

Colours of Minor Bodies in the Outer Solar System

Sample: allClean.dat , April 15, 2020

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ESO

Compilation date: April 15, 2020

ABSTRACT

This is a collection of all tables and graphs mentioned in Hainaut, Boehnhardt and Protopapa (2012), A&A **XX**, XX, updated for the following sample allClean.dat on April 15, 2020.
Refer to the paper for discussions and methods, and to the MBOSS photometry web page, <http://www.eso.org/~ohainaut/MBOSS> for individual plots and for updates.

Key words.

1. Intro

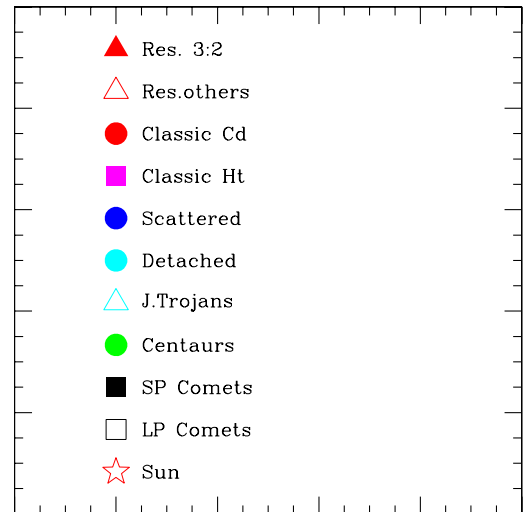
This is essentially a collection of tables and figures with no text. The explanatory text is found in Hainaut, Boehnhardt and Protopapa 2012.

2. ChangeLog

- added Bauer+13 radiometric WISE data
 - added various comet-related papers: Mee+08, Jew15, Jew05
 - added Pluto and Charon data
 - Aug.2017 various Esa object miss visible information; rescued a few from papers of “less than optimal” quality. Added For+09 for more gradients.
 - check for new binaries, Vil+14, For+13, SSa+12
 - imported HBO papers:
- | Paper | Obj | epochs | dispersion |
|--------|-----|--------|---------------------|
| Ban+16 | 7 | 0 | no quality estimate |
| Por+16 | 6 | 0 | no quality estimate |
| Pet+08 | 55 | 0 | no quality estimate |
| TRC16 | 72 | 71 | 0.064 |
| ST16 | 12 | 0 | no quality estimate |
| STT16 | 9 | 0 | no quality estimate |
| SRT12 | 6 | 1 | 0.105 |
| TS14 | 2 | 1 | 0.042 |
- Dynamical classification: comets are comets only based on their designation (C/, P/), not on their orbital elements. Hwv, elements are now read in and processed for P/ (not C/, as we use a).
 - Dynamical classification: Cold Classic now more restrictive: $i < 5$ and $e < 0.15$.
 - Jun.2017 Incorporate radiometric data, Esa. Reads and processes Diam, Pv, M11. Pending: eta

Table 1. Content of the database [statCount.tex, from proc/KStno-count]

Item	Count
Jtrojans	90
Res. 3:2	58
Res. other	32
LPComets	51
SPComets	141
Centaur	90
Scattered	53
Detached Disk Obj.	33
Classical Cold	94
Classical Hot	82
Objects	724
Epochs	2662
Papers	153



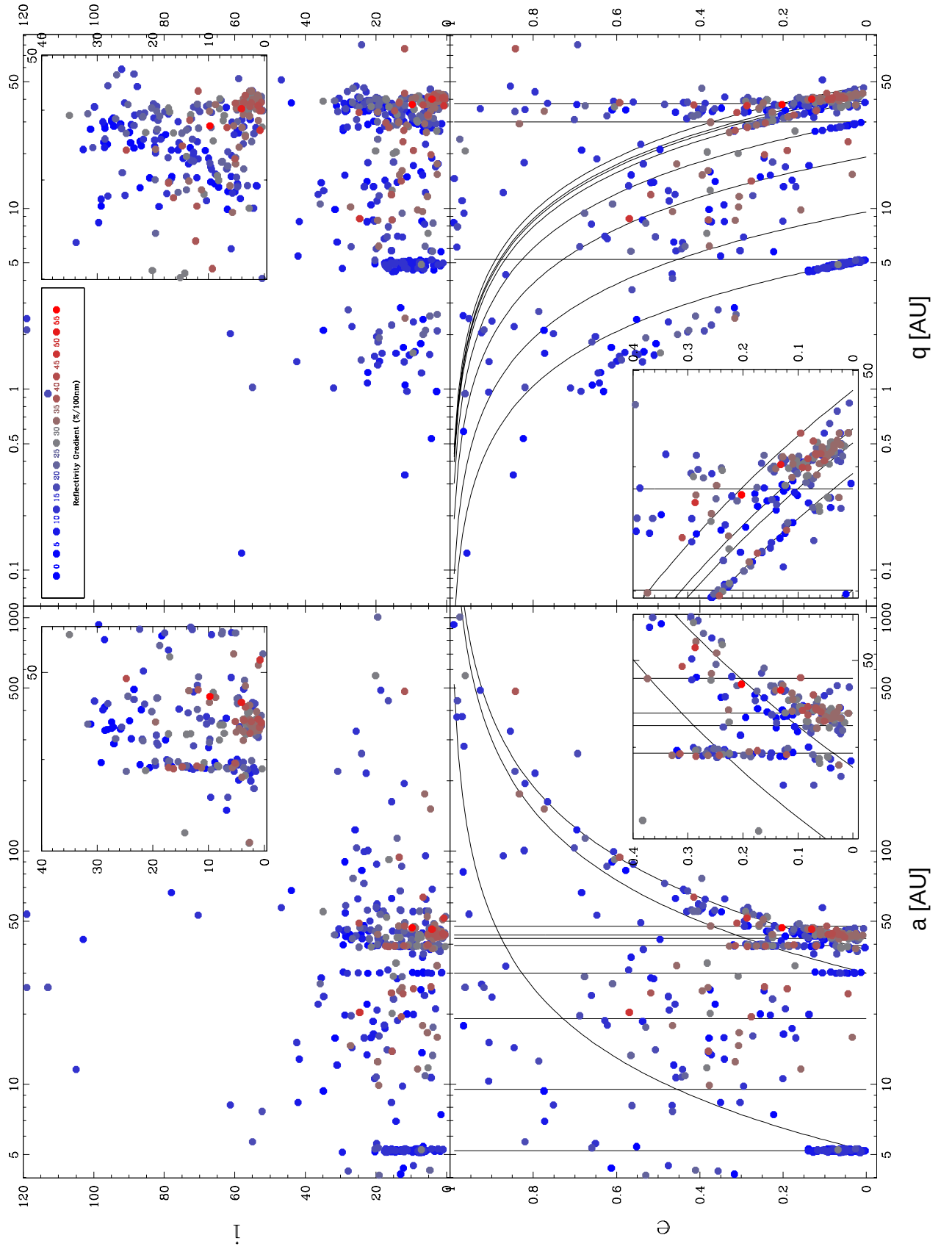


Fig. 2. Spectral gradient of the objects [eleCol.sm]

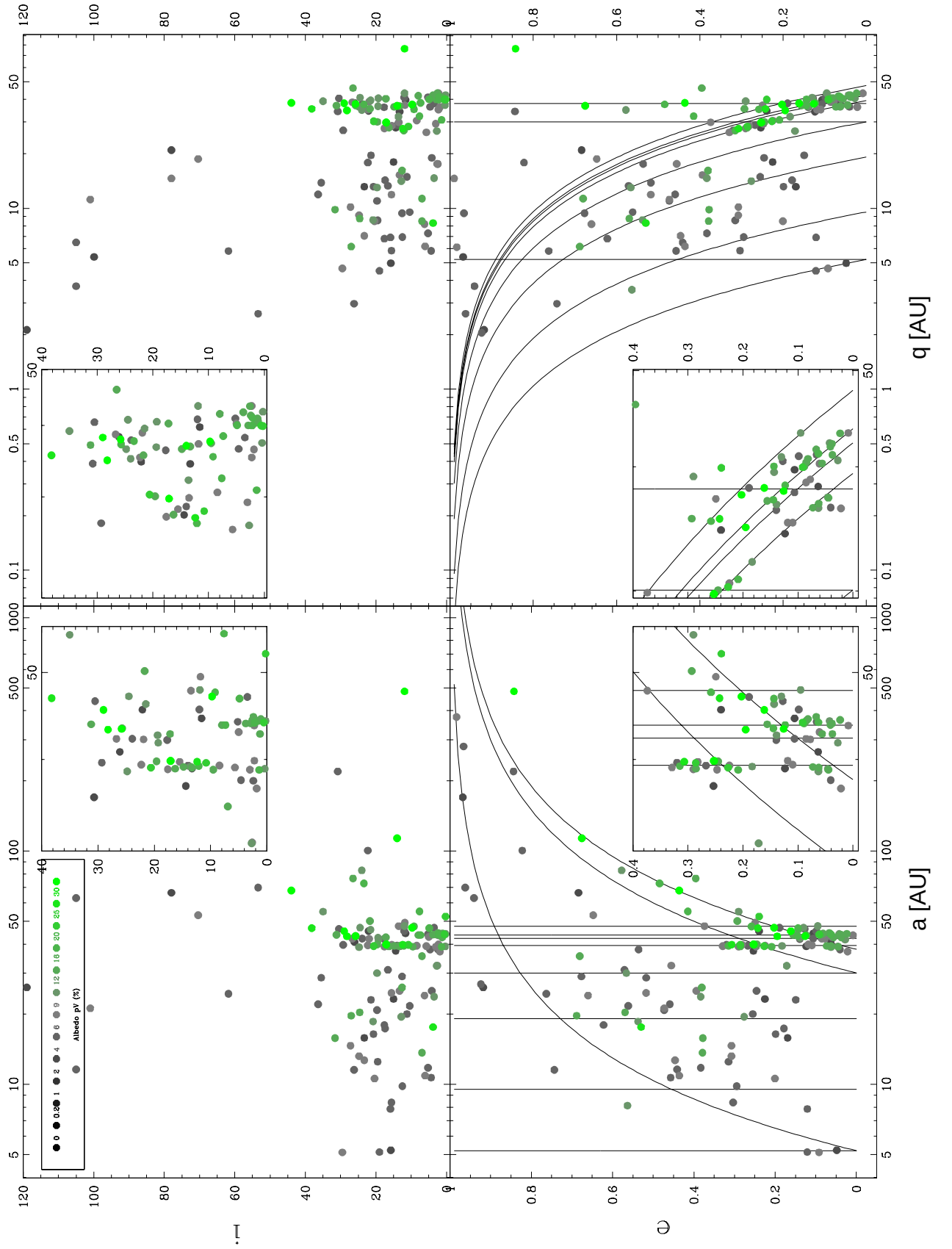


Fig. 3. V albedo of the objects from thermal IR [eleAlbedo.sm]

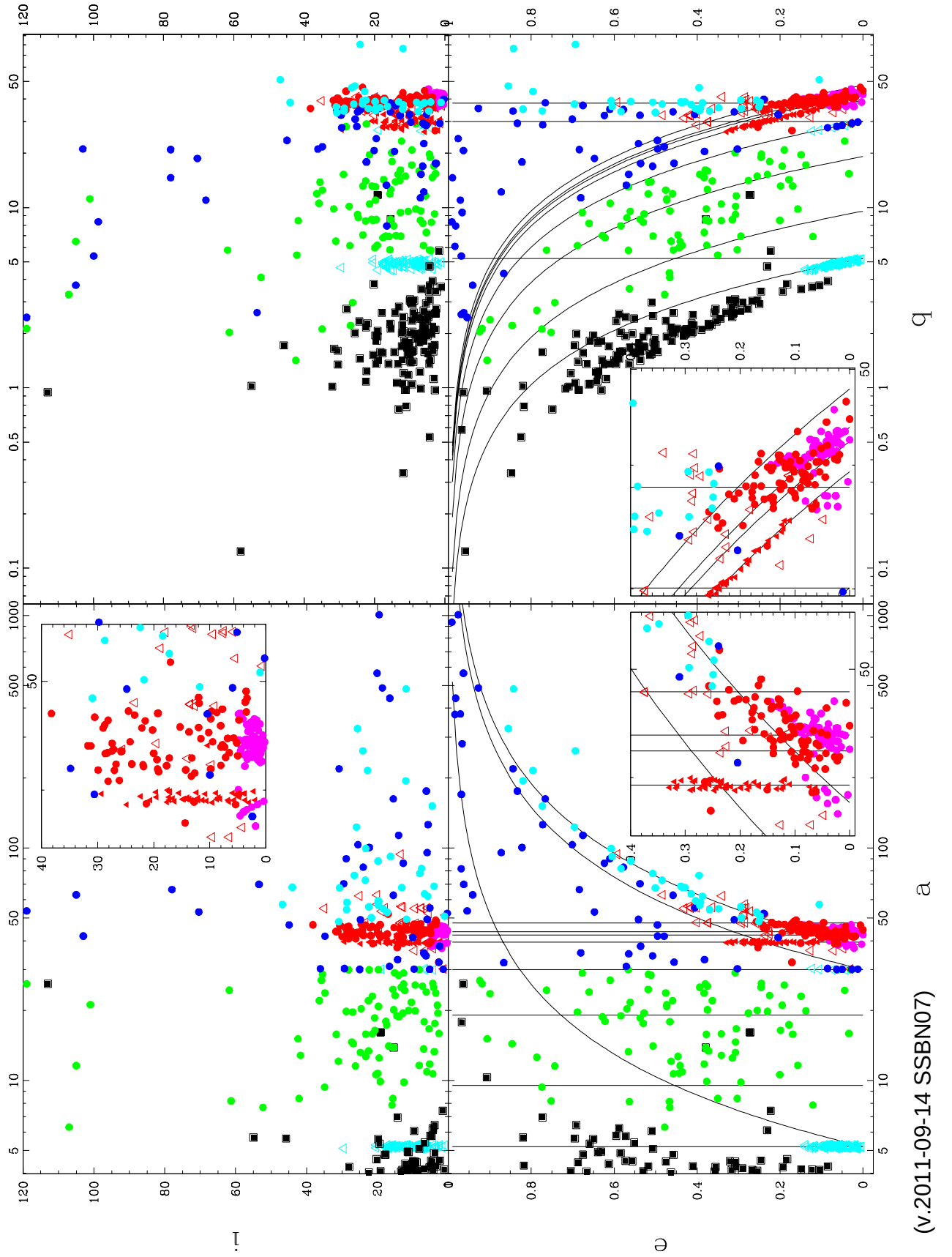


Fig. 4. Dynamical classification and orbital elements of the objects [ele.sm]

Table 2. Average Magnitudes and Colors allColorTex.tex from colorTex

Object	Class ⁽¹⁾ Gr $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
C/1983H1-IA	LP Comet	1	1	14.851 $\pm$ 0.376	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/1983J1-SS	LP Comet	1	1	19.418 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/1984K1-Shoemak	LP Comet	1	1	9.831 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/1984U1-Shoemak	LP Comet	1	1	9.925 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/1986P1-Wilson	LP Comet	1	1	11.225 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/1987A1-Levy	LP Comet	1	1	15.648 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/1987H1-Shoemak	LP Comet	1	1	10.127 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/1988B1-Shoemak	LP Comet	1	1	11.225 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/1988C1-MP	LP Comet	1	1	17.053 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/1995O1-HB	LP Comet	2	1	9.418 $\pm$ 1.056	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	2.578 $\pm$ 4.691	0.810 $\pm$ 0.050 $\pm$ 0.000	0.390 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/1996B2-Hyakuta	LP Comet	1	1	15.358 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/1999J2	LP Comet	11	1	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/1999S4-LINEAR	LP Comet	1	1	0.403 $\pm$ 0.014 $\pm$ 0.012	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2000B4	LP Comet	6	1	19.249 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2001G1	LP Comet	2	1	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	7.799 $\pm$ 2.113	0.454 $\pm$ 0.034 $\pm$ 0.021	0.430 $\pm$ 0.045 $\pm$ 0.032	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	6.474 $\pm$ 0.647	0.752 $\pm$ 0.012 $\pm$ 0.000	0.430 $\pm$ 0.030 $\pm$ 0.022	0.433 $\pm$ 0.011 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2001M10	Centaur	2	1	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2001O1	LP Comet	1	1	0.520 $\pm$ 0.080 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2001OG108-LONE	LP Comet	1	1	0.480 $\pm$ 0.023 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2001Q1	LP Comet	2	1	12.825 $\pm$ 0.183	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2002CE10-LINEA	LP Comet	2	1	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	29.277 $\pm$ 0.802	0.445 $\pm$ 0.160 $\pm$ 0.159	0.623 $\pm$ 0.013 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	15.658 $\pm$ 1.447	0.770 $\pm$ 0.024 $\pm$ 0.000	0.542 $\pm$ 0.029 $\pm$ 0.015	0.504 $\pm$ 0.025 $\pm$ 0.005	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2002VQ94-LINEA	LP Comet	1	1	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2003A2	LP Comet	4	1	0.480 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2003A2-Gleason	LP Comet	1	1	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	7.213 $\pm$ 1.463	0.456 $\pm$ 0.025 $\pm$ 0.016	0.393 $\pm$ 0.019 $\pm$ 0.006	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	9.774 $\pm$ 1.982	0.610 $\pm$ 0.040 $\pm$ 0.000	0.470 $\pm$ 0.040 $\pm$ 0.000	0.460 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
C/2004D1-NEAT	LP Comet 9.178 $\pm$ 1.982	1 0.820 $\pm$ 0.050 $\pm$ 0.000	1 0.430 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — 0.510 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2006S3-Loneos	LP Comet 20.659 $\pm$ 1.301	1 0.740 $\pm$ 0.010 $\pm$ 0.000	1 0.580 $\pm$ 0.010 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2007D1-LINEAR	LP Comet 6.512 $\pm$ 1.266	1 0.750 $\pm$ 0.020 $\pm$ 0.000	1 0.440 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — 0.410 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2008S3-Boattin	LP Comet 5.440 $\pm$ 1.352	2 0.769 $\pm$ 0.036 $\pm$ 0.018	1 0.448 $\pm$ 0.026 $\pm$ 0.016	— $\pm$ — 0.364 $\pm$ 0.022 $\pm$ 0.008	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2009T1-McNaugh	LP Comet 12.933 $\pm$ 1.525	1 0.640 $\pm$ 0.040 $\pm$ 0.000	1 0.530 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — 0.450 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2010D4-WISE	LP Comet 8.876 $\pm$ 4.691	1 0.740 $\pm$ 0.070 $\pm$ 0.000	1 0.460 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2010DG56-WISE	LP Comet 0.851 $\pm$ 4.691	1 0.770 $\pm$ 0.050 $\pm$ 0.000	1 0.370 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2010KW7	LP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2010L3-Catalin	LP Comet 5.382 $\pm$ 1.525	1 0.750 $\pm$ 0.030 $\pm$ 0.000	1 0.420 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — 0.410 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2010U3-Boattin	LP Comet 7.678 $\pm$ 2.115	3 0.778 $\pm$ 0.048 $\pm$ 0.032	1 0.520 $\pm$ 0.037 $\pm$ 0.018	— $\pm$ — 0.320 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2011KP36	LP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Bau+13 nodate ThermalIR tel=WISE hmag=9.4/0.3 diam=55.1/-19.4/+19.4 pV=0.101/-0.062/+0.062 fixeta=0.8/-0.4/+0.4							
C/2011P2-PANSTAR	LP Comet -3.055 $\pm$ 7.499	3 0.919 $\pm$ 0.079 $\pm$ 0.056	1 0.323 $\pm$ 0.081 $\pm$ 0.064	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2011Q1-PANSTAR	LP Comet 11.605 $\pm$ 4.492	2 0.819 $\pm$ 0.046 $\pm$ 0.010	1 0.489 $\pm$ 0.048 $\pm$ 0.014	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2012A1-PANSTAR	LP Comet 7.949 $\pm$ 2.056	1 0.740 $\pm$ 0.010 $\pm$ 0.000	1 0.450 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2012E1-Hill	LP Comet 3.452 $\pm$ 6.505	1 0.790 $\pm$ 0.090 $\pm$ 0.000	1 0.400 $\pm$ 0.070 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2012K8-Lemmon	LP Comet 4.148 $\pm$ 0.000	1 0.720 $\pm$ 0.010 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2012LP26-Palom	LP Comet 14.176 $\pm$ 4.357	3 0.854 $\pm$ 0.047 $\pm$ 0.041	1 0.516 $\pm$ 0.046 $\pm$ 0.043	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2012Q1-Kowalsk	LP Comet 16.280 $\pm$ 2.417	6 0.907 $\pm$ 0.032 $\pm$ 0.015	1 0.537 $\pm$ 0.024 $\pm$ 0.014	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2013C2	LP Comet 15.841 $\pm$ 2.173	4 0.887 $\pm$ 0.021 $\pm$ 0.007	1 0.533 $\pm$ 0.021 $\pm$ 0.007	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2013E1-McNaugh	LP Comet 10.751 $\pm$ 2.909	1 0.750 $\pm$ 0.030 $\pm$ 0.000	1 0.480 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2013H2-Boattin	LP Comet 11.701 $\pm$ 1.301	1 0.770 $\pm$ 0.020 $\pm$ 0.000	1 0.490 $\pm$ 0.010 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2013P3-Palomar	LP Comet 7.951 $\pm$ 4.691	1 0.920 $\pm$ 0.050 $\pm$ 0.000	1 0.450 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
C/2013P4	LP Comet	3	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2014AA52-CATAL	11.387 $\pm$ 2.082	0.827 $\pm$ 0.020 $\pm$ 0.003	0.487 $\pm$ 0.020 $\pm$ 0.003	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	LP Comet	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2014B1-Schwarz	4.336 $\pm$ 2.057	0.770 $\pm$ 0.020 $\pm$ 0.000	0.410 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	LP Comet	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2014R1-Borisov	20.663 $\pm$ 2.909	0.850 $\pm$ 0.030 $\pm$ 0.000	0.580 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	LP Comet	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2014W6-Catalin	8.876 $\pm$ 1.301	0.810 $\pm$ 0.010 $\pm$ 0.000	0.460 $\pm$ 0.010 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	LP Comet	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	7.952 $\pm$ 1.301	0.810 $\pm$ 0.010 $\pm$ 0.000	0.450 $\pm$ 0.010 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2014XB8-PANSTA	LP Comet	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
C/2015B1-PANSTAR	7.035 $\pm$ 2.909	0.790 $\pm$ 0.030 $\pm$ 0.000	0.440 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	LP Comet	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Nereid	7.951 $\pm$ 1.301	0.780 $\pm$ 0.010 $\pm$ 0.000	0.450 $\pm$ 0.010 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/1991L3-Levy	1.480 $\pm$ 0.868	0.628 $\pm$ 0.010 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	SP Comet	1	1	13.442 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/1993W1-Mueller	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	SP Comet	1	1	15.648 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/1994A1-Kushida	SP Comet	1	1	16.864 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/1994J3-Shoemak	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	SP Comet	1	1	14.667 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/1995A1-Jedicke	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	SP Comet	1	1	14.874 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/1996A1-Jedicke	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	SP Comet	1	1	13.765 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/1997C1-Gehrels	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	SP Comet	1	1	15.451 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/1997G1-Montani	SP Comet	1	1	15.270 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/1997V1-Larsen	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	SP Comet	1	1	14.478 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/1998S1-LM	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	SP Comet	1	1	14.143 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/1999D1-Hermann	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	SP Comet	1	1	18.034 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/1999RO28-LONEO	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	SP Comet	1	1	22.259 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/2004A1	SP Comet	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
P/2011S1-Gibbs	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	SP Comet	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Phoebe	21.706 $\pm$ 2.909	0.960 $\pm$ 0.110 $\pm$ 0.000	0.590 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Lel+13 nodate ThermalIR tel=S+H hmag=6.63/0.01 emi=0.9/- diam=213/-1.4/+1.4 pV=0.082/-0.002/+0.002 freeta=1.32/-0.04/+0.03 Diameter from 2010Icar..208..395, albedo from 2008Icar..193..309B Phoebe 609 Saturn IX							

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
Sycorax	1 — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Lel+13 nodate ThermalIR tel=H hmag=7.83/0.06 emi=0.9/- diam=165/-42/+36 pV=0.049/-0.017/+0.038 freeta=1.26/-0.78/+0.92 717 Uranus XVII							
1P/Halley	SP Comet 4.266 $\pm$ 2.015	2 0.720 $\pm$ 0.040 $\pm$ 0.000	1 0.410 $\pm$ 0.030 $\pm$ 0.000	13.558 $\pm$ 0.596 0.390 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2P/Encke	SP Comet 5.117 $\pm$ 2.574	6 0.780 $\pm$ 0.020 $\pm$ 0.000	1 0.424 $\pm$ 0.053 $\pm$ 0.032	15.207 $\pm$ 0.596 0.408 $\pm$ 0.060 $\pm$ 0.034	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
4P/Faye	SP Comet 7.951 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 0.450 $\pm$ 0.040 $\pm$ 0.000	16.020 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
6P/dArrest	SP Comet 13.264 $\pm$ 2.147	3 0.770 $\pm$ 0.040 $\pm$ 0.000	1 0.563 $\pm$ 0.067 $\pm$ 0.033	16.239 $\pm$ 0.009 0.450 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
7P/PW	SP Comet 4.264 $\pm$ 2.620	2 — $\pm$ — $\pm$ —	1 0.400 $\pm$ 0.050 $\pm$ 0.000	15.185 $\pm$ 0.009 0.410 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
8P/Tuttle	SP Comet 15.869 $\pm$ 2.326	2 0.890 $\pm$ 0.040 $\pm$ 0.000	1 0.530 $\pm$ 0.040 $\pm$ 0.000	12.799 $\pm$ 0.009 0.530 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
9P/Tempel1	SP Comet 9.959 $\pm$ 0.826	14 — $\pm$ — $\pm$ —	1 0.468 $\pm$ 0.010 $\pm$ 0.006	14.560 $\pm$ 0.460 0.469 $\pm$ 0.013 $\pm$ 0.006	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
10P/Tempel2	SP Comet 13.740 $\pm$ 1.578	10 0.800 $\pm$ 0.020 $\pm$ 0.000	1 0.521 $\pm$ 0.037 $\pm$ 0.017	14.287 $\pm$ 0.304 0.520 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
14P/Wolf	SP Comet 17.666 $\pm$ 3.210	2 — $\pm$ — $\pm$ —	1 0.570 $\pm$ 0.070 $\pm$ 0.000	15.423 $\pm$ 0.009 0.510 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
15P/Finlay	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.488 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
16P/Brooks2	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.107 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
17P/Holmes	SP Comet 18.608 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 0.560 $\pm$ 0.020 $\pm$ 0.000	16.094 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
19P/Borrelly	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.860 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
21P/GZ	SP Comet 12.661 $\pm$ 2.057	2 0.800 $\pm$ 0.030 $\pm$ 0.000	1 0.500 $\pm$ 0.020 $\pm$ 0.000	17.259 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
22P/Kopff	SP Comet 12.577 $\pm$ 2.730	4 0.795 $\pm$ 0.056 $\pm$ 0.025	1 0.519 $\pm$ 0.046 $\pm$ 0.012	16.093 $\pm$ 0.156 0.450 $\pm$ 0.055 $\pm$ 0.039	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
24P/Schaumasse	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.744 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
26P/GS	SP Comet 5.227 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 0.420 $\pm$ 0.139 $\pm$ 0.000	16.642 $\pm$ 0.136 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
28P/Neujmin1	SP Comet 9.967 $\pm$ 4.007	11 — $\pm$ — $\pm$ —	1 0.494 $\pm$ 0.072 $\pm$ 0.015	12.580 $\pm$ 0.009 0.440 $\pm$ 0.079 $\pm$ 0.026	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
30P/Reinmuth1	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	14.602 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
31P/SW2	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	14.803 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
32P/ComasSola	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	14.478 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

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Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
33P/Daniel	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.053 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
36P/Whipple	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.432 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
37P/Forbes	SP Comet 3.181 $\pm$ 2.015	2 — $\pm$ — $\pm$ —	1 0.290 $\pm$ 0.030 $\pm$ 0.000	17.348 $\pm$ 0.009 0.660 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
39P/Oterma	SP Comet 3.094 $\pm$ 3.964 J09 Cometary activity J09 Dynamically a Centaur	3 0.890 $\pm$ 0.070 $\pm$ 0.000	1 0.386 $\pm$ 0.063 $\pm$ 0.027	12.464 $\pm$ 0.009 0.412 $\pm$ 0.114 $\pm$ 0.057	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
40P/Vaisala1	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.983 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
41P/TG	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	18.034 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
42P/Neujmin3	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.259 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
43P/WH	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.983 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
44P/Reinmuth2	SP Comet 24.892 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 0.620 $\pm$ 0.080 $\pm$ 0.000	16.225 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
45P/HMP	SP Comet 0.768 $\pm$ 2.444	2 1.080 $\pm$ 0.050 $\pm$ 0.000	1 0.440 $\pm$ 0.050 $\pm$ 0.000	17.744 $\pm$ 0.009 0.210 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
46P/Wirtanen	SP Comet 4.079 $\pm$ 0.000	3 — $\pm$ — $\pm$ —	1 0.407 $\pm$ 0.081 $\pm$ 0.047	18.369 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
47P/AJ	SP Comet 3.451 $\pm$ 7.417	2 0.780 $\pm$ 0.080 $\pm$ 0.000	1 0.400 $\pm$ 0.080 $\pm$ 0.000	15.024 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
48P/Johnson	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	14.970 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
49P/AR	SP Comet 9.452 $\pm$ 2.141	3 0.770 $\pm$ 0.030 $\pm$ 0.000	1 0.471 $\pm$ 0.032 $\pm$ 0.003	14.120 $\pm$ 0.277 0.444 $\pm$ 0.064 $\pm$ 0.036	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
50P/Arend	SP Comet 24.132 $\pm$ 4.627	2 — $\pm$ — $\pm$ —	1 0.810 $\pm$ 0.100 $\pm$ 0.000	17.371 $\pm$ 0.009 0.260 $\pm$ 0.090 $\pm$ 0.000	1.630 $\pm$ 0.200 $\pm$ 0.000	0.360 $\pm$ 0.141 $\pm$ 0.000	0.140 $\pm$ 0.141 $\pm$ 0.000
51P/Harrington	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.648 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
52P/HA	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.690 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
53P/VanBiesbroeck	SP Comet -2.672 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 0.328 $\pm$ 0.081 $\pm$ 0.000	14.647 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
55P/TT	SP Comet 10.765 $\pm$ 2.444	2 0.750 $\pm$ 0.050 $\pm$ 0.000	1 0.510 $\pm$ 0.050 $\pm$ 0.000	15.543 $\pm$ 0.482 0.420 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
56P/SB	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.294 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
57P/dTND	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.239 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
58P/JN	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	18.369 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

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Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
59P/KK	SP Comet	2	1	17.771 $\pm$ 0.009			
	12.937 $\pm$ 3.558	— $\pm$ — $\pm$ —	0.620 $\pm$ 0.070 $\pm$ 0.000	0.270 $\pm$ 0.080 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
60P/Tsuchinshan2	SP Comet	1	1	17.744 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
61P/SS	SP Comet	1	1	18.229 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
62P/Tsuchinshan1	SP Comet	1	1	17.744 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
63P/Wild1	SP Comet	2	1	16.453 $\pm$ 0.009			
	10.054 $\pm$ 2.273	— $\pm$ — $\pm$ —	0.500 $\pm$ 0.050 $\pm$ 0.000	0.420 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
64P/SG	SP Comet	1	1	16.239 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
65P/Gunn	SP Comet	1	1	13.853 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
67P/CG	SP Comet	2	1	15.754 $\pm$ 0.009			
	13.630 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.510 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
68P/Klemola	SP Comet	1	1	15.547 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
69P/Taylor	SP Comet	1	1	14.947 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
70P/Kojima	SP Comet	2	1	15.912 $\pm$ 0.009			
	22.758 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.600 $\pm$ 0.090 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
71P/Clark	SP Comet	2	1	18.097 $\pm$ 0.009			
	27.065 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.640 $\pm$ 0.070 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
72P/DF	SP Comet	1	1	17.744 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
73P/SW3	SP Comet	1	1	16.850 $\pm$ 0.050			
	10.751 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.480 $\pm$ 0.235 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
73P/SW3C	SP Comet	1	1	18.097 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
74P/SC	SP Comet	1	1	15.518 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
75P/Kohoutek	SP Comet	1	1	15.754 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
76P/WKI	SP Comet	1	1	19.667 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
77P/Longmore	SP Comet	1	1	15.358 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
78P/Gehrels2	SP Comet	1	1	16.498 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
79P/dTH	SP Comet	1	1	16.529 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
81P/Wild2	SP Comet	1	1	15.754 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
82P/Gehrels3	SP Comet	1	1	17.943 $\pm$ 0.009			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

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Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
84P/Giclas	SP Comet -3.328 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 0.320 $\pm$ 0.030 $\pm$ 0.000	17.488 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
86P/Wild3	SP Comet 18.135 $\pm$ 35.399	3 1.580 $\pm$ 0.080 $\pm$ 0.000	1 0.555 $\pm$ 0.385 $\pm$ 0.366	19.092 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
87P/Bus	SP Comet 16.889 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 0.543 $\pm$ 0.020 $\pm$ 0.000	20.024 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
88P/Howell	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.866 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
89P/Russell2	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.864 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
90P/Gehrels1	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	14.602 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
91P/Russell3	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.690 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
92P/Sanguin	SP Comet 16.937 $\pm$ 1.982	2 — $\pm$ — $\pm$ —	1 0.540 $\pm$ 0.040 $\pm$ 0.000	16.882 $\pm$ 0.009 0.540 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
93P/HL	SP Comet -7.552 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	1 0.267 $\pm$ 0.075 $\pm$ 0.000	— $\pm$ — $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
94P/Russell4	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.866 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
96P/Machholz1	SP Comet 6.036 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 0.429 $\pm$ 0.027 $\pm$ 0.000	14.734 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
97P/MB	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.107 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
98P/Takamizawa	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	14.418 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
99P/Kowal1	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	13.853 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
100P/Hartley1	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.690 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
101P/Chernykh	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.358 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
103P/Hartley2	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.744 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
104P/Kowal2	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.259 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
105P/SB	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.259 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
106P/Schuster	SP Comet 12.396 $\pm$ 2.913	2 1.010 $\pm$ 0.060 $\pm$ 0.000	1 0.520 $\pm$ 0.060 $\pm$ 0.000	17.394 $\pm$ 0.009 0.450 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
107P/WH	SP Comet 0.119 $\pm$ 4.538	6 0.674 $\pm$ 0.089 $\pm$ 0.070	1 0.361 $\pm$ 0.048 $\pm$ 0.042	15.865 $\pm$ 0.220 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
109P/ST	SP Comet 18.608 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 0.560 $\pm$ 0.050 $\pm$ 0.000	12.002 $\pm$ 0.376 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
110P/Hartley3	SP Comet 30.401 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 0.670 $\pm$ 0.090 $\pm$ 0.000	15.597 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

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Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
111P/HRC	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	18.369 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
112P/UN	SP Comet 15.593 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 0.530 $\pm$ 0.040 $\pm$ 0.000	17.488 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
113P/Spitaler	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.053 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
114P/WS	SP Comet 12.158 $\pm$ 1.087	2 0.850 $\pm$ 0.030 $\pm$ 0.000	1 0.460 $\pm$ 0.020 $\pm$ 0.000	17.799 $\pm$ 0.009 0.540 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
115P/Maury	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.033 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
116P/Wild4	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	14.539 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
117P/HRA	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	14.304 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
118P/SL	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.358 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
119P/PH	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.270 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
120P/Mueller1	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.379 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
121P/SH	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.212 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
123P/WH	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.547 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
124P/Mrkos	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.239 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
125P/Spacewatch	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.744 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
126P/IRAS	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.280 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
128P/SH	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.451 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
129P/SL	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.358 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
130P/McNH	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.983 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
131P/Mueller2	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.744 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
132P/HRA	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.488 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
134P/KV	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.529 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
135P/SL	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.239 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
136P/Mueller3	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.866 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

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Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
137P/SL	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	14.947 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
138P/SL	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.744 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
139P/VO	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.185 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
140P/BS	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.451 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
141P/Machholz2	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	17.259 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
143P/KM	SP Comet 20.354 $\pm$ 1.102	5 0.820 $\pm$ 0.023 $\pm$ 0.012	1 0.580 $\pm$ 0.020 $\pm$ 0.000	13.598 $\pm$ 0.009 0.560 $\pm$ 0.021 $\pm$ 0.006	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
144P/Kushida	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.864 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
147P/KM	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	20.648 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
148P/AL	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	15.648 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
152P/HL	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	13.946 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
154P/Brewington	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	16.379 $\pm$ 0.009 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
166P/2001T4	Centaur 36.293 $\pm$ 1.976 J09 Cometary activity J09 Dynamically a Centaur	2 0.870 $\pm$ 0.040 $\pm$ 0.000	1 0.695 $\pm$ 0.030 $\pm$ 0.005	— $\pm$ — 0.735 $\pm$ 0.060 $\pm$ 0.045	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
166P/NEAT	SP Comet 18.607 $\pm$ 2.909	1 0.890 $\pm$ 0.110 $\pm$ 0.000	1 0.560 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
167P/2004PY42	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
167P/CINEOS	SP Comet 15.631 $\pm$ 1.938	5 0.758 $\pm$ 0.043 $\pm$ 0.019	1 0.516 $\pm$ 0.049 $\pm$ 0.035	— $\pm$ — 0.504 $\pm$ 0.050 $\pm$ 0.044	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
204P/Wild2	SP Comet — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — 0.436 $\pm$ 0.093 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1172-Aneas	J.Trojan 9.261 $\pm$ 0.863	2 0.727 $\pm$ 0.030 $\pm$ 0.000	1 0.510 $\pm$ 0.022 $\pm$ 0.000	8.688 $\pm$ 0.042 0.400 $\pm$ 0.030 $\pm$ 0.000	1.577 $\pm$ 0.036 $\pm$ 0.000	0.430 $\pm$ 0.042 $\pm$ 0.000	0.135 $\pm$ 0.036 $\pm$ 0.000
1173-Anchises	J.Trojan 4.286 $\pm$ 1.443	1 0.811 $\pm$ 0.034 $\pm$ 0.000	1 0.402 $\pm$ 0.035 $\pm$ 0.000	8.821 $\pm$ 0.059 0.403 $\pm$ 0.052 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1647-Menelaus	J.Trojan 6.803 $\pm$ 1.630	1 — $\pm$ — $\pm$ —	1 0.428 $\pm$ 0.043 $\pm$ 0.000	— $\pm$ — 0.438 $\pm$ 0.061 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1871-Astyanax	J.Trojan 7.777 $\pm$ 2.485	3 0.716 $\pm$ 0.071 $\pm$ 0.000	1 0.456 $\pm$ 0.053 $\pm$ 0.000	11.185 $\pm$ 0.093 0.424 $\pm$ 0.089 $\pm$ 0.000	1.422 $\pm$ 0.103 $\pm$ 0.092	0.373 $\pm$ 0.053 $\pm$ 0.026	0.123 $\pm$ 0.040 $\pm$ 0.014
1994 ES ₂	Classic Cd — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	7.503 $\pm$ 0.130 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1994 EV ₃	Classic Cd 30.400 $\pm$ 7.250	4 1.065 $\pm$ 0.110 $\pm$ 0.045	1 0.588 $\pm$ 0.156 $\pm$ 0.095	7.043 $\pm$ 0.177 0.800 $\pm$ 0.126 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

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Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
1994 TA	Centaur	2	1	11.433 $\pm$ 0.126			
	31.545 $\pm$ 6.243	1.261 $\pm$ 0.139 $\pm$ 0.045	0.672 $\pm$ 0.080 $\pm$ 0.020	0.740 $\pm$ 0.210 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1995 DB ₂	Classic Cd	2	1	8.053 $\pm$ 0.120			
	54.335 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1995 DC ₂	Classic Cd	5	1	6.803 $\pm$ 0.204			
	35.475 $\pm$ 7.654	— $\pm$ — $\pm$ —	0.770 $\pm$ 0.160 $\pm$ 0.000	0.580 $\pm$ 0.160 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1995 FB ₂₁	Classic Cd	4	1	7.017 $\pm$ 0.099			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1995 HM ₅	Res. 3:2	8	1	7.839 $\pm$ 0.109			
	9.432 $\pm$ 3.661	0.649 $\pm$ 0.102 $\pm$ 0.032	0.460 $\pm$ 0.097 $\pm$ 0.029	0.428 $\pm$ 0.126 $\pm$ 0.060	— $\pm$ — $\pm$ —	1.180 $\pm$ 0.470 $\pm$ 0.000	— $\pm$ — $\pm$ —
	Ful+08 TAXO=BR						
1996 KV ₁	Classic Ht	1	1	— $\pm$ —			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.430 $\pm$ 0.256 $\pm$ 0.000	— $\pm$ — $\pm$ —
1996 RQ ₂₀	Classic Ht	7	1	6.877 $\pm$ 0.100			
	22.364 $\pm$ 4.307	0.935 $\pm$ 0.141 $\pm$ 0.022	0.558 $\pm$ 0.096 $\pm$ 0.044	0.591 $\pm$ 0.109 $\pm$ 0.036	— $\pm$ — $\pm$ —	0.380 $\pm$ 0.226 $\pm$ 0.000	— $\pm$ — $\pm$ —
	Ful+08 TAXO=IR-RR						
	RB07 FAMILY=2003EL61 IR colors inconsistent with family						
1996 RR ₂₀	Res. 3:2	4	1	6.815 $\pm$ 0.251			
	36.278 $\pm$ 5.193	1.143 $\pm$ 0.106 $\pm$ 0.018	0.730 $\pm$ 0.095 $\pm$ 0.023	0.628 $\pm$ 0.125 $\pm$ 0.065	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Ful+08 TAXO=RR						
1996 TC ₆₈	Classic Ht	1	1	6.734 $\pm$ 0.073			
	22.758 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.600 $\pm$ 0.078 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1996 TK ₆₆	Classic Cd	4	1	6.196 $\pm$ 0.117			
	29.906 $\pm$ 4.054	0.993 $\pm$ 0.062 $\pm$ 0.024	0.680 $\pm$ 0.067 $\pm$ 0.041	0.551 $\pm$ 0.097 $\pm$ 0.052	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Ful+08 TAXO=RR						
1996 TS ₆₆	Classic Ht	8	1	5.953 $\pm$ 0.131			
	26.561 $\pm$ 4.871	1.028 $\pm$ 0.079 $\pm$ 0.045	0.672 $\pm$ 0.106 $\pm$ 0.083	0.637 $\pm$ 0.088 $\pm$ 0.024	1.824 $\pm$ 0.178 $\pm$ 0.014	0.650 $\pm$ 0.071 $\pm$ 0.000	— $\pm$ — $\pm$ —
	Ful+08 TAXO=RR						
	Vil+14 nodate ThermalIR tel=S hmag=6.5/0.05 emi=0.9/- diam=159/-46/+44 pV=0.179/-0.07/+0.173 freeta=0.75/-0.27/+0.21 Hmag not explicitly given in reference						
1997 CT ₂₉	Classic Cd	4	1	6.449 $\pm$ 0.173			
	32.698 $\pm$ 4.508	— $\pm$ — $\pm$ —	0.762 $\pm$ 0.105 $\pm$ 0.023	0.490 $\pm$ 0.120 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.410 $\pm$ 0.238 $\pm$ 0.000	— $\pm$ — $\pm$ —
1997 GA ₄₅	Classic Ht	1	1	7.728 $\pm$ 0.500			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1997 QH ₄	Classic Ht	4	1	7.134 $\pm$ 0.175			
	27.144 $\pm$ 4.569	1.088 $\pm$ 0.143 $\pm$ 0.057	0.641 $\pm$ 0.092 $\pm$ 0.032	0.631 $\pm$ 0.107 $\pm$ 0.011	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Ful+08 TAXO=RR						
1997 RL ₁₃	Classic Ht	1	1	9.361 $\pm$ 0.300			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1997 RX ₉	Classic Ht	1	1	7.807 $\pm$ 0.100			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	RB07 FAMILY=2003EL61						

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
1998 FS ₁₄₄	Classic Ht 23.851 $\pm$ 3.089	4 0.950 $\pm$ 0.044 $\pm$ 0.020	1 0.588 $\pm$ 0.060 $\pm$ 0.035	6.712 $\pm$ 0.105 0.510 $\pm$ 0.085 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.390 $\pm$ 0.228 $\pm$ 0.000	— $\pm$ — $\pm$ —
1998 KS ₆₅	Classic Cd 26.148 $\pm$ 1.858	2 1.090 $\pm$ 0.040 $\pm$ 0.000	1 0.640 $\pm$ 0.020 $\pm$ 0.000	7.167 $\pm$ 0.040 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1998 KY ₆₁	Classic Cd — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.350 $\pm$ 0.278 $\pm$ 0.000	— $\pm$ — $\pm$ —
1998 UR ₄₃	Res. 3:2 14.450 $\pm$ 7.356 Ful+08 TAXO=BR	4 0.784 $\pm$ 0.101 $\pm$ 0.000	1 0.583 $\pm$ 0.120 $\pm$ 0.043	8.131 $\pm$ 0.134 0.354 $\pm$ 0.175 $\pm$ 0.104	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1998 WS ₃₁	Res. 3:2 18.736 $\pm$ 6.008 Ful+08 TAXO=BR	2 0.726 $\pm$ 0.080 $\pm$ 0.000	1 0.606 $\pm$ 0.102 $\pm$ 0.024	7.936 $\pm$ 0.204 0.439 $\pm$ 0.172 $\pm$ 0.145	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1998 WU ₂₄	Centaur 12.934 $\pm$ 1.361 Ful+08 TAXO=BR	1 0.780 $\pm$ 0.034 $\pm$ 0.000	1 0.530 $\pm$ 0.037 $\pm$ 0.000	— $\pm$ — $\pm$ — 0.460 $\pm$ 0.051 $\pm$ 0.000	1.670 $\pm$ 0.043 $\pm$ 0.000	0.430 $\pm$ 0.125 $\pm$ 0.000	0.240 $\pm$ 0.189 $\pm$ 0.000
1998 WV ₂₄	Classic Cd 11.777 $\pm$ 3.357	2 0.770 $\pm$ 0.010 $\pm$ 0.000	2 0.502 $\pm$ 0.058 $\pm$ 0.004	7.131 $\pm$ 0.067 0.450 $\pm$ 0.106 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1998 WV ₃₁	Res. 3:2 13.835 $\pm$ 4.507 Ful+08 TAXO=BR	2 0.790 $\pm$ 0.099 $\pm$ 0.044	1 0.521 $\pm$ 0.075 $\pm$ 0.008	7.644 $\pm$ 0.072 0.481 $\pm$ 0.144 $\pm$ 0.105	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1998 WW ₃₁	Classic Ht 8.864 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1998 WW ₃₁ B	Classic Ht 2.628 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1998 WX ₂₄	Classic Cd 30.875 $\pm$ 3.793	2 1.090 $\pm$ 0.050 $\pm$ 0.000	1 0.727 $\pm$ 0.086 $\pm$ 0.041	6.244 $\pm$ 0.099 0.500 $\pm$ 0.092 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1998 WX ₃₁	Classic Cd 29.252 $\pm$ 3.312	3 — $\pm$ — $\pm$ —	1 0.638 $\pm$ 0.083 $\pm$ 0.034	6.161 $\pm$ 0.095 0.653 $\pm$ 0.081 $\pm$ 0.010	— $\pm$ — $\pm$ —	0.400 $\pm$ 0.235 $\pm$ 0.000	— $\pm$ — $\pm$ —
1998 WY ₂₄	Classic Cd 29.094 $\pm$ 3.185	2 — $\pm$ — $\pm$ —	1 0.620 $\pm$ 0.092 $\pm$ 0.000	6.443 $\pm$ 0.086 0.680 $\pm$ 0.078 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.400 $\pm$ 0.240 $\pm$ 0.000	— $\pm$ — $\pm$ —
1998 WZ ₃₁	Res. 3:2 6.687 $\pm$ 4.513 Ful+08 TAXO=BB	3 0.727 $\pm$ 0.093 $\pm$ 0.000	1 0.489 $\pm$ 0.114 $\pm$ 0.032	8.049 $\pm$ 0.115 0.339 $\pm$ 0.114 $\pm$ 0.040	— $\pm$ — $\pm$ —	0.400 $\pm$ 0.234 $\pm$ 0.000	— $\pm$ — $\pm$ —
1999 CB ₁₁₉	Classic Ht 33.869 $\pm$ 2.678 Ful+08 TAXO=RR	1 1.212 $\pm$ 0.102 $\pm$ 0.000	1 0.714 $\pm$ 0.076 $\pm$ 0.000	6.731 $\pm$ 0.076 0.645 $\pm$ 0.062 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1999 CF ₁₁₉	Detached 14.704 $\pm$ 4.163 Ful+08 TAXO=BR	3 — $\pm$ — $\pm$ —	1 0.622 $\pm$ 0.115 $\pm$ 0.071	6.929 $\pm$ 0.133 0.365 $\pm$ 0.106 $\pm$ 0.026	— $\pm$ — $\pm$ —	0.380 $\pm$ 0.226 $\pm$ 0.000	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBNO7. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
1999 CH ₁₁₉	Classic Ht — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.320 $\pm$ 0.266 $\pm$ 0.000	— $\pm$ — $\pm$ —
1999 CJ ₁₁₉	Classic Cd — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.450 $\pm$ 0.265 $\pm$ 0.000	— $\pm$ — $\pm$ —
1999 CL ₁₁₉	Classic Ht 19.530 $\pm$ 3.359	2 — $\pm$ — $\pm$ —	1 0.497 $\pm$ 0.077 $\pm$ 0.000	5.697 $\pm$ 0.072 0.665 $\pm$ 0.094 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.450 $\pm$ 0.282 $\pm$ 0.000	— $\pm$ — $\pm$ —
1999 CQ ₁₃₃	Classic Ht — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.460 $\pm$ 0.282 $\pm$ 0.000	— $\pm$ — $\pm$ —
1999 CX ₁₃₁	Res.other 19.520 $\pm$ 4.293 Ful+08 TAXO=RR	3 0.918 $\pm$ 0.124 $\pm$ 0.000	1 0.664 $\pm$ 0.128 $\pm$ 0.068	6.907 $\pm$ 0.107 0.434 $\pm$ 0.105 $\pm$ 0.020	— $\pm$ — $\pm$ —	0.370 $\pm$ 0.238 $\pm$ 0.000	— $\pm$ — $\pm$ —
1999 HJ ₁₂	Classic Cd 30.391 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.480 $\pm$ 0.598 $\pm$ 0.000	— $\pm$ — $\pm$ —
1999 HS ₁₁	Classic Cd 31.102 $\pm$ 3.766 Ful+08 TAXO=RR	3 1.121 $\pm$ 0.082 $\pm$ 0.030	1 0.698 $\pm$ 0.056 $\pm$ 0.024	6.326 $\pm$ 0.079 0.600 $\pm$ 0.090 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1999 HV ₁₁	Classic Cd 21.706 $\pm$ 2.057	1 1.110 $\pm$ 0.060 $\pm$ 0.000	1 0.590 $\pm$ 0.020 $\pm$ 0.000	6.997 $\pm$ 0.050 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1999 LE ₃₁	Centaur 12.083 $\pm$ 1.843	2 0.748 $\pm$ 0.038 $\pm$ 0.004	1 0.467 $\pm$ 0.042 $\pm$ 0.027	12.638 $\pm$ 0.214 0.521 $\pm$ 0.046 $\pm$ 0.024	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1999 OD ₄	Classic Ht — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.460 $\pm$ 0.282 $\pm$ 0.000	— $\pm$ — $\pm$ —
1999 OH ₄	Classic Ht — $\pm$ — RB07 FAMILY=2003EL61 IR colors inconsistent with family	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.330 $\pm$ 0.328 $\pm$ 0.000	— $\pm$ — $\pm$ —
1999 OJ ₄	Classic Cd 26.192 $\pm$ 3.113 Ful+08 TAXO=RR	5 1.098 $\pm$ 0.157 $\pm$ 0.125	2 0.668 $\pm$ 0.072 $\pm$ 0.020	6.914 $\pm$ 0.062 0.549 $\pm$ 0.073 $\pm$ 0.010	— $\pm$ — $\pm$ —	0.230 $\pm$ 0.197 $\pm$ 0.000	— $\pm$ — $\pm$ —
1999 OJ ₄ B	Classic Cd 34.360 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1999 RC ₂₁₅	Classic Cd 33.893 $\pm$ 4.703	2 — $\pm$ — $\pm$ —	1 0.810 $\pm$ 0.134 $\pm$ 0.000	6.576 $\pm$ 0.126 0.520 $\pm$ 0.120 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.320 $\pm$ 0.225 $\pm$ 0.000	— $\pm$ — $\pm$ —
1999 RT ₂₁₄	Classic Cd 35.732 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1999 RX ₂₁₄	Classic Ht 20.207 $\pm$ 2.817 Ful+08 TAXO=RR	3 1.054 $\pm$ 0.072 $\pm$ 0.000	1 0.593 $\pm$ 0.065 $\pm$ 0.000	6.418 $\pm$ 0.052 0.530 $\pm$ 0.066 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1999 TR ₁₁	Res. 3:2 37.093 $\pm$ 4.048	2 1.020 $\pm$ 0.080 $\pm$ 0.000	1 0.750 $\pm$ 0.097 $\pm$ 0.000	8.150 $\pm$ 0.152 0.650 $\pm$ 0.122 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
1999 XY ₁₄₃	Classic Ht 26.014 $\pm$ 2.399	1 — $\pm$ — $\pm$ —	2 0.590 $\pm$ 0.071 $\pm$ 0.000	5.926 $\pm$ 0.065 0.660 $\pm$ 0.064 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2000 AF ₂₅₅	Detached — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.460 $\pm$ 0.265 $\pm$ 0.000	— $\pm$ — $\pm$ —

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Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
2000 CE ₁₀₅	Classic Cd 14.512 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.160 $\pm$ 0.184 $\pm$ 0.000	— $\pm$ — $\pm$ —
2000 CF ₁₀₅	Classic Cd 24.245 $\pm$ 0.000	6 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.400 $\pm$ 0.266 $\pm$ 0.000	— $\pm$ — $\pm$ —
2000 CF ₁₀₅ B	Classic Cd 21.377 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2000 CG ₁₀₅	Classic Ht 18.711 $\pm$ 4.970 RB07 FAMILY=2003EL61 IR colors inconsistent with family SNO+10 magR FAMILY=2003EL61 LIGHTCURVE==0.45	2 — $\pm$ — $\pm$ —	1 0.530 $\pm$ 0.149 $\pm$ 0.000	6.655 $\pm$ 0.136 0.590 $\pm$ 0.142 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.510 $\pm$ 0.298 $\pm$ 0.000	— $\pm$ — $\pm$ —
2000 CK ₁₀₅	Res. 3:2 25.479 $\pm$ 4.225	2 — $\pm$ — $\pm$ —	1 0.590 $\pm$ 0.127 $\pm$ 0.000	6.367 $\pm$ 0.118 0.650 $\pm$ 0.114 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.390 $\pm$ 0.256 $\pm$ 0.000	— $\pm$ — $\pm$ —
2000 CL ₁₀₄	Classic Cd 23.634 $\pm$ 4.673 Ful+08 TAXO=RR	4 1.223 $\pm$ 0.167 $\pm$ 0.000	1 0.600 $\pm$ 0.119 $\pm$ 0.058	6.638 $\pm$ 0.229 0.612 $\pm$ 0.128 $\pm$ 0.089	— $\pm$ — $\pm$ —	0.450 $\pm$ 0.285 $\pm$ 0.000	— $\pm$ — $\pm$ —
2000 CO ₁₀₅	Classic Ht 22.327 $\pm$ 2.904	2 — $\pm$ — $\pm$ —	1 0.620 $\pm$ 0.085 $\pm$ 0.000	5.593 $\pm$ 0.078 0.550 $\pm$ 0.078 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.380 $\pm$ 0.228 $\pm$ 0.000	— $\pm$ — $\pm$ —
2000 CP ₁₀₄	Classic Ht 18.106 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.440 $\pm$ 0.289 $\pm$ 0.000	— $\pm$ — $\pm$ —
2000 FS ₅₃	Classic Cd 34.603 $\pm$ 1.976	2 1.060 $\pm$ 0.040 $\pm$ 0.000	1 0.710 $\pm$ 0.020 $\pm$ 0.000	7.295 $\pm$ 0.080 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2000 FV ₅₃	Res. 3:2 17.018 $\pm$ 4.070	1 — $\pm$ — $\pm$ —	1 0.448 $\pm$ 0.094 $\pm$ 0.000	7.543 $\pm$ 0.087 0.679 $\pm$ 0.116 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2000 FZ ₅₃	Centaur 14.413 $\pm$ 3.939	2 — $\pm$ — $\pm$ —	1 0.686 $\pm$ 0.090 $\pm$ 0.000	10.974 $\pm$ 0.085 0.238 $\pm$ 0.103 $\pm$ 0.050	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2000 GM ₁₃₇	Centaur — $\pm$ — Duf+14 nodate ThermalIR tel=S hmag=14.36/0.38 emi=0.9/- diam=8.6/-1.5/+1.5 pV=0.043/-0.016/+0.026 fixeta=1.2/-0.35/+0.35	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2000 GV ₁₄₆	Classic Cd 35.732 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2000 HE ₄₆	Centaur 12.317 $\pm$ 3.210	1 0.870 $\pm$ 0.060 $\pm$ 0.000	1 0.550 $\pm$ 0.070 $\pm$ 0.000	16.213 $\pm$ 0.020 0.400 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2000 KK ₄	Classic Ht 17.291 $\pm$ 2.477	3 0.910 $\pm$ 0.040 $\pm$ 0.000	1 0.580 $\pm$ 0.102 $\pm$ 0.091	5.978 $\pm$ 0.103 0.640 $\pm$ 0.064 $\pm$ 0.000	1.790 $\pm$ 0.106 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2000 KL ₄	Classic Ht 27.864 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2000 OU ₆₉	Classic Cd 10.128 $\pm$ 0.000	3 — $\pm$ — $\pm$ —	1 0.473 $\pm$ 0.130 $\pm$ 0.021	6.840 $\pm$ 0.120 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.400 $\pm$ 0.235 $\pm$ 0.000	— $\pm$ — $\pm$ —
2000 PD ₃₀	Classic Cd 19.719 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.560 $\pm$ 0.336 $\pm$ 0.000	— $\pm$ — $\pm$ —
2000 PH ₃₀	Detached — $\pm$ — — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.550 $\pm$ 0.361 $\pm$ 0.000	— $\pm$ — $\pm$ —
2000 QL ₂₅₁	Classic Ht 6.266 $\pm$ 0.000 MPC08 Resonant 1:2	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

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Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
2000 QL ₂₅₁ B	Classic Ht 12.082 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2001 FL ₁₈₅	Classic Cd 23.082 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2001 FM ₁₉₄	Detached 7.035 $\pm$ 2.909	1 0.760 $\pm$ 0.030 $\pm$ 0.000	1 0.440 $\pm$ 0.030 $\pm$ 0.000	7.575 $\pm$ 0.040 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2001 KA ₇₇	Classic Ht 37.758 $\pm$ 3.264 Ful+08 TAXO=RR Vil+14 nodate ThermalIR tel=S+H hmag=5.64/0.12 emi=0.9/- diam=310/-60/+170 pV=0.099/-0.056/+0.052 freeta=2.52/-0.83/+0.18	5 1.104 $\pm$ 0.107 $\pm$ 0.062	1 0.704 $\pm$ 0.064 $\pm$ 0.024	5.048 $\pm$ 0.094 0.716 $\pm$ 0.120 $\pm$ 0.103	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2001 KD ₇₇	Res. 3:2 24.005 $\pm$ 2.575 Ful+08 TAXO=RR Mom+12 nodate ThermalIR tel=H hmag=6.42/0.08 emi=0.9/- diam=232.3/-39.4/+40.5 pV=0.089/-0.027/+0.044 fixeta=1.2/-0.35/+0.35	10 1.123 $\pm$ 0.054 $\pm$ 0.006	1 0.624 $\pm$ 0.070 $\pm$ 0.024	5.922 $\pm$ 0.104 0.565 $\pm$ 0.069 $\pm$ 0.023	2.294 $\pm$ 0.092 $\pm$ 0.025	0.366 $\pm$ 0.141 $\pm$ 0.014	— $\pm$ — $\pm$ —
2001 KG ₇₇	Scattered 7.032 $\pm$ 5.595	1 0.810 $\pm$ 0.040 $\pm$ 0.000	1 0.440 $\pm$ 0.060 $\pm$ 0.000	8.335 $\pm$ 0.120 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2001 KY ₇₆	Res. 3:2 — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.390 $\pm$ 0.228 $\pm$ 0.000	— $\pm$ — $\pm$ —
2001 OG ₁₀₉	Classic Cd — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.350 $\pm$ 0.300 $\pm$ 0.000	— $\pm$ — $\pm$ —
2001 OK ₁₀₈	Classic Cd — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.430 $\pm$ 0.275 $\pm$ 0.000	— $\pm$ — $\pm$ —
2001 QC ₂₉₈	Classic Ht 10.332 $\pm$ 2.434 RB07 FAMILY=2003EL61 IR colors inconsistent with family SNO+10 magR FAMILY=2003EL61 LIGHTCURVE==0.4 Vil+14 nodate ThermalIR tel=S hmag=6.26/0.32 emi=0.9/- diam=303/-30/+27 pV=0.061/-0.017/+0.027 freeta=0.985/-0.095/+0.084	4 0.750 $\pm$ 0.080 $\pm$ 0.000	2 0.490 $\pm$ 0.030 $\pm$ 0.000	6.424 $\pm$ 0.030 0.480 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.430 $\pm$ 0.323 $\pm$ 0.000	— $\pm$ — $\pm$ —
2001 QC ₂₉₈ B	Classic Ht 6.266 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2001 QR ₃₂₂	Res.other 6.254 $\pm$ 1.266 MPC08 Resonant 1:1 ST06 Neptune trojan	1 0.800 $\pm$ 0.030 $\pm$ 0.000	1 0.460 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — 0.360 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2001 QS ₃₂₂	Classic Cd — $\pm$ — Vil+14 nodate ThermalIR tel=S+H hmag=6.91/0.68 emi=0.9/- diam=186/-24/+99 pV=0.095/-0.06/+0.531 fixeta=1.2/-0.35/+0.35	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2001 QW ₃₂₂ A	Classic Cd — $\pm$ —	28 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	7.420 $\pm$ 0.086 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2001 QW ₃₂₂ B	Classic Cd — $\pm$ —	27 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	7.421 $\pm$ 0.091 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2001 QX ₃₂₂	Detached 18.862 $\pm$ 5.260	3 0.914 $\pm$ 0.058 $\pm$ 0.008	1 0.562 $\pm$ 0.056 $\pm$ 0.022	6.391 $\pm$ 0.080 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.410 $\pm$ 0.247 $\pm$ 0.000	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
2001 XU ₂₅₄	Classic Ht — ± —	1 — ± — ± —	1 — ± — ± —	— ± — — ± — ± —	— ± — ± —	0.370 ± 0.226 ± 0.000	— ± — ± —
2001 XZ ₂₅₅	Centaur 34.900 ± 6.368	2 1.224 ± 0.091 ± 0.086	1 0.709 ± 0.068 ± 0.034	10.784 ± 0.080 — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
2002 CB ₂₄₉	Centaur 5.278 ± 4.487	1 — ± — ± —	1 0.492 ± 0.116 ± 0.000	10.587 ± 0.109 0.300 ± 0.114 ± 0.000	— ± — ± —	— ± — ± —	— ± — ± —
2002 GH ₃₂	Classic Ht 20.916 ± 3.383	2 0.990 ± 0.099 ± 0.000	1 0.570 ± 0.070 ± 0.000	6.080 ± 0.050 0.590 ± 0.070 ± 0.000	— ± — ± —	— ± — ± —	— ± — ± —
RB07 FAMILY=2003EL61 SNO+10 magR FAMILY=2003EL61 LIGHTCURVE==0.75 Vil+14 nodate ThermalIR tel=H hmag=6.58/0.28 emi=0.9/- diam=230/-230/0 pV=0.075/-0/999 fixedeta=1.20+/-0.35 Non detection							
2002 PQ ₁₅₂	Centaur 36.168 ± 4.691	1 1.130 ± 0.040 ± 0.000	1 0.720 ± 0.050 ± 0.000	9.294 ± 0.060 — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
2002 XV ₉₃	Res. 3:2 1.280 ± 2.106	3 0.720 ± 0.020 ± 0.000	1 0.375 ± 0.021 ± 0.005	4.427 ± 0.030 — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
Mom+12 nodate ThermalIR tel=S+H hmag=5.42/0.46 emi=0.9/- diam=549.2/-23/+21.7 pV=0.04/-0.015/+0.02 freeta=1.24/-0.06/+0.06							
2003 FZ ₁₂₉	Detached 10.329 ± 1.812	1 0.840 ± 0.057 ± 0.000	1 0.480 ± 0.040 ± 0.000	6.977 ± 0.020 0.460 ± 0.030 ± 0.000	— ± — ± —	— ± — ± —	— ± — ± —
2003 QA ₉₂	Classic Cd 25.973 ± 3.793	1 1.040 ± 0.030 ± 0.000	1 0.630 ± 0.040 ± 0.000	— ± — ± — — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
2003 QD ₁₁₂	Centaur — ± —	1 — ± — ± —	1 — ± — ± —	11.660 ± 0.030 — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
J09 Cometary activity							
2003 QK ₉₁	Detached 11.829 ± 1.812	1 0.870 ± 0.057 ± 0.000	1 0.500 ± 0.040 ± 0.000	6.968 ± 0.030 0.470 ± 0.030 ± 0.000	— ± — ± —	— ± — ± —	— ± — ± —
2003 QQ ₉₁	Classic Ht 13.624 ± 7.416	1 0.670 ± 0.060 ± 0.000	1 0.510 ± 0.080 ± 0.000	— ± — ± — — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
2003 QR ₉₁	Classic Ht — ± —	1 — ± — ± —	1 — ± — ± —	— ± — ± — — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
Vil+14 nodate ThermalIR tel=S hmag=6.55/0.56 emi=0.9/- diam=280/-30/+27 pV=0.054/-0.028/+0.035 freeta=1.2/-0.12/+0.1							
2003 QY ₉₀	Classic Cd 32.348 ± 0.000	1 — ± — ± —	2 — ± — ± —	— ± — ± — — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
2003 QY ₉₀ B	Classic Cd 32.348 ± 0.000	1 — ± — ± —	2 — ± — ± —	— ± — ± — — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
2003 TJ ₅₈	Classic Cd 19.719 ± 0.000	1 — ± — ± —	1 — ± — ± —	— ± — ± — — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
2003 TJ ₅₈ B	Classic Cd 18.639 ± 0.000	1 — ± — ± —	1 — ± — ± —	— ± — ± — — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
2003 UT ₂₉₂	Res. 3:2 — ± —	1 — ± — ± —	1 — ± — ± —	— ± — ± — — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
Mom+12 nodate ThermalIR tel=H hmag=6.85/0.68 emi=0.9/- diam=185.6/-18/+17.9 pV=0.067/-0.034/+0.068 fixeta=1.2/-0.35/+0.35							
2003 UY ₂₉₁	Classic Ht 20.163 ± 3.383	1 0.880 ± 0.099 ± 0.000	1 0.510 ± 0.070 ± 0.000	— ± — ± — 0.670 ± 0.070 ± 0.000	— ± — ± —	— ± — ± —	— ± — ± —
S10 rotational lightcurve She10 Object showed large light variations indicating possible rotational lc over 0.1							

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute *R* magnitude from photometry. Grt is the spectral gradient *S* (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
2003 WN ₁₈₈	Centaur	1	1	14.397 $\pm$ 0.010			
	11.656 $\pm$ 1.266	0.780 $\pm$ 0.030 $\pm$ 0.000	0.480 $\pm$ 0.020 $\pm$ 0.000	0.500 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2003 WU ₁₈₈	Classic Cd	1	1	— $\pm$ —			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Vil+14 nodate ThermalIR tel=H hmag=5.96/0.64 emi=0.9/- diam=220/-220/0 pV=0.15/-0/+999 fixeta=1.20+-0.35 Non detection							
2004 DA ₆₂	Centaur	1	1	13.163 $\pm$ 0.020			
	16.136 $\pm$ 1.812	0.850 $\pm$ 0.060 $\pm$ 0.000	0.520 $\pm$ 0.040 $\pm$ 0.000	0.550 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2004 OJ ₁₄	Detached	1	1	6.991 $\pm$ 0.020			
	15.680 $\pm$ 1.525	0.900 $\pm$ 0.042 $\pm$ 0.000	0.520 $\pm$ 0.030 $\pm$ 0.000	0.540 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2004 PB ₁₀₈	Classic Ht	1	2	— $\pm$ —			
	19.177 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2004 PB ₁₀₈ B	Classic Ht	1	2	— $\pm$ —			
	21.377 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2004 QQ ₂₆	Centaur	1	1	— $\pm$ —			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Duf+14 nodate ThermalIR tel=S hmag=9.53/0.36 emi=0.9/- diam=79/-19/+19 pV=0.044/-0.014/+0.039 fixeta=1.2/-0.35/+0.35							
2004 XR ₁₉₀	Detached	1	1	3.938 $\pm$ 0.030			
	10.679 $\pm$ 1.982	0.790 $\pm$ 0.057 $\pm$ 0.000	0.450 $\pm$ 0.040 $\pm$ 0.000	0.520 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2005 TN ₅₃	Scattered	1	1	— $\pm$ —			
	10.085 $\pm$ 3.731	0.820 $\pm$ 0.080 $\pm$ 0.000	0.470 $\pm$ 0.070 $\pm$ 0.000	0.470 $\pm$ 0.090 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
ST06 Neptune trojan							
2006 RJ ₁₀₃	Centaur	2	1	7.299 $\pm$ 0.211			
	4.346 $\pm$ 1.702	0.820 $\pm$ 0.030 $\pm$ 0.000	0.470 $\pm$ 0.030 $\pm$ 0.000	0.270 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2007 NC ₇	Scattered	1	1	8.075 $\pm$ 0.020			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2007 TJ ₄₂₂	Centaur	1	1	— $\pm$ —			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2007 VH ₃₀₅	Centaur	5	1	11.709 $\pm$ 0.091			
	11.430 $\pm$ 1.896	0.690 $\pm$ 0.030 $\pm$ 0.000	0.491 $\pm$ 0.027 $\pm$ 0.003	0.480 $\pm$ 0.064 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.640 $\pm$ 0.156 $\pm$ 0.000	-0.370 $\pm$ 0.192 $\pm$ 0.000
Bau+13 nodate ThermalIR tel=WISE hmag=8.21/0.3 diam=23.8/-8.0/+8.0 pV=0.070/-0.036/+0.036 fixeta=0.8/-0.384/+0.384							
2008 JS ₁₄	Centaur	1	1	— $\pm$ —			
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Bau+13 nodate ThermalIR tel=WISE hmag=13.2/0.3 diam=14.5/-1.8/+1.8 pV=0.044/-0.019/+0.019 freeta=1.046/-0.186/+0.186							
2009 YG ₁₉	Scattered	1	1	5.881 $\pm$ 0.050			
	23.819 $\pm$ 3.793	1.000 $\pm$ 0.040 $\pm$ 0.000	0.610 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2010 BK ₁₁₈	Scattered	4	1	10.351 $\pm$ 0.030			
	14.529 $\pm$ 2.020	0.794 $\pm$ 0.027 $\pm$ 0.014	0.525 $\pm$ 0.030 $\pm$ 0.019	0.480 $\pm$ 0.042 $\pm$ 0.030	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Bau+13 nodate ThermalIR tel=WISE hmag=10.2/0.3 diam=46.4/-1.8/+1.8 pV=0.068/-0.013/+0.013 freeta=0.821/-0.043/+0.043							
2010 BL ₄	Centaur	2	1	— $\pm$ —			
	5.692 $\pm$ 1.525	0.860 $\pm$ 0.050 $\pm$ 0.000	0.390 $\pm$ 0.030 $\pm$ 0.000	0.470 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Bau+13 nodate ThermalIR tel=WISE hmag=11.9/0.3 diam=15.7/-3.2/+3.2 pV=0.114/-0.052/+0.052 fixeta=0.8/-0.333/+0.333							

