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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 October issue (odd-numbered years); the ICQ is also indexed in *Astronomy and Astrophysics Abstracts* and in *Science Abstracts Section A*.

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Group subscription rates available upon request. Back issues are \$6.00 each — except for "current" *Comet Handbooks*, which are available for \$15.00 (\$8.00 to subscribers if ordered with their ICQ subscription; see above). Up-to-date information concerning comet discoveries, orbital elements, and ephemerides can be obtained by subscribing to the *IAU Circulars* and/or the *Minor Planet Circulars* (via postal mail and also available via computer access); for further information, contact the above e-mail address (or the ICQ at the above postal address).

Cometary observations should be sent to the Editor in Cambridge; all data intended for publication in the ICQ that is not sent via computer electronic mail should be sent on standard ICQ observation report forms, which can be obtained upon request from the Editor. Those who can send observational data (or manuscripts) in machine-readable form are encouraged to do so [especially through e-mail via the computer networks SPAN (6700::DAN) or Internet (ICQ@CFA.HARVARD.EDU), or via floppy disks that can be read on an IBM PC], and should contact the Editor for further information. The ICQ has extensive information for comet observers on the World Wide Web, including the Keys to Abbreviations used in data tabulation (see URL <http://cfa-www.harvard.edu/icq/icq.html>). In early 1997, the ICQ published a 225-page *Guide to Observing Comets*; this edition is now out of print, but a revised edition is under preparation.

Most of the Observation Coordinators (OCs) listed below have e-mail contacts with the ICQ Editor; observers in the general area of such OCs who lack access to e-mail networks may send data to the OC for relay to the ICQ in electronic form.

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EDITORIAL NOTICE.

In 1999, the Minor Planet Center and Central Bureau for Astronomical Telegrams adopted a new scheme whereby 'P/' designations for one-apparition comets are given only to comets whose orbital periods are generally under 30 years (there being a current large gap between 25 and 42 yr for unnumbered short-period comets). Over the last few decades, astronomers had come to consider short-period comets as those with periods under 200 yr, but there is no real dynamical reason to have an artificial boundary there. So, while the ICQ continued with the 200-yr 'P/' criterion in 1999, we immediately change in order to be compliant with the MPC/CBAT system.

Letter to the Editor: The 'Deep Impact' Mission

Ball Aerospace has been awarded a contract to build the Deep Impact spacecraft, which will consist of an observer spacecraft and an impactor (see <http://www.ball.com/aerospace/deepimpact.html>). The impactor is scheduled to hit comet 9P/Tempel 1 on 2005 July 4. I am assisting Dr. Lucy McFadden, University of Maryland, in setting up an amateur-observer network to obtain as much data on comet 9P as we can prior to the impact.

We are looking for advanced CCD observers to start monitoring the comet in March of this year. We feel that the minimum requirement for obtaining useful observations of this comet are as follows: Telescope with a minimum aperture of 25 cm, a good quality CCD camera, "standard" *V* and *R* filters, and a good working knowledge of CCD image calibration. The observations can be transmitted to the University of Maryland and will be posted on an observer web-page there.

We would appreciate any assistance that observers can give us. Potential observers can contact us via e-mail at gemerson@ball.com or mcfadden@astro.umd.edu.

— Gary Emerson (*Systems Engineer, Ball Aerospace*)

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EDITORIAL NOTE: The special Proceedings issue for the IWCA II has been postponed to the July issue, due to the large amount of editing necessary for numerous papers.

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Tabulation of Comet Observations

Due to time constraints, those observations contributed for this issue on paper will appear in the April issue.

We have added a new code for CCD observations obtained by K. Kadota at Ageo, Saitama, Japan, and measured by S. Yoshida: YOS05. We formerly gave this as YOS04, but now YOS04 is only used for the photometry obtained entirely by Yoshida (usually visual). Note that the team of Kadota/Yoshida has been involved in previous CCD observations published in the *ICQ* under code YOS04 (as has been occasionally stated in the Descriptive Information).

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

◇ *Comet C/1995 O1 (Hale-Bopp)* ⇒ 1999 Dec. 4: "outburst has dissipated somewhat, and comet has faded; at 180×, coma appears quite flat, both in texture and cond., resembling a circular disk" [RAE].

◇ *Comet C/1998 K2 (LINEAR)* ⇒ 1999 Dec. 3.61: GUIDE 7.0 software used for photometry [NAK01].

◇ *Comet C/1998 M3 (Larsen)* ⇒ 2000 Feb. 5.2 and 7.2: "w/ 1.52-m *f*/8 telescope (+ Tektronics TK1024AB CCD + Johnson *R* filter; 0".4/pixel) at the National Astronomical Observatory, Calar Alto, Spain, we lacked the ability to track on the object, and had to expose longer than the rate of motion of the comet allowed, considering the seeing conditions (1".5 at both nights); yet we clearly detected the comet's motion by comparing individual images taken at different times, and though we were not able to obtain any confident measurements of the comet's magnitude because of the low surface density of the coma, we found a rough estimation of the coma diameter in the direction ⊥ to its motion to be 20" (50 pixels), which corresponds to 10⁵ km at a geocentric distance of 6.9 AU" [P. B. Lacerda (Obs. Astron. of Lisbon, Portugal), N. Peixinho (Inst. Astroph. of Granada, Spain), Maarten Roos-Serote (Observatorio Astronomico de Lisboa)].

◇ *Comet C/1998 P1 (Williams)* ⇒ 1999 Apr. 16.93: comet not seen; "conservative *m*₁ estimate, as I did not have access to faint comparison chart"; alt. 23° [WAR01].

◇ *Comet C/1999 H1 (Lee)* ⇒ 1999 Sept. 4.91: "in the outer coma is the bright star TT 3750.00822 (mag 9.8), which disturbed obs." [LEH]. Sept. 9.05, 12.03, and Oct. 17.06: software Megastar 4.0 (GSC 1.1) used for ref (Hipparcos/Tycho comparison stars) [LEP]. Sept. 9.05 and 12.03: w/ 14-cm D, 6-min exp. on TP 2415H emulsion shows anti-tail 0.5 long in p.a. 99° [LEP]. Oct. 1.82: comet only ≈ 2° from C/1999 S3 [LEH]. Oct. 12.83: w/ 8-cm R, "comet barely visible (visibility clearly inferior to NGC 205)"; w/ 20-cm T, comet faint faint, but clearly seen [GRA04]. Oct. 16.86: not visible with 7.0-cm R [GRA04]. Oct. 28.40: GUIDE 6.0 software used for photometry [NAG08]. Oct. 31.74: comet involved w/ 12th-mag star [MEY]. Nov. 2.85: comet enhanced w/ Swan-band filter [MOR09]. Nov. 8.78, 25.74, and 27.75: "beginning 1999 June 23, I stopped using the USNO-A magnitudes and started using Mikuž's system; I now use an ST-7 CCD, binned 2×2, with all comparison stars extracted from catalogue on CD-ROM Guide 6.0" [LIG]. Nov. 9.49: GUIDE 7.0 software used for photometry [YOS02].

- ◊ *Comet C/1999 J2 (Skiff)* \Rightarrow 1999 Nov. 10.39: GUIDE 7.0 software used for comparison-star mags [NAK01].
- ◊ *Comet C/1999 J3 (LINEAR)* \Rightarrow 1999 July 17.95: "outburst?; slight enhancement w/ a Lumicon Swan Band Filter" [MEY]. Oct. 15.17: "only faintly visible due to thin clouds and low alt." [GRA04]. Nov. 20.40: severe moonlight interference [RAE]. Dec. 16.61: comet has faded considerably since last obs.; comet barely brighter than background sky [RAE].
- ◊ *Comet C/1999 K8 (LINEAR)* \Rightarrow 1999 Nov. 6.86: comet close to star of 12th mag [BOU]. Nov. 10.84: comet close to star of 14th mag [BOU].
- ◊ *Comet C/1999 L3 (LINEAR)* \Rightarrow 1999 Dec. 17.85: GUIDE 7.0 software used for comparison-star mags [YOS02].
- ◊ *Comet C/1999 N2 (Lynn)* \Rightarrow 1999 Aug. 1.85: comet looks like globular cluster [LEH].
- ◊ *Comet C/1999 S3 (LINEAR)* \Rightarrow 1999 Oct. 31.75: bright and starlike central cond. surrounded by a faint outer coma [MEY]. Nov. 2.31: in 25.6-cm $f/5$ L (169 \times), starlike nucleus of mag ≈ 14.5 , w/ 2' tail in p.a. 110° [BIV]. Nov. 8.79, 25.77, 27.78, 29.83, Dec. 6.82, and 30.79: "beginning 1999 June 23, I stopped using the USNO-A magnitudes and started using Mikuž's system; I now use an ST-7 CCD, binned 2 \times 2, with all comparison-star mags extracted from catalogue on CD-ROM Guide 6.0" [LIG]. Nov. 9.57 and Dec. 11.49: GUIDE 7.0 software used for comparison-star mags [YOS02]. Nov. 27.81: "comet barely visible, but seen at correct location; m_1 deduced from the AAVSO SS Cyg seq." [GRA04]. Nov. 28.40: GUIDE 6.0 software used for comparison-star mags [NAG08].
- ◊ *Comet C/1999 S4 (LINEAR)* \Rightarrow 1999 Nov. 6.96: "reality (and motion) of observed object confirmed in 50-cm reflector at 226 \times "; all obs. Nov. 6-17 from MPC station 965 in Poio, Portugal [BOU]. Nov. 7.87-Dec. 30.80: "beginning 1999 June 23, I stopped using the USNO-A magnitudes and started using Mikuž's system; I now use an ST-7 CCD, binned 2 \times 2, with all comparison-star mags extracted from catalogue on CD-ROM Guide 6.0" [LIG].
- ◊ *Comet C/1999 T2 (LINEAR)* \Rightarrow 1999 Dec. 9.08: central cond. of dia. 3" and mag 17.3; coma was symmetrical with an uncertain hint of a very faint, short tail in p.a. 103° [ROQ].
- ◊ *Comet C/1999 U4 (Catalina-Skiff)* \Rightarrow 1999 Nov. 3.13: central cond. of dia. < 3" and mag 17.0; coma appeared symmetrical and sharply bounded [ROQ]. Dec. 6.08: central cond. of dia. < 2" and mag 17.7; coma appeared faint and very diffuse, but symmetrical [ROQ].
- ◊ *Comet 10P/Tempel 2* \Rightarrow 1999 Nov. 1.51 and 7.43: GUIDE 7.0 software used for comparison-star mags [YOS02].
- ◊ *Comet 37P/Forbes* \Rightarrow 1999 July 11.00: suspected object at predicted position; low alt., clouds, and incoming twilight prevented confirmation [MEY].
- ◊ *Comet 59P/Kearns-Kwee* \Rightarrow 1999 Nov. 19.76: w/ 18-cm $f/5.5$ reflector + CCD, wide tail toward W [YOS05].
- ◊ *Comet 63P/Wild 1* \Rightarrow 1999 Nov. 30.85: seems to have a tail [YOS05].
- ◊ *Comet 106P/Schuster* \Rightarrow 1999 Sept. 1.55: CCD image w/ 1.0-m $f/8$ reflector shows 15" coma, diffuse tail 50" long in p.a. 275°; mag = 16.5R using USNO-A2.0 catalogue ("apart from the fact that the magnitudes in this [catalogue] are poor, I'm not sure what form of magnitude I'm measuring; I'd doubt m_2 was that bright, m_1 could be") [Robert H. McNaught, Siding Spring Observatory]. Nov. 9.47: GUIDE 7.0 software used for comparison-star mags [YOS02]. Nov. 28.52: wide tail [YOS05]. Dec. 2.08: central cond. of dia. > 2" and mag 15.5; coma was somewhat asymmetrical toward the tail; tail appeared diffuse with an embedded, narrow core centered along the initial 35" of its length [ROQ]. Dec. 12.05: central cond. of dia. > 2" and mag 15.4; coma appeared asymmetrical in p.a. 69°; the main body of the tail was diffuse with a narrow central core that extended over 135" along the initial portion of the diffuse-tail length [ROQ].
- ◊ *Comet 114P/Wiseman-Skiff* \Rightarrow 1999 Nov. 5.10: central cond. of dia. 3" and mag 16.0; coma appeared symmetrical at all brightness levels w/o apparent substructure [ROQ]. Nov. 21.53 and 28.59: seems to have a tail [YOS05]. Dec. 13.07: central cond. of dia. > 2" and mag 14.8; the coma was slightly asymmetrical in p.a. 90°, w/o internal structure [ROQ]. Dec. 30.81: "beginning 1999 June 23, I stopped using the USNO-A magnitudes and started using Mikuž's system; I now use an ST-7 CCD, binned 2 \times 2, with all comparison stars extracted from catalogue on CD-ROM Guide 6.0" [LIG].
- ◊ *Comet 141P/Machholz 2* \Rightarrow 1999 Oct. 28.23, Nov. 2.24, and 8.23: "obs. of component A quite difficult and somewhat uncertain, but apparently no faint background stars (from Digital Sky Survey) were at this precisely predicted place for the comet" [BIV]. Oct. 31.74: "obs. in Oct. 1999 ICQ 99 (Whole No. 112) of component A; at the time of observation I didn't know of the recovery of component D" [HAS02]. Nov. 2.41: CCD image w/ 1.0-m $f/8$ reflector shows that "fragment D has brightened dramatically in the last 2 weeks and is now very significantly brighter than fragment A; fragment A is still brightening only very slowly; I searched $\approx 40'$ beyond D along the line of variation, but there was nothing visible to about a mag fainter than that of A" [Robert H. McNaught, Siding Spring Observatory]. Nov. 3.4 and following dates: "CCD frames showed no trace of fragment A; on Nov. 10.4 frames, I barely saw a very faint 'patch' at the predicted position of A, but it was impossible to get any astrometry due to its faintness and crowded field stars (it was in the Milky Way!); bad weather and moonlight didn't allow me to observe it for 20 days, and both fragments changed dramatically their brightness and figure (central cond.); on Nov. 30 frames, fragment A was bright, whereas D was completely diffused and impossible to get astrometry of; although D was diffuse (I couldn't specify where the center was!), it was clearly visible and I measured the brightness; on Dec. 3 and 8, the situation was same" [NAK01]. Nov. 7.24 and 8.22: "component D clearly seen (in contrast to nucleus A)" on these dates, and likely also

($m_1 \approx 13$) on Nov. 2.24" [BIV]. Nov. 8.82, 9.82, and 10.81: "not 100% certain about reality of observed fragment A; low altitude and generally poor seeing, but during brief moments of good seeing, suspect remained diffuse; on Nov. 10, Bev Ewen-Smith was taking simultaneous CCD frames with a 15-cm telescope, and the marginal frames show that the comet appeared faintly visible near the expected position, where I also had seen it visually (a check with the Digital Sky Survey was not entirely convincing in this crowded field, but there appeared to be nothing stellar/nebular brighter than mag 15-16 where we saw/imaged the comet, so I assume that it was indeed the comet that I had seen)" [BOU]. Nov. 10.42, Dec. 3.40, 8.40: GUIDE 7.0 software used for comparison-star mags [NAK01]. Nov. 12.70: w/ 25.4-cm $f/1.8$ D + Kodalith orthochromatic film, component A shows 1'5 coma and mag 13.3; component D shows 2'5 coma and mag 12.0 [Michael Jäger near Vienna, Austria]. Nov. 26.22: w/ 25.6-cm L (84 \times), "component D seen under not-very-good sky conditions; component A may not have been significantly brighter" [BIV]. Nov. 26.68: w/ 25.4-cm $f/1.8$ D + Kodalith orthochromatic film, component A shows 2' coma and mag 11.8; component D shows 2'5 coma and mag 12.3 [Michael Jäger near Vienna, Austria]. Nov. 26.71: comet close to 10th-mag star; brightness of suspect probably underestimated [MEY]. Nov. 27.22: w/ 25.6-cm L (84 \times), "under clearer skies, component A was brighter and more condensed than component D" [BIV]. Nov. 27.23: w/ 25.6-cm L (84 \times and 169 \times), components A and D clearly seen, both elongated in p.a. 60° (comp. A brighter, larger, and more condensed)" [BIV]. Nov. 27.68: w/ 25.4-cm $f/1.8$ D + Kodalith orthochromatic film, component A shows 2'5 coma and mag 11.7; component D shows 2'5 coma and mag 12.0 [Michael Jäger near Vienna, Austria]. Nov. 27.73: "we definitely observed at the location of component A, though the obs. was difficult; Michael Jaeger has photographed component A at mag ≈ 14 at this position" [HAS02]. Nov. 28.39 and Dec. 11.38: GUIDE 6.0 software used for comparison-star mags [NAG08]. Nov. 30: very faint object not enhanced by Swan Band filter [SEA].

Dec. 8.68: w/ 25.4-cm $f/1.8$ D + Kodalith orthochromatic film, component A shows 2'5 coma and mag 10.8; component D shows 2' coma and mag 12.0 [Michael Jäger near Vienna, Austria]. Dec. 9.68: w/ 25.4-cm $f/1.8$ D + Kodalith orthochromatic film, component A shows 2'7 coma and mag 10.8; component D shows 2' coma and mag 12.0 [Michael Jäger near Vienna, Austria]. Dec. 11.43: GUIDE 7.0 software used for comparison-star mags [YOS02]. Dec. 11.68: w/ 25.4-cm $f/1.8$ D + Kodalith orthochromatic film, component A shows 3' coma and mag 10.6; component D shows 2'5 coma and mag 11.8; "over ten nights from Nov. 26 to Dec. 11, component A brightened ≈ 1.5 mag, while component D remained close to mag 12.0 ± 0.3 (only the inner coma changed); there was generally a moderately condensed inner coma of diameter $\approx 1'$ with a faint outer halo up to 2'5 in diameter; most photos show a faint trail of material linking A and D" [Michael Jäger near Vienna, Austria]. Dec. 23.39: clouds hampered m_1 est. [YOS04]. Dec. 29.99: Guide v.07 software used for ref. stars [DES01]. Dec. 30.25: w/ 25.6-cm L (84 \times and 169 \times), component A bright and large, but D seen at the limit [BIV].

◇ Comet 142P/Ge-Wang \Rightarrow 1999 Sept. 14: "I scanned over a region covering $\approx \pm 4$ days to our usual limiting mag of ≈ 21.0 (conservatively above our actual threshold); I didn't see the comet, though I looked pretty thoroughly" [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; "N" = notes [* = correction to observation published in earlier issue of the *ICQ*; an exclamation mark (!) in this same location indicates that the observer has corrected his estimate in some manner for atmospheric extinction (prior to September 1992, this was the standard symbol for noting extinction correction, but following publication of the extinction paper — July 1992 *ICQ* — this symbol is only to be used to denote corrections made using procedures different from that outlined by Green 1992, *ICQ* 14, 55-59, and in Appendix E of the *ICQ Guide to Observing Comets* — and then only for situations where the observed comet is at altitude $> 10^\circ$); '&' = 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].

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

"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

diaphragm size (i.e., the coma is almost always larger than such a specified diaphragm size). "DC" = degree of condensation on a scale where 9 = stellar and 0 = diffuse (preceded by lower- and upper-case letters S and D to indicate the presence of stellar and disklike central condensations; cf. July 1995 issue, p. 90); a slash (/) indicates a value midway between the given number and the next-higher integer. "TAIL" = estimated tail length in degrees, to 0.01 degree if appropriate; again, an ampersand indicates a rough estimate. Lower-case letters between the tail length and the p.a. indicate that the tail was measured in arcmin ("m") or arcsec ("s"), *in which cases the decimal point is shifted one column to the right*. "PA" = estimated measured position angle of the tail to nearest whole integer in degrees (north = 0°, east = 90°). "OBS" = the observer who made the observation (given as a 3-letter, 2-digit code).

