

## January 2014 Comets

## C/2012 X1 (LINEAR)

## C/2013 V3 (NEVSKI)

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m1	m2
2014 01 01		11 07 15.2	+34 15 10	0.8761	1.6294	122.3	30.7	15.8	
2014 01 02		11 08 36.9	+34 49 53	0.8783	1.6364	122.9	30.3	15.9	
2014 01 03		11 09 55.5	+35 24 27	0.8806	1.6434	123.6	29.9	15.9	
2014 01 04		11 11 10.9	+35 58 52	0.8831	1.6504	124.2	29.5	15.9	
2014 01 05		11 12 23.1	+36 33 05	0.8858	1.6576	124.9	29.1	15.9	
2014 01 06		11 13 32.0	+37 07 06	0.8886	1.6648	125.5	28.7	16.0	
2014 01 07		11 14 37.7	+37 40 54	0.8917	1.6720	126.1	28.4	16.0	
2014 01 08		11 15 40.0	+38 14 26	0.8950	1.6794	126.7	28.0	16.0	
2014 01 09		11 16 39.1	+38 47 41	0.8984	1.6867	127.3	27.6	16.0	
2014 01 10		11 17 34.7	+39 20 39	0.9020	1.6942	127.9	27.3	16.1	
2014 01 11		11 18 26.9	+39 53 18	0.9058	1.7017	128.5	26.9	16.1	
2014 01 12		11 19 15.7	+40 25 36	0.9098	1.7092	129.0	26.6	16.1	
2014 01 13		11 20 01.1	+40 57 33	0.9140	1.7168	129.6	26.2	16.2	
2014 01 14		11 20 42.9	+41 29 08	0.9184	1.7245	130.1	25.9	16.2	
2014 01 15		11 21 21.3	+42 00 18	0.9229	1.7322	130.6	25.5	16.2	
2014 01 16		11 21 56.1	+42 31 04	0.9277	1.7399	131.1	25.2	16.2	
2014 01 17		11 22 27.4	+43 01 23	0.9326	1.7477	131.6	24.9	16.3	
2014 01 18		11 22 55.2	+43 31 16	0.9377	1.7556	132.0	24.6	16.3	
2014 01 19		11 23 19.4	+44 00 40	0.9430	1.7635	132.5	24.3	16.3	
2014 01 20		11 23 40.0	+44 29 34	0.9485	1.7714	132.9	24.0	16.4	
2014 01 21		11 23 57.1	+44 57 58	0.9542	1.7794	133.3	23.7	16.4	
2014 01 22		11 24 10.6	+45 25 51	0.9601	1.7875	133.7	23.5	16.4	
2014 01 23		11 24 20.6	+45 53 12	0.9661	1.7956	134.0	23.2	16.5	
2014 01 24		11 24 27.0	+46 19 59	0.9724	1.8037	134.4	23.0	16.5	
2014 01 25		11 24 30.0	+46 46 12	0.9788	1.8118	134.7	22.7	16.5	
2014 01 26		11 24 29.4	+47 11 50	0.9854	1.8201	135.0	22.5	16.6	
2014 01 27		11 24 25.4	+47 36 51	0.9922	1.8283	135.3	22.3	16.6	
2014 01 28		11 24 18.1	+48 01 16	0.9992	1.8366	135.5	22.1	16.6	
2014 01 29		11 24 07.3	+48 25 03	1.0064	1.8449	135.8	21.9	16.7	
2014 01 30		11 23 53.3	+48 48 12	1.0138	1.8533	136.0	21.7	16.7	
2014 01 31		11 23 36.1	+49 10 42	1.0213	1.8617	136.2	21.5	16.7	

