

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
481817 2008 UL₉₀										2135 Aristaeus (continuation)									
4 26	0 43.12	+ 2 33.0	0.827	0.432	101.4	20.1	25 W	2*	19*	8 19	9 2.34	+ 6 45.1	1.740	0.795	17.7	19.5	14 W	—	8*
4 28	0 51.08	+ 1 43.0	0.870	0.434	95.1	19.9	25 W	—	19*	8 24	9 27.76	+ 5 27.8	1.756	0.797	15.5	19.5	12 W	—	6*
4 30	0 59.54	+ 1 8.4	0.913	0.439	89.1	19.8	26 W	—	20*	8 29	9 52.74	+ 4 9.7	1.776	0.805	13.3	19.4	11 W	—	5*
5 2	1 8.36	+ 0 47.7	0.957	0.447	83.3	19.7	26 W	—	20*	9 3	10 17.19	+ 2 51.9	1.799	0.818	11.1	19.4	9 W	—	3*
5 4	1 17.42	+ 0 39.3	1.000	0.456	77.9	19.6	26 W	—	20*	9 8	10 41.03	+ 1 35.3	1.825	0.836	9.0	19.4	7 W	—	1*
5 6	1 26.63	+ 0 41.4	1.043	0.467	72.8	19.6	26 W	—	20*	9 13	11 4.21	+ 0 20.6	1.853	0.859	7.1	19.4	6 W	—	—
5 8	1 35.90	+ 0 52.5	1.085	0.479	68.1	19.6	26 W	—	20*	9 23	11 48.49	- 2 0.2	1.916	0.916	3.8	19.5	3 W	—	—
5 10	1 45.17	+ 1 10.9	1.125	0.493	63.8	19.6	26 W	—	19*	10 3	12 30.02	- 4 7.1	1.984	0.984	1.5	19.5	1 W	—	—
5 12	1 54.38	+ 1 35.2	1.164	0.508	59.9	19.6	26 W	—	19*	10 13	13 8.93	- 5 58.1	2.055	1.058	1.8	19.8	2 W	—	—
5 14	2 3.51	+ 2 4.4	1.202	0.523	56.3	19.6	26 W	—	19*	10 23	13 45.43	- 7 32.2	2.127	1.136	3.4	20.1	4 W	—	—
5 16	2 12.53	+ 2 37.3	1.238	0.539	53.1	19.7	25 W	—	19*	11 2	14 19.77	- 8 48.8	2.197	1.215	5.1	20.5	6 W	—	—
5 18	2 21.42	+ 3 13.2	1.273	0.556	50.1	19.7	25 W	—	18*	11 12	14 52.17	- 9 48.1	2.264	1.294	6.7	20.7	9 W	2*	—
5 20	2 30.18	+ 3 51.2	1.307	0.572	47.5	19.8	25 W	—	18*	11 22	15 22.83	- 10 30.1	2.325	1.372	8.3	21.0	12 W	5*	—
5 22	2 38.79	+ 4 30.8	1.339	0.589	45.0	19.8	24 W	—	18*	12 2	15 51.89	- 10 55.3	2.380	1.447	9.9	21.2	15 W	9*	—
5 24	2 47.28	+ 5 11.5	1.369	0.606	42.8	19.9	24 W	—	17*	12 12	16 19.47	- 11 4.3	2.426	1.520	11.6	21.4	18 W	12*	—
5 26	2 55.62	+ 5 52.9	1.398	0.623	40.9	19.9	24 W	—	17*										
5 31	3 15.95	+ 7 37.4	1.465	0.664	36.7	20.0	23 W	—	17*	231937 2001 FO₃₂									
6 5	3 35.59	+ 9 20.5	1.525	0.704	33.5	20.2	23 W	—	16*	4 26	1 5.17	+ 23 21.0	0.815	0.355	112.6	19.3	19 W	12*	4*
6 10	3 54.67	+ 10 59.9	1.577	0.742	31.0	20.3	22 W	—	16*	4 28	1 11.18	+ 22 9.0	0.880	0.328	103.2	18.8	18 W	11*	5*
6 15	4 13.31	+ 12 34.4	1.622	0.776	29.0	20.4	22 W	—	16*	4 30	1 18.72	+ 20 51.5	0.947	0.308	92.2	18.3	18 W	10*	6*
6 25	4 49.64	+ 15 25.5	1.695	0.837	26.5	20.6	22 W	1*	5 2	1 27.89	+ 19 30.8	1.016	0.297	80.0	17.9	17 W	8*	7*	
7 5	5 25.35	+ 17 51.0	1.745	0.886	25.3	20.7	22 W	4*	5 4	1 38.56	+ 18 10.1	1.083	0.297	67.7	17.6	16 W	6*	7*	
7 15	6 1.03	+ 19 49.2	1.775	0.922	24.9	20.8	22 W	7*	5 6	1 50.35	+ 16 52.6	1.147	0.308	56.2	17.5	15 W	4*	7*	
7 25	6 37.12	+ 21 19.3	1.788	0.946	25.3	20.9	23 W	11*	5 8	2 2.78	+ 15 40.6	1.206	0.328	46.6	17.5	14 W	2*	7*	
8 4	7 14.06	+ 22 19.5	1.784	0.958	26.0	20.9	24 W	14*	5 10	2 15.39	+ 14 35.3	1.261	0.356	39.0	17.5	13 W	—	6*	
8 14	7 52.16	+ 22 47.4	1.766	0.957	27.1	21.0	26 W	17*	5 12	2 27.86	+ 13 36.5	1.311	0.388	33.4	17.6	12 W	—	6*	
8 24	8 31.72	+ 22 39.1	1.737	0.944	28.4	20.9	26 W	19*	5 14	2 40.02	+ 12 43.7	1.358	0.423	29.4	17.8	12 W	—	6*	
9 3	9 13.01	+ 21 49.5	1.698	0.919	29.7	20.9	27 W	20*	5 16	2 51.75	+ 11 56.1	1.401	0.461	26.6	18.0	12 W	—	6*	
9 13	9 56.21	+ 20 12.0	1.654	0.882	31.0	20.7	27 W	21*	5 21	3 19.09	+ 10 14.9	1.500	0.557	23.1	18.4	12 W	—	5*	
9 23	10 41.47	+ 17 38.5	1.607	0.832	32.0	20.6	26 W	20*	5 26	3 43.70	+ 8 51.9	1.589	0.653	21.8	18.8	14 W	—	5*	
10 3	11 28.95	+ 14 0.1	1.562	0.770	32.4	20.4	24 W	18*	5 31	4 5.94	+ 7 40.9	1.672	0.745	21.2	19.2	15 W	—	6*	
10 8	11 53.59	+ 11 44.0	1.542	0.735	32.2	20.2	23 W	17*	6 5	4 26.20	+ 6 38.0	1.750	0.835	20.9	19.6	17 W	—	7*	
10 13	12 18.86	+ 9 8.7	1.523	0.697	31.5	20.1	21 W	15*	6 10	4 44.77	+ 5 40.7	1.824	0.920	20.5	19.8	19 W	—	8*	
10 18	12 44.84	+ 6 13.7	1.506	0.657	30.4	19.9	19 W	13*	6 15	5 1.90	+ 4 47.1	1.895	1.002	20.3	20.1	20 W	—	9*	
10 23	13 11.61	+ 2 58.5	1.492	0.615	28.5	19.7	17 W	11*	6 20	5 17.79	+ 3 56.0	1.962	1.081	20.0	20.3	21 W	—	11*	
10 28	13 39.31	+ 0 36.4	1.479	0.573	25.6	19.4	14 W	8*	6 25	5 32.61	+ 3 6.5	2.025	1.156	19.8	20.5	23 W	—	12*	
11 2	14 8.12	- 4 30.1	1.468	0.532	21.5	19.1	11 W	5*	6 30	5 46.48	+ 2 17.9	2.085	1.229	19.7	20.7	24 W	—	14*	
11 7	14 38.27	- 8 40.0	1.456	0.493	16.0	18.7	8 W	1*	7 5	5 59.52	+ 1 29.8	2.142	1.298	19.6	20.9	25 W	—	16*	
11 12	15 10.02	- 13 1.3	1.441	0.461	9.9	18.4	5 E	—	7 10	6 11.82	+ 0 41.6	2.195	1.365	19.6	21.1	27 W	—	18*	
11 17	15 43.60	- 17 26.0	1.421	0.440	8.6	18.2	4 E	—	7 15	6 23.45	- 0 6.8	2.244	1.430	19.6	21.2	28 W	—	20*	
11 22	16 19.15	- 21 41.7	1.394	0.431	16.5	18.4	7 E	—	7 20	6 34.46	- 0 55.8	2.289	1.492	19.7	21.4	30 W	—	22*	
									7 25	6 44.90	- 1 45.5	2.330	1.553	19.8	21.5	31 W	—	24*	
11 24	16 33.92	- 23 18.1	1.380	0.432	20.5	18.5	9 E	—	163364 2002 OD₂₀										
11 26	16 49.00	- 24 49.7	1.366	0.435	24.6	18.6	11 E	—	4 26	1 13.15	- 21 20.6	0.100	0.929	138.4	20.3	38 W	—	22*	
11 28	17 4.35	- 26 15.3	1.351	0.440	28.6	18.7	12 E	—	4 28	0 53.55	- 22 55.1	0.098	0.937	133.2	19.7	43 W	—	29*	
11 30	17 19.97	- 27 34.3	1.334	0.448	32.5	18.9	14 E	—	4 30	0 32.99	- 24 17.8	0.097	0.946	127.5	19.1	48 W	—	36*	
12 2	17 35.83	- 28 45.7	1.318	0.458	36.2	19.0	16 E	—	5 2	0 11.82	- 25 26.6	0.096	0.954	121.5	18.6	54 W	—	43*	
12 4	17 51.88	- 29 48.9	1.300	0.469	39.6	19.1	18 E	—	5 4	23 50.42	- 26 20.1	0.096	0.964	115.4	18.1	60 W	—	49*	
12 6	18 8.11	- 30 43.3	1.283	0.481	42.7	19.2	19 E	—	5 6	23 29.14	- 26 58.2	0.096	0.973	109.3	17.8	66 W	—	56*	
12 8	18 24.45	- 31 28.6	1.266	0.495	45.6	19.3	21 E	—	5 8	23 8.30	- 27 21.6	0.097	0.983	103.2	17.5	71 W	—	63*	
12 10	18 40.86	- 32 4.4	1.250	0.510	48.1	19.4	23 E	—	5 10	22 48.13	- 27 31.7	0.099	0.993	97.2	17.3	77 W	3*	69*	
12 12	18 57.29	- 32 30.6	1.233	0.526	50.3	19.5	24 E	1*	5 12	22 28.82	- 27 30.3	0.101	1.003	91.3	17.1	83 W	6*	75*	
12 14	19 13.68	- 32 47.2	1.218	0.542	52.3	19.6	26 E	2*	5 14	22 10.45	- 27 19.4	0.104	1.013	85.7	16.9	88 W	8*	81*	
12 16	19 29.97	- 32 54.2	1.203	0.558	53.9	19.7	27 E	2*	5 16	21 53.07	- 27 0.8	0.106	1.024	80.2	16.8	94 W	11*	87*	
12 18	19 46.10	- 32 51.8	1.190	0.575	55.4	19.8	29 E	3*	5 18	21 36.66	- 26 36.4	0.110	1.034	74.9	16.7	99 W	13*	89	
12 20	20 2.01	- 32 40.2	1.177	0.592	56.6	19.9	30 E	4*	5 20	21 21.21	- 26 7.8	0.113	1.045	69.8	16.6	104 W	15*	90	
12 22	20 17.65	- 32 19.8	1.165	0.609	57.6	19.9	32 E	5*	5 22	21 6.66	- 25 36.1	0.117	1.056	64.9	16.6	109 W	17*	90	
12 27	20 55.26	- 30 53.4	1.141	0.651	59.3	20.1	35 E	7*	5 24	20 52.95	- 25 2.5	0.121	1.068	60.2	16.5	114 W	19*	89	
1	1 21 30.33	- 28 43.2	1.124	0.691	60.1	20.2	38 E	10*	5 26	20 40.03	- 24 27.8	0.126	1.079	55.6	16.5	118 W	20*	88	
1	6 22 2.60																		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
344074 1997 UH₉										337283 2000 WR₆₇									
<i>(continuation)</i>										<i>(continuation)</i>									
10 31	18 40.12	-47 28.7	0.731	0.926	72.6	20.5	63 E	—	53*	7 25	8 40.12	+14 3.7	2.536	1.537	5.2	21.1	8 E	—	1*
11 2	18 58.32	-46 44.4	0.735	0.941	71.4	20.5	64 E	—	54*	8 4	9 9.44	+11 55.0	2.561	1.557	4.1	21.1	6 E	—	—
11 4	19 15.67	-45 50.4	0.740	0.956	70.2	20.5	65 E	—	56*	8 14	9 37.82	+9 35.3	2.588	1.581	3.2	21.1	5 E	—	—
11 6	19 32.10	-44 47.9	0.747	0.971	69.1	20.5	66 E	—	58*	8 24	10 5.23	+7 8.0	2.616	1.609	2.7	21.1	4 W	—	—
11 8	19 47.60	-43 38.3	0.755	0.985	68.0	20.5	67 E	1*	59*	9 3	10 31.72	+4 36.0	2.644	1.642	3.1	21.2	5 W	—	—
11 10	20 2.15	-42 23.0	0.763	0.999	66.9	20.6	68 E	2*	60*	9 13	10 57.34	+2 2.0	2.672	1.677	4.1	21.3	7 W	—	1*
11 12	20 15.79	-41 3.1	0.773	1.012	65.8	20.6	69 E	4*	62*	9 23	11 22.14	-0 31.2	2.697	1.715	5.5	21.5	9 W	—	3*
11 14	20 28.55	-39 39.7	0.784	1.025	64.7	20.6	69 E	5*	63*	450161 2000 YE₂₉									
11 16	20 40.50	-38 13.8	0.796	1.037	63.7	20.6	70 E	7*	64*	4 26	4 24.47	+17 1.4	2.690	1.909	16.1	21.4	32 E	19*	20*
11 18	20 51.68	-36 46.2	0.808	1.049	62.7	20.7	71 E	8*	64*	5 6	4 46.99	+18 34.8	2.685	1.850	14.6	21.3	28 E	14*	17*
11 20	21 2.17	-35 17.6	0.822	1.061	61.8	20.7	71 E	10	65*	5 16	5 11.08	+19 58.0	2.674	1.793	13.1	21.2	24 E	11*	14*
11 22	21 12.01	-33 48.6	0.836	1.072	60.9	20.7	71 E	11	65*	5 26	5 36.72	+21 8.7	2.656	1.738	11.5	21.0	20 E	7*	11*
11 24	21 21.27	-32 19.8	0.851	1.083	60.0	20.8	72 E	13	66*	6 5	6 3.88	+22 4.3	2.632	1.686	9.9	20.9	17 E	4*	9*
11 26	21 30.00	-30 51.4	0.866	1.093	59.2	20.8	72 E	14	66*	6 15	6 32.49	+22 42.4	2.605	1.636	8.4	20.7	14 E	2*	6*
11 28	21 38.26	-29 23.9	0.882	1.103	58.3	20.8	72 E	16	65*	6 25	7 2.42	+23 0.4	2.576	1.590	7.0	20.6	11 E	—	4*
11 30	21 46.09	-27 57.4	0.899	1.112	57.6	20.9	72 E	17	65*	7 5	7 33.50	+22 56.4	2.546	1.548	5.6	20.4	9 E	—	2*
12 2	21 53.52	-26 32.2	0.916	1.122	56.8	20.9	72 E	18	65*	7 15	8 5.51	+22 28.4	2.516	1.511	4.5	20.3	7 E	—	—
12 7	22 10.67	-23 5.5	0.960	1.143	55.1	21.0	72 E	22	63*	7 25	8 38.18	+21 35.8	2.488	1.479	3.6	20.2	5 E	—	—
12 12	22 26.11	-19 48.6	1.006	1.161	53.5	21.1	71 E	25	60*	8 4	9 11.23	+20 18.5	2.463	1.454	3.3	20.1	5 E	—	—
12 17	22 40.24	-16 41.8	1.053	1.177	52.0	21.2	71 E	28	57*	8 14	9 44.38	+18 37.5	2.443	1.436	3.4	20.1	5 E	—	—
12 22	22 53.35	-13 44.8	1.100	1.191	50.7	21.3	69 E	31	54*	8 24	10 17.36	+16 35.2	2.427	1.425	4.0	20.1	6 E	—	—
12 27	23 5.68	-10 56.9	1.147	1.202	49.4	21.3	68 E	34	50*	9 3	10 49.98	+14 14.7	2.418	1.421	4.7	20.1	7 E	—	—
1 1	23 17.41	-8 17.2	1.194	1.211	48.3	21.4	67 E	36	47*	9 13	11 22.09	+11 40.3	2.415	1.425	5.5	20.1	8 W	—	—
1 6	23 28.68	-5 44.9	1.240	1.218	47.2	21.5	65 E	39	44*	9 23	11 53.55	+8 56.4	2.419	1.436	6.3	20.2	9 W	1*	—
434911 2006 TD₆₃										6239 Minos									
4 26	2 47.03	+20 8.3	2.654	1.675	6.3	21.4	10 E	4*	—	4 26	4 52.92	+24 45.2	1.766	1.173	32.8	21.5	39 E	29*	20*
5 6	3 14.74	+22 18.8	2.645	1.652	4.9	21.3	8 E	2*	—	5 6	5 24.78	+25 6.3	1.737	1.106	33.0	21.3	37 E	25*	19*
5 16	3 43.72	+24 14.7	2.634	1.632	3.7	21.2	6 E	—	—	5 16	5 58.73	+25 1.5	1.693	1.036	33.7	21.1	35 E	22*	19*
5 26	4 13.88	+25 52.6	2.622	1.615	3.0	21.1	5 E	—	—	5 26	6 34.74	+24 24.9	1.636	0.964	35.2	20.9	33 E	19*	20*
6 5	4 45.10	+27 9.5	2.610	1.602	3.1	21.1	5 W	—	—	6 5	7 12.77	+23 10.3	1.563	0.892	37.6	20.7	32 E	16*	21*
6 15	5 17.18	+28 2.7	2.599	1.592	3.8	21.1	6 W	—	—	6 15	7 52.67	+21 11.7	1.477	0.822	41.3	20.5	32 E	14*	22*
6 25	5 49.79	+28 30.1	2.588	1.586	4.9	21.2	8 W	1*	—	6 25	8 34.20	+18 24.4	1.376	0.760	46.6	20.4	33 E	12*	24*
7 5	6 22.61	+28 30.6	2.578	1.584	6.1	21.2	9 W	3*	—	6 30	8 55.48	+16 41.6	1.321	0.733	49.8	20.3	33 E	11*	25*
7 15	6 55.26	+28 4.2	2.568	1.585	7.3	21.3	11 W	5*	—	7 5	9 17.05	+14 46.3	1.263	0.711	53.5	20.2	34 E	10*	26*
7 25	7 27.38	+27 12.1	2.559	1.590	8.6	21.3	14 W	7*	1*	7 10	9 38.88	+12 38.8	1.203	0.694	57.6	20.2	35 E	10*	28*
8 4	7 58.68	+25 56.2	2.551	1.599	10.0	21.4	16 W	9*	2*	7 15	10 0.97	+10 20.0	1.141	0.682	61.9	20.2	36 E	9*	29*
8 14	8 28.92	+24 19.2	2.542	1.612	11.3	21.5	18 W	12*	3*	7 25	10 45.97	+5 12.9	1.015	0.678	70.6	20.2	39 E	8*	33*
311999 2007 NS₂										377998 2006 RZ₈₃									
4 26	2 54.68	+25 5.1	2.409	1.462	10.4	21.5	15 E	9*	—	8 19	12 49.96	-9 23.9	0.744	0.772	83.8	20.2	49 E	8*	43*
5 6	3 26.79	+26 12.2	2.424	1.457	8.8	21.4	13 E	7*	—	8 24	13 18.65	-12 23.5	0.706	0.803	83.9	20.2	52 E	9*	46*
5 16	3 59.37	+26 56.1	2.436	1.453	7.1	21.4	10 E	4*	—	8 29	13 49.16	-15 16.4	0.675	0.836	83.2	20.2	55 E	10*	49*
5 26	4 32.19	+27 15.1	2.446	1.449	5.5	21.3	8 E	2*	—	9 3	14 21.50	-17 56.9	0.653	0.871	81.6	20.1	59 E	11*	53*
6 5	5 0.01	+27 8.1	2.453	1.446	3.9	21.2	6 E	—	—	9 8	14 55.47	-20 18.2	0.638	0.906	79.3	20.1	62 E	12*	56*
6 15	5 37.62	+26 34.9	2.456	1.444	2.4	21.1	3 E	—	—	9 13	15 30.58	-22 14.1	0.633	0.943	76.6	20.1	66 E	13*	60*
6 25	6 9.76	+25 35.9	2.457	1.442	1.7	21.1	2 W	—	—	9 18	16 6.11	-23 39.7	0.636	0.979	73.5	20.0	69 E	15*	63*
7 5	6 41.25	+24 11.9	2.455	1.441	2.6	21.1	4 W	—	—	9 23	16 41.24	-24 33.1	0.647	1.015	70.3	20.1	72 E	16*	66*
7 15	7 11.97	+22 24.6	2.449	1.441	4.1	21.2	6 W	—	—	9 28	17 15.18	-24 55.3	0.666	1.051	67.2	20.1	75 E	17*	69*
7 25	7 41.81	+20 15.7	2.440	1.442	5.8	21.3	8 W	—	1*	10 3	17 47.32	-24 50.1	0.692	1.086	64.1	20.2	77 E	19*	71*
8 4	8 10.77	+17 47.4	2.428	1.444	7.6	21.4	11 W	1*	3*	10 8	18 17.30	-24 22.5	0.724	1.120	61.2	20.2	79 E	20*	73*
8 14	8 38.87	+15 2.0	2.413	1.446	9.3	21.4	13 W	3*	6*	10 13	18 44.98	-23 37.6	0.762	1.154	58.6	20.3	81 E	21*	74*
8 24	9 6.17	+12 1.6	2.394	1.449	11.1	21.5	16 W	6*	8*	10 18	19 10.38	-22 40.4	0.804	1.186	56.2	20.4	82 E	22*	74*
377998 2006 RZ₈₃										351331 2004 XH₂₉									
4 26	3 17.96	+7 11.1	2.653	1.716	9.9	21.4	17 E	—	11*	4 26	4 56.47	+9 30.2	1.580	1.037	38.6	21.3	40 E	19*	30*
5 6	3 44.31	+8 17.5	2.647	1.694	9.0	21.4	15 E	—	9*	5 6	5 27.69	+9 42.6	1.506	0.952	41.3	21.1	39 E	16*	30*
5 16	4 11.38	+9 13.2	2.640	1.676	8.3	21.3	14 E	—	7*	5 16	6 2.08	+9 46.3	1.413	0.870	45.2	20.9	38 E	12*	30*
5 26	4 39.07	+9 56.4	2.631	1.660	7.9	21.3	13 E	—	5*	5 26	6 40.05	+9 43.9	1.305	0.796	50.9	20.7	38 E	10*	30*
6 5	5 7.28	+10 25.5	2.621	1.646	7.8	21.2	13 E	—	3*	6 5	7 21.99	+9 42.6	1.182	0.735	58.5	20.5	38 E	9*	31*
6 15	5 35.88	+10 39.3	2.612	1.636	7.8	21.2	13 E	—	—	351331 2004 XH₂₉									
6 25	6 4.71	+10 37.1	2.604	1.630	8.1	21.2	13 W	—	2*	4 26	4 56.47	+9 30.2	1.580	1.037	38.6	21.3	40 E	19*	30*
7 5	6 33.61	+10 18.7	2.597	1.626	8.5	21.2	14 W	—	4*	5 6	5 27.69	+9 42.6	1.506	0.952	41.3	21.1	39 E	16*	30*
7 15	7 2.40	+9 44.3	2.591	1.626	9.0	21.2	14 W	—	7*	5 16	6 2.08	+9 46.3	1.413	0.870	45.2	20.9	38 E	12*	30*
7 25	7 30.92	+8 54.9	2.586	1.630	9.6	21.3	16 W	—	9*	5 26	6 40.05	+9 43.9	1.305	0.796	50.9	20.7	38 E	10*	30*
8 4	7 59.03	+7 51.8	2.581	1.636	10.3	21.3	17 W	—	11*	6 5	7 21.99	+9 42.6	1.182	0.735	58.5	20.5	38 E	9*	31*
8 14	8 26.63	+6 36.6	2.577	1.646	11.2	21.3	18 W	—	12*	351331 2004 XH₂₉									
8 24	8 53.61	+5 11.5	2.572	1.659	12.1	21.4	20 W	3*	14*	4 26	4 56.47	+9 30.2	1.580	1.037	38.6	21.3	40 E	19*	30*
9 3	9 19.93	+3 38.5	2.565	1.675	13.														

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
351331 2004 XH₂₉ (continuation)										289315 2005 AN₂₆									
6 10	7 44.57	+9 46.3	1.118	0.713	62.9	20.4	39 E	8*	32*	4 26	15 5.34	-12 3.3	2.451	3.440	3.7	23.5	167 W	33	76
6 15	8 8.29	+9 55.8	1.052	0.697	67.5	20.4	39 E	9*	32*	5 6	14 55.34	-11 11.6	2.402	3.407	1.6	23.3	175 W	34	75
6 20	8 33.17	+10 13.4	0.986	0.688	72.3	20.4	40 E	10*	33*	5 16	14 45.07	-10 20.9	2.384	3.373	4.2	23.4	166 E	35	74
6 25	8 59.27	+10 41.3	0.922	0.687	76.8	20.4	41 E	11*	34*	5 26	14 35.34	-9 35.2	2.396	3.338	7.6	23.6	154 E	35	74
6 30	9 26.66	+11 20.9	0.861	0.694	80.9	20.4	42 E	13*	34*	6 5	14 26.87	-8 57.9	2.436	3.301	10.7	23.7	143 E	36	73
7 5	9 55.42	+12 12.1	0.805	0.708	84.2	20.4	44 E	15*	35*	464941 2005 UT₃₉₇									
7 10	10 25.64	+13 13.3	0.755	0.729	86.5	20.4	46 E	18*	36*	4 26	15 8.35	-15 40.8	2.747	3.733	3.6	22.5	167 W	29	80
7 15	10 57.34	+14 20.9	0.713	0.756	87.5	20.4	48 E	22*	37*	5 6	14 59.71	-15 19.0	2.720	3.728	0.6	22.2	178 W	30	79
7 20	11 30.41	+15 29.6	0.679	0.788	87.4	20.4	51 E	26*	37*	5 16	14 50.94	-14 56.4	2.723	3.722	2.8	22.4	170 E	30	79
7 25	12 4.62	+16 33.1	0.653	0.823	86.2	20.4	54 E	30*	38*	5 26	14 42.71	-14 35.7	2.757	3.716	5.8	22.6	158 E	30	79
7 30	12 39.54	+17 24.9	0.637	0.861	83.9	20.3	57 E	34*	39*	6 5	14 35.62	-14 19.2	2.818	3.708	8.6	22.8	147 E	31	78
8 4	13 14.63	+17 59.6	0.629	0.901	81.0	20.3	61 E	38*	40*	400196 2006 YL₁₃									
8 9	13 49.24	+18 13.8	0.630	0.942	77.5	20.3	65 E	42*	42*	4 26	15 8.69	-54 53.4	2.831	3.634	10.9	22.4	137 W	-	61
8 14	14 22.77	+18 6.8	0.639	0.984	73.8	20.3	69 E	46*	43*	5 1	15 2.00	-54 56.3	2.809	3.636	10.3	22.4	140 W	-	61
8 19	14 54.72	+17 40.4	0.654	1.027	70.1	20.3	73 E	49*	44*	5 6	14 55.08	-54 52.2	2.793	3.638	9.9	22.4	142 W	-	61
8 24	15 24.79	+16 57.8	0.676	1.069	66.4	20.3	76 E	51*	45*	5 11	14 48.13	-54 41.0	2.783	3.639	9.6	22.4	143 E	-	61
8 29	15 52.82	+16 2.7	0.704	1.112	63.0	20.4	79 E	53*	47*	5 16	14 41.32	-54 23.1	2.779	3.641	9.5	22.4	143 E	-	62
9 3	16 18.86	+14 58.9	0.737	1.154	59.8	20.5	81 E	54*	48*	5 21	14 34.82	-53 58.9	2.781	3.642	9.6	22.4	143 E	-	62
9 8	16 43.00	+13 50.0	0.775	1.195	56.8	20.6	83 E	54*	49*	5 26	14 28.79	-53 29.1	2.789	3.643	9.8	22.4	142 E	-	63
9 13	17 5.42	+12 39.2	0.816	1.236	54.2	20.7	85 E	55*	50*	5 26	14 23.34	-52 54.6	2.803	3.643	10.2	22.4	141 E	-	63
9 18	17 26.30	+11 28.7	0.862	1.275	51.8	20.8	86 E	54*	51*	6 5	14 18.56	-52 16.2	2.823	3.644	10.7	22.4	138 E	-	64
9 23	17 45.80	+10 20.4	0.911	1.314	49.7	20.9	87 E	53*	52*	530099 2010 XJ₅₁									
9 28	18 4.11	+9 15.4	0.962	1.352	47.7	21.1	87 E	53*	53*	4 26	15 12.16	-52 9.1	2.952	3.775	10.0	23.6	140 W	-	64
10 3	18 21.40	+8 14.7	1.017	1.389	46.0	21.2	87 E	53*	54*	5 1	15 6.06	-52 5.6	2.924	3.772	9.4	23.5	142 W	-	64
10 8	18 37.79	+7 19.0	1.075	1.426	44.4	21.3	87 E	52*	54*	5 6	14 59.76	-51 55.9	2.902	3.769	8.9	23.5	144 W	-	64
10 13	18 53.42	+6 28.6	1.135	1.461	43.0	21.5	86 E	51*	54*	5 11	14 53.40	-51 39.8	2.886	3.766	8.6	23.5	146 E	-	64
380636 2004 XN₁₄										35670 1998 SU₂₇									
4 26	5 42.32	+30 1.3	0.853	0.809	74.5	21.5	51 E	41*	23*	4 26	15 13.63	-26 11.2	1.706	2.678	7.0	23.1	161 W	19	90
5 1	5 58.95	+31 5.5	0.818	0.786	77.8	21.5	50 E	40*	22*	5 1	15 6.87	-25 41.4	1.712	2.703	4.9	23.0	167 W	19	90
5 6	6 15.42	+32 4.3	0.780	0.763	81.7	21.4	48 E	38*	22*	5 6	15 0.10	-25 8.3	1.726	2.727	3.3	23.0	171 W	20	89
5 11	6 31.46	+32 57.7	0.737	0.743	86.0	21.4	47 E	37*	21*	5 11	14 53.48	-24 32.6	1.747	2.751	2.9	23.0	172 E	20	89
5 16	6 46.72	+33 45.8	0.692	0.725	91.1	21.4	46 E	36*	20*	5 16	14 47.18	-23 55.3	1.775	2.774	4.1	23.1	169 E	21	88
5 21	7 0.71	+34 29.1	0.644	0.709	96.7	21.5	44 E	34*	19*	5 21	14 41.33	-23 17.5	1.811	2.797	5.9	23.3	164 E	22	87
399325 1999 GY₅										489152 2006 DC₂₁₇									
4 26	6 33.49	+9 51.4	0.496	0.902	86.9	21.2	64 E	36*	47*	4 26	15 14.60	-41 33.6	1.962	2.871	10.4	22.5	149 W	3	74
4 28	6 52.83	+10 40.6	0.497	0.926	84.4	21.2	66 E	38*	48*	5 1	15 7.76	-41 43.8	1.954	2.883	9.4	22.5	152 W	3	74
4 30	7 11.96	+11 25.3	0.501	0.949	81.7	21.1	69 E	40*	48*	5 6	15 0.69	-41 47.1	1.952	2.896	8.6	22.5	155 W	3	74
5 2	7 30.68	+12 4.9	0.507	0.971	79.1	21.1	71 E	42*	49*	5 11	14 53.59	-41 43.5	1.957	2.908	8.2	22.4	156 E	3	74
5 4	7 48.87	+12 39.0	0.516	0.994	76.6	21.1	74 E	43*	49*	5 16	14 46.66	-41 33.4	1.969	2.920	8.2	22.5	156 E	3	74
5 6	8 6.39	+13 7.5	0.528	1.016	74.1	21.1	76 E	45*	50*	5 21	14 40.07	-41 17.5	1.988	2.932	8.7	22.5	154 E	4	75
5 11	8 46.78	+13 55.2	0.566	1.070	68.5	21.2	80 E	47*	50*	5 26	14 34.00	-40 56.8	2.014	2.943	9.5	22.6	151 E	4	75
5 16	9 21.98	+14 14.2	0.616	1.121	63.6	21.4	83 E	49*	50	402267 2005 QE₁₆₆									
5 21	9 52.25	+14 11.9	0.673	1.171	59.5	21.5	85 E	49*	50	4 26	15 16.77	-7 26.1	3.032	4.007	4.1	22.8	163 W	38	71
5 26	10 18.24	+13 54.9	0.737	1.218	56.1	21.7	87 E	49*	50	5 6	15 8.98	-6 37.2	3.029	4.025	2.7	22.7	169 W	38	71
419624 2010 SO₁₆										527671 2007 WF₅₅									
4 26	7 12.93	+38 40.1	0.392	0.946	87.2	21.4	70 E	61*	24*	4 26	15 23.93	-39 47.6	2.575	3.479	8.5	24.4	149 W	5	76
5 1	7 38.47	+35 15.3	0.379	0.951	87.4	21.4	71 E	59*	28*	5 1	15 18.52	-39 34.7	2.538	3.468	7.5	24.4	153 W	5	76
5 6	8 2.32	+31 19.2	0.368	0.956	87.4	21.3	71 E	57*	32*	5 6	15 12.85	-39 16.5	2.507	3.457	6.6	24.3	157 W	6	77
5 11	8 24.52	+26 55.8	0.359	0.961	87.3	21.3	72 E	53*	36*	5 11	15 7.04	-38 53.1	2.484	3.446	6.1	24.2	159 E	6	77
5 16	8 45.15	+22 10.6	0.353	0.967	86.9	21.2	73 E	49*	41*	5 16	15 1.22	-38 24.7	2.468	3.434	5.9	24.2	160 E	7	78
5 21	9 4.37	+17 9.4	0.348	0.973	86.3	21.2	74 E	45*	46*	5 21	14 55.53	-37 51.7	2.460	3.422	6.2	24.2	159 E	7	78
5 26	9 22.32	+11 58.5	0.346	0.979	85.6	21.2	75 E	39*	51*	5 26	14 50.09	-37 14.8	2.458	3.409	6.9	24.2	156 E	8	79
6 5	9 39.19	+6 44.2	0.346	0.986	84.7	21.1	75 E	34*	56*	136993 1998 ST₄₉									
6 5	9 55.21	+1 32.3	0.349	0.992	83.7	21.1	76 E	29*	61*	4 26	15 24.35	-38 36.2	2.665	3.575	8.0	23.2	150 W	6	77
6 10	10 10.57	-3 32.3	0.353	0.999	82.6	21.1	77 E	23*	65*	5 1	15 18.17	-38 40.8	2.649	3.583	7.0	23.1	154 W	6	77
6 15	10 25.47	-8 26.2	0.359	1.005	81.5	21.1	78 E	18*	69*	5 6	15 11.77	-38 40.6	2.639	3.591	6.2	23.1	157 W	6	77
6 20	10 40.07	-13 6.7	0.366	1.011	80.3	21.1	79 E	14*	72*	5 11	15 5.28	-38 35.6	2.637	3.598	5.7	23.0	159 E	6	77
6 25	10 54.50	-17 32.2	0.374	1.018	79.2	21.2	80 E	9*	74*	5 16	14 58.84	-38 25.9	2.642	3.606	5.7	23.0	159 E	7	78
6 30	11 8.94	-21 41.7	0.383	1.024	78.1	21.2	80 E	5*	74*	5 21	14 52.58	-38 12.0	2.654	3.613	6.0	23.1	158 E	7	78
7 5	11 23.56	-25 35.0	0.393	1.030	77.0	21.2	81 E	2*	73*	5 26	14 46.62	-37 54.5	2.675	3.619	6.7	23.1	155 E	7	78
7																			

