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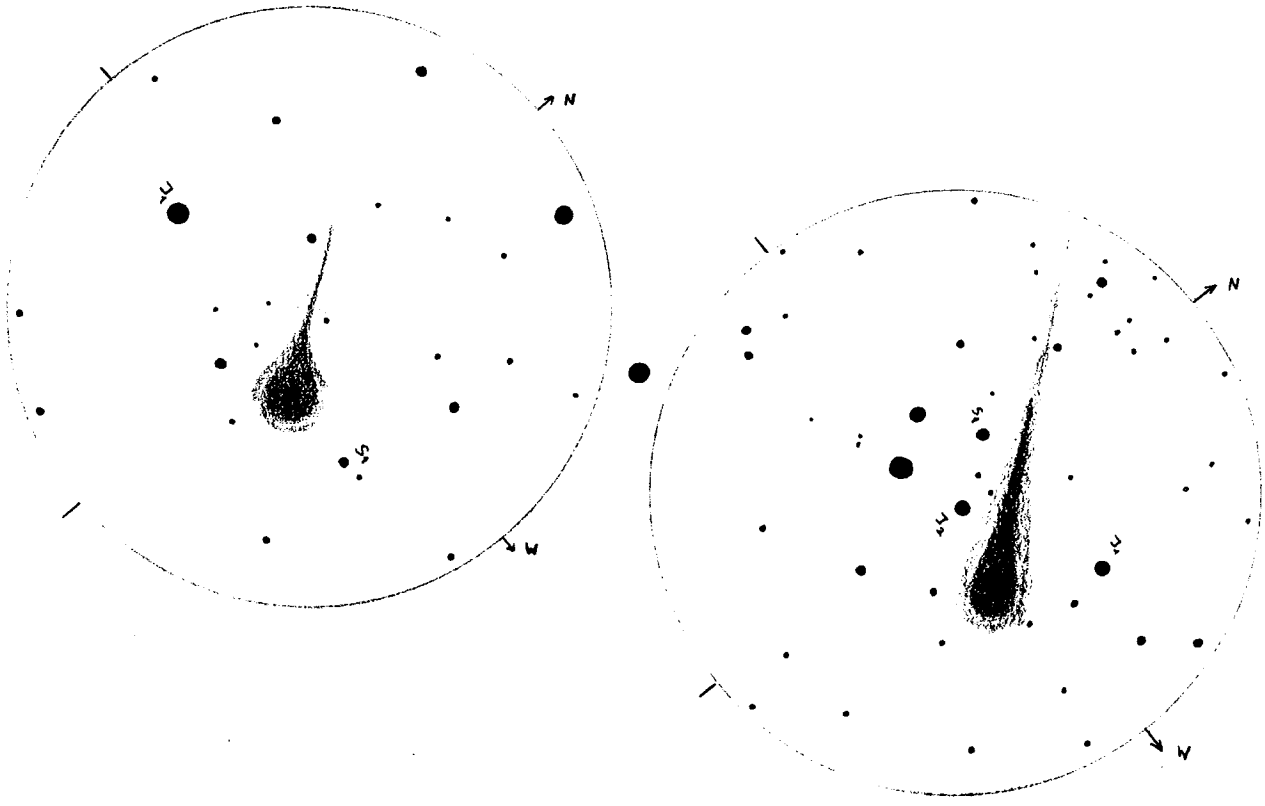

Drawings of comet Mueller 1993a by Martin Lehký from Hradec Králové, Czech Republic, with a 20-cm $f/17$ refractor at 140× (1993 Dec. 4.25 UT on left; Dec. 5.73 on right).

SMITHSONIAN ASTROPHYSICAL OBSERVATORY
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The International Comet Quarterly (*ICQ*) is a journal devoted to news and observation of comets, published by the Smithsonian Astrophysical Observatory in Cambridge, Massachusetts. Regular issues are published 4 times per year (January, April, July, and October), with an annual *Comet Handbook* of ephemerides published normally in the first half of the year as a special fifth issue. An index to each volume normally is published in every other January issue (even-numbered years); the *ICQ* is also indexed in *Astronomy and Astrophysics Abstracts* and in *Science Abstracts Section A*.

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INTERNATIONAL WORKSHOP ON COMETARY ASTRONOMY

As announced in these pages more than a year ago, the first International Workshop on Cometary Astronomy (IWCA) was held on February 18 and 19 in Selvino, Italy, with about 40 people attending from 11 different countries. Those travelling the furthest distances to the meeting were Charles S. Morris from southern California and Akimasa Nakamura from Shikoku, Japan.

The host organizing committee did a fabulous job in selecting a scenic setting in the Italian "pre-Alps" that included a most comfortable hotel and a very good meeting site half a block from the hotel. The meeting had been expanded to two days from the original single day, due to high pre-registration numbers, and discussion of the meeting afterwards by attendants yielded agreement that future meetings should consider three days. In fact, it was announced that the second IWCA will probably be held in mid-August 1999 in Cambridge, England, during the week after the total solar eclipse that crosses central Europe; Jonathan Shanklin, who heads the Comets Section of the British Astronomical Association, is eager to host IWCA II at that time, and we hope to have comet enthusiasts from many more countries attending that meeting (because so many are likely to be drawn to Europe to view the solar eclipse). An early suggestion is to hold the meeting from Saturday through Monday, August 14-16 (the eclipse occurs on Wednesday, August 11).

There was widespread interest in Selvino to have a published *Proceedings* from the meeting, and I agreed to have the *ICQ* publish the papers from IWCA I in the July 1994 issue. (If you intend on contributing a paper to the published *Proceedings*, please e-mail a copy to me no later than May 1 — or send a copy on IBM-compatible floppy disk — and follow up by sending a printed copy with tables, graphs, and illustrations by postal mail.)

On Friday morning, I talked about the *ICQ* archive and what we have accomplished thus far. Jonathan Shanklin of Cambridge, England, talked about his work on archival observations from the British Astronomical Association's Comets Section files, much of the work occuring during his annual travels to Antarctica by ship, during his work with the British Antarctic Survey. Akimasa Nakamura then talked about comet discovery from Japan.

After lunch on Friday afternoon, John E. Bortle of Stormville, New York, talked about drawing comet features, and Mauro Vittorio Zanotta of Milano, Italy, spoke about his comet-hunting techniques; he had hunted 220 hours before finding comet 1991g_1, and also made independent discoveries of P/Metcalf-Brewington and Tsuchiya-Kiuchi 1990i. *ICQ* Associate Editor Charles S. Morris of La Canada, California, talked about studies of P/Halley in trying to relate the total visual magnitude to gas- and dust-production rates determined from specific bandpass spectrophotometry. Akos Kerestzuri of Budapest, Hungary, spoke briefly about the Hungarian Astronomical Association, whose Comet Section was formed in 1991. Giuseppe Canonaco of Genk, Belgium, talked about the comet section of the VVS in Belgium. Capping off the Friday session, Stephane Garro talked about the current status of observing in France.

On Saturday morning, Andreas Kammerer talked about the German group of comet observers, and more specifically about an approach that he has developed concerning the prediction of visual tail lengths of comets, based on about 2500 observations of tail lengths taken from the *ICQ* archive. Jose Carvajal Martinez and Fran Garcia of Madrid, Spain, spoke about activities by Spanish observers; Carvajal agreed to become the *ICQ* Observation Coordinator for his country, effective immediately. Herman Mikuž of Ljubljana, Slovenia, talked about his extensive CCD imaging and photometry of comets and showed numerous interesting slides of his results. E. Peter Bus of The Netherlands showed amazing processed images of the inner coma detail in P/Swift-Tuttle (taken with the 1-m reflector of Dany Cardoen at Puimichel, France, during Nov. 29-Dec. 20) on the screens of two lap-top computers; many jets and fountains are visible on the $6' \times 8'$ exposures that ranged from 120 seconds on the first night to only 1 second on Dec. 18.

On Saturday afternoon, Bortle and Morris conducted an open forum for about two hours on visual comet observing techniques. They began by showing five drawings of various "hypothetical" comets and asked all of the observers at the meeting to privately judge the degree of condensation (DC) and to hand in their DC estimates on paper for statistical tabulation by Shanklin, which was shown to the group later in the afternoon; the discussion surrounding this test was quite enthusiastic and interesting, and details will be presented in the published proceedings of the IWCA. (More extensive indoor testing with pre-drawn comet images will be offered at the IWCA II in 1999.) Further talks included that by Andrea Boattini of Firenze, Italy, who recounted the finding of his pre-recovery images of P/Swift-Tuttle on photographs taken with the 40-cm Asiago telescope in January 1992, and that by Bernd Brinkmann from Germany, who showed about 20 slides from Hoher List Observatory. Antonio Milani spoke about the Italian comet section, which was founded in 1976, and Alex Scholten talked about the Dutch Comet Section.

We thank the Unione Astrofili Italiani, the Circolo Astrofili Bergamaschi, the *ICQ* and Smithsonian Astrophysical Observatory, and *Sky and Telescope* magazine for providing funding to help make this first IWCA a huge success.

— D. W. E. Green

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TABULATION OF COMET OBSERVATIONS

Descriptive Information (to complement the Tabulated Data):

◇ *Comet Sorrells 1987 II* ⟹ 1986 Nov. 23.07: "strikingly condensed coma, so much so that the magnitude can only be determined satisfactorily by the Beyer method; comet resembles Comet Wilson 1986l, but even more extreme in being suddenly very sharply condensed at the center" [BOR]. Nov. 26.04: "at 170×, nucleus is stellar (mag ~ 13.0); more material trailing nucleus and preceeding it" [BOR]. Dec. 5.06: "extensive outer halo (dia. 2'.9) surrounding bright inner coma (dia. 1'.8); Lumicon comet filter slightly enhances comet" [BOR]. Dec. 6.06: inner coma is 2'.0 in dia., while halo reaches to 2'.7 [BOR]. Dec. 28.00: in 31.7-cm *f*/6 L (68×), 2'.8 coma, DC = 5 [BOR]. 1987 Jan. 1.00: very large outer halo (dia. 5'.0) surrounds small, bright inner coma (dia. ~ 1'.3); starlike central feature of mag ~ 12.5 [BOR]. July 16.11: coma much less condensed than last winter; Lumicon comet filter causes no change in object's visibility [BOR]. July 17.11: inner coma somewhat fan-shaped [BOR].

◇ *Comet Wilson 1987 VII* ⟹ 1986 Aug. 12.11: at 170×, an almost-stellar nucleus of mag ~ 13 [BOR]. Aug. 14.18: "strange looking object, intense nuclear cond. of mag 12.9, very dense and ~ 20″ in dia.; comet looks rather like a comet in a state of outburst" [BOR]. Aug. 29.12: "coma composed of three parts: a 10″ nucleus, an 0'.4 bright central mass, and a 1'.2 very faint and tenuous outer halo" [BOR]. Sept. 7.12: "comet distinctly brighter than before and very strongly and sharply condensed to a dense, non-stellar nucleus" [BOR]. Sept. 8.09: "nucleus" even sharper and more star-like but outer regions even more vague and diffuse than ever; at 170×, nucleus not more than 1″-2″ in dia. [BOR]. Sept. 9.08: "condensed region ~ 0'.2 in dia. (20% of the coma's size) but accounts for almost all its brightness; at 170×, a stellar nucleus of mag 13" [BOR]. Sept. 22.03: "comet appears almost like a small, slightly defocused star; at 170×, the very dense cond. contains a stellar nucleus of mag 13" [BOR]. Oct. 6.05: "at 170×, possibly low-surface-brightness extensions toward the E and perhaps a jet to the N" [BOR]. Oct. 31.03: possible structure near the nucleus glimpsed at 170× [BOR].

◇ *Comet Bradfield 1987 XXIX* ⟹ 1987 Oct. 9.73: w/ 10×50 B, $m_1 \sim 7$ (MM: S; ref: AC), 4′ coma, DC = 5 [MIZ01].

◇ *Comet Austin 1990 V* ⟹ 1990 May 5.06: w/ 4-cm *f*/11 R (60×), 8′ coma, DC = 8 [KIS02]. May 28.04: faint dust fan 1° long spanning p.a. 300°-335° [BOU]. May 29.04: faint dust fan 1° long spanning p.a. 310°-340° [BOU].

◇ *Comet Levy 1990 XX* ⟹ 1990 June 29.02: w/ 16.2-cm *f*/3 L (42×), $m_1 \sim 9$ (MM: S; ref: AC); 3′.5 coma, DC = 4 [SZO01]. July 5.96: w/ 10-cm *f*/9 L (60×), $m_1 = 8.1$ (MM: S), 4′ coma, DC = 3 [FUL02]. July 19.96: w/ 20-cm *f*/7 L (75×), 4′ coma, DC = 8 [VIC]. Aug. 13.89: broad, diffuse anti-tail 1°.0 long in p.a. 23° [BOU]. Aug. 20.86: broad dust fan ~ 0°.6 long spanning p.a. 90°-140° [BOU]. Aug. 22.87: broad dust fan ~ 1°.3 long spanning p.a. 40°-110° [BOU]. Aug. 24.87: dust fan ~ 1°.3 long spanning p.a. 50°-95° [BOU]. 1991 Apr. 3.86: near-stellar cond. in large, faint coma [BOU]. Apr. 8.89: stellar cond. much fainter (only seen unambiguously at 115×) [BOU]. Apr. 11.86: at 115×, no clear stellar cond. visible [BOU].

◇ *Comet Mueller 1993a [some information supplements tabulated data published in the January 1994 issue]* ⟹ 1993 Aug. 26.38: in 35.9-cm L (164×), stellar central cond. of mag ~ 13 [MOD]. Aug. 26.39: in 20-cm L, estimate difficult due to star of mag ~ 10.5 located ~ 2′ from comet [MOD]. Sept. 8.07: comet altitude 19°; comparison stars 50′ below comet, correction deemed insignificant [MOD]. Sept. 11.05: round coma is 35″ in dia.; possible faint outer 90″ coma; no tail seen; altitude only 18° [MAL02]. Sept. 11.13: comet only 15° from the horizon [DID]. Sept. 13.36: comet very low [DID]. Sept. 24.37: fan-shaped coma opens to W, subtends ~ 70° [MOD]. Sept. 26.49: stellar cond. in coma [MOR]. Oct. 6.00: coma somewhat fanned [DID]. Oct. 6.08: coma dia. 60″ × 78″ toward p.a. 290°; coma diameter is very dependent on exposure time; after stacking 60 digital exposures, one can see a 170″ × 210″ coma elongated toward p.a. 320° [MAL02]. Oct. 11.00: fanned coma spanning p.a. 275°-337° [DID]. Oct. 12.02: fanned coma spanning p.a. 260°-355° [DID]. Oct. 12.08: w/ 25-cm *f*/20 'Tri-Schiefspiegler' (90×), $m_1 = 10.0$ (MM: B, ref: AA), coma dia. 5′, DC = 4 [NOW]. Oct. 14.00: fanned coma spanning p.a. 225°-360° [DID]. Oct. 16.99: AAVSO sequence SS Cyg [DAH].

Nov. 8: with 20.3-cm T (80×), using averted vision, 10′-long tail; coma dia. 3′ [GAR02]. Nov. 8.01: fanned coma spanning p.a. 340°-20° [DID]. Nov. 8.11: with 15-cm *f*/4 telescope + unfiltered CCD, very condensed nucleus of mag 9.06 (compared to G5-star SAO 18362); 3′.6 coma elongated toward NE; long, very broad, very faint dust tail in p.a. ~ 22° [Gary Emerson, CO, U.S.A.]. Nov. 9.00: fanned coma spanning p.a. 30°-45° [DID]. Nov. 10.15: "coma has extensive, very faint outer halo; at 110×, there is a minute central nucleus" [BOR]. Nov. 11.01: at 110×, "minute (probably non-stellar) nucleus of mag ~ 12.5-13" [BOR]. Nov. 11.04: coma elongated 160″ × 290″ toward p.a. 40° [MAL02]. Nov. 13.07: "circular coma (central 30% quite bright) surrounded by a very faint, tenuous outer halo (dia. 3′.6); at 110×, there was a tiny distinctly non-stellar nucleus" [BOR]. Nov. 16.06: coma extended toward p.a. 35°-330° [DID]. Nov. 17.04: "coma elongated to the N (tail?); at the heart of the coma at 110×, there is a small (not more than 0′.1 in dia.) central knot; no stellar nucleus present" [BOR]. Nov. 23.01: "8-day-old moon hinders obs.; at 110×, near-stellar nucleus of mag 12.5-13 again present; at lower power, Lumicon comet filter fails to enhance comet and may even slightly suppress it" [BOR].

Dec. 4.76: w/ 20.0-cm *f*/17 R (280×), coma dia. 1′.4, DC = 4, narrow tail ~ 4′.5 long in p.a. 60° [LEH]. Dec. 5.21: broad fan tail spanning p.a. 75°-345° [MOR]. Dec. 5.74: w/ 20.0-cm *f*/17 R (140×), coma dia. 2′.5, DC = 3, narrow tail 11′ long in p.a. 50° [LEH]. Dec. 7.76: clear visible cond. not quite central in coma [COM]. Dec. 9.02: "very faint, tenuous outer halo to coma; striking contrast of brightness between inner and outer coma makes m_1 determination difficult; at 110×, stellar nucleus of mag ~ 12.5" [BOR]. Dec. 9.98: (correction) tail and p.a. was estimated at 130× [DID]. Dec. 12.05: w/ 25-cm *f*/20 'Tri-Schiefspiegler' (105×), $m_1 = 11.0$: (MM: B, ref: AA), coma dia. 2′, DC = 1 [NOW]. Dec. 12.98: "sky conditions rather inferior and probably resulted in decreased size of coma observed; at 110×, a stellar or nearly-stellar nucleus of mag roughly 12.5 is centrally located" [BOR]. Dec. 17.02: "brighter inner coma subtends 2′.9, but extremely weak outer halo occasionally glimpsed to dia. 4′.5; broad tail suspected extending 0°.1 toward p.a. 20°; use of Lumicon comet filter at 68× fails to affect comet's appearance" [BOR]. Dec. 18.00: "area of greatest cond. probably offset somewhat SSW of coma's center" [BOR].

1994 Jan. 4.16: extinction correction of −0.3 mag applied [MOR]. Jan. 5.99: fairly obvious, tiny, non-stellar nucleus of mag 12-13 [BOR]. Jan. 12.14: extinction correction of −0.3 mag applied [MOR]. Jan. 16.15: extinction correction of −0.6 mag applied [MOR]. Jan. 17.14: extinction correction of −0.4 mag applied [MOR]. Apr. 18.75: in 20×80 B, $m_1 \simeq 10.5$ (MM: S), 2′ coma [CAM03].

◇ *Comet Mueller 1993p [some information supplements tabulated data published in the January 1994 issue]* ⟹ 1993 Oct. 6.06: "comet w/in ~ 1′ of two stars (mag ~ 12 each), possible interference (m_1 too faint?)" [MOD]. Oct. 7.10: "apparent outburst" [MOD]. Oct. 11.12: at 164×, stellar central cond. of mag 14.4 ± 0.1 [MOD]. Oct. 14.17: "tail as wide as coma" [MOD]. Oct. 13.12: $m_1 = 12.8$ in 50″ aperture; coma dia. 79″ × 107″, elongated toward p.a. 0°, based on stacked CCD exposures totalling 42 min [MAL02]. Oct. 25.96: 40-sec unfiltered exposure [CAV]. Nov. 9.10: coma elongated 55″ × 145″ toward p.a. 50° [MAL02]. Nov. 10.18: at 164×, stellar central cond. of mag ~ 14.5 [MOD]. Dec. 4.78: in 20.0-cm *f*/17 R (140×), 1′ coma, DC = 2, weak central cond. [LEH]. Dec. 5.78: in 20.0-cm *f*/17 R (140×), 1′.5 coma, DC = 2, weak central cond. [LEH]. Dec. 11.46: similar appearance using Swan-band filter, but maybe a little larger [SEA].

1994 Jan. 4.15: extinction correction of −0.2 mag applied [MOR]. Jan. 9: with 20.3-cm T, coma dia. 1′.5; 16′-long tail towards p.a. 53°; at 167×, the head was small, condensed, and almost stellar [GAR02]. Jan. 12.15: comet had a nearly stellar cond. [MOR]. Apr. 5.92: comet unchanged w/ Swan-band filter [DEA]. Apr. 19.37: "brighter using Swan-band filter; also appeared more sharply condensed" [SEA]. Apr. 28.37: "only a little brighter in Swan Band filter" [SEA]. Apr. 30.36: "little change in appearance using Swan Band filter" [SEA].

◇ *Comet McNaught-Russell 1993v* ⟹ 1994 Feb. 13.46: "somewhat enhanced using Swan-band filter" [SEA]. Mar. 2.45: in 25.0-cm $f/4$ L (43×), 9′ coma, DC = 5 [GAR01]. Mar. 3.42: in 25×100 B, DC = 5; strongly enhanced using Swan-band filter [SEA]. Mar. 6.06: very difficult to see because of its low altitude (~ 10°) [KRO02]. Mar. 6.10 and 7.11: 0.1-mag correction made; seen through heavy light pollution [HER02]. Mar. 10.39: stellar nucleus of mag ~ 13 suspected in 25.4-cm L at 71× [SEA]. Mar. 10.46: in 25.0-cm $f/4$ L (43×), 8′ coma, DC = 4 [GAR01]. Mar. 13.39: possible tail to 0°.5 (p.a. 84°) in 25×100 B [SEA]. Mar. 14.00: comet brighter w/ Lumicon Swan-band filter [DEA]. Mar. 14.11: "comet appears much more condensed than previous observations, possibly due to comet entering darker skies away from the heavy light pollution of Tucson near the horizon" [HER02]. Mar. 14.39: not so sure of tail, comet just glimpsed in 2.5×25 B [SEA]. Mar. 14.75: in 11.0-cm $f/7$ L (32×), 4′ coma, DC = 5 [SAR02]. Mar. 15.95: inner 6′.4 of coma brighter w/ Lumicon Swan-band filter [DEA]. Mar. 18.98, Apr. 3.94, 5.95, and 6.95: w/ Swan-band filter, comet brighter and more condensed [DEA]. Mar. 20.03: in 31.7-cm $f/6$ L (55×), coma dia. 4′.2, DC = 4; glimpses of a minute stellar nucleus at center of cond. [BOR]. Mar. 21.02: in 31.7-cm $f/6$ L (55×), coma dia. 4′.7, DC = 5; bright inner coma surrounded by a large, very faint outer halo; Lumicon comet filter does not appear to affect comet's visibility [BOR]. Mar. 21.42: possible short tail in 25×100B [SEA]. Mar. 22 and 31: near-stellar cond. of mag ~ 11 visible in 33.3-cm L, which "remains evident up to 201×, but then dissolves away at higher magnifications" [KRO02]. Mar. 22.11: comet appears more condensed than previous observations; a hint of a stellar nuclear cond. was noted ($m_2 \simeq 10$:) [HER02]. Mar. 22.12: w/ 25-cm telescope + CCD + Wratten #15 filter (which has a short-wavelength cutoff at 510 nm and maintains a 90-percent transmission through the CCD response peak near 680 nm), the inner coma region had dia. 1′.3 and appeared somewhat asymmetrical at p.a. 93° [ROQ].

Mar. 23.03: in 31.7-cm $f/6$ L (68×), coma dia. 4′.2, DC = 5; at 110×, a tiny, poorly-defined knot of material at coma's center, < 10″ in dia. [BOR]. Mar. 23.1: CCD images show a coma in excess of 7′ and an ion tail at p.a. 90° stretching > 1° in length [Gary Emerson, CO, U.S.A.]. Mar. 25.11: same details as on Mar. 22.12, except 1′.2 and 95° [ROQ]. Mar. 27.17: very strong moonlight; comet very large, diffuse, very indistinct, still appears structureless; comet invisible in Lumicon Swan-Band filter [SPR]. Mar. 28.12: a short (15-min) twilight exposure with a 10-cm Schmidt camera and Technical Pan emulsion (unfiltered) recorded a 3′.2 coma asymmetrical toward p.a. ~ 95° and had several short, imbedded jets [ROQ]. Mar. 28.15: some moonlight (rising); comet not so large, easy object now, less diffuse, coma more condensed; comet very visible in Lumicon Swan-Band filter at 19× [SPR]. Mar. 28.36: in 31.7-cm $f/5$ L (137×), $m_1 = 6.3$ [Andre J. Ayme de Rosamond, Queensland, Australia]. Mar. 28.80: in 20.0-cm $f/17$ R (280×), 2′.5 coma, DC = 5, very strong pointlike central cond.; coma elongated toward p.a. 60° [LEH]. Mar. 29.16: comet very easy object now, large, coma much more condensed; comet very visible in Lumicon Swan-Band filter; quite easy in #8 yellow filter [SPR]. Mar. 29.36, 30.36, 31.36, Apr. 1.36, and 3.36: in 31.7-cm $f/5$ L (137×), $m_1 = 6.2$ [Ayme de Rosamond]. Mar. 29.42: in 10×50 B, $m_1 \sim 6$: (ref: AA) [WYA]. Mar. 29.42 and Apr. 1.40: "diffuse, no tail, moon" [WYA]. Mar. 29.93, 30.94, Apr. 2.95, and 4.94: w/ Lumicon Swan-band filter, comet slightly brighter [DEA]. Mar. 30.84: 5-min exposure obtained w/ 20-cm $f/2$ Baker-Schmidt camera + ST-6 CCD + narrow band H_2O^+ filter centered at 620 nm (FWHM = 10 nm) shows weak 'wavy' ion tail, 0°.6 long in p.a. 90° [MIK]. Mar. 30.94: very faint fanlike tail centered at p.a. 125° [DEA]. Mar. 31.04: in 31.7-cm $f/6$ L (68×), coma dia. 3′.5, DC = 5; comet's appearance unchanged w/ Lumicon comet filter [BOR]. Mar. 31.38: possible tail to NE in 25×100 B [SEA].

Apr. 1.82: in 9.0-cm M (38×), 4′.8 coma, DC = 2-3 [KAM01]. Apr. 3.78: in 12-cm $f/5$ L (43×), coma 5′, DC = 5-6 [VIC]. Apr. 3.79: in 33.4-cm $f/4$ L (61×), coma 11′, DC = 6 [SZE02]. Apr. 3.85: observing was affected by auroral light at Malm, Norway [GRA04]. Apr. 4.86 and 10.92: sequence SVSO AE Aur chart [HEE]. Apr. 5.16: broad fan tail between edge of dust tail (1°.5 in p.a. 155°) and gas tail (45′ in p.a. 7°); material between was very faint [MOR]. Apr. 5.80: in 20.0-cm $f/17$ R (280×), 1′.9 coma, DC = 6, very strong pointlike central cond.; coma elongated toward p.a. 60° [LEH]. Apr. 6.45: in 20×80 B, $m_1 \simeq 7.0$ (MM: S), 3′ coma, DC = 2 [CAM03]. Apr. 6.95: SAO 57610 ($m_v = 6.4$) near the comet was troublesome [DEA]. Apr. 6.90: AC ref. was AAVSO RW Aur chart [GRA04]. Apr. 7.79: in 44.5-cm $f/4$ L (146×), 6′ coma, DC = 5-6, primary tail 0°.1 long in p.a. 240°; secondary tail of length 0°.05 spanning p.a. 180°-200° [SAR02]. Apr. 8.95 and 10.93: comet slightly brighter w/ Lumicon Swan-band filter [DEA]. Apr. 9.0: w/ 61-cm reflector, CCD images were co-added and processed using adaptive histogram equalization and rotational/radial shift derivative methods, and these show a short sunward pointing anti-tail or jet 13″ long in p.a. 245°.0 with an I filter [J. A. DeYoung, U.S. Naval Observatory, Washington]. Apr. 11.16: similar to Apr. 5.16, except gas tail was 30′ long in p.a. 105°; star in coma [MOR]. Apr. 14.16: only edges of the broad fan (~ 90° angle) were visible [MOR]. Apr. 15.0: using same procedure as for Apr. 9.0 (above), 13″ jet noted in p.a. 260°.0 with a clear filter [DeYoung]. Apr. 15.93: AC reference was AAVSO SS Aur chart [GRA04]. Apr. 20.83: in 33.4-cm $f/4$ L (214×), 8′ coma, DC = 4 [SZE02]. Apr. 25.21: bright moonlight (full moon); comet brighter in yellow (#8) filter, but little in the form of distinctive structure was visible in the bright sky [SPR].

◇ *Comet Shoemaker-Levy 1994d* ⟹ 1994 Apr. 6.82: curved tail; the p.a. refers to the end of the brightest part of the tail ~ 40″ off the central cond.; 60-sec image taken by P. Sicoli and V. Giuliani [CAV]. Apr. 29.87: photometry obtained with 20-cm $f/2$ Baker-Schmidt camera + V filter + ST-6 CCD [MIK].

◇ *Comet Takamizawa-Levy 1994f* ⟹ 1994 Apr. 16.48: clouds interrupted observation; estimate is only a guess [MOR]. Apr. 20.11: "CCD images were taken by M. Varady, reduced by P. Pravec; total R magnitude measured in aperture of dia. 1′.3; faint outer coma of dia. 3′.3; well-defined central cond. with nuclear R mag 13.2 (note new method code 'q'); broad tail with bright part extending to 2′.4 from central cond. (spans p.a. 185°-251°); faint tail extends beyond 5′.0 (spans p.a. 181°-230° at that distance); measured on composite image of 3^m40^s total integration time [PRA01]. Apr. 21.12: faint outer halo of dia. 2′.7 in both V and R bands; well-defined central cond. with nuclear magnitudes $V = 13.8$ and $R = 13.4$; broad tail; measured on CCD images of 60-sec total integration time, taken in twilight sky [PRA01]. Apr. 22.10: photometry obtained with 20-cm $f/2$ Baker-Schmidt camera + V filter + ST-6 CCD [MIK].

◇ *Periodic Comet Ashbrook-Jackson (1992j)* ⟹ 1993 Aug. 22.06: $m_1 = 13.6$ in 60″ aperture; round coma is 40″ in dia.; tail is faint; 90″ measurement of m_1 includes some tail [MAL02]. Sept. 11.19: $m_1 = 12.9$ in 90″ aperture; coma elongated 40″ × 70″ toward p.a. 260° [MAL02]. Sept. 18.26: non-stellar cond. at 156× [MOR]. Sept. 19.02: AAVSO sequence RX And [DAH]. Sept. 19.25: outer coma not visible in 50.8-cm L [MOR]. Sept. 20.07: coma elongated 60″ × 90″ toward p.a. 260° [MAL02]. Sept. 25.43: coma elongated toward W with a nearly stellar cond. near the eastern edge of the coma [MOR]. Sept. 26.42: comet distinctly elongated toward W; cond. less distinct [MOR]. Oct. 8.23: comet was over a star [MOR]. Nov. 11.14: 60″ coma; possible very faint tail [MAL02]. 1994 Feb. 10.13: sunward spike extends 0′.95 in p.a. 61° [SCO01].