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m1	m2
2014 01 01		16 28 45.4	+11 06 13	2.2460	1.7429	47.7	24.7	12.2	
2014 01 02		16 31 48.4	+10 54 09	2.2396	1.7377	47.7	24.8	12.2	
2014 01 03		16 34 51.4	+10 42 06	2.2334	1.7325	47.7	24.8	12.1	
2014 01 04		16 37 54.3	+10 30 05	2.2272	1.7274	47.8	24.9	12.1	
2014 01 05		16 40 57.2	+10 18 05	2.2211	1.7225	47.8	25.0	12.1	
2014 01 06		16 43 59.9	+10 06 07	2.2152	1.7176	47.8	25.1	12.1	
2014 01 07		16 47 02.6	+09 54 11	2.2093	1.7128	47.9	25.2	12.1	
2014 01 08		16 50 05.1	+09 42 16	2.2036	1.7080	47.9	25.3	12.0	
2014 01 09		16 53 07.4	+09 30 23	2.1980	1.7034	47.9	25.4	12.0	
2014 01 10		16 56 09.6	+09 18 32	2.1925	1.6989	48.0	25.5	12.0	
2014 01 11		16 59 11.7	+09 06 43	2.1871	1.6944	48.0	25.5	12.0	
2014 01 12		17 02 13.5	+08 54 57	2.1818	1.6900	48.0	25.6	12.0	
2014 01 13		17 05 15.1	+08 43 12	2.1765	1.6858	48.0	25.7	12.0	
2014 01 14		17 08 16.5	+08 31 29	2.1714	1.6816	48.1	25.8	11.9	
2014 01 15		17 11 17.7	+08 19 49	2.1664	1.6775	48.1	25.9	11.9	
2014 01 16		17 14 18.6	+08 08 12	2.1615	1.6735	48.1	26.0	11.9	
2014 01 17		17 17 19.2	+07 56 36	2.1567	1.6696	48.1	26.0	11.9	
2014 01 18		17 20 19.5	+07 45 03	2.1519	1.6658	48.2	26.1	11.9	
2014 01 19		17 23 19.5	+07 33 33	2.1473	1.6621	48.2	26.2	11.9	
2014 01 20		17 26 19.2	+07 22 06	2.1427	1.6585	48.2	26.3	11.9	
2014 01 21		17 29 18.6	+07 10 41	2.1383	1.6549	48.3	26.3	11.8	
2014 01 22		17 32 17.6	+06 59 19	2.1339	1.6515	48.3	26.4	11.8	
2014 01 23		17 35 16.3	+06 48 00	2.1295	1.6482	48.3	26.5	11.8	
2014 01 24		17 38 14.5	+06 36 44	2.1253	1.6450	48.4	26.6	11.8	
2014 01 25		17 41 12.4	+06 25 31	2.1211	1.6419	48.4	26.6	11.8	
2014 01 26		17 44 09.9	+06 14 20	2.1170	1.6389	48.4	26.7	11.8	
2014 01 27		17 47 06.9	+06 03 13	2.1130	1.6360	48.5	26.8	11.8	
2014 01 28		17 50 03.5	+05 52 09	2.1090	1.6332	48.5	26.9	11.8	
2014 01 29		17 52 59.6	+05 41 08	2.1051	1.6305	48.6	26.9	11.7	
2014 01 30		17 55 55.3	+05 30 10	2.1013	1.6279	48.6	27.0	11.7	
2014 01 31		17 58 50.4	+05 19 16	2.0975	1.6255	48.7	27.1	11.7	

