

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°
307227 2002 GE₁₂₃										12923 Zephyr (continuation)									
12 27	13 20.35	-9 54.1	1.718	1.714	33.3	21.3	73 W	35	54*	10 17	21 59.63	-21 29.5	0.286	1.168	47.3	15.1	121 E	24	85
1 6	13 39.43	-11 25.7	1.648	1.741	33.6	21.3	78 W	34	61*	10 19	22 12.21	-20 42.9	0.298	1.180	46.0	15.2	122 E	24	85
1 16	13 57.00	-12 42.0	1.576	1.770	33.6	21.2	84 W	32	67*	10 21	22 23.92	-19 55.1	0.311	1.192	44.8	15.3	122 E	25	84
1 26	14 12.75	-13 41.7	1.501	1.800	33.2	21.1	90 W	31	74*	10 23	22 34.82	-19 6.7	0.325	1.204	43.8	15.3	123 E	26	83
2 5	14 26.32	-14 23.9	1.425	1.831	32.3	21.0	97 W	31	78*	10 28	22 58.96	-17 5.8	0.363	1.235	41.7	15.6	124 E	28	81
2 15	14 37.24	-14 47.6	1.349	1.863	30.9	20.9	105 W	30	79	11 2	23 19.41	-15 8.2	0.405	1.267	40.1	15.8	125 E	30	79
2 25	14 45.05	-14 51.9	1.276	1.895	28.7	20.8	113 W	30	79	11 7	23 37.02	-13 15.8	0.451	1.300	39.0	16.1	124 E	32	77
3 7	14 49.31	-14 36.4	1.209	1.928	25.9	20.6	122 W	30	79	11 12	23 52.47	-11 29.1	0.500	1.333	38.2	16.4	124 E	34	75
3 17	14 49.69	-14 0.7	1.150	1.961	22.1	20.4	132 W	31	78	11 17	0 6.28	-9 47.9	0.553	1.367	37.6	16.6	122 E	35	74
3 27	14 46.13	-13 6.0	1.105	1.994	17.5	20.2	143 W	32	77	11 22	0 18.81	-8 11.9	0.609	1.402	37.2	16.9	121 E	37	72
4 1	14 43.00	-12 32.5	1.088	2.011	14.9	20.1	149 W	32	77	12 2	0 41.20	-5 13.3	0.729	1.471	36.5	17.3	117 E	40	69
4 6	14 39.09	-11 55.5	1.077	2.028	12.1	20.0	155 W	33	76	12 12	1 1.34	-2 29.3	0.861	1.540	36.0	17.8	113 E	43	66
4 11	14 34.53	-11 16.1	1.071	2.044	9.3	19.9	161 W	34	75	12 22	1 20.19	+0 2.6	1.002	1.609	35.5	18.2	108 E	45	64
4 16	14 29.50	-10 35.2	1.071	2.061	6.3	19.8	167 W	34	75	1 1	1 38.31	+2 23.9	1.151	1.677	34.8	18.6	103 E	47	61*
4 21	14 24.21	-9 54.1	1.077	2.077	3.6	19.7	173 W	35	74	1 11	1 56.08	+4 35.9	1.308	1.744	33.9	18.9	98 E	50	57*
4 26	14 18.86	-9 14.2	1.089	2.093	2.1	19.6	176 W	36	73	1 21	2 13.69	+6 38.9	1.471	1.810	32.9	19.2	93 E	52	53*
5 1	14 13.65	-8 36.5	1.107	2.110	3.8	19.8	172 E	36	73										
5 6	14 8.75	-8 2.2	1.132	2.126	6.3	20.0	167 E	37	72										
5 11	14 4.32	-7 32.2	1.162	2.142	8.9	20.2	161 E	37	72										
5 16	14 0.49	-7 7.1	1.199	2.158	11.4	20.4	155 E	38	71										
5 26	13 54.95	-6 33.2	1.287	2.189	15.8	20.7	144 E	38	71										
6 5	13 52.43	-6 21.1	1.393	2.220	19.2	21.0	134 E	39	70										
6 15	13 52.85	-6 28.9	1.513	2.251	21.8	21.3	125 E	39*	70										
6 25	13 55.97	-6 53.7	1.645	2.280	23.6	21.6	116 E	37*	71										
12923 Zephyr																			
12 27	13 20.66	-7 35.3	2.408	2.336	23.9	20.6	74 W	37	53*	12 27	13 20.78	-35 43.1	1.720	1.587	34.3	18.2	65 W	9	59*
1 6	13 34.07	-8 37.8	2.232	2.288	25.1	20.4	81 W	36	60*	1 1	13 34.50	-37 19.9	1.702	1.597	34.5	18.2	67 W	8	61*
1 16	13 46.96	-9 32.2	2.053	2.238	26.0	20.2	88 W	35	67*	1 6	13 48.20	-38 50.6	1.683	1.608	34.7	18.2	68 W	6	62*
1 26	13 59.13	-10 16.8	1.874	2.186	26.7	20.0	95 W	35	72*	1 11	14 1.83	-40 15.0	1.665	1.620	34.8	18.2	70 W	5	64*
2 5	14 10.37	-10 49.9	1.697	2.133	26.9	19.7	102 W	34	75	1 16	14 15.32	-41 32.8	1.645	1.633	34.9	18.2	72 W	3	65*
2 15	14 20.34	-11 9.4	1.524	2.077	26.6	19.4	110 W	34	75	1 21	14 28.61	-42 44.0	1.625	1.647	35.0	18.2	74 W	2	66*
2 25	14 28.65	-11 12.4	1.358	2.019	25.7	19.1	118 W	34	75	1 26	14 41.62	-43 48.6	1.604	1.661	35.0	18.2	76 W	1	67*
3 7	14 34.83	-10 56.2	1.201	1.960	24.0	18.7	126 W	34	75	1 31	14 54.30	-44 46.8	1.582	1.677	35.0	18.2	78 W	-	67*
3 17	14 38.28	-10 17.0	1.055	1.898	21.5	18.3	136 W	35	74	2 5	15 6.55	-45 38.6	1.559	1.693	35.0	18.1	80 W	-	68*
3 27	14 38.36	-9 11.0	0.923	1.835	17.8	17.8	146 W	36	73	2 10	15 18.27	-46 24.4	1.535	1.710	34.9	18.1	82 W	-	68*
4 6	14 34.53	-7 35.4	0.808	1.770	13.1	17.2	156 W	37	72	2 15	15 29.37	-47 4.2	1.510	1.728	34.7	18.1	85 W	-	68*
4 16	14 26.43	-5 29.5	0.712	1.704	7.8	16.7	167 W	40	69	2 20	15 39.74	-47 38.3	1.484	1.746	34.5	18.1	87 W	-	68*
4 21	14 20.86	-4 16.8	0.671	1.670	5.9	16.4	170 W	41	68	2 25	15 49.29	-48 6.9	1.457	1.765	34.1	18.1	90 W	-	68*
4 26	14 14.44	-2 59.5	0.637	1.636	6.4	16.3	170 W	42	67	3 2	15 57.92	-48 30.1	1.429	1.784	33.7	18.0	93 W	-	68
5 1	14 7.35	-1 39.6	0.607	1.602	9.2	16.3	165 E	43	66	3 7	16 5.54	-48 48.2	1.401	1.804	33.1	18.0	96 W	-	67
5 6	13 59.82	-0 19.5	0.583	1.568	13.1	16.3	159 E	45	64	3 12	16 12.02	-49 1.3	1.372	1.824	32.5	18.0	100 W	-	67
5 11	13 52.17	+0 57.9	0.563	1.533	17.4	16.3	153 E	46	63	3 17	16 17.28	-49 9.1	1.343	1.845	31.7	17.9	103 W	-	67
5 16	13 44.73	+2 9.7	0.548	1.498	21.9	16.3	146 E	47	62	3 22	16 21.22	-49 11.5	1.314	1.866	30.7	17.9	107 W	-	67
5 21	13 37.82	+3 13.4	0.536	1.464	26.5	16.4	140 E	48	61	3 27	16 23.81	-49 8.1	1.285	1.888	29.6	17.8	111 W	-	67
5 26	13 31.73	+4 7.0	0.528	1.429	30.9	16.4	134 E	49	60	4 1	16 24.98	-48 58.5	1.257	1.910	28.3	17.8	115 W	-	67
5 31	13 26.66	+4 49.6	0.522	1.394	35.2	16.5	128 E	50	59	4 6	16 24.71	-48 41.9	1.231	1.932	26.8	17.7	120 W	-	67
6 5	13 22.79	+5 20.6	0.517	1.360	39.3	16.5	122 E	50	59	4 11	16 23.02	-48 17.5	1.207	1.954	25.1	17.6	124 W	-	68
6 15	13 19.01	+5 47.4	0.510	1.293	46.9	16.6	112 E	50*	58	4 16	16 19.98	-47 44.1	1.185	1.977	23.2	17.5	129 W	-	68
6 25	13 20.69	+5 31.0	0.501	1.228	53.8	16.6	103 E	47*	58	4 21	16 15.73	-47 1.0	1.166	1.999	21.2	17.5	134 W	-	69
7 5	13 27.52	+4 37.4	0.487	1.168	60.1	16.6	95 E	43*	59	4 26	16 10.45	-46 7.4	1.151	2.022	19.0	17.4	139 W	-	70
7 15	13 39.20	+3 10.6	0.466	1.113	65.9	16.6	89 E	39*	61	5 1	16 4.39	-45 2.8	1.141	2.045	16.7	17.3	144 W	-	71
7 25	13 55.51	+1 13.5	0.437	1.067	71.4	16.5	85 E	36*	63*	5 6	15 57.80	-43 47.4	1.136	2.068	14.4	17.3	149 W	1	72
8 4	14 16.48	-1 14.2	0.401	1.031	76.5	16.5	81 E	33*	64*	5 11	15 51.00	-42 21.8	1.136	2.091	12.2	17.2	154 W	3	74
8 9	14 28.94	-2 40.9	0.381	1.017	78.7	16.4	80 E	32*	65*	5 16	15 44.26	-40 47.3	1.143	2.115	10.3	17.2	158 W	4	75
8 14	14 42.95	-4 17.4	0.359	1.007	80.8	16.3	79 E	31*	65*	5 21	15 37.88	-39 6.0	1.156	2.138	8.9	17.2	161 E	6	77
8 19	14 58.76	-6 4.9	0.337	1.000	82.4	16.2	78 E	30*	66*	5 26	15 32.06	-37 20.3	1.176	2.161	8.5	17.2	162 E	8	79
8 24	15 16.77	-8 4.8	0.315	0.996	83.6	16.1	78 E	29*	67*	5 31	15 26.97	-35 32.8	1.203	2.185	8.9	17.3	160 E	9	80
8 29	15 37.49	-10 18.5	0.292	0.997	84.2	16.0	79 E	28*	69*	6 5	15 22.70	-33 46.0	1.237	2.208	10.2	17.4	157 E	11	82
9 3	16 1.67	-12 46.6	0.271	1.001	83.9	15.8	81 E	27*	71*	6 10	15 19.31	-32 2.1	1.277	2.231	11.7	17.6	153 E	13	84

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°
102896 1999 XD₁₀										143303 2003 AF₄₀ (continuation)									
12 27	13 22.36	-16 50.4	2.810	2.645	20.5	21.0	70 W	28	57*	9 3	13 40.75	-21 55.1	3.635	3.112	14.7	21.0	52 E	2*	45*
1 6	13 33.34	-18 22.0	2.661	2.627	21.4	20.9	77 W	27	65*	9 13	13 53.52	-22 33.0	3.712	3.086	13.4	21.0	45 E	—	38*
1 16	13 43.29	-19 49.3	2.508	2.608	22.1	20.7	85 W	25	74*	9 23	14 7.05	-23 14.9	3.776	3.058	11.8	20.9	39 E	—	32*
1 26	13 51.91	-21 11.4	2.353	2.589	22.3	20.6	92 W	24	82*	10 3	14 21.30	-23 59.5	3.826	3.030	10.2	20.9	32 E	—	25*
2 5	13 58.91	-22 27.2	2.199	2.568	22.2	20.4	100 W	23	86	10 13	14 36.23	-24 45.7	3.862	3.001	8.5	20.8	26 E	—	19*
2 15	14 3.90	-23 35.5	2.049	2.547	21.5	20.2	109 W	21	88	10 23	14 51.79	-25 32.2	3.883	2.971	6.7	20.7	20 E	—	13*
2 25	14 6.49	-24 34.1	1.905	2.524	20.3	20.0	118 W	20	89	11 2	15 7.93	-26 17.8	3.888	2.940	5.0	20.6	15 E	—	8*
3 7	14 6.32	-25 20.5	1.772	2.501	18.4	19.8	127 W	20	89	11 12	15 24.63	-27 1.5	3.878	2.909	3.4	20.5	10 E	—	2*
3 17	14 3.11	-25 50.9	1.653	2.477	15.8	19.5	137 W	19	90	11 22	15 41.83	-27 42.2	3.851	2.876	2.7	20.4	8 W	—	—
3 27	13 56.85	-26 1.3	1.552	2.452	12.7	19.3	147 W	19	90	12 2	15 59.48	-28 18.8	3.810	2.843	3.4	20.4	10 W	—	4*
4 6	13 47.93	-25 48.0	1.472	2.427	9.1	19.0	157 W	19	90	12 12	16 17.53	-28 50.4	3.752	2.809	5.0	20.4	14 W	—	8*
4 11	13 42.72	-25 31.8	1.442	2.414	7.5	18.8	162 W	19	90	12 22	16 35.89	-29 16.1	3.680	2.774	6.9	20.5	20 W	1*	13*
4 16	13 37.20	-25 9.3	1.417	2.400	6.3	18.7	165 W	20	89	1 1	16 54.51	-29 35.3	3.594	2.739	8.9	20.5	25 W	4*	19*
4 21	13 31.55	-24 40.9	1.400	2.387	5.9	18.7	166 E	20	89	1 11	17 13.27	-29 47.1	3.495	2.703	10.9	20.5	31 W	6*	25*
4 26	13 25.96	-24 7.5	1.389	2.373	6.5	18.7	164 E	21	88	1 21	17 32.09	-29 51.2	3.383	2.666	12.9	20.4	37 W	7*	31*
5 1	13 20.60	-23 30.0	1.384	2.360	8.0	18.7	161 E	21	88	382838 2004 BG₈₃									
5 6	13 15.64	-22 49.6	1.386	2.346	9.9	18.8	157 E	22	87	12 27	13 22.95	-2 18.4	1.406	1.500	39.4	21.0	75 W	43	49*
5 11	13 11.22	-22 7.7	1.394	2.332	11.9	18.9	152 E	23	86	1 6	13 52.20	-4 25.0	1.321	1.474	40.7	20.8	78 W	41	54*
5 16	13 7.46	-21 25.5	1.407	2.318	14.0	19.0	146 E	24	85	1 16	14 21.85	-6 21.7	1.243	1.453	41.9	20.7	81 W	39	58*
5 21	13 4.47	-20 44.5	1.426	2.303	16.0	19.1	141 E	24	85	1 26	14 51.66	-8 5.4	1.171	1.437	42.9	20.6	83 W	37	63*
5 26	13 2.28	-20 5.7	1.449	2.289	17.9	19.1	136 E	25	84	2 5	15 21.34	-9 33.7	1.106	1.425	43.6	20.5	86 W	35	67*
5 31	13 0.92	-19 30.0	1.476	2.274	19.7	19.2	131 E	25	84	2 15	15 50.47	-10 44.9	1.046	1.419	44.2	20.4	88 W	34	71*
6 5	13 0.39	-18 58.0	1.507	2.259	21.3	19.3	126 E	26*	83	2 25	16 18.55	-11 38.6	0.991	1.418	44.2	20.2	91 W	33	74*
6 15	13 1.79	-18 7.2	1.578	2.229	24.0	19.5	117 E	26*	82	3 7	16 45.10	-12 16.0	0.939	1.423	44.0	20.1	95 W	33	76*
6 25	13 6.27	-17 35.2	1.656	2.199	26.0	19.6	108 E	24*	82	3 17	17 9.53	-12 39.3	0.891	1.433	43.3	20.0	99 W	32	77
7 5	13 13.49	-17 21.6	1.739	2.168	27.5	19.7	101 E	21*	81	3 27	17 31.23	-12 52.5	0.846	1.448	42.1	19.9	103 W	32	77
7 15	13 23.14	-17 24.8	1.824	2.137	28.3	19.8	93 E	19*	81	4 6	17 49.67	-13 0.5	0.804	1.468	40.3	19.7	108 W	32	77
7 25	13 34.94	-17 42.6	1.908	2.106	28.8	19.9	86 E	17*	79*	4 16	18 4.22	-13 8.6	0.764	1.492	37.7	19.6	114 W	32	77
8 4	13 48.65	-18 12.2	1.990	2.075	28.8	19.9	80 E	15*	74*	4 26	18 14.30	-13 23.1	0.728	1.520	34.3	19.4	122 W	32	77
8 14	14 4.09	-18 51.0	2.069	2.043	28.5	20.0	74 E	13*	68*	5 6	18 19.49	-13 49.6	0.698	1.552	29.9	19.3	130 W	31	78
8 24	14 21.11	-19 36.5	2.144	2.012	27.9	20.0	69 E	12*	63*	5 16	18 19.52	-14 32.1	0.676	1.587	24.5	19.1	139 W	30	79
9 3	14 39.60	-20 25.6	2.214	1.981	27.1	20.0	64 E	11*	57*	5 26	18 14.71	-15 32.1	0.666	1.625	18.1	18.9	150 W	29	80
9 13	14 59.49	-21 16.0	2.278	1.951	26.1	20.0	58 E	10*	52*	5 31	18 10.79	-16 7.8	0.666	1.644	14.6	18.8	156 W	29	80
9 23	15 20.70	-22 4.9	2.336	1.920	24.9	20.0	54 E	10*	48*	6 5	18 6.10	-16 46.4	0.671	1.664	11.1	18.7	162 W	28	81
10 3	15 43.17	-22 49.6	2.388	1.891	23.6	20.0	49 E	9*	43*	6 10	18 0.88	-17 27.0	0.680	1.685	7.6	18.6	167 W	28	81
10 13	16 6.84	-23 27.4	2.434	1.862	22.1	19.9	45 E	9*	39*	6 15	17 55.41	-18 8.6	0.693	1.706	4.4	18.6	173 W	27	82
10 23	16 31.62	-23 55.8	2.474	1.834	20.6	19.9	40 E	9*	34*	6 20	17 49.99	-18 50.2	0.712	1.727	2.8	18.5	175 E	26	83
11 2	16 57.39	-24 12.3	2.509	1.807	19.0	19.8	36 E	9*	30*	6 25	17 44.89	-19 31.0	0.736	1.749	4.6	18.7	172 E	25	84
11 12	17 24.05	-24 14.7	2.538	1.782	17.3	19.8	32 E	9*	26*	6 30	17 40.32	-20 10.4	0.766	1.771	7.5	19.1	167 E	25	84
11 22	17 51.40	-24 1.0	2.562	1.758	15.5	19.7	28 E	9*	21*	7 5	17 36.45	-20 47.7	0.800	1.793	10.4	19.2	161 E	24	85
12 2	18 19.29	-23 29.6	2.582	1.736	13.7	19.6	25 E	8*	17*	7 15	17 31.34	-21 55.8	0.882	1.838	15.6	19.7	151 E	23	86
12 12	18 47.53	-22 39.6	2.597	1.715	11.9	19.6	21 E	8*	13*	7 25	17 30.05	-22 54.8	0.981	1.883	19.8	20.1	141 E	22	87
12 22	19 15.91	-21 30.3	2.609	1.697	10.1	19.5	18 E	7*	9*	8 4	17 32.44	-23 45.0	1.095	1.928	23.0	20.5	132 E	21	88
1 1	19 44.25	-20 2.1	2.617	1.681	8.3	19.4	14 E	5*	5*	8 14	17 38.12	-24 26.9	1.221	1.974	25.2	20.9	124 E	21	88
1 11	20 12.41	-18 15.5	2.623	1.668	6.4	19.3	11 E	4*	1*	8 24	17 46.61	-25 0.9	1.358	2.019	26.7	21.2	116 E	20	89
1 21	20 40.25	-16 11.9	2.626	1.657	4.7	19.2	8 E	1*	—	9 3	17 57.38	-25 26.7	1.503	2.064	27.5	21.5	109 E	20	89
143303 2003 AF₄₀										175921 2000 DM₁									
12 27	13 22.64	-23 13.2	3.742	3.498	15.1	21.3	68 W	22	59*	12 27	13 22.96	-8 44.5	1.424	1.475	39.6	21.4	73 W	36	53*
1 6	13 29.76	-24 29.3	3.596	3.493	15.9	21.3	76 W	21	68*	1 6	13 48.81	-13 14.5	1.280	1.407	42.6	21.1	76 W	32	60*
1 16	13 35.63	-25 41.6	3.444	3.487	16.3	21.2	84 W	19	77*	1 16	14 18.46	-18 17.9	1.144	1.336	45.9	20.9	77 W	27	66*
1 26	13 39.99	-26 48.9	3.290	3.481	16.4	21.1	93 W	18	87*	1 26	14 53.92	-23 56.8	1.021	1.262	49.7	20.6	78 W	21	70*
2 5	13 42.62	-27 49.9	3.137	3.473	16.1	21.0	102 W	17	88	2 5	15 38.32	-30 2.8	0.915	1.184	54.2	20.4	77 W	15	71*
2 15	13 43.26	-28 42.7	2.988	3.464	15.5	20.8	111 W	16	87	2 10	16 5.17	-33 6.8	0.870	1.144	56.7	20.2	76 W	12*	70*
2 25	13 41.74	-29 24.8	2.849	3.455	14.3	20.7	120 W	16	87	2 15	16 35.85	-36 1.4	0.833	1.104	59.4	20.1	74 W	9*	67*
3 7	13 37.98	-29 53.5	2.723	3.445	12.8	20.5	130 W	15	86	2 20	17 10.72	-38 35.1	0.804	1.064	62.1	20.1	72 W	6*	64*
3 17	13 32.07	-30 5.6	2.614	3.434	10.8	20.3	140 W	15	86	2 25	17 49.70	-40 33.7	0.783	1.023	64.9	20.0	69 W	3*	61*
3 27	13 24.34	-29 58.7	2.528	3.422	8.7	20.2	149 W	15	86	2 27	18 6.29	-41 8.1	0.777	1.007	66.0	20.0	68 W	2*	59*
4 1</																			

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
175921 2000 DM₁										138978 2001 CD₃₂									
<i>(continuation)</i>										<i>(continuation)</i>									
4 11	23 11.19	-21 6.9	0.989	0.726	69.6	19.9	43 W	—	34*	4 27	5 16.94	-84 16.0	1.735	2.147	27.5	20.2	100 E	—	30*
4 16	23 32.73	-16 55.7	1.043	0.713	66.7	19.9	41 W	—	33*	4 28	5 21.46	-84 3.7	1.734	2.148	27.5	20.2	100 E	—	30*
4 21	23 52.70	-12 45.1	1.098	0.707	63.4	19.9	39 W	—	32*	4 29	5 25.91	-83 51.7	1.733	2.150	27.5	20.2	100 E	—	30*
4 26	0 11.51	-8 38.1	1.154	0.708	59.8	19.9	37 W	—	31*	4 30	5 30.30	-83 39.9	1.732	2.152	27.4	20.2	100 E	—	30*
5 1	0 29.49	-4 37.2	1.210	0.716	56.3	19.9	36 W	—	30*	5 1	5 34.65	-83 28.3	1.731	2.154	27.4	20.2	100 E	—	31*
5 6	0 46.87	-0 44.4	1.265	0.731	52.8	20.0	35 W	—	29*	5 2	5 38.95	-83 16.9	1.730	2.156	27.4	20.2	101 E	—	31*
5 11	1 3.80	+2 58.5	1.319	0.752	49.6	20.0	35 W	—	28*	5 3	5 43.23	-83 5.7	1.729	2.158	27.3	20.2	101 E	—	31*
5 16	1 20.41	+6 30.3	1.370	0.778	46.8	20.1	34 W	—	28*	5 4	5 47.48	-82 54.7	1.728	2.159	27.3	20.2	101 E	—	31*
5 26	1 52.95	+12 57.3	1.465	0.842	42.1	20.3	34 W	10*	26*	5 5	5 51.72	-82 43.9	1.728	2.161	27.3	20.2	101 E	—	31*
6 5	2 24.90	+18 34.4	1.549	0.916	38.9	20.5	35 W	14*	25*	5 6	5 55.94	-82 33.3	1.727	2.163	27.2	20.2	101 E	—	31*
6 15	2 56.47	+23 23.2	1.622	0.996	36.7	20.7	36 W	18*	23*	5 8	6 4.38	-82 12.8	1.725	2.166	27.2	20.2	102 E	—	32*
6 25	3 27.69	+27 26.9	1.683	1.077	35.3	20.9	38 W	23*	22*	5 10	6 12.82	-81 53.1	1.724	2.170	27.1	20.2	102 E	—	32*
7 5	3 58.56	+30 50.1	1.731	1.158	34.5	21.1	40 W	27*	21*	5 12	6 21.28	-81 34.1	1.723	2.173	27.0	20.2	102 E	—	32*
7 15	4 28.97	+33 37.2	1.767	1.236	34.1	21.3	43 W	32*	20*	5 14	6 29.80	-81 15.8	1.722	2.176	27.0	20.2	102 E	—	32*
7 25	4 58.74	+35 52.9	1.791	1.312	34.0	21.5	46 W	37*	19*	5 16	6 38.38	-80 58.3	1.721	2.180	26.9	20.2	103 E	—	33*
138978 2001 CD₃₂										138978 2001 CD₃₂									
12 27	13 23.96	-45 2.9	2.047	1.830	28.7	20.2	63 W	—	56*	5 18	6 47.03	-80 41.5	1.720	2.183	26.8	20.2	103 E	—	33*
1 1	13 32.88	-47 43.9	2.024	1.846	29.0	20.2	65 W	—	57*	5 20	6 55.78	-80 25.2	1.719	2.186	26.8	20.2	103 E	—	33*
1 6	13 41.95	-50 24.6	2.002	1.862	29.2	20.2	67 W	—	58*	5 22	7 4.62	-80 9.6	1.719	2.189	26.7	20.2	104 E	—	33*
1 11	13 51.17	-53 4.5	1.980	1.878	29.4	20.2	70 W	—	57*	5 24	7 13.56	-79 54.5	1.718	2.192	26.7	20.2	104 E	—	34*
1 16	14 0.58	-55 43.4	1.960	1.893	29.5	20.2	71 W	—	57*	5 26	7 22.61	-79 40.0	1.718	2.195	26.6	20.2	104 E	—	34*
1 21	14 10.18	-58 20.8	1.940	1.908	29.6	20.2	73 W	—	56*	5 31	7 45.76	-79 5.4	1.718	2.202	26.5	20.2	104 E	—	34*
1 26	14 20.02	-60 56.3	1.922	1.923	29.7	20.2	75 W	—	54*	6 5	8 9.70	-78 32.7	1.720	2.209	26.4	20.2	105 E	—	35*
1 31	14 30.12	-63 29.5	1.904	1.938	29.7	20.2	77 W	—	52*	6 10	8 34.42	-78 1.2	1.723	2.216	26.3	20.2	105 E	—	36*
2 5	14 40.54	-66 0.0	1.888	1.952	29.7	20.2	79 W	—	50*	6 15	8 59.86	-77 29.9	1.727	2.222	26.2	20.2	105 E	—	36*
2 10	14 51.32	-68 27.4	1.873	1.967	29.7	20.2	80 W	—	47*	6 20	9 25.87	-76 58.0	1.733	2.227	26.1	20.2	105 E	—	37*
2 15	15 2.51	-70 51.3	1.858	1.981	29.6	20.2	82 W	—	45*	6 25	9 52.29	-76 24.6	1.741	2.233	26.1	20.2	105 E	—	37*
2 20	15 14.22	-73 11.2	1.845	1.994	29.5	20.2	84 W	—	43	6 27	10 2.93	-76 10.6	1.745	2.235	26.1	20.2	105 E	—	38*
2 25	15 26.57	-75 26.7	1.832	2.008	29.4	20.2	85 W	—	41	6 29	10 13.59	-75 56.2	1.749	2.237	26.1	20.2	105 E	—	38*
2 27	15 31.74	-76 19.6	1.828	2.013	29.4	20.2	86 W	—	40	7 1	10 24.27	-75 41.3	1.753	2.239	26.1	20.3	105 E	—	38*
3 1	15 37.07	-77 11.8	1.823	2.018	29.3	20.2	86 W	—	39	7 3	10 34.93	-75 25.9	1.758	2.241	26.1	20.3	105 E	—	39*
3 3	15 42.57	-78 3.1	1.819	2.023	29.3	20.2	87 W	—	38	7 5	10 45.58	-75 10.0	1.763	2.243	26.1	20.3	104 E	—	39*
3 5	15 48.28	-78 53.6	1.814	2.029	29.2	20.2	87 W	—	37	7 7	10 56.20	-74 53.5	1.769	2.244	26.1	20.3	104 E	—	39*
3 7	15 54.22	-79 43.3	1.810	2.034	29.2	20.2	88 W	—	36	7 9	11 6.78	-74 36.4	1.774	2.246	26.1	20.3	104 E	—	39*
3 9	16 0.44	-80 32.1	1.806	2.039	29.1	20.2	89 W	—	35	7 11	11 17.30	-74 18.7	1.781	2.248	26.1	20.3	104 E	—	40*
3 11	16 6.98	-81 20.1	1.802	2.044	29.1	20.2	89 W	—	35	7 13	11 27.74	-74 0.4	1.787	2.249	26.1	20.3	103 E	—	40*
3 13	16 13.93	-82 7.1	1.798	2.049	29.0	20.2	90 W	—	34	7 15	11 38.11	-73 41.4	1.794	2.251	26.1	20.3	103 E	—	40*
3 15	16 21.38	-82 53.2	1.795	2.054	29.0	20.2	90 W	—	33	7 20	12 3.58	-72 51.4	1.813	2.254	26.2	20.3	102 E	—	41*
3 17	16 29.49	-83 38.2	1.791	2.058	28.9	20.2	91 W	—	32	7 25	12 28.31	-71 57.4	1.835	2.258	26.2	20.4	101 E	—	42*
3 18	16 33.84	-84 0.4	1.789	2.061	28.9	20.2	91 W	—	32	7 30	12 52.19	-70 59.7	1.859	2.261	26.3	20.4	100 E	—	43*
3 19	16 38.45	-84 22.3	1.787	2.063	28.8	20.2	91 W	—	32	8 4	13 15.19	-69 58.5	1.886	2.263	26.4	20.4	98 E	—	44*
3 20	16 43.34	-84 43.9	1.786	2.066	28.8	20.2	91 W	—	31	8 9	13 37.28	-68 54.2	1.915	2.265	26.4	20.5	96 E	—	45*
3 21	16 48.58	-85 5.3	1.784	2.068	28.8	20.2	92 W	—	31	8 14	13 58.45	-67 47.2	1.946	2.267	26.4	20.5	95 E	—	46*
3 22	16 54.24	-85 26.4	1.782	2.070	28.7	20.2	92 W	—	31	8 19	14 18.73	-66 38.1	1.980	2.268	26.5	20.6	93 E	—	47*
3 23	17 0.40	-85 47.1	1.781	2.073	28.7	20.2	92 W	—	30	8 24	14 38.15	-65 27.2	2.016	2.269	26.5	20.6	91 E	—	48*
3 24	17 7.18	-86 7.6	1.779	2.075	28.7	20.2	92 W	—	30	8 29	14 56.75	-64 14.8	2.054	2.270	26.4	20.6	89 E	—	48*
3 25	17 14.75	-86 27.7	1.777	2.077	28.7	20.2	93 W	—	30	9 3	15 14.59	-63 1.3	2.094	2.270	26.3	20.7	87 E	—	49*
3 26	17 23.31	-86 47.5	1.776	2.080	28.6	20.2	93 W	—	29	9 8	15 31.73	-61 47.1	2.136	2.270	26.2	20.7	84 E	—	50*
3 27	17 33.17	-87 6.9	1.774	2.082	28.6	20.2	93 W	—	29	9 13	15 48.23	-60 32.5	2.180	2.270	26.0	20.8	82 E	—	50*
3 28	17 44.76	-87 25.8	1.773	2.084	28.6	20.2	93 W	—	29	9 18	16 4.12	-59 17.6	2.225	2.269	25.8	20.8	80 E	—	51*
3 29	17 58.71	-87 44.2	1.771	2.086	28.5	20.2	94 W	—	28	9 23	16 19.45	-58 2.6	2.270	2.268	25.5	20.8	77 E	—	51*
3 30	18 15.99	-88 1.9	1.769	2.089	28.5	20.2	94 W	—	28*	9 28	16 34.27	-56 47.6	2.317	2.267	25.2	20.9	75 E	—	51*
3 31	18 38.07	-88 18.8	1.768	2.091	28.5	20.2	94 W	—	28*	10 3	16 48.62	-55 32.8	2.365	2.265	24.8	20.9	72 E	—	51*
4 1	19 7.26	-88 34.4	1.767	2.093	28.4	20.2	94 W	—	27*	10 8	17 2.53	-54 18.1	2.413	2.262	24.4	20.9	69 E	—	51*
4 2	19 47.00	-88 48.3	1.765	2.095	28.4	20.2	94 W	—	27*	10 13	17 16.05	-53 3.7	2.461	2.260	23.9	20.9	67 E	—	50*
4 3	20 41.49	-88 59.3	1.764	2.098	28.4	20.2	95 W	—	27*	10 18	17 29.19	-51 49.5	2.509	2.257	23.4	21.0	64 E	—	49*
4 4	21 52.51	-89 6.0	1.762	2.100	28.3	20.2	95 W	—	27*	10 23	17 41.98	-50 35.4	2.556	2.253	22.8	21.0	61 E	—	48*

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°
14309 Defoy										523679 2013 YB₃₈									
<i>(continuation)</i>										<i>(continuation)</i>									
2 5	13 59.23	-9 55.4	2.283	2.710	20.6	19.3	105 W	35	74	7 15	20 6.66	+16 0.2	1.061	1.963	18.7	20.4	142 W	61	48
2 15	14 4.39	-9 57.2	2.107	2.664	19.8	19.0	114 W	35	74	7 20	19 59.34	+16 7.6	1.086	1.994	17.8	20.4	143 W	61	48
2 25	14 7.49	-9 44.2	1.940	2.617	18.5	18.8	123 W	35	74	7 25	19 52.36	+16 2.3	1.115	2.025	17.3	20.5	144 E	61	48
3 7	14 8.19	-9 14.7	1.785	2.569	16.4	18.5	133 W	36	73	7 30	19 45.91	+15 45.8	1.150	2.056	17.1	20.6	143 E	61	48
3 17	14 6.22	-8 27.7	1.647	2.520	13.5	18.2	144 W	37	72	8 4	19 40.14	+15 19.4	1.189	2.087	17.3	20.7	142 E	60	49
3 27	14 1.52	-7 23.6	1.530	2.470	9.8	17.8	155 W	38	71	8 9	19 35.16	+14 45.0	1.233	2.117	17.7	20.8	141 E	60	49
4 6	13 54.31	-6 4.9	1.436	2.420	5.6	17.5	166 W	39	70	8 14	19 31.06	+14 4.4	1.282	2.147	18.3	20.9	138 E	59	50
4 11	13 49.94	-5 21.6	1.399	2.394	3.5	17.3	172 W	40	69	8 19	19 27.86	+13 19.3	1.335	2.176	19.0	21.1	136 E	58	51
4 16	13 45.19	-4 36.8	1.368	2.369	2.5	17.1	174 W	40	69	8 24	19 25.56	+12 31.3	1.392	2.205	19.7	21.2	133 E	58	51
4 21	13 40.23	-3 51.8	1.345	2.343	3.7	17.1	171 E	41	68	8 29	19 24.14	+11 41.8	1.453	2.234	20.5	21.4	129 E	57	52
4 26	13 35.20	-3 7.8	1.328	2.317	6.0	17.2	166 E	42	67	158091 2000 WH₅₆									
5 1	13 30.26	-2 25.9	1.318	2.291	8.6	17.3	160 E	43	66	12 27	13 24.73	-28 19.1	3.532	3.264	16.0	20.9	66 W	17	59*
5 5	13 25.57	-1 47.2	1.314	2.265	11.2	17.4	154 E	43	66	1 6	13 32.73	-30 0.3	3.397	3.262	16.8	20.8	74 W	15	67*
5 11	13 21.28	-1 12.8	1.315	2.239	13.7	17.4	148 E	44	65	1 16	13 39.45	-31 39.7	3.256	3.259	17.4	20.7	82 W	13	76*
5 16	13 17.52	-0 43.6	1.322	2.212	16.1	17.5	143 E	44	65	1 26	13 44.61	-33 16.1	3.112	3.255	17.6	20.7	89 W	12	82*
5 26	13 12.01	-0 2.8	1.350	2.159	20.6	17.6	132 E	45	64	2 5	13 47.90	-34 48.3	2.969	3.250	17.5	20.5	98 W	10	81
6 5	13 9.55	+0 13.2	1.391	2.106	24.3	17.8	121 E	45*	64	2 15	13 49.01	-36 14.3	2.829	3.244	17.0	20.4	106 W	9	80
6 15	13 10.33	+0 4.8	1.441	2.053	27.3	17.9	112 E	44*	64	2 25	13 47.64	-37 30.9	2.696	3.237	16.1	20.3	115 W	7	78
6 25	13 14.29	+0 26.0	1.496	1.999	29.6	18.0	104 E	41*	64	3 7	13 43.61	-38 34.4	2.575	3.229	14.9	20.1	123 W	6	77
7 5	13 21.21	-1 16.1	1.552	1.946	31.3	18.0	96 E	37*	65	3 17	13 36.94	-39 20.2	2.469	3.220	13.3	20.0	132 W	6	77
7 15	13 30.85	-2 22.9	1.608	1.894	32.5	18.1	89	33*	66	3 22	13 32.68	-39 34.8	2.423	3.216	12.4	19.9	136 W	5	76
7 25	13 43.00	-3 43.5	1.661	1.842	33.2	18.1	83	30*	67*	3 27	13 27.92	-39 43.2	2.382	3.211	11.5	19.8	140 W	5	76
8 4	13 57.44	-5 15.0	1.709	1.792	33.6	18.1	78 E	27*	66*	4 1	13 22.74	-39 44.9	2.347	3.205	10.7	19.8	143 W	5	76
8 14	14 14.05	-6 54.9	1.754	1.743	33.7	18.1	73 E	25*	63*	4 6	13 17.25	-39 39.8	2.318	3.200	10.0	19.7	146 W	5	76
8 24	14 32.73	-8 40.6	1.793	1.696	33.5	18.1	68 E	23*	60*	4 11	13 11.58	-39 27.6	2.295	3.194	9.4	19.6	149 E	6	77
9 3	14 53.41	-10 29.1	1.827	1.651	33.2	18.1	64	21*	56*	4 16	13 5.88	-39 8.6	2.278	3.188	9.0	19.6	150 E	6	77
9 13	15 16.09	-12 17.4	1.858	1.610	32.8	18.1	60	20*	53*	4 21	13 0.30	-38 43.1	2.269	3.182	9.0	19.6	150 E	6	77
9 23	15 40.72	-14 2.2	1.884	1.571	32.2	18.0	56	19*	50*	4 26	12 54.97	-38 11.9	2.265	3.175	9.2	19.6	150 E	7	78
10 3	16 7.27	-15 39.5	1.908	1.537	31.5	18.0	53 E	18*	46*	5 1	12 50.02	-37 35.7	2.269	3.168	9.7	19.6	148 E	7	78
10 13	16 35.70	-17 5.5	1.931	1.506	30.7	17.9	50 E	18*	43*	5 6	12 45.55	-36 55.6	2.278	3.161	10.4	19.7	145 E	8	79
10 23	17 5.86	-18 16.0	1.954	1.481	29.8	17.9	48 E	18*	40*	5 11	12 41.64	-36 12.5	2.294	3.154	11.3	19.7	142 E	9	80
11 2	17 37.56	-19 7.0	1.977	1.462	28.9	17.9	45 E	18*	37*	5 16	12 38.36	-35 27.7	2.315	3.146	12.2	19.7	139 E	10	81
11 12	18 10.53	-19 35.0	2.003	1.448	27.9	17.8	43 E	18*	34*	5 21	12 35.75	-34 42.1	2.342	3.139	13.2	19.8	135 E	10	81
11 22	18 44.38	-19 37.4	2.032	1.440	26.7	17.8	41 E	18*	31*	5 26	12 33.83	-33 56.8	2.374	3.131	14.2	19.9	131 E	11	82
12 2	19 18.70	-19 12.7	2.065	1.439	25.5	17.8	39 E	19*	28*	5 31	12 32.58	-33 12.6	2.410	3.123	15.1	19.9	127 E	12*	83
12 12	19 53.06	-18 21.2	2.104	1.444	24.2	17.8	37 E	19*	25*	6 5	12 32.01	-32 30.3	2.450	3.114	16.0	20.0	122 E	12*	83
12 22	20 27.03	-17 4.4	2.148	1.455	22.8	17.9	35 E	19*	22*	6 15	12 32.81	-31 13.7	2.541	3.096	17.4	20.1	114 E	11*	85
1 1	21 0.29	-15 25.1	2.199	1.473	21.2	17.9	33 E	19*	19*	6 25	12 36.00	-30 10.2	2.641	3.078	18.5	20.2	106 E	10*	86
1 6	21 16.58	-14 28.3	2.226	1.483	20.4	17.9	32 E	19*	18*	7 5	12 41.30	-29 21.3	2.747	3.058	19.2	20.3	98 E	8*	87
1 11	21 32.61	-13 27.3	2.254	1.496	19.6	17.9	31 E	19*	17*	7 15	12 48.45	-28 47.1	2.857	3.038	19.6	20.4	90 E	5*	82*
1 16	21 48.35	-12 22.7	2.284	1.509	18.8	17.9	30 E	18*	16*	7 25	12 57.22	-28 27.1	2.966	3.016	19.5	20.4	83 E	3*	75*
1 21	22 3.81	-11 15.1	2.315	1.524	17.9	18.0	28 E	18*	14*	8 4	13 7.39	-28 19.8	3.073	2.993	19.2	20.5	76 E	1*	67*
523679 2013 YB₃₈										8 14	13 18.81	-28 24.0	3.175	2.970	18.6	20.5	69 E	-	60*
12 27	13 24.70	-33 27.7	1.210	1.196	48.3	20.4	65 W	12	59*	8 24	13 31.35	-28 37.9	3.271	2.946	17.7	20.5	63 E	-	53*
1 1	13 48.23	-35 20.5	1.195	1.178	49.0	20.4	65 W	10*	59*	9 3	13 44.90	-28 59.9	3.358	2.920	16.7	20.5	56 E	-	47*
1 6	14 12.67	-36 56.4	1.183	1.162	49.6	20.3	64 W	8*	58*	9 13	13 59.39	-29 28.3	3.436	2.894	15.5	20.5	50 E	-	41*
1 11	14 37.82	-38 13.1	1.174	1.149	50.1	20.3	64 W	7*	58*	9 23	14 14.74	-30 1.5	3.502	2.867	14.1	20.5	44 E	-	35*
1 16	15 3.44	-39 9.2	1.168	1.138	50.5	20.3	63 W	6*	57*	10 3	14 30.91	-30 37.9	3.557	2.838	12.6	20.5	38 E	-	29*
1 21	15 29.24	-39 43.7	1.163	1.130	50.8	20.3	63 W	5*	57*	10 13	14 47.87	-31 16.1	3.600	2.809	11.0	20.4	32 E	-	24*
1 26	15 54.91	-39 56.5	1.160	1.125	51.0	20.3	63 W	5*	56*	10 23	15 5.55	-31 54.4	3.628	2.779	9.4	20.3	27 E	-	19*
1 31	16 20.13	-39 48.1	1.159	1.123	51.1	20.3	63 W	4*	56*	11 2	15 23.94	-32 31.4	3.644	2.748	7.7	20.3	22 E	-	13*
2 5	16 44.62	-39 19.8	1.158	1.123	51.2	20.3	63 W	5*	56*	11 12	15 43.00	-33 5.8	3.645	2.716	6.2	20.2	17 E	-	8*
2 10	17 8.15	-38 33.1	1.158	1.127	51.2	20.3	63 W	5*	56*	11 22	16 2.66	-33 36.1	3.632	2.683	5.1	20.1	14 E	-	3*
2 15	17 30.52	-37 29.9	1.158	1.133	51.1	20.3	63 W	6*	56*	12 2	16 22.87	-34 1.0	3.605	2.650	4.5	20.0	12 W	-	2*
2 20	17 51.63	-36 12.2	1.158	1.142	50.9	20.3	64 W	6*	57*	12 12	16 43.57	-34 19.5	3.564	2.615	5.0	20.0	13 W	-	6*
2 25	18 11.43	-34 42.2	1.158	1.154	50.7	20.3	64 W	7*	58*	12 22	17 4.65	-34 30.3	3.509	2.580	6.2	20.0	16 W	-	10*
3 2	18 29.90	-33 1.7	1.157	1.169	50.4	20.3	65 W	9*	59*	1 1	17 26.04	-34 32.6	3.441	2.544	7.8	20.0	21 W	-	14*
3 7	18 47.07	-31 12.7	1.156	1.185	50.1	20.3	66 W	10*	60*	1 11	17 47.62	-34 25.6	3.360	2.507	9.7	20.0	25 W	-	19*
3 12	19 2.98	-29 16.6	1.154	1.204	49.8	20.4	68 W	11*	61*	1 21	18 9.27	-34 8.6	3.267	2.470	11.6	19.9	30 W	-	24*
3 17	19 17.66	-27 15.0	1.152	1.225	49.4	20.4	69 W	13*	63*	22283 Pytheas									
3 22	19 31.18	-25 9.0	1.148	1.248	48.9	20.4	71 W	14*	65*	12 27	13 25.09	-4 13.1	2.776	2.681	20.7	20.2	74 W	41	50*
3 27	19 43.58	-22 59.7	1.144	1.272	48.4	20.4	73 W	16*	67*	1 6	13 35.72	-4 46.7	2.629	2.671	21.4	20.1	82 W	40	57*
4 6	20 5.25	-18 34.3	1.13																

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°
22283 Pytheas										30963 Mount Banzan									
<i>(continuation)</i>																			
5 16	13 11.02	+ 4 24.5	1.605	2.455	15.9	18.6	138 E	49	60	12 27	13 25.33	+16 13.7	2.892	2.937	19.4	19.9	83 W	61	36*
5 26	13 6.53	+ 4 30.0	1.673	2.432	19.1	18.8	128 E	49	60	1 6	13 33.84	+16 34.4	2.774	2.951	19.5	19.8	90 W	62	41*
6 5	13 4.77	+ 4 13.6	1.754	2.409	21.7	19.0	118 E	49*	60	1 16	13 40.72	+17 10.9	2.655	2.963	19.2	19.8	98 W	62	44*
6 15	13 5.72	+ 3 38.0	1.843	2.384	23.7	19.1	110 E	47*	60	1 26	13 45.69	+18 3.3	2.540	2.975	18.5	19.6	107 W	63	46*
6 25	13 9.23	+ 2 46.1	1.939	2.359	25.0	19.3	101 E	43*	61	2 5	13 48.46	+19 10.3	2.432	2.986	17.4	19.5	115 W	64	45
7 5	13 15.03	+ 1 41.1	2.036	2.334	25.8	19.4	94 E	39*	62	2 15	13 48.78	+20 29.4	2.335	2.995	16.0	19.4	123 W	65	44
7 15	13 22.88	+ 0 25.5	2.134	2.308	26.1	19.4	87 E	35*	64	2 20	13 47.96	+21 12.1	2.292	3.000	15.1	19.3	128 W	66	43
7 25	13 32.56	+ 0 58.5	2.228	2.281	26.0	19.5	80 E	31*	64*	2 25	13 46.46	+21 56.0	2.253	3.004	14.2	19.3	132 W	67	42
8 4	13 43.84	+ 2 28.7	2.319	2.253	25.6	19.6	74 E	27*	62*	3 2	13 44.31	+22 40.1	2.219	3.008	13.3	19.2	136 W	68	41
8 14	13 56.59	+ 4 3.6	2.405	2.225	24.9	19.6	68 E	25*	58*	3 7	13 41.50	+23 23.6	2.189	3.012	12.4	19.1	139 W	68	41
8 24	14 10.68	+ 5 41.3	2.484	2.197	24.0	19.6	62 E	22*	54*	3 12	13 38.08	+24 5.3	2.166	3.015	11.6	19.1	142 W	69	40
9 3	14 26.00	+ 7 20.3	2.556	2.168	22.8	19.6	56 E	20*	49*	3 17	13 34.09	+24 44.2	2.148	3.019	10.9	19.0	145 W	70	39
9 13	14 42.50	+ 8 59.2	2.621	2.139	21.5	19.6	51 E	18*	44*	3 22	13 29.63	+25 19.0	2.137	3.022	10.3	19.0	147 W	70	39
9 23	15 0.12	+ 10 36.3	2.678	2.110	20.0	19.6	46 E	17*	39*	3 27	13 24.78	+25 48.9	2.132	3.025	10.1	19.0	148 W	71	38
10 3	15 18.84	+ 12 10.1	2.726	2.080	18.5	19.5	41 E	15*	34*	4 1	13 19.67	+26 12.8	2.133	3.027	10.1	19.0	148 W	71	38
10 13	15 38.64	+ 13 39.1	2.766	2.051	16.8	19.5	36 E	14*	29*	4 6	13 14.40	+26 30.3	2.141	3.030	10.4	19.0	147 W	72	37
10 23	15 59.47	+ 15 1.5	2.798	2.021	15.0	19.4	32 E	12*	24*	4 11	13 9.11	+26 40.7	2.155	3.032	10.9	19.1	145 E	72	37
11 2	16 21.32	+ 16 15.7	2.821	1.991	13.2	19.3	27 E	11*	19*	4 16	13 3.92	+26 43.8	2.176	3.034	11.6	19.1	142 E	72	37
11 12	16 44.15	+ 17 20.1	2.836	1.962	11.3	19.2	23 E	9*	14*	4 21	12 58.96	+26 39.5	2.202	3.035	12.5	19.2	139 E	72	37
11 22	17 7.90	+ 18 13.0	2.844	1.933	9.4	19.1	19 E	8*	10*	4 26	12 54.33	+26 28.2	2.234	3.037	13.4	19.2	136 E	71	38
12 2	17 32.50	+ 18 52.8	2.844	1.905	7.4	19.0	14 E	6*	5*	5 1	12 50.12	+26 10.1	2.271	3.038	14.3	19.3	132 E	71	38
12 12	17 57.88	+ 19 18.2	2.837	1.877	5.5	18.9	10 E	3*	1*	5 6	12 46.40	+25 45.9	2.313	3.039	15.2	19.4	128 E	71	38
12 22	18 23.90	+ 19 28.1	2.823	1.850	3.6	18.7	7 E	1*	—	5 16	12 40.61	+24 41.2	2.408	3.040	16.8	19.5	120 E	70	39
1 1	18 50.45	+ 19 21.5	2.804	1.824	2.1	18.6	4 E	—	—	5 26	12 37.16	+23 18.8	2.517	3.040	18.0	19.7	112 E	68	41
1 11	19 17.40	+ 18 58.0	2.779	1.799	2.1	18.5	4 W	—	—	6 5	12 36.02	+21 43.6	2.636	3.039	18.9	19.8	104 E	66*	42
1 21	19 44.60	+ 18 17.5	2.750	1.776	3.6	18.6	7 W	—	—	6 15	12 37.03	+19 59.2	2.760	3.037	19.4	19.9	96 E	60*	44
6490 1991 NR₂										363071 2000 GD₁₄₇									
12 27	13 25.21	+ 25 56.0	3.135	2.894	18.2	20.3	67 W	19	59*	12 27	13 25.42	+ 2 43.4	0.521	1.004	72.7	21.4	77 W	48	45*
1 6	13 36.27	+ 27 43.5	2.970	2.855	19.3	20.2	74 W	17	67*	12 29	13 37.63	+ 0 58.8	0.521	0.990	74.0	21.4	75 W	46*	46*
1 16	13 46.53	+ 29 30.5	2.800	2.815	20.2	20.1	81 W	15	75*	12 31	13 49.80	+ 0 45.8	0.522	0.978	75.2	21.5	74 W	44*	47*
1 26	13 55.75	+ 31 16.2	2.629	2.775	20.8	19.9	88 W	14	82*	1 2	14 1.91	+ 2 29.7	0.524	0.965	76.3	21.5	72 W	42*	47*
2 5	14 3.63	+ 32 59.8	2.458	2.733	21.0	19.8	95 W	12	83	1 4	14 13.95	+ 4 12.1	0.528	0.953	77.3	21.5	71 W	41*	48*
2 15	14 9.81	+ 34 40.2	2.290	2.691	20.9	19.6	103 W	10	81	370866 2005 EB₃₇									
2 20	14 12.13	+ 35 28.6	2.208	2.670	20.7	19.5	107 W	10	81	12 27	13 25.73	+ 8 49.2	2.050	1.986	28.1	21.2	72 W	36	52*
2 25	14 13.86	+ 36 15.4	2.128	2.648	20.4	19.4	111 W	9	80	1 6	13 47.41	+ 9 42.4	1.901	1.937	29.7	21.0	77 W	35	58*
3 2	14 14.95	+ 37 0.2	2.050	2.627	20.0	19.3	115 W	8	79	1 16	14 9.65	+ 10 20.6	1.755	1.889	31.0	20.8	82 W	35	63*
3 7	14 15.35	+ 37 42.6	1.974	2.605	19.5	19.1	119 W	7	78	1 26	14 32.37	+ 10 40.3	1.614	1.843	32.2	20.6	87 W	34	68*
3 12	14 15.00	+ 38 22.0	1.902	2.583	18.8	19.0	123 W	7	78	2 5	14 55.49	+ 10 37.9	1.480	1.800	33.2	20.4	92 W	34	72*
3 17	14 13.85	+ 38 57.6	1.832	2.561	18.0	18.9	127 W	6	77	2 10	15 7.14	+ 10 27.2	1.416	1.780	33.6	20.3	94 W	35	73*
3 22	14 11.89	+ 39 28.7	1.767	2.539	17.1	18.8	131 W	6	77	2 15	15 18.82	+ 10 9.6	1.354	1.760	33.9	20.2	96 W	35	74*
3 27	14 9.11	+ 39 54.3	1.705	2.516	16.1	18.6	136 W	5	76	2 20	15 30.48	+ 9 44.7	1.294	1.741	34.2	20.1	98 W	35	74*
4 1	14 5.54	+ 40 13.7	1.648	2.494	15.1	18.5	139 W	5	76	2 25	15 42.09	+ 9 12.1	1.237	1.722	34.4	20.0	101 W	36	73
4 6	14 1.22	+ 40 25.9	1.596	2.471	14.0	18.4	143 W	5	76	3 7	16 4.97	+ 7 43.0	1.130	1.689	34.5	19.7	105 W	37	72
4 11	13 56.24	+ 40 29.8	1.549	2.448	13.0	18.3	147 W	5	76	3 17	16 27.01	+ 5 41.1	1.035	1.659	34.4	19.5	110 W	39	70
4 16	13 50.75	+ 40 24.8	1.507	2.425	12.1	18.1	149 W	5	76	3 27	16 47.68	+ 3 8.0	0.951	1.634	33.9	19.3	114 W	42	67
4 21	13 44.90	+ 40 10.4	1.471	2.402	11.5	18.0	152 E	5	76	4 1	16 57.33	+ 1 41.1	0.914	1.623	33.6	19.2	116 W	43	66
4 26	13 38.91	+ 39 46.5	1.440	2.379	11.2	18.0	153 E	5	76	4 6	17 6.44	+ 0 8.3	0.879	1.613	33.2	19.1	118 W	45	64
5 1	13 32.98	+ 39 13.5	1.416	2.356	11.4	17.9	152 E	6	77	4 11	17 14.91	+ 1 29.3	0.848	1.605	32.7	18.9	120 W	46	63
5 6	13 27.32	+ 38 31.8	1.397	2.333	12.0	17.9	151 E	6	77	4 16	17 22.67	+ 3 10.2	0.820	1.598	32.1	18.8	122 W	48	61
5 11	13 22.12	+ 37 42.7	1.385	2.309	13.0	17.9	149 E	7	78	4 21	17 29.66	+ 4 52.7	0.795	1.592	31.5	18.8	124 W	50	59
5 16	13 17.58	+ 36 47.4	1.377	2.286	14.4	17.9	146 E	8	79	4 26	17 35.84	+ 6 35.1	0.772	1.588	30.9	18.7	126 W	52	57
5 21	13 13.83	+ 35 47.8	1.375	2.262	15.9	17.9	142 E	9	80	5 1	17 41.15	+ 8 15.3	0.753	1.585	30.1	18.6	128 W	53	56
5 26	13 10.97	+ 34 45.5	1.378	2.239	17.5	18.0	138 E	10	81	5 6	17 45.55	+ 9 51.4	0.737	1.584	29.4	18.5	130 W	55	54
5 31	13 9.06	+ 33 42.3	1.386	2.215	19.1	18.0	134 E	11	82	5 11	17 49.02	+ 11 21.2	0.723	1.584	28.6	18.5	131 W	56	53
6 5	13 8.12	+ 32 39.5	1.398	2.192	20.8	18.1	130 E	12*	83										
6 10	13 8.16	+ 31 38.5	1.413	2.169	22.3	18.1	126 E	13*	84										
6 15	13 9.17	+ 30 40.5	1.431	2.145	23.8	18.2	122 E	14*	85										
6 20	13 11.12	+ 29 46.3	1.453	2.122	25.2	18.2	117 E	14*	86										
6 25	13 13.95	+ 28 56.5	1.476	2.098	26.4	18.2	113 E	13*	87										
7 5	13 22.08	+ 27 31.1	1.528	2.052	28.5	18.3	106 E	13*	88										
7 15	13 33.19	+ 26 25.1	1.584	2.007	30.1	18.4	99 E	12*	90										
7 25	13 46.95	+ 25 37.4	1.643	1.962	31.2	18.5	92 E	11*	86*										
8 4	14 3.01	+ 25 5.2	1.702	1.918	31.9	18.5	86 E	11*	80*										
8 14	14 21.17	+ 24 45.2	1.760	1.875	32.2	18.6	80 E	10*	74*										
8 24	14 41.21	+ 24 33.9	1.817	1.834	32.2	18.6	75 E	10*	68*										
9 3	15 2.96	+ 24 27.3	1.870	1.795	31.9	18.6	70 E	10*	64*										
9 13	15 26.29	+ 24 21.9	1.922	1.758	31.3	18.6	65 E	11*	59*										
9 23	15 51.03	+ 24 13.8	1.970																

