Appendix A. Data Tables - 739 observed NEAs and new 2-4m survey statistics within the EURONEAR network

Table A.1: The observing log for 477 program NEAs. We list the name of the asteroid, its classification, date of observation, expected apparent magnitude V, exposure time (seconds), number of observed positions, apparent motion μ ($''$/min) and the length of the arc before and after our observations (d-days, m-months, y-years). Objects recovered at a new opposition are marked by ⋆ while new objects followed-up soon after discovery are marked by •

Telescope	Asteroid	Class	Date (UT)	V	Exp	Nr pos	μ ($''$/min)	Arc
Blanco	(175189) 2005 EC224	NEA	2011 Jun 04	21.0	20	7	1.4	9y/9y
	2008 XB1 ⋆	PHA	2011 Jun 04	23.3	120	6	0.6	2m/3y
	2010 KX7	PHA	2011 Jun 04	21.0	20	6	1.7	1y/1y
	2009 BE81 ⋆	PHA	2011 Jun 04	23.6	90	7	0.9	2m/2y
	2009 OG ⋆	PHA	2011 Jun 04	23.4	120	7	0.5	5m/2y
	2003 VE1 ⋆	PHA	2011 Jun 04	21.2	20	6	1.1	1m/8y
	2006 CT10 ⋆	PHA	2011 Jun 04	23.3	120	7	0.9	3m/5y
	2009 BD	NEA	2011 Jun 04	16.5	2	6	36.0	2y/2y
	2004 AE ⋆	PHA	2011 Jun 04	22.7	30	7	0.5	4y/7y
	2006 LK	PHA	2011 Jun 04	21.3	30	5	2.1	5y/5y
	2010 XC25 ⋆	PHA	2011 Jun 04	22.9	120	8	0.1	1m/6m
	2008 QT3 ⋆	PHA	2011 Jun 04	22.6	120	8	1.4	7m/3y
	2011 AG5	VI	2011 Jun 04	22.2	90	4	0.2	7m/7m
	2011 KE15 •	NEA	2011 Jun 04	19.6	2	10	56.4	8d/9d
INT	2011 QH21 •	NEA	2011 Sep 12	20.6	120	6	1.1	3d/20d
	2009 CS ⋆	PHA	2011 Sep 12	21.1	90	6	4.0	3m/3y
	2011 RZ •	NEA	2011 Sep 13	20.6	90	13	1.4	2d/8d
	2008 UC ⋆	NEA	2011 Sep 13	21.4	60	8	2.6	6m/3y
	2011 UE256	NEA	2011 Nov 14	20.8	90	7	1.9	13y/13y
	2011 UA276 •	NEA	2011 Nov 14	21.0	30	7	5.6	3d/14d
	2011 UD256 •	NEA	2011 Nov 14	21.5	90	9	2.2	1d/15d
	2008 AF32 ⋆	NEA	2011 Dec 23	20.4	100	6	3.2	5m/4y
	2011 YA •	NEA	2011 Dec 23	17.8	90	7	1.6	6d/7d
	2011 XZ1	PHA	2011 Dec 23	20.8	90	7	0.8	14y/14y
	2011 WQ46 •	NEA	2011 Dec 23	21.5	90	7	2.8	10d/26d
	2009 WG54 ⋆	NEA	2011 Dec 23	19.8	90	6	2.1	1m/2y
	2009 AL15 ⋆	NEA	2011 Dec 23	21.7	90	7	1.2	1m/4y
	2011 UH21 •	NEA	2011 Dec 23	20.9	90	7	0.8	1m/2m
	2011 WV95	NEA	2011 Dec 23	19.7	90	7	10.4	1m/1m
	2011 YC •	NEA	2011 Dec 23	20.8	90	7	6.4	5d/7d
	2007 JF22	NEA	2012 Feb 25	21.6	120	7	0.7	5y/5y
	2011 FR29 ⋆	NEA	2012 Feb 25	21.5	30	5	4.4	12d/11m
	2009 WG54	NEA	2012 Feb 25	21.0	120	7	1.2	2y/2y
	2005 QQ30 ⋆	NEA	2012 Feb 25	21.5	120	6	0.7	2m/7y
	2012 BB14 •	NEA	2012 Feb 25	21.1	30	7	3.6	24d/36d
	2012 DZ13 •	NEA	2012 Feb 25	18.9	10	7	8.3	2d/3d
	2012 AC13 •	NEA	2012 Feb 25	21.5	180	7	0.3	28d/43d
	2012 CR36 •	NEA	2012 Feb 25	21.2	20	7	5.6	6d/10d
	2012 CC29 •	NEA	2012 Feb 25	21.5	60	7	1.6	8d/12d
	2012 DC28 •	NEA	2012 Feb 26	19.9	180	3	10.2	1d/2d
	2008 CS1 ⋆	PHA	2012 Feb 26	20.8	120	6	2.5	13d/4y
	2004 PS92	NEA	2012 Feb 26	21.2	180	7	1.2	8y/8y
	2012 DG54 •	NEA	2012 Feb 26	21.4	180	6	1.8	1d/1d
	2008 CC119 ⋆	NEA	2012 Feb 28	19.9	120	4	2.8	2m/4y
	(175706) 1996 FG3	PHA	2012 Feb 28	20.2	120	9	0.9	16y/16y
	2012 DA14 •	VI	2012 Feb 29	20.0	30	5	4.0	5d/6d
	2008 JQ14 ⋆	NEA	2012 Feb 29	20.7	180	4	2.7	3m/4y
WHT	2010 DA ⋆	PHA	2011 Feb 20	20.6	10	7	2.7	1m/1y
	2011 BC40 •	NEA	2011 Feb 20	20.9	10	5	2.1	20d/21d
	2008 RG1 ⋆	PHA	2011 Feb 20	22.7	60	6	0.7	2m/2y
	2011 JB10 •	NEA	2011 May 11	19.5	10	10	17.9	2d/3d
	2011 GX65 •	NEA	2011 May 11	19.9	20	11	5.2	24d/27d
	2008 UZ94 ⋆	PHA	2011 May 17	21.9	120	5	0.6	4m/3y
	(101955) 1999 RQ36 ⋆	VI	2011 Aug 13	20.2	30	33	3.1	7y/12y
	2010 XB24	PHA	2011 Aug 30	22.7	30	7	1.5	8m/9m
	(101955) 1999 RQ36 ⋆	VI	2011 Aug 30	19.9	30	26	4.6	12y/12y
	(101955) 1999 RQ36 ⋆	VI	2011 Sep 14	20.2	20	29	4.9	12y/12y
	(101955) 1999 RQ36 ⋆	VI	2011 Nov 05	21.8	45	50	2.3	12y/12y

Table A.1 (continued) – The observing log for 477 program NEAs.

Telescope	Asteroid	Class	Date (UT)	V	Exp	Nr pos	μ (″/min)	Arc
Haute de Provence	2010 GE35	NEA	2010 Apr 19	18.9	60	10	6.3	7d/7d
	2010 FQ	PHA	2010 Apr 19	19.3	60	10	2.5	3m/3m
	2010 GU21	PHA	2010 Apr 19	17.2	60	15	1.7	14d/14d
	2010 GN67 •	NEA	2010 Apr 19	20.6	90	4	2.6	1d/4d
	2010 GO33 •	NEA	2010 Apr 19	20.1	60	11	1.9	3d/8d
	2010 GR75	NEA	2010 Apr 20	19.9	60	4	2.9	6d/7d
	2010 FF10	PHA	2010 Apr 20	18.6	60	10	7.3	1m/1m
	2010 FA81	NEA	2010 Apr 20	19.7	60	6	4.0	1m/1m
	2010 GA34 •	NEA	2010 Apr 20	20.1	60	10	1.2	6d/7d
	2010 GS7	NEA	2010 Apr 20	18.2	30	8	9.1	13d/13d
	2010 GU6 •	NEA	2010 Apr 20	18.5	30	12	7.2	13d/15d
	2010 GA24 •	NEA	2010 Apr 21	17.3	30	8	2.6	16d/17d
	2010 DB34	NEA	2010 Apr 21	18.8	60	7	2.9	2m/2m
	2010 CH18	NEA	2010 Apr 21	19.6	90	11	3.8	2m/2m
	2010 EC135	NEA	2010 Apr 21	19.4	90	11	0.8	1m/1m
	2010 GU21	PHA	2010 Apr 21	16.9	30	11	2.3	16d/16d
	2010 GT7	PHA	2010 Apr 21	19.4	60	11	2.3	2d/2d
	2010 CL18	NEA	2010 Apr 22	18.7	30	12	0.7	2m/2m
	2010 FO92 •	NEA	2010 Apr 22	19.4	60	11	2.2	29d/1m
	2007 TD71 ⋆	PHA	2010 Apr 22	18.3	30	8	7.3	7y/8y
	2010 WA •	NEA	2010 Nov 16	17.4	40	2	84.1	1d/1d
	2010 SC41	PHA	2010 Nov 16	17.0	60	14	1.9	2m/2m
	2010 VY190	NEA	2010 Nov 16	17.9	60	10	2.9	6m/6m
	2010 VN98 •	NEA	2010 Nov 17	18.5	90	8	10.0	8d/9d
	2010 VW139 •	NEA	2010 Nov 17	19.4	120	8	8.2	2d/3d
	2010 UE51 •	NEA	2010 Nov 17	18.8	150	4	9.9	18d/19d
	2010 LO97	NEA	2010 Nov 17	18.1	120	7	2.9	5m/5m
	2010 SC41	NEA	2010 Nov 18	16.9	90	10	2.1	2m/2m
	2010 VZ139	NEA	2010 Nov 18	17.7	40	9	13.3	20d/20d
	2010 WB	NEA	2010 Nov 18	16.9	40	9	13.7	2d/2d
	2010 VY190	NEA	2010 Nov 18	17.8	60	10	2.9	6m/6m
	2010 WH •	NEA	2010 Nov 18	19.8	60	8	2.2	1d/1d
	2010 WJ	NEA	2010 Nov 19	19.1	90	10	1.7	2d/2d
	2010 UX6 •	NEA	2010 Nov 19	17.9	90	7	15.0	21d/23d
	2010 RF181	PHA	2010 Nov 19	14.7	90	9	11.1	2m/2m
	2010 VY139 •	NEA	2010 Nov 19	19.7	60	10	3.4	3d/5d
Pic du Midi	2010 RO82	NEA	2011 Mar 02	19.0	120	8	2.9	4m/6m
	2000 EB14	NEA	2011 Mar 02	20.3	300	12	6.9	11y/11y
	2011 ET4 •	NEA	2011 Mar 02	18.5	60	10	7.4	1d/1d
	2011 ES4 •	VI	2011 Mar 02	20.4	180	10	7.2	1d/2d
	2007 ES	NEA	2011 Mar 03	21.3	180	10	1.2	4y/4y
	2011 EW4 •	NEA	2011 Mar 03	21.4	120	1	2.8	1d/1d
	2010 VN65	NEA	2011 Mar 03	20.8	180	9	1.4	2m/5m
	2011 EX4 •	NEA	2011 Mar 03	18.8	30	9	8.6	1d/1d
	2011 AF37 •	NEA	2011 Mar 03	20.1	90	7	1.2	1m/2m
	2011 PW6	NEA	2011 Nov 17	19.8	300	6	0.3	3m/3m
	2011 OV18	PHA	2011 Nov 17	20.0	300	8	0.5	2y/2y
	2011 WM2 •	NEA	2011 Nov 17	18.9	120	8	4.0	1d/1d
	2011 WV2 •	NEA	2011 Nov 17	19.7	300	6	2.5	1d/1d
	(175706) 1996 FG3	PHA	2011 Nov 18	17.0	90	6	6.4	15y/15y
	2011 WW4	NEA	2011 Nov 18	19.9	300	7	0.8	16y/16y
	2011 WV4 •	NEA	2011 Nov 19	19.0	180	8	2.3	1d/1d
	2011 WU4 •	NEA	2011 Nov 19	19.6	300	6	3.6	1d/1d
	2008 WZ13 ⋆	PHA	2011 Nov 19	20.5	300	8	0.6	4m/3y
	2011 WP4 •	NEA	2011 Nov 19	20.3	300	3	3.4	1d/1d
	2011 UH21	NEA	2011 Nov 19	20.2	300	6	4.0	1m/1m
	2011 VP12	NEA	2011 Nov 19	19.8	300	5	3.8	5d/5d
	(4183) Cuno	PHA	2011 Nov 19	16.4	60	8	1.2	52y/52y
	(308635) 2005 YU55	NEA	2011 Nov 20	17.8	90	8	0.2	6y/6y
	2011 WQ4	NEA	2011 Nov 21	17.3	90	8	76.6	3d/3d
	2011 WK5 •	NEA	2011 Nov 21	20.1	300	7	2.8	1d/1d
	2011 WV2 •	NEA	2011 Nov 21	19.7	300	6	2.5	1d/4d
	2001 YE4 ⋆	NEA	2011 Nov 21	20.2	300	6	1.0	1y/10y
	(4183) Cuno	PHA	2011 Nov 21	16.4	60	6	1.2	52y/52y
	2011 WP4 •	NEA	2011 Nov 21	18.9	180	6	14.7	3d/3d

Table A.1 (continued) – The observing log for 477 program NEAs.

Telescope	Asteroid	Class	Date (UT)	V	Exp	Nr pos	μ (″/min)	Arc
	2011 WE32 •	NEA	2011 Nov 23	19.7	300	5	2.5	1d/1d
	2011 WD39 •	NEA	2011 Nov 24	20.9	300	3	2.2	1d/1d
	2011 WF32 •	NEA	2011 Nov 24	20.5	300	3	2.4	1d/1d
	2011 WK5 •	NEA	2011 Nov 24	19.9	300	6	3.3	1d/4d
	2011 WU4 •	NEA	2011 Nov 24	19.3	300	6	4.9	3d/6d
Tautenburg	2011 SP12 •	NEA	2011 Sep 20	20.2	180	2	2.7	1d/1d
	2011 SF25 •	NEA	2011 Sep 21	18.9	180	2	5.2	1d/1d
	2011 SJ16 •	NEA	2011 Sep 21	19.4	180	2	1.2	1d/1d
	2011 SG16	NEA	2011 Sep 21	19.9	180	2	1.1	8y/8y
	2011 SE16 •	NEA	2011 Sep 21	20.7	180	2	2.6	1d/1d
	2011 SS26 •	NEA	2011 Sep 23	20.5	180	2	1.7	1d/1d
	2012 ES14 •	NEA	2012 Mar 16	19.9	180	2	1.4	1d/2d
	2012 FF •	NEA	2012 Mar 16	21.5	180	2	4.6	1d/1d
	2012 EV14 •	NEA	2012 Mar 17	21.3	180	2	4.5	1d/2d
	2010 GE30	NEA	2012 Mar 17	21.3	180	2	2.2	1y/1y
	2012 EH5 •	NEA	2012 Mar 17	20.6	180	2	6.4	1d/4d
	2012 EH5 •	NEA	2012 Mar 21	21.0	180	2	5.8	6d/8d
	2012 FT23 •	NEA	2012 Mar 23	21.3	180	2	7.3	1d/1d
	2010 GE30	NEA	2012 Mar 25	21.0	180	2	2.5	2y/2y
	2012 FR35 •	NEA	2012 Mar 25	19.8	180	2	3.2	1d/1d
	2012 FS35 •	NEA	2012 Mar 25	17.9	180	2	43.2	1d/1d
	2012 FX35 •	NEA	2012 Mar 25	17.7	180	2	36.0	1d/1d
	2012 FP35 •	NEA	2012 Mar 25	16.2	180	2	100.5	1d/1d
	2012 FZ44 •	NEA	2012 Mar 26	20.3	180	2	2.2	1d/1d
	2012 FM35	NEA	2012 Mar 27	19.2	180	2	10.8	4d/4d
	2012 FA57 •	NEA	2012 Mar 28	20.9	180	2	2.4	1d/1d
	2012 FN62	NEA	2012 Mar 28	20.8	180	2	0.8	1m/1m
	2012 JU4	NEA	2012 May 14	20.9	180	2	1.6	16d/16d
	2001 QN142	NEA	2012 May 14	20.7	180	2	5.7	11y/11y
	2012 JB16 •	NEA	2012 May 15	19.4	180	4	3.0	1d/1d
	2001 QN142	NEA	2012 May 16	20.8	180	2	5.7	11y/11y
	2012 JR4 •	NEA	2012 May 16	20.9	180	2	4.4	2d/3d
	2012 KB6 •	NEA	2012 May 19	21.2	180	2	5.4	2d/2d
	2007 MT20 ⋆	NEA	2012 May 21	20.2	180	2	1.2	7m/5y
	2007 MT20	NEA	2012 May 23	20.0	180	2	1.3	7m/5y
	2012 KN18	NEA	2012 May 24	20.6	180	4	5.4	2d/2d
	2007 MT20	NEA	2012 May 25	20.0	180	4	1.4	5y/5y
	2012 KN18	NEA	2012 May 25	20.6	180	2	5.4	3d/3d
	2007 MT20	NEA	2012 May 25	20.0	180	2	1.3	5y/5y
	2012 KF25 •	NEA	2012 May 25	19.4	180	2	24.7	1d/1d
	2012 KN18	NEA	2012 May 25	20.5	180	4	6.0	5d/5d
	2001 QN142	NEA	2012 May 28	21.5	180	3	4.5	11y/11y
	2001 QN142	NEA	2012 May 29	21.5	180	3	4.5	11y/11y
Bonn AIfA	2011 SO32 •	PHA	2011 Sep 23	19.6	90	11	2.1	1d/1d
	(16960) 1998 QS52	PHA	2011 Sep 29	18.1	60	8	1.1	13y/13y
	(7341) 1991 VK	PHA	2011 Sep 29	16.8	45	9	1.1	20y/20y
	(39572) 1993 DQ1	PHA	2011 Sep 29	17.0	60	14	1.0	18y/18y
	(219071) 1997 US9	NEA	2011 Sep 29	16.8	60	7	2.3	14y/14y
	(90075) 2002 VU94	PHA	2011 Sep 29	18.5	90	7	0.8	9y/9y
	(297300) 1998 SC15	NEA	2011 Sep 30	17.9	40	12	3.8	13y/13y
	(4183) Cuno	PHA	2011 Sep 30	17.9	120	12	0.3	52y/52y
	(4503) Cleobulus	NEA	2011 Sep 30	18.6	120	12	0.7	21y/21y
	(5143) Heracles	NEA	2011 Sep 30	16.7	30	59	0.5	20y/20y
	(267494) 2002 JB9	NEA	2011 Sep 30	18.7	90	5	1.6	9y/9y
	(136923) 1998 JH2	NEA	2011 Sep 30	17.0	120	10	0.5	13y/13y
	(32906) 1994 RH	NEA	2011 Sep 30	17.2	60	9	2.2	7y/7y
	(209924) 2005 WS55	NEA	2011 Sep 30	18.6	120	8	0.7	6y/6y
	(144332) 2004 DV24	PHA	2011 Sep 30	19.3	70	7	2.4	7y/7y
	(88710) 2001 SL9	NEA	2011 Oct 01	19.5	60	6	2.8	10y/10y
	(138524) 2000 OJ8	PHA	2011 Oct 01	14.5	30	18	5.1	11y/11y
	2011 SR69	NEA	2011 Oct 21	18.1	90	7	1.4	2m/2m
	(22771) 1999 CU3	NEA	2011 Oct 21	17.8	75	6	1.4	12y/12y
	(96315) 1997 AP10	NEA	2011 Oct 21	16.4	30	10	4.8	14y/14y

Table A.1 (continued) – The observing log for 477 program NEAs.

Telescope	Asteroid	Class	Date (UT)	V	Exp	Nr pos	μ ($''$/min)	Arc
	(36284) 2000 DM8	NEA	2011 Oct 21	17.7	60	8	0.9	11y/11y
	(21088) 1992 BL2	NEA	2011 Oct 21	17.9	90	5	0.6	9y/9y
	2011 TN9	PHA	2011 Oct 23	17.0	30	3	4.7	9d/9d
	(5143) Heracles	NEA	2011 Nov 06	14.2	180	47	1.8	20y/20y
	(154302) 2002 UQ3	PHA	2011 Nov 06	16.2	30	10	3.7	9y/9y
	(308635) 2005 YU55	NEA	2011 Nov 09	11.8	3	337	521	6y/6y
	(302831) 2003 FH	NEA	2011 Nov 09	17.8	45	6	2.8	8y/8y
	(308635) 2005 YU55	NEA	2011 Nov 14	11.8	5	154	522	6y/6y
	(175706) 1996 FG3	PHA	2011 Nov 15	17.6	30	12	5.9	15y/15y
	(137084) 1998 XS16	NEA	2011 Nov 15	17.2	45	8	2.7	13y/13y
	(308635) 2005 YU55	NEA	2011 Nov 16	16.4	5	20	0.5	6y/6y
	(209924) 2005 WS55	NEA	2011 Nov 16	17.2	90	27	0.8	6y/6y
	(175706) 1996 FG3	PHA	2011 Nov 16	17.4	45	5	6.0	15y/15y
	(209924) 2005 WS55	NEA	2011 Nov 24	17.0	120	7	1.0	6y/6y
	(53430) 1999 TY16	NEA	2011 Nov 24	16.7	20	4	6.4	12y/12y
	2004 QJ7	NEA	2012 Mar 14	17.8	30	6	3.1	7y/7y
	(1866) Sisyphus	NEA	2012 Mar 19	16.3	60	5	1.3	57y/57y
	(3103) Eger	NEA	2012 Mar 19	17.3	150	13	0.2	30y/30y
	(3352) McAuliffe	NEA	2012 Mar 20	15.6	120	27	0.7	31y/31y
	2012 DX75	PHA	2012 Mar 21	17.4	60	5	3.3	20d/21d
	(3352) McAuliffe	NEA	2012 Mar 23	15.6	60	5	0.7	31y/31y
	(24475) 2000 VN2	NEA	2012 Mar 23	17.0	90	6	1.9	11y/11y
	(137925) 2000 BJ19	NEA	2012 Mar 23	17.6	110	2	1.7	58y/58y
	(141018) 2001 WC47	NEA	2012 Apr 17	16.0	60	3	2.9	20y/20y
	(6455) 1992 HE	NEA	2012 Apr 17	15.0	60	5	2.3	23y/23y
	(5587) 1990 SB	NEA	2012 Apr 17	15.2	60	5	1.2	58y/58y
	(141018) 2001 WC47	NEA	2012 Apr 17	16.0	60	3	2.9	20y/20y
	(6455) 1992 HE	NEA	2012 Apr 17	15.0	60	4	2.3	23y/23y
	(141018) 2001 WC47	NEA	2012 Apr 17	16.0	60	3	3.0	20y/20y
	2011 WV134	PHA	2012 May 12	15.2	40	8	5.3	5y/5y
	(141018) 2001 WC47	NEA	2012 May 13	16.0	45	3	3.2	20y/20y
	(7889) 1994 LX	NEA	2012 May 13	17.4	90	8	2.2	35y/35y
	(6455) 1992 HE	NEA	2012 May 14	15.3	60	7	2.2	23y/23y
	(5587) 1990 SB	NEA	2012 May 14	15.5	60	8	0.8	58y/58y
	(7092) Cadmus	NEA	2012 May 14	16.8	45	3	3.7	32y/32y
	2010 LJ14	NEA	2012 May 16	19.1	180	5	0.9	2y/2y
	2011 WV134	PHA	2012 May 16	15.2	30	19	4.2	5y/5y
	(162980) 2001 RR17	NEA	2012 May 16	17.9	40	4	3.9	35y/35y
	(7889) 1994 LX	NEA	2012 May 16	17.4	60	9	2.1	35y/35y
	(1866) Sisyphus	NEA	2012 May 16	17.2	120	5	1.2	57y/57y
Galati	2011 OV4	NEA	2011 Sep 16	17.5	300	3	0.6	2m/2m
	2011 OQ5	NEA	2011 Sep 16	17.8	300	3	0.6	2m/2m
	2011 PT1	NEA	2011 Sep 16	16.8	30	3	5.8	1m/1m
	(433) Eros	NEA	2011 Sep 17	12.8	60	3	1.6	118y/118y
	(96189) Pygmalion	NEA	2011 Sep 25	19.2	300	3	0.8	25y/25y
	(16834) 1997 WU22	NEA	2011 Sep 26	18.6	300	3	0.4	24y/24y
	(152942) 2000 FN10	NEA	2011 Sep 27	19.1	300	7	1.3	11y/11y
	(85804) 1998 WQ5	NEA	2011 Oct 01	18.9	300	3	0.7	22y/22y
	(16816) 1997 UF9	NEA	2011 Oct 02	19.3	300	3	0.6	14y/14y
	(304293) 2006 SQ78	NEA	2011 Oct 03	18.6	30	3	3.9	10y/10y
	(219071) 1997 US9	NEA	2011 Oct 03	16.7	30	3	2.5	14y/14y
	(16960) 1998 QS52	PHA	2011 Oct 03	18.1	300	3	1.0	28y/28y
	(7341) 1991 VK	PHA	2011 Oct 03	16.6	300	3	1.2	30y/30y
	(4503) Cleobulus	NEA	2011 Oct 03	18.4	300	3	0.7	31y/31y
	2011 OQ5	NEA	2011 Oct 03	17.9	300	3	0.7	03m/03m
	2011 SO32	PHA	2011 Oct 03	18.7	30	3	4.1	1m/1m
	(297300) 1998 SC15	NEA	2011 Oct 04	17.6	30	3	5.0	13y/13y
	2011 SS25	NEA	2011 Oct 04	17.3	30	3	8.5	1m/1m
	(20086) 1994 LW	NEA	2011 Oct 06	18.7	30	3	2.1	17y/17y
	(105140) 2000 NL10	NEA	2011 Oct 06	18.4	30	3	2.3	59y/59y
	2011 TG2	NEA	2011 Oct 06	16.3	30	3	10.4	3d/3d
	(283460) 2001 PD1	NEA	2011 Oct 06	16.8	180	4	0.9	10y/10y
	(219071) 1997 US9	NEA	2011 Oct 06	16.5	180	3	2.6	14y/14y
	(276274) 2002 SS41	NEA	2011 Oct 06	18.4	30	3	4.1	9y/9y
	2011 LJ19	PHA	2011 Oct 06	18.1	180	4	1.2	4m/4m

Table A.1 (continued) – The observing log for 477 program NEAs.

