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COMET C/2005 S4 (McNAUGHT)

R. H. McNaught, Australian National University, reports his discovery of a comet on CCD images taken with the 0.5-m Uppsala Schmidt telescope in the course of the Siding Spring Survey (discovery observation tabulated below); 120-s exposures taken on Oct. 1.6 UT clearly show a tail $\sim 8''$ long in p.a. $\sim 135^{\rm o}$ (the discovery images on Sept. 30.6 show the comet as slightly diffuse).

2005	UT	α_{2000}	δ_{2000}	Mag.
Sept.	30.55673	$22^{\rm h}06^{\rm m}03\overset{\rm s}{.}85$	$-37^{\circ}48'49\overset{''}{.}1$	18.9

The available astrometry (including prediscovery Uppsala Schmidt images back to July 27), the following parabolic orbital elements, and an ephemeris appear on *MPEC* 2005-T12.

$$\left.\begin{array}{ll} T = \text{2007 July 18.0603 TT} & \omega = 31\overset{\circ}{.}3980 \\ & \Omega = 318.2820 \\ q = \text{5.851768 AU} & i = 107.9924 \end{array}\right\} 2000.0$$

(3982) KASTEL

P. Pravec and P. Kušnirák, Ondřejov Observatory; L. Kornoš and J. Világi, Modra Observatory; D. Pray, Coventry, RI; R. Durkee, Minneapolis, MN; and W. Cooney, J. Gross and D. Terrell, Sonoita Research Observatory, AZ, report that photometric observations obtained during Sept. 24–29 reveal that (3982) has a lightcurve consisting of two linearly additive components with periods 8.488 and 5.835 (or possibly 2.918) hr and amplitudes 0.27 and 0.08 mag, respectively. No attenuations due to occultations/eclipses were seen, so the proposed interpretation of binary nature of the minor planet needs to be confirmed with further observations.

COMET C/2005 O2 (CHRISTENSEN)

Improved parabolic orbital elements from *MPEC* 2005-S57:

$$\left.\begin{array}{ll} T = \text{2005 Sept. 8.4476 TT} & \omega = 263\overset{\circ}{.}8330 \\ e = 0.859426 & \Omega = 280.7698 \\ q = \text{3.333580 AU} & i = 148.8919 \end{array}\right\} 2000.0$$

a = 23.714057 AU $\quad n^{\rm o}$ = 0.0085348 $\quad P$ = 115.5 years

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