## 290P/2013 N1 (JAGER)

## C/2006 S3 (LONEOS)

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m1	m2
2014 01 01		06 31 15.6	+38 03 29	1.2918	2.2553	164.7	6.6	14.6	
2014 01 02		06 30 21.5	+37 52 58	1.2896	2.2526	164.5	6.7	14.6	
2014 01 03		06 29 27.9	+37 42 13	1.2876	2.2500	164.3	6.8	14.6	
2014 01 04		06 28 34.7	+37 31 12	1.2858	2.2473	164.0	6.9	14.6	
2014 01 05		06 27 42.0	+37 19 57	1.2843	2.2447	163.5	7.1	14.6	
2014 01 06		06 26 50.1	+37 08 28	1.2831	2.2422	163.1	7.3	14.5	
2014 01 07		06 25 59.0	+36 56 46	1.2822	2.2396	162.5	7.6	14.5	
2014 01 08		06 25 08.8	+36 44 50	1.2815	2.2371	161.9	7.8	14.5	
2014 01 09		06 24 19.6	+36 32 42	1.2810	2.2347	161.2	8.1	14.5	
2014 01 10		06 23 31.5	+36 20 21	1.2808	2.2323	160.5	8.4	14.5	
2014 01 11		06 22 44.5	+36 07 49	1.2809	2.2299	159.8	8.8	14.5	
2014 01 12		06 21 58.8	+35 55 07	1.2812	2.2275	159.0	9.1	14.5	
2014 01 13		06 21 14.4	+35 42 13	1.2818	2.2252	158.2	9.4	14.5	
2014 01 14		06 20 31.5	+35 29 11	1.2827	2.2229	157.4	9.8	14.5	
2014 01 15		06 19 50.0	+35 15 59	1.2837	2.2207	156.5	10.2	14.5	
2014 01 16		06 19 10.1	+35 02 38	1.2851	2.2184	155.6	10.6	14.5	
2014 01 17		06 18 31.7	+34 49 10	1.2866	2.2163	154.7	10.9	14.5	
2014 01 18		06 17 55.1	+34 35 34	1.2884	2.2141	153.8	11.3	14.5	
2014 01 19		06 17 20.2	+34 21 52	1.2905	2.2120	152.9	11.7	14.5	
2014 01 20		06 16 47.0	+34 08 04	1.2928	2.2100	151.9	12.1	14.5	
2014 01 21		06 16 15.7	+33 54 10	1.2953	2.2079	151.0	12.5	14.5	
2014 01 22		06 15 46.3	+33 40 11	1.2981	2.2059	150.0	12.9	14.5	
2014 01 23		06 15 18.8	+33 26 09	1.3011	2.2040	149.0	13.3	14.5	
2014 01 24		06 14 53.3	+33 12 02	1.3043	2.2021	148.1	13.7	14.5	
2014 01 25		06 14 29.8	+32 57 53	1.3077	2.2002	147.1	14.1	14.5	
2014 01 26		06 14 08.3	+32 43 41	1.3114	2.1983	146.1	14.5	14.5	
2014 01 27		06 13 48.9	+32 29 28	1.3153	2.1965	145.1	14.9	14.5	
2014 01 28		06 13 31.6	+32 15 13	1.3194	2.1948	144.1	15.2	14.5	
2014 01 29		06 13 16.5	+32 00 57	1.3237	2.1930	143.2	15.6	14.5	
2014 01 30		06 13 03.4	+31 46 41	1.3282	2.1913	142.2	16.0	14.5	
2014 01 31		06 12 52.6	+31 32 25	1.3330	2.1897	141.2	16.4	14.5	

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m1	m2
2014 01 01		13 28 58.9	-14 29 25	7.1018	6.9028	74.4	7.9	14.6	
2014 01 02		13 28 49.4	-14 30 14	7.0885	6.9075	75.5	7.9	14.6	
2014 01 03		13 28 39.3	-14 31 01	7.0752	6.9122	76.5	8.0	14.6	
2014 01 04		13 28 28.6	-14 31 45	7.0618	6.9169	77.6	8.0	14.6	
2014 01 05		13 28 17.3	-14 32 25	7.0483	6.9216	78.6	8.0	14.6	
2014 01 06		13 28 05.4	-14 33 03	7.0348	6.9263	79.7	8.0	14.6	
2014 01 07		13 27 52.9	-14 33 38	7.0212	6.9310	80.7	8.0	14.6	
2014 01 08		13 27 39.8	-14 34 09	7.0076	6.9358	81.8	8.1	14.6	
2014 01 09		13 27 26.0	-14 34 38	6.9939	6.9405	82.9	8.1	14.6	
2014 01 10		13 27 11.6	-14 35 03	6.9802	6.9452	83.9	8.1	14.6	
2014 01 11		13 26 56.6	-14 35 25	6.9665	6.9499	85.0	8.1	14.6	
2014 01 12		13 26 40.9	-14 35 44	6.9527	6.9547	86.1	8.1	14.6	
2014 01 13		13 26 24.6	-14 36 00	6.9389	6.9594	87.1	8.1	14.6	
2014 01 14		13 26 07.6	-14 36 12	6.9252	6.9641	88.2	8.1	14.6	
2014 01 15		13 25 50.0	-14 36 21	6.9114	6.9689	89.3	8.1	14.6	
2014 01 16		13 25 31.8	-14 36 26	6.8976	6.9736	90.4	8.1	14.6	
2014 01 17		13 25 12.9	-14 36 28	6.8838	6.9784	91.5	8.1	14.6	
2014 01 18		13 24 53.3	-14 36 26	6.8700					

