

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°										
699 Hela										47834 2000 EN₁₁₄ (continuation)																			
12 27	23 7.02	+ 5 0.3	1.686	1.712	33.6	15.0	75 E	50*	41*	12 2	12 57.53	+ 5 5.9	2.639	2.293	21.6	18.8	59 W	46*	28*	12 2	12 57.53	+ 5 5.9	2.639	2.293	21.6	18.8	59 W	46*	28*
1 6	23 32.98	+ 6 13.3	1.804	1.749	32.1	15.2	71 E	50*	37*	12 12	13 9.92	+ 3 23.4	2.559	2.329	22.6	18.8	65 W	47*	35*	12 12	13 9.92	+ 3 23.4	2.559	2.329	22.6	18.8	65 W	47*	35*
1 16	23 58.36	+ 7 31.6	1.927	1.789	30.4	15.3	67 E	50*	34*	12 22	13 20.99	+ 1 49.7	2.470	2.364	23.3	18.7	72 W	47*	42*	12 22	13 20.99	+ 1 49.7	2.470	2.364	23.3	18.7	72 W	47*	42*
1 26	0 23.17	+ 8 53.0	2.053	1.831	28.6	15.4	63 E	49*	31*	1 1	13 30.55	+ 0 25.0	2.374	2.399	23.8	18.7	80 W	45	50*	1 1	13 30.55	+ 0 25.0	2.374	2.399	23.8	18.7	80 W	45	50*
2 5	0 47.42	+10 15.2	2.182	1.874	26.8	15.6	59 E	47*	28*	1 11	13 38.35	+ 0 50.1	2.272	2.434	23.8	18.6	87 W	44	58*	1 11	13 38.35	+ 0 50.1	2.272	2.434	23.8	18.6	87 W	44	58*
2 15	1 11.16	+11 36.5	2.313	1.919	24.8	15.7	55 E	44*	25*	1 21	13 44.11	+ 1 55.5	2.167	2.468	23.4	18.5	96 W	43	64*	1 21	13 44.11	+ 1 55.5	2.167	2.468	23.4	18.5	96 W	43	64*
2 25	1 34.44	+12 55.0	2.443	1.965	22.8	15.8	50 E	41*	23*	74789 1999 SY₅																			
3 7	1 57.29	+14 9.3	2.571	2.011	20.8	15.9	46 E	37*	21*	12 27	23 7.72	-25 55.6	1.808	1.633	32.7	18.1	64 E	19*	55*	12 27	23 7.72	-25 55.6	1.808	1.633	32.7	18.1	64 E	19*	55*
3 17	2 19.76	+15 18.2	2.697	2.059	18.6	16.0	41 E	33*	19*	1 1	23 20.08	-24 43.0	1.833	1.624	32.3	18.1	62 E	20*	53*	1 1	23 20.08	-24 43.0	1.833	1.624	32.3	18.1	62 E	20*	53*
3 27	2 41.86	+16 20.6	2.818	2.106	16.5	16.1	37 E	28*	17*	1 6	23 32.56	-23 26.2	1.857	1.616	31.9	18.1	60 E	21*	51*	1 6	23 32.56	-23 26.2	1.857	1.616	31.9	18.1	60 E	21*	51*
4 6	3 3.62	+17 15.7	2.933	2.154	14.3	16.1	32 E	23*	15*	1 11	23 45.13	-22 5.5	1.881	1.609	31.5	18.1	59 E	22*	49*	1 11	23 45.13	-22 5.5	1.881	1.609	31.5	18.1	59 E	22*	49*
4 16	3 25.05	+18 2.9	3.042	2.202	12.2	16.2	28 E	18*	13*	1 16	23 57.80	-20 41.1	1.905	1.603	31.1	18.2	57 E	23*	47*	1 16	23 57.80	-20 41.1	1.905	1.603	31.1	18.2	57 E	23*	47*
4 26	3 46.12	+18 41.6	3.143	2.250	10.0	16.2	23 E	13*	11*	1 21	0 10.53	-19 13.5	1.928	1.598	30.6	18.2	56 E	24*	45*	1 21	0 10.53	-19 13.5	1.928	1.598	30.6	18.2	56 E	24*	45*
5 6	4 6.84	+19 11.4	3.235	2.297	7.8	16.2	18 E	8*	8*	1 26	0 23.33	-17 42.9	1.951	1.593	30.2	18.2	54 E	24*	44*	1 26	0 23.33	-17 42.9	1.951	1.593	30.2	18.2	54 E	24*	44*
5 16	4 27.17	+19 32.3	3.317	2.345	5.7	16.2	13 E	3*	6*	1 31	0 36.17	-16 10.0	1.974	1.590	29.7	18.2	53 E	25*	42*	1 31	0 36.17	-16 10.0	1.974	1.590	29.7	18.2	53 E	25*	42*
5 26	4 47.08	+19 44.0	3.388	2.392	3.6	16.2	9 E	—	2*	2 5	0 49.05	-14 34.9	1.998	1.587	29.2	18.2	52 E	25*	41*	2 5	0 49.05	-14 34.9	1.998	1.587	29.2	18.2	52 E	25*	41*
6 5	5 6.54	+19 46.6	3.448	2.438	1.8	16.1	4 E	—	—	2 15	1 14.96	-11 20.1	2.045	1.585	28.1	18.2	49 E	25*	38*	2 15	1 14.96	-11 20.1	2.045	1.585	28.1	18.2	49 E	25*	38*
6 15	5 25.50	+19 40.3	3.496	2.484	1.6	16.2	4 W	—	—	2 25	1 41.03	- 8 2.5	2.093	1.586	27.0	18.2	47 E	25*	36*	2 25	1 41.03	- 8 2.5	2.093	1.586	27.0	18.2	47 E	25*	36*
6 25	5 43.92	+19 25.3	3.531	2.529	3.3	16.4	8 W	—	2*	3 7	2 7.26	- 4 45.6	2.145	1.592	25.8	18.2	44 E	24*	33*	3 7	2 7.26	- 4 45.6	2.145	1.592	25.8	18.2	44 E	24*	33*
7 5	6 1.75	+19 2.1	3.553	2.574	5.2	16.5	13 W	—	7*	3 17	2 33.64	- 1 33.3	2.199	1.600	24.5	18.3	42 E	23*	31*	3 17	2 33.64	- 1 33.3	2.199	1.600	24.5	18.3	42 E	23*	31*
7 15	6 18.94	+18 30.9	3.561	2.618	7.1	16.7	19 W	3*	11*	3 27	3 0.19	+ 1 30.9	2.256	1.613	23.1	18.3	39 E	21*	29*	3 27	3 0.19	+ 1 30.9	2.256	1.613	23.1	18.3	39 E	21*	29*
7 25	6 35.43	+17 52.4	3.556	2.661	9.0	16.8	24 W	9*	16*	4 6	3 26.88	+ 4 23.7	2.316	1.628	21.6	18.3	37 E	18*	27*	4 6	3 26.88	+ 4 23.7	2.316	1.628	21.6	18.3	37 E	18*	27*
8 4	6 51.17	+17 7.1	3.536	2.703	10.7	16.9	30 W	14*	20*	4 16	3 53.68	+ 7 2.6	2.379	1.647	20.0	18.4	34 E	16*	25*	4 16	3 53.68	+ 7 2.6	2.379	1.647	20.0	18.4	34 E	16*	25*
8 14	7 6.08	+16 15.5	3.503	2.745	12.4	17.0	36 W	20*	24*	4 26	4 20.56	+ 9 25.2	2.444	1.669	18.3	18.4	31 E	13*	23*	4 26	4 20.56	+ 9 25.2	2.444	1.669	18.3	18.4	31 E	13*	23*
8 24	7 20.10	+15 18.4	3.457	2.786	14.0	17.0	42 W	27*	27*	5 6	4 47.43	+11 30.0	2.511	1.694	16.5	18.4	28 E	10*	21*	5 6	4 47.43	+11 30.0	2.511	1.694	16.5	18.4	28 E	10*	21*
9 3	7 33.15	+14 16.4	3.397	2.826	15.4	17.1	48 W	33*	31*	5 16	5 14.24	+13 16.0	2.578	1.721	14.6	18.5	25 E	6*	18*	5 16	5 14.24	+13 16.0	2.578	1.721	14.6	18.5	25 E	6*	18*
9 13	7 45.12	+13 10.5	3.326	2.865	16.7	17.1	55 W	39*	35*	5 26	5 40.88	+14 42.8	2.644	1.750	12.7	18.5	22 E	3*	16*	5 26	5 40.88	+14 42.8	2.644	1.750	12.7	18.5	22 E	3*	16*
9 23	7 55.91	+12 1.4	3.243	2.903	17.7	17.1	62 W	44*	38*	6 5	6 7.25	+15 50.6	2.709	1.781	10.7	18.5	19 E	—	13*	6 5	6 7.25	+15 50.6	2.709	1.781	10.7	18.5	19 E	—	13*
10 3	8 5.38	+10 50.1	3.150	2.940	18.5	17.1	69 W	49*	42*	6 15	6 33.26	+16 40.1	2.771	1.813	8.7	18.5	16 E	—	10*	6 15	6 33.26	+16 40.1	2.771	1.813	8.7	18.5	16 E	—	10*
10 13	8 13.38	+ 9 37.7	3.049	2.977	19.0	17.1	76 W	52*	46*	6 25	6 58.82	+17 12.1	2.829	1.847	6.6	18.5	12 E	—	6*	6 25	6 58.82	+17 12.1	2.829	1.847	6.6	18.5	12 E	—	6*
10 23	8 19.73	+ 8 25.4	2.942	3.013	19.2	17.0	84 W	53*	50*	7 5	7 23.84	+17 28.2	2.882	1.883	4.5	18.5	8 E	—	2*	7 5	7 23.84	+17 28.2	2.882	1.883	4.5	18.5	8 E	—	2*
11 2	8 24.25	+ 7 14.8	2.833	3.047	19.0	16.9	93 W	52*	54*	7 15	7 48.28	+17 29.8	2.930	1.919	2.6	18.4	5 E	—	—	7 15	7 48.28	+17 29.8	2.930	1.919	2.6	18.4	5 E	—	—
11 12	8 26.73	+ 6 7.4	2.723	3.081	18.3	16.9	102 W	51	57*	7 25	8 12.05	+17 18.5	2.969	1.955	1.4	18.4	3 W	—	—	7 25	8 12.05	+17 18.5	2.969	1.955	1.4	18.4	3 W	—	—
11 22	8 27.01	+ 5 5.3	2.618	3.114	17.2	16.8	111 W	50	59	8 4	8 35.15	+16 56.3	3.002	1.993	2.5	18.6	5 W	—	—	8 4	8 35.15	+16 56.3	3.002	1.993	2.5	18.6	5 W	—	—
12 2	8 24.97	+ 4 10.7	2.522	3.146	15.6	16.7	121 W	49	60	8 14	8 57.55	+16 24.9	3.025	2.030	4.5	18.7	9 W	1*	1*	8 14	8 57.55	+16 24.9	3.025	2.030	4.5	18.7	9 W	1*	1*
12 12	8 20.60	+ 3 26.0	2.440	3.177	13.5	16.5	131 W	48	61	8 24	9 19.23	+15 46.3	3.038	2.068	6.5	18.9	13 W	6*	3*	8 24	9 19.23	+15 46.3	3.038	2.068	6.5	18.9	13 W	6*	3*
12 22	8 14.07	+ 2 53.5	2.377	3.207	11.0	16.4	142 W	48	61	9 3	9 40.20	+15 2.1	3.042	2.106	8.6	19.0	18 W	11*	5*	9 3	9 40.20	+15 2.1	3.042	2.106	8.6	19.0	18 W	11*	5*
1 1	8 5.79	+ 2 35.0	2.337	3.236	8.3	16.3	152 W	48	61	9 13	10 0.48	+14 14.4	3.034	2.144	10.6	19.1	23 W	16*	8*	9 13	10 0.48	+14 14.4	3.034	2.144	10.6	19.1	23 W	16*	8*
1 11	7 56.39	+ 2 31.3	2.325	3.264	6.1	16.2	159 W	48	61	9 23	10 20.04	+13 24.9	3.016	2.182	12.5	19.2	28 W	21*	10*	9 23	10 20.04	+13 24.9	3.016	2.182	12.5</				

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°
383518 2007 CO₄₇										74564 1999 NY₁									
<i>(continuation)</i>										<i>(continuation)</i>									
1 31	0 35.34	-15 14.4	2.012	1.622	29.0	20.6	53 E	25*	42*	1 1	7 39.62	+ 6 51.7	1.969	2.909	6.9	20.0	159 W	52	57
2 5	0 48.03	-13 44.5	2.038	1.621	28.4	20.7	52 E	26*	40*	1 11	7 29.35	+ 7 16.6	1.961	2.924	4.9	19.9	165 W	52	57
2 10	1 0.77	-12 13.1	2.065	1.621	27.9	20.7	50 E	26*	39*	1 21	7 19.14	+ 7 53.2	1.983	2.937	5.8	20.0	163 E	53	56
2 15	1 13.54	-10 40.7	2.091	1.622	27.3	20.7	49 E	26*	37*	11405 1999 CV₃									
2 20	1 26.34	-9 7.8	2.118	1.623	26.7	20.7	48 E	25*	36*	12 27	23 8.15	-23 12.2	1.895	1.721	31.1	19.1	65 E	22*	55*
2 25	1 39.17	-7 34.7	2.145	1.626	26.1	20.7	46 E	25*	35*	1 1	23 19.30	-22 5.8	1.961	1.742	30.1	19.2	63 E	23*	52*
3 2	1 52.04	-6 2.0	2.173	1.629	25.4	20.7	45 E	24*	34*	1 6	23 30.22	-20 58.5	2.025	1.762	29.1	19.2	60 E	23*	50*
3 7	2 4.93	-4 30.0	2.201	1.633	24.8	20.7	44 E	24*	33*	1 11	23 40.95	-19 50.4	2.088	1.781	28.0	19.3	58 E	24*	48*
3 12	2 17.86	-2 59.2	2.230	1.638	24.1	20.7	42 E	23*	32*	1 16	23 51.50	-18 41.9	2.150	1.800	27.0	19.4	56 E	24*	45*
3 17	2 30.82	-1 29.9	2.259	1.644	23.4	20.8	41 E	22*	31*	1 26	0 12.16	-16 24.4	2.269	1.835	25.0	19.5	52 E	25*	41*
3 22	2 43.81	-0 2.7	2.289	1.651	22.7	20.8	40 E	21*	30*	2 5	0 32.34	-14 7.6	2.382	1.867	23.0	19.5	48 E	24*	37*
3 27	2 56.83	+ 1 22.3	2.319	1.659	22.0	20.8	38 E	20*	29*	2 15	0 52.18	-11 52.8	2.487	1.897	21.0	19.6	44 E	22*	33*
4 1	3 9.87	+ 2 44.5	2.350	1.667	21.2	20.8	37 E	19*	28*	2 25	1 11.77	-9 41.0	2.584	1.923	19.0	19.7	39 E	20*	30*
4 6	3 22.94	+ 4 3.7	2.382	1.676	20.4	20.8	36 E	18*	27*	3 7	1 31.19	-7 33.4	2.672	1.947	17.1	19.7	35 E	16*	27*
4 11	3 36.03	+ 5 19.6	2.414	1.686	19.6	20.8	34 E	16*	26*	3 17	1 50.52	-5 30.8	2.750	1.968	15.2	19.7	31 E	13*	24*
4 16	3 49.14	+ 6 32.0	2.446	1.696	18.8	20.9	33 E	15*	25*	3 27	2 9.82	-3 34.1	2.818	1.986	13.4	19.7	27 E	8*	21*
4 21	4 2.25	+ 7 40.5	2.479	1.707	18.0	20.9	32 E	13*	23*	4 6	2 29.12	-1 44.1	2.875	2.001	11.6	19.7	24 E	4*	18*
4 26	4 15.37	+ 8 45.1	2.512	1.719	17.1	20.9	30 E	11*	22*	4 16	2 48.48	-0 1.4	2.922	2.013	10.1	19.7	21 E	—	15*
5 1	4 28.47	+ 9 45.5	2.545	1.731	16.3	20.9	29 E	10*	21*	4 26	3 7.91	+ 1 33.3	2.956	2.023	8.8	19.7	18 E	—	11*
5 6	4 41.56	+ 10 41.6	2.578	1.744	15.4	20.9	27 E	8*	20*	5 6	3 27.45	+ 2 59.4	2.980	2.029	7.9	19.7	16 E	—	8*
5 11	4 54.63	+ 11 33.4	2.612	1.758	14.5	20.9	26 E	6*	19*	5 16	3 47.10	+ 4 16.4	2.991	2.033	7.5	19.7	15 E	—	4*
5 16	5 7.67	+ 12 20.7	2.644	1.771	13.5	20.9	24 E	5*	18*	5 26	4 6.86	+ 5 23.7	2.991	2.034	7.7	19.7	16 W	—	2*
5 21	5 20.66	+ 13 3.6	2.677	1.786	12.6	20.9	23 E	3*	16*	6 5	4 26.73	+ 6 21.1	2.979	2.032	8.5	19.7	17 W	—	7*
5 26	5 33.59	+ 13 42.0	2.709	1.801	11.6	21.0	21 E	—	13*	6 15	4 46.72	+ 7 8.1	2.956	2.028	9.7	19.7	20 W	—	11*
5 31	5 46.45	+ 14 16.0	2.741	1.816	10.7	21.0	19 E	—	10*	6 25	5 6.80	+ 7 44.6	2.921	2.020	11.1	19.7	23 W	—	16*
6 5	5 59.23	+ 14 45.6	2.772	1.832	9.7	21.0	18 E	—	8*	7 5	5 26.95	+ 8 10.3	2.875	2.010	12.8	19.8	26 W	—	20*
6 10	6 11.92	+ 15 11.0	2.802	1.848	8.7	21.0	16 E	—	7*	7 15	5 47.17	+ 8 25.1	2.818	1.997	14.5	19.8	30 W	2*	23*
6 15	6 24.51	+ 15 32.1	2.831	1.864	7.8	21.0	14 E	—	5*	7 25	6 7.42	+ 8 29.1	2.750	1.981	16.3	19.8	33 W	7*	27*
6 20	6 36.99	+ 15 49.2	2.859	1.881	6.8	21.0	13 E	—	4*	8 4	6 27.68	+ 8 22.5	2.672	1.962	18.2	19.7	37 W	12*	30*
6 25	6 49.35	+ 16 2.3	2.886	1.898	5.8	21.0	11 E	—	3*	8 14	6 47.94	+ 8 5.3	2.585	1.941	20.1	19.7	41 W	18*	32*
6 30	7 1.57	+ 16 11.7	2.912	1.915	4.9	20.9	9 E	—	2*	8 24	7 8.19	+ 7 38.1	2.488	1.916	22.0	19.7	45 W	23*	34*
7 5	7 13.66	+ 16 17.4	2.936	1.933	4.0	20.9	8 E	—	1*	9 3	7 28.42	+ 7 1.3	2.383	1.889	23.9	19.6	49 W	28*	37*
7 10	7 25.61	+ 16 19.8	2.958	1.951	3.3	20.9	6 E	—	—	9 13	7 48.63	+ 6 15.5	2.270	1.858	25.8	19.5	54 W	33*	39*
7 15	7 37.40	+ 16 18.8	2.978	1.968	2.7	20.9	5 E	—	—	9 23	8 8.85	+ 5 21.7	2.150	1.825	27.7	19.4	58 W	37*	41*
7 20	7 49.03	+ 16 14.9	2.997	1.986	2.5	20.9	5 W	—	—	10 3	8 29.12	+ 4 20.6	2.023	1.789	29.6	19.3	62 W	40*	43*
7 25	8 0.49	+ 16 8.1	3.014	2.005	2.7	21.0	5 W	—	—	10 13	8 49.50	+ 3 13.5	1.891	1.750	31.5	19.1	66 W	43*	45*
7 30	8 11.79	+ 15 58.7	3.028	2.023	3.2	21.1	6 W	—	—	10 23	9 10.08	+ 2 1.9	1.755	1.709	33.4	19.0	71 W	44*	48*
8 4	8 22.92	+ 15 46.9	3.041	2.041	4.0	21.1	8 W	—	—	11 2	9 31.02	+ 0 47.6	1.616	1.664	35.2	18.8	75 W	45*	51*
8 9	8 33.88	+ 15 32.9	3.051	2.060	4.9	21.2	10 W	—	—	11 12	9 52.49	-0 27.2	1.475	1.617	37.0	18.6	79 W	45*	53*
8 14	8 44.66	+ 15 16.8	3.059	2.078	5.8	21.3	12 W	3*	4*	11 22	10 14.80	-1 39.5	1.333	1.567	38.8	18.3	84 W	43*	57*
8 19	8 55.26	+ 14 59.1	3.064	2.097	6.8	21.3	14 W	5*	5*	12 2	10 38.36	-2 45.7	1.192	1.514	40.6	18.1	88 W	42*	60*
8 24	9 5.68	+ 14 39.7	3.067	2.116	7.7	21.4	16 W	8*	7*	12 7	10 50.78	-3 15.1	1.122	1.487	41.5	17.9	89 W	42*	61*
8 29	9 15.93	+ 14 19.1	3.067	2.134	8.7	21.5	19 W	10*	8*	12 12	11 3.75	-3 40.8	1.054	1.459	42.4	17.8	91 W	41*	63*
74564 1999 NY₁										12 17	11 17.39	-4 2.0	0.987	1.431	43.4	17.6	93 W	41*	64*
12 27	23 8.06	- 7 28.2	1.907	1.818	30.5	19.7	70 E	37*	49*	12 22	11 31.85	-4 17.6	0.921	1.402	44.4	17.5	95 W	41*	65*
1 6	23 30.39	- 5 44.3	2.031	1.852	28.9	19.8	65 E	39*	44*	12 27	11 47.30	-4 26.4	0.857	1.373	45.4	17.3	96 W	41*	66*
1 16	23 52.36	- 3 55.1	2.156	1.886	27.1	20.0	61 E	39*	39*	1 1	12 3.92	-4 26.7	0.795	1.343	46.5	17.1	98 W	41*	67*
1 26	0 13.97	- 2 3.0	2.280	1.921	25.3	20.1	56 E	38*	35*	1 6	12 21.95	-4 16.6	0.736	1.313	47.8	16.9	99 W	41*	67*
2 5	0 35.27	- 0 10.0	2.403	1.957	23.4	20.2	52 E	37*	31*	1 11	12 41.66	-3 53.9	0.680	1.283	49.2	16.7	99 W	41*	67*
2 15	0 56.31	+ 1 42.1	2.523	1.993	21.4	20.3	48 E	34*	28*	1 16	13 3.33	-3 16.6	0.628	1.253	50.7	16.6	100 W	42*	66*
2 25	1 17.12	+ 3 31.8	2.639	2.030	19.4	20.3	43 E	31*	25*	1 21	13 27.28	-2 22.1	0.580	1.222	52.6	16.4	99 W	43*	66*
3 7	1 37.72	+ 5 17.6	2.750	2.067	17.4	20.4	38 E	27*	22*	161081 2002 NR₂									
3 17	1 58.17	+ 6 58.2	2.855	2.104	15.3	20.4	34 E	23*	19*	12 27	23 8.31	+ 2 34.2	1.596	1.625	35.5	19.6	74 E	47*	43*
3 27	2 18.48	+ 8 32.8	2.954	2.141	13.2	20.5	29 E	19*	17*	1 6	23 33.83	+ 4 22.3	1.685	1.639	34.4	19.7	70 E	49*	39*
4 6	2 38.64	+ 10 0.2	3.045	2.178	11.1	20.5	25 E	14*	14*	1 16	23 59.50	+ 6 15.2	1.778	1.657	33.0	19.8	67 E	49*	35*
4 16	2 58.69	+ 11 19.8	3.128	2.214	9.0	20.5	20 E	9*	11*	1 26	0 25.22	+ 8 10.3	1.873	1.678	31.6	19.9	63 E	49*	32*
4 26	3 18.61	+ 12 30.9	3.201	2.250	7.0	20.5	16 E	4*	9*	2 5	0 50.93	+ 10 4.7	1.971	1.701	30.0	20.0	60 E	48*	29*
5 6	3 38.36	+ 13 32.9	3.265	2.286	5.1	20.5	12 E	—	2*	2 15	1 16.62	+ 11 56.1	2.072	1.726	28.3	20.1	56 E	45*	26*
5 16	3 57.95	+ 14 25.7	3.318	2.321	3.5	20.5	8 E	—	—	2 25	1 42.26	+ 13 42.4	2.173	1.754	26.6	20.2	52 E	43*	24*
5 26	4 17.33	+ 15 8.8	3.360	2.356	2.6	20.5	6 E	—	—	3 7	2 7.83	+ 15 21.3	2.275	1.784	24.7	20.3	49 E	40*	23*
6 5	4 36.44	+ 15 42.1	3.391	2.390	3.3	20.6	8 W	—	—	3 17	2 33.32	+ 16 51.4	2.376	1.815	22.8	20.4	45 E	36*	21*
6 15	4 55.26	+ 16 5.8	3.410	2.423	4.8	20.7	11 W	—	5*	3 27	2 58.70	+ 18 11.2	2.477	1.848	20.9	20.4	41 E	32*	20*
6 25	5 13.71	+ 16 19.7	3.417	2.455	6.5	20.8	16 W	—	10*	4 6	3 23.92	+ 19 19.6	2.575	1.881	18.9	20.5	37 E	28	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
161081 2002 NR₂ (continuation)										106577 2000 WB₉₅ (continuation)									
9 23	9 19.53	+10 13.1	3.155	2.487	15.4	21.4	41 W	29*	24*	3 17	2 23.27	+13 21.9	2.345	1.732	22.4	20.6	42 E	32*	21*
10 3	9 33.78	+ 8 40.0	3.092	2.519	16.9	21.5	47 W	34*	28*	3 27	2 48.60	+15 35.3	2.426	1.754	20.6	20.7	38 E	29*	19*
10 13	9 47.05	+ 7 6.1	3.018	2.550	18.3	21.5	53 W	39*	32*	4 6	3 14.16	+17 35.3	2.506	1.777	18.7	20.7	35 E	25*	17*
10 23	9 59.24	+ 5 32.8	2.934	2.580	19.5	21.5	60 W	43*	36*	4 16	3 39.94	+19 20.7	2.584	1.803	16.8	20.7	31 E	22*	16*
11 2	10 10.25	+ 4 1.0	2.840	2.610	20.4	21.5	67 W	46*	41*	4 26	4 5.85	+20 50.3	2.659	1.830	14.9	20.8	28 E	18*	14*
11 12	10 19.92	+ 2 32.1	2.738	2.638	21.1	21.4	74 W	47*	46*	5 6	4 31.80	+22 3.6	2.731	1.858	12.9	20.8	24 E	14*	12*
11 22	10 28.09	+ 1 7.7	2.629	2.666	21.5	21.4	81 W	46	52*	5 16	4 57.73	+23 0.1	2.799	1.887	10.9	20.8	21 E	10*	10*
12 2	10 34.56	+ 0 10.8	2.516	2.693	21.5	21.3	89 W	45	58*	5 26	5 23.49	+23 40.0	2.863	1.917	8.9	20.8	17 E	7*	7*
12 12	10 39.07	+ 1 21.2	2.402	2.719	21.0	21.2	98 W	44	63*	6 5	5 48.98	+24 3.5	2.922	1.948	6.8	20.8	13 E	3*	5*
12 22	10 41.40	+ 2 21.3	2.290	2.744	20.0	21.1	107 W	43	66*	6 15	6 14.10	+24 11.2	2.975	1.979	4.8	20.8	9 E	—	2*
1 1	10 41.33	+ 3 8.7	2.183	2.768	18.5	21.0	117 W	42	67	6 25	6 38.73	+24 4.1	3.021	2.011	2.8	20.7	6 E	—	—
1 11	10 38.70	+ 3 40.7	2.087	2.791	16.4	20.8	127 W	41	68	7 5	7 2.78	+23 43.2	3.060	2.044	0.9	20.6	2 E	—	—
1 21	10 33.57	+ 3 54.8	2.007	2.813	13.6	20.6	138 W	41	68	7 15	7 26.18	+23 9.8	3.090	2.076	1.5	20.7	3 W	—	—
333980 2000 RL₁₂										100754 1998 FP₂									
12 27	23 9.38	+ 3 1.1	2.144	2.103	26.8	20.2	74 E	48*	43*	12 27	23 10.79	+10 23.3	1.865	1.774	31.2	20.4	69 E	35*	51*
1 6	23 22.92	+ 5 43.3	2.320	2.161	25.0	20.4	68 E	49*	36*	1 6	23 32.17	+ 9 28.3	1.974	1.785	29.8	20.5	64 E	35*	46*
1 16	23 36.81	+ 8 17.8	2.492	2.219	23.2	20.5	63 E	49*	29*	1 16	23 53.62	+ 8 20.9	2.080	1.796	28.2	20.6	60 E	35*	42*
1 26	23 50.99	+10 46.4	2.658	2.277	21.3	20.6	57 E	47*	23*	1 26	0 15.13	+ 7 4.2	2.181	1.807	26.5	20.7	55 E	34*	38*
2 5	0 5.41	+13 10.2	2.818	2.333	19.3	20.8	51 E	44*	18*	2 5	0 36.68	+ 5 40.9	2.276	1.818	24.8	20.7	51 E	32*	34*
2 15	0 20.05	+15 30.1	2.968	2.389	17.3	20.9	46 E	39*	13*	2 15	0 58.30	+ 4 13.2	2.365	1.829	23.0	20.8	46 E	29*	31*
2 25	0 34.88	+17 46.5	3.109	2.443	15.3	20.9	41 E	34*	9*	2 25	1 20.00	+ 2 43.5	2.448	1.839	21.2	20.8	42 E	26*	29*
3 7	0 49.87	+19 59.6	3.239	2.497	13.3	21.0	35 E	29*	4*	3 7	1 41.81	+ 1 13.6	2.524	1.849	19.4	20.8	38 E	23*	26*
3 17	1 5.03	+22 9.8	3.357	2.549	11.4	21.1	30 E	24*	1*	3 17	2 3.75	+ 0 14.5	2.593	1.859	17.6	20.8	34 E	19*	24*
3 27	1 20.34	+24 17.0	3.462	2.601	9.6	21.1	26 E	19*	—	3 27	2 25.85	+ 1 39.1	2.655	1.868	15.8	20.8	31 E	15*	22*
4 6	1 35.78	+26 21.2	3.554	2.651	8.1	21.1	22 E	14*	—	4 6	2 48.11	+ 2 58.5	2.709	1.877	14.1	20.8	27 E	11*	20*
4 16	1 51.35	+28 22.5	3.632	2.700	6.8	21.2	19 E	10*	—	4 16	3 10.56	+ 4 11.4	2.756	1.886	12.6	20.8	24 E	6*	17*
4 26	2 7.02	+30 20.7	3.695	2.749	6.1	21.2	17 W	8*	—	4 26	3 33.19	+ 5 16.3	2.796	1.894	11.1	20.8	21 E	2*	15*
5 6	2 22.79	+32 15.7	3.744	2.795	6.1	21.3	17 W	10*	—	5 6	3 55.97	+ 6 12.1	2.828	1.901	9.8	20.8	19 E	—	13*
5 16	2 38.63	+34 7.8	3.778	2.841	6.7	21.4	19 W	13*	—	5 16	4 18.90	+ 6 57.7	2.854	1.908	8.8	20.8	17 E	—	10*
5 26	2 54.50	+35 56.9	3.797	2.886	7.7	21.4	22 W	16*	1*	5 26	4 41.94	+ 7 32.3	2.872	1.915	8.1	20.8	15 E	—	7*
335024 2004 PD₂₀										100754 1998 FP₂									
12 27	23 9.90	+ 4 0.0	1.493	1.505	38.3	21.2	72 E	41*	47*	6 5	5 5.04	+ 7 55.2	2.883	1.921	7.8	20.8	15 E	—	3*
1 6	23 35.89	+ 0 30.1	1.594	1.539	36.5	21.3	69 E	44*	42*	6 15	5 28.15	+ 8 5.8	2.888	1.926	8.0	20.8	15 W	—	2*
1 16	0 1.29	+ 2 52.0	1.700	1.575	34.7	21.5	66 E	46*	37*	6 25	5 51.22	+ 8 4.0	2.885	1.931	8.5	20.8	16 W	—	6*
1 26	0 26.24	+ 6 4.8	1.809	1.612	32.8	21.6	63 E	47*	33*	7 5	6 14.17	+ 7 49.6	2.876	1.935	9.4	20.8	18 W	—	10*
2 5	0 50.84	+ 9 7.0	1.921	1.650	30.9	21.7	59 E	47*	29*	7 15	6 36.97	+ 7 22.8	2.860	1.939	10.5	20.9	20 W	—	13*
277572 2005 YR₁₈₆										100754 1998 FP₂									
12 27	23 9.98	+21 6.4	1.520	1.430	38.8	21.1	66 E	24*	55*	7 25	6 59.53	+ 6 43.9	2.837	1.941	11.7	20.9	23 W	—	17*
1 1	23 24.00	+19 14.6	1.552	1.434	38.2	21.2	64 E	26*	53*	8 4	7 21.82	+ 5 53.5	2.807	1.944	13.1	20.9	26 W	1*	20*
1 6	23 37.81	+17 20.4	1.585	1.440	37.6	21.2	63 E	27*	51*	8 14	7 43.79	+ 4 52.3	2.771	1.945	14.5	21.0	29 W	6*	22*
1 11	23 51.45	+15 24.5	1.618	1.445	36.9	21.2	62 E	29*	48*	8 24	8 5.39	+ 3 41.1	2.727	1.946	16.0	21.0	32 W	10*	25*
1 16	0 4.92	+13 27.5	1.652	1.451	36.2	21.3	61 E	30*	46*	9 3	8 26.59	+ 2 21.1	2.677	1.946	17.5	21.0	36 W	15*	28*
1 21	0 18.25	+11 29.9	1.686	1.458	35.5	21.3	59 E	32*	44*	9 13	8 47.38	+ 0 53.3	2.619	1.946	19.1	21.0	39 W	19*	30*
1 26	0 31.46	+ 9 32.3	1.721	1.465	34.8	21.3	58 E	33*	42*	9 23	9 7.71	+ 0 41.1	2.555	1.945	20.6	21.0	43 W	23*	33*
1 31	0 44.55	+ 7 35.3	1.757	1.473	34.1	21.4	57 E	33*	41*	10 3	9 27.59	+ 2 20.6	2.483	1.943	22.1	21.0	47 W	27*	35*
2 5	0 57.55	+ 5 39.1	1.794	1.481	33.3	21.4	56 E	34*	39*	10 13	9 46.98	+ 4 4.0	2.404	1.941	23.6	21.0	51 W	30*	38*
2 10	1 10.48	+ 3 44.3	1.831	1.489	32.6	21.5	54 E	34*	37*	10 23	10 5.86	+ 5 49.4	2.318	1.938	25.0	20.9	56 W	32*	41*
2 15	1 23.37	+ 1 51.3	1.868	1.498	31.8	21.5	53 E	35*	35*	11 2	10 24.21	+ 7 35.4	2.226	1.934	26.4	20.9	60 W	34*	45*
85185 Lederman										100754 1998 FP₂									
12 27	23 10.42	+ 2 20.9	1.980	1.924	29.1	20.6	72 E	43*	47*	11 12	10 41.97	+ 9 20.1	2.127	1.930	27.7	20.8	65 W	34*	49*
1 6	23 30.28	+ 0 39.1	2.115	1.959	27.6	20.7	67 E	44*	41*	11 22	10 59.07	+11 1.4	2.023	1.925	28.8	20.7	70 W	34*	54*
1 16	23 50.04	+ 1 6.3	2.249	1.993	25.9	20.8	62 E	44*	36*	12 2	11 15.43	+12 37.2	1.913	1.919	29.8	20.6	75 W	32*	59*
1 26	0 9.72	+ 2 53.8	2.380	2.028	24.2	20.9	57 E	42*	31*	12 12	11 30.89	+14 4.8	1.799	1.913	30.6	20.5	81 W	31*	65*
2 5	0 29.29	+ 4 41.7	2.509	2.063	22.3	21.0	52 E	40*	27*	12 22	11 45.28	+15 21.1	1.681	1.907	31.0	20.4	87 W	30*	72*
2 15	0 48.80	+ 6 28.9	2.633	2.097	20.3	21.1	48 E	37*	24*	461579 2004 PU₂₆									
2 25	1 8.24	+ 8 14.1	2.752	2.131	18.3	21.2	43 E	33*	20*	12 27	23 11.62	+ 3 4.5	1.638	1.634	35.0	21.3	72 E	42*	47*
3 7	1 27.64	+ 9 56.2	2.864	2.165	16.2	21.2	38 E	29*	17*	1 6	23 35.30	+ 0 4.9	1.746	1.664	33.4	21.4	69 E	44*	42*
3 17	1 47.02	+11 34.1	2.969	2.198	14.1	21.3	33 E	24*	15*	1 16	23 58.74	+ 2 50.7	1.857	1.696	31.7	21.5	65 E	46*	37*
3 27	2 6.37	+13 7.0	3.065	2.230	12.0	21.3	28 E	20*	12*	1 26	0 21.99	+ 5 41.0	1.971	1.730	30.0	21.7	61 E	46*	32*
4 6	2 25.71	+14 34.0	3.152	2.262	9.8	21.3	23 E	15*	9*	2 5	0 45.08	+ 8 24.6	2.085	1.765	28.1	21.8	58 E	45*	29*
4 16	2 45.03	+15 54.4	3.229	2.294	7.7	21.3	18 E	10*	6*	90916 1997 LR									
4 26	3 4.31	+17 7.6	3.295	2.324	5.5	21.3	13 E	5*	3*	12 27	23 14.11	+12 18.1	1.783	1.706	32.6	20.2	69 E	33*	53*
5 6	3 23.55	+18 13.0	3.350	2.354	3.3	21.2	8 E	—	—	1 6	23 37.42	+ 9 39.7	1.891	1.734	31.1	20.3	66 E	35*	47*
5 16	3 42.71	+19 10.2	3.392	2.383	1.2	21.1	3 E	—	—	1 16	0 0.33	+ 6 59.5	2.001	1.762	29.4	20.4	62 E	36*	42*
5 26	4 1.74	+19 58.9	3.423	2.411	1.0	21.1	2 W	—	—	1 26	0 22.88	+ 4 19.7	2.112	1.793	27.7	20.5	58 E	37*	38*
6 5	4 20.62	+20 39																	