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°		
523669 2012 XS₁₃₄										410650 2008 SQ₁											
4	26	15 25.57	-1 52.7	1.711	2.674	7.8	22.3	159 W	43	66	4	26	15 42.77	-24 46.1	3.692	4.630	5.0	25.1	156 W	20	89
5	6	15 13.56	-1 36.6	1.649	2.634	6.0	22.1	164 W	43	66	5	6	15 35.39	-24 21.6	3.650	4.639	2.8	24.9	167 W	21	88
5	16	15 0.47	-1 34.3	1.616	2.593	7.3	22.0	161 E	43	66	5	16	15 27.58	-23 51.7	3.638	4.646	1.1	24.8	175 E	21	88
5	26	14 47.58	-1 49.0	1.612	2.551	10.7	22.1	152 E	43	66	5	26	15 19.87	-23 18.2	3.657	4.653	2.6	24.9	168 E	22	87
6	5	14 36.06	-2 22.1	1.633	2.507	14.6	22.3	141 E	43	66	6	5	15 12.77	-22 43.2	3.707	4.659	4.8	25.1	157 E	22	87
309203 2007 GG										539063 2016 MK₁											
4	26	15 27.05	-11 17.3	2.594	3.565	5.0	22.9	162 W	34	75	4	26	15 43.93	-5 58.4	1.499	2.455	9.4	22.6	157 W	39	70
5	6	15 18.05	-10 38.9	2.598	3.599	2.4	22.7	171 W	34	75	5	1	15 36.16	-5 12.9	1.492	2.469	7.4	22.5	162 W	40	69
5	16	15 8.94	-10 3.9	2.633	3.632	2.9	22.8	170 E	35	74	5	6	15 28.09	-4 29.6	1.493	2.482	6.0	22.4	165 W	41	68
5	26	15 0.41	-9 35.0	2.697	3.664	5.6	23.0	160 E	35	74	5	11	15 19.93	-3 49.4	1.502	2.494	5.7	22.4	166 W	41	68
6	5	14 53.05	-9 14.2	2.790	3.694	8.2	23.2	149 E	36	73	5	16	15 11.88	-3 13.3	1.519	2.505	6.6	22.5	164 E	42	67
496816 1989 UP										363135 2001 QQ₁₉₉											
4	26	15 27.42	-18 7.3	1.566	2.541	7.2	24.0	162 W	27	82	4	26	15 44.98	-0 40.9	6.580	7.497	3.4	21.5	154 W	44	65
5	1	15 20.88	-17 49.0	1.560	2.555	4.7	23.9	168 W	27	82	5	6	15 40.99	-0 2.7	6.537	7.490	2.7	21.4	160 W	45	64
5	6	15 14.13	-17 29.2	1.562	2.568	2.1	23.8	175 W	28	81	5	16	15 36.75	+0 31.5	6.523	7.483	2.6	21.4	160 W	46	63
5	11	15 7.35	-17 8.3	1.570	2.580	0.4	23.6	179 E	28	81	5	26	15 32.48	+1 0.6	6.539	7.476	3.2	21.5	156 E	46	63
5	16	15 0.71	-16 47.2	1.587	2.592	2.9	23.9	172 E	28	81	6	5	15 28.42	+1 23.8	6.583	7.468	4.1	21.5	149 E	46	63
5	21	14 54.38	-16 26.4	1.610	2.604	5.4	24.1	166 E	29	80	6	15	15 24.74	+1 40.6	6.654	7.461	5.0	21.6	140 E	47	62
5	26	14 48.52	-16 6.7	1.641	2.615	7.7	24.2	160 E	29	80	417634 2006 XG₁										
435548 2008 QT₃										4	26	15 46.73	-27 40.6	2.289	3.224	7.9	23.4	154 W	17	88	
4	26	15 27.44	-26 37.8	1.839	2.799	7.7	22.9	158 W	18	89	5	6	15 35.48	-27 55.4	2.197	3.181	4.8	23.1	165 W	17	88
5	1	15 21.24	-26 13.9	1.832	2.814	5.7	22.8	164 W	19	90	5	16	15 22.74	-27 58.6	2.134	3.136	2.9	22.9	171 E	17	88
5	6	15 14.86	-25 46.5	1.831	2.829	3.8	22.7	169 W	19	90	5	26	15 9.56	-27 50.3	2.102	3.090	5.0	23.0	165 E	17	88
5	11	15 8.46	-25 16.1	1.839	2.843	2.7	22.7	173 E	20	89	6	5	14 57.07	-27 32.7	2.100	3.043	8.5	23.1	154 E	17	88
5	16	15 2.20	-24 43.3	1.853	2.857	3.1	22.7	171 E	20	89	491565 2012 QF₄₉										
5	21	14 56.23	-24 9.1	1.876	2.870	4.6	22.9	167 E	21	88	4	26	15 48.94	-37 41.4	2.472	3.366	9.2	22.6	148 W	7	78
5	26	14 50.69	-23 34.2	1.905	2.883	6.5	23.0	161 E	21	88	5	1	15 42.90	-37 59.1	2.443	3.368	8.0	22.5	152 W	7	78
508861 2002 RN₃₈										5	6	15 36.43	-38 12.2	2.422	3.369	7.0	22.5	156 W	7	78	
4	26	15 30.77	-23 31.5	5.428	6.378	3.2	25.3	159 W	21	88	5	11	15 29.68	-38 20.5	2.407	3.370	6.1	22.4	159 W	7	78
5	6	15 25.13	-23 13.3	5.386	6.380	1.6	25.2	170 W	22	87	5	16	15 22.77	-38 23.8	2.401	3.371	5.7	22.4	161 E	7	78
5	16	15 19.28	-22 51.9	5.374	6.382	0.7	25.1	175 E	22	87	5	21	15 15.88	-38 22.3	2.401	3.371	5.8	22.4	160 E	7	78
5	26	15 13.54	-22 28.6	5.394	6.384	2.1	25.2	167 E	23	86	5	26	15 9.16	-38 16.3	2.409	3.371	6.4	22.4	158 E	7	78
6	5	15 8.21	-22 4.6	5.444	6.385	3.7	25.4	156 E	23	86	5	31	15 2.73	-38 6.2	2.425	3.371	7.3	22.5	155 E	7	78
524606 2003 QT₇₉										154453 2003 CJ₁₁											
4	26	15 31.32	-14 0.9	2.051	3.021	6.2	22.4	161 W	31	78	4	26	15 50.69	-16 28.2	3.729	4.668	5.0	21.8	156 W	29	80
5	6	15 21.68	-13 32.1	1.989	2.991	2.6	22.2	172 W	31	78	5	6	15 42.27	-16 9.0	3.689	4.680	2.6	21.7	168 W	29	80
5	16	15 11.18	-13 2.9	1.955	2.960	2.6	22.1	172 E	32	77	5	16	15 33.37	-15 48.5	3.681	4.691	0.7	21.5	177 W	29	80
5	26	15 0.80	-12 36.7	1.951	2.928	6.4	22.3	161 E	32	77	5	26	15 24.52	-15 28.3	3.706	4.701	2.6	21.7	168 E	30	79
6	5	14 51.47	-12 16.9	1.974	2.895	10.2	22.4	150 E	33	76	6	5	15 16.23	-15 9.9	3.763	4.709	5.0	21.9	156 E	30	79
455396 2003 AB₂₀										6	15	15 8.92	-14 55.0	3.849	4.717	7.1	22.0	145 E	30	79	
4	26	15 33.92	-16 17.3	2.319	3.285	5.9	22.8	160 W	29	80	333510 2005 MD										
5	6	15 25.31	-15 29.2	2.305	3.307	2.5	22.6	172 W	30	79	4	26	15 52.01	+1 16.7	1.695	2.623	10.5	22.6	152 W	46	63
5	16	15 16.36	-14 40.5	2.320	3.328	1.7	22.6	174 E	30	79	5	1	15 46.45	+2 17.3	1.660	2.608	9.5	22.5	155 W	47	62
5	26	15 7.87	-13 55.0	2.365	3.348	5.0	22.8	163 E	31	78	5	6	15 40.37	+3 15.9	1.633	2.591	8.8	22.4	157 W	48	61
6	5	15 0.53	-13 16.1	2.438	3.368	8.1	23.0	152 E	32	77	5	11	15 33.90	+4 11.3	1.613	2.574	8.7	22.4	157 W	49	60
463282 2012 HR₁₅										5	16	15 27.18	+5 2.0	1.600	2.556	9.3	22.4	156 E	50	59	
4	26	15 34.08	+3 8.6	3.191	4.119	6.1	23.2	154 W	48	61	5	21	15 20.40	+5 47.1	1.594	2.538	10.4	22.4	153 E	51	58
5	6	15 24.96	+3 35.0	3.185	4.140	5.2	23.1	158 W	49	60	5	26	15 13.70	+6 25.6	1.595	2.519	11.9	22.4	149 E	51	58
5	16	15 15.59	+3 50.5	3.210	4.159	5.5	23.2	157 E	49	60	5	31	15 7.24	+6 57.0	1.603	2.499	13.6	22.5	145 E	52	57
5	26	15 6.58	+3 53.5	3.266	4.177	6.9	23.3	150 E	49	60	531277 2012 MM₁₁										
6	5	14 58.45	+3 43.9	3.349	4.194	8.6	23.4	142 E	49	60	4	26	15 52.87	-21 37.6	1.453	2.403	10.2	23.7	155 W	23	86
440242 2004 RX₉										5	6	15 40.57	-20 52.4	1.341	2.336	5.3	23.2	168 W	24	85	
4	26	15 39.67	-25 41.9	2.377	3.324	7.0	23.0	156 W	19	90	5	16	15 25.43	-19 50.6	1.255	2.266	0.7	22.7	178 E	25	84
5	1	15 34.90	-25 34.1	2.356	3.329	5.4	22.9	162 W	19	90	5	26	15 8.87	-18 34.9	1.199	2.194	6.8	22.9	165 E	26	83
5	6	15 29.86	-25 23.9	2.343	3.334	3.8	22.8	167 W	20	89	6	5	14 52.72	-17 12.3	1.171	2.119	13.2	23.0	152 E	28	81
5	11	15 24.68	-25 11.3	2.336	3.339	2.4	22.7	172 W	20	89	310777 2002 ST₁₉										
5	16	15 19.45	-24 56.7	2.337	3.344	2.0	22.7	174 E	20	89	4	26	15 54.24	+14 50.3	2.476	3.330	10.6	21.7	142 W	60	49
5	21	15 14.31	-24 40.4	2.346	3.348	2.9	22.8	170 E	20	89	5	1	15 50.30	+15 28.6	2.476	3.344	10.2	21.6	144 W	60	49
5	26	15 9.36	-24 22.9	2.362	3.352	4.4	22.9	165 E	21	88	5	6	15 46.12	+16 1.7	2.482	3.357	10.0	21.6	145 W	61	48
5	31	15 4.70	-24 4.8	2.386	3.356	5.9	23.0	160 E	21	88	5	11	15 41.80	+16 29.1	2.494	3.371	9.9	21.7	145 W	61	48
447334 2005 YA₄₇										5	16	15 37.42	+16 50.5	2.513	3.384	10.1	21.7	144 W	62	47	
4	26	15 42.52	-27 55.2	1.850	2.793	8.9	22.4	155 W	17	88	5	21	15 33.09	+17 5.5	2.537	3.397	10.4	21.7	143 E	62	47
5	1	15 37.75	-27 46.0	1.816	2.785	7.0	22.2	160 W	17	88	5	26	15 28.90	+17 14.1	2.568	3.409	10.9	21.8	140 E	62	47
5	6	15 32.57	-27 33.1	1.789	2.777	5.2	22.1	165 W	17	88	5	31	15 24.91	+17 16.6	2.604	3.422	11.5	21.9	138 E	62	47
5	11	15 27.09	-27 16.6	1.770	2.769	3.7	22.0	17													

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°		
338172 2002 RV₁₁₂										448768 2011 SR₃₃											
4	26	15 59.95	6 19.1	2.242	3.171	8.3	22.1	153 W	39	70	4	26	16 5.04	-13 30.3	2.428	3.355	7.8	22.3	153 W	31	78
5	6	15 51.30	5 4.7	2.178	3.151	5.8	21.9	161 W	40	69	5	6	15 56.71	-13 6.9	2.381	3.362	4.8	22.1	164 W	32	77
5	16	15 41.53	3 55.2	2.143	3.130	4.9	21.8	165 W	41	68	5	16	15 47.42	-12 44.5	2.363	3.368	2.2	22.0	173 W	32	77
5	26	15 31.47	2 55.8	2.138	3.107	6.6	21.9	159 E	42	67	5	26	15 37.95	-12 25.2	2.375	3.373	3.5	22.1	168 E	33	76
6	5	15 21.99	2 10.3	2.161	3.083	9.4	22.0	150 E	43	66	6	5	15 29.07	-12 11.4	2.416	3.377	6.5	22.3	158 E	33	76
6	15	15 13.83	1 41.1	2.210	3.058	12.3	22.2	140 E	43	66	6	15	15 21.44	-12 4.6	2.484	3.380	9.5	22.4	147 E	33	76
306865 2001 SS₂₆₃										285625 2000 RD₃₄											
4	26	16 0.09	-40 35.1	2.948	3.810	8.9	21.5	144 W	4	75	4	26	16 9.26	-31 44.3	1.591	2.501	12.4	21.4	148 W	13	84
5	1	15 55.54	-40 40.8	2.916	3.812	7.9	21.4	149 W	4	75	5	1	16 3.67	-31 38.7	1.570	2.511	10.4	21.3	153 W	13	84
5	6	15 50.63	-40 42.5	2.891	3.815	7.0	21.3	153 W	4	75	5	6	15 57.51	-31 28.2	1.554	2.521	8.3	21.2	159 W	14	85
5	11	15 45.47	-40 40.1	2.872	3.817	6.2	21.3	156 W	4	75	5	11	15 50.96	-31 12.7	1.544	2.530	6.4	21.1	164 W	14	85
5	16	15 40.16	-40 33.4	2.861	3.819	5.6	21.2	158 W	4	75	5	16	15 44.20	-30 52.4	1.542	2.539	4.8	21.1	168 W	14	85
5	21	15 34.81	-40 22.7	2.857	3.821	5.3	21.2	159 E	5	76	5	21	15 37.45	-30 27.7	1.547	2.548	4.3	21.1	169 E	15	86
5	26	15 29.55	-40 8.1	2.860	3.823	5.4	21.2	159 E	5	76	5	26	15 30.89	-29 59.4	1.558	2.556	5.0	21.1	167 E	15	86
5	31	15 24.47	-39 50.1	2.870	3.824	5.9	21.3	157 E	5	76	5	31	15 24.71	-29 28.4	1.577	2.564	6.6	21.2	163 E	16	87
6	5	15 19.68	-39 29.1	2.887	3.825	6.6	21.3	154 E	6	77	6	5	15 19.04	-28 55.5	1.602	2.572	8.4	21.4	158 E	16	87
6	10	15 15.27	-39 5.6	2.911	3.826	7.5	21.4	150 E	6	77	6	10	15 14.02	-28 21.9	1.633	2.579	10.3	21.5	153 E	17	88
6	15	15 11.30	-38 40.4	2.941	3.827	8.5	21.4	146 E	6	77	6	15	15 9.73	-27 48.6	1.671	2.586	12.2	21.6	147 E	17	88
413199 2002 YB										542627 2013 GK₃₇											
4	26	16 0.77	+16 25.5	2.847	3.676	10.1	21.8	140 W	61	48	4	26	16 11.24	-35 23.1	2.099	2.984	11.0	22.5	146 W	10	81
5	6	15 53.16	+17 22.7	2.832	3.687	9.5	21.7	143 W	62	47	5	1	16 5.79	-35 47.8	2.077	2.995	9.5	22.4	151 W	9	80
5	16	15 44.84	+18 0.1	2.841	3.698	9.5	21.7	143 W	63	46	5	6	15 59.81	-36 8.3	2.061	3.006	8.1	22.3	155 W	9	80
5	26	15 36.47	+18 15.2	2.875	3.707	10.2	21.8	140 E	63	46	5	11	15 53.43	-36 24.2	2.051	3.017	6.8	22.3	159 W	9	80
6	5	15 28.69	+18 7.8	2.932	3.715	11.2	21.9	135 E	63	46	5	16	15 46.81	-36 35.3	2.049	3.027	5.9	22.2	162 W	8	79
6	15	15 22.00	+17 39.5	3.010	3.723	12.4	22.0	128 E	63	46	5	21	15 40.12	-36 41.4	2.054	3.037	5.5	22.2	163 E	8	79
310991 2003 WH₈₄										443885 2001 UX₁₃₅											
4	26	16 1.18	-26 16.6	2.362	3.283	8.4	21.9	152 W	19	90	4	26	16 11.66	-20 37.3	2.032	2.953	9.5	22.0	151 W	24	85
5	6	15 52.62	-25 48.5	2.302	3.280	5.2	21.7	163 W	19	90	5	6	16 2.76	-20 35.2	1.969	2.947	5.8	21.8	163 W	24	85
5	16	15 42.99	-25 10.8	2.271	3.277	2.1	21.5	173 W	20	89	5	16	15 52.36	-20 28.1	1.932	2.941	1.8	21.5	175 W	25	84
5	26	15 33.18	-24 25.6	2.269	3.272	2.9	21.6	171 E	21	88	5	26	15 41.45	-20 17.1	1.925	2.933	2.4	21.5	173 E	25	84
6	5	15 24.06	-23 36.4	2.296	3.267	6.2	21.8	160 E	21	88	6	5	15 31.05	-20 4.7	1.946	2.925	6.5	21.8	161 E	25	84
6	15	15 16.38	-22 47.6	2.350	3.260	9.3	21.9	149 E	22	87	6	15	15 22.11	-19 53.6	1.995	2.915	10.2	22.0	149 E	25	84
453242 2008 RG₁₀₆										419922 2011 BJ₂₄											
4	26	16 1.44	-9 16.1	1.139	2.087	12.5	21.6	153 W	36	73	4	26	16 12.79	-12 56.4	2.064	2.985	9.4	22.3	151 W	32	77
5	1	15 58.27	-8 37.4	1.102	2.071	10.5	21.5	158 W	36	73	5	6	16 3.77	-12 0.2	1.955	2.931	6.1	22.0	162 W	33	76
5	6	15 54.41	-7 58.7	1.070	2.055	8.5	21.3	163 W	37	72	5	11	15 49.98	-11 1.2	1.873	2.875	3.4	21.7	170 W	34	75
5	11	15 49.98	-7 20.7	1.044	2.039	6.9	21.2	166 W	38	71	5	16	15 45.13	-6 44.9	1.024	2.023	6.3	21.1	167 W	38	71
5	16	15 45.13	-6 44.9	1.024	2.023	6.3	21.1	167 W	38	71	5	21	15 40.04	-6 12.2	1.010	2.006	7.1	21.1	166 E	39	70
5	21	15 40.04	-6 12.2	1.010	2.006	7.1	21.1	166 E	39	70	5	26	15 34.92	-5 43.8	1.001	1.990	8.9	21.1	162 E	39	70
5	26	15 34.92	-5 43.8	1.001	1.990	8.9	21.1	162 E	39	70	5	31	15 29.96	-5 20.7	0.998	1.974	11.2	21.2	158 E	40	69
5	31	15 29.96	-5 20.7	0.998	1.974	11.2	21.2	158 E	40	69	6	5	15 25.35	-5 3.4	1.000	1.958	13.7	21.2	153 E	40	69
6	5	15 25.35	-5 3.4	1.000	1.958	13.7	21.2	153 E	40	69	6	10	15 21.25	-4 52.7	1.008	1.943	16.2	21.3	148 E	40	69
6	10	15 21.25	-4 52.7	1.008	1.943	16.2	21.3	148 E	40	69	6	15	15 17.83	-4 48.8	1.019	1.927	18.7	21.4	143 E	40	69
6	15	15 17.83	-4 48.8	1.019	1.927	18.7	21.4	143 E	40	69	397827 2008 SP₁₄₈										
450405 2005 SW₂₆₅										4	26	16 13.52	-5 28.9	2.301	3.208	9.2	21.5	149 W	40	69	
4	26	16 1.74	-10 38.8	1.663	2.602	10.0	22.1	153 W	34	75	5	6	16 5.64	-4 4.0	2.256	3.213	6.7	21.3	158 W	41	68
5	6	15 53.24	-9 48.2	1.598	2.581	6.3	21.9	164 W	35	74	5	16	15 56.69	-2 45.7	2.239	3.218	5.4	21.2	163 W	42	67
5	16	15 43.16	-9 0.5	1.559	2.559	4.1	21.7	170 W	36	73	5	26	15 47.45	-1 39.1	2.252	3.222	6.2	21.3	160 E	43	66
5	26	15 32.60	-8 20.7	1.547	2.537	6.2	21.7	164 E	37	72	6	5	15 38.69	-0 47.8	2.293	3.224	8.5	21.4	152 E	44	65
6	5	15 22.70	-7 53.2	1.561	2.513	10.2	21.9	154 E	37	72	6	15	15 31.12	-0 13.8	2.360	3.225	11.1	21.6	142 E	45	64
6	15	15 14.48	-7 40.8	1.599	2.488	14.1	22.1	143 E	37	72	277142 2005 LG₈										
357129 2001 XU₂₆₆										4	26	16 15.17	-5 18.3	2.042	2.950	10.1	21.3	149 W	40	69	
4	26	16 2.42	+9 28.8	2.226	3.101	10.8	22.3	145 W	54	55	5	1	16 9.42	-4 27.8	1.993	2.931	8.7	21.1	154 W	41	68
5	1	15 58.53	+10 10.5	2.205	3.099	10.2	22.2	147 W	55	54	5	6	16 3.09	-3 37.2	1.951	2.912	7.4	21.0	158 W	41	68
5	6	15 54.29	+10 48.3	2.190	3.096	9.8	22.2	149 W	56	53	5	11	15 56.27	-2 47.2	1.917	2.892	6.4	20.9	161 W	42	67
5	11	15 49.79	+11 21.2	2.182	3.094	9.6	22.2	149 W	56	53	5	16	15 49.09	-1 58.7	1.892	2.872	6.1	20.9	162 W	43	66
5	16	15 45.14	+11 48.7	2.180	3.090	9.7	22.2	149 W	57	52	5	21	15 41.69	-1 12.8	1.874	2.850	6.7	20.8	161 E	44	65
5	21	15 40.43	+12 10.2	2.184	3.087	10.1	22.2	148 E	57	52	5	26	15 34.22	-0 30.2	1.865	2.828	7.9	20.9	158 E	44	65
5	26	15 35.79	+12 25.4	2.195	3.083	10.7	22.2	145 E	57	52	5	31	15 26.85	+0 8.1	1.864	2.805	9.5	20.9	153 E	45	64
5	31	15 31.30	+12 34.2	2.212	3.079	11.5	22.3	143 E	58	51	6	5	15 19.70	+0 41.7	1.871	2.782	11.2	21.0	148 E	46	63
6	5	15 27.05	+12 36.7	2.235	3.075	12.4	22.3	139 E	58	51	6	10	15 12.93	+1 9.9	1.884	2.757	13.0	21.0	142 E	46	63
6	10	15 23.14	+12 32.9	2.263	3.071	13.4	22.4	136 E	58	51	6	15	15 6.65	+1 32.6	1.904	2.732	14.8	21.1	137 E	47	62
6	15	15 19.64	+12 23.3	2.296	3.066	14.3	22.4	132 E	57	52	6	20	15 0.97	+1 49.7	1.929	2.70					