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

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Key to observers with observations published in this issue, with 2-digit numbers between Observer Code and Observer's Name indicating source [07 = Comet Section, British Astronomical Assn.; 16 = Japanese observers (c/o Akimasa Nakamura, Kuma, Japan); 23 = Czech group (c/o P. Pravec and V. Znojil); 32 = Hungarian group (c/o K. Sarneczky); 37 = Ukrainian Comet Section (c/o A. R. Baransky and K. I. Churyumov); 42 = Belarus observers, c/o V. S. Nevski, Vitebsk; etc.]. Those with asterisks (*) preceding the 5-character code are new additions to the Observer Key:

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BOU 11	Reinder J. Bouma, The Netherlands	OSS 18	Piotr Ossowski, Poland
CER01 23	Jakub Černý, Praha, Czech Rep.	PAN 07	Roy W. Panther, England
COM 11	Georg Comello, The Netherlands	PAR03 18	Mieczyslaw L. Paradowski, Poland
DES01	Jose G. de Souza Aguiar, Brazil	PLE01 18	Janusz Pleszka, Poland
DRA02 18	Michal Drahos, Krakow, Poland	POW01 18	Jacek Powichrowski, Poland
DUS 18	Grzegorz Duszpanowicz, Sweden	RAE	Stuart T. Rae, New Zealand
FIL04 18	Marcin Filipek, Poland	ROM 42	Aleksandr M. Romancev, Belarus
GET 07	Stephen Getliffe, England	ROQ	Paul Roques, AZ, U.S.A.
GRA04 24	Bjoern Haakon Granslo, Norway	SAD 18	Piotr Sadowski, Poland
*HAL05 23	Michal Haltuf, Czech Republic	SAN04 38	Juan Manuel San Juan, Spain
HAS02	Werner Hasubick, Germany	SAR02 32	Krisztián Sárnecky, Hungary
HOR02 23	Kamil Hornoch, Czech Republic	SEA 14	David A. J. Seargent, Australia
IVA03 37	Vladimir Ivanov, Russia	SEG 38	Carlos Segarra, Valencia, Spain
JAR01 18	Marcin Jarski, Niezabitow, Poland	SHA02 07	Jonathan D. Shanklin, England
KID01 18	Krzysztof Kida, Elblag, Poland	SHU 42	Sergey E. Shurpakov, Belarus
KOS	Attila Kósa-Kiss, Salonta, Romania	SIW01 18	Michal Siwak, Tuchow, Poland
KRA04 23	Lukáš Král, Czech Republic	SMY 18	Jaroslav Smyslo, Poland
KUB 23	Pavel Kubicek, Czech Republic	SOU01 35	Willian Carlos de Souza, Brazil
KWI 18	Maciej Kwinta, Krakow, Poland	SPE01 18	Jerzy Speil, Poland
LEH	Martin Lehky, Czechoslovakia	SUZ02 16	Masayuki Suzuki, Japan
LEP 39	Xavier Leprette, France	SVE 23	Milan Švehla, Czech Republic
LIB 23	Jan Libich, Czech Republic	SWI 18	Mariusz Swietnicki, Poland
LIG	Rolando Ligustri, Latisana, Italy	WAR01	Johan Warell, Sweden
*MAN03	Eric Mandon, France	WLO 18	Robert Wlodarczyk, Poland
MAR02 13	Jose Carvajal Martinez, Spain	YOS02 16	Katsumi Yoshimoto, Japan
MEN03 07	Haldun I. Menali, MA, U.S.A.	YOS04 16	Seichi Yoshida, Japan
MEY 28	Maik Meyer, Germany	*YOS05 16	S. Yoshida and K. Kadota, Japan
MIG01 18	Adam Migulski, Jasien, Poland		

Comet C/1995 01 (Hale-Bopp)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 13.39			S[12.5	TT	25	L	5	75	! 1.0				RAE
1999 11 30.49			S 13.0	GA	25.4	L	4	71					SEA
1999 12 10.41			S 12.9	HS	25	L	5	75	0.9	2/			RAE

Comet C/1997 BA6 (Spacewatch)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 30.48			S 12.8	GA	25.4	L	4	71					SEA

Comet C/1998 K2 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 12 03.61	x	C	16.5	HV	60.0	Y	6	a240	0.7				NAK01

Comet C/1998 M1 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 10.49		C	19.1	GA	60.0	Y	6	a240	0.25				NAK01

Comet C/1998 M5 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 04 05.87	x	S	10.8:	TT	15.0	L	9	33	& 5	d1			PAR03
1999 11 04.78		C	15.4	TJ	18.0	L	6	a 60	0.55				YOS05
1999 11 16.85	a	C	14.7	GA	60.0	Y	6	a120	1.3				NAK01
1999 11 30.83		C	15.5	TJ	18.0	L	6	a 40	0.65				YOS05
1999 12 07.94	a	C	14.9	GA	60.0	Y	6	a120	1.2				NAK01
1999 12 09.80		C	15.5	TJ	18.0	L	6	a 40	0.45				YOS05
1999 12 25.81		C	15.6	TJ	18.0	L	6	a 60	0.65				YOS05
1999 12 27.78		C	15.3	TJ	18.0	L	6	a 60	0.5				YOS05

Comet C/1998 P1 (Williams)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 04 16.93		S[13.0	HS	44.5	L	5	220						WAR01

Comet C/1998 T1 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 12 21.85		C	15.3	TJ	18.0	L	6	a 60	0.45				YOS05
1999 12 27.85		C	15.7	TJ	18.0	L	6	a 90	0.5				YOS05

Comet C/1998 W3 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 16.73		C	18.0	GA	60.0	Y	6	a240	0.4				NAK01

Comet C/1999 E1 (Li)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 16.84		C	16.7	GA	60.0	Y	6	a240	0.45		0.8m	260	NAK01
1999 12 07.74		C	16.1	HS	18.0	L	6	a 60	0.35				YOS05
1999 12 07:83		C	16.6	GA	60.0	Y	6	a240	0.65		1.5m	245	NAK01
1999 12 09.77		C	16.2	TJ	18.0	L	6	a 60	0.4				YOS05

Comet C/1999 F2 (Dalcanton)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 07 04.89		B	14.7	HS	42	L	5	162	0.5	4			LEH
1999 07 17.92		B	14.8	HS	42	L	5	162	0.5	4			LEH
1999 08 01.88		B	14.6	HS	42	L	5	162	0.6	4			LEH
1999 08 02.86		B	14.6	HS	42	L	5	162	0.5	4			LEH

Comet C/1999 H1 (Lee)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 04 20.97		S	9.5	VN	14.3	L	6	78	1	2			AM001
1999 04 21.92		S	9.0	VN	14.3	L	6	78	2	2			AM001
1999 04 21.93		S	9.1	VN	5.0	R	12	50	3	0			AM001
1999 05 17.82	x\$	B	6.8	S	6.6	B		20	10	s3			PLE01
1999 05 17.83	x\$	S	6.5:	TT	10.0	B		20	9	2			DRA02
1999 05 18.83	x\$	B	6.7	S	6.6	B		20	9	s3			PLE01
1999 05 18.84	x\$	S	6.6	TT	10.0	B		20	7	2			DRA02
1999 05 19.83	x\$	B	6.6	S	6.6	B		20	8	s3			PLE01
1999 05 19.83	x\$	S	7.0	TT	6.0	B		20	7	4			DRA02
1999 05 19.83	x\$	S	7.1	TT	6.6	B		20	7	4			DRA02
1999 05 19.84	x\$	S	7.1	TT	10.0	B		20	8	2/			DRA02
1999 05 22.83	x\$	B	6.5	S	6.6	B		20	8	s3			PLE01
1999 05 23.83	\$	S	6.8	S	8	R	7	35	4	3			KWI
1999 05 23.84	x&	B	8.0:	TT	8.0	B		15		4			DUS
1999 05 24.84	\$	S	6.7	S	8	R	7	35	4	3/			KWI
1999 05 24.84	x&	B	7.9	TT	8.0	B		15		4			DUS
1999 05 28.84	x\$	B	6.7	S	6.6	B		20	6	s4			PLE01
1999 05 29.84	x\$	B	6.6	S	6.6	B		20	6	s4			PLE01
1999 05 31.02		S	8.0:	AA	10.8	L	4	35	5	0			MEN03
1999 07 31.06	x	S	6.5	TT	6.0	B		20	5	s5			DRA02
1999 07 31.06	x\$	B	6.6	S	10.0	B		25	7	s5			PLE01
1999 08 05.04	x	S	7.2:	S	11.0	L	7	54	& 4.5	5			SAD
1999 08 07.01	x	B	7.0:	TT	8.0	B		15		7			DUS
1999 08 07.04		M	6.8	TT	5.0	B		10	8	4			LEH
1999 08 07.06	x	M	6.5	TT	6.0	B		20	6	S6			DRA02
1999 08 07.06	x	M	6.6	TT	10.0	B		25	6	S6/			DRA02
1999 08 07.07	xa	B	6.9	S	10.0	B		25	8	d6			PLE01
1999 08 08.06	xa	B	7.0	S	10.0	B		25	8	d5			PLE01
1999 08 09.06		M	7.1	TT	5.0	B		10	7	4			LEH
1999 08 09.06	x	S	7.3	TT	6.0	B		20	3.7	S6			DRA02
1999 08 09.06	xa	B	7.1	S	10.0	B		25	6	d5			PLE01
1999 08 10.09		M	7.1	TT	5.0	B		10	7	4			LEH
1999 08 14.05	x	B	7.2:	S	6.0	B		20	&10	5/			WLO
1999 08 14.06	x	S	6.8	TT	8	R	7	35	4	5			KWI
1999 08 14.07	xa	B	7.3	S	6.6	B		20	5	d6			PLE01
1999 08 14.87	x	B	7.4	TT	8.0	B		15	5	6			DUS
1999 08 15.04	x	B	7.6:	S	11.0	L	7	32	2.3	S6/			SAD
1999 08 15.05	x	S	7.7:	S	6.0	B		20	& 4	5			SAD
1999 08 15.05	x	S	8.0:	S	5.0	B		7	& 4	6			SAD
1999 08 15.12		S	7.3	AA	7.0	B		15	7	3			PAN
1999 08 16.10	x&	B	7.9	TJ	5.0	B		12	& 5	d3/			SMY
1999 08 16.91	x	B	7.4	TT	8.0	B		15	7	6			DUS
1999 08 17.89	x	B	7.6	TT	8.0	B		15	5	6			DUS
1999 08 18.05	x	B	7.4:	S	6.0	B		20	&10	5			WLO
1999 08 18.13	x&	B	7.9	TJ	5.0	B		12	& 5	d3/			SMY
1999 08 18.89	x	B	8.1	TT	8.0	B		15	5	6			DUS
1999 08 19.93	x	B	8.1	TT	8.0	B		15	5	5			DUS
1999 08 20.01	x	B	7.5:	S	6.0	B		20	&10	5			WLO
1999 08 20.06	x	B	8.1	TT	8.0	B		20	4.2	S4			SPE01
1999 08 20.06		M	8.2	TT	20	L	4	42	4	4			LEH
1999 08 20.11		S	7.3	AA	7.0	B		15	5	2			PAN
1999 08 20.95	x	B	8.1	TT	8.0	B		15	5	5			DUS
1999 08 21.01	x	S	8.0	TT	6.0	B		20	6	D3			PAR03
1999 08 21.06	x	B	7.5:	S	18	L	7	40	&10	5/			WLO
1999 08 21.96	x	B	7.9	TT	8.0	B		15	5	6			DUS
1999 08 22.11		S	7.8	AA	7.0	B		15	6	2			PAN
1999 08 22.13	x&	B	8.0	TJ	5.0	B		12	6	d3/	&0.05	46	SMY
1999 08 22.93	x	B	8.1	TT	8.0	B		15		6			DUS
1999 08 23.05	x	M	7.9	TT	6.0	B		20	3.7	S6			DRA02
1999 08 23.06	x	B	7.2	TT	6.5	R	6	28	& 4	4			SWI
1999 08 23.06	x	B	7.5:	S	6.0	B		20	& 8	4/			WLO
1999 08 23.06		M	7.8	TT	20	L	4	42	5.5	6	0.15	115	LEH
1999 08 23.08	xa	B	7.7	S	6.6	B		20	4	d6			PLE01
1999 08 24.06	x	B	7.6:	S	6.0	B		20	& 8	4			WLO
1999 08 24.06		M	7.8	TT	20	L	4	42	5.7	6	0.42	124	LEH

Comet C/1999 H1 (Lee) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 08 24.07	x	B	8.3	TT	8.0	B		20	4.4	S5			SPE01
1999 08 24.13	x	B	8.2	TJ	5.0	B		12	6	s3/	0.09	41	SMY
1999 08 25.02	x	B	8.0	TT	8.0	B		15	5	5			DUS
1999 08 25.02	x	S	8.5:	S	11.0	L	7	54	2.4	s5/			SAD
1999 08 25.04	x	S	8.7:	S	11.0	L	7	54	3.0	d3/			SAD
1999 08 25.05	x	S	8.3:	S	6.0	B		20	& 4	3/			SAD
1999 08 25.08	x	M	8.0	TT	10.0	B		25	3.7	s4			DRA02
1999 08 25.08	xa	B	7.9	S	10.0	B		25	4	s5			PLE01
1999 08 25.15	x	B	8.2	TJ	5.0	B		12	6	s3/	0.09	41	SMY
1999 08 26.08	x	B	8.3:	TJ	8	L	7	35	& 4	d2			BOH02
1999 08 26.14	x	B	8.2	TJ	5.0	B		12	7	s3/	0.09	41	SMY
1999 08 27.05	x	S	8.7:	S	11.0	L	7	54	3.0	3/			SAD
1999 08 29.14	x	B	8.2	TJ	5.0	B		12	6	3	0.08		SMY
1999 09 01.15	x	B	8.3	TJ	5.0	B		12	6	s3			SMY
1999 09 03.84	x	S	8.4	TT	14.7	L	6	70	5	3/			SIW01
1999 09 03.86	x	S	7.5	TT	10.0	B		25	8	4	0.19	95	DRA02
1999 09 03.88	x	S	7.9	TT	10.0	M	10	20	7	D3			PAR03
1999 09 03.89	x	B	8.6	TT	8.0	B		15	10	5	0.47	290	DUS
1999 09 03.89	x	B	8.6:	S	11.0	L	7	32	5.7	6			SAD
1999 09 03.90	x	S	7.9	TT	6.0	B		20	9	D3			PAR03
1999 09 03.91		M	8.4	TT	10	B	4	25	7.2	4			LEH
1999 09 03.92	x	S	8.1	TT	5.0	B		7	9	d2/			POW01
1999 09 03.94	x	B	7.6	TT	25	L	6	108	5	3			SWI
1999 09 03.97		S	8.0	S	8	R	7	35	8	5			KWI
1999 09 03.98	xa	B	7.9	S	10.0	B		25	6	s4/			PLE01
1999 09 04.00	x	S	7.6	TT	9	L	10	70	4.5	D3			JAR01
1999 09 04.02	x	B	8.0:	S	18	L	7	40	& 8	4			WLO
1999 09 04.03		M	8.7	TI	15	L	4	43	& 8	5			HAL05
1999 09 04.83	x	S	8.3	TT	14.7	L	6	70	5	4	&1	99	SIW01
1999 09 04.84	x	S	8.1	TT	10.0	B		25	7	3			DRA02
1999 09 04.85	x	B	8.5	TT	15	L	5	37	8	5	0.33	102	DUS
1999 09 04.91		M	8.5	TT	42	L	5	81	6	4			LEH
1999 09 04.91	x	S	8.8:	S	11.0	L	7	32	5.5	d5/			SAD
1999 09 05.02	x	B	8.2:	S	6.0	B		20	& 7	4			WLO
1999 09 05.03	x	S	8.0	TT	5	R	4	20	3.5	D2	0.01	270	JAR01
1999 09 05.78		S	7.7:	HS	31.7	L	6	63	4	5			MIY01
1999 09 05.85	x	B	8.7	TT	15	L	5	37	7	4	0.45	102	DUS
1999 09 05.87	x	S	7.9	TT	6.0	B		20	10	D3			PAR03
1999 09 05.93		M	8.6	TT	10	B	4	25	6	4			LEH
1999 09 05.97		M	8.5	S	6.0	B	5	20	4	2			KUB
1999 09 06.15	x	B	8.3	TJ	5.0	B		12	6	s3			SMY
1999 09 06.83	x	B	8.7	TT	15	L	5	37	8	4	0.66	90	DUS
1999 09 06.88		M	8.4	TT	10	B	4	25	7	4			LEH
1999 09 06.88	x	S	8.6	TT	14.7	L	6	70	5	3/			SIW01
1999 09 06.99		S	8.1	S	8	R	7	35	5	5			KWI
1999 09 07.88	x	B	8.7	TT	15	L	5	37		4			DUS
1999 09 08.09	x	M	8.5	TT	8.0	B		20	5.6	s3			SPE01
1999 09 08.10	x	B	8.1	TT	15.0	L	5	44	5.8	s4			SPE01
1999 09 08.13		S	8.1	AA	7.0	B		15	4	1			PAN
1999 09 08.85	x	B	8.7	TT	15	L	5	37	7	4	0.57	94	DUS
1999 09 08.86		M	8.1	TT	10	B	4	25	6.5	4/			LEH
1999 09 08.97	x	B	8.3	TT	6.6	B		20	9	4/			FIL04
1999 09 09.02		S	8.1	S	8	R	7	35	5	4			KWI
1999 09 09.05		B	8.0	TI	8.0	B		11	6	4			LEP
1999 09 09.08	x	B	8.4:	S	6.0	B		20	& 7	3/			WLO
1999 09 09.85	x	B	8.5	TT	15	L	5	37	5	4	0.60	100	DUS
1999 09 09.87		M	8.4	TT	10	B	4	25	5.5	4			LEH
1999 09 09.89	x	S	8.8	TT	14.7	L	6	70	6	4			SIW01
1999 09 09.92	x	B	8.3	TT	6.6	B		20	8	4/			FIL04
1999 09 09.96	x	B	8.1	TT	15.5	L	8	48	6	4	&0.23	90	FIL04
1999 09 09.99		M	8.7	TI	15	L	4	43	5.5	5/			HAL05
1999 09 10.01	x	S	8.2	TT	5	R	4	20	4.5	D3			JAR01
1999 09 10.13		S	8.0	AA	7.0	B		15	4	1			PAN
1999 09 10.15	x	B	8.3	TJ	5.0	B		12	6	d3			SMY
1999 09 10.84	x	B	8.6	TT	15	L	5	37	7	4	0.67	97	DUS