◇ *P/Encke* ⟹ 1994 Jan. 4.12: Lumicon comet filter slightly enhanced the comet [MOR]. Jan. 5.97: Lumicon comet filter (w/ 68×) enhances comet strongly and slightly increases DC (to 4) [BOR]. Jan. 6.96: in 20-cm *f*/8 L (46×), $m_1 \sim 10$ (MM: S), coma dia. 5′, DC = 2 [DID]. Jan. 7.04, 10.00, 15.00, 17.00, 22.00, 25.00: comet brighter w/ Swan-band filter [SHA04]. Jan. 9: with 20.3-cm T (80×), diffuse, asymmetrical coma of dia. 2′.5, elongated in the solar direction; 6′-long tail towards p.a. 38° [GAR02]. Jan. 9.97: Lumicon comet filter strongly enhances comet [BOR]. Jan. 12.11: parabolic coma spanning p.a. 75°-345° [MOR]. Jan. 16.12: hint of gas tail and sunward fan [MOR]. Jan. 16.98: Lumicon comet filter makes comet appear significantly brighter and decidedly more condensed; comet well seen with binoculars in spite of moonlight [BOR]. Jan. 19.72: bright moon only 50° away [MEY]. Jan. 22.98: bright gibbous moon does not seem to affect comet's visibility much; coma sharply condensed at center w/ 32-cm L at 68× [BOR]. Jan. 25.00: faint fan tail spans p.a. 220°-315° [SHA04]. Jan. 26.98: late twilight, full moon; comet only 10° up in the west; coma sharply condensed at center [BOR]. Feb. 15.76: not quite as clear using Swan-band filter; bright sky [SEA]. Mar. 2.77: possibly a little clearer using Swan-band filter; bright sky [SEA].

◇ *Periodic Comet Gehrels 3 (1992v)* ⟹ 1994 Apr. 5.25: nearly stellar; narrow tail [SCO01].

◇ *P/Kushida (1994a)* ⟹ 1994 Jan. 16.074: photograph on Foma Medix Rapid (x-ray) film w/ 42-cm Schmidt telescope shows 3′.7 coma, DC = 8 [LEH]. Jan. 16.35: faint stars in coma [MOR]. Feb. 3.18: Lumicon comet filter slightly enhances comet; comet larger but much less condensed than P/Schwassmann-Wachmann 2 (observed minutes earlier) [BOR]. Feb. 6.013: photograph on Foma Medix Rapid (x-ray) film w/ 42-cm Schmidt telescope shows 4′.4 coma, DC = 4 [LEH]. Feb. 6.18: comet noticeably enhanced by Lumicon comet filter [BOR]. Feb. 16.20: comet's center was only a few arcsec from a star of mag 14.7 (HS); the star could easily be seen through the coma [KRO02]. Feb. 20.20: strong moonlight; comet brighter and more condensed in Lumicon Swan-band filter [SPR]. Mar. 3.151: unfiltered CCD images show an 8″ central cond. [ROQ]. Mar. 4.85: photometry obtained with 20-cm *f*/2 Baker-Schmidt camera + *V* filter + ST-6 CCD; large circular coma with ~ 1′ central cond. [MIK]. Mar. 13.22: possible faint stellar cond. [MOR]. Mar. 29.86: starlike, 0′.5 central cond.; delicate coma [MIK]. Apr. 5.27: faint tail [SCO01]. Apr. 11.25: hint of something large and diffuse at comet's position; limiting mag assumes coma dia. of 2′.5 [MOR].

◇ *Periodic Comet Lovas 2* ⟹ 1993 July 23.07: attempted recovery [GAR02].

◇ *P/Mrkos (1991 IV)* ⟹ 1991 Mar. 23.10: comet has appearance of fuzzy star; at 88×, very faint coma of dia. ~ 1′.2 suspected occasionally (if real, m_1 may have been as bright as 13.0) [BOU].

◇ *Periodic Comet Schwassmann-Wachmann 1* ⟹ 1990 Aug. 19.93 and 21.94, Dec. 6.81, 1992 Dec. 16.76 and 29.94, 1993 Jan. 14.82, and Mar. 15.88: exposures of duration 0.5-5 sec on T-Max film with RTC XX 1390 image intensifier; magnitude given is limiting stellar magnitude; it is possible to record stars to mag 18 in exposures of 5 sec (sensitivity of photocathode extends from ~ 300 to 950 nm) [MER]. 1991 Sept. 14.93 and 1993 Feb. 15.93: visually w/ image intensifier (see previous remark) [MER]. 1994 Feb. 16.18: "looked like a different comet because the cond. [seen two nights earlier] had virtually vanished" [KRO02]. Mar. 13.18: comet strongly suspected at mag 13.5 [MOR]. Apr. 19.47: *R*-band CCD image taken w/ 188-cm telescope at Okayama Astrophysical Observatory shows a strong jet-like structure of length 10″ toward p.a. 340°; another weak spiral structure extending up to 10″-15″ was recognized between p.a. 120° and 360°; $m_1 \sim 13$ (*R*), which is uncertain due to thin cloud during the observation [Junichi Watanabe, National Astronomical Observatory of Japan; A. Nakamura, Institute of Space and Astronautical Science; and Y. Hirota, Tokyo Gakugei University]. Apr. 29.84: photometry obtained with 20-cm *f*/2 Baker-Schmidt camera + *V* filter + ST-6 CCD; "starlike 0′.5 central cond. without any coma; probably in fresh outburst" [MIK].

◇ *P/Schwassmann-Wachmann 2* ⟹ 1994 Jan. 16.00: no enhancement w/ a Lumicon Swan Band Filter [MEY]. Jan. 16.23 and 17.16: tiny comet with parabolic coma and tail [MOR]. Feb. 2.193: unfiltered CCD images obtained with a 25-cm telescope showed an apparent 1′-dia. symmetrical coma surrounding a bright starlike nucleus [ROQ]. Feb. 2.27: in 35.9-cm *f*/7 L (164×), stellar cond. of mag 13.9 ± 0.2; coma possibly elongated toward SW [MOD]. Feb. 3.17: at 110×, a minute but strong knot of bright material occupies coma's center, possibly containing a very faint, stellar nucleus of mag ≃ 13.5; Lumicon comet filter slightly suppresses comet's image [BOR]. Feb. 4.19: at 110×, a strong, dense, bright central knot containing a tiny stellar or near-stellar nucleus was seen [BOR]. Feb. 4.21: in 35.9-cm *f*/7 L (164×), stellar cond. of mag 13.9 ± 0.2; coma possibly elongated toward S [MOD]. Feb. 5.984: photograph on Foma Medix Rapid (x-ray) film w/ 42-cm Schmidt telescope shows 2′.2 coma, DC = 8, very weak narrow tail ~ 0′.4 long in p.a. 60°, distinct narrow tail ~ 1′.2 long in p.a. 131°, and a brighter narrow tail ~ 0′.7 long in p.a. 182° [LEH]. Feb. 6.144: observation made as on Feb. 2.193 (above), "when the coma, although still symmetrical and with approximately the same diameter, had diminished considerably in intensity; the well-defined 'stellar' nucleus had also faded by ~ 1 magnitude" [ROQ]. Feb. 6.17: at 110×, a tiny stellar nucleus of mag ~ 13 — brighter and more conspicuous than before — surrounded by a dense,

[cont. from previous page] bright, central mass [BOR]. Feb. 7.21: essentially-stellar nucleus of mag 13-13.5 at heart of coma, heavily involved with surrounding material [BOR]. Feb. 14.16: the comet was < 1′ from an 11.5-mag star [KRO02]. Feb. 14.90: at 280×, 0′.7 coma, DC = 4, strong pointlike central cond. [LEH]. Feb. 18.31: at 164×, stellar central cond. of mag 14.3 ± 0.1 [MOD]. Feb. 19.92: observation made from Selvino, Italy, during IWCA; bright 1st-quarter moon in western Gemini [BOR]. Feb. 19.93: observation made at IWCA in Selvino, Italy, using IWCA-prepared AAVSO (b) chart for V Cancri (date 1941) [GRE]. Mar. 2.07: Lumicon comet filter slightly suppresses comet [BOR]. Mar. 3.18: galaxy NGC 2545 (m_1 = 11.4, dia. 0′.9, DC = 7) was only 2′.5 north of the comet [KRO02]. Mar. 5.23: fairly difficult to make an estimate, as comet was quite close to a group of mag 13-14 stars [KRO02]. Mar. 6.18: somewhat difficult to see; comet was touching a 9th-mag star, so that the star seemed to show a diffuse tail [KRO02]. Mar. 9.87 and 9.95: AAVSO sequence U Gem chart [GRA04, DAH]. Mar. 12.05: comet only glimpsed under somewhat inferior conditions [BOR]. Mar. 29.85: photometry obtained with 20-cm *f*/2 Baker-Schmidt camera + *V* filter + ST-6 CCD; fan-like tail ~ 4′ long in p.a. 95° [MIK]. Mar. 30.87: fan-like tail ~ 5′ long in p.a. ~ 110°-130° [MIK]. Mar. 31.05: coma seems significantly larger than before, but comet is very faint [BOR]. Mar. 31.82: in 33.4-cm *f*/4 L (214×), 0′.4 coma, DC = 4-5 [SZE02]. Apr. 29.90: fan-like tail [MIK].

◇ *Periodic Comet Shoemaker-Levy 9 (1993e)* ⟹ 1993 Apr. 17.58 and May 20.61: coma dia. 1′.0 × 0′.15 elongated in p.a. 77°-257° [NAK01]. Apr. 25.52: coma dia. 0′.95 × 0′.15 elongated in p.a. 77°-257° [NAK01]. May 15.61: coma dia. 0′.95 × 0′.15 elongated in p.a. 75°-255° [NAK01]. May 25.60: coma dia. 1′.05 × 0′.15 elongated in p.a. 76°-256° [NAK01]. 1994 Feb. 6.127: photograph on Foma Medix Rapid (x-ray) film w/ 42-cm Schmidt telescope shows "very weak diffuse trace" ~ 8′ long and 1′ wide along p.a. 68°-248° [LEH]. Mar. 16 and 18: a 60-min exp. on TP2415 hypered film w/ 20.3-cm *f*/6 telescope also failed to record the comet, on both nights [GAR02].

◇ *P/Spitaler (1993r)* ⟹ 1994 Jan. 30.78: 180-sec unfiltered exposure; the image of P/Spitaler was obtained by P. Sicoli and A. Testa and was measured by M. Cavagna [CAV].

◇ *Periodic Comet Tempel 1 (1993c)* ⟹ 1994 Feb. 6.15: CCD image of 20 sec integration time in clear filter; asymmetric inner coma with brightness excess (jet, fan?) extending to 12″ from nuclear cond. at p.a. 235° [PRA01]. Mar. 4.96: photometry obtained with 20-cm *f*/2 Baker-Schmidt camera + *V* filter + ST-6 CCD; starlike 1′ central cond. w/ delicate coma around [MIK]. Mar. 5.26: "stars to mag 15 were fairly easy to see, but the comet was extremely difficult, yet I am positive it was [seen]"; possible slight atmospheric haze [KRO02]. Mar. 6.22: much easier to see than the night before [KRO02]. Mar. 7.273: central cond. < 5″ in size [ROQ]. Apr. 7.94: sequence from *The Astronomer* (T Leo) [DAH]. Apr. 10.45: in 20×80 B, $m_1 \simeq 10.5$ (MM: S), 2′ coma [CAM03]. Apr. 11.27: stellar cond. offset towards the E-NE and the coma was elongated towads the W-SW; star also in coma [MOR]. Apr. 11.46: broad fan-shaped tail; m_1 is brighter than 11.7 [SCO01]. Apr. 16.30: stellar cond. offset towards the NE and the coma was elongated towads the SW; dimensions of coma 1′.2 × 2′.4 [MOR].

◇ *P/Urata-Niijima (1993q)* ⟹ 1994 Apr. 6.15: nearly stellar; faint tail [SCO01].

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TABULATED DATA

The headings for the tabulated data are as follows: "DATE (UT)" = Date and time to hundredths of a day in Universal Time; "MM" = the method employed for estimating the total visual magnitude [B = Bobrovnikoff, M = Morris, S = Sidgwick/In-out — see October 1980 issue of *ICQ*, pages 69-73 — etc.; also, P stands for photographic magnitude, and photoelectrically-determined values fall under U, L, and V for the standard *U*, *B*, and *V*, respectively]. "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 (B = Bobrovnikoff, M = Morris, S = Sidgwick, C = unfiltered CCD integration, c = same as 'C', but for nuclear magnitudes, V = electronic observations — usually CCD — with Johnson *V* filter, *etc.*; see pages 98-100 of the October 1992 issue, and page 60 of the April 1993 issue, for all of the 1- and 2-letter codes). "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).

"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; 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. "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).

An asterisk between the published DATE and MM columns indicates that the observation is an updated version of one already published in a previous issue of the *ICQ*, *The Comet Quarterly*, or *The Comet*. 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 then only for situations where the observed comet is at altitude > 10°. Here again are the new special symbols: '&' = 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.

A complete list of the Keys to abbrevations used in the *ICQ* is available from the Editor for $4.00 postpaid. *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 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.

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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 [11 = Dutch Comet Section; 16 = Japanese observers (c/o Akimasa Nakamura, Kima, Japan); 23 = Czech group (c/o P. Pravec); 32 = Hungarian group (c/o K. Sarneczky); etc.]. Those with asterisks (*) preceding the 5-character code are new additions to the Observer Key:*

*ALD	32	Gabor Aldott, Budapest, Hungary
*AUG		Todd Augustyniak, IL, U.S.A.
BAK01	32	Gaspar Bakos, Budapest, Hungary
BAR		Sandro Baroni, Italy
BAR06		Alexandr R. Baransky, Okhnovka, Ukraine
*BAR08	32	Jozsef Barankai, Szomolya, Hungary
*BLO01	11	L. Blommers, The Netherlands
*BOD02	32	Arnold Bodnar, Balatonkenese, Hungary
BOR		John E. Bortle, NY, U.S.A.
BOU		Reinder J. Bouma, The Netherlands
BRL	32	Pa'l Brla's, Hungary
*BRO04	27	E. Broens, Belgium
*BUS04	32	Sandor Busa, Harkakotony, Hungary
CAM03	14	Paul Camilleri, Australia
CAV		Marco Cavagna, Italy
COM	11	Georg Comello, The Netherlands
CSU	32	Matyas Csukas, Romania
*CZI	32	Szabolcs Cziniel, Pannonhalma, Hungary
DAH	24	Haakon Dahle, Norway
DEA		Vicente Ferreira de Assis Neto, Brazil
DEM	23	Eduard Demencik, Slovak Republic
DES01		Jose Guilherme de Souza Aguiar, Brazil
DID		Richard Robert Didick, MA, U.S.A.
DIE02		Alfons Diepvens, Belgium
DIL		William G. Dillon, VA, U.S.A.
*DOM	32	Gabor Domeny, Szekszard, Hungary
*DRE	23	Radek Dreveny, Czech Republic
DVO	23	Denisa Dvorakova, Czech Republic
FAB	23	Peter Fabian, Slovak Republic
*FAZ	32	Zoltan Fazakas, Nagyvarad, Romania
FEI	11	Henk Feijth, The Netherlands
*FOL	32	Ferenc Foldesi, Veszprem, Hungary
GAR01		Gordon Garradd, N.S.W., Australia
GAR02		Stephane Garro, France
GRA04	24	Bjoern Haakon Granslo, Norway
GRE		Daniel W. E. Green, U.S.A.
*GYE	32	Peter Gyenizse, Komlo, Hungary
HAD01	32	Csaba Hadhazi, Hungary
HAS02		Werner Hasubick, Germany
HEE	24	Lars Trygve Heen, Norway
HER02		Carl Hergenrother, AZ, U.S.A.
*HEV	32	Zoltan Hevesi, Kaposvar, Hungary
HOR02	23	Kamil Hornoch, Czechoslovakia
*ILL	32	Elek Illes, Kovagoszolos, Hungary
*ISK	32	Jozsef Iskum, Budapest, Hungary
ITO02	16	Kazuyuki Ito, Japan
*IVA01	32	Tamas Ivady, Ivad, Hungary
*JON04	32	Karoly Jonas, Budapest, Hungary
KAM01		Andreas Kammerer, Germany
KAM03	16	Toshiyuki Kamijima, Japan
KAR	32	L. Ka'roly, Hungary
KEE		Richard A. Keen, CO, U.S.A.
KER	32	Akos Kereszturi, Hungary
KES01	32	Sa'ndor Keszthelyi, Hungary
*KES02	32	Daniel Keszthelyi, Gyongyos, Hungary
KIS02	32	Laszlo Kiss, Szeged, Hungary
KOC03	32	Antal Kocsis, Hungary
*KOJ		Takuo Kojima, Gunma, Japan
*KOK	32	Istvan Kokai, Nagykanizsa, Hungary
KON03	16	Eitoshi Konno, Japan
*KON05	32	Andras Konya, Szomolya, Hungary
KOS	32	Attila Kosa-Kiss, Romania
*KRA03	32	Zoltan Kranicz, Budapest, Hungary
KRO02		Gary W. Kronk, IL, U.S.A.
KRY01		Timur Valer'evich Kryachko, Russia
KUB	23	Pavel Kubicek, Czech Republic
*KUJ	23	Josef Kujal, Czech Republic
KYS	23	J. Kysely, Czech Republic
LAA	11	T. A. van der Laan, The Netherlands
*LAD	32	Tamas Ladanyi, Hungary
*LAN02	32	Zsolt Lantos, Budapest, Hungary
*LAU01	24	Andreas Lauvstad, Norway
LEH		Martin Lehky, Czech Republic
LUE		Hartwig Luethen, Germany
MAL02		A. Mallama, MD, U.S.A.
MCN		Robert Houston McNaught, Australia
MER		Jean-Claude Merlin, France
MEY		Maik Meyer, Germany
*MIG	32	Laszlo Migaly, Hehalom, Hungary
MIK		Herman Mikuz, Slovenia
MIL02		Giannantonio Milani, Italy
MIZ01	32	Attila Mizser, Hungary
MOD		Robert J. Modic, OH, U.S.A.
MOE		Michael Moeller, Germany
MOR		Charles S. Morris, U.S.A.
MOR03		Warren C. Morrison, Canada
NAG02	16	T. Nagata, Japan
*NAG05	32	Akos Nagy-Melykuti, Hungary
*NAG06	32	Gabor Nagy, Hejopapi, Hungary
*NAG07	32	Zoltan Antal Nagy, Budapest, Hungary
NAK01	16	Akimasa Nakamura, Japan
OFE		Eran Ofek, Israel
OLE	18	Arkadiusz Olech, Poland
PAP02	32	Sandor Papp, Hungary
PAP03	32	Csaba Pap, Hungary
*PET01	32	Peter Petrovics, Budapest, Hungary
PRA01	23	Petr Pravec, Czech Republic
*ROH	32	Lajos Rohoska, Budapest, Hungary
*ROQ		Paul Roques, AZ, U.S.A.
*ROT01	23	Michal Rottenborn, Czech Republic
*SAJ	32	Andras Sajtz, Satu-Nou, Romania
SAR02	32	Krisztian Sarneczky, Hungary
SCH04	11	Alex H. Scholten, The Netherlands
SCO01		James V. Scotti, AZ, U.S.A.
SEA	14	David A. J. Seargent, Australia
SEA01	14	John Seach, Australia
SHA04		Gregory T. Shanos, U.S.A.
SHI	16	Hiroyuki Shioi, Japan
SKA01	23	Petr Skalak, Czech Republic
SPR		Christopher E. Spratt, BC, Canada
*SPU	23	Miroslav Spurny, Czech Republic
STE10	23	Petr Stepan, Czech Republic
SZA	32	Sa'ndor Szabo', Hungary
SZA02	32	Levente Szarka, Hungary
*SZA03	32	Agoston Szauer, Papa, Hungary
SZE02	32	Laszlo Szentasko, Hungary
SZO	32	Balazs Szoke, Hungary
*SZO01	32	Attila Szollosi, Hungary
TEP	32	Istvan Tepliczky, Hungary
*TOT02	32	Krisztian Toth, Dunakeszi, Hungary
UJV	32	Antal Ujva'rosy, Hungary
*VET01	23	Marie Vetrovcova, Czech Republic
VIC	32	Zoltan Vician, Hehalom, Hungary
VIE		Jean-Francois Viens, Quebec, Canada
*VOG		Matthew Vogel, IL, U.S.A.
WAR		Robert Warren, IN, U.S.A.
WAT01	16	Nobuo Watanabe, Japan
WIL02		Peter F. Williams, Australia
*WYA	14	C. Wyatt, Victoria, Australia
YAS	16	Masanori Yasuki, Japan
YUS	16	Toru Yusa, Japan
ZAN		Mauro Vittorio Zanotta, Italy
ZNO	23	Vladimir Znojil, Czech Republic

Comet Sorrells 1987 II

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1986 11 23.07	E	11.0	AC	31.7	L	6	68	1.9	7/	0.1	135	BOR
1986 11 26.04	E	11.0	AC	31.7	L	6	68	1.5	7/	?	90	BOR
1986 12 05.06	E	10.8	AC	31.7	L	6	68	2.9	7			BOR
1986 12 06.06	E	10.6	AC	31.7	L	6	68	2.7	7			BOR
1987 07 16.11	S	10.3	AC	31.7	L	6	68	2.0	3/	?	135	BOR
1987 07 17.11	S	10.6	AC	31.7	L	6	68	1.9	4	?	135	BOR
1987 07 18.14	S	10.5	AC	31.7	L	6	68	2.7	3/			BOR
1987 07 22.14	S	10.6	AC	31.7	L	6	68	2.4	3			BOR
1987 07 29.11	S	10.7	AC	31.7	L	6	68	2.8	3			BOR
1987 08 25.07	S	12.6	AC	50.0	L	6	96	1.0	3			BOR

Comet Wilson 1987 VII

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1986 08 12.11	S	12.3	AC	31.7	L	6	110	0.7				BOR
1986 08 14.18	S	12.3	AC	31.7	L	6	88	0.6	7			BOR
1986 08 29.12	S	12.2	AC	31.7	L	6	88	1.2	7/			BOR
1986 09 07.12	S	11.6	AC	31.7	L	6	68	1.0	5/	?	90	BOR
1986 09 07.12	S	11.6	AC	31.7	L	6	88	1.0	7			BOR
1986 09 08.09	S	11.9	AC	31.7	L	6	68	1.2	6/			BOR
1986 09 09.08	S	11.8	AC	31.7	L	6	68	0.8	7			BOR
1986 09 22.03	S	11.6	AC	31.7	L	6	68	0.6	7	?	110	BOR
1986 10 06.05	S	11.6	AC	31.7	L	6	68	0.8	7	?	90	BOR
1986 10 24.99	S	11.8	AC	31.7	L	6	68	0.8	6/			BOR
1986 10 29.02	S	12.0	AC	31.7	L	6	68	1.0	6/			BOR
1986 10 31.03	S	11.9	AC	31.7	L	6	68	0.8	6/			BOR
1986 11 25.99	S	10.9	AC	31.7	L	6	68	1.7	4			BOR

Comet Bradfield 1987 XXIX

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1987 10 14.73	S	6.5	AC	5.0	B		10	4	5			MIZ01
1987 10 29.73	M	6.1	SC	8.0	B		10	5		0.3		HOR02
1987 10 29.75	S	5.5	AC	5.0	B		10	7	8	0.8	90	MIZ01
1987 10 30.73	E	6.5	SC	13	L	8	69	3.5				HOR02
1987 10 30.76	M	5.9	SC	5.0	B		10					HOR02
1987 10 31.71	S	6.3	AC	10	L	4	20	4	2			SZA
1987 10 31.72	E	6.5	SC	13	L	8	69					HOR02
1987 10 31.72	M	5.9	SC	8.0	B		10	6		0.2		HOR02
1987 10 31.75	M	5.9	SC	5.0	B		10					HOR02
1987 10 31.75	S	5.5	AC	5.0	B		10	10	6	0.5	90	MIZ01
1987 11 03.74	E	6.6	SC	13	L	8	69	2.5				HOR02
1987 11 04.71	M	6.0	SC	5.0	B		10					HOR02
1987 11 04.72	E	6.8	SC	13	L	8	69	2.5				HOR02
1987 11 04.75	S	5.5	AC	3.0	B		8	9	7			CSU
1987 11 05.75	S	6.4	AA	8	R	15	80		4			FOL
1987 11 07.75	S	6 :	AC	10	L	4	20	5	5	0.08	85	SZA
1987 11 11.70	S	5.6	AC	5.0	B		10	5	5			MIZ01
1987 11 17.69	S	5.5	AA	8	R	15	80		7			FOL
1987 11 18.71	S	5.5	AC	5.0	B		10	10	7			MIZ01
1987 11 20.75	S	5.1	AC	5	R	11	33	15	5/	1	60	KOC03
1987 11 20.77	S	5.5	AC	10	L	4	20	4	6	0.18	65	SZA
1987 11 21.74	S	6.1	AC	6.8	R		10	3	7/	0.7	65	SZA
1987 11 22.70	S	5.5	AA	6	R	7	28		7			FOL
1987 11 23.75	S	5.1	AC	3.0	B		8	6	9	0.8	110	CSU
1987 11 23.79	S	5.1	AC	5.0	B		10	10	6			SZO
1987 11 23.80	M	5.7	SC	8.0	B		10	5				HOR02
1987 11 25.70	M	5.6	SC	5.0	B		10					HOR02
1987 11 25.71	S	5.7	AC	5.6	B		8	5	3			ROH

Comet Bradfield 1987 XXIX [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1987 11 25.72	S	5.5	AC	15	L	7	64	12	7	&0.5	40	ISK
1987 11 25.75	S	5.3	AC	6.3	R		21	15	5/	1.5	45	TEP
1987 11 26.76	S	5.9	AC	10	L	4	20	3	7	0.7	70	SZA
1987 12 07.71	S	6.1	AA	5.0	B		7		7			FOL
1987 12 08.74	S	5.9	AC	10	L	4	20	5	4			SZA
1987 12 09.74	S	5.8	AC	10	L	4	20	6	4			SZA
1987 12 10.75	S	5.7	AC	5.0	B		7	5		1	75	SZA
1987 12 10.76	S	6.2	AA	6	R	7	35		7			FOL
1987 12 10.77	S	5.0	AC	5.0	B		10	3.5	5/	2	25	BUS04
1987 12 11.75	S	5.2	AC	7	R		50	3	6	2	65	BUS04
1987 12 11.75	S	6.2	AA	6	R	7	28		7			FOL
1987 12 11.76	S	5.7	AC	5.0	B		7			0.5	70	SZA
1987 12 12.71	S	5.6	AC	5.0	B		10	15	5	2		MIZ01
1987 12 12.75	S	5.0	AC	7	R	7	50	2.5	7	1	45	BUS04
1987 12 19.76	S	5.7	AC	5.0	B		7		2	1.5	70	SZA
1987 12 20.71	S	6.0	AC	5.0	B		10	&10	5	1.5		MIZ01
1987 12 21.75	S	5.5	AC	7	R	7	50	2	2/	1.5	42	BUS04
1987 12 21.81	S	7.0	AA	6	R	7	28		6			FOL
1987 12 23.77	S	5.8	AC	5.0	B		10	9	7	1.5	60	MIZ01
1987 12 23.79	S	6 :	AC	3.0	B		8	5	7	0.8		ILL
1988 01 09.77	S	6.8	AC	10	L	8	80	5	3/			ILL
1988 01 12.73	S	6.8:	AC	10	L	8	80	4	3			ILL
1988 01 12.74	S	7.6	AC	10	L	10	50	4	1			ALD
1988 01 12.76	S	8.5:	AC	15	L	11	56	3	3			SZA

Comet Liller 1988 V

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1988 04 10.80	s	6.2:	AC	5.0	B		7				40	SZA
1988 04 11.81	S	6 :	AC	6.3	R	13	34	5	5	0.33	340	SZA03
1988 04 11.84	S	5.9	AC	5.0	B		7					SZA
1988 04 15.83	S	5.7	AC	5.0	B		7		7	0.5	0	SZA
1988 04 16.75	S	5.6	AC	5.0	B		7		5	0.33	5	SZA
1988 04 16.76	S	5.6	AC	6.3	R	7	26	5	6	1	10	SZA03
1988 04 17.79	S	5.6	AC	7.0	B		7		6	1.3	10	SZA
1988 04 18.85	S	5.7:	AC	7.0	B		7		7	0.5	10	SZA
1988 04 19.78	S	5.9	AC	7.0	B		7			0.33	5	SZA
1988 04 21.04	S	5.0	AC	3.0	B		8	6	4	0.8	5	CSU
1988 04 24.80	S	6.1	AC	5.0	B		7		5	0.5	0	SZA
1988 05 07.86	S	6.5	AC	3.0	B		8	6	3	0.7	20	CSU
1988 05 09.84	B	6.4	SC	5.0	B		10					HOR02
1988 05 14.88	S	7.8	AA	8	R	10	33		4			FOL
1988 06 02.98	S	8.7	AC	15	L	9	50	1.5	4			JON04
1988 06 03.97	S	8 :	AC	8	L	8	60		5/			VIC
1988 06 03.98	S	8.7	AC	15	L	9	50	1.3	4			JON04
1988 06 04.83	S	8.7	AA	27	L		59		3			FOL
1988 06 04.99	S	8.8	AC	15	L	9	50	1.2	4			JON04
1988 06 06.84	S	9.0:	AA	19	L				2			FOL
1988 06 07.95	S	8.1	AC	8	L	8	60		6	0.25	90	VIC
1988 06 08.98	S	9.0	AC	15	L	9	50	1.2	3			JON04
1988 06 09.93	S	8.0	AC	5.0	B		10	&10	3			MIZ01
1988 06 09.96	S	9.1	AC	15	L	9	50	1	3			JON04
1988 06 10.84	S	9.0:	AA	27	L		59		2			FOL
1988 06 13.95	S	9.3	AC	15	L	9	50	1	3			JON04
1988 06 16.96	S	9.5	AC	15	L	9	50	1	2/			JON04
1988 06 18.94	S	9.7	AC	15	L	9	50	1.2	2			JON04
1988 07 02.96	S	10.5	AC	15	L	9	50	1.2	2			JON04

Comet Černis-Kiuchi-Nakamura 1990 III

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 03 26.82	B	8.3	AA	15.0	L	5	25	3.7	3			MER