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°		
491653 2012 <i>TT</i> ₂₅₄ (continuation)									440043 2002 <i>QF</i> ₂₄										
5 21	15 52.38	-11 35.5	1.665	2.670	3.2	21.6	171 W	33 76	4 26	16 28.62	-63 22.3	1.724	2.441	19.8	21.4	125 W	—	53	
5 26	15 47.27	-10 46.5	1.683	2.683	4.4	21.7	168 E	34 75	5 1	16 22.36	-64 5.7	1.681	2.429	19.2	21.3	127 W	—	52	
5 31	15 42.42	-10 0.9	1.709	2.696	6.2	21.8	163 E	35 74	5 6	16 14.48	-64 40.7	1.643	2.416	18.7	21.3	130 W	—	51	
6 5	15 37.92	-9 19.3	1.742	2.709	8.1	21.9	158 E	36 73	5 11	16 5.16	-65 5.4	1.608	2.403	18.2	21.2	132 W	—	51	
6 10	15 33.88	-8 42.4	1.781	2.722	9.9	22.1	152 E	36 73	5 16	15 54.70	-65 18.1	1.577	2.389	17.9	21.1	134 W	—	51	
6 15	15 30.37	-8 10.4	1.827	2.735	11.7	22.2	147 E	37 72	5 21	15 43.55	-65 17.7	1.551	2.376	17.6	21.1	135 E	—	51	
6 20	15 27.45	-7 43.4	1.877	2.747	13.3	22.3	142 E	37 72	5 26	15 32.24	-65 3.5	1.530	2.362	17.5	21.0	136 E	—	51	
431760 2008 <i>HE</i>									468684 2009 <i>QY</i> ₃₃										
4 26	16 18.36	-16 17.3	1.814	2.730	10.7	22.2	150 W	29 80	4 26	16 21.52	+22 58.1	0.875	1.720	25.8	21.7	132 W	68	41	
5 6	16 3.42	-15 9.8	1.660	2.641	6.5	21.8	163 W	30 79	5 1	16 15.31	+24 23.7	0.879	1.733	25.0	21.7	133 W	69	40	
5 16	15 44.76	-13 47.3	1.539	2.547	2.5	21.3	174 W	31 78	5 6	16 8.36	+25 33.7	0.887	1.746	24.5	21.7	134 W	71	38	
5 26	15 23.49	-12 12.6	1.455	2.449	5.9	21.3	166 E	33 76	5 11	16 0.90	+26 26.3	0.899	1.759	24.3	21.7	134 W	71	38	
6 5	15 1.35	-10 32.7	1.407	2.347	12.1	21.4	151 E	34 75	5 16	15 53.24	+27 0.7	0.915	1.771	24.4	21.8	134 W	72	37	
6 15	14 40.33	-8 57.4	1.392	2.240	18.3	21.5	136 E	36 73	5 21	15 45.66	+27 16.6	0.934	1.782	24.7	21.9	133 E	72	37	
393413 2001 <i>QL</i> ₁₀₂									335772 2007 <i>EA</i> ₁₆₆										
4 26	16 22.62	-23 16.2	1.351	2.268	13.6	21.3	148 W	22 87	4 26	16 32.24	-21 6.6	2.006	2.896	11.2	22.4	146 W	24	85	
5 6	16 15.46	-23 9.6	1.264	2.236	9.2	21.0	159 W	22 87	5 6	16 24.18	-20 42.3	1.925	2.884	7.6	22.2	158 W	24	85	
5 16	16 5.54	-22 53.3	1.200	2.205	4.1	20.6	171 E	22 87	5 16	16 14.22	-20 12.0	1.871	2.871	3.6	21.9	170 W	25	84	
5 26	15 54.00	-22 28.0	1.161	2.172	1.9	20.3	176 E	23 86	5 26	16 3.25	-19 37.2	1.845	2.858	0.8	21.6	178 E	25	84	
5 31	15 48.10	-22 12.7	1.151	2.156	4.7	20.5	170 E	23 86	6 5	15 52.34	-19 0.8	1.848	2.842	5.1	21.9	166 E	26	83	
6 5	15 42.39	-21 56.5	1.146	2.140	7.5	20.6	164 E	23 86	6 15	15 42.53	-18 26.4	1.879	2.826	9.1	22.1	154 E	27	82	
6 10	15 37.06	-21 39.9	1.148	2.124	10.3	20.7	158 E	23 86	226213 2002 <i>VR</i> ₅₁										
6 15	15 32.30	-21 24.0	1.156	2.107	13.1	20.8	152 E	24 85	4 26	16 32.32	-17 56.5	1.865	2.759	11.7	21.6	146 W	27	82	
6 20	15 28.26	-21 9.4	1.168	2.091	15.6	20.9	146 E	24 85	5 6	16 23.99	-17 44.5	1.812	2.773	7.9	21.4	158 W	27	82	
6 25	15 25.06	-20 56.8	1.185	2.075	18.0	21.0	141 E	24 85	5 16	16 13.89	-17 30.3	1.785	2.786	3.7	21.1	170 W	27	82	
6 30	15 22.75	-20 46.7	1.206	2.058	20.3	21.1	135 E	24 85	5 26	16 3.03	-17 15.5	1.786	2.797	1.5	21.0	176 E	28	81	
7 5	15 21.38	-20 39.5	1.231	2.042	22.3	21.2	130 E	24 85	6 5	15 52.49	-17 2.4	1.816	2.808	5.4	21.3	165 E	28	81	
7 10	15 20.98	-20 35.5	1.259	2.026	24.1	21.3	125 E	24* 85	6 15	15 43.28	-16 53.2	1.872	2.818	9.3	21.5	153 E	28	81	
7 15	15 21.54	-20 34.9	1.289	2.009	25.7	21.3	121 E	24* 85	530706 2011 <i>UV</i> ₆₂										
7 20	15 23.05	-20 37.5	1.321	1.993	27.2	21.4	116 E	24* 85	4 26	16 34.47	-33 21.4	2.069	2.931	12.1	22.3	142 W	12	83	
7 25	15 25.46	-20 43.2	1.355	1.977	28.4	21.5	112 E	23* 85	5 6	16 26.10	-32 38.8	1.972	2.909	9.0	22.1	153 W	12	83	
415818 2001 <i>QX</i> ₁₅₁									434167 2002 <i>TQ</i> ₆₅										
4 26	16 23.20	-56 41.6	2.629	3.367	13.2	21.8	130 W	—	59	4 26	16 35.20	-32 36.0	3.477	4.319	8.2	22.4	142 W	12	83
5 1	16 17.78	-56 59.3	2.584	3.358	12.6	21.7	134 W	—	59	5 6	16 27.46	-33 1.9	3.419	4.341	6.1	22.2	153 W	12	83
5 6	16 11.58	-57 11.0	2.543	3.349	11.9	21.7	137 W	—	59	5 16	16 18.54	-33 19.4	3.388	4.362	4.1	22.1	162 W	12	83
5 11	16 4.76	-57 15.9	2.508	3.339	11.4	21.6	139 W	—	59	5 26	16 9.05	-33 27.6	3.388	4.382	2.8	22.1	168 E	12	83
5 16	15 57.48	-57 13.4	2.478	3.330	10.9	21.6	141 W	—	59	6 5	15 59.64	-33 27.0	3.417	4.402	3.6	22.1	164 E	12	83
5 21	15 49.96	-57 3.2	2.455	3.320	10.6	21.5	143 E	—	59	6 15	15 50.95	-33 18.9	3.477	4.421	5.5	22.3	155 E	12	83
5 26	15 42.42	-56 45.1	2.437	3.310	10.4	21.5	144 E	—	59	66253 1999 <i>GT</i> ₃									
5 31	15 35.07	-56 19.4	2.425	3.299	10.4	21.5	144 E	—	60	4 26	16 35.48	+ 8 22.5	1.560	2.409	16.0	22.1	139 W	53	56
6 5	15 28.11	-55 46.6	2.419	3.289	10.6	21.5	143 E	—	60	5 1	16 27.76	+ 9 22.4	1.539	2.418	14.7	22.1	142 W	54	55
6 10	15 21.72	-55 7.4	2.419	3.278	11.0	21.5	142 E	—	61	5 6	16 19.34	+10 17.0	1.525	2.426	13.6	22.0	146 W	55	54
6 15	15 16.06	-54 22.8	2.425	3.267	11.6	21.5	140 E	—	62	5 11	16 10.38	+11 4.9	1.518	2.432	12.8	22.0	148 W	56	53
442586 2012 <i>BX</i> ₁₅₀									376836 2001 <i>QD</i> ₆₁										
4 26	16 26.63	-18 1.4	2.193	3.091	10.0	21.6	148 W	27 82	4 26	16 28.22	+17 59.1	2.630	3.410	12.2	22.0	134 W	63	46	
5 6	16 18.00	-18 6.8	2.153	3.117	6.6	21.4	159 W	27 82	5 1	16 24.93	+18 32.1	2.599	3.401	11.8	21.9	137 W	64	45	
5 16	16 8.02	-18 10.2	2.140	3.143	2.8	21.2	171 W	27 82	5 6	16 21.25	+19 0.8	2.573	3.392	11.4	21.9	138 W	64	45	
5 26	15 57.59	-18 12.4	2.157	3.168	1.4	21.2	176 E	27 82	5 11	16 17.22	+19 24.4	2.552	3.383	11.2	21.9	139 W	64	45	
6 5	15 47.61	-18 14.8	2.203	3.192	4.9	21.5	164 E	27 82	5 16	16 12.94	+19 42.4	2.537	3.374	11.1	21.9	140 W	65	44	
6 15	15 38.90	-18 18.9	2.277	3.215	8.3	21.7	153 E	27 82	5 21	16 8.49	+19 54.1	2.528	3.365	11.2	21.8	140 W	65	44	
154229 2002 <i>JN</i> ₉₇									615429 2002 <i>JN</i> ₉₇										
4 26	16 36.99	-20 4.2	2.175	3.055	10.9	21.4	145 W	25 84	4 26	16 36.99	-20 4.2	2.175	3.055	10.9	21.4	145 W	25	84	
5 6	16 26.40	-19 52.4	2.075	3.031	7.4	21.1	157 W	25 84	5 6	16 26.40	-19 52.4	2.075	3.031	7.4	21.1	157 W	25	84	
5 16	16 13.61	-19 34.9	2.003	3.004	3.4	20.8	170 W	25 84	5 16	16 13.61	-19 34.9	2.003	3.004	3.4	20.8	170 W	25	84	
5 26	15 59.55	-19 12.5	1.963	2.975	1.1	20.6	177 E	26 83	6 5	15 55.06	+19 49.7	2.535	3.335	12.3	21.9	135 E	65	44	
6 5	15 45.37	-18 47.0	1.955	2.944	5.4	20.8	164 E	26 83	6 10	15 50.85	+19 35.0	2.548	3.325	12.9	21.9	133 E	65	44	
6 15	15 32.25	-18 21.6	1.977	2.910	9.6	21.0	151 E	27 82	6 15	15 46.92	+19 13.9	2.566	3.314	13.5	21.9	130 E	64	45	
6 25	15 21.16	-18 0.2	2.026	2.874	13.4	21.2	139 E	27 82	6 20	15 43.34	+18 47.0	2.589	3.303	14.2	22.0	127 E	64	45	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
154229 2002 JN₉₇ (continuation)										276732 2004 EV₉ (continuation)									
7 5	15 12.72	-17 45.8	2.097	2.835	16.5	21.4	128 E	27*	82	10 15	15 42.79	-1 20.1	1.013	0.627	70.5	19.2	36 E	23*	23*
7 15	15 7.18	-17 40.7	2.184	2.794	18.9	21.5	117 E	27*	82	10 17	15 45.05	-3 6.4	0.981	0.591	74.1	19.1	35 E	22*	22*
162058 1997 AE₁₂										276732 2004 EV₉ (continuation)									
4 26	16 37.27	-29 4.9	1.599	2.479	14.1	21.7	143 W	16	87	10 19	15 46.86	-5 1.9	0.948	0.556	78.2	19.0	33 E	20*	21*
5 6	16 29.39	-29 7.9	1.471	2.419	10.4	21.3	154 W	16	87	10 21	15 48.03	-7 7.9	0.914	0.521	83.0	19.0	31 E	17*	21*
5 16	16 18.11	-28 56.5	1.366	2.358	6.2	20.9	165 W	16	87	10 23	15 48.34	-9 25.7	0.881	0.486	88.6	19.0	29 E	15*	19*
5 26	16 4.27	-28 27.3	1.287	2.295	3.3	20.6	172 E	17	88	10 25	15 47.46	-11 56.4	0.847	0.452	95.0	19.0	27 E	12*	18*
6 5	15 49.28	-27 39.6	1.235	2.230	6.8	20.6	165 E	17	88	10 27	15 44.96	-14 40.2	0.815	0.420	102.5	19.1	24 E	9*	17*
6 15	15 34.96	-26 37.4	1.209	2.164	12.3	20.7	153 E	18	89	10 29	15 40.35	-17 35.9	0.786	0.390	110.8	19.3	22 E	5*	15*
6 25	15 23.03	-25 28.8	1.206	2.096	17.8	20.8	141 E	20	89	11 21	15 22.69	-23 40.2	0.742	0.343	128.6	20.3	19 E	1*	12*
7 5	15 14.70	-24 23.1	1.221	2.027	22.7	21.0	130 E	21*	88	11 31	15 16.31	-25 6.1	0.736	0.335	132.3	20.6	14 E	—	8*
7 15	15 10.57	-23 28.0	1.249	1.956	27.0	21.1	119 E	21*	87	11 41	15 9.22	-26 26.0	0.732	0.329	135.0	20.8	14 E	—	6*
7 25	15 10.75	-22 48.1	1.285	1.884	30.6	21.1	109 E	20*	87	11 51	15 1.54	-27 38.0	0.731	0.325	136.5	21.0	13 E	—	4*
8 4	15 15.05	-22 24.3	1.323	1.811	33.4	21.2	101 E	19*	86	11 61	14 53.43	-28 40.2	0.732	0.323	136.5	21.0	13 E	—	2*
8 14	15 23.19	-22 15.4	1.360	1.737	35.6	21.2	93 E	18*	86*	11 71	14 45.13	-29 31.4	0.736	0.323	134.9	20.8	13 W	—	1*
8 24	15 34.89	-22 18.9	1.393	1.663	37.3	21.2	86 E	18*	80*	11 81	14 36.86	-30 11.0	0.743	0.326	131.9	20.5	14 W	—	4*
9 3	15 49.90	-22 31.0	1.419	1.589	38.7	21.2	80 E	17*	74*	11 91	14 28.86	-30 39.1	0.752	0.330	128.1	20.2	15 W	—	6*
9 13	16 8.09	-22 47.6	1.438	1.514	39.8	21.2	74 E	16*	68*	11 101	14 21.32	-30 56.4	0.763	0.337	123.6	19.9	16 W	—	8*
9 23	16 29.34	-23 4.0	1.448	1.441	40.7	21.1	69 E	16*	63*	11 111	14 14.40	-31 4.1	0.776	0.345	118.8	19.6	18 W	—	10*
10 3	16 53.60	-23 15.0	1.448	1.370	41.5	21.0	65 E	16*	59*	11 121	14 8.17	-31 3.6	0.791	0.355	114.0	19.4	19 W	—	12*
10 13	17 20.84	-23 15.0	1.440	1.302	42.3	20.9	61 E	17*	55*	11 131	14 2.69	-30 56.4	0.806	0.367	109.2	19.2	20 W	—	14*
10 23	17 50.98	-22 57.5	1.424	1.239	43.2	20.8	58 E	18*	52*	11 141	13 57.95	-30 44.0	0.822	0.380	104.7	19.0	22 W	—	16*
11 2	18 23.89	-22 16.2	1.402	1.181	44.2	20.7	56 E	19*	49*	11 151	13 53.94	-30 27.6	0.839	0.394	100.5	18.9	23 W	—	17*
11 12	18 59.40	-21 4.7	1.374	1.132	45.3	20.6	54 E	21*	46*	11 161	13 50.58	-30 8.2	0.855	0.408	96.5	18.9	24 W	—	18*
11 22	19 37.15	-19 17.5	1.344	1.094	46.4	20.5	53 E	23*	43*	11 171	13 47.84	-29 46.9	0.872	0.424	92.8	18.8	25 W	1*	19*
12 2	20 16.75	-16 51.2	1.316	1.067	47.5	20.4	53 E	26*	40*	11 181	13 45.64	-29 24.2	0.889	0.440	89.5	18.8	26 W	2*	20*
12 12	20 57.75	-13 45.2	1.292	1.054	48.3	20.4	53 E	29*	38*	11 191	13 43.92	-29 0.7	0.906	0.456	86.4	18.8	27 W	3*	21*
12 17	21 18.61	-11 58.3	1.282	1.054	48.6	20.4	53 E	30*	37*	11 201	13 42.63	-28 36.8	0.922	0.473	83.5	18.8	28 W	4*	22*
12 22	21 39.63	-10 3.2	1.276	1.056	48.8	20.4	54 E	32*	36*	11 211	13 41.11	-27 48.9	0.954	0.508	78.6	18.9	30 W	6*	24*
12 27	22 0.76	-8 1.1	1.273	1.063	48.8	20.4	54 E	34*	35*	11 241	13 40.72	-27 2.2	0.984	0.543	74.4	18.9	32 W	8*	25*
1	22 21.94	+5 53.2	1.273	1.073	48.7	20.4	55 E	36*	34*	11 261	13 41.17	-26 17.3	1.011	0.578	70.9	19.0	34 W	10*	27*
1 6	22 43.14	+3 41.1	1.277	1.086	48.4	20.4	56 E	38*	33*	11 281	13 42.25	-25 34.4	1.037	0.614	67.9	19.1	35 W	11*	28*
1 11	23 4.28	+1 26.5	1.285	1.103	47.9	20.5	56 E	40*	32*	11 301	13 43.80	-24 53.7	1.061	0.649	65.3	19.2	37 W	13*	29*
1 16	23 25.33	+0 48.6	1.298	1.122	47.3	20.5	57 E	41*	31*	12 21	13 45.68	-24 14.9	1.083	0.684	63.2	19.3	38 W	14*	30*
1 21	23 46.23	+3 2.5	1.316	1.145	46.5	20.6	58 E	43*	30*	12 12	13 51.35	-22 45.4	1.130	0.769	58.9	19.5	42 W	17*	33*
283393 2000 RO₄₉										276732 2004 EV₉ (continuation)									
4 26	16 40.45	+0 30.2	2.301	3.148	11.6	21.4	141 W	46	63	12 13	13 57.68	-21 23.9	1.166	0.851	55.8	19.7	46 W	20*	35*
5 6	16 33.35	+1 47.4	2.261	3.169	9.4	21.3	149 W	47	62	12 17	14 4.19	-20 7.4	1.192	0.930	53.5	19.9	49 W	22*	38*
5 16	16 24.87	+2 53.1	2.247	3.189	7.9	21.2	154 W	48	61	12 22	14 10.58	-18 53.5	1.210	1.006	51.7	20.0	53 W	24*	41*
5 26	16 15.76	+3 42.6	2.260	3.208	7.6	21.2	155 W	49	60	12 27	14 16.66	-17 40.3	1.220	1.078	50.2	20.2	57 W	26*	45*
6 5	16 6.79	+4 13.3	2.300	3.226	8.7	21.3	151 E	49	60	1	14 22.32	-16 26.0	1.223	1.148	48.9	20.3	62 W	28*	48*
6 15	15 58.69	+4 24.2	2.366	3.243	10.6	21.5	144 E	49	60	1 6	14 27.44	-15 8.9	1.220	1.215	47.6	20.3	66 W	30*	52*
6 25	15 52.07	+4 16.2	2.454	3.259	12.6	21.7	136 E	49	60	1 11	14 31.94	-13 47.8	1.212	1.279	46.4	20.4	70 W	31*	55*
276732 2004 EV₉										357622 2005 EY₉₅									
4 26	16 40.88	+33 50.3	1.632	2.318	21.8	21.6	121 W	79	30	4 26	16 41.06	-19 28.5	0.737	1.661	20.8	21.8	144 W	26	83
5 1	16 34.47	+35 38.4	1.598	2.294	21.9	21.6	122 W	81	28	5 6	16 19.49	-18 52.4	0.685	1.666	12.5	21.3	159 W	26	83
5 6	16 26.90	+37 19.1	1.570	2.269	22.2	21.5	122 W	82	27	5 16	15 52.43	-17 56.7	0.656	1.666	3.2	20.8	175 W	27	82
5 11	16 18.25	+38 50.0	1.546	2.243	22.7	21.5	121 W	84	25	5 26	15 23.76	-16 45.7	0.655	1.659	7.3	21.0	168 E	28	81
5 16	16 8.63	+40 8.6	1.527	2.215	23.2	21.4	120 W	85	24	6 5	14 57.93	-15 33.1	0.680	1.647	16.7	21.4	152 E	29	80
5 21	15 58.26	+41 13.0	1.513	2.187	24.0	21.4	119 W	86	23	6 15	14 38.04	-14 34.8	0.727	1.629	24.7	21.8	138 E	30	79
5 26	15 47.37	+42 1.6	1.503	2.157	24.8	21.4	117 E	87	22	488801 2005 ES₁₅₆									
5 31	15 36.27	+42 33.7	1.497	2.126	25.8	21.4	114 E	88	21	4 26	16 41.47	-25 18.5	1.303	2.194	15.9	21.4	143 W	20	89
6 5	15 25.25	+42 49.0	1.495	2.094	26.8	21.4	112 E	88	21	5 1	16 37.48	-25 30.1	1.288	2.213	13.6	21.4	149 W	19	90
6 10	15 14.62	+42 47.8	1.495	2.061	27.8	21.4	109 E	88	21	5 6	16 32.76	-25 39.3	1.279	2.233	11.1	21.3	155 W	19	90
6 15	15 4.67	+42 31.0	1.498	2.026	28.8	21.4	106 E	88	21	5 11	16 27.42	-25 45.8	1.275	2.253	8.6	21.2	161 W	19	90
6 20	14 55.61	+42 0.1	1.503	1.990	29.9	21.4	103 E	87	22	5 16	16 21.67	-25 49.4	1.277	2.272	6.0	21.1	166 W	19	90
6 25	14 47.59	+41 16.7	1.509	1.953	30.9	21.4	99 E	86	23	5 21	16 15.68	-25 50.2	1.286	2.292	3.6	21.0	172 W	19	90
6 30	14 40.72	+40 22.5	1.516	1.915	31.9	21.4	96 E	84*	24	5 26	16 9.68	-25 48.4	1.301	2.312	2.1	20.9	175 E	19	90
7 5	14 35.03	+39 19.2	1.522	1.875	32.8	21.4	93 E	80*	25	5 31	16 3.86	-25 44.4	1.322	2.331	3.2	21.1	173 E	19	90
7 10	14 30.52	+38 8.2	1.529	1.833	33.7	21.3	90 E	76*	26	6 5	15 58.39	-25 38.6	1.350	2.350	5.4	21.2	167 E	19	90
7 15	14 27.17	+36 50.8	1.535	1.790	34.5	21.3	87 E	72*	27	6 10	15 53.43	-25 31.6	1.384	2.370	7.7	21.4	162 E	19	90
7 20	14 24.94	+35 28.3	1.539	1.746	35.3	21.3	84 E	68*	29	6 15	15 49.10	-25 24.1	1.424	2.389	9.9	21.6	156 E	20	89
7 25	14 23.75	+34 1.6	1.542	1.700	36.1	21.3	80 E	65*	30	6 20	15 45.50	-25 16.8	1.470	2.408	11.9	21.8	151 E	20	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
525356 2005 BG₁₄									350872 2002 PG₄₃ (continuation)								
4 26	16 43.50	+ 1 48.8	1.400	2.264	16.7	22.0	140 W	47 62	5 26	16 28.30	-35 27.6	1.032	2.028	7.4	20.3	165 W	10 81
5 1	16 38.70	+ 2 26.0	1.329	2.225	15.3	21.8	144 W	47 62	5 31	16 20.89	-35 29.0	1.004	2.003	6.9	20.2	166 E	10 81
5 6	16 32.77	+ 3 1.9	1.262	2.186	14.0	21.6	148 W	48 61	6 5	16 13.16	-35 23.6	0.981	1.978	7.8	20.2	165 E	10 81
5 11	16 25.69	+ 3 35.4	1.201	2.145	12.9	21.4	152 W	49 60	6 10	16 5.42	-35 11.2	0.965	1.953	9.7	20.2	161 E	10 81
5 16	16 17.49	+ 4 5.0	1.147	2.104	12.1	21.2	154 W	49 60	6 15	15 57.99	-34 52.5	0.954	1.927	12.2	20.3	156 E	10 81
5 21	16 8.26	+ 4 29.0	1.099	2.062	12.0	21.1	155 W	49 60	6 20	15 51.17	-34 28.4	0.948	1.902	15.0	20.3	151 E	11 82
5 26	15 58.16	+ 4 45.9	1.058	2.018	12.7	21.0	154 E	50 59	6 25	15 45.20	-34 0.3	0.947	1.877	17.7	20.4	146 E	11 82
5 31	15 47.39	+ 4 54.2	1.024	1.974	14.3	20.9	151 E	50 59	6 30	15 40.28	-33 29.6	0.950	1.851	20.5	20.4	140 E	12 83
6 5	15 36.20	+ 4 52.8	0.997	1.929	16.7	20.9	147 E	50 59	7 5	15 36.55	-32 57.9	0.958	1.825	23.1	20.5	135 E	12 83
6 10	15 24.89	+ 4 40.8	0.977	1.883	19.5	20.9	142 E	50 59	7 10	15 34.10	-32 26.5	0.968	1.800	25.6	20.6	130 E	13* 84
6 15	15 13.77	+ 4 17.7	0.962	1.835	22.5	20.9	136 E	49 60	7 15	15 32.98	-31 56.5	0.981	1.774	27.9	20.6	125 E	13* 84
6 20	15 3.16	+ 3 43.8	0.953	1.787	25.7	20.9	130 E	49 60	7 20	15 33.18	-31 29.0	0.997	1.749	30.0	20.7	121 E	13* 85
6 25	14 53.29	+ 2 59.6	0.948	1.737	28.9	21.0	124 E	48 61	7 25	15 34.67	-31 4.2	1.013	1.723	31.9	20.8	116 E	13* 85
6 30	14 44.34	+ 2 6.0	0.947	1.687	32.0	21.0	118 E	47* 62	7 30	15 37.39	-30 42.6	1.032	1.698	33.6	20.8	112 E	13* 85
7 5	14 36.46	+ 1 4.0	0.948	1.635	35.1	21.0	113 E	45* 63	8 4	15 41.30	-30 24.1	1.050	1.673	35.2	20.9	108 E	13* 86
7 10	14 29.71	+ 0 5.6	0.952	1.582	37.9	21.0	107 E	43* 64	8 9	15 46.35	-30 8.6	1.070	1.648	36.6	20.9	105 E	13* 86
7 15	14 24.14	+ 1 21.7	0.956	1.528	40.7	21.0	101 E	40* 65	8 14	15 52.48	-29 55.7	1.089	1.623	37.8	21.0	101 E	13* 86
7 20	14 19.71	+ 2 43.7	0.961	1.472	43.3	21.0	96 E	37* 67	8 19	15 59.63	-29 45.1	1.108	1.599	38.8	21.0	98 E	13* 86
7 25	14 16.37	+ 4 10.9	0.964	1.416	45.8	21.0	91 E	33* 68	8 24	16 7.74	-29 36.2	1.127	1.575	39.8	21.0	95 E	13* 86*
7 30	14 14.04	+ 5 43.0	0.966	1.358	48.3	21.0	86 E	30* 69*	8 29	16 16.76	-29 28.3	1.146	1.552	40.6	21.0	92 E	13* 84*
8 4	14 12.64	+ 7 19.7	0.966	1.299	50.7	21.0	82 E	27* 69*	9 3	16 26.64	-29 20.8	1.163	1.529	41.3	21.1	89 E	13* 82*
8 9	14 12.07	+ 9 1.0	0.962	1.239	53.1	20.9	78 E	24* 68*	9 8	16 37.34	-29 13.0	1.180	1.507	41.9	21.1	87 E	13* 80*
8 14	14 12.24	+ 10 47.2	0.955	1.177	55.6	20.9	73 E	21* 66*	9 13	16 48.83	-29 4.3	1.197	1.485	42.4	21.1	84 E	13* 78*
8 19	14 12.99	+ 12 38.2	0.944	1.115	58.2	20.8	69 E	18* 63*	9 18	17 1.06	-28 53.8	1.213	1.464	42.8	21.1	82 E	14* 76*
8 24	14 14.18	+ 14 34.5	0.929	1.051	61.1	20.7	65 E	15* 59*	9 23	17 13.97	-28 40.9	1.227	1.445	43.2	21.1	80 E	14* 74*
8 29	14 15.61	+ 16 36.2	0.908	0.987	64.3	20.6	62 E	12* 56*	9 28	17 27.52	-28 24.8	1.242	1.426	43.5	21.1	78 E	15* 72*
9 3	14 17.02	+ 18 43.7	0.882	0.922	68.0	20.5	58 E	10* 52*	10 3	17 41.66	-28 4.8	1.255	1.408	43.7	21.1	76 E	15* 70*
9 8	14 18.06	+ 20 57.0	0.850	0.858	72.3	20.4	54 E	6* 48*	10 8	17 56.35	-27 40.2	1.268	1.391	43.8	21.1	75 E	16* 69*
9 13	14 18.20	+ 23 15.4	0.811	0.794	77.6	20.4	50 E	3* 44*	10 13	18 11.54	-27 10.6	1.281	1.375	44.0	21.1	73 E	16* 67*
9 18	14 16.64	+ 25 36.5	0.768	0.733	84.0	20.3	47 E	— 39*	10 18	18 27.16	-26 35.3	1.293	1.361	44.0	21.1	72 E	17* 65*
9 23	14 12.18	+ 27 55.1	0.719	0.676	92.0	20.3	42 E	— 34*	10 23	18 43.15	-25 53.8	1.306	1.347	44.0	21.1	70 E	18* 64*
9 25	14 9.25	+ 28 47.4	0.698	0.655	95.7	20.3	40 E	— 32*	10 28	18 59.44	-25 5.8	1.318	1.336	44.0	21.1	69 E	19* 62*
9 27	14 5.47	+ 29 36.3	0.677	0.634	99.6	20.4	39 E	— 29*	11 2	19 15.99	-24 11.1	1.330	1.326	43.9	21.1	68 E	20* 61*
9 29	14 0.74	+ 30 20.3	0.656	0.616	103.9	20.5	37 E	— 27*	11 7	19 32.73	-23 9.5	1.343	1.317	43.7	21.1	67 E	21* 59*
10 1	13 54.94	+ 30 57.5	0.635	0.599	108.5	20.6	35 E	— 24*	11 12	19 49.60	-22 1.0	1.357	1.310	43.5	21.1	66 E	22* 57*
10 3	13 47.99	+ 31 25.5	0.615	0.583	113.2	20.7	32 E	— 21*	11 17	20 6.55	-20 45.7	1.371	1.305	43.3	21.1	65 E	24* 55*
10 5	13 39.85	+ 31 41.6	0.595	0.570	118.2	21.0	30 E	— 17*	11 22	20 23.52	-19 23.9	1.385	1.301	43.0	21.1	64 E	25* 53*
10 7	13 30.56	+ 31 43.0	0.577	0.560	123.1	21.2	28 E	— 14*	11 27	20 40.47	-17 55.8	1.402	1.300	42.6	21.2	63 E	26* 51*
488615 2002 SR									12 2	20 57.36	-16 22.0	1.419	1.300	42.2	21.2	62 E	28* 49*
4 26	16 48.02	+ 1 25.3	0.392	1.331	29.1	21.6	140 W	44 65	12 7	21 14.16	-14 43.0	1.438	1.301	41.8	21.2	62 E	30* 47*
5 1	16 41.04	+ 0 2.6	0.385	1.341	25.6	21.4	145 W	45 64	12 12	21 30.85	-12 59.4	1.458	1.305	41.3	21.2	61 E	31* 45*
5 6	16 32.53	+ 1 13.0	0.380	1.350	22.3	21.3	149 W	46 63	12 17	21 47.40	-11 11.9	1.480	1.310	40.7	21.2	60 E	33* 43*
5 11	16 22.81	+ 2 18.2	0.379	1.359	19.5	21.2	153 W	47 62	12 22	22 2.80	-9 21.3	1.503	1.317	40.1	21.3	60 E	34* 41*
5 16	16 12.33	+ 3 9.7	0.381	1.367	17.8	21.2	156 W	48 61	1 1	22 36.11	-5 33.8	1.557	1.336	38.8	21.3	58 E	36* 39*
5 21	16 1.65	+ 3 45.2	0.387	1.375	17.4	21.2	156 W	49 60	1 6	22 52.03	-3 38.3	1.586	1.347	38.1	21.4	58 E	39* 35*
5 26	15 51.28	+ 4 3.6	0.397	1.382	18.5	21.3	154 E	49 60	1 11	23 7.79	-1 42.7	1.618	1.360	37.3	21.4	57 E	40* 33*
5 31	15 41.68	+ 4 5.1	0.410	1.388	20.5	21.5	151 E	49 60	1 16	23 23.40	+ 0 12.3	1.652	1.375	36.5	21.5	56 E	41* 31*
6 5	15 33.20	+ 3 50.8	0.426	1.393	23.1	21.7	147 E	49 60	485823 2012 DF₆₁								
6 10	15 26.11	+ 3 22.4	0.446	1.398	25.9	21.9	143 E	48 61	4 26	16 58.65	-29 42.8	0.799	1.690	23.2	22.4	139 W	15 86
6 15	15 20.57	+ 2 42.1	0.468	1.402	28.7	22.0	139 E	48 61	5 1	16 51.86	-30 10.9	0.755	1.681	20.3	22.1	145 W	15 86
6 20	15 16.61	+ 1 52.2	0.493	1.405	31.3	22.2	134 E	47 62	5 6	16 43.01	-30 35.7	0.715	1.670	17.0	21.9	151 W	14 85
395339 2011 QS₃₃									5 11	16 32.11	-30 54.9	0.679	1.658	13.5	21.6	157 W	14 85
4 26	16 50.91	+ 18 10.8	1.373	2.253	16.0	21.4	142 W	27 82	5 16	16 19.27	-31 5.8	0.650	1.645	9.9	21.4	164 W	14 85
5 1	16 46.29	+ 17 44.6	1.276	2.221	12.1	21.1	153 W	27 82	5 21	16 4.85	-31 6.0	0.626	1.630	7.1	21.2	169 W	14 85
5 6	16 38.58	+ 17 14.8	1.199	2.188	7.4	20.7	164 W	28 81	5 26	15 49.36	-30 53.8	0.608	1.614	6.8	21.1	169 W	14 85
5 26	16 28.55	+ 16 43.4	1.145	2.155	2.8	20.4	174 W	28 81	5 31	15 33.44	-30 28.4	0.597	1.597	9.8	21.1	164 E	15 86
5 31	16 23.04	+ 16 28.1	1.128	2.139	2.7	20.3	174 E	29 80	6 5	15 17.80	-29 50.9	0.592	1.579	14.1	21.3	158 E	15 86
6 5	16 17.44	+ 16 13.7	1.116	2.122	4.9	20.4	170 E	29 80	6 10	15 3.12	-29 3.8	0.593	1.559	18.8	21.4	150 E	16 87
6 10	16 11.95	+ 16 0.8	1.111	2.106	7.6	20.5	164 E	29 80	6 15	14 49.97	-28 10.8	0.599	1.538	23.4	21.5	143 E	17 88
6 15	16 6.78	+ 15 49.8	1.111	2.089	10.3	20.6	158 E	29 80	6 20	14 38.70	-27 15.9	0.610	1.515	27.8	21.7	136 E	18 89
6 20	16 2.11	+ 15 41.5	1.117	2.073	13.0	20.7	153 E	29 80	487740 2015 RX₁₀₇								
6 25	15 58.10	+ 15 36.0	1.128	2.056	15.6	20.8	147 E	29 80	4 26	16 59.19	-30 54.8	1.152	2.016	19.4	21.2	138 W	14 85
6 30	15 54.85	+ 15 33.9	1.144	2.040	18.1	20.9	141 E	29 80	5 6	16 56.04	-31 53.6	1.057	1.986	15.7	20.9	148 W	13 84
7 5	15 52.45	+ 15 35.2	1.164	2.024	20.3	21.0	136 E	29 80	5 16	16 48.78	-32 44.5	0.981	1.955	11.3	20.5	158 W	12 83
7 10	15 50.97	+ 15 3															

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°		
487740 2015 RX₁₀₇ (continuation)									371522 2006 UG₁₈₅										
8 4	16 6.08	-31 11.4	1.055	1.732	32.5	21.1	114 E	13*	85	4 26	17 19.29	-2 35.2	4.675	5.410	7.8	21.5	133 W	42	67
8 9	16 11.70	-31 3.7	1.085	1.720	33.6	21.2	110 E	13*	85	5 6	17 16.15	-2 14.3	4.582	5.411	6.6	21.4	142 W	43	66
8 14	16 18.29	-30 57.4	1.116	1.709	34.6	21.2	107 E	13*	85	5 16	17 12.07	-1 58.2	4.512	5.411	5.4	21.3	150 W	43	66
8 19	16 25.78	-30 52.1	1.147	1.698	35.4	21.3	104 E	13*	85	5 26	17 7.29	-1 48.3	4.468	5.411	4.3	21.2	156 W	43	66
8 24	16 34.09	-30 47.3	1.179	1.688	36.1	21.4	101 E	13*	85	6 5	17 2.11	-1 45.4	4.452	5.411	3.8	21.2	159 W	43	66
8 29	16 43.15	-30 42.5	1.212	1.678	36.6	21.4	98 E	13*	85	6 15	16 56.86	-1 50.2	4.463	5.412	4.2	21.2	157 E	43	66
9 3	16 52.92	-30 37.2	1.245	1.669	37.0	21.5	95 E	13*	85*	6 25	16 51.88	-2 2.9	4.502	5.411	5.3	21.3	151 E	43	66
483408 1999 TZ₄									282044 1998 SF₁₀₇										
4 26	17 7.30	-64 13.9	0.991	1.739	29.7	21.9	121 W	-	52	4 26	17 20.00	-13 51.9	1.657	2.471	16.8	21.5	135 W	31	78
4 28	17 4.60	-65 16.5	0.985	1.740	29.4	21.9	122 W	-	51	5 6	17 16.38	-12 57.6	1.550	2.445	13.7	21.2	145 W	32	77
4 30	17 1.29	-66 17.8	0.979	1.742	29.2	21.8	123 W	-	50	5 16	17 9.84	-12 2.2	1.464	2.419	10.1	20.9	155 W	33	76
5 2	16 57.32	-67 17.5	0.973	1.743	28.9	21.8	123 W	-	49	5 26	17 0.89	-11 9.2	1.400	2.392	6.5	20.6	164 W	34	75
5 4	16 52.64	-68 15.4	0.969	1.744	28.7	21.8	124 W	-	48	6 5	16 50.42	-10 22.9	1.362	2.364	5.2	20.5	168 E	35	74
5 6	16 47.18	-69 11.0	0.965	1.745	28.5	21.8	124 W	-	47	6 10	16 44.98	-10 3.6	1.353	2.350	6.2	20.5	166 E	35	74
5 8	16 40.89	-70 4.0	0.961	1.746	28.4	21.8	125 W	-	46	6 15	16 39.62	-9 47.7	1.350	2.336	8.0	20.6	161 E	35	74
5 10	16 33.73	-70 54.0	0.958	1.747	28.2	21.8	125 W	-	45	6 20	16 34.52	-9 35.4	1.354	2.321	10.0	20.6	157 E	35	74
5 12	16 25.67	-71 40.6	0.956	1.747	28.1	21.8	125 W	-	44	6 25	16 29.82	-9 27.1	1.363	2.307	12.2	20.7	151 E	36	73
5 14	16 16.70	-72 23.3	0.955	1.748	28.0	21.8	126 W	-	44	6 30	16 25.65	-9 22.8	1.377	2.292	14.3	20.8	146 E	36	73
5 16	16 6.85	-73 1.9	0.954	1.749	28.0	21.8	126 W	-	43	7 5	16 22.11	-9 22.8	1.397	2.277	16.4	20.9	141 E	36	73
5 18	15 56.17	-73 35.8	0.953	1.750	28.0	21.8	126 W	-	42	7 10	16 19.29	-9 26.8	1.421	2.262	18.3	21.0	136 E	36	73
5 20	15 44.74	-74 4.9	0.954	1.750	28.0	21.8	126 E	-	42	7 15	16 17.25	-9 34.7	1.449	2.247	20.1	21.1	131 E	35	74
5 22	15 32.71	-74 28.9	0.954	1.751	28.0	21.8	126 E	-	42	7 20	16 16.02	-9 46.2	1.480	2.232	21.7	21.1	126 E	35	74
5 24	15 20.24	-74 47.5	0.956	1.751	28.0	21.8	126 E	-	41	7 25	16 15.61	-10 1.0	1.514	2.217	23.1	21.2	121 E	35	74
5 26	15 7.53	-75 0.9	0.958	1.751	28.1	21.8	125 E	-	41	8 3	16 16.00	-10 18.8	1.550	2.202	24.3	21.3	117 E	35	74
5 27	15 1.16	-75 5.6	0.959	1.752	28.2	21.8	125 E	-	41	8 4	16 17.19	-10 39.0	1.589	2.186	25.4	21.4	112 E	34	75
5 28	14 54.81	-75 9.0	0.960	1.752	28.2	21.8	125 E	-	41	8 9	16 19.16	-11 1.5	1.629	2.171	26.3	21.4	108 E	33	75
5 29	14 48.51	-75 11.1	0.962	1.752	28.3	21.8	125 E	-	41	8 14	16 21.88	-11 25.7	1.669	2.155	27.1	21.5	104 E	32	75
5 30	14 42.28	-75 11.9	0.963	1.752	28.4	21.8	125 E	-	41	523660 2012 KY₄₁									
5 31	14 36.17	-75 11.6	0.965	1.752	28.4	21.8	125 E	-	41	4 26	17 30.37	-9 8.1	1.291	2.099	21.0	21.3	132 W	36	73
6 1	14 30.18	-75 10.1	0.967	1.752	28.5	21.8	124 E	-	41	5 6	17 28.42	-6 2.7	1.163	2.043	18.4	20.9	140 W	39	70
6 2	14 24.34	-75 7.5	0.969	1.752	28.6	21.8	124 E	-	41	5 16	17 22.68	-2 32.3	1.054	1.986	15.6	20.6	148 W	42	67
6 3	14 18.68	-75 3.8	0.971	1.752	28.7	21.8	124 E	-	41	5 26	17 13.20	+1 14.6	0.968	1.927	13.8	20.2	153 W	46	63
6 4	14 13.21	-74 59.2	0.973	1.753	28.8	21.8	124 E	-	41	5 31	17 7.23	+3 9.8	0.935	1.897	13.8	20.1	153 W	48	61
6 5	14 7.94	-74 53.5	0.975	1.753	28.9	21.8	123 E	-	41	6 5	17 0.59	+5 2.9	0.907	1.866	14.6	20.1	152 W	50	59
6 7	13 58.06	-74 39.7	0.980	1.753	29.1	21.8	123 E	-	41	6 10	16 53.49	+6 51.2	0.885	1.835	16.2	20.0	150 E	52	57
6 9	13 49.13	-74 22.9	0.985	1.753	29.3	21.9	122 E	-	42	6 15	16 46.14	+8 31.9	0.870	1.804	18.3	20.0	146 E	54	55
6 11	13 41.18	-74 3.5	0.991	1.753	29.5	21.9	122 E	-	42	6 20	16 38.82	+10 2.8	0.859	1.773	20.8	20.0	142 E	55	54
6 13	13 34.20	-73 42.0	0.997	1.752	29.8	21.9	121 E	-	42	6 25	16 31.77	+11 22.1	0.854	1.742	23.4	20.1	137 E	56	53
6 15	13 28.19	-73 19.0	1.004	1.752	30.0	21.9	120 E	-	43	6 30	16 25.23	+12 28.8	0.852	1.710	26.1	20.1	132 E	57	52
6 17	13 23.10	-72 54.7	1.010	1.752	30.3	21.9	120 E	-	43	7 5	16 19.41	+13 22.4	0.854	1.678	28.8	20.1	127 E	58	51
322913 2002 CM₁									7 15	16 10.57	+14 31.3	0.865	1.613	33.9	20.2	118 E	60	49	
4 26	17 11.59	-76 27.0	2.555	3.088	17.5	22.1	113 W	-	40	7 25	16 6.17	+14 55.5	0.881	1.549	38.2	20.3	109 E	60	49
4 28	17 7.51	-76 43.1	2.536	3.082	17.4	22.1	114 W	-	39	8 4	16 6.43	+14 44.5	0.897	1.485	42.0	20.4	102 E	59	49
4 30	17 2.92	-76 58.1	2.517	3.077	17.3	22.1	115 W	-	39	8 9	16 8.30	+14 28.5	0.904	1.453	43.7	20.4	98 E	58	50
5 2	16 57.80	-77 12.0	2.499	3.072	17.2	22.0	116 W	-	39	8 14	16 11.30	+14 6.7	0.909	1.421	45.2	20.4	95 E	57	50
5 4	16 52.17	-77 24.5	2.482	3.066	17.1	22.0	116 W	-	39	8 19	16 15.41	+13 40.2	0.912	1.390	46.7	20.4	92 E	56	50
5 6	16 46.03	-77 35.6	2.465	3.061	17.0	22.0	117 W	-	38	8 24	16 20.57	+13 9.6	0.914	1.359	48.1	20.4	90 E	55	51
5 8	16 39.40	-77 45.0	2.448	3.055	17.0	22.0	118 W	-	38	8 29	16 26.76	+12 35.3	0.914	1.329	49.4	20.4	87 E	54	51
5 10	16 32.33	-77 52.7	2.433	3.050	16.9	21.9	119 W	-	38	9 3	16 33.98	+11 57.9	0.911	1.300	50.6	20.3	85 E	53	52
5 12	16 24.85	-77 58.5	2.417	3.044	16.8	21.9	119 W	-	38	9 13	16 51.47	+10 34.6	0.899	1.245	53.1	20.3	81 E	51	51
5 14	16 17.04	-78 2.3	2.402	3.039	16.7	21.9	120 W	-	38	9 23	17 13.04	+9 1.4	0.878	1.194	55.4	20.2	78 E	50	51
5 16	16 8.95	-78 3.9	2.388	3.033	16.6	21.9	121 W	-	38	10 3	17 38.84	+7 18.2	0.849	1.151	57.7	20.1	76 E	49	50
5 17	16 4.83	-78 3.9	2.381	3.030	16.6	21.9	121 W	-	38	10 13	18 9.21	+5 24.3	0.815	1.115	59.9	20.0	75 E	48	50
5 18	16 0.68	-78 3.3	2.375	3.027	16.6	21.9	121 W	-	38	10 23	18 44.51	+3 19.3	0.779	1.090	61.7	19.9	75 E	47	50
5 19	15 56.50	-78 2.1	2.368	3.024	16.5	21.9	122 W	-	38	11 2	19 25.04	+1 3.7	0.746	1.076	63.0	19.9	75 E	45	50
5 20	15 52.31	-78 0.4	2.362	3.021	16.5	21.9	122 W	-	38	11 7	19 47.31	-0 6.7	0.732	1.073	63.3	19.8	75 E	44	51
5 21	15 48.12	-77 58.0	2.355	3.018	16.5	21.8	122 E	-	38	11 12	20 10.82	-1 17.2	0.721	1.073	63.4	19.8	76 E	43	52
5 22	15 43.94	-77 55.1	2.349	3.015	16.5	21.8	122 E	-	38	11 17	20 35.46	-2 26.3	0.713	1.077	63.3	19.8	77 E	43	53
5 23	15 39.78	-77 51.6	2.343	3.012	16.4	21.8	123 E	-	38	11 22	21 1.03	-3 32.2	0.710	1.083	62.9	19.8	77 E	41	54
5 24	15 35.66	-77 47.4	2.338	3.009	16.4	21.8	123 E	-	38	11 27	21 27.26	-4 32.6	0.711	1.092	62.2	19.8	78 E	40	55
5 25	15 31.58	-77 42.7	2.332	3.006	16.4	21.8	123 E	-	38	12 2	21 53.85	-5 25.6	0.718	1.104	61.3	19.8	79 E	40	56
5 26	15 27.55	-77 37.4	2.327	3.003	16.4	21.8	123 E	-	38	12 7	22 20.49	-6 9.1	0.730	1.119	60.1	19.8	80 E	39	57
5 28	15 19.69	-77 25.1	2.316	2.997	16.4	21.8	124 E	-	39	12 12	22 46.82	-6 42.0	0.7						