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°
370866 2005 EB₃₇										10578 1995 LH									
<i>(continuation)</i>										<i>(continuation)</i>									
5 16	17 51.57	+12 42.4	0.712	1.585	27.8	18.4	133 W	58	51	6 15	12 45.26	-0 57.0	1.964	2.459	23.3	18.8	107 E	41*	65
5 21	17 53.23	+13 52.8	0.704	1.588	27.0	18.4	135 W	59	50	6 25	12 48.12	-2 5.6	2.044	2.413	24.6	18.9	98 E	37*	66
5 26	17 54.09	+14 50.6	0.699	1.592	26.2	18.3	136 W	60	49	7 5	12 53.35	-3 25.6	2.125	2.367	25.4	19.0	91 E	32*	67
5 31	17 54.22	+15 34.2	0.696	1.598	25.4	18.3	137 W	61	48	7 15	13 0.75	-4 55.5	2.205	2.320	25.8	19.0	83 E	27*	68*
6 5	17 53.75	+16 2.5	0.697	1.605	24.7	18.3	139 W	61	48	7 25	13 10.11	-6 33.9	2.281	2.273	25.8	19.1	77 E	23*	67*
6 10	17 52.82	+16 14.5	0.700	1.613	24.1	18.3	140 W	61	48	8 4	13 21.25	-8 19.1	2.353	2.226	25.4	19.1	70 E	19*	63*
6 15	17 51.60	+16 9.7	0.705	1.622	23.6	18.3	140 W	61	48	8 14	13 34.06	-10 10.2	2.417	2.179	24.8	19.1	64 E	16*	58*
6 20	17 50.28	+15 48.4	0.714	1.633	23.2	18.3	141 E	61	48	8 24	13 48.43	-12 5.6	2.475	2.133	23.9	19.0	59 E	14*	53*
6 25	17 49.05	+15 11.4	0.726	1.645	22.9	18.4	141 E	60	49	9 3	14 4.32	-14 3.9	2.524	2.086	22.8	19.0	53 E	11*	47*
6 30	17 48.04	+14 20.1	0.741	1.658	22.8	18.4	141 E	59	50	9 13	14 21.71	-16 3.7	2.566	2.040	21.6	18.9	48 E	9*	42*
7 5	17 47.40	+13 16.0	0.760	1.672	22.9	18.5	140 E	58	51	9 23	14 40.61	-18 3.3	2.600	1.995	20.3	18.9	43 E	8*	37*
7 10	17 47.25	+12 1.0	0.781	1.688	23.1	18.6	139 E	57	52	10 3	15 1.03	-20 0.7	2.626	1.951	18.8	18.8	39 E	6*	33*
7 15	17 47.67	+10 37.2	0.806	1.704	23.5	18.7	138 E	56	53	10 13	15 23.04	-21 53.9	2.644	1.908	17.3	18.7	35 E	5*	29*
7 20	17 48.75	+9 6.9	0.835	1.721	23.9	18.8	137 E	54	55	10 23	15 46.64	-23 40.2	2.655	1.866	15.7	18.6	30 E	3*	24*
7 25	17 50.50	+7 32.2	0.867	1.740	24.5	18.9	135 E	53	56	11 2	16 11.87	-25 16.9	2.660	1.826	14.0	18.5	26 E	2*	20*
7 30	17 52.92	+5 55.3	0.903	1.759	25.1	19.1	133 E	51	58	11 12	16 38.74	-26 41.0	2.659	1.788	12.4	18.4	23 E	1*	17*
8 4	17 56.00	+4 17.7	0.943	1.778	25.7	19.2	131 E	49	60	11 22	17 7.16	-27 49.2	2.654	1.752	10.7	18.3	19 E	—	13*
8 9	17 59.73	+2 41.2	0.986	1.799	26.3	19.3	128 E	48	61	12 2	17 37.03	-28 38.4	2.645	1.720	9.2	18.2	16 E	—	10*
8 14	18 4.09	+1 6.9	1.032	1.820	26.8	19.5	126 E	46	63	12 12	18 8.14	-29 5.4	2.633	1.690	7.6	18.1	13 E	—	7*
8 19	18 9.03	-0 24.0	1.082	1.842	27.4	19.6	123 E	45	64	12 22	18 40.20	-29 7.8	2.620	1.663	6.3	18.0	11 E	—	5*
8 24	18 14.51	-1 50.5	1.135	1.865	27.8	19.8	121 E	43	66	1 1	19 12.87	-28 43.8	2.606	1.640	5.1	17.9	9 E	—	2*
9 3	18 26.88	-4 28.4	1.251	1.911	28.5	20.1	115 E	41	68	1 11	19 45.78	-27 52.8	2.593	1.622	4.3	17.8	7 E	—	—
9 13	18 40.87	-6 44.0	1.378	1.960	28.9	20.3	110 E	38	71	1 21	20 18.53	-26 35.2	2.580	1.607	4.1	17.8	7 E	—	—
9 23	18 56.16	-8 35.9	1.516	2.010	29.0	20.6	104 E	36	73	367525 2009 QZ₆									
10 3	19 12.41	-10 4.6	1.662	2.061	28.7	20.8	98 E	35	74*	12 27	13 27.34	-26 59.7	1.400	1.346	41.9	20.8	66 W	18*	58*
10 13	19 29.40	-11 11.1	1.817	2.113	28.1	21.1	93 E	34	74*	1 1	13 44.20	-29 14.1	1.367	1.333	42.7	20.7	67 W	16	60*
10 23	19 46.89	-11 56.9	1.977	2.166	27.3	21.3	87 E	33	71*	1 6	14 1.84	-31 23.8	1.335	1.319	43.5	20.7	67 W	14	61*
11 2	20 4.68	-12 23.7	2.141	2.219	26.2	21.5	81 E	33	67*	1 11	14 20.30	-33 27.4	1.306	1.307	44.2	20.7	68 W	12	62*
194459 2001 WE₂										1 16	14 39.62	-35 23.3	1.278	1.295	44.9	20.6	68 W	10	62*
12 27	13 26.01	-11 41.8	1.796	1.748	32.2	20.4	71 W	33	54*	1 21	14 59.81	-37 9.6	1.252	1.284	45.6	20.6	69 W	8	63*
1 6	13 43.47	-13 47.4	1.737	1.787	32.4	20.4	77 W	31	61*	1 26	15 20.85	-38 44.8	1.228	1.274	46.3	20.5	69 W	6*	63*
1 16	13 59.24	-15 40.4	1.673	1.828	32.2	20.4	83 W	29	69*	1 31	15 42.70	-40 7.3	1.205	1.264	47.0	20.5	70 W	5*	63*
1 26	14 12.98	-17 20.0	1.606	1.870	31.8	20.3	89 W	28	76*	2 5	16 5.26	-41 15.5	1.183	1.255	47.6	20.5	70 W	4*	62*
2 5	14 24.34	-18 46.1	1.537	1.913	30.8	20.3	96 W	26	82*	2 10	16 28.38	-42 8.1	1.163	1.248	48.2	20.4	70 W	3*	62*
2 15	14 32.87	-19 58.1	1.467	1.957	29.3	20.2	104 W	25	84	2 15	16 51.86	-42 44.2	1.144	1.241	48.7	20.4	71 W	2*	62*
2 25	14 38.12	-20 54.9	1.401	2.001	27.2	20.1	113 W	24	85	2 20	17 15.48	-43 3.0	1.126	1.236	49.2	20.4	71 W	1*	62*
3 7	14 39.74	-21 35.3	1.339	2.046	24.3	19.9	122 W	23	86	2 25	17 39.00	-43 4.5	1.109	1.231	49.7	20.3	72 W	1*	62*
3 17	14 37.46	-21 57.2	1.288	2.090	20.7	19.8	132 W	23	86	3 2	18 2.18	-42 48.7	1.092	1.228	50.2	20.3	72 W	1*	62*
3 27	14 31.46	-21 58.3	1.250	2.135	16.3	19.6	143 W	23	86	3 7	18 24.80	-42 16.3	1.076	1.225	50.6	20.3	73 W	1*	62*
4 1	14 27.24	-21 50.6	1.238	2.157	13.8	19.5	149 W	23	86	3 12	18 46.66	-41 28.3	1.060	1.224	51.0	20.3	73 W	1*	62*
4 6	14 22.37	-21 37.6	1.232	2.179	11.3	19.4	155 W	23	86	3 17	19 7.60	-40 25.7	1.044	1.224	51.3	20.2	74 W	1*	63*
4 11	14 17.02	-21 19.4	1.231	2.201	8.7	19.4	161 W	24	85	3 22	19 27.51	-39 9.9	1.028	1.225	51.6	20.2	74 W	2*	64*
4 16	14 11.36	-20 56.5	1.236	2.223	6.2	19.3	166 W	24	85	3 27	19 46.33	-37 42.2	1.013	1.227	51.8	20.2	75 W	2*	65*
4 21	14 5.62	-20 29.9	1.247	2.245	4.1	19.2	171 W	25	84	4 6	20 20.66	-34 16.4	0.981	1.235	52.2	20.1	77 W	4*	68*
4 26	14 0.00	-20 0.5	1.265	2.267	3.3	19.2	173 E	25	84	4 16	20 50.65	-30 18.0	0.948	1.247	52.3	20.1	79 W	7*	72*
5 1	13 54.67	-19 29.4	1.290	2.288	4.4	19.3	170 E	26	83	4 26	21 16.53	-25 55.2	0.913	1.264	52.1	20.0	82 W	11*	76*
5 6	13 49.78	-18 57.8	1.321	2.310	6.5	19.5	165 E	26	83	5 6	21 38.66	-21 13.9	0.877	1.283	51.6	20.0	85 W	15*	79*
5 11	13 45.46	-18 26.7	1.358	2.331	8.7	19.7	160 E	27	82	5 16	21 57.21	-16 18.7	0.839	1.306	50.7	19.9	89 W	20*	80*
5 16	13 41.82	-17 57.3	1.401	2.352	10.8	19.9	154 E	27	82	5 26	22 12.24	-11 13.3	0.801	1.332	49.4	19.8	94 W	26*	75
5 21	13 38.91	-17 30.4	1.450	2.374	12.8	20.0	149 E	27	82	6 5	22 23.68	-6 0.6	0.763	1.360	47.5	19.7	99 W	33*	70
5 26	13 36.76	-17 6.7	1.503	2.394	14.6	20.2	143 E	28	81	6 15	22 31.20	-0 44.3	0.727	1.389	45.1	19.5	104 W	41*	65
6 5	13 34.69	-16 30.0	1.625	2.436	17.6	20.5	133 E	28	81	6 20	22 33.35	+1 53.6	0.709	1.404	43.6	19.5	108 W	45*	62
6 15	13 35.46	-16 8.7	1.761	2.476	19.9	20.8	124 E	29*	80	6 25	22 34.34	+4 30.1	0.693	1.420	42.0	19.4	111 W	48*	59
6 25	13 38.75	-16 2.6	1.909	2.516	21.4	21.1	115 E	27*	80	6 30	22 34.12	+7 4.2	0.678	1.436	40.2	19.3	114 W	52*	57
7 5	13 44.19	-16 9.9	2.065	2.555	22.4	21.3	107 E	25*	80	7 5	22 32.60	+9 34.3	0.664	1.452	38.2	19.3	118 W	55	54
7 15	13 51.45	-16 28.7	2.228	2.593	22.8	21.5	99 E	23*	80	7 10	22 29.73	+11 58.5	0.653	1.468	36.2	19.2	122 W	57	52
10578 1995 LH										7 15	22 25.50	+14 14.4	0.643	1.484	34.0	19.1	125 W	59	50
12 27	13 26.44	-0 24.9	3.244	3.144	17.6	20.3	75 W	45*	47*	7 20	22 19.94	+16 19.5	0.636	1.500	31.8	19.0	129 W	61	48
1 6	13 34.78	-1 4.4	3.067	3.110	18.3	20.1	83 W	44	55*	7 25	22 13.15	+18 11.3	0.632	1.517	29.5	19.0	133 W	63	46
1 16	13 41.99	-1 35.2	2.887	3.075	18.7	20.0	92 W	43	61*	7 30	22 5.30	+19 47.3	0.631	1.533	27.4	19.0	136 W	65	44
1 26	13 47.82	-1 56.5	2.708	3.039	18.6	19.8	100 W	43	65*	8 4	21 56.62	+21 5.1	0.634	1.549	25.5	18.9	139 W	66	43
2 5	13 52.01	-2 7.7	2.532	3.003	18.1	19.6	109 W	43	66*	8 9	21 47.42	+22 3.1	0.641	1.565	23.9	18.9	141 W	67	42
2 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°
367525 2009 QZ₆										348314 2005 BC									
<i>(continuation)</i>																			
11 12	21 35.03	+12 29.9	1.375	1.829	32.2	21.2	100 E	58	50*	12 27	13 29.84	-35 50.5	1.637	1.489	36.3	21.4	64 W	9*	58*
11 17	21 42.49	+12 16.6	1.433	1.840	32.2	21.3	97 E	57	50*	1 1	13 41.60	-38 2.4	1.609	1.496	36.7	21.4	65 W	7	59*
11 22	21 50.29	+12 8.1	1.492	1.850	32.2	21.4	94 E	57	48*	1 6	13 53.63	-40 12.5	1.579	1.502	37.1	21.4	67 W	5	61*
11 27	21 58.41	+12 4.1	1.551	1.860	32.0	21.5	91 E	57	47*	1 11	14 5.94	-42 20.7	1.549	1.507	37.5	21.4	69 W	3	62*
494706 2005 GL₉																			
12 27	13 27.53	-23 41.2	2.073	1.916	28.2	20.8	67 W	21*	58*	1 16	14 18.56	-44 26.6	1.518	1.512	37.9	21.3	71 W	1	63*
1 6	13 32.18	-24 50.1	2.039	2.030	28.0	20.9	75 W	20	67*	1 21	14 31.53	-46 30.1	1.487	1.515	38.3	21.3	72 W	—	63*
1 16	13 33.93	-25 47.3	1.992	2.138	27.3	21.0	85 W	19	78*	1 26	14 44.88	-48 30.9	1.455	1.518	38.6	21.3	74 W	—	63*
1 26	13 32.39	-26 30.1	1.937	2.241	26.0	21.0	95 W	18	89*	1 31	14 58.65	-50 28.6	1.422	1.520	39.0	21.2	76 W	—	62*
2 5	13 27.29	-26 54.7	1.879	2.339	24.0	20.9	105 W	18	89	2 5	15 12.90	-52 23.1	1.388	1.520	39.3	21.2	78 W	—	61*
2 15	13 18.45	-26 56.2	1.826	2.433	21.3	20.9	116 W	18	89	2 10	15 27.64	-54 14.2	1.355	1.520	39.6	21.1	79 W	—	60*
2 25	13 6.11	-26 28.7	1.786	2.522	17.9	20.8	128 W	19	90	2 15	15 42.90	-56 1.4	1.320	1.519	39.9	21.1	81 W	—	59*
3 7	12 51.00	-25 28.5	1.765	2.608	14.0	20.7	141 W	20	89	2 20	15 58.72	-57 44.4	1.285	1.517	40.3	21.0	83 W	—	58*
3 17	12 34.35	-23 55.3	1.770	2.690	10.0	20.6	152 W	21	88	2 25	16 15.13	-59 23.0	1.250	1.515	40.6	21.0	84 W	—	56*
3 27	12 17.74	-21 55.0	1.808	2.769	6.9	20.6	161 E	23	86	3 2	16 32.15	-60 56.9	1.214	1.511	40.9	20.9	86 W	—	55*
4 6	12 2.65	-19 39.1	1.880	2.844	6.6	20.7	161 E	25	84	3 7	16 49.80	-62 25.9	1.177	1.507	41.1	20.9	88 W	—	53*
4 16	11 50.12	-17 20.7	1.985	2.917	8.9	21.0	153 E	28	81	3 12	17 8.05	-63 49.9	1.140	1.501	41.4	20.8	89 W	—	52*
4 26	11 40.67	-15 11.6	2.121	2.986	11.7	21.3	143 E	30	79	3 17	17 26.88	-65 8.5	1.103	1.495	41.7	20.7	91 W	—	51*
390802 2004 GS₁₉																			
12 27	13 28.95	+20 9.1	2.337	2.437	23.7	21.4	84 W	65*	32*	3 22	17 46.21	-66 21.7	1.065	1.488	42.0	20.6	92 W	—	50*
1 6	13 42.69	+20 19.6	2.198	2.409	24.1	21.2	90 W	65	36*	3 27	18 6.00	-67 29.6	1.027	1.480	42.3	20.6	94 W	—	49*
1 16	13 55.24	+20 47.0	2.061	2.380	24.2	21.1	96 W	66	40*	4 1	18 26.14	-68 32.2	0.988	1.471	42.5	20.5	95 W	—	47*
1 26	14 6.28	+21 32.3	1.928	2.351	24.1	20.9	103 W	67	41*	4 6	18 46.49	-69 29.8	0.949	1.461	42.8	20.4	97 W	—	47*
2 5	14 15.42	+22 35.4	1.800	2.321	23.6	20.7	109 W	68	41*	4 11	19 6.86	-70 23.1	0.909	1.450	43.1	20.3	99 W	—	46
2 15	14 22.20	+23 55.5	1.680	2.291	22.8	20.5	116 W	69	40	4 16	19 27.01	-71 12.4	0.869	1.439	43.3	20.2	100 W	—	45
2 25	14 26.10	+25 29.5	1.571	2.261	21.7	20.3	122 W	70	39	4 18	19 34.96	-71 31.1	0.852	1.434	43.4	20.1	101 W	—	44
3 2	14 26.81	+26 19.8	1.520	2.245	21.1	20.2	125 W	71	38	4 20	19 42.82	-71 49.4	0.836	1.429	43.5	20.1	101 W	—	44
3 7	14 26.62	+27 11.3	1.473	2.229	20.4	20.1	128 W	72	37	4 22	19 50.58	-72 7.3	0.820	1.424	43.6	20.0	102 W	—	44
3 12	14 25.48	+28 2.5	1.429	2.214	19.7	20.0	131 W	73	36	4 24	19 58.22	-72 24.9	0.803	1.419	43.7	20.0	103 W	—	44
3 17	14 23.34	+28 52.0	1.390	2.198	19.1	19.9	134 W	74	35	4 26	20 5.73	-72 42.2	0.787	1.414	43.8	19.9	103 W	—	43
3 22	14 20.22	+29 37.9	1.354	2.182	18.5	19.8	136 W	75	34	4 28	20 13.08	-72 59.3	0.770	1.408	43.9	19.9	104 W	—	43
3 27	14 16.15	+30 18.3	1.323	2.166	18.1	19.7	138 W	75	34	4 30	20 20.25	-73 16.2	0.754	1.402	44.0	19.8	105 W	—	43
4 1	14 11.19	+30 51.4	1.296	2.150	17.9	19.7	139 W	76	33	5 2	20 27.22	-73 33.2	0.737	1.397	44.1	19.8	105 W	—	42
4 6	14 5.45	+31 15.4	1.274	2.135	17.8	19.6	139 W	76	33	5 4	20 33.97	-73 50.3	0.720	1.391	44.2	19.7	106 W	—	42
4 11	13 59.09	+31 28.4	1.257	2.119	18.0	19.6	139 W	76	33	5 6	20 40.46	-74 7.5	0.703	1.385	44.3	19.6	107 W	—	42
4 16	13 52.31	+31 28.9	1.244	2.103	18.5	19.5	138 W	76	33	5 8	20 46.66	-74 25.1	0.687	1.379	44.4	19.6	107 W	—	42
4 21	13 45.33	+31 15.9	1.237	2.087	19.2	19.5	137 E	76	33	5 10	20 52.54	-74 42.9	0.670	1.372	44.5	19.5	108 W	—	41
4 26	13 38.41	+30 49.1	1.233	2.071	20.1	19.5	135 E	76	33	5 12	20 58.05	-75 1.3	0.653	1.366	44.5	19.5	109 W	—	41
5 1	13 31.76	+30 8.5	1.235	2.055	21.2	19.6	133 E	75	34	5 14	21 3.16	-75 20.1	0.636	1.359	44.6	19.4	109 W	—	41
5 6	13 25.59	+29 14.6	1.240	2.039	22.3	19.6	130 E	74	35	5 16	21 7.82	-75 39.7	0.619	1.353	44.7	19.3	110 W	—	40
5 11	13 20.07	+28 8.5	1.250	2.023	23.6	19.6	127 E	73	36	5 18	21 11.96	-75 59.9	0.602	1.346	44.7	19.3	111 W	—	40
5 16	13 15.35	+26 51.3	1.263	2.007	24.8	19.7	124 E	72	37	5 20	21 15.52	-76 21.0	0.585	1.339	44.8	19.2	111 W	—	40
5 21	13 11.52	+25 24.4	1.280	1.992	26.0	19.7	120 E	70	39	5 22	21 18.43	-76 42.9	0.567	1.332	44.9	19.1	112 W	—	39
5 26	13 8.61	+23 49.4	1.299	1.976	27.2	19.8	117 E	69	40	5 24	21 20.58	-77 5.8	0.550	1.325	44.9	19.0	113 W	—	39
5 31	13 6.64	+22 7.7	1.322	1.961	28.3	19.8	114 E	67	42	5 26	21 21.85	-77 29.8	0.533	1.318	45.0	19.0	113 W	—	39
6 5	13 5.60	+20 20.7	1.347	1.946	29.3	19.9	110 E	65*	44	5 27	21 22.12	-77 42.2	0.525	1.314	45.0	18.9	114 W	—	38
6 10	13 5.45	+18 29.4	1.374	1.930	30.2	19.9	107 E	63*	46	5 28	21 22.10	-77 54.8	0.516	1.310	45.0	18.9	114 W	—	38
6 15	13 6.16	+16 34.8	1.403	1.916	31.0	20.0	104 E	60*	47	5 29	21 21.78	-78 7.8	0.508	1.307	45.0	18.8	114 W	—	38
6 20	13 7.68	+14 37.9	1.434	1.901	31.7	20.0	100 E	56*	49	5 30	21 21.13	-78 21.0	0.499	1.303	45.0	18.8	115 W	—	38
6 25	13 9.96	+12 39.5	1.465	1.886	32.3	20.1	97 E	52*	51	5 31	21 20.11	-78 34.5	0.490	1.299	45.1	18.7	115 W	—	37
7 5	13 16.57	+ 8 40.2	1.532	1.858	33.2	20.2	91 E	45*	55	6 1	21 18.68	-78 48.2	0.482	1.295	45.1	18.7	115 W	—	37
7 15	13 25.65	+ 4 40.3	1.602	1.831	33.6	20.2	86 E	39*	59	6 2	21 16.81	-79 2.1	0.473	1.291	45.1	18.7	116 W	—	37
7 25	13 36.88	+ 0 42.3	1.673	1.805	33.7	20.3	80 E	33*	62*	6 3	21 14.44	-79 16.3	0.465	1.288	45.1	18.6	116 W	—	37
8 4	13 50.05	- 3 11.8	1.744	1.781	33.4	20.4	75 E	28*	63*	6 4	21 11.53	-79 30.6	0.456	1.284	45.1	18.6	116 W	—	36
8 14	14 5.00	- 7 0.8	1.815	1.758	32.9	20.4	70 E	23*	62*	6 5	21 8.00	-79 45.0	0.448	1.280	45.1	18.5	117 W	—	36
8 24	14 21.66	-10 43.2	1.884	1.738	32.1	20.4	66 E	20*	59*	6 6	21 3.81	-79 59.4	0.439	1.276	45.1	18.5	117 W	—	36
9 3	14 39.96	-14 17.7	1.952	1.719	31.1	20.5	62 E	16*	55*	6 7	20 58.87	-80 13.7	0.431	1.272	45.1	18.4	117 W	—	36
9 13	14 59.93	-17 42.7	2.017	1.703	29.9	20.5													

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°
348314 2005 BC (continuation)									348314 2005 BC (continuation)								
7 4	15 30.52	-69 9.5	0.220	1.157	46.1	16.8	125 E	— 47	1 13	10 27.65	-17 14.5	0.354	1.213	42.9	17.8	123 W	28 81
7 5	15 25.40	-67 30.4	0.214	1.152	46.4	16.7	125 E	— 48	1 15	10 19.39	-19 16.9	0.356	1.222	41.4	17.8	125 W	26 83
7 6	15 20.88	-65 44.2	0.207	1.148	46.7	16.7	125 E	— 50	1 17	10 10.80	-21 13.2	0.358	1.230	40.1	17.8	126 W	24 85
7 7	15 16.90	-63 50.7	0.202	1.143	47.1	16.6	125 E	— 52	1 19	10 1.91	-23 2.5	0.362	1.239	38.9	17.8	128 W	22 87
7 8	15 13.39	-61 49.8	0.196	1.139	47.5	16.5	124 E	— 54	1 21	9 52.80	-24 43.9	0.366	1.247	37.9	17.8	129 W	20 89
7 9	15 10.31	-59 41.3	0.191	1.134	48.1	16.5	124 E	— 56	47035 1998 WS								
7 10	15 7.61	-57 25.0	0.186	1.130	48.7	16.4	123 E	— 59	12 27	13 30.66	+ 0 22.7	1.928	1.921	29.6	16.9	75 W	45* 46*
7 11	15 5.24	-55 0.9	0.181	1.125	49.4	16.4	123 E	— 61	1 6	13 41.74	- 2 3.7	1.853	1.963	29.7	16.9	81 W	43 54*
7 12	15 3.18	-52 29.1	0.177	1.121	50.2	16.3	122 E	— 64	1 16	13 50.66	- 4 23.2	1.773	2.006	29.4	16.8	89 W	41 62*
7 13	15 1.39	-49 49.7	0.173	1.116	51.1	16.3	121 E	— 66	1 26	13 57.07	- 6 36.1	1.691	2.049	28.5	16.8	96 W	38 69*
7 14	14 59.84	-47 2.9	0.169	1.111	52.1	16.3	120 E	— 69	2 5	14 0.55	- 8 42.9	1.610	2.094	27.1	16.7	105 W	36 73
7 15	14 58.50	-44 9.2	0.166	1.107	53.3	16.3	119 E	— 72	2 15	14 0.66	-10 43.4	1.532	2.139	24.9	16.5	114 W	34 75
7 16	14 57.35	-41 9.2	0.163	1.102	54.5	16.3	118 E	3* 75	2 25	13 57.01	-12 36.4	1.463	2.184	21.9	16.4	125 W	32 77
7 17	14 56.37	-38 3.6	0.161	1.098	55.9	16.3	117 E	6* 78	3 7	13 49.47	-14 19.5	1.408	2.229	18.1	16.2	136 W	31 78
7 18	14 55.54	-34 53.2	0.159	1.093	57.3	16.3	115 E	9* 81	3 17	13 38.27	-15 48.8	1.372	2.274	13.6	16.1	147 W	29 80
7 19	14 54.84	-31 39.2	0.157	1.089	58.9	16.3	114 E	12* 84	3 22	13 31.54	-16 26.9	1.363	2.297	11.2	16.0	153 W	29 80
7 20	14 54.27	-28 22.6	0.157	1.084	60.5	16.3	112 E	15* 88	3 27	13 24.27	-17 0.1	1.360	2.320	8.8	15.9	159 W	28 81
7 21	14 53.79	-25 4.7	0.156	1.080	62.2	16.3	110 E	18* 89	4 1	13 16.65	-17 28.1	1.365	2.342	6.6	15.8	164 W	28 81
7 22	14 53.41	-21 46.7	0.156	1.075	63.9	16.4	108 E	21* 86	4 6	13 8.90	-17 50.9	1.376	2.365	4.9	15.8	168 W	27 82
7 23	14 53.11	-18 30.0	0.157	1.070	65.7	16.4	106 E	24* 82	4 11	13 1.24	-18 8.7	1.395	2.387	4.5	15.8	169 E	27 82
7 24	14 52.88	-15 15.6	0.158	1.066	67.5	16.5	104 E	27* 79	4 16	12 53.89	-18 22.0	1.422	2.410	5.5	15.9	167 E	27 82
7 25	14 52.70	-12 4.8	0.160	1.061	69.2	16.6	102 E	30* 76	4 21	12 47.03	-18 31.6	1.455	2.432	7.2	16.1	162 E	26 83
7 26	14 52.59	- 8 58.4	0.162	1.057	71.0	16.7	100 E	32* 73	4 26	12 40.81	-18 38.2	1.496	2.454	9.2	16.2	157 E	26 83
7 27	14 52.51	+ 5 57.3	0.164	1.052	72.7	16.7	98 E	35* 70	5 1	12 35.35	-18 42.9	1.542	2.476	11.1	16.4	152 E	26 83
7 28	14 52.48	+ 3 2.1	0.167	1.048	74.3	16.8	97 E	37* 67	5 6	12 30.71	-18 46.3	1.595	2.498	12.9	16.6	146 E	26 83
7 29	14 52.47	+ 0 13.4	0.170	1.043	75.9	16.9	95 E	40* 64	5 16	12 24.00	-18 52.8	1.716	2.542	16.1	16.9	136 E	26 83
7 30	14 52.50	+ 2 28.6	0.174	1.039	77.4	17.0	93 E	42* 62	5 26	12 20.67	-19 2.9	1.854	2.585	18.4	17.2	126 E	26* 83
7 31	14 52.54	+ 5 3.6	0.178	1.034	78.9	17.1	91 E	44* 59	6 5	12 20.38	-19 19.7	2.005	2.627	20.0	17.4	117 E	25* 83
8 1	14 52.61	+ 7 31.5	0.182	1.030	80.2	17.2	90 E	46* 56	6 15	12 22.73	-19 44.5	2.165	2.669	21.1	17.6	109 E	22* 84
8 2	14 52.68	+ 9 52.5	0.186	1.025	81.5	17.3	88 E	48* 54	6 25	12 27.32	-20 17.8	2.331	2.710	21.6	17.9	101 E	18* 84
8 3	14 52.76	+12 6.6	0.191	1.021	82.7	17.3	86 E	49* 52	7 5	12 33.74	-20 59.1	2.500	2.750	21.7	18.0	93 E	14* 85*
8 4	14 52.85	+14 14.0	0.196	1.017	83.9	17.4	85 E	51* 50	7 15	12 41.72	-21 47.9	2.670	2.790	21.3	18.2	86 E	10* 80*
8 6	14 53.02	+18 9.9	0.207	1.008	85.9	17.6	82 E	53* 46*	7 25	12 50.98	-22 43.3	2.838	2.829	20.6	18.3	79 E	7* 73*
8 8	14 53.16	+21 42.2	0.218	0.999	87.6	17.8	80 E	56* 42*	8 4	13 1.32	-23 44.2	3.003	2.867	19.7	18.5	73 E	4* 65*
8 10	14 53.25	+24 53.6	0.229	0.991	89.1	17.9	78 E	57* 39*	8 14	13 12.60	-24 49.9	3.162	2.905	18.6	18.6	66 E	2* 58*
8 12	14 53.25	+27 46.5	0.241	0.983	90.4	18.1	76 E	58* 36*	8 24	13 24.67	-25 59.3	3.315	2.941	17.3	18.7	60 E	— 52*
8 14	14 53.15	+30 23.0	0.254	0.974	91.5	18.2	74 E	59* 33*	9 3	13 37.45	-27 11.6	3.458	2.977	15.9	18.7	54 E	— 45*
8 16	14 52.91	+32 45.2	0.266	0.966	92.3	18.3	72 E	60* 30*	9 13	13 50.86	-28 26.1	3.592	3.012	14.4	18.8	48 E	— 39*
8 18	14 52.52	+34 54.9	0.279	0.958	93.0	18.4	71 E	60* 28*	9 23	14 4.83	-29 41.9	3.715	3.046	12.8	18.8	42 E	— 33*
8 20	14 51.94	+36 53.6	0.291	0.951	93.6	18.5	70 E	60* 25*	10 3	14 19.30	-30 58.2	3.826	3.079	11.1	18.8	36 E	— 27*
8 22	14 51.17	+38 42.4	0.304	0.943	94.1	18.6	68 E	60* 23*	10 13	14 34.25	-32 14.6	3.923	3.112	9.5	18.9	31 E	— 21*
8 24	14 50.18	+40 22.4	0.317	0.936	94.4	18.7	67 E	60* 21*	10 23	14 49.60	-33 30.3	4.006	3.143	8.0	18.9	26 E	— 16*
8 26	14 48.96	+41 54.5	0.329	0.929	94.7	18.8	66 E	60* 19*	11 2	15 5.32	-34 44.8	4.074	3.174	6.7	18.9	22 E	— 11*
8 28	14 47.49	+43 19.3	0.342	0.922	94.9	18.9	65 E	59* 17*	11 12	15 21.35	-35 57.7	4.127	3.204	5.6	18.9	19 E	— 6*
8 30	14 45.76	+44 37.6	0.354	0.916	94.9	18.9	65 E	59* 15*	11 22	15 37.63	-37 8.6	4.163	3.233	5.2	18.9	17 W	— 5*
9 1	14 43.77	+45 49.8	0.366	0.909	95.0	19.0	64 E	58* 13*	12 2	15 54.10	-38 17.2	4.182	3.261	5.5	18.9	18 W	— 9*
9 3	14 41.50	+46 56.3	0.378	0.903	94.9	19.1	63 E	57* 11*	12 12	16 10.67	-39 23.4	4.185	3.288	6.3	19.0	21 W	— 14*
9 8	14 34.57	+49 19.6	0.406	0.890	94.6	19.2	62 E	55* 6*	12 22	16 27.25	-40 27.3	4.172	3.315	7.4	19.0	26 W	— 19*
9 13	14 25.82	+51 12.6	0.433	0.879	94.0	19.2	61 E	52* 1*	1 1	16 43.75	-41 29.0	4.142	3.340	8.8	19.1	31 W	— 25*
9 18	14 15.30	+52 36.6	0.457	0.870	93.2	19.3	60 E	50* —	1 11	17 0.04	-42 28.8	4.097	3.365	10.2	19.2	37 W	— 30*
9 23	14 3.28	+53 31.7	0.478	0.864	92.2	19.4	59 E	47* —	1 21	17 15.97	-43 27.3	4.037	3.389	11.5	19.2	43 W	— 36*
9 28	13 50.20	+53 57.4	0.497	0.860	91.2	19.4	59 E	44* —	316720 1998 BE7								
10 3	13 36.65	+53 53.9	0.513	0.859	90.0	19.4	59 E	40* —	12 27	13 32.96	+ 5 55.4	3.885	3.780	14.7	21.3	77 W	51* 42*
10 5	13 31.23	+53 44.6	0.519	0.859	89.5	19.4	59 E	39* —	1 6	13 38.63	+ 6 1.2	3.771	3.816	14.9	21.2	85 W	51 49*
10 7	13 25.86	+53 30.9	0.524	0.860	89.0	19.4	59 E	38* —	1 16	13 42.94	+ 6 18.3	3.654	3.852	14.8	21.2	94 W	51 54*
10 9	13 20.58	+53 12.8	0.528	0.862	88.5	19.4	60 E	36* —	1 26	13 45.70	+ 6 46.8	3.538	3.886	14.3	21.1	103 W	52 57*
10 11	13 15.42	+52 50.6	0.532	0.863	88.0	19.4	60 E	35* —	2 5	13 46.78	+ 7 25.9	3.428	3.920	13.4	21.0	113 W	52 57
10 13	13 10.39	+52 24.3	0.536	0.866	87.5	19.4	60 W	34* —	2 15	13 46.08	+ 8 14.6	3.329	3.953	12.1	20.9	123 W	53 56
10 18	12 58.58	+51 1.5	0.542	0.873	86.2	19.4	61 W	38* —	2 25	13 43.58	+ 9 10.5	3.246	3.985	10.5	20.8	133 W	54 55
10 23	12 48.03	+49 16.2	0.545	0.883	84.9	19.4	62 W	43* —	3 7	13 39.36	+10 10.5	3.183	4.017	8.6	20.7	143 W	55 54
10 28	12 38.85	+47 10.9	0.544	0.895	83.6	19.4	63 W	48* —	3 17	13 33.64	+11 10.7	3.144	4.047	6.7	20.6	152 W	56 53
11 2	12 30.96	+44 47.9	0.540	0.909	82.2	19.3	65 W	52* —	3 27	13 26.80	+12 6.5	3.133	4.077	5.2	20.6	158 W	57 52
11 7	12 24.22	+42 9.2	0.534	0.925	80.8	19.3	67 W	57* —	4 6	13 19.34	+12 53.8	3.151	4.106	4.7	20.6	160 W	58 51
11 12	12 18.37	+39 16.1	0.524	0.943	79.3	19.2	69 W	61* 2*	4 16	13 11.81	+13 29.1	3.199	4.134	5.7	20.7	156 E	58 51
11 17	12 13.18	+36 9.1	0.512	0.962</													

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°	
3198 Wallonia (continuation)									6523 Clube (continuation)									
3 2	15 3.29	+11 25.4	1.199	1.878	27.8	16.1	118 W	56 53	6 5	12 58.40	-72 20.5	0.825	1.603	32.9	17.1	121 E	-	44
3 7	15 4.72	+11 54.3	1.172	1.892	26.5	16.0	122 W	57 52	6 7	12 54.96	-72 19.6	0.825	1.598	33.3	17.1	120 E	-	44
3 12	15 5.10	+12 24.4	1.147	1.905	25.1	16.0	126 W	57 52	6 9	12 52.16	-72 17.5	0.826	1.593	33.6	17.1	120 E	-	44
3 17	15 4.40	+12 54.4	1.124	1.919	23.5	15.9	130 W	58 51	6 11	12 50.02	-72 14.2	0.826	1.589	34.0	17.1	119 E	-	44
3 22	15 2.63	+13 23.2	1.104	1.932	21.8	15.8	134 W	58 51	6 13	12 48.56	-72 10.1	0.826	1.585	34.3	17.1	118 E	-	44
3 27	14 59.83	+13 49.2	1.088	1.946	20.1	15.7	138 W	59 50	6 15	12 47.76	-72 5.3	0.827	1.581	34.6	17.1	118 E	-	44
4 1	14 56.05	+14 11.0	1.076	1.960	18.4	15.7	142 W	59 50	6 20	12 48.69	-71 51.3	0.829	1.572	35.4	17.1	116 E	-	44
4 6	14 51.40	+14 27.3	1.068	1.974	16.8	15.6	145 W	59 50	6 25	12 53.64	-71 35.4	0.833	1.564	36.0	17.1	115 E	-	44
4 11	14 46.02	+14 36.7	1.065	1.989	15.3	15.6	148 W	60 49	6 30	13 2.40	-71 18.3	0.836	1.558	36.6	17.2	114 E	-	45
4 16	14 40.10	+14 37.8	1.067	2.003	14.2	15.6	151 W	60 49	7 5	13 14.74	-70 59.3	0.841	1.552	37.1	17.2	113 E	-	45
4 21	14 33.85	+14 30.0	1.074	2.017	13.5	15.6	152 W	59 50	7 7	13 20.63	-70 51.1	0.843	1.550	37.3	17.2	113 E	-	45
4 26	14 27.50	+14 12.7	1.087	2.031	13.4	15.6	152 W	59 50	7 9	13 27.03	-70 42.3	0.845	1.549	37.4	17.2	112 E	-	45
5 1	14 21.27	+13 46.1	1.105	2.046	13.8	15.7	151 E	59 50	7 11	13 33.92	-70 32.9	0.847	1.547	37.6	17.2	112 E	-	45
5 6	14 15.36	+13 10.6	1.129	2.060	14.6	15.8	149 E	58 51	7 13	13 41.27	-70 22.8	0.849	1.546	37.7	17.2	112 E	-	46
5 11	14 9.94	+12 26.9	1.158	2.074	15.7	15.9	146 E	57 52	7 15	13 49.07	-70 11.8	0.852	1.545	37.8	17.2	111 E	-	46
5 16	14 5.15	+11 36.0	1.192	2.089	17.0	16.0	143 E	57 52	7 17	13 57.28	-69 59.8	0.855	1.544	37.9	17.2	111 E	-	46
5 21	14 1.11	+10 38.9	1.231	2.103	18.4	16.1	139 E	56 53	7 19	14 5.86	-69 46.7	0.857	1.544	38.0	17.2	111 E	-	46
5 26	13 57.86	+9 36.9	1.275	2.117	19.7	16.2	135 E	55 54	7 21	14 14.78	-69 32.3	0.860	1.543	38.1	17.2	110 E	-	46
5 31	13 55.43	+8 31.0	1.323	2.131	21.0	16.4	131 E	54 55	7 23	14 24.01	-69 16.6	0.864	1.543	38.2	17.3	110 E	-	47
6 5	13 53.81	+7 22.2	1.374	2.146	22.1	16.5	127 E	52 57	7 25	14 33.50	-68 59.2	0.867	1.543	38.3	17.3	110 E	-	47
6 10	13 52.99	+6 11.4	1.429	2.160	23.2	16.6	123 E	51 58	7 27	14 43.20	-68 40.2	0.871	1.543	38.3	17.3	110 E	-	47
6 15	13 52.94	+4 59.3	1.488	2.174	24.0	16.8	119 E	50 59	7 29	14 53.09	-68 19.3	0.874	1.544	38.4	17.3	109 E	-	48
6 25	13 54.96	+2 33.2	1.612	2.201	25.4	17.0	112 E	46 61	7 31	15 3.12	-67 56.6	0.879	1.544	38.4	17.3	109 E	-	48
7 5	13 59.49	+0 7.8	1.745	2.229	26.2	17.2	105 E	42 64	8 2	15 13.24	-67 31.8	0.883	1.545	38.4	17.3	109 E	-	48
7 15	14 6.15	+2 15.1	1.884	2.256	26.5	17.4	98 E	37 66	8 4	15 23.43	-67 4.9	0.888	1.546	38.5	17.3	109 E	-	49
7 25	14 14.63	+4 34.0	2.026	2.282	26.4	17.6	91 E	33 69	8 6	15 33.63	-66 36.0	0.893	1.547	38.5	17.3	108 E	-	49
8 4	14 24.64	+6 48.0	2.171	2.308	26.0	17.8	85 E	29 70	8 8	15 43.81	-66 4.9	0.898	1.549	38.5	17.4	108 E	-	50
8 14	14 35.98	+8 56.5	2.315	2.333	25.2	17.9	78 E	26 68	8 10	15 53.94	-65 31.7	0.903	1.551	38.5	17.4	108 E	-	50
8 24	14 48.45	+10 59.2	2.458	2.357	24.1	18.0	72 E	23 64	8 12	16 3.98	-64 56.3	0.909	1.552	38.5	17.4	108 E	-	51
9 3	15 1.92	+12 55.5	2.599	2.381	22.8	18.1	66 E	20 59	8 14	16 13.92	-64 18.8	0.916	1.555	38.5	17.4	107 E	-	52
9 13	15 16.28	+14 45.2	2.734	2.404	21.4	18.2	61 E	18 54	8 16	16 23.71	-63 39.3	0.923	1.557	38.5	17.4	107 E	-	52
9 23	15 31.44	+16 27.9	2.864	2.427	19.7	18.3	55 E	16 48	8 18	16 33.34	-62 57.7	0.930	1.559	38.4	17.4	107 E	-	53
10 3	15 47.31	+18 3.1	2.986	2.448	18.0	18.4	49 E	14 43	8 20	16 42.79	-62 14.3	0.937	1.562	38.4	17.5	106 E	-	54
10 13	16 3.82	+19 30.6	3.100	2.469	16.1	18.4	43 E	12 37	8 22	16 52.05	-61 29.0	0.945	1.565	38.4	17.5	106 E	-	55
10 23	16 20.91	+20 50.0	3.205	2.489	14.1	18.4	37 E	10 31	8 24	17 1.11	-60 42.0	0.954	1.568	38.3	17.5	106 E	-	55
11 2	16 38.49	+22 1.0	3.298	2.509	12.0	18.4	32 E	8 25	8 29	17 22.81	-58 37.5	0.977	1.576	38.2	17.6	105 E	-	57
11 12	16 56.51	+23 3.3	3.380	2.527	9.9	18.4	26 E	6 19	9 3	17 43.16	-56 24.6	1.003	1.586	38.1	17.6	104 E	-	60
11 22	17 14.88	+23 56.7	3.449	2.544	7.7	18.4	20 E	4 13	9 8	18 2.22	-54 5.3	1.033	1.597	38.0	17.7	103 E	-	62
12 2	17 33.52	+24 41.3	3.505	2.561	5.5	18.3	14 E	1 8	9 13	18 20.06	-51 41.6	1.066	1.608	37.8	17.8	102 E	-	64
12 12	17 52.36	+25 17.0	3.546	2.577	3.3	18.2	9 E	— 2	9 18	18 36.78	-49 15.3	1.103	1.621	37.7	17.9	100 E	-	67
12 22	18 11.28	+25 44.0	3.573	2.591	1.3	18.1	3 E	—	9 23	18 52.49	-46 48.0	1.143	1.635	37.3	18.0	99 E	-	69
1	18 30.22	+26 2.7	3.585	2.605	1.7	18.2	4 W	—	9 28	19 7.29	-44 21.0	1.186	1.650	37.0	18.1	98 E	1	72
1 11	18 49.07	+26 13.6	3.581	2.618	3.7	18.3	10 W	— 4	10 3	19 21.30	-41 55.4	1.233	1.665	36.7	18.2	96 E	3	74
1 21	19 7.75	+26 17.4	3.563	2.630	5.9	18.4	16 W	— 10	10 8	19 34.63	-39 32.2	1.283	1.682	36.3	18.3	94 E	5	76
6523 Clube									10 13	19 47.36	-37 11.9	1.336	1.699	35.9	18.3	92 E	8	79
12 27	13 34.79	+14 10.8	2.446	2.275	23.7	19.9	68 W	31 53	10 18	19 59.56	-34 55.0	1.392	1.717	35.5	18.4	90 E	10	80
1 6	13 48.61	+17 0.7	2.279	2.226	25.2	19.8	74 W	28 61	10 23	20 11.29	-32 41.9	1.451	1.736	35.0	18.5	88 E	12	81
1 16	14 2.19	+19 59.4	2.112	2.178	26.5	19.6	80 W	25 70	10 28	20 22.61	-30 32.5	1.512	1.755	34.4	18.6	86 E	14	80
1 26	14 15.41	+23 8.8	1.947	2.129	27.5	19.4	87 W	22 78	11 2	20 33.58	-28 27.0	1.575	1.775	33.8	18.7	84 E	17	78
2 5	14 28.13	+26 31.3	1.785	2.081	28.2	19.2	93 W	18 87	11 12	20 54.62	-24 27.0	1.708	1.816	32.4	18.9	80 E	21	72
2 15	14 40.13	+30 9.8	1.630	2.033	28.7	19.0	99 W	15 86	11 22	21 14.67	-20 41.0	1.847	1.860	30.9	19.1	75 E	24	65
2 25	14 51.10	+34 7.0	1.483	1.986	28.8	18.7	105 W	11 82	12 2	21 33.92	-17 7.3	1.990	1.904	29.2	19.3	71 E	28	58
3 7	15 0.64	+38 25.5	1.348	1.939	28.5	18.4	111 W	7 78	12 12	21 52.57	-13 44.2	2.136	1.950	27.4	19.4	66 E	31	50
3 12	15 4.69	+40 43.2	1.285	1.916	28.3	18.3	114 W	4 75	12 22	22 10.70	-10 30.2	2.282	1.997	25.5	19.6	61 E	34	43
3 17	15 8.13	+43 6.3	1.226	1.893	28.0	18.2	117 W	2 73	1 1	22 28.40	+7 24.1	2.428	2.045	23.5	19.7	56 E	35	36
3 22	15 10.83	+45 34.6	1.170	1.871	27.7	18.0	119 W	— 70	1 11	22 45.77	+4 24.7	2.570	2.093	21.4	19.8	51 E	35	29
3 27	15 12.67	+48 7.4	1.119	1.849	27.4	17.9	122 W	— 68	1 21	23 2.84	+1 31.2	2.708	2.141	19.2	19.9	46 E	34	23
4 1	15 13.48	+50 43.8	1.072	1.827	27.0	17.8	124 W	— 65	109077 2001 QR₂₅									
4 6	15 13.04	+53 22.4	1.029	1.806	26.7	17.7	126 W	— 63	12 27	13 36.21	+5 55.2	3.143	2.972	18.2	21.3	71 W	39	49
4 11	15 11.11	+56 1.1	0.991	1.785	26.5	17.5	127 W	— 60	1 6	13 45.14	+6 30.0	3.010	2.980	18.9	21.2	79 W	38	57
4 16	15 7.40	+58 37.3	0.957	1.765	26.5	17.4	128 W	— 57	1 16	13 52.78	+6 54.8	2.871	2.988	19.2	21.1	87 W	38	64
4 21	15 1.64	+61 8.3	0.928	1.746	26.5	17.3	129 W	— 55	1 26	13 58.88	+7 8.6	2.730	2.994	19.1	21.0	96 W	38	70
4 26	14 53.60	+63 30.6	0.903	1.727	26.8	17.3	129 W	— 52	2 5	14 3.21	+7 10.6	2.591	2.999	18.5	20.9	105 W	38	71
5 1	14 43.06	+65 40.9	0.882	1.708	27.2	17.2	129 W	— 50										

