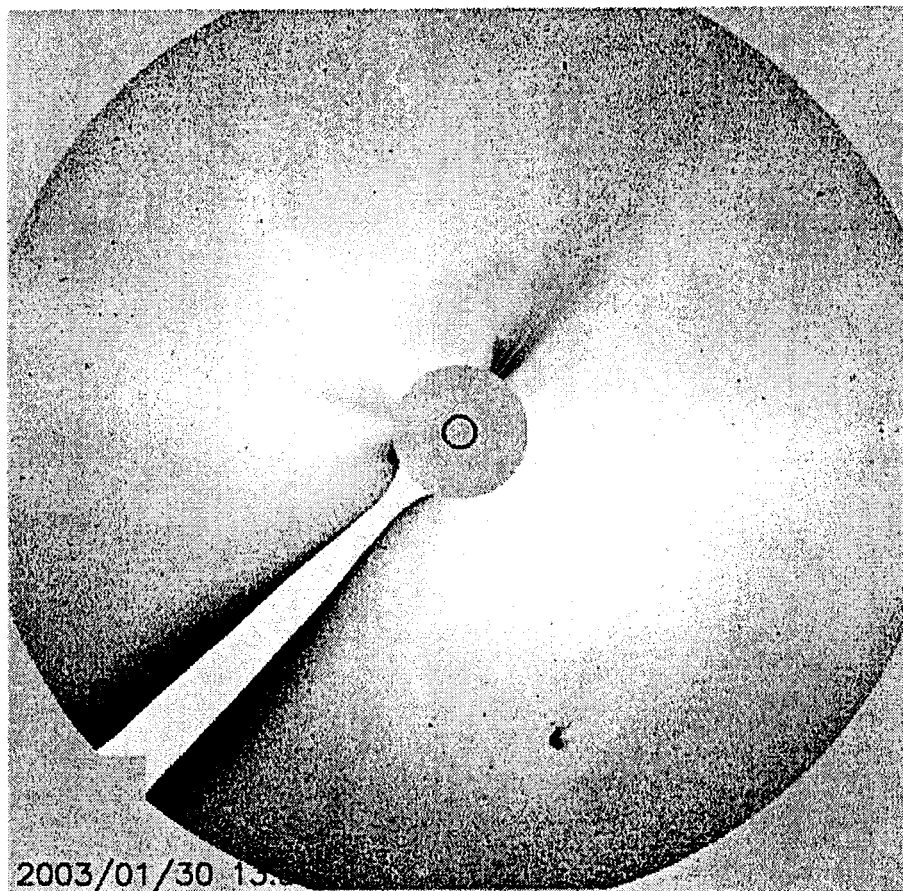

INTERNATIONAL COMET QUARTERLY

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SOHO C3 coronagraph image of comet C/2002 X5 (at 5:30 o'clock from the sun, two-thirds of way to the edge of the field) with its short, curved tail on 2003 Jan. 30.58 UT. The sun is hidden behind the occulting disk, from whence coronal streamers emanate. The occulting arm extends to the lower left.



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CORRIGENDA

• In the October 2002 issue, the even-numbered tabulated-data pages from page 248 to page 268 were inadvertently labelled "July 2002" in the upper right corner.

New Catalogue of Cometary Orbits

The fifteenth edition of the *Catalogue of Cometary Orbits* (2003) has just been published. The Introduction states that the *CCO 2003* includes 1516 orbits for 1488 single-apparition comets and 881 orbits for 870 apparitions of the 155 permanently numbered comets. Numerous comets have orbits for different components or nuclei, as well. The "General Catalogue" is composed of separate tables containing orbital elements, names, designations (both new- and old-style), arcs of observation, and references for the one-apparition comets (pp. 9-71) and the numbered comets (pp. 72-111). Other tables in the *CCO 2003* contain indentifications (including old-style names with numeral suffixes, which have been now dropped from the main catalogue as in the *ICQ*), osculating orbital elements for the numbered short-period comets for 2003-2005, various statistical tables, convenient correspondences of the pre-1995 (old-style) and post-1995 comet designations, and a list of the X/ comet (presumed comets without reliable orbits).

The *CCO 2003* is available for US\$40.00 (or \$60.00 for overseas airmail delivery) through the *International Comet Quarterly* (see payment instructions on page 2 of this issue).

Φ Φ Φ

Tabulation of Comet Observations

Akimasa Nakamura has pointed out that there is a problem with unfiltered CCD photometry of comets, even with the new expanded *ICQ* system for reporting data — the problem of varying comparison-star spectral types. For example, even if the spectral response of the CCD camera and the band of the comparison-star magnitudes is known from the tabulated data, the color of the comparison star itself will have a big impact on the derived total magnitude for the comet. If an unfiltered CCD camera has its peak response in the red portion of the optical band, a blue comparison star (say, type A) of mag $V = 10.0$ will be fainter to the camera than will a red comparison star (say, type M) of mag $V = 10.0$, because an A-type star puts out less radiation at red wavelengths than does an M-type star. For this reason, we ask all unfiltered CCD observers to immediately begin to send, as textual data to be included with the descriptive information in the printed *ICQ*, the spectral type *or* the $B - V$ and $V - R$ colors for the comparison stars. If more than one comparison star is used for a single unfiltered CCD observation of a comet (which Nakamura says happens in most cases, from his experience), a different m_1 value should be given for each star (but please give only one for the tabulated data; other m_2 values for other spectrally different comparison stars should be given in the descriptive text).

Some observations contributed on paper have been held to the April issue, to speed up publication of this issue.

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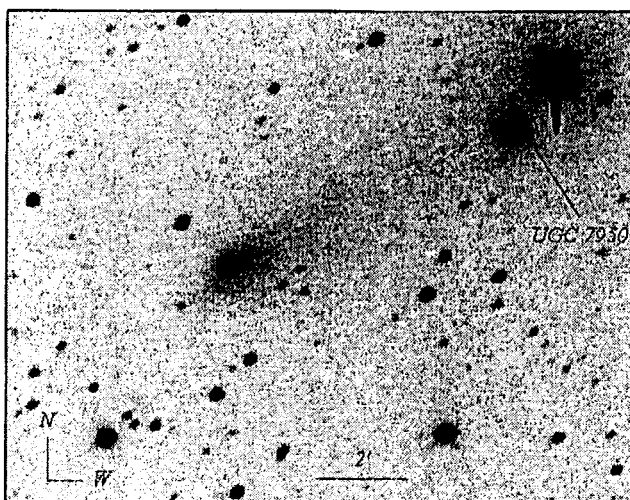


Image of comet 19P/Borrelly taken on 2002 Feb. 17.16 UT by G. Sostero with a 0.3-m f/2.8 Baker-Schmidt camera (+ Hi-Sis 24 CCD; scale 2"/pixel). The image above is from four 300-sec unfiltered exposures. North is up and east is to the left.

Descriptive Information, to complement the Tabulated Data (all times UT):

See the July 2001 issue (page 98) for explanations of the abbreviations used in the descriptive information.

◊ *Comet 19P/Borrelly* ⇒ 2002 Feb. 2.89, 3.89, 8.88, 14.89, 15.91, 16.90, Mar. 6.82, 10.88, 13.83, Apr. 4.85, 5.92, 7.83, and May 16.99: w/ CCD, fan-shaped coma [HOR02]. Feb. 2.89: w/ CCD, second tail 2'4 long in p.a. 135° [HOR02]. Feb. 3.89: w/ CCD, second tail 1'5 long in p.a. 147° [HOR02]. Feb. 8.88: w/ CCD, second tail 1'9 long in p.a. 149° [HOR02]. Feb. 14.89: w/ CCD, second tail 1'5 long in p.a. 127° [HOR02]. Feb. 15.91: w/ CCD, second tail 1'5 long in p.a. 149° [HOR02]. Feb. 16.90: w/ CCD, second tail 1'4 long in p.a. 141° [HOR02]. Mar. 6.82: w/ CCD, second tail 1'3 long in p.a. 140°; comet close to bright star [HOR02]. Mar. 10.88: w/ CCD, second tail 1'2 long in p.a. 130° [HOR02]. Mar. 13.83: w/ CCD, second tail 1'1 long in p.a. 141° [HOR02]. Apr. 4.85: w/ CCD, second tail 1'0 long in p.a. 120° [HOR02]. Apr. 5.92: w/ CCD, second tail 0'9 long in p.a. 122° [HOR02]. Apr. 7.83: w/ CCD, second tail 1'5 long in p.a. 146° [HOR02]. May 16.99: w/ CCD, second tail 0'8 long in p.a. 132° [HOR02].

◊ *Comet 29P/Schwassmann-Wachmann* ⇒ 2002 Sept. 1.61, 8.55, Oct. 29.50, Nov. 6.40, 29.39, and Dec. 15.38: GUIDE 8.0 software used for comp.-star mags [TSU02]. Nov. 6.44: GUIDE 8.0 software used for comp.-star mags [NAK01].

◊ *Comet 30P/Reinmuth* ⇒ 2002 Nov. 6.77 and Dec. 14.79: GUIDE 8.0 software used for comp.-star mags [OHS]. Dec. 14.81: GUIDE 8.0 software used for comp.-star mags [TSU02].

◊ *Comet 46P/Wirtanen* ⇒ 2002 Sept. 12.12: only barely visible at low alt. in twilight, but it was seen at correct location [GRA04]. Nov. 2.81 and 4.81: GUIDE 6.0 software used for comp.-star mags [NAG08]. Nov. 6.84, Dec. 14.88, and 2003 Jan. 7.85: GUIDE 8.0 software used for comp.-star mags [TSU02]. 2002 Dec. 14.82: GUIDE 8.0 software used for comp.-star mags [OHS].

◊ *Comet 54P/de Vico-Swift-NEAT* ⇒ 2002 Nov. 9.56: GUIDE 8.0 software used for comp.-star mags [TSU02].

◊ *Comet 57P/du Toit-Neujmin-Delporte* ⇒ 2002 Sept. 1.58, 8.55, 12.53, and Nov. 6.45: GUIDE 8.0 software used for comp.-star mags [TSU02].

◊ *Comet 65P/Gunn* ⇒ 2002 Apr. 30.84: w/ CCD, elongated coma in p.a. 300° [HOR02]. May 7.96: w/ CCD, elongated coma in p.a. 305° [HOR02]. May 16.87: w/ CCD, elongated coma in p.a. ~ 310° [HOR02]. Dec. 14.85, 19.85, and 29.84: GUIDE 8.0 software used for comp.-star mags [OHS].

◊ *Comet 67P/Churyumov-Gerasimenko* ⇒ 2002 Sept. 17.81: GUIDE 8.0 software used for comp.-star mags [YOS02]. Nov. 6.83, Dec. 14.83, and 2003 Jan. 7.78: GUIDE 8.0 software used for comp.-star mags [TSU02]. 2002 Dec. 8.06 and 11.06: limiting mag ~ 16 (162×) [LEH]. Dec. 8.06: second confirming detection made at Dec. 8.17 [LEH]. Dec. 11.06: second confirming detection made at Dec. 11.17 [LEH]. Dec. 14.80: GUIDE 8.0 software used for comp.-star mags [OHS].

◊ *Comet 81P/Wild* ⇒ 2003 Jan. 7.44: GUIDE 8.0 software used for comp.-star mags [TSU02]. Jan. 12.68: GUIDE 8.0 software used for comp.-star mags [OHS].

◊ *Comet 89P/Russell* ⇒ 2002 Oct. 29.53: GUIDE 8.0 software used for comp.-star mags [TSU02].

◊ *Comet 90P/Gehrels* ⇒ 2002 Nov. 9.58, 28.58, and Dec. 14.51: GUIDE 8.0 software used for comp.-star mags [TSU02].

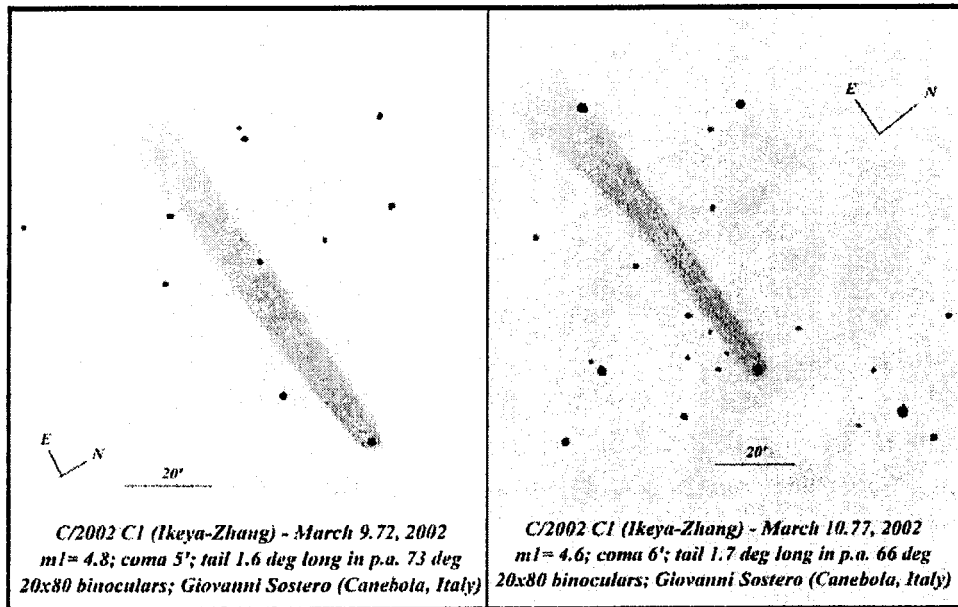
◊ *Comet 92P/Sanguin* ⇒ 2002 Sept. 1.62, Oct. 29.51, Nov. 6.46, 28.53, Dec. 15.43, and 30.44: GUIDE 8.0 software used for comp.-star mags [TSU02].

◊ *Comet 116P/Wild* ⇒ 2002 Dec. 14.84 and 19.82: GUIDE 8.0 software used for comp.-star mags [OHS]. 2003 Jan. 7.87: GUIDE 8.0 software used for comp.-star mags [TSU02].

◊ *Comet 153P/2002 C1 (Ikeya-Zhang)* ⇒ 2002 Mar. 1.05: small nuclear cond. [NOW]. Mar. 16.02 and Apr. 7.36: seen w/ naked eye [NOW]. Mar. 29.02: full moon; comet at low alt. [NOW]. May 16.13: comet larger than nearby M13 [NOW]. June 14.99: w/ CCD, anti-tail > 9'5 long in p.a. 297° [HOR02]. June 18.96: w/ CCD, anti-tail > 11'5 long in p.a. 302° [HOR02]. June 22.96, 25.95, 26.96, July 20.89, and 22.92: moonlight [HOR02]. June 22.96: w/ CCD, anti-tail > 8'0 long in p.a. 303° [HOR02]. June 25.95: w/ CCD, anti-tail > 9'9 long in p.a. 302° [HOR02]. June 26.96: w/ CCD, anti-tail > 10'7 long in p.a. 304° [HOR02]. July 7.92: w/ CCD, anti-tail > 12'0 long in p.a. 305° [HOR02]. July 8.93: w/ CCD, anti-tail > 13'1 long in p.a. 308° [HOR02]. July 9.93: w/ CCD, anti-tail > 12'6 long in p.a. 304° [HOR02]. July 22.92: anti-tail 3'8 long in p.a. 306° [HOR02]. July 29.87: anti-tail 3'9 long in p.a. 306° [HOR02]. Aug. 3.87: w/ CCD, anti-tail > 7'9 long in p.a. 311° [HOR02]. Sept. 9.47: GUIDE 8.0 software used for comp.-star mags [TSU02].

◊ *Comet 154P/Brewington* ⇒ 2002 Sept. 8.53, Nov. 6.38, 28.38, Dec. 15.41, 30.41, and 2003 Jan. 7.42: GUIDE 8.0 software used for comp.-star mags [TSU02]. 2002 Dec. 29.42: GUIDE 8.0 software used for comp.-star mags [OHS].

◊ *Comet 155P/Shoemaker* ⇒ 2002 Nov. 6.78, Dec. 14.79, and 2003 Jan. 8.60: GUIDE 8.0 software used for comp.-star mags [TSU02]. 2002 Dec. 8.10, 9.10, and 11.10: limiting mag ~ 15.5 (81×) [LEH]. Dec. 8.10: second confirming detection made at Dec. 8.19 [LEH]. Dec. 9.10: second confirming detection made at Dec. 9.19 [LEH]. Dec. 11.10: second confirming detection made at Dec. 11.19 [LEH]. 2003 Jan. 6.75, 8.79, and 12.77: GUIDE 8.0 software used for comp.-star mags [OHS]. Jan. 11.97: reality for visual obs. checked on CCD frames taken on Jan. 12.00 [HOR02].



Two drawings of comet 153P/2002 C1 (Ikeya-Zhang) by Giovanni Sostero (Canebola, Italy) on 2002 Mar. 9.72 (left) and 10.77 (right). The scale bar below the comet indicates 20'; north is to the upper right and east to the upper left in both drawings.

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[descriptive text cont. from page 4]

◇ Comet C/1999 U4 (Catalina-Skiff) ⇒ 2002 Feb. 14.84, 15.86: w/ CCD, 'ejected dust cloud' in p.a. ~ 230° [HOR02]. Feb. 16.96: w/ CCD, 'ejected dust cloud' in p.a. ~ 230°; comet close to bright star [HOR02]. Dec. 13.81 and 27.76: GUIDE 8.0 software used for comp.-star mags [OHS]. 2003 Jan. 7.81: GUIDE 8.0 software used for comp.-star mags [TSU02].

◇ Comet C/2000 SV₇₄ (LINEAR) ⇒ 2002 July 22.94, 27.96, Aug. 17.83, 20.85, and Sept. 12.81: moonlight [HOR02]. July 27.96: comet close to bright star [HOR02]. Sept. 8.46: GUIDE 8.0 software used for comp.-star mags [TSU02]. Dec. 14.81 and 29.83: GUIDE 8.0 software used for comp.-star mags [OHS].

◇ Comet C/2000 WM₁ (LINEAR) ⇒ 2001 Nov. 17.30: no real sharp nuclear cond. [NOW]. Nov. 23.73 and 24.73: moonlight [BAR]. Dec. 7.98: no real defined nuclear cond.; very thin tail [NOW]. 2002 June 22.92: moonlight [HOR02]. June 25.88: very wide tail spans p.a. 150°-210° [HOR02]. June 26.90: very wide tail spans p.a. 154°-211° [HOR02]. June 30.90: very wide tail spans p.a. 145°-207° [HOR02]. July 7.89: very wide tail spans p.a. 147°-209° [HOR02]. July 8.89: very wide tail spans p.a. 151°-215° [HOR02]. July 23.02: very wide tail spans p.a. 140°-208°; moonlight [HOR02]. July 29.85: very wide tail spans p.a. 146°-207° [HOR02]. Sept. 8.49 and 9.49: GUIDE 8.0 software used for comp.-star mags [TSU02].

◇ Comet C/2001 HT₅₀ (LINEAR-NEAT) ⇒ 2002 Dec. 12.73 and 2003 Jan. 8.81: GUIDE 8.0 software used for comp.-star mags [YOS02]. 2002 Dec. 14.74: MegaStar Ver. 5.0 software used for comp.-star mags [MUR02]. Dec. 14.71: fan-shaped tail spans p.a. 330°-30° [EZA]. Dec. 14.80, 2003 Jan. 8.57, and 8.61: GUIDE 8.0 software used for comp.-star mags [TSU02]. 2002 Dec. 24.77 and 29.71: fan-shaped tail spans p.a. 315°-45° [EZA]. Dec. 27.76, 2003 Jan. 6.58, 11.83, and 31.70: GUIDE 6.0 software used for comp.-star mags [NAG08]. 2003 Jan. 1.43: close to a 10th-mag star, making obs. difficult [RAE]. Jan. 2.81, 4.79, 5.77, 6.81, 7.79, 8.78, 11.76, 13.75, 14.78, 15.83, 24.48, 30.73, and 31.72: GUIDE 7.0 software used for comp.-star mags [MIY01]. Jan. 7.05: w/ 20.3-cm T (133×), central cond. of mag 14.1 [BIV]. Jan. 7.69: curved tail beginning in p.a. 40° curved to p.a. 94° at 4.7 from the nucleus [NAK01]. Jan. 12.11: w/ CCD, strongly curved, wide, fan-shaped tail; width of fan ~ 180° [HOR02]. Jan. 12.72: GUIDE 8.0 software used for comp.-star mags [OHS]. Jan. 25.97: "tail is 3' wide at its end — looks like a triangle" [MAR02]. Jan. 28.5: comet difficult in a hazy sky [SEA]. Jan. 31.92: virtually-stellar cond. of mag 13 [BOU].

◇ Comet C/2001 K5 (LINEAR) ⇒ 2002 June 22.90, July 20.86, 22.98, 28.02, Aug. 17.80, 18.82, 20.80, and Sept. 12.77: moonlight [HOR02]. Aug. 25.81: 0.3 long jet in p.a. 139° [HOR02]. Aug. 26.80: 0.3 long jet in p.a. 137° [HOR02]. Sept. 6.77: 0.3 long jet in p.a. 135° [HOR02]. Sept. 7.78: 0.4 long jet in p.a. 140° [HOR02]. Sept. 8.51: GUIDE 8.0 software used for comp.-star mags [TSU02]. Sept. 11.78: 0.4 long jet in p.a. 142° [HOR02]. Sept. 12.77: 0.4 long jet in p.a. 151° [HOR02]. Sept. 29.76: 14" long jet in p.a. 144° [HOR02]. Oct. 30.42, Dec. 14.86, and 2003 Jan. 15.83: GUIDE

software used for comp.-star mags [OHS].

◊ *Comet C/2001 N2 (LINEAR)* \implies 2002 July 22.96 and 27.98: moonlight [HOR02].

◊ *Comet C/2001 Q4 (NEAT)* \implies 2002 Sept. 8.78, Oct. 29.58, Nov. 6.56, Dec. 15.47, and 2003 Jan. 2.39: GUIDE 8.0 software used for comp.-star mags [TSU02]. 2002 Nov. 5.62: GUIDE 8.0 software used for comp.-star mags [NAK01]. Dec. 3.57: small, condensed object; very faint, but definitely seen during quiet moments in rather windy conditions; obs. made in Australian outback on the night before the total solar eclipse, during comet-observing session w/ Michael Mattiazzo, Charles Morris, Andrew Pearce, and Timo Karhula [BOU].

◊ *Comet C/2000 RX₁₄ (LINEAR)* \implies 2002 Feb. 4.77: w/ CCD, elliptical coma 22" \times 14" [HOR02]. Feb. 16.77: w/ CCD, elliptical coma 17" \times 12" [HOR02]. Sept. 7.07: w/ CCD, elongated coma [HOR02]. Nov. 2.81, 4.80, Dec. 2.78, 4.62, 11.62, 15.84, 27.78, 2003 Jan. 5.84, 6.59, 8.82, 11.84, and 31.71: GUIDE 6.0 software used for comp.-star mags [NAG08]. 2002 Nov. 6.80, Dec. 14.85, 17.82, 28.86, and 2003 Jan. 7.81: GUIDE 8.0 software used for comp.-star mags [TSU02]. 2002 Nov. 9.83, 16.82, Dec. 12.76, 29.84, 2003 Jan. 8.85: GUIDE 8.0 software used for comp.-star mags [YOS02]. 2002 Dec. 14.76 and 2003 Jan. 8.82: GUIDE 8.0 software used for comp.-star mags [OHS]. Dec. 14.77: MegaStar Ver. 5.0 software used for comp.-star mags [MUR02]. Dec. 28.98: w/ 25.6-cm L (169 \times), central cond. of mag 13.5 [BIV]. Dec. 29.74: another tail in p.a. 300° [EZA]. 2003 Jan. 2.86, 4.80, 5.81, 6.82, 7.82, 8.81, 9.87, 11.81, 13.76, 14.80, 15.84, 25.55, 28.84, 29.81, 30.76, and 31.73: GUIDE 7.0 software used for comp.-star mags [MIY01]. Jan. 5.01: some interference from star of mag 10.5 only 2' away [BOU]. Jan. 7.01: w/ 20.3-cm T (133 \times), central cond. of mag 14.0 [BIV]. Jan. 9.17: comet appeared elongated (short stubby tail) in p.a. 280° [BOU]. Jan. 12.22: w/ 25.6-cm L (169 \times), central cond. of mag 13.6; 6' curved dust tail [BIV]. Jan. 17.92: strong moonlight [HOR02]. Jan. 31.69: The Sky (ver. 5) software used for comp.-star mags [MIT].

◊ *Comet C/2002 E2 (Snyder-Murakami)* \implies 2002 June 22.99, July 23.00, and 28.04: moonlight [HOR02]. July 29.98: w/ CCD, comet close to bright star [HOR02].

◊ *Comet C/2002 O4 (Hönig)* \implies 2002 July 28.00 and Aug. 23.82: moonlight [HOR02]. Aug. 4.15: very diffuse and ill-defined; difficult to see against Milky Way background [NOW]. Aug. 20.04: w/ CCD, comet close to star of mag 7 [HOR02]. Aug. 27.84: w/ 20-cm f/10 D (50 \times), coma dia. 7', DC = 4 [LAB02]. Aug. 31.88: w/ 25.6-cm L (169 \times), central cond. of mag 14.3 [BIV]. Sept. 8.45, 9.42 and Nov. 6.85: GUIDE 8.0 software used for comp.-star mags [TSU02]. Sept. 11.12: w/ 25.6-cm L (169 \times), central cond. of mag 12.8 [BIV]. Sept. 11.93: appearance of comet similar to NGC 205; clearly visible despite some interference from aurora [GRA04]. Nov. 6.85: very diffuse elliptical coma (3' \times 6'), main axis toward N [TSU02].

◊ *Comet C/2002 O6 (SWAN)* \implies 2002 Sept. 12.12: w/ 25.4-cm L (152 \times), nearby stars to mag 12.5 (ref TK) were seen, but there was no trace of the comet; it was, however, successfully imaged using the same telescope and CCD (+ V filter); twilight [GRA04].

◊ *Comet C/2002 O7 (LINEAR)* \implies 2003 Jan. 12.79: GUIDE 8.0 software used for comp.-star mags [OHS].

◊ *Comet C/2002 Q2 (LINEAR)* \implies 2002 Sept. 8.58 and 12.48: GUIDE 8.0 software used for comp.-star mags [TSU02].

◊ *Comet C/2002 Q3 (LINEAR)* \implies 2002 Sept. 8.59: GUIDE 8.0 software used for comp.-star mags [TSU02].

◊ *Comet C/2002 Q5 (LINEAR)* \implies 2002 Sept. 7.97: w/ CCD, comet close to bright star [HOR02]. Sept. 8.52 and 12.52: GUIDE 8.0 software used for comp.-star mags [TSU02]. Sept. 29.82: w/ CCD, very faint outer coma [HOR02]. Dec. 27.83 and 2003 Jan. 12.82: GUIDE 8.0 software used for comp.-star mags [OHS]. 2003 Jan. 4.85, 5.85, 6.86, 7.85, 8.84, 11.84, 13.84, 14.85, and 15.85: GUIDE 7.0 software used for comp.-star mags [MIY01]. Jan. 11.85: GUIDE 6.0 software used for comp.-star mags [NAG08].

◊ *Comet C/2002 R3 (LONEOS)* \implies 2002 Dec. 11.92: close to bright star (CCD) [HOR02]. 2003 Jan. 25.46: GUIDE 8.0 software used for comp.-star mags [OHS].

◊ *Comet P/2002 T1 (LINEAR)* \implies 2002 Oct. 11.14: difficult obs. of rather large, faint and very diffuse object; slight motion suspected over 20 min; obs. confirmed sighting of the previous morning (Oct. 10.15), when an object of similar appearance was seen moving near the expected position over a 25-min period, but a nearby star of mag 6.0 and windy conditions made a secure obs. impossible; check of Digital Sky Survey for both dates revealed no interfering stars or galaxies near the position of the comet [BOU]. Nov. 1.51, 22.41, and 29.53: GUIDE 8.0 software used for comp.-star mags [TSU02].

◊ *Comet C/2002 T5 (LINEAR)* \implies 2002 Nov. 6.60: GUIDE 8.0 software used for comp.-star mags [TSU02]. 2003 Jan. 25.49: GUIDE 8.0 software used for comp.-star mags [OHS].

◊ *Comet C/2002 T7 (LINEAR)* \implies 2002 Nov. 9.63, 28.57, Dec. 14.53, and 2003 Jan. 2.47: GUIDE 8.0 software used for comp.-star mags [TSU02]. 2002 Dec. 9.95: w/ CCD, in the same field as β Tau [HOR02]. Dec. 10.79: w/ CCD, close to star [HOR02]. Dec. 27.69: GUIDE 8.0 software used for comp.-star mags [OHS]. 2003 Jan. 17.87: strong moonlight [HOR02].

◊ *Comet C/2002 U2 (LINEAR)* \implies 2003 Jan. 7.88: GUIDE 8.0 software used for comp.-star mags [TSU02].

◊ *Comet C/2002 V1 (NEAT)* \implies 2002 Nov. 9.60, 28.55, 29.57, Dec. 14.47, 18.48, 28.53, 30.45, 2003 Jan. 2.42, 5.45,

and 8.45: GUIDE 8.0 software used for comp.-star mags [TSU02]. 2002 Nov. 28.62, Dec. 3.58, 22.37, 2003 Jan. 21.38, 23.42, 28.42, 30.39, and 31.42: StellaNavigator software used for comp.-star mags [OOT]. 2002 Nov. 28.71, Dec. 7.59, 12.71, 26.41, 27.43, 29.53, 2003 Jan. 1.43, 15.46, 23.46, and 29.42: GUIDE 8.0 software used for comp.-star mags [YOS02]. 2002 Dec. 1.98 and 28.95: w/ 25.6-cm L (169 \times), central cond. of mag 14.5 [BIV]. Dec. 2.76, 4.60, 11.58, 24.45, 26.38, 29.39, 2003 Jan. 4.44, 6.48, 8.48, 14.44, 21.40, 25.39, 28.41, 30.41, and 31.41: GUIDE 6.0 software used for comp.-star mags [NAG08]. 2002 Dec. 6.87: "a strong central cond. is present as a bright disk (a bit blue) of dia. $< 1'$ w/in a big, diffuse coma; difficult to estimate, a long-eyepiece defocussing was needed to get a uniform source of light" [MAR02]. Dec. 7.89: "clearly I lost the external parts of the coma due to the background sky, but even so, the comet remains bright; the disk is still there, but w/ no sign of color present today" [MAR02]. Dec. 8.88: very diffuse, large and round coma surrounding a more condensed central region of dia. 2.5 and w/ a marginally brighter center [WAR01]. Dec. 8.91: clear enhancement w/ Lumicon Swan Band Filter [MEY]. Dec. 10.87: w/ CCD, close to bright star [HOR02]. Dec. 11.49: very-low-intensity coma (very difficult to determine its size in moonlight); m_1 probably conservative [SEA]. Dec. 11.97: faint object, significantly condensed towards center; at 242 \times , no false nucleus brighter than mag 13.5 [KAM01]. Dec. 13.71 and 2003 Jan. 25.42: GUIDE 8.0 software used for comp.-star mags [OHS]. 2002 Dec. 14.08: comet not visible; obs. at alt. $\sim 20^\circ$, but under a quite dark sky [GRA04]. Dec. 21.44: conditions quite poor (M74 could not be detected); comet enhanced quite strongly w/ Swan Band filter [SEA]. Dec. 23.73: round, very diffuse w/ marginally brighter center; very large; no central cond. seen; similar in appearance to nearby M74, but brighter and larger [WAR01]. Dec. 24.73: faint, but seen w/ certainty; comet was diffuse and ill-defined [GRA04]. Dec. 27.72: faintly seen w/ 12 \times 50 B [GRA04]. 2002 Dec. 30.45, 2003 Jan. 4.39, 7.51, 12.40, 21.46, 24.41, 25.41, 28.40, and 30.40: The Sky (ver. 5) software used for comp.-star mags [MIT]. 2002 Dec. 30.75: clearly visible in 12 \times 50 B, despite a quite-bright sky background [GRA04]. Dec. 30.82: w/ 25.6-cm L (169 \times), central cond. of mag 13.3 [BIV]. Dec. 30.97: "central cond. partly visible in B, but no sign of the strong one seen through a telescope days ago" [MAR02].

2003 Jan. 2.85: w/ 25.6-cm L (169 \times), central cond. of mag 12.9 [BIV]. Jan. 3.87: not visible in 12 \times 50 B, due to unfavorable conditions [GRA04]. Jan. 3.90: "central cond. is difficult to detect in B; w/ 10-cm R, the disk-like cond. is still visible at $m_1 = 7.9$, dia. 7', DC = 6" [MAR02]. Jan. 4.39, 6.52, 8.52, 21.41, 24.40, 25.40, 26.40, 28.39, 29.40, 30.40, and 31.39: GUIDE 7.0 software used for comp.-star mags [MIY01]. Jan. 5.77: very diffuse; surface brightness similar to M33 [GRA04]. Jan. 6.96: w/ 20.3-cm T (133 \times), central cond. of mag 13.1 [BIV]. Jan. 7.45: "comet appeared more condensed and of higher surface intensity than at previous observations" [SEA]. Jan. 8.92: comet obs. at alt. 15° , after moonset [BOU]. Jan. 8.99: interference from moonlight and clouds [SOU01]. Jan. 9.15: moonlight and light pollution [CRE01]. Jan. 9.75: moon only 13° from comet [SCH04]. Jan. 9.83: quick obs. due to clouds; comet clearly visible despite a nearly-first-quarter Moon [GRA04]. Jan. 10.73: moon 18° from comet; comet seems oval [BUS01]. Jan. 11.75: rather diffuse object in B; w/20-cm T (50 \times), surprisingly conspicuous central cond. (knot of material of dia. 30"), which showed a false nucleus of mag ~ 11.5 at 161 \times ; moon brightened background significantly [KAM01]. Jan. 12.77: w/ 25.6-cm L (169 \times), central cond. of mag 12.6 [BIV]. Jan. 12.78: "comet more condensed than yesterday; w/ 20-cm T (50 \times), conspicuous central cond. (knot of material of dia. 30"), which showed a false nucleus of mag ~ 12.0 at 161 \times ; interference from moon much less than yesterday" [KAM01]. Jan. 13.08: an easy binocular object, despite moonlight [CRE01]. Jan. 15.71: comet easily seen w/ the 7.0-cm R and 15.2-cm L; quite faint in 7 \times 50 B; moonlight [GRA04]. Jan. 15.71: moonlight [HOR02]. Jan. 17.39: GUIDE 8.0 software used for comp.-star mags [NAK01]. Jan. 17.74: easy object despite full moon (coma significantly more condensed); w/ 20-cm T (50 \times), bright central cond.; at 161 \times , no false nucleus definitely seen [KAM01]. Jan. 17.75: full moon [SCH04]. Jan. 17.76: strong moonlight [HOR02]. Jan. 18.73: not difficult to obs. despite the full Moon [GRA04]. Jan. 23.42: "comet very condensed and visible to the naked eye (was in the process of making a visual naked-eye magnitude estimate when clouds moved in; w/ 4-inch f/5 R (23 \times), it has a bright pseudonucleus (a high degree of central cond.) and tightly wrapped inner coma, which is almost uniformly bright to $\approx 7'$ from the nucleus; beyond that is a dimmer mantle of fuzziness to $\approx 3'$; very straight tail $\approx 2^\circ$ long; clouds moved in and before I could make accurate measurements of the comet's coma dia. and tail length" [OME]. Jan. 23.86: strong central cond. w/ a smaller, more-diffuse coma than weeks ago [MAR02]. Jan. 24.86: "central cond. seems a bit fainter today, clearly smoothing the brightness profile" [MAR02]. Jan. 25.02: comet seemed to have a bluish color; visible in 8 \times 42 B [NOW]. Jan. 25.75: rather strongly condensed object displaying a faint tail; w/ 30-cm T (75 \times), tail well visible; coma showed bright central cond., and at 242 \times , a barely visible, star-like false nucleus of mag 12 at center [KAM01]. Jan. 25.84: no tail visible in B, due to poor conditions; w/ 45-cm L (65 \times), tail length $\sim 0.5^\circ$ [MAR02]. Jan. 26.79: w/ 7.0-cm f/6.8 R (15 \times), dia. 5' and DC = 7; coma appeared bluish; an apparently stellar central cond. (mag ≈ 8) was surrounded by a diffuse glow w/ ill-defined boundaries; comet only clearly seen for a couple of minutes due to clouds [GRA04]. Jan. 27.75-27.76: comet barely visible to naked eye; w/ 7 \times 50 B, coma dia. approximate [SKI] Jan. 31.00: tail extremely faint and thin; coma had a bluish-gray tint [NOW]. Jan. 31.02: w/ 16 \times 80 B, $m_1 = 5.5$ (MM = B), dia. = 5', DC = 7, tail 1.5° long in p.a. 60° (tail's surface brightness still quite low); w/ 25-cm T (114 \times), intensely condensed coma and some tail structure visible; tail is still a relatively straight, narrow ion tail; coma just visible to naked eye [CRE01]. Jan. 31.77: well-condensed, round coma w/ brighter center; straight tail; visible to naked eye; similar in appearance to a globular cluster; alt. $\approx 11^\circ$ [WAR01]. Jan. 31.69: round coma w/ starlike central cond. [AND01].

