Circular No. 8869

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 P/2007 R3 (GIBBS)

A. R. Gibbs reports his discovery of another comet on unfiltered CCD images obtained with the 1.5-m reflector in the course of the Mt. Lemmon Survey ("discovery" observation tabulated below); the four co-added 30-s frames show a well-condensed 8″ coma and a faint, narrow tail 20″ long in p.a. 240°, while four co-added 80-s frames taken around Sept. 14.37 UT show a condensed 11″ coma and a faint 30″ tapered tail in p.a. 240°. Four co-added 30-s exposures by Gibbs on Sept. 15.24–15.27 show a condensed 8″ coma and a faint 10″ tail in p.a. 225°, while four co-added 80-s frames taken around Sept. 15.35–15.36 show a condensed 10″ coma and a narrow 40″ tail in p.a. 245°. Following posting on the Minor Planet Center's 'NEOCP' webpage, numerous other CCD astrometric observers have also commented on the object's cometary appearance. G. Hug (Scranton, KS, 0.30-m reflector) writes that the object appeared diffuse on his images from Sept. 15.3. J. G. Ries (McDonald Observatory 0.76-m reflector) notes that her images from Sept. 15.4 show a coma and a faint tail ≈ 23″ long toward the southwest. V. Gonano, E. Guido, and G. Sostero (Remanzacco, Italy, 0.45-m reflector) report that fourth co-added 60-s exposures taken around Sept. 16.0 show a diffuse coma nearly 15″ in diameter with a broad tail nearly 25″ long in p.a. 260°. P. Birtwhistle (Great Shefford, Berkshire, England, 0.40-m $f/6$ reflector) writes that his images from Sept. 16.0 show a 10″ coma with a 30″ tail in p.a. 240°.

2007 UT	α_{2000}	δ_{2000}	Mag.
Sept.14.29338	$0^h41^m55^s.38$	$+1°26'12''.0$	18.9

The available astrometry, the following preliminary elliptical orbital elements, and an ephemeris appear on *MPEC* 2007-S02.

$$\begin{array}{llll} T = 2007\text{ June }6.477\text{ TT} & \omega = 292^\circ.699 & \\ e = 0.53777 & \Omega = 33.711 & \Big\}2000.0 \\ q = 2.20125\text{ AU} & i = 3.165 & \end{array}$$

$$a = 4.76219\text{ AU} \qquad n^\circ = 0.094840 \qquad P = 10.4\text{ years}$$

COMET C/2007 N3 (LULIN)

The following revised parabolic orbital elements for this comet (cf. *IAUC* 8857) are from *MPEC* 2007-R56: T = 2009 Jan. 10.7452 TT, q = 1.211903 AU, $\omega = 136^\circ.8430$, $\Omega = 338^\circ.4873$, $i = 178^\circ.3716$ (equinox 2000.0).

2007 September 16 Daniel W. E. Green