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INTERNATIONAL ASTRONOMICAL UNION

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COMET P/2005 Q4 (LINEAR)

An apparently asteroidal object discovered by LINEAR (discovery observation below), and posted on the 'NEO Confirmation Page', has been found to show a 16″ tail in p.a. 255° on CCD images taken by J. Lacruz (Madrid, Spain, 0.30-m reflector) on Sept. 3.04–3.05 UT. J. Young (Table Mountain, 0.6-m *f*/16 Cassegrain reflector) reports that his long CCD exposures taken on Sept. 4.5 show an extension 16″ long between p.a. 240° and 270° and a very round, condensed coma 4″ in diameter in very good seeing; his images on Sept. 5.5 show a 6″ slightly elongated coma (total mag 17.5) with a 40″ straight, narrow tail in p.a. 265°.

2005 UT	α_{2000}	δ_{2000}	Mag.
Aug. 31.40325	$5^h14^m52^s.38$	$+33°52'04''.4$	19.1

The available astrometry, the following preliminary elliptical orbital elements, and an ephemeris appear on *MPEC* 2005-R24.

$$\begin{array}{llll} T = 2005\text{ Sept.}28.882\text{ TT} & \omega = 51^\circ.377 & \\ e = 0.55154 & \Omega = 10.811 & \left.\right\} 2000.0 \\ q = 1.73505\text{ AU} & i = 17.531 & \end{array}$$
$$a = 3.86888\text{ AU} \quad n^\circ = 0.129517 \quad P = 7.6\text{ years}$$

COMET P/2005 R1 (NEAT)

K. J. Lawrence reports the NEAT discovery of a comet, on CCD images taken with the 1.2-m Schmidt telescope at Palomar (discovery observation below), whose image appears somewhat softer than surrounding stars and has a possible short tail toward the southwest. Young reports that his images taken on Sept. 5.44–5.45 UT show a 6″ round coma of mag 17.6 with a broad 14″ tail spanning p.a. 240°–260°.

2005 UT	α_{2000}	δ_{2000}	Mag.
Sept.2.42614	$0^h37^m07^s.81$	$+31°42'49''.5$	18.0

Preliminary elliptical orbital elements from *MPEC* 2005-R25:

$$\begin{array}{llll} T = 2005\text{ Oct. }8.552\text{ TT} & \omega = 117^\circ.622 & \\ e = 0.64458 & \Omega = 259.502 & \left.\right\} 2000.0 \\ q = 2.06554\text{ AU} & i = 15.489 & \end{array}$$
$$a = 5.81161\text{ AU} \quad n^\circ = 0.070349 \quad P = 14.0\text{ years}$$

2005 September 5 *Daniel W. E. Green*