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°
90916 1997 LR										310582 2001 TP₂₃₅									
<i>(continuation)</i>																			
3 17	2 12.23	+ 7 49.5	2.650	1.957	18.0	20.9	37 E	26*	22*	12 27	23 15.97	-11 54.1	1.746	1.685	33.2	21.3	70 E	33*	53*
3 27	2 33.75	+ 9 52.1	2.748	1.991	16.0	21.0	33 E	22*	19*	1 6	23 38.73	- 8 53.2	1.846	1.705	31.8	21.4	66 E	36*	47*
4 6	2 55.21	+11 44.7	2.841	2.026	13.9	21.0	29 E	18*	17*	1 16	0 1.31	- 5 52.1	1.948	1.727	30.3	21.5	62 E	38*	42*
4 16	3 16.63	+13 26.7	2.928	2.060	11.8	21.0	25 E	14*	14*	1 26	0 23.72	- 2 52.8	2.051	1.750	28.6	21.6	58 E	38*	38*
4 26	3 37.99	+14 57.7	3.007	2.095	9.7	21.0	21 E	9*	11*	2 5	0 46.00	+ 0 2.6	2.154	1.776	26.9	21.7	55 E	38*	33*
5 6	3 59.27	+16 17.2	3.079	2.129	7.6	21.0	16 E	5*	8*	155958 2001 QL₁₀₆									
5 16	4 20.46	+17 25.1	3.142	2.162	5.5	21.0	12 E	—	5*	12 27	23 16.92	- 5 4.9	1.651	1.651	34.7	19.4	73 E	40*	49*
5 26	4 41.50	+18 21.4	3.195	2.196	3.5	21.0	8 E	—	2*	1 6	23 37.16	- 0 56.1	1.772	1.687	32.9	19.6	69 E	44*	43*
6 5	5 2.35	+19 6.2	3.239	2.229	1.9	20.9	4 E	—	—	1 16	23 57.28	+ 2 57.6	1.895	1.724	31.1	19.7	65 E	46*	36*
6 15	5 22.95	+19 39.8	3.272	2.261	1.9	21.0	4 W	—	—	1 26	0 17.38	+ 6 37.5	2.020	1.763	29.2	19.8	61 E	47*	31*
6 25	5 43.25	+20 2.4	3.295	2.293	3.6	21.1	8 W	—	2*	2 5	0 37.52	+10 4.2	2.145	1.802	27.2	20.0	57 E	46*	26*
7 5	6 3.17	+20 14.7	3.305	2.324	5.5	21.3	13 W	—	6*	2 15	0 57.80	+13 18.4	2.269	1.842	25.2	20.1	53 E	44*	22*
7 15	6 22.66	+20 17.2	3.304	2.354	7.4	21.4	17 W	4*	10*	2 25	1 18.28	+16 20.7	2.390	1.883	23.1	20.2	48 E	41*	18*
7 25	6 41.64	+20 10.8	3.291	2.383	9.3	21.5	22 W	9*	13*	3 7	1 39.00	+19 11.3	2.507	1.924	21.1	20.3	44 E	37*	15*
303262 2004 RJ₈₄																			
12 27	23 14.21	+17 41.0	0.709	1.129	59.6	20.3	82 E	63*	33*	3 17	2 0.03	+21 50.3	2.619	1.965	19.0	20.3	40 E	34*	12*
1 6	23 33.09	+18 59.5	0.717	1.078	62.7	20.3	77 E	63*	29*	3 27	2 21.38	+24 17.8	2.726	2.006	17.0	20.4	36 E	30*	9*
1 16	23 54.37	+20 26.4	0.711	1.026	66.1	20.2	72 E	62*	25*	4 6	2 43.07	+26 33.5	2.827	2.046	15.0	20.4	32 E	26*	6*
1 26	0 17.89	+21 54.2	0.692	0.972	70.3	20.2	68 E	60*	21*	4 16	3 5.13	+28 37.3	2.920	2.087	13.0	20.5	28 E	22*	4*
1 31	0 30.43	+22 35.0	0.676	0.945	72.7	20.2	66 E	59*	20*	4 26	3 27.52	+30 29.1	3.005	2.127	11.1	20.5	24 E	18*	1*
2 5	0 43.43	+23 11.4	0.658	0.919	75.4	20.1	64 E	57*	19*	5 6	3 50.22	+32 8.6	3.081	2.166	9.4	20.5	21 E	15*	—
2 10	0 56.88	+23 41.1	0.635	0.893	78.4	20.1	62 E	56*	18*	5 16	4 13.20	+33 35.9	3.149	2.204	7.9	20.6	17 E	11*	—
2 15	1 10.68	+24 1.5	0.609	0.869	81.9	20.1	61 E	54*	18*	5 26	4 36.37	+34 50.7	3.206	2.242	6.7	20.6	15 E	8*	—
2 20	1 24.70	+24 9.3	0.580	0.845	85.7	20.1	58 E	52*	17*	6 5	4 59.66	+35 53.3	3.253	2.279	6.0	20.6	13 E	6*	—
2 25	1 38.78	+24 0.2	0.548	0.824	90.1	20.1	56 E	50*	17*	6 15	5 22.99	+36 44.0	3.290	2.315	5.9	20.7	14 W	6*	—
3 2	1 52.64	+23 29.1	0.513	0.804	95.0	20.1	54 E	47*	17*	6 25	5 46.22	+37 23.2	3.316	2.351	6.5	20.8	15 W	9*	—
3 7	2 5.98	+22 29.9	0.477	0.788	100.5	20.1	51 E	44*	18*	7 5	6 9.26	+37 51.5	3.330	2.385	7.6	20.8	18 W	12*	—
3 12	2 18.40	+20 55.7	0.440	0.774	106.6	20.2	48 E	41*	18*	7 15	6 31.99	+38 9.8	3.333	2.418	8.9	20.9	22 W	16*	—
3 17	2 29.38	+18 38.2	0.403	0.764	113.4	20.4	45 E	37*	19*	7 25	6 54.29	+38 19.3	3.325	2.451	10.4	21.0	26 W	20*	1*
3 19	2 33.24	+17 29.1	0.388	0.761	116.3	20.5	43 E	35*	19*	8 4	7 16.06	+38 21.0	3.304	2.482	11.9	21.1	30 W	24*	3*
3 21	2 36.73	+16 11.1	0.374	0.758	119.3	20.7	42 E	33*	20*	8 14	7 37.21	+38 16.5	3.272	2.512	13.4	21.2	35 W	29*	4*
3 23	2 39.82	+14 43.8	0.360	0.756	122.4	20.8	40 E	30*	20*	8 24	7 57.62	+38 7.4	3.229	2.542	14.9	21.2	40 W	34*	6*
3 25	2 42.46	+13 6.5	0.347	0.755	125.5	21.0	38 E	28*	20*	9 3	8 17.23	+37 55.3	3.174	2.570	16.3	21.2	45 W	39*	8*
3 27	2 44.62	+11 19.1	0.334	0.755	128.7	21.2	36 E	25*	21*	9 13	8 35.95	+37 42.3	3.109	2.597	17.5	21.3	51 W	45*	9*
4 1	2 47.68	+ 6 5.7	0.305	0.756	136.3	21.8	32 E	17*	21*	9 23	8 53.66	+37 30.4	3.033	2.623	18.7	21.3	57 W	51*	11*
4 6	2 47.14	- 0 5.8	0.283	0.761	142.4	22.5	28 E	8*	21*	10 3	9 10.30	+37 21.7	2.948	2.647	19.7	21.3	63 W	57*	13*
4 11	2 42.92	- 6 56.1	0.268	0.771	145.1	22.8	26 E	—	20*	10 13	9 25.74	+37 18.6	2.855	2.671	20.5	21.2	69 W	63*	14*
4 16	2 35.34	-13 52.3	0.260	0.783	143.0	22.4	28 E	—	17*	10 23	9 39.81	+37 23.4	2.755	2.694	21.0	21.2	76 W	70*	16*
317189 2001 YG₂																			
12 27	23 14.43	-11 53.0	1.645	1.596	35.3	21.0	70 E	33*	52*	11 2	9 52.37	+37 38.5	2.649	2.715	21.3	21.1	83 W	77*	18*
1 6	23 37.04	- 9 24.3	1.699	1.572	34.7	21.1	66 E	35*	47*	11 12	10 3.15	+38 6.3	2.541	2.735	21.2	21.0	91 W	82*	20*
1 16	0 0.57	- 6 44.5	1.751	1.551	34.0	21.1	62 E	37*	42*	11 22	10 11.86	+38 48.6	2.433	2.755	20.8	21.0	98 W	84	22*
1 26	0 24.94	- 3 56.3	1.800	1.534	33.1	21.1	58 E	37*	38*	12 2	10 18.15	+39 46.6	2.328	2.772	19.9	20.8	106 W	85	23*
2 5	0 50.07	- 1 2.5	1.849	1.520	32.2	21.1	55 E	38*	35*	12 12	10 21.57	+41 0.4	2.229	2.789	18.7	20.7	115 W	86	23*
2 15	1 15.97	+ 1 53.9	1.897	1.510	31.1	21.1	52 E	37*	32*	12 22	10 21.67	+42 27.4	2.140	2.805	17.0	20.6	123 W	87	22
2 25	1 42.60	+ 4 49.3	1.946	1.504	30.0	21.1	49 E	36*	30*	1 1	10 18.04	+44 2.8	2.067	2.819	15.1	20.5	132 W	89	20
3 7	2 9.96	+ 7 40.2	1.995	1.502	28.8	21.1	47 E	34*	27*	1 6	10 14.73	+44 51.2	2.037	2.826	14.0	20.4	136 W	90	19
3 17	2 38.05	+10 22.9	2.046	1.504	27.5	21.2	44 E	32*	26*	1 11	10 10.44	+45 38.2	2.013	2.833	13.0	20.3	139 W	89	18
3 27	3 6.84	+12 54.0	2.098	1.510	26.2	21.2	42 E	30*	24*	1 16	10 5.19	+46 22.3	1.994	2.839	12.1	20.3	143 W	89	18
4 6	3 36.23	+15 10.1	2.153	1.519	24.7	21.2	39 E	28*	23*	1 21	9 59.08	+47 2.2	1.981	2.845	11.4	20.3	145 W	88	17
4 16	4 6.17	+17 8.3	2.209	1.533	23.2	21.2	37 E	25*	22*	61343 2000 PC₅									
4 26	4 36.49	+18 46.2	2.268	1.550	21.7	21.3	35 E	22*	21*	12 27	23 17.44	-13 51.5	1.894	1.805	30.7	19.5	70 E	31*	54*
5 6	5 7.01	+20 2.3	2.328	1.570	20.1	21.3	32 E	19*	20*	1 6	23 38.93	-11 16.8	2.008	1.831	29.2	19.6	65 E	33*	48*
5 16	5 37.54	+20 55.5	2.390	1.594	18.4	21.4	30 E	16*	18*	1 16	0 0.17	- 8 40.4	2.123	1.859	27.6	19.7	61 E	35*	43*
5 26	6 7.85	+21 25.8	2.453	1.620	16.6	21.4	27 E	12*	17*	1 26	0 21.19	- 6 4.4	2.238	1.888	25.9	19.8	57 E	35*	39*
6 5	6 37.74	+21 33.9	2.517	1.649	14.8	21.4	25 E	9*	16*	2 5	0 42.01	- 3 30.6	2.351	1.918	24.1	19.9	53 E	34*	34*
6 15	7 7.02	+21 20.9	2.580	1.679	13.0	21.4	22 E	6*	14*	2 15	1 2.68	- 1 0.4	2.462	1.948	22.2	20.0	48 E	33*	31*
6 25	7 35.52	+20 48.7	2.642	1.712	11.1	21.5	19 E	4*	12*	2 25	1 23.25	+ 1 24.9	2.570	1.980	20.3	20.0	44 E	30*	27*
7 5	8 3.13	+19 59.3	2.702	1.746	9.1	21.5	16 E	2*	9*	3 7	1 43.72	+ 3 43.9	2.675	2.011					

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°
61343 2000 PC₅										447221 2005 UO₅									
<i>(continuation)</i>																			
10 23	8 30.84	+16 48.9	2.566	2.647	21.9	20.7	84 W	61*	42*	12 27	23 18.37	+29 7.2	0.336	1.029	72.8	20.9	88 E	74*	25*
11 2	8 38.74	+16 33.7	2.445	2.666	21.8	20.6	92 W	62	44*	1 1	23 19.74	+33 0.5	0.349	1.020	74.0	21.0	86 E	77*	19*
11 12	8 44.60	+16 26.7	2.323	2.684	21.3	20.5	100 W	61	46*	1 6	23 21.66	+36 40.4	0.362	1.013	75.0	21.1	84 E	78*	14*
11 22	8 48.17	+16 30.2	2.205	2.702	20.1	20.4	110 W	62	47*	1 11	23 24.06	+40 8.9	0.374	1.006	75.8	21.2	83 E	76*	9*
12 2	8 49.16	+16 46.2	2.092	2.718	18.4	20.2	120 W	62	47	1 16	23 26.93	+43 28.3	0.384	1.000	76.5	21.3	81 E	73*	5*
12 12	8 47.34	+17 15.8	1.991	2.733	15.9	20.0	130 W	62	47	1 21	23 30.22	+46 40.3	0.392	0.995	77.0	21.3	80 E	70*	—
12 22	8 42.65	+17 59.0	1.907	2.748	12.8	19.9	142 W	63	46	1 26	23 33.91	+49 46.3	0.399	0.991	77.4	21.4	79 E	67*	—
1 1	8 35.26	+18 53.8	1.844	2.761	9.0	19.6	154 W	64	45	1 31	23 38.06	+52 47.3	0.403	0.989	77.7	21.4	79 E	63*	—
1 6	8 30.69	+19 24.3	1.823	2.768	6.9	19.5	160 W	64	45	2 5	23 42.77	+55 44.5	0.406	0.987	78.0	21.4	78 E	60*	—
1 11	8 25.68	+19 56.0	1.808	2.774	4.8	19.4	166 W	65	44	2 10	23 48.25	+58 39.4	0.407	0.986	78.1	21.4	78 E	57*	—
1 16	8 20.34	+20 28.1	1.801	2.780	2.5	19.3	173 W	65	44	2 15	23 54.76	+61 33.5	0.406	0.987	78.2	21.4	78 E	54*	—
1 21	8 14.84	+20 59.8	1.802	2.786	0.5	19.1	179 W	66	43	2 20	0 2.70	+64 28.3	0.403	0.989	78.2	21.4	78 E	52*	—
331722 2002 TR₁₀										490581 2009 WZ₁₀₄									
12 27	23 17.75	-11 35.3	1.870	1.798	31.0	20.8	70 E	33*	53*	12 27	23 18.79	+1 56.0	0.509	0.992	74.2	21.1	76 E	47*	45*
1 6	23 37.43	-10 40.0	1.935	1.765	30.4	20.8	65 E	34*	48*	1 6	0 4.30	+3 34.8	0.534	1.007	72.0	21.2	77 E	49*	45*
1 16	23 58.27	-9 29.8	1.995	1.734	29.5	20.8	60 E	34*	43*	1 16	0 46.29	+5 1.6	0.563	1.016	70.5	21.3	77 E	50*	44*
1 26	0 20.14	-8 7.1	2.049	1.705	28.6	20.8	56 E	33*	39*	1 26	1 25.22	+6 17.2	0.593	1.020	69.5	21.4	76 E	51*	44*
2 5	0 42.93	-6 34.1	2.097	1.678	27.5	20.8	52 E	32*	36*	2 5	2 1.59	+7 21.7	0.622	1.019	69.1	21.4	75 E	51*	44*
2 15	1 6.59	-4 53.1	2.140	1.654	26.4	20.7	48 E	30*	33*	329502 2002 RM₁₃₇									
2 25	1 31.08	-3 6.5	2.179	1.633	25.3	20.7	45 E	28*	31*	12 27	23 19.25	-19 56.1	1.736	1.644	33.7	20.1	68 E	25*	57*
3 7	1 56.35	-1 16.9	2.214	1.615	24.2	20.7	42 E	25*	29*	1 1	23 31.24	-19 6.0	1.769	1.639	33.3	20.1	66 E	26*	54*
3 17	2 22.39	+0 33.1	2.246	1.601	23.0	20.7	39 E	22*	28*	1 6	23 43.38	-18 11.8	1.801	1.634	32.8	20.1	64 E	27*	52*
3 27	2 49.17	+2 20.7	2.277	1.590	21.9	20.7	37 E	19*	26*	1 11	23 55.63	-17 13.6	1.833	1.630	32.3	20.1	62 E	27*	50*
4 6	3 16.64	+4 3.2	2.307	1.583	20.8	20.6	34 E	16*	25*	1 16	0 8.00	-16 12.0	1.865	1.628	31.8	20.2	61 E	28*	48*
4 16	3 44.74	+5 37.9	2.337	1.580	19.7	20.6	32 E	13*	24*	1 26	0 33.01	-13 59.7	1.927	1.625	30.7	20.2	57 E	28*	45*
4 26	4 13.37	+7 2.2	2.368	1.580	18.6	20.6	30 E	10*	23*	2 5	0 58.30	-11 38.2	1.987	1.625	29.6	20.2	54 E	29*	42*
5 6	4 42.41	+8 13.8	2.400	1.585	17.5	20.6	28 E	6*	22*	2 15	1 23.83	-9 10.4	2.047	1.629	28.4	20.3	52 E	28*	39*
5 16	5 11.71	+9 10.9	2.435	1.593	16.3	20.6	26 E	3*	20*	2 25	1 49.56	-6 39.7	2.108	1.636	27.1	20.3	49 E	27*	37*
5 26	5 41.11	+9 51.9	2.473	1.606	15.1	20.6	24 E	—	18*	3 7	2 15.47	-4 9.6	2.169	1.647	25.8	20.3	46 E	26*	35*
6 5	6 10.42	+10 16.3	2.512	1.621	13.8	20.6	22 E	—	16*	3 17	2 41.53	-1 42.9	2.231	1.661	24.5	20.4	44 E	24*	33*
6 15	6 39.46	+10 23.8	2.554	1.640	12.5	20.7	20 E	—	14*	3 27	3 7.73	+0 37.1	2.295	1.678	23.1	20.4	41 E	21*	31*
6 25	7 8.07	+10 15.0	2.597	1.662	11.1	20.7	18 E	—	11*	4 6	3 34.00	+2 47.7	2.360	1.698	21.6	20.5	39 E	18*	30*
7 5	7 36.09	+9 50.8	2.641	1.687	9.6	20.7	16 E	—	8*	4 16	4 0.32	+4 46.7	2.427	1.721	20.1	20.5	36 E	15*	28*
7 15	8 3.43	+9 12.5	2.684	1.715	8.2	20.7	14 E	—	5*	4 26	4 26.60	+6 32.1	2.495	1.746	18.5	20.5	33 E	12*	26*
7 25	8 29.99	+8 22.0	2.727	1.745	6.8	20.7	12 E	—	2*	5 6	4 52.78	+8 2.6	2.564	1.773	16.9	20.6	31 E	8*	24*
8 4	8 55.73	+7 21.1	2.767	1.777	5.7	20.7	10 W	—	—	5 16	5 18.77	+9 17.3	2.633	1.802	15.2	20.6	28 E	4*	22*
8 14	9 20.64	+6 11.6	2.804	1.810	5.0	20.7	9 W	—	1*	5 26	5 44.47	+10 15.8	2.701	1.833	13.5	20.7	25 E	1*	19*
8 24	9 44.71	+4 55.5	2.837	1.845	5.0	20.8	9 W	—	3*	6 5	6 9.80	+10 58.2	2.767	1.865	11.7	20.7	22 E	—	16*
9 3	10 7.97	+3 34.8	2.863	1.881	5.7	20.9	11 W	—	5*	6 15	6 34.68	+11 25.0	2.831	1.898	10.0	20.7	19 E	—	13*
9 13	10 30.46	+2 11.1	2.883	1.919	7.0	21.0	13 W	2*	7*	6 25	6 59.02	+11 36.9	2.891	1.933	8.2	20.7	16 E	—	9*
9 23	10 52.19	+0 46.2	2.895	1.957	8.6	21.2	17 W	6*	9*	7 5	7 22.76	+11 35.3	2.946	1.968	6.6	20.7	13 E	—	5*
10 3	11 13.21	+0 38.3	2.898	1.995	10.3	21.3	21 W	11*	11*	7 15	7 45.86	+11 21.2	2.995	2.004	5.3	20.7	10 E	—	—
10 13	11 33.56	-2 0.9	2.892	2.034	12.1	21.4	25 W	15*	14*	7 25	8 8.28	+10 56.1	3.037	2.040	4.5	20.8	9 W	—	—
10 23	11 53.22	-3 19.9	2.875	2.073	13.9	21.5	30 W	19*	16*	8 4	8 30.00	+10 21.5	3.072	2.077	4.6	20.8	9 W	—	3*
505977 2015 FY₃₄₄										9 3									
12 27	23 17.86	-6 23.2	1.850	1.814	31.1	21.0	72 E	39*	50*	9 3	9 30.88	+7 55.7	3.117	2.188	8.6	21.2	19 W	8*	11*
1 6	23 31.73	-3 1.9	1.915	1.773	30.6	21.0	67 E	41*	43*	9 13	9 49.75	+6 58.2	3.110	2.225	10.4	21.3	24 W	13*	13*
1 16	23 47.13	+0 23.4	1.975	1.735	29.9	21.0	61 E	43*	36*	9 23	10 7.90	+5 58.9	3.092	2.262	12.2	21.4	28 W	18*	16*
1 26	0 3.95	+3 52.5	2.028	1.697	28.9	21.0	57 E	43*	30*	10 3	10 25.33	+4 59.2	3.062	2.298	14.0	21.4	34 W	23*	19*
2 5	0 22.14	+7 24.7	2.075	1.662	27.9	20.9	52 E	42*	24*	10 13	10 42.02	+4 0.7	3.019	2.334	15.7	21.5	39 W	28*	22*
2 15	0 41.74	+10 59.2	2.116	1.629	26.8	20.9	48 E	40*	20*										
2 25	1 2.80	+14 34.5	2.151	1.598	25.6	20.9	44 E	37*	16*										
3 7	1 25.45	+18 8.7	2.180	1.571	24.4	20.8	41 E	34*	13*										
3 17	1 49.86	+21 39.1	2.205	1.547	23.3	20.8	38 E	32*	10*										
3 27	2 16.22	+25 2.4	2.226	1.526	22.2	20.7	35 E	29*	8*										
4 6	2 44.70	+28 14.2	2.245	1.510	21.3	20.7	33 E	27*	6*										
4 16	3 15.50	+31 9.5	2.262	1.491	20.3	20.7	31 E	25*	4*										
4 26	3 48.65	+33 42.4	2.280	1.491	19.5	20.6	30 E	24*	3*										
5 6	4 24.05	+35 46.7	2.299	1.488	18.7	20.6	28 E	22*	3*										
5 16	5 1.39	+37 16.6	2.320	1.490	17.9	20.6	27 E	21*	2*										
5 26	5 40.07	+38 7.5	2.344	1.496	17.1	20.6	26 E	19*	2*										
6 5	6 19.30	+38 16.5	2.371	1.508	16.2	20.6	24 E	18*	2*										
6 15	6 58.18	+37 43.9	2.403	1.523	15.2	20.7	23 E	17*	3*										
6 25	7 35.89	+36 32.3	2.439	1.543	14.2	20.7	22 E	15*	3*										
7 5	8 11.81	+34 46.5	2.479	1.566	13.1	20.7	20 E	14*	3*										
7 15	8 45.58	+32 32.6	2.522	1.593	11.8	20.7	19 E	12*	2*										
7 25	9 17.07	+29 57.1	2.567	1.623	10.6	20.8	17 E	11*	1*										
8 4	9 46.36	+27 6.0	2.614	1.656	9.2	20.8	15 E	9*	—										
8 14	10 13.61	+24 4.7	2.660	1.691	8.0	20.8	13 E	7*	—										
8 24	10 39.03	+20 57.6	2.705	1.728	6.9	20.9	12 E	6*	—										
9 3	11 2.87	+17 48.2	2.748	1.767	6.1	20.9	11 E	4*	—										
9 13	11 25.35	+14 39.3	2.786	1.807	6.0	21.0	11 E	2*	—										
9 23	11 46.65	+11 33.0	2.818	1.848	6.5	21.1	12 W	4*	—										
10 3	12 6.95	+8 31.0	2.843	1.890	7.5	21.2	14 W	8*	—										
10 13	12 26.39	+5 34.3	2.860																