Telescope	Asteroid	Class	Date (UT)	V	Exp	Nr pos	μ ($''$/min)	Arc
	(7341) 1991 VK	PHA	2011 Oct 06	16.5	180	4	1.2	30y/30y
	2011 SR69	NEA	2011 Oct 06	19.1	300	3	0.9	2m/2m
	(3691) Bede	NEA	2011 Oct 06	17.8	300	3	0.8	36y/36y
	(90075) 2002 VU94	PHA	2011 Oct 06	18.4	300	3	0.9	56y/56y
	(4183) Cuno	PHA	2011 Oct 06	17.6	300	3	0.4	52y/52y
	(16834) 1997 WU22	NEA	2011 Oct 06	18.3	300	3	0.7	23y/23y
	2011 TA4	NEA	2011 Oct 07	18.1	30	3	7.9	11d/11d
	(2061) Anza	NEA	2011 Oct 27	18.7	60	2	2.2	50y/51y
	2011 UD •	NEA	2011 Oct 27	18.7	30	8	8.0	10d/11d
	2011 TA4	NEA	2011 Oct 27	18.8	30	7	5.5	1m/1m
	(20826) 2000 UV13	NEA	2011 Oct 27	18.1	300	4	0.8	58y/58y
	(5653) Camarillo	NEA	2011 Oct 27	18.2	300	3	0.7	37y/37y
	(20086) 1994 LW	NEA	2011 Oct 28	19.2	300	3	1.9	17y/17y
	(302831) 2003 FH	NEA	2011 Oct 30	16.6	30	29	10.2	8y/8y
	(138524) 2000 OJ8	PHA	2011 Oct 31	15.4	30	6	3.7	11y/11y
	(308635) 2005 YU55	NEA	2011 Nov 09	11.9	10	1	70.0	6y/6y
	(308635) 2005 YU55	NEA	2011 Nov 12	15.0	60	26	2.3	6y/6y
	(208617) 2002 EB3	NEA	2011 Nov 17	17.8	30	7	7.6	9y/9y
	2011 WA •	PHA	2011 Nov 17	17.4	30	23	14.0	1d/1d
	(39572) 1993 DQ1	PHA	2011 Nov 17	18.2	300	3	0.5	18y/18y
	(3691) Bede	NEA	2011 Nov 18	17.9	300	3	0.6	36y/36y
	(154656) 2004 FE3	NEA	2011 Nov 26	17.9	30	1	3.2	7y/7y
	(283460) 2001 PD1	NEA	2011 Nov 26	17.7	300	2	1.2	10y/10y
	(154330) 2002 VX94	PHA	2011 Nov 26	18.9	300	3	1.3	25y/25y
	(175706) 1996 FG3	PHA	2011 Nov 26	15.9	60	81	6.7	15y/15y
	(175706) 1996 FG3	PHA	2011 Nov 27	15.9	60	209	6.8	15y/15y
	(53430) 1999 TY16	NEA	2011 Nov 27	16.6	30	44	8.8	12y/12y
	(170502) 2003 WM7	NEA	2011 Nov 27	15.2	30	31	5.7	8y/8y
	(209924) 2005 WS55	NEA	2011 Nov 27	16.9	60	30	1.0	9y/9y
	(138852) 2000 WN10	NEA	2011 Nov 27	17.8	30	9	4.4	11y/11y
	(1943) Anteros	NEA	2011 Nov 28	17.3	60	11	1.0	38y/38y
	2011 SR69	NEA	2011 Nov 28	16.7	30	21	4.5	2m/2m
	(175706) 1996 FG3	PHA	2011 Nov 28	15.8	60	116	6.8	15y/15y
	(37336) 2001 RM	NEA	2011 Nov 30	17.2	30	18	2.9	34y/34y
	(5143) Heracles	NEA	2011 Nov 30	12.9	30	18	6.5	58y/58y
	(53430) 1999 TY16	NEA	2011 Nov 30	16.6	30	17	6.9	12y/12y
	(7358) Oze	NEA	2011 Nov 30	16.1	30	16	3.0	52y/52y
	2011 WS74 •	NEA	2011 Nov 30	17.8	30	2	21.5	1d/1d
	(137084) 1998 XS16	NEA	2011 Dec 02	17.7	30	6	2.1	17y/17y
	(16816) 1997 UF9	NEA	2011 Dec 02	17.0	30	12	2.3	14y/14y
	(209924) 2005 WS55	NEA	2011 Dec 02	16.8	30	7	1.2	9y/9y
	(20826) 2000 UV13	NEA	2011 Dec 02	17.8	30	3	0.7	58y/58y
	(42286) 2001 TN41	NEA	2011 Dec 02	17.9	30	3	1.5	36y/36y
	(283729) 2002 UX	NEA	2011 Dec 02	17.4	30	3	2.1	9y/9y
	(137671) 1999 XP35	NEA	2011 Dec 02	17.0	30	6	3.0	35y/35y
	2011 SL102	NEA	2011 Dec 02	16.1	30	10	2.2	10y/10y
	(170502) 2003 WM7	NEA	2011 Dec 02	14.8	30	18	11.3	8y/8y
	(175706) 1996 FG3	PHA	2011 Dec 02	15.5	30	18	6.2	15y/15y
	(294739) 2008 CM	NEA	2011 Dec 03	18.9	30	3	2.0	3y/3y
	(137805) 1999 YK5	NEA	2011 Dec 03	17.0	30	8	5.2	10y/12y
	(36236) 1999 VV	NEA	2011 Dec 03	18.3	30	2	3.0	32y/32y
	(90403) 2003 YE45	PHA	2011 Dec 03	18.6	30	2	1.5	21y/22y
	(3200) Phaethon	PHA	2011 Dec 03	17.3	30	3	1.6	28y/28y
	(2201) Oljato	PHA	2011 Dec 03	16.6	30	3	1.5	80y/80y
	2011 UU106	NEA	2011 Dec 03	18.3	30	3	1.5	10y/10y
	(8507) 1991 CB1	NEA	2011 Dec 03	18.8	30	3	1.4	20y/20y
	2006 WO3	NEA	2011 Dec 03	18.3	30	3	7.0	10y/10y
	(39565) 1992 SL	NEA	2011 Dec 03	18.6	30	2	1.0	19y/19y
	2011 XC	NEA	2011 Dec 03	18.5	30	2	4.4	13y/13y
	(3988) 1986 LA	NEA	2011 Dec 03	18.7	30	2	0.6	25y/25y
	2012 AE1	NEA	2012 Jan 18	18.7	30	2	1.7	18d/18d
	2008 WZ13	PHA	2012 Jan 18	17.3	30	2	3.0	4y/4y
	(310842) 2003 AK18	NEA	2012 Jan 18	17.4	30	2	2.4	9y/9y
	(29075) 1950 DA	PHA	2012 Jan 18	17.9	30	2	1.3	62y/62y
	(8567) 1996 HW1	NEA	2012 Jan 18	17.6	30	2	0.4	57y/57y
	2012 BX1 •	NEA	2012 Jan 19	18.5	30	1	17.9	1d/1d
	(143651) 2003 QO104	PHA	2012 Jan 19	18.5	30	9	0.9	31y/31y

Table A.1 (continued) – The observing log for 477 program NEAs.

Telescope	Asteroid	Class	Date (UT)	V	Exp	Nr pos	μ ($''$/min)	Arc
	1996 AE2	NEA	2012 Jan 19	17.5	30	7	10.5	16y/16y
	(142563) 2002 TR69	NEA	2012 Jan 19	17.2	30	6	2.1	15y/15y
	2006 VY13	NEA	2012 Jan 19	17.0	30	10	3.3	6y/6y
	(6455) 1992 HE	NEA	2012 Jan 19	18.2	30	4	0.5	23y/23y
	(263976) 2009 KD5	NEA	2012 Jan 19	17.6	30	10	3.3	62y/62y
	(85628) 1998 KV2	NEA	2012 Jan 19	18.7	30	5	1.7	14y/14y
	(163693) Atira	NEA	2012 Jan 19	17.9	30	4	2.2	9y/9y
	2011 WV134	PHA	2012 Jan 29	17.9	30	3	0.7	6y/6y
	2008 WZ13	PHA	2012 Jan 29	17.2	30	16	3.8	4y/4y
	(314212) 2005 NJ1	NEA	2012 Jan 29	17.9	30	3	7.1	7y/7y
	(294739) 2008 CM	NEA	2012 Jan 29	18.2	30	4	4.6	4y/4y
	(20826) 2000 UV13	NEA	2012 Jan 29	17.9	30	2	0.6	59y/59y
	2012 BJ134	NEA	2012 Feb 22	17.7	60	12	3.1	3d/3d
	2010 SV3	NEA	2012 Feb 22	18.6	60	9	2.6	02y/02y
	2012 CD29	NEA	2012 Feb 22	18.0	60	3	5.5	9d/9d
	(209924) 2005 WS55	NEA	2012 Feb 25	17.0	60	7	2.5	10y/10y
	(9400) 1994 TW1	NEA	2012 Feb 26	17.7	60	2	1.1	21y/21y
	2009 AV	PHA	2012 Feb 26	17.3	60	12	7.2	3y/3y
	(141018) 2001 WC47	NEA	2012 Mar 05	16.2	60	18	0.8	21y/21y
	(24475) 2000 VN2	NEA	2012 Mar 05	16.6	60	18	1.8	12y/12y
	(1866) Sisyphus	NEA	2012 Mar 05	16.0	60	18	1.3	57y/57y
	(3103) Eger	NEA	2012 Mar 05	16.6	60	15	0.7	30y/30y
	2012 BJ134	NEA	2012 Mar 05	17.3	60	17	6.3	3m/3m
	2012 BT23	PHA	2012 Mar 07	17.6	60	10	5.5	2m/2m
	(162186) 1999 OP3	NEA	2012 Mar 07	17.3	60	12	0.8	22y/22y
	(137925) 2000 BJ19	NEA	2012 Mar 07	17.4	60	13	2.3	15y/15y
	(89959) 2002 NT7	PHA	2012 Mar 07	17.6	60	12	4.8	58y/58y
	2012 CD29	NEA	2012 Mar 07	18.0	60	1	12.1	24d/24d
	2011 SL102	NEA	2012 Mar 07	17.9	60	3	1.7	11y/11y
	2004 QJ7	NEA	2012 Mar 07	17.7	60	17	3.3	8y/8y
	(101873) 1999 NC5	NEA	2012 Mar 07	18.7	60	3	0.6	29y/29y
	2012 DH4	NEA	2012 Mar 09	16.5	60	8	5.3	21d/21d
	2011 WV134	PHA	2012 Mar 15	17.7	60	13	1.0	6y/6y
	(7889) 1994 LX	NEA	2012 Mar 15	16.7	60	15	3.4	35y/35y
	2012 BJ134	NEA	2012 Mar 15	17.6	60	9	8.4	2m/2m
	2012 AA11	NEA	2012 Mar 15	18.0	60	17	3.2	2m/2m
	2004 QJ7	NEA	2012 Mar 15	17.8	60	18	3.0	8y/8y
	2012 EL5	NEA	2012 Mar 16	18.1	60	13	3.6	3d/3d
	(306595) 2000 GG147	NEA	2012 Mar 16	19.2	60	4	2.3	12y/12y
	2011 QD48	VI	2012 Mar 17	18.7	60	4	5.7	7m/7m
	2011 WV134	PHA	2012 Mar 17	17.7	60	14	1.1	6y/6y
	2011 XO3	NEA	2012 Mar 17	18.6	60	6	1.9	3m/3m
	(155336) 2006 GA1	NEA	2012 Mar 17	18.5	60	5	6.3	13y/13y
	(137925) 2000 BJ19	NEA	2012 Mar 17	17.5	60	18	1.9	15y/15y
	2002 EM6	NEA	2012 Mar 17	18.6	60	6	5.1	20y/20y
	2012 EK8 •	NEA	2012 Mar 17	18.5	60	3	7.7	2d/3d
	2012 FJ •	NEA	2012 Mar 18	18.8	60	3	4.5	2d/3d
	(208565) 2002 CT11	NEA	2012 Mar 18	18.6	60	6	2.4	10y/10y
	2006 VY13	NEA	2012 Mar 18	17.1	60	12	0.7	6y/6y
	(317643) 2003 FH1	NEA	2012 Mar 18	17.1	60	18	5.8	9y/9y
	2012 EO8	NEA	2012 Mar 18	17.9	30	1	18.2	3d/4d
	(85839) 1998 YO4	NEA	2012 Mar 18	18.7	60	3	0.7	19y/19y
	(32906) 1994 RH	NEA	2012 Mar 18	18.3	60	4	0.8	28y/28y
	(3352) McAuliffe	NEA	2012 Mar 19	15.6	60	18	0.6	31y/31y
	(6455) 1992 HE	NEA	2012 Mar 19	16.0	60	18	1.0	23y/23y
	2012 EL5	NEA	2012 Mar 19	18.2	60	13	3.0	7d/7d
	2012 BC20	NEA	2012 Mar 19	18.2	60	6	3.9	2m/2m
	(302830) 2003 FB	NEA	2012 Mar 19	18.8	60	1	1.9	10y/10y
	2004 FF29	NEA	2012 Mar 19	18.2	60	6	1.7	8y/8y
	(162186) 1999 OP3	NEA	2012 Mar 20	17.4	60	17	0.7	22y/22y
	2012 CA55	PHA	2012 Mar 20	18.8	60	1	7.6	2m/2m
	(155336) 2006 GA1	NEA	2012 Mar 20	18.6	60	3	5.5	13y/13y
	(4055) Magellan	NEA	2012 Mar 20	17.8	60	18	0.8	27y/27y
	(275558) 1999 RH33	NEA	2012 Mar 20	18.6	60	3	1.2	13y/13y
	(267221) 2001 AD2	NEA	2012 Mar 20	18.4	60	3	4.1	11y/11y
	(21277) 1996 TO5	NEA	2012 Mar 20	18.7	60	3	0.8	22y/22y
	2004 QJ7	NEA	2012 Mar 20	18.0	60	16	2.8	8y/8y

Table A.1 (continued) – The observing log for 477 program NEAs.

Telescope	Asteroid	Class	Date (UT)	V	Exp	Nr pos	μ (″/min)	Arc
	(9400) 1994 TW1	NEA	2012 Mar 20	17.3	60	18	1.2	21y/21y
	2012 DX75	PHA	2012 Mar 22	17.1	60	18	3.9	23d/23d
	2011 QD48	VI	2012 Apr 10	17.8	60	16	5.6	7m/7m
	(21088) 1992 BL2	NEA	2012 Apr 10	18.5	60	3	0.6	22y/22y
	(1627) Ivar	NEA	2012 Apr 10	17.9	60	4	0.5	83y/83y
	(312942) 1995 EK1	NEA	2012 Apr 10	17.6	60	18	3.2	17y/17y
	2012 FG58	PHA	2012 Apr 10	18.8	60	3	4.8	14d/14d
	(141531) 2002 GB	NEA	2012 Apr 10	18.9	60	3	2.8	10y/10y
	(322966) 2002 KF4	NEA	2012 Apr 10	18.8	60	3	1.2	10y/10y
	(186823) 2004 FN32	NEA	2012 Apr 11	19.2	60	3	3.1	12y/12y
	2008 JZ30	NEA	2012 Apr 11	19.2	60	8	2.2	4y/4y
	2012 HG2	VI	2012 Apr 21	17.6	60	4	10.8	2d/2d
	2012 HM	NEA	2012 Apr 21	17.8	60	4	4.1	6d/6d
	2012 HM •	NEA	2012 Apr 23	17.2	60	10	7.8	7d/8d
	1994 NK	NEA	2012 Apr 23	18.0	60	16	2.6	18y/18y
	2012 DO	NEA	2012 Apr 23	18.0	60	16	1.5	2m/2m
	(318050) 2004 FC32	NEA	2012 Apr 23	18.8	60	5	0.7	16y/16y
	2012 HL	NEA	2012 Apr 23	18.7	60	12	5.1	8d/8d
	(36183) 1999 TX16	NEA	2012 Apr 23	18.9	60	14	1.3	15y/15y
	(85628) 1998 KV2	NEA	2012 Apr 23	17.7	60	17	1.2	14y/14y
	(141531) 2002 GB	NEA	2012 Apr 23	18.6	60	13	2.8	10y/10y
	2001 SZ269	PHA	2012 Apr 24	16.7	60	10	8.6	11y/11y
	(66272) 1999 JW6	NEA	2012 Apr 24	18.7	60	2	1.5	13y/13y
	(1620) Geographos	PHA	2012 Apr 24	18.1	60	12	1.5	61y/61y
	2012 HP13	VI	2012 Apr 24	17.9	30	9	15.6	3d/3d
	(318050) 2004 FC32	NEA	2012 Apr 24	18.8	60	11	0.7	16y/16y
	2012 ES14	NEA	2012 Apr 24	19.1	60	12	6.8	1m/1m
	(154144) 2002 FA5	NEA	2012 Apr 24	18.8	60	5	1.2	10y/10y
	(68267) 2001 EA16	NEA	2012 Apr 24	19.5	60	5	1.1	11y/11y
	(154555) 2003 HA	NEA	2012 Apr 24	19.1	60	14	1.4	9y/9y
	(322775) 2001 HA8	NEA	2012 Apr 24	19.2	60	5	0.8	11y/11y
	(85275) 1994 LY	NEA	2012 Apr 24	19.0	60	14	0.9	18y/18y
	(40263) 1999 FQ5	NEA	2012 Apr 24	19.4	60	5	1.2	18y/18y
	(326732) 2003 HB6	NEA	2012 Apr 24	18.6	60	3	0.5	9y/9y
	2006 VY13	NEA	2012 Apr 24	17.2	60	8	0.6	6y/6y
	(24475) 2000 VN2	NEA	2012 Apr 26	18.1	60	18	1.6	12y/12y
	(86667) 2000 FO10	NEA	2012 Apr 26	16.5	60	18	3.6	24y/24y
	(312473) 2008 SX245	NEA	2012 Apr 26	16.9	60	18	1.1	14y/14y
	2010 KX7	PHA	2012 Apr 26	18.7	60	5	8.5	2y/2y
	(86667) 2000 FO10	NEA	2012 Apr 27	16.5	60	36	3.6	24y/24y
	2003 WH166	PHA	2012 Apr 27	17.6	30	34	14.8	9y/9y
	2011 YV15	NEA	2012 Apr 27	17.3	60	12	0.5	11y/11y
	(162082) 1998 HL1	PHA	2012 Apr 27	18.8	60	7	2.0	14y/14y
	(326290) 1998 HE3	NEA	2012 Apr 27	17.8	60	16	3.7	19y/19y
	(53110) 1999 AR7	NEA	2012 Apr 28	18.7	60	3	0.7	14y/14y
	2012 HZ33 •	PHA	2012 Apr 28	19.7	60	15	3.0	1d/1d
	(326290) 1998 HE3	NEA	2012 Apr 28	17.6	60	13	4.1	19y/19y
	2012 HM8	NEA	2012 May 02	18.7	30	16	10.2	12d/12d
	2012 HJ1	PHA	2012 May 02	18.7	60	10	1.9	17d/17d
	2012 FY23	NEA	2012 May 02	18.1	60	9	6.5	1m/1m
	(328059) 2007 UB6	NEA	2012 May 02	18.8	60	5	1.4	7y/7y
	(154555) 2003 HA	NEA	2012 May 03	19.1	60	5	1.4	9y/9y
	(5587) 1990 SB	NEA	2012 May 03	15.4	60	18	0.8	59y/59y
	(312473) 2008 SX245	NEA	2012 May 03	17.5	60	8	0.8	14y/14y
	(141018) 2001 WC47	NEA	2012 May 03	15.9	60	18	3.4	21y/21y
	2012 HZ33	PHA	2012 May 03	19.5	60	9	3.8	6d/6d
	2009 XG8	NEA	2012 May 03	19.4	60	9	4.6	3y/3y
	(322966) 2002 KF4	NEA	2012 May 03	17.8	60	3	2.1	10y/10y
	(322966) 2002 KF4	NEA	2012 May 04	17.8	60	10	2.1	10y/10y
	2002 JC9	NEA	2012 May 11	18.6	30	22	7.1	10y/10y
	2012 HZ33	PHA	2012 May 11	19.3	60	9	5.2	11d/11d
	(141018) 2001 WC47	NEA	2012 May 11	16.0	60	15	3.2	21y/21y
	2012 HN40	NEA	2012 May 12	19.3	60	5	1.6	22d/22d
	2012 JO4 •	NEA	2012 May 12	19.3	30	13	8.4	1d/1d
Urseanu	1998 CS1	PHA	2009 Jan 12	12.8	5	3	12.8	11y/11y

Table A.1 (continued) – The observing log for 477 program NEAs.

Telescope	Asteroid	Class	Date (UT)	V	Exp	Nr pos	μ ($''$/min)	Arc
	2008 EV5	PHA	2009 Jan 13	15.7	10	3	2.0	8m/8m
	2009 AD16	NEA	2009 Jan 18	16.3	10	5	8.4	3d/3d
	1991 DB	NEA	2009 Mar 21	16.2	7	5	6.3	18y/18y
	2009 FD	VI	2009 Mar 23	15.8	6	6	4.6	1m/1m
	2003 QO104	PHA	2009 Apr 29	15.5	5	7	1.3	6y/6y
	1991 JW	PHA	2009 Apr 29	16.1	5	6	2.3	18y/18y
	2000 LC16	NEA	2009 Aug 02	14.1	5	3	1.9	9y/9y
	(433) Eros	NEA	2009 Aug 02	12.6	5	3	0.6	111y/111y
	2000 CO101	PHA	2009 Sep 23	15.2	6	8	10.6	9y/9y
	1998 FW4	PHA	2009 Sep 23	15.0	6	3	7.8	11y/11y
	1999 AP10	NEA	2009 Sep 23	13.3	6	5	2.3	8m/8m
	2009 KC3	PHA	2009 Sep 23	16.6	6	5	1.4	4m/4m
	2000 LC16	NEA	2009 Oct 05	16.0	7	7	1.2	9y/9y
	2000 XK44	NEA	2009 Nov 20	14.6	8	5	3.7	9y/9y
	2006 WO127	NEA	2010 Apr 01	16.1	6	3	4.1	4y/4y
	1999 JD6	PHA	2010 Jul 06	15.8	6	5	3.3	11y/11y
	2002 CY46	NEA	2010 Sep 11	15.1	6	3	7.3	8y/8y
	1990 SA	NEA	2010 Sep 15	15.6	7	6	4.4	20y/20y
	2000 DM8	NEA	2011 Feb 12	15.6	7	7	2.5	11y/11y
	2002 JB9	NEA	2011 May 24	15.4	6	5	3.4	9y/9y
	(3288) Seleucus	NEA	2011 May 24	14.9	3	5	0.6	29y/29y
	(1036) Ganymed	NEA	2011 Jun 07	11.5	6	5	1.8	87y/87y
	2003 WM7	NEA	2011 Nov 28	15.1	7	5	6.4	8y/8y
	(5143) Heracles	NEA	2011 Nov 30	12.9	8	10	6.5	20y/20y
	1996 FG3	PHA	2011 Nov 30	15.6	15	8	6.2	15y/15y
	2000 VN2	NEA	2012 Jan 02	14.9	8	7	3.2	12y/12y
	2011 YA	NEA	2012 Jan 12	15.7	10	10	24.6	2m/2m

Table A.2: Comparison of orbits of 111 program NEAs. Objects recovered at a new opposition are marked by ⋆ while new objects followed-up soon after discovery are marked by •. For every object, the first line gives orbital elements fitted without our data, while the second line gives elements adding our data. Orbital elements fitted with FIND_ORB (Gray, 2012) at epoch $JD = 2456200.5$ listing the asteroid name, semimajor axis a, eccentricity e, inclination i, longitude of the ascending node Ω, argument of pericenter ω, and mean anomaly M, followed by the minimal orbital intersection distance MOID, number of fitted positions and the root mean square residual of the fit σ.