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°
109077 2001 QR₂₅										136874 1998 FH₇₄									
<i>(continuation)</i>										<i>(continuation)</i>									
6 15	13 3.13	0 19.0	2.463	2.978	18.6	20.8	111 E	43*	64	3 12	13 10.17	-11 47.9	1.856	2.764	10.2	19.8	150 W	33	76
6 25	13 5.07	0 49.5	2.589	2.970	19.6	20.9	102 E	40*	65	3 17	13 3.07	-10 52.6	1.859	2.803	7.9	19.7	157 W	34	75
7 5	13 8.88	1 30.8	2.719	2.960	20.0	21.0	94 E	35*	66	3 22	12 55.77	-9 54.4	1.869	2.841	5.5	19.7	164 W	35	74
7 15	13 14.39	2 21.1	2.848	2.950	20.1	21.1	86 E	31*	66*	3 27	12 48.44	-8 54.5	1.889	2.878	3.1	19.6	171 W	36	73
7 25	13 21.39	3 18.8	2.975	2.939	19.8	21.2	78 E	27*	65*	4 1	12 41.24	-7 54.1	1.917	2.915	1.2	19.5	177 W	37	72
8 4	13 29.70	4 22.1	3.097	2.926	19.1	21.3	71 E	24*	61*	4 6	12 34.31	-6 54.5	1.954	2.950	2.1	19.7	174 E	38	71
8 14	13 39.16	5 30.0	3.213	2.913	18.2	21.3	64 E	21*	56*	4 11	12 27.78	-5 57.0	1.999	2.985	4.2	19.9	167 E	39	70
8 24	13 49.66	6 41.1	3.319	2.899	17.0	21.3	57 E	18*	50*	4 16	12 21.76	-5 2.4	2.053	3.020	6.2	20.0	161 E	40	69
9 3	14 1.07	7 54.2	3.416	2.884	15.7	21.3	51 E	16*	44*	4 21	12 16.33	-4 11.7	2.115	3.053	8.1	20.2	154 E	41	68
9 13	14 13.33	9 8.4	3.502	2.868	14.2	21.3	44 E	14*	38*	4 26	12 11.54	-3 25.5	2.185	3.086	9.9	20.4	148 E	42	67
9 23	14 26.34	10 22.7	3.574	2.851	12.5	21.3	38 E	12*	31*	5 6	12 3.96	-2 7.8	2.342	3.150	12.8	20.7	136 E	43	66
10 3	14 40.06	11 36.0	3.634	2.833	10.7	21.2	32 E	10*	25*	5 16	11 59.04	-1 10.1	2.521	3.211	14.9	21.0	125 E	44	65
10 13	14 54.43	12 47.6	3.680	2.814	8.8	21.2	26 E	8*	19*	5 26	11 56.59	0 31.6	2.714	3.270	16.3	21.2	115 E	44*	65
10 23	15 9.40	13 56.4	3.711	2.794	6.9	21.1	20 E	5*	13*	6 5	11 56.30	0 9.9	2.917	3.327	17.1	21.4	105 E	42*	64
11 2	15 24.93	15 1.7	3.727	2.773	4.9	21.0	14 E	3*	6*	181771 1997 GG₃									
11 12	15 40.98	16 2.5	3.728	2.751	2.9	20.9	8 E	1*	—	12 27	13 37.37	-9 14.0	2.631	2.465	21.9	21.3	69 W	36*	50*
11 22	15 57.50	16 58.2	3.713	2.728	1.3	20.7	4 E	—	—	1 6	13 50.05	-10 31.3	2.471	2.433	23.1	21.2	76 W	34	58*
12 2	16 14.43	17 47.9	3.684	2.705	2.1	20.7	6 W	—	—	1 16	14 2.00	-11 42.9	2.306	2.400	24.0	21.0	83 W	33	66*
12 12	16 31.72	18 31.1	3.639	2.680	4.1	20.8	11 W	4*	1*	1 26	14 12.99	-12 48.0	2.141	2.365	24.6	20.9	91 W	32	73*
12 22	16 49.30	19 7.0	3.580	2.655	6.2	20.9	17 W	8*	6*	2 5	14 22.76	-13 46.0	1.975	2.330	24.8	20.7	98 W	31	78*
1 1	17 7.11	19 35.3	3.507	2.629	8.4	20.9	23 W	11*	13*	2 15	14 30.94	-14 36.2	1.813	2.293	24.4	20.4	106 W	30	79
1 11	17 25.06	19 55.7	3.420	2.602	10.5	20.9	29 W	13*	19*	2 25	14 37.12	-15 17.8	1.655	2.255	23.5	20.2	115 W	30	79
1 21	17 43.07	20 7.8	3.321	2.574	12.6	20.9	35 W	15*	26*	3 7	14 40.84	-15 49.7	1.506	2.216	21.9	19.9	124 W	29	80
399611 2004 BE₁₁										3 17	14 41.57	-16 10.7	1.369	2.175	19.4	19.6	133 W	29	80
12 27	13 36.70	7 39.9	0.862	1.066	60.2	21.2	70 W	37*	50*	3 27	14 38.88	-16 19.2	1.246	2.134	16.0	19.2	144 W	29	80
1 6	14 20.77	8 20.7	0.845	1.055	61.2	21.1	70 W	37*	50*	4 6	14 32.56	-16 13.7	1.141	2.091	11.6	18.8	155 W	29	80
1 16	15 4.95	8 36.4	0.835	1.047	61.8	21.1	70 W	36*	51*	4 16	14 22.78	-15 53.2	1.057	2.048	6.2	18.4	167 W	29	80
1 26	15 48.46	8 26.7	0.833	1.044	62.1	21.1	70 W	36*	52*	4 21	14 16.85	-15 37.5	1.024	2.026	3.3	18.1	173 W	29	80
2 5	16 30.68	7 54.1	0.835	1.046	62.0	21.1	70 W	36*	53*	4 26	14 10.44	-15 18.9	0.998	2.004	1.0	17.9	178 E	30	79
2 15	17 11.09	7 2.0	0.841	1.052	61.7	21.1	70 W	36*	54*	5 1	14 3.76	-14 57.8	0.977	1.981	3.5	18.0	173 E	30	79
2 25	17 49.34	5 54.8	0.848	1.062	61.2	21.2	70 W	36*	55*	5 6	13 57.05	-14 35.3	0.963	1.959	6.8	18.1	167 E	30	79
3 7	18 25.34	4 36.7	0.855	1.076	60.6	21.2	71 W	37*	56*	5 11	13 50.55	-14 12.4	0.955	1.936	10.1	18.2	160 E	31	78
3 17	18 59.08	3 11.5	0.860	1.093	59.8	21.2	72 W	37*	57*	5 16	13 44.51	-13 50.4	0.952	1.913	13.4	18.3	154 E	31	78
3 27	19 30.61	1 42.9	0.861	1.114	59.1	21.2	73 W	37*	58*	5 21	13 39.13	-13 30.4	0.955	1.890	16.5	18.4	148 E	31	78
4 6	20 0.09	0 13.9	0.857	1.136	58.3	21.2	75 W	37*	59*	5 26	13 34.59	-13 13.6	0.962	1.867	19.5	18.5	142 E	32	77
4 16	20 27.63	+1 12.7	0.847	1.160	57.5	21.2	77 W	38*	59*	5 31	13 31.00	-13 0.8	0.973	1.844	22.3	18.5	136 E	32	77
4 26	20 53.31	+2 33.7	0.830	1.185	56.7	21.2	80 W	39*	60*	6 5	13 28.44	-12 52.6	0.987	1.820	24.9	18.6	131 E	32	77
5 6	21 17.25	+3 46.0	0.807	1.211	55.8	21.2	83 W	40*	60*	6 15	13 26.56	-12 51.8	1.024	1.774	29.4	18.8	121 E	32*	77
5 16	21 39.41	+4 46.1	0.778	1.237	54.7	21.1	86 W	41*	59	6 25	13 28.97	-13 12.8	1.067	1.728	33.1	18.9	112 E	30*	77
5 26	21 59.72	+5 29.1	0.742	1.262	53.4	21.0	91 W	43*	59	7 5	13 35.39	-13 54.1	1.113	1.682	35.9	19.0	104 E	27*	78
6 5	22 18.08	+5 49.9	0.701	1.287	51.7	20.9	95 W	44*	58	7 15	13 45.47	-14 53.4	1.159	1.636	38.0	19.1	97 E	24*	79
6 15	22 34.16	+5 41.1	0.655	1.311	49.5	20.7	101 W	46*	58	7 25	13 58.90	-16 7.5	1.204	1.592	39.6	19.2	91 E	21*	80*
6 25	22 47.54	+5 43.0	0.607	1.334	46.5	20.5	108 W	48*	59	8 4	14 15.40	-17 32.7	1.245	1.550	40.8	19.2	86 E	19*	78*
7 5	22 57.66	+3 14.4	0.558	1.355	42.6	20.2	116 W	48*	61	8 14	14 34.80	-19 5.2	1.284	1.509	41.6	19.3	81 E	17*	75*
7 10	23 1.24	+2 1.6	0.534	1.365	40.1	20.1	120 W	47*	62	8 24	14 56.98	-20 40.6	1.318	1.471	42.1	19.3	77 E	15*	71*
7 15	23 3.68	+0 30.8	0.511	1.374	37.3	19.9	125 W	46	63	9 3	15 21.85	-22 14.0	1.349	1.436	42.3	19.3	73 E	14*	67*
7 20	23 4.89	+1 19.4	0.489	1.384	34.1	19.8	130 W	44	65	9 13	15 49.36	-23 40.4	1.378	1.404	42.4	19.3	70 E	14*	64*
7 25	23 4.79	+3 30.0	0.470	1.392	30.4	19.6	136 W	42	67	9 23	16 19.39	-24 53.9	1.404	1.377	42.3	19.3	67 E	14*	61*
7 30	23 3.27	+6 0.7	0.453	1.400	26.4	19.4	142 W	39	70	10 3	16 51.73	-25 48.5	1.429	1.355	42.0	19.3	65 E	14*	59*
8 4	23 0.31	+8 50.2	0.439	1.408	22.0	19.2	149 W	36	73	10 13	17 26.12	-26 18.5	1.455	1.337	41.6	19.3	63 E	14*	57*
8 9	22 55.90	-11 54.8	0.429	1.415	17.4	19.0	155 W	33	76	10 23	18 2.07	-26 18.8	1.483	1.326	41.0	19.3	61 E	15*	55*
8 14	22 50.19	-15 8.8	0.424	1.422	13.0	18.9	162 W	30	79	11 2	18 39.02	-25 46.1	1.514	1.321	40.3	19.3	59 E	17*	53*
8 19	22 43.42	-18 24.5	0.424	1.428	9.4	18.7	167 W	27	82	11 7	18 57.67	-25 16.8	1.531	1.320	39.8	19.3	59 E	17*	52*
8 24	22 35.92	-21 33.5	0.429	1.434	8.4	18.7	168 W	23	86	11 12	19 16.34	-24 38.8	1.549	1.321	39.4	19.3	58 E	18*	50*
8 29	22 28.08	-24 28.2	0.440	1.439	10.5	18.9	165 E	21	88	11 17	19 34.94	-23 52.4	1.569	1.324	38.8	19.3	57 E	19*	49*
9 3	22 20.35	-27 2.6	0.455	1.444	14.1	19.1	160 E	18	89	11 22	19 53.40	-22 57.9	1.590	1.328	38.3	19.4	56 E	20*	48*
9 8	22 13.19	-29 12.8	0.474	1.447	18.1	19.3	153 E	16	87	11 27	20 11.65	-21 55.8	1.613	1.334	37.7	19.4	56 E	21*	46*
9 13	22 6.98	-30 57.6	0.498	1.451	21.9	19.6	147 E	14	85	12 2	20 29.67	-20 46.6	1.637	1.341	37.0	19.4	55 E	23*	45*
9 18	22 2.04	-32 17.8	0.525	1.454	25.4	19.8	142 E	13	84	12 7	20 47.39	-19 31.0	1.663	1.349	36.3	19.4	54 E	24*	43*
9 23	21 58.52	-33 15.4	0.555	1.456	28.5	20.0	136 E	12	83	12 12	21 4.79	-18 9.6	1.692	1.359	35.6	19.5	53 E	25*	41*
9 28	21 56.47	-33 53.0	0.587	1.458	31.1	20.2	131 E	11	82	12 17	21 21.85	-16 43.3	1.721	1.370	34.8	19.5	53 E	26*	39*
10 3	21 55.89	-34 13.3	0.622	1.459	33.5	20.4	126 E	11	82	12 22	21 38.54	-15 12.8							

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°
354663 2005 LY₁₉									354663 2005 LY₁₉								
<i>(continuation)</i>									<i>(continuation)</i>								
2 15	14 57.64	-42 10.5	1.184	1.563	39.2	19.2	92 W	3 74	1 11	20 45.39	-27 0.8	2.797	1.889	9.4	20.5	18 E	1* 12*
2 20	15 3.43	-44 52.1	1.161	1.579	38.6	19.2	94 W	— 71	1 16	20 56.37	-25 42.2	2.806	1.879	8.3	20.5	16 E	1* 10*
2 25	15 8.45	-47 33.4	1.138	1.596	38.0	19.1	97 W	— 68	1 21	21 7.21	-24 21.4	2.811	1.869	7.1	20.4	14 E	— 7*
3 2	15 12.55	-50 13.7	1.117	1.612	37.3	19.1	100 W	— 66	100553 Dariofo								
3 7	15 15.51	-52 52.5	1.097	1.628	36.6	19.0	102 W	— 63	12 27	13 38.87	-2 27.4	1.517	1.528	37.7	19.9	72 W	42* 46*
3 12	15 17.06	-55 28.6	1.079	1.644	35.7	19.0	105 W	— 61	1 6	14 3.25	-5 8.0	1.434	1.517	38.8	19.8	75 W	40 52*
3 17	15 16.87	-58 0.6	1.063	1.660	34.9	19.0	107 W	— 58	1 16	14 27.45	-7 44.4	1.351	1.509	39.8	19.7	79 W	37 58*
3 22	15 14.58	-60 26.7	1.049	1.675	34.0	18.9	110 W	— 56	1 26	14 51.35	-10 15.4	1.270	1.502	40.5	19.6	82 W	35 64*
3 27	15 9.79	-62 44.6	1.037	1.690	33.1	18.9	112 W	— 53	2 5	15 14.85	-12 40.9	1.190	1.497	41.1	19.5	86 W	32 70*
3 29	15 7.08	-63 36.9	1.033	1.696	32.7	18.9	113 W	— 52	2 15	15 37.73	-15 0.9	1.112	1.494	41.4	19.3	91 W	30 76*
3 31	15 3.87	-64 27.3	1.029	1.702	32.4	18.9	114 W	— 52	2 25	15 59.69	-17 16.2	1.037	1.494	41.3	19.2	95 W	28 81*
4 2	15 0.14	-65 15.6	1.026	1.708	32.0	18.9	115 W	— 51	3 7	16 20.41	-19 28.6	0.963	1.495	40.8	19.0	100 W	26 83*
4 4	14 55.86	-66 1.4	1.023	1.714	31.7	18.9	116 W	— 50	3 17	16 39.41	-21 40.3	0.893	1.499	39.9	18.8	105 W	23 86
4 6	14 51.03	-66 44.7	1.020	1.720	31.3	18.9	117 W	— 49	3 27	16 56.11	-23 54.5	0.826	1.505	38.3	18.6	111 W	21 88
4 11	14 36.47	-68 19.7	1.016	1.734	30.5	18.8	118 W	— 48	4 6	17 9.82	-26 14.7	0.765	1.513	36.0	18.4	117 W	19 90
4 16	14 18.62	-69 32.8	1.014	1.748	29.8	18.8	120 W	— 46	4 11	17 15.28	-27 27.9	0.736	1.517	34.5	18.3	121 W	18 89
4 21	13 58.30	-70 21.0	1.015	1.762	29.1	18.8	121 W	— 46	4 16	17 19.64	-28 43.5	0.709	1.523	32.8	18.1	125 W	16 87
4 26	13 36.85	-70 42.8	1.019	1.775	28.6	18.8	122 E	— 45	4 21	17 22.80	-30 1.4	0.684	1.528	30.9	18.0	129 W	15 86
4 28	13 28.33	-70 44.1	1.022	1.780	28.4	18.9	123 E	— 45	4 26	17 24.64	-31 21.3	0.661	1.534	28.8	17.9	133 W	14 85
4 30	13 20.01	-70 41.4	1.024	1.785	28.2	18.9	123 E	— 45	5 1	17 25.08	-32 42.5	0.641	1.541	26.4	17.8	137 W	12 83
5 2	13 11.98	-70 34.9	1.028	1.791	28.1	18.9	123 E	— 45	5 6	17 24.01	-34 3.8	0.624	1.547	23.9	17.6	142 W	11 82
5 4	13 4.32	-70 24.6	1.031	1.796	28.0	18.9	123 E	— 46	5 11	17 21.41	-35 23.6	0.610	1.555	21.2	17.5	146 W	10 81
5 6	12 57.13	-70 11.0	1.035	1.801	27.9	18.9	123 E	— 46	5 16	17 17.33	-36 39.7	0.600	1.562	18.4	17.4	151 W	8 79
5 8	12 50.44	-69 54.3	1.040	1.806	27.8	18.9	124 E	— 46	5 21	17 11.90	-37 49.8	0.593	1.570	15.8	17.3	155 W	7 78
5 10	12 44.32	-69 34.8	1.045	1.810	27.7	18.9	124 E	— 46	5 26	17 5.39	-38 51.6	0.591	1.578	13.5	17.2	159 W	6 77
5 12	12 38.77	-69 12.8	1.051	1.815	27.7	18.9	123 E	— 47	5 31	16 58.12	-39 43.1	0.593	1.587	11.8	17.2	161 W	5 76
5 14	12 33.83	-68 48.6	1.056	1.820	27.6	19.0	123 E	— 47	6 5	16 50.49	-40 22.9	0.599	1.596	11.3	17.2	162 E	5 76
5 16	12 29.49	-68 22.5	1.063	1.825	27.6	19.0	123 E	— 48	6 10	16 42.95	-40 50.4	0.610	1.605	11.8	17.3	161 E	4 75
5 21	12 21.17	-67 11.1	1.081	1.836	27.7	19.0	123 E	— 49	6 15	16 35.95	-41 6.2	0.625	1.614	13.3	17.4	159 E	4 75
5 26	12 16.21	-65 53.8	1.101	1.847	27.8	19.1	122 E	— 50	6 20	16 29.88	-41 11.6	0.645	1.623	15.3	17.5	155 E	4 75
5 31	12 14.17	-64 33.7	1.124	1.858	28.0	19.1	121 E	— 51	6 25	16 25.02	-41 8.4	0.668	1.633	17.6	17.7	151 E	4 75
6 5	12 14.62	-63 13.2	1.149	1.868	28.3	19.2	119 E	— 53	6 30	16 21.53	-40 58.5	0.695	1.643	19.8	17.9	147 E	4 75
6 7	12 15.40	-62 41.3	1.160	1.872	28.4	19.2	119 E	— 53	7 5	16 19.47	-40 43.8	0.725	1.653	21.9	18.1	143 E	4 75
6 9	12 16.50	-62 9.7	1.171	1.876	28.5	19.3	118 E	— 54	7 10	16 18.86	-40 25.9	0.759	1.663	23.9	18.2	138 E	5 76
6 11	12 17.89	-61 38.5	1.183	1.880	28.7	19.3	117 E	— 54	7 15	16 19.67	-40 6.3	0.796	1.673	25.7	18.4	134 E	5 76
6 13	12 19.55	-61 7.7	1.194	1.884	28.8	19.3	117 E	— 55	7 20	16 21.80	-39 45.9	0.835	1.684	27.3	18.6	131 E	5 76
6 15	12 21.47	-60 37.5	1.206	1.888	28.9	19.4	116 E	— 55	7 25	16 25.15	-39 25.4	0.877	1.694	28.7	18.7	127 E	6 77
6 20	12 27.24	-59 24.6	1.238	1.897	29.3	19.4	114 E	— 57	7 30	16 29.58	-39 5.2	0.921	1.705	29.9	18.9	123 E	6* 77
6 25	12 34.22	-58 15.8	1.272	1.905	29.6	19.5	112 E	— 58	8 4	16 34.99	-38 45.3	0.967	1.715	30.9	19.0	120 E	6* 77
6 30	12 42.22	-57 11.3	1.307	1.913	29.9	19.6	110 E	— 59	8 9	16 41.28	-38 25.9	1.015	1.726	31.7	19.2	117 E	6* 78
7 5	12 51.08	-56 11.1	1.345	1.921	30.2	19.7	108 E	— 60	8 14	16 48.35	-38 6.8	1.065	1.737	32.4	19.3	113 E	7* 78
7 10	13 0.68	-55 15.2	1.383	1.929	30.5	19.7	106 E	— 61	8 19	16 56.12	-37 47.8	1.116	1.747	32.9	19.4	110 E	7* 78
7 15	13 10.92	-54 23.3	1.423	1.936	30.7	19.8	104 E	— 62*	8 24	17 4.48	-37 28.9	1.169	1.758	33.3	19.6	107 E	7* 79
7 20	13 21.69	-53 35.5	1.465	1.942	30.8	19.9	101 E	— 62*	8 29	17 13.36	-37 9.5	1.222	1.768	33.6	19.7	104 E	8* 79
7 25	13 32.92	-52 51.2	1.508	1.948	31.0	20.0	99 E	— 62*	9 3	17 22.69	-36 49.6	1.277	1.779	33.7	19.8	102 E	8* 79
7 30	13 44.55	-52 10.0	1.551	1.954	31.1	20.0	97 E	— 63*	9 8	17 32.42	-36 28.8	1.333	1.789	33.8	19.9	99 E	8* 80
8 4	13 56.52	-51 31.6	1.596	1.959	31.1	20.1	95 E	— 63*	9 13	17 42.50	-36 7.0	1.390	1.800	33.8	20.0	96 E	9* 80*
8 9	14 8.80	-50 55.7	1.642	1.964	31.1	20.2	92 E	— 62*	9 18	17 52.86	-35 43.8	1.447	1.810	33.6	20.1	93 E	9* 80*
8 14	14 21.35	-50 21.8	1.688	1.968	31.0	20.2	90 E	— 62*	9 23	18 3.46	-35 19.2	1.505	1.821	33.4	20.2	91 E	9* 79*
8 19	14 34.12	-49 49.6	1.735	1.972	30.9	20.3	88 E	— 62*	9 28	18 14.26	-34 52.8	1.563	1.831	33.2	20.3	88 E	10* 79*
8 24	14 47.09	-49 18.6	1.782	1.975	30.7	20.4	85 E	— 61*	10 3	18 25.22	-34 24.6	1.622	1.841	33.2	20.4	86 E	10* 77*
8 29	15 0.21	-48 48.5	1.830	1.978	30.4	20.4	83 E	— 60*	10 8	18 36.31	-33 54.5	1.682	1.851	32.4	20.4	83 E	11* 76*
9 3	15 13.48	-48 18.9	1.878	1.981	30.2	20.5	81 E	— 60*	10 13	18 47.50	-33 22.2	1.741	1.860	32.0	20.5	81 E	11* 74*
9 8	15 26.86	-47 49.4	1.926	1.983	29.8	20.5	78 E	— 59*	10 18	18 58.75	-32 47.8	1.800	1.870	31.4	20.6	78 E	12* 72*
9 13	15 40.34	-47 19.8	1.974	1.984	29.5	20.5	76 E	— 58*	10 23	19 10.04	-32 11.2	1.860	1.880	30.9	20.6	76 E	13* 70*
9 18	15 53.87	-46 49.8	2.022	1.985	29.0	20.6	73 E	— 57*	10 28	19 21.35	-31 32.3	1.919	1.889	30.2	20.7	73 E	13* 67*
9 23	16 7.45	-46 19.1	2.070	1.986	28.6	20.6	71 E	— 56*	11 2	19 32.65	-30 51.1	1.978	1.898	29.6	20.8	71 E	14* 65*
9 28	16 21.05	-45 47.4	2.117	1.986	28.0	20.7	69 E	— 55*	11 7	19 43.94	-30 7.7	2.036	1.907	28.9	20.8	68 E	15* 62*
10 3	16 34.65	-45 14.4	2.164	1.986	27.5	20.7	66 E	— 54*	11 12	19 55.20	-29 22.0	2.094	1.916	28.1	20.9	66 E	15* 60*
10 8	16 48.24	-44 40.0	2.210	1.985	26.9	20.7	64 E	— 52*	11 17	20 6.41	-28 34.2	2.151	1.925	27.4	20.9	63 E	16* 57*
10 13	17 1.79	-44 4.0	2.256	1.984	26.2	20.7	62 E	— 51*	11 22	20 17.54	-27 44.2	2.208	1.933	26.5	21.0	61 E	17* 54*
10 18	17 15.29	-43 26.2	2.300	1.983	25.6	20.8	59 E	— 49*	11 27	20 28.61	-26 52.1	2.263	1.941	25.7	21.0	59 E	17* 51*
10 23	17 28.71	-42 46.5	2.343	1.981	24.8	20.8	57 E	— 48*	12 2	20 39.60	-25 58.0	2.318	1.949	24.8	21.0	56 E	18* 48*
10 28	17 42.04	-42 4.7	2.386	1.978	24.1	20.8	54 E	— 46*	12 7	20 50.51	-25 1.9	2.372	1.957	23.9	21.1		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°
5131 1990 BG									153195 2000 WB₁								
<i>(continuation)</i>									<i>(continuation)</i>								
1 21	16 36.31	+15 25.0	0.741	0.934	70.9	16.5	64 W	54* 24*	3 8	14 55.00	+72 32.8	0.660	1.323	46.5	19.0	105 W	62
1 26	17 11.56	+13 52.7	0.758	0.886	73.1	16.5	59 W	50* 22*	3 9	14 51.99	+73 16.2	0.650	1.314	47.1	18.9	104 W	62
1 31	17 44.89	+12 2.7	0.786	0.840	74.5	16.5	55 W	46* 21*	3 10	14 48.43	+74 0.1	0.641	1.305	47.6	18.9	104 W	61
2 5	18 16.10	+9 59.6	0.823	0.795	75.1	16.5	51 W	42* 21*	3 11	14 44.24	+74 44.6	0.632	1.296	48.2	18.9	103 W	60
2 10	18 45.28	+7 47.7	0.867	0.754	74.7	16.5	47 W	38* 21*	3 12	14 39.31	+75 29.4	0.622	1.286	48.8	18.8	103 W	60
2 15	19 12.75	+5 30.5	0.916	0.716	73.3	16.4	44 W	34* 21*	3 13	14 33.50	+76 14.6	0.613	1.277	49.4	18.8	103 W	59
2 20	19 38.93	+3 11.2	0.970	0.685	71.0	16.4	41 W	30* 22*	3 14	14 26.65	+76 59.9	0.604	1.267	50.1	18.8	102 W	58
2 25	20 4.24	+0 52.8	1.027	0.661	67.9	16.3	38 W	26* 22*	3 15	14 18.54	+77 45.1	0.595	1.258	50.8	18.8	102 W	57
3 2	20 29.06	+1 21.2	1.085	0.646	64.1	16.3	36 W	22* 23*	3 16	14 8.91	+78 30.0	0.586	1.248	51.5	18.7	101 W	57
3 7	20 53.66	+3 26.8	1.143	0.640	60.0	16.3	34 W	19* 24*	3 17	13 57.46	+79 14.1	0.578	1.238	52.2	18.7	100 W	56
3 12	21 18.14	+5 20.6	1.201	0.645	55.8	16.3	32 W	15* 24*	3 18	13 43.80	+79 56.9	0.569	1.228	53.0	18.7	100 W	55
3 17	21 42.47	+6 59.6	1.257	0.660	51.8	16.3	31 W	11* 24*	3 19	13 27.47	+80 37.7	0.560	1.218	53.7	18.6	99 W	54
3 27	22 30.21	+9 28.1	1.363	0.714	45.2	16.5	31 W	5* 24*	3 20	13 7.97	+81 15.7	0.552	1.208	54.6	18.6	99 W	54
4 6	23 15.72	+10 53.0	1.459	0.792	40.6	16.7	31 W	— 25*	3 21	12 44.83	+81 49.4	0.543	1.198	55.4	18.6	98 W	53
4 16	23 58.12	+11 27.8	1.546	0.883	37.6	17.0	32 W	— 25*	3 22	12 17.70	+82 17.6	0.535	1.188	56.3	18.6	97 W	53
4 21	0 18.03	+11 31.6	1.587	0.931	36.5	17.1	33 W	— 26*	3 23	11 46.61	+82 38.3	0.527	1.178	57.2	18.5	96 E	52
4 26	0 37.08	+11 29.1	1.626	0.980	35.6	17.3	35 W	— 26*	3 24	11 12.16	+82 49.8	0.519	1.168	58.2	18.5	96 E	52
5 1	0 55.29	+11 21.7	1.662	1.029	34.9	17.4	36 W	— 27*	3 25	10 35.72	+82 50.5	0.511	1.158	59.1	18.5	95 E	52
5 6	1 12.70	+11 11.2	1.697	1.077	34.2	17.5	37 W	— 28*	3 26	9 59.18	+82 39.5	0.503	1.147	60.2	18.5	94 E	52
5 11	1 29.33	+10 58.6	1.730	1.126	33.7	17.7	38 W	— 29*	3 27	9 24.43	+82 16.7	0.495	1.137	61.2	18.4	93 E	53
5 16	1 45.24	+10 45.1	1.760	1.173	33.3	17.8	40 W	— 31*	3 28	8 52.87	+81 43.0	0.487	1.126	62.3	18.4	92 E	53
5 21	2 0.45	+10 31.7	1.788	1.220	32.9	17.9	41 W	— 32*	3 29	8 25.18	+80 59.4	0.480	1.116	63.4	18.4	91 E	54
5 26	2 15.02	+10 18.9	1.814	1.266	32.6	18.0	42 W	— 34*	3 30	8 1.41	+80 7.4	0.473	1.105	64.6	18.4	90 E	55
6 5	2 42.34	+9 57.8	1.859	1.355	32.2	18.2	45 W	— 37*	3 31	7 41.23	+79 8.2	0.465	1.095	65.9	18.4	89 E	56
6 15	3 7.47	+9 45.5	1.894	1.440	31.9	18.3	49 W	— 41*	4 1	7 24.17	+78 2.7	0.458	1.084	67.1	18.3	88 E	57*
6 25	3 30.58	+9 44.4	1.917	1.521	31.8	18.5	52 W	— 45*	4 2	7 9.73	+76 51.7	0.451	1.073	68.4	18.3	87 E	58*
7 5	3 51.81	+9 56.0	1.930	1.597	31.8	18.6	56 W	— 49*	4 3	6 57.46	+75 35.9	0.445	1.062	69.8	18.3	86 E	59*
7 15	4 11.23	+10 21.6	1.932	1.669	31.7	18.7	60 W	5* 54*	4 4	6 46.95	+74 15.7	0.438	1.051	71.2	18.3	84 E	60*
7 25	4 28.83	+11 1.7	1.922	1.736	31.7	18.8	64 W	10* 58*	4 5	6 37.89	+72 51.5	0.432	1.040	72.7	18.3	83 E	61*
8 4	4 44.59	+11 56.6	1.902	1.800	31.7	18.8	69 W	15* 62*	4 6	6 30.03	+71 23.4	0.426	1.029	74.2	18.3	82 E	61*
8 14	4 58.38	+13 6.6	1.872	1.860	31.5	18.9	74 W	19* 67*	4 7	6 23.14	+69 51.8	0.420	1.018	75.8	18.3	80 E	62*
8 24	5 10.02	+14 31.4	1.832	1.915	31.2	18.9	79 W	23* 71*	4 8	6 17.06	+68 16.7	0.414	1.007	77.4	18.3	79 E	63*
9 3	5 19.27	+16 10.2	1.786	1.967	30.7	18.8	85 W	25* 76*	4 9	6 11.64	+66 38.2	0.409	0.995	79.0	18.3	77 E	63*
9 13	5 25.80	+18 2.0	1.733	2.015	30.0	18.8	91 W	26* 81*	4 10	6 6.78	+64 56.6	0.404	0.984	80.8	18.3	76 E	63*
9 23	5 29.20	+20 3.7	1.678	2.059	28.9	18.8	97 W	25* 84*	4 11	6 2.38	+63 11.7	0.399	0.973	82.5	18.3	74 E	63*
9 28	5 29.59	+21 7.0	1.650	2.080	28.3	18.7	100 W	24 85	4 12	5 58.36	+61 23.9	0.394	0.961	84.4	18.3	73 E	62*
10 3	5 29.03	+22 11.2	1.622	2.100	27.6	18.7	104 W	23 86	4 13	5 54.66	+59 33.0	0.390	0.950	86.2	18.4	71 E	62*
10 8	5 27.45	+23 15.1	1.596	2.119	26.8	18.7	107 W	22 87	4 14	5 51.23	+57 39.3	0.386	0.938	88.2	18.4	69 E	61* 3*
10 13	5 24.80	+24 17.5	1.570	2.138	25.9	18.6	111 W	21 88	4 15	5 48.02	+55 42.8	0.382	0.927	90.2	18.4	67 E	60* 5*
10 18	5 21.06	+25 17.0	1.547	2.155	25.0	18.6	114 W	20 89	4 16	5 44.99	+53 43.8	0.379	0.915	92.2	18.5	66 E	59* 6*
10 23	5 16.22	+26 12.1	1.526	2.171	24.0	18.5	117 W	19 90	4 18	5 39.36	+49 38.4	0.373	0.892	96.4	18.6	62 E	56* 9*
10 28	5 10.31	+27 1.0	1.508	2.187	23.0	18.5	121 W	18 89	4 20	5 34.12	+45 24.7	0.370	0.868	100.7	18.7	58 E	52* 12*
11 2	5 3.36	+27 42.0	1.494	2.202	22.1	18.5	123 W	17 88	4 22	5 29.11	+41 4.7	0.368	0.844	105.1	18.9	54 E	48* 14*
11 7	4 55.49	+28 13.0	1.484	2.216	21.2	18.4	126 W	17 88	4 24	5 24.22	+36 40.8	0.368	0.821	109.6	19.0	50 E	43* 16*
11 12	4 46.87	+28 32.4	1.478	2.229	20.5	18.4	128 W	16 87	4 26	5 19.34	+32 15.9	0.370	0.797	114.1	19.3	46 E	38* 18*
11 17	4 37.69	+28 38.7	1.478	2.242	19.9	18.4	130 W	16 87	4 28	5 14.41	+27 53.2	0.374	0.773	118.4	19.5	42 E	33* 20*
11 22	4 28.21	+28 31.2	1.482	2.253	19.5	18.4	131 W	16 87	4 30	5 9.38	+23 36.1	0.381	0.750	122.6	19.8	39 E	27* 21*
11 27	4 18.67	+28 9.5	1.493	2.264	19.3	18.4	131 W	17 88	5 2	5 4.21	+19 28.0	0.390	0.726	126.4	20.1	35 E	22* 22*
12 2	4 9.34	+27 33.7	1.509	2.274	19.3	18.5	130 E	17 88	5 4	4 58.88	+15 32.3	0.402	0.703	129.7	20.4	32 E	16* 22*
12 7	4 0.46	+26 44.7	1.530	2.283	19.6	18.5	129 E	18 89	5 6	4 53.39	+11 51.9	0.416	0.680	132.5	20.7	30 E	11* 22*
12 12	3 52.24	+25 43.7	1.558	2.291	20.0	18.6	127 E	19 90	5 8	4 47.75	+8 29.2	0.433	0.657	135.5	21.0	28 E	6* 21*
12 17	3 44.85	+24 32.5	1.590	2.299	20.6	18.6	125 E	20 89	5 10	4 41.97	+5 26.2	0.453	0.635	134.6	21.1	26 E	1* 20*
12 22	3 38.39	+23 12.9	1.628	2.306	21.2	18.7	122 E	20 89	5 12	4 36.10	+2 44.5	0.474	0.614	135.8	21.2	25 E	— 19*
12 27	3 32.91	+21 46.7	1.670	2.312	21.9	18.8	119 E	22 87	5 14	4 30.20	+0 25.0	0.499	0.594	135.1	21.1	25 E	— 17*
1 1	3 28.44	+20 15.7	1.717	2.317	22.5	18.9	116 E	23 86	5 16	4 24.33	+1 31.8	0.525	0.575	133.9	21.0	24 E	— 15*
1 6	3 24.97	+18 41.3	1.767	2.321	23.1	19.0	112 E	26 83	5 21	4 10.36	+4 44.1	0.601	0.535	125.9	20.4	25 E	— 9*
1 11	3 22.46	+17 5.0	1.820	2.325	23.7	19.0	108 E	28 81	5 26	3 58.60	+5 42.7	0.688	0.507	115.0	19.7	27 W	— 9*
1 16	3 20.88	+15 28.0	1.876	2.328	24.1	19.1	105 E	30 79	5 31	3 50.33	+4 48.7	0.783	0.496	102.6	19.2	29 W	— 15*
1 21	3 20.16	+13 51.2	1.935	2.330	24.5	19.2	101 E	31 78*	6 5	3 46.19	+2 32.3	0.878	0.503	90.3	18.9	30 W	— 20*
12 27	13 40.29	+46 16.7	1.460	1.822	32.5	21.0	94 W	87* 10*	6 7	3 45.67	+1 22.1	0.916	0.511	85.7	18.9	30 W	— 21*
1 6	13 59.94	+47 42.6	1.337	1.769	33.4	20.8	98 W	87 11*	6 9	3 45.74	+0 5.8	0.952	0.521	81.4	18.8	31 W	— 23*
1 16	14 18.54	+49 42.4	1.216	1.711	34.3	20.5	102 W	85 11*	6 11	3 46.36	+1 14.9	0.988	0.534	77.4	18.8	31 W	— 24*
1 26	14 35.63	+52 21.2	1.097	1.647	35.4	20.2	104 W	83 10*	6 13	3 47.48	+2 38.5	1.022	0.549	73.7	18.8	31 W	— 25*
1 31	14 43.43	+53 57.2	1.039	1.613	36.1	20.1	106 W	81 9*	6 15	3 49.02	+4 3.9	1.055	0.566	70.4	18.8	32 W	— 25*
2 5	14 50.58	+55 45.4	0.983	1.577	36.8	19.9	106 W	79 8*</									

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°										
153195 2000 WB₁										22844 1999 RU₁₁₁																			
<i>(continuation)</i>										<i>(continuation)</i>																			
8 24	6 7.60	+41 50.6	1.474	1.323	41.9	20.6	61 W	54*	17*	4 6	13 59.14	+11 40.1	2.149	3.093	7.4	18.1	157 W	57	52	4 11	13 55.08	+12 33.8	2.165	3.113	7.2	18.2	157 W	58	51
9 3	6 30.63	+45 45.9	1.464	1.412	41.0	20.7	67 W	61*	14*	4 16	13 50.94	+13 22.4	2.188	3.133	7.4	18.2	156 W	58	51	4 26	13 42.85	+14 41.7	2.256	3.173	8.9	18.4	151 E	60	49
9 13	6 53.63	+49 38.0	1.445	1.494	40.0	20.8	73 W	66*	11*	5 6	13 35.61	+15 35.3	2.349	3.211	10.9	18.6	143 E	61	48	5 16	13 29.78	+16 3.5	2.465	3.249	12.9	18.8	134 E	61	48
9 23	7 16.39	+53 32.1	1.419	1.570	38.8	20.8	79 W	70*	7*	5 26	13 25.73	+16 8.5	2.599	3.286	14.6	19.0	125 E	61	48	6 5	13 23.59	+15 54.0	2.747	3.322	15.9	19.2	116 E	61	48
10 3	7 38.68	+57 33.3	1.391	1.640	37.4	20.8	85 W	72*	4*	6 15	13 23.34	+15 23.7	2.906	3.358	16.7	19.3	108 E	59*	49	6 25	13 24.87	+14 41.2	3.072	3.393	17.2	19.5	100 E	56*	49
10 13	8 0.08	+61 45.6	1.361	1.704	35.8	20.8	91 W	72*	—	7 5	13 28.00	+13 49.6	3.240	3.427	17.3	19.6	92 E	51*	50	7 15	13 32.56	+12 51.5	3.410	3.460	17.0	19.8	84 E	46*	51
10 23	8 19.92	+66 11.4	1.335	1.763	34.0	20.8	97 W	69*	—	7 25	13 38.35	+11 48.9	3.576	3.492	16.5	19.9	77 E	42*	52*	8 4	13 45.20	+10 43.7	3.738	3.523	15.7	20.0	70 E	38*	50*
11 2	8 36.96	+70 50.8	1.314	1.817	32.1	20.8	103 W	64	—	8 14	13 52.97	+9 37.3	3.892	3.554	14.8	20.0	63 E	35*	47*	8 24	14 1.54	+8 30.9	4.038	3.584	13.6	20.1	57 E	32*	42*
11 12	8 48.15	+75 40.5	1.301	1.866	30.2	20.7	108 W	59	—	9 3	14 10.77	+7 25.6	4.173	3.613	12.4	20.1	50 E	29*	37*	9 13	14 20.58	+6 22.3	4.296	3.641	11.1	20.2	44 E	27*	31*
11 22	8 44.66	+80 31.1	1.301	1.910	28.6	20.7	112 W	54	—	9 23	14 30.87	+5 21.9	4.405	3.669	9.7	20.2	38 E	24*	25*	10 3	14 41.56	+4 25.2	4.500	3.695	8.4	20.2	33 E	22*	18*
12 2	7 48.11	+84 56.1	1.314	1.949	27.2	20.8	115 W	50	—	10 13	14 52.58	+3 32.9	4.579	3.721	7.1	20.2	27 E	19*	11*	10 23	15 3.84	+2 45.8	4.640	3.746	6.0	20.2	23 E	17*	4*
12 12	3 45.45	+86 31.4	1.341	1.984	26.4	20.8	116 E	48	—	11 2	15 15.29	+2 4.5	4.685	3.771	5.3	20.2	20 E	14*	—	11 12	15 26.83	+1 29.7	4.712	3.794	5.0	20.2	20 E	11*	—
12 22	1 23.29	+83 27.6	1.383	2.014	26.1	20.9	116 E	52	—	11 22	15 38.39	+1 1.9	4.720	3.817	5.4	20.2	21 W	11*	—	12 2	15 49.89	+0 41.8	4.711	3.839	6.2	20.3	25 W	18*	—
1 1	1 1.73	+79 39.7	1.439	2.040	26.2	21.0	113 E	55	—	12 12	16 1.22	+0 29.9	4.684	3.860	7.3	20.3	30 W	24*	—	12 12	16 12.29	+0 26.6	4.639	3.880	8.5	20.4	35 W	29*	6*
1 11	1 8.17	+76 8.5	1.507	2.062	26.6	21.2	110 E	59	—	1 1	16 23.00	+0 32.2	4.578	3.899	9.7	20.4	42 W	34*	14*	1 11	16 33.21	+0 47.1	4.502	3.918	10.8	20.4	48 W	37*	22*
225454 2000 EY₁₄										31415 1999 AK₂₃																			
12 27	13 41.81	+15 11.7	1.507	1.633	36.2	19.5	79 W	60*	34*	12 27	13 42.00	-7 14.8	3.061	2.863	18.7	20.4	69 W	38*	48*	1 6	13 52.29	-7 52.3	2.916	2.855	19.6	20.3	77 W	37	56*
1 6	14 4.07	+14 3.2	1.447	1.644	36.4	19.5	83 W	59	39*	1 16	14 1.49	-8 19.9	2.766	2.847	20.1	20.2	85 W	37	64*	1 26	14 9.34	-8 36.6	2.613	2.838	20.3	20.1	93 W	36	70*
1 16	14 24.39	+13 6.9	1.386	1.659	36.3	19.4	87 W	58	43*	2 5	14 15.60	-8 41.3	2.461	2.828	20.0	19.9	101 W	36	73*	2 15	14 19.95	-8 32.9	2.313	2.817	19.2	19.7	111 W	36	73
1 26	14 42.45	+12 23.6	1.325	1.676	35.9	19.3	92 W	57	47*	2 25	14 22.11	-8 10.6	2.173	2.805	17.8	19.6	120 W	37	72	3 7	14 21.85	-7 34.1	2.045	2.792	15.7	19.3	130 W	37	72
2 5	14 57.92	+11 53.2	1.264	1.696	35.2	19.2	97 W	57	51*	3 17	14 19.01	-6 43.7	1.932	2.778	13.0	19.1	141 W	38	71	3 27	14 13.68	-6 41.3	1.841	2.763	9.7	18.9	152 W	39	70
2 15	15 10.36	+11 34.9	1.202	1.719	34.1	19.1	103 W	57	52*	4 6	14 6.20	-4 30.8	1.774	2.747	6.0	18.6	163 W	40	69	4 11	14 1.84	-3 54.0	1.750	2.739	4.3	18.5	168 W	41	68
2 25	15 19.29	+11 26.2	1.142	1.743	32.3	19.0	110 W	56	53	4 16	13 57.21	-3 17.3	1.734	2.731	3.1	18.4	171 W	42	67	4 21	13 52.44	-2 41.7	1.725	2.722	3.3	18.4	171 E	42	67
3 2	15 22.29	+11 24.3	1.112	1.756	31.3	18.9	113 W	56	53	4 26	13 47.65	-2 8.0	1.723	2.713	4.8	18.5	167 E	43	66	4 26	13 42.98	-1 37.0	1.728	2.704	6.7	18.6	162 E	43	66
3 7	15 24.23	+11 23.2	1.084	1.770	30.0	18.8	117 W	56	53	5 6	13 38.54	-1 9.4	1.740	2.695	8.6	18.6	156 E	44	65	5 1	13 38.54	-1 9.4	1.740	2.695	8.6	18.6	156 E	44	65
3 12	15 25.05	+11 22.2	1.057	1.784	28.6	18.7	121 W	56	53	5 16	13 30.80	0 26.7	1.782	2.675	12.5	18.8	145 E	45	64	5 26	13 25.11	0 2.7	1.846	2.655	15.8	19.0	134 E	45	64
3 17	15 24.70	+11 20.2	1.032	1.798	27.0	18.7	125 W	56	53	6 5	13 21.84	+0 2.2	1.926	2.634	18.6	19.2	124 E	45	64	6 15	13 21.10	+0 11.0	2.019	2.612	20.7	19.3	115 E	44*	64
3 22	15 23.16	+11 16.3	1.010	1.813	25.2	18.6	129 W	56	53	6 25	13 22.81	+0 40.3	2.120	2.590	22.2	19.5	106 E	41*	65	6 5	13 22.81	+0 40.3	2.120	2.590	22.2	19.5	106 E	41*	65
3 27	15 20.44	+11 9.1	0.990	1.828	23.2	18.5	134 W	56	53	7 5	13 26.79	-1 23.1	2.225	2.566	23.1	19.6	98 E	37*	65	7 15	13 26.79	-1 23.1	2.225	2.566	23.1	19.6	98 E	37*	65
4 1	15 16.59	+10 57.5	0.973	1.844	21.1	18.4	138 W	56	53	7 25	13 32.82	-2 17.2	2.332	2.542	23.6	19.7	90 E	34*	66	8 4	13 50.15	-4 30.6	2.539	2.491	23.3	19.8	76 E	27*	64*
4 6	15 11.68	+10 40.5	0.960	1.859	18.9	18.3	143 W	56	53	8 14	14 1.10	-5 46.2	2.635	2.464	22.6	19.8	69 E	24*	60*	8 14	14 1.10	-5 46.2	2.635	2.464	22.6	19.8	69 E	24*	60*
4 11	15 5.84	+10 16.8	0.952	1.875	16.8	18.3	147 W	55	54	8 24	14 13.36	-7 5.4	2.725	2.437	21.7	19.9	63 E	21*	55*	9 3	14 26.83	-8 26.7	2.806	2.409	20.5	19.9	57 E	19*	50*
4 16	14 59.24	+9 45.7	0.948	1.891	14.7	18.2	151 W	55	54	9 13	14 41.43	-9 48.8	2.880	2.380	19.2	19.9	51 E	17*	44*	9 23	14 41.43	-9 48.8	2.880	2.380	19.2	19.9	51 E	17*	44*
4 26	14 44.77	+8 19.2	0.958	1.925	11.8	18.1	157 W	53	56	9 23	14 57.09	-11 10.2	2.943	2.351	17.7	19.8	45 E	16*	39*	10 3	15 13.75	-12 29.5	2.997	2.321	16.1	19.8	40 E	14*	33*
5 6	14 30.28	+6 22.7	0.991	1.958	11.8	18.3	157 E	51	58	10 13	15 31.39	-13 45.4	3.040	2.291	14.3	19.7	35 E	12*	28*	10 23	15 49.96	-14 56.5	3.073	2.260	12.5	19.7	29 E	11*	22*
5 16	14 17.62	+4 3.2	1.049	1.993	14.4	18.5	151 E	49	60	11 2	16 9.42	-16 1.3	3.095	2.229	10.6	19.6	24 E	9*	17*	11 2	16 9.42	-16 1.3	3.095	2.229	10.6	19.6	24 E	9*	17*
5 21	14 12.41	+2 47.8	1.086	2.010	16.0	18.7	147 E	48	61	11 12	16 29.75	-16 58.6	3.107	2.198	8.6	19.5	19 E	7*	11*	11 12	16 29.75	-16 58.6	3.107	2.198	8.6	19.5	19 E	7*	11*
5 26	14 8.09	+1 30.2	1.128	2.027	17.7	18.8	142 E	47	62	12 2	17 12.78	-18 25.1	3.098	2.135	4.7	19.2	10 E	3*	1*	12 2	17 12.78	-18 25.1	3.098	2.135	4.7	19.2	10 E	3*	1*
5 31	14 4.69	+0 11.6	1.176	2.045	19.4	19.0	138 E	45	64	12 12	17 35.38	-18 51.8	3.079	2.103	2.9	1													

