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COMET C/2005 E2 (McNAUGHT)

R. H. McNaught reports his discovery of a comet with a 12″ tail in p.a. 250° on CCD images taken on Mar. 12.8 and 13.8 UT with the 0.5-m Uppsala Schmidt telescope at Siding Spring (discovery observation given below). Following posting on the 'NEO Confirmation Page', CCD observations obtained with the 1.0-m *f*/7.7 reflector at Mt. John University Observatory on Mar. 13.7 by A. C. Gilmore (measured by P. M. Kilmartin) show a uniform coma $\sim 7''$ in diameter with a stubby tail 13″ long to the southwest.

2005 UT	α_{2000}	δ_{2000}	Mag.
Mar. 12.75009	$19^h47^m24^s.43$	$-35^\circ 48' 32''.6$	16.5

The available astrometry, the following very preliminary parabolic orbital elements, and an ephemeris appear on *MPEC* 2005-E84.

$$\begin{array}{llll} T = 2006 \text{ Apr. } 13.126 \text{ TT} & \omega = 358^\circ.748 & \\ & \Omega = 357.427 & \left.\right\} 2000.0 \\ q = 3.01128 \text{ AU} & i = 16.116 & \end{array}$$

COMETS C/2005 E3 (SOHO) AND C/2005 E4 (SOHO)

Additional comets found on SOHO website images (cf. *IAUC* 8490; MO = M. Oates).

Comet	2005 UT	α_{2000}	δ_{2000}	Inst.	F	*MPEC*
C/2005 E3	Mar. 6.671	$23^h16^m.9$	$-\ 6^\circ 09'$	C2	MO	2005-E87
C/2005 E4	10.388	23 33.0	$-\ 2\ 48$	C3	RK	2005-E87

C/2005 E3 is a Kreutz sungrazer, while C/2005 E4 belongs to the Marsden group. On *MPEC* 2005-E87, B. G. Marsden suggests that C/2005 E4 is identical with C/1999 N5 and has $P = 5.66$ yr. He shows that, when run back a further revolution, the linked orbit agrees very closely with the linked orbit corresponding to his earlier suggestion that C/2004 V9 was a return of C/1999 J6 (*IAUC* 8456, *MPEC* 2004-X73, $P = 5.49$ yr), with then $T =$ 1993 Nov. 20–22, $q = 0.0515$ AU, and agreement to better than $0^\circ.3$ in ω, Ω, and i. This indicates that these Marsden-group comets probably separated from each other around that time. Marsden adds that, if C/1999 U2 also then separated from them, it would now have $P = 5.95$ yr and $T = 2005$ Oct. 8 (to within a few days).

2005 March 16 *Daniel W. E. Green*