Asteroid	a (AU)	e	i (°)	Ω (°)	ω (°)	M (°)	MOID (AU)	Nr pos	σ (″)
				Blanco observations:					
2008 XB1 ⋆	1.3325316	0.3727211	12.68489	270.40512	84.00333	210.02902	0.0460	90	0.54
	1.3325334	0.3727214	12.68489	270.40513	84.00348	210.02716	0.0460	96	0.54
2009 BE81 ⋆	1.5224083	0.3494415	18.79196	118.05393	333.38243	356.52156	0.0326	32	0.53
	1.5226071	0.3495222	18.79412	118.05268	333.38496	356.38013	0.0326	39	0.50
2009 OG ⋆	2.7049543	0.8590749	48.36843	309.43967	114.15714	242.33456	0.0411	211	0.52
	2.7049503	0.8590747	48.36839	309.43968	114.15714	242.33509	0.0411	218	0.52
2003 VE1 ⋆	1.9424421	0.4950035	16.31434	29.65747	323.10760	123.48639	0.0442	62	0.41
	1.9423792	0.4949865	16.31375	29.65721	323.10842	123.54551	0.0442	68	0.39
2006 CT10 ⋆	2.8876819	0.6631662	12.91110	111.23540	30.46573	125.54650	0.0344	47	0.68
	2.8876622	0.6631633	12.91111	111.23492	30.46613	125.55181	0.0344	54	0.67
2004 AE ⋆	1.4320746	0.3327194	18.72371	307.62179	193.08991	19.27949	0.0225	60	0.67
	1.4320746	0.3327194	18.72370	307.62177	193.08993	19.27952	0.0225	66	0.65
2010 XC25 ⋆	1.7432039	0.5281615	2.97724	304.08154	237.10509	250.37473	0.0011	102	0.66
	1.7431511	0.5281468	2.97719	304.08131	237.10551	250.38590	0.0011	110	0.64
2008 QT3 ⋆	2.0126246	0.5278038	7.22842	272.04916	160.66785	117.27367	0.0101	557	0.48
	2.0125918	0.5277959	7.22836	272.04929	160.66783	117.28540	0.0101	565	0.48
2011 KE15 •	1.7061623	0.4309034	1.57615	74.71311	210.65052	202.11591	0.0001	21	0.40
	1.7006802	0.4289845	1.57121	74.71064	210.65064	203.08603	0.0001	31	0.37
				INT observations:					
2011 QH21 •	1.3069391	0.2300646	22.74493	241.58579	269.82546	96.79975	0.1969	11	0.26
	1.3075282	0.2333234	22.84213	241.32777	269.38191	97.79198	0.1971	17	0.28
2009 CS ⋆	2.0076217	0.5956228	3.19748	250.15070	170.57194	124.25473	0.0408	88	0.46
	2.0076406	0.5956271	3.19749	250.15067	170.57202	124.24779	0.0408	93	0.46
2011 RZ •	2.5447385	0.5987962	45.43082	338.11939	275.71403	132.82123	0.4421	16	0.19
	2.1315403	0.5322385	36.52763	332.18761	278.32377	169.79444	0.3257	29	0.29
2008 UC ⋆	1.9764513	0.4528767	10.25161	99.24230	337.98564	128.12421	0.1097	102	0.57
	1.9764347	0.4528725	10.25156	99.24239	337.98564	128.13035	0.1097	110	0.56
2011 UA276 •	1.6612868	0.3523409	9.97692	41.50025	15.50701	144.74953	0.0914	19	0.38
	1.6759862	0.3574664	10.08527	41.49034	15.53877	142.83905	0.0924	26	0.35
2011 UD256 •	1.4775027	0.6042561	47.89493	216.32336	322.44477	100.71027	0.3673	20	0.37
	1.4627894	0.6004289	47.43563	216.34927	322.96364	101.85749	0.3692	29	0.34
2008 AF32 ⋆	1.2105993	0.1108663	27.18252	105.33252	80.07856	137.39326	0.1843	42	0.98
	1.2105992	0.1108661	27.18253	105.33257	80.07823	137.39373	0.1843	48	0.93
2011 YA •	2.1188850	0.7561740	5.25747	341.02410	226.55438	68.79828	0.0538	90	0.26
	2.1156582	0.7557440	5.25625	340.98213	226.59785	68.95197	0.0537	97	0.25
2011 WQ46 •	1.6521990	0.3657560	1.06903	219.85013	235.62552	131.24754	0.0663	23	0.31
	1.6545823	0.3665860	1.07108	219.86238	235.61955	130.96598	0.0664	30	0.30
2009 WG54 ⋆	1.5636374	0.2878101	13.03023	64.41522	85.77480	107.05361	0.2589	23	0.42
	1.5636202	0.2878057	13.02974	64.41532	85.77419	107.06229	0.2589	36	0.38
2009 AL15 ⋆	1.3012070	0.1595557	16.52133	114.58443	265.70438	257.20735	0.2074	50	0.34
	1.3012115	0.1595566	16.52156	114.58446	265.70436	257.20264	0.2074	57	0.32
2011 UH21 •	1.9553802	0.4526305	3.40174	21.39406	50.68487	109.88907	0.0958	51	0.39
	1.9600653	0.4538339	3.40903	21.40470	50.67516	109.49838	0.0960	58	0.38
2011 YC •	1.6856137	0.3729236	14.02871	85.21898	358.00525	131.05594	0.0730	30	0.37
	1.6858298	0.3729945	14.03114	85.21933	358.00830	131.02946	0.0730	37	0.36
2011 FR29 ⋆	1.0575852	0.3467839	3.62163	215.37944	175.83848	268.50916	0.0609	22	0.52
	1.0575838	0.3465554	3.62049	215.38352	175.82552	268.54687	0.0609	26	0.49
2005 QQ30 ⋆	1.7548860	0.5459310	11.23522	67.90488	173.54421	48.51165	0.1628	31	0.54
	1.7547486	0.5458988	11.23468	67.90936	173.53820	48.65342	0.1627	37	0.49
2012 BB14 •	1.0642522	0.0993367	2.64260	316.95899	254.96321	146.02468	0.0171	22	0.19
	1.0642911	0.0993971	2.64428	316.95906	254.97329	146.00890	0.0171	29	0.19
2012 DZ13 •	1.1354832	0.3908106	9.28725	336.04512	283.03077	119.22008	0.0225	49	0.55
	1.1349648	0.3903220	9.27871	336.04569	283.04274	119.27202	0.0225	56	0.53
2012 AC13 •	2.1958821	0.4312243	1.85719	102.02412	316.47349	101.00564	0.2621	40	0.34
	2.1961831	0.4313071	1.85747	102.02536	316.46790	100.98641	0.2621	47	0.31
2012 CR36 •	1.3743801	0.3605339	27.13705	329.96059	275.80580	81.56605	0.1112	16	0.34
	1.3691579	0.3582681	26.97091	329.96581	275.96880	81.94740	0.1088	23	0.33

Table A.2 (continued) – Comparison of orbits of 111 program NEAs.

Asteroid	a (AU)	e	i (°)	Ω (°)	ω (°)	M (°)	MOID (AU)	Nr pos	σ (″)
2012 CC29 •	2.4277781	0.7736352	1.93528	171.13731	230.37469	76.47364	0.0208	22	0.15
	2.4565418	0.7769888	1.95015	171.06263	230.40039	75.11188	0.0210	29	0.14
2012 DC28 •	1.4599253	0.2133322	37.79366	336.38972	171.55682	126.62662	0.1607	26	0.31
	1.4605470	0.2135764	37.80892	336.38962	171.71444	126.44605	0.1608	29	0.35
2008 CS1 ⋆	1.2303852	0.3724583	29.85089	134.15558	94.95909	102.85752	0.0100	41	0.79
	1.2303853	0.3724583	29.85089	134.15558	94.95909	102.85747	0.0100	47	0.74
2012 DG54 •	1.8453274	0.6398731	24.73667	163.05846	227.31411	133.98827	0.2017	12	0.24
	2.0925789	0.6966888	26.98561	162.66197	228.77088	109.61428	0.2214	18	0.28
2008 CC119 ⋆	2.5859231	0.5399923	24.97405	350.55117	137.12653	51.56378	0.2828	23	0.38
	2.5857984	0.5399733	24.97346	350.55076	137.12620	51.59341	0.2827	27	0.36
2012 DA14 •	1.0018565	0.1081880	10.34237	147.26290	271.08093	299.98335	0.0002	66	0.53
	1.0018278	0.1081339	10.33665	147.26202	271.07247	300.00782	0.0002	71	0.54
2008 JQ14 ⋆	2.4612248	0.5186814	14.51927	204.00669	22.23640	44.88657	0.1937	74	0.50
	2.4608980	0.5186217	14.51868	204.00771	22.23618	44.96791	0.1937	78	0.50
WHT observations:									
2010 DA ⋆	1.0306956	0.5657039	20.53057	162.38763	122.16383	99.77216	0.0051	78	0.49
	1.0306468	0.5656373	20.52676	162.38947	122.16239	99.82683	0.0051	85	0.47
2011 BC40 •	2.2343868	0.6209622	8.12036	215.56578	194.29138	195.63531	0.0846	45	0.41
	2.2289109	0.6200462	8.11320	215.61147	194.23367	196.36358	0.0847	50	0.40
2008 RG1 ⋆	1.3153923	0.4430621	13.08353	347.90501	257.27691	305.39474	0.0143	64	0.43
	1.3153870	0.4430590	13.08345	347.90497	257.27682	305.40111	0.0143	70	0.42
2011 JB10 •	1.2567588	0.1829701	13.43485	45.55761	182.16619	355.90769	0.0181	38	0.82
	1.2572072	0.1832448	13.45015	45.55602	182.16627	355.71718	0.0181	48	0.75
2011 GX65 •	1.3439936	0.2864183	22.86373	42.30068	263.29129	271.13201	0.1509	40	0.39
	1.3441732	0.2865109	22.86924	42.29974	263.28466	271.08237	0.1510	51	0.39
2008 UZ94 ⋆	2.1898829	0.5722101	30.22807	248.31455	159.63394	65.15400	0.0266	119	0.36
	2.1898332	0.5722002	30.22788	248.31470	159.63383	65.16860	0.0266	124	0.37
(101955) ⋆	1.1259944	0.2037147	6.03497	2.04460	66.27214	267.84460	0.0030	286	0.57
	1.1259944	0.2037147	6.03496	2.04460	66.27213	267.84460	0.0030	345	0.53
Haute Provence observations:									
2010 GN67 •	1.3383887	0.3419190	18.50942	209.52085	252.05466	276.37405	0.0558	22	0.29
	1.3348527	0.3371109	18.66409	209.50771	251.82832	279.45133	0.0574	26	0.35
2010 GO33 •	2.4316392	0.7028576	19.37043	144.06579	153.29836	212.25802	0.2012	49	0.39
	2.4009956	0.6979004	19.04775	143.48464	153.63472	216.38189	0.1989	60	0.41
2010 GR75 •	1.7264804	0.6385285	18.05426	116.89009	0.94091	55.23818	0.3027	18	0.48
	1.7784142	0.6485141	18.07882	118.51613	0.11150	36.98345	0.3032	24	0.44
2010 GA34 •	1.4583113	0.2991254	4.29913	97.03332	132.86787	127.58779	0.0414	33	0.32
	1.4572622	0.2986249	4.29422	97.06137	132.84073	128.11541	0.0413	43	0.30
2010 GU6 •	2.6873212	0.6770079	10.31421	195.85401	84.07706	188.59831	0.0980	128	0.44
	2.6908259	0.6774313	10.31952	195.85727	84.06810	188.23186	0.0981	138	0.44
2010 GA24 •	2.0869422	0.5439352	7.67325	30.88278	237.39327	275.51963	0.0491	119	0.45
	2.0837114	0.5431933	7.66529	30.88309	237.39144	276.15980	0.0491	127	0.43
2010 FO92 •	2.1454810	0.5198238	6.76292	164.10502	124.78720	250.79428	0.0791	26	0.50
	2.1449269	0.5197284	6.75916	164.09257	124.79797	250.89613	0.0790	35	0.46
2007 TD71 ⋆	1.2862284	0.2796418	49.75863	49.60188	220.74372	215.17464	0.0308	59	0.49
	1.2862285	0.2796424	49.75862	49.60189	220.74373	215.17436	0.0308	62	0.51
2010 WA •	1.6983023	0.5048671	8.23328	234.57807	236.16108	286.18296	0.0004	23	0.28
	1.6995296	0.5052128	8.23380	234.57874	236.14249	285.87994	0.0004	24	0.35
2010 VN98 •	1.5378776	0.2924109	27.19898	54.29451	338.26845	5.03644	0.1148	74	0.47
	1.5423811	0.2942476	27.27960	54.29752	338.30742	3.41281	0.1151	81	0.63
2010 VW139 •	2.5900381	0.5848651	9.49321	252.78517	171.03561	161.80817	0.0911	24	0.37
	2.5951589	0.5856409	9.50139	252.79636	171.03234	161.33008	0.0912	34	0.41
2010 UE51 •	1.0551995	0.0596709	0.62433	32.27693	47.27002	239.36926	0.0093	148	0.68
	1.0551987	0.0596703	0.62432	32.27650	47.27067	239.36974	0.0093	151	0.74
2010 WH •	2.3930897	0.4746625	22.00650	46.65273	73.49165	163.92462	0.4500	10	0.47
	2.3550841	0.4649147	21.78571	46.48590	72.67208	168.16760	0.4468	18	0.58
2010 UX6 •	2.5035727	0.5994853	1.33872	220.29084	208.82524	167.15870	0.0195	295	0.44
	2.5024172	0.5993025	1.33841	220.29105	208.82485	167.27432	0.0195	302	0.46
Pic du Midi observations:									
2011 ET4 •	1.6592709	0.3113795	32.20340	347.68626	149.95420	279.23741	0.1837	43	0.78
	1.6602025	0.3112824	32.26078	347.68408	150.23671	278.87023	0.1839	53	0.71

Table A.2 (continued) – Comparison of orbits of 111 program NEAs.

Asteroid	a (AU)	e	i (°)	Ω (°)	ω (°)	M (°)	MOID (AU)	Nr pos	σ (″)
2011 ES4 •	1.1138167	0.2588138	3.33294	339.98391	270.36028	63.48237	0.0060	21	0.43
	1.0896316	0.2410397	3.35365	339.97850	273.38083	75.05007	0.0007	31	0.45
2011 EW4 •	1.5448826	0.4683947	8.51568	328.04669	281.58415	256.76727	0.0299	11	0.47
	1.5448826	0.4683947	8.51568	328.04669	281.58414	256.76727	0.0299	12	0.45
2011 EX4 •	0.8563342	0.2736315	3.02520	153.34467	219.03929	128.59640	0.0040	26	0.72
	0.8561233	0.2741866	3.03241	153.34852	219.02275	128.83602	0.0040	35	0.92
2011 AF37 •	1.9974161	0.3805389	14.14033	133.47247	357.72987	212.19722	0.2520	155	0.53
	1.9976581	0.3805980	14.14199	133.47246	357.73003	212.15858	0.2521	164	0.53
2011 WM2 •	1.6484364	0.3153201	16.02208	57.45876	323.85433	160.66719	0.1735	37	0.41
	1.7154273	0.3368628	16.07148	57.42219	329.22131	148.81444	0.1738	43	0.43
2011 WV2 •	1.4640631	0.0549764	24.00037	237.59399	194.30707	163.97821	0.3977	7	0.18
	1.4780030	0.0619432	24.00040	237.60306	171.17209	182.08131	0.3989	13	0.41
2011 WV4 •	1.1958459	0.3057337	12.03269	46.70604	277.95771	294.37962	0.0280	20	0.25
	1.1858416	0.2920591	11.72867	46.55558	278.34858	298.69209	0.0286	28	0.31
2011 WU4 •	1.9420008	0.5208333	6.28323	31.26665	86.17785	96.27584	0.0834	43	0.43
	1.9405783	0.5204688	6.27927	31.26385	86.17933	96.38042	0.0834	49	0.41
2008 WZ13 ⋆	1.5636374	0.2878101	13.03023	64.41522	85.77480	107.05361	0.2589	23	0.42
	1.5636202	0.2878057	13.02974	64.41532	85.77419	107.06229	0.2589	36	0.38
2011 WP4 •	1.3615058	0.4153884	0.94324	228.01512	263.61403	162.00699	0.0038	17	0.46
	1.3575623	0.4128748	0.94673	228.03770	263.56017	162.66167	0.0038	20	0.57
2011 WK5 •	2.1911995	0.5137790	5.87307	253.33394	184.39203	89.36409	0.0806	38	0.43
	2.1914129	0.5138374	5.87363	253.33150	184.40168	89.34929	0.0806	44	0.41
2011 WE32 •	2.3793331	0.4841095	22.36067	236.69570	145.59670	97.21126	0.2836	30	0.38
	2.3571674	0.4789684	22.28335	236.67791	145.78147	98.54964	0.2834	35	0.36
2011 WD39 •	1.6575028	0.4283178	85.30661	239.69687	20.00600	275.01440	0.0468	20	0.34
	2.3280006	0.4927917	95.17184	239.22110	56.71453	149.62503	0.3754	23	0.38
2011 WF32 •	2.4614593	0.4841934	16.39685	57.55386	24.26362	72.86557	0.3007	15	0.30
	2.3941779	0.5141793	14.25626	57.44874	42.84220	71.24584	0.2291	18	0.32
2011 WK5 •	2.1911995	0.5137790	5.87307	253.33394	184.39203	89.36409	0.0806	38	0.43
	2.1914129	0.5138374	5.87362	253.33150	184.40168	89.34929	0.0806	44	0.41
2011 WU4 •	1.9420008	0.5208333	6.28323	31.26665	86.17785	96.27584	0.0834	43	0.43
	1.9405783	0.5204688	6.27927	31.26385	86.17933	96.38042	0.0834	49	0.41
Tautenburg observations:									
2011 SP12 •	2.3029053	0.5709405	13.82291	171.79902	123.32304	121.26811	0.1006	10	0.69
	2.5466566	0.5958381	14.57734	171.62875	128.49791	103.54682	0.1205	13	0.71
2011 SF25 •	2.6988347	0.5985974	9.77220	349.59471	42.19699	77.17580	0.1278	18	0.27
	2.5461793	0.5807948	9.56288	349.31688	46.86781	83.27062	0.1221	20	0.34
2011 SJ16 •	2.1425846	0.7127440	16.01993	185.97391	292.88937	92.44819	0.0812	11	0.36
	2.4762476	0.7641362	16.94167	186.31193	293.32799	75.08876	0.1009	13	0.35
2011 SE16 •	1.5011891	0.2927200	6.28463	182.60646	207.60322	182.73680	0.0751	18	0.25
	1.5023751	0.2934122	6.28984	182.60288	207.67345	182.49168	0.0750	19	0.28
2011 SS26 •	1.7237523	0.4622939	2.66252	353.72773	309.66192	183.56750	0.0069	9	0.20
	1.6963334	0.4524497	2.63889	353.68716	309.67493	188.14877	0.0070	10	0.20
2012 ES14 •	2.6200543	0.6689121	24.92829	189.38506	78.43755	27.33236	0.1682	10	0.06
	2.5050413	0.6488089	24.57042	189.48493	77.97505	29.01830	0.1707	12	0.17
2012 FF •	1.4478613	0.2609317	23.99882	167.93582	312.08114	143.33083	0.1473	11	0.33
	1.4818564	0.2319731	17.64023	167.51421	9.81784	105.30999	0.1473	13	0.36
2012 EV14 •	1.8241226	0.4038745	33.94500	174.35466	301.60436	106.19373	0.2443	8	0.14
	1.7263544	0.3932077	31.35354	174.15138	297.32003	116.21881	0.2176	10	0.30
2012 EH5 •	0.9810860	0.1265791	15.61118	356.56636	4.03280	13.61379	0.1098	13	0.24
	0.9810723	0.1273759	15.63948	356.56863	5.13992	12.18608	0.1104	15	0.33
2012 FT23 •	1.5964894	0.3738657	14.99986	3.15988	129.56683	113.85330	0.0884	14	0.35
	1.5806946	0.3702670	14.94774	3.17424	128.36473	116.06307	0.0876	15	0.38
2012 FR35 •	2.4815489	0.5333368	13.04630	10.59968	180.72875	356.71824	0.1587	26	0.58
	2.4399627	0.5244343	13.05439	10.62273	179.78141	356.85794	0.1612	28	0.61
2012 FP35 •	1.3655985	0.4512472	8.97504	185.42753	78.89869	83.33986	0.0011	32	0.57
	1.3657973	0.4513572	8.97677	185.42748	78.89845	83.32442	0.0011	34	0.62
2012 FZ44 •	1.6193840	0.5327446	11.78858	342.94621	309.41690	43.97374	0.0703	11	0.24
	1.6487622	0.5453094	12.33383	343.41798	309.35607	42.73352	0.0746	13	0.32
2012 FA57 •	2.9117552	0.6637440	0.28594	190.86077	21.98545	32.62754	0.0003	12	0.31
	2.5585825	0.6164795	0.27756	190.15482	22.04982	39.68871	0.0003	14	0.40
2012 JB16 •	1.7489861	0.2848555	35.81259	70.33282	190.33562	42.41047	0.2405	25	0.44
	1.7380967	0.2795246	35.69703	70.39818	189.85900	42.99511	0.2416	29	0.42
2012 JR4 •	1.2531186	0.1396977	15.40947	56.27105	113.50555	146.86019	0.1409	23	0.36
	1.2506267	0.1387663	15.31107	56.28003	113.22970	147.47221	0.1400	25	0.37

Table A.2 (continued) – Comparison of orbits of 111 program NEAs.

Asteroid	a (AU)	e	i (°)	Ω (°)	ω (°)	M (°)	MOID (AU)	Nr pos	σ (″)
2007 MT20 ⋆	1.8463303	0.6131586	16.61246	226.48412	148.50795	7.16645	0.1672	199	0.48
	1.8463400	0.6131610	16.61246	226.48402	148.50807	7.16150	0.1672	205	0.48
2012 KF25 •	0.9899554	0.0488116	16.96669	64.94416	335.49658	332.77835	0.0203	20	0.88
	0.9899502	0.0488201	16.97023	64.94393	335.50317	332.77253	0.0203	21	0.87
Bonn AIfA observations:									
2011 SO32 •	1.6951225	0.4674415	9.77588	198.86699	243.48058	136.12626	0.0469	23	0.55
	1.6390233	0.4447659	9.39810	198.85894	242.93462	143.03462	0.0463	28	0.60
Galati observations:									
2011 UD •	2.0276168	0.7799193	8.79969	357.31489	146.77052	96.55293	0.1014	103	0.57
	2.0314733	0.7804732	8.81194	357.33771	146.75248	96.28518	0.1015	111	0.57
2011 WA •	0.8451522	0.2854117	30.46253	51.54453	206.19050	180.39447	0.0511	102	0.33
	0.8450758	0.2854913	30.44891	51.54533	206.18403	180.45350	0.0511	128	0.43
2011 WS74 •	0.9721752	0.3511040	13.75933	67.54051	117.70561	234.60197	0.0175	56	0.57
	0.9719956	0.3509638	13.75614	67.54069	117.72843	234.64423	0.0175	59	0.57
2012 BX1 •	1.1464635	0.3053905	13.00536	117.50036	276.35697	256.12795	0.0133	21	0.36
	1.1433472	0.3033433	12.98057	117.49875	276.13990	257.35808	0.0133	24	0.45
2012 HZ33 •	1.6041097	0.3832586	26.77944	51.95516	206.13377	53.47516	0.0075	13	0.61
	1.3909060	0.3020679	26.68295	53.03449	216.25179	59.09253	0.0055	28	0.47
2012 JO4 •	1.8252293	0.4432852	1.59096	79.10440	124.23297	66.28899	0.0252	22	0.47
	1.8231709	0.4425516	1.59674	78.97124	124.43559	66.38048	0.0253	33	0.52

Table A.3: 104 unknown MBAs discovered at the INT in Feb 2012 in the opposition mini-survey fields. 2-night and 3-night observations of the same objects are linked and designated by the MPC; their corresponding acronyms previously assigned by us are listed in the first column. In the first line we give the orbital elements fitted with FIND_ORB based on linked observational data from our run only. In the second line we include published MPC orbital data based on all available observations, according to the MPC database accessed at 8 Aug 2012.

Acronym	Designation (from MPC)	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	μ (″/min)
INT Feb 2012 3-night objects discovered in the opposition mini-survey:											
EBA017b EBA091 EBA149	2012 DS41	2.41	0.17	1.88	1.01	18.8	14	3d	0.17	21.4	0.64
		2.51	0.31	2.37	0.74	18.3	14	3d			
EBA028 EBA100 EVA035	2012 DM41	3.14	0.15	0.32	1.82	17.4	15	3d	0.17	21.3	0.51
		3.21	0.11	0.27		17.9	15	3d			
EBA037 EBA101 EBA134	2012 DT46	2.64	0.14	3.25	1.27	17.3	15	3d	0.12	20.6	0.59
		2.62	0.12	3.27		17.2	19	3d			
EBA042 EBA105 EBA138	2012 DR41	2.34	0.23	3.20	0.79	18.5	15	3d	0.11	21.1	0.68
		2.35	0.25	3.34	0.76	18.4	15	3d			
ELA011 EBA084 ESU178	2012 DT85	2.69	0.14	0.83	1.31	18.2	13	2d	0.14	20.8	0.58
		2.55	0.27	1.11	0.85	16.7	17	4d			
ELA013 EBA082 ESU108	2012 DT40	3.11	0.11	20.44	1.83	17.3	13	2d	0.09	20.9	0.62
		3.10	0.09	22.67		17.0	13	3d			
ELA017 EPA066 EPA111	2012 DK41	2.44	0.11	0.51	1.16	19.0	14	3d	0.10	21.1	0.63
		2.44	0.16	0.50		19.2	14	3d			
ELA019 EPA067 EPA088	2012 DF41	3.08	0.11	5.83	1.73	17.1	15	3d	0.10	21.5	0.51
		2.99	0.26	7.40		16.7	15	3d			
ELA020 EPA065 EPA108	2012 DG41	2.47	0.23	2.97	0.96	19.2	15	3d	0.12	21.4	0.65
		2.46	0.22	2.64	0.92	19.4	15	3d			
ELA022 EPA071 EPA118	2012 DN45	2.74	0.12	4.10	1.41	18.8	15	3d	0.17	21.5	0.58
		2.72	0.09	4.24		18.6	15	3d			
ELA023 EPA063 EPA104	2012 DH41	2.23	0.15	5.66	0.91	20.0	15	3d	0.08	21.0	0.67
		2.23	0.15	5.72	0.92	19.9	15	3d			
ELA026 EPA074 EPA097	2012 DB41	2.76	0.26	6.91	1.06	17.8	15	3d	0.24	20.5	0.61
		2.64	0.19	5.74		18.4	26	1m			
ELA030 EPA081 EPA102	2012 DJ41	2.36	0.13	0.39	1.07	20.0	15	3d	0.13	21.6	0.62
		2.38	0.13	0.40		19.8	15	3d			
ELA035 ELA049 EPA145	2012 DP42	2.11	0.17	2.71	0.75	19.2	14	3d	0.10	20.0	0.71
		2.21	0.15	4.18	0.87	18.2	22	1m			
EPO019 EBA117 EPO096	2012 DO60	2.22	0.16	4.90	0.89	19.4	14	3d	0.24	20.3	0.65
		2.57	0.25	8.50	0.96	18.2	29	14d			
EPO027 EBA113 EPO087	2012 DV40	2.84	0.12	2.37	1.50	17.3	13	3d	0.19	20.1	0.56
		2.80	0.03	2.74		16.9	59	7y			
EPO022 EBA114 EPO067	2012 DM45	2.56	0.20	2.55	1.05	19.1	13	3d	0.28	20.8	0.60
		2.61	0.06	3.80		18.0	13	3d			
EPO023 EBA119 EPO101	2012 DC84	4.14	0.94	107.46	0.78	14.4	11	3d	0.12	20.8	0.60
		2.52	0.11	2.93		18.9	15	3d			
EPO035 ETU006 ETU046	2012 DB86	2.61	0.14	6.08	1.33	17.1	15	3d	0.22	20.3	0.60
		2.60	0.15	6.68		16.9	19	3d			
EPO032 ETU040 ETU073	2012 DY85	2.60	0.34	3.20	0.72	20.1	14	3d	0.23	20.7	0.55
		3.04	0.08	14.29		16.6	14	3d			
EPO051 ETU017 ETU053	2012 DW51	2.37	0.11	0.71	1.12	18.3	14	3d	0.14	19.9	0.62
		2.37	0.11	0.72		18.4	18	3d			
EPO041 ETU010 ETU059	2012 DE42	2.35	0.23	10.65	0.84	18.2	15	3d	0.15	19.9	0.75
		2.38	0.23	11.52	0.86	17.9	29	1m			
EPO043 ETU037 ETU055	2012 DA86	2.55	0.54	13.19	0.16	16.2	13	3d	0.17	20.9	0.59
		2.65	0.09	5.59		17.5	14	3d			
EPO045 ETU028 ETU077	2012 DM42	3.08	0.07	1.49	1.86	17.2	13	3d	0.13	21.0	0.52
		3.08	0.05	1.47		17.1	14	3d			
EPO050 ETU011 ETU078	2012 DN42	2.99	0.17	8.50	1.49	18.0	13	3d	0.14	20.6	0.57
		2.94	0.19	7.56		18.1	13	3d			
ESU004 ESU064 ESU147	2012 DM85	2.54	0.31	15.36	0.77	16.8	11	3d	0.24	20.7	0.63
		2.61	0.18	10.64		17.4	11	3d			
ESU009 ESU077 ESU122	2012 DA60	2.32	0.14	1.09	1.01	18.9	15	3d	0.16	20.1	0.62
		2.37	0.12	1.19		18.8	26	15d			
ESU015 ESU070 ESU160	2012 DG88	2.39	0.16	1.15	1.00	19.0	13	3d	0.23	20.9	0.65
		2.24	0.18	0.80	0.84	19.8	13	3d			
ESU019 ESU093 ELA072	2012 DJ84	2.53	0.19	0.74	1.08	18.8	14	3d	0.30	20.4	0.59
		2.75	0.22	1.09		17.8	18	6d			
ESU022 ESU083 ELA078	2012 DE84	1.98	0.17	1.62	0.65	20.1	14	3d	0.26	19.9	0.63

Table A.3 (continued) – 104 unknown asteroids discovered at the INT in Feb 2012 in the opposition mini-survey.