◊ Comet C/2002 V2 (LINEAR) \implies 2003 Jan. 2.51: GUIDE 8.0 software used for comp.-star mags [TSU02].

◊ Comet C/2002 X1 (LINEAR) \implies 2002 Dec. 27.73, 2003 Jan. 6.78, and 12.75: GUIDE 8.0 software used for comp.-star mags [OHS]. 2003 Jan. 8.55: GUIDE 8.0 software used for comp.-star mags [TSU02]. Jan. 31.94: motion evident after 0.5 hr [BOU].

◊ Comet C/2002 X5 (Kudo-Fujikawa) \implies 2002 Dec. 15.82, 22.82, 26.37, 27.85, 29.37, 2003 Jan. 3.85, 5.86, 8.85, 11.86, and 14.87: GUIDE 6.0 software used for comp.-star mags [NAG08]. 2002 Dec. 17.84 and 28.88: GUIDE 8.0

software used for comp.-star mags [TSU02]. Dec. 18.10: diffuse and clearly condensed coma; comet clearly visible despite moonlight and artificial light pollution [GRA04]. Dec. 18.21: near-full moon 115° to the W; otherwise good conditions [GIL01]. Dec. 18.71, 20.20, and 2003 Jan. 11.69: moonlight [HOR02]. 2002 Dec. 19.71: moonlight [MEY]. Dec. 19.79, 27.82, 2003 Jan. 6.86, 12.87, and 15.86: GUIDE 8.0 software used for comp.-star mags [OHS]. 2002 Dec. 21.26: comet weakly visible in B — much fainter than M13; moon and astron. twilight [GRA04]. Dec. 21.63: coma faintly bluish in color; central cond. bright but not quite starlike [SHU]. Dec. 22.35: StellaNavigator software used for comp.-star mags [OOT]. Dec. 22.69: round, diffuse w/ brighter center [WAR01]. Dec. 23.18: coma noticeably larger, despite moonlight; somewhat diffuse central cond. [SHU]. Dec. 23.69: round, diffuse w/ brighter center [WAR01]. Dec. 24.69: clearly visible under a quite dark sky [GRA04]. Dec. 27.69: the comet's extent and size was similar to that of M27, but considerably fainter than M92; some interference from clouds and aurora [GRA04]. Dec. 29.69: sky not impressive (high thin clouds) [GRA04]. Dec. 29.86, 2003 Jan. 1.84, and 8.88: GUIDE 8.0 software used for comp.-star mags [YOS02]. 2003 Jan. 2.75: w/ 25.6-cm L (169 \times), central cond. of mag 12.6 [BIV]. Jan. 3.17: poor transparency [GRA04]. Jan. 3.84 and 6.85: The Sky (ver. 5) software used for comp.-star mags [MIT]. Jan. 4.82, 5.86, 6.85, 7.86, 8.85, 11.85, 14.86, and 15.86: GUIDE 7.0 software used for comp.-star mags [MIY01]. Jan. 5.25: tail was faint; brightness and size of coma similar to that of M92; obs. under considerably better conditions than recently [GRA04]. Jan. 5.77: tail only barely visible; obs. shortly before setting below local horizon (true alt. $\sim 10^\circ$) [GRA04]. Jan. 6.69: low, high clouds [HOR02]. Jan. 7.24: coma slightly blue-greenish [RIE]. Jan. 7.26: w/ 20.3-cm T (133 \times), central cond. of mag 11.8; 1' jet in p.a. 260° [BIV]. Jan. 8.25: w/ 12 \times 50 B: somewhat brighter than M92 [GRA04]. Jan. 8.69: close to bright star (visual) [HOR02]. Jan. 11.21: low; bright sky [HOR02]. Jan. 12.22: moonlight [MAN02]. Jan. 12.24: comet nearly starlike at first glimpse; faint tail suspected [KAM01]. Jan. 12.25: w/ 25.6-cm L (169 \times), central cond. of mag 11.3 [BIV]. Jan. 12.26: a bright inner coma was surrounded by a faint glow; astron. twilight [GRA04]. Jan. 12.73: w/ 25.6-cm L (169 \times), central cond. of mag 11.8 [BIV]. Jan. 13.25: w/ 12 \times 50 B, comet appeared en par M13 in brightness; using 15.2-cm L, an apparently stellar nucleus was surrounded by a bright inner coma; coma appeared blue-green; tail was faint [GRA04]. Jan. 15.26: w/ 25.6-cm L (169 \times), central cond. of mag 10.7 [BIV]. Jan. 15.71: w/ 7.0-cm R, the coma showed a bright central cond. of size 0'5-1' at mag ~ 7.0 (ref TK); no tail visible; comet faintly seen in 7 \times 50 B at same m_1 and dia.; evening obs. at alt. 8° , astron. twilight and moonlight [GRA04]. Jan. 16.25: moon very low (alt. $2^\circ 5'$) behind cloud bank in the W; comet at alt. 8° ; tail faint, but fairly long [BOU]. Jan. 16.25: comet remained visible in 7 \times 50 B until true solar alt. $-8^\circ 0'$; the comet and its tail was, at the same time, successfully imaged w/ 25.4-cm f/6 L (+ CCD + V filter); morning obs. at alt. 10° [GRA04]. Jan. 17.24: comet only 6° above horizon; comet strongly condensed; w/ 9-cm T (39 \times), dominating central cond. w/in faint coma; faint tail suspected towards p.a. 355° [KAM01]. Jan. 18.71: challenging evening obs. due to low alt. (3° - 4°) and interference from trees; comet was not visible in 12 \times 50 B; mag not corrected for extinction, as the comp. star (58 Aql) was at nearly the the alt. as comet; comet appeared at least 1.0 mag fainter than the nearby variable star η Aql [GRA04].

◊ Comet C/2002 Y1 (Juels-Holvorcem) \implies 2003 Jan. 5.80, 6.83, 7.81, 8.80, 11.80, 13.78, 14.79, 15.84, 28.85, 29.79, 30.77, and 31.75: GUIDE 7.0 software used for comp.-star mags [MIY01]. Jan. 6.82: GUIDE 8.0 software used for comp.-star mags [OHS]. Jan. 7.82: GUIDE 8.0 software used for comp.-star mags [TSU02]. Jan. 8.83, 11.84, and 31.72: GUIDE 6.0 software used for comp.-star mags [NAG08]. Jan. 8.83: GUIDE 8.0 software used for comp.-star mags [YOS02]. Jan. 27.25: comet was barely visible; its angular extent was similar to M97, although M97 was clearly brighter; moon and astron. twilight [GRA04]. Jan. 31.67: The Sky (ver. 5) software used for comp.-star mags [MIT]. Feb. 1.00: "comet impressive in 31.0-cm J — quite a difference w/ the view only 6 days ago!" [BOU].

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Key to observers with observations published in this issue, with 2-digit numbers between Observer Code and Observer's Name indicating source [07 = Comet Section, British Astronomical Association; 11 = Dutch Comet Section (Werkgroep Kometen); 16 = Japanese observers (via Akimasa Nakamura, Kuma, Japan); 35 = South American observers (c/o Jose G. de Souza Aguiar, Brazil); 42 = Belarus observers (c/o V. S. Nevski and S. E. Shurpakov, Vitebsk); 48 = Ukrainian observers (c/o Denis A. Svechkarev); etc.]:

ABB	07	James Abbott, Essex, England	CSU	32	Mátyás Csukás, Salonta, Romania
AM001	35	Alexandre Amorim, Brazil	DES01		Jose G. de Souza Aguiar, Brazil
AND01		Karl-Gustav Andersson, Sweden	DIE02		Alfons Diepvens, Belgium
ARA	35	Wesley Araujo, Salvador, Brazil	DIJ		Edwin van Dijk, The Netherlands
ARQ	35	Adrian P. Arquiola, Argentina	EZA	16	Y. Ezaki, Toyonaka, Osaka, Japan
BAR		Sandro Baroni, Italy	FOG		Sergio Foglia, Italy
BIV		Nicolas Biver, France	GIA01		A. Giambersio, Potenza, Italy
BOU		Reinder J. Bouma, The Netherlands	GIL01	11	Guus Gilein, The Netherlands
BUS01	11	E. P. Bus, The Netherlands	GON05		J. J. Gonzalez, Asturias, Spain
CER01	23	Jakub Černý, Praha, Czech Rep.	GRA04	24	Bjoern Haakon Granslo, Norway
CHE03	33	Kazimieras T. Černis, Lithuania	GRE		Daniel W. E. Green, U.S.A.
COM	11	Georg Comello, The Netherlands	HAS02		Werner Hasubick, Germany
CRE01		Phillip J. Creed, OH, U.S.A.	HOD02	35	Juan M. Hodar, Campinas, Brazil

HOE	Sebastian F. Hoenig, Germany	RAE	Stuart T. Rae, New Zealand
HOR02 23	Kamil Hornoch, Czech Republic	RIE 11	Hermanus Rietveld, Netherlands
JOH01	C. Johannink, The Netherlands	ROD01 13	Diego Rodriguez, Mallorca, Spain
KAD02 16	Ken-ichi Kadota, Saitama, Japan	ROM 42	Aleksandr M. Romancev, Belarus
KAM01	A. Kammerer, Ettlingen, Germany	SAN04 38	Juan M. San Juan, Madrid, Spain
KIT02	Maxim Kititsa, Kiev, Ukraine	SCH04 11	Alex H. Scholten, The Netherlands
KOS 07	A. Kósa-Kiss, Salonta, Romania	SEA 14	David A. J. Seargent, Australia
LAB02	C. Labordena, Castellon, Spain	SEG 38	Carlos Segarra, Valencia, Spain
LEH	Martin Lehky, Czech Republic	SER02	Jérôme Serant, Chevillon, France
MAN02 23	Roman Maňák, Lipov, Czech Rep.	SHA02 07	Jonathan D. Shanklin, U.K.
MAR02 13	Jose Carvajal Martinez, Spain	SHU 42	S. E. Shurpakov, Baran, Belarus
MEY	Maik Meyer, Germany	SIM	Karl Simmons, FL, U.S.A.
MIT 16	Shigeo Mitsuma, Saitama, Japan	SIM01	Wanda Simmons, FL, U.S.A.
MIY01 16	Osamu Miyazaki, Ibaraki, Japan	SKI 24	Oddleiv Skilbrei, Norway
MOM 16	Masahiko Momose, Nagano, Japan	SOU01 35	W. C. de Souza, Sao Paulo, Brazil
MORO3	Warren C. Morrison, Canada	SVE01 48	Denis A. Svechkarev, Ukraine
MURO2 16	Shigeki Murakami, Niigata, Japan	TAY 07	M. D. Taylor, Yorkshire, England
NAK01 16	Akimasa Nakamura, Ehime, Japan	TIT 48	R. E. Titarenko, Ukraine
NAG08 16	Yoshimi Nagai, Yamanashi, Japan	TSU02 16	M. Tsumura, Wakayama, Japan
NAV01	Ramon Naves, Barcelona, Spain	VIN02 07	Alex Vincent, Sussex, England
NEV 42	V. S. Nevski, Vitebsk, Belarus	WAR01	Johan Warell, Sweden
NOW	Gary T. Nowak, VT, U.S.A.	YOS02 16	Katsumi Yoshimoto, Hirao, Japan
OHS 16	Yuuji Ohshima, Nagano, Japan	YOS04 16	Seiichi Yoshida, Ibaraki, Japan
OME	Stephen O'Meara, MA, U.S.A.	ZAN	Mauro Vittorio Zanotta, Italy
OOT 16	Isao Ootsuki, Miyagi, Japan	ZNO 23	Vladimír Znojil, Czech Republic

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TABULATED VISUAL DATA (also format for old-style CCD data)

NOTE: As begun in the October 2001 issue, the CCD and visual tabulated data are separated. The tabulated CCD data are also now generally further separated into two "CCD" sections: the first in the old format for those observations submitted only in the old format, and the second in the new format (whose columns are described on page 208 of the July 2002 *ICQ*).

The headings for the tabulated data are as follows: "DATE (UT)" = Date and time to hundredths of a day in Universal Time; "N" = notes [* = correction to observation published in earlier issue of the *ICQ*; an exclamation mark (!) in this same location indicates that the observer has corrected his estimate in some manner for atmospheric extinction (prior to September 1992, this was the standard symbol for noting extinction correction, but following publication of the extinction paper — July 1992 *ICQ* — this symbol is only to be used to denote corrections made using procedures different from that outlined by Green 1992, *ICQ* 14, 55-59, and in Appendix E of the *ICQ Guide to Observing Comets* — and then only for situations where the observed comet is at altitude > 10°); '&' = comet observed at altitude 20° or less with no atmospheric extinction correction applied; '\$' = comet observed at altitude 10° or lower, observations corrected by the observer using procedure of Green (*ibid.*); for a correction applied by the observer using Tables Ia, Ib, or Ic of Green (*ibid.*), the letters 'a', 'w', or 's', respectively, should be used; x indicates that a secondary source (often amateur computer software) was used to get supposedly correct comparison-star magnitudes from an accepted catalogue].

"MM" = the method employed for estimating the total (visual) magnitude; see article on page 186 of the Oct. 1996 issue [B = VBM method, M = Morris method, S = VSS or In-Out method, I = in-focus, C = unfiltered CCD, c = same as 'C', but for 'nuclear' magnitudes, V = electronic observations — usually CCD — with Johnson V filter, *etc.*]. "MAG." = total (visual) magnitude estimate; a colon indicates that the observation is only approximate, due to bad weather conditions, *etc.*; a left bracket ([]) indicates that the comet was not seen, with an estimated limiting magnitude given (if the comet IS seen, and it is simply estimated to be fainter than a certain magnitude, a "greater-than" sign (>) must be used, not a bracket). "RF" = reference for total magnitude estimates (see pages 98-100 of the October 1992 issue, and Appendix C of the *ICQ Guide to Observing Comets*, for all of the 1- and 2-letter codes; an updated list is also maintained at the *ICQ* World Wide Website). "AP." = aperture in centimeters of the instrument used for the observations, usually given to tenths. "T" = type of instrument used for the observation (R = refractor, L = Newtonian reflector, B = binoculars, C = Cassegrain reflector, A = camera, T = Schmidt-Cassegrain reflector, S = Schmidt-Newtonian reflector, E = naked eye, *etc.*). "F/" and "PWR" are the focal ratio and power or magnification, respectively, of the instrument used for the observation — given to nearest whole integer (round even); note that for CCD observations, in place of magnification is given the exposure time in seconds [see page 11 of the January 1997 issue; a lower-case "a" indicates an exposure time under 1000 seconds, an upper-case "A" indicates an exposure time of 1000-1999 seconds (with the thousands digit replaced by the "A"), an upper-case "B" indicates an exposure time of 2000-2999 seconds (with the thousands digit replaced by the "B"), *etc.*].

“COMA” = estimated coma diameter in minutes of arc; an ampersand (&) indicates an approximate estimate; an exclamation mark (!) precedes a coma diameter when the comet was not seen (*i.e.*, was too faint) and where a limiting magnitude estimate is provided based on an “assumed” coma diameter (a default size of 1' or 30" is recommended; cf. *ICQ* 9, 100); a plus mark (+) precedes a coma diameter when a diaphragm was used electronically, thereby specifying the diaphragm size (*i.e.*, the coma is almost always larger than such a specified diaphragm size). “DC” = degree of condensation on a scale where 9 = stellar and 0 = diffuse (preceded by lower- and upper-case letters S and D to indicate the presence of stellar and disklike central condensations; cf. July 1995 issue, p. 90); a slash (/) indicates a value midway between the given number and the next-higher integer. “TAIL” = estimated tail length in degrees, to 0.01 degree if appropriate; again, an ampersand indicates a rough estimate. Lower-case letters between the tail length and the p.a. indicate that the tail was measured in arcmin (“m”) or arcsec (“s”), *in which cases the decimal point is shifted one column to the right*. “PA” = estimated measured position angle of the tail to nearest whole integer in degrees (north = 0°, east = 90°). “OBS” = the observer who made the observation (given as a 3-letter, 2-digit code).

A complete list of the Keys to abbreviations used in the *ICQ* is available from the Editor for \$4.00 postpaid (available free of charge via e-mail); these Keys (with the exception of the Observer Codes) are also available in the *Guide to Observing Comets* and via the *ICQ*'s World Wide Web site. *Please note that data in archival form, and thus the data to be sent in machine-readable form, use a format that is different from that of the Tabulated data in the printed pages of the ICQ; see pages 59-61 of the July 1992 issue, p. 10 of the January 1995 issue, and p. 100 of the April 1996 issue for further information [note correction on page 140 of the October 1993 issue]. Further guidelines concerning reporting of data may be found on pages 59-60 of the April 1993 issue, and in the ICQ Guide to Observing Comets.*

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NOTE: The old-style CCD tabulated data begin on page 26 of this issue; the new-style CCD tabulated data begin on page 34.

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Visual Data

Comet 29P/Schwassmann-Wachmann

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 08 31.91		S	13.2	HS	25.6	L	5	84	1.3	3			BIV
2002 12 07.78		S	13.8	NP	44.5	L	5	100	1.5	0			MAR02

Comet 30P/Reinmuth

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2003 01 09.16	a	S	13.2	AC	31.0	J	6	109	1.1	2/			DIJ
2003 01 09.16	a	S	13.3	AC	31.0	J	6	109	1.0	3			BOU
2003 01 31.99	a	S	13.3	AC	31.0	J	6	109	1.1	0/			DIJ
2003 01 31.99	a	S	13.4	AC	31.0	J	6	109	1.0	2/			BOU

Comet 46P/Wirtanen

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 08 06.35		S	12.4	AC	44.5	L	4	167	0.7	2			MOR03
2002 08 19.36		S	11.5	AC	44.5	L	4	167	1.0	2			MOR03
2002 09 04.38		S	12.1	AC	44.5	L	4	167	0.9	2			MOR03
2002 09 08.39		S	12.2	AC	44.5	L	4	167	0.9	2			MOR03
2002 09 12.12		S	11.3:	TK	25.4	L	6	76	1.5	2			GRA04
2002 09 12.39		S	12.2	AC	44.5	L	4	167	1.0	1			MOR03
2002 09 17.40		S	11.9	AC	44.5	L	4	167	1.3	2			MOR03
2002 10 05.15		S	10.4	TK	25.6	L	5	42	2.5	4			BIV
2002 10 05.16		S	10.5	TK	25.6	L	5	84	2.0	4	0.05	290	BIV
2002 10 07.17		S	10.6	TK	25.6	L	5	42	2.2	4			BIV
2002 10 07.18		S	10.8	TK	25.6	L	5	84	2.0	5			BIV
2002 10 08.16		S	10.8	TK	25.4	J	6	72	2.7	2			BOU
2002 10 10.17		S	10.7	TK	31.0	J	6	72	2.5	1/			BOU
2002 10 10.18		S	11.0	TK	31.0	J	6	72	3.1	1/			DIJ
2002 10 11.17		S	10.9	TK	31.0	J	6	72	2.5	2			BOU
2002 10 11.18		S	10.9	TK	31.0	J	6	72	3.3	2			DIJ
2002 11 02.81	x	S	11.5:	HS	32.0	L	5	58	4	2			NAG08
2002 11 04.81	x	S	11.8:	HS	32.0	L	5	58	3	2			NAG08

Comet 46P/Wirtanen [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 05.22		S	11.8	HS	25.6	L	5	84	1.8	3			BIV
2002 11 16.23		S	12.6	HS	20.3	T	10	77	1.5	3			BIV
2002 11 17.22		S	12.8	HS	20.3	T	10	77	1.3	4			BIV

Comet 67P/Churyumov-Gerasimenko

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 08 19.35		S	12.7	AC	44.5	L	4	167	0.35				MOR03
2002 09 04.38		S	12.8	AC	44.5	L	4	167	0.6	4			MOR03
2002 09 08.39		S	13.1	AC	44.5	L	4	167	0.6	5			MOR03
2002 09 17.39		S	13.0	AC	44.5	L	4	167	0.8	4			MOR03
2002 09 17.81	x	S	12.5	HS	25.4	L	4	113	1.0	3/			YOS02
2002 10 08.13		B	12.7	TK	25.4	T	10	96	0.5	7			HOE
2002 10 08.15		S	12.6	AC	25.4	J	6	88	1.0	4/			BOU
2002 10 10.16	a	S	12.5	AC	31.0	J	6	89	1.3	2/			DIJ
2002 10 10.16	a	S	12.8	AC	31.0	J	6	89	1.0	4			BOU
2002 10 11.16		S	12.2	TK	31.0	J	6	109	1.6	2			DIJ
2002 10 11.16		S	12.6	TK	31.0	J	6	109	1.1	3			BOU
2002 12 08.06		B	14.2	HS	42	L	5	162	1.4	4			LEH
2002 12 11.06		B	14.1	HS	42	L	5	162	1.5	4			LEH

Comet 81P/Wild

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 06.89		S	14.4	NP	44.5	L	5	100	0.75	0			MAR02

Comet 92P/Sanguin

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 29.98		M	13.7	HS	35	L	5	158	1.0	3			HOR02
2002 09 30.97		S	13.8	HS	35	L	5	158	0.9	3			HOR02
2002 10 06.80		S	12.9	AC	25.4	J	6	115	1.3	3/			BOU

Comet 153P/Ikeya-Zhang

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 02 05.00		S	8.2	AA	15	R	5	42	3	4			MOR03
2002 03 01.02		S	6.2	AA	3.5	B		7	3.5				MOR03
2002 03 01.05		B	6.1	AA	4.2	B	5	8	4	2	1.5	47	NOW
2002 03 02.03		S	5.9	AA	3.5	B		7	2				MOR03
2002 03 11.02		B	4.3	A	5.0	B		7		8	1		SIM
2002 03 11.02		B	4.7	A	5.0	B		7					SIM01
2002 03 12.00		B	5.1	AA	3.5	B	5	7	6	5	3.25	45	NOW
2002 03 13.03		S	4.3	AA	3.5	B		7	2	7	0.80	65	MOR03
2002 03 16.02		B	4.4	AA	4.2	B	5	8	8	5	3.0	47	NOW
2002 03 17.03		S	3.6	AA	3.5	B		7		S8	2.5	60	MOR03
2002 03 22.03		S	3.8	AA	3.5	B		7	2.5	S8	2.5	45	MOR03
2002 03 28.04		B	3.8	AA	3.5	B		7	2	S8	1.3	20	MOR03
2002 03 29.02		B	3.7	AA	4.2	B	5	8	10	7	2.2	40	NOW
2002 03 31.04		S	4.3	AA	3.5	B		7	2.5	6	2	25	MOR03
2002 04 02.04		S	3.5	AA	3.5	B		7	2.5	6	2.25	15	MOR03
2002 04 07.06		S	4.1	AA	3.5	B		7	3.5	7	2.5	5	MOR03
2002 04 07.36		B	3.9	AA	4.2	B	5	8	17	7	5	310	NOW
2002 04 11.06		S	4.3	AA	3.5	B		7	6	6	2.5	350	MOR03
2002 04 12.38		S	4.0	AA	3.5	B		7	6.5	6	1.5	340	MOR03
2002 04 17.37		S	4.2	AA	3.5	B		7	7	6	1.03	320	MOR03
2002 04 18.38		S	4.2	AA	3.5	B		7	8	6	0.9	305	MOR03
2002 04 21.37		S	4.3	AA	3.5	B		7	9	5	1.3	305	MOR03
2002 04 23.37		S	4.5	AA	3.5	B		7	8.5	5	0.8	285	MOR03
2002 04 24.35		S	4.6	AA	3.5	B		7	10	5	0.6	290	MOR03
2002 05 01.14		S	4.6	AA	3.5	B		7	13	5	0.8	250	MOR03
2002 05 03.33		S	5.0	AA	3.5	B		7	16	5	0.7	235	MOR03
2002 05 06.10		S	5.2	AA	3.5	B		7	13	5			MOR03
2002 05 08.28		S	5.3	AA	3.5	B		7	16	5			MOR03
2002 05 08.93		M	5.4	TK	5	R	7	11	10	5			KIT02

Comet 153P/Ikeya-Zhang [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 05 09.92		M	5.7	TK	5	R	7	11	8	4			KIT02
2002 05 10.09		S	5.5	AA	3.5	B		7	13	5			MOR03
2002 05 11.18		S	5.5	AA	3.5	B		7	13.5	5			MOR03
2002 05 15.09		S	5.7	AC	3.5	B		7	16	4			MOR03
2002 05 16.08		S	5.9	AC	3.5	B		7	18	4			MOR03
2002 05 16.13		B	6.1	AC	3.5	B	5	7	13	4			NOW
2002 05 18.08		S	6.2	AC	3.5	B		7	12	4			MOR03
2002 05 19.11		S	6.0	AC	3.5	B		7	12	4			MOR03
2002 05 20.10		S	6.2	AC	3.5	B		7	10.5	5			MOR03
2002 05 21.11		S	6.0	AC	3.5	B		7	13	5			MOR03
2002 05 29.11		S	6.8	AC	3.5	B		7	11.5	4			MOR03
2002 06 03.28		S	6.9	AC	3.5	B		7	10.5	3			MOR03
2002 06 04.91		B	7.6	TI	8.0	B		11	10	3			LAB02
2002 06 07.11		S	7.3	AC	3.5	B		7	9	3			MOR03
2002 06 10.14		S	7.5	AC	3.5	B		7	10	4			MOR03
2002 06 15.87		B	8.0	TI	10.2	R	5	25	5	2			LAB02
2002 06 18.29		S	8.8	AC	15	R	5	42	6	3			MOR03
2002 06 20.29		S	8.2	AC	3.5	B		7	8				MOR03
2002 07 03.16		S	9.2	AC	15	R	5	42	4	2			MOR03
2002 07 05.18		S	9.2	AC	15	R	5	42	5	1			MOR03
2002 07 08.12		S	9.4	AC	15	R	5	42	4.5	1			MOR03
2002 07 09.08		S	9.0	TJ	8.0	B		11	& 5	1			SOU01
2002 07 12.95		B	9.3	TI	8.0	B		11	3	1	7 m		LAB02
2002 07 31.10		S	13.2	AC	44.5	L	4	167	0.7	1			MOR03

Comet 154P/Brewington

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 07.79		S	13.2	NP	44.5	L	5	100	2.5	2			MAR02
2002 12 07.80		S	13.5	NP	44.5	L	5	100	2	2			SAN04
2003 01 23.77		S	[12.1	HS	30	R	20	185					SHA02

Comet 155P/Shoemaker

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 08.10		M	13.0	HS	42	L	5	81	1.4	4			LEH
2002 12 09.10		M	13.0	HS	42	L	5	81	1.3	4			LEH
2002 12 11.10		M	13.1	HS	42	L	5	81	1.4	4			LEH
2003 01 09.18	a	S	13.3	AC	31.0	J	6	109	1.5	2			BOU
2003 01 09.19	a	S	13.3	AC	31.0	J	6	109	1.2	1			DIJ
2003 01 11.97		S	14.6	HS	35	L	5	237	0.5	3/			HOR02
2003 01 12.00		M	11.7	TI	42	L	5	81	1.8	4			LEH
2003 01 31.96		S	13.3	AC	31.0	J	6	124	1.5	2			DIJ
2003 01 31.96		S	13.5	AC	31.0	J	6	124	1.0	3/			BOU

Comet C/2000 WM_1 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2001 11 17.30		B	7.3	AC	6.3	B	5	12	8	3			NOW
2001 11 23.73		S	6.6	AA	8.0	B		20	9	5			BAR
2001 11 24.73		S	6.5	AA	8.0	B		20	10	4			BAR
2001 12 06.72		S	5.7	AA	8.0	B		20	20	3			BAR
2001 12 07.98		B	5.7	AC	3.5	B	5	7	15	3	2	45	NOW
2001 12 09.96		B	5.8	AC	12.5	B	5	27	18	3	2.2	45	NOW

Comet C/2001 HT_50 (LINEAR-NEAT)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 08.03		M	12.4	HS	42	L	5	81	1.6	3			LEH
2002 12 09.03		M	12.2	HS	42	L	5	81	1.8	3			LEH
2002 12 10.06		M	12.2	HS	42	L	5	81	1.8	3			LEH
2002 12 11.03		M	11.7	HS	42	L	5	81	1.8	3/			LEH
2002 12 11.66		S	12.6	GA	25.4	L	4	71	1				SEA
2002 12 12.73	x	M	12.8	HS	25.4	L	4	113	0.9	7			YOS02
2002 12 14.74	x	S	12.8	HS	45.7	L	4	68	1.0	7			MURO2

Comet C/2001 HT_50 (LINEAR-NEAT) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 27.76	x	S	12.8	HS	32.0	L	5	91	1.5	5			NAG08
2002 12 29.02		S	12.6	NP	25	L	5	96	1	6			SEG
2003 01 01.43		S	11.4	HS	20	L	4	80	1	5			RAE
2003 01 02.81	x	S	12.8:	HS	31.7	L	6	152	0.4	3			MIY01
2003 01 03.95		S	12.3	HS	20.3	T	10	77	1	4			GON05
2003 01 04.01		S	10.4	NP	10	R	5	45	1.5	2			MAR02
2003 01 04.79	x	S	13.4	HS	31.7	L	6	152	0.7	3/			MIY01
2003 01 05.02		M	11.8	TK	25.4	J	6	88	1.4	4/			BOU
2003 01 05.03		M	11.7	TK	25.4	J	6	88	1.0	3			DIJ
2003 01 05.77	x	S	12.8	HS	31.7	L	6	152	0.6	5			MIY01
2003 01 06.11		S	11.3	TK	25.4	T	10	158	1	5			AM001
2003 01 06.58	x	S	12.6	HS	32.0	L	5	91	0.9	7			NAG08
2003 01 06.81	x	S	13.1	HS	31.7	L	6	152	0.8	4/			MIY01
2003 01 06.99		S	12.6	VB	20	R	14	185	0.7	5			SHAO2
2003 01 07.05		S	11.7	TK	20.3	T	10	77	2.0	6			BIV
2003 01 07.15		B	11.5	TK	15	R	10	70	1	2			ARQ
2003 01 07.53		S	11.9	GA	25.4	L	4	71	2				SEA
2003 01 07.79	x	S	13.6	HS	31.7	L	6	152	0.6	3			MIY01
2003 01 08.01		S	11.5	TK	33	L	5	100	1.1	4			SHAO2
2003 01 08.61	x	M	13.3	HS	35.0	C	14	125	1.0	4			TSU02
2003 01 08.79	x	S	13.8	HS	31.7	L	6	152	0.6	3			MIY01
2003 01 08.81	x	S	12.2	HS	25.4	L	4	113	1.2	6			YOS02
2003 01 11.76		S	12.0	HS	31.7	L	6	152	1.3	4			YOS04
2003 01 11.76	x	S	13.1	HS	31.7	L	6	152	0.7	4			MIY01
2003 01 11.83	x	S	12.4	HS	32.0	L	5	58	1.2	6			NAG08
2003 01 11.96		M	10.5	TT	42	L	5	81	2	4			LEH
2003 01 12.09		M	12.0	HS	35	L	5	68	1.5	4			HOR02
2003 01 12.09		S	12.2	TT	25	L	5	60	1	4			SEG
2003 01 12.21		S	12.0	HS	25.6	L	5	42	1.3	5			BIV
2003 01 13.08		S	11.3	TK	25.4	T	10	158	1	1			AM001
2003 01 13.75	x	S	12.6	HS	31.7	L	6	152	0.6	3/			MIY01
2003 01 14.78	x	S	12.8:	HS	31.7	L	6	152	0.7	3			MIY01
2003 01 15.83	x	S	12.4	HS	31.7	L	6	152	0.7	3/			MIY01
2003 01 16.01		S	11.0:	TK	25.4	T	10	158	1	1			AM001
2003 01 23.97		S	12.2	VB	33	L	5	150	0.9	2			SHAO2
2003 01 23.98		S	12.3	HS	30	R	20	185	0.9	2			SHAO2
2003 01 23.99		S	11.7	HS	20.3	T	10	77	1	3			GON05
2003 01 24.48	x	S	12.8	HS	31.7	L	6	152	0.7	3/			MIY01
2003 01 25.93		S	11.9	TK	31.0	J	6	89	1.5	4			BOU
2003 01 25.94		S	11.7	TK	31.0	J	6	89	1.3	3/			DIJ
2003 01 25.97		M	11.5	NP	44.5	L	5	91	1	6	3 m 15		MAR02
2003 01 25.98		M	12.0	NP	44.5	L	5	91	0.5	6			SAN04
2003 01 27.01		S	12.1	HS	30	R	20	230	0.9	2			SHAO2
2003 01 27.17		B	11.1	TJ	15	R	10	70	1.5	2			ARQ
2003 01 27.99		S	11.8	HS	20.3	T	10	133	1	3			GON05
2003 01 28.50		S	11.9	GA	25.4	L	4	71	0.5				SEA
2003 01 28.99		S	12.5	VB	30	R	20	185	0.8	3			SHAO2
2003 01 29.08		S	11.7	TK	25.4	T	10	63	1	1			AM001
2003 01 30.73		S	11.3	TJ	31.7	L	6	152	1.8	4			YOS04
2003 01 30.73	x	S	11.9	HS	31.7	L	6	152	0.8	4			MIY01
2003 01 31.47		S	11.8	GA	25.4	L	4	114	0.8	5			SEA
2003 01 31.70	x	S	12.8	HS	32.0	L	5	91	1.0	7			NAG08
2003 01 31.72	x	S	13.1	HS	31.7	L	6	152	0.5	3/			MIY01
2003 01 31.92		M	11.8	TK	31.0	J	6	89	1.7	s5			BOU
2003 01 31.93		S	11.3	TK	31.0	J	6	89	1.3	3/			DIJ

Comet C/2001 K5 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 29.79		M	13.6	HS	35	L	5	158	0.6	3/			HOR02

Comet C/2001 Q4 (NEAT)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 03.57		S	14.5:	HS	28.0	T	10	196	0.3	6			BOU