Comet C/1999 H1 (Lee) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 09 10.87		M	8.1	TT	10	B	4	25	5.5	4			LEH
1999 09 10.93	x	S	7.5	TT	6.0	B		20	8	2			DRA02
1999 09 10.95	x	S	8.2	TT	5.0	B		7	10	d2			POW01
1999 09 10.96	xa	B	7.8	S	10.0	B		25	10	s4			PLE01
1999 09 10.97	x	S	8.2	TT	14.7	L	6	70	6	4			SIW01
1999 09 11.02	x	S	8.2	TT	5	R	4	20	3	D3			JAR01
1999 09 11.07	x	S	8.9:	S	11.0	L	7	32	5.9	s4			SAD
1999 09 11.08	x	B	8.1	TT	6.6	B		20	15	4/			FIL04
1999 09 11.08	x	B	8.4:	S	6.0	B		20	& 8	3/			WLO
1999 09 11.09	x	B	8.2	TT	15.5	L	8	48	12	4			FIL04
1999 09 11.13		M	8.0	TT	10	L	4	12	6.5	4/			LEH
1999 09 11.85	x	B	8.7	TT	15	L	5	37	6	4	0.75	97	DUS
1999 09 11.87		M	8.6	TT	10	B	4	25	5	4			LEH
1999 09 11.89		B	8.4	TT	7.6	L	9	35	12				CER01
1999 09 11.94	xa	B	7.6	S	10.0	B		25	9	s3			PLE01
1999 09 11.95		M	8.3	S	11	L	5	25	6	3			KUB
1999 09 11.95	x	S	8.2	TT	5.0	B		7	10	d3			POW01
1999 09 11.96	x	S	7.3	TT	6.0	B		20	8	2			DRA02
1999 09 12.03		B	8.1	TI	8.0	B		11	7	4			LEP
1999 09 12.06		S	8.4	TT	10	B		25					KRA04
1999 09 12.08	x	S	8.2	TT	5.0	B		7	10	d3			POW01
1999 09 12.08	x	S	8.2	TT	8.0	B		20	5.9	s2/			SPE01
1999 09 12.09	x	S	8.4	TT	15.0	L	5	44	6.6	s3/			SPE01
1999 09 12.13		M	8.5	TT	10	L	4	12	6	4/			LEH
1999 09 12.15	x	B	8.3	TJ	6.6	M	5	10	6	s3			SMY
1999 09 12.86	x	B	8.8	TT	15	L	5	37	7	4	0.77	97	DUS
1999 09 12.86		M	8.4	TT	10	B	4	25	6	4			LEH
1999 09 12.88	x	S	8.3	TT	5.0	B		10	& 4	d1			OSS
1999 09 12.92		S	8.6	TT	14	L	8	46					KRA04
1999 09 12.94	x	S	7.9	TT	6.0	B		20	10	D3			PAR03
1999 09 12.95		M	8.1	S	11	L	5	25	6	2			KUB
1999 09 12.95	x	S	8.1	TT	5	R	4	20	4	D3			JAR01
1999 09 13.04	x	S	8.4	TT	14.7	L	6	70	7	4			SIW01
1999 09 13.06	x	S	7.2	TT	6.0	B		20	16	2			DRA02
1999 09 13.07	x	B	8.3	TT	6.6	B		20	8	4/	&0.18	85	FIL04
1999 09 13.07	x	B	9.3:	S	11.0	L	7	32	6.7	4/			SAD
1999 09 13.08	x	B	8.5:	S	6.0	B		20	& 7	3			WLO
1999 09 13.12		M	8.3	TT	10	L	4	12	7	5			LEH
1999 09 13.15	x	B	8.5	TJ	6.6	M	5	10	6	s3			SMY
1999 09 13.83	x	B	8.7	TT	15	L	5	37	7	3	0.85	100	DUS
1999 09 13.85	x	B	8.2:	TT	6.5	R	6	28	& 5	2			SWI
1999 09 13.85	x	S	9.0	TT	14.7	L	6	70	7	4			SIW01
1999 09 13.86		M	8.7	TT	10	B	4	25	6	4			LEH
1999 09 13.88		S	8.2	TT	14	L	8	46					KRA04
1999 09 13.95		S	8.0	S	8	R	7	35	6	5	0.36	280	KWI
1999 09 13.95	x	S	8.2	TT	5	R	4	20	4	D2/			JAR01
1999 09 13.95	xa	B	7.4	S	10.0	B		25	9	s3			PLE01
1999 09 14.04	x	B	8.3	TT	6.6	B		20	19	4			FIL04
1999 09 14.06	x	B	8.3	TT	8.0	B		20	7.4	s3			SPE01
1999 09 14.07	x	M	6.9	TT	6.0	B		20	11	s2			DRA02
1999 09 14.07	x	M	8.3	TT	15.0	L	5	44	8.4	s4			SPE01
1999 09 14.11		M	8.6	TT	10	L	4	12	7	4			LEH
1999 09 14.83		M	8.6	TT	10	B	4	25	7	4			LEH
1999 09 14.86	x	S	8.4	TT	14.7	L	6	70	5	3			SIW01
1999 09 14.87	x	B	9.2	TT	15	L	5	37	7	3	0.85	90	DUS
1999 09 14.91	x	B	9.0	TT	25	L	6	70	5	2			SWI
1999 09 14.93		S	8.7	TT	14	L	8	46					KRA04
1999 09 15.07	x	S	7.4	TT	6.0	B		20	10	2			DRA02
1999 09 15.10	x	B	8.5:	S	18	L	6	40	& 6	3			WLO
1999 09 15.81		M	8.5	TT	20	L	4	33	7	4			LEH
1999 09 15.93	xa	B	7.4	S	10.0	B		25	8	s3			PLE01
1999 09 16.00	x	S	8.0	TT	5.0	B		7	8	d2/			POW01
1999 09 16.02	x	B	8.2	TT	6.6	B		20	10	4			FIL04
1999 09 16.06	x	S	6.5	TT	6.0	B		20	10	2			DRA02
1999 09 16.99		S	8.2	AA	7.0	B		15	4	1			PAN

Comet C/1999 H1 (Lee) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 09 18.10	x	S	8.1	TT	5.0	B		7	8	d2/			POW01
1999 09 18.79		S	8.4	AA	11	L		32	5	3			IVA03
1999 09 19.81		S	8.4	AA	11	L		32	7	3			IVA03
1999 09 22.89	x	S	9.0	TT	14.7	L	6	70	3	3			SIW01
1999 09 22.98		S	7.8	TT	10	B		25					KRA04
1999 09 23.08	x	S	7.0	TT	10.0	B		20	9	1/			DRA02
1999 09 24.11	x	B	8.8:	S	18	L	7	40	& 7	3			WLO
1999 09 25.06	x	B	8.7:	TT	6.6	B		20	4	4			FIL04
1999 09 27.77		S	8.6	AA	11	L		32	5	3			IVA03
1999 09 27.78		M	9.4	TT	20	L	4	33	5	4			LEH
1999 09 27.95	x	S	8.8	TT	10	R	5	20	2.3	3			DRA02
1999 09 28.80		S	8.7	AA	11	L		32	5	3			IVA03
1999 09 29.76		S	8.8	AA	11	L		32	5	3			IVA03
1999 09 29.79	x	M	10.2	TT	10.0	B		25	5	2			DRA02
1999 09 29.80	x	S	10.3	TT	11.0	L	7	54	2.8	3			SAD
1999 09 29.80	x	S	10.3:	TT	25	L	5	66	4	3			KID01
1999 09 29.82	x	S	9.1	TT	14.7	L	6	70	5	3			SIW01
1999 09 29.92	x	B	9.4:	TT	25	L	6	108	4	3			SWI
1999 09 30.34		S	8.0	TJ	5.0	B		7	12	2			BIV
1999 09 30.77		S	8.7	AA	11	L		32	5.5	3			IVA03
1999 09 30.82	x	S	8.6	TT	14.7	L	6	70	7	3/			SIW01
1999 10 01.04					40.6	L		70	5.5	5			BOR
1999 10 01.04		S	8.3	TI	8.0	B		20	6	3/			BOR
1999 10 01.36		S	7.9	TJ	5.0	B		7	10	2			BIV
1999 10 01.78		M	8.6	TJ	25.4	L	5	65	4.4	4			MEY
1999 10 01.79	x	S	10.1	TT	25	L	5	69	3.6	2			DRA02
1999 10 01.80	x	S	9.6	TT	11.0	L	7	32	& 3.2	3/			SAD
1999 10 01.82	x	M	8.5	TT	8	R	7	35	6	6			KWI
1999 10 01.82		M	9.1	TT	20	L	4	33	7	3			LEH
1999 10 01.82	x	S	9.1	TT	14.7	L	6	70	8	3	0.52	60	SIW01
1999 10 01.90		B	9.2	TI	10	L	10	43	6		0.25		LIB
1999 10 01.92	x	B	9.7:	TT	25	L	6	70	4	4			SWI
1999 10 01.92	x	S	9.7	TT	20	L	5	50	6	d2			POW01
1999 10 01.92	xa	S	9.8	TT	35	M	10	90	10	s2			PLE01
1999 10 01.93	x	B	9.2:	S	18	L	7	40	& 6	2			WLO
1999 10 02.09		S	8.4	TI	8.0	B		20	6	3/			BOR
1999 10 02.41		S	8.3	TJ	5.0	B		7	9	1			BIV
1999 10 02.76	x	S	8.7	TT	14.7	L	6	70	7	2/			SIW01
1999 10 02.77		S	8.6	TJ	10.0	B		20	6.5	3			MEY
1999 10 02.78		M	9.3	TT	10	B	4	25	8	3			LEH
1999 10 02.78		S	8.9	AA	11	L		32	4	3			IVA03
1999 10 02.88	x	I	9.0	TT	14.0	L	6	46	& 6	1			ADA02
1999 10 02.88	x	S	9.9	TT	20	L	5	50	6	d1/			POW01
1999 10 02.92	xa	S	10.2	TT	35	M	10	90	6	s2			PLE01
1999 10 03.31		S	8.1	TJ	5.0	B		7	9	1			BIV
1999 10 03.88	x	B	9.2:	S	18	L	7	40	& 6	2			WLO
1999 10 04.31		S	8.5	TJ	5.0	B		7	7	3			BIV
1999 10 04.83		S	8.9	AA	11	L		32	4.5	2			IVA03
1999 10 04.83	x	S	9.7:	TT	25	L	5	66	5	4			KID01
1999 10 04.84	x	B	10.0	TT	15	L	5	37	8	3	0.42	147	DUS
1999 10 04.93		S	8.9	AA	15	L	4	30	5	1			PAN
1999 10 05.41		S	9.0	TJ	25.6	L	5	42	7	3	0.3	40	BIV
1999 10 05.43		S	8.5	TJ	5.0	B		7	8	2			BIV
1999 10 05.79	x	B	10.0	TT	15	L	5	37	5	3	0.67	105	DUS
1999 10 05.80		S	8.7	AA	11	L		32	6	2			IVA03
1999 10 05.83	x	S	9.0	S	6.0	B		20	4	d4			MIG01
1999 10 06.08		S	8.5	TI	8.0	B		20	8	3			BOR
1999 10 06.15	x	B	8.9	TJ	15.0	L	6	30	6	s3			SMY
1999 10 06.92		B	9.0	S	25.7	L	6	75	3	3			MAN03
1999 10 07.79	x	B	10.4:	TT	15	L	5	37	5	3			DUS
1999 10 07.82		S	8.9	AA	11	L		32	3	2			IVA03
1999 10 07.84		M	9.7	TT	20	L	4	42	5	4			LEH
1999 10 07.94		M	9.7	TI	15	L	4	43	3.0	3			HAL05
1999 10 08.15	x	B	9.2	TJ	15.0	L	6	30	6	s3			SMY
1999 10 08.99		S	8.9	AA	11	L		32	4	2			IVA03

Comet C/1999 H1 (Lee) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 10 09.03	x	B	10.0	TT	15	L	5	37	5	3			DUS
1999 10 09.38		S	9.0	TJ	25.6	L	5	42	7	3	0.3	40	BIV
1999 10 09.40		S	8.8	TJ	5.0	B		7	8	2			BIV
1999 10 09.58		S	9.8:	HS	31.7	L	6	63	3.2	5			MIYO1
1999 10 09.81		C	11.1	HV	20.3	T	6	a 90	2.0				LIG
1999 10 10.15	x	B	9.5	TJ	15.0	L	6	30	6	d3			SMY
1999 10 10.35		S	8.8	TJ	5.0	B		7	7	2			BIV
1999 10 10.35		S	9.1	TJ	25.6	L	5	42	7	2			BIV
1999 10 11.42		S	8.9	TJ	5.0	B		7	7	2			BIV
1999 10 11.43		S	9.2	TJ	25.6	L	5	42	8	3	0.4	40	BIV
1999 10 11.80		S	8.9	AA	6.3	R	13	52	5	2			KOS
1999 10 11.81	x	B	10.5:	TT	15	L	5	37					DUS
1999 10 12.00		S	8.7	TI	8.0	B		20	8.5	3			BOR
1999 10 12.00		S	9.3	TI	40.6	L		70	4.0	4			BOR
1999 10 12.16		S	9.7	AA	35	L	4	50	7	2			PAN
1999 10 12.80		M	9.5	TT	20	L	4	42	5	3			LEH
1999 10 12.82		S	9.1	AA	6.3	R	13	52	5	2			KOS
1999 10 12.83		S	8.7	TJ	8.0	R		12	9	2			GRA04
1999 10 12.83		S	9.0	TJ	20.3	T	10	80	5.0	3			GRA04
1999 10 12.84	x	M	10.8	TT	35	M	10	90	2.7	s5/			DRA02
1999 10 12.85		E	9.7	AA	20	L	5	33	4	3			ROM
1999 10 12.85	x	S	10.1	TT	10.0	B		25	5	s3			DRA02
1999 10 12.86		S	9.7	TT	7.6	L	9	35	4	2			CERO1
1999 10 12.90	x	I	10.5	TT	14.0	L	6	46	& 4	1			ADA02
1999 10 12.93		B	9.2	S	25.7	L	6	75	1	3			MAN03
1999 10 12.93	xa	S	10.8	TT	35	M	10	90	6	s3			PLE01
1999 10 12.94	xa	B	10.2	TT	10.0	B		25	10	5			PLE01
1999 10 13.07	x	B	11.0	TT	15	L	5	62		3			DUS
1999 10 13.79		S	8.9	TJ	7.0	R	7	24	9	2			GRA04
1999 10 13.80		S	9.0	AA	6.3	R	13	52	5	2			KOS
1999 10 13.81		S	8.8	TJ	8.0	B		12	9	4			GRA04
1999 10 14.82		S	9.7	AA	25	L	4	40	6	1			PAN
1999 10 15.43		S	9.2	TJ	25.6	L	5	42	6	3	0.2	50	BIV
1999 10 15.44		S	9.1	TJ	5.0	B		7	8	3			BIV
1999 10 15.80		S	9.6	TJ	25.4	L	5	65	5.0	3			MEY
1999 10 16.51		S	9.4	TJ	25.6	L	5	42	5.5	3			BIV
1999 10 16.52		S	9.4	TJ	5.0	B		7	6	3			BIV
1999 10 16.78	x	B	11.0:	TT	15	L	5	37		2			DUS
1999 10 16.86		S	9.7	TJ	20.3	T	10	100	3.5	3			GRA04
1999 10 16.95		S	9.5	TJ	25.4	L	5	65	4.8	3			MEY
1999 10 17.06		S	9.5	TI	20.3	T	10	56	6	1/			LEP
1999 10 17.78	x	B	11.0:	TT	15	L	5	37		2			DUS
1999 10 17.90		S	9.2	AA	6.3	R	13	52	4	2			KOS
1999 10 18.45		S	9.1	TJ	5.0	B		7	8	2			BIV
1999 10 18.82		S	9.1	TT	6	R	12	38	7.5	3			SVE
1999 10 18.94	x	B	8.8	TT	6.6	B		20	9	3			FIL04
1999 10 18.95		S	9.4	AA	6.3	R	13	52	4	1			KOS
1999 10 19.52		S	9.4	TJ	5.0	B		7	6	3			BIV
1999 10 24.45		C	12.8	TJ	18.0	L	6	a 40	1.1				YOS05
1999 10 26.71		M	10.0	TT	35	L	5	92	2.5	3			HOR02
1999 10 27.25		S	9.9	TJ	25.6	L	5	42	6	2			BIV
1999 10 27.71		S	10.4	AC	6.3	R	13	52	3	1			KOS
1999 10 28.26		S	9.9	TJ	25.6	L	5	42	5	2			BIV
1999 10 28.40	x	S	10.5	TJ	32.0	L	5	58	1.8	4			NAG08
1999 10 28.42		S	12.7	HS	31.7	L	6	152	1	3			MIYO1
1999 10 28.77	x	B	11.3:	AA	25	L	6	70	& 4	1			SWI
1999 10 29.28		S	9.9	TJ	5.0	B		7	5	2			BIV
1999 10 29.76		S	10.8	TJ	25.4	L	5	65	2.8	2/			MEY
1999 10 29.83		S	10.6	TT	30.5	T	10	56	> 3	0/			COM
1999 10 30.72		S	10.8	TJ	25.4	L	5	65	3.8	2/			MEY
1999 10 30.75	x	I	12.5	TT	31.7	L	5	78	& 4	1			ADA02
1999 10 30.75	x	S	11.4:	TT	35	M	10	90	2.1	s2			DRA02
1999 10 30.76		S	10.5	HS	20	L	5	70	3.6	2			BAR06
1999 10 30.83		S	10.4	TT	35	L	5	92	2.8	2/			HOR02
1999 10 31.74		S	10.8	TJ	25.4	L	5	65	3.5	2/			MEY

Comet C/1999 H1 (Lee) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 10 31.76		S	10.6	HS	20	L	5	70	3.2	2/			BAR06
1999 10 31.77		S	10.4	TT	35	L	5	92	3	2			HOR02
1999 10 31.90		M	10.9	TI	20	L	4	42	3	4			LEH
1999 11 01.91		S	10.4	TT	35	L	5	92	3	2			HOR02
1999 11 02.28		S	10.4	TJ	25.6	L	5	42	3.5	2			BIV
1999 11 02.80		S	11.2	VB	33	L	5	75	2.1	2			SHA02
1999 11 02.82	x	S	11.0	TJ	25.4	J	6	47	3.4	0/			BOU
1999 11 02.84		S	11.4:	HS	20	L	5	70	2.5	1			BAR06
1999 11 02.85	&	S	11.3	HS	20.3	L	4	97	4	2			MOR09
1999 11 03.40		S	11.2	HS	32.0	L	5	91	2.1	3			NAG08
1999 11 03.75		S	10.9	TJ	15.2	L	5	42	2.5	1			MOE
1999 11 03.90		S	11.3:	VB	33	L	5	150	2.6	3			SHA02
1999 11 04.45		C	12.0	GA	60.0	Y	6	a120	2.9		> 6.2m	50	NAK01
1999 11 04.74		S	10.9	TJ	15.2	L	5	42	2.5	1			MOE
1999 11 04.76		M	11.2	TI	20	L	4	42	3	4			LEH
1999 11 04.80	a	S	11.2	SE	25	L	4	64	3	2			SHU
1999 11 04.97					40.6	L		70	2.8	1			BOR
1999 11 05.50		C	13.8	TJ	18.0	L	6	a 40	0.6		1.3m	102	YOS05
1999 11 05.51		S	10.6	TJ	25.4	T	6	62	3.0	4/			YOS04
1999 11 05.53		C	13.0	GA	20.3	T	9	a 90	1.0				SUZ02
1999 11 05.77		S	11.9	VB	30	R	20	105	2.3	1			SHA02
1999 11 06.42		C	13.9	TJ	18.0	L	6	a 40	0.5		1.7m	64	YOS05
1999 11 06.56		S	11.1	TJ	25.4	T	6	62	2.5	4			YOS04
1999 11 06.87	x	S	11.2	TJ	30.0	L	5	47	2.8	0/			BOU
1999 11 06.88		S	11.2	TT	30.0	L	5	58	& 3	0/			COM
1999 11 06.92		S	11.3	VB	33	L	5	75	2.3	1			SHA02
1999 11 06.97	&	S	11.8	HS	40.6	L	5	139	1.9	2	3.2m	57	MOR09
1999 11 07.85	x	S	11.3	TJ	30.0	L	5	47	2.6	1			BOU
1999 11 08.24		S	11.2	HS	25.6	L	5	42	2.5	2			BIV
1999 11 08.78		C	12.2	HV	20.3	T	6	a120	3.0				LIG
1999 11 08.86	x	S	11.3	TJ	30.0	L	5	47	3.0	1			BOU
1999 11 08.90		S	10.8	NP	32	L	5	126	6	2/			MAR02
1999 11 09.49	x	S	11.7	HS	25.4	L	4	113	1.9	2			YOS02
1999 11 09.72		S	11.6	HS	20	L	5	70	2.5	2			BAR06
1999 11 09.85	x	S	11.4	TJ	30.0	L	5	47	3.2	0/			BOU
1999 11 09.86		S	11.3	TT	30.0	L	5	58	& 3	0/			COM
1999 11 10.87	x	S	11.5	TJ	30.0	L	5	47	2.8	0/			BOU
1999 11 10.91		S	12.2	VB	30	R	20	105	2.5	2			SHA02
1999 11 11.74		S	11.4	TJ	15.2	L	5	42	2.0	2			MOE
1999 11 11.88	x	S	11.6	TJ	30.0	L	5	47	2.6	0/			BOU
1999 11 12.74		M	11.3	TI	42	L	5	81	2.2	3			LEH
1999 11 12.75		S	11.4	TJ	15.2	L	5	42	2.0	1			MOE
1999 11 12.82		C	12.9	HV	20.3	T	6	a120	2.5				LIG
1999 11 12.85	&	S	12.3	HS	40.6	L	5	96	3.9	2			MOR09
1999 11 12.89	x	S	11.5	TJ	30.0	L	5	47	2.7	0/			BOU
1999 11 13.36		S	[12.5	TT	25	L	5	75	! 0.5				RAE
1999 11 13.44		C	14.1	TJ	18.0	L	6	a 40	0.45		2.1m	77	YOS05
1999 11 13.50		C	13.6	GA	20.3	T	9	a120	0.9				SUZ02
1999 11 13.89		S	11.4	TT	30.0	L	5	58	& 2.5	0/			COM
1999 11 13.95		S	11.7	HS	30.0	L	5	58	2.3	0/			BOU
1999 11 14.37		S	11.6	HS	25.6	L	5	42	2.0	2			BIV
1999 11 14.88		M	11.3	TI	20	L	4	42	2	3/			LEH
1999 11 14.95		S	11.8	HS	30.0	L	5	58	2.2	0			BOU
1999 11 15.38		S	12.3:	HS	25.6	L	5	84	1.5	1			BIV
1999 11 15.78		M	11.4	TI	42	L	5	81	1.8	3			LEH
1999 11 18.42		C	15.0	TJ	18.0	L	6	a 60	0.6		2.0m	78	YOS05
1999 11 18.47		C	13.9	GA	60.0	Y	6	a120	1.5				NAK01
1999 11 25.74		C	14.0	HV	20.3	T	6	a120	1.2				LIG
1999 11 26.26		S	12.5	HS	25.6	L	5	84	1.5	2			BIV
1999 11 26.72		S	12.1	AC	25.4	L	5	104	1.5	2			MEY
1999 11 26.73		M	11.9	HS	20	L	4	42	1.8	4			LEH
1999 11 27.28		S	13.0	HS	25.6	L	5	84	1.5	3			BIV
1999 11 27.68		M	12.6	HS	42	L	5	81	1.6	4			LEH
1999 11 27.74		S	13.2	HS	44.0	L	5	156	1.8	2			HAS02
1999 11 27.75		C	13.8	HV	20.3	T	6	a120	1.2				LIG