Acronym	Designation	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	μ (″/min)
		2.23	0.18	2.32	0.85	19.2	18	6d			
EVA001 ESU051 EPA182	2012 DB43	2.23	0.17	2.11	0.87	19.7	15	3d	0.19	20.5	0.63
		2.28	0.16	2.28	0.92	19.6	19	6d			
EVA002 ESU044 EPA175	2012 DZ42	3.08	0.13	11.60	1.76	16.2	15	3d	0.29	20.4	0.53
		3.07	0.13	12.20		16.1	15	3d			
EVA007 ESU045 EPA184	2012 DU84	2.41	0.19	4.04	0.93	17.2	13	3d	0.27	19.8	0.66
		2.35	0.12	3.07		17.9	17	6d			
EVA009 ESU046 EPA188	2012 DW42	2.28	0.16	1.31	0.92	19.1	15	3d	0.14	20.2	0.64
		2.31	0.14	1.42	0.98	18.9	19	6d			
EVA011 ESU047 EPA186	2012 DY42	2.33	0.29	1.31	0.85	19.6	15	3d	0.35	20.3	0.58
		2.75	0.18	2.55		18.0	19	6d			
EVA019 ESU053 EPA191	2012 DV42	2.66	0.28	0.80	0.91	19.0	15	3d	0.10	20.0	0.53
		3.10	0.14	1.33		17.1	21	13d			
EVA028 ESU049 EPA187	2012 DX42	2.15	0.25	1.12	0.61	20.7	15	3d	0.18	20.4	0.53
		3.09	0.08	4.37		17.2	19	6d			
EVA032 ESU060 EPA189	2012 DO89	2.68	0.25	1.55	1.01	18.9	13	3d	0.21	20.1	0.54
		2.86	0.23	5.79		16.0	17	6d			
INT Feb 2012 2-night objects discovered in the opposition mini-survey:											
EBA019 EBA124	2012 DQ45	3.61	0.53	2.27	0.71	18.4	10	3d	0.13	20.7	0.57
EBA021 EVA038	2012 DO49	2.86	0.49	28.78	0.49	15.4	10	3d	0.08	20.2	0.61
EBA025 EBA141	2012 DP45	5.51	0.68	1.78	0.74	18.6	9	3d	0.12	21.2	0.55
EBA026 EBA093	2012 DL20	2.56	0.12	9.06	1.26	17.5	10	2d	0.15	19.8	0.65
		2.30	0.18	5.11	0.90	18.5	38	9y			
EBA034 EBA102	2012 DN41	2.47	0.16	0.35	1.08	19.3	10	2d	0.11	20.7	0.60
EBA045 EBA110	2012 DO41	2.49	0.24	2.22	0.90	20.9	8	2d	0.16	21.8	0.56
EBA032 EBA104	2012 DP41	2.37	0.26	2.91	0.75	19.4	10	2d	0.15	19.7	0.54
		3.16	0.24	6.64		17.3	12	3d			
EBA080 ESU179	2012 DY59	2.65	0.04	12.94	1.55	17.3	7	2d	0.11	20.1	0.64
		2.68	0.06	13.89		17.0	11	4d			
EBA088 EBA143	2012 DS46	2.81	0.01	2.25	1.77	17.6	10	2d	0.12	21.0	0.55
EBA095 EVA034	2012 DU51	2.34	0.19	3.98	0.90	20.3	10	2d	0.13	21.2	0.61
EBA099 EVA037	2012 DT51	3.59	0.53	4.66	0.70	19.3	10	2d	0.10	21.3	0.61
EBA215 EBA090	2012 DQ41	3.16	0.30	4.86	1.24	18.3	10	2d	0.08	20.7	0.54
ELA001 EBA070	2012 DU40	3.09	0.37	7.62	0.96	17.1	8	2d	0.10	20.8	0.57
ELA021 EPA072	2012 DD41	2.22	0.06	4.47	1.11	19.2	10	2d	0.09	21.1	0.69
		2.26	0.09	5.73		18.7	14	3d			
ELA024 EPA093	2012 DO45	1.75	0.28	1.11	0.25	22.7	10	3d	0.27	21.3	0.67
ELA033 EPA082	2012 DL41	2.87	0.08	2.18	1.85	18.2	10	2d	0.11	21.5	0.55
ELA036 EPA155	2012 DP49	2.20	0.20	6.48	0.95	17.9	10	3d	0.28	18.3	0.70
		2.23	0.14	4.91	0.91	18.4	18	6d			
ELA043 EPA146	2012 DL73	2.43	0.21	2.40	0.93	20.1	9	2d	0.18	21.1	0.58
ELA045 EPA129	2012 DK73	2.73	0.04	4.54	1.60	17.6	9	2d	0.10	20.9	0.58
		2.16	0.22	1.17	0.69	20.7	13	6d			
ELA048 EPA138	2012 DA52	5.36	0.74	3.29	0.38	14.9	9	2d	0.04	20.0	0.51
ELA058 EBA151	2012 DV51	2.43	0.25	1.51	0.82	18.0	10	2d	0.11	21.3	0.63
EPO003 EBA111	2012 DX40	2.94	0.03	2.04	1.86	17.1	8	2d	0.08	20.5	0.54
		3.00	0.26	1.34		18.3	12	3d			
EPO005 EPO095	2012 DA84	2.88	0.12	2.34	1.54	17.0	10	3d	0.10	21.0	0.53

Table A.3 (continued) – 104 unknown asteroids discovered at the INT in Feb 2012 in the opposition mini-survey.

Acronym	Designation	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	μ (″/min)
EPO009 EPO093	2012 DD84	2.27	0.19	3.37	0.82	17.7	10	3d	0.14	20.8	0.66
EPO013 EPO097	2012 DB84	2.35	0.19	3.66	0.90	20.4	10	3d	0.30	21.4	0.60
EPO024 EBA112	2012 DL89	1.95	0.17	0.45	0.63	19.8	7	2d	0.23	19.7	0.64
		2.45	0.13	0.77		17.5	45	4y			
EPO030 ETU067	2012 DV85	2.41	0.12	5.37	1.11	17.7	10	3d	0.15	20.7	0.64
EPO036 ETU003	2012 DH42	2.28	0.23	4.82	0.76	20.5	10	2d	0.18	20.7	0.61
EPO037 ETU004	2012 DJ42	2.33	0.25	2.58	0.75	20.0	10	2d	0.20	20.3	0.55
EPO038 ETU005	2012 DK42	2.35	0.26	3.04	0.75	19.6	10	2d	0.26	19.8	0.55
		3.22	0.23	15.71		15.7	14	3d			
EPO039 ETU048	2012 DU85	2.84	0.03	2.55	1.82	17.4	10	3d	0.19	20.7	0.56
EPO042 ETU025	2012 DZ51	2.88	0.27	6.98	1.11	16.8	10	2d	0.19	20.4	0.58
		2.73	0.18	7.26		16.9	14	3d			
EPO044 ETU026	2012 DG42	2.89	0.11	2.66	1.56	16.6	10	2d	0.13	20.5	0.54
EPO049 ETU021	2012 DL42	5.20	0.76	3.66	0.26	18.7	9	2d	0.16	20.0	0.67
		2.23	0.09	3.49		18.8	15	29d			
ESU001 ESU062	2012 DU42	3.05	0.16	3.82	1.56	17.4	10	2d	0.07	20.0	0.54
		3.05	0.09	4.79		17.0	14	7d			
ESU011 ESU078	2012 DT42	2.81	0.18	1.27	1.29	18.1	10	2d	0.12	20.4	0.57
ESU013 ESU067	2012 DN89	2.33	0.11	3.31	1.08	18.6	10	2d	0.22	20.0	0.64
		2.55	0.36	9.14	0.66	16.6	13	4d			
ESU016 ESU075	2012 DQ42	2.94	0.03	0.73	1.86	16.6	10	2d	0.26	19.8	0.54
		2.97	0.10	0.64		17.3	16	9d			
ESU017 ESU080	2012 DM89	2.19	0.04	7.88	1.08	18.2	9	2d	0.19	20.2	0.72
ESU030 ELA055	2012 DY41	2.32	0.18	3.49	0.91	19.4	10	2d	0.12	20.3	0.62
		2.43	0.21	3.86	0.92	19.2	14	3d			
ESU033 ELA056	2012 DZ41	2.77	0.03	3.68	1.68	16.9	10	2d	0.08	20.2	0.57
		2.71	0.22	5.25		16.6	14	9d			
ESU035 ELA061	2012 DX41	3.19	0.09	9.34	1.89	17.5	9	2d	0.12	20.8	0.54
ESU036 ELA059	2012 DD42	2.43	0.22	0.37	0.90	20.0	10	2d	0.14	20.9	0.57
		2.78	0.02	0.92		17.6	14	3d			
ESU040 ELA052	2012 DB42	2.70	0.25	0.96	1.05	19.6	10	2d	0.16	21.0	0.55
ESU042 ELA054	2012 DW41	2.57	0.17	2.30	1.29	17.9	10	2d	0.16	21.2	0.60
ESU048 EPA185	2012 DQ89	2.84	0.13	2.39	1.46	16.4	10	2d	0.33	20.4	0.54
ESU061 EPA183	2012 DW84	2.81	0.35	12.44	0.89	17.1	10	2d	0.13	19.2	0.70
		2.33	0.20	7.70	0.87	18.2	17	4d			
ESU073 ESU154	2012 DN85	2.49	0.22	2.63	0.94	19.8	10	2d	0.16	20.8	0.57
		2.14	0.22	1.77	0.68	20.8	13	6d			
ESU087 ELA085	2012 DF84	2.82	0.17	2.08	1.32	16.0	10	2d	0.08	20.1	0.54
		2.90	0.07	1.68		16.4	14	6d			
ESU088 ELA084	2012 DH84	2.36	0.26	0.41	0.75	20.4	10	2d	0.11	20.7	0.52
		2.94	0.28	1.46		16.2	14	6d			
ESU089 ELA089	2012 DK84	2.97	0.21	3.83	1.34	19.1	10	2d	0.21	21.3	0.54
ESU086 ELA071	2012 DL84	2.38	0.26	4.41	0.78	19.9	10	2d	0.12	20.3	0.57
		3.19	0.14	26.62		15.6	17	1m			
ESU090 ELA083	2012 DM84	2.75	0.04	1.00	1.63	17.5	10	2d	0.14	20.8	0.57
		2.76	0.01	0.93		17.7	14	6d			
ESU092 ELA074	2012 DG84	2.29	0.14	1.74	0.99	19.4	10	2d	0.30	21.0	0.65
ETU022 ETU084	2012 DW85	2.37	0.22	2.71	0.90	19.8	10	2d	0.15	20.7	0.59
ETU012 ETU052	2012 DX85	2.52	0.15	8.03	1.15	19.0	10	2d	0.17	20.7	0.65

Table A.3 (continued) – 104 unknown asteroids discovered at the INT in Feb 2012 in the opposition mini-survey.

Acronym	Designation	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ ($''$)	R	μ ($''$/min)
ETU032 ETU080	2012 DZ85	1.97	0.16	2.50	0.66	21.1	10	2d	0.14	21.1	0.65
EVA008 EPA178	2012 DT84	2.57	0.35	2.45	0.67	19.8	10	3d	0.14	20.3	0.54
EVA014 ESU055	2012 DC43	2.98	0.08	2.21	1.74	16.4	10	2d	0.12	20.4	0.53
		3.15	0.17	1.94		17.5	20	13y			
EVA016 ESU052	2012 DA43	3.03	0.06	10.64	1.82	16.4	10	2d	0.09	20.3	0.54
		2.95	0.19	13.60		16.1	14	4d			
EVA022 ESU056	2012 DE43	2.69	0.06	3.60	1.55	17.7	10	2d	0.21	20.3	0.59
EVA025 ESU059	2012 DF43	2.76	0.03	4.06	1.66	16.7	10	2d	0.23	20.0	0.57
		2.66	0.29	6.59	0.87	16.1	14	4d			
INT Feb 2012 1-night objects discovered in the opposition mini-survey:											
EBA152	2012 DX47	3.18	0.01	11.65	2.12	15.8	5	1d	0.09	19.8	0.54
		3.18	0.03	11.14		16.1	25	1m			
ESU137	2012 DC83	2.40	0.05	3.77	1.29	18.5	5	1d	0.09	20.5	0.64
ETU090	2012 DC86	2.37	0.13	4.69	1.08	18.2	5	1d	0.05	19.7	0.66
		2.46	0.10	5.98		17.5	27	2m			
EVA045	2012 EO1	2.25	0.28	4.24	0.63	20.0	3	1d	0.20	13.3	0.58
		3.14	0.04	9.26		16.1	20	16d			

Table A.4: 626 unknown objects observed with the INT during one night in Feb 2012 in the opposition mini-survey fields. We include approximate orbital data fitted with FIND_ORB software based on our 1-night datasets.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
EBA016	2.57	0.01	2.3	1.55	19.2	5	1n	0.16	21.8	-1	184	0.62
EBA022	2.69	0.06	3.1	1.52	17.1	5	1n	0.09	20.4	-1	184	0.59
EBA023	1.04	0.04	0.4	0.01	32.0	5	1n	0.27	20.7	-1	184	1.11
EBA024	1.03	0.11	0.2	0.01	36.5	4	1n	0.38	20.4	-1	184	0.80
EBA027	2.33	0.29	3.7	0.67	21.5	4	1n	0.09	21.5	0	184	0.57
EBA029	2.50	0.24	2.6	0.90	19.5	5	1n	0.11	20.4	0	184	0.58
EBA030	2.93	0.03	1.1	1.86	15.7	5	1n	0.05	19.0	0	184	0.56
EBA031	2.30	0.30	0.1	0.63	21.4	5	1n	0.06	21.2	0	184	0.50
EBA033	3.19	0.01	1.8	2.14	17.8	5	1n	0.25	21.7	0	184	0.52
EBA036	2.90	0.02	2.8	1.86	18.1	5	1n	0.09	21.4	0	184	0.56
EBA038	2.39	0.04	0.5	1.29	19.6	4	1n	0.07	21.7	0	184	0.66
EBA040	2.45	0.23	0.4	0.90	20.9	5	1n	0.23	21.8	0	184	0.60
EBA041	2.29	0.10	7.0	1.08	19.5	3	1n	0.11	20.9	0	184	0.72
EBA043	2.26	0.01	2.9	1.23	19.6	5	1n	0.30	21.6	0	184	0.71
EBA044	2.38	0.04	2.8	1.29	17.4	5	1n	0.07	19.4	-1	184	0.66
EBA071	2.46	0.16	2.3	1.08	19.0	3	1n	0.16	20.5	-1	186	0.62
EBA073	2.65	0.08	13.3	1.43	16.7	3	1n	0.10	20.1	-1	186	0.64
EBA074	1.39	0.06	0.5	0.31	23.5	3	1n	0.27	21.5	-1	186	0.93
EBA075	2.48	0.24	3.8	0.90	18.6	3	1n	0.08	19.6	-1	186	0.60
EBA076	2.34	0.10	4.2	1.10	19.0	3	1n	0.28	21.4	-1	186	0.68
EBA077	1.82	0.18	0.6	0.51	22.2	3	1n	0.18	21.5	-1	186	0.65
EBA078	2.39	0.27	5.7	0.75	20.8	2	1n	0.00	21.2	-1	186	0.63
EBA079	2.40	0.05	3.9	1.29	19.7	2	1n	0.00	21.9	-1	186	0.66
EBA081	2.46	0.23	2.6	0.90	19.8	3	1n	0.14	20.8	-1	186	0.59
EBA083	2.35	0.38	0.4	0.47	22.3	3	1n	0.28	21.4	-1	186	0.26
EBA085	2.31	0.30	3.4	0.63	21.5	3	1n	0.07	21.4	-1	186	0.54
EBA086	2.43	0.22	0.7	0.90	19.8	3	1n	0.10	20.8	-1	186	0.59
EBA087	2.35	0.36	2.6	0.53	22.1	3	1n	0.03	21.5	-1	186	0.41
EBA089	3.07	0.05	2.3	1.91	16.7	5	1n	0.06	20.6	-1	184	0.52
EBA092	2.37	0.27	3.4	0.75	20.5	5	1n	0.10	20.9	-1	184	0.58
EBA096	2.45	0.04	0.1	1.35	19.1	5	1n	0.23	21.8	0	184	0.63
EBA097	2.66	0.05	3.0	1.55	17.8	5	1n	0.05	20.5	0	184	0.60
EBA098	2.44	0.23	2.4	0.90	19.4	5	1n	0.06	20.4	0	184	0.59
EBA103	3.10	0.04	7.2	1.96	17.8	5	1n	0.21	21.8	0	184	0.54
EBA106	2.81	0.01	0.9	1.75	18.2	5	1n	0.14	21.6	0	184	0.56
EBA107	2.45	0.04	0.8	1.34	19.1	4	1n	0.38	21.8	0	184	0.61
EBA108	3.18	0.01	11.3	2.12	18.0	5	1n	0.12	22.0	0	184	0.54
EBA109	2.73	0.04	12.4	1.60	18.2	5	1n	0.13	21.5	0	184	0.62
EBA115	3.16	0.02	1.1	2.09	16.4	5	1n	0.06	20.3	-1	184	0.51
EBA116	2.40	0.21	2.3	0.90	19.2	4	1n	0.15	20.1	-1	185	0.62
EBA121	2.36	0.20	6.8	0.90	20.2	5	1n	0.21	21.2	-1	184	0.66
EBA122	2.40	0.05	2.9	1.29	18.5	5	1n	0.13	20.7	-1	184	0.63
EBA123	2.34	0.10	1.2	1.09	18.7	5	1n	0.10	20.8	-1	185	0.66
EBA125	2.86	0.00	1.4	1.84	17.1	5	1n	0.05	20.5	-1	184	0.56
EBA126	2.44	0.34	0.4	0.63	21.3	5	1n	0.16	21.2	-1	184	0.43
EBA127	2.43	0.05	1.4	1.31	18.3	5	1n	0.08	21.1	-1	184	0.64
EBA128	2.41	0.14	3.3	1.08	19.1	5	1n	0.21	20.7	-1	185	0.61
EBA129	3.01	0.16	3.3	1.55	17.8	5	1n	0.06	20.6	-1	185	0.54
EBA130	2.36	0.26	2.8	0.75	20.0	4	1n	0.17	20.5	-1	185	0.57
EBA132	2.33	0.34	0.5	0.55	21.2	3	1n	0.07	20.8	-1	185	0.41
EBA135	2.81	0.01	0.9	1.76	17.4	3	1n	0.06	20.8	0	185	0.57
EBA136	2.39	0.05	0.5	1.29	18.8	5	1n	0.07	21.0	0	184	0.65
EBA139	2.31	0.01	2.6	1.29	17.3	5	1n	0.07	19.5	0	185	0.66
EBA144	2.80	0.02	3.0	1.75	17.9	5	1n	0.23	21.3	-1	185	0.55
EBA145	2.37	0.04	3.0	1.29	19.0	5	1n	0.14	21.1	-1	184	0.66
EBA146	2.29	0.10	6.6	1.08	19.6	4	1n	0.10	21.2	-1	184	0.70
EBA147	2.31	0.01	0.6	1.29	19.1	4	1n	0.20	21.3	-1	184	0.68
EBA150	2.44	0.04	2.9	1.32	18.2	5	1n	0.06	21.0	-1	185	0.64
EBA153	2.48	0.24	3.3	0.90	19.5	4	1n	0.11	20.4	0	184	0.59
EBA154	2.67	0.05	2.6	1.55	18.0	5	1n	0.14	20.8	0	184	0.60
EBA155	2.27	0.17	7.5	0.90	18.6	5	1n	0.02	19.6	0	184	0.71
EBA156	2.46	0.16	4.0	1.08	19.0	5	1n	0.06	20.6	0	184	0.62
EBA157	2.21	0.04	1.2	1.12	18.4	4	1n	0.22	20.6	0	184	0.71
EBA158	2.38	0.21	3.3	0.90	19.1	5	1n	0.29	16.1	0	184	0.61
EBA159	2.37	0.20	0.5	0.90	20.0	5	1n	0.08	21.0	0	184	0.60

Table A.4 (continued) – 626 unknown objects observed with the INT during one night in Feb 2012 in the opposition mini-survey fields.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
EBA160	3.10	0.04	11.5	1.98	17.1	5	1n	0.09	21.1	0	184	0.55
EBA161	3.03	0.06	1.8	1.82	17.0	5	1n	0.11	21.0	0	184	0.54
EBA162	2.42	0.33	0.6	0.63	21.4	4	1n	0.33	21.3	0	184	0.47
EBA163	1.31	0.39	0.2	0.01	30.9	5	1n	0.05	20.7	0	184	0.54
EBA164	2.31	0.25	3.7	0.75	20.7	5	1n	0.08	21.1	0	184	0.59
EBA165	2.40	0.05	5.2	1.29	19.0	5	1n	0.15	21.1	0	184	0.65
EBA166	3.05	0.07	0.5	1.86	17.6	5	1n	0.03	20.9	0	184	0.54
EBA167	1.95	0.03	0.1	0.90	20.2	5	1n	0.11	21.2	0	184	0.76
EBA168	2.47	0.30	3.0	0.71	16.9	5	1n	0.08	21.0	0	184	0.61
EBA169	2.67	0.05	3.6	1.55	18.0	4	1n	0.14	20.7	0	184	0.60
EBA170	2.30	0.24	5.4	0.75	19.3	5	1n	0.10	19.8	0	184	0.63
EBA171	2.36	0.26	2.4	0.75	20.8	5	1n	0.10	21.3	0	184	0.56
EBA172	2.37	0.20	0.3	0.90	20.4	5	1n	0.08	21.4	0	184	0.61
EBA173	2.29	0.10	6.3	1.08	19.7	5	1n	0.19	21.3	0	184	0.71
EBA174	2.48	0.16	0.4	1.08	19.7	5	1n	0.09	21.3	-1	184	0.61
EBA175	2.77	0.03	12.4	1.69	17.2	5	1n	0.04	20.6	0	184	0.62
EBA176	2.12	0.12	8.2	0.86	19.1	4	1n	0.25	21.3	-1	184	0.78
EBA177	2.49	0.25	4.0	0.88	19.8	5	1n	0.07	20.8	-1	184	0.60
EBA178	2.75	0.04	2.7	1.63	17.1	5	1n	0.05	20.5	-1	184	0.58
EBA179	3.06	0.07	0.5	1.86	17.8	5	1n	0.04	21.2	-1	184	0.54
EBA180	2.12	0.08	2.2	0.94	19.1	4	1n	0.12	21.2	-1	184	0.72
EBA182	2.35	0.03	2.7	1.29	18.6	5	1n	0.20	20.8	-1	184	0.67
EBA183	2.33	0.14	11.6	1.02	18.9	5	1n	0.15	20.5	-1	184	0.79
EBA184	2.49	0.30	1.0	0.75	20.4	4	1n	0.14	20.8	-1	184	0.52
EBA185	2.36	0.31	1.3	0.63	20.8	5	1n	0.08	20.7	-1	184	0.47
EBA186	1.56	0.64	0.1	0.01	29.0	5	1n	0.21	20.1	-1	184	0.54
EBA187	2.68	0.06	5.0	1.50	17.4	5	1n	0.15	20.8	-1	184	0.60
EBA188	2.91	0.10	2.5	1.60	16.7	5	1n	0.04	20.8	-1	184	0.54
EBA189	2.32	0.25	6.2	0.75	20.5	5	1n	0.06	21.0	0	184	0.66
EBA190	2.91	0.10	2.1	1.60	16.9	5	1n	0.07	20.9	0	184	0.54
EBA191	2.77	0.03	3.9	1.69	17.0	5	1n	0.05	20.4	0	184	0.58
EBA192	2.34	0.19	3.4	0.90	19.5	5	1n	0.04	20.5	0	184	0.63
EBA193	2.12	0.12	0.9	0.84	17.9	5	1n	0.14	20.0	0	184	0.73
EBA194	2.39	0.21	3.1	0.90	20.4	4	1n	0.14	21.4	0	184	0.63
EBA195	2.42	0.05	0.4	1.29	18.5	5	1n	0.13	21.3	0	184	0.64
EBA196	2.62	0.11	12.2	1.36	18.3	5	1n	0.31	21.0	0	184	0.68
EBA197	3.17	0.01	2.4	2.12	16.0	5	1n	0.14	20.0	0	184	0.52
EBA198	3.06	0.05	11.1	1.89	17.2	5	1n	0.10	21.3	0	184	0.54
EBA199	2.44	0.28	2.4	0.75	20.7	5	1n	0.14	21.1	0	184	0.53
EBA200	3.16	0.16	3.4	1.65	16.6	5	1n	0.11	21.2	0	184	0.49
EBA201	2.32	0.09	0.5	1.10	18.8	5	1n	0.06	20.9	0	184	0.68
EBA202	2.38	0.30	0.2	0.67	21.3	2	1n	0.00	21.4	0	184	0.50
EBA203	2.45	0.29	2.5	0.75	20.4	5	1n	0.07	20.9	0	184	0.54
EBA204	3.08	0.04	3.4	1.93	16.0	5	1n	0.14	20.0	0	184	0.51
EBA205	2.33	0.10	0.5	1.10	19.2	5	1n	0.16	21.4	0	184	0.66
EBA206	2.32	0.02	0.2	1.29	19.0	5	1n	0.07	21.1	0	184	0.68
EBA207	2.77	0.03	6.4	1.67	17.2	5	1n	0.04	20.6	0	184	0.59
EBA207b	2.44	0.04	0.5	1.33	17.5	5	1n	0.06	20.2	0	184	0.63
EBA208	3.01	0.05	2.9	1.86	18.0	5	1n	0.54	21.3	0	184	0.53
EBA209	2.14	0.03	0.2	1.08	19.4	5	1n	0.12	21.0	0	184	0.71
EBA209b	2.40	0.21	2.1	0.90	20.1	5	1n	0.06	21.1	0	184	0.60
EBA210	2.68	0.06	2.0	1.50	17.8	5	1n	0.09	21.2	0	184	0.58
EBA211	2.87	0.20	3.5	1.29	19.2	4	1n	0.13	21.3	0	184	0.56
EBA212	2.46	0.16	0.7	1.08	19.7	5	1n	0.35	21.2	0	184	0.62
EBA213	2.32	0.14	2.2	0.97	18.6	5	1n	0.15	21.3	0	184	0.68
ELA002	2.49	0.30	3.6	0.75	21.3	5	1n	0.15	21.7	-1	186	0.56
ELA003	2.40	0.33	2.4	0.63	21.3	4	1n	0.36	21.2	-1	186	0.45
ELA004	1.14	0.23	0.5	0.01	30.0	5	1n	0.27	20.0	-1	186	0.65
ELA005	2.38	0.26	5.0	0.75	19.9	5	1n	0.09	20.3	-1	186	0.60
ELA006	2.60	0.09	2.1	1.35	17.2	4	1n	0.03	20.6	-1	186	0.61
ELA007	2.30	0.30	4.1	0.63	21.2	4	1n	0.68	21.1	-1	186	0.61
ELA008	2.48	0.17	0.6	1.08	20.0	5	1n	0.09	21.5	-1	186	0.62
ELA009	2.47	0.23	0.6	0.90	21.0	5	1n	0.13	21.9	-1	186	0.59
ELA010	2.38	0.20	0.6	0.90	20.7	5	1n	0.08	21.7	-1	186	0.61
ELA012	2.33	0.25	3.3	0.75	20.8	5	1n	0.14	21.2	-1	186	0.60
ELA014	1.04	0.19	0.0	0.01	33.5	5	1n	0.07	20.8	-1	186	0.54
ELA015	2.34	0.02	4.1	1.29	19.0	5	1n	0.16	21.1	-2	186	0.66

