54	5 1	1 33.63	-2 35.1	1.849	1.000	23.0	21.3	23 W	—	15*
8 4	1 54.62	-62 48.4	0.881	1.577	36.5	16.2	112 W	—	53	5 6	1 44.61	-0 18.2	1.894	1.050	22.6	21.5	24 W	—	16*
8 9	2 0.77	-63 8.7	0.874	1.572	36.6	16.2	113 W	—	53	31869 2000 EF₁₀₁									
8 14	2 4.30	-63 25.5	0.866	1.568	36.5	16.2	113 W	—	53	12 27	16 2.80	-21 16.5	2.579	1.829	16.8	18.8	33 W	15*	23*
8 19	2 5.13	-63 37.6	0.859	1.566	36.4	16.1	113 W	—	52	1 6	16 29.55	-22 45.8	2.498	1.803	18.9	18.7	36 W	15*	27*
8 24	2 3.22	-63 43.5	0.853	1.564	36.2	16.1	114 W	—	52	1 16	16 57.16	-24 0.7	2.414	1.779	20.9	18.7	40 W	15*	32*
8 29	1 58.61	-63 41.1	0.847	1.565	36.0	16.1	115 W	—	52	1 26	17 25.50	-24 59.3	2.329	1.756	22.8	18.6	44 W	14*	36*
9 3	1 51.46	-63 27.7	0.842	1.566	35.6	16.1	115 W	—	53	2 5	17 54.44	-25 40.4	2.244	1.736	24.7	18.6	47 W	13*	41*
9 5	1 47.96	-63 18.6	0.840	1.567	35.5	16.1	116 W	—	53	2 15	18 23.79	-26 2.8	2.159	1.717	26.5	18.5	51 W	13*	45*
9 7	1 44.12	-63 7.0	0.839	1.568	35.3	16.0	116 W	—	53	2 25	18 53.30	-26 6.4	2.074	1.701	28.2	18.5	54 W	12*	48*
9 9	1 40.00	-62 52.7	0.837	1.569	35.1	16.0	116 W	—	53	3 7	19 22.75	-25 51.3	1.991	1.687	29.9	18.4	58 W	12*	52*
9 11	1 35.62	-62 35.6	0.836	1.571	34.9	16.0	117 W	—	53	3 17	19 51.89	-25 18.5	1.910	1.676	31.4	18.4	61 W	11*	55*
9 13	1 31.03	-62 15.4	0.835	1.573	34.7	16.0	117 W	—	54	3 27	20 20.46	-24 29.7	1.830	1.667	32.7	18.3	65 W	11*	59*
9 15	1 26.29	-61 51.9	0.834	1.575	34.5	16.0	117 W	—	54	4 6	20 48.26	-23 27.0	1.751	1.662	34.0	18.2	68 W	11*	62*
9 17	1 21.42	-61 25.2	0.833	1.577	34.3	16.0	118 W	—	55	4 16	21 15.09	-22 13.1	1.675	1.659	35.0	18.2	72 W	12*	66*
9 19	1 16.49	-60 55.0	0.833	1.579	34.1	16.0	118 W	—	55	4 26	21 40.77	-20 51.3	1.600	1.659	35.9	18.1	75 W	13*	69*
9 21	1 11.53	-60 21.2	0.833	1.582	33.9	16.0	119 W	—	56	5 6	22 5.17	-19 24.8	1.527	1.662	36.6	18.0	79 W	14*	73*
9 23	1 6.59	-59 43.9	0.834	1.584	33.7	16.0	119 W	—	56	5 16	22 28.12	-17 57.2	1.455	1.668	37.0	17.9	83 W	15*	76*
9 25	1 1.71	-59 3.1	0.834	1.587	33.5	16.0	119 W	—	57	5 26	22 49.45	-16 31.9	1.384	1.676	37.1	17.8	87 W	17*	79*
9 27	0 56.93	-58 18.6	0.836	1.591	33.2	16.0	120 W	—	58	6 5	23 9.01	-15 12.4	1.315	1.687	36.9	17.7	92 W	20*	79
9 29	0 52.29	-57 30.5	0.837	1.594	33.0	16.0	120 W	—	58	6 15	23 26.53	-14 2.1	1.247	1.687	36.3	17.6	97 W	23*	78
10 1	0 47.81	-56 39.0	0.839	1.597	32.8	16.0	120 W	—	59	6 25	23 41.73	-13 4.2	1.180	1.718	35.3	17.5	103 W	27*	77
10 3	0 43.52	-55 44.0	0.842	1.601	32.6	16.0	120 W	—	60	7 5	23 54.27	-12 21.3	1.117	1.736	33.7	17.3	109 W	30*	76
10 8	0 33.77	-53 12.6	0.851	1.611	32.2	16.0	121 E	—	63	7 15	0 3.72	-11 55.8	1.056	1.757	31.4	17.2	116 W	32*	76
10 13	0 25.59	-50 23.1	0.864	1.622	31.8	16.1	121 E	—	66	7 25	0 9.62	-11 49.0	1.002	1.779	28.3	17.0	124 W	33	76
10 18	0 19.05	-47 19.0	0.880	1.634	31.5	16.1	121 E	—	69	8 4	0 11.60	-12 0.1	0.955	1.804	24.5	16.8	133 W	33	76
10 23	0 14.12	-44 4.0	0.902	1.648	31.3	16.2	121 E	1	72	8 14	0 9.42	-12 26.5	0.920	1.829	19.8	16.6	142 W	33	76
10 28	0 10.68	-40 42.0	0.927	1.662	31.3	16.3	120 E	4	75	8 19	0 6.82	-12 43.5	0.908	1.843	17.2	16.5	147 W	32	77
11 2	0 8.60	-37 16.3	0.958	1.677	31.3	16.4	119 E	8	79	8 24	0 3.31	-13 1.5	0.900	1.856	14.5	16.4	153 W	32	77
11 7	0 7.74	-33 50.1	0.993	1.693	31.4	16.5	117 E	11	82	8 29	23 59.02	-13 19.4	0.896	1.870	11.8	16.3	158 W	32	77
11 12	0 7.98	-30 26.1	1.034	1.709	31.6	16.6	115 E	15	86	9 3	23 54.10	-13 36.0	0.898	1.885	9.2	16.3	163 W	31	78
11 17	0 9.16	-27 6.5	1.078	1.727	31.7	16.7	113 E	18	89	9 8	23 48.76	-13 49.8	0.904	1.899	7.0	16.2	167 W	31	78
11 22	0 11.17	-23 52.9	1.128	1.745	31.9	16.8	111 E	21	88	9 13	23 43.22	-13 59.7	0.917	1.914	5.8	16.2	169 W	31	