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°										
98891 2001 BK₄₁										220219 2002 VM₉₉ (continuation)																			
12 27	23 19.48	+ 1 34.4	2.998	2.920	19.1	21.3	76 E	47*	46*	7 10	6 10.68	+36 57.5	2.607	1.692	12.1	19.9	20 W	14*	—	8 14	8 12.72	+34 43.1	2.452	1.620	16.7	19.8	27 W	21*	1*
1 6	23 29.63	+ 2 15.4	3.162	2.946	18.1	21.4	68 E	46*	39*	7 15	6 28.02	+37 1.9	2.583	1.679	12.8	19.8	21 W	15*	—	8 4	7 38.14	+36 0.8	2.494	1.637	15.4	19.8	25 W	19*	—
1 16	23 40.52	+ 3 4.3	3.318	2.970	16.9	21.5	61 E	45*	33*	7 20	6 45.50	+36 58.5	2.560	1.668	13.5	19.8	23 W	16*	—	8 9	7 55.52	+35 25.8	2.473	1.628	16.1	19.8	26 W	20*	—
1 26	23 52.02	+ 3 59.7	3.465	2.993	15.4	21.5	54 E	41*	27*	7 25	7 3.06	+36 47.3	2.538	1.656	14.2	19.8	24 W	17*	—	8 14	8 12.72	+34 43.1	2.452	1.620	16.7	19.8	27 W	21*	1*
2 5	0 3.98	+ 5 0.3	3.601	3.016	13.8	21.6	47 E	37*	22*	7 30	7 20.63	+36 28.0	2.515	1.646	14.8	19.8	24 W	18*	—	8 14	8 12.72	+34 43.1	2.452	1.620	16.7	19.8	27 W	21*	1*
467845 2010 VR₁₄																													
12 27	23 20.57	-18 47.3	1.836	1.740	31.8	20.7	69 E	26*	57*	8 24	8 46.32	+32 56.2	2.412	1.607	17.9	19.8	29 W	23*	1*	9 3	9 18.63	+30 43.3	2.375	1.598	19.0	19.8	31 W	25*	2*
1 6	23 40.94	-14 32.1	1.945	1.766	30.2	20.8	65 E	30*	50*	9 13	9 49.43	+28 8.5	2.339	1.592	20.1	19.8	33 W	27*	3*	9 23	10 18.63	+25 16.1	2.304	1.591	21.3	19.8	35 W	29*	4*
1 16	0 0.91	-10 26.1	2.056	1.794	28.6	20.9	61 E	33*	44*	10 3	10 46.27	+22 10.5	2.269	1.593	22.4	19.8	37 W	31*	6*	10 13	11 12.40	+18 55.9	2.234	1.599	23.5	19.8	40 W	34*	8*
1 26	0 20.60	- 6 30.3	2.170	1.823	26.8	21.0	57 E	35*	39*	10 23	11 37.14	+15 35.9	2.197	1.609	24.7	19.8	42 W	36*	11*	11 2	12 0.59	+12 13.7	2.158	1.623	25.8	19.8	45 W	39*	14*
2 5	0 40.08	- 2 45.2	2.284	1.853	24.9	21.1	52 E	35*	34*	11 2	12 22.86	+ 8 52.0	2.115	1.640	27.0	19.8	49 W	41*	18*	11 12	12 22.86	+ 8 52.0	2.115	1.640	27.0	19.8	49 W	41*	18*
2 15	0 59.46	+ 0 48.7	2.398	1.885	22.9	21.2	48 E	34*	29*	11 22	12 44.00	+ 5 32.8	2.069	1.660	28.1	19.8	52 W	42*	23*	12 2	13 4.07	+ 2 17.7	2.018	1.684	29.1	19.8	56 W	42*	28*
2 25	1 18.81	+ 4 11.4	2.509	1.918	20.8	21.2	44 E	32*	25*	12 2	13 23.06	- 0 52.3	1.962	1.710	30.1	19.8	61 W	42*	35*	12 12	13 23.06	- 0 52.3	1.962	1.710	30.1	19.8	61 W	42*	35*
3 7	1 38.19	+ 7 22.6	2.617	1.951	18.7	21.3	39 E	29*	21*	12 22	13 40.92	- 3 56.5	1.901	1.738	31.0	19.8	65 W	40*	42*	1 1	13 57.55	- 6 54.9	1.834	1.769	31.6	19.8	71 W	38*	49*
3 17	1 57.65	+10 22.3	2.721	1.985	16.6	21.3	35 E	25*	17*	1 11	14 26.37	-12 35.4	1.688	1.836	32.1	19.7	82 W	32	66*	1 11	14 26.37	-12 35.4	1.688	1.836	32.1	19.7	82 W	32	66*
3 27	2 17.24	+13 10.6	2.818	2.019	14.4	21.4	30 E	22*	14*	2 5	0 59.02	+ 6 40.8	1.952	1.720	28.6	20.6	56 E	44*	29*	2 5	0 59.02	+ 6 40.8	1.952	1.720	28.6	20.6	56 E	44*	29*
4 6	2 36.99	+15 47.3	2.909	2.054	12.2	21.4	26 E	18*	11*	2 15	1 23.35	+ 9 15.1	2.055	1.750	26.8	20.7	53 E	42*	27*	3 7	2 12.16	+13 57.0	2.264	1.781	24.9	20.8	49 E	39*	24*
4 16	2 56.92	+18 12.7	2.993	2.089	10.0	21.4	21 E	14*	8*	3 17	2 12.16	+13 57.0	2.264	1.781	24.9	20.8	49 E	39*	24*	3 27	3 1.18	+17 53.7	2.469	1.848	23.1	20.9	42 E	33*	20*
4 26	3 17.03	+20 26.5	3.067	2.123	7.8	21.4	17 E	9*	4*	4 6	3 25.74	+19 32.4	2.569	1.883	19.1	21.0	38 E	29*	18*	4 6	3 27.54	+18 30.5	2.455	1.878	17.0	21.0	34 E	25*	17*
5 6	3 37.34	+22 28.9	3.133	2.158	5.7	21.4	12 E	6*	1*	4 16	3 50.29	+20 57.2	2.666	1.918	17.0	21.0	34 E	25*	17*	4 26	4 17.77	+22 7.5	2.759	1.954	15.0	21.1	30 E	20*	15*
5 16	3 57.82	+24 20.0	3.188	2.192	3.8	21.4	8 E	2*	—	5 6	4 39.13	+23 3.3	2.847	1.991	12.9	21.1	26 E	16*	13*	5 6	4 39.13	+23 3.3	2.847	1.991	12.9	21.1	26 E	16*	13*
5 26	4 18.44	+25 59.9	3.233	2.227	2.4	21.4	5 E	—	—	5 16	5 3.29	+23 44.6	2.929	2.027	10.8	21.1	22 E	12*	10*	5 26	5 27.16	+24 11.7	3.004	2.063	8.7	21.2	18 E	8*	8*
6 5	4 39.18	+27 28.8	3.268	2.260	2.6	21.4	6 W	—	—	6 5	5 50.68	+24 25.0	3.072	2.100	6.5	21.1	14 E	4*	5*	6 5	5 50.68	+24 25.0	3.072	2.100	6.5	21.1	14 E	4*	5*
381783 2009 TS₂										16474 1990 QG₃																			
12 27	23 20.90	- 8 32.0	1.628	1.626	35.2	20.8	72 E	36	52*	12 27	23 21.76	- 4 19.8	1.563	1.603	36.2	20.1	74 E	41	50*	1 6	23 46.06	- 1 32.7	1.656	1.621	34.9	20.2	71 E	43*	45*
1 6	23 43.98	- 5 35.8	1.704	1.626	34.3	20.8	69 E	39*	47*	1 16	0 10.38	+ 1 14.7	1.752	1.642	33.5	20.3	67 E	45*	40*	1 16	0 7.50	- 2 35.6	1.782	1.630	33.1	20.9	65 E	41*	42*
1 16	0 7.50	- 2 35.6	1.782	1.630	33.1	20.9	65 E	41*	42*	1 26	0 34.70	+ 4 0.0	1.851	1.666	32.0	20.4	64 E	46*	36*	2 5	0 55.64	+ 3 26.0	1.942	1.649	30.5	21.0	58 E	42*	34*
1 26	0 31.41	+ 0 26.0	1.861	1.638	31.9	21.0	61 E	42*	37*	2 5	0 59.02	+ 6 40.8	1.952	1.692	30.3	20.5	60 E	45*	32*	2 15	1 20.21	+ 6 21.6	2.025	1.663	29.0	21.1	55 E	41*	30*
2 5	0 55.64	+ 3 26.0	1.942	1.649	30.5	21.0	58 E	42*	34*	2 15	1 23.35	+ 9 15.1	2.055	1.720	28.6	20.6	56 E	44*	29*	2 25	1 45.10	+ 9 10.3	2.110	1.681	27.4	21.2	51 E	40*	28*
2 15	1 20.21	+ 6 21.6	2.025	1.663	29.0	21.1	55 E	41*	30*	2 25	1 47.74	+11 41.1	2.159	1.750	26.8	20.7	53 E	42*	27*	3 7	2 10.29	+11 49.5	2.195	1.701	25.7	21.2	48 E	37*	25*
2 25	1 45.10	+ 9 10.3	2.110	1.681	27.4	21.2	51 E	40*	28*	3 7	2 12.16	+13 57.0	2.264	1.781	24.9	20.8	49 E	39*	24*	3 17	2 35.79	+14 17.1	2.282	1.724	24.0	21.3	45 E	35*	23*
3 7	2 10.29	+11 49.5	2.195	1.701	25.7	21.2	48 E	37*	25*	3 17	2 12.16	+13 57.0	2.264	1.781	24.9	20.8	49 E	39*	24*	3 27	3 1.55	+16 31.3	2.369	1.750	22.2	21.4	41 E	32*	21*
3 17	2 35.79	+14 17.1	2.282	1.724	24.0	21.3	45 E	35*	23*	3 27	3 1.18	+17 53.7	2.469	1.848	23.1	20.9	42 E	33*	20*	4 6	3 27.54	+18 30.5	2.455	1.778	20.3	21.4	38 E	28*	19*
3 27	3 1.55	+16 31.3	2.369	1.750	22.2	21.4	41 E	32*	21*	4 6	3 25.74	+19 32.4	2.569	1.883	19.1	21.0	38 E	29*	18*	4 16	3 53.69	+20 13.5	2.541	1.808	18.4	21.5	35 E	25*	18*
4 6	3 27.54	+18 30.5	2.455	1.778	20.3	21.4	38 E	28*	19*	4 16	3 50.29	+20 57.2	2.666	1.918	17.0	21.0	34 E	25*	17*	4 26	4 17.77	+22 7.5	2.759	1.954	15.0	21.1	30 E	20*	15*
4 16	3 53.69	+20 13.5	2.541	1.808	18.4	21.5	35 E	25*	18*	5 6	4 39.13	+23 3.3	2.847	1.991	12.9	21.1	26 E	16*	13*	5 6	4 39.13	+23 3.3	2.847	1.991	12.9	21.1	26 E	16*	13*
506782 2007 AN₁₀										274627 2008 TE₈₂																			
12 27	23 21.22	-26 53.7	1.695	1.585	34.7	21.0	66 E	18	59*	12 27	23 22.12	- 3 4.1	1.906	1.900	30.0	20.1	75 E	42	49*	1 1	23 34.17	-25 3.9	1.724	1.585	34.2	21.0	65 E	20*	56*
1 1	23 34.17	-25 3.9	1.724	1.585	34.2	21.0	65 E	20*	56*	1 6	23 42.84	- 1 19.1	2.039	1.936	28.5	20.2	70 E	43*	44*	1 6	23 47.03	-23 11.0	1.754	1.585	33.8	21.0	64 E	22*	54*
1 6	23 47.03	-23 11.0	1.754	1.585	33.8	21.0	64 E	22*	54*	1 16	0 3.41	+ 0 29.3	2.173	1.973	26.9	20.4	65 E	44*	39*	1 11	23 59.82	-21 15.5	1.784	1.587	33.3	21.1	62 E	23*	52*
1 11	23 59.82	-21 15.5	1.784	1.587	33.3	21.1	62 E	23*	52*	1 26	0 23.81	+ 2 19.4	2.307																

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°
251705 1996 UJ										231716 1999 BT₂									
12 27	23 23.23	- 2 45.8	1.782	1.800	31.9	20.9	75 E	42	49*	12 27	23 24.76	+25 21.5	1.658	1.893	31.3	19.3	88 E	70	29*
1 6	23 37.27	+ 0 18.6	1.848	1.760	31.5	20.9	69 E	45*	42*	1 6	23 41.14	+25 57.0	1.716	1.856	31.7	19.4	82 E	70*	25*
1 16	23 52.99	+ 3 28.2	1.908	1.722	30.9	20.9	64 E	46*	35*	1 16	23 59.92	+26 47.2	1.771	1.820	31.8	19.4	77 E	68*	21*
1 26	0 10.28	+ 6 42.6	1.962	1.685	30.1	20.9	59 E	46*	29*	1 26	0 20.92	+27 49.4	1.823	1.786	31.6	19.4	72 E	65*	18*
2 5	0 29.08	+10 0.7	2.010	1.651	29.2	20.9	55 E	45*	24*	2 5	0 44.01	+28 59.9	1.871	1.754	31.4	19.4	68 E	62*	15*
2 15	0 49.43	+13 21.2	2.051	1.618	28.2	20.9	51 E	43*	20*	2 15	1 9.16	+30 14.7	1.917	1.723	30.9	19.4	64 E	58*	13*
2 25	1 11.39	+16 42.4	2.087	1.589	27.2	20.8	47 E	40*	16*	2 25	1 36.27	+31 29.3	1.959	1.695	30.3	19.4	60 E	54*	12*
3 7	1 35.06	+20 1.7	2.119	1.562	26.1	20.8	44 E	37*	13*	3 7	2 5.26	+32 38.7	2.000	1.670	29.7	19.4	56 E	50*	11*
3 17	2 0.63	+23 15.9	2.146	1.539	25.1	20.7	41 E	35*	11*	3 17	2 35.99	+33 38.0	2.041	1.647	28.9	19.4	53 E	47*	11*
3 27	2 28.22	+26 21.2	2.170	1.519	24.1	20.7	38 E	32*	9*	3 27	3 8.24	+34 22.2	2.080	1.628	28.0	19.4	50 E	44*	11*
4 6	2 57.98	+29 12.6	2.192	1.504	23.1	20.7	36 E	30*	7*	4 6	3 41.69	+34 46.7	2.121	1.612	27.0	19.4	47 E	41*	11*
4 16	3 29.98	+31 44.9	2.214	1.493	22.1	20.7	34 E	28*	6*	4 16	4 15.93	+34 47.9	2.162	1.600	25.8	19.4	44 E	38*	12*
4 26	4 4.17	+33 52.1	2.236	1.487	21.2	20.6	32 E	26*	6*	4 21	4 33.20	+34 39.0	2.183	1.595	25.2	19.4	43 E	36*	12*
5 6	4 40.28	+35 28.3	2.260	1.485	20.3	20.6	31 E	24*	5*	4 26	4 50.48	+34 23.4	2.205	1.592	24.6	19.4	41 E	34*	13*
5 16	5 17.88	+36 28.9	2.286	1.488	19.4	20.6	29 E	23*	5*	5 1	5 7.71	+34 1.1	2.227	1.589	23.9	19.4	40 E	32*	13*
5 26	5 56.26	+36 50.3	2.315	1.495	18.4	20.6	28 E	21*	6*	5 6	5 24.83	+33 32.0	2.249	1.587	23.2	19.4	38 E	31*	14*
6 5	6 34.63	+36 31.6	2.349	1.508	17.3	20.7	26 E	19*	6*	5 11	5 41.79	+32 56.4	2.272	1.586	22.5	19.4	37 E	29*	14*
6 15	7 12.22	+35 34.3	2.386	1.524	16.2	20.7	25 E	17*	6*	5 16	5 58.54	+32 14.3	2.296	1.586	21.8	19.4	36 E	27*	14*
6 25	7 48.36	+34 2.1	2.427	1.544	14.9	20.7	23 E	15*	6*	5 21	6 15.03	+31 26.0	2.319	1.588	21.0	19.4	34 E	25*	15*
7 5	8 22.61	+32 0.1	2.472	1.568	13.6	20.7	21 E	13*	6*	5 26	6 31.22	+30 31.8	2.343	1.590	20.2	19.4	33 E	22*	15*
7 15	8 54.79	+29 34.4	2.520	1.596	12.1	20.8	19 E	11*	5*	5 31	6 47.09	+29 32.1	2.368	1.593	19.4	19.4	31 E	20*	15*
7 25	9 24.87	+26 50.7	2.569	1.626	10.6	20.8	17 E	10*	4*	6 5	7 2.62	+28 27.1	2.393	1.597	18.5	19.4	30 E	18*	16*
8 4	9 52.95	+23 54.4	2.619	1.659	9.0	20.8	15 E	8*	3*	6 15	7 32.62	+26 3.2	2.443	1.608	16.8	19.4	27 E	14*	15*
8 14	10 19.23	+20 50.0	2.669	1.694	7.4	20.8	12 E	6*	1*	6 25	8 1.16	+23 23.4	2.494	1.623	15.0	19.4	24 E	10*	15*
8 24	10 43.91	+17 41.5	2.717	1.731	5.9	20.8	10 E	4*	—	7 5	8 28.29	+20 30.7	2.545	1.642	13.1	19.4	22 E	6*	14*
9 3	11 7.21	+14 31.8	2.762	1.770	4.8	20.9	8 E	2*	—	7 15	8 54.10	+17 28.1	2.595	1.663	11.2	19.4	19 E	3*	12*
9 13	11 29.32	+11 23.2	2.803	1.810	4.2	20.9	8 E	—	—	7 25	9 18.73	+14 18.1	2.643	1.688	9.4	19.4	16 E	—	10*
9 23	11 50.43	+ 8 17.7	2.837	1.851	4.6	21.0	9 W	1*	—	8 4	9 42.29	+11 2.9	2.690	1.715	7.6	19.4	13 E	—	7*
10 3	12 10.67	+ 5 16.5	2.865	1.893	5.8	21.1	11 W	5*	—	8 14	10 4.96	+ 7 44.5	2.733	1.745	5.8	19.4	10 E	—	4*
10 13	12 30.17	+ 2 20.6	2.885	1.935	7.4	21.3	15 W	8*	—	8 24	10 26.83	+ 4 24.4	2.773	1.777	4.4	19.4	8 E	—	—
10 23	12 49.02	- 0 29.2	2.895	1.977	9.2	21.4	19 W	12*	3*	9 3	10 48.06	+ 1 4.0	2.809	1.811	3.7	19.4	7 E	—	—
136698 1995 SO₆₃										8444 Popovich									
12 27	23 24.06	- 3 47.3	1.732	1.754	32.8	20.9	75 E	41	50*	12 27	23 24.89	- 2 41.3	1.726	1.760	32.8	17.8	75 E	42	50*
1 6	23 46.44	- 1 29.8	1.854	1.789	31.3	21.0	71 E	43*	45*	1 6	23 46.24	- 0 18.5	1.838	1.783	31.5	17.9	71 E	44*	44*
1 16	0 8.55	+ 0 47.8	1.979	1.825	29.6	21.2	66 E	44*	40*	1 16	0 7.71	+ 2 5.1	1.952	1.807	30.0	18.0	67 E	46*	39*
1 26	0 30.41	+ 3 3.9	2.105	1.863	27.9	21.3	62 E	44*	36*	1 26	0 29.27	+ 4 27.7	2.066	1.833	28.5	18.1	63 E	46*	35*
2 5	0 52.04	+ 5 16.9	2.232	1.901	26.1	21.4	58 E	43*	32*	2 5	0 50.90	+ 6 47.6	2.180	1.861	26.8	18.2	58 E	45*	31*
12 27	23 24.40	- 6 8.2	1.687	1.703	33.7	19.6	74 E	39	52*	2 15	1 12.62	+ 9 3.5	2.293	1.889	25.0	18.3	54 E	43*	27*
1 6	23 46.23	- 3 2.8	1.804	1.735	32.2	19.7	70 E	42*	46*	2 25	1 34.44	+11 13.9	2.404	1.919	23.2	18.4	50 E	40*	24*
1 16	0 7.85	- 0 2.3	1.923	1.768	30.5	19.9	66 E	44*	40*	3 7	1 56.34	+13 17.4	2.513	1.949	21.3	18.5	45 E	36*	21*
1 26	0 29.32	+ 2 52.3	2.044	1.803	28.8	20.0	62 E	44*	36*	3 17	2 18.37	+15 13.1	2.619	1.980	19.3	18.5	41 E	32*	19*
2 5	0 50.68	+ 5 39.9	2.165	1.839	27.0	20.1	58 E	44*	31*	3 27	2 40.49	+16 59.9	2.720	2.011	17.3	18.6	37 E	28*	17*
2 15	1 11.99	+ 8 19.8	2.285	1.875	25.1	20.2	54 E	42*	28*	4 6	3 2.70	+18 36.8	2.815	2.042	15.2	18.6	32 E	24*	14*
2 25	1 33.29	+10 51.2	2.404	1.912	23.1	20.3	49 E	39*	24*	4 16	3 24.98	+20 3.3	2.905	2.074	13.2	18.7	28 E	20*	12*
3 7	1 54.62	+13 13.4	2.521	1.949	21.1	20.4	45 E	36*	21*	4 26	3 47.30	+21 18.7	2.989	2.106	11.1	18.7	24 E	15*	10*
3 17	2 16.01	+15 25.8	2.633	1.987	19.0	20.5	41 E	32*	18*	5 6	4 9.61	+22 22.5	3.064	2.138	9.0	18.7	19 E	11*	7*
3 27	2 37.47	+17 27.8	2.741	2.024	16.9	20.5	36 E	28*	16*	5 16	4 31.86	+23 14.7	3.132	2.170	6.8	18.7	15 E	6*	5*
4 6	2 59.01	+19 19.1	2.843	2.062	14.8	20.6	32 E	24*	13*	5 26	4 53.98	+23 55.0	3.191	2.202	4.7	18.6	10 E	2*	2*
4 16	3 20.62	+20 59.3	2.938	2.099	12.7	20.6	27 E	20*	11*	6 5	5 15.90	+24 23.5	3.240	2.233	2.7	18.6	6 E	—	—
4 26	3 42.29	+22 28.1	3.026	2.136	10.6	20.6	23 E	15*	8*	6 15	5 37.57	+24 40.7	3.279	2.264	0.8	18.5	2 E	—	—
5 6	4 3.97	+23 45.2	3.106	2.172	8.4	20.6	18 E	11*	6*	6 25	5 58.88	+24 46.7	3.308	2.294	1.7	18.6	4 W	—	—
5 16	4 25.64	+24 50.8	3.176	2.208	6.3	20.6	14 E	7*	3*	7 5	6 19.78	+24 42.3	3.325	2.325	3.7	18.8	9 W	1*	1*
5 26	4 47.22	+25 44.7	3.236	2.243	4.3	20.6	10 E	3*	—	7 15	6 40.19	+24 28.1	3.331	2.354	5.7	18.9	13 W	5*	4*
6 5	5 8.66	+26 27.3	3.286	2.278	2.5	20.5	6 E	—	—	7 25	7 0.04	+24 5.0	3.326	2.383	7.7	19.0	18 W	9*	8*
6 15	5 29.90	+26 58.8	3.325	2.312	1.7	20.5	4 W	—	—	8 4	7 19.27	+23 33.9	3.308	2.412	9.7	19.1	23 W	14*	11*
6 25	5 50.85	+27 19.8	3.352	2.345	2.9	20.7	7 W	—	—	8 14	7 37.81	+22 55.8	3.278	2.439	11.5	19.2	29 W	19*	14*
7 5	6 11.44	+27 30.9	3.367	2.378	4.7	20.8	11 W	4*	1*	8 24	7 55.61	+22 11.8	3.236	2.466	13.3	19.3	34 W	25*	16*
7 15	6 31.61	+27 32.8	3.370	2.409	6.7	21.0	16 W	8*	4*	9 3	8 12.61	+21 23.2	3.182	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°
8444 Popovich (continuation)										14211 1999 NT₁ (continuation)									
12 2	9 53.30	+14 39.0	2.276	2.694	20.8	19.0	104 W	60	48*	11 2	10 35.93	- 4 42.9	3.026	2.637	18.6	19.4	58 W	35*	41*
12 12	9 55.60	+14 30.0	2.160	2.712	19.4	18.8	114 W	59	50	11 12	10 45.83	- 6 51.6	2.933	2.665	19.6	19.4	65 W	36*	47*
12 22	9 55.26	+14 34.5	2.054	2.729	17.4	18.7	124 W	60	49	11 22	10 54.46	- 8 59.6	2.832	2.692	20.4	19.3	72 W	36*	54*
1 1	9 52.13	+14 52.9	1.960	2.746	14.6	18.5	135 W	60	49	12 2	11 1.65	-11 6.0	2.725	2.718	20.9	19.3	79 W	34	61*
1 11	9 46.23	+15 24.2	1.885	2.761	11.3	18.3	147 W	60	49	12 12	11 7.14	-13 9.2	2.614	2.743	21.0	19.2	87 W	32	69*
1 21	9 37.91	+16 5.1	1.834	2.775	7.3	18.1	159 W	61	48	12 22	11 10.68	-15 7.6	2.503	2.767	20.7	19.1	95 W	30	77*
480997 2004 DT₃₉										386621 2009 RL₅₉									
12 27	23 24.94	-21 19.9	1.624	1.567	35.8	20.4	69 E	24	58*	12 27	23 27.06	- 4 10.0	1.631	1.679	34.5	21.2	75 E	41	51*
1 6	23 48.17	-20 19.1	1.660	1.526	35.6	20.4	65 E	25*	54*	1 6	23 49.83	- 1 39.3	1.724	1.691	33.4	21.3	71 E	43*	46*
1 16	0 12.97	-18 57.0	1.689	1.489	35.4	20.4	61 E	25*	50*	1 16	0 12.86	+ 0 53.9	1.821	1.707	32.2	21.4	68 E	45*	41*
1 26	0 39.17	-17 15.3	1.713	1.458	35.0	20.3	58 E	26*	47*	1 26	0 36.12	+ 3 27.2	1.918	1.725	30.8	21.5	64 E	45*	37*
2 5	1 6.62	-15 15.8	1.732	1.432	34.7	20.3	56 E	26*	45*	2 5	0 59.54	+ 5 58.2	2.018	1.746	29.2	21.6	60 E	45*	33*
2 15	1 35.22	-13 0.4	1.749	1.413	34.4	20.3	54 E	26*	43*	139092 2001 FU₃₂									
2 25	2 4.88	-10 32.0	1.766	1.400	34.0	20.3	52 E	26*	42*	12 27	23 27.08	+ 5 39.6	1.993	2.054	28.1	19.7	79 E	51	44*
3 2	2 20.06	- 9 14.0	1.775	1.397	33.8	20.3	52 E	25*	41*	1 6	23 43.11	+ 5 35.0	2.076	2.018	27.8	19.7	73 E	50*	40*
3 7	2 35.47	- 7 54.2	1.785	1.395	33.6	20.3	51 E	25*	41*	1 16	0 0.46	+ 5 46.9	2.153	1.983	27.1	19.8	67 E	49*	35*
3 12	2 51.08	- 6 33.0	1.796	1.395	33.4	20.3	51 E	25*	41*	1 26	0 18.95	+ 6 12.5	2.225	1.947	26.2	19.8	61 E	46*	31*
3 17	3 6.88	- 5 11.2	1.808	1.397	33.1	20.3	50 E	25*	40*	2 5	0 38.47	+ 6 49.1	2.291	1.913	25.1	19.8	55 E	43*	28*
3 22	3 22.86	- 3 49.4	1.822	1.401	32.8	20.3	50 E	24*	40*	2 15	0 58.95	+ 7 33.9	2.350	1.879	23.8	19.7	50 E	39*	25*
3 27	3 38.97	- 2 28.3	1.838	1.406	32.5	20.3	49 E	24*	40*	2 25	1 20.33	+ 8 24.5	2.401	1.846	22.8	19.7	45 E	35*	23*
4 1	3 55.20	- 1 8.6	1.856	1.414	32.1	20.4	49 E	23*	39*	3 7	1 42.56	+ 9 18.2	2.445	1.814	21.0	19.7	41 E	31*	21*
4 6	4 11.51	+ 0 9.0	1.876	1.423	31.7	20.4	48 E	23*	39*	3 17	2 5.64	+10 12.4	2.482	1.783	19.4	19.6	37 E	27*	19*
4 16	4 44.31	+ 2 35.4	1.924	1.446	30.7	20.4	47 E	21*	38*	3 27	2 29.55	+11 4.8	2.511	1.754	17.8	19.5	33 E	22*	18*
4 26	5 17.08	+ 4 46.0	1.983	1.475	29.4	20.5	46 E	19*	37*	4 6	2 54.25	+11 52.8	2.535	1.727	16.2	19.5	29 E	18*	16*
5 6	5 49.55	+ 6 37.0	2.052	1.509	28.0	20.6	45 E	17*	36*	4 16	3 19.76	+12 34.2	2.552	1.702	14.7	19.4	26 E	14*	15*
5 16	6 21.47	+ 8 6.2	2.130	1.548	26.3	20.7	43 E	15*	35*	4 26	3 46.00	+13 6.5	2.565	1.680	13.2	19.3	22 E	9*	14*
5 26	6 52.60	+ 9 12.8	2.217	1.591	24.5	20.8	41 E	12*	33*	5 6	4 12.93	+13 27.6	2.573	1.659	11.9	19.3	20 E	5*	13*
6 5	7 22.74	+ 9 57.3	2.310	1.638	22.5	20.9	38 E	9*	31*	5 16	4 40.48	+13 35.7	2.578	1.642	10.7	19.2	18 E	1*	11*
6 15	7 51.78	+10 21.0	2.409	1.688	20.4	21.0	35 E	6*	29*	5 26	5 8.52	+13 29.2	2.580	1.628	9.7	19.2	16 E	—	10*
6 25	8 19.63	+10 26.2	2.510	1.740	18.3	21.0	32 E	4*	26*	6 5	5 36.94	+13 6.8	2.580	1.616	8.9	19.1	14 E	—	8*
7 5	8 46.27	+10 15.1	2.612	1.794	16.0	21.1	29 E	2*	23*	6 15	6 5.61	+12 27.9	2.580	1.609	8.3	19.1	13 E	—	6*
7 15	9 11.73	+ 9 50.5	2.713	1.849	13.7	21.2	26 E	—	20*	6 25	6 34.36	+11 32.1	2.580	1.604	8.0	19.0	13 E	—	4*
7 25	9 36.05	+ 9 14.6	2.811	1.905	11.4	21.2	22 E	—	16*	7 5	7 3.05	+10 20.0	2.580	1.603	7.9	19.0	13 E	—	1*
8 4	9 59.29	+ 8 30.1	2.904	1.962	9.1	21.3	18 E	—	12*	7 15	7 31.54	+ 8 52.3	2.581	1.605	8.0	19.1	13 W	—	1*
8 14	10 21.55	+ 7 38.9	2.991	2.019	6.7	21.3	13 E	—	7*	7 25	7 59.70	+ 7 10.5	2.583	1.611	8.3	19.1	13 W	—	3*
8 24	10 42.88	+ 6 43.0	3.069	2.077	4.4	21.3	9 E	—	3*	8 4	8 27.44	+ 5 16.5	2.587	1.621	8.7	19.1	14 W	—	6*
9 3	11 3.38	+ 5 44.4	3.139	2.134	2.0	21.3	4 E	—	—	8 14	8 54.70	+ 3 12.2	2.591	1.633	9.2	19.1	15 W	—	8*
9 13	11 23.12	+ 4 44.5	3.198	2.192	0.4	21.2	1 W	—	—	8 24	9 21.42	+ 1 0.1	2.597	1.649	9.8	19.2	16 W	—	10*
9 23	11 42.15	+ 3 45.1	3.245	2.249	2.6	21.5	6 W	—	—	9 3	9 47.57	- 1 17.5	2.602	1.667	10.5	19.3	17 W	—	11*
469640 2004 TC₁₉										72044 2000 YH₅									
12 27	23 26.47	+13 13.3	1.531	1.709	34.8	21.3	83 E	58	39*	12 27	23 27.84	- 8 56.4	1.676	1.689	34.0	19.7	74 E	36	54*
1 6	23 51.33	+14 27.7	1.634	1.733	33.8	21.5	79 E	59*	35*	1 6	23 49.71	- 5 59.2	1.771	1.702	32.8	19.8	70 E	39*	48*
1 16	0 16.42	+15 45.7	1.742	1.761	32.6	21.6	75 E	59*	32*	1 16	0 11.77	- 3 1.1	1.867	1.717	31.5	19.9	66 E	41*	43*
1 26	0 41.61	+17 5.3	1.854	1.790	31.3	21.7	71 E	59*	29*	1 26	0 34.01	- 0 4.3	1.965	1.734	30.1	20.0	62 E	42*	38*
2 5	1 6.81	+18 24.0	1.970	1.822	29.8	21.9	67 E	57*	26*	2 5	0 56.40	+ 2 49.0	2.063	1.753	28.5	20.0	58 E	42*	34*
14211 1999 NT₁										386621 2009 RL₅₉									
12 27	23 26.68	+21 19.7	1.343	1.612	37.5	17.1	86 E	66	32*	12 27	23 27.06	- 4 10.0	1.631	1.679	34.5	21.2	75 E	41	51*
1 6	23 55.28	+21 50.7	1.428	1.630	36.8	17.2	83 E	67*	30*	1 6	23 49.83	- 1 39.3	1.724	1.691	33.4	21.3	71 E	43*	46*
1 16	0 24.20	+22 25.4	1.519	1.652	35.8	17.4	79 E	66*	28*	1 16	0 12.86	+ 0 53.9	1.821	1.707	32.2	21.4	68 E	45*	41*
1 26	0 53.19	+23 1.6	1.616	1.676	34.7	17.5	76 E	65*	26*	1 26	0 36.12	+ 3 27.2	1.918	1.725	30.8	21.5	64 E	45*	37*
2 5	1 22.03	+23 36.9	1.720	1.703	33.5	17.6	72 E	63*	25*	2 5	0 59.54	+ 5 58.2	2.018	1.746	29.2	21.6	60 E	45*	33*
2 15	1 50.61	+24 9.5	1.829	1.732	32.1	17.8	69 E	60*	24*	139092 2001 FU₃₂									
2 25	2 18.82	+24 37.6	1.942	1.763	30.5	17.9	65 E	57*	23*	12 27	23 27.08	+ 5 39.6	1.993	2.054	28.1	19.7	79 E	51	44*
3 7	2 46.57	+24 59.6	2.057	1.796	28.8	18.0	61 E	53*	23*	1 6	23 43.11	+ 5 35.0	2.076	2.018	27.8	19.7	73 E	50*	40*
3 17	3 13.83	+25 14.4	2.175	1.830	27.1	18.1	57 E	49*	22*	1 16	0 0.46	+ 5 46.9	2.153	1.983	27.1	19.8	67 E	49*	35*
3 27	3 40.54	+25 21.0	2.293	1.865	25.2	18.2	53 E	44*	22*	1 26	0 18.95	+ 6 12.5	2.225	1.947	26.2	19.8	61 E	46*	31*
4 6	4 6.65	+25 18.7	2.410	1.901	23.2	18.3	49 E	40*	22*	2 5	0 38.47	+ 6 49.1	2.291	1.913	25.1	19.8	55 E	43*	28*
4 16	4 32.16	+25 7.2	2.525	1.938	21.2	18.4	44 E	35*	21*	2 15	0 58.95	+ 7 33.9	2.350	1.879	23.8	19.7	50 E	39*	25*
4 26	4 57.03	+24 46.1	2.636	1.976	19.1	18.5	40 E	30*	20*	2 25	1 20.33	+ 8 24.5	2.401	1.846	22.8	19.7	45 E	35*	23*
5 6	5 21.23	+24 15.4	2.743	2.013	17.0	18.5	36 E	24*	19*	3 7	1 42.56	+ 9 18.2	2.445	1.814	21.0	19.7	41 E	31*	21*
5 16	5 44.75	+23 35.2	2.845	2.051	14.9	18.6	31 E	19*	18*	3 17	2 5.64	+10 12.4	2.482	1.783	19.4	19.6	37 E	27*	19*
5 26	6 7.56	+22 45.7	2.940	2.090	12.7	18.6	27 E	13*	16*	3 27	2 29.55	+11 4.8	2.511	1.754	17.8	19.5	33 E	22*	18*
6 5	6 29.66	+21 47.4	3.028	2.128	10.6	18.6	23 E	8*	14*	4 6	2 54.25	+11 52.8	2.535	1.727	16.2	19.5	29 E	18*	16*
6 15	6 51.06	+20 40.6	3.107	2.165	8.4	18.6	18 E	3*	11*	4 16	3 19.76	+12 34.2	2.552	1.702	14.7	19.4	26 E	14*	15*
6 25	7 11.73	+19 25.8	3.177	2.203	6.3	18.6	14 E	—</											