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
2010 ES ₆₅	Centaur — $\pm$ — Bau+13 nodate ThermalIR tel=WISE hmag=11.8/0.3 diam=26.9/-7.9/+7.9 pV=0.049/-0.024/+0.024 fixeta=0.8/-0.28/+0.28	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2010 FH ₉₂	Centaur — $\pm$ — Bau+13 nodate ThermalIR tel=WISE hmag=11.7/0.3 diam=28.0/-0.6/+0.6 pV=0.047/-0.007/+0.007 freeta=0.73/-0.023/+0.023	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2010 GW ₁₄₇	Scattered — $\pm$ — Bau+13 nodate ThermalIR tel=WISE hmag=13.2/0.3 diam=15.9/-0.7/+0.7 pV=0.037/-0.006/+0.006 freeta=0.869/-0.056/+0.056	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2010 GW ₆₄	Scattered — $\pm$ — Bau+13 nodate ThermalIR tel=WISE hmag=14.9/0.3 diam=6.42/-0.38/+0.38 pV=0.047/-0.012/+0.012 freeta=0.795/-0.075/+0.075	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2010 JH ₁₂₄	Scattered — $\pm$ — Bau+13 nodate ThermalIR tel=WISE hmag=14.6/0.3 diam=7.04/-0.74/+0.74 pV=0.052/-0.024/+0.024 freeta=0.959/-0.164/+0.164	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2010 OM ₁₀₁	Centaur 16.526 $\pm$ 3.589 Bau+13 nodate ThermalIR tel=WISE hmag=17.0/0.3 diam=3.12/-0.17/+0.17 pV=0.029/-0.005/+0.005 freeta=1.054/-0.105/+0.105	2 0.795 $\pm$ 0.056 $\pm$ 0.019	1 0.588 $\pm$ 0.093 $\pm$ 0.077	— $\pm$ — 0.360 $\pm$ 0.070 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2010 OR ₁	Centaur 12.588 $\pm$ 1.758 Bau+13 nodate ThermalIR tel=WISE hmag=16.2/0.3 diam=3.25/-0.64/+0.64 pV=0.055/-0.013/+0.013 freeta=0.831/-0.146/+0.146	2 0.781 $\pm$ 0.043 $\pm$ 0.025	1 0.517 $\pm$ 0.029 $\pm$ 0.005	— $\pm$ — 0.447 $\pm$ 0.037 $\pm$ 0.024	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2010 TS ₁₉₁	J.Trojan 2.578 $\pm$ 4.691	1 0.760 $\pm$ 0.040 $\pm$ 0.000	1 0.390 $\pm$ 0.050 $\pm$ 0.000	7.799 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2010 TT ₁₉₁	J.Trojan 9.808 $\pm$ 3.793	1 0.750 $\pm$ 0.030 $\pm$ 0.000	1 0.470 $\pm$ 0.040 $\pm$ 0.000	7.642 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2010 WG ₉	Scattered 12.120 $\pm$ 2.900 Bau+13 nodate ThermalIR tel=WISE hmag=8.1/0.3 diam=112.7/-61.9/+61.9 pV=0.074/-0.080/+0.080 fixeta=0.8/-0.423/+0.423	4 0.781 $\pm$ 0.044 $\pm$ 0.021	1 0.492 $\pm$ 0.047 $\pm$ 0.041	— $\pm$ — 0.458 $\pm$ 0.091 $\pm$ 0.085	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2011 HM ₁₀₂	Scattered 8.382 $\pm$ 1.982	1 0.720 $\pm$ 0.040 $\pm$ 0.000	1 0.410 $\pm$ 0.040 $\pm$ 0.000	7.948 $\pm$ 0.080 0.520 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2011 MM ₄	Centaur — $\pm$ — Bau+13 nodate ThermalIR tel=WISE hmag=9.3/0.3 diam=63.7/-6.2/+6.2 pV=0.083/-0.024/+0.024 freeta=0.841/-0.119/+0.119	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2012 DR ₃₀	Scattered 13.241 $\pm$ 1.341 Kis+13 nodate ThermalIR tel=H+W hmag=7.04/0.35 emi=0.9/- diam=188/-9.4/+9.4 pV=0.076/-0.025/+0.031 freeta=0.813/-0.062/+0.074 Includes WISE	3 0.647 $\pm$ 0.038 $\pm$ 0.000	1 0.563 $\pm$ 0.034 $\pm$ 0.000	7.016 $\pm$ 0.031 0.422 $\pm$ 0.036 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2012 VP ₁₁₃	Detached 15.284 $\pm$ 1.982	2 0.920 $\pm$ 0.064 $\pm$ 0.000	1 0.520 $\pm$ 0.040 $\pm$ 0.000	3.911 $\pm$ 0.030 0.530 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
2012 YO ₆	Centaur — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — 0.340 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2013 AZ ₆₀	Scattered 16.587 $\pm$ 1.301	1 0.820 $\pm$ 0.010 $\pm$ 0.000	1 0.540 $\pm$ 0.010 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2013 BL ₇₆	Scattered 7.951 $\pm$ 4.691	1 0.920 $\pm$ 0.050 $\pm$ 0.000	1 0.450 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2013 BO ₁₆	J.Trojan 28.167 $\pm$ 2.909 MPC08 Resonant 1:2	1 1.140 $\pm$ 0.080 $\pm$ 0.000	1 0.650 $\pm$ 0.030 $\pm$ 0.000	16.340 $\pm$ 0.060 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2013 CX ₂₁₇	J.Trojan -6.535 $\pm$ 3.793	1 0.850 $\pm$ 0.100 $\pm$ 0.000	1 0.280 $\pm$ 0.040 $\pm$ 0.000	15.484 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2013 CY ₁₉₇	J.Trojan 18.001 $\pm$ 1.087	1 0.880 $\pm$ 0.028 $\pm$ 0.000	1 0.510 $\pm$ 0.020 $\pm$ 0.000	15.603 $\pm$ 0.010 0.610 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2013 KY ₁₈	J.Trojan 0.004 $\pm$ 2.056	1 0.760 $\pm$ 0.010 $\pm$ 0.000	1 0.360 $\pm$ 0.020 $\pm$ 0.000	6.512 $\pm$ 0.010 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2013 LD ₁₆	Scattered 7.035 $\pm$ 2.909	1 0.860 $\pm$ 0.050 $\pm$ 0.000	1 0.440 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2013 NS ₁₁	Centaur 18.602 $\pm$ 3.792	1 0.740 $\pm$ 0.020 $\pm$ 0.000	1 0.560 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2013 ST ₃₉	J.Trojan — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Bau+13 nodate ThermalIR tel=WISE hmag=12.1/0.3 diam=24.0/-1.5/+1.5 pV=0.044/-0.010/+0.010 freeta=1.22/-0.094/+0.094							
2013 TZ ₁₅₈	J.Trojan 14.948 $\pm$ 1.099 Bau+13 nodate ThermalIR tel=WISE hmag=9.0/0.3 diam=46.0/-13.0/+13.0 pV=0.033/-0.015/+0.015 freeta=0.64/-0.29/+0.29 J09 Cometary activity, CO-driven. CO+ and CN detected. J09 Dynamically a Centaur	4 0.790 $\pm$ 0.030 $\pm$ 0.000	1 0.536 $\pm$ 0.030 $\pm$ 0.020	10.027 $\pm$ 0.765 0.497 $\pm$ 0.025 $\pm$ 0.015 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2013 YG ₄₈	Centaur 14.117 $\pm$ 3.820	2 0.800 $\pm$ 0.036 $\pm$ 0.030	1 0.515 $\pm$ 0.040 $\pm$ 0.035	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2014 CW ₁₄	Scattered 13.628 $\pm$ 5.596	1 0.870 $\pm$ 0.090 $\pm$ 0.000	1 0.510 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2014 QO ₄₄₁	J.Trojan 9.809 $\pm$ 2.909	1 0.750 $\pm$ 0.030 $\pm$ 0.000	1 0.470 $\pm$ 0.030 $\pm$ 0.000	7.793 $\pm$ 0.010 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2060-Chiron	Centaur 0.026 $\pm$ 1.001 For+13 nodate ThermalIR tel=S+H hmag=5.92/0.2 emi=0.9/- diam=218/-20/+20 pV=0.16/-0.03/+0.03 Includes SPIRE, using a thermophysical model Ful+08 TAXO=BB Mee+09 Cometary activity Rom+03 SPECTRUM=Water ice	36 0.660 $\pm$ 0.055 $\pm$ 0.049	1 0.359 $\pm$ 0.018 $\pm$ 0.005	6.091 $\pm$ 0.068 0.324 $\pm$ 0.024 $\pm$ 0.010	1.153 $\pm$ 0.100 $\pm$ 0.070	0.293 $\pm$ 0.078 $\pm$ 0.009	0.065 $\pm$ 0.093 $\pm$ 0.011
2223-Sarpedon	J.Trojan 8.785 $\pm$ 1.244	1 0.753 $\pm$ 0.032 $\pm$ 0.000	1 0.465 $\pm$ 0.025 $\pm$ 0.000	9.213 $\pm$ 0.046 0.440 $\pm$ 0.041 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
2357-Phereclos	J.Trojan 7.601 $\pm$ 1.876	1 0.718 $\pm$ 0.059 $\pm$ 0.000	1 0.427 $\pm$ 0.045 $\pm$ 0.000	8.794 $\pm$ 0.078 0.463 $\pm$ 0.068 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBNO7. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
3548-Eurybates	J.Trojan -0.087 $\pm$ 1.847	1 0.677 $\pm$ 0.052 $\pm$ 0.000	1 0.352 $\pm$ 0.045 $\pm$ 0.000	— $\pm$ — 0.339 $\pm$ 0.067 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
4035-1986 WD	J.Trojan 10.258 $\pm$ 1.995	2 0.752 $\pm$ 0.040 $\pm$ 0.000	1 0.484 $\pm$ 0.043 $\pm$ 0.011	9.491 $\pm$ 0.080 0.451 $\pm$ 0.069 $\pm$ 0.002	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
4829-Sergestus	J.Trojan 4.196 $\pm$ 1.856	1 0.851 $\pm$ 0.050 $\pm$ 0.000	1 0.420 $\pm$ 0.039 $\pm$ 0.000	11.061 $\pm$ 0.068 0.372 $\pm$ 0.065 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
5130-Ilioneus	J.Trojan 9.188 $\pm$ 1.378	1 0.763 $\pm$ 0.034 $\pm$ 0.000	1 0.481 $\pm$ 0.026 $\pm$ 0.000	9.678 $\pm$ 0.048 0.424 $\pm$ 0.046 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
5145-Pholus	Centaur 47.951 $\pm$ 2.098	45 1.261 $\pm$ 0.121 $\pm$ 0.045	1 0.791 $\pm$ 0.037 $\pm$ 0.009	7.143 $\pm$ 0.078 0.818 $\pm$ 0.060 $\pm$ 0.015	2.612 $\pm$ 0.048 $\pm$ 0.036	0.391 $\pm$ 0.047 $\pm$ 0.017	-0.037 $\pm$ 0.047 $\pm$ 0.010
Cru+98 SPECTRUM=Methanol Duf+14 nodate ThermalIR tel=S+H hmag=7.68/0.28 emi=0.9/- diam=99/-14/+15 pV=0.155/-0.049/+0.076 freeta=0.77/-0.16/+0.16 Ful+08 TAXO=RR							
5244-Amphilochos	J.Trojan 3.187 $\pm$ 1.754	1 — $\pm$ — $\pm$ —	1 0.407 $\pm$ 0.044 $\pm$ 0.000	— $\pm$ — 0.363 $\pm$ 0.064 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
5258-1989 AU ₁	J.Trojan 8.233 $\pm$ 1.590	1 — $\pm$ — $\pm$ —	1 0.466 $\pm$ 0.041 $\pm$ 0.000	— $\pm$ — 0.425 $\pm$ 0.059 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
5511-Cloanthus	J.Trojan 10.774 $\pm$ 1.229	1 0.906 $\pm$ 0.027 $\pm$ 0.000	1 0.442 $\pm$ 0.027 $\pm$ 0.000	10.263 $\pm$ 0.047 0.526 $\pm$ 0.042 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
6545-1986 TR ₆	J.Trojan 10.572 $\pm$ 1.962	1 0.734 $\pm$ 0.041 $\pm$ 0.000	1 0.499 $\pm$ 0.042 $\pm$ 0.000	10.190 $\pm$ 0.073 0.436 $\pm$ 0.069 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
6998-Tithonus	J.Trojan 8.155 $\pm$ 1.282	1 0.787 $\pm$ 0.040 $\pm$ 0.000	1 0.455 $\pm$ 0.032 $\pm$ 0.000	11.304 $\pm$ 0.059 0.438 $\pm$ 0.046 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
7066-Nessus	Centaur 39.777 $\pm$ 3.448	18 1.090 $\pm$ 0.040 $\pm$ 0.000	1 0.763 $\pm$ 0.059 $\pm$ 0.024	9.052 $\pm$ 0.075 0.689 $\pm$ 0.087 $\pm$ 0.017	2.290 $\pm$ 0.040 $\pm$ 0.000	0.309 $\pm$ 0.268 $\pm$ 0.058	-0.089 $\pm$ 0.385 $\pm$ 0.126
Duf+14 nodate ThermalIR tel=S hmag=9.51/0.22 emi=0.9/- diam=57/-14/+17 pV=0.086/-0.034/+0.075 fixeta=1.2/-0.35/+0.35 Ful+08 TAXO=RR							
7352-1994 CO	J.Trojan 4.815 $\pm$ 1.629	1 0.713 $\pm$ 0.036 $\pm$ 0.000	1 0.417 $\pm$ 0.034 $\pm$ 0.000	9.892 $\pm$ 0.056 0.397 $\pm$ 0.056 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
8405-Asbolus	Centaur 12.765 $\pm$ 1.370	44 0.738 $\pm$ 0.038 $\pm$ 0.007	1 0.508 $\pm$ 0.053 $\pm$ 0.033	8.996 $\pm$ 0.060 0.505 $\pm$ 0.038 $\pm$ 0.008	1.654 $\pm$ 0.048 $\pm$ 0.011	0.386 $\pm$ 0.103 $\pm$ 0.044	0.170 $\pm$ 0.171 $\pm$ 0.028
Duf+14 nodate ThermalIR tel=S+H hmag=9.13/0.25 emi=0.9/- diam=85/-9/+8 pV=0.056/-0.015/+0.019 freeta=0.97/-0.18/+0.14 Ful+08 TAXO=BR Ker+00 SPECTRUM=Water ice							
9030-1989 UX ₅	J.Trojan 11.783 $\pm$ 1.115	1 0.887 $\pm$ 0.024 $\pm$ 0.000	1 0.493 $\pm$ 0.027 $\pm$ 0.000	10.986 $\pm$ 0.047 0.480 $\pm$ 0.039 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
9430-Erichthonio	J.Trojan 10.723 $\pm$ 3.060	1 0.742 $\pm$ 0.079 $\pm$ 0.000	1 0.488 $\pm$ 0.060 $\pm$ 0.000	11.327 $\pm$ 0.106 0.456 $\pm$ 0.109 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
9818-Eurymachos	J.Trojan -0.162 $\pm$ 1.824	1 0.673 $\pm$ 0.052 $\pm$ 0.000	1 0.339 $\pm$ 0.046 $\pm$ 0.000	— $\pm$ — 0.355 $\pm$ 0.067 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
10199-Chariklo	Centaur 13.425 $\pm$ 0.908	69 0.802 $\pm$ 0.049 $\pm$ 0.025	1 0.491 $\pm$ 0.016 $\pm$ 0.004	6.484 $\pm$ 0.018 0.519 $\pm$ 0.015 $\pm$ 0.004	1.685 $\pm$ 0.110 $\pm$ 0.104	0.417 $\pm$ 0.047 $\pm$ 0.010	0.101 $\pm$ 0.050 $\pm$ 0.013
For+13 nodate ThermalIR tel=S+H+W hmag=7.4/0.25 emi=0.9/- diam=248/-18/+18 pV=0.035/-0.01/+0.01 Spitzer+Herschel+WISE, using a Thermophysical model Ful+08 TAXO=BR Gui+09 SPECTRUM=Water ice							

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

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10370-Hylonome	Centaur 9.668 $\pm$ 6.478 Duf+14 nodate ThermalIR tel=S+H hmag=9.51/0.08 emi=0.9/- diam=74/-16/+16 pV=0.051/-0.017/+0.030 freeta=1.29/-0.31/+0.31 Ful+08 TAXO=BR	27 0.690 $\pm$ 0.110 $\pm$ 0.068	1 0.469 $\pm$ 0.154 $\pm$ 0.057	9.240 $\pm$ 0.159 0.496 $\pm$ 0.189 $\pm$ 0.064	1.310 $\pm$ 0.100 $\pm$ 0.000	0.180 $\pm$ 0.085 $\pm$ 0.000	0.270 $\pm$ 0.092 $\pm$ 0.000
11089-1994 CS ₈	J.Trojan 4.732 $\pm$ 2.619	1 0.689 $\pm$ 0.073 $\pm$ 0.000	1 0.423 $\pm$ 0.056 $\pm$ 0.000	10.693 $\pm$ 0.098 0.384 $\pm$ 0.094 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
11351-Leucus	J.Trojan 9.325 $\pm$ 2.033	1 0.739 $\pm$ 0.044 $\pm$ 0.000	1 0.498 $\pm$ 0.044 $\pm$ 0.000	10.756 $\pm$ 0.076 0.402 $\pm$ 0.072 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
11488-1988 RM ₁₁	J.Trojan 6.507 $\pm$ 2.832	2 0.777 $\pm$ 0.110 $\pm$ 0.073	1 0.436 $\pm$ 0.062 $\pm$ 0.004	11.470 $\pm$ 0.203 0.420 $\pm$ 0.103 $\pm$ 0.002	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
11663-1997 GO ₂₄	J.Trojan 6.580 $\pm$ 1.438	1 0.837 $\pm$ 0.030 $\pm$ 0.000	1 0.409 $\pm$ 0.030 $\pm$ 0.000	10.853 $\pm$ 0.052 0.463 $\pm$ 0.049 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
12917-1998 TG ₁₆	J.Trojan 11.839 $\pm$ 1.962	2 0.724 $\pm$ 0.042 $\pm$ 0.000	1 0.537 $\pm$ 0.042 $\pm$ 0.000	11.458 $\pm$ 0.073 0.410 $\pm$ 0.069 $\pm$ 0.000	1.707 $\pm$ 0.066 $\pm$ 0.000	0.475 $\pm$ 0.086 $\pm$ 0.000	0.205 $\pm$ 0.081 $\pm$ 0.000
12921-1998 WZ ₅	J.Trojan 3.492 $\pm$ 1.876	2 0.673 $\pm$ 0.040 $\pm$ 0.000	1 0.403 $\pm$ 0.047 $\pm$ 0.019	10.946 $\pm$ 0.073 0.380 $\pm$ 0.068 $\pm$ 0.014	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
13463-Antiphos	J.Trojan 7.093 $\pm$ 1.913	2 0.692 $\pm$ 0.045 $\pm$ 0.000	1 0.449 $\pm$ 0.034 $\pm$ 0.000	11.066 $\pm$ 0.066 0.412 $\pm$ 0.066 $\pm$ 0.000	1.417 $\pm$ 0.048 $\pm$ 0.000	0.343 $\pm$ 0.055 $\pm$ 0.000	0.103 $\pm$ 0.052 $\pm$ 0.000
13862-1999 XT ₁₆₀	J.Trojan 2.203 $\pm$ 1.754	1 — $\pm$ — $\pm$ —	1 0.381 $\pm$ 0.044 $\pm$ 0.000	— $\pm$ — $\pm$ — 0.370 $\pm$ 0.064 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
14707-2000 CC ₂₀	J.Trojan 4.232 $\pm$ 1.902	2 0.752 $\pm$ 0.041 $\pm$ 0.002	1 0.412 $\pm$ 0.035 $\pm$ 0.012	11.358 $\pm$ 0.112 0.385 $\pm$ 0.067 $\pm$ 0.019	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
15094-Polymele	J.Trojan 5.186 $\pm$ 2.495	3 0.652 $\pm$ 0.065 $\pm$ 0.000	1 0.477 $\pm$ 0.065 $\pm$ 0.000	11.550 $\pm$ 0.118 0.322 $\pm$ 0.094 $\pm$ 0.000	1.401 $\pm$ 0.066 $\pm$ 0.043	0.342 $\pm$ 0.062 $\pm$ 0.000	0.095 $\pm$ 0.058 $\pm$ 0.000
15502-1999 NV ₂₇	J.Trojan 7.367 $\pm$ 1.724	3 0.766 $\pm$ 0.047 $\pm$ 0.000	1 0.445 $\pm$ 0.036 $\pm$ 0.000	9.951 $\pm$ 0.075 0.430 $\pm$ 0.060 $\pm$ 0.000	1.565 $\pm$ 0.046 $\pm$ 0.023	0.492 $\pm$ 0.041 $\pm$ 0.000	0.152 $\pm$ 0.034 $\pm$ 0.003
15504-1999 RG ₃₃	Centaur 3.430 $\pm$ 2.703	2 0.817 $\pm$ 0.047 $\pm$ 0.015	1 0.495 $\pm$ 0.099 $\pm$ 0.085	11.987 $\pm$ 0.052 0.350 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
15535-2000 AT ₁₇₇	J.Trojan 9.836 $\pm$ 2.098	4 0.739 $\pm$ 0.043 $\pm$ 0.012	1 0.470 $\pm$ 0.049 $\pm$ 0.024	10.526 $\pm$ 0.075 0.461 $\pm$ 0.082 $\pm$ 0.043	1.681 $\pm$ 0.045 $\pm$ 0.006	0.500 $\pm$ 0.048 $\pm$ 0.000	0.123 $\pm$ 0.047 $\pm$ 0.000
15760-Albion	Classic Cd 27.538 $\pm$ 4.806 Ful+08 TAXO=RR MPC nodate 1992 QB1	5 0.869 $\pm$ 0.143 $\pm$ 0.079	1 0.707 $\pm$ 0.093 $\pm$ 0.048	6.984 $\pm$ 0.094 0.651 $\pm$ 0.166 $\pm$ 0.116	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
15788-1993 SB	Res. 3:2 12.407 $\pm$ 4.044 Ful+08 TAXO=BR Ful+08 TAXO=BR	6 0.802 $\pm$ 0.071 $\pm$ 0.017	1 0.475 $\pm$ 0.077 $\pm$ 0.012	8.035 $\pm$ 0.143 0.514 $\pm$ 0.114 $\pm$ 0.018	— $\pm$ — $\pm$ —	0.450 $\pm$ 0.253 $\pm$ 0.000	— $\pm$ — $\pm$ —
15789-1993 SC	Res. 3:2 34.698 $\pm$ 4.012 Ful+08 TAXO=RR JL01 SPECTRUM=Methane	17 1.045 $\pm$ 0.117 $\pm$ 0.066	1 0.688 $\pm$ 0.074 $\pm$ 0.030	6.747 $\pm$ 0.077 0.697 $\pm$ 0.093 $\pm$ 0.054	2.236 $\pm$ 0.200 $\pm$ 0.101	0.412 $\pm$ 0.240 $\pm$ 0.015	-0.040 $\pm$ 0.197 $\pm$ 0.000

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

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Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
15807-1994 GV ₉	Classic Cd 38.552 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	1 0.740 $\pm$ 0.099 $\pm$ 0.000	6.807 $\pm$ 0.091 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
15809-1994 JS	Res.other 28.194 $\pm$ 6.000 MPC08 Resonant 3:5	2 — $\pm$ — $\pm$ —	1 0.760 $\pm$ 0.170 $\pm$ 0.000	7.474 $\pm$ 0.160 0.480 $\pm$ 0.149 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.460 $\pm$ 0.705 $\pm$ 0.000	— $\pm$ — $\pm$ —
15810-Arawn	Res. 3:2 15.860 $\pm$ 4.717 MPC nodate 1994 JR1	15 1.010 $\pm$ 0.180 $\pm$ 0.000	1 0.632 $\pm$ 0.110 $\pm$ 0.062	6.867 $\pm$ 0.079 0.538 $\pm$ 0.098 $\pm$ 0.015	— $\pm$ — $\pm$ —	0.430 $\pm$ 0.242 $\pm$ 0.000	— $\pm$ — $\pm$ —
15820-1994 TB	Res. 3:2 37.669 $\pm$ 3.728 Ful+08 TAXO=RR Lel+13 nodate ThermalIR tel=S+H hmag=7.934/0.354 emi=0.9/- diam=85/-28/+36 pV=0.172/-0.097/+0.258 freeta=1.26/-0.65/+0.97	16 1.107 $\pm$ 0.126 $\pm$ 0.020	1 0.697 $\pm$ 0.075 $\pm$ 0.021	7.507 $\pm$ 0.116 0.739 $\pm$ 0.099 $\pm$ 0.018	2.368 $\pm$ 0.162 $\pm$ 0.109	0.428 $\pm$ 0.119 $\pm$ 0.014	0.120 $\pm$ 0.120 $\pm$ 0.000
15836-1995 DA ₂	Res.other 16.356 $\pm$ 5.630 MPC08 Resonant 3:4	6 — $\pm$ — $\pm$ —	1 0.550 $\pm$ 0.110 $\pm$ 0.000	7.803 $\pm$ 0.091 0.500 $\pm$ 0.160 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
15874-1996 TL ₆₆	Scattered 1.451 $\pm$ 2.858 Ful+08 TAXO=BB SaS+12 nodate ThermalIR tel=S+H hmag=5.39/0.12 emi=0.9/- diam=339/-20/+20 pV=0.11/-0.015/+0.021 freeta=1.15/-0.05/+0.08	17 0.687 $\pm$ 0.072 $\pm$ 0.050	1 0.369 $\pm$ 0.052 $\pm$ 0.037	5.214 $\pm$ 0.131 0.370 $\pm$ 0.077 $\pm$ 0.051	1.452 $\pm$ 0.114 $\pm$ 0.102	0.267 $\pm$ 0.144 $\pm$ 0.060	-0.018 $\pm$ 0.138 $\pm$ 0.027
15875-1996 TP ₆₆	Res. 3:2 30.636 $\pm$ 3.598 Ful+08 TAXO=RR Mom+12 nodate ThermalIR tel=S+H hmag=7.51/0.09 emi=0.9/- diam=154/-33.7/+28.8 pV=0.074/-0.031/+0.063 fixeta=1.2/-0.35/+0.35	8 1.031 $\pm$ 0.112 $\pm$ 0.080	1 0.655 $\pm$ 0.076 $\pm$ 0.021	6.967 $\pm$ 0.076 0.673 $\pm$ 0.086 $\pm$ 0.051	2.309 $\pm$ 0.060 $\pm$ 0.000	0.170 $\pm$ 0.078 $\pm$ 0.000	0.020 $\pm$ 0.092 $\pm$ 0.000
15883-1997 CR ₂₉	Classic Ht 20.484 $\pm$ 7.048 Ful+08 TAXO=BR	3 0.750 $\pm$ 0.152 $\pm$ 0.057	1 0.538 $\pm$ 0.157 $\pm$ 0.101	7.072 $\pm$ 0.135 0.620 $\pm$ 0.182 $\pm$ 0.081	— $\pm$ — $\pm$ —	0.490 $\pm$ 0.320 $\pm$ 0.000	— $\pm$ — $\pm$ —
15977-1998 MA ₁₁	J.Trojan 8.770 $\pm$ 1.049	1 0.748 $\pm$ 0.033 $\pm$ 0.000	1 0.465 $\pm$ 0.025 $\pm$ 0.000	10.618 $\pm$ 0.046 0.441 $\pm$ 0.036 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
16684-1994 JQ ₁	Classic Cd 31.346 $\pm$ 4.713 Ful+08 TAXO=RR	8 1.134 $\pm$ 0.068 $\pm$ 0.039	1 0.736 $\pm$ 0.101 $\pm$ 0.069	6.640 $\pm$ 0.113 0.650 $\pm$ 0.123 $\pm$ 0.032	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
17416-1988 RR ₁₀	J.Trojan 12.135 $\pm$ 2.732	1 0.742 $\pm$ 0.071 $\pm$ 0.000	1 0.488 $\pm$ 0.055 $\pm$ 0.000	12.727 $\pm$ 0.097 0.498 $\pm$ 0.097 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
18060-1999 XJ ₁₅₆	J.Trojan 3.456 $\pm$ 1.719	1 0.758 $\pm$ 0.056 $\pm$ 0.000	1 0.412 $\pm$ 0.043 $\pm$ 0.000	— $\pm$ — $\pm$ — 0.364 $\pm$ 0.063 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
18137-2000 OU ₃₀	J.Trojan 9.115 $\pm$ 1.218	1 0.733 $\pm$ 0.039 $\pm$ 0.000	1 0.496 $\pm$ 0.031 $\pm$ 0.000	11.139 $\pm$ 0.057 0.409 $\pm$ 0.044 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
18268-Dardanos	J.Trojan 12.538 $\pm$ 1.495	1 0.795 $\pm$ 0.042 $\pm$ 0.000	1 0.529 $\pm$ 0.040 $\pm$ 0.000	12.084 $\pm$ 0.070 0.451 $\pm$ 0.056 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
18493-Demoleon	J.Trojan 3.154 $\pm$ 2.460	2 0.703 $\pm$ 0.073 $\pm$ 0.000	1 0.395 $\pm$ 0.047 $\pm$ 0.000	10.841 $\pm$ 0.083 0.380 $\pm$ 0.087 $\pm$ 0.000	1.383 $\pm$ 0.045 $\pm$ 0.014	0.384 $\pm$ 0.046 $\pm$ 0.005	0.091 $\pm$ 0.040 $\pm$ 0.015

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
18940-2000 QV ₄₉	J.Trojan 8.449 $\pm$ 2.608	1 0.709 $\pm$ 0.072 $\pm$ 0.000	1 0.465 $\pm$ 0.055 $\pm$ 0.000	11.661 $\pm$ 0.097 0.429 $\pm$ 0.093 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
19255-1994 VK ₈	Classic Cd 24.540 $\pm$ 5.861 Ful+08 TAXO=RR	4 1.010 $\pm$ 0.060 $\pm$ 0.000	1 0.659 $\pm$ 0.095 $\pm$ 0.014	7.019 $\pm$ 0.163 0.490 $\pm$ 0.255 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.520 $\pm$ 0.297 $\pm$ 0.000	— $\pm$ — $\pm$ —
19299-1996 SZ ₄	Res. 3:2 13.725 $\pm$ 4.694 Ful+08 TAXO=BR	5 0.754 $\pm$ 0.100 $\pm$ 0.073	1 0.522 $\pm$ 0.061 $\pm$ 0.021	8.338 $\pm$ 0.166 0.446 $\pm$ 0.154 $\pm$ 0.110	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
19308-1996 TO ₆₆	Classic Ht 2.077 $\pm$ 2.168 Ful+08 TAXO=BB Pei+12 f SPECTRUM=Water ice RB07 FAMILY=2003EL61 SPECTRUM=Strong water ice	16 0.671 $\pm$ 0.057 $\pm$ 0.021	1 0.389 $\pm$ 0.043 $\pm$ 0.012	4.524 $\pm$ 0.042 0.356 $\pm$ 0.053 $\pm$ 0.016	0.997 $\pm$ 0.101 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
19521-Chaos	Classic Ht 23.292 $\pm$ 2.396 Ful+08 TAXO=IR MPC nodate 1998 WH24 Vil+12 nodate ThermalIR tel=S+H hmag=5/0.06 emi=0.9/- diam=600/-130/+140 pV=0.05/-0.016/+0.03 freeta=2.2/-1.1/+1.2	14 0.932 $\pm$ 0.054 $\pm$ 0.025	1 0.608 $\pm$ 0.041 $\pm$ 0.015	4.507 $\pm$ 0.090 0.571 $\pm$ 0.087 $\pm$ 0.069	1.835 $\pm$ 0.087 $\pm$ 0.053	0.400 $\pm$ 0.095 $\pm$ 0.012	0.033 $\pm$ 0.094 $\pm$ 0.021
20000-Varuna	Classic Ht 26.491 $\pm$ 1.867 Ful+08 TAXO=IR Lel+13 nodate ThermalIR tel=S+H hmag=3.76/0.035 emi=0.9/- diam=668/-86/+154 pV=0.127/-0.042/+0.04 freeta=2.18/-0.49/+1.04 MPC nodate 2000 WR106 Pei+12 g SPECTRUM=Water ice	12 0.906 $\pm$ 0.052 $\pm$ 0.030	1 0.626 $\pm$ 0.035 $\pm$ 0.010	3.471 $\pm$ 0.072 0.628 $\pm$ 0.040 $\pm$ 0.021	2.010 $\pm$ 0.050 $\pm$ 0.000	0.564 $\pm$ 0.070 $\pm$ 0.000	-0.038 $\pm$ 0.105 $\pm$ 0.000
20108-1995 QZ ₉	Res. 3:2 14.510 $\pm$ 3.460	3 0.880 $\pm$ 0.040 $\pm$ 0.000	1 0.515 $\pm$ 0.050 $\pm$ 0.009	7.895 $\pm$ 0.399 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
20161-1996 TR ₆₆	Res.other — $\pm$ — MPC08 Resonant 1:2	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.470 $\pm$ 0.296 $\pm$ 0.000	— $\pm$ — $\pm$ —
20738-1999 XG ₁₉₁	J.Trojan 10.132 $\pm$ 1.962	2 0.776 $\pm$ 0.041 $\pm$ 0.000	1 0.472 $\pm$ 0.042 $\pm$ 0.000	11.541 $\pm$ 0.073 0.467 $\pm$ 0.069 $\pm$ 0.000	1.593 $\pm$ 0.062 $\pm$ 0.000	0.520 $\pm$ 0.084 $\pm$ 0.000	0.113 $\pm$ 0.081 $\pm$ 0.000
23549-Epicles	J.Trojan 7.916 $\pm$ 2.720	1 0.800 $\pm$ 0.071 $\pm$ 0.000	1 0.485 $\pm$ 0.068 $\pm$ 0.000	11.809 $\pm$ 0.118 0.387 $\pm$ 0.101 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
23694-1997 KZ ₃	J.Trojan 8.337 $\pm$ 1.151	1 0.723 $\pm$ 0.035 $\pm$ 0.000	1 0.474 $\pm$ 0.029 $\pm$ 0.000	11.375 $\pm$ 0.053 0.418 $\pm$ 0.041 $\pm$ 0.000	1.657 $\pm$ 0.033 $\pm$ 0.000	0.493 $\pm$ 0.033 $\pm$ 0.000	0.211 $\pm$ 0.028 $\pm$ 0.000
24233-1999 XD ₉₄	J.Trojan 9.103 $\pm$ 1.978	1 0.704 $\pm$ 0.051 $\pm$ 0.000	1 0.481 $\pm$ 0.037 $\pm$ 0.000	11.411 $\pm$ 0.071 0.418 $\pm$ 0.069 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
24341-2000 AJ ₈₇	J.Trojan 2.026 $\pm$ 1.928	1 0.713 $\pm$ 0.043 $\pm$ 0.000	1 0.369 $\pm$ 0.035 $\pm$ 0.000	11.977 $\pm$ 0.067 0.390 $\pm$ 0.067 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
24380-2000 AA ₁₆₀	J.Trojan 1.556 $\pm$ 1.804	1 0.734 $\pm$ 0.055 $\pm$ 0.000	1 0.391 $\pm$ 0.048 $\pm$ 0.000	— $\pm$ — 0.336 $\pm$ 0.068 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
24390-2000 AD ₁₇₇	J.Trojan 12.512 $\pm$ 1.913	2 0.700 $\pm$ 0.042 $\pm$ 0.000	1 0.513 $\pm$ 0.034 $\pm$ 0.000	11.600 $\pm$ 0.066 0.462 $\pm$ 0.066 $\pm$ 0.000	1.684 $\pm$ 0.048 $\pm$ 0.000	0.461 $\pm$ 0.055 $\pm$ 0.000	0.140 $\pm$ 0.052 $\pm$ 0.000

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Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Gr _t ± σ	Epochs ⁽²⁾ B-V ± σ ± d	Multiple ⁽³⁾ V-R ± σ ± d	M11 ± σ R-I ± σ ± d	V-J ± σ ± d	J-H ± σ ± d	H-K ± σ ± d
24420-2000 BU ₂₂	J.Trojan 2.931 ± 1.742	1 0.937 ± 0.066 ± 0.000	1 0.441 ± 0.042 ± 0.000	—±— 0.304 ± 0.063 ± 0.000	—±—±—	—±—±—	—±—±—
24426-2000 CR ₁₂	J.Trojan 5.604 ± 1.660	1 0.717 ± 0.054 ± 0.000	1 0.414 ± 0.043 ± 0.000	—±— 0.424 ± 0.062 ± 0.000	—±—±—	—±—±—	—±—±—
24444-2000 OP ₃₂	J.Trojan 6.264 ± 2.536	1 0.712 ± 0.071 ± 0.000	1 0.437 ± 0.053 ± 0.000	11.432 ± 0.093 0.409 ± 0.090 ± 0.000	—±—±—	—±—±—	—±—±—
24452-2000 QU ₁₆₇	J.Trojan 6.333 ± 2.377	1 0.872 ± 0.056 ± 0.000	1 0.441 ± 0.056 ± 0.000	11.757 ± 0.099 0.406 ± 0.087 ± 0.000	—±—±—	—±—±—	—±—±—
24467-2000 SS ₁₆₅	J.Trojan 11.221 ± 2.463	1 0.927 ± 0.079 ± 0.000	1 0.460 ± 0.060 ± 0.000	11.771 ± 0.104 0.513 ± 0.091 ± 0.000	—±—±—	—±—±—	—±—±—
24835-1995 SM ₅₅	Classic Ht 0.272 ± 1.805 Ful+08 TAXO=BB Pei+12 g SPECTRUM=Water ice Rab+08 BETA=0.060/0.027 Rab+08 FAMILY=2003EL61 RB07 FAMILY=2003EL61 SPECTRUM=Strong water ice	10 0.652 ± 0.032 ± 0.008	1 0.357 ± 0.043 ± 0.025	4.336 ± 0.040 0.356 ± 0.052 ± 0.023	1.010 ± 0.050 ± 0.000	-0.270 ± 0.163 ± 0.000	—±—±—
24952-1997 QJ ₄	Res. 3:2 4.695 ± 4.772 Ful+08 TAXO=BR-BB	4 0.763 ± 0.114 ± 0.053	1 0.431 ± 0.114 ± 0.070	7.628 ± 0.194 0.396 ± 0.102 ± 0.032	—±—±—	—±—±—	—±—±—
24978-1998 HJ ₁₅₁	Classic Cd 29.628 ± 2.427	2 1.110 ± 0.030 ± 0.000	1 0.710 ± 0.030 ± 0.000	7.003 ± 0.050 —±—±—	—±—±—	—±—±—	—±—±—
25347-1999 RQ ₁₁₆	J.Trojan 10.900 ± 2.252	1 0.618 ± 0.058 ± 0.000	1 0.488 ± 0.042 ± 0.000	11.566 ± 0.075 0.461 ± 0.079 ± 0.000	—±—±—	—±—±—	—±—±—
26181-1996 GQ ₂₁	Res.other 37.090 ± 2.023 Ful+08 TAXO=RR Pei+12 g SPECTRUM=Methanol	9 0.999 ± 0.059 ± 0.010	1 0.697 ± 0.050 ± 0.028	4.625 ± 0.172 0.694 ± 0.056 ± 0.000	2.438 ± 0.062 ± 0.030	0.497 ± 0.082 ± 0.007	0.055 ± 0.096 ± 0.006
26308-1998 SM ₁₆₅	Res.other 31.425 ± 2.295 Ful+08 TAXO=RR Lel+13 nodate ThermalIR tel=S+H hmag=6.023/0.075 emi=0.9/- diam=291/-26/+22 pV=0.083/-0.013/+0.018 freeta=1.55/-0.1/+0.11 MPC08 Resonant 1:2	9 0.989 ± 0.114 ± 0.020	2 0.641 ± 0.056 ± 0.020	5.555 ± 0.107 0.666 ± 0.072 ± 0.018	2.295 ± 0.087 ± 0.062	0.546 ± 0.086 ± 0.052	0.080 ± 0.071 ± 0.000
26308-1998 SM ₁₆₅ B	Res.other 31.037 ± 0.000	1 —±—±—	2 —±—±—	—±— —±—±—	—±—±—	—±—±—	—±—±—
26375-1999 DE ₉	Res.other 20.625 ± 1.625 Ful+08 TAXO=IR Lel+13 nodate ThermalIR tel=S+H hmag=5.154/0.046 emi=0.9/- diam=311/-32/+29 pV=0.163/-0.026/+0.041 freeta=0.71/-0.11/+0.1 Pei+12 h SPECTRUM=Featureless	14 0.967 ± 0.043 ± 0.026	1 0.579 ± 0.036 ± 0.004	4.803 ± 0.045 0.568 ± 0.043 ± 0.007	1.717 ± 0.193 ± 0.180	0.327 ± 0.106 ± 0.023	0.025 ± 0.108 ± 0.023
28958-2001 CQ ₄₂	J.Trojan -2.591 ± 1.987	1 0.730 ± 0.054 ± 0.000	1 0.364 ± 0.045 ± 0.000	—±— 0.230 ± 0.071 ± 0.000	—±—±—	—±—±—	—±—±—
28978-Ixion	Res. 3:2 22.179 ± 2.243 Ful+08 TAXO=IR Lel+13 nodate ThermalIR tel=S+H hmag=3.828/0.039 emi=0.9/- diam=617/-20/+19 pV=0.141/-0.011/+0.011 freeta=0.91/-0.06/+0.04 MPC nodate 2001 KX76	16 1.018 ± 0.041 ± 0.017	1 0.605 ± 0.030 ± 0.005	3.257 ± 0.116 0.580 ± 0.040 ± 0.000	1.590 ± 0.064 ± 0.000	0.277 ± 0.069 ± 0.018	-0.010 ± 0.071 ± 0.000

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Gr_t is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
29981-1999 TD ₁₀	Scattered 12.194 $\pm$ 1.263 Ful+08 TAXO=BR Pei+12 g SPECTRUM=Water ice	18 0.808 $\pm$ 0.095 $\pm$ 0.089	1 0.502 $\pm$ 0.032 $\pm$ 0.011	8.714 $\pm$ 0.040 0.511 $\pm$ 0.051 $\pm$ 0.040	1.790 $\pm$ 0.057 $\pm$ 0.000	0.425 $\pm$ 0.093 $\pm$ 0.005	— $\pm$ — $\pm$ —
30698-Hippokoon	J.Trojan 7.486 $\pm$ 2.170	3 0.715 $\pm$ 0.067 $\pm$ 0.000	1 0.458 $\pm$ 0.048 $\pm$ 0.015	12.002 $\pm$ 0.128 0.412 $\pm$ 0.079 $\pm$ 0.023	1.527 $\pm$ 0.074 $\pm$ 0.038	0.396 $\pm$ 0.080 $\pm$ 0.037	0.183 $\pm$ 0.069 $\pm$ 0.001
31820-1999 RT ₁₈₆	J.Trojan 10.495 $\pm$ 4.232	1 0.889 $\pm$ 0.093 $\pm$ 0.000	1 0.520 $\pm$ 0.091 $\pm$ 0.000	12.409 $\pm$ 0.168 0.396 $\pm$ 0.153 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
31821-1999 RK ₂₂₅	J.Trojan 8.202 $\pm$ 3.877	1 0.980 $\pm$ 0.111 $\pm$ 0.000	1 0.440 $\pm$ 0.097 $\pm$ 0.000	11.847 $\pm$ 0.173 0.461 $\pm$ 0.145 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
31824-Elatus	Centaur 27.348 $\pm$ 1.859 Duf+14 nodate ThermalIR tel=S hmag=10.4/0.09 emi=0.9/- diam=49.8/-9.8/+10.4 pV=0.049/-0.016/+0.028 fixeta=1.2/-0.35/+0.35 Ful+08 TAXO=RR Pei+12 g SPECTRUM=Water ice	15 1.020 $\pm$ 0.060 $\pm$ 0.029	1 0.620 $\pm$ 0.048 $\pm$ 0.019	10.430 $\pm$ 0.124 0.630 $\pm$ 0.038 $\pm$ 0.021	— $\pm$ — $\pm$ —	0.392 $\pm$ 0.062 $\pm$ 0.000	0.020 $\pm$ 0.086 $\pm$ 0.000
32430-2000 RQ ₈₃	J.Trojan 8.679 $\pm$ 1.818	1 0.772 $\pm$ 0.038 $\pm$ 0.000	1 0.474 $\pm$ 0.045 $\pm$ 0.000	12.286 $\pm$ 0.074 0.425 $\pm$ 0.067 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
32532-Thereus	Centaur 10.623 $\pm$ 1.294 Duf+14 nodate ThermalIR tel=S hmag=9.4/0.16 emi=0.9/- diam=62/-3/+3 pV=0.083/-0.013/+0.016 freeta=0.87/-0.08/+0.08 Ful+08 TAXO=BR Pei+12 h SPECTRUM=Water ice	224 0.764 $\pm$ 0.049 $\pm$ 0.045	1 0.501 $\pm$ 0.017 $\pm$ 0.003	9.246 $\pm$ 0.015 0.479 $\pm$ 0.039 $\pm$ 0.019	1.350 $\pm$ 0.050 $\pm$ 0.000	0.442 $\pm$ 0.074 $\pm$ 0.049	0.110 $\pm$ 0.074 $\pm$ 0.000
32615-2001 QU ₂₇₇	J.Trojan 9.346 $\pm$ 1.235	1 0.807 $\pm$ 0.052 $\pm$ 0.000	1 0.452 $\pm$ 0.028 $\pm$ 0.000	11.427 $\pm$ 0.050 0.474 $\pm$ 0.043 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
32794-1989 UE ₅	J.Trojan 6.794 $\pm$ 2.116	1 0.923 $\pm$ 0.065 $\pm$ 0.000	1 0.393 $\pm$ 0.056 $\pm$ 0.000	12.722 $\pm$ 0.094 0.486 $\pm$ 0.080 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
32929-1995 QY ₉	Classic Ht 18.741 $\pm$ 10.170 Ful+08 TAXO=BR	5 0.740 $\pm$ 0.200 $\pm$ 0.000	1 0.561 $\pm$ 0.110 $\pm$ 0.067	7.374 $\pm$ 0.062 — $\pm$ — $\pm$ —	2.027 $\pm$ 0.201 $\pm$ 0.137	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
33001-1997 CU ₂₉	Classic Cd 28.823 $\pm$ 3.429 Ful+08 TAXO=RR	6 1.157 $\pm$ 0.145 $\pm$ 0.082	1 0.645 $\pm$ 0.066 $\pm$ 0.020	6.214 $\pm$ 0.104 0.634 $\pm$ 0.092 $\pm$ 0.044	— $\pm$ — $\pm$ —	0.410 $\pm$ 0.238 $\pm$ 0.000	— $\pm$ — $\pm$ —
33128-1998 BU ₄₈	Scattered 26.535 $\pm$ 4.487 Ful+08 TAXO=RR	9 1.044 $\pm$ 0.071 $\pm$ 0.046	1 0.631 $\pm$ 0.101 $\pm$ 0.048	6.854 $\pm$ 0.137 0.644 $\pm$ 0.104 $\pm$ 0.050	2.275 $\pm$ 0.059 $\pm$ 0.000	0.505 $\pm$ 0.098 $\pm$ 0.015	-0.157 $\pm$ 0.105 $\pm$ 0.035
33340-1998 VG ₄₄	Res. 3:2 19.741 $\pm$ 2.874 Ful+08 TAXO=IR Lel+13 nodate ThermalIR tel=S+H hmag=6.67/0.04 emi=0.9/- diam=248/-41/+43 pV=0.063/-0.017/+0.026 freeta=1.55/-0.38/+0.58	14 0.955 $\pm$ 0.050 $\pm$ 0.025	1 0.555 $\pm$ 0.039 $\pm$ 0.019	6.265 $\pm$ 0.072 0.598 $\pm$ 0.098 $\pm$ 0.077	— $\pm$ — $\pm$ —	0.398 $\pm$ 0.128 $\pm$ 0.009	0.010 $\pm$ 0.078 $\pm$ 0.000
34785-2001 RG ₈₇	J.Trojan 4.113 $\pm$ 1.599	1 0.728 $\pm$ 0.050 $\pm$ 0.000	1 0.386 $\pm$ 0.043 $\pm$ 0.000	12.538 $\pm$ 0.076 0.419 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

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Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
35671-1998 SN ₁₆₅	Classic Cd 6.856 $\pm$ 3.068 Ful+08 TAXO=BB Vil+14 nodate ThermalIR tel=S+H hmag=5.707/0.085 emi=0.9/- diam=393/-38/+39 pV=0.06/-0.013/+0.019 fixeta=1.23/-0.35/+0.35 Fixed-adjusted eta	7 0.712 $\pm$ 0.095 $\pm$ 0.062	1 0.444 $\pm$ 0.078 $\pm$ 0.042	5.684 $\pm$ 0.320 0.437 $\pm$ 0.083 $\pm$ 0.037	1.270 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
38083-Rhadamanth	Classic Ht 11.287 $\pm$ 3.072 Ful+08 TAXO=BR MPC nodate 1999 HX11	1 0.650 $\pm$ 0.085 $\pm$ 0.000	1 0.527 $\pm$ 0.069 $\pm$ 0.000	7.424 $\pm$ 0.063 0.412 $\pm$ 0.075 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
38084-1999 HB ₁₂	Res.other 15.815 $\pm$ 3.668 Ful+08 TAXO=BR	3 0.893 $\pm$ 0.064 $\pm$ 0.023	1 0.544 $\pm$ 0.065 $\pm$ 0.031	6.625 $\pm$ 0.079 0.481 $\pm$ 0.094 $\pm$ 0.069	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
38628-Huya	Res. 3:2 22.400 $\pm$ 2.192 For+13 nodate ThermalIR tel=S+H hmag=5.04/0.03 emi=0.9/- diam=458/-9.2/+9.2 pV=0.083/-0.004/+0.004 freeta=0.93/-0.02/+0.02 Includes SPIRE Ful+08 TAXO=IR MPC nodate 2000 EB173 Pei+12 g SPECTRUM=Featureless	60 0.963 $\pm$ 0.042 $\pm$ 0.012	1 0.609 $\pm$ 0.090 $\pm$ 0.014	4.668 $\pm$ 0.099 0.593 $\pm$ 0.055 $\pm$ 0.039	1.970 $\pm$ 0.050 $\pm$ 0.000	0.330 $\pm$ 0.109 $\pm$ 0.077	— $\pm$ — $\pm$ —
39285-2001 BP ₇₅	J.Trojan -0.195 $\pm$ 1.869	1 0.810 $\pm$ 0.059 $\pm$ 0.000	1 0.381 $\pm$ 0.044 $\pm$ 0.000	— $\pm$ — 0.291 $\pm$ 0.067 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
40314-1999 KR ₁₆	Scattered 42.032 $\pm$ 2.385 Ful+08 TAXO=RR SaS+12 nodate ThermalIR tel=H hmag=5.37/0.08 emi=0.9/- diam=254/-37/+37 pR=0.204/-0.05/+0.07 fixeta=1.2/-0.35/+0.35	6 1.123 $\pm$ 0.083 $\pm$ 0.056	1 0.738 $\pm$ 0.057 $\pm$ 0.041	5.605 $\pm$ 0.092 0.750 $\pm$ 0.040 $\pm$ 0.012	— $\pm$ — $\pm$ —	0.560 $\pm$ 0.071 $\pm$ 0.000	0.020 $\pm$ 0.071 $\pm$ 0.000
42301-2001 UR ₁₆₃	Res.other 45.205 $\pm$ 2.882 Ful+08 TAXO=RR Pei+12 g SPECTRUM=Featureless	9 1.290 $\pm$ 0.109 $\pm$ 0.090	1 0.839 $\pm$ 0.044 $\pm$ 0.011	3.876 $\pm$ 0.102 0.673 $\pm$ 0.121 $\pm$ 0.107	2.381 $\pm$ 0.058 $\pm$ 0.013	0.476 $\pm$ 0.115 $\pm$ 0.023	— $\pm$ — $\pm$ —
42355-Typhon	Scattered 12.215 $\pm$ 1.832 Ful+08 TAXO=BR Pei+12 h SPECTRUM=Water ice SaS+12 nodate ThermalIR tel=S+H hmag=7.72/0.04 emi=0.9/- diam=185/-7/+7 pV=0.044/-0.003/+0.003 freeta=1.48/-0.07/+0.07	15 0.758 $\pm$ 0.039 $\pm$ 0.018	2 0.518 $\pm$ 0.029 $\pm$ 0.009	7.257 $\pm$ 0.071 0.378 $\pm$ 0.094 $\pm$ 0.053	1.560 $\pm$ 0.045 $\pm$ 0.000	0.406 $\pm$ 0.087 $\pm$ 0.049	0.160 $\pm$ 0.071 $\pm$ 0.000
42355-Typhon+B	Scattered 9.763 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
43212-2000 AL ₁₁₃	J.Trojan 2.314 $\pm$ 1.748	1 — $\pm$ — $\pm$ —	1 0.402 $\pm$ 0.043 $\pm$ 0.000	— $\pm$ — 0.343 $\pm$ 0.064 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
44594-1999 OX ₃	Scattered 34.133 $\pm$ 2.125 Ful+08 TAXO=RR Lel+13 nodate ThermalIR tel=S+H hmag=7.718/0.092 emi=0.9/- diam=135/-12/+13 pV=0.081/-0.015/+0.018 freeta=1.04/-0.22/+0.27 Pei+12 i SPECTRUM=Water ice	34 1.138 $\pm$ 0.067 $\pm$ 0.019	1 0.708 $\pm$ 0.052 $\pm$ 0.013	7.054 $\pm$ 0.084 0.640 $\pm$ 0.067 $\pm$ 0.022	2.217 $\pm$ 0.127 $\pm$ 0.099	0.392 $\pm$ 0.105 $\pm$ 0.060	-0.000 $\pm$ 0.099 $\pm$ 0.030

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Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
45802-2000 PV ₂₉	Classic Cd — $\pm$ —	2 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.428 $\pm$ 0.291 $\pm$ 0.030	— $\pm$ — $\pm$ —
47171-Lempo	Res. 3:2 29.334 $\pm$ 1.738 Ful+08 TAXO=RR Mom+12 nodate ThermalIR tel=S+H hmag=5.41/0.1 emi=0.9/- diam=393.1/-26.8/+25.2 pV=0.079/-0.011/+0.013 freeta=1.1/-0.08/+0.07 MPC nodate 1999 TC36 Pei+12 h SPECTRUM=Water ice PPP+09 SPECTRO=H2O MODELING=Intimate mixture Triton tholin+Titan tholin+serpentine+Triton tholin diluted in water ice SCATTERING=Hapke	24 1.029 $\pm$ 0.047 $\pm$ 0.016	1 0.693 $\pm$ 0.032 $\pm$ 0.009	4.865 $\pm$ 0.060 0.619 $\pm$ 0.049 $\pm$ 0.021	2.215 $\pm$ 0.101 $\pm$ 0.073	0.337 $\pm$ 0.092 $\pm$ 0.019	0.009 $\pm$ 0.090 $\pm$ 0.016
47171-Lempo+B	Res. 3:2 19.177 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
47932-2000 GN ₁₇₁	Res. 3:2 26.270 $\pm$ 1.851 Ful+08 TAXO=IR Mom+12 nodate ThermalIR tel=S+H hmag=6.45/0.34 emi=0.9/- diam=147.1/-17.8/+20.7 pV=0.215/-0.07/+0.093 freeta=1.11/-0.21/+0.24 Pei+12 h SPECTRUM=Featureless	15 0.960 $\pm$ 0.063 $\pm$ 0.033	1 0.607 $\pm$ 0.042 $\pm$ 0.016	5.923 $\pm$ 0.267 0.617 $\pm$ 0.054 $\pm$ 0.000	1.711 $\pm$ 0.079 $\pm$ 0.042	0.365 $\pm$ 0.108 $\pm$ 0.012	0.060 $\pm$ 0.099 $\pm$ 0.000
47967-2000 SL ₂₉₈	J.Trojan 11.415 $\pm$ 2.726	1 0.899 $\pm$ 0.058 $\pm$ 0.000	1 0.489 $\pm$ 0.069 $\pm$ 0.000	11.830 $\pm$ 0.113 0.476 $\pm$ 0.102 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
48249-2001 SY ₃₄₅	J.Trojan 11.716 $\pm$ 1.707	1 0.758 $\pm$ 0.050 $\pm$ 0.000	1 0.530 $\pm$ 0.037 $\pm$ 0.000	12.561 $\pm$ 0.072 0.420 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
48252-2001 TL ₂₁₂	J.Trojan 8.694 $\pm$ 3.314	1 0.949 $\pm$ 0.100 $\pm$ 0.000	1 0.467 $\pm$ 0.093 $\pm$ 0.000	12.739 $\pm$ 0.153 0.436 $\pm$ 0.129 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
48639-1995 TL ₈	Scattered 22.529 $\pm$ 6.004 Ful+08 TAXO=RR Lel+13 nodate ThermalIR tel=S+H hmag=5.29/0.06 emi=0.9/- diam=244/-63/+82 pV=0.231/-0.102/+0.189 freeta=1.38/-0.49/+0.8	5 1.008 $\pm$ 0.159 $\pm$ 0.152	1 0.621 $\pm$ 0.091 $\pm$ 0.084	4.666 $\pm$ 0.087 0.551 $\pm$ 0.120 $\pm$ 0.112	2.420 $\pm$ 0.050 $\pm$ 0.000	0.412 $\pm$ 0.131 $\pm$ 0.021	-0.020 $\pm$ 0.085 $\pm$ 0.000
49036-Pelion	Centaur 8.734 $\pm$ 3.519 Ful+08 TAXO=BR	3 0.746 $\pm$ 0.080 $\pm$ 0.020	1 0.556 $\pm$ 0.078 $\pm$ 0.055	10.436 $\pm$ 0.247 0.368 $\pm$ 0.102 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
50000-Quaoar	Classic Ht 29.224 $\pm$ 1.706 DOCM+09 MODELING=Intimate mixture crystalline H2O(contaminated molecularly by Triton tholin)+amorphous H2O+CH4 (contaminated molecularly by Triton and Titan tholin)+N2+C2H6+Triton tholin+Titan tholin RANGE=(0.4-4.5) μ m SCATTERING=Shkuratov SPECTRO=H2O TAXO=RR For+13 bulk density for A+B density=2.18+0.43-0.36 For+13 nodate ThermalIR tel=S+H hmag=2.73/0.06 emi=0.9/- diam=1073.6/-37.9/+37.9 pV=0.127/-0.009/+0.01 freeta=1.73/-0.08/+0.08 MPC nodate 2002 LM60 Pei+12 h SPECTRUM=Methane	5 0.958 $\pm$ 0.035 $\pm$ 0.029	2 0.650 $\pm$ 0.020 $\pm$ 0.014	2.217 $\pm$ 0.029 0.610 $\pm$ 0.028 $\pm$ 0.000	2.180 $\pm$ 0.058 $\pm$ 0.000	0.360 $\pm$ 0.050 $\pm$ 0.000	0.030 $\pm$ 0.057 $\pm$ 0.000
51359-2000 SC ₁₇	J.Trojan 7.745 $\pm$ 5.725	1 0.864 $\pm$ 0.201 $\pm$ 0.000	1 0.447 $\pm$ 0.131 $\pm$ 0.000	11.981 $\pm$ 0.233 0.438 $\pm$ 0.210 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
52747-1998 HM ₁₅₁	Classic Cd 24.891 $\pm$ 4.691	1 0.930 $\pm$ 0.090 $\pm$ 0.000	1 0.620 $\pm$ 0.050 $\pm$ 0.000	7.413 $\pm$ 0.100 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
52872-Okyrhoe	Centaur 11.501 $\pm$ 2.017 Duf+14 nodate ThermalIR tel=S+H hmag=11.07/0.1 emi=0.9/- diam=35/-3/+3 pV=0.056/-0.01/+0.012 freeta=0.71/-0.13/+0.12 Ful+08 TAXO=BR Pei+12 g SPECTRUM=Water ice	22 0.743 $\pm$ 0.065 $\pm$ 0.047	1 0.495 $\pm$ 0.042 $\pm$ 0.016	10.796 $\pm$ 0.078 0.480 $\pm$ 0.061 $\pm$ 0.028	— $\pm$ — $\pm$ —	0.456 $\pm$ 0.068 $\pm$ 0.036	0.144 $\pm$ 0.082 $\pm$ 0.024

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52975-Cyllarus	Centaur 32.286 $\pm$ 3.654 Duf+14 nodate ThermalIR tel=S hmag=9.02/0.15 emi=0.9/- diam=56/-18/+21 pV=0.139/-0.064/+0.157 fixeta=1.2/-0.35/+0.35 Ful+08 TAXO=RR	10 1.096 $\pm$ 0.095 $\pm$ 0.047	1 0.680 $\pm$ 0.085 $\pm$ 0.035	8.642 $\pm$ 0.100 0.669 $\pm$ 0.090 $\pm$ 0.033	2.425 $\pm$ 0.077 $\pm$ 0.000	0.450 $\pm$ 0.092 $\pm$ 0.000	-0.100 $\pm$ 0.085 $\pm$ 0.000
53469-2000 AX ₈	J.Trojan 0.771 $\pm$ 1.818	1 0.663 $\pm$ 0.051 $\pm$ 0.000	1 0.356 $\pm$ 0.045 $\pm$ 0.000	— $\pm$ — 0.361 $\pm$ 0.067 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
54520-2000 PJ ₃₀	Scattered — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.410 $\pm$ 0.304 $\pm$ 0.000	— $\pm$ — $\pm$ —
54598-Bienor	Centaur 8.793 $\pm$ 2.427 Duf+14 nodate ThermalIR tel=S+H hmag=7.57/0.34 emi=0.9/- diam=198/-7/+6 pV=0.043/-0.012/+0.016 freeta=1.58/-0.07/+0.07 Ful+08 TAXO=BR Pei+12 h SPECTRUM=Methanol	16 0.711 $\pm$ 0.059 $\pm$ 0.019	1 0.476 $\pm$ 0.046 $\pm$ 0.009	7.588 $\pm$ 0.104 0.400 $\pm$ 0.079 $\pm$ 0.052	1.684 $\pm$ 0.091 $\pm$ 0.066	0.379 $\pm$ 0.078 $\pm$ 0.027	0.153 $\pm$ 0.099 $\pm$ 0.043
55565-2002 AW ₁₉₇	Classic Ht 21.861 $\pm$ 1.417 Ful+08 TAXO=IR Pei+12 h SPECTRUM=Featureless RB07 FAMILY=2003EL61 SPECTRUM=No water ice Vil+14 nodate ThermalIR tel=S+H hmag=3.568/0.046 emi=0.9/- diam=768/-38/+39 pV=0.112/-0.011/+0.012 freeta=1.29/-0.1/+0.13	11 0.915 $\pm$ 0.035 $\pm$ 0.018	1 0.589 $\pm$ 0.030 $\pm$ 0.015	3.121 $\pm$ 0.050 0.581 $\pm$ 0.037 $\pm$ 0.014	1.740 $\pm$ 0.054 $\pm$ 0.000	0.329 $\pm$ 0.070 $\pm$ 0.016	0.215 $\pm$ 0.094 $\pm$ 0.063
55576-Amycus	Centaur 33.744 $\pm$ 1.803 Duf+14 nodate ThermalIR tel=S+H hmag=8.27/0.11 emi=0.9/- diam=104/-8/+8 pV=0.083/-0.015/+0.016 freeta=1/-0.13/+0.12 Ful+08 TAXO=RR	23 1.111 $\pm$ 0.034 $\pm$ 0.006	1 0.705 $\pm$ 0.032 $\pm$ 0.008	7.738 $\pm$ 0.048 0.666 $\pm$ 0.047 $\pm$ 0.023	— $\pm$ — $\pm$ —	0.299 $\pm$ 0.077 $\pm$ 0.026	0.004 $\pm$ 0.064 $\pm$ 0.005
55636-2002 TX ₃₀₀	Classic Ht -0.195 $\pm$ 1.513 Ful+08 TAXO=BB Lel+13 nodate ThermalIR tel=S+H hmag=3.509/0.076 emi=0.9/- diam=286/-10/+10 pV=0.88/-0.06/+0.15 freeta=1.15/-0.74/+0.55 Size and albedo from occultation (2010Natur.465..897E) Lic+06 FAMILY=2003EL61 MODELING=Areal mixture water ice+olivine+amorphous carbon RANGE=(0.5-2.2)mu SCATTERING=Shkuratov SPECTRO=H2O TAXO=BB Pei+12 q SPECTRUM=Water ice Rab+08 BETA=0.076/0.029 Rab+08 FAMILY=2003EL61 RB07 FAMILY=2003EL61 SPECTRUM=Strong water ice	9 0.679 $\pm$ 0.038 $\pm$ 0.026	1 0.359 $\pm$ 0.024 $\pm$ 0.009	3.241 $\pm$ 0.043 0.323 $\pm$ 0.041 $\pm$ 0.027	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
55637-2002 UX ₂₅	Classic Ht 15.798 $\pm$ 1.269 For+13 nodate ThermalIR tel=S+H hmag=3.87/0.02 emi=0.9/- diam=697.2/-24.5/+23 pV=0.107/-0.008/+0.005 freeta=1.07/-0.05/+0.08 Ful+08 TAXO=IR Pei+12 g SPECTRUM=Water ice	12 0.979 $\pm$ 0.038 $\pm$ 0.023	2 0.552 $\pm$ 0.026 $\pm$ 0.010	3.521 $\pm$ 0.034 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.352 $\pm$ 0.072 $\pm$ 0.052	0.040 $\pm$ 0.072 $\pm$ 0.000
55638-2002 VE ₉₅	Res. 3:2 38.547 $\pm$ 2.722 BAR+06 MODELING=Intimate mixture amorphous H2O+CH3OH+Titan tholin+Triton tholin+amorphous carbon+olivine RANGE=(0.4-2.4)mu SCATTERING=Shkuratov SPECTRO=H2O+CH3OH TAXO=RR BAR+06 MODELING=Intimate mixture amorphous H2O+CH3OH+Titan tholin+Triton tholin+amorphous carbon RANGE=(0.4-2.4)mu SCATTERING=Hapke SPECTRO=H2O+CH3OH TAXO=RR Ful+08 TAXO=RR Mom+12 nodate ThermalIR tel=S+H hmag=5.7/0.06 emi=0.9/- diam=249.8/-13.1/+13.5 pV=0.149/-0.016/+0.019 freeta=1.4/-0.11/+0.12 Pei+12 g SPECTRUM=Methanol	10 1.094 $\pm$ 0.052 $\pm$ 0.021	1 0.733 $\pm$ 0.038 $\pm$ 0.009	5.150 $\pm$ 0.050 0.760 $\pm$ 0.120 $\pm$ 0.000	2.220 $\pm$ 0.057 $\pm$ 0.000	0.364 $\pm$ 0.072 $\pm$ 0.022	0.035 $\pm$ 0.075 $\pm$ 0.008

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56968-2000 SA ₉₂	J.Trojan 13.013 $\pm$ 1.374	1 0.986 $\pm$ 0.040 $\pm$ 0.000	1 0.494 $\pm$ 0.033 $\pm$ 0.000	11.550 $\pm$ 0.059 0.509 $\pm$ 0.049 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
58534-Logos	Classic Cd 26.351 $\pm$ 4.789 Ful+08 TAXO=RR MPC nodate 1997 CQ29	7 0.990 $\pm$ 0.127 $\pm$ 0.000	2 0.729 $\pm$ 0.120 $\pm$ 0.064	6.754 $\pm$ 0.181 0.602 $\pm$ 0.119 $\pm$ 0.015	— $\pm$ — $\pm$ —	0.498 $\pm$ 0.340 $\pm$ 0.132	— $\pm$ — $\pm$ —
58534-Logos+B	Classic Cd 17.578 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
59358-1999 CL ₁₅₈	Scattered 5.546 $\pm$ 2.064 Ful+08 TAXO=BR	1 0.800 $\pm$ 0.060 $\pm$ 0.000	1 0.390 $\pm$ 0.040 $\pm$ 0.000	6.650 $\pm$ 0.090 0.470 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
60454-2000 CH ₁₀₅	Classic Cd 25.350 $\pm$ 3.158 Ful+08 TAXO=RR	2 1.019 $\pm$ 0.086 $\pm$ 0.000	1 0.643 $\pm$ 0.096 $\pm$ 0.048	6.371 $\pm$ 0.093 0.583 $\pm$ 0.095 $\pm$ 0.061	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
60458-2000 CM ₁₁₄	Detached 11.545 $\pm$ 1.858	2 0.730 $\pm$ 0.020 $\pm$ 0.000	2 0.500 $\pm$ 0.020 $\pm$ 0.000	6.969 $\pm$ 0.040 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
60458-2000 CM ₁₁₄ B	Detached 13.041 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
60558-Echeclus	Centaur 11.324 $\pm$ 3.273 Duf+14 nodate ThermalIR tel=S+H hmag=9.78/0.14 emi=0.9/- diam=65/-2/+2 pV=0.052/-0.007/+0.007 freeta=0.86/-0.04/+0.04 Ful+08 TAXO=BR J09 aka 174P J09 Cometary activity, burst late 2005, complex coma	12 0.841 $\pm$ 0.072 $\pm$ 0.023	1 0.502 $\pm$ 0.065 $\pm$ 0.021	9.501 $\pm$ 0.125 0.486 $\pm$ 0.095 $\pm$ 0.034	1.480 $\pm$ 0.072 $\pm$ 0.000	0.466 $\pm$ 0.125 $\pm$ 0.100	0.340 $\pm$ 0.083 $\pm$ 0.000
60608-2000 EE ₁₇₃	Scattered 13.198 $\pm$ 1.827 Ful+08 TAXO=BR	3 0.665 $\pm$ 0.032 $\pm$ 0.015	1 0.488 $\pm$ 0.029 $\pm$ 0.005	8.135 $\pm$ 0.179 0.543 $\pm$ 0.056 $\pm$ 0.007	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
60620-2000 FD ₈	Res.other 30.813 $\pm$ 3.016 Ful+08 TAXO=RR	3 1.151 $\pm$ 0.110 $\pm$ 0.021	1 0.664 $\pm$ 0.078 $\pm$ 0.012	6.500 $\pm$ 0.221 0.648 $\pm$ 0.070 $\pm$ 0.033	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
60621-2000 FE ₈	Res.other 11.433 $\pm$ 1.500 Ful+08 TAXO=BR	3 0.750 $\pm$ 0.024 $\pm$ 0.000	2 0.480 $\pm$ 0.020 $\pm$ 0.000	6.503 $\pm$ 0.062 0.500 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.470 $\pm$ 0.277 $\pm$ 0.000	— $\pm$ — $\pm$ —
63252-2001 BL ₄₁	Centaur 13.807 $\pm$ 2.421 Duf+14 nodate ThermalIR tel=S hmag=11.34/0.21 emi=0.9/- diam=34.6/-6.1/+6.6 pV=0.043/-0.014/+0.028 fixeta=1.2/-0.35/+0.35 Ful+08 TAXO=BR	11 0.718 $\pm$ 0.049 $\pm$ 0.043	1 0.509 $\pm$ 0.044 $\pm$ 0.015	11.058 $\pm$ 0.064 0.381 $\pm$ 0.160 $\pm$ 0.151	— $\pm$ — $\pm$ —	0.365 $\pm$ 0.071 $\pm$ 0.005	0.255 $\pm$ 0.101 $\pm$ 0.054
65150-2002 CA ₁₂₆	J.Trojan 3.241 $\pm$ 1.724	1 0.651 $\pm$ 0.051 $\pm$ 0.000	1 0.377 $\pm$ 0.044 $\pm$ 0.000	— $\pm$ — 0.407 $\pm$ 0.064 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Gr _t $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
65225-2002 EK ₄₄	J.Trojan	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	1.982 $\pm$ 1.783	0.693 $\pm$ 0.052 $\pm$ 0.000	0.401 $\pm$ 0.044 $\pm$ 0.000	0.334 $\pm$ 0.065 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
65407-2002 RP ₁₂₀	Scattered	3	1	12.813 $\pm$ 0.060	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	11.696 $\pm$ 1.483	0.846 $\pm$ 0.033 $\pm$ 0.016	0.489 $\pm$ 0.028 $\pm$ 0.009	0.484 $\pm$ 0.034 $\pm$ 0.022	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
65489-Ceto	Scattered	9	2	6.288 $\pm$ 0.062	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	14.362 $\pm$ 2.974	0.879 $\pm$ 0.052 $\pm$ 0.016	0.547 $\pm$ 0.050 $\pm$ 0.011	0.411 $\pm$ 0.153 $\pm$ 0.105	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Pei+12 g SPECTRUM=Water ice SaS+12 nodate ThermalIR tel=S+H hmag=6.54/0.06 emi=0.9/- diam=281/-11/+11 pV=0.056/-0.006/+0.006 freeta=1.04/-0.05/+0.05						
65489-Ceto+B	Scattered	1	2	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	13.527 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
66452-1999 OF ₄	Classic Cd	3	1	6.325 $\pm$ 0.080	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	26.708 $\pm$ 3.878	1.032 $\pm$ 0.106 $\pm$ 0.000	0.673 $\pm$ 0.083 $\pm$ 0.000	0.601 $\pm$ 0.080 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.380 $\pm$ 0.253 $\pm$ 0.000	— $\pm$ — $\pm$ —
	Ful+08 TAXO=RR						
66652-Borasisi	Classic Cd	8	2	5.422 $\pm$ 0.056	2.010 $\pm$ 0.067 $\pm$ 0.000	0.457 $\pm$ 0.162 $\pm$ 0.054	0.100 $\pm$ 0.094 $\pm$ 0.000
	33.831 $\pm$ 2.714	0.820 $\pm$ 0.170 $\pm$ 0.000	0.646 $\pm$ 0.058 $\pm$ 0.000	0.647 $\pm$ 0.062 $\pm$ 0.000	2.010 $\pm$ 0.067 $\pm$ 0.000	0.457 $\pm$ 0.162 $\pm$ 0.054	0.100 $\pm$ 0.094 $\pm$ 0.000
	Ful+08 TAXO=RR MPC nodate 1999 RZ253 Vil+14 nodate ThermalIR tel=S+H hmag=6.121/0.07 emi=0.9/- diam=163/-66/+32 pV=0.236/-0.077/+0.438 freeta=0.77/-0.47/+0.19						
66652-Borasisi+B	Classic Cd	1	2	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	41.482 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
69986-1998 WW ₂₄	Res. 3:2	3	1	7.968 $\pm$ 0.085	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	17.966 $\pm$ 2.895	0.756 $\pm$ 0.112 $\pm$ 0.071	0.463 $\pm$ 0.081 $\pm$ 0.047	0.659 $\pm$ 0.104 $\pm$ 0.074	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Ful+08 TAXO=BR						
69987-1998 WA ₂₅	Classic Cd	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	17.056 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
69988-1998 WA ₃₁	Res.other	2	1	7.356 $\pm$ 0.122	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	13.652 $\pm$ 6.704	0.786 $\pm$ 0.129 $\pm$ 0.000	0.492 $\pm$ 0.133 $\pm$ 0.033	0.530 $\pm$ 0.183 $\pm$ 0.118	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Ful+08 TAXO=BR MPC08 Resonant 2:5						
69990-1998 WU ₃₁	Res. 3:2	1	1	8.209 $\pm$ 0.073	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	23.278 $\pm$ 3.272	0.720 $\pm$ 0.089 $\pm$ 0.000	0.505 $\pm$ 0.086 $\pm$ 0.000	0.722 $\pm$ 0.087 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Ful+08 TAXO=RR						
73480-2002 PN ₃₄	Scattered	13	1	8.499 $\pm$ 0.047	1.680 $\pm$ 0.058 $\pm$ 0.000	0.458 $\pm$ 0.098 $\pm$ 0.036	0.200 $\pm$ 0.078 $\pm$ 0.000
	12.181 $\pm$ 1.208	0.818 $\pm$ 0.095 $\pm$ 0.094	0.514 $\pm$ 0.036 $\pm$ 0.023	— $\pm$ — $\pm$ —	1.680 $\pm$ 0.058 $\pm$ 0.000	0.458 $\pm$ 0.098 $\pm$ 0.036	0.200 $\pm$ 0.078 $\pm$ 0.000
	Pei+12 j SPECTRUM=Water ice SaS+12 nodate ThermalIR tel=S+H hmag=8.66/0.03 emi=0.9/- diam=112/-7/+7 pV=0.049/-0.006/+0.006 freeta=1.02/-0.09/+0.07						
76804-2000 QE	J.Trojan	1	1	12.127 $\pm$ 0.135	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	7.871 $\pm$ 2.878	0.803 $\pm$ 0.082 $\pm$ 0.000	0.446 $\pm$ 0.070 $\pm$ 0.000	0.443 $\pm$ 0.106 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
78799-2002 XW ₉₃	Classic Ht	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Vil+12 nodate ThermalIR tel=H hmag=5.4/0.7 emi=0.9/- diam=565/-73/+71 pV=0.038/-0.025/+0.043 freeta=0.79/-0.24/+0.27						