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
24143 1999 VY₁₂₄										315098 2007 EX (continuation)									
12 27	13 43.28	-10 32.0	2.822	2.611	20.4	20.9	68 W	34*	50*	4 27	22 16.38	-69 57.1	0.412	1.110	64.9	17.5	93 W	—	43*
1 6	13 54.94	-11 45.8	2.677	2.597	21.4	20.9	75 W	33	58*	4 28	22 27.76	-69 43.4	0.407	1.105	65.5	17.5	93 W	—	43*
1 16	14 5.64	-12 53.2	2.527	2.582	22.2	20.7	82 W	32	66*	4 29	22 39.11	-69 26.8	0.401	1.100	66.1	17.5	93 W	—	42*
1 26	14 15.12	-13 53.6	2.374	2.566	22.6	20.6	90 W	31	73*	4 30	22 50.38	-69 7.3	0.395	1.095	66.8	17.4	92 W	—	42*
2 5	14 23.11	-14 46.4	2.222	2.550	22.5	20.4	98 W	30	79*	5 1	23 1.54	-68 44.8	0.389	1.091	67.4	17.4	92 W	—	42*
2 15	14 29.26	-15 30.7	2.071	2.532	22.0	20.3	106 W	29	80	5 2	23 12.55	-68 19.2	0.384	1.086	68.1	17.4	91 W	—	42*
2 25	14 33.18	-16 5.8	1.926	2.513	20.9	20.1	115 W	29	80	5 3	23 23.38	-67 50.5	0.378	1.081	68.9	17.4	91 W	—	42*
3 7	14 34.52	-16 30.5	1.790	2.494	19.1	19.8	125 W	28	81	5 4	23 34.00	-67 18.6	0.372	1.076	69.6	17.4	90 W	—	42*
3 17	14 32.93	-16 43.5	1.667	2.473	16.5	19.6	135 W	28	81	5 5	23 44.39	-66 43.4	0.367	1.070	70.4	17.3	90 W	—	42*
3 27	14 28.27	-16 43.4	1.560	2.452	13.1	19.3	146 W	28	81	5 6	23 54.52	-66 5.1	0.362	1.065	71.3	17.3	89 W	—	41*
4 6	14 20.69	-16 29.5	1.475	2.430	9.0	19.0	158 W	29	80	5 8	0 13.96	-64 38.3	0.351	1.054	73.0	17.3	88 W	—	41*
4 16	14 10.73	-16 2.1	1.413	2.407	4.3	18.6	170 W	29	80	5 10	0 32.22	-62 58.2	0.341	1.043	75.0	17.3	86 W	—	41*
4 21	14 5.18	-15 44.0	1.393	2.396	2.0	18.5	175 W	29	80	5 12	0 49.29	-61 4.3	0.331	1.032	77.1	17.3	84 W	—	41*
4 26	13 59.46	-15 23.8	1.379	2.384	1.7	18.4	176 E	30	79	5 14	1 5.17	-58 56.4	0.321	1.020	79.3	17.2	82 W	—	41*
5 1	13 53.74	-15 2.2	1.372	2.372	4.0	18.5	171 E	30	79	5 16	1 19.91	-56 34.3	0.312	1.007	81.8	17.2	80 W	—	41*
5 6	13 48.20	-14 40.0	1.372	2.359	6.5	18.6	165 E	30	79	5 18	1 33.58	-53 57.8	0.304	0.995	84.4	17.3	78 W	—	41*
5 11	13 43.00	-14 18.0	1.378	2.347	9.1	18.8	159 E	31	78	5 20	1 46.25	-51 6.6	0.296	0.982	87.2	17.3	76 W	—	41*
5 16	13 38.28	-13 57.3	1.390	2.334	11.5	18.9	153 E	31	78	5 22	1 58.01	-48 0.8	0.289	0.969	90.2	17.3	73 W	—	40*
5 21	13 34.19	-13 38.6	1.408	2.322	13.8	19.0	147 E	31	78	5 24	2 8.94	-44 40.6	0.283	0.955	93.4	17.4	70 W	—	40*
5 26	13 30.79	-13 22.6	1.431	2.309	16.0	19.1	141 E	32	77	5 26	2 19.13	-41 6.4	0.278	0.942	96.8	17.5	67 W	—	40*
6 5	13 26.32	-13 0.9	1.490	2.282	19.8	19.3	130 E	32	77	5 28	2 28.67	-37 19.2	0.274	0.928	100.3	17.6	64 W	—	40*
6 15	13 25.07	-12 54.8	1.562	2.255	22.8	19.4	121 E	32	77	5 30	2 37.64	-33 20.4	0.272	0.913	104.0	17.7	61 W	—	39*
6 25	13 26.96	-13 5.1	1.644	2.228	25.1	19.6	112 E	30	77	6 1	2 46.09	-29 12.1	0.271	0.898	107.7	17.9	58 W	—	39*
7 5	13 31.73	-13 30.7	1.731	2.200	26.7	19.7	103 E	27*	78	6 3	2 54.10	-24 56.5	0.271	0.883	111.4	18.1	54 W	—	38*
7 15	13 39.11	-14 9.9	1.821	2.171	27.8	19.8	96 E	24*	78	6 5	3 1.74	-20 36.8	0.273	0.868	115.1	18.3	51 W	—	37*
7 25	13 48.80	-15 0.7	1.911	2.142	28.3	19.9	89 E	21*	78*	6 7	3 9.05	-16 16.0	0.277	0.852	118.6	18.5	48 W	—	36*
8 4	14 0.55	-16 0.7	1.999	2.113	28.4	20.0	82 E	18*	75*	6 9	3 16.08	-11 57.4	0.283	0.837	121.9	18.8	44 W	—	34*
8 14	14 14.18	-17 7.8	2.084	2.084	28.1	20.0	76 E	16*	70*	6 11	3 22.90	-7 44.3	0.291	0.821	124.9	19.0	41 W	—	33*
8 24	14 29.51	-18 19.7	2.163	2.054	27.6	20.1	70 E	14*	64*	6 13	3 29.54	-3 39.4	0.300	0.804	127.6	19.3	39 W	—	32*
9 3	14 46.43	-19 33.9	2.238	2.025	26.8	20.1	65 E	13*	59*	6 15	3 36.05	+ 0 14.8	0.312	0.788	129.8	19.5	37 W	—	30*
9 13	15 4.87	-20 48.5	2.307	1.995	25.8	20.1	60 E	11*	54*	6 17	3 42.49	+ 3 56.5	0.325	0.771	131.4	19.8	35 W	—	29*
9 23	15 24.75	-22 0.9	2.369	1.966	24.6	20.1	55 E	10*	49*	6 19	3 48.88	+ 7 24.4	0.340	0.754	132.6	19.9	33 W	—	1* 27*
10 3	15 46.01	-23 8.8	2.425	1.937	23.3	20.1	50 E	9*	44*	6 21	3 55.28	+ 10 37.7	0.357	0.737	133.2	20.0	32 W	—	3* 26*
10 13	16 8.62	-24 9.9	2.474	1.908	21.8	20.0	45 E	9*	39*	6 23	4 1.72	+ 13 36.2	0.376	0.721	133.3	20.1	31 W	—	6* 24*
10 23	16 32.48	-25 1.6	2.517	1.880	20.2	20.0	41 E	8*	35*	6 25	4 8.25	+ 16 19.8	0.397	0.704	132.8	20.1	31 W	—	8* 23*
11 2	16 57.51	-25 41.7	2.553	1.853	18.6	19.9	37 E	8*	30*	6 30	4 25.21	+ 22 6.1	0.457	0.662	129.8	20.0	30 W	—	13* 20*
11 12	17 23.62	-26 7.8	2.583	1.826	16.9	19.9	32 E	7*	26*	7 5	4 43.48	+ 26 29.7	0.527	0.621	124.4	19.7	30 W	—	17* 17*
11 22	17 50.63	-26 17.9	2.607	1.801	15.1	19.8	28 E	6*	22*	7 10	5 3.49	+ 29 39.8	0.607	0.584	117.2	19.3	31 W	—	20* 15*
12 2	18 18.38	-26 10.1	2.626	1.777	13.3	19.7	25 E	6*	18*	7 15	5 25.47	+ 31 44.7	0.695	0.552	108.6	18.9	31 W	—	21* 13*
12 12	18 46.68	-25 43.3	2.639	1.754	11.5	19.6	21 E	5*	14*	7 17	5 34.82	+ 32 17.8	0.733	0.541	104.8	18.8	31 W	—	22* 12*
12 22	19 15.29	-24 56.6	2.648	1.733	9.7	19.5	17 E	4*	10*	7 19	5 44.49	+ 32 41.8	0.772	0.531	100.9	18.6	31 W	—	22* 12*
1 1	19 44.02	-23 49.7	2.653	1.713	7.8	19.4	14 E	2*	6*	7 21	5 54.43	+ 32 57.1	0.811	0.523	96.8	18.5	31 W	—	22* 11*
1 11	20 12.68	-22 23.2	2.654	1.696	5.9	19.3	10 E	—	3*	7 23	6 4.63	+ 33 4.0	0.851	0.517	92.7	18.4	31 W	—	22* 11*
1 21	20 41.09	-20 38.0	2.653	1.680	4.1	19.2	7 E	—	—	7 25	6 15.05	+ 33 2.8	0.892	0.512	88.4	18.3	30 W	—	22* 10*
315098 2007 EX																			
12 27	13 43.36	-23 35.3	1.028	1.060	56.2	19.1	64 W	17*	54*	7 27	6 25.63	+ 32 54.0	0.932	0.509	84.1	18.2	30 W	—	22* 10*
1 6	14 4.78	-28 17.4	1.013	1.110	55.0	19.2	68 W	21*	60*	7 29	6 36.33	+ 32 37.9	0.973	0.508	79.9	18.2	29 W	—	22* 9*
1 16	14 26.90	-32 51.5	0.985	1.151	54.2	19.2	72 W	12	65*	7 31	6 47.09	+ 32 15.1	1.013	0.509	75.7	18.1	29 W	—	22* 9*
1 26	14 49.85	-37 19.3	0.948	1.184	53.6	19.1	76 W	8	69*	8 2	6 57.86	+ 31 46.1	1.053	0.511	71.5	18.1	29 W	—	21* 8*
2 5	15 13.93	-41 42.9	0.903	1.209	53.3	19.0	79 W	3	70*	8 4	7 8.58	+ 31 11.4	1.093	0.516	67.5	18.0	28 W	—	21* 8*
2 10	15 26.52	-43 53.9	0.877	1.218	53.2	19.0	81 W	1	70*	8 6	7 19.20	+ 30 31.7	1.131	0.522	63.7	18.0	27 W	—	20* 8*
2 15	15 39.54	-46 4.4	0.850	1.226	53.2	18.9	83 W	—	68*	8 8	7 29.69	+ 29 47.3	1.168	0.530	60.1	18.0	27 W	—	20* 8*
2 20	15 53.09	-48 14.6	0.822	1.231	53.2	18.9	85 W	—	67*	8 10	7 40.00	+ 28 59.1	1.205	0.540	56.6	18.0	26 W	—	19* 7*
2 25	16 7.28	-50 24.7	0.793	1.234	53.2	18.8	87 W	—	65*	8 12	7 50.11	+ 28 7.4	1.240	0.551	53.4	18.0	26 W	—	19* 7*
3 2	16 22.29	-52 34.6	0.763	1.235	53.3	18.7	89 W	—	63*	8 14	7 59.99	+ 27 12.9	1.274	0.563	50.4	18.1	25 W	—	18* 7*
3 7	16 38.30	-54 44.5	0.733	1.235	53.5	18.6	90 W	—	61*	8 16	8 9.63	+ 26 16.0	1.306	0.576	47.7	18.1	25 W	—	18* 7*
3 12	16 55.56	-56 54.2	0.701	1.232	53.7	18.5	92 W	—	59*	8 18	8 19.03	+ 25 17.1	1.338	0.590	45.1				

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
315098 2007 EX										347149 2011 CB₇₆									
<i>(continuation)</i>										<i>(continuation)</i>									
1 11	15 54.68	-34 30.2	1.635	1.223	36.8	19.9	48 W	8*	42*	6 7	16 19.48	-74 51.6	0.797	1.628	29.6	18.7	128 E	—	41
1 16	16 13.32	-35 28.4	1.603	1.215	37.8	19.9	49 W	7*	43*	6 9	16 14.70	-74 56.9	0.798	1.629	29.6	18.7	127 E	—	41
1 21	16 32.67	-36 17.8	1.570	1.205	38.8	19.8	50 W	6*	44*	6 11	16 10.11	-74 59.1	0.800	1.630	29.7	18.7	127 E	—	41
4910 Kawasato										85709 1998 SG₃₆									
12 27	13 44.99	-9 58.7	3.208	2.973	17.8	19.2	67 W	35*	49*	12 27	13 46.70	-20 50.7	1.273	1.214	46.5	18.6	64 W	24*	53*
1 6	13 55.29	-10 44.8	3.049	2.951	18.8	19.1	75 W	34	57*	1 1	14 7.61	-21 6.8	1.240	1.195	47.6	18.5	64 W	24*	53*
1 16	14 4.66	-11 23.0	2.884	2.928	19.5	19.0	83 W	34	65*	1 6	14 29.10	-21 11.3	1.208	1.177	48.7	18.5	64 W	24*	54*
1 26	14 12.84	-11 52.2	2.716	2.904	19.8	18.9	91 W	33	72*	1 11	14 51.11	-21 3.2	1.180	1.161	49.7	18.4	64 W	24*	54*
2 5	14 19.60	-12 11.3	2.549	2.879	19.7	18.7	99 W	33	76*	1 16	15 13.52	-20 41.5	1.154	1.146	50.6	18.4	64 W	24*	54*
2 15	14 24.63	-12 19.2	2.384	2.854	19.2	18.5	108 W	33	76	1 21	15 36.22	-20 5.7	1.131	1.133	51.5	18.3	64 W	24*	54*
2 25	14 27.63	-12 14.7	2.227	2.827	18.1	18.3	118 W	33	76	1 26	15 59.07	-19 15.7	1.111	1.121	52.3	18.3	64 W	25*	54*
3 7	14 28.32	-11 57.0	2.081	2.799	16.3	18.1	128 W	33	76	4 1	16 21.94	-18 11.8	1.095	1.111	53.0	18.3	64 W	26*	54*
3 17	14 26.50	-11 25.2	1.949	2.771	13.8	17.9	138 W	34	75	4 6	16 41.43	-51 45.0	1.081	1.103	53.6	18.2	64 W	27*	54*
3 27	14 22.13	-10 39.7	1.836	2.742	10.7	17.6	149 W	34	75	4 11	16 48.20	-54 18.2	1.072	1.097	54.1	18.2	64 W	28*	54*
4 6	14 15.42	-9 42.1	1.747	2.712	6.9	17.3	161 W	35	74	4 16	16 54.25	-56 50.9	1.065	1.093	54.5	18.2	64 W	29*	53*
4 16	14 6.88	-8 35.6	1.684	2.682	2.9	17.0	172 W	36	73	4 21	16 59.39	-59 21.6	1.062	1.091	54.7	18.2	64 W	30*	53*
4 21	14 2.19	-8 0.8	1.663	2.666	1.6	16.8	176 W	37	72	4 26	17 3.40	-61 48.5	1.061	1.091	54.7	18.2	64 W	31*	52*
4 26	13 57.38	-7 26.0	1.649	2.650	2.7	16.9	173 E	38	71	5 1	17 6.02	-64 9.8	1.064	1.093	54.7	18.2	64 W	32*	52*
5 1	13 52.60	-6 52.1	1.642	2.634	4.8	17.0	167 E	38	71	5 6	17 6.89	-66 23.2	1.068	1.097	54.5	18.2	64 W	33*	51*
5 6	13 47.96	-6 19.8	1.642	2.618	7.1	17.1	161 E	39	70	5 8	17 6.68	-67 13.9	1.075	1.104	54.2	18.3	64 W	34*	51*
5 11	13 43.60	-5 50.2	1.649	2.602	9.3	17.2	155 E	39	70	5 10	17 6.10	-68 2.7	1.083	1.112	53.9	18.3	65 W	35*	50*
5 16	13 39.64	-5 23.7	1.661	2.585	11.4	17.3	150 E	40	69	5 12	17 5.15	-68 49.6	1.093	1.122	53.4	18.3	65 W	36*	50*
5 26	13 33.27	-4 42.9	1.704	2.551	15.3	17.4	138 E	40	69	5 14	17 3.80	-69 34.3	1.103	1.134	53.0	18.3	65 W	37*	49*
6 5	13 29.35	-4 20.0	1.764	2.517	18.6	17.6	128 E	41	68	5 16	17 2.04	-70 16.7	1.124	1.162	52.4	18.4	66 W	38*	49*
6 15	13 28.11	-4 15.6	1.838	2.482	21.2	17.7	118 E	40*	68	5 21	16 55.83	-71 51.5	1.098	1.165	50.7	18.5	67 W	41*	48*
6 25	13 29.55	-4 28.8	1.920	2.447	23.1	17.9	109 E	38*	68	5 26	16 47.13	-73 8.6	1.095	1.235	49.6	18.5	69 W	43*	47*
7 5	13 33.50	-4 57.7	2.008	2.411	24.5	18.0	101 E	35*	69	5 31	16 36.36	-74 6.2	1.094	1.277	48.5	18.6	72 W	45*	46*
7 15	13 39.76	-5 40.3	2.098	2.374	25.3	18.0	93 E	31*	70	6 5	16 24.35	-74 42.8	1.095	1.277	48.5	18.6	72 W	45*	46*
7 25	13 48.12	-6 34.1	2.187	2.338	25.7	18.1	85 E	28*	70*										
8 4	13 58.35	-7 36.9	2.273	2.300	25.6	18.2	79 E	25*	68*										
8 14	14 10.29	-8 46.8	2.355	2.263	25.2	18.2	72 E	23*	64*										
8 24	14 23.81	-10 1.7	2.431	2.225	24.6	18.2	66 E	20*	59*										
9 3	14 38.78	-11 19.6	2.500	2.187	23.7	18.2	61 E	19*	54*										
9 13	14 55.14	-12 38.8	2.561	2.149	22.6	18.2	55 E	17*	48*										
9 23	15 12.82	-13 57.4	2.615	2.111	21.3	18.2	50 E	16*	43*										
10 3	15 31.77	-15 13.4	2.661	2.074	19.9	18.1	45 E	14*	38*										
10 13	15 51.96	-16 24.9	2.699	2.037	18.3	18.0	40 E	13*	33*										
10 23	16 13.36	-17 29.9	2.728	2.000	16.7	18.0	35 E	12*	28*										
11 2	16 35.91	-18 26.4	2.750	1.964	15.0	17.9	31 E	11*	23*										
11 12	16 59.57	-19 12.5	2.764	1.929	13.2	17.8	26 E	10*	18*										
11 22	17 24.25	-19 46.0	2.772	1.895	11.4	17.7	22 E	9*	14*										
12 2	17 49.86	-20 5.3	2.773	1.862	9.5	17.6	18 E	7*	9*										
12 12	18 16.27	-20 8.7	2.768	1.830	7.6	17.5	14 E	5*	5*										
12 22	18 43.33	-19 55.0	2.758	1.801	5.8	17.3	11 E	3*	1*										
1 1	19 10.90	-19 23.3	2.744	1.773	4.0	17.2	7 E	1*	—										
1 11	19 38.79	-18 33.3	2.727	1.747	2.3	17.1	4 E	—	—										
1 21	20 6.84	-17 25.2	2.706	1.724	1.6	17.0	3 W	—	—										
347149 2011 CB₇₆										85709 1998 SG₃₆									
12 27	13 46.37	-10 53.1	2.043	1.886	28.6	21.0	67 W	34*	49*	12 27	13 46.70	-20 50.7	1.273	1.214	46.5	18.6	64 W	24*	53*
1 6	14 4.34	-14 9.3	1.914	1.858	30.2	20.9	72 W	31	57*	1 1	14 7.61	-21 6.8	1.240	1.195	47.6	18.5	64 W	24*	53*
1 16	14 22.38	-17 32.8	1.785	1.830	31.6	20.7	77 W	27	64*	1 6	14 29.10	-21 11.3	1.208	1.177	48.7	18.5	64 W	24*	54*
1 26	14 40.48	-21 4.7	1.658	1.803	32.7	20.6	82 W	24	72*	1 11	14 51.11	-21 3.2	1.180	1.161	49.7	18.4	64 W	24*	54*
2 5	14 58.62	-24 46.8	1.535	1.777	33.6	20.4	87 W	20	80*	1 16	15 13.52	-20 41.5	1.154	1.146	50.6	18.4	64 W	24*	54*
2 15	15 16.75	-28 41.0	1.417	1.753	34.3	20.2	92 W	16	86*	1 21	15 36.22	-20 5.7	1.131	1.133	51.5	18.3	64 W	24*	54*
2 25	15 34.76	-32 48.7	1.306	1.730	34.6	20.0	97 W	12	83	1 26	15 59.07	-19 15.7	1.111	1.121	52.3	18.3	64 W	25*	54*
3 7	15 52.54	-37 11.6	1.203	1.709	34.6	19.8	102 W	8	79	4 1	16 21.94	-18 11.8	1.095	1.111	53.0	18.3	64 W	26*	54*
3 12	16 1.27	-39 28.9	1.155	1.699	34.5	19.7	104 W	6	77	4 6	16 41.43	-51 45.0	1.081	1.103	53.6	18.2	64 W	27*	54*
3 17	16 9.84	-41 49.9	1.109	1.690	34.3	19.6	107 W	3	74	4 11	16 48.20	-54 18.2	1.072	1.097	54.1	18.2	64 W	28*	54*
3 22	16 18.21	-44 14.5	1.067	1.681	34.0	19.5	109 W	1	72	4 16	16 54.25	-56 50.9	1.065	1.093	54.5	18.2	64 W	29*	53*
3 27	16 26.31	-46 42.3	1.027	1.673	33.7	19.4	111 W	—	69	4 21	16 59.39	-59 21.6	1.062	1.091	54.7	18.2	64 W	30*	53*
4 1	16 34.09	-49 12.7	0.991	1.666	33.3	19.3	114 W	—	67	4 26	17 3.40	-61 48.5	1.061	1.091	54.7	18.2	64 W	31*	52*
4 6	16 41.43	-51 45.0	0.957	1.659	32.9	19.2	116 W	—	64	5 1	17 6.02	-64 9.8	1.064	1.093	54.7	18.2	64 W	32*	52*
4 11	16 48.20	-54 18.2	0.927	1.652	32.4	19.1	118 W	—	62	5 6	17 6.89	-66 23.2	1.068	1.097	54.5	18.2	64 W	33*	51*
4 16	16 54.25	-56 50.9	0.900	1.647	32.0	19.0	120 W	—	59	5 8	17 6.68	-67 13.9	1.075	1.104	54.2	18.3	64 W	34*	51*
4 21	16 59.39	-59 21.6	0.876	1.642	31.5	18.9	121 W	—	57	5 10	17 6.10	-68 2.7	1.083	1.112	53.9	18.3	65 W	35*	50*
4 26	17 3.40	-61 48.5	0.856	1.637	31.1	18.9	123 W	—	54	5 12	17 5.15	-68 49.6	1.093	1.122	53.4	18.3	65 W	36*	50*
5 1	17 6.02	-64 9.8	0.838	1.634	30.7	18.8	124 W	—	52	5 14	17 3.80	-69 34.3	1.103	1.134	53.0	18.3	65 W	37*	49*
5 6	17 6.89	-66 23.2	0.824	1.631	30.3	18.8	125 W	—	50	5 16	17 2.04	-70 16.7	1.12						

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°
85709 1998 SG₃₆										185851 2000 DP₁₀₇									
<i>(continuation)</i>										<i>(continuation)</i>									
5 16	22 12.89	+18 51.9	1.165	1.322	47.5	18.6	74 W	47*	44*	9 3	5 59.47	+30 11.4	1.423	1.446	41.2	21.4	71 W	59*	30*
5 26	22 31.84	+21 13.8	1.156	1.368	46.4	18.7	78 W	51*	43*	9 13	6 20.40	+31 3.3	1.381	1.497	40.7	21.4	76 W	65*	30*
6 5	22 48.37	+23 16.4	1.138	1.416	45.2	18.7	82 W	55*	41	9 23	6 39.20	+31 50.5	1.330	1.544	40.0	21.3	82 W	71*	30*
6 15	23 2.23	+24 58.3	1.111	1.464	43.9	18.6	87 W	60*	39	10 3	6 55.50	+32 37.4	1.271	1.589	39.0	21.3	88 W	76*	30*
6 20	23 8.07	+25 40.7	1.095	1.488	43.1	18.6	90 W	62*	38	10 13	7 8.78	+33 28.6	1.206	1.630	37.6	21.2	95 W	78	30*
6 25	23 13.13	+26 16.9	1.077	1.512	42.2	18.6	92 W	65*	38	10 23	7 18.41	+34 28.5	1.137	1.668	35.6	21.0	103 W	79	29*
6 30	23 17.35	+26 46.3	1.057	1.536	41.2	18.6	96 W	67*	37	11 2	7 23.58	+35 40.6	1.067	1.703	32.8	20.9	112 W	81	28
7 5	23 20.69	+27 8.3	1.035	1.559	40.1	18.5	99 W	70*	37	11 12	7 23.20	+37 6.1	1.001	1.735	29.2	20.7	121 W	82	27
7 10	23 23.07	+27 22.0	1.013	1.583	38.8	18.5	103 W	72*	37	11 22	7 16.26	+38 40.8	0.943	1.764	24.6	20.4	132 W	84	25
7 15	23 24.44	+27 26.3	0.990	1.606	37.4	18.4	106 W	72*	37	11 27	7 10.08	+39 28.4	0.919	1.777	22.0	20.3	138 W	84	25
7 20	23 24.77	+27 20.0	0.966	1.629	35.7	18.3	110 W	72*	37	12 2	7 2.05	+40 13.2	0.898	1.789	19.2	20.2	143 W	85	24
7 25	23 24.04	+27 2.1	0.943	1.652	33.9	18.3	115 W	72*	37	12 7	6 52.28	+40 52.5	0.883	1.801	16.3	20.1	149 W	86	23
7 30	23 22.23	+26 31.1	0.921	1.674	31.8	18.2	120 W	72*	37	12 12	6 41.03	+41 23.4	0.873	1.812	13.6	20.0	154 W	86	23
8 4	23 19.37	+25 45.7	0.900	1.696	29.5	18.1	125 W	71	38	12 17	6 28.71	+41 43.3	0.869	1.822	11.3	19.9	159 W	87	22
8 9	23 15.51	+24 44.6	0.882	1.718	26.9	18.0	130 W	70	39	12 22	6 15.84	+41 50.5	0.872	1.831	9.9	19.9	161 W	87	22
8 14	23 10.77	+23 26.9	0.866	1.739	24.2	17.9	135 W	68	41	12 27	6 2.99	+41 44.3	0.881	1.839	9.9	19.9	161 E	87	22
8 19	23 5.33	+21 52.7	0.855	1.760	21.2	17.8	141 W	67	42	1 1	5 50.74	+41 25.4	0.897	1.847	11.3	20.0	158 E	86	23
8 24	22 59.40	+20 2.6	0.847	1.781	18.2	17.7	147 W	65	44	1 6	5 39.59	+40 55.7	0.919	1.854	13.4	20.1	154 E	86	23
8 29	22 53.21	+17 58.4	0.846	1.801	15.3	17.7	152 W	63	46	1 11	5 29.93	+40 17.7	0.947	1.860	15.8	20.3	149 E	85	24
9 3	22 47.01	+15 42.6	0.850	1.820	12.7	17.6	157 E	61	48	1 16	5 21.97	+39 34.2	0.980	1.865	18.3	20.5	143 E	85	24
9 8	22 41.05	+13 19.0	0.860	1.840	10.8	17.6	160 E	58	51	1 21	5 15.78	+38 48.0	1.019	1.869	20.6	20.6	138 E	84	25
9 13	22 35.57	+10 51.6	0.878	1.858	10.2	17.6	161 E	56	53	154555 2003 HA									
9 18	22 30.77	+8 24.9	0.902	1.877	10.8	17.7	159 E	53	56	12 27	13 48.11	+36 35.7	1.612	1.863	31.8	20.4	88 W	81*	17*
9 23	22 26.78	+6 2.8	0.933	1.894	12.4	17.9	156 E	51	58	1 6	14 3.93	+38 16.1	1.532	1.870	31.7	20.3	93 W	83	19*
9 28	22 23.68	+3 48.5	0.970	1.912	14.5	18.1	151 E	49	60	1 16	14 17.64	+40 27.6	1.451	1.872	31.3	20.2	99 W	85	20*
10 3	22 21.51	+1 44.2	1.014	1.929	16.7	18.2	146 E	47	62	1 26	14 28.53	+43 11.3	1.374	1.868	30.8	20.1	104 W	88	19*
10 8	22 20.28	0 8.4	1.063	1.945	18.8	18.4	141 E	45	64	1 31	14 32.65	+44 44.9	1.336	1.865	30.5	20.0	106 W	90	19*
10 13	22 19.99	-1 48.7	1.117	1.961	20.7	18.6	136 E	43	66	2 5	14 35.68	+46 25.9	1.301	1.860	30.2	19.9	108 W	89	17*
10 23	22 22.00	-4 31.8	1.237	1.991	23.9	19.0	126 E	40	69	2 10	14 37.43	+48 13.6	1.267	1.855	30.0	19.9	110 W	87	16*
11 2	22 27.03	-6 28.8	1.370	2.020	26.1	19.3	117 E	39	70	2 15	14 37.64	+50 6.9	1.235	1.847	29.7	19.8	112 W	85	14
11 12	22 34.56	-7 45.9	1.513	2.046	27.4	19.6	108 E	37	72	2 20	14 36.04	+52 3.9	1.206	1.839	29.5	19.7	114 W	83	12
11 17	22 39.12	-8 11.5	1.586	2.058	27.8	19.7	104 E	37	72	2 25	14 32.33	+54 2.5	1.179	1.829	29.4	19.7	115 W	81	10
11 22	22 44.12	-8 29.6	1.661	2.070	28.1	19.8	100 E	37	72*	3 2	14 26.15	+55 59.6	1.155	1.819	29.4	19.6	116 W	79	8
11 27	22 49.51	-8 40.9	1.736	2.082	28.1	19.9	96 E	36	71*	3 7	14 17.15	+57 51.8	1.134	1.806	29.5	19.5	116 W	77	6
12 2	22 55.26	-8 46.2	1.811	2.092	28.1	20.0	92 E	36	69*	3 12	14 5.00	+59 34.5	1.116	1.793	29.8	19.5	116 W	75	4
12 7	23 1.33	-8 45.9	1.887	2.103	27.9	20.1	88 E	36	66*	3 17	13 49.55	+61 2.2	1.101	1.778	30.2	19.5	116 W	74	3
12 12	23 7.67	-8 40.7	1.962	2.113	27.7	20.2	85 E	36	63*	3 22	13 30.98	+62 9.5	1.090	1.762	30.8	19.4	115 W	73	2
12 22	23 21.08	-8 17.4	2.109	2.131	26.8	20.4	78 E	37	57*	3 27	13 9.88	+62 51.1	1.081	1.745	31.5	19.4	114 W	72	1
1 1	23 35.27	-7 39.9	2.253	2.147	25.7	20.5	71 E	37*	51*	3 29	13 0.95	+62 59.6	1.079	1.738	31.8	19.4	113 W	72	1
1 11	23 50.11	-6 51.1	2.390	2.161	24.3	20.6	65 E	37*	45*	3 31	12 51.86	+63 3.3	1.077	1.730	32.1	19.4	113 W	72	1
1 21	0 5.46	-5 53.6	2.519	2.173	22.7	20.7	58 E	36*	39*	4 2	12 42.70	+63 1.9	1.076	1.722	32.5	19.4	112 E	72	1
185851 2000 DP₁₀₇										4 4	12 33.57	+62 55.6	1.075	1.714	32.9	19.4	111 E	72	1
12 27	13 47.01	-9 33.5	1.498	1.437	39.1	21.4	67 W	35*	48*	4 6	12 24.54	+62 44.2	1.074	1.706	33.3	19.4	111 E	72	1
1 6	14 16.26	-12 57.9	1.379	1.384	41.7	21.2	69 W	32*	54*	4 8	12 15.72	+62 27.9	1.074	1.698	33.7	19.4	110 E	73	2
1 16	14 48.59	-16 28.5	1.266	1.328	44.5	21.0	71 W	29*	58*	4 10	12 7.16	+62 6.8	1.074	1.689	34.1	19.4	109 E	73	2
1 26	15 24.93	-20 0.5	1.163	1.270	47.5	20.8	72 W	25*	62*	4 12	11 58.96	+61 41.1	1.075	1.680	34.6	19.4	108 E	73	2
2 5	16 6.39	-23 25.0	1.071	1.211	50.7	20.6	72 W	21*	64*	4 14	11 51.15	+61 11.1	1.076	1.671	35.0	19.4	107 E	74	3
2 15	16 53.97	-26 25.2	0.994	1.151	54.2	20.5	71 W	18*	65*	4 16	11 43.79	+60 37.0	1.078	1.662	35.5	19.4	106 E	74	3
2 20	17 20.21	-27 38.6	0.962	1.122	56.0	20.4	70 W	16*	64*	4 21	11 27.49	+58 55.8	1.083	1.638	36.7	19.4	103 E	76	5
2 25	17 48.02	-28 36.1	0.936	1.092	57.8	20.3	69 W	15*	63*	4 26	11 14.28	+56 55.8	1.090	1.612	37.9	19.4	100 E	78	7
3 3	18 17.22	-29 13.7	0.914	1.063	59.6	20.3	68 W	13*	62*	5 1	11 4.02	+54 41.2	1.098	1.585	39.1	19.5	98 E	80	9
3 7	18 47.50	-29 28.0	0.899	1.035	61.3	20.2	66 W	11*	60*	5 6	10 56.40	+52 15.7	1.108	1.556	40.2	19.5	95 E	83	12
3 12	19 18.44	-29 16.6	0.889	1.007	62.8	20.2	64 W	10*	58*	5 11	10 51.09	+49 42.2	1.118	1.526	41.4	19.5	92 E	85*	14
3 17	19 49.51	-28 38.1	0.885	0.981	64.2	20.2	63 W	9*	56*	5 16	10 47.73	+47 2.8	1.128	1.495	42.5	19.5	88 E	82*	17
3 22	20 20.22	-27 32.9	0.887	0.956	65.3	20.2	61 W	8*	54*	5 21	10 46.02	+44 19.4	1.139	1.461	43.7	19.5	85 E	77*	20
3 27	20 50.12	-26 3.0	0.895	0.933	66.1	20.1	59 W	7*	52*	5 26	10 45.65	+41 33.0	1.148	1.427	44.7	19.5	82 E	72*	22
4 1	21 18.89	-24 11.2	0.908	0.912	66.6	20.1	57 W	6*	50*	5 31	10 46.40	+38 44.5	1.157	1.390	45.8	19.5	79 E	67*	25
4 6	21 46.31	-22 1.3	0.926	0.894	66.7	20.1	55 W	5*	49*	6 5	10 48.06	+35 54.0	1.165	1.352	46.8	19.5	76 E	61*	28
4 11	22 12.31	-19 37.3	0.948	0.878	66.4	20.1	53 W	5*	47*	6 10	10 50.49	+33 1.8	1.172	1.312	47.8	19.4	73 E	56*	31*
4 16	22 36.88	-17 3.0	0.974	0.866	65.8	20.2	52 W	5*	46*	6 15	10 53.54	+30 7.8	1.176	1.271	48.9	19.4	70 E	51*	34*
4 21	23 0.11	-14 21.9	1.003	0.857	64.8	20.2	51 W	5*	44*	6 20	10 57.09	+27 11.9	1.179	1.227	49.9	19.4	68 E	46*	36*
4 26	23 22.12	-11 37.1	1.035	0.852	63.6	20.2	49 W	5*	43*	6 25</									

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°	
154555 2003 HA (continuation)									82124 2001 FO₇₈ (continuation)									
9 7	10 48.78	-20 3.7	0.689	0.497	115.4	18.9	26 W	8*	5 11	15 20.86	-20 5.9	0.766	1.775	1.8	16.6	177 W	25	84
9 9	10 40.83	-19 24.9	0.670	0.498	118.3	19.0	26 W	11*	5 16	15 14.99	-20 33.9	0.753	1.763	2.3	16.6	176 E	24	85
9 11	10 32.92	-18 24.1	0.654	0.502	120.6	19.2	25 W	14*	5 21	15 9.06	-21 1.4	0.745	1.751	5.7	16.7	170 E	24	85
9 13	10 25.31	-17 2.1	0.639	0.509	122.0	19.3	25 W	16*	5 26	15 3.34	-21 28.3	0.742	1.739	9.1	16.9	164 E	24	85
9 15	10 18.26	-15 20.7	0.627	0.519	122.5	19.3	26 W	18*	5 31	14 58.10	-21 54.7	0.744	1.728	12.5	17.0	158 E	23	86
9 17	10 11.96	-13 22.6	0.618	0.530	122.1	19.3	27 W	20*	6 5	14 53.57	-22 20.9	0.751	1.717	15.7	17.1	153 E	23	86
9 19	10 6.55	-11 10.8	0.611	0.544	120.9	19.2	28 W	22*	6 10	14 49.96	-22 47.4	0.762	1.707	18.8	17.2	147 E	22	87
9 21	10 2.12	-8 49.0	0.606	0.559	119.0	19.1	29 W	23*	6 15	14 47.43	-23 14.5	0.777	1.697	21.6	17.4	142 E	22	87
9 23	9 58.68	-6 20.3	0.603	0.576	116.7	19.0	31 W	24*	6 25	14 45.94	-24 12.1	0.816	1.680	26.5	17.6	133 E	21	88
9 25	9 56.23	-3 47.9	0.602	0.594	114.0	18.9	33 W	25*	7 5	14 49.27	-25 15.3	0.866	1.664	30.4	17.8	124 E	19*	89
9 27	9 54.71	-1 14.3	0.603	0.613	111.0	18.8	35 W	25*	7 15	14 57.23	-26 23.5	0.923	1.652	33.4	18.0	117 E	18*	90
9 29	9 54.06	+1 18.4	0.605	0.633	108.0	18.7	37 W	25*	7 25	15 9.40	-27 35.3	0.986	1.642	35.5	18.2	110 E	16*	88
10 1	9 54.21	+3 48.6	0.608	0.654	104.9	18.6	39 W	25*	8 4	15 25.26	-28 47.3	1.054	1.635	36.9	18.4	104 E	14*	87
10 3	9 55.07	+6 15.2	0.612	0.675	101.9	18.5	41 W	25*	8 14	15 44.36	-29 55.8	1.124	1.631	37.8	18.5	99 E	13*	86
10 8	9 59.86	+12 1.5	0.626	0.731	94.6	18.4	47 W	37*	8 24	16 6.26	-30 57.1	1.198	1.630	38.2	18.7	95 E	12*	85*
10 13	10 7.58	+17 16.4	0.641	0.787	88.0	18.3	52 W	44*	9 3	16 30.50	-31 47.0	1.275	1.632	38.2	18.8	90 E	11*	81*
10 18	10 17.41	+22 1.2	0.658	0.843	82.2	18.3	57 W	50*	9 8	16 43.37	-32 6.6	1.315	1.634	38.1	18.9	88 E	11*	80*
10 23	10 28.74	+26 19.6	0.674	0.898	77.0	18.3	62 W	55*	9 13	16 56.67	-32 22.1	1.355	1.636	37.9	19.0	86 E	11*	78*
10 28	10 41.14	+30 16.3	0.690	0.953	72.4	18.3	66 W	60*	9 18	17 10.35	-32 33.1	1.396	1.640	37.6	19.0	84 E	11*	77*
11 2	10 54.26	+33 55.6	0.705	1.006	68.3	18.4	70 W	64*	9 23	17 24.33	-32 39.3	1.438	1.644	37.2	19.1	83 E	11*	75*
11 7	11 7.86	+37 21.6	0.719	1.057	64.6	18.4	74 W	68*	9 28	17 38.56	-32 40.6	1.480	1.649	36.9	19.1	81 E	11*	73*
11 12	11 21.74	+40 37.6	0.732	1.107	61.2	18.4	78 W	72*	10 3	17 52.99	-32 36.6	1.524	1.655	36.4	19.2	79 E	11*	72*
11 17	11 35.76	+43 46.2	0.745	1.155	58.0	18.5	82 W	75*	10 8	18 7.56	-32 27.3	1.568	1.661	35.9	19.2	77 E	11*	70*
11 22	11 49.80	+46 49.4	0.757	1.201	55.1	18.5	86 W	77*	10 13	18 22.23	-32 12.7	1.612	1.668	35.4	19.3	75 E	12*	69*
11 27	12 3.76	+49 49.1	0.769	1.245	52.4	18.5	89 W	79*	10 18	18 36.92	-31 52.7	1.658	1.676	34.8	19.4	74 E	12*	67*
12 2	12 17.55	+52 46.6	0.782	1.288	49.9	18.6	93 W	79*	10 23	18 51.60	-31 27.3	1.704	1.684	34.2	19.4	72 E	13*	66*
12 7	12 31.04	+55 42.8	0.795	1.328	47.5	18.6	96 W	78*	10 28	19 6.22	-30 56.8	1.751	1.693	33.5	19.5	70 E	13*	64*
12 12	12 44.10	+58 37.9	0.809	1.368	45.3	18.7	99 W	76*	11 2	19 20.74	-30 21.3	1.798	1.702	32.8	19.5	68 E	14*	62*
12 17	12 56.62	+61 31.9	0.824	1.405	43.3	18.7	102 W	73*	11 7	19 35.14	-29 40.9	1.847	1.712	32.1	19.6	66 E	15*	60*
12 22	13 8.41	+64 24.7	0.841	1.441	41.5	18.7	104 W	71*	11 12	19 49.37	-28 55.9	1.895	1.722	31.3	19.6	65 E	15*	58*
12 27	13 19.23	+67 15.9	0.859	1.475	39.8	18.8	106 W	68*	11 17	20 3.42	-28 6.7	1.945	1.733	30.5	19.7	63 E	16*	56*
1 1	13 28.69	+70 5.0	0.879	1.508	38.4	18.8	108 W	65*	11 22	20 17.25	-27 13.4	1.994	1.745	29.7	19.7	61 E	17*	54*
1 3	13 31.97	+71 11.8	0.888	1.520	37.8	18.9	109 W	64*	11 27	20 30.86	-26 16.4	2.044	1.757	28.8	19.7	59 E	18*	51*
1 5	13 34.88	+72 18.0	0.897	1.533	37.3	18.9	109 W	63*	12 2	20 44.25	-25 16.0	2.095	1.769	28.0	19.8	57 E	19*	49*
1 7	13 37.36	+73 23.7	0.906	1.545	36.9	18.9	110 W	62*	12 7	20 57.40	-24 12.5	2.145	1.782	27.1	19.8	55 E	20*	46*
1 9	13 39.35	+74 28.5	0.916	1.556	36.4	19.0	110 W	61*	12 12	21 10.31	-23 6.3	2.196	1.795	26.2	19.9	54 E	20*	44*
1 11	13 40.73	+75 32.5	0.926	1.568	36.0	19.0	110 W	59*	12 22	21 35.42	-20 46.7	2.298	1.822	24.3	19.9	50 E	22*	39*
1 12	13 41.15	+76 4.2	0.931	1.574	35.8	19.0	111 W	59*	1 1	21 59.61	-18 19.7	2.399	1.850	22.3	20.0	46 E	22*	34*
1 13	13 41.38	+76 35.6	0.936	1.579	35.6	19.0	111 W	58*	1 11	22 22.95	-15 47.4	2.498	1.880	20.3	20.1	42 E	22*	29*
1 14	13 41.40	+77 6.7	0.942	1.585	35.4	19.0	111 W	58*	1 21	22 45.50	-13 11.9	2.594	1.910	18.3	20.1	37 E	22*	24*
1 15	13 41.16	+77 37.6	0.947	1.591	35.3	19.0	111 W	57*	41434 2000 GB₈₂									
1 16	13 40.66	+78 8.1	0.952	1.596	35.1	19.1	111 W	57*	12 27	13 48.78	-1 47.7	1.803	1.729	32.2	20.2	70 W	43*	44*
1 17	13 39.86	+78 38.3	0.958	1.602	35.0	19.1	111 W	56*	1 6	14 7.28	-3 51.3	1.707	1.732	33.2	20.1	75 W	41*	51*
1 18	13 38.72	+79 8.2	0.964	1.607	34.8	19.1	111 W	56*	1 16	14 24.94	-5 48.9	1.608	1.734	34.0	20.0	80 W	39	58*
1 19	13 37.20	+79 37.7	0.969	1.612	34.7	19.1	111 W	55*	1 26	14 41.54	-7 40.5	1.506	1.735	34.5	19.9	86 W	37	64*
1 20	13 35.25	+80 6.7	0.975	1.617	34.5	19.1	111 W	55*	2 5	14 56.85	-9 27.1	1.402	1.736	34.6	19.8	92 W	36	71*
1 21	13 32.81	+80 35.3	0.981	1.623	34.4	19.1	111 W	54*	2 15	15 10.51	-11 9.6	1.298	1.736	34.3	19.6	98 W	34	75*
337607 2001 TB₁₃									2 25	15 22.06	-12 49.7	1.195	1.735	33.5	19.4	105 W	32	77*
12 27	13 48.40	-7 21.6	2.234	2.071	26.1	21.4	68 W	37*	3 7	15 30.96	-14 29.8	1.095	1.734	32.0	19.1	112 W	31	78
1 6	14 3.90	-7 15.8	2.157	2.115	26.6	21.4	74 W	38	3 17	15 36.50	-16 12.0	0.999	1.732	29.6	18.9	121 W	29	80
1 16	14 17.84	-6 51.7	2.075	2.158	26.8	21.4	81 W	38	3 27	15 37.87	-17 58.4	0.912	1.730	26.3	18.6	130 W	27	82
1 26	14 29.94	-6 7.8	1.990	2.202	26.6	21.3	89 W	39	4 6	15 34.34	-19 49.7	0.836	1.727	21.8	18.3	140 W	25	84
2 5	14 39.92	-5 3.0	1.903	2.245	25.9	21.2	97 W	40	4 16	15 25.34	-21 42.9	0.774	1.724	16.2	17.9	151 W	23	86
2 15	14 47.47	-3 36.5	1.819	2.287	24.6	21.1	105 W	41	4 21	15 18.83	-22 38.1	0.751	1.722	13.1	17.7	157 W	22	87
2 25	14 52.25	-1 48.6	1.740	2.329	22.8	21.0	114 W	43	4 26	15 11.17	-23 30.9	0.732	1.720	9.8	17.5	163 W	21	88
3 7	14 54.06	+0 18.7	1.671	2.371	20.4	20.9	124 W	45	5 1	15 2.57	-24 19.9	0.719	1.717	6.8	17.4	168 W	21	88
3 17	14 52.73	+2 41.2	1.616	2.412	17.4	20.8	133 W	48	5 6	14 53.34	-25 3.9	0.711	1.715	5.1	17.3	171 W	20	89
3 27	14 48.39	+5 11.4	1.581	2.452	14.2	20.6	143 W	50	5 11	14 43.85	-25 42.0	0.709	1.713	6.0	17.3	170 E	19	90
4 6	14 41.48	+7 38.9	1.568	2.491	11.2	20.6	151 W	53	5 16	14 34.53	-26 13.9	0.713	1.710	8.7	17.4	165 E	19	90
4 16	14 32.75	+9 52.2	1.581	2.529	9.4	20.5	156 W	55	5 21	14 25.79	-26 40.2	0.722	1.707	12.0	17.6	159 E	18	89
4 26	14 23.24	+11 40.7	1.620	2.567	9.6	20.6	155 W	57	5 26	14 17.95	-27 1.6	0.737	1.704	15.3	17.7	154 E	18	89
5 6	14 14.07	+12 57.7	1.686	2.603	11.5	20.8	149 E	58	5 31	14 11.27	-27 19.3	0.755	1.702	18.5	17.9	148 E	18	89
5 16	14 6.19	+13 41.3	1.774	2.639	13.9	21.0	141 E	59	6 5	14 5.91	-27 34.6	0.779	1.699	21.4	18.1	142 E	17	88
5 26	14 0.29	+13 53.3	1.883	2.674	16.2	21.3	133 E	59	6 10	14 1.97	-27 48.8	0.805	1.695	24.				