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
72044 2000 YH₅										36183 1999 TX₁₆									
<i>(continuation)</i>										<i>(continuation)</i>									
8 4	7 50.30	+23 19.1	3.227	2.273	7.3	20.9	17 W	9*	5*	11 2	13 48.09	+10 1.4	2.906	2.067	12.4	20.8	27 W	19*	—
8 14	8 10.42	+22 35.7	3.216	2.303	9.2	21.0	21 W	14*	8*	11 7	13 56.75	+8 51.4	2.888	2.067	13.0	20.8	28 W	21*	—
8 24	8 29.82	+21 46.1	3.194	2.333	11.1	21.1	26 W	19*	10*	11 12	14 5.36	+7 43.1	2.867	2.067	13.7	20.9	30 W	23*	—
9 3	8 48.46	+20 51.6	3.160	2.362	13.0	21.1	32 W	24*	13*	11 17	14 13.91	+6 36.6	2.843	2.066	14.5	20.9	31 W	25*	—
9 13	9 6.31	+19 53.8	3.115	2.391	14.7	21.2	37 W	29*	16*	11 22	14 22.41	+5 31.7	2.816	2.064	15.3	20.9	33 W	27*	1*
9 23	9 23.31	+18 54.1	3.058	2.419	16.3	21.2	43 W	35*	18*	11 27	14 30.86	+4 28.6	2.786	2.062	16.1	20.9	35 W	29*	4*
10 3	9 39.43	+17 54.2	2.990	2.446	17.9	21.3	49 W	40*	21*	12 2	14 39.27	+3 27.3	2.753	2.060	16.9	20.9	37 W	31*	7*
10 13	9 54.61	+16 55.6	2.911	2.473	19.2	21.3	55 W	45*	24*	12 7	14 47.62	+2 27.7	2.716	2.056	17.8	20.9	40 W	33*	10*
10 23	10 8.76	+16 0.2	2.823	2.499	20.4	21.3	61 W	51*	28*	12 12	14 55.92	+1 29.9	2.676	2.053	18.7	20.9	42 W	34*	13*
11 2	10 21.78	+15 9.7	2.725	2.524	21.4	21.2	68 W	55*	32*	12 17	15 4.15	+0 33.7	2.633	2.048	19.6	20.8	44 W	35*	17*
11 12	10 33.54	+14 26.1	2.620	2.548	22.0	21.2	75 W	58*	36*	12 22	15 12.32	-0 20.7	2.587	2.043	20.5	20.8	47 W	36*	20*
11 22	10 43.87	+13 51.4	2.508	2.572	22.4	21.1	82 W	59*	40*	12 27	15 20.43	-1 13.6	2.538	2.038	21.5	20.8	49 W	37*	24*
12 2	10 52.57	+13 27.8	2.393	2.595	22.3	21.0	90 W	58*	44*	1 1	15 28.46	-2 5.0	2.486	2.032	22.4	20.8	52 W	38*	27*
12 12	10 59.38	+13 17.5	2.277	2.617	21.8	20.9	99 W	58*	48*	1 6	15 36.41	-2 54.9	2.431	2.025	23.3	20.8	55 W	38*	31*
12 22	11 4.03	+13 22.2	2.163	2.638	20.8	20.8	108 W	58*	50*	1 11	15 44.27	-3 43.5	2.374	2.018	24.2	20.7	57 W	38*	35*
1 1	11 6.24	+13 43.4	2.055	2.658	19.1	20.7	118 W	59	50	1 16	15 52.02	-4 30.9	2.313	2.010	25.1	20.7	60 W	38*	39*
1 11	11 5.75	+14 21.6	1.957	2.678	16.8	20.5	128 W	59	50	1 21	15 59.66	-5 17.2	2.251	2.002	25.9	20.6	63 W	38*	43*
1 21	11 2.46	+15 15.4	1.875	2.696	13.8	20.3	139 W	60	49	133048 2003 CG₁₅									
12 27	23 28.02	-11 25.0	0.858	1.099	58.8	18.2	73 E	34	55*	12 27	23 28.03	+1 20.6	2.588	2.568	22.0	20.6	78 E	46	48*
1 1	23 41.68	-5 49.3	0.886	1.115	57.5	18.2	73 E	39*	51*	1 6	23 37.41	+3 6.4	2.741	2.585	21.0	20.7	71 E	48*	40*
1 6	23 54.71	-0 31.5	0.919	1.132	56.1	18.3	73 E	44*	46*	1 16	23 47.81	+4 54.7	2.887	2.602	19.8	20.8	64 E	47*	33*
1 11	0 7.30	+4 26.3	0.957	1.151	54.7	18.4	73 E	49*	41*	1 26	23 59.05	+6 45.3	3.025	2.618	18.3	20.8	57 E	45*	27*
1 16	0 19.62	+9 3.5	0.999	1.171	53.2	18.5	72 E	53*	37*	2 5	0 11.00	+8 37.8	3.152	2.633	16.7	20.9	50 E	41*	21*
1 21	0 31.79	+13 20.3	1.044	1.192	51.7	18.6	72 E	56*	33*	2 15	0 23.54	+10 31.9	3.269	2.647	15.0	20.9	44 E	36*	16*
1 26	0 43.94	+17 17.7	1.092	1.214	50.2	18.7	71 E	59*	29*	2 25	0 36.59	+12 27.2	3.373	2.660	13.2	20.9	38 E	31*	12*
1 31	0 56.15	+20 56.7	1.142	1.237	48.7	18.8	71 E	61*	26*	3 7	0 50.09	+14 23.2	3.464	2.672	11.3	20.9	32 E	26*	7*
2 5	1 8.51	+24 18.9	1.193	1.260	47.3	18.9	70 E	62*	22*	3 17	1 3.99	+16 19.6	3.540	2.683	9.4	20.9	26 E	20*	3*
2 10	1 21.12	+27 25.5	1.245	1.283	45.9	19.0	69 E	62*	20*	3 27	1 18.24	+18 15.8	3.603	2.693	7.6	20.9	21 E	15*	—
2 15	1 34.05	+30 18.1	1.298	1.307	44.6	19.1	68 E	62*	17*	4 6	1 32.83	+20 11.6	3.650	2.702	5.9	20.8	16 E	10*	—
2 20	1 47.35	+32 57.7	1.351	1.331	43.3	19.1	67 E	61*	15*	4 16	1 47.74	+22 6.4	3.682	2.711	4.6	20.8	12 E	5*	—
2 25	2 1.08	+35 25.1	1.404	1.356	42.0	19.2	66 E	60*	13*	4 26	2 2.94	+24 0.0	3.700	2.718	4.0	20.8	11 W	4*	—
3 2	2 15.29	+37 41.3	1.457	1.380	40.8	19.3	65 E	59*	11*	5 6	2 18.42	+25 52.0	3.702	2.724	4.5	20.8	12 W	6*	—
3 7	2 30.02	+39 46.6	1.509	1.404	39.6	19.4	64 E	58*	10*	5 16	2 34.17	+27 42.1	3.690	2.730	5.7	20.9	16 W	9*	1*
3 12	2 45.32	+41 41.7	1.562	1.428	38.5	19.5	63 E	57*	8*	5 26	2 50.17	+29 30.0	3.664	2.734	7.3	20.9	20 W	12*	6*
3 17	3 1.22	+43 26.8	1.613	1.453	37.4	19.6	63 E	56*	7*	6 5	3 6.39	+31 15.7	3.624	2.738	9.0	21.0	25 W	16*	9*
3 22	3 17.73	+45 2.1	1.664	1.477	36.4	19.6	62 E	55*	7*	6 15	3 22.81	+32 59.0	3.570	2.740	10.7	21.0	30 W	20*	13*
3 27	3 34.85	+46 27.6	1.714	1.500	35.4	19.7	61 E	54*	6*	6 25	3 39.38	+34 39.9	3.505	2.742	12.4	21.1	36 W	25*	15*
4 1	3 52.56	+47 43.3	1.764	1.524	34.4	19.8	60 E	53*	5*	7 5	3 56.06	+36 18.6	3.427	2.742	14.1	21.1	41 W	31*	17*
4 6	4 10.83	+48 49.0	1.813	1.547	33.5	19.8	59 E	52*	5*	7 15	4 12.77	+37 55.3	3.339	2.742	15.6	21.1	47 W	37*	18*
4 11	4 29.63	+49 44.7	1.861	1.570	32.6	19.9	58 E	51*	4*	7 25	4 29.43	+39 30.4	3.241	2.740	17.1	21.0	52 W	43*	19*
4 16	4 48.87	+50 30.2	1.909	1.592	31.7	20.0	56 E	50*	4*	8 4	4 45.92	+41 4.6	3.134	2.738	18.3	21.0	58 W	50*	19*
4 21	5 8.48	+51 5.6	1.955	1.614	30.9	20.0	55 E	49*	4*	8 14	5 2.11	+42 38.8	3.020	2.735	19.5	21.0	64 W	57*	19*
4 26	5 28.33	+51 30.8	2.001	1.636	30.0	20.1	54 E	48*	4*	8 24	5 17.80	+44 14.0	2.899	2.730	20.4	20.9	70 W	64*	18*
5 1	5 48.32	+51 45.9	2.047	1.657	29.2	20.1	53 E	47*	5*	9 3	5 32.79	+45 51.4	2.775	2.725	21.1	20.8	77 W	71*	17*
5 6	6 8.31	+51 50.9	2.091	1.678	28.4	20.2	52 E	46*	5*	9 13	5 46.78	+47 32.5	2.647	2.719	21.6	20.7	83 W	77*	16*
5 11	6 28.21	+51 46.2	2.135	1.698	27.7	20.2	51 E	45*	5*	9 23	5 59.39	+49 18.8	2.519	2.712	21.7	20.6	90 W	83*	14*
5 16	6 47.87	+51 32.3	2.179	1.718	26.9	20.3	50 E	44*	6*	10 3	6 10.18	+51 11.6	2.393	2.703	21.6	20.5	97 W	84	13*
5 21	7 7.21	+51 9.5	2.221	1.738	26.2	20.3	49 E	43*	6*	10 13	6 18.51	+53 11.7	2.270	2.694	21.0	20.4	104 W	82	11*
5 26	7 26.12	+50 38.4	2.263	1.756	25.4	20.4	48 E	42*	6*	10 18	6 21.53	+54 14.4	2.212	2.689	20.7	20.3	108 W	81	10
5 31	7 44.52	+49 59.6	2.304	1.775	24.7	20.4	47 E	41*	7*	10 23	6 23.64	+55 18.6	2.155	2.684	20.2	20.2	111 W	80	9
6 5	8 2.39	+49 13.7	2.345	1.793	24.0	20.4	46 E	40*	8*	10 28	6 24.71	+56 23.9	2.101	2.679	19.6	20.1	115 W	79	8
6 10	8 19.67	+48 21.3	2.384	1.810	23.3	20.5	45 E	38*	8*	11 2	6 24.61	+57 29.8	2.051	2.673	19.0	20.1	119 W	78	7
6 15	8 36.36	+47 23.3	2.423	1.827	22.5	20.5	44 E	37*	8*	11 7	6 23.19	+58 35.5	2.003	2.667	18.3	20.0	122 W	76	5
6 20	8 52.44	+46 20.1	2.461	1.843	21.8	20.5	42 E	36*	9*	11 12	6 20.32	+59 39.8	1.959	2.661	17.6	19.9	126 W	75	4
6 25	9 7.93	+45 12.5	2.498	1.859	21.1	20.6	41 E	34*	9*	11 17	6 15.91	+60 41.4	1.920	2.655	16.9	19.8	129 W	74	3
6 30	9 22.84	+44 0.9	2.535	1.874	20.4	20.6	40 E	33*	9*	11 22	6 9.88	+61 38.7	1.885	2.648	16.1	19.8	132 W	73	2
7 5	9 37.19	+42 46.0	2.570	1.888	19.7	20.6	39 E	32*	10*	11 27	6 2.23	+62 29.9	1.855	2.641	15.5	19.7	134 W	73	2
7 10	9 51.02	+41 28.2	2.605	1.902	19.0	20.6	38 E	30*	10*	12 2	5 53.05	+63 13.0	1.830	2.634	14.9	19.6	137 W	72	1
7 15	10 4.37	+40 8.0	2.638	1.916	18.3	20.7	36 E	29*	10*	12 7	5 42.54	+63 46.2	1.811	2.627	14.5	19.6	138 W	71	—
7 20	10 17.25	+38 46.0	2.670	1.928	17.6	20.7	35 E	28*	9*	12 12	5 31.08	+64 8.0	1.797	2.619	14.3	19.6	139 W	71	—
7 25	10 29.69	+37 22.3	2.701	1.941	16.9	20.7	34 E	27*	9*	12 14	5 26.34	+64 13.3	1.793	2.616	14.3	19.6	139 W	71	—
7 30	10 41.75	+35 57.5	2.730	1.953	16.2	20.7	33 E	26*	8*	12 16	5 21.55	+64 16.6	1.790	2.613	14.3	19.6	139 E	71	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°		
479030 2013 AD₂₀										480962 2003 UP₈₇											
<i>(continuation)</i>										<i>(continuation)</i>											
2	5	0 49.52	+33 14.6	1.608	1.591	35.9	20.1	71 E	65*	13*	2	15	1 16.21	+36 26.2	1.710	1.631	34.3	20.6	68 E	62*	10*
2	15	1 17.16	+35 40.3	1.655	1.581	35.4	20.1	68 E	62*	11*	2	25	1 46.47	+38 20.5	1.755	1.619	33.8	20.7	66 E	59*	9*
2	25	1 47.85	+37 57.3	1.702	1.576	34.9	20.2	66 E	59*	9*	3	7	2 19.55	+40 1.4	1.800	1.612	33.2	20.7	63 E	56*	8*
3	7	2 21.51	+39 58.2	1.750	1.575	34.2	20.2	63 E	57*	9*	3	17	2 55.22	+41 21.7	1.847	1.609	32.5	20.7	60 E	54*	8*
3	17	2 57.92	+41 35.3	1.801	1.579	33.4	20.3	61 E	55*	8*	3	27	3 32.98	+42 14.4	1.897	1.610	31.7	20.8	58 E	52*	9*
3	22	3 17.01	+42 12.8	1.827	1.583	33.0	20.3	60 E	54*	8*	4	6	4 12.06	+42 34.2	1.952	1.616	30.8	20.8	56 E	50*	10*
3	27	3 36.57	+42 41.8	1.855	1.588	32.5	20.3	59 E	53*	9*	4	16	4 51.55	+42 17.9	2.011	1.626	29.7	20.9	53 E	47*	11*
4	1	3 56.48	+43 1.6	1.884	1.594	32.0	20.3	58 E	52*	9*	4	26	5 30.47	+41 25.4	2.076	1.640	28.5	20.9	51 E	45*	13*
4	6	4 16.63	+43 11.8	1.914	1.601	31.5	20.4	57 E	51*	10*	5	6	6 7.97	+39 58.9	2.146	1.658	27.1	21.0	48 E	41*	14*
4	11	4 36.87	+43 12.1	1.945	1.610	30.9	20.4	56 E	50*	10*	5	16	6 43.48	+38 3.2	2.221	1.680	25.5	21.0	46 E	37*	16*
4	16	4 57.08	+43 2.5	1.979	1.619	30.3	20.4	55 E	49*	11*	5	26	7 16.68	+35 43.5	2.301	1.705	23.9	21.1	43 E	33*	18*
4	21	5 17.11	+42 43.2	2.013	1.629	29.7	20.5	53 E	47*	12*	6	5	7 47.50	+33 5.5	2.384	1.734	22.1	21.1	40 E	29*	19*
4	26	5 36.84	+42 14.4	2.049	1.641	29.0	20.5	52 E	46*	13*	6	15	8 16.06	+30 14.2	2.470	1.765	20.2	21.2	37 E	24*	19*
5	1	5 56.16	+41 36.6	2.087	1.653	28.3	20.5	51 E	45*	14*	6	25	8 42.54	+27 13.9	2.557	1.799	18.2	21.3	34 E	19*	19*
5	6	6 14.98	+40 50.5	2.126	1.666	27.6	20.6	50 E	43*	14*	7	5	9 7.19	+24 8.2	2.643	1.835	16.1	21.3	30 E	15*	19*
5	11	6 33.25	+39 56.8	2.166	1.680	26.8	20.6	49 E	41*	15*	7	15	9 30.26	+20 59.6	2.728	1.873	13.9	21.3	26 E	11*	17*
5	16	6 50.92	+38 56.3	2.208	1.695	26.0	20.7	47 E	39*	16*	7	25	9 51.96	+17 50.1	2.810	1.912	11.7	21.4	23 E	8*	14*
5	21	7 7.95	+37 49.7	2.251	1.711	25.2	20.7	46 E	37*	17*	8	4	10 12.50	+14 41.2	2.888	1.953	9.5	21.4	19 E	4*	11*
5	26	7 24.34	+36 37.9	2.295	1.727	24.3	20.7	45 E	35*	18*	8	14	10 32.06	+11 33.9	2.960	1.995	7.3	21.4	14 E	1*	8*
5	31	7 40.09	+35 21.5	2.340	1.744	23.4	20.8	43 E	33*	19*	8	24	10 50.78	+8 28.9	3.025	2.037	5.0	21.4	10 E	—	4*
6	5	7 55.21	+34 1.3	2.386	1.761	22.5	20.8	42 E	30*	19*	9	3	11 8.79	+5 26.7	3.082	2.081	2.8	21.3	6 E	—	—
6	10	8 9.73	+32 38.0	2.432	1.780	21.6	20.8	40 E	28*	20*	9	13	11 26.20	+2 27.6	3.130	2.125	0.7	21.2	2 E	—	—
6	15	8 23.69	+31 12.1	2.479	1.798	20.6	20.9	38 E	26*	20*	9	23	11 43.06	+0 28.2	3.169	2.169	1.9	21.4	4 W	—	—
6	20	8 37.10	+29 44.2	2.526	1.818	19.6	20.9	37 E	23*	20*	162142 1998 VR										
6	25	8 49.99	+28 14.7	2.573	1.837	18.6	20.9	35 E	21*	20*	12	27	23 28.83	+1 43.3	0.847	1.142	57.0	20.7	77 E	43	50*
6	30	9 2.41	+26 44.1	2.620	1.858	17.5	21.0	33 E	19*	20*	1	1	23 38.24	+0 59.3	0.876	1.134	56.8	20.7	75 E	46*	46*
7	5	9 14.40	+25 12.6	2.667	1.878	16.5	21.0	32 E	17*	19*	1	6	23 47.67	+3 35.7	0.903	1.125	56.7	20.8	73 E	48*	42*
7	10	9 25.97	+23 40.7	2.714	1.899	15.4	21.0	30 E	15*	18*	1	11	23 57.16	+6 6.7	0.928	1.114	56.7	20.8	71 E	50*	38*
7	15	9 37.17	+22 8.5	2.760	1.920	14.3	21.0	28 E	13*	17*	1	16	0 6.76	+8 32.9	0.951	1.101	56.7	20.9	69 E	52*	35*
7	20	9 48.01	+20 36.3	2.805	1.942	13.2	21.1	26 E	11*	16*	1	21	0 16.50	+10 55.2	0.971	1.087	56.8	20.9	68 E	53*	32*
7	25	9 58.54	+19 4.2	2.848	1.964	12.1	21.1	24 E	10*	15*	1	26	0 26.41	+13 13.8	0.988	1.071	57.0	20.9	66 E	54*	29*
7	30	10 8.76	+17 32.5	2.891	1.986	11.0	21.1	22 E	8*	14*	1	31	0 36.51	+15 29.1	1.002	1.053	57.2	20.9	64 E	54*	26*
8	4	10 18.72	+16 1.3	2.933	2.008	9.9	21.1	20 E	6*	12*	2	5	0 46.83	+17 41.5	1.012	1.033	57.6	20.9	62 E	53*	23*
8	9	10 28.43	+14 30.5	2.973	2.030	8.7	21.1	18 E	5*	10*	2	10	0 57.43	+19 51.1	1.018	1.012	58.2	20.9	61 E	53*	21*
8	14	10 37.90	+13 0.5	3.011	2.053	7.6	21.1	16 E	3*	8*	2	15	1 8.34	+21 58.1	1.021	0.989	58.9	20.8	59 E	52*	19*
8	19	10 47.16	+11 31.1	3.047	2.076	6.5	21.1	13 E	2*	6*	2	20	1 19.58	+24 2.5	1.018	0.965	59.7	20.8	57 E	51*	16*
8	24	10 56.23	+10 2.6	3.082	2.099	5.3	21.1	11 E	1*	4*	2	25	1 31.18	+26 3.8	1.011	0.939	60.9	20.8	56 E	50*	15*
8	29	11 5.10	+8 34.9	3.114	2.121	4.2	21.1	9 E	—	2*	3	2	1 43.16	+28 1.8	0.999	0.912	62.3	20.7	55 E	48*	13*
9	3	11 13.82	+7 8.0	3.144	2.144	3.0	21.1	6 E	—	—	3	7	1 55.55	+29 55.6	0.982	0.883	64.0	20.7	53 E	47*	11*
9	8	11 22.37	+5 42.0	3.171	2.167	1.9	21.0	4 E	—	—	3	12	2 8.38	+31 44.4	0.960	0.854	66.1	20.6	52 E	46*	10*
9	13	11 30.78	+4 17.0	3.196	2.190	0.8	21.0	2 E	—	—	3	17	2 21.60	+33 26.8	0.932	0.824	68.7	20.5	50 E	44*	9*
9	18	11 39.05	+2 52.9	3.218	2.213	0.5	21.0	1 W	—	—	3	22	2 35.17	+35 0.9	0.898	0.793	71.9	20.5	49 E	43*	7*
9	23	11 47.18	+1 29.8	3.237	2.236	1.5	21.1	3 W	—	—	3	27	2 48.94	+36 23.8	0.859	0.762	75.7	20.4	48 E	42*	6*
9	28	11 55.19	+0 7.7	3.254	2.259	2.6	21.2	6 W	—	—	4	1	3 2.69	+37 31.7	0.813	0.732	80.4	20.4	46 E	40*	6*
10	3	12 3.08	+1 13.4	3.267	2.282	3.7	21.3	9 W	2*	—	4	6	3 16.03	+38 19.4	0.763	0.703	86.0	20.4	44 E	38*	5*
10	8	12 10.86	+2 33.6	3.277	2.305	4.8	21.4	11 W	4*	2*	4	8	3 21.13	+38 31.4	0.741	0.691	88.6	20.4	44 E	38*	5*
10	13	12 18.52	+3 52.8	3.284	2.328	5.9	21.5	14 W	6*	4*	4	10	3 26.04	+38 38.5	0.719	0.680	91.4	20.4	43 E	37*	4*
247429 2002 CQ₂₉₂										427584 2003 RK₁₁											
12	27	23 28.43	+4 58.0	1.528	1.658	35.7	20.0	79 E	50	45*	12	27	23 29.46	+7 49.3	1.526	1.679	35.3	21.4	81 E	53	43*
1	6	23 51.14	+7 11.6	1.623	1.672	34.7	20.1	75 E	52*	40*	1	6	23 52.09	+9 55.3	1.625	1.696	34.4	21.5	77 E	55*	38*
1	16	0 14.38	+9 26.5	1.720	1.688	33.5	20.2	71 E	53*	36*	1	16	0 15.28	+12 2.1	1.727	1.716	33.2	21.7	73 E	56*	34*
1	26	0 38.09	+11 40.7	1.819	1.706	32.2	20.3	68 E	53*	32*	1	26	0 38.91	+14 7.8	1.831	1.738	31.9	21.8	69 E	56*	30*
2	5	1 2.18	+13 51.8	1.919	1.726	30.8	20.4	64 E	52*	29*	2	5	1 2.92	+16 10.2	1.937	1.762	30.5	21.9	65 E	54*	27*
2	15	1 26.63	+15 57.8	2.020	1.748	29.3	20.5	60 E	50*	26*	477519 2010 DJ₅₆										
2	25	1 51.40	+17 56.9	2.122	1.772	27.6	20.6	56 E	47*	23*	12	27	23 29.59	-46 33.7	0.904	1.006	61.7	21.2	64 E	—	57*
3	7	2 16.45	+19 47.1	2.224	1.798	25.9	20.7	52 E	44*	21*	1	1	23 47.89	-45 32.2	0.885	0.992	62.9	21.2	64 E	—	57*
3	17	2 41.74	+21 26.9	2.325	1.825	24.1	20.8	49 E	41*	20*	1	6	0 6.38	-44 16.1	0.862	0.980	64.2	21.1	64 E	1*	57*
3	27	3 7.22	+22 54.8	2.424	1.853	22.3	20.8	45 E	37*	18*	1	11	0 25.02	-42 43.9	0.836	0.969	65.5	21.1	64 E	2*	57*
4	6	3 32.82	+24 9.8	2.521	1.882	20.4	20.9	41 E	33*	17*	1	16	0 43.79	-40 53.6	0.807	0.960	67.0	21.0	64 E	4*	58*
4	16	3 58.48	+25 11.1	2.616	1.912	18.4	20.9	37 E	29*	15*	1	21	1 2.65	-38 43.1	0.775	0.953	68.5	21.0	64 E	6*	58*
4	26	4 24.09	+25 58.0	2.706	1.942	16.4	21.0	33 E	25*	14*	1	26	1 21.59	-36 9.6	0.742	0.948	70.1	20.9	65 E</		