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Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
79360-Sila-Nunam	Classic Cd 28.475 $\pm$ 2.382 Ful+08 TAXO=RR MPC nodate 1997 CS29 Pei+12 k SPECTRUM=Featureless Vil+12 nodate ThermalIR tel=S+H hmag=5.56/0.04 emi=0.9/- diam=343/-42/+42 pV=0.09/-0.017/+0.027 freeta=1.36/-0.19/+0.21	16 1.055 $\pm$ 0.079 $\pm$ 0.036	2 0.666 $\pm$ 0.054 $\pm$ 0.025	4.989 $\pm$ 0.060 0.609 $\pm$ 0.057 $\pm$ 0.033	2.073 $\pm$ 0.134 $\pm$ 0.087	0.356 $\pm$ 0.150 $\pm$ 0.022	0.104 $\pm$ 0.176 $\pm$ 0.106
79360-Sila-Nunam+B	Classic Cd 31.690 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
79978-1999 CC ₁₅₈	Res.other 24.869 $\pm$ 2.974 Ful+08 TAXO=IR	2 0.996 $\pm$ 0.066 $\pm$ 0.022	1 0.611 $\pm$ 0.052 $\pm$ 0.027	5.353 $\pm$ 0.097 0.619 $\pm$ 0.075 $\pm$ 0.046	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
79983-1999 DF ₉	Classic Ht 33.944 $\pm$ 2.164 Ful+08 TAXO=RR	1 0.920 $\pm$ 0.060 $\pm$ 0.000	1 0.710 $\pm$ 0.050 $\pm$ 0.000	5.792 $\pm$ 0.110 0.650 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
80806-2000 CM ₁₀₅	Classic Cd 32.348 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.360 $\pm$ 0.256 $\pm$ 0.000	— $\pm$ — $\pm$ —
82075-2000 YW ₁₃₄	Res.other 16.483 $\pm$ 2.187 Ful+08 TAXO=BR	14 0.922 $\pm$ 0.053 $\pm$ 0.018	1 0.503 $\pm$ 0.052 $\pm$ 0.032	4.381 $\pm$ 0.046 0.581 $\pm$ 0.059 $\pm$ 0.034	— $\pm$ — $\pm$ —	0.358 $\pm$ 0.153 $\pm$ 0.022	— $\pm$ — $\pm$ —
82155-2001 FZ ₁₇₃	Scattered 15.975 $\pm$ 1.446 Ful+08 TAXO=IR	9 0.864 $\pm$ 0.023 $\pm$ 0.004	1 0.546 $\pm$ 0.026 $\pm$ 0.015	5.807 $\pm$ 0.024 0.508 $\pm$ 0.036 $\pm$ 0.018	— $\pm$ — $\pm$ —	0.171 $\pm$ 0.118 $\pm$ 0.000	— $\pm$ — $\pm$ —
82158-2001 FP ₁₈₅	Scattered 16.010 $\pm$ 2.281 Ful+08 TAXO=IR SaS+12 nodate ThermalIR tel=S+H hmag=6.39/0.07 emi=0.9/- diam=332/-24/+31 pV=0.046/-0.007/+0.007 freeta=1.23/-0.19/+0.24	8 0.820 $\pm$ 0.048 $\pm$ 0.025	1 0.572 $\pm$ 0.038 $\pm$ 0.016	5.941 $\pm$ 0.054 0.458 $\pm$ 0.078 $\pm$ 0.056	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
83982-Crantor	Centaur 39.225 $\pm$ 1.992 Duf+14 nodate ThermalIR tel=S hmag=9.03/0.16 emi=0.9/- diam=59/-12/+11 pV=0.121/-0.038/+0.064 fixeta=1.2/-0.35/+0.35 Ful+08 TAXO=RR	18 1.105 $\pm$ 0.042 $\pm$ 0.018	1 0.761 $\pm$ 0.039 $\pm$ 0.012	8.644 $\pm$ 0.057 0.667 $\pm$ 0.055 $\pm$ 0.006	— $\pm$ — $\pm$ —	0.380 $\pm$ 0.067 $\pm$ 0.011	-0.140 $\pm$ 0.064 $\pm$ 0.000
84522-2002 TC ₃₀₂	Res.other 29.739 $\pm$ 1.432 For+13 nodate ThermalIR tel=S+H hmag=4.17/0.1 emi=0.9/- diam=584.1/-88/+105.6 pV=0.115/-0.033/+0.047 freeta=1.09/-0.25/+0.37 MPC08 Resonant 2:5 Pei+12 g SPECTRUM=Water ice Rab+08 BETA=0.118/0.040	4 1.067 $\pm$ 0.050 $\pm$ 0.044	1 0.655 $\pm$ 0.025 $\pm$ 0.015	3.718 $\pm$ 0.025 0.660 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
84709-2002 VW ₁₂₀	J.Trojan 12.794 $\pm$ 3.419	1 0.855 $\pm$ 0.087 $\pm$ 0.000	1 0.462 $\pm$ 0.090 $\pm$ 0.000	12.476 $\pm$ 0.158 0.548 $\pm$ 0.130 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
84719-2002 VR ₁₂₈	Res. 3:2 23.288 $\pm$ 2.107 Mom+12 nodate ThermalIR tel=H hmag=5.58/0.37 emi=0.9/- diam=448.5/-43.2/+42.1 pV=0.052/-0.018/+0.027 fixeta=1.2/-0.35/+0.35	3 0.935 $\pm$ 0.030 $\pm$ 0.005	1 0.605 $\pm$ 0.021 $\pm$ 0.005	4.989 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

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84922-2003 VS ₂	Res. 3:2 21.706 $\pm$ 2.057 Mom+12 nodate ThermalIR tel=S+H hmag=4.11/0.38 emi=0.9/- diam=523/-34.4/+35.1 pV=0.147/-0.043/+0.063 freeta=1.57/-0.23/+0.3 Pei+12 g SPECTRUM=Water ice	3 0.930 $\pm$ 0.020 $\pm$ 0.000	1 0.590 $\pm$ 0.020 $\pm$ 0.000	3.818 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
85627-1998 HP ₁₅₁	Classic Cd 25.429 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
85633-1998 KR ₆₅	Classic Cd 30.583 $\pm$ 2.821 Ful+08 TAXO=RR	4 1.095 $\pm$ 0.080 $\pm$ 0.070	1 0.628 $\pm$ 0.066 $\pm$ 0.043	6.598 $\pm$ 0.206 0.790 $\pm$ 0.081 $\pm$ 0.050	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
86047-1999 OY ₃	Classic Ht -3.527 $\pm$ 2.148 RB07 FAMILY=2003EL61 Visible and IR colors of strong water ice SNO+10 magR FAMILY=2003EL61 LIGHTCURVE=	5 0.726 $\pm$ 0.037 $\pm$ 0.018	1 0.345 $\pm$ 0.046 $\pm$ 0.031	6.398 $\pm$ 0.147 0.277 $\pm$ 0.076 $\pm$ 0.049	— $\pm$ — $\pm$ —	-0.380 $\pm$ 0.256 $\pm$ 0.000	— $\pm$ — $\pm$ —
86177-1999 RY ₂₁₅	Classic Ht 3.838 $\pm$ 3.476 Ful+08 TAXO=BR SNO+10 magR FAMILY=2003EL61 LIGHTCURVE= Vil+14 nodate ThermalIR tel=H hmag=7.235/0.093 emi=0.9/- diam=263/-37/+29 pV=0.0388/-0.0065/+0.0122 fixeta=1.2/-0.35/+0.35	4 0.719 $\pm$ 0.123 $\pm$ 0.078	1 0.358 $\pm$ 0.090 $\pm$ 0.000	7.432 $\pm$ 0.077 0.631 $\pm$ 0.185 $\pm$ 0.163	— $\pm$ — $\pm$ —	0.470 $\pm$ 0.286 $\pm$ 0.000	— $\pm$ — $\pm$ —
87269-2000 OO ₆₇	Scattered 26.481 $\pm$ 2.592	3 1.080 $\pm$ 0.092 $\pm$ 0.000	1 0.654 $\pm$ 0.081 $\pm$ 0.041	9.035 $\pm$ 0.155 0.593 $\pm$ 0.055 $\pm$ 0.027	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
87555-2000 QB ₂₄₃	Scattered 5.554 $\pm$ 5.948 Ful+08 TAXO=U	6 0.763 $\pm$ 0.086 $\pm$ 0.008	1 0.383 $\pm$ 0.083 $\pm$ 0.026	8.444 $\pm$ 0.129 0.729 $\pm$ 0.198 $\pm$ 0.170	1.480 $\pm$ 0.108 $\pm$ 0.007	0.592 $\pm$ 0.152 $\pm$ 0.068	— $\pm$ — $\pm$ —
88269-2001 KF ₇₇	Centaur 37.354 $\pm$ 1.301	1 1.080 $\pm$ 0.040 $\pm$ 0.000	1 0.730 $\pm$ 0.010 $\pm$ 0.000	10.024 $\pm$ 0.020 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
88611-Teharonhia	Classic Cd 5.020 $\pm$ 0.000 MPC nodate 2001 QT297 Vil+14 nodate ThermalIR tel=S+H hmag=6/0.13 emi=0.9/- diam=220/-44/+41 pV=0.145/-0.045/+0.086 freeta=1.08/-0.28/+0.3	2 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
88611-Teharonhia+B	Classic Cd 4.612 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
90377-Sedna	Detached 35.348 $\pm$ 2.475 BAR+05 MODELING=intimate mixture Triton tholin+amorphous carbon+N2+CH3OH+CH4 contaminated by small inclusions of Titan tholin RANGE=(0.49-2.5)mu SCATTERING=Shkuratov SPECTRO=CH4 TAXO=RR Ful+08 TAXO=RR MPC nodate 2003 VB12 Pal+12, nodate ThermalIR tel=H hmag=1.83/0.05 emi=0.9/- diam=990/-95/+95 pV=0.336/-0.072/+0.072 freeta=0.95/-0.43/+0.43 using a Thermophysical model Pei+12 l SPECTRUM=Methane	9 1.179 $\pm$ 0.069 $\pm$ 0.044	1 0.739 $\pm$ 0.047 $\pm$ 0.027	1.118 $\pm$ 0.058 0.654 $\pm$ 0.068 $\pm$ 0.013	2.320 $\pm$ 0.060 $\pm$ 0.000	0.388 $\pm$ 0.138 $\pm$ 0.056	0.050 $\pm$ 0.314 $\pm$ 0.000
90482-Orcus	Res. 3:2 2.486 $\pm$ 1.520 For+13 bulk density for A+B density=1.53+0.15-0.13 For+13 nodate ThermalIR tel=S+H hmag=2.31/0.03 emi=0.9/- diam=958.4/-22.9/+22.9 pV=0.231/-0.011/+0.018 freeta=0.97/-0.02/+0.05 Includes SPIRE Ful+08 TAXO=BB MPC nodate 2004 DW Pei+12 m SPECTRUM=Methane	12 0.670 $\pm$ 0.034 $\pm$ 0.014	2 0.376 $\pm$ 0.027 $\pm$ 0.004	2.000 $\pm$ 0.053 0.372 $\pm$ 0.038 $\pm$ 0.015	1.070 $\pm$ 0.042 $\pm$ 0.000	0.130 $\pm$ 0.057 $\pm$ 0.025	0.022 $\pm$ 0.073 $\pm$ 0.052

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
90568-2004 GV ₉	Classic Ht 19.705 $\pm$ 1.028 Pei+12 h SPECTRUM=Featureless Rab+08 BETA=0.127/0.011 Vil+12 nodate ThermalIR tel=S+H hmag=4.23/0.1 emi=0.9/- diam=680/-34/+34 pV=0.077/-0.0077/+0.0084 freeta=1.93/-0.07/+0.09	4 0.895 $\pm$ 0.061 $\pm$ 0.054	1 0.520 $\pm$ 0.020 $\pm$ 0.000	3.781 $\pm$ 0.030 — $\pm$ — $\pm$ —	1.570 $\pm$ 0.058 $\pm$ 0.000	0.340 $\pm$ 0.094 $\pm$ 0.000	0.140 $\pm$ 0.094 $\pm$ 0.000
91133-1998 HK ₁₅₁	Res. 3:2 9.775 $\pm$ 2.589 Ful+08 TAXO=BR	6 0.645 $\pm$ 0.121 $\pm$ 0.101	1 0.520 $\pm$ 0.062 $\pm$ 0.033	6.933 $\pm$ 0.075 0.390 $\pm$ 0.061 $\pm$ 0.017	1.570 $\pm$ 0.092 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
91205-1998 US ₄₃	Res. 3:2 4.463 $\pm$ 3.403 Ful+08 TAXO=BR	2 0.691 $\pm$ 0.102 $\pm$ 0.000	1 0.446 $\pm$ 0.095 $\pm$ 0.000	7.856 $\pm$ 0.078 0.347 $\pm$ 0.094 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
91554-1999 RZ ₂₁₅	Scattered 19.081 $\pm$ 3.401 Ful+08 TAXO=IR-RR	1 0.771 $\pm$ 0.097 $\pm$ 0.000	1 0.575 $\pm$ 0.090 $\pm$ 0.000	8.073 $\pm$ 0.079 0.539 $\pm$ 0.091 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
95626-2002 GZ ₃₂	Centaur 16.992 $\pm$ 2.947 Duf+14 nodate ThermalIR tel=S+H hmag=7.37/0.1 emi=0.9/- diam=237/-8/+8 pV=0.037/-0.004/+0.004 freeta=0.97/-0.07/+0.05 Ful+08 TAXO=BR	19 0.674 $\pm$ 0.043 $\pm$ 0.029	1 0.576 $\pm$ 0.054 $\pm$ 0.041	6.713 $\pm$ 0.156 0.538 $\pm$ 0.067 $\pm$ 0.057	— $\pm$ — $\pm$ —	0.442 $\pm$ 0.113 $\pm$ 0.080	— $\pm$ — $\pm$ —
99328-2001 UY ₁₂₃	J.Trojan 12.496 $\pm$ 2.292	1 0.890 $\pm$ 0.058 $\pm$ 0.000	1 0.537 $\pm$ 0.056 $\pm$ 0.000	12.598 $\pm$ 0.103 0.434 $\pm$ 0.084 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
105685-2000 SC ₅₁	J.Trojan 8.131 $\pm$ 2.099	1 1.016 $\pm$ 0.055 $\pm$ 0.000	1 0.444 $\pm$ 0.059 $\pm$ 0.000	12.693 $\pm$ 0.097 0.452 $\pm$ 0.081 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
111113-2001 VK ₈₅	J.Trojan 13.245 $\pm$ 1.864	1 0.822 $\pm$ 0.063 $\pm$ 0.000	1 0.462 $\pm$ 0.048 $\pm$ 0.000	12.618 $\pm$ 0.086 0.558 $\pm$ 0.069 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
118228-1996 TQ ₆₆	Res. 3:2 38.250 $\pm$ 4.976 Ful+08 TAXO=RR	7 1.186 $\pm$ 0.118 $\pm$ 0.030	1 0.670 $\pm$ 0.096 $\pm$ 0.034	7.251 $\pm$ 0.195 0.746 $\pm$ 0.113 $\pm$ 0.005	2.435 $\pm$ 0.128 $\pm$ 0.009	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
118379-1999 HC ₁₂	Classic Ht 12.620 $\pm$ 6.899 Ful+08 TAXO=BR	3 0.894 $\pm$ 0.163 $\pm$ 0.000	1 0.490 $\pm$ 0.138 $\pm$ 0.000	7.850 $\pm$ 0.125 0.343 $\pm$ 0.125 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.490 $\pm$ 0.298 $\pm$ 0.000	— $\pm$ — $\pm$ —
118702-2000 OM ₆₇	Detached 14.444 $\pm$ 1.982	1 0.820 $\pm$ 0.057 $\pm$ 0.000	1 0.470 $\pm$ 0.040 $\pm$ 0.000	7.078 $\pm$ 0.030 0.590 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
119068-2001 KC ₇₇	Res.other 18.607 $\pm$ 1.301 MPC08 Resonant 2:5	1 0.910 $\pm$ 0.010 $\pm$ 0.000	1 0.560 $\pm$ 0.010 $\pm$ 0.000	6.817 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
119070-2001 KP ₇₇	Res.other — $\pm$ — $\pm$ — Ful+08 TAXO=IR MPC08 Resonant 4:7	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.370 $\pm$ 0.235 $\pm$ 0.000	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
119315-2001 SQ ₇₃	Centaur 8.875 $\pm$ 1.301	2 0.670 $\pm$ 0.020 $\pm$ 0.000	1 0.460 $\pm$ 0.010 $\pm$ 0.000	8.900 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Duf+14 nodate ThermalIR tel=S hmag=9.15/0.11 emi=0.9/- diam=90/-20/+23 pV=0.048/-0.018/+0.03 fixeta=1.2/-0.35/+0.35						
119951-2002 KX ₁₄	Classic Cd 25.903 $\pm$ 1.567	6 1.050 $\pm$ 0.038 $\pm$ 0.020	1 0.607 $\pm$ 0.020 $\pm$ 0.003	4.345 $\pm$ 0.039 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Pei+12 h SPECTRUM=Featureless Vil+12 nodate ThermalIR tel=S+H hmag=4.86/0.1 emi=0.9/- diam=455/-27/+27 pV=0.097/-0.013/+0.014 freeta=1.79/-0.15/+0.16						
119976-2002 VR ₁₃₀	Centaur — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Duf+14 nodate ThermalIR tel=S hmag=11.26/0.39 emi=0.9/- diam=24.4/-4.6/+5.4 pV=0.093/-0.036/+0.066 fixeta=1.2/-0.35/+0.35						
119979-2002 WC ₁₉	Res.other 27.307 $\pm$ 2.636	3 1.040 $\pm$ 0.050 $\pm$ 0.000	2 0.630 $\pm$ 0.040 $\pm$ 0.000	4.204 $\pm$ 0.050 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Lel+13 nodate ThermalIR tel=S+H hmag=4.88/0.07 emi=0.9/- diam=348/-45/+45 pV=0.167/-0.037/+0.052 freeta=1.12/-0.17/+0.16 MPC08 Resonant 1:2						
120061-2003 CO ₁	Centaur 10.850 $\pm$ 2.221	17 0.743 $\pm$ 0.039 $\pm$ 0.003	1 0.472 $\pm$ 0.036 $\pm$ 0.007	8.993 $\pm$ 0.086 0.494 $\pm$ 0.080 $\pm$ 0.036	— $\pm$ — $\pm$ —	0.326 $\pm$ 0.091 $\pm$ 0.041	— $\pm$ — $\pm$ —
	Duf+14 nodate ThermalIR tel=S+H hmag=9.07/0.05 emi=0.9/- diam=94/-5/+5 pV=0.049/-0.006/+0.005 freeta=1.23/-0.11/+0.12						
120132-2003 FY ₁₂₈	Detached 21.977 $\pm$ 2.531	7 1.021 $\pm$ 0.042 $\pm$ 0.030	1 0.614 $\pm$ 0.039 $\pm$ 0.010	4.463 $\pm$ 0.043 0.540 $\pm$ 0.076 $\pm$ 0.025	1.640 $\pm$ 0.058 $\pm$ 0.000	0.360 $\pm$ 0.078 $\pm$ 0.000	0.110 $\pm$ 0.085 $\pm$ 0.000
	Pei+12 g SPECTRUM=Water ice SaS+12 nodate ThermalIR tel=S+H hmag=5.09/0.09 emi=0.9/- diam=460/-21/+21 pV=0.079/-0.01/+0.01 freeta=1.07/-0.08/+0.08						
120178-2003 OP ₃₂	Classic Ht 0.506 $\pm$ 2.059	6 0.662 $\pm$ 0.057 $\pm$ 0.015	1 0.375 $\pm$ 0.044 $\pm$ 0.007	3.750 $\pm$ 0.083 0.305 $\pm$ 0.078 $\pm$ 0.029	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Rab+08 BETA=0.040/0.022 Rab+08 FAMILY=2003EL61 RB07 FAMILY=2003EL61 SPECTRUM=Strong water ice						
120181-2003 UR ₂₉₂	Classic Ht 26.521 $\pm$ 11.645	3 1.025 $\pm$ 0.091 $\pm$ 0.015	1 0.635 $\pm$ 0.126 $\pm$ 0.105	7.115 $\pm$ 0.097 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Vil+14 nodate ThermalIR tel=H hmag=7.4/0.4 emi=0.9/- diam=136/-26/+16 pV=0.105/-0.033/+0.081 fixeta=1.2/-0.35/+0.35						
120216-2004 EW ₉₅	Res. 3:2 -0.713 $\pm$ 2.407	6 0.693 $\pm$ 0.037 $\pm$ 0.005	1 0.375 $\pm$ 0.033 $\pm$ 0.010	6.301 $\pm$ 0.056 0.215 $\pm$ 0.090 $\pm$ 0.055	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	Mom+12 nodate ThermalIR tel=H hmag=6.69/0.35 emi=0.9/- diam=291.1/-25.9/+20.3 pV=0.044/-0.015/+0.021 fixeta=1.2/-0.35/+0.35						
120347-Salacia	Classic Ht 6.370 $\pm$ 2.013	6 0.664 $\pm$ 0.098 $\pm$ 0.072	2 0.403 $\pm$ 0.061 $\pm$ 0.012	4.005 $\pm$ 0.100 0.433 $\pm$ 0.118 $\pm$ 0.036	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	For+13 bulk density for A+B density=1.29+0.29-0.23 For+13 nodate ThermalIR tel=S+H hmag=4.25/0.05 emi=0.9/- diam=901/-45/+45 pV=0.044/-0.004/+0.004 freeta=1.16/-0.03/+0.03 RB07 FAMILY=2003EL61 SNO+10 magR FAMILY=2003EL61 LIGHTCURVE==0.2						

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
120347-Salacia+B	Classic Ht	1	2	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
120348-2004 TY ₃₆₄	7.982 $\pm$ 0.000 Res. 3:2	— $\pm$ — $\pm$ — 5	— $\pm$ — $\pm$ — 1	— $\pm$ — $\pm$ — 4.109 $\pm$ 0.045	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	22.641 $\pm$ 2.286	1.059 $\pm$ 0.089 $\pm$ 0.000	0.601 $\pm$ 0.028 $\pm$ 0.001	0.520 $\pm$ 0.057 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.450 $\pm$ 0.058 $\pm$ 0.000	0.030 $\pm$ 0.094 $\pm$ 0.000
	Lel+13 nodate ThermalIR tel=S+H hmag=4.52/0.07 emi=0.9/- diam=512/-40/+37 pV=0.107/-0.015/+0.02 freeta=1.55/-0.1/+0.15						
120453-1988 RE ₁₂	J.Trojan	1	1	13.169 $\pm$ 0.189	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
121725-Aphidas	6.453 $\pm$ 3.884 Centaur	0.826 $\pm$ 0.132 $\pm$ 0.000 10	0.388 $\pm$ 0.108 $\pm$ 0.000 1	0.483 $\pm$ 0.151 $\pm$ 0.000 8.517 $\pm$ 0.123	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	30.600 $\pm$ 5.205 Ful+08 TAXO=RR	1.060 $\pm$ 0.089 $\pm$ 0.049	0.648 $\pm$ 0.116 $\pm$ 0.047	0.679 $\pm$ 0.123 $\pm$ 0.077	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
123509-2000 WK ₁₈₃	Classic Cd	1	2	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
123509-2000 WK ₁₈₃ B	29.751 $\pm$ 0.000 Classic Cd	— $\pm$ — $\pm$ — 1	— $\pm$ — $\pm$ — 2	— $\pm$ — $\pm$ — — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
124729-2001 SB ₁₇₃	26.029 $\pm$ 0.000 J.Trojan	— $\pm$ — $\pm$ — 1	— $\pm$ — $\pm$ — 1	— $\pm$ — $\pm$ — 12.582 $\pm$ 0.107	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
127546-2002 XU ₉₃	10.320 $\pm$ 2.774 Scattered	0.992 $\pm$ 0.060 $\pm$ 0.000 4	0.503 $\pm$ 0.064 $\pm$ 0.000 1	0.424 $\pm$ 0.101 $\pm$ 0.000 8.001 $\pm$ 0.053	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	6.070 $\pm$ 1.988	0.731 $\pm$ 0.034 $\pm$ 0.025	0.410 $\pm$ 0.036 $\pm$ 0.030	0.443 $\pm$ 0.060 $\pm$ 0.051	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	SaS+12 nodate ThermalIR tel=S+H hmag=8.11/0.1 emi=0.9/- diam=164/-9/+9 pV=0.038/-0.004/+0.004 freeta=1.12/-0.08/+0.05						
129772-1999 HR ₁₁	Classic Cd	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	28.264 $\pm$ 4.298 Ful+08 TAXO=RR-IR	0.920 $\pm$ 0.120 $\pm$ 0.000	0.530 $\pm$ 0.100 $\pm$ 0.000	0.800 $\pm$ 0.070 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
130391-2000 JG ₈₁	Res.other	2	1	7.746 $\pm$ 0.059	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	3.743 $\pm$ 4.431 MPC08 Resonant 1:2	— $\pm$ — $\pm$ —	0.370 $\pm$ 0.128 $\pm$ 0.000	0.430 $\pm$ 0.134 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
131695-2001 XS ₂₅₄	Res.other	1	1	— $\pm$ —	— $\pm$ — $\pm$ —	0.420 $\pm$ 0.260 $\pm$ 0.000	— $\pm$ — $\pm$ —
133067-2003 FB ₁₂₈	— $\pm$ — Res. 3:2	— $\pm$ — $\pm$ — 2	— $\pm$ — $\pm$ — 1	— $\pm$ — $\pm$ — 7.023 $\pm$ 0.297	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
134340-Pluto	-3.930 $\pm$ 0.000 Res. 3:2	— $\pm$ — $\pm$ — 4	0.313 $\pm$ 0.154 $\pm$ 0.015 6	— $\pm$ — $\pm$ — -0.886 $\pm$ 0.400	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
134340-Pluto+A	7.607 $\pm$ 0.681 Res. 3:2	0.867 $\pm$ 0.016 $\pm$ 0.009 1	0.515 $\pm$ 0.035 $\pm$ 0.029 6	0.400 $\pm$ 0.010 $\pm$ 0.000 — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	21.500 $\pm$ 0.000 Bui+10 Colour has changed between 2000 and 2003 Bui+92 ThermalIR Mutual Event: diam=2300./14/14 pV=0.52/.20/.20	0.958 $\pm$ 0.002 $\pm$ 0.000 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
134340-Pluto+B	Res. 3:2	2	6	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	4.278 $\pm$ 0.000 Bui+92 ThermalIR Mutual Event: diam=1186./20/14 pV=0.38/.05/.20	0.722 $\pm$ 0.012 $\pm$ 0.011 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
134340-Pluto+C	Res. 3:2	1	6	— $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
	-2.234 $\pm$ 0.000	0.644 $\pm$ 0.028 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Gr _t ± σ	Epochs ⁽²⁾ B-V ± σ ± d	Multiple ⁽³⁾ V-R ± σ ± d	M11 ± σ R-I ± σ ± d	V-J ± σ ± d	J-H ± σ ± d	H-K ± σ ± d
134340-Pluto+D	Res. 3:2 18.074 ± 0.000	1 0.907 ± 0.031 ± 0.000	6 — ± — ± —	— ± — — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
134860-2000 OJ ₆₇	Classic Cd 26.378 ± 3.102 Ful+08 TAXO=RR	5 1.050 ± 0.060 ± 0.000	2 0.670 ± 0.050 ± 0.000	6.003 ± 0.120 0.600 ± 0.070 ± 0.000	— ± — ± —	0.305 ± 0.162 ± 0.058	0.070 ± 0.139 ± 0.000
134860-2000 OJ ₆₇ B	Classic Cd 33.683 ± 0.000	1 — ± — ± —	2 — ± — ± —	— ± — — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
135182-2001 QT ₃₂₂	Classic Cd 15.584 ± 11.076 Vil+14 nodate ThermallR tel=S+H hmag=7.29/0.67 emi=0.9/- diam=159/-47/+30 pV=0.085/-0.052/+0.424 fixeta=1.2/-0.35/+0.35	2 0.710 ± 0.060 ± 0.000	1 0.530 ± 0.120 ± 0.000	— ± — — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
136108-Haumea	Classic Ht -0.269 ± 1.852 For+13 nodate ThermallR tel=S+H hmag=0.43/0.11 emi=0.9/- diam=1239.5/-57.8/+68.7 pV=0.804/-0.095/+0.062 freeta=0.95/-0.26/+0.33 Includes SPIRE Ful+08 TAXO=BB Lac09 SIZE=2000x1600x1000km ROTATION=3.9h DENSITY=2.6 surface feature dark red spot MPC nodate 2003 EL61 PA+09 FAMILY=2003EL61 MODELING=Intimate mixture crystalline water ice+amorphous water ice+minor constituents(upper limit 8RANGE=(0.35-2.5)mu SCATTERING=Hapke SPECTRO=H2O TAXO=BB Pei+12 n SPECTRUM=Water ice Rab+08 BETA=0.097/0.007 Rab+08 FAMILY=2003EL61 Tru+07 FAMILY=2003EL61 MODELING=Areal mixture crystalline water ice+near-infrared blue component(HCN or kaolinite) RANGE=(1.2-2.35)mu SCATTERING=Hapke SPECTRO=H2O TAXO=BB	10 0.633 ± 0.045 ± 0.018	2 0.353 ± 0.048 ± 0.021	0.214 ± 0.030 0.330 ± 0.044 ± 0.026	1.051 ± 0.020 ± 0.000	-0.044 ± 0.037 ± 0.000	-0.111 ± 0.048 ± 0.000
136120-2003 LG ₇	Res.other — ± — MPC08 Resonant 1:3	1 — ± — ± —	1 — ± — ± —	8.320 ± 0.050 — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
136199-Eris	Detached 3.870 ± 0.823 Ful+08 TAXO=BB Lel+13 nodate ThermallR tel=H hmag=-1.12/0.03 emi=0.9/- diam=2326/-12/+12 pV=0.96/-0.04/+0.04 freeta=0.87/-0.41/+0.26 Size and albedo from occultation (2011Natur.478..493S) MPC nodate 2003 UB313	68 0.781 ± 0.032 ± 0.027	2 0.393 ± 0.047 ± 0.009	-1.461 ± 0.036 0.363 ± 0.061 ± 0.020	0.849 ± 0.108 ± 0.083	0.066 ± 0.076 ± 0.015	-0.290 ± 0.082 ± 0.010
136204-2003 WL ₇	Centaur 2.187 ± 1.972 Duf+14 nodate ThermallR tel=S+H hmag=8.75/0.16 emi=0.9/- diam=105/-7/+6 pV=0.053/-0.01/+0.01 freeta=1.02/-0.05/+0.07	5 0.720 ± 0.067 ± 0.024	1 0.480 ± 0.039 ± 0.017	8.667 ± 0.072 — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
136472-Makemake	Classic Ht 5.321 ± 0.874 Br+07 MODELING=Intimate mixture methane+ethane+tholin RANGE=(0.3-2.5)mu SCATTERING=Hapke SPECTRO=CH4 Lel+13 nodate ThermallR tel=H hmag=0.14/0.05 emi=0.9/- diam=1430/-9/+9 pV=0.77/-0.02/+0.02 freeta=2.29/-0.4/+0.46 Size and albedo from occultation (2012Natur.491..566O) MPC nodate 2005 FY9 RB07 FAMILY=2003EL61 SPECTRUM=Methane ice	4 0.840 ± 0.024 ± 0.011	1 0.480 ± 0.020 ± 0.000	-0.322 ± 0.030 — ± — ± —	— ± — ± —	— ± — ± —	— ± — ± —
137294-1999 RE ₂₁₅	Classic Cd 30.557 ± 3.448 Ful+08 TAXO=RR	3 1.003 ± 0.130 ± 0.083	1 0.710 ± 0.074 ± 0.014	6.418 ± 0.187 0.571 ± 0.089 ± 0.067	— ± — ± —	— ± — ± —	— ± — ± —

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Gr_t is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
137295-1999 RB ₂₁₆	Res.other 14.468 $\pm$ 2.704 Ful+08 TAXO=IR-BR MPC08 Resonant 1:2	1 0.897 $\pm$ 0.122 $\pm$ 0.000	1 0.522 $\pm$ 0.073 $\pm$ 0.000	7.675 $\pm$ 0.087 0.506 $\pm$ 0.061 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
138537-2000 OK ₆₇	Classic Cd 20.354 $\pm$ 3.262 Vil+14 nodate ThermalIR tel=S+H hmag=6.47/0.13 emi=0.9/- diam=164/-45/+33 pV=0.169/-0.052/+0.159 fixeta=1.2/-0.35/+0.35	6 0.821 $\pm$ 0.123 $\pm$ 0.080	1 0.583 $\pm$ 0.072 $\pm$ 0.040	6.085 $\pm$ 0.083 0.524 $\pm$ 0.079 $\pm$ 0.040	2.421 $\pm$ 0.088 $\pm$ 0.000	0.455 $\pm$ 0.145 $\pm$ 0.009	0.040 $\pm$ 0.078 $\pm$ 0.000
143707-2003 UY ₁₁₇	Res.other 21.706 $\pm$ 2.057 MPC08 Resonant 2:5	1 0.950 $\pm$ 0.030 $\pm$ 0.000	1 0.590 $\pm$ 0.020 $\pm$ 0.000	5.393 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
144897-2004 UX ₁₀	Res. 3:2 20.095 $\pm$ 3.313 Mom+12 nodate ThermalIR tel=H hmag=4.75/0.16 emi=0.9/- diam=398.1/-39.3/+32.6 pV=0.141/-0.031/+0.044 fixeta=1.2/-0.35/+0.35	9 0.950 $\pm$ 0.020 $\pm$ 0.000	1 0.575 $\pm$ 0.035 $\pm$ 0.003	4.201 $\pm$ 0.050 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.420 $\pm$ 0.071 $\pm$ 0.000	-0.025 $\pm$ 0.095 $\pm$ 0.019
145451-2005 RM ₄₃	Scattered 1.494 $\pm$ 1.389 Rab+08 BETA=0.179/0.018	6 0.590 $\pm$ 0.038 $\pm$ 0.000	1 0.390 $\pm$ 0.036 $\pm$ 0.008	4.255 $\pm$ 0.047 — $\pm$ — $\pm$ —	0.910 $\pm$ 0.067 $\pm$ 0.000	0.194 $\pm$ 0.074 $\pm$ 0.005	0.155 $\pm$ 0.143 $\pm$ 0.115
145452-2005 RN ₄₃	Classic Ht 17.812 $\pm$ 1.860 Vil+12 nodate ThermalIR tel=H hmag=3.89/0.05 emi=0.9/- diam=679/-73/+55 pV=0.107/-0.018/+0.029 fixeta=1.2/-0.35/+0.35	7 0.940 $\pm$ 0.047 $\pm$ 0.006	1 0.592 $\pm$ 0.043 $\pm$ 0.010	3.485 $\pm$ 0.077 0.486 $\pm$ 0.064 $\pm$ 0.010	1.550 $\pm$ 0.058 $\pm$ 0.000	0.310 $\pm$ 0.071 $\pm$ 0.000	0.190 $\pm$ 0.071 $\pm$ 0.000
145453-2005 RR ₄₃	Classic Ht 1.159 $\pm$ 2.297 PA+07 FAMILY=2003EL61 MODELING=Intimate mixture crystalline water ice+amorphous water ice+complex organics (such as amorphous carbon or silicates, Supper limit) RANGE=(0.53-2.4)mu SCATTERING=Shkuratov SPECTRO=H2O Rab+08 BETA=0.010/0.016 Rab+08 FAMILY=2003EL61 RB07 FAMILY=2003EL61 SPECTRUM=Strong water ice	7 0.790 $\pm$ 0.076 $\pm$ 0.000	1 0.389 $\pm$ 0.036 $\pm$ 0.011	3.858 $\pm$ 0.045 — $\pm$ — $\pm$ —	1.020 $\pm$ 0.067 $\pm$ 0.000	-0.190 $\pm$ 0.081 $\pm$ 0.000	-0.200 $\pm$ 0.166 $\pm$ 0.000
145480-2005 TB ₁₉₀	Detached 20.439 $\pm$ 3.192 SaS+12 nodate ThermalIR tel=H hmag=4.4/0.11 emi=0.9/- diam=464/-62/+62 pV=0.148/-0.036/+0.051 fixeta=1.2/-0.35/+0.35	3 0.980 $\pm$ 0.042 $\pm$ 0.000	1 0.562 $\pm$ 0.055 $\pm$ 0.004	4.184 $\pm$ 0.069 0.578 $\pm$ 0.089 $\pm$ 0.061	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
145486-2005 UJ ₄₃₈	Centaur 22.980 $\pm$ 1.823 Duf+14 nodate ThermalIR tel=S+H hmag=11.14/0.32 emi=0.9/- diam=16/-2/+1 pV=0.256/-0.076/+0.097 freeta=0.34/-0.08/+0.09	3 0.946 $\pm$ 0.091 $\pm$ 0.082	1 0.641 $\pm$ 0.041 $\pm$ 0.014	11.288 $\pm$ 0.116 0.510 $\pm$ 0.071 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
148209-2000 CR ₁₀₅	Detached 14.424 $\pm$ 3.398	3 0.771 $\pm$ 0.082 $\pm$ 0.018	1 0.509 $\pm$ 0.048 $\pm$ 0.023	6.226 $\pm$ 0.040 0.590 $\pm$ 0.090 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.410 $\pm$ 0.297 $\pm$ 0.000	— $\pm$ — $\pm$ —
148780-Altjira	Classic Ht 29.751 $\pm$ 0.000 Ful+08 TAXO=RR Vil+14 nodate ThermalIR tel=S+H hmag=6.44/0.14 emi=0.9/- diam=331/-187/+51 pV=0.043/-0.0095/+0.1825 freeta=1.62/-0.83/+0.24 Hv from 2012AA...541A..94V	2 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
148780-Altjira+B	Classic Ht 35.732 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

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Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Gr $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
148975-2001 XA ₂₅₅	Centaur 22.381 $\pm$ 2.444 Bau+13 nodate ThermalIR tel=WISE hmag=11.2/0.3 diam=37.7/-10.5/10.5 pV=0.041/-0.014/+0.014 freeta=0.703/-0.186/+0.186	2 0.810 $\pm$ 0.050 $\pm$ 0.000	1 0.680 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — 0.440 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
149560-2003 QZ ₉₁	Scattered — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	8.303 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
150642-2001 CZ ₃₁	Classic Ht — $\pm$ — Ful+08 TAXO=BB	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.550 $\pm$ 0.099 $\pm$ 0.000	0.160 $\pm$ 0.099 $\pm$ 0.000
160427-2005 RL ₄₃	Centaur 37.350 $\pm$ 5.595	1 1.120 $\pm$ 0.040 $\pm$ 0.000	1 0.730 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
163135-2002 CT ₂₂	J.Trojan 1.927 $\pm$ 1.789	1 0.690 $\pm$ 0.053 $\pm$ 0.000	1 0.382 $\pm$ 0.045 $\pm$ 0.000	— $\pm$ — 0.360 $\pm$ 0.066 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
163216-2002 EN ₆₈	J.Trojan 4.392 $\pm$ 1.713	1 — $\pm$ — $\pm$ —	1 0.443 $\pm$ 0.042 $\pm$ 0.000	— $\pm$ — 0.347 $\pm$ 0.062 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
168700-2000 GE ₁₄₇	Res. 3:2 16.667 $\pm$ 3.950	1 — $\pm$ — $\pm$ —	1 0.550 $\pm$ 0.120 $\pm$ 0.000	7.993 $\pm$ 0.110 0.520 $\pm$ 0.114 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
168703-2000 GP ₁₈₃	Classic Cd 8.353 $\pm$ 2.654 Ful+08 TAXO=BR	5 0.669 $\pm$ 0.074 $\pm$ 0.058	1 0.445 $\pm$ 0.053 $\pm$ 0.024	5.749 $\pm$ 0.060 0.463 $\pm$ 0.066 $\pm$ 0.044	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
174567-Varda	Classic Ht 16.911 $\pm$ 2.416 Vil+14 nodate ThermalIR tel=H hmag=3.61/0.05 emi=0.9/- diam=792/-84/+91 pV=0.102/-0.02/+0.024 freeta=0.84/-0.22/+0.28	7 0.892 $\pm$ 0.047 $\pm$ 0.011	2 0.556 $\pm$ 0.040 $\pm$ 0.005	3.150 $\pm$ 0.072 0.510 $\pm$ 0.098 $\pm$ 0.025	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
175113-2004 PF ₁₁₅	Res. 3:2 — $\pm$ — Mom+12 nodate ThermalIR tel=H hmag=4.54/0.25 emi=0.9/- diam=468.2/-49.1/+38.6 pV=0.123/-0.033/+0.043 fixeta=1.2/-0.35/+0.35	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
181708-1993 FW	Classic Ht 18.979 $\pm$ 3.484 Ful+08 TAXO=IR	8 1.023 $\pm$ 0.069 $\pm$ 0.009	1 0.583 $\pm$ 0.070 $\pm$ 0.041	6.521 $\pm$ 0.122 0.439 $\pm$ 0.104 $\pm$ 0.050	— $\pm$ — $\pm$ —	0.400 $\pm$ 0.250 $\pm$ 0.000	— $\pm$ — $\pm$ —
181855-1998 WT ₃₁	Classic Ht 4.292 $\pm$ 3.664 Ful+08 TAXO=BB RB07 FAMILY=2003EL61 SNO+10 magR FAMILY=2003EL61 LIGHTCURVE=	2 0.774 $\pm$ 0.106 $\pm$ 0.000	1 0.453 $\pm$ 0.090 $\pm$ 0.000	7.434 $\pm$ 0.071 0.326 $\pm$ 0.102 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
181867-1999 CV ₁₁₈	Res.other 31.744 $\pm$ 2.469 MPC08 Resonant 3:7	1 — $\pm$ — $\pm$ —	1 0.733 $\pm$ 0.067 $\pm$ 0.000	7.183 $\pm$ 0.063 0.582 $\pm$ 0.062 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
181871-1999 CO ₁₅₃	Classic Cd 38.554 $\pm$ 0.000 MPC08 Resonant 4:7	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

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Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
181874-1999 HW ₁₁	Detached 12.561 $\pm$ 2.766	2 0.840 $\pm$ 0.042 $\pm$ 0.000	1 0.499 $\pm$ 0.073 $\pm$ 0.039	6.667 $\pm$ 0.077 0.493 $\pm$ 0.083 $\pm$ 0.055	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
181902-1999 RD ₂₁₅	Detached 7.547 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	7.865 $\pm$ 0.079 0.498 $\pm$ 0.058 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
182397-2001 QW ₂₉₇	Classic Ht 25.220 $\pm$ 3.210	1 1.020 $\pm$ 0.099 $\pm$ 0.000	1 0.580 $\pm$ 0.070 $\pm$ 0.000	6.662 $\pm$ 0.050 0.670 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
182933-2002 GZ ₃₁	Detached 33.013 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
182934-2002 GJ ₃₂	Classic Ht 15.495 $\pm$ 6.357 Ful+08 TAXO=RR Vil+14 nodate ThermalIR tel=S hmag=6.16/0.13 emi=0.9/- diam=416/-78/+81 pV=0.035/-0.011/+0.019 freeta=2.05/-0.36/+0.38 Hmag not explicitly given in reference	2 1.330 $\pm$ 0.178 $\pm$ 0.000	1 0.590 $\pm$ 0.140 $\pm$ 0.000	5.395 $\pm$ 0.090 0.420 $\pm$ 0.120 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
192388-1996 RD ₂₉	J.Trojan 4.691 $\pm$ 1.684	1 0.741 $\pm$ 0.055 $\pm$ 0.000	1 0.421 $\pm$ 0.042 $\pm$ 0.000	— $\pm$ — 0.388 $\pm$ 0.062 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
192929-2000 AT ₄₄	J.Trojan -0.624 $\pm$ 1.876	1 0.707 $\pm$ 0.053 $\pm$ 0.000	1 0.354 $\pm$ 0.045 $\pm$ 0.000	— $\pm$ — 0.318 $\pm$ 0.068 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
202421-2005 UQ ₅₁₃	Classic Ht — $\pm$ — RB07 FAMILY=2003EL61 SPECTRUM=Weak water ice SNO+10 magR FAMILY=2003EL61 LIGHTCURVE==0.3 Vil+14 nodate ThermalIR tel=H hmag=3.87/0.14 emi=0.9/- diam=498/-75/+63 pV=0.202/-0.049/+0.084 fixeta=1.27/-0.35/+0.35 Fixed-adjusted eta	2 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	3.451 $\pm$ 0.010 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.300 $\pm$ 0.122 $\pm$ 0.000	— $\pm$ — $\pm$ —
208996-2003 AZ ₈₄	Res. 3:2 6.824 $\pm$ 4.417 Ful+08 TAXO=BB Mom+12 nodate ThermalIR tel=S+H hmag=3.74/0.08 emi=0.9/- diam=727/-66.5/+61.9 pV=0.107/-0.016/+0.023 freeta=1.05/-0.15/+0.19 Rab+08 BETA=0.061/0.026	14 0.738 $\pm$ 0.090 $\pm$ 0.084	2 0.430 $\pm$ 0.062 $\pm$ 0.056	3.471 $\pm$ 0.112 0.473 $\pm$ 0.105 $\pm$ 0.095	1.210 $\pm$ 0.054 $\pm$ 0.000	0.239 $\pm$ 0.127 $\pm$ 0.097	0.060 $\pm$ 0.071 $\pm$ 0.000
225088-Gonggong	Detached — $\pm$ — SaS+12 nodate ThermalIR tel=H hmag=1.96/0.16 emi=0.9/- diam=1280/-210/+210 pR=0.185/-0.052/+0.076 fixeta=1.2/-0.35/+0.35	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
229762-2007 UK ₁₂₆	Detached 18.396 $\pm$ 1.767 SaS+12 nodate ThermalIR tel=H hmag=3.69/0.1 emi=0.9/- diam=599/-77/+77 pV=0.167/-0.038/+0.058 fixeta=1.2/-0.35/+0.35	4 — $\pm$ — $\pm$ —	2 0.582 $\pm$ 0.035 $\pm$ 0.022	3.224 $\pm$ 0.045 0.470 $\pm$ 0.057 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.360 $\pm$ 0.106 $\pm$ 0.000	— $\pm$ — $\pm$ —
230965-2004 XA ₁₉₂	Classic Ht — $\pm$ — Vil+14 nodate ThermalIR tel=H hmag=4.42/0.63 emi=0.9/- diam=339/-95/+120 pV=0.26/-0.15/+0.34 freeta=0.62/-0.49/+0.79	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
248835-2006 SX ₃₆₈	Centaur 10.782 $\pm$ 1.929 Duf+14 nodate ThermalIR tel=S+H hmag=9.45/0.11 emi=0.9/- diam=76/-2/+2 pV=0.052/-0.006/+0.007 freeta=0.87/-0.06/+0.04	5 0.758 $\pm$ 0.042 $\pm$ 0.017	1 0.478 $\pm$ 0.042 $\pm$ 0.008	9.431 $\pm$ 0.076 0.471 $\pm$ 0.074 $\pm$ 0.015	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
250112-2002 KY ₁₄	Centaur 33.671 $\pm$ 1.505 Duf+14 nodate ThermalIR tel=H hmag=10.37/0.07 emi=0.9/- diam=47/-4/+3 pV=0.057/-0.007/+0.011 fixeta=1.2/-0.35/+0.35	5 1.060 $\pm$ 0.020 $\pm$ 0.000	1 0.709 $\pm$ 0.024 $\pm$ 0.012	10.162 $\pm$ 0.066 0.650 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.290 $\pm$ 0.092 $\pm$ 0.000	0.020 $\pm$ 0.106 $\pm$ 0.000

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Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
275809-2001 QY ₂₉₇	Classic Cd 23.483 $\pm$ 6.083 Ful+08 TAXO=BR Vil+14 nodate ThermalIR tel=S+H hmag=5.86/0.31 emi=0.9/- diam=229/-108/+22 pV=0.152/-0.035/+0.439 freeta=1.52/-0.92/+0.22 Hv from	8 0.947 $\pm$ 0.223 $\pm$ 0.178	2 0.479 $\pm$ 0.103 $\pm$ 0.031	5.153 $\pm$ 0.232 0.651 $\pm$ 0.290 $\pm$ 0.225	— $\pm$ — $\pm$ —	0.506 $\pm$ 0.098 $\pm$ 0.000	— $\pm$ — $\pm$ —
275809-2001 QY ₂₉₇ B	Classic Cd 26.635 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
278361-2007 JJ ₄₃	Classic Ht 18.453 $\pm$ 1.087	1 1.020 $\pm$ 0.028 $\pm$ 0.000	1 0.590 $\pm$ 0.020 $\pm$ 0.000	4.041 $\pm$ 0.010 0.500 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
281371-2008 FC ₇₆	Centaur 31.628 $\pm$ 1.608 Duf+14 nodate ThermalIR tel=H hmag=9.44/0.1 emi=0.9/- diam=68/-7/+6 pV=0.067/-0.011/+0.017 fixeta=1.2/-0.35/+0.35	8 0.987 $\pm$ 0.031 $\pm$ 0.012	1 0.685 $\pm$ 0.036 $\pm$ 0.019	9.256 $\pm$ 0.057 0.652 $\pm$ 0.060 $\pm$ 0.018	— $\pm$ — $\pm$ —	0.400 $\pm$ 0.113 $\pm$ 0.000	0.120 $\pm$ 0.120 $\pm$ 0.000
303775-2005 QU ₁₈₂	Scattered 22.051 $\pm$ 5.577 SaS+12 nodate ThermalIR tel=H hmag=3.8/0.32 emi=0.9/- diam=416/-73/+73 pV=0.328/-0.109/+0.16 fixeta=1.2/-0.35/+0.35	4 0.877 $\pm$ 0.063 $\pm$ 0.034	1 0.593 $\pm$ 0.060 $\pm$ 0.033	3.368 $\pm$ 0.092 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
307251-2002 KW ₁₄	Classic Ht 59.253 $\pm$ 2.602 Vil+14 nodate ThermalIR tel=S+H hmag=5.88/0.11 emi=0.9/- diam=161/-40/+35 pV=0.31/-0.094/+0.281 fixeta=1.2/-0.35/+0.35	3 — $\pm$ — $\pm$ —	1 0.695 $\pm$ 0.074 $\pm$ 0.050	5.291 $\pm$ 0.092 1.090 $\pm$ 0.092 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
307261-2002 MS ₄	Classic Ht 1.710 $\pm$ 2.057 Vil+12 nodate ThermalIR tel=S+H hmag=4/0.6 emi=0.9/- diam=934/-47/+47 pV=0.051/-0.022/+0.036 freeta=1.06/-0.06/+0.06	2 0.690 $\pm$ 0.020 $\pm$ 0.000	1 0.380 $\pm$ 0.020 $\pm$ 0.000	3.332 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
307463-2002 VU ₁₃₀	Res. 3:2 — $\pm$ — Mom+12 nodate ThermalIR tel=H hmag=5.47/0.83 emi=0.9/- diam=252.9/-31.3/+33.6 pV=0.179/-0.103/+0.202 fixeta=1.2/-0.35/+0.35	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
307616-2003 QW ₉₀	Res. 3:2 15.349 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	1.930 $\pm$ 0.162 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
307982-2004 PG ₁₁₅	Detached 26.631 $\pm$ 3.439	6 0.966 $\pm$ 0.072 $\pm$ 0.016	1 0.664 $\pm$ 0.067 $\pm$ 0.028	4.826 $\pm$ 0.105 0.633 $\pm$ 0.127 $\pm$ 0.003	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
308933-2006 SQ ₃₇₂	Scattered 24.677 $\pm$ 1.702	2 1.030 $\pm$ 0.042 $\pm$ 0.000	1 0.590 $\pm$ 0.030 $\pm$ 0.000	7.714 $\pm$ 0.047 0.650 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
309139-2006 XQ ₅₁	Centaur 4.336 $\pm$ 2.909 Bau+13 nodate ThermalIR tel=WISE hmag=9.8/0.3 diam=39.1/-15.7/+15.7 pV=0.139/-0.058/+0.058 fixeta=0.8/-0.456/+0.456	2 0.740 $\pm$ 0.030 $\pm$ 0.000	1 0.410 $\pm$ 0.030 $\pm$ 0.000	10.190 $\pm$ 0.040 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
309239-2007 RW ₁₀	Scattered — $\pm$ — dIF12 a temporary quasi-satellite of Neptune SaS+12 nodate ThermalIR tel=H hmag=6.39/0.61 emi=0.9/- diam=247/-30/+30 pR=0.083/-0.039/+0.068 fixeta=1.2/-0.35/+0.35	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
309737-2008 SJ ₂₃₆	Centaur 20.012 $\pm$ 1.654 Bau+13 nodate ThermalIR tel=WISE hmag=12.2/0.3 diam=17.7/-1.5/+1.5 pV=0.074/-0.021/+0.021 freeta=0.800/-0.110/+0.110	5 1.010 $\pm$ 0.020 $\pm$ 0.000	1 0.588 $\pm$ 0.027 $\pm$ 0.011	12.180 $\pm$ 0.206 0.500 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.410 $\pm$ 0.130 $\pm$ 0.000	-0.230 $\pm$ 0.163 $\pm$ 0.000

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
309741-2008 UZ ₆	Centaur 21.706 $\pm$ 2.909	1 0.920 $\pm$ 0.040 $\pm$ 0.000	1 0.590 $\pm$ 0.030 $\pm$ 0.000	10.745 $\pm$ 0.040 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
310071-2010 KR ₅₉	Centaur — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Bau+13 nodate ThermalIR tel=WISE hmag=7.7/0.3 diam=110.06/-30.82/+30.82 pV=0.121/-0.037/+0.037 fixeta=0.8/-0.324/+0.324							
315898-2008 QD ₄	Centaur 8.875 $\pm$ 2.057	1 0.740 $\pm$ 0.020 $\pm$ 0.000	1 0.460 $\pm$ 0.020 $\pm$ 0.000	11.527 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
316431-2010 TH ₁₆₇	J.Trojan 8.875 $\pm$ 2.057	2 0.720 $\pm$ 0.020 $\pm$ 0.000	1 0.460 $\pm$ 0.020 $\pm$ 0.000	13.302 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Bau+13 nodate ThermalIR tel=WISE hmag=9.2/0.3 diam=69.9/-24.2/+24.2 pV=0.078/-0.033/+0.033 fixeta=0.8/-0.363/+0.363							
328884-2010 LJ ₁₀₉	Centaur — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Bau+13 nodate ThermalIR tel=WISE hmag=10.1/0.3 diam=44.2/-3.8/+3.8 pV=0.083/-0.021/+0.021 freeta=0.748/-0.103/+0.103							
330759-2008 SO ₂₁₈	Centaur 16.406 $\pm$ 1.422	1 0.890 $\pm$ 0.030 $\pm$ 0.000	1 0.550 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — 0.500 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Bau+13 nodate ThermalIR tel=WISE hmag=12.8/0.3 diam=11.8/-0.4/+0.4 pV=0.097/-0.017/+0.017 freeta=0.823/-0.046/+0.046							
332685-2009 HH ₃₆	Centaur — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Bau+13 nodate ThermalIR tel=WISE hmag=10.6/0.3 diam=33.0/-2.8/+2.8 pV=0.078/-0.018/+0.018 freeta=0.739/-0.095/+0.095							
336756-2010 NV ₁	Scattered 10.202 $\pm$ 1.351	3 0.765 $\pm$ 0.039 $\pm$ 0.025	1 0.512 $\pm$ 0.029 $\pm$ 0.015	10.652 $\pm$ 0.030 0.390 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Bau+13 nodate ThermalIR tel=WISE hmag=10.5/0.3 diam=44.2/-8.0/+8.0 pV=0.057/-0.030/+0.030 freeta=0.661/-0.168/+0.168							
341275-2007 RG ₂₈₃	Centaur 9.809 $\pm$ 2.909	1 0.790 $\pm$ 0.030 $\pm$ 0.000	1 0.470 $\pm$ 0.030 $\pm$ 0.000	8.515 $\pm$ 0.040 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
341520-Mors-Somn	Res. 3:2 34.660 $\pm$ 0.677	4 1.290 $\pm$ 0.014 $\pm$ 0.000	2 0.740 $\pm$ 0.010 $\pm$ 0.000	— $\pm$ — 0.630 $\pm$ 0.010 $\pm$ 0.000	— $\pm$ — $\pm$ —	-0.160 $\pm$ 0.130 $\pm$ 0.000	— $\pm$ — $\pm$ —
341520-Mors-Somn+A	Res. 3:2 — $\pm$ —	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
341520-Mors-Somn+B	Res. 3:2 — $\pm$ —	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
342842-2008 YB ₃	Centaur 10.664 $\pm$ 0.681	4 0.774 $\pm$ 0.025 $\pm$ 0.018	1 0.472 $\pm$ 0.022 $\pm$ 0.015	9.720 $\pm$ 0.018 0.490 $\pm$ 0.010 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Bau+13 nodate ThermalIR tel=WISE hmag=9.5/0.3 diam=67.1/-1.0/+1.0 pV=0.062/-0.012/+0.012 freeta=0.839/-0.012/+0.012 She10 Retrograde orbit							
346889-Rhiphonos	Centaur 17.592 $\pm$ 2.057	2 0.820 $\pm$ 0.020 $\pm$ 0.000	1 0.550 $\pm$ 0.020 $\pm$ 0.000	11.984 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
349933-2009 YF ₇	Centaur 8.875 $\pm$ 2.057	1 0.720 $\pm$ 0.020 $\pm$ 0.000	1 0.460 $\pm$ 0.020 $\pm$ 0.000	11.021 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
382004-2010 RM ₆₄	Centaur 17.594 $\pm$ 2.057	2 1.000 $\pm$ 0.020 $\pm$ 0.000	1 0.550 $\pm$ 0.020 $\pm$ 0.000	11.145 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Bau+13 nodate ThermalIR tel=WISE hmag=11.0/0.3 diam=21.0/-2.0/+2.0 pV=0.159/-0.048/+0.048 freeta=0.85/-0.144							

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Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
385185-1993 RO	Res. 3:2 24.485 $\pm$ 4.231 Ful+08 TAXO=IR	2 0.850 $\pm$ 0.070 $\pm$ 0.000	1 0.590 $\pm$ 0.137 $\pm$ 0.109	8.620 $\pm$ 0.134 0.480 $\pm$ 0.113 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
385191-1997 RT ₅	Classic Ht 15.015 $\pm$ 4.506	4 1.075 $\pm$ 0.121 $\pm$ 0.000	1 0.474 $\pm$ 0.107 $\pm$ 0.000	6.957 $\pm$ 0.378 0.539 $\pm$ 0.091 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.380 $\pm$ 0.231 $\pm$ 0.000	— $\pm$ — $\pm$ —
385194-1998 KG ₆₂	Classic Cd 24.857 $\pm$ 3.762 Ful+08 TAXO=RR-IR	5 1.039 $\pm$ 0.105 $\pm$ 0.057	1 0.609 $\pm$ 0.095 $\pm$ 0.046	6.369 $\pm$ 0.283 0.610 $\pm$ 0.078 $\pm$ 0.025	— $\pm$ — $\pm$ —	0.410 $\pm$ 0.231 $\pm$ 0.000	— $\pm$ — $\pm$ —
385199-1999 OE ₄	Classic Cd 13.985 $\pm$ 7.765 Ful+08 TAXO=RR	4 1.103 $\pm$ 0.236 $\pm$ 0.190	1 0.567 $\pm$ 0.159 $\pm$ 0.078	6.833 $\pm$ 0.178 0.414 $\pm$ 0.180 $\pm$ 0.115	— $\pm$ — $\pm$ —	0.360 $\pm$ 0.216 $\pm$ 0.000	— $\pm$ — $\pm$ —
385437-2003 GH ₅₅	Classic Cd 41.437 $\pm$ 4.050 Vil+14 nodate ThermalIR tel=H hmag=6.43/0.12 emi=0.9/- diam=178/-56/+21 pV=0.15/-0.031/+0.182 fixeta=1.2/-0.35/+0.35	4 1.120 $\pm$ 0.050 $\pm$ 0.000	1 0.665 $\pm$ 0.075 $\pm$ 0.028	5.902 $\pm$ 0.098 0.859 $\pm$ 0.158 $\pm$ 0.070	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
385446-Manwe	Res.other 27.864 $\pm$ 0.000 MPC08 Resonant 4:7	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
385446-Manwe+B	Res.other 30.391 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
385571-Otrera	Scattered 6.838 $\pm$ 2.156	1 0.740 $\pm$ 0.050 $\pm$ 0.000	1 0.420 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — 0.460 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
385607-2005 EO ₂₉₇	Res.other 13.673 $\pm$ 2.955 MPC08 Resonant 1:3 S10 rotational lightcurve She10 Object showed large light variations indicating possible rotational lc (	1 0.840 $\pm$ 0.071 $\pm$ 0.000	1 0.480 $\pm$ 0.050 $\pm$ 0.000	7.217 $\pm$ 0.030 0.570 $\pm$ 0.080 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
385695-2005 TO ₇₄	Scattered 9.717 $\pm$ 2.620	1 0.850 $\pm$ 0.060 $\pm$ 0.000	1 0.490 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — 0.420 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
413666-2005 VJ ₁₁₉	Scattered — $\pm$ — Bau+13 nodate ThermalIR tel=WISE hmag=10.6/0.3 diam=28.5/-6.9/+6.9 pV=0.126/-0.060/+0.060 fixeta=0.8/-0.3/+0.3	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
416400-2003 UZ ₁₁₇	Classic Ht -0.271 $\pm$ 1.694 RB07 FAMILY=2003EL61 SPECTRUM=Strong water ice?	7 0.663 $\pm$ 0.032 $\pm$ 0.019	1 0.354 $\pm$ 0.030 $\pm$ 0.010	4.959 $\pm$ 0.031 0.335 $\pm$ 0.041 $\pm$ 0.014	— $\pm$ — $\pm$ —	-0.220 $\pm$ 0.192 $\pm$ 0.000	— $\pm$ — $\pm$ —
418993-2009 MS ₉	Scattered 14.606 $\pm$ 3.793	1 0.840 $\pm$ 0.040 $\pm$ 0.000	1 0.520 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
427507-2002 DH ₅	Centaur 4.151 $\pm$ 2.833 Ful+08 TAXO=BR	1 0.663 $\pm$ 0.072 $\pm$ 0.000	1 0.391 $\pm$ 0.069 $\pm$ 0.000	10.165 $\pm$ 0.061 0.416 $\pm$ 0.081 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

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Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Gr _t $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
444030-2004 NT ₃₃	Classic Ht 4.182 $\pm$ 2.576 Vil+14 nodate ThermalIR tel=H hmag=4.74/0.11 emi=0.9/- diam=423/-80/+87 pV=0.125/-0.039/+0.069 freeta=0.69/-0.32/+0.46	4 0.641 $\pm$ 0.065 $\pm$ 0.005	1 0.403 $\pm$ 0.052 $\pm$ 0.007	4.479 $\pm$ 0.090 0.403 $\pm$ 0.093 $\pm$ 0.030	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
445473-2010 VZ ₉₈	Detached 30.400 $\pm$ 2.057	1 1.100 $\pm$ 0.040 $\pm$ 0.000	1 0.670 $\pm$ 0.020 $\pm$ 0.000	4.643 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
447178-2005 RO ₄₃	Centaur 9.809 $\pm$ 2.909 Duf+14 nodate ThermalIR tel=S+H hmag=7.34/0.51 emi=0.9/- diam=194/-10/+10 pV=0.056/-0.021/+0.036 freeta=1.12/-0.08/+0.05	2 0.770 $\pm$ 0.030 $\pm$ 0.000	1 0.470 $\pm$ 0.030 $\pm$ 0.000	6.955 $\pm$ 0.040 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
449097-2012 UT ₆₈	Centaur 29.278 $\pm$ 2.057	1 1.020 $\pm$ 0.020 $\pm$ 0.000	1 0.660 $\pm$ 0.020 $\pm$ 0.000	9.398 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
455171-1999 OM ₄	Classic Cd 18.976 $\pm$ 3.909 Ful+08 TAXO=RR	1 1.137 $\pm$ 0.135 $\pm$ 0.000	1 0.602 $\pm$ 0.104 $\pm$ 0.000	7.506 $\pm$ 0.100 0.499 $\pm$ 0.088 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
455502-2003 UZ ₄₁₃	Res. 3:2 5.341 $\pm$ 2.010	8 — $\pm$ — $\pm$ —	1 0.430 $\pm$ 0.035 $\pm$ 0.008	4.031 $\pm$ 0.052 0.387 $\pm$ 0.068 $\pm$ 0.015	— $\pm$ — $\pm$ —	0.370 $\pm$ 0.103 $\pm$ 0.000	0.150 $\pm$ 0.127 $\pm$ 0.000
459865-2013 XZ ₈	Centaur 7.950 $\pm$ 2.057	1 0.720 $\pm$ 0.020 $\pm$ 0.000	1 0.450 $\pm$ 0.020 $\pm$ 0.000	9.734 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
459971-2014 ON ₆	Centaur 20.664 $\pm$ 2.057	1 0.970 $\pm$ 0.020 $\pm$ 0.000	1 0.580 $\pm$ 0.020 $\pm$ 0.000	12.125 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
463368-2012 VU ₈₅	Centaur 25.973 $\pm$ 3.793	1 1.070 $\pm$ 0.060 $\pm$ 0.000	1 0.630 $\pm$ 0.040 $\pm$ 0.000	8.300 $\pm$ 0.050 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
463663-2014 HY ₁₂₃	Centaur 11.701 $\pm$ 2.057	1 0.670 $\pm$ 0.050 $\pm$ 0.000	1 0.490 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
469306-1999 CD ₁₅₈	Res.other 16.860 $\pm$ 2.607 Ful+08 TAXO=BR MPC08 Resonant 4:7 RB07 FAMILY=2003EL61 IR colors inconsistent with family SNO+10 magR FAMILY=2003EL61 LIGHTCURVE==0.6	5 0.864 $\pm$ 0.056 $\pm$ 0.005	1 0.520 $\pm$ 0.053 $\pm$ 0.029	4.821 $\pm$ 0.099 0.575 $\pm$ 0.064 $\pm$ 0.022	1.862 $\pm$ 0.076 $\pm$ 0.000	0.423 $\pm$ 0.135 $\pm$ 0.016	0.048 $\pm$ 0.116 $\pm$ 0.065
469333-2000 PE ₃₀	Detached 2.353 $\pm$ 3.158 Ful+08 TAXO=BB	7 0.752 $\pm$ 0.069 $\pm$ 0.029	1 0.373 $\pm$ 0.077 $\pm$ 0.054	5.798 $\pm$ 0.081 0.410 $\pm$ 0.049 $\pm$ 0.035	1.646 $\pm$ 0.080 $\pm$ 0.000	0.452 $\pm$ 0.114 $\pm$ 0.013	0.260 $\pm$ 0.072 $\pm$ 0.000
469362-2001 KB ₇₇	Res. 3:2 11.442 $\pm$ 3.220	7 0.890 $\pm$ 0.010 $\pm$ 0.000	1 0.457 $\pm$ 0.084 $\pm$ 0.023	7.352 $\pm$ 0.069 0.548 $\pm$ 0.089 $\pm$ 0.003	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
469372-2001 QF ₂₉₈	Res. 3:2 2.419 $\pm$ 2.652 Ful+08 TAXO=BB Mom+12 nodate ThermalIR tel=H hmag=5.43/0.07 emi=0.9/- diam=408.2/-44.9/+40.2 pV=0.071/-0.014/+0.02 fixeta=1.2/-0.35/+0.35	12 0.695 $\pm$ 0.067 $\pm$ 0.028	1 0.388 $\pm$ 0.058 $\pm$ 0.022	5.117 $\pm$ 0.093 0.360 $\pm$ 0.085 $\pm$ 0.018	1.126 $\pm$ 0.124 $\pm$ 0.000	0.317 $\pm$ 0.172 $\pm$ 0.129	0.165 $\pm$ 0.113 $\pm$ 0.040
469438-2002 GV ₃₁	Classic Cd — $\pm$ — Vil+12 nodate ThermalIR tel=H hmag=6.1/0.6 emi=0.9/- diam=180/-180/0 pV=0.19/-0/999 fixedeta=1.20+-0.35 Non detection	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Gr_t is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm\sigma$	Epochs ⁽²⁾ B-V $\pm\sigma \pm d$	Multiple ⁽³⁾ V-R $\pm\sigma \pm d$	M11 $\pm\sigma$ R-I $\pm\sigma \pm d$	V-J $\pm\sigma \pm d$	J-H $\pm\sigma \pm d$	H-K $\pm\sigma \pm d$
469505-2003 FE ₁₂₈	Classic Ht 31.639 $\pm$ 3.887 MPC08 Resonant 1:2	4 — $\pm$ — $\pm$ —	1 0.698 $\pm$ 0.088 $\pm$ 0.021	6.254 $\pm$ 0.144 0.597 $\pm$ 0.138 $\pm$ 0.020	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
469514-2003 QA ₉₁	Classic Cd — $\pm$ — $\pm$ — Vil+14 nodate ThermalIR tel=S+H hmag=5.76/0.63 emi=0.9/- diam=260/-36/+30 pV=0.13/-0.075/+0.119 freeta=0.83/-0.15/+0.1	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
469615-2004 PT ₁₀₇	Classic Ht — $\pm$ — $\pm$ — RB07 FAMILY=2003EL61 SNO+10 magR FAMILY=2003EL61 LIGHTCURVE==0.05 Vil+14 nodate ThermalIR tel=H hmag=6.33/0.11 emi=0.9/- diam=400/-51/+45 pV=0.0325/-0.0066/+0.0111 fixeta=1.53/-0.35/+0.35 Fixed-adjusted eta	2 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	5.848 $\pm$ 0.010 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.540 $\pm$ 0.228 $\pm$ 0.000	— $\pm$ — $\pm$ —
469705-2005 EF ₂₉₈	Classic Cd — $\pm$ — $\pm$ — Vil+12 nodate ThermalIR tel=H hmag=6.4/0.5 emi=0.9/- diam=174/-32/+27 pV=0.16/-0.07/+0.13 fixeta=1.2/-0.35/+0.35	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
469750-2005 PU ₂₁	Scattered 30.943 $\pm$ 1.087	1 1.140 $\pm$ 0.028 $\pm$ 0.000	1 0.650 $\pm$ 0.020 $\pm$ 0.000	6.094 $\pm$ 0.020 0.680 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
469987-2006 HJ ₁₂₃	Res. 3:2 — $\pm$ — $\pm$ — Mom+12 nodate ThermalIR tel=H hmag=5.32/0.66 emi=0.9/- diam=216.4/-34.2/+29.7 pV=0.281/-0.152/+0.259 fixeta=1.2/-0.35/+0.35	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
470309-2007 JK ₄₃	Scattered — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	7.023 $\pm$ 0.020 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
470316-2007 OC ₁₀	Detached 14.824 $\pm$ 2.766 SaS+12 nodate ThermalIR tel=H hmag=5.43/0.1 emi=0.9/- diam=309/-37/+37 pV=0.127/-0.028/+0.04 fixeta=1.2/-0.35/+0.35	4 0.876 $\pm$ 0.080 $\pm$ 0.012	1 0.553 $\pm$ 0.071 $\pm$ 0.009	5.029 $\pm$ 0.110 0.471 $\pm$ 0.105 $\pm$ 0.015	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
470599-2008 OG ₁₉	Detached 18.921 $\pm$ 0.677	1 0.940 $\pm$ 0.014 $\pm$ 0.000	1 0.530 $\pm$ 0.010 $\pm$ 0.000	4.611 $\pm$ 0.010 0.590 $\pm$ 0.010 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
471143-Dziewanna	Scattered — $\pm$ — $\pm$ —	2 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
471339-2011 ON ₄₅	Centaur 34.410 $\pm$ 1.751	3 1.110 $\pm$ 0.020 $\pm$ 0.009	1 0.705 $\pm$ 0.016 $\pm$ 0.004	11.467 $\pm$ 0.028 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
474640-2004 VN ₁₁₂	Detached 12.396 $\pm$ 2.913	1 0.900 $\pm$ 0.085 $\pm$ 0.000	1 0.520 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ — 0.450 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
506479-2003 HB ₅₇	Scattered 13.225 $\pm$ 1.525	1 0.830 $\pm$ 0.042 $\pm$ 0.000	1 0.480 $\pm$ 0.030 $\pm$ 0.000	7.385 $\pm$ 0.020 0.540 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
508770-1995 WY ₂	Classic Cd 19.923 $\pm$ 1.862 Ful+08 TAXO=RR-IR	2 1.030 $\pm$ 0.280 $\pm$ 0.000	1 0.600 $\pm$ 0.230 $\pm$ 0.000	6.937 $\pm$ 0.149 0.510 $\pm$ 0.280 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
508788-2000 CQ ₁₁₄	Classic Cd 34.780 $\pm$ 4.289	3 — $\pm$ — $\pm$ —	1 0.690 $\pm$ 0.156 $\pm$ 0.000	6.656 $\pm$ 0.147 0.650 $\pm$ 0.134 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.420 $\pm$ 0.403 $\pm$ 0.000	— $\pm$ — $\pm$ —
508788-2000 CQ ₁₁₄ B	Classic Cd 33.683 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
523588-2000 CN ₁₀₅	Classic Cd 29.677 $\pm$ 1.174	4 1.100 $\pm$ 0.020 $\pm$ 0.000	1 0.636 $\pm$ 0.072 $\pm$ 0.031	5.257 $\pm$ 0.072 0.640 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
523591-2001 QD ₂₉₈	Classic Ht 30.399 $\pm$ 8.330	2 0.970 $\pm$ 0.130 $\pm$ 0.000	1 0.670 $\pm$ 0.090 $\pm$ 0.000	6.187 $\pm$ 0.170 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Vil+14 nodate ThermalIR tel=S+H hmag=6.71/0.17 emi=0.9/- diam=233/-63/+27 pV=0.067/-0.014/+0.062 fixeta=1.26/-0.35/+0.35 Fixed-adjusted eta							
523597-2002 QX ₄₇	Centaur 1.710 $\pm$ 3.793	1 0.700 $\pm$ 0.040 $\pm$ 0.000	1 0.380 $\pm$ 0.040 $\pm$ 0.000	8.737 $\pm$ 0.050 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
523620-2007 RH ₂₈₃	Centaur 6.126 $\pm$ 2.057	3 0.720 $\pm$ 0.030 $\pm$ 0.000	1 0.430 $\pm$ 0.020 $\pm$ 0.000	8.432 $\pm$ 0.038 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
523622-2007 TG ₄₂₂	Scattered 13.918 $\pm$ 1.982	1 0.880 $\pm$ 0.057 $\pm$ 0.000	1 0.510 $\pm$ 0.040 $\pm$ 0.000	6.190 $\pm$ 0.010 0.510 $\pm$ 0.040 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
523676-2013 UL ₁₀	Centaur 30.399 $\pm$ 2.057	1 0.970 $\pm$ 0.020 $\pm$ 0.000	1 0.670 $\pm$ 0.020 $\pm$ 0.000	13.281 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
523785-2015 CM ₃	Centaur 19.632 $\pm$ 4.691	1 1.210 $\pm$ 0.060 $\pm$ 0.000	1 0.570 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
523794	Detached — $\pm$ —	7 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
523899-1997 CV ₂₉	Classic Ht 28.171 $\pm$ 2.056	2 1.210 $\pm$ 0.010 $\pm$ 0.000	1 0.650 $\pm$ 0.020 $\pm$ 0.000	7.150 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.360 $\pm$ 0.243 $\pm$ 0.000	— $\pm$ — $\pm$ —
523955-1998 UU ₄₃	Res.other 14.799 $\pm$ 3.950	2 — $\pm$ — $\pm$ —	1 0.610 $\pm$ 0.120 $\pm$ 0.000	6.931 $\pm$ 0.110 0.400 $\pm$ 0.114 $\pm$ 0.000	— $\pm$ — $\pm$ —	0.490 $\pm$ 0.273 $\pm$ 0.000	— $\pm$ — $\pm$ —
MPC08 Resonant 3:4							
523965-1998 XY ₉₅	Detached 41.427 $\pm$ 5.409	2 0.930 $\pm$ 0.233 $\pm$ 0.000	1 0.720 $\pm$ 0.145 $\pm$ 0.065	6.440 $\pm$ 0.144 0.752 $\pm$ 0.126 $\pm$ 0.015	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Ful+08 TAXO=RR							
523983-1999 RY ₂₁₄	Classic Ht 18.062 $\pm$ 3.131	2 0.693 $\pm$ 0.087 $\pm$ 0.000	1 0.565 $\pm$ 0.080 $\pm$ 0.000	7.015 $\pm$ 0.065 0.530 $\pm$ 0.084 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Ful+08 TAXO=BR							
524049-2000 CQ ₁₀₅	Detached 7.864 $\pm$ 2.902	5 0.671 $\pm$ 0.023 $\pm$ 0.003	1 0.449 $\pm$ 0.038 $\pm$ 0.020	5.963 $\pm$ 0.049 0.346 $\pm$ 0.101 $\pm$ 0.003	— $\pm$ — $\pm$ —	0.420 $\pm$ 0.262 $\pm$ 0.000	— $\pm$ — $\pm$ —
524217-2001 RZ ₁₄₃	Classic Cd 13.173 $\pm$ 5.715	2 1.080 $\pm$ 0.177 $\pm$ 0.000	1 0.510 $\pm$ 0.130 $\pm$ 0.000	6.245 $\pm$ 0.080 0.490 $\pm$ 0.100 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Vil+12 nodate ThermalIR tel=S+H hmag=6.69/0.13 emi=0.9/- diam=140/-33/+39 pV=0.191/-0.045/+0.066 freeta=0.75/-0.19/+0.23							
524366-2001 XR ₂₅₄	Classic Cd 15.011 $\pm$ 0.000	2 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
Vil+14 nodate ThermalIR tel=H hmag=6.05/0.15 emi=0.9/- diam=221/-71/+41 pV=0.136/-0.044/+0.168 fixeta=1.2/-0.35/+0.35							
524366-2001 XR ₂₅₄ B	Classic Cd 16.024 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
524834-2003 YL ₁₇₉	Classic Cd 7.947 $\pm$ 9.243	1 0.810 $\pm$ 0.040 $\pm$ 0.000	1 0.450 $\pm$ 0.100 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
525462-2005 EO ₃₀₄	Classic Cd 38.554 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBN07. (2) Number of epochs. (3) Number of components (>1 for satellites or multiple). M11 is the absolute R magnitude from photometry. Grt is the spectral gradient S (%/100nm).