Table A.4 (continued) – 626 unknown objects observed with the INT during one night in Feb 2012 in the opposition mini-survey fields.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
ELA016	2.85	0.00	3.5	1.84	17.5	5	1n	0.10	20.9	-2	186	0.57
ELA018	3.08	0.05	3.8	1.93	18.1	4	1n	0.10	22.0	-1	184	0.52
ELA025	2.89	0.11	2.3	1.55	16.2	5	1n	0.05	20.2	-1	185	0.55
ELA027	2.86	0.07	2.1	1.63	16.9	4	1n	0.06	20.5	-1	185	0.56
ELA029	2.36	0.12	3.7	1.08	19.6	5	1n	0.32	21.1	0	184	0.68
ELA031	2.32	0.25	3.2	0.75	19.8	4	1n	0.06	20.1	-1	184	0.60
ELA032	1.85	0.02	3.8	0.80	20.6	4	1n	0.19	21.5	-1	184	0.86
ELA037	2.36	0.32	1.2	0.62	20.8	5	1n	0.18	20.4	0	182	0.46
ELA038	2.32	0.25	6.0	0.75	19.9	5	1n	0.18	20.0	0	182	0.66
ELA039	2.50	0.30	1.4	0.75	20.1	5	1n	0.11	20.3	0	181	0.51
ELA040	2.20	0.04	3.4	1.12	17.8	4	1n	0.30	19.8	0	182	0.73
ELA041	2.80	0.02	2.2	1.74	17.3	4	1n	0.17	20.5	0	182	0.57
ELA042	2.83	0.01	1.5	1.80	17.1	4	1n	0.20	20.3	0	182	0.57
ELA046	2.71	0.04	2.4	1.59	17.7	4	1n	0.16	20.6	0	182	0.59
ELA047	2.31	0.39	0.9	0.40	21.4	4	1n	1.20	19.9	0	182	0.17
ELA050	2.58	0.37	12.3	0.63	20.9	4	1n	1.46	20.6	1	182	0.84
ELA051	2.43	0.05	1.0	1.30	17.9	5	1n	0.10	20.5	0	183	0.64
ELA053	2.38	0.27	3.1	0.75	20.2	5	1n	0.11	20.5	0	183	0.57
ELA057	3.00	0.07	0.0	1.77	15.7	5	1n	0.07	19.6	0	183	0.53
ELA062	2.12	0.02	0.1	1.08	20.1	5	1n	0.15	21.6	0	183	0.71
ELA063	3.11	0.04	11.0	1.98	17.4	5	1n	0.10	21.4	0	183	0.55
ELA064	2.39	0.31	1.3	0.67	????	4	1n	0.35	0.0	0	183	0.49
ELA065	2.25	0.02	0.4	1.20	18.9	4	1n	0.05	20.9	0	183	0.68
ELA066	2.33	0.29	0.6	0.67	21.4	3	1n	0.07	21.4	0	184	0.52
ELA067	2.00	0.14	5.3	0.71	18.8	5	1n	0.27	20.9	0	184	0.81
ELA068	2.44	0.22	3.9	0.90	19.6	5	1n	0.10	20.5	0	183	0.60
ELA069	2.66	0.05	3.3	1.55	18.5	5	1n	0.20	21.2	0	181	0.60
ELA070	1.95	0.03	15.6	0.90	20.1	3	1n	0.18	21.0	1	182	0.99
ELA073	2.37	0.20	0.4	0.90	19.9	5	1n	0.06	20.8	1	182	0.60
ELA075	3.00	0.05	0.4	1.86	17.1	5	1n	0.07	20.4	1	182	0.54
ELA076	2.36	0.26	3.6	0.75	20.8	5	1n	0.18	21.2	0	182	0.57
ELA077	2.42	0.05	2.8	1.30	17.6	5	1n	0.09	20.3	1	182	0.64
ELA079	2.77	0.03	4.2	1.67	17.6	5	1n	0.15	20.9	0	182	0.57
ELA080	3.11	0.03	8.8	2.00	15.5	5	1n	0.06	19.5	0	182	0.53
ELA081	2.37	0.27	2.9	0.75	20.3	5	1n	0.15	20.6	0	182	0.56
ELA082	2.33	0.31	1.3	0.63	20.3	5	1n	0.13	20.1	0	182	0.46
ELA086	2.49	0.08	0.8	1.29	19.3	5	1n	0.12	21.3	1	182	0.61
ELA087	2.35	0.19	3.4	0.90	20.3	5	1n	0.10	21.2	1	182	0.62
ELA088	2.30	0.13	3.2	1.00	18.7	5	1n	0.07	21.4	1	182	0.69
ELA090	2.27	0.12	4.9	0.99	17.2	5	1n	0.04	19.9	1	182	0.69
ELA091	2.41	0.05	2.1	1.29	18.5	5	1n	0.05	20.6	1	182	0.65
ELA092	2.49	0.08	1.0	1.29	19.0	5	1n	0.12	21.1	1	182	0.63
ELA093	2.44	0.32	2.9	0.65	17.1	5	1n	0.05	21.0	1	182	0.62
ELA094	2.47	0.03	1.4	1.38	18.5	5	1n	0.09	21.2	1	182	0.63
ELA095	1.91	0.01	7.8	0.90	20.7	3	1n	0.35	21.7	1	182	0.86
ELA096	2.43	0.22	0.6	0.90	19.2	5	1n	0.04	20.2	1	182	0.59
ELA097	2.41	0.22	2.1	0.90	20.0	5	1n	0.06	20.9	1	182	0.60
ELA098	2.70	0.06	2.4	1.54	17.8	5	1n	0.07	21.2	1	182	0.59
ELA099	2.71	0.05	3.9	1.55	17.2	5	1n	0.04	20.6	1	182	0.58
ELA100	2.39	0.27	0.5	0.75	20.3	5	1n	0.05	20.6	1	182	0.53
ELA101	2.31	0.25	3.3	0.75	20.8	4	1n	0.08	21.2	1	182	0.59
ELA102	3.06	0.05	10.8	1.89	15.6	5	1n	0.03	19.6	1	182	0.54
ELA103	2.28	0.29	0.5	0.63	21.5	5	1n	0.14	21.3	1	182	0.48
ELA104	3.11	0.18	3.3	1.56	16.5	5	1n	0.10	21.1	1	182	0.50
ELA105	2.22	0.03	4.4	1.15	19.4	5	1n	0.13	21.5	1	182	0.70
ELA106	2.56	0.32	2.4	0.75	19.7	5	1n	0.03	20.0	1	182	0.50
ELA107	2.80	0.15	2.4	1.37	15.8	5	1n	0.04	19.8	1	182	0.56
ELA108	2.44	0.23	3.0	0.90	19.5	5	1n	0.06	20.5	1	182	0.59
ELA109	2.65	0.08	2.6	1.44	16.8	5	1n	0.07	20.2	1	182	0.60
ELA110	2.61	0.03	12.5	1.55	18.2	5	1n	0.09	20.9	1	182	0.68
ELA111	3.12	0.19	3.8	1.55	18.4	5	1n	0.13	21.1	1	182	0.55
ELA112	2.30	0.01	2.3	1.29	18.7	5	1n	0.23	20.8	1	182	0.68
ELA113	2.43	0.28	2.6	0.75	20.8	5	1n	0.16	21.2	1	182	0.54
EPA064	2.48	0.16	0.5	1.08	20.1	5	1n	0.09	21.7	-1	185	0.61
EPA068	2.90	0.02	1.4	1.86	17.6	5	1n	0.04	21.0	-1	185	0.56
EPA069	2.80	0.15	9.7	1.37	15.9	5	1n	0.05	19.9	-1	185	0.57
EPA073	2.82	0.14	2.2	1.41	16.3	5	1n	0.06	20.3	-1	185	0.56

Table A.4 (continued) – 626 unknown objects observed with the INT during one night in Feb 2012 in the opposition mini-survey fields.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
EPA075	2.49	0.02	3.5	1.42	16.4	5	1n	0.03	19.1	-1	185	0.64
EPA079	2.45	0.15	0.3	1.08	19.5	5	1n	0.22	21.0	0	185	0.64
EPA080	2.39	0.05	1.1	1.29	18.6	5	1n	1.75	20.7	0	185	0.82
EPA083	2.98	0.04	10.9	1.86	17.1	5	1n	0.05	20.4	-1	185	0.58
EPA084	2.32	0.01	0.4	1.29	17.3	5	1n	0.26	19.4	-1	185	0.68
EPA085	2.31	0.14	2.2	0.98	16.9	5	1n	0.06	19.7	-1	185	0.68
EPA086	2.43	0.05	2.2	1.31	16.9	5	1n	0.11	19.7	-1	185	0.63
EPA087	2.32	0.02	2.4	1.29	19.3	5	1n	0.06	21.5	-1	185	0.67
EPA089	2.81	0.02	2.7	1.75	18.4	5	1n	0.24	21.8	-1	185	0.56
EPA090	3.06	0.05	1.3	1.90	17.3	5	1n	0.08	21.3	-1	185	0.52
EPA091	2.40	0.21	0.5	0.90	20.1	5	1n	0.06	21.1	-1	185	0.59
EPA092	2.32	0.18	3.5	0.90	20.4	5	1n	0.09	21.4	-1	185	0.62
EPA094	3.16	0.02	10.4	2.09	16.1	5	1n	0.03	20.1	-1	185	0.53
EPA095	2.13	0.03	0.6	1.08	20.4	5	1n	0.25	22.0	-1	185	0.72
EPA096	3.01	0.07	8.9	1.79	16.7	5	1n	0.06	20.8	-1	185	0.53
EPA098	2.95	0.04	0.7	1.86	17.2	5	1n	0.09	20.6	-1	185	0.54
EPA099	2.86	0.00	3.8	1.85	17.6	5	1n	0.10	21.0	-1	185	0.56
EPA100	2.87	0.12	3.2	1.55	18.3	5	1n	0.16	21.1	-1	185	0.56
EPA101	2.25	0.01	5.9	1.20	18.6	5	1n	0.26	20.8	-1	185	0.67
EPA103	2.52	0.18	14.5	1.08	18.8	5	1n	0.09	20.4	-1	185	0.78
EPA105	2.93	0.03	2.0	1.86	17.0	5	1n	0.07	20.4	-1	185	0.55
EPA106	2.31	0.10	2.4	1.08	17.0	5	1n	0.06	19.8	-1	185	0.66
EPA107	2.88	0.12	2.0	1.53	17.4	5	1n	0.15	21.4	-1	185	0.54
EPA109	1.02	0.11	0.2	0.01	34.9	5	1n	0.07	21.5	-1	185	0.64
EPA110	2.30	0.24	3.3	0.75	20.0	5	1n	0.08	20.4	-1	185	0.59
EPA112	2.90	0.20	2.0	1.31	17.0	5	1n	0.05	21.1	-1	185	0.55
EPA113	2.33	0.22	2.5	0.80	18.1	3	1n	0.04	21.5	-1	185	0.66
EPA114	2.31	0.20	10.8	0.86	19.7	5	1n	0.06	20.7	-1	185	0.77
EPA116	2.25	0.16	7.0	0.90	20.0	5	1n	0.10	21.0	-1	185	0.71
EPA117	3.11	0.04	16.7	1.98	17.6	5	1n	0.11	21.6	-1	185	0.57
EPA119	2.87	0.01	0.6	1.85	18.3	5	1n	0.20	21.6	0	182	0.56
EPA120	2.24	0.02	0.4	1.18	19.2	5	1n	0.07	21.3	0	182	0.69
EPA121	3.06	0.07	0.4	1.86	18.5	5	1n	0.37	17.5	0	182	0.54
EPA122	3.01	0.05	3.2	1.86	18.3	5	1n	0.13	21.6	0	182	0.56
EPA123	2.69	0.06	2.9	1.51	17.6	5	1n	0.06	20.9	0	182	0.59
EPA124	3.02	0.06	1.3	1.86	17.9	5	1n	0.04	21.2	0	182	0.54
EPA125	2.26	0.12	5.5	0.97	18.2	5	1n	0.04	20.9	0	182	0.70
EPA126	3.10	0.04	8.5	1.97	16.9	4	1n	0.09	20.9	0	182	0.54
EPA127	2.37	0.20	0.3	0.90	20.4	5	1n	0.06	21.3	0	182	0.60
EPA128	2.44	0.29	3.1	0.75	21.3	5	1n	0.12	21.7	0	182	0.54
EPA130	2.78	0.02	6.5	1.70	16.9	5	1n	0.05	20.2	0	182	0.58
EPA131	2.14	0.03	1.8	1.08	20.1	5	1n	0.11	21.6	0	182	0.72
EPA132	3.15	0.16	1.2	1.63	16.5	5	1n	0.12	21.1	0	183	0.49
EPA133	3.06	0.07	2.7	1.86	17.8	5	1n	0.08	21.2	0	183	0.53
EPA134	2.77	0.03	3.4	1.69	18.0	5	1n	0.15	21.3	0	183	0.57
EPA135	2.59	0.02	2.8	1.55	18.5	5	1n	0.11	21.3	0	183	0.62
EPA136	3.09	0.04	1.6	1.95	17.1	5	1n	0.06	21.1	0	182	0.52
EPA137	2.91	0.02	2.5	1.86	17.9	5	1n	0.08	21.2	0	182	0.55
EPA139	2.38	0.20	5.3	0.90	20.5	5	1n	0.12	21.4	0	182	0.64
EPA140	2.91	0.02	1.1	1.86	18.2	5	1n	0.14	21.5	1	182	0.55
EPA142	2.31	0.01	4.4	1.29	18.9	5	1n	0.10	21.0	0	182	0.67
EPA143	1.88	0.07	16.1	0.75	20.5	5	1n	0.09	20.8	0	182	1.13
EPA144	3.15	0.02	2.3	2.07	16.4	5	1n	0.06	20.4	0	183	0.52
EPA147	2.55	0.32	2.3	0.75	18.8	5	1n	0.04	19.2	0	182	0.50
EPA148	2.23	0.15	6.6	0.90	19.8	5	1n	0.11	20.7	0	182	0.71
EPA149	2.24	0.02	1.3	1.18	19.4	5	1n	0.12	21.5	0	182	0.69
EPA150	3.07	0.05	10.9	1.91	17.4	5	1n	0.06	21.4	1	182	0.54
EPA151	2.26	0.01	6.8	1.22	19.3	5	1n	0.07	21.4	1	183	0.70
EPA152	2.44	0.22	0.8	0.90	20.6	5	1n	0.14	21.6	1	182	0.57
EPA153	2.43	0.04	3.2	1.32	18.1	5	1n	0.05	20.8	1	182	0.64
EPA154	2.40	0.27	0.3	0.75	20.1	5	1n	0.08	20.5	1	183	0.54
EPA156	2.33	0.02	2.7	1.29	18.3	5	1n	0.07	20.4	1	183	0.67
EPA157	3.10	0.04	4.5	1.97	17.3	5	1n	0.21	21.3	1	183	0.50
EPA158	2.47	0.08	3.8	1.29	18.6	5	1n	0.04	20.7	1	183	0.64
EPA159	2.35	0.19	3.7	0.90	19.8	5	1n	0.04	20.8	1	183	0.64
EPA160	3.14	0.02	9.4	2.05	16.9	5	1n	0.20	20.9	1	183	0.54
EPA161	2.32	0.01	3.6	1.29	18.7	5	1n	0.03	20.8	0	183	0.68

Table A.4 (continued) – 626 unknown objects observed with the INT during one night in Feb 2012 in the opposition mini-survey fields.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
EPA162	2.39	0.21	2.8	0.90	20.2	5	1n	0.05	21.2	1	183	0.61
EPA163	2.41	0.28	0.4	0.75	21.1	5	1n	0.17	21.4	1	183	0.54
EPA164	3.18	0.28	3.9	1.29	19.3	5	1n	0.07	21.4	1	183	0.52
EPA165	2.45	0.16	2.2	1.04	17.5	5	1n	0.03	20.9	1	182	0.63
EPA166	2.21	0.04	2.5	1.12	19.6	5	1n	0.22	21.7	1	183	0.70
EPA167	2.32	0.08	4.5	1.12	19.3	4	1n	0.12	21.6	1	182	0.67
EPA168	2.97	0.04	1.2	1.86	18.3	5	1n	0.13	21.7	1	182	0.54
EPA169	2.50	0.24	2.1	0.90	20.0	5	1n	0.07	21.0	1	183	0.57
EPA170	3.05	0.07	2.7	1.86	17.6	5	1n	0.07	20.9	1	182	0.54
EPA171	3.02	0.06	2.8	1.86	17.8	5	1n	0.06	21.1	1	183	0.55
EPA172	3.19	0.20	3.2	1.55	18.6	5	1n	0.09	21.4	1	183	0.53
EPA173	2.31	0.01	2.7	1.29	19.3	5	1n	0.08	21.4	1	183	0.67
EPA174	2.25	0.01	2.2	1.21	17.9	5	1n	0.07	19.9	1	180	0.68
EPA176	3.03	0.06	0.6	1.86	16.9	5	1n	0.12	20.2	1	180	0.53
EPA177	2.57	0.01	2.9	1.55	18.0	5	1n	0.27	20.7	1	180	0.63
EPA179	2.12	0.02	1.4	1.08	18.1	5	1n	0.10	19.6	1	180	0.70
EPA180	2.68	0.06	13.2	1.50	16.9	5	1n	0.08	20.2	1	181	0.63
EPA181	2.33	0.02	5.4	1.29	17.2	5	1n	0.06	19.2	1	180	0.67
EPA190	1.93	0.07	21.3	0.78	19.4	5	1n	0.17	20.8	1	180	1.05
EPA192	2.95	0.23	3.9	1.29	18.4	5	1n	0.17	20.5	1	181	0.55
EPA193	2.39	0.05	5.8	1.29	18.3	5	1n	0.09	20.3	1	181	0.66
EPA194	2.45	0.04	3.6	1.34	17.3	5	1n	0.06	19.9	1	181	0.64
EPA195	2.30	0.18	4.5	0.90	18.9	5	1n	0.07	19.8	1	181	0.64
EPA198	2.73	0.04	4.4	1.61	17.5	5	1n	0.05	20.8	2	181	0.58
EPA199	2.27	0.17	6.2	0.90	18.6	5	1n	0.18	19.5	2	181	0.70
EPA200	2.30	0.24	3.0	0.75	20.6	5	1n	0.10	20.9	2	181	0.58
EPA201	2.47	0.03	2.6	1.38	18.4	4	1n	0.13	21.1	2	180	0.63
EPA202	2.44	0.04	4.0	1.32	18.5	5	1n	0.27	21.1	2	180	0.62
EPA203	2.74	0.04	4.1	1.63	17.9	5	1n	0.17	21.2	2	181	0.58
EPA204	3.03	0.06	1.1	1.83	17.0	5	1n	0.08	20.9	2	180	0.52
EPA205	2.64	0.22	2.4	1.05	17.0	5	1n	0.10	20.9	2	180	0.57
EPA206	2.40	0.05	4.8	1.29	18.8	5	1n	0.12	20.8	2	181	0.65
EPO002	2.30	0.01	2.2	1.29	18.7	5	1n	0.12	20.8	-1	185	0.68
EPO004	2.20	0.17	2.4	0.82	18.0	5	1n	0.41	20.7	-1	185	0.68
EPO006	2.19	0.04	1.4	1.09	19.1	4	1n	0.22	21.1	-1	185	0.70
EPO007	2.50	0.02	3.7	1.44	18.5	5	1n	0.21	21.2	-1	185	0.63
EPO008	3.03	0.06	1.7	1.83	16.3	5	1n	0.38	20.3	-1	185	0.50
EPO010	2.39	0.27	3.2	0.75	20.8	4	1n	0.15	21.2	-1	185	0.57
EPO011	3.09	0.19	11.8	1.51	16.5	3	1n	0.23	21.1	-1	185	0.54
EPO012	2.49	0.14	2.1	1.12	17.6	5	1n	0.22	20.9	-1	185	0.62
EPO014	2.45	0.20	0.7	0.96	20.1	4	1n	0.29	21.3	-1	185	0.59
EPO015	2.48	0.17	0.4	1.08	19.6	3	1n	0.08	21.1	-1	185	0.62
EPO016	2.33	0.25	3.5	0.75	20.3	5	1n	0.08	20.6	-1	185	0.61
EPO017	2.87	0.01	1.4	1.85	17.3	4	1n	0.09	20.6	-1	185	0.57
EPO018	2.84	0.10	3.5	1.55	17.6	5	1n	0.10	20.3	-1	185	0.58
EPO020	3.04	0.06	1.1	1.86	17.8	5	1n	0.11	21.1	-1	185	0.53
EPO021	2.47	0.03	0.5	1.38	18.3	5	1n	0.11	21.0	-1	185	0.64
EPO025	2.35	0.19	3.9	0.90	20.1	4	1n	0.13	21.0	-1	185	0.64
EPO026	1.14	0.27	0.5	0.01	37.0	4	1n	0.32	21.0	-1	185	0.61
EPO028	3.20	0.21	11.6	1.55	16.3	5	1n	0.18	19.0	-1	185	0.60
EPO029	2.43	0.15	3.6	1.08	18.6	5	1n	0.24	20.1	-1	185	0.64
EPO031	1.06	0.14	0.4	0.01	30.6	5	1n	0.20	19.6	0	182	1.04
EPO033	2.23	0.03	2.0	1.16	????	3	1n	0.08	????	0	183	0.71
EPO034	1.95	0.00	2.4	0.94	18.9	4	1n	0.49	19.9	0	182	0.74
EPO040	3.11	0.18	7.1	1.54	15.9	5	1n	0.22	20.4	0	182	0.52
EPO046	3.09	0.03	8.4	2.00	15.3	4	1n	0.11	18.8	0	182	0.57
EPO047	2.96	0.14	3.3	1.55	16.8	5	1n	0.23	19.4	0	182	0.56
EPO048	2.07	0.00	0.2	1.06	18.3	5	1n	0.18	19.7	0	182	0.73
EPO062	2.76	0.16	2.5	1.30	17.5	5	1n	0.18	21.6	-1	186	0.56
EPO063	2.92	0.13	3.5	1.55	17.7	5	1n	0.07	20.5	-1	186	0.56
EPO064	2.34	0.31	0.6	0.63	21.2	4	1n	0.15	21.2	-1	186	0.47
EPO065	1.95	0.06	22.8	0.82	19.0	4	1n	0.10	20.6	-1	186	1.08
EPO066	3.13	0.03	3.9	2.02	17.4	5	1n	0.08	21.4	-1	186	0.52
EPO068	2.49	0.02	1.4	1.42	18.8	4	1n	0.14	21.6	-1	186	0.63
EPO069	2.42	0.33	0.7	0.63	20.2	5	1n	0.04	20.1	-1	186	0.43
EPO070	2.32	0.22	2.4	0.80	18.4	4	1n	0.13	21.5	-1	186	0.69
EPO071	2.50	0.02	4.0	1.44	18.3	5	1n	0.09	21.1	-1	186	0.63