Comet C/2001 RX₁₄ (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 30.05		M	12.0	HS	35	L	5	158	1.3	3			HOR02
2002 10 01.07		M	11.8	HS	35	L	5	158	1.4	3			HOR02
2002 10 02.12		M	11.9	HS	35	L	5	158	1.4	3			HOR02
2002 10 07.16		S	12.3	HS	25.6	L	5	84	1.3	5			BIV
2002 10 08.14		S	12.0	TK	25.4	J	6	88	1.4	4			BOU
2002 10 08.14		S	12.5	TK	25.4	T	10	96					HOE
2002 10 10.13		S	11.6	TK	31.0	J	6	72	2.1	3/			DIJ
2002 10 10.13		S	11.8	TK	31.0	J	6	72	1.5	4			BOU
2002 10 11.15		S	11.7	TK	31.0	J	6	89	1.5	2/			DIJ
2002 10 11.15		S	11.9	TK	31.0	J	6	89	1.9	3			BOU
2002 10 30.97		S	11.5	TK	25.4	J	6	72	2.0	3/			BOU
2002 10 30.98		S	11.5	TK	25.4	J	6	72	2	2/			DIJ
2002 11 02.72		S	12.1	HS	25.4	T	6	116	1.4	4			YOS04
2002 11 02.81	x	S	11.5	HS	32.0	L	5	58	1.6	6			NAG08
2002 11 04.04		S	12.7	HS	30	R	20	185	0.7	4			SHAO2
2002 11 04.80	x	S	11.6	HS	32.0	L	5	58	1.7	6			NAG08
2002 11 05.20		S	11.8	TK	25.6	L	5	42	1.5	5			BIV
2002 11 05.22		S	11.9	TK	25.6	L	5	84	1.5	6			BIV
2002 11 06.97		S	12.1	TK	20	T	10	160	0.8	3			SHAO2
2002 11 07.10		M	11.5	TT	11	R	15	47	1.5	4			LEH
2002 11 07.98		S	11.3	TK	25.4	J	6	72	1.8	3/			BOU
2002 11 09.83	x	S	11.8	TK	25.4	L	4	113	1.2	6	4	m 290	YOS02
2002 11 11.05		M	11.5	TK	35	L	5	68	1.8	4			HOR02
2002 11 16.22		S	11.7	TK	20.3	T	10	77	1.7	6			BIV
2002 11 16.82	x	S	11.9	TK	25.4	L	4	113	1.2	6	3	m 290	YOS02
2002 12 02.00		S	11.7	HS	25.6	L	5	42	1.5	5			BIV
2002 12 02.78	x	S	11.8	HS	32.0	L	5	91	0.9	7	2	m 290	NAG08
2002 12 04.62	x	S	11.6	HS	32.0	L	5	58	1.3	7	2	m 290	NAG08
2002 12 04.98		S	12.9:	HS	30	R	20	230	0.7	4			SHAO2
2002 12 07.96		M	11.3	TK	13	L	8	69	3.0	3			HOR02
2002 12 08.00		M	10.3	TT	42	L	5	81	2.7	3			LEH
2002 12 08.90		M	11.3	AS	30	L	5	60	1	4	0.1	290	NEV
2002 12 08.93		S	11.2	TK	25.4	T	6	64	1.2	3			MEY
2002 12 08.95		S	11.4	TK	25.4	T	6	64	1.8	2/			HOE
2002 12 09.00		M	10.3	TT	42	L	5	81	2.8	3			LEH
2002 12 09.00		M	11.0	TK	13	L	8	69	3.2	3			HOR02
2002 12 09.11		M	11.1	GA	15	L	5	42	1.5	3			SHU
2002 12 09.98		M	10.7	HS	11.4	L	8	75	2	8			CERO1
2002 12 10.00		M	10.4	TT	42	L	5	81	2.6	3			LEH
2002 12 10.07		M	11.0	TK	13	L	8	69	2.8	3			HOR02
2002 12 10.93		M	10.8	TK	13	L	8	69	2.6	2/			HOR02
2002 12 10.97		S	11.1	TK	25.6	L	5	42	2.5	4			BIV
2002 12 11.00		M	10.4	TT	42	L	5	81	2.7	3			LEH
2002 12 11.62	x	S	11.5	TJ	32.0	L	5	58	1.4	6			NAG08
2002 12 12.01		M	10.8	TK	13	L	8	69	2.7	2/			HOR02
2002 12 12.02		M	10.3	TT	42	L	5	81	2.8	3			LEH
2002 12 12.09		M	10.8	HS	11.4	L	8	75	1	7			CERO1
2002 12 12.76	x	M	11.5	TK	25.4	L	4	46	1.2	7	4	m 290	YOS02
2002 12 14.77	x	S	10.7	TK	45.7	L	4	68	2.8	6	0.28	310	MURO2
2002 12 15.84	x	S	11.3	HS	32.0	L	5	58	1.4	7			NAG08
2002 12 16.11		M	11.5	AS	30	L	5	100	0.8	4	4	m 290	NEV
2002 12 17.82	x	M	11.7:	HS	35.0	C	14	120					TSU02
2002 12 26.83		S	10.9	TJ	25.4	T	6	62	2.0	7			YOS04
2002 12 27.78	x	S	11.0	TJ	32.0	L	5	58	1.2	6/			NAG08
2002 12 28.97		S	11.1	TK	25.6	L	5	42	2.0	4	0.07	300	BIV
2002 12 28.97		S	11.7	HS	30	R	20	185	1.0	3			SHAO2
2002 12 28.98		S	11.3	TK	30	L	4	95	1.3	4	1	m 303	ABB
2002 12 29.82		S	10.9	TJ	25.4	T	6	62	1.8	7			YOS04
2002 12 29.84	x	M	10.8	TK	25.4	L	4	46	2.0	6	5	m 315	YOS02
2003 01 02.86	x	S	11.6:	HS	31.7	L	6	63	1.3	4			MIY01
2003 01 03.98		S	11.0	TJ	20.3	T	10	77	2	4			GON05
2003 01 04.03		S	9.9	NP	10	R	5	25	3	3			MAR02
2003 01 04.80	x	S	11.3	HS	31.7	L	6	63	1.2	5			MIY01
2003 01 04.99		S	10.7	TT	30.0	L	5	60	2	4			SCH04
2003 01 05.01		M	10.8	TK	25.4	J	6	88	& 2	5			BOU

Comet C/2001 RX₁₄ (LINEAR) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2003 01 05.02		M	10.6	TK	25.4	J	6	88	2.5	3/			DIJ
2003 01 05.81	x	S	11.7	HS	31.7	L	6	63	0.9	6	6.5m	310	MIY01
2003 01 05.84	x	S	10.8	TJ	32.0	L	5	58	1.3	6			NAG08
2003 01 06.01		S	11.5	TJ	15	L	5	42	1	3/			SHU
2003 01 06.59	x	S	10.9	TJ	32.0	L	5	58	1.7	5/			NAG08
2003 01 06.82	x	S	12.6	HS	31.7	L	6	63	1.6	5/	9 m	310	MIY01
2003 01 06.94		S	11.5	TI	30	L	5	60	1	3	4 m	315	NEV
2003 01 06.98		S	11.2	VB	20	R	14	140	1.1	4			SHA02
2003 01 07.00		S	11.0	TK	20.3	T	10	77	3.0	5	0.13	300	BIV
2003 01 07.81	x	M	11.5	HS	10.0	B		26	2				TSU02
2003 01 07.82	x	S	11.7	HS	31.7	L	6	63	1.1	5/	4 m	310	MIY01
2003 01 08.00		S	11.1	TK	33	L	5	100	1.8	5			SHA02
2003 01 08.81	x	S	11.8	HS	31.7	L	6	63	1.1	5/	13 m	305	MIY01
2003 01 08.82	x	S	10.9	TJ	32.0	L	5	58	1.9	6	7 m	285	NAG08
2003 01 08.85	x	M	11.3	TK	25.4	L	4	46	1.8	6	9 m	300	YOS02
2003 01 08.95		S	11.1	TK	20	R	14	140	1.4	4			SHA02
2003 01 09.17		M	10.6	TK	31.0	J	6	72	2.6	4/			BOU
2003 01 09.17		S	10.7	TK	31.0	J	6	72	2.0	4/			DIJ
2003 01 09.87	x	S	12.4:	HS	31.7	L	6	63	0.9	4/			MIY01
2003 01 10.98		M	11.9	TI	30	L	5	60	0.7	5	3 m	290	NEV
2003 01 11.09		S	11.0	TK	20	R	14	110	1.1	4			SHA02
2003 01 11.81	x	S	11.7	HS	31.7	L	6	63	1.3	5	7 m	280	MIY01
2003 01 11.82		S	10.9	TJ	31.7	L	6	63	2.2	6	5.5m	305	YOS04
2003 01 11.84	x	S	10.9	TJ	32.0	L	5	58	1.8	7	5 m	270	NAG08
2003 01 11.94		M	10.8	TK	35	L	5	68	2.3	5	5 m	310	HOR02
2003 01 12.05		M	10.0	TT	42	L	5	81	3	3			LEH
2003 01 12.09		S	10.6	TI	15.0	M		27	4	5			SER02
2003 01 12.22		S	10.9	TK	25.6	L	5	42	3.0	5	0.10	300	BIV
2003 01 13.76	x	S	12.0	HS	31.7	L	6	63	0.8	5	2.5m	315	MIY01
2003 01 14.80	x	S	11.8	HS	31.7	L	6	63	1.2	4	12 m	290	MIY01
2003 01 15.24		S	10.7	TK	25.6	L	5	42	3.0	5	0.12	300	BIV
2003 01 15.84	x	S	12.1	HS	31.7	L	6	63	1.6	5	5 m	295	MIY01
2003 01 16.25		S	11.1	TK	33	L	5	100	1.1	4			SHA02
2003 01 21.81		S	10.6	TK	25.4	J	6	58	& 2.5	4			BOU
2003 01 23.94		S	11.3	TK	33	L	5	100	1.2	3			SHA02
2003 01 23.97		S	11.2	TJ	20.3	T	10	77	2	6	0.2	300	GON05
2003 01 25.55	x	S	11.1:	HS	31.7	L	6	63	1.4	4			MIY01
2003 01 25.94		S	11.4	TK	30.5	T	10	56	& 2	2			COM
2003 01 25.97		S	10.8	TK	31.0	J	6	72	2.8	4			BOU
2003 01 25.98		S	11.1	TK	31.0	J	6	72	1.7	4			DIJ
2003 01 26.06		M	11.0	NP	44.5	L	5	91	1	6	4 m	280	SAN04
2003 01 26.06		M	11.2	NP	44.5	L	5	91	1.5	6/	6 m	280	MAR02
2003 01 27.04		S	11.5	TK	20	R	14	110	0.8	5			SHA02
2003 01 27.91		S	11.2	TJ	20.3	T	10	77	2	6	0.1	300	GON05
2003 01 28.84	x	S	11.9	HS	31.7	L	6	63	1.2	4/	5.5m	285	MIY01
2003 01 29.00		S	11.6	TK	30	R	20	185	0.7	5	1 m	270	SHA02
2003 01 29.81	x	S	11.3	HS	31.7	L	6	63	1.9	5	10 m	305	MIY01
2003 01 30.74		S	10.7	TJ	31.7	L	6	63	2.5	7			YOS04
2003 01 30.76	x	S	11.4	HS	31.7	L	6	63	1.0	5	10 m	305	MIY01
2003 01 31.69	x	S	11.4	TJ	15.0	B		25	3	5			MIT
2003 01 31.71	x	S	11.1	HS	32.0	L	5	58	2.3	6	4 m	290	NAG08
2003 01 31.73	x	S	11.4	HS	31.7	L	6	63	2.2	5	5 m	280	MIY01
2003 01 31.97		M	10.9	TK	31.0	J	6	72	2.4	5			BOU
2003 01 31.97		S	10.8	TK	31.0	J	6	72	2	4			DIJ

Comet C/2002 04 (Hoenig)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 07 31.12		S	9.9	AC	15	R	5	42	3.5	3			MOR03
2002 08 01.85		S	9.8	AC	6.3	R	13	52	5	1			KOS
2002 08 03.08		S	9.8	AC	15	R	5	42	4	3			MOR03
2002 08 03.91		S	9.6	AC	6.3	R	13	52	5	1			KOS
2002 08 04.10		S	9.7	AC	15	R	5	42	4	3			MOR03
2002 08 04.15		B	9.7	AA	10.0	B		20	6	1			NOW
2002 08 06.36		S	8.9	AC	15	R	5	42	4	3			MOR03

Comet C/2002 04 (Hoenig) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 08 06.86		S	8.6	AA	6.3	R	13	52	5	2			KOS
2002 08 08.35		S	9.0	AC	15	R	5	42	4.5	3			MOR03
2002 08 10.13		S	9.1	AC	15	R	5	42	4	3			MOR03
2002 08 10.84		S	8.1	AA	5.0	B		7	7	2			KOS
2002 08 11.08		S	9.1	AC	15	R	5	42	3	3			MOR03
2002 08 11.95		M	8.5	HS	36	L	6	68	6	3			KIT02
2002 08 15.84		S	7.8	AA	5.0	B		7	8	2			KOS
2002 08 16.26		S	8.9	AC	15	R	5	42	4.5	3			MOR03
2002 08 19.34		S	8.8	AC	15	R	5	42	5	3			MOR03
2002 08 20.34		S	8.8	AC	15	R	5	42	4	3			MOR03
2002 08 21.04		M	8.2	TI	5.0	B		10	5	7			CER01
2002 08 21.06		M	8.5	TK	36	L	6	68	6	3			KIT02
2002 08 24.79		S	8.1	AA	5.0	B		7	3	1			KOS
2002 08 24.80		S	8.0	AA	5.5	M		12	4	1			KOS
2002 08 26.08		S	9.2	AC	15	R	5	42	4	3			MOR03
2002 08 26.82		S	8.5	AA	6.3	R	13	52	7	0			KOS
2002 08 26.82		S	8.6	AA	5.5	M		12	5	0			KOS
2002 08 27.79		S	8.8	AA	6.3	R	13	52	6	0			KOS
2002 08 27.80		S	8.8	AA	5.5	M		12	5	0			KOS
2002 08 27.84		B	7.9	TI	8.0	B		11					LAB02
2002 08 28.09		S	8.8	AC	15	R	5	42	5	3			MOR03
2002 08 28.81		S	8.7	AA	6.3	R	13	52	4	1			KOS
2002 08 28.82		S	8.8	AA	5.5	M		12	3	1			KOS
2002 08 29.07		S	8.8	AC	15	R	5	42	4.5	3			MOR03
2002 08 29.91		B	8.0	TI	8.0	B		11	6	3			LAB02
2002 08 30.81		S	8.5	AA	5.5	M		12	3	2			KOS
2002 08 30.81		S	8.5	AA	6.3	R	13	52	5	2			KOS
2002 08 30.91		S	8.4	TK	5.0	B		7	5	5			BIV
2002 08 30.91		S	8.9	TK	25.6	L	5	42	6	4	0.1	40	BIV
2002 08 31.09		S	9.2	AC	15	R	5	42	4	3			MOR03
2002 08 31.10		B	9.1	AC	8.0	B		15	6	3			NOW
2002 08 31.89		S	8.8	TK	5.0	B		7	7	5			BIV
2002 08 31.89		S	8.9	TK	25.6	L	5	42	6	5	0.2	60	BIV
2002 08 31.93		B	8.0	TI	8.0	B		11	5	3			LAB02
2002 09 01.95		S	8.7	TK	5.0	B		7	5	5			BIV
2002 09 01.95		S	8.8	TK	20.3	L	6	48	5	4			BIV
2002 09 02.06		S	9.0	AC	15	R	5	42	4.5	3			MOR03
2002 09 02.87		S	8.7	TK	20.3	L	6	48	5	4	0.1	60	BIV
2002 09 02.88		S	8.6	TK	5.0	B		7	5	4			BIV
2002 09 04.06		S	8.8	AC	15	R	5	42	4	3			MOR03
2002 09 04.86		S	8.9	TK	5.0	B		7	5	4			BIV
2002 09 04.86		S	9.1	TK	20.3	L	6	48	4	4			BIV
2002 09 06.04		S	8.6	TT	10	B		25		2			MAN02
2002 09 06.05		S	9.0	AC	15	R	5	42	4	3			MOR03
2002 09 06.79		S	9.8	AC	5.0	B		7	3	1			KOS
2002 09 07.79		S	9.8	AC	6.3	R	13	52	3	1			KOS
2002 09 11.10		S	8.3:	TK	5.0	B		7	4	5			BIV
2002 09 11.11		S	8.7	TK	25.6	L	5	42	5	4	0.1	50	BIV
2002 09 11.93		S	8.3	TK	5.0	B		12	7	4			GRA04
2002 09 12.05		S	9.2	AC	15	R	5	42	3	3			MOR03
2002 09 24.82		S	10.3	TK	20.3	L	6	95	2	3			BIV
2002 09 24.83		S	10.0:	TK	20.3	L	6	48	2	3			BIV
2002 09 26.02		w S	10.3	AC	15	R	5	42	2.5	1			MOR03
2002 09 27.80		B	9.3	TI	10.0	R		25	2	1	0.03		LAB02
2002 09 28.81		S	10.5	TK	25.6	L	5	42	3.5	2			BIV
2002 10 05.18		S	11.6:	TK	25.6	L	5	42	2.5	2			BIV
2002 10 05.18		S	11.6:	TK	25.6	L	5	84	2.0	2			BIV

Comet C/2002 06 (SWAN)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 08 03.35		s S	7.6	AC	15	R	5	42	6	3			MOR03
2002 08 04.35		s S	7.6	AC	15	R	5	42	4.5	3			MOR03
2002 08 06.36		S	6.6	AC	3.5	B		7	6	3			MOR03
2002 08 08.12		S	6.3	AA	8.0	B		20	8	2			BAR

Comet C/2002 06 (SWAN) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 08 08.36		S	6.5	AC	3.5	B		7	8	3			MOR03
2002 08 11.06		S	6.2	AC	5.0	B		7	12	2			KOS
2002 08 11.06		S	6.3	AC	6.3	R	13	52	15	3			KOS
2002 08 12.13		S	6.2	AA	8.0	B		20	7	3			BAR
2002 08 17.36	s	S	6.3	AC	3.5	B		7	8	3			MOR03
2002 08 19.37	s	S	7.3	AC	3.5	B		7	6	4			MOR03
2002 08 21.13		M	5.9	TI	5.0	B		10	10	5			CER01
2002 08 31.84		S	8.1	TK	25.6	L	5	42	3.5	6	0.1	0	BIV
2002 08 31.86		S	7.8	TK	5.0	B		7	3	5			BIV
2002 09 02.86		S	8.4	TK	20.3	L	6	48	3	4			BIV
2002 09 04.06	s	S	9.4	AC	15	R	5	62	3.8				MOR03
2002 09 04.84		S	8.9	TK	20.3	L	6	48	3	4			BIV
2002 09 11.16		S	9.7	TK	25.6	L	5	42	2	1			BIV
2002 09 12.12		B	10.8	TK	25.4	L	6	76	1				GRA04

Comet C/2002 Q5 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 10 06.78		a	S	12.9	GA	25.4	J	6	115	1.2			BOU
2003 01 04.85	x	S	12.2	HS	31.7	L	6	152	0.5	4/			MIY01
2003 01 05.85	x	S	12.8	HS	31.7	L	6	152	0.5	3			MIY01
2003 01 06.86	x	S	12.5	HS	31.7	L	6	152	0.5	2			MIY01
2003 01 07.85	x	S	12.5	HS	31.7	L	6	152	0.5	2/			MIY01
2003 01 08.84	x	S	13.1	HS	31.7	L	6	152	0.7	2			MIY01
2003 01 11.84	x	S	12.7	HS	31.7	L	6	152	0.9	2/			MIY01
2003 01 11.85		S	12.2	HS	31.7	L	6	152	1.8	3			YOS04
2003 01 11.85	x	S	12.5	HS	32.0	L	5	58	1.8	3			NAG08
2003 01 13.84	x	S	13.3	HS	31.7	L	6	152	0.7	2			MIY01
2003 01 14.85	x	S	13.2	HS	31.7	L	6	152	0.6	3			MIY01
2003 01 15.85	x	S	13.3:	HS	31.7	L	6	152	0.7	2/			MIY01
2003 01 31.68		S	12.4	GA	25.4	L	4	71	2	1			SEA

Comet P/2002 T1 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 10 11.14		S	13.4:	GA	31.0	J	6	109	1.8	0/			BOU

Comet C/2002 U2 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2003 01 09.22	a	S	13.7	AC	31.0	J	6	143	0.7	4			BOU
2003 01 09.22	a	S	13.8	AC	31.0	J	6	143	0.8	0/			DIJ

Comet C/2002 V1 (NEAT)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 28.62	x	S	12.8	HS	31.0	L	6	114	& 2	4			OOT
2002 11 28.71	x	S	12.1	TK	25.4	L	4	113	1.5	3			YOS02
2002 12 01.82		M	11.5	TT	11	R	15	47	2	5			LEH
2002 12 01.97		S	12.3	HS	25.6	L	5	42	1.8	3			BIV
2002 12 01.98		S	12.4	HS	25.6	L	5	84	1.3	4			BIV
2002 12 02.76	x	S	11.6	HS	32.0	L	5	91	2.4	4			NAG08
2002 12 03.54		S	12.0	TK	28.0	T	6	84	2.0	3/			BOU
2002 12 03.58	x	S	11.6	HS	31.0	L	6	114	& 2	3			OOT
2002 12 04.60	x	S	11.4	HS	32.0	L	5	58	2.9	3			NAG08
2002 12 04.94		S	12.3	TK	30	R	20	185	1.4	3			SHAO2
2002 12 06.87		M	10.8	HS	44.5	L	5	100	8	D4			MAR02
2002 12 06.88		M	11.0	HS	44.5	L	5	100	6	3			SAN04
2002 12 07.55		S	11.9	HS	40.0	L	5	131	& 2	4/			BOU
2002 12 07.55		S	12.4	TK	40.0	L	5	131		3/			COM
2002 12 07.59	x	S	11.4	TK	25.4	L	4	46	3.9	3			YOS02
2002 12 07.83		M	11.0	TT	42	L	5	81	2.2	4			LEH
2002 12 07.89		M	10.5	HS	44.5	L	5	100	6	D3			MAR02
2002 12 07.89		M	10.8	HS	44.5	L	5	100	4	3			SAN04
2002 12 07.92		M	11.0	TK	13	L	8	69	3.2	3/			HOR02

Comet C/2002 V1 (NEAT) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 08.88		B	12.2	TK	45	L	4	40	5				WAR01
2002 12 08.91		M	10.8	TT	42	L	5	81	2.7				LEH
2002 12 08.91		S	11.8	TK	25.4	T	6	64	2.4	2/			MEY
2002 12 08.92		S	11.7	TK	25.4	T	6	64	2.5	3			HOE
2002 12 08.95		M	10.8	TK	13	L	8	69	3.3	3/			HOR02
2002 12 09.88		S	[11.5	HS	30	R	20	230					SHA02
2002 12 09.92		M	10.8	TT	42	L	5	81	2.5	4			LEH
2002 12 09.94		M	11.2	HS	11.4	L	8	75	3	7			CER01
2002 12 09.97		M	10.8	TK	13	L	8	69	3.4	3			HOR02
2002 12 10.81		S	11.3	TK	44.0	L	5	100	1.4	3			HAS02
2002 12 10.90		M	11.3	TK	25.4	T	6	64	2.1	3/			HOE
2002 12 10.93		M	10.7	TT	42	L	5	81	2.5	4			LEH
2002 12 10.95		S	10.6	TK	25.6	L	5	42	4.0	3			BIV
2002 12 10.96		M	10.5	TK	13	L	8	69	3.0	2/			HOR02
2002 12 11.49		S	11.5	GA	25.4	L	4	71					SEA
2002 12 11.58	x	S	11.1	TJ	32.0	L	5	58	2.5	3/			NAG08
2002 12 11.97		M	10.4	TK	13	L	8	69	3.3	2/			HOR02
2002 12 11.97		S	11.2	TK	30.5	T	11	75	1.3	4			KAM01
2002 12 11.99		M	10.7	TT	42	L	5	81	2.6	4			LEH
2002 12 12.06		M	10.4	TI	11.4	L	8	75	4	6			CER01
2002 12 12.71	x	S	10.3	TK	25.4	L	4	46	4.0	3			YOS02
2002 12 14.08		B	[10.5	TK	7.0	R	7	24	!	3			GRA04
2002 12 17.75		S	[10.6	HS	30	R	20	230					SHA02
2002 12 18.76		S	11.9:	TK	30	R	20	230	0.5	3			SHA02
2002 12 21.44		S	9.2	AA	10.0	B		25					SEA
2002 12 22.37	x	S	9.5	TK	31.0	L	6	40	& 2	3			OOT
2002 12 23.73		S	8.6	TT	10	T	10	45	12	1			WAR01
2002 12 24.45	x	S	9.5	TJ	32.0	L	5	58	3.9	4			NAG08
2002 12 24.71		M	10.3	AA	30	L	5	60	5	3			NEV
2002 12 24.73		S	9.3	TK	7.0	R	7	24	6	3			GRA04
2002 12 25.72		M	10.0:	PA	15	L	5	62	3	4/			SHU
2002 12 26.00		S	10.0	TK	25.4	T	10	50	3	2/			AM001
2002 12 26.38	x	S	9.4	TJ	10.0	B		20	4	4			NAG08
2002 12 26.41	x	S	9.3	TK	10.0	B		20	6	3/			YOS02
2002 12 26.55		S	8.4	TJ	25.4	T	6	32	7	3			YOS04
2002 12 27.43	x	S	8.5	TK	10.0	B		20	8	3/			YOS02
2002 12 27.44		S	8.6	TK	10.0	B		25	5.5	3			BOU
2002 12 27.44		S	8.8	AC	10.0	B		25		2/			COM
2002 12 27.72		S	8.8	TK	5.0	B		12	7				GRA04
2002 12 27.72		S	8.8	TK	7.0	R	7	24	7	3			GRA04
2002 12 28.01		S	11.6:	TK	20.0	L	8	67	20	3			HOD02
2002 12 28.04		S	9.5	TJ	8.0	B		11	5	2			SOU01
2002 12 28.44		S	8.5	AA	10.0	B		25	6	3			BOU
2002 12 28.44		S	8.5	AC	10.0	B		25	& 5	3			COM
2002 12 28.48		S	8.4	AA	10.0	B		25		4			SEA
2002 12 28.76		S	9.0	TK	8.0	B		20	5.1	5			SHA02
2002 12 28.76		S	9.0	TK	10	B		14	6.1	s5			SHA02
2002 12 28.90		S	8.7	TK	5.0	B		7	7	4			BIV
2002 12 28.90		S	8.7	TK	25.6	L	5	42	7.0	3			BIV
2002 12 29.00		S	9.0	TK	14	L	6	35	2	4			AM001
2002 12 29.04		S	10.3	TJ	27.0	L	5	79	3	2/			DES01
2002 12 29.39	x	S	8.5	TJ	8.0	B		11	7	4/			NAG08
2002 12 29.43		S	8.3	AA	10.0	B		25	7	3			SEA
2002 12 29.43		S	8.3	TK	10.0	B		25	6	3/			BOU
2002 12 29.44		S	8.1	AA	5.0	B		10					SEA
2002 12 29.44		S	8.1	TK	5.0	B		10		3			BOU
2002 12 29.44		S	8.4	AC	10.0	B		25	& 6	4			COM
2002 12 29.52		S	8.5	TJ	25.4	T	6	32	5.5	3			YOS04
2002 12 29.53	x	S	8.5	TK	10.0	B		20	7	3			YOS02
2002 12 29.73		S	8.0	TT	8.0	B		10	16	1/			HOR02
2002 12 29.99		S	9.5	TJ	8.0	B		11	5	3			SOU01
2002 12 30.04		S	10.3:	TK	25.4	T	10	63	2	1			AM001
2002 12 30.45	x	M	9.0	TJ	15.0	B		25	7	2			MIT
2002 12 30.51		S	8.6	HS	12.0	R	5	28	6	4			MOM
2002 12 30.75		S	8.2	TK	5.0	B		12	8	3			GRA04

Comet C/2002 V1 (NEAT) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 30.75		S	8.3	TK	7.0	R	7	24	8	3			GRA04
2002 12 30.78		S	8.2	TK	5.0	B		7	9	3			BIV
2002 12 30.82		S	8.3	TK	25.6	L	5	42	7.0	3			BIV
2002 12 30.97		S	7.7	HS	7.0	B		10	11	3			MAR02
2002 12 31.01		S	9.2	TJ	8.0	B		11	5	2			SOU01
2002 12 31.02		S	9.4:	TK	20	L	8	67	10	6			HOD02
2002 12 31.65		M	8.4	S	15	L	5	62	5	5			SHU
2002 12 31.73		S	8.2	TK	8.0	B		15	6.5	2/			DIJ
2002 12 31.73		S	8.2	TK	8.0	B		15	7	3			BOU
2002 12 31.76		M	7.7	TT	10	R	4	25	12	5			LEH
2002 12 31.79		S	7.9	TT	10	R	5	25	13	2			HOR02
2003 01 01.41		S	7.9	TT	5.0	B		10	8	4			RAE
2003 01 01.43	x	M	8.1	TK	10.0	B		20	10	4			YOS02
2003 01 01.70		S	7.9	TK	5.0	B		12	10	3			GRA04
2003 01 01.83		S	8.2	TK	8.0	B		20	9.0	4			SHA02
2003 01 02.42	x	M	8.8	TT	10.0	B		26	6	3			TSU02
2003 01 02.76		S	7.8	TK	25.6	L	5	42	8	3			BIV
2003 01 02.77		S	7.8	TT	5.0	B		10	15.3	3			HAS02
2003 01 02.84		S	8.2:	TK	8.0	B		20	8	3			SHA02
2003 01 02.86		S	7.9	TK	25.6	L	5	42	7	3			BIV
2003 01 02.86		S	8.0	TK	5.0	B		7	9	3			BIV
2003 01 03.02		S	9.3	TJ	10	B		14	6	3			ARQ
2003 01 03.44		S	7.4	AA	5.0	B		10	7				SEA
2003 01 03.74		S	8.0	AA	4.2	B		7	15	2			ZAN
2003 01 03.75		S	7.4	AA	5.0	B		20	8	3			DIE02
2003 01 03.77		M	7.5	TT	8.0	B		10	15	3			HOR02
2003 01 03.78		S	8.0	SC	8.0	B		20	10	1			BAR
2003 01 03.81		S	7.4	AA	6.0	B		20	8	4			CSU
2003 01 03.83		S	7.6	TJ	5.0	B		7	13	3			GON05
2003 01 03.87		S	7.7	TK	7.0	R	7	24	8	3/			GRA04
2003 01 03.90		S	7.6	S	7.0	B		10	10	4			MAR02
2003 01 03.91		S	8.0	TK	8.0	B		20	9	3			SHA02
2003 01 03.92		B	8.6	TI	10.2	R	5	20	4	3			LAB02
2003 01 04.39	x	M	8.4	HV	15.0	B		25	8	3			MIT
2003 01 04.39	x	S	8.6	TJ	8.0	B		11	4	4/			MIY01
2003 01 04.44	x	S	8.3:	TJ	8.0	B		11	&10	4			NAG08
2003 01 04.73		S	7.7	TK	8.0	B		15	8	3/			BOU
2003 01 04.75		S	7.7	TK	8.0	B		20	10	3			SHA02
2003 01 04.76		S	7.3	TT	5.0	B		10	12	3			RIE
2003 01 04.81		S	7.4	AA	6.0	B		20	10	4			CSU
2003 01 04.86		B	8.2	TI	10.2	R	5	20	6	3			LAB02
2003 01 05.45	x	M	8.3	TT	10.0	B		26	7	4			TSU02
2003 01 05.67		M	7.7	PA	15	L	5	62	6	5			SHU
2003 01 05.69		B	8.2:	TJ	7.5	B		40	6	4			CHE03
2003 01 05.73		M	7.4	TT	8.0	B		10	17	2/			HOR02
2003 01 05.74		S	7.5	TK	8.0	B		20	10	4			SHA02
2003 01 05.75		B	8.1	TI	8.0	B		12	10	4			SER02
2003 01 05.75		S	7.1:	TK	5.0	B		10	10	2			SHA02
2003 01 05.77		M	7.5	TK	5.0	B		12	12	4			GRA04
2003 01 05.81		S	7.8	SC	8.0	B		20	8	2			BAR
2003 01 05.84		S	7.4	HV	6.3	B		9	6.5	4			KAM01
2003 01 06.00		S	8.3	TK	6	R	13	40	4	2			AM001
2003 01 06.44		S	7.4	HS	12.0	R	5	28	8	4			MOM
2003 01 06.48	x	S	8.0	TJ	8.0	B		11	8	4			NAG08
2003 01 06.52	x	S	8.2	TJ	8.0	B		11	4	4/			MIY01
2003 01 06.72		S	7.7	AA	6.0	B		20	9	3			CSU
2003 01 06.73		M	6.8	AA	11	B		20	7	3			NEV
2003 01 06.87		B	7.7	TI	10.2	R	5	20	6	3			LAB02
2003 01 06.89		S	7.3	TJ	5.0	B		7	13	3			GON05
2003 01 06.95		S	7.9	TK	5.0	B		7	10	4			BIV
2003 01 06.96		S	7.3	HI	8.0	B		20	10	3			SHA02
2003 01 06.96		S	8.3	TK	20.3	T	10	77	8	4	0.15	75	BIV
2003 01 07.45		S	7.4	AA	8.0	B		15	10	6			SEA
2003 01 07.51	x	M	8.3	HV	15.0	B		25	9	3			MIT
2003 01 07.75		S	7.6	HI	8.0	B		20	9	4			SHA02

Comet C/2002 V1 (NEAT) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.	
2003 01 08.45	x	M	8.1	TT	10.0	B		26					TSU02	
2003 01 08.48	x	S	7.7	TJ	8.0	B		11	8	3/			NAG08	
2003 01 08.52	x	S	8.7	TJ	8.0	B		11	7	2			MIY01	
2003 01 08.73		M	7.2	TT	8.0	B		10	17	2/			HOR02	
2003 01 08.80		S	7.3	TJ	5.0	B		7	10	3			GON05	
2003 01 08.87		S	7.4	AA	15.0	R	8	20	5	3			DIE02	
2003 01 08.92		M	7.4	TK	8.0	B		15	8	4			BOU	
2003 01 08.92		M	7.5	TK	8.0	B		15	5.5	3/			DIJ	
2003 01 08.93		S	7.2	HI	8.0	B		20	10	4			SHA02	
2003 01 08.97		S	8.0:	TK	6	R	13	40	3	0/			AM001	
2003 01 08.99		S	8.5	TK	25.4	T	10	63	5	0			SOU01	
2003 01 09.15		S	7.1	HV	8.0	B		16	10	2			CRE01	
2003 01 09.71		M	7.1	TT	8.0	B		10	13	4/			LEH	
2003 01 09.75		S	7.2	TT	8.0	B		15	&10	5			SCH04	
2003 01 09.75		S	7.4	AA	15.0	R	8	20	7	5			DIE02	
2003 01 09.83		S	7.2	TK	5.0	B		12	10	3			GRA04	
2003 01 10.73		S	7.1	S	7.8	R	4	12	12	4			BUS01	
2003 01 11.74		M	6.9	TT	8.0	B		10	15	3			HOR02	
2003 01 11.75		M	6.9	TT	8.0	B		10	15	4/			LEH	
2003 01 11.75		S	7.2	AA	15.0	R	8	20	5	5			DIE02	
2003 01 11.75		S	7.2	HV	6.3	B		9	8	3			KAM01	
2003 01 11.77		S	8.0	TT	25	L	5	30	4	6			SEG	
2003 01 11.80		S	6.9	HI	8.0	B		20	8	4			SHA02	
2003 01 11.85		B	6.8	TI	10.2	R	5	20	6	2			LAB02	
2003 01 12.40	x	M	8.0	HV	15.0	B		25	8	4			MIT	
2003 01 12.41		S	7.0	HS	12.0	R	5	28	8	3			MOM	
2003 01 12.75		S	7.2	AA	6.0	B		20	5	3			CSU	
2003 01 12.76		S	7.6	TK	5.0	B		7	6	5			BIV	
2003 01 12.76		S	7.6	TK	25.6	L	5	42	6.5	5			BIV	
2003 01 12.77		B	8.0	TI	8.0	B		12	5	5			SER02	
2003 01 12.78		S	6.8	HV	6.3	B		9	11	4/			KAM01	
2003 01 12.82		S	6.9	TJ	5.0	B		7	7	4			GON05	
2003 01 12.83		S	6.9	TJ	8.0	B		11	6	5			GON05	
2003 01 12.98		S	8.0	TK	6	R	13	40	3	1/			AM001	
2003 01 13.08		M	6.8	HV	8.0	B		16	11	5			CRE01	
2003 01 14.44	x	M	6.8	TJ	8.0	B		11	12	6			NAG08	
2003 01 14.80		S	6.8	TJ	5.0	B		7	6	5			GON05	
2003 01 14.81		S	6.8	TJ	8.0	B		11	6	6			GON05	
2003 01 15.46	x	M	7.3	TK	10.0	B		20	8	6			YOS02	
2003 01 15.71		M	6.7	TT	8.0	B		10	14	4			HOR02	
2003 01 15.73		M	6.8	TK	7.0	R	7	24	9	4/			GRA04	
2003 01 15.73		M	7.1	TK	15.2	L	5	44	7.5	5			GRA04	
2003 01 15.73		S	6.8	TK	5.0	B		7	9	4			GRA04	
2003 01 15.74		S	6.9	HI	8.0	B		20	7.5	4			SHA02	
2003 01 15.75		S	7.0	TT	6	R	10	30	2	6			MAN02	
2003 01 15.97		S	7.7	TK	25.4	T	10	63	3	2			AM001	
2003 01 16.75		S	6.7	HI	8.0	B		20	5	5	10	m	20	SHA02
2003 01 16.80		S	6.8	TJ	5.0	B		7	5	5			GON05	
2003 01 16.81		S	6.8	TJ	8.0	B		11	6	6			GON05	
2003 01 17.70		M	6.7	TT	5.0	B		7	12	5			ZNO	
2003 01 17.73		M	6.6	TT	8.0	B		10	14	4			HOR02	
2003 01 17.74		S	6.4	HV	6.3	B		9	8.5	6			KAM01	
2003 01 17.74		S	6.7	AA	5.0	B		20	6	8			DIE02	
2003 01 17.75		S	6.8	TT	8.0	B		15	& 8	6			SCH04	
2003 01 17.77		S	6.6	HI	8.0	B		20	8	4			SHA02	
2003 01 17.79		M	6.9	TT	8.0	B		10	10	4/			LEH	
2003 01 18.73		M	6.7	TK	5.0	B		7	6	4/			GRA04	
2003 01 19.70		S	6.8	TJ	7.0	B		16	8	7			GIA01	
2003 01 19.71		M	6.6	TT	8.0	B		10	14	4/			LEH	
2003 01 19.73		S	6.9	TK	5.0	B		7	5	5			BIV	
2003 01 19.73		S	6.9:	TK	25.6	L	5	42	5	5			BIV	
2003 01 20.79		S	6.4	TJ	5.0	B		7	6	6	0.2	65	GON05	
2003 01 20.80		S	6.3	TJ	8.0	B		11	6	6	0.3	65	GON05	
2003 01 20.82		S	6.7	HI	8.0	B		20	9	5			SHA02	
2003 01 20.93		S	7.2	TK	8.0	B		11	5	1			ARA	