Table 2. Average Magnitudes and Colours (Cont'd.)

Object	Class ⁽¹⁾ Grt $\pm \sigma$	Epochs ⁽²⁾ B-V $\pm \sigma \pm d$	Multiple ⁽³⁾ V-R $\pm \sigma \pm d$	M11 $\pm \sigma$ R-I $\pm \sigma \pm d$	V-J $\pm \sigma \pm d$	J-H $\pm \sigma \pm d$	H-K $\pm \sigma \pm d$
525462-2005 EO ₃₀₄ B	Classic Cd 33.683 $\pm$ 0.000	1 — $\pm$ — $\pm$ —	1 — $\pm$ — $\pm$ —	— $\pm$ — — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
525815-2005 SD ₂₇₈	Res.other 17.797 $\pm$ 1.087 MPC08 Resonant 2:5	1 0.970 $\pm$ 0.028 $\pm$ 0.000	1 0.560 $\pm$ 0.020 $\pm$ 0.000	5.919 $\pm$ 0.020 0.530 $\pm$ 0.020 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
527328-2007 TK ₄₂₂	Centaur 13.629 $\pm$ 2.057	1 0.710 $\pm$ 0.030 $\pm$ 0.000	1 0.510 $\pm$ 0.020 $\pm$ 0.000	8.902 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
527443-2007 UM ₁₂₆	Centaur 7.362 $\pm$ 1.567	7 0.740 $\pm$ 0.030 $\pm$ 0.000	1 0.435 $\pm$ 0.035 $\pm$ 0.021	10.177 $\pm$ 0.041 0.440 $\pm$ 0.042 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	0.340 $\pm$ 0.153 $\pm$ 0.000
527603-2007 VJ ₃₀₅	Detached 14.913 $\pm$ 1.525	1 0.920 $\pm$ 0.042 $\pm$ 0.000	1 0.520 $\pm$ 0.030 $\pm$ 0.000	6.717 $\pm$ 0.020 0.520 $\pm$ 0.030 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
527604	Centaur 10.452 $\pm$ 2.444	1 0.830 $\pm$ 0.050 $\pm$ 0.000	1 0.470 $\pm$ 0.050 $\pm$ 0.000	7.973 $\pm$ 0.080 0.480 $\pm$ 0.050 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
528219-2008 KV ₄₂	Scattered 8.461 $\pm$ 2.913 S10 rotational lightcurve She10 Object showed large light variations indicating possible rotational lc (She10 Retrograde orbit	1 0.820 $\pm$ 0.085 $\pm$ 0.000	1 0.470 $\pm$ 0.060 $\pm$ 0.000	8.561 $\pm$ 0.040 0.420 $\pm$ 0.060 $\pm$ 0.000	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
530664	Scattered 2.578 $\pm$ 2.909	1 0.690 $\pm$ 0.030 $\pm$ 0.000	1 0.390 $\pm$ 0.030 $\pm$ 0.000	7.718 $\pm$ 0.030 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —
530930	Centaur 3.452 $\pm$ 4.691	1 0.720 $\pm$ 0.040 $\pm$ 0.000	1 0.400 $\pm$ 0.050 $\pm$ 0.000	7.056 $\pm$ 0.040 — $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —	— $\pm$ — $\pm$ —

(1) Classes refer to Gladman et al, SSBN07. M11 is the absolute R magnitude (2) Number of epochs. Grt is the spectral gradient S (%/100nm).

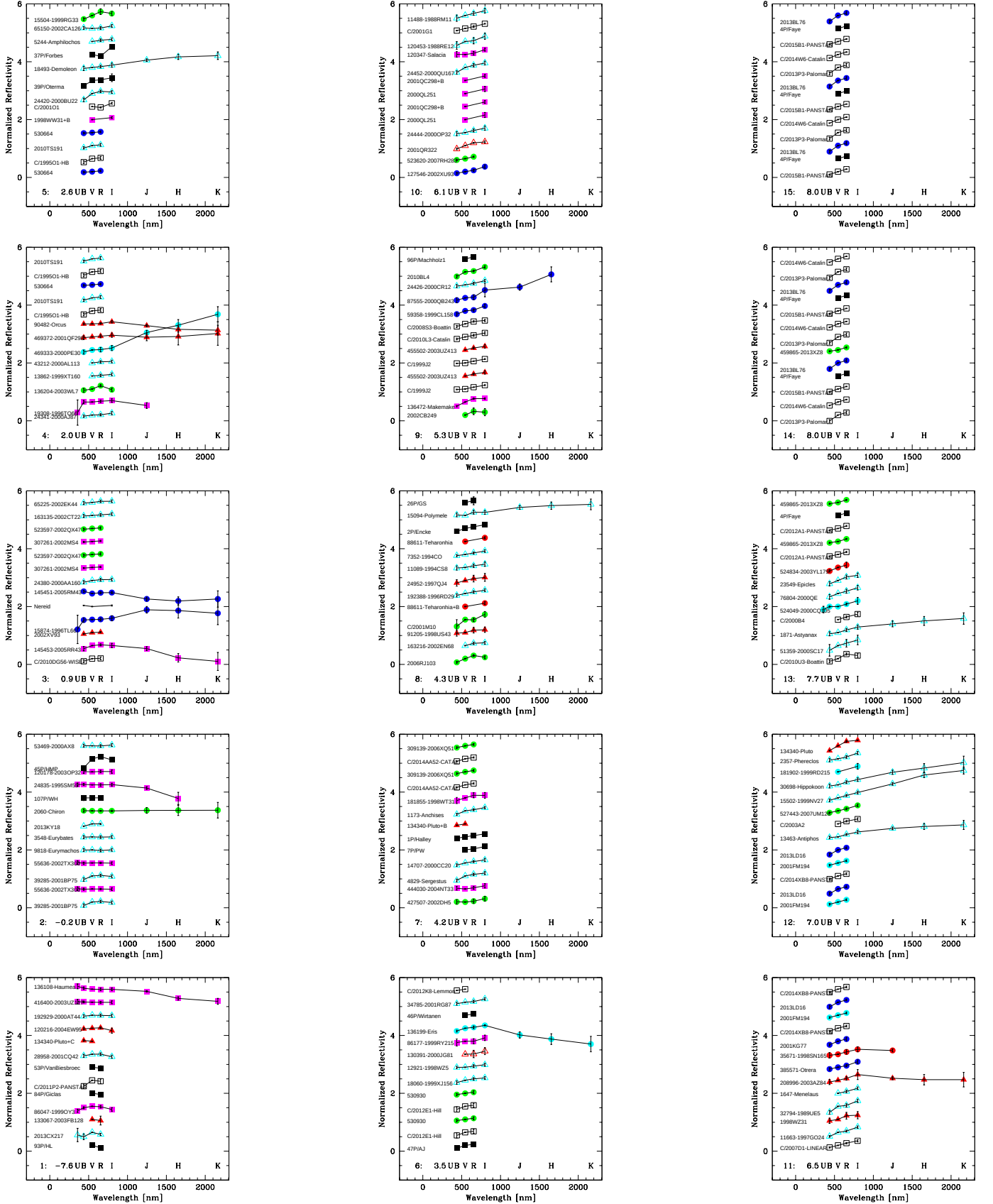


Fig. 5. Reflectivity spectra sorted by increasing gradient. The reflectivity is normalized to 1 for the V filter; the spectra have been arbitrarily shifted for clarity. The meaning of the symbols is given in Fig. 1. The numbers at the bottom left of each panel are the sequential number of the plot and the gradient of the first object. [tnoGrad]

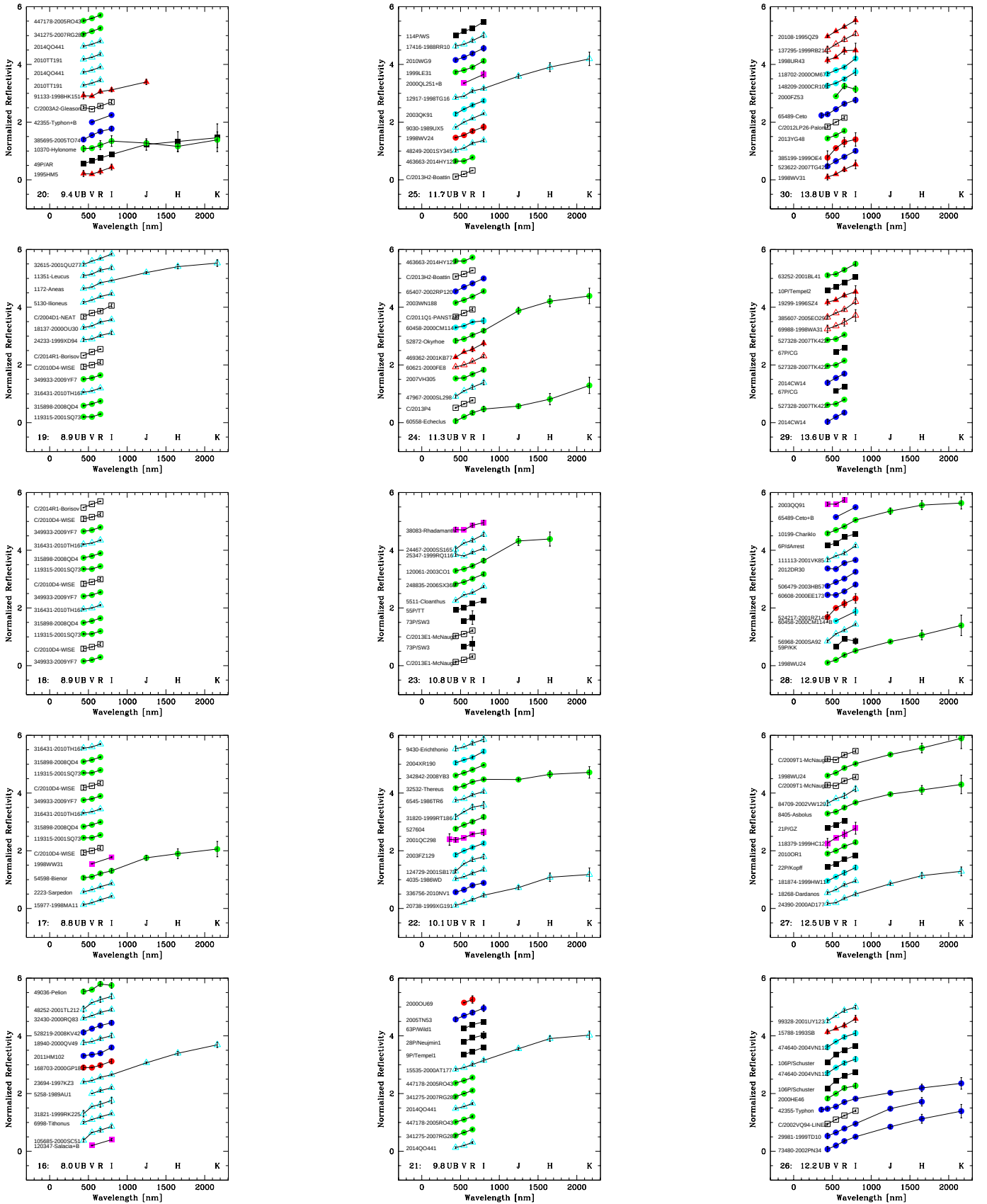


Fig. 5. (cont'd) Reflectivity spectra sorted by increasing gradient. The reflectivity is normalized to 1 for the V filter; the spectra have been arbitrarily shifted for clarity. The meaning of the symbols is given in Fig. 1

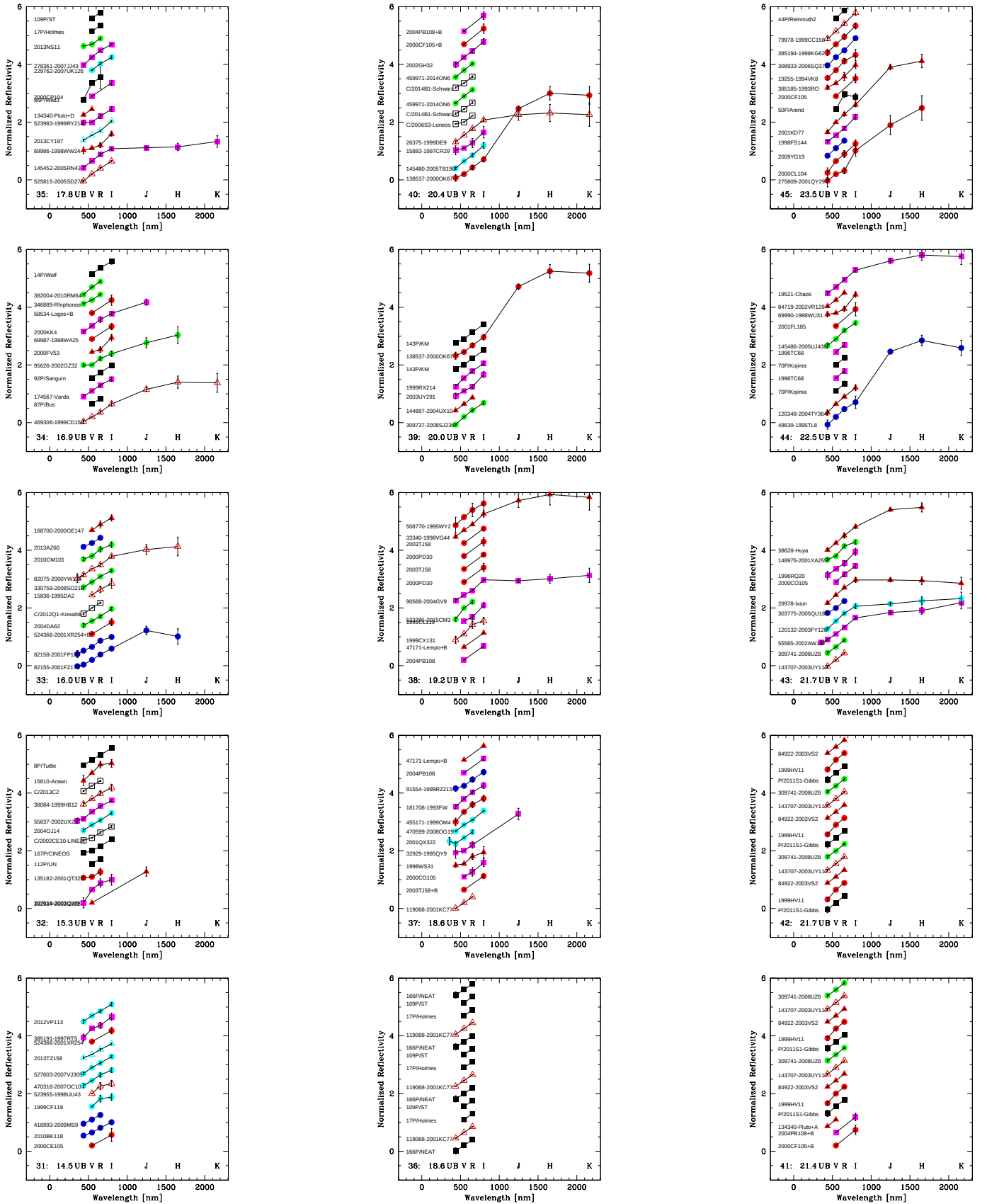


Fig. 5. (cont'd) Reflectivity spectra sorted by increasing gradient. The reflectivity is normalized to 1 for the V filter; the spectra have been arbitrarily shifted for clarity. The meaning of the symbols is given in Fig. 1

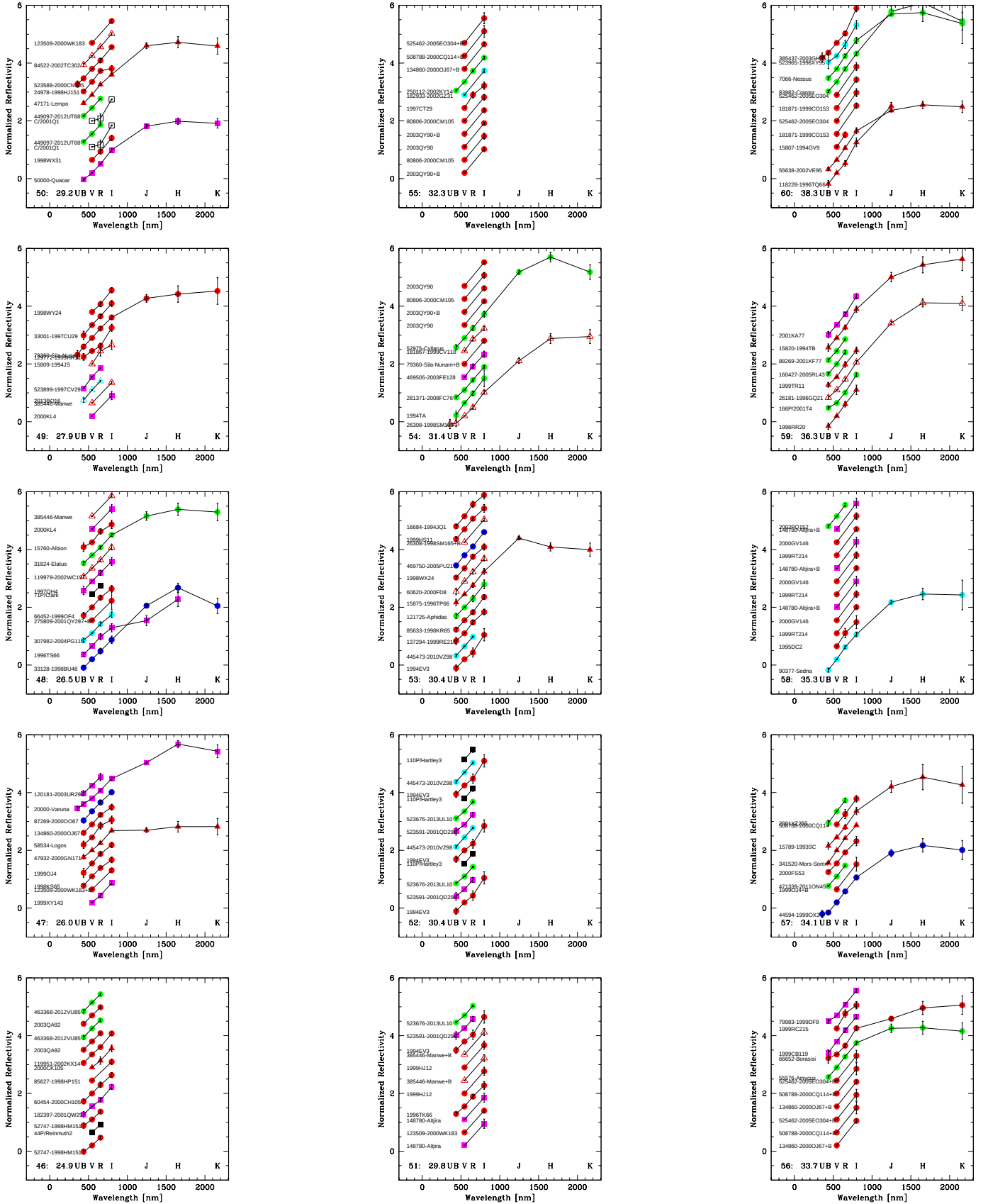
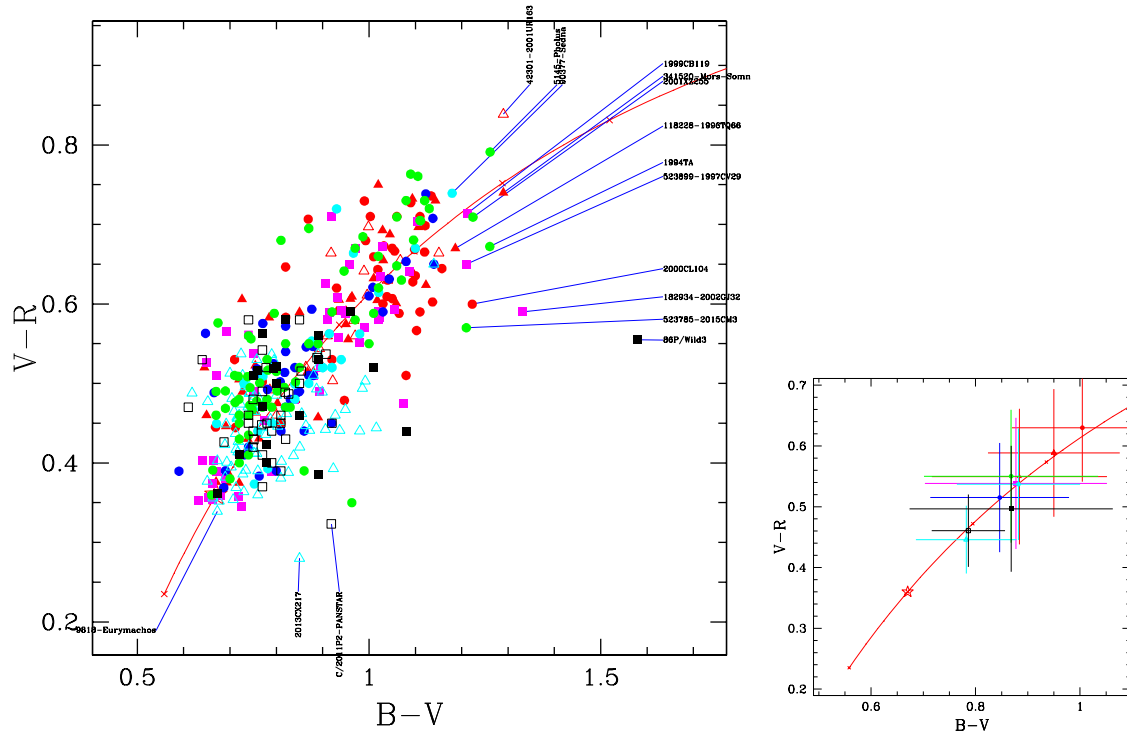
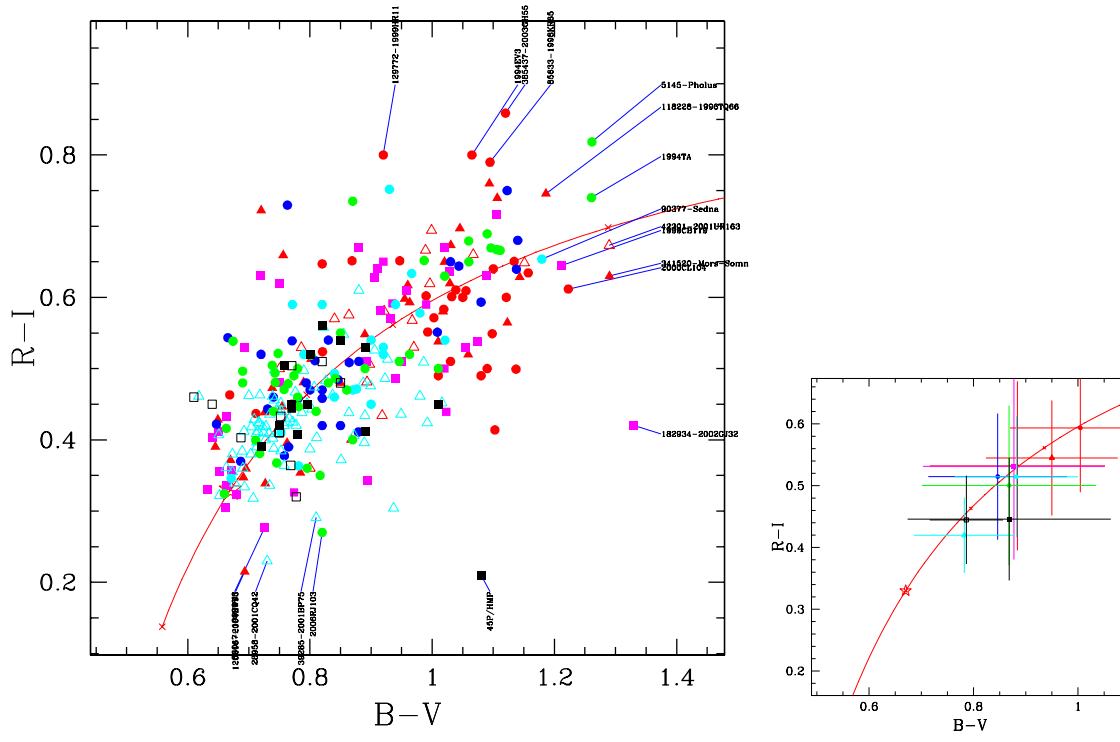
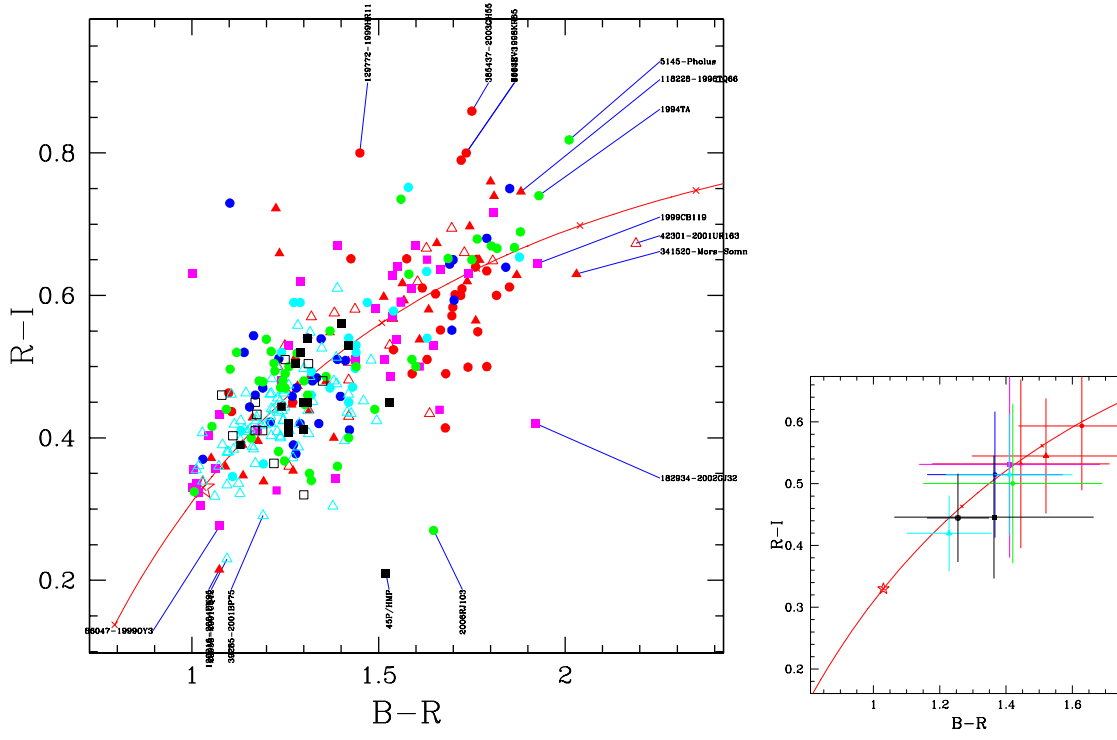
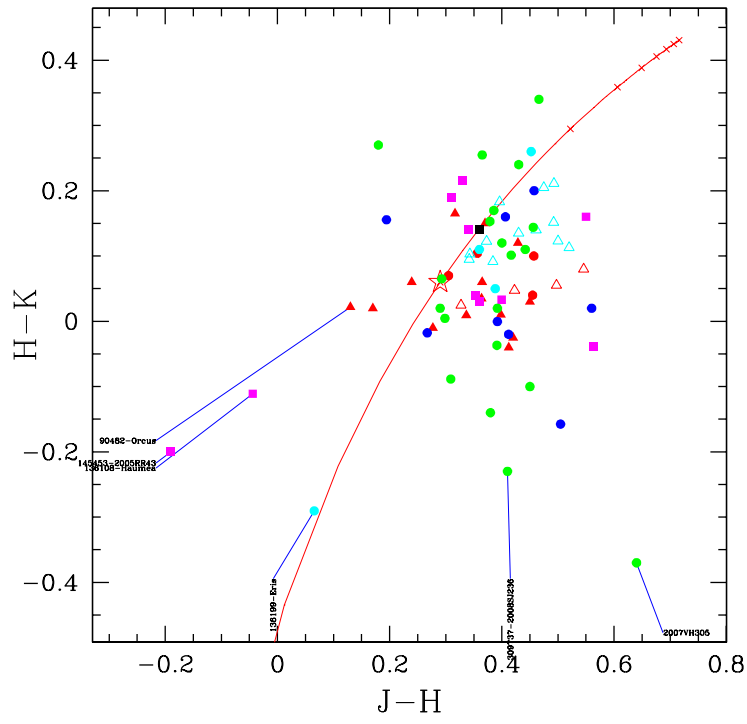


Fig. 6. (cont'd) Reflectivity spectra sorted by increasing gradient. The reflectivity is normalized to 1 for the V filter; the spectra have been arbitrarily shifted for clarity. The meaning of the symbols is given in Fig. 1









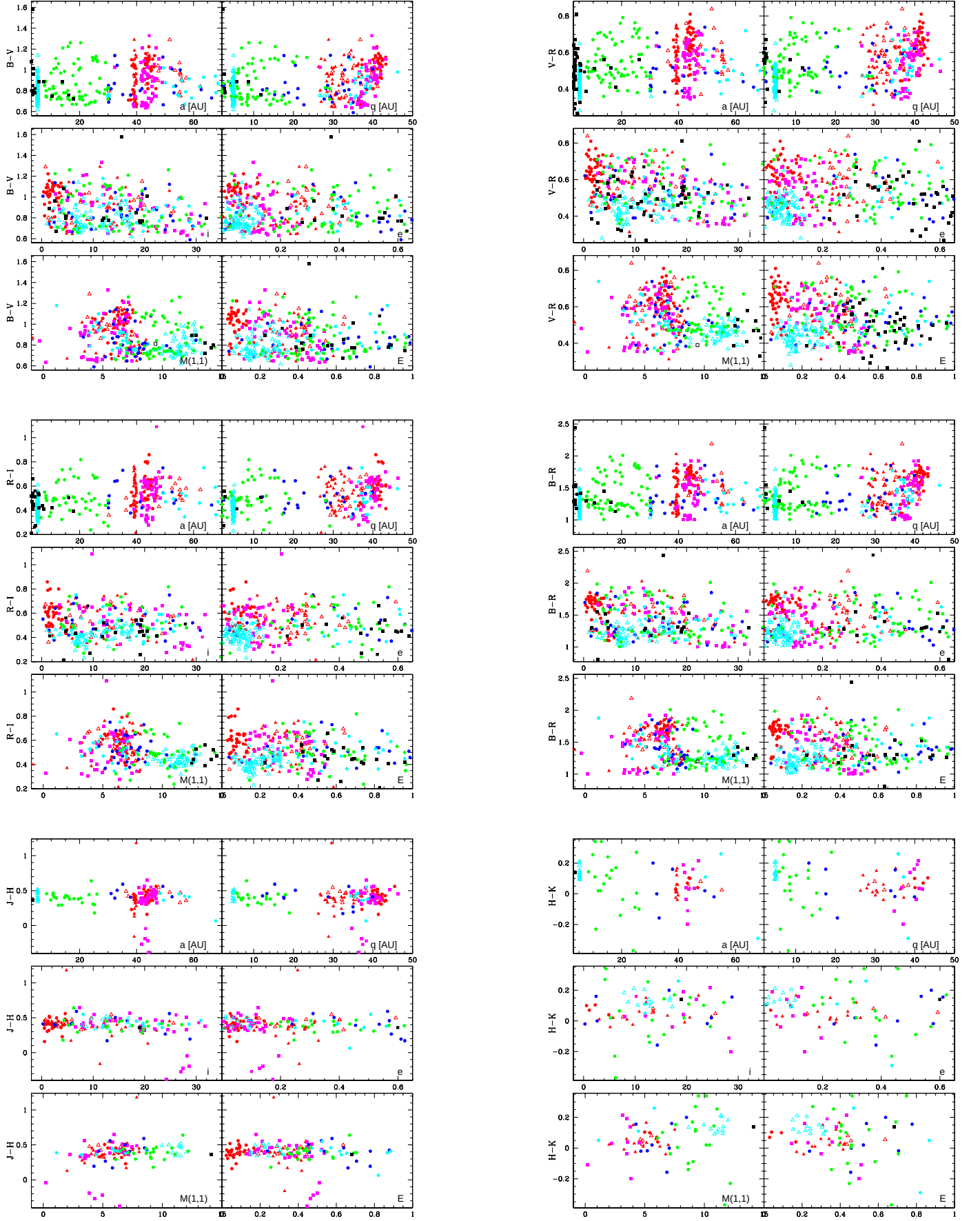


Fig. 8. Colour distributions as functions of the absolute magnitude $M(1,1)$, the orbit semi-major axis a [AU], the eccentricity e , the inclination i and the orbit energy $\mathcal{E}$ (see text for definition). Red curves indicating objects of mag. 20, 22, 24 are drawn on the plot of absolute mag vs q . The meaning of the different symbols is given in Fig. 1. [tnoOrbit]

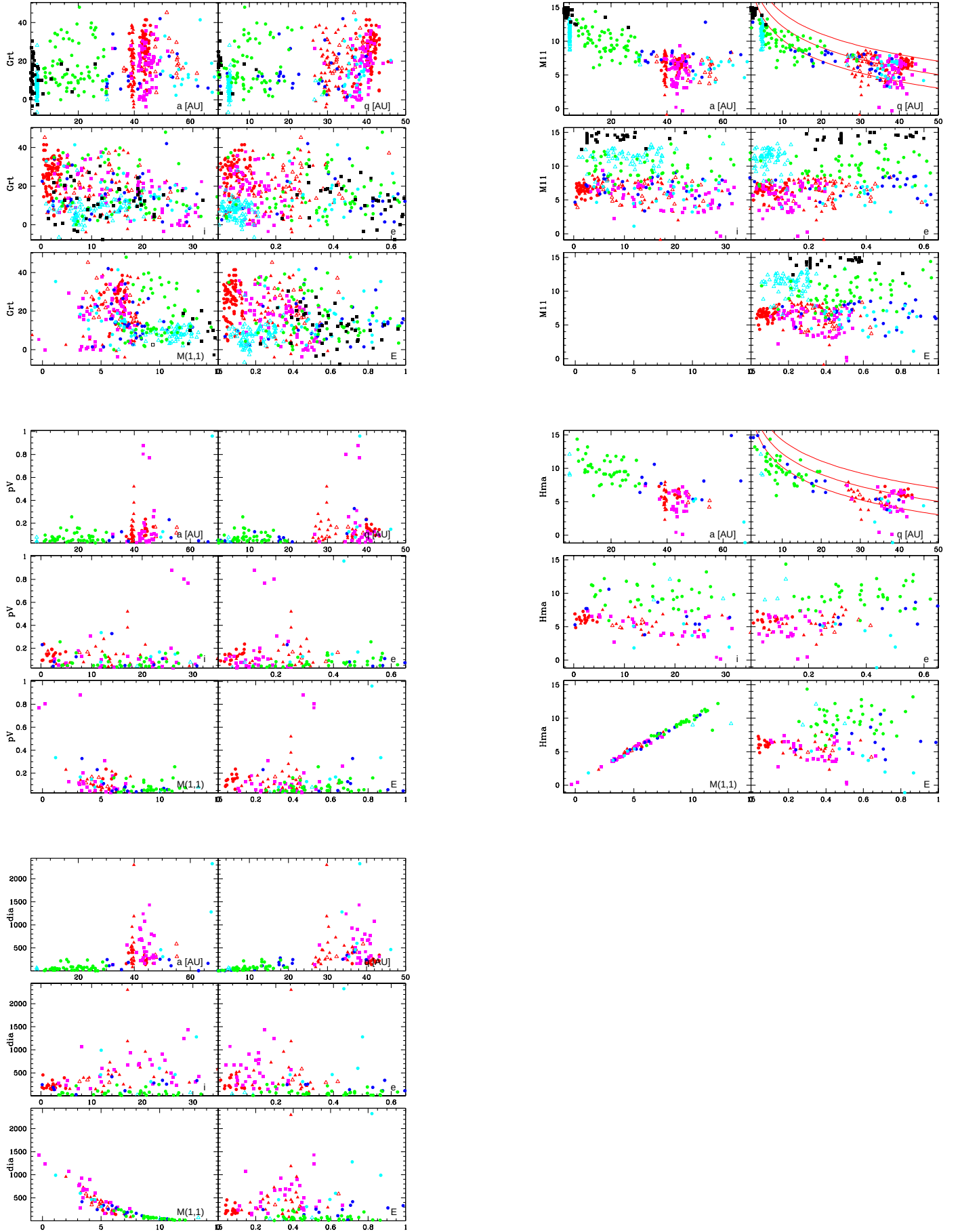


Fig. 10. Cont'd

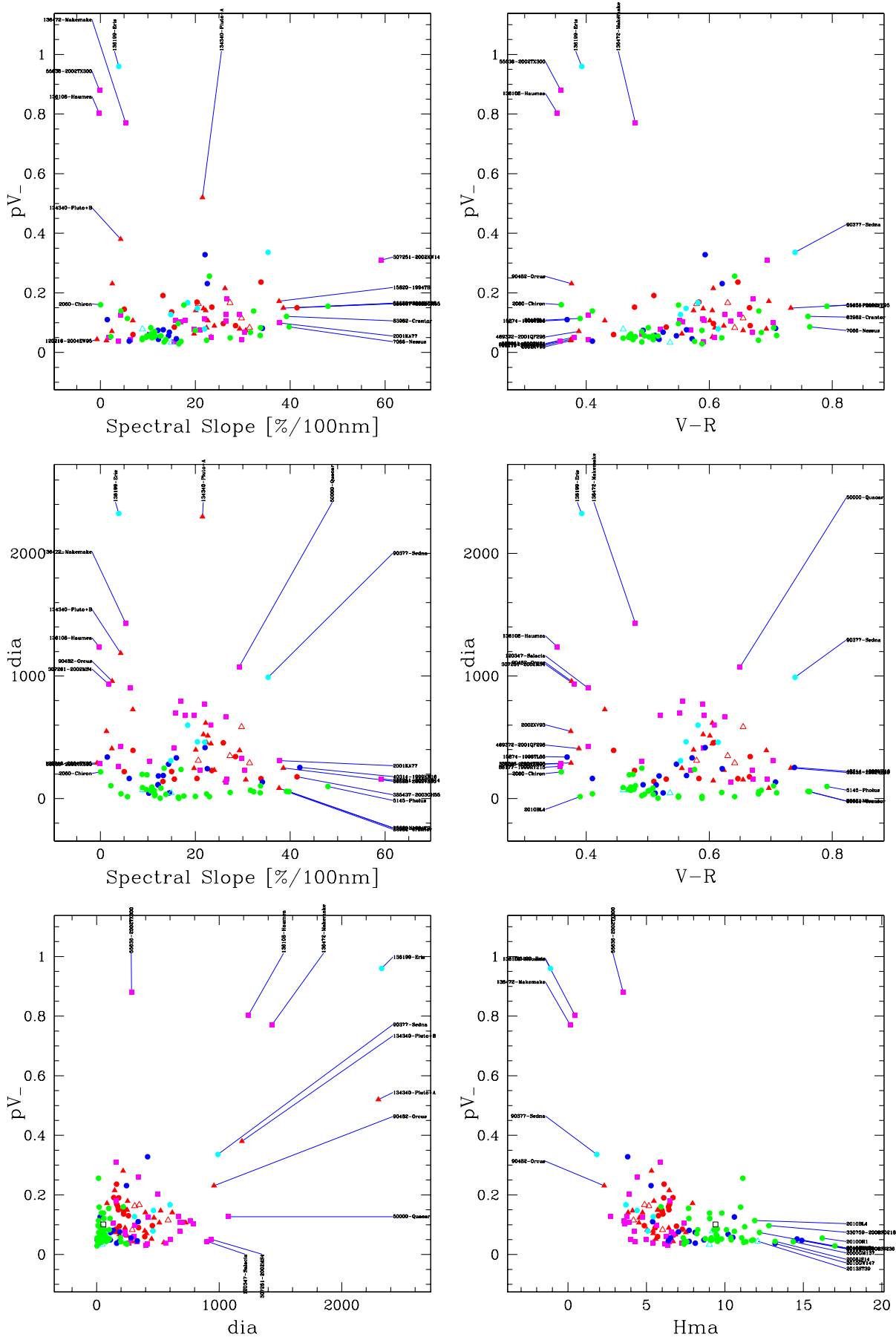


Fig. 11. MBOSS thermal IR parametres [colorColorOne]

Table 3. Average of measurements for the various classes of objects. For each item, the table lists the number of objects included in the statistics, as well as the average colour and the square root of the corresponding variance (which is undefined and set to 0 in case only one object is available). Values in **bold** have at least 5 measurements. [tnoCentaurisKS]

Colour	Res. 3:2	Res.others	Classic Cd	Classic Ht	Scattered	Detached	J.Trojans	Centauris	SP Comets	LP Comets
U-B	0	2	3	10	7	2	1	0	0	0
	—	0.273± 0.090	0.593± 0.123	0.274± 0.168	0.334± 0.144	0.180± 0.156	0.100± 0.000	—	—	—
U-V	0	2	3	10	7	2	1	0	0	0
	—	1.289± 0.030	1.697± 0.110	1.035± 0.232	1.255± 0.239	0.970± 0.014	0.950± 0.000	—	—	—
U-R	0	2	3	10	7	2	1	0	0	0
	—	1.888± 0.102	2.350± 0.128	1.478± 0.316	1.803± 0.290	1.465± 0.092	1.230± 0.000	—	—	—
U-I	0	1	2	7	4	0	0	0	0	0
	—	2.470± 0.000	3.060± 0.141	1.921± 0.448	2.377± 0.465	—	—	—	—	—
B-V	44	20	40	48	41	24	83	72	20	33
	0.884± 0.168	0.950± 0.126	1.005± 0.135	0.877± 0.174	0.846± 0.133	0.882± 0.118	0.782± 0.096	0.868± 0.167	0.868± 0.195	0.786± 0.070
B-R	39	22	40	47	43	25	83	74	20	32
	1.445± 0.268	1.521± 0.223	1.629± 0.191	1.411± 0.273	1.367± 0.205	1.410± 0.191	1.228± 0.128	1.420± 0.269	1.364± 0.301	1.255± 0.093
B-I	32	17	26	40	32	21	76	42	13	11
	1.956± 0.421	2.085± 0.318	2.216± 0.256	1.886± 0.380	1.884± 0.310	1.934± 0.239	1.650± 0.156	1.901± 0.371	1.791± 0.130	1.643± 0.108
B-J	4	3	1	1	4	2	5	9	1	0
	2.544± 0.880	3.163± 0.395	3.148± 0.000	2.975± 0.000	3.148± 0.604	3.005± 0.770	2.247± 0.105	2.676± 0.768	2.400± 0.000	—
B-H	4	3	1	1	4	2	5	9	1	0
	2.983± 0.923	3.656± 0.423	3.608± 0.000	3.375± 0.000	3.551± 0.465	3.389± 0.637	2.674± 0.159	3.184± 0.716	2.760± 0.000	—
B-K	3	2	1	1	2	1	5	9	1	0
	3.173± 1.085	3.529± 0.517	3.648± 0.000	3.395± 0.000	3.797± 0.066	3.890± 0.000	2.823± 0.206	3.252± 0.653	2.900± 0.000	—
V-R	45	25	48	55	41	26	89	74	46	6
	0.550± 0.111	0.589± 0.105	0.630± 0.089	0.538± 0.108	0.515± 0.090	0.537± 0.092	0.446± 0.056	0.550± 0.109	0.497± 0.104	0.461± 0.060
V-I	41	26	73	60	34	26	82	47	23	5
	1.090± 0.222	1.159± 0.171	1.234± 0.157	1.055± 0.234	1.021± 0.167	1.048± 0.169	0.866± 0.096	1.042± 0.218	0.945± 0.117	0.912± 0.129
V-J	15	5	4	13	9	4	12	11	1	0
	1.884± 0.474	2.138± 0.327	1.944± 0.484	1.585± 0.428	1.754± 0.481	1.614± 0.601	1.551± 0.120	1.756± 0.479	1.630± 0.000	—
V-H	9	4	1	6	7	4	12	11	1	0
	2.100± 0.537	2.457± 0.495	2.881± 0.000	1.960± 0.536	2.194± 0.575	1.898± 0.741	1.986± 0.177	2.204± 0.459	1.990± 0.000	—
V-K	7	3	1	6	5	3	12	11	1	0
	2.115± 0.585	2.377± 0.544	2.921± 0.000	2.017± 0.586	2.279± 0.552	1.783± 1.078	2.125± 0.206	2.315± 0.389	2.130± 0.000	—
R-I	39	22	37	44	30	23	82	47	24	5
	0.532± 0.136	0.545± 0.093	0.594± 0.104	0.531± 0.151	0.515± 0.102	0.514± 0.098	0.420± 0.061	0.500± 0.129	0.446± 0.099	0.445± 0.071
R-J	4	3	0	3	5	2	5	9	1	0
	1.428± 0.418	1.527± 0.136	—	1.348± 0.086	1.447± 0.262	1.498± 0.087	1.080± 0.066	1.280± 0.360	1.160± 0.000	—
R-H	4	3	0	3	5	2	5	9	1	0
	1.912± 0.286	2.021± 0.184	—	1.761± 0.044	1.862± 0.242	1.882± 0.046	1.508± 0.122	1.717± 0.347	1.520± 0.000	—
R-K	2	2	0	1	3	1	5	9	1	0
	2.113± 0.076	2.066± 0.355	—	1.803± 0.000	2.020± 0.075	1.900± 0.000	1.656± 0.170	1.783± 0.309	1.660± 0.000	—
I-J	8	6	2	4	9	1	5	16	1	0
	0.716± 0.189	0.843± 0.211	1.043± 0.238	0.659± 0.136	0.838± 0.290	0.950± 0.000	0.662± 0.062	0.774± 0.184	0.730± 0.000	—
I-H	3	4	1	2	4	1	5	9	1	0
	1.053± 0.479	1.317± 0.252	1.671± 0.000	1.230± 0.121	1.206± 0.429	1.240± 0.000	1.089± 0.115	1.146± 0.213	1.090± 0.000	—
I-K	3	4	1	2	3	1	5	9	1	0
	1.102± 0.525	1.348± 0.289	1.711± 0.000	1.227± 0.070	1.364± 0.141	1.290± 0.000	1.238± 0.159	1.233± 0.229	1.230± 0.000	—
J-H	23	13	29	35	12	11	12	22	1	0
	0.368± 0.223	0.437± 0.065	0.402± 0.083	0.329± 0.245	0.399± 0.131	0.387± 0.120	0.434± 0.064	0.388± 0.089	0.360± 0.000	—
J-K	15	5	4	10	10	4	12	22	1	0
	0.371± 0.127	0.515± 0.123	0.483± 0.086	0.340± 0.341	0.460± 0.128	0.314± 0.383	0.574± 0.091	0.463± 0.159	0.500± 0.000	—
H-K	14	4	4	10	8	4	12	21	1	0
	0.043± 0.062	0.052± 0.023	0.079± 0.030	0.046± 0.135	0.042± 0.120	0.032± 0.233	0.139± 0.041	0.066± 0.184	0.140± 0.000	—
M11	44	25	49	58	35	26	69	62	134	13
	6.257± 2.007	6.148± 1.375	6.537± 0.719	5.468± 1.887	7.369± 1.838	5.386± 2.107	11.326± 1.689	9.918± 1.965	16.152± 1.603	13.550± 3.601
Grt	51	28	80	67	43	29	89	74	46	37
	17.487± 11.370	22.052± 9.533	26.167± 9.143	17.319± 11.645	14.271± 8.676	16.577± 9.242	7.276± 4.801	17.218± 11.408	11.786± 8.347	9.341± 6.085
Hma	22	4	16	29	19	7	3	44	0	1
	5.441± 1.327	5.057± 0.766	6.136± 0.573	4.797± 1.808	8.448± 3.161	3.040± 2.314	10.100± 1.735	10.147± 2.239	—	9.400± 0.000
dia	24	4	16	29	19	7	3	44	0	1
	500.371±462.645	383.525±135.785	230.312± 90.703	544.666±335.175	166.219±125.272	918.286±707.956	46.633± 22.957	69.183± 62.029	—	55.100± 0.000
pV	24	4	16	29	17	6	3	44	0	1
	0.148± 0.113	0.132± 0.040	0.140± 0.046	0.175± 0.232	0.089± 0.077	0.303± 0.334	0.052± 0.023	0.078± 0.045	—	0.101± 0.000

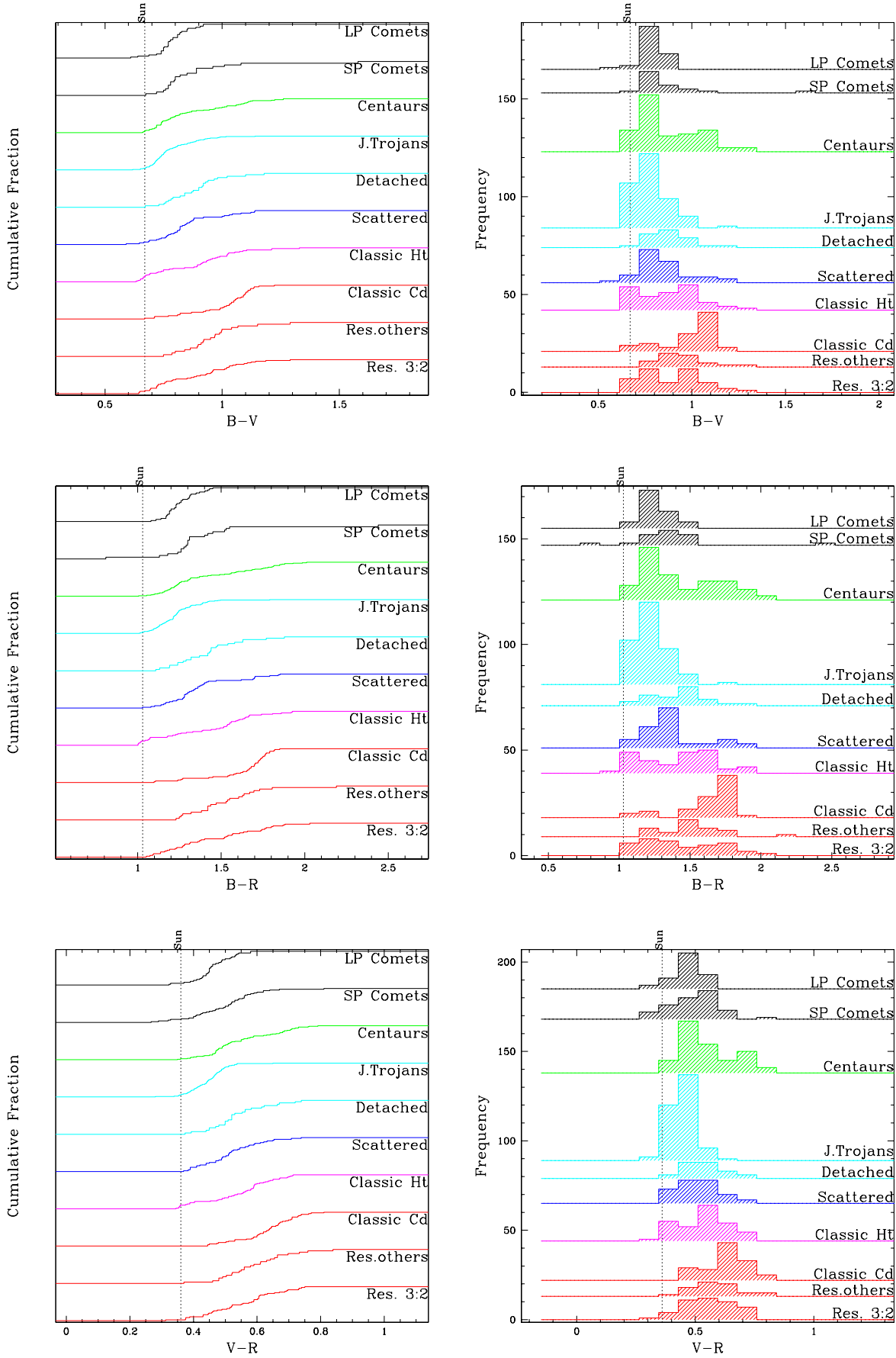


Fig. 12. CPF and histograms for the colour indices for all the classes of object [tnoCentaurKS]).

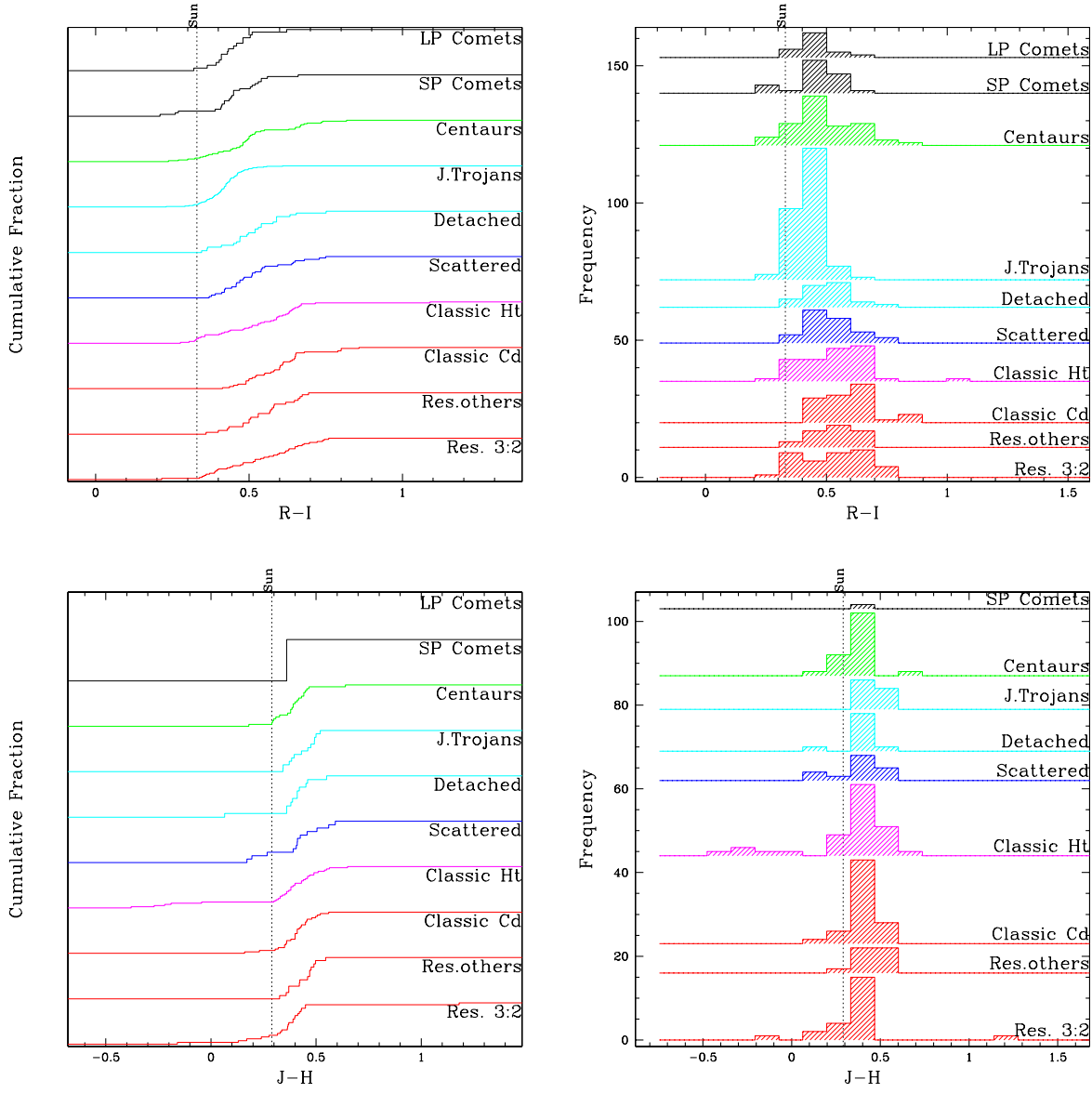


Fig. 12. cont;d

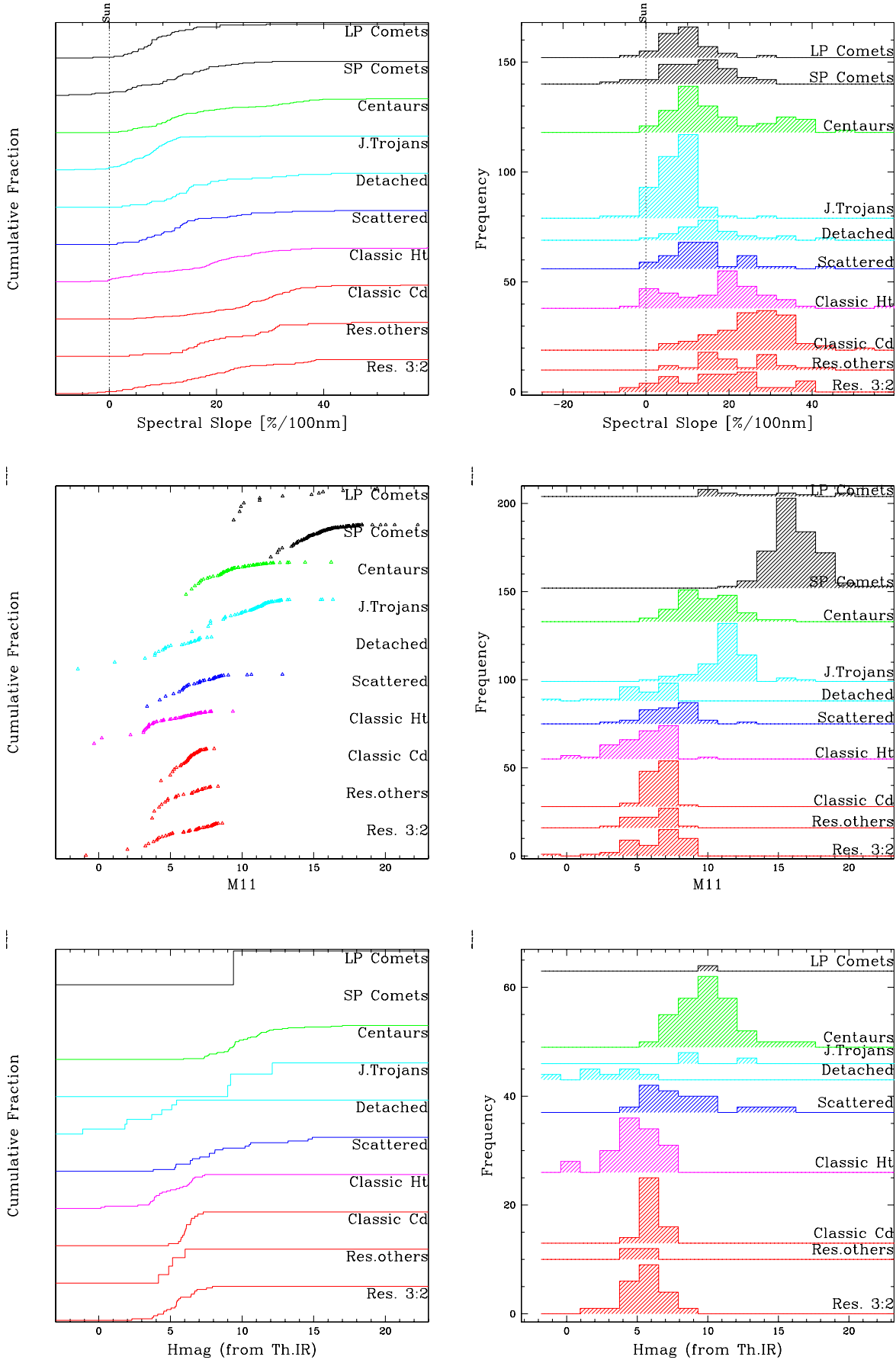


Fig. 12. CPF and histograms for gradient and absolute magnitude [tnoCentaursKS]).