Comet C/1999 H1 (Lee) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 28.26		S	13.0	HS	25.6	L	5	84	1.4	2			BIV
1999 11 28.40		C	15.4	TJ	18.0	L	6	a 60	0.8				YOS05
1999 11 28.44		S	[11.6	HS	25.4	T	6	116	! 1.7				YOS04
1999 11 28.70		M	12.6	HS	42	L	5	81	1.6	4			LEH
1999 11 29.25		S	13.2	HS	25.6	L	5	84	1.2	2			BIV
1999 11 29.72		S	11.8	AC	25.4	L	5	104	1.4	2/			MEY
1999 11 29.73		M	12.4	HS	42	L	5	81	1.7	3			LEH
1999 11 29.80		S	[13.2	VB	30	R	20	185					SHAO2
1999 11 30.46		C	14.3	GA	60.0	Y	6	a120	1.5		3.6m	58	NAK01
1999 11 30.73		M	12.4	HS	42	L	5	162	1.6	3/			LEH
1999 12 01.29		S	12.8	HS	25.6	L	5	84	1.5	2			BIV
1999 12 01.79		S	[13.2:	VB	30	R	20	185					SHAO2
1999 12 05.28		S	13.0	HS	25.6	L	5	84	1.5	1			BIV
1999 12 05.80		S	12.5	NP	25	L	5	60	2	3			SEG
1999 12 06.26		S	13.3	HS	25.6	L	5	84	1.0	2			BIV
1999 12 06.89		S	12.6	NP	45	L	5	100	2	1			SAN04
1999 12 06.89		S	12.8	NP	45	L	5	100	1.75	2			MAR02
1999 12 08.72		M	12.9	HS	42	L	5	162	1.3	4			LEH
1999 12 10.40		C	14.7	TJ	18.0	L	6	a 60	0.85				YOS05

Comet C/1999 H3 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 07 03.92		B	13.2	HS	42	L	5	162	1.4	3			LEH
1999 07 04.92		M	12.8	HS	42	L	5	81	1.5	3			LEH
1999 07 16.96		S	13.1	AC	25.4	L	5	104	0.5	s3/			MEY
1999 07 17.94		S	13.5	GA	25.4	L	5	104	1.0	3/			MEY
1999 07 17.96		M	12.9	HS	42	L	5	81	1.4	3			LEH
1999 07 18.90		M	13.0	HS	42	L	5	81	1.5	3			LEH
1999 07 19.94		M	13.0	HS	42	L	5	81	1.4	3			LEH
1999 08 01.92		M	13.0	HS	42	L	5	162	1.2	3/			LEH
1999 08 02.89		M	12.8	HS	42	L	5	162	1.3	3/			LEH
1999 08 03.90		M	12.9	HS	42	L	5	81	1.1	3			LEH
1999 08 04.88		M	13.0	HS	42	L	5	81	1.2	3			LEH
1999 09 03.82		M	13.1	HS	42	L	5	81	1.2	3/			LEH
1999 09 04.81		M	13.2	HS	42	L	5	81	1.3	3/			LEH
1999 09 05.81		B	13.5	HS	42	L	5	162	1.3	3			LEH
1999 09 06.81		B	13.5	HS	42	L	5	162	1.2	3			LEH
1999 09 08.81		B	13.3	HS	42	L	5	162	1.3	3			LEH
1999 09 09.80		B	13.4	HS	42	L	5	81	1.3	3			LEH
1999 09 10.80		B	13.4	HS	42	L	5	162	1.2	4/			LEH
1999 09 11.80		M	13.2	HS	42	L	5	162	1.2	3/			LEH
1999 09 12.79		B	13.4	HS	42	L	5	162	1.2	3/			LEH
1999 09 13.79		B	13.6	HS	42	L	5	162	1.1	3/			LEH
1999 09 14.79		B	13.6	HS	42	L	5	162	1	3			LEH
1999 09 15.79		B	13.4	HS	20	L	4	106	1.1	3/			LEH
1999 10 01.78		B	13.5	HS	20	L	4	106	1.1	4			LEH
1999 10 02.75		B	13.5	HS	42	L	5	162	1	4			LEH
1999 10 12.75		B	13.5	HS	20	L	4	106	1	4			LEH
1999 11 08.85		C	15.4:	TJ	18.0	L	6	a 60	0.55				YOS05
1999 12 09.83		C	14.9	TJ	18.0	L	6	a 60	0.65				YOS05
1999 12 15.86		C	14.6	GA	60.0	Y	6	a120	1.2				NAK01
1999 12 25.86		C	15.2	HS	18.0	L	6	a 60	0.75				YOS05

Comet C/1999 J2 (Skiff)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 05 16.97		B	14.2	HS	42	L	5	162	0.9	4			LEH
1999 05 17.95		B	13.9	HS	42	L	5	162	1.1	3/			LEH
1999 05 18.95		B	13.9	HS	42	L	5	162	1.0	4			LEH
1999 05 19.91		B	14.0	HS	42	L	5	162	1.0	4			LEH
1999 05 22.01		B	13.8	HS	42	L	5	162	1.0	4			LEH
1999 06 03.93		B	14.1	HS	42	L	5	162	0.9	4			LEH
1999 06 04.91		B	14.1	HS	42	L	5	162	0.9	4			LEH
1999 06 09.89		B	14.5	HS	42	L	5	162	0.8	4			LEH

Comet C/1999 J2 (Skiff) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 07 03.91		B	14.5	HS	42	L	5	162	0.8	4			LEH
1999 07 04.90		B	14.5	HS	42	L	5	162	0.7	4			LEH
1999 07 17.94		B	14.2	HS	42	L	5	162	1.0	3/			LEH
1999 07 18.89		B	14.3	HS	42	L	5	162	0.8	4			LEH
1999 07 19.92		B	14.2	HS	42	L	5	162	0.9	4			LEH
1999 08 02.90		B	14.5	HS	42	L	5	162	0.6	4			LEH
1999 08 03.91		B	14.4	HS	42	L	5	162	0.8	4			LEH
1999 08 04.89		B	14.4	HS	42	L	5	162	0.9	3/			LEH
1999 09 03.86		B	14.2	HS	42	L	5	162	0.9	4			LEH
1999 09 04.83		B	14.2	HS	42	L	5	162	0.9	4			LEH
1999 09 05.84		B	14.3	HS	42	L	5	162	0.8	4			LEH
1999 09 06.82		B	14.4	HS	42	L	5	162	0.8	4			LEH
1999 09 08.83		B	14.1	HS	42	L	5	162	0.8	4			LEH
1999 09 09.82		B	14.3	HS	42	L	5	162	0.7	4			LEH
1999 09 10.82		B	14.3	HS	42	L	5	162	0.8	4			LEH
1999 09 11.82		B	14.4	HS	42	L	5	162	0.9	4			LEH
1999 09 12.81		B	14.5	HS	42	L	5	162	0.8	4			LEH
1999 09 13.81		B	14.2	HS	42	L	5	162	0.8	4			LEH
1999 09 14.80		B	14.2	HS	42	L	5	162	0.8	4/			LEH
1999 10 02.77		B	14.2	HS	42	L	4	162	0.8	4			LEH
1999 10 31.73		S	14.2	HS	35	L	5	208	1.2	3			HOR02
1999 11 10.39		C	16.1	HV	60.0	Y	6	a120	0.45		1.1m	28	NAK01
1999 11 12.70		B	14.4	HS	42	L	4	162	0.9	4			LEH
1999 12 27.87		C	15.8	TJ	18.0	L	6	a 60	0.5				YOS05

Comet C/1999 J3 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 07 16.94		S	13.0:	AS	25.4	L	5	104	1.1	2/			MEY
1999 07 17.95		S	11.4	AS	25.4	L	5	65	2.3	2/			MEY
1999 07 24.90		M	11.5	TI	20	R	17	140	1.9	4			LEH
1999 07 25.87		M	11.4	HS	42	L	5	81	1.7	3			LEH
1999 07 31.88		M	11.9	HS	42	L	5	162	1.8	3/			LEH
1999 08 01.90		M	12.4	HS	42	L	5	162	1.3	4			LEH
1999 08 02.88		M	11.7	HS	42	L	5	162	2.2	4			LEH
1999 08 03.87		M	12.0	HS	42	L	5	162	1.8	4			LEH
1999 08 04.85		M	11.8	HS	42	L	5	162	1.9	4			LEH
1999 08 06.95		M	11.4	TI	20	L	4	106	1.7	3/			LEH
1999 08 19.84		M	10.9	TI	20	L	4	42	2.7	3/			LEH
1999 08 20.84		M	10.9	TI	20	L	4	42	2.5	3/			LEH
1999 08 21.92		S	9.9	TI	10.8	L	4	27	2.5	2			GET
1999 08 22.83		M	10.0	TT	20	L	4	42	3.4	3/			LEH
1999 08 23.08		M	10.1	TT	20	L	4	42	3.2	4			LEH
1999 08 24.07		M	9.8	TT	20	L	4	42	3.5	4			LEH
1999 08 27.06	x	S	9.9:	S	11.0	L	7	96	& 1	4			SAD
1999 08 30.86		S	9.2	TI	10.8	L	4	27	4	3			GET
1999 09 03.85	x	S	9.5:	S	11.0	L	7	96	2.2	2/			SAD
1999 09 04.14		S	9.7	TI	10.8	L	4	27					GET
1999 09 04.85	x	B	10.5:	TT	15	L	5	37		5			DUS
1999 09 05.85	x	S	10.3:	TT	15	L	5	37		5			DUS
1999 09 06.85	x	B	10.3	TT	15	L	5	37	3	3			DUS
1999 09 08.14		S	9.0	TI	10.8	L	4	15					GET
1999 09 08.85	x	B	10.0	TT	15	L	5	37	3	3			DUS
1999 09 09.83	x	B	10.5:	TT	15	L	5	37	4	3/			DUS
1999 09 11.07	x	S	9.7:	S	11.0	L	7	54	2.3	3			SAD
1999 09 11.08		M	9.4	TT	10	B	4	25	4.0	3/			LEH
1999 09 11.85	x	B	10.0	TT	15	L	5	37	3	4			DUS
1999 09 12.08		M	9.4	TT	10	B	4	25	3.5	5/			LEH
1999 09 13.07	x	S	9.4:	S	11.0	L	7	32	2.6	4/			SAD
1999 09 13.08		M	8.7	TT	10	B	4	25	5	4			LEH
1999 09 13.09	x	B	10.7:	TT	15	L	5	37	6	3			DUS
1999 09 13.10		S	8.6	TI	5.0	B		7	3.5	8			GET
1999 09 13.83	x	B	9.8	TT	15	L	5	37		3/			DUS
1999 09 14.08		M	8.7	TT	10	B	4	25	5	6/			LEH
1999 09 14.08	x	S	8.7	TT	6.0	B		20	7	s3			DRA02

Comet C/1999 J3 (LINEAR) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 09 14.87	x	B	9.6	TT	15	L	5	37	4	3/			DUS
1999 09 16.10	x	S	9.4:	TT	6.0	B		20	5	s3			DRA02
1999 09 17.10		S	8.4	TI	5.0	B		7	9	7			GET
1999 09 19.15		S	8.5	MC	10.8	L	4	15	10	7			GET
1999 09 19.86		S	8.9	AA	11	L	7	32	2	4			IVA03
1999 09 23.09	x	S	8.6	TT	10.0	B		20	4.6	s6			DRA02
1999 09 24.18		S	8.4	HI	5.0	B		7	8.5	6			GET
1999 09 25.12	x	S	9.3	TT	10	R	5	20	2.8	s3			DRA02
1999 10 02.13		M	7.5	TT	20	L	4	33	9	4			LEH
1999 10 02.89		S	8.7	AA	11	L	7	32	3	4			IVA03
1999 10 03.18		S	8.3	HI	10.8	L	4	15	4.8	5			GET
1999 10 04.56		S	8.0	TJ	5.0	B		7	6	6			BIV
1999 10 04.89		S	8.6	AA	11	L	7	32	5	4			IVA03
1999 10 05.10		S	7.6	MC	5.0	B		7	10	4	0.13	201	GET
1999 10 05.54		S	7.9	TJ	25.6	L	5	42	6	5	0.2	290	BIV
1999 10 05.55		S	7.9	TJ	5.0	B		7	6	5			BIV
1999 10 06.16		S	7.8	MC	5.0	B		7	6.5	4	0.10	187	GET
1999 10 07.35		S	7.6	TI	5.0	B		10	8	5			BOR
1999 10 07.35		S	7.7	TI	8.0	B		20	7	5			BOR
1999 10 08.97		S	8.5	AA	11	L	7	32	7	4			IVA03
1999 10 09.11	x	B	8.5	TT	8.0	B		15	11	3			DUS
1999 10 09.51		S	7.7	TJ	5.0	B		7	7	4			BIV
1999 10 09.52		S	7.8	TJ	25.6	L	5	42	6	5			BIV
1999 10 09.76		S	8.2:	HS	31.7	L	6	63	4.7	4			MIY01
1999 10 10.58		S	7.8	TJ	5.0	B		7	8	5			BIV
1999 10 10.58		S	7.9	TJ	25.6	L	5	42	7	4	0.2	260	BIV
1999 10 10.86		S	8.5	AA	11	L	7	32	5.5	4			IVA03
1999 10 11.53		S	7.5	TJ	5.0	B		7	6	4			BIV
1999 10 11.54		S	7.7	TJ	25.6	L	5	42	6	5			BIV
1999 10 12.09		S	8.2	AA	6.3	R	13	52	7	4			KOS
1999 10 12.22		S	7.5	HI	10.8	L	4	15	2.1	5	0.05	177	GET
1999 10 13.07	x	B	8.4	TT	8.0	B		15	11	4			DUS
1999 10 13.09		M	8.2	TI	15	L	4	43	4	4			HAL05
1999 10 13.13		M	7.6	TT	20	L	4	42	7	4			LEH
1999 10 13.14		S	7.2	MC	5.0	B		7	12	5	0.09	229	GET
1999 10 13.14	x	S	7.5	TT	6.0	B		20	7	2			DRA02
1999 10 14.11	x	B	8.4	TT	8.0	B		15	8	4			DUS
1999 10 15.08	x&	B	8.4	TT	8.0	B		15	7	4			DUS
1999 10 15.17		S	8.0	TJ	7.0	R	7	24	5.5	3/			GRA04
1999 10 15.56		S	8.0	TJ	25.6	L	5	42	7	4			BIV
1999 10 15.58		S	8.0	TJ	5.0	B		7	6	4			BIV
1999 10 16.61		S	7.8	TJ	5.0	B		7	6	4			BIV
1999 10 16.61		S	7.9	TJ	25.6	L	5	42	6.5	4			BIV
1999 10 18.47		S	7.8	TJ	5.0	B		7	7	3			BIV
1999 10 19.52		S	7.8	TJ	5.0	B		7	6	5			BIV
1999 10 20.78		S	9.0	HS	31.7	L	6	63	2.7	4			MIY01
1999 10 20.82		B	8.8	HS	20.0	L	4	40	7	3			OHM
1999 10 22.62		S	7.8	TJ	5.0	B		7	9	5			BIV
1999 10 23.63		S	7.7	TJ	5.0	B		7	9	4			BIV
1999 10 24.81		C	11.6	TJ	18.0	L	6 a	20	1.0				YOS05
1999 10 30.53		S	8.8:	TJ	5.0	B		7	8	3			BIV
1999 11 01.56		S	8.3:	TJ	5.0	B		7	7	2			BIV
1999 11 02.08		S	8.5	AA	8.0	B		11					SQU01
1999 11 06.08		B	8.7	AA	14.3	L	6	35	3	1			AM001
1999 11 07.10		B	8.7	AA	14.3	L	6	35	3	0			AM001
1999 11 07.97		S	9.0	AA	14.3	L	6	35	2	1			AM001
1999 11 11.49		M	8.8	TT	11	L	4	30	5	4			RAE
1999 11 12.53		S	9.2	AA	10.0	B		25					SEA
1999 11 13.07		B	9.0	AA	14.3	L	6	78	4	0			AM001
1999 11 13.38		M	9.5:	TT	25	L	5	40	3	4			RAE
1999 11 13.53		S	9.0	AA	5.0	B		10					SEA
1999 11 14.66		M	9.3	TT	25	L	5	32	4	3/			RAE
1999 11 20.40		S	9.5	TT	25	L	5	40	3	3			RAE
1999 11 29.38		S	10.0	TT	25	L	5	32	2	2			RAE
1999 12 08.46		S	10.8	TT	25	L	2	75	5	2/			RAE

Comet C/1999 J3 (LINEAR) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 12 10.40		S	11.0	TT	25	L	5	32	2.5	3			RAE
1999 12 16.61		S	12.6	HS	25	L	5	75	1.7	1/			RAE

Comet C/1999 K2 (Ferris)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 07 18.01		B	14.5	HS	42	L	5	162	0.4	4/			LEH
1999 09 04.86		0	[14.8	HS	42	L	5	162	! 0.5				LEH
1999 09 05.89		0	[14.8	HS	42	L	5	162	! 0.5				LEH

Comet C/1999 K5 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 07 17.97		B	14.2	HS	42	L	5	162	0.7	4			LEH
1999 07 19.96		B	13.8	HS	42	L	5	162	1.0	3/			LEH

Comet C/1999 K6 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 07 04.95		B	14.6	HS	42	L	5	162	0.4	4			LEH
1999 07 17.97	*	S	15.0:	HS	44.0	L	5	226					HAS02
1999 07 18.03		B	14.7	HS	42	L	5	162	0.4	4			LEH
1999 08 03.93		B	14.4	HS	42	L	5	162	0.8	4			LEH
1999 09 04.88		B	14.7	HS	42	L	5	162	0.5	4			LEH
1999 09 05.88		B	14.9	HS	42	L	5	162	0.5	4			LEH
1999 09 06.84		B	14.8	HS	42	L	5	162	0.5	4			LEH
1999 09 09.84		B	14.9	HS	42	L	5	162	0.4	4/			LEH
1999 09 10.84		B	14.9	HS	42	L	5	162	0.4	5			LEH
1999 09 11.84		B	14.6	HS	42	L	5	162	0.5	4			LEH
1999 09 12.83		B	14.7	HS	42	L	5	162	0.6	4			LEH
1999 09 13.83		B	14.7	HS	42	L	5	162	0.5	4			LEH
1999 11 10.46		C	17.0	GA	60.0	Y	6	a240	0.35				NAK01
1999 11 30.44		C	17.2	GA	60.0	Y	6	a240	0.45				NAK01
1999 12 08.45		C	17.2	GA	60.0	Y	6	a240	0.5				NAK01

