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COMET C/2007 M2 (CATALINA)

An apparently asteroidal object discovered by the Catalina Sky Survey (discovery observation tabulated below), and posted on the Minor Planet Center's 'NEOCP' webpage, has been found to show a round 6″ coma with little central condensation and no hint of a tail in long exposures taken by J. Young on June 21.2 UT with the Table Mountain 0.61-m reflector.

2007 UT	α_{2000}	δ_{2000}	Mag.
June 20.18640	$11^h47^m05^s.74$	$+40^\circ16'38''.7$	20.4

The available astrometry, the following preliminary parabolic orbital elements, and an ephemeris appear on *MPEC* 2007-M30.

$$T = 2008 \text{ Nov. } 28.605 \text{ TT} \qquad \omega = 229^\circ.179$$
$$\Omega = 357.947 \quad \text{(2000.0)}$$
$$q = 3.03493 \text{ AU} \qquad i = 80.452$$

COMET C/2007 M3 (LINEAR)

An apparently asteroidal object discovered by the LINEAR survey, and posted on the NEOCP, has been found to show cometary appearance by other astrometric observers. L. Donato, E. Guido, and G. Sostero write that their twenty co-added 60-s unfiltered CCD images taken on June 22.0 UT with a 0.45-m reflector at Remanzacco, Italy, show a small coma nearly 15″ in diameter with a broad tail 25″ long toward p.a. 125°. Twenty co-added 60-s exposures by Guido and Sostero obtained remotely on June 22.3 with a 0.25-m reflector at Mayhill, New Mexico, show the presence of a coma nearly 10″ in diameter elongated toward p.a. 120°. J. Young writes that his exposures at Table Mountain on June 23.32–23.34 show a very bright round coma of mag 17.0 and diameter 12″ with strong central condensation; there was a very faint broad tail to the east, 40″ in length, with p.a. between 110° and 120° — the tail appearing straight with same width from the coma to its end.

2007 UT	α_{2000}	δ_{2000}	Mag.
June 21.31323	$19^h48^m08^s.71$	$+2^\circ13'32''.0$	17.2

The available astrometry, preliminary parabolic orbital elements (T = 2007 Sept. 23.886 TT, q = 3.41866 AU, $\omega = 130^\circ.992$, $\Omega = 42^\circ.444$, $i = 161^\circ.677$, equinox 2000.0), and an ephemeris appear on *MPEC* 2007-M31.

2007 June 23 *Daniel W. E. Green*