Comet C/2002 V1 (NEAT) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2003 01 21.38	x	S	6.5	TK	4.2	B		7	10	5			OOT
2003 01 21.40	x	M	6.4	TJ	3.5	B		7	8	8			NAG08
2003 01 21.41	x	B	6.8	TJ	8.0	B		11	4.5	5			MIY01
2003 01 21.44		S	6.2	HS	4.0	B		8	10	6			MOM
2003 01 21.46	x	M	6.7	HV	8.0	B		11	8	5			MIT
2003 01 21.47	x	M	6.8	HV	15.0	B		25	6	6			MIT
2003 01 21.73		S	6.6	AA	5.0	B		20	8	7			DIE02
2003 01 21.74		M	6.3	TK	5.0	B		10	6.5	6	0.4	55	BOU
2003 01 21.77		S	6.5	TT	8.0	B		15	9	6/			SCH04
2003 01 21.79		S	6.3	TK	5.0	B		7	6.5	6			DIJ
2003 01 21.97		S	6.0	TT	8.0	B		20	& 8	4/			GRE
2003 01 21.97		S	6.3	TT	5.0	B		12	& 9	5			GRE
2003 01 22.04		M	6.2	HV	8.0	B		16	7	7	0.5	60	CRE01
2003 01 22.97		B	6.8	TT	8.0	B		20					GRE
2003 01 22.97		S	6.3	TT	8.0	B		20	& 3	5			GRE
2003 01 22.97		S	6.4	TT	5.0	B		12	& 7	6			GRE
2003 01 23.42		M	5.8	SC	5.0	B		7					OME
2003 01 23.42	x	S	6.2	TK	3.5	B		7	10	6			OOT
2003 01 23.46	x	M	6.6	TK	3.5	B		7	& 9	8			YOS02
2003 01 23.75		S	6.2	HI	8.0	B		10	6	5			SHA02
2003 01 23.75		S	6.2	HI	8.0	B		20	6.2	6	30 m	40	SHA02
2003 01 23.76		M	6.3	TK	5.0	B		7	6	7	1.0	60	BOU
2003 01 23.76		S	6.3	HI	3.0	B		8	5	6			SHA02
2003 01 23.76		S	6.5	TK	5.0	B		7		7			JOH01
2003 01 23.78		S	6.5	TT	8.0	B		15	7	7			SCH04
2003 01 23.80		S	6.1	TJ	5.0	B		7	7	6			GON05
2003 01 23.81		S	6.0	TJ	8.0	B		11	7	6	0.2	60	GON05
2003 01 23.81		S	6.1	TT	8.0	B		15	7	6	0.3	75	RIE
2003 01 23.86		M	6.2	S	7.0	B		10	7	6			MAR02
2003 01 23.93		S	6.6	TK	8.0	B		11	5	1			ARA
2003 01 24.01		B	6.6	A	5.0	B		7	10	4			SIM
2003 01 24.40	x	B	7.0	TJ	8.0	B		11	4.5	5	20 m	75	MIY01
2003 01 24.42	x	M	6.7	HV	15.0	B		25	5	7	10 m	70	MIT
2003 01 24.43	x	M	6.6	HV	8.0	B		11	6	6			MIT
2003 01 24.73		S	5.2	AA	8.0	B		20	10	6			BAR
2003 01 24.74		S	6.1	AA	5.0	B		20	5	7			DIE02
2003 01 24.74		S	6.1	S	7.8	R	4	12	7	6	0.3	60	BUS01
2003 01 24.75		M	6.2	TK	5.0	B		7	5	7/			DIJ
2003 01 24.76		S	6.4	TT	8.0	B		15	7	7			SCH04
2003 01 24.78		S	6.4	TK	5.0	B		10	& 5	7	0.5		COM
2003 01 24.81		M	6.2	TK	8.0	B		15	6	6/	0.8	55	BOU
2003 01 24.86		M	6.1	S	7.0	B		10	6	5/			MAR02
2003 01 25.01		B	6.1	A	10.0	B		14	6	7			SIM
2003 01 25.02		B	7.3	AC	10.0	B		20	4	4			NOW
2003 01 25.39	x	M	6.4	TJ	5.0	B		12	6	7			NAG08
2003 01 25.40	x	B	6.9	TJ	8.0	B		11	4.0	5	17 m	65	MIY01
2003 01 25.41	x	M	6.2	HV	8.0	B		11	7	7			MIT
2003 01 25.73		S	5.3	AA	8.0	B		20	8	5			BAR
2003 01 25.73		S	5.8	AA	8.0	B		20	6	5			FOG
2003 01 25.74		S	6.1	S	7.8	R	4	12	7	6	0.4	60	BUS01
2003 01 25.75		B	6.5	HV	6.3	B		9	8	7	0.25	58	KAM01
2003 01 25.75		M	6.0	TK	3.0	B		8	7	6	0.5	60	HOE
2003 01 25.75		M	6.2	TK	8.0	B		15	5	7	0.75	54	BOU
2003 01 25.76		M	6.2	TK	5.0	B		7	6	7	0.3	50	DIJ
2003 01 25.78		S	6.0	TT	5.0	B		10	7	6	0.5	60	RIE
2003 01 25.84		M	6.2	S	3.0	B		6	8	6			MAR02
2003 01 25.85		M	6.3	S	3.0	B		6	7	5			SAN04
2003 01 25.86		S	5.9	HI	8.0	B		20	6.6	6	0.5	35	SHA02
2003 01 26.40	x	B	7.0	TJ	8.0	B		11	10	4	30 m	45	MIY01
2003 01 26.78		S	5.7	HI	5.0	B		7	5	6			SHA02
2003 01 26.78		S	5.9	HI	8.0	B		20	7.7	6	0.5	55	SHA02
2003 01 26.79		M	6.0	TK	5.0	B		12	5	6/			GRA04
2003 01 26.84		M	6.1	S	7.0	B		10	6	6/			MAR02
2003 01 27.71		M	5.9	TK	5.0	B		12	5	6			GRA04
2003 01 27.74		S	5.2	AA	8.0	B		20	9	4			BAR

Comet C/2002 V1 (NEAT) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.	
2003 01 27.75		B	5.9	TK	5.0	B		7	6	7			SKI	
2003 01 27.76		I	5.8	TK	0.7	E		1					SKI	
2003 01 27.82		S	5.8	TJ	5.0	B		7	7	7	0.7	65	GON05	
2003 01 27.92		S	5.6	TK	8.0	B		11	5	1			ARA	
2003 01 27.98		S	5.9	TT	5.0	B		12	& 6.5	6/			GRE	
2003 01 28.39	x	B	6.3	TJ	8.0	B		11	5.5	5	35	m	60	MIY01
2003 01 28.40	x	M	5.9	HV	15.0	B		25	5	7	0.4		55	MIT
2003 01 28.41		S	5.8	HS	4.0	B		8	10	6				MOM
2003 01 28.41	xw	M	6.0	TJ	5.0	B		12	7	7	0.5		55	NAG08
2003 01 28.41	x	M	5.9	HV	8.0	B		11	6	7				MIT
2003 01 28.42	x	B	5.9	HS	7.0	B		10	5	7	&1		59	OOT
2003 01 28.74		B	5.9	TK	5.0	B		7	7	7/				BOU
2003 01 28.75		M	5.9	TK	8.0	B		15	6	7/	1.6		49	BOU
2003 01 28.75		S	5.1	AA	8.0	B		20	10	6	0.5		30	BAR
2003 01 28.75		S	5.8	TJ	5.0	B		7	4	7				GIA01
2003 01 28.77		M	5.8	TK	5.0	B		7		7/	0.8		60	DIJ
2003 01 29.40	x	B	5.9	TJ	8.0	B		11	4	6	1.2		55	MIY01
2003 01 29.42	x	M	5.4	TK	3.5	B		7	& 8	7	0.5		55	YOS02
2003 01 29.73		B	5.8	TK	8.0	B		15	5	7/	1.5		50	BOU
2003 01 29.88		B	6.0	S	7.0	B		10	5	6/	25	m	50	MAR02
2003 01 30.38		S	5.6	HS	4.0	B		8	8	8	0.5		60	MOM
2003 01 30.39	x	B	5.6	HS	7.0	B		10	5	7	&0.7		60	OOT
2003 01 30.40	xw	M	5.8	HV	8.0	B		11	5	7/	0.5		60	MIT
2003 01 30.40	x	B	5.9	TJ	8.0	B		11	4	6	1.4		50	MIY01
2003 01 30.41	xw	M	5.6	TJ	4.0	B		10	6	7	1.0		55	NAG08
2003 01 30.80		S	5.8	HI	5.0	B		7	5	6				SHA02
2003 01 31.00		B	6.3	AC	12.5	B		27	6	6	1.75		90	NOW
2003 01 31.02		I	5.2	HV	0.0	E		1	7	5				CRE01
2003 01 31.39	x	B	5.8	TJ	8.0	B		11	3	7	1.8		57	MIY01
2003 01 31.41	xw	M	5.6	TJ	5.0	B		12	6	7	1.3		50	NAG08
2003 01 31.42	x	B	5.6	HS	7.0	B		10	5	7	0.7		55	OOT
2003 01 31.69		S	5.3	TT	8.0	B		20	7	7	0.2		52	AND01
2003 01 31.73		M	5.1	HD	7	R	4	25	3	8	50	m		SHU
2003 01 31.74	s	B	5.5	TK	8.0	B		15	5	7/	1.8		50	BOU
2003 01 31.75		M	5.5	TK	5.0	B		7		7/				DIJ
2003 01 31.75		S	5.0	AA	8.0	B		20	10	7	0.5		35	BAR
2003 01 31.75		S	5.9	AA	5.0	B		20	6	7	15	m	45	DIE02
2003 01 31.77		B	5.9	TT	8.0	B		11		6/	0.5		65	WAR01
2003 01 31.79		S	5.8:	HI	8.0	B		20	5	6	10	m	45	SHA02
2003 01 31.80		B	5.7	TJ	5.0	B		7	6	8	0.5		55	GON05

Comet C/2002 X1 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2003 01 25.92		S	13.7	NP	44.5	L	5	91	1	3			MAR02
2003 01 25.96		S	13.7	HS	31.0	J	6	109	& 0.6	2/			BOU
2003 01 25.97		S	14.1:	HS	31.0	J	6	109	0.5	2			DIJ
2003 01 31.94		S	13.8	AC	31.0	J	6	124	0.9	3			BOU
2003 01 31.95		S	13.9	AC	31.0	J	6	124	0.8	2			DIJ

Comet C/2002 X5 (Kudo-Fujikawa)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 15.67		M	8.4	HD	15	L	5	62	1	4/			SHU
2002 12 15.82	x	S	8.5	TJ	8.0	B		11	6	7			NAG08
2002 12 16.12		M	7.4	AA	11	B		20	5	3			NEV
2002 12 16.20		B	7.9	TI	8.0	B		11	5	3			LAB02
2002 12 16.20		S	7.9	TJ	8.0	B		11	6	3			GON05
2002 12 16.21		S	8.0	TJ	5.0	B		7	5	3			GON05
2002 12 17.73		S	8.5	TK	15	L	8	80	2.4	3			SHA02
2002 12 18.09		S	7.8:	TK	15.5	L	5	25	5	2/			DIJ
2002 12 18.10		M	8.1	TK	15.2	L	5	44	3.3	4/			GRA04
2002 12 18.21		S	7.2	TK	5.0	B		10	5	4			GIL01
2002 12 18.24		S	7.3	TT	8.0	B		15	6	4			RIE
2002 12 18.27		S	8.3	TT	7.0	B		16	5	2			TAY

Comet C/2002 X5 (Kudo-Fujikawa) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 18.27		S	8.3	TT	7.0	B		16	5	2			TAY
2002 12 18.71		S	7.4	TT	8.0	B		10	10	3			HORO2
2002 12 18.73		S	8.0	TK	8.0	B		20	5.0	4			SHAO2
2002 12 19.68		M	7.4	TT	10	B	4	25	4	3			LEH
2002 12 19.71		S	7.4	TK	10.0	B		20	4.5	3/			MEY
2002 12 19.72		S	7.6	TK	25.4	T	6	64	3	3			HOE
2002 12 20.20		M	7.3	TT	8.0	B		10	9	3			HORO2
2002 12 20.23		S	7.1	TJ	8.0	B		11	5	4			GONO5
2002 12 21.26		M	7.6	TK	15.2	L	5	44	4.5	4			GRAO4
2002 12 21.26		S	7.4	TK	5.0	B		12	5.5				GRAO4
2002 12 21.63		M	7.7	S	15	L	5	42	3	5			SHU
2002 12 21.66		E	6.0	AA	6.0	B		20	4	4			ROM
2002 12 21.98		M	7.3	HV	8.0	B		16	6	4			CREO1
2002 12 22.35	x	S	8.3	TK	15.0	B		25	& 7	4			OOT
2002 12 22.69		B	7.7	TT	10	T	10	45	5	3			WARO1
2002 12 22.82	x	S	7.6	TJ	10.0	B		20	5	5	10 m	335	NAGO8
2002 12 23.18		M	7.3	S	15	L	5	42	4	4/			SHU
2002 12 23.69		B	7.7	TT	10	T	10	45	5	3			WARO1
2002 12 23.69		E	6.1	AA	6.0	B		20	4	4			ROM
2002 12 24.66		E	6.0	AA	6.0	B		20	5	5			ROM
2002 12 24.69		M	7.4	TK	5.0	B		12	6	4			GRAO4
2002 12 24.72		M	7.2	AA	11	B		20	5	4			NEV
2002 12 25.22		S	7.5	TK	8.0	B		20	2.9	5			SHAO2
2002 12 25.66		E	5.8	AA	6.0	B		20	5	4/			ROM
2002 12 25.68		M	7.4:	S	15	L	5	62	3.5	4/			SHU
2002 12 25.71		B	7.0:	TJ	5.0	B		7					CHEO3
2002 12 25.74		S	6.6	AA	5.0	B		10	2	6			ABB
2002 12 25.74		S	7.6	TK	8.0	B		20	3.6	4			SHAO2
2002 12 26.37	x\$	S	7.8	TJ	10.0	B		20	4	4/			NAGO8
2002 12 26.69		B	6.8	TJ	4.0	R	5	12	5	4			CHEO3
2002 12 26.72		S	7.2	AA	5.0	B		20	3	7			DIEO2
2002 12 26.77		S	7.3	AA	6.0	B		20	6	2			CSU
2002 12 26.84		S	7.7	TJ	25.4	T	6	32	6	7			YOSO4
2002 12 27.22		S	6.7	TJ	8.0	B		11	6	6			GONO5
2002 12 27.22		S	6.9	TJ	5.0	B		7	5	6			GONO5
2002 12 27.69		M	7.2	TK	5.0	B		12	7	4			GRAO4
2002 12 27.72		S	8.3	TT	8	R	5	26	4	3			TAY
2002 12 27.85	xw	S	7.3	TJ	8.0	B		11	5	7			NAGO8
2002 12 28.23		B	6.8	TI	10.2	R		20	5	5	0.05	240	LABO2
2002 12 28.73		S	7.4	TT	8	R	5	26	3.5	3			TAY
2002 12 28.74		S	6.9	TK	8.0	B		20	6.6	5			SHAO2
2002 12 28.88	x	M	8.3:	TT	10.0	B		26					TSUO2
2002 12 29.21		S	6.3	AA	8.0	B		20	5	7		310	BAR
2002 12 29.37	x\$	S	7.3	TJ	8.0	B		11	5	7			NAGO8
2002 12 29.69		M	6.9	TK	5.0	B		12	7	5			GRAO4
2002 12 29.70		M	6.8	TT	8.0	B		10	8	5			HORO2
2002 12 29.73		M	6.6	TT	5.0	B		7	7	3			ZNO
2002 12 29.84		S	7.5	TJ	25.4	T	6	32	5.5	7	8 m	355	YOSO4
2002 12 29.86	xw	M	7.0	TK	10.0	B		20	6	5			YOSO2
2002 12 30.22		S	6.3	AA	8.0	B		20	5	6			BAR
2002 12 30.74		M	6.9	TK	5.0	B		12	7	5			GRAO4
2002 12 30.81		S	6.8:	HV	25.6	L	5	42	5	5			BIV
2002 12 31.61		M	7.0	S	15	L	5	62	4	5			SHU
2002 12 31.67		E	5.4	AA	6.0	B		20	6	d4			ROM
2002 12 31.72		M	6.6	TK	8.0	B		15	4.5	5			BOU
2002 12 31.72		S	6.9	TK	8.0	B		15	5	5			DIJ
2003 01 01.20		M	6.6	TT	10	R	5	25	7	5/			HORO2
2003 01 01.22		S	7.3	TT	6	R	10	30	6	5			MANO2
2003 01 01.64	w	S	6.0:	S	3.5	B		7	6	1			TIT
2003 01 01.65	w	S	6.1	S	11	L	7	32	4.5	1			SVEO1
2003 01 01.69		M	6.7	TK	5.0	B		12	8	5			GRAO4
2003 01 01.80		S	6.6:	TK	8.0	B		20	4.7	5			SHAO2
2003 01 01.84	xw	M	7.1	TK	10.0	B		20	5	6			YOSO2
2003 01 01.88	x	M	6.9	TK	3.5	B		7		6			YOSO2
2003 01 02.16		S	6.9	TJ	7.0	B		16	10	4			GIAO1

Comet C/2002 X5 (Kudo-Fujikawa) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2003 01 02.18		M	6.9	S	7	R	4	25	3	5			SHU
2003 01 02.74		S	6.5	HV	5.0	B		7	8	5			BIV
2003 01 02.76		S	6.6	HV	25.6	L	5	42	5	6			BIV
2003 01 03.18		M	6.7	TK	5.0	B		12	8	5			GRA04
2003 01 03.20		S	6.5	HV	5.0	B		7	6	5			BIV
2003 01 03.24		S	6.6	HV	25.6	L	5	42	5	6	0.3	355	BIV
2003 01 03.25		B	6.3	TI	8.0	B		11	5	3			LAB02
2003 01 03.25		S	6.4	TJ	5.0	B		7	5	6			GON05
2003 01 03.26		S	6.5	TJ	8.0	B		11	6	6	0.1	0	GON05
2003 01 03.71		S	6.5	AA	5.0	B		20	3	7			DIE02
2003 01 03.72		S	7.0	TT	8	R	5	26	5.0	3			TAY
2003 01 03.80		S	6.4	TJ	8.0	B		11	6	6			GON05
2003 01 03.82		S	6.3	S	7.0	B		10	9	5			MAR02
2003 01 03.84		x M	7.0	HV	8.0	B		11	5	6			MIT
2003 01 03.85		xw S	6.8	TJ	8.0	B		11	7	7/	15 m	345	NAG08
2003 01 03.85		x M	7.0	HV	15.0	B		25	4	6	8 m		MIT
2003 01 04.24		S	6.7	TT	8.0	B		15	5	7/			SCH04
2003 01 04.72		M	6.4	TK	8.0	B		15	5	6	0.4	355	BOU
2003 01 04.74		S	6.1	HI	8.0	B		20	4.7	6	15 m	35	SHA02
2003 01 04.74		S	6.2	TT	5.0	B		15	7	6			RIE
2003 01 04.82		x S	6.8	TJ	8.0	B		11	4	6	7 m	330	MIY01
2003 01 05.22		S	6.6	TT	8.0	B		15	7	7			SCH04
2003 01 05.23		w B	6.9	TI	8.0	B		12	5	5			SER02
2003 01 05.25		M	6.7	TK	5.0	B		12	8	5			GRA04
2003 01 05.25		M	6.8	TK	7.0	R	7	24	7	5	0.5	350	GRA04
2003 01 05.27		S	6.8	TT	7.0	B		16	5.5	3	0.15	345	TAY
2003 01 05.65		M	6.7	S	15	L	5	62	5	5/	0.25	350	SHU
2003 01 05.68		B	6.2	TJ	6.0	B		20	5	5			CHE03
2003 01 05.69		M	6.4	TT	8.0	B		10	6	6			HOR02
2003 01 05.73		S	6.4	TK	5.0	B		7	5	5/			DIJ
2003 01 05.74		S	6.3	HI	8.0	B		20	4.3	6	15 m	15	SHA02
2003 01 05.78		M	6.6	TK	5.0	B		12	8	5	0.6	355	GRA04
2003 01 05.86		xw S	6.7	TJ	8.0	B		11	7	7/			NAG08
2003 01 05.86		x S	7.0	TJ	8.0	B		11	3.3	5	10 m	335	MIY01
2003 01 06.25		B	6.2	TI	10.2	R	5	20	7	6			LAB02
2003 01 06.65		M	5.7	AA	11	B		20	5	6	0.5	355	NEV
2003 01 06.69		w M	6.3	TT	8.0	B		10	7	5/			HOR02
2003 01 06.79		S	6.5	TJ	8.0	B		11	6	6			GON05
2003 01 06.85		x M	6.5	HV	8.0	B		11	7	7			MIT
2003 01 06.85		x S	6.6	TJ	8.0	B		11	2.5	6	15 m	355	MIY01
2003 01 07.23		S	5.5	SC	8.0	B		20	5	5			BAR
2003 01 07.24		B	6.2	TI	10.2	R	5	20	7	6	0.83	55	LAB02
2003 01 07.24		B	6.6	HV	5.0	B		7	5	7	0.5	350	BIV
2003 01 07.24		S	6.4	TT	8.0	B		15	6	7			RIE
2003 01 07.25		S	6.7	HV	20.3	T	10	77	4	7	0.4	355	BIV
2003 01 07.26		S	6.1	HI	5.0	B		10	3.5	6			SHA02
2003 01 07.26		S	6.1	HI	8.0	B		20	3.5	6	20 m	310	SHA02
2003 01 07.48		M	6.2	HV	8.0	B		16	6	6	0.3	350	CRE01
2003 01 07.73		S	5.6	TT	7.0	B		16	5.0	4			TAY
2003 01 07.74		S	6.1	HI	8.0	B		20	4.7	6	15 m	355	SHA02
2003 01 07.86		x S	6.6	TJ	8.0	B		11	3.3	6	8 m	357	MIY01
2003 01 08.23		S	6.3	TK	3.0	B		8	6	4/			HOE
2003 01 08.25		M	6.2	TK	5.0	B		12	7	5			GRA04
2003 01 08.25		M	6.3	TK	15.2	L	5	44	5.5	5	0.4	0	GRA04
2003 01 08.69		w M	6.3:	TT	8.0	B		10	6	5			HOR02
2003 01 08.85		x\$ S	6.4	TJ	5.0	B		12	7	7/			NAG08
2003 01 08.85		x S	7.3	TJ	8.0	B		11	3.3	6	13 m	355	MIY01
2003 01 08.88		xw M	6.5	TK	3.5	B		7	6	6			YOS02
2003 01 09.23		B	6.4	HV	6.3	B		9	5	7/			KAM01
2003 01 09.23		M	6.3	TK	8.0	B		15	5	7	0.7	350	BOU
2003 01 09.24		M	6.3	TK	8.0	B		15	7	7/	26 m	346	DIJ
2003 01 09.25		B	6.1	TI	8.0	B		11	8	8	0.2	355	LAB02
2003 01 09.25		S	6.4	AA	5.0	B		20	5	8	15 m	335	DIE02
2003 01 09.25		S	6.4	TT	8.0	B		15	6	7/			SCH04
2003 01 09.72		S	6.4	AA	5.0	B		20	5	8	15 m	350	DIE02

Comet C/2002 X5 (Kudo-Fujikawa) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.	
2003 01 10.73		S	6.2	TT	7.0	B		16	3.0	5			TAY	
2003 01 10.74		S	6.5:	HI	8.0	B		20	3.5	5			SHA02	
2003 01 11.17		M	5.8	AA	11	B		20	4	S7	1	353	NEV	
2003 01 11.21	w	M	6.1	TT	8.0	B		10	5	7/	0.5	345	HOR02	
2003 01 11.24		B	6.0	TJ	5.0	B		7	2	7			CHE03	
2003 01 11.24	a	S	6.3	TT	8.0	B		15	5	7/			SCH04	
2003 01 11.25		B	6.0	TI	10.2	R	5	20	7	7	0.16	330	LAB02	
2003 01 11.69	w	M	6.0	TT	8.0	B		10	5	8			HOR02	
2003 01 11.72		S	6.6	AA	15.0	R	8	20	3	8			DIE02	
2003 01 11.85	x	S	5.6	TJ	8.0	B		11	4.2	6	15	m	2	MIY01
2003 01 11.86	x\$	M	6.1	TJ	5.0	B		12	6	8				NAG08
2003 01 11.86	w	B	6.1	TJ	8.0	B		11	5.5	8	?			YOS04
2003 01 12.22		B	6.3	TT	6	R	10	30	4.5	6				MAN02
2003 01 12.22		S	6.4	TT	3.0	B		8	7.5	5				MAN02
2003 01 12.24		B	6.1	HV	5.0	B		7	4	7				BIV
2003 01 12.24	a	S	6.3	TT	8.0	B		15	6	7/				SCH04
2003 01 12.24	w	B	6.4	HV	6.3	B		9	3.5	8/				KAM01
2003 01 12.25		B	5.8	TI	10.2	R	5	20	6	8	0.07	330	LAB02	
2003 01 12.25		B	6.0	HV	25.6	L	5	42	3	7	0.4	355	BIV	
2003 01 12.26		M	6.1	TK	5.0	B		12	5.5	6/				GRA04
2003 01 12.26		S	6.1	HI	8.0	B		20	3	6				SHA02
2003 01 12.73		B	6.2	HV	25.6	L	5	42	3	8				BIV
2003 01 12.74		B	6.0	HV	5.0	B		7	4	7				BIV
2003 01 13.25		B	5.8	TI	10.2	R	5	20	5	8	0.12	330	LAB02	
2003 01 13.25		M	6.0	TK	5.0	B		12	5	6/				GRA04
2003 01 13.25		N	9.2	TK	15.2	L	5	44	4	6	0.3	355	GRA04	
2003 01 13.26		S	5.6	TJ	5.0	B		7	4	7	0.4	355	GON05	
2003 01 13.26	a	S	5.6:	TI	8.0	B		12	10	5				SER02
2003 01 14.28		S	5.8	HI	8.0	B		20	2.3	7	8	m	0	SHA02
2003 01 14.77		S	5.8	TJ	8.0	B		11	3	8				GON05
2003 01 14.86	x	B	6.0	TJ	8.0	B		11	3.1	6/				MIY01
2003 01 14.87	x\$	M	6.0:	TJ	8.0	B		11	3	8/				NAG08
2003 01 15.25		B	5.8	HV	5.0	B		7	3	7				BIV
2003 01 15.26		B	5.7	HV	25.6	L	5	42	2.5	7	0.4	355	BIV	
2003 01 15.26		S	5.6	TJ	5.0	B		7	4	8	0.2	355	GON05	
2003 01 15.26		S	5.6	TJ	8.0	B		11	4	7	0.4	355	GON05	
2003 01 15.27		B	5.8	HV	5.0	B		7	3	7				BIV
2003 01 15.71		M	5.7	TK	7.0	R	7	24	4	6/				GRA04
2003 01 15.74		S	5.3	HI	8.0	B		20	2.1	6	20	m	5	SHA02
2003 01 15.86	x	B	6.5:	TJ	8.0	B		11	2.5	6/				MIY01
2003 01 16.25		M	5.7	TK	5.0	B		7	3	7	0.4	350	GRA04	
2003 01 16.25		M	5.7	TK	8.0	B		15	4	8	0.8	355	BOU	
2003 01 16.25		S	5.3:	TK	5.0	B		7	7	7/				DIJ
2003 01 16.26		S	5.8	TT	8.0	B		15	& 5	7				SCH04
2003 01 16.27		S	5.6:	HI	8.0	B		20	1.8	7	15	m	340	SHA02
2003 01 17.23	w	M	5.9	TT	8.0	B		10	3.5	8/				HOR02
2003 01 17.24	a	B	6.0	HV	6.3	B		9	1.5	9				KAM01
2003 01 18.71		M	5.3:	TK	7.0	R	7	24	2.5	6/				GRA04

Comet C/2002 Y1 (Juels-Holvorcem)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2003 01 05.80	x	S	12.7	HS	31.7	L	6	63	1.4	3/			MIY01
2003 01 06.83	x	S	13.4	HS	31.7	L	6	63	1.2	2			MIY01
2003 01 07.81	x	S	13.0	HS	31.7	L	6	63	1.4	2			MIY01
2003 01 08.80	x	S	12.9	HS	31.7	L	6	63	1.3	2			MIY01
2003 01 08.83	x	S	11.8	HS	32.0	L	5	58	2.5	3			NAG08
2003 01 08.83	x	S	12.7	HS	25.4	L	4	113	1.8	3			YOS02
2003 01 09.19		S	12.5	TK	31.0	J	6	89	2.0	2/			BOU
2003 01 09.20		S	12.5	TK	31.0	J	6	89	1.6	1			DIJ
2003 01 11.13		S	11.6	TK	20	R	14	140	1.6	3			SHA02
2003 01 11.79		S	10.7	TJ	31.7	L	6	63	3.3	3			YOS04
2003 01 11.80	x	S	11.6	HS	31.7	L	6	63	2.2	2/			MIY01
2003 01 11.84	x	S	11.8	HS	32.0	L	5	58	2.8	3			NAG08
2003 01 12.01		S	11.5	HS	35	L	5	158	2.5	2			HOR02

Comet C/2002 Y1 (Juels-Holvorcem)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2003 01 13.78	x	S	12.2	HS	31.7	L	6	63	2.0				MIY01
2003 01 14.79	x	S	12.2	HS	31.7	L	6	63	1.4	2/			MIY01
2003 01 15.84	x	S	12.0	HS	31.7	L	6	63	2.1	2			MIY01
2003 01 16.23		S	11.0	TK	33	L	5	100					SHAO2
2003 01 26.00		S	10.5	TK	31.0	J	6	58	3.2	2			BOU
2003 01 26.01		S	10.5	TK	31.0	J	6	58	2	3			DIJ
2003 01 26.07		M	9.8	NP	44.5	L	5	91	3	4			SAN04
2003 01 26.07		M	10.3	NP	44.5	L	5	91	4	3			MAR02
2003 01 27.25		S	9.9	TK	15.2	L	5	44	3.5	3			GRA04
2003 01 28.01		S	10.3	TJ	20.3	T	10	77	3	3			GON05
2003 01 28.85	x	S	10.4	HS	31.7	L	6	63	4.4	4			MIY01
2003 01 29.03		S	11.6	TK	30	R	20	105	1.8	2			SHAO2
2003 01 29.79	x	S	10.6	HS	31.7	L	6	63	3.0	4			MIY01
2003 01 30.77		S	9.1	TJ	31.7	L	6	38	4.5	3/			YOS04
2003 01 30.77	x	S	10.4	HS	31.7	L	6	63	3.6	4			MIY01
2003 01 31.67	x	S	9.7	TJ	15.0	B		25	7	3			MIT
2003 01 31.72	x	S	9.4	TJ	32.0	L	5	58	4.3	4			NAG08
2003 01 31.75	x	S	10.4	HS	31.7	L	6	63	4.1	3/			MIY01
2003 02 01.00		M	9.2	TK	8.0	B		15	5	6			DIJ
2003 02 01.00		S	9.2	TK	8.0	B		15	6.5	4			BOU

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Non-Visual Data (old format)

Comet 7P/Pons-Winnecke

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 05.52	a	C	17.6	GA	60.0	Y	6	a240	0.4				NAK01

Comet 29P/Schwassmann-Wachmann

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 01.61	xa	C	12.4	HV	35.0	C	9	a120	2.5	5			TSU02
2002 09 08.55	xa	C	12.7	HV	35.0	C	9	a 60	2.0	4			TSU02
2002 09 18.47		C	14.4	TJ	30.0	L	6	a120	0.6				EZA
2002 10 29.50	xa	C	13.8	HV	35.0	C	9	a 90	0.6	6			TSU02
2002 11 06.40	xa	C	13.7	HV	35.0	C	9	a120	0.9	4			TSU02
2002 11 06.44	x	C	12.4	TJ	60.0	Y	6	a120	2.8	5			NAK01
2002 11 06.44	x	c	15.9	TJ	60.0	Y	6	a120					NAK01
2002 11 29.39	xa	C	14.3	HV	35.0	C	9	a840	1.2	3			TSU02
2002 12 15.38	xa	C	12.7	HV	35.0	C	9	a720	0.2	8			TSU02

Comet 30P/Reinmuth

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 06.69		C	15.6	TJ	30.0	L	6	a 60	0.3				EZA
2002 11 06.77	x	C	16.1	TJ	20.0	L	4	a120	0.38	5	1.2m	292	OHS
2002 11 12.85		C	15.6	GA	60.0	Y	6	a120	0.5		2.3m	295	NAK01
2002 11 16.70		C	15.5	HS	30.0	L	6	a120	0.4				EZA
2002 12 07.74		c	16.9	HS	30.0	L	6	a 60					EZA
2002 12 10.75		C	14.7	HS	30.0	L	6	a480	0.6		2 m	290	EZA
2002 12 13.83		C	14.8	GA	60.0	Y	6	a120	0.75		5.0m	288	NAK01
2002 12 14.74		C	14.8	HS	30.0	L	6	a360	0.6		1 m	305	EZA
2002 12 14.79	x	C	15.1	TJ	20.0	L	4	a120	0.5	5	2.4m	290	OHS
2002 12 14.81	xa	C	15.1	HV	35.0	C	9	a120	0.5	5	5.0m	289	TSU02
2002 12 29.75		C	14.2	HS	30.0	L	6	a360	0.6		?	290	EZA

Comet 46P/Wirtanen

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 18.83	a	C	11.7:	GA	60.0	Y	6	a 60	2.1		3.9m	288	NAK01
2002 09 23.81		C	12.6	TJ	30.0	L	6	a 60	1.8				EZA
2002 09 24.80		C	9.6	TJ	25.0	L	5	a 60	3.5		8.9m	290	KAD02
2002 11 06.84	xa	C	12.9	HV	35.0	C	9	a 90	2.5	4	7.5m	297	TSU02
2002 11 16.85		C	14.8	HS	30.0	L	6	a 60	0.6		5 m	305	EZA
2002 12 10.79		C	15.6	HS	30.0	L	6	a120	0.4	3/	4 m	300	EZA
2002 12 13.86	a	C	15.5	GA	60.0	Y	6	a120	0.8		5.4m	298	NAK01
2002 12 14.80		C	15.7	HS	30.0	L	6	a120	0.6	2/			EZA
2002 12 14.82	x	C	16.1	TJ	20.0	L	4	a120	0.4	2	1.4m	295	OHS
2002 12 14.88	xa	C	15.0:	HV	35.0	C	9	a120	0.9	2			TSU02

Comet 54P/de Vico-Swift-NEAT

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 05.58		C	18.8	GA	60.0	Y	6	a240	0.25				NAK01
2002 11 09.56	xa	C	17.7	HV	35.0	C	9	a240	0.4	3			TSU02
2002 12 27.52		C	20.3:	GA	60.0	Y	6	a240	0.15				NAK01

Comet 57P/du Toit-Neujmin-Delporte [component A]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 01.58	xa	C	14.3	HV	35.0	C	9	a120	0.8	5			TSU02
2002 09 08.55	xa	C	14.6	HV	35.0	C	9	a 60	0.4	4			TSU02
2002 09 12.53	xa	C	14.9	HV	35.0	C	9	a120					TSU02
2002 09 18.49		C	15.7	TJ	30.0	L	6	a120	0.4				EZA
2002 09 23.50		C	16.2	TJ	30.0	L	6	a120	0.4				EZA
2002 11 06.45	xa	C	16.4	HV	35.0	C	9	a120	0.5	3			TSU02
2002 11 28.42	a	C	17.2	GA	60.0	Y	6	a120	0.4			65	NAK01

Comet 65P/Gunn

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 14.85	x	C	14.1	TJ	20.0	L	4	a120	0.5	4			OHS
2002 12 19.85	x	C	15.0	TJ	20.0	L	4	a120	0.5	3			OHS
2002 12 22.86		C	14.5	HS	30.0	L	6	a120	0.5				EZA
2002 12 29.84	x	C	14.9	TJ	20.0	L	4	a120	0.4		0.5m	289	OHS
2002 12 29.85		C	15.1	HS	30.0	L	6	a 60	0.4				EZA