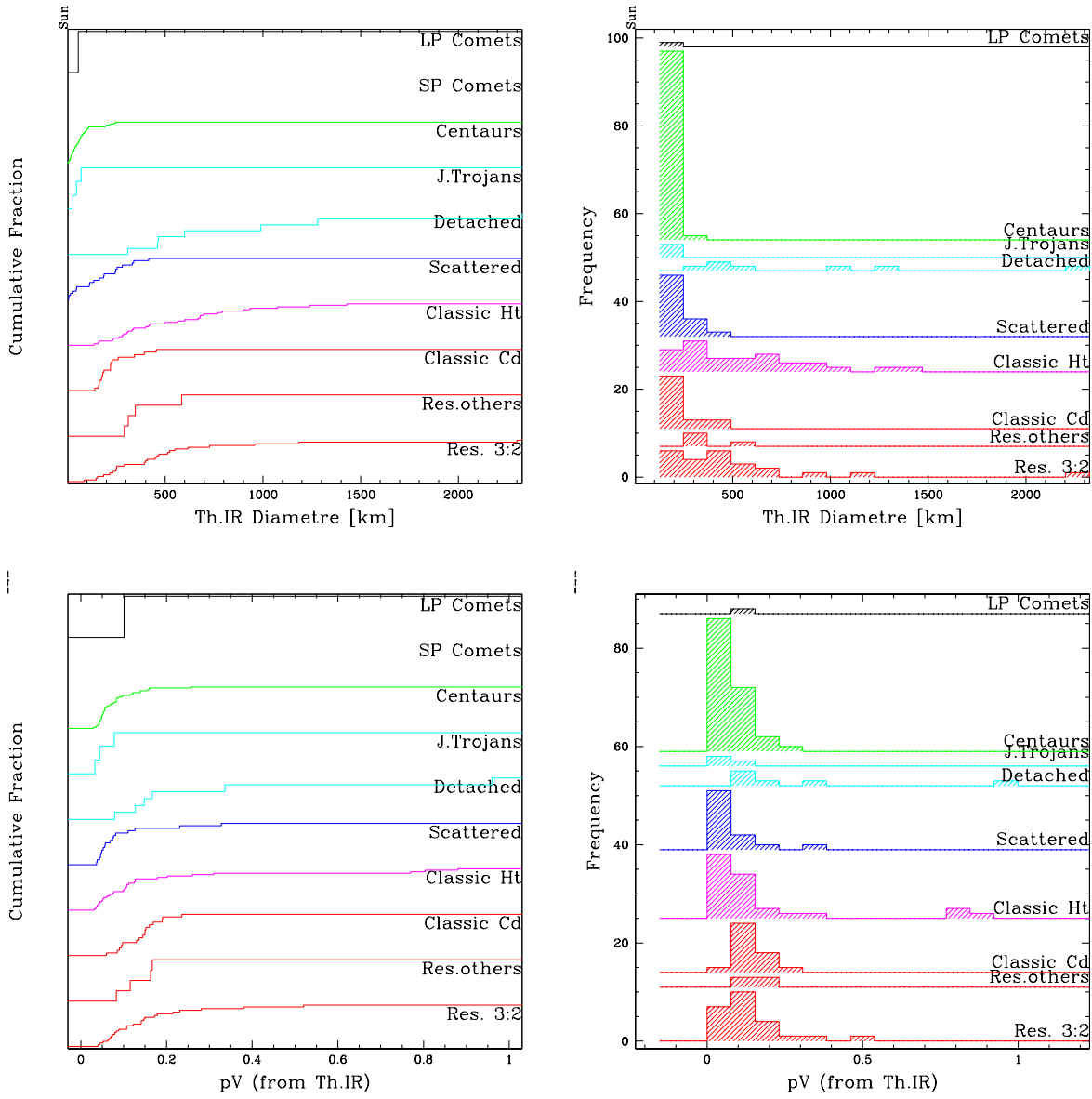


Fig. 12. CPF and Histograms for Thermal IR data

Table 4. Size, mean and square-root of the variance of the sub-samples used for statistical tests: t tests the mean of the 2 sub-samples, f the broadening of the 2 sub-sample, and r is the correlation of the colour (or measurement) with the parameter (a , i , ...). This table refers to all non-Trojan MBOSSes. [tnoOrbit]

All MBOSS populations (except Trojans)							
Colour	Cut	Pop. 1 (small)		Pop. 2 (large)		Statistics	
		n_1	$\bar{x}/\sigma$	n_2	$\bar{x}/\sigma$	$t/Prob$	$f/Prob$
vs. a : semi-major axis.							
B-V	39.17	124	0.86± 0.17	158	0.92± 0.16	-2.56/0.011	1.18/0.324
B-R	39.17	126	1.40± 0.27	157	1.48± 0.25	-2.43/0.016	1.15/0.398
B-I	39.17	76	1.89± 0.34	124	1.99± 0.37	-1.84/0.067	1.16/0.483
V-R	39.17	154	0.53± 0.11	179	0.57± 0.11	-2.80 / 0.005	1.10/0.557
V-I	39.17	98	1.03± 0.19	208	1.13± 0.21	-3.92 / 0.000	1.20/0.307
V-J	39.17	19	1.77± 0.43	39	1.78± 0.47	-0.07/0.944	1.19/0.715
R-I	39.17	94	0.49± 0.12	150	0.54± 0.13	-3.30 / 0.001	1.08/0.682
I-J	39.17	23	0.76± 0.22	21	0.80± 0.22	-0.61/0.543	1.02/0.955
J-H	39.17	37	0.39± 0.13	103	0.37± 0.18	0.43/0.666	2.09/0.014
H-K	39.17	30	0.06± 0.16	33	0.05± 0.11	0.35/0.726	2.21/0.031
M11	39.17	117	10.26± 2.95	187	6.09± 1.70	13.90 / 0.000	3.00 / 0.000
Grt	39.17	157	15.57± 10.43	230	20.08± 10.84	-4.11 / 0.000	1.08/0.602
Hma	39.17	59	8.89± 2.28	72	5.39± 2.34	8.63 / 0.000	1.06/0.823
dia	39.17	61	128.77± 139.07	74	479.53± 435.10	-6.54 / 0.000	9.79 / 0.000
pV	39.17	60	0.08± 0.04	72	0.17± 0.19	-3.96 / 0.000	17.78 / 0.000
vs. q : Perihelion distance.							
B-V	29.57	127	0.87± 0.17	166	0.91± 0.16	-2.15/0.032	1.08/0.628
B-R	29.57	132	1.41± 0.26	162	1.48± 0.25	-2.28/0.023	1.09/0.600
B-I	29.57	84	1.90± 0.34	126	1.99± 0.36	-1.80/0.073	1.15/0.503
V-R	29.57	156	0.53± 0.11	188	0.57± 0.11	-3.14 / 0.002	1.02/0.898
V-I	29.57	102	1.02± 0.20	215	1.13± 0.21	-4.32 / 0.000	1.14/0.468
V-J	29.57	24	1.86± 0.40	37	1.72± 0.50	1.18/0.245	1.56/0.265
R-I	29.57	100	0.50± 0.13	153	0.54± 0.12	-3.06 / 0.002	1.01/0.956
I-J	29.57	27	0.77± 0.21	19	0.81± 0.23	-0.51/0.610	1.24/0.601
J-H	29.57	40	0.40± 0.18	104	0.37± 0.16	1.02/0.309	1.15/0.561
H-K	29.57	31	0.06± 0.16	34	0.05± 0.11	0.52/0.608	2.13/0.036
M11	29.57	123	10.23± 2.86	191	5.96± 1.63	15.08 / 0.000	3.08 / 0.000
Grt	29.57	158	15.39± 10.55	242	20.14± 10.67	-4.38 / 0.000	1.02/0.885
Hma	29.57	65	9.17± 2.35	69	4.93± 1.62	12.12 / 0.000	2.09 / 0.003
dia	29.57	67	112.28± 114.69	71	514.50± 426.82	-7.65 / 0.000	13.85 / 0.000
pV	29.57	66	0.08± 0.05	69	0.18± 0.19	-4.05 / 0.000	13.32 / 0.000
vs. e : eccentricity.							
B-V	0.29	165	0.91± 0.17	143	0.88± 0.15	1.71/0.088	1.21/0.242
B-R	0.29	160	1.47± 0.27	149	1.41± 0.24	2.04/0.042	1.20/0.255
B-I	0.29	121	1.96± 0.37	101	1.94± 0.33	0.44/0.661	1.24/0.270
V-R	0.29	185	0.57± 0.11	174	0.53± 0.10	2.70 / 0.007	1.16/0.324
V-I	0.29	204	1.12± 0.21	125	1.05± 0.19	3.00 / 0.003	1.21/0.251
V-J	0.29	36	1.73± 0.45	26	1.86± 0.49	-1.07/0.289	1.22/0.576
R-I	0.29	145	0.54± 0.13	120	0.51± 0.12	1.82/0.070	1.08/0.650
I-J	0.29	21	0.75± 0.21	26	0.82± 0.21	-1.06/0.293	1.03/0.929
J-H	0.29	99	0.37± 0.19	47	0.40± 0.11	-1.12/0.264	2.90 / 0.000
H-K	0.29	33	0.05± 0.10	33	0.05± 0.16	0.04/0.972	2.63 / 0.008
M11	0.29	184	6.47± 2.20	141	9.08± 3.29	-8.12 / 0.000	2.24 / 0.000
Grt	0.29	236	19.91± 10.93	179	15.96± 10.08	3.81 / 0.000	1.18/0.255
Hma	0.29	74	5.72± 2.06	65	8.44± 3.11	-5.99 / 0.000	2.27 / 0.001
dia	0.29	76	429.24± 365.48	67	194.49± 344.52	3.95 / 0.000	1.13/0.626
pV	0.29	76	0.15± 0.16	64	0.11± 0.13	1.42/0.156	1.58/0.063
vs. i : inclination.							
B-V	10.30	119	0.94± 0.16	190	0.86± 0.15	4.23 / 0.000	1.13/0.456
B-R	10.30	120	1.53± 0.26	189	1.39± 0.24	4.73 / 0.000	1.13/0.443
B-I	10.30	81	2.05± 0.35	142	1.89± 0.34	3.24 / 0.001	1.05/0.800
V-R	10.30	145	0.59± 0.11	214	0.53± 0.10	5.25 / 0.000	1.15/0.341
V-I	10.30	155	1.16± 0.20	175	1.03± 0.20	6.00 / 0.000	1.00/0.984
V-J	10.30	22	1.91± 0.41	40	1.71± 0.49	1.65/0.104	1.44/0.379
R-I	10.30	106	0.56± 0.13	159	0.50± 0.12	3.21 / 0.002	1.22/0.250
I-J	10.30	14	0.77± 0.30	33	0.80± 0.17	-0.34/0.739	3.19 / 0.007
J-H	10.30	69	0.42± 0.13	77	0.34± 0.19	3.04 / 0.003	2.10 / 0.002
H-K	10.30	21	0.04± 0.15	45	0.06± 0.13	-0.75/0.460	1.33/0.421
M11	10.30	147	8.02± 2.86	180	7.27± 3.09	2.27/0.024	1.17/0.333
Grt	10.30	188	21.73± 10.67	228	15.23± 9.93	6.39 / 0.000	1.16/0.295
Hma	10.30	45	6.91± 1.93	96	7.04± 3.28	-0.30/0.764	2.89 / 0.000
dia	10.30	45	219.00± 169.17	100	361.76± 425.90	-2.88 / 0.005	6.34 / 0.000
pV	10.30	45	0.12± 0.06	97	0.13± 0.17	-0.49/0.623	7.46 / 0.000
vs. $E = \sqrt{e^2 + \sin^2 i}$: orbit energy.							
B-V	0.41	149	0.93± 0.17	159	0.85± 0.15	4.39 / 0.000	1.35/0.063
B-R	0.41	145	1.52± 0.26	164	1.38± 0.23	5.18 / 0.000	1.23/0.198
B-I	0.41	102	2.05± 0.36	120	1.87± 0.32	4.07 / 0.000	1.24/0.252
V-R	0.41	170	0.59± 0.11	189	0.52± 0.10	6.38 / 0.000	1.10/0.530
V-I	0.41	182	1.16± 0.20	147	1.01± 0.19	7.17 / 0.000	1.03/0.876
V-J	0.41	31	1.88± 0.42	31	1.68± 0.50	1.75/0.086	1.42/0.339
R-I	0.41	127	0.56± 0.13	138	0.50± 0.12	4.10 / 0.000	1.14/0.439
I-J	0.41	20	0.81± 0.20	27	0.77± 0.22	0.70/0.490	1.16/0.749
J-H	0.41	87	0.40± 0.13	59	0.35± 0.21	1.86/0.066	2.46 / 0.000
H-K	0.41	31	0.07± 0.09	35	0.04± 0.17	1.07/0.290	3.50 / 0.001
M11	0.41	172	7.24± 2.59	153	8.01± 3.39	-2.29/0.023	1.71 / 0.001
Grt	0.41	219	21.67± 10.53	196	14.34± 9.61	7.41 / 0.000	1.20/0.190
Hma	0.41	66	6.42± 2.14	73	7.51± 3.43	-2.28/0.025	2.58 / 0.000
dia	0.41	68	352.54± 347.27	75	289.07± 395.77	1.02/0.309	1.30/0.278
pV	0.41	68	0.12± 0.08	72	0.14± 0.19	-0.68/0.498	4.91 / 0.000
vs. $M(1, 1)$: absolute magnitude. $M_{\text{cut}} = 7$.							
B-V	7.00	137	0.93± 0.16	132	0.87± 0.17	3.20 / 0.002	1.13/0.467
B-R	7.00	133	1.50± 0.25	138	1.40± 0.26	3.28 / 0.001	1.09/0.604
B-I	7.00	115	2.02± 0.36	86	1.88± 0.33	2.86 / 0.005	1.20/0.368
V-R	7.00	157	0.58± 0.11	166	0.53± 0.11	3.58 / 0.000	1.06/0.720
V-I	7.00	140	1.12± 0.22	118	1.04± 0.19	3.16 / 0.002	1.26/0.193
V-J	7.00	42	1.76± 0.48	17	1.88± 0.43	-0.93/0.357	1.24/0.656
R-I	7.00	133	0.55± 0.12	111	0.50± 0.12	2.94 / 0.004	1.02/0.905
I-J	7.00	27	0.79± 0.21	19	0.79± 0.22	0.01/0.990	1.06/0.870
J-H	7.00	84	0.35± 0.17	34	0.44± 0.16	-2.54/0.014	1.21/0.543
H-K	7.00	40	0.05± 0.09	23	0.07± 0.18	-0.58/0.570	3.79 / 0.000
M11	7.00	159	5.50± 1.32	174	9.79± 2.56	—/—	3.74 / 0.000
Grt	7.00	156	20.21± 10.70	167	15.64± 10.32	3.90 / 0.000	1.07/0.649
Hma	7.00	66	5.16± 1.40	35	9.21± 1.30	-14.53 / 0.000	1.18/0.615
dia	7.00	66	438.64± 251.28	35	85.76± 57.48	10.88 / 0.000	19.11 / 0.000
pV	7.00	65	0.14± 0.14	35	0.08± 0.05	3.09 / 0.003	9.02 / 0.000

Table 4. Cont'd, for “Classical Cold” objects (code Q) only.

Classical Cold TNOs								
Colour	Cut	n_1	Pop. 1 (small) $\bar{x}/\sigma$	n_2	Pop. 2 (large) $\bar{x}/\sigma$	$t/Prob$	Statistics $f/Prob$	r
vs. a : semi-major axis.								
B-V	43.93	22	0.98±0.15	18	1.04±0.11	-1.53/0.135	1.93/0.173	0.47
B-R	43.93	23	1.59±0.23	17	1.68±0.11	-1.67/0.105	4.55/ 0.003	0.55
B-I	43.93	12	2.20±0.32	14	2.23±0.20	-0.22/0.830	2.58/0.107	0.37
V-R	43.93	26	0.62±0.10	22	0.65±0.08	-1.29/0.203	1.45/0.390	0.40
V-I	43.93	35	1.23±0.14	38	1.24±0.17	-0.31/0.761	1.43/0.296	0.19
V-J	43.93	2	1.67±0.57	2	2.22±0.29	—/—	—/—	—
R-I	43.93	17	0.59±0.12	20	0.59±0.09	0.04/0.965	1.74/0.249	0.24
I-J	43.93	0	—	2	1.04±0.24	—/—	—/—	—
J-H	43.93	16	0.38±0.09	13	0.43±0.07	-1.82/0.079	1.66/0.382	0.46
H-K	43.93	2	0.09±0.02	2	0.07±0.04	—/—	—/—	—
M11	43.93	23	6.45±0.73	26	6.61±0.72	-0.80/0.428	1.02/0.953	0.30
Grt	43.93	41	25.50±8.64	38	26.15±8.70	-0.33/0.739	1.01/0.962	0.24
Hma	43.93	7	5.98±0.75	9	6.26±0.39	-0.91/0.387	3.77/0.088	0.09
dia	43.93	7	280.71±115.70	9	191.11±37.87	1.97/0.090	9.33/ 0.006	-0.51
pV	43.93	7	0.11±0.04	9	0.16±0.04	-2.59/0.022	1.17/0.873	0.64
vs. q : Perihelion Distance.								
B-V	41.15	22	0.96±0.16	18	1.06±0.06	-2.90/ 0.007	6.05/ 0.000	0.59
B-R	41.15	21	1.56±0.23	19	1.70±0.09	-2.45/0.021	6.28/ 0.000	0.62
B-I	41.15	13	2.12±0.32	13	2.31±0.13	-1.99/0.064	5.55/ 0.006	0.60
V-R	41.15	25	0.60±0.09	23	0.66±0.08	-2.34/0.023	1.42/0.416	0.44
V-I	41.15	39	1.24±0.16	34	1.22±0.15	0.54/0.591	1.14/0.703	0.05
V-J	41.15	3	1.90±0.58	1	2.07±—	—/—	—/—	—
R-I	41.15	20	0.58±0.10	17	0.61±0.11	-1.04/0.308	1.20/0.691	0.33
I-J	41.15	2	1.04±0.24	0	—	—/—	—/—	—
J-H	41.15	12	0.43±0.08	17	0.38±0.08	1.66/0.111	1.05/0.960	0.18
H-K	41.15	2	0.07±0.04	2	0.09±0.02	—/—	—/—	—
M11	41.15	24	6.41±0.86	24	6.65±0.55	-1.17/0.248	2.39/0.042	0.28
Grt	41.15	42	25.06±8.92	37	26.66±8.31	-0.82/0.413	1.15/0.666	0.16
Hma	41.15	10	6.13±0.62	6	6.15±0.53	-0.06/0.953	1.36/0.769	-0.00
dia	41.15	10	231.60±105.13	6	228.17±69.12	0.08/0.938	2.31/0.369	-0.29
pV	41.15	10	0.14±0.05	6	0.13±0.04	0.44/0.664	1.91/0.494	0.29
vs. e : eccentricity.								
B-V	0.05	21	1.01±0.14	19	1.00±0.14	0.05/0.963	1.03/0.958	-0.05
B-R	0.05	22	1.63±0.21	18	1.63±0.17	-0.10/0.922	1.64/0.306	0.03
B-I	0.05	11	2.26±0.26	15	2.18±0.26	0.78/0.445	1.05/0.913	-0.21
V-R	0.05	23	0.62±0.09	25	0.64±0.09	-0.50/0.620	1.20/0.666	0.06
V-I	0.05	35	1.20±0.15	38	1.26±0.16	-1.60/0.114	1.04/0.915	0.18
V-J	0.05	2	1.67±0.57	2	2.22±0.29	—/—	—/—	—
R-I	0.05	16	0.60±0.12	21	0.59±0.09	0.29/0.778	1.58/0.336	-0.05
I-J	0.05	0	—	2	1.04±0.24	—/—	—/—	—
J-H	0.05	14	0.40±0.08	15	0.41±0.09	-0.30/0.770	1.13/0.828	0.29
H-K	0.05	2	0.09±0.02	2	0.07±0.04	—/—	—/—	—
M11	0.05	22	6.51±0.77	26	6.54±0.69	-0.13/0.899	1.24/0.602	0.07
Grt	0.05	38	24.36±8.55	41	27.16±8.57	-1.45/0.151	1.00/0.992	0.14
Hma	0.05	8	6.04±0.76	8	6.23±0.32	-0.64/0.538	5.60/0.037	0.14
dia	0.05	8	274.62±107.76	8	186.00±39.09	2.19/0.057	7.60/0.016	-0.42
pV	0.05	8	0.11±0.03	8	0.17±0.03	-3.98/ 0.001	1.03/0.970	0.64
vs. i : inclination.								
B-V	2.09	21	1.02±0.13	19	0.99±0.15	0.74/0.464	1.33/0.530	-0.30
B-R	2.09	21	1.66±0.16	19	1.60±0.22	0.99/0.331	1.84/0.188	-0.35
B-I	2.09	11	2.28±0.21	15	2.17±0.28	1.07/0.297	1.83/0.339	-0.43
V-R	2.09	25	0.64±0.08	23	0.62±0.10	0.85/0.401	1.73/0.193	-0.32
V-I	2.09	37	1.24±0.13	36	1.23±0.18	0.23/0.819	2.05/0.035	-0.01
V-J	2.09	1	2.01±—	3	1.92±0.59	—/—	—/—	—
R-I	2.09	19	0.61±0.11	18	0.58±0.09	0.69/0.495	1.50/0.406	-0.19
I-J	2.09	1	0.88±—	1	1.21±—	—/—	—/—	—
J-H	2.09	16	0.39±0.09	13	0.41±0.08	-0.55/0.584	1.11/0.872	0.24
H-K	2.09	2	0.09±0.02	2	0.07±0.05	—/—	—/—	—
M11	2.09	26	6.54±0.74	23	6.54±0.71	0.01/0.994	1.11/0.807	0.11
Grt	2.09	40	26.37±7.46	39	25.23±9.74	0.58/0.561	1.70/0.102	-0.11
Hma	2.09	7	6.22±0.78	9	6.07±0.38	0.45/0.663	4.24/0.065	-0.01
dia	2.09	7	227.29±103.94	9	232.67±85.49	-0.11/0.914	1.48/0.593	0.03
pV	2.09	7	0.14±0.05	9	0.14±0.04	-0.28/0.783	1.41/0.637	-0.09
vs. $\mathcal{E} = \sqrt{e^2 + i^2}$: orbit energy.								
B-V	0.07	23	1.02±0.12	17	0.98±0.16	0.94/0.356	1.73/0.229	-0.18
B-R	0.07	24	1.65±0.17	16	1.60±0.22	0.63/0.532	1.62/0.288	-0.13
B-I	0.07	12	2.30±0.13	14	2.15±0.32	1.59/0.129	6.41/ 0.004	-0.36
V-R	0.07	27	0.63±0.09	21	0.62±0.09	0.41/0.683	1.25/0.591	-0.10
V-I	0.07	36	1.20±0.15	37	1.27±0.16	-1.88/0.064	1.04/0.911	0.15
V-J	0.07	1	2.07±—	3	1.90±0.58	—/—	—/—	—
R-I	0.07	18	0.59±0.12	19	0.60±0.09	-0.33/0.744	1.61/0.324	-0.12
I-J	0.07	0	—	2	1.04±0.24	—/—	—/—	—
J-H	0.07	16	0.36±0.08	13	0.45±0.06	-3.15/ 0.004	2.30/0.152	0.33
H-K	0.07	2	0.09±0.02	2	0.07±0.04	—/—	—/—	—
M11	0.07	24	6.53±0.70	24	6.53±0.76	-0.01/0.990	1.18/0.694	0.13
Grt	0.07	41	24.61±8.66	38	27.10±8.51	-1.29/0.201	1.04/0.916	0.06
Hma	0.07	7	6.19±0.84	9	6.09±0.29	0.32/0.761	8.20/ 0.009	0.08
dia	0.07	7	246.29±113.13	9	217.89±73.68	0.58/0.578	2.36/0.260	-0.30
pV	0.07	7	0.12±0.04	9	0.16±0.05	-1.64/0.123	1.44/0.673	0.49
vs. $M(1, 1)$: absolute magnitude, $M_{\text{cut}} = 7$.								
B-V	7.00	28	1.02±0.13	8	1.02±0.12	-0.05/0.958	1.20/0.864	0.19
B-R	7.00	27	1.65±0.18	8	1.66±0.18	-0.20/0.847	1.05/0.969	0.20
B-I	7.00	23	2.20±0.26	2	2.39±0.21	—/—	—/—	—
V-R	7.00	36	0.64±0.09	8	0.63±0.07	0.41/0.687	1.71/0.471	0.20
V-I	7.00	33	1.24±0.14	8	1.22±0.21	0.19/0.851	2.19/0.125	0.01
V-J	7.00	4	1.94±0.48	0	—	—/—	—/—	—
R-I	7.00	32	0.59±0.09	4	0.56±0.16	—/—	—/—	—
I-J	7.00	2	1.04±0.24	0	—	—/—	—/—	—
J-H	7.00	18	0.40±0.07	1	0.52±—	—/—	—/—	—
H-K	7.00	4	0.08±0.03	0	—	—/—	—/—	—
M11	7.00	36	6.26±0.62	13	7.31±0.30	-7.97/ 0.000	4.33/ 0.009	1.00
Grt	7.00	36	26.42±8.02	8	25.12±7.12	0.46/0.656	1.27/0.798	-0.02
Hma	7.00	8	5.96±0.60	0	—	—/—	—/—	—
dia	7.00	8	258.12±121.47	0	—	—/—	—/—	—
pV	7.00	8	0.14±0.06	0	—	—/—	—/—	—

Table 4. Cont'd, for “Classical Hot” objects (code H) only.

Classical HOT TNOs								
Colour	Cut	Pop. 1 (small)		Pop. 2 (large)		Statistics		
		n_1	$\bar{x}/\sigma$	n_2	$\bar{x}/\sigma$	$t/Prob$	$f/Prob$	
vs. a : semi-major axis.								
							r	
B-V	43.90	28	0.86±0.17	20	0.90±0.18	-0.90/0.373	1.08/0.843	0.15
B-R	43.90	27	1.39±0.28	20	1.44±0.27	-0.65/0.516	1.03/0.968	0.13
B-I	43.90	20	1.83±0.39	20	1.95±0.37	-1.01/0.317	1.08/0.865	0.33
V-R	43.90	30	0.53±0.11	25	0.55±0.11	-0.99/0.324	1.00/0.997	0.14
V-I	43.90	25	1.01±0.22	35	1.08±0.24	-1.15/0.255	1.15/0.726	0.22
V-J	43.90	11	1.55±0.46	2	1.79±0.07	—/—	—/—	—
R-I	43.90	20	0.49±0.12	24	0.56±0.17	-1.57/0.125	1.79/0.201	0.38
I-J	43.90	3	0.63±0.15	1	0.74±—	—/—	—/—	—
J-H	43.90	21	0.32±0.23	14	0.34±0.28	-0.21/0.837	1.52/0.388	0.15
H-K	43.90	7	0.01±0.14	3	0.14±0.09	—/—	—/—	—
M11	43.90	32	5.17±1.85	26	5.83±1.91	-1.34/0.186	1.07/0.858	-0.03
Grt	43.90	32	15.95±10.46	34	17.38±10.64	-0.55/0.584	1.04/0.926	0.07
Hma	43.90	17	4.60±1.74	12	5.08±1.94	-0.68/0.505	1.24/0.671	-0.16
dia	43.90	17	576.61±327.47	12	499.42±355.21	0.60/0.558	1.18/0.746	0.05
pV	43.90	17	0.19±0.25	12	0.16±0.21	0.28/0.784	1.42/0.561	0.11
vs. q : Perihelion Distance.								
B-V	38.85	27	0.78±0.14	21	1.00±0.13	-5.60/ 0.000	1.10/0.845	0.41
B-R	38.85	26	1.25±0.23	21	1.61±0.17	-6.06/ 0.000	1.88/0.152	0.42
B-I	38.85	22	1.64±0.31	18	2.18±0.21	-6.50/ 0.000	2.21/0.102	0.67
V-R	38.85	29	0.49±0.11	26	0.60±0.06	-4.50/ 0.000	3.04/ 0.006	0.23
V-I	38.85	29	0.95±0.26	31	1.15±0.16	-3.67/ 0.001	2.60/0.012	0.40
V-J	38.85	8	1.41±0.44	5	1.86±0.24	-2.39/0.036	3.23/0.274	0.18
R-I	38.85	21	0.48±0.19	23	0.58±0.08	-2.22/0.035	5.41/ 0.000	0.33
I-J	38.85	2	0.57±0.16	2	0.74±0.01	—/—	—/—	—
J-H	38.85	15	0.23±0.35	20	0.40±0.07	-1.92/0.074	23.53/ 0.000	0.32
H-K	38.85	4	-0.03±0.15	6	0.10±0.10	—/—	—/—	—
M11	38.85	30	5.14±2.04	27	5.69±1.54	-1.17/0.247	1.75/0.153	-0.10
Grt	38.85	32	11.03±9.89	34	22.00±8.08	-4.92/ 0.000	1.50/0.255	0.29
Hma	38.85	18	4.74±2.05	11	4.89±1.42	-0.23/0.821	2.08/0.238	-0.12
dia	38.85	18	534.54±379.15	11	561.24±264.00	-0.22/0.825	2.06/0.245	0.10
pV	38.85	18	0.23±0.28	11	0.08±0.03	2.17/0.044	68.57/ 0.000	-0.10
vs. e : eccentricity.								
B-V	0.11	20	0.94±0.18	28	0.83±0.16	2.26/0.030	1.32/0.499	-0.33
B-R	0.11	20	1.52±0.26	27	1.33±0.26	2.38/0.022	1.01/0.993	-0.36
B-I	0.11	15	2.04±0.36	25	1.79±0.37	2.05/0.049	1.04/0.970	-0.32
V-R	0.11	24	0.56±0.09	31	0.52±0.12	1.43/0.158	1.75/0.171	-0.14
V-I	0.11	29	1.11±0.19	31	1.00±0.26	1.83/0.073	1.87/0.100	-0.18
V-J	0.11	7	1.71±0.38	6	1.44±0.47	1.10/0.299	1.53/0.615	-0.18
R-I	0.11	19	0.55±0.11	25	0.52±0.18	0.61/0.548	2.43/0.058	-0.02
I-J	0.11	3	0.65±0.17	1	0.69±—	—/—	—/—	—
J-H	0.11	20	0.37±0.17	15	0.27±0.32	1.17/0.255	3.58/0.011	-0.21
H-K	0.11	5	0.07±0.09	5	0.02±0.18	0.56/0.593	3.65/0.238	-0.41
M11	0.11	25	5.53±1.46	32	5.30±2.09	0.49/0.623	2.05/0.074	0.08
Grt	0.11	33	19.79±9.32	33	13.57±10.82	2.50/0.015	1.35/0.403	-0.26
Hma	0.11	12	5.14±1.34	17	4.55±2.08	0.93/0.361	2.40/0.146	0.00
dia	0.11	12	543.47±268.96	17	545.51±383.23	-0.02/0.987	2.03/0.237	-0.08
pV	0.11	12	0.07±0.03	17	0.25±0.28	-2.50/0.023	67.45/ 0.000	0.24
vs. i : inclination.								
B-V	15.30	22	0.97±0.18	26	0.80±0.13	3.97/ 0.000	1.92/0.121	-0.53
B-R	15.30	22	1.57±0.23	25	1.27±0.23	4.52/ 0.000	1.06/0.898	-0.58
B-I	15.30	16	2.15±0.27	24	1.71±0.34	4.49/ 0.000	1.53/0.399	-0.68
V-R	15.30	25	0.61±0.07	30	0.48±0.10	5.62/ 0.000	1.86/0.124	-0.67
V-I	15.30	27	1.17±0.21	33	0.96±0.22	3.80/ 0.000	1.09/0.836	-0.54
V-J	15.30	4	1.97±0.17	9	1.42±0.40	—/—	—/—	—
R-I	15.30	20	0.58±0.16	24	0.49±0.13	2.23/0.032	1.33/0.507	-0.47
I-J	15.30	1	0.74±—	3	0.63±0.15	—/—	—/—	—
J-H	15.30	14	0.44±0.08	21	0.26±0.29	2.72/0.012	12.55/ 0.000	-0.44
H-K	15.30	3	0.07±0.07	7	0.03±0.16	—/—	—/—	—
M11	15.30	25	6.32±1.42	33	4.82±1.95	3.39/ 0.001	1.89/0.111	-0.37
Grt	15.30	31	21.76±9.03	35	12.19±9.72	4.14/ 0.000	1.16/0.688	-0.54
Hma	15.30	11	5.86±1.23	18	4.15±1.82	3.00/ 0.006	2.18/0.210	-0.46
dia	15.30	11	387.69±275.61	18	640.59±338.62	-2.19/0.038	1.51/0.514	0.30
pV	15.30	11	0.10±0.08	18	0.22±0.28	-1.70/0.104	11.61/ 0.000	0.35
vs. $\mathcal{E} = \sqrt{e^2 + i^2}$: orbit energy.								
B-V	0.33	23	0.97±0.17	25	0.79±0.13	4.20/ 0.000	1.87/0.139	-0.58
B-R	0.33	23	1.58±0.22	24	1.25±0.22	5.04/ 0.000	1.07/0.874	-0.64
B-I	0.33	17	2.17±0.25	23	1.68±0.32	5.43/ 0.000	1.74/0.258	-0.71
V-R	0.33	26	0.61±0.07	29	0.47±0.09	6.57/ 0.000	1.98/0.089	-0.68
V-I	0.33	28	1.18±0.20	32	0.95±0.21	4.22/ 0.000	1.10/0.809	-0.56
V-J	0.33	6	1.90±0.22	7	1.31±0.37	3.58/ 0.005	2.87/0.268	-0.87
R-I	0.33	21	0.59±0.14	23	0.47±0.14	2.83/ 0.007	1.09/0.839	-0.45
I-J	0.33	2	0.74±0.01	2	0.57±0.16	—/—	—/—	—
J-H	0.33	15	0.43±0.09	20	0.25±0.29	2.65/0.014	10.34/ 0.000	-0.43
H-K	0.33	5	0.08±0.10	5	0.02±0.17	0.66/0.533	3.20/0.286	-0.37
M11	0.33	25	5.91±1.43	32	5.00±2.02	2.00/0.050	2.00/0.084	-0.28
Grt	0.33	32	22.07±8.80	34	11.62±9.48	4.64/ 0.000	1.16/0.679	-0.58
Hma	0.33	12	5.55±1.42	17	4.26±1.90	2.10/0.045	1.79/0.333	-0.41
dia	0.33	12	420.55±282.62	17	632.28±349.25	-1.80/0.083	1.53/0.482	0.24
pV	0.33	12	0.11±0.08	17	0.22±0.29	-1.54/0.141	14.53/ 0.000	0.37
vs. $M(1, 1)$: absolute magnitude, $M_{\text{cut}} = 7$.								
B-V	7.00	35	0.89±0.18	10	0.85±0.19	0.54/0.597	1.19/0.669	0.25
B-R	7.00	34	1.43±0.28	10	1.38±0.28	0.46/0.651	1.03/0.957	0.25
B-I	7.00	31	1.91±0.40	7	1.78±0.32	0.94/0.368	1.53/0.628	0.17
V-R	7.00	42	0.54±0.12	10	0.54±0.09	-0.04/0.968	1.58/0.473	0.27
V-I	7.00	39	1.07±0.26	7	1.01±0.18	0.79/0.444	2.04/0.377	0.20
V-J	7.00	12	1.55±0.42	1	2.03±—	—/—	—/—	—
R-I	7.00	36	0.53±0.15	7	0.50±0.14	0.60/0.563	1.28/0.820	0.18
I-J	7.00	4	0.66±0.14	0	—	—/—	—/—	—
J-H	7.00	23	0.28±0.29	4	0.45±0.06	—/—	—/—	—
H-K	7.00	9	0.03±0.14	0	—	—/—	—/—	—
M11	7.00	44	4.99±1.52	13	7.53±0.62	-8.87/ 0.000	6.07/ 0.002	1.00
Grt	7.00	41	16.94±11.21	10	17.12±8.95	-0.05/0.960	1.57/0.483	0.29
Hma	7.00	22	4.61±1.54	2	7.32±0.12	—/—	—/—	—
dia	7.00	22	565.97±304.49	2	199.50±89.80	—/—	—/—	—
pV	7.00	22	0.17±0.23	2	0.07±0.05	—/—	—/—	—

Table 4. Cont'd, for Resonant only (“3” plutinos and “P” others).

Resonant population								
Colour	Cut	Pop. 1 (small)		Pop. 2 (large)		Statistics		
		n_1	$\bar{x}/\sigma$	n_2	$\bar{x}/\sigma$	$t/Prob$	$f/Prob$	r
vs. a : semi-major axis.								
B-V	39.65	31	0.89±0.17	32	0.91±0.15	-0.56/0.580	1.32/0.447	0.15
B-R	39.65	30	1.44±0.28	30	1.49±0.23	-0.71/0.479	1.47/0.304	0.07
B-I	39.65	24	1.97±0.44	24	2.02±0.34	-0.42/0.677	1.72/0.203	0.13
V-R	39.65	37	0.56±0.11	32	0.57±0.11	-0.32/0.753	1.06/0.864	0.08
V-I	39.65	34	1.10±0.22	32	1.12±0.18	-0.36/0.718	1.44/0.311	0.15
V-J	39.65	9	1.91±0.59	10	1.93±0.30	-0.10/0.921	3.80/0.063	0.14
R-I	39.65	32	0.54±0.14	28	0.53±0.10	0.10/0.920	1.87/0.102	0.17
I-J	39.65	5	0.71±0.25	8	0.79±0.19	-0.59/0.572	1.77/0.479	0.06
J-H	39.65	18	0.33±0.16	17	0.45±0.20	-1.85/0.075	1.64/0.321	0.09
H-K	39.65	12	0.05±0.07	5	0.04±0.03	0.24/0.813	3.60/0.228	0.00
M11	39.65	35	6.54±1.76	33	5.93±1.81	1.41/0.162	1.05/0.881	-0.05
Grt	39.65	38	19.16±11.26	40	18.61±10.46	0.22/0.824	1.16/0.651	0.14
Hma	39.65	16	5.37±1.43	10	5.40±0.98	-0.05/0.957	2.12/0.255	-0.14
dia	39.65	16	410.06±223.19	12	581.83±608.69	-0.93/0.368	7.44/ 0.001	-0.05
pV	39.65	16	0.11±0.05	12	0.19±0.14	-1.81/0.093	6.86/ 0.001	-0.01
vs. q : Perihelion distance.								
B-V	31.41	32	0.87±0.16	32	0.94±0.15	-1.77/0.082	1.04/0.913	0.19
B-R	31.41	28	1.43±0.25	33	1.50±0.25	-1.09/0.280	1.02/0.956	0.13
B-I	31.41	24	1.91±0.39	25	2.09±0.37	-1.65/0.105	1.11/0.797	0.19
V-R	31.41	32	0.55±0.11	38	0.57±0.11	-0.90/0.370	1.03/0.921	0.10
V-I	31.41	32	1.09±0.22	35	1.14±0.19	-0.98/0.329	1.28/0.481	0.16
V-J	31.41	10	1.93±0.43	10	1.96±0.49	-0.15/0.882	1.29/0.713	0.04
R-I	31.41	30	0.52±0.13	31	0.55±0.11	-0.85/0.399	1.40/0.365	0.13
I-J	31.41	8	0.77±0.22	6	0.77±0.19	-0.06/0.952	1.40/0.737	0.05
J-H	31.41	17	0.38±0.26	19	0.41±0.07	-0.41/0.689	15.62/ 0.000	0.10
H-K	31.41	10	0.05±0.05	8	0.04±0.06	0.36/0.727	1.42/0.607	-0.05
M11	31.41	30	6.33±2.13	39	6.13±1.51	0.44/0.665	1.99/0.046	-0.20
Grt	31.41	38	17.60±11.47	41	20.50±10.32	-1.18/0.243	1.24/0.512	0.14
Hma	31.41	15	5.79±1.41	11	4.83±0.75	2.23/0.036	3.50/0.052	-0.52
dia	31.41	17	498.94±548.89	11	460.10±139.46	0.28/0.784	15.49/ 0.000	0.08
pV	31.41	17	0.17±0.13	11	0.12±0.04	1.49/0.152	11.16/ 0.000	-0.13
vs. e : eccentricity.								
B-V	0.25	29	0.88±0.17	35	0.92±0.15	-0.97/0.334	1.22/0.580	0.06
B-R	0.25	28	1.43±0.27	33	1.51±0.24	-1.12/0.268	1.24/0.549	0.08
B-I	0.25	23	1.93±0.41	26	2.06±0.37	-1.15/0.257	1.18/0.685	0.11
V-R	0.25	36	0.56±0.11	34	0.57±0.11	-0.36/0.721	1.14/0.694	0.12
V-I	0.25	36	1.09±0.20	31	1.14±0.21	-0.99/0.324	1.08/0.822	0.17
V-J	0.25	11	1.78±0.50	9	2.16±0.28	-2.15/0.047	3.04/0.129	0.31
R-I	0.25	32	0.52±0.13	29	0.56±0.11	-1.42/0.160	1.22/0.599	0.23
I-J	0.25	5	0.69±0.23	9	0.82±0.18	-1.09/0.314	1.62/0.521	0.24
J-H	0.25	20	0.37±0.08	16	0.42±0.26	-0.64/0.529	10.00/ 0.000	0.06
H-K	0.25	10	0.04±0.07	8	0.05±0.04	-0.38/0.708	3.57/0.107	0.09
M11	0.25	35	6.36±1.78	34	6.07±1.82	0.67/0.506	1.05/0.880	0.03
Grt	0.25	40	18.61±10.18	39	19.62±11.74	-0.41/0.684	1.33/0.379	0.15
Hma	0.25	12	4.66±1.08	14	6.00±1.07	-3.15/ 0.004	1.03/0.952	0.38
dia	0.25	12	503.28±200.52	16	468.98±552.25	0.23/0.821	7.59/ 0.002	-0.11
pV	0.25	12	0.12±0.05	16	0.16±0.13	-1.19/0.247	6.54/ 0.003	0.12
vs. i : inclination.								
B-V	12.10	29	0.92±0.18	35	0.90±0.14	0.50/0.618	1.60/0.190	-0.03
B-R	12.10	29	1.50±0.28	32	1.44±0.23	0.92/0.363	1.46/0.308	-0.12
B-I	12.10	25	2.01±0.40	24	1.99±0.39	0.23/0.821	1.07/0.867	-0.05
V-R	12.10	36	0.58±0.11	34	0.54±0.11	1.41/0.163	1.16/0.667	-0.21
V-I	12.10	36	1.13±0.18	31	1.10±0.23	0.76/0.450	1.52/0.232	-0.18
V-J	12.10	10	2.07±0.31	10	1.82±0.54	1.27/0.223	3.05/0.112	-0.48
R-I	12.10	32	0.53±0.11	29	0.54±0.13	-0.34/0.735	1.35/0.416	-0.04
I-J	12.10	6	0.83±0.17	8	0.73±0.22	0.99/0.342	1.61/0.622	-0.39
J-H	12.10	22	0.40±0.22	14	0.38±0.11	0.49/0.624	3.85/0.016	-0.21
H-K	12.10	9	0.04±0.06	9	0.05±0.05	-0.65/0.526	1.66/0.490	0.31
M11	12.10	34	6.71±1.35	35	5.74±2.05	2.31/0.024	2.32/0.018	-0.30
Grt	12.10	40	20.47±10.28	39	17.71±11.50	1.12/0.264	1.25/0.490	-0.19
Hma	12.10	10	6.06±1.10	16	4.95±1.17	2.43/0.024	1.13/0.878	-0.34
dia	12.10	10	256.95±106.78	18	609.64±492.46	-2.92/ 0.009	21.27/ 0.000	0.28
pV	12.10	10	0.13±0.05	18	0.15±0.13	-0.53/0.604	5.65/0.012	0.02
vs. $\mathcal{E} = \sqrt{e^2 + i^2}$: Orbit Energy.								
B-V	0.33	27	0.90±0.19	37	0.91±0.13	-0.17/0.863	2.19/0.029	0.03
B-R	0.33	27	1.48±0.30	34	1.47±0.21	0.23/0.818	1.96/0.069	-0.03
B-I	0.33	22	1.99±0.44	27	2.01±0.35	-0.23/0.822	1.53/0.304	0.05
V-R	0.33	34	0.57±0.11	36	0.56±0.11	0.49/0.625	1.12/0.738	-0.07
V-I	0.33	33	1.12±0.20	34	1.12±0.21	0.02/0.983	1.15/0.698	-0.02
V-J	0.33	8	2.03±0.44	12	1.89±0.47	0.71/0.491	1.15/0.887	-0.08
R-I	0.33	29	0.52±0.12	32	0.56±0.12	-1.32/0.191	1.02/0.963	0.12
I-J	0.33	4	0.84±0.18	10	0.74±0.21	—/—	—/—	—
J-H	0.33	19	0.41±0.23	17	0.38±0.11	0.54/0.592	4.32/ 0.005	-0.06
H-K	0.33	6	0.03±0.07	12	0.05±0.05	-0.85/0.423	2.06/0.294	0.31
M11	0.33	32	6.58±1.59	37	5.90±1.92	1.60/0.114	1.46/0.289	-0.22
Grt	0.33	38	19.25±11.11	41	18.97±10.87	0.11/0.910	1.04/0.891	-0.02
Hma	0.33	10	5.14±0.93	16	5.53±1.43	-0.84/0.407	2.33/0.202	-0.05
dia	0.33	10	413.98±157.28	18	522.40±527.30	-0.81/0.427	11.24/ 0.001	0.12
pV	0.33	10	0.11±0.05	18	0.16±0.13	-1.53/0.140	7.47/ 0.004	0.05
vs. $M(1, 1)$: absolute magnitude.								
B-V	7.00	37	0.95±0.15	20	0.83±0.14	3.01/ 0.004	1.13/0.790	-0.28
B-R	7.00	36	1.54±0.25	22	1.36±0.21	2.98/ 0.004	1.47/0.356	-0.26
B-I	7.00	30	2.10±0.37	16	1.81±0.35	2.63/0.013	1.16/0.785	-0.29
V-R	7.00	40	0.58±0.10	27	0.53±0.11	1.85/0.070	1.14/0.696	-0.07
V-I	7.00	34	1.14±0.21	26	1.07±0.19	1.29/0.201	1.25/0.568	-0.10
V-J	7.00	17	1.89±0.46	2	2.40±0.05	—/—	—/—	—
R-I	7.00	33	0.55±0.12	25	0.52±0.12	0.94/0.351	1.02/0.981	-0.12
I-J	7.00	13	0.76±0.20	1	0.94±—	—/—	—/—	—
J-H	7.00	26	0.37±0.10	5	0.58±0.33	-1.39/0.234	12.05/ 0.000	0.44
H-K	7.00	17	0.04±0.05	1	0.12±—	—/—	—/—	—
M11	7.00	40	5.30±1.27	28	7.78±0.39	-11.57/ 0.000	10.36/ 0.000	1.00
Grt	7.00	40	21.02±10.75	27	16.84±10.61	1.57/0.121	1.03/0.961	-0.10
Hma	7.00	21	5.23±1.21	1	7.93±—	—/—	—/—	—
dia	7.00	21	421.38±197.30	1	85.00±—	—/—	—/—	—
pV	7.00	21	0.11±0.05	1	0.17±—	—/—	—/—	—

Table 4. Cont'd, for Centaurs (“C”) and Sattered (“K”) and Detached (“D”) TNOs only.

Centaur, and Scattered and Detached Disks TNO populations								
Colour	Cut	Pop. 1 (small)		Pop. 2 (large)		Statistics		
		n_1	$\bar{x}/\sigma$	n_2	$\bar{x}/\sigma$	$t/Prob$	$f/Prob$	r
vs. a : semi-major axis.								
B-V	25.20	58	0.86±0.17	53	0.86±0.13	0.25/0.803	1.81/0.031	-0.04
B-R	25.20	60	1.41±0.27	56	1.38±0.22	0.78/0.440	1.51/0.127	-0.10
B-I	25.20	35	1.91±0.39	38	1.88±0.29	0.42/0.673	1.75/0.098	-0.05
V-R	25.20	59	0.55±0.11	56	0.52±0.10	1.64/0.105	1.09/0.749	-0.13
V-I	25.20	39	1.06±0.22	45	1.01±0.18	0.91/0.365	1.54/0.165	-0.07
V-J	25.20	10	1.69±0.45	11	1.79±0.49	-0.47/0.641	1.21/0.787	-0.13
R-I	25.20	39	0.51±0.13	40	0.49±0.11	0.87/0.385	1.23/0.525	-0.07
I-J	25.20	15	0.76±0.18	9	0.85±0.29	-0.82/0.430	2.72/0.097	0.21
J-H	25.20	21	0.39±0.09	19	0.40±0.13	-0.52/0.606	1.99/0.138	-0.18
H-K	25.20	20	0.07±0.18	11	0.01±0.16	0.93/0.363	1.30/0.689	-0.25
M11	25.20	50	10.06±1.81	49	7.17±1.84	7.88 / 0.000	1.03/0.914	-0.71
Grt	25.20	59	17.45±11.26	59	14.88±10.18	1.30/0.196	1.22/0.445	-0.11
Hma	25.20	38	9.95±1.76	22	7.16±3.68	3.34 / 0.003	4.39 / 0.000	-0.53
dia	25.20	38	69.47±61.14	24	319.87±507.94	-2.40/0.025	69.02 / 0.000	0.53
pV	25.20	38	0.08±0.05	21	0.13±0.20	-1.24/0.229	18.60 / 0.000	0.33
vs. q : Perihelion Distance.								
B-V	14.93	60	0.85±0.15	61	0.87±0.15	-0.48/0.632	1.04/0.877	0.02
B-R	14.93	62	1.39±0.24	64	1.41±0.25	-0.25/0.802	1.08/0.775	0.00
B-I	14.93	37	1.91±0.35	45	1.88±0.32	0.35/0.725	1.23/0.517	-0.01
V-R	14.93	62	0.54±0.10	63	0.53±0.11	0.48/0.630	1.18/0.519	-0.08
V-I	14.93	42	1.04±0.21	52	1.03±0.19	0.45/0.651	1.29/0.379	-0.04
V-J	14.93	11	1.73±0.41	12	1.68±0.55	0.25/0.806	1.80/0.362	-0.17
R-I	14.93	41	0.50±0.13	46	0.51±0.11	-0.44/0.664	1.29/0.412	0.05
I-J	14.93	14	0.81±0.15	11	0.78±0.30	0.33/0.746	3.74/0.029	0.28
J-H	14.93	20	0.40±0.08	23	0.38±0.13	0.70/0.488	2.97/0.020	-0.18
H-K	14.93	19	0.07±0.19	13	0.03±0.16	0.71/0.481	1.33/0.619	-0.15
M11	14.93	49	10.18±1.83	61	6.95±1.69	9.52 / 0.000	1.16/0.581	-0.82
Grt	14.93	62	16.29±10.39	68	16.23±10.85	0.03/0.975	1.09/0.735	-0.02
Hma	14.93	42	10.27±2.05	21	6.08±2.63	6.41 / 0.000	1.65/0.175	-0.84
dia	14.93	44	60.54±58.39	21	398.37±515.90	-2.99 / 0.007	78.06 / 0.000	0.63
pV	14.93	44	0.08±0.04	18	0.16±0.21	-1.54/0.140	22.92 / 0.000	0.47
vs. e : eccentricity.								
B-V	0.47	76	0.87±0.16	60	0.86±0.14	0.39/0.696	1.29/0.307	-0.01
B-R	0.47	76	1.41±0.27	65	1.40±0.20	0.21/0.832	1.76/0.021	-0.00
B-I	0.47	48	1.92±0.36	46	1.89±0.28	0.48/0.635	1.62/0.108	0.06
V-R	0.47	76	0.54±0.11	64	0.54±0.09	-0.13/0.893	1.65/0.042	0.03
V-I	0.47	54	1.05±0.22	52	1.02±0.16	0.80/0.427	1.80/0.037	0.04
V-J	0.47	13	1.70±0.50	11	1.77±0.48	-0.31/0.757	1.09/0.900	0.09
R-I	0.47	50	0.52±0.12	49	0.49±0.11	1.35/0.181	1.07/0.820	-0.01
I-J	0.47	14	0.81±0.21	12	0.80±0.24	0.13/0.898	1.24/0.702	0.02
J-H	0.47	26	0.39±0.10	19	0.39±0.12	-0.18/0.857	1.38/0.450	0.03
H-K	0.47	23	0.06±0.17	10	0.05±0.18	0.21/0.835	1.16/0.737	-0.09
M11	0.47	70	8.44±2.23	51	7.99±2.71	0.96/0.338	1.48/0.130	-0.03
Grt	0.47	78	17.08±11.68	67	15.40±8.31	1.00/0.318	1.97 / 0.005	-0.04
Hma	0.47	35	8.53±2.77	33	8.99±3.33	-0.62/0.539	1.45/0.290	0.15
dia	0.47	35	189.78±389.86	35	171.09±278.69	0.23/0.818	1.96/0.054	-0.04
pV	0.47	33	0.11±0.16	34	0.09±0.08	0.45/0.657	4.23 / 0.000	-0.02
vs. i : inclination.								
B-V	19.70	72	0.90±0.17	64	0.82±0.11	3.44 / 0.001	2.30 / 0.001	-0.19
B-R	19.70	74	1.47±0.27	67	1.33±0.17	3.89 / 0.000	2.55 / 0.000	-0.20
B-I	19.70	48	1.98±0.36	46	1.83±0.26	2.35/0.021	1.85/0.040	-0.21
V-R	19.70	73	0.57±0.11	67	0.51±0.08	3.58 / 0.000	1.72/0.026	-0.18
V-I	19.70	56	1.08±0.21	50	1.00±0.16	2.25/0.027	1.78/0.043	-0.16
V-J	19.70	16	1.83±0.42	8	1.53±0.55	1.39/0.192	1.70/0.366	-0.31
R-I	19.70	50	0.54±0.12	49	0.48±0.10	2.55/0.013	1.49/0.166	-0.25
I-J	19.70	20	0.79±0.24	6	0.83±0.13	-0.54/0.599	3.49/0.171	0.11
J-H	19.70	30	0.40±0.10	15	0.37±0.12	0.84/0.411	1.34/0.485	-0.26
H-K	19.70	22	0.04±0.18	11	0.08±0.16	-0.60/0.553	1.17/0.829	0.12
M11	19.70	67	8.15±2.34	54	8.37±2.59	-0.49/0.626	1.22/0.434	0.23
Grt	19.70	76	19.27±11.31	69	13.04±7.82	3.88 / 0.000	2.09 / 0.002	-0.20
Hma	19.70	32	8.95±2.57	36	8.58±3.43	0.50/0.616	1.79/0.104	0.23
dia	19.70	32	132.69±190.00	38	220.64±421.10	-1.16/0.253	4.91 / 0.000	-0.09
pV	19.70	32	0.10±0.08	35	0.10±0.15	-0.13/0.900	3.66 / 0.000	-0.09
vs. $\mathcal{E} = \sqrt{e^2 + i^2}$: Orbit Energy								
B-V	0.60	73	0.89±0.17	63	0.84±0.12	1.95/0.053	1.78/0.021	-0.15
B-R	0.60	75	1.44±0.27	66	1.36±0.18	2.16/0.033	2.23 / 0.001	-0.17
B-I	0.60	49	1.94±0.37	45	1.86±0.27	1.21/0.231	1.87/0.038	-0.10
V-R	0.60	74	0.55±0.11	66	0.53±0.08	1.57/0.119	1.80/0.016	-0.13
V-I	0.60	56	1.06±0.22	50	1.01±0.15	1.42/0.158	2.04/0.012	-0.09
V-J	0.60	15	1.77±0.43	9	1.66±0.57	0.52/0.612	1.76/0.338	-0.09
R-I	0.60	51	0.53±0.12	48	0.49±0.10	1.87/0.065	1.50/0.164	-0.15
I-J	0.60	18	0.78±0.25	8	0.86±0.13	-1.17/0.253	3.83/0.078	0.06
J-H	0.60	29	0.41±0.09	16	0.36±0.13	1.23/0.233	2.31/0.054	-0.07
H-K	0.60	23	0.06±0.15	10	0.04±0.23	0.22/0.827	2.44/0.085	-0.01
M11	0.60	68	8.36±2.05	53	8.10±2.89	0.56/0.574	1.99 / 0.008	0.02
Grt	0.60	77	18.04±11.80	68	14.34±7.81	2.25/0.026	2.29 / 0.001	-0.18
Hma	0.60	34	9.02±2.36	34	8.49±3.61	0.72/0.475	2.34/0.017	0.12
dia	0.60	34	122.97±119.77	36	234.70±451.12	-1.43/0.159	14.19 / 0.000	0.02
pV	0.60	33	0.08±0.05	34	0.12±0.17	-1.13/0.266	9.67 / 0.000	-0.01
vs. $M(1, 1)$: absolute magnitude.								
B-V	7.00	37	0.88±0.14	76	0.86±0.16	0.64/0.524	1.33/0.352	-0.06
B-R	7.00	36	1.43±0.22	80	1.40±0.26	0.60/0.549	1.37/0.304	-0.07
B-I	7.00	31	1.92±0.33	49	1.92±0.35	0.06/0.955	1.13/0.726	-0.11
V-R	7.00	39	0.54±0.10	78	0.54±0.11	0.14/0.886	1.17/0.611	-0.01
V-I	7.00	34	1.05±0.19	55	1.04±0.20	0.09/0.928	1.10/0.791	-0.12
V-J	7.00	9	1.72±0.53	13	1.81±0.43	-0.41/0.685	1.50/0.506	-0.10
R-I	7.00	32	0.52±0.11	53	0.51±0.12	0.28/0.784	1.32/0.415	-0.18
I-J	7.00	8	0.85±0.22	17	0.79±0.23	0.69/0.503	1.10/0.951	-0.19
J-H	7.00	17	0.38±0.10	23	0.40±0.09	-0.72/0.478	1.13/0.774	0.22
H-K	7.00	10	0.06±0.11	21	0.06±0.18	-0.13/0.895	2.66/0.134	-0.09
M11	7.00	39	5.59±1.33	82	9.51±1.73	-13.72 / 0.000	1.70/0.071	1.00
Grt	7.00	39	17.08±9.91	79	16.32±11.02	0.38/0.705	1.24/0.477	-0.05
Hma	7.00	15	5.42±1.55	32	9.37±1.24	-8.67 / 0.000	1.56/0.292	0.97
dia	7.00	15	372.33±204.56	32	78.68±49.77	5.48 / 0.000	16.89 / 0.000	-0.90
pV	7.00	14	0.14±0.10	32	0.08±0.05	2.06/0.056	4.69 / 0.000	-0.49

Table 5. f and t tests on the $M11$ distribution: comparing the $M11$ of the “blue” objects (or small value of the considered parameter) with the $M11$ of the “red” objects (or large value). Cut value is the median of the colour (or parameter). The first subtable is for the whole MBOSS sample (except Trojans), the following subtables for sub-samples as indicated in each table. [tnoOrbit]

All MBOSS population (except Trojans)								
Colour	Cut	<Cut		>Cut		Statistics		
		n_1	$\bar{x} \pm \sigma$	n_2	$\bar{x} \pm \sigma$	$f/prob$	$t/prob$	r
B-V	0.85	122	8.40± 3.28	147	6.88± 2.82	4.03/ 0.000	1.35/0.081	-0.07
B-R	1.37	121	8.51± 3.20	150	6.91± 2.80	4.33/ 0.000	1.31/0.119	-0.11
B-I	1.88	89	8.22± 3.49	112	6.47± 2.29	4.07/ 0.000	2.32/ 0.000	-0.14
V-R	0.53	148	8.95± 3.97	175	7.50± 3.42	3.48/ 0.001	1.35/0.057	-0.16
V-I	1.06	128	8.45± 3.69	130	6.68± 2.45	4.52/ 0.000	2.27/ 0.000	-0.21
V-J	1.72	29	5.95± 2.79	30	5.68± 1.87	0.44/0.661	2.24/0.035	0.13
R-I	0.51	114	8.49± 3.77	130	6.90± 2.60	3.77/ 0.000	2.11/ 0.000	-0.24
I-J	0.79	22	6.05± 2.69	24	6.82± 2.33	-1.03/0.310	1.33/0.504	0.05
J-H	0.40	66	5.99± 2.41	52	6.81± 1.78	-2.11/0.037	1.84/0.026	0.27
H-K	0.05	32	6.00± 2.80	31	6.68± 2.87	-0.94/0.351	1.05/0.899	0.05
M11	7.02	165	5.56± 1.33	168	9.89± 2.55	—/—	3.68/ 0.000	1.00
Grt	15.87	154	9.10± 4.01	169	7.33± 3.27	4.33/ 0.000	1.51/ 0.010	-0.21
Hma	6.47	55	4.38± 1.27	46	8.50± 1.74	-13.36/ 0.000	1.89/0.026	0.98
dia	218.00	44	8.50± 1.85	57	4.52± 1.40	11.88/ 0.000	1.75/0.049	-0.86
pV	0.08	51	7.39± 2.25	49	5.08± 2.34	5.04/ 0.000	1.07/0.803	-0.40
Cold TNOs (Q) population only								
Colour	Cut	n_1	$\bar{x} \pm \sigma$	n_2	$\bar{x} \pm \sigma$	$f/prob$	$t/prob$	r
B-V	1.04	16	6.38± 0.65	20	6.41± 0.81	-0.13/0.895	1.55/0.391	0.19
B-R	1.70	16	6.33± 0.80	19	6.50± 0.66	-0.65/0.518	1.50/0.410	0.20
B-I	2.26	12	6.34± 0.63	13	6.32± 0.62	0.10/0.923	1.04/0.944	0.38
V-R	0.64	20	6.37± 0.81	24	6.48± 0.54	-0.50/0.618	2.27/0.063	0.20
V-I	1.27	20	6.54± 0.62	21	6.29± 0.79	1.09/0.283	1.65/0.279	0.01
V-J	2.01	2	5.55± 0.19	2	5.54± 0.77	—/—	—/—	—
R-I	0.60	19	6.50± 0.48	17	6.21± 0.64	1.52/0.139	1.79/0.236	-0.15
I-J	0.88	1	5.15± —	1	6.08± —	—/—	—/—	—
J-H	0.40	9	6.34± 0.60	10	6.28± 0.59	0.24/0.810	1.03/0.957	-0.12
H-K	0.07	2	6.04± 0.06	2	5.21± 0.31	—/—	—/—	—
M11	6.60	24	5.98± 0.57	25	7.07± 0.34	-8.10/ 0.000	2.87/0.013	1.00
Grt	26.38	21	6.48± 0.78	23	6.38± 0.57	0.50/0.622	1.87/0.156	-0.02
Hma	6.05	4	5.04± 0.55	4	5.91± 0.36	—/—	—/—	—
dia	186.00	4	5.91± 0.36	4	5.04± 0.55	—/—	—/—	—
pV	0.14	3	5.01± 0.67	5	5.76± 0.46	—/—	—/—	—
Hot TNOs (H) population only								
Colour	Cut	n_1	$\bar{x} \pm \sigma$	n_2	$\bar{x} \pm \sigma$	$f/prob$	$t/prob$	r
B-V	0.89	21	5.15± 2.02	24	5.54± 1.49	-0.74/0.462	1.83/0.163	0.25
B-R	1.47	20	5.21± 2.05	24	5.54± 1.49	-0.61/0.548	1.89/0.148	0.25
B-I	1.99	19	5.12± 2.02	19	5.26± 1.54	-0.23/0.817	1.72/0.260	0.17
V-R	0.56	24	5.14± 1.92	28	5.71± 1.37	-1.22/0.231	1.98/0.090	0.27
V-I	1.10	23	5.04± 1.89	23	5.63± 1.35	-1.22/0.228	1.94/0.127	0.20
V-J	1.57	6	3.37± 1.59	7	4.66± 1.85	-1.36/0.202	1.35/0.757	0.29
R-I	0.54	22	5.22± 1.88	21	5.69± 1.37	-0.95/0.349	1.88/0.164	0.18
I-J	0.69	2	3.93± 0.58	2	3.99± 0.73	—/—	—/—	—
J-H	0.38	15	4.39± 1.95	12	6.18± 1.22	-2.91/ 0.008	2.55/0.126	0.31
H-K	0.03	5	2.85± 1.70	4	3.48± 0.27	—/—	—/—	—
M11	5.93	28	4.14± 1.26	29	6.95± 0.71	-10.29/ 0.000	3.16/ 0.003	1.00
Grt	18.45	24	4.97± 1.88	27	5.88± 1.35	-1.97/0.055	1.93/0.108	0.29
Hma	4.42	12	3.08± 1.00	12	5.81± 0.93	-6.93/ 0.000	1.17/0.799	0.99
dia	416.00	11	5.82± 1.12	13	3.29± 1.10	5.57/ 0.000	1.04/0.931	-0.86
pV	0.10	11	5.28± 1.27	13	3.75± 1.71	2.51/0.020	1.83/0.347	-0.50
Resonant (3:2 and others, 3 and P) population only								
Colour	Cut	n_1	$\bar{x} \pm \sigma$	n_2	$\bar{x} \pm \sigma$	$f/prob$	$t/prob$	r
B-V	0.91	27	6.92± 1.62	30	5.49± 1.29	3.65/ 0.001	1.56/0.243	-0.28
B-R	1.42	28	7.00± 1.62	30	5.58± 1.29	3.68/ 0.001	1.57/0.234	-0.26
B-I	1.95	22	6.89± 1.66	24	5.58± 1.23	3.02/ 0.004	1.81/0.167	-0.29
V-R	0.56	33	6.69± 1.58	34	5.91± 1.49	2.09/0.041	1.13/0.725	-0.07
V-I	1.10	31	6.75± 1.57	29	6.05± 1.52	1.75/0.085	1.07/0.862	-0.10
V-J	1.97	9	4.55± 1.47	10	5.85± 1.23	-2.06/0.056	1.43/0.607	0.54
R-I	0.53	28	6.82± 1.65	30	6.06± 1.40	1.89/0.065	1.39/0.383	-0.12
I-J	0.73	7	4.12± 1.36	7	5.31± 1.17	-1.75/0.105	1.35/0.726	0.53
J-H	0.39	15	4.92± 1.39	16	6.21± 1.48	-2.51/0.018	1.14/0.816	0.44
H-K	0.03	9	4.80± 1.65	9	5.13± 1.16	-0.49/0.629	2.01/0.342	0.08
M11	6.75	33	4.97± 1.14	35	7.60± 0.50	-12.24/ 0.000	5.10/ 0.000	1.00
Grt	18.07	33	6.71± 1.58	34	5.89± 1.48	2.20/0.031	1.14/0.715	-0.10
Hma	5.41	11	3.92± 0.82	11	5.83± 0.91	-5.16/ 0.000	1.21/0.766	0.99
dia	393.10	11	5.77± 0.98	11	3.98± 0.89	4.49/ 0.000	1.23/0.749	-0.92
pV	0.12	13	5.11± 1.06	9	4.54± 1.58	0.94/0.366	2.24/0.202	-0.32
Centaur, and Scattered and Detached Disk population only								
Colour	Cut	n_1	$\bar{x} \pm \sigma$	n_2	$\bar{x} \pm \sigma$	$f/prob$	$t/prob$	r
B-V	0.82	58	8.57± 2.09	55	8.05± 2.95	1.08/0.281	2.00/0.011	-0.06
B-R	1.32	58	8.53± 1.94	58	8.14± 2.94	0.84/0.405	2.30/ 0.002	-0.07
B-I	1.82	37	8.76± 2.63	43	7.21± 2.28	2.80/ 0.007	1.34/0.365	-0.11
V-R	0.51	59	8.55± 2.09	58	8.05± 2.98	1.04/0.299	2.02/ 0.009	-0.01
V-I	0.99	43	8.67± 2.51	46	7.48± 2.59	2.19/0.031	1.07/0.830	-0.12
V-J	1.65	11	7.14± 2.04	11	6.89± 2.29	0.26/0.794	1.26/0.719	-0.10
R-I	0.49	38	8.59± 2.58	47	7.71± 2.63	1.55/0.126	1.04/0.912	-0.18
I-J	0.84	12	7.92± 1.31	13	7.26± 2.55	0.83/0.416	3.76/0.036	-0.19
J-H	0.40	21	7.26± 2.56	19	7.88± 2.13	-0.83/0.409	1.45/0.433	0.22
H-K	0.05	15	7.75± 2.90	16	8.04± 2.13	-0.32/0.750	1.85/0.248	-0.09
M11	8.14	60	6.28± 1.44	61	10.19± 1.48	-14.68/ 0.000	1.05/0.840	1.00
Grt	13.24	58	8.75± 2.28	60	7.87± 2.76	1.89/0.061	1.47/0.148	-0.05
Hma	9.13	29	6.60± 2.17	18	10.14± 0.92	-7.76/ 0.000	5.56/ 0.001	0.97
dia	68.00	18	10.22± 1.04	29	6.55± 2.05	8.13/ 0.000	3.88/ 0.005	-0.90
pV	0.06	22	8.65± 1.55	24	7.42± 3.04	1.75/0.088	3.81/ 0.003	-0.49

Table 6. *t*-test, comparing the mean of the distributions of pairs of classes

Colour	Res. 3:2 Res.others	Res. 3:2 Classic Cd	Res. 3:2 Classic Ht	Res. 3:2 Scattered	Res. 3:2 Detached	Res. 3:2 J.Trojans	Res. 3:2 Centaur	Res. 3:2 SP Comets	Res. 3:2 LP Comets
B-V	44 20 -1.7 0.087	44 40 -3.6 0.000	44 48 0.2 0.855	44 41 1.2 0.253	44 24 0.0 0.963	44 83 3.7 0.000	44 72 0.5 0.623	44 20 0.3 0.760	44 33 3.5 0.001
B-R	39 22 -1.2 0.242	39 40 -3.5 0.001	39 47 0.6 0.561	39 43 1.5 0.145	39 25 0.6 0.541	39 83 4.8 0.000	39 74 0.5 0.643	39 20 1.0 0.317	39 32 4.1 0.000
B-I	32 17 -1.2 0.235	32 26 -2.9 0.006	32 40 0.7 0.466	32 32 0.8 0.437	32 21 0.2 0.808	32 76 4.0 0.000	32 42 0.6 0.558	32 13 2.0 0.052	32 11 3.9 0.000
B-J	4 3 -1.2 0.275	4 1 —	4 1 —	4 4 -1.1 0.306	4 2 -0.7 0.568	4 5 0.7 0.550	4 9 -0.3 0.806	4 1 —	4 0 —
B-H	4 3 -1.3 0.261	4 1 —	4 1 —	4 4 -1.1 0.328	4 2 -0.6 0.572	4 5 0.7 0.554	4 9 -0.4 0.716	4 1 —	4 0 —
B-K	3 2 -0.5 0.658	3 1 —	3 1 —	3 2 -1.0 0.424	3 1 —	3 5 0.6 0.634	3 9 -0.1 0.914	3 1 —	3 0 —
V-R	45 25 -1.5 0.150	45 48 -3.8 0.000	45 55 0.5 0.614	45 41 1.6 0.117	45 26 0.5 0.611	45 89 5.9 0.000	45 74 -0.0 0.976	45 46 2.3 0.021	45 36 4.6 0.000
V-I	41 26 -1.4 0.159	41 73 -3.7 0.000	41 60 0.8 0.454	41 34 1.5 0.128	41 26 0.9 0.382	41 82 6.2 0.000	41 47 1.0 0.313	41 23 3.4 0.001	41 15 3.7 0.001
V-J	15 5 -1.3 0.211	15 4 -0.2 0.835	15 13 1.8 0.092	15 9 0.6 0.528	15 4 0.8 0.452	15 12 2.6 0.019	15 11 0.7 0.507	15 1 —	15 0 —
V-H	9 4 -1.2 0.285	9 1 —	9 6 0.5 0.631	9 7 -0.3 0.745	9 4 0.5 0.647	9 12 0.6 0.555	9 11 -0.5 0.653	9 1 —	9 0 —
V-K	7 3 -0.7 0.531	7 1 —	7 6 0.3 0.770	7 5 -0.5 0.632	7 3 0.5 0.656	7 12 -0.0 0.967	7 11 -0.8 0.443	7 1 —	7 0 —
R-I	39 22 -0.4 0.667	39 37 -2.2 0.030	39 44 0.0 0.978	39 30 0.6 0.549	39 23 0.6 0.557	39 82 4.9 0.000	39 47 1.1 0.275	39 24 2.9 0.005	39 15 3.1 0.004
R-J	4 3 -0.4 0.682	4 0 —	4 3 0.4 0.731	4 5 -0.1 0.939	4 2 -0.3 0.764	4 5 1.6 0.195	4 9 0.6 0.565	4 1 —	4 0 —
R-H	4 3 -0.6 0.570	4 0 —	4 3 1.0 0.370	4 5 0.3 0.788	4 2 0.2 0.851	4 5 2.6 0.059	4 9 1.1 0.324	4 1 —	4 0 —
R-K	2 2 0.2 0.883	2 0 —	2 1 —	2 3 1.3 0.301	2 1 —	2 5 4.9 0.006	2 9 2.8 0.022	2 1 —	2 0 —
I-J	8 6 -1.2 0.270	8 2 -1.8 0.271	8 4 0.6 0.566	8 9 -1.0 0.319	8 1 —	8 5 0.7 0.473	8 16 -0.7 0.487	8 1 —	8 0 —
I-H	3 4 -0.9 0.452	3 1 —	3 2 -0.6 0.595	3 4 -0.4 0.683	3 1 —	3 5 -0.1 0.908	3 9 -0.3 0.771	3 1 —	3 0 —
I-K	3 4 -0.7 0.519	3 1 —	3 2 -0.4 0.720	3 3 -0.8 0.481	3 1 —	3 5 -0.4 0.701	3 9 -0.4 0.711	3 1 —	3 0 —
J-H	23 13 -1.4 0.176	23 29 -0.7 0.489	23 35 0.6 0.543	23 12 -0.5 0.601	23 11 -0.3 0.744	23 12 -1.3 0.194	23 22 -0.4 0.683	23 1 —	23 0 —
J-K	15 5 -2.2 0.060	15 4 -2.1 0.077	15 10 0.3 0.787	15 10 -1.7 0.105	15 4 0.3 0.787	15 12 -4.8 0.000	15 22 -1.9 0.060	15 1 —	15 0 —
H-K	14 4 -0.4 0.678	14 4 -1.6 0.143	14 10 -0.1 0.955	14 8 0.0 0.986	14 4 0.1 0.932	14 12 -4.7 0.000	14 21 -0.5 0.605	14 1 —	14 0 —
M11	44 25 0.3 0.792	44 49 -0.9 0.384	44 58 2.0 0.047	44 35 -2.6 0.012	44 26 1.7 0.095	44 69 -13.9 0.000	44 62 -9.3 0.000	44 134 -29.7 0.000	44 13 -7.0 0.000
Grt	51 28 -1.9 0.062	51 80 -4.6 0.000	51 67 0.1 0.937	51 43 1.6 0.124	51 29 0.4 0.699	51 89 6.1 0.000	51 74 0.1 0.897	51 46 2.8 0.006	51 37 4.3 0.000
Hma	22 4 0.8 0.447	22 16 -2.2 0.036	22 29 1.5 0.149	22 19 -3.9 0.001	22 7 2.6 0.034	22 3 -4.5 0.035	22 44 -10.7 0.000	22 0 —	22 1 —
dia	24 4 1.0 0.329	24 16 2.8 0.010	24 29 -0.4 0.697	24 19 3.4 0.002	24 7 -1.5 0.181	24 3 4.8 0.000	24 44 4.5 0.000	24 0 —	24 1 —
pV	24 4 0.5 0.608	24 16 0.3 0.748	24 29 -0.6 0.583	24 17 2.0 0.056	24 6 -1.1 0.311	24 3 3.6 0.002	24 44 2.9 0.007	24 0 —	24 1 —