Comet Austin 1990 V

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 04 21.10	& S	4 :	AC	6.0	B		20	8	6	0.4	345	SAR02
1990 04 24.08	& S	5 :	AC	6.0	B		20	5	8/	0.3	330	SZA02
1990 04 24.10	& S	5 :	AC	5.0	B		7	12	4	0.3	320	KES01
1990 04 30.07	S	5 :	AC	5	R	11	34	8	5	0.2	280	LAD
1990 04 30.09	S	5.8	AC	6.0	B		20	10	6	0.4	345	SZA02
1990 05 03.04	& S	4.5	AC	25	L	12	150	14	7	0.5	290	VIC
1990 05 03.05	& S	4.5	AC	8.3	R	4	15	9	9	2	280	MIG
1990 05 03.07				16.2	L	3	21	10	6	1	270	SZA02
1990 05 03.07	S	5.5	AC	6.0	B		20					SZA02
1990 05 03.08	S	4.4	AC	5.0	B		10	9	6			KIS02
1990 05 03.08	S	5.6	AC	5.0	B		7	4.5	4	0.4	275	PAP02
1990 05 05.06	S	4.3	AC	5.0	B		10					KIS02
1990 05 05.06	S	5.5	AC	16.2	L	3	21	10	6			SZO01
1990 05 05.07				16.2	B	3	21	10	6	&0.5	280	SZA02
1990 05 05.07	S	5.6	AC	5.0	B		7					SZA02
1990 05 05.08	S	4.3	AC	11	L	7	32	5	3			KON05
1990 05 05.09	S	4.5	AC	6.0	B		20	7	4			SAR02
1990 05 05.09	S	5 :	AC	8	R	6	20	10	5	1.5	305	KOC03
1990 05 06.05	M	5.0	AA	5.0	B		10	10	5			BOU
1990 05 06.05	S	4.4	AC	8	R	6	20	&15	5/	1.5	315	KOC03
1990 05 06.05	S	4.8:	AC	5.0	B		7	16	5	0.5	300	BOD02
1990 05 06.08	S	5.0	AC	5.0	B		10	5	7	0.5	300	SZA03
1990 05 06.08	S	5.0	AC	5.0	B		10	5	7	0.5	300	SZA03
1990 05 14.05	S	4.2:	AC	8	R	6	20	8	6	1.0	320	KOC03
1990 05 15 05	S	4.5:	AC	5	R	11	22	&12	2/			LAD
1990 05 16.05	S	4.7	AC	6.0	B		20	12	3/	0.08	280	SAR02
1990 05 16.07	S	5.8	AC	6.0	B		20	12	3			PET01
1990 05 17.98	S	5.5	AC	5.0	B		15		3			FOL
1990 05 19 90	S	5.5	AC	5.0	B		15		3			FOL
1990 05 20.05	S	4.7	AC	5.0	B		10	&10	7			KIS02
1990 05 20.05	S	6.2	AC	5.0	B		7	&15				BRL
1990 05 20.06	S	4.9	AC	6.0	B		20	7	2	0.7	270	SAR02
1990 05 20.06	S	5.1	AC	5.0	B		10		6	1.5		VIC
1990 05 21.04	S	5.8	AC	5.0	B		7	20	3			BRL
1990 05 22.00	M	4.7	AA	5.0	B		7	15	3	0.9	328	BOU
1990 05 22.04	S	6.3	AC	5.0	B		7	15		1.0		BRL
1990 05 23.06	S	4.7	AA	5.0	B		7	17	2			BOU
1990 05 26.06	S	7.0	AC	16.2	L	3	21	15	2			SZA02
1990 05 27.05	S	5.3	AA	5.0	B		7	18	2			BOU
1990 05 28.04	S	5.4	AA	5.0	B		7	20	2	2.0	300	BOU
1990 05 29.04	S	5.5	AA	5.0	B		7	15	2	2.0	310	BOU
1990 05 30.04	S	5.8	AC	6.0	B		20	20		0.2	300	MIZ01
1990 05 30.04	S	6.8	AC	5.0	B		10	10	2	2	330	VIC
1990 05 31.02	M	5.6	AA	5.0	B		7	14	2	2.5	320	BOU
1990 05 31.03	S	6.5	AC	5.0	B		7	15				BRL
1990 05 31.06	S	5.5:	AC	8	R	6	20	&25	3/			KOC03
1990 06 01.03	S	7.0	AC	5.0	B		7	15				BRL
1990 06 01.06	S	5.7	AA	5.0	B		7	12	1/	1.5	320	BOU
1990 06 02.05	S	5.8	AA	5.0	B		7	11	1/	2.0	320	BOU

Comet Tsuchiya-Kiuchi 1990 XVII

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 07 21.93	S	9.1	AC	25.4	J	6	58	3.5	2/			BOU

Comet Tsuchiya-Kiuchi 1990 XVII [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 07 22.93	S	9.2	AC	25.4	J	6	58	3.0	2			BOU
1990 07 25.93	S	9.1	AC	25.4	J	6	58	3.5	2			BOU
1990 10 22.16	S	8 :	AC	8	R	11	34	&10				GYE
1990 10 22.18	S	7.4	AA	5.0	B		10		4			BOU
1990 10 24.18	S	7.4	AA	5.0	B		10		3			BOU
1990 10 31.13	S	6.9	AC	5.0	B		10					VIC
1991 02 04.76	S	11.4	GA	25.4	J	6	72	2	1			BOU

Comet Levy 1990 XX

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 06 23.00	S	9.1	AC	11	L	7	51		1			FOL
1990 06 23.03	S	9.0	AC	25.4	L	4		2.5	4/			DOM
1990 06 24.99	S	8.2	AA	25	L	7	150	2.5				VIC
1990 06 25.00	S	8.6:	AC	15	L	4	59	5.5	4/			PAP02
1990 06 28.02	S	8.5:	AC	16.2	L	3	21	4.5	3			SZA02
1990 06 28.97	M	8.2	AC	25.4	J	6	58	3	5			BOU
1990 06 28.98	S	9.7:	AC	8	R	6	83	3	0			LAD
1990 06 28.99	S	9.4	AC	8	R	6	20	4	0/			KOC03
1990 07 01.03	S	8.0	AC	6.0	B		20	9	2/			SAR02
1990 07 03.99	M	7.9	AC	25.4	J	6	58	3	5			BOU
1990 07 14.90	S	8.0	AC	20	L	5	100	5	3			SZO01
1990 07 14.92	S	7.5	AC	5.0	B		10	4	5			SZA03
1990 07 15.90	B	7.5	AA	11	L	7	32	3.5	6			KON05
1990 07 15.90	S	7.2	AC	10	L	10	32	7	2			KIS02
1990 07 15.90	S	8 :	AC	16.2	L	6	42	4	6	0.06	270	SZA02
1990 07 16.01	S	7.5	AA	5.0	B		10	5				DOM
1990 07 18.94	S	7.0	AC	11	L	7	51	5	5			FOL
1990 07 19.97	S	6.9	AA	5.0	B		10	5	4	0.7	260	BOU
1990 07 21.94	S	6.6	AA	5.0	B		10	10	3			BOU
1990 07 22.89	S	6.3	AC	11	L	7	54	& 4	6	0.03		BAR08
1990 07 22.91	B	6.7	AA	11	L	7	32	4.5	6/	0.05		KON05
1990 07 22.96	S	7.5	AC	5.0	B		10	4	4			VIC
1990 07 23.96	S	6.5	AA	11	L	7	51	&10	7			FOL
1990 07 24.94	S	6.5	AA	15	L	5	25	10	3	0.05		IVA01
1990 07 24.99	S	6.7	AC	5.0	B		10	5	5/			VIC
1990 07 25.90	S	7.0	AC	11	L	7	32	6.5	3			SZA03
1990 07 25.94	S	6.5	AA	5.0	B		10	8	4/			BOU
1990 07 26.92	S	7.2	AC	6.0	B		20	6	2			SAR02
1990 07 26.95	M	6.3	AA	5.0	B		10	10	4/			BOU
1990 07 27.01	S	6.1	AC	8	R	6	20	6.5	5/			KOC03
1990 07 28.90	S	6.5	AC	3.0	B		6	10	2			KER
1990 07 28.90	S	6.7	AC	5.0	B		7	15	5			BRL
1990 07 28.91	S	6.2	AC	10	L	10	32	4.5	8			KIS02
1990 07 28.94	S	6.9	AC	6.0	B		20	8	2/			SAR02
1990 07 29.07				20	L	8	75	7	8	0.2	275	VIC
1990 07 29.07	S	6.4	AA	5.0	B		10	6	6			VIC
1990 07 29.90	S	6.0	AC	10	L	10	92	5	7			KIS02
1990 07 30.01	S	6.8	AC	16.2	L	3	21	8	6	0.25	250	SZA02
1990 07 31.96	M	5.7	AA	5.0	B		10	10	5			BOU
1990 07 31.97	I	5.5:	AA	0.7	E		1					BOU
1990 08 01.97	I	5.5:	AA	0.7	E		1					BOU
1990 08 01.98	M	5.6	AA	5.0	B		10	11	5	1.2	230	BOU
1990 08 03.02	I	5.4	AA	0.7	E		1					BOU
1990 08 03.02	M	5.5	AA	5.0	B		10	13	5/	1.5	223	BOU
1990 08 03.90	S	5.5	AC	5.0	B		10	4.5	8			KIS02
1990 08 04.89	S	5.6	AC	5.0	B		7	&10	4/			UJV
1990 08 04.95	S	4.6:	AC	8	R	6	20	4.5	6/			KOC03
1990 08 05.87	S	5.8	AC	5.0	B		7	9	5			UJV

Comet Levy 1990 XX [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 08 11.88	S	5.0	AC	6.0	B		20	12	5/			PET01
1990 08 11.90	S	4.3	AA	8	R	6	20	6	6/			KOC03
1990 08 12.88	S	4.0	AA	5.0	B		7	20	5	0.3	190	UJV
1990 08 12.92	S	4.5	AA	5.0	B		10	10				KIS02
1990 08 12.96	S	4.5	AA	5.0	B		10	18	6/			DOM
1990 08 13.85	S	4.5	AA	10	L	10	32	9				KIS02
1990 08 13.85	S	4.6	S	3.0	B		6	11	6			KER
1990 08 13.86	S	4.6	AA	5.0	B		7	&20	5			BRL
1990 08 13.89	M	4.3	AA	5.0	B		10	16	6/	2.3	202	BOU
1990 08 13.93	S	4.5	AA	5.0	B		10	18	6/	1.5	208	DOM
1990 08 14.07	S	3.6	AA	5.0	B		7	20	5/	0.4	200	UJV
1990 08 14.84	S	4.2	S	11	L	7	32	9.5				SZA03
1990 08 14.89	S	3.9	AA	8	R	6	20					KOC03
1990 08 14.91	I	4.1	AA	0.7	E		1					BOU
1990 08 14.91	M	4.2	AA	5.0	B		10	16	6/			BOU
1990 08 14.92	S	4.1	AC	5.0	B		10	&15	7/			VIC
1990 08 14.95	S			5.0	B		10	20	6	1	188	DOM
1990 08 15.90	S	4.0	AA	6.0	B		20	15	7/	0.1	125	SAR02
1990 08 16.92	S	3.4:	AA	8	R	6	20	9	4	1		KOC03
1990 08 16.98	S	4.0	AA	5.0	B		10	22	6/	2	170	DOM
1990 08 17.82	S	4.0	AA	5.0	B		10	20				BRL
1990 08 17.87	I	4.0	AA	0.7	E		1					BOU
1990 08 18.81	S	4.0	AA	5.0	B		7	25	5			BRL
1990 08 18.86	S	3.6	AA	6.0	B		20		5	0.5		PAP03
1990 08 18.91	S	3.8	AA	6.0	B		20	15	5/	0.05	140	SAR02
1990 08 18.95	S	3.7	S	11	L	7	32	13				SZA03
1990 08 19.00	S	3.5	AA	16.2	L	3	21	15	7	0.05	220	SZO01
1990 08 19.03	S	3.5	AA	16.2	L	3	21	25	6	1	200	SZA02
1990 08 19.05	S	4.0	AA	5.0	B		7	25	8/			JON04
1990 08 19.84	S	4.0	AA	8	R	4	25	13	6	1		KAR
1990 08 19.94	S	3.2:	AA	5.0	B		10					VIC
1990 08 19.97	S	3.8	AA	6.0	B		20	12	6/	0.2	160	SAR02
1990 08 20.80	S	4.0	AA	5.0	B		7	30				BRL
1990 08 20.81				5.0	B		10	25	6/	2.5	155	DOM
1990 08 20.86	M	3.6	AA	5.0	B		7	15	7	1.0	140	BOU
1990 08 20.86	S	3.7	AA	6.0	B		20	13	7	0.25	80	SAR02
1990 08 21.86	S	3.1	AA	8.3	R	4	15					VIC
1990 08 21.86	S	3.5	AA	5.0	B		7	10	6	0.3	80	TOT02
1990 08 21.86	S	3.7	AA	6.0	B		20	11	7/	0.2	80	SAR02
1990 08 21.87	M	3.5	AA	5.0	B		7	15	7			BOU
1990 08 22.01	S	3.6	AA	5.0	B		7	&30	5/	0.4		UJV
1990 08 22.87	M	3.5	AA	5.0	B		7		7	1.5	110	BOU
1990 08 23.85	S	3.8	AA	5.0	B		7	35				BRL
1990 08 23.86	S	3.6	AA	5.0	B		7			0.5	80	KON05
1990 08 23.88	S	3.0	AA	16.2	L	3	21	&15	6	0.5	90	SZO01
1990 08 23.88	S	3.5	AA	5.0	B		7	10	6	0.4	90	TOT02
1990 08 23.88	S	3.7	AA	6.0	B		20	10	7	0.4	90	SAR02
1990 08 23.90	S	3.3	AA	8	R	6	20	&10	6/	1.5	80	KOC03
1990 08 23.90	S	3.7	S	5.0	B		10		6			DOM
1990 08 23.91	M	3.4	AA	5.0	B		7	15	6/			BOU
1990 08 24.80	S	3.6	AA	5.0	B		7		6/	1.5	70	NAG07
1990 08 24.87	M	3.4	AA	5.0	B		7		7	4.0	93	BOU
1990 08 24.88	S	3.5	S	5.0	B		10	35	6	1.5	89	DOM
1990 08 24.88	S	3.7	AA	5.0	B		7	25	5	1.5	80	BRL
1990 08 24.91	S	3.7	S	5.0	B		7	20	9	2.5		JON04
1990 08 25.81	S	3.8	AA	5.0	B		7	25	5	1	90	BRL
1990 08 25.82	S	4.0	AA	8	R	6	25	12	6	1		KAR
1990 08 25.87	M	3.4	AA	5.0	B		7	16	7			BOU
1990 08 25.94	S	3.4	AA	5.0	B		10	12	8	0.75	60	KIS02

Comet Levy 1990 XX [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 08 26.88	S	3.2:	AA	5	R	11	21	15	6/	1	87	KOC03
1990 08 26.92	S	3.8	AA	6.0	B		20	10	6	1	60	SAR02
1990 08 26.96	S	3.5	AA	5.0	B		10	11	6	0.75	70	KIS02
1990 08 27.84	S	3.8	AA	5.0	B		7	20				BRL
1990 08 27.85	S	3.8	S	4.3	R	12	25	5		0.2	80	CZI
1990 08 28.80	B	3.8	S	5.0	B		7		7/	1	45	NAG07
1990 08 28.88	S	3.8	AA	6.0	B		20	10	7	1.2	80	SAR02
1990 08 28.96	a M	3.4	AA	5.0	B		7	20	6/	3.7	68	BOU
1990 08 29.90	S	3.7	AA	6.0	B		20	8	7/	1.3	75	SAR02
1990 08 29.94	a M	3.4	AA	5.0	B		7	20	6/	4.6	69	BOU
1991 02 18.98	S	9 :	AC	24.5	L	4	37	3	3/			DOM
1991 03 03.87	S	8.4	AA	15.6	L	5	29	5	4			BOU
1991 04 03.86	S	10.1	AC	25.4	J	6	47	2.5	3			BOU
1991 04 08.89	S	10.7	AC	25.4	J	6	58	2.3	1/			BOU
1991 04 11.86	S	10.8	AC	25.4	J	6	58	2.5	1			BOU

Comet Arai 1990 XXVI

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 01 10.91	S	9.9	AC	25.4	J	6	58	3.0	3			BOU
1991 01 15.77	S	10.7	AC	25.4	J	6	58	2.8	1			BOU
1991 01 16.77	S	10.6	AC	25.4	J	6	47	3.0	1			BOU
1991 01 17.77	S	10.7	AC	25.4	J	6	47	3.2	1			BOU
1991 01 18.78	S	10.6	AC	25.4	J	6	47	3.2	1			BOU
1991 01 19.88	S	10.4	AC	25.4	J	6	47	3.5	1			BOU
1991 01 31.77	S	11.3	AC	25.4	J	6	58	2.5	0/			BOU
1991 02 02.78	S	11.1	AC	25.4	J	6	58	3.5	0/			BOU
1991 02 04.79	S	11.2	AC	25.4	J	6	47	3.5	1			BOU

Comet Shoemaker-Levy 1991 XXIV

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 04 11.88	S	13.5:	AC	25.4	J	6	143	0.5	2/			BOU
1991 11 12.20	S	11.0	AC	25.4	J	6	72	1.7	4			BOU
1991 11 13.18	S	10.9	AC	25.4	J	6	72	1.7	3/			BOU
1991 11 30.72	S	10.8	AC	25.4	J	6	88	2.0	4			BOU
1991 12 06.16	M	10.5	AC	25.4	J	6	72	1.8	4/			BOU
1991 12 11.20	M	9.8	AC	25.4	J	6	58	2.2	5			BOU
1991 12 15.18	S	9.6	AC	25.4	J	6	58	2.5	4/			BOU
1992 01 02.22	I	10.5:		8	R		17					KYS
1992 01 03.19	I	10.5:		8	R		17					KYS
1992 01 11.19	M	9.6	AC	25.4	J	6	58	2.5	3/			BOU
1992 01 21.74	S	10.2	GA	25.4	J	6	72		3			BOU
1992 01 22.74	S	9.9	AC	25.4	J	6	88		2			BOU
1992 02 01.12	S	10.7:	GA	11	L	7	56	1	3			BAR06
1992 02 09.20	S	9.8	AC	25.4	J	6	72	2.0	4			BOU
1992 03 05.14	S	10.5	AC	33.4	L	4	170	1.5	2	0.01	160	SZE02
1992 03 07.17	S	10.9	AC	25.4	J	6	72	1.4	4			BOU
1992 03 29.13	S	10.8	AC	25.4	J	6	72	1.3	3			BOU
1992 04 05.12	S	11.0	AC	25.4	J	6	72	1.3	2/			BOU
1992 04 08.10	S	11.2	AC	25.4	J	6	72	1.5	1/			BOU
1992 04 09.10	S	11.1	AC	25.4	J	6	72	1.5	2			BOU
1992 04 30.04	S	11.8	AC	25.4	J	6	88	2.5	1			BOU
1992 05 02.03	S	11.8	AC	25.4	J	6	72	1.5	2			BOU
1992 05 20.94	S	12.2	AC	25.4	J	6	88	1.3	1/			BOU
1992 05 21.95	S	12.2	AC	25.4	J	6	88	1.4	1			BOU
1992 05 22.97	S	12.1	AC	25.4	J	6	72	1.5	1			BOU
1992 05 23.98	S	12.3	AC	25.4	J	6	115	1.4	1			BOU
1992 05 24.97	S	12.3	AC	25.4	J	6	115		1			BOU

Comet Shoemaker-Levy 1991 XXIV [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 05 25.96	S	12.2	AC	25.4	J	6	88	1.5	2			BOU
1992 05 27.98	S	12.3	AC	25.4	J	6	115	1.2	3			BOU
1992 05 28.96	S	12.4	AC	25.4	J	6	115	1.2	2/			BOU
1992 06 03.98	S	12.6	AC	25.4	J	6	143	0.8	2			BOU
1992 06 26.97	S	12.7	AC	25.4	J	6	115	0.8	1/			BOU
1992 06 28.98	S	12.7	AC	25.4	J	6	115	1.0	1			BOU
1992 07 02.98	S	12.4	AC	25.4	J	6	88	1.4	1/			BOU
1992 07 06.98	S	12.5	AC	25.4	J	6	115	1.0	1/			BOU
1992 07 07.98	S	12.6	AC	25.4	J	6	88	1.1	1			BOU
1992 07 08.97	S	12.5	AC	25.4	J	6	88	1.1	1/			BOU
1992 07 28.96	S	13.1	AC	25.4	J	6	115	0.9	1			BOU
1992 07 29.96	S	12.9	AC	25.4	J	6	115	0.8	1/			BOU
1992 07 30.96	S	13.0	AC	25.4	J	6	143	0.8	1/			BOU
1992 08 03.94	S	12.9	AC	25.4	J	6	115	0.9	2			BOU
1992 08 04.96	S	12.7	AC	25.4	J	6	88	1.1	2/			BOU
1992 08 05.95	S	12.7	AC	25.4	J	6	58	1.4				BOU
1992 08 06.95	S	12.7	AC	25.4	J	6	88	1.4	2			BOU
1992 08 07.99	S	12.9	AC	25.4	J	6	115	1.1	1			BOU
1992 08 24.93	s	13.5:	AC	40.0	L	5		1.0	2			MER
1992 09 24.84	S	13.9	AC	45.0	L	4	148	0.5	2			BOU
1992 09 25.83	S	13.8	AC	45.0	L	4	148	0.6	2			BOU

Comet Helin-Lawrence 1992 I

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 04 08.91	S	13.5	AC	25.4	J	6	143	0.4	3			BOU
1991 04 11.90	S	13.4	AC	25.4	J	6	143	0.4	2			BOU
1991 05 15.94	S	13.1	AC	25.4	J	6	115	1.1	3			BOU

Comet Zanotta-Brewington 1992 III

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 01 02.74	S	9.0	AC	15.6	L	5	36	3.0	4			BOU
1992 01 03.71	S	8.5:	AC	6.0	B		20					MIZ01
1992 01 04.71	S	8.4	AC	6.0	B		20	5	5			SAR02
1992 01 04.75	M	8.5	AC	25.4	J	6	58	3.0	5			BOU
1992 01 05.78	S	8.0	AC	5.0	B		7	5.0	5			MER
1992 01 07.71	S	8.8	AC	16.2	L	6	42	2.5	5			SZA02
1992 01 08.73	S	9.0	AC	7	R		20	3	4			SZA
1992 01 10.74	M	8.1	AA	15.6	L	5	36	3.0	5			BOU
1992 01 11.73	S	7.9	AC	15	L	7	50	3.5	2			KRA03
1992 01 21.71	S	7.5	AC	6.0	B		20	& 9	5			MIZ01
1992 01 21.75	M	7.6	AA	25.4	J	6	58	2.5	6			BOU
1992 01 22.75	S	7.5	AA	5.0	B		7	2.5	6/			BOU
1992 01 23.74	S	7.7	AA	25.4	J	6	47	2.5	6			BOU
1992 01 24.71	& S	7.8	AC	16.2	L	6	42	4.5	3			SZA02
1992 01 26.75	M	7.5	AA	15.6	L	5	29	2.0	6			BOU
1992 01 30.71	& S	8 :	AC	16.2	L	6	42	2.5	2			SZA02
1992 02 01.71	& S	7.4	AC	6.0	B		20	4	3			SAR02
1992 02 01.71	& S[	7.0	AC	6.0	B		20					KES01

Comet Mueller 1992 VIII

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 01 21.78	S	12.0	AC	25.4	J	6	72	2.0	1/			BOU
1992 01 22.80	S	11.8	AC	25.4	J	6	72	2.6	0/			BOU
1992 01 26.90	S	11.3	AC	25.4	J	6	58	3.0	0/			BOU
1992 02 03.81	S	10.5	AC	25.4	J	6	58	3.8	1/			BOU
1992 02 08.93	a S	10.1	AC	25.4	J	6	47	3.5	1/			BOU

Comet Mueller 1992 VIII [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 02 19.80	S	8.6	AC	25.4	J	6	58	3.3	2/			BOU
1992 02 23.79	M	8.2	AC	25.4	J	6	47	3.0	3			BOU
1992 02 28.73	S	7.5:	AC	6.0	B		20	8	3			SAR02
1992 02 29.73	S	7.8	AC	6.0	B		20	10	3			SAR02
1992 02 29.78	a S	7.5	AA	25.4	J	6	58	2.5	3			BOU
1992 04 09.12	S[	10.5	AC	25.4	J	6	88	! 2.0				BOU

Comet Tanaka-Machholz 1992 X

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 04 07.13	S	8.5	AC	25.4	J	6	58	2.8	4			BOU
1992 04 08.11	S	8.5	AC	25.4	J	6	58	2.5	4/			BOU
1992 04 09.10	S	8.4	AC	25.4	J	6	47	2.5	4/			BOU
1992 04 11.08	& S	9 :	AC	16.2	L	6	42	4	2			SZA02
1992 04 12.08	& S	8.5:	AC	10	L	5	20	4	3			LAD
1992 04 20.10	S	8.7	A	11	L	7	32	6	5			BAR06
1992 04 25.07	S	8.6	A	11	L	7	32	5	4			BAR06
1992 04 26.06	M	8.2	AA	25.4	J	6	58	2.5	4/			BOU
1992 04 28.07	M	9.3	S	11	L	8	32					KYS
1992 04 30.05	M	8.0	AA	25.4	J	6	58	2.5	4/			BOU
1992 05 02.04	M	8.1	AC	25.4	J	6	47	3.0	5			BOU
1992 05 02.05	S	8.2	AC	5.0	B		10					BOU
1992 05 02.06	S	8.4	A	11	L	7	32	5	4			BAR06
1992 05 03.04	S	8.8	AC	10	L	10	74	3	2			KIS02
1992 05 03.07	S	8.7	A	11	L	7	32	3.5	4			BAR06
1992 05 04.04	M	8.0	AC	25.4	J	6	47	3.0	4/			BOU
1992 05 05.04	S	8.2	A	11	L	7	32	4	4			BAR06
1992 05 13.03	S	7.8	A	11	L	7	32	4	5			BAR06
1992 05 14.94	S	7.9	AC	25.4	J	6	58	3.0	4			BOU
1992 05 17.93	M	8.0	AC	25.4	J	6	58	3.0	4/			BOU
1992 05 17.93	S	7.9	AC	4.0	R	5	10					BOU
1992 05 18.93	M	7.9	AC	25.4	J	6	58	3.0	4/			BOU
1992 05 19.93	M	7.8	AA	25.4	J	6	47	3.6	5			BOU
1992 05 19.94	S	7.9	AA	5.0	B		10		3			BOU
1992 05 20.93	M	8.0	AA	25.4	J	6	47	3.2	5			BOU
1992 05 20.96	S	8.5	A	11	L	7	32	3	3			BAR06
1992 05 21.94	M	7.9	AA	25.4	J	6	47	3.3	4/			BOU
1992 05 22.93	S	8.2	A	11	L	7	32	3	5			BAR06
1992 05 22.96	M	8.0	AA	25.4	J	6	47	3.3	4			BOU
1992 05 23.93	S	8.3	A	11	L	7	32	3	5			BAR06
1992 05 23.97	M	8.0	AA	25.4	J	6	47	3.5	4/			BOU
1992 05 24.96	M	8.0	AA	25.4	J	6	47	3.5	4/			BOU
1992 05 24.96	S	8.4	A	11	L	7	32	3	5			BAR06
1992 05 24.99	S	9.5	AC	10	L	10	74	2	0			KIS02
1992 05 25.96	S	8.1	AA	4.0	R	5	10	4	3			BOU
1992 05 26.96	M	8.2	AA	24.4	J	6	47	3.3	4			BOU
1992 05 27.97	M	8.1	AA	24.4	J	6	47	3.5	5			BOU
1992 05 28.95	M	8.1	AA	24.4	J	6	47	3.5	5			BOU
1992 05 28.96	S	8.1	AA	4.0	R	5	10		3			BOU
1992 05 31.06	S	9.6	AC	16.2	L	6	42	3	2			SZA02
1992 06 03.00	S	9.3	A	11	L	7	32	3	4			BAR06
1992 06 03.95	S	8.9	A	11	L	7	32	3.5	4			BAR06
1992 06 03.97	S	8.6	AC	25.4	J	6	47	3.2	3/			BOU
1992 06 05.96	S	8.7	AC	25.4	J	6	47	3.2	3/			BOU
1992 06 05.96	S	9.3	A	11	L	7	32	3.5	3			BAR06
1992 06 06.96	S	9.4	A	11	L	7	56	3	2			BAR06
1992 06 10.00	S	9.2	AC	25.4	J	6	72	2.5	1/			BOU
1992 06 10.97	S	9.2	AC	25.4	J	6	58	2.8	1			BOU
1992 06 20.01	S	10.1	GA	11	L	7	32	3	3			BAR06

Comet Tanaka-Machholz 1992 X [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 06 20.99	S	10.3:	GA	11	L	7	32	3	3			BAR06
1992 06 25.96	S	10.4	AC	25.4	J	6	72	2.2	1			BOU
1992 06 27.93	O	[11.0:		11	L	8	54	1				KYS

Comet Shoemaker-Levy 1992 XIX

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 02 03.79	S	[13.0	AC	25.4	J	6	143	! 1.0				BOU
1992 05 02.06	S	11.8:	AC	25.4	J	6	115					BOU
1992 05 04.05	S	11.7	AC	25.4	J	6	88	1.8	1			BOU
1992 05 20.95	S	10.8	AC	25.4	J	6	72	2.0	1			BOU
1992 05 21.97	S	11.0	AC	25.4	J	6	72	2.0	0/			BOU
1992 05 23.99	S	10.7	AC	25.4	J	6	72	1.8	1/			BOU
1992 05 24.98	S	10.6	AC	25.4	J	6	72	2.0	1/			BOU
1992 05 25.98	S	10.6	AC	25.4	J	6	58	2.2	2			BOU
1992 05 26.98	S	10.5	AC	25.4	J	6	58	2.2	1/			BOU
1992 05 27.99	S	10.6	AC	25.4	J	6	58	2.0	1/			BOU
1992 05 28.98	S	10.5	AC	25.4	J	6	72	1.8	2			BOU
1992 06 03.99	S	10.0	AC	25.4	J	6	58	2.2	2			BOU
1992 06 05.98	S	9.8	AC	25.4	J	6	58	2.8	1/			BOU
1992 06 09.01	S	9.6	AC	25.4	J	6	72	2.5	2			BOU
1992 06 10.01	S	9.6	AC	25.4	J	6	58	2.1	2			BOU
1992 06 10.98	S	9.5	AC	25.4	J	6	72	2.5	2/			BOU
1992 06 19.94	S	9.7:	A	11	L	7	32	& 3	2			BAR06
1992 06 20.93	S	9.5	A	11	L	7	32	& 3	3			BAR06
1992 06 21.95	S	9.4	A	11	L	7	32	3	4			BAR06
1992 06 23.97	S	9.0	A	11	L	7	32	3	4			BAR06
1992 06 25.97	M	8.2	AC	25.4	J	6	47	3.0	6			BOU
1992 06 25.98	S	8.3	AC	5.0	B		10	3.5	2/			BOU
1992 06 26.97	S	8.2	AC	25.4	J	6	47	3.2	5			BOU
1992 06 26.97	S	8.9	A	11	L	7	32	3	4			BAR06
1992 06 28.97	M	8.1	AC	25.4	J	6	47	3.2	5			BOU
1992 06 28.97	S	8.2	AC	5.0	B		10	4	2			BOU
1992 06 28.99	S	8.8:	A	11	L	7	32	3	4			BAR06
1992 06 29.97	M	8.0	AA	25.4	J	6	47	3.4	4/			BOU
1992 06 29.98	S	8.1	AA	5.0	B		10					BOU
1992 06 30.85	S	7.8	AC	5.0	B		7	9	5			UJV
1992 06 30.95	S	8.6	A	11	L	7	32	4	5			BAR06
1992 07 01.88	S	7.5	AC	5.0	B		7	10	4			UJV
1992 07 01.95	M	8.5	A	11	L	7	32	4	4			BAR06
1992 07 02.95	S	8.6	A	11	L	7	32	4	4			BAR06
1992 07 02.99	M	7.9	AC	25.4	J	6	47	3.0	5/			BOU
1992 07 03.86	S	7.5:	AC	5.0	B		7		4			UJV
1992 07 03.96	S	8.4	A	11	L	7	32	4	4			BAR06
1992 07 07.00	M	7.6	AC	25.4	J	6	47	3.3	5/			BOU
1992 07 07.01	S	7.6	AC	5.0	B		10	3	3			BOU
1992 07 07.96	M	7.6	AC	25.4	J	6	47	3.3	5/	0.20	35	BOU
1992 07 08.97	M	8.2	A	11	L	7	32	3.5	5			BAR06
1992 07 08.98	M	7.6	AC	25.4	J	6	47	3.0	5			BOU
1992 07 09.97	M	8.2	A	11	L	7	32	3.5	4			BAR06
1992 07 12.98	S	7.5	AA	15.6	L	5	36		5			BOU
1992 07 19.95	S	7.5	AC	25.4	J	6	47		5/			BOU
1992 07 21.91	S	7.6	A	11	L	7	32	5	4/			BAR06
1992 07 22.91	S	8.1:	A	11	L	7	32	4	3			BAR06
1992 07 22.92	M	7.6	AA	25.4	J	6	47	3.0	6			BOU
1992 07 22.93	S	7.8	AA	5.0	B		10		3/			BOU
1992 07 23.91	S	7.5	AA	25.4	J	6	47		5			BOU
1992 07 26.84	& S	8.1	AC	16.2	L	6	22	3	2			SZA02
1992 07 27.91	M	7.8	AA	25.4	J	6	47	3.8	5			BOU

