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COMET P/2005 T5 (BROUGHTON)

John Broughton, Reedy Creek, Qld., Australia, reports his discovery of a comet on CCD images taken with a 0.51-m *f*/2.7 reflector (discovery observation below). Other observers have confirmed the object's cometary appearance from their own CCD images, including J. Young (Table Mountain, 0.6-m reflector, co-added exposures taken on Oct. 24.2 UT; prominent, round 8″ coma with a 16″ tail spanning p.a. 20°–30°), R. H. McNaught (Siding Spring, 1.0-m reflector, 60-s exposures taken on Oct. 24.45; very strongly condensed condensation of size 2″.5 FWHM with a faint 12″ tail in p.a. 40°), and J. E. McGaha (Tucson, 0.62-m reflector, five 180-s co-added frames taken on Oct. 25.2; round, bright inner coma of diameter $\sim 7''$ and a very faint outer coma extending to $\sim 20''$, no tail).

2005 UT	α_{2000}	δ_{2000}	Mag.
Oct. 9.57058	$0^h06^m38^s.05$	$-27^\circ22'54''.2$	18.5

The available astrometry (prediscovery observations back to Aug. 26), the following orbital elements, and an ephemeris appear on *MPEC* 2005-U53.

$$\begin{array}{llll} T = 2005\ \text{Nov. } 3.3917\ \text{TT} & \omega = 304^\circ.4863 & \\ e = 0.552357 & \Omega = 57.0701 & \Big\} 2000.0 \\ q = 3.247088\ \text{AU} & i = 21.3730 & \end{array}$$

$$a = 7.253744\ \text{AU} \qquad n^\circ = 0.0504499 \qquad P = 19.536\ \text{years}$$

SUPERNOVAE 2005hc, 2005hd, 2005he

Three supernovae have been reported: 2005hc in MCG +00-6-3 by J. Frieman (Fermilab and University of Chicago), on behalf of the Sloan Digitial Sky Survey II collaboration; 2005hd by the "Nearby Supernova Factory" collaboration; and 2005he in MCG +06-49-68 by D. R. Madison and W. Li on unfiltered LOSS/KAIT images (cf. *IAUC* 8616).

SN	2005 UT	α_{2000}	δ_{2000}	Mag.	*Offset*
2005hc	Oct. 12	$1^h56^m47^s.94$	$-0^\circ12'49''.2$	18.5	8″.4 W, 3″.9 S
2005hd	Oct. 21.5	4 16 12.37	–13 13 11.6	17.8	–
2005he	Oct. 24.23	22 39 45.44	+34 22 43.0	18.6	1″.3 W, 5″.5 S

SN 2005hc is a type-Ia supernova (details on *CBETs* 259 and 260). SN 2005hd is a type-II supernova (details on *CBET* 263). Additional KAIT magnitudes for 2005he: Sept. 29.24 UT, [19.5; Oct. 16.22, [18.5; 25.22, 18.7.

2005 October 25 *Daniel W. E. Green*