Comet C/1999 K8 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 07 18.05		B	14.0	HS	42	L	5	162	0.8	4			LEH
1999 07 19.98		B	13.6	HS	42	L	5	162	1.0	3/			LEH
1999 08 02.92		B	13.6	HS	42	L	5	162	0.9	4/			LEH
1999 08 03.92		B	13.7	HS	42	L	5	162	1	4			LEH
1999 08 04.90		B	13.8	HS	42	L	5	162	1	3/			LEH
1999 09 03.88		B	13.8	HS	42	L	5	162	1.0	3/			LEH
1999 09 04.85		B	13.5	HS	42	L	5	162	1.2	3/			LEH
1999 09 05.85		B	13.5	HS	42	L	5	162	1.1	3			LEH
1999 09 06.83		B	13.7	HS	42	L	5	162	1.0	3			LEH
1999 09 08.84		B	13.6	HS	42	L	5	162	1.3	3			LEH
1999 09 09.83		B	13.2	HS	42	L	5	162	1.5	3/			LEH
1999 09 10.83		M	12.7	HS	42	L	5	162	1.8	3/			LEH
1999 09 11.83		M	12.5	HS	42	L	5	162	1.8	3			LEH
1999 09 12.82		M	12.7	HS	42	L	5	162	1.5	3			LEH
1999 09 13.82		B	13.3	HS	42	L	5	162	1.2	3			LEH
1999 09 14.81		B	13.3	HS	42	L	5	162	1.3	3/			LEH
1999 09 15.80		M	13.0	HS	20	L	4	106	1.4	3			LEH
1999 10 01.81		M	12.9	HS	20	L	4	106	1.4	3/			LEH
1999 10 02.83		M	13.1	HS	42	L	5	162	1.3	3			LEH
1999 10 07.88		M	12.7	HS	20	L	4	106	1.4	3/			LEH
1999 10 12.76		M	12.8	HS	20	L	4	106	1.6	3/			LEH
1999 10 30.82		S	13.8	HS	35	L	5	208	1.3	2/			HOR02
1999 10 31.75		S	13.7	HS	35	L	5	208	1.4	2/			HOR02
1999 10 31.88		B	13.5	HS	20	L	4	106	1.2	4			LEH
1999 11 03.48		C	14.6	GA	60.0	Y	6	a120	1.0				NAK01
1999 11 04.75		M	13.1	HS	20	L	4	106	1.2	3			LEH
1999 11 05.48		C	15.4	TJ	18.0	L	6	a 60	0.55				YOS05

Comet C/1999 K8 (LINEAR) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 06.86		S	13.7	HS	30.0	L	5	150	0.5	3/			BOU
1999 11 07.01	&	S	12.8	HS	40.6	L	5	139	0.8	0			MOR09
1999 11 07.84		S	13.8	HS	30.0	L	5	150	0.5	3			BOU
1999 11 08.84		S	13.9	HS	30.0	L	5	150	0.6	2			BOU
1999 11 10.47		C	14.7	GA	60.0	Y	6	a120	0.9				NAK01
1999 11 10.84		S	13.8	HS	30.0	L	5	203	0.5	3			BOU
1999 11 11.86		S	13.8	HS	30.0	L	5	150	0.6	3			BOU
1999 11 12.76		B	13.2	HS	42	L	5	81	1.1	3			LEH
1999 11 12.87		S	13.7	HS	30.0	L	5	150	0.6	3/			BOU
1999 11 13.47		C	14.3	TJ	18.0	L	6	a 60	0.8				YOS05
1999 11 14.93		S	13.7	HS	30.0	L	5	150	0.6	4			BOU
1999 11 15.79		B	13.3	HS	42	L	5	162	1.2	3			LEH
1999 11 15.91		S	13.7	HS	35	L	5	208	1.3	3			HOR02
1999 11 26.73		S	13.6	HS	35	L	5	208	1.2	3			HOR02
1999 11 26.74		B	13.3	HS	20	L	4	106	1.5	4			LEH
1999 11 27.74		S	13.9	HS	44.0	L	5	156	0.5	3			HAS02
1999 11 28.45		C	14.8	TJ	18.0	L	6	a 60	0.9				YOS05
1999 11 28.72		B	13.4	HS	42	L	5	162	1.2	4			LEH
1999 11 29.74		B	13.5	HS	42	L	5	162	1.3	3/			LEH
1999 11 30.74		B	13.5	HS	42	L	5	162	1.2	3			LEH
1999 12 03.43		C	14.7:	GA	60.0	Y	6	a120	1.2				NAK01
1999 12 06.96		S	12.8	NP	45	L	5	167	1.25	2			MAR02
1999 12 08.43		C	14.8	GA	60.0	Y	6	a120	1.2				NAK01
1999 12 08.75		B	13.7	HS	42	L	5	162	1.1	3			LEH
1999 12 10.42		C	15.2	TJ	18.0	L	6	a 60	0.5				YOS05
1999 12 30.41		C	14.6	TJ	18.0	L	6	a 60	0.9				YOS05

Comet C/1999 L2 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 07 17.89		B	14.6	HS	42	L	5	162	0.4	4			LEH
1999 07 31.85		B	14.4	HS	42	L	5	162	0.5	5			LEH
1999 08 01.86		B	14.3	HS	42	L	5	162	0.5	4			LEH

Comet C/1999 L3 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 16.24		S	13.9	HS	50.0	L	5	151	0.5	2			BOU
1999 11 17.23		S	13.7	HS	30.0	L	5	100	0.5	2/			BOU
1999 11 29.84		C	13.9	TJ	18.0	L	6	a 40	0.5				YOS05
1999 11 30.86		C	13.9	TJ	18.0	L	6	a 40	0.55				YOS05
1999 12 06.79		C	14.2	HS	18.0	L	6	a 40	0.85				YOS05
1999 12 07.86		C	13.5	GA	60.0	Y	6	a120	1.4		1.5m	291	NAK01
1999 12 09.81		C	13.9	TJ	18.0	L	6	a 40	0.5		1.4m	304	YOS05
1999 12 11.81		C	13.6	TJ	18.0	L	6	a 40	0.65		2.4m	301	YOS05
1999 12 14.61		S	13.0	HS	25.6	L	5	84	1.4	3			BIV
1999 12 15.83		C	13.5	TJ	16.0	H	3	a 60	1.3				YOS05
1999 12 16.56		S	12.7	HS	25.6	L	5	84	1.4	3			BIV
1999 12 17.85	x	S	12.3:	GA	25.4	L	4	113	1.2	3/	2	m 300	YOS02
1999 12 18.65		S	12.9	HS	25.6	L	5	84	1.3	3			BIV
1999 12 19.25		S	12.6	VB	33	L	5	100	1.5	3			SHA02
1999 12 20.26		S	12.1	HS	20	T	10	135	1.0	3			SHA02
1999 12 21.82		C	13.2	TJ	18.0	L	6	a 40	1.3				YOS05
1999 12 25.83		C	13.6	HS	18.0	L	6	a 60	1.2		1.8m	300	YOS05
1999 12 27.80		C	13.8	TJ	18.0	L	6	a 60	0.75		2.3m	297	YOS05
1999 12 29.76		C	13.4	TJ	18.0	L	6	a 60	0.85		1.1m	296	YOS05

Comet C/1999 N2 (Lynn)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 07 29.85		M	8.4	TT	20	L	4	42	6.5	4/			LEH
1999 07 30.85		M	8.1	TT	10	B	4	25	6.5	4			LEH
1999 07 31.83		B	7.3:	TT	7.6	L	9	35	7				CER01
1999 07 31.84		M	8.1	TT	10	B	4	25	5.5	4/			LEH
1999 08 01.85		M	7.7	TT	10	B	4	25	7	6			LEH

Comet C/1999 N2 (Lynn) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 08 02.85		M	7.8	TT	10	B	4	25	6	6			LEH
1999 08 03.85		M	7.8	TT	10	B	4	25	5.5	6			LEH
1999 08 04.84		M	8.0	TT	10	B	4	25	5.5	5			LEH
1999 08 14.83	x	M	8.6	TT	35	M	10	90	1.8	4			DRA02
1999 08 19.82		M	8.1	TI	20	L	4	42	6.4	6			LEH
1999 08 20.83		M	8.1	TI	20	L	4	42	6	5/			LEH
1999 08 22.82		M	8.1	TI	20	L	4	42	5	5/			LEH
1999 08 23.82		M	8.3	TI	20	L	4	42	5.8	5			LEH
1999 08 25.81		M	8.3	TI	20	L	4	42	5	5			LEH
1999 08 31.46		S	9.0:	HS	31.7	L	6	63	1.7	4			MIY01
1999 09 03.81		M	9.5	TT	10	B	4	25	4	4/			LEH
1999 09 03.83	x	S	9.6	TT	35	M	10	90	1.3	2/			DRA02
1999 09 04.80		M	9.5	TT	10	B	4	25	4	4			LEH
1999 09 04.83	x	S	10.0	TT	35	M	10	90	2.1	2/			DRA02
1999 09 05.80		M	9.8	TT	10	B	4	25	3.5	4			LEH
1999 09 06.79		M	9.8	TT	10	B	4	25	3.5	4			LEH
1999 09 08.80		M	10.3	TT	10	B	4	25	3	4			LEH
1999 09 09.79		M	10.3	TT	10	B	4	25	3	4			LEH
1999 09 10.78		M	10.4	TT	10	B	4	25	3	4			LEH
1999 09 11.78		M	10.2	TT	10	B	4	25	3	3/			LEH
1999 09 12.78		M	10.2	TT	10	B	4	25	2.5	4			LEH
1999 09 13.78		M	10.3	TT	10	B	4	25	2.5	3/			LEH
1999 09 14.78		M	10.4	TT	10	B	4	25	2.5	4			LEH
1999 09 15.78		M	10.5	TT	20	L	4	33	2	4			LEH
1999 10 01.77		M	11.2	TT	20	L	4	33	1.8	3/			LEH
1999 10 01.79		S	11.5	TJ	25.4	L	5	65	2.0	2/			MEY
1999 10 04.76		M	11.6	HS	20	L	4	42	1.9	3			LEH
1999 10 12.74		M	11.5	TI	20	L	4	42	2	3/			LEH
1999 10 31.72		S	13.0	HS	35	L	5	166	1.5	1/			HOR02
1999 11 02.77		S	12.1:	VB	33	L	5	150	1.5	2			SHA02
1999 11 04.73		M	12.5	HS	20	L	4	106	1.8	3			LEH
1999 11 08.80		S	12.7	NP	32	L	5	126	0.75	2			MAR02
1999 11 08.84		C	14.9:	HS	18.0	L	6	a 60	0.85	0			YOS05
1999 11 19.83	1	C	[15.9	TJ	18.0	L	6	a 60					YOS05
1999 12 09.84		C	16.5:	TJ	18.0	L	6	a 60	0.55				YOS05
1999 12 19.23		S	12.9	VB	33	L	5	100	1.5	3			SHA02
1999 12 20.27		S	12.9:	HS	20	T	10	135	1.1	2			SHA02

Comet C/1999 S3 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 09 27.77		M	13.1	HS	20	L	4	106	1.1	3			LEH
1999 10 01.81		S	12.5:	AC	25.4	L	5	104	0.8	3			MEY
1999 10 01.84		M	12.8	HS	20	L	4	106	1.5	3/			LEH
1999 10 02.82		M	12.5	HS	42	L	5	81	1.5	4			LEH
1999 10 05.45		S	13.0	HS	25.6	L	5	84	0.5	7			BIV
1999 10 07.86		M	11.7	HS	20	L	4	42	2.1	3/			LEH
1999 10 09.44		B	12.7	HS	25.6	L	5	84	0.8	7			BIV
1999 10 10.31		S	12.5	HS	25.6	L	5	84	0.6	7			BIV
1999 10 11.40		S	12.6	HS	25.6	L	5	84	0.6	7			BIV
1999 10 12.78		M	12.5	HS	20	L	4	106	1.8	3			LEH
1999 10 15.46		B	12.3	HS	25.6	L	5	84	0.7	7			BIV
1999 10 15.82		S	12.2	AC	25.4	L	5	65	1.8	S4			MEY
1999 10 16.53		S	12.7	HS	25.6	L	5	84	0.5	7			BIV
1999 10 16.96		S	12.4	AC	25.4	L	5	65	1.7	S4			MEY
1999 10 24.44		C	12.6	TJ	18.0	L	6	a 40	0.75		0.9m	114	YOS05
1999 10 26.74		M	12.3	HS	35	L	5	92	1.1	5			HOR02
1999 10 27.24		B	12.3	HS	25.6	L	5	84	0.8	6			BIV
1999 10 28.28		B	12.3	HS	25.6	L	5	42	0.8	7			BIV
1999 10 28.41		S	12.1	HS	31.7	L	6	152	0.8	3/			MIY01
1999 10 29.77		M	12.1	AC	25.4	L	5	65	0.8	S4/			MEY
1999 10 30.74		M	12.2	AC	25.4	L	5	65	1.6	S4			MEY
1999 10 30.80		M	11.7	TI	35	L	5	92	1.5	5/			HOR02
1999 10 31.75		M	12.1	AC	25.4	L	5	65	0.8	S4/			MEY
1999 10 31.76		M	11.8	TI	35	L	5	92	1.4	6			HOR02

Comet C/1999 S3 (LINEAR) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 10 31.91		M	11.3	HS	20	L	4	42	2.1	3			LEH
1999 11 01.91		M	11.8	TI	35	L	5	92	1.4	5/			HOR02
1999 11 02.30		B	12.4	HS	25.6	L	5	42	0.7	6	2.0m	110	BIV
1999 11 02.78		S	12.0	VB	33	L	5	75	0.5	4			SHA02
1999 11 02.84		M	12.4	AC	25.4	J	6	72	1.0	4/			BOU
1999 11 03.49		C	12.6	GA	60.0	Y	6	a120	1.1		2.3m	106	NAK01
1999 11 03.89		S	12.5	VB	33	L	5	150	0.7	4			SHA02
1999 11 04.78		M	12.0	HS	20	L	4	42	2.0	3/			LEH
1999 11 05.49		C	12.6	TJ	18.0	L	6	a 30	0.6		2.1m	96	YOS05
1999 11 05.51		C	12.8	GA	20.3	T	9	a 60	0.7		0.8m	95	SUZ02
1999 11 05.53		S	11.4	HS	25.4	T	6	116	0.9	6/			YOS04
1999 11 06.00		S	13.0	HS	39	L	5	126	0.4	s5			SAR02
1999 11 06.44		C	12.9	TJ	18.0	L	6	a 40	0.75		1.1m	103	YOS05
1999 11 06.58		S	11.1	HS	25.4	T	6	116	0.9	7			YOS04
1999 11 06.93		M	12.5	HS	30.0	L	5	100	0.7	5			BOU
1999 11 06.93		S	12.4	VB	33	L	5	75	1.4	4			SHA02
1999 11 06.98		S	12.7	TT	30.0	L	5	100	& 1	3			COM
1999 11 07.18	&	S	12.6	HS	40.6	L	5	139	1.0	1			MOR09
1999 11 07.90		S	12.9	TT	30.0	L	5	100	& 0.5	4			COM
1999 11 07.94		M	12.6	HS	30.0	L	5	100	0.7	4/			BOU
1999 11 08.26		B	12.6	HS	25.6	L	5	84	0.5	7	2.0m	105	BIV
1999 11 08.79		C	12.4	HV	20.3	T	6	a120			0.03	100	LIG
1999 11 08.93		B	12.4	NP	32	L	5	126	0.5	7	1.5	110	MAR02
1999 11 08.93		M	12.6	HS	30.0	L	5	100	0.8	5/			BOU
1999 11 09.57	x	S	11.8	HS	25.4	L	4	113	1.2	5			YOS02
1999 11 09.80		S	12.2	VB	33	L	5	100	1.0	4			SHA02
1999 11 09.91		M	12.7	HS	30.0	L	5	100	1.0	5			BOU
1999 11 10.93		S	12.3	VB	30	R	20	185	0.5	5			SHA02
1999 11 10.98		M	12.6	HS	30.0	L	5	100	0.8	5/			BOU
1999 11 11.92		M	12.6	HS	30.0	L	5	100	0.8	5/			BOU
1999 11 12.75		M	11.9	HS	42	L	5	81	1.7	3			LEH
1999 11 12.83		C	12.5	HV	20.3	T	6	a120			0.03	100	LIG
1999 11 13.45		S	11.5	HS	32.0	L	5	91	0.9	5			NAG08
1999 11 13.47		C	13.0	GA	20.3	T	9	a 60	0.6		0.7m	90	SUZ02
1999 11 13.48		C	12.9	TJ	18.0	L	6	a 40	0.6		1.5m	96	YOS05
1999 11 13.92		M	12.5	HS	30.0	L	5	100	0.7	5/			BOU
1999 11 14.35		B	12.5	HS	25.6	L	5	84	0.8	7	1.5m	95	BIV
1999 11 14.96		M	12.7	HS	30.0	L	5	100	0.7	5/			BOU
1999 11 15.36		B	12.6	HS	25.6	L	5	84	0.8	6	1.0m	85	BIV
1999 11 15.81		M	12.7	HS	42	L	5	162	1.4	4			LEH
1999 11 15.91		M	12.2	TI	35	L	5	92	1.4	6/			HOR02
1999 11 15.98		M	12.7	HS	30.0	L	5	100	0.8	6			BOU
1999 11 16.02		S	12.1	HS	44.5	L	4	146	0.8	6/			SAR02
1999 11 18.43		C	12.9	TJ	18.0	L	6	a 40	0.35		1.2m	82	YOS05
1999 11 18.46		C	12.7	GA	60.0	Y	6	a120	1.3		3.3m	86	NAK01
1999 11 21.45		C	12.8	TJ	16.0	H	3	a 40	0.4		0.8m	48	YOS05
1999 11 25.77		C	12.4	HV	20.3	T	6	a120	1.0		0.03	80	LIG
1999 11 26.72		M	11.8	HS	35	L	5	92	1.1	5			HOR02
1999 11 26.73		S	12.2	AC	25.4	L	5	65	1.9	3/			MEY
1999 11 26.76		M	12.4	HS	20	L	4	106	1.6	3			LEH
1999 11 27.27		S	12.3	HS	25.6	L	5	84	0.9	5	1.0m	75	BIV
1999 11 27.75		S	13.5	HS	44.0	L	5	156	0.1	5			HAS02
1999 11 27.78		C	12.7	HV	20.3	T	6	a120	1.0		0.03	80	LIG
1999 11 27.81		S	12.4:	AC	20.3	T	10	100	0.9				GRA04
1999 11 28.28		S	12.5	HS	25.6	L	5	84	0.8	5	1.0m	70	BIV
1999 11 28.40		S	12.4	HS	32.0	L	5	91	0.6	5			NAG08
1999 11 28.45		S	11.5	HS	25.4	T	6	116	1.2	5/			YOS04
1999 11 28.48		C	13.9	TJ	18.0	L	6	a 40	0.45		1.2m	53	YOS05
1999 11 28.74		M	12.0	HS	42	L	5	81	1.8	3			LEH
1999 11 29.27		S	12.4	HS	25.6	L	5	84	0.8	6	1.5m	80	BIV
1999 11 29.73		S	12.1	AC	25.4	L	5	65	2.3	4			MEY
1999 11 29.75		M	12.0	HS	42	L	5	81	1.7	3/			LEH
1999 11 29.82		S	12.9	VB	30	R	20	185	0.7	3			SHA02
1999 11 29.83		C	12.4	HV	20.3	T	6	a120	1.0		0.03	80	LIG
1999 11 30.75		M	12.1	HS	42	L	5	162	1.6	4			LEH