Comet Shoemaker-Levy 1992 XIX [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 07 28.91	a S	7.8	AA	25.4	J	6	47		4			BOU
1992 08 02.83	& S	8.5:	AC	19	L		46	2	3			SZA02

Comet Ohshita 1992 XXVII

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 12 05.21	S	10.6	AC	25.4	J	6	58	3	2/			BOU
1992 12 29.08	S	12.7:	AC	25.4	J	6	115	1.5	0/			BOU
1992 12 29.99	S	11.8	AC	25.4	J	6	58	2.0	1			BOU
1992 12 31.00	S	12.0	AC	25.4	J	6	58	2.0	0			BOU
1993 01 03.20	S	12.1	AC	25.4	J	6	58	2.0	0/			BOU

Comet Spacewatch 1992h

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 09 24.42	S[	14.2	GA	35.9	L	7	164	! 0.5				MOD
1993 10 14.43	S[	14.6	GA	45.7	L	4	176	! 0.5				MOD
1993 10 24.45	S[	13.7	GA	35.9	L	7	164	! 0.5				MOD
1993 11 10.43	S[	14.3	GA	35.9	L	7	164	! 0.5				MOD
1993 12 13.26	S[	14.5	GA	35.9	L	7	164	! 0.5				MOD
1994 02 03.43	C	16.0	GA	60.0	Y	6		0.35			25	NAK01

Comet Shoemaker 1992y

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 12 20.88	S	13.6:	GA	25.4	J	6	143	0.4	3/			BOU
1992 12 28.94	S	13.5	GA	25.4	J	6	143	0.5	2			BOU
1992 12 29.96	S	13.5	GA	25.4	J	6	143	0.6	1			BOU
1992 12 30.98	S	13.6	GA	25.4	J	6	203	0.5	0/			BOU
1993 01 14.79	S	13.6:	GA	25.4	J	6	143	0.5	1			BOU
1993 01 16.90	S	13.7:	GA	25.4	J	6	143	0.5	1			BOU

Comet Mueller 1993a

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 01 18.85	S	13.4	HS	25.4	J	6	143	0.4	3			BOU
1993 01 27.99	S	13.2	HS	25.4	J	6	115	0.4	2			BOU
1993 02 02.42	S	13.3	AC	44.5	L	4	167	0.9	1			MOR03
1993 02 17.90	S	13.1	HS	25.4	J	6	115		3			BOU
1993 02 22.81	S	13.1	HS	25.4	J	6	143	0.5	3			BOU
1993 02 23.87	S	13.2	HS	25.4	J	6	143	0.5	3			BOU
1993 03 09.80	S	13.2	HS	25.4	J	6	143	0.6	1			BOU
1993 03 18.97	S	13.4	AC	25.4	J	6	143	0.6	1			BOU
1993 03 23.94	S	13.4	AC	25.4	J	6	203	0.6	2			BOU
1993 03 24.90	S	13.4	AC	25.4	J	6	143	0.6	1/			BOU
1993 03 26.97	S	13.3	AC	25.4	J	6	115	0.7	2/			BOU
1993 03 27.97	S	13.4	AC	25.4	J	6	143	0.7	1			BOU
1993 04 16.95	S	13.0	HS	25.4	J	6	115	1.0	2			BOU
1993 04 17.85	S	13.1	AC	45.0	L	4	74	1.1	1/			BOU
1993 04 18.86	S	13.1	AC	25.4	J	6	115	1.1	1			BOU
1993 04 19.88	S	13.1	AC	25.4	J	6	115	1.1	2			BOU
1993 04 20.88	S	13.2:	AC	25.4	J	6	143	1.0	2			BOU
1993 04 20.88	S[	13 :	AC	33.4	L	4	61					SZE02
1993 05 17.96	S	13.1	AC	25.4	J	6	115	1.2	2			BOU
1993 05 18.88	S[	13 :	AC	33.4	L	4	61					SZE02
1993 07 29.00	a S	12.3	AC	25.4	J	6	115	1.0	5/			BOU
1993 08 13.98	S	11.9	AC	25.4	J	6	58	2.0	4			BOU
1993 08 16.99	S	11.9	AC	25.4	J	6	58	2.0	4/			BOU
1993 08 17.97	S	11.8	AC	25.4	J	6	58	2.0	4			BOU

Comet Mueller 1993a [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 08 18.36	S	11.2	AC	44.5	L	4	80	1.7				MOR03
1993 08 18.96	S	11.8	AC	25.4	J	6	58	1.5	4			BOU
1993 08 19.01	S	10.7	AC	25.4	J	6	61	2	4			FEI
1993 08 21.35	S	11.2	AC	44.5	L	4	80	1.2	3			MOR03
1993 08 22.96	S	11.4	AC	25.4	J	6	58	2.2	4			BOU
1993 08 24.95	M	10.9	AC	25.4	J	6	58	2.5	3/			BOU
1993 09 04.97	S	10.9	GA	20.3	T	10	133	1.4	4			DAH
1993 09 11.05	C	11.2	GA	20	T	3		+ 1.5				MAL02
1993 09 11.39	S	10.9	AC	15	R	5	62	2.0	3			MOR03
1993 09 11.87	S	10.4	AC	25.4	J	6	58	2.5	4/			BOU
1993 09 12.34	S	11.7	AC	40.0	L	5	100		4			VIE
1993 09 17.29	S	10.8	AC	25.4	L	6	71	1.5	4			VIE
1993 09 17.91	M	10.2	AC	25.4	J	6	58	2.5	5			BOU
1993 09 18.23	M	10.3	NP	25.6	L	4	45	3.2	6			MOR
1993 09 18.93	M	10.1	AC	25.4	J	6	58	2.6	5			BOU
1993 09 19.39	S	10.6	AC	15	R	5	42	5.5	3			MOR03
1993 09 19.86	S	10.2	AC	25.4	J	6	58	2.9	4			BOU
1993 09 20.04	B	10.3	AA	15.6	L	10	52	4	2			KOS
1993 09 20.08	S	10.6	AC	15	R	5	62	2.6	3			MOR03
1993 09 20.33	S	10.6	AC	25.4	L	6	71	1.5	4			VIE
1993 09 22.39	S	10.3	AC	15	R	5	42	4	3			MOR03
1993 09 24.25	S	10.3	AC	15	R	5	42	4	3			MOR03
1993 09 25.10	B	10.1	AA	15.6	L	10	52	4	2			KOS
1993 09 25.33	S	10.5	AC	25.4	L	6	71	1.5	3			VIE
1993 09 25.33	S	10.6	AC	15	R	5	42	3	3			MOR03
1993 09 25.49	M	10.2	NP	25.6	L	4	45	1.6	5/			MOR
1993 09 26.49	M	9.8	NP	25.6	L	4	45	3.0	6/	0.17	305	MOR
1993 09 28.13	B	10.0	AA	15.6	L	10	52	4	2			KOS
1993 10 05.02	S	10.4	AC	15	R	5	42	3	3			MOR03
1993 10 06.79	M	9.6	AC	25.4	J	6	47	3.0	5			BOU
1993 10 06.81	S	9.7	AC	8.0	B		15		3			BOU
1993 10 07.78	M	9.6	AC	25.4	J	6	47	3.2	4/			BOU
1993 10 08.14	M	9.9	NP	25.6	L	4	45	2.4	3	0.10	35	MOR
1993 10 09.74	S	9.7	AC	16.2	L	6	42	3	4			SZA02
1993 10 09.83	M	9.5	AC	25.4	J	6	47		5/			BOU
1993 10 10.52	S	10.9	NP	25	L	6	82	1.8	0			WAT01
1993 10 11.26	S	10.1	AC	11.4	L	8	40	1.8	3			VIE
1993 10 11.44	S	10.9	NP	25	L	6	82	1.8	5			WAT01
1993 10 13.09	S	10.6	AC	15	R	5	42	2.5	3			MOR03
1993 10 14.07	S	10.5	AC	15	R	5	42	2.5	3			MOR03
1993 10 14.84	S	9.2	AC	20.0	T	10	77	& 5	5			COM
1993 10 14.96	M	9.5	AC	25.4	J	6	47	3.2	4			BOU
1993 10 15.82	S	10.6	NP	25	L	6	82	1.7	5			WAT01
1993 10 15.91	M	9.4	AC	25.4	J	6	47	3.5	5			BOU
1993 10 16.58	S	10.6	NP	25	L	6	82	1.4	5			WAT01
1993 10 16.79	S	9.4	AC	44.5	L	4	82	6	6			KER
1993 10 16.79	S	10.6	NP	25	L	6	82	1.8	5			WAT01
1993 10 16.83	S	9.8	AC	14.5	L	8	48	2	1/			LAA
1993 10 16.84	M	9.1	AC	25.4	J	6	47	3.8	5			BOU
1993 10 16.99	S	9.5	AC	20.3	T	10	80	2.8	4			DAH
1993 10 17.14	S	9.2	AC	8.0	B		15	4.5	3			BOU
1993 10 17.85	S	9.8	AC	14.5	L	8	48	2	1/			LAA
1993 10 17.87	M	9.1	AC	25.4	J	6	47	3.6	5			BOU
1993 10 18.79	S	10.4	AC	14.5	L	8	48	2	1/			LAA
1993 10 19.06	S	10.2	AC	15	R	5	42	3	3			MOR03
1993 10 19.08	M	9.1	AC	25.4	J	6	47	4.0	5/			BOU
1993 10 19.08	S	9.2	AC	8.0	B		15	4.5	4			BOU
1993 10 19.11	S	9.4	AC	11.0	L	6	35	2.5	3			FEI
1993 10 19.92	M	9.1	AC	25.4	J	6	47	3.5	5/			BOU

Comet Mueller 1993a [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR		COMA	DC	TAIL	PA	OBS.
1993 10 20.01	S	9.7	AC	11.0	L	6	35		1.5	3			FEI
1993 10 20.38	S	10.0	AC	15	R	5	42		4	3			MOR03
1993 10 24.42	S	9.8	AC	15	R	5	42		4	3			MOR03
1993 10 25.40	S	9.8	AC	15	R	5	42		4	3			MOR03
1993 11 01.98	S	9.6	AC	15	R	5	42		3	3			MOR03
1993 11 03.43	M	9.8	AC	20	L	6	38		3	3			KAM03
1993 11 03.47	S	10.9	NP	25	L	6	82		1.1	4			WAT01
1993 11 04.49	M	9.8	AC	20	L	6	38		3	3			KAM03
1993 11 04.79	S	9.6	AC	14.5	L	8	48	&	3	0/			LAA
1993 11 08.01	S	10.0	AC	11.4	L	8	40		1	4			VIE
1993 11 08.84	S	10.0	CS	12.7	T	10	40		2.0	4			GAR02
1993 11 09.07	S	9.6	AC	15	R	5	42		3.5				MOR03
1993 11 09.51	M	9.6	AC	20	L	6	38		3	4			KAM03
1993 11 09.77	M	9.3	NP	25.4	J	6	47		4.0	4			BOU
1993 11 11.91	M	9.4	NP	25.4	J	6	47		4.0	4/			BOU
1993 11 12.78	M	9.2	NP	25.4	J	6	47		4.0	5			BOU
1993 11 13.01	S	9.8	AC	15	R	5	42		4.5	4			MOR03
1993 11 13.06	S	10.4	AC	11.4	L	8	40		1	4			VIE
1993 11 13.38	S	10.3	AA	20	L	6	67		2.5	3			YAS
1993 11 14.52	M	9.4	AC	20	L	6	50		4	4			KAM03
1993 11 15.47	M	9.5	AC	20	L	6	38		4	4			KAM03
1993 11 15.48	S	10.2	AA	20	L	6	67		3	4			YAS
1993 11 16.80	M	9.1	NP	25.4	J	6	47		4.0	4			BOU
1993 11 16.88	S	9.8	AC	20.0	T	10	78	&	4	3			COM
1993 11 17.76	S	10.3	AC	25.8	L	5	76		1.0	4			FEI
1993 11 17.84	M	9.2	NP	25.4	J	6	47		4.0	4/			BOU
1993 11 17.88	S	9.9	AC	28.0	T	10	108	&	4	3			COM
1993 11 18.88	S	9.8	AC	28.0	T	10	108	&	4	2			COM
1993 11 19.02	S	10.3	AC	11.4	L	8	40			3			VIE
1993 11 19.84	S	9.2	AC	30.5	L	5	85		7	4			VIC
1993 11 19.84	S	10.1	UX	20.0	L	10	76		1.5	2			BLO01
1993 11 21.75	S	9.5:	AC	10	L	10	74		2	0			KIS02
1993 11 25.99	S	9.8	AC	15	R	5	42		3	3			MOR03
1993 11 30.75	M	9.0	S	20.0	R	17	140		1	2			LEH
1993 11 30.99	S	9.8	AC	15	R	5	42		3	3			MOR03
1993 12 04.48	M	9.2	AC	20	L	6	50		4	5			KAM03
1993 12 04.75	M	8.9	HS	20.0	R	17	140		2.5	3	0.2	55	LEH
1993 12 05.21	M	9.3	NP	25.6	L	4	67	&	2	6	0.08	30	MOR
1993 12 05.73	M	10.4	HS	20.0	R	17	280		1.5	4	0.19	60	LEH
1993 12 05.75	M	8.9	S	10.0	B	4	25		5	2			LEH
1993 12 05.76	M	10.5	HS	11	R	15	66			3			KUJ
1993 12 06.08	S	10.0	AC	15	R	5	42		2.5	3			MOR03
1993 12 06.11	S	9.4	AA	20.3	R	15	152		2	3			HER02
1993 12 07.44	C	10.8:	GA	60.0	Y	6			3.6		>0.12	23	NAK01
1993 12 07.76	S	9.7	AC	20.0	L	10	76	&	3	3			COM
1993 12 09.83	S	9.7	AC	20.0	L	10	78	>	2	2			COM
1993 12 10.70	B	8.8	AA	15.6	L	10	52		3	7			KOS
1993 12 10.71	S	9.0	AC	16	L	6	90		1.8	6			HAD01
1993 12 12.39	S	10.0	AC	20	L	6	67		2.5	4			YAS
1993 12 12.70	B	8.8	AA	15.6	L	10	52		3	7			KOS
1993 12 12.75	B	9.6:	AC	16.2	L	3	21		2.5	4			SZA02
1993 12 13.98	S	10.4	AC	15	R	5	62		2.4	3			MOR03
1993 12 14.70	S	10.0	AC	20.0	L	10	76	&	3	2			COM
1993 12 15.71	S	9.7	S	10.0	B		25		3.6	1			KUB
1993 12 15.73	S	9.1	AC	13.0	L	6	36		3	4/			MEY
1993 12 16.06	S	10.5	AC	15	R	5	62		2.0	3			MOR03
1993 12 16.97	S	10.6	AC	25.4	L	6	71		1	3			VIE
1993 12 17.02	S	10.1	AC	15	R	5	62		2.9	3			MOR03
1993 12 17.70	S	10.0	S	10.0	B		25		3.6	0			KUB

Comet Mueller 1993a [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 12 18.03	S	10.7	AC	25.4	L	6	71	1	3			VIE
1993 12 19.71	B	10.0	AA	15.6	L	10	52	3	5			KOS
1993 12 19.73	S	10.1	AC	20.0	L	10	76	& 2	2			COM
1994 01 01.45	S	9.4	AC	20	L	6	38	3.5	4			KAM03
1994 01 01.71	S	10.3	AC	15.2	L	5	44	3	4			MOE
1994 01 04.16	w M	9.7	NP	25.6	L	4	67	1.7	4	0.17	5	MOR
1994 01 04.40	S	9.4	AC	20	L	6	38	4	4			KAM03
1994 01 04.45	S	10.3	NP	15.0	R	5	25	4	3			NAG02
1994 01 05.43	S	9.7	HS	25	L	4	42	2.5	4			KON03
1994 01 05.99	S	9.1	AC	31.7	L	6	68	2.9	5			BOR
1994 01 07.70	M	9.5	HS	10.0	B		25	4.3				FAB
1994 01 07.72	S	10.4	AC	15.2	L	5	42	3	3			MOE
1994 01 08.42	S	9.4	AC	20	L	6	38	3	3			KAM03
1994 01 08.73	S	10.5:	AC	15.2	L	5	76	3	3			MOE
1994 01 09.40	M	9.4	AC	20	L	6	38	5	4			KAM03
1994 01 09.43	a C	10.8	GA	60.0	Y	6		2.7		>0.10	24	NAK01
1994 01 11.99	S	10.1	AC	15	R	5	62	2.4	2			MOR03
1994 01 12.14	w M	9.9	NP	25.6	L	4	67	2.1	3/	0.08	345	MOR
1994 01 12.75	M	9.8	HS	20.0	R	17	87	2.5	2			LEH
1994 01 14.71	S	10.1	S	11	L	8	32	1.5	3			KYS
1994 01 14.76	M	10.1	HS	20.0	R	17	87	1.5	3			LEH
1994 01 16.15	w M	10.6	NP	25.6	L	4	67	2.7	3	0.10		MOR
1994 01 17.14	w M	10.8	NP	25.6	L	4	67	2.4	3/	0.12		MOR
1994 01 18.73	I	10.2	S	10.0	B		25	2.5	3			ZNO
1994 01 19.72	M	10.4	S	10.0	B		25	2	3			ZNO
1994 01 19.73	S	9.4:	S	11	L	8	32	1.5				KYS
1994 01 19.78	S	9.3	S	5.6	R	14	40		1			DEM
1994 01 30.10	S	9.8	AA	20.3	R	15	152	4	4			HER02
1994 02 01.00	w S	10.3	AC	44.5	L	4	80	1.9	2			MOR03
1994 02 03.73	M	9.5	HS	20.0	R	17	87	1	2			LEH
1994 02 05.00	w S	10.4	AC	44.5	L	4	80	1.6	2			MOR03

Comet Mueller 1993p

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 09 11.91	S	13.7	GA	25.4	J	6	203	0.4	2/			BOU
1993 09 17.92	S	13.5	GA	25.4	J	6	203	0.4	2			BOU
1993 09 18.96	S	13.6	GA	25.4	J	6	203	0.4	3			BOU
1993 09 19.18	S	13.5	NP	50.8	L	4	275	0.5	2			MOR
1993 09 19.38	S	13.8	AC	44.5	L	4	167	0.8	2			MOR03
1993 09 20.05	S	13.8	AC	44.5	L	4	167	0.6	1			MOR03
1993 09 25.46	M	12.2	NP	25.6	L	4	111	1.4	3			MOR
1993 09 26.47	S	12.2	NP	25.6	L	4	111	1.0	3			MOR
1993 10 06.80	S	12.9	AC	25.4	J	6	115	0.5	4			BOU
1993 10 07.81	S	13.0	AC	25.4	J	6	143	0.5	3			BOU
1993 10 08.18	S	13.4	NP	25.6	L	4	156	0.9	3			MOR
1993 10 09.84	S	12.8	AC	25.4	J	6	115	0.6	4			BOU
1993 10 11.49	S	11.7	NP	25	L	6	82	0.9	4			WAT01
1993 10 11.79	S	12.8	AC	25.4	J	6	115	0.5	2/			BOU
1993 10 13.12	C	12.5	GA	20	T	3		+ 1.25			0	MAL02
1993 10 14.01	S	12.7	AC	44.5	L	4	167	1.1	3			MOR03
1993 10 14.83	S	12.3	AC	28.0	T	10	108	& 0.5	2			COM
1993 10 14.97	a S	12.6	AC	25.4	J	6	115	0.8	3/			BOU
1993 10 15.80	S	11.6	NP	25	L	6	82	1.1	0			WAT01
1993 10 15.93	S	12.5	AC	25.4	J	6	115	0.8	4			BOU
1993 10 16.53	S	11.2	NP	25	L	6	82	0.9	1			WAT01
1993 10 16.77	S	12.2	NP	25	L	6	82	0.9	0			WAT01
1993 10 16.83	S	12.6	AC	44.5	L	4	230	& 3	3			KER
1993 10 16.85	S	12.5	AC	25.4	J	6	143	0.8	3			BOU

Comet Mueller 1993p [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 10 17.87	S	12.5	AC	25.4	J	6	88	0.9	2/			BOU
1993 10 19.07	S	12.4	AC	25.4	J	6	88	1.1	3/			BOU
1993 10 19.94	S	12.3	AC	25.4	J	6	58	1.0	4			BOU
1993 10 25.96	C	12.3	HS	50	Y	4		0.85		0.09	22	CAV
1993 11 08.88	S	12.7	AC	20.3	T	10	62	0.5	2			GAR02
1993 11 09.10	C	11.7	GA	20	T	3		+ 1.25			50	MAL02
1993 11 09.53	S	11.7	AC	20	L	6	50	3	2			KAM03
1993 11 11.92	S	12.2	AC	25.4	J	6	88	1.3	2			BOU
1993 11 14.55	S	11.4	AC	20	L	6	50	3	2			KAM03
1993 11 15.48	S	11.5	AC	20	L	6	50	3	2			KAM03
1993 11 15.52	S	11.3	AC	20	L	6	171	1	4			YAS
1993 11 17.90	S	12.4	AC	28.0	L	10	108	> 3	0/			COM
1993 11 18.90	S	12.2	AC	28.0	L	10	108	> 3	1			COM
1993 11 30.79	M	10.8	HS	20.0	R	17	140	0.5	2			LEH
1993 12 01.98	S	12.8	AC	44.5	L	4	167	0.8	3			MOR03
1993 12 04.50	S	11.2	AC	20	L	6	50	3	4			KAM03
1993 12 04.77	M	12.6	HS	20.0	R	17	280	0.7	3			LEH
1993 12 05.19	S	10.8	NP	25.6	L	4	45	4	1			MOR
1993 12 05.77	M	13.0	HS	20.0	R	17	280	0.6	3			LEH
1993 12 06.10	S	12.9	AC	44.5	L	4	167	1.0	2			MOR03
1993 12 11.46	S	11.9	GA	25.4	L	4	71	3	2			SEA
1993 12 14.99	S	12.2	AC	44.5	L	4	80	1.7	3			MOR03
1994 01 01.72	S	10.2:	AC	15.2	L	5	44	3	2			MOE
1994 01 04.15	w M	9.7	NP	25.6	L	4	67	2.7	3/			MOR
1994 01 04.43	S	9.5	AC	20	L	6	50	3	4			KAM03
1994 01 05.39	S	10.2	HS	25	L	4	42	3	5			KON03
1994 01 07.46	S	9.1	AC	20	L	6	38	5	3			KAM03
1994 01 08.44	S	9.5	AC	20	L	6	38	4	4			KAM03
1994 01 09.42	a C	10.8	GA	60.0	Y	6		3.1		>0.11	36	NAK01
1994 01 09.42	M	9.5	AC	20	L	6	38	4	5			KAM03
1994 01 09.80	S	9.9	CS	12.7	T	10	50	1.0	4			GAR02
1994 01 09.98	S	10.0	AC	15	R	5	42	3	2			MOR03
1994 01 10.02	& M	11.1	GA	20.0	L	5	35	1.3	3			MOD
1994 01 10.90	S	9.2	S	5.0	B		7	1.1	3			DAH
1994 01 11.98	S	10.8	AC	44.5	L	4	80	1.9	4			MOR03
1994 01 11.99	S	10.6	AC	15	R	5	62	2	3			MOR03
1994 01 12.15	M	9.4	S	25.6	L	4	67	2.4	3/			MOR
1994 01 14.72	S	10.6	HS	11	L	8	32	2	5			KYS
1994 01 14.75	M	11.0	HS	20.0	R	17	87	2.5	2			LEH
1994 01 15.39	S	9.5	AC	20	L	6	67	2	4			YAS
1994 01 16.15	M	9.1	S	25.6	L	4	67	& 2	4			MOR
1994 01 17.12	M	9.2	S	25.6	L	4	67	2.1	4			MOR
1994 01 18.71	M	10.4	HS	10.0	B		25	2.5	3	0.15		ZNO
1994 01 19.71	M	10.2	HS	10.0	B		25	2	2			ZNO
1994 02 02.01	s S[	9.8	GA	20.0	L	5	68	! 1.0				MOD
1994 04 04.92	B	7.7	S	7.0	B		10	4.8	3			DEA
1994 04 05.92	B	7.7	S	7.0	B		10	5.0	4			DEA
1994 04 11.39	S	7.9	AA	10.0	B		25		6			SEA
1994 04 19.37	M	7.7	AA	10.0	B		25		5			SEA
1994 04 28.37	S	9.7	AA	10.0	B		25					SEA
1994 04 30.36	S	9.9	GA	10.0	B		25					SEA

Comet McNaught-Russell 1993v

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 02 13.46	S	9.5	GA	25.4	L	4	71	6	2			SEA
1994 02 15.44	S	9.1	SM	8.0	B		20	5	0/			CAM03
1994 02 15.44	S	9.4	SM	20.3	L	7	56	3	3			CAM03
1994 02 16.44	S	9.2	AA	10.0	B		25					SEA

Comet McNaught-Russell 1993v [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 02 16.45	S	9.0:		8.0	B		20	5	1			CAM03
1994 02 18.58	S	9.0	SM	8.0	B		20	4	0			CAM03
1994 03 02.42	S	9.3	S	20	L	6	46	3.5	3/			NAK01
1994 03 02.43	S	8.5	SM	8.0	B		20	3	3			CAM03
1994 03 02.43	S	8.5	SM	20.3	L	7	56	2	4			CAM03
1994 03 02.44	S	8.4	VN	5.0	B		10		3			WIL02
1994 03 02.46	B	8.6	AA	5.0	B		10					GAR01
1994 03 03.42	S	7.8	AA	5.0	B		10	&10	1			SEA
1994 03 03.42	S	8.5	SM	8.0	B		20	3	3			CAM03
1994 03 04.45	S	8.4	SM	20.3	L	7	56	2	4			CAM03
1994 03 06.06	S	10 :	HS	33.3	L	4	201	& 2	2			KRO02
1994 03 06.10	a S	9.1	AA	20.3	R	15	152	5	3/			HER02
1994 03 06.43	S	8.3	SM	8.0	B		20	3	3			CAM03
1994 03 06.43	S	8.3	SM	20.3	L	7	56	1	4			CAM03
1994 03 07.11	a S	9.2	AA	20.3	R	15	152	4	2			HER02
1994 03 09.43	M	7.8	AA	5.0	B		10	7	3			MCN
1994 03 10.09	M	7.6	AA	5.0	B		7	20	0			KEE
1994 03 10.11	M	7.6	AA	15.3	L	3	16	15	1			KEE
1994 03 10.13	S	8.0	AA	20.3	R	15	152	6	4			HER02
1994 03 10.39	S	7.6	AA	5.0	B		10		5			SEA
1994 03 10.46	M	7.8	A	5.0	B		10					GAR01
1994 03 10.46	S	7.8	SC	8.0	B		20	2	3			CAM03
1994 03 11.39	B	7.9	AA	5.0	B		10					SEA01
1994 03 11.39	S	7.9	AA	4.0	B		8					SEA01
1994 03 11.39	S	8.0	AA	8.0	B		15	9	6			SEA01
1994 03 11.73	M	7.4:	S	10.0	B		25	4	3			ZNO
1994 03 11.76	& B	8.2	AA	15.6	L	10	54	4	5			KOS
1994 03 12.45	M	7.6	A	5.0	B		10					GAR01
1994 03 12.75	& B	8.0	AA	15.6	L	10	54	4	5			KOS
1994 03 13.39	B	7.7	AA	8.0	B		15	9	6			SEA01
1994 03 13.39	S	7.5	AA	5.0	B		10		5			SEA
1994 03 13.39	S	7.8	AA	5.0	B		10					SEA01
1994 03 13.41	S	7.6	SC	8.0	B		20	2	3			CAM03
1994 03 13.44	B	7.9	AA	8.0	B		15		6			SEA01
1994 03 13.46	M	7.6	A	5.0	B		10					GAR01
1994 03 14.00	B	8.2	S	7.0	B		10	10.4	2			DEA
1994 03 14.11	S	7.6	AA	20.3	R	15	152	5	5			HER02
1994 03 14.38	S	7.5	SC	8.0	B		20	2	3			CAM03
1994 03 14.39	S	7.4	AA	5.0	B		10					SEA
1994 03 14.81	B	7.9	S	8.0	B		11	4.0	3			GAR02
1994 03 14.96	B	8.1	S	7.0	B		10	10	3			DEA
1994 03 15.95	B	7.9	S	7.0	B		10	13.5	4			DEA
1994 03 16.07	S	8.4	HS	33.3	L	4	56	& 3	3			KRO02
1994 03 16.16	M	7.6	AA	8.0	B		20	9	5			MOR
1994 03 16.39	S	7.9	AA	5.0	B		10					SEA01
1994 03 16.39	S	8.0	AA	8.0	B		15		6			SEA01
1994 03 16.40	M	7.3	A	5.0	B		10					GAR01
1994 03 16.43	S	7.5	SC	8.0	B		20	2	3			CAM03
1994 03 16.43	S	7.5	SC	20.3	L	7	56	1	4			CAM03
1994 03 16.43	S	7.9	AA	5.0	B		10					SEA01
1994 03 16.43	S	7.9	AA	8.0	B		15					SEA01
1994 03 16.46	S	7.9	AA	5.0	B		10					SEA01
1994 03 16.46	S	8.0	AA	8.0	B		15					SEA01
1994 03 16.98	B	7.9	S	7.0	B		10	13.0	4			DEA
1994 03 17.41	M	7.4	A	5.0	B		10					GAR01
1994 03 17.76	M	7.2	S	10.0	B		25	9	3			ZNO
1994 03 17.77	B	8.3	S	11	L	8	32	2	3			KYS
1994 03 17.77	M	8.5	TI	13	L	8	69	1.5	4			HOR02
1994 03 18.02	S	7.7	AC	31.7	L	6	55	4.5	3			BOR