Comet 67P/Churyumov-Gerasimenko

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 18.82	a	C	12.5	GA	60.0	Y	6	a 60	1.7		4.8m	285	NAK01
2002 09 23.80		C	12.5	TJ	30.0	L	6	a 60	1.5		3.0m	290	EZA
2002 11 06.83	xa	C	12.8	HV	35.0	C	9	a 90	1.0	5	8.5m	296	TSU02
2002 11 16.84		C	13.7	HS	30.0	L	6	a 60	0.9		3 m	300	EZA
2002 12 10.78		C	14.1	HS	30.0	L	6	a480	0.9		4.3m	300	EZA
2002 12 14.79		C	14.3	HS	30.0	L	6	a360	0.7		5 m	300	EZA
2002 12 14.80	x	C	14.9	TJ	20.0	L	4	a120	0.6		3.9m	300	OHS
2002 12 14.83	xa	C	14.1	HV	35.0	C	9	a120	1.0	5	9 m	298	TSU02
2002 12 22.81		C	14.8	HS	30.0	L	6	a120	0.4				EZA
2002 12 29.76		C	14.6	HS	30.0	L	6	a360	0.6		4 m	300	EZA

Comet 81P/Wild

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 05.74		C	16.9	GA	60.0	Y	6	a120	0.3		1.4m	264	NAK01
2002 11 28.63		C	15.8	GA	60.0	Y	6	a120	0.4		2.4m	270	NAK01
2002 12 27.57		C	15.5	GA	60.0	Y	6	a120	0.55				NAK01

Comet 89P/Russell

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 10 29.53	xa	C	17.8	HV	35.0	C	9	a480	0.3	3			TSU02
2002 11 28.45	a	C	19.2:	GA	60.0	Y	6	a240	0.25				NAK01

Comet 90P/Gehrels

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 18.81			C 17.1	GA	60.0	Y	6	a240	0.35				NAK01
2002 11 09.58	xa		C 16.5	HV	35.0	C	9	a120	0.3	3			TSU02
2002 11 12.78			C 16.6	GA	60.0	Y	6	a240	0.4				NAK01
2002 11 16.64			C 16.7	HS	30.0	L	6	a120	0.4				EZA
2002 11 28.50			C 16.0	HS	30.0	L	6	a120	0.3				EZA
2002 11 28.58	xa		C 16.9	HV	35.0	C	9	a120	0.3	4			TSU02
2002 12 10.56			C 16.6	HS	30.0	L	6	a120	0.4				EZA
2002 12 14.51	xa		C 16.5	HV	35.0	C	9	a960	0.4	3			TSU02
2002 12 14.59			c 17.4	HS	30.0	L	6	a120	0.4				EZA
2002 12 27.60			C 16.4	GA	60.0	Y	6	a240	0.5		2.3m	249	NAK01

Comet 92P/Sanguin

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 01.62	xa		C 14.1	HV	35.0	C	9	a120	0.8	5			TSU02
2002 10 29.51	xa		C 14.1	HV	35.0	C	9	a 90	0.7	5	1.3m	33	TSU02
2002 10 29.52			C 15.1	TJ	30.0	L	6	a120	0.7		0.7m	45	EZA
2002 11 05.55		a	C 14.2	GA	60.0	Y	6	a120	1.4			35	NAK01
2002 11 06.46	xa		C 14.4	HV	35.0	C	9	a 60	0.5	5	1.5m	38	TSU02
2002 11 28.53	xa		C 15.2	HV	35.0	C	9	a120	0.8	5	1.0m	38	TSU02
2002 12 15.43	xa		C 15.8	HV	35.0	C	9	a120	0.7	4			TSU02
2002 12 30.44	xa		C 16.4	HV	35.0	C	9	a720	0.4	3			TSU02

Comet 94P/Russell

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 28.65			C 19.3	GA	60.0	Y	6	a240	0.2				NAK01
2002 12 14.71			C 18.8	GA	60.0	Y	6	a240	0.15				NAK01
2002 12 27.62			C 18.8	GA	60.0	Y	6	a240	0.15				NAK01

Comet 116P/Wild

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 16.85			C 15.4	HS	30.0	L	6	a 60	0.6		2 m	300	EZA
2002 12 10.86			C 14.8	HS	30.0	L	6	a480	0.7		7 m	300	EZA
2002 12 13.87		a	C 14.3	GA	60.0	Y	6	a120	0.65		> 6.1m	293	NAK01
2002 12 14.84	x		C 14.6	TJ	20.0	L	4	a120	0.5		5.6m	295	OHS
2002 12 14.86			C 15.3	HS	30.0	L	6	a360	0.4		5 m	295	EZA
2002 12 19.82	x		C 14.7	TJ	20.0	L	4	a120	0.4		3.0m	295	OHS

Comet 118P/Shoemaker-Levy

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 05.56			C 17.3	GA	60.0	Y	6	a120	0.3				NAK01
2002 11 28.48		a	C 17.1	GA	60.0	Y	6	a120	0.3				NAK01

Comet 153P/Ikeya-Zhang

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 09.47	xa		C 15.7	HV	35.0	C	9	a600	0.4	3			TSU02
2002 09 18.42			C 16.1	TJ	30.0	L	6	a120	0.3				EZA
2002 09 23.42			C 15.2	TJ	30.0	L	6	a 60	0.5				EZA

Comet 154P/Brewington

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 08.53	xa		C 17.1	HV	35.0	C	9	a540	0.3	3			TSU02
2002 11 06.38	xa		C 15.9	HV	35.0	C	9	A120	0.4	3			TSU02
2002 11 06.42		a	C 16.0	GA	60.0	Y	6	a120	0.55				NAK01
2002 11 28.38	xa		C 14.8	HV	35.0	C	9	A120	0.6	4			TSU02
2002 11 28.41		a	C 14.6	GA	60.0	Y	6	a120	1.2				NAK01
2002 12 15.41	xa		C 14.7	HV	35.0	C	9	a120	0.7	4			TSU02
2002 12 29.42	x		C 14.2	TJ	20.0	L	4	a120	0.5				OHS
2002 12 30.41	xa		C 13.9	HV	35.0	C	9	a900	1.3	4			TSU02

Comet 155P/Shoemaker

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 10 29.70			C 16.1	TJ	30.0	L	6	a120	0.5		0.6m	280	EZA
2002 11 06.68			C 15.9	TJ	30.0	L	6	a 60	0.4				EZA
2002 11 06.78	xa		C 15.8	HV	35.0	C	9	a120	0.3	4	2.0m	279	TSU02
2002 11 12.81			C 15.9	GA	60.0	Y	6	a120	0.5		2.5m	287	NAK01
2002 11 16.66			C 15.4	HS	30.0	L	6	a120	0.4				EZA
2002 12 07.73			c 16.8	HS	30.0	L	6	a 60					EZA
2002 12 10.65			C 15.2	HS	30.0	L	6	a480	0.4				EZA
2002 12 13.76			C 15.0	GA	60.0	Y	6	a120	0.9		4.7m	284	NAK01
2002 12 14.68			C 15.1	HS	30.0	L	6	a360	0.4				EZA
2002 12 14.79	xa		C 15.1	HV	35.0	C	9	a120	0.4	4	4.0m	285	TSU02
2002 12 29.61			C 15.9	HS	30.0	L	6	a120	0.4				EZA

Comet C/1999 U4 (Catalina-Skiff)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 13.81	x		C 15.3	TJ	20.0	L	4	a480	0.3	2			OHS
2002 12 27.75	x		C 16.2	TJ	20.0	L	4	A200	0.7				OHS

Comet C/2000 CT_54 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 06.55			C 17.3	GA	60.0	Y	6	a240	0.4				NAK01

Comet C/2000 SV_74 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 08.46	xa		C 14.6	HV	35.0	C	9	a120	0.3	3			TSU02
2002 12 10.83			C 15.0	HS	30.0	L	6	a120	0.6				EZA
2002 12 14.81			C 15.1	HS	30.0	L	6	a360	0.5				EZA
2002 12 14.81	x		C 15.6	TJ	20.0	L	4	a120	0.5	4			OHS
2002 12 29.77			C 14.4	HS	30.0	L	6	a360	0.6				EZA
2002 12 29.83	x		C 15.5	TJ	20.0	L	4	a120	0.5				OHS

Comet C/2000 WM_1 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 08.49	xa		C 16.4	HV	35.0	C	9	a840	0.3	3			TSU02
2002 09 09.49	xa		C 16.0	HV	35.0	C	9	a840	0.4	3			TSU02

Comet C/2000 Y1 (Tubbiolo)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 05.64			C 20.1:	GA	60.0	Y	6	a240	0.15				NAK01

Comet C/2001 B2 (NEAT)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 14.74			C 17.6	GA	60.0	Y	6	a240	0.4			130	NAK01

Comet C/2001 HT_50 (LINEAR-NEAT)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 16.83			C 14.3	HS	30.0	L	6	a 60	0.7		0.3m	0	EZA
2002 12 10.77			C 13.4	HS	30.0	L	6	a480	1.0		1.0m	315	EZA
2002 12 13.79			C 13.0	GA	60.0	Y	6	a120	1.3				NAK01
2002 12 14.71			C 13.6	HS	30.0	L	6	a360	0.8		0.5m	0	EZA
2002 12 14.80	xa		C 13.2	HV	35.0	C	9	a 60	0.8	5	3.5m	98	TSU02
2002 12 24.77			C 13.3	HS	30.0	L	6	a240	0.9		1.0m	0	EZA
2002 12 29.71			C 13.1	HS	30.0	L	6	a180	0.9		1.0m	0	EZA

Comet C/2001 K5 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 08.51	xa		C 14.6	HV	35.0	C	9	a 60	0.3	5	1.4m	193	TSU02
2002 09 18.50			C 14.4	TJ	30.0	L	6	a120	0.5				EZA

Comet C/2001 K5 (LINEAR) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 23.44			C 14.7	TJ	30.0	L	6	a120	0.4			1.0m 185	EZA
2002 10 30.42	x		C 13.8	TJ	20.0	L	4	a180	0.58	5/		1.2m 203	OHS
2002 12 14.86	x		C 15.5	TJ	20.0	L	4	a120	0.3	4			OHS

Comet C/2001 M10 (NEAT)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 28.43			C 19.4	GA	60.0	Y	6	a240	0.2				NAK01

Comet C/2001 Q4 (NEAT)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 08.78	xs		C 16.7	HV	35.0	C	9	a120	0.4	4			TSU02
2002 09 23.75			C 16.6	TJ	30.0	L	6	a120	0.3				EZA
2002 10 29.58	xs		C 15.6	HV	35.0	C	9	a990	0.6	4	0.5m	335	TSU02
2002 11 05.62	x		C 15.7	TJ	60.0	Y	6	a120	0.45			350	NAK01
2002 11 06.56	xs		C 15.8	HV	35.0	C	9	a120	0.5	4	1.0m	356	TSU02
2002 12 15.47	xs		C 15.5:	HV	35.0	C	9	a240	0.4				TSU02

Comet C/2001 RX_14 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 23.79			C 13.3	TJ	30.0	L	6	a 60	0.9			5.0m 290	EZA
2002 10 29.68			C 12.5	TJ	30.0	L	6	a 60	1.3			8.0m 305	EZA
2002 11 06.67			C 12.5	TJ	30.0	L	6	a 60	0.9			8.5m 305	EZA
2002 11 06.80	xa		C 12.6	HV	35.0	C	9	a120	1.0	5	11.0m	305	TSU02
2002 11 12.73			C 12.4	HS	30.0	L	6	a 60	0.9			6 m 305	EZA
2002 11 12.82			C 12.4	GA	60.0	Y	6	a120	1.5		>	9.6m 305	NAK01
2002 11 16.68			C 12.3	HS	30.0	L	6	a900	0.9			12 m 308	EZA
2002 12 10.67			C 12.2	HS	30.0	L	6	a600	1.8			10 m 310	EZA
2002 12 14.72			C 12.3	HS	30.0	L	6	a300	1.5			15 m 320	EZA
2002 12 14.76	x		C 12.3	TJ	20.0	L	4	a120	1.5	7	6.0m	310	OHS
2002 12 14.80			C 12.2	GA	60.0	Y	6	a120	1.6		>	9.6m 310	NAK01
2002 12 14.85	xa		C 12.1	HV	35.0	C	9	a120	1.8	5	>10	m 310	TSU02
2002 12 22.80			C 12.1	HS	30.0	L	6	a 60	0.9				EZA
2002 12 24.61			C 12.4	HS	30.0	L	6	a180	0.9			4 m 300	EZA
2002 12 28.86	xa		C 12.0	HV	35.0	C	9	a120	2.1	5	>11	m 312	TSU02
2002 12 29.74			C 12.4	HS	30.0	L	6	a180	1.1			10 m 310	EZA

Comet C/2001 T4 (NEAT)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 06.57			C 19.1	GA	60.0	Y	6	a240	0.2				NAK01

Comet P/2001 YX_127 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 13.82			C 19.6	GA	60.0	Y	6	a240	0.2			0.9m 294	NAK01
2002 12 14.77			C 19.7	GA	60.0	Y	6	a240	0.15			290	NAK01

Comet C/2002 A3 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 13.78			C 17.7	GA	60.0	Y	6	a240	0.35			2.5m 247	NAK01
2002 12 14.75			C 17.7	GA	60.0	Y	6	a240	0.35			2.0m 248	NAK01

Comet C/2002 C2 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 05.68			C 17.4	GA	60.0	Y	6	a240	0.35			2.2m 4	NAK01
2002 11 28.60	a		C 17.4	GA	60.0	Y	6	a240	0.3			2.3m 7	NAK01

Comet C/2002 E2 (Snyder-Murakami)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 10.85		C	16.2	HS	30.0	L	6	a120	0.3				EZA

Comet C/2002 O4 (Hoenig)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 01.45		C	10.1	HS	25.0	L	5	a 30	3.3		7.5m	56	KAD02
2002 09 08.45	xa	C	10.8	HV	35.0	C	9	a 60	3.0	4	6.0m	48	TSU02
2002 09 09.42	xa	C	10.6	HV	35.0	C	9	a 60	3.2	4	7.0m	58	TSU02
2002 09 18.46		C	11.8	TJ	18.0	L	6	a 60	1.3		2.3m	42	KAD02
2002 11 06.85	xa	C	14.1:	HV	35.0	C	9	a840	3	1			TSU02

Comet C/2002 O7 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 10.84		C	17.2	HS	25.0	L	5	a180	0.25				KAD02
2002 12 11.85		C	17.3	HS	25.0	L	5	a180	0.2				KAD02
2002 12 14.85		C	16.6	HS	30.0	L	6	a180	0.3				EZA
2002 12 29.81		C	16.5	HS	30.0	L	6	a120	0.3				EZA

Comet P/2002 O8 (NEAT)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 06.43	a	C	18.4:	GA	60.0	Y	6	a240	0.2				NAK01

Comet C/2002 P1 (NEAT)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 06.46		C	19.4	GA	60.0	Y	6	a240	0.2				NAK01

Comet P/2002 Q1 (Van Ness)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 18.80	a	C	16.9	GA	60.0	Y	6	a120	0.4		1.3m	279	NAK01
2002 09 23.78		C	17.7	TJ	30.0	L	6	a120	0.3				EZA

Comet C/2002 Q2 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 08.58	xa	C	15.3	HV	35.0	C	9	a660	1.0	1			TSU02
2002 09 12.48	xa	C	15.3	HV	35.0	C	9	a120					TSU02

Comet C/2002 Q3 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 08.59	xa	C	15.7	HV	35.0	C	9	a900	0.8	1			TSU02

Comet C/2002 Q5 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 08.52	xa	C	14.8	HV	35.0	C	9	a120	0.5	5			TSU02
2002 09 12.52	xa	C	14.3	HV	35.0	C	9	a120	0.5	5			TSU02
2002 09 18.43		C	14.1	TJ	30.0	L	6	a480	0.6		0.6m	90	EZA
2002 09 23.44		C	14.4	TJ	30.0	L	6	a 60	0.5				EZA
2002 12 25.87		C	12.6	TJ	25.0	L	5	a 40	1.1				KAD02
2002 12 26.87		C	12.5	TJ	25.0	L	5	a 40	1.2				KAD02
2002 12 27.83	x	C	12.5	TJ	20.0	L	4	a120	1.1				OHS
2002 12 29.87		C	13.2	HS	30.0	L	6	a 60	0.6				EZA

Comet C/2002 R3 (LONEOS)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 09 18.79		C	17.9	GA	60.0	Y	6	a240	0.25	8			NAK01
2002 10 29.55		C	16.4	TJ	30.0	L	6	a 60	0.4				EZA
2002 11 05.66		C	16.7	GA	60.0	Y	6	a120	0.3	8			NAK01
2002 11 06.61		C	16.7	TJ	30.0	L	6	a120	0.3				EZA

Comet C/2002 R3 (LONEOS) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 09.54		C	16.5	HS	30.0	L	6	a120	0.4	8			EZA
2002 11 12.66		C	16.6	GA	60.0	Y	6	a120	0.3				NAK01
2002 11 28.46		C	16.4	HS	30.0	L	6	a120	0.3				EZA
2002 11 28.58		C	16.7	GA	60.0	Y	6	a120	0.3				NAK01
2002 12 07.65		c	17.6	HS	30.0	L	6	a120					EZA
2002 12 22.57		C	16.8	HS	30.0	L	6	a120	0.3				EZA
2002 12 24.55		C	16.3	HS	30.0	L	6	a120	0.3				EZA
2002 12 27.51		C	16.9	GA	60.0	Y	6	a120	0.3		0.4m	74	NAK01
2002 12 29.53		C	16.2	HS	30.0	L	6	a120	0.3				EZA

Comet P/2002 S1 (Skiff)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 05.78		C	18.1	GA	60.0	Y	6	a240	0.25				NAK01
2002 11 12.80		C	18.1	GA	60.0	Y	6	a240	0.25		1.0m	281	NAK01
2002 12 13.75		C	18.3	GA	60.0	Y	6	a240	0.25		1.2m	247	NAK01
2002 12 27.67		C	18.6	GA	60.0	Y	6	a240	0.25		0.8m	240	NAK01

Comet P/2002 T1 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 10 29.54		C	17.0	TJ	30.0	L	6	a 60	0.3	8			EZA
2002 11 01.51	xa	C	17.3	HV	35.0	C	9	a120	0.1	7			TSU02
2002 11 05.59		C	17.9	GA	60.0	Y	6	a120	0.2	8			NAK01
2002 11 09.50		C	17.3	HS	30.0	L	6	a120	0.2				EZA
2002 11 22.41	xa	C	18.1:	HV	35.0	C	9	a180					TSU02
2002 11 28.54		C	19.1	GA	60.0	Y	6	a240	0.2				NAK01
2002 11 29.53	xa	C	18.1:	HV	35.0	C	9	a240	0.2	3			TSU02

Comet P/2002 T5 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 05.69	a	C	17.2	GA	60.0	Y	6	a240	0.3				NAK01
2002 11 06.60	xa	C	16.7	HV	35.0	C	9	a120	0.3	4	0.7m	265	TSU02
2002 11 12.70	a	C	17.3	GA	60.0	Y	6	a240	0.35				NAK01
2002 11 28.62	a	C	16.8	GA	60.0	Y	6	a240	0.4		1.0m	282	NAK01
2002 12 10.63		C	17.0	HS	30.0	L	6	a120	0.4				EZA
2002 12 14.51		c	18.2	HS	30.0	L	6	a120					EZA
2002 12 24.58		C	15.9	HS	30.0	L	6	a120	0.3				EZA
2002 12 26.58		C	16.5	HS	30.0	L	6	a120	0.3				EZA
2002 12 27.56	a	C	16.6	GA	60.0	Y	6	a120	0.35				NAK01
2002 12 29.56		C	16.5	HS	30.0	L	6	a120	0.4				EZA

Comet P/2002 T6 (NEAT-LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 05.61		C	19.1	GA	60.0	Y	6	a240	0.2				NAK01
2002 11 12.65	a	C	19.2	GA	60.0	Y	6	a240	0.2				NAK01
2002 11 28.50		C	18.7	GA	60.0	Y	6	a240	0.2				NAK01

Comet C/2002 T7 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 06.63		C	16.9	TJ	30.0	L	6	a120	0.3				EZA
2002 11 09.63	xa	C	16.8:	HV	35.0	C	9	a 90	0.2	7			TSU02
2002 11 12.74		C	16.9	GA	60.0	Y	6	a120	0.2	8			NAK01
2002 11 23.61		C	17.3	HS	30.0	L	6	a120	0.2				EZA
2002 11 28.51		C	16.8	HS	30.0	L	6	a120	0.3				EZA
2002 11 28.57	xa	C	16.7	HV	35.0	C	9	a120	0.15	8			TSU02
2002 11 28.64		C	16.6	GA	60.0	Y	6	a120	0.2	8/			NAK01
2002 12 10.54		C	15.7	HS	30.0	L	6	a600	0.3				EZA
2002 12 13.73		C	16.1	GA	60.0	Y	6	a120	0.3				NAK01
2002 12 14.53	xa	C	16.1	HV	35.0	C	9	a120	0.2	7			TSU02
2002 12 14.57		C	15.6	HS	30.0	L	6	a120	0.3				EZA
2002 12 22.62		C	15.8	HS	30.0	L	6	a120	0.4				EZA

Comet C/2002 T7 (LINEAR) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 24.60		C	15.8	HS	30.0	L	6	a120	0.3	8			EZA
2002 12 26.56		C	16.1	HS	30.0	L	6	a120	0.3	8			EZA
2002 12 27.59		C	16.1	GA	60.0	Y	6	a120	0.25	8			NAK01
2002 12 27.69	x	C	16.4	TJ	20.0	L	4	a120	0.3				OHS
2002 12 29.54		C	15.8	HS	30.0	L	6	a120	0.4				EZA

Comet C/2002 U2 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 10 26.78		C	15.7	HS	25.0	L	5	a 90	0.4		1.0m	276	KAD02
2002 10 29.62		C	15.5	TJ	30.0	L	6	a120	0.4		2.4m	280	EZA
2002 11 06.66		C	15.7	TJ	30.0	L	6	a 60	0.3		0.8m	320	EZA
2002 11 12.84	a	C	15.5	GA	60.0	Y	6	a120	0.4		3.2m	343	NAK01
2002 12 10.84		C	15.6	HS	30.0	L	6	a480	0.4		1 m	0	EZA
2002 12 14.83		C	15.7	HS	30.0	L	6	a360	0.3		0.7m	350	EZA
2002 12 22.84		C	15.1	HS	30.0	L	6	a120	0.4				EZA
2002 12 29.82		C	14.5	HS	30.0	L	6	a360	0.5		0.5m	320	EZA

Comet C/2002 V1 (NEAT)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 09.55		C	15.5	HS	30.0	L	6	a600	0.4				EZA
2002 11 09.60	xa	C	15.5	HV	35.0	C	9	a120	0.8	5			TSU02
2002 11 12.67		C	15.5	GA	60.0	Y	6	a120	0.55		0.8m	234	NAK01
2002 11 12.70		C	14.9	HS	30.0	L	6	a120	0.5				EZA
2002 11 13.67		C	15.5	HS	25.0	L	5	a120	0.5				KAD02
2002 11 16.63		C	14.6	HS	30.0	L	6	a120	0.5				EZA
2002 11 23.59		C	14.0	HS	30.0	L	6	a120	0.6				EZA
2002 11 26.66		C	13.1	HS	25.0	L	5	a 60	1.6				KAD02
2002 11 28.48		C	13.2	HS	30.0	L	6	a 60	0.9				EZA
2002 11 28.55	xa	C	13.4	HV	35.0	C	9	a 60	5	5			TSU02
2002 11 28.59		C	12.9	GA	60.0	Y	6	a120	2.5				NAK01
2002 11 29.57	xa	C	13.2	HV	35.0	C	9	a 60	3.5	5			TSU02
2002 12 01.57		C	13.0	HS	30.0	L	6	a 60	1.1				EZA
2002 12 07.63		C	12.6	HS	30.0	L	6	a 60	1.3				EZA
2002 12 10.52		C	12.1	HS	30.0	L	6	a420	2.3				EZA
2002 12 13.71	x	C	12.1	TJ	20.0	L	4	a120	2.4	4			OHS
2002 12 14.47	xa	C	10.6	HV	35.0	C	9	a 60	12	5			TSU02
2002 12 14.48		C	11.4	HS	30.0	L	6	a420	1.9				EZA
2002 12 18.48	xa	C	11.2:	HV	10.7	C	3	a120	5	5			TSU02
2002 12 18.48	xa	C	11.2:	HV	10.7	C	3	a120	5	5			TSU02
2002 12 22.54		C	10.7	HS	30.0	L	6	a420	2.4				EZA
2002 12 22.56		C	10.9	HS	30.0	L	6	a420	2.4				EZA
2002 12 26.53		C	10.4	HS	30.0	L	6	a420	2.4				EZA
2002 12 27.49		C	10.1	GA	60.0	Y	6	a 60	6.2				NAK01
2002 12 28.53	xa	C	10.1	HV	35.0	C	9	a 60	5	5			TSU02
2002 12 29.51		C	9.8	HS	30.0	L	6	a600	2.6			60	EZA
2002 12 30.45	xa	C	9.6	HV	35.0	C	9	a 60	6	5			TSU02
2002 12 30.47		C	9.9	HS	30.0	L	6	a360	2.6				EZA

Comet C/2002 V2 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 11 12.72		C	18.5	GA	60.0	Y	6	a240	0.2				NAK01
2002 11 28.66		C	18.4	GA	60.0	Y	6	a240	0.25				NAK01
2002 12 10.60		c	18.4	HS	30.0	L	6	a180					EZA
2002 12 13.72		C	18.0:	GA	60.0	Y	6	a240	0.35				NAK01
2002 12 27.58		C	18.4	GA	60.0	Y	6	a240	0.3				NAK01

Comet C/2002 X1 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 10.67		C	16.1	HS	25.0	L	5	a 90	0.45				KAD02
2002 12 10.74		C	16.4	HS	30.0	L	6	a120	0.4				EZA
2002 12 13.80		C	16.5	GA	60.0	Y	6	a240	0.5		1.8m	287	NAK01

Comet C/2002 X1 (LINEAR) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 14.70		C	16.1	HS	30.0	L	6	a120	0.3				EZA
2002 12 14.79		C	16.7	GA	60.0	Y	6	a240	0.45			290	NAK01
2002 12 27.70		C	15.9	GA	60.0	Y	6	a120	0.55				NAK01
2002 12 27.73	x	C	16.2	TJ	20.0	L	4	a120	0.3				OHS
2002 12 29.59		C	15.4	HS	30.0	L	6	a120	0.4	8			EZA

Comet P/2002 X2 (NEAT)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 27.54	a	C	18.1	GA	60.0	Y	6	a240	0.3			70	NAK01

Comet C/2002 X5 (Kudo-Fujikawa)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 17.84	xa	C	8.8	TT	10.7	R	3	a120	7	5	10	m 340	TSU02
2002 12 19.79	x	C	10.1	TJ	20.0	L	4	a 60	1.6	7			OHS
2002 12 22.83		C	8.9	HS	30.0	L	6	a300	3.4				EZA
2002 12 26.84		C	8.7	HS	30.0	L	6	a300	4.1		10	m 345	EZA
2002 12 26.84	a	L	8.4	LA	30.0	L	6	a180	4.1		2	m 345	EZA
2002 12 26.85	a	V	7.6	LA	30.0	L	6	a180	4.1		2	m 345	EZA
2002 12 26.85	a	k	9.5	LA	30.0	L	6	a180	4.1		10	m 345	EZA
2002 12 27.82	x	C	8.7	TJ	20.0	L	4	a 60	4.4		>12	m 343	OHS
2002 12 28.77		P	8.2	HI			A						VIN02
2002 12 28.88	xa	C	8.1	HV	35.0	C	9	a 60	6		> 7	m 350	TSU02
2002 12 29.83		C	8.9	HS	30.0	L	6	a300	3.4		>14	m 350	EZA
2003 01 12.26		P	6.2	HI			A				18	m 355	VIN02

Comet C/2002 Y1 (Juels-Holvorcem)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
2002 12 30.73		C	15.1	TJ	25.0	L	5	a120	1.3				KAD02
2002 12 31.76		C	14.0	HS	30.0	L	6	a 30	0.6				EZA

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Non-Visual Data (new format)

TABULATED NON-VISUAL DATA

The new format for non-visual data was introduced in the October 2001 issue of the *ICQ*, chiefly to help researchers make more sense of comet photometry obtained with CCD cameras, to determine what effects various instrumental factors play (spectral responses, exposure times, photometric aperture sizes, etc.). As described in that issue, almost all of the new information is added to the original observation records in columns 81-129, thereby leaving the first 80 columns essentially unchanged (except that in the "coma-diameter" column, read coma diameters are now given without exception in the new format; the old format allowed CCD users to put instead an aperture size in the "coma-diameter" column, but this is now allowed for in columns 87-93 of the new-format records). See also page 208 of the July 2002 issue.

Most of the columns below are as for the visual data (described on pages 9-10 of this issue). While electronic magnitudes *can* be submitted to 0.01 magnitude (as were the SOHO comet magnitudes listed earlier in this issue), for many reasons it is highly advised to continue giving total comet magnitudes only to 0.1 mag. Similarly, it is advised to continue giving all times to 0.01 day, as 0.001 day is usually unnecessary for cometary photometry.

The headings for the tabulated data are as follows: The date (UT), notes, magnitude method (including filters for CCDs, and "P" for photographs), magnitude, reference, instrument aperture, instrument type, instrument *f*-ratio, exposure time, coma diameter, degree of condensation, tail length and position angle, and observer are all as described for the visual tabulation. The column headed "APERTUR" gives the photometric aperture, preceded by "S" for square aperture and "C" for circular aperture, and followed by "d" for degrees, "m" for arcmin, and "s" for arcsec. The column "Chp" contains the 3-character code for the computer chip, given to indicate spectral response of the CCD camera. This column will also be used to indicate photographic emulsion when such information is provided for photographic photometry. The column "Sfw" contains the 3-character code for the software used to actually perform the photometric measures (not solely to extract comparison-star magnitudes). A lower-case "a" between these two columns indicates an

anti-blooming CCD. The column headed "c" gives a number as follows: 0 = no correction; 1 = correction for bias (bias subtracted); 2 = flat-field corrected (flat-fielded); 3 = 1 + 2; 4 = dark-subtracted (and bias-subtracted) 5 = 2 + 4. The column headed "P" includes a P if the images used to measure the photometry were also measured for astrometry and those astrometric measures were published in the *Minor Planet Circulars* (meaning they were refereed); a U in this column indicates that the respective astrometric was sent to the MPC for publication but that either (a) they are unpublished at the time of reporting the photometry or (b) the observer is unaware of the publication status; a blank in this column indicates that no astrometry was measured. The 3-character CCD-camera code is listed under "Cam".

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Comet 19P/Borrelly

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 02 02.89	d	k	12.1	LA	35	L	5	A530	1.6		> 9.7m	295	C 1.60m	T24	GAI	5*	ST6	HOR02	
2002 02 03.89	d	k	12.1	LA	35	L	5	A080	1.8		8.5m	296	C 1.80m	T24	GAI	5*	ST6	HOR02	
2002 02 08.88	d	k	12.8	LA	35	L	5	a450	1.8		11.5m	301	C 3.60m	T24	GAI	5*	ST6	HOR02	
2002 02 08.88	d	k	13.3	LA	35	L	5	a450	1.8		11.5m	301	C 1.80m	T24	GAI	5*	ST6	HOR02	
2002 02 14.89	d	k	12.5	LA	35	L	5	B610	2.6		11	m289	C 2.60m	T24	GAI	5*	ST6	HOR02	
2002 02 15.91	d	k	12.5	LA	35	L	5	a540	2.0		> 7.0m	299	C 2.60m	T24	GAI	5*	ST6	HOR02	
2002 02 15.91	d	k	12.8	LA	35	L	5	a540	2.0		> 7.0m	299	C 2.00m	T24	GAI	5*	ST6	HOR02	
2002 02 16.90	d	k	12.4	LA	35	L	5	a810	1.9		8.5m	301	C 2.60m	T24	GAI	5*	ST6	HOR02	
2002 02 16.90	d	k	12.7	LA	35	L	5	a810	1.9		8.5m	301	C 1.90m	T24	GAI	5*	ST6	HOR02	
2002 03 06.82	d	k	13.1	LA	35	L	5	a900	1.9		4.8m	294	C 1.90m	T24	GAI	5*U	ST6	HOR02	
2002 03 10.88	d	k	12.3	LA	35	L	5	a630	1.9		5.2m	290	C 4.00m	T24	GAI	5*U	ST6	HOR02	
2002 03 10.88	d	k	13.0	LA	35	L	5	a630	1.9		5.2m	290	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 03 10.88	d	k	13.1	LA	35	L	5	a630	1.9		5.2m	290	C 1.90m	T24	GAI	5*U	ST6	HOR02	
2002 03 13.83	d	k	13.3	LA	35	L	5	a990	2.0		5.2m	294	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 04 04.85	d	k	13.5	LA	35	L	5	a720	1.2		> 6.5m	293	C 3.00m	T24	GAI	5*U	ST6	HOR02	
2002 04 04.85	d	k	13.7	LA	35	L	5	a720	1.2		> 6.5m	293	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 04 04.85	d	k	13.9	LA	35	L	5	a720	1.2		> 6.5m	293	C 1.20m	T24	GAI	5*U	ST6	HOR02	
2002 04 05.92	d	k	13.6	LA	35	L	5	a810	1.5		5.6m	293	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 04 05.92	d	k	13.8	LA	35	L	5	a810	1.5		5.6m	293	C 1.50m	T24	GAI	5*U	ST6	HOR02	
2002 04 07.83	d	k	13.3	LA	35	L	5	a720	1.7		4.8m	291	C 3.00m	T24	GAI	5*U	ST6	HOR02	
2002 04 07.83	d	k	13.6	LA	35	L	5	a720	1.7		4.8m	291	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 04 07.83	d	k	13.8	LA	35	L	5	a720	1.7		4.8m	291	C 1.70m	T24	GAI	5*U	ST6	HOR02	
2002 05 16.99	d	k	14.4	LA	35	L	5	a630	1.0		3.4m	299	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 16.99	d	k	15.0	LA	35	L	5	a630	1.0		3.4m	299	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 16.99	d	k	15.8	LA	35	L	5	a630	1.0		3.4m	299	C 0.50m	T24	GAI	5*U	ST6	HOR02	

Comet 22P/Kopff

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 05 01.97	d	k	14.8	LA	35	L	5	a600	0.63				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 01.97	d	k	15.1	LA	35	L	5	a600	0.63				C 0.63m	T24	GAI	5*U	ST6	HOR02	
2002 05 16.91	d	k	15.0	LA	35	L	5	a540	0.83		0.7m	40	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 16.91	d	k	15.0	LA	35	L	5	a540	0.83		0.7m	40	C 0.83m	T24	GAI	5*U	ST6	HOR02	
2002 05 16.91	d	k	15.3	LA	35	L	5	a540	0.83		0.7m	40	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 06 14.89	d	k	14.5	LA	35	L	5	a660	0.60				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 14.89	d	k	14.8	LA	35	L	5	a660	0.60				C 0.60m	T24	GAI	5*U	ST6	HOR02	
2002 06 26.87	d	k	15.4	LA	35	L	5	a660	0.50		1.5m	82	C 0.50m	T24	GAI	5*U	ST6	HOR02	

Comet 29P/Schwassmann-Wachmann

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.	
2002 08 30.93		c	14.7	UO	30.5T		6	a 30					S10.4	s	K26	AfP	5	P	ST9	NAV01
2002 09 02.87		c	14.8	UO	30.5T		6	a 30					S10.4	s	K26	AfP	5	P	ST9	NAV01
2002 09 06.95		c	15.4	UO	30.5T		6	a 30					S10.4	s	K26	AfP	5	P	ST9	NAV01
2002 09 26.88		c	15.6	UO	30.5T		6	a 30					S10.4	s	K26	AfP	5	P	ST9	NAV01
2002 10 11.83		c	14.8	UO	30.5T		6	a 30					S10.4	s	K26	AfP	5	P	ST9	NAV01
2002 10 20.84		c	16.8	UO	30.5T		6	a 60					S10.4	s	K26	AfP	5	P	ST9	NAV01
2002 10 25.86		c	14.8	UO	30.5T		6	a 30					S10.4	s	K26	AfP	5	P	ST9	NAV01
2002 10 28.88		c	13.8	UO	30.5T		6	a 20					S10.4	s	K26	AfP	5	P	ST9	NAV01
2002 11 09.76		c	14.0	UO	30.5T		6	a 30					S10.4	s	K26	AfP	5	P	ST9	NAV01
2002 11 09.76		c	17.7	UO	30.5T		6	a120					S10.4	s	K26	AfP	5	P	ST9	NAV01
2002 11 16.77		c	14.2	UO	30.5T		6	a 30					S31.2	s	K26	AfP	5	P	ST9	NAV01
2002 11 16.77		c	15.2	UO	30.5T		6	a 30					S18.7	s	K26	AfP	5	P	ST9	NAV01
2002 11 16.77		c	15.8	UO	30.5T		6	a 30					S10.4	s	K26	AfP	5	P	ST9	NAV01
2002 11 21.81		c	14.7	UO	30.5T		6	a 30					S18.7	s	K26	AfP	5	P	ST9	NAV01

Comet 29P/Schwassmann-Wachmann [cont.]