## C/2013 R1 (Lovejoy)

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m1	m2
2014 01 01		17 28 17.9	+20 15 28	1.0819	0.8307	47.1	60.2	9.4	
2014 01 02		17 30 15.4	+19 45 39	1.0995	0.8350	46.9	59.2	9.4	
2014 01 03		17 32 09.3	+19 16 18	1.1169	0.8396	46.6	58.3	9.5	
2014 01 04		17 33 59.9	+18 47 25	1.1340	0.8446	46.3	57.4	9.5	
2014 01 05		17 35 47.3	+18 18 59	1.1508	0.8500	46.1	56.5	9.6	
2014 01 06		17 37 31.7	+17 50 58	1.1673	0.8558	45.9	55.6	9.7	
2014 01 07		17 39 13.4	+17 23 24	1.1835	0.8619	45.7	54.8	9.7	
2014 01 08		17 40 52.5	+16 56 15	1.1994	0.8684	45.6	54.0	9.8	
2014 01 09		17 42 29.2	+16 29 31	1.2150	0.8752	45.4	53.2	9.8	
2014 01 10		17 44 03.5	+16 03 12	1.2302	0.8824	45.3	52.4	9.9	
2014 01 11		17 45 35.7	+15 37 16	1.2451	0.8899	45.2	51.6	10.0	
2014 01 12		17 47 05.8	+15 11 45	1.2597	0.8976	45.1	50.9	10.0	
2014 01 13		17 48 34.0	+14 46 36	1.2740	0.9057	45.1	50.2	10.1	
2014 01 14		17 50 00.3	+14 21 51	1.2879	0.9141	45.0	49.6	10.2	
2014 01 15		17 51 24.9	+13 57 29	1.3016	0.9227	45.0	48.9	10.2	
2014 01 16		17 52 47.7	+13 33 29	1.3148	0.9316	45.0	48.3	10.3	
2014 01 17		17 54 08.9	+13 09 51	1.3278	0.9408	45.0	47.7	10.4	
2014 01 18		17 55 28.5	+12 46 35	1.3404	0.9502	45.1	47.2	10.4	
2014 01 19		17 56 46.6	+12 23 41	1.3527	0.9598	45.2	46.6	10.5	
2014 01 20		17 58 03.2	+12 01 08	1.3646	0.9697	45.3	46.1	10.5	
2014 01 21		17 59 18.4	+11 38 55	1.3762	0.9797	45.4	45.6	10.6	
2014 01 22		18 00 32.1	+11 17 03	1.3875	0.9900	45.5	45.2	10.7	
2014 01 23		18 01 44.6	+10 55 31	1.3984	1.0004	45.7	44.7	10.7	
2014 01 24		18 02 55.6	+10 34 19	1.4090	1.0111	45.9	44.3	10.8	
2014 01 25		18 04 05.4	+10 13 26	1.4193	1.0219	46.1	43.9	10.9	
2014 01 26		18 05 13.9	+09 52 52	1.4292	1.0329	46.3	43.5	10.9	
2014 01 27		18 06 21.0	+09 32 37	1.4388	1.0440	46.5	43.2	11.0	
2014 01 28		18 07 26.9	+09 12 40	1.4481	1.0553	46.8	42.8	11.0	
2014 01 29		18 08 31.6	+08 53 01	1.4570	1.0668	47.1	42.5	11.1	
2014 01 30		18 09 34.9	+08 33 40	1.4657	1.0783	47.4	42.2	11.2	
2014 01 31		18 10 37.0	+08 14 35	1.4740	1.0900	47.7	41.9	11.2	