Comet McNaught-Russell 1993v [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 03 18.44	M	7.3	A	5.0	B		10					GAR01
1994 03 18.98	B	8.2	S	7.0	B		10	14	5			DEA
1994 03 19.06	S	8.0	S	8.0	B		20	4	2			KRO02
1994 03 19.06	S	8.4	HS	33.3	L	4	56	2.6	4			KRO02
1994 03 19.43	M	7.3	A	5.0	B		10					GAR01
1994 03 19.75	& B	7.3	AA	15.6	L	10	54	8	7			KOS
1994 03 20.03	S	7.3	HR	8.0	B		20	4	4			BOR
1994 03 20.05	S	7.0	S	28	T	10	140					WAR
1994 03 20.40	M	7.3	A	5.0	B		10					GAR01
1994 03 20.42	S	7.0	SC	8.0	B		20	2	3			CAM03
1994 03 20.76	S	7.3	AA	8.0	B		20	6	4			ZAN
1994 03 21.02	S	7.2	HR	8.0	B		20	5	5			BOR
1994 03 21.42	S	7.2	AA	5.0	B		10		5			SEA
1994 03 22.08	S	7.5	S	8.0	B		20	7	3			KRO02
1994 03 22.08	S	8.2	S	33.3	L	4	56	2.6	6			KRO02
1994 03 22.11	B	6.4	AA	20.3	R	15	152	8	7/			HER02
1994 03 22.12	M	6.6	AA	5.0	B		7	15	2			KEE
1994 03 23.03	S	7.2	HR	5.0	B		10	5	5			BOR
1994 03 23.03	S	7.2	HR	8.0	B		20	4.5	5			BOR
1994 03 25.16	S	6.6	AA	8.0	B		11	15	1			SPR
1994 03 26.16	S	6.6	AA	8.0	B		11	15	1/			SPR
1994 03 26.70	B	8.2	S	25.0	L	4	40	6	4			KRY01
1994 03 26.78	M	7.4	TI	8.0	B		10		3			HOR02
1994 03 26.79	S	6.9	AA	8.0	B		20	6	4			ZAN
1994 03 26.80	M	6.2	S	10.0	B		25	18	3			ZNO
1994 03 26.80	M	8.1	S	10.0	B	4	25	5	3			LEH
1994 03 26.81	B	6.9:	AA	5.0	B		10	4	5			MOE
1994 03 26.81	M	7.8	S	10.0	B		25	8	4			KUJ
1994 03 26.81	M	8.1	S	10.0	B		25	4	3			KUJ
1994 03 27.17	S	6.8	AA	8	R	4	19	15	1/			SPR
1994 03 27.74	M	6.7	AC	6.0	B		20	1.5	3			KES02
1994 03 27.77	B	7.6	S	10.0	B		25	5				FAB
1994 03 27.77	& S	6.9	AC	6.0	B		20	10	2			KER
1994 03 27.77	& S	7.3	AC	6.0	B		20	5	4			SAR02
1994 03 27.77	S	7.5	AC	6.0	B		20	3	5			KIS02
1994 03 27.78	B	7.3	S	11	L	8	32	3	5			KYS
1994 03 27.78	M	7.9	S	10.0	B	4	25	9	3/			LEH
1994 03 27.78	S	7 :	AC	6	R		20	2	5			VIC
1994 03 27.79	M	8.3	S	10.0	B		25	8	3			KUJ
1994 03 27.79	M	8.6	S	20.0	R	17	87	3.5	4			LEH
1994 03 27.79	S	6.4	AA	15.2	L	5	42	4.5	5	0.3	90	MOE
1994 03 27.79	S	6.9	AA	8.0	B		20	6	4/			ZAN
1994 03 27.79	S	7.5	S	11	L	8	54	2.5	5			KYS
1994 03 27.80	S	7.2	S	8	R		17	4	6			KYS
1994 03 27.81	M	7.0	S	8.0	B		10		3			HOR02
1994 03 27.81	S	6.9	S	5.0	B		7	6	6			KYS
1994 03 27.81	S	7.5:	S	6.3	B		9					KAM01
1994 03 28.15	S	6.3	AA	8	R	4	19	10	2/			SPR
1994 03 28.76	S	6.9	AC	16	L		90	3.2	6			HAD01
1994 03 28.77	B	7.0	AA	5.0	B		7	6	6			KOS
1994 03 28.78	M	8.0	S	10.0	B	4	25	8	3			LEH
1994 03 28.78	S	6.7	S	5.0	B		7	7	6			KYS
1994 03 28.79	M	6.6	S	8.0	B		10	8	3/			HOR02
1994 03 28.80	M	8.5	S	20.0	R	17	87	5.5	4/		65	LEH
1994 03 29.16	S	6.4	AA	8	R	4	19	9	3/			SPR
1994 03 29.44	S	7.0	AC	6.5	R	8	16	6	5			NAK01
1994 03 29.48	S	7.3	S	15.0	R	5	25	5	5/			NAG02
1994 03 29.77	B	7.0	AA	5.0	B		7	6	5			KOS
1994 03 29.80	M	6.9	AA	8.0	B	5	20	9	3			MIL02

Comet McNaught-Russell 1993v [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 03 29.80	S	6.8	AA	8.0	B	5	20	9	3			MIL02
1994 03 29.81	S	6.1	AA	15.2	L	5	42	6.0	5	0.6	90	MOE
1994 03 29.84	S	6.9	S	10.0	M	10	50	7	3			LUE
1994 03 29.93	B	8.0	AA	7.0	B		10	15	5			DEA
1994 03 30.38	M	7.0	A	5.0	B		10					GAR01
1994 03 30.42	S	6.8	S	25	L	4	42	9	6			KON03
1994 03 30.45	B	7.0	AA	8.0	B		20	7	4			YUS
1994 03 30.46	S	8.1	S	15.0	R	5	25	4	5			NAG02
1994 03 30.75	S	7.3:	AC	24.4	L	5	60	3.5	5			PAP02
1994 03 30.78	M	7.2	S	10.0	B	4	25	14	4			LEH
1994 03 30.78	S	6.2	AC	6.0	R		20	21	7			SZE02
1994 03 30.78	S	7.0	S	5.0	B		7	6	6			KYS
1994 03 30.78	S	7.4	S	11	L	8	32	3	5			KYS
1994 03 30.79	M	5.8	S	8.0	B		10	21	2			ZNO
1994 03 30.79	M	6.8	S	8.0	B		10		3/			HOR02
1994 03 30.79	S	7.2	AC	16.2	L	6	42	6	4			SZA02
1994 03 30.80	B	7.2	S	5.0	B		7	6	6			KYS
1994 03 30.80	M	7.2	S	10.0	B		25	5.5				FAB
1994 03 30.80	M	7.3	S	10.0	B		25	4	3			KUJ
1994 03 30.80	M	7.7	S	20.0	R	17	87	7	4/			LEH
1994 03 30.82	S	6.2	AA	15.2	L	5	42	6.0	5	0.6	85	MOE
1994 03 30.82	S	7.0	AA	15	R	15	85	3.5	5			DIE02
1994 03 30.82	S	7.3	S	6.3	B		9	6	3			KAM01
1994 03 30.83	S	6.4	S	10.0	M	10	50	7	2			LUE
1994 03 30.85	S	6.2	AA	11	L	8	36	4.0	6			BRO04
1994 03 30.94	B	7.6	AA	7.0	B		10	16	5		125	DEA
1994 03 31.04	a S	6.8	AC	5.0	B		10	8	5			BOR
1994 03 31.07	S	6.7	SC	8.0	B		20	11	3			KRO02
1994 03 31.07	S	7.2	SC	33.3	L	4	56	3.9	5			KRO02
1994 03 31.11	M	7.0	AA	5.0	B		7	13	3			KEE
1994 03 31.16	S	6.8	AA	8.0	B		11	8.5	2/			SPR
1994 03 31.38	S	6.6	AA	5.0	B		10					SEA
1994 03 31.39	S	6.4	AA	5.0	B		10					SEA01
1994 03 31.39	S	6.6	AA	8.0	B		15					SEA01
1994 03 31.42	S	7.8	S	25	L	4	42	6	4			KON03
1994 03 31.44	S	6.9	AA	6.5	R	8	16	9.5	5/			NAK01
1994 03 31.45	B	7.2	AA	8.0	B		20	6	5			YUS
1994 03 31.76	M	6.4	AA	30.5	L	5	47	15	5/			VIC
1994 03 31.78	B	6.8	AA	5.0	B		7	7	5			KOS
1994 03 31.79				33.4	L	4	61	12	8	0.1	230	SZE02
1994 03 31.79	S	6.7:	AA	8.0	B	5	20	> 6	3			MIL02
1994 03 31.79	S	7.0	AC	6.0	R		20					SZE02
1994 03 31.80	M	6.5	AC	6.0	B		20	3.0	6			KES02
1994 03 31.80	M	7.2	S	10.0	B		25	7				FAB
1994 03 31.80	S	7.8	S	6.0	B		20					OLE
1994 04 01.08	S	6.5	SC	8.0	B		20	10	4			KRO02
1994 04 01.09	S	6.9	SC	15.2	L	8	68	6.5	6			KRO02
1994 04 01.09	S	7.0	SC	33.3	L	4	56	5.6	6			KRO02
1994 04 01.15	S	6.2	AA	8.0	B		11	9	3			SPR
1994 04 01.17	M	6.6	AA	5.0	B		7	15	3			KEE
1994 04 01.38	S	6.2	AA	5.0	B		10	12				SEA
1994 04 01.38	S	6.3	AA	5.0	B		10					SEA01
1994 04 01.38	S	6.5	AA	8.0	B		15					SEA01
1994 04 01.40		7.2:	AA	5.0	B		10					WYA
1994 04 01.83	S	7.3	AA	6.3	B		9	5	2			KAM01
1994 04 02.08	S	6.6	SC	8.0	B		20	9	4			KRO02
1994 04 02.10	S	7.9	SC	28	T	10	50	1.6				DIL
1994 04 02.12	S	6.2	AA	5.6	B		8	11	6			HER02
1994 04 02.36	S	6.4	AA	5.0	B		10					SEA01

Comet McNaught-Russell 1993v [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 04 02.36	S	6.5	AA	8.0	B		15		4			SEA01
1994 04 02.45	S	7.0	AA	6.5	R	8	16	9.5	6/			NAK01
1994 04 02.47	S	6.7	S	15.0	R	5	25	5	4			NAG02
1994 04 02.78	S	6.6	S	5.0	B		7	7	5			KYS
1994 04 02.78	S	7.1	S	11	L	8	32	3.5	4			KYS
1994 04 02.79	M	6.6	S	10.0	B	4	25	12	3			LEH
1994 04 02.80	M	7.3	S	20.0	R	17	87	5	3/			LEH
1994 04 02.82	S	6.1	AA	15.2	L	5	42	8.0	5	0.8	85	MOE
1994 04 02.83	S	6.3	AA	4.2	B		7	10	5/			ZAN
1994 04 02.84	S	6.6	AA	5.0	R		8	4.5	8			DIE02
1994 04 02.85	B	6.8	S	5.0	B		7	8	4			KYS
1994 04 02.85	S	6.5	S	11	L	8	32	5	4			KYS
1994 04 02.87	M	6.1	S	5.0	B		7		3/			DVO
1994 04 02.87	M	6.1	S	5.0	B		7		3/			HOR02
1994 04 02.95	B	7.4	AA	7.0	B		10	15.2	5			DEA
1994 04 03.13	S	6.2	AA	5.6	B		8	11	6/			HER02
1994 04 03.19	S	6.3	AA	8.0	B		11	9	3/			SPR
1994 04 03.38	S	6.5	AA	5.0	B		10					SEA01
1994 04 03.40	M	7.1	A	5.0	B		10					GAR01
1994 04 03.42	S	7.9	S	25	L	4	42	6	3			KON03
1994 04 03.43	S	7.3	AA	10	L	5	16	10	4			SHI
1994 04 03.76	B	6.5	AA	5.0	B		7	8	6			KOS
1994 04 03.78	M	6.8	AA	6	R		20	6.5				VIC
1994 04 03.78	S	7.0	S	6.0	B		20	8	4			SAR02
1994 04 03.79	S	6.7	AC	6.0	B		20					SZE02
1994 04 03.80	B	7.1	S	5.0	B		10	6.5		0.4		FAB
1994 04 03.81	S	6.3	AA	4.2	B		7	10	5/			ZAN
1994 04 03.83	M	6.9	AC	6.0	B		20	4.0	5			KES02
1994 04 03.83	M	7.5:	S	5.6	R	14	40	8	4			DEM
1994 04 03.83	S	6.4	S	3.0	B		9	6	1			LUE
1994 04 03.83	S	6.7	S	5.0	B		7	7	4			KYS
1994 04 03.84	S	6.2	AA	15.2	L	5	42	8.0	5	0.7	90	MOE
1994 04 03.84	S	7.3	S	11	L	8	32	4	6			KYS
1994 04 03.85	B	7.6	S	6.0	B		20	10	5/			OLE
1994 04 03.85	S	6.8	SC	3.5	B		7					GRA04
1994 04 03.87	S	6.8	SC	20.3	L	6	49	5.5	5			GRA04
1994 04 03.94	S	7.2	AA	7.0	B		10	12	5			DEA
1994 04 04.08	S	6.5	SC	8.0	B		20	11	5			KRO02
1994 04 04.16	M	6.5	AA	5.0	B		7	14	3			KEE
1994 04 04.42	S	7.9	S	25	L	4	42	5	3			KON03
1994 04 04.49	S	7.5	S	15.0	R	5	25	5	4			NAG02
1994 04 04.78	M	7.0	AC	6.0	B		20	5.0	2			KES02
1994 04 04.78	S	7.4	AA	10	L	10	74	5	8			KIS02
1994 04 04.79	S	6.9	AC	11	L	7	32	9	5			BAK01
1994 04 04.80				33.4	L	4	61	8	6	0.5	340	SZE02
1994 04 04.80	M	6.9	S	10.0	B		25	6		0.33		FAB
1994 04 04.80	S	6.8	AC	5.0	B		10					SZE02
1994 04 04.83	S	6.5	AA	5.0	B		20					DIE02
1994 04 04.86	S	6.2	V	5.0	B		7	7	5			HEE
1994 04 04.92	S	6.5	AA	11.4	L	8	36	6	7			BRO04
1994 04 04.94	S	7.2	AA	7.0	B		10	16	5			DEA
1994 04 05.03	B	7.5	AA	8.0	B		20					GRE
1994 04 05.03	S	6.7	AA	8.0	B		20	& 7.5	4/			GRE
1994 04 05.04	S	6.6	AA	5.0	B		12	&10	6			GRE
1994 04 05.16	M	6.8	AA	5.0	B		10	13	7			MOR
1994 04 05.16	M	6.9	AA	8.0	B		20		6	1.5	155	MOR
1994 04 05.38	S	6.3	AA	4.0	B		8					SEA01
1994 04 05.38	S	6.3	AA	8.0	B		15	8	6			SEA01
1994 04 05.78	M	6.7	S	10.0	B		25	16	4	0.65		ZNO

Comet McNaught-Russell 1993v [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 04 05.78	M	6.8	S	10.0	B	4	25	12	5		50	LEH
1994 04 05.80	B	7.0	S	5.0	B		7	15	3			PRA01
1994 04 05.80	M	7.1	S	20.0	R	17	87	8	6		60	LEH
1994 04 05.83	M	6.6	S	8.0	B		10		4	0.33		HOR02
1994 04 05.84	S	6.1	AA	4.2	B		7	12	5			ZAN
1994 04 05.86	O	8.4:	S	7	R		40	4				DRE
1994 04 05.86	S	6.1	AA	15.2	L	5	42	8.0	5	0.8	80	MOE
1994 04 05.95	S	7.2	AA	7.0	B		10	16	5			DEA
1994 04 06.16	M	6.7	AA	5.0	B		7	20	3			KEE
1994 04 06.37	S	6.3	AA	5.0	B		10	7	4			SEA01
1994 04 06.37	S	6.4	AA	8.0	B		15	6	5			SEA01
1994 04 06.38	S	6.3	AA	4.0	B		8	6	2			SEA01
1994 04 06.70	B	7.5	S	8.0	B	4	10	13	3			KRY01
1994 04 06.81	S	6.7	AA	8.0	B	5	20	& 7	4			MIL02
1994 04 06.82	S	6.1	AA	4.2	B		7	14	5			ZAN
1994 04 06.85	S	6.3	AA	15.2	L	5	42	7.0	5	0.6	90	MOE
1994 04 06.89	S	6.8	SC	5.0	B		7	7				GRA04
1994 04 06.90	N	11.0	AC	15.2	L	8	49					GRA04
1994 04 06.90	S	7.0	SC	15.2	L	8	49	5.5	5			GRA04
1994 04 06.95	S	7.2	AA	7.0	B		10	15	5			DEA
1994 04 07.08	S	6.6	SC	8.0	B		20	10	5			KRO02
1994 04 07.71	B	6.9	S	8.0	B	4	10	12	3			KRY01
1994 04 07.78	S	7.1	S	6.0	B		20	8	6			SAR02
1994 04 07.78	S	7.2	S	6.0	B		20	3	6			TOT02
1994 04 07.79				44.5	L	4	146	8	5		260	BAK01
1994 04 07.79	M	6.7	S	10.0	B	4	25	8	5			LEH
1994 04 07.79	S	6.9	S	12	R		20	8	5			BAK01
1994 04 07.80	M	7.6	S	8.0	B		10	12	4			HOR02
1994 04 07.80	M	7.9	S	20.0	R	17	87	4	6/		50	LEH
1994 04 07.83	M	7.0	AC	6.0	B		20	4.0	2			KES02
1994 04 07.84	S	6.2	V	5.0	B		7		5			HEE
1994 04 07.84	S	6.3	AA	15.2	L	5	42	7.0	5	0.4	90	MOE
1994 04 07.88	S	7.7	SC	20.3	T	10	80	4.5	5			DAH
1994 04 07.90	S	7.5	SC	15.2	L	8	49	4.5	4			LAU01
1994 04 08.08	S	6.8	SC	8.0	B		20	11	5			KRO02
1994 04 08.78	M	7.0	AC	6.0	B		20	4.0	2			KES02
1994 04 08.79	B	6.3	AA	5.0	B		7	9	4			KOS
1994 04 08.83	S	6.2	AA	4.2	B		7	12	5			ZAN
1994 04 08.95	B	7.3	S	7.0	B		10	16.5	5			DEA
1994 04 09.71	B	7.4	S	8.0	B	4	10	15	3			KRY01
1994 04 09.79	B	6.4	AA	5.0	B		7	9	4			KOS
1994 04 09.81	S	6.6	AA	15.2	L	5	42	6.5	4	0.3	90	MOE
1994 04 09.85	S	6.3	AA	4.2	B		7	10	6			ZAN
1994 04 10.19	S	6.4	AA	8	R	4	19	8	3/			SPR
1994 04 10.42	S	7.8	S	25	L	4	42	6	4			KON03
1994 04 10.81	M	6.9	S	8.0	B		10		3/			HOR02
1994 04 10.92	S	6.5	V	5.0	B		7	10	3			HEE
1994 04 10.93	B	7.3	S	7.0	B		10	16.5	5			DEA
1994 04 11.16	M	7.2	AA	5.0	B		10		5			MOR
1994 04 11.16	M	7.2	AA	8.0	B		20	7	6	1.5	195	MOR
1994 04 11.72	B	8.1	S	8.0	B	4	10	15	3			KRY01
1994 04 11.80	M	6.5	S	10.0	B		25	20	3	0.3		ZNO
1994 04 11.81	M	6.8	S	8.0	B		10		4			HOR02
1994 04 11.82	M	6.9	S	5.0	B		10					DVO
1994 04 11.83	S	7.6	AA	8.0	B	5	20	& 6	4			MIL02
1994 04 11.84	S	6.6	AA	15.2	L	5	42	6.0	6	0.4	75	MOE
1994 04 12.83	M	6.8	S	8.0	B		10	15	4	0.33		HOR02
1994 04 13.48	S	7.3	S	15.0	R	5	25	6	4/			NAG02
1994 04 13.77	M	7.7	S	8.0	B		20	& 5	5			OFE

Comet McNaught-Russell 1993v [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 04 13.83	S	6.9	SC	8.0	B		20	7	6			BAR
1994 04 13.84	B	7.8	S	8.0	B	4	10	14	3			KRY01
1994 04 14.09	S	7.1	SC	8.0	B		20	9	5			KRO02
1994 04 14.09	S	7.1:	SC	5.0	B		10	10	6			KRO02
1994 04 14.09	S	7.3	SC	33.3	L	4	56	6.8	5			KRO02
1994 04 14.16	M	7.4	AA	8.0	B		20	9	5			MOR
1994 04 14.48	S	7.2	S	15.0	R	5	25	6	4/			NAG02
1994 04 14.49	S	6.5	SC	6.5	R	8	16	14	5			NAK01
1994 04 14.76	B	7.7	S	8.0	B	4	10	15	3			KRY01
1994 04 14.80	B	7.4	AA	5.0	B		7	6	3			KOS
1994 04 15.08	S	7.2	SC	8.0	B		20	10	4			KRO02
1994 04 15.25	M	7.0	AA	5.0	B		7	18	2			KEE
1994 04 15.46	S	7.2	S	15.0	R	5	25	7	4			NAG02
1994 04 15.77	M	7.9	S	8.0	B		20	& 5	4			OFE
1994 04 15.83	S	7.0	AA	30.5	L	5	117	5	4			VIC
1994 04 15.84	M	6.8	S	8.0	B		10	15	3/	0.17		HOR02
1994 04 15.93	N	12.5	AC	20.3	T	10	123					GRA04
1994 04 15.93	S	7.6	SC	20.3	T	10	80	5.0	5			GRA04
1994 04 16.09	S	7.6	SC	8.0	B		20	7	4			KRO02
1994 04 16.19	M	7.6	AA	8.0	B		20	9	5			MOR
1994 04 16.84	S	6.9	AA	15.2	L	5	42	6.0	5			MOE
1994 04 16.89	S	8.2	S	20.3	T	10	80	5.5	5			DAH
1994 04 16.96	S	7.9	SC	20.3	T	10	80	4.0	4/			GRA04
1994 04 17.08	S	7.4	SC	8.0	B		20	8	4			KRO02
1994 04 17.88	S	7.0	AA	8.0	R	12	25	5.5	4			MOE
1994 04 18.01	S	7.5	SC	20.3	T	10	80	5.0	5			GRA04
1994 04 18.19	S	7.6	SC	33.3	L	4	56	& 7	4			KRO02
1994 04 18.83				33.4	L	4	214	8	6	0.15	320	SZE02
1994 04 18.83	S	7.3	AC	6	R		20					SZE02
1994 04 18.89	S	7.0	AA	15.2	L	5	42	6.0	3			MOE
1994 04 19.92	B	7.5	S	5.0	B		7	15	1/			PRA01
1994 04 20.21	S	7.0	AA	10	R	5	30	8	3/			SPR
1994 04 20.83	S	7.3	AC	6	R		20					SZE02
1994 04 20.84	S	6.9	AA	30.5	L	5	117	10	5			VIC
1994 04 21.85	M	7.4	AA	6.0	B		20		7			TOT02
1994 04 22.84	S	7.5	AA	15.2	L	5	42	4.0	4			MOE
1994 04 24.84	S	7.8	AA	15.2	L	5	42	4.0	3			MOE
1994 04 25.21	S	7.6	AA	10	R	5	30	7.0	3/			SPR
1994 04 28.23	S	7.8	AA	20	T	10	80	& 6	3/			SPR
1994 04 29.85	S	8.5	AA	8.0	B	5	20	5	2			MIL02
1994 04 30.86	S	7.2	AA	6	R		20	6.5	2/			SZE02

Comet Shoemaker-Levy 1994d

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 04 06.82	C	15.2	HS	50	Y	4		0.3		0.1	113	CAV
1994 04 07.13	c	19.0	FA	91.4	L	5		0.58		0.16	124	SCO01
1994 04 07.83	S[	13.8	AC	44.5	L	4	146					SAR02
1994 04 07.83	! V	15.0	YF	20.0	T	2		0.7	7	&0.07	130	MIK
1994 04 07.84	S[	14.0	AC	44.5	L	4	230					BAK01
1994 04 11.21	S	13.3	NP	25.6	L	4	156	0.9	2			MOR
1994 04 29.87	! V[	16.0	YF	20.0	T	2						MIK

Comet Takamizawa-Levy 1994f

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 04 16.40	M	10.2	AA	30.5	R	15	176	2	4			AUG
1994 04 16.48		10.0:		25.6	L	4	67	4.5	3			MOR
1994 04 18.75	S	10.1	SM	8.0	B		20	1	2			CAM03

Comet Takamizawa-Levy 1994f [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 04 20.11	R	11.3	L	65	L	4		+ 1.3		>0.09	205	PRA01
1994 04 20.11	q	13.2	L	65	L	4						PRA01
1994 04 21.07				33.4	L	4	214	2.0	2	0.03	270	SZE02
1994 04 21.07	S	10.5	AC	33.4	L	4	61					SZE02
1994 04 21.07	S	10.7	AC	30.5	L	5	117	4	5/			VIC
1994 04 21.12	R	11.3	L	65	L	4		+ 1.3		>0.05	223	PRA01
1994 04 21.12	V	11.4	L	65	L	4		+ 1.3				PRA01
1994 04 22.10	! V	10.6	YF	20.0	T	2		& 5	6			MIK
1994 04 22.39	M	9.8	AA	30.5	R	15	83	2	5			AUG
1994 04 23.12	! V	10.6	YF	20.0	T	2		& 5	6			MIK
1994 04 23.40	M	9.8	AA	30.5	R	15	176	2	5			AUG
1994 04 23.41	M	10.0	AA	30.5	R	15	176	2	5			VOG
1994 04 24.41	M	9.7	AA	30.5	R	15	176	2	5			AUG

Periodic Comet Encke

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 09 24.08	S	9.1	AC	15.2	L	5	30	1.5	0			KOC03
1990 09 29.11	S	9 :	AC	16.2	L	6	42	3	2			SZA02
1993 08 24.70	C	19.3	GA	60.0	Y	6		0.2				NAK01
1993 08 25.67	C	19.2	GA	60.0	Y	6		0.2				NAK01
1993 09 25.74	C	17.7	GA	60.0	Y	6		0.2				NAK01
1993 09 26.73	C	17.8	GA	60.0	Y	6		0.2				NAK01
1993 10 11.62	C	17.1	GA	60.0	Y	6		0.2				NAK01
1993 10 19.56	C	17.2	GA	60.0	Y	6		0.2				NAK01
1993 11 09.04	C[	14.5	GA	20	T	3		! 1.0				MAL02
1993 12 05.14	S	12.5	NP	25.6	L	4	111	2.7	0/			MOR
1993 12 07.41	C	14.5:	GA	60.0	Y	6		1.2				NAK01
1993 12 08.50	C	14.2:	HS	60.0	Y	6		1.4				NAK01
1993 12 09.85	S	12.5:	AC	28.0	L	10	108		0			COM
1993 12 14.83	[	11.0	HS	45.0	L	4	100					HAS02
1993 12 14.98	S	11.6	AC	44.5	L	4	80	3.2	1			MOR03
1993 12 31.96	S	10.7	GA	20	L	8	130	3	1			DID
1994 01 01.42	S	9.6	AC	20	L	6	38	3.5	4			KAM03
1994 01 01.72	S	9.7	AC	15.2	L	5	44	4.5	1			MOE
1994 01 03.70	S[	9 :	AC	6.0	B		20					KES01
1994 01 04.12	M	9.6	NP	25.6	L	4	45	3.2	2/	0.08	300	MOR
1994 01 04.41	M	9.3	AC	20	L	6	38	5	4			KAM03
1994 01 04.43	S	9.8	NP	15.0	R	5	25	3	4			NAG02
1994 01 05.40	S	9.4	HS	25	L	4	42	3	3			KON03
1994 01 05.70	B	9.5	AA	6.3	R	13	52	5	5			KOS
1994 01 05.70	S[	9 :	AC	6.0	B		20					KES01
1994 01 05.97	S	9.0	AC	31.7	L	6	68	2.9	3			BOR
1994 01 07.04	S	9.0:	AA	20.0	T	10	50	& 2.5	1			SHA04
1994 01 07.43	S	9.0	AC	20	L	6	38	4	4			KAM03
1994 01 07.72	B	9.4	AA	6.3	R	13	52	4	6			KOS
1994 01 07.72	S	9.2	AC	15.2	L	5	42	4	3			MOE
1994 01 08.43	S	9.0	AC	20	L	6	38	5	4			KAM03
1994 01 08.44	S	9.6	NP	15.0	R	5	39	3	4/			NAG02
1994 01 08.71	S	9.8	S	11	L	8	32	1.7	3			KYS
1994 01 08.72	S	9.4	AC	15.2	L	5	42	3.5	3			MOE
1994 01 08.93	S	9.2	GA	20	L	8	130	5	3			DID
1994 01 08.97	S	8.6	AC	31.7	L	6	68	2.9	3			BOR
1994 01 09.41	M	8.7	AC	20	L	6	38	6	5			KAM03
1994 01 09.43	a C	10.8	GA	60.0	Y	6		4.1				NAK01
1994 01 09.74	S	8.2:	AC	11.0	L	7	32	& 8	0/			SCH04
1994 01 09.75	B	9.2	CS	8.0	B		11	2	2			GAR02
1994 01 09.93	S	9.2	GA	20	L	8	46	5	2			DID
1994 01 09.97	S	8.5	AC	31.7	L	6	68	2.7	4			BOR

Periodic Comet Encke [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 01 09.98	S	9.4	AC	15	R	5	42	4.5	3			MOR03
1994 01 10.00	M	10.0	GA	20.0	L	5	35	2.4	1/			MOD
1994 01 10.00	S	8.4	AA	20.0	T	10	50	2.2	2			SHA04
1994 01 10.86	S	9.0	S	5.0	B		7	3.4	4/			DAH
1994 01 11.99	S	9.1	AC	15	R	5	42	3	3			MOR03
1994 01 12.11			NP	25.6	L	4	67	3.0	5	0.17	325	MOR
1994 01 12.11	M	8.6	NP	8.0	B		20		3			MOR
1994 01 12.70	S	9.0	AC	15	L	7	45	3	3			DOM
1994 01 12.70	S	9.0	AC	16.2	L	6	42	4	1			SZA02
1994 01 12.73	M	9.0	HS	10.0	B		25	3				FAB
1994 01 13.72	S	8.6	AC	25.8	L	5	52	2.0	4			FEI
1994 01 14.70	S	9.0	S	11	L	8	32	2	5			KYS
1994 01 14.72	M	9.1	S	10.0	B	4	25	5	2			LEH
1994 01 14.73	M	9.2	S	20.0	R	17	87	3.5	3			LEH
1994 01 14.74	S	9.1	S	10	R		25					ROT01
1994 01 14.74	S	9.1	S	10	R		25					VET01
1994 01 14.87	S	8.5	AA	8.0	B		11	5	4/			DES01
1994 01 14.98	S	8.5	AC	15	R	5	42	4	3			MOR03
1994 01 15.00	S	8.2	AA	20.0	T	10	50	2.4	3			SHA04
1994 01 15.39	S	8.8	AA	20	L	6	67	4	5			YAS
1994 01 15.41	S	8.5	S	15.0	R	5	25	3	5/			NAG02
1994 01 15.70	S	8.0	AA	30.5	L	5	95	2.5	3/	0.1	230	VIC
1994 01 15.70	S	9.1	S	11	L	8	32	1.7	3			KYS
1994 01 15.98	S	8.1	AC	31.7	L	6	68	2.8	5/			BOR
1994 01 15.98	S	8.5	AC	15	R	5	42	4	3			MOR03
1994 01 16.12	M	8.4	NP	8.0	B		20		5/			MOR
1994 01 16.75	S	8.8	AC	20.0	L	10	78	& 3	5/			COM
1994 01 16.98	S	8.0	AC	31.7	L	6	68	2.8	5			BOR
1994 01 16.98	S	8.1	AC	8.0	B		20	3.5	5			BOR
1994 01 17.00	S	8.0	AA	20.0	T	10	50	2.2	3			SHA04
1994 01 17.10	M	8.2	NP	8.0	B		20		6			MOR
1994 01 17.98	S	8.2	AC	15	R	5	42	4	3			MOR03
1994 01 18.72	M	9.1	S	10.0	B		25	3	5			ZNO
1994 01 18.72	& S[	8 :	AC	6.0	B		20					KES01
1994 01 18.98	S	7.9	AC	8.0	B		20	3.5	6			BOR
1994 01 19.70	S	8.3	S	11	L	8	32	1.7	6			KYS
1994 01 19.71	M	8.9	S	10.0	B		25	3.5	5			ZNO
1994 01 19.72	S	8.3:	S	13.0	L	6	36	2	6			MEY
1994 01 19.76	S	8.6	S	5.6	R	14	40		4			DEM
1994 01 19.98	S	7.8	AC	8.0	B		20	3	7			BOR
1994 01 19.99	S	8.0	AC	15	R	5	42	4	4			MOR03
1994 01 20.98	S	7.8	AC	8.0	B		20	3	6/			BOR
1994 01 20.99	S	8.0	AC	15	R	5	42	3	4			MOR03
1994 01 21.00	& M	8.9:	SC	20.0	L	5	68	1.2	2/			MOD
1994 01 21.71	S	7.7	S	11	L	8	32	2	4			KYS
1994 01 22.00	S	7.5	AA	20.0	T	10	50	2.5	4/	?		SHA04
1994 01 22.08	M	8.0	S	31.8	L	4	63	4	4			KEE
1994 01 22.41	S	7.5	S	15.0	R	5	25	3	7/			NAG02
1994 01 22.98	S	7.2	NO	31.7	L	6	55	2.1	6/			BOR
1994 01 22.98	a S	7.3	AC	31.7	L	6	55					BOR
1994 01 22.98	S	7.3	NO	8.0	B		20	3				BOR
1994 01 22.98	w S	7.8	AC	15	R	5	42	2.5	5			MOR03
1994 01 25.00	S	7.0	AA	20.0	T	10	50	2.2	4/	&1.0	268	SHA04
1994 01 25.73	S	8.0:	AC	20.0	L	10	78		6/			COM
1994 01 26.98	S	6.9	HR	31.7	L	6	55	2.6	7			BOR
1994 01 26.98	S	7.0	HR	8.0	B		20					BOR
1994 01 26.99	w S	7.3	AC	15	R	5	42	3	5			MOR03
1994 01 28.71	S	7.0:	S	11	L	8	32	1.2				KYS
1994 01 30.70	& S[	6 :	AC	6.0	B		20					KES01