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
310535 2001 BJ ₄₃ (continuation)									537721 2015 TO ₂₃₄ (continuation)								
6 5	16 50.25	-30 51.1	1.412	2.420	3.5	20.5	172 E	14 85	7 20	16 40.77	-32 48.7	0.896	1.767	24.0	20.2	135 E	12 83
6 15	16 37.14	-29 49.2	1.424	2.422	5.9	20.7	166 E	15 86	7 25	16 40.49	-32 8.0	0.913	1.750	26.3	20.3	130 E	13 84
6 25	16 25.83	-28 39.1	1.463	2.423	10.2	20.9	155 E	16 87	7 30	16 41.48	-31 28.8	0.933	1.735	28.3	20.4	126 E	14 85
7 5	16 17.39	-27 28.6	1.526	2.423	14.3	21.1	144 E	18 89	8 4	16 43.71	-30 51.5	0.955	1.719	30.2	20.5	122 E	14* 85
7 15	16 12.33	-26 24.0	1.608	2.421	17.8	21.4	133 E	19 90	8 9	16 47.13	-30 16.4	0.979	1.704	31.8	20.6	118 E	15* 86
498548 2008 GH ₁₁₀									537721 2015 TO ₂₃₄ (continuation)								
4 26	17 40.53	+ 9 20.0	0.692	1.505	33.7	21.5	124 W	54 55	8 14	16 51.67	-29 43.4	1.004	1.689	33.3	20.6	114 E	15* 86
5 1	17 36.58	+12 44.8	0.684	1.519	32.1	21.4	127 W	58 51	8 19	16 57.26	-29 12.6	1.030	1.675	34.6	20.7	110 E	16* 87
5 6	17 31.19	+16 2.2	0.681	1.531	30.8	21.4	129 W	61 48	8 24	17 3.81	-28 43.4	1.058	1.661	35.6	20.8	107 E	16* 87
5 11	17 24.46	+19 7.3	0.682	1.543	29.8	21.4	131 W	64 45	8 29	17 11.25	-28 15.5	1.086	1.648	36.6	20.8	104 E	16* 88
5 16	17 16.56	+21 55.2	0.687	1.554	29.1	21.4	132 W	67 42	9 3	17 19.49	-27 48.5	1.115	1.635	37.3	20.9	101 E	17* 88
5 21	17 7.76	+24 21.6	0.697	1.565	28.9	21.5	132 W	69 40	9 8	17 28.49	-27 21.7	1.144	1.623	38.0	21.0	98 E	17* 89
5 26	16 58.38	+26 23.8	0.711	1.575	29.0	21.5	131 W	71 38	9 13	17 38.18	-26 54.7	1.174	1.611	38.5	21.0	95 E	18* 89*
5 31	16 48.77	+28 0.3	0.729	1.584	29.4	21.6	130 W	73 36	9 18	17 48.49	-26 27.0	1.204	1.600	38.9	21.1	92 E	18* 86*
6 5	16 39.28	+29 10.9	0.750	1.592	30.1	21.7	128 E	74 35	9 23	17 59.35	-25 58.0	1.234	1.590	39.1	21.1	90 E	19* 84*
6 10	16 30.26	+29 56.5	0.774	1.599	30.9	21.8	126 E	75 34	9 28	18 10.71	-25 27.4	1.264	1.580	39.3	21.2	88 E	15* 82*
6 15	16 22.03	+30 18.8	0.801	1.606	31.7	21.9	124 E	75 34	10 3	18 22.50	-24 54.6	1.294	1.571	39.4	21.2	85 E	20* 79*
6 20	16 14.81	+30 20.7	0.831	1.612	32.6	22.0	121 E	75 34	10 8	18 34.70	-24 19.2	1.325	1.563	39.4	21.2	83 E	20* 77*
6 25	16 8.75	+30 4.9	0.862	1.617	33.5	22.1	119 E	75 34	10 13	18 47.24	-23 41.0	1.355	1.556	39.3	21.3	81 E	21* 75*
6 30	16 3.93	+29 34.3	0.894	1.621	34.3	22.2	116 E	75 34	10 18	19 0.07	-22 59.6	1.386	1.549	39.2	21.3	79 E	22* 72*
324387 2006 RR ₉₆									537721 2015 TO ₂₃₄ (continuation)								
4 26	17 40.98	-30 58.6	2.230	2.972	15.2	21.4	129 W	14 85	10 23	19 13.14	-22 14.8	1.417	1.543	39.0	21.4	77 E	23* 70*
5 6	17 35.43	-31 22.7	2.165	3.008	12.4	21.3	140 W	14 85	10 28	19 26.41	-21 26.5	1.448	1.538	38.7	21.4	76 E	23* 68*
5 16	17 27.31	-31 40.4	2.120	3.044	9.3	21.2	151 W	13 84	11 2	19 39.84	-20 34.5	1.480	1.534	38.4	21.4	74 E	24* 65*
5 26	17 17.26	-31 49.1	2.100	3.078	5.9	21.0	162 W	13 84	11 7	19 53.39	-19 38.8	1.511	1.531	38.0	21.4	72 E	25* 63*
6 5	17 6.19	-31 47.1	2.107	3.112	3.2	20.9	170 W	13 84	11 12	20 7.04	-18 39.3	1.544	1.529	37.6	21.5	70 E	26* 60*
6 15	16 55.16	-31 34.4	2.143	3.144	3.8	21.0	168 E	13 84	523603 2004 QJ ₇								
6 25	16 45.22	-31 13.3	2.208	3.176	6.7	21.2	159 E	14 85	4 26	18 2.13	-39 0.3	1.076	1.837	27.1	21.3	124 W	6 77
7 5	16 37.14	-30 47.2	2.298	3.207	9.6	21.5	148 E	14 85	5 1	17 59.79	-40 11.5	1.043	1.847	25.2	21.2	129 W	5 76
359003 2008 UY ₄									5 6	17 55.82	-41 23.0	1.013	1.857	23.3	21.1	133 W	4 75
4 26	17 41.49	- 5 21.9	2.191	2.922	15.7	21.5	128 W	40 69	5 11	17 50.14	-42 32.8	0.987	1.866	21.1	21.0	138 W	2 73
5 6	17 36.70	- 3 47.2	2.121	2.945	13.4	21.4	138 W	41 68	5 16	17 42.71	-43 38.9	0.965	1.874	18.9	20.9	143 W	1 72
5 16	17 29.70	- 2 17.9	2.072	2.968	10.8	21.2	146 W	43 66	5 21	17 33.65	-44 38.5	0.947	1.881	16.8	20.7	148 W	- 71
5 26	17 21.02	- 0 58.9	2.048	2.989	8.7	21.1	154 W	44 65	5 26	17 23.14	-45 28.9	0.935	1.888	14.9	20.7	151 W	- 71
6 5	17 11.38	+ 0 5.1	2.050	3.010	7.6	21.1	157 W	45 64	5 31	17 11.51	-46 7.8	0.929	1.894	13.4	20.6	154 W	- 70
6 15	17 1.65	+ 0 50.6	2.080	3.030	8.2	21.2	155 E	46 63	6 5	16 59.20	-46 33.2	0.928	1.900	12.6	20.6	156 W	- 69
6 25	16 52.68	+ 1 16.1	2.137	3.048	10.1	21.3	148 E	46 63	6 10	16 46.73	-46 44.4	0.933	1.905	12.7	20.6	156 E	- 69
7 5	16 45.18	+ 1 22.1	2.217	3.066	12.3	21.5	140 E	46 63	6 15	16 34.67	-46 41.5	0.944	1.909	13.6	20.7	154 E	- 69
490718 2010 RL ₈₂									6 20	16 23.51	-46 26.3	0.961	1.912	15.1	20.8	151 E	- 70
4 26	17 44.85	+15 0.4	0.913	1.667	31.3	21.5	121 W	60 49	6 25	16 13.66	-46 0.9	0.983	1.915	16.9	20.9	147 E	- 70
5 1	17 44.50	+16 17.7	0.888	1.669	30.3	21.4	123 W	61 48	6 30	16 5.35	-45 28.0	1.009	1.918	18.9	21.0	142 E	- 71
5 6	17 42.99	+17 29.7	0.865	1.670	29.3	21.3	126 W	62 47	7 5	15 58.71	-44 50.3	1.040	1.919	20.8	21.1	138 E	- 71
5 11	17 40.31	+18 34.3	0.844	1.671	28.3	21.2	128 W	64 45	7 10	15 53.78	-44 10.0	1.075	1.920	22.7	21.3	133 E	1 72
5 16	17 36.51	+19 29.2	0.826	1.672	27.3	21.1	131 W	64 45	7 15	15 50.53	-43 29.3	1.114	1.920	24.4	21.4	129 E	2* 73
5 21	17 31.68	+20 12.1	0.811	1.672	26.4	21.1	133 W	65 44	445269 2009 SU ₃₂₅								
5 26	17 25.97	+20 41.0	0.799	1.672	25.6	21.0	134 W	66 43	4 26	18 25.68	-22 7.5	0.970	1.709	30.7	21.3	120 W	23 86
5 31	17 19.56	+20 54.1	0.790	1.672	25.1	21.0	136 W	66 43	5 6	18 38.82	-22 45.4	0.863	1.673	29.0	21.0	126 W	22 87
6 5	17 12.67	+20 50.1	0.784	1.672	24.8	20.9	136 W	66 43	5 16	18 49.66	-23 35.4	0.767	1.638	26.5	20.6	134 W	21 88
6 10	17 5.58	+20 28.1	0.782	1.671	24.7	20.9	137 E	65 44	5 26	18 57.71	-24 42.1	0.682	1.604	23.1	20.2	142 W	20 89
6 15	16 58.56	+19 48.2	0.783	1.670	24.9	20.9	136 E	65 44	6 5	19 2.47	-26 8.9	0.610	1.573	18.8	19.8	150 W	19 90
6 20	16 51.92	+18 51.0	0.787	1.669	25.5	21.0	135 E	64 45	6 15	19 3.54	-27 56.1	0.552	1.544	13.6	19.3	159 W	17 88
6 25	16 45.88	+17 38.2	0.796	1.668	26.2	21.0	134 E	63 46	6 20	19 2.74	-28 55.8	0.528	1.530	10.8	19.1	164 W	16 87
6 30	16 40.65	+16 11.7	0.807	1.666	27.1	21.1	132 E	61 48	6 25	19 1.15	-29 57.8	0.509	1.518	8.2	18.9	168 W	15 86
7 5	16 36.35	+14 33.6	0.822	1.664	28.2	21.1	129 E	60 49	6 30	18 58.92	-31 0.4	0.494	1.506	6.3	18.7	171 W	14 85
7 10	16 33.10	+12 46.4	0.840	1.662	29.3	21.2	127 E	58 51	7 5	18 56.24	-32 1.6	0.482	1.495	6.3	18.7	171 W	13 84
7 15	16 30.95	+10 52.3	0.861	1.660	30.5	21.3	124 E	56 53	7 10	18 53.37	-32 59.3	0.475	1.484	8.1	18.7	168 E	12 83
7 20	16 29.92	+ 8 53.6	0.885	1.657	31.7	21.4	121 E	54 55	7 15	18 50.64	-33 51.6	0.471	1.475	10.9	18.8	164 E	11 82
7 25	16 29.98	+ 6 52.3	0.911	1.654	32.8	21.5	118 E	52 57	7 20	18 48.39	-34 36.9	0.471	1.467	14.1	18.9	159 E	10 81
537721 2015 TO ₂₃₄									7 25	18 46.91	-35 14.3	0.475	1.460	17.2	19.0	155 E	10 81
4 26	17 45.19	-34 43.2	1.285	2.062	22.6	21.3	128 W	10 81	7 30	18 46.44	-35 43.2	0.482	1.453	20.3	19.1	150 E	9 80
5 1	17 46.44	-35 6.8	1.226	2.045	21.4	21.1	132 W	10 81	8 4	18 47.16	-36 3.5	0.492	1.448	23.1	19.3	146 E	9 80
5 6	17 46.72	-35 29.8	1.171	2.027	19.9	21.0	137 W	10 81	8 9	18 49.19	-36 15.2	0.504	1.444	25.7	19.4	142 E	9 80
5 11	17 45.95	-35 51.6	1.119	2.009	18.3	20.8	141 W	9 80	8 14	18 52.61	-36 18.7	0.519	1.441	28.1	19.5	138 E	9 80
5 16	17 44.09	-36 11.6	1.071	1.992	16.4	20.6	146 W	9 80	8 19	18 57.41	-36 14.4	0.537	1.439	30.2	19.6	134 E	9 80
5 21	17 41.16	-36 28.8	1.027	1.974	14.4	20.4	151 W	9 80	8 24	19 3.49	-36 2.6	0.556	1.438	32.1	19.8	131 E	9 80
5 26	17 37.17	-36 42.4	0.988	1.956	12.4	20.3	156 W	8 79	8 29	19 10.74	-35 43.6	0.578	1.439	33.7	19.		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
530535 2011 OR₁₈										364877 2008 EM₉ (continuation)									
4 26	18 37.45	-15 42.6	1.297	1.963	27.3	21.4	116 W	29	80	6 25	17 13.15	-9 21.3	0.736	1.726	11.8	18.5	160 E	36	73
5 6	18 45.45	-14 8.8	1.178	1.931	25.7	21.1	124 W	31	78	7 5	16 36.84	-7 12.8	0.671	1.605	22.4	18.5	143 E	38	71
5 16	18 50.52	-12 26.5	1.070	1.899	23.4	20.7	132 W	33	76	7 15	15 59.25	-5 5.5	0.637	1.476	34.4	18.6	125 E	40	69
5 26	18 52.34	-10 38.9	0.975	1.867	20.4	20.4	140 W	34	75	7 20	15 41.33	-4 7.4	0.628	1.408	40.5	18.6	116 E	41*	68
5 31	18 51.96	-9 44.5	0.933	1.852	18.7	20.2	144 W	35	74	7 25	15 24.47	-3 14.5	0.624	1.338	46.6	18.7	107 E	40*	67
6 5	18 50.71	-8 50.7	0.895	1.837	16.8	20.1	148 W	36	73	7 30	15 8.80	-2 27.1	0.622	1.266	52.5	18.7	98 E	39*	66
6 10	18 48.62	-7 58.4	0.861	1.823	14.9	19.9	152 W	37	72	8 4	14 54.27	-1 44.9	0.621	1.191	58.5	18.7	90 E	37*	66
6 15	18 45.75	-7 8.9	0.832	1.808	13.1	19.8	156 W	38	71	8 9	14 40.68	-1 6.8	0.620	1.113	64.5	18.8	82 E	35*	64*
6 20	18 42.23	-6 23.0	0.807	1.794	11.5	19.6	159 W	39	70	8 14	14 27.64	-0 31.0	0.618	1.031	70.8	18.8	74 E	32*	60*
6 25	18 38.21	-5 42.1	0.787	1.780	10.5	19.5	161 W	39	70	8 19	14 14.58	+0 4.8	0.613	0.947	77.7	18.8	66 E	29*	54*
6 30	18 33.85	-5 7.0	0.772	1.767	10.3	19.4	162 E	40	69	8 24	14 0.69	+0 43.5	0.606	0.859	85.4	18.9	58 E	26*	48*
7 5	18 29.36	-4 38.8	0.762	1.754	11.0	19.4	161 E	40	69	8 29	13 44.93	+1 28.0	0.597	0.767	94.7	19.0	49 E	22*	40*
7 15	18 20.88	-4 5.1	0.756	1.730	14.6	19.5	155 E	41	68	9 3	13 25.94	+2 21.3	0.588	0.672	106.3	19.2	40 E	18*	31*
7 25	18 14.57	-4 2.6	0.767	1.708	19.3	19.7	146 E	41	68	9 8	13 2.11	+3 24.8	0.583	0.573	121.3	19.9	29 E	13*	21*
8 4	18 11.67	-4 27.2	0.792	1.687	23.8	19.8	138 E	41	68	430305 2013 WX₁₀₆									
8 9	18 11.73	-4 47.8	0.810	1.678	25.9	19.9	134 E	40	69	4 26	18 43.93	-16 8.8	1.874	2.472	21.7	21.4	115 W	29*	80
8 14	18 12.88	-5 12.5	0.830	1.670	27.8	20.0	130 E	40	69	5 6	18 47.93	-15 52.0	1.721	2.428	20.3	21.1	124 W	29	80
8 19	18 15.10	-5 40.3	0.852	1.662	29.6	20.1	126 E	39	70	5 16	18 49.31	-15 39.9	1.578	2.383	18.2	20.8	133 W	29	80
8 24	18 18.37	-6 10.2	0.877	1.655	31.1	20.2	122 E	39	70	5 26	18 47.80	-15 34.9	1.451	2.337	15.3	20.5	142 W	29	80
8 29	18 22.65	-6 41.1	0.903	1.648	32.4	20.3	119 E	38	71	6 5	18 43.27	-15 39.2	1.341	2.291	11.7	20.2	153 W	29	80
9 3	18 27.88	-7 12.4	0.931	1.642	33.6	20.4	116 E	38	71	6 15	18 35.84	-15 54.1	1.253	2.245	7.4	19.8	164 W	29	80
9 13	18 41.02	-8 12.7	0.991	1.633	35.5	20.6	110 E	37	72	6 25	18 26.13	-16 20.0	1.187	2.199	3.5	19.4	172 W	29	80
9 23	18 57.28	-9 5.3	1.057	1.626	36.7	20.8	104 E	36	73	6 30	18 20.74	-16 36.7	1.164	2.176	3.5	19.4	173 E	28	81
10 3	19 16.11	-9 45.9	1.127	1.623	37.5	20.9	99 E	35	74	7 5	18 15.22	-16 55.8	1.146	2.153	5.3	19.4	169 E	28	81
10 13	19 37.05	-10 11.4	1.201	1.623	37.8	21.1	95 E	35	74*	7 10	18 9.75	-17 16.8	1.135	2.130	7.8	19.5	164 E	28	81
10 23	19 59.62	-10 19.4	1.280	1.626	37.7	21.2	90 E	35	72*	7 15	18 4.54	-17 39.5	1.130	2.107	10.5	19.5	158 E	27	82
11 2	20 23.36	-10 9.2	1.362	1.632	37.4	21.3	86 E	35	68*	7 20	17 59.79	-18 3.6	1.130	2.083	13.1	19.6	152 E	27	82
11 12	20 47.92	-9 40.3	1.449	1.641	36.7	21.5	82 E	35	64*	7 25	17 55.66	-18 28.9	1.135	2.061	15.7	19.7	147 E	27	82
183548 2003 HU₄₂										7 30	17 52.28	-18 54.9	1.145	2.038	18.2	19.8	141 E	26	83
4 26	18 38.27	-11 27.3	1.618	2.244	23.9	21.3	116 W	34	75	8 4	17 49.77	-19 21.6	1.159	2.015	20.5	19.9	136 E	26	83
5 6	18 40.44	-10 6.5	1.486	2.216	22.1	21.1	124 W	35	74	8 14	17 47.67	-20 15.7	1.197	1.970	24.6	20.0	126 E	25	84
5 16	18 39.37	-8 43.2	1.365	2.186	19.7	20.8	133 W	36	73	8 24	17 49.67	-21 9.4	1.246	1.926	27.9	20.1	117 E	24	85
5 26	18 34.82	-7 20.8	1.260	2.155	16.6	20.5	143 W	38	71	9 3	17 55.70	-22 0.5	1.301	1.883	30.5	20.3	109 E	23	86
5 31	18 31.23	-6 41.4	1.214	2.139	14.8	20.3	147 W	38	71	9 13	18 5.54	-22 46.8	1.360	1.842	32.4	20.4	101 E	22	87
6 5	18 26.79	-6 4.1	1.173	2.122	13.1	20.1	152 W	39	70	9 23	18 18.87	-23 25.6	1.421	1.802	33.7	20.4	94 E	21*	87*
6 10	18 21.57	-5 29.8	1.137	2.105	11.4	20.0	156 W	40	69	10 3	18 35.29	-23 54.3	1.481	1.764	34.6	20.5	88 E	21*	82*
6 15	18 15.69	-4 59.3	1.107	2.088	10.0	19.9	159 W	40	69	10 13	18 54.46	-24 10.0	1.541	1.728	35.0	20.6	83 E	21*	76*
6 20	18 9.30	-4 33.4	1.083	2.070	9.3	19.8	161 W	40	69	10 23	19 15.98	-24 10.1	1.599	1.695	35.0	20.6	78 E	21*	71*
6 25	18 2.58	-4 12.8	1.065	2.052	9.5	19.7	161 E	41	68	11 2	19 39.46	-23 52.3	1.655	1.665	34.8	20.6	73 E	21*	66*
7 5	17 49.01	-3 49.8	1.046	2.014	12.3	19.8	155 E	41	68	11 12	20 4.55	-23 14.7	1.709	1.638	34.3	20.7	69 E	21*	61*
7 15	17 36.68	-3 52.5	1.050	1.976	16.8	19.9	146 E	41	68	11 22	20 30.87	-22 16.1	1.762	1.615	33.7	20.7	65 E	22*	56*
7 25	17 27.14	-4 19.3	1.073	1.936	21.4	20.0	136 E	41	68	12 2	20 58.05	-20 56.2	1.814	1.596	32.8	20.7	61 E	23*	51*
7 30	17 23.72	-4 40.4	1.090	1.915	23.6	20.1	131 E	40	69	12 12	21 25.80	-19 15.5	1.866	1.582	31.9	20.7	58 E	25*	46*
8 4	17 21.30	-5 5.8	1.110	1.894	25.6	20.2	126 E	40	69	12 22	21 53.83	-17 15.3	1.918	1.571	30.8	20.7	55 E	26*	42*
8 9	17 19.92	-5 34.8	1.133	1.873	27.5	20.3	121 E	39	70	1	1 22 21.92	-14 57.9	1.971	1.566	29.5	20.7	52 E	27*	38*
8 14	17 19.59	-6 6.7	1.157	1.852	29.2	20.3	117 E	39	70	1 11	22 49.92	-12 25.9	2.026	1.565	28.2	20.8	49 E	28*	34*
8 24	17 22.02	-7 16.3	1.211	1.809	32.0	20.5	109 E	38*	71	1 21	23 17.72	-9 42.7	2.083	1.569	26.8	20.8	46 E	28*	30*
9 3	17 28.30	-8 29.6	1.266	1.764	34.1	20.6	101 E	36*	72	270073 2001 PR₄₉									
9 13	17 38.15	-9 42.7	1.322	1.719	35.7	20.6	94 E	35*	74*	4 26	18 52.52	-12 36.1	1.270	1.896	29.4	21.4	112 W	32*	77
9 23	17 51.21	-10 51.8	1.376	1.674	36.8	20.7	88 E	33*	73*	5 6	18 58.23	-10 24.1	1.165	1.884	27.6	21.1	120 W	35	74
10 3	18 7.18	-11 53.8	1.426	1.628	37.5	20.7	82 E	32*	70*	5 16	19 0.41	-8 2.5	1.069	1.871	25.2	20.9	128 W	37	72
10 13	18 25.80	-12 45.8	1.472	1.582	37.9	20.8	77 E	31*	65*	5 26	18 58.71	-5 35.8	0.986	1.857	22.0	20.6	137 W	39	70
10 23	18 46.84	-13 25.1	1.512	1.537	38.1	20.8	72 E	30*	61*	6 5	18 53.01	-3 10.7	0.918	1.842	18.5	20.3	145 W	42	67
11 2	19 10.06	-13 49.1	1.547	1.492	38.1	20.7	68 E	30*	56*	6 10	18 48.71	-2 1.9	0.890	1.835	16.7	20.2	149 W	43	66
11 12	19 35.29	-13 55.7	1.577	1.449	37.9	20.7	64 E	30*	51*	6 15	18 43.57	-0 57.6	0.867	1.827	15.2	20.0	152 W	44	65
11 22	20 2.30	-13 42.8	1.601	1.407	37.6	20.7	60 E	30*	47*	6 20	18 37.75	+0 0.7	0.849	1.819	14.0	19.9	154 W	45	64
12 2	20 30.89	-13 9.1	1.622	1.368	37.3	20.6	57 E	30*	42*	6 25	18 31.44	+0 51.5	0.836	1.810	13.5	19.9	155 W	46	63
12 12	21 0.87	-12 13.6	1.638	1.332	36.9	20.6	54 E	30*	38*	6 30	18 24.86	+1 33.5	0.828	1.802	13.7	19.9	155 E	47	62
12 22	21 32.01	-10 56.2	1.652	1.299	36.5	20.5	52 E	31*	34*	7 5	18 18.25	+2 5.8	0.825	1.793	14.7	19.9	153 E	47	62
1	1 22 4.12	-9 17.9	1.665	1.271	36.1	20.5	50 E	31*	31*	7 15	18 5.98	+2 39.3	0.834	1.776	18.1	20.0	147 E	48	61
1 11	22 37.05	-7 20.2	1.677	1.249	35.6	20.5	48 E	32*	29*	7 25	17 56.46	+2 33.3	0.860	1.758	22.3	20.2	139 E	48	61
1 21	23 10.63	-5 6.1	1.690	1.232	35.1	20.4	46 E	32*	27*	8 4	17 50.81	+1 55.0	0.900	1.739	26.3	20.4	130 E	47	62

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	
270073 2001 PR₄₉ (continuation)									537562 2015 OX₇₇ (continuation)									
10 18	19 9.30	-6 36.2	1.363	1.597	38.3	21.4	84 E	38* 65*	7 10	18 59.98	-16 45.7	0.695	1.708	4.0	18.5	173 E	28	81
10 23	19 19.91	-6 53.5	1.395	1.588	38.3	21.5	81 E	38* 63*	7 15	18 53.13	-15 13.1	0.685	1.692	7.3	18.7	168 E	30	79
10 28	19 30.94	-7 6.6	1.427	1.579	38.2	21.5	79 E	38* 61*	7 20	18 46.62	-13 41.2	0.681	1.677	10.9	18.8	162 E	31	78
291542 2006 EK₄₇									496114 2009 WF₁₈₅									
4 26	19 6.87	-52 35.1	1.865	2.412	23.0	21.4	111 W	— 63	4 26	19 16.03	-25 8.9	2.293	2.781	20.1	21.3	109 W	19*	89
5 1	19 11.14	-53 27.6	1.802	2.396	22.6	21.3	114 W	— 63	5 6	19 18.28	-24 3.7	2.127	2.743	19.0	21.1	118 W	21*	88
5 6	19 14.53	-54 21.8	1.740	2.380	22.1	21.2	117 W	— 62	5 16	19 17.79	-22 52.8	1.971	2.705	17.3	20.8	127 W	22	87
5 11	19 16.92	-55 17.5	1.682	2.363	21.6	21.0	121 W	— 61	5 26	19 14.30	-21 35.3	1.831	2.666	14.9	20.6	137 W	23	86
5 16	19 18.18	-56 14.1	1.626	2.346	20.9	20.9	124 W	— 60	6 5	19 7.77	-20 10.5	1.709	2.627	11.7	20.3	148 W	25	84
5 21	19 18.18	-57 10.9	1.574	2.329	20.3	20.8	127 W	— 59	6 15	18 58.37	-18 38.1	1.610	2.587	7.9	20.0	160 W	26	83
5 26	19 16.79	-58 6.9	1.526	2.312	19.6	20.7	130 W	— 58	6 25	18 46.73	-16 59.3	1.539	2.546	3.9	19.6	170 W	28	81
5 31	19 13.90	-59 0.9	1.481	2.295	18.9	20.6	133 W	— 57	6 30	18 40.38	-16 8.3	1.514	2.526	2.9	19.5	173 W	29	80
6 5	19 9.42	-59 51.3	1.440	2.278	18.2	20.5	136 W	— 56	7 10	18 33.88	-15 17.0	1.496	2.505	3.7	19.5	171 E	30	79
6 10	19 3.31	-60 36.2	1.403	2.260	17.6	20.4	138 W	— 55	7 15	18 27.40	-14 26.1	1.486	2.484	5.7	19.6	166 E	31	78
6 15	18 55.64	-61 13.4	1.371	2.242	17.1	20.3	140 W	— 55	7 20	18 21.12	-13 36.3	1.482	2.463	8.0	19.7	160 E	31	78
6 20	18 46.60	-61 40.9	1.343	2.225	16.8	20.3	141 W	— 54	7 25	18 15.21	-12 48.3	1.486	2.442	10.4	19.8	154 E	32	77
6 25	18 36.51	-61 56.8	1.320	2.207	16.8	20.2	141 W	— 54	8 4	18 9.81	-12 2.7	1.496	2.421	12.7	19.8	149 E	33	76
6 27	18 32.26	-61 59.6	1.312	2.199	16.8	20.2	141 W	— 54	8 11	18 0.99	-10 40.4	1.533	2.379	16.9	20.0	137 E	34	75
6 29	18 27.95	-62 0.3	1.305	2.192	16.9	20.2	141 E	— 54	8 14	17 55.30	-9 31.7	1.588	2.336	20.4	20.2	126 E	35	74
7 1	18 23.60	-61 58.7	1.299	2.185	17.0	20.2	141 E	— 54	8 24	17 53.00	-8 36.4	1.656	2.293	23.3	20.3	116 E	36	73
7 3	18 19.24	-61 54.9	1.293	2.178	17.2	20.2	141 E	— 54	9 3	17 54.02	-7 52.4	1.733	2.250	25.3	20.4	107 E	37	72
7 5	18 14.91	-61 48.8	1.288	2.171	17.4	20.2	140 E	— 54	9 13	17 58.14	-7 16.8	1.813	2.207	26.8	20.5	99 E	38*	71
7 7	18 10.65	-61 40.5	1.284	2.163	17.6	20.1	140 E	— 54	9 23	17 5.09	-6 46.3	1.893	2.164	27.6	20.6	91 E	38*	70*
7 9	18 6.48	-61 30.0	1.281	2.156	17.9	20.1	139 E	— 55	10 3	18 14.53	-6 17.7	1.972	2.121	28.0	20.6	84 E	38*	66*
7 11	18 2.45	-61 17.3	1.278	2.149	18.2	20.1	139 E	— 55	10 13	18 26.22	-5 47.9	2.046	2.079	28.0	20.7	78 E	38*	61*
7 13	17 58.59	-61 2.5	1.277	2.141	18.6	20.1	138 E	— 55	10 23	18 39.89	-5 14.2	2.114	2.037	27.7	20.7	72 E	38*	55*
7 15	17 54.91	-60 45.7	1.275	2.134	19.0	20.1	137 E	— 55	11 2	18 55.32	-4 34.3	2.175	1.996	27.1	20.7	66 E	38*	48*
7 20	17 46.71	-59 55.6	1.276	2.116	20.0	20.2	135 E	— 56	11 12	19 12.34	-3 46.2	2.229	1.957	26.3	20.7	61 E	38*	41*
7 25	17 40.08	-58 55.6	1.280	2.097	21.2	20.2	132 E	— 57	11 22	19 30.79	-2 48.1	2.276	1.918	25.5	20.7	57 E	38*	35*
7 30	17 35.17	-57 47.6	1.288	2.079	22.4	20.2	129 E	— 58	12 2	19 50.52	-1 38.8	2.315	1.880	24.5	20.6	52 E	38*	28*
8 4	17 32.00	-56 33.5	1.300	2.061	23.7	20.3	125 E	— 59	12 12	20 11.43	0 17.2	2.347	1.845	23.5	20.6	48 E	37*	22*
8 9	17 30.53	-55 15.0	1.315	2.042	24.9	20.3	122 E	— 61	12 22	20 33.42	+1 17.1	2.373	1.811	22.5	20.5	45 E	36*	16*
8 14	17 30.67	-53 53.9	1.332	2.024	26.1	20.3	119 E	— 62	1 1	20 56.42	+3 3.9	2.393	1.779	21.4	20.5	41 E	34*	11*
8 19	17 32.29	-52 31.3	1.353	2.005	27.2	20.4	115 E	— 63	1 11	21 20.36	+5 2.8	2.410	1.750	20.4	20.4	38 E	32*	6*
8 24	17 35.23	-51 8.2	1.376	1.987	28.2	20.4	112 E	— 65	1 21	21 45.19	+7 12.7	2.424	1.724	19.5	20.4	36 E	30*	2*
8 29	17 39.36	-49 45.1	1.400	1.969	29.1	20.5	108 E	— 66	4596 1981 QB									
9 3	17 44.54	-48 22.5	1.427	1.951	29.9	20.5	105 E	— 68	4 26	19 24.17	+18 22.6	2.337	2.657	22.1	21.4	97 W	62*	46
9 8	17 50.66	-47 0.5	1.455	1.933	30.7	20.6	102 E	— 69	5 6	19 27.76	+20 15.6	2.190	2.609	22.1	21.3	103 W	65*	44
9 13	17 57.61	-45 39.2	1.484	1.915	31.3	20.6	99 E	— 70	5 16	19 28.98	+22 6.7	2.048	2.559	22.0	21.1	109 W	67	42
9 18	18 5.29	-44 18.6	1.514	1.897	31.8	20.6	96 E	1* 72	5 26	19 27.52	+23 50.3	1.914	2.508	21.6	20.9	114 W	69	40
9 23	18 13.58	-42 58.5	1.544	1.879	32.2	20.7	93 E	2* 73*	6 5	19 23.14	+25 18.9	1.789	2.455	21.0	20.6	120 W	70	39
9 28	18 22.41	-41 38.6	1.575	1.862	32.6	20.7	90 E	3* 73*	6 15	19 15.70	+26 23.3	1.675	2.401	20.4	20.4	124 W	71	38
10 3	18 31.72	-40 18.6	1.607	1.845	32.8	20.7	87 E	5* 74*	6 20	19 10.89	+26 42.9	1.624	2.373	20.1	20.3	127 W	72	37
10 8	18 41.43	-38 58.4	1.639	1.828	32.9	20.8	84 E	6* 73*	6 25	19 5.44	+26 52.3	1.576	2.345	19.9	20.2	128 W	72	37
10 13	18 51.50	-37 37.6	1.671	1.811	33.0	20.8	81 E	7* 72*	6 30	18 59.43	+26 50.3	1.532	2.316	19.8	20.1	130 W	72	37
10 18	19 1.86	-36 15.9	1.703	1.795	33.0	20.8	79 E	9* 71*	7 5	18 52.98	+26 35.6	1.492	2.287	19.7	20.1	131 E	72	37
10 23	19 12.47	-34 53.2	1.735	1.778	32.9	20.8	76 E	10* 69*	7 10	18 46.25	+26 7.3	1.456	2.258	19.8	20.0	131 E	71	38
10 28	19 23.27	-33 29.2	1.766	1.763	32.7	20.8	73 E	11* 67*	7 15	18 39.42	+25 24.7	1.425	2.228	20.1	19.9	131 E	70	39
11 2	19 34.25	-32 3.6	1.798	1.748	32.5	20.9	71 E	13* 65*	7 20	18 32.68	+24 27.7	1.399	2.198	20.6	19.9	130 E	69	40
11 7	19 45.37	-30 36.3	1.829	1.733	32.2	20.9	69 E	14* 62*	7 25	18 26.22	+23 16.6	1.377	2.167	21.3	19.8	129 E	68	41
11 12	19 56.60	-29 7.1	1.860	1.718	31.8	20.9	66 E	15* 60*	7 30	18 20.21	+21 52.3	1.360	2.136	22.1	19.8	128 E	67	42
11 17	20 7.91	-27 36.0	1.890	1.704	31.4	20.9	64 E	17* 57*	8 4	18 14.81	+20 15.7	1.347	2.105	23.1	19.8	125 E	65	44
11 22	20 19.28	-26 2.9	1.919	1.691	30.9	20.9	62 E	18* 54*	8 9	18 10.15	+18 28.4	1.339	2.073	24.2	19.7	123 E	63	46
11 27	20 30.70	-24 27.7	1.948	1.678	30.4	20.9	59 E	20* 51*	8 14	18 6.35	+16 31.9	1.335	2.041	25.4	19.7	120 E	62	47
12 2	20 42.15	-22 50.3	1.977	1.666	29.9	20.9	57 E	21* 48*										
12 7	20 53.62	-21 10.8	2.005	1.654	29.3	20.9	55 E	22* 45*										
12 12	21 5.11	-19 29.2	2.032	1.643	28.7	20.9	53 E	24* 42*										
12 17	21 16.60	-17 45.6	2.059	1.633	28.0	20.9	51 E	25* 39*										
12 22	21 28.10	-16 0.0	2.085	1.624	27.3	20.9	49 E	26* 36*										
12 27	21 39.59	-14 12.5	2.110	1.615	26.6	20.9	47 E	27* 33*										
1 1	21 51.09	-12 23.3	2.135	1.607	25.9	20.9	45 E	27* 30*										
1 6	22 2.61	-10 32.4	2.159	1.600	25.1	20.8	44 E	28* 27*										
1 11	22 14.14	-8 40.0	2.183	1.593	24.4	20.8	42 E	28* 24*										
1 16	22 25.68	-6 46.3	2.206	1.588	23.6	20.8	40 E	28* 22*										
1 21	22 37.25	-4 51.5	2.228	1.583	22.8	20.8	39 E	28* 19*										
537562 2015 OX₇₇																		
4 26	19 13.58	-31 17.2	1.391	1.972	28.7	21.3	110 W	13* 85										
5 1	19 19.04	-30 47.4	1.323	1.954	28.3	21.1	113 W	14* 85										
5 6	19 23.80	-30 14.7	1.257	1.936	27.7	21.0	117 W	15* 86										
5 11	19 27.79	-29 39.0	1.193	1.918	26.9	20.8	121 W	15* 86										
5 16	19 30.93	-29 0.1	1.131	1.899	25.9	20.6	125 W	16* 87										

