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COMET C/2005 EL$_{173}$ (LONEOS)

An apparently asteroidal object that was discovered by the LONEOS project, and designated 2005 EL$_{173}$ by the Minor Planet Center (discovery observation below from *MPS* 129296), has been found by A. Fitzsimmons (Queen's University, Belfast) to have an asymmetric coma extending to 3″.5 in p.a. 70° on combined CCD *R*-band frames (total exposure 1650 s) taken on May 10.0 UT with the 3.6-m New Technology Telescope at the European Southern Observatory; individual sub-arcsecond 110-s frames show a compact coma.

2005	UT	α_{2000}	δ_{2000}	Mag.
Mar.	8.24106	$11^{h}14^{m}23^{s}.44$	$+7^{\circ}40'49''.6$	19.3

The following hyperbolic orbital elements by B. G. Marsden, Smithsonian Astrophysical Observatory, are from 39 observations spanning 2005 Mar. 3–May 4 (including prediscovery Spacewatch observations from Mar. 3; mean residual 0″.5). The "original" barycentric value of $1/a$ is +0.000113 ± 0.000056 AU^{-1} (1σ mean error), while the "future" value of $1/a$ is +0.000031 AU^{-1}.

Epoch = 2007 Mar. 1.0 TT

T = 2007 Mar. 6.1192 TT
e = 1.003109
q = 3.897440 AU
ω = 261.°3354
Ω = 344.7938
i = 130.7181
} 2000.0

2005 EO$_{304}$

S. D. Kern and J. L. Elliot, Massachusetts Institute of Technology, report that *VR*-band observations, obtained with the 6.5-m Clay telescope (+ MagIC) on Apr. 15 UT in ∼ 0″.7 seeing, reveal 2005 EO$_{304}$ (cf. *MPECs* 2005-G51, 2005-J15; *MPS* 130312) to be a binary system. These observations are part of an ongoing program for recovery of new tranneptunian objects discovered by the 'Deep Ecliptic Survey'. The fainter member of the pair lies 2″.67 ± 0″.06 from the brighter member at p.a. 105° ± 1°. The primary member of the pair is 1.2 ± 0.1 magnitudes brighter than its companion. Additional photometric and astrometric observations of 2005 EO$_{304}$ are strongly encouraged.