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°
41434 2000 GB₈₂ (continuation)									24761 Ahau (continuation)								
10 3	17 2.88	-36 22.5	1.662	1.606	35.6	20.0	69 E	5* 61*	8 9	14 39.15	+ 3 30.7	1.520	1.680	36.5	20.8	80 E	38* 59*
10 13	17 32.60	-36 19.7	1.730	1.598	34.6	20.0	65 E	5* 58*	8 14	14 45.82	+ 1 47.4	1.558	1.671	36.4	20.9	78 E	36* 60*
10 18	17 47.79	-36 10.5	1.763	1.594	34.1	20.1	64 E	6* 57*	8 19	14 52.94	+ 0 5.9	1.595	1.660	36.2	20.9	75 E	34* 60*
10 23	18 3.14	-35 55.8	1.795	1.590	33.5	20.1	62 E	6* 55*	8 24	15 0.47	- 1 33.6	1.631	1.648	35.9	20.9	73 E	32* 60*
10 28	18 18.61	-35 35.4	1.827	1.587	32.9	20.1	60 E	7* 54*	8 29	15 8.40	- 3 11.1	1.666	1.636	35.6	20.9	71 E	31* 59*
11 2	18 34.15	-35 9.1	1.858	1.583	32.3	20.1	58 E	7* 52*	9 3	15 16.73	+ 4 46.5	1.700	1.623	35.3	21.0	68 E	29* 58*
11 7	18 49.72	-34 37.0	1.889	1.579	31.6	20.1	57 E	8* 51*	9 8	15 25.46	- 6 19.7	1.732	1.610	34.9	21.0	66 E	28* 56*
11 12	19 5.27	-33 59.1	1.919	1.576	31.0	20.1	55 E	9* 49*	9 13	15 34.58	- 7 50.6	1.763	1.595	34.4	21.0	64 E	26* 55*
11 17	19 20.75	-33 15.3	1.948	1.572	30.3	20.1	53 E	9* 47*	9 18	15 44.08	- 9 19.1	1.792	1.580	33.9	21.0	61 E	25* 53*
11 22	19 36.14	-32 25.9	1.977	1.569	29.6	20.1	52 E	10* 45*	9 23	15 53.97	-10 45.0	1.819	1.565	33.4	21.0	59 E	24* 51*
11 27	19 51.40	-31 30.8	2.005	1.566	28.9	20.2	50 E	11* 44*	9 28	16 4.25	-12 8.2	1.845	1.548	32.9	21.0	57 E	22* 49*
12 2	20 6.51	-30 30.4	2.033	1.563	28.1	20.2	48 E	12* 42*	10 3	16 14.92	-13 28.5	1.869	1.531	32.3	20.9	55 E	21* 47*
12 7	20 21.45	-29 24.7	2.060	1.560	27.4	20.2	47 E	13* 40*	10 8	16 26.00	-14 45.9	1.891	1.513	31.7	20.9	53 E	20* 45*
12 12	20 36.20	-28 14.2	2.087	1.557	26.6	20.2	45 E	13* 38*	10 13	16 37.49	-16 0.0	1.911	1.495	31.1	20.9	51 E	19* 43*
12 17	20 50.75	-26 59.1	2.113	1.555	25.8	20.2	44 E	14* 36*	10 18	16 49.39	-17 10.8	1.929	1.476	30.5	20.9	49 E	18* 41*
12 22	21 5.08	-25 39.7	2.139	1.552	25.0	20.2	42 E	15* 33*	10 23	17 1.71	-18 17.9	1.944	1.456	29.9	20.9	47 E	17* 39*
12 27	21 19.20	-24 16.2	2.163	1.550	24.2	20.2	40 E	15* 31*	10 28	17 14.46	-19 21.1	1.958	1.436	29.2	20.8	45 E	16* 37*
1 1	21 33.12	-22 49.1	2.188	1.548	23.4	20.2	39 E	16* 29*	11 2	17 27.65	-20 20.2	1.969	1.415	28.6	20.8	43 E	16* 35*
1 6	21 46.83	-21 18.5	2.212	1.546	22.6	20.1	37 E	16* 27*	11 7	17 41.29	-21 15.0	1.978	1.394	27.9	20.7	41 E	15* 34*
1 11	22 0.34	-19 45.0	2.235	1.544	21.7	20.1	35 E	17* 25*	11 12	17 55.37	-22 5.0	1.985	1.372	27.3	20.7	39 E	14* 32*
1 16	22 13.67	-18 8.7	2.257	1.542	20.8	20.1	34 E	17* 23*	11 17	18 9.91	-22 49.9	1.989	1.350	26.6	20.6	38 E	13* 30*
1 21	22 26.81	-16 30.1	2.279	1.540	20.0	20.1	32 E	17* 22*	11 22	18 24.90	-23 29.5	1.991	1.327	26.0	20.6	36 E	13* 28*
									11 27	18 40.35	-24 3.3	1.991	1.304	25.4	20.5	35 E	12* 27*
									12 2	18 56.26	-24 31.0	1.988	1.281	24.9	20.5	33 E	12* 25*
310728 2002 PD₄₈									4544 Xanthus								
12 27	13 48.79	- 2 14.5	2.969	2.783	19.3	21.5	70 W	42* 44*	12 27	13 49.19	+ 0 31.9	1.199	1.274	46.7	19.9	71 W	45* 42*
1 6	13 59.07	+ 1 53.0	2.868	2.822	19.9	21.4	77 W	43 51*	1 6	14 12.08	- 2 6.7	1.138	1.288	47.3	19.8	74 W	43* 49*
1 16	14 7.94	+ 1 15.9	2.761	2.859	20.1	21.4	86 W	44 57*	1 16	14 34.59	- 4 42.7	1.071	1.297	47.9	19.7	78 W	40 55*
1 26	14 15.15	+ 0 22.1	2.653	2.897	19.8	21.3	94 W	45 62*	1 26	14 56.81	- 7 17.7	0.997	1.302	48.5	19.6	82 W	38 61*
2 5	14 20.50	+ 0 48.8	2.547	2.933	19.1	21.2	103 W	46 63*	2 5	15 18.89	- 9 54.1	0.919	1.302	49.1	19.4	86 W	35 68*
2 15	14 23.74	+ 2 17.0	2.447	2.968	17.9	21.1	112 W	47 62	2 15	15 40.98	-12 35.5	0.838	1.299	49.5	19.2	90 W	32 74*
2 25	14 24.68	+ 4 1.0	2.357	3.003	16.2	21.0	122 W	49 60	2 25	16 3.24	-15 26.8	0.755	1.290	49.9	19.0	94 W	30 79*
3 7	14 23.25	+ 5 57.8	2.283	3.036	14.1	20.9	132 W	51 58	3 7	16 26.07	-18 35.3	0.671	1.278	50.2	18.7	99 W	26 83
3 17	14 19.48	+ 8 2.4	2.229	3.069	11.7	20.8	141 W	53 56	3 12	16 37.83	-20 18.9	0.630	1.270	50.3	18.6	101 W	25 84
3 27	14 13.64	+10 7.8	2.199	3.101	9.3	20.7	150 W	55 54	3 17	16 49.94	-22 10.7	0.589	1.261	50.4	18.4	103 W	23 86
4 6	14 6.22	+12 5.6	2.196	3.132	7.7	20.6	155 W	57 52	3 22	17 2.53	-24 12.4	0.549	1.251	50.5	18.3	104 W	21 88
4 16	13 57.90	+13 47.9	2.221	3.162	7.5	20.7	156 W	59 50	3 27	17 15.78	-26 26.0	0.510	1.240	50.6	18.1	106 W	19 90
4 26	13 49.50	+15 8.3	2.275	3.191	8.8	20.8	151 E	60 49	4 1	17 29.96	-28 53.7	0.473	1.228	50.8	17.9	108 W	16 87
5 6	13 41.78	+16 3.4	2.355	3.220	10.8	21.0	143 E	61 48	4 6	17 45.39	-31 37.6	0.437	1.215	51.1	17.7	109 W	13 84
5 16	13 35.37	+16 32.9	2.458	3.247	12.8	21.2	134 E	62 47	4 11	18 2.53	-34 39.8	0.403	1.201	51.6	17.5	110 W	10 81
5 26	13 30.69	+16 38.8	2.579	3.274	14.6	21.4	126 E	62 47	4 16	18 22.05	-38 1.4	0.371	1.187	52.3	17.3	111 W	7* 78
24761 Ahau									4544 Xanthus								
12 27	13 49.15	+ 4 31.1	1.299	1.371	43.1	20.2	72 W	49* 40*	4 18	18 30.74	-39 27.4	0.359	1.180	52.7	17.3	111 W	6* 77
1 6	14 12.94	+ 5 11.0	1.260	1.414	42.7	20.2	77 W	50* 44*	4 20	18 40.04	-40 56.4	0.347	1.174	53.1	17.2	111 W	4* 75
1 16	14 34.99	+ 6 13.6	1.217	1.455	42.0	20.2	82 W	51 47*	4 22	18 50.04	-42 27.9	0.336	1.167	53.6	17.1	111 W	2* 74
1 26	14 55.02	+ 7 41.0	1.170	1.494	41.2	20.1	87 W	53 50*	4 24	19 0.87	-44 1.6	0.326	1.161	54.2	17.1	111 W	1* 72
2 5	15 12.73	+ 9 34.7	1.120	1.530	40.0	20.1	93 W	55 52*	4 26	19 12.63	-45 36.9	0.316	1.154	54.9	17.0	110 W	- 70
2 15	15 27.66	+11 55.5	1.069	1.564	38.6	20.0	99 W	57 52*	4 28	19 25.46	-47 13.1	0.307	1.147	55.7	17.0	110 W	- 69
2 25	15 39.27	+14 42.4	1.019	1.595	36.8	19.8	105 W	60 49	4 30	19 39.51	-48 48.9	0.298	1.140	56.6	16.9	109 W	- 67
3 2	15 43.65	+16 14.6	0.996	1.609	35.8	19.8	108 W	61 48	5 2	19 54.93	-50 23.2	0.290	1.133	57.7	16.9	108 W	- 66
3 7	15 46.97	+17 51.9	0.973	1.623	34.7	19.7	111 W	63 46	5 4	20 11.86	-51 54.2	0.282	1.125	58.8	16.8	107 W	- 64
3 12	15 49.12	+19 33.2	0.951	1.635	33.6	19.7	114 W	65 44	5 6	20 30.44	-53 19.9	0.276	1.118	60.0	16.8	106 W	- 63
3 17	15 50.01	+21 17.3	0.931	1.648	32.4	19.6	118 W	66 43	5 8	20 50.74	-54 38.0	0.270	1.110	61.4	16.8	105 W	- 61
3 22	15 49.58	+23 2.2	0.914	1.659	31.1	19.5	121 W	68 41	5 10	21 12.78	-55 45.9	0.264	1.103	62.9	16.8	104 W	- 60
3 27	15 47.76	+24 45.8	0.898	1.670	29.9	19.5	123 W	70 39	5 12	21 36.47	-56 40.8	0.260	1.095	64.4	16.8	102 W	- 59*
4 1	15 44.52	+26 25.6	0.885	1.680	28.8	19.4	126 W	71 38	5 14	22 1.56	-57 20.1	0.256	1.087	66.1	16.8	100 W	- 58*
4 6	15 39.88	+27 59.1	0.876	1.689	27.7	19.4	128 W	73 36	5 16	22 27.69	-57 41.6	0.253	1.079	67.9	16.8	99 W	- 57*
4 11	15 33.86	+29 23.0	0.869	1.698	26.8	19.4	130 W	74 35	5 17	22 40.97	-57 45.2	0.252	1.075	68.8	16.8	98 W	- 57*
4 16	15 26.63	+30 34.4	0.866	1.706	26.1	19.3	132 W	76 33	5 18	22 54.32	-57 43.7	0.251	1.071	69.7	16.8	97 W	- 56*
4 21	15 18.38	+31 30.4	0.867	1.713	25.7	19.3	132 W	77 32	5 19	23 7.64	-57 37.3	0.250	1.067	70.6	16.8	96 W	- 56*
4 26	15 9.42	+32 8.8	0.871	1.719	25.6	19.3	133 W	77 32	5 20	23 20.87	-57 25.8	0.249	1.063	71.6	16.8	95 W	- 55*
5 1	15 0.07	+32 28.4	0.879	1.725	25.7	19.4	132 W	77 32	5 21	23 33.93	-57 9.4	0.249	1.058	72.6	16.8	94 W	- 55*
5 6	14 50.69	+32 28.6	0.891	1.730	26.1	19.4	131 E	77 32	5 22	23 46.76	-56 48.2	0.249	1.054	73.5	16.9	93 W	- 54*
5 11	14 41.61	+32 9.6	0.906	1.734	26.7	19.5	130 E	77 32	5 23	23 59.30	-56 22.4	0.248	1.050	74.5	16.9	92 W	- 54*
5 16	14 33.16	+31 32.5	0.925	1.737	27.5	19.6	128 E	77 32	5 24	0 11.50	-55 52.1	0.249	1.046	75.5	16.9	91 W	- 54*
5 21	14 25.60	+30 39.2	0.947	1.740	28.4	19.6	125 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°	
4544 Xanthus (continuation)									3635 Kreutz (continuation)									
6 11	2 41.25	-39 37.5	0.276	0.968	91.8	17.6	72 W	- 49*	7 20	15 41.84	- 4 50.2	1.224	1.905	28.6	18.0	116 E	40*	69
6 13	2 51.34	-37 30.7	0.281	0.960	93.3	17.7	71 W	- 49*	7 25	15 44.75	- 4 46.9	1.276	1.908	29.5	18.1	112 E	40*	69
6 15	3 0.61	-35 24.2	0.287	0.951	94.7	17.8	69 W	- 49*	7 30	15 48.34	- 4 48.5	1.330	1.912	30.2	18.2	109 E	39*	69
6 17	3 9.17	-33 18.3	0.293	0.942	96.0	17.8	67 W	- 49*	8 4	15 52.56	- 4 54.3	1.384	1.915	30.8	18.3	105 E	39*	69
6 19	3 17.12	-31 13.4	0.300	0.934	97.2	17.9	66 W	- 49*	8 14	16 2.73	- 5 15.9	1.494	1.921	31.5	18.5	98 E	37*	69
6 21	3 24.55	-29 9.6	0.307	0.925	98.4	18.0	64 W	- 49*	8 24	16 14.91	- 5 46.3	1.605	1.926	31.6	18.7	92 E	36*	70*
6 23	3 31.54	-27 7.1	0.314	0.917	99.4	18.1	63 W	- 49*	9 3	16 28.78	- 6 21.1	1.715	1.931	31.4	18.8	86 E	35*	69*
6 25	3 38.16	-25 6.0	0.322	0.908	100.3	18.2	62 W	- 49*	9 13	16 44.13	- 6 57.0	1.824	1.935	30.9	19.0	81 E	34*	66*
6 30	3 53.47	-20 9.7	0.342	0.888	102.2	18.3	59 W	- 49*	9 23	17 0.76	- 7 30.8	1.930	1.938	30.1	19.1	75 E	33*	63*
7 5	4 7.58	-15 23.2	0.364	0.869	103.4	18.5	56 W	- 48*	10 3	17 18.49	- 8 0.3	2.033	1.941	29.0	19.2	70 E	33*	58*
7 10	4 21.07	-10 47.0	0.388	0.850	104.0	18.6	54 W	- 48*	10 13	17 37.19	- 8 23.3	2.132	1.944	27.9	19.2	65 E	32*	53*
7 15	4 34.36	- 6 21.6	0.415	0.834	103.9	18.7	53 W	4* 47*	10 23	17 56.71	- 8 38.0	2.227	1.945	26.5	19.3	61 E	32*	48*
7 20	4 47.81	- 2 7.9	0.443	0.819	103.3	18.8	52 W	9* 45*	11 2	18 16.93	- 8 43.1	2.316	1.946	25.1	19.3	56 E	31*	42*
7 25	5 1.71	+ 1 52.9	0.473	0.806	102.0	18.8	51 W	14* 44*	11 12	18 37.75	- 8 37.6	2.399	1.946	23.5	19.4	52 E	31*	36*
7 30	5 16.29	+ 5 39.2	0.505	0.796	100.2	18.9	50 W	19* 42*	11 22	18 59.04	- 8 20.5	2.477	1.946	21.9	19.4	47 E	30*	30*
8 4	5 31.68	+ 9 9.2	0.538	0.788	98.0	18.9	50 W	23* 40*	12 2	19 20.71	- 7 51.4	2.548	1.945	20.2	19.4	43 E	30*	24*
8 9	5 47.96	+12 21.2	0.573	0.783	95.5	18.9	50 W	27* 37*	12 12	19 42.65	- 7 10.2	2.612	1.943	18.5	19.4	39 E	28*	19*
8 14	6 5.14	+15 13.8	0.609	0.781	92.7	18.9	50 W	30* 35*	12 22	20 4.78	- 6 16.9	2.669	1.941	16.7	19.4	35 E	26*	13*
8 24	6 42.02	+19 56.8	0.683	0.787	86.6	18.9	51 W	36* 31*	1 1	20 27.02	- 5 12.0	2.720	1.938	14.9	19.3	30 E	23*	8*
9 3	7 21.52	+23 13.9	0.756	0.803	80.5	18.9	52 W	41* 27*	1 11	20 49.32	- 3 55.9	2.762	1.934	13.2	19.3	27 E	20*	3*
9 13	8 2.24	+25 8.0	0.825	0.830	74.9	19.0	53 W	44* 23*	1 21	21 11.61	- 2 29.6	2.798	1.930	11.4	19.3	23 E	17*	—
9 18	8 22.58	+25 36.8	0.857	0.846	72.3	19.0	53 W	45* 22*	27995 1997 WL₂									
9 23	8 42.68	+25 48.7	0.887	0.864	69.9	19.1	54 W	46* 21*	12 27	13 50.48	- 8 14.9	2.459	2.260	23.6	19.9	67 W	36*	47*
9 28	9 2.43	+25 45.6	0.915	0.883	67.7	19.1	55 W	47* 20*	1 6	14 6.10	- 9 35.5	2.312	2.231	24.9	19.8	73 W	35	54*
10 3	9 21.71	+25 29.2	0.940	0.904	65.7	19.2	55 W	48* 19*	1 16	14 21.32	-10 49.4	2.162	2.200	26.0	19.7	79 W	34	61*
10 8	9 40.44	+25 1.5	0.962	0.924	63.9	19.2	56 W	49* 19*	1 26	14 35.94	-11 55.7	2.010	2.169	26.9	19.5	86 W	33	68*
10 13	9 58.56	+24 24.1	0.982	0.946	62.3	19.3	57 W	50* 19*	2 5	14 49.78	-12 54.1	1.859	2.138	27.4	19.3	92 W	32	74*
10 18	10 16.06	+23 38.7	0.999	0.968	60.8	19.3	58 W	51* 19*	2 15	15 2.55	-13 43.9	1.710	2.105	27.6	19.1	99 W	31	78*
10 23	10 32.94	+22 46.8	1.014	0.989	59.6	19.3	59 W	52* 19*	2 25	15 13.91	-14 24.7	1.564	2.073	27.3	18.9	106 W	31	78*
10 28	10 49.21	+21 49.5	1.025	1.011	58.4	19.4	60 W	53* 19*	3 7	15 23.48	-14 56.4	1.424	2.040	26.4	18.6	114 W	30	79
11 2	11 4.90	+20 48.1	1.033	1.032	57.4	19.4	61 W	54* 20*	3 17	15 30.76	-15 19.0	1.292	2.007	24.8	18.3	122 W	30	79
11 7	11 20.01	+19 43.8	1.039	1.053	56.5	19.4	62 W	55* 21*	3 27	15 35.22	-15 32.5	1.170	1.973	22.5	18.0	131 W	29	80
11 12	11 34.57	+18 37.3	1.041	1.074	55.8	19.5	64 W	55* 22*	4 6	15 36.38	-15 37.3	1.060	1.940	19.2	17.6	140 W	29	80
11 22	12 2.20	+16 20.7	1.037	1.113	54.5	19.5	67 W	56* 25*	4 16	15 33.82	-15 33.9	0.966	1.906	14.9	17.3	151 W	29	80
12 2	12 28.05	+14 3.2	1.023	1.150	53.6	19.5	70 W	57* 29*	4 26	15 27.56	-15 23.4	0.890	1.873	9.6	16.8	162 W	30	79
12 12	12 52.26	+11 48.5	0.997	1.183	52.9	19.5	73 W	56* 33*	5 6	15 18.16	-15 8.0	0.835	1.841	3.6	16.4	174 W	30	79
12 22	13 14.99	+ 9 38.8	0.961	1.212	52.3	19.5	77 W	55* 38*	5 11	15 12.66	-14 59.5	0.815	1.825	1.6	16.2	177 W	30	79
1 1	13 36.31	+ 7 35.4	0.916	1.238	51.7	19.4	81 W	53* 44*	5 16	15 6.93	-14 51.4	0.801	1.809	4.0	16.3	173 E	30	79
1 11	13 56.17	+ 5 39.5	0.863	1.259	51.2	19.3	86 W	51* 50*	5 21	15 1.21	-14 44.5	0.792	1.793	7.3	16.4	167 E	30	79
1 21	14 14.48	+ 3 50.6	0.803	1.276	50.4	19.1	91 W	49* 55*	5 26	14 55.78	-14 39.6	0.789	1.777	10.7	16.5	161 E	30	79
12 27	13 50.00	-25 44.8	1.937	1.704	30.5	18.8	62 W	19* 53*	5 31	14 50.86	-14 37.4	0.790	1.762	14.0	16.6	155 E	30	79
1 6	14 13.38	-27 27.8	1.861	1.713	31.6	18.8	66 W	18* 58*	6 5	14 46.66	-14 38.6	0.796	1.747	17.2	16.7	149 E	30	79
1 16	14 36.34	-28 54.3	1.780	1.723	32.6	18.7	71 W	16* 64*	6 10	14 43.35	-14 43.7	0.805	1.732	20.2	16.8	144 E	30	79
1 26	14 58.61	-30 3.0	1.695	1.733	33.4	18.6	75 W	15* 69*	6 15	14 41.06	-14 53.1	0.819	1.718	23.0	16.9	139 E	30	79
1 31	15 9.40	-30 30.3	1.651	1.738	33.7	18.6	78 W	14* 72*	6 25	14 39.80	-15 25.7	0.855	1.690	27.9	17.1	129 E	30*	79
2 5	15 19.90	-30 52.8	1.606	1.743	33.9	18.5	81 W	14* 75*	7 5	14 43.02	-16 15.5	0.900	1.664	31.8	17.3	120 E	28*	80
2 10	15 30.06	-31 10.4	1.561	1.749	34.1	18.5	83 W	14* 77*	7 15	14 50.52	-17 20.1	0.951	1.640	34.8	17.5	113 E	26*	81
2 15	15 39.81	-31 23.0	1.514	1.754	34.2	18.4	86 W	14* 80*	7 25	15 1.96	-18 35.8	1.006	1.618	37.0	17.7	106 E	24*	83
2 20	15 49.12	-31 30.4	1.467	1.759	34.2	18.4	89 W	13* 82*	8 4	15 16.87	-19 58.3	1.064	1.599	38.6	17.8	101 E	22*	84
2 25	15 57.90	-31 32.5	1.420	1.765	34.1	18.3	92 W	13* 84*	8 14	15 34.93	-21 23.0	1.124	1.582	39.6	17.9	95	20*	85
3 2	16 6.11	-31 29.2	1.372	1.770	33.9	18.2	96 W	14* 85*	8 24	15 55.79	-22 45.2	1.185	1.568	40.1	18.0	91 E	19*	84*
3 7	16 13.67	-31 20.5	1.325	1.776	33.5	18.2	99 W	14* 85*	9 3	16 19.11	-24 0.3	1.247	1.557	40.3	18.1	87 E	18*	81*
3 12	16 20.50	-31 6.2	1.278	1.781	33.0	18.1	103 W	14* 85*	9 13	16 44.60	-25 3.8	1.310	1.549	40.1	18.2	83 E	17*	77*
3 17	16 26.52	-30 46.0	1.231	1.787	32.3	18.0	106 W	14* 85*	9 23	17 11.93	-25 51.8	1.376	1.545	39.7	18.3	79 E	17*	73*
3 22	16 31.66	-30 19.7	1.184	1.792	31.4	17.9	110 W	15* 86*	10 3	17 40.70	-26 20.5	1.443	1.544	39.0	18.4	76 E	17*	70*
3 27	16 35.85	-29 47.1	1.139	1.798	30.4	17.8	114 W	15* 86*	10 13	18 10.56	-26 27.5	1.512	1.546	38.1	18.5	73 E	17*	67*
4 1	16 39.01	-29 7.9	1.096	1.803	29.1	17.7	119 W	16* 87*	10 18	18 25.75	-26 22.2	1.548	1.549	37.5	18.5	71 E	17*	65*
4 6	16 41.08	-28 21.7	1.054	1.808	27.6	17.5	123 W	17* 88*	10 23	18 41.05</								

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°
65784 Naderayama										5817 Robertfrazier (continuation)									
12 27	13 50.71	-9 58.0	3.149	2.895	18.1	21.1	66 W	35*	48*	9 13	14 11.41	-32 5.4	3.712	3.219	14.6	19.1	54 E	—	44*
1 6	14 0.62	-10 57.1	3.010	2.892	19.0	21.1	74 W	34	56*	9 23	14 25.01	-32 43.5	3.817	3.223	13.2	19.1	47 E	—	38*
1 16	14 9.43	-11 49.2	2.864	2.889	19.7	21.0	82 W	33	64*	10 3	14 39.31	-33 25.0	3.909	3.225	11.8	19.1	41 E	—	32*
1 26	14 16.89	-12 33.5	2.715	2.884	20.0	20.9	90 W	32	72*	10 13	14 54.24	-34 8.6	3.988	3.227	10.3	19.1	35 E	—	26*
2 5	14 22.73	-13 9.4	2.565	2.879	19.8	20.7	98 W	32	77*	10 23	15 9.74	-34 53.4	4.053	3.227	8.8	19.1	30 E	—	20*
2 15	14 26.66	-13 36.3	2.417	2.872	19.2	20.6	107 W	31	78	11 2	15 25.75	-35 38.2	4.102	3.227	7.4	19.0	25 E	—	15*
2 25	14 28.37	-13 53.2	2.275	2.865	17.9	20.4	117 W	31	78	11 12	15 42.22	-36 22.3	4.136	3.225	6.1	19.0	20 E	—	9*
3 7	14 27.62	-13 59.4	2.144	2.856	16.1	20.2	127 W	31	78	11 22	15 59.06	-37 4.9	4.154	3.223	5.2	19.0	17 E	—	4*
3 17	14 24.24	-13 54.3	2.028	2.847	13.5	20.0	138 W	31	78	12 2	16 16.23	-37 45.3	4.155	3.220	4.9	18.9	16 W	—	5*
3 27	14 18.27	-13 37.5	1.931	2.836	10.3	19.8	149 W	31	78	12 12	16 33.63	-38 23.1	4.139	3.215	5.4	19.0	18 W	—	9*
4 6	14 10.06	-13 9.8	1.858	2.824	6.5	19.5	161 W	32	77	12 22	16 51.17	-38 57.8	4.106	3.210	6.4	19.0	21 W	—	14*
4 16	14 0.23	-12 33.2	1.812	2.812	2.3	19.2	174 W	32	77	1 1	17 8.75	-39 29.3	4.057	3.204	7.8	19.0	26 W	—	19*
4 21	13 55.00	-12 12.7	1.800	2.805	0.2	19.0	180 W	33	76	1 11	17 26.26	-39 57.6	3.993	3.196	9.3	19.0	32 W	—	25*
4 26	13 49.74	-11 51.6	1.796	2.798	2.2	19.2	174 E	33	76	1 21	17 43.58	-40 22.9	3.913	3.188	10.8	19.1	37 W	—	31*
5 1	13 44.58	-11 30.5	1.798	2.791	4.4	19.3	168 E	33	76	152948 2000 FP₃₂									
5 6	13 39.64	-11 10.0	1.808	2.784	6.5	19.4	162 E	34	75	12 27	13 51.30	-9 25.1	1.916	1.766	30.6	20.9	66 W	35*	47*
5 11	13 35.05	-10 50.9	1.824	2.776	8.6	19.5	156 E	34	75	1 6	14 11.17	-11 14.3	1.847	1.790	31.3	20.8	71 W	34*	54*
5 16	13 30.90	-10 33.6	1.847	2.768	10.6	19.6	150 E	34	75	1 16	14 29.90	-12 51.4	1.774	1.817	31.8	20.8	77 W	32	61*
5 26	13 24.24	-10 7.0	1.909	2.752	14.1	19.8	139 E	35	74	1 26	14 47.22	-14 15.7	1.698	1.844	31.9	20.7	82 W	31	68*
6 5	13 20.05	-9 52.9	1.991	2.734	17.0	20.0	128 E	35	74	2 5	15 2.82	-15 27.3	1.619	1.873	31.8	20.7	88 W	30	74*
6 15	13 18.45	-9 52.4	2.087	2.715	19.3	20.1	118 E	34*	74	2 15	15 16.34	-16 26.3	1.540	1.903	31.1	20.6	95 W	29	80*
6 25	13 19.38	-10 5.6	2.192	2.696	20.9	20.3	109 E	32*	74	2 25	15 27.34	-17 13.1	1.460	1.933	30.0	20.5	102 W	28	81
7 5	13 22.63	-10 31.5	2.303	2.676	22.0	20.4	100 E	29*	75	3 7	15 35.38	-17 48.2	1.383	1.965	28.2	20.3	111 W	27	82
7 15	13 27.98	-11 8.6	2.416	2.654	22.5	20.5	92 E	25*	75	3 17	15 40.00	-18 11.9	1.311	1.997	25.7	20.2	119 W	27	82
7 25	13 35.20	-11 55.4	2.529	2.632	22.6	20.6	84 E	22*	74*	3 27	15 40.83	-18 24.4	1.247	2.030	22.4	20.0	129 W	27	82
8 4	13 44.07	-12 50.3	2.638	2.609	22.3	20.7	77 E	19*	70*	4 6	15 37.74	-18 25.8	1.196	2.062	18.3	19.8	140 W	27	82
8 14	13 54.43	-13 51.6	2.743	2.584	21.7	20.7	70 E	16*	64*	4 16	15 30.98	-18 16.0	1.160	2.095	13.4	19.6	151 W	27	82
8 24	14 6.12	-14 58.0	2.840	2.559	20.8	20.7	64 E	14*	58*	4 21	15 26.44	-18 7.3	1.150	2.112	10.7	19.5	157 W	27	82
9 3	14 19.04	-16 7.8	2.929	2.533	19.6	20.7	57 E	12*	51*	4 26	15 21.34	-17 56.2	1.146	2.128	7.9	19.4	163 W	27	82
9 13	14 33.09	-17 19.7	3.009	2.506	18.3	20.7	51 E	10*	45*	5 1	15 15.85	-17 43.4	1.147	2.145	5.0	19.3	169 W	27	82
9 23	14 48.21	-18 32.4	3.079	2.479	16.7	20.7	45 E	8*	39*	5 6	15 10.17	-17 29.2	1.154	2.161	2.1	19.1	175 W	28	81
10 3	15 4.34	-19 44.5	3.138	2.450	15.1	20.7	40 E	7*	34*	5 11	15 4.49	-17 14.3	1.168	2.178	0.8	19.1	178 E	28	81
10 13	15 21.46	-20 54.7	3.185	2.421	13.3	20.6	34 E	5*	28*	5 16	14 59.03	-16 59.4	1.188	2.194	3.6	19.3	172 E	28	81
10 23	15 39.50	-22 1.5	3.220	2.391	11.4	20.5	28 E	4*	22*	5 21	14 53.96	-16 45.4	1.215	2.211	6.3	19.5	166 E	28	81
11 2	15 58.46	-23 3.6	3.243	2.360	9.4	20.4	23 E	2*	17*	5 26	14 49.44	-16 32.8	1.247	2.227	8.9	19.7	160 E	28	81
11 12	16 18.30	-23 59.7	3.254	2.329	7.4	20.3	18 E	—	11*	6 5	14 42.41	-16 14.2	1.329	2.259	13.4	20.1	149 E	29	80
11 22	16 38.97	-24 48.4	3.252	2.297	5.3	20.2	12 E	—	6*	6 15	14 38.44	-16 6.8	1.430	2.291	17.1	20.4	138 E	29	80
12 2	17 0.42	-25 28.4	3.239	2.264	3.2	20.0	7 E	—	1*	6 25	14 37.60	-16 11.8	1.547	2.323	20.0	20.7	129 E	29*	80
12 12	17 22.60	-25 58.5	3.213	2.231	1.5	19.9	3 E	—	—	7 5	14 39.65	-16 28.4	1.678	2.354	22.0	20.9	120 E	28*	80
12 22	17 45.42	-26 17.6	3.177	2.198	2.0	19.9	4 W	—	—	7 15	14 44.28	-16 55.0	1.818	2.384	23.4	21.2	111 E	26*	81
1 1	18 8.81	-26 24.6	3.130	2.164	4.0	19.9	9 W	—	3*	7 25	14 51.13	-17 29.9	1.964	2.414	24.1	21.4	104 E	24*	81
1 11	18 32.67	-26 18.7	3.073	2.129	6.2	20.0	13 W	—	7*	152858 1999 XN₃₅									
1 21	18 56.88	-25 59.3	3.008	2.095	8.4	20.0	18 W	1*	12*	12 27	13 51.57	+7 34.6	3.083	2.953	18.6	21.3	73 W	52*	37*
5817 Robertfrazier										1 6	14 0.36	+7 12.2	2.947	2.953	19.2	21.2	81 W	52	44*
12 27	13 50.97	-23 24.1	3.117	2.792	18.1	18.5	62 W	21*	52*	1 16	14 7.82	+7 1.6	2.807	2.952	19.5	21.1	89 W	52	50*
1 6	14 0.73	-25 18.8	3.016	2.820	19.0	18.5	69 W	20	61*	1 26	14 13.68	+7 3.3	2.666	2.950	19.3	21.0	97 W	52	55*
1 16	14 9.20	-27 10.7	2.908	2.848	19.6	18.5	77 W	18	70*	2 5	14 17.69	+7 17.3	2.526	2.947	18.8	20.8	106 W	52	57*
1 26	14 16.09	-28 59.5	2.794	2.874	19.9	18.4	85 W	16	79*	2 15	14 19.52	+7 43.1	2.392	2.943	17.8	20.7	115 W	53	56
2 5	14 21.09	-30 44.7	2.679	2.900	19.9	18.3	93 W	14	85*	2 25	14 18.90	+8 19.1	2.267	2.938	16.2	20.5	124 W	53	56
2 15	14 23.85	-32 25.2	2.565	2.924	19.3	18.3	101 W	13	84	3 7	14 15.66	+9 2.7	2.156	2.932	14.1	20.3	134 W	54	55
2 25	14 24.00	-33 58.8	2.456	2.948	18.4	18.1	110 W	11	82	3 17	14 9.72	+9 49.7	2.064	2.924	11.7	20.1	143 W	55	54
3 7	14 21.30	-35 22.7	2.356	2.971	16.9	18.0	119 W	10	81	3 22	14 5.80	+10 12.7	2.027	2.920	10.4	20.0	148 W	55	54
3 17	14 15.59	-36 32.7	2.269	2.993	15.1	17.9	129 W	8	79	3 27	14 1.32	+10 34.3	1.995	2.916	9.2	19.9	152 W	56	53
3 22	14 11.65	-37 0.9	2.232	3.003	14.0	17.8	133 W	8	79	4 1	13 56.36	+10 53.5	1.971	2.911	8.1	19.9	156 W	56	53
3 27	14 7.04	-37 23.7	2.200	3.013	12.9	17.8	138 W	8	79	4 6	13 50.99	+11 9.8	1.953	2.906	7.3	19.8	158 W	56	53
4 1	14 1.85	-37 40.6	2.173	3.023	11.7	17.7	142 W	7	78	4 11	13 45.35	+11 22.2	1.942	2.901	7.0	19.8	159 W	56	53
4 6	13 56.17	-37 51.2	2.152	3.033	10.6	17.6	146 W	7	78	4 16	13 39.56	+11 30.1	1.938	2.895	7.3	19.8	158 W	57	52
4 11	13 50.15	-37 55.0	2.137	3.043	9.7	17.6	149 W	7	78	4 26	13 28.07	+11 30.5	1.953	2.884	9.2	19.9	153 E	57	52
4 16	13 43.92	-37 52.0	2.129	3.052	8.9	17.6	152 W	7	78	5 6	13 17.53	+11 9.3	1.993	2.871	12.0	20.0	144 E	56	53
4 21	13 37.65	-37 42.4	2.127	3.061	8.3	17.5	154 E	7	78	5 16	13 8.77	+10 27.4	2.058	2.857	14.7	20.2	134 E	55	54
4 26	13 31.50	-37 26.7	2.133	3.070	8.2	17.6	154 E	8	79	5 26	13 2.32	+9 27.2	2.142	2.841	17.1	20.3	125 E	54	55
5 1	13 25.62	-37 5.5	2.145	3.079	8.4	17.6	153 E	8	79	6 5	12 58.36	+8 12.3	2.240	2.825	19.0	20.5	115 E	53*	56
5 6	13 20.14	-36 39.7	2.163	3.087	9.0	17.6	151 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°
152858 1999 XN₃₅										127688 2003 EC₁₆									
<i>(continuation)</i>										<i>(continuation)</i>									
11 12	15 34.64	-20 33.4	3.401	2.421	2.8	20.4	7 E	—	1*	7 5	13 6.75	-36 57.8	2.396	2.842	20.2	20.8	106 E	3*	79
11 22	15 52.79	-22 12.2	3.374	2.388	0.9	20.2	2 E	—	—	7 10	13 9.80	-36 32.3	2.447	2.835	20.6	20.8	102 E	2*	79
12 2	16 11.77	-23 46.1	3.334	2.353	2.1	20.2	5 W	—	—	7 15	13 13.41	-36 10.6	2.500	2.828	20.9	20.9	98 E	1*	80*
12 12	16 31.59	-25 14.4	3.280	2.318	4.4	20.3	10 W	—	4*	7 20	13 17.55	-35 52.5	2.554	2.820	21.1	20.9	94 E	1*	79*
12 22	16 52.23	-26 36.4	3.213	2.282	6.7	20.3	16 W	1*	9*	7 25	13 22.16	-35 38.1	2.608	2.813	21.2	21.0	91 E	—	77*
1 1	17 13.71	-27 51.4	3.135	2.245	9.0	20.3	21 W	3*	14*	7 30	13 27.22	-35 27.1	2.662	2.805	21.2	21.0	87 E	—	74*
1 11	17 36.02	-28 58.9	3.046	2.207	11.4	20.3	26 W	4*	20*	8 4	13 32.70	-35 19.3	2.715	2.797	21.1	21.0	84 E	—	71*
1 21	17 59.13	-29 58.3	2.948	2.169	13.7	20.3	31 W	5*	25*	8 9	13 38.58	-35 14.6	2.769	2.789	21.0	21.1	81 E	—	68*
101496 1998 XM₃										67367 2000 LY₂₇									
12 27	13 51.65	-8 43.4	3.838	3.560	14.7	21.5	66 W	36*	47*	12 27	13 52.07	-20 28.2	1.264	1.189	47.1	19.7	62 W	24*	51*
1 6	13 58.87	-9 26.8	3.689	3.557	15.5	21.4	75 W	36	56*	1 6	14 21.42	-23 25.2	1.248	1.222	46.9	19.7	65 W	21*	56*
1 16	14 4.97	-10 3.4	3.533	3.554	16.0	21.4	83 W	35	64*	1 16	14 50.31	-25 57.8	1.225	1.254	46.7	19.7	68 W	19*	60*
1 26	14 9.74	-10 32.7	3.374	3.550	16.1	21.3	92 W	34	71*	1 26	15 18.56	-28 5.6	1.196	1.287	46.5	19.7	72 W	17*	65*
2 5	14 12.96	-10 54.0	3.216	3.545	15.8	21.1	101 W	34	75	2 5	15 45.95	-29 49.1	1.159	1.319	46.3	19.7	75 W	15*	69*
2 15	14 14.42	-11 6.8	3.061	3.538	15.1	21.0	111 W	34	75	2 10	15 59.23	-30 32.1	1.139	1.335	46.2	19.7	77 W	14*	71*
2 25	14 13.92	-11 10.5	2.915	3.531	13.9	20.9	121 W	34	75	2 15	16 12.15	-31 9.5	1.116	1.350	46.0	19.6	80 W	14*	74*
3 7	14 11.38	-11 4.9	2.782	3.523	12.1	20.7	132 W	34	75	2 20	16 24.67	-31 41.5	1.093	1.365	45.8	19.6	82 W	13*	76*
3 17	14 6.77	-10 50.1	2.668	3.514	9.8	20.5	143 W	34	75	2 25	16 36.74	-32 8.4	1.067	1.380	45.5	19.6	84 W	13*	78*
3 27	14 0.30	-10 26.7	2.577	3.505	7.0	20.3	155 W	35	74	3 2	16 48.31	-32 30.4	1.041	1.395	45.2	19.5	87 W	12*	79*
4 6	13 52.35	-9 56.4	2.513	3.494	3.9	20.1	166 W	35	74	3 7	16 59.30	-32 47.8	1.013	1.409	44.8	19.5	89 W	12*	81*
4 16	13 43.48	-9 21.8	2.479	3.482	0.6	19.8	178 W	36	73	3 12	17 9.65	-33 1.1	0.984	1.422	44.3	19.4	92 W	12*	82*
4 26	13 34.44	-8 46.2	2.476	3.469	3.1	20.0	169 E	36	73	3 17	17 19.27	-33 10.3	0.954	1.436	43.7	19.4	95 W	12*	83*
5 6	13 25.94	-8 13.5	2.502	3.456	6.4	20.2	158 E	37	72	3 22	17 28.07	-33 16.0	0.922	1.448	42.9	19.3	98 W	12	83
5 16	13 18.62	-7 47.0	2.556	3.441	9.5	20.3	146 E	37	72	3 27	17 35.99	-33 18.2	0.891	1.461	42.1	19.2	101 W	12	83
5 26	13 12.96	-7 29.5	2.634	3.426	12.1	20.5	135 E	38	71	4 1	17 42.93	-33 17.4	0.859	1.472	41.1	19.1	105 W	12	83
6 5	13 9.22	-7 22.4	2.731	3.409	14.2	20.7	124 E	38*	71	4 6	17 48.79	-33 13.7	0.826	1.484	39.8	19.0	108 W	12	83
6 15	13 7.47	-7 26.2	2.842	3.392	15.8	20.8	115 E	38*	71	4 11	17 53.43	-33 7.2	0.794	1.494	38.4	18.9	112 W	12	83
6 25	13 7.70	-7 41.0	2.962	3.374	16.9	20.9	105 E	38*	71	4 16	17 56.73	-32 57.9	0.762	1.504	36.7	18.8	116 W	12	83
7 5	13 9.77	-8 5.8	3.088	3.355	17.5	21.0	96 E	38*	72	4 21	17 58.59	-32 45.6	0.731	1.514	34.8	18.7	121 W	12	83
7 15	13 13.53	-8 39.7	3.215	3.334	17.7	21.1	88 E	26*	73*	4 26	17 58.88	-32 30.0	0.700	1.523	32.6	18.5	125 W	13	84
7 25	13 18.80	-9 21.7	3.340	3.313	17.6	21.1	80 E	22*	70*	5 1	17 57.52	-32 10.5	0.672	1.532	30.0	18.4	131 W	13	84
8 4	13 25.41	-10 10.6	3.460	3.291	17.0	21.2	72 E	19*	65*	5 6	17 54.41	-31 46.4	0.645	1.539	27.1	18.2	136 W	13	84
8 14	13 33.24	-11 5.3	3.573	3.268	16.2	21.2	65 E	16*	58*	5 11	17 49.52	-31 16.5	0.621	1.547	23.8	18.0	142 W	14	85
8 24	13 42.15	-12 4.8	3.677	3.244	15.2	21.2	57 E	13*	51*	5 16	17 42.91	-30 39.8	0.601	1.553	20.2	17.9	148 W	14	85
9 3	13 52.02	-13 8.1	3.769	3.219	13.9	21.2	50 E	10*	44*	5 21	17 34.76	-29 55.3	0.584	1.560	16.2	17.7	155 W	15	86
9 13	14 2.77	-14 14.2	3.849	3.193	12.5	21.2	43 E	8*	37*	5 26	17 25.35	-29 2.3	0.571	1.565	11.9	17.5	161 W	16	87
9 23	14 14.31	-15 22.3	3.914	3.166	10.9	21.1	37 E	6*	31*	5 31	17 15.07	-28 1.1	0.564	1.570	7.5	17.3	168 W	17	88
10 3	14 26.59	-16 31.4	3.964	3.138	9.2	21.1	30 E	4*	24*	6 5	17 4.37	-26 52.6	0.561	1.574	3.4	17.1	175 W	18	89
10 13	14 39.56	-17 40.9	3.999	3.109	7.4	21.0	23 E	2*	17*	6 10	16 53.77	-25 38.7	0.564	1.578	3.2	17.1	175 E	19	90
10 23	14 53.16	-18 49.9	4.017	3.080	5.4	20.9	17 E	—	11*	6 15	16 43.76	-24 22.0	0.572	1.581	7.3	17.3	169 E	21	88
11 2	15 7.34	-19 57.6	4.019	3.049	3.5	20.8	11 E	—	5*	6 20	16 34.77	-23 5.8	0.586	1.583	11.5	17.5	162 E	22	87
11 12	15 22.07	-21 3.4	4.003	3.017	1.6	20.6	5 E	—	—	6 25	16 27.10	-21 52.9	0.604	1.585	15.6	17.8	155 E	23	86
11 22	15 37.30	-22 6.5	3.970	2.985	1.2	20.5	4 W	—	—	6 30	16 20.89	-20 45.5	0.627	1.586	19.4	18.0	149 E	24	85
12 2	15 52.98	-23 6.4	3.921	2.951	3.0	20.6	9 W	—	2*	7 5	16 16.22	-19 45.2	0.653	1.587	22.8	18.2	143 E	25	84
12 12	16 9.06	-24 2.3	3.855	2.917	5.1	20.7	15 W	3*	8*	7 15	16 11.44	-18 8.9	0.716	1.586	28.6	18.5	132 E	27	82
12 22	16 25.49	-24 54.0	3.773	2.881	7.2	20.7	22 W	6*	14*	7 25	16 12.22	-17 4.4	0.788	1.583	32.9	18.9	122 E	28*	81
1 1	16 42.20	-25 40.9	3.677	2.845	9.3	20.7	28 W	9*	20*	8 4	16 17.63	-16 26.5	0.866	1.577	36.1	19.1	114 E	28*	80
1 11	16 59.12	-26 22.9	3.566	2.808	11.4	20.7	34 W	10*	27*										
1 21	17 16.16	-26 59.8	3.443	2.770	13.4	20.7	41 W	12*	34*										
127688 2003 EC₁₆																			
12 27	13 51.68	-28 16.3	3.275	2.921	17.1	21.4	61 W	16*	53*										
1 6	14 2.03	-30 15.4	3.155	2.925	18.1	21.4	68 W	15	61*										
1 16	14 11.33	-32 14.0	3.027	2.929	18.9	21.3	75 W	13	69*										
1 26	14 19.29	-34 11.9	2.895	2.932	19.4	21.2	82 W	11	76*										
2 5	14 25.60	-36 8.5	2.762	2.933	19.6	21.1	90 W	9	80*										
2 15	14 29.85	-38 2.9	2.629	2.934	19.5	21.0	98 W	7	78										
2 25	14 31.63	-39 53.2	2.500	2.934	18.9	20.9	106 W	5	76										
3 7	14 30.52	-41 36.7	2.379	2.932	17.9	20.8	114 W	3	74										
3 17	14 26.17	-43 8.8	2.269	2.930	16.6	20.6	123 W	2	73										
3 27	14 18.48	-44 23.7	2.174	2.927	14.9	20.4	131 W	1	72										
4 1	14 13.46	-44 52.6	2.134	2.925	14.0	20.4	135 W	—	71										
4 6	14 7.75	-45 14.7	2.098	2.923	13.1	20.3	138 W	—	71										
4 11	14 1.45	-45 29.2	2.068	2.920	12.3	20.2	142 W	—	71										
4 16	13 54.74	-45 35.7	2.044	2.918	11.6	20.2	144 W	—	70										
4 21	13 47.79	-45 33.8	2.026	2.915	11.1	20.1	146 E	—	70										

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°
67367 2000 LY₂₇										172034 2001 WR₁									
<i>(continuation)</i>										<i>(continuation)</i>									
8 9	16 21.81	-16 15.5	0.906	1.573	37.3	19.3	110 E	28*	80	1 6	22 5.86	-10 34.7	1.524	1.071	40.0	20.4	44 E	28*	28*
8 14	16 26.86	-16 8.6	0.946	1.569	38.3	19.4	106 E	28*	80	1 11	22 20.51	-7 42.7	1.524	1.061	39.9	20.4	44 E	30*	25*
8 19	16 32.70	-16 5.1	0.987	1.564	39.1	19.5	103 E	28*	80	1 16	22 35.10	-4 47.9	1.524	1.051	39.8	20.4	43 E	31*	23*
8 24	16 39.25	-16 4.2	1.027	1.558	39.8	19.6	100 E	28*	80	1 21	22 49.69	-1 50.9	1.524	1.043	39.8	20.4	43 E	32*	21*
9 3	16 54.21	-16 7.2	1.107	1.545	40.7	19.8	94 E	27*	80*	22099 2000 EX₁₀₆									
9 13	17 11.37	-16 12.9	1.185	1.529	41.1	19.9	88 E	27*	78*	12 27	13 52.53	-6 22.2	1.404	1.365	41.6	20.9	67 W	38*	45*
9 23	17 30.43	-16 17.1	1.259	1.512	41.2	20.0	83 E	27*	74*	1 6	14 21.63	-7 51.2	1.312	1.343	43.4	20.8	70 W	37*	50*
10 3	17 51.12	-16 16.0	1.329	1.492	41.1	20.1	78 E	27*	69*	1 16	14 52.23	-9 7.4	1.221	1.318	45.4	20.7	73 W	36*	54*
10 13	18 13.27	-16 6.9	1.393	1.469	40.7	20.2	74 E	27*	64*	1 26	15 24.63	-10 7.7	1.132	1.289	47.4	20.5	75 W	35*	58*
10 23	18 36.71	-15 47.0	1.451	1.445	40.2	20.2	70 E	28*	60*	2 5	15 59.20	-10 49.0	1.046	1.257	49.7	20.3	76 W	34*	61*
11 2	19 1.28	-15 14.3	1.503	1.419	39.6	20.2	66 E	28*	55*	2 10	16 17.41	-11 1.4	1.005	1.239	50.9	20.3	77 W	34*	62*
11 12	19 26.90	-14 26.9	1.549	1.391	38.9	20.2	62 E	29*	50*	2 15	16 36.30	-11 7.5	0.965	1.221	52.1	20.2	77 W	34*	63*
11 22	19 53.43	-13 23.6	1.587	1.362	38.2	20.2	58 E	30*	45*	2 20	16 55.89	-11 7.0	0.927	1.201	53.5	20.1	78 W	33*	64*
12 2	20 20.79	-12 3.5	1.618	1.331	37.5	20.2	55 E	30*	40*	2 25	17 16.24	-10 59.3	0.892	1.181	54.9	20.0	78 W	33*	64*
12 12	20 48.94	-10 26.2	1.643	1.299	36.8	20.1	52 E	31*	35*	3 2	17 37.38	-10 44.1	0.859	1.160	56.4	19.9	77 W	33*	64*
12 22	21 17.82	-8 31.9	1.661	1.267	36.2	20.1	50 E	32*	30*	3 7	17 59.34	-10 20.9	0.828	1.139	58.0	19.9	77 W	33*	64*
1 1	21 47.44	-6 21.5	1.673	1.234	35.7	20.0	47 E	32*	26*	3 17	18 45.64	-9 9.5	0.776	1.094	61.5	19.7	75 W	32*	63*
1 11	22 17.86	-3 56.1	1.679	1.202	35.2	20.0	45 E	33*	23*	3 27	19 34.93	-7 25.2	0.738	1.048	65.2	19.7	73 W	31*	61*
1 21	22 49.14	-1 18.1	1.681	1.170	34.9	19.9	43 E	32*	20*	4 6	20 26.66	-5 11.6	0.717	1.001	69.0	19.6	69 W	30*	58*
172034 2001 WR₁										24445 2000 PM₈									
12 27	13 52.37	+ 4 42.9	1.148	1.256	48.0	20.4	72 W	49*	39*	4 11	20 53.16	-3 56.0	0.712	0.978	70.8	19.6	67 W	29*	56*
1 6	14 10.38	+ 0 58.0	1.103	1.287	47.8	20.4	76 W	46*	47*	4 16	21 19.89	-2 36.4	0.713	0.955	72.4	19.6	65 W	28*	55*
1 16	14 26.76	- 2 47.0	1.049	1.317	47.5	20.3	81 W	42	55*	4 21	21 46.71	-1 14.1	0.717	0.932	73.8	19.6	63 W	27*	53*
1 26	14 41.30	- 6 35.5	0.988	1.346	46.9	20.2	86 W	38	64*	4 26	22 13.49	+ 0 9.4	0.727	0.910	74.9	19.6	61 W	25*	51*
2 5	14 53.70	-10 32.3	0.922	1.373	45.9	20.1	92 W	34	72*	5 1	22 40.12	+ 1 32.9	0.740	0.890	75.7	19.6	59 W	24*	49*
2 15	15 3.37	-14 42.9	0.853	1.399	44.3	19.9	99 W	30	79*	5 6	23 6.49	+ 2 55.5	0.758	0.871	76.2	19.7	57 W	23*	47*
2 20	15 6.91	-16 55.3	0.818	1.411	43.2	19.8	102 W	28	81	5 16	23 58.15	+ 5 34.4	0.806	0.837	75.9	19.7	53 W	20*	44*
2 25	15 9.42	-19 13.6	0.784	1.423	41.9	19.7	106 W	26	83	5 26	0 48.09	+ 8 1.3	0.867	0.814	74.1	19.7	51 W	18*	41*
3 2	15 10.73	-21 38.3	0.750	1.434	40.5	19.6	110 W	23	86	6 5	1 36.27	+10 14.2	0.938	0.801	70.9	19.8	48 W	17*	39*
3 7	15 10.64	-24 9.9	0.717	1.445	38.7	19.4	114 W	21	88	6 15	2 22.72	+12 10.9	1.014	0.801	66.9	19.8	46 W	17*	37*
3 12	15 8.88	-26 48.1	0.687	1.455	36.8	19.3	119 W	18	89	6 25	3 7.44	+13 48.8	1.092	0.813	62.5	19.9	45 W	17*	35*
3 17	15 5.19	-29 31.9	0.658	1.464	34.6	19.1	123 W	15	86	7 5	3 50.47	+15 5.4	1.167	0.837	58.2	19.9	44 W	18*	34*
3 22	14 59.28	-32 19.5	0.633	1.473	32.2	19.0	128 W	13	84	7 15	4 31.72	+15 58.7	1.237	0.870	54.3	20.0	44 W	20*	33*
3 27	14 50.90	-35 7.4	0.611	1.482	29.7	18.9	133 W	10	81	7 25	5 11.10	+16 27.8	1.300	0.910	51.1	20.2	44 W	22*	32*
4 1	14 39.83	-37 50.8	0.594	1.489	27.2	18.8	137 W	7	78	8 4	5 48.60	+16 33.4	1.353	0.954	48.5	20.3	45 W	25*	31*
4 6	14 26.00	-40 23.3	0.581	1.497	25.0	18.6	141 W	5	76	8 14	6 24.20	+16 17.1	1.396	1.000	46.5	20.4	46 W	28*	31*
4 11	14 9.59	-42 37.5	0.574	1.503	23.2	18.6	144 W	2	73	8 24	6 57.91	+15 41.2	1.427	1.047	45.1	20.5	47 W	31*	31*
4 16	13 51.13	-44 26.8	0.572	1.509	22.2	18.5	145 W	1	72	9 3	7 29.86	+14 48.5	1.448	1.093	44.1	20.6	49 W	34*	31*
4 18	13 43.37	-45 2.3	0.572	1.512	22.0	18.5	146 E	—	71	9 13	8 0.12	+13 42.0	1.456	1.138	43.5	20.7	51 W	36*	32*
4 20	13 35.49	-45 32.9	0.574	1.514	22.0	18.6	146 E	—	70	9 23	8 28.81	+12 24.4	1.454	1.180	43.2	20.7	54 W	39*	33*
4 22	13 27.58	-45 58.5	0.577	1.516	22.1	18.6	145 E	—	70	10 3	8 56.09	+10 58.7	1.440	1.220	43.2	20.8	57 W	42*	34*
4 24	13 19.70	-46 19.1	0.580	1.518	22.3	18.6	145 E	—	70	10 13	9 22.08	+ 9 27.3	1.414	1.256	43.4	20.8	60 W	44*	35*
4 26	13 11.93	-46 34.8	0.584	1.520	22.7	18.6	144 E	—	69	10 23	9 46.89	+ 7 53.0	1.379	1.289	43.6	20.8	63 W	46*	37*
4 28	13 4.34	-46 45.9	0.589	1.521	23.1	18.7	144 E	—	69	11 2	10 10.65	+ 6 18.2	1.333	1.318	44.0	20.8	67 W	48*	40*
4 30	12 57.00	-46 52.6	0.595	1.523	23.7	18.7	143 E	—	69	11 12	10 33.43	+ 4 45.6	1.278	1.343	44.3	20.8	71 W	48*	42*
5 2	12 49.95	-46 55.2	0.601	1.525	24.3	18.7	141 E	—	69	11 22	10 55.29	+ 3 18.1	1.214	1.364	44.6	20.7	76 W	48*	46*
5 4	12 43.25	-46 54.1	0.609	1.526	25.0	18.8	140 E	—	69	12 2	11 16.28	+ 1 58.4	1.143	1.381	44.8	20.6	81 W	47	50*
5 6	12 36.94	-46 49.8	0.616	1.527	25.8	18.8	139 E	—	69	12 12	11 36.36	+ 0 50.3	1.065	1.395	44.7	20.5	86 W	46	54*
5 11	12 23.06	-46 27.1	0.639	1.530	27.7	19.0	135 E	—	70	12 22	11 55.47	- 0 2.2	0.983	1.404	44.5	20.3	91 W	45	58*
5 16	12 12.04	-45 53.1	0.664	1.533	29.7	19.1	131 E	—	70	12 27	12 4.64	- 0 21.1	0.941	1.407	44.2	20.2	94 W	45	60*
5 21	12 3.87	-45 13.4	0.692	1.534	31.6	19.3	127 E	—	71	1 1	12 13.50	- 0 34.2	0.897	1.409	43.9	20.1	97 W	44	62*
5 26	11 58.33	-44 32.6	0.723	1.535	33.4	19.4	124 E	—	71	1 6	12 22.03	- 0 40.6	0.853	1.410	43.4	20.0	100 W	44	64*
5 31	11 55.15	-43 53.6	0.755	1.536	34.9	19.6	120 E	—	72	1 11	12 30.18	- 0 39.2	0.809	1.409	42.8	19.8	103 W	44	64*
6 5	11 54.06	-43 18.4	0.788	1.536	36.3	19.7	116 E	—	73	1 16	12 37.91	- 0 29.2	0.765	1.408	42.0	19.7	107 W	45	64*
6 10	11 54.81	-42 48.3	0.822	1.535	37.5	19.8	113 E	—	73	1 21	12 45.17	- 0 9.3	0.722	1.406	41.1	19.5	110 W	45	64
6 15	11 57.18	-42 24.0	0.856	1.533	38.6	19.9	110 E	—	74	12 27	13 52.60	-17 12.4	2.556	2.289	22.6	19.6	63 W	28*	50*
6 20	12 0.95	-42 5.8	0.890	1.531	39.5	20.0	107 E	—	74	1 6	14 4.32	-17 39.1	2.484	2.349	23.3	19.			

