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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	$11^h14^m23^s.44$	$+7^\circ40'49''.6$	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}.

$$\text{Epoch} = \text{2007 Mar. 1.0 TT}$$

$$\begin{array}{lll} T = \text{2007 Mar. 6.1192 TT} & \omega = 261^\circ.3354 & \\ e = 1.003109 & \Omega = 344.7938 & \Big\} 2000.0 \\ q = 3.897440 \text{ AU} & i = 130.7181 & \end{array}$$

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 $\sim 0''.7$ 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 $2''.67 \pm 0''.06$ 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.

2005 May 10 *Daniel W. E. Green*