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°
477519 2010 DJ₅₆										5870 Baltimore									
<i>(continuation)</i>										<i>(continuation)</i>									
3 9	4 7.74	+ 5 38.5	0.529	0.981	75.7	20.4	73 E	47*	49*	12 2	12 36.56	+ 3 3.7	2.831	2.535	20.2	18.6	63 W	45*	34*
3 11	4 16.36	+ 8 21.6	0.528	0.986	75.3	20.4	74 E	49*	48*	12 12	12 49.20	+ 3 9.1	2.747	2.581	21.0	18.6	70 W	48*	39*
3 13	4 25.09	+11 3.9	0.529	0.991	74.9	20.4	74 E	51*	46*	12 22	13 0.58	+ 3 29.7	2.656	2.627	21.5	18.6	78 W	48	45*
3 15	4 33.94	+13 44.5	0.531	0.996	74.4	20.4	75 E	53*	44*	1 1	13 10.50	+ 4 7.2	2.560	2.672	21.5	18.5	86 W	49	51*
3 17	4 42.91	+16 22.3	0.534	1.002	73.8	20.4	75 E	56*	42*	1 11	13 18.74	+ 5 3.3	2.463	2.717	21.2	18.5	94 W	50	55*
3 19	4 52.00	+18 56.5	0.538	1.007	73.2	20.4	76 E	58*	40*	1 21	13 25.06	+ 6 19.2	2.368	2.761	20.3	18.4	103 W	51	57*
3 21	5 1.21	+21 26.1	0.544	1.013	72.6	20.4	76 E	59*	38*	508987 2005 ER₁₃₃									
3 23	5 10.56	+23 50.6	0.551	1.019	71.9	20.5	76 E	61*	36*	12 27	23 31.68	+17 32.0	1.376	1.629	37.0	21.0	86 E	63	36*
3 25	5 20.02	+26 9.2	0.559	1.025	71.2	20.5	77 E	63*	34*	1 6	23 48.28	+19 55.3	1.439	1.604	37.2	21.0	81 E	65*	30*
3 27	5 29.61	+28 21.4	0.567	1.032	70.5	20.5	77 E	65*	33*	1 16	0 7.41	+22 25.8	1.497	1.581	37.1	21.1	76 E	65*	25*
4 1	5 54.12	+33 22.1	0.593	1.048	68.7	20.6	78 E	68*	29*	1 26	0 29.01	+25 1.1	1.552	1.562	36.9	21.1	72 E	64*	21*
4 6	6 19.31	+37 37.8	0.624	1.066	66.8	20.7	78 E	70*	25*	2 5	0 53.03	+27 37.7	1.603	1.546	36.4	21.2	69 E	62*	18*
4 11	6 45.06	+41 8.7	0.659	1.084	65.0	20.8	78 E	71*	22*	2 15	1 19.53	+30 11.7	1.652	1.534	35.9	21.2	66 E	59*	15*
4 16	7 11.18	+43 57.0	0.696	1.102	63.2	20.9	79 E	72*	20*	2 25	1 48.56	+32 37.9	1.700	1.525	35.2	21.2	63 E	57*	13*
4 21	7 37.42	+46 6.2	0.735	1.121	61.5	21.0	79 E	72*	18*	3 7	2 20.08	+34 50.4	1.747	1.520	34.5	21.2	60 E	54*	12*
4 26	8 3.49	+47 40.2	0.775	1.140	59.8	21.1	78 E	72*	16*	3 17	2 54.02	+36 42.9	1.795	1.520	33.7	21.3	58 E	52*	11*
5 1	8 29.10	+48 43.0	0.815	1.160	58.3	21.2	78 E	72*	15*	3 27	3 30.05	+38 9.3	1.845	1.523	32.7	21.3	56 W	50	11*
5 6	8 54.02	+49 18.5	0.856	1.179	56.8	21.3	78 E	72*	15	4 6	4 7.66	+39 3.8	1.898	1.530	31.7	21.4	53 E	47*	12*
5 11	9 18.08	+49 30.1	0.897	1.199	55.4	21.4	78 E	71*	14	4 16	4 46.17	+39 22.9	1.954	1.541	30.6	21.4	51 E	45*	13*
5 16	9 41.14	+49 21.2	0.937	1.218	54.1	21.5	77 E	71*	15	4 26	5 24.71	+39 5.0	2.015	1.556	29.3	21.5	49 E	43*	14*
193331 2000 TN₂₉										407338 2010 RQ₃₀									
12 27	23 30.90	+ 8 18.9	1.542	1.700	34.9	19.6	81 E	53	43*	12 27	23 31.83	- 8 17.6	1.509	1.572	37.2	21.4	75 E	37	54*
1 6	23 57.12	+ 8 15.0	1.654	1.726	33.7	19.8	77 E	53*	40*	1 6	23 47.04	- 6 26.4	1.546	1.505	37.6	21.3	69 E	38*	48*
1 16	0 22.81	+ 8 26.0	1.772	1.755	32.4	19.9	73 E	53*	38*	1 16	0 4.33	- 4 21.2	1.572	1.436	37.8	21.3	64 E	39*	42*
1 26	0 47.96	+ 8 48.4	1.894	1.787	30.9	20.1	69 E	51*	36*	1 26	0 23.60	- 2 2.8	1.585	1.364	38.1	21.2	59 E	39*	37*
2 5	1 12.54	+ 9 18.8	2.019	1.820	29.2	20.2	64 E	49*	33*	2 5	0 44.85	+ 0 27.9	1.584	1.291	38.4	21.1	54 E	38*	33*
2 15	1 36.62	+ 9 54.8	2.145	1.856	27.4	20.3	60 E	46*	31*	2 15	1 8.19	+ 3 9.9	1.571	1.217	39.0	21.0	51 E	37*	30*
2 25	2 0.24	+10 32.0	2.271	1.893	25.5	20.4	55 E	43*	30*	2 25	1 33.81	+ 6 2.1	1.544	1.143	39.8	20.8	48 E	36*	27*
3 7	2 23.42	+11 9.5	2.396	1.931	23.5	20.5	51 E	39*	28*	3 7	2 1.98	+ 9 2.1	1.505	1.071	41.2	20.7	45 E	34*	25*
3 17	2 46.22	+11 45.0	2.518	1.970	21.5	20.6	47 E	35*	27*	3 17	2 33.11	+12 7.2	1.454	1.003	43.1	20.5	44 E	33*	24*
3 27	3 8.67	+12 16.6	2.636	2.011	19.5	20.7	42 E	30*	25*	3 22	2 49.92	+13 40.3	1.424	0.971	44.3	20.4	43 E	32*	23*
4 6	3 30.77	+12 42.8	2.748	2.052	17.4	20.8	38 E	25*	23*	3 27	3 7.63	+15 12.6	1.392	0.941	45.8	20.3	43 E	32*	23*
4 16	3 52.55	+13 2.6	2.856	2.093	15.3	20.8	34 E	20*	22*	4 1	3 26.31	+16 43.2	1.358	0.914	47.4	20.3	42 E	32*	23*
4 26	4 13.99	+13 15.0	2.956	2.135	13.3	20.9	29 E	14*	20*	4 6	3 46.01	+18 10.9	1.322	0.889	49.2	20.2	42 E	31*	23*
5 6	4 35.08	+13 19.2	3.048	2.178	11.4	20.9	25 E	9*	17*	4 11	4 6.80	+19 34.5	1.284	0.868	51.2	20.1	42 E	31*	23*
5 16	4 55.81	+13 14.8	3.132	2.220	9.5	20.9	21 E	3	15*	4 16	4 28.72	+20 52.2	1.246	0.851	53.2	20.1	43 E	31*	23*
5 26	5 16.13	+13 1.3	3.207	2.262	7.8	21.0	18 E	-	12*	4 21	4 51.78	+22 2.4	1.207	0.839	55.4	20.0	43 E	32*	24*
6 5	5 36.03	+12 38.7	3.273	2.304	6.3	21.0	14 E	-	8*	4 26	5 16.00	+23 2.9	1.168	0.831	57.5	20.0	44 E	32*	25*
6 15	5 55.48	+12 6.8	3.328	2.346	5.3	21.0	12 E	-	4*	5 1	5 41.33	+23 51.7	1.130	0.829	59.6	20.0	45 E	32*	26*
6 25	6 14.42	+11 25.8	3.372	2.387	5.1	21.1	12 W	-	-	5 6	6 7.73	+24 26.5	1.094	0.832	61.4	20.0	46 E	32*	27*
7 5	6 32.82	+10 35.8	3.406	2.428	5.6	21.1	13 W	-	4*	5 11	6 35.10	+24 45.1	1.060	0.839	63.0	20.0	48 E	33*	28*
7 15	6 50.66	+ 9 37.2	3.428	2.469	6.6	21.2	16 W	-	9*	5 16	7 3.28	+24 45.7	1.030	0.852	64.2	20.0	49 E	33*	29*
7 25	7 7.88	+ 8 30.2	3.438	2.509	8.0	21.3	20 W	-	14*	5 21	7 32.08	+24 26.4	1.003	0.868	65.0	20.0	51 E	33*	31*
8 4	7 24.45	+ 7 15.3	3.437	2.549	9.5	21.4	24 W	2*	18*	5 26	8 1.23	+23 46.4	0.982	0.889	65.4	20.0	53 E	34*	33*
5870 Baltimore										5 31	8 30.45	+22 45.4	0.965	0.914	65.3	20.0	55 E	34*	35*
12 27	23 31.33	-24 32.5	1.867	1.777	31.2	17.2	69 E	20	60*	6 5	8 59.44	+21 24.1	0.954	0.941	64.7	20.1	57 E	34*	37*
1 6	23 51.89	-22 58.4	1.919	1.744	30.7	17.2	65 E	22*	55*	6 10	9 27.92	+19 44.4	0.950	0.971	63.8	20.1	59 E	34*	40*
1 16	0 13.70	-21 8.2	1.965	1.715	30.0	17.2	61 E	23*	51*	6 15	9 55.63	+17 48.7	0.952	1.003	62.5	20.1	61 E	33*	42*
1 26	0 36.59	-19 3.7	2.005	1.689	29.3	17.2	57 E	24*	47*	6 20	10 22.35	+15 40.6	0.961	1.037	61.0	20.2	63 E	33*	45*
2 5	1 0.39	-16 46.9	2.042	1.667	28.6	17.2	54 E	24*	44*	6 25	10 47.95	+13 23.7	0.976	1.071	59.3	20.2	65 E	32*	47*
2 15	1 25.04	-14 19.8	2.076	1.649	27.8	17.2	51 E	24*	41*	6 30	11 12.34	+11 1.7	0.997	1.107	57.5	20.3	67 E	31*	50*
2 25	1 50.43	-11 45.1	2.109	1.635	27.1	17.2	49 E	23*	39*	7 5	11 35.51	+ 8 37.9	1.024	1.144	55.6	20.4	68 E	30*	52*
3 7	2 16.48	- 9 5.6	2.142	1.626	26.3	17.2	46 E	22*	37*	7 10	11 57.48	+ 6 15.2	1.057	1.180	53.7	20.4	69 E	29*	54*
3 17	2 43.15	- 6 24.6	2.176	1.621	25.4	17.2	44 E	20*	36*	7 15	12 18.32	+ 3 55.8	1.096	1.217	51.8	20.5	70 E	28*	56*
3 27	3 10.35	- 3 45.6	2.213	1.621	24.5	17.2	42 E	18*	34*	7 20	12 38.09	+ 1 41.5	1.139	1.254	50.0	20.6	71 E	27*	58*
4 6	3 37.98	- 1 12.2	2.255	1.626	23.5	17.2	40 E	16*	33*	7 25	12 56.87	- 0 26.6	1.186	1.291	48.2	20.7	71 E	26*	60*
4 16	4 5.96	+ 1 12.2	2.301	1.635	22.3	17.2	38 E	14*	31*	7 30	13 14.77	- 2 27.8	1.237	1.328	46.5	20.8	71 E	25*	61*
4 26	4 34.15	+ 3 24.4	2.351	1.649	21.1	17.3	36 E	11*	29*	8 4	13 31.87	- 4 21.7	1.292	1.364	44.8	20.9	71 E	24*	62*
5 6	5 2.41	+ 5 21.8	2.407	1.667	19.7	17.3	34 E	8*	27*	8 9	13 48.27	- 6 8.3	1.350	1.400	43.2	21.1	71 E	23*	62*
5 16	5 30.60	+ 7 2.5	2.467	1.689	18.2	17.3	31 E	5*	25*	8 14	14 4.04	- 7 47.7	1.410	1.436	41.7	21.2	71 E	23*	62*
5 26	5 58.57	+ 8 25.2	2.531	1.715	16.6	17.4	29 E	2*	23*	8 19	14 19.27	- 9 19.9	1.473	1.471	40.2	21.3	70 E	22*	62*
6 5	6 26.15	+ 9 29.6	2.598	1.745	14.8	17.4	26 E	-	20*	8 24	14 34.01	-10 45.3	1.538	1.505	38.8	21.4	69 E	21*	61*
6 15	6 53.23	+10 15.9	2.666	1.777	13.0	17.4	23 E	-	17*	8 29	14 48.31	-12 4.2	1.604	1.539	37.4	21.5	68 E	21*	61*
6 25																			

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°
347558 2000 UP₁₈										5392 Parker									
<i>(continuation)</i>																			
5 16	4 46.29	+24 10.6	3.145	2.208	8.2	21.2	18 E	9*	7*	12 27	23 33.14	-21 2.1	3.128	2.954	18.3	18.6	71 E	24	60*
5 26	5 8.16	+24 27.9	3.213	2.241	6.1	21.2	14 E	5*	4*	1 6	23 41.35	-19 1.4	3.237	2.933	17.5	18.6	64 E	26*	52*
6 5	5 29.71	+24 34.4	3.271	2.274	4.0	21.1	9 E	1*	1*	1 16	23 50.68	-16 59.1	3.337	2.912	16.4	18.6	56 E	26*	44*
6 15	5 50.90	+24 30.5	3.319	2.307	1.9	21.0	4 E	—	—	1 26	0 0.94	-14 55.8	3.427	2.889	15.1	18.6	50 E	25*	38*
6 25	6 11.63	+24 16.5	3.355	2.339	0.5	21.0	1 W	—	—	2 5	0 11.98	-12 52.1	3.505	2.865	13.6	18.6	43 E	23*	32*
7 5	6 31.87	+23 52.9	3.380	2.370	2.4	21.2	6 W	—	—	2 15	0 23.69	-10 48.2	3.570	2.840	12.0	18.6	37 E	19*	26*
7 15	6 51.55	+23 20.4	3.393	2.401	4.5	21.3	11 W	2*	2*	2 25	0 35.97	-8 44.6	3.622	2.814	10.3	18.5	31 E	15*	21*
7 25	7 10.61	+22 39.8	3.393	2.431	6.5	21.5	16 W	6*	6*	3 7	0 48.75	-6 41.7	3.659	2.788	8.5	18.4	25 E	10*	17*
329261 1998 SW₁₂₃																			
12 27	23 32.17	-4 41.5	1.611	1.678	34.7	20.8	76 E	40	52*	3 17	1 1.96	-4 39.8	3.681	2.760	6.8	18.3	19 E	5*	12*
1 6	23 54.92	-2 23.1	1.703	1.688	33.7	20.9	72 E	43*	47*	3 27	1 15.56	-2 39.3	3.688	2.731	5.1	18.2	14 E	—	8*
1 16	0 18.01	-0 0.2	1.796	1.700	32.5	21.0	68 E	44*	42*	4 6	1 29.52	-0 40.5	3.680	2.701	3.8	18.1	10 E	—	4*
1 26	0 41.36	+2 24.5	1.892	1.716	31.2	21.1	65 E	45*	38*	4 16	1 43.82	+1 16.2	3.658	2.671	3.4	18.1	9 E	—	—
2 5	1 4.91	+4 48.2	1.989	1.734	29.7	21.2	61 E	44*	35*	4 26	1 58.43	+3 10.5	3.620	2.639	4.1	18.1	11 W	—	2*
2 15	1 28.65	+7 8.6	2.086	1.755	28.1	21.3	57 E	43*	32*	5 6	2 13.34	+5 2.1	3.569	2.607	5.7	18.1	15 W	—	8*
2 25	1 52.56	+9 23.5	2.185	1.778	26.5	21.3	53 E	41*	29*	5 16	2 28.55	+6 50.8	3.505	2.573	7.5	18.1	19 W	—	13*
3 7	2 16.62	+11 30.7	2.283	1.803	24.7	21.4	49 E	38*	27*	5 26	2 44.04	+8 36.2	3.427	2.539	9.5	18.1	24 W	—	18*
3 17	2 40.82	+13 28.5	2.381	1.830	22.9	21.5	46 E	35*	24*	6 5	2 59.80	+10 18.3	3.338	2.504	11.5	18.1	29 W	—	23*
91210 1998 XS₉₆																			
12 27	23 32.29	-5 33.9	1.532	1.609	36.4	20.3	76 E	39	53*	6 15	3 15.83	+11 56.7	3.237	2.468	13.5	18.1	35 W	7*	28*
1 6	23 54.06	-3 3.0	1.599	1.584	35.1	20.5	68 E	44*	42*	6 25	3 32.10	+13 31.6	3.126	2.431	15.5	18.1	40 W	12*	31*
1 16	0 16.81	-0 24.7	1.666	1.577	34.2	20.5	64 E	45*	38*	7 5	3 48.62	+15 2.8	3.005	2.394	17.4	18.0	45 W	19*	34*
1 26	0 40.44	+2 18.0	1.732	1.573	33.2	20.5	61 E	45*	35*	7 15	4 5.34	+16 30.7	2.876	2.356	19.3	17.9	50 W	25*	37*
2 5	1 4.88	+5 2.3	1.798	1.572	32.0	20.6	57 E	44*	31*	7 25	4 22.24	+17 55.3	2.739	2.317	21.1	17.8	55 W	32*	38*
2 15	1 30.10	+7 45.0	1.864	1.574	30.7	20.6	54 E	42*	29*	8 4	4 39.29	+19 17.4	2.597	2.278	22.8	17.7	61 W	39*	39*
2 25	1 56.05	+10 23.0	1.931	1.580	29.3	20.7	51 E	40*	27*	8 14	4 56.43	+20 37.6	2.449	2.238	24.4	17.6	66 W	46*	39*
3 7	2 22.71	+12 53.1	1.998	1.589	27.9	20.7	48 E	38*	25*	8 24	5 13.58	+21 57.0	2.297	2.197	25.9	17.5	72 W	53*	39*
3 17	2 50.04	+15 12.4	2.066	1.601	26.4	20.8	45 E	35*	24*	9 3	5 30.69	+23 17.2	2.144	2.157	27.1	17.3	77 W	59*	39*
3 27	3 17.98	+17 18.0	2.135	1.616	24.8	20.8	43 E	32*	22*	9 13	5 47.65	+24 40.2	1.989	2.116	28.2	17.2	83 W	65*	38*
4 6	3 46.43	+19 7.5	2.204	1.633	23.1	20.8	40 E	29*	21*	9 23	6 4.31	+26 8.7	1.835	2.075	28.9	17.0	89 W	70*	37*
4 16	4 15.29	+20 38.8	2.275	1.653	21.4	20.9	37 E	25*	20*	10 3	6 20.55	+27 46.0	1.683	2.034	29.4	16.8	95 W	73*	36*
4 26	4 44.39	+21 50.5	2.345	1.676	19.6	20.9	34 E	22*	19*	10 13	6 36.12	+29 36.4	1.535	1.993	29.4	16.5	102 W	75*	34*
5 6	5 13.57	+22 41.7	2.416	1.700	17.8	21.0	31 E	18*	18*	10 23	6 50.78	+31 45.0	1.395	1.952	28.9	16.2	108 W	77	32
5 16	5 42.64	+23 12.0	2.486	1.727	15.9	21.0	28 E	14*	17*	11 2	7 4.15	+34 17.4	1.262	1.912	28.0	16.0	115 W	79	30
5 26	6 11.41	+23 21.8	2.555	1.755	14.1	21.0	25 E	11*	15*	11 7	7 10.20	+35 44.4	1.200	1.892	27.3	15.8	119 W	81	28
6 5	6 39.69	+23 11.9	2.623	1.784	12.1	21.0	22 E	7*	13*	11 12	7 15.73	+37 19.4	1.141	1.872	26.4	15.6	123 W	82	27
6 15	7 7.36	+22 43.6	2.688	1.815	10.2	21.0	18 E	4*	11*	11 17	7 20.64	+39 2.7	1.086	1.853	25.4	15.5	126 W	84	25
6 25	7 34.27	+21 58.5	2.751	1.846	8.2	21.0	15 E	2*	8*	11 22	7 24.86	+40 54.6	1.035	1.834	24.3	15.3	130 W	86	23
7 5	8 0.34	+20 58.5	2.809	1.878	6.2	21.0	11 E	—	5*	11 27	7 28.23	+42 55.0	0.987	1.815	23.2	15.2	134 W	88	21
7 15	8 25.54	+19 45.5	2.863	1.911	4.2	21.0	8 E	—	2*	12 2	7 30.64	+45 3.0	0.945	1.796	22.0	15.0	137 W	90	19
7 25	8 49.84	+18 21.4	2.912	1.944	2.2	20.9	4 E	—	—	12 7	7 31.90	+47 17.4	0.907	1.778	20.9	14.9	140 W	88	17
8 4	9 13.25	+16 48.2	2.955	1.978	0.4	20.8	1 E	—	—	12 12	7 31.90	+49 36.0	0.874	1.760	19.9	14.7	142 W	85	14
8 14	9 35.81	+15 7.8	2.991	1.846	8.2	21.0	15 E	2*	8*	12 17	7 30.48	+51 56.1	0.846	1.743	19.3	14.6	144 W	83	12
8 24	9 57.54	+13 21.8	3.019	1.878	6.2	21.0	11 E	—	—	12 22	7 27.54	+54 14.2	0.824	1.726	19.0	14.5	145 W	81	10
9 3	10 18.50	+11 31.9	3.038	2.011	2.0	21.1	4 W	—	—	12 27	7 23.01	+56 26.5	0.807	1.709	19.2	14.5	145 W	79	8
9 13	10 38.73	+9 39.6	3.049	2.045	4.0	21.2	8 W	2*	2*	1 1	7 16.92	+58 28.8	0.795	1.693	19.9	14.4	144 W	77	6
423162 2004 FD₁																			
12 27	23 32.63	+26 2.6	1.320	1.640	36.8	21.0	90 E	71	29*	1 6	7 9.48	+60 17.3	0.788	1.678	21.0	14.4	142 W	75	4
1 6	23 50.62	+27 48.9	1.411	1.645	36.5	21.1	85 E	72*	25*	1 11	7 1.12	+61 48.9	0.786	1.663	22.4	14.5	140 E	73	2
1 16	0 10.68	+29 39.5	1.500	1.651	36.0	21.2	80 E	72*	21*	1 13	6 57.65	+62 20.4	0.786	1.657	23.1	14.5	139 E	73	2
1 26	0 32.68	+31 32.8	1.586	1.657	35.3	21.3	76 E	70*	17*	1 15	6 54.16	+62 48.8	0.787	1.652	23.7	14.5	137 E	72	1
2 5	0 56.50	+33 25.8	1.669	1.663	34.4	21.4	72 E	66*	14*	1 17	6 50.71	+63 14.1	0.788	1.646	24.4	14.5	136 E	72	1
481817 2008 UL₉₀																			
12 27	23 33.08	-11 26.0	0.352	0.949	85.1	19.2	74 E	34	56*	1 19	6 47.33	+63 36.3	0.790	1.641	25.1	14.5	135 E	71	—
1 1	23 47.31	-4 40.5	0.371	0.955	83.2	19.3	75 E	40	51*	1 21	6 44.08	+63 55.4	0.793	1.636	25.8	14.5	134 E	71	—
1 6	23 59.44	+1 21.2	0.393	0.959	81.9	19.3	75 E	46*	46*	12 27	23 33.70	-11 28.5	1.764	1.770	32.3	21.2	74 E	34	56*
1 11	0 9.99	+6 41.3	0.416	0.959	81.0	19.4	74 E	51*	40*	1 6	23 51.29	-8 30.2	1.832	1.744	31.8	21.3	69 E	36*	50*
1 16	0 19.31	+11 24.1	0.440	0.956	80.4	19.5	73 E	55*	35*	1 16	0 10.04	-5 26.2	1.897	1.721	31.1	21.3	65 E	38*	44*
1 21	0 27.64	+15 34.6	0.464	0.950	80.2	19.6	72 E	58*	31*	1 26	0 29.86	-2 18.0	1.960	1.699	30.2	21.3	60 E	39*	39*
1 26	0 35.10	+19 17.4	0.487	0.941	80.4	19.7	70 E	60*	26*	2 5	0 50.65	+0 52.3	2.019	1.680	29.1	21.3			

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/21	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
266691 2009 PB										17182 1999 VU									
12 27	23 35.03	+ 1 55.7	1.461	1.608	37.0	19.5	80 E	47	48*	12 27	23 35.22	+ 6 36.0	1.626	1.773	33.3	20.7	82 E	52	45*
1 6	0 0.83	+ 3 52.9	1.565	1.637	35.7	19.6	76 E	49*	44*	1 6	23 46.60	+ 7 27.6	1.695	1.717	33.5	20.7	74 E	52*	39*
1 16	0 26.39	+ 5 52.2	1.673	1.668	34.2	19.7	73 E	50*	40*	1 16	0 0.04	+ 8 34.7	1.752	1.655	33.4	20.7	68 E	51*	34*
1 26	0 51.69	+ 7 50.9	1.786	1.702	32.7	19.9	69 E	51*	37*	1 26	0 15.38	+ 9 55.3	1.797	1.590	33.1	20.7	62 E	49*	29*
2 5	1 16.71	+ 9 46.6	1.902	1.739	31.0	20.0	65 E	50*	34*	2 5	0 32.52	+ 11 27.5	1.828	1.519	32.6	20.6	56 E	46*	24*
2 15	1 41.47	+ 11 37.3	2.022	1.777	29.2	20.2	62 E	49*	31*	2 15	0 51.51	+ 13 9.5	1.843	1.444	32.2	20.5	51 E	43*	21*
2 25	2 6.00	+ 13 21.3	2.143	1.817	27.4	20.3	58 E	46*	29*	2 25	1 12.42	+ 14 59.3	1.842	1.365	31.7	20.4	46 E	39*	18*
3 7	2 30.29	+ 14 56.9	2.265	1.858	25.5	20.4	54 E	43*	27*	3 7	1 35.47	+ 16 54.3	1.825	1.280	31.5	20.2	42 E	35*	15*
3 17	2 54.36	+ 16 23.1	2.386	1.900	23.5	20.5	50 E	39*	25*	3 17	2 0.96	+ 18 51.7	1.791	1.191	31.5	20.0	39 E	32*	14*
3 27	3 18.22	+ 17 39.0	2.506	1.943	21.5	20.6	46 E	35*	23*	3 27	2 29.30	+ 20 47.2	1.740	1.098	32.1	19.8	36 E	29*	12*
4 6	3 41.84	+ 18 43.8	2.623	1.986	19.5	20.7	41 E	31*	22*	4 1	2 44.68	+ 21 42.3	1.708	1.051	32.6	19.6	35 E	28*	12*
4 16	4 5.20	+ 19 37.1	2.736	2.030	17.4	20.7	37 E	26*	20*	4 6	3 0.98	+ 22 34.5	1.671	1.002	33.4	19.5	33 E	26*	12*
4 26	4 28.27	+ 20 18.6	2.845	2.073	15.3	20.8	33 E	22*	18*	4 11	3 18.25	+ 23 22.4	1.631	0.954	34.5	19.4	33 E	25*	12*
5 6	4 51.01	+ 20 48.2	2.948	2.117	13.2	20.8	29 E	17*	16*	4 16	3 36.58	+ 24 4.7	1.586	0.906	35.9	19.3	32 E	24*	12*
5 16	5 13.38	+ 21 6.1	3.044	2.161	11.0	20.9	24 E	12*	14*	4 21	3 56.01	+ 24 39.5	1.536	0.858	37.7	19.1	31 E	23*	13*
5 26	5 35.32	+ 21 12.6	3.132	2.204	8.9	20.9	20 E	7*	11*	4 26	4 16.58	+ 25 4.7	1.483	0.811	40.0	19.0	31 E	23*	13*
6 5	5 56.78	+ 21 8.1	3.211	2.247	6.8	20.9	15 E	2*	8*	5 1	4 38.28	+ 25 17.9	1.424	0.767	42.8	18.9	31 E	22*	14*
6 15	6 17.74	+ 20 53.1	3.281	2.290	4.7	20.9	11 E	—	4*	5 5	5 1.08	+ 25 16.4	1.362	0.725	46.4	18.7	31 E	21*	15*
6 25	6 38.13	+ 20 28.2	3.340	2.332	2.7	20.8	6 E	—	—	5 11	5 24.87	+ 24 57.5	1.295	0.689	50.7	18.6	32 E	21*	17*
7 5	6 57.92	+ 19 54.2	3.388	2.374	1.3	20.8	3 E	—	—	5 16	5 49.47	+ 24 18.5	1.224	0.658	55.7	18.6	33 E	20*	18*
7 15	7 17.09	+ 19 11.9	3.425	2.414	2.2	20.9	5 W	—	—	5 21	6 14.60	+ 23 17.2	1.149	0.636	61.4	18.5	33 E	19*	20*
7 25	7 35.59	+ 18 22.1	3.449	2.455	4.1	21.1	10 W	—	3*	5 26	6 40.00	+ 21 52.0	1.072	0.623	67.5	18.5	35 E	18*	23*
8 4	7 53.40	+ 17 25.6	3.460	2.494	6.0	21.3	15 W	4*	7*	5 31	7 5.41	+ 20 2.6	0.994	0.620	73.8	18.5	36 E	17*	25*
8 14	8 10.50	+ 16 23.3	3.459	2.533	8.0	21.4	20 W	9*	11*	6 5	7 30.70	+ 17 49.1	0.917	0.627	79.7	18.6	37 E	16*	27*
8 24	8 26.84	+ 15 16.2	3.443	2.570	9.8	21.5	26 W	15*	14*	6 10	7 55.92	+ 15 12.1	0.842	0.645	85.0	18.7	39 E	14*	30*
163014 2001 UA₅										137238 1999 RN₂₉									
12 27	23 35.06	+ 2 16.4	0.437	1.003	74.8	18.3	80 E	47	48*	12 27	23 35.86	-11 17.0	1.616	1.656	35.0	19.2	75 E	34	57*
1 6	0 1.36	+ 10 31.9	0.412	0.992	76.8	18.2	79 E	55*	40*	1 6	23 56.78	-10 25.9	1.675	1.622	34.7	19.2	70 E	35*	52*
1 16	0 33.13	+ 19 39.6	0.391	0.994	77.2	18.1	80 E	64*	32*	1 16	0 19.03	- 9 17.5	1.728	1.592	34.2	19.2	65 E	35*	48*
1 26	1 13.17	+ 29 18.1	0.376	1.009	75.5	18.0	83 E	73*	24*	1 26	0 42.46	- 7 54.5	1.777	1.564	33.5	19.2	61 E	35*	44*
2 1	1 37.52	+ 34 3.9	0.372	1.021	73.9	18.0	85 E	77*	21*	2 5	1 6.96	- 6 19.6	1.822	1.540	32.8	19.2	58 E	34*	41*
2 5	2 5.52	+ 38 34.9	0.372	1.036	71.9	17.9	87 E	80*	19*	2 15	1 32.46	- 4 35.6	1.862	1.519	32.0	19.2	55 E	33*	39*
2 10	2 37.69	+ 42 38.9	0.375	1.054	69.4	17.9	90 E	84*	17*	2 25	1 58.91	- 2 45.5	1.900	1.503	31.1	19.2	52 E	32*	37*
2 15	3 14.16	+ 46 3.0	0.382	1.074	66.8	17.9	92 E	86*	15*	3 7	2 26.24	- 0 52.4	1.936	1.491	30.3	19.2	49 E	30*	36*
2 17	3 29.85	+ 47 10.6	0.386	1.083	65.6	17.9	94 E	86*	14*	3 17	2 54.41	+ 1 0.5	1.971	1.484	29.4	19.2	47 E	28*	34*
2 19	3 46.08	+ 48 9.2	0.390	1.092	64.5	17.9	95 E	86*	14*	3 27	3 23.37	+ 2 49.7	2.007	1.482	28.5	19.2	45 E	26*	33*
2 21	4 2.74	+ 48 58.2	0.395	1.101	63.4	17.9	96 E	86*	14*	4 1	4 16.58	+ 24 39.5	1.536	0.858	37.7	19.1	31 E	23*	13*
2 23	4 19.71	+ 49 37.4	0.401	1.110	62.2	18.0	97 E	85	13*	4 6	3 36.58	+ 24 4.7	1.586	0.906	35.9	19.3	32 E	24*	12*
2 25	4 36.86	+ 50 6.5	0.408	1.120	61.1	18.0	98 E	85	13*	4 11	3 18.25	+ 23 22.4	1.631	0.954	34.5	19.4	33 E	25*	12*
2 27	4 54.04	+ 50 25.5	0.415	1.130	60.0	18.0	99 E	85	13*	4 16	3 36.58	+ 24 4.7	1.586	0.906	35.9	19.3	32 E	24*	12*
3 1	5 11.11	+ 50 34.8	0.423	1.141	58.9	18.0	100 E	84	13*	4 21	3 56.01	+ 24 39.5	1.536	0.858	37.7	19.1	31 E	23*	13*
3 3	5 27.92	+ 50 34.7	0.431	1.151	57.8	18.1	101 E	84	13*	4 26	4 16.58	+ 25 4.7	1.483	0.811	40.0	19.0	31 E	23*	13*
3 5	5 44.35	+ 50 25.7	0.440	1.162	56.8	18.1	101 E	85	14	5 1	4 38.28	+ 25 17.9	1.424	0.767	42.8	18.9	31 E	22*	14*
3 7	6 0.30	+ 50 8.6	0.450	1.173	55.7	18.1	102 E	85	14	5 5	5 1.08	+ 25 16.4	1.362	0.725	46.4	18.7	31 E	21*	15*
3 9	6 15.67	+ 49 44.1	0.461	1.184	54.8	18.2	103 E	85	14	5 11	5 24.87	+ 24 57.5	1.295	0.689	50.7	18.6	32 E	21*	17*
3 11	6 30.42	+ 49 13.1	0.472	1.196	53.8	18.2	104 E	86	15	5 16	5 49.47	+ 24 18.5	1.224	0.658	55.7	18.6	33 E	20*	18*
3 13	6 44.51	+ 48 36.4	0.484	1.207	52.9	18.3	104 E	86	15	5 21	6 14.60	+ 23 17.2	1.149	0.636	61.4	18.5	33 E	19*	20*
3 15	6 57.92	+ 47 54.7	0.496	1.219	52.1	18.3	105 E	87	16	5 26	6 40.00	+ 21 52.0	1.072	0.623	67.5	18.5	35 E	18*	23*
3 17	7 10.65	+ 47 8.8	0.509	1.231	51.2	18.4	105 E	88	17	6 5	7 30.70	+ 17 49.1	0.917	0.627	79.7	18.6	37 E	16*	27*
3 19	7 22.71	+ 46 19.5	0.523	1.243	50.5	18.4	106 E	89	18	6 10	7 55.92	+ 15 12.1	0.842	0.645	85.0	18.7	39 E	14*	30*
3 21	7 34.13	+ 45 27.4	0.537	1.255	49.7	18.5	106 E	90	19	6 15	8 21.31	+ 12 11.9	0.772	0.672	89.1	18.7	41 E	13*	33*
3 23	7 44.93	+ 44 33.1	0.552	1.267	49.0	18.6	106 E	90	19	6 20	8 47.25	+ 8 48.4	0.708	0.705	92.0	18.8	44 E	11*	36*
3 25	7 55.15	+ 43 37.1	0.567	1.280	48.4	18.6	106 E	89	20	6 25	9 14.25	+ 5 1.4	0.651	0.744	93.3	18.7	47 E	10*	40*
3 27	8 4.82	+ 42 39.7	0.583	1.292	47.7	18.7	107 E	88	21	6 30	9 42.85	+ 0 51.4	0.603	0.787	93.1	18.7	51 E	8*	44*
3 29	8 13.98	+ 41 41.6	0.600	1.304	47.1	18.7	107 E	87	22	7 5	10 13.56	- 3 38.8	0.564	0.832	91.4	18.6	55 E	7*	49*
3 31	8 22.68	+ 40 42.8	0.617	1.317	46.6	18.8	107 E	86	23	7 10	10 46.71	- 8 22.2	0.536	0.880	88.3	18.5	60 E	6*	54*
4 2	8 30.93	+ 39 43.8	0.634	1.329	46.0	18.9	107 E	85	24	7 15	11 22.30	- 13 6.6	0.520	0.928	84.2	18.4			