## C/ 2011 J2 (LINEAR)

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m1	m2
2014 01 01		21 42 02.4	+78 29 59	3.0618	3.4439	104.6	16.0	13.8	
2014 01 02		21 48 05.6	+78 02 45	3.0676	3.4441	104.2	16.1	13.8	
2014 01 03		21 53 45.4	+77 35 24	3.0738	3.4443	103.9	16.1	13.8	
2014 01 04		21 59 04.0	+77 08 00	3.0802	3.4446	103.5	16.1	13.8	
2014 01 05		22 04 03.7	+76 40 35	3.0870	3.4448	103.0	16.1	13.8	
2014 01 06		22 08 46.3	+76 13 11	3.0941	3.4451	102.6	16.2	13.8	
2014 01 07		22 13 13.3	+75 45 50	3.1015	3.4454	102.2	16.2	13.8	
2014 01 08		22 17 26.4	+75 18 34	3.1092	3.4457	101.7	16.2	13.8	
2014 01 09		22 21 26.7	+74 51 24	3.1172	3.4461	101.2	16.3	13.8	
2014 01 10		22 25 15.5	+74 24 23	3.1255	3.4465	100.7	16.3	13.8	
2014 01 11		22 28 53.7	+73 57 30	3.1341	3.4469	100.2	16.3	13.9	
2014 01 12		22 32 22.2	+73 30 47	3.1430	3.4473	99.7	16.3	13.9	
2014 01 13		22 35 41.9	+73 04 16	3.1521	3.4477	99.1	16.4	13.9	
2014 01 14		22 38 53.5	+72 37 57	3.1615	3.4482	98.6	16.4	13.9	
2014 01 15		22 41 57.5	+72 11 51	3.1711	3.4487	98.0	16.4	13.9	
2014 01 16		22 44 54.7	+71 45 58	3.1810	3.4493	97.4	16.4	13.9	
2014 01 17		22 47 45.6	+71 20 20	3.1912	3.4498	96.9	16.4	13.9	
2014 01 18		22 50 30.5	+70 54 57	3.2015	3.4504	96.3	16.5	13.9	
2014 01 19		22 53 10.0	+70 29 50	3.2121	3.4510	95.7	16.5	13.9	
2014 01 20		22 55 44.4	+70 04 59	3.2230	3.4516	95.0	16.5	13.9	
2014 01 21		22 58 14.1	+69 40 25	3.2340	3.4523	94.4	16.5	13.9	
2014 01 22		23 00 39.4	+69 16 07	3.2453	3.4529	93.8	16.5	13.9	
2014 01 23		23 03 00.6	+68 52 07	3.2567	3.4536	93.2	16.5	13.9	
2014 01 24		23 05 18.0	+68 28 25	3.2684	3.4544	92.5	16.5	14.0	
2014 01 25		23 07 31.8	+68 05 01	3.2802	3.4551	91.9	16.5	14.0	
2014 01 26		23 09 42.2	+67 41 56	3.2923	3.4559	91.2	16.5	14.0	
2014 01 27		23 11 49.5	+67 19 09	3.3044	3.4567	90.5	16.6	14.0	
2014 01 28		23 13 53.8	+66 56 41	3.3168	3.4575	89.9	16.5	14.0	
2014 01 29		23 15 55.3	+66 34 33	3.3293	3.4584	89.2	16.5	14.0	
2014 01 30		23 17 54.2	+66 12 43	3.3420	3.4592	88.5	16.5	14.0	
2014 01 31		23 19 50.6	+65 51 13	3.3548	3.4601	87.8	16.5	14.0	