Periodic Comet Encke [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 02 15.76	S	6.6	AA	10.0	B		25	< 1	8			SEA
1994 02 15.77	S	6.6	SC	10.0	B		25					SEA
1994 02 16.77	S	6.6	SC	8.0	B		20	1	5			CAM03
1994 02 17.77	S	6.6	SC	8.0	B		20	1	4			CAM03
1994 02 20.32	B	7.3	S	7.0	B		10	3.7	4			DEA
1994 02 21.31	B	7.6	S	7.0	B		10	3.7	4			DEA
1994 02 23.31	B	7.9	S	7.0	B		10	4.0	4			DEA
1994 03 02.77	S	9.8	AA	10.0	B		25					SEA
1994 03 13.79	S	9 :		8.0	B		20	1				CAM03

Periodic Comet Grigg-Skjellerup (1992 XVIII)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 09 23.80	S	13.8	AC	106.0	L	3	179	1.0	0/			BOU
1992 09 25.80	S	13.8	AC	45.0	L	4	113	1.1	0			BOU

Periodic Comet Tempel 1 (1993c)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 12 11.85	C	17.9	GA	60.0	Y	6		0.2				NAK01
1993 12 25.83	C	17.5	HS	60.0	Y	6		0.2				NAK01
1994 01 08.84	C	16.6	GA	60.0	Y	6		0.25				NAK01
1994 02 05.32	S[	14.5	GA	35.9	L	7	164	! 0.5				MOD
1994 02 06.15	C	15.1	HS	65	L	4		0.35		0.01	265	PRA01
1994 02 18.43	M	14.5	GA	35.9	L	7	164	0.35	3			MOD
1994 02 19.08	S	13.0:	AC	28.0	L	10	108	& 1	0/			COM
1994 03 03.20	S	12.5	AC	31.8	L	4	150	1	0			KEE
1994 03 04.96	! V	13.2	YF	20.0	T	2		& 6	5			MIK
1994 03 05.26	S	13.4	HS	33.3	L	4	201	0.6	3			KRO02
1994 03 06.22	S	12.8	HS	33.3	L	4	201	0.7	4			KRO02
1994 03 07.27	C	14.1	SC	25	T	4		15				ROQ
1994 03 10.87	S	11.6	AC	15.2	L	5	42	1.5	1			MOE
1994 03 10.90	O[	11.5	TI	13	L	8	69	1				HOR02
1994 03 11.21	S	12.6:	HS	33.3	L	4	201	& 0.6	3			KRO02
1994 03 11.96	S	12.0	AC	30.5	L	5	117	1	4			VIC
1994 03 11.96	S	12.0	AC	30.5	L	5	117	1	4			VIC
1994 03 12.08	B	12.6	HS	25	L	6	75		2			KUB
1994 03 12.10	O	12.8	HS	25	L	6	75	6				SPU
1994 03 12.35	M	13.0	GA	35.9	L	7	85	0.75	3			MOD
1994 03 13.35	S	11.9	NP	25.6	L	4	111	1.5	3			MOR
1994 03 14.89	S	11.5	AC	15.2	L	5	42	1.5	2			MOE
1994 03 14.94	B	12.1	AC	44.5	L	4	146	0.6	7/			SAR02
1994 03 14.94	B	12.8:	AC	44.5	L	4	146	0.7	8			KIS02
1994 03 15.01	S	12.7	AC	20.3	T	10	80	0.8	2/			GAR02
1994 03 15.71	C	12.9	GA	60.0	Y	6		1.0				NAK01
1994 03 15.91	S	11.6	AC	15.2	L	5	42	1.5	2			MOE
1994 03 16.17	S	12.9	HS	33.3	L	4	201	0.6	4			KRO02
1994 03 17.87	M	12.1	TI	13	L	8	69	1	2/			HOR02
1994 03 18.01	S	12 :	AC	30.5	L	5	117	1	6			VIC
1994 03 19.24	S	12.7	HS	33.3	L	4	201	0.6	5			KRO02
1994 03 21.96	S	11.6	AC	15.2	L	5	76	1.5	1			MOE
1994 03 29.84	S	11.4	AC	15.2	L	5	76	1.5	2			MOE
1994 03 30.83	S	11.3	AC	15.2	L	5	76	1.5	2			MOE
1994 03 30.88	M	11.2	HS	20.0	R	17	87	1.4	3			LEH
1994 03 30.89	M	11.3	HS	20	R	18	87	2	3			KUJ
1994 03 30.89	S	11.0	TI	11	L	8	32	1.5	6			KYS
1994 03 31.84	S	11.7	AC	33.4	L	4	214	0.25	5		190	SZE02
1994 03 31.91	S	11.2	AA	30.5	L	5	117	1.5	7			VIC
1994 04 02.67	C	11.0	HS	20.0	L	6		0.58				ITO02

Periodic Comet Tempel 1 (1993c) [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 04 02.83	M	11.3	HS	20.0	R	17	87	2	3			LEH
1994 04 02.84	S	11.1	AC	15.2	L	5	42	2.0	3			MOE
1994 04 02.86	S	11.0	TI	11	L	8	54	1.5	4			KYS
1994 04 02.88	S	11.8	AA	15	R	15	85	1.5	7			DIE02
1994 04 03.85	S	9.8	HS	20.3	T	10	67	2.0	3			LUE
1994 04 03.85	S	12.0	AC	33.4	L	4	214	0.3	7		160	SZE02
1994 04 03.86	S	11.1	AC	15.2	L	5	42	2.0	2			MOE
1994 04 03.96	M	11.0	TI	10.0	B		25	2				FAB
1994 04 04.85	S	12.0	AC	33.4	L	4	214	0.7	7	0.01	190	SZE02
1994 04 05.85	M	10.1	TI	13	L	8	69	1.3	3/			HOR02
1994 04 05.87	M	11.6	TI	15	R	15	56	2	3			KUB
1994 04 05.92	M	11.6	HS	20.0	R	17	87	2.5	3			LEH
1994 04 07.92				44.5	L	4	230	0.8	7	0.03	240	SAR02
1994 04 07.92	S	10.6	AC	44.5	L	4	146					SAR02
1994 04 07.92	S	10.7	AC	44.5	L	4	146					TOT02
1994 04 07.94	S	10.0	V	20.3	T	10	133	1.6	7			DAH
1994 04 07.99	M	11.5	HS	20.0	R	17	87	3.5	3/			LEH
1994 04 08.56	C	11.5	GA	60.0	Y	6		2.2			225	NAK01
1994 04 09.01	S	10.5	AC	30.5	L	5	117	2	8	0.03	220	VIC
1994 04 09.61	C	12.1	HS	20.0	L	6		0.58				ITO02
1994 04 09.84	S	10.8	AC	15.2	L	5	42	2.0	2			MOE
1994 04 10.20	S	10.8	AA	20	T	10	64	2	2/			SPR
1994 04 11.27	M	10.7	NP	25.6	L	4	67	1.5	4/			MOR
1994 04 11.46	c	15.2	FA	91.4	L	5		10.3		>0.15	257	SCO01
1994 04 11.82	M	10.2	TI	10.0	B		25	2	4			ZNO
1994 04 11.84	S	10.8	AC	15.2	L	5	42	2.0	2			MOE
1994 04 12.93	S	10.2	GA	20.3	T	10	80	2.1	6			DAH
1994 04 13.82	M	11.1	HS	20.0	T	10	77	> 0.5	1			OFE
1994 04 15.55	S	10.0	NP	15.0	R	5	25	4	3/			NAG02
1994 04 15.98	M	10.4	HS	20.0	T	10	77	> 0.5	7			OFE
1994 04 16.30	M	10.3	NP	25.6	L	4	67	1.2	6			MOR
1994 04 16.86	S	10.9	AC	15.2	L	5	42	2.0	1			MOE
1994 04 17.97	S	10.8	AC	15.0	R	20	85	1.5	1			MOE
1994 04 18.18	S	10.7	HS	33.3	L	4	56	1.4	6			KRO02
1994 04 18.80	S	10.5	AC	15.2	L	5	42	2.5	2			MOE
1994 04 18.86				33.4	L	4	214	1.0	5	0.03	205	SZE02
1994 04 18.86	S	10.8	AC	33.4	L	4	61					SZE02
1994 04 19.16	c	15.1	FA	91.4	L	5						SCO01
1994 04 20.22	S	9.6	AA	10	R	5	30	3	2/			SPR
1994 04 21.03	S	10.4	AA	30.5	L	5	324	2	7			VIC
1994 04 28.23	S	9.2	AA	20	T	10	80	3.0	2/			SPR
1994 04 29.84				33.4	L	4	214	1.5	6/	0.02	230	SZE02
1994 04 29.84	S	10.3	AC	33.4	L	4	61					SZE02
1994 04 30.83	M	10.0	AC	33.4	L	4	61	1.5	8			SZE02

Periodic Comet Kojima (1992z)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 04 06.12	c	20.7	FA	91.4	L	5		0.28		<0.01	125	SCO01

Periodic Comet Honda-Mrkos-Pajdušáková (1990 XIV)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 08 03.06	S	11.3	AC	25.4	J	6	88	1.5	1			BOU
1990 08 23.13	a S	8.1	AC	25.4	J	6	58	2.5	1/			BOU
1990 08 24.13	a S	7.9	AC	25.4	J	6	58	2.5	2			BOU
1990 08 26.13	a S	7.8	AC	25.4	J	6	58	2.3	3			BOU
1990 08 28.14	a S	7.8	AC	25.4	J	6	58	2.0	3			BOU

Periodic Comet Mrkos (1991 IV)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 03 23.10	I	14.0:	GA	25.4	J	6	115		8/			BOU

Periodic Comet Spitaler (1993r)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 11 18.57	C	17.3	GA	60.0	Y	6		0.25				NAK01
1993 12 08.51	C	18.4	GA	60.0	Y	6		0.2				NAK01
1993 12 12.45	C	18.4	GA	60.0	Y	6		0.2				NAK01
1994 01 09.49	C	18.9	GA	60.0	Y	6		0.2				NAK01
1994 01 30.78	C	18.4	HS	50	Y	4		0.15	1			CAV
1994 02 11.12	C	18.9	FA	91.4	L	5		0.23		<0.01	75	SCO01
1994 04 05.14	C	19.6	FA	91.4	L	5		0.17				SCO01

Periodic Comet Schwassmann-Wachmann 2

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 08 24.78	a C	15.6	GA	60.0	Y	6		0.35		0.04	270	NAK01
1993 08 27.79	a C	15.6	GA	60.0	Y	6		0.3		0.04	270	NAK01
1993 09 18.49	S	[13.3	NP	25.6	L	4	156					MOR
1993 09 19.10	S	[13 :	AC	33.4	L	4	214					SZE02
1993 09 21.12	S	[13 :	AC	33.4	L	4	214					SZE02
1993 09 23.11	S	[13 :	AC	33.4	L	4	214					SZE02
1993 09 26.79	C	14.9	HS	60.0	Y	6		0.4		0.06	275	NAK01
1993 10 11.76	C	14.9	GA	60.0	Y	6		0.5		0.08	275	NAK01
1993 10 12.10	S	[13 :	AC	33.4	L	4	214					SZE02
1993 10 22.78	C	14.5	GA	60.0	Y	6		0.5		0.11	275	NAK01
1993 10 26.05	S	[12.5	AC	33.4	L	4	214					SAR02
1993 10 26.06	S	[12.5	AC	33.4	L	4	214					SZE02
1993 11 09.03	S	13.4	AC	20.3	T	10	167	0.4	1			GAR02
1993 11 14.79	C	13.7	GA	60.0	Y	6		0.65		>0.10	280	NAK01
1993 11 19.09	S	12.5:	AC	28.0	L	10	108		1			COM
1993 12 11.81	C	13.0	GA	60.0	Y	6		0.95		>0.14	285	NAK01
1993 12 23.35	S	11.3	GA	20	L	8	130	2	1		300	DID
1993 12 24.34	S	11.3	GA	20	L	8	130	2	1			DID
1994 01 04.85	S	11.2	AC	15.2	L	5	42	3	2			MOE
1994 01 08.57	C	12.1	GA	60.0	Y	6		1.5		>0.12	282	NAK01
1994 01 09.90	S	12.1:	AC	12.7	T	10	50	1	3			GAR02
1994 01 13.88	S	11.0	AC	15.2	L	5	42	2.5	2			MOE
1994 01 14.84	S	11.6	HS	13	L	8	69	2	2			HOR02
1994 01 15.03	S	11.4	HS	11	L	8	32	1				KYS
1994 01 15.86	S	11.0	AC	15.2	L	5	42	3	1			MOE
1994 01 15.90	S	12.1	HS	10.0	B		25	0.6				FAB
1994 01 15.96	M	11.3	HS	20.0	R	17	87	2	3			LEH
1994 01 16.00	S	11.5	AC	13.0	L	6	36	1.5	3			MEY
1994 01 16.12	S	11.1	HS	11	L	8	32	1.3	5			KYS
1994 01 16.23	M	11.6	NP	25.6	L	4	111	0.8	5/	0.05	270	MOR
1994 01 17.16	M	11.8	NP	25.6	L	4	111	1.0	4/			MOR
1994 01 18.10	S	11.2	HS	11	L	8	54	1.4	2			KYS
1994 01 18.80	I	11.7:	HS	10.0	B		25	1	4			ZNO
1994 01 19.90	S	11.3	HS	11	L	8	32	1.2	3			KYS
1994 01 20.08	S	11.4	HS	11	L	8	54	1.2	3			KYS
1994 01 22.09	S	11.4:	HS	11	L	8	54	1				KYS
1994 01 24.92	S	10.8:	AC	15.2	L	5	76	& 3	2			MOE
1994 01 29.77	S	11.4	HS	11	L	8	54	1.5	3			KYS
1994 01 31.78	S	10.4	AC	15.2	L	5	42	3	2			MOE
1994 01 31.92	S	10.8	HS	20.3	T	10	92	0.8	4			HAS02
1994 02 01.13	S	10.8	AA	20	T	10	64	1.5	3			SPR
1994 02 02.10	M	11.7	GA	20.0	L	5	68	1.2	4			MOD
1994 02 02.14	S	10.8	AA	20	T	10	64	1.0	3/			SPR

Periodic Comet Schwassmann-Wachmann 2 [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 02 02.98	S	10.8	AC	28.0	L	10	108	& 1.5	2/			COM
1994 02 03.00	S	10.5:	AC	15.2	L	5	42	3.5	2			MOE
1994 02 03.15	S	10.9	AA	20	T	10	64	2.0	2/			SPR
1994 02 03.17	S	10.1	AC	31.7	L	6	68	2.3	4			BOR
1994 02 03.62	C	11.3	GA	60.0	Y	6		2.5		>0.11	280	NAK01
1994 02 03.78	M	11.2	HS	20.0	R	17	87	1.5	3			LEH
1994 02 03.82	S	10.6	AC	15.2	L	5	42	3	3			MOE
1994 02 03.84	M	12.2	HS	20	R	18	87	2	3			KUJ
1994 02 04.12	M	11.8	GA	20.0	L	5	68	1.2	3			MOD
1994 02 04.19	S	10.2	AC	31.7	L	6	68	2.3	4			BOR
1994 02 05.01	S	12.1	AC	44.5	L	4	230	1	5/			SAR02
1994 02 05.01	S	12.5	AC	44.5	L	4	230	1	6			BAK01
1994 02 05.10	S	11.2	GA	20	L	8	130	2	2			DID
1994 02 05.15	S	10.9	AA	20	T	10	64	1.5	2			SPR
1994 02 05.24	M	11.7	GA	20.0	L	5	68	1.3	3/			MOD
1994 02 05.82	M	12.0	HS	20	R	18	87	3	2			KUJ
1994 02 05.84	M	11.1	HS	20.0	R	17	87	2	3			LEH
1994 02 06.01	S	11.9:	AC	44.5	L	4	230	1	6			BAK01
1994 02 06.01	S	12.3:	AC	44.5	L	4	230	1	6/			SAR02
1994 02 06.14	S	11.0	AA	20	T	10	64	2.0	2			SPR
1994 02 06.17	S	10.1	AC	31.7	L	6	68	2.3	5			BOR
1994 02 07.06	S	11.2	GA	20	L	8	130	2	2/			DID
1994 02 07.21	S	10.1	AC	31.7	L	6	68	2.3	5			BOR
1994 02 08.05	S	10.8	HS	33.3	L	4	56	1.4	3			KRO02
1994 02 08.06	S	10.7	HS	33.3	L	4	201	1.7	4			KRO02
1994 02 08.08	S	11.2:	GA	20	L	8	130	2	2			DID
1994 02 08.13	S	11.1	AA	20	T	10	64	2.0	2/			SPR
1994 02 08.95	S	10.7	AC	28.0	L	10	108	& 1	1/			COM
1994 02 09.83	S	10.1	HS	11	L	8	32	1.5	3			KYS
1994 02 09.83	S	10.9	AC	13.0	L	6	36	1.5	2			MEY
1994 02 09.85	B	10.1	HS	11	L	8	32	1.5	3			KYS
1994 02 09.89	S	10.8	AC	28.0	L	10	108	& 1	1/			COM
1994 02 10.89	S	10.7	AC	20.0	L	10	78	& 1.5	1			COM
1994 02 11.06	S	11.7	AC	51.0	L	6	65	4	6			SCH04
1994 02 11.23	S	10.8	HS	33.3	L	4	56	1.9	5			KRO02
1994 02 11.93	S	10.9	AC	20.0	L	10	78	& 1	1			COM
1994 02 12.23	S	10.9	HS	33.3	L	4	56	1.9	5			KRO02
1994 02 13.77	S	10.9	AC	15.2	L	5	42	2.5	3			MOE
1994 02 13.88	M	11.1	HS	20	R	18	87	5	4			KUJ
1994 02 13.88	M	11.2	HS	20.0	R	17	87	2	2			LEH
1994 02 14.16	S	11.5:	HS	33.3	L	4	56	1.1	5			KRO02
1994 02 14.77	S	10.9	AC	15.2	L	5	42	2.5	3			MOE
1994 02 14.80	S	10.3:	S	10.0	B		25	3.0	3			HAS02
1994 02 14.80	S	11.8	HS	11	L	8	54	1				KYS
1994 02 14.85	S	11.8	AC	33.4	L	4	214	2.2	4	0.04	150	SZE02
1994 02 14.85	S	11.9	AC	33.4	L	4	214	1.5	6	0.04	120	SAR02
1994 02 14.86	M	11.5	HS	20	R	18	87	2.5	4			KUJ
1994 02 14.88	S	12.6	HS	13	L	8	69		3			HOR02
1994 02 14.89	M	11.7	HS	20.0	R	17	87	2	3/			LEH
1994 02 14.91	S	11.2	AC	28.0	L	10	108	& 1	1			COM
1994 02 15.14	S	10.2	AC	31.7	L	6	68	2.4	4			BOR
1994 02 15.78	M	12.0	HS	10.0	B		25	1	5			ZNO
1994 02 15.82	M	12.1	HS	13	L	8	69	1	4/			HOR02
1994 02 15.91	S	10.4	HS	11	L	8	54	1.5	3			KYS
1994 02 15.95	S	11.1	AC	20.0	L	10	78	& 1	1			COM
1994 02 15.99	S	11.0	AC	15.2	L	5	42	2.5	2			MOE
1994 02 16.09	S	11.5	AC	51.0	L	6	65	3	6/			SCH04
1994 02 16.19	S	11.5	HS	33.3	L	4	56	1.4	5			KRO02
1994 02 16.76	S	11.2	AC	15.2	L	5	76	2	2			MOE

Periodic Comet Schwassmann-Wachmann 2 [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 02 16.81	S	11.9	AC	33.4	L	4	214	1.6	4			SZE02
1994 02 16.91	M	11.7	HS	20	R	18	87	2	3			KUJ
1994 02 16.99	S	11.0	AC	20.0	L	10	78	& 1.5	1			COM
1994 02 17.05	S	11.3	GA	20	L	8	130	3	1			DID
1994 02 17.77	S	11.2:	AC	15.2	L	5	76	& 2	2			MOE
1994 02 18.31	M	12.0	GA	35.9	L	7	85	1.0	2/			MOD
1994 02 18.94	M	10.9	HS	20.0	R	17	140	2	3			LEH
1994 02 18.94	M	11.0	HS	20	R	18	87	2	2			KUJ
1994 02 19.09	S	10.9	AC	28.0	L	10	108	& 1	1			COM
1994 02 19.22	S	11.5	AA	20	T	10	64	1.5	1/			SPR
1994 02 19.92	S	10.0	AC	44.4	L	4	100	2.0	4			BOR
1994 02 19.92	S	10.1	AC	44.4	L	4	100	2.5	3			MOR
1994 02 19.93	S	10.2	AC	25	L	6	69	& 2	1			GRE
1994 02 27.78	S	11.9	AC	33.4	L	4	214	1.2	0/	0.1	100	SZE02
1994 02 28.04	S	10.3	AC	31.7	L	6	68	2.5	3			BOR
1994 02 28.13	M	12.6	GA	35.9	L	7	85	0.8	2			MOD
1994 03 02.07	S	10.3	AC	31.7	L	6	68	2.0	3/			BOR
1994 03 03.18	S	11.6	HS	33.3	L	4	201	1.0	4			KRO02
1994 03 03.22	M	11.9	AC	31.8	L	4	63	2	2			KEE
1994 03 03.78	M	11.1	HS	10.0	B		25	1.2	5			ZNO
1994 03 03.83	S	11.6	AC	33.4	L	4	61	1.0	3	0.1	95	SZE02
1994 03 03.83	S	11.6	AC	33.4	L	4	61	1.0	4/	0.08	90	SAR02
1994 03 04.19	S	11.8	HS	33.3	L	4	201	1.1	4			KRO02
1994 03 04.80	B	12.4	HS	15	R	15	90	0.7	1			KUB
1994 03 04.84	! V	12.2	YF	20.0	T	2		& 3	8			MIK
1994 03 04.87	M	12.4	HS	20	R	18	87	2	3			KUJ
1994 03 04.90	M	12.0	HS	20.0	R	17	140	2	2			LEH
1994 03 04.90	O	12.2	HS	25	L	6	60	1.9		0.06		SKA01
1994 03 05.12	S	12.2	GA	20	L	8	130	2	0/			DID
1994 03 05.23	S	11.8:	HS	33.3	L	4	201	& 0.8	3			KRO02
1994 03 05.80	B	11.9:	HS	25	L	15	60	3	7			STE10
1994 03 05.81	S	12.4	AC	33.4	L	4	214	1.0	4	0.06	90	SZE02
1994 03 05.98	M	12.0	HS	20.0	R	17	140	2	2			LEH
1994 03 06.18	S	12 :	HS	33.3	L	4	201	& 1	3			KRO02
1994 03 08.80	S	12.2	AC	33.4	L	4	214	1.0	2			SZE02
1994 03 09.87	S	11.5	AC	40.6	L	5	208	2.3	4			GRA04
1994 03 09.95	S	11.9:	AC	20.3	T	10	133	1.0	3			DAH
1994 03 10.62	C	12.0	GA	60.0	Y	6		2.2			110	NAK01
1994 03 11.18	S	11.9	HS	33.3	L	4	201	1.0	4			KRO02
1994 03 11.77	M	11.8:	HS	10.0	B		25	1.4	3			ZNO
1994 03 11.80	B	12.5	HS	25	L	15	60	3	5			STE10
1994 03 11.80	S	12.3	AC	30.5	L	5	117	1	1			VIC
1994 03 11.86				44.5	L	4	230	0.8	3/	0.07	110	SAR02
1994 03 11.86	S	12.5	AC	44.5	L	4	82					SAR02
1994 03 11.89	I	11.9	HS	11	L	8	54	1				KYS
1994 03 11.97	B	12.4	HS	25	L	6	75	0.9	0			KUB
1994 03 12.05	S	10.5	AC	31.7	L	6	68	1.7				BOR
1994 03 12.22	S	13.0	GA	35.9	L	7	85	0.9	1			MOD
1994 03 12.86	S	12.9	AC	44.5	L	4	230	0.7	2			SAR02
1994 03 12.86	S	13.0	AC	44.5	L	4	230	0.8	2			SZE02
1994 03 13.20	S	11.8	NP	25.6	L	4	111	1.5	2			MOR
1994 03 14.84	S	12.4	AC	44.5	L	4	146	1	7	0.04	130	KIS02
1994 03 14.84	S	12.4	AC	44.5	L	4	146	1.7	6	0.15	110	SAR02
1994 03 14.91	S	11.3	AC	20.3	T	10	62	1.5	1			GAR02
1994 03 16.12	S	11.9	HS	33.3	L	4	201	0.9	3			KRO02
1994 03 16.80	B	12.2	HS	11	L	8	54	0.7				KYS
1994 03 17.79	B	12.3	HS	11	L	8	54	0.8				KYS
1994 03 17.88	S	12.5	AC	30.5	L	5	117	2	1			VIC
1994 03 19.22	S	12.2:	HS	33.3	L	4	201	0.7	2			KRO02

Periodic Comet Schwassmann-Wachmann 2 [cont.]