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°
137238 1999 RN₂₉										407653 2011 QF₃									
<i>(continuation)</i>										<i>(continuation)</i>									
4 6	3 53.00	+ 4 32.0	2.045	1.484	27.5	19.2	43 E	23*	33*	2 25	1 39.35	+ 3 4.2	1.689	1.266	35.6	20.1	48 E	34*	30*
4 16	4 23.20	+ 6 4.2	2.086	1.491	26.5	19.3	42 E	20*	32*	3 7	2 7.35	+ 5 37.7	1.663	1.202	36.2	20.0	46 E	32*	28*
4 26	4 53.79	+ 7 23.3	2.130	1.503	25.4	19.3	40 E	17*	31*	3 17	2 37.94	+ 8 15.8	1.630	1.143	37.1	19.9	44 E	31*	27*
5 6	5 24.59	+ 8 27.0	2.179	1.519	24.2	19.3	38 E	14*	30*	3 27	3 11.35	+10 54.1	1.592	1.091	38.2	19.7	43 E	29*	26*
5 16	5 55.40	+ 9 13.7	2.233	1.539	22.9	19.4	36 E	11*	29*	4 1	3 29.19	+12 11.5	1.572	1.069	38.9	19.7	42 E	29*	26*
5 26	6 25.99	+ 9 42.3	2.290	1.563	21.5	19.4	34 E	7*	28*	4 6	3 47.80	+13 26.7	1.551	1.049	39.7	19.6	42 E	28*	26*
6 5	6 56.15	+ 9 52.9	2.352	1.590	19.9	19.5	32 E	4*	26*	4 11	4 7.22	+14 38.6	1.531	1.033	40.5	19.6	42 E	28*	26*
6 15	7 25.71	+ 9 46.1	2.418	1.621	18.3	19.5	30 E	1*	24*	4 16	4 27.43	+15 46.1	1.511	1.019	41.3	19.6	42 E	28*	27*
6 25	7 54.50	+ 9 23.1	2.486	1.654	16.6	19.6	28 E	—	22*	4 21	4 48.42	+16 48.0	1.493	1.009	42.1	19.5	42 E	28*	27*
7 5	8 22.43	+ 8 45.5	2.556	1.690	14.7	19.6	25 E	—	19*	4 26	5 10.15	+17 43.1	1.476	1.003	42.8	19.5	43 E	27*	27*
7 15	8 49.45	+ 7 55.3	2.626	1.727	12.8	19.6	22 E	—	16*	5 1	5 32.56	+18 30.0	1.460	1.000	43.5	19.5	43 E	27*	28*
7 25	9 15.51	+ 6 54.6	2.694	1.766	10.9	19.7	19 E	—	13*	5 6	5 55.57	+19 7.6	1.448	1.001	44.1	19.5	44 E	27*	29*
8 4	9 40.64	+ 5 45.3	2.761	1.807	8.8	19.7	16 E	—	9*	5 11	6 19.09	+19 34.8	1.438	1.006	44.6	19.5	44 E	27*	29*
8 14	10 4.87	+ 4 29.6	2.824	1.848	6.8	19.7	13 E	—	5*	5 16	6 42.97	+19 50.6	1.431	1.015	44.9	19.5	45 E	26*	30*
8 24	10 28.24	+ 3 9.2	2.882	1.891	4.8	19.7	9 E	—	1*	5 21	7 7.07	+19 54.5	1.429	1.027	45.1	19.6	46 E	26*	31*
9 3	10 50.81	+ 1 46.0	2.934	1.933	3.1	19.7	6 E	—	—	5 26	7 31.21	+19 46.0	1.430	1.042	45.1	19.6	47 E	26*	32*
9 13	11 12.66	+ 0 21.4	2.978	1.976	2.3	19.7	4 W	—	—	5 31	7 55.23	+19 25.4	1.436	1.060	44.9	19.6	48 E	25*	33*
9 23	11 33.82	+ 1 2.8	3.013	2.020	3.2	19.8	7 W	—	—	6 5	8 18.97	+18 53.0	1.446	1.082	44.5	19.7	48 E	25*	34*
10 3	11 54.36	+ 2 25.3	3.039	2.063	5.0	20.0	10 W	2*	3*	6 10	8 42.30	+18 9.7	1.460	1.106	44.0	19.7	49 E	24*	35*
10 13	12 14.31	+ 3 45.0	3.054	2.106	7.0	20.2	15 W	7*	5*	6 15	9 5.07	+17 16.4	1.479	1.132	43.3	19.8	50 E	24*	37*
10 23	12 33.70	+ 5 0.3	3.058	2.148	9.0	20.3	20 W	12*	8*	6 20	9 27.20	+16 14.4	1.503	1.160	42.5	19.9	50 E	23*	38*
11 2	12 52.54	+ 6 10.3	3.049	2.191	11.0	20.4	25 W	16*	11*	6 25	9 48.60	+15 5.2	1.531	1.189	41.5	19.9	51 E	23*	39*
11 12	13 10.83	+ 7 13.6	3.029	2.232	13.0	20.5	30 W	20*	15*	7 5	10 9.24	+13 50.1	1.564	1.220	40.5	20.0	51 E	22*	40*
11 22	13 28.52	+ 8 9.3	2.996	2.273	14.8	20.6	36 W	24*	19*	7 10	10 29.10	+12 30.5	1.600	1.253	39.4	20.1	52 E	21*	40*
12 2	13 45.58	+ 8 56.1	2.950	2.314	16.6	20.7	42 W	28*	24*	7 15	11 6.51	+ 9 42.9	1.684	1.320	37.1	20.2	52 E	20*	42*
12 12	14 1.93	+ 9 33.1	2.892	2.354	18.2	20.7	48 W	31*	30*	7 20	11 24.12	+ 8 17.1	1.731	1.354	35.9	20.3	51 E	19*	42*
12 22	14 17.45	+ 9 59.2	2.823	2.393	19.6	20.7	55 W	33*	37*	7 25	11 41.03	+ 6 51.1	1.781	1.390	34.7	20.4	51 E	19*	42*
1 1	14 32.03	+ 10 13.3	2.743	2.431	20.8	20.7	61 W	34*	43*	7 30	11 57.29	+ 5 25.7	1.834	1.425	33.4	20.5	51 E	18*	42*
1 11	14 45.50	+ 10 14.6	2.654	2.468	21.7	20.7	68 W	35*	51*	8 4	12 12.97	+ 4 1.5	1.889	1.461	32.1	20.6	50 E	18*	42*
1 21	14 57.64	+ 10 1.9	2.558	2.505	22.4	20.7	76 W	35	58*	8 9	12 28.10	+ 2 38.9	1.946	1.497	30.9	20.6	49 E	17*	41*
139047 2001 EB₁₆										167701 2004 TM₁₃									
12 27	23 36.74	+ 39 5.9	2.007	1.854	29.2	21.2	67 E	6	61*	8 14	12 42.73	+ 1 18.4	2.005	1.532	29.6	20.7	48 E	17*	41*
1 6	23 53.08	+ 37 21.8	2.041	1.805	28.8	21.2	62 E	8*	56*	8 19	12 56.91	+ 0 0.2	2.065	1.568	28.4	20.8	47 E	17*	40*
1 16	0 11.27	+ 35 25.7	2.063	1.754	28.4	21.1	58 E	9*	52*	8 24	13 10.67	+ 1 15.4	2.127	1.604	27.1	20.9	46 E	16*	39*
1 26	0 31.14	+ 33 17.4	2.072	1.703	28.1	21.1	55 E	10*	49*	8 29	13 24.06	+ 2 28.3	2.189	1.640	25.9	21.0	45 E	16*	38*
2 5	0 52.55	+ 30 56.7	2.069	1.650	28.0	21.0	52 E	10*	46*	9 3	13 37.11	+ 3 38.2	2.252	1.675	24.6	21.0	44 E	15*	37*
2 15	1 15.42	+ 28 22.4	2.056	1.598	27.9	20.9	49 E	10*	43*	9 8	13 49.86	+ 4 45.3	2.315	1.710	23.4	21.1	42 E	15*	35*
2 25	1 39.72	+ 25 34.1	2.034	1.545	28.1	20.8	47 E	10*	41*	9 13	14 2.34	+ 5 49.3	2.378	1.745	22.1	21.2	41 E	14*	34*
3 7	2 5.41	+ 22 31.2	2.006	1.493	28.4	20.7	46 E	9*	40*	9 18	14 14.57	+ 6 50.2	2.441	1.779	20.9	21.2	39 E	14*	32*
3 17	2 32.51	+ 19 13.0	1.974	1.441	28.9	20.6	44 E	8*	38*	9 23	14 26.57	+ 7 47.9	2.504	1.813	19.7	21.3	37 E	14*	30*
3 27	3 1.01	+ 15 40.3	1.941	1.391	29.3	20.5	43 E	8*	37*	9 28	14 38.37	+ 8 42.5	2.566	1.847	18.4	21.3	36 E	13*	29*
4 6	3 30.89	+ 11 54.1	1.910	1.343	29.8	20.4	42 E	7*	36*	10 3	14 49.98	+ 9 34.0	2.628	1.880	17.2	21.4	34 E	13*	27*
4 16	4 2.12	+ 7 57.1	1.885	1.297	30.2	20.3	41 E	6*	35*	10 8	15 1.43	+ 10 22.4	2.688	1.913	16.0	21.4	32 E	12*	25*
4 21	4 18.21	+ 5 55.8	1.874	1.276	30.3	20.3	40 E	6*	34*	10 13	15 12.72	+ 11 7.7	2.746	1.946	14.8	21.5	30 E	12*	22*
4 26	4 34.61	+ 3 53.6	1.866	1.256	30.3	20.3	39 E	6*	33*	167701 2004 TM₁₃									
5 1	4 51.29	+ 1 51.0	1.860	1.237	30.3	20.2	38 E	6*	32*	12 27	23 37.15	+ 5 41.4	1.891	2.002	29.1	20.6	82 E	51	46*
5 6	5 8.25	+ 0 11.0	1.857	1.220	30.1	20.2	37 E	5*	31*	1 6	23 54.89	+ 6 58.8	2.030	2.032	28.0	20.7	76 E	52*	41*
5 11	5 25.46	+ 2 11.5	1.856	1.204	29.9	20.1	36 E	5*	30*	1 16	0 13.00	+ 8 21.6	2.168	2.063	26.7	20.9	71 E	52*	36*
5 16	5 42.90	+ 4 9.8	1.858	1.189	29.6	20.1	35 E	5*	29*	1 26	0 31.40	+ 9 48.4	2.305	2.094	25.3	21.0	65 E	51*	32*
5 21	6 0.55	+ 6 4.8	1.862	1.177	29.1	20.1	34 E	5*	28*	2 5	0 50.03	+ 11 17.3	2.439	2.124	23.7	21.1	60 E	48*	28*
5 26	6 18.38	+ 7 55.6	1.869	1.166	28.6	20.1	33 E	5*	27*	2 15	1 8.87	+ 12 46.8	2.569	2.154	22.0	21.2	55 E	45*	24*
5 31	6 36.36	+ 9 41.6	1.878	1.157	28.0	20.0	32 E	5*	26*	2 25	1 27.89	+ 14 15.5	2.694	2.184	20.1	21.3	49 E	41*	21*
6 5	6 54.47	+ 11 22.0	1.889	1.150	27.3	20.0	31 E	5*	25*	3 7	1 47.06	+ 15 42.0	2.813	2.214	18.2	21.3	44 E	36*	18*
6 15	7 31.01	+ 14 23.2	1.917	1.143	25.7	20.0	29 E	5*	22*	3 17	2 6.38	+ 17 5.2	2.925	2.243	16.3	21.4	39 E	32*	16*
6 25	8 7.77	+ 16 55.3	1.949	1.144	24.0	20.0	27 E	6*	20*	3 27	2 25.83	+ 18 24.1	3.029	2.272	14.2	21.4	34 E	27*	13*
7 5	8 44.58	+ 18 55.8	1.985	1.154	22.4	20.0	26 E	8*	18*	4 6	2 45.40	+ 19 37.6	3.124	2.300	12.2	21.4	29 E	22*	10*
7 15	9 21.28	+ 20 23.8	2.021	1.173	20.9	20.0	24 E	9*	16*	4 16	3 5.05	+ 20 44.8	3.209	2.328	10.1	21.4	24 E	17*	8*
7 25	9 57.70	+ 21 19.8	2.058																

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°
210744 2000 UE₇₅										155287 2005 XK₁ <i>(continuation)</i>									
12 27	23 37.62	- 8 12.2	1.740	1.784	32.4	20.2	76 E	37	55*	3 27	3 6.69	+15 40.6	2.523	1.909	20.6	21.3	42 E	32*	23*
1 6	23 58.16	- 5 31.9	1.859	1.812	31.0	20.4	72 E	39*	50*	4 6	3 29.81	+17 11.2	2.626	1.942	18.6	21.4	38 E	28*	21*
1 16	0 18.69	- 2 52.7	1.979	1.842	29.6	20.5	67 E	41*	44*	4 16	3 52.94	+18 29.8	2.723	1.975	16.6	21.4	34 E	24*	18*
1 26	0 39.20	- 0 16.1	2.100	1.872	27.9	20.6	63 E	42*	39*	4 26	4 16.03	+19 35.7	2.816	2.008	14.5	21.5	30 E	19*	16*
2 5	0 59.69	+ 2 16.4	2.221	1.903	26.2	20.7	59 E	42*	35*	438010 2003 WT₂₅									
2 15	1 20.21	+ 4 43.6	2.341	1.936	24.4	20.8	54 E	40*	31*	12 27	23 39.52	+18 19.3	2.268	2.433	23.8	21.3	88 E	63	37*
2 25	1 40.76	+ 7 4.4	2.458	1.968	22.5	20.9	50 E	37*	28*	1 6	23 51.68	+17 53.4	2.361	2.400	23.8	21.4	80 E	63*	33*
3 7	2 1.36	+ 9 17.7	2.573	2.002	20.6	21.0	45 E	34*	25*	1 16	0 5.34	+17 44.5	2.452	2.366	23.5	21.4	73 E	61*	28*
3 17	2 22.03	+11 22.7	2.683	2.035	18.6	21.0	41 E	30*	22*	1 26	0 20.30	+17 50.4	2.538	2.331	22.8	21.4	67 E	57*	25*
3 27	2 42.77	+13 18.7	2.788	2.069	16.6	21.1	36 E	26*	19*	2 5	0 36.39	+18 8.7	2.617	2.295	21.9	21.5	60 E	52*	21*
4 6	3 3.58	+15 4.9	2.887	2.102	14.5	21.1	32 E	22*	17*	2 15	0 53.52	+18 36.9	2.689	2.259	20.8	21.4	54 E	47*	18*
4 16	3 24.45	+16 41.0	2.979	2.136	12.4	21.2	27 E	17*	14*	2 25	1 11.61	+19 12.7	2.752	2.222	19.5	21.4	48 E	42*	15*
4 26	3 45.35	+18 6.3	3.064	2.169	10.2	21.2	23 E	13*	11*	3 7	1 30.58	+19 53.5	2.805	2.185	18.0	21.4	43 E	36*	13*
5 6	4 6.26	+19 20.8	3.140	2.202	8.1	21.2	18 E	8*	8*	3 17	1 50.42	+20 37.2	2.850	2.147	16.4	21.3	38 E	31*	10*
5 16	4 27.13	+20 24.1	3.207	2.235	6.0	21.1	13 E	4*	5*	3 27	2 11.08	+21 21.4	2.884	2.110	14.7	21.2	32 E	26*	9*
5 26	4 47.92	+21 16.3	3.263	2.267	3.8	21.1	9 E	—	2*	4 6	2 32.55	+22 3.8	2.908	2.072	12.9	21.2	27 E	21*	7*
6 5	5 8.56	+21 57.6	3.310	2.299	1.7	21.0	4 E	—	—	4 16	2 54.82	+22 42.3	2.923	2.034	11.0	21.1	23 E	16*	5*
6 15	5 29.00	+22 28.0	3.345	2.330	0.6	21.0	1 W	—	—	4 26	3 17.86	+23 14.5	2.928	1.996	9.0	20.9	18 E	12*	3*
6 25	5 49.17	+22 48.1	3.369	2.361	2.5	21.2	6 W	—	—	5 6	3 41.65	+23 38.4	2.923	1.958	7.0	20.8	14 E	7*	1*
7 5	6 9.00	+22 58.4	3.382	2.391	4.6	21.3	11 W	1*	4*	5 16	4 6.14	+23 51.9	2.911	1.921	5.0	20.7	10 E	3*	—
7 15	6 28.42	+22 59.5	3.381	2.420	6.6	21.5	16 W	5*	7*	5 26	4 31.26	+23 52.8	2.890	1.884	2.9	20.5	5 E	—	—
181882 1999 RF₁₄										6 5	4 56.95	+23 39.4	2.862	1.848	0.9	20.3	2 E	—	—
12 27	23 38.75	+20 46.3	1.429	1.713	35.0	17.9	88 E	66	34*	6 15	5 23.11	+23 9.9	2.828	1.813	1.3	20.2	2 W	—	—
1 6	23 56.35	+22 29.3	1.499	1.696	35.2	18.0	83 E	67*	30*	6 25	5 49.64	+22 22.9	2.788	1.780	3.3	20.3	6 W	—	—
1 16	0 16.28	+24 20.2	1.567	1.681	35.0	18.0	79 E	68*	25*	7 5	6 16.41	+21 17.2	2.743	1.747	5.4	20.3	9 W	—	3*
1 26	0 38.40	+26 16.2	1.634	1.669	34.7	18.1	75 E	66*	22*	7 15	6 43.32	+19 52.2	2.694	1.717	7.5	20.4	13 W	1*	6*
2 5	1 2.58	+28 13.7	1.699	1.659	34.1	18.2	71 E	64*	19*	7 25	7 10.25	+18 7.3	2.642	1.688	9.5	20.4	16 W	3*	9*
2 15	1 28.74	+30 8.9	1.763	1.653	33.4	18.2	67 E	61*	16*	8 4	7 37.12	+16 2.7	2.589	1.662	11.4	20.4	19 W	6*	11*
2 25	1 56.79	+31 57.4	1.827	1.650	32.6	18.3	64 E	58*	15*	8 14	8 3.87	+13 38.9	2.534	1.638	13.3	20.4	22 W	8*	14*
3 7	2 26.59	+33 34.7	1.890	1.649	31.6	18.3	61 E	55*	14*	8 24	8 30.42	+10 56.9	2.479	1.617	15.2	20.4	25 W	11*	16*
3 17	2 57.96	+34 56.3	1.955	1.652	30.6	18.4	58 E	52*	13*	9 3	8 56.77	+ 7 58.2	2.425	1.600	16.9	20.3	27 W	14*	18*
3 27	3 30.61	+35 58.3	2.021	1.658	29.4	18.4	55 E	49*	13*	9 13	9 22.92	+ 4 44.8	2.373	1.585	18.6	20.3	30 W	16*	20*
4 6	4 1.15	+36 37.2	2.088	1.667	28.2	18.5	52 E	46*	13*	9 23	9 48.90	+ 1 19.3	2.322	1.574	20.1	20.3	33 W	18*	23*
4 11	4 21.12	+36 47.3	2.123	1.672	27.5	18.5	50 E	44*	13*	10 3	10 14.74	+ 2 15.6	2.274	1.567	21.6	20.3	35 W	19*	25*
4 16	4 38.14	+36 50.9	2.157	1.678	26.8	18.5	49 E	43*	14*	10 13	10 40.51	- 5 56.7	2.229	1.563	23.0	20.3	38 W	21*	27*
4 21	4 55.16	+36 47.9	2.193	1.685	26.1	18.5	48 E	41*	14*	10 23	11 6.26	- 9 40.2	2.186	1.564	24.2	20.3	40 W	21*	30*
4 26	5 12.09	+36 38.4	2.228	1.693	25.3	18.5	46 E	39*	14*	11 2	11 32.06	-13 22.8	2.145	1.568	25.4	20.3	43 W	21*	32*
5 1	5 28.89	+36 22.3	2.264	1.701	24.6	18.6	45 E	37*	14*	11 12	11 57.94	-17 0.8	2.106	1.576	26.5	20.3	45 W	21*	35*
5 6	5 45.50	+35 59.9	2.301	1.710	23.8	18.6	43 E	35*	15*	11 22	12 23.94	-20 30.4	2.068	1.587	27.6	20.3	48 W	20*	38*
5 11	6 1.89	+35 31.4	2.338	1.719	23.0	18.6	42 E	34*	15*	12 2	12 50.05	-23 48.6	2.030	1.602	28.5	20.3	51 W	19*	42*
5 16	6 18.00	+34 57.1	2.375	1.729	22.1	18.6	40 E	32*	15*	12 7	13 3.14	-25 22.6	2.010	1.611	29.0	20.3	52 W	18*	44*
5 21	6 33.80	+34 17.3	2.412	1.740	21.3	18.7	39 E	29*	16*	12 12	13 16.23	-26 52.5	1.991	1.620	29.4	20.3	54 W	17*	46*
5 26	6 49.26	+33 32.3	2.449	1.751	20.4	18.7	37 E	27*	16*	12 17	13 29.31	-28 18.2	1.970	1.631	29.9	20.3	56 W	16*	48*
5 31	7 4.35	+32 42.5	2.487	1.762	19.5	18.7	35 E	25*	16*	12 22	13 42.37	-29 39.5	1.950	1.642	30.3	20.3	57 W	15*	50*
6 5	7 19.08	+31 48.2	2.524	1.774	18.6	18.7	34 E	23*	16*	12 27	13 55.38	-30 56.2	1.928	1.653	30.7	20.3	59 W	14*	52*
6 10	7 33.44	+30 50.0	2.561	1.787	17.7	18.7	32 E	21*	16*	1 1	14 8.32	-32 8.0	1.906	1.666	31.0	20.3	61 W	13*	54*
6 15	7 47.42	+29 48.1	2.598	1.799	16.7	18.7	31 E	19*	15*	1 6	14 21.14	-33 14.9	1.883	1.679	31.4	20.3	63 W	12*	57*
6 25	8 14.24	+27 34.8	2.670	1.826	14.8	18.8	27 E	15*	15*	1 11	14 33.82	-34 16.7	1.859	1.692	31.7	20.3	65 W	11*	59*
7 5	8 39.62	+25 11.2	2.740	1.855	12.7	18.8	24 E	11*	13*	1 16	14 46.31	-35 13.5	1.833	1.707	32.0	20.3	67 W	10*	61*
7 15	9 3.67	+22 39.5	2.806	1.884	10.7	18.8	20 E	8*	11*	1 21	14 58.57	-36 5.1	1.807	1.721	32.3	20.3	69 W	9	63*
7 25	9 26.49	+20 2.0	2.868	1.915	8.6	18.8	16 E	5*	8*	94210 2001 BK₃₃									
8 4	9 48.22	+17 20.4	2.925	1.946	6.5	18.8	12 E	2*	5*	12 27	23 39.56	+ 3 56.2	1.507	1.674	35.5	19.3	82 E	49	48*
8 14	10 8.98	+14 36.1	2.975	1.978	4.3	18.7	8 E	—	1*	1 6	23 59.59	+ 5 51.7	1.570	1.650	35.5	19.3	77 E	51*	43*
8 24	10 28.89	+11 50.4	3.017	2.011	2.2	18.7	4 E	—	—	1 16	0 21.27	+ 7 56.4	1.631	1.629	35.1	19.4	72 E	52*	38*
9 3	10 48.04	+ 9 4.3	3.052	2.044	0.7	18.6	1 E	—	—	1 26	0 44.43	+10 7.4	1.691	1.612	34.6	19.4	68 E	52*	34*
9 13	11 6.54	+ 6 18.5	3.078	2.077	2.4	18.8	5 W	—	—	2 5	1 8.96	+12 21.3	1.751	1.599	33.8	19.4	65 E	52*	31*
9 23	11 24.44	+ 3 33.9	3.094	2.110	4.5	19.0	9 W	3*	—	2 15	1 34.76	+14 34.5	1.811	1.590	33.0	19.5	61 E	50*	28*
10 3	11 41.82	+ 0 50.9	3.099	2.144	6.6	19.1	14 W	7*	4*	2 25	2 1.74	+16 43.4	1.872	1.586	31.9	19.5	58 E	48*	26*
10 13	11 58.72	- 1 50.0	3.094	2.177	8.7	19.2	19 W	11*	8*	3 7	2 29.79	+18 44.0	1.934	1.586	30.8	19.6	55 E	46*	24*
10 23	12 15.15	- 4 28.4	3.078	2.210	10.7	19.3	24 W	15*	12*	3 17	2 58.81	+20 32.8	1.998	1.591	29.5	19.6	52 E	43*	23*
11 2	12 31.13	- 7 3.8	3.050	2.243	12.7	19.4	30 W	19*	17*	3 27	3 28.63	+22 6.4	2.064	1.600	28.1	19.6	49 E	40*	22*
11 12	12 46.66	- 9 36.2	3.011	2.275	14.5	19.5	35 W	22*	22*	4 6	3 59.04	+23 22.1	2.132	1.613	26.7	19.7	46 E	37*	22*
11 22	13 1.67	-12 5.1	2.960	2.307	16.3	19.6	41 W	24*	27*	4 16	4 29.82	+24 17.6	2.202	1.630	25.1	19.7	44 E	34*	

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°	
94210 2001 BK₃₃ (continuation)									35107 1991 VH (continuation)									
10 3	11 26.91	+ 1 34.7	3.199	2.269	7.8	20.7	18 W	10* 7*	8 14	12 12.65	+ 8 16.6	1.845	1.240	31.2	19.8	39 E	17* 31*	
10 13	11 43.91	- 0 27.7	3.196	2.313	9.8	20.8	23 W	15* 11*	8 24	12 41.64	+ 5 14.9	1.855	1.222	30.4	19.8	38 E	16* 29*	
10 23	12 0.28	- 2 26.9	3.182	2.356	11.6	20.9	29 W	19* 14*	9 3	13 11.02	+ 2 6.8	1.860	1.203	29.6	19.7	36 E	15* 28*	
11 2	12 16.01	- 4 22.2	3.155	2.399	13.4	21.0	34 W	23* 19*	9 13	13 41.04	- 1 5.1	1.861	1.182	29.0	19.7	35 E	14* 27*	
11 12	12 31.05	- 6 12.9	3.116	2.442	15.1	21.0	40 W	27* 24*	9 23	14 11.94	- 4 17.7	1.858	1.159	28.4	19.6	33 E	14* 26*	
11 22	12 45.36	- 7 58.3	3.065	2.485	16.7	21.1	46 W	30* 29*	10 3	14 43.95	- 7 27.6	1.852	1.136	27.9	19.6	32 E	13* 24*	
12 2	12 58.86	- 9 37.9	3.002	2.526	18.0	21.1	53 W	32* 35*	10 13	15 17.33	-10 30.9	1.843	1.113	27.5	19.5	31 E	13* 23*	
12 12	13 11.42	-11 11.0	2.928	2.567	19.2	21.2	59 W	33* 42*	10 23	15 52.28	-13 22.8	1.831	1.090	27.2	19.4	30 E	12* 22*	
12 22	13 22.90	-12 37.0	2.844	2.608	20.2	21.2	66 W	32* 50*	11 2	16 28.98	-15 58.0	1.819	1.067	26.9	19.3	29 E	12* 21*	
1 1	13 33.13	-13 55.5	2.751	2.647	20.9	21.1	74 W	31* 58*	11 7	16 48.02	-17 7.6	1.812	1.056	26.8	19.3	29 E	12* 20*	
1 11	13 41.87	-15 5.7	2.652	2.686	21.2	21.1	81 W	30* 67*	11 12	17 7.52	-18 10.8	1.805	1.045	26.7	19.3	28 E	12* 20*	
1 21	13 48.90	-16 6.9	2.548	2.725	21.2	21.0	90 W	29* 75*	11 17	17 27.46	-19 6.8	1.798	1.035	26.7	19.3	28 E	12* 19*	
237566 2001 BW₁									35107 1991 VH (continuation)									
12 27	23 39.96	+28 35.1	3.405	3.579	15.9	21.4	92 E	74 28*	11 22	17 47.84	-19 54.9	1.790	1.025	26.7	19.2	28 E	12* 19*	
1 6	23 47.20	+28 3.7	3.530	3.568	15.9	21.5	84 E	73* 24*	11 27	18 8.62	-20 34.5	1.783	1.016	26.7	19.2	28 E	12* 19*	
1 16	23 55.74	+27 46.5	3.652	3.556	15.6	21.5	77 E	69* 20*	12 2	18 29.76	-21 4.8	1.776	1.008	26.7	19.2	27 E	11* 18*	
1 26	0 5.40	+27 42.6	3.770	3.543	15.1	21.6	69 E	63* 15*	12 12	19 12.95	-21 35.4	1.763	0.993	26.8	19.1	27 E	12* 18*	
2 5	0 15.99	+27 50.7	3.881	3.529	14.3	21.6	62 E	56* 11*	12 22	19 56.90	-21 23.6	1.751	0.982	27.1	19.1	27 E	12* 17*	
380729 2005 RX₃₀									269806 1999 VM₉₅									
12 27	23 40.03	+ 7 3.6	1.441	1.641	36.5	20.1	83 E	52 46*	12 27	23 40.30	+ 2 41.6	2.185	2.255	25.5	19.9	81 E	48 49*	
1 6	0 3.27	+ 8 45.0	1.522	1.643	35.9	20.2	79 E	54* 41*	1 6	23 56.41	+ 2 46.6	2.351	2.297	24.4	20.1	75 E	48* 44*	
1 16	0 27.43	+10 32.1	1.605	1.648	35.2	20.3	75 E	55* 37*	1 16	0 12.67	+ 3 5.3	2.516	2.339	23.0	20.2	68 E	47* 39*	
1 26	0 52.34	+12 22.2	1.691	1.657	34.2	20.4	71 E	55* 34*	1 26	0 29.02	+ 3 34.6	2.677	2.381	21.4	20.4	62 E	45* 35*	
2 5	1 17.87	+14 11.6	1.780	1.669	33.0	20.5	67 E	54* 31*	2 5	0 45.41	+ 4 11.7	2.833	2.423	19.7	20.5	56 E	42* 31*	
2 15	1 43.90	+15 57.6	1.870	1.684	31.7	20.5	64 E	53* 29*	2 15	1 1.84	+ 4 54.1	2.982	2.464	17.9	20.6	50 E	38* 27*	
2 25	2 10.36	+17 37.6	1.963	1.703	30.3	20.6	60 E	50* 27*	2 25	1 18.26	+ 5 39.9	3.122	2.505	15.9	20.6	44 E	33* 24*	
3 7	2 37.12	+19 8.7	2.058	1.724	28.7	20.7	57 E	47* 25*	3 7	1 34.67	+ 6 27.0	3.253	2.546	13.9	20.7	38 E	28* 21*	
3 17	3 4.11	+20 29.1	2.154	1.748	27.1	20.8	53 E	44* 24*	3 17	1 51.04	+ 7 14.1	3.372	2.586	11.8	20.7	32 E	22* 18*	
3 27	3 31.22	+21 37.0	2.250	1.774	25.3	20.9	50 E	40* 23*	3 27	2 7.37	+ 7 59.6	3.480	2.626	9.8	20.7	27 E	16* 15*	
4 6	3 58.32	+22 30.9	2.347	1.802	23.5	20.9	46 E	36* 22*	4 6	2 23.63	+ 8 42.5	3.574	2.665	7.7	20.7	21 E	10* 12*	
4 16	4 25.32	+23 10.2	2.444	1.832	21.7	21.0	42 E	32* 21*	4 16	2 39.80	+ 9 21.6	3.655	2.703	5.8	20.7	16 E	4* 8*	
4 26	4 52.08	+23 34.2	2.539	1.864	19.8	21.1	39 E	28* 20*	4 26	2 55.85	+ 9 56.1	3.722	2.740	4.0	20.7	11 E	— 5*	
5 6	5 18.47	+23 43.0	2.632	1.897	17.8	21.1	35 E	23* 19*	5 6	3 11.75	+10 25.1	3.774	2.777	2.8	20.7	8 E	— 1*	
5 16	5 44.40	+23 36.8	2.722	1.932	15.8	21.2	31 E	19* 18*	5 16	3 27.47	+10 47.9	3.811	2.814	3.0	20.8	8 W	— 4*	
5 26	6 9.76	+23 16.3	2.809	1.967	13.8	21.2	28 E	14* 16*	5 26	3 42.96	+11 3.9	3.832	2.849	4.3	20.9	12 W	— 11*	
6 5	6 34.46	+22 42.2	2.891	2.003	11.7	21.2	24 E	10* 14*	6 5	3 58.17	+11 12.5	3.839	2.884	5.9	21.0	17 W	— 17*	
6 15	6 58.45	+21 55.6	2.967	2.040	9.7	21.2	20 E	5* 12*	6 15	4 13.04	+11 13.5	3.830	2.918	7.7	21.1	23 W	— 22*	
6 25	7 21.67	+20 57.5	3.038	2.077	7.6	21.2	16 E	2* 9*	6 25	4 27.49	+11 6.2	3.806	2.951	9.4	21.2	28 W	1* 22*	
7 5	7 44.10	+19 49.3	3.101	2.115	5.5	21.2	12 E	— 5*	7 5	4 41.46	+10 50.6	3.769	2.984	11.1	21.2	34 W	6* 28*	
7 15	8 5.73	+18 32.1	3.157	2.153	3.5	21.2	7 E	— 1*	7 15	4 54.86	+10 26.3	3.717	3.015	12.6	21.3	40 W	12* 33*	
7 25	8 26.56	+17 7.1	3.204	2.191	1.6	21.1	3 E	— —	7 25	5 7.57	+ 9 53.1	3.652	3.046	14.0	21.3	47 W	19* 37*	
8 4	8 46.61	+15 35.5	3.241	2.229	1.3	21.2	3 W	— —	8 4	5 19.50	+ 9 11.0	3.576	3.076	15.3	21.4	53 W	25* 42*	
8 14	9 5.88	+13 58.4	3.269	2.266	3.1	21.4	7 W	— —	8 14	5 30.52	+ 8 20.0	3.488	3.106	16.4	21.4	60 W	31* 46*	
35107 1991 VH									495997 2007 VH₉₆									
12 27	23 40.07	-22 35.4	0.787	1.051	62.8	18.5	72 E	22 62*	12 27	23 40.73	- 9 21.0	1.652	1.715	33.9	20.6	77 E	36 57*	
1 1	0 0.85	-20 11.4	0.796	1.061	62.0	18.5	72 E	25 61*	1 6	23 57.20	- 5 51.3	1.707	1.678	33.8	20.6	72 E	39* 50*	
1 6	0 20.90	-17 40.2	0.807	1.073	61.2	18.6	73 E	27 60*	1 16	0 15.28	- 2 15.6	1.759	1.644	33.4	20.6	67 E	42* 43*	
1 11	0 40.30	-15 3.7	0.820	1.084	60.3	18.6	73 E	30 59*	1 26	0 34.86	+ 1 24.5	1.809	1.614	32.8	20.6	63 E	43* 38*	
1 16	0 59.12	-12 23.8	0.834	1.096	59.5	18.6	74 E	33 58*	2 5	0 55.87	+ 5 6.8	1.857	1.587	32.1	20.6	59 E	44* 33*	
1 21	1 17.43	- 9 42.3	0.850	1.107	58.6	18.7	74 E	35 56*	2 15	1 18.30	+ 8 48.9	1.904	1.565	31.2	20.6	55 E	43* 29*	
1 26	1 35.31	- 7 1.0	0.867	1.119	57.8	18.7	74 E	38 55*	2 25	1 42.17	+12 27.8	1.949	1.549	30.2	20.6	52 E	42* 25*	
1 31	1 52.81	- 4 21.2	0.887	1.131	56.9	18.8	74 E	40 53*	3 7	2 7.52	+15 59.9	1.995	1.537	29.1	20.6	49 E	40* 22*	
2 5	2 10.00	- 1 44.5	0.908	1.143	56.1	18.8	74 E	43 51*	3 17	2 34.41	+19 21.5	2.041	1.530	28.0	20.6	46 E	38* 20*	
2 10	2 26.96	+ 0 48.2	0.931	1.154	55.3	18.9	74 E	45 50*	3 27	3 2.87	+22 28.4	2.088	1.530	26.7	20.6	44 E	36* 18*	
2 15	2 43.75	+ 3 15.7	0.955	1.165	54.4	18.9	74 E	47 48*	4 6	3 32.85	+25 16.3	2.137	1.534	25.5	20.6	41 E	34* 16*	
2 20	3 0.40	+ 5 37.1	0.981	1.176	53.6	19.0	73 E	48 47*	4 16	4 4.27	+27 41.0	2.189	1.544	24.1	20.7	39 E	31* 15*	
2 25	3 16.96	+ 7 51.7	1.008	1.187	52.8	19.0	73 E	50 45*	4 26	4 36.93	+29 38.8	2.243	1.559	22.8	20.7	37 E	29* 14*	
3 7	3 49.93	+11 58.1	1.066	1.208	51.3	19.1	72 E	52 43*	5 6	5 10.49	+31 6.7	2.300	1.580	21.4	20.7	35 E	27* 13*	
3 17	4 22.89	+15 31.4	1.127	1.227	49.8	19.3	70 E	52 40*	5 16	5 44.57	+32 3.1	2.360	1.604	19.9	20.8	33 E	24* 12*	
3 27	4 55.97	+18 29.6	1.191	1.244	48.3	19.4	69 E	52 38*	5 26	6 18.66	+32 27.8	2.422	1.633	18.4	20.8	31 E	22* 12*	
4 6	5 29.14	+20 52.0	1.257	1.259	46.9	19.5	67 E	51 37*	6 5	6 52.28	+32 21.7	2.488	1.666	16.8	20.9	28 E	19* 11*	
4 16	6 2.40	+22 38.6	1.322	1.272	45.5	19.6	65 E	49 36*										
4 26	6 35.62	+23 50.4	1.387	1.283	44.1	19.6	62 E	46 35*										