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
4596 1981 QB										326683 2002 WP									
<i>(continuation)</i>										<i>(continuation)</i>									
8 19	18 3.47	+14 28.3	1.335	2.009	26.7	19.7	117 E	59	50	9 18	18 25.19	-48 53.4	1.035	1.547	39.9	21.0	99 E	—	67
8 24	18 1.56	+12 19.4	1.339	1.976	27.9	19.8	114 E	57	52	9 23	18 33.77	-48 24.7	1.064	1.533	40.6	21.1	96 E	—	68
8 29	18 0.63	+10 6.8	1.346	1.943	29.2	19.8	110 E	55	54	9 28	18 43.37	-47 53.0	1.092	1.519	41.2	21.1	93 E	—	68*
9 3	18 0.69	+7 52.2	1.355	1.909	30.4	19.8	107 E	53	56	10 3	18 53.88	-47 17.9	1.119	1.505	41.7	21.2	90 E	—	68*
9 8	18 1.73	+5 36.9	1.367	1.875	31.5	19.8	103 E	51*	58	10 8	19 5.19	-46 39.0	1.145	1.490	42.1	21.2	88 E	—	69*
9 13	18 3.74	+3 22.3	1.381	1.841	32.6	19.8	100 E	48*	61	10 13	19 17.19	-45 55.8	1.170	1.475	42.4	21.2	85 E	—	69*
9 18	18 6.68	+1 9.4	1.397	1.807	33.6	19.8	96 E	46*	63	10 18	19 29.79	-45 7.9	1.194	1.460	42.7	21.3	83 E	—	69*
9 23	18 10.52	-1 0.9	1.414	1.773	34.4	19.8	93 E	44*	65*	10 23	19 42.87	-44 14.9	1.216	1.444	42.9	21.3	81 E	1	68*
10 3	18 20.78	-5 11.5	1.451	1.703	35.9	19.8	86 E	39*	66*	10 28	19 56.35	-43 16.4	1.236	1.429	43.0	21.3	79 E	2	68*
10 13	18 34.32	-9 5.5	1.488	1.633	36.9	19.8	79 E	35*	65*	11 2	20 10.16	-42 12.1	1.256	1.413	43.2	21.3	77 E	3	68*
10 23	18 50.93	-12 40.5	1.523	1.563	37.6	19.8	73 E	31*	61*	11 7	20 24.24	-41 1.5	1.274	1.397	43.2	21.3	75 E	4	67*
11 2	19 10.45	-15 55.0	1.555	1.494	37.9	19.8	68 E	28*	57*	11 12	20 38.51	-39 44.5	1.291	1.382	43.3	21.3	73 E	5	66*
11 12	19 32.80	-18 47.7	1.582	1.426	38.0	19.7	62 E	25*	53*	11 17	20 52.90	-38 21.0	1.306	1.366	43.4	21.3	72 E	7	65*
11 22	19 57.89	-21 17.2	1.602	1.360	37.9	19.6	58 E	22*	48*	11 22	21 7.37	-36 50.9	1.320	1.350	43.4	21.3	70 E	8	64*
12 2	20 25.65	-23 22.1	1.614	1.297	37.7	19.5	54 E	20*	44*	11 27	21 21.87	-35 14.0	1.333	1.334	43.4	21.3	68 E	10	62*
12 12	20 56.04	-25 0.2	1.617	1.239	37.5	19.4	50 E	18*	41*	12 2	21 36.37	-33 30.4	1.345	1.319	43.4	21.3	67 E	11	61*
12 22	21 28.95	-26 8.9	1.612	1.187	37.4	19.3	47 E	16*	39*	12 7	21 50.86	-31 40.0	1.356	1.304	43.4	21.3	65 E	13*	59*
1 1	22 4.27	-26 44.9	1.599	1.143	37.6	19.2	45 E	15*	37*	12 12	22 5.31	-29 43.2	1.366	1.289	43.4	21.3	64 E	15*	57*
1 11	22 41.82	-26 44.2	1.579	1.109	38.1	19.1	44 E	14*	36*	12 17	22 19.69	-27 40.0	1.375	1.274	43.4	21.3	63 E	17*	55*
1 21	23 21.30	-26 2.8	1.554	1.086	38.9	19.1	44 E	14*	37*	12 22	22 34.01	-25 30.8	1.383	1.260	43.4	21.3	62 E	19*	53*
506427 2000 RE₃₄										464271 2015 TO₆₇									
4 26	19 36.73	-22 0.7	1.589	2.068	28.2	21.3	103 W	22*	86	4 26	19 45.35	-29 7.9	1.407	1.899	31.1	21.5	103 W	14*	87
5 6	19 49.89	-21 7.6	1.447	2.027	27.9	21.1	110 W	23*	85	5 6	20 1.59	-29 10.7	1.286	1.872	30.7	21.2	109 W	15*	87
5 16	20 1.25	-20 11.1	1.313	1.986	27.0	20.8	117 W	24*	84	5 16	20 15.94	-29 17.2	1.172	1.845	29.8	21.0	115 W	15*	87
5 26	20 10.44	-19 12.9	1.188	1.946	25.5	20.5	124 W	26*	83	5 26	20 27.98	-29 30.1	1.066	1.818	28.2	20.7	122 W	15*	86
6 5	20 17.09	-18 14.8	1.073	1.907	23.3	20.2	132 W	27	82	6 5	20 37.20	-29 51.7	0.969	1.793	25.9	20.4	129 W	15*	86
6 15	20 20.76	-17 18.9	0.971	1.869	20.3	19.8	140 W	28	81	6 10	20 40.55	-30 6.2	0.924	1.781	24.5	20.2	133 W	15	86
6 25	20 21.19	-16 27.1	0.883	1.834	16.3	19.4	150 W	29	80	6 15	20 42.96	-30 23.0	0.882	1.769	22.9	20.1	137 W	15	86
7 5	20 18.38	-15 41.1	0.812	1.800	11.5	19.0	159 W	29	80	6 20	20 44.39	-30 41.9	0.844	1.757	21.1	19.9	142 W	14	85
7 15	20 12.73	-15 2.2	0.759	1.768	6.1	18.6	169 W	30	79	6 25	20 44.77	-31 2.5	0.809	1.746	19.0	19.7	146 W	14	85
7 20	20 9.17	-14 45.5	0.740	1.753	3.8	18.4	173 W	30	79	6 30	20 44.09	-31 23.8	0.777	1.735	16.8	19.5	150 W	14	85
7 25	20 5.38	-14 30.6	0.726	1.739	3.4	18.3	174 E	30	79	6 35	20 44.79	-31 25.0	0.777	1.735	16.8	19.5	150 W	14	85
7 30	20 1.55	-14 17.5	0.716	1.726	5.5	18.4	171 E	31	78	7 5	20 42.34	-31 45.1	0.749	1.725	14.5	19.4	155 W	13	84
8 4	19 57.92	-14 6.0	0.712	1.713	8.4	18.5	166 E	31	78	7 10	20 39.56	-32 4.9	0.726	1.715	12.2	19.2	159 W	13	84
8 9	19 54.72	-13 56.1	0.712	1.701	11.5	18.6	160 E	31	78	7 15	20 35.89	-32 21.7	0.707	1.705	10.0	19.1	163 W	13	84
8 14	19 52.16	-13 47.5	0.716	1.690	14.5	18.7	155 E	31	78	7 20	20 31.50	-32 34.0	0.692	1.696	8.4	18.9	166 W	12	83
8 24	19 49.65	-13 32.8	0.737	1.670	20.1	19.0	145 E	31	78	7 25	20 26.63	-32 40.4	0.683	1.688	7.9	18.9	167 W	12	83
9 3	19 51.20	-13 19.2	0.771	1.654	24.9	19.2	136 E	32	77	7 30	20 21.57	-32 39.9	0.677	1.679	8.7	18.9	166 E	12	83
9 13	19 57.05	-13 3.5	0.817	1.642	28.8	19.4	128 E	32	77	8 4	20 16.59	-32 31.8	0.676	1.672	10.6	18.9	162 E	12	83
9 23	20 6.95	-12 42.2	0.873	1.634	31.8	19.6	121 E	32	77	8 9	20 12.01	-32 15.9	0.680	1.665	13.0	19.0	158 E	13	84
10 3	20 20.35	-12 12.2	0.936	1.630	33.9	19.8	115 E	33	76	8 14	20 8.11	-31 52.4	0.688	1.658	15.7	19.1	154 E	13	84
10 13	20 36.64	-11 31.2	1.007	1.630	35.4	20.0	109 E	33	76	8 19	20 5.14	-31 22.0	0.700	1.653	18.3	19.3	149 W	14	85
10 23	20 55.20	-10 37.3	1.083	1.634	36.3	20.2	104 E	34	75	8 24	20 3.23	-30 45.6	0.716	1.647	20.9	19.4	145 W	14	85
11 2	21 15.43	-9 30.1	1.166	1.643	36.7	20.4	99 E	36	73*	8 29	20 2.47	-30 4.3	0.735	1.643	23.3	19.5	140 E	15	86
11 12	21 36.88	-8 9.7	1.255	1.655	36.6	20.6	94 E	37	70*	9 3	20 2.90	-29 18.7	0.758	1.639	25.5	19.6	136 E	16	87
11 22	21 59.13	-6 36.9	1.349	1.672	36.2	20.7	90 E	38	66*	9 8	20 4.50	-28 29.9	0.783	1.635	27.5	19.8	132 E	17	88
12 2	22 21.85	-4 53.5	1.449	1.691	35.5	20.9	86 E	40	61*	9 13	20 7.24	-27 38.2	0.811	1.633	29.2	19.9	128 E	17	88
12 12	22 44.82	-3 1.0	1.554	1.715	34.6	21.1	82 E	42	55*	9 18	20 11.05	-26 44.3	0.841	1.631	30.8	20.0	124 E	18	89
12 22	23 7.87	-1 1.7	1.663	1.741	33.5	21.2	78 E	44	50*	9 23	20 15.82	-25 48.5	0.874	1.629	32.1	20.1	120 E	19	90
1 1	23 30.87	+1 2.1	1.777	1.770	32.2	21.4	74 E	46*	45*	9 28	20 21.46	-24 50.9	0.908	1.629	33.3	20.2	117 E	20	89
1 11	23 53.80	+3 8.6	1.894	1.802	30.7	21.5	69 E	47*	40*	10 3	20 27.88	-23 51.7	0.944	1.628	34.2	20.4	114 E	21	88
326683 2002 WP										345853 2007 PU₁₁									
4 26	19 37.18	-22 42.2	1.234	1.763	33.7	21.5	103 W	21*	87	4 26	20 5.03	-5 31.9	2.534	2.780	21.2	21.5	93 W	36*	70
5 6	19 47.96	-24 18.8	1.128	1.762	32.3	21.3	111 W	20*	88	5 6	20 11.86	-4 8.5	2.348	2.722	21.4	21.3	101 W	39*	68
5 16	19 55.86	-26 24.0	1.028	1.758	30.2	21.0	119 W	18*	90	5 16	20 17.05	-2 42.5	2.167	2.663	21.1	21.0	108 W	41*	67
5 26	20 0.11	-29 4.2	0.936	1.752	27.1	20.7	128 W	16*	87	5 26	20 20.33	-1 15.9	1.993	2.603	20.4	20.8	116 W	43*	65
6 5	19 59.79	-32 22.9	0.856	1.744	23.2	20.4	137 W	13	84	6 5	20 21.42	+0 9.0	1.829	2.542	19.3	20.5	124 W	45	64
6 10	19 57.54	-34 15.8	0.821	1.739	20.9	20.2	142 W	11	82	6 15	20 20.01	+1 28.6	1.678	2.480	17.6	20.2	132 W	46	63
6 15	19 53.74	-36 16.0	0.791	1.734	18.6	20.0	147 W	9	80	6 25	20 15.93	+2 38.3	1.544	2.417	15.5	19.9	141 W	48	61
6 20	19 48.30	-38 20.9	0.766	1.729	16.3	19.9	151 W	7	78	6 30	20 12.87	+3 7.8	1.483	2.385	14.3	19.8	145 W	48	61
6 25	19 41.18	-40 27.0	0.747	1.722	14.4	19.8	155 W	5	76	7 5	20 9.16	+3 32.7	1.427	2.353	13.2	19.6	148 W	49	60
6 30	19 32.46	-42 30.3	0.732	1.716	13.2	19.7	157 W	2	73										
7 5	19 22.28	-44 26.1	0.724	1.709	1														

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
345853 2007 PU₁₁ (continuation)									533495 2014 HU₁₇₇ (continuation)								
7 10	20 4.83	+ 3 52.3	1.377	2.321	12.1	19.5	151 W	49 60	9 23	21 30.16	-21 13.7	0.824	1.707	23.2	19.8	138 E	24 85
7 15	19 59.97	+ 4 5.6	1.332	2.288	11.3	19.3	154 W	49 60	10 3	21 36.11	-21 15.6	0.904	1.722	26.7	20.2	129 E	24 85
7 25	19 49.13	+ 4 11.5	1.259	2.222	11.1	19.1	155 E	49 60	10 13	21 45.15	-20 49.8	0.994	1.740	29.2	20.5	122 E	24 85
8 4	19 37.74	+ 3 47.7	1.210	2.156	13.0	19.0	151 E	49 60	10 18	21 50.67	-20 27.8	1.043	1.749	30.2	20.6	118 E	25 84
8 14	19 27.23	+ 2 55.1	1.182	2.089	16.5	19.0	144 E	48 61	10 23	21 56.76	-20 0.4	1.093	1.759	30.9	20.7	115 E	25 84
8 19	19 22.74	+ 2 19.5	1.176	2.056	18.5	19.1	140 E	47 62	10 28	22 3.34	-19 28.0	1.146	1.770	31.5	20.9	111 E	26 83
8 24	19 18.96	+ 1 38.9	1.174	2.022	20.6	19.1	135 E	47 62	11 2	22 10.35	-18 51.2	1.200	1.780	32.0	21.0	108 E	26 83
8 29	19 16.00	+ 0 54.3	1.176	1.988	22.6	19.1	131 E	46 63	11 7	22 17.74	-18 10.2	1.256	1.792	32.3	21.1	105 E	27 82
9 3	19 13.96	+ 0 6.8	1.181	1.954	24.6	19.2	126 E	45 64	11 12	22 25.46	-17 25.4	1.314	1.803	32.5	21.2	102 E	28 81
9 8	19 12.91	+ 0 42.7	1.189	1.921	26.5	19.2	122 E	44 65	11 17	22 33.46	-16 37.3	1.372	1.815	32.5	21.4	99 E	28 81*
9 13	19 12.88	+ 1 33.1	1.200	1.887	28.3	19.2	117 E	43 66	11 22	22 41.68	-15 46.2	1.432	1.827	32.5	21.5	96 E	29 79*
9 18	19 13.90	- 2 23.5	1.212	1.853	29.9	19.3	113 E	43 66	436030 2009 JO₂								
9 23	19 15.96	- 3 13.1	1.226	1.820	31.4	19.3	109 E	42 67	4 26	20 14.42	+ 4 45.3	0.851	1.303	50.5	21.4	89 W	45* 59*
10 3	19 23.11	- 4 47.4	1.255	1.754	34.0	19.3	101 E	40 69	5 6	20 26.98	+ 9 46.4	0.786	1.312	50.2	21.2	93 W	51* 54
10 13	19 34.18	- 6 11.6	1.285	1.689	36.1	19.4	95 E	39 70*	5 16	20 37.33	+15 18.6	0.720	1.312	49.8	21.0	97 W	57* 49
10 23	19 48.88	- 7 22.0	1.314	1.625	37.7	19.4	88 E	38 68*	5 26	20 45.05	+21 24.8	0.655	1.305	49.7	20.8	101 W	65* 43
11 2	20 6.93	- 8 15.9	1.340	1.564	39.0	19.4	83 E	37 64*	6 5	20 49.52	+22 8.0	0.593	1.289	49.9	20.6	104 W	73* 36
11 12	20 28.07	- 8 51.0	1.363	1.506	40.0	19.3	78 E	36 60*	6 15	20 49.60	+35 29.0	0.535	1.265	50.8	20.3	105 W	80 29
11 22	20 52.00	- 9 5.3	1.383	1.453	40.7	19.3	73 E	36* 55*	6 20	20 47.47	+39 22.7	0.508	1.250	51.7	20.2	105 W	84 25
12 2	21 18.44	- 8 57.6	1.400	1.404	41.2	19.3	70 E	36* 51*	6 25	20 43.47	+43 24.2	0.482	1.233	52.8	20.1	105 W	88 21
12 12	21 47.13	- 8 26.8	1.415	1.361	41.5	19.2	66 E	36* 47*	6 30	20 37.12	+47 32.7	0.458	1.213	54.4	20.0	104 W	87 16
12 22	22 17.75	- 7 33.1	1.429	1.326	41.6	19.2	64 E	37* 43*	7 5	20 27.69	+51 46.2	0.436	1.191	56.3	19.9	103 W	83 12
1	22 50.00	- 6 17.5	1.444	1.298	41.6	19.2	61 E	37* 40*	7 7	20 22.82	+53 28.3	0.427	1.182	57.3	19.9	102 W	82 11
1 11	23 23.58	- 4 42.0	1.461	1.280	41.4	19.2	59 E	38* 38*	7 9	20 17.21	+55 10.5	0.419	1.172	58.3	19.9	101 W	80 9
1 21	23 58.17	- 2 50.1	1.483	1.271	41.0	19.2	58 E	39* 36*	7 11	20 10.74	+56 52.6	0.410	1.162	59.4	19.8	100 W	78 7
395402 2011 SP₁₂₁									7 13	20 3.29	+58 34.0	0.402	1.152	60.6	19.8	99 W	76 5
4 26	20 9.61	-12 26.7	1.223	1.635	37.9	21.4	94 W	29* 76	7 15	19 54.70	+60 14.5	0.395	1.141	61.9	19.8	98 W	75 4
5 6	20 30.90	-10 34.6	1.137	1.620	38.1	21.3	98 W	31* 75	7 17	19 44.81	+61 53.5	0.387	1.130	63.2	19.7	97 E	73 2
5 16	20 50.64	- 8 38.0	1.055	1.609	37.9	21.1	102 W	33* 73	7 19	19 33.38	+63 30.3	0.380	1.119	64.7	19.8	96 E	71 -
5 26	21 8.54	- 6 41.7	0.979	1.601	37.3	20.9	107 W	36* 71	7 21	19 20.15	+65 4.3	0.373	1.107	66.3	19.7	94 W	70 -
6 5	21 24.30	- 4 50.8	0.908	1.596	36.1	20.7	112 W	39* 69	7 23	19 4.82	+66 34.3	0.366	1.095	68.0	19.7	92 E	68 -
6 15	21 37.50	- 3 11.4	0.844	1.594	34.3	20.5	118 W	41* 67	7 25	18 47.04	+67 58.9	0.360	1.082	69.8	19.7	91 E	67 -
6 20	21 43.01	- 2 28.2	0.814	1.595	33.2	20.4	121 W	42* 66	7 26	18 37.11	+68 38.7	0.356	1.076	70.8	19.7	90 E	66 -
6 25	21 47.73	- 1 50.4	0.785	1.596	31.8	20.2	124 W	43 66	7 27	18 26.44	+69 16.5	0.353	1.069	71.8	19.7	89 E	66 -
6 30	21 51.62	- 1 18.9	0.759	1.598	30.2	20.1	128 W	44 65	7 28	18 14.98	+69 51.8	0.350	1.062	72.8	19.7	88 E	65 -
7 5	21 54.62	- 0 54.7	0.735	1.601	28.4	20.0	131 W	44 65	7 29	18 2.71	+70 24.6	0.347	1.056	73.8	19.7	87 E	65 -
7 10	21 56.69	- 0 38.6	0.713	1.605	26.4	19.9	135 W	44 65	7 30	17 49.60	+70 54.2	0.344	1.049	74.9	19.7	86 E	64 -
7 15	21 57.84	- 0 31.4	0.694	1.610	24.1	19.8	140 W	44 65	7 31	17 35.66	+71 20.4	0.341	1.042	76.0	19.7	85 E	64 -
7 25	21 57.46	- 0 45.5	0.664	1.622	18.8	19.5	149 W	44 65	8 1	17 20.90	+71 42.8	0.338	1.035	77.2	19.7	84 E	63 -
8 4	21 54.03	- 1 37.7	0.649	1.636	13.0	19.3	159 W	43 66	8 2	17 5.37	+72 0.9	0.335	1.028	78.3	19.7	83 E	63 -
8 14	21 48.64	- 3 2.6	0.650	1.654	7.3	19.1	168 W	42 67	8 3	16 49.14	+72 14.4	0.333	1.021	79.6	19.7	82 E	63 -
8 19	21 45.73	- 3 53.4	0.657	1.664	5.5	19.0	171 E	41 68	8 4	16 32.33	+72 22.8	0.330	1.014	80.8	19.7	80 E	63* -
8 24	21 42.97	- 4 47.2	0.669	1.674	5.7	19.1	171 E	40 69	8 5	16 15.07	+72 25.8	0.327	1.006	82.1	19.8	79 E	62* -
8 29	21 40.53	- 5 41.8	0.686	1.686	7.6	19.3	167 E	39 70	8 6	15 57.53	+72 23.0	0.325	0.999	83.4	19.8	78 E	62* -
9 3	21 38.60	- 6 35.4	0.707	1.697	10.1	19.4	163 E	38 71	8 7	15 39.87	+72 14.4	0.323	0.991	84.8	19.8	77 E	61* -
9 8	21 37.32	- 7 26.2	0.733	1.709	12.8	19.6	158 E	38 71	8 8	15 22.28	+71 59.7	0.320	0.984	86.2	19.8	75 E	61* -
9 13	21 36.79	- 8 12.7	0.764	1.722	15.3	19.8	153 E	37 72	8 9	15 4.94	+71 38.9	0.318	0.976	87.7	19.8	74 E	60* -
9 18	21 37.08	- 8 53.9	0.798	1.735	17.7	20.0	148 E	36 73	8 10	14 48.00	+71 12.0	0.316	0.968	89.1	19.9	73 E	59* -
9 23	21 38.19	- 9 29.0	0.837	1.749	19.9	20.2	144 E	36 73	8 11	14 31.60	+70 39.2	0.314	0.960	90.7	19.9	71 E	58* -
10 3	21 42.79	-10 20.0	0.926	1.778	23.6	20.6	135 E	35 74	8 12	14 15.85	+70 0.6	0.312	0.952	92.2	19.9	70 E	57* -
10 13	21 50.32	-10 45.3	1.027	1.808	26.3	20.9	126 E	34 75	8 13	14 0.82	+69 16.4	0.310	0.944	93.8	20.0	68 E	56* -
10 23	22 0.32	-10 46.4	1.140	1.840	28.3	21.3	119 E	34 75	8 14	13 46.55	+68 26.8	0.308	0.936	95.5	20.0	67 E	55* -
11 2	22 12.27	-10 26.1	1.261	1.872	29.5	21.6	112 E	35 74	8 16	13 20.37	+66 32.7	0.306	0.919	98.9	20.1	64 E	53* -
533495 2014 HU₁₇₇									8 18	12 57.25	+64 20.2	0.303	0.902	102.5	20.2	60 E	50* -
4 26	20 10.16	-13 24.8	1.387	1.768	34.6	21.4	94 W	28* 77	8 20	12 36.96	+61 51.3	0.302	0.885	106.3	20.4	57 E	47* -
5 6	20 29.05	-12 23.2	1.281	1.748	34.8	21.2	99 W	30* 76	8 22	12 19.18	+59 7.9	0.301	0.867	110.2	20.6	54 E	43* -
5 16	20 46.65	-11 23.2	1.180	1.730	34.5	21.0	104 W	31* 75	8 24	12 3.58	+56 11.8	0.302	0.849	114.2	20.8	50 E	40* -
5 26	21 2.68	-10 29.3	1.084	1.713	33.9	20.8	110 W	33* 74	8 25	11 56.52	+54 39.5	0.302	0.840	116.3	20.9	48 E	38* -
6 5	21 16.88	- 9 46.1	0.994	1.699	32.6	20.5	116 W	34* 74	8 26	11 49.90	+53 4.8	0.303	0.831	118.3	21.0	46 E	36* -
6 15	21 28.81	- 9 19.5	0.911	1.687													