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°		
24445 2000 PM₈										474424 2002 YZ₁											
<i>(continuation)</i>										<i>(continuation)</i>											
6	5	13 19.28	1 15.2	2.348	3.037	16.0	19.8	124 E	44	65	4	21	14 3.14	-16 15.4	1.260	2.263	2.2	19.7	175 W	29	80
6	15	13 18.47	0 52.0	2.507	3.070	17.5	20.1	114 E	43*	65	4	26	13 55.79	-16 33.6	1.276	2.280	2.3	19.8	175 E	28	81
6	25	13 19.72	0 45.4	2.675	3.101	18.4	20.2	105 E	41*	65	5	1	13 48.73	-16 49.3	1.299	2.297	4.7	20.0	169 E	28	81
7	5	13 22.77	0 52.7	2.848	3.131	18.8	20.4	96 E	37*	65	5	6	13 42.15	-17 3.2	1.329	2.313	7.2	20.2	163 E	28	81
7	15	13 27.38	1 11.2	3.023	3.159	18.8	20.6	88 E	34*	65	5	11	13 36.21	-17 15.6	1.365	2.330	9.6	20.3	157 E	28	81
7	25	13 33.34	1 38.6	3.195	3.185	18.3	20.7	80 E	30*	64*	5	16	13 31.02	-17 27.3	1.408	2.347	11.9	20.5	152 E	28	81
8	4	13 40.44	2 12.9	3.363	3.210	17.6	20.8	73 E	27*	61*	5	21	13 26.67	-17 39.0	1.456	2.363	13.9	20.7	146 E	27	82
8	14	13 48.52	2 52.2	3.523	3.234	16.5	20.9	65 E	24*	56*	5	26	13 23.19	-17 51.1	1.509	2.379	15.7	20.8	140 E	27	82
8	24	13 57.44	3 35.1	3.674	3.256	15.3	20.9	58 E	22*	50*	5	31	13 20.59	-18 4.0	1.567	2.395	17.4	21.0	135 E	27	82
9	3	14 7.07	4 20.0	3.814	3.277	13.9	21.0	51 E	20*	43*	6	5	13 18.84	-18 18.1	1.628	2.411	18.8	21.1	130 E	27	82
9	13	14 17.32	5 5.9	3.941	3.296	12.3	21.0	44 E	17*	37*	6	10	13 17.92	-18 33.7	1.694	2.427	19.9	21.3	125 E	26*	83
9	23	14 28.09	5 51.7	4.053	3.313	10.6	21.0	38 E	15*	30*	6	15	13 17.78	-18 50.9	1.762	2.442	20.9	21.4	121 E	25*	83
10	3	14 39.30	6 36.3	4.149	3.330	8.9	21.0	31 E	13*	23*	325395 2009 CQ₅										
10	13	14 50.89	7 18.8	4.228	3.345	7.1	21.0	24 E	11*	16*	12	27	13 54.15	-28 18.2	0.942	0.964	62.1	19.5	60 W	16*	52*
10	23	15 2.77	7 58.5	4.288	3.358	5.3	20.9	18 E	9*	9*	1	1	14 13.14	-30 52.4	0.949	0.972	61.6	19.5	60 W	14*	54*
11	2	15 14.89	8 34.4	4.330	3.370	3.8	20.9	13 E	6*	1*	1	6	14 32.95	-33 13.9	0.955	0.978	61.1	19.5	61 W	12*	54*
11	12	15 27.17	9 5.9	4.353	3.381	2.8	20.8	10 E	3*	—	1	11	14 53.59	-35 21.7	0.960	0.985	60.7	19.5	61 W	9*	55*
11	22	15 39.53	9 32.1	4.355	3.390	3.1	20.9	11 W	3*	—	1	16	15 15.06	-37 14.7	0.964	0.991	60.4	19.6	61 W	7*	55*
12	2	15 51.89	9 52.6	4.338	3.398	4.4	20.9	15 W	9*	—	1	21	15 37.32	-38 51.7	0.968	0.996	60.1	19.6	61 W	6*	55*
12	12	16 4.17	10 6.6	4.302	3.404	6.1	21.0	21 W	9*	3*	1	26	16 0.32	-40 11.7	0.970	1.001	59.9	19.6	62 W	4*	55*
12	22	16 16.27	10 13.7	4.246	3.410	7.8	21.1	28 W	20*	10*	1	31	16 23.95	-41 13.8	0.971	1.005	59.8	19.6	62 W	3*	55*
1	1	16 28.08	10 13.3	4.172	3.413	9.5	21.1	35 W	24*	18*	2	5	16 48.07	-41 57.4	0.971	1.009	59.7	19.6	62 W	2*	55*
1	11	16 39.49	10 5.1	4.081	3.416	11.1	21.1	42 W	27*	25*	2	10	17 12.51	-42 21.9	0.970	1.012	59.7	19.6	62 W	1*	54*
1	21	16 50.36	9 48.6	3.974	3.416	12.6	21.1	49 W	30*	34*	2	15	17 37.06	-42 27.1	0.968	1.014	59.7	19.6	62 W	—	54*
12	27	13 53.12	6 5.6	3.213	2.971	17.7	20.8	67 W	39*	45*	2	20	18 1.51	-42 12.9	0.965	1.016	59.8	19.6	63 W	—	54*
1	6	14 2.37	6 49.3	3.091	2.988	18.5	20.8	75 W	38	53*	2	25	18 25.66	-41 39.5	0.961	1.017	60.0	19.6	63 W	—	54*
1	16	14 10.38	7 24.0	2.962	3.003	19.0	20.7	83 W	38	61*	3	2	18 49.37	-40 47.5	0.956	1.018	60.2	19.6	63 W	—	54*
1	26	14 16.89	7 49.1	2.829	3.018	19.0	20.6	91 W	37	68*	3	7	19 12.48	-39 37.5	0.950	1.018	60.5	19.6	63 W	—	54*
2	5	14 21.69	8 4.1	2.696	3.031	18.7	20.5	100 W	37	72*	3	12	19 34.91	-38 10.2	0.943	1.017	60.8	19.6	63 W	—	54*
2	15	14 24.50	8 8.5	2.566	3.044	17.8	20.4	110 W	37	72	3	17	19 56.59	-36 26.5	0.935	1.016	61.2	19.6	63 W	1*	55*
2	25	14 25.10	8 2.2	2.444	3.055	16.4	20.2	120 W	37	72	3	22	20 17.48	-34 27.2	0.927	1.014	61.6	19.6	64 W	2*	55*
3	7	14 23.35	7 45.3	2.333	3.066	14.4	20.1	130 W	37	72	3	27	20 37.62	-32 13.1	0.918	1.011	62.1	19.5	64 W	3*	55*
3	17	14 19.21	7 18.7	2.239	3.076	11.8	19.9	141 W	38	71	4	1	20 57.06	-29 45.1	0.909	1.008	62.6	19.5	64 W	4*	56*
3	27	14 12.87	6 44.1	2.167	3.085	8.6	19.7	152 W	38	71	4	6	21 15.86	-27 3.9	0.900	1.004	63.1	19.5	64 W	5*	56*
4	6	14 4.75	6 4.3	2.120	3.093	5.2	19.5	164 W	39	70	4	11	21 34.10	-24 10.4	0.891	0.999	63.7	19.5	63 W	7*	57*
4	16	13 55.52	5 23.1	2.101	3.100	2.2	19.3	173 W	40	69	4	16	21 51.86	-21 5.4	0.882	0.994	64.3	19.5	63 W	8*	57*
4	26	13 46.03	4 45.0	2.113	3.106	3.5	19.4	169 E	40	69	4	21	22 9.22	-17 49.9	0.875	0.989	64.9	19.5	63 W	10*	57*
5	6	13 37.14	4 14.1	2.153	3.112	7.0	19.6	158 E	41	68	4	26	22 26.32	-14 24.9	0.868	0.983	65.5	19.5	63 W	12*	57*
5	16	13 29.57	3 53.8	2.221	3.116	10.2	19.9	147 E	41	68	5	1	22 43.25	-10 51.5	0.862	0.976	66.1	19.5	62 W	14*	56*
5	26	13 23.85	3 45.9	2.311	3.119	13.1	20.1	136 E	41	68	5	6	23 0.14	-7 11.0	0.858	0.969	66.7	19.5	62 W	16*	55*
6	5	13 20.24	3 50.9	2.420	3.122	15.3	20.2	126 E	41	68	5	11	23 17.09	-3 25.2	0.855	0.962	67.2	19.4	61 W	18*	54*
6	15	13 18.80	4 8.2	2.544	3.123	17.0	20.4	116 E	40	68	5	16	23 34.21	+0 24.1	0.855	0.955	67.7	19.4	61 W	20*	52*
6	25	13 19.46	4 36.9	2.677	3.124	18.2	20.6	107 E	40	68	5	21	23 51.63	+4 14.9	0.856	0.947	68.1	19.4	60 W	23*	50*
7	5	13 22.03	5 15.4	2.816	3.124	18.8	20.7	98 E	33*	69	5	26	0 9.46	+8 4.7	0.860	0.939	68.4	19.4	60 W	25*	48*
7	15	13 26.34	6 2.3	2.957	3.122	19.0	20.8	90 E	33*	69	5	31	0 27.85	+11 51.2	0.865	0.931	68.6	19.4	59 W	27*	45*
7	25	13 32.18	6 56.4	3.097	3.120	18.8	20.9	82 E	29*	70	6	5	0 46.92	+15 31.7	0.874	0.923	68.7	19.4	58 W	29*	42*
8	4	13 39.36	7 55.1	3.233	3.117	18.3	21.0	74 E	26*	69*	6	10	1 6.76	+19 3.6	0.884	0.914	68.7	19.5	57 W	31*	39*
8	14	13 47.73	8 59.1	3.364	3.113	17.4	21.0	67 E	22*	65*	6	15	1 27.50	+22 24.0	0.897	0.906	68.6	19.5	56 W	33*	36*
8	24	13 57.15	10 6.0	3.487	3.108	16.4	21.1	60 E	19*	60*	6	20	1 49.20	+25 30.2	0.912	0.898	68.3	19.5	55 W	35*	34*
9	3	14 7.49	11 15.0	3.600	3.102	15.1	21.1	53 W	17*	53*	6	25	2 11.93	+28 19.6	0.929	0.891	67.9	19.5	54 W	36*	31*
9	13	14 18.66	12 25.2	3.702	3.095	13.6	21.1	46 E	14*	47*	6	30	2 35.73	+30 49.9	0.947	0.884	67.3	19.5	53 W	37*	28*
9	23	14 30.57	13 35.8	3.791	3.087	12.0	21.1	40 E	12*	40*	7	5	3 0.55	+32 58.9	0.968	0.877	66.7	19.5	52 W	38*	26*
10	3	14 43.15	14 45.8	3.867	3.079	10.3	21.0	33 E	10*	34*	7	10	3 26.29	+34 44.6	0.989	0.871	65.9	19.5	51 W	39*	24*
10	13	14 56.33	15 54.6	3.927	3.069	8.4	21.0	27 E	8*	27*	7	15	3 52.78	+36 5.8	1.011	0.865	65.1	19.5	50 W	39*	22*
10	23	15 10.06	17 1.3	3.972	3.059	6.5	20.9	20 E	5*	21*	7	20	4 19.80	+37 1.3	1.034	0.860	64.1	19.5	50 W	40*	20*
11	2	15 24.27	18 5.3	4.001	3.047	4.5	20.8	14 E	3*	14*	7	25	4 47.08	+37 31.0	1.058	0.856	63.1	19.5	49 W	39*	19*
11	12	15 38.92	19 5.9	4.014	3.035	2.4	20.7	7 E	1*	8*	7	30	5 14.33	+37 35.1	1.082	0.852	62.0	19.5	48 W	39*	18*
11	22	15 53.93	20 2.5	4.009	3.021	0.3	20.5	1 E	—	—	8	4	5 41.27	+37 14.5	1.105	0.850	60.9	19.5	47 W	39*	17*
12	2	16 9.26	20 54.6	3.987	3.007	1.8	20.6	5 W	—	—	8	9	6 7.64	+36 30.6	1.129	0.848	59.7	19.5	46 W	39*	16*
12	12	16 24.82	21 41.8	3.949	2.992	3.9	20.7	12 W	3*	4*	8	14	6 33.23	+35 25.2							

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°
325395 2009 CQ₅										6183 Viscome									
<i>(continuation)</i>										<i>(continuation)</i>									
12 2	13 25.89	-21 27.1	1.431	0.980	43.5	19.9	43 W	18*	33*	2 15	14 39.12	-36 39.3	2.686	2.970	19.3	19.3	97 W	8	79
12 7	13 44.79	-23 41.0	1.435	0.986	43.3	19.9	43 W	17*	34*	2 25	14 42.24	-37 44.6	2.554	2.971	18.7	19.2	105 W	7	78
12 12	14 4.21	-25 45.2	1.438	0.992	43.1	19.9	43 W	15*	35*	3 7	14 42.72	-38 40.2	2.427	2.972	17.8	19.0	114 W	6	77
12 17	14 24.18	-27 39.0	1.441	0.997	43.0	20.0	44 W	14*	36*	3 17	14 40.31	-39 22.4	2.310	2.972	16.3	18.9	123 W	6	77
12 22	14 44.71	-29 21.2	1.443	1.002	42.9	20.0	44 W	12*	37*	3 27	14 34.94	-39 46.7	2.207	2.971	14.4	18.7	132 W	5	76
12 27	15 5.80	-30 51.1	1.445	1.006	42.8	20.0	44 W	11*	37*	4 1	14 31.22	-39 50.6	2.162	2.970	13.3	18.6	137 W	5	76
1 1	15 27.42	-32 7.8	1.445	1.009	42.8	20.0	44 W	9*	38*	4 6	14 26.89	-39 48.4	2.122	2.968	12.2	18.5	141 W	5	76
1 6	15 49.50	-33 10.3	1.445	1.012	42.8	20.0	44 W	8*	38*	4 11	14 22.03	-39 39.5	2.087	2.967	11.1	18.4	145 W	5	76
1 11	16 11.98	-33 58.0	1.444	1.015	42.9	20.0	45 W	7*	38*	4 16	14 16.77	-39 23.5	2.058	2.965	10.0	18.4	149 W	6	77
1 16	16 34.76	-34 30.2	1.442	1.016	43.0	20.0	45 W	7*	39*	4 21	14 11.26	-39 0.5	2.035	2.963	9.0	18.3	153 W	6	77
1 21	16 57.74	-34 46.6	1.440	1.018	43.1	20.0	45 W	6*	39*	4 26	14 5.64	-38 30.5	2.019	2.961	8.3	18.3	155 E	6	77
3553 Mera										61799 2000 QC₁₈₄									
12 27	13 54.96	-43 55.4	1.269	1.118	48.2	19.0	58 W	1*	51*	12 27	13 55.74	-8 48.7	3.246	2.975	17.5	21.3	65 W	36*	46*
1 1	14 18.27	-44 29.8	1.271	1.119	48.1	19.0	58 W	—	51*	1 6	14 5.93	-9 38.7	3.097	2.962	18.5	21.3	73 W	35	54*
1 6	14 41.32	-44 46.3	1.273	1.122	48.0	19.0	58 W	—	51*	1 16	14 15.16	-10 21.1	2.942	2.948	19.2	21.2	81 W	35	62*
1 11	15 3.93	-44 45.7	1.272	1.127	47.9	19.0	58 W	—	51*	1 26	14 23.17	-10 55.2	2.783	2.933	19.6	21.0	89 W	34	70*
1 16	15 25.91	-44 28.8	1.270	1.133	47.9	19.0	59 W	—	52*	2 5	14 29.73	-11 20.4	2.623	2.917	19.6	20.9	97 W	34	75*
1 21	15 47.11	-43 56.6	1.266	1.142	47.9	19.0	59 W	—	52*	2 15	14 34.53	-11 35.8	2.465	2.901	19.1	20.7	106 W	33	76*
1 26	16 7.43	-43 9.9	1.260	1.152	47.9	19.0	60 W	1*	53*	2 25	14 37.28	-11 40.9	2.313	2.883	18.0	20.6	116 W	33	76
1 31	16 26.78	-42 9.9	1.251	1.163	48.0	19.0	61 W	2*	54*	3 7	14 37.72	-11 35.1	2.171	2.864	16.4	20.3	126 W	33	76
2 5	16 45.13	-40 5.6	1.241	1.176	48.1	19.0	63 W	3*	55*	3 17	14 35.62	-11 18.0	2.043	2.845	14.0	20.1	136 W	34	75
2 15	17 18.69	-37 59.4	1.213	1.206	48.2	19.0	66 W	6*	59*	3 27	14 30.96	-10 50.0	1.934	2.824	11.0	19.9	147 W	34	75
2 25	17 48.07	-34 20.8	1.177	1.241	48.2	19.0	69 W	9*	63*	4 6	14 23.94	-10 12.5	1.847	2.803	7.4	19.6	159 W	35	74
3 7	18 13.42	-30 5.6	1.135	1.279	48.1	19.0	74 W	13*	67*	4 16	14 15.04	-9 28.1	1.786	2.781	3.4	19.3	170 W	36	73
3 17	18 34.88	-25 16.2	1.089	1.320	47.6	19.0	78 W	18*	72*	4 21	14 10.14	-9 4.6	1.767	2.769	1.7	19.2	175 W	36	73
3 27	18 52.50	-19 53.6	1.040	1.363	46.7	18.9	84 W	23*	77*	4 26	14 5.11	-8 41.1	1.754	2.758	1.9	19.2	175 E	36	73
4 6	19 6.31	-13 58.9	0.992	1.407	45.3	18.9	90 W	29*	77*	5 1	14 0.07	-8 18.2	1.749	2.746	3.8	19.3	170 E	37	72
4 16	19 16.12	-7 34.5	0.946	1.452	43.4	18.8	96 W	36*	72	5 6	13 55.15	-7 56.6	1.751	2.734	5.9	19.4	164 E	37	72
4 21	19 19.44	-4 12.8	0.926	1.475	42.2	18.7	100 W	40*	68	5 16	13 46.17	-7 19.9	1.774	2.709	10.1	19.6	152 E	38	71
4 26	19 21.64	-0 46.2	0.908	1.497	40.9	18.7	103 W	43*	65	5 26	13 39.02	-6 55.2	1.822	2.683	13.8	19.7	141 E	38	71
5 1	19 22.70	+ 2 43.7	0.893	1.520	39.6	18.6	106 W	47*	61	6 5	13 34.21	-6 45.1	1.889	2.657	17.0	19.9	130 E	38	71
5 6	19 22.55	+ 6 14.9	0.880	1.543	38.1	18.6	109 W	51*	58	6 15	13 31.99	-6 50.2	1.971	2.630	19.6	20.1	120 E	38*	71
5 11	19 21.15	+ 9 44.9	0.871	1.565	36.6	18.6	112 W	55*	54	6 25	13 32.37	-7 10.1	2.063	2.602	21.4	20.2	111 E	36*	71
5 16	19 18.47	+13 10.5	0.865	1.587	35.1	18.5	115 W	58	51	7 5	13 35.20	-7 43.3	2.162	2.573	22.7	20.3	102 E	32*	72
5 21	19 14.52	+16 28.5	0.863	1.609	33.7	18.5	118 W	61	48	7 15	13 40.28	-8 28.3	2.264	2.543	23.5	20.4	94 E	29*	72
5 26	19 9.33	+19 35.2	0.865	1.631	32.4	18.5	120 W	65	44	7 25	13 47.39	-9 23.2	2.365	2.513	23.8	20.5	86 E	26*	73*
5 31	19 2.98	+22 27.3	0.871	1.652	31.2	18.5	122 W	67	42	8 4	13 56.32	-10 26.0	2.464	2.482	23.7	20.5	79 E	22*	70*
6 5	18 55.59	+25 1.8	0.882	1.674	30.3	18.6	124 W	70	39	8 14	14 6.89	-11 35.2	2.558	2.450	23.2	20.6	72 E	20*	65*
6 10	18 47.36	+27 15.8	0.896	1.695	29.5	18.6	125 W	72	37	8 24	14 18.96	-12 48.9	2.646	2.418	22.5	20.6	66 E	17*	59*
6 15	18 38.52	+29 7.4	0.915	1.715	28.9	18.6	125 W	74	35	9 3	14 32.39	-14 5.7	2.727	2.385	21.4	20.6	60 E	15*	54*
6 20	18 29.38	+30 35.7	0.937	1.735	28.5	18.7	125 W	76	33	9 13	14 47.12	-15 24.0	2.799	2.351	20.2	20.6	54 E	14*	48*
6 25	18 20.26	+31 40.9	0.963	1.755	28.4	18.8	125 W	77	32	9 23	15 3.06	-16 42.3	2.863	2.317	18.8	20.6	48 E	12*	42*
6 30	18 11.43	+32 23.9	0.992	1.775	28.3	18.9	124 E	77	32	10 3	15 20.17	-17 58.9	2.916	2.283	17.3	20.5	43 E	10*	37*
7 5	18 3.18	+32 46.3	1.024	1.794	28.4	19.0	123 E	78	31	10 13	15 38.41	-19 12.4	2.960	2.248	15.6	20.5	37 E	9*	31*
7 10	17 55.72	+32 49.9	1.059	1.812	28.5	19.1	122 E	78	31	10 23	15 57.75	-20 21.1	2.993	2.213	13.8	20.4	32 E	8*	26*
7 15	17 49.24	+32 37.3	1.097	1.831	28.7	19.2	120 E	78	31	11 2	16 18.14	-21 23.5	3.016	2.178	11.9	20.3	27 E	6*	20*
7 20	17 43.85	+32 10.9	1.136	1.849	29.0	19.3	118 E	77	32										
7 25	17 39.59	+31 33.3	1.178	1.866	29.2	19.4	116 E	77	32										
7 30	17 36.47	+30 46.7	1.221	1.883	29.4	19.5	114 E	76	33										
8 4	17 34.45	+29 53.0	1.266	1.899	29.6	19.6	112 E	75	34										
8 9	17 33.50	+28 53.9	1.312	1.915	29.8	19.7	110 E	74	35										
8 14	17 33.56	+27 51.1	1.360	1.931	29.9	19.8	108 E	73	36										
8 19	17 34.57	+26 45.8	1.408	1.946	30.0	19.9	106 E	72	37										
8 24	17 36.44	+25 39.2	1.457	1.961	30.1	20.0	104 E	71	38										
8 29	17 39.11	+24 32.2	1.507	1.975	30.1	20.1	102 E	70	39										
9 3	17 42.50	+23 25.5	1.558	1.989	30.0	20.2	99 E	68*	41										
9 8	17 46.57	+22 19.7	1.609	2.002	30.0	20.2	97 E	67*	42										
9 13	17 51.25	+21 15.4	1.660	2.014	29.8	20.3	95 E	66*	43										
9 18	17 56.49	+20 13.2	1.712	2.027	29.7	20.4	93 E	65*	44*										
9 23	18 2.24	+19 13.3	1.764	2.038	29.5	20.5	91 E	63*	44*										
10 3	18 15.10	+17 21.8	1.868	2.060	29.0	20.6	86 E	61*	45*										
10 13	18 29.52	+15 42.7	1.972	2.080	28.3	20.7	82 E	59*	43*										
10 23	18 45.24	+14 17.7	2.075	2.098	27.6	20.8	78 E	57*	41*										
11 2	19 2.02	+13 7.5	2.176	2.115	26.7	20.9	73 E	56*	38*										
11 12	19 19.70	+12 12.7	2.275	2.129	25.7	21.0	69 E	54*	3										

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
61799 2000 QC₁₈₄										52007 2002 EQ₄₇									
<i>(continuation)</i>										<i>(continuation)</i>									
11 12	16 39.56	-22 17.8	3.029	2.143	9.9	20.2	22 E	5*	15*	5 16	13 32.59	-24 17.8	4.298	5.213	5.2	20.6	152 E	21	88
11 22	17 1.94	-23 2.5	3.032	2.108	7.9	20.1	17 E	3*	10*	5 26	13 28.28	-23 48.3	4.375	5.215	6.8	20.7	142 E	21	88
12 2	17 25.23	-23 36.0	3.025	2.073	5.8	19.9	12 E	1*	6*	6 5	13 25.14	-23 20.7	4.475	5.216	8.2	20.8	133 E	22	87
12 12	17 49.34	-23 56.9	3.009	2.038	3.7	19.8	8 E	—	1*	6 15	13 23.28	-22 56.9	4.594	5.217	9.4	20.9	123 E	22*	87
12 22	18 14.17	-24 3.7	2.984	2.003	1.6	19.6	3 E	—	—	6 25	13 22.76	-22 38.4	4.727	5.218	10.3	21.0	114 E	20*	87
1	18 39.62	-23 55.5	2.952	1.969	0.7	19.4	1 W	—	—	7 5	13 23.52	-22 26.2	4.872	5.219	10.9	21.1	104 E	18*	86
1 11	19 5.54	-23 31.3	2.912	1.936	2.8	19.5	6 W	—	—	7 15	13 25.52	-22 20.8	5.022	5.220	11.2	21.2	96 E	15*	86
1 21	19 31.80	-22 50.8	2.866	1.903	4.9	19.6	10 W	—	3*	7 25	13 28.67	-22 22.4	5.175	5.220	11.2	21.3	87 E	12*	81*
35709 1999 FR₂₈										433 Eros									
12 27	13 56.48	-10 39.3	2.880	2.613	19.9	19.2	65 W	34*	47*	12 27	13 57.08	-19 17.4	1.292	1.196	46.4	13.4	62 W	25*	50*
1 6	14 8.73	-12 11.8	2.724	2.584	21.1	19.1	71 W	33*	55*	1 1	14 12.35	-21 15.0	1.284	1.208	46.4	13.4	63 W	23*	52*
1 16	14 20.28	-13 41.3	2.563	2.554	22.2	18.9	78 W	31	63*	1 6	14 27.64	-23 6.5	1.276	1.220	46.3	13.4	64 W	22*	54*
1 26	14 30.92	-15 7.7	2.398	2.524	22.9	18.8	86 W	30	71*	1 11	14 42.94	-24 51.9	1.267	1.233	46.3	13.4	65 W	20*	57*
2 5	14 40.40	-16 31.3	2.234	2.493	23.3	18.6	93 W	28	79*	1 16	14 58.21	-26 30.7	1.257	1.247	46.3	13.4	66 W	18*	59*
2 15	14 48.38	-17 52.1	2.071	2.461	23.2	18.4	101 W	27	82	1 21	15 13.45	-28 2.8	1.246	1.262	46.2	13.4	68 W	17*	61*
2 25	14 54.47	-19 10.5	1.912	2.428	22.6	18.2	109 W	26	83	1 26	15 28.62	-29 28.2	1.234	1.276	46.1	13.4	69 W	15*	63*
3 7	14 58.26	-20 26.5	1.760	2.395	21.4	18.0	118 W	25	84	1 31	15 43.69	-30 46.9	1.221	1.292	46.1	13.4	71 W	14*	65*
3 17	14 59.25	-21 39.7	1.619	2.362	19.5	17.7	128 W	23	86	2 5	15 58.63	-31 59.0	1.207	1.307	46.0	13.4	72 W	13*	66*
3 27	14 57.02	-22 48.7	1.492	2.328	16.8	17.4	138 W	22	87	2 10	16 13.39	-33 4.6	1.192	1.323	45.8	13.4	74 W	12*	68*
4 6	14 51.29	-23 51.4	1.383	2.293	13.4	17.1	148 W	21	88	2 15	16 27.90	-34 3.9	1.176	1.339	45.7	13.4	76 W	11*	70*
4 16	14 42.10	-24 43.8	1.294	2.258	9.4	16.8	159 W	20	89	2 20	16 42.10	-34 57.2	1.158	1.355	45.5	13.4	78 W	10*	71*
4 21	14 36.40	-25 4.9	1.259	2.241	7.3	16.6	163 W	20	89	2 25	16 55.95	-35 44.9	1.139	1.371	45.3	13.4	80 W	9*	72*
4 26	14 30.12	-25 22.0	1.230	2.223	5.7	16.4	167 W	20	89	3 2	17 9.38	-36 27.3	1.119	1.388	45.0	13.3	82 W	8*	74*
5 1	14 23.46	-25 34.9	1.208	2.205	4.9	16.3	169 E	19	90	3 7	17 22.33	-37 4.9	1.098	1.404	44.7	13.3	84 W	8*	75*
5 6	14 16.61	-25 43.6	1.192	2.188	5.7	16.3	168 E	19	90	3 12	17 34.73	-37 38.3	1.075	1.420	44.3	13.3	87 W	7*	76*
5 11	14 9.80	-25 48.2	1.182	2.170	7.5	16.4	164 E	19	90	3 17	17 46.47	-38 7.9	1.052	1.436	43.8	13.3	89 W	7*	76*
5 16	14 3.26	-25 49.3	1.179	2.152	9.8	16.5	159 E	19	90	3 22	17 57.50	-38 34.4	1.027	1.452	43.3	13.2	92 W	6*	77*
5 21	13 57.22	-25 47.8	1.181	2.134	12.3	16.5	153 E	19	90	3 27	18 7.73	-38 58.2	1.001	1.468	42.6	13.2	95 W	6*	77*
5 26	13 51.86	-25 44.6	1.189	2.117	14.8	16.6	148 E	19	90	4 1	18 17.09	-39 20.0	0.975	1.484	41.9	13.1	97 W	5*	77
5 31	13 47.31	-25 40.7	1.202	2.099	17.1	16.7	142 E	19	90	4 6	18 25.49	-39 40.2	0.948	1.499	41.0	13.1	101 W	5*	76
6 5	13 43.69	-25 36.9	1.220	2.081	19.4	16.8	137 E	19	90	4 11	18 32.79	-39 59.5	0.921	1.515	40.0	13.0	104 W	5*	76
6 10	13 41.06	-25 34.3	1.241	2.064	21.4	16.9	132 E	19	90	4 16	18 38.91	-40 18.1	0.893	1.529	38.8	12.9	107 W	5*	76
6 15	13 39.46	-25 33.5	1.265	2.046	23.3	17.0	127 E	19*	90	4 21	18 43.71	-40 36.4	0.865	1.544	37.4	12.8	111 W	4*	75
6 25	13 39.34	-25 40.1	1.322	2.011	26.5	17.1	118 E	18*	90	4 26	18 47.09	-40 54.4	0.838	1.558	35.8	12.8	115 W	4*	75
7 5	13 43.14	-25 59.1	1.386	1.977	28.9	17.3	110 E	16*	90	5 1	18 48.93	-41 12.0	0.812	1.572	34.0	12.7	119 W	4	75
7 15	13 50.55	-26 30.9	1.453	1.943	30.7	17.4	102 E	13*	89	5 6	18 49.10	-41 28.7	0.786	1.586	32.0	12.6	124 W	4	75
7 25	14 1.23	-27 14.7	1.523	1.910	32.0	17.5	96 E	11*	88*	5 11	18 47.47	-41 43.9	0.763	1.599	29.7	12.5	128 W	3	74
8 4	14 14.84	-28 8.1	1.591	1.878	32.7	17.6	89 E	9*	82*	5 16	18 43.99	-41 56.0	0.741	1.612	27.2	12.4	133 W	3	74
8 14	14 31.17	-29 8.3	1.659	1.848	33.0	17.6	84 E	7*	76*	5 21	18 38.64	-42 3.5	0.722	1.624	24.4	12.3	138 W	3	74
8 24	14 50.00	-30 12.2	1.723	1.818	33.0	17.7	79 E	6*	71*	5 26	18 31.53	-42 4.4	0.706	1.637	21.4	12.2	144 W	3	74
9 3	15 11.18	-31 16.1	1.785	1.791	32.8	17.7	74 E	5*	66*	5 31	18 22.84	-41 56.7	0.693	1.648	18.4	12.1	149 W	3	74
9 13	15 34.59	-32 16.2	1.845	1.765	32.3	17.7	69 E	5*	61*	6 5	18 12.86	-41 38.3	0.685	1.659	15.3	12.0	154 W	3	74
9 23	16 0.07	-33 8.4	1.901	1.741	31.6	17.7	65 E	4*	58*	6 10	18 2.04	-41 8.0	0.682	1.670	12.5	11.9	159 W	4	75
10 3	16 27.44	-33 48.6	1.955	1.720	30.8	17.8	61 E	4*	54*	6 15	17 50.91	-40 25.4	0.684	1.680	10.5	11.9	162 W	5	76
10 13	16 56.47	-34 12.9	2.008	1.701	29.8	17.8	58 E	5*	51*	6 20	17 40.01	-39 31.2	0.691	1.690	9.7	11.9	164 E	5	76
10 23	17 26.84	-34 17.8	2.058	1.684	28.7	17.8	54 E	5*	48*	6 25	17 29.86	-38 27.5	0.703	1.700	10.6	12.0	162 E	7	78
11 2	17 58.16	-34 0.2	2.108	1.671	27.5	17.8	51 E	6*	45*	6 30	17 20.83	-37 17.0	0.721	1.708	12.5	12.1	159 E	8	79
11 7	18 14.07	-33 42.3	2.132	1.665	26.8	17.8	49 E	7*	43*	7 5	17 13.18	-36 2.5	0.744	1.717	15.0	12.2	154 E	9	80
11 12	18 30.05	-33 18.3	2.157	1.660	26.2	17.8	48 E	7*	42*	7 10	17 7.07	-34 47.1	0.771	1.725	17.6	12.4	149 E	10	81
11 17	18 46.06	-32 47.9	2.181	1.656	25.5	17.8	46 E	8*	40*	7 15	17 2.56	-33 33.1	0.804	1.732	20.2	12.5	144 E	11	82
11 22	19 2.03	-32 11.3	2.206	1.653	24.8	17.8	44 E	8*	38*	7 20	16 59.61	-32 22.6	0.840	1.739	22.6	12.7	139 E	13	84
11 27	19 17.93	-31 28.4	2.230	1.650	24.0	17.8	43 E	9*	37*	7 25	16 58.12	-31 16.6	0.879	1.746	24.7	12.9	134 E	14	85
12 2	19 33.72	-30 39.5	2.255	1.649	23.3	17.8	41 E	9*	35*	7 30	16 57.98	-30 16.0	0.922	1.751	26.6	13.0	129 E	15	86
12 7	19 49.35	-29 44.7	2.280	1.648	22.5	17.8	40 E	10*	33*	8 4	16 59.06	-29 20.7	0.967	1.757	28.3	13.2	125 E	16	87
12 12	20 4.78	-28 44.4	2.305	1.648	21.7	17.8	38 E	11*	31*	8 9	17 1.25	-28 30.9	1.015	1.762	29.7	13.3	121 E	16	87
12 17	20 20.00	-27 38.8	2.330	1.649	20.9	17.7	37 E	11*	29*	8 14	17 4.43	-27 46.1	1.065	1.766	30.9	13.4	116 E	17*	88
12 22	20 34.97	-26 28.3	2.355	1.650	20.0	17.7	35 E	12*	27*	8 19	17 8.51								

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°
433 Eros (continuation)									162510 2000 QW₆₉ (continuation)								
10 13	18 30.34	-22 4.4	1.706	1.779	33.2	14.5	77 E	22* 70*	4 11	23 15.64	-46 15.5	1.059	1.046	56.8	19.8	61 W	- 37*
10 23	18 49.66	-21 9.5	1.807	1.774	32.3	14.6	72 E	23* 64*	4 16	23 31.28	-44 11.1	1.084	1.064	55.7	19.8	61 W	- 38*
11 2	19 9.73	-20 8.1	1.903	1.767	31.1	14.7	67 E	24* 58*	4 21	23 45.06	-42 7.6	1.106	1.084	54.6	19.9	62 W	- 40*
11 12	19 30.42	-18 58.7	1.993	1.758	29.8	14.8	62 E	25* 52*	4 26	23 57.32	-40 6.2	1.123	1.104	53.7	19.9	62 W	- 42*
11 22	19 51.60	-17 40.2	2.076	1.747	28.3	14.8	57 E	26* 46*	5 1	0 8.32	-38 7.6	1.137	1.125	52.9	20.0	63 W	- 44*
12 2	20 13.15	-16 11.8	2.152	1.733	26.7	14.8	52 E	26* 39*	5 6	0 18.24	-36 12.1	1.147	1.147	52.2	20.0	64 W	- 46*
12 12	20 35.02	-14 33.0	2.220	1.718	25.1	14.8	48 E	26* 33*	5 11	0 27.24	-34 20.0	1.152	1.170	51.6	20.1	65 W	- 49*
12 22	20 57.13	-12 43.7	2.279	1.701	23.3	14.8	43 E	26* 27*	5 16	0 35.41	-32 31.5	1.154	1.192	51.0	20.1	66 W	- 52*
1 1	21 19.47	-10 44.0	2.330	1.682	21.5	14.8	39 E	26* 22*	5 21	0 42.84	-30 46.6	1.151	1.215	50.5	20.1	68 W	- 55*
1 11	21 42.02	-8 34.1	2.371	1.661	19.7	14.8	35 E	24* 17*	5 26	0 49.59	-29 4.9	1.144	1.239	50.1	20.1	70 W	- 58*
1 21	22 4.80	-6 14.7	2.404	1.639	17.9	14.7	31 E	22* 12*	6 5	1 1.16	-25 51.1	1.119	1.285	49.3	20.1	74 W	- 65*
445777 2011 YU₁₅																	
12 27	13 57.35	-7 58.0	1.649	1.528	35.8	21.1	65 W	37* 45*	6 15	1 10.17	-22 48.9	1.080	1.331	48.5	20.1	79 W	3* 72*
1 6	14 19.81	-10 11.6	1.615	1.570	35.9	21.1	70 W	35* 51*	6 25	1 16.40	-19 56.1	1.028	1.376	47.3	20.0	85 W	10* 79*
1 16	14 40.57	-12 9.4	1.577	1.617	35.8	21.1	74 W	33 58*	7 5	1 19.39	-17 9.6	0.965	1.420	45.7	19.9	91 W	17* 81*
1 26	14 59.39	-13 51.5	1.535	1.667	35.5	21.1	80 W	31 65*	7 10	1 19.44	-15 47.7	0.931	1.441	44.6	19.8	95 W	21* 80
2 5	15 15.98	-15 18.9	1.489	1.719	34.9	21.1	85 W	30 72*	7 15	1 18.34	-14 26.1	0.896	1.461	43.3	19.8	99 W	25* 78
2 15	15 29.97	-16 32.5	1.439	1.773	33.8	21.0	92 W	28 78*	7 20	1 15.97	-13 4.0	0.859	1.481	41.7	19.7	104 W	29* 77
2 25	15 40.94	-17 33.5	1.386	1.828	32.3	21.0	99 W	27 82	7 25	1 12.14	-11 40.5	0.823	1.501	39.8	19.5	109 W	32* 76
3 7	15 48.50	-18 23.5	1.334	1.885	30.2	20.9	107 W	27 82	7 30	1 6.70	-10 15.1	0.787	1.520	37.4	19.4	114 W	34* 74
3 17	15 52.21	-19 3.0	1.284	1.942	27.3	20.8	116 W	26 83	8 4	0 59.44	-8 47.0	0.753	1.539	34.7	19.3	120 W	36 73
3 27	15 51.78	-19 32.4	1.241	2.000	23.7	20.7	126 W	25 84	8 14	0 38.89	-5 40.7	0.693	1.574	27.7	18.9	134 W	39 70
4 6	15 47.21	-19 51.5	1.209	2.058	19.3	20.6	137 W	25 84	8 24	0 10.23	-2 21.6	0.653	1.607	18.8	18.6	149 W	43 66
4 16	15 38.88	-19 59.2	1.193	2.116	14.2	20.4	149 W	25 84	9 3	23 35.61	+0 58.0	0.641	1.637	9.0	18.2	165 W	46 63
4 21	15 33.60	-19 58.7	1.193	2.145	11.5	20.3	155 W	25 84	9 8	23 17.52	+2 30.8	0.648	1.651	5.4	18.1	171 W	48 61
4 26	15 27.79	-19 55.5	1.198	2.174	8.6	20.3	161 W	25 84	9 13	22 59.93	+3 55.3	0.664	1.665	5.9	18.2	170 E	49 60
5 1	15 21.67	-19 49.8	1.209	2.203	5.8	20.2	167 W	25 84	9 18	22 43.54	+5 9.7	0.689	1.678	9.6	18.4	164 E	50 59
5 6	15 15.42	-19 42.0	1.226	2.232	2.9	20.1	174 W	25 84	9 23	22 28.86	+6 13.6	0.722	1.690	13.7	18.7	157 E	51 58
5 11	15 9.26	-19 32.7	1.250	2.260	0.8	20.0	178 E	25 84	9 28	22 16.18	+7 7.6	0.761	1.701	17.5	19.0	149 E	52 57
5 16	15 3.38	-19 22.4	1.281	2.289	2.9	20.2	173 E	26 83	10 3	22 5.65	+7 53.0	0.806	1.712	20.8	19.2	142 E	53 56
5 21	14 57.96	-19 12.1	1.318	2.317	5.4	20.5	168 E	26 83	10 8	21 57.23	+8 31.5	0.857	1.722	23.7	19.5	136 E	54 55
5 26	14 53.13	-19 2.2	1.362	2.345	7.8	20.7	162 E	26 83	10 13	21 50.82	+9 4.9	0.911	1.732	26.1	19.7	130 E	54 55
5 31	14 48.98	-18 53.5	1.411	2.373	10.1	20.9	156 E	26 83	10 18	21 46.24	+9 34.9	0.969	1.741	28.1	19.9	125 E	55 54
6 5	14 45.56	-18 46.3	1.466	2.401	12.1	21.1	150 E	26 83	10 23	21 43.29	+10 2.9	1.029	1.749	29.7	20.1	120 E	55 54
6 10	14 42.91	-18 41.2	1.526	2.428	13.9	21.2	145 E	26 83	10 28	21 41.78	+10 29.7	1.090	1.756	30.9	20.2	115 E	55 54
6 15	14 41.04	-18 38.2	1.592	2.456	15.5	21.4	140 E	26 83	11 2	21 41.53	+10 56.4	1.153	1.763	31.9	20.4	110 E	56 53
12 27	13 57.39	+8 5.5	0.902	1.112	57.3	19.6	72 W	52* 36*	11 7	21 42.41	+11 23.6	1.217	1.769	32.6	20.5	106 E	56 53*
1 1	14 10.20	+3 45.7	0.861	1.092	59.1	19.5	72 W	48* 41*	11 12	21 44.26	+11 51.9	1.281	1.774	33.1	20.7	102 E	57 52*
1 6	14 23.62	+0 56.1	0.824	1.072	60.8	19.4	72 W	44* 46*	11 17	21 46.97	+12 21.7	1.344	1.779	33.4	20.8	98 E	57 50*
1 11	14 37.87	+6 0.5	0.789	1.053	62.6	19.3	72 W	39* 50*	11 22	21 50.42	+12 53.3	1.407	1.783	33.5	20.9	95 E	58 48*
1 16	14 53.25	-11 26.9	0.759	1.035	64.3	19.3	72 W	34* 55*	11 27	21 54.54	+13 26.9	1.470	1.786	33.5	21.0	91 E	58 45*
1 21	15 10.11	-17 12.5	0.735	1.019	65.9	19.2	71 W	28* 59*	12 2	21 59.26	+14 2.7	1.531	1.789	33.4	21.1	88 E	59 42*
1 26	15 28.91	-23 11.5	0.717	1.005	67.4	19.2	70 W	22* 62*	12 7	22 4.50	+14 40.7	1.590	1.790	33.2	21.2	85 E	60 39*
1 28	15 37.10	-25 37.0	0.712	0.999	67.9	19.1	70 W	19* 63*	12 12	22 10.23	+15 21.2	1.649	1.792	32.9	21.2	82 E	60* 36*
1 30	15 45.71	-28 2.6	0.708	0.994	68.3	19.1	70 W	17* 63*	12 17	22 16.40	+16 4.2	1.705	1.792	32.6	21.3	79 E	61* 33*
2 1	15 54.80	-30 27.4	0.705	0.990	68.8	19.1	69 W	14* 63*	12 22	22 22.96	+16 49.5	1.759	1.792	32.1	21.4	76 E	61* 29*
2 2	16 4.41	-32 50.6	0.704	0.985	69.1	19.1	69 W	12* 63*	12 27	22 29.89	+17 37.3	1.812	1.791	31.7	21.4	73 E	61* 26*
2 5	16 14.57	-35 11.3	0.703	0.981	69.4	19.1	69 W	10* 63*	1 1	22 37.17	+18 27.5	1.862	1.789	31.2	21.4	70 E	60* 23*
2 9	16 25.33	-37 28.5	0.704	0.978	69.6	19.1	68 W	7* 62*	1 6	22 44.79	+19 20.1	1.910	1.787	30.6	21.5	68 E	59* 20*
2 11	16 36.72	-39 41.2	0.706	0.974	69.8	19.1	68 W	5* 61*	366736 2004 EH₃₇								
2 13	16 48.76	-41 48.5	0.710	0.971	69.9	19.1	68 W	3* 60*	12 27	13 58.14	-1 43.8	2.119	1.968	27.5	20.4	68 W	43* 42*
2 15	17 14.91	-45 43.1	0.720	0.966	70.0	19.2	67 W	— 57*	1 6	14 14.04	-2 55.6	2.055	2.011	28.0	20.4	74 W	42* 49*
2 17	17 29.03	-47 28.6	0.727	0.964	69.9	19.2	66 W	— 55*	1 16	14 28.29	-3 54.2	1.985	2.055	28.1	20.4	80 W	41 56*
2 19	17 43.81	-49 5.1	0.735	0.963	69.8	19.2	66 W	— 54*	1 26	14 40.61	-4 39.4	1.911	2.100	27.9	20.4	87 W	40 62*
2 21	17 59.22	-50 32.2	0.743	0.962	69.6	19.2	66 W	— 52*	2 5	14 50.74	-5 11.4	1.834	2.145	27.3	20.3	94 W	40 67*
2 23	18 15.20	-51 49.1	0.753	0.961	69.3	19.2	65 W	— 51*	2 15	14 58.33	-5 30.5	1.757	2.190	26.2	20.2	102 W	39 70
2 25	18 31.65	-52 55.7	0.764	0.960	69.0	19.3	65 W	— 49*	2 25	15 3.05	-5 37.4	1.682	2.235	24.4	20.1	111 W	39 70
2 27	18 48.46	-53 51.6	0.775	0.960	68.6	19.3	65 W	— 48*	3 7	15 4.61	-5 33.4	1.612	2.281	22.1	20.0	120 W	39 70
3 1	19 5.50	-54 36.8	0.787	0.961	68.2	19.3	64 W	— 46*	3 17	15 2.83	-5 20.3	1.553	2.326	19.0	19.9	131 W	40 69
3 3	19 22.61	-55 11.7	0.799	0.962	67.8	19.3	64 W	— 45*	3 27	14 57.75	-5 0.7	1.508	2.370	15.3	19		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
232382 2003 BT₄₇										242450 2004 QY₂									
<i>(continuation)</i>										<i>(continuation)</i>									
1 26	15 50.56	-22 58.0	1.290	1.258	45.4	19.9	66 W	22*	57*	5 4	20 19.21	-84 9.9	0.942	1.563	38.2	17.1	106 W	—	32
1 31	16 11.68	-24 27.3	1.265	1.241	46.3	19.8	66 W	20*	58*	5 5	20 19.72	-84 30.9	0.935	1.561	38.2	17.1	107 W	—	31
2 5	16 33.38	-25 47.0	1.243	1.227	47.0	19.8	66 W	18*	59*	5 6	20 19.76	-84 52.2	0.928	1.559	38.2	17.0	107 W	—	31
2 10	16 55.57	-26 55.7	1.225	1.215	47.7	19.8	66 W	17*	59*	5 7	20 19.20	-85 13.7	0.921	1.556	38.2	17.0	107 W	—	31
2 15	17 18.09	-27 52.1	1.210	1.205	48.3	19.7	66 W	16*	59*	5 8	20 17.87	-85 35.4	0.913	1.554	38.2	17.0	108 W	—	30
2 20	17 40.79	-28 35.5	1.198	1.198	48.7	19.7	66 W	14*	60*	5 9	20 15.57	-85 57.4	0.906	1.552	38.2	17.0	108 W	—	30
2 25	18 3.50	-29 5.4	1.189	1.193	49.1	19.7	66 W	13*	60*	5 10	20 11.98	-86 19.5	0.899	1.549	38.2	17.0	108 W	—	30
3 2	18 26.04	-29 21.9	1.182	1.191	49.4	19.7	66 W	12*	60*	5 11	20 6.64	-86 41.8	0.892	1.547	38.2	16.9	109 W	—	29
3 7	18 48.23	-29 25.2	1.177	1.191	49.5	19.7	66 W	11*	60*	5 12	19 58.86	-87 4.0	0.885	1.544	38.2	16.9	109 W	—	29
3 12	19 9.91	-29 16.1	1.174	1.194	49.6	19.7	66 W	11*	60*	5 13	19 47.59	-87 26.0	0.878	1.542	38.2	16.9	109 W	—	29
3 17	19 30.93	-28 55.8	1.173	1.199	49.6	19.7	67 W	10*	60*	5 14	19 31.11	-87 47.6	0.871	1.539	38.2	16.9	110 W	—	28
3 22	19 51.16	-28 25.4	1.172	1.207	49.5	19.7	67 W	10*	61*	5 15	19 6.62	-88 8.1	0.864	1.537	38.2	16.8	110 W	—	28
3 27	20 10.54	-27 46.3	1.172	1.217	49.3	19.7	68 W	9*	61*	5 16	18 29.71	-88 26.5	0.857	1.534	38.2	16.8	110 W	—	28
4 1	20 29.00	-27 0.0	1.173	1.230	49.1	19.7	68 W	9*	62*	5 17	17 34.73	-88 40.9	0.850	1.531	38.2	16.8	110 W	—	27
4 6	20 46.53	-26 8.0	1.173	1.244	48.8	19.7	69 W	9*	63*	5 18	16 19.94	-88 48.4	0.843	1.528	38.3	16.8	111 W	—	27
4 11	21 3.09	-25 11.5	1.173	1.261	48.5	19.8	70 W	9*	64*	5 19	14 57.71	-88 46.2	0.836	1.525	38.3	16.8	111 E	—	27
4 16	21 18.69	-24 11.9	1.173	1.279	48.1	19.8	72 W	10*	65*	5 20	13 48.34	-88 34.8	0.830	1.523	38.3	16.7	111 E	—	27
4 26	21 47.04	-22 8.0	1.170	1.322	47.1	19.8	74 W	11*	68*	5 21	12 59.29	-88 16.7	0.823	1.520	38.3	16.7	111 E	—	28
5 6	22 11.76	-20 4.1	1.163	1.370	46.0	19.9	78 W	12*	72*	5 22	12 26.59	-87 54.5	0.816	1.516	38.4	16.7	112 E	—	28
5 16	22 32.95	-18 6.5	1.151	1.422	44.7	19.9	82 W	15*	76*	5 23	12 4.76	-87 29.7	0.810	1.513	38.4	16.7	112 E	—	29
5 26	22 50.69	-16 20.1	1.133	1.479	43.2	19.9	87 W	17*	79*	5 24	11 49.92	-87 3.1	0.803	1.510	38.4	16.7	112 E	—	29
6 5	23 4.96	-14 48.5	1.109	1.538	41.2	19.9	93 W	21*	79*	5 25	11 39.66	-86 35.3	0.797	1.507	38.5	16.6	112 E	—	29
6 15	23 15.59	-13 34.9	1.082	1.599	38.8	19.8	99 W	25*	78	5 26	11 32.49	-86 6.4	0.791	1.504	38.5	16.6	112 E	—	30
6 25	23 22.35	-12 41.7	1.052	1.661	35.8	19.8	107 W	29*	77	5 27	11 27.49	-85 36.6	0.784	1.500	38.6	16.6	113 E	—	30
7 5	23 24.97	-12 10.0	1.022	1.724	32.2	19.7	116 W	32*	76	5 28	11 24.06	-85 6.0	0.778	1.497	38.6	16.6	113 E	—	31
7 15	23 23.18	-12 0.4	0.996	1.788	27.7	19.6	125 W	33*	76	5 29	11 21.78	-84 34.7	0.772	1.493	38.7	16.6	113 E	—	31
7 25	23 16.98	-12 10.8	0.979	1.851	22.3	19.5	136 W	33	76	5 30	11 20.39	-84 2.7	0.766	1.490	38.8	16.5	113 E	—	32
7 30	23 12.35	-12 22.0	0.975	1.882	19.4	19.4	142 W	33	76	5 31	11 19.68	-83 30.0	0.760	1.486	38.9	16.5	113 E	—	32
8 4	23 6.83	-12 36.2	0.976	1.914	16.3	19.3	148 W	32	77	6 1	11 19.51	-82 56.6	0.754	1.483	39.0	16.5	113 E	—	33
8 9	23 0.57	-12 52.4	0.981	1.945	13.1	19.3	154 W	32	77	6 2	11 19.78	-82 22.6	0.748	1.479	39.0	16.5	113 E	—	34
8 14	22 53.76	-13 9.3	0.992	1.976	9.8	19.2	161 W	32	77	6 3	11 20.39	-81 47.9	0.742	1.475	39.1	16.5	113 E	—	34
8 19	22 46.65	-13 25.8	1.008	2.007	6.6	19.1	167 W	32	77	6 4	11 21.29	-81 12.6	0.736	1.471	39.1	16.4	113 E	—	35
8 24	22 39.48	-13 40.8	1.031	2.038	3.6	19.1	173 W	31	78	6 5	11 22.44	-80 36.7	0.731	1.468	39.4	16.4	113 E	—	35
8 29	22 32.47	-13 53.5	1.060	2.068	2.2	19.1	176 W	31	78	6 6	11 23.78	-80 0.2	0.725	1.464	39.5	16.4	113 E	—	36
9 3	22 25.83	-14 3.2	1.095	2.098	4.0	19.3	172 E	31	78	6 7	11 25.29	-79 23.0	0.720	1.460	39.6	16.4	113 E	—	37
9 8	22 19.77	-14 9.6	1.137	2.128	6.6	19.5	166 E	31	78	6 8	11 26.95	-78 45.2	0.715	1.456	39.8	16.4	113 E	—	37
9 13	22 14.41	-14 12.3	1.185	2.158	9.2	19.8	160 E	31	78	6 9	11 28.72	-78 6.8	0.709	1.451	39.9	16.3	113 E	—	38
9 23	22 6.21	-14 6.8	1.297	2.217	13.6	20.2	149 E	31	78	6 10	11 30.61	-77 27.8	0.704	1.447	40.1	16.3	113 E	—	39
10 3	22 1.50	-13 48.1	1.430	2.274	17.2	20.6	138 E	31	78	6 11	11 32.58	-76 48.1	0.699	1.443	40.2	16.3	113 E	—	39
10 13	22 0.15	-13 17.8	1.580	2.330	19.7	20.9	128 E	32	77	6 12	11 34.63	-76 7.9	0.694	1.439	40.4	16.3	113 E	—	40
10 23	22 1.77	-12 37.6	1.743	2.385	21.5	21.2	119 E	32	77	6 13	11 36.75	-75 27.1	0.690	1.434	40.6	16.3	113 E	—	41
12 27	13 59.26	-42 35.6	1.625	1.369	37.1	17.9	57 W	2*	51*	6 14	11 38.92	-74 45.7	0.685	1.430	40.8	16.3	113 E	—	41
1 6	14 24.70	-46 59.2	1.609	1.418	37.2	18.0	61 W	—	53*	6 15	11 41.15	-74 3.7	0.680	1.425	41.0	16.2	113 E	—	42
1 16	14 51.21	-51 5.8	1.584	1.461	37.4	18.0	64 W	—	54*	6 17	11 45.72	-72 38.0	0.671	1.416	41.5	16.2	113 E	—	43
1 26	15 18.90	-54 55.7	1.552	1.498	37.6	18.0	68 W	—	54*	6 19	11 50.43	-71 10.1	0.663	1.407	42.0	16.2	112 E	—	45
1 31	15 33.24	-56 44.5	1.533	1.515	37.7	18.0	70 W	—	54*	6 21	11 55.23	-69 40.0	0.655	1.397	42.5	16.2	112 E	—	46
2 5	15 47.92	-58 29.5	1.513	1.530	37.8	18.0	72 W	—	54*	6 23	12 0.11	-68 7.8	0.647	1.388	43.1	16.1	111 E	—	48
2 10	16 2.95	-60 10.8	1.490	1.543	37.9	18.0	74 W	—	53*	6 25	12 5.03	-66 33.7	0.640	1.377	43.8	16.1	110 E	—	49
2 15	16 18.30	-61 48.4	1.466	1.555	38.0	18.0	76 W	—	52*	6 30	12 17.46	-62 30.3	0.625	1.351	45.6	16.1	108 E	—	53
2 20	16 33.98	-63 22.6	1.440	1.566	38.1	18.0	78 W	—	51*	7 5	12 29.96	-58 17.1	0.613	1.323	47.6	16.0	106 E	—	58*
2 25	16 49.99	-64 53.4	1.413	1.575	38.2	18.0	80 W	—	50*	7 10	12 42.43	-53 56.6	0.603	1.294	50.0	16.0	103 E	—	62*
3 2	17 6.29	-66 21.2	1.384	1.583	38.3	17.9	82 W	—	49*	7 15	12 54.81	-49 31.6	0.597	1.263	52.5	16.0	100 E	—	66*
3 7	17 22.89	-67 46.4	1.354	1.589	38.4	17.9	84 W	—	48*	7 20	13 7.02	-45 4.7	0.593	1.230	55.2	16.0	96 E	—	70*
3 12	17 39.71	-69 9.3	1.322	1.594	38.4	17.9	86 W	—	46*	7 25	13 18.99	-40 38.0	0.592	1.196	58.0	16.0	92 E	—	72*
3 17	17 56.69	-70 30.4	1.289	1.598	38.5	17.8	88 W	—	45*	7 30	13 30.68	-36 13.0	0.593	1.161	61.0	16.1	88 E	—	74*
3 22	18 13.77	-71 50.1	1.256	1.600	38.5	17.8	90 W	—	44*	8 4	13 42.04	-31 50.8	0.595	1.124	64.0	16.1	84 E	2*	74*
3 27	18 30.87	-73 9.0	1.221	1.601	38.5	17.7	92 W	—	43*	8 9	13 53.02	-27 32.0	0.599	1.085	67.0	16.1	80 E	6*	73*
4 1	18 47.92	-74 27.8	1.186	1.601	38.5	17.6	94 W	—	41*	8 14	14 3.55	-23 16.5	0.603	1.045	70.1	16.2	76 E	9*	70*
4 6	19 4.80	-75 47.4	1.150	1.599	38.5	17.6	96 W	—	40*	8 19	14 13.51	-19 3.6	0.607	1.003	73.3	16.2	72 E	13*	66*
4 8	19 11.45	-76 19.6	1.135	1.598	38.5	17.5	97 W	—	40*	8 24	14 22.76	-14 52.0	0.611	0.961	76.5	16.2	68 E	16*	61*
4 10	19 18.04	-76 52.2	1.120	1.596	38.5	17.5	97 W	—	39*	8 29	14 31.13	-10 40.3	0.615	0.917	79.8	16.2	63 E	19*	56*
4 12	19 24.53	-77 25.1	1.105	1.595	38.5	17.5	98 W												