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°
495997 2007 VH₉₆										344132 1999 YP₁₃									
<i>(continuation)</i>										<i>(continuation)</i>									
6 15	7 25.02	+31 47.2	2.555	1.703	15.2	20.9	26 E	17*	11*	3 17	2 58.02	-1 55.8	2.134	1.641	26.7	19.3	48 E	26*	37*
6 25	7 56.54	+30 47.8	2.623	1.742	13.6	21.0	24 E	14*	9*	3 27	3 23.52	+1 39.5	2.203	1.657	25.3	19.4	45 E	25*	34*
7 5	8 26.61	+29 27.3	2.692	1.784	12.0	21.0	21 E	12*	8*	4 6	3 49.16	+4 59.3	2.276	1.676	23.7	19.4	42 E	23*	32*
7 15	8 55.15	+27 49.6	2.760	1.827	10.3	21.1	19 E	10*	6*	4 16	4 14.92	+8 1.1	2.354	1.699	21.9	19.5	39 E	20*	29*
7 25	9 22.12	+25 58.8	2.827	1.873	8.7	21.1	16 E	9*	4*	4 26	4 40.75	+10 43.1	2.434	1.725	20.1	19.5	36 E	17*	26*
8 4	9 47.60	+23 58.3	2.891	1.920	7.2	21.2	14 E	7*	2*	5 6	5 6.59	+13 4.3	2.516	1.754	18.1	19.6	33 E	14*	24*
8 14	10 11.67	+21 51.2	2.950	1.969	5.9	21.2	12 E	5*	—	5 16	5 32.37	+15 4.3	2.598	1.786	16.1	19.6	29 E	11*	21*
8 24	10 34.45	+19 40.5	3.005	2.018	5.1	21.2	10 E	4*	—	5 26	5 58.00	+16 43.3	2.679	1.820	13.9	19.6	26 E	8*	18*
9 3	10 56.06	+17 28.2	3.054	2.068	4.9	21.3	10 E	3*	—	6 5	6 23.39	+18 2.1	2.758	1.856	11.8	19.7	22 E	4*	15*
9 13	11 16.62	+15 16.4	3.094	2.118	5.4	21.4	11 W	3*	—	6 15	6 48.45	+19 1.7	2.834	1.894	9.6	19.7	18 E	2*	11*
3040 Kozai										153249 2001 BW₁₅									
12 27	23 40.86	-45 11.6	1.645	1.542	35.8	17.3	66 E	—	59*	12 27	23 41.29	+54 43.1	2.344	2.739	20.5	20.4	103 E	80	5*
1 1	23 54.10	-44 4.2	1.659	1.533	35.6	17.3	65 E	—	58*	1 1	23 48.00	+53 56.6	2.409	2.762	20.5	20.4	100 E	81	5*
1 6	0 7.57	-42 50.3	1.671	1.525	35.5	17.3	64 E	2*	57*	1 6	23 55.14	+53 15.3	2.476	2.785	20.5	20.5	98 E	81*	4*
1 11	0 21.24	-41 30.1	1.681	1.517	35.4	17.3	63 E	3*	57*	1 11	0 2.66	+52 39.0	2.545	2.807	20.4	20.6	95 E	81*	4*
1 16	0 35.08	-40 3.4	1.689	1.510	35.3	17.3	62 E	5*	56*	1 16	0 10.50	+52 7.6	2.614	2.829	20.3	20.7	92 E	79*	3*
1 21	0 49.05	-38 30.4	1.695	1.504	35.2	17.3	62 E	6*	56*	1 21	0 18.63	+51 41.0	2.685	2.850	20.2	20.7	89 E	77*	2*
1 26	1 3.13	-36 51.2	1.701	1.498	35.1	17.3	61 E	7*	55*	1 26	0 27.01	+51 18.7	2.755	2.871	20.0	20.8	87 E	75*	2*
1 31	1 17.29	-35 6.0	1.706	1.492	35.1	17.3	61 E	9*	55*	1 31	0 35.60	+51 0.6	2.826	2.891	19.8	20.9	84 E	72*	1*
2 5	1 31.52	-33 14.9	1.711	1.488	35.0	17.3	60 E	10*	54*	2 5	0 44.40	+50 46.2	2.898	2.911	19.5	20.9	81 E	69*	—
2 10	1 45.81	-31 18.2	1.715	1.483	35.0	17.3	60 E	11*	54*	2 10	0 53.38	+50 35.3	2.969	2.931	19.2	21.0	78 E	67*	—
2 15	2 0.15	-29 16.4	1.720	1.480	35.0	17.3	59 E	13*	53*	2 15	1 2.53	+50 27.7	3.039	2.950	18.9	21.0	75 E	64*	—
2 20	2 14.52	-27 10.0	1.725	1.477	34.9	17.3	59 E	14*	53*	2 20	1 11.84	+50 23.0	3.109	2.968	18.5	21.1	73 E	61*	—
2 25	2 28.91	-24 59.5	1.732	1.475	34.8	17.3	58 E	15*	52*	2 25	1 21.28	+50 21.0	3.178	2.986	18.1	21.1	70 E	58*	—
3 2	2 43.31	-22 45.8	1.740	1.473	34.7	17.3	58 E	16*	51*	3 2	1 30.86	+50 21.4	3.245	3.004	17.7	21.2	67 E	56*	—
3 7	2 57.71	-20 29.4	1.750	1.472	34.5	17.3	57 E	17*	51*	3 7	1 40.55	+50 23.7	3.311	3.021	17.3	21.2	65 E	53*	—
3 12	3 12.12	-18 11.2	1.762	1.472	34.3	17.3	57 E	18*	50*	3 12	1 50.37	+50 27.9	3.376	3.038	16.8	21.2	62 E	51*	—
3 17	3 26.53	-15 52.3	1.775	1.473	34.1	17.3	56 E	18*	49*	3 17	2 0.30	+50 33.8	3.439	3.054	16.3	21.3	59 E	48*	—
3 22	3 40.94	-13 33.4	1.792	1.474	33.8	17.3	55 E	19*	48*	3 22	2 10.33	+50 40.9	3.500	3.070	15.8	21.3	57 E	46*	—
3 27	3 55.32	-11 15.7	1.811	1.476	33.4	17.3	55 E	19*	47*	3 27	2 20.45	+50 49.2	3.559	3.085	15.2	21.3	54 E	44*	—
4 1	4 9.69	-9 0.0	1.832	1.478	33.0	17.3	54 E	19*	46*	4 1	2 30.66	+50 58.3	3.616	3.100	14.7	21.4	52 E	41*	—
4 6	4 24.03	-6 47.2	1.856	1.482	32.5	17.4	53 E	19*	45*	4 6	2 40.96	+51 8.1	3.670	3.115	14.1	21.4	50 E	39*	—
4 11	4 38.35	-4 38.0	1.883	1.485	31.9	17.4	52 E	19*	44*	4 11	2 51.34	+51 18.4	3.722	3.129	13.6	21.4	47 E	37*	—
4 16	4 52.63	-2 33.3	1.912	1.490	31.3	17.4	50 E	19*	43*	4 16	3 1.80	+51 29.1	3.771	3.143	13.1	21.4	45 E	35*	—
344132 1999 YP₁₃										27089 1998 UE₁₅									
12 27	23 41.09	-32 5.2	1.738	1.667	33.5	19.1	69 E	13	63*	12 27	23 41.39	-11 46.2	1.767	1.800	32.0	19.6	76 E	33	58*
1 1	23 52.80	-30 29.4	1.759	1.658	33.3	19.1	68 E	15	61*	1 6	0 1.56	-9 10.5	1.882	1.823	30.7	19.7	71 E	36	52*
1 6	0 4.65	-28 49.3	1.780	1.649	33.0	19.1	66 E	16*	59*	1 16	0 21.78	-6 33.9	1.998	1.848	29.3	19.8	67 E	38*	47*
1 11	0 16.62	-27 5.1	1.801	1.642	32.8	19.1	65 E	18*	57*	1 26	0 42.03	-3 58.2	2.114	1.873	27.8	19.9	62 E	39*	42*
1 16	0 28.69	-25 17.2	1.822	1.636	32.5	19.1	63 E	19*	55*	2 5	1 2.31	-1 25.2	2.229	1.900	26.1	20.0	58 E	38*	38*
1 21	0 40.85	-23 26.1	1.843	1.630	32.2	19.2	62 E	21*	53*	2 15	1 22.65	+1 3.6	2.342	1.927	24.4	20.1	54 E	37*	34*
1 26	0 53.08	-21 32.2	1.865	1.626	31.8	19.2	61 E	22*	52*	2 25	1 43.05	+3 26.8	2.452	1.954	22.5	20.2	49 E	35*	30*
1 31	1 5.36	-19 36.1	1.887	1.623	31.5	19.2	59 E	23*	50*	3 7	2 3.53	+5 43.3	2.559	1.982	20.6	20.2	45 E	32*	27*
2 5	1 17.69	-17 38.1	1.910	1.620	31.1	19.2	58 E	24*	48*	3 17	2 24.10	+7 52.1	2.662	2.010	18.7	20.3	40 E	28*	24*
2 10	1 30.08	-15 38.8	1.934	1.619	30.6	19.2	57 E	25*	47*	3 27	2 44.77	+9 52.1	2.760	2.039	16.7	20.3	36 E	24*	22*
2 15	1 42.52	-13 38.8	1.959	1.619	30.2	19.2	56 E	26*	45*	4 6	3 5.53	+11 42.6	2.852	2.067	14.7	20.4	32 E	20*	19*
2 20	1 55.00	-11 38.7	1.985	1.620	29.7	19.2	54 E	26*	44*	4 16	3 26.39	+13 23.0	2.937	2.095	12.6	20.4	27 E	15*	16*
2 25	2 7.52	-9 39.1	2.012	1.622	29.2	19.2	53 E	27*	42*	4 26	3 47.31	+14 52.6	3.015	2.123	10.6	20.4	23 E	11*	13*
3 2	2 20.08	-7 40.4	2.040	1.626	28.6	19.3	52 E	27*	41*	5 6	4 8.26	+16 11.1	3.085	2.151	8.5	20.4	18 E	6*	10*
3 7	2 32.68	-5 43.3	2.070	1.630	28.0	19.3	50 E	27*	39*	5 16	4 29.21	+17 18.3	3.146	2.179	6.4	20.4	14 E	2*	7*
										5 26	4 50.12	+18 14.0	3.198	2.206	4.4	20.3	10 E	—	4*
										6 5	5 10.92	+18 58.3	3.240	2.233	2.6	20.3	6 E	—	—
										6 15	5 31.57	+19 31.3	3.272	2.259	1.7	20.3	4 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°
27089 1998 UE₁₅										505019 2011 QH₂₁									
<i>(continuation)</i>																			
6 25	5 51.99	+19 53.4	3.292	2.285	2.8	20.4	6 W	—	—	12 27	23 42.50	+ 6 42.0	0.995	1.315	48.0	21.1	83 E	52	46*
7 5	6 12.12	+20 5.0	3.302	2.310	4.6	20.5	11 W	—	4*	1 6	0 8.02	+ 5 32.8	1.039	1.280	48.8	21.1	78 E	51*	44*
7 15	6 31.90	+20 6.8	3.300	2.334	6.6	20.6	15 W	3*	8*	1 16	0 34.68	+ 4 46.2	1.078	1.244	49.5	21.2	74 E	49*	43*
7 25	6 51.24	+19 59.4	3.286	2.358	8.5	20.7	20 W	8*	11*	1 26	1 2.38	+ 4 17.1	1.112	1.208	50.0	21.2	70 E	48*	41*
8 4	7 10.10	+19 43.7	3.260	2.381	10.5	20.8	25 W	13*	15*	2 5	1 31.02	+ 4 0.4	1.138	1.172	50.5	21.2	67 E	46*	40*
8 14	7 28.41	+19 20.7	3.222	2.404	12.3	20.9	30 W	19*	18*	2 15	2 0.61	+ 3 51.7	1.158	1.138	51.0	21.2	63 E	44*	40*
8 24	7 46.09	+18 51.4	3.172	2.426	14.1	20.9	36 W	24*	20*	2 25	2 31.19	+ 3 47.1	1.169	1.105	51.5	21.2	61 E	41*	40*
9 3	8 3.08	+18 17.1	3.111	2.446	15.8	21.0	41 W	30*	23*	3 7	3 2.79	+ 3 43.1	1.172	1.076	52.2	21.1	59 E	39*	40*
9 13	8 19.30	+17 39.1	3.037	2.466	17.4	21.0	47 W	36*	26*	3 17	3 35.54	+ 3 37.4	1.167	1.050	53.0	21.1	57 E	36*	41*
9 23	8 34.68	+16 58.7	2.953	2.486	18.9	21.0	53 W	42*	28*	3 27	4 9.53	+ 3 27.8	1.155	1.029	54.0	21.0	57 E	33*	42*
10 3	8 49.11	+16 17.7	2.859	2.504	20.1	21.0	59 W	47*	31*	4 6	4 44.91	+ 3 13.0	1.135	1.014	55.2	21.0	56 E	30*	44*
10 13	9 2.49	+15 37.6	2.756	2.522	21.2	20.9	66 W	52*	34*	4 16	5 21.85	+ 2 52.6	1.112	1.005	56.3	21.0	56 E	28*	45*
10 23	9 14.66	+15 0.6	2.644	2.538	22.0	20.9	73 W	56*	37*	4 26	6 0.50	+ 2 26.4	1.086	1.002	57.5	21.0	57 E	25*	47*
11 2	9 25.47	+14 28.5	2.526	2.554	22.5	20.8	80 W	59*	41*	5 6	6 40.96	+ 1 54.6	1.060	1.007	58.4	20.9	58 E	23*	49*
11 12	9 34.71	+14 3.9	2.403	2.569	22.7	20.7	88 W	59*	44*	5 16	7 23.22	+ 1 17.8	1.039	1.018	58.9	20.9	60 E	20*	51*
11 22	9 42.13	+13 49.2	2.279	2.583	22.3	20.6	96 W	59*	47*	5 26	8 7.07	+ 0 36.2	1.025	1.035	58.9	20.9	61 E	19*	53*
12 2	9 47.47	+13 46.9	2.155	2.596	21.5	20.5	105 W	59*	50*	6 5	8 51.99	+ 0 9.7	1.021	1.058	58.4	21.0	63 E	17*	54*
12 12	9 50.41	+13 59.5	2.037	2.608	20.0	20.3	115 W	59*	50*	6 15	9 37.30	+ 0 59.3	1.031	1.085	57.3	21.0	64 E	17*	56*
12 22	9 50.68	+14 28.9	1.927	2.619	17.9	20.1	125 W	59*	50*	6 25	10 22.12	+ 1 52.0	1.054	1.115	55.8	21.1	65 E	16*	57*
1 1	9 48.09	+15 15.7	1.831	2.630	15.0	19.9	136 W	60*	49*	7 5	11 5.65	+ 2 46.5	1.091	1.149	53.9	21.2	66 E	17*	58*
1 11	9 42.60	+16 18.8	1.754	2.639	11.4	19.7	148 W	61*	48*	7 15	11 47.34	+ 3 42.2	1.142	1.183	51.8	21.3	66 E	17*	58*
1 21	9 34.53	+17 34.0	1.701	2.647	7.3	19.5	160 W	63*	46*	7 25	12 26.84	+ 4 37.8	1.204	1.219	49.6	21.4	66 E	18*	58*
162913 2001 MT₁₈										131905 2002 BQ₉									
12 27	23 41.66	+ 9 23.7	1.263	1.412	42.7	21.1	77 E	36	57*	12 27	23 42.76	+10 49.3	2.540	2.500	22.5	20.7	76 E	34	58*
1 6	23 56.01	+ 7 52.2	1.295	1.339	43.8	21.1	70 E	37*	50*	1 6	23 54.82	+ 9 14.7	2.694	2.528	21.4	20.8	70 E	36*	51*
1 16	0 12.55	+ 6 5.6	1.312	1.262	44.9	21.0	65 E	38*	45*	1 16	0 7.54	+ 7 37.3	2.844	2.555	20.1	20.9	63 E	36*	44*
1 26	0 31.16	+ 4 5.0	1.312	1.180	46.2	20.9	60 E	38*	40*	1 26	0 20.80	+ 5 58.0	2.987	2.582	18.6	21.0	57 E	35*	38*
2 5	0 51.74	+ 1 51.4	1.293	1.093	47.9	20.8	55 E	37*	36*	2 5	0 34.48	+ 4 17.9	3.121	2.608	17.0	21.1	51 E	33*	33*
2 15	1 14.37	+ 0 35.1	1.254	1.003	50.4	20.6	51 E	36*	32*	2 15	0 48.52	+ 2 38.0	3.247	2.633	15.2	21.1	44 E	29*	28*
2 25	1 39.07	+ 3 14.2	1.194	0.910	54.1	20.4	48 E	34*	30*	2 25	1 2.83	+ 0 59.1	3.361	2.657	13.4	21.1	38 E	25*	24*
3 7	2 5.80	+ 6 5.9	1.109	0.818	59.7	20.1	45 E	32*	27*	3 7	1 17.37	+ 0 37.9	3.464	2.680	11.5	21.1	32 E	20*	20*
3 17	2 34.20	+ 9 11.2	1.001	0.733	68.0	19.9	43 E	31*	26*	3 17	1 32.10	+ 2 12.4	3.554	2.702	9.5	21.1	27 E	15*	16*
3 27	3 2.98	+12 32.4	0.869	0.663	80.1	19.8	41 E	29*	24*	3 27	1 46.97	+ 3 43.6	3.631	2.723	7.5	21.1	21 E	10*	12*
4 1	3 16.64	+14 21.0	0.796	0.637	87.7	19.8	40 E	28*	22*	4 6	2 1.96	+ 5 10.9	3.694	2.744	5.6	21.1	16 E	4*	8*
4 6	3 29.03	+16 17.3	0.720	0.619	96.5	19.9	38 E	27*	21*	4 16	2 17.03	+ 6 33.6	3.743	2.763	3.9	21.0	11 E	—	5*
4 11	3 39.35	+18 24.3	0.642	0.611	106.2	20.1	36 E	26*	19*	4 26	2 32.15	+ 7 51.3	3.777	2.782	2.6	21.0	7 E	—	1*
4 16	3 46.63	+20 45.8	0.566	0.613	116.5	20.5	33 E	24*	16*	5 6	2 47.27	+ 9 3.4	3.797	2.799	2.7	21.0	7 W	—	—
4 21	3 49.78	+23 26.2	0.494	0.625	127.2	21.1	30 E	22*	12*	5 16	3 2.37	+10 9.6	3.801	2.816	4.0	21.1	11 W	—	4*
213548 2002 JV₁₁₅										86534 2000 DT₉₈									
12 27	23 41.74	+ 5 7.7	1.693	1.778	32.8	21.2	78 E	40	54*	12 27	23 42.93	+ 2 37.1	2.006	2.069	27.9	20.4	80 E	42	53*
1 6	0 3.55	+ 2 59.6	1.830	1.824	31.2	21.4	74 E	42*	49*	1 6	23 58.36	+ 0 33.8	2.148	2.098	26.7	20.6	74 E	44*	47*
1 16	0 24.86	+ 0 51.6	1.971	1.871	29.5	21.5	70 E	44*	44*	1 16	0 14.31	+ 1 30.1	2.288	2.126	25.4	20.7	68 E	45*	41*
1 26	0 45.78	+ 1 14.8	2.113	1.919	27.7	21.7	65 E	44*	40*	1 26	0 30.68	+ 3 33.8	2.424	2.155	23.9	20.8	62 E	45*	35*
2 5	1 6.34	+ 3 17.9	2.255	1.966	25.9	21.8	61 E	43*	36*	2 5	0 47.41	+ 5 36.3	2.557	2.182	22.3	20.9	57 E	43*	31*
239825 1998 SO₁₃₃										276888 2004 RM₃₂₃									
12 27	23 41.83	+ 0 1.5	1.679	1.799	32.6	21.4	80 E	45	51*	12 27	23 42.44	+ 2 58.1	1.911	2.021	28.8	21.5	82 E	48	49*
1 6	0 1.46	+ 2 20.4	1.804	1.829	31.4	21.5	76 E	47*	45*	1 6	0 0.51	+ 4 25.2	2.064	2.066	27.5	21.7	76 E	49*	44*
1 16	0 21.31	+ 4 40.9	1.931	1.860	30.0	21.7	71 E	49*	40*	1 16	0 18.66	+ 5 55.7	2.218	2.112	26.1	21.8	71 E	50*	39*
1 26	0 41.36	+ 6 58.8	2.058	1.891	28.5	21.8	66 E	49*	35*	1 26	0 36.84	+ 7 28.2	2.371	2.157	24.5	22.0	65 E	49*	34*
2 5	1 1.57	+ 9 13.1	2.184	1.923	26.8	21.9	62 E	48*	31*	2 5	0 55.04	+ 9 1.0	2.522	2.203	22.8	22.1	60 E	47*	30*
9172 Abhramu																			
12 27	23 41.86	+ 7 52.3	1.034	1.346	46.6	18.9	84 E	53	45*										
1 6	0 18.66	+10 44.3	1.119	1.397	44.3	19.1	83 E	56	42*										
1 16	0 53.91	+13 18.9	1.219	1.454	42.1	19.3	82 E	58*	40*										
1 26	1 27.51	+15 34.9	1.332	1.514	39.8	19.5	80 E	60*	37*										
2 5	1 59.49	+17 31.7	1.458	1.578	37.6	19.7	78 E	61*	35*										
2 15	2 29.95	+19 10.4	1.593	1.644	35.5	19.9	75 E	61*	34*										
2 25	2 59.03	+20 31.9	1.737	1.712	33.3	20.2	72 E	59*	33*										
3 7	3 26.84	+21 37.4	1.887	1.781	31.2	20.4	68 E	57*	31*										
3 17	3 53.52	+22 28.0	2.042	1.850	29.1	20.6	65 E	53*	30*										
3 27	4 19.18	+23 4.9	2.199	1.919	27.0	20.7	61 E	50*	30*										
4 6	4 43.87	+23 28.9	2.358	1.988	24.8	20.9	56 E	45*	29*										
4 16	5 7.67	+23 40.9	2.515	2.057	22.6	21.1	52 E	40*	28*										
4 26	5 30.64	+23 41.9	2.670	2.125	20.5	21.2	48 E	35*	26*										
5 6	5 52.79	+23 32.4	2.821	2.193	18.3	21.3	43 E	29*	25*										
5 16	6 14.17	+23 13.5	2.966	2.259	16.1	21.4	38 E	24*	23*										
5 26	6 34.78	+22 45.8	3.104	2.325	13.9	21.5	33 E	18*	21*										