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 11 21.81		c	15.4	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 11 22.75		c	15.5	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 11 22.76		c	14.4	UO	30.5T	6	a	30					S31.2 s	K26	AfP	5	P	ST9	NAV01
2002 11 22.76		c	14.9	UO	30.5T	6	a	30					S18.7 s	K26	AfP	5	P	ST9	NAV01
2002 11 30.74		c	15.7	UO	30.5T	6	a	30					C25.0 s	K26	A32	5	P	ST9	NAV01
2002 12 06.76		c	16.1	UO	30.5T	6	a	60					C24.0 s	K26	A32	5	P	ST9	NAV01
2002 12 24.74		c	14.8	UO	30.5T	6	a	30					C24.0 s	K26	A32	5	P	ST9	NAV01

Comet 30P/Reinmuth

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 11 17.06		c	15.0	UO	30.5T	6	a	30					S31.2 s	K26	AfP	5	P	ST9	NAV01
2002 11 17.06		c	15.6	UO	30.5T	6	a	30					S18.7 s	K26	AfP	5	P	ST9	NAV01
2002 11 17.06		c	16.0	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 12 01.04		c	15.7	UO	30.5T	6	a	30					C25.0 s	K26	A32	5	P	ST9	NAV01
2002 12 22.02		c	15.9	UO	30.5T	6	a	30					C24.0 s	K26	A32	5	P	ST9	NAV01
2002 12 29.06		c	15.6	UO	30.5T	6	a	30					C24.0 s	K26	A32	5	P	ST9	NAV01
2003 01 07.78		C	14.5	GA	60.0Y	6	a	120	1.1		> 5.9m290		S 1.1 m	SIA	IPL	5	U	Ap7	NAK01

Comet 46P/Wirtanen

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2003 01 07.85		axC	16.0	HV	35.0C	9	a	720	0.8	1	4.5m299		S 1.1 m	KAIa	SI3	5	ST2	TSU02	
2003 01 07.86		C	16.8	GA	60.0Y	6	a	240	0.7		> 7.0m295		S 0.7 m	SIA	IPL	5	U	Ap7	NAK01

Comet 54P/de Vico-Swift-NEAT

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 10 25.89		c	17.0	UO	30.5T	6	a	120					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 11 05.93		c	18.0	UO	30.5T	6	a	180					S10.4 s	K26	AfP	5	P	ST9	NAV01

Comet 57P/du Toit-Neujmin-Delporte

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 08 21.83		c	15.0	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 08 21.83		c	16.3	UO	30.5T	6	a	60					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 08 30.96		c	14.7	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 09 06.94		c	15.4	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 09 26.88		c	16.0	UO	30.5T	6	a	60					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 10 11.81		c	16.2	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAV01

Comet 57P/du Toit-Neujmin-Delporte [component A]

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 07 21.07		d	k	13.3	LA	35	L	5 a480	0.80				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 21.07		d	k	13.4	LA	35	L	5 a480	0.80				C 0.80m	T24	GAI	5*U	ST6	HOR02	
2002 07 21.07		d	k	13.8	LA	35	L	5 a480	0.80				C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 08 04.04		d	k	13.3	LA	35	L	5 a780	1.10		1.1m246		C 1.50m	T24	GAI	5*U	ST6	HOR02	
2002 08 04.04		d	k	13.4	LA	35	L	5 a780	1.10		1.1m246		C 1.10m	T24	GAI	5*U	ST6	HOR02	
2002 08 04.04		d	k	14.0	LA	35	L	5 a780	1.10		1.1m246		C 0.50m	T24	GAI	5*U	ST6	HOR02	

Comet 65P/Gunn

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 04 04.98		d	k	14.4	LA	35	L	5 a480	0.60				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 04 04.98		d	k	14.6	LA	35	L	5 a480	0.60				C 0.60m	T24	GAI	5*U	ST6	HOR02	
2002 04 05.90		d	k	14.2	LA	35	L	5 A020	0.60				C 1.50m	T24	GAI	5*U	ST6	HOR02	
2002 04 05.90		d	k	14.5	LA	35	L	5 A020	0.60				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 04 05.90		d	k	14.7	LA	35	L	5 A020	0.60				C 0.60m	T24	GAI	5*U	ST6	HOR02	
2002 04 07.91		d	k	14.3	LA	35	L	5 a640	0.60		0.6m322		C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 04 07.91		d	k	14.6	LA	35	L	5 a640	0.60		0.6m322		C 0.60m	T24	GAI	5*U	ST6	HOR02	
2002 04 30.84		d	k	14.5	LA	35	L	5 a660	0.73				C 1.50m	T24	GAI	5*U	ST6	HOR02	
2002 04 30.84		d	k	14.5	LA	35	L	5 a660	0.73				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 04 30.84		d	k	14.7	LA	35	L	5 a660	0.73				C 0.73m	T24	GAI	5*U	ST6	HOR02	
2002 05 01.87		d	k	14.7	LA	35	L	5 a180	0.70				C 0.70m	T24	GAI	5*U	ST6	HOR02	

Comet 65P/Gunn [cont.]

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 05 07.96	d	k	14.7	LA	35	L	5	a540	0.73				C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 05 07.96	d	k	14.8	LA	35	L	5	a540	0.73				C 0.73m	T24	GAI	5*U	ST6	HORO2	
2002 05 16.87	d	k	14.3	LA	35	L	5	a600	0.62				C 1.50m	T24	GAI	5*U	ST6	HORO2	
2002 05 16.87	d	k	14.5	LA	35	L	5	a600	0.62				C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 05 16.87	d	k	14.7	LA	35	L	5	a600	0.62				C 0.62m	T24	GAI	5*U	ST6	HORO2	
2002 05 18.85	d	k	14.5	LA	35	L	5	a720	0.57				C 1.50m	T24	GAI	5*U	ST6	HORO2	
2002 05 18.85	d	k	14.6	LA	35	L	5	a720	0.57				C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 05 18.85	d	k	14.8	LA	35	L	5	a720	0.57				C 0.57m	T24	GAI	5*U	ST6	HORO2	
2002 06 14.87	d	k	14.3	LA	35	L	5	a540	0.78				C 1.50m	T24	GAI	5*U	ST6	HORO2	
2002 06 14.87	d	k	14.5	LA	35	L	5	a540	0.78				C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 14.87	d	k	14.6	LA	35	L	5	a540	0.78				C 0.78m	T24	GAI	5*U	ST6	HORO2	
2002 06 14.87	d	k	14.8	LA	35	L	5	a540	0.78				C 0.50m	T24	GAI	5*U	ST6	HORO2	
2002 06 25.90	d	k	14.7	LA	35	L	5	a540	0.53				C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 25.90	d	k	15.0	LA	35	L	5	a540	0.53				C 0.53m	T24	GAI	5*U	ST6	HORO2	

Comet 67P/Churyumov-Gerasimenko

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 11 17.08		c	13.5	UO	30.5T		6	a 30					S31.2 s	K26	AfP	5	P	ST9	NAV01
2002 11 17.08		c	14.1	UO	30.5T		6	a 30					S18.7 s	K26	AfP	5	P	ST9	NAV01
2002 11 17.08		c	15.0	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 12 22.05		c	15.9	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01
2002 12 29.07		c	16.1	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01
2003 01 07.78	ax	C	14.6	HV	35.0C		9	a120	1.0	5	10	m300	S 1.09m	KAIa	SI3	5		ST2	TSU02
2003 01 07.81		C	14.3	GA	60.0Y		6	a120	1.2		> 8.0m	297	S 1.2 m	SIA	IPL	5	U	Ap7	NAK01

Comet 81P/Wild

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 10 11.97		c	13.5	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 11 16.89		c	16.1	UO	30.5T		6	a 30					S18.7 s	K26	AfP	5	P	ST9	NAV01
2002 11 16.89		c	16.4	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 11 29.84		c	15.6	UO	30.5T		6	a 30					C25.0 s	K26	A32	5	P	ST9	NAV01
2002 12 03.93		c	15.7	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01
2002 12 05.84		c	15.4	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01
2002 12 21.80		c	16.2	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01
2002 12 27.90		c	16.2	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01
2003 01 07.44	ax	C	15.6	HV	35.0C		9	a120	0.5	5			S 0.61m	KAIa	SI3	5		ST2	TSU02
2003 01 08.48		C	15.4	GA	60.0Y		6	a120	0.6				S 0.6 m	SIA	IPL	5	U	Ap7	NAK01
2003 01 12.68	x	C	15.2	TJ	20.0L		4	A200	0.4				S 0.4 m	K41a	SI3	5		SE7	OHS

Comet 90P/Gehrels

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 12 27.00		c	17.4	UO	30.5T		6	a 60					C24.0 s	K26	A32	5	P	ST9	NAV01
2002 12 28.93		c	17.3	UO	30.5T		6	a120					C24.0 s	K26	A32	5	P	ST9	NAV01
2003 01 08.54		C	16.8	GA	60.0Y		6	a120	0.35				S 0.35m	SIA	IPL	5	U	Ap7	NAK01

Comet 92P/Sanguin

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 07 24.00		C	16.7	UO	20.0T		10	a120	0.30				S10.0 s	K26	OPS	3	P	ST9	ROD01
2002 08 04.07	d	k	14.8	LA	35	L	5	a480	0.50		1.1m	221	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 08 04.07	d	k	15.1	LA	35	L	5	a480	0.50		1.1m	221	C 0.50m	T24	GAI	5*U	ST6	HORO2	
2002 08 05.01		C	16.0	UO	20.0T		10	a120	0.25				S10.0 s	K26	OPS	3	P	ST9	ROD01
2002 08 10.92		C	15.7	UO	20.0T		10	a120	0.30				S10.0 s	K26	OPS	3	P	ST9	ROD01
2002 08 10.94		C	15.8	UO	20.0T		10	a120	0.30				S10.0 s	K26	OPS	3	P	ST9	ROD01
2002 08 17.92		C	15.3	UO	20.0T		10	a120	0.30				S10.0 s	K26	OPS	3	P	ST9	ROD01
2002 08 18.05	d	k	14.3	LA	35	L	5	a600	0.95				C 0.95m	T24	GAI	5*P	ST6	HORO2	
2002 08 28.95		C	14.9	UO	20.0T		10	a100	0.30				S10.0 s	K26	OPS	3	P	ST9	ROD01
2002 08 31.94		C	14.7	UO	20.0T		10	a100	0.30				S10.0 s	K26	OPS	3	P	ST9	ROD01
2002 09 03.03	d	k	13.4	LA	35	L	5	a780	0.83				C 2.00m	T24	GAI	5*P	ST6	HORO2	
2002 09 03.03	d	k	13.8	LA	35	L	5	a780	0.83				C 0.83m	T24	GAI	5*P	ST6	HORO2	
2002 09 04.00	d	k	13.7	LA	35	L	5	a780	1.03				C 1.03m	T24	GAI	5*P	ST6	HORO2	
2002 09 04.88		C	14.3	UO	20.0T		10	a100	0.25				S10.0 s	K26	OPS	3	P	ST9	ROD01

Comet 92P/Sanguin [cont.].

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 09 05.01	d	k	13.5	LA	35	L	5	a720	1.07				C 2.00m	T24	GAI	5*	P	ST6	HORO2
2002 09 05.01	d	k	13.7	LA	35	L	5	a720	1.07				C 1.07m	T24	GAI	5*	P	ST6	HORO2
2002 09 07.00	d	k	13.7	LA	35	L	5	a640	1.58				C 1.58m	T24	GAI	5*	P	ST6	HORO2
2002 09 07.00	d	k	13.9	LA	35	L	5	a640	1.58				C 1.00m	T24	GAI	5*	P	ST6	HORO2
2002 09 08.00	d	k	13.3	LA	35	L	5	a560	1.00				C 2.00m	T24	GAI	5*	P	ST6	HORO2
2002 09 08.00	d	k	13.5	LA	35	L	5	a560	1.00				C 1.00m	T24	GAI	5*	P	ST6	HORO2
2002 09 09.88	c		14.7	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 09 12.00	d	k	13.5	LA	35	L	5	a640	0.83				C 2.00m	T24	GAI	5*	P	ST6	HORO2
2002 09 12.00	d	k	13.6	LA	35	L	5	a640	0.83				C 1.00m	T24	GAI	5*	P	ST6	HORO2
2002 09 12.00	d	k	13.7	LA	35	L	5	a640	0.83				C 0.83m	T24	GAI	5*	P	ST6	HORO2
2002 09 12.99	d	k	13.7	LA	35	L	5	a280	0.68				C 0.68m	T24	GAI	5*	P	ST6	HORO2
2002 09 14.99	c		14.3	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 09 25.87	c		14.7	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 09 29.96	d	k	13.2	LA	35	L	5	a600	1.12		1.2m	10	C 2.00m	T24	GAI	5*	P	ST6	HORO2
2002 09 29.96	d	k	13.4	LA	35	L	5	a600	1.12		1.2m	10	C 1.12m	T24	GAI	5*	P	ST6	HORO2
2002 09 29.96	d	k	13.8	LA	35	L	5	a600	1.12		1.2m	10	C 0.50m	T24	GAI	5*	P	ST6	HORO2
2002 10 04.93	c		14.6	UO	20.0T		10	a100	0.25				S10.0 s	K26	OPS	3	P	ST9	RODO1
2002 10 11.81	c		14.5	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 10 13.91	c		14.8	UO	20.0T		10	a100	0.20				S10.0 s	K26	OPS	3	P	ST9	RODO1
2002 10 19.86	c		15.1	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 10 27.91	c		15.0	UO	20.0T		10	a120	0.25				S10.0 s	K26	OPS	3	P	ST9	RODO1
2002 11 04.91	c		15.3	UO	20.0T		10	a100	0.30				S10.0 s	K26	OPS	3	P	ST9	RODO1
2002 11 09.77	c		15.2	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 11 10.89	d	k	13.5	LA	35	L	5	a520	1.03		3.4m	26	C 2.00m	T24	GAI	5*	P	ST6	HORO2
2002 11 10.89	d	k	14.2	LA	35	L	5	a520	1.03		3.4m	26	C 1.03m	T24	GAI	5*	P	ST6	HORO2
2002 11 10.89	d	k	14.5	LA	35	L	5	a520	1.03		3.4m	26	C 0.50m	T24	GAI	5*	P	ST6	HORO2
2002 11 10.92	c		15.2	UO	20.0T		10	a120	0.30				S10.0 s	K26	OPS	3	P	ST9	RODO1
2002 11 22.78	c		14.5	UO	30.5T		6	a 30					S31.2 s	K26	AfP	5	P	ST9	NAVO1
2002 11 22.78	c		14.9	UO	30.5T		6	a 30					S18.7 s	K26	AfP	5	P	ST9	NAVO1
2002 11 22.78	c		15.4	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 11 29.82	c		15.9	UO	30.5T		6	a 30					C25.0 s	K26	A32	5	P	ST9	NAVO1
2002 12 06.80	c		16.4	UO	30.5T		6	a 60					C24.0 s	K26	A32	5	P	ST9	NAVO1

Comet 94P/Russell

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 12 28.92	c		18.1	UO	30.5T		6	a180					C24.0 s	K26	A32	5	P	ST9	NAVO1
2003 01 08.53	c		18.7	GA	60.0Y		6	a240	0.15				S 0.15m	SIA	IPL	5	U	Ap7	NAK01

Comet 116P/Wild

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2003 01 07.87	axC		14.1	HV	35.0C		9	a120	0.5	5	7	m289	S 0.85m	KAIa	SI3	5		ST2	TSU02

Comet 118P/Shoemaker-Levy

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 10 11.85	c		17.3	UO	30.5T		6	a 60					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 11 22.87	c		17.1	UO	30.5T		6	a120					S10.4 s	K26	AfP	5	P	ST9	NAVO1

Comet 153P/Ikeya-Zhang

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 04 30.88	d	k	6.2	LA	35	L	5	a600	>13		>10.5m	249	C 8.00m	T24	GAI	5*	U	ST6	HORO2
2002 04 30.88	d	k	6.7	LA	35	L	5	a600	>13		>10.5m	249	C 4.00m	T24	GAI	5*	U	ST6	HORO2
2002 04 30.88	d	k	7.4	LA	35	L	5	a600	>13		>10.5m	249	C 2.00m	T24	GAI	5*	U	ST6	HORO2
2002 04 30.88	d	k	8.3	LA	35	L	5	a600	>13		>10.5m	249	C 1.00m	T24	GAI	5*	U	ST6	HORO2
2002 05 01.89	d	k	6.4	LA	35	L	5	a440	>18		>14	m236	C 8.00m	T24	GAI	5*	U	ST6	HORO2
2002 05 01.89	d	k	6.9	LA	35	L	5	a440	>18		>14	m236	C 4.00m	T24	GAI	5*	U	ST6	HORO2
2002 05 01.89	d	k	7.6	LA	35	L	5	a440	>18		>14	m236	C 2.00m	T24	GAI	5*	U	ST6	HORO2
2002 05 01.89	d	k	8.4	LA	35	L	5	a440	>18		>14	m236	C 1.00m	T24	GAI	5*	U	ST6	HORO2
2002 05 07.89	d	k	6.8	LA	35	L	5	a360	>13		>10	m226	C 8.00m	T24	GAI	5*	U	ST6	HORO2
2002 05 07.89	d	k	7.4	LA	35	L	5	a360	>13		>10	m226	C 4.00m	T24	GAI	5*	U	ST6	HORO2
2002 05 07.89	d	k	8.2	LA	35	L	5	a360	>13		>10	m226	C 2.00m	T24	GAI	5*	U	ST6	HORO2
2002 05 07.89	d	k	9.1	LA	35	L	5	a360	>13		>10	m226	C 1.00m	T24	GAI	5*	U	ST6	HORO2

Comet 153P/Ikeya-Zhang [cont.]

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 05 16.88	d	k	7.0	LA	35	L	5	a600	>20		>11	m199	C 8.00m	T24	GAI	5*U	ST6	HORO2	
2002 05 16.88	d	k	7.5	LA	35	L	5	a600	>20		>11	m199	C 4.00m	T24	GAI	5*U	ST6	HORO2	
2002 05 16.88	d	k	8.3	LA	35	L	5	a600	>20		>11	m199	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 05 16.88	d	k	9.2	LA	35	L	5	a600	>20		>11	m199	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 05 18.87	d	k	7.0	LA	35	L	5	a420	>19		>	8.9m196	C 8.00m	T24	GAI	5*U	ST6	HORO2	
2002 05 18.87	d	k	7.7	LA	35	L	5	a420	>19		>	8.9m196	C 4.00m	T24	GAI	5*U	ST6	HORO2	
2002 05 18.87	d	k	8.5	LA	35	L	5	a420	>19		>	8.9m196	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 05 18.87	d	k	9.4	LA	35	L	5	a420	>19		>	8.9m196	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 14.99	d	k	8.2	LA	35	L	5	a540	>13.0			3.8m116	C 8.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 14.99	d	k	8.9	LA	35	L	5	a540	>13.0			3.8m116	C 4.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 14.99	d	k	9.8	LA	35	L	5	a540	>13.0			3.8m116	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 14.99	d	k	10.7	LA	35	L	5	a540	>13.0			3.8m116	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 18.96	d	k	8.5	LA	35	L	5	A200	>12			4.4m121	C 8.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 18.96	d	k	9.2	LA	35	L	5	A200	>12			4.4m121	C 4.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 18.96	d	k	10.1	LA	35	L	5	A200	>12			4.4m121	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 18.96	d	k	11.0	LA	35	L	5	A200	>12			4.4m121	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 22.96	d	k	8.6	LA	35	L	5	a600	>12			5.0m129	C 8.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 22.96	d	k	9.3	LA	35	L	5	a600	>12			5.0m129	C 4.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 22.96	d	k	10.2	LA	35	L	5	a600	>12			5.0m129	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 22.96	d	k	11.1	LA	35	L	5	a600	>12			5.0m129	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 25.95	d	k	8.7	LA	35	L	5	a840	>12			3.6m121	C 8.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 25.95	d	k	9.4	LA	35	L	5	a840	>12			3.6m121	C 4.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 25.95	d	k	10.3	LA	35	L	5	a840	>12			3.6m121	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 25.95	d	k	11.3	LA	35	L	5	a840	>12			3.6m121	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 26.96	d	k	9.1	LA	35	L	5	a840	>12.5			2.8m124	C 8.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 26.96	d	k	9.8	LA	35	L	5	a840	>12.5			2.8m124	C 4.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 26.96	d	k	10.6	LA	35	L	5	a840	>12.5			2.8m124	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 06 26.96	d	k	11.6	LA	35	L	5	a840	>12.5			2.8m124	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 07.92	d	k	10.2	LA	35	L	5	a680	9.2			3.5m124	C 8.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 07.92	d	k	10.6	LA	35	L	5	a680	9.2			3.5m124	C 4.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 07.92	d	k	11.4	LA	35	L	5	a680	9.2			3.5m124	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 07.92	d	k	12.3	LA	35	L	5	a680	9.2			3.5m124	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 08.93	d	k	10.2	LA	35	L	5	a600	8.2			3.2m122	C 8.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 08.93	d	k	10.7	LA	35	L	5	a600	8.2			3.2m122	C 4.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 08.93	d	k	11.5	LA	35	L	5	a600	8.2			3.2m122	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 08.93	d	k	12.3	LA	35	L	5	a600	8.2			3.2m122	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 09.93	d	k	10.2	LA	35	L	5	a480	8.2			2.7m120	C 8.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 09.93	d	k	10.7	LA	35	L	5	a480	8.2			2.7m120	C 4.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 09.93	d	k	11.4	LA	35	L	5	a480	8.2			2.7m120	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 09.93	d	k	12.3	LA	35	L	5	a480	8.2			2.7m120	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 17.93	d	k	11.5	LA	35	L	5	a480	3.0				C 3.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 20.89	d	k	11.7	LA	35	L	5	a440	3.0				C 3.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 20.89	d	k	12.9	LA	35	L	5	a440	3.0				C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 22.92	d	k	11.3	LA	35	L	5	a480	3.4			1.2m126	C 3.40m	T24	GAI	5*U	ST6	HORO2	
2002 07 22.92	d	k	11.9	LA	35	L	5	a480	3.4			1.2m126	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 22.92	d	k	12.8	LA	35	L	5	a480	3.4			1.2m126	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 29.87	d	k	11.8	LA	35	L	5	a480	3.1			2.7m130	C 3.10m	T24	GAI	5*U	ST6	HORO2	
2002 07 29.87	d	k	12.2	LA	35	L	5	a480	3.1			2.7m130	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 07 29.87	d	k	13.0	LA	35	L	5	a480	3.1			2.7m130	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 08 03.87	d	k	11.8	LA	35	L	5	a480	3.0			2.5m124	C 3.00m	T24	GAI	5*U	ST6	HORO2	
2002 08 03.87	d	k	12.1	LA	35	L	5	a480	3.0			2.5m124	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 08 03.87	d	k	12.9	LA	35	L	5	a480	3.0			2.5m124	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 08 05.86	d	k	11.6	LA	35	L	5	a660	3.2			> 9.5m312	C 3.20m	T24	GAI	5*U	ST6	HORO2	
2002 08 05.86	d	k	12.3	LA	35	L	5	a660	3.2			> 9.5m312	C 2.00m	T24	GAI	5*U	ST6	HORO2	
2002 08 05.86	d	k	13.2	LA	35	L	5	a660	3.2			> 9.5m312	C 1.00m	T24	GAI	5*U	ST6	HORO2	
2002 08 20.85		c	15.3	U0	30.5T		6	a	30				S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 09 06.83		c	15.6	U0	30.5T		6	a	30				S10.4 s	K26	AfP	5	P	ST9	NAV01

Comet 154P/Brewington

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 09 06.92		c	16.4	U0	30.5T		6	a	30				S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 11 30.76		c	16.0	U0	30.5T		6	a	30				C25.0 s	K26	A32	5	P	ST9	NAV01
2003 01 07.42	ax	C	14.0	HV	35.0C		9	a120	0.8	4			S 0.96m	KAIA	SI3	5		ST2	TSU02
2003 01 15.39	a	C	14.6	LA	30.0L		6	a180	0.5				C 0.5 m	SIA	MIm	5*U	Ap7	EZA	

Comet 155P/Shoemaker

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.	
2002 11 11.02	d	k	15.9	LA	35	L	5	a420	0.62				C 0.62m	T24	GAI	5*	P	ST6	HOR02	
2002 11 17.06		c	15.8	UO	30.5T		6	a 30					S18.7 s	K26	AfP	5	P	ST9	NAV01	
2002 11 17.06		c	16.3	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAV01	
2002 11 23.03		c	15.5	UO	30.5T		6	a 60					S18.7 s	K26	AfP	5	P	ST9	NAV01	
2002 11 23.03		c	16.0	UO	30.5T		6	a 60					S10.4 s	K26	AfP	5	P	ST9	NAV01	
2002 11 30.99		c	15.7	UO	30.5T		6	a 30					C25.0 s	K26	A32	5	P	ST9	NAV01	
2002 12 06.01		c	15.7	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01	
2002 12 09.98	d	k	14.9	LA	35	L	5	a660	0.62		2.0m285		C 1.00m	T24	GAI	5*	P	ST6	HOR02	
2002 12 09.98	d	k	15.1	LA	35	L	5	a660	0.62		2.0m285		C 0.62m	T24	GAI	5*	P	ST6	HOR02	
2002 12 10.94	d	k	14.7	LA	35	L	5	a720	0.72		2.5m286		C 1.00m	T24	GAI	5*	P	ST6	HOR02	
2002 12 10.94	d	k	14.9	LA	35	L	5	a720	0.72		2.5m286		C 0.72m	T24	GAI	5*	P	ST6	HOR02	
2002 12 11.96	d	k	14.7	LA	35	L	5	a720	0.58		1.9m288		C 1.00m	T24	GAI	5*	P	ST6	HOR02	
2002 12 11.96	d	k	15.0	LA	35	L	5	a720	0.58		1.9m288		C 0.58m	T24	GAI	5*	P	ST6	HOR02	
2002 12 21.93		c	15.8	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01	
2002 12 27.03		c	15.8	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01	
2002 12 27.96		c	16.1	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01	
2003 01 04.64	a	C	15.2	LA	30.0L		6	a360	0.5		?	275	C 0.5 m	SIA	MIm	5*	U	Ap7	EZA	
2003 01 06.75	x	C	15.0	TJ	20.0L		4	a120	0.4			1.5m285	S 0.4 m	K41aSI3			5		SE7	OHS
2003 01 08.60	ax	C	14.8	HV	35.0C		9	a120	0.6	5		4.5m287	S 0.76m	KAIaSI3			5		ST2	TSU02
2003 01 08.79	x	C	15.1	TJ	20.0L		4	a120	0.5			1.6m285	S 0.5 m	K41aSI3			5		SE7	OHS
2003 01 12.00	d	k	13.8	LA	35	L	5	a600	0.90			4.2m288	C 2.00m	T24	GAI	5*	P	ST6	HOR02	
2003 01 12.00	d	k	14.2	LA	35	L	5	a600	0.90			4.2m288	C 0.90m	T24	GAI	5*	P	ST6	HOR02	
2003 01 12.00	d	k	14.7	LA	35	L	5	a600	0.90			4.2m288	C 0.50m	T24	GAI	5*	P	ST6	HOR02	
2003 01 12.77	x	C	15.3	TJ	20.0L		4	a120	0.5			1.4m296	S 0.5 m	K41aSI3			5		SE7	OHS

Comet C/1999 U4 (Catalina-Skiff)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.	
2001 10 14.90	d	k	15.6	FD	35	L	5	a720	0.75				2.2m298	S 0.77m	T24	OPS	5*	ST6	HOR02	
2001 11 10.86	d	k	15.6	FD	35	L	5	a810	0.6				1.2m312	C 0.60m	T24	GAI	5*	ST6	HOR02	
2001 11 17.82	d	k	15.7	FD	35	L	5	a990	0.75				2.3m308	C 0.75m	T24	GAI	5*	ST6	HOR02	
2001 12 08.83	d	k	15.7	LA	35	L	5	a240	0.6				2 m315	C 0.60m	T24	GAI	5*	ST6	HOR02	
2001 12 09.86	d	k	15.6	LA	35	L	5	A620	0.8				5.5m317	C 0.80m	T24	GAI	5*	ST6	HOR02	
2002 02 02.85	d	k	15.9	LA	35	L	5	B070	0.63				4.6m308	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 02 02.85	d	k	15.9	LA	35	L	5	B070	0.63				4.6m308	C 0.63m	T24	GAI	5*	ST6	HOR02	
2002 02 03.84	d	k	15.8	LA	35	L	5	a810	0.60				3.9m306	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 02 03.84	d	k	15.9	LA	35	L	5	a810	0.60				3.9m306	C 0.60m	T24	GAI	5*	ST6	HOR02	
2002 02 04.85	d	k	15.9	LA	35	L	5	a630	0.63				1.7m295	C 0.63m	T24	GAI	5*	ST6	HOR02	
2002 02 14.84	d	k	14.9	LA	35	L	5	a900	0.93				4.4m310	C 2.00m	T24	GAI	5*	ST6	HOR02	
2002 02 14.84	d	k	15.4	LA	35	L	5	a900	0.93				4.4m310	C 0.93m	T24	GAI	5*	ST6	HOR02	
2002 02 15.86	d	k	15.1	LA	35	L	5	a990	0.72				3.6m311	C 2.00m	T24	GAI	5*	ST6	HOR02	
2002 02 15.86	d	k	15.5	LA	35	L	5	a990	0.72				3.6m311	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 02 15.86	d	k	15.6	LA	35	L	5	a990	0.72				3.6m311	C 0.72m	T24	GAI	5*	ST6	HOR02	
2002 02 16.96	d	k	15.5	LA	35	L	5	a630	0.83				4.0m312	C 0.83m	T24	GAI	5*	ST6	HOR02	
2002 03 06.85	d	k	15.5	LA	35	L	5	a720	0.83				2.2m307	C 0.83m	T24	GAI	5*U	ST6	HOR02	
2002 03 08.88	d	k	15.3	LA	35	L	5	a630	0.78				3.1m298	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 03 08.88	d	k	15.5	LA	35	L	5	a630	0.78				3.1m298	C 0.78m	T24	GAI	5*U	ST6	HOR02	
2002 03 10.83	d	k	15.6	LA	35	L	5	a540	0.73				2.3m304	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 03 10.83	d	k	15.6	LA	35	L	5	a540	0.73				2.3m304	C 0.73m	T24	GAI	5*U	ST6	HOR02	
2002 03 13.81	d	k	15.3	LA	35	L	5	a630	0.78				1.9m309	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 03 13.81	d	k	15.6	LA	35	L	5	a630	0.78				1.9m309	C 0.78m	T24	GAI	5*U	ST6	HOR02	
2002 04 04.81	d	k	15.6	LA	35	L	5	a630	0.73				1.1m305	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 04 04.81	d	k	15.7	LA	35	L	5	a630	0.73				1.1m305	C 0.73m	T24	GAI	5*U	ST6	HOR02	
2002 04 07.81	d	k	15.5	LA	35	L	5	a720	0.62				3.5m301	C 1.00m	T24	GAI	5*P	ST6	HOR02	
2002 04 07.81	d	k	15.7	LA	35	L	5	a720	0.62				3.5m301	C 0.62m	T24	GAI	5*P	ST6	HOR02	
2003 01 07.81	ax	C	17.6	HV	35.0C		9	A080	0.6	4			3.2m337	S 1.04m	KAIaSI3			5	ST2	TSU02
2003 01 07.83		C	17.0	GA	60.0Y		6	a120	0.4				2.6m336	S 0.4 m	SIA	IPL	5	U	Ap7	NAK01
2003 01 12.07	d	k	16.6	LA	35	L	5	a720	0.37				C 0.37m	T24	GAI	5*P	ST6	HOR02		

Comet C/2000 CT_54 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 12 05.90		c	17.6	UO	30.5T		6	a120					C24.0 s	K26	A32	5	P	ST9	NAV01

Comet C/2000 SV_74 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2001 10 14.74	d	k	13.3	FD	35	L	5	a630	0.8				S 0.88m	T24	OPS	5*	ST6	HOR02	
2001 11 10.91	d	k	13.4	FD	35	L	5	a630	1.0			0.6m320	C 1.00m	T24	GAI	5*	ST6	HOR02	
2001 11 17.74	d	k	13.5	FD	35	L	5	a720	1.5				C 1.50m	T24	GAI	5*	ST6	HOR02	
2001 12 08.80	d	k	13.6	LA	35	L	5	a810	1.5				C 1.50m	T24	GAI	5*	ST6	HOR02	
2001 12 09.83	d	k	13.6	LA	35	L	5	a810	1.6				C 1.60m	T24	GAI	5*	ST6	HOR02	
2002 02 02.73	d	k	13.7	LA	35	L	5	A440	0.93				C 0.93m	T24	GAI	5*	ST6	HOR02	
2002 02 04.80	d	k	13.7	LA	35	L	5	a630	0.87				C 0.87m	T24	GAI	5*	ST6	HOR02	
2002 02 08.84	d	k	13.9	LA	35	L	5	a630	0.90				C 0.90m	T24	GAI	5*	ST6	HOR02	
2002 02 15.81	d	k	13.5	LA	35	L	5	a630	1.2				C 1.20m	T24	GAI	5*	ST6	HOR02	
2002 02 16.80	d	k	13.5	LA	35	L	5	a720	0.83				C 0.83m	T24	GAI	5*	ST6	HOR02	
2002 03 08.82	d	k	13.3	LA	35	L	5	a630	1.6				C 1.60m	T24	GAI	5*U	ST6	HOR02	
2002 03 08.82	d	k	13.7	LA	35	L	5	a630	1.6				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 03 08.82	d	k	14.4	LA	35	L	5	a630	1.6				C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 03 10.79	d	k	13.1	LA	35	L	5	a540	1.6				C 1.60m	T24	GAI	5*U	ST6	HOR02	
2002 03 10.79	d	k	13.5	LA	35	L	5	a540	1.6				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 03 10.79	d	k	14.3	LA	35	L	5	a540	1.6				C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 05 08.02	d	k	13.5	LA	35	L	5	a630	1.7				C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 08.02	d	k	13.7	LA	35	L	5	a630	1.7				C 1.70m	T24	GAI	5*U	ST6	HOR02	
2002 05 08.02	d	k	13.8	LA	35	L	5	a630	1.7				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 17.05	d	k	13.4	LA	35	L	5	A350	1.7				C 1.70m	T24	GAI	5*U	ST6	HOR02	
2002 05 17.05	d	k	13.8	LA	35	L	5	A350	1.7				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 27.03	d	k	13.4	LA	35	L	5	a600	1.23				C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 27.03	d	k	13.8	LA	35	L	5	a600	1.23				C 1.23m	T24	GAI	5*U	ST6	HOR02	
2002 06 27.03	d	k	14.0	LA	35	L	5	a600	1.23				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 27.03	d	k	14.6	LA	35	L	5	a600	1.23				C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 07 07.95	d	k	13.9	LA	35	L	5	a600	1.7				C 1.70m	T24	GAI	5*U	ST6	HOR02	
2002 07 07.95	d	k	14.1	LA	35	L	5	a600	1.7				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 07.95	d	k	14.7	LA	35	L	5	a600	1.7				C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 07 08.95	d	k	13.5	LA	35	L	5	a600	1.7				C 1.70m	T24	GAI	5*U	ST6	HOR02	
2002 07 08.95	d	k	13.5	LA	35	L	5	a600	1.7				C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 08.95	d	k	13.9	LA	35	L	5	a600	1.7				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 08.95	d	k	14.6	LA	35	L	5	a600	1.7				C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 07 17.95	d	k	14.1	LA	35	L	5	a630	1.8				C 1.80m	T24	GAI	5*U	ST6	HOR02	
2002 07 17.95	d	k	14.3	LA	35	L	5	a630	1.8				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 17.95	d	k	14.8	LA	35	L	5	a630	1.8				C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 07 22.94	d	k	13.6	LA	35	L	5	a720	1.7				C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 22.94	d	k	13.7	LA	35	L	5	a720	1.7				C 1.70m	T24	GAI	5*U	ST6	HOR02	
2002 07 22.94	d	k	14.0	LA	35	L	5	a720	1.7				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 22.94	d	k	14.6	LA	35	L	5	a720	1.7				C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 07 27.96	d	k	14.5	LA	35	L	5	a720	1.8				C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 07 29.95	d	k	13.6	LA	35	L	5	a810	1.8				C 1.80m	T24	GAI	5*U	ST6	HOR02	
2002 07 29.95	d	k	13.9	LA	35	L	5	a810	1.8				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 29.95	d	k	14.5	LA	35	L	5	a810	1.8				C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 08 03.84	d	k	13.6	LA	35	L	5	a630	2.0				C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 08 03.84	d	k	13.9	LA	35	L	5	a630	2.0				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 08 03.84	d	k	14.6	LA	35	L	5	a630	2.0				C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 08 05.91	d	k	13.7	LA	35	L	5	a720	1.9				C 1.90m	T24	GAI	5*U	ST6	HOR02	
2002 08 05.91	d	k	14.1	LA	35	L	5	a720	1.9				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 08 05.91	d	k	14.7	LA	35	L	5	a720	1.9				C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 08 17.83	d	k	13.9	LA	35	L	5	a720	2.0				C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 08 17.83	d	k	14.2	LA	35	L	5	a720	2.0				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 08 17.83	d	k	14.8	LA	35	L	5	a720	2.0				C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 08 20.85	d	k	13.9	LA	35	L	5	a990	1.9				C 1.90m	T24	GAI	5*U	ST6	HOR02	
2002 08 20.85	d	k	14.2	LA	35	L	5	a990	1.9				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 08 21.89		c	15.7	U0	30	.5T	6	a 30					S10.4 s	K26	AfP	5 P	ST9	NAV01	
2002 09 06.81	d	k	13.9	LA	35	L	5	a630	2.1				C 2.10m	T24	GAI	5*U	ST6	HOR02	
2002 09 06.81	d	k	14.3	LA	35	L	5	a630	2.1				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 07.82	d	k	14.1	LA	35	L	5	a990	1.5				C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 07.82	d	k	14.1	LA	35	L	5	a990	1.5				C 1.50m	T24	GAI	5*U	ST6	HOR02	
2002 09 07.82	d	k	14.4	LA	35	L	5	a990	1.5				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 11.82	d	k	13.7	LA	35	L	5	a360	1.7				C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 11.82	d	k	13.7	LA	35	L	5	a360	1.7				C 1.70m	T24	GAI	5*U	ST6	HOR02	
2002 09 11.82	d	k	14.2	LA	35	L	5	a360	1.7				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 12.81	d	k	14.1	LA	35	L	5	a630	1.5				C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 12.81	d	k	14.1	LA	35	L	5	a630	1.5				C 1.50m	T24	GAI	5*U	ST6	HOR02	

Comet C/2000 SV_74 (LINEAR) [cont.]