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
200589 2001 RQ₁₂									368812 2006 AA₁₁								
<i>(continuation)</i>									<i>(continuation)</i>								
7 20	22 5.99	+1 3.7	0.744	1.665	22.2	19.5	142 W	46 63	9 13	19 47.48	-30 50.5	1.399	2.118	23.6	19.7	123 E	14 85
7 25	22 5.46	+1 12.9	0.725	1.667	19.8	19.4	146 W	46 63	9 23	19 49.42	-29 56.3	1.459	2.075	26.3	19.8	114 E	15 86
8 4	22 2.12	+1 4.0	0.696	1.673	14.6	19.2	155 W	46 63	10 3	19 55.10	-28 52.7	1.525	2.033	28.3	19.9	105 E	16 87
8 14	21 56.52	+0 19.1	0.684	1.681	9.4	18.9	164 W	45 64	10 13	20 4.15	-27 40.4	1.594	1.992	29.8	20.0	98 E	17 88
8 24	21 50.19	-0 54.7	0.690	1.692	6.9	18.8	168 E	44 65	10 23	20 16.10	-26 19.5	1.665	1.951	30.7	20.1	91 E	19 85*
8 29	21 47.27	-1 38.6	0.699	1.699	7.7	18.9	167 E	43 66	11 2	20 30.48	-24 49.1	1.734	1.912	31.1	20.1	84 E	20 77*
9 3	21 44.77	-2 24.8	0.714	1.706	9.7	19.1	163 E	43 66	11 12	20 46.89	-23 8.4	1.802	1.874	31.2	20.2	78 E	22 70*
9 8	21 42.87	-3 11.3	0.733	1.713	12.1	19.2	159 E	42 67	11 22	21 4.95	-21 16.4	1.867	1.837	30.9	20.2	73 E	24 63*
9 13	21 41.70	-3 56.6	0.757	1.721	14.5	19.4	155 E	41 68	12 2	21 24.35	-19 12.8	1.928	1.803	30.4	20.2	68 E	26 56*
9 18	21 41.35	-4 38.9	0.786	1.730	17.0	19.6	150 E	40 69	12 12	21 44.84	-16 57.1	1.986	1.771	29.7	20.2	63 E	28 50*
9 23	21 41.85	-5 17.2	0.818	1.739	19.2	19.7	145 E	40 69	12 22	22 6.21	-14 29.6	2.041	1.741	28.8	20.2	58 E	29 44*
9 28	21 43.21	-5 50.6	0.854	1.748	21.3	19.9	141 E	39 70	1	22 28.29	-11 51.0	2.092	1.714	27.7	20.2	54 E	31 38*
10 3	21 45.42	-6 18.6	0.893	1.759	23.1	20.1	136 E	39 70	1 11	22 51.00	-9 2.2	2.140	1.690	26.6	20.2	50 E	31 33*
10 13	21 52.22	-6 57.2	0.982	1.780	26.2	20.4	128 E	38 71	1 21	23 14.23	-6 4.9	2.186	1.669	25.3	20.2	47 E	31 28*
10 23	22 1.81	-7 12.2	1.083	1.803	28.4	20.7	120 E	38 71	394837 2008 SF₁₈₀								
11 2	22 13.65	-7 5.1	1.192	1.828	29.9	21.0	113 E	38 71	4 26	20 31.44	-20 46.7	1.579	1.882	32.3	21.3	91 W	20 83*
11 12	22 27.28	-6 37.9	1.310	1.853	30.8	21.2	107 E	38 71	5 6	20 50.79	-20 12.4	1.455	1.853	32.8	21.1	96 W	20 84
11 22	22 42.28	-5 53.1	1.434	1.880	31.1	21.5	100 E	39 69*	5 16	21 9.25	-19 40.0	1.335	1.824	32.9	20.9	101 W	22 84
524635 2003 SS₁₃₀									5 26	21 26.62	-19 12.9	1.221	1.796	32.7	20.7	107 W	23 83
4 26	20 24.94	-29 33.7	1.613	1.962	30.8	21.3	94 W	12* 86*	6 5	21 42.67	-18 54.4	1.113	1.770	32.0	20.4	113 W	24 83
5 6	20 43.75	-29 8.0	1.482	1.927	31.1	21.1	100 W	13* 87	6 15	21 57.03	-18 48.6	1.012	1.746	30.7	20.2	119 W	25 83
5 16	21 1.33	-28 41.9	1.356	1.892	31.0	20.9	105 W	13* 87	6 25	22 9.33	-18 59.4	0.920	1.723	28.7	19.9	126 W	26 83
5 26	21 17.40	-28 17.5	1.236	1.859	30.5	20.6	111 W	15* 88	7 5	22 19.09	-19 30.0	0.838	1.701	26.0	19.6	133 W	26 83
6 5	21 31.62	-27 56.7	1.123	1.827	29.6	20.3	117 W	16* 88	7 15	22 25.76	-20 22.4	0.768	1.683	22.5	19.2	141 W	25 84
6 15	21 43.50	-27 41.6	1.019	1.796	28.0	20.1	124 W	17* 88	7 25	22 28.92	-21 34.7	0.710	1.666	18.2	18.9	149 W	23 86
6 25	21 52.53	-27 33.2	0.925	1.767	25.7	19.7	131 W	17* 88	7 30	22 29.13	-22 16.5	0.687	1.659	15.9	18.7	153 W	23 86
6 30	21 55.82	-27 31.5	0.881	1.753	24.3	19.6	135 W	17 88	8 4	22 28.42	-23 0.4	0.668	1.652	13.5	18.6	158 W	22 87
7 5	21 58.17	-27 31.2	0.841	1.740	22.7	19.4	139 W	17 88	8 9	22 26.86	-23 44.6	0.653	1.646	11.3	18.5	161 W	21 88
7 10	21 59.54	-27 31.9	0.804	1.727	20.8	19.2	143 W	17 88	8 14	22 24.57	-24 27.0	0.642	1.640	9.5	18.3	164 W	21 88
7 15	21 59.87	-27 33.0	0.770	1.715	18.8	19.1	147 W	17 88	8 19	22 21.75	-25 5.5	0.635	1.636	8.6	18.3	166 W	20 89
7 20	21 59.15	-27 33.5	0.740	1.704	16.6	18.9	151 W	17 88	8 24	22 18.60	-25 38.0	0.633	1.632	8.9	18.3	165 W	19 90
7 25	21 57.43	-27 32.3	0.714	1.693	14.3	18.7	156 W	17 88	8 29	22 15.35	-26 2.8	0.635	1.628	10.4	18.3	163 E	19 90
7 30	21 54.76	-27 28.3	0.692	1.682	11.9	18.6	160 W	18 89	9 3	22 12.25	-26 18.7	0.642	1.626	12.5	18.4	160 E	19 90
8 4	21 51.24	-27 20.1	0.674	1.673	9.7	18.4	164 W	18 89	9 8	22 9.55	-26 24.9	0.653	1.624	15.0	18.6	155 E	19 90
8 9	21 47.06	-27 6.5	0.661	1.664	8.1	18.3	167 W	18 89	9 13	22 7.47	-26 20.9	0.667	1.623	17.5	18.7	151 E	19 90
8 14	21 42.47	-26 46.3	0.652	1.656	7.6	18.2	168 W	18 89	9 18	22 6.18	-26 7.0	0.686	1.623	19.9	18.8	147 E	19 90
8 19	21 37.75	-26 18.8	0.648	1.648	8.5	18.2	166 E	19 90	9 23	22 5.79	-25 43.8	0.708	1.623	22.2	19.0	142 E	19 90
8 24	21 33.20	-25 43.8	0.648	1.642	10.4	18.3	163 E	19 90	9 28	22 6.34	-25 12.2	0.733	1.624	24.3	19.1	138 E	20 89
8 29	21 29.08	-25 1.4	0.653	1.636	12.9	18.4	159 E	20 89	10 3	22 7.85	-24 32.9	0.762	1.626	26.2	19.3	134 E	20 89
9 3	21 25.62	-24 12.4	0.662	1.631	15.5	18.5	154 E	21 88	10 8	22 10.29	-23 46.8	0.793	1.629	27.9	19.4	130 E	21 88
9 8	21 23.03	-23 17.4	0.676	1.627	18.2	18.6	150 E	22 87	10 13	22 13.65	-22 54.7	0.826	1.632	29.4	19.5	127 E	22 87
9 13	21 21.46	-22 17.5	0.693	1.624	20.7	18.8	145 E	23 86	10 18	22 17.85	-21 57.4	0.863	1.636	30.6	19.7	123 E	23 86
9 18	21 20.97	-21 13.7	0.714	1.622	23.1	18.9	141 E	24 85	10 23	22 22.79	-20 55.7	0.901	1.641	31.7	19.8	120 E	24 85
9 23	21 21.59	-20 7.0	0.738	1.620	25.3	19.0	136 E	25 84	10 28	22 28.41	-19 50.1	0.941	1.647	32.7	19.9	117 E	25 84
9 28	21 23.27	-18 58.0	0.765	1.620	27.2	19.2	132 E	26 83	11 2	22 34.62	-18 41.2	0.984	1.653	33.4	20.1	114 E	26 83
10 3	21 25.97	-17 47.5	0.795	1.620	28.9	19.3	128 E	27 82	11 7	22 41.37	-17 29.3	1.028	1.660	34.0	20.2	111 E	28 81
10 13	21 34.19	-15 23.2	0.863	1.623	31.7	19.6	121 E	30 79	11 12	22 48.59	-16 15.0	1.074	1.667	34.5	20.3	108 E	29 80
10 23	21 45.59	-12 56.0	0.940	1.630	33.7	19.8	115 E	32 77	11 17	22 56.21	-14 58.5	1.122	1.675	34.8	20.4	105 E	30 79
11 2	21 59.49	-10 27.1	1.024	1.640	34.9	20.1	109 E	35 74	11 22	23 4.18	-13 40.4	1.171	1.684	35.0	20.5	102 E	31 78
11 12	22 15.35	-7 56.3	1.116	1.654	35.6	20.3	103 E	37 72	11 27	23 12.44	-12 20.8	1.222	1.693	35.1	20.6	100 E	33 76*
11 22	22 32.67	-5 24.0	1.213	1.670	35.8	20.5	98 E	40 68*	12 2	23 20.95	-11 0.1	1.274	1.703	35.1	20.7	97 E	34 74*
12 2	22 51.09	-2 50.8	1.316	1.690	35.6	20.7	93 E	42 63*	12 7	23 29.70	-9 38.5	1.328	1.713	35.0	20.8	94 E	35 71*
12 12	23 10.34	-0 17.0	1.424	1.712	35.1	20.9	89 E	45 57*	12 12	23 38.65	-8 16.3	1.383	1.724	34.8	20.9	92 E	37 68*
12 22	23 30.22	+2 16.5	1.536	1.736	34.3	21.1	84 E	47 51*	12 17	23 47.76	-6 53.7	1.438	1.736	34.5	21.0	89 E	38 65*
1	23 50.57	+4 48.6	1.652	1.763	33.3	21.2	80 E	50 46*	12 22	23 57.02	-5 31.0	1.495	1.747	34.2	21.1	87 E	39 62*
1 11	0 11.32	+7 18.5	1.771	1.792	32.0	21.4	75 E	52 40*	12 27	0 6.40	-4 8.5	1.553	1.760	33.8	21.2	85 E	41 58*
368812 2006 AA₁₁									1	0 15.90	-2 46.2	1.611	1.772	33.4	21.3	82 E	42 55*
4 26	20 27.26	-26 38.0	2.456	2.702	21.8	21.4	93 W	14* 87*	1 6	0 25.51	-1 24.4	1.670	1.785	32.9	21.4	80 E	44 52*
5 6	20 36.76	-26 35.7	2.288	2.664	21.9	21.2	101 W	15* 89	1 11	0 35.22	-0 3.2	1.730	1.798	32.3	21.4	78 E	45 50*
5 16	20 44.58	-26 41.0	2.123	2.624	21.4	21.0	108 W	16* 89	401009 2011 RM₃								
5 26	20 50.40	-26 55.6	1.966	2.584	20.5	20.7	117 W	17* 89	4 26	20 34.02	-28 58.1	1.418	1.768	34.7	21.3	92 W	12* 84*
6 5	20 53.90	-27 20.8	1.817	2.544	19.0	20.5	125 W	17* 89	5 6	20 56.79	-28 20.2	1.310	1.744	35.1	21.1	97 W	12* 88
6 15	20 54.67	-27 57.4	1.682	2.502	16.8	20.2	135 W	17 88	5 16	21 18.36	-27 38.4	1.208	1.722	35.2	20.9	101 W	13* 88
6 25	20 52.42	-28 44.2	1.562	2.461	13.9	19.9	144 W	16 87	5 26	21 38.40	-26 55.2	1.112	1.701	34.9	20.7	106 W	15* 89
7 5	20 47.02	-29 38.0	1.462														

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45° - 26°
401009 2011 RM₃ (continuation)									461367 2000 QX₁₆₀ (continuation)								
9 8	22 7.97	-20 59.5	0.669	1.651	12.4	18.9	159 E	24 85	9 28	23 57.90	+10 55.9	0.659	1.655	6.2	18.4	170 E	56 53
9 13	22 4.69	-20 11.2	0.690	1.656	15.0	19.0	155 E	25 84	10 3	23 55.06	+10 18.8	0.671	1.663	7.2	18.5	168 E	55 54
9 18	22 2.32	-19 18.7	0.714	1.663	17.5	19.2	150 E	26 83	10 8	23 52.70	+9 40.0	0.689	1.673	9.3	18.6	164 E	55 54
9 23	22 0.92	-18 22.8	0.743	1.670	19.9	19.4	146 E	27 82	10 13	23 50.98	+9 1.6	0.711	1.683	11.8	18.8	160 E	54 55
9 28	22 0.51	-17 24.3	0.775	1.677	22.0	19.5	141 E	28 81	10 18	23 50.03	+8 25.4	0.737	1.694	14.4	19.0	155 E	53 56
10 3	22 1.10	-16 24.0	0.811	1.686	24.0	19.7	137 E	29 80	10 23	23 49.90	+7 52.8	0.768	1.705	16.8	19.2	150 E	53 56
10 13	22 5.11	-14 19.4	0.892	1.704	27.2	20.0	129 E	31 78	10 28	23 50.62	+7 24.8	0.803	1.717	19.1	19.4	146 E	52 57
10 23	22 12.43	-12 11.6	0.985	1.725	29.6	20.3	121 E	33 76	11 2	23 52.18	+7 2.2	0.842	1.730	21.2	19.6	141 E	52 57
11 2	22 22.44	-10 2.1	1.087	1.747	31.2	20.6	114 E	35 74	11 12	23 57.74	+6 34.5	0.930	1.756	24.6	19.9	132 E	52 57
11 12	22 34.60	-7 51.1	1.197	1.772	32.1	20.9	108 E	37 72	11 22	0 6.18	+6 30.3	1.031	1.785	27.2	20.2	124 E	52 57
11 22	22 48.41	-5 38.6	1.315	1.798	32.5	21.1	102 E	39 69*	12 2	0 16.98	+6 47.5	1.143	1.815	29.0	20.6	117 E	52 57
12 2	23 3.49	-3 25.2	1.437	1.825	32.5	21.4	96 E	42 65*	12 12	0 29.72	+7 22.8	1.263	1.846	30.1	20.8	110 E	52 57*
									12 22	0 43.97	+8 12.9	1.391	1.879	30.6	21.1	103 E	53 55*
									1 1	0 59.41	+9 14.1	1.525	1.912	30.7	21.3	97 E	54 52*
297612 2001 SQ₃₂₈									380187 2000 WH₂								
4 26	20 44.50	-25 31.8	1.439	1.741	35.3	21.4	89 W	14* 83*	4 26	21 17.00	-34 21.9	2.330	2.455	24.1	21.4	85 W	3* 74*
5 6	21 7.13	-24 25.9	1.337	1.721	35.8	21.3	93 W	15* 87*	5 6	21 29.46	-33 23.4	2.167	2.413	24.7	21.2	91 W	5* 80*
5 16	21 28.45	-23 14.7	1.239	1.704	36.0	21.1	98 W	17* 87	5 16	21 40.17	-32 25.8	2.004	2.370	25.0	21.0	98 W	7* 84
5 26	21 48.20	-22 1.1	1.146	1.689	35.8	20.9	103 W	19* 86	5 26	21 48.82	-31 29.7	1.844	2.327	24.8	20.8	105 W	10* 85
6 5	22 6.09	-20 47.8	1.058	1.676	35.2	20.7	108 W	21* 85	6 5	21 55.04	-30 35.2	1.689	2.284	24.1	20.6	113 W	12* 85
6 15	22 21.71	-19 38.2	0.976	1.666	34.0	20.5	113 W	23* 84	6 15	21 58.32	-29 41.8	1.540	2.241	22.8	20.3	121 W	14* 86
6 25	22 34.60	-18 35.2	0.900	1.658	32.2	20.2	120 W	26* 83	6 20	21 58.68	-29 14.9	1.470	2.219	21.9	20.1	125 W	15* 87
7 5	22 44.30	-17 41.3	0.832	1.653	29.6	20.0	127 W	27* 82	6 25	21 58.12	-28 47.4	1.402	2.198	20.7	20.0	130 W	16* 87
7 15	22 50.21	-16 58.3	0.772	1.651	26.1	19.7	134 W	28 81	6 30	21 56.56	-28 18.8	1.337	2.176	19.4	19.8	135 W	17 88
7 25	22 51.95	-16 26.3	0.723	1.652	21.7	19.4	143 W	29 80	7 5	21 53.94	-27 48.5	1.276	2.155	17.8	19.6	140 W	17 88
8 4	22 49.42	-16 2.8	0.687	1.656	16.2	19.2	153 W	29 80	7 10	21 50.21	-27 15.6	1.220	2.133	15.9	19.4	145 W	18 89
8 9	22 46.66	-15 52.9	0.674	1.659	13.2	19.0	158 W	29 80	7 15	21 45.37	-26 39.2	1.168	2.112	13.8	19.3	150 W	18 89
8 14	22 43.07	-15 43.2	0.666	1.662	10.1	18.9	163 W	29 80	7 20	21 39.45	-25 58.4	1.122	2.091	11.4	19.1	156 W	19 90
8 19	22 38.87	-15 32.6	0.662	1.666	6.9	18.7	169 W	29 80	7 25	21 32.54	-25 12.0	1.081	2.070	8.9	18.8	162 W	20 89
8 24	22 34.27	-15 20.4	0.663	1.671	4.2	18.6	173 W	30 79	7 30	21 24.78	-24 19.4	1.046	2.049	6.2	18.6	167 W	21 88
8 29	22 29.52	-15 6.0	0.669	1.677	3.4	18.6	174 E	30 79	8 4	21 16.34	-23 20.0	1.018	2.028	3.8	18.4	172 W	22 87
9 3	22 24.89	-14 48.7	0.679	1.683	5.4	18.7	171 E	30 79	8 9	21 7.49	-22 13.7	0.997	2.008	3.3	18.3	173 E	23 86
9 8	22 20.63	-14 28.4	0.695	1.690	8.3	18.9	166 E	31 78	8 14	20 58.53	-21 0.7	0.983	1.988	5.4	18.4	169 E	24 85
9 13	22 16.97	-14 4.8	0.715	1.697	11.3	19.1	161 E	31 78	8 19	20 49.77	-19 41.9	0.976	1.968	8.4	18.5	163 E	25 84
9 23	22 12.08	-13 8.0	0.768	1.714	16.9	19.5	150 E	32 77	8 24	20 41.50	-18 18.7	0.976	1.948	11.6	18.6	157 E	27 82
10 3	22 10.89	-12 0.0	0.838	1.732	21.5	19.9	141 E	33 76	8 29	20 33.98	-16 52.7	0.982	1.928	14.7	18.7	151 E	28 81
10 13	22 13.45	-10 42.7	0.922	1.753	25.1	20.2	132 E	34 75	9 3	20 27.41	-15 25.3	0.994	1.909	17.7	18.8	145 W	30 79
10 23	22 19.40	-9 17.3	1.018	1.776	27.7	20.5	124 E	36 73	9 8	20 21.94	-13 58.0	1.012	1.891	20.5	18.9	139 E	31 78
11 2	22 28.17	-7 45.0	1.124	1.800	29.6	20.8	116 E	37 72	9 13	20 17.67	-12 32.0	1.034	1.872	23.1	19.0	133 E	32 77
11 12	22 39.22	-6 6.5	1.238	1.825	30.7	21.1	110 E	39 70	9 23	20 12.80	-9 46.5	1.089	1.837	27.3	19.2	123 E	35 74
11 22	22 52.07	-4 22.2	1.360	1.852	31.3	21.3	103 E	41 68*	10 3	20 12.59	-7 11.5	1.154	1.804	30.6	19.4	113 E	38 71
									10 13	20 16.58	-4 45.9	1.227	1.773	32.9	19.6	105 E	40 69
									10 23	20 24.19	-2 26.4	1.301	1.744	34.4	19.7	98 E	43 66*
									11 2	20 34.85	-0 9.7	1.377	1.719	35.3	19.8	92 E	45 61*
									11 12	20 48.13	+2 7.4	1.451	1.696	35.6	19.9	86 E	47 55*
									11 22	21 3.64	+4 27.6	1.522	1.677	35.6	20.0	81 E	49 49*
									12 2	21 21.08	+6 52.6	1.591	1.661	35.2	20.1	76 E	52* 42*
									12 12	21 40.27	+9 23.5	1.657	1.650	34.6	20.1	72 E	54* 35*
									12 22	22 1.03	+12 0.6	1.720	1.642	33.9	20.2	69 E	55* 29*
									1 1	22 23.28	+14 42.9	1.781	1.639	33.1	20.2	65 E	55* 23*
									1 11	22 46.95	+17 29.5	1.841	1.639	32.2	20.3	63 E	55* 18*
									1 21	23 11.99	+20 17.9	1.901	1.644	31.2	20.3	60 E	53* 14*
									334028 2000 XT₃₇								
4 26	21 15.50	-13 55.8	1.670	1.772	33.8	21.5	79 W	22* 71*	4 26	21 17.21	-24 35.3	1.719	1.861	32.3	21.5	82 W	12* 75*
5 6	21 37.43	-11 42.6	1.559	1.745	35.0	21.3	83 W	24* 73*	5 6	21 33.82	-22 34.0	1.602	1.848	33.0	21.3	87 W	14* 81*
5 16	21 58.71	-9 20.5	1.452	1.719	36.0	21.2	87 W	26* 73*	5 16	21 48.69	-20 25.8	1.485	1.834	33.4	21.2	93 W	17* 84*
5 26	22 19.23	-6 51.5	1.350	1.695	36.7	21.0	91 W	29* 71	5 26	22 1.61	-18 11.2	1.369	1.820	33.4	21.0	99 W	21* 82
6 5	22 38.91	-4 17.7	1.253	1.674	37.2	20.8	95 W	33* 68	6 5	22 12.29	-15 50.4	1.255	1.805	32.9	20.8	105 W	25* 80
6 15	22 57.57	+1 41.8	1.161	1.656	37.3	20.6	99 W	37* 66	6 15	22 20.34	-13 23.4	1.146	1.791	31.8	20.5	112 W	29* 77
6 25	23 14.99	+0 53.1	1.074	1.640	37.1	20.4	103 W	42* 63	6 25	22 25.26	-10 50.2	1.042	1.776	29.9	20.2	119 W	34* 75
7 5	23 30.94	+3 23.7	0.993	1.627	36.4	20.2	108 W	47* 61	7 5	22 26.50	-8 10.5	0.946	1.761	27.2	19.9	128 W	37 72
7 15	23 45.00	+5 45.9	0.918	1.618	35.2	20.0	113 W	50* 58	7 15	22 23.45	-5 25.5	0.862	1.746	23.6	19.6	137 W	40 69
7 20	23 51.20	+6 52.4	0.883	1.615	34.4	19.9	116 W	52* 57	7 25	22 15.74	-2 38.1	0.791	1.731	19.0	19.3	146 W	42 67
7 25	23 56.76	+7 55.2	0.850	1.612	33.3	19.8	119 W	53 56	7 30	22 10.15	-1 15.1	0.763	1.724	16.5	19.1	151 W	44 65
7 30	0 1.63	+8 53.5	0.818	1.610	32.1	19.7	122 W	54 55	8 4	22 3.50	+0 5.8	0.739	1.716	13.9	18.9	156 W	45 64
8 4	0 5.72	+9 46.6	0.789	1.609	30.7	19.5	126 W	55 54	8 9	21 55.96	+1 23.3	0.721	1.709	11.7	18.8	160 W	46 63
8 9	0 8.98	+10 33.7	0.761	1.609	29.1	19.4	129 W	56 53	8 14	21 47.75	+2 35.8	0.708	1.702	10.2	18.7	163 W	48 61
8 14	0 11.34	+11 13.9	0.736	1.610	27.2	19.3	133 W	56 53	8 19	21 39.19	+3 42.0	0					

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
334028 2000 XT₃₇										506355 2017 PB₂₅									
<i>(continuation)</i>										<i>(continuation)</i>									
10 13	20 56.48	+ 8 39.2	0.910	1.625	33.2	19.8	117 E	54	55	6 15	22 56.07	- 0 59.2	1.339	1.801	33.9	20.5	99 W	38*	65
10 18	20 59.74	+ 8 49.8	0.944	1.620	34.4	19.9	113 E	54	55	6 25	23 10.38	+ 2 10.7	1.231	1.774	33.8	20.3	104 W	44*	62
10 23	21 4.00	+ 9 1.6	0.978	1.615	35.4	20.0	110 E	54	55	7 5	23 23.25	+ 5 26.5	1.130	1.749	33.4	20.1	109 W	49*	59
11 2	21 15.21	+ 9 30.8	1.050	1.606	36.9	20.2	104 E	55	54*	7 15	23 34.32	+ 8 45.7	1.038	1.727	32.4	19.8	114 W	54*	55
11 12	21 29.53	+10 9.7	1.123	1.597	37.8	20.4	98 E	55	52*	7 25	23 43.19	+12 4.7	0.954	1.707	31.0	19.6	120 W	57	52
11 22	21 46.42	+11 0.0	1.196	1.590	38.3	20.5	93 E	56	49*	7 30	23 46.67	+13 42.8	0.916	1.699	30.0	19.5	123 W	59	50
12 2	22 5.44	+12 1.7	1.269	1.585	38.5	20.7	88 E	57	45*	8 4	23 49.43	+15 18.7	0.880	1.691	28.9	19.3	126 W	60	49
12 12	22 26.29	+13 14.6	1.341	1.580	38.3	20.8	84 E	58	40*	8 9	23 51.40	+16 51.5	0.848	1.685	27.7	19.2	129 W	62	47
12 22	22 48.69	+14 37.6	1.414	1.577	37.9	20.9	80 E	60	35*	8 14	23 52.55	+18 20.0	0.818	1.679	26.3	19.1	133 W	63	46
1 1	23 12.41	+16 8.6	1.486	1.575	37.3	21.0	76 E	60	31*	8 19	23 52.86	+19 42.9	0.791	1.674	24.8	19.0	136 W	65	44
1 11	23 37.34	+17 45.7	1.557	1.575	36.6	21.0	73 E	60	27*	8 24	23 52.32	+20 58.8	0.767	1.670	23.2	18.8	139 W	66	43
1 21	0 3.32	+19 26.1	1.629	1.576	35.7	21.1	69 E	60	24*	8 29	23 50.97	+22 6.3	0.747	1.667	21.6	18.7	143 W	67	42
280017 2001 WC₂										171730 2000 WX₅₀									
4 26	21 20.92	+ 4 27.9	3.744	3.575	15.6	21.5	73 W	37*	55*	4 26	21 37.58	-11 45.2	1.970	1.931	29.9	21.4	73 W	21*	65*
5 6	21 25.84	+ 6 4.6	3.624	3.591	16.1	21.4	80 W	40*	57*	5 6	21 54.23	- 9 20.6	1.846	1.910	31.1	21.3	78 W	24*	69*
5 16	21 29.36	+ 7 40.5	3.500	3.606	16.3	21.4	88 W	45*	56	5 16	22 9.95	- 6 48.0	1.721	1.888	32.1	21.1	83 W	27*	70*
5 26	21 31.33	+ 9 14.0	3.376	3.621	16.2	21.3	96 W	49*	55	5 26	22 24.63	- 4 7.8	1.597	1.865	32.9	21.0	88 W	31*	68
6 5	21 31.61	+10 43.2	3.255	3.635	15.7	21.2	104 W	53*	53	6 5	22 10.20	+ 0 31.1	1.481	1.927	31.3	21.0	99 W	40*	63
6 15	21 30.10	+12 5.7	3.141	3.647	15.0	21.1	112 W	57*	52	6 15	22 16.65	+ 2 31.8	1.380	1.932	30.3	20.8	106 W	45*	61
6 25	21 26.75	+13 18.5	3.038	3.659	13.9	21.0	120 W	58	51	6 25	22 20.32	+ 4 24.2	1.283	1.935	28.7	20.6	114 W	49*	60
7 5	21 21.63	+14 18.7	2.949	3.670	12.5	20.9	129 W	59	50	7 5	22 20.80	+ 6 4.2	1.192	1.936	26.4	20.4	122 W	51	58
7 15	21 14.91	+15 3.0	2.879	3.680	11.0	20.8	136 W	60	49	7 10	22 19.71	+ 6 47.8	1.149	1.936	24.9	20.3	127 W	52	57
7 25	21 6.97	+15 28.6	2.830	3.690	9.6	20.7	143 W	60	49	7 15	22 17.68	+ 7 25.9	1.110	1.936	23.3	20.2	131 W	52	57
8 4	20 58.32	+15 34.3	2.805	3.698	8.6	20.7	147 W	61	48	7 20	22 14.72	+ 7 57.7	1.073	1.935	21.5	20.0	136 W	53	56
8 14	20 49.58	+15 19.9	2.806	3.706	8.3	20.7	148 E	60	49	7 25	22 10.84	+ 8 22.4	1.040	1.934	19.6	19.9	140 W	53	56
8 24	20 41.40	+14 47.7	2.833	3.713	8.8	20.7	146 E	60	49	7 30	22 6.09	+ 8 38.9	1.012	1.933	17.6	19.8	145 W	54	55
9 3	20 34.36	+14 1.3	2.885	3.719	9.9	20.8	140 E	59	50	8 4	22 0.56	+ 8 46.5	0.987	1.931	15.5	19.7	149 W	54	55
9 13	20 28.90	+13 5.4	2.960	3.724	11.3	20.9	133 E	58	51	8 14	21 47.72	+ 8 33.0	0.954	1.926	12.0	19.4	157 W	54	55
9 23	20 25.30	+12 5.0	3.055	3.729	12.7	21.0	125 E	57	52	8 24	21 33.98	+ 7 42.1	0.942	1.920	10.9	19.4	159 E	53	56
10 3	20 23.67	+11 4.5	3.167	3.732	13.8	21.2	117 E	56	53	9 3	21 21.24	+ 6 21.0	0.953	1.912	13.2	19.5	154 E	51	58
10 13	20 23.98	+10 7.6	3.290	3.735	14.6	21.3	109 E	55	54	9 8	21 15.80	+ 5 32.9	0.966	1.908	15.2	19.6	150 E	51	58
10 23	20 26.13	+ 9 17.3	3.423	3.737	15.2	21.4	101 E	54	55*	9 13	21 11.22	+ 4 42.1	0.985	1.903	17.3	19.7	146 E	50	59
11 2	20 29.95	+ 8 35.4	3.560	3.738	15.4	21.5	93 E	54	53*	9 18	21 7.63	+ 3 50.6	1.008	1.898	19.4	19.8	141 E	49	60
4 26	21 23.40	- 7 59.1	1.884	1.894	30.9	21.5	75 W	26*	65*	9 23	21 5.08	+ 2 59.7	1.035	1.892	21.5	19.9	136 E	48	61
5 6	21 37.72	- 5 51.5	1.786	1.905	31.5	21.4	81 W	29*	68*	9 28	21 3.59	+ 2 10.9	1.066	1.886	23.4	20.0	132 E	47	62
5 16	21 50.44	- 3 42.7	1.686	1.914	31.8	21.3	87 W	32*	68*	10 3	21 3.17	+ 1 25.0	1.101	1.880	25.2	20.1	127	46	63
5 26	22 1.34	- 1 34.5	1.584	1.921	31.8	21.2	93 W	36*	66	10 8	21 3.78	+ 0 43.0	1.138	1.873	26.8	20.2	122	46	63
6 5	22 10.20	+ 0 31.1	1.481	1.927	31.3	21.0	99 W	40*	63	10 13	21 5.38	+ 0 5.4	1.177	1.866	28.2	20.4	118 E	45	64
6 15	22 16.65	+ 2 31.8	1.380	1.932	30.3	20.8	106 W	45*	61	10 23	21 11.31	- 0 54.9	1.260	1.851	30.4	20.6	110 E	44	65
6 25	22 20.32	+ 4 24.2	1.283	1.935	28.7	20.6	114 W	49*	60	11 2	21 20.40	- 1 34.6	1.348	1.835	31.9	20.7	102 E	43	66*
7 5	22 20.80	+ 6 4.2	1.192	1.936	26.4	20.4	122 W	51	58	11 12	21 32.18	- 1 53.7	1.438	1.817	32.9	20.9	95 E	43	64*
7 10	22 19.71	+ 6 47.8	1.149	1.936	24.9	20.3	127 W	52	57	11 22	21 46.18	- 1 52.7	1.528	1.798	33.3	21.0	89 E	43	60*
7 15	22 17.68	+ 7 25.9	1.110	1.936	23.3	20.2	131 W	52	57	12 2	22 1.99	+ 1 33.1	1.616	1.778	33.3	21.1	82	43	55*
7 20	22 14.72	+ 7 57.7	1.073	1.935	21.5	20.0	136 W	53	56	12 12	22 19.33	+ 0 56.1	1.700	1.757	33.0	21.2	77 E	44	49*
7 25	22 10.84	+ 8 22.4	1.040	1.934	19.6	19.9	140 W	53	56	12 22	22 37.94	+ 0 3.4	1.780	1.734	32.5	21.2	71 E	45	43*
7 30	22 6.09	+ 8 38.9	1.012	1.933	17.6	19.8	145 W	54	55	1 1	22 57.63	+ 1 3.1	1.855	1.711	31.7	21.3	66 E	45	38*
8 4	22 0.56	+ 8 46.5	0.987	1.931	15.5	19.7	149 W	54	55	1 11	23 18.30	+ 2 21.8	1.925	1.686	30.7	21.3	61 E	44*	33*
8 14	21 47.72	+ 8 33.0	0.954	1.926	12.0	19.4	157 W	54	55	1 21	23 39.84	+ 3 50.8	1.988	1.661	29.6	21.3	56 E	43*	29*
8 24	21 33.98	+ 7 42.1	0.942	1.920	10.9	19.4	159 E	53	56	506355 2017 PB₂₅									
9 3	21 21.24	+ 6 21.0	0.953	1.912	13.2	19.5	154 E	51	58	4 26	21 29.63	-14 38.2	1.959	1.968	29.7	21.4	76 W	19*	69*
9 8	21 15.80	+ 5 32.9	0.966	1.908	15.2	19.6	150 E	51	58	5 6	21 48.47	-12 14.5	1.827	1.931	31.0	21.3	80 W	22*	72*
9 13	21 11.22	+ 4 42.1	0.985	1.903	17.3	19.7	146 E	50	59	5 16	22 6.63	- 9 40.0	1.698	1.896	32.1	21.1	85 W	25*	73*
9 18	21 7.63	+ 3 50.6	1.008	1.898	19.4	19.8	141 E	49	60	5 26	22 24.02	- 6 55.6	1.573	1.863	32.9	20.9	89 W	29*	71
9 23	21 5.08	+ 2 59.7	1.035	1.892	21.5	19.9	136 E	48	61	6 5	22 40.56	- 4 1.7	1.453	1.831	33.6	20.7	94 W	33*	68
9 28	21 3.59	+ 2 10.9	1.066	1.886	23.4	20.0	132 E	47	62	12 2	23 9.12	+16 51.5	0.843	1.449	41.2	19.2	105 E	62	46*
10 3	21 3.17	+ 1 25.0	1.101	1.880	25.2	20.1	127	46	63	12 12	23 31.48	+16 37.6	0.896	1.440	42.3	19.4	100 E	62	45*
10 8	21 3.78	+ 0 43.0	1.138	1.873	26.8	20.2	122	46	63	12 22	23 56.09	+16 42.8	0.951	1.434	43.0	19.5	96 E	62	43*
10 13	21 5.38	+ 0 5.4	1.177	1.866	28.2	20.4	118 E	45	64	1 1	0 22.43	+17 3.3	1.010	1.431	43.4	19.7	92 E	62	41*
10 23	21 11.31	- 0 54.9	1.260	1.851	30.4	20.6	110 E	44	65	1 11	0 50.17	+17 35.2	1.073	1.430	43.4	19.8	88 E	63	38*
11 2	21 20.40	- 1 34.6	1.348	1.835	31.9	20.7	102 E	43	66*	1 21	1 18.94	+18 14.3	1.139	1.433	43.1	19.9	85 E	63*	37*
11 12	21 32.18	- 1 53.7	1.438	1.817	32.9	20.9	95 E	43	64*										
11 22	21 46.18	- 1 52.7	1.528	1.798	33.3	21.0	89 E	43	60*										
12 2	22 1.99	+ 1 33.1	1.616	1.778															