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°
86534 2000 DT₉₈										260277 2004 TR₁₂									
<i>(continuation)</i>										<i>(continuation)</i>									
6 5	4 26.16	+24 9.1	3.480	2.473	2.5	21.0	6 W	—	—	7 8	5 50.17	+55 26.3	0.338	0.769	129.0	20.9	36 W	28*	—
6 15	4 45.08	+24 55.3	3.482	2.493	4.5	21.2	11 W	2*	3*	7 9	5 45.60	+54 53.4	0.335	0.773	128.8	20.9	36 W	29*	—
6 25	5 3.88	+25 33.3	3.471	2.511	6.5	21.3	16 W	6*	7*	7 10	5 41.23	+54 17.5	0.333	0.776	128.4	20.8	37 W	30*	—
7 5	5 22.50	+26 3.3	3.447	2.529	8.5	21.4	22 W	10*	11*	7 11	5 37.08	+53 38.8	0.330	0.779	128.1	20.8	37 W	30*	—
7 15	5 40.86	+26 25.4	3.410	2.546	10.4	21.5	27 W	15*	14*	7 12	5 33.16	+52 57.3	0.328	0.783	127.7	20.7	38 W	31*	—
206253 2002 XM₆₃										260277 2004 TR₁₂									
12 27	23 43.20	- 8 10.9	1.350	1.489	40.2	20.3	78 E	37	57*	7 13	5 29.48	+52 13.2	0.325	0.786	127.2	20.7	38 W	32*	—
1 1	23 56.18	- 6 38.5	1.388	1.495	39.7	20.4	76 E	38	54*	7 14	5 26.05	+51 26.6	0.323	0.790	126.7	20.6	39 W	32*	—
1 6	0 9.16	- 5 5.0	1.428	1.502	39.1	20.4	75 E	40	52*	7 15	5 22.87	+50 37.8	0.321	0.794	126.1	20.6	39 W	33*	—
1 11	0 22.15	- 3 31.1	1.468	1.511	38.5	20.5	73 E	41*	49*	7 17	5 17.27	+48 54.0	0.318	0.801	124.8	20.5	40 W	34*	3*
1 16	0 35.15	- 1 57.0	1.510	1.520	37.9	20.5	72 E	43*	47*	7 19	5 12.66	+47 2.9	0.315	0.808	123.4	20.3	42 W	35*	6*
1 21	0 48.15	- 0 23.4	1.552	1.529	37.2	20.6	70 E	44*	45*	7 21	5 8.99	+45 5.9	0.312	0.816	121.9	20.2	43 W	37*	9*
1 26	1 1.14	+ 1 9.3	1.596	1.540	36.5	20.6	69 E	45*	43*	7 23	5 6.22	+43 4.1	0.311	0.823	120.2	20.1	44 W	38*	11*
1 31	1 14.14	+ 2 40.7	1.640	1.551	35.8	20.7	67 E	45*	41*	7 25	5 4.26	+40 58.6	0.309	0.831	118.5	20.0	46 W	38*	14*
2 5	1 27.14	+ 4 10.4	1.686	1.563	35.1	20.7	66 E	46*	39*	7 27	5 3.06	+38 50.4	0.308	0.839	116.7	19.9	48 W	39*	17*
2 10	1 40.15	+ 5 38.0	1.732	1.576	34.3	20.8	64 E	46*	38*	7 29	5 2.52	+36 40.4	0.308	0.847	114.9	19.8	49 W	40*	19*
2 15	1 53.17	+ 7 3.2	1.779	1.589	33.5	20.9	63 E	46*	36*	7 31	5 2.59	+34 29.4	0.308	0.854	113.0	19.7	51 W	41*	22*
2 20	2 6.20	+ 8 25.7	1.827	1.603	32.7	20.9	61 E	46*	35*	8 2	5 3.18	+32 18.0	0.308	0.862	111.2	19.6	52 W	41*	24*
2 25	2 19.25	+ 9 45.2	1.876	1.618	31.8	21.0	60 E	45*	34*	8 4	5 4.24	+30 6.7	0.308	0.870	109.3	19.5	54 W	41*	27*
3 2	2 32.31	+11 1.4	1.925	1.633	31.0	21.0	58 E	44*	33*	8 9	5 8.55	+24 41.8	0.311	0.889	104.7	19.3	58 W	42*	33*
3 7	2 45.38	+12 14.0	1.975	1.648	30.1	21.1	56 E	43*	32*	8 14	5 14.66	+19 25.2	0.315	0.908	100.3	19.1	62 W	42*	39*
3 12	2 58.46	+13 23.0	2.026	1.664	29.2	21.1	55 E	42*	31*	8 19	5 22.01	+14 19.6	0.320	0.927	96.1	19.0	66 W	41*	44*
3 17	3 11.56	+14 28.1	2.077	1.681	28.3	21.2	53 E	41*	30*	8 24	5 30.22	+ 9 26.2	0.326	0.945	92.2	18.9	69 W	40*	49*
3 22	3 24.67	+15 29.2	2.128	1.698	27.4	21.2	52 E	39*	29*	8 29	5 38.98	+ 4 45.3	0.332	0.962	88.7	18.8	72 W	39*	54*
3 27	3 37.78	+16 26.1	2.179	1.715	26.4	21.3	50 E	38*	28*	9 3	5 48.05	+ 0 16.0	0.339	0.978	85.4	18.8	75 W	37*	58*
4 1	3 50.88	+17 18.7	2.230	1.732	25.5	21.3	48 E	36*	27*	9 8	5 57.21	- 4 2.3	0.345	0.993	82.5	18.8	78 W	35*	63*
4 6	4 3.97	+18 6.9	2.281	1.749	24.5	21.3	46 E	35*	26*	9 13	6 6.32	- 8 10.4	0.352	1.007	79.8	18.7	80 W	33*	67*
4 11	4 17.05	+18 50.8	2.333	1.767	23.5	21.4	45 E	33*	25*	9 18	6 15.27	-12 8.9	0.358	1.020	77.4	18.7	82 W	30*	71*
4 16	4 30.10	+19 30.3	2.383	1.785	22.5	21.4	43 E	31*	25*	9 23	6 23.99	-15 58.6	0.364	1.032	75.3	18.7	84 W	28*	74*
4 21	4 43.12	+20 5.4	2.434	1.804	21.5	21.5	41 E	29*	24*	10 3	6 40.45	-23 14.7	0.374	1.052	71.8	18.7	87 W	22*	81*
4 26	4 56.08	+20 36.0	2.484	1.822	20.5	21.5	39 E	27*	23*	10 13	6 55.00	-30 3.4	0.381	1.067	69.2	18.7	90 W	15	83*
260277 2004 TR₁₂										260277 2004 TR₁₂									
12 27	23 43.25	-27 19.5	0.872	1.082	59.3	20.2	71 E	18	63*	10 28	7 12.26	-39 29.0	0.386	1.081	66.8	18.7	92 W	6	77
1 1	23 59.65	-25 31.8	0.888	1.083	58.9	20.2	70 E	19	62*	11 2	7 16.51	-42 26.3	0.386	1.082	66.3	18.6	93 W	3	74
1 6	0 15.47	-23 39.5	0.904	1.082	58.5	20.3	70 E	21	61*	11 7	7 19.83	-45 18.1	0.384	1.083	66.1	18.6	93 W	—	71
1 11	0 30.81	-21 43.0	0.917	1.080	58.3	20.3	69 E	23*	59*	11 12	7 22.10	-48 4.1	0.381	1.082	66.0	18.6	93 W	—	68
1 16	0 45.77	-19 42.8	0.930	1.077	58.2	20.3	68 E	25*	58*	11 17	7 23.26	-50 44.2	0.378	1.080	66.1	18.6	93 W	—	65
1 21	1 0.41	-17 39.4	0.940	1.072	58.1	20.3	68 E	27*	56*	11 22	7 23.16	-53 18.8	0.372	1.076	66.4	18.6	93 W	—	63
1 26	1 14.81	-15 33.2	0.949	1.066	58.1	20.3	67 E	29*	55*	11 27	7 21.61	-55 48.1	0.366	1.071	66.9	18.5	93 W	—	60
2 5	1 43.10	-11 13.5	0.962	1.050	58.5	20.3	65 E	32*	51*	12 2	7 18.37	-58 12.1	0.358	1.065	67.6	18.5	93 W	—	58
2 15	2 11.13	- 6 45.1	0.968	1.030	59.2	20.3	64 E	35*	48*	12 7	7 13.13	-60 30.5	0.348	1.058	68.6	18.4	92 W	—	55
2 25	2 39.26	- 2 9.7	0.966	1.004	60.3	20.3	62 E	37*	45*	12 12	7 5.61	-62 43.1	0.337	1.049	69.8	18.4	92 W	—	53
3 7	3 7.79	+ 2 31.4	0.957	0.975	61.8	20.3	60 E	38*	42*	12 14	7 1.88	-63 34.7	0.332	1.045	70.3	18.4	91 W	—	52
3 17	3 37.00	+ 7 17.6	0.939	0.941	63.9	20.2	58 E	39*	39*	12 16	6 57.68	-64 25.4	0.327	1.041	70.9	18.3	91 W	—	52
3 27	4 7.11	+12 8.1	0.913	0.905	66.6	20.1	56 E	40*	36*	12 18	6 52.98	-65 15.4	0.322	1.037	71.6	18.3	90 W	—	51
4 6	4 38.17	+17 2.6	0.878	0.866	70.0	20.1	54 E	40*	33*	12 20	6 47.71	-66 4.7	0.316	1.033	72.3	18.3	90 W	—	50
4 16	5 10.17	+22 1.6	0.835	0.827	74.3	20.0	53 E	39*	29*	12 22	6 41.82	-66 53.3	0.310	1.028	73.1	18.3	89 W	—	49
4 21	5 26.43	+24 33.0	0.810	0.808	76.8	20.0	52 E	39*	27*	12 24	6 35.23	-67 41.3	0.304	1.023	73.9	18.3	89 W	—	48
4 26	5 42.76	+27 6.0	0.782	0.790	79.6	19.9	51 E	39*	26*	12 26	6 27.84	-68 28.5	0.298	1.018	74.9	18.2	88 W	—	48
5 1	5 59.04	+29 40.8	0.753	0.773	82.7	19.9	50 E	39*	24*	12 28	6 19.55	-69 15.1	0.291	1.013	75.9	18.2	87 E	—	47
5 6	6 15.11	+32 18.0	0.721	0.757	86.0	19.9	48 E	38*	21*	12 30	6 10.23	-70 0.8	0.285	1.008	76.9	18.2	87 E	—	46
5 11	6 30.74	+34 57.8	0.688	0.742	89.7	19.9	47 E	38*	19*	1 1	5 59.71	-70 45.6	0.278	1.002	78.1	18.1	86 E	—	45
5 16	6 45.63	+37 40.6	0.654	0.730	93.7	19.9	46 E	38*	17*	1 2	5 53.96	-71 7.6	0.274	1.000	78.7	18.1	85 E	—	45
5 21	6 59.34	+40 26.8	0.619	0.720	97.9	20.0	45 E	37*	14*	1 3	5 47.83	-71 29.2	0.270	0.997	79.4	18.1	85 E	—	45
5 26	7 11.31	+43 16.0	0.583	0.713	102.4	20.0	43 E	36*	11*	1 4	5 41.31	-71 50.4	0.267	0.994	80.0	18.1	84 E	—	44
5 28	7 15.44	+44 24.4	0.568	0.711	104.2	20.1	43 E	36*	10*	1 5	5 34.36	-72 11.2	0.263	0.991	80.7	18.1	84 E	—	44
5 30	7 19.13	+45 32.9	0.554	0.709	106.1	20.1	42 E	36*	8*	1 6	5 26.94	-72 31.5	0.259	0.988	81.5	18.1	83 E	—	43
6 1	7 22.31	+46 41.6	0.540	0.708	107.9	20.2	42 E	35*	7*	1 7	5 19.03	-72 51.3	0.255	0					

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°
404108 2012 SF₅₁										142989 2002 VK₉₀									
<i>(continuation)</i>										<i>(continuation)</i>									
2 15	0 29.97	+12 30.8	2.739	2.176	19.1	19.9	46 E	39*	17*	8 4	7 32.27	+22 18.2	3.384	2.458	8.2	21.4	20 W	11*	9*
2 25	0 43.96	+14 12.9	2.746	2.090	17.8	19.8	40 E	34*	12*	8 14	7 50.44	+21 56.9	3.366	2.493	10.2	21.5	26 W	16*	12*
3 7	0 59.44	+16 3.7	2.738	2.002	16.3	19.7	35 E	28*	8*	376848 2001 RY₄₇									
3 17	1 16.50	+18 2.4	2.713	1.911	14.9	19.5	30 E	23*	5*	12 27	23 43.88	+30 49.7	0.620	1.197	55.0	20.8	94 E	76	27*
3 27	1 35.27	+20 8.0	2.673	1.818	13.4	19.3	25 E	19*	2*	1 1	23 50.05	+30 47.1	0.644	1.181	56.4	20.8	91 E	76	25*
4 6	1 56.00	+22 18.9	2.618	1.722	12.0	19.1	21 E	15*	—	1 6	23 56.95	+30 50.9	0.665	1.162	57.7	20.9	87 E	76*	23*
4 16	2 19.00	+24 33.4	2.551	1.624	10.9	18.9	18 E	12*	—	1 11	0 4.49	+31 0.0	0.684	1.142	59.0	21.0	84 E	75*	21*
4 26	2 44.68	+26 48.4	2.471	1.524	10.0	18.6	15 E	9*	—	1 16	0 12.63	+31 13.7	0.700	1.120	60.3	21.0	82 E	74*	20*
5 1	2 58.69	+27 54.7	2.428	1.473	9.7	18.5	14 E	8*	—	1 21	0 21.29	+31 30.9	0.712	1.096	61.7	21.1	79 E	72*	18*
5 6	3 13.57	+28 59.3	2.383	1.422	9.5	18.4	14 E	7*	—	1 26	0 30.40	+31 50.7	0.720	1.071	63.2	21.1	76 E	70*	17*
5 11	3 29.42	+30 1.3	2.336	1.371	9.5	18.3	13 E	6*	—	1 31	0 39.91	+32 11.8	0.725	1.043	64.8	21.1	73 E	67*	15*
5 16	3 46.30	+30 59.5	2.288	1.319	9.5	18.1	12 E	6*	—	2 5	0 49.78	+32 32.8	0.726	1.014	66.7	21.1	71 E	65*	14*
5 21	4 4.28	+31 52.5	2.239	1.268	9.7	18.0	12 E	5*	—	2 10	0 59.95	+32 52.4	0.722	0.983	68.8	21.1	68 E	62*	13*
5 26	4 23.44	+32 38.7	2.189	1.216	9.9	17.9	12 E	5*	—	2 15	1 10.33	+33 9.0	0.714	0.950	71.2	21.1	66 E	60*	12*
5 31	4 43.83	+33 16.1	2.140	1.165	10.2	17.7	12 E	5*	—	2 20	1 20.82	+33 20.3	0.701	0.915	74.1	21.0	63 E	57*	11*
6 5	5 5.46	+33 42.4	2.090	1.115	10.5	17.6	12 E	5*	—	2 25	1 31.23	+33 23.4	0.683	0.879	77.5	21.0	60 E	54*	10*
6 10	5 28.33	+33 55.4	2.042	1.066	10.9	17.5	11 E	5*	—	3 2	1 41.32	+33 14.7	0.660	0.842	81.5	21.0	57 E	51*	9*
6 15	5 52.35	+33 52.2	1.994	1.019	11.4	17.3	11 E	5*	—	3 7	1 50.77	+32 49.1	0.633	0.804	86.4	21.0	54 E	48*	9*
6 20	6 17.39	+33 30.2	1.949	0.973	11.8	17.2	11 E	5*	—	3 12	1 59.10	+32 0.0	0.601	0.766	92.4	21.0	50 E	44*	8*
6 25	6 43.25	+32 46.9	1.906	0.931	12.4	17.1	11 E	5*	—	3 17	2 5.67	+30 38.1	0.566	0.727	99.8	21.1	46 E	40*	8*
6 30	7 9.69	+31 40.2	1.865	0.891	13.0	17.0	11 E	5*	—	3 22	2 9.61	+28 30.9	0.529	0.690	109.0	21.3	41 E	35*	7*
7 5	7 36.43	+30 8.5	1.828	0.857	13.8	16.9	12 E	5*	—	474171 1999 TY₁₉₃									
7 10	8 3.15	+28 11.5	1.794	0.828	14.9	16.8	12 E	5*	1*	12 27	23 44.99	+0 19.5	1.854	1.959	29.7	21.5	81 E	45	52*
7 15	8 29.59	+25 49.5	1.764	0.805	16.2	16.7	13 E	5*	3*	1 6	23 58.25	+1 32.6	1.919	1.910	29.8	21.5	75 E	46*	45*
7 20	8 55.49	+23 4.2	1.739	0.789	17.8	16.7	14 E	4*	5*	1 16	0 13.41	+3 35.4	1.978	1.862	29.5	21.5	69 E	47*	39*
7 25	9 20.70	+19 58.3	1.718	0.782	19.6	16.7	15 E	4*	7*	1 26	0 30.31	+5 47.2	2.030	1.816	29.0	21.5	63 E	47*	34*
7 30	9 45.11	+16 35.6	1.702	0.782	21.5	16.8	16 E	3*	9*	2 5	0 48.86	+8 6.2	2.077	1.770	28.3	21.5	58 E	46*	30*
8 4	10 8.69	+13 0.0	1.691	0.791	23.4	16.8	18 E	2*	12*	2 15	1 9.01	+10 30.6	2.117	1.727	27.5	21.4	54 E	43*	26*
8 9	10 31.48	+9 16.0	1.686	0.808	25.1	16.9	20 E	2*	14*	2 25	1 30.75	+12 58.2	2.152	1.687	26.5	21.4	50 E	40*	22*
8 14	10 53.55	+5 28.0	1.687	0.832	26.5	17.0	22 E	1*	15*	3 7	1 54.09	+15 26.0	2.181	1.649	25.5	21.3	46 E	37*	20*
8 19	11 14.96	+1 40.1	1.695	0.862	27.6	17.2	23 E	—	17*	3 17	2 19.09	+17 51.2	2.206	1.614	24.5	21.3	42 E	34*	18*
8 24	11 35.82	-2 4.1	1.708	0.898	28.3	17.3	25 E	—	19*	3 27	2 45.78	+20 10.0	2.228	1.583	23.4	21.2	39 E	31*	16*
8 29	11 56.23	-5 41.6	1.728	0.937	28.6	17.4	26 E	—	20*	4 6	3 14.16	+22 18.5	2.247	1.556	22.3	21.2	36 E	29*	15*
9 3	12 16.27	-9 10.0	1.754	0.981	28.6	17.5	28 E	—	21*	4 16	3 44.22	+24 12.3	2.266	1.534	21.2	21.1	34 E	26*	13*
9 8	12 36.00	-12 27.3	1.785	1.026	28.3	17.7	29 E	—	22*	4 26	4 15.84	+25 47.0	2.284	1.517	20.1	21.1	31 E	23*	13*
9 13	12 55.48	-15 32.3	1.822	1.074	27.8	17.8	30 E	—	23*	5 6	4 48.81	+26 58.4	2.304	1.504	19.0	21.1	29 E	20*	12*
9 23	13 33.80	-21 1.8	1.911	1.174	26.3	18.0	31 E	—	24*	5 16	5 22.82	+27 42.9	2.326	1.498	17.9	21.0	27 E	18*	12*
10 3	14 11.37	-25 36.0	2.015	1.276	24.3	18.3	32 E	—	24*	6 5	6 32.19	+27 42.6	2.379	1.502	15.5	21.0	23 E	13*	11*
10 13	14 48.18	-29 16.6	2.132	1.379	22.0	18.5	31 E	—	23*	6 15	7 6.60	+26 57.2	2.411	1.512	14.2	21.0	21 E	10*	10*
10 18	15 6.26	-30 48.1	2.193	1.430	20.9	18.6	31 E	—	23*	6 25	7 40.23	+25 43.7	2.447	1.527	12.9	21.0	20 E	8*	10*
10 23	15 24.09	-32 7.9	2.256	1.481	19.7	18.7	30 E	—	22*	7 5	8 12.75	+24 5.2	2.486	1.548	11.5	21.0	18 E	6*	9*
10 28	15 41.64	-33 16.7	2.320	1.532	18.5	18.8	29 E	—	22*	7 15	8 43.95	+22 5.6	2.529	1.573	10.0	21.0	16 E	4*	7*
11 2	15 58.91	-34 15.4	2.384	1.582	17.3	18.9	28 E	—	21*	7 25	9 13.70	+19 49.2	2.574	1.603	8.4	21.1	13 E	3*	6*
11 7	16 15.85	-35 4.7	2.449	1.632	16.1	19.0	27 E	—	20*	8 4	9 42.01	+17 20.0	2.621	1.637	6.8	21.1	11 E	1*	4*
11 12	16 32.46	-35 45.3	2.514	1.681	15.0	19.1	26 E	—	19*	8 14	10 8.94	+14 42.1	2.669	1.673	5.1	21.1	8 E	—	1*
11 17	16 48.70	-36 17.8	2.578	1.730	13.8	19.1	25 E	—	17*	8 24	10 34.57	+11 58.9	2.716	1.713	3.4	21.1	6 E	—	—
11 22	17 4.56	-36 43.1	2.641	1.778	12.7	19.2	23 E	—	16*	9 3	10 59.03	+9 13.3	2.762	1.756	1.8	21.1	3 E	—	—
11 27	17 20.04	-37 1.7	2.703	1.825	11.6	19.3	22 E	—	15*	9 13	11 22.45	+6 27.9	2.805	1.800	1.4	21.1	3 W	—	—
12 2	17 35.12	-37 14.3	2.764	1.872	10.6	19.3	20 E	—	13*	9 23	11 44.93	+3 44.8	2.843	1.846	2.8	21.3	5 W	—	—
12 7	17 49.79	-37 21.5	2.823	1.918	9.7	19.4	19 E	—	12*	10 3	12 6.58	+1 5.5	2.876	1.894	4.6	21.5	9 W	3*	—
12 12	18 4.04	-37 23.7	2.879	1.964	8.8	19.5	18 E	—	10*	140333 2001 TD₂									
12 22	18 31.31	-37 15.7	2.985	2.053	7.3	19.6	15 E	—	7*	12 27	23 45.80	+22 4.2	0.829	1.292	49.6	21.2	91 E	67	34*
1 1	18 56.95	-36 53.9	3.080	2.140	6.4	19.7	14 E	—	3*	1 1	23 50.60	+22 20.7	0.857	1.269	50.7	21.3	87 E	67	32*
1 11	19 20.99	-36 21.7	3.162	2.224	6.4	19.8	15 W	—	3*	1 6	23 56.16	+22 42.5	0.882	1.244	51.7	21.3	83 E	68*	30*
1 21	19 43.47	-35 41.9	3.230	2.306	7.1	20.0	17 W	—	7*	1 11	0 2.40	+23 9.2	0.904	1.217	52.8	21.3	80 E	67*	27*
12 27	23 43.72	-14 32.7	1.638	1.684	34.4	19.8	75 E	30	60*	1 16	0 9.26	+23 40.2	0.922	1.188	53.8	21.4	77 E	66*	25*
1 6	0 6.09	-11 11.4	1.740	1.708	33.1	20.0	72 E	34*	54*	1 21	0 16.69	+24 14.9	0.937	1.158	54.8	21.4	74 E	65*	23*
1 16	0 28.24	-7 51.8	1.846	1.735	31.7	20.1	68 E	37*	49*	1 26	0 24.64	+24 52.6	0.947	1.125					

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	20/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°		
10563 Izhdubar										10563 Izhdubar											
<i>(continuation)</i>										<i>(continuation)</i>											
1	26	0 32.98	-15 28.9	1.452	1.234	42.0	19.7	57 E	27*	45*	10	5	12 46.82	-61 15.4	1.322	1.138	47.3	19.5	57 E	—	19*
2	5	0 46.83	-7 53.5	1.527	1.212	40.2	19.7	52 E	31*	37*	10	7	12 51.73	-62 28.4	1.321	1.145	47.2	19.5	57 E	—	19*
2	15	1 0.52	-0 52.5	1.598	1.186	38.1	19.7	48 E	33*	30*	10	9	12 57.06	-63 41.7	1.320	1.151	47.1	19.5	58 W	—	19*
2	20	1 7.38	+2 26.9	1.631	1.171	36.9	19.7	45 E	33*	27*	10	11	13 2.89	-64 55.3	1.319	1.158	47.0	19.5	58 W	—	19*
2	25	1 14.30	+5 40.2	1.660	1.155	35.8	19.7	43 E	32*	23*	10	13	13 9.30	-66 9.2	1.317	1.164	46.9	19.5	58 W	—	20*
3	2	1 21.30	+8 48.0	1.687	1.138	34.7	19.6	41 E	31*	20*	10	15	13 16.38	-67 23.1	1.314	1.171	46.9	19.5	59 W	—	20*
3	7	1 28.43	+11 51.2	1.709	1.119	33.5	19.6	39 E	31*	17*	10	17	13 24.25	-68 37.1	1.311	1.177	46.8	19.5	59 W	—	20*
3	12	1 35.73	+14 50.6	1.727	1.100	32.5	19.6	36 E	29*	14*	10	19	13 33.08	-69 50.9	1.308	1.183	46.8	19.5	60 W	—	21*
3	17	1 43.25	+17 47.0	1.740	1.080	31.5	19.5	35 E	28*	11*	10	21	13 43.05	-71 4.3	1.304	1.189	46.8	19.5	60 E	—	21*
3	22	1 51.03	+20 41.2	1.748	1.059	30.7	19.5	33 E	27*	8*	10	23	13 54.41	-72 17.0	1.300	1.194	46.8	19.5	61 E	—	21*
3	27	1 59.15	+23 33.8	1.750	1.038	30.1	19.4	31 E	25*	5*	10	24	14 0.70	-72 52.9	1.298	1.197	46.8	19.5	61 E	—	22*
4	1	2 7.68	+26 25.3	1.746	1.015	29.7	19.3	30 E	24*	2*	10	25	14 7.45	-73 28.5	1.296	1.200	46.8	19.5	62 E	—	22*
4	6	2 16.74	+29 16.4	1.736	0.993	29.6	19.3	29 E	23*	—	10	26	14 14.72	-74 3.5	1.294	1.202	46.8	19.5	62 E	—	22*
4	11	2 26.47	+32 7.6	1.719	0.969	29.8	19.2	29 E	22*	—	10	27	14 22.55	-74 38.1	1.292	1.205	46.8	19.5	62 E	—	23*
4	16	2 37.03	+34 59.1	1.696	0.946	30.5	19.1	29 E	21*	—	10	28	14 31.00	-75 11.9	1.290	1.207	46.8	19.5	62 E	—	23*
4	21	2 48.66	+37 51.1	1.666	0.922	31.6	19.1	29 E	21*	—	10	29	14 40.14	-75 44.9	1.288	1.210	46.7	19.5	63 E	—	24*
4	26	3 1.64	+40 43.2	1.630	0.898	33.2	19.0	29 E	21*	—	10	30	14 50.04	-76 16.9	1.285	1.212	46.7	19.5	63 E	—	24*
5	1	3 16.38	+43 34.8	1.587	0.875	35.2	19.0	30 E	21*	—	10	31	15 0.75	-76 47.8	1.283	1.215	46.7	19.5	63 E	—	24*
5	6	3 33.41	+46 24.1	1.537	0.853	37.8	18.9	31 E	22*	—	11	1	15 12.37	-77 17.2	1.281	1.217	46.7	19.5	63 E	—	25*
5	8	3 41.01	+47 30.7	1.516	0.844	38.9	18.9	32 E	22*	—	11	2	15 24.94	-77 45.1	1.278	1.219	46.7	19.5	64 E	—	25*
5	10	3 49.14	+48 36.2	1.493	0.835	40.1	18.9	32 E	23*	—	11	3	15 38.53	-78 11.0	1.276	1.222	46.7	19.5	64 E	—	26*
5	12	3 57.86	+49 40.4	1.470	0.827	41.4	18.8	33 E	23*	—	11	4	15 53.18	-78 34.7	1.274	1.224	46.7	19.5	64 E	—	26*
5	14	4 7.21	+50 42.9	1.446	0.819	42.7	18.8	33 E	24*	—	11	5	16 8.92	-78 55.9	1.272	1.226	46.7	19.5	64 E	—	27*
5	16	4 17.27	+51 43.2	1.421	0.811	44.1	18.8	34 E	25*	—	11	6	16 25.71	-79 14.3	1.269	1.228	46.7	19.5	64 E	—	27*
5	18	4 28.10	+52 40.7	1.396	0.803	45.6	18.8	35 E	25*	—	11	7	16 43.51	-79 29.4	1.267	1.230	46.7	19.5	65 E	—	28*
5	20	4 39.76	+53 34.8	1.370	0.796	47.1	18.8	35 E	26*	—	11	8	17 2.21	-79 40.9	1.265	1.232	46.7	19.5	65 E	—	29*
5	22	4 52.31	+54 24.6	1.343	0.789	48.6	18.7	36 E	27*	—	11	9	17 21.63	-79 48.6	1.262	1.234	46.7	19.5	65 E	—	29*
5	24	5 5.79	+55 9.4	1.316	0.783	50.2	18.7	36 E	28*	—	11	10	17 41.56	-79 52.2	1.260	1.236	46.7	19.5	65 E	—	30*
5	26	5 20.23	+55 48.0	1.288	0.776	51.8	18.7	37 E	29*	—	11	11	18 1.75	-79 51.5	1.258	1.238	46.7	19.5	66 E	—	30*
5	28	5 35.64	+56 19.4	1.260	0.770	53.5	18.7	38 E	29*	—	11	12	18 21.91	-79 46.3	1.256	1.240	46.7	19.5	66 E	—	31*
5	30	5 51.98	+56 42.2	1.232	0.765	55.2	18.7	38 E	30*	—	11	13	18 41.78	-79 36.8	1.254	1.242	46.7	19.5	66 E	—	32*
6	1	6 9.18	+56 55.1	1.204	0.760	56.9	18.7	39 E	31*	—	11	14	19 1.10	-79 23.0	1.252	1.244	46.7	19.5	66 E	—	32*
6	3	6 27.10	+56 56.8	1.176	0.756	58.6	18.7	39 E	32*	—	11	15	19 19.66	-79 5.1	1.250	1.245	46.7	19.5	66 E	—	33*
6	5	6 45.58	+56 46.0	1.149	0.752	60.3	18.6	40 E	33*	—	11	16	19 37.31	-78 43.3	1.248	1.247	46.7	19.5	67 E	—	34*
6	6	6 54.96	+56 35.6	1.135	0.750	61.2	18.6	40 E	34*	—	11	17	19 53.95	-78 17.9	1.246	1.249	46.7	19.5	67 E	—	35*
6	7	7 4.39	+56 21.6	1.122	0.748	62.0	18.6	41 E	34*	—	11	18	20 9.53	-77 49.2	1.245	1.250	46.7	19.5	67 E	—	35*
6	8	7 13.85	+56 3.9	1.108	0.747	62.9	18.6	41 E	34*	—	11	19	20 24.04	-77 17.4	1.243	1.252	46.7	19.5	67 E	—	36*
6	9	7 23.29	+55 42.5	1.095	0.745	63.7	18.6	41 E	35*	—	11	20	20 37.51	-76 42.9	1.242	1.253	46.7	19.5	67 E	—	37*
6	10	7 32.69	+55 17.3	1.082	0.744	64.5	18.6	41 E	35*	—	11	21	20 49.97	-76 5.9	1.240	1.255	46.7	19.5	67 E	—	38*
6	11	7 42.02	+54 48.2	1.069	0.743	65.3	18.6	42 E	36*	—	11	22	21 1.50	-75 26.7	1.239	1.256	46.6	19.5	68 E	—	38*
6	12	7 51.24	+54 15.1	1.056	0.742	66.1	18.6	42 E	36*	—	11	23	21 12.16	-74 45.5	1.238	1.257	46.6	19.5	68 E	—	39*
6	13	8 0.32	+53 38.1	1.044	0.741	66.9	18.6	42 E	36*	1*	11	24	21 22.01	-74 2.5	1.237	1.259	46.6	19.5	68 E	—	40*
6	14	8 9.24	+52 57.1	1.032	0.740	67.7	18.6	42 E	36*	2*	11	25	21 31.13	-73 17.9	1.236	1.260	46.6	19.5	68 E	—	41*
6	15	8 17.97	+52 12.2	1.020	0.740	68.4	18.6	43 E	37*	3*	11	26	21 39.59	-72 31.9	1.235	1.261	46.6	19.5	68 E	—	42*
6	17	8 34.80	+50 30.7	0.997	0.739	69.8	18.6	43 E	37*	5*	11	27	21 47.44	-71 44.5	1.234	1.262	46.6	19.5	68 E	—	42*
6	19	8 50.67	+48 34.2	0.976	0.739	71.1	18.6	43 E	37*	—	11	28	21 54.75	-70 56.0	1.233	1.263	46.5	19.5	68 E	—	43*
6	21	9 5.51	+46 23.5	0.957	0.739	72.4	18.6	44 E	37*	—	11	29	22 1.57	-70 6.4	1.233	1.264	46.5	19.5	68 E	—	44*
6	23	9 19.28	+43 59.6	0.939	0.740	73.4	18.6	44 E	37*	10*	11	30	22 7.94	-69 15.8	1.233	1.265	46.5	19.5	68 E	—	45*
6	25	9 31.98	+41 23.7	0.923	0.742	74.4	18.6	45 E	36*	12*	12	1	22 13.91	-68 24.4	1.233	1.266	46.5	19.5	69 E	—	46*
6	27	9 43.64	+38 37.2	0.910	0.744	75.1	18.6	45 E	35*	15*	12	2	22 19.51	-67 32.1	1.233	1.267	46.4	19.5	69 E	—	46*
6	29	9 54.32	+35 41.6	0.898	0.747	75.7	18.6	45 E	34*	18*	12	3	22 24.78	-66 39.1	1.233	1.268	46.4	19.5	69 E	—	47*
7	1	10 4.08	+32 38.5	0.889	0.750	76.1	18.6	46 E	32*	20*	12	4	22 29.76	-65 45.5	1.233	1.269	46.4	19.5	69 E	—	48*
7	3	10 12.98	+29 29.7	0.882	0.754	76.4	18.6	46 E	31*	23*	12	5	22 34.46	-64 51.3	1.233	1.270	46.4	19.5	69 E	—	49*
7	5	10 21.10	+26 16.8	0.878	0.758	76.5	18.6	46 E	29*	26*	12	6	22 38.92	-63 56.5	1.234	1.270	46.3	19.5	69 E	—	50*
7	7	10 28.50	+23 1.6	0.876	0.763	76.4	18.6	47 E	27*	31*	12	7	22 43.15	-63 1.3	1.235	1.271	46.3	19.5	69 E	—	50*
7	9	10 35.26	+19 45.5	0.876	0.768	76.1	18.6	47 E	25*	33*	12	8	22 47.17	-62 5.6	1.236	1.271	46.2	19.5	69 E	—	51*
7	11	10 41.43	+16 30.0	0.879	0.773	75.7	18.6	47 E	23*	35*	12	9	22 51.01	-61 9.6	1.237	1.272	46.2	19.5	69 E	—	52*
7	13	10 47.08	+13 16.6	0.883	0.779	75.1	18.6	48 E	21*	37*	12	10	22 54.68	-60 13.1	1.238	1.273	46.2	19.5	69 E	—	52*
7	15	10 52.25	+10 6.4	0.890	0.786	74.4	18.6	48 E	20*	37*	12	11	22 58.18	-59 16.4	1.240	1.273	46.1	19.5	69 E	—	53*
7	17	10 57.00	+7 0.4	0.898	0.793	73.6	18.6	48 E	18*	39*											