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 09 12.81	d	k	14.4	LA	35	L	5	a630	1.5				C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 12 29.09		c	15.9	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01
2003 01 12.09	d	k	14.2	LA	35	L	5	a600	1.4				C 2.00m	T24	GAI	5*P	ST6	HOR02	
2003 01 12.09	d	k	14.3	LA	35	L	5	a600	1.4				C 1.40m	T24	GAI	5*P	ST6	HOR02	
2003 01 12.09	d	k	14.6	LA	35	L	5	a600	1.4				C 1.00m	T24	GAI	5*P	ST6	HOR02	
2003 01 12.09	d	k	15.3	LA	35	L	5	a600	1.4				C 0.50m	T24	GAI	5*P	ST6	HOR02	

Comet C/2000 WM_1 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2001 10 14.86	d	k	11.3	FD	35	L	5	a630	2.9				C 3.00m	T24	GAI	5*	ST6	HOR02	
2002 05 07.99	d	k	10.8	LA	35	L	5	a600	2.0	>	12	m219	C 3.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 07.99	d	k	11.2	LA	35	L	5	a600	2.0	>	12	m219	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 07.99	d	k	11.9	LA	35	L	5	a600	2.0	>	12	m219	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 16.98	d	k	11.7	LA	35	L	5	a480	2.1	>	12.4m	213	C 2.10m	T24	GAI	5*U	ST6	HOR02	
2002 05 16.98	d	k	12.5	LA	35	L	5	a480	2.1	>	12.4m	213	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 18.92	d	k	12.0	LA	35	L	5	A020	1.9	>	8.0m	213	C 1.90m	T24	GAI	5*U	ST6	HOR02	
2002 06 14.97	d	k	13.0	LA	35	L	5	a660	1.6	>	8.0m	187	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 14.97	d	k	13.1	LA	35	L	5	a660	1.6	>	8.0m	187	C 1.60m	T24	GAI	5*U	ST6	HOR02	
2002 06 14.97	d	k	13.5	LA	35	L	5	a660	1.6	>	8.0m	187	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 18.93	d	k	13.2	LA	35	L	5	a780	1.9	>	9.8m	195	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 18.93	d	k	13.2	LA	35	L	5	a780	1.9	>	9.8m	195	C 1.90m	T24	GAI	5*U	ST6	HOR02	
2002 06 18.93	d	k	13.8	LA	35	L	5	a780	1.9	>	9.8m	195	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 18.93	d	k	14.5	LA	35	L	5	a780	1.9	>	9.8m	195	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 06 22.92	d	k	13.6	LA	35	L	5	a600	1.2	>	8.5m	193	C 1.20m	T24	GAI	5*U	ST6	HOR02	
2002 06 22.92	d	k	13.8	LA	35	L	5	a600	1.2	>	8.5m	193	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 22.92	d	k	14.4	LA	35	L	5	a600	1.2	>	8.5m	193	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 06 25.88	d	k	13.8	LA	35	L	5	a600	1.2	>	7.9m	180	C 1.20m	T24	GAI	5*U	ST6	HOR02	
2002 06 25.88	d	k	14.1	LA	35	L	5	a600	1.2	>	7.9m	180	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 25.88	d	k	14.7	LA	35	L	5	a600	1.2	>	7.9m	180	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 06 26.90	d	k	13.4	LA	35	L	5	A320	1.2	>	10.3m	182	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 26.90	d	k	13.8	LA	35	L	5	A320	1.2	>	10.3m	182	C 1.20m	T24	GAI	5*U	ST6	HOR02	
2002 06 26.90	d	k	14.0	LA	35	L	5	A320	1.2	>	10.3m	182	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 26.90	d	k	14.6	LA	35	L	5	A320	1.2	>	10.3m	182	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 06 30.90	d	k	13.8	LA	35	L	5	a660	0.63	>	10.0m	176	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 30.90	d	k	14.3	LA	35	L	5	a660	0.63	>	10.0m	176	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 30.90	d	k	14.6	LA	35	L	5	a660	0.63	>	10.0m	176	C 0.63m	T24	GAI	5*U	ST6	HOR02	
2002 07 07.89	d	k	13.8	LA	35	L	5	a660	0.90	>	9.8m	178	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 07.89	d	k	14.5	LA	35	L	5	a660	0.90	>	9.8m	178	C 0.90m	T24	GAI	5*U	ST6	HOR02	
2002 07 07.89	d	k	15.1	LA	35	L	5	a660	0.90	>	9.8m	178	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 07 08.89	d	k	13.7	LA	35	L	5	a600	0.93	>	10.3m	183	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 08.89	d	k	14.5	LA	35	L	5	a600	0.93	>	10.3m	183	C 0.93m	T24	GAI	5*U	ST6	HOR02	
2002 07 08.89	d	k	15.0	LA	35	L	5	a600	0.93	>	10.3m	183	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 07 10.02	d	k	14.5	LA	35	L	5	a540	0.78	>	10.1m	184	C 0.78m	T24	GAI	5*U	ST6	HOR02	
2002 07 10.02	d	k	15.0	LA	35	L	5	a540	0.78	>	10.1m	184	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 07 17.88	d	k	13.9	LA	35	L	5	a720	0.92	>	12.2m	175	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 17.88	d	k	14.4	LA	35	L	5	a720	0.92	>	12.2m	175	C 0.92m	T24	GAI	5*U	ST6	HOR02	
2002 07 17.88	d	k	15.1	LA	35	L	5	a720	0.92	>	12.2m	175	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 07 23.02	d	k	14.2	LA	35	L	5	a720	0.63	>	10.3m	174	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 23.02	d	k	14.9	LA	35	L	5	a720	0.63	>	10.3m	174	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 23.02	d	k	15.3	LA	35	L	5	a720	0.63	>	10.3m	174	C 0.63m	T24	GAI	5*U	ST6	HOR02	
2002 07 29.85	d	k	15.0	LA	35	L	5	a600	0.55	>	9.0m	207	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 29.85	d	k	15.3	LA	35	L	5	a600	0.55	>	9.0m	207	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 29.85	d	k	15.6	LA	35	L	5	a600	0.55	>	9.0m	207	C 0.55m	T24	GAI	5*U	ST6	HOR02	
2002 08 03.95	d	k	14.8	LA	35	L	5	a540	0.43	>	10.0m	168	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 08 03.95	d	k	15.2	LA	35	L	5	a540	0.43	>	10.0m	168	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 08 03.95	d	k	15.9	LA	35	L	5	a540	0.43	>	10.0m	168	C 0.43m	T24	GAI	5*U	ST6	HOR02	
2002 08 20.89		c	17.0	UO	30.5T		6	a 60					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 09 06.84		c	16.8	UO	30.5T		6	a 60					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 09 06.84	d	k	16.2	LA	35	L	5	a720	0.63				C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 09 06.84	d	k	16.4	LA	35	L	5	a720	0.63				C 0.63m	T24	GAI	5*	ST6	HOR02	
2002 09 15.85		c	16.9	UO	30.5T		6	a 60					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 10 11.79		c	17.2	UO	30.5T		6	a 60					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 11 10.75		c	17.3	UO	30.5T		6	a120					S10.4 s	K26	AfP	5	P	ST9	NAV01

Comet C/2001 A2 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2001 10 14.83	d	k	16.0	FD	35	L	5	a630	0.35				S 0.36m	T24	OPS	5*	ST6		HOR02
2002 09 15.88	c		19.0	UO	30.5T		6	a180					S10.4 s	K26	AfP	5	P	ST9	NAV01

Comet C/2001 B2 (NEAT)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2003 01 07.76		C	17.5	GA	60.0Y		6	a240	0.4		1.0m134	S	0.4 m	SIA	IPL	5	U	Ap7	NAK01

Comet C/2001 HT_50 (LINEAR-NEAT)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 12 01.04	c		14.6	UO	30.5T		6	a 30					C25.0 s	K26	A32	5	P	ST9	NAV01
2002 12 21.99	c		14.6	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01
2002 12 27.02	c		14.0	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01
2002 12 27.98	c		13.8	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01
2002 12 29.05	c		14.5	UO	30.5T		6	a 30					C24.0 s	K26	A32	5	P	ST9	NAV01
2003 01 04.60	a	C	13.4	LA	30.0L		6	a180	0.5		0.6m 0		C 0.5 m	SIA	MIm	5*U	Ap7		EZA
2003 01 07.69		C	12.5	GA	60.0Y		6	a120	1.6		4.7m		S 1.6 m	SIA	IPL	5	U	Ap7	NAK01
2003 01 08.57	axC		12.8	HV	35.0C		9	a120	0.8	6	4.5m 96	S	0.93m	KAIA	SI3	5		ST2	TSU02
2003 01 12.11	d	k	13.1	LA	35	L	5	a660	1.1		2.7m 90	C	2.00m	T24	GAI	5*P	ST6		HOR02
2003 01 12.11	d	k	13.2	LA	35	L	5	a660	1.1		2.7m 90	C	1.10m	T24	GAI	5*P	ST6		HOR02
2003 01 12.11	d	k	13.4	LA	35	L	5	a660	1.1		2.7m 90	C	0.50m	T24	GAI	5*P	ST6		HOR02
2003 01 12.72	x	C	12.3	TJ	20.0L		4	a120	1.1				S 1.1 m	K41a	SI3	5		SE7	OHS
2003 01 15.56	a	C	13.5	LA	30.0L		6	a180	0.4		0.4m320	C	0.4 m	SIA	MIm	5*U	Ap7		EZA

Comet C/2001 K5 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 06 15.00	d	k	13.8	LA	35	L	5	a600	0.50		2.8m199	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 06 15.00	d	k	14.0	LA	35	L	5	a600	0.50		2.8m199	C	0.50m	T24	GAI	5*U	ST6		HOR02
2002 06 18.91	d	k	14.0	LA	35	L	5	a660	0.47		1.8m199	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 06 18.91	d	k	14.2	LA	35	L	5	a660	0.47		1.8m199	C	0.47m	T24	GAI	5*U	ST6		HOR02
2002 06 22.90	d	k	13.8	LA	35	L	5	a780	0.47		1.8m191	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 06 22.90	d	k	14.1	LA	35	L	5	a780	0.47		1.8m191	C	0.47m	T24	GAI	5*U	ST6		HOR02
2002 06 25.98	d	k	13.8	LA	35	L	5	a660	0.48		2.8m195	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 06 25.98	d	k	14.1	LA	35	L	5	a660	0.48		2.8m195	C	0.48m	T24	GAI	5*U	ST6		HOR02
2002 06 26.94	d	k	13.9	LA	35	L	5	a720	0.57		3.1m194	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 06 26.94	d	k	14.2	LA	35	L	5	a720	0.57		3.1m194	C	0.57m	T24	GAI	5*U	ST6		HOR02
2002 06 30.86	d	k	13.7	LA	35	L	5	a720	0.57		4.2m193	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 06 30.86	d	k	13.9	LA	35	L	5	a720	0.57		4.2m193	C	0.57m	T24	GAI	5*U	ST6		HOR02
2002 07 07.86	d	k	13.9	LA	35	L	5	a660	0.55		4.0m190	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 07 07.86	d	k	14.1	LA	35	L	5	a660	0.55		4.0m190	C	0.55m	T24	GAI	5*U	ST6		HOR02
2002 07 08.87	d	k	13.9	LA	35	L	5	a720	0.53		3.8m193	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 07 08.87	d	k	14.1	LA	35	L	5	a720	0.53		3.8m193	C	0.53m	T24	GAI	5*U	ST6		HOR02
2002 07 09.90	d	k	13.9	LA	35	L	5	a420	0.50		4.3m192	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 07 09.90	d	k	14.1	LA	35	L	5	a420	0.50		4.3m192	C	0.50m	T24	GAI	5*U	ST6		HOR02
2002 07 17.84	d	k	13.9	LA	35	L	5	A020	0.52		3.2m195	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 07 17.84	d	k	14.2	LA	35	L	5	A020	0.52		3.2m195	C	0.52m	T24	GAI	5*U	ST6		HOR02
2002 07 20.86	d	k	14.0	LA	35	L	5	a600	0.55		1.8m192	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 07 20.86	d	k	14.2	LA	35	L	5	a600	0.55		1.8m192	C	0.55m	T24	GAI	5*U	ST6		HOR02
2002 07 22.98	d	k	14.0	LA	35	L	5	a600	0.48		2.9m189	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 07 22.98	d	k	14.2	LA	35	L	5	a600	0.48		2.9m189	C	0.48m	T24	GAI	5*U	ST6		HOR02
2002 07 28.02	d	k	13.8	LA	35	L	5	a560	0.57		1.6m188	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 07 28.02	d	k	14.1	LA	35	L	5	a560	0.57		1.6m188	C	0.57m	T24	GAI	5*U	ST6		HOR02
2002 07 29.83	d	k	14.0	LA	35	L	5	a660	0.53		2.6m190	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 07 29.83	d	k	14.2	LA	35	L	5	a660	0.53		2.6m190	C	0.53m	T24	GAI	5*U	ST6		HOR02
2002 07 31.93	d	k	14.0	LA	35	L	5	a240	0.53		1.7m189	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 07 31.93	d	k	14.2	LA	35	L	5	a240	0.53		1.7m189	C	0.53m	T24	GAI	5*U	ST6		HOR02
2002 08 03.82	d	k	13.9	LA	35	L	5	a900	0.48		3.8m192	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 08 03.82	d	k	14.2	LA	35	L	5	a900	0.48		3.8m192	C	0.48m	T24	GAI	5*U	ST6		HOR02
2002 08 05.84	d	k	14.0	LA	35	L	5	a600	0.53		3.1m189	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 08 05.84	d	k	14.2	LA	35	L	5	a600	0.53		3.1m189	C	0.53m	T24	GAI	5*U	ST6		HOR02
2002 08 17.80	d	k	14.0	LA	35	L	5	a720	0.62		2.3m184	C	1.00m	T24	GAI	5*U	ST6		HOR02
2002 08 17.80	d	k	14.2	LA	35	L	5	a720	0.62		2.3m184	C	0.62m	T24	GAI	5*U	ST6		HOR02
2002 08 18.82	d	k	13.9	LA	35	L	5	a600	0.53		1.2m186	C	1.00m	T24	GAI	5*U	ST6		HOR02

Comet C/2001 K5 (LINEAR) [cont.]

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 08 18.82	d	k	14.2	LA	35	L	5	a600	0.53		1.2m186	C	0.53m	T24	GAI	5*U	ST6	HOR02	
2002 08 20.80	d	k	14.0	LA	35	L	5	a600	0.62		1.3m187	C	1.00m	T24	GAI	5*U	ST6	HOR02	
2002 08 20.80	d	k	14.2	LA	35	L	5	a600	0.62		1.3m187	C	0.62m	T24	GAI	5*U	ST6	HOR02	
2002 08 20.86		c	14.7	UO	30.5	T	6	a 30					S10.4	s	K26	AfP	5 P	ST9	NAV01
2002 08 25.81	d	k	14.0	LA	35	L	5	a540	0.50		1.6m184	C	1.00m	T24	GAI	5*U	ST6	HOR02	
2002 08 25.81	d	k	14.2	LA	35	L	5	a540	0.50		1.6m184	C	0.50m	T24	GAI	5*U	ST6	HOR02	
2002 08 26.80	d	k	14.0	LA	35	L	5	a240	0.62		1.5m189	C	1.00m	T24	GAI	5*U	ST6	HOR02	
2002 08 26.80	d	k	14.2	LA	35	L	5	a240	0.62		1.5m189	C	0.62m	T24	GAI	5*U	ST6	HOR02	
2002 09 06.77	d	k	14.0	LA	35	L	5	a600	0.62		1.3m189	C	1.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 06.77	d	k	14.2	LA	35	L	5	a600	0.62		1.3m189	C	0.62m	T24	GAI	5*U	ST6	HOR02	
2002 09 06.83		c	14.6	UO	30.5	T	6	a 30					S10.4	s	K26	AfP	5 P	ST9	NAV01
2002 09 07.78	d	k	14.0	LA	35	L	5	a780	0.60		1.4m189	C	1.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 07.78	d	k	14.2	LA	35	L	5	a780	0.60		1.4m189	C	0.60m	T24	GAI	5*U	ST6	HOR02	
2002 09 08.80	d	k	14.0	LA	35	L	5	a720	0.50		1.8m187	C	1.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 08.80	d	k	14.2	LA	35	L	5	a720	0.50		1.8m187	C	0.50m	T24	GAI	5*U	ST6	HOR02	
2002 09 11.78	d	k	14.1	LA	35	L	5	a300	0.58		1.6m186	C	1.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 11.78	d	k	14.2	LA	35	L	5	a300	0.58		1.6m186	C	0.58m	T24	GAI	5*U	ST6	HOR02	
2002 09 12.77	d	k	14.2	LA	35	L	5	a300	0.55		1.4m183	C	1.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 12.77	d	k	14.4	LA	35	L	5	a300	0.55		1.4m183	C	0.55m	T24	GAI	5*U	ST6	HOR02	
2002 09 14.86		c	14.6	UO	30.5	T	6	a 30					S10.4	s	K26	AfP	5 P	ST9	NAV01
2002 09 29.76	d	k	14.2	LA	35	L	5	A140	0.48		4.7m193	C	1.00m	T24	GAI	5*P	ST6	HOR02	
2002 09 29.76	d	k	14.5	LA	35	L	5	A140	0.48		4.7m193	C	0.48m	T24	GAI	5*P	ST6	HOR02	
2002 10 06.84		c	14.7	UO	30.5	T	6	a 30					S10.4	s	K26	AfP	5 P	ST9	NAV01
2002 10 11.79		c	14.6	UO	30.5	T	6	a 30					S10.4	s	K26	AfP	5 P	ST9	NAV01
2002 10 20.80		c	14.6	UO	30.5	T	6	a 30					S10.4	s	K26	AfP	5 P	ST9	NAV01
2002 11 10.73		c	15.1	UO	30.5	T	6	a 30					S10.4	s	K26	AfP	5 P	ST9	NAV01
2002 12 11.70	d	k	14.2	LA	35	L	5	a660	0.52		1.3m225	C	1.00m	T24	GAI	5*P	ST6	HOR02	
2002 12 11.70	d	k	14.4	LA	35	L	5	a660	0.52		1.3m225	C	0.52m	T24	GAI	5*P	ST6	HOR02	
2003 01 15.83	x	C	15.1	TJ	20.0	L	4	a120	0.4		0.6m227	S	0.4 m	K41a	SI3	5	SE7	OHS	

Comet P/2001 MD_7 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 02 02.80	d	k	12.9	LA	35	L	5	A080	1.33		2.0m	75	C	4.00m	T24	GAI	5*	ST6	HOR02
2002 02 02.80	d	k	13.2	LA	35	L	5	A080	1.33		2.0m	75	C	2.00m	T24	GAI	5*	ST6	HOR02
2002 02 02.80	d	k	13.5	LA	35	L	5	A080	1.33		2.0m	75	C	1.33m	T24	GAI	5*	ST6	HOR02
2002 02 03.79	d	k	13.1	LA	35	L	5	a660	0.60		2.0m	83	C	2.00m	T24	GAI	5*	ST6	HOR02
2002 02 03.79	d	k	13.2	LA	35	L	5	a660	0.60		2.0m	83	C	4.00m	T24	GAI	5*	ST6	HOR02
2002 02 03.79	d	k	13.6	LA	35	L	5	a660	0.60		2.0m	83	C	1.00m	T24	GAI	5*	ST6	HOR02
2002 02 03.79	d	k	14.0	LA	35	L	5	a660	0.60		2.0m	83	C	0.60m	T24	GAI	5*	ST6	HOR02
2002 02 04.78	d	k	13.1	LA	35	L	5	a660	1.08		2.0m	70	C	2.00m	T24	GAI	5*	ST6	HOR02
2002 02 04.78	d	k	13.1	LA	35	L	5	a660	1.08		2.0m	70	C	4.00m	T24	GAI	5*	ST6	HOR02
2002 02 04.78	d	k	13.5	LA	35	L	5	a660	1.08		2.0m	70	C	1.08m	T24	GAI	5*	ST6	HOR02
2002 02 14.77	d	k	13.1	LA	35	L	5	a720	1.23		1.8m	83	C	2.00m	T24	GAI	5*	ST6	HOR02
2002 02 14.77	d	k	13.4	LA	35	L	5	a720	1.23		1.8m	83	C	1.23m	T24	GAI	5*	ST6	HOR02
2002 02 16.78	d	k	13.0	LA	35	L	5	a600	1.17		2.1m	82	C	2.00m	T24	GAI	5*	ST6	HOR02
2002 02 16.78	d	k	13.4	LA	35	L	5	a600	1.17		2.1m	82	C	1.17m	T24	GAI	5*	ST6	HOR02
2002 03 08.81	d	k	14.6	LA	35	L	5	a600	0.78		1.7m107	C	0.78m	T24	GAI	5*P	ST6	HOR02	
2002 03 10.81	d	k	14.4	LA	35	L	5	a720	0.70		2.3m106	C	1.00m	T24	GAI	5*	ST6	HOR02	
2002 03 10.81	d	k	14.7	LA	35	L	5	a720	0.70		2.3m106	C	0.70m	T24	GAI	5*	ST6	HOR02	
2002 04 04.79	d	k	15.0	LA	35	L	5	a660	0.72				C	0.72m	T24	GAI	5*U	ST6	HOR02
2002 04 07.79	d	k	15.4	LA	35	L	5	a780	0.60				C	0.60m	T24	GAI	5*U	ST6	HOR02

Comet C/2001 N2 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 05 17.03	d	k	14.7	LA	35	L	5	a360	0.33				C	0.33m	T24	GAI	5*U	ST6	HOR02
2002 06 26.99	d	k	14.0	LA	35	L	5	a720	0.83				C	0.83m	T24	GAI	5*U	ST6	HOR02
2002 06 26.99	d	k	14.4	LA	35	L	5	a720	0.83				C	0.50m	T24	GAI	5*U	ST6	HOR02
2002 06 30.92	d	k	14.2	LA	35	L	5	a600	0.72				C	0.72m	T24	GAI	5*U	ST6	HOR02
2002 06 30.92	d	k	14.5	LA	35	L	5	a600	0.72				C	0.50m	T24	GAI	5*U	ST6	HOR02
2002 07 08.03	d	k	14.3	LA	35	L	5	a600	0.83				C	0.83m	T24	GAI	5*U	ST6	HOR02
2002 07 08.03	d	k	14.5	LA	35	L	5	a600	0.83				C	0.50m	T24	GAI	5*U	ST6	HOR02
2002 07 08.99	d	k	13.8	LA	35	L	5	a600	0.77		2.0m	85	C	1.00m	T24	GAI	5*U	ST6	HOR02
2002 07 08.99	d	k	14.0	LA	35	L	5	a600	0.77		2.0m	85	C	0.77m	T24	GAI	5*U	ST6	HOR02

Comet C/2001 N2 (LINEAR) [cont.]

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 07 08.99	d	k	14.3	LA	35	L	5	a600	0.77		2.0m	85	C 0.50m	T24	GAI	5*	ST6	HOR02	
2002 07 10.04	d	k	14.3	LA	35	L	5	a540	0.73				C 0.73m	T24	GAI	5*	ST6	HOR02	
2002 07 10.04	d	k	14.5	LA	35	L	5	a540	0.73				C 0.50m	T24	GAI	5*	ST6	HOR02	
2002 07 17.98	d	k	14.3	LA	35	L	5	a660	0.63		1.5m	72	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 07 17.98	d	k	14.5	LA	35	L	5	a660	0.63		1.5m	72	C 0.63m	T24	GAI	5*	ST6	HOR02	
2002 07 21.04	d	k	14.5	LA	35	L	5	a240	0.62		1.4m	70	C 0.62m	T24	GAI	5*	ST6	HOR02	
2002 07 22.96	d	k	14.2	LA	35	L	5	a660	0.73		0.7m	92	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 07 22.96	d	k	14.3	LA	35	L	5	a660	0.73		0.7m	92	C 0.73m	T24	GAI	5*	ST6	HOR02	
2002 07 27.98	d	k	14.3	LA	35	L	5	a420	0.67		1.0m	78	C 0.67m	T24	GAI	5*	ST6	HOR02	
2002 07 29.93	d	k	14.0	LA	35	L	5	a660	0.67		1.3m	77	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 07 29.93	d	k	14.4	LA	35	L	5	a660	0.67		1.3m	77	C 0.67m	T24	GAI	5*	ST6	HOR02	
2002 08 03.89	d	k	14.1	LA	35	L	5	a600	0.78		1.2m	77	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 08 03.89	d	k	14.3	LA	35	L	5	a600	0.78		1.2m	77	C 0.78m	T24	GAI	5*	ST6	HOR02	
2002 08 03.89	d	k	14.6	LA	35	L	5	a600	0.78		1.2m	77	C 0.50m	T24	GAI	5*	ST6	HOR02	
2002 08 05.88	d	k	14.5	LA	35	L	5	a480	0.83		2.1m	76	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 08 05.88	d	k	14.6	LA	35	L	5	a480	0.83		2.1m	76	C 0.83m	T24	GAI	5*	ST6	HOR02	
2002 08 05.88	d	k	14.9	LA	35	L	5	a480	0.83		2.1m	76	C 0.50m	T24	GAI	5*	ST6	HOR02	
2002 08 17.85	d	k	14.9	LA	35	L	5	a960	0.67				C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 08 17.85	d	k	15.0	LA	35	L	5	a960	0.67				C 0.67m	T24	GAI	5*	ST6	HOR02	
2002 08 20.83	d	k	14.9	LA	35	L	5	a720	0.65				C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 08 20.83	d	k	15.3	LA	35	L	5	a720	0.65				C 0.65m	T24	GAI	5*	ST6	HOR02	
2002 08 20.85	c		15.5	UO	30.5	T	6	a 30					S10.4 s	K26	AfP	5 P	ST9	NAV01	

Comet C/2001 OG_108 (LONEOS)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 02 03.73	d	k	13.3	LA	35	L	5	a660	0.47		0.6m	289	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 02 03.73	d	k	13.9	LA	35	L	5	a660	0.47		0.6m	289	C 0.47m	T24	GAI	5*	ST6	HOR02	
2002 04 02.88	d	k	11.8	LA	35	L	5	a600	1.4		>11.3m	317	C 2.00m	T24	GAI	5*	ST6	HOR02	
2002 04 02.88	d	k	12.1	LA	35	L	5	a600	1.4		>11.3m	317	C 1.40m	T24	GAI	5*	ST6	HOR02	
2002 04 04.95	d	k	12.2	LA	35	L	5	A240	1.7		>10.0m	314	C 1.70m	T24	GAI	5*	ST6	HOR02	
2002 04 04.95	d	k	12.7	LA	35	L	5	A240	1.7		>10.0m	314	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 04 05.94	d	k	12.1	LA	35	L	5	a600	1.5		>10.9m	317	C 2.00m	T24	GAI	5*	ST6	HOR02	
2002 04 05.94	d	k	12.6	LA	35	L	5	a600	1.5		>10.9m	317	C 1.50m	T24	GAI	5*	ST6	HOR02	
2002 04 07.93	d	k	11.9	LA	35	L	5	a600	2.3		>10.4m	329	C 2.30m	T24	GAI	5*	ST6	HOR02	
2002 04 07.93	d	k	12.0	LA	35	L	5	a600	2.3		>10.4m	329	C 2.00m	T24	GAI	5*	ST6	HOR02	
2002 04 07.93	d	k	12.7	LA	35	L	5	a600	2.3		>10.4m	329	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 04 30.82	d	k	13.5	LA	35	L	5	a600	0.55		2.6m	86	C 3.00m	T24	GAI	5*	ST6	HOR02	
2002 04 30.82	d	k	13.7	LA	35	L	5	a600	0.55		2.6m	86	C 2.00m	T24	GAI	5*	ST6	HOR02	
2002 04 30.82	d	k	14.4	LA	35	L	5	a600	0.55		2.6m	86	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 04 30.82	d	k	15.0	LA	35	L	5	a600	0.55		2.6m	86	C 0.55m	T24	GAI	5*	ST6	HOR02	
2002 05 01.84	d	k	13.8	LA	35	L	5	a330	0.43		2.2m	90	C 2.00m	T24	GAI	5*	ST6	HOR02	
2002 05 01.84	d	k	14.5	LA	35	L	5	a330	0.43		2.2m	90	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 05 01.84	d	k	15.4	LA	35	L	5	a330	0.43		2.2m	90	C 0.43m	T24	GAI	5*	ST6	HOR02	
2002 05 16.85	d	k	14.5	LA	35	L	5	a600	0.50		2.1m	69	C 2.00m	T24	GAI	5*	ST6	HOR02	
2002 05 16.85	d	k	15.3	LA	35	L	5	a600	0.50		2.1m	69	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 05 16.85	d	k	15.6	LA	35	L	5	a600	0.50		2.1m	69	C 0.50m	T24	GAI	5*	ST6	HOR02	

Comet C/2001 Q4 (NEAT)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2003 01 02.39	ax	C	15.3	HV	35.0	C	14	a240	0.4	4			S 0.65m	KA1a	SI3	5	ST2	TSU02	

Comet P/2001 Q5 (LINEAR-NEAT)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2001 11 10.89	d	k	16.2	FD	35	L	5	a810	0.3		0.3m	190	S 0.36m	T24	OPS	5*	ST6	HOR02	
2001 11 17.80	d	k	16.8	FD	35	L	5	a990	0.4				C 0.40m	T24	GAI	5*	ST6	HOR02	

Comet P/2001 Q6 (NEAT)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2001 11 10.83	d	k	12.8	FD	35	L	5	a630	3.5		2.0m	77	C 3.50m	T24	GAI	5*	ST6	HOR02	
2001 11 17.69	d	k	12.9	FD	35	L	5	a900	2.8		1.9m	50	C 2.80m	T24	GAI	5*	ST6	HOR02	
2001 12 08.73	d	k	13.3	LB	35	L	5	a720	2.1		3.5m	39	C 2.10m	T24	GAI	5*	ST6	HOR02	

Comet P/2001 Q6 (NEAT) [cont.]