Table 6. (cont'd) *t*-test

Colour	Res.others Classic Cd	Res.others Classic Ht	Res.others Scattered	Res.others Detached	Res.others J.Trojans	Res.others Centaur	Res.others SP Comets	Res.others LP Comets
U-B	2 3	2 10	2 7	2 2	2 1	2 0	2 0	2 0
	-3.4 0.047	-0.0 0.998	-0.7 0.523	0.7 0.555	—	—	—	—
U-V	2 3	2 10	2 7	2 2	2 1	2 0	2 0	2 0
	-6.1 0.016	3.3 0.008	0.4 0.732	13.5 0.018	—	—	—	—
U-R	2 3	2 10	2 7	2 2	2 1	2 0	2 0	2 0
	-4.5 0.026	3.3 0.016	0.6 0.541	4.4 0.050	—	—	—	—
B-V	20 40	20 48	20 41	20 24	20 83	20 72	20 20	20 33
	-1.5 0.131	1.9 0.061	3.0 0.005	1.8 0.075	5.6 0.000	2.4 0.022	1.6 0.125	5.3 0.000
B-R	22 40	22 47	22 43	22 25	22 83	22 74	22 20	22 32
	-1.9 0.063	1.8 0.083	2.7 0.010	1.8 0.076	5.9 0.000	1.8 0.085	1.9 0.065	5.3 0.000
B-I	17 26	17 40	17 32	17 21	17 76	17 42	17 13	17 11
	-1.4 0.167	2.0 0.049	2.1 0.041	1.6 0.115	5.5 0.000	1.9 0.063	3.5 0.002	5.3 0.000
B-J	3 1	3 1	3 4	3 2	3 5	3 9	3 1	3 0
	—	—	0.0 0.971	0.3 0.825	3.9 0.052	1.4 0.197	—	—
B-H	3 1	3 1	3 4	3 2	3 5	3 9	3 1	3 0
	—	—	0.3 0.768	0.5 0.665	3.9 0.047	1.4 0.214	—	—
B-K	2 1	2 1	2 2	2 1	2 5	2 9	2 1	2 0
	—	—	-0.7 0.596	—	1.9 0.290	0.7 0.588	—	—
V-R	25 48	25 55	25 41	25 26	25 89	25 74	25 46	25 36
	-1.7 0.100	2.0 0.055	2.9 0.006	1.9 0.069	6.5 0.000	1.6 0.125	3.5 0.001	5.5 0.000
V-I	26 73	26 60	26 34	26 26	26 82	26 47	26 23	26 15
	-2.0 0.056	2.3 0.025	3.1 0.003	2.4 0.023	8.3 0.000	2.5 0.014	5.2 0.000	5.2 0.000
V-J	5 4	5 13	5 9	5 4	5 12	5 11	5 1	5 0
	0.7 0.521	2.9 0.015	1.8 0.103	1.6 0.185	3.9 0.014	1.9 0.089	—	—
V-H	4 1	4 6	4 7	4 4	4 12	4 11	4 1	4 0
	—	1.5 0.177	0.8 0.449	1.3 0.263	1.9 0.152	0.9 0.413	—	—
V-K	3 1	3 6	3 5	3 3	3 12	3 11	3 1	3 0
	—	0.9 0.409	0.2 0.817	0.9 0.458	0.8 0.508	0.2 0.868	—	—
R-I	22 37	22 44	22 30	22 23	22 82	22 47	22 24	22 15
	-1.9 0.070	0.5 0.653	1.1 0.275	1.1 0.292	6.0 0.000	1.6 0.110	3.5 0.001	3.7 0.001
R-J	3 0	3 3	3 5	3 2	3 5	3 9	3 1	3 0
	—	1.9 0.140	0.6 0.593	0.3 0.796	5.3 0.019	1.7 0.118	—	—
R-H	3 0	3 3	3 5	3 2	3 5	3 9	3 1	3 0
	—	2.4 0.128	1.0 0.340	1.2 0.324	4.3 0.022	1.9 0.094	—	—
R-K	2 0	2 1	2 3	2 1	2 5	2 9	2 1	2 0
	—	—	0.2 0.886	—	1.6 0.333	1.0 0.448	—	—
I-J	6 2	6 4	6 9	6 1	6 5	6 16	6 1	6 0
	-1.1 0.426	1.7 0.132	0.0 0.965	—	2.0 0.092	0.7 0.499	—	—
I-H	4 1	4 2	4 4	4 1	4 5	4 9	4 1	4 0
	—	0.6 0.599	0.4 0.677	—	1.7 0.170	1.2 0.291	—	—
I-K	4 1	4 2	4 3	4 1	4 5	4 9	4 1	4 0
	—	0.8 0.480	-0.1 0.923	—	0.7 0.529	0.7 0.516	—	—
J-H	13 29	13 35	13 12	13 11	13 12	13 22	13 1	13 0
	1.5 0.152	2.4 0.022	0.9 0.386	1.2 0.236	0.1 0.921	1.9 0.074	—	—
J-K	5 4	5 10	5 10	5 4	5 12	5 22	5 1	5 0
	0.4 0.667	1.4 0.174	0.8 0.445	1.0 0.379	-1.0 0.369	0.8 0.450	—	—
H-K	4 4	4 10	4 8	4 4	4 12	4 21	4 1	4 0
	-1.4 0.209	0.1 0.896	0.2 0.837	0.2 0.878	-5.3 0.000	-0.3 0.738	—	—
M11	25 49	25 58	25 35	25 26	25 69	25 62	25 134	25 13
	-1.3 0.195	1.8 0.071	-2.9 0.005	1.5 0.132	-15.1 0.000	-10.2 0.000	-32.5 0.000	-7.1 0.000
Grt	28 80	28 67	28 43	28 29	28 89	28 74	28 46	28 37
	-2.0 0.053	2.1 0.043	3.5 0.001	2.2 0.032	7.9 0.000	2.2 0.035	4.7 0.000	6.2 0.000
Hma	4 16	4 29	4 19	4 7	4 3	4 44	4 0	4 1
	-2.6 0.060	0.5 0.622	-4.1 0.001	2.1 0.068	-4.7 0.025	-10.0 0.000	—	—
dia	4 16	4 29	4 19	4 7	4 3	4 44	4 0	4 1
	2.1 0.105	-1.7 0.113	2.9 0.040	-1.9 0.096	4.9 0.014	4.6 0.018	—	—
pV	4 16	4 29	4 17	4 6	4 3	4 44	4 0	4 1
	-0.3 0.752	-0.9 0.371	1.5 0.156	-1.2 0.268	3.3 0.022	2.6 0.067	—	—

Table 6. (cont'd) *t*-test

Colour	Classic Cd Classic Ht	Classic Cd Scattered	Classic Cd Detached	Classic Cd J.Trojans	Classic Cd Centaur	Classic Cd SP Comets	Classic Cd LP Comets
U-B	3 10 3.6 0.018	3 7 2.9 0.039	3 2 3.2 0.096	3 1 —	3 0 —	3 0 —	3 0 —
U-V	3 10 6.8 0.000	3 7 4.0 0.004	3 2 11.3 0.006	3 1 —	3 0 —	3 0 —	3 0 —
U-R	3 10 7.0 0.000	3 7 4.1 0.003	3 2 9.0 0.003	3 1 —	3 0 —	3 0 —	3 0 —
U-I	2 7 5.8 0.001	2 4 2.7 0.057	2 0 —	2 0 —	2 0 —	2 0 —	2 0 —
B-V	40 48 3.9 0.000	40 41 5.3 0.000	40 24 3.8 0.000	40 83 9.3 0.000	40 72 4.7 0.000	40 20 2.8 0.009	40 33 8.9 0.000
B-R	40 47 4.4 0.000	40 43 6.0 0.000	40 25 4.5 0.000	40 83 12.0 0.000	40 74 4.8 0.000	40 20 3.6 0.001	40 32 10.9 0.000
B-I	26 40 4.2 0.000	26 32 4.5 0.000	26 21 3.9 0.000	26 76 10.6 0.000	26 42 4.1 0.000	26 13 6.9 0.000	26 11 9.6 0.000
B-J	1 1 —	1 4 —	1 2 —	1 5 —	1 9 —	1 1 —	1 0 —
B-H	1 1 —	1 4 —	1 2 —	1 5 —	1 9 —	1 1 —	1 0 —
B-K	1 1 —	1 2 —	1 1 —	1 5 —	1 9 —	1 1 —	1 0 —
V-R	48 55 4.7 0.000	48 41 6.0 0.000	48 26 4.2 0.000	48 89 13.1 0.000	48 74 4.4 0.000	48 46 6.7 0.000	48 36 10.5 0.000
V-I	73 60 5.1 0.000	73 34 6.3 0.000	73 26 4.9 0.000	73 82 17.3 0.000	73 47 5.2 0.000	73 23 9.5 0.000	73 15 8.5 0.000
V-J	4 13 1.3 0.246	4 9 0.7 0.538	4 4 0.9 0.427	4 12 1.6 0.203	4 11 0.7 0.533	4 1 —	4 0 —
V-H	1 6 —	1 7 —	1 4 —	1 12 —	1 11 —	1 1 —	1 0 —
V-K	1 6 —	1 5 —	1 3 —	1 12 —	1 11 —	1 1 —	1 0 —
R-I	37 44 2.2 0.032	37 30 3.1 0.003	37 23 3.0 0.005	37 82 9.4 0.000	37 47 3.7 0.000	37 24 5.6 0.000	37 15 5.9 0.000
R-J	0 3 —	0 5 —	0 2 —	0 5 —	0 9 —	0 1 —	0 0 —
R-H	0 3 —	0 5 —	0 2 —	0 5 —	0 9 —	0 1 —	0 0 —
R-K	0 1 —	0 3 —	0 1 —	0 5 —	0 9 —	0 1 —	0 0 —
I-J	2 4 2.1 0.227	2 9 1.1 0.414	2 1 —	2 5 2.2 0.257	2 16 1.5 0.341	2 1 —	2 0 —
I-H	1 2 —	1 4 —	1 1 —	1 5 —	1 9 —	1 1 —	1 0 —
I-K	1 2 —	1 3 —	1 1 —	1 5 —	1 9 —	1 1 —	1 0 —
J-H	29 35 1.6 0.108	29 12 0.1 0.950	29 11 0.4 0.708	29 12 -1.3 0.194	29 22 0.6 0.580	29 1 —	29 0 —
J-K	4 10 1.2 0.242	4 10 0.4 0.701	4 4 0.9 0.447	4 12 -1.8 0.126	4 22 0.4 0.722	4 1 —	4 0 —
H-K	4 10 0.7 0.486	4 8 0.8 0.446	4 4 0.4 0.720	4 12 -3.2 0.015	4 21 0.3 0.774	4 1 —	4 0 —
M11	49 58 4.0 0.000	49 35 -2.5 0.015	49 26 2.7 0.012	49 69 -21.0 0.000	49 62 -12.5 0.000	49 134 -55.8 0.000	49 13 -7.0 0.000
Grt	80 67 5.1 0.000	80 43 7.1 0.000	80 29 4.8 0.000	80 89 16.5 0.000	80 74 5.3 0.000	80 46 9.0 0.000	80 37 11.8 0.000
Hma	16 29 3.7 0.001	16 19 -3.1 0.005	16 7 3.5 0.012	16 3 -3.9 0.056	16 44 -10.9 0.000	16 0 —	16 1 —
dia	16 29 -4.7 0.000	16 19 1.8 0.089	16 7 -2.6 0.042	16 3 7.0 0.000	16 44 6.6 0.000	16 0 —	16 1 —
pV	16 29 -0.8 0.433	16 17 2.3 0.031	16 6 -1.2 0.286	16 3 5.0 0.003	16 44 4.7 0.000	16 0 —	16 1 —

Table 6. (cont'd) *t*-test

Colour	Classic Ht Scattered	Classic Ht Detached	Classic Ht J.Trojans	Classic Ht Centaur	Classic Ht SP Comets	Classic Ht LP Comets
U-B	10 7 -0.8 0.439	10 2 0.8 0.545	10 1 —	10 0 —	10 0 —	10 0 —
U-V	10 7 -1.9 0.080	10 2 0.9 0.404	10 1 —	10 0 —	10 0 —	10 0 —
U-R	10 7 -2.2 0.046	10 2 0.1 0.916	10 1 —	10 0 —	10 0 —	10 0 —
U-I	7 4 -1.6 0.162	7 0 —	7 0 —	7 0 —	7 0 —	7 0 —
B-V	48 41 1.0 0.343	48 24 -0.1 0.889	48 83 3.5 0.001	48 72 0.3 0.772	48 20 0.2 0.859	48 33 3.3 0.002
B-R	47 43 0.9 0.387	47 25 0.0 0.983	47 83 4.3 0.000	47 74 -0.2 0.852	47 20 0.6 0.553	47 32 3.6 0.001
B-I	40 32 0.0 0.978	40 21 -0.6 0.549	40 76 3.8 0.000	40 42 -0.2 0.858	40 13 1.4 0.180	40 11 3.6 0.001
B-J	1 4 —	1 2 —	1 5 —	1 9 —	1 1 —	1 0 —
B-H	1 4 —	1 2 —	1 5 —	1 9 —	1 1 —	1 0 —
B-K	1 2 —	1 1 —	1 5 —	1 9 —	1 1 —	1 0 —
V-R	55 41 1.2 0.253	55 26 0.1 0.954	55 89 5.9 0.000	55 74 -0.6 0.542	55 46 2.0 0.050	55 36 4.4 0.000
V-I	60 34 0.8 0.405	60 26 0.2 0.864	60 82 5.9 0.000	60 47 0.3 0.764	60 23 2.8 0.006	60 15 3.2 0.003
V-J	13 9 -0.8 0.410	13 4 -0.1 0.933	13 12 0.3 0.788	13 11 -0.9 0.372	13 1 —	13 0 —
V-H	6 7 -0.8 0.465	6 4 0.1 0.891	6 12 -0.1 0.912	6 11 -0.9 0.371	6 1 —	6 0 —
V-K	6 5 -0.8 0.466	6 3 0.4 0.752	6 12 -0.4 0.678	6 11 -1.1 0.298	6 1 —	6 0 —
R-I	44 30 0.6 0.577	44 23 0.5 0.585	44 82 4.7 0.000	44 47 1.0 0.299	44 24 2.8 0.007	44 15 3.0 0.005
R-J	3 5 -0.8 0.467	3 2 -1.9 0.182	3 5 4.6 0.014	3 9 0.5 0.613	3 1 —	3 0 —
R-H	3 5 -0.9 0.410	3 2 -2.9 0.088	3 5 4.2 0.007	3 9 0.4 0.721	3 1 —	3 0 —
R-K	1 3 —	1 1 —	1 5 —	1 9 —	1 1 —	1 0 —
I-J	4 9 -1.5 0.160	4 1 —	4 5 -0.0 0.970	4 16 -1.4 0.211	4 1 —	4 0 —
I-H	2 4 0.1 0.925	2 1 —	2 5 1.4 0.307	2 9 0.8 0.512	2 1 —	2 0 —
I-K	2 3 -1.4 0.248	2 1 —	2 5 -0.1 0.912	2 9 -0.1 0.954	2 1 —	2 0 —
J-H	35 12 -1.2 0.222	35 11 -1.0 0.302	35 12 -2.3 0.026	35 22 -1.3 0.203	35 1 —	35 0 —
J-K	10 10 -1.0 0.320	10 4 0.1 0.911	10 12 -2.1 0.061	10 22 -1.1 0.300	10 1 —	10 0 —
H-K	10 8 0.1 0.955	10 4 0.1 0.919	10 12 -2.1 0.060	10 21 -0.3 0.735	10 1 —	10 0 —
M11	58 35 -4.8 0.000	58 26 0.2 0.866	58 69 -18.3 0.000	58 62 -12.7 0.000	58 134 -37.6 0.000	58 13 -7.9 0.000
Grt	67 43 1.6 0.120	67 29 0.3 0.740	67 89 6.6 0.000	67 74 0.1 0.959	67 46 2.9 0.004	67 37 4.6 0.000
Hma	29 19 -4.6 0.000	29 7 1.9 0.098	29 3 -5.0 0.024	29 44 -11.2 0.000	29 0 —	29 1 —
dia	29 19 5.5 0.000	29 7 -1.4 0.218	29 3 7.8 0.000	29 44 7.6 0.000	29 0 —	29 1 —
pV	29 17 1.8 0.076	29 6 -0.9 0.406	29 3 2.7 0.010	29 44 2.2 0.033	29 0 —	29 1 —

Table 6. (cont'd) *t*-test

Colour	Scattered Detached	Scattered J.Trojans	Scattered Centaur	Scattered SP Comets	Scattered LP Comets
U-B	7 2 1.3 0.367	7 1 —	7 0 —	7 0 —	7 0 —
U-V	7 2 3.1 0.019	7 1 —	7 0 —	7 0 —	7 0 —
U-R	7 2 2.7 0.036	7 1 —	7 0 —	7 0 —	7 0 —
U-I	4 0 —	4 0 —	4 0 —	4 0 —	4 0 —
B-V	41 24 -1.1 0.263	41 83 2.7 0.008	41 72 -0.8 0.447	41 20 -0.5 0.650	41 33 2.5 0.015
B-R	43 25 -0.9 0.389	43 83 4.0 0.000	43 74 -1.2 0.230	43 20 0.0 0.969	43 32 3.2 0.002
B-I	32 21 -0.7 0.510	32 76 4.0 0.000	32 42 -0.2 0.829	32 13 1.4 0.164	32 11 3.8 0.001
B-J	4 2 0.2 0.844	4 5 2.9 0.057	4 9 1.2 0.269	4 1 —	4 0 —
B-H	4 2 0.3 0.788	4 5 3.6 0.028	4 9 1.1 0.300	4 1 —	4 0 —
B-K	2 1 —	2 5 9.4 0.000	2 9 2.4 0.038	2 1 —	2 0 —
V-R	41 26 -1.0 0.342	41 89 4.6 0.000	41 74 -1.9 0.067	41 46 0.9 0.373	41 36 3.2 0.002
V-I	34 26 -0.6 0.539	34 82 5.0 0.000	34 47 -0.5 0.615	34 23 2.0 0.050	34 15 2.5 0.019
V-J	9 4 0.4 0.699	9 12 1.2 0.249	9 11 -0.0 0.993	9 1 —	9 0 —
V-H	7 4 0.7 0.521	7 12 0.9 0.384	7 11 -0.0 0.970	7 1 —	7 0 —
V-K	5 3 0.7 0.519	5 12 0.6 0.573	5 11 -0.1 0.898	5 1 —	5 0 —
R-I	30 23 0.0 0.991	30 82 4.8 0.000	30 47 0.5 0.589	30 24 2.5 0.016	30 15 2.7 0.011
R-J	5 2 -0.4 0.714	5 5 3.0 0.033	5 9 1.0 0.340	5 1 —	5 0 —
R-H	5 2 -0.2 0.863	5 5 2.9 0.027	5 9 0.9 0.380	5 1 —	5 0 —
R-K	3 1 —	3 5 4.2 0.006	3 9 2.1 0.061	3 1 —	3 0 —
I-J	9 1 —	9 5 1.7 0.113	9 16 0.6 0.564	9 1 —	9 0 —
I-H	4 1 —	4 5 0.5 0.629	4 9 0.3 0.804	4 1 —	4 0 —
I-K	3 1 —	3 5 1.2 0.296	3 9 1.2 0.284	3 1 —	3 0 —
J-H	12 11 0.2 0.816	12 12 -0.8 0.422	12 22 0.3 0.798	12 1 —	12 0 —
J-K	10 4 0.7 0.506	10 12 -2.4 0.031	10 22 -0.1 0.952	10 1 —	10 0 —
H-K	8 4 0.1 0.939	8 12 -2.2 0.059	8 21 -0.4 0.692	8 1 —	8 0 —
M11	35 26 3.8 0.000	35 69 -10.7 0.000	35 62 -6.4 0.000	35 134 -25.8 0.000	35 13 -5.9 0.000
Grt	43 29 -1.1 0.292	43 89 4.9 0.000	43 74 -1.6 0.119	43 46 1.4 0.173	43 37 3.0 0.004
Hma	19 7 4.8 0.000	19 3 -1.3 0.245	19 44 -2.1 0.043	19 0 —	19 1 —
dia	19 7 -2.8 0.031	19 3 3.8 0.001	19 44 3.2 0.004	19 0 —	19 1 —
pV	17 6 -1.6 0.179	17 3 1.6 0.130	17 44 0.6 0.559	17 0 —	17 1 —

Table 6. (cont'd) *t*-test

Colour	Detached J.Trojans	Detached Centaur	Detached SP Comets	Detached LP Comets
U-B	2 1	2 0	2 0	2 0
U-V	2 1	2 0	2 0	2 0
U-R	2 1	2 0	2 0	2 0
U-I	0 0	0 0	0 0	0 0
B-V	24 83 3.8 0.001	24 72 0.5 0.650	24 20 0.3 0.782	24 33 3.6 0.001
B-R	25 83 4.5 0.000	25 74 -0.2 0.831	25 20 0.6 0.559	25 32 3.7 0.001
B-I	21 76 5.1 0.000	21 42 0.4 0.671	21 13 2.3 0.031	21 11 4.7 0.000
B-J	2 5 1.4 0.395	2 9 0.5 0.655	2 1	2 0
B-H	2 5 1.6 0.353	2 9 0.4 0.734	2 1	2 0
B-K	1 5	1 9	1 1	1 0
V-R	26 89 4.8 0.000	26 74 -0.6 0.553	26 46 1.7 0.092	26 36 3.7 0.001
V-I	26 82 5.2 0.000	26 47 0.1 0.905	26 23 2.5 0.016	26 15 2.9 0.007
V-J	4 12 0.2 0.849	4 11 -0.4 0.690	4 1	4 0
V-H	4 12 -0.2 0.829	4 11 -0.8 0.484	4 1	4 0
V-K	3 12 -0.5 0.639	3 11 -0.8 0.484	3 1	3 0
R-I	23 82 4.4 0.000	23 47 0.5 0.614	23 24 2.4 0.022	23 15 2.5 0.016
R-J	2 5 6.1 0.049	2 9 1.6 0.143	2 1	2 0
R-H	2 5 5.9 0.002	2 9 1.4 0.203	2 1	2 0
R-K	1 5	1 9	1 1	1 0
I-J	1 5	1 16	1 1	1 0
I-H	1 5	1 9	1 1	1 0
I-K	1 5	1 9	1 1	1 0
J-H	11 12 -1.2 0.263	11 22 -0.0 0.975	11 1	11 0
J-K	4 12 -1.3 0.269	4 22 -0.8 0.496	4 1	4 0
H-K	4 12 -0.9 0.426	4 21 -0.3 0.799	4 1	4 0
M11	26 69 -12.9 0.000	26 62 -9.4 0.000	26 134 -24.7 0.000	26 13 -7.6 0.000
Grt	29 89 5.2 0.000	29 74 -0.3 0.769	29 46 2.3 0.027	29 37 3.6 0.001
Hma	7 3 -5.3 0.003	7 44 -7.6 0.000	7 0	7 1
dia	7 3 3.3 0.017	7 44 3.2 0.019	7 0	7 1
pV	6 3 1.8 0.125	6 44 1.7 0.159	6 0	6 1

Table 6. (cont'd) *t*-test

Colour	J.Trojans Centaur	J.Trojans SP Comets	J.Trojans LP Comets
U-B	1 0	1 0	1 0
U-V	1 0	1 0	1 0
U-R	1 0	1 0	1 0
U-I	0 0	0 0	0 0
B-V	83 72 -3.8 0.000	83 20 -1.9 0.068	83 33 -0.2 0.805
B-R	83 74 -5.6 0.000	83 20 -2.0 0.062	83 32 -1.2 0.226
B-I	76 42 -4.2 0.000	76 13 -3.5 0.003	76 11 0.2 0.848
B-J	5 9 -1.6 0.136	5 1	5 0
B-H	5 9 -2.0 0.070	5 1	5 0
B-K	5 9 -1.8 0.099	5 1	5 0
V-R	89 74 -7.4 0.000	89 46 -3.1 0.003	89 36 -1.3 0.208
V-I	82 47 -5.2 0.000	82 23 -3.0 0.006	82 15 -1.3 0.202
V-J	12 11 -1.4 0.196	12 1	12 0
V-H	12 11 -1.5 0.164	12 1	12 0
V-K	12 11 -1.5 0.168	12 1	12 0
R-I	82 47 -4.0 0.000	82 24 -1.2 0.229	82 15 -1.3 0.221
R-J	5 9 -1.6 0.141	5 1	5 0
R-H	5 9 -1.6 0.130	5 1	5 0
R-K	5 9 -1.0 0.340	5 1	5 0
I-J	5 16 -2.1 0.051	5 1	5 0
I-H	5 9 -0.7 0.528	5 1	5 0
I-K	5 9 0.0 0.965	5 1	5 0
J-H	12 22 1.7 0.095	12 1	12 0
J-K	12 22 2.6 0.014	12 1	12 0
H-K	12 21 1.8 0.093	12 1	12 0
M11	69 62 4.4 0.000	69 134 -19.6 0.000	69 13 -2.2 0.048
Grt	89 74 -7.0 0.000	89 46 -3.4 0.001	89 37 -1.8 0.071
Hma	3 44 -0.0 0.968	3 0	3 1
dia	3 44 -1.4 0.230	3 0	3 1
pV	3 44 -1.7 0.183	3 0	3 1

Table 6. (cont'd) *t*-test

Colour	Centaurs SP Comets	Centaurs LP Comets
U-B	0 0	0 0
U-V	0 0	0 0
U-R	0 0	0 0
U-I	0 0	0 0
B-V	72 20 -0.0 0.995	72 33 3.5 0.001
B-R	74 20 0.8 0.454	74 32 4.7 0.000
B-I	42 13 1.6 0.109	42 11 3.9 0.000
B-J	9 1	9 0
B-H	9 1	9 0
B-K	9 1	9 0
V-R	74 46 2.7 0.008	74 36 5.5 0.000
V-I	47 23 2.4 0.018	47 15 2.8 0.007
V-J	11 1	11 0
V-H	11 1	11 0
V-K	11 1	11 0
R-I	47 24 2.0 0.054	47 15 2.1 0.040
R-J	9 1	9 0
R-H	9 1	9 0
R-K	9 1	9 0
I-J	16 1	16 0
I-H	9 1	9 0
I-K	9 1	9 0
J-H	22 1	22 0
J-K	22 1	22 0
H-K	21 1	21 0
M11	62 134 -21.8 0.000	62 13 -3.5 0.004
Grt	74 46 3.0 0.003	74 37 4.7 0.000
Hma	44 0	44 1
dia	44 0	44 1
pV	44 0	44 1

Table 6. *f*-test, comparing the variance of the distributions of pairs of classes

Colour	Res. 3:2 Res.others	Res. 3:2 Classic Cd	Res. 3:2 Classic Ht	Res. 3:2 Scattered	Res. 3:2 Detached	Res. 3:2 J.Trojans	Res. 3:2 Centaur	Res. 3:2 SP Comets	Res. 3:2 LP Comets
B-V	44 20 1.8 0.182	44 40 1.5 0.171	44 48 1.1 0.797	44 41 1.6 0.141	44 24 2.0 0.073	44 83 3.0 0.000	44 72 1.0 0.949	44 20 1.3 0.410	44 33 5.7 0.000
B-R	39 22 1.4 0.378	39 40 2.0 0.039	39 47 1.0 0.909	39 43 1.7 0.092	39 25 2.0 0.083	39 83 4.4 0.000	39 74 1.0 0.990	39 20 1.3 0.528	39 32 8.2 0.000
B-I	32 17 1.8 0.236	32 26 2.7 0.013	32 40 1.2 0.535	32 32 1.8 0.092	32 21 3.1 0.010	32 76 7.3 0.000	32 42 1.3 0.438	32 13 10.5 0.000	32 11 15.2 0.000
B-J	4 3 5.0 0.345	4 1 —	4 1 —	4 4 2.1 0.553	4 2 1.3 0.892	4 5 70.9 0.001	4 9 1.3 0.671	4 1 —	4 0 —
B-H	4 3 4.8 0.357	4 1 —	4 1 —	4 4 3.9 0.290	4 2 2.1 0.920	4 5 33.8 0.005	4 9 1.7 0.501	4 1 —	4 0 —
B-K	3 2 4.4 0.639	3 1 —	3 1 —	3 2 266.9 0.086	3 1 —	3 5 27.7 0.009	3 9 2.8 0.246	3 1 —	3 0 —
V-R	45 25 1.1 0.781	45 48 1.6 0.129	45 55 1.1 0.824	45 41 1.5 0.172	45 26 1.5 0.309	45 89 4.0 0.000	45 74 1.0 0.889	45 46 1.2 0.641	45 36 3.5 0.000
V-I	41 26 1.7 0.174	41 73 2.0 0.011	41 60 1.1 0.731	41 34 1.8 0.101	41 26 1.7 0.153	41 82 5.4 0.000	41 47 1.0 0.913	41 23 3.6 0.002	41 15 3.0 0.031
V-J	15 5 2.1 0.493	15 4 1.0 0.810	15 13 1.2 0.729	15 9 1.0 0.919	15 4 1.6 0.464	15 12 15.6 0.000	15 11 1.0 0.946	15 1 —	15 0 —
V-H	9 4 1.2 0.991	9 1 —	9 6 1.0 0.953	9 7 1.1 0.835	9 4 1.9 0.415	9 12 9.2 0.001	9 11 1.4 0.630	9 1 —	9 0 —
V-K	7 3 1.2 0.935	7 1 —	7 6 1.0 0.976	7 5 1.1 0.953	7 3 3.4 0.207	7 12 8.1 0.003	7 11 2.3 0.242	7 1 —	7 0 —
R-I	39 22 2.1 0.066	39 37 1.7 0.109	39 44 1.2 0.535	39 30 1.8 0.109	39 23 1.9 0.101	39 82 5.0 0.000	39 47 1.1 0.720	39 24 1.9 0.109	39 15 3.6 0.012
R-J	4 3 9.4 0.196	4 0 —	4 3 23.8 0.081	4 5 2.6 0.387	4 2 23.1 0.303	4 5 39.7 0.004	4 9 1.3 0.653	4 1 —	4 0 —
R-H	4 3 2.4 0.615	4 0 —	4 3 41.8 0.047	4 5 1.4 0.730	4 2 38.7 0.235	4 5 5.5 0.133	4 9 1.5 0.822	4 1 —	4 0 —
R-K	2 2 21.6 0.270	2 0 —	2 1 —	2 3 1.0 0.834	2 1 —	2 5 4.9 0.648	2 9 16.4 0.377	2 1 —	2 0 —
I-J	8 6 1.2 0.760	8 2 1.6 0.498	8 4 1.9 0.638	8 9 2.3 0.278	8 1 —	8 5 9.4 0.047	8 16 1.1 0.876	8 1 —	8 0 —
I-H	3 4 3.6 0.317	3 1 —	3 2 15.7 0.351	3 4 1.2 0.807	3 1 —	3 5 17.4 0.021	3 9 5.1 0.076	3 1 —	3 0 —
I-K	3 4 3.3 0.348	3 1 —	3 2 56.3 0.188	3 3 13.9 0.134	3 1 —	3 5 10.9 0.048	3 9 5.3 0.069	3 1 —	3 0 —
J-H	23 13 11.9 0.000	23 29 7.2 0.000	23 35 1.2 0.654	23 12 2.9 0.073	23 11 3.5 0.046	23 12 12.0 0.000	23 22 6.2 0.000	23 1 —	23 0 —
J-K	15 5 1.1 0.934	15 4 2.2 0.568	15 10 7.3 0.001	15 10 1.0 0.942	15 4 9.1 0.003	15 12 1.9 0.274	15 22 1.6 0.387	15 1 —	15 0 —
H-K	14 4 7.5 0.124	14 4 4.4 0.250	14 10 4.7 0.013	14 8 3.7 0.040	14 4 13.9 0.000	14 12 2.3 0.166	14 21 8.7 0.000	14 1 —	14 0 —
M11	44 25 2.1 0.050	44 49 7.8 0.000	44 58 1.1 0.657	44 35 1.2 0.601	44 26 1.1 0.762	44 69 1.4 0.200	44 62 1.0 0.869	44 134 1.6 0.056	44 13 3.2 0.005
Grt	51 28 1.4 0.326	51 80 1.5 0.082	51 67 1.0 0.867	51 43 1.7 0.074	51 29 1.5 0.240	51 89 5.6 0.000	51 74 1.0 0.993	51 46 1.9 0.037	51 37 3.5 0.000
Hma	22 4 3.0 0.397	22 16 5.4 0.002	22 29 1.9 0.148	22 19 5.7 0.000	22 7 3.0 0.053	22 3 1.7 0.411	22 44 2.8 0.012	22 0 —	22 1 —
dia	24 4 11.6 0.066	24 16 26.0 0.000	24 29 1.9 0.105	24 19 13.6 0.000	24 7 2.3 0.131	24 3 406.1 0.005	24 44 55.6 0.000	24 0 —	24 1 —
pV	7.9 0.113 6.1 0.001	24 16 4.2 0.001	24 29 2.1 0.120	24 17 8.6 0.000	24 6 23.4 0.084	24 3 6.3 0.000	24 44 —	24 0 —	24 1 —

Table 6. (cont'd) *f*-test

Colour	Res.others Classic Cd	Res.others Classic Ht	Res.others Scattered	Res.others Detached	Res.others J.Trojans	Res.others Centaur	Res.others SP Comets	Res.others LP Comets
U-B	2 3	2 10	2 7	2 2	2 1	2 0	2 0	2 0
	1.9 0.913	3.5 0.786	2.6 0.886	3.0 0.665	—	—	—	—
U-V	2 3	2 10	2 7	2 2	2 1	2 0	2 0	2 0
	13.1 0.383	58.6 0.202	62.2 0.194	4.6 0.557	—	—	—	—
U-R	2 3	2 10	2 7	2 2	2 1	2 0	2 0	2 0
	1.6 0.983	9.6 0.492	8.1 0.526	1.2 0.935	—	—	—	—
B-V	20 40	20 48	20 41	20 24	20 83	20 72	20 20	20 33
	1.1 0.780	1.9 0.127	1.1 0.836	1.1 0.747	1.7 0.099	1.7 0.174	2.4 0.067	3.2 0.003
B-R	22 40	22 47	22 43	22 25	22 83	22 74	22 20	22 32
	1.4 0.393	1.5 0.319	1.2 0.616	1.4 0.456	3.0 0.000	1.5 0.336	1.8 0.187	5.7 0.000
B-I	17 26	17 40	17 32	17 21	17 76	17 42	17 13	17 11
	1.5 0.320	1.4 0.451	1.1 0.866	1.8 0.227	4.1 0.000	1.4 0.518	6.0 0.003	8.7 0.001
B-J	3 1	3 1	3 4	3 2	3 5	3 9	3 1	3 0
	—	—	2.3 0.627	3.8 0.381	14.3 0.030	3.8 0.452	—	—
B-H	3 1	3 1	3 4	3 2	3 5	3 9	3 1	3 0
	—	—	1.2 0.965	2.3 0.542	7.1 0.097	2.9 0.569	—	—
B-K	2 1	2 1	2 2	2 1	2 5	2 9	2 1	2 0
	—	—	60.7 0.163	—	6.3 0.132	1.6 0.903	—	—
V-R	25 48	25 55	25 41	25 26	25 89	25 74	25 46	25 36
	1.4 0.318	1.1 0.915	1.4 0.371	1.3 0.510	3.6 0.000	1.1 0.851	1.0 0.913	3.1 0.002
V-I	26 73	26 60	26 34	26 26	26 82	26 47	26 23	26 15
	1.2 0.564	1.9 0.088	1.0 0.892	1.0 0.949	3.2 0.000	1.6 0.194	2.2 0.072	1.8 0.267
V-J	5 4	5 13	5 9	5 4	5 12	5 11	5 1	5 0
	2.2 0.463	1.7 0.638	2.2 0.475	3.4 0.270	7.4 0.008	2.1 0.480	—	—
V-H	4 1	4 6	4 7	4 4	4 12	4 11	4 1	4 0
	—	1.2 0.956	1.3 0.871	2.2 0.525	7.8 0.009	1.2 0.743	—	—
V-K	3 1	3 6	3 5	3 3	3 12	3 11	3 1	3 0
	—	1.2 0.953	1.0 0.906	3.9 0.406	7.0 0.022	2.0 0.383	—	—
R-I	22 37	22 44	22 30	22 23	22 82	22 47	22 24	22 15
	1.3 0.592	2.6 0.020	1.2 0.674	1.1 0.824	2.3 0.007	1.9 0.106	1.1 0.774	1.7 0.310
R-J	3 0	3 3	3 5	3 2	3 5	3 9	3 1	3 0
	—	2.5 0.565	3.7 0.450	2.5 0.822	4.2 0.206	7.0 0.263	—	—
R-H	3 0	3 3	3 5	3 2	3 5	3 9	3 1	3 0
	—	17.4 0.109	1.7 0.801	16.1 0.347	2.3 0.435	3.5 0.478	—	—
R-K	2 0	2 1	2 3	2 1	2 5	2 9	2 1	2 0
	—	—	22.3 0.084	—	4.4 0.209	1.3 0.569	—	—
I-J	6 2	6 4	6 9	6 1	6 5	6 16	6 1	6 0
	1.3 0.624	2.4 0.503	1.9 0.505	—	11.7 0.033	1.3 0.621	—	—
I-H	4 1	4 2	4 4	4 1	4 5	4 9	4 1	4 0
	—	4.3 0.671	2.9 0.404	—	4.8 0.163	1.4 0.626	—	—
I-K	4 1	4 2	4 3	4 1	4 5	4 9	4 1	4 0
	—	17.0 0.352	4.2 0.397	—	3.3 0.280	1.6 0.531	—	—
J-H	13 29	13 35	13 12	13 11	13 12	13 22	13 1	13 0
	1.6 0.364	14.3 0.000	4.1 0.022	3.4 0.048	1.0 0.992	1.9 0.249	—	—
J-K	5 4	5 10	5 10	5 4	5 12	5 22	5 1	5 0
	2.1 0.578	7.7 0.065	1.1 0.978	9.7 0.053	1.8 0.386	1.7 0.667	—	—
H-K	4 4	4 10	4 8	4 4	4 12	4 21	4 1	4 0
	1.7 0.671	34.9 0.014	27.7 0.020	103.7 0.003	3.2 0.369	65.0 0.005	—	—
M11	25 49	25 58	25 35	25 26	25 69	25 62	25 134	25 13
	3.7 0.000	1.9 0.090	1.8 0.141	2.3 0.040	1.5 0.262	2.0 0.055	1.4 0.386	6.9 0.000
Grt	28 80	28 67	28 43	28 29	28 89	28 74	28 46	28 37
	1.1 0.752	1.5 0.250	1.2 0.572	1.1 0.870	3.9 0.000	1.4 0.298	1.3 0.422	2.5 0.012
Hma	4 16	4 29	4 19	4 7	4 3	4 44	4 0	4 1
	1.8 0.385	5.6 0.181	17.0 0.039	9.1 0.097	5.1 0.215	8.5 0.101	—	—
dia	4 16	4 29	4 19	4 7	4 3	4 44	4 0	4 1
	2.2 0.251	6.1 0.161	1.2 0.694	27.2 0.021	35.0 0.056	4.8 0.011	—	—
pV	4 16	4 29	4 17	4 6	4 3	4 44	4 0	4 1
	1.3 0.938	33.2 0.014	3.7 0.309	68.5 0.005	3.0 0.526	1.2 0.999	—	—

Table 6. (cont'd) f -test

Colour	Classic Cd Classic Ht	Classic Cd Scattered	Classic Cd Detached	Classic Cd J.Trojans	Classic Cd Centaur	Classic Cd SP Comets	Classic Cd LP Comets
U-B	3 10 1.9 0.798	3 7 1.4 0.963	3 2 1.6 0.669	3 1 —	3 0 —	3 0 —	3 0 —
U-V	3 10 4.5 0.393	3 7 4.7 0.369	3 2 60.2 0.182	3 1 —	3 0 —	3 0 —	3 0 —
U-R	3 10 6.1 0.297	3 7 5.2 0.343	3 2 1.9 0.907	3 1 —	3 0 —	3 0 —	3 0 —
U-I	2 7 10.0 0.474	2 4 10.8 0.438	2 0 —	2 0 —	2 0 —	2 0 —	2 0 —
B-V	40 48 1.7 0.101	40 41 1.0 0.926	40 24 1.3 0.501	40 83 2.0 0.011	40 72 1.5 0.151	40 20 2.1 0.052	40 33 3.7 0.000
B-R	40 47 2.0 0.025	40 43 1.1 0.668	40 25 1.0 0.984	40 83 2.2 0.002	40 74 2.0 0.021	40 20 2.5 0.016	40 32 4.2 0.000
B-I	26 40 2.2 0.040	26 32 1.5 0.331	26 21 1.1 0.765	26 76 2.7 0.001	26 42 2.1 0.053	26 13 3.9 0.017	26 11 5.6 0.007
B-J	1 1 —	1 4 —	1 2 —	1 5 —	1 9 —	1 1 —	1 0 —
B-H	1 1 —	1 4 —	1 2 —	1 5 —	1 9 —	1 1 —	1 0 —
B-K	1 1 —	1 2 —	1 1 —	1 5 —	1 9 —	1 1 —	1 0 —
V-R	48 55 1.5 0.173	48 41 1.0 0.933	48 26 1.1 0.814	48 89 2.5 0.000	48 74 1.5 0.125	48 46 1.4 0.293	48 36 2.2 0.016
V-I	73 60 2.2 0.001	73 34 1.1 0.645	73 26 1.2 0.620	73 82 2.7 0.000	73 47 1.9 0.012	73 23 1.8 0.116	73 15 1.5 0.410
V-J	4 13 1.3 0.652	4 9 1.0 0.873	4 4 1.5 0.730	4 12 16.2 0.000	4 11 1.0 0.849	4 1 —	4 0 —
V-H	1 6 —	1 7 —	1 4 —	1 12 —	1 11 —	1 1 —	1 0 —
V-K	1 6 —	1 5 —	1 3 —	1 12 —	1 11 —	1 1 —	1 0 —
R-I	37 44 2.1 0.026	37 30 1.0 0.912	37 23 1.1 0.766	37 82 2.9 0.000	37 47 1.5 0.186	37 24 1.1 0.817	37 15 2.1 0.130
R-J	0 3 —	0 5 —	0 2 —	0 5 —	0 9 —	0 1 —	0 0 —
R-H	0 3 —	0 5 —	0 2 —	0 5 —	0 9 —	0 1 —	0 0 —
R-K	0 1 —	0 3 —	0 1 —	0 5 —	0 9 —	0 1 —	0 0 —
I-J	2 4 3.0 0.360	2 9 1.5 0.872	2 1 —	2 5 14.8 0.037	2 16 1.7 0.434	2 1 —	2 0 —
I-H	1 2 —	1 4 —	1 1 —	1 5 —	1 9 —	1 1 —	1 0 —
I-K	1 2 —	1 3 —	1 1 —	1 5 —	1 9 —	1 1 —	1 0 —
J-H	29 35 8.7 0.000	29 12 2.5 0.049	29 11 2.1 0.125	29 12 1.7 0.375	29 22 1.2 0.706	29 1 —	29 0 —
J-K	4 10 15.8 0.044	4 10 2.2 0.553	4 4 20.0 0.035	4 12 1.1 0.954	4 22 3.4 0.337	4 1 —	4 0 —
H-K	4 10 20.4 0.030	4 8 16.2 0.043	4 4 60.8 0.007	4 12 1.9 0.664	4 21 38.1 0.012	4 1 —	4 0 —
M11	49 58 6.9 0.000	49 35 6.5 0.000	49 26 8.6 0.000	49 69 5.5 0.000	49 62 7.5 0.000	49 134 5.0 0.000	49 13 25.1 0.000
Grt	80 67 1.6 0.040	80 43 1.1 0.721	80 29 1.0 0.906	80 89 3.6 0.000	80 74 1.6 0.055	80 46 1.2 0.511	80 37 2.3 0.008
Hma	16 29 10.0 0.000	16 19 30.4 0.000	16 7 16.3 0.000	16 3 9.2 0.005	16 44 15.3 0.000	16 0 —	16 1 —
dia	16 29 13.7 0.000	16 19 1.9 0.212	16 7 60.9 0.000	16 3 15.6 0.124	16 44 2.1 0.053	16 0 —	16 1 —
pV	16 29 25.4 0.000	16 17 2.8 0.051	16 6 52.4 0.000	16 3 3.9 0.450	16 44 1.0 0.863	16 0 —	16 1 —

Table 6. (cont'd) *f*-test

Colour	Classic Ht Scattered	Classic Ht Detached	Classic Ht J.Trojans	Classic Ht Centaur	Classic Ht SP Comets	Classic Ht LP Comets
U-B	10 7 1.4 0.729	10 2 1.2 0.758	10 1 —	10 0 —	10 0 —	10 0 —
U-V	10 7 1.1 0.899	10 2 268.3 0.095	10 1 —	10 0 —	10 0 —	10 0 —
U-R	10 7 1.2 0.866	10 2 11.8 0.445	10 1 —	10 0 —	10 0 —	10 0 —
U-I	7 4 1.1 0.853	7 0 —	7 0 —	7 0 —	7 0 —	7 0 —
B-V	48 41 1.7 0.081	48 24 2.2 0.045	48 83 3.3 0.000	48 72 1.1 0.722	48 20 1.2 0.529	48 33 6.2 0.000
B-R	47 43 1.8 0.061	47 25 2.0 0.062	47 83 4.5 0.000	47 74 1.0 0.904	47 20 1.2 0.577	47 32 8.6 0.000
B-I	40 32 1.5 0.246	40 21 2.5 0.030	40 76 5.9 0.000	40 42 1.0 0.876	40 13 8.6 0.000	40 11 12.3 0.000
B-J	1 4 —	1 2 —	1 5 —	1 9 —	1 1 —	1 0 —
B-H	1 4 —	1 2 —	1 5 —	1 9 —	1 1 —	1 0 —
B-K	1 2 —	1 1 —	1 5 —	1 9 —	1 1 —	1 0 —
V-R	55 41 1.4 0.226	55 26 1.4 0.384	55 89 3.8 0.000	55 74 1.0 0.918	55 46 1.1 0.790	55 36 3.3 0.000
V-I	60 34 1.9 0.040	60 26 1.9 0.076	60 82 6.0 0.000	60 47 1.1 0.633	60 23 4.0 0.001	60 15 3.3 0.017
V-J	13 9 1.3 0.690	13 4 2.0 0.343	13 12 12.7 0.000	13 11 1.3 0.701	13 1 —	13 0 —
V-H	6 7 1.1 0.898	6 4 1.9 0.492	6 12 9.2 0.002	6 11 1.4 0.632	6 1 —	6 0 —
V-K	6 5 1.1 0.934	6 3 3.4 0.236	6 12 8.1 0.004	6 11 2.3 0.252	6 1 —	6 0 —
R-I	44 30 2.2 0.030	44 23 2.4 0.032	44 82 6.1 0.000	44 47 1.4 0.306	44 24 2.3 0.034	44 15 4.4 0.004
R-J	3 5 9.3 0.198	3 2 1.0 0.833	3 5 1.7 0.595	3 9 17.7 0.109	3 1 —	3 0 —
R-H	3 5 29.8 0.065	3 2 1.1 0.816	3 5 7.6 0.239	3 9 61.5 0.032	3 1 —	3 0 —
R-K	1 3 —	1 1 —	1 5 —	1 9 —	1 1 —	1 0 —
I-J	4 9 4.5 0.243	4 1 —	4 5 4.9 0.159	4 16 1.8 0.686	4 1 —	4 0 —
I-H	2 4 12.6 0.407	2 1 —	2 5 1.1 0.704	2 9 3.1 0.827	2 1 —	2 0 —
I-K	2 3 4.1 0.663	2 1 —	2 5 5.2 0.635	2 9 10.7 0.465	2 1 —	2 0 —
J-H	35 12 3.5 0.032	35 11 4.2 0.020	35 12 14.5 0.000	35 22 7.5 0.000	35 1 —	35 0 —
J-K	10 10 7.1 0.007	10 4 1.3 0.690	10 12 14.1 0.000	10 22 4.6 0.004	10 1 —	10 0 —
H-K	10 8 1.3 0.779	10 4 3.0 0.179	10 12 10.9 0.001	10 21 1.9 0.339	10 1 —	10 0 —
M11	58 35 1.1 0.886	58 26 1.2 0.485	58 69 1.2 0.379	58 62 1.1 0.758	58 134 1.4 0.130	58 13 3.6 0.001
Grt	67 43 1.8 0.043	67 29 1.6 0.177	67 89 5.9 0.000	67 74 1.0 0.861	67 46 1.9 0.019	67 37 3.7 0.000
Hma	29 19 3.1 0.008	29 7 1.6 0.347	29 3 1.1 0.820	29 44 1.5 0.234	29 0 —	29 1 —
dia	29 19 7.2 0.000	29 7 4.5 0.005	29 3 213.2 0.009	29 44 29.2 0.000	29 0 —	29 1 —
pV	29 17 9.0 0.000	29 6 2.1 0.201	29 3 98.1 0.020	29 44 26.6 0.000	29 0 —	29 1 —

Table 6. (cont'd) *f*-testTable 6. (cont'd) *f*-test

Colour	Scattered Detached	Scattered J.Trojans	Scattered Centaur	Scattered SP Comets	Scattered LP Comets	Colour	Detached J.Trojans	Detached Centaur	Detached SP Comets	Detached LP Comets
U-B	7 2 1.2 0.643	7 1 —	7 0 —	7 0 —	7 0 —	U-B	2 1 —	2 0 —	2 0 —	2 0 —
U-V	7 2 284.7 0.091	7 1 —	7 0 —	7 0 —	7 0 —	U-V	2 1 —	2 0 —	2 0 —	2 0 —
U-R	7 2 9.9 0.476	7 1 —	7 0 —	7 0 —	7 0 —	U-R	2 1 —	2 0 —	2 0 —	2 0 —
U-I	4 0 —	4 0 —	4 0 —	4 0 —	4 0 —	U-I	0 0 —	0 0 —	0 0 —	0 0 —
B-V	41 24 1.3 0.550	41 83 1.9 0.014	41 72 1.6 0.121	41 20 2.1 0.042	41 20 3.6 0.000	B-V	24 83 1.5 0.190	24 72 2.0 0.065	24 20 2.7 0.024	24 33 2.8 0.007
B-R	43 25 1.2 0.727	43 83 2.5 0.000	43 74 1.7 0.056	43 20 2.2 0.038	43 20 4.8 0.000	B-R	25 83 2.2 0.009	25 74 2.0 0.060	25 20 2.5 0.037	25 32 4.2 0.000
B-I	32 21 1.7 0.228	32 76 3.9 0.000	32 42 1.4 0.303	32 13 5.7 0.003	32 13 8.2 0.001	B-I	21 76 2.3 0.009	21 42 2.4 0.038	21 13 3.4 0.034	21 11 4.9 0.013
B-J	4 2 1.6 0.585	4 5 33.4 0.005	4 9 1.6 0.757	4 1 —	4 1 —	B-J	2 5 54.3 0.004	2 9 1.0 0.690	2 1 —	2 0 —
B-H	4 2 1.9 0.528	4 5 8.6 0.065	4 9 2.4 0.516	4 1 —	4 1 —	B-H	2 5 16.1 0.032	2 9 1.3 0.799	2 1 —	2 0 —
B-K	2 1 —	2 5 9.6 0.473	2 9 96.8 0.157	2 1 —	2 1 —	B-K	1 5 —	1 9 —	1 1 —	1 0 —
V-R	41 26 1.0 0.875	41 89 2.6 0.000	41 74 1.5 0.173	41 46 1.3 0.356	41 46 2.3 0.015	V-R	26 89 2.7 0.001	26 74 1.4 0.328	26 46 1.3 0.524	26 36 2.4 0.018
V-I	34 26 1.0 0.947	34 82 3.1 0.000	34 47 1.7 0.113	34 23 2.1 0.079	34 23 1.7 0.295	V-I	26 82 3.1 0.000	26 47 1.7 0.171	26 23 2.1 0.082	26 15 1.7 0.289
V-J	9 4 1.6 0.545	9 12 16.0 0.000	9 11 1.0 0.971	9 1 —	9 1 —	V-J	4 12 25.1 0.000	4 11 1.6 0.512	4 1 —	4 0 —
V-H	7 4 1.7 0.546	7 12 10.5 0.001	7 11 1.6 0.505	7 1 —	7 1 —	V-H	4 12 17.5 0.000	4 11 2.6 0.220	4 1 —	4 0 —
V-K	5 3 3.8 0.237	5 12 7.2 0.008	5 11 2.0 0.336	5 1 —	5 1 —	V-K	3 12 27.5 0.000	3 11 7.7 0.019	3 1 —	3 0 —
R-I	30 23 1.1 0.851	30 82 2.8 0.000	30 47 1.6 0.180	30 24 1.1 0.902	30 24 2.0 0.161	R-I	23 82 2.6 0.002	23 47 1.7 0.160	23 24 1.0 0.950	23 15 1.9 0.227
R-J	5 2 9.0 0.488	5 5 15.6 0.021	5 9 1.9 0.562	5 1 —	5 1 —	R-J	2 5 1.7 0.520	2 9 17.1 0.370	2 1 —	2 0 —
R-H	5 2 27.6 0.283	5 5 3.9 0.214	5 9 2.1 0.505	5 1 —	5 1 —	R-H	2 5 7.0 0.549	2 9 57.0 0.204	2 1 —	2 0 —
R-K	3 1 —	3 5 5.1 0.342	3 9 16.9 0.114	3 1 —	3 1 —	R-K	1 5 —	1 9 —	1 1 —	1 0 —
I-J	9 1 —	9 5 22.0 0.009	9 16 2.5 0.125	9 1 —	9 1 —	I-J	1 5 —	1 16 —	1 1 —	1 0 —
I-H	4 1 —	4 5 14.0 0.028	4 9 4.1 0.101	4 1 —	4 1 —	I-H	1 5 —	1 9 —	1 1 —	1 0 —
I-K	3 1 —	3 5 1.3 0.968	3 9 2.6 0.609	3 1 —	3 1 —	I-K	1 5 —	1 9 —	1 1 —	1 0 —
J-H	12 11 1.2 0.774	12 12 4.2 0.026	12 22 2.2 0.124	12 1 —	12 1 —	J-H	11 12 3.5 0.053	11 22 1.8 0.250	11 1 —	11 0 —
J-K	10 4 9.0 0.009	10 12 2.0 0.286	10 22 1.5 0.509	10 1 —	10 1 —	J-K	4 12 17.7 0.000	4 22 5.8 0.009	4 1 —	4 0 —
H-K	8 4 3.7 0.137	8 12 8.7 0.002	8 21 2.3 0.252	8 1 —	8 1 —	H-K	4 12 32.5 0.000	4 21 1.6 0.444	4 1 —	4 0 —
M11	35 26 1.3 0.454	35 69 1.2 0.544	35 62 1.1 0.683	35 134 1.3 0.278	35 134 3.8 0.002	M11	26 69 1.6 0.155	26 62 1.1 0.644	26 134 1.7 0.052	26 13 2.9 0.023
Grt	43 29 1.1 0.698	43 89 3.3 0.000	43 74 1.7 0.056	43 46 1.1 0.797	43 46 2.0 0.032	Grt	29 89 3.7 0.000	29 74 1.5 0.214	29 46 1.2 0.532	29 37 2.3 0.019
Hma	19 7 1.9 0.452	19 3 3.3 0.513	19 44 2.0 0.065	19 0 —	19 0 —	Hma	7 3 1.8 0.805	7 44 1.1 0.793	7 0 —	7 1 —
dia	19 7 31.9 0.000	19 3 29.8 0.066	19 44 4.1 0.000	19 0 —	19 0 —	dia	7 3 951.0 0.002	7 44 130.3 0.000	7 0 —	7 1 —
pV	17 6 18.5 0.000	17 3 10.9 0.174	17 44 3.0 0.005	17 0 —	17 0 —	pV	6 3 202.2 0.010	6 44 54.8 0.000	6 0 —	6 1 —

Table 6. (cont'd) *f*-test

Colour	J.Trojans Centaur	J.Trojans SP Comets	J.Trojans LP Comets
U-B	1 0	1 0	1 0
U-V	1 0	1 0	1 0
U-R	1 0	1 0	1 0
U-I	0 0	0 0	0 0
B-V	83 72 3.0 0.000	83 20 4.1 0.000	83 33 1.9 0.048
B-R	83 74 4.4 0.000	83 20 5.5 0.000	83 32 1.9 0.049
B-I	76 42 5.6 0.000	76 13 1.5 0.486	76 11 2.1 0.201
B-J	5 9 53.9 0.002	5 1	5 0
B-H	5 9 20.3 0.011	5 1	5 0
B-K	5 9 10.0 0.041	5 1	5 0
V-R	89 74 3.9 0.000	89 46 3.5 0.000	89 36 1.1 0.602
V-I	82 47 5.2 0.000	82 23 1.5 0.207	82 15 1.8 0.102
V-J	12 11 15.9 0.000	12 1	12 0
V-H	12 11 6.7 0.004	12 1	12 0
V-K	12 11 3.6 0.048	12 1	12 0
R-I	82 47 4.5 0.000	82 24 2.6 0.001	82 15 1.4 0.375
R-J	5 9 29.5 0.005	5 1	5 0
R-H	5 9 8.1 0.060	5 1	5 0
R-K	5 9 3.3 0.260	5 1	5 0
I-J	5 16 8.9 0.047	5 1	5 0
I-H	5 9 3.5 0.247	5 1	5 0
I-K	5 9 2.1 0.505	5 1	5 0
J-H	12 22 1.9 0.261	12 1	12 0
J-K	12 22 3.1 0.060	12 1	12 0
H-K	12 21 20.4 0.000	12 1	12 0
M11	69 62 1.4 0.223	69 134 1.1 0.604	69 13 4.5 0.000
Grt	89 74 5.6 0.000	89 46 3.0 0.000	89 37 1.6 0.076
Hma	3 44 1.7 0.894	3 0	3 1
dia	3 44 7.3 0.255	3 0	3 1
pV	3 44 3.7 0.472	3 0	3 1

Table 6. (cont'd) *f*-test

Colour	Centaur SP Comets	Centaur LP Comets
U-B	0 0	0 0
U-V	0 0	0 0
U-R	0 0	0 0
U-I	0 0	0 0
B-V	72 20 1.4 0.349	72 33 5.6 0.000
B-R	74 20 1.2 0.493	74 32 8.3 0.000
B-I	42 13 8.1 0.000	42 11 11.8 0.000
B-J	9 1	9 0
B-H	9 1	9 0
B-K	9 1	9 0
V-R	74 46 1.1 0.703	74 36 3.4 0.000
V-I	47 23 3.5 0.002	47 15 2.9 0.035
V-J	11 1	11 0
V-H	11 1	11 0
V-K	11 1	11 0
R-I	47 24 1.7 0.174	47 15 3.3 0.019
R-J	9 1	9 0
R-H	9 1	9 0
R-K	9 1	9 0
I-J	16 1	16 0
I-H	9 1	9 0
I-K	9 1	9 0
J-H	22 1	22 0
J-K	22 1	22 0
H-K	21 1	21 0
M11	62 134 1.5 0.054	62 13 3.4 0.002
Grt	74 46 1.9 0.026	74 37 3.5 0.000
Hma	44 0	44 1
dia	44 0	44 1
pV	44 0	44 1

Table 6. KS-test, comparing the distributions using the KS test of pairs of classes

Colour	Res. 3:2 Res.others	Res. 3:2 Classic Cd	Res. 3:2 Classic Ht	Res. 3:2 Scattered	Res. 3:2 Detached	Res. 3:2 J.Trojans	Res. 3:2 Centaur	Res. 3:2 SP Comets	Res. 3:2 LP Comets
B-V	44 20 0.3 0.069	44 40 0.4 0.001	44 48 0.1 0.741	44 41 0.3 0.057	44 24 0.2 0.334	44 83 0.4 0.000	44 72 0.2 0.439	44 20 0.3 0.203	44 33 0.5 0.000
B-R	39 22 0.3 0.167	39 40 0.5 0.000	39 47 0.2 0.435	39 43 0.3 0.073	39 25 0.2 0.396	39 83 0.4 0.000	39 74 0.2 0.575	39 20 0.3 0.129	39 32 0.5 0.001
B-I	32 17 0.3 0.186	32 26 0.4 0.009	32 40 0.2 0.357	32 32 0.2 0.233	32 21 0.3 0.236	32 76 0.5 0.000	32 42 0.2 0.221	32 13 0.5 0.022	32 11 0.5 0.012
B-J	4 3 0.5 0.616	4 1 0.5 0.903	4 1 0.5 0.903	4 4 0.8 0.107	4 2 0.5 0.736	4 5 0.5 0.477	4 9 0.4 0.679	4 1 0.5 0.903	4 0 —
B-H	4 3 0.5 0.616	4 1 0.5 0.903	4 1 0.5 0.903	4 4 0.5 0.534	4 2 0.5 0.736	4 5 0.5 0.477	4 9 0.4 0.679	4 1 0.5 0.903	4 0 —
B-K	3 2 0.5 0.780	3 1 0.7 0.641	3 1 0.7 0.641	3 2 0.5 0.780	3 1 1.0 0.168	3 5 0.7 0.224	3 9 0.4 0.623	3 1 0.7 0.641	3 0 —
V-R	45 25 0.2 0.315	45 48 0.4 0.001	45 55 0.1 0.821	45 41 0.2 0.123	45 26 0.2 0.278	45 89 0.6 0.000	45 74 0.1 0.668	45 46 0.3 0.017	45 36 0.5 0.000
V-I	41 26 0.3 0.093	41 73 0.4 0.001	41 60 0.1 0.847	41 34 0.3 0.030	41 26 0.3 0.195	41 82 0.6 0.000	41 47 0.2 0.132	41 23 0.5 0.002	41 15 0.5 0.003
V-J	15 5 0.4 0.472	15 4 0.3 0.918	15 13 0.5 0.066	15 9 0.3 0.749	15 4 0.4 0.518	15 12 0.7 0.002	15 11 0.4 0.214	15 1 0.7 0.542	15 0 —
V-H	9 4 0.5 0.359	9 1 1.0 0.121	9 6 0.4 0.363	9 7 0.4 0.405	9 4 0.3 0.841	9 12 0.4 0.192	9 11 0.3 0.749	9 1 0.6 0.779	9 0 —
V-K	7 3 0.4 0.703	7 1 1.0 0.128	7 6 0.4 0.468	7 5 0.4 0.707	7 3 0.3 0.924	7 12 0.4 0.298	7 11 0.4 0.431	7 1 0.4 0.962	7 0 —
R-I	39 22 0.2 0.635	39 37 0.3 0.049	39 44 0.1 0.824	39 30 0.2 0.300	39 23 0.3 0.173	39 82 0.5 0.000	39 47 0.2 0.119	39 24 0.4 0.007	39 15 0.5 0.003
R-J	4 3 0.4 0.821	4 0 —	4 3 0.8 0.152	4 5 0.4 0.878	4 2 0.8 0.242	4 5 0.8 0.082	4 9 0.5 0.296	4 1 0.8 0.461	4 0 —
R-H	4 3 0.4 0.821	4 0 —	4 3 0.8 0.152	4 5 0.4 0.754	4 2 0.8 0.242	4 5 0.8 0.082	4 9 0.5 0.296	4 1 0.8 0.461	4 0 —
R-K	2 2 0.5 0.844	2 0 —	2 1 1.0 0.201	2 3 0.7 0.425	2 1 1.0 0.201	2 5 1.0 0.038	2 9 0.8 0.139	2 1 1.0 0.201	2 0 —
I-J	8 6 0.4 0.471	8 2 0.8 0.175	8 4 0.2 0.986	8 9 0.6 0.034	8 1 1.0 0.124	8 5 0.6 0.206	8 16 0.3 0.587	8 1 0.6 0.649	8 0 —
I-H	3 4 0.5 0.616	3 1 1.0 0.168	3 2 0.3 0.991	3 4 0.5 0.616	3 1 0.7 0.641	3 5 0.7 0.224	3 9 0.4 0.623	3 1 0.7 0.641	3 0 —
I-K	3 4 0.3 0.961	3 1 1.0 0.168	3 2 0.7 0.425	3 3 0.3 0.976	3 1 0.7 0.641	3 5 0.5 0.657	3 9 0.3 0.908	3 1 0.7 0.641	3 0 —
J-H	23 13 0.5 0.022	23 29 0.3 0.123	23 35 0.2 0.342	23 12 0.4 0.198	23 11 0.3 0.641	23 12 0.5 0.051	23 22 0.2 0.688	23 1 0.7 0.561	23 0 —
J-K	15 5 0.5 0.158	15 4 0.5 0.331	15 10 0.3 0.716	15 10 0.3 0.433	15 4 0.2 0.970	15 12 0.7 0.001	15 22 0.4 0.140	15 1 0.9 0.228	15 0 —
H-K	14 4 0.5 0.300	14 4 0.6 0.087	14 10 0.3 0.771	14 8 0.3 0.650	14 4 0.4 0.603	14 12 0.8 0.000	14 21 0.4 0.184	14 1 0.9 0.241	14 0 —
M11	44 25 0.3 0.213	44 49 0.4 0.003	44 58 0.3 0.010	44 35 0.3 0.126	44 26 0.4 0.024	44 69 0.9 0.000	44 62 0.8 0.000	44 134 1.0 0.000	44 13 1.0 0.000
Grt	51 28 0.2 0.276	51 80 0.4 0.000	51 67 0.1 0.921	51 43 0.3 0.014	51 29 0.2 0.276	51 89 0.6 0.000	51 74 0.2 0.179	51 46 0.3 0.011	51 37 0.5 0.000
Hma	22 4 0.4 0.577	22 16 0.6 0.003	22 29 0.3 0.170	22 19 0.5 0.003	22 7 0.5 0.063	22 3 1.0 0.003	22 44 0.9 0.000	22 0 —	22 1 1.0 0.107
dia	24 4 0.4 0.608	24 16 0.5 0.004	24 29 0.2 0.385	24 19 0.5 0.003	24 7 0.5 0.111	24 3 1.0 0.003	24 44 0.8 0.000	24 0 —	24 1 1.0 0.106
pV	24 4 0.3 0.749	24 16 0.3 0.252	24 29 0.2 0.497	24 17 0.4 0.034	24 6 0.4 0.413	24 3 0.7 0.072	24 44 0.4 0.005	24 0 —	24 1 0.6 0.699

Table 6. (cont'd) KS-test

Colour	Res.others Classic Cd	Res.others Classic Ht	Res.others Scattered	Res.others Detached	Res.others J.Trojans	Res.others Centaurs	Res.others SP Comets	Res.others LP Comets
U-B	2 3 1.0 0.063	2 10 0.5 0.630	2 7 0.4 0.950	2 2 0.5 0.844	2 1 1.0 0.201	2 0 — —	2 0 — —	2 0 — —
U-V	2 3 1.0 0.063	2 10 0.8 0.114	2 7 0.6 0.494	2 2 1.0 0.097	2 1 1.0 0.201	2 0 — —	2 0 — —	2 0 — —
U-R	2 3 1.0 0.063	2 10 0.9 0.053	2 7 0.7 0.230	2 2 1.0 0.097	2 1 1.0 0.201	2 0 — —	2 0 — —	2 0 — —
U-I	1 2 1.0 0.201	1 7 0.9 0.264	1 4 0.8 0.461	1 0 — —	1 0 — —	1 0 — —	1 0 — —	1 0 — —
B-V	20 40 0.5 0.003	20 48 0.3 0.080	20 41 0.5 0.001	20 24 0.3 0.261	20 83 0.6 0.000	20 72 0.4 0.005	20 20 0.6 0.003	20 33 0.7 0.000
B-R	22 40 0.4 0.004	22 47 0.3 0.074	22 43 0.5 0.001	22 25 0.3 0.354	22 83 0.7 0.000	22 74 0.4 0.021	22 20 0.5 0.013	22 32 0.6 0.000
B-I	17 26 0.5 0.008	17 40 0.3 0.128	17 32 0.5 0.013	17 21 0.3 0.298	17 76 0.8 0.000	17 42 0.5 0.004	17 13 0.6 0.006	17 11 0.8 0.000
B-J	3 1 0.7 0.641	3 1 0.7 0.641	3 4 0.4 0.821	3 2 0.5 0.780	3 5 1.0 0.014	3 9 0.7 0.156	3 1 1.0 0.168	3 0 — —
B-H	3 1 0.7 0.641	3 1 0.7 0.641	3 4 0.3 0.961	3 2 0.5 0.780	3 5 1.0 0.014	3 9 0.6 0.339	3 1 1.0 0.168	3 0 — —
B-K	2 1 0.5 0.937	2 1 0.5 0.937	2 2 0.5 0.844	2 1 0.5 0.937	2 5 1.0 0.038	2 9 0.6 0.504	2 1 1.0 0.201	2 0 — —
V-R	25 48 0.3 0.065	25 55 0.2 0.430	25 41 0.4 0.021	25 26 0.3 0.086	25 89 0.7 0.000	25 74 0.3 0.075	25 46 0.4 0.015	25 36 0.6 0.000
V-I	26 73 0.3 0.020	26 60 0.3 0.156	26 34 0.6 0.000	26 26 0.3 0.068	26 82 0.8 0.000	26 47 0.5 0.001	26 23 0.6 0.000	26 15 0.8 0.000
V-J	5 4 0.3 0.878	5 13 0.6 0.089	5 9 0.6 0.180	5 4 0.8 0.082	5 12 1.0 0.000	5 11 0.7 0.025	5 1 1.0 0.140	5 0 — —
V-H	4 1 1.0 0.150	4 6 0.5 0.435	4 7 0.4 0.811	4 4 0.5 0.534	4 12 0.8 0.032	4 11 0.4 0.656	4 1 0.8 0.461	4 0 — —
V-K	3 1 0.7 0.641	3 6 0.3 0.935	3 5 0.3 0.947	3 3 0.3 0.976	3 12 0.4 0.669	3 11 0.3 0.895	3 1 0.7 0.641	3 0 — —
R-I	22 37 0.3 0.149	22 44 0.2 0.522	22 30 0.3 0.281	22 23 0.2 0.653	22 82 0.7 0.000	22 47 0.3 0.082	22 24 0.5 0.006	22 15 0.6 0.003
R-J	3 0 — —	3 3 0.7 0.320	3 5 0.4 0.825	3 2 0.3 0.991	3 5 1.0 0.014	3 9 0.7 0.156	3 1 1.0 0.168	3 0 — —
R-H	3 0 — —	3 3 1.0 0.033	3 5 0.6 0.338	3 2 0.7 0.425	3 5 1.0 0.014	3 9 0.8 0.062	3 1 1.0 0.168	3 0 — —
R-K	2 0 — —	2 1 1.0 0.201	2 3 0.5 0.780	2 1 0.5 0.937	2 5 0.8 0.158	2 9 0.7 0.281	2 1 1.0 0.201	2 0 — —
I-J	6 2 0.5 0.682	6 4 0.7 0.135	6 9 0.2 0.984	6 1 0.7 0.583	6 5 0.7 0.099	6 16 0.3 0.621	6 1 0.7 0.583	6 0 — —
I-H	4 1 1.0 0.150	4 2 0.5 0.736	4 4 0.2 0.997	4 1 0.8 0.461	4 5 0.8 0.082	4 9 0.5 0.296	4 1 0.8 0.461	4 0 — —
I-K	4 1 1.0 0.150	4 2 0.5 0.736	4 3 0.2 0.999	4 1 0.5 0.903	4 5 0.4 0.878	4 9 0.4 0.679	4 1 0.8 0.461	4 0 — —
J-H	13 29 0.4 0.139	13 35 0.3 0.333	13 12 0.3 0.597	13 11 0.4 0.308	13 12 0.2 0.976	13 22 0.4 0.052	13 1 0.8 0.256	13 0 — —
J-K	5 4 0.4 0.754	5 10 0.3 0.862	5 10 0.4 0.540	5 4 0.6 0.357	5 12 0.3 0.841	5 22 0.3 0.780	5 1 0.6 0.724	5 0 — —
H-K	4 4 0.5 0.534	4 10 0.4 0.627	4 8 0.6 0.150	4 4 0.5 0.534	4 12 1.0 0.001	4 21 0.5 0.216	4 1 1.0 0.150	4 0 — —
M11	25 49 0.3 0.085	25 58 0.2 0.434	25 35 0.4 0.017	25 26 0.2 0.387	25 69 0.9 0.000	25 62 0.8 0.000	25 134 1.0 0.000	25 13 1.0 0.000
Grt	28 80 0.3 0.052	28 67 0.3 0.141	28 43 0.5 0.000	28 29 0.4 0.013	28 89 0.9 0.000	28 74 0.4 0.001	28 46 0.5 0.000	28 37 0.7 0.000
Hma	4 16 0.7 0.051	4 29 0.4 0.579	4 19 0.8 0.014	4 7 0.6 0.250	4 3 1.0 0.021	4 44 1.0 0.000	4 0 — —	4 1 1.0 0.150
dia	4 16 0.8 0.012	4 29 0.4 0.466	4 19 0.8 0.007	4 7 0.6 0.191	4 3 1.0 0.021	4 44 1.0 0.000	4 0 — —	4 1 1.0 0.150
pV	4 16 0.2 0.968	4 29 0.4 0.365	4 17 0.8 0.020	4 6 0.3 0.890	4 3 1.0 0.021	4 44 0.6 0.058	4 0 — —	4 1 0.8 0.461