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°	
242450 2004 QY₂ (continuation)									53789 2000 ED₁₀₄ (continuation)									
10 23	13 22.60	+21 22.7	0.675	0.569	106.0	16.6	33 W	22*	6 30	14 32.95	+39 3.5	1.254	1.693	36.7	20.4	96 E	82*	25
10 25	13 15.62	+20 19.9	0.684	0.573	104.3	16.5	34 W	24*	7 5	14 33.51	+38 10.2	1.284	1.684	37.1	20.5	93 E	79*	26
10 27	13 9.26	+19 4.8	0.695	0.578	102.3	16.5	35 W	26*	7 10	14 35.05	+37 11.3	1.314	1.676	37.3	20.5	91 E	76*	27
10 29	13 3.59	+17 38.9	0.706	0.585	100.3	16.4	35 W	28*	7 15	14 37.52	+36 7.8	1.341	1.666	37.6	20.6	89 E	73*	28
10 31	12 58.63	+16 3.8	0.717	0.593	98.1	16.4	36 W	30*	7 20	14 40.85	+35 0.4	1.368	1.656	37.8	20.6	87 E	71*	29
11 2	12 54.40	+14 21.3	0.729	0.603	95.9	16.3	37 W	31* 2*	7 25	14 44.97	+33 49.8	1.392	1.646	37.9	20.6	85 E	68*	30
11 4	12 50.87	+12 32.9	0.741	0.614	93.7	16.3	38 W	32* 5*	7 30	14 49.82	+32 36.4	1.415	1.634	38.0	20.6	83 E	66*	31
11 6	12 48.02	+10 39.9	0.753	0.626	91.5	16.3	39 W	33* 8*	8 4	14 55.36	+31 20.5	1.436	1.622	38.1	20.7	81 E	64*	33
11 8	12 45.80	+ 8 43.7	0.765	0.639	89.3	16.3	40 W	34* 10*	8 9	15 1.55	+30 2.3	1.454	1.610	38.2	20.7	79 E	62*	34*
11 10	12 44.16	+ 6 45.3	0.778	0.653	87.2	16.3	41 W	34* 13*	8 14	15 8.35	+28 42.3	1.471	1.597	38.3	20.7	78 E	61*	35*
11 12	12 43.05	+ 4 45.4	0.790	0.668	85.1	16.3	42 W	34* 16*	8 19	15 15.74	+27 20.5	1.486	1.583	38.3	20.7	76 E	59*	36*
11 17	12 42.27	- 0 15.7	0.820	0.708	80.3	16.3	45 W	34* 22*	8 24	15 23.68	+25 57.2	1.499	1.569	38.4	20.7	75 E	58*	37*
11 22	12 43.76	- 5 13.5	0.848	0.750	76.1	16.4	47 W	32* 28*	8 29	15 32.15	+24 32.5	1.510	1.554	38.5	20.7	73 E	57*	37*
11 27	12 46.95	-10 3.6	0.874	0.794	72.3	16.4	50 W	30* 34*	9 3	15 41.14	+23 6.5	1.520	1.538	38.5	20.7	72 E	55*	37*
12 2	12 51.39	-14 44.1	0.898	0.839	69.1	16.5	53 W	27* 39*	9 8	15 50.65	+21 39.2	1.528	1.522	38.6	20.7	70 E	54*	38*
12 7	12 56.74	-19 14.3	0.920	0.884	66.2	16.6	55 W	24* 44*	9 13	16 0.66	+20 10.9	1.534	1.506	38.6	20.7	69 E	53*	38*
12 12	13 2.75	-23 34.1	0.940	0.928	63.6	16.7	58 W	21* 48*	9 18	16 11.16	+18 41.8	1.539	1.489	38.7	20.6	68 E	52*	38*
12 17	13 9.24	-27 43.9	0.957	0.972	61.3	16.7	60 W	17* 52*	9 23	16 22.14	+17 11.9	1.542	1.471	38.8	20.6	67 E	51*	37*
12 22	13 16.08	-31 44.2	0.973	1.014	59.3	16.8	62 W	13* 56*	9 28	16 33.61	+15 41.3	1.545	1.453	38.9	20.6	66 E	50*	37*
12 27	13 23.16	-35 35.7	0.986	1.055	57.5	16.9	65 W	9 59*	10 3	16 45.56	+14 10.3	1.546	1.435	39.0	20.6	64 E	49*	37*
1	13 30.36	-39 19.0	0.998	1.095	55.8	16.9	67 W	6 61*	10 8	16 57.99	+12 38.9	1.547	1.416	39.1	20.6	63 E	48*	36*
1	13 37.59	-42 54.6	1.008	1.133	54.3	17.0	69 W	2 62*	10 13	17 10.91	+11 7.6	1.547	1.397	39.2	20.5	62 E	47*	36*
1	11 13 44.76	-46 22.8	1.016	1.170	52.9	17.0	72 W	- 63*	10 18	17 24.30	+ 9 36.6	1.547	1.378	39.3	20.5	61 E	46*	35*
1	16 13 51.78	-49 44.2	1.022	1.205	51.6	17.1	74 W	- 62*	10 23	17 38.15	+ 8 6.1	1.546	1.358	39.4	20.5	60 E	45*	34*
12 27	14 1.56	+22 17.6	1.955	2.003	28.7	20.6	78 W	66* 25*	11 2	18 7.23	+ 5 7.8	1.546	1.317	39.6	20.4	58 E	43*	33*
1	14 20.66	+24 33.3	1.905	2.051	28.5	20.6	84 W	69* 28*	11 12	18 38.09	+ 2 15.8	1.546	1.276	39.6	20.3	55 E	41*	31*
1	16 14 38.26	+27 11.2	1.858	2.097	28.0	20.6	90 W	72 29*	11 22	19 10.58	- 0 26.9	1.548	1.235	39.6	20.3	53 E	38*	29*
1	26 14 53.99	+30 10.1	1.818	2.142	27.2	20.6	95 W	75 30*	12 2	19 44.53	- 2 57.3	1.552	1.195	39.4	20.2	50 E	36*	28*
2	5 15 7.47	+33 26.8	1.785	2.186	26.4	20.6	100 W	78 29*	12 12	20 19.74	- 5 12.5	1.560	1.156	39.1	20.1	48 E	34*	26*
2	15 15 18.19	+36 56.8	1.763	2.229	25.4	20.5	105 W	82 27*	12 22	20 55.92	- 7 10.4	1.569	1.119	38.6	20.1	45 E	31*	25*
2	25 15 25.60	+40 32.8	1.751	2.270	24.4	20.5	109 W	86 23	1	21 32.86	- 8 49.4	1.579	1.085	37.9	20.0	43 E	29*	24*
3	7 15 29.16	+44 5.6	1.751	2.309	23.5	20.5	112 W	89 20	1	22 10.36	-10 8.6	1.589	1.056	37.2	19.9	41 E	26*	24*
3	17 15 28.33	+47 24.7	1.764	2.348	22.8	20.6	114 W	88 17	1	22 48.22	-11 7.9	1.596	1.032	36.6	19.9	39 E	24*	24*
3	27 15 22.87	+50 17.7	1.789	2.385	22.3	20.6	115 W	85 14	329615 2003 LV₁									
4	6 15 13.01	+52 33.3	1.826	2.420	22.1	20.7	115 W	82 11	12 27	14 2.82	+31 2.0	1.152	1.417	43.5	21.3	83 W	74*	19*
4	16 14 59.62	+54 2.1	1.874	2.454	22.0	20.8	114 W	81 10	1	14 19.57	+31 1.0	1.134	1.415	43.7	21.3	84 W	75*	20*
4	26 14 44.39	+54 38.3	1.933	2.487	22.1	20.9	112 W	80 9	1	14 35.80	+31 0.2	1.117	1.413	43.8	21.3	84 W	75*	21*
5	6 14 29.31	+54 22.4	2.001	2.518	22.3	21.0	109 E	81 10	1	14 51.47	+31 0.0	1.101	1.411	44.0	21.2	85 W	75*	22*
5	16 14 16.18	+53 19.3	2.078	2.547	22.4	21.1	106 E	82 11	1	16 15 6.52	+31 0.7	1.085	1.410	44.1	21.2	86 W	75*	23*
5	26 14 6.18	+51 37.4	2.161	2.575	22.6	21.2	102 E	83 12	1	15 20.89	+31 2.6	1.069	1.408	44.2	21.2	86 W	75*	24*
6	5 13 59.74	+49 26.3	2.250	2.602	22.7	21.3	99 E	86 15	1	16 15 34.57	+31 5.8	1.053	1.407	44.3	21.2	87 W	76*	25*
6	15 13 56.77	+46 54.3	2.343	2.627	22.7	21.4	95 E	88* 17	1	16 47.51	+31 10.6	1.037	1.406	44.5	21.1	88 W	76*	26*
12 27	14 2.36	-19 27.8	1.763	1.537	33.8	20.9	60 W	25* 49*	2	15 59.70	+31 17.1	1.020	1.405	44.6	21.1	89 W	76*	27*
1	14 13.12	-19 9.9	1.726	1.553	34.4	20.9	63 W	26* 51*	2	10 16 11.08	+31 25.5	1.002	1.404	44.6	21.1	90 W	76*	28*
1	6 14 23.63	-18 45.9	1.686	1.568	34.9	20.9	66 W	26* 54*	2	15 21.63	+31 35.9	0.983	1.404	44.7	21.0	91 W	76*	29*
1	11 14 33.87	-18 15.4	1.644	1.582	35.4	20.8	69 W	27* 57*	2	20 16 31.31	+31 48.0	0.962	1.404	44.7	21.0	92 W	77*	30*
1	16 14 43.81	-17 37.7	1.600	1.596	35.9	20.8	72 W	27* 60*	2	25 16 40.07	+32 1.6	0.941	1.404	44.7	20.9	93 W	77*	31*
1	21 14 53.43	-16 52.4	1.554	1.609	36.2	20.8	75 W	28* 63*	3	2 16 47.88	+32 16.5	0.918	1.404	44.7	20.9	95 W	77*	31*
1	26 15 2.69	-15 58.8	1.506	1.622	36.5	20.7	78 W	29 65*	3	7 16 54.69	+32 32.5	0.894	1.404	44.6	20.8	96 W	78	31*
1	31 15 11.57	-14 56.3	1.457	1.634	36.6	20.7	81 W	30 68*	3	12 17 0.41	+32 49.2	0.869	1.405	44.5	20.7	98 W	78	31*
2	5 15 20.03	-13 44.3	1.407	1.645	36.7	20.6	85 W	31 70*	3	17 17 4.96	+33 5.8	0.842	1.406	44.3	20.7	99 W	78	31
2	10 15 28.03	-12 21.9	1.357	1.656	36.6	20.5	88 W	33 72*	3	22 17 8.24	+33 21.4	0.814	1.406	44.0	20.6	101 W	78	31
2	15 15 35.50	-10 48.4	1.307	1.666	36.3	20.5	92 W	34 73*	3	27 17 10.14	+33 34.8	0.785	1.408	43.5	20.5	104 W	79	30
2	20 15 42.40	- 9 3.0	1.257	1.675	36.0	20.4	96 W	36 72*	4	1 17 10.57	+33 44.7	0.755	1.409	43.0	20.4	106 W	79	30
2	25 15 48.67	- 7 5.0	1.208	1.684	35.4	20.3	100 W	38 71*	4	6 17 9.37	+33 49.1	0.724	1.410	42.2	20.3	109 W	79	30
3	2 15 54.26	+ 4 53.7	1.161	1.692	34.7	20.2	103 W	40 69	4	11 17 6.38	+33 45.8	0.693	1.412	41.3	20.2	112 W	79	30
3	7 15 59.08	- 2 28.6	1.116	1.700	33.9	20.1	107 W	43 66	4	16 17 1.48	+33 31.4	0.662	1.414	40.2	20.0	115 W	79	30
3	17 16 6.09	+ 3 3.4	1.034	1.713	31.7	19.9	115 W	48 61	4	21 16 54.58	+33 1.9	0.631	1.416	38.8	19.9	118 W	78	31
3	27 16 9.06	+ 9 26.2	0.968	1.723	29.2	19.7	122 W	54 55	4	26 16 45.65	+32 12.5	0.602	1.418	37.2	19.8	122 W	77	32
4	6 16 7.40	+16 23.3	0.923	1.731	27.0	19.5	128 W	61 48	5	1 16 34.77	+30 58.4	0.575	1.420	35.3	19.6	125 W	76	33
4	11 16 4.67	+19 55.6	0.909	1.734	26.2	19.5	130 W	65 44	5	6 16 22.11	+29 14.3	0.550	1.423	33.2	19.5	129 W	74	35
4	16 16 0.67	+23 24.0	0.902	1.737	25.7	19.4	131 W	68 41	5	11 16 8.03	+26 55.4	0.529	1.425	31.1	19.3	133 W	72	37
4	21 15 55.42	+26 43.2	0.900	1.738	25.6	19.4	132 W	72 37	5	16 15 53.07	+23 58.8	0.513	1.428	29.1	19.2	137 W	69	40
4																		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
329615 2003 LV₁										79721 1998 SE₁₁₂									
<i>(continuation)</i>										<i>(continuation)</i>									
7 25	14 29.35	-28 30.3	0.882	1.476	42.3	20.8	102 E	12*	87	9 13	16 36.62	-21 23.8	1.496	1.660	36.7	19.5	81 E	20*	74*
7 30	14 34.10	-30 42.4	0.931	1.479	42.7	21.0	99 E	9*	85	9 23	17 0.53	-22 19.8	1.564	1.647	36.3	19.5	76 E	19*	70*
8 4	14 39.84	-32 45.2	0.981	1.483	42.9	21.1	96 E	7*	83*	10 3	17 26.04	-23 2.2	1.633	1.638	35.6	19.6	72 E	19*	66*
8 9	14 46.52	-34 39.6	1.031	1.487	42.9	21.2	93 E	5*	80*	10 13	17 52.88	-23 28.1	1.702	1.632	34.8	19.7	69 E	19*	62*
8 14	14 54.11	-36 26.7	1.080	1.491	42.8	21.3	91 E	3*	77*	10 23	18 20.75	-23 35.4	1.771	1.628	33.7	19.7	65 E	19*	58*
8 19	15 2.57	-38 7.1	1.129	1.494	42.6	21.4	88 E	1*	74*	11 2	18 49.31	-23 22.4	1.842	1.628	32.5	19.8	62 E	20*	55*
8 24	15 11.88	-39 41.3	1.177	1.498	42.3	21.5	86 E	—	71*	11 12	19 18.27	-22 48.3	1.913	1.631	31.2	19.8	58 E	20*	50*
249047 2007 TC₉₁										163132 2002 CU₁₁									
12 27	14 4.99	-13 7.2	4.328	3.959	12.6	20.8	62 W	31*	46*	12 27	14 6.73	-6 17.8	1.227	1.187	48.1	21.1	64 W	38*	42*
1 6	14 13.59	-13 31.1	4.187	3.958	13.5	20.8	70 W	31*	54*	1 1	14 27.92	-5 2.3	1.174	1.163	49.8	21.0	65 W	39*	42*
1 16	14 21.26	-13 47.6	4.039	3.957	14.1	20.7	78 W	31*	63*	1 6	14 50.39	-3 34.1	1.126	1.139	51.4	20.9	65 W	40*	42*
1 26	14 27.85	-13 56.2	3.887	3.957	14.4	20.6	87 W	31*	71*	1 11	15 14.18	-1 53.2	1.084	1.115	53.1	20.9	65 W	42*	41*
2 5	14 33.20	-13 56.1	3.734	3.956	14.4	20.6	96 W	31*	77*	1 16	15 39.26	-0 0.6	1.048	1.091	54.7	20.8	65 W	43*	39*
2 15	14 37.13	-13 46.8	3.584	3.956	14.0	20.5	105 W	31*	78	1 21	16 5.54	+2 1.6	1.020	1.067	56.2	20.7	64 W	45*	38*
2 25	14 39.50	-13 27.9	3.440	3.956	13.1	20.3	115 W	32	77	2 25	16 32.84	+4 10.0	1.000	1.044	57.6	20.7	63 W	46*	36*
3 7	14 40.23	-12 59.2	3.308	3.957	11.9	20.2	125 W	32	77	2 5	17 0.92	+6 20.2	0.989	1.020	58.7	20.6	62 W	47*	34*
3 17	14 39.30	-12 21.0	3.191	3.957	10.3	20.1	135 W	33	76	3 27	17 29.47	+8 27.2	0.987	0.998	59.6	20.6	61 W	47*	31*
3 27	14 36.79	-11 34.3	3.094	3.957	8.2	19.9	146 W	33	76	4 6	18 58.13	+10 26.1	0.994	0.976	60.1	20.6	59 W	47*	29*
4 6	14 32.92	-10 40.6	3.020	3.958	5.8	19.7	156 W	34	75	4 16	19 26.42	+12 12.9	1.009	0.956	60.3	20.6	57 W	46*	27*
4 16	14 28.02	-9 42.5	2.974	3.959	3.2	19.6	167 W	35	74	4 20	18 54.37	+13 44.3	1.032	0.936	60.1	20.6	55 W	45*	25*
4 26	14 22.54	-8 43.1	2.957	3.960	1.3	19.4	175 W	36	73	4 25	19 21.40	+14 58.8	1.060	0.919	59.5	20.6	53 W	44*	24*
5 6	14 17.00	-7 46.2	2.969	3.961	3.1	19.6	168 E	37	72	5 2	19 47.45	+15 55.9	1.093	0.903	58.6	20.6	51 W	42*	22*
5 16	14 11.89	-6 54.9	3.011	3.963	5.7	19.7	157 E	38	71	5 3	20 12.46	+16 36.3	1.130	0.889	57.4	20.6	49 W	40*	22*
5 26	14 7.67	-6 12.2	3.079	3.964	8.1	19.9	147 E	39	70	5 12	20 36.42	+17 1.3	1.168	0.878	55.9	20.6	47 W	38*	21*
6 5	14 4.64	-5 39.8	3.170	3.966	10.2	20.1	136 E	39	70	5 17	20 59.35	+17 12.4	1.208	0.869	54.3	20.6	45 W	36*	21*
6 15	14 3.02	-5 18.6	3.281	3.968	11.9	20.2	126 E	40	69	5 22	21 21.33	+17 11.2	1.246	0.863	52.6	20.6	44 W	34*	21*
6 25	14 2.91	-5 8.6	3.407	3.970	13.2	20.3	117 E	39*	69	5 27	21 42.47	+16 59.5	1.284	0.860	50.9	20.6	42 W	32*	21*
7 5	14 4.29	-5 9.1	3.544	3.972	14.1	20.4	108 E	37*	69	6 4	22 2.86	+16 38.7	1.319	0.860	49.2	20.6	41 W	30*	22*
7 15	14 7.12	-5 19.0	3.688	3.975	14.6	20.6	99 E	35*	69	6 12	22 22.63	+16 10.4	1.352	0.863	47.7	20.6	40 W	28*	22*
7 25	14 11.28	-5 37.0	3.836	3.977	14.8	20.6	91 E	32*	70	6 16	22 41.86	+15 35.8	1.381	0.868	46.3	20.7	39 W	26*	23*
8 4	14 16.67	-6 1.7	3.984	3.980	14.6	20.7	82 E	29*	69*	6 21	23 0.64	+14 55.9	1.407	0.877	45.1	20.7	38 W	24*	24*
8 14	14 23.17	-6 31.8	4.130	3.983	14.2	20.8	75 E	26*	64*	6 26	23 19.04	+14 11.5	1.429	0.888	44.2	20.7	38 W	23*	25*
8 24	14 30.66	-7 5.9	4.270	3.986	13.5	20.8	67 E	24*	59*	6 31	23 37.13	+13 23.2	1.447	0.901	43.4	20.8	38 W	21*	27*
9 3	14 39.03	-7 42.9	4.403	3.989	12.6	20.9	60 E	22*	52*	6 36	23 54.98	+12 31.7	1.462	0.917	42.9	20.8	38 W	19*	28*
9 13	14 48.18	-8 21.5	4.526	3.993	11.5	20.9	52 E	19*	45*	6 41	24 12.64	+11 37.2	1.473	0.934	42.6	20.8	39 W	17*	29*
9 23	14 58.00	-9 0.6	4.638	3.996	10.3	20.9	45 E	17*	38*	6 46	24 30.14	+10 40.1	1.481	0.953	42.5	20.9	40 W	16*	31*
10 3	15 8.42	-9 39.4	4.736	4.000	8.9	20.9	38 E	15*	31*	6 51	24 47.50	+9 40.4	1.486	0.974	42.5	21.0	41 W	14*	32*
10 13	15 19.34	-10 16.9	4.821	4.004	7.5	20.9	31 E	13*	23*	6 56	25 1.47	+8 38.2	1.489	0.995	42.6	21.0	42 W	13*	34*
10 23	15 30.69	-10 52.1	4.890	4.008	6.0	20.8	25 E	11*	16*	7 5	25 1.90	+7 33.3	1.489	1.017	42.7	21.1	43 W	12*	36*
11 2	15 42.39	-11 24.4	4.942	4.012	4.5	20.8	18 E	9*	9*	7 10	25 35.89	+6 25.9	1.488	1.041	42.9	21.1	44 W	11*	37*
11 12	15 54.35	-11 53.0	4.977	4.016	3.1	20.7	13 E	6*	1*	7 15	25 55.97	+5 15.8	1.485	1.064	43.1	21.2	46 W	10*	39*
11 22	16 6.48	-12 17.3	4.994	4.021	2.1	20.7	9 E	2*	—	7 20	26 12.89	+4 2.9	1.481	1.088	43.3	21.2	47 W	9*	41*
12 2	16 18.71	-12 36.7	4.993	4.025	2.4	20.7	10 W	3*	—	7 25	26 29.73	+2 47.2	1.476	1.112	43.4	21.3	49 W	9*	42*
12 12	16 30.93	-12 50.7	4.974	4.030	3.6	20.8	15 W	9*	—	7 30	26 46.51	+1 28.6	1.471	1.136	43.6	21.3	50 W	8*	44*
12 22	16 43.06	-12 59.0	4.937	4.035	5.0	20.8	21 W	14*	5*	7 35	27 3.07	+0 7.2	1.465	1.160	43.6	21.3	52 W	8*	46*
1 1	16 54.98	-13 1.3	4.883	4.039	6.5	20.9	28 W	18*	13*	7 40	27 31.95	+1 17.1	1.460	1.184	43.7	21.4	54 W	8*	47*
1 11	17 6.59	-12 57.4	4.812	4.045	8.0	20.9	35 W	21*	20*	7 45	28 14.55	+0 4.0	1.455	1.207	43.7	21.4	55 W	8*	49*
1 21	17 17.76	-12 47.2	4.726	4.050	9.4	20.9	42 W	24*	29*	7 50	28 32.00	-0 5.4	1.447	1.230	43.6	21.4	57 W	8*	50*
79721 1998 SE₁₁₂										5646 1990 TR									
12 27	14 6.15	-10 42.9	2.688	2.396	21.3	21.1	62 W	34*	45*	12 27	14 7.91	-13 16.4	3.183	2.840	17.6	21.1	61 W	31*	45*
1 6	14 21.45	-11 54.6	2.542	2.367	22.7	21.0	69 W	33*	52*	1 6	14 18.97	-14 27.2	3.025	2.814	18.9	21.0	68 W	30*	54*
1 16	14 36.35	-12 59.2	2.391	2.338	24.0	20.9	75 W	32*	59*	1 16	14 29.27	-15 33.6	2.859	2.786	20.0	20.9	76 W	29	62*
1 26	14 50.67	-13 55.9	2.238	2.308	25.0	20.7	82 W	31	67*	1 26	14 38.58	-16 35.1	2.688	2.756	20.8	20.8	84 W	28	71*
2 5	15 4.24	-14 44.1	2.083	2.278	25.6	20.6	88 W	30	74*	2 5	14 46.65	-17 31.7	2.515	2.726	21.2	20.6	92 W	27	79*
2 15	15 16.77	-15 23.3	1.929	2.247	26.0	20.4	95 W	30	79*	2 15	14 53.17	-18 22.9	2.341	2.693	21.2	20.4	100 W	27	82
2 25	15 27.95	-15 53.0	1.777	2.216	25.8	20.2	103 W	29	80	2 25	14 57.75	-19 8.2	2.171	2.660	20.6	20.2	109 W	26	83
3 7	15 37.44	-16 12.9	1.630	2.184	25.2	19.9	110 W	29	80	3 7	15 0.01	-19 47.1	2.007	2.625	19.5	20.0	118 W	25	84
3 17	15 44.78	-16 22.6	1.491	2.152	24.0	19.7	119 W	29	80	3 17	14 59.54	-20 18.4	1.854	2.588	17.6	19.7	128 W	25	84
3 27	15 49.52	-16 22.2	1.360	2.120	22.0	19.4	127 W	29	80	3 27	14 55.97	-20 40.4	1.715	2.550	15.0	19.4	139 W	24	85
4 6	15 51.21	-16 11.7	1.242	2.087	19.1	19.0	137 W	29	80	4 6	14 49.18	-20 51.3	1.595	2.510	11.6	19.1	150 W	24	85
4 16	15 49.50	-15 51.3	1.139	2.055	15.4	18.7	147 W	29	80	4 16	14 39.31	-20 48.7	1.498	2.470	7.5	18.8	161 W	24	85
4 26	15 44.33	-15 22.2	1.054	2.022	10.8	18.3	158 W	30	79	4 26	14 27.03	-20 31.5	1.426	2.427	3.2	18.4	172 W	24	85
5 6	15 36.13	-14 46.7	0.990	1.990	5.5	17.9	169 W	30	79										

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°	
5646 1990 TR									157995 2000 LF₂₆									
<i>(continuation)</i>									<i>(continuation)</i>									
6 15	13 35.08	-17 38.3	1.455	2.194	22.5	19.0	124 E	27* 82	5 21	15 26.09	+ 1 20.9	1.013	1.987	11.1	18.3	158 E	46	63
6 25	13 33.54	-17 28.9	1.512	2.143	25.6	19.1	114 E	26* 81	5 26	15 21.46	+ 1 55.7	1.009	1.970	13.0	18.4	154 E	47	62
7 5	13 35.48	-17 36.0	1.576	2.092	27.9	19.2	106 E	23* 82	5 31	15 17.09	+ 2 22.3	1.009	1.953	15.2	18.4	150 E	47	62
7 15	13 40.63	-17 59.2	1.642	2.039	29.6	19.3	97 E	20* 82	6 5	15 13.15	+ 2 40.3	1.015	1.936	17.4	18.5	145 E	48	61
7 25	13 48.73	-18 37.3	1.707	1.985	30.8	19.4	90 E	18* 82*	6 15	15 7.15	+ 2 49.1	1.038	1.903	21.8	18.6	136 E	48	61
8 4	13 59.48	-19 28.0	1.768	1.930	31.5	19.4	83 E	15* 77*	6 25	15 4.33	+ 2 23.8	1.074	1.871	25.7	18.8	127 E	47	62
8 14	14 12.71	-20 29.1	1.824	1.874	31.8	19.4	77 E	13* 71*	7 5	15 5.03	+ 1 29.4	1.120	1.840	29.0	18.9	119 E	46*	63
8 24	14 28.28	-21 38.0	1.873	1.817	31.8	19.4	71 E	11* 65*	7 10	15 6.72	+ 0 53.1	1.146	1.825	30.3	19.0	115 E	45*	63
9 3	14 46.09	-22 52.0	1.915	1.761	31.5	19.4	66 E	10* 60*	7 15	15 9.29	+ 0 11.7	1.173	1.810	31.5	19.1	111 E	44*	64
9 13	15 6.15	-24 8.1	1.949	1.704	31.1	19.3	61 E	9* 55*	7 20	15 12.70	+ 0 34.0	1.202	1.796	32.6	19.1	108 E	43*	65
9 23	15 28.43	-25 22.8	1.974	1.647	30.5	19.3	56 E	8* 50*	7 25	15 16.92	- 1 23.3	1.231	1.782	33.5	19.2	105 E	41*	65
10 3	15 52.99	-26 32.5	1.992	1.591	29.8	19.2	52 E	7* 46*	8 4	15 27.63	- 3 10.0	1.290	1.755	34.9	19.3	98 E	39*	67
10 13	16 19.85	-27 32.8	2.002	1.536	29.1	19.1	49 E	7* 42*	8 14	15 41.15	- 5 3.8	1.352	1.731	35.8	19.4	93 E	36*	69
10 23	16 48.98	-28 18.8	2.005	1.482	28.4	19.0	45 E	7* 39*	8 24	15 57.21	- 7 0.2	1.414	1.708	36.3	19.5	88 E	34*	70*
11 2	17 20.31	-28 45.4	2.003	1.431	27.7	18.9	42 E	7* 36*	9 3	16 15.55	- 8 55.2	1.476	1.688	36.4	19.6	83 E	32*	70*
11 12	17 53.66	-28 47.3	1.997	1.383	27.0	18.8	39 E	8* 33*	9 13	16 36.00	-10 45.0	1.538	1.670	36.3	19.6	79 E	30*	68*
11 22	18 28.71	-28 19.3	1.988	1.339	26.4	18.7	37 E	9* 30*	9 23	16 58.33	-12 26.1	1.601	1.656	35.8	19.7	75 E	29*	65*
12 2	19 5.05	-27 17.3	1.977	1.300	25.8	18.6	35 E	10* 28*	10 3	17 22.34	-13 55.1	1.664	1.644	35.2	19.7	71 E	28*	62*
12 12	19 42.18	-25 38.5	1.968	1.266	25.3	18.5	33 E	11* 25*	10 13	17 47.83	-15 9.1	1.729	1.635	34.4	19.8	68 E	27*	59*
12 22	20 19.55	-23 22.4	1.961	1.240	24.8	18.5	32 E	13* 23*	10 23	18 14.54	-16 5.2	1.794	1.630	33.4	19.8	64 E	26*	55*
12 27	20 38.18	-22 0.8	1.959	1.229	24.6	18.4	31 E	14* 22*	11 2	18 42.21	-16 41.5	1.861	1.628	32.2	19.9	61 E	26*	51*
1	20 56.70	-20 30.7	1.958	1.221	24.3	18.4	31 E	14* 21*	11 12	19 10.56	-16 56.9	1.929	1.629	30.9	19.9	58 E	25*	47*
1	6 21 15.08	-18 52.6	1.959	1.215	24.1	18.4	30 E	15* 19*	11 22	19 39.30	-16 50.6	1.999	1.633	29.4	20.0	54 E	25*	43*
1	11 21 33.28	-17 7.3	1.961	1.210	23.8	18.4	30 E	16* 18*	12 2	20 8.14	-16 23.2	2.071	1.641	27.9	20.0	51 E	25*	38*
1	16 21 51.26	-15 15.7	1.966	1.208	23.5	18.4	29 E	16* 17*	12 12	20 36.85	-15 35.6	2.144	1.652	26.2	20.0	48 E	25*	34*
1	21 22 9.03	-13 18.5	1.972	1.209	23.2	18.4	29 E	17* 16*	12 22	21 5.21	-14 29.8	2.219	1.666	24.4	20.1	44 E	25*	30*
334073 2001 PL₅₉									9400 1994 TW₁									
12 27	14 8.26	-17 1.7	2.807	2.463	20.2	21.0	60 W	27* 47*	12 27	14 8.51	-26 4.4	3.587	3.167	15.2	20.9	57 W	18*	49*
1	6 14 19.13	-18 58.0	2.723	2.506	21.2	21.0	67 W	26* 55*	1	16 14 15.83	-27 52.9	3.498	3.213	16.1	20.9	65 W	17*	58*
1	16 14 28.66	-20 49.7	2.630	2.547	21.8	21.0	74 W	24* 64*	1	16 14 21.77	-29 39.8	3.400	3.258	16.8	20.9	73 W	15	67*
1	26 14 36.54	-22 37.2	2.531	2.588	22.1	20.9	82 W	22 74*	1	26 14 26.07	-31 24.8	3.295	3.302	17.2	20.9	82 W	14	76*
2	5 14 42.49	-24 20.5	2.429	2.628	22.0	20.9	90 W	21 83*	2	5 14 28.42	-33 7.1	3.186	3.344	17.1	20.8	91 W	12	82*
2	15 14 46.14	-25 59.4	2.325	2.666	21.5	20.8	99 W	19 90	2	15 14 28.51	-34 45.6	3.078	3.385	16.7	20.8	100 W	10	81
2	25 14 47.11	-27 32.7	2.225	2.704	20.3	20.7	108 W	17 88	2	25 14 26.04	-36 17.7	2.975	3.424	15.9	20.7	109 W	9	80
3	7 14 45.10	-28 58.6	2.132	2.740	18.7	20.6	118 W	16 87	3	7 14 20.82	-37 40.4	2.882	3.463	14.6	20.6	118 W	7	78
3	17 14 39.88	-30 13.8	2.050	2.776	16.4	20.5	128 W	15 86	3	17 14 12.83	-38 49.4	2.803	3.500	13.0	20.5	128 W	6	77
3	27 14 31.51	-31 13.9	1.986	2.810	13.7	20.3	138 W	14 85	3	27 14 2.31	-39 39.9	2.744	3.535	11.2	20.4	137 W	5	76
4	1 14 26.27	-31 36.9	1.962	2.827	12.2	20.3	143 W	13 84	4	1 13 56.28	-39 56.8	2.723	3.553	10.3	20.4	141 W	5	76
4	6 14 20.44	-31 54.4	1.943	2.843	10.7	20.2	148 W	13 84	4	6 13 49.88	-40 7.7	2.709	3.570	9.4	20.3	144 W	5	76
4	11 14 14.14	-32 6.2	1.931	2.859	9.2	20.1	153 W	13 84	4	11 13 43.22	-40 12.4	2.701	3.587	8.6	20.3	148 W	5	76
4	16 14 7.52	-32 11.8	1.926	2.875	7.9	20.1	157 W	13 84	4	16 13 36.44	-40 10.7	2.700	3.604	8.0	20.3	150 W	5	76
4	21 14 0.76	-32 11.5	1.928	2.891	7.0	20.0	160 W	13 84	4	21 13 29.70	-40 3.0	2.707	3.620	7.7	20.3	151 E	5	76
4	26 13 54.02	-32 5.5	1.937	2.906	6.5	20.0	161 E	13 84	4	26 13 23.12	-39 49.7	2.721	3.636	7.6	20.3	151 E	5	76
5	1 13 47.47	-31 54.4	1.953	2.921	6.7	20.1	160 E	13 84	5	1 13 16.85	-39 31.4	2.741	3.651	7.8	20.4	150 E	5	76
5	6 13 41.25	-31 38.9	1.976	2.936	7.4	20.2	158 E	13 84	5	6 13 10.98	-39 8.9	2.769	3.667	8.3	20.4	148 E	6	77
5	11 13 35.51	-31 19.9	2.006	2.950	8.5	20.2	154 E	14 85	5	11 13 5.61	-38 42.9	2.804	3.682	8.9	20.5	146 E	6	77
5	16 13 30.35	-30 58.5	2.043	2.964	9.7	20.3	150 E	14 85	5	16 13 0.81	-38 14.6	2.845	3.697	9.6	20.5	142 E	7	78
5	21 13 25.84	-30 35.5	2.086	2.978	11.0	20.5	146 E	14 85	5	21 12 56.63	-37 44.7	2.892	3.711	10.4	20.6	138 E	7	78
5	26 13 22.05	-30 12.2	2.135	2.992	12.3	20.6	141 E	15 86	5	26 12 53.09	-37 14.2	2.945	3.725	11.2	20.7	134 E	8	79
5	31 13 18.98	-29 49.2	2.189	3.005	13.5	20.7	136 E	15 86	5	31 12 47.97	-36 14.3	3.065	3.753	12.6	20.9	126 E	9*	80
6	5 13 16.65	-29 27.2	2.248	3.018	14.6	20.8	132 E	16 87	6	10 12 46.36	-35 46.2	3.132	3.766	13.3	20.9	122 E	8*	80
6	10 13 15.03	-29 7.0	2.311	3.031	15.5	20.9	127 E	16* 87	6	15 12 45.36	-35 20.0	3.202	3.779	13.8	21.0	117 E	8*	81
6	15 13 14.12	-28 49.0	2.377	3.043	16.4	21.0	122 E	16* 87	6	20 12 44.94	-34 56.1	3.275	3.792	14.3	21.1	113 E	7*	81
6	20 13 13.88	-28 33.5	2.447	3.055	17.1	21.1	118 E	15* 87	6	25 12 45.06	-34 34.9	3.351	3.805	14.6	21.1	109 E	6*	81
6	25 13 14.27	-28 20.7	2.519	3.067	17.7	21.2	113 E	14* 88	6	30 12 45.69	-34 16.3	3.428	3.817	14.9	21.2	105 E	5*	82
6	30 13 15.24	-28 10.9	2.594	3.079	18.2	21.3	109 E	13* 88	7	5 12 46.80	-34 0.7	3.507	3.829	15.1	21.3	101 E	4*	82
7	5 13 16.76	-28 3.9	2.670	3.090	18.5	21.3	105 E	12* 88	7	10 12 48.35	-33 47.9	3.587	3.841	15.2	21.3	97 E	3*	82*
7	10 13 18.79	-27 59.8	2.747	3.101	18.8	21.4	101 E	11* 88	7	15 12 50.31	-33 38.2	3.668	3.852	15.3	21.4	93 E	1*	80*
7	15 13 21.30	-27 58.7	2.826	3.112	18.9	21.5	97 E	9* 88*	7	20 12 52.65	-33 31.3	3.749	3.863	15.2	21.4	89 E	—	77*
157995 2000 LF₂₆									89830 2002 CE									
12 27	14 8.47	- 9 26.8	2.776	2.476	20.6	21.3	62 W	35* 44*	12 27	14 8.74	-10 42.8	3.431	3.089	16.3	21.0	62 W	33*	44*
1	6 14 23.61	-10 10.4	2.625	2.445	22.0	21.2	69 W	35* 51*	1	6 14 15.33	-12 3.8	3.296	3.100	17.3	21.0	70 W	33*	53*
1	16 14 38.34	-10 44.0	2.469	2.414	23.2	21.1	75 W	34 58*	1	16 14 20.62	-13 21.2	3.152	3.109	18.1	20.9	78 W	32	63*
1	26 14 52.49	-11 5.9	2.311	2.382														

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
89830 2002 CE (continuation)									453707 2010 XY₇₂ (continuation)								
4 11	13 36.13	-20 33.4	2.139	3.123	4.2	19.5	167 W	24 85	4 21	13 49.57	+ 4 8.3	0.276	1.272	12.5	17.1	164 E	49 60
4 16	13 28.66	-20 34.9	2.129	3.121	3.4	19.4	169 E	24 85	4 26	13 17.17	- 0 45.9	0.263	1.258	15.0	17.0	161 E	44 65
4 21	13 21.17	-20 33.2	2.127	3.118	3.8	19.5	168 E	24 85	5 1	12 43.49	- 6 6.8	0.260	1.243	22.5	17.2	152 E	39 70
4 26	13 13.83	-20 28.6	2.134	3.114	5.1	19.5	164 E	25 84	5 6	12 11.00	-11 22.0	0.267	1.228	31.4	17.5	141 E	34 75
5 1	13 6.78	-20 21.6	2.149	3.110	6.7	19.6	159 E	25 84	5 8	11 58.82	-13 20.2	0.273	1.221	34.8	17.6	136 E	32 77
5 6	13 0.13	-20 13.0	2.172	3.106	8.4	19.7	153 E	25 84	5 10	11 47.25	-15 12.2	0.279	1.215	38.1	17.8	132 E	30 79
5 11	12 54.00	-20 3.5	2.202	3.102	10.1	19.8	148 E	25 84	5 12	11 36.37	-16 57.5	0.287	1.208	41.2	17.9	128 E	28 81
5 16	12 48.47	-19 53.7	2.238	3.097	11.6	19.9	142 E	25 84	5 14	11 26.19	-18 36.0	0.295	1.201	44.1	18.0	124 E	26 83
5 26	12 39.45	-19 36.0	2.329	3.086	14.4	20.1	131 E	25 84	5 16	11 16.73	-20 7.7	0.304	1.195	46.8	18.2	121 E	25* 84
6 5	12 33.24	-19 24.5	2.437	3.073	16.6	20.3	120 E	25* 83	5 21	10 56.12	-23 30.0	0.330	1.177	52.7	18.5	112 E	20* 88
6 15	12 29.79	-19 22.0	2.558	3.059	18.2	20.4	110 E	23* 83	5 26	10 39.46	-26 20.0	0.357	1.159	57.4	18.8	105 E	15* 90
6 25	12 28.88	-19 30.3	2.686	3.044	19.2	20.5	101 E	19* 84	5 31	10 26.06	-28 45.4	0.386	1.141	61.3	19.0	99 E	9* 87
7 5	12 30.23	-19 49.6	2.816	3.026	19.6	20.6	92 E	15* 84*	6 5	10 15.27	-30 52.7	0.414	1.123	64.3	19.2	94 E	4* 84*
7 15	12 33.56	-20 19.9	2.945	3.007	19.6	20.7	84 E	11* 78*	6 10	10 6.53	-32 47.0	0.442	1.104	66.9	19.4	90 E	— 78*
7 25	12 38.60	-21 0.7	3.069	2.987	19.3	20.8	76 E	7* 70*	6 15	9 59.32	-34 32.1	0.468	1.085	69.0	19.6	86 E	— 72*
8 4	12 45.13	-21 51.2	3.185	2.965	18.6	20.8	68 E	3* 61*	6 20	9 53.19	-36 10.2	0.492	1.066	70.7	19.7	82 E	— 66*
8 14	12 52.98	-22 50.7	3.290	2.941	17.6	20.9	61 E	— 54*	6 25	9 47.79	-37 42.6	0.513	1.047	72.3	19.8	79 E	— 61*
8 24	13 2.00	-23 58.3	3.384	2.916	16.4	20.9	55 E	— 46*	6 30	9 42.82	-39 9.6	0.531	1.028	73.7	19.9	76 E	— 55*
9 3	13 12.06	-25 13.2	3.464	2.889	15.1	20.8	48 E	— 39*	7 5	9 38.07	-40 31.5	0.547	1.010	75.0	19.9	74 E	— 50*
9 13	13 23.11	-26 34.8	3.529	2.861	13.6	20.8	42 E	— 32*	7 10	9 33.33	-41 48.0	0.558	0.992	76.3	20.0	71 E	— 45*
9 23	13 35.07	-28 2.5	3.577	2.830	12.1	20.8	36 E	— 26*	7 15	9 28.44	-42 58.7	0.566	0.975	77.6	20.0	69 E	— 40*
10 3	13 47.92	-29 35.4	3.610	2.799	10.6	20.7	31 E	— 20*	7 20	9 23.23	-44 2.4	0.570	0.958	78.9	20.0	68 E	— 35*
10 13	14 1.67	-31 13.3	3.625	2.765	9.2	20.6	26 E	— 15*	7 25	9 17.60	-44 57.3	0.571	0.942	80.3	20.1	66 E	— 30*
10 23	14 16.30	-32 55.3	3.622	2.730	8.0	20.5	22 E	— 9*	7 30	9 11.52	-45 41.6	0.567	0.928	81.7	20.1	65 E	— 26*
11 2	14 31.86	-34 40.9	3.603	2.693	7.3	20.5	20 E	— 4*	8 4	9 5.00	-46 13.3	0.559	0.915	83.2	20.1	64 E	— 21*
11 12	14 48.40	-36 29.8	3.567	2.654	7.1	20.4	19 W	— 7*	8 9	8 58.11	-46 30.0	0.548	0.903	84.9	20.0	63 W	— 22*
11 22	15 5.97	-38 21.0	3.515	2.613	7.6	20.4	21 W	— 11*	8 14	8 50.97	-46 29.2	0.532	0.894	86.7	20.0	62 W	— 26*
12 2	15 24.69	-40 14.2	3.447	2.571	8.7	20.3	23 W	— 15*	8 19	8 43.75	-46 7.7	0.513	0.886	88.6	20.0	61 W	— 30*
12 12	15 44.66	-42 8.6	3.365	2.527	10.2	20.3	27 W	— 19*	8 24	8 36.75	-45 21.7	0.490	0.880	90.6	20.0	60 W	— 34*
12 22	16 6.02	-44 3.3	3.270	2.481	11.8	20.3	31 W	— 24*	8 29	8 30.31	-44 7.7	0.464	0.876	92.7	19.9	60 W	— 37*
1 1	16 28.95	-45 57.3	3.164	2.433	13.6	20.2	36 W	— 28*	9 3	8 24.80	-42 21.6	0.436	0.874	94.8	19.9	60 W	— 41*
1 11	16 53.66	-47 49.5	3.047	2.384	15.5	20.2	40 W	— 32*	9 8	8 20.55	-39 58.1	0.405	0.875	97.0	19.8	59 W	— 44*
1 21	17 20.38	-49 38.1	2.923	2.332	17.3	20.1	45 W	— 36*	9 13	8 17.88	-36 50.3	0.373	0.877	99.2	19.8	59 W	— 48*
9162 Kwiila									453707 2010 XY₇₂ (continuation)								
12 27	14 8.95	-13 33.3	1.569	1.385	38.3	21.0	61 W	31* 45*	9 15	8 17.32	-35 20.7	0.360	0.879	100.0	19.7	59 W	— 49*
1 6	14 26.37	-14 19.0	1.553	1.473	37.8	21.1	67 W	31* 52*	9 17	8 17.09	-33 41.7	0.346	0.881	100.8	19.7	59 W	— 50*
1 16	14 41.53	-14 47.7	1.522	1.555	37.3	21.2	73 W	30* 59*	9 19	8 17.21	-31 52.5	0.333	0.883	101.6	19.6	59 W	2* 51*
1 26	14 54.17	-14 58.9	1.477	1.633	36.5	21.2	80 W	30* 67*	9 21	8 17.69	-29 52.2	0.320	0.886	102.3	19.6	60 W	4* 52*
2 5	15 3.97	-14 52.2	1.422	1.707	35.3	21.2	88 W	30* 74*	9 23	8 18.55	-27 39.9	0.307	0.889	102.9	19.6	60 W	7* 53*
2 15	15 10.50	-14 26.6	1.360	1.776	33.5	21.1	97 W	31* 78*	9 25	8 19.83	-25 14.4	0.294	0.892	103.5	19.5	60 W	10* 54*
2 25	15 13.26	-13 40.7	1.294	1.841	31.0	21.0	107 W	31* 78*	9 27	8 21.52	-22 34.5	0.282	0.896	104.0	19.4	60 W	14* 54*
3 7	15 11.79	-12 33.3	1.230	1.902	27.6	20.9	117 W	32 77	9 29	8 23.66	-19 39.2	0.270	0.900	104.4	19.4	60 W	17* 54*
3 17	15 5.74	-11 3.7	1.174	1.958	23.3	20.7	129 W	34 75	10 1	8 26.26	-16 27.3	0.259	0.904	104.6	19.3	61 W	21* 54*
3 27	14 55.18	-9 13.6	1.131	2.011	18.0	20.5	142 W	36 73	10 3	8 29.35	-12 57.8	0.248	0.909	104.7	19.2	61 W	25* 53*
4 6	14 40.80	-7 8.9	1.110	2.060	11.9	20.3	155 W	38 71	10 8	8 39.33	- 2 53.6	0.226	0.921	103.8	19.0	64 W	36* 49*
4 11	14 32.60	- 6 4.2	1.109	2.083	8.9	20.2	161 W	39 70	10 13	8 52.89	+ 8 57.0	0.211	0.935	101.3	18.8	67 W	48* 41*
4 16	14 24.04	- 5 0.1	1.115	2.105	6.1	20.1	167 W	40 69	10 18	9 10.60	+21 49.9	0.206	0.950	97.1	18.5	71 W	60* 31*
4 21	14 15.38	- 3 58.5	1.129	2.127	4.4	20.1	171 W	41 68	10 23	9 33.21	+34 27.2	0.211	0.966	91.8	18.4	76 W	69* 19*
4 26	14 6.90	- 3 1.2	1.150	2.147	4.9	20.2	169 E	42 67	10 25	9 43.80	+39 7.8	0.216	0.973	89.5	18.4	78 W	72* 15*
5 1	13 58.83	- 2 9.5	1.178	2.166	7.0	20.4	165 E	43 66	10 27	9 55.35	+43 30.0	0.222	0.979	87.3	18.4	80 W	73* 11*
5 6	13 51.36	- 1 24.4	1.214	2.185	9.6	20.5	159 E	44 65	10 29	10 7.90	+47 31.6	0.230	0.986	85.1	18.4	82 W	73* 7*
5 11	13 44.65	- 0 46.7	1.256	2.203	12.1	20.7	153 E	44 65	10 31	10 21.49	+51 11.3	0.238	0.993	83.0	18.4	83 W	73* 4*
5 16	13 38.81	- 0 16.7	1.304	2.220	14.5	20.9	147 E	45 64	11 2	10 36.12	+54 28.9	0.248	1.001	81.0	18.4	85 W	71* —
5 21	13 33.90	+ 0 5.7	1.358	2.236	16.6	21.1	141 E	45 64	11 4	10 51.81	+57 24.8	0.258	1.008	79.1	18.4	86 W	69* —
5 26	13 29.95	+ 0 20.9	1.416	2.251	18.5	21.3	135 E	45 64	11 6	11 8.50	+59 59.7	0.269	1.015	77.3	18.5	87 W	67* —
5 31	13 26.93	+ 0 29.2	1.478	2.265	20.1	21.4	130 E	45 64	11 8	11 26.15	+62 14.9	0.280	1.022	75.6	18.5	88 W	65* —
453707 2010 XY₇₂									11 10	11 44.63	+64 11.7	0.292	1.030	74.1	18.6	89 W	64* —
12 27	14 9.06	+23 37.0	1.197	1.376	44.3	21.4	78 W	67* 23*	11 12	12 3.81	+65 51.4	0.305	1.037	72.6	18.6	90 W	62* —
1 6	14 29.46	+22 21.0	1.137	1.385	44.6	21.3	81 W	67* 28*	11 13	12 13.60	+66 35.3	0.311	1.041	71.9	18.7	91 W	61* —
1 16	14 48.02	+21 16.7	1.069	1.390	44.8	21.2	85 W	66* 33*	11 14	12 23.50	+67 15.6	0.317	1.045	71.2	18.7	91 W	61* —
1 26	15 4.58	+20 24.2	0.993	1.392	45.0	21.0	90 W	65* 38*	11 15	12 33.48	+67 52.4	0.324	1.049	70.6	18.7	91 W	60* —
2 5	15 18.90	+19 42.4	0.910	1.391	45.0	20.8	94 W	65 42*	11 16	12 43.50	+68 25.9	0.330	1.052	69.9	18.8	92 W	59* —
2 15	15 30.52	+19 10.0	0.822	1.386	44.6	20.6	100 W	64 44*	11 17	12 53.55	+68 56.3	0.336	1.056	69.3	18.8	92 W	59* —
2 25	15 38.70	+18 43.1	0.729	1.378	43.8	20.3	106 W	64 45	11 18	13 3.59	+69 23.8	0.343	1.060	68.7	18.8	92 W	58* —
3 2	15 41.19	+18 29.8	0.682	1.372	43.1	20.1	109 W	63 46	11 19	13 13.60	+69						