Comet C/1999 S3 (LINEAR) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 12 01.28		S	12.4	HS	25.6	L	5	84	0.8	5	1.0m	70	BIV
1999 12 01.76		S	12.9	VB	33	L	5	100	0.8	3			SHA02
1999 12 03.42		C	12.9	GA	60.0	Y	6	a120	1.3		3.0m	73	NAK01
1999 12 03.78		S	12.9:	VB	33	L	5	100	1.1	3			SHA02
1999 12 03.90		S	13.3	VB	30	R	20	185	0.8	3			SHA02
1999 12 05.29		S	12.1	HS	25.6	L	5	84	0.9	5			BIV
1999 12 06.29		S	12.1	HS	25.6	L	5	84	0.8	5			BIV
1999 12 06.82		C	12.8	HV	20.3	T	6	a 60	1.0		0.02	60	LIG
1999 12 06.98		M	12.8	NP	45	L	5	100	0.5	5			SAN04
1999 12 06.98		M	12.9	NP	45	L	5	100	0.75	3			MAR02
1999 12 07.77		S	13.3	VB	33	L	5	100	0.6	4			SHA02
1999 12 08.73		M	12.8	HS	42	L	5	162	1.4	3			LEH
1999 12 08.76		S	13.7	VB	30	R	20	185	0.4	4			SHA02
1999 12 10.41		C	13.5	TJ	18.0	L	6	a 60	0.5				YOS05
1999 12 11.42		S	11.6	HS	25.4	T	6	116	1.5	3/			YOS04
1999 12 11.49	x	S	12.1:	HS	25.4	L	4	113	1.2	3			YOS02
1999 12 14.33		S	12.8	HS	25.6	L	5	84	0.8	4			BIV
1999 12 16.30		S	13.0	HS	25.6	L	5	84	0.5	5			BIV
1999 12 19.39		C	14.2	TJ	18.0	L	6	a 40	0.35				YOS05
1999 12 23.40		S	[12.0	HS	25.4	T	6	116	! 0.8				YOS04
1999 12 23.41		C	14.4	TJ	18.0	L	6	a 60	0.45				YOS05
1999 12 25.79		S	12.6:	HS	20	T	10	135	0.5	3			SHA02
1999 12 28.80		M	12.8	HS	20	L	4	106	1.4	3			LEH
1999 12 29.78		S	13.8	VB	30	R	20	185	0.5	3			SHA02
1999 12 30.39		C	14.2	TJ	18.0	L	6	a 60	0.35				YOS05
1999 12 30.79		C	13.5	HV	20.3	T	6	a120	1.0		0.02	45	LIG

Comet C/1999 S4 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 10 31.79		S	14.6	HS	35	L	5	208	0.7	2/			HOR02
1999 11 04.64		C	15.4	GA	60.0	Y	6	a120	0.45				NAK01
1999 11 04.72		C	15.5	TJ	18.0	L	6	a 60	0.45				YOS05
1999 11 05.59		C	15.1	TJ	18.0	L	6	a 60	0.45				YOS05
1999 11 06.94		S	13.8:	VB	33	L	5	150	0.4	3			SHA02
1999 11 06.96		S	13.9:	HS	30	R	20	185	0.4	3			SHA02
1999 11 06.96		S	14.3	HS	30.0	L	5	150	0.6	2			BOU
1999 11 06.97		S	14.6	TT	30.0	L	5	150	0.5	4			COM
1999 11 07.22	&	S	13.4	HS	40.6	L	5	139	0.5	1			MOR09
1999 11 07.87		C	15.6	HS	20.3	T	6	a 60	0.5				LIG
1999 11 07.96		S	14.4	HS	30.0	L	5	150	0.6	2			BOU
1999 11 08.43		S	14.7:	HS	25.6	L	5	169	0.4	4			BIV
1999 11 08.79		C	14.9	TJ	18.0	L	6	a 60	0.5				YOS05
1999 11 08.83		C	15.5	HV	20.3	T	6	a120	0.5				LIG
1999 11 09.92		S	14.3	HS	30.0	L	5	150	0.6	2/			BOU
1999 11 10.63		C	15.1	GA	60.0	Y	6	a120	0.6				NAK01
1999 11 10.94		I	[15.0	VB	30	R	20	230					SHA02
1999 11 11.94		S	14.1	HS	30.0	L	5	150	0.6	2			BOU
1999 11 12.85		C	15.5	HV	20.3	T	6	a120	0.5				LIG
1999 11 12.92		S	14.3	HS	50.0	L	5	226	0.7	2			BOU
1999 11 13.51		S	13.9	HS	40.0	L	6	200	0.7	4			NAG08
1999 11 13.62		C	15.1	TJ	18.0	L	6	a 60	0.35				YOS05
1999 11 13.98		S	14.2	HS	30.0	L	5	150	0.6	2/			BOU
1999 11 14.51		S	14.6	HS	25.6	L	5	169	0.5	5			BIV
1999 11 14.97		S	14.2	HS	30.0	L	5	150	0.6	3			BOU
1999 11 15.46		S	14.2	HS	25.6	L	5	169	0.4	6			BIV
1999 11 15.88		B	14.0	HS	42	L	5	162	0.8	4			LEH
1999 11 15.98		S	14.2	HS	30.0	L	5	150	0.7	3			BOU
1999 11 16.00		S	13.6	HS	44.5	L	4	146	0.8	3			SAR02
1999 11 16.14		S	14.3	HS	35	L	5	237	0.9	1/			HOR02
1999 11 16.49		S	14.4	HS	25.6	L	5	169	0.5	6			BIV
1999 11 16.74		C	15.2	TJ	16.0	H	3	a 60	0.45				YOS05
1999 11 17.20		S	14.2	HS	30.0	L	5	150	0.7	2			BOU
1999 11 18.62		C	15.0	GA	60.0	Y	6	a120	0.7		1.3m	130	NAK01
1999 11 19.74		C	15.0	TJ	18.0	L	6	a 60	0.35				YOS05

Comet C/1999 S4 (LINEAR) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 25.76		C	14.8	HS	20.3	T	6	a120	0.5				LIG
1999 11 27.32		S	14.3:	HS	25.6	L	5	169	0.4	5			BIV
1999 11 27.76		C	14.4	HV	20.3	T	6	a120	0.5				LIG
1999 11 27.76		S	14.0	HS	44.0	L	5	156	0.6	4			HAS02
1999 11 28.34		S	14.3	HS	25.6	L	5	169	0.4	5			BIV
1999 11 28.54		C	14.9:	TJ	18.0	L	6	a 60	0.5		1.1m	119	YOS05
1999 11 28.77		B	14.0	HS	42	L	5	162	1	4			LEH
1999 11 29.33		S	14.3	HS	25.6	L	5	169	0.5	5			BIV
1999 11 29.79		B	14.0	HS	42	L	5	162	1.3	4			LEH
1999 11 29.84		S	13.7	VB	30	R	20	185	0.7	4			SHA02
1999 11 29.88		C	14.8	HV	20.3	T	6	a120	0.8				LIG
1999 11 30.77		B	13.9	HS	42	L	5	162	1.3	4			LEH
1999 12 01.30		S	14.3	HS	25.6	L	5	169	0.6	5			BIV
1999 12 01.81		S	13.8:	VB	30	R	20	185	0.4	3			SHA02
1999 12 03.58		C	14.8	GA	60.0	Y	6	a120	1.0		1.4m	109	NAK01
1999 12 03.92		S	13.8	VB	30	R	20	185	0.6	3			SHA02
1999 12 05.32		S	14.2	HS	25.6	L	5	169	0.5	5			BIV
1999 12 06.34		S	14.3	HS	25.6	L	5	169	0.6	5			BIV
1999 12 06.83		C	15.0	HV	20.3	T	6	a 60	0.8				LIG
1999 12 07.03		S	13.7	NP	45	L	5	167	1.5	2			MAR02
1999 12 07.66		C	14.9	TJ	18.0	L	6	a 60	0.5				YOS05
1999 12 07.84		S	14.0:	VB	30	R	20	185	0.4	2			SHA02
1999 12 08.46		S	14.3	HS	25.6	L	5	169	0.6	5			BIV
1999 12 10.50		C	14.8	TJ	18.0	L	6	a 60	0.5		0.7m	85	YOS05
1999 12 11.82		B	13.9	HS	42	L	5	162	1.1	4			LEH
1999 12 14.40		S	14.2	HS	25.6	L	5	169	0.6	6			BIV
1999 12 15.52		C	14.9	GA	60.0	Y	6	a120	0.75		1.2m	96	NAK01
1999 12 16.46		S	14.3	HS	25.6	L	5	169	0.6	5			BIV
1999 12 19.63		C	14.7	TJ	18.0	L	6	a 60	0.55				YOS05
1999 12 22.63		C	14.5	TJ	18.0	L	6	a 60	0.5				YOS05
1999 12 23.50		C	15.0	TJ	18.0	L	6	a 60	0.45				YOS05
1999 12 28.83		B	13.8	HS	20	L	4	106	1.1	4			LEH
1999 12 29.82		S	14.3:	VB	30	R	20	185	0.6	2			SHA02
1999 12 30.34		S	14.3	HS	25.6	L	5	169	0.6	5			BIV
1999 12 30.44		C	15.3	TJ	18.0	L	6	a 60	0.55				YOS05
1999 12 30.80		C	14.6	HV	20.3	T	6	a120	0.8				LIG

Comet C/1999 T1 (McNaught-Hartley)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 04.58		C	15.8	TJ	60.0	Y	6	a120	0.5				NAK01
1999 11 30.49		a C	15.8:	GA	60.0	Y	6	a120	0.55			20	NAK01
1999 12 12.50		C	15.4	TJ	60.0	Y	6	a120	0.65			30	NAK01
1999 12 27.42		x C	15.3	TJ	60.0	Y	6	a120	0.5			45	NAK01

Comet C/1999 T2 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 04.46		C	16.6	GA	60.0	Y	6	a120	0.35		0.7m	103	NAK01
1999 11 05.52		C	17.3	TJ	18.0	L	6	a 90	0.3				YOS05
1999 11 07.90		S	15.4	HS	50.0	L	5	226	0.3	4			BOU
1999 11 10.50		C	16.5	GA	60.0	Y	6	a120	0.45		0.6m	106	NAK01
1999 11 10.96		S	15.0	HS	50.0	L	5	226	0.4	4			BOU
1999 11 15.87		B	14.5	HS	42	L	5	162	0.8	4			LEH
1999 11 28.51		C	15.3	TJ	18.0	L	6	a 60	0.65				YOS05
1999 11 28.76		B	14.7	HS	42	L	5	162	0.6	4			LEH
1999 11 29.76		B	14.7	HS	42	L	5	162	0.7	4			LEH
1999 11 30.45		C	16.5	GA	60.0	Y	6	a120	0.5				NAK01
1999 12 08.46		C	16.5	GA	60.0	Y	6	a120	0.55		0.5m	96	NAK01
1999 12 08.78		B	14.5	HS	42	L	5	162	0.8	4			LEH
1999 12 09.08		J	15.7	SC	25.4	T	5	a100	0.30	s1/	?		ROQ

Comet C/1999 T3 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 04.55		C	17.1	GA	60.0	Y	6	a240	0.35		0.9m	351	NAK01
1999 11 04.69		C	17.0	TJ	18.0	L	6	a 60	0.3				YOS05
1999 11 05.56		C	17.2	TJ	18.0	L	6	a 60	0.3				YOS05
1999 11 10.56		C	17.3	GA	60.0	Y	6	a240	0.35	8	0.7m	3	NAK01
1999 11 13.56		C	17.2	TJ	18.0	L	6	a 90	0.2				YOS05
1999 11 16.58		C	17.5	GA	60.0	Y	6	a240	0.35	8	1.0m	14	NAK01
1999 11 30.57		C	17.7	GA	60.0	Y	6	a240	0.3	8	0.6m	12	NAK01
1999 12 15.54		C	17.8	GA	60.0	Y	6	a240	0.3		0.4m	33	NAK01

Comet C/1999 U1 (Ferris)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 04.70		C	16.8	GA	60.0	Y	6	a240	0.5		1.4m	151	NAK01
1999 11 08.72		C	16.3	TJ	18.0	L	6	a 60	0.6				YOS05
1999 11 10.66		C	16.6	GA	60.0	Y	6	a240	0.5		1.6m	146	NAK01
1999 11 13.62		C	16.6	HS	18.0	L	6	a 60	0.3				YOS05
1999 11 16.65		C	16.8	GA	60.0	Y	6	a240	0.55		2.0m	150	NAK01
1999 12 03.60		C	16.8	GA	60.0	Y	6	a240	0.5		1.8m	144	NAK01

Comet C/1999 U4 (Catalina-Skiff)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 03.13		J	15.9	SC	25.4	T	5	a100	0.19	s5			ROQ
1999 11 04.57		C	17.2	GA	60.0	Y	6	a240	0.35			180	NAK01
1999 11 04.66		C	17.1	HS	18.0	L	6	a 60	0.45				YOS05
1999 11 05.54		C	16.9	HS	18.0	L	6	a 60	0.25				YOS05
1999 11 10.65		C	17.2	GA	60.0	Y	6	a240	0.4				NAK01
1999 11 13.56		C	17.4	TJ	18.0	L	6	a 90	0.2				YOS05
1999 11 15.91		B	14.7	HS	42	L	5	162	0.5	5			LEH
1999 11 16.62		C	17.4	GA	60.0	Y	6	a240	0.45				NAK01
1999 11 28.57		C	17.4	HS	18.0	L	6	a 90	0.35				YOS05
1999 11 28.82		B	14.9	HS	42	L	5	162	0.4	5			LEH
1999 11 29.81		B	14.9	HS	42	L	5	162	0.4	5/			LEH
1999 11 30.56		C	17.5	GA	60.0	Y	6	a240	0.4				NAK01
1999 12 06.08		J	17.3	SC	25.4	T	5	a100	0.09	d1			ROQ
1999 12 08.49		C	17.0	GA	60.0	Y	6	a240	0.45				NAK01

Comet C/1999 Y1 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 12 27.44		x C	16.4	TJ	60.0	Y	6	a120	0.35			60	NAK01
1999 12 27.75		C	16.2	TJ	18.0	L	6	a 90		9			YOS05
1999 12 29.67		C	16.4	TJ	18.0	L	6	a 90		8/			YOS05

Comet 4P/Faye

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 19.78		C	16.0	TJ	18.0	L	6	a 60	0.45				YOS05
1999 12 07.81		C	16.0	GA	60.0	Y	6	a240	0.9		2.7m	288	NAK01

Comet 10P/Tempel 2

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 05 17.00		B	13.3	HS	42	L	5	162	1.0	4			LEH
1999 05 18.97		B	13.3	HS	42	L	5	162	1.0	4			LEH
1999 05 19.93		B	13.3	HS	42	L	5	162	1.3	3			LEH
1999 05 22.04		B	13.1	HS	42	L	5	162	1.4	3/			LEH
1999 06 01.82		x S	11.1:	TJ	15.0	L	6	30	5	d1			SMY
1999 06 03.97		B	13.1	HS	42	L	5	162	1.2	3			LEH
1999 06 04.94		B	13.1	HS	42	L	5	162	1.3	3			LEH
1999 06 06.82		x S	11.0	TJ	15.0	L	6	30	5	d1			SMY
1999 06 08.82		x S	11.0	TJ	15.0	L	6	30	5	d1			SMY
1999 06 09.92		B	12.9	HS	42	L	5	162	1.5	3			LEH
1999 07 01.83		x S	10.0	TJ	15.0	L	6	30	6	d1			SMY
1999 07 03.94		M	11.8	HS	42	L	5	81	1.7	3			LEH

Comet 10P/Tempel 2 [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 07 04.93		M	11.8	HS	42	L	5	66	1.9	3/			LEH
1999 07 05.89	x	S	9.6:	TT	8	R	7	35	4	3/			KWI
1999 07 05.90	x	S	10.9	TT	11.0	L	7	54	1.4	3/			SAD
1999 07 06.90	x	S	9.8:	TT	8	R	7	35	4	4			KWI
1999 07 06.92	x	S	10.9	TT	11.0	L	7	96	& 1.5	5			SAD
1999 07 10.88	xa	B	11.9	TT	20	T	10	100	2	1/			PLE01
1999 07 10.89	xa	B	11.6	TT	10.0	B		25	3	2/			PLE01
1999 07 10.94		S	11.6	AC	25.4	L	5	104	1.2	4			MEY
1999 07 11.88	xa	B	11.6	TT	15	M	10	60	1.8	2			PLE01
1999 07 14.89	xa	B	11.5	TT	15	M	10	60	2	2			PLE01
1999 07 15.89	x	S	9.3	TT	8	R	7	35	5	3/			KWI
1999 07 15.89	x	S	10.3:	TT	20	T	10	50	4	s2/			DRA02
1999 07 15.90	xa	B	11.3	TT	15	M	10	60	2.5	2			PLE01
1999 07 15.94	x	S	10.5	TT	11.0	L	7	96	1.7	2/			SAD
1999 07 16.89	x	S	9.3	TT	8	R	7	35	4	3			KWI
1999 07 16.91		S	10.6	TJ	25.4	L	5	65	3.8	2/			MEY
1999 07 17.89	xa	B	11.2	TT	15	M	10	60	3	2/			PLE01
1999 07 17.90	x	S	11.6:	TT	20	T	10	50	4.5	2			DRA02
1999 07 17.91		M	11.0	TI	42	L	5	66	2.6	3			LEH
1999 07 17.91		S	10.9	TJ	25.4	L	5	65	3.6	s3/			MEY
1999 07 17.91	x	S	13.7:	TT	20	T	10	111	2	s3/			DRA02
1999 07 18.88		M	10.8	TI	42	L	5	66	2.7	3			LEH
1999 07 18.95	x	S	9.9	TT	11.0	L	7	54	1.3	4			SAD
1999 07 19.91		M	11.0	TI	42	L	5	66	2.5	3/			LEH
1999 07 30.86		M	10.6	TI	42	L	5	81	2.6	3			LEH
1999 07 31.86		M	10.1	TI	42	L	5	81	2.9	4			LEH
1999 07 31.88		S	10.5:	TI	7.6	L	9	35	3				CER01
1999 08 01.89		M	10.5	TT	42	L	5	81	2.8	3			LEH
1999 08 02.88		M	10.5	TT	42	L	5	81	2.8	3			LEH
1999 08 03.89		M	10.5	TI	42	L	5	81	2.4	3			LEH
1999 08 04.86		M	10.0	TT	42	L	5	81	2.8	3/			LEH
1999 08 06.85		M	10.1	TT	20	L	4	42	2.8	3			LEH
1999 08 07.82	x	S	9.3	TJ	15.0	L	6	30	6	d1/			SMY
1999 08 07.88	xa	B	10.8	TT	35	M	10	90	3.5	3			PLE01
1999 08 09.87	xa	B	10.6	TT	35	M	10	90	4	3			PLE01
1999 08 11.87	xa	B	10.4	TT	35	M	10	90	4.5	3			PLE01
1999 08 12.87	xa	B	10.3	TT	35	M	10	90	4	3			PLE01
1999 08 14.06	a	S	7.6	S	8	R	7	35	5	4			KWI
1999 08 14.86	x	S	11.6	HS	35	M	10	144	0.8	2			DRA02
1999 08 16.85	x&	S	10.5	TT	25	L	5	66	& 3	4			KID01
1999 08 21.82	x	S	9.7	TJ	15.0	L	6	30	6	d1/			SMY
1999 08 30.82	x	S	10.0	TJ	15.0	L	6	30	5	d1/			SMY
1999 09 03.80	a	S	7.9	S	8	R	7	35	4	4/			KWI
1999 09 03.84		M	10.6	TT	42	L	5	81	1.8	3/			LEH
1999 09 04.82		M	10.4	TT	42	L	5	81	1.6	3/			LEH
1999 09 05.83		M	10.7	TT	42	L	5	81	1.8	3			LEH
1999 09 09.81		M	10.7	TT	42	L	5	81	2	3/			LEH
1999 09 09.82	x	S	10.0	TJ	15.0	L	6	30	5	d1/			SMY
1999 09 10.81		M	10.5	TT	42	L	5	81	2	3/			LEH
1999 09 10.84	x\$	B	11.0	TT	35	M	10	90	2.5	3/			PLE01
1999 09 11.81		M	10.1	TT	42	L	5	81	2.1	3			LEH
1999 09 11.83	x\$	S	11.4	TT	35	M	10	90	2	3			PLE01
1999 09 12.80		M	10.0	TT	42	L	5	81	2.3	3/			LEH
1999 09 13.80		M	10.0	TT	42	L	5	81	2.3	3			LEH
1999 09 13.82	x\$	S	11.9	TT	35	M	10	90	2	2/			PLE01
1999 09 15.82	x\$	S	12.2	TT	35	M	10	90	1	2			PLE01
1999 10 05.33		S	10.6	TJ	25.6	L	5	42	3.5	3			BIV
1999 10 09.36		S	10.4	TJ	25.6	L	5	42	2.5	3			BIV
1999 10 10.24		S	10.4	TJ	25.6	L	5	42	3.5	3			BIV
1999 10 11.34		S	10.4	TJ	25.6	L	5	42	3.0	3			BIV
1999 10 15.35		S	10.5	TJ	25.6	L	5	42	4.0	3			BIV
1999 10 24.43		C	13.6	TJ	18.0	L	6	a 60	0.6				YOS05
1999 10 28.25		S	10.8	TJ	25.6	L	5	42	3.0	3			BIV
1999 10 28.39		S	11.8	HS	31.7	L	6	152	2	2/			MIY01
1999 11 01.51	x	S	11.1:	TT	25.4	L	4	46	2.7	2			YOS02