Table A.4 (continued) – 626 unknown objects observed with the INT during one night in Feb 2012 in the opposition mini-survey fields.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
EPO072	2.40	0.21	2.4	0.90	20.3	5	1n	0.14	21.4	0	186	0.60
EPO073	2.46	0.03	3.1	1.36	18.5	5	1n	0.09	21.3	0	186	0.64
EPO074	2.15	0.12	2.3	0.88	19.4	3	1n	0.08	21.3	0	186	0.73
EPO076	2.37	0.20	2.4	0.90	19.5	5	1n	0.04	20.6	0	186	0.61
EPO077	3.18	0.01	8.8	2.13	17.2	5	1n	0.10	21.2	0	186	0.53
EPO078	1.50	0.47	0.4	0.01	29.9	5	1n	0.02	20.3	0	186	0.73
EPO079	2.27	0.00	7.0	1.25	18.5	4	1n	0.14	20.8	-1	186	0.70
EPO080	2.26	0.13	4.8	0.97	18.4	5	1n	0.10	20.6	-1	186	0.72
EPO081	2.32	0.25	4.7	0.75	19.6	5	1n	0.08	20.1	-1	186	0.60
EPO082	2.37	0.13	3.4	1.08	20.1	5	1n	0.16	21.7	-1	186	0.63
EPO083	3.13	0.03	2.7	2.03	17.7	5	1n	0.20	21.8	-1	186	0.52
EPO084	2.23	0.18	9.8	0.85	20.5	4	1n	0.13	21.6	-1	186	0.80
EPO085	2.16	0.04	0.7	1.08	19.8	5	1n	0.08	21.4	-1	186	0.70
EPO086	2.94	0.14	3.1	1.55	18.7	5	1n	0.09	21.5	-1	186	0.57
EPO088	2.39	0.27	0.5	0.75	21.1	5	1n	0.12	21.6	-1	186	0.52
EPO089	2.48	0.30	2.6	0.75	20.4	5	1n	0.06	20.9	-1	186	0.52
EPO090	2.43	0.33	0.6	0.63	21.7	5	1n	0.11	21.7	-1	186	0.42
EPO091	2.74	0.17	2.2	1.26	16.7	5	1n	0.06	20.8	-1	186	0.56
EPO092	2.81	0.01	1.4	1.76	18.3	5	1n	0.19	21.7	-1	186	0.57
EPO094	2.37	0.20	0.4	0.90	20.5	5	1n	0.15	21.5	-1	186	0.59
EPO098	2.34	0.11	3.9	1.08	19.8	5	1n	0.12	21.4	-1	186	0.65
EPO099	2.36	0.12	5.2	1.08	19.0	5	1n	0.03	20.6	-1	186	0.66
EPO102	2.47	0.16	4.0	1.08	19.9	5	1n	0.12	21.5	-1	186	0.62
EPO103	2.31	0.01	6.0	1.29	17.8	5	1n	0.13	20.0	-1	186	0.69
EPO104	2.32	0.25	5.9	0.75	19.7	5	1n	0.09	20.2	-1	186	0.62
EPO105	2.45	0.16	2.4	1.08	18.9	5	1n	0.09	20.5	-1	186	0.61
EPO106	2.95	0.03	0.9	1.86	17.1	5	1n	0.14	20.5	-1	186	0.54
EPO107	3.19	0.01	2.7	2.15	16.0	4	1n	0.03	20.0	-1	186	0.51
ESU002	2.40	0.14	3.3	1.08	19.0	5	1n	0.32	20.4	1	180	0.67
ESU003	2.46	0.07	3.4	1.29	17.9	5	1n	0.17	19.9	1	180	0.64
ESU005	2.38	0.18	4.4	0.97	19.6	3	1n	0.08	20.6	1	180	0.65
ESU006	2.24	0.26	5.6	0.67	20.7	4	1n	0.15	20.6	1	180	0.65
ESU007	2.61	0.13	12.3	1.29	18.2	5	1n	0.15	20.1	1	180	0.70
ESU008	2.32	0.18	7.8	0.90	19.2	5	1n	0.17	20.0	1	180	0.70
ESU010	2.46	0.16	3.4	1.08	18.2	3	1n	0.03	19.6	1	180	0.64
ESU012	2.49	0.24	3.4	0.90	18.2	5	1n	0.13	19.0	1	180	0.60
ESU014	2.47	0.16	3.4	1.08	18.2	5	1n	0.09	19.6	1	180	0.63
ESU018	2.46	0.16	2.3	1.07	16.8	5	1n	0.08	20.0	1	181	0.63
ESU020	3.04	0.06	0.6	1.86	16.5	5	1n	0.43	19.7	1	181	0.52
ESU021	2.44	0.04	0.5	1.33	17.1	5	1n	0.15	19.6	1	181	0.65
ESU023	2.93	0.10	2.2	1.63	16.8	5	1n	0.19	20.7	0	183	0.54
ESU024	2.28	0.29	2.3	0.62	20.9	5	1n	0.17	20.6	0	183	0.52
ESU025	3.04	0.06	1.0	1.85	16.8	5	1n	0.17	20.7	0	183	0.53
ESU026	2.15	0.04	1.3	1.08	19.1	5	1n	0.26	20.5	0	183	0.73
ESU027	2.30	0.01	1.6	1.29	18.2	5	1n	0.12	20.2	0	183	0.70
ESU028	2.40	0.39	1.8	0.47	21.7	3	1n	0.26	20.6	0	183	0.31
ESU029	2.41	0.05	0.1	1.29	18.7	5	1n	0.24	20.7	0	183	0.63
ESU032	3.07	0.05	0.3	1.92	15.9	5	1n	0.08	19.8	0	183	0.53
ESU034	2.65	0.14	15.3	1.29	18.3	3	1n	0.08	20.3	0	183	0.75
ESU037	2.43	0.15	0.5	1.08	18.7	5	1n	0.28	20.1	0	183	0.65
ESU038	2.47	0.16	0.6	1.08	18.9	5	1n	0.02	20.3	0	183	0.63
ESU039	2.40	0.21	6.8	0.90	20.1	5	1n	0.41	20.9	0	183	0.70
ESU041	2.40	0.27	3.0	0.75	20.2	4	1n	0.16	20.5	0	183	0.57
ESU043	3.13	0.03	3.5	2.03	16.9	5	1n	0.46	20.8	0	183	0.49
ESU050	2.35	0.12	4.5	1.08	17.9	5	1n	0.04	19.2	1	180	0.65
ESU054	2.77	0.03	1.0	1.69	17.2	5	1n	0.09	20.4	1	180	0.57
ESU057	2.48	0.16	2.6	1.08	19.2	5	1n	0.27	20.6	1	180	0.59
ESU058	2.20	0.08	3.0	1.01	18.7	4	1n	0.60	21.0	1	180	0.69
ESU065	2.36	0.12	4.8	1.08	18.8	5	1n	0.06	20.1	1	181	0.66
ESU066	2.35	0.21	27.2	0.83	16.4	5	1n	0.04	19.6	1	181	0.80
ESU068	2.80	0.02	10.9	1.73	15.9	5	1n	0.05	19.1	1	181	0.61
ESU069	2.37	0.20	2.7	0.90	18.9	5	1n	0.03	19.7	1	180	0.61
ESU071	2.67	0.01	2.5	1.63	17.1	3	1n	0.11	19.9	1	181	0.60
ESU072	2.90	0.02	10.2	1.86	16.1	5	1n	0.08	19.3	1	181	0.60
ESU076	2.87	0.01	1.1	1.85	17.6	5	1n	0.12	20.8	1	181	0.56
ESU079	3.01	0.07	3.3	1.79	17.1	4	1n	0.24	21.0	0	181	0.53
ESU081	2.77	0.25	3.1	1.08	19.4	4	1n	0.13	20.8	1	181	0.56

Table A.4 (continued) – 626 unknown objects observed with the INT during one night in Feb 2012 in the opposition mini-survey fields.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
ESU082	2.37	0.04	2.6	1.29	18.7	5	1n	0.08	20.7	1	181	0.66
ESU084	2.88	0.01	2.9	1.86	17.8	5	1n	0.25	21.1	1	181	0.54
ESU085	3.19	0.20	3.2	1.55	18.4	5	1n	0.14	21.0	1	181	0.53
ESU091	3.08	0.04	3.0	1.94	17.2	5	1n	0.12	21.1	1	181	0.52
ESU094	2.29	0.00	1.3	1.28	18.5	5	1n	0.11	20.5	1	182	0.68
ESU095	2.96	0.14	3.8	1.55	18.1	5	1n	0.09	21.0	-1	187	0.55
ESU096	1.07	0.38	0.1	0.01	35.4	4	1n	0.06	21.5	-1	187	0.53
ESU097	2.39	0.19	2.1	0.92	18.1	5	1n	0.51	21.5	-1	187	0.60
ESU098	2.89	0.01	3.0	1.86	18.2	4	1n	0.23	21.7	-1	187	0.56
ESU099	2.37	0.27	5.1	0.75	21.1	3	1n	0.54	21.6	-1	187	0.60
ESU100	2.32	0.01	3.2	1.29	18.2	5	1n	0.04	20.4	-1	187	0.67
ESU101	2.40	0.21	2.6	0.90	19.2	5	1n	0.05	20.3	-1	187	0.59
ESU102	2.43	0.06	3.5	1.29	19.3	5	1n	0.14	21.5	-1	187	0.63
ESU103	2.35	0.81	0.5	0.00	29.8	5	1n	0.06	20.2	-1	187	0.70
ESU104	2.30	0.13	2.9	0.99	18.8	5	1n	0.10	21.0	-1	187	0.69
ESU105	3.00	0.05	1.3	1.86	18.0	5	1n	0.20	21.4	-1	187	0.54
ESU106	2.32	0.35	0.3	0.51	22.3	5	1n	0.19	21.7	-1	187	0.37
ESU107	3.01	0.07	2.1	1.78	17.5	5	1n	0.17	21.6	-1	187	0.53
ESU110	1.19	0.27	0.4	0.01	33.3	5	1n	0.11	21.2	-1	187	0.57
ESU111	2.39	0.21	3.6	0.90	20.4	4	1n	0.25	21.5	-1	187	0.60
ESU112	2.33	0.02	0.5	1.29	18.8	4	1n	0.33	21.0	-1	187	0.67
ESU113	2.27	0.01	4.9	1.24	18.7	5	1n	0.15	20.9	-1	187	0.67
ESU114	2.31	0.25	2.4	0.75	19.9	5	1n	0.13	20.4	-1	187	0.57
ESU115	3.02	0.21	8.2	1.37	16.3	5	1n	0.16	21.0	-1	187	0.51
ESU116	3.18	0.01	2.1	2.12	17.1	5	1n	0.12	21.2	-1	187	0.51
ESU117	2.20	0.15	4.7	0.85	18.8	5	1n	0.14	21.5	1	181	0.71
ESU118	3.15	0.27	3.5	1.29	19.4	5	1n	0.20	21.4	1	181	0.52
ESU119	2.49	0.08	2.9	1.29	19.0	5	1n	0.51	21.0	1	181	0.58
ESU120	3.15	0.34	2.1	1.08	20.2	4	1n	0.26	21.6	1	181	0.50
ESU121	3.13	0.03	5.3	2.03	16.2	5	1n	0.06	20.2	1	181	0.52
ESU123	2.36	0.26	4.4	0.75	19.4	5	1n	0.12	19.8	1	181	0.58
ESU124	2.21	0.15	2.6	0.87	18.0	5	1n	0.13	20.7	1	181	0.71
ESU125	2.70	0.05	5.6	1.55	17.6	5	1n	0.10	20.9	1	181	0.60
ESU126	3.18	0.01	2.0	2.12	16.6	5	1n	0.08	20.6	1	181	0.51
ESU127	2.39	0.21	2.5	0.90	19.0	5	1n	0.09	19.9	1	181	0.60
ESU128	2.74	0.04	13.0	1.63	17.1	5	1n	0.06	20.4	2	181	0.62
ESU129	2.11	0.05	3.5	0.99	19.4	5	1n	0.09	20.9	1	181	0.72
ESU130	2.42	0.15	3.8	1.08	18.6	5	1n	0.07	20.1	1	181	0.63
ESU131	2.77	0.17	8.1	1.29	17.9	5	1n	0.09	20.0	1	181	0.61
ESU132	2.64	0.04	2.8	1.55	18.9	4	1n	0.59	21.6	1	181	0.57
ESU133	2.50	0.17	0.7	1.08	19.7	5	1n	0.15	21.1	1	181	0.59
ESU134	2.69	0.06	12.5	1.53	18.0	5	1n	0.40	17.1	1	181	0.59
ESU135	2.38	0.13	4.7	1.08	19.8	5	1n	0.25	21.3	1	181	0.65
ESU136	2.55	0.32	2.0	0.75	20.4	5	1n	0.19	20.8	1	181	0.48
ESU138	2.61	0.03	2.0	1.55	18.0	5	1n	0.07	20.6	1	181	0.60
ESU139	2.12	0.03	7.2	1.08	19.9	5	1n	0.17	21.3	1	181	0.76
ESU140	2.85	0.11	3.8	1.55	18.6	4	1n	0.23	21.3	1	181	0.57
ESU141	2.48	0.08	2.8	1.29	19.4	5	1n	0.33	21.4	1	181	0.67
ESU142	2.45	0.31	2.4	0.68	17.5	5	1n	0.29	21.5	1	181	0.60
ESU143	2.37	0.03	3.1	1.29	19.2	5	1n	0.31	21.3	1	181	0.66
ESU144	2.44	0.15	2.1	1.08	19.9	5	1n	0.17	21.3	1	181	0.63
ESU145	2.12	0.02	3.6	1.08	19.8	5	1n	0.11	21.3	1	181	0.74
ESU146	2.39	0.13	3.3	1.08	19.7	5	1n	0.36	21.1	1	181	0.63
ESU148	2.43	0.22	0.7	0.90	20.4	5	1n	0.22	21.2	0	181	0.58
ESU149	2.31	0.30	0.4	0.63	21.2	5	1n	0.32	21.0	0	181	0.47
ESU150	2.86	0.00	1.3	1.84	17.9	5	1n	0.12	21.2	1	181	0.56
ESU151	3.06	0.05	1.5	1.89	17.3	5	1n	0.22	21.3	1	181	0.52
ESU153	2.70	0.06	2.1	1.55	18.5	5	1n	0.07	21.2	1	181	0.60
ESU155	2.71	0.05	2.2	1.56	17.9	5	1n	0.16	21.2	1	181	0.59
ESU156	3.12	0.03	9.9	2.02	17.6	5	1n	0.15	21.6	1	181	0.52
ESU157	2.46	0.16	3.4	1.08	18.6	5	1n	0.06	20.0	1	181	0.62
ESU158	2.27	0.17	5.3	0.90	19.6	5	1n	0.23	12.3	1	181	0.67
ESU159	2.44	0.15	0.5	1.08	18.5	5	1n	0.22	16.0	1	181	0.62
ESU161	2.42	0.22	3.9	0.90	18.5	5	1n	0.05	19.4	1	181	0.62
ESU162	2.30	0.01	5.5	1.29	18.9	5	1n	0.06	20.9	1	181	0.69
ESU163	2.37	0.20	3.2	0.90	20.3	5	1n	0.24	21.2	1	181	0.63
ESU164	2.24	0.16	7.9	0.90	20.2	4	1n	0.11	21.2	-1	186	0.73

Table A.4 (continued) – 626 unknown objects observed with the INT during one night in Feb 2012 in the opposition mini-survey fields.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
ESU165	2.93	0.03	1.1	1.86	18.3	5	1n	0.35	21.7	-1	186	0.55
ESU166	1.02	0.08	0.2	0.01	35.0	5	1n	0.29	20.8	-1	186	0.81
ESU167	2.41	0.28	2.7	0.75	20.8	4	1n	0.14	21.3	-1	187	0.54
ESU169	2.61	0.02	2.9	1.55	18.0	5	1n	0.30	20.8	-1	187	0.58
ESU170	2.44	0.29	3.9	0.75	20.4	5	1n	0.28	21.0	-2	187	0.55
ESU171	2.95	0.23	3.1	1.29	19.2	5	1n	0.14	21.4	-2	187	0.53
ESU172	2.46	0.16	2.1	1.07	17.9	5	1n	0.18	21.4	-2	187	0.65
ESU173	2.26	0.28	2.4	0.63	21.5	5	1n	0.19	21.5	-2	186	0.51
ESU174	1.07	0.08	0.3	0.01	31.2	5	1n	0.09	20.7	-1	187	0.57
ESU175	2.37	0.26	3.1	0.75	20.6	5	1n	0.08	21.1	-1	187	0.56
ESU176	2.26	0.01	7.3	1.22	18.9	4	1n	0.20	21.1	-1	187	0.72
ESU177	3.12	0.09	3.8	1.86	17.8	5	1n	0.21	21.3	-1	187	0.55
ESU180	2.49	0.14	2.9	1.13	17.8	5	1n	0.54	21.3	-1	187	0.59
ESU181	1.35	0.40	0.7	0.01	35.2	5	1n	0.17	21.3	-1	187	0.49
ETU007	2.48	0.21	0.8	0.96	20.3	4	1n	0.23	21.4	0	183	0.59
ETU008	2.66	0.04	2.3	1.55	18.8	5	1n	0.20	21.4	0	183	0.61
ETU009	2.24	0.02	1.0	1.19	19.4	5	1n	0.46	21.4	0	183	0.74
ETU013	2.33	0.02	0.5	1.29	17.9	5	1n	0.09	19.9	0	183	0.66
ETU014	2.38	0.27	2.7	0.75	20.7	5	1n	0.39	21.0	0	183	0.54
ETU015	2.94	0.14	3.9	1.55	18.4	5	1n	0.26	21.1	0	183	0.58
ETU016	2.36	0.26	5.0	0.75	19.8	5	1n	0.12	20.1	0	183	0.61
ETU018	1.02	0.03	0.2	0.01	32.2	5	1n	0.13	20.9	0	183	0.55
ETU019	2.49	0.30	1.0	0.75	20.4	5	1n	0.14	20.7	0	183	0.52
ETU020	2.32	0.02	5.9	1.29	18.9	5	1n	0.15	20.9	0	183	0.69
ETU024	2.32	0.02	0.3	1.29	18.7	5	1n	0.15	20.8	0	182	0.65
ETU029	2.97	0.23	3.6	1.29	17.0	5	1n	0.14	19.0	0	183	0.56
ETU030	3.06	0.20	10.7	1.45	15.3	5	1n	0.04	19.9	0	183	0.52
ETU031	2.15	0.04	0.8	1.08	18.8	5	1n	0.06	20.2	0	183	0.71
ETU033	3.06	0.07	0.8	1.86	18.1	5	1n	0.30	21.4	0	182	0.52
ETU034	2.88	0.01	2.6	1.86	17.2	5	1n	0.04	20.5	0	183	0.56
ETU035	2.41	0.33	0.7	0.63	21.7	5	1n	0.47	21.4	0	183	0.41
ETU036	2.31	0.46	0.8	0.27	23.2	4	1n	0.14	21.4	0	182	0.09
ETU038	2.45	0.20	2.5	0.96	20.7	4	1n	0.24	21.8	0	183	0.58
ETU039	2.39	0.32	0.5	0.63	21.6	4	1n	0.14	21.4	0	183	0.44
ETU041	3.17	0.10	3.8	1.86	18.0	5	1n	0.13	21.2	0	183	0.54
ETU043	3.08	0.05	2.1	1.92	16.5	5	1n	0.24	20.5	0	183	0.53
ETU044	2.21	0.03	3.0	1.13	18.9	5	1n	0.16	21.0	0	183	0.71
ETU045	2.30	0.30	0.1	0.62	21.5	4	1n	0.57	21.3	0	183	0.47
ETU047	3.04	0.21	2.3	1.40	16.2	5	1n	0.07	20.8	0	183	0.50
ETU049	2.69	0.20	2.0	1.16	16.9	5	1n	0.07	20.9	0	183	0.57
ETU051	3.05	0.20	10.0	1.42	16.3	5	1n	0.06	21.0	0	183	0.52
ETU056	3.09	0.18	3.2	1.55	18.4	4	1n	0.08	21.1	0	183	0.55
ETU057	3.16	0.10	3.9	1.86	17.8	5	1n	0.08	21.1	0	183	0.53
ETU058	2.44	0.04	3.2	1.34	16.6	5	1n	0.04	19.4	0	183	0.64
ETU060	2.79	0.02	0.6	1.72	17.7	7	1n	0.16	21.0	0	183	0.56
ETU061	2.37	0.26	5.1	0.75	20.0	5	1n	0.09	20.4	0	183	0.59
ETU062	2.39	0.27	2.2	0.75	20.6	4	1n	0.02	21.0	0	183	0.55
ETU064	3.10	0.26	8.2	1.29	19.1	5	1n	0.07	21.2	0	183	0.57
ETU065	2.41	0.22	3.9	0.90	20.3	5	1n	0.10	21.2	0	183	0.61
ETU066	2.23	0.15	6.2	0.90	20.4	3	1n	0.13	21.4	0	183	0.71
ETU068	2.47	0.15	3.4	1.08	18.3	5	1n	0.21	21.7	0	183	0.64
ETU069	2.38	0.32	0.2	0.63	21.4	3	1n	0.10	21.2	0	183	0.45
ETU070	2.68	0.05	13.1	1.55	19.0	5	1n	0.56	21.7	0	183	0.68
ETU071	2.86	0.00	1.1	1.85	17.8	5	1n	0.27	21.2	0	183	0.57
ETU072	2.45	0.04	3.4	1.36	18.9	5	1n	0.14	21.7	0	183	0.64
ETU074	3.15	0.02	10.1	2.08	17.3	5	1n	0.10	21.3	0	183	0.52
ETU075	3.06	0.20	10.9	1.45	15.2	5	1n	0.04	19.9	0	183	0.52
ETU076	2.64	0.08	2.6	1.42	18.3	3	1n	0.17	21.7	0	183	0.60
ETU079	2.23	0.02	1.2	1.17	18.1	5	1n	0.04	20.2	0	183	0.70
ETU081	2.41	0.21	3.2	0.90	20.5	5	1n	0.12	21.5	0	183	0.61
ETU082	2.40	0.19	2.3	0.95	16.7	5	1n	0.04	20.0	0	183	0.64
ETU083	2.89	0.01	2.1	1.86	17.6	4	1n	0.07	21.0	0	183	0.56
ETU085	2.40	0.21	2.7	0.90	20.0	5	1n	0.06	21.0	0	183	0.61
ETU086	2.32	0.25	2.5	0.75	21.2	4	1n	0.09	21.6	1	183	0.58
ETU087	3.10	0.04	3.2	1.97	17.1	5	1n	0.06	21.1	1	183	0.52
ETU088	2.26	0.23	4.8	0.75	21.2	5	1n	0.09	21.6	1	183	0.64
ETU089	2.11	0.02	3.7	1.08	20.0	4	1n	0.28	21.5	1	183	0.73

Table A.4 (continued) – 626 unknown objects observed with the INT during one night in Feb 2012 in the opposition mini-survey fields.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
ETU091	1.30	0.10	0.2	0.15	25.4	5	1n	0.10	21.5	1	183	0.63
ETU092	2.24	0.11	4.3	0.98	19.4	4	1n	0.24	21.8	1	183	0.69
ETU093	2.21	0.12	2.7	0.92	18.1	3	1n	0.00	20.5	1	183	0.71
ETU094	2.26	0.23	7.1	0.75	21.0	5	1n	0.11	21.4	1	183	0.69
ETU095	2.47	0.15	3.3	1.09	18.2	4	1n	0.09	21.5	1	183	0.63
ETU096	2.62	0.10	12.0	1.38	17.9	5	1n	0.08	20.6	1	183	0.66
ETU097	2.45	0.04	2.3	1.34	18.7	5	1n	0.18	21.5	1	183	0.63
ETU098	2.41	0.28	0.6	0.75	20.9	5	1n	0.06	21.3	1	183	0.53
ETU099	2.48	0.24	2.8	0.90	19.5	5	1n	0.06	20.4	1	183	0.59
ETU100	2.37	0.04	4.1	1.29	19.4	5	1n	0.07	21.5	1	183	0.67
ETU101	2.33	0.09	2.1	1.10	19.2	4	1n	0.17	21.6	1	183	0.68
ETU102	2.70	0.05	4.2	1.55	18.3	4	1n	0.10	21.7	1	183	0.59
ETU104	2.41	0.33	1.6	0.63	21.8	4	1n	0.13	21.7	1	183	0.44
ETU105	2.44	0.22	0.5	0.90	20.7	5	1n	0.15	21.6	0	183	0.59
ETU106	2.76	0.03	3.5	1.66	16.7	5	1n	0.05	20.1	0	183	0.58
ETU107	2.97	0.08	10.5	1.71	17.6	5	1n	0.08	21.6	0	183	0.56
ETU108	1.04	0.04	0.3	0.03	30.5	5	1n	0.03	20.7	0	183	0.47
ETU109	2.38	0.04	3.2	1.29	19.1	5	1n	0.07	21.3	0	183	0.66
ETU110	3.16	0.20	3.5	1.55	18.9	5	1n	0.10	21.6	1	183	0.53
ETU111	2.71	0.05	3.8	1.56	18.2	5	1n	0.12	21.5	0	183	0.59
ETU112	3.06	0.17	3.1	1.55	18.8	5	1n	0.17	17.2	0	183	0.53
ETU113	2.44	0.22	2.2	0.90	20.4	5	1n	0.11	21.4	0	185	0.59
ETU114	2.47	0.15	2.6	1.08	18.3	5	1n	0.10	21.7	0	185	0.63
ETU115	2.47	0.29	2.1	0.75	20.3	5	1n	0.08	20.7	-1	185	0.53
ETU116	2.36	0.03	2.5	1.29	19.5	4	1n	0.07	21.7	0	185	0.65
ETU117	2.86	0.13	2.2	1.48	17.1	4	1n	0.21	21.2	-1	185	0.54
ETU118	2.26	0.01	6.9	1.23	18.8	5	1n	0.19	21.0	-1	186	0.70
ETU119	2.25	0.14	2.1	0.93	19.0	4	1n	0.13	21.5	0	185	0.72
ETU120	2.33	0.25	3.4	0.75	21.1	4	1n	0.05	21.6	0	185	0.59
ETU121	2.37	0.04	4.5	1.29	19.4	4	1n	0.07	21.6	0	185	0.67
ETU122	3.01	0.05	2.4	1.86	18.3	5	1n	0.12	21.7	0	185	0.54
ETU123	2.31	0.31	0.4	0.61	21.3	5	1n	0.48	21.8	0	185	0.44
ETU124	2.23	0.12	7.0	0.96	19.2	5	1n	0.11	21.4	0	185	0.72
ETU125	1.02	0.05	0.3	0.01	36.3	5	1n	0.47	20.7	0	186	0.61
ETU126	2.47	0.03	2.7	1.39	18.6	5	1n	0.08	21.4	0	185	0.64
ETU127	2.79	0.15	8.0	1.35	17.1	5	1n	0.04	21.1	0	185	0.56
ETU128	2.23	0.15	6.7	0.90	20.8	5	1n	0.35	21.8	0	186	0.73
ETU129	2.23	0.12	5.3	0.96	18.6	5	1n	0.06	20.7	0	185	0.72
ETU130	2.83	0.01	1.2	1.79	18.1	4	1n	0.16	21.5	0	185	0.56
ETU131	2.40	0.36	0.2	0.56	22.2	3	1n	0.23	21.8	0	185	0.39
ETU132	2.35	0.31	3.9	0.63	21.8	3	1n	0.19	14.5	0	185	0.54
ETU133	2.48	0.30	3.3	0.73	17.5	4	1n	0.16	21.6	0	185	0.61
ETU134	2.30	0.12	0.3	1.02	19.2	5	1n	0.15	21.4	0	185	0.69
EVA003	2.87	0.12	3.6	1.55	17.7	5	1n	0.45	20.4	1	179	0.59
EVA004	2.36	0.03	5.6	1.29	17.1	5	1n	0.12	19.1	1	179	0.68
EVA005	2.80	0.18	7.0	1.29	18.7	5	1n	0.12	20.7	1	180	0.60
EVA006	2.45	0.29	2.9	0.75	20.0	5	1n	0.08	20.3	1	179	0.55
EVA012	2.69	0.06	2.0	1.52	17.0	5	1n	0.11	20.3	1	180	0.60
EVA013	2.35	0.35	1.7	0.53	21.8	4	1n	0.34	21.1	1	180	0.37
EVA015	3.16	0.10	3.5	1.86	17.6	5	1n	0.14	20.8	1	180	0.52
EVA017	2.30	0.11	10.6	1.07	19.5	5	1n	0.20	20.9	1	180	0.78
EVA018	2.25	0.01	5.5	1.21	18.5	5	1n	0.14	20.6	1	180	0.72
EVA020	2.76	0.03	3.6	1.66	17.6	5	1n	0.26	20.9	1	180	0.61
EVA021	2.41	0.11	3.8	1.16	19.3	4	1n	0.17	20.9	1	180	0.65
EVA023	2.45	0.04	2.5	1.35	17.8	5	1n	0.13	20.4	1	179	0.64
EVA024	3.18	0.20	10.9	1.55	17.6	5	1n	0.09	20.2	1	179	0.58
EVA026	2.47	0.21	2.6	0.97	19.8	4	1n	0.14	20.8	1	180	0.61
EVA027	2.43	0.15	3.3	1.08	19.5	5	1n	0.16	20.9	1	180	0.65
EVA029	2.41	0.28	3.1	0.75	20.4	5	1n	0.22	20.7	1	180	0.58
EVA030	2.39	0.13	7.0	1.08	19.2	3	1n	0.10	20.6	1	180	0.69
EVA031	2.37	0.17	3.7	0.97	18.6	4	1n	0.07	19.6	1	180	0.65
EVA033	3.17	0.20	3.1	1.55	18.3	5	1n	0.10	21.1	0	184	0.53
EVA036	3.15	0.02	8.8	2.07	17.1	4	1n	0.13	21.2	0	185	0.52
EVA039	2.40	0.21	2.7	0.90	19.2	5	1n	0.10	20.2	0	185	0.61
EVA040	2.40	0.05	2.3	1.29	19.1	5	1n	0.27	21.3	0	185	0.64
EVA041	2.69	0.05	3.0	1.55	17.6	5	1n	0.04	20.4	0	185	0.60
EVA042	2.50	0.30	0.3	0.75	20.8	5	1n	0.13	21.2	0	185	0.52

