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COMET C/2007 JA$_{21}$ (LINEAR)

An apparently asteroidal object reported by the LINEAR survey (discovery observation posted below; prematurely announced as 2007 JA$_{21}$ on *MPEC* 2007-J52) has been found by several observers to show cometary appearance following posting on the Minor Planet Center's 'NEOCP' webpage. Q.-z. Ye reports that three stacked 30-s CCD exposures obtained with the Lulin Observatory 0.41-m Ritchey-Chrétien reflector on May 12.82 UT show a coma of diameter $\sim 3''$ with an apparent but uncertain very faint tail around $7''$-$10''$ long in p.a. $\sim 45^\circ$. J. G. Ries writes that her *R*-band images obtained with the McDonald Observatory 0.76-m reflector on May 13.4 show the comet to be diffuse with a tail $\approx 10''$–$13''$ long toward the north-northeast. Also, G. Sostero reports that forty co-added 120-s unfiltered CCD frames taken by L. Donato, M. Gonano, V. Gonano, E. Guido, and himself with a 0.45-m reflector at Remanzacco, Italy, during May 13.91–13.98 show a compact coma nearly $10''$ in diameter (giving the object's magnitude as 18.7–18.8).

2007	UT	α_{2000}	δ_{2000}	Mag.
May	11.30048	$17^{\rm h}40^{\rm m}15\overset{\rm s}{.}69$	$+53^\circ06'22\overset{''}{.}3$	19.9

Additional astrometry, the following preliminary parabolic orbital elements, and an ephemeris appear on *MPEC* 2007-J55:

$$\left.\begin{array}{lll} T = \text{2007 May 11.272 TT} & \omega = 113\overset{\circ}{.}384 \\ & \Omega = 66.274 \\ q = \text{5.45549 AU} & i = 89.472 \end{array}\right\} 2000.0$$

COMET P/2007 H1 (McNAUGHT)

Additional observations of this comet (cf. *IAUC* 8830), published on *MPEC* 2007-J35, yield the following elliptical orbital elements:

$$\left.\begin{array}{lll} T = \text{2007 Aug. 8.740 TT} & \omega = 199\overset{\circ}{.}594 \\ e = 0.42222 & \Omega = 144.670 \\ q = \text{2.31257 AU} & i = 11.802 \end{array}\right\} 2000.0$$

$$a = \text{4.00251 AU} \qquad n^\circ = 0.123085 \qquad P = \text{8.0 years}$$

  Daniel W. E. Green