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°
400242 2007 NZ₄									333901 1999 RX₁₁₂ (continuation)								
4 26	21 41.94	-14 20.9	1.958	1.917	30.1	21.5	73 W	18* 66*	9 3	23 33.59	+ 3 22.3	0.766	1.758	9.0	18.0	164 W	48 61
5 6	22 2.95	-12 56.8	1.835	1.887	31.4	21.3	77 W	19* 70*	9 13	23 25.53	+ 4 19.6	0.729	1.731	4.8	17.6	172 W	49 60
5 16	22 23.62	-11 30.9	1.713	1.858	32.6	21.2	82 W	21* 72*	9 23	23 16.82	+ 5 4.9	0.713	1.707	6.9	17.6	168 E	50 59
5 26	22 43.88	-10 5.3	1.595	1.830	33.5	21.0	86 W	24* 73*	10 3	23 9.31	+ 5 40.7	0.716	1.687	12.6	17.9	158 E	51 58
6 5	23 3.69	- 8 42.2	1.480	1.803	34.2	20.9	91 W	26* 73	10 8	23 6.55	+ 5 56.6	0.724	1.678	15.5	18.0	153 E	51 58
6 15	23 22.91	- 7 24.2	1.369	1.778	34.7	20.7	95 W	29* 71	10 13	23 4.70	+ 6 12.2	0.737	1.670	18.3	18.1	148 E	51 58
6 25	23 41.40	- 6 14.2	1.263	1.755	34.8	20.5	100 W	33* 70	10 18	23 3.87	+ 6 28.4	0.753	1.663	20.9	18.2	143 E	51 58
7 5	23 58.96	- 5 14.9	1.162	1.733	34.5	20.2	105 W	36* 69	10 23	23 4.10	+ 6 45.9	0.773	1.657	23.2	18.3	139 E	52 57
7 15	0 15.28	- 4 29.8	1.068	1.714	33.7	20.0	111 W	39* 68	11 2	23 7.79	+ 7 26.4	0.822	1.649	27.3	18.6	130 E	52 57
7 25	0 29.97	- 4 2.0	0.980	1.697	32.4	19.8	117 W	41* 68	11 12	23 15.62	+ 8 17.1	0.882	1.644	30.4	18.8	123 E	53 56
8 4	0 42.59	- 3 54.3	0.899	1.683	30.4	19.5	123 W	41 68	11 22	23 27.10	+ 9 19.6	0.950	1.644	32.7	19.0	116 E	54 55
8 14	0 52.55	- 4 9.0	0.828	1.671	27.6	19.2	130 W	41 68	12 2	23 41.61	+ 10 33.4	1.026	1.648	34.2	19.3	110 E	56 55
8 24	0 59.30	- 4 46.1	0.767	1.662	24.1	19.0	138 W	40 69	12 12	23 58.64	+ 11 57.2	1.109	1.656	35.2	19.5	104 E	57 51*
9 3	1 2.41	- 5 42.8	0.718	1.655	19.6	18.7	147 W	39 70	12 22	0 17.68	+ 13 29.1	1.198	1.668	35.6	19.7	99 E	58 48*
9 8	1 2.52	- 6 16.7	0.699	1.653	17.2	18.5	151 W	39 70	1 1	0 38.30	+ 15 6.2	1.292	1.684	35.6	19.8	94 60	44*
9 13	1 1.71	- 6 52.4	0.683	1.652	14.7	18.4	155 W	38 71	1 11	1 0.22	+ 16 46.2	1.392	1.703	35.3	20.0	90 62	40*
9 18	1 0.08	- 7 28.3	0.672	1.652	12.2	18.3	160 W	38 71	1 21	1 23.13	+ 18 26.0	1.497	1.726	34.6	20.2	86 E	63*
9 23	0 57.74	- 8 2.4	0.665	1.652	10.0	18.2	163 W	37 72	525783 2005 SU₁₆₄								
9 28	0 54.86	- 8 33.1	0.663	1.653	8.4	18.1	166 W	36 73	4 26	22 0.74	- 19 45.3	1.771	1.720	33.5	21.4	70 W	11* 64*
10 3	0 51.64	- 8 58.4	0.665	1.655	8.1	18.1	167 W	36 73	5 6	22 26.56	- 18 10.9	1.670	1.694	34.9	21.3	74 W	12* 68*
10 8	0 48.32	- 9 16.8	0.672	1.657	9.0	18.1	165 E	36 73	5 16	22 52.06	- 16 30.4	1.571	1.670	36.2	21.2	77 W	13* 71*
10 13	0 45.13	- 9 26.9	0.684	1.661	10.9	18.3	162 E	36 73	5 26	23 17.15	- 14 45.9	1.477	1.647	37.3	21.0	80 W	15* 73*
10 18	0 42.30	- 9 28.2	0.700	1.664	13.2	18.4	158 E	36 73	6 5	23 41.78	- 12 59.7	1.388	1.628	38.3	20.9	84 W	18* 75*
10 23	0 40.02	- 9 20.3	0.720	1.669	15.7	18.6	153 E	36 73	6 15	0 5.79	- 11 14.1	1.302	1.610	39.0	20.8	87 W	21* 75*
11 2	0 37.56	- 8 38.4	0.773	1.681	20.3	18.9	144 E	36 73	6 25	0 29.03	- 9 31.6	1.221	1.596	39.6	20.6	91 W	25* 74
11 12	0 38.41	- 7 25.6	0.841	1.695	24.2	19.2	135 E	38 71	7 5	0 51.31	- 7 54.4	1.144	1.585	39.8	20.5	94 W	29* 72
11 22	0 42.63	- 5 48.6	0.922	1.711	27.3	19.5	127 E	39 70	7 15	1 12.34	- 6 24.9	1.070	1.576	39.7	20.3	98 W	33* 70
11 27	0 45.90	- 4 53.2	0.966	1.720	28.6	19.7	123 E	40 69	7 25	1 31.77	- 5 4.9	1.001	1.571	39.2	20.1	102 W	37* 69
12 2	0 49.88	- 3 54.3	1.013	1.730	29.6	19.8	120 E	41 68	8 4	1 49.20	- 3 55.6	0.935	1.569	38.2	20.0	107 W	40* 68
12 7	0 54.51	- 2 54.2	1.063	1.740	30.5	19.9	116 E	42 67	8 14	2 4.06	- 2 58.0	0.874	1.571	36.6	19.8	113 W	42* 67
12 12	0 59.75	- 1 48.2	1.114	1.751	31.2	20.1	113 E	43 66	8 24	2 15.76	- 2 11.6	0.817	1.576	34.2	19.6	119 W	43 66
12 22	1 11.81	+ 0 25.0	1.223	1.774	32.1	20.3	107 E	45 64*	9 3	2 23.65	- 1 35.2	0.766	1.584	31.1	19.3	126 W	43 66
1 1	1 25.64	+ 2 41.5	1.338	1.799	32.5	20.6	101 E	48 60*	9 13	2 27.07	- 1 6.0	0.722	1.596	26.9	19.1	134 W	44 65
1 11	1 40.93	+ 4 58.4	1.459	1.826	32.5	20.8	95 E	50 56*	9 23	2 25.69	- 0 39.3	0.689	1.610	21.8	18.9	143 W	44 65
1 21	1 57.42	+ 7 13.3	1.584	1.853	32.1	21.0	89 E	52 51*	9 28	2 23.22	- 0 25.2	0.677	1.618	18.9	18.8	149 W	45 64
488943 2005 UL₁₄₇									10 3	2 19.68	- 0 9.6	0.668	1.627	15.8	18.6	154 W	45 64
4 26	21 43.89	- 21 54.5	1.662	1.705	34.7	21.4	75 W	11* 69*	10 8	2 15.19	+ 0 8.4	0.664	1.637	12.7	18.5	159 W	45 64
5 6	22 9.52	- 20 18.1	1.563	1.681	36.0	21.3	78 W	12* 72*	10 13	2 10.01	+ 0 29.3	0.665	1.647	9.7	18.4	164 W	45 64
5 16	22 34.54	- 18 34.5	1.467	1.659	37.1	21.1	82 W	14* 76*	10 23	1 58.62	+ 1 22.3	0.680	1.669	6.0	18.3	170 W	46 63
5 26	22 58.83	- 16 45.8	1.375	1.640	38.0	21.0	85 W	16* 78*	11 2	1 47.76	+ 2 30.5	0.716	1.693	9.1	18.6	164 E	48 61
6 5	23 22.27	- 14 54.4	1.288	1.623	38.7	20.8	89 W	19* 78*	11 12	1 39.38	+ 3 52.8	0.773	1.719	14.5	19.0	154 E	49 60
6 15	23 44.70	- 13 2.9	1.204	1.609	39.1	20.7	93 W	22* 77	11 22	1 34.70	+ 5 26.1	0.848	1.747	19.3	19.4	144 E	50 59
6 25	0 5.90	- 11 13.8	1.125	1.598	39.2	20.5	96 W	26* 75	12 2	1 33.98	+ 7 7.0	0.940	1.776	23.3	19.8	135 E	52 57
7 5	0 25.62	- 9 29.5	1.049	1.590	38.9	20.4	101 W	30* 73	12 12	1 37.03	+ 8 52.8	1.045	1.807	26.2	20.2	126 E	54 55
7 15	0 43.50	- 7 52.4	0.978	1.585	38.2	20.2	105 W	34* 72	12 22	1 43.39	+ 10 41.3	1.161	1.838	28.3	20.5	118 E	56 53
7 25	0 59.12	- 6 24.4	0.911	1.584	36.9	20.0	110 W	38* 70	1 1	1 52.49	+ 12 30.5	1.286	1.871	29.5	20.8	110 E	58 51*
8 4	1 11.97	- 5 6.7	0.848	1.585	35.0	19.8	116 W	40* 69	1 11	2 3.89	+ 14 19.1	1.418	1.904	30.2	21.1	103 E	59 49*
8 14	1 21.41	- 4 0.6	0.791	1.590	32.3	19.6	123 W	41 68	1 21	2 17.16	+ 16 5.5	1.556	1.937	30.3	21.3	97 E	61 45*
8 24	1 26.83	- 3 5.4	0.741	1.598	28.6	19.3	131 W	42 67	253692 2003 UH₂₆₀								
9 3	1 27.76	- 2 19.8	0.700	1.609	23.9	19.1	140 W	43 66	4 26	22 12.26	- 17 50.5	2.654	2.447	22.3	21.4	67 W	11* 61*
9 13	1 24.00	- 1 41.0	0.672	1.623	18.1	18.8	150 W	43 66	5 6	22 28.00	- 17 8.9	2.503	2.412	23.6	21.3	73 W	13* 67*
9 23	1 16.15	- 1 4.4	0.658	1.639	11.6	18.6	161 W	44 65	5 16	22 43.26	- 16 32.4	2.350	2.376	24.7	21.2	79 W	15* 73*
10 3	1 5.64	+ 0 25.2	0.662	1.658	5.2	18.3	171 W	45 64	5 26	22 57.95	- 16 3.0	2.195	2.340	25.6	21.0	85 W	17* 77*
10 13	0 54.54	+ 0 20.9	0.686	1.680	5.1	18.4	171 E	45 64	6 5	23 11.98	- 15 43.0	2.042	2.303	26.1	20.8	91 W	19* 80*
10 23	0 45.09	+ 1 16.9	0.731	1.703	10.9	18.9	161 E	46 63	6 15	23 25.17	- 15 35.1	1.891	2.266	26.4	20.7	98 W	22* 80*
11 2	0 38.79	+ 2 23.0	0.795	1.729	16.5	19.3	150 E	47 62	6 25	23 37.35	- 15 41.9	1.744	2.229	26.2	20.4	105 W	25* 80
11 12	0 36.36	+ 3 38.8	0.876	1.756	21.1	19.7	140 E	49 60	7 5	23 48.28	- 16 6.3	1.604	2.191	25.6	20.2	111 W	27* 80
11 22	0 37.82	+ 5 3.1	0.972	1.784	24.7	20.0	131 E	50 59	7 15	23 57.60	- 16 51.2	1.471	2.153	24.5	19.9	119 W	28* 81
12 2	0 42.72	+ 6 34.1	1.081	1.814	27.2	20.4	123 E	52 57	7 25	0 4.95	- 17 58.7	1.349	2.115	22.8	19.7	126 W	27 82
12 12	0 50.58	+ 8 10.6	1.199	1.845	29.0	20.7	115 E	53 56	8 4	0 9.88	- 19 29.4	1.239	2.077	20.5	19.4	134 W	26 83
12 22	1 0.86	+ 9 51.0	1.326	1.876	30.0	21.0	108 E	55 54*	8 14	0 11.91	- 21 21.6	1.143	2.039	17.8	19.1	142 W	24 85
1 1	1 13.09	+ 11 33.7	1.459	1.908	30.4	21.2	101 E	57 51*	8 19	0 11.72	- 22 23.7	1.102	2.020	16.4	18.9	146 W	23 86
1 11	1 26.94	+ 13 17.4	1.596	1.941	30.3	21.5	95 E	58 47*	8 24	0 10.70	- 23 28.4	1.066	2.002	15.1	18.8	149 W	22 87
333901 1999 RX₁₁₂									8 29	0 8.84	- 24 33.9	1.034	1.983	13.9	18.7	152 W	20 89
4 26	21 46.52	- 17 28.1	2.353	2.269	25.1	21.5	73 W	15* 67									

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°-26°
253692 2003 UH₂₆₀ (continuation)									539918 2017 FC₁₂₈ (continuation)								
11 2	23 28.52	-26 58.4	1.047	1.764	29.3	18.9	120 E	18 89	8 24	1 38.65	+19 20.7	1.105	1.837	28.3	20.4	120 W	64 45
11 7	23 29.78	-25 56.5	1.072	1.750	30.6	19.0	116 E	19 90	9 3	1 39.18	+20 6.8	1.049	1.861	24.7	20.2	130 W	65 44
11 12	23 32.01	-24 47.2	1.098	1.736	31.8	19.1	112 E	20 89	9 13	1 35.74	+20 25.9	1.004	1.886	20.3	20.0	139 W	65 44
11 17	23 35.14	-23 31.4	1.126	1.723	32.9	19.1	109 E	21 88	9 23	1 28.68	+20 14.8	0.974	1.911	15.1	19.8	150 W	65 44
11 22	23 39.12	-22 10.1	1.154	1.710	33.8	19.2	106 E	23 86	9 28	1 24.08	+19 57.7	0.966	1.924	12.4	19.7	156 W	65 44
11 27	23 43.88	-20 43.9	1.184	1.698	34.5	19.2	103 E	24 85	10 3	1 18.97	+19 33.1	0.963	1.937	9.6	19.6	161 W	65 44
12 2	23 49.36	-19 13.3	1.215	1.687	35.2	19.3	100 E	26 83	10 8	1 13.59	+19 2.0	0.966	1.950	7.2	19.5	166 W	64 45
12 7	23 55.50	-17 38.9	1.246	1.677	35.7	19.4	97 E	27 81*	10 13	1 8.17	+18 25.4	0.975	1.964	5.5	19.5	169 E	63 46
12 12	0 2.25	-16 1.2	1.278	1.667	36.1	19.4	94 E	29 78*	10 18	1 2.96	+17 45.0	0.989	1.977	5.4	19.5	169 E	63 46
12 17	0 9.54	-14 20.7	1.311	1.658	36.4	19.5	91 E	31 74*	10 23	0 58.15	+17 2.4	1.010	1.990	6.8	19.6	166 E	62 47
12 22	0 17.33	-12 37.8	1.344	1.649	36.6	19.5	89 E	32 70*	10 28	0 53.92	+16 19.4	1.036	2.003	9.0	19.8	162 E	61 48
12 27	0 25.58	-10 53.0	1.377	1.642	36.7	19.6	86 E	34 67*	11 2	0 50.40	+15 37.5	1.068	2.017	11.4	20.0	156 E	61 48
1 1	0 34.24	-9 6.6	1.411	1.635	36.7	19.6	84 E	36 63*	11 7	0 47.70	+14 58.2	1.106	2.030	13.7	20.1	151 E	60 49
1 6	0 43.30	-7 19.0	1.446	1.629	36.7	19.6	82 E	38 60*	11 12	0 45.86	+14 22.6	1.148	2.043	15.9	20.3	146 E	59 50
1 11	0 52.72	-5 30.7	1.480	1.624	36.6	19.7	80 E	39 57*	11 22	0 44.82	+13 25.9	1.247	2.070	19.6	20.6	135 E	58 51
1 16	1 2.48	-3 41.9	1.515	1.620	36.4	19.7	78 E	41 54*	12 2	0 47.09	+12 50.4	1.361	2.096	22.4	21.0	126 E	58 51
1 21	1 12.55	-1 53.3	1.551	1.617	36.1	19.8	76 E	43* 51*	12 12	0 52.31	+12 36.1	1.487	2.123	24.4	21.2	117 E	58 51
									12 22	1 0.02	+12 41.0	1.623	2.149	25.7	21.5	109 E	58 51*
297695 2001 VK₃₄									347961 2003 RK₁								
4 26	22 14.75	-12 48.4	2.033	1.843	29.6	21.5	65 W	15* 58*	4 26	22 32.12	-19 54.4	2.507	2.252	23.6	21.5	64 W	7* 57*
5 6	22 37.56	-10 50.0	1.914	1.807	31.3	21.3	69 W	16* 62*	5 6	22 51.18	-18 38.7	2.361	2.207	25.2	21.3	69 W	8* 63*
5 16	23 03.37	-8 45.8	1.797	1.772	32.9	21.2	72 W	19* 65*	5 16	23 10.05	-17 22.6	2.215	2.161	26.7	21.2	74 W	10* 68*
5 26	23 23.18	-6 37.2	1.683	1.738	34.4	21.1	76 W	21* 66*	5 26	23 28.70	-16 7.4	2.070	2.117	28.0	21.0	79 W	13* 72*
6 5	23 46.04	-4 25.7	1.573	1.705	35.8	20.9	79 W	24* 67*	6 5	23 47.11	-14 54.1	1.927	2.072	29.1	20.9	83 W	16* 76*
6 15	0 8.91	-2 13.2	1.467	1.675	37.0	20.7	83 W	28* 68*	6 15	0 5.20	-13 44.2	1.787	2.029	30.0	20.7	88 W	19* 77*
6 25	0 31.78	-0 1.7	1.366	1.646	38.0	20.6	86 W	32* 64	6 25	0 22.86	-12 39.0	1.651	1.986	30.7	20.5	93 W	23* 77*
7 5	0 54.60	+2 6.9	1.269	1.620	38.9	20.4	90 W	37* 62	7 5	0 39.98	-11 39.6	1.519	1.945	31.2	20.3	98 W	27* 76
7 15	1 17.24	+4 10.2	1.178	1.597	39.5	20.2	93 W	42* 60	7 15	0 56.34	-10 47.6	1.394	1.904	31.3	20.1	103 W	30* 75
7 25	1 39.51	+6 6.0	1.093	1.576	39.8	20.1	97 W	47* 58	7 25	1 11.69	-10 3.8	1.274	1.866	31.1	19.8	109 W	33* 74
8 4	2 1.18	+7 52.3	1.012	1.559	39.8	19.9	101 W	51* 56	8 4	1 25.71	-9 28.7	1.162	1.829	30.4	19.5	114 W	35* 73
8 14	2 21.85	+9 26.9	0.937	1.546	39.3	19.7	105 W	54* 55	8 14	1 37.92	-9 2.6	1.057	1.795	29.2	19.3	120 W	36 73
8 24	2 41.04	+10 48.6	0.867	1.536	38.4	19.5	109 W	56 53	8 24	1 47.82	-8 44.1	0.962	1.763	27.4	19.0	127 W	36 73
9 3	2 58.19	+11 56.5	0.803	1.530	36.8	19.2	115 W	57 52	9 3	1 54.83	-8 30.6	0.877	1.735	24.9	18.7	134 W	36 73
9 13	3 12.51	+12 50.4	0.745	1.528	34.5	19.0	121 W	58 51	9 8	1 57.06	-8 24.4	0.838	1.721	23.3	18.5	137 W	37 72
9 23	3 23.28	+13 31.1	0.693	1.530	31.2	18.8	128 W	59 50	9 13	1 58.35	-8 17.4	0.803	1.709	21.6	18.3	141 W	37 72
10 3	3 29.75	+14 0.0	0.650	1.536	27.0	18.5	136 W	59 50	9 18	1 58.66	-8 8.6	0.771	1.697	19.7	18.2	145 W	37 72
10 13	3 31.40	+14 18.9	0.618	1.546	21.6	18.2	145 W	59 50	9 23	1 58.00	-7 56.7	0.743	1.687	17.6	18.0	149 W	37 72
10 23	3 28.38	+14 30.6	0.598	1.560	15.2	18.0	156 W	60 49	9 28	1 56.37	-7 40.8	0.719	1.677	15.4	17.9	154 W	37 72
10 28	3 25.38	+14 34.6	0.594	1.568	11.7	17.9	161 W	60 49	10 3	1 53.83	-7 19.4	0.699	1.668	13.3	17.7	158 W	38 71
11 2	3 21.64	+14 37.9	0.594	1.577	8.1	17.7	167 W	60 49	10 8	1 50.50	-6 51.4	0.683	1.660	11.3	17.6	161 W	38 71
11 7	3 17.42	+14 41.2	0.598	1.587	4.5	17.6	173 W	60 49	10 13	1 46.56	-6 15.8	0.672	1.653	9.8	17.5	164 W	39 70
11 12	3 13.02	+14 45.0	0.608	1.597	1.9	17.5	177 W	60 49	10 23	1 37.79	-4 39.6	0.664	1.643	9.7	17.4	164 E	40 69
11 17	3 8.76	+14 50.0	0.622	1.609	3.9	17.7	174 E	60 49	11 2	1 29.50	-2 31.1	0.675	1.637	13.4	17.6	157 E	42 67
11 22	3 4.90	+14 56.8	0.641	1.621	7.2	17.9	168 E	60 49	11 12	1 23.58	+0 3.2	0.706	1.635	18.3	17.9	149 E	45 64
11 27	3 1.66	+15 5.7	0.665	1.633	10.4	18.1	163 E	60 49	11 17	1 21.94	+1 27.1	0.727	1.636	20.6	18.0	144 E	46 63
12 2	2 59.21	+15 17.1	0.693	1.647	13.5	18.4	157 E	60 49	11 22	1 21.30	+2 54.0	0.753	1.638	22.8	18.1	140 E	48 61
12 12	2 57.13	+15 48.5	0.763	1.675	18.9	18.8	147 E	61 48	11 27	1 21.67	+4 22.5	0.783	1.641	24.8	18.3	136 E	49 60
12 22	2 59.03	+16 30.9	0.849	1.706	23.1	19.2	137 E	62 47	12 2	1 23.06	+5 51.9	0.816	1.645	26.6	18.4	132 E	51 58
1 1	3 4.62	+17 22.4	0.948	1.739	26.3	19.6	128 E	62 47	12 12	1 28.81	+8 50.5	0.891	1.656	29.5	18.7	124 E	54 55
1 11	3 13.45	+18 20.2	1.058	1.773	28.6	19.9	120 E	63 46	12 22	1 38.13	+11 45.2	0.977	1.672	31.6	19.0	117 E	57 52
1 21	3 25.00	+19 21.5	1.178	1.808	30.0	20.2	113 E	64 45	1 1	1 50.48	+14 32.9	1.073	1.691	33.0	19.3	111 E	60 49*
									1 11	2 5.42	+17 11.8	1.177	1.714	33.7	19.5	105 E	62 46*
									1 21	2 22.50	+19 40.5	1.288	1.741	33.9	19.8	99 E	65 42*
168791 2000 SQ₄₃									260141 2004 QT₂₄								
4 26	22 27.20	-5 17.7	1.313	1.177	47.3	21.4	59 W	19* 52*	4 26	22 32.96	-26 38.9	1.468	1.417	40.8	21.5	67 W	1* 59*
5 6	22 47.02	-3 32.0	1.303	1.163	47.8	21.4	59 W	19* 51*	5 6	23 1.21	-25 16.7	1.402	1.418	41.9	21.4	70 W	2* 62*
5 16	23 6.69	-1 45.2	1.295	1.152	48.2	21.4	58 W	19* 51*	5 16	23 28.78	-23 48.2	1.332	1.416	43.0	21.3	73 W	2* 66*
5 26	23 26.15	+0 1.4	1.291	1.144	48.5	21.4	58 W	19* 50*	5 26	23 55.73	-22 15.2	1.261	1.410	44.1	21.2	76 W	4* 69*
6 5	23 45.37	+1 46.6	1.290	1.138	48.7	21.4	58 W	20* 49*	6 5	0 22.21	-20 38.9	1.187	1.401	45.1	21.1	79 W	6* 72*
6 15	0 4.32	+3 29.3	1.291	1.135	48.8	21.4	58 W	20* 48*	6 15	0 48.29	-19 0.5	1.111	1.388	46.3	21.0	81 W	9* 75*
6 25	0 22.97	+5 8.5	1.294	1.135	48.7	21.4	57 W	21* 48*	6 25	1 14.11	-17 20.1	1.034	1.371	47.5	20.8	84 W	12* 77*
7 5	0 41.32	+6 43.3	1.299	1.138	48.6	21.4	57 W	21* 47*	7 5	1 39.83	-15 37.4	0.956	1.351	48.7	20.7	86 W	16* 78*
7 15	0 59.32	+8 13.1	1.306	1.144	48.4	21.4	57 W	22* 47*	7 15	2 5.61	-13 51.3	0.878	1.327	50.0	20.5	89 W	21* 77*
7 25	1 16.97	+9 37.2	1.313	1.153	48.1	21.4	58 W	23* 46*	7 20	2 18.60	-12 56.2	0.839	1.314	50.7	20.4	90 W	23* 77*
8 4	1 34.23	+10 55.3	1.321	1.164	47.7	21.4	58 W	24* 46*	7 25	2 31.71	-11 59.2	0.800	1.300	51.4	20.3	91 W	25* 76*
8 14	1 51.08	+12 7.1	1.329	1.178	47.3	21.5	59 W	26* 45*	7 30	2 44.98	-10 59.6	0.761	1.285	52.2	20.2		

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
260141 2004 QT₂₄										396593 2001 HC									
<i>(continuation)</i>																			
9 18	5 30.05	+5 29.5	0.403	1.100	65.8	18.9	93 W	50*	58*	4 26	23 34.22	-23 51.1	1.177	1.001	54.3	21.3	54 W	—	45*
9 23	5 54.59	+8 26.2	0.376	1.079	68.4	18.7	91 W	53*	55*	5 1	23 58.37	-21 14.5	1.151	0.961	56.1	21.3	52 W	—	43*
9 28	6 22.14	+11 41.0	0.353	1.058	71.2	18.7	89 W	56*	51*	5 6	0 22.75	-18 16.5	1.130	0.919	57.9	21.2	50 W	—	42*
10 3	6 53.14	+15 8.7	0.335	1.037	74.4	18.6	87 W	59*	47*	5 11	0 47.31	-14 57.1	1.115	0.874	59.6	21.1	48 W	—	40*
10 5	7 6.56	+16 33.3	0.329	1.029	75.8	18.6	86 W	60*	45*	5 16	1 12.07	-11 17.5	1.106	0.827	61.0	21.0	46 W	—	38*
10 7	7 20.58	+17 57.5	0.323	1.021	77.1	18.6	84 W	62*	43*	5 21	1 37.08	-7 19.4	1.105	0.778	62.2	20.9	43 W	—	36*
10 9	7 35.17	+19 20.3	0.319	1.012	78.5	18.6	83 W	63*	41*	5 26	2 2.45	-3 5.2	1.111	0.727	62.8	20.8	40 W	—	33*
10 11	7 50.31	+20 40.5	0.316	1.004	79.9	18.6	82 W	63*	39*	5 31	2 28.41	+1 21.7	1.126	0.674	62.8	20.6	36 W	—	30*
10 13	8 5.95	+21 56.9	0.314	0.996	81.3	18.6	81 W	64*	37*	6 5	2 55.27	+5 57.0	1.149	0.621	61.7	20.5	33 W	—	27*
10 15	8 22.02	+23 8.3	0.313	0.988	82.6	18.6	79 W	65*	35*	6 10	3 23.46	+10 35.1	1.181	0.569	59.2	20.3	29 W	2*	23*
10 17	8 38.45	+24 13.6	0.313	0.980	83.9	18.7	78 W	65*	33*	6 15	3 53.55	+15 8.8	1.221	0.521	54.9	20.0	25 W	3*	18*
10 19	8 55.12	+25 11.8	0.314	0.972	85.2	18.7	76 W	65*	30*	6 20	4 26.17	+19 28.2	1.267	0.480	48.6	19.7	21 W	4*	14*
10 21	9 11.94	+26 2.0	0.317	0.964	86.4	18.8	75 W	65*	28*	6 25	5 1.87	+23 19.3	1.317	0.451	40.4	19.5	17 W	4*	9*
10 23	9 28.77	+26 43.6	0.320	0.957	87.4	18.8	74 W	65*	26*	6 27	5 17.05	+24 40.1	1.337	0.444	36.7	19.4	15 W	4*	7*
10 25	9 45.50	+27 16.3	0.324	0.949	88.4	18.9	73 W	64*	24*	6 29	5 32.70	+25 52.4	1.357	0.439	32.9	19.3	14 W	4*	4*
10 27	10 2.01	+27 40.1	0.329	0.942	89.3	18.9	71 W	64*	23*	7 1	5 48.76	+26 55.2	1.376	0.438	29.2	19.2	12 W	4*	2*
10 29	10 18.19	+27 55.1	0.336	0.934	90.1	19.0	70 W	63*	21*	7 3	6 5.15	+27 47.6	1.395	0.440	25.6	19.1	11 W	4*	—
10 31	10 33.94	+28 1.7	0.343	0.927	90.7	19.0	69 W	62*	19*	7 5	6 21.75	+28 29.0	1.413	0.444	22.4	19.1	10 W	3*	—
11 2	10 49.21	+28 0.4	0.351	0.921	91.3	19.1	68 W	61*	18*	7 7	6 38.45	+28 59.0	1.430	0.452	19.7	19.0	9 W	3*	—
11 4	11 3.92	+27 51.8	0.359	0.914	91.7	19.1	67 W	61*	17*	7 9	6 55.10	+29 17.6	1.447	0.462	17.7	19.1	8 W	2*	—
11 6	11 18.04	+27 36.7	0.368	0.908	92.0	19.2	66 W	60*	16*	7 11	7 11.60	+29 25.2	1.463	0.474	16.4	19.1	8 W	1*	—
11 8	11 31.55	+27 15.6	0.378	0.902	92.2	19.2	65 W	59*	15*	7 13	7 27.83	+29 22.2	1.478	0.489	15.8	19.2	8 W	—	—
11 10	11 44.44	+26 49.2	0.389	0.896	92.2	19.3	65 W	58*	14*	7 15	7 43.69	+29 9.4	1.494	0.505	15.7	19.2	8 E	1*	—
11 12	11 56.74	+26 18.2	0.400	0.890	92.2	19.3	64 W	58*	13*	7 17	7 59.11	+28 47.6	1.508	0.523	16.1	19.4	8 E	2*	—
11 14	12 8.45	+25 43.2	0.411	0.885	92.1	19.4	63 W	57*	13*	7 19	8 14.03	+28 17.8	1.523	0.541	16.7	19.5	9 E	3*	—
11 16	12 19.60	+25 4.6	0.423	0.880	91.9	19.4	63 W	57*	12*	7 21	8 28.43	+27 41.0	1.538	0.561	17.4	19.6	9 E	3*	—
11 18	12 30.22	+24 23.0	0.435	0.875	91.6	19.5	62 W	56*	12*	7 23	8 42.28	+26 58.0	1.552	0.581	18.1	19.7	10 E	4*	—
11 20	12 40.35	+23 38.7	0.448	0.871	91.3	19.5	62 W	56*	12*	7 25	8 55.57	+26 9.7	1.567	0.602	18.7	19.8	11 E	5*	—
11 22	12 50.01	+22 52.2	0.461	0.867	90.9	19.5	61 W	55*	12*	7 27	9 8.32	+25 17.0	1.582	0.623	19.3	19.9	12 E	5*	—
11 27	13 12.39	+20 47.8	0.493	0.858	89.6	19.6	60 W	54*	13*	7 29	9 20.53	+24 20.6	1.598	0.644	19.8	20.1	12 E	5*	1*
12 2	13 32.63	+18 35.1	0.526	0.852	88.0	19.7	60 W	53*	14*	7 31	9 32.23	+23 21.1	1.613	0.665	20.2	20.2	13 E	6*	2*
12 7	13 51.15	+16 16.8	0.559	0.848	86.2	19.7	59 W	52*	15*	8 2	9 43.43	+22 19.2	1.629	0.686	20.5	20.3	14 E	6*	3*
12 12	14 8.36	+13 54.9	0.592	0.847	84.3	19.8	59 W	51*	17*	8 4	9 54.17	+21 15.4	1.645	0.707	20.7	20.4	14 E	6*	4*
12 17	14 24.56	+11 31.0	0.624	0.849	82.3	19.8	59 W	50*	20*	8 9	10 19.13	+18 30.5	1.687	0.759	20.9	20.6	15 E	6*	6*
12 22	14 40.01	+9 6.1	0.654	0.853	80.3	19.8	59 W	48*	22*	8 14	10 41.77	+15 42.0	1.729	0.809	20.7	20.8	16 E	6*	8*
12 27	14 54.92	+6 41.5	0.682	0.860	78.3	19.9	59 W	47*	25*	8 19	11 2.45	+12 53.7	1.773	0.857	20.2	20.9	17 E	6*	9*
1 1	15 9.44	+4 18.0	0.709	0.869	76.4	19.9	59 W	45*	28*	8 24	11 21.52	+10 8.2	1.817	0.903	19.4	21.1	17 E	5*	10*
1 6	15 23.65	+1 56.7	0.733	0.880	74.5	20.0	60 W	44*	31*	8 29	11 39.27	+7 26.9	1.861	0.946	18.6	21.2	17 E	5*	10*
1 11	15 37.66	+0 22.0	0.755	0.893	72.8	20.0	60 W	42*	35*	9 3	11 55.94	+4 50.6	1.904	0.987	17.6	21.3	17 E	4*	10*
1 16	15 51.52	+2 37.5	0.774	0.907	71.1	20.0	61 W	40*	38*	9 8	12 11.75	+2 19.8	1.947	1.025	16.5	21.4	17 E	3*	10*
1 21	16 5.30	-4 49.5	0.791	0.924	69.6	20.1	62 W	38*	41*	9 13	12 26.84	-0 5.2	1.988	1.060	15.4	21.5	16 E	2*	10*
344184 2001 DT₁₀₅										310616 2002 AX									
4 26	23 29.11	-2 3.2	2.855	2.237	18.1	21.5	44 W	11*	37*	4 26	23 51.16	-7 20.8	2.218	1.601	24.4	21.5	41 W	4*	35*
5 6	23 47.86	+0 17.2	2.731	2.193	20.1	21.4	48 W	13*	41*	5 6	0 18.87	-4 33.2	2.133	1.560	26.3	21.4	43 W	5*	37*
5 16	0 6.83	+1 29.4	2.602	2.150	22.0	21.3	53 W	16*	45*	5 16	0 47.17	-1 39.9	2.053	1.521	28.2	21.3	45 W	6*	39*
5 26	0 26.05	+3 15.3	2.471	2.107	23.9	21.2	57 W	19*	49*	5 26	1 16.13	+1 16.2	1.978	1.485	29.9	21.2	47 W	8*	41*
6 5	0 45.58	+4 59.3	2.338	2.064	25.7	21.1	62 W	22*	51*	6 5	1 45.80	+4 12.0	1.910	1.453	31.5	21.2	49 W	11*	42*
6 15	1 5.42	+6 40.1	2.205	2.022	27.4	21.0	66 W	26*	53*	6 15	2 16.22	+7 4.0	1.848	1.425	33.1	21.1	50 W	14*	42*
6 25	1 25.60	+8 16.0	2.072	1.980	28.9	20.8	71 W	31*	54*	6 25	2 47.35	+9 48.1	1.793	1.402	34.4	21.0	51 W	18*	42*
7 5	1 46.13	+9 45.5	1.940	1.940	30.4	20.7	75 W	36*	53*	7 5	3 19.15	+12 20.6	1.744	1.384	35.6	21.0	52 W	22*	41*
7 15	2 6.98	+11 6.7	1.811	1.901	31.7	20.5	79 W	41*	53*	7 15	3 51.49	+14 37.8	1.701	1.372	36.7	20.9	54 W	26*	40*
7 25	2 28.09	+12 17.7	1.684	1.863	32.8	20.4	83 W	46*	52	7 25	4 24.17	+16 36.4	1.663	1.366	37.6	20.9	55 W	31*	39*
8 4	2 49.37	+13 16.6	1.562	1.827	33.7	20.2	88 W	51*	51	8 4	4 56.94	+18 14.2	1.629	1.366	38.4	20.9	57 W	35*	38*
8 14	3 10.65	+14 1.3	1.444	1.793	34.4	20.0	92 W	55*	50	8 14	5 29.50	+19 30.1	1.597	1.372	39.0	20.9	58 W	40*	37*
8 24	3 31.69	+14 30.1	1.331	1.761	34.8	19.8	97 W	58*	49	8 24	6 1.49	+20 24.0	1.567	1.384	39.5	20.8	60 W	44*	36*
9 3	3 52.21	+14 41.5	1.224	1.732	34.8	19.6	101 W	60*	49	9 3	6 32.59	+20 57.5	1.538	1.402	39.8	20.8	63 W	48*	35*
9 13	4 11.78	+14 34.4	1.124	1.706	34.5	19.3	106 W	60*	49	9 13	7 2.45	+21 12.9	1.507	1.425	40.0	20.8	66 W	51*	35*
9 23	4 29.93	+14 8.6	1.030	1.683	33.6	19.1	112 W	59	50	9 23	7 30.78	+21 13.7	1.474	1.453	40.1	20.8	69 W	55*	35*
10 3	4 46.09	+13 25.0	0.945	1.664	32.2	18.8	118 W	58	51	10 3	7 57.34	+21 3.9	1.438	1.485	40.0	20.8	73 W	58*	35*
10 13	4 59.58	+12 25.7	0.868	1.648	30.2	18.6	124 W	57	52	10 13	8 21.86	+20 48.4	1.399	1.521	39.7	20.8	77 W	62*	36*
10 23	5 9.79	+11 15.1	0.801	1.636	27.3	18.3	131 W	56	53	10 23	8 44.13	+20 32.0	1.356	1.560	39.1	20.8	82 W	64*	37*
10 28	5 13.49	+10 37.3	0.771	1.632	25.6	18.2	135 W	56	53	11 2	9 3.94	+20 19.8	1.310	1.601	38.2	20.7	87 W	65*	38*
11 2	5 16.18	+9 59.1	0.745	1.628	23.7	18.0	139 W	55											