## 154P/Brewington

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m1	m2
2014 01 01		23 46 55.1	+18 36 21	1.3850	1.6224	84.7	37.1	9.5	19.3
2014 01 02		23 49 21.3	+18 53 43	1.3928	1.6239	84.3	37.1	9.5	19.3
2014 01 03		23 51 48.6	+19 11 02	1.4007	1.6255	84.0	37.0	9.6	19.3
2014 01 04		23 54 16.9	+19 28 17	1.4086	1.6272	83.7	36.9	9.6	19.3
2014 01 05		23 56 46.3	+19 45 29	1.4166	1.6289	83.4	36.8	9.6	19.3
2014 01 06		23 59 16.7	+20 02 37	1.4246	1.6307	83.1	36.8	9.6	19.3
2014 01 07		00 01 48.1	+20 19 41	1.4327	1.6326	82.8	36.7	9.7	19.3
2014 01 08		00 04 20.5	+20 36 41	1.4409	1.6345	82.5	36.6	9.7	19.3
2014 01 09		00 06 53.9	+20 53 37	1.4491	1.6366	82.2	36.5	9.7	19.4
2014 01 10		00 09 28.3	+21 10 28	1.4574	1.6387	81.9	36.4	9.8	19.4
2014 01 11		00 12 03.6	+21 27 15	1.4657	1.6408	81.6	36.4	9.8	19.4
2014 01 12		00 14 39.8	+21 43 56	1.4742	1.6431	81.3	36.3	9.8	19.4
2014 01 13		00 17 16.9	+22 00 33	1.4826	1.6454	81.0	36.2	9.8	19.4
2014 01 14		00 19 55.0	+22 17 03	1.4912	1.6477	80.7	36.1	9.9	19.4
2014 01 15		00 22 33.9	+22 33 28	1.4998	1.6502	80.4	36.0	9.9	19.4
2014 01 16		00 25 13.6	+22 49 48	1.5084	1.6527	80.1	35.9	9.9	19.5
2014 01 17		00 27 54.3	+23 06 01	1.5172	1.6553	79.8	35.8	10.0	19.5
2014 01 18		00 30 35.7	+23 22 07	1.5260	1.6579	79.5	35.7	10.0	19.5
2014 01 19		00 33 18.0	+23 38 08	1.5349	1.6606	79.2	35.6	10.0	19.5
2014 01 20		00 36 01.1	+23 54 01	1.5438	1.6634	78.9	35.5	10.1	19.5
2014 01 21		00 38 45.1	+24 09 48	1.5528	1.6662	78.6	35.4	10.1	19.5
2014 01 22		00 41 29.8	+24 25 27	1.5619	1.6691	78.3	35.3	10.1	19.5
2014 01 23		00 44 15.2	+24 40 59	1.5711	1.6721	78.0	35.2	10.2	19.5
2014 01 24		00 47 01.5	+24 56 24	1.5803	1.6752	77.7	35.0	10.2	19.6
2014 01 25		00 49 48.5	+25 11 41	1.5896	1.6783	77.5	34.9	10.3	19.6
2014 01 26		00 52 36.2	+25 26 50	1.5990	1.6814	77.2	34.8	10.3	19.6
2014 01 27		00 55 24.6	+25 41 51	1.6084	1.6846	76.9	34.7	10.3	19.6
2014 01 28		00 58 13.8	+25 56 43	1.6179	1.6879	76.6	34.6	10.4	19.6
2014 01 29		01 01 03.7	+26 11 28	1.6275	1.6913	76.3	34.5	10.4	19.6
2014 01 30		01 03 54.3	+26 26 04	1.6372	1.6947	76.0	34.3	10.4	19.6
2014 01 31		01 06 45.5	+26 40 31	1.6469	1.6982	75.7	34.2	10.5	19.7

## C/2012 F6 (Lemmon)

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m1	m2
2014 01 01		19 53 34.0	+48 53 02	4.2934	4.1242	73.5	13.2	19.3	
2014 01 02		19 54 43.5	+48 55 29	4.3079	4.1350	73.4	13.2	19.3	
2014 01 03		19 55 53.1	+48 58 07	4.3223	4.1458	73.2	13.1	19.4	
2014 01 04		19 57 02.6	+49 00 53	4.3366	4.1566	73.0	13.1	19.4	
2014 01 05		19 58 12.2	+49 03 50	4.3510	4.1674	72.8	13.0	19.4	
2014 01 06		19 59 21.8	+49 06 56	4.3652	4.1782	72.6	13.0	19.4	
2014 01 07		20 00 31.4	+49 10 11	4.3794	4.1890	72.4	12.9	19.4	
2014 01 08		20 01 41.0	+49 13 36	4.3935	4.1998	72.3	12.9	19.4	
2014 01 09		20 02 50.5	+49 17 11	4.4076	4.2105	72.1	12.8	19.5	
2014 01 10		20 04 00.0	+49 20 54	4.4216	4.2213	71.9	12.8	19.5	
2014 01 11		20 05 09.5	+49 24 47	4.4356	4.2320	71.8	12.7	19.5	
2014 01 12		20 06 19.0	+49 28 48	4.4495	4.2427	71.6	12.7	19.5	
2014 01 13		20 07 28.4	+49 32 59	4.4633	4.2534	71.4	12.7	19.5	
2014 01 14		20 08 37.7	+49 37 18	4.4771	4.2641	71.3	12.6	19.6	
2014 01 15		20 09 47.0	+49 41 47	4.4908	4.2748	71.1	12.6	19.6	
2014 01 16		20 10 56.2	+49 46 24	4.5045	4.2855	70.9	12.5	19.6	
2014 01 17		20 12 05.3	+49 51 10	4.5181	4.2962	70.8	12.5	19.6	