Comet 10P/Tempel 2 [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 02.25		S	10.8	HS	25.6	L	5	42	3.0	3			BIV
1999 11 03.45		C	11.9	HV	60.0	Y	6	a120	2.5				NAK01
1999 11 06.41		C	13.7	TJ	18.0	L	6	a 40	0.8				YOS05
1999 11 06.41		S	11.2	HS	25.4	T	6	116	1.6	3			YOS04
1999 11 06.84	x	S	10.8	TJ	30.0	L	5	100	2.5	1/			BOU
1999 11 07.22		S	11.1	HS	25.6	L	5	42	2.5	3			BIV
1999 11 07.43	x	S	11.5	GA	25.4	L	4	46	2.0	2			YOS02
1999 11 08.28		S	11.6	HS	25.6	L	5	42	2.0	2			BIV
1999 11 08.83	x	S	10.7	TJ	30.0	L	5	58	3.0	2			BOU
1999 11 08.84		M	10.9	NP	32	L	5	126	2.5	3/			MAR02
1999 11 09.83	x	S	10.8	TJ	30.0	L	5	72	2.9	1/			BOU
1999 11 10.83	x	S	10.9	TJ	30.0	L	5	58	2.9	1			BOU
1999 11 11.84	x	S	10.9	TJ	30.0	L	5	72	2.5	2			BOU
1999 11 11.85		S	11.0	TT	30.0	L	5	72	2	2/			COM
1999 11 12.84	x	S	10.9	TJ	30.0	L	5	58	2.4	2			BOU
1999 11 13.41		C	12.2	TJ	18.0	L	6	a 40	1.0				YOS05
1999 11 14.34		S	11.6	HS	25.6	L	5	42	2.0	3			BIV
1999 11 15.27		S	12.0	HS	25.6	L	5	84	1.5	3			BIV
1999 11 18.40		C	13.1	TJ	18.0	L	6	a 60	1.0				YOS05
1999 11 21.38		C	13.5	TJ	16.0	H	3	a 20	0.5				YOS05
1999 11 27.25		S	11.8	HS	25.6	L	5	42	2.0	3			BIV
1999 11 27.73		S	13.5	HS	44.0	L	5	156	0.7	2			HAS02
1999 11 28.24		S	12.0	HS	25.6	L	5	42	2.0	4			BIV
1999 11 28.41		C	14.4	TJ	18.0	L	6	a 40	1.0				YOS05
1999 11 28.41		S[11.2	TJ	25.4	T	6	116	!	1.4				YOS04
1999 11 29.24		S	11.8	HS	25.6	L	5	42	2.0	3			BIV
1999 11 29.72		M	11.8	TI	42	L	5	81	1.7	4			LEH
1999 11 30.42	a	C	12.7	GA	60.0	Y	6	a120	2.4				NAK01
1999 12 01.25		S	11.8	HS	25.6	L	5	42	2.0	3			BIV
1999 12 05.25		S	11.9	HS	25.6	L	5	42	2.7	3			BIV
1999 12 05.79		S	12.1	NP	25	L	5	60	1	3			SEG
1999 12 06.27		S	12.6:	HS	25.6	L	5	84	1.5	3			BIV
1999 12 06.82		S	11.4	NP	45	L	5	100	2.5	2			MAR02
1999 12 06.82		S	11.7	NP	45	L	5	100	1	2			SAN04
1999 12 08.76		M	12.6	HS	42	L	5	162	1.4	3			LEH
1999 12 23.40		C	15.3	TJ	18.0	L	6	a 60	0.75	2			YOS05
1999 12 27.43	a	C	13.6	GA	60.0	Y	6	a120	1.7				NAK01
1999 12 30.28		S	12.9	HS	25.6	L	5	84	1.4	2			BIV

Comet 29P/Schwassmann-Wachmann 1

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 04 20.96		B	13.3	HS	42	L	5	162	1.4	3			LEH
1999 05 16.99		B	13.7	HS	42	L	5	162	1.5	4			LEH
1999 05 18.96		B	13.6	HS	42	L	5	162	1.8	3			LEH
1999 07 03.89		M	13.1	HS	42	L	5	162	1.3	3/			LEH

Comet 37P/Forbes

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 07 11.00		S	11.5:	TJ	25.4	L	5	104	1.3	3			MEY
1999 07 17.99		M	11.9	HS	42	L	5	81	1.8	3			LEH
1999 07 18.00		S	11.9	TJ	25.4	L	5	104	2.1	2/			MEY
1999 07 20.00		M	12.1	HS	42	L	5	81	1.8	3			LEH
1999 07 25.01		M	12.2	HS	20	L	4	106	1.8	3			LEH
1999 07 26.01		M	12.0	HS	20	L	4	106	1.8	3			LEH
1999 08 06.97		M	12.7	HS	20	L	4	106	1.3	3/			LEH
1999 08 23.07		B	13.7	HS	20	L	4	106	1.2	3			LEH
1999 09 03.90		M	13.0	HS	42	L	5	81	1.4	3			LEH
1999 09 04.90		M	13.3	HS	42	L	5	81	1.3	3			LEH
1999 09 05.94		M	13.3	HS	42	L	5	81	1.3	3			LEH
1999 09 06.85		M	13.3	HS	42	L	5	162	1.3	3			LEH
1999 09 08.85		M	13.2	HS	42	L	5	162	1.3	3			LEH
1999 09 09.86		B	13.4	HS	42	L	5	162	1.2	4			LEH
1999 09 10.86		B	13.5	HS	42	L	5	162	1.1	3/			LEH

Comet 37P/Forbes [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 09 11.85		B	13.5	HS	42	L	5	162	1.0		3/		LEH
1999 09 12.84		B	13.6	HS	42	L	5	162	1		3		LEH
1999 09 13.84		B	13.7	HS	42	L	5	162	0.9		3/		LEH
1999 09 14.82		B	13.7	HS	42	L	5	162	1		3/		LEH
1999 10 02.84		B	13.9	HS	42	L	5	162	0.9		4		LEH
1999 11 08.53		C	16.7	GA	60.0	Y	6	a240	0.75				NAK01
1999 11 15.85		B	14.6	HS	42	L	5	162	0.7		4		LEH
1999 11 28.81		B	14.7	HS	42	L	5	162	0.6		4		LEH
1999 11 29.78		B	14.7	HS	42	L	5	162	0.5		4		LEH
1999 11 30.47		C	17.1	GA	60.0	Y	6	a240	0.9				NAK01
1999 12 08.80		O	[14.7	HS	42	L	5	162	! 0.5				LEH

Comet 50P/Arend

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 09 11.11		B	14.6	HS	42	L	5	162	0.8				LEH
1999 09 12.11		B	14.3	HS	42	L	5	162	0.8				LEH
1999 09 13.10		B	14.6	HS	42	L	5	162	0.5		4/		LEH
1999 09 14.10		B	14.2	HS	42	L	5	162	0.8		4		LEH
1999 11 12.19		S	14.1	HS	50.0	L	5	151	1.0		1/		BOU
1999 11 15.96		B	14.6	HS	42	L	5	162	0.4		4/		LEH
1999 11 16.19		S	14.3	HS	50.0	L	5	151	0.9		1		BOU
1999 11 16.74		C	16.9	GA	60.0	Y	6	a240	0.6				NAK01
1999 11 30.87		S	14.0	HS	44.0	L	5	156	0.4		4	1.8m 284	HAS02
1999 12 07.74		C	16.8	GA	60.0	Y	6	a240	0.6			1.0m 281	NAK01

Comet 59P/Kearns-Kwee

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 09 11.10		B	14.5	HS	42	L	5	162	0.8				LEH
1999 09 12.10		B	14.4	HS	42	L	5	162	0.9				LEH
1999 09 13.09		B	14.0	HS	42	L	5	162	0.8				LEH
1999 09 14.09		B	13.8	HS	42	L	5	162	1.1				LEH
1999 11 12.21		S	14.2	HS	50.0	L	5	226	0.6		2/		BOU
1999 11 15.94		B	13.7	HS	42	L	5	162	1.1		4		LEH
1999 11 16.12		S	14.0	HS	35	L	5	208	1.1		3		HOR02
1999 11 16.21		S	14.4	HS	50.0	L	5	151	0.7		3/		BOU
1999 11 16.78		C	16.7	GA	60.0	Y	6	a240	0.65			1.8m 289	NAK01
1999 11 19.76		C	15.5	TJ	18.0	L	6	a 90	0.6				YOS05
1999 11 30.87		S	14.2	HS	44.0	L	5	156	0.4		4		HAS02
1999 12 07.04		S	14.0	NP	45	L	5	167	0.5		1		MAR02
1999 12 07.71		C	16.1	TJ	18.0	L	6	a 90	0.4				YOS05
1999 12 07.75		C	16.4	GA	60.0	Y	6	a240	0.7			> 1.6m 287	NAK01
1999 12 29.73		C	16.1	TJ	18.0	L	6	a 60	0.45				YOS05

Comet 63P/Wild 1

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 08.82		C	16.2	TJ	18.0	L	6	a 60	0.35				YOS05
1999 11 12.22		S	14.0	HS	50.0	L	5	151	0.7		3		BOU
1999 11 16.23		S	13.7	HS	50.0	L	5	151	0.8		3		BOU
1999 11 16.86		C	15.6	GA	60.0	Y	6	a120	0.85				NAK01
1999 11 17.22		S	13.7	HS	30.0	L	5	150	0.9		1/		BOU
1999 11 19.80		C	15.6	TJ	18.0	L	6	a 60	0.45				YOS05
1999 11 30.85		C	15.3	TJ	18.0	L	6	a 60	0.35				YOS05
1999 12 07.86		C	14.9	GA	60.0	Y	6	a120	1.3				NAK01
1999 12 09.85		C	15.5	TJ	18.0	L	6	a 60	0.5				YOS05
1999 12 21.86		C	14.7	TJ	18.0	L	6	a 60	0.85				YOS05
1999 12 27.83		C	15.6	TJ	18.0	L	6	a 60	0.5				YOS05

Comet 65P/Gunn

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 18.64		C	18.9	GA	60.0	Y	6	a240	0.2				NAK01

Comet 74P/Smirnova-Chernykh

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 12 03.69		C	16.5	GA	60.0	Y	6	a240	0.55		1.7m	275	NAK01
1999 12 06.76		C	15.9	TJ	18.0	L	6	a 60	0.5				YOS05
1999 12 29.72		C	16.1	TJ	18.0	L	6	a 60	0.3				YOS05

Comet 84P/Giclas

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 09 06.04		B	14.6	HS	42	L	5	162	0.7				LEH
1999 09 11.07		B	14.7	HS	42	L	5	162	0.6				LEH
1999 09 12.07		B	14.3	HS	42	L	5	162	0.7				LEH
1999 09 13.07		B	14.3	HS	42	L	5	162	0.7				LEH
1999 09 14.07		B	14.2	HS	42	L	5	162	0.9				LEH
1999 11 04.75		C	15.9	GA	60.0	Y	6	a240	0.6		1.3m	276	NAK01
1999 11 08.76		C	15.6	TJ	18.0	L	6	a 60	0.35		0.6m	281	YOS05
1999 11 10.75		C	15.7:	GA	60.0	Y	6	a120	0.6		1.3m	282	NAK01
1999 11 15.92		B	14.0	HS	42	L	5	162	1	4			LEH
1999 11 15.92		S	14.5	HS	35	L	5	208	0.7	2/			HOR02
1999 11 16.67		C	15.7	GA	60.0	Y	6	a120	0.7		1.1m	275	NAK01
1999 11 30.62		C	15.4	GA	60.0	Y	6	a120	0.65				NAK01
1999 11 30.85		S	13.7	HS	44.0	L	5	156	0.3	4			HAS02
1999 12 07.69		C	15.5	TJ	18.0	L	6	a 60	0.45				YOS05

Comet 106P/Schuster

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 02.35		S	13.3	HS	25.6	L	5	84	1.0	3			BIV
1999 11 04.50		C	13.7	GA	60.0	Y	6	a120	0.95		4.6m	41	NAK01
1999 11 06.89		S	13.3	HS	30.0	L	5	100	0.8	1			BOU
1999 11 07.86		S	13.3	HS	30.0	L	5	150	1.0	1/			BOU
1999 11 08.30		S	13.3	HS	25.6	L	5	84	1.4	5			BIV
1999 11 08.87		S	13.1	AC	30.0	L	5	100	0.9	3			BOU
1999 11 08.91		S	13.0	NP	32	L	5	126	1.5	2/			MAR02
1999 11 09.47	x	S	13.1	HS	25.4	L	4	113	& 1.7	3			YOS02
1999 11 09.88		S	13.2	HS	30.0	L	5	100	1.1	2			BOU
1999 11 10.53	a	C	13.4	GA	60.0	Y	6	a120	1.2		4.1m	51	NAK01
1999 11 10.85		S	13.3	HS	30.0	L	5	100	1.0	2/			BOU
1999 11 11.87		S	13.2	HS	30.0	L	5	100	1.0	1/			BOU
1999 11 12.88		S	13.2	HS	30.0	L	5	100	0.9	2			BOU
1999 11 13.49		C	13.3	TJ	18.0	L	6	a 60	0.45		1.3m	50	YOS05
1999 11 13.88		S	13.3	TT	30.0	L	5	167	1	2			COM
1999 11 13.94		S	13.1	HS	30.0	L	5	100	1.0	2			BOU
1999 11 14.39		S	13.2	HS	25.6	L	5	84	1.2	3			BIV
1999 11 14.94		S	13.1	HS	30.0	L	5	100	0.9	2			BOU
1999 11 15.40		S	13.4	HS	25.6	L	5	84	1.0	3			BIV
1999 11 15.83		M	12.9	HS	42	L	5	162	1.6	3			LEH
1999 11 15.90		S	12.3	HS	35	L	5	208	1.3	3			HOR02
1999 11 16.46		S	13.2	HS	25.6	L	5	84	1.0	3			BIV
1999 11 18.45		C	13.5	TJ	18.0	L	6	a 40	0.8		2.6m	48	YOS05
1999 11 26.74		S	12.5	AC	25.4	L	5	104	1.4	2/			MEY
1999 11 27.30		S	13.3	HS	25.6	L	5	84	1.0	4	1.0m	60	BIV
1999 11 27.75		S	14.0	HS	44.0	L	5	156	0.8	4			HAS02
1999 11 28.30		S	13.0	HS	25.6	L	5	84	0.8	5	1.0m	60	BIV
1999 11 28.43		S	12.2	HS	25.4	T	6	116	1.4	5			YOS04
1999 11 28.52		C	13.5	TJ	18.0	L	6	a 40	0.75		3.6m	57	YOS05
1999 11 28.80		B	13.1	HS	42	L	5	162	1	4			LEH
1999 11 29.28		S	13.4	HS	25.6	L	5	84	1.0	4	1.0m	70	BIV
1999 11 29.75		S	12.5:	AC	25.4	L	5	104	1.1	4			MEY
1999 11 29.77		M	12.8	HS	42	L	5	81	1.3	3/			LEH
1999 11 30.48		C	14.0	GA	60.0	Y	6	a120	1.1		3.7m	67	NAK01
1999 12 01.32		S	12.8:	HS	25.6	L	5	84	1.0	4			BIV
1999 12 01.46		S	13.6	GA	25.4	L	4	71					SEA
1999 12 02.08		J	12.1	SC	25.4	T	5	a100	2.70	s5	4.4m	75	ROQ
1999 12 05.30		S	13.3	HS	25.6	L	5	84	1.0	3			BIV
1999 12 07.80		S	13.3	VB	30	R	20	185	0.6	3			SHA02
1999 12 08.44		S	13.1	HS	25.6	L	5	84	1.0	2			BIV

Comet 106P/Schuster [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 12 08.47		C	14.1	GA	60.0	Y	6	a120	1.2		3.7m	71	NAK01
1999 12 08.77		B	13.5	HS	42	L	5	162	1.2	4			LEH
1999 12 08.79		S	13.7:	VB	30	R	20	185	0.8	3			SHA02
1999 12 10.44		C	13.6	TJ	18.0	L	6	a 60	1.0		4.0m	53	YOS05
1999 12 12.05		J	12.7	SC	25.4	T	5	a100	1.51	s4	3.7m	72	ROQ
1999 12 14.36		S	13.3	HS	25.6	L	5	169	0.9	3			BIV
1999 12 23.44		C	15.0	TJ	18.0	L	6	a 60	0.35				YOS05
1999 12 28.78		I[13.8		HS	20	T	10	135					SHA02
1999 12 28.82		B	13.6	HS	20	L	4	106	1.1	4			LEH
1999 12 29.80		S	13.8	VB	30	R	20	185	0.7	3			SHA02
1999 12 30.31		S	13.7	HS	25.6	L	5	84	1.0	2			BIV

Comet 108P/Ciffréo

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 30.41		a C	19.5	GA	60.0	Y	6	a240	0.2				NAK01

Comet 114P/Wiseman-Skiff

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 10 31.80		S	14.7	HS	35	L	5	208	0.6	2/			HOR02
1999 11 04.62		C	15.6	GA	60.0	Y	6	a120	0.5		0.6m	200	NAK01
1999 11 05.10		J	14.3	SC	25.4	T	5	a100	0.38	s5			ROQ
1999 11 05.53		C	15.7	TJ	18.0	L	6	a 60	0.35				YOS05
1999 11 10.61		C	15.2	GA	60.0	Y	6	a120	0.7		0.8m	212	NAK01
1999 11 10.95		S	14.4	HS	50.0	L	5	226	0.6	2/			BOU
1999 11 13.60		C	15.2	TJ	18.0	L	6	a 60	0.5				YOS05
1999 11 14.99		S	14.5	HS	50.0	L	5	226	0.7	1/			BOU
1999 11 15.90		M	12.6	HS	42	L	5	162	1.5	3/			LEH
1999 11 16.11		S	14.3	HS	35	L	5	208	0.7	1/			HOR02
1999 11 18.47		C	15.0	TJ	18.0	L	6	a 60	0.5				YOS05
1999 11 21.53		C	15.1	TJ	16.0	H	3	a 60	0.45				YOS05
1999 11 27.75		S	14.0	HS	44.0	L	5	226	0.2	5			HAS02
1999 11 28.59		C	14.6	TJ	18.0	L	6	a 60	0.5				YOS05
1999 11 28.78		M	13.0	HS	42	L	5	81	1.5	3			LEH
1999 11 29.80		B	13.2	HS	42	L	5	81	1.5	3			LEH
1999 11 30.61		C	14.4	GA	60.0	Y	6	a120	1.0		1.4m	128	NAK01
1999 11 30.78		M	12.8	HS	42	L	5	162	1.5	3			LEH
1999 12 05.97		S	13.3	NP	25	L	5	60	1	2			SEG
1999 12 07.01		S	14.2	NP	45	L	5	167	1	3			SAN04
1999 12 07.01		S	14.3	NP	45	L	5	167	1	1			MAR02
1999 12 07.65		C	14.3	TJ	18.0	L	6	a 60	0.7				YOS05
1999 12 07.82		S	14.0:	VB	30	R	20	185	0.7	2			SHA02
1999 12 08.47		S	14.2	HS	25.6	L	5	169	0.6	4			BIV
1999 12 08.51		C	13.9	GA	60.0	Y	6	a120	1.3				NAK01
1999 12 10.46		C	14.0	TJ	18.0	L	6	a 60	0.7		0.9m	79	YOS05
1999 12 11.43		S	12.8	HS	25.4	T	6	116	1.4	5			YOS04
1999 12 11.83		B	13.1	HS	42	L	5	162	1.4	3			LEH
1999 12 13.07		J	12.8	SC	25.4	T	5	a100	0.62	s5			ROQ
1999 12 14.48		S	14.0	HS	25.6	L	5	169	0.5	5			BIV
1999 12 16.47		S	13.4	HS	25.6	L	5	84	0.7	4			BIV
1999 12 19.60		C	14.1	TJ	18.0	L	6	a 60	0.45				YOS05
1999 12 22.65		C	14.3	TJ	18.0	L	6	a 40	0.6				YOS05
1999 12 23.53		C	14.7	TJ	18.0	L	6	a 60	0.45				YOS05
1999 12 28.85		B	13.5	HS	20	L	4	106	1.3	3/			LEH
1999 12 29.83		S	14.0	VB	30	R	20	185	0.7	3			SHA02
1999 12 30.35		S	13.4	HS	25.6	L	5	84	1.3	3			BIV
1999 12 30.45		C	14.8	TJ	18.0	L	6	a 60	0.55				YOS05
1999 12 30.81		C	14.3	HV	20.3	T	6	a120	1.0				LIG