Table 6. (cont'd) KS-test

Colour	Classic Cd Classic Ht	Classic Cd Scattered	Classic Cd Detached	Classic Cd J.Trojans	Classic Cd Centaur	Classic Cd SP Comets	Classic Cd LP Comets
U-B	3 10 0.9 0.017	3 7 0.9 0.038	3 2 1.0 0.063	3 1 1.0 0.168	3 0 — —	3 0 — —	3 0 — —
U-V	3 10 1.0 0.006	3 7 0.9 0.038	3 2 1.0 0.063	3 1 1.0 0.168	3 0 — —	3 0 — —	3 0 — —
U-R	3 10 1.0 0.006	3 7 0.9 0.038	3 2 1.0 0.063	3 1 1.0 0.168	3 0 — —	3 0 — —	3 0 — —
U-I	2 7 1.0 0.029	2 4 0.8 0.242	2 0 — —	2 0 — —	2 0 — —	2 0 — —	2 0 — —
B-V	40 48 0.5 0.000	40 41 0.6 0.000	40 24 0.6 0.000	40 83 0.7 0.000	40 72 0.5 0.000	40 20 0.6 0.000	40 33 0.8 0.000
B-R	40 47 0.5 0.000	40 43 0.7 0.000	40 25 0.6 0.000	40 83 0.8 0.000	40 74 0.5 0.000	40 20 0.7 0.000	40 32 0.8 0.000
B-I	26 40 0.6 0.000	26 32 0.7 0.000	26 21 0.6 0.000	26 76 0.9 0.000	26 42 0.6 0.000	26 13 0.9 0.000	26 11 0.9 0.000
B-J	1 1 1.0 0.289	1 4 0.8 0.461	1 2 0.5 0.937	1 5 1.0 0.140	1 9 0.7 0.561	1 1 1.0 0.289	1 0 — —
B-H	1 1 1.0 0.289	1 4 0.5 0.903	1 2 0.5 0.937	1 5 1.0 0.140	1 9 0.7 0.561	1 1 1.0 0.289	1 0 — —
B-K	1 1 1.0 0.289	1 2 1.0 0.201	1 1 1.0 0.289	1 5 1.0 0.140	1 9 0.7 0.561	1 1 1.0 0.289	1 0 — —
V-R	48 55 0.5 0.000	48 41 0.6 0.000	48 26 0.6 0.000	48 89 0.8 0.000	48 74 0.5 0.000	48 46 0.6 0.000	48 36 0.8 0.000
V-I	73 60 0.4 0.000	73 34 0.6 0.000	73 26 0.6 0.000	73 82 0.9 0.000	73 47 0.6 0.000	73 23 0.8 0.000	73 15 0.8 0.000
V-J	4 13 0.5 0.267	4 9 0.4 0.592	4 4 0.5 0.534	4 12 0.8 0.032	4 11 0.5 0.385	4 1 0.8 0.461	4 0 — —
V-H	1 6 1.0 0.133	1 7 1.0 0.128	1 4 1.0 0.150	1 12 1.0 0.115	1 11 0.9 0.191	1 1 1.0 0.289	1 0 — —
V-K	1 6 1.0 0.133	1 5 1.0 0.140	1 3 1.0 0.168	1 12 1.0 0.115	1 11 0.9 0.191	1 1 1.0 0.289	1 0 — —
R-I	37 44 0.3 0.091	37 30 0.4 0.004	37 23 0.4 0.012	37 82 0.8 0.000	37 47 0.4 0.001	37 24 0.6 0.000	37 15 0.7 0.000
R-J	0 3 — —	0 5 — —	0 2 — —	0 5 — —	0 9 — —	0 1 — —	0 0 — —
R-H	0 3 — —	0 5 — —	0 2 — —	0 5 — —	0 9 — —	0 1 — —	0 0 — —
R-K	0 1 — —	0 3 — —	0 1 — —	0 5 — —	0 9 — —	0 1 — —	0 0 — —
I-J	2 4 1.0 0.047	2 9 0.6 0.504	2 1 0.5 0.937	2 5 1.0 0.038	2 16 0.6 0.315	2 1 1.0 0.201	2 0 — —
I-H	1 2 1.0 0.201	1 4 1.0 0.150	1 1 1.0 0.289	1 5 1.0 0.140	1 9 1.0 0.121	1 1 1.0 0.289	1 0 — —
I-K	1 2 1.0 0.201	1 3 1.0 0.168	1 1 1.0 0.289	1 5 1.0 0.140	1 9 1.0 0.121	1 1 1.0 0.289	1 0 — —
J-H	29 35 0.2 0.345	29 12 0.2 0.917	29 11 0.2 0.988	29 12 0.3 0.264	29 22 0.2 0.576	29 1 0.7 0.421	29 0 — —
J-K	4 10 0.3 0.910	4 10 0.4 0.627	4 4 0.5 0.534	4 12 0.5 0.318	4 22 0.4 0.502	4 1 0.5 0.903	4 0 — —
H-K	4 10 0.5 0.343	4 8 0.6 0.150	4 4 0.5 0.534	4 12 0.8 0.032	4 21 0.5 0.317	4 1 1.0 0.150	4 0 — —
M11	49 58 0.4 0.001	49 35 0.5 0.000	49 26 0.4 0.010	49 69 1.0 0.000	49 62 0.9 0.000	49 134 1.0 0.000	49 13 1.0 0.000
Grt	80 67 0.4 0.000	80 43 0.6 0.000	80 29 0.6 0.000	80 89 0.9 0.000	80 74 0.5 0.000	80 46 0.7 0.000	80 37 0.8 0.000
Hma	16 29 0.5 0.004	16 19 0.6 0.003	16 7 0.9 0.000	16 3 1.0 0.004	16 44 1.0 0.000	16 0 — —	16 1 1.0 0.110
dia	16 29 0.6 0.000	16 19 0.5 0.026	16 7 0.9 0.000	16 3 1.0 0.004	16 44 0.9 0.000	16 0 — —	16 1 1.0 0.110
pV	16 29 0.4 0.022	16 17 0.7 0.000	16 6 0.3 0.621	16 3 0.9 0.008	16 44 0.7 0.000	16 0 — —	16 1 0.7 0.500

Table 6. (cont'd) KS-test

Colour	Classic Ht Scattered	Classic Ht Detached	Classic Ht J.Trojans	Classic Ht Centaurs	Classic Ht SP Comets	Classic Ht LP Comets
U-B	10 7 0.5 0.176	10 2 0.5 0.630	10 1 1.0 0.118	10 0 — —	10 0 — —	10 0 — —
U-V	10 7 0.5 0.176	10 2 0.5 0.630	10 1 0.5 0.872	10 0 — —	10 0 — —	10 0 — —
U-R	10 7 0.5 0.176	10 2 0.4 0.866	10 1 0.6 0.689	10 0 — —	10 0 — —	10 0 — —
U-I	7 4 0.6 0.250	7 0 — —	7 0 — —	7 0 — —	7 0 — —	7 0 — —
B-V	48 41 0.3 0.008	48 24 0.3 0.160	48 83 0.4 0.000	48 72 0.2 0.100	48 20 0.4 0.036	48 33 0.5 0.000
B-R	47 43 0.3 0.007	47 25 0.3 0.153	47 83 0.5 0.000	47 74 0.2 0.149	47 20 0.3 0.052	47 32 0.5 0.000
B-I	40 32 0.3 0.031	40 21 0.3 0.278	40 76 0.5 0.000	40 42 0.3 0.053	40 13 0.5 0.005	40 11 0.6 0.004
B-J	1 4 0.8 0.461	1 2 0.5 0.937	1 5 1.0 0.140	1 9 0.7 0.561	1 1 1.0 0.289	1 0 — —
B-H	1 4 0.8 0.461	1 2 0.5 0.937	1 5 1.0 0.140	1 9 0.7 0.561	1 1 1.0 0.289	1 0 — —
B-K	1 2 1.0 0.201	1 1 1.0 0.289	1 5 1.0 0.140	1 9 0.7 0.561	1 1 1.0 0.289	1 0 — —
V-R	55 41 0.3 0.052	55 26 0.2 0.311	55 89 0.6 0.000	55 74 0.2 0.378	55 46 0.3 0.020	55 36 0.5 0.000
V-I	60 34 0.4 0.004	60 26 0.3 0.073	60 82 0.6 0.000	60 47 0.3 0.025	60 23 0.5 0.000	60 15 0.5 0.001
V-J	13 9 0.3 0.505	13 4 0.3 0.915	13 12 0.5 0.033	13 11 0.3 0.541	13 1 0.5 0.800	13 0 — —
V-H	6 7 0.4 0.700	6 4 0.2 0.991	6 12 0.3 0.669	6 11 0.3 0.791	6 1 0.5 0.887	6 0 — —
V-K	6 5 0.5 0.454	6 3 0.3 0.935	6 12 0.2 0.929	6 11 0.5 0.229	6 1 0.5 0.887	6 0 — —
R-I	44 30 0.2 0.206	44 23 0.3 0.237	44 82 0.6 0.000	44 47 0.3 0.033	44 24 0.4 0.004	44 15 0.5 0.004
R-J	3 5 0.6 0.338	3 2 1.0 0.063	3 5 1.0 0.014	3 9 0.4 0.623	3 1 1.0 0.168	3 0 — —
R-H	3 5 0.4 0.825	3 2 1.0 0.063	3 5 1.0 0.014	3 9 0.6 0.339	3 1 1.0 0.168	3 0 — —
R-K	1 3 1.0 0.168	1 1 1.0 0.289	1 5 0.8 0.362	1 9 0.6 0.779	1 1 1.0 0.289	1 0 — —
I-J	4 9 0.9 0.009	4 1 1.0 0.150	4 5 0.6 0.357	4 16 0.6 0.171	4 1 0.5 0.903	4 0 — —
I-H	2 4 0.5 0.736	2 1 0.5 0.937	2 5 0.6 0.474	2 9 0.7 0.281	2 1 1.0 0.201	2 0 — —
I-K	2 3 0.7 0.425	2 1 1.0 0.201	2 5 0.4 0.909	2 9 0.4 0.776	2 1 0.5 0.937	2 0 — —
J-H	35 12 0.3 0.364	35 11 0.3 0.596	35 12 0.3 0.282	35 22 0.2 0.635	35 1 0.6 0.601	35 0 — —
J-K	10 10 0.3 0.675	10 4 0.3 0.910	10 12 0.6 0.036	10 22 0.3 0.654	10 1 0.6 0.689	10 0 — —
H-K	10 8 0.3 0.642	10 4 0.4 0.782	10 12 0.6 0.022	10 21 0.2 0.779	10 1 0.6 0.689	10 0 — —
M11	58 35 0.4 0.001	58 26 0.1 0.921	58 69 0.9 0.000	58 62 0.8 0.000	58 134 1.0 0.000	58 13 1.0 0.000
Grt	67 43 0.4 0.001	67 29 0.3 0.092	67 89 0.6 0.000	67 74 0.2 0.065	67 46 0.4 0.001	67 37 0.5 0.000
Hma	29 19 0.6 0.000	29 7 0.4 0.219	29 3 1.0 0.002	29 44 0.9 0.000	29 0 — —	29 1 1.0 0.104
dia	29 19 0.6 0.000	29 7 0.4 0.326	29 3 1.0 0.002	29 44 0.9 0.000	29 0 — —	29 1 1.0 0.104
pV	29 17 0.3 0.190	29 6 0.5 0.086	29 3 0.6 0.257	29 44 0.3 0.022	29 0 — —	29 1 0.5 0.824

Table 6. (cont'd) KS-test

Table 6. (cont'd) KS-test

Colour	Scattered Detached	Scattered J.Trojans	Scattered Centaur	Scattered SP Comets	Scattered LP Comets	Colour	Detached J.Trojans	Detached Centaur	Detached SP Comets	Detached LP Comets
U-B	7 2	7 1	7 0	7 0	7 0	U-B	2 1	2 0	2 0	2 0
	0.5 0.665	1.0 0.128	—	—	—		0.5 0.937	—	—	—
U-V	7 2	7 1	7 0	7 0	7 0	U-V	2 1	2 0	2 0	2 0
	0.9 0.089	0.9 0.264	—	—	—		1.0 0.201	—	—	—
U-R	7 2	7 1	7 0	7 0	7 0	U-R	2 1	2 0	2 0	2 0
	0.9 0.089	1.0 0.128	—	—	—		1.0 0.201	—	—	—
U-I	4 0	4 0	4 0	4 0	4 0	U-I	0 0	0 0	0 0	0 0
	—	—	—	—	—		—	—	—	—
B-V	41 24	41 83	41 72	41 20	41 33	B-V	24 83	24 72	24 20	24 33
	0.3 0.153	0.4 0.001	0.2 0.433	0.2 0.707	0.3 0.068		0.4 0.001	0.3 0.137	0.3 0.233	0.5 0.003
B-R	43 25	43 83	43 74	43 20	43 32	B-R	25 83	25 74	25 20	25 32
	0.3 0.052	0.5 0.000	0.2 0.239	0.2 0.835	0.4 0.008		0.5 0.000	0.2 0.359	0.3 0.142	0.5 0.003
B-I	32 21	32 76	32 42	32 13	32 11	B-I	21 76	21 42	21 13	21 11
	0.3 0.187	0.5 0.000	0.2 0.664	0.2 0.712	0.6 0.001		0.6 0.000	0.4 0.014	0.4 0.134	0.8 0.000
B-J	4 2	4 5	4 9	4 1	4 0	B-J	2 5	2 9	2 1	2 0
	0.5 0.736	0.8 0.082	0.5 0.296	0.8 0.461	—		1.0 0.038	0.4 0.776	1.0 0.201	—
B-H	4 2	4 5	4 9	4 1	4 0	B-H	2 5	2 9	2 1	2 0
	0.5 0.736	1.0 0.007	0.4 0.592	1.0 0.150	—		1.0 0.038	0.6 0.504	1.0 0.201	—
B-K	2 1	2 5	2 9	2 1	2 0	B-K	1 5	1 9	1 1	1 0
	1.0 0.201	1.0 0.038	0.8 0.139	1.0 0.201	—		1.0 0.140	0.8 0.364	1.0 0.289	—
V-R	41 26	41 89	41 74	41 46	41 36	V-R	26 89	26 74	26 46	26 36
	0.2 0.707	0.5 0.000	0.2 0.243	0.1 0.948	0.4 0.012		0.6 0.000	0.1 0.747	0.2 0.438	0.5 0.001
V-I	34 26	34 82	34 47	34 23	34 15	V-I	26 82	26 47	26 23	26 15
	0.2 0.299	0.5 0.000	0.1 0.762	0.2 0.432	0.5 0.010		0.6 0.000	0.2 0.264	0.3 0.094	0.5 0.007
V-J	9 4	9 12	9 11	9 1	9 0	V-J	4 12	4 11	4 1	4 0
	0.3 0.907	0.4 0.192	0.2 0.991	0.6 0.779	—		0.4 0.547	0.4 0.656	0.8 0.461	—
V-H	7 4	7 12	7 11	7 1	7 0	V-H	4 12	4 11	4 1	4 0
	0.4 0.811	0.6 0.068	0.2 0.982	0.9 0.264	—		0.2 0.976	0.2 0.978	0.8 0.461	—
V-K	5 3	5 12	5 11	5 1	5 0	V-K	3 12	3 11	3 1	3 0
	0.5 0.657	0.6 0.095	0.2 0.975	0.8 0.362	—		0.3 0.890	0.5 0.485	0.7 0.641	—
R-I	30 23	30 82	30 47	30 24	30 15	R-I	23 82	23 47	23 24	23 15
	0.1 0.970	0.5 0.000	0.2 0.622	0.4 0.049	0.4 0.104		0.6 0.000	0.2 0.502	0.4 0.028	0.5 0.031
R-J	5 2	5 5	5 9	5 1	5 0	R-J	2 5	2 9	2 1	2 0
	0.4 0.909	0.8 0.036	0.4 0.634	0.8 0.362	—		1.0 0.038	0.7 0.281	1.0 0.201	—
R-H	5 2	5 5	5 9	5 1	5 0	R-H	2 5	2 9	2 1	2 0
	0.6 0.474	0.8 0.036	0.3 0.779	1.0 0.140	—		1.0 0.038	0.8 0.139	1.0 0.201	—
R-K	3 1	3 5	3 9	3 1	3 0	R-K	1 5	1 9	1 1	1 0
	1.0 0.168	1.0 0.014	0.8 0.062	1.0 0.168	—		1.0 0.140	0.7 0.561	1.0 0.289	—
I-J	9 1	9 5	9 16	9 1	9 0	I-J	1 5	1 16	1 1	1 0
	0.7 0.561	0.9 0.004	0.4 0.236	0.9 0.217	—		1.0 0.140	0.8 0.294	1.0 0.289	—
I-H	4 1	4 5	4 9	4 1	4 0	I-H	1 5	1 9	1 1	1 0
	0.5 0.903	0.6 0.357	0.5 0.359	0.8 0.461	—		0.8 0.362	0.7 0.561	1.0 0.289	—
I-K	3 1	3 5	3 9	3 1	3 0	I-K	1 5	1 9	1 1	1 0
	0.7 0.641	0.5 0.657	0.6 0.339	0.7 0.641	—		0.6 0.724	0.6 0.779	1.0 0.289	—
J-H	12 11	12 12	12 22	12 1	12 0	J-H	11 12	11 22	11 1	11 0
	0.2 0.947	0.3 0.786	0.3 0.612	0.8 0.398	—		0.4 0.222	0.2 0.948	0.8 0.297	—
J-K	10 4	10 12	10 22	10 1	10 0	J-K	4 12	4 22	4 1	4 0
	0.4 0.627	0.5 0.107	0.2 0.975	0.6 0.689	—		0.6 0.165	0.2 0.961	0.8 0.461	—
H-K	8 4	8 12	8 21	8 1	8 0	H-K	4 12	4 21	4 1	4 0
	0.4 0.740	0.6 0.026	0.2 0.825	0.6 0.649	—		0.5 0.318	0.2 0.996	0.8 0.461	—
M11	35 26	35 69	35 62	35 134	35 13	M11	26 69	26 62	26 134	26 13
	0.5 0.000	0.8 0.000	0.6 0.000	1.0 0.000	0.9 0.000		0.9 0.000	0.9 0.000	1.0 0.000	1.0 0.000
Grt	43 29	43 89	43 74	43 46	43 37	Grt	29 89	29 74	29 46	29 37
	0.2 0.247	0.5 0.000	0.2 0.332	0.2 0.235	0.4 0.008		0.6 0.000	0.2 0.590	0.2 0.220	0.5 0.001
Hma	19 7	19 3	19 44	19 0	19 1	Hma	7 3	7 44	7 0	7 1
	0.8 0.001	0.7 0.097	0.5 0.003	—	0.7 0.502		1.0 0.009	1.0 0.000	—	1.0 0.128
dia	19 7	19 3	19 44	19 0	19 1	dia	7 3	7 44	7 0	7 1
	0.9 0.000	0.7 0.097	0.6 0.000	—	0.7 0.502		1.0 0.009	1.0 0.000	—	1.0 0.128
pV	17 6	17 3	17 44	17 0	17 1	pV	6 3	6 44	6 0	6 1
	0.7 0.010	0.5 0.428	0.1 0.980	—	0.8 0.364		1.0 0.011	0.7 0.005	—	0.8 0.303

Table 6. (cont'd) KS-test

Colour	J.Trojans Centaur	J.Trojans SP Comets	J.Trojans LP Comets
U-B	1 0	1 0	1 0
U-V	1 0	1 0	1 0
U-R	1 0	1 0	1 0
U-I	0 0	0 0	0 0
B-V	83 72 0.3 0.008	83 20 0.4 0.010	83 33 0.3 0.031
B-R	83 74 0.4 0.000	83 20 0.5 0.000	83 32 0.2 0.145
B-I	76 42 0.5 0.000	76 13 0.5 0.003	76 11 0.3 0.230
B-J	5 9 0.8 0.018	5 1 1.0 0.140	5 0 —
B-H	5 9 0.8 0.018	5 1 0.6 0.724	5 0 —
B-K	5 9 0.7 0.049	5 1 0.6 0.724	5 0 —
V-R	89 74 0.5 0.000	89 46 0.4 0.000	89 36 0.2 0.543
V-I	82 47 0.5 0.000	82 23 0.4 0.001	82 15 0.3 0.274
V-J	12 11 0.4 0.326	12 1 0.7 0.549	12 0 —
V-H	12 11 0.4 0.351	12 1 0.6 0.716	12 0 —
V-K	12 11 0.4 0.303	12 1 0.6 0.716	12 0 —
R-I	82 47 0.5 0.000	82 24 0.3 0.120	82 15 0.2 0.645
R-J	5 9 0.6 0.148	5 1 0.8 0.362	5 0 —
R-H	5 9 0.7 0.063	5 1 0.6 0.724	5 0 —
R-K	5 9 0.7 0.049	5 1 0.6 0.724	5 0 —
I-J	5 16 0.7 0.032	5 1 0.8 0.362	5 0 —
I-H	5 9 0.5 0.309	5 1 0.6 0.724	5 0 —
I-K	5 9 0.2 0.974	5 1 0.6 0.724	5 0 —
J-H	12 22 0.4 0.109	12 1 0.8 0.274	12 0 —
J-K	12 22 0.5 0.055	12 1 0.7 0.549	12 0 —
H-K	12 21 0.5 0.041	12 1 0.6 0.716	12 0 —
M11	69 62 0.4 0.000	69 134 0.9 0.000	69 13 0.5 0.011
Grt	89 74 0.5 0.000	89 46 0.4 0.000	89 37 0.2 0.425
Hma	3 44 0.3 0.856	3 0 —	3 1 0.7 0.641
dia	3 44 0.3 0.815	3 0 —	3 1 0.7 0.641
pV	3 44 0.5 0.389	3 0 —	3 1 1.0 0.168

Table 6. (cont'd) KS-test

Colour	Centaur SP Comets	Centaur LP Comets
U-B	0 0	0 0
U-V	0 0	0 0
U-R	0 0	0 0
U-I	0 0	0 0
B-V	72 20 0.2 0.255	72 33 0.3 0.010
B-R	74 20 0.3 0.121	74 32 0.4 0.002
B-I	42 13 0.3 0.442	42 11 0.6 0.005
B-J	9 1 0.8 0.364	9 0 —
B-H	9 1 0.9 0.217	9 0 —
B-K	9 1 0.9 0.217	9 0 —
V-R	74 46 0.2 0.080	74 36 0.4 0.000
V-I	47 23 0.3 0.228	47 15 0.4 0.018
V-J	11 1 0.6 0.612	11 0 —
V-H	11 1 0.7 0.440	11 0 —
V-K	11 1 0.8 0.297	11 0 —
R-I	47 24 0.3 0.053	47 15 0.4 0.090
R-J	9 1 0.7 0.561	9 0 —
R-H	9 1 0.9 0.217	9 0 —
R-K	9 1 0.9 0.217	9 0 —
I-J	16 1 0.6 0.749	16 0 —
I-H	9 1 0.8 0.364	9 0 —
I-K	9 1 0.6 0.779	9 0 —
J-H	22 1 0.7 0.420	22 0 —
J-K	22 1 0.5 0.857	22 0 —
H-K	21 1 0.6 0.629	21 0 —
M11	62 134 0.9 0.000	62 13 0.5 0.010
Grt	74 46 0.2 0.107	74 37 0.4 0.001
Hma	44 0 —	44 1 0.6 0.629
dia	44 0 —	44 1 0.5 0.811
pV	44 0 —	44 1 0.8 0.303

Table 6. T-Test (t and $Prob$) for the colours of the TEST classes: are the mean colours compatible?

Color	Odd-Even	99-non99
U-B	3 2 -1.5 0.247	0 5 — —
U-V	3 2 -1.9 0.163	0 5 — —
U-R	3 2 -1.7 0.189	0 5 — —
B-V	30 30 0.1 0.940	4 56 1.6 0.193
B-R	31 31 0.4 0.658	4 58 3.1 0.018
B-I	22 21 -0.1 0.955	3 40 0.6 0.558
B-J	2 2 0.2 0.878	0 4 — —
B-H	2 2 0.3 0.835	0 4 — —
V-R	37 36 -0.0 0.984	5 68 2.0 0.102
V-I	50 49 0.7 0.477	7 92 1.9 0.095
V-J	5 4 0.3 0.760	0 9 — —
V-H	3 2 0.6 0.655	0 5 — —
V-K	2 2 4.1 0.148	0 4 — —
R-I	30 29 0.1 0.941	4 55 -1.4 0.227
I-J	4 4 -2.7 0.036	0 8 — —
I-H	3 2 -3.1 0.071	0 5 — —
I-K	3 2 -3.2 0.078	0 5 — —
J-H	21 21 0.4 0.684	5 37 -1.0 0.351
J-K	5 4 -1.4 0.224	0 9 — —
H-K	4 4 -0.9 0.407	0 8 — —
M11	37 37 1.8 0.078	5 69 2.0 0.059
Grt	54 54 0.2 0.841	8 100 1.9 0.093
Hma	10 10 0.7 0.473	0 20 — —
dia	10 10 -0.3 0.748	0 20 — —
pV	10 10 -1.0 0.313	0 20 — —

Table 7. F-Test for the colours of the TEST classes: are the colour variances compatible?

Color	Odd-Even	99-non99
U-B	3 2 1.1 0.879	0 5 — —
U-V	3 2 2.1 0.876	0 5 — —
U-R	3 2 2.2 0.868	0 5 — —
B-V	30 30 1.4 0.380	4 56 2.0 0.648
B-R	31 31 1.4 0.360	4 58 7.3 0.124
B-I	22 21 1.3 0.562	3 40 4.2 0.425
B-J	2 2 63.3 0.159	0 4 — —
B-H	2 2 20.1 0.280	0 4 — —
V-R	37 36 1.2 0.570	5 68 1.4 0.812
V-I	50 49 1.6 0.087	7 92 2.8 0.192
V-J	5 4 2.7 0.365	0 9 — —
V-H	3 2 5.8 0.275	0 5 — —
V-K	2 2 116.9 0.117	0 4 — —
R-I	30 29 1.1 0.749	4 55 2.2 0.560
I-J	4 4 1.2 0.882	0 8 — —
I-H	3 2 13.5 0.377	0 5 — —
I-K	3 2 63.7 0.176	0 5 — —
J-H	21 21 2.4 0.059	5 37 1.8 0.302
J-K	5 4 4.9 0.221	0 9 — —
H-K	4 4 2.5 0.472	0 8 — —
M11	37 37 1.1 0.714	5 69 13.1 0.022
Grt	54 54 1.4 0.257	8 100 2.5 0.200
Hma	10 10 2.1 0.291	0 20 — —
dia	10 10 2.6 0.171	0 20 — —
pV	10 10 1.0 0.962	0 20 — —

Table 8. KS Test for the colours of the TEST classes: are the distribution compatible?

Color	Odd-Even	99-non99
U-B	3 2	0 5
	0.7 0.425	— —
U-V	3 2	0 5
	0.7 0.425	— —
U-R	3 2	0 5
	0.7 0.425	— —
U-I	2 1	0 3
	1.0 0.201	— —
B-V	30 30	4 56
	0.2 0.760	0.6 0.109
B-R	31 31	4 58
	0.2 0.778	0.5 0.215
B-I	22 21	3 40
	0.2 0.639	0.3 0.880
B-J	2 2	0 4
	0.5 0.844	— —
B-H	2 2	0 4
	0.5 0.844	— —
B-K	2 1	0 3
	0.5 0.937	— —
V-R	37 36	5 68
	0.1 0.954	0.5 0.146
V-I	50 49	7 92
	0.1 0.815	0.3 0.420
V-J	5 4	0 9
	0.2 0.994	— —
V-H	3 2	0 5
	0.5 0.780	— —
V-K	2 2	0 4
	1.0 0.097	— —
R-I	30 29	4 55
	0.1 0.967	0.4 0.366
R-J	2 1	0 3
	0.5 0.937	— —
R-H	2 1	0 3
	0.5 0.937	— —
R-K	1 1	0 2
	1.0 0.289	— —
I-J	4 4	0 8
	0.8 0.107	— —
I-H	3 2	0 5
	1.0 0.063	— —
I-K	3 2	0 5
	1.0 0.063	— —
J-H	21 21	5 37
	0.1 0.973	0.3 0.568
J-K	5 4	0 9
	0.8 0.053	— —
H-K	4 4	0 8
	0.5 0.534	— —
M11	37 37	5 69
	0.3 0.111	0.4 0.377
Grt	54 54	8 100
	0.1 0.938	0.3 0.382
Hma	10 10	0 20
	0.3 0.675	— —
dia	10 10	0 20
	0.2 0.975	— —
pV	10 10	0 20
	0.3 0.675	— —

Table 9. List of the references used in this study, and number of epochs, sorted by object [photRef.tex from tnoAverage]

Object	References	Nr.
	0	
C/1983H1-IA	Lamy et al. (2004)	1
C/1983J1-SS	Lamy et al. (2004)	1
C/1984K1-Shoemak	Lamy et al. (2004)	1
C/1984U1-Shoemak	Lamy et al. (2004)	1
C/1986P1-Wilson	Lamy et al. (2004)	1
C/1987A1-Levy	Lamy et al. (2004)	1
C/1987H1-Shoemak	Lamy et al. (2004)	1
C/1988B1-Shoemak	Lamy et al. (2004)	1
C/1988C1-MP	Lamy et al. (2004)	1
C/1995O1-HB	Lamy & Toth (2009)	
	Lamy et al. (2004)	2
C/1996B2-Hyakuta	Lamy et al. (2004)	1
C/1999J2	Meech et al. (2009)	11
C/1999S4-LINEAR	Lamy et al. (2004)	1
C/2000B4	Bauer et al. (2003)	6
C/2001G1	Meech et al. (2009)	2
C/2001M10	Jewitt (2009)	2
C/2001M10-NEAT	—	0
C/2001O1	Meech et al. (2009)	1
C/2001OG108-LONE	Lamy et al. (2004)	1
C/2001Q1	Meech et al. (2009)	2
C/2002CE10-LINEA	Jewitt (2005)	2
C/2002VQ94-LINEA	Jewitt (2005)	1
C/2003A2	Meech et al. (2009)	4
C/2003A2-Gleason	Jewitt (2015)	1
C/2004D1-NEAT	Jewitt (2015)	1
C/2006S3-Loneos	Jewitt (2015)	1
C/2007D1-LINEAR	Jewitt (2015)	1
C/2008S3-Boattin	Jewitt (2015)	2
C/2009T1-McNaugh	Jewitt (2015)	1
C/2010D4-WISE	Jewitt (2015)	1
C/2010DG56-WISE	Jewitt (2015)	1
C/2010KW7	Bauer et al. (2013)	1
C/2010L3-Catalin	Jewitt (2015)	1
C/2010U3-Boattin	Jewitt (2015)	3
C/2011KP36	Bauer et al. (2013)	1
C/2011P2-PANSTAR	Jewitt (2015)	3
C/2011Q1-PANSTAR	Jewitt (2015)	2
C/2012A1-PANSTAR	Jewitt (2015)	1
C/2012E1-Hill	Jewitt (2015)	1
C/2012K8-Lemmon	Jewitt (2015)	1
C/2012LP26-Palom	Jewitt (2015)	3
C/2012Q1-Kowalsk	Jewitt (2015)	6
C/2013C2	Jewitt (2015)	4
C/2013E1-McNaugh	Jewitt (2015)	1
C/2013H2-Boattin	Jewitt (2015)	1
C/2013P3-Palomar	Jewitt (2015)	1
C/2013P4	Jewitt (2015)	3
C/2014AA52-CATAL	Jewitt (2015)	1
C/2014B1-Schwarz	Jewitt (2015)	1
C/2014R1-Borisov	Jewitt (2015)	1
C/2014W6-Catalin	Jewitt (2015)	1
C/2014XB8-PANSTA	Jewitt (2015)	1
C/2015B1-PANSTAR	Jewitt (2015)	1
Nereid	Rabinowitz et al. (2007)	1
P/1991L3-Levy	Lamy et al. (2004)	1
P/1993W1-Mueller	Lamy et al. (2004)	1
P/1994A1-Kushida	Lamy et al. (2004)	1
P/1994J3-Shoemak	Lamy et al. (2004)	1
P/1995A1-Jedicke	Lamy et al. (2004)	1
P/1996A1-Jedicke	Lamy et al. (2004)	1
P/1997C1-Gehrels	Lamy et al. (2004)	1
P/1997G1-Montani	Lamy et al. (2004)	1
P/1997V1-Larsen	Lamy et al. (2004)	1
P/1998S1-LM	Lamy et al. (2004)	1
P/1999D1-Hermann	Lamy et al. (2004)	1
P/1999RO28-LONEO	Lamy et al. (2004)	1
P/2004A1	Jewitt (2009)	1
P/2004A1-Loneos	—	0
P/2005S2-Skiff	—	0
P/2005T3-Read	—	0
P/2011S1-Gibbs	Jewitt (2015)	1
Phoebe	Lellouch et al. (2013)	1
Sycorax	Lellouch et al. (2013)	1
1P/Halley	Lamy et al. (2004)	1
	Keller & Thomas (1989)	2
2P/Encke	Jewitt (2002)	
	Meech et al. (2004)	
	Lamy et al. (2004)	
	Luu & Jewitt (1990)	6
4P/Faye	Lamy et al. (2004)	
	Lamy & Toth (2009)	2

Table 9. List of the references used in this study, sorted by object
(Cont'd)

Object	References	Nr.
6P/dArrest	Meech et al. (2004) Jewitt (2002)	
7P/PW	Lamy et al. (2004) Snodgrass et al. (2005)	3
8P/Tuttle	Lamy et al. (2004)	2
9P/Tempel1	Lamy et al. (2004) Lamy & Toth (2009)	2
10P/Tempel2	Meech et al. (2004) Lamy et al. (2004)	14
14P/Wolf	Jewitt & Luu (1989) Meech et al. (2004) Lamy et al. (2004) Jewitt & Meech (1988) Lamy & Toth (2009) Snodgrass et al. (2005)	10
15P/Finlay	Lamy et al. (2004)	2
16P/Brooks2	Lamy et al. (2004)	1
17P/Holmes	Lamy et al. (2004) Lamy & Toth (2009)	2
19P/Borrelly	Lamy et al. (2004)	1
21P/GZ	Lamy et al. (2004) Luu (1993)	2
22P/Kopff	Meech et al. (2004) Lamy et al. (2004) Lamy et al. (2002) Lamy & Toth (2009)	4
24P/Schaumasse	Lamy et al. (2004)	1
26P/GS	Boehnhardt et al. (1999) Lamy et al. (2004)	2
28P/Neujmin1	Jewitt & Meech (1988) Delahodde et al. (2001) Meech et al. (2004) Lamy et al. (2004) Campins et al. (1987)	11
30P/Reinmuth1	Lamy et al. (2004)	1
31P/SW2	Lamy et al. (2004)	1
32P/ComasSola	Lamy et al. (2004)	1
33P/Daniel	Lamy et al. (2004)	1
36P/Whipple	Lamy et al. (2004)	1
37P/Forbes	Lamy et al. (2004) Lamy & Toth (2009)	2
39P/Oterma	Bauer et al. (2003) Jewitt (2009)	
40P/Vaisala1	Lamy et al. (2004)	3
41P/TG	Lamy et al. (2004)	1
42P/Neujmin3	Lamy et al. (2004)	1
43P/WH	Lamy et al. (2004)	1
44P/Reinmuth2	Lamy et al. (2004) Lamy & Toth (2009)	2
45P/HMP	Lamy et al. (2004) Lamy & Toth (2009)	2
46P/Wirtanen	Meech et al. (2004) Lamy et al. (2004) Lamy & Toth (2009)	3
47P/AJ	Lamy et al. (2004) Lamy & Toth (2009)	2
48P/Johnson	Lamy et al. (2004)	1
49P/AR	Lowry et al. (2003) Lamy et al. (2004) Millis et al. (1988)	3
50P/Arend	Lamy et al. (2004) Lamy & Toth (2009)	2
51P/Harrington	Lamy et al. (2004)	1
52P/HA	Lamy et al. (2004)	1
53P/VanBiesbroeck	Meech et al. (2004) Lamy et al. (2004)	2
55P/TT	Lamy et al. (2004) Lamy & Toth (2009)	2
56P/SB	Lamy et al. (2004)	1
57P/dTND	Lamy et al. (2004)	1
58P/JN	Lamy et al. (2004)	1
59P/KK	Lamy et al. (2004) Lamy & Toth (2009)	2
60P/Tsuchinshan2	Lamy et al. (2004)	1
61P/SS	Lamy et al. (2004)	1
62P/Tsuchinshan1	Lamy et al. (2004)	1
63P/Wild1	Lamy et al. (2004) Lamy & Toth (2009)	2
64P/SG	Lamy et al. (2004)	1

Table 9. List of the references used in this study, sorted by object
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Object	References	Nr.
65P/Gunn	Lamy et al. (2004)	1
67P/CG	Lamy et al. (2004)	
	Lamy & Toth (2009)	2
68P/Klemola	Lamy et al. (2004)	1
69P/Taylor	Lamy et al. (2004)	1
70P/Kojima	Lamy et al. (2004)	
	Lamy & Toth (2009)	2
71P/Clark	Lamy et al. (2004)	
	Lamy & Toth (2009)	2
72P/DF	Lamy et al. (2004)	1
73P/SW3	Boehnhardt et al. (1999)	1
73P/SW3C	Lamy et al. (2004)	1
74P/SC	Lamy et al. (2004)	1
75P/Kohoutek	Lamy et al. (2004)	1
76P/WKI	Lamy et al. (2004)	1
77P/Longmore	Lamy et al. (2004)	1
78P/Gehrels2	Lamy et al. (2004)	1
79P/dTH	Lamy et al. (2004)	1
81P/Wild2	Lamy et al. (2004)	1
82P/Gehrels3	Lamy et al. (2004)	1
84P/Giclas	Lamy et al. (2004)	
	Lamy & Toth (2009)	2
86P/Wild3	Meech et al. (2004)	
	Lamy et al. (2004)	
	Lamy & Toth (2009)	3
87P/Bus	Meech et al. (2004)	
	Lamy et al. (2004)	2
88P/Howell	Lamy et al. (2004)	1
89P/Russell2	Lamy et al. (2004)	1
90P/Gehrels1	Lamy et al. (2004)	1
91P/Russell3	Lamy et al. (2004)	1
92P/Sanguin	Snodgrass et al. (2005)	
	Lamy et al. (2004)	2
93P/HL	Meech et al. (2004)	1
94P/Russell4	Lamy et al. (2004)	1
96P/Machholz1	Meech et al. (2004)	
	Lamy et al. (2004)	2
97P/MB	Lamy et al. (2004)	1
98P/Takamizawa	Lamy et al. (2004)	1
99P/Kowal1	Lamy et al. (2004)	1
100P/Hartley1	Lamy et al. (2004)	1
101P/Chernykh	Lamy et al. (2004)	1
103P/Hartley2	Lamy et al. (2004)	1
104P/Kowal2	Lamy et al. (2004)	1
105P/SB	Lamy et al. (2004)	1
106P/Schuster	Lamy et al. (2004)	
	Lamy & Toth (2009)	2
107P/WH	Meech et al. (2004)	
	Lowry & Weissman (2003)	
	Lamy et al. (2004)	
	Chamberlin et al. (1996)	6
109P/ST	Green et al. (1997)	
	Lamy et al. (2004)	2
110P/Hartley3	Lamy et al. (2004)	
	Lamy & Toth (2009)	2
111P/HRC	Lamy et al. (2004)	1
112P/UN	Lamy et al. (2004)	
	Lamy & Toth (2009)	2
113P/Spitaler	Lamy et al. (2004)	1
114P/WS	Lamy et al. (2004)	
	Lamy & Toth (2009)	2
115P/Maury	Lamy et al. (2004)	1
116P/Wild4	Lamy et al. (2004)	1
117P/HRA	Lamy et al. (2004)	1
118P/SL	Lamy et al. (2004)	1
119P/PH	Lamy et al. (2004)	1
120P/Mueller1	Lamy et al. (2004)	1
121P/SH	Lamy et al. (2004)	1
123P/WH	Lamy et al. (2004)	1
124P/Mrkos	Lamy et al. (2004)	1
125P/Spacewatch	Lamy et al. (2004)	1
126P/IRAS	Lamy et al. (2004)	1
128P/SH	Lamy et al. (2004)	1
129P/SL	Lamy et al. (2004)	1
130P/McNH	Lamy et al. (2004)	1
131P/Mueller2	Lamy et al. (2004)	1
132P/HRA	Lamy et al. (2004)	1
134P/KV	Lamy et al. (2004)	1
135P/SL	Lamy et al. (2004)	1
136P/Mueller3	Lamy et al. (2004)	1
137P/SL	Lamy et al. (2004)	1

Table 9. List of the references used in this study, sorted by object
(Cont'd)

Object	References	Nr.
138P/SL	Lamy et al. (2004)	1
139P/VO	Lamy et al. (2004)	1
140P/BS	Lamy et al. (2004)	1
141P/Machholz2	Lamy et al. (2004)	1
143P/KM	Jewitt (2002)	
	Jewitt et al. (2003)	
	Lamy et al. (2004)	5
144P/Kushida	Lamy et al. (2004)	1
147P/KM	Lamy et al. (2004)	1
148P/AL	Lamy et al. (2004)	1
152P/HL	Lamy et al. (2004)	1
154P/Brewington	Lamy et al. (2004)	1
165P/LINEAR	–	0
166P/2001T4	Jewitt (2009)	2
166P/NEAT	Jewitt (2015)	1
167P/2004PY42	Bauer et al. (2013)	1
167P/CINEOS	Jewitt (2009)	
	Tegler et al. (2016)	
	Jewitt (2015)	5
204P/Wild2	Meech et al. (2004)	1
1172-Aneas	Fornasier et al. (2007)	2
1173-Anchises	Fornasier et al. (2007)	1
1647-Menelaus	Fornasier et al. (2007)	1
1871-Astyanax	Fornasier et al. (2007)	3
1994 ES ₂	Green et al. (1997)	1
1994 EV ₃	Boehnhardt et al. (2001)	
	Gil-Hutton & Licandro (2001)	
	Boehnhardt et al. (2002)	4
1994 TA	Tegler & Romanishin (2000)	
	Jewitt & Luu (2001)	2
1995 DB ₂	Green et al. (1997)	
	Benecchi et al. (2011)	2
1995 DC ₂	Green et al. (1997)	5
1995 FB ₂₁	Green et al. (1997)	4
1995 HM ₅	Romanishin & Tegler (1999)	
	Gil-Hutton & Licandro (2001)	
	Boehnhardt et al. (2001)	
	Benecchi et al. (2011)	
	Barucci et al. (2000)	
	Tegler & Romanishin (1998)	8
1996 KV ₁	Benecchi et al. (2011)	1
1996 RQ ₂₀	Romanishin & Tegler (1999)	
	Jewitt & Luu (2001)	
	Boehnhardt et al. (2001)	
	Delsanti et al. (2001)	
	Benecchi et al. (2011)	
	Tegler & Romanishin (1998)	7
1996 RR ₂₀	Jewitt & Luu (2001)	
	Tegler & Romanishin (2000)	
	Boehnhardt et al. (2002)	
	Benecchi et al. (2011)	4
1996 TC ₆₈	Gil-Hutton & Licandro (2001)	1
1996 TK ₆₆	Tegler & Romanishin (2000)	
	Jewitt & Luu (2001)	
	Doressoundiram et al. (2002)	
	Benecchi et al. (2011)	4
1996 TS ₆₆	Jewitt & Luu (1998)	
	Romanishin & Tegler (1999)	
	Davies et al. (2000)	
	Jewitt & Luu (2001)	
	Tegler & Romanishin (1998)	
	Vilenius et al. (2014)	8
1997 CT ₂₉	Tegler & Romanishin (2000)	
	Benecchi et al. (2011)	
	Barucci et al. (2000)	4
1997 GA ₄₅	Gladman et al. (1998)	1
1997 QH ₄	Tegler & Romanishin (2000)	
	Jewitt & Luu (2001)	
	Delsanti et al. (2001)	
	Boehnhardt et al. (2002)	4
1997 RL ₁₃	Gladman et al. (1998)	1
1997 RX ₉	Gladman et al. (1998)	1
1998 FS ₁₄₄	Tegler & Romanishin (2003)	
	Benecchi et al. (2011)	
	Barucci et al. (2000)	4
1998 HL ₁₅₁	–	0
1998 KS ₆₅	Tegler & Romanishin (2003)	
	Benecchi et al. (2011)	2
1998 KY ₆₁	Benecchi et al. (2011)	1
1998 UR ₄₃	Gil-Hutton & Licandro (2001)	
	Delsanti et al. (2001)	
	Benecchi et al. (2011)	4

Table 9. List of the references used in this study, sorted by object
(Cont'd)

Object	References	Nr.
1998 WS ₃₁	Benecchi et al. (2011)	
	Peixinho et al. (2004)	2
1998 WU ₂₄	Davies et al. (2001)	1
1998 WV ₂₄	Tegler & Romanishin (2000)	
	Benecchi et al. (2011)	2
1998 WV ₃₁	Delsanti et al. (2001)	
	Peixinho et al. (2004)	2
1998 WW ₃₁	Benecchi et al. (2009)	1
1998 WW ₃₁	Benecchi et al. (2009)	1
1998 WX ₂₄	Tegler & Romanishin (2000)	
	Benecchi et al. (2011)	2
1998 WX ₃₁	Delsanti et al. (2001)	
	Benecchi et al. (2011)	3
1998 WY ₂₄	Benecchi et al. (2011)	2
1998 WZ ₃₁	Benecchi et al. (2011)	
	Peixinho et al. (2004)	3
1999 CB ₁₁₉	Peixinho et al. (2004)	1
1999 CF ₁₁₉	Delsanti et al. (2001)	
	Benecchi et al. (2011)	3
1999 CH ₁₁₉	Benecchi et al. (2011)	1
1999 CJ ₁₁₉	Benecchi et al. (2011)	1
1999 CL ₁₁₉	Peixinho et al. (2004)	
	Benecchi et al. (2011)	2
1999 CQ ₁₃₃	Benecchi et al. (2011)	1
1999 CX ₁₃₁	Benecchi et al. (2011)	
	Peixinho et al. (2004)	3
1999 HJ ₁₂	Benecchi et al. (2011)	2
1999 HS ₁₁	Tegler & Romanishin (2003)	
	Peixinho et al. (2004)	
	Doressoundiram et al. (2001)	3
1999 HV ₁₁	Tegler & Romanishin (2003)	1
1999 LE ₃₁	Jewitt (2005)	2
1999 OD ₄	Benecchi et al. (2011)	1
1999 OH ₄	Benecchi et al. (2011)	1
1999 OJ ₄	Peixinho et al. (2004)	
	Benecchi et al. (2011)	
	Benecchi et al. (2009)	5
1999 OJ ₄	Benecchi et al. (2009)	1
1999 OK ₄	–	0
1999 RB ₂₁₅	–	0
1999 RC ₂₁₅	Benecchi et al. (2011)	2
1999 RT ₂₁₄	Benecchi et al. (2009)	1
1999 RU ₂₁₄	–	0
1999 RW ₂₁₅	–	0
1999 RX ₂₁₄	Peixinho et al. (2004)	
	Benecchi et al. (2011)	3
1999 TR ₁₁	Tegler & Romanishin (2000)	
	Benecchi et al. (2011)	2
1999 XY ₁₄₃	Benecchi et al. (2011)	1
2000 AF ₂₅₅	Benecchi et al. (2011)	1
2000 CE ₁₀₅	Benecchi et al. (2011)	2
2000 CF ₁₀₅	Tegler et al. (2003)	
	Benecchi et al. (2011)	
	Benecchi et al. (2009)	6
2000 CF ₁₀₅	Benecchi et al. (2009)	1
2000 CG ₁₀₅	Benecchi et al. (2011)	2
2000 CK ₁₀₅	Benecchi et al. (2011)	2
2000 CL ₁₀₄	Boehnhardt et al. (2002)	
	Benecchi et al. (2011)	
	Peixinho et al. (2004)	4
2000 CO ₁₀₅	Benecchi et al. (2011)	2
2000 CP ₁₀₄	Benecchi et al. (2011)	2
2000 FS ₅₃	Tegler & Romanishin (2003)	
	Benecchi et al. (2011)	2
2000 FV ₅₃	Peixinho et al. (2004)	1
2000 FZ ₅₃	Peixinho et al. (2004)	2
2000 GM ₁₃₇	Duffard et al. (2014)	1
2000 GV ₁₄₆	Benecchi et al. (2011)	1
2000 HE ₄₆	Jewitt (2005)	1
2000 KK ₄	McBride et al. (2003)	
	Tegler & Romanishin (2003)	
	Benecchi et al. (2011)	3
2000 KL ₄	Benecchi et al. (2011)	1
2000 OP ₆₇	–	0
2000 OU ₆₉	Peixinho et al. (2004)	
	Benecchi et al. (2011)	3
2000 OX ₆₇	–	0
2000 PD ₃₀	Benecchi et al. (2011)	2
2000 PH ₃₀	Benecchi et al. (2011)	1
2000 QL ₂₅₁	Benecchi et al. (2009)	1
2000 QL ₂₅₁	Benecchi et al. (2009)	1

Table 9. List of the references used in this study, sorted by object
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Object	References	Nr.
2000 QN ₂₅₁	–	0
2000 SR ₃₃₁	–	0
2001 FL ₁₈₅	Benecchi et al. (2009)	1
2001 FM ₁₉₄	Tegler et al. (2003)	1
2001 KA ₇₇	Doressoundiram et al. (2002)	
	Peixinho et al. (2004)	
	Doressoundiram et al. (2005b)	
	Vilenius et al. (2014)	5
2001 KD ₇₇	Doressoundiram et al. (2002)	
	Peixinho et al. (2004)	
	Doressoundiram et al. (2007)	
	Benecchi et al. (2011)	
	Mommert et al. (2012)	10
2001 KG ₇₇	Tegler et al. (2003)	1
2001 KY ₇₆	Benecchi et al. (2011)	1
2001 OG ₁₀₉	Benecchi et al. (2011)	1
2001 OK ₁₀₈	Benecchi et al. (2011)	1
2001 QC ₂₉₈	Benecchi et al. (2011)	
	Jewitt et al. (2007)	
	Benecchi et al. (2009)	
	Vilenius et al. (2014)	4
2001 QC ₂₉₈	Benecchi et al. (2009)	1
2001 QE ₂₉₈	–	0
2001 QR ₃₂₂	Sheppard & Trujillo (2006)	1
2001 QS ₃₂₂	Vilenius et al. (2014)	1
2001 QW ₃₂₂	Petit et al. (2008)	28
2001 QW ₃₂₂	Petit et al. (2008)	27
2001 QX ₃₂₂	Tegler et al. (2003)	
	Benecchi et al. (2011)	
	Jewitt et al. (2007)	3
2001 UP ₁₈	–	0
2001 XU ₂₅₄	Benecchi et al. (2011)	1
2001 XZ ₂₅₅	Jewitt (2015)	
	Tegler et al. (2003)	2
2002 CB ₂₄₉	Peixinho et al. (2004)	1
2002 GH ₃₂	Santos-Sanz et al. (2009)	
	Vilenius et al. (2014)	2
2002 GV ₃₂	–	0
2002 GW ₃₂	–	0
2002 PQ ₁₅₂	Tegler et al. (2016)	1
2002 PU ₁₇₀	–	0
2002 VD ₁₃₀	–	0
2002 VV ₁₃₀	–	0
2002 XV ₉₃	Tegler et al. (2016)	
	Mommert et al. (2012)	3
2003 EL _{61c}	–	0
2003 FZ ₁₂₉	Sheppard (2010a)	1
2003 HA ₅₇	–	0
2003 HX ₅₆	–	0
2003 LA ₇	–	0
2003 QA ₉₂	Romanishin et al. (2010)	1
2003 QD ₁₁₂	Jewitt (2009)	1
2003 QK ₉₁	Sheppard (2010a)	1
2003 QQ ₉₁	Romanishin et al. (2010)	1
2003 QR ₉₁	Vilenius et al. (2014)	1
2003 QX ₉₁	–	0
2003 QY ₉₀	Benecchi et al. (2009)	1
2003 QY ₉₀	Benecchi et al. (2009)	1
2003 SQ ₃₁₇	–	0
2003 TH ₅₈	–	0
2003 TJ ₅₈	Benecchi et al. (2009)	1
2003 TJ ₅₈	Benecchi et al. (2009)	1
2003 UT ₂₉₂	Mommert et al. (2012)	1
2003 UY ₂₉₁	Sheppard (2010a)	1
2003 WN ₁₈₈	Jewitt (2005)	1
2003 WU ₁₈₈	Vilenius et al. (2014)	1
2003 YQ ₁₇₉	–	0
2004 DA ₆₂	Jewitt (2005)	1
2004 OJ ₁₄	Sheppard (2010a)	1
2004 PB ₁₀₈	Benecchi et al. (2009)	1
2004 PB ₁₀₈	Benecchi et al. (2009)	1
2004 PW ₁₀₇	–	0
2004 PY ₄₂	–	0
2004 QQ ₂₆	Duffard et al. (2014)	1
2004 TT ₃₅₇	–	0
2004 TV ₃₅₇	–	0
2004 TX ₃₅₇	–	0
2004 UP ₁₀	–	0
2004 XR ₁₉₀	Sheppard (2010a)	1
2005 CA ₇₉	–	0
2005 SE ₂₇₈	–	0

Table 9. List of the references used in this study, sorted by object
(Cont'd)

Object	References	Nr.
2005 TN ₅₃	Sheppard & Trujillo (2006)	1
2005 TN ₇₄	–	0
2005 TO ₇₄	–	0
2006 RJ ₁₀₃	Peixinho et al. (2012)	2
2007 NC ₇	Parker et al. (2013)	1
2007 TJ ₄₂₂	Peixinho et al. (2012)	1
2007 VH ₃₀₅	Tegler et al. (2016)	1
	Perna et al. (2010)	
	Fornasier et al. (2009)	
	Tegler et al. (2016)	
	Bauer et al. (2013)	5
2007 VL ₃₀₅	–	0
2008 JS ₁₄	Bauer et al. (2013)	1
2009 QV ₃₈	–	0
2009 YG ₁₉	Tegler et al. (2016)	1
2010 BK ₁₁₈	Jewitt (2015)	
	Tegler et al. (2016)	
	Bauer et al. (2013)	4
2010 BL ₄	Jewitt (2015)	2
	Bauer et al. (2013)	0
2010 EK ₁₃₉	–	1
2010 ES ₆₅	Bauer et al. (2013)	1
2010 FH ₉₂	Bauer et al. (2013)	1
2010 GW ₁₄₇	Bauer et al. (2013)	1
2010 GW ₆₄	Bauer et al. (2013)	1
2010 JH ₁₂₄	Bauer et al. (2013)	1
2010 KW ₇	–	0
2010 LG ₆₁	–	0
2010 OM ₁₀₁	Jewitt (2015)	2
2010 OR ₁	Jewitt (2015)	2
2010 PO ₅₈	–	0
2010 TS ₁₉₁	Jewitt (2018)	1
2010 TT ₁₉₁	Jewitt (2018)	1
2010 WG ₉	Jewitt (2015)	
	Bauer et al. (2013)	
	Rabinowitz et al. (2013)	4
2011 HM ₁₀₂	Parker et al. (2013)	1
2011 MM ₄	Bauer et al. (2013)	1
2012 DR ₃₀	Kiss et al. (2013)	3
2012 VP ₁₁₃	Trujillo & Sheppard (2014)	2
2012 YO ₆	Jewitt (2015)	1
2013 AZ ₆₀	Jewitt (2015)	1
2013 BL ₇₆	Jewitt (2015)	1
2013 BO ₁₆	Tegler & Romanishin (2000)	1
2013 CB ₂₀₄	–	0
2013 CX ₂₁₇	Jewitt et al. (2007)	1
2013 CY ₁₉₇	Sheppard (2010a)	1
2013 EZ ₇₅	–	0
2013 KY ₁₈	Jewitt (2018)	1
2013 LD ₁₆	Jewitt (2015)	1
2013 NS ₁₁	Jewitt (2015)	1
2013 RY ₉₈	–	0
2013 ST ₃₉	Bauer et al. (2013)	1
2013 TZ ₁₅₈	Bauer et al. (2003)	
	Jewitt (2009)	
	Lamy et al. (2004)	
	Bauer et al. (2013)	4
2013 YG ₄₈	Jewitt (2015)	2
2014 CW ₁₄	Jewitt (2015)	1
2014 QO ₄₄₁	Jewitt (2018)	1
2060-Chiron	Hartmann et al. (1981)	
	Davies et al. (1998)	
	Parker et al. (1997)	
	Jewitt (2002)	
	Bauer et al. (2003)	
	Romon-Martin et al. (2003)	
	Doressoundiram et al. (2007)	
	Fornasier et al. (2013)	
	Green et al. (1997)	36
2223-Sarpedon	Fornasier et al. (2007)	1
2357-Phereclos	Fornasier et al. (2007)	1
3548-Eurybates	Fornasier et al. (2007)	1
4035-1986 WD	Fornasier et al. (2007)	2
4829-Sergestus	Fornasier et al. (2007)	1
5130-Ilioneus	Fornasier et al. (2007)	1
5145-Pholus	Binzel (1992)	
	Mueller et al. (1992)	
	Davies et al. (1993)	
	Davies et al. (1998)	
	Romanishin & Tegler (1999)	
	Weintraub et al. (1997)	
	Bauer et al. (2003)	
	Doressoundiram et al. (2007)	
	Fornasier et al. (2009)	
	Perna et al. (2010)	
	Buie & Bus (1992)	
	Davies (2000)	
	Duffard et al. (2014)	
	Fink et al. (1992)	
	Green et al. (1997)	
	Tegler & Romanishin (1998)	45

Table 9. List of the references used in this study, sorted by object
(Cont'd)

Object	References	Nr.
5244-Amphilochos	Fornasier et al. (2007)	1
5258-1989 AU ₁	Fornasier et al. (2007)	1
5511-Cloanthus	Fornasier et al. (2007)	1
6545-1986 TR ₆	Fornasier et al. (2007)	1
6998-Tithonus	Fornasier et al. (2007)	1
7066-Nessus	Davies et al. (1998)	
	Romanishin & Tegler (1999)	
	Bauer et al. (2003)	
	Davies (2000)	
	Duffard et al. (2014)	
	Tegler & Romanishin (1998)	18
7352-1994 CO	Fornasier et al. (2007)	1
8405-Asbolus	Weintraub et al. (1997)	
	Brown & Luu (1997)	
	Davies et al. (1998)	
	Bauer et al. (2003)	
	Romon-Martin et al. (2002)	
	Davies (2000)	
	Duffard et al. (2014)	
	Rabinowitz et al. (2007)	
	Tegler & Romanishin (1998)	44
9030-1989 UX ₅	Fornasier et al. (2007)	1
9430-Erichthonio	Fornasier et al. (2007)	1
9818-Eurymachos	Fornasier et al. (2007)	1
10199-Chariklo	Davies et al. (1998)	
	Jewitt & Kalas (1998)	
	Romanishin & Tegler (1999)	
	N. McBride & Foster (1999)	
	Jewitt & Luu (2001)	
	Peixinho et al. (2001)	
	Bauer et al. (2003)	
	DeMeo et al. (2009)	
	Perna et al. (2010)	
	Fornasier et al. (2009)	
	Davies (2000)	
	Fornasier et al. (2013)	
	Tegler & Romanishin (1998)	69
10370-Hylonome	Davies et al. (1998)	
	Romanishin & Tegler (1999)	
	Bauer et al. (2003)	
	Doressoundiram et al. (2002)	
	Delsanti et al. (2006)	
	Davies (2000)	
	Duffard et al. (2014)	
	Tegler & Romanishin (1998)	27
11089-1994 CS ₈	Fornasier et al. (2007)	1
11351-Leucus	Fornasier et al. (2007)	1
11488-1988 RM ₁₁	Fornasier et al. (2007)	2
11663-1997 GO ₂₄	Fornasier et al. (2007)	1
12917-1998 TG ₁₆	Fornasier et al. (2007)	
	Dotto et al. (2006)	2
12921-1998 WZ ₅	Fornasier et al. (2007)	2
13463-Antiphos	Fornasier et al. (2007)	
	Dotto et al. (2006)	2
13862-1999 XT ₁₆₀	Fornasier et al. (2007)	1
14707-2000 CC ₂₀	Fornasier et al. (2007)	2
15094-Polymele	Fornasier et al. (2007)	
	Dotto et al. (2006)	3
15502-1999 NV ₂₇	Fornasier et al. (2007)	3
15504-1999 RG ₃₃	Jewitt (2005)	2
15535-2000 AT ₁₇₇	Fornasier et al. (2007)	
	Dotto et al. (2006)	4
15760-Albion	Jewitt & Luu (2001)	
	Tegler & Romanishin (2000)	
	Boehnhardt et al. (2001)	
	Benecchi et al. (2011)	
	Romanishin et al. (1997)	5
15788-1993 SB	Gil-Hutton & Licandro (2001)	
	Jewitt & Luu (2001)	
	Tegler & Romanishin (2000)	
	McBride et al. (2003)	
	Delsanti et al. (2001)	
	Benecchi et al. (2011)	6
15789-1993 SC	Davies et al. (1997)	
	Romanishin & Tegler (1999)	
	Jewitt & Luu (1998)	
	Davies et al. (2000)	
	Jewitt & Luu (2001)	
	Benecchi et al. (2011)	
	Luu & Jewitt (1996)	
	Romanishin et al. (1997)	
	Tegler & Romanishin (1998)	17

Table 9. List of the references used in this study, sorted by object
(Cont'd)

Object	References	Nr.
15807-1994 GV ₉	Gil-Hutton & Licandro (2001)	1
15809-1994 JS	Benecchi et al. (2011)	2
15810-Arawn	Green et al. (1997)	
	Romanishin & Tegler (1999)	
	Benecchi et al. (2011)	
	Porter et al. (2016)	
	Barucci et al. (1999)	
15820-1994 TB	Tegler & Romanishin (1998)	15
	Davies et al. (2000)	
	Jewitt & Luu (2001)	
	Delsanti et al. (2001)	
	Delsanti et al. (2004)	
	Delsanti et al. (2006)	
	Doressoundiram et al. (2007)	
	Barucci et al. (1999)	
	Davies (2000)	
	Lellouch et al. (2013)	
	Romanishin et al. (1997)	
	Tegler & Romanishin (1998)	
15836-1995 DA ₂	Green et al. (1997)	16
	Benecchi et al. (2011)	6
15874-1996 TL ₆₆	Jewitt et al. (2007)	
	Jewitt & Luu (1998)	
	Romanishin & Tegler (1999)	
	Boehnhardt et al. (2001)	
	Davies et al. (2000)	
	Jewitt & Luu (2001)	
	Benecchi et al. (2011)	
	Doressoundiram et al. (2007)	
	Barucci et al. (1999)	
	Davies (2000)	
	Santos-Sanz et al. (2012)	
15875-1996 TP ₆₆	Tegler & Romanishin (1998)	17
	Jewitt & Luu (1998)	
	Romanishin & Tegler (1999)	
	Boehnhardt et al. (2001)	
	Davies et al. (2000)	
	Jewitt & Luu (2001)	
	Barucci et al. (1999)	
	Mommert et al. (2012)	8
15883-1997 CR ₂₉	Jewitt & Luu (2001)	
	Doressoundiram et al. (2001)	
	Benecchi et al. (2011)	3
15977-1998 MA ₁₁	Fornasier et al. (2007)	1
16684-1994 JQ ₁	Green et al. (1997)	
	Gil-Hutton & Licandro (2001)	
	Boehnhardt et al. (2002)	
	Tegler & Romanishin (2003)	
	Benecchi et al. (2011)	8
17416-1988 RR ₁₀	Fornasier et al. (2007)	1
18060-1999 XJ ₁₅₆	Fornasier et al. (2007)	1
18137-2000 OU ₃₀	Fornasier et al. (2007)	1
18268-Dardanos	Fornasier et al. (2007)	1
18493-Demoleon	Fornasier et al. (2007)	2
18940-2000 QV ₄₉	Fornasier et al. (2007)	1
19255-1994 VK ₈	Tegler & Romanishin (2000)	
	Doressoundiram et al. (2001)	
	Benecchi et al. (2011)	4
19299-1996 SZ ₄	Jewitt & Luu (2001)	
	Tegler & Romanishin (2000)	
	McBride et al. (2003)	
	Boehnhardt et al. (2002)	5
19308-1996 TO ₆₆	Jewitt et al. (2007)	
	Jewitt & Luu (1998)	
	Romanishin & Tegler (1999)	
	Hainaut et al. (2000)	
	Gil-Hutton & Licandro (2001)	
	Davies et al. (2000)	
	Jewitt & Luu (2001)	
	Boehnhardt et al. (2001)	
	Sheppard (2010a)	
	Barucci et al. (1999)	
	Davies (2000)	
	Tegler & Romanishin (1998)	16
19521-Chaos	Davies et al. (2000)	
	Tegler & Romanishin (2000)	
	Boehnhardt et al. (2001)	
	Delsanti et al. (2004)	
	Doressoundiram et al. (2002)	
	Benecchi et al. (2011)	
	Doressoundiram et al. (2007)	
	Barucci et al. (2000)	
	Vilenius et al. (2012)	14

Table 9. List of the references used in this study, sorted by object (Cont'd)

Object	References	Nr.
20000-Varuna	Doressoundiram et al. (2002) Hainaut (2001) Jewitt & Sheppard (2002) McBride et al. (2003) Doressoundiram et al. (2007) Jewitt et al. (2007) Fornasier et al. (2009) Perna et al. (2010) Lellouch et al. (2013) Rabinowitz et al. (2007)	12
20108-1995 QZ ₉	Gil-Hutton & Licandro (2001) Tegler & Romanishin (2000) Benecchi et al. (2011)	3
20161-1996 TR ₆₆	Benecchi et al. (2011)	1
20738-1999 XG ₁₉₁	Fornasier et al. (2007) Dotto et al. (2006)	2
23549-Epicles	Fornasier et al. (2007)	1
23694-1997 KZ ₃	Fornasier et al. (2007)	1
24233-1999 XD ₉₄	Fornasier et al. (2007)	1
24341-2000 AJ ₈₇	Fornasier et al. (2007)	1
24380-2000 AA ₁₆₀	Fornasier et al. (2007)	1
24390-2000 AD ₁₇₇	Fornasier et al. (2007) Dotto et al. (2006)	2
24420-2000 BU ₂₂	Fornasier et al. (2007)	1
24426-2000 CR ₁₂	Fornasier et al. (2007)	1
24444-2000 OP ₃₂	Fornasier et al. (2007)	1
24452-2000 QU ₁₆₇	Fornasier et al. (2007)	1
24467-2000 SS ₁₆₅	Fornasier et al. (2007)	1
24835-1995 SM ₅₅	Gil-Hutton & Licandro (2001) Boehnhardt et al. (2001) Delsanti et al. (2001) McBride et al. (2003) Delsanti et al. (2004) Doressoundiram et al. (2002) Benecchi et al. (2011) Jewitt et al. (2007) Doressoundiram et al. (2007) Rabinowitz et al. (2008) Gil-Hutton & Licandro (2001) Jewitt & Luu (2001) Delsanti et al. (2001) Boehnhardt et al. (2002)	10
24952-1997 QJ ₄	Tegler & Romanishin (2003) Benecchi et al. (2011)	4
24978-1998 HJ ₁₅₁	Fornasier et al. (2007)	2
25347-1999 RQ ₁₁₆	McBride et al. (2003)	1
26181-1996 GQ ₂₁	Boehnhardt et al. (2002) Delsanti et al. (2006) Doressoundiram et al. (2003) Doressoundiram et al. (2007) Tegler et al. (2016) Tegler & Romanishin (2000) McBride et al. (2003) Delsanti et al. (2004) Doressoundiram et al. (2007) Jewitt et al. (2007) Benecchi et al. (2009)	9
26308-1998 SM ₁₆₅	Lellouch et al. (2013) Benecchi et al. (2009)	9
26308-1998 SM ₁₆₅ B	Jewitt & Luu (2001)	1
26375-1999 DE ₉	Delsanti et al. (2001) Doressoundiram et al. (2002) McBride et al. (2003) Delsanti et al. (2006) Doressoundiram et al. (2003) Tegler et al. (2003) Benecchi et al. (2011) Doressoundiram et al. (2007) DeMeo et al. (2009) Lellouch et al. (2013) Rabinowitz et al. (2007)	14
28958-2001 CQ ₄₂	Fornasier et al. (2007)	1
28978-Ixion	Doressoundiram et al. (2002) Boehnhardt et al. (2004) Doressoundiram et al. (2007) DeMeo et al. (2009) Lellouch et al. (2013) Rabinowitz et al. (2007)	16
29981-1999 TD ₁₀	Delsanti et al. (2001) McBride et al. (2003) Doressoundiram et al. (2002) Doressoundiram et al. (2007) Consolmagno et al. (2000) Rabinowitz et al. (2007)	18

Table 9. List of the references used in this study, sorted by object
(Cont'd)

Object	References	Nr.
30698-Hippokoon	Fornasier et al. (2007)	3
31820-1999 RT ₁₈₆	Fornasier et al. (2007)	1
31821-1999 RK ₂₂₅	Fornasier et al. (2007)	1
31824-Elatus	Peixinho et al. (2001)	
	Delsanti et al. (2004)	
	Doressoundiram et al. (2002)	
	Doressoundiram et al. (2007)	
	Duffard et al. (2014)	
	Gutiérrez et al. (2001)	15
32430-2000 RQ ₈₃	Fornasier et al. (2007)	1
32532-Thereus	Farnham & Davies (2003)	
	Tegler et al. (2003)	
	Barucci et al. (2002)	
	Bauer et al. (2003)	
	Doressoundiram et al. (2007)	
	Jewitt (2015)	
	DeMeo et al. (2009)	
	Duffard et al. (2014)	
	Rabinowitz et al. (2007)	224
32615-2001 QU ₂₇₇	Fornasier et al. (2007)	1
32794-1989 UE ₅	Fornasier et al. (2007)	1
32929-1995 QY ₉	Gil-Hutton & Licandro (2001)	
	Davies et al. (2000)	
	Barucci et al. (1999)	5
33001-1997 CU ₂₉	Tegler & Romanishin (2000)	
	Jewitt & Luu (2001)	
	Doressoundiram et al. (2001)	
	Benecchi et al. (2011)	
	Barucci et al. (2000)	6
33128-1998 BU ₄₈	Delsanti et al. (2004)	
	Doressoundiram et al. (2002)	
	Delsanti et al. (2006)	
	Bauer et al. (2003)	9
33340-1998 VG ₄₄	Boehnhardt et al. (2001)	
	Doressoundiram et al. (2001)	
	McBride et al. (2003)	
	Doressoundiram et al. (2002)	
	Delsanti et al. (2006)	
	Benecchi et al. (2011)	
	Doressoundiram et al. (2007)	
	Tegler et al. (2016)	
	Lellouch et al. (2013)	14
34785-2001 RG ₈₇	Fornasier et al. (2007)	1
35671-1998 SN ₁₆₅	Jewitt & Luu (2001)	
	Gil-Hutton & Licandro (2001)	
	Delsanti et al. (2001)	
	McBride et al. (2003)	
	Fornasier et al. (2004)	
	Doressoundiram et al. (2001)	
	Vilenius et al. (2014)	7
38083-Rhadamanth	Boehnhardt et al. (2002)	1
38084-1999 HB ₁₂	Benecchi et al. (2011)	
	Peixinho et al. (2004)	
	Doressoundiram et al. (2001)	3
38628-Huya	Ferrin et al. (2001)	
	Jewitt & Luu (2001)	
	Schaefer & Rabinowitz (2002)	
	Boehnhardt et al. (2002)	
	McBride et al. (2003)	
	Doressoundiram et al. (2007)	
	Doressoundiram et al. (2001)	
	Fornasier et al. (2013)	
	Mommert et al. (2012)	
	Rabinowitz et al. (2007)	60
39285-2001 BP ₇₅	Fornasier et al. (2007)	1
40314-1999 KR ₁₆	Jewitt & Luu (2001)	
	Delsanti et al. (2006)	
	Boehnhardt et al. (2002)	
	Jewitt et al. (2007)	
	Santos-Sanz et al. (2012)	6
42301-2001 UR ₁₆₃	Doressoundiram et al. (2007)	
	Doressoundiram et al. (2005b)	
	Benecchi et al. (2011)	
	Perna et al. (2010)	
	Fornasier et al. (2009)	9
42355-Typhon	Peixinho et al. (2004)	
	Tegler et al. (2003)	
	Doressoundiram et al. (2007)	
	Jewitt et al. (2007)	
	DeMeo et al. (2009)	
	Perna et al. (2010)	
	Fornasier et al. (2009)	
	Benecchi et al. (2009)	
	Rabinowitz et al. (2007)	
	Santos-Sanz et al. (2012)	15

Table 9. List of the references used in this study, sorted by object
(Cont'd)

Object	References	Nr.
42355-Typhon+B	Benecchi et al. (2009)	1
43212-2000 AL ₁₁₃	Fornasier et al. (2007)	1
44594-1999 OX ₃	Tegler & Romanishin (2000)	
	Bauer et al. (2003)	
	Delsanti et al. (2001)	
	McBride et al. (2003)	
	Boehnhardt et al. (2002)	
	Doressoundiram et al. (2002)	
	Peixinho et al. (2004)	
	Doressoundiram et al. (2005b)	
	Doressoundiram et al. (2007)	
	Delsanti et al. (2006)	
	Jewitt et al. (2007)	
	Sheppard (2010a)	
	Perna et al. (2010)	
	Fornasier et al. (2009)	
	Doressoundiram et al. (2001)	
	Lellouch et al. (2013)	34
45802-2000 PV ₂₉	Benecchi et al. (2011)	2
47171-Lempo	Boehnhardt et al. (2001)	
	Delsanti et al. (2001)	
	McBride et al. (2003)	
	Delsanti et al. (2004)	
	Dotto et al. (2003)	
	Tegler et al. (2003)	
	Doressoundiram et al. (2007)	
	Protopapa et al. (2009)	
	DeMeo et al. (2009)	
	Benecchi et al. (2009)	
	Doressoundiram et al. (2001)	
	Mommert et al. (2012)	
	Rabinowitz et al. (2007)	24
47171-Lempo+B	Benecchi et al. (2009)	1
47932-2000 GN ₁₇₁	McBride et al. (2003)	
	Boehnhardt et al. (2002)	
	Tegler et al. (2016)	
	Doressoundiram et al. (2007)	
	DeMeo et al. (2009)	
	Mommert et al. (2012)	
	Rabinowitz et al. (2007)	15
47967-2000 SL ₂₉₈	Fornasier et al. (2007)	1
48249-2001 SY ₃₄₅	Fornasier et al. (2007)	1
48252-2001 TL ₂₁₂	Fornasier et al. (2007)	1
48639-1995 TL ₈	Delsanti et al. (2004)	
	Doressoundiram et al. (2002)	
	Benecchi et al. (2011)	
	Sheppard (2010a)	
	Lellouch et al. (2013)	5
49036-Pelion	Tegler & Romanishin (2000)	
	Boehnhardt et al. (2002)	
	Doressoundiram et al. (2002)	3
50000-Quaoar	Fornasier et al. (2004)	
	Tegler et al. (2003)	
	DeMeo et al. (2009)	
	Fornasier et al. (2013)	
	Rabinowitz et al. (2007)	5
51359-2000 SC ₁₇	Fornasier et al. (2007)	1
52747-1998 HM ₁₅₁	Tegler & Romanishin (2003)	1
52872-Okyrhoe	Bauer et al. (2003)	
	Delsanti et al. (2001)	
	Dotto et al. (2003)	
	Delsanti et al. (2006)	
	Doressoundiram et al. (2007)	
	Perna et al. (2010)	
	Fornasier et al. (2009)	
	Doressoundiram et al. (2001)	
	Duffard et al. (2014)	22
52975-Cyllarus	Boehnhardt et al. (2001)	
	Delsanti et al. (2004)	
	Bauer et al. (2003)	
	Doressoundiram et al. (2002)	
	Tegler et al. (2003)	
	Duffard et al. (2014)	10
53469-2000 AX ₈	Fornasier et al. (2007)	1
54520-2000 PJ ₃₀	Benecchi et al. (2011)	1
54598-Bienor	Delsanti et al. (2004)	
	Doressoundiram et al. (2002)	
	Tegler et al. (2003)	
	Dotto et al. (2003)	
	Bauer et al. (2003)	
	Doressoundiram et al. (2007)	
	DeMeo et al. (2009)	
	Duffard et al. (2014)	
	Rabinowitz et al. (2007)	16