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2001 12 09.74	d	k	13.4	LB	35	L	5	a720	2.1		3.5m	35	C 2.10m	T24	GAI	5*		ST6	HOR02

Comet C/2001 RX_14 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 02 03.81	d	k	16.5	LA	35	L	5	a960	0.20				C 0.20m	T24	GAI	5*		ST6	HOR02
2002 02 04.77	d	k	16.3	LA	35	L	5	a720	0.37				C 0.37m	T24	GAI	5*		ST6	HOR02
2002 02 15.79	d	k	16.2	LA	35	L	5	a600	0.37				C 0.37m	T24	GAI	5*		ST6	HOR02
2002 02 16.77	d	k	16.2	LA	35	L	5	a600	0.28				C 0.28m	T24	GAI	5*		ST6	HOR02
2002 08 18.06	d	k	13.1	LA	35	L	5	a480	0.82		2.5m274		C 2.00m	T24	GAI	5*U		ST6	HOR02
2002 08 18.06	d	k	13.8	LA	35	L	5	a480	0.82		2.5m274		C 0.82m	T24	GAI	5*U		ST6	HOR02
2002 09 03.06	d	k	13.6	LA	35	L	5	a840	0.70		4.6m279		C 0.70m	T24	GAI	5*U		ST6	HOR02
2002 09 04.04	d	k	13.5	LA	35	L	5	a960	0.73		3.1m279		C 2.00m	T24	GAI	5*U		ST6	HOR02
2002 09 04.04	d	k	13.7	LA	35	L	5	a960	0.73		3.1m279		C 0.73m	T24	GAI	5*U		ST6	HOR02
2002 09 05.05	d	k	13.3	LA	35	L	5	a900	0.88		2.4m282		C 2.00m	T24	GAI	5*U		ST6	HOR02
2002 09 05.05	d	k	13.6	LA	35	L	5	a900	0.88		2.4m282		C 0.88m	T24	GAI	5*U		ST6	HOR02
2002 09 07.03	d	k	13.3	LA	35	L	5	A200	0.88		3.5m282		C 2.00m	T24	GAI	5*U		ST6	HOR02
2002 09 07.03	d	k	13.7	LA	35	L	5	A200	0.88		3.5m282		C 0.88m	T24	GAI	5*U		ST6	HOR02
2002 09 08.02	d	k	13.1	LA	35	L	5	a600	0.63		4.6m281		C 2.00m	T24	GAI	5*U		ST6	HOR02
2002 09 08.02	d	k	13.4	LA	35	L	5	a600	0.63		4.6m281		C 1.00m	T24	GAI	5*U		ST6	HOR02
2002 09 08.02	d	k	13.6	LA	35	L	5	a600	0.63		4.6m281		C 0.63m	T24	GAI	5*U		ST6	HOR02
2002 09 12.02	d	k	13.0	LA	35	L	5	a720	1.00		5.6m281		C 2.00m	T24	GAI	5*U		ST6	HOR02
2002 09 12.02	d	k	13.3	LA	35	L	5	a720	1.00		5.6m281		C 1.00m	T24	GAI	5*U		ST6	HOR02
2002 09 30.00	d	k	12.8	LA	35	L	5	a660	1.00		8.6m290		C 3.00m	T24	GAI	5*P		ST6	HOR02
2002 09 30.00	d	k	12.9	LA	35	L	5	a660	1.00		8.6m290		C 2.00m	T24	GAI	5*P		ST6	HOR02
2002 09 30.00	d	k	13.2	LA	35	L	5	a660	1.00		8.6m290		C 1.00m	T24	GAI	5*P		ST6	HOR02
2002 09 30.00	d	k	13.6	LA	35	L	5	a660	1.00		8.6m290		C 0.50m	T24	GAI	5*P		ST6	HOR02
2002 10 01.06	d	k	12.8	LA	35	L	5	a640	0.83		9.0m289		C 3.00m	T24	GAI	5*P		ST6	HOR02
2002 10 01.06	d	k	12.8	LA	35	L	5	a640	0.83		9.0m289		C 2.00m	T24	GAI	5*P		ST6	HOR02
2002 10 01.06	d	k	13.4	LA	35	L	5	a640	0.83		9.0m289		C 0.83m	T24	GAI	5*P		ST6	HOR02
2002 10 01.06	d	k	13.6	LA	35	L	5	a640	0.83		9.0m289		C 0.50m	T24	GAI	5*P		ST6	HOR02
2002 10 19.02	c		13.6	UO	30.5	T	6	a 30					S10.4 s	K26	AfP	5 P		ST9	NAV01
2002 10 26.03	c		14.5	UO	30.5	T	6	a 30					S10.4 s	K26	AfP	5 P		ST9	NAV01
2002 11 17.01	c		13.2	UO	30.5	T	6	a 30					S31.2 s	K26	AfP	5 P		ST9	NAV01
2002 11 17.01	c		13.8	UO	30.5	T	6	a 30					S18.7 s	K26	AfP	5 P		ST9	NAV01
2002 11 17.01	c		14.8	UO	30.5	T	6	a 30					S10.4 s	K26	AfP	5 P		ST9	NAV01
2002 11 22.99	c		13.0	UO	30.5	T	6	a 30					S31.2 s	K26	AfP	5 P		ST9	NAV01
2002 11 22.99	c		13.4	UO	30.5	T	6	a 30					S18.7 s	K26	AfP	5 P		ST9	NAV01
2002 11 22.99	c		13.9	UO	30.5	T	6	a 30					S10.4 s	K26	AfP	5 P		ST9	NAV01
2002 11 30.98	c		14.0	UO	30.5	T	6	a 30					C25.0 s	K26	A32	5 P		ST9	NAV01
2002 12 06.01	c		13.6	UO	30.5	T	6	a 30					C24.0 s	K26	A32	5 P		ST9	NAV01
2002 12 08.98	d	k	11.5	LA	35	L	5	a510	1.9		>12.5m313		C 3.00m	T24	GAI	5*P		ST6	HOR02
2002 12 08.98	d	k	11.8	LA	35	L	5	a510	1.9		>12.5m313		C 1.90m	T24	GAI	5*P		ST6	HOR02
2002 12 08.98	d	k	12.2	LA	35	L	5	a510	1.9		>12.5m313		C 1.00m	T24	GAI	5*P		ST6	HOR02
2002 12 08.98	d	k	12.4	LA	35	L	5	a510	1.9		>12.5m313		C 0.50m	T24	GAI	5*P		ST6	HOR02
2002 12 10.00	d	k	11.5	LA	35	L	5	a720	1.8		>14.7m315		C 3.00m	T24	GAI	5*P		ST6	HOR02
2002 12 10.00	d	k	11.8	LA	35	L	5	a720	1.8		>14.7m315		C 1.80m	T24	GAI	5*P		ST6	HOR02
2002 12 10.00	d	k	12.2	LA	35	L	5	a720	1.8		>14.7m315		C 1.00m	T24	GAI	5*P		ST6	HOR02
2002 12 10.00	d	k	12.7	LA	35	L	5	a720	1.8		>14.7m315		C 0.50m	T24	GAI	5*P		ST6	HOR02
2002 12 10.96	d	k	11.5	LA	35	L	5	a960	2.3		>13.1m310		C 3.00m	T24	GAI	5*P		ST6	HOR02
2002 12 10.96	d	k	11.7	LA	35	L	5	a960	2.3		>13.1m310		C 2.30m	T24	GAI	5*P		ST6	HOR02
2002 12 10.96	d	k	12.2	LA	35	L	5	a960	2.3		>13.1m310		C 1.00m	T24	GAI	5*P		ST6	HOR02
2002 12 10.96	d	k	12.7	LA	35	L	5	a960	2.3		>13.1m310		C 0.50m	T24	GAI	5*P		ST6	HOR02
2002 12 12.00	d	k	11.5	LA	35	L	5	a780	2.2		>14.9m314		C 3.00m	T24	GAI	5*P		ST6	HOR02
2002 12 12.00	d	k	11.7	LA	35	L	5	a780	2.2		>14.9m314		C 2.20m	T24	GAI	5*P		ST6	HOR02
2002 12 12.00	d	k	12.2	LA	35	L	5	a780	2.2		>14.9m314		C 1.00m	T24	GAI	5*P		ST6	HOR02
2002 12 12.00	d	k	12.7	LA	35	L	5	a780	2.2		>14.9m314		C 0.50m	T24	GAI	5*P		ST6	HOR02
2002 12 21.98	c		14.0	UO	30.5	T	6	a 30					C24.0 s	K26	A32	5 P		ST9	NAV01
2002 12 25.98	c		13.9	UO	30.5	T	6	a 30					C24.0 s	K26	A32	5 P		ST9	NAV01
2002 12 27.04	c		13.8	UO	30.5	T	6	a 30					C24.0 s	K26	A32	5 P		ST9	NAV01
2002 12 28.03	c		14.0	UO	30.5	T	6	a 30					C24.0 s	K26	A32	5 P		ST9	NAV01
2002 12 29.03	c		13.7	UO	30.5	T	6	a 30					C24.0 s	K26	A32	5 P		ST9	NAV01
2003 01 04.65	a	C	12.9	LA	30.0	L	6	a180	0.9		9 m305		C 0.9 m	SIA	MI	5*U		Ap7	EZA
2003 01 04.66	a	H	12.1	LA	30.0	L	6	a180	0.9		9 m305		C 0.9 m	SIA	MI	5 U		Ap7	EZA
2003 01 04.66	a	L	13.6	LA	30.0	L	6	a180	0.9		3 m305		C 0.9 m	SIA	MI	5 U		Ap7	EZA

Comet C/2001 RX₁₄ (LINEAR) [cont.]

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2003 01 04.66	a	V	12.1	LA	30.0L	6	a180	0.9			5	m305	C 0.9 m	SIA	MIm	5	U	Ap7	EZA
2003 01 04.66	a	k	12.4	LA	30.0L	6	a180	0.9			7	m305	C 0.9 m	SIA	MIm	5	U	Ap7	EZA
2003 01 07.82		C	11.6	GA	60.0Y	6	a120	2.6			> 8.8m	306	S 2.6 m	SIA	IPL	5	U	Ap7	NAK01
2003 01 08.82	x	C	12.2	TJ	20.0L	4	a120	0.8			8	m304	S 0.8 m	K41a	SI3	5		SE7	OHS
2003 01 11.63	a	H	11.8	LA	30.0L	6	A260	0.9			7	m315	C 0.9 m	SIA	MIm	5*U		Ap7	EZA
2003 01 11.65	a	k	12.2	LA	30.0L	6	A260	0.9			5	m315	C 0.9 m	SIA	MIm	5*U		Ap7	EZA
2003 01 11.67	a	V	12.7	LA	30.0L	6	A260	0.9			5	m300	C 0.9 m	SIA	MIm	5*U		Ap7	EZA
2003 01 11.69	a	L	13.4	LA	30.0L	6	A260	0.9			5	m300	C 0.9 m	SIA	MIm	5*U		Ap7	EZA
2003 01 12.02	d	k	11.0	LA	35	L	5	a560	2.5		>13.3m	306	C 4.00m	T24	GAI	5*P		ST6	HORO2
2003 01 12.02	d	k	11.4	LA	35	L	5	a560	2.5		>13.3m	306	C 2.50m	T24	GAI	5*P		ST6	HORO2
2003 01 12.02	d	k	12.0	LA	35	L	5	a560	2.5		>13.3m	306	C 1.00m	T24	GAI	5*P		ST6	HORO2
2003 01 12.02	d	k	12.5	LA	35	L	5	a560	2.5		>13.3m	306	C 0.50m	T24	GAI	5*P		ST6	HORO2
2003 01 17.92	d	k	10.8	LA	35	L	5	A590	3.0		>11.6m	304	C 4.00m	T24	GAI	5*P		ST6	HORO2
2003 01 17.92	d	k	11.1	LA	35	L	5	A590	3.0		>11.6m	304	C 3.00m	T24	GAI	5*P		ST6	HORO2
2003 01 17.92	d	k	11.4	LA	35	L	5	A590	3.0		>11.6m	304	C 2.00m	T24	GAI	5*P		ST6	HORO2
2003 01 17.92	d	k	11.9	LA	35	L	5	A590	3.0		>11.6m	304	C 1.00m	T24	GAI	5*P		ST6	HORO2
2003 01 17.92	d	k	12.5	LA	35	L	5	A590	3.0		>11.6m	304	C 0.50m	T24	GAI	5*P		ST6	HORO2

Comet P/2001 TU₈₀ (LINEAR-NEAT)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 02 04.83	d	k	14.4	LA	35	L	5	a720	0.53		0.6m	255	C 2.00m	T24	GAI	5*		ST6	HORO2
2002 02 04.83	d	k	14.6	LA	35	L	5	a720	0.53		0.6m	255	C 1.00m	T24	GAI	5*		ST6	HORO2
2002 02 04.83	d	k	15.0	LA	35	L	5	a720	0.53		0.6m	255	C 0.53m	T24	GAI	5*		ST6	HORO2
2002 02 14.82	d	k	14.8	LA	35	L	5	a600	0.60		0.4m	255	C 1.00m	T24	GAI	5*		ST6	HORO2
2002 02 14.82	d	k	15.1	LA	35	L	5	a600	0.60		0.4m	255	C 0.60m	T24	GAI	5*		ST6	HORO2
2002 02 15.83	d	k	14.8	LA	35	L	5	a600	0.75				C 1.00m	T24	GAI	5*		ST6	HORO2
2002 02 15.83	d	k	15.0	LA	35	L	5	a600	0.75				C 0.75m	T24	GAI	5*		ST6	HORO2
2002 02 16.82	d	k	15.0	LA	35	L	5	a900	0.57				C 1.00m	T24	GAI	5*		ST6	HORO2
2002 02 16.82	d	k	15.3	LA	35	L	5	a900	0.57				C 0.57m	T24	GAI	5*		ST6	HORO2
2002 03 08.89	d	k	15.3	LA	35	L	5	a720	0.58		0.4m	135	C 1.00m	T24	GAI	5*U		ST6	HORO2
2002 03 08.89	d	k	15.7	LA	35	L	5	a720	0.58		0.4m	135	C 0.58m	T24	GAI	5*U		ST6	HORO2
2002 03 10.86	d	k	15.5	LA	35	L	5	a450	0.50		0.4m	130	C 1.00m	T24	GAI	5*U		ST6	HORO2
2002 03 10.86	d	k	15.9	LA	35	L	5	a450	0.50		0.4m	130	C 0.50m	T24	GAI	5*U		ST6	HORO2
2002 04 04.87	d	k	16.6	LA	35	L	5	a660	0.30				C 0.50m	T24	GAI	5*U		ST6	HORO2
2002 04 04.87	d	k	17.2	LA	35	L	5	a660	0.30				C 0.30m	T24	GAI	5*U		ST6	HORO2
2002 04 05.85	d	k	16.7	LA	35	L	5	a810	0.30				C 0.50m	T24	GAI	5*U		ST6	HORO2
2002 04 05.85	d	k	17.1	LA	35	L	5	a810	0.30				C 0.30m	T24	GAI	5*U		ST6	HORO2
2002 04 07.87	d	k	16.8	LA	35	L	5	a900	0.33				C 0.50m	T24	GAI	5*U		ST6	HORO2
2002 04 07.87	d	k	17.3	LA	35	L	5	a900	0.33				C 0.33m	T24	GAI	5*U		ST6	HORO2

Comet C/2001 U6 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2001 12 09.90	d	k	17.5	LB	35	L	5	A200	0.25				S 0.30m	T24	OPS	5*		ST6	HORO2
2002 10 13.79		c	17.8	UD	30.5T	6	a 30						S10.4 s	K26	AfP	5	P	ST9	NAV01

Comet C/2001 W2 (BATTERS)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2001 12 08.70	d	k	11.5	LA	35	L	5	a960	0.9		6	m 33	C 0.90m	T24	GAI	5*		ST6	HORO2
2001 12 09.69	d	k	11.5	LA	35	L	5	a960	1.0		>12	m 33	C 1.00m	T24	GAI	5*		ST6	HORO2

Comet P/2001 YX₁₂₇ (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2003 01 07.74		C	19.4	GA	60.0Y	6	a240	0.2			0.8m	292	S 0.2 m	SIA	IPL	5	U	Ap7	NAK01

Comet C/2002 A3 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2003 01 08.63		C	17.7	GA	60.0Y	6	a240	0.35			2.6m	247	S 0.35m	SIA	IPL	5	U	Ap7	NAK01

Comet C/2002 C2 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 02 03.91	d	k	16.8	LA	35	L	5	A180	0.22				C 0.22m	T24	GAI	5*	ST6	HOR02	
2002 02 04.90	d	k	16.7	LA	35	L	5	a810	0.20				C 0.20m	T24	GAI	5*	ST6	HOR02	
2002 02 15.89	d	k	16.7	LA	35	L	5	a540	0.43				C 0.43m	T24	GAI	5*	ST6	HOR02	
2002 02 16.87	d	k	16.5	LA	35	L	5	A350	0.43		1.0m	19	C 0.43m	T24	GAI	5*	ST6	HOR02	
2002 02 16.87	d	k	16.5	LA	35	L	5	A350	0.43		1.0m	19	C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 03 08.85	d	k	16.7	LA	35	L	5	a720	0.47		0.5m	40	C 0.47m	T24	GAI	5*	ST6	HOR02	
2002 03 10.85	d	k	16.6	LA	35	L	5	a630	0.40		0.4m	34	C 0.40m	T24	GAI	5*	ST6	HOR02	

Comet C/2002 E2 (Snyder-Murakami)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 04 30.90	d	k	12.0	LA	35	L	5	a720	2.8		>12	m217	C 2.80m	T24	GAI	5*U	ST6	HOR02	
2002 04 30.90	d	k	12.4	LA	35	L	5	a720	2.8		>12	m217	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 04 30.90	d	k	12.9	LA	35	L	5	a720	2.8		>12	m217	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 01.91	d	k	12.5	LA	35	L	5	a600	1.7		>	8.0m223	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 01.91	d	k	12.6	LA	35	L	5	a600	1.7		>	8.0m223	C 1.70m	T24	GAI	5*U	ST6	HOR02	
2002 05 01.91	d	k	13.2	LA	35	L	5	a600	1.7		>	8.0m223	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 07.90	d	k	11.7	LA	35	L	5	a520	1.3		>10	m220	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 07.90	d	k	11.9	LA	35	L	5	a520	1.3		>10	m220	C 1.30m	T24	GAI	5*U	ST6	HOR02	
2002 05 07.90	d	k	13.3	LA	35	L	5	a520	1.3		>10	m220	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 16.94	d	k	12.5	LA	35	L	5	a600	1.6		>11.4m	219	C 1.60m	T24	GAI	5*U	ST6	HOR02	
2002 05 16.94	d	k	13.4	LA	35	L	5	a600	1.6		>11.4m	219	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 18.89	d	k	13.0	LA	35	L	5	a600	1.6		>	9.4m219	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 18.89	d	k	13.1	LA	35	L	5	a600	1.6		>	9.4m219	C 1.60m	T24	GAI	5*U	ST6	HOR02	
2002 05 18.89	d	k	13.6	LA	35	L	5	a600	1.6		>	9.4m219	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 15.04	d	k	13.8	LA	35	L	5	a660	0.95		>	7.8m170	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 15.04	d	k	14.1	LA	35	L	5	a660	0.95		>	7.8m170	C 0.95m	T24	GAI	5*U	ST6	HOR02	
2002 06 15.04	d	k	14.8	LA	35	L	5	a660	0.95		>	7.8m170	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 06 18.98	d	k	13.7	LA	35	L	5	a630	1.0		>10.8m	168	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 18.98	d	k	14.4	LA	35	L	5	a630	1.0		>10.8m	168	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 18.98	d	k	14.8	LA	35	L	5	a630	1.0		>10.8m	168	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 06 22.99	d	k	14.0	LA	35	L	5	a660	0.95		>	8.9m151	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 22.99	d	k	14.6	LA	35	L	5	a660	0.95		>	8.9m151	C 0.95m	T24	GAI	5*U	ST6	HOR02	
2002 06 22.99	d	k	15.0	LA	35	L	5	a660	0.95		>	8.9m151	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 06 25.92	d	k	14.6	LA	35	L	5	a720	0.92		>	7.7m150	C 0.92m	T24	GAI	5*U	ST6	HOR02	
2002 06 25.92	d	k	15.1	LA	35	L	5	a720	0.92		>	7.7m150	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 06 27.00	d	k	14.6	LA	35	L	5	a600	0.75		>10.0m	146	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 06 27.00	d	k	15.0	LA	35	L	5	a600	0.75		>10.0m	146	C 0.75m	T24	GAI	5*U	ST6	HOR02	
2002 06 27.00	d	k	15.2	LA	35	L	5	a600	0.75		>10.0m	146	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 07 08.01	d	k	15.0	LA	35	L	5	a720	0.72		>	7.2m132	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 08.01	d	k	15.3	LA	35	L	5	a720	0.72		>	7.2m132	C 0.72m	T24	GAI	5*U	ST6	HOR02	
2002 07 08.01	d	k	15.4	LA	35	L	5	a720	0.72		>	7.2m132	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 07 09.01	d	k	14.7	LA	35	L	5	a720	0.67		>12.2m	132	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 09.01	d	k	15.1	LA	35	L	5	a720	0.67		>12.2m	132	C 0.67m	T24	GAI	5*U	ST6	HOR02	
2002 07 17.91	d	k	14.3	LA	35	L	5	A260	1.0		>10.1m	133	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 17.91	d	k	15.0	LA	35	L	5	A260	1.0		>10.1m	133	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 17.91	d	k	15.6	LA	35	L	5	A260	1.0		>10.1m	133	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 07 23.00	d	k	15.1	LA	35	L	5	a720	0.47		>	6.6m130	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 23.00	d	k	15.8	LA	35	L	5	a720	0.47		>	6.6m130	C 0.47m	T24	GAI	5*U	ST6	HOR02	
2002 07 28.04	d	k	15.2	LA	35	L	5	a630	0.55		>12.1m	129	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 07 28.04	d	k	15.8	LA	35	L	5	a630	0.55		>12.1m	129	C 0.55m	T24	GAI	5*U	ST6	HOR02	
2002 07 29.98	d	k	15.8	LA	35	L	5	A320	0.58		>	9.8m131	C 0.58m	T24	GAI	5*U	ST6	HOR02	
2002 08 04.03	d	k	15.4	LA	35	L	5	A440	0.53		>11.5m	128	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 08 04.03	d	k	15.9	LA	35	L	5	A440	0.53		>11.5m	128	C 0.53m	T24	GAI	5*U	ST6	HOR02	
2002 08 05.94	d	k	15.5	LA	35	L	5	a840	0.50		>10.7m	129	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 08 05.94	d	k	16.0	LA	35	L	5	a840	0.50		>10.7m	129	C 0.50m	T24	GAI	5*U	ST6	HOR02	
2002 08 28.84	c		17.6	UO	30.5T		6	a 60					S10.4 s	K26	AfP	5 P	ST9	NAV01	

Comet C/2002 H2 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 04 30.93	d	k	13.2	LA	35	L	5	a480	1.2		1.3m	229	C 1.20m	T24	GAI	5*U	ST6	HOR02	
2002 04 30.93	d	k	13.3	LA	35	L	5	a480	1.2		1.3m	229	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 05 01.94	d	k	13.1	LA	35	L	5	a600	1.4		1.5m	228	C 1.40m	T24	GAI	5*U	ST6	HOR02	
2002 05 01.94	d	k	13.6	LA	35	L	5	a600	1.4		1.5m	228	C 1.00m	T24	GAI	5*U	ST6	HOR02	

Comet C/2002 04 (Hoenig) [cont.]

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 09 06.79	d	k	11.0	LA	35	L	5	a420	7.8		11.6m	52	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 06.79	d	k	11.6	LA	35	L	5	a420	7.8		11.6m	52	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 07.80	d	k	10.4	LA	35	L	5	a800	6.0		5.9m	47	C 4.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 07.80	d	k	11.0	LA	35	L	5	a800	6.0		5.9m	47	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 07.80	d	k	11.6	LA	35	L	5	a800	6.0		5.9m	47	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 08.82	d	k	10.5	LA	35	L	5	a800	5.7		7.4m	43	C 4.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 08.82	d	k	10.9	LA	35	L	5	a800	5.7		7.4m	43	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 08.82	d	k	11.5	LA	35	L	5	a800	5.7		7.4m	43	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 11.80	d	k	10.5	LA	35	L	5	a560	6.0	>	7.3m	47	C 4.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 11.80	d	k	10.9	LA	35	L	5	a560	6.0	>	7.3m	47	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 11.80	d	k	11.6	LA	35	L	5	a560	6.0	>	7.3m	47	C 1.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 12.79	d	k	10.7	LA	35	L	5	a600	4.9	>	8.5m	42	C 4.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 12.79	d	k	11.2	LA	35	L	5	a600	4.9	>	8.5m	42	C 2.00m	T24	GAI	5*U	ST6	HOR02	
2002 09 12.79	d	k	11.9	LA	35	L	5	a600	4.9	>	8.5m	42	C 1.00m	T24	GAI	5*U	ST6	HOR02	

Comet P/2002 05 (NEAT)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 08 20.91	c		16.9	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 09 02.81	c		17.2	UO	30.5T		6	a 60					S10.4 s	K26	AfP	5	P	ST9	NAV01

Comet C/2002 07 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2003 01 04.83	a	C	16.8	LA	30.0L		6	a360	0.5				C 0.5 m	SIA	MIm	5*U	Ap7	EZA	
2003 01 07.87	a	C	17.0	GA	60.0Y		6	a120	0.3				S 0.3 m	SIA	IPL	5	U	Ap7	NAK01
2003 01 12.79	x	C	17.6	TJ	20.0L		4	a480	0.4				S 0.4 m	K41a	SI3	5		SE7	OBS

Comet C/2002 P1 (NEAT)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 09 06.98	c		18.4	UO	30.5T		6	a180					S10.4 s	K26	AfP	5	P	ST9	NAV01

Comet C/2002 Q2 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 08 28.01	c		16.4	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 08 30.83	c		17.0	UO	30.5T		6	a 60					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 09 06.88	c		17.1	UO	30.5T		6	a 60					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 09 06.97	d	k	15.8	LA	35	L	5	a780	0.58				C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 09 06.97	d	k	16.3	LA	35	L	5	a780	0.58				C 0.58m	T24	GAI	5*	ST6	HOR02	
2002 09 11.87	d	k	15.8	LA	35	L	5	a840	0.70				C 0.70m	T24	GAI	5*	ST6	HOR02	
2002 09 11.87	d	k	16.1	LA	35	L	5	a840	0.70				C 0.50m	T24	GAI	5*	ST6	HOR02	
2002 09 12.87	d	k	15.6	LA	35	L	5	a780	0.75				C 1.00m	T24	GAI	5*	ST6	HOR02	
2002 09 12.87	d	k	15.9	LA	35	L	5	a780	0.75				C 0.75m	T24	GAI	5*	ST6	HOR02	
2002 09 12.87	d	k	16.4	LA	35	L	5	a780	0.75				C 0.50m	T24	GAI	5*	ST6	HOR02	
2002 09 14.90	c		16.5	UO	30.5T		6	a 60					S10.4 s	K26	AfP	5	P	ST9	NAV01

Comet C/2002 Q5 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 08 30.88	c		15.8	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 08 30.95	d	k	15.1	LA	35	L	5	a540	0.57				C 0.57m	T24	GAI	5*P	ST6	HOR02	
2002 09 02.80	c		16.0	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 09 03.00	d	k	15.0	LA	35	L	5	a480	0.58				C 0.58m	T24	GAI	5*P	ST6	HOR02	
2002 09 03.98	d	k	14.7	LA	35	L	5	a540	0.60				C 1.00m	T24	GAI	5*P	ST6	HOR02	
2002 09 03.98	d	k	14.9	LA	35	L	5	a540	0.60				C 0.60m	T24	GAI	5*P	ST6	HOR02	
2002 09 04.99	d	k	15.1	LA	35	L	5	a600	0.58				C 0.58m	T24	GAI	5*P	ST6	HOR02	
2002 09 06.95	d	k	14.6	LA	35	L	5	a720	0.75				C 0.75m	T24	GAI	5*P	ST6	HOR02	
2002 09 08.87	d	k	14.6	LA	35	L	5	A320	0.77		0.5m121		C 0.77m	T24	GAI	5*P	ST6	HOR02	
2002 09 09.85	c		15.7	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAV01
2002 09 11.84	d	k	14.8	LA	35	L	5	a660	0.57				C 0.57m	T24	GAI	5*P	ST6	HOR02	
2002 09 12.84	d	k	14.8	LA	35	L	5	a540	0.55				C 1.00m	T24	GAI	5*P	ST6	HOR02	
2002 09 12.84	d	k	14.9	LA	35	L	5	a540	0.55				C 0.55m	T24	GAI	5*P	ST6	HOR02	
2002 09 15.86	c		15.2	UO	30.5T		6	a 30					S10.4 s	K26	AfP	5	P	ST9	NAV01

Comet C/2002 Q5 (LINEAR) [cont.]

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 09 19.83		c	15.3	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 09 19.83		c	16.1	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 09 29.82	d	k	14.6	LA	35	L	5	a780	0.62				C 1.00m	T24	GAI	5*	P	ST6	HORO2
2002 09 29.82	d	k	15.0	LA	35	L	5	a780	0.62				C 0.62m	T24	GAI	5*	P	ST6	HORO2
2002 10 07.79		c	14.4	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 10 11.80		c	14.4	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 10 16.77		c	14.5	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2003 01 12.82	x	C	13.4	TJ	20.0L	4	a	120	0.9				S 0.9 m	K41aSI3	5		SE7	OHS	

Comet C/2002 R3 (LONEOS)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 09 29.01		c	16.4	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 10 19.91		c	16.4	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 11 01.93		c	16.3	UO	30.5T	6	a	60					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 11 10.80	d	k	15.9	LA	35	L	5	a880	0.37				C 1.00m	T24	GAI	5*	P	ST6	HORO2
2002 11 10.80	d	k	16.2	LA	35	L	5	a880	0.37				C 0.37m	T24	GAI	5*	P	ST6	HORO2
2002 11 10.85		c	16.2	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 11 21.89		c	16.5	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 11 28.92		c	16.1	UO	30.5T	6	a	30					C25.0 s	K26	A32	5	P	ST9	NAVO1
2002 12 01.81	d	k	16.0	LA	35	L	5	a660	0.43				C 1.00m	T24	GAI	5*	P	ST6	HORO2
2002 12 01.81	d	k	16.3	LA	35	L	5	a660	0.43				C 0.43m	T24	GAI	5*	P	ST6	HORO2
2002 12 04.90		c	16.4	UO	30.5T	6	a	30					C24.0 s	K26	A32	5	P	ST9	NAVO1
2002 12 06.91		c	16.7	UO	30.5T	6	a	60					C24.0 s	K26	A32	5	P	ST9	NAVO1
2002 12 09.92	d	k	16.8	LA	35	L	5	a780	0.38				C 1.00m	T24	GAI	5*	P	ST6	HORO2
2002 12 09.92	d	k	16.8	LA	35	L	5	a780	0.38				C 0.38m	T24	GAI	5*	P	ST6	HORO2
2002 12 10.86	d	k	16.5	LA	35	L	5	a660	0.33				C 1.00m	T24	GAI	5*	P	ST6	HORO2
2002 12 10.86	d	k	16.5	LA	35	L	5	a660	0.33				C 0.33m	T24	GAI	5*	P	ST6	HORO2
2002 12 11.92	d	k	16.4	LA	35	L	5	A320	0.38				C 0.38m	T24	GAI	5*	P	ST6	HORO2
2002 12 21.84		c	16.7	UO	30.5T	6	a	60					C24.0 s	K26	A32	5	P	ST9	NAVO1
2002 12 25.87		c	17.0	UO	30.5T	6	a	60					C24.0 s	K26	A32	5	P	ST9	NAVO1
2003 01 25.46	x	C	16.3	TJ	20.0L	4	a	480	0.3				S 0.3 m	K41aSI3	5		SE7	OHS	

Comet P/2002 S1 (Skiff)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 12 29.02		c	17.8	UO	30.5T	6	a	180					C24.0 s	K26	A32	5	P	ST9	NAVO1
2003 01 07.72		C	18.7	GA	60.0Y	6	a	240	0.25			0.8m228	S 0.25m	SIA	IPL	5	U	Ap7	NAKO1

Comet P/2002 T1 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 10 06.85		c	15.5	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 10 07.86		c	15.9	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 10 11.89		c	15.6	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 10 16.85		c	15.9	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 10 18.95		c	16.2	UO	30.5T	6	a	30					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 10 25.93		c	16.6	UO	30.5T	6	a	60					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 11 04.90		c	17.1	UO	30.5T	6	a	120					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 11 10.70	d	k	17.8	LA	35	L	5	a900	0.22		15	s230	C 0.22m	T24	GAI	5*	P	ST6	HORO2
2002 11 10.70	d	k	17.8	LA	35	L	5	a900	0.22		15	s230	C 0.50m	T24	GAI	5*	P	ST6	HORO2
2002 12 01.88	d	k	18.0	LA	35	L	5	a360	0.25				C 0.25m	T24	GAI	5*		ST6	HORO2

Comet P/2002 T5 (LINEAR)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 10 25.99		c	16.9	UO	30.5T	6	a	60					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 11 22.96		c	16.2	UO	30.5T	6	a	60					S10.4 s	K26	AfP	5	P	ST9	NAVO1
2002 11 22.98		c	16.0	UO	30.5T	6	a	60					S18.7 s	K26	AfP	5	P	ST9	NAVO1
2002 11 29.92		c	16.6	UO	30.5T	6	a	30					C25.0 s	K26	A32	5	P	ST9	NAVO1
2003 01 06.55		C	16.4:GA	60.0Y	6	a	120	0.4					S 0.4 m	SIA	IPL	4	U	Ap7	NAKO1
2003 01 06.57	a	C	16.8	LA	30.0L	6	a	360	0.3				C 0.3 m	SIA	MIm	5*	U	Ap7	EZA
2003 01 08.49		C	16.6	GA	60.0Y	6	a	120	0.45				S 0.45m	SIA	IPL	5	U	Ap7	NAKO1
2003 01 25.49	x	C	16.5	TJ	20.0L	4	a	720	0.3				S 0.3 m	K41aSI3	5		SE7	OHS	

Comet C/2002 X1 (LINEAR) [cont.]

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2003 01 08.55	axC		15.9	HV	35.0C		9	a120	0.3	5	0.7m100		S 0.50m	KAIaSI3	5		ST2	TSU02	
2003 01 11.98	dk		15.2	LA	35 L		5	a720	0.73				C 1.00m	T24 GAI	5*	P	ST6	HOR02	
2003 01 11.98	dk		15.3	LA	35 L		5	a720	0.73				C 0.73m	T24 GAI	5*	P	ST6	HOR02	
2003 01 11.98	dk		15.4	LA	35 L		5	a720	0.73				C 0.50m	T24 GAI	5*	P	ST6	HOR02	
2003 01 12.75	xC		14.1	TJ	20.0L		4	a120	0.5				S 0.5 m	K41aSI3	5		SE7	OHS	
2003 01 15.55	aC		15.5	LA	30.0L		6	a 60	0.4				C 0.4 m	SIA MIm	5	U	Ap7	EZA	

Comet C/2002 X5 (Kudo-Fujikawa)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 12 21.75	c		13.4	UO	30.5T		6	a 30					C24.0 s	K26 A32	5	P	ST9	NAV01	
2002 12 24.73	c		13.4	UO	30.5T		6	a 30					C24.0 s	K26 A32	5	P	ST9	NAV01	
2002 12 30.23	c		12.6	UO	30.5T		6	a 30					C24.0 s	K26 A32	5	P	ST9	NAV01	
2003 01 04.86	aH		8.3	LA	30.0L		6	a180	2.3		9	m355	S 4.1 m	SIA MIm	5*	U	Ap7	EZA	
2003 01 04.86	ak		8.0	LA	30.0L		6	a180	2.7		>20	m355	S 4.1 m	SIA MIm	5*	U	Ap7	EZA	
2003 01 04.87	aL		7.2	LA	30.0L		6	a180	4.1			5.5m355	S 4.1 m	SIA MIm	5*	U	Ap7	EZA	
2003 01 04.87	aV		6.5	LA	30.0L		6	a180	4.1			6.2m355	S 4.1 m	SIA MIm	5*	U	Ap7	EZA	
2003 01 04.88	aC		7.7	LA	30.0L		6	a360	4.1		>20	m355	S 4.1 m	SIA MIm	5*	U	Ap7	EZA	
2003 01 06.69	dk		8.4	LA	35 L		5	a600	4.8		>	8.2m349	C 4.80m	T24 GAI	5*	P	ST6	HOR02	
2003 01 06.69	dk		8.8	LA	35 L		5	a600	4.8		>	8.2m349	C 2.00m	T24 GAI	5*	P	ST6	HOR02	
2003 01 06.69	dk		9.3	LA	35 L		5	a600	4.8		>	8.2m349	C 1.00m	T24 GAI	5*	P	ST6	HOR02	
2003 01 06.69	dk		10.1	LA	35 L		5	a600	4.8		>	8.2m349	C 0.50m	T24 GAI	5*	P	ST6	HOR02	
2003 01 06.86	xC		7.5	TJ	20.0L		4	a 60	4.4			12.5m351	S 4.4 m	K41aSI3	5		SE7	OHS	
2003 01 12.87	xC		7.2	TJ	20.0L		4	a 60	3.2		>0.26	350	S 3.2 m	K41aSI3	5		SE7	OHS	
2003 01 15.86	xC		8.3	TJ	20.0L		4	a240	2.5		>0.20	350	S 2.5 m	K41aSI3	5		SE7	OHS	

Comet C/2002 Y1 (Juels-Holvorcem)

DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2002 12 30.20	c		16.1	UO	30.5T		6	a 30					C24.0 s	K26 A32	5	P	ST9	NAV01	
2003 01 04.76	aC		15.0	LA	30.0L		6	a180	0.6				C 0.6 m	SIA MIm	5*	U	Ap7	EZA	
2003 01 06.82	xC		14.8	TJ	20.0L		4	a120	0.5				S 0.5 m	K41aSI3	5		SE7	OHS	
2003 01 07.82	axC		12.6	HV	35.0C		9	a120	3.5	5			S 4.5 m	KAIaSI3	5		ST2	TSU02	
2003 01 07.84	C		12.5	GA	60.0Y		6	a120	4.0				S 4.0 m	SIA IPL	5	U	Ap7	NAK01	
2003 01 12.13	dk		13.0	LA	35 L		5	a660	2.1				C 3.00m	T24 GAI	5*	P	ST6	HOR02	
2003 01 12.13	dk		13.2	LA	35 L		5	a660	2.1				C 2.10m	T24 GAI	5*	P	ST6	HOR02	
2003 01 12.13	dk		13.9	LA	35 L		5	a660	2.1				C 1.00m	T24 GAI	5*	P	ST6	HOR02	
2003 01 12.13	dk		14.5	LA	35 L		5	a660	2.1				C 0.50m	T24 GAI	5*	P	ST6	HOR02	

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DATE (UT)	n	M	MAG.	RF	AP.	T	f/	EXP.	COMA	DC	TAIL	PA	APERTUR	Chp	Sfw	C	P	Cam	OBS.
2003 01 17.41	C		17.8	GA	60.0Y		6	a240	0.25				S 0.25m	SIA IPL	5	U	Ap7	NAK01	

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DESIGNATIONS OF RECENT COMETS

Listed below, for handy reference, are the last 10 comets to have been given designations in the new system. [This list updates that in the October 2002 issue, p. 270, where explanation of the columns is given.]

	<i>New-Style Designation</i>	<i>P</i>	<i>T</i>	<i>q</i>	<i>IAUC</i>
*	C/2002 X5 (Kudo-Fujikawa)		1/29/03	0.19	8032
*	C/2002 Y1 (Juels-Holvorcem)		4/13/03	0.71	8039
*	P/2003 A1	7.09	2/1/03	1.92	8044
*	C/2003 A2 (Gleason)		11/6/03	11.4	8049
*	P/2003 CP ₇ (LINEAR-NEAT)	8.05	4/29/03	3.02	8092
*	C/2003 E1 (NEAT)	51.2	2/13/04	3.24	8092
*	C/2003 F1 (LINEAR)	96.0	7/2/03	4.00	8098
*	P/2003 F2 (NEAT)	16.1	4/25/03	2.88	8104
*	C/2003 G1 (LINEAR)		2/7/03	4.92	8115
*	C/2003 G2 (LINEAR)		4/29/03	1.55	8116