Comet 117P/Helin-Roman-Alu 1

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 04.68		C	17.7	GA	60.0	Y	6	a240	0.3		1.1m	238	NAK01
1999 12 03.55		C	18.1	GA	60.0	Y	6	a240	0.3		0.9m	235	NAK01

Comet 136P/Mueller 3

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 08.65		C	17.5	GA	60.0	Y	6	a240	0.4				NAK01
1999 11 30.61		C	17.9	GA	60.0	Y	6	a240	0.35				NAK01

Comet 137P/Shoemaker-Levy 2

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 04.43		C	19.1:	GA	60.0	Y	6	a240		9			NAK01
1999 12 08.41	a	C	18.5	GA	60.0	Y	6	a240	0.25				NAK01

Comet 141P/Machholz 2

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 10 31.73		O	[12.5	HS	35	L	5	166	! 1.5				HOR02
1999 10 31.73		S	[12.5	HS	25.4	L	5	104	! 1.0				MEY
1999 11 06.85		S	12.7	TT	30.0	L	5	58	1.5		2		COM
1999 11 09.70		E	10.2	AA	20	L	5	33	1		2		ROM
1999 12 24.70		E	8.9	AA	6	R	10	16	2		3		ROM
1999 12 25.69		E	8.9	AA	6	R	10	16	2		3		ROM
1999 12 29.99	x	S	10.3:	TJ	23.0	L	5	36	2		3		DES01

Comet 141P/Machholz 2 (component A)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 10 28.23		S	14.4:	HS	25.6	L	5	169	0.4		4		BIV
1999 10 30.72		S	[12.5	HS	20	L	5	70	! 1.5				BAR06
1999 11 02.24		S	14.1:	HS	25.6	L	5	169	1		2		BIV
1999 11 02.75		I	[11.4	HS	33	L	5	75					SHA02
1999 11 02.75		S	[10.5	HS	33	L	5	75					SHA02
1999 11 05.76		S	12.3:	HS	30	R	20	105	1.0		3		SHA02
1999 11 08.23		S	13.8:	HS	25.6	L	5	169	0.4		5		BIV
1999 11 08.82		S	13.0:	HS	30.0	L	5	150	1.0		2		BOU
1999 11 09.77		S	10.9	TJ	30	R	20	185	0.8		3		SHA02
1999 11 09.82		S	12.8:	HS	30.0	L	5	150	0.9		2/		BOU
1999 11 10.81		S	12.8	HS	30.0	L	5	150	1.0		3		BOU
1999 11 13.38	l	C	[15.0	TJ	18.0	L	6	a 40					YOS05
1999 11 18.39		C	14.6:	TJ	18.0	L	6	a 60	0.3				YOS05
1999 11 27.22		S	11.6	HS	25.6	L	5	84	2.0		5		BIV
1999 11 27.73		S	12.8	HS	44.0	L	5	156	0.7		3		HAS02
1999 11 28.22		S	12.1	HS	25.6	L	5	84	1.8		5		BIV
1999 11 28.37		C	14.9	TJ	18.0	L	6	a 60	0.45				YOS05
1999 11 28.39		S	[12.5	HS	32.0	L	5	91	! 0.5				NAG08
1999 11 29.23		S	11.9	HS	25.6	L	5	84	2.0		3		BIV
1999 11 29.71		S	11.8	AC	25.4	L	5	104	1.8		3		MEY
1999 11 30.40	a	C	13.1	GA	60.0	Y	6	a120	1.9				NAK01
1999 12 01.22		S	11.6	HS	25.6	L	5	84	1.7		2		BIV
1999 12 01.75		S	12.2:	HS	33	L	5	100	1.0		2		SHA02
1999 12 02.45		S	11.4	GA	25.4	L	4	71					SEA
1999 12 03.40	x	C	12.5	HV	60.0	Y	6	a120	2.4				NAK01
1999 12 03.77		S	11.2	TJ	33	L	5	100	1.0		2		SHA02
1999 12 05.23		S	11.9	HS	25.6	L	5	84	2.0		4		BIV
1999 12 06.23		S	11.4	HS	25.6	L	5	84	2.5		5		BIV
1999 12 06.79		M	11.8	NP	45	L	5	100	3.5		3		MAR02
1999 12 06.80		M	11.1	NP	45	L	5	100	6		3		SAN04
1999 12 07.75		S	11.3	TJ	33	L	5	100	1.4		2		SHA02
1999 12 08.40	x	C	11.9	TJ	60.0	Y	6	a120	2.7				NAK01
1999 12 08.74		M	10.5	TI	42	L	5	81	3.5		4		LEH
1999 12 08.75		S	11.3	TJ	30	R	20	105	1.6		2		SHA02
1999 12 09.28		S	10.9	TJ	25.6	L	5	84	2.5		5		BIV
1999 12 10.36		C	14.0	TJ	18.0	L	6	a 60	1.2		1		YOS05
1999 12 11.37		C	12.8	TJ	18.0	L	6	a 30	0.9				YOS05
1999 12 11.38	x	S	11.0:	TJ	32.0	L	5	58	& 4		2		NAG08
1999 12 11.40		S	11.6	HS	25.4	T	6	116	2.1		2/		YOS04
1999 12 11.43	x	S	10.8	TT	25.4	L	4	46	2.5		3		YOS02
1999 12 14.23		S	11.0	HS	25.6	L	5	84	2.5		5		BIV
1999 12 19.38		C	11.9	TJ	18.0	L	6	a 40	1.0		0		YOS05

Comet 141P/Machholz 2 (component A) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 12 23.36		C	11.8	TJ	18.0	L	6 a	60	1.7				YOS05
1999 12 23.39		S	9.8:	TJ	25.4	T	6	62	5.0	3			YOS04
1999 12 25.77		S	10.3	TJ	20	T	10	75	3.2	1			SHA02
1999 12 27.40	x	C	11.1	HV	60.0	Y	6 a	60	3.4				NAK01
1999 12 28.75		S	9.3	TJ	20	T	10	75	2.8	3			SHA02
1999 12 29.26		S	10.1	TJ	25.6	L	5	42	4.0	4			BIV
1999 12 29.75		S	9.3	TJ	33	L	5	60	3.0	3			SHA02
1999 12 30.25		S	9.8	TJ	25.6	L	5	42	5.0	4			BIV
1999 12 30.37		C	12.8	TJ	18.0	L	6 a	60	1.0				YOS05
1999 12 31.38		S	10.4	TJ	25.4	T	6	62	2.6	2			YOS04

Comet 141P/Machholz 2 (component D)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 10 24.39	l	C	[16.2	TJ	18.0	L	6 a	60					YOS05
1999 10 30.72		S	[12.5	HS	20	L	5	70	! 1.5				BAR06
1999 11 03.40		C	15.1	HV	60.0	Y	6 a	120	0.65	1/			NAK01
1999 11 04.40		C	15.3:	HV	60.0	Y	6 a	120	0.5	0/			NAK01
1999 11 05.76		S	12.5:	HS	30	R	20	105	0.8	3			SHA02
1999 11 06.39		C	14.6	TJ	18.0	L	6 a	40	0.6				YOS05
1999 11 06.82		S	12.7	HS	50.0	L	5	151	1.2	1			BOU
1999 11 07.24		S	12.3	HS	25.6	L	5	84	1.5	2			BIV
1999 11 08.22		S	12.5	HS	25.6	L	5	84	1.3	2			BIV
1999 11 08.81		S	12.3	HS	30.0	L	5	100	1.2	1/			BOU
1999 11 09.70		S	12.3	HS	20	L	5	70	1.5	2			BAR06
1999 11 09.77		S	11.3	TJ	30	R	20	185	0.7	3			SHA02
1999 11 09.81		S	12.2	HS	30.0	L	5	100	1.2	1/			BOU
1999 11 10.42		C	13.6:	HV	60.0	Y	6 a	120	0.85				NAK01
1999 11 10.81		S	12.0	HS	30.0	L	5	100	1.6	1/			BOU
1999 11 11.83		S	12.0	HS	30.0	L	5	100	1.6	1/			BOU
1999 11 13.38		C	14.5:	TJ	18.0	L	6 a	40	0.35				YOS05
1999 11 14.25		S	12.1	HS	25.6	L	5	84	1.3	2			BIV
1999 11 15.23		S	12.2:	HS	25.6	L	5	84	1.3	2			BIV
1999 11 15.77		M	11.1	TT	42	L	5	81	3.2	4			LEH
1999 11 16.71		S	[11.0:	HS	20	L	5	70	! 1.5				BAR06
1999 11 18.36		C	14.9:	TJ	18.0	L	6 a	60	0.6				YOS05
1999 11 26.22		S	12.4:	HS	25.6	L	5	84	1.5	2			BIV
1999 11 26.71		S	12.0:	AC	25.4	L	5	104	1.2	1/			MEY
1999 11 26.72		S	11.8	HS	20	L	5	70	1.5	2			BAR06
1999 11 27.22		S	12.3:	HS	25.6	L	5	84	1.2	2			BIV
1999 11 27.73		S	12.9	HS	44.0	L	5	156	0.7	2			HAS02
1999 11 28.22		S	12.6	HS	25.6	L	5	84	1.2	2			BIV
1999 11 28.37		C	15.4:	TJ	18.0	L	6 a	60	0.65	1			YOS05
1999 11 28.39		S	[12.5	HS	32.0	L	5	91	! 0.5				NAG08
1999 11 28.40		S	11.2	HS	25.4	T	6	116	1.5	3			YOS04
1999 11 29.23		S	12.5	HS	25.6	L	5	84	1.0	2			BIV
1999 11 29.70		M	10.8	TT	42	L	5	81	3.7	4			LEH
1999 11 29.71		S	12.0:	AC	25.4	L	5	104	2.1	2			MEY
1999 11 29.78		S	[10.5:	TJ	33	L	5	100					SHA02
1999 11 30.40	a	C	14.4:	GA	60.0	Y	6 a	120	1.1	0			NAK01
1999 11 30.45		S	11.8	GA	25.4	L	4	114					SEA
1999 12 01.23		S	12.5	HS	25.6	L	5	84	1.2	2			BIV
1999 12 01.75		S	11.9:	HS	33	L	5	100	1.0	3			SHA02
1999 12 02.45		S	12 :	GA	25.4	L	4	114					SEA
1999 12 03.40	x	C	13.6:	HV	60.0	Y	6 a	120	1.7	0			NAK01
1999 12 03.77		S	10.8	TJ	33	L	5	100	1.0	3			SHA02
1999 12 05.22		S	12.4	HS	25.6	L	5	84	1.2	3			BIV
1999 12 05.78		S	12.0	NP	25	L	5	60	2	2			SEG
1999 12 06.23		S	13.0	HS	25.6	L	5	84	1.0	2			BIV
1999 12 06.79		S	13.0	NP	45	L	5	100	1.5	1			MAR02
1999 12 06.80		S	12.8	NP	45	L	5	100	0.75	2			SAN04
1999 12 07.75		S	11.1	TJ	33	L	5	100	1.4	3			SHA02
1999 12 08.40	x	C	14.0:	TJ	60.0	Y	6 a	120	1.5	0			NAK01
1999 12 08.74		M	10.9	TI	42	L	5	81	3.0	4			LEH
1999 12 08.75		S	10.9	TJ	30	R	20	105	1.8	3			SHA02

Comet 141P/Machholz 2 (component D) [cont.]

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 12 10.36	1	C	[15.8	TJ	18.0	L	6	a 60					YOS05
1999 12 11.37	1	C	[15.5	TJ	18.0	L	6	a 30					YOS05
1999 12 11.38		S	[12.5	HS	32.0	L	5	58	! 0.5				NAG08
1999 12 14.25		S	12.8	HS	25.6	L	5	169	1.0	3			BIV
1999 12 23.38	1	C	[16.0	TJ	18.0	L	6	a 60					YOS05
1999 12 25.77		S	10.9	TJ	20	T	10	75	1.7	3			SHA02
1999 12 27.40		C	[16.0:		60.0	Y	6	a240	! 1.5				NAK01
1999 12 28.75		S	10.7	TJ	20	T	10	75	2.0	2			SHA02
1999 12 29.27		S	13.2:	HS	25.6	L	5	169	0.8	2			BIV
1999 12 29.75		S	11.0	TJ	33	L	5	100	1.8	3			SHA02
1999 12 30.26		S	13.4:	HS	25.6	L	5	169	1.0	2			BIV

Comet P/1998 U4 (Spahr)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 12 03.72		a	C 18.6	GA	60.0	Y	6	a240	0.25			290	NAK01

Comet P/1999 R028 (LONEOS)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 04.59			C 18.9	GA	60.0	Y	6	a240	0.25				NAK01

Comet P/1999 U3 (LINEAR)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 04.63			C 16.3	GA	60.0	Y	6	a240	0.45		0.9m	221	NAK01
1999 11 04.74			C 16.7:	TJ	18.0	L	6	a 60	0.3				YOS05
1999 11 05.58			C 16.1	TJ	18.0	L	6	a 90	0.45		1.0m	225	YOS05
1999 11 10.61			C 16.3	GA	60.0	Y	6	a120	0.45		0.7m	218	NAK01
1999 11 16.57			C 16.3	GA	60.0	Y	6	a120	0.55		0.9m	217	NAK01
1999 11 28.63			C 16.4	TJ	18.0	L	6	a 60	0.3				YOS05
1999 12 03.58			C 16.1	GA	60.0	Y	6	a120	0.5		0.7m	209	NAK01
1999 12 07.67			C 16.1	TJ	18.0	L	6	a 60	0.4				YOS05
1999 12 15.52			C 15.8	GA	60.0	Y	6	a120	0.5				NAK01

Comet P/1999 V1 (Catalina)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 11 16.83			C 18.1	GA	60.0	Y	6	a240	0.35		1.0m	296	NAK01
1999 12 07.80			C 17.9	GA	60.0	Y	6	a240	0.4		0.8m	296	NAK01

Comet P/1999 X1 (Hug-Bell)

DATE (UT)	N	MM	MAG.	RF	AP.	T	F/	PWR	COMA	DC	TAIL	PA	OBS.
1999 12 15.76			C 18.7	GA	60.0	Y	6	a240	0.25		0.5m	288	NAK01

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New Tycho Source for Comparison-Star Magnitudes

A new source of comparison-star magnitudes from the Hipparcos/Tycho catalogue has been released on CD-ROM. Called "The Tycho-2 Catalogue", it is described in a paper by E. Høg *et al.* (2000, *Astronomy and Astrophysics*, in press). The catalogue is also described on the World Wide Web at URL <http://www.astro.ku.dk/~erik/Tycho-2>.

NOTE that *only* Tycho-2 V_T magnitudes (labeled VT) from the *main* catalogue should be used. The supplements contain a mix of V -like magnitudes from the original Tycho catalogue and should not be taken from this source. The *ICQ* tabulation will use the 2-letter code 'TK' to denote the use of appropriate comparison-star magnitudes from the Tycho-2 Catalogue.

DESIGNATIONS OF RECENT COMETS

Listed below, for handy reference, are the last 35 comets to have been given designations in the new system. The name, preceded by a star (*) if the comet was a new discovery (compared to a recovery from predictions of a previously-known short-period comet) or a # if a re-discovery of a lost comet. 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 last column indicate the *IAU Circular* (4-digit number) containing the discovery/recovery or permanent-number announcement.

Not included below are numerous recently-discovered comets observed only with the ESA/NASA Solar and Heliospheric Observatory (SOHO) spacecraft — and seen only close to the sun with the SOHO instruments — that are presumed to be Kreutz sungrazers that are no longer in existence (see lists and references in October 1997 *ICQ*, p. 286; July 1998 *ICQ*, p. 160; April 1999 *ICQ*, p. 75; and July 1999 *ICQ*, p. 112); recent such SOHO discoveries were reported on *IAUC* 7349, 7364, 7367, 7370, 7376, and 7377 and include comets C/1999 E2, C/1999 O1, C/1999 O2, C/1999 O3, C/1999 P3, C/1999 P4, C/1999 P5, C/1999 Q1, C/1999 Q2, C/1999 Q3, C/1999 R3, C/2000 B1, C/2000 C6, C/2000 D1, and C/2000 E1. Other SOHO discoveries that were evidently *not* Kreutz sungrazers include C/1997 K2 (*IAUC* 7327), C/1998 G3 (*IAUC* 6952, 7343), C/1999 U2 (*IAUC* 7292), C/1999 Y2 (*IAUC* 7343), C/2000 C2 (*IAUC* 7364), C/2000 C3 (*IAUC* 7364), C/2000 C4 (*IAUC* 7364), and C/2000 C5 (*IAUC* 7364).

[This list updates that in the July 1999 issue, p. 112. For explanation regarding new usage of 'C/' instead of 'P/' for intermediate-period comets, see editorial note on page 2 of this issue.]

<i>New-Style Designation</i>	<i>P</i>	<i>T</i>	<i>q</i>	<i>IAUC</i>
* C/1999 K4 (LINEAR)		5/16/99	1.45	7176
* C/1999 K5 (LINEAR)		7/4/00	3.3	7178
* C/1999 K6 (LINEAR)		8/10/99	2.25	7180
* C/1999 K7 (LINEAR)		2/25/99	2.32	7181
* C/1999 K8 (LINEAR)		4/24/00	4.2	7182
* C/1999 L2 (LINEAR)		8/4/99	1.90	7199
* C/1999 L3 (LINEAR)		1/4/00	1.99	7200
* C/1999 N2 (Lynn)		7/23/99	0.76	7222
* C/1999 N4 (LINEAR)		5/26/00	5.49	7226
141P/1999 P1 (Machholz 2)	5.22	12/9/99	0.75	7231
* P/1999 RO ₂₈ (LONEOS)	6.46	10/2/99	1.23	7253
142P/1999 R2 (Ge-Wang)	11.2	6/21/99	2.50	7255
* C/1999 S2 (McNaught-Watson)		11/24/97	6.5	7260
* C/1999 S3 (LINEAR)	82.6	11/9/99	1.89	7264
* C/1999 S4 (LINEAR)		8/4/00	0.76	7267
* C/1999 T1 (McNaught-Hartley)		12/13/00	1.17	7273
* C/1999 T2 (LINEAR)		11/24/00	3.0	7280
* C/1999 T3 (LINEAR)		9/1/00	5.4	7289
* C/1999 U1 (Ferris)		9/2/98	4.1	7283
* P/1999 U3 (LINEAR)	10.7	11/18/99	1.85	7295
* C/1999 U4 (Catalina-Skiff)		10/28/01	4.9	7298
* P/1999 V1 (Catalina)	16.8	10/25/99	2.94	7302
* P/1999 WJ ₇ (Korlević)	10.0	2/15/00	3.17	7368
* P/1999 X1 (Hug-Bell)	7.04	6/20/99	1.94	7331
* P/1999 XB ₆₉ (LINEAR)	9.4	2/17/00	1.64	7370
* C/1999 XS ₈₇ (LINEAR)	72.7	8/6/99	2.77	7344
* P/1999 XN ₁₂₀ (Catalina)	8.5	5/1/00	3.29	7370
* C/1999 Y1 (LINEAR)		3/24/01	3.1	7338
* C/2000 A1 (Montani)		7/14/00	9.8	7346
* C/2000 B2 (LINEAR)		11/9/99	3.8	7354
* P/2000 B3 (LINEAR)	8.0	2/14/00	1.70	7356
* C/2000 B4 (LINEAR)	77.2	6/24/00	6.8	7368
* P/2000 C1 (Hergenrother)	6.64	3/19/00	2.10	7357
* C/2000 CT ₅₄ (LINEAR)		6/18/01	3.13	7368
* C/2000 D2 (LINEAR)		3/2/00	2.3	7372