Table 9. List of the references used in this study, sorted by object
(Cont'd)

Object	References	Nr.
55565-2002 AW ₁₉₇	Doressoundiram et al. (2005a) Fornasier et al. (2004) Tegler et al. (2016) Jewitt et al. (2007) DeMeo et al. (2009) Rabinowitz et al. (2007) Vilenius et al. (2014)	11
55576-Amycus	Peixinho et al. (2004) Bauer et al. (2003) Fornasier et al. (2004) Doressoundiram et al. (2005a) Tegler et al. (2016) Doressoundiram et al. (2007) Fornasier et al. (2009) Perna et al. (2010) Duffard et al. (2014)	23
55636-2002 TX ₃₀₀	Tegler et al. (2003) Doressoundiram et al. (2005b) Jewitt et al. (2007) Lellouch et al. (2013) Ortiz et al. (2004) Rabinowitz et al. (2008) Rabinowitz et al. (2007) Jewitt et al. (2007) Doressoundiram et al. (2007) Tegler et al. (2016) DeMeo et al. (2009) Perna et al. (2010) Fornasier et al. (2013) Rabinowitz et al. (2007) Tegler et al. (2016) Perna et al. (2010) Fornasier et al. (2009) Mommert et al. (2012) Rabinowitz et al. (2007) Barucci et al. (2006)	9
55637-2002 UX ₂₅	Doressoundiram et al. (2007) Tegler et al. (2016) DeMeo et al. (2009) Perna et al. (2010) Fornasier et al. (2013) Rabinowitz et al. (2007) Tegler et al. (2016) Perna et al. (2010) Fornasier et al. (2009) Mommert et al. (2012) Rabinowitz et al. (2007) Barucci et al. (2006)	12
55638-2002 VE ₉₅	Doressoundiram et al. (2007) Tegler et al. (2016) DeMeo et al. (2009) Perna et al. (2010) Fornasier et al. (2013) Rabinowitz et al. (2007) Tegler et al. (2016) Perna et al. (2010) Fornasier et al. (2009) Mommert et al. (2012) Rabinowitz et al. (2007) Barucci et al. (2006)	10
56968-2000 SA ₉₂	Fornasier et al. (2007)	1
58534-Logos	Jewitt & Luu (2001) Boehnhardt et al. (2001) Gil-Hutton & Licandro (2001) Benecchi et al. (2011) Barucci et al. (2000) Benecchi et al. (2009)	7
58534-Logos+B	Benecchi et al. (2009)	1
59358-1999 CL ₁₅₈	Doressoundiram et al. (2002)	1
60454-2000 CH ₁₀₅	Peixinho et al. (2004) Benecchi et al. (2011)	2
60458-2000 CM ₁₁₄	Tegler et al. (2003) Benecchi et al. (2009)	2
60458-2000 CM ₁₁₄ B	Benecchi et al. (2009)	1
60558-Echeclus	Boehnhardt et al. (2002) Delsanti et al. (2006) Bauer et al. (2003) Tegler et al. (2016) Jewitt (2009) DeMeo et al. (2009) Duffard et al. (2014) Boehnhardt et al. (2002) Benecchi et al. (2011) Tegler et al. (2003) Boehnhardt et al. (2002) Benecchi et al. (2011) Peixinho et al. (2004) Doressoundiram et al. (2002) Benecchi et al. (2011) Tegler et al. (2003) Bauer et al. (2003) Doressoundiram et al. (2003) Peixinho et al. (2004) Tegler et al. (2003) Duffard et al. (2014)	12
60608-2000 EE ₁₇₃	Boehnhardt et al. (2002) Benecchi et al. (2011) Tegler et al. (2003) Boehnhardt et al. (2002) Benecchi et al. (2011) Peixinho et al. (2004)	3
60620-2000 FD ₈	Doressoundiram et al. (2002) Benecchi et al. (2011)	3
60621-2000 FE ₈	Tegler et al. (2003) Bauer et al. (2003) Doressoundiram et al. (2003) Peixinho et al. (2004) Tegler et al. (2003) Duffard et al. (2014)	3
63252-2001 BL ₄₁	Fornasier et al. (2007) Fornasier et al. (2007) Jewitt (2005)	3
65150-2002 CA ₁₂₆	Tegler et al. (2003) Jewitt et al. (2007) Perna et al. (2013) Benecchi et al. (2009) Santos-Sanz et al. (2012)	9
65225-2002 EK ₄₄	Benecchi et al. (2009)	1
65407-2002 RP ₁₂₀	Peixinho et al. (2004)	1
65489-Ceto	Benecchi et al. (2011)	3
65489-Ceto+B		
66452-1999 OF ₄		

Table 9. List of the references used in this study, sorted by object
(Cont'd)

Object	References	Nr.
66652-Borasisi	Delsanti et al. (2001) McBride et al. (2003) Delsanti et al. (2006) Benecchi et al. (2011) Benecchi et al. (2009) Doressoundiram et al. (2001) Vilenius et al. (2014)	8
66652-Borasisi+B	Benecchi et al. (2009)	1
69986-1998 WW ₂₄	Doressoundiram et al. (2002) Peixinho et al. (2004)	3
69987-1998 WA ₂₅	Benecchi et al. (2011)	1
69988-1998 WA ₃₁	Benecchi et al. (2011) Peixinho et al. (2004)	2
69990-1998 WU ₃₁	Peixinho et al. (2004)	1
73480-2002 PN ₃₄	Tegler et al. (2003) Doressoundiram et al. (2007) Perna et al. (2010) Fornasier et al. (2009) Rabinowitz et al. (2007) Santos-Sanz et al. (2012)	13
76804-2000 QE	Fornasier et al. (2007)	1
78799-2002 XW ₉₃	Vilenius et al. (2012)	1
79360-Sila-Nunam	Romanishin & Tegler (1999) Jewitt & Luu (2001) Davies et al. (2000) Boehnhardt et al. (2001) Delsanti et al. (2006) Benecchi et al. (2011) Jewitt et al. (2007) Barucci et al. (2000) Benecchi et al. (2009) Tegler & Romanishin (1998) Vilenius et al. (2012)	16
79360-Sila-Nunam+B	Benecchi et al. (2009)	1
79978-1999 CC ₁₅₈	Delsanti et al. (2001) Doressoundiram et al. (2002)	2
79983-1999 DF ₉	Doressoundiram et al. (2002)	1
80806-2000 CM ₁₀₅	Benecchi et al. (2011) Benecchi et al. (2009)	2
82075-2000 YW ₁₃₄	Peixinho et al. (2004) Benecchi et al. (2011) Doressoundiram et al. (2005b) Doressoundiram et al. (2007) Jewitt et al. (2007) Sheppard (2010a) Benecchi et al. (2009)	14
82155-2001 FZ ₁₇₃	Peixinho et al. (2004) Tegler et al. (2003) Doressoundiram et al. (2007) Jewitt et al. (2007)	9
82158-2001 FP ₁₈₅	Peixinho et al. (2004) Doressoundiram et al. (2005b) Tegler et al. (2003) Jewitt et al. (2007)	8
83982-Crantor	Santos-Sanz et al. (2012) Peixinho et al. (2004) Bauer et al. (2003) Tegler et al. (2003) Doressoundiram et al. (2005a) Fornasier et al. (2004) Doressoundiram et al. (2007) DeMeo et al. (2009) Duffard et al. (2014)	18
84522-2002 TC ₃₀₂	Tegler et al. (2016) Sheppard (2010a) Fornasier et al. (2013) Rabinowitz et al. (2008)	4
84709-2002 VW ₁₂₀	Fornasier et al. (2007)	1
84719-2002 VR ₁₂₈	Tegler et al. (2016) Mommert et al. (2012)	3
84922-2003 VS ₂	Tegler et al. (2016) Mommert et al. (2012)	3
85627-1998 HP ₁₅₁	Benecchi et al. (2011)	1
85633-1998 KR ₆₅	Boehnhardt et al. (2002) Tegler & Romanishin (2003) Benecchi et al. (2011)	4
86047-1999 OY ₃	Tegler & Romanishin (2000) Boehnhardt et al. (2002) Doressoundiram et al. (2002) Benecchi et al. (2011) Jewitt et al. (2007)	5

Table 9. List of the references used in this study, sorted by object (Cont'd)

Object	References	Nr.
86177-1999 RY ₂₁₅	Boehnhardt et al. (2002) Benecchi et al. (2011) Doressoundiram et al. (2001) Vilenius et al. (2014)	4
87269-2000 OO ₆₇	Tegler et al. (2003) Benecchi et al. (2011) Sheppard (2010a)	3
87555-2000 QB ₂₄₃	Peixinho et al. (2004) Doressoundiram et al. (2007)	6
88269-2001 KF ₇₇	Tegler et al. (2003)	1
88611-Teharonhia	Benecchi et al. (2009) Vilenius et al. (2014)	2
88611-Teharonhia+B 90377-Sedna	Benecchi et al. (2009) Barucci et al. (2005) Tegler et al. (2016) Fornasier et al. (2009) Perna et al. (2010) Sheppard (2010a) Lellouch et al. (2013) Pál et al. (2012)	1
90482-Orcus	Rabinowitz et al. (2007) Rabinowitz et al. (2004) de Bergh et al. (2005) Tegler et al. (2016) Perna et al. (2010) Fornasier et al. (2009) Fornasier et al. (2013)	9
90568-2004 GV ₉	Rabinowitz et al. (2007) Tegler et al. (2016) DeMeo et al. (2009) Rabinowitz et al. (2008) Vilenius et al. (2012)	12
91133-1998 HK ₁₅₁	Boehnhardt et al. (2001) McBride et al. (2003) Doressoundiram et al. (2002) Benecchi et al. (2011) Doressoundiram et al. (2001) Peixinho et al. (2004)	4
91205-1998 US ₄₃	Boehnhardt et al. (2002)	6
91554-1999 RZ ₂₁₅	—	2
95625-2002 GX ₃₂	—	1
95626-2002 GZ ₃₂	Doressoundiram et al. (2005b) Bauer et al. (2003) Tegler et al. (2003) Fornasier et al. (2004) Doressoundiram et al. (2007) Duffard et al. (2014) Rabinowitz et al. (2007)	0
99328-2001 UY ₁₂₃	Fornasier et al. (2007)	19
105685-2000 SC ₅₁	Fornasier et al. (2007)	1
111113-2001 VK ₈₅	Fornasier et al. (2007)	1
118228-1996 TQ ₆₆	Romanishin & Tegler (1999) Davies et al. (2000) Gil-Hutton & Licandro (2001) Jewitt & Luu (2001) Benecchi et al. (2011) Tegler & Romanishin (1998)	1
118378-1999 HT ₁₁	—	7
118379-1999 HC ₁₂	Boehnhardt et al. (2002) Benecchi et al. (2011)	0
118698-2000 OY ₅₁	—	3
118702-2000 OM ₆₇	Sheppard (2010a)	0
119066-2001 KJ ₇₆	—	1
119067-2001 KP ₇₆	—	0
119068-2001 KC ₇₇	Tegler et al. (2003)	1
119070-2001 KP ₇₇	Benecchi et al. (2011)	1
119315-2001 SQ ₇₃	Tegler et al. (2003) Duffard et al. (2014)	2
119951-2002 KX ₁₄	Tegler et al. (2016) DeMeo et al. (2009) Rabinowitz et al. (2007) Romanishin et al. (2010) Vilenius et al. (2012)	6
119956-2002 PA ₁₄₉	—	0
119976-2002 VR ₁₃₀	Duffard et al. (2014)	1
119979-2002 WC ₁₉	Tegler et al. (2016) Benecchi et al. (2009) Lellouch et al. (2013)	3
120061-2003 CO ₁	Tegler et al. (2003) Doressoundiram et al. (2007) Perna et al. (2010) Fornasier et al. (2009) Perna et al. (2013) Duffard et al. (2014)	17

Table 9. List of the references used in this study, sorted by object
(Cont'd)

Object	References	Nr.
120132-2003 FY ₁₂₈	Tegler et al. (2016) DeMeo et al. (2009) Perna et al. (2010) Fornasier et al. (2009) Sheppard (2010a) Santos-Sanz et al. (2012)	7
120178-2003 OP ₃₂	Perna et al. (2010) Fornasier et al. (2009) Perna et al. (2013) Rabinowitz et al. (2008)	6
120181-2003 UR ₂₉₂	Tegler et al. (2016) Vilenius et al. (2014)	3
120216-2004 EW ₉₅	Tegler et al. (2016) Perna et al. (2013) Mommert et al. (2012)	6
120347-Salacia	Perna et al. (2013) Benecchi et al. (2009) Fornasier et al. (2013)	6
120347-Salacia+B	Benecchi et al. (2009)	1
120348-2004 TY ₃₆₄	Perna et al. (2010) Fornasier et al. (2009) Lellouch et al. (2013) Rabinowitz et al. (2007)	5
120453-1988 RE ₁₂	Fornasier et al. (2007)	1
121725-Aphidas	Bauer et al. (2003) Doressoundiram et al. (2002) Peixinho et al. (2004)	10
123509-2000 WK ₁₈₃	Benecchi et al. (2009)	1
123509-2000 WK ₁₈₃	Benecchi et al. (2009)	1
124729-2001 SB ₁₇₃	Fornasier et al. (2007)	1
126154-2001 YH ₁₄₀	–	0
127546-2002 XU ₉₃	Jewitt (2005) Sheppard (2010a) Santos-Sanz et al. (2012) Doressoundiram et al. (2001)	4
129772-1999 HR ₁₁	Benecchi et al. (2011)	1
130391-2000 JG ₈₁	Peixinho et al. (2012) Benecchi et al. (2011)	2
131695-2001 XS ₂₅₄	Benecchi et al. (2011)	1
131696-2001 XT ₂₅₄	–	0
131697-2001 XH ₂₅₅	–	0
133067-2003 FB ₁₂₈	Perna et al. (2013) Buratti et al. (2003) Jewitt & Luu (2001) Buie et al. (2006)	2
134340-Pluto	Buie et al. (2010)	4
134340-Pluto+A	–	1
134340-Pluto	–	0
134340-Pluto+B	Buie et al. (2006) Buie et al. (2010)	2
134340-Pluto+C	Buie et al. (2006)	1
134340-Pluto+D	Buie et al. (2006)	1
134568-1999 RH ₂₁₅	–	0
134860-2000 OJ ₆₇	Doressoundiram et al. (2002) Delsanti et al. (2006) Benecchi et al. (2011) Benecchi et al. (2009)	5
134860-2000 OJ ₆₇	Benecchi et al. (2009)	1
135024-2001 KO ₇₆	–	0
135182-2001 QT ₃₂₂	Romanishin et al. (2010) Vilenius et al. (2014)	2
135571-2002 GG ₃₂	–	0
135742-2002 PB ₁₇₁	–	0
136108-Haumea	Rabinowitz et al. (2006) Jewitt et al. (2007) Fornasier et al. (2013) Rabinowitz et al. (2007) Trujillo et al. (2007) Peixinho et al. (2012)	10
136120-2003 LG ₇	–	1
136199-Eris	Tegler et al. (2016) Carraro et al. (2006) DeMeo et al. (2009) Perna et al. (2010) Lellouch et al. (2013) Rabinowitz et al. (2007) Santos-Sanz et al. (2012)	68
136204-2003 WL ₇	Tegler et al. (2016) Perna et al. (2013) Duffard et al. (2014)	5
136472-Makemake	Tegler et al. (2016) Lellouch et al. (2013) Lim et al. (2010) Rabinowitz et al. (2007)	4

Table 9. List of the references used in this study, sorted by object
(Cont'd)

Object	References	Nr.
137294-1999 RE ₂₁₅	Boehnhardt et al. (2002)	
	Benecchi et al. (2011)	3
137295-1999 RB ₂₁₆	Boehnhardt et al. (2002)	1
138537-2000 OK ₆₇	Delsanti et al. (2001)	
	Delsanti et al. (2004)	
	Doressoundiram et al. (2002)	
	Benecchi et al. (2011)	
	Vilenius et al. (2014)	6
143685-2003 SS ₃₁₇	–	0
143707-2003 UY ₁₁₇	Tegler et al. (2016)	1
143751-2003 US ₂₉₂	–	0
144897-2004 UX ₁₀	Perna et al. (2010)	
	Fornasier et al. (2009)	
	Mommert et al. (2012)	
	Romanishin et al. (2010)	9
145451-2005 RM ₄₃	DeMeo et al. (2009)	
	Perna et al. (2010)	
	Fornasier et al. (2009)	
	Rabinowitz et al. (2008)	6
145452-2005 RN ₄₃	DeMeo et al. (2009)	
	Perna et al. (2013)	
	Vilenius et al. (2012)	7
145453-2005 RR ₄₃	DeMeo et al. (2009)	
	Perna et al. (2010)	
	Fornasier et al. (2009)	
	Rabinowitz et al. (2008)	7
145480-2005 TB ₁₉₀	Sheppard (2010a)	
	Perna et al. (2013)	
	Santos-Sanz et al. (2012)	3
145486-2005 UJ ₄₃₈	Perna et al. (2013)	
	Tegler et al. (2016)	
	Duffard et al. (2014)	3
148209-2000 CR ₁₀₅	Tegler et al. (2003)	
	Benecchi et al. (2011)	
	Sheppard (2010a)	3
148780-Altjira	Benecchi et al. (2009)	
	Vilenius et al. (2014)	2
148780-Altjira+B	Benecchi et al. (2009)	1
148975-2001 XA ₂₅₅	Jewitt (2015)	
	Bauer et al. (2013)	2
149349-2002 VA ₁₃₁	–	0
149560-2003 QZ ₉₁	Peixinho et al. (2012)	1
150642-2001 CZ ₃₁	Delsanti et al. (2006)	1
160147-2001 KN ₇₆	–	0
160427-2005 RL ₄₃	Jewitt (2015)	1
163135-2002 CT ₂₂	Fornasier et al. (2007)	1
163216-2002 EN ₆₈	Fornasier et al. (2007)	1
168700-2000 GE ₁₄₇	Benecchi et al. (2011)	1
168703-2000 GP ₁₈₃	Doressoundiram et al. (2002)	
	Benecchi et al. (2011)	
	Peixinho et al. (2004)	5
174567-Varda	Tegler et al. (2016)	
	Fornasier et al. (2009)	
	Perna et al. (2010)	
	Perna et al. (2013)	
	Vilenius et al. (2014)	7
175113-2004 PF ₁₁₅	Mommert et al. (2012)	1
181708-1993 FW	Green et al. (1997)	
	Tegler & Romanishin (2003)	
	Benecchi et al. (2011)	
	Barucci et al. (2000)	
	Romanishin et al. (1997)	8
181855-1998 WT ₃₁	Peixinho et al. (2004)	2
181867-1999 CV ₁₁₈	Peixinho et al. (2004)	1
181871-1999 CO ₁₅₃	Benecchi et al. (2011)	1
181874-1999 HW ₁₁	Benecchi et al. (2011)	
	Sheppard (2010a)	2
181902-1999 RD ₂₁₅	Boehnhardt et al. (2002)	
	Benecchi et al. (2011)	
182222-2000 YU ₁	–	0
182294-2001 KU ₇₆	–	0
182397-2001 QW ₂₉₇	Sheppard (2010a)	1
182933-2002 GZ ₃₁	Benecchi et al. (2009)	1
182934-2002 GJ ₃₂	Santos-Sanz et al. (2009)	
	Vilenius et al. (2014)	
183964-2004 DJ ₇₁	–	0
192388-1996 RD ₂₉	Fornasier et al. (2007)	1
192929-2000 AT ₄₄	Fornasier et al. (2007)	1
202421-2005 UQ ₅₁₃	Snodgrass et al. (2010)	
	Vilenius et al. (2014)	2
208996-2003 AZ ₈₄	Fornasier et al. (2004)	
	Doressoundiram et al. (2007)	
	Tegler et al. (2016)	
	DeMeo et al. (2009)	
	Fornasier et al. (2009)	
	Perna et al. (2010)	
	Mommert et al. (2012)	
	Rabinowitz et al. (2008)	14

Table 9. List of the references used in this study, sorted by object
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Object	References	Nr.
225088-Gonggong	Santos-Sanz et al. (2012)	1
229762-2007 UK ₁₂₆	Fornasier et al. (2009)	
	Perna et al. (2010)	
	Santos-Sanz et al. (2012)	4
230965-2004 XA ₁₉₂	Vilenius et al. (2014)	1
248835-2006 SX ₃₆₈	Perna et al. (2013)	
	Tegler et al. (2016)	
	Duffard et al. (2014)	5
250112-2002 KY ₁₄	Perna et al. (2010)	
	Fornasier et al. (2009)	
	Tegler et al. (2016)	
	Duffard et al. (2014)	5
275809-2001 QY ₂₉₇	Doressoundiram et al. (2005b)	
	Doressoundiram et al. (2007)	
	Benecchi et al. (2009)	
	Vilenius et al. (2014)	8
275809-2001 QY ₂₉₇	Benecchi et al. (2009)	1
278361-2007 JJ ₄₃	Sheppard (2010a)	1
281371-2008 FC ₇₆	Peixinho et al. (2012)	
	Perna et al. (2010)	
	Fornasier et al. (2009)	
	Perna et al. (2013)	
	Tegler et al. (2016)	
	Duffard et al. (2014)	8
303775-2005 QU ₁₈₂	Perna et al. (2013)	
	Santos-Sanz et al. (2012)	4
307251-2002 KW ₁₄	Perna et al. (2013)	
	Vilenius et al. (2014)	3
307261-2002 MS ₄	Tegler et al. (2016)	
	Vilenius et al. (2012)	2
307463-2002 VU ₁₃₀	Mommert et al. (2012)	1
307616-2003 QW ₉₀	DeMeo et al. (2009)	2
307982-2004 PG ₁₁₅	Perna et al. (2013)	6
308193-2005 CB ₇₉	—	0
308933-2006 SQ ₃₇₂	Peixinho et al. (2012)	
	Sheppard (2010a)	2
309139-2006 XQ ₅₁	Tegler et al. (2016)	
	Bauer et al. (2013)	2
309239-2007 RW ₁₀	Santos-Sanz et al. (2012)	1
309737-2008 SJ ₂₃₆	Perna et al. (2010)	
	Fornasier et al. (2009)	
	Tegler et al. (2016)	
	Bauer et al. (2013)	5
309741-2008 UZ ₆	Tegler et al. (2016)	1
310071-2010 KR ₅₉	Bauer et al. (2013)	1
315898-2008 QD ₄	Tegler et al. (2016)	1
316431-2010 TH ₁₆₇	Tegler et al. (2016)	
	Bauer et al. (2013)	2
328884-2010 LJ ₁₀₉	Bauer et al. (2013)	1
330759-2008 SO ₂₁₈	Jewitt (2015)	1
332685-2009 HH ₃₆	Bauer et al. (2013)	1
336756-2010 NV ₁	Jewitt (2015)	
	Tegler et al. (2016)	
	Bauer et al. (2013)	3
341275-2007 RG ₂₈₃	Tegler et al. (2016)	1
341520-Mors-Somn	Sheppard et al. (2012)	4
341520-Mors-Somn+A	Sheppard et al. (2012)	1
341520-Mors-Somn+B	Sheppard et al. (2012)	1
342842-2008 YB ₃	Sheppard (2010a)	
	Tegler et al. (2016)	
	Jewitt (2015)	
	Bauer et al. (2013)	4
346889-Rhiphonos	Tegler et al. (2016)	
	Bauer et al. (2013)	2
349933-2009 YF ₇	Tegler et al. (2016)	1
382004-2010 RM ₆₄	Tegler et al. (2016)	
	Bauer et al. (2013)	2
385185-1993 RO	Boehnhardt et al. (2001)	
	Tegler & Romanishin (2000)	2
385191-1997 RT ₅	Gladman et al. (1998)	
	Boehnhardt et al. (2002)	
	Benecchi et al. (2011)	4
385194-1998 KG ₆₂	Gil-Hutton & Licandro (2001)	
	Boehnhardt et al. (2002)	
	Benecchi et al. (2011)	
	Doressoundiram et al. (2001)	5
385199-1999 OE ₄	Peixinho et al. (2004)	
	Benecchi et al. (2011)	4
385437-2003 GH ₅₅	Jewitt et al. (2007)	
	Perna et al. (2013)	
	Vilenius et al. (2014)	4

Table 9. List of the references used in this study, sorted by object (Cont'd)

Object	References	Nr.
385446-Manwe	Benecchi et al. (2009)	1
385446-Manwe+B	Benecchi et al. (2009)	1
385527-2004 OK ₁₄	—	0
385571-Otrera	Sheppard & Trujillo (2006)	1
385607-2005 EO ₂₉₇	Sheppard (2010a)	1
385695-2005 TO ₇₄	Sheppard & Trujillo (2006)	1
413666-2005 VJ ₁₁₉	Bauer et al. (2013)	1
416400-2003 UZ ₁₁₇	Jewitt et al. (2007)	1
	Tegler et al. (2016)	
	DeMeo et al. (2009)	
	Perna et al. (2010)	7
418993-2009 MS ₉	Jewitt (2015)	1
427507-2002 DH ₅	Peixinho et al. (2004)	1
427581-2003 QB ₉₂	—	0
444030-2004 NT ₃₃	Perna et al. (2013)	
	Vilenius et al. (2014)	4
444745-2007 JF ₄₃	—	0
445473-2010 VZ ₉₈	Tegler et al. (2016)	1
447178-2005 RO ₄₃	Tegler et al. (2016)	
	Duffard et al. (2014)	2
449097-2012 UT ₆₈	Tegler et al. (2016)	1
455171-1999 OM ₄	Boehnhardt et al. (2002)	1
455502-2003 UZ ₄₁₃	Perna et al. (2010)	
	Fornasier et al. (2009)	8
459865-2013 XZ ₈	Tegler et al. (2016)	1
459971-2014 ON ₆	Tegler et al. (2016)	1
463368-2012 VU ₈₅	Tegler et al. (2016)	1
463663-2014 HY ₁₂₃	Jewitt (2015)	1
469306-1999 CD ₁₅₈	Delsanti et al. (2004)	
	Doressoundiram et al. (2002)	
	Delsanti et al. (2006)	
	Benecchi et al. (2011)	5
469333-2000 PE ₃₀	Delsanti et al. (2006)	
	Doressoundiram et al. (2007)	
	Benecchi et al. (2011)	
	Sheppard (2010a)	
	Doressoundiram et al. (2001)	7
469362-2001 KB ₇₇	Peixinho et al. (2004)	
	Tegler et al. (2016)	7
469372-2001 QF ₂₉₈	Doressoundiram et al. (2007)	
	Fornasier et al. (2004)	
	Delsanti et al. (2006)	
	Doressoundiram et al. (2005b)	
	Tegler et al. (2016)	
	Mommert et al. (2012)	12
469420-2001 XP ₂₅₄	—	0
469438-2002 GV ₃₁	Vilenius et al. (2014)	1
469505-2003 FE ₁₂₈	Perna et al. (2013)	4
469514-2003 QA ₉₁	Vilenius et al. (2014)	1
469615-2004 PT ₁₀₇	Snodgrass et al. (2010)	
	Vilenius et al. (2014)	2
469705-2005 EF ₂₉₈	Vilenius et al. (2012)	1
469708-2005 GE ₁₈₇	—	0
469750-2005 PU ₂₁	Sheppard (2010a)	1
469987-2006 HJ ₁₂₃	Mommert et al. (2012)	1
470308-2007 JH ₄₃	—	0
470309-2007 JK ₄₃	Peixinho et al. (2012)	1
470316-2007 OC ₁₀	Perna et al. (2013)	
	Santos-Sanz et al. (2012)	4
470599-2008 OG ₁₉	Sheppard (2010a)	1
471143-Dziewanna	Lellouch et al. (2013)	
	Pál et al. (2012)	2
471339-2011 ON ₄₅	Tegler et al. (2016)	3
474640-2004 VN ₁₁₂	Sheppard (2010a)	1
506479-2003 HB ₅₇	Sheppard (2010a)	1
508770-1995 WY ₂	Jewitt & Luu (2001)	2
508788-2000 CQ ₁₁₄	Benecchi et al. (2011)	
	Benecchi et al. (2009)	3
508788-2000 CQ ₁₁₄	Benecchi et al. (2009)	1
523588-2000 CN ₁₀₅	Peixinho et al. (2004)	
	Jewitt et al. (2007)	4
523591-2001 QD ₂₉₈	Doressoundiram et al. (2005b)	
	Vilenius et al. (2014)	2
523597-2002 QX ₄₇	Tegler et al. (2016)	1
523620-2007 RH ₂₈₃	Peixinho et al. (2012)	
	Tegler et al. (2016)	3
523622-2007 TG ₄₂₂	Sheppard (2010a)	1
523676-2013 UL ₁₀	Tegler et al. (2016)	1
523785-2015 CM ₃	Jewitt (2015)	1
523794	Bannister et al. (2016)	7
523899-1997 CV ₂₉	Tegler & Romanishin (2003)	
	Benecchi et al. (2011)	2

Table 9. List of the references used in this study, sorted by object (Cont'd)

Object	References	Nr.
523955-1998 UU ₄₃	Benecchi et al. (2011)	2
523965-1998 XY ₉₅	Boehnhardt et al. (2001)	
	Benecchi et al. (2011)	2
523983-1999 RY ₂₁₄	Peixinho et al. (2004)	2
524049-2000 CQ ₁₀₅	Benecchi et al. (2011)	
	Peixinho et al. (2004)	
	Tegler et al. (2003)	
	Jewitt et al. (2007)	5
524217-2001 RZ ₁₄₃	Santos-Sanz et al. (2009)	
	Vilenius et al. (2012)	2
524365-2001 XQ ₂₅₄	—	0
524366-2001 XR ₂₅₄	Benecchi et al. (2009)	
	Vilenius et al. (2014)	2
524366-2001 XR ₂₅₄	Benecchi et al. (2009)	1
524460-2002 GF ₃₂	—	0
524834-2003 YL ₁₇₉	Romanishin et al. (2010)	1
525462-2005 EO ₃₀₄	Benecchi et al. (2009)	1
525462-2005 EO ₃₀₄	Benecchi et al. (2009)	1
525815-2005 SD ₂₇₈	Sheppard (2010a)	1
525816-2005 SF ₂₇₈	—	0
527328-2007 TK ₄₂₂	Tegler et al. (2016)	1
527443-2007 UM ₁₂₆	Fornasier et al. (2009)	
	Perna et al. (2010)	
	Peixinho et al. (2012)	
	Tegler et al. (2016)	7
527603-2007 VJ ₃₀₅	Sheppard (2010a)	1
527604	Parker et al. (2013)	1
528219-2008 KV ₄₂	Sheppard (2010a)	1
530664	Jewitt (2018)	1
530930	Jewitt (2018)	1

Table 10. List of the references for the comments, sorted by object [commRef.tex from tnoAverage]

Object	References
C/1983H1-IA	—
C/1983J1-SS	—
C/1984K1-Shoemak	—
C/1984U1-Shoemak	—
C/1986P1-Wilson	—
C/1987A1-Levy	—
C/1987H1-Shoemak	—
C/1988B1-Shoemak	—
C/1988C1-MP	—
C/1995O1-HB	—
C/1996B2-Hyakuta	—
C/1999J2	—
C/1999S4-LINEAR	—
C/2000B4	—
C/2001G1	—
C/2001M10	—
C/2001M10-NEAT	Jewitt (2009)
C/2001O1	—
C/2001OG108-LONE	—
C/2001Q1	—
C/2002CE10-LINEA	—
C/2002VQ94-LINEA	—
C/2003A2	—
C/2003A2-Gleason	—
C/2004D1-NEAT	—
C/2006S3-Loneos	—
C/2007D1-LINEAR	—
C/2008S3-Boattin	—
C/2009T1-McNaugh	—
C/2010D4-WISE	—
C/2010DG56-WISE	—
C/2010KW7	—
C/2010L3-Catalin	—
C/2010U3-Boattin	—
C/2011KP36	Bauer et al. (2013)
C/2011P2-PANSTAR	—
C/2011Q1-PANSTAR	—
C/2012A1-PANSTAR	—
C/2012E1-Hill	—
C/2012K8-Lemmon	—
C/2012LP26-Palom	—
C/2012Q1-Kowalsk	—
C/2013C2	—
C/2013E1-McNaugh	—
C/2013H2-Boattin	—
C/2013P3-Palomar	—
C/2013P4	—
C/2014AA52-CATAL	—
C/2014B1-Schwarz	—
C/2014R1-Borisov	—
C/2014W6-Catalin	—
C/2014XB8-PANSTA	—
C/2015B1-PANSTAR	—
Nereid	—
P/1991L3-Levy	—
P/1993W1-Mueller	—
P/1994A1-Kushida	—
P/1994J3-Shoemak	—
P/1995A1-Jedicke	—
P/1996A1-Jedicke	—
P/1997C1-Gehrels	—
P/1997G1-Montani	—
P/1997V1-Larsen	—
P/1998S1-LM	—
P/1999D1-Hermann	—
P/1999RO28-LONEO	—
P/2004A1	—
P/2004A1-Loneos	Jewitt (2009)
P/2005S2-Skiff	Jewitt (2009)
P/2005T3-Read	Jewitt (2009)
P/2011S1-Gibbs	—
Phoebe	Lellouch et al. (2013)
Sycorax	Lellouch et al. (2013)
1P/Halley	—
2P/Encke	—
4P/Faye	—
6P/dArrest	—
7P/PW	—
8P/Tuttle	—
9P/Tempel1	—
10P/Tempel2	—

Table 10. List of the references for the comments, sorted by object (Cont'd)

Object	References
14P/Wolf	–
15P/Finlay	–
16P/Brooks2	–
17P/Holmes	–
19P/Borrelly	–
21P/GZ	–
22P/Kopff	–
24P/Schaumasse	–
26P/GS	–
28P/Neujmin1	–
30P/Reinmuth1	–
31P/SW2	–
32P/ComasSola	–
33P/Daniel	–
36P/Whipple	–
37P/Forbes	–
39P/Oterma	Jewitt (2009)
40P/Vaisala1	–
41P/TG	–
42P/Neujmin3	–
43P/WH	–
44P/Reinmuth2	–
45P/HMP	–
46P/Wirtanen	–
47P/AJ	–
48P/Johnson	–
49P/AR	–
50P/Arend	–
51P/Harrington	–
52P/HA	–
53P/VanBiesbroeck	–
55P/TT	–
56P/SB	–
57P/dTND	–
58P/JN	–
59P/KK	–
60P/Tsuchinshan2	–
61P/SS	–
62P/Tsuchinshan1	–
63P/Wild1	–
64P/SG	–
65P/Gunn	–
67P/CG	–
68P/Klemola	–
69P/Taylor	–
70P/Kojima	–
71P/Clark	–
72P/DF	–
73P/SW3	–
73P/SW3C	–
74P/SC	–
75P/Kohoutek	–
76P/WKI	–
77P/Longmore	–
78P/Gehrels2	–
79P/dTH	–
81P/Wild2	–
82P/Gehrels3	–
84P/Giclas	–
86P/Wild3	–
87P/Bus	–
88P/Howell	–
89P/Russell2	–
90P/Gehrels1	–
91P/Russell3	–
92P/Sanguin	–
93P/HL	–
94P/Russell4	–
96P/Machholz1	–
97P/MB	–
98P/Takamizawa	–
99P/Kowal1	–
100P/Hartley1	–
101P/Chernykh	–
103P/Hartley2	–
104P/Kowal2	–
105P/SB	–
106P/Schuster	–
107P/WH	–
109P/ST	–
110P/Hartley3	–

Table 10. List of the references for the comments, sorted by object (Cont'd)

Object	References
111P/HRC	–
112P/UN	–
113P/Spitaler	–
114P/WS	–
115P/Maury	–
116P/Wild4	–
117P/HRA	–
118P/SL	–
119P/PH	–
120P/Mueller1	–
121P/SH	–
123P/WH	–
124P/Mrkos	–
125P/Spacewatch	–
126P/IRAS	–
128P/SH	–
129P/SL	–
130P/McNH	–
131P/Mueller2	–
132P/HRA	–
134P/KV	–
135P/SL	–
136P/Mueller3	–
137P/SL	–
138P/SL	–
139P/VO	–
140P/BS	–
141P/Machholz2	–
143P/KM	–
144P/Kushida	–
147P/KM	–
148P/AL	–
152P/HL	–
154P/Brewington	–
165P/LINEAR	Jewitt (2009)
	Kusnirak & Balam (2000)
	Jewitt (2009)
166P/2001T4	–
166P/NEAT	–
167P/2004PY42	–
167P/CINEOS	–
204P/Wild2	–
1172-Aneas	–
1173-Anchises	–
1647-Menelaus	–
1871-Astyanax	–
1994 ES ₂	–
1994 EV ₃	–
1994 TA	–
1995 DB ₂	–
1995 DC ₂	–
1995 FB ₂₁	–
1995 HM ₅	Fulchignoni et al. (2008)
1996 KV ₁	–
1996 RQ ₂₀	Fulchignoni et al. (2008)
	Ragozzine & Brown (2007)
	Fulchignoni et al. (2008)
1996 RR ₂₀	–
1996 TC ₆₈	–
1996 TK ₆₆	Fulchignoni et al. (2008)
1996 TS ₆₆	Fulchignoni et al. (2008)
	Vilenius et al. (2014)
1997 CT ₂₉	–
1997 GA ₄₅	–
1997 QH ₄	Fulchignoni et al. (2008)
1997 RL ₁₃	–
1997 RX ₉	Ragozzine & Brown (2007)
1998 FS ₁₄₄	–
1998 HL ₁₅₁	Ragozzine & Brown (2007)
1998 KS ₆₅	–
1998 KY ₆₁	–
1998 UR ₄₃	Fulchignoni et al. (2008)
1998 WS ₃₁	Fulchignoni et al. (2008)
1998 WU ₂₄	Fulchignoni et al. (2008)
1998 WV ₂₄	–
1998 WV ₃₁	Fulchignoni et al. (2008)
1998 WW ₃₁	–
1998 WW ₃₁	–
1998 WX ₂₄	–
1998 WX ₃₁	–
1998 WY ₂₄	–
1998 WZ ₃₁	Fulchignoni et al. (2008)
1999 CB ₁₁₉	Fulchignoni et al. (2008)

Table 10. List of the references for the comments, sorted by object (Cont'd)

Object	References
1999 CF ₁₁₉	Fulchignoni et al. (2008)
1999 CH ₁₁₉	–
1999 CJ ₁₁₉	–
1999 CL ₁₁₉	–
1999 CQ ₁₃₃	–
1999 CX ₁₃₁	Fulchignoni et al. (2008)
1999 HJ ₁₂	–
1999 HS ₁₁	Fulchignoni et al. (2008)
1999 HV ₁₁	–
1999 LE ₃₁	–
1999 OD ₄	–
1999 OH ₄	Ragozzine & Brown (2007)
1999 OJ ₄	Fulchignoni et al. (2008)
1999 OJ ₄	–
1999 OK ₄	Ragozzine & Brown (2007)
1999 RB ₂₁₅	Marsden (2008)
1999 RC ₂₁₅	–
1999 RT ₂₁₄	–
1999 RU ₂₁₄	Marsden (2008)
1999 RW ₂₁₅	Marsden (2008)
1999 RX ₂₁₄	Fulchignoni et al. (2008)
1999 TR ₁₁	–
1999 XY ₁₄₃	–
2000 AF ₂₅₅	–
2000 CE ₁₀₅	–
2000 CF ₁₀₅	–
2000 CF ₁₀₅	–
2000 CG ₁₀₅	Ragozzine & Brown (2007) Snodgrass et al. (2010)
2000 CK ₁₀₅	–
2000 CL ₁₀₄	Fulchignoni et al. (2008)
2000 CO ₁₀₅	–
2000 CP ₁₀₄	–
2000 FS ₅₃	–
2000 FV ₅₃	–
2000 FZ ₅₃	–
2000 GM ₁₃₇	Duffard et al. (2014)
2000 GV ₁₄₆	–
2000 HE ₄₆	–
2000 KK ₄	–
2000 KL ₄	–
2000 OP ₆₇	Marsden (2008)
2000 OU ₆₉	–
2000 OX ₆₇	Fulchignoni et al. (2008)
2000 PD ₃₀	–
2000 PH ₃₀	–
2000 QL ₂₅₁	Marsden (2008)
2000 QL ₂₅₁	–
2000 QN ₂₅₁	Marsden (2008)
2000 SR ₃₃₁	Marsden (2008)
2001 FL ₁₈₅	–
2001 FM ₁₉₄	–
2001 KA ₇₇	Fulchignoni et al. (2008) Vilenius et al. (2014)
2001 KD ₇₇	Fulchignoni et al. (2008) Mommert et al. (2012)
2001 KG ₇₇	–
2001 KY ₇₆	–
2001 OG ₁₀₉	–
2001 OK ₁₀₈	–
2001 QC ₂₉₈	Ragozzine & Brown (2007) Snodgrass et al. (2010) Vilenius et al. (2014)
2001 QC ₂₉₈	–
2001 QE ₂₉₈	Marsden (2008)
2001 QR ₃₂₂	Marsden (2008) Sheppard & Trujillo (2006)
2001 QS ₃₂₂	Vilenius et al. (2014)
2001 QW ₃₂₂	–
2001 QW ₃₂₂	–
2001 QX ₃₂₂	–
2001 UP ₁₈	Marsden (2008)
2001 XU ₂₅₄	–
2001 XZ ₂₅₅	–
2002 CB ₂₄₉	–
2002 GH ₃₂	Ragozzine & Brown (2007) Snodgrass et al. (2010) Vilenius et al. (2014)
2002 GV ₃₂	Fulchignoni et al. (2008)
2002 GW ₃₂	Marsden (2008)
2002 PQ ₁₅₂	–

Table 10. List of the references for the comments, sorted by object (Cont'd)

Object	References
2002 PU ₁₇₀	Marsden (2008)
2002 VD ₁₃₀	Marsden (2008)
2002 VV ₁₃₀	Marsden (2008)
2002 XV ₉₃	Mommert et al. (2012)
2003 EL _{61c}	Ragozzine & Brown (2007)
2003 FZ ₁₂₉	–
2003 HA ₅₇	Ragozzine & Brown (2007)
2003 HX ₅₆	Ragozzine & Brown (2007)
2003 LA ₇	Marsden (2008)
2003 QA ₉₂	–
2003 QD ₁₁₂	Jewitt (2009)
2003 QK ₉₁	–
2003 QQ ₉₁	–
2003 QR ₉₁	Vilenius et al. (2014)
2003 QX ₉₁	Marsden (2008)
2003 QY ₉₀	–
2003 QY ₉₀	–
2003 SQ ₃₁₇	Ragozzine & Brown (2007) Snodgrass et al. (2010)
2003 TH ₅₈	Ragozzine & Brown (2007) Snodgrass et al. (2010)
2003 TJ ₅₈	–
2003 TJ ₅₈	–
2003 UT ₂₉₂	Mommert et al. (2012)
2003 UY ₂₉₁	Sheppard (2010b) Sheppard (2010a)
2003 WN ₁₈₈	–
2003 WU ₁₈₈	Vilenius et al. (2014)
2003 YQ ₁₇₉	Marsden (2008)
2004 DA ₆₂	–
2004 OJ ₁₄	–
2004 PB ₁₀₈	–
2004 PB ₁₀₈	–
2004 PW ₁₀₇	Marsden (2008)
2004 PY ₄₂	Bauer et al. (2013) Jewitt (2009)
2004 QQ ₂₆	Duffard et al. (2014)
2004 TT ₃₅₇	Marsden (2008)
2004 TV ₃₅₇	Marsden (2008)
2004 TX ₃₅₇	Marsden (2008)
2004 UP ₁₀	Sheppard & Trujillo (2006)
2004 XR ₁₉₀	–
2005 CA ₇₉	Marsden (2008)
2005 SE ₂₇₈	Marsden (2008)
2005 TN ₅₃	Sheppard & Trujillo (2006)
2005 TN ₇₄	Marsden (2008)
2005 TO ₇₄	Sheppard & Trujillo (2006)
2006 RJ ₁₀₃	–
2007 NC ₇	–
2007 TJ ₄₂₂	–
2007 VH ₃₀₅	Bauer et al. (2013)
2007 VL ₃₀₅	Marsden (2008)
2008 JS ₁₄	Bauer et al. (2013)
2009 QV ₃₈	Bauer et al. (2013)
2009 YG ₁₉	–
2010 BK ₁₁₈	Bauer et al. (2013)
2010 BL ₄	Bauer et al. (2013)
2010 EK ₁₃₉	Pál et al. (2012); ?
2010 ES ₆₅	Bauer et al. (2013)
2010 FH ₉₂	Bauer et al. (2013)
2010 GW ₁₄₇	Bauer et al. (2013)
2010 GW ₆₄	Bauer et al. (2013)
2010 JH ₁₂₄	Bauer et al. (2013)
2010 KW ₇	Bauer et al. (2013)
2010 LG ₆₁	Bauer et al. (2013)
2010 OM ₁₀₁	Bauer et al. (2013)
2010 OR ₁	Bauer et al. (2013)
2010 PO ₅₈	Bauer et al. (2013)
2010 TS ₁₉₁	–
2010 TT ₁₉₁	–
2010 WG ₉	Bauer et al. (2013)
2011 HM ₁₀₂	–
2011 MM ₄	Bauer et al. (2013)
2012 DR ₃₀	Kiss et al. (2013)
2012 VP ₁₁₃	–
2012 YO ₆	–
2013 AZ ₆₀	–
2013 BL ₇₆	–
2013 BO ₁₆	Marsden (2008)
2013 CB ₂₀₄	Marsden (2008)
2013 CX ₂₁₇	–

Table 10. List of the references for the comments, sorted by object (Cont'd)

Object	References
2013 CY ₁₉₇	–
2013 EZ ₇₅	Brown et al. (2005)
2013 KY ₁₈	–
2013 LD ₁₆	–
2013 NS ₁₁	–
2013 RY ₉₈	Marsden (2008)
2013 ST ₃₉	Bauer et al. (2013)
2013 TZ ₁₅₈	Bauer et al. (2013)
	Jewitt (2009)
2013 YG ₄₈	–
2014 CW ₁₄	–
2014 QO ₄₄₁	–
2060-Chiron	Fornasier et al. (2013)
	Fulchignoni et al. (2008)
	Meech et al. (2009)
	Romon-Martin et al. (2003)
2223-Sarpedon	–
2357-Phereclos	–
3548-Eurybates	–
4035-1986 WD	–
4829-Sergestus	–
5130-Illioneus	–
5145-Pholus	Cruikshank et al. (1998)
	Duffard et al. (2014)
	Fulchignoni et al. (2008)
5244-Amphilochos	–
5258-1989 AU ₁	–
5511-Cloanthus	–
6545-1986 TR ₆	–
6998-Tithonus	–
7066-Nessus	Duffard et al. (2014)
	Fulchignoni et al. (2008)
7352-1994 CO	Duffard et al. (2014)
8405-Asbolus	Fulchignoni et al. (2008)
	Kern et al. (2000)
9030-1989 UX ₅	–
9430-Erichthonio	–
9818-Eurymachos	–
10199-Chariklo	Fornasier et al. (2013)
	Fulchignoni et al. (2008)
	Guilbert et al. (2009)
	Duffard et al. (2014)
	Fulchignoni et al. (2008)
10370-Hylonome	–
11089-1994 CS ₈	–
11351-Leucus	–
11488-1988 RM ₁₁	–
11663-1997 GO ₂₄	–
12917-1998 TG ₁₆	–
12921-1998 WZ ₅	–
13463-Antiphos	–
13862-1999 XT ₁₆₀	–
14707-2000 CC ₂₀	–
15094-Polymele	–
15502-1999 NV ₂₇	–
15504-1999 RG ₃₃	–
15535-2000 AT ₁₇₇	–
15760-Albion	Fulchignoni et al. (2008)
	?
15788-1993 SB	Fulchignoni et al. (2008)
15789-1993 SC	Fulchignoni et al. (2008)
	Jewitt & Luu (2001)
15807-1994 GV ₉	–
15809-1994 JS	Marsden (2008)
15810-Arawn	?
15820-1994 TB	Fulchignoni et al. (2008)
	Lellouch et al. (2013)
15836-1995 DA ₂	Marsden (2008)
15874-1996 TL ₆₆	Fulchignoni et al. (2008)
	Santos-Sanz et al. (2012)
15875-1996 TP ₆₆	Fulchignoni et al. (2008)
	Mommert et al. (2012)
15883-1997 CR ₂₉	Fulchignoni et al. (2008)
15977-1998 MA ₁₁	–
16684-1994 JQ ₁	Fulchignoni et al. (2008)
17416-1988 RR ₁₀	–
18060-1999 XJ ₁₅₆	–
18137-2000 OU ₃₀	–
18268-Dardanos	–
18493-Demoleon	–
18940-2000 QV ₄₉	–

Table 10. List of the references for the comments, sorted by object (Cont'd)

Object	References
19255-1994 VK ₈	Fulchignoni et al. (2008)
19299-1996 SZ ₄	Fulchignoni et al. (2008)
19308-1996 TO ₆₆	Fulchignoni et al. (2008)
	Peixinho et al. (2012)
19521-Chaos	Ragozzine & Brown (2007)
	Fulchignoni et al. (2008)
	?
	Vilenius et al. (2012)
20000-Varuna	Fulchignoni et al. (2008)
	Lellouch et al. (2013)
	?
	Peixinho et al. (2012)
20108-1995 QZ ₉	–
20161-1996 TR ₆₆	Marsden (2008)
20738-1999 XG ₁₉₁	–
23549-Epicles	–
23694-1997 KZ ₃	–
24233-1999 XD ₉₄	–
24341-2000 AJ ₈₇	–
24380-2000 AA ₁₆₀	–
24390-2000 AD ₁₇₇	–
24420-2000 BU ₂₂	–
24426-2000 CR ₁₂	–
24444-2000 OP ₃₂	–
24452-2000 QU ₁₆₇	–
24467-2000 SS ₁₆₅	–
24835-1995 SM ₅₅	Fulchignoni et al. (2008)
	Peixinho et al. (2012)
	Rabinowitz et al. (2008)
	Ragozzine & Brown (2007)
	Fulchignoni et al. (2008)
24952-1997 QJ ₄	–
24978-1998 HJ ₁₅₁	–
25347-1999 RQ ₁₁₆	–
26181-1996 GQ ₂₁	Fulchignoni et al. (2008)
	Peixinho et al. (2012)
26308-1998 SM ₁₆₅	Fulchignoni et al. (2008)
	Lellouch et al. (2013)
	Marsden (2008)
26308-1998 SM ₁₆₅ B	–
26375-1999 DE ₉	Fulchignoni et al. (2008)
	Lellouch et al. (2013)
	Peixinho et al. (2012)
28958-2001 CQ ₄₂	–
28978-Ixion	Fulchignoni et al. (2008)
	Lellouch et al. (2013)
	?
29981-1999 TD ₁₀	Fulchignoni et al. (2008)
	Peixinho et al. (2012)
30698-Hippokoon	–
31820-1999 RT ₁₈₆	–
31821-1999 RK ₂₂₅	–
31824-Elatus	Duffard et al. (2014)
	Fulchignoni et al. (2008)
	Peixinho et al. (2012)
32430-2000 RQ ₈₃	–
32532-Thereus	Duffard et al. (2014)
	Fulchignoni et al. (2008)
	Peixinho et al. (2012)
32615-2001 QU ₂₇₇	–
32794-1989 UE ₅	–
32929-1995 QY ₉	Fulchignoni et al. (2008)
33001-1997 CU ₂₉	Fulchignoni et al. (2008)
33128-1998 BU ₄₈	Fulchignoni et al. (2008)
33340-1998 VG ₄₄	Fulchignoni et al. (2008)
	Lellouch et al. (2013)
34785-2001 RG ₈₇	–
35671-1998 SN ₁₆₅	Fulchignoni et al. (2008)
	Vilenius et al. (2014)
38083-Rhadamanth	Fulchignoni et al. (2008)
	?
38084-1999 HB ₁₂	Fulchignoni et al. (2008)
38628-Huya	Fornasier et al. (2013)
	Fulchignoni et al. (2008)
	?
	Peixinho et al. (2012)
39285-2001 BP ₇₅	–
40314-1999 KR ₁₆	Fulchignoni et al. (2008)
	Santos-Sanz et al. (2012)
42301-2001 UR ₁₆₃	Fulchignoni et al. (2008)
	Peixinho et al. (2012)
42355-Typhon	Fulchignoni et al. (2008)
	Peixinho et al. (2012)
	Santos-Sanz et al. (2012)

Table 10. List of the references for the comments, sorted by object (Cont'd)

Object	References
42355-Typhon+B	–
43212-2000 AL ₁₁₃	–
44594-1999 OX ₃	Fulchignoni et al. (2008) Lellouch et al. (2013) Peixinho et al. (2012)
45802-2000 PV ₂₉	–
47171-Lempo	Fulchignoni et al. (2008) Mommert et al. (2012) ? Peixinho et al. (2012) Protopapa et al. (2009)
47171-Lempo+B	–
47932-2000 GN ₁₇₁	Fulchignoni et al. (2008) Mommert et al. (2012) Peixinho et al. (2012)
47967-2000 SL ₂₉₈	–
48249-2001 SY ₃₄₅	–
48252-2001 TL ₂₁₂	–
48639-1995 TL ₈	Fulchignoni et al. (2008) Lellouch et al. (2013) Fulchignoni et al. (2008)
49036-Pelion	Dalle Öre et al. (2009)
50000-Quaoar	Fornasier et al. (2013) ? Peixinho et al. (2012)
51359-2000 SC ₁₇	–
52747-1998 HM ₁₅₁	–
52872-Okyrhoe	Duffard et al. (2014) Fulchignoni et al. (2008) Peixinho et al. (2012)
52975-Cyllarus	Duffard et al. (2014) Fulchignoni et al. (2008)
53469-2000 AX ₈	–
54520-2000 PJ ₃₀	–
54598-Bienor	Duffard et al. (2014) Fulchignoni et al. (2008) Peixinho et al. (2012)
55565-2002 AW ₁₉₇	Fulchignoni et al. (2008) Peixinho et al. (2012) Ragozzine & Brown (2007) Vilenius et al. (2014)
55576-Amycus	Duffard et al. (2014) Fulchignoni et al. (2008)
55636-2002 TX ₃₀₀	Fulchignoni et al. (2008) Lellouch et al. (2013) Licandro et al. (2006) Peixinho et al. (2012) Rabinowitz et al. (2008) Ragozzine & Brown (2007)
55637-2002 UX ₂₅	Fornasier et al. (2013) Fulchignoni et al. (2008) Peixinho et al. (2012)
55638-2002 VE ₉₅	Barucci et al. (2006) Fulchignoni et al. (2008) Mommert et al. (2012) Peixinho et al. (2012)
56968-2000 SA ₉₂	–
58534-Logos	Fulchignoni et al. (2008) ?
58534-Logos+B	–
59358-1999 CL ₁₅₈	Fulchignoni et al. (2008)
60454-2000 CH ₁₀₅	Fulchignoni et al. (2008)
60458-2000 CM ₁₁₄	–
60458-2000 CM ₁₁₄ B	–
60558-Echeclus	Duffard et al. (2014) Fulchignoni et al. (2008) Jewitt (2009)
60608-2000 EE ₁₇₃	Fulchignoni et al. (2008)
60620-2000 FD ₈	Fulchignoni et al. (2008)
60621-2000 FE ₈	Fulchignoni et al. (2008)
63252-2001 BL ₄₁	Duffard et al. (2014) Fulchignoni et al. (2008)
65150-2002 CA ₁₂₆	–
65225-2002 EK ₄₄	–
65407-2002 RP ₁₂₀	–
65489-Ceto	Peixinho et al. (2012) Santos-Sanz et al. (2012)
65489-Ceto+B	–
66452-1999 OF ₄	Fulchignoni et al. (2008)
66652-Borasisi	Fulchignoni et al. (2008) ? Vilenius et al. (2014)

Table 10. List of the references for the comments, sorted by object (Cont'd)

Object	References
66652-Borasisi+B	–
69986-1998 WW ₂₄	Fulchignoni et al. (2008)
69987-1998 WA ₂₅	–
69988-1998 WA ₃₁	Fulchignoni et al. (2008) Marsden (2008)
69990-1998 WU ₃₁	Fulchignoni et al. (2008)
73480-2002 PN ₃₄	Peixinho et al. (2012) Santos-Sanz et al. (2012)
76804-2000 QE	–
78799-2002 XW ₉₃	Vilenius et al. (2012)
79360-Sila-Nunam	Fulchignoni et al. (2008) ? Peixinho et al. (2012) Vilenius et al. (2012)
79360-Sila-Nunam+B	–
79978-1999 CC ₁₅₈	Fulchignoni et al. (2008)
79983-1999 DF ₉	Fulchignoni et al. (2008)
80806-2000 CM ₁₀₅	–
82075-2000 YW ₁₃₄	Fulchignoni et al. (2008)
82155-2001 FZ ₁₇₃	Fulchignoni et al. (2008)
82158-2001 FP ₁₈₅	Fulchignoni et al. (2008) Santos-Sanz et al. (2012)
83982-Crantor	Duffard et al. (2014) Fulchignoni et al. (2008)
84522-2002 TC ₃₀₂	Fornasier et al. (2013) Marsden (2008) Peixinho et al. (2012) Rabinowitz et al. (2008)
84709-2002 VW ₁₂₀	–
84719-2002 VR ₁₂₈	Mommert et al. (2012)
84922-2003 VS ₂	Mommert et al. (2012) Peixinho et al. (2012)
85627-1998 HP ₁₅₁	–
85633-1998 KR ₆₅	Fulchignoni et al. (2008)
86047-1999 OY ₃	Ragozzine & Brown (2007) Snodgrass et al. (2010)
86177-1999 RY ₂₁₅	Fulchignoni et al. (2008) Snodgrass et al. (2010) Vilenius et al. (2014)
87269-2000 OO ₆₇	–
87555-2000 QB ₂₄₃	Fulchignoni et al. (2008)
88269-2001 KF ₇₇	–
88611-Teharonhia	? Vilenius et al. (2014)
88611-Teharonhia+B	–
90377-Sedna	? Fulchignoni et al. (2008) ? Pál et al. (2012); ? Peixinho et al. (2012)
90482-Orcus	Fornasier et al. (2013) Fulchignoni et al. (2008) ?
90568-2004 GV ₉	Peixinho et al. (2012) Peixinho et al. (2012) Rabinowitz et al. (2008) Vilenius et al. (2012)
91133-1998 HK ₁₅₁	Fulchignoni et al. (2008)
91205-1998 US ₄₃	Fulchignoni et al. (2008)
91554-1999 RZ ₂₁₅	Fulchignoni et al. (2008)
95625-2002 GX ₃₂	Marsden (2008)
95626-2002 GZ ₃₂	Duffard et al. (2014) Fulchignoni et al. (2008)
99328-2001 UY ₁₂₃	–
105685-2000 SC ₅₁	–
111113-2001 VK ₈₅	–
118228-1996 TQ ₆₆	Fulchignoni et al. (2008)
118378-1999 HT ₁₁	Marsden (2008)
118379-1999 HC ₁₂	Fulchignoni et al. (2008)
118698-2000 OY ₅₁	Marsden (2008)
118702-2000 OM ₆₇	–
119066-2001 KJ ₇₆	Marsden (2008)
119067-2001 KP ₇₆	Marsden (2008)
119068-2001 KC ₇₇	Marsden (2008)
119070-2001 KP ₇₇	Fulchignoni et al. (2008) Marsden (2008)
119315-2001 SQ ₇₃	Duffard et al. (2014)
119951-2002 KX ₁₄	Peixinho et al. (2012) Vilenius et al. (2012)
119956-2002 PA ₁₄₉	Marsden (2008)
119976-2002 VR ₁₃₀	Duffard et al. (2014)

Table 10. List of the references for the comments, sorted by object (Cont'd)

Object	References
119979-2002 WC ₁₉	Lellouch et al. (2013) Marsden (2008)
120061-2003 CO ₁	Duffard et al. (2014)
120132-2003 FY ₁₂₈	Peixinho et al. (2012) Santos-Sanz et al. (2012)
120178-2003 OP ₃₂	Rabinowitz et al. (2008) Ragozzine & Brown (2007)
120181-2003 UR ₂₉₂	Vilenius et al. (2014)
120216-2004 EW ₉₅	Mommert et al. (2012)
120347-Salacia	Fornasier et al. (2013) Ragozzine & Brown (2007) Snodgrass et al. (2010)
120347-Salacia+B	–
120348-2004 TY ₃₆₄	Lellouch et al. (2013)
120453-1988 RE ₁₂	–
121725-Aphidas	Fulchignoni et al. (2008)
123509-2000 WK ₁₈₃	–
123509-2000 WK ₁₈₃	–
124729-2001 SB ₁₇₃	–
126154-2001 YH ₁₄₀	Marsden (2008)
127546-2002 XU ₉₃	Santos-Sanz et al. (2012)
129772-1999 HR ₁₁	Fulchignoni et al. (2008)
130391-2000 JG ₈₁	Marsden (2008)
131695-2001 XS ₂₅₄	–
131696-2001 XT ₂₅₄	Marsden (2008)
131697-2001 XH ₂₅₅	Marsden (2008)
133067-2003 FB ₁₂₈	–
134340-Pluto	–
134340-Pluto+A	Buie et al. (2010) Buie et al. (1992)
134340-Pluto	Fulchignoni et al. (2008)
134340-Pluto+B	Buie et al. (1992)
134340-Pluto+C	–
134340-Pluto+D	–
134568-1999 RH ₂₁₅	Marsden (2008)
134860-2000 OJ ₆₇	Fulchignoni et al. (2008)
134860-2000 OJ ₆₇	–
135024-2001 KO ₇₆	Marsden (2008)
135182-2001 QT ₃₂₂	Vilenius et al. (2014)
135571-2002 GG ₃₂	Marsden (2008)
135742-2002 PB ₁₇₁	Marsden (2008)
136108-Haumea	Fornasier et al. (2013) Fulchignoni et al. (2008) Lacerda (2009) ? Pinilla-Alonso et al. (2009) Peixinho et al. (2012) Rabinowitz et al. (2008) Trujillo et al. (2007)
136120-2003 LG ₇	Marsden (2008)
136199-Eris	Fulchignoni et al. (2008) Lellouch et al. (2013) ? Duffard et al. (2014)
136204-2003 WL ₇	Brown et al. (2007)
136472-Makemake	Lellouch et al. (2013) ? Ragozzine & Brown (2007) Fulchignoni et al. (2008)
137294-1999 RE ₂₁₅	Fulchignoni et al. (2008)
137295-1999 RB ₂₁₆	Fulchignoni et al. (2008) Marsden (2008)
138537-2000 OK ₆₇	Vilenius et al. (2014)
143685-2003 SS ₃₁₇	Marsden (2008)
143707-2003 UY ₁₁₇	Marsden (2008)
143751-2003 US ₂₉₂	Marsden (2008)
144897-2004 UX ₁₀	Mommert et al. (2012)
145451-2005 RM ₄₃	Rabinowitz et al. (2008)
145452-2005 RN ₄₃	Vilenius et al. (2012)
145453-2005 RR ₄₃	Pinilla-Alonso et al. (2007) Rabinowitz et al. (2008) Ragozzine & Brown (2007) Santos-Sanz et al. (2012) Duffard et al. (2014)
145480-2005 TB ₁₉₀	–
145486-2005 UJ ₄₃₈	–
148209-2000 CR ₁₀₅	–
148780-Altjira	Fulchignoni et al. (2008) Vilenius et al. (2014)
148780-Altjira+B	–
148975-2001 XA ₂₅₅	Bauer et al. (2013)
149349-2002 VA ₁₃₁	Marsden (2008)
149560-2003 QZ ₉₁	–
150642-2001 CZ ₃₁	Fulchignoni et al. (2008)

Table 10. List of the references for the comments, sorted by object (Cont'd)

Object	References
160147-2001 KN ₇₆	Marsden (2008)
160427-2005 RL ₄₃	–
163135-2002 CT ₂₂	–
163216-2002 EN ₆₈	–
168700-2000 GE ₁₄₇	–
168703-2000 GP ₁₈₃	Fulchignoni et al. (2008)
174567-Varda	Vilenius et al. (2014)
175113-2004 PF ₁₁₅	Mommert et al. (2012)
181708-1993 FW	Fulchignoni et al. (2008)
181855-1998 WT ₃₁	Fulchignoni et al. (2008) Ragozzine & Brown (2007) Snodgrass et al. (2010)
181867-1999 CV ₁₁₈	Marsden (2008)
181871-1999 CO ₁₅₃	Marsden (2008)
181874-1999 HW ₁₁	–
181902-1999 RD ₂₁₅	–
182222-2000 YU ₁	Marsden (2008)
182294-2001 KU ₇₆	Marsden (2008)
182397-2001 QW ₂₉₇	–
182933-2002 GZ ₃₁	–
182934-2002 GJ ₃₂	Fulchignoni et al. (2008) Vilenius et al. (2014) Marsden (2008)
183964-2004 DJ ₇₁	–
192388-1996 RD ₂₉	–
192929-2000 AT ₄₄	–
202421-2005 UQ ₅₁₃	Ragozzine & Brown (2007) Snodgrass et al. (2010) Vilenius et al. (2014) Fulchignoni et al. (2008) Mommert et al. (2012) Rabinowitz et al. (2008) Santos-Sanz et al. (2012) Santos-Sanz et al. (2012) Vilenius et al. (2014) Duffard et al. (2014) Duffard et al. (2014) Fulchignoni et al. (2008) Vilenius et al. (2014)
208996-2003 AZ ₈₄	–
225088-Gonggong	–
229762-2007 UK ₁₂₆	–
230965-2004 XA ₁₉₂	–
248835-2006 SX ₃₆₈	–
250112-2002 KY ₁₄	–
275809-2001 QY ₂₉₇	–
275809-2001 QY ₂₉₇	–
278361-2007 JJ ₄₃	–
281371-2008 FC ₇₆	Duffard et al. (2014)
303775-2005 QU ₁₈₂	Santos-Sanz et al. (2012)
307251-2002 KW ₁₄	Vilenius et al. (2014)
307261-2002 MS ₄	Vilenius et al. (2012)
307463-2002 VU ₁₃₀	Mommert et al. (2012)
307616-2003 QW ₉₀	–
307982-2004 PG ₁₁₅	–
308193-2005 CB ₇₉	Ragozzine & Brown (2007)
308933-2006 SQ ₃₇₂	–
309139-2006 XQ ₅₁	Bauer et al. (2013)
309239-2007 RW ₁₀	? Santos-Sanz et al. (2012) Bauer et al. (2013)
309737-2008 SJ ₂₃₆	–
309741-2008 UZ ₆	–
310071-2010 KR ₅₉	Bauer et al. (2013)
315898-2008 QD ₄	–
316431-2010 TH ₁₆₇	Bauer et al. (2013)
328884-2010 LJ ₁₀₉	Bauer et al. (2013)
330759-2008 SO ₂₁₈	Bauer et al. (2013)
332685-2009 HH ₃₆	Bauer et al. (2013)
336756-2010 NV ₁	Bauer et al. (2013)
341275-2007 RG ₂₈₃	–
341520-Mors-Somn	–
341520-Mors-Somn+A	–
341520-Mors-Somn+B	–
342842-2008 YB ₃	Bauer et al. (2013) Sheppard (2010a)
346889-Rhiphonos	–
349933-2009 YF ₇	–
382004-2010 RM ₆₄	Bauer et al. (2013)
385185-1993 RO	Fulchignoni et al. (2008)
385191-1997 RT ₅	–
385194-1998 KG ₆₂	Fulchignoni et al. (2008)
385199-1999 OE ₄	Fulchignoni et al. (2008)
385437-2003 GH ₅₅	Vilenius et al. (2014)
385446-Manwe	Marsden (2008)
385446-Manwe+B	–
385527-2004 OK ₁₄	Marsden (2008)
385571-Otrera	–
385607-2005 EO ₂₉₇	Marsden (2008) Sheppard (2010b) Sheppard (2010a)

Table 10. List of the references for the comments, sorted by object
(Cont'd)

Object	References
385695-2005 TO ₇₄	–
413666-2005 VJ ₁₁₉	Bauer et al. (2013)
416400-2003 UZ ₁₁₇	Ragozzine & Brown (2007)
418993-2009 MS ₉	–
427507-2002 DH ₅	Fulchignoni et al. (2008)
427581-2003 QB ₉₂	Marsden (2008)
444030-2004 NT ₃₃	Vilenius et al. (2014)
444745-2007 JF ₄₃	Marsden (2008)
445473-2010 VZ ₉₈	–
447178-2005 RO ₄₃	Duffard et al. (2014)
449097-2012 UT ₆₈	–
455171-1999 OM ₄	Fulchignoni et al. (2008)
455502-2003 UZ ₄₁₃	–
459865-2013 XZ ₈	–
459971-2014 ON ₆	–
463368-2012 VU ₈₅	–
463663-2014 HY ₁₂₃	–
469306-1999 CD ₁₅₈	Fulchignoni et al. (2008) Marsden (2008) Ragozzine & Brown (2007) Snodgrass et al. (2010)
469333-2000 PE ₃₀	Fulchignoni et al. (2008)
469362-2001 KB ₇₇	–
469372-2001 QF ₂₉₈	Fulchignoni et al. (2008) Mommert et al. (2012)
469420-2001 XP ₂₅₄	Marsden (2008)
469438-2002 GV ₃₁	Vilenius et al. (2012)
469505-2003 FE ₁₂₈	Marsden (2008)
469514-2003 QA ₉₁	Vilenius et al. (2014)
469615-2004 PT ₁₀₇	Ragozzine & Brown (2007) Snodgrass et al. (2010) Vilenius et al. (2014)
469705-2005 EF ₂₉₈	Vilenius et al. (2012)
469708-2005 GE ₁₈₇	Snodgrass et al. (2010)
469750-2005 PU ₂₁	–
469987-2006 HJ ₁₂₃	Mommert et al. (2012)
470308-2007 JH ₄₃	Marsden (2008)
470309-2007 JK ₄₃	–
470316-2007 OC ₁₀	Santos-Sanz et al. (2012)
470599-2008 OG ₁₉	–
471143-Dziewanna	–
471339-2011 ON ₄₅	–
474640-2004 VN ₁₁₂	–
506479-2003 HB ₅₇	–
508770-1995 WY ₂	Fulchignoni et al. (2008)
508788-2000 CQ ₁₁₄	–
508788-2000 CQ ₁₁₄	–
523588-2000 CN ₁₀₅	–
523591-2001 QD ₂₉₈	Vilenius et al. (2014)
523597-2002 QX ₄₇	–
523620-2007 RH ₂₈₃	–
523622-2007 TG ₄₂₂	–
523676-2013 UL ₁₀	–
523785-2015 CM ₃	–
523794	–
523899-1997 CV ₂₉	–
523955-1998 UU ₄₃	Marsden (2008)
523965-1998 XY ₉₅	Fulchignoni et al. (2008)
523983-1999 RY ₂₁₄	Fulchignoni et al. (2008)
524049-2000 CQ ₁₀₅	–
524217-2001 RZ ₁₄₃	Vilenius et al. (2012)
524365-2001 XQ ₂₅₄	Marsden (2008)
524366-2001 XR ₂₅₄	Vilenius et al. (2014)
524366-2001 XR ₂₅₄	–
524460-2002 GF ₃₂	Fulchignoni et al. (2008)
524834-2003 YL ₁₇₉	–
525462-2005 EO ₃₀₄	–
525462-2005 EO ₃₀₄	–
525815-2005 SD ₂₇₈	Marsden (2008)
525816-2005 SF ₂₇₈	Marsden (2008)
527328-2007 TK ₄₂₂	–
527443-2007 UM ₁₂₆	–
527603-2007 VJ ₃₀₅	–
527604	–
528219-2008 KV ₄₂	Sheppard (2010b) Sheppard (2010a)
530664	–
530930	–

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