DATE (UT)		MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 03 20.1		S	12.0:	AA	28	T	10	140	10	1			WAR
1994 03 27.83		M	10.3	HS	20.0	R	17	140	1.5	1			LEH
1994 03 28.80		M	11.8	HS	20.0	R	17	140	2.5	2			LEH
1994 03 29.85	!	V	12.8	YF	20.0	T	2		1	8	&0.07	95	MIK
1994 03 30.83		M	11.7	HS	20	R	18	140	1.7	3			KUJ
1994 03 30.86		M	11.7	HS	20.0	R	17	87	2.5	1/			LEH
1994 03 30.87	!	V	12.8	YF	20.0	T	2		& 1.5	7	&0.08	110	MIK
1994 03 31.05		S	10.7	AC	31.7	L	6	68	3.5	1			BOR
1994 03 31.54		C	12.9	GA	60.0	Y	6		1.5		0.07	110	NAK01
1994 03 31.81		S	12.8	AC	30.5	L	5	117	1	2	0.02	100	VIC
1994 03 31.82		S	13.0	AC	33.4	L	4	61					SZE02
1994 04 02.51		C	13.3	HS	20.0	L	6		0.58				ITO02
1994 04 03.83		S	13.0	AC	33.4	L	4	61	0.7	3/			SZE02
1994 04 05.90		M	12.8	HS	20.0	R	17	140	1	1			LEH
1994 04 07.88		S	13.1	AC	44.5	L	4	230	1	4			BAK01
1994 04 07.88		S	13.2	AC	44.5	L	4	230	0.8	4			SAR02
1994 04 07.94		M	11.9	HS	20.0	R	17	140	1.5	1			LEH
1994 04 08.49		C	13.0	GA	60.0	Y	6		1.5		0.05	115	NAK01
1994 04 09.54		C	13.8	HS	20.0	L	6		0.42				ITO02
1994 04 11.23		S	13.2	NP	25.6	L	4	111	1.1	3			MOR
1994 04 11.83		M	12.1:	HS	10.0	B		25	1	3			ZNO
1994 04 13.80		C	12.6	HS	50	Y	4		0.7		0.06	112	CAV
1994 04 16.25		S[	13.3	NP	25.6	L	4	156					MOR
1994 04 29.90	!	V	13.9	YF	20.0	T	2		0.4	8	&0.03	110	MIK

Periodic Comet Forbes (1993f)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 07 22.73	C	16.9	GA	60.0	Y	6		0.25				NAK01
1993 07 23.08	S[	13.2	AC	20.3	T	10	167	! 0.5				GAR02
1993 08 24.72	C	17.5	GA	60.0	Y	6		0.2			250	NAK01
1993 09 25.76	C	16.6	GA	60.0	Y	6		0.25			220	NAK01
1993 10 11.64	C	16.5	GA	60.0	Y	6		0.35			230	NAK01
1993 10 19.62	C	17.1	GA	60.0	Y	6		0.3				NAK01
1993 11 18.61	C	16.6	GA	60.0	Y	6		0.2				NAK01
1993 12 12.44	C	17.8	GA	60.0	Y	6		0.2				NAK01
1993 12 15.40	C	17.9	GA	60.0	Y	6		0.25				NAK01
1994 01 09.48	C	19.1	GA	60.0	Y	6		0.2				NAK01

Periodic Comet Wirtanen (1991 XVI)

DATE (UT)		MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 08 21.09		S	10.5:	GA	25.4	J	6	72	1.5	1			BOU
1991 09 07.10		B	10.6	AA	15.6	L	10	54	2	1			KOS
1991 09 12.13		S	9.5	AC	25.4	J	6	58	2.5	2/			BOU
1991 09 13.11		S	9.4	AC	25.4	J	6	58	2.8	2			BOU
1991 09 14.12		S	9.4	AC	25.4	J	6	58	2.5	3			BOU
1991 09 16.12		S	9.4	AC	25.4	J	6	58	2.5	2/			BOU
1991 09 18.12		S	9.3	AC	25.4	J	6	58	2.5	3			BOU
1991 09 19.11		S	9.4	AC	25.4	J	6	72	2.5	2			BOU
1991 09 21.12		S	9.4	AC	25.4	J	6	58	2.5	2			BOU
1991 10 07.15	a	S	9.7	AC	25.4	J	6	72	2.7	1			BOU
1991 11 10.19		S	11.0	GA	25.4	J	6	72	2.5	0			BOU
1991 11 13.17		S	11.6	GA	25.4	J	6	72	2.0	0/			BOU

Periodic Comet West-Kohoutek-Ikemura (1993o)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 11 08.98	S[	13.3	AC	20.3	T	10	167	! 0.5				GAR02

Periodic Comet West-Kohoutek-Ikemura (1993o) [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 12 05.86		O[11.5	HS	11	L	8	54	1				KYS
1993 12 06.11		S 13.5	AC	44.5	L	4	167	0.9	1			MOR03
1993 12 15.07		S 13.0	AC	44.5	L	4	80	1.4	1			MOR03
1993 12 17.79		O[11.0	HS	11	L	8	54	1				KYS
1994 01 04.56		C 14.4	GA	60.0	Y	6		0.75				NAK01
1994 01 07.78		S[13.0	HS	45.0	L	4	156					HAS02
1994 01 09.85		S[13.5	AC	20.3	T	10	167	! 0.5				GAR02
1994 01 11.82		S[12.7	AC	20.3	T	10	167	! 0.5				GAR02
1994 01 14.78		S 12.5	HS	11	L	8	54	0.5				KYS
1994 01 16.19		S[13.3	NP	25.6	L	4	156					MOR
1994 01 17.18		S 13.5	NP	25.6	L	4	156	1.0	0/			MOR
1994 02 03.56		C 15.8	GA	60.0	Y	6		0.4			110	NAK01
1994 02 04.17		S[14.5	GA	35.9	L	7	164	! 0.5				MOD
1994 03 02.53		C 16.8	HS	60.0	Y	6		0.25				NAK01
1994 03 30.51		C 18.1	GA	60.0	Y	6		0.2				NAK01

Periodic Comet Wild 2 (1990 XXVIII)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 10 22.19		S 12.5:	AC	25.4	J	6	115					BOU
1990 11 30.22	a	S 12.2	AC	25.4	J	6	72	1.7	1/			BOU

Periodic Comet Wild 3 (1994b)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 02 10.51		C 21.2	FA	91.4	L	5		0.20		<0.01	292	SCO01

Periodic Comet Bus (1993b)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 04 06.18		C 16.7	FA	91.4	L	5		0.58		&0.05	287	SCO01

Periodic Comet Howell (1992c)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 07 23.10		S[13.2	AC	20.3	T	10	167	! 0.5				GAR02
1993 08 24.73		C 15.8	GA	60.0	Y	6		0.45		0.06	245	NAK01
1993 08 27.73		C 15.6	GA	60.0	Y	6		0.45		0.04	245	NAK01
1993 09 25.79		C 16.1	GA	60.0	Y	6		0.3				NAK01
1993 09 26.74		C 16.0	GA	60.0	Y	6		0.35			240	NAK01
1993 10 11.67		C 16.2	GA	60.0	Y	6		0.35			240	NAK01
1993 10 19.64		C 16.0	GA	60.0	Y	6		0.4		0.03	235	NAK01
1993 11 14.72		C 15.7	GA	60.0	Y	6		0.5				NAK01
1993 11 18.67		C 16.0	GA	60.0	Y	6		0.35				NAK01
1993 12 12.47		C 17.4	GA	60.0	Y	6		0.25				NAK01
1994 01 04.53		C 17.7	GA	60.0	Y	6		0.3				NAK01
1994 02 02.48		C 18.1	HS	60.0	Y	6		0.25				NAK01
1994 02 11.14		C 18.1	FA	91.4	L	5		0.90		>0.03	235	SCO01

Periodic Comet Hartley 2 (1991 XV)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 08 09.01	M	8.2	AA	25.4	J	6	47	4	3			BOU
1991 08 11.89	S	9.6	AC	19	L	6	44					PAP03
1991 08 12.01	S	9.5	AC	19	L	6	114	5	3			SZA02
1991 08 17.04	B	9.3	AA	15.6	L	10	54	4	3			KOS
1991 08 20.05	B	9.5	AA	15.6	L	10	54	3	2			KOS
1991 08 21.06	M	8.0	AA	25.4	J	6	47	& 3	3/			BOU
1991 09 12.10	S	7.7	AC	4.0	R	5	10	3.5	6			BOU

Periodic Comet Hartley 2 (1991 XV) [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 09 13.10	S	7.6	AC	4.0	R	5	10	3.5	6/			BOU
1991 09 14.11	S	7.7	AA	5.0	B		10	3	7			BOU
1991 09 16.11	M	7.7	AA	25.4	J	6	47	3.0	5	0.20	275	BOU
1991 09 18.11	M	7.7	AA	25.4	J	6	47	3.2	5/			BOU
1991 09 18.11	S	7.7	AA	4.0	R	5	10		7			BOU
1991 09 19.10	S	7.7	AA	5.0	B		10		6			BOU
1991 09 19.11	M	7.6	AA	25.4	J	6	47	3.2	6/			BOU
1991 09 20.10	M	7.6	AA	25.4	J	6	47	3.5	5/			BOU
1991 09 21.11	M	7.6	AA	25.4	J	6	47	3.5	6			BOU
1991 09 21.13	S	7.7	AA	5.0	B		10		6/			BOU
1991 10 07.14	M	7.7	AA	25.4	J	6	58	3.5	3/			BOU
1991 10 12.09	B	8.7	A	11	L	7	32	4	4			BAR06
1991 10 19.14	B	8.8	A	11	L	7	32	4	4			BAR06
1991 11 04.15	S	8.9	GA	25.4	J	6	58	3.7	1/			BOU
1991 11 09.16	S	9.2	AA	25.4	J	6	58	3.3	1/			BOU
1991 11 10.17	S	9.3	AC	25.4	J	6	58	3.6	1/			BOU
1991 11 12.17	S	9.3	GA	25.4	J	6	58	3.5	1			BOU
1991 11 13.17	S	9.4	GA	25.4	J	6	58	3.5	1			BOU
1991 12 06.18	S	10.5	GA	25.4	J	6	58	3.2	0/			BOU
1991 12 11.19	S	11.0	AC	25.4	J	6	58	2.5	0/			BOU
1991 12 15.18	S	11.6	AC	25.4	J	6	72	2.5	0/			BOU

Periodic Comet Urata-Niijima (1993q)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 04 06.15	C	22.4	FA	91.4	L	5				<0.01	267	SCO01

Periodic Comet Lovas 2

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 07 23.07	S[	13.0	HS	20.3	T	10	167	! 0.5				GAR02

Periodic Comet Hartley 3 (1993m)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 01 04.52	C	15.0	GA	60.0	Y	6		0.55			75	NAK01
1994 02 03.41	C	15.1	GA	60.0	Y	6		0.5		0.03	68	NAK01
1994 03 02.47	C	15.4	GA	60.0	Y	6		0.4			65	NAK01
1994 03 14.84	S[	13.5	AC	20.3	T	10	167	! 0.5				GAR02
1994 03 30.45	C	15.1	GA	60.0	Y	6		0.55			60	NAK01
1994 04 08.44	a C	15.3	GA	60.0	Y	6		0.4				NAK01

Periodic Comet Kushida-Muramatsu (1993t)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 04 05.16	C	16.9	FA	91.4	L	5		0.38		<0.01	276	SCO01
1994 04 05.16	c	21.4	FA	91.4	L	5						SCO01

Periodic Comet Faye (1991 XXI)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 08 21.03	S	12.4	GA	25.4	J	6	115	0.9	2			BOU
1991 09 04.93	S	11.9	GA	25.4	J	6	88	1.2	2/			BOU
1991 09 12.09	M	11.5	GA	25.4	J	6	72	1.2	6			BOU
1991 09 13.08	M	11.4	AC	25.4	J	6	72	1.5	6/			BOU
1991 09 13.96	M	11.2	GA	25.4	J	6	72	1.8	5/			BOU
1991 09 16.09	M	10.9	GA	25.4	J	6	58	1.8	5			BOU
1991 09 18.10	M	10.7	GA	25.4	J	6	58	1.8	6			BOU
1991 09 19.10	M	10.5	GA	25.4	J	6	58	1.9	6			BOU

Periodic Comet Faye (1991 XXI) [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 09 20.09	M	10.4	AA	25.4	J	6	58		5			BOU
1991 09 21.11	M	10.3	AA	25.4	J	6	58	1.9	5			BOU
1991 09 30.85	M	9.7	GA	25.4	J	6	58	2.2	5			BOU
1991 10 03.88	S	9.5	AC	11	L	7	64		2			FOL
1991 10 03.93	B	10.0	AC	15.6	L	10	54	4	8			KOS
1991 10 04.87	S	10.0	AC	11	L	7	64		2			FOL
1991 10 04.89	B	10.2	AC	15.6	L	10	54	2	5			KOS
1991 10 04.89	S	9.3	AC	10	R	10	40	5	4	0.05	230	NAG05
1991 10 06.79	S	9.7	AC	10	R	10	40	8	4			NAG05
1991 10 06.90	M	9.8	GA	25.4	J	6	58	1.9	6/	0.10	260	BOU
1991 10 06.92	B	10.2	AC	15.6	L	10	54	2	5			KOS
1991 10 07.91	B	10.1	AC	15.6	L	10	54	2	5			KOS
1991 10 09.86	S	9.5	AC	10	R	10	40	8	3			NAG05
1991 10 10.87	S	10 :	AC	10	R	10	40	8	3			NAG05
1991 10 11.94	B	9.9	A	11	L	7	32	3	5			BAR06
1991 10 13.88	S	10.4	AC	10	R	10	40	8	2			NAG05
1991 10 16.	B	9.8	A	11	L	7	32	3	5			BAR06
1991 10 27.78	M	9.4	GA	25.4	J	6	58	2.5	5			BOU
1991 10 28.81	M	9.4	GA	25.4	J	6	58	2.5	5			BOU
1991 11 01.93	B	10.0	AC	15.6	L	10	54	4	8			KOS
1991 11 04.12	M	9.5	GA	25.4	J	6	58	3.5	5			BOU
1991 11 08.83	M	9.5	GA	25.4	J	6	58	3	6			BOU
1991 11 11.94	M	9.5	GA	25.4	J	6	58		6			BOU
1991 11 13.94	M	9.4	GA	25.4	J	6	58	2.5	5/			BOU
1991 11 14.96	S	9.3	GA	25.4	J	6	58	2.5	6			BOU
1991 12 05.80	M	9.7	GA	25.4	J	6	58	2.2	5			BOU
1991 12 09.80	S	10.0	AC	25.4	J	6	58	2.2	3			BOU
1991 12 10.84	M	10.1	AC	25.4	J	6	58	3.0	3			BOU
1991 12 24.81	S	10.5	AC	25.4	J	6	72	1.8	2			BOU
1992 01 04.77	S	10.9	AC	25.4	J	6	58	2.3	1/			BOU
1992 01 10.93	S	11.2	AC	25.4	J	6	72	1.5	1/			BOU
1992 01 21.77	S	11.8	AC	25.4	J	6	72	1.5	1/			BOU
1992 01 22.78	S	11.7	GA	25.4	J	6	72	1.5	1			BOU
1992 01 26.88	S	11.7	AC	25.4	J	6	72	1.5	1			BOU
1992 02 03.82	S	12.1	GA	25.4	J	6	88	1.5	2			BOU
1992 02 23.81	S	12.8	AC	25.4	J	6	115	1.2	1			BOU
1992 02 29.80	S	13.0	AC	25.4	J	6	115	1.1	1			BOU

Periodic Comet Metcalf-Brewington (1991 I)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 01 13.76	S	8.5	AC	5.0	B		10		1			BOU
1991 01 13.76	S	8.6	AC	15.6	L	5	29	4.5	3			BOU
1991 01 14.75	a S	8.9	AC	25.4	J	6	47	3.5	2/			BOU
1991 01 15.75	S	8.7	AC	25.4	J	6	47	3.5	3	0.35	63	BOU
1991 01 16.75	S	8.7	AC	5.0	B		10	5	1			BOU
1991 01 16.75	S	8.7	AC	25.4	J	6	47	3.2	3			BOU
1991 01 17.75	S	8.8	AC	25.4	J	6	47	3.0	2/			BOU
1991 01 18.79	S	9.0	AC	25.4	J	6	58	3.0	3/			BOU
1991 01 19.75	S	8.8	AC	15.6	L	5	29	3.5	2/			BOU
1991 01 31.75	S	9.5	AC	25.4	J	6	47	3.5	2			BOU
1991 02 02.76	S	9.6	AC	25.4	J	6	58	3.0	1/			BOU
1991 02 03.76	S	9.7	AC	15.6	L	5	45	2.5	1			BOU
1991 02 04.77	S	9.8	AC	25.4	J	6	58	2.5	1/			BOU

Periodic Comet Wolf-Harrington (1991 V)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 02 02.77	S	13.2	AC	25.4	J	6	115	0.5	2/			BOU

Periodic Comet Wolf-Harrington (1991 V) [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 02 04.78	S	13.0	AC	25.4	J	6	115	0.5	2			BOU

Periodic Comet Ashbrook-Jackson (1992j)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 07 21.32	S	13.3	AC	44.5	L	4	167	0.9	2			MOR03
1993 07 22.72	C	14.1	GA	60.0	Y	6		0.45			250	NAK01
1993 07 23.07	S	13.0	AC	20.3	T	10	167	0.5	3			GAR02
1993 07 24.03	S	13.2	AC	20.3	T	10	167	0.4	4			GAR02
1993 07 28.32	S	12.6	AC	44.5	L	4	80	1.9	2			MOR03
1993 07 29.02	S	12.8	AC	25.4	J	6	115	0.8	1/			BOU
1993 08 17.01	S	12.7	AC	25.4	J	6	115	1.2	1/			BOU
1993 08 19.01	S	12.8	AC	25.4	J	6	115	1.0	1			BOU
1993 08 21.36	S	13.6	AC	44.5	L	4	167	1.0	2			MOR03
1993 08 22.06	C	12.7	L	20	T	3		+ 1.5		&0.04	240	MAL02
1993 08 24.71	C	13.6	GA	60.0	Y	6		0.7		0.08	250	NAK01
1993 08 27.71	S	13.1	GA	60.0	Y	8	192	0.9	4/	0.07	250	NAK01
1993 09 11.19	C	12.5	GA	20	T	3		+ 2.25		&0.06	240	MAL02
1993 09 11.93	S	12.6	AC	25.4	J	6	143	1.2	0/			BOU
1993 09 17.94	S	12.8	AC	25.4	J	6	143	1.0	1			BOU
1993 09 18.27	S	12.3	NP	25.6	L	4	111	1.9	2/			MOR
1993 09 18.97	S	12.5	AC	25.4	J	6	115	1.2	1/			BOU
1993 09 19.02	S	12.8	AC	20.3	T	10	77	1.4	3			DAH
1993 09 19.25	M	12.5	NP	50.8	L	4	120	1.0	4			MOR
1993 09 20.07	C	12.9	GA	20	T	3		+ 1.5		&0.04	230	MAL02
1993 09 24.24	S	13.2	AC	44.5	L	4	80	1.3	3			MOR03
1993 09 25.43	M	12.5	NP	25.6	L	4	111	1.8	3/			MOR
1993 09 25.73	C	13.3	GA	60.0	Y	6		0.9		0.11	240	NAK01
1993 09 26.42	M	12.4	NP	25.6	L	4	111	1.4	3			MOR
1993 10 08.23	S	12.5	NP	25.6	L	4	111	1.6	2			MOR
1993 10 09.95	S	13.0	AC	25.4	J	6	143	0.8	1			BOU
1993 10 11.63	C	12.9	GA	60.0	Y	6		1.1		>0.11	235	NAK01
1993 10 14.05	S	12.9	AC	44.5	L	4	167	0.9	2			MOR03
1993 10 15.96	S	12.6	AC	25.4	J	6	115	1.1	1			BOU
1993 10 16.89	S	12.7	AC	25.4	J	6	88	0.8	2			BOU
1993 10 17.89	S	12.6	AC	25.4	J	6	88	1.2	1/			BOU
1993 10 19.06	S	12.6	AC	25.4	J	6	88	1.0	1/			BOU
1993 10 19.08	S	13.2	AC	44.5	L	4	167	1.1	3			MOR03
1993 10 19.61	C	12.8	GA	60.0	Y	6		1.2		>0.11	235	NAK01
1993 10 19.91	S	12.5	AC	25.4	J	6	115	1.1	1/			BOU
1993 10 23.16	C	13.2	GA	20	T	3		+ 1.5		&0.07	230	MAL02
1993 11 08.92	S	13.1	AC	20.3	T	10	80	0.6	2			GAR02
1993 11 09.09	S	13.3	AC	44.5	L	4	167	1.0				MOR03
1993 11 11.14	C	13.6	GA	20	T	3		+ 1.25		?0.05	230	MAL02
1993 11 12.80	S	13.0	AC	25.4	J	6	115	1.0	0			BOU
1993 11 13.00	S	13.5	AC	44.5	L	4	167	0.6	1			MOR03
1993 11 17.84	S	13.2	AC	25.4	J	6	115	0.8	0/			BOU
1993 11 18.61	C	13.3	GA	60.0	Y	6		1.0				NAK01
1993 12 12.43	C	14.4	GA	60.0	Y	6		0.8			230	NAK01
1993 12 15.49	C	14.2	GA	60.0	Y	6		0.9				NAK01
1994 01 05.50	C	15.3	HS	60.0	Y	6		0.5			65	NAK01
1994 01 07.77	S[	13.0	HS	45.0	L	4	156					HAS02
1994 01 09.47	C	15.7	GA	60.0	Y	6		0.35			65	NAK01
1994 01 09.84	S[	13.3	AC	20.3	T	10	167	! 0.5				GAR02
1994 02 02.46	C	15.8	HS	60.0	Y	6		0.6			65	NAK01
1994 02 10.13	C	16.3	FA	91.4	L	5		0.80		0.19	238	SCO01
1994 03 02.46	C	16.3	HS	60.0	Y	6		0.35				NAK01
1994 03 30.44	a C	17.9	GA	60.0	Y	6		0.25				NAK01

Periodic Comet Shajn-Schaldach (1993k)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 07 22.70	C	18.1	GA	60.0	Y	6		0.15				NAK01
1993 08 25.63	C	17.6	GA	60.0	Y	6		0.2			250	NAK01
1993 09 19.29	S	[13.7	NP	50.8	L	4	275					MOR
1993 09 25.70	C	16.4	GA	60.0	Y	6		0.3			250	NAK01
1993 09 26.72	C	16.3	GA	60.0	Y	6		0.35				NAK01
1993 10 11.61	C	16.5	GA	60.0	Y	6		0.35				NAK01
1993 10 19.59	C	16.8	GA	60.0	Y	6		0.3				NAK01
1993 12 07.43	C	17.7	GA	60.0	Y	6		0.25				NAK01
1993 12 12.42	C	18.1	GA	60.0	Y	6		0.2				NAK01
1994 01 05.46	C	18.3	HS	60.0	Y	6		0.25				NAK01
1994 01 09.46	C	18.1	GA	60.0	Y	6		0.25				NAK01
1994 02 02.45	C	18.6	HS	60.0	Y	6		0.25				NAK01
1994 02 10.10	c	21.7	FA	91.4	L	5		0.35		0.01	62	SCO01

Periodic Comet Giclas (1992 XXV)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 10 01.12	S	14.1	AC	45.0	L	4	183	0.8	0/			BOU

Periodic Comet Russell 2 (1994e)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 04 05.49	c	21.3	FA	91.4	L	5			9			SCO01
1994 04 06.49	c	21.5	FA	91.4	L	5			9			SCO01

Periodic Comet Shoemaker 1 (1991 XXIII)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 01 22.77	S	13.1	AC	25.4	J	6	143	0.7	1/			BOU

Periodic Comet Shoemaker-Levy 6 (1991 XVIII)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 11 13.94	S	10.9	GA	25.4	J	6	47	4	0			BOU
1991 11 14.96	S	10.9	GA	25.4	J	6	47	4.5	0			BOU

Periodic Comet Kushida (1994a)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 01 13.94	S	11.7:	AC	15.2	L	5	76	& 2	1			MOE
1994 01 15.06	S	11.4	HS	11	L	8	32	2	3			KYS
1994 01 15.90	S	11.7:	AC	15.2	L	5	76	& 2	1			MOE
1994 01 16.00	M	12.2	HS	20.0	R	17	87	1.5	2			LEH
1994 01 16.02	S	10.9	AC	20.0	L	10	78	> 3	1			COM
1994 01 16.12	S	11.0	HS	11	L	8	32	2	3			KYS
1994 01 16.35	S	10.9	NP	25.6	L	4	67	2.9	2			MOR
1994 01 18.03	S	10.6	AC	20.0	L	10	78		1			COM
1994 01 18.10	S	11.2	HS	11	L	8	32	2	2			KYS
1994 01 20.08	S	11.5	HS	11	L	8	54	1.8	2			KYS
1994 01 20.79	B	11.8	HS	25	L	15	60	4	5			STE10
1994 01 21.40	S	10.7	GA	20.0	L	5	35	2.7	1			MOD
1994 01 22.05	S	10.5	AC	30.5	L	5	95	2.5	5			VIC
1994 01 22.10	S	11.7	HS	11	L	8	54	2	1			KYS
1994 01 31.94	S	10.7	HS	20.3	T	10	92	2.7	2			HAS02
1994 02 02.18	M	10.7	GA	20.0	L	5	35					MOD
1994 02 02.18	S	10.5	GA	20.0	L	5	35	2.3	1			MOD
1994 02 02.97	S	10.4	AC	28.0	L	10	108	& 2.5	2			COM
1994 02 03.18	S	10.0	AC	31.7	L	6	68	3.0	2			BOR
1994 02 03.50	S	10.3	GA	10.0	B		25	4	1			SEA

Periodic Comet Kushida (1994a) [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 02 03.90	M	12.3	HS	20.0	R	17	87	5	3			LEH
1994 02 03.91	M	12.3	HS	20	R	18	87	6	2			KUJ
1994 02 04.20	S	10.0	AC	31.7	L	6	68	3.2	2			BOR
1994 02 04.98	S	11.3	AC	44.5	L	4	230	1.8	4			SAR02
1994 02 05.20	S	11.5	AA	20	T	10	125	2.0	2/			SPR
1994 02 05.27	S	10.5	GA	20.0	L	5	35	2.6	1			MOD
1994 02 05.50	S	10.4	GA	10.0	B		25	4	2			SEA
1994 02 05.88	M	12.2	HS	20.0	R	17	87	3	1			LEH
1994 02 05.90	M	12.1	HS	20	R	18	87	5	2			KUJ
1994 02 06.18	S	9.9	AC	31.7	L	6	68	3.2	2/			BOR
1994 02 07.50	S	10.4	GA	10.0	B		25	4	1			SEA
1994 02 08.18	S	11.6	AA	20	T	10	125	1.5	3/			SPR
1994 02 09.00	S	10.9	AC	28.0	L	10	108	> 1	1			COM
1994 02 09.88	S	10.6	AC	28.0	L	10	108	> 1	1			COM
1994 02 10.88	S	10.8	AC	28.0	L	10	108	> 2	1			COM
1994 02 11.03	S	10.4	AC	11.0	L	7	32	6	1/			SCH04
1994 02 11.25	S	11.4	HS	33.3	L	4	56	3.2	2			KRO02
1994 02 11.25	S	11.6	HS	33.3	L	4	201	2.1	2			KRO02
1994 02 12.24	S	12 :	HS	33.3	L	4	56	2.3	2			KRO02
1994 02 13.90	M	11.4	HS	20.0	R	17	87	2	1			LEH
1994 02 13.96	S	10.6	GA	11	L	7	40	5	2			BAR06
1994 02 14.17	S	11.8	HS	33.3	L	4	56	1.9	2			KRO02
1994 02 14.90	M	12.0:	HS	20	R	18	87	3.5	2			KUJ
1994 02 14.90	S	10.9	AC	28.0	L	10	108	& 1.5	0/			COM
1994 02 14.92	M	12.6	HS	20.0	R	17	87	3.5	2			LEH
1994 02 14.92	S	10.4	GA	11	L	7	40	5	3			BAR06
1994 02 15.15	S	10.0	AC	31.7	L	6	68	3.0	2			BOR
1994 02 15.44	S	11.4	SM	20.3	L	7	56	2	2			CAM03
1994 02 15.86	M	11.7	HS	13	L	8	69	1.9	1			HOR02
1994 02 15.90	S	10.6	GA	11	L	7	40	3.7	3			BAR06
1994 02 15.92	S	11.1	HS	11	L	8	32	2	2			KYS
1994 02 15.95	S	11.0	AC	20.0	L	10	78	> 1.5	1			COM
1994 02 16.10	S	10.5	AC	51.0	L	6	65	4	1/			SCH04
1994 02 16.20	S	11.7	HS	33.3	L	4	56	2.2	2			KRO02
1994 02 16.72	S	11.4	SM	20.3	L	7	56	2	2			CAM03
1994 02 16.83	S	11.4	AC	33.4	L	4	214	1.5	2			SZE02
1994 02 16.96	S	10.7	GA	11	L	7	40	4	3			BAR06
1994 02 16.99	S	10.8	AC	20.0	L	10	78	& 2	1			COM
1994 02 18.33	M	11.7	GA	35.9	L	7	85	1.2	1/			MOD
1994 02 18.38	S	11.3	GA	20.0	L	5	35	1.6	0			MOD
1994 02 18.58	S	11.4	SM	20.3	L	7	56	2	3			CAM03
1994 02 18.93	M	12.4	HS	20.0	R	17	140	2.5	1			LEH
1994 02 19.09	S	10.8	AC	28.0	L	10	108	& 2	1			COM
1994 02 19.24	S	10.8	AA	20	T	10	64	3.0	4/			SPR
1994 02 20.20	S	10.9	AA	20	T	10	64	3.0	3/			SPR
1994 02 27.79	S	11.9	AC	33.4	L	4	214	1.0	2			SZE02
1994 03 02.43	S	12.0:	GA	20.3	L	7	56	1				CAM03
1994 03 03.15	C	13.9	SC	25	T	4		30				ROQ
1994 03 03.19	S	11.9	HS	33.3	L	4	201	1.3	2			KRO02
1994 03 03.24	M	11.3	AC	31.8	L	4	63	3	1			KEE
1994 03 03.90	S	11.6:	AC	33.4	L	4	214	& 1	2			SZE02
1994 03 03.90	S	11.7:	AC	33.4	L	4	214	& 0.8	3			SAR02
1994 03 04.20	S	11.8	HS	33.3	L	4	201	2.0	3			KRO02
1994 03 04.85	! V	11.5	YF	20.0	T	2		&12	5			MIK
1994 03 04.91	M	12.7	HS	20.0	R	17	140	2	1			LEH
1994 03 04.93	O[	11.5	HS	11	L	8	54	1				KYS
1994 03 05.24	S	11.7	HS	33.3	L	4	201	1.5	2			KRO02
1994 03 05.82	B	12.6	HS	25	L	15	60	2	3			STE10
1994 03 05.83	S	12.1	AC	33.4	L	4	214	1.0	1			SZE02

Periodic Comet Kushida (1994a) [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 03 06.18		S 12.4	GA	35.9	L	7	85	1.0	2			MOD
1994 03 06.20		S 11.8	HS	33.3	L	4	201	1.8	3			KRO02
1994 03 08.83		S 12.4	AC	33.4	L	4	214	0.8	0			SZE02
1994 03 10.89		O[11.5	TI	13	L	8	69	1				HOR02
1994 03 11.20		S 12.0	HS	33.3	L	4	201	1.4	2			KRO02
1994 03 11.83		S 13.0	AC	30.5	L	5	117	1.5	5			VIC
1994 03 11.89		S[12.5	AC	44.5	L	4	82					SAR02
1994 03 12.27		S 12.8	GA	35.9	L	7	85	0.9	0/			MOD
1994 03 13.22		S 11.3	NP	25.6	L	4	111	2.4	1/			MOR
1994 03 14.91		S 12.3	AC	44.5	L	4	146	1	3/			KIS02
1994 03 14.91		S 12.6	AC	44.5	L	4	146	1.0	2/			SAR02
1994 03 14.94		S 12.2	AC	20.3	T	10	80	1.0	1			GAR02
1994 03 16.16		S 12.5	HS	33.3	L	4	201	1.1	2			KRO02
1994 03 17.91		O[12.0	HS	11	L	8	54	1				KYS
1994 03 17.91		S 13.2	AC	30.5	L	5	117	2	5			VIC
1994 03 19.23		S 12.7	HS	33.3	L	4	201	0.7	1			KRO02
1994 03 29.86	!	V 13.1	AA	20.0	T	2		& 6	5			MIK
1994 03 31.89		S 13.5	AC	30.5	L	5	117	1	3			VIC
1994 04 05.24		C 14.7	FA	91.4	L	5						SCO01
1994 04 05.27		c 19.8	FA	91.4	L	5		9.4		&0.18	99	SCO01
1994 04 07.85		S[14.0	AC	44.5	L	4	230					BAK01
1994 04 07.91	!	V 13.5	YF	20.0	T	2		& 3	5			MIK
1994 04 11.25		S[12.5	NP	25.6	L	4	111					MOR
1994 04 29.91	!	V 14.6	YF	20.0	T	2		& 2	2			MIK

Periodic Comet Schaumasse (1992x)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 12 16.86		S 12.8	GA	25.4	J	6	115	1.0	1/			BOU
1992 12 20.86		S 12.6	GA	25.4	J	6	115	1.0	1/			BOU
1992 12 29.06		S 12.1	GA	25.4	J	6	88	1.5	0/			BOU
1992 12 29.97		S 12.1	GA	25.4	J	6	88	1.7	0/			BOU
1992 12 30.99		S 11.8	GA	25.4	J	6	58	2.2	0/			BOU
1993 01 13.77		S 10.8:	GA	11	L	7	56	2	3			BAR06
1993 01 13.83		B 11.2	AA	15.6	L	10	150	1	2			KOS
1993 01 14.76		S 10.6	GA	25.4	J	6	58	2.5	1			BOU
1993 01 14.77		S 11.1:	GA	11	L	7	56	1.1				BAR06
1993 01 16.90		S 10.2	GA	25.4	J	6	47	3.2	1/			BOU
1993 01 17.75		S 10.6	GA	11	L	7	56	3.3				BAR06
1993 01 17.95		S 10.2	GA	25.4	J	6	47	3.2	1			BOU
1993 01 18.84		S 10.1	GA	25.4	J	6	47	3.5	1			BOU
1993 01 21.95		S 9.8	GA	11	L	7	32	5.2	1			BAR06
1993 01 22.71		S 10.1	GA	11	L	7	32	4.8	1			BAR06
1993 01 22.96		S 9.8	AC	25.4	J	6	47	3.5	1			BOU
1993 01 23.71		S 10.0	GA	11	L	7	32	5.2	3			BAR06
1993 01 23.88		S 9.5	AA	26	L	6	44	6	4			VIC
1993 01 27.98		S 9.0	AC	25.4	J	6	47	4.5	1/			BOU
1993 01 30.01		S 8.9	AC	25.4	J	6	47	5	2			BOU
1993 02 09.75		B 9.0	AA	15.6	L	10	52	5	1			KOS
1993 02 10.75		B 8.8	AA	15.6	L	10	52	6	1			KOS
1993 02 11.73		S 9.6	AA	26	L	6	44	6	5			VIC
1993 02 11.78		B 9.2	AA	15.6	L	10	52	5	1			KOS
1993 02 11.87		S 9.3	AC	16.2	L	6	42	2	3			SZA02
1993 02 12.83		S 10.0	GA	11	L	7	32	4.5	3			BAR06
1993 02 13.73		S 9.6	AA	26	L	6	44	6	5			VIC
1993 02 14.73		S 9.7	AA	26	L	6	44	4	3/			VIC
1993 02 14.87		B 9.2	AA	15.6	L	10	52	4	1			KOS
1993 02 15.85		S 9.7	GA	11	L	7	32	4.4	3			BAR06
1993 02 16.92		S 9.7	GA	11	L	7	32	3.5	4			BAR06