## C/2012 K1 (PannStarrs)

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	m1	m2
2014 01 01		16 20 24.3	+10 39 25	4.0498	3.4819	48.8	12.3	13.0	
2014 01 02		16 20 56.6	+10 42 36	4.0282	3.4710	49.5	12.4	12.9	
2014 01 03		16 21 28.7	+10 45 58	4.0065	3.4601	50.2	12.6	12.9	
2014 01 04		16 22 00.6	+10 49 29	3.9845	3.4492	50.9	12.8	12.9	
2014 01 05		16 22 32.2	+10 53 11	3.9623	3.4382	51.6	12.9	12.9	
2014 01 06		16 23 03.5	+10 57 03	3.9400	3.4273	52.3	13.1	12.8	
2014 01 07		16 23 34.6	+11 01 05	3.9174	3.4164	53.0	13.3	12.8	
2014 01 08		16 24 05.4	+11 05 18	3.8947	3.4054	53.7	13.5	12.8	
2014 01 09		16 24 35.9	+11 09 42	3.8718	3.3945	54.4	13.6	12.7	
2014 01 10		16 25 06.0	+11 14 16	3.8487	3.3835	55.1	13.8	12.7	
2014 01 11		16 25 35.8	+11 19 02	3.8254	3.3725	55.8	14.0	12.7	
2014 01 12		16 26 05.3	+11 23 59	3.8020	3.3615	56.5	14.1	12.7	
2014 01 13		16 26 34.4	+11 29 07	3.7784	3.3505	57.3	14.3	12.6	
2014 01 14		16 27 03.1	+11 34 27	3.7546	3.3395	58.0	14.5	12.6	
2014 01 15		16 27 31.4	+11 39 59	3.7307	3.3285	58.8	14.6	12.6	
2014 01 16		16 27 59.3	+11 45 43	3.7066	3.3175	59.5	14.8	12.6	
2014 01 17		16 28 26.8	+11 51 39	3.6824	3.3064	60.2	15.0	12.5	
2014 01 18		16 28 53.9	+11 57 47	3.6580	3.2954	61.0	15.1	12.5	
2014 01 19		16 29 20.4	+12 04 08	3.6335	3.2843	61.8	15.3	12.5	
2014 01 20		16 29 46.5	+12 10 42	3.6088	3.2732	62.5	15.5	12.4	
2014 01 21		16 30 12.1	+12 17 29	3.5839	3.2622	63.3	15.6	12.4	
2014 01 22		16 30 37.2	+12 24 29	3.5590	3.2511	64.0	15.8	12.4	
2014 01 23		16 31 01.7	+12 31 43	3.5339	3.2400	64.8	16.0	12.3	
2014 01 24		16 31 25.6	+12 39 10	3.5086	3.2289	65.6	16.1	12.3	
2014 01 25		16 31 49.0	+12 46 52	3.4833	3.2178	66.4	16.3	12.3	
2014 01 26		16 32 11.8	+12 54 47	3.4578	3.2066	67.2	16.4	12.3	
2014 01 27		16 32 33.9	+13 02 57	3.4322	3.1955	67.9	16.6	12.2	
2014 01 28		16 32 55.4	+13 11 22	3.4065	3.1843	68.7	16.8	12.2	
2014 01 29		16 33 16.1	+13 20 02	3.3806	3.1732	69.5	16.9	12.2	
2014 01 30		16 33 36.2	+13 28 57	3.3547	3.1620	70.3	17.1	12.1	
2014 01 31		16 33 55.5	+13 38 08	3.3287	3.1508	71.1	17.2	12.1	