Circular No. 8994

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URL http://www.cfa.harvard.edu/iau/cbat.html ISSN 0081-0304
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COMET P/2008 T4 (HILL)

R. E. Hill reports his discovery of a comet on CCD images taken with the 0.68-m Schmidt telescope in the course of the Catalina Sky Survey (discovery observation tabulated below), a stack of four 30-s exposures showing a diffuse coma 10″ across and a well-condensed nuclear condensation with a broad tail 20″ long in p.a. ~ 210°. Images obtained by A. Boattini with the Mt. Lemmon 1.5-m reflector on Oct. 8.44–8.45 UT show a well-condensed coma with diameter 10″ and a broad tail ~ 30″ long in p.a. 245°.

2008 UT	α_{2000}	δ_{2000}	Mag.
Oct. 8.38711	1^{h}52^{m}52^s.10	+7°39′25″.5	17.9

The available astrometry (including prediscovery observations from Sept. 28–30), the following preliminary elliptical orbital elements, and an ephemeris appear on *MPEC* 2008-T90.

$$\begin{array}{llll} T = 2008\ \text{Sept.}21.832\ \text{TT} & \omega = 331^\circ.404 & \\ e = 0.44203 & \Omega = 46.835 & \Big\}\ 2000.0 \\ q = 2.44897\ \text{AU} & i = 5.540 & \\ a = 4.38908\ \text{AU} & n^\circ = 0.107188 & P = 9.20\ \text{years} \end{array}$$

2008 TC$_3$

J. Borovicka, Astronomical Institute, Czech Academy of Sciences, reports that Z. Charvat (Czech Hydrometeorological Institute) has noticed a bright spot that likely corresponds to the atmospheric entry of 2008 TC_3 (cf. *IAUC* 8990) over northern Sudan on images taken by the weather satellite Meteosat 8 around Oct. 7^{d}02^{h}45^m UT; the spot is apparent in all twelve satellite spectral channels, spanning wavelengths 0.5–14 μm. Since the satellite takes images in scanning mode, it takes ~ 5 min to obtain one image; consequently, the exact time of the spot's appearance cannot be inferred easily from the image. The spot is, however, not present in the images taken at nominal times 2^{h}40^m and 2^{h}50^m UT. The geographical coordinates of the spot in the visual and near-infrared channels are λ = 32°.16 east, β = +20°.97 (assuming that the source of light is at sea level). The HRV channel shows an apparent tail ~ 3 km long toward the west-northwest. The infrared channels (displaced in the instrument focal plane and likely scanned the region 1.8 s later) show the spot at λ = 32°.37 east, β = +20°.89. The actual coordinates may be slightly southwest of these positions after correcting for the fireball's altitude (~ 30 and 22 km).

2008 October 8 *Daniel W. E. Green*