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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. $\sim 135^{\circ}$ (the discovery images on Sept. 30.6 show the comet as slightly diffuse).

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

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

(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:

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

$$a = 23.714057 \text{ AU} \qquad n^{\circ} = 0.0085348 \qquad P = 115.5 \text{ years}$$

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