Circular No. 8880

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://www.cfa.harvard.edu/iau/cbat.html` ISSN 0081-0304
Phone 617-495-7440/7244/7444 (for emergency use only)

COMET C/2007 T4 (GIBBS)

A. R. Gibbs reports his discovery of a comet on unfiltered CCD images obtained with the 0.68-m Schmidt telescope at Catalina (discovery observation tabulated below), with four co-added 30-s exposures showing a compact coma of size $8''.5 \times 6''$ with a tapered $25''$ tail in p.a. 305°. Four 30-s images taken by R. A. Kowalski with the Mt. Lemmon 1.5-m reflector on Oct. 14.5 UT show a coma of diameter $\approx 10''$ with a straight tail $\approx 25''$ long in p.a. 300°. Following posting on the Minor Planet Center's 'NEOCP' webpage, J. Y. Young writes that his CCD images taken with the Table Mountain 0.61-m telescope on Oct. 15.5 show a round, $6''$-diameter, diffuse coma with a small bright central core and a $30''$ tail in p.a. 290°.

2007 UT	α_{2000}	δ_{2000}	Mag.
Oct. 12.46227	$9^h57^m24^s.47$	$+34^\circ12'33''.6$	18.4

The available astrometry, the following preliminary parabolic orbital elements, and an ephemeris appear on *MPEC* 2007-T113.

$$T = 2007\ \text{Aug.}\ 11.396\ \text{TT} \qquad \left.\begin{array}{l}\omega = 49^\circ.967\\ \Omega = 41.159\\ i = 24.007\end{array}\right\}2000.0$$
$$q = 2.19536\ \text{AU}$$

COMET C/2007 T5 (GIBBS)

Gibbs also reports his discovery of another comet with a diffuse $15''$ coma and a brighter $6''$-diameter center (no visible tail) on four co-added 30-s unfiltered Catalina Sky Survey exposures (discovery observation tabulated below). Kowalski adds that four co-added 60-s exposures at Mt. Lemmon on Oct. 14.5 UT show a strongly condensed coma of diameter $30''$; his four co-added 75-s exposures on Oct. 15.5 show a condensed coma $\approx 12''$ across and an extended coma $\approx 25''$ across with no visible tail in poor seeing. Young found a very faint diffuse round coma of diameter $26''$ with no tail and very little central condensation on his images from Oct. 15.5.

2007 UT	α_{2000}	δ_{2000}	Mag.
Oct. 13.45523	$8^h16^m28^s.09$	$+19^\circ11'10''.5$	18.2

The available astrometry, preliminary parabolic orbital elements (T = 2008 Feb. 13.463 TT, q = 4.40844 AU, $\omega = 17^\circ.415$, $\Omega = 110^\circ.115$, $i = 44^\circ.126$, equinox 2000.0), and an ephemeris appear on *MPEC* 2007-T114.

2007 October 15 *Daniel W. E. Green*