Table A.4 (continued) – 626 unknown objects observed with the INT during one night in Feb 2012 in the opposition mini-survey fields.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
EVA043	2.93	0.03	0.8	1.86	17.8	5	1n	0.25	21.2	0	185	0.55
EVA044	2.90	0.02	3.1	1.86	17.1	4	1n	0.24	20.5	0	185	0.57
EVA046	3.12	0.03	11.9	2.01	16.1	5	1n	0.15	20.1	0	185	0.55
EVA047	2.40	0.27	3.5	0.75	19.2	5	1n	0.12	19.6	0	185	0.56
EVA048	3.07	0.19	10.1	1.46	15.7	5	1n	0.14	20.4	0	185	0.52
EVA049	2.63	0.04	2.3	1.55	18.4	5	1n	0.04	21.1	0	185	0.61
EVA050	2.70	0.05	2.2	1.55	17.8	5	1n	0.14	21.2	0	185	0.58
EVA051	2.42	0.33	2.8	0.62	16.8	5	1n	0.10	20.9	0	185	0.61
EVA052	2.35	0.03	2.6	1.29	18.7	5	1n	0.27	20.9	0	185	0.65
EVA053	2.34	0.02	6.8	1.29	19.0	5	1n	0.11	21.1	0	185	0.69
EVA054	2.80	0.02	4.2	1.74	17.7	5	1n	0.30	21.1	0	185	0.58
EVA055	3.12	0.03	1.1	2.01	16.9	5	1n	0.08	20.9	0	185	0.52
EVA056	2.37	0.13	3.3	1.08	18.5	5	1n	0.11	20.1	0	185	0.65
EVA057	2.63	0.08	2.8	1.41	17.4	5	1n	0.07	20.8	0	185	0.60
EVA058	2.03	0.10	3.8	0.83	19.6	5	1n	0.47	21.2	0	185	0.71
EVA059	2.22	0.15	4.5	0.89	18.5	5	1n	0.17	21.2	0	185	0.70
EVA060	2.82	0.01	0.6	1.78	17.9	5	1n	0.13	21.3	0	184	0.57
EVA061	2.32	0.10	1.2	1.08	19.1	5	1n	0.11	21.2	0	184	0.69
EVA062	2.37	0.20	0.3	0.90	19.7	5	1n	0.29	20.7	0	185	0.61
EVA063	2.77	0.03	6.2	1.69	17.7	5	1n	0.16	21.1	0	185	0.57
EVA064	2.30	0.28	4.4	0.66	21.3	4	1n	0.21	21.4	0	185	0.61
EVA065	2.44	0.17	2.3	1.02	17.2	5	1n	0.07	20.6	0	185	0.63
EVA066	2.83	0.01	2.1	1.79	17.3	5	1n	0.10	20.7	0	185	0.56
EVA067	2.32	0.02	1.5	1.29	18.0	5	1n	0.10	20.2	0	185	0.67
EVA068	2.23	0.22	5.6	0.75	20.7	5	1n	0.17	21.2	0	185	0.65

Table A.5: 89 unknown objects observed with the INT in Feb 2012 in program NEA fields. We include approximate orbital data fitted with FIND_ORB software based on our 1-night datasets.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
EBA000	2.47	0.03	1.4	1.39	15.8	3	1n	0.21	20.3	-1	272	0.59
EBA002	2.68	0.15	1.0	1.30	16.0	3	1n	0.09	20.1	-1	272	0.74
EBA003	2.73	0.35	9.3	0.76	14.5	4	1n	0.60	20.5	-1	271	0.35
EBA004	2.74	0.04	7.4	1.61	15.4	7	1n	0.39	20.3	-1	272	0.48
EBA005	2.65	0.08	1.5	1.42	15.2	7	1n	0.39	20.2	-1	272	0.46
EBA006	3.18	0.10	1.3	1.86	13.6	7	1n	0.32	18.6	-1	272	0.50
EBA011	2.47	0.55	7.9	0.11	17.7	7	1n	0.04	18.8	-15	258	0.66
EBA012	1.06	0.11	2.3	0.01	24.5	7	1n	0.18	21.0	-15	258	2.13
EBA014	2.62	0.22	14.7	1.08	18.4	3	1n	0.10	20.3	0	191	0.73
EBA046	2.25	0.01	6.7	1.21	17.8	7	1n	0.06	20.3	-9	198	0.65
EBA048	2.30	0.01	5.4	1.28	17.8	5	1n	0.08	20.3	-9	198	0.58
EBA049	2.24	0.02	7.2	1.19	17.9	7	1n	0.05	20.4	-9	198	0.65
EBA051	2.12	0.02	3.8	1.08	19.1	7	1n	0.13	21.0	-2	196	0.67
EBA052	2.44	0.06	3.3	1.30	18.9	6	1n	0.24	21.3	-2	196	0.58
EBA053	2.95	0.04	2.4	1.86	17.2	7	1n	0.12	20.8	-3	196	0.50
EBA054	2.35	0.03	4.1	1.29	18.7	5	1n	0.13	21.1	-3	196	0.63
EBA055	1.06	0.07	0.3	0.01	35.3	5	1n	0.20	21.1	-3	196	0.43
EBA057	2.28	0.00	4.2	1.26	18.6	6	1n	0.12	21.1	-3	196	0.63
EBA058	2.38	0.20	6.9	0.90	19.2	7	1n	0.18	20.5	-3	196	0.60
EBA059	2.20	0.15	6.1	0.85	17.3	7	1n	0.31	20.3	-3	196	0.64
EBA060	2.35	0.03	2.3	1.30	18.3	5	1n	0.25	20.7	-3	196	0.60
EBA061	2.49	0.24	3.5	0.90	19.8	7	1n	0.15	21.1	-2	196	0.53
EBA062	2.32	0.18	3.6	0.90	20.3	7	1n	0.19	21.5	-2	196	0.56
EBA063	2.34	0.25	3.4	0.75	19.2	7	1n	0.17	21.1	-2	196	0.69
EBA064	2.58	0.20	15.7	1.08	19.1	7	1n	0.17	20.9	-2	196	0.75
EBA066	2.40	0.06	2.1	1.24	18.4	7	1n	0.17	21.4	-2	196	0.59
EBA067	1.19	0.22	0.6	0.01	33.0	5	1n	0.30	21.1	-2	196	0.47
EBA068	2.39	0.30	7.5	0.67	20.4	7	1n	0.08	21.2	-2	196	0.68
EBA069	2.37	0.20	2.8	0.90	18.9	5	1n	0.17	20.2	-2	196	0.53
EBA120	1.94	0.10	20.9	0.78	19.8	5	1n	0.09	21.1	34	178	0.90
EPA002	2.43	0.22	1.0	0.90	18.9	7	1n	0.03	19.9	-2	187	0.58
EPA003	3.06	0.05	11.0	1.89	16.9	7	1n	0.11	20.9	-2	186	0.54
EPA004	2.80	0.02	11.1	1.73	36.3	7	1n	0.08	20.5	-2	187	0.59
EPA005	2.03	0.18	0.9	0.68	17.2	7	1n	0.18	20.9	-2	187	0.64
EPA009	2.28	0.09	2.1	1.05	18.4	7	1n	0.09	20.8	-2	187	0.72
EPA010	2.46	0.23	2.4	0.90	19.3	7	1n	0.06	20.3	-2	187	0.58
EPA011	2.67	0.13	12.1	1.34	18.2	7	1n	0.06	20.6	-2	187	0.67
EPA012	2.32	0.18	4.1	0.90	19.8	7	1n	0.09	20.8	-2	187	0.67
EPA014	2.89	0.44	11.5	0.68	18.3	5	1n	0.30	21.2	-12	284	1.51
EPA015	1.81	0.43	22.2	0.09	19.6	6	1n	0.49	19.6	-14	261	3.33
EPA022	2.35	0.03	4.7	1.30	18.1	7	1n	0.03	21.1	2	223	0.27
EPA023	2.27	0.00	5.2	1.25	18.9	7	1n	0.10	21.9	2	223	0.27
EPA024	2.35	0.59	0.5	0.01	27.8	7	1n	0.06	22.1	2	223	0.34
EPA025	2.54	0.00	4.6	1.52	18.5	7	1n	0.11	22.0	2	223	0.26
EPA026	2.29	0.00	5.0	1.29	18.9	7	1n	0.07	21.9	2	223	0.29
EPA027	2.40	0.06	3.2	1.24	18.3	7	1n	0.07	21.9	2	223	0.27
EPA028	2.35	0.12	2.7	1.08	17.8	7	1n	0.03	20.2	2	223	0.19
EPA029	2.36	0.03	1.5	1.30	18.4	7	1n	0.04	21.4	2	223	0.23
EPA030	2.25	0.08	1.3	1.08	18.5	6	1n	0.03	21.0	2	223	0.19
EPA032	2.37	0.07	5.1	1.19	17.8	7	1n	0.04	21.3	2	223	0.28
EPA033	2.23	0.07	1.3	1.08	19.4	7	1n	0.02	21.9	2	223	0.20
EPA034	2.47	0.16	1.6	1.08	18.9	7	1n	0.08	21.4	2	223	0.16
EPA035	2.49	0.15	1.5	1.11	17.3	7	1n	0.05	21.4	2	223	0.30
EPA036	2.33	0.11	1.2	1.08	19.1	6	1n	0.11	21.6	2	223	0.19
EPA037	2.80	0.18	15.3	1.30	17.1	7	1n	0.39	20.1	2	223	0.42
EPA040	2.37	0.07	5.6	1.18	17.8	7	1n	0.07	21.4	3	223	0.31
EPA041	2.28	0.00	3.5	1.27	18.4	7	1n	0.05	21.4	3	223	0.26
EPA043	2.26	0.01	4.7	1.22	19.2	6	1n	0.09	22.2	3	223	0.28
EPA044	2.43	0.15	2.7	1.09	18.0	7	1n	0.05	20.5	3	223	0.15
EPA045	2.47	0.03	2.0	1.39	18.1	7	1n	0.04	21.7	3	223	0.26
EPA047	2.41	0.05	2.3	1.30	18.7	7	1n	0.07	21.7	3	223	0.23
EPA048	2.30	0.01	5.2	1.29	18.4	7	1n	0.04	21.4	3	223	0.28
EPA049	2.29	0.00	3.8	1.28	19.2	6	1n	0.22	22.2	3	223	0.27
EPA050	2.24	0.08	1.5	1.08	18.6	7	1n	0.03	21.0	3	223	0.19
EPA051	2.22	0.07	9.4	1.09	18.9	7	1n	0.07	21.4	2	223	0.29
EPA052	2.22	0.07	2.3	1.08	18.4	7	1n	0.05	20.9	3	223	0.21

Table A.5 (continued) – 89 unknown objects observed with the INT in Feb 2012 in the opposition mini-survey fields.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
EPA053	2.31	0.01	3.4	1.30	18.3	7	1n	0.05	21.4	2	223	0.24
EPA054	2.46	0.07	3.9	1.30	18.7	5	1n	0.13	21.7	2	223	0.21
EPA055	2.31	0.01	1.5	1.30	18.6	7	1n	0.04	21.6	2	223	0.24
EPA056	2.27	0.01	6.3	1.23	17.7	7	1n	0.04	20.7	2	223	0.27
EPA059	2.38	0.20	1.9	0.90	17.7	6	1n	0.09	21.8	2	223	0.33
EPA060	2.36	0.03	1.8	1.30	18.9	7	1n	0.07	21.9	2	223	0.23
EPA061	2.36	0.08	4.0	1.16	18.5	6	1n	0.07	22.0	2	223	0.28
EPA062	2.50	0.02	2.3	1.45	18.6	7	1n	0.09	22.2	2	223	0.25
EPA070	2.73	0.24	12.9	1.09	18.9	6	1n	0.16	21.4	3	223	0.33
EPO052	2.41	0.20	3.3	0.94	20.6	6	1n	0.17	21.7	-6	181	0.62
EPO053	2.36	0.29	2.9	0.68	21.1	4	1n	0.07	21.2	-6	181	0.51
EPO054	2.22	0.26	4.4	0.65	21.4	6	1n	0.09	21.4	-6	181	0.59
EPO055	2.64	0.12	12.6	1.35	18.4	6	1n	0.09	20.7	-6	181	0.69
EPO056	2.38	0.02	3.6	1.34	17.9	6	1n	0.06	20.2	-6	181	0.66
EPO057	2.24	0.22	4.9	0.76	18.7	6	1n	0.05	19.1	-6	181	0.65
EPO058	3.17	0.15	11.2	1.68	16.8	5	1n	0.16	21.5	-6	181	0.51
EPO059	2.64	0.12	13.9	1.35	19.4	6	1n	0.23	21.7	-6	181	0.70
EPO060	2.40	0.20	4.1	0.94	19.7	6	1n	0.26	20.8	-6	181	0.64
EPO061	2.68	0.23	5.0	1.07	17.1	4	1n	0.39	20.6	-6	96	0.83
EPO200	2.51	0.59	3.2	0.06	19.5	4	1n	0.12	20.6	2	106	0.37
ESU031	1.02	0.01	6.7	0.01	28.3	3	1n	0.56	20.5	0	183	10.32
ETU001	3.23	0.12	12.3	1.86	16.8	6	1n	0.34	21.7	-1	268	0.47
ETU002	2.38	0.58	5.6	0.07	19.9	6	1n	0.31	21.4	-1	268	0.75

Table A.6: 75 unknown objects observed with the INT during 2011 runs in program NEA fields. We include approximate orbital data fitted with FIND_ORB software based on our 1-night datasets.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
KVT010	2.36	0.51	3.1	0.17	21.1	6	1n	0.06	21.4	-7	127	0.24
KVT001	2.35	0.12	3.4	1.09	18.1	7	1n	0.03	21.1	-5	119	0.29
KVT002	2.56	0.01	3.9	1.54	17.9	7	1n	0.10	21.9	-5	119	0.14
KVT003	2.23	0.03	5.2	1.16	18.6	7	1n	0.03	22.1	-5	120	0.14
KVT004	2.66	0.29	4.6	0.91	19.2	7	1n	0.07	21.7	-5	119	0.45
KVT005	2.30	0.11	6.1	1.05	18.1	6	1n	0.09	21.9	-7	127	0.17
KVT006	2.66	0.07	14.1	1.47	17.3	6	1n	0.06	21.6	-7	127	0.26
KVT007	2.39	0.06	9.7	1.22	17.4	6	1n	0.05	21.2	-7	127	0.24
KVT008	2.75	0.03	12.9	1.65	17.8	6	1n	0.07	22.1	-6	127	0.24
KVT009	2.70	0.16	4.5	1.30	18.6	6	1n	0.05	21.8	-6	127	0.14
KVT014	3.18	0.01	21.9	2.13	16.9	7	1n	0.05	21.7	22	136	0.41
KVT015	2.34	0.51	6.4	0.17	21.6	7	1n	0.05	21.9	-8	120	0.61
KVT016	2.37	0.04	5.8	1.31	18.9	7	1n	0.09	22.3	-8	120	0.20
KVT017	2.26	0.01	6.5	1.22	18.6	7	1n	0.06	22.1	-8	119	0.17
KVT018	2.31	0.01	4.7	1.30	18.6	7	1n	0.04	21.5	-5	143	0.34
KVT019	2.28	0.17	4.7	0.91	20.6	7	1n	0.08	22.5	-6	143	0.19
KVT020	2.28	0.00	4.5	1.25	20.0	8	1n	0.05	22.7	-6	143	0.33
KVT021	2.37	0.07	4.8	1.18	17.9	7	1n	0.04	21.3	-5	143	0.35
KVT022	2.33	0.02	7.7	1.30	18.5	7	1n	0.06	21.5	-5	143	0.33
KVT023	2.35	0.03	6.9	1.30	19.2	7	1n	0.10	22.2	-5	143	0.32
KVT024	2.97	0.04	11.4	1.87	17.4	7	1n	0.03	21.4	-5	143	0.30
KVT025	2.55	0.00	9.6	1.55	19.0	7	1n	0.10	22.5	-6	143	0.33
KVT026	2.61	0.03	9.7	1.56	17.5	7	1n	0.05	21.0	-5	143	0.32
KVT027	2.65	0.04	12.8	1.56	18.2	7	1n	0.06	21.7	-5	143	0.34
KVT028	2.31	0.44	2.4	0.31	21.6	7	1n	0.05	22.1	-5	143	0.42
KVT029	2.28	0.11	3.8	1.01	19.2	7	1n	0.11	22.7	-5	143	0.36
KVT030	2.35	0.03	4.4	1.30	19.0	7	1n	0.04	21.9	-5	143	0.29
KVT031	2.33	0.02	3.7	1.30	19.2	7	1n	0.05	22.2	-5	143	0.30
VFL003	1.92	0.19	18.6	0.54	15.3	8	1n	0.28	19.8	4	62	0.96
VFLLP01	4.72	0.79	2.2	0.01	33.2	7	1n	0.12	21.7	8	261	1.74
VKF001	2.58	0.20	12.7	1.13	19.3	7	1n	0.08	21.6	23	155	0.41
VKF002	2.58	0.38	12.1	0.62	20.3	7	1n	0.53	21.7	23	155	0.57
VKF003	3.20	0.11	17.4	1.91	17.5	7	1n	0.20	21.5	23	155	0.48
VKF004	2.76	0.25	13.3	1.13	18.1	7	1n	0.04	20.4	23	155	0.47
VKF005	2.80	0.42	12.2	0.66	19.0	7	1n	0.03	21.0	23	155	0.53
VKF006	2.29	0.38	6.9	0.45	21.3	7	1n	0.04	21.2	20	160	0.32
VKF007	2.23	0.37	6.9	0.44	21.7	7	1n	0.15	21.5	20	160	0.34
VKF008	1.87	0.07	19.4	0.77	19.7	7	1n	0.10	20.8	20	160	1.13
VKF009	2.51	0.09	14.4	1.33	17.2	7	1n	0.06	19.9	20	160	0.54
VKF010	2.30	0.35	8.0	0.51	21.7	6	1n	0.10	22.0	20	160	0.48
VKF011	2.34	0.37	7.8	0.52	20.5	7	1n	0.13	20.9	20	160	0.45
VKF012	2.30	0.38	6.8	0.45	21.1	7	1n	0.03	20.9	20	160	0.31
VKF013	2.93	0.03	2.0	1.86	16.8	5	1n	0.07	20.1	1	185	0.55
VKF014	2.11	0.08	4.2	0.91	19.0	4	1n	0.17	21.2	1	185	0.72
VKF015	2.20	0.12	5.0	0.93	18.8	7	1n	0.11	20.9	1	185	0.72
VKF016	3.02	0.07	1.0	1.81	16.9	7	1n	0.13	20.9	1	185	0.54
VKF017	2.61	0.03	2.2	1.56	17.1	5	1n	0.17	19.8	1	185	0.61
VKF018	2.36	0.08	2.1	1.17	18.7	7	1n	0.11	21.5	1	186	0.66
VKF019	2.34	0.31	0.6	0.64	21.5	7	1n	0.10	21.4	1	186	0.48
VKF020	3.08	0.04	11.9	1.93	16.8	7	1n	0.04	20.8	1	186	0.55
VKF021	2.78	0.32	2.4	0.91	20.2	7	1n	0.08	21.2	1	185	0.51
VKF022	2.98	0.08	3.1	1.73	16.4	7	1n	0.05	20.4	1	185	0.54
VKF023	2.36	0.12	6.0	1.09	19.5	7	1n	0.10	21.1	1	185	0.69
VKF024	2.48	0.17	0.7	1.09	19.6	7	1n	0.12	21.1	1	185	0.61
VKF025	2.41	0.22	2.2	0.91	19.6	7	1n	0.07	20.6	1	185	0.60
VKF026	2.91	0.02	0.8	1.86	17.2	7	1n	0.12	20.6	1	185	0.55
VKF027	2.39	0.21	4.2	0.91	20.0	7	1n	0.15	21.0	1	185	0.62
VKF028	3.10	0.04	1.2	1.96	16.7	7	1n	0.09	20.7	1	185	0.53
VKF029	2.40	0.21	5.8	0.91	20.1	7	1n	0.10	21.1	1	185	0.65
VKF030	2.34	0.35	0.3	0.53	21.4	6	1n	0.10	20.8	1	186	0.35
VKF031	2.43	0.33	0.7	0.64	21.8	7	1n	0.16	21.7	1	186	0.45
VKF032	2.54	0.15	15.1	1.20	19.2	7	1n	0.12	21.3	1	185	0.75
VKF033	2.45	0.29	3.3	0.76	20.4	7	1n	0.11	20.8	1	186	0.54
VKF034	1.98	0.04	23.4	0.91	18.7	7	1n	0.08	19.7	1	186	1.22
VKF035	2.34	0.26	2.3	0.76	21.1	7	1n	0.12	21.6	1	186	0.59
VKF036	2.65	0.04	13.4	1.56	16.7	7	1n	0.05	19.5	1	186	0.67

Table A.6 (continued) – 75 unknown objects observed with the INT during 2011 in program NEA fields.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ ($''$)	R	β (°)	ϵ (°)	μ ($''$/min)
VKF037	2.50	0.17	0.7	1.09	18.5	7	1n	0.06	20.1	1	186	0.61
VSPK000	2.22	0.33	6.8	0.52	21.1	7	1n	0.12	21.4	17	198	0.45
VSPK001	2.76	0.03	11.8	1.69	17.2	7	1n	0.14	21.0	17	198	0.51
VSPK002	2.27	0.12	4.2	0.99	17.3	7	1n	0.15	20.7	0	212	0.42
VSPK003	2.43	0.44	6.6	0.38	20.6	7	1n	0.13	21.1	0	212	0.59
VSPK005	2.37	0.20	3.2	0.90	18.9	7	1n	0.21	20.6	0	212	0.24
VSPK007	2.70	0.23	11.3	1.11	18.8	9	1n	0.18	20.8	20	190	0.54
VSPK008	2.25	0.02	6.1	1.20	17.8	5	1n	0.08	20.6	0	212	0.42
VSPK009	2.76	0.08	4.1	1.55	17.6	6	1n	0.21	20.9	-3	210	0.36

