Circular No. 8597

Central Bureau for Astronomical Telegrams
INTERNATIONAL ASTRONOMICAL UNION
Mailstop 18, Smithsonian Astrophysical Observatory, Cambridge, MA 02138, U.S.A.
IAUSUBS@CFA.HARVARD.EDU or FAX 617-495-7231 (subscriptions)
CBAT@CFA.HARVARD.EDU (science)
URL `http://cfa-www.harvard.edu/iau/cbat.html` ISSN 0081-0304
Phone 617-495-7440/7244/7444 (for emergency use only)

COMET P/2005 R2 (VAN NESS)

M. E. Van Ness, Lowell Observatory, reports his discovery of a comet on images taken by himself with the LONEOS telescope (discovery observation tabulated below); the new object shows a moderately condensed elongated coma of diameter 20″ with a fan-shaped tail 245″ long in p.a. 240°. Following posting on the 'NEO Confirmation Page', several other observers have noted the object's cometary nature on their CCD images — including D. Kyrylenko, O. Gerashchenko, V. Lokot, and Y. Ivashchenko (Zhytomyr reg, Ukraine, Sept. 10.8 UT; 2′ tail in p.a. 250°); E. Reina Lorenz (Masquefa, Spain, Sept. 11.0; 50″ coma and 100″ tail); C. Jacques and E. Pimentel (Belo Horizonte, Minas Gerais, Brazil, Sept. 11.25; elongated coma of diameter 9″ × 12″ and red mag 15.8–16.1 with a broad 50″ fan tail in p.a. 240°); and J. E. McGaha (Tucson, AZ, Sept. 11.27–11.29; six 60-s co-added images show a 12″ × 18″ coma elongated with a narrow, fan-shaped tail 115″ long in in p.a. 236°).

2005 UT	α_{2000}	δ_{2000}	Mag.
Sept.10.40969	$2^{h}26^{m}37^{s}.95$	$+28^{\circ}36'18''.9$	17.0

The available astrometry (including prediscovery LINEAR observations on Aug. 16 and 31), the following orbital elements, and an ephemeris appear on *MPEC* 2005-R54.

$$
\begin{array}{lll}
T = 2005\ \text{Feb.}\ 11.022\ \text{TT} & \omega = 3^{\circ}.215 & \\
e = 0.38393 & \Omega = 312.836 & 2000.0 \\
q = 2.12818\ \text{AU} & i = 10.246 & \\
a = 3.45442\ \text{AU} \quad n^{\circ} = 0.153512 & P = 6.42\ \text{years} &
\end{array}
$$

COMET P/2004 FY$_{140}$ (LINEAR)

An apparently asteroidal object discovery by LINEAR (discovery observation below, from *MPS* 104067; orbital elements on *MPO* 66354) has been found by C. Hergenrother, Lunar and Planetary Laboratory, to have been consistently non-stellar on individual and co-added *R*-band frames taken on 2004 May 19 and 20 UT; images taken on 2005 July 5 and 6 with the Catalina 1.54-m reflector failed to show the object for 15′ along the line-of-variation (limiting mag $V \sim 22$; predicted mag near $V \sim 19$).

2004 UT	α_{2000}	δ_{2000}	Mag.
Mar. 27.33098	$12^{h}37^{m}49^{s}.21$	$-6^{\circ}08'44''.6$	18.1

2005 September 11 Daniel W. E. Green