Periodic Comet Schaumasse (1992x) [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 02 17.88	S	8.3	AA	8.0	B		15	8	2			BOU
1993 02 19.96	S	8.3	AA	8.0	B		15		2/			BOU
1993 02 20.77	S	8.4	AC	6.0	B		20	4	2			KIS02
1993 02 20.81	S	8.6	AC	12	R		20	10	1/			NAG07
1993 02 20.83	S	8.8	AC	12	R		20		2/	0.2	80	PAP03
1993 02 21.02	S	9.9:	GA	11	L	7	32	& 4	3			BAR06
1993 02 22.84	S	8.2	AA	8.0	B		15	10	2			BOU
1993 02 23.85	S	8.2	AA	8.0	B		15	10	2			BOU
1993 02 28.99	S	10.0:	GA	11	L	7	32	3.5	4			BAR06
1993 03 09.81	S	8.5	AA	8.0	B		15	8	1/			BOU
1993 03 11.75	S	9.8	GA	11	L	7	32	3.5	4			BAR06
1993 03 13.76	S	10.5	GA	11	L	7	56	2.5	4			BAR06
1993 03 13.86	S	8.4	AA	25.4	J	6	47	7.5	2			BOU
1993 03 13.93	S	10.4	GA	11	L	7	32		2			BAR06
1993 03 14.76	S	10.4:	GA	11	L	7	32	2.5	4			BAR06
1993 03 14.98	S	8.6	AA	25.4	J	6	47	9	2			BOU
1993 03 15.91	S	8.4	AC	25.4	J	6	47	9	2/			BOU
1993 03 16.78	S	9.9	GA	11	L	7	32	4.5	2/			BAR06
1993 03 17.87	S	8.6	AA	25.4	J	6	47	7.5	1/			BOU
1993 03 18.94	S	8.5	AA	8.0	B		15	9	1			BOU
1993 03 22.78	S	10.5	GA	11	L	7	32	3	3			BAR06
1993 03 23.92	M	8.7	AA	25.4	J	6	47	5.5	2			BOU
1993 03 23.92	S	8.6	AA	8.0	B		15	7	1			BOU
1993 03 23.92	S	10.5:	GA	11	L	7	32	3	4			BAR06
1993 03 24.88	S	8.7	AA	25.4	J	6	47	5.5	2			BOU
1993 03 26.79	S	10.5	GA	11	L	7	32	4	4			BAR06
1993 03 26.92	S	8.6	AA	8.0	B		15	7	1			BOU
1993 03 27.96	S	8.7	AA	8.0	B		15	6.5	1/			BOU
1993 03 29.00	S	8.7	AC	25.4	J	6	47	5	2			BOU
1993 03 30.06	S	8.8	AC	25.4	J	6	47	5	1/			BOU
1993 04 13.93	S	9.3	AC	25.4	J	6	47	4.0	1/			BOU
1993 04 16.93	S	9.3	AC	25.4	J	6	47	4.0	1/			BOU
1993 04 17.88	S	9.2	AC	25.4	J	6	47	4.0	2			BOU
1993 04 18.87	S	9.2	AC	25.4	J	6	47	4.5	2			BOU
1993 04 19.88	S	9.3	AC	25.4	J	6	47	4.0	2			BOU
1993 04 20.87	S	9.1	AC	25.4	J	6	47	4.5	2/			BOU
1993 04 23.92	S	9.5	AC	25.4	J	6	47	4	1			BOU
1993 05 10.93	S	11.0	AC	25.4	J	6	58	3.0	0/			BOU
1993 05 11.92	S	10.9	AC	25.4	J	6	58	3.3	0/			BOU
1993 05 15.93	S	11.5:	AC	25.4	J	6	58	2.5	0			BOU
1993 05 16.95	S	11.5	AC	25.4	J	6	58	2.7	0/			BOU
1993 05 17.96	S	11.6	AC	25.4	J	6	72	2.7	0			BOU
1993 05 22.97	S	11.8	AC	25.4	J	6	72	2.7	0			BOU

Periodic Comet Gehrels 3 (1992v)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1994 04 05.25	C	19.8	FA	91.4	L	5				&0.02	292	SCO01

Periodic Comet Brewington (1992 XIV)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 08 31.10	S	12.1	AC	25.4	J	6	88	1.7	0/			BOU
1992 09 06.10	S	11.7	AC	25.4	J	6	58	1.9	0/			BOU
1992 09 26.11	O	[11.5:		11	L	8	54	1				KYS

Periodic Comet Peters-Hartley (1990 IX)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 08 21.85	S	13.8	AC	106.0	L	3	179	1.0	0/			BOU
1990 08 24.85	S	14.0	AC	106.0	L	3	179		0/			BOU
1990 08 25.84	S	14.0	AC	106.0	L	3	179	1.0	0			BOU

Periodic Comet Swift-Tuttle (1992 XXVIII)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 09 28.82	S	9.1	AC	25.4	J	6	58	3.5	1/			BOU
1992 09 29.81	S	9.0	AC	25.4	J	6	58	3.7	2			BOU
1992 09 30.82	S	9.0	AC	25.4	J	6	58	3.6	2			BOU
1992 10 01.13	S	8.9	AC	25.4	J	6	58	3.8	2/			BOU
1992 10 02.11	S	8.8	AC	25.4	J	6	58	3.6	2/			BOU
1992 10 05.15	S	8.5	AC	15.6	L	5	29	4.8	3			BOU
1992 10 05.16	S	8.5	AC	5.0	B		10	6	1/			BOU
1992 10 10.18	M	7.8	AC	15.6	L	5	29	4.5	5			BOU
1992 10 16.76	M	7.0	AC	15.6	L	5	24	6	4/			BOU
1992 10 16.77	S	7.0	AC	5.0	B		7	6.5	2/			BOU
1992 10 17.79	M	6.9	AC	15.6	L	5	24	6	5			BOU
1992 10 17.80	S	6.9	AC	5.0	B		10	6.5	2/			BOU
1992 10 19.78	S	7.0	AC	4.6	B		10		5			FAZ
1992 10 19.82	S	7.5	A	11	L	7	32	5	2			BAR06
1992 10 20.77	S	7.6	A	11	L	7	32	5	4			BAR06
1992 10 21.81	M	6.5	AA	5.0	B		10	8	5			BOU
1992 10 21.82	M	6.6	AA	8.0	B		15	7	6			BOU
1992 10 22.73	B	7.4	AC	5.0	B		10		5			NAG06
1992 10 22.76	S	8 :	AC	33.4	L	4	56	10	6/			SZE02
1992 10 22.81	& S	8.0	AC	10	L	10	74	3				KIS02
1992 10 23.71	S	7.5	AC	5.0	B		10					SAJ
1992 10 23.72	S	7.5	AC	10	L	10	74	3				KIS02
1992 10 23.76	S	7.4	A	11	L	7	32	4	5			BAR06
1992 10 23.78	S	6.4	AA	5.0	B		10	9	5			BOU
1992 10 24.97	S	6.4	AA	5.0	B		7	9	4/			BOU
1992 10 25.82	S	7.3	A	11	L	7	32	5	4			BAR06
1992 10 26.75	B	7.1	AC	5.0	B		10		6			NAG06
1992 10 26.76	M	6.2	AA	5.0	B		10	10	5			BOU
1992 10 27.79				16.2	L	6	42	7	4	0.1	270	SZA02
1992 10 27.79	S	7.3	AC	6.0	B		20					SZA02
1992 10 28.17	S	6.2	AA	5.0	B		10	12	4/			BOU
1992 10 29.81	S	6.0	AA	5.0	B		10	10	5			BOU
1992 10 30.15	S	6.9	A	11	L	7	32	6	4			BAR06
1992 10 30.75	S	6.7	A	11	L	7	32	4.5	4			BAR06
1992 10 31.76	S	5.8	AA	5.0	B		10	11	6	0.3	20	BOU
1992 11 01.84	S	6.6	A	11	L	7	32	4	5/			BAR06
1992 11 02.18	S	6.6:	A	11	L	7	32	6	5			BAR06
1992 11 02.74	B	6.2	Y	8.0	B	4	10	7	4			KRY01
1992 11 02.83	S	5.7	AA	5.0	B		7	12	5			BOU
1992 11 03.75	S	5.7	AA	5.0	B		7	12	5/	1.5	58	BOU
1992 11 06.71	S	5.6	AC	5.0	B		7	10	8			NAG07
1992 11 06.83	S	5.7	AC	6	R	13	40					LAN02
1992 11 07.71	S	5.6	AC	6.0	B		20	10				HEV
1992 11 07.73	S	6.0	AC	5.0	B		10					MIZ01
1992 11 07.75	S	5.5	AC	5.0	B		7	15	8	2	60	LAN02
1992 11 08.75	S	5.6	AC	6	R	13	40					LAN02
1992 11 08.76	S	5.5	AA	5.0	B		7		5			BOU
1992 11 09.71	M	5.4	AC	4.8	R	11						KOK
1992 11 09.72	S	5.8	AC	15	L	7	50	8	6			KRA03
1992 11 09.73	S	5.5	AC	6	R	13	40					LAN02
1992 11 09.75	S	5.8	AC	6.0	B		20	&20	6			KOC03
1992 11 10.74	S	6.0:	AC	5.0	B		10	& 6	4	0.1	35	SAJ

Periodic Comet Swift-Tuttle (1992 XXVIII) [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1992 11 12.74	S	5.3	AA	5.0	B		10		6			BOU
1992 11 13.71	S	5.7	AC	15	L	7	50	8	6	0.1		KRA03
1992 11 13.74	S	5.2	AA	5.0	B		10	12	6	1.5	40	BOU
1992 11 13.74	S	5.3	AC	5.0	B		10	&10	6	0.2	35	LAN02
1992 11 13.75	S	5.1:	AC	6	R	13	40	&10				LAN02
1992 11 13.76	S	5.4	AC	3.0	B		8					FAZ
1992 11 14.71	M	5.3	AC	4.8	R	11	54	6				KOK
1992 11 14.71	S	5.5	AC	8	R	6	62		7			KOC03
1992 11 14.72	S	5.3	AC	6.0	B		20					HEV
1992 11 14.75	M	5.2	AA	5.0	B		10	10	7	1.6	60	BOU
1992 11 18.72	S	5.4	AC	15	L	7	50	10	8	0.1		KRA03
1992 11 18.73	S	5.0	AC	6	R	13	40					LAN02
1992 11 19.71	S	5.0	AC	5.0	B		10	8	6			SAJ
1992 11 19.74	M	5.1	AA	5.0	B		10	10	7	1.6	47	BOU
1992 11 19.75	S	5.3	AC	4.6	R		20		3			FAZ
1992 11 20.71	S	5.0	AC	8	R		10		3	0.5	40	SZA
1992 11 20.73	S	5.1	AC	11	L	8	32	13			55	HEV
1992 11 20.80	S	5.4:	A	11	L	7	32	3	6			BAR06
1992 11 23.74	M	4.9	AA	5.0	B		7	8	7	3.0	48	BOU
1992 11 24.72	I	4.9	AA	0.7	E		1					BOU
1992 11 24.72	M	4.9	AA	5.0	B		10	7	7/	2.5	45	BOU
1992 11 25.69	S	5.5:	AA	12	L	4	21		7	1.5	50	GYE
1992 11 27.69	S	5.5	AC	6.0	B		20	6		0.4	50	KES01
1992 11 27.71	S	5.0	AC	10	L	10	44	4	8/	0.2	60	KIS02
1992 11 27.73	S	5.2	AC	15	L	7	50	&12	9	0.25		JON04
1992 11 27.73	S	5.4	AC	5.0	B		10	9	6	0.3	40	SAJ
1992 11 27.77	& S	5.4	AC	8	R		10		6			SZA
1992 11 28.72	M	4.8	AA	5.0	B		10	7	7/	2.9	54	BOU
1992 11 29.73	M	4.9	AA	5.0	B		10		7			BOU
1992 11 30.71	M	4.8	AA	5.0	B		10		7/	3.0	45	BOU
1992 11 30.71	S	5.0	AC	6	R	13	40					LAN02
1992 11 30.74	S	5.0	AC	4.6	R		10	12	7/	3.5	45	FAZ
1992 11 30.74	S	5.3	AC	5.0	B		10					MIZ01
1992 12 04.71	S	5.2	AC	5.0	B		7	&15		1		BRL
1992 12 04.73	S	5.2	AC	4.6	R		10		6/	2		FAZ
1992 12 05.68	S	5.0	AC	3.0	B		8	13	7/			CSU
1992 12 05.71	M	4.8	AA	5.0	B		7		8			BOU
1992 12 05.75	& S	5.0	AC	5.0	B		7					BRL
1992 12 12.71	M	5.0	AA	5.0	B		10		7/	2.5	45	BOU
1992 12 15.68	B	5.2	S	5.0	B		7	3				KYS
1992 12 15.69	& S	5.2	AC	6.0	B		20	4	7	1	40	KES01
1992 12 16.71	M	5.1	AA	15.6	L		29		8			BOU

Periodic Comet Chernykh (1992 II)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 08 21.01	S[	13.3	AC	25.4	J	6	143	! 0.5				BOU
1991 09 04.94	S[	13.4	AC	25.4	J	6	143	! 0.5				BOU
1991 09 13.95	S[	13.3	AC	25.4	J	6	143	! 0.5				BOU
1991 10 06.89	S[	13.3	AC	25.4	J	6	143	! 0.5				BOU
1991 10 28.83	S[	13.3	AC	25.4	J	6	143	! 0.5				BOU
1992 01 22.78	S[	13.0	AC	25.4	J	6	143	! 1.0				BOU

Periodic Comet Schwassmann-Wachmann 1

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 08 03.04	S	13.1	AC	25.4	J	6	143	0.3	6			BOU
1990 08 19.93	t[	15.0	AC	40.0	L	5						MER
1990 08 21.94	t[	15.0	AC	40.0	L	5						MER

Periodic Comet Schwassmann-Wachmann 1 [cont.]

DATE (UT)	MM MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 08 23.09	S[13.0	AC	25.4	J	6	143	! 1.0				BOU
1990 08 24.09	S[13.5	AC	45.0	L	4	119	! 1.0				BOU
1990 08 26.07	S 13.7	AC	106.0	L	3	179	1.2	0/			BOU
1990 09 26.12	S 12.8:	AC	25.4	J	6	115	1	1/			BOU
1990 12 06.81	t[16.0	AC	40.0	L	5						MER
1991 01 14.76	S[13.0	AC	25.4	J	6	115	! 1.0				BOU
1991 08 21.05	S 12.4	GA	25.4	J	6	88	1.2	0/			BOU
1991 09 13.09	S[13.0	AC	25.4	J	6	115	! 1.0				BOU
1991 09 14.09	S[13.0	AC	25.4	J	6	143	! 1.0				BOU
1991 09 14.93	i[16.0	AC	40.0	L	5						MER
1991 12 09.82	S 13.2	AC	25.4	J	6	115	0.4	6/			BOU
1991 12 10.85	S 13.3	AC	25.4	J	6	115	0.5	5			BOU
1992 02 29.81	S[13.0	AC	25.4	J	6	115	! 1.0				BOU
1992 12 16.76	t[16.0	AC	40.0	L	5						MER
1992 12 29.94	t[16.0	AC	40.0	L	5						MER
1993 01 14.82	t[16.0	AC	40.0	L	5						MER
1993 02 15.93	s 12.7	AC	40.0	L	5		0.5	4			MER
1993 02 22.83	S 13.3	HS	25.4	J	6	143	0.8	1/			BOU
1993 02 23.89	S 13.5	AC	25.4	J	6	143	0.7	0/			BOU
1993 03 11.87	s 13.2	AC	40.0	L	5		0.8	2			MER
1993 03 15.88	t[15.5	AC	40.0	L	5						MER
1993 04 17.86	S 12.5:	AC	25.4	J	6	88					BOU
1993 04 18.85	S 12.2	AC	25.4	J	6	88	1.0	1/			BOU
1993 04 19.86	S 12.2	AC	25.4	J	6	88	1.0	1			BOU
1993 04 20.85	S 12.3	AC	25.4	J	6	115	1.0	1			BOU
1993 10 19.10	S[13.0	AC	25.4	J	6	143	! 1.0				BOU
1993 10 23.68	C 15.5	HS	25	W	3						KOJ
1993 10 31.63	C 13.1	HS	25	W	3						KOJ
1993 11 01.61	C 13.3	HS	25	W	3						KOJ
1993 11 09.01	S[13.5	AC	20.3	T	10	167	! 0.5				GAR02
1993 11 18.02	S[13.0	AC	25.4	J	6	143	! 1.0				BOU
1993 12 17.88	O[13.0	HS	13	L	8	69	1				HOR02
1994 01 08.52	C 13.5	GA	60.0	Y	6		0.8	5			NAK01
1994 01 12.23	S 12.8	NP	25.6	L	4	156	1.3	1			MOR
1994 01 15.79	C 13.3	GA	60.0	Y	6		1.45	2			NAK01
1994 01 15.94	[13 :		20.0	R	17	87					LEH
1994 01 16.22	S 13.1	NP	25.6	L	4	156	2.0	0/			MOR
1994 01 17.15	S 13.1	NP	25.6	L	4	156	2.0	0/			MOR
1994 01 20.46	C 12.5	HS	25	W	3						KOJ
1994 01 21.37	S[12.6	AC	20.0	L	5	68	! 1.0				MOD
1994 02 02.25	S 13.5	AC	35.9	L	7	164	0.65	0/			MOD
1994 02 03.58	C 12.2	GA	60.0	Y	6		1.8	2			NAK01
1994 02 04.16	S 13.5	AC	35.9	L	7	164	0.75	0/			MOD
1994 02 04.99	S 12.9	AC	44.5	L	4	230	1.5	2/			BAK01
1994 02 04.99	S 13.3	AC	44.5	L	4	230	1	2			SAR02
1994 02 05.29	S 13.1	AC	20.0	L	5	68	1.1	0			MOD
1994 02 06.00	S 12.8	AC	44.5	L	4	230	2	1			BAK01
1994 02 06.00	S 13.1	AC	44.5	L	4	230	> 0.7	2			SAR02
1994 02 07.56	C 13.3	HS	25	W	3						KOJ
1994 02 10.57	C 12.3	HS	25	W	3		2				KOJ
1994 02 12.20	S 12.7	HS	33.3	L	4	201	0.4	6			KRO02
1994 02 14.14	B 12.4	HS	33.3	L	4	56	0.9	6			KRO02
1994 02 14.14	S 12.5	HS	33.3	L	4	201	0.5	6			KRO02
1994 02 14.83	S 12.6	AC	33.4	L	4	214	1	4			SAR02
1994 02 14.83	S 12.6	AC	33.4	L	4	214	1	5			SZE02
1994 02 14.87	O[12.5	HS	13	L	8	69	1				HOR02
1994 02 15.83	O[12.8	HS	13	L	8	69	1				HOR02
1994 02 16.18	S 12.4	HS	33.3	L	4	201	0.7	2			KRO02
1994 02 16.79	S 13.0	AC	33.4	L	4	214	1.5	1			SZE02

Periodic Comet Schwassmann-Wachmann 1 [cont.]

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR		COMA	DC	TAIL	PA	OBS.
1994 02 18.28		S 13.0	AC	35.9	L	7	164		0.65	1			MOD
1994 02 28.08		S[13.6	AC	35.9	L	7	164	!	0.5				MOD
1994 03 02.54		c 15.6	HS	60.0	Y	6			3.4	0/			NAK01
1994 03 03.81		S 12.1	AC	33.4	L	4	214		1.2	1/			SAR02
1994 03 03.81		S 12.3	AC	33.4	L	4	214		1.4	1			SZE02
1994 03 04.82	!	V 12.7	YF	20.0	T	2			2.5	5			MIK
1994 03 05.79		S 13.0	AC	33.4	L	4	214		1.5	0			SZE02
1994 03 06.11		S 14.1	AC	35.9	L	7	164		0.55	1			MOD
1994 03 08.79		S[13.0	AC	33.4	L	4	214						SZE02
1994 03 10.91		O[12.0	TI	13	L	8	69		1				HOR02
1994 03 11.84		S[13.0	AC	44.5	L	4	82						SAR02
1994 03 12.84		S[13.0	AC	44.5	L	4	82						SAR02
1994 03 13.18		S[13.3	NP	25.6	L	4	156						MOR
1994 03 14.82		S 12.8	AC	44.5	L	4	146		1	0			KIS02
1994 03 14.82		S 13.0	AC	44.5	L	4	146	&	1.4	0			SAR02
1994 03 14.88		S[13.3	AC	20.3	T	10	167	!	0.5				GAR02
1994 03 15.98		S[13.3	AC	20.3	T	10	167	!	0.5				GAR02
1994 03 17.53		c 16.3	GA	60.0	Y	6			2.7	0			NAK01
1994 03 17.99		S[13.0	AC	20.3	T	10	167	!	0.5				GAR02
1994 03 30.52		C 15.3	GA	60.0	Y	6			0.3	7			NAK01
1994 03 30.86	!	V 13.6	YF	20.0	T	2		&	2	5			MIK
1994 03 31.53		C 15.2	GA	60.0	Y	6			0.3	7/			NAK01
1994 03 31.81		S[13.5	AC	33.4	L	4	214						SZE02
1994 04 05.89		[13 :		20.0	R	17	140						LEH
1994 04 07.82		S[13.8	AC	44.5	L	4	146						SAR02
1994 04 07.85	!	V 13.7	YF	20.0	T	2		&	3	3			MIK
1994 04 07.89		S[14.0	AC	44.5	L	4	230						BAK01
1994 04 08.46		c 16.4	GA	60.0	Y	6			1.4	1/			NAK01
1994 04 11.20		S[13.3	NP	25.6	L	4	156						MOR
1994 04 17.47		C 13.7	HS	25	W	3							KOJ
1994 04 29.84	!	V 12.9	YF	20.0	T	2			0.5	8/			MIK

Periodic Comet Väisälä 1 (1992u)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 03 26.95		S 13.9	AC	25.4	J	6	143	0.5	1			BOU
1993 04 19.96		S 14.0	AC	45.0	L	4	148	0.6	1/			BOU
1993 04 20.94		S 14.1	AC	45.0	L	4	148	0.6	0/			BOU

Periodic Comet Slaughter-Burnham (1992w)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 08 24.76	a	C 16.9	GA	60.0	Y	6		0.2			255	NAK01
1993 08 27.77		C 16.3	GA	60.0	Y	6		0.25			260	NAK01
1993 10 11.70		C 17.0:	GA	60.0	Y	6		0.2				NAK01
1993 10 19.69		C 16.9	GA	60.0	Y	6		0.35			255	NAK01
1993 11 14.74		C 16.7	GA	60.0	Y	6		0.3				NAK01
1993 11 18.68		C 16.7	GA	60.0	Y	6		0.25			250	NAK01
1993 12 12.48		C 16.9	GA	60.0	Y	6		0.3		0.03	260	NAK01
1994 01 04.54		C 17.4	GA	60.0	Y	6		0.25				NAK01
1994 02 03.52		C 17.8	GA	60.0	Y	6		0.3				NAK01
1994 03 02.49		C 18.9	GA	60.0	Y	6		0.25			245	NAK01

Periodic Comet Shoemaker-Levy 1 (1990 XV)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1990 11 19.97		S 12.8:	AC	25.4	J	6	115		2			BOU
1990 11 21.81		S 12.9	AC	25.4	J	6	115	1	1			BOU

Periodic Comet Levy (1991 XI)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1991 07 14.02	B	8.2	A	11	L	7	32	4	4			BAR06
1991 07 16.05	& S	8 :	AC	10	L	5	83	& 3	3/			LAD
1991 07 22.05	B	8.5	A	11	L	7	32	4	4			BAR06
1991 08 09.03	M	9.3	GA	25.4	J	6	58	& 2.5	3/			BOU
1991 08 12.05	S	10.5	AC	19	L	6	44	2	0			SZA02
1991 08 21.07	S	9.9	GA	25.4	J	6	58	3.0	0/			BOU
1991 09 12.12	S	10.9	AC	25.4	J	6	58	2.5	0/			BOU
1991 09 13.11	S	10.6	AC	25.4	J	6	58	2.7	1			BOU
1991 09 14.10	S	10.6	AC	25.4	J	6	58	2.5	1			BOU
1991 09 16.10	S	11.0	AC	25.4	J	6	72	2.5				BOU
1991 09 18.13	S	11.0	AC	25.4	J	6	58	2.5	1			BOU
1991 09 19.12	S	11.2	AC	25.4	J	6	58	2.3	1			BOU
1991 09 21.12	S	11.3	AC	25.4	J	6	58	2.3	0/			BOU
1991 11 04.14	S	12.8:	AC	25.4	J	6	88	2	0			BOU

Periodic Comet Shoemaker-Levy 9 (1993e)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 04 17.92	S	13.5	AC	33.4	L	4	214	0.5				SZE02
1993 04 18.96	S	13.1	AC	25.4	J	6	143	0.7	0			BOU
1993 04 19.97	S	13.2	AC	45.0	L	4	113	0.9	0			BOU
1993 04 19.99	S	13.2	AC	25.4	J	6	115	0.8	0/			BOU
1993 04 20.90	S	12.9	AC	25.4	J	6	115	1.0	0			BOU
1993 04 20.96	S	12.8	AC	45.0	L	4	113	1.0	0			BOU
1993 04 21.89	O[	12.0	HS	11	L	8	96	1				KYS
1993 05 12.90	S	14 :	AC	33.4	L	4	61	0.4	0			SZE02
1994 03 15.13	S[	13.4	AC	20.3	T	10	167	! 0.5				GAR02
1994 03 16.13	S[	13.2	AC	20.3	T	10	250	! 0.5				GAR02

Periodic Comet Mueller 5 (1993s)

DATE (UT)	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1993 12 11.80	C	18.5	GA	60.0	Y	6		0.15		0.04	265	NAK01
1993 12 15.57	C	18.4	GA	60.0	Y	6		0.15		0.03	262	NAK01
1993 12 18.61	C	17.9	GA	60.0	Y	6		0.2				NAK01
1994 01 04.58	C	18.1	GA	60.0	Y	6		0.25		0.03	258	NAK01
1994 01 09.53	C	18.0	GA	60.0	Y	6		0.25		0.04	257	NAK01
1994 02 03.57	C	18.2	GA	60.0	Y	6		0.2			251	NAK01
1994 03 17.51	C	18.5	GA	60.0	Y	6		0.2				NAK01
1994 03 30.48	C	18.4	GA	60.0	Y	6		0.25				NAK01
1994 04 03.49	C	18.8:	GA	60.0	Y	6		0.2				NAK01
1994 04 13.45	C	19.0	GA	60.0	Y	6		0.2				NAK01

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— CORRIGENDA —

- In the April 1991 issue, cover caption (*ICQ* **13**, 67), *for* 60-sec exposure *read* 60-min exposure
- In the July 1993 issue, page 106, "Periodic Comet Schaumasse (1992x)", line 7, *for* DC = 1-2 [MOD]. *read* DC = 0-1 [MOD].
- In the January 1994 issue, the observations by MOD for comet Mueller 1993a for the following dates need a note 's' to denote that atmospheric extinction was corrected for (pages 9 and 15): 1993 June 17.14, July 22.36, and Dec. 13.07. His observation of P/Ashbrook-Jackson on page 23 for 1993 July 22.34 should have magnitude method code 'M' instead of 'S'. And on page 25 of the same issue, his observations of P/Schwassmann-Wachmann 1 on 1993 Nov. 9.31 and 10.35 should have DC = 0-1 (instead of 1-2).

The Last 15 Comets to Receive Provisional Letter Designations

Listed below, for handy reference, are the last 15 comets which have been given letter designations (1989a is the first comet to be discovered/recovered in 1989, 1989b is the second comet..., etc.). After the "equal sign" is given the name, preceded by a star (⋆) if the comet is a new discovery (compared to a recovery from predictions of a previously-known short-period comet); a 'sharp' sign (#) is used to indicate a 're-discovery' of a comet that had been lost for many years (or one significantly off from the prediction). Also given are such values as the orbital period (in years) for periodic comets, date of perihelion, T (month/date/year), and the perihelion distance (q, in AU). Four-digit numbers in the second-to-last column indicate the *IAU Circular* containing the discovery/recovery announcement. The last column lists the 3-digit code for short-period comets as used internally in archival data (first 3 characters), and which should be used by those observers contributing data in computer-readable form. [This list updates that in the Jan. 1994 issue, p. 28.]

Desig.			*Comet*	*P*	*T*	*q*	*IAUC*	P/ code
1993q	=		P/Urata-Niijima	6.6	7/13/93	1.46	5882	639
1993r	=	#	P/Spitaler	7.1	1/28/94	2.1	5885	605
1993s	=	⋆	P/Mueller 5	13.8	9/10/94	4.3	5891	955
1993t	=	⋆	P/Kushida-Muramatsu	7.4	12/7/93	2.7	5903	649
1993u	=		P/Wiseman-Skiff	6.5	6/4/93	1.5	5908	641
1993v	=	⋆	McNaught-Russell		3/31/94	0.87	5910	
1994a	=	⋆	P/Kushida	7.3	12/12/93	1.4	5918	731
1994b	=		P/Wild 3	6.9	7/21/94	2.3	5933	632
1994c	=	⋆	Mueller		12/16/93	1.9	5948	
1994d	=	⋆	Shoemaker-Levy		5/27/94	1.16	5962	
1994e	=		P/Russell 2	7.4	10/27/94	2.3	5967	719
1994f	=	⋆	Takamizawa-Levy		5/23/94	1.35	5974	
1994g	=		P/Harrington	6.8	8/23/94	1.57	5982	623
1994h	=		P/Maury	8.7	3/18/94	2.0	5984	810
1994i	=	⋆	Takamizawa		6/28/94	1.95	5986	

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Recent "annual comets":

Desig.		*Comet*	*P*	*T*	*q*	P/ code
1989 XI	=	P/Gunn	6.8	9/24/89	2.5	627
1989 XV	=	P/Schwassmann-Wachmann 1	14.9	10/26/89	5.8	920
1990 XXI	=	P/Encke	3.3	10/28/90	0.33	301
1991 XII	=	P/Machholz	5.2	7/21/91	0.126	522
1991 XVII	=	P/Arend-Rigaux	6.8	10/2/91	1.4	621
1992 XVIII	=	P/Grigg-Skjellerup	5.1	7/22/92	0.995	402
1992 XXI	=	P/Smirnova-Chernykh	8.6	8/5/92	3.6	807
	=	P/Encke	3.3	2/9/94	0.33	301
	=	P/Schwassmann-Wachmann 2	6.4	1/23/94	2.1	616

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