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°	
453707 2010 XY₇₂ (continuation)									34755 2001 QW₁₂₀ (continuation)									
12	4	15 26.52	+72 34.2	0.445	1.121	61.1	19.3	96 W 52*	2	15	14 52.99	+ 5 42.9	2.457	2.891	19.2	19.6	106 W 51	58
12	6	15 40.92	+72 41.1	0.458	1.128	60.3	19.3	96 W 52*	2	25	14 56.01	+ 7 10.8	2.352	2.910	18.0	19.5	115 W 52	57
12	8	15 54.55	+72 47.1	0.470	1.135	59.6	19.4	96 W 52*	3	7	14 56.67	+ 8 51.1	2.259	2.927	16.4	19.4	124 W 54	55
12	10	16 7.45	+72 52.5	0.482	1.143	58.9	19.4	96 W 51*	3	17	14 54.80	+10 39.8	2.180	2.944	14.5	19.3	132 W 56	53
12	12	16 19.69	+72 57.7	0.493	1.150	58.3	19.5	96 W 51*	3	22	14 52.93	+11 35.4	2.148	2.952	13.4	19.2	137 W 57	52
12	14	16 31.31	+73 3.2	0.505	1.157	57.7	19.5	97 W 51*	3	27	14 50.47	+12 30.6	2.121	2.960	12.4	19.1	140 W 58	51
12	16	16 42.38	+73 9.1	0.516	1.164	57.1	19.6	97 W 51*	4	1	14 47.46	+13 24.5	2.100	2.967	11.4	19.1	144 W 58	51
12	18	16 52.96	+73 15.7	0.527	1.172	56.5	19.6	97 W 51*	4	6	14 43.95	+14 16.0	2.085	2.974	10.6	19.0	147 W 59	50
12	20	17 3.10	+73 23.2	0.538	1.179	55.9	19.6	97 W 51*	4	11	14 40.01	+15 4.0	2.077	2.981	10.0	19.0	149 W 60	49
12	22	17 12.86	+73 31.8	0.549	1.186	55.4	19.7	97 W 50*	4	16	14 35.74	+15 47.5	2.074	2.988	9.6	19.0	150 W 61	48
12	24	17 22.28	+73 41.5	0.559	1.192	54.9	19.7	97 W 50*	4	21	14 31.24	+16 25.7	2.079	2.994	9.5	19.0	150 W 61	48
12	26	17 31.43	+73 52.6	0.569	1.199	54.4	19.8	98 W 50*	4	26	14 26.63	+16 57.7	2.090	3.000	9.8	19.0	149 W 62	47
12	28	17 40.33	+74 5.0	0.579	1.206	53.9	19.8	98 W 50*	5	6	14 17.50	+17 41.8	2.131	3.012	11.1	19.1	145 E 63	46
12	30	17 49.03	+74 19.0	0.588	1.213	53.5	19.8	98 W 50*	5	16	14 9.18	+17 57.9	2.195	3.022	13.0	19.3	138 E 63	46
1	1	17 57.57	+74 34.4	0.598	1.219	53.0	19.9	98 W 50*	5	26	14 2.38	+17 47.4	2.280	3.032	14.8	19.4	130 E 63	46
1	3	18 5.98	+74 51.5	0.607	1.226	52.6	19.9	98 W 50*	6	5	13 57.53	+17 13.8	2.381	3.040	16.5	19.6	122 E 62	47
1	5	18 14.31	+75 10.2	0.616	1.232	52.2	19.9	98 W 50*	6	15	13 54.80	+16 21.4	2.496	3.047	17.8	19.7	114 E 61	48
1	7	18 22.57	+75 30.4	0.624	1.238	51.8	20.0	98 W 50*	6	25	13 54.23	+15 14.5	2.620	3.054	18.7	19.9	106 E 59	49
1	9	18 30.83	+75 52.4	0.633	1.244	51.4	20.0	98 W 50*	7	5	13 55.67	+13 57.2	2.750	3.059	19.2	20.0	98 E 54	50
1	11	18 39.11	+76 15.9	0.641	1.250	51.1	20.0	98 W 50*	7	15	13 58.97	+12 32.6	2.883	3.064	19.4	20.1	90 E 50	51
1	13	18 47.46	+76 41.0	0.649	1.256	50.7	20.0	99 W 49*	7	25	14 3.92	+11 3.3	3.015	3.067	19.2	20.2	83 E 45	53*
1	15	18 55.95	+77 7.7	0.657	1.262	50.4	20.1	99 W 49*	8	4	14 10.32	+ 9 31.4	3.146	3.069	18.7	20.3	76 E 41	53*
1	17	19 4.64	+77 35.9	0.664	1.268	50.1	20.1	99 W 49*	8	14	14 18.00	+ 7 58.6	3.272	3.070	18.0	20.3	70 E 37	51*
1	19	19 13.59	+78 5.7	0.672	1.273	49.8	20.1	99 W 49*	8	24	14 26.80	+ 6 26.2	3.391	3.071	17.1	20.4	63 E 34	48*
1	21	19 22.90	+78 36.9	0.679	1.279	49.5	20.1	99 W 49*	9	3	14 36.58	+ 4 55.3	3.502	3.070	16.0	20.4	57 E 31	44*
34759 2001 QL₁₅₁									218144 2002 RL₆₆									
12	27	14 10.11	-28 39.7	3.628	3.193	14.9	20.0	57 W 16*	12	27	14 10.52	- 6 18.4	2.231	1.988	26.2	19.4	63 W 38*	42*
1	6	14 19.08	-30 30.1	3.535	3.228	15.9	20.1	64 W 14*	1	6	14 24.47	- 8 25.8	2.160	2.029	26.9	19.4	69 W 36*	50*
1	16	14 26.87	-32 19.1	3.433	3.261	16.6	20.0	72 W 13*	1	16	14 36.94	-10 25.7	2.081	2.070	27.4	19.4	76 W 35	58*
1	26	14 33.20	-34 6.6	3.325	3.293	17.1	20.0	80 W 11*	1	26	14 47.66	-12 18.8	1.996	2.111	27.6	19.4	83 W 33	66*
2	5	14 37.79	-35 52.0	3.213	3.325	17.2	20.0	88 W 9*	2	5	14 56.33	-14 6.0	1.907	2.152	27.3	19.3	90 W 31	74*
2	15	14 40.32	-37 34.4	3.100	3.355	17.0	19.9	96 W 7*	2	15	15 2.55	-15 48.0	1.817	2.193	26.5	19.2	99 W 29	80*
2	25	14 40.45	-39 11.8	2.992	3.385	16.4	19.8	105 W 6*	2	25	15 5.90	-17 25.2	1.727	2.233	25.0	19.1	107 W 28	81
3	7	14 37.93	-40 41.8	2.891	3.414	15.4	19.7	114 W 4*	3	7	15 5.95	-18 57.7	1.643	2.272	22.9	19.0	117 W 26	83
3	17	14 32.59	-42 0.4	2.801	3.441	14.1	19.6	123 W 3*	3	17	15 2.34	-20 24.0	1.568	2.311	20.0	18.8	127 W 25	84
3	27	14 24.50	-43 3.0	2.728	3.468	12.5	19.5	131 W 2*	3	27	14 54.95	-21 41.5	1.508	2.349	16.4	18.6	138 W 23	86
4	1	14 19.54	-43 26.8	2.699	3.482	11.6	19.5	135 W 2*	4	6	14 44.09	-22 46.3	1.468	2.387	12.1	18.5	150 W 22	87
4	6	14 14.06	-43 45.0	2.676	3.495	10.8	19.4	139 W 1*	4	11	14 37.58	-23 12.5	1.457	2.406	9.9	18.4	156 W 22	87
4	11	14 8.17	-43 57.1	2.658	3.507	10.0	19.4	143 W 1*	4	16	14 30.57	-23 34.2	1.452	2.424	7.7	18.3	161 W 21	88
4	16	14 2.00	-44 2.7	2.646	3.520	9.3	19.4	146 W 1*	4	21	14 23.24	-23 51.0	1.454	2.442	5.7	18.2	166 W 21	88
4	21	13 55.69	-44 1.9	2.641	3.532	8.7	19.3	148 W 1*	4	26	14 15.80	-24 3.1	1.464	2.460	4.3	18.2	169 W 21	88
4	26	13 49.38	-43 54.9	2.643	3.544	8.4	19.3	149 E 1*	5	1	14 8.47	-24 10.8	1.481	2.478	4.4	18.2	169 E 21	88
5	1	13 43.22	-43 42.0	2.651	3.556	8.3	19.3	149 E 1*	5	6	14 1.44	-24 14.6	1.505	2.495	5.7	18.3	166 E 21	88
5	6	13 37.34	-43 23.8	2.666	3.568	8.4	19.4	149 E 2*	5	11	13 54.88	-24 15.2	1.535	2.512	7.5	18.5	161 E 21	88
5	11	13 31.86	-43 0.9	2.688	3.579	8.8	19.4	147 E 2*	5	16	13 48.95	-24 13.4	1.573	2.529	9.4	18.6	156 E 21	88
5	16	13 26.87	-42 34.2	2.716	3.590	9.3	19.5	145 E 2*	5	21	13 43.75	-24 10.3	1.617	2.546	11.3	18.8	150 E 21	88
5	21	13 22.45	-42 4.8	2.750	3.601	10.0	19.5	142 E 3*	5	26	13 39.35	-24 6.6	1.666	2.563	13.1	18.9	145 E 21	88
5	26	13 18.67	-41 33.4	2.790	3.612	10.7	19.6	138 E 3*	6	5	13 33.06	-24 0.6	1.780	2.595	16.2	19.2	135 E 21	88
5	31	13 15.53	-41 1.1	2.836	3.622	11.5	19.7	135 E 4*	6	15	13 30.08	-23 59.9	1.911	2.627	18.5	19.5	125 E 21	88
6	5	13 13.06	-40 28.6	2.886	3.633	12.2	19.7	131 E 5*	6	25	13 30.13	-24 7.3	2.054	2.657	20.2	19.7	116 E 19	88
6	15	13 10.11	-39 25.8	3.001	3.653	13.5	19.9	123 E 5*	7	5	13 32.85	-24 23.8	2.206	2.687	21.2	19.9	107 E 17	88
6	25	13 9.65	-38 29.8	3.129	3.672	14.6	20.0	115 E 4*	7	15	13 37.85	-24 49.2	2.363	2.715	21.7	20.1	99 E 14	89
7	5	13 11.45	-37 43.5	3.268	3.690	15.3	20.2	107 E 2*	7	25	13 44.80	-25 22.9	2.522	2.743	21.7	20.3	91 E 11	85*
7	15	13 15.24	-37 8.4	3.414	3.707	15.7	20.3	99 E 1*	8	4	13 53.39	-26 3.6	2.681	2.769	21.4	20.4	84 E 9	77*
7	25	13 20.75	-36 44.9	3.564	3.724	15.8	20.4	91 E 1*	8	14	14 3.39	-26 50.2	2.838	2.795	20.7	20.5	77 E 6	70*
8	4	13 27.74	-36 32.6	3.714	3.739	15.6	20.5	84 E 1*	8	24	14 14.62	-27 41.6	2.990	2.819	19.8	20.6	71 E 4	63*
8	14	13 36.01	-36 30.8	3.861	3.754	15.2	20.5	76 E 1*	9	3	14 26.90	-28 36.3	3.136	2.843	18.6	20.7	64 E 3	56*
8	24	13 45.39	-36 38.5	4.003	3.768	14.5	20.6	69 E 1*	9	13	14 40.13	-29 33.4	3.274	2.865	17.3	20.8	58 E 1	50*
9	3	13 55.73	-36 54.5	4.138	3.781	13.7	20.7	63 E 1*	9	23	14 54.20	-30 31.7	3.403	2.887	15.8	20.8	51 E 1	44*
9	13	14 6.93	-37 17.9	4.264	3.793	12.7	20.7	56 E 1*	10	3	15 9.03	-31 30.3	3.521	2.907	14.2	20.9	45 E 1	38*
9	23	14 18.86	-37 47.3	4.378	3.805	11.6	20.7	50 E 1*	10	13	15 24.55	-32 28.1	3.627	2.926	12.5	20.9	39 E 1	32*
10	3	14 31.46	-38 21.8	4.480	3.815	10.4	20.7	43 E 1*	10	23	15 40.68	-33 24.4	3.720	2.944	10.8	20.9	34 E 1	26*
10	13	14 44.65	-39 0.3	4.567	3.825	9.2	20.7	38 E 1*	11	2	15 57.36	-34 18.4	3.800	2.961	9.1	20.9	28 E 1	20*
10	23	14 58.36	-39 42.0	4.639	3.834	8.0	20.7	32 E 1*	11	12	16 14.54	-35 9.4	3.864	2.978	7.4	20.8	23 E 1	15*
11	2	15 12.51	-40 25.9	4.694	3.842	6.9												

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°
218144 2002 RL₆₆ (continuation)									944 Hidalgo (continuation)								
11 22	16 32.12	-35 56.8	3.913	2.993	6.0	20.8	18 E	10*	6 5	13 25.73	-23 51.9	5.979	6.711	6.4	19.2	133 E	21 88
12 2	16 50.04	-36 40.3	3.947	3.007	5.0	20.8	15 E	5*	6 15	13 23.06	-23 36.3	6.141	6.750	7.2	19.3	123 E	21* 88
12 12	17 8.20	-37 19.5	3.963	3.020	4.6	20.8	14 W	3*	6 25	13 21.47	-23 24.5	6.318	6.789	7.9	19.4	114 E	19* 87
12 22	17 26.52	-37 54.3	3.964	3.031	5.2	20.8	16 W	7*	7 5	13 20.93	-23 17.1	6.507	6.827	8.3	19.5	104 E	17* 87
1 1	17 44.89	-38 24.8	3.948	3.042	6.3	20.9	20 W	12*	7 15	13 21.39	-23 14.8	6.701	6.865	8.5	19.6	95 E	14* 87*
1 11	18 3.20	-38 51.3	3.916	3.052	7.8	20.9	25 W	18*	7 25	13 22.78	-23 17.8	6.898	6.903	8.4	19.7	86 E	11* 80*
1 21	18 21.35	-39 14.2	3.868	3.061	9.4	21.0	30 W	23*	8 4	13 25.02	-23 26.0	7.093	6.940	8.2	19.7	77 E	8* 71*
508774 1999 JE₁									93040 2000 SG								
12 27	14 10.71	+35 36.2	0.469	1.044	69.5	20.7	84 W	77* 14*	12 27	14 12.01	-27 43.8	3.205	2.783	17.1	19.7	56 W	17* 48*
1 1	14 2.44	+40 24.1	0.484	1.106	62.7	20.7	91 W	85* 14*	1 6	14 23.38	-29 36.6	3.118	2.816	18.2	19.7	63 W	15* 56*
1 6	13 52.28	+44 59.1	0.500	1.166	56.6	20.7	98 W	90 14*	1 16	14 33.63	-31 26.7	3.022	2.848	19.0	19.6	70 W	14 62*
1 11	13 39.29	+49 20.0	0.518	1.223	51.0	20.7	105 W	86 12*	1 26	14 42.48	-33 14.1	2.919	2.880	19.5	19.6	78 W	12 72*
1 16	13 22.54	+53 22.1	0.538	1.279	45.9	20.7	111 W	82 10*	2 5	14 49.64	-34 58.6	2.811	2.910	19.7	19.6	86 W	10 78*
1 21	13 1.18	+56 57.1	0.562	1.332	41.5	20.8	116 W	78 7	2 15	14 54.75	-36 39.7	2.703	2.939	19.6	19.5	94 W	8 79*
1 26	12 34.78	+59 55.5	0.590	1.383	37.7	20.9	121 W	75 4	2 25	14 57.43	-38 15.9	2.595	2.968	19.0	19.4	102 W	7 78
1 31	12 3.77	+62 7.6	0.622	1.432	34.5	21.0	125 W	73 2	3 7	14 57.35	-39 45.4	2.493	2.995	18.0	19.3	111 W	5 76
2 5	11 29.79	+63 27.2	0.658	1.479	32.1	21.1	127 W	72 1	3 17	14 54.19	-41 4.5	2.400	3.022	16.6	19.2	120 W	4 75
2 10	10 55.57	+63 53.3	0.700	1.525	30.4	21.3	129 W	71 -	3 27	14 47.88	-42 8.8	2.321	3.047	14.8	19.1	129 W	3 74
2 15	10 24.01	+63 31.8	0.746	1.568	29.3	21.4	129 W	71 -	4 1	14 43.60	-42 33.7	2.288	3.060	13.8	19.0	133 W	2 73
2 20	9 57.15	+62 33.0	0.797	1.610	28.8	21.6	128 E	72 1	4 6	14 38.64	-42 52.9	2.259	3.072	12.7	19.0	137 W	2 73
2 25	9 35.70	+61 8.7	0.853	1.650	28.6	21.8	127 E	74 3	4 11	14 33.11	-43 5.8	2.236	3.084	11.7	18.9	141 W	2 73
3 2	9 19.41	+59 28.9	0.913	1.689	28.7	22.0	125 E	76 5	4 16	14 27.13	-43 11.9	2.219	3.095	10.7	18.9	145 W	2 73
3 7	9 7.57	+57 41.3	0.976	1.726	29.0	22.2	123 E	77 6	4 21	14 20.84	-43 10.9	2.208	3.107	9.8	18.8	148 W	2 73
3 12	8 59.40	+55 50.7	1.043	1.761	29.3	22.4	120 E	79 8	4 26	14 14.41	-43 3.0	2.203	3.118	9.2	18.8	150 W	2 73
262623 2006 WY₂									944 Hidalgo								
12 27	14 11.34	+12 20.7	0.781	1.040	63.5	20.4	71 W	56* 31*	12 27	14 11.90	-20 47.3	6.504	6.039	7.9	19.2	58 W	23* 47*
1 1	14 39.74	+11 48.4	0.766	1.013	65.4	20.4	70 W	55* 30*	1 6	14 15.28	-21 34.4	6.400	6.084	8.6	19.2	67 W	23* 57*
1 6	15 8.75	+11 5.3	0.757	0.985	67.3	20.3	67 W	54* 29*	1 16	14 17.75	-22 18.6	6.286	6.128	9.0	19.2	76 W	23 67*
1 11	15 38.04	+10 11.2	0.755	0.955	69.1	20.3	65 W	52* 29*	1 26	14 19.21	-22 59.5	6.164	6.172	9.2	19.2	86 W	22 78*
1 16	16 7.29	+9 6.0	0.758	0.926	70.7	20.3	63 W	50* 28*	2 5	14 19.56	-23 36.5	6.041	6.216	9.1	19.2	96 W	21 87*
1 21	16 36.24	+7 50.3	0.767	0.895	72.1	20.3	60 W	47* 28*	2 15	14 18.72	-24 9.0	5.921	6.259	8.7	19.1	106 W	21 88
1 26	17 4.68	+6 25.3	0.782	0.865	73.3	20.3	57 W	45* 28*	2 25	14 16.68	-24 36.2	5.809	6.302	8.1	19.1	116 W	20 89
1 31	17 32.51	+4 52.2	0.802	0.834	74.0	20.3	54 W	42* 28*	3 7	14 13.46	-24 57.6	5.710	6.344	7.3	19.0	126 W	20 89
2 5	17 59.73	+3 12.8	0.826	0.804	74.4	20.3	52 W	39* 28*	3 17	14 9.16	-25 12.3	5.629	6.387	6.2	19.0	136 W	20 89
2 10	18 26.41	+1 29.2	0.855	0.775	74.3	20.3	49 W	36* 28*	3 27	14 3.95	-25 20.1	5.571	6.428	4.9	18.9	147 W	20 89
2 15	18 52.66	0 16.5	0.888	0.748	73.7	20.3	47 W	32* 29*	4 6	13 58.07	-25 20.9	5.540	6.470	3.6	18.8	156 W	20 89
2 20	19 18.64	-2 2.0	0.924	0.723	72.6	20.3	44 W	29* 29*	4 16	13 51.83	-25 15.0	5.539	6.511	2.4	18.8	164 W	20 89
2 25	19 44.54	-3 44.7	0.964	0.701	71.0	20.2	42 W	26* 29*	4 26	13 45.54	-25 3.4	5.569	6.552	2.0	18.8	167 E	20 89
3 2	20 10.50	-5 21.6	1.006	0.682	68.9	20.2	40 W	22* 29*	5 6	13 39.53	-24 47.6	5.629	6.592	2.8	18.8	161 E	20 89
3 7	20 36.66	-6 49.4	1.050	0.668	66.3	20.2	38 W	19* 29*	5 16	13 34.09	-24 29.2	5.719	6.632	4.1	19.0	152 E	21 88
3 12	21 3.03	-8 4.8	1.095	0.659	63.4	20.1	36 W	15* 29*	5 26	13 29.43	-24 10.0	5.837	6.672	5.3	19.1	143 E	21 88
3 17	21 29.58	-9 5.1	1.142	0.656	60.2	20.1	35 W	12* 28*	197964 2004 RF₁₀₃								
3 22	21 56.18	-9 48.0	1.189	0.658	56.9	20.1	34 W	9* 27*	12 27	14 13.76	-19 43.7	2.340	1.997	24.6	21.1	58 W	24* 46*
3 27	22 22.66	-10 12.6	1.236	0.666	53.6	20.1	33 W	6* 26*	1 6	14 35.38	-21 42.7	2.212	1.962	26.4	21.0	62 W	23* 52*
4 1	22 48.81	-10 18.5	1.284	0.679	50.4	20.2	32 W	3* 26*	1 16	14 57.58	-23 35.0	2.083	1.928	28.1	20.9	67 W	21* 58*
4 6	23 14.45	-10 6.9	1.330	0.697	47.4	20.2	31 W	1* 25*	1 26	15 20.33	-25 18.9	1.954	1.894	29.6	20.7	72 W	20* 64*
4 11	23 39.40	-9 39.6	1.376	0.719	44.7	20.3	30 W	- 24*	2 5	15 43.58	-26 52.8	1.826	1.861	31.0	20.6	76 W	18 70*
4 16	0 3.53	-8 58.8	1.420	0.743	42.2	20.4	30 W	- 23*	2 15	16 7.23	-28 15.3	1.700	1.829	32.2	20.4	81 W	17 75*
4 21	0 26.77	-8 7.1	1.464	0.770	40.0	20.4	30 W	- 22*									
4 26	0 49.09	-7 7.1	1.506	0.799	38.1	20.5	29 W	- 22*									
5 1	1 10.51	-6 0.9	1.546	0.829	36.4	20.6	29 W	- 21*									
5 6	1 31.05	-4 50.8	1.585	0.859	34.9	20.7	29 W	- 21*									
5 11	1 50.77	-3 38.3	1.623	0.890	33.6	20.8	29 W	- 21*									
5 16	2 9.73	-2 24.9	1.658	0.921	32.5	20.9	29 W	- 21*									
5 21	2 27.98	-1 11.9	1.691	0.951	31.5	21.0	29 W	- 21*									
5 26	2 45.60	0 0.2	1.723	0.980	30.7	21.1	30 W	- 22*									
5 31	3 2.65	+1 9.7	1.752	1.008	30.1	21.1	30 W	- 23*									
6 5	3 19.19	+2 17.2	1.778	1.036	29.5	21.2	30 W	- 23*									
6 10	3 35.27	+3 21.8	1.802	1.062	29.1	21.3	31 W	- 24*									
6 15	3 50.95	+4 23.2	1.823	1.088	28.8	21.4	31 W	- 25*									
6 20	4 6.26	+5 21.3	1.841	1.112	28.6	21.4	32 W	- 25*									
6 25	4 21.25	+6 16.0	1.857	1.135	28.5	21.5	32 W	- 26*									

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°		
197964 2004 RF₁₀₃										305090 2007 VQ₄											
<i>(continuation)</i>										<i>(continuation)</i>											
2	20	16 19.16	-28 51.7	1.638	1.814	32.8	20.3	83 W	16	77*	7	5	15 24.59	-34 8.6	1.318	2.142	20.4	19.5	133 E	11	82
2	25	16 31.12	-29 24.7	1.577	1.799	33.3	20.3	86 W	16	80*	7	10	15 24.07	-34 30.3	1.393	2.173	21.6	19.7	128 E	10*	81
3	2	16 43.10	-29 54.2	1.517	1.784	33.7	20.2	88 W	15	82*	7	15	15 24.57	-34 50.3	1.471	2.204	22.6	19.8	124 E	10*	81
3	7	16 55.05	-30 20.0	1.457	1.769	34.1	20.1	90 W	15	83*	7	20	15 25.99	-35 9.1	1.552	2.235	23.3	20.0	120 E	9*	81
3	12	17 6.94	-30 42.0	1.399	1.755	34.4	20.0	93 W	14	85*	7	25	15 28.25	-35 27.1	1.635	2.265	23.9	20.2	115 E	9*	81
3	17	17 18.72	-31 0.2	1.342	1.742	34.7	19.9	95 W	14	85*	7	30	15 31.25	-35 44.6	1.719	2.296	24.3	20.3	112 E	8*	80
3	22	17 30.34	-31 14.4	1.287	1.729	34.8	19.8	98 W	14	85	8	4	15 34.94	-36 1.6	1.806	2.326	24.5	20.5	108 E	7*	80
3	27	17 41.75	-31 24.7	1.233	1.716	34.9	19.7	100 W	14	85	8	9	15 39.24	-36 18.3	1.894	2.356	24.7	20.6	104 E	7*	80
4	1	17 52.91	-31 31.1	1.180	1.704	34.9	19.6	103 W	13*	84	8	14	15 44.10	-36 34.7	1.983	2.386	24.7	20.7	101 E	6*	79
4	6	18 3.75	-31 33.6	1.128	1.693	34.8	19.4	105 W	13*	84	8	19	15 49.46	-36 50.9	2.073	2.415	24.6	20.8	97 E	6*	79*
4	11	18 14.19	-31 32.4	1.079	1.682	34.6	19.3	108 W	13*	84	8	24	15 55.28	-37 6.8	2.163	2.444	24.4	21.0	94 E	5*	78*
4	16	18 24.16	-31 27.4	1.031	1.672	34.2	19.2	111 W	14*	85	8	29	16 1.50	-37 22.3	2.254	2.473	24.1	21.1	90 E	4*	76*
4	21	18 33.59	-31 18.8	0.984	1.662	33.7	19.1	113 W	14*	85	9	3	16 8.10	-37 37.4	2.345	2.502	23.7	21.2	87 E	4*	74*
4	26	18 42.40	-31 6.8	0.940	1.653	33.1	18.9	116 W	14*	85	9	8	16 15.04	-37 52.0	2.435	2.531	23.3	21.3	84 E	4*	72*
5	1	18 50.53	-30 51.5	0.897	1.645	32.3	18.8	119 W	14	85	9	13	16 22.29	-38 5.9	2.526	2.559	22.8	21.3	80 E	3*	69*
5	6	18 57.87	-30 33.2	0.857	1.637	31.3	18.7	123 W	14	85	9	18	16 29.82	-38 19.2	2.615	2.587	22.3	21.4	77 E	3*	67*
5	11	19 4.34	-30 11.9	0.818	1.630	30.1	18.5	126 W	15	86	9	23	16 37.60	-38 31.8	2.704	2.614	21.7	21.5	74 E	2*	64*
5	16	19 9.85	-29 47.8	0.782	1.624	28.7	18.4	129 W	15	86											
5	21	19 14.33	-29 20.9	0.748	1.619	27.1	18.2	133 W	16	87											
5	26	19 17.73	-28 51.5	0.717	1.615	25.2	18.1	137 W	16	87											
6	5	19 21.12	-27 44.7	0.664	1.608	20.7	17.8	146 W	17	88	12	27	14 14.33	+10 53.1	2.439	2.294	23.7	21.1	70 W	54*	31*
6	15	19 19.96	-26 27.5	0.625	1.605	15.1	17.4	156 W	19	90	1	6	14 32.02	+10 59.3	2.300	2.261	24.9	20.9	75 W	56*	36*
6	25	19 15.01	-25 0.3	0.600	1.606	8.7	17.1	166 W	20	89	1	16	14 49.41	+11 22.0	2.161	2.227	25.9	20.8	81 W	56*	41*
6	30	19 11.58	-24 13.7	0.595	1.607	5.3	16.9	172 W	21	88	1	26	15 6.31	+12 2.6	2.024	2.192	26.6	20.6	86 W	57	45*
7	5	19 7.80	-23 25.7	0.593	1.610	1.7	16.7	177 W	22	87	2	5	15 22.53	+13 2.3	1.891	2.157	27.2	20.5	92 W	58	48*
7	10	19 3.97	-22 37.3	0.597	1.613	1.9	16.7	177 E	22	87	2	15	15 37.81	+14 22.0	1.761	2.121	27.5	20.3	97 W	59	49*
7	15	19 0.36	-21 49.2	0.604	1.617	5.3	17.0	171 E	23	86	2	25	15 51.82	+16 1.6	1.638	2.084	27.7	20.1	102 W	61	48*
7	20	18 57.24	-21 2.5	0.617	1.622	8.7	17.2	166 E	24	85	3	7	16 4.21	+17 59.9	1.521	2.047	27.6	19.9	107 W	63	46
7	25	18 54.81	-20 17.9	0.633	1.627	11.9	17.4	161 E	25	84	3	12	16 9.66	+19 5.5	1.466	2.029	27.5	19.8	110 W	64	45
7	30	18 53.20	-19 36.1	0.654	1.633	14.9	17.6	156 E	25	84	3	17	16 14.53	+20 14.8	1.413	2.010	27.3	19.7	112 W	65	44
8	4	18 52.50	-18 57.4	0.679	1.641	17.7	17.8	151 E	26	83	3	22	16 18.75	+21 26.9	1.362	1.991	27.1	19.6	114 W	66	43
8	14	18 54.03	-17 50.0	0.740	1.657	22.4	18.1	141 E	27	82	3	27	16 22.28	+22 41.2	1.313	1.972	26.9	19.5	117 W	68	41
8	24	18 59.39	-16 54.4	0.813	1.676	26.1	18.5	133 E	28	81	4	1	16 25.03	+23 56.7	1.267	1.954	26.7	19.4	119 W	69	40
9	3	19 8.12	-16 7.2	0.898	1.698	28.8	18.8	126 E	29	80	4	6	16 28.96	+25 12.2	1.224	1.935	26.5	19.3	121 W	70	39
9	13	19 19.67	-15 24.4	0.993	1.722	30.8	19.1	119 E	30	79	4	11	16 27.97	+26 26.5	1.183	1.916	26.2	19.2	122 W	71	38
9	23	19 33.49	-14 42.2	1.096	1.748	32.0	19.4	113 E	30	79	4	16	16 28.04	+27 37.8	1.145	1.897	26.0	19.1	124 W	73	36
10	3	19 49.04	-13 57.5	1.207	1.776	32.7	19.6	107 E	31	78	4	21	16 27.12	+28 44.3	1.109	1.878	25.9	19.0	125 W	74	35
10	13	20 5.91	-13 8.0	1.324	1.805	32.8	19.9	101 E	32	77	4	26	16 25.21	+29 44.0	1.076	1.860	25.8	18.9	126 W	75	34
10	23	20 23.74	-12 12.0	1.447	1.836	32.6	20.1	96 E	33	76*	5	1	16 22.33	+30 35.0	1.047	1.841	25.5	18.8	127 W	76	33
11	2	20 42.21	-11 8.6	1.575	1.869	32.1	20.3	90 E	34	72*	5	6	16 18.53	+31 15.0	1.019	1.822	25.9	18.7	128 W	76	33
11	12	21 1.13	-9 57.6	1.706	1.902	31.3	20.5	85 E	35	67*	5	11	16 13.89	+31 41.9	0.995	1.804	26.1	18.7	128 W	77	32
11	22	21 20.30	-8 38.8	1.841	1.935	30.2	20.7	80 E	36	61*	5	16	16 8.57	+31 53.6	0.974	1.786	26.4	18.6	128 W	77	32
12	2	21 39.57	-7 13.0	1.977	1.970	28.9	20.8	75 E	38	54*	5	21	16 2.77	+31 48.3	0.955	1.768	26.8	18.5	128 W	77	32
12	12	21 58.88	-5 40.4	2.114	2.005	27.5	21.0	70 E	39*	48*	5	26	15 56.71	+31 25.0	0.939	1.750	27.4	18.5	127 E	76	33
12	22	22 18.12	-4 2.2	2.250	2.040	25.9	21.1	65 E	40*	41*	5	31	15 50.64	+30 42.8	0.926	1.733	28.0	18.5	127 E	76	33
1	1	22 37.27	-2 19.1	2.385	2.075	24.2	21.2	60 E	40*	35*	6	5	15 44.77	+29 41.6	0.916	1.716	28.8	18.4	125 E	75	34
1	11	22 56.29	-0 32.2	2.517	2.111	22.4	21.3	55 E	40*	30*	6	10	15 39.36	+28 21.6	0.908	1.699	29.7	18.4	124 E	73	36
1	21	23 15.17	+1 17.6	2.644	2.146	20.5	21.4	50 E	38*	25*	6	15	15 34.61	+26 43.8	0.903	1.682	30.7	18.4	122 E	72	37
12	27	14 13.85	+18 59.4	1.138	1.285	47.4	18.8	74 W	62*	26*	6	20	15 30.70	+24 49.4	0.901	1.666	31.7	18.4	121 E	70	39
1	6	14 46.36	+15 54.2	1.120	1.279	47.8	18.8	75 W	60*	30*	6	25	15 27.72	+22 40.5	0.902	1.651	32.7	18.4	119 E	68	41
1	16	15 15.87	+12 51.1	1.104	1.282	48.0	18.8	76 W	57*	35*	6	30	15 25.75	+22 18.9	0.905	1.636	33.8	18.5	117 E	65	44
1	26	15 42.39	+9 53.7	1.087	1.295	47.9	18.7	77 W	54*	41*	7	5	15 24.83	+17 46.7	0.911	1.621	34.9	18.5	114 E	63	46
2	5	16 6.00	+7 3.1	1.067	1.316	47.5	18.7	80 W	52*	47*	7	10	15 24.96	+15 5.9	0.920	1.607	35.9	18.5	112 E	60*	49
2	15	16 26.67	+4 18.6	1.042	1.346	46.8	18.7	83 W	49*	53*	7	15	15 26.15	+12 18.6	0.931	1.593	36.9	18.6	110 E	57*	52
2	25	16 44.28	+1 37.7	1.013	1.382	45.7	18.7	87 W	47*	59*	7	20	15 28.37	+9 26.8	0.944	1.581	37.8	18.6	107 E	53*	55
3	7	16 58.61	-1 3.7	0.978	1.425	44.1	18.6	93 W	44*	64*	7	25	15 31.58	+6 32.6	0.959	1.568	38.7	18.6	105 E	50*	57
3	12	17 4.43	-2 26.1	0.959	1.449	43.0	18.6	96 W	43	66*	7	30	15 35.73	+3 37.4	0.977	1.557	39.5	18.7	103 E	47*	60
3	17	17 9.26	-3 50.6	0.939	1.473	41.8	18.5	99 W	41	68	8	4	15 40.78	+0 2.9	0.997	1.546	40.2	18.7	100 E	43*	63
3	22	17 13.03	-5 18.1	0.919	1.499	40.4	18.5	103 W	40	69	8	9	15 46.71	-2 9.7	1.019	1.536	40.8	18.8	98 E	40*	66
3	27	17 15.68	-6 49.1	0.899	1.526	38.7	18.4	107 W	38												

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°
40315 1999 LS										385186 1994 AW₁									
<i>(continuation)</i>										<i>(continuation)</i>									
12 27	22 12.81	-30 9.4	2.061	1.638	28.0	20.1	51 E	13*	44*	3 27	20 58.95	-31 23.7	1.170	1.079	52.5	20.0	59 W	1*	51*
1 1	22 27.76	-29 9.1	2.103	1.653	27.1	20.1	50 E	14*	43*	4 1	21 17.06	-28 48.5	1.156	1.073	53.1	20.0	59 W	2*	51*
1 6	22 42.39	-28 4.2	2.145	1.669	26.3	20.2	49 E	14*	41*	4 6	21 34.45	-26 2.2	1.142	1.067	53.7	20.0	59 W	4*	52*
1 11	22 56.70	-26 55.6	2.188	1.685	25.4	20.2	47 E	15*	40*	4 11	21 51.18	-23 5.8	1.129	1.062	54.3	20.0	59 W	5*	53*
1 16	23 10.69	-25 43.7	2.230	1.701	24.6	20.2	46 E	15*	38*	4 16	22 7.36	-20 0.1	1.116	1.056	54.9	20.0	60 W	7*	53*
1 21	23 24.38	-24 29.0	2.272	1.718	23.8	20.3	45 E	15*	37*	4 21	22 23.08	-16 46.0	1.104	1.051	55.5	19.9	60 W	9*	54*
142040 2002 QE₁₅										152787 1999 TB₁₀									
12 27	14 15.21	-26 16.0	2.614	2.217	21.5	21.1	56 W	18*	48*	12 27	14 15.36	-6 50.9	1.075	1.058	54.9	20.9	62 W	37*	41*
1 6	14 31.17	-27 8.9	2.509	2.226	23.0	21.0	62 W	18*	54*	1 1	14 31.10	-9 28.4	1.073	1.064	54.8	20.9	62 W	35*	44*
1 16	14 46.23	-27 52.2	2.394	2.233	24.2	21.0	69 W	17*	62*	1 6	14 46.85	-12 2.1	1.072	1.072	54.6	20.9	63 W	32*	46*
1 26	15 0.15	-28 25.1	2.271	2.238	25.2	20.9	75 W	17*	69*	1 11	15 2.62	-14 31.3	1.070	1.081	54.4	20.9	63 W	30*	49*
2 5	15 12.67	-28 46.4	2.141	2.240	25.9	20.8	83 W	16	77*	1 16	15 18.45	-16 55.5	1.067	1.091	54.2	20.9	64 W	28*	52*
2 15	15 23.42	-28 54.9	2.005	2.241	26.1	20.7	90 W	16	84*	1 21	15 34.35	-19 14.2	1.065	1.102	54.0	20.9	65 W	25*	54*
2 25	15 31.99	-28 48.7	1.868	2.240	25.9	20.5	99 W	16	87	1 26	15 50.33	-21 27.0	1.061	1.115	53.7	20.9	66 W	23*	57*
3 2	15 35.32	-28 39.4	1.799	2.238	25.6	20.4	103 W	16	87	1 31	16 6.41	-23 33.5	1.057	1.128	53.5	20.9	67 W	21*	59*
3 7	15 37.93	-28 25.5	1.731	2.236	25.1	20.3	107 W	17	88	2 5	16 22.59	-25 33.6	1.053	1.142	53.2	21.0	68 W	19*	61*
3 12	15 39.76	-28 6.6	1.664	2.234	24.4	20.2	112 W	17	88	2 10	16 38.85	-27 26.9	1.047	1.157	52.9	21.0	69 W	17*	63*
3 17	15 40.73	-27 42.0	1.599	2.231	23.5	20.1	117 W	17	88	2 15	16 55.16	-29 13.5	1.041	1.173	52.6	21.0	71 W	15*	65*
3 22	15 40.81	-27 11.3	1.536	2.228	22.3	19.9	122 W	18	89	2 20	17 11.50	-30 53.2	1.034	1.189	52.3	21.0	72 W	13*	66*
3 27	15 39.94	-26 34.0	1.475	2.224	21.0	19.8	127 W	18	89	2 25	17 27.83	-32 26.3	1.026	1.205	51.9	21.0	73 W	12*	67*
4 6	15 35.26	-24 56.8	1.364	2.214	17.5	19.5	138 W	20	89	3 2	17 44.11	-33 52.8	1.017	1.222	51.5	21.0	75 W	10*	68*
4 16	15 26.72	-22 46.6	1.272	2.203	12.9	19.2	151 W	22	87	3 7	18 0.31	-35 13.1	1.008	1.239	51.2	21.0	77 W	9*	69*
4 26	15 14.93	-20 3.0	1.205	2.189	7.3	18.8	164 W	25	84	3 12	18 16.36	-36 27.5	0.997	1.257	50.7	21.0	78 W	7*	70*
5 1	15 8.18	-18 30.5	1.181	2.182	4.2	18.6	171 W	26	83	3 17	18 32.19	-37 36.7	0.985	1.274	50.3	21.0	80 W	6*	70*
5 6	15 1.14	-16 52.8	1.166	2.174	1.1	18.4	178 W	28	81	3 22	18 47.74	-38 41.0	0.973	1.292	49.8	21.0	82 W	4*	71*
5 11	14 54.01	-15 12.0	1.157	2.165	2.3	18.5	175 E	30	79	3 27	19 2.95	-39 41.1	0.959	1.309	49.3	20.9	84 W	3*	71*
5 16	14 47.03	-13 30.5	1.157	2.156	5.5	18.6	168 E	31	78	4 1	19 17.76	-40 37.8	0.945	1.327	48.7	20.9	86 W	2*	71*
5 21	14 40.43	-11 50.8	1.164	2.147	8.7	18.8	161 E	33	76	4 6	19 32.09	-41 31.8	0.930	1.344	48.1	20.9	88 W	1*	72*
5 26	14 34.40	-10 15.3	1.178	2.137	11.8	18.9	154 E	35	74	4 11	19 45.88	-42 24.1	0.914	1.361	47.4	20.9	90 W	—	72*
5 31	14 29.07	-8 45.8	1.198	2.126	14.7	19.1	148 E	36	73	4 16	19 59.03	-43 15.4	0.898	1.378	46.7	20.8	93 W	—	72*
6 5	14 24.54	-7 24.0	1.225	2.115	17.4	19.2	142 E	38	71	4 21	20 11.46	-44 6.6	0.880	1.395	45.8	20.8	95 W	—	71*
6 10	14 20.90	-6 10.7	1.256	2.104	19.8	19.3	135 E	39	70	4 26	20 23.10	-44 58.5	0.862	1.411	44.9	20.7	98 W	—	71*
6 15	14 18.17	-5 6.6	1.291	2.092	21.9	19.4	130 E	40	69										
6 25	14 15.46	-3 25.5	1.372	2.066	25.5	19.6	119 E	41*	67										
7 5	14 16.20	-2 18.0	1.462	2.038	28.1	19.8	109 E	41*	66										
7 15	14 20.04	-1 39.1	1.555	2.009	29.8	20.0	101 E	39*	66										
7 20	14 23.01	-1 28.7	1.602	1.993	30.4	20.0	97 E	38*	65										
7 25	14 26.62	-1 23.4	1.649	1.977	30.9	20.1	93 E	37*	65										
7 30	14 30.81	-1 22.6	1.694	1.961	31.2	20.1	89 E	36*	65										
8 4	14 35.55	-1 25.7	1.739	1.944	31.4	20.2	86 E	35*	65										
8 14	14 46.58	-1 41.5	1.823	1.908	31.4	20.2	79 E	33*	63*										
8 24	14 59.48	-2 7.0	1.900	1.871	31.1	20.3	73 E	32*	60*										
9 3	15 14.07	-2 38.8	1.969	1.832	30.5	20.3	67 E	31*	56*										
9 13	15 30.26	-3 14.2	2.027	1.791	29.7	20.3	62 E	30*	51*										
9 23	15 47.97	-3 50.5	2.075	1.748	28.8	20.3	57 E	29*	46*										
10 3	16 7.14	-4 25.2	2.113	1.704	27.9	20.2	53 E	28*	41*										
10 13	16 27.80	-4 56.3	2.139	1.659	26.8	20.2	49 E	28*	36*										
10 23	16 49.92	-5 21.2	2.155	1.612	25.8	20.1	45 E	27*	32*										
11 2	17 13.53	-5 38.1	2.161	1.564	24.9	20.0	42 E	27*	27*										
11 12	17 38.67	-5 44.8	2.158	1.516	24.0	19.9	39 E	26*	22*										
11 22	18 5.32	-5 39.2	2.147	1.467	23.3	19.8	36 E	26*	17*										
12 2	18 33.53	-5 19.8	2.129	1.418	22.7	19.7	34 E	25*	13*										
12 12	19 3.28	-4 45.2	2.106	1.370	22.2	19.6	32 E	25*	9*										
12 22	19 34.56	-3 54.4	2.080	1.323	21.8	19.5	30 E	24*	5*										
1 1	20 7.32	-2 47.6	2.053	1.278	21.5	19.3	29 E	22*	2*										
1 11	20 41.51	-1 25.5	2.026	1.235	21.3	19.2	27 E	21*	—										
1 21	21 17.01	+0 9.6	2.003	1.196	21.0	19.1	26 E	20*	—										
385186 1994 AW₁										152787 1999 TB₁₀									
12 27	14 15.22	-32 55.8	1.424	1.175	43.2	20.4	55 W	11*	48*	12 27	14 15.36	-6 50.9	1.075	1.058	54.9	20.9	62 W	37*	41*
1 1	14 34.54	-35 1.5	1.408	1.172	43.6	20.4	55 W	9*	49*	1 1	14 31.10	-9 28.4	1.073	1.064	54.8	20.9	62 W	35*	44*
1 6	14 54.78	-36 57.3	1.392	1.168	44.1	20.4	56 W	7*	50*	1 6	14 46.85	-12 2.1	1.072	1.072	54.6	20.9	63 W	32*	46*
1 11	15 15.94	-38 41.7	1.377	1.164	44.6	20.3	56 W	6*	50*	1 11	15 2.62	-14 31.3	1.070	1.081	54.4	20.9	63 W	30*	49*
1 16	15 38.02	-40 13.1	1.363	1.160	45.0	20.3	56 W	4*	50*	1 16	15 18.45	-16 55.5	1.067	1.091	54.2	20.9	64 W	28*	52*
1 21	16 0.95	-41 29.8	1.348	1.155	45.5	20.3	57 W	2*	50*	1 21	15 34.35	-19 14.2	1.065	1.102	54.0	20.9	65 W	25*	54*
1 26	16 24.63	-42 30.5	1.334	1.150	45.9	20.3	57 W	1*	50*	1 26	15 50.33	-21 27.0	1.061	1.115	53.7	20.9	66 W	23*	57*
1 31	16 48.92	-43 14.0	1.321	1.145	46.4	20.3	57 W	—	50*	1 31	16 6.41	-23 33.5	1.057	1.128	53.5	20.9	67 W	21*	59*
2 5	17 13.64	-43 39.2	1.307	1.139	46.9	20.2	58 W	—	50*	2 5	16 22.59	-25 33.6	1.053	1.142	53.2	21.0	68 W	19*	61*
2 10	17 38.54	-43 45.5	1.294	1.134	47.4	20.2	58 W	—	49*	2 10	16 38.85	-27 26.9	1.047	1.157	52.9	21.0	69 W	17*	63*
2 15	18 3.39	-43 32.7	1.280	1.128	47.9	20.2	58 W	—	49*	2 15	16 55.16	-29 13.5	1.041	1.173	52.6	21.0	71 W	15*	65*
2 20	18 27.93	-43 0.8	1.267	1.1															

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
152787 1999 TB₁₀										98129 2000 SD₂₅									
<i>(continuation)</i>										<i>(continuation)</i>									
5 1	20 33.86	-45 52.1	0.844	1.427	44.0	20.7	100 W	-	70	11 22	17 11.84	-12 22.3	3.105	2.212	9.3	19.3	21 E	13*	8*
5 6	20 43.64	-46 48.2	0.826	1.443	42.9	20.6	103 W	-	69	12 2	17 32.40	-12 14.3	3.098	2.176	7.7	19.2	17 E	11*	2*
5 11	20 52.29	-47 47.5	0.807	1.459	41.7	20.6	106 W	-	68	12 12	17 53.61	-11 54.9	3.080	2.140	6.5	19.1	14 E	8*	-
5 16	20 59.67	-48 50.5	0.789	1.473	40.4	20.5	109 W	-	67	12 22	18 15.37	-11 23.0	3.052	2.103	5.8	19.0	13 E	5*	-
5 21	21 5.61	-49 57.5	0.771	1.488	38.9	20.5	112 W	-	66	1 1	18 37.63	-10 37.7	3.016	2.067	5.9	18.9	13 W	4*	-
5 26	21 9.93	-51 8.5	0.754	1.502	37.4	20.4	116 W	-	65	1 11	19 0.31	-9 38.4	2.971	2.031	6.7	18.9	14 W	8*	-
5 31	21 12.43	-52 23.1	0.737	1.516	35.8	20.3	119 W	-	64	1 21	19 23.34	-8 24.5	2.920	1.995	8.0	18.9	16 W	10*	-
6 5	21 12.84	-53 40.4	0.722	1.529	34.0	20.2	123 W	-	62	235041 2003 FA₅₅									
6 10	21 10.86	-54 58.9	0.708	1.542	32.2	20.2	126 W	-	61	12 27	14 17.27	-2 28.7	2.126	1.894	27.5	20.5	63 W	41*	38*
6 15	21 6.25	-56 15.8	0.697	1.554	30.4	20.1	129 W	-	60	1 6	14 33.34	-4 29.6	2.058	1.928	28.3	20.4	69 W	40*	46*
6 20	20 58.84	-57 27.6	0.688	1.566	28.5	20.0	133 W	-	59	1 16	14 48.02	-6 21.6	1.983	1.963	28.9	20.4	74 W	39*	53*
6 25	20 48.57	-58 30.2	0.681	1.577	26.8	20.0	136 W	-	57	1 26	15 1.05	-8 5.3	1.902	1.999	29.1	20.4	81 W	37	61*
6 30	20 35.63	-59 19.0	0.678	1.587	25.3	19.9	138 W	-	57	2 5	15 12.18	-9 41.8	1.817	2.035	29.0	20.3	88 W	35	69*
7 5	20 20.46	-59 49.5	0.678	1.597	24.1	19.9	140 W	-	56	2 15	15 21.03	-11 12.1	1.730	2.071	28.4	20.2	95 W	34	74*
7 7	20 13.94	-59 55.7	0.679	1.601	23.7	19.9	141 W	-	56	2 25	15 27.19	-12 37.5	1.642	2.107	27.2	20.1	104 W	32	77
7 9	20 7.26	-59 58.1	0.681	1.605	23.4	19.9	141 W	-	56	3 7	15 30.25	-13 59.1	1.557	2.143	25.3	20.0	113 W	31	78
7 11	20 0.49	-59 56.8	0.683	1.609	23.1	19.9	142 W	-	56	3 17	15 29.76	-15 17.6	1.479	2.180	22.7	19.8	122 W	30	79
7 13	19 53.70	-59 51.5	0.686	1.612	23.0	19.9	142 W	-	56	3 27	15 25.42	-16 32.6	1.412	2.216	19.2	19.7	133 W	28	81
7 15	19 46.96	-59 42.4	0.690	1.616	22.9	19.9	142 W	-	56	4 6	15 17.27	-17 42.8	1.361	2.252	15.0	19.5	145 W	27	82
7 17	19 40.36	-59 29.4	0.694	1.619	22.9	19.9	142 E	-	57	4 16	15 5.74	-18 45.1	1.331	2.287	10.0	19.3	157 W	26	83
7 19	19 33.95	-59 12.8	0.699	1.622	22.9	20.0	142 E	-	57	4 21	14 59.04	-19 12.5	1.325	2.305	7.4	19.2	163 W	26	83
7 21	19 27.79	-58 52.7	0.704	1.626	23.1	20.0	141 E	-	57	4 26	14 51.94	-19 37.0	1.327	2.322	4.8	19.1	169 W	25	84
7 23	19 21.94	-58 29.4	0.710	1.629	23.3	20.0	141 E	-	58	5 1	14 44.67	-19 58.5	1.335	2.339	2.5	18.9	174 W	25	84
7 25	19 16.42	-58 3.0	0.717	1.632	23.5	20.1	140 E	-	58	5 6	14 37.43	-20 17.0	1.350	2.357	2.2	19.0	175 E	25	84
7 27	19 11.28	-57 33.9	0.724	1.635	23.9	20.1	139 E	-	58	5 11	14 30.43	-20 32.7	1.373	2.374	4.2	19.1	170 E	24	85
7 29	19 6.52	-57 2.3	0.732	1.638	24.2	20.1	139 E	-	59	5 16	14 23.86	-20 46.3	1.402	2.391	6.6	19.3	164 E	24	85
7 31	19 2.18	-56 28.6	0.741	1.640	24.6	20.2	138 E	-	60	5 21	14 17.90	-20 58.1	1.438	2.407	9.0	19.5	158 E	24	85
8 2	18 58.25	-55 52.9	0.750	1.643	25.1	20.2	137 E	-	60	5 26	14 12.64	-21 8.9	1.480	2.424	11.1	19.7	152 E	24	85
8 4	18 54.74	-55 15.6	0.760	1.646	25.6	20.3	136 E	-	61	6 5	14 4.55	-21 29.4	1.581	2.457	14.9	20.0	141 E	24	85
8 8	18 47.77	-53 37.0	0.787	1.652	26.8	20.4	133 E	-	62	6 15	13 59.86	-21 52.0	1.701	2.489	17.9	20.3	131 E	23	86
8 14	18 43.24	-51 53.6	0.817	1.657	28.2	20.5	129 E	-	64	6 25	13 58.45	-22 19.3	1.836	2.520	20.1	20.5	121 E	22*	86
8 19	18 40.91	-50 8.4	0.850	1.662	29.5	20.6	126 E	-	66	7 5	13 59.99	-22 52.7	1.981	2.551	21.6	20.8	113 E	20*	87
8 24	18 40.50	-48 23.7	0.886	1.666	30.7	20.8	123 E	-	68	7 15	14 4.11	-23 32.3	2.134	2.581	22.4	21.0	104 E	17*	88
8 29	18 41.71	-46 40.9	0.925	1.670	31.9	20.9	119 E	-	69	7 25	14 10.44	-24 17.8	2.291	2.610	22.7	21.2	97 E	15*	88
9 3	18 44.31	-45 0.6	0.965	1.673	32.9	21.0	116 E	-	71	8 4	14 18.63	-25 8.1	2.450	2.638	22.6	21.3	89 E	12*	83*
9 8	18 48.11	-43 23.5	1.008	1.675	33.8	21.1	112 E	2	73	8 14	14 28.43	-26 2.4	2.608	2.665	22.1	21.5	82 E	10*	76*
9 13	18 52.92	-41 49.6	1.052	1.677	34.5	21.3	109 E	3	74	306606 2000 LU₃₆									
9 18	18 58.58	-40 18.9	1.097	1.678	35.2	21.4	106 E	5	76	12 27	14 17.78	-5 47.8	3.964	3.601	13.9	21.1	62 W	38*	40*
9 23	19 4.96	-38 51.2	1.143	1.679	35.7	21.5	103 E	6	77	1 6	14 26.46	-6 9.5	3.808	3.584	14.9	21.0	69 W	39*	48*
12 27	14 16.34	-22 49.9	3.472	3.040	15.6	20.5	56 W	21*	47*	1 16	14 34.27	-6 22.8	3.644	3.566	15.6	20.9	78 W	39	56*
1 6	14 27.96	-23 33.7	3.334	3.029	16.9	20.4	64 W	21*	54*	2 5	14 46.40	-6 27.0	3.475	3.548	16.1	20.8	86 W	39	64*
1 16	14 38.73	-24 11.2	3.187	3.017	18.0	20.3	71 W	21*	63*	2 15	14 41.00	-6 21.6	3.305	3.528	16.2	20.7	95 W	39	69*
1 26	14 48.44	-24 41.4	3.032	3.004	18.8	20.3	79 W	20	71*	2 15	14 50.44	-6 6.1	3.136	3.508	15.9	20.6	104 W	39	70
2 5	14 56.85	-25 3.4	2.873	2.990	19.2	20.1	87 W	20	80*	2 25	14 52.69	-5 40.3	2.972	3.487	15.1	20.4	113 W	39	70
2 15	15 3.66	-25 16.1	2.712	2.975	19.3	20.0	96 W	20	89*	3 7	14 53.05	-5 4.4	2.819	3.464	13.9	20.2	123 W	40	69
2 25	15 8.59	-25 17.9	2.552	2.959	18.9	19.9	105 W	20	89	3 17	14 51.37	-4 19.1	2.680	3.441	12.1	20.1	133 W	41	68
3 7	15 11.35	-25 7.2	2.397	2.943	18.0	19.7	114 W	20	89	3 27	14 47.64	-3 26.3	2.561	3.418	9.9	19.9	144 W	42	67
3 17	15 11.65	-24 42.1	2.251	2.925	16.4	19.5	124 W	20	89	4 6	14 42.02	-2 28.5	2.464	3.393	7.4	19.6	154 W	43	66
3 27	15 9.35	-24 0.4	2.119	2.906	14.2	19.3	134 W	21	88	4 16	14 34.81	-1 29.5	2.394	3.367	5.0	19.5	163 W	44	65
4 6	15 4.46	-23 0.3	2.005	2.887	11.3	19.0	146 W	22	87	4 26	14 26.59	0 33.9	2.353	3.341	4.0	19.3	167 W	44	65
4 16	14 57.25	-21 41.2	1.914	2.866	7.8	18.7	157 W	23	86	5 6	14 18.03	+0 13.8	2.342	3.313	5.6	19.4	161 E	45	64
4 21	14 52.95	-20 54.8	1.879	2.856	5.8	18.6	163 W	24	85	5 16	14 9.87	+0 49.6	2.359	3.285	8.3	19.5	152 E	46	63
4 26	14 48.33	-20 4.5	1.850	2.845	3.7	18.5	169 W	25	84	5 26	14 2.79	+1 10.8	2.401	3.256	11.1	19.7	142 E	46	63
5 1	14 43.50	-19 10.9	1.829	2.834	1.8	18.3	175 W	26	83	6 5	13 57.30	+1 16.4	2.465	3.226	13.7	19.8	131 E	46	63
5 6	14 38.59	-18 14.8	1.815	2.823	1.3	18.2	176 E	27	82	6 15	13 53.71	+1 6.8	2.546	3.195	15.7	19.9	121 E	46*	63
5 11	14 33.73	-17 17.2	1.809	2.811	3.2	18.4	171 E	28	81	6 25	13 52.17	+0 43.2	2.640	3.163	17.3	20.0	112 E	44*	63
5 16	14 29.04	-16 19.2	1.811	2.800	5.4	18.5	165 E	29	80	7 5	13 52.67	+0 7.3	2.742	3.131					