Table A.7: 196 unknown objects observed with Blanco during one night in 2011 in program NEA fields. We include preliminary orbits fitted with FIND_ORB.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
PCPV010	2.39	0.19	2.0	0.92	17.2	6	1n	0.23	22.2	2	277	0.54
PCPV011	2.49	0.02	5.0	1.42	17.3	5	1n	0.61	21.9	2	277	0.69
PCPV012	2.88	0.01	13.7	1.85	17.2	3	1n	0.29	22.2	2	277	0.59
PCSV001	2.56	0.11	15.1	1.34	17.3	6	1n	0.05	21.6	-20	127	0.28
PCSV002	2.31	0.10	12.4	1.10	17.2	6	1n	0.04	20.0	-20	128	0.35
PCSV003	2.91	0.55	10.1	0.31	21.4	6	1n	0.55	22.4	-20	128	0.41
PCSV004	2.71	0.16	14.4	1.32	17.6	6	1n	0.09	20.9	-20	127	0.23
PCSV005	2.39	0.04	8.5	1.27	17.1	8	1n	0.27	20.9	7	101	0.59
PCSV006	2.62	0.09	9.0	1.41	16.5	8	1n	0.11	21.3	7	102	0.37
PCSV007	1.14	0.11	0.2	0.01	32.0	7	1n	0.19	22.4	7	102	0.74
PCSV008	2.82	0.27	9.2	1.06	17.9	8	1n	0.15	21.3	7	102	0.72
PCSV009	2.26	0.01	7.9	1.25	17.0	8	1n	0.29	20.8	7	102	0.57
PCSV010	2.40	0.62	6.4	0.02	19.6	8	1n	0.04	21.1	7	101	0.14
PCSV011	2.95	0.14	10.5	1.53	16.4	8	1n	0.08	20.7	8	101	0.45
PCSV012	2.77	0.17	6.9	1.28	18.9	8	1n	0.14	22.7	8	102	0.59
PCSV013	2.30	0.53	4.0	0.09	19.4	8	1n	0.06	20.6	7	101	0.59
PCSV014	3.18	0.20	7.7	1.54	16.9	8	1n	0.11	21.2	8	101	0.53
PCSV015	3.18	0.20	7.6	1.53	17.0	8	1n	0.09	21.2	7	101	0.51
PCSV016	2.43	0.22	8.6	0.89	17.7	8	1n	0.54	21.2	6	80	1.20
PCSV017	2.16	0.06	5.9	1.06	18.4	8	1n	0.17	22.6	6	80	0.82
PCSV018	2.78	0.03	10.1	1.72	16.8	8	1n	0.06	21.9	6	80	0.62
PCSV019	2.51	0.69	5.8	0.04	19.4	8	1n	0.08	21.9	6	80	0.72
PCSV020	2.47	0.72	7.5	0.08	19.6	8	1n	0.08	22.0	6	80	0.53
PCSV021	2.00	0.03	5.8	0.96	18.9	8	1n	0.21	22.8	6	79	0.96
PCSV022	2.19	0.16	6.0	0.86	17.8	8	1n	0.15	22.4	6	79	0.70
PCSV023	2.43	0.05	17.1	1.34	17.9	8	1n	0.36	22.5	5	79	0.67
PCSV024	2.98	0.08	5.5	1.77	16.8	8	1n	0.30	22.4	5	79	0.53
PCSV025	2.32	0.11	5.9	1.07	18.8	8	1n	0.20	22.7	6	79	1.02
PCSV026	1.00	0.01	0.3	0.01	26.2	8	1n	0.06	21.3	6	79	1.05
PCSV027	1.01	0.02	0.2	0.01	26.6	8	1n	0.15	22.6	6	79	0.90
PCSV028	3.11	0.04	8.9	2.02	16.8	8	1n	0.09	22.3	6	79	0.52
PCSV029	2.46	0.03	5.9	1.41	17.2	8	1n	0.17	21.9	6	79	0.73
PCSV030	2.42	0.70	10.6	0.01	19.5	8	1n	0.06	22.0	6	79	0.72
PCSV031	3.29	0.37	5.7	1.07	18.4	8	1n	0.31	22.3	6	79	1.09
PCSV032	2.56	0.56	8.6	0.15	20.1	6	1n	0.20	21.2	18	112	0.23
PCSV033	2.58	0.12	14.9	1.31	17.9	6	1n	0.12	21.5	18	112	0.39
PCTV001	2.24	0.27	13.7	0.63	16.8	6	1n	0.04	22.0	6	298	0.71
PCTV002	2.75	0.04	11.2	1.65	17.2	4	1n	0.22	22.5	6	298	0.77
PCTV003	3.03	0.06	10.2	1.84	16.0	6	1n	0.14	21.7	6	298	0.65
PCTV004	2.16	0.32	7.7	0.46	16.7	6	1n	0.12	21.9	-5	293	0.66
PCTV005	3.49	0.08	10.8	2.23	16.9	5	1n	0.34	22.5	-4	293	0.63
PCTV006	2.80	0.02	6.9	1.74	16.8	6	1n	0.15	22.0	-4	293	0.74
PCTV007	0.97	0.18	2.0	0.03	21.7	6	1n	0.07	22.2	-4	293	1.07
PCTV008	2.23	0.67	9.1	0.06	19.4	6	1n	0.09	22.3	-4	293	0.91
PCTV009	2.46	0.16	12.9	1.07	15.6	6	1n	0.14	20.8	-5	293	0.70
PCTV010	2.28	0.41	7.1	0.35	15.7	6	1n	0.11	21.3	-5	293	0.56
PCTV011	2.70	0.05	13.9	1.55	15.6	6	1n	0.16	20.8	-4	293	0.73
PCTV018	2.77	0.16	8.3	1.31	17.4	4	1n	0.14	22.9	1	279	0.47
PCTV024	2.51	0.48	0.7	0.28	20.3	5	1n	0.12	18.3	2	169	0.66
PCTV025	2.31	0.44	1.8	0.28	19.9	3	1n	0.25	17.9	2	169	0.60
PCTV026	2.23	0.42	1.1	0.28	22.0	3	1n	0.08	19.9	2	169	0.48
PCTV028	1.13	0.08	0.7	0.03	25.6	8	1n	0.10	21.5	-7	232	0.33
PCTV029	2.48	0.15	8.2	1.13	18.7	8	1n	0.16	23.0	-7	232	0.20
PCTV030	2.67	0.14	4.8	1.28	18.6	7	1n	0.06	21.9	-7	231	0.13
PCTV031	2.23	0.02	6.0	1.19	17.2	7	1n	0.04	20.4	-7	231	0.06
PCTV032	2.28	0.47	3.6	0.20	21.2	7	1n	0.04	21.5	-7	231	0.15
PCTV033	2.67	0.07	13.6	1.49	17.6	7	1n	0.06	21.9	-7	231	0.13
PCTV034	2.60	0.10	12.4	1.36	17.4	7	1n	0.08	21.7	-7	231	0.12
PCTV035	2.52	0.01	8.3	1.51	19.8	7	1n	0.15	23.5	-7	231	0.20
PCTV036	2.48	0.15	5.9	1.12	17.7	8	1n	0.06	22.0	-7	231	0.14
PCTV037	2.58	0.53	3.7	0.20	20.5	8	1n	0.04	21.3	-7	231	0.19
PCTV038	2.27	0.25	9.4	0.71	19.1	8	1n	0.18	23.4	-7	232	0.17
PCTV039	2.56	0.11	14.1	1.33	17.2	6	1n	0.06	21.9	-17	253	0.31
PCTV040	3.13	0.03	14.5	2.08	17.4	6	1n	0.04	22.6	-17	253	0.27
PCTV041	2.44	0.17	13.9	1.09	16.4	6	1n	0.03	21.1	-17	253	0.31
PCTV042	2.43	0.05	7.1	1.33	16.8	8	1n	0.07	20.5	-7	232	0.19

Table A.7 (continued) – 196 unknown objects observed with Blanco during one night in 2011 in program NEA fields.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
PCTV043	2.68	0.06	14.3	1.55	18.3	6	1n	0.09	23.0	-16	253	0.29
PCTV044	2.87	0.12	15.2	1.57	18.2	6	1n	0.08	22.4	-16	253	0.50
PCTV045	2.24	0.14	22.4	0.97	17.7	6	1n	0.09	21.9	-17	253	0.53
PCTV076	2.92	0.25	2.9	1.19	16.9	8	1n	0.10	22.7	-2	104	0.14
PCTV077	2.87	0.12	1.8	1.53	18.7	5	1n	0.12	22.9	-2	104	0.42
PCTV078	2.40	0.19	6.6	0.96	18.9	4	1n	0.09	23.6	-2	104	0.26
PCTV079	2.55	0.01	6.6	1.53	18.8	4	1n	0.09	23.1	-2	104	0.39
PCTV080	2.28	0.00	7.7	1.27	17.9	8	1n	0.09	21.7	-2	104	0.49
PCTV081	2.45	0.04	5.8	1.38	18.5	8	1n	0.17	22.7	-2	104	0.39
PCTV082	2.13	0.52	0.4	0.01	29.8	8	1n	0.26	22.4	-2	104	0.64
PCTV083	2.36	0.03	7.2	1.27	18.7	8	1n	0.19	22.5	-1	104	0.48
PCTV084	2.37	0.07	4.3	1.22	18.6	8	1n	0.20	22.8	-1	104	0.38
PCTV085	2.68	0.23	3.5	1.05	18.4	8	1n	0.27	21.7	-1	104	0.67
PCTV086	1.31	0.22	0.9	0.01	25.5	6	1n	0.25	23.2	-2	104	0.41
PCTV087	2.49	0.02	5.7	1.46	19.0	8	1n	0.15	23.2	-1	104	0.38
PCTV088	3.01	0.05	3.8	1.83	17.1	8	1n	0.10	21.8	-2	104	0.32
PCTV089	2.50	0.09	14.9	1.27	18.4	8	1n	0.19	22.2	-1	104	0.55
PCTV090	2.20	0.32	8.0	0.52	19.6	8	1n	0.15	22.6	-2	104	0.48
PCTV091	3.09	0.33	3.4	1.05	18.5	6	1n	0.29	21.8	-1	104	0.75
PCTV092	2.53	0.18	5.6	1.05	17.9	8	1n	0.20	21.2	-1	104	0.66
PCTV093	1.02	0.01	0.2	0.01	29.3	7	1n	0.10	23.1	-1	104	0.35
PCTV094	2.83	0.14	4.1	1.47	17.6	8	1n	0.12	22.8	-1	104	0.22
PCTV095	2.55	0.10	8.2	1.27	18.9	6	1n	0.18	22.7	-1	104	0.52
PCTV096	1.02	0.01	0.3	0.01	25.9	8	1n	0.29	20.3	-1	104	0.94
PCTV097	2.60	0.02	2.2	1.53	17.6	4	1n	0.10	21.9	-1	104	0.39
PCTV098	2.45	0.04	6.1	1.37	18.7	8	1n	0.20	22.9	-1	104	0.39
PCTV099	2.32	0.19	5.2	0.88	19.5	7	1n	0.24	22.4	-1	104	0.78
PCTV100	2.34	0.09	3.3	1.15	19.1	7	1n	0.27	23.3	-1	104	0.36
PCTV101	2.45	0.31	2.0	0.70	17.8	8	1n	0.21	23.0	-2	104	0.17
PCTV102	2.62	0.03	1.7	1.52	18.1	8	1n	0.14	22.3	-2	104	0.41
PCTV103	2.58	0.20	6.3	1.05	18.2	7	1n	0.20	21.5	-2	104	0.69
PCTV104	2.45	0.16	2.8	1.07	17.9	8	1n	0.20	22.6	-2	104	0.27
PCTV105	2.73	0.18	2.6	1.26	18.2	8	1n	0.20	23.5	-2	104	0.21
PCTV106	2.90	0.12	1.9	1.52	18.2	8	1n	0.19	22.4	-2	104	0.44
PCTV107	2.94	0.30	2.7	1.05	19.3	8	1n	0.31	22.7	-2	104	0.72
PCTV108	2.60	0.12	16.3	1.27	19.3	7	1n	0.16	23.1	-2	104	0.57
PCTV110	2.32	0.23	2.0	0.79	16.9	8	1n	0.23	22.0	1	280	0.55
PCTV111	2.45	0.17	3.8	1.04	17.1	8	1n	0.52	22.2	1	280	0.52
PCTV112	3.16	0.19	10.7	1.55	17.3	7	1n	0.36	22.0	1	280	0.76
PCTV113	2.36	0.12	2.5	1.07	17.7	8	1n	0.17	21.5	1	280	1.00
PCTV114	2.83	0.10	17.6	1.55	17.0	8	1n	0.19	21.6	1	280	0.74
PCTV115	2.21	0.29	7.5	0.57	17.3	6	1n	0.73	22.4	1	280	0.57
PCTV120	2.87	0.12	14.1	1.52	16.6	8	1n	0.23	22.1	1	280	0.48
PCTV121	2.33	0.09	11.1	1.11	16.8	8	1n	0.21	21.5	1	280	0.67
PCTV122	2.16	0.18	4.0	0.78	17.6	8	1n	0.24	22.3	1	280	0.66
PCTV123	2.55	0.12	8.3	1.25	17.3	8	1n	0.29	22.3	1	280	0.57
PCTVb46	2.35	0.59	2.5	0.01	21.2	8	1n	0.21	22.9	3	92	0.64
PCTVb47	2.24	0.14	4.8	0.95	17.0	8	1n	0.10	21.5	3	92	0.55
PCTVb48	2.81	0.10	10.1	1.53	19.1	3	1n	0.23	23.6	3	92	0.62
PCTVb49	3.14	0.09	9.9	1.84	18.9	6	1n	0.27	23.8	3	92	0.51
PCTVb50	1.15	0.17	2.3	0.03	20.9	6	1n	0.06	20.4	3	91	1.07
PCTVb51	3.04	0.06	9.8	1.88	16.6	8	1n	0.08	22.0	3	91	0.39
PCTVb52	2.83	0.01	11.3	1.82	16.9	8	1n	0.10	21.8	3	91	0.48
PCTVb53	3.15	0.19	16.3	1.53	17.0	8	1n	0.11	21.5	3	91	0.63
PCTVb54	2.34	0.12	5.0	1.06	18.4	8	1n	0.20	22.1	3	91	0.86
PCTVb55	2.66	0.47	4.1	0.40	19.2	8	1n	0.20	21.9	3	91	0.92
PCTVb56	2.89	0.01	5.5	1.83	16.1	8	1n	0.12	21.0	3	91	0.50
PCTVb57	2.36	0.08	3.3	1.19	18.4	8	1n	0.23	22.8	4	91	0.57
PCTVb58	1.31	0.22	0.4	0.01	25.1	8	1n	0.21	22.6	4	91	0.95
PCTVb59	2.21	0.59	2.8	0.01	20.8	8	1n	0.12	22.5	4	91	0.54
PCTVb60	2.69	0.06	12.3	1.55	16.5	8	1n	0.10	21.5	3	91	0.49
PCTVb61	1.02	0.00	0.2	0.01	30.6	8	1n	0.26	22.6	3	91	0.97
PCTVb62	3.17	0.16	11.2	1.69	17.4	7	1n	0.16	23.3	3	91	0.29
PCTVb63	2.54	0.44	3.8	0.43	14.9	8	1n	0.07	20.8	3	91	0.25
PCTVb64	2.36	0.61	6.1	0.04	20.1	7	1n	0.26	21.9	3	91	0.65
PCTVb65	2.67	0.59	2.6	0.08	20.7	7	1n	0.18	22.4	3	91	0.93
PCTVb66	2.55	0.01	3.0	1.52	16.9	7	1n	0.19	21.4	3	91	0.59

Table A.7 (continued) – 196 unknown objects observed with Blanco during one night in 2011 in program NEA fields.

Acronym	a (AU)	e	i (°)	MOID (AU)	H	Nr pos	Arc	σ (″)	R	β (°)	ϵ (°)	μ (″/min)
PCTVb67	3.06	0.17	7.2	1.53	18.3	8	1n	0.27	22.8	3	91	0.64
PCTVb68	1.02	0.00	0.2	0.01	30.2	6	1n	0.26	22.1	3	91	1.13
PCTVb69	1.01	0.00	0.1	0.01	30.2	8	1n	0.22	22.6	3	91	1.00
PCTVb70	3.01	0.05	5.0	1.84	17.5	8	1n	0.17	22.5	3	91	0.52
PCTVb71	1.49	0.41	1.9	0.02	21.9	7	1n	0.14	22.8	4	91	0.64
PCTVb72	2.98	0.15	3.3	1.53	18.1	8	1n	0.20	22.5	4	91	0.64
PCV001	2.24	0.14	5.3	0.95	18.8	6	1n	0.13	22.5	-7	232	0.15
PCV002	3.03	0.06	12.8	1.84	17.9	6	1n	0.05	22.2	-7	232	0.24
PCV003	2.22	0.14	6.0	0.91	19.3	6	1n	0.08	23.1	-7	232	0.18
PCV010	2.77	0.16	8.3	1.35	16.8	7	1n	0.37	21.6	-8	232	0.20
PCV011	2.36	0.21	6.8	0.87	18.0	7	1n	2.15	22.3	-8	232	0.21
PCV013	2.56	0.43	15.1	0.47	14.5	7	1n	0.66	20.0	-7	231	0.20
PCV014	2.52	0.13	14.0	1.21	17.4	6	1n	0.25	21.7	-7	231	0.27
PCV015	2.49	0.08	6.3	1.28	17.4	8	1n	0.21	20.6	-7	232	0.03
PCV016	2.70	0.06	5.3	1.56	17.5	6	1n	0.11	22.4	3	91	0.47
PCV017	2.31	0.23	5.4	0.79		5	1n	0.33		4	91	0.41
PCV018	2.43	0.58	2.6	0.02	21.0	8	1n	0.20	22.7	3	91	0.78
PCV019	2.79	0.19	8.4	1.25	18.5	8	1n	1.14	22.5	4	91	0.65
PCV021	2.30	0.01	4.0	1.28	18.5	5	1n	0.19	22.6	4	269	0.68
PCV022	2.49	0.59	3.4	0.02	20.4	6	1n	0.19	22.1	4	269	0.78
PCV023	2.11	0.45	5.1	0.15	20.7	4	1n	0.12	21.6	4	269	1.78
PCV024	2.97	0.04	5.5	1.86	17.4	6	1n	0.20	22.4	4	269	0.50
PCV025	2.41	0.33	1.1	0.60		6	1n	1.01		2	169	0.48
PCV026	2.40	0.27	1.0	0.73		4	1n	0.50		2	169	0.49
PCV027	2.39	0.27	1.0	0.73		8	1n	0.87		2	169	0.48
PCVP001	1.96	0.70	17.4	0.26	19.4	5	1n	0.23	22.1	-11	293	0.79
PCVP002	2.54	0.44	20.9	0.45	16.2	3	1n	0.10	22.3	-11	293	0.49
PCVP003	3.16	0.77	14.5	0.17	18.2	5	1n	0.11	21.5	-11	293	0.78
PCVP004	2.49	0.02	17.5	1.44	16.9	5	1n	0.09	21.7	-11	293	0.82
PCVP005	1.91	0.61	22.5	0.25	20.4	3	1n	0.10	22.4	-38	248	0.62
PCVP006	3.27	0.02	11.8	2.22	16.2	7	1n	0.11	21.7	2	277	0.48
PCVP007	3.20	0.84	17.6	0.14	19.5	4	1n	0.22	21.9	2	276	0.34
PCVP008	3.25	0.30	1.8	1.29	17.6	7	1n	0.26	21.8	2	276	0.87
PCVP009	3.15	0.10	3.7	1.85	17.5	7	1n	0.23	22.5	2	277	0.61
PCVP013	2.56	0.16	14.2	1.16	16.0	6	1n	0.17	19.1	18	189	0.63
PCVP014	2.20	0.21	7.6	0.75	19.9	6	1n	0.13	20.7	18	189	0.53
PCVP015	2.36	0.14	13.0	1.04	19.5	3	1n	0.17	22.0	17	189	0.67
PCVP016	2.37	0.25	7.9	0.77	20.5	4	1n	0.38	21.6	17	189	0.52
PCVP017	2.22	0.22	7.8	0.74	20.9	4	1n	0.12	21.9	17	189	0.57
PCVP018	2.62	0.20	13.8	1.12	19.3	3	1n	0.18	22.1	17	189	0.62
PCVP019	2.35	0.03	9.9	1.30	18.3	5	1n	0.34	20.8	17	189	0.59
PCVP020	2.40	0.27	7.9	0.75	20.2	5	1n	0.29	21.0	18	189	0.45
PCVP021	2.52	0.09	14.6	1.29	17.1	6	1n	0.27	19.6	18	189	0.65
PCVP022	2.36	0.26	7.8	0.75	19.0	3	1n	0.04	19.8	18	189	0.46
PCVP023	1.97	0.17	19.2	0.73	19.4	3	1n	0.20	21.6	18	189	0.87
PCVS004	2.22	0.03	7.4	1.15	17.4	6	1n	0.50	21.4	4	269	0.66
PCVS005	2.25	0.13	5.2	0.97	17.0	6	1n	0.13	21.5	4	269	0.54
PCVS006	2.27	0.09	4.2	1.07	18.1	6	1n	0.24	21.8	4	269	0.80
PCVS007	2.13	0.19	5.6	0.72	17.1	6	1n	0.22	21.6	4	269	0.51
PCVS008	2.35	0.12	4.5	1.07	17.6	6	1n	0.40	21.2	4	269	0.86
PCVS009	2.25	0.09	7.5	1.07	18.2	6	1n	0.36	21.9	4	269	0.77
PCVS010	3.21	0.01	4.7	2.20	16.5	6	1n	0.18	21.9	4	269	0.39
PCVS011	2.44	0.60	4.5	0.05	20.6	6	1n	0.37	22.3	4	269	0.66
PCVS012	2.36	0.08	6.6	1.18	17.9	6	1n	0.29	22.4	4	269	0.56
PCVS013	2.91	0.02	3.7	1.85	15.4	6	1n	0.05	20.3	4	269	0.50
PCVS014	3.18	0.01	9.3	2.15	15.2	6	1n	0.11	20.6	4	269	0.41
PCVS015	2.58	0.11	4.9	1.31	16.2	6	1n	0.09	21.2	4	269	0.46
PCVS019	2.18	0.31	3.7	0.50	17.1	6	1n	0.27	22.2	-3	286	0.62
PCVS020	3.01	0.16	11.0	1.53	17.2	6	1n	0.40	21.9	-4	286	0.88
PCVS021	2.53	0.13	5.7	1.20	17.6	6	1n	0.20	22.7	-3	286	0.62
PCVS022	2.27	0.75	3.2	0.06	18.5	5	1n	0.36	21.6	-3	297	0.82
PCVS023	3.03	0.68	2.7	0.01	19.3	5	1n	0.61	22.4	-2	296	1.17
PCVS024	2.28	0.93	5.2	0.05	19.1	4	1n	0.16	22.2	-3	296	0.31

Table A.8: 60 *NEO candidates* matching at least one of the three NEO selection methods: fit the $\epsilon - \mu$ model, have a good score (greater than 10%) in the "NEO Rating" developed by the MPC, or have small calculated MOID (less than 0.3 AU). We list in bold 18 *best NEO candidates* defined to match at least two of the three criteria. The object ESU031 marked with + turned out to be the recently discovered NEA 2012 DC28, and fitted all three NEO selection methods well.

Acronym	μ (″/min)	ϵ (°)	R	MOID (AU)	a (AU)	e	i (°)	Pos	σ (″)	MPC rating	Model
INT NEA fields:											
EBA012	2.13	258	21.0	**0.01**	1.06	0.11	2.3	7	0.18	**100**	**Best**
EBA055	0.43	196	21.1	0.01	1.06	0.07	0.3	5	0.20	1	Bad
EBA067	0.47	196	21.1	0.01	1.19	0.22	0.6	5	0.30	0	Bad
EBA120	0.90	178	21.1	0.78	1.94	0.10	20.9	5	0.09	20	Close
EPA014	1.51	284	21.2	0.68	2.89	0.44	11.5	5	0.30	61	Close
EPA015	3.33	261	19.6	**0.09**	1.81	0.43	22.2	6	0.49	**100**	**Best**
VFLLP01	1.74	261	21.7	**0.01**	4.72	0.79	2.2	7	0.12	**88**	**Best**
VKF006	0.32	160	21.2	0.45	2.29	0.38	6.9	7	0.04	13	Bad
VKF008	1.13	160	20.8	0.77	1.87	0.07	19.4	7	0.10	**22**	**Best**
VKF012	0.31	160	20.9	0.45	2.30	0.38	6.8	7	0.03	11	Bad
VKF030	0.35	186	20.8	0.53	2.34	0.35	0.3	6	0.10	22	Bad
VKF034	1.22	186	19.7	0.91	1.98	0.04	23.4	7	0.08	**17**	**Best**
VSPK003	0.59	212	21.1	0.38	2.43	0.44	6.6	7	0.13	2	Good
INT opposition fields:											
EBA023	1.11	184	21.7	**0.01**	1.04	0.04	0.4	5	0.27	8	**Good**
EBA024	0.80	184	20.4	0.01	1.03	0.11	0.2	4	0.38	1	Close
EBA074	0.93	186	21.5	0.31	1.39	0.06	0.5	3	0.27	4	Close
EBA163	0.54	184	20.7	0.01	1.31	0.39	0.2	5	0.05	0	Bad
ELA004	0.65	186	20.0	0.01	1.14	0.23	0.5	5	0.27	0	Bad
ELA014	0.54	186	20.8	0.01	1.04	0.19	0.0	5	0.07	0	Bad
ELA070	0.99	182	21.0	0.90	1.95	0.03	15.6	3	0.18	5	Close
EPA109	0.64	185	21.5	0.01	1.02	0.11	0.2	5	0.07	0	Bad
EPA143	1.13	182	20.8	0.75	1.88	0.07	16.1	5	0.09	**11**	**Good**
EPA190	1.05	180	20.8	0.78	1.93	0.07	21.3	5	0.17	**15**	**Good**
EPO031	1.04	182	19.6	**0.01**	1.06	0.14	0.4	5	0.20	**19**	**Good**
EPO078	0.73	186	20.3	0.01	1.50	0.47	0.4	5	0.02	1	Bad
EPO026	0.61	185	21.0	0.01	1.14	0.27	0.5	4	0.32	0	Bad
EPO065	1.08	186	20.6	0.82	1.95	0.06	22.8	4	0.10	**17**	**Good**
ETU018	0.55	183	20.9	0.01	1.02	0.03	0.2	5	0.13	1	Bad
ETU091	0.63	183	21.5	0.15	1.30	0.10	0.2	5	0.10	0	Bad
ETU108	0.47	183	20.7	0.03	1.04	0.04	0.3	5	0.03	0	Bad
ETU125	0.61	186	20.7	0.01	1.02	0.05	0.3	5	0.47	0	Bad
ESU031 +	10.32	183	20.5	**0.01**	1.02	0.01	6.7	3	0.56	**100**	**Best**
ESU096	0.53	187	21.5	0.01	1.07	0.38	0.1	4	0.06	0	Bad
ESU110	0.57	187	21.2	0.01	1.19	0.27	0.4	5	0.11	0	Bad
ESU166	0.81	186	20.8	0.01	1.02	0.08	0.2	5	0.29	2	Close
ESU174	0.57	187	20.7	0.01	1.07	0.08	0.3	5	0.09	0	Bad
ESU181	0.49	187	21.3	0.01	1.35	0.40	0.7	5	0.17	0	Bad
Blanco NEA fields:											
PCSV007	0.74	102	22.4	0.01	1.14	0.11	0.2	7	0.19	2	Bad
PCSV026	1.05	79	21.3	0.01	1.00	0.01	0.3	8	0.06	4	Bad
PCSV027	0.90	79	22.6	0.01	1.01	0.02	0.2	8	0.15	1	Bad
PCTV007	1.07	293	22.2	0.03	0.97	0.18	2.0	6	0.07	1	Bad
PCTV086	0.41	104	23.2	0.01	1.31	0.22	0.9	6	0.25	0	Bad
PCTV024	0.66	169	18.3	**0.28**	2.51	0.48	0.7	5	0.12	**100**	Bad
PCTV026	0.48	169	19.9	**0.28**	2.23	0.42	1.1	3	0.08	**100**	Bad
PCTV028	0.33	232	21.5	0.03	1.13	0.08	0.7	8	0.10	7	Bad
PCTV098	0.39	104	22.9	1.37	2.45	0.04	6.1	8	0.20	0	Bad
PCTVb50	1.07	91	20.4	**0.03**	1.15	0.17	2.3	6	0.06	**10**	Bad
PCTVb58	0.95	91	22.6	0.01	1.31	0.22	0.4	8	0.21	1	Bad
PCTVb63	0.25	91	20.8	0.43	2.54	0.44	3.8	8	0.07	22	Bad
PCTVb68	1.13	91	22.1	0.01	1.02	0.00	0.2	6	0.26	3	Bad
PCTVb69	1.00	91	22.6	0.01	1.01	0.00	0.1	8	0.22	5	Bad
PCTVb71	0.64	91	22.8	0.02	1.49	0.41	1.9	7	0.14	0	Bad
PCV013	0.20	231	20.0	0.47	2.56	0.43	15.1	7	0.66	77	Bad
PCV023	1.78	269	20.7	**0.15**	2.11	0.45	5.1	4	0.12	**80**	**Good**
PCVP005	0.62	248	22.4	**0.25**	1.91	0.61	22.5	3	0.10	**100**	Bad
PCVP007	0.34	276	21.9	**0.14**	3.20	0.84	17.6	4	0.22	**100**	Bad

Table A.8 (continued) – 60 NEO candidates and 18 best NEO candidates.

Acronym	μ (″/min)	ϵ (°)	R	MOID (AU)	a (AU)	e	i (°)	Pos	σ (″)	MPC rate	Model
PCVP013	0.63	189	19.1	1.16	2.56	0.16	14.2	6	0.17	10	Bad
PCVP023	0.87	189	21.6	0.73	1.97	0.17	19.2	3	0.20	23	Close
PCVS010	0.39	269	21.9	2.20	3.21	0.01	4.7	6	0.18	1	Bad
PCVS024	0.31	296	22.2	**0.05**	2.28	0.93	5.2	4	0.16	**19**	Bad