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
434786 2006 PW										210718 2000 ST₂₅₂									
<i>(continuation)</i>										<i>(continuation)</i>									
6 5	2 46.03	+ 0 11.6	1.436	0.889	44.5	20.3	38 W	—	32*	11 2	1 21.35	+ 0 53.2	1.656	2.600	8.5	19.0	157 E	44	65
6 15	3 44.72	+ 3 15.1	1.379	0.764	46.4	20.0	33 W	—	27*	11 12	1 14.69	+ 0 55.1	1.681	2.565	12.3	19.1	146 E	44	65
6 25	4 49.59	+ 6 47.8	1.367	0.641	44.7	19.5	26 W	—	20*	11 22	1 10.03	+ 0 38.9	1.728	2.532	15.8	19.3	136 E	44	65
7 5	5 59.14	+10 43.7	1.400	0.538	36.2	19.0	18 W	—	12*	12 2	1 7.85	+ 0 4.6	1.793	2.500	18.7	19.4	126 E	45	64
7 10	6 35.14	+12 45.8	1.428	0.502	28.7	18.6	14 W	—	7*	12 12	1 8.35	+ 0 46.6	1.872	2.468	21.0	19.6	116 E	46	63
7 15	7 11.58	+14 45.1	1.460	0.483	19.4	18.3	9 W	—	2*	12 22	1 11.53	+ 1 52.7	1.960	2.438	22.7	19.7	107 E	47	62*
7 20	7 48.07	+16 34.5	1.491	0.485	9.8	18.0	5 W	—	—	1 1	1 17.19	+ 3 11.4	2.054	2.409	23.8	19.8	99 E	48	59*
7 25	8 24.08	+18 6.2	1.519	0.506	4.7	17.9	2 E	—	—	1 11	1 25.15	+ 4 40.4	2.152	2.381	24.4	19.9	91 E	50	54*
7 30	8 59.11	+19 14.1	1.546	0.544	10.0	18.4	5 E	—	—	1 21	1 35.14	+ 6 17.4	2.250	2.355	24.5	20.0	84 E	51	49*
8 4	9 32.79	+19 55.3	1.573	0.593	15.7	18.8	9 E	2*	1*	483453 2002 AV₁₁									
8 9	10 4.86	+20 10.4	1.601	0.650	19.8	19.2	13 E	5*	3*	5 6	0 32.12	+16 31.1	2.024	1.306	25.2	21.5	33 W	17*	23*
8 14	10 35.19	+20 2.0	1.632	0.710	22.6	19.5	16 E	8*	4*	5 11	0 48.84	+18 30.7	2.001	1.290	25.8	21.4	34 W	18*	22*
8 19	11 3.72	+19 33.7	1.665	0.773	24.3	19.8	18 E	11*	6*	5 16	1 6.06	+20 26.9	1.981	1.276	26.3	21.4	34 W	19*	22*
8 24	11 30.46	+18 49.3	1.703	0.835	25.2	20.0	21 E	13*	7*	5 21	1 23.80	+22 18.4	1.963	1.263	26.8	21.4	34 W	19*	22*
8 29	11 55.50	+17 52.6	1.744	0.898	25.5	20.2	22 E	15*	9*	5 26	1 42.05	+24 4.1	1.948	1.250	27.2	21.4	34 W	20*	21*
9 3	12 18.92	+16 46.9	1.788	0.959	25.4	20.4	24 E	16*	10*	5 31	2 0.84	+25 42.9	1.934	1.240	27.6	21.3	35 W	20*	20*
9 8	12 40.86	+15 35.0	1.835	1.019	25.0	20.6	25 E	17*	10*	6 5	2 20.13	+27 13.5	1.923	1.231	27.9	21.3	35 W	21*	20*
9 13	13 1.44	+14 19.3	1.884	1.077	24.4	20.8	26 E	18*	11*	6 10	2 39.90	+28 34.9	1.913	1.223	28.2	21.3	35 W	21*	19*
9 18	13 20.79	+13 2.0	1.935	1.134	23.6	20.9	27 E	19*	11*	6 15	3 0.09	+29 46.0	1.906	1.217	28.4	21.3	35 W	22*	18*
9 23	13 39.05	+11 44.4	1.988	1.189	22.8	21.1	27 E	20*	11*	6 20	3 20.62	+30 45.9	1.900	1.212	28.5	21.3	35 W	22*	18*
9 28	13 56.33	+10 27.8	2.042	1.242	21.9	21.2	28 E	20*	10*	6 25	3 41.41	+31 34.0	1.896	1.209	28.7	21.3	35 W	23*	17*
10 3	14 12.75	+ 9 12.9	2.096	1.294	20.9	21.3	27 E	20*	10*	6 30	4 2.36	+32 9.7	1.893	1.208	28.8	21.3	35 W	24*	17*
10 8	14 28.40	+ 8 0.7	2.151	1.343	19.9	21.4	27 E	20*	9*	7 5	4 23.34	+32 32.7	1.892	1.209	28.8	21.3	35 W	24*	16*
5 6	0 14.00	+ 0 19.2	2.145	1.551	25.8	21.5	42 W	9*	36*	7 10	4 44.25	+32 43.1	1.891	1.211	28.9	21.3	35 W	25*	16*
5 16	0 40.07	+ 3 34.8	2.099	1.549	27.2	21.5	44 W	11*	38*	7 15	5 4.95	+32 41.1	1.891	1.215	29.0	21.3	35 W	25*	16*
5 26	1 5.97	+ 6 46.3	2.055	1.551	28.5	21.5	47 W	14*	39*	7 20	5 25.32	+32 26.9	1.892	1.220	29.1	21.3	36 W	26*	15*
6 5	1 31.70	+ 9 50.9	2.013	1.557	29.7	21.5	49 W	18*	40*	7 25	5 45.28	+32 1.2	1.893	1.227	29.1	21.3	36 W	27*	15*
6 15	1 57.28	+12 46.0	1.971	1.568	30.7	21.5	52 W	21*	41*	7 30	6 4.73	+31 24.7	1.894	1.236	29.3	21.3	37 W	27*	16*
6 25	2 22.64	+15 29.4	1.929	1.582	31.7	21.5	55 W	26*	41*	8 4	6 23.62	+30 38.3	1.895	1.246	29.4	21.3	37 W	28*	16*
7 5	2 47.72	+17 59.5	1.887	1.600	32.6	21.5	58 W	31*	40*	8 9	6 41.88	+29 42.8	1.896	1.258	29.5	21.4	38 W	29*	16*
7 15	3 12.40	+20 15.1	1.843	1.622	33.3	21.5	61 W	37*	40*	8 14	6 59.49	+28 39.1	1.897	1.271	29.5	21.4	38 W	30*	17*
7 25	3 36.49	+22 15.7	1.797	1.647	34.0	21.5	65 W	43*	39*	8 19	7 16.42	+27 28.1	1.897	1.285	29.9	21.4	39 W	30*	17*
8 4	3 59.81	+24 1.4	1.748	1.675	34.4	21.5	69 W	49*	38*	8 24	7 32.68	+26 10.8	1.896	1.300	30.1	21.5	40 W	31*	18*
8 14	4 22.06	+25 32.8	1.696	1.706	34.6	21.4	73 W	55*	37*	8 29	7 48.28	+24 47.8	1.894	1.316	30.4	21.5	41 W	32*	19*
8 24	4 42.96	+26 51.3	1.641	1.739	34.7	21.4	78 W	61*	36*	482798 2013 QK₄₈									
9 3	5 2.15	+27 58.9	1.582	1.773	34.4	21.4	83 W	67*	36*	5 6	0 45.46	+12 46.6	0.858	0.516	90.9	19.7	31 W	12*	22*
9 13	5 19.22	+28 57.6	1.520	1.810	33.8	21.3	89 W	72*	35*	5 8	0 43.13	+12 2.8	0.884	0.556	85.8	19.8	33 W	13*	25*
9 23	5 33.71	+29 50.1	1.457	1.848	32.7	21.2	96 W	75*	34*	5 10	0 41.74	+11 24.0	0.909	0.596	81.4	19.8	36 W	14*	27*
10 3	5 45.13	+30 39.0	1.393	1.887	31.1	21.1	103 W	76	33	5 12	0 41.06	+10 49.7	0.933	0.635	77.7	19.9	38 W	14*	30*
10 13	5 52.89	+31 26.0	1.331	1.927	28.9	21.0	111 W	76	33	5 14	0 40.93	+10 19.0	0.955	0.674	74.5	19.9	40 W	15*	32*
10 23	5 56.48	+32 12.1	1.273	1.968	26.0	20.9	120 W	77	32	5 16	0 41.20	+ 9 51.4	0.975	0.712	71.7	20.0	42 W	16*	33*
11 2	5 55.45	+32 56.0	1.223	2.009	22.3	20.7	130 W	78	31	5 21	0 43.07	+ 8 52.9	1.020	0.804	66.2	20.2	47 W	17*	38*
11 12	5 49.67	+33 33.9	1.187	2.050	17.9	20.6	141 W	79	30	5 26	0 45.89	+ 8 4.3	1.055	0.892	62.0	20.4	51 W	19*	42*
11 22	5 39.66	+33 59.8	1.168	2.092	12.8	20.4	152 W	79	30	5 31	0 49.08	+ 7 21.5	1.082	0.975	58.8	20.5	55 W	20*	45*
11 27	5 33.43	+34 6.3	1.167	2.113	10.3	20.3	158 W	79	30	6 5	0 52.28	+ 6 41.3	1.101	1.055	56.1	20.7	60 W	22*	49*
12 2	5 26.67	+34 7.6	1.171	2.134	7.8	20.2	163 W	79	30	6 10	0 55.25	+ 6 1.3	1.113	1.131	53.8	20.8	64 W	24*	52*
12 7	5 19.65	+34 3.5	1.182	2.154	5.8	20.2	167 W	79	30	6 15	0 57.83	+ 5 19.8	1.119	1.204	51.7	20.9	68 W	26*	55*
12 12	5 12.65	+33 54.2	1.200	2.175	4.9	20.2	169 E	79	30	6 20	0 59.88	+ 4 35.3	1.120	1.274	49.7	20.9	73 W	29*	57*
12 17	5 5.96	+33 40.1	1.225	2.196	5.6	20.3	168 E	79	30	6 25	1 1.30	+ 3 46.5	1.115	1.341	47.8	21.0	78 W	31*	60*
12 22	4 59.79	+33 22.2	1.256	2.216	7.3	20.5	163 E	78	31	6 30	1 1.99	+ 2 52.5	1.107	1.406	45.8	21.0	83 W	34*	61*
12 27	4 54.34	+33 1.3	1.293	2.237	9.3	20.6	158 E	78	31	7 5	1 1.84	+ 1 52.0	1.096	1.468	43.8	21.0	88 W	36*	62
1 1	4 49.75	+32 38.6	1.336	2.257	11.4	20.8	153 E	78	31	7 10	1 0.75	+ 0 44.3	1.082	1.528	41.6	21.0	93 W	38*	63
1 6	4 46.11	+32 15.0	1.386	2.277	13.4	21.0	148 W	77	32	7 15	0 58.63	+ 0 31.6	1.066	1.585	39.3	21.0	99 W	40*	65
1 11	4 43.47	+31 51.6	1.441	2.298	15.2	21.1	142 E	77	32	7 20	0 55.39	+ 1 56.0	1.051	1.641	36.7	21.0	105 W	41*	66
1 16	4 41.82	+31 29.0	1.500	2.318	16.9	21.3	137 E	76	33	7 25	0 50.96	+ 3 29.0	1.036	1.695	33.9	20.9	111 W	41*	67
1 21	4 41.14	+31 7.7	1.564	2.338	18.3	21.5	132 E	76	33	7 30	0 45.29	+ 5 10.5	1.023	1.747	30.9	20.9	118 W	40*	69
5 6	0 17.16	+ 4 54.2	3.932	3.278	12.3	21.5	44 W	5*	38*	8 4	0 38.35	+ 6 59.5	1.012	1.797	27.6	20.8	125 W	38	

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	21/22	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
494999 2010 JU₃₉										303946 2005 XR₂₈									
<i>(continuation)</i>										<i>(continuation)</i>									
6 7	4 40.13	+14 44.2	1.386	0.417	23.0	19.6	9 W	—	2*	10 8	6 8.98	-5 11.1	1.228	1.720	34.8	19.7	101 W	40	69
6 9	4 54.17	+16 26.2	1.407	0.420	17.8	19.5	7 W	—	—	10 13	6 15.68	-5 16.5	1.177	1.708	34.6	19.5	103 W	40	69
6 11	5 8.19	+18 5.8	1.427	0.427	12.8	19.4	5 W	—	—	10 18	6 21.82	-5 19.2	1.127	1.698	34.3	19.4	106 W	40	69
6 13	5 22.17	+19 42.0	1.446	0.437	8.3	19.3	4 W	—	—	10 23	6 27.33	-5 18.3	1.078	1.688	33.9	19.3	109 W	40	69
6 15	5 36.11	+21 13.8	1.463	0.449	4.9	19.2	2 E	—	—	10 28	6 32.16	-5 12.7	1.029	1.678	33.3	19.2	112 W	40	69
6 17	5 49.99	+22 40.4	1.478	0.465	4.6	19.3	2 E	—	—	11 2	6 36.22	-5 1.0	0.981	1.669	32.4	19.0	116 W	40	69
6 19	6 3.81	+24 1.1	1.493	0.482	6.9	19.5	3 E	—	—	11 7	6 39.42	-4 41.8	0.935	1.661	31.4	18.9	119 W	40	69
6 21	6 17.55	+25 15.6	1.507	0.501	9.8	19.7	5 E	—	—	11 12	6 41.70	-4 13.1	0.890	1.653	30.1	18.7	123 W	41	68
6 23	6 31.21	+26 23.4	1.520	0.522	12.5	19.9	6 E	—	—	11 17	6 43.00	-3 33.2	0.848	1.646	28.6	18.6	127 W	41	68
6 25	6 44.77	+27 24.6	1.532	0.543	14.9	20.1	8 E	1*	—	11 22	6 43.24	-2 40.0	0.807	1.640	26.7	18.4	132 W	42	67
6 30	7 18.18	+29 28.1	1.561	0.600	19.6	20.5	11 E	5*	—	11 27	6 42.36	-1 31.6	0.770	1.634	24.5	18.2	137 W	43	66
7 5	7 50.69	+30 51.2	1.591	0.658	22.9	20.9	15 E	8*	1*	12 2	6 40.34	0 6.1	0.735	1.629	22.0	18.1	142 W	45	64
7 10	8 22.04	+31 37.3	1.620	0.716	24.9	21.2	17 E	10*	2*	12 7	6 37.17	+1 38.0	0.705	1.624	19.1	17.9	147 W	47	62
7 15	8 51.99	+31 50.9	1.651	0.773	26.2	21.4	20 E	13*	4*	12 12	6 32.94	+3 41.6	0.680	1.620	15.9	17.7	153 W	49	60
197588 2004 HE₁₂										140333 2001 TD₂									
5 6	0 59.65	+26 19.9	2.719	1.886	14.5	21.5	28 W	19*	12*	5 6	1 11.24	-8 17.0	0.736	0.587	98.7	20.9	35 W	—	27*
5 16	1 20.94	+29 54.7	2.613	1.828	16.7	21.4	31 W	22*	13*	5 8	1 12.51	-8 15.4	0.765	0.603	94.3	20.9	37 W	—	29*
5 26	1 44.49	+33 37.0	2.504	1.767	19.0	21.3	35 W	25*	14*	5 10	1 14.23	-8 6.3	0.793	0.621	90.4	20.9	38 W	—	31*
6 5	2 10.98	+37 23.9	2.394	1.705	21.3	21.2	38 W	29*	14*	5 12	1 16.32	-7 51.1	0.819	0.639	86.8	20.8	39 W	—	32*
6 15	2 41.35	+41 10.4	2.284	1.641	23.4	21.1	40 W	32*	12*	5 14	1 18.73	-7 31.0	0.845	0.657	83.5	20.8	40 W	—	33*
6 25	3 16.69	+44 47.9	2.179	1.576	25.5	20.9	42 W	35*	10*	5 16	1 21.38	-7 6.8	0.870	0.676	80.6	20.9	41 W	—	34*
7 5	3 58.23	+48 2.5	2.080	1.510	27.5	20.8	43 W	37*	7*	5 18	1 24.24	-6 39.5	0.894	0.695	78.0	20.9	42 W	—	36*
7 15	4 46.84	+50 34.6	1.989	1.443	29.3	20.7	44 W	38*	4*	5 20	1 27.26	-6 9.8	0.917	0.714	75.6	20.9	43 W	—	37*
7 25	5 42.08	+51 59.4	1.910	1.377	30.9	20.5	44 W	38*	1*	5 22	1 30.41	-5 38.0	0.938	0.733	73.4	21.0	44 W	—	38*
8 4	6 41.46	+51 53.1	1.844	1.311	32.2	20.4	44 W	37*	—	5 24	1 33.68	-5 4.7	0.958	0.752	71.4	21.0	45 W	—	39*
8 6	6 53.45	+51 39.5	1.832	1.298	32.5	20.4	43 W	37*	—	5 26	1 37.02	-4 30.3	0.978	0.772	69.6	21.0	46 W	1*	39*
8 8	7 5.40	+51 21.7	1.821	1.285	32.7	20.3	43 W	36*	—	5 31	1 45.65	-3 0.8	1.020	0.819	65.8	21.1	48 W	3*	41*
8 10	7 17.26	+50 59.6	1.810	1.272	32.9	20.3	43 W	36*	—	6 5	1 54.49	-1 29.0	1.056	0.866	62.8	21.2	49 W	5*	43*
8 12	7 28.99	+50 33.3	1.800	1.259	33.1	20.3	43 W	36*	—	6 10	2 3.40	+0 3.1	1.084	0.911	60.4	21.3	51 W	8*	45*
8 14	7 40.56	+50 2.8	1.791	1.247	33.2	20.2	42 W	35*	—	6 15	2 12.28	+1 34.3	1.106	0.954	58.5	21.4	53 W	11*	46*
8 19	8 8.60	+48 29.1	1.769	1.216	33.6	20.2	42 W	34*	—	5 6	1 12.12	-7 49.9	0.693	0.589	103.4	21.3	35 W	—	27*
8 24	8 35.12	+46 31.7	1.750	1.186	33.8	20.1	41 W	33*	—	5 8	1 13.84	-7 36.9	0.722	0.599	99.2	21.2	36 W	—	28*
8 29	8 59.92	+44 13.0	1.735	1.157	34.0	20.0	40 W	32*	—	5 10	1 16.01	-7 16.7	0.750	0.611	95.2	21.1	37 W	—	30*
9 3	9 22.95	+41 35.7	1.722	1.129	34.0	20.0	39 W	31*	—	5 12	1 18.55	-6 50.6	0.778	0.623	91.6	21.1	38 W	—	31*
9 8	9 44.25	+38 42.4	1.712	1.103	34.0	19.9	38 W	30*	—	5 14	1 21.42	-6 19.7	0.805	0.636	88.3	21.1	39 W	—	32*
9 13	10 3.94	+35 35.6	1.704	1.079	33.8	19.8	37 W	29*	—	5 16	1 24.56	-5 44.9	0.832	0.649	85.2	21.0	40 W	—	33*
9 18	10 22.18	+32 17.4	1.698	1.057	33.6	19.8	36 W	28*	—	5 18	1 27.93	-5 6.8	0.857	0.663	82.4	21.1	41 W	—	34*
9 23	10 39.17	+28 49.7	1.693	1.038	33.3	19.7	35 W	28*	—	5 20	1 31.49	-4 26.2	0.882	0.677	79.8	21.1	41 W	—	35*
9 28	10 55.08	+25 14.3	1.690	1.021	33.0	19.7	34 W	27*	—	5 22	1 35.21	-3 43.7	0.905	0.692	77.4	21.1	42 W	—	36*
10 3	11 10.09	+21 32.5	1.688	1.007	32.7	19.6	33 W	27*	1*	5 24	1 39.07	-2 59.5	0.928	0.707	75.2	21.1	42 W	—	36*
10 8	11 24.37	+17 45.6	1.686	0.996	32.4	19.6	32 W	26*	3*	5 26	1 43.04	-2 14.2	0.949	0.722	73.2	21.1	43 W	1*	37*
10 13	11 38.07	+13 54.6	1.686	0.989	32.1	19.6	32 W	26*	5*	5 31	1 53.34	-0 17.6	0.999	0.761	68.9	21.2	44 W	4*	38*
10 18	11 51.34	+10 0.6	1.685	0.985	31.9	19.6	32 W	25*	7*	6 5	2 4.02	+1 41.0	1.041	0.799	65.4	21.3	46 W	6*	40*
10 23	12 4.30	+6 4.6	1.686	0.985	31.8	19.6	31 W	25*	10*	6 10	2 14.92	+3 39.4	1.078	0.837	62.5	21.4	47 W	9*	40*
10 28	12 17.08	+2 7.3	1.686	0.988	31.8	19.6	32 W	24*	12*	6 15	2 25.96	+5 36.3	1.109	0.874	60.3	21.5	48 W	11*	41*
11 2	12 29.80	+1 50.2	1.687	0.995	31.8	19.6	32 W	23*	15*	177049 2003 EE₁₆									
11 7	12 42.56	+5 47.1	1.689	1.005	32.0	19.6	32 W	22*	17*	5 6	1 12.93	+7 33.9	1.369	0.635	43.6	21.3	26 W	4*	19*
11 12	12 55.43	-9 42.2	1.691	1.018	32.1	19.6	33 W	21*	20*	5 11	1 44.68	+10 37.6	1.394	0.596	39.7	21.1	22 W	3*	16*
11 17	13 8.53	-13 34.5	1.694	1.034	32.3	19.7	34 W	19*	22*	5 16	2 17.36	+13 31.0	1.426	0.566	34.4	20.9	18 W	1*	12*
11 22	13 21.93	-17 23.1	1.697	1.053	32.5	19.7	35 W	17*	25*	5 21	2 50.83	+16 8.7	1.464	0.550	28.0	20.7	15 W	—	8*
11 27	13 35.72	-21 6.9	1.702	1.075	32.7	19.8	36 W	15*	27*	5 26	3 24.77	+18 25.3	1.505	0.548	21.0	20.5	11 W	—	5*
12 2	13 49.98	-24 44.8	1.708	1.098	32.9	19.8	37 W	13*	29*	5 31	3 58.75	+20 16.9	1.549	0.561	14.1	20.4	8 W	—	1*
12 7	14 4.78	-28 15.8	1.714	1.124	33.0	19.9	38 W	11*	31*	6 5	4 32.26	+21 41.2	1.593	0.587	7.9	20.3	5 W	—	—
12 12	14 20.19	-31 38.6	1.722	1.151	33.1	20.0	40 W	8*	33*	6 10	5 4.82	+22 38.0	1.639	0.625	2.9	20.2	2 W	—	—
12 17	14 36.28	-34 52.4	1.731	1.180	33.1	20.0	41 W	6*	35*	6 15	5 36.05	+23 9.1	1.685	0.670	1.0	20.3	1 E	—	—
12 22	14 53.11	-37 56.0	1.741	1.210	33.1	20.1	42 W	3*	36*	6 20	6 5.68	+23 17.3	1.733	0.720	3.8	20.7	3 E	—	—
12 27	15 10.73	-40 48.6	1.752	1.241	33.1	20.2	44 W	1*	37*	6 25	6 33.59	+23 6.0	1.783	0.774	5.7	21.1	4 E	—	—
1 1	15 29.19	-43 29.3	1.764	1.272	33.0	20.2	45 W	—	—	6 30	6 59.73	+22 38.6	1.835	0.829	6.9	21.3			

EPHEMERIDES OF NEAS AND SOME UNUSUAL MINOR PLANETS

2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°	2021	α_{2000}	δ_{2000}	Δ	r	β	V	ψ	45°	-26°
517046 2013 AA ₅₃ (continuation)										351370 2005 EY (continuation)									
6 1	3 26.61	+ 6 33.3	1.428	0.629	38.4	20.7	23 W	—	16*	5 14	2 3.67	+ 5 16.1	1.177	0.474	58.1	17.9	23 W	—	17*
6 3	3 35.01	+ 6 59.2	1.465	0.656	36.3	20.8	23 W	—	16*	5 15	2 6.13	+ 5 20.5	1.204	0.495	55.6	18.0	24 W	—	18*
6 5	3 43.14	+ 7 25.2	1.501	0.683	34.4	20.9	22 W	—	16*	5 16	2 8.62	+ 5 26.1	1.230	0.516	53.4	18.1	24 W	—	18*
6 10	4 2.41	+ 8 29.0	1.586	0.751	30.7	21.1	22 W	—	16*	5 18	2 13.64	+ 5 40.1	1.279	0.559	49.6	18.2	25 W	—	19*
6 15	4 20.32	+ 9 29.2	1.663	0.818	28.0	21.3	22 W	—	16*	5 20	2 18.63	+ 5 56.5	1.326	0.601	46.6	18.4	26 W	—	19*
6 20	4 37.06	+10 24.5	1.733	0.884	26.1	21.5	22 W	—	16*	5 22	2 23.56	+ 6 14.4	1.370	0.643	44.1	18.5	26 W	—	20*
6 25	4 52.77	+11 14.4	1.797	0.948	24.7	21.7	23 W	—	17*	5 24	2 28.40	+ 6 33.1	1.411	0.684	42.0	18.7	27 W	—	21*
										5 26	2 33.13	+ 6 52.2	1.450	0.725	40.3	18.8	28 W	—	22*
325102 2008 EY ₅																			
5 6	1 43.87	+11 56.7	0.901	0.303	102.1	21.0	17 W	2*	11*	5 31	2 44.44	+ 7 39.7	1.539	0.823	37.2	19.1	29 W	—	23*
5 8	1 56.49	+13 10.6	0.968	0.273	90.7	20.4	16 W	1*	9*	6 5	2 55.01	+ 8 24.8	1.617	0.918	35.1	19.4	31 W	2*	25*
5 10	2 10.94	+14 26.3	1.038	0.249	76.4	19.8	14 W	1*	7*	6 10	3 4.86	+ 9 6.5	1.685	1.009	33.8	19.7	34 W	4*	27*
5 12	2 27.44	+15 43.1	1.108	0.236	59.8	19.3	12 W	—	5*	6 15	3 14.04	+ 9 44.3	1.744	1.097	32.9	19.9	36 W	6*	29*
5 14	2 45.78	+16 58.2	1.172	0.235	42.2	18.9	9 W	—	3*	6 25	3 30.54	+10 48.5	1.838	1.262	31.9	20.3	41 W	11*	33*
5 16	3 5.25	+18 7.6	1.228	0.247	25.9	18.7	6 W	—	—	7 5	3 44.78	+11 38.4	1.902	1.416	31.6	20.6	47 W	17*	37*
5 18	3 24.98	+19 8.1	1.273	0.270	12.4	18.5	3 W	—	—	7 15	3 56.86	+12 15.4	1.941	1.561	31.4	20.8	53 W	24*	41*
5 20	3 44.33	+19 58.4	1.311	0.299	1.9	18.3	1 W	—	—	7 25	4 6.74	+12 40.9	1.957	1.698	31.3	21.0	60 W	31*	45*
5 22	4 2.98	+20 38.7	1.342	0.332	6.0	18.8	2 E	—	—	8 4	4 14.35	+12 55.9	1.952	1.828	30.9	21.2	68 W	39*	47*
5 24	4 20.80	+21 9.9	1.369	0.367	11.7	19.3	4 E	—	—	8 14	4 19.46	+13 1.2	1.931	1.952	30.2	21.3	76 W	46*	50*
5 26	4 37.79	+21 33.0	1.393	0.401	16.0	19.7	6 E	—	—	8 24	4 21.81	+12 57.5	1.896	2.070	29.1	21.3	85 W	52*	51*
5 28	4 53.96	+21 49.0	1.415	0.436	19.2	20.0	8 E	—	1*	9 3	4 21.09	+12 45.2	1.853	2.182	27.4	21.4	95 W	57*	51*
5 30	5 9.38	+21 58.9	1.436	0.470	21.5	20.3	10 E	—	3*	9 13	4 17.00	+12 24.4	1.807	2.290	25.1	21.3	105 W	57	52
6 1	5 24.09	+22 3.5	1.456	0.503	23.3	20.5	11 E	1*	4*	9 23	4 9.33	+11 55.4	1.766	2.393	22.0	21.3	117 W	57	52
6 3	5 38.14	+22 3.4	1.476	0.534	24.6	20.7	13 E	2*	5*	10 3	3 58.14	+11 18.8	1.735	2.493	18.1	21.2	129 W	56	53
6 5	5 51.57	+21 59.4	1.495	0.565	25.5	20.9	14 E	2*	6*	10 13	3 43.85	+10 36.0	1.725	2.589	13.6	21.1	142 W	56	53
6 10	6 22.74	+21 34.8	1.542	0.636	26.7	21.3	16 E	3*	9*	10 23	3 27.40	+ 9 49.9	1.741	2.681	8.7	21.0	156 W	55	54
6 15	6 50.91	+20 54.4	1.589	0.699	26.9	21.5	18 E	4*	11*	11 2	3 10.15	+ 9 4.5	1.790	2.769	4.1	21.0	168 W	54	55
6 20	7 16.53	+20 2.9	1.634	0.756	26.6	21.8	19 E	4*	12*	11 12	2 53.56	+ 8 24.8	1.875	2.855	3.4	21.1	170 E	53	56
6 25	7 40.03	+19 3.4	1.678	0.806	26.0	21.9	20 E	3*	13*	11 22	2 38.93	+ 7 55.0	1.994	2.938	6.9	21.5	159 E	53	56
										12 2	2 27.06	+ 7 37.6	2.145	3.018	10.3	21.8	147 E	53	56
466507 2014 FK ₃₃										488474 1999 HD ₁									
5 6	1 46.86	+ 4 47.4	1.295	0.485	44.6	21.5	20 W	—	13*	5 6	2 1.15	+14 30.9	1.616	0.666	18.9	21.4	12 W	1*	6*
5 11	2 11.79	+10 4.6	1.366	0.488	35.6	21.4	16 W	—	10*	5 11	2 29.28	+15 28.9	1.649	0.680	15.4	21.4	10 W	—	4*
5 16	2 37.31	+15 3.2	1.433	0.507	27.5	21.3	13 W	—	7*	5 16	2 56.92	+16 13.3	1.683	0.699	12.4	21.4	9 W	—	2*
5 21	3 3.49	+19 34.8	1.494	0.538	21.3	21.4	11 W	1*	4*	5 21	3 23.93	+16 44.6	1.716	0.724	10.1	21.4	7 W	—	1*
5 26	3 30.26	+23 33.5	1.551	0.578	17.2	21.5	10 W	2*	1*	5 26	3 50.18	+17 3.6	1.751	0.752	8.5	21.5	6 W	—	—
292165 2006 SC ₆										503941 2003 UV ₁₁									
5 6	1 47.49	+ 1 3.8	2.232	1.369	17.2	21.4	24 W	—	16*	5 6	2 36.56	+15 37.1	1.966	0.962	3.9	21.2	4 W	—	—
5 16	2 17.34	+ 0 36.4	2.121	1.288	20.0	21.3	26 W	—	18*	5 11	2 55.53	+17 15.0	1.892	0.886	4.3	21.0	4 W	—	—
5 26	2 50.03	+ 2 19.0	2.008	1.200	22.7	21.1	27 W	—	20*	5 16	3 16.48	+18 53.4	1.815	0.808	4.3	20.7	3 W	—	—
6 5	3 26.23	+ 4 3.6	1.898	1.106	25.3	20.9	28 W	—	21*	5 21	3 39.80	+20 30.3	1.737	0.727	3.6	20.4	3 W	—	—
6 15	4 6.69	+ 5 49.7	1.794	1.004	27.5	20.6	27 W	—	21*	5 26	4 5.96	+22 2.6	1.656	0.644	2.4	19.9	2 W	—	—
6 25	4 52.14	+ 7 35.8	1.703	0.897	29.0	20.3	25 W	—	19*	5 31	4 35.52	+23 25.1	1.572	0.560	3.3	19.5	2 E	—	—
7 5	5 43.27	+ 9 19.7	1.629	0.786	29.1	19.9	22 W	—	16*	6 5	5 9.01	+24 29.9	1.483	0.478	9.4	19.4	4 E	—	—
7 15	6 40.51	+10 57.6	1.576	0.676	26.4	19.4	17 W	—	11*	6 7	5 23.57	+24 48.2	1.445	0.447	13.2	19.3	6 E	—	—
7 25	7 43.84	+12 24.1	1.544	0.578	19.2	18.8	11 W	—	4*	6 9	5 38.80	+25 0.9	1.405	0.419	17.9	19.3	7 E	—	—
7 30	8 17.58	+13 0.2	1.532	0.540	13.6	18.5	7 W	—	1*	6 11	5 54.62	+25 6.8	1.363	0.393	23.6	19.3	9 E	1*	1*
8 4	8 52.42	+13 28.5	1.522	0.515	7.8	18.1	4 W	—	—	6 13	6 10.95	+25 4.9	1.319	0.372	30.5	19.3	11 E	2*	2*
8 9	9 27.94	+13 45.9	1.512	0.504	7.6	18.1	4 E	—	—	6 15	6 27.62	+24 54.3	1.271	0.356	38.3	19.3	13 E	3*	4*
8 14	10 3.62	+13 48.6	1.500	0.511	14.4	18.3	7 E	—	1*	6 17	6 44.41	+24 34.3	1.221	0.346	46.9	19.4	14 E	4*	6*
8 19	10 38.91	+13 33.7	1.487	0.533	21.8	18.6	11 E	2*	4*	6 19	7 1.09	+24 4.8	1.168	0.344	56.0	19.6	16 E	5*	8*
8 24	11 13.35	+12 59.7	1.476	0.567	28.0	19.0	15 E	6*	7*	6 21	7 17.43	+23 26.0	1.114	0.350	65.0	19.8	18 E	5*	10*
8 29	11 46.62	+12 6.9	1.469	0.612	32.7	19.2	19 E	9*	10*	6 23	7 33.30	+22 38.6	1.059	0.363	73.4	20.0	20 E	6*	12*
9 3	12 18.56	+10 57.4	1.467	0.662	35.9	19.5	23 E	12*	12*	6 25	7 48.68	+21 43.2	1.005	0.381	80.8	20.2	22 E	7*	14*
9 8	12 49.06	+ 9 34.3	1.472	0.716	37.9	19.7	26 E	15*	15*	6 27	8 3.59	+20 40.5	0.953	0.405	87.1	20.5	23 E	7*	15*
9 13	13 18.09	+ 8 1.1	1.483	0.771	38.8	19.9	29 E	17*	17*	6 29	8 18.17	+19 30.7	0.903	0.432	92.3	20.7	25 E	7*	17*
9 18	13 45.64	+ 6 21.6	1.502	0.827	39.0	20.1	31 E	19*	19*	7 1	8 32.54	+18 13.8	0.857	0.461	96.3	20.9	27 E	7*	19*
9 23	14 11.75	+ 4 39.1	1.528	0.883	38.7	20.3	33 E	20*	21*	7 3	8 46.86	+16 49.8	0.813	0.493	99.4	21.1	29 E	8*	21*
9 28	14 36.49	+ 2 56.6	1.560	0.937	37.9	20.4	35 E	22*	23*	7 5	9 1.24	+15 18.2	0.772	0.526	101.5	21.2	30 E	8*	23*
10 3	14 59.93	+ 1 16.3	1.598	0.991	36.8	20.6	36 E	23*	24*	7 7	